OpX Installation and Configuration Guide

FastFind Links

Product Overview
Installing the OpX Software
File Server Module
Audio Server Module
Auxiliary Audio Server Module
Studio Client Module
File Manager Module
Clock Builder Module
Import-Merge Module
Info Editor Module
File Sync Module
Serial Device Server Module
Allow Stations Module
FTP Server Module
UMix
Data Repeater Module
Mobile Gateway/Client Module
Stinger Module
Audio Server Watchdog Module
Troubleshooting

Copyright © 2016 by Broadcast Software International
909 International Way
Springfield, OR 97477 USA
Sales: (541) 338-8588
Fax: (541) 338-8656
Support: (541) 342-5250

All Rights Reserved

OpX Installation and Configuration Guide
April 21, 2016

Table of Contents

Introduction **12**

Audience 12
Document Revision Level 12
Changes in this Revision 13
Document Conventions 13
Safety and Warnings 13
Typographic Conventions 14

1 Product Overview **15**

1.1 OpX Modules 16
1.2 Matching User Tasks with Modules 17

2 Installing the OpX Software **18**

2.1 Installation Configurations 19
2.1.1 Single Workstation/Single Station 19
2.1.2 Dual Workstation/Single Station 19
2.1.3 Triple Workstation/Single Station 20
2.1.4 Simple Multi-Station 21
2.1.5 Robust Multi-Station 22
2.1.6 Production Workstation 23
2.2 System Requirements 24
2.3 Installation Instructions 25
2.4 Installing the USB Registration Key 35
2.4.1 Installing the driver from the BSI Installation CD 35
2.4.2 Downloading the Driver from the BSI Website 36
2.4.3 Installing the Sentinel Protection Windows Driver 36
2.5 Registering Your OpX System 41
2.6 Modifying the Current Authorization Code 42
2.7 Where to Go from Here 43

3 File Server Module **44**

3.1 Starting the File Server Module 45
3.2 Quick Tour 46
3.2.1 Menu Bar 47
3.2.2 Tool Bar 49

3.2.3 Connections List 50
3.2.4 Station Folder List 50
3.3 Configuring the File Server Module 51
3.4 Adding and Removing Stations 52
3.4.1 Adding Stations to Your File Server 52
3.4.2 Adding a New Folder to a Station 54
3.4.3 Adding a Common Folder to a Station 55
3.5 Enabling or Disabling the Virtual Audio Server 57
3.6 Enabling or Disabling the Voicetrack Transfer Module 58
3.7 Remote Voice Track Transfer Module 59

4 Audio Server Module 60

4.1 Starting the Audio Server Module 61
4.2 Quick Tour 63
4.2.1 Audio Server Module Menu Bar 64
4.2.2 Audio Server Tool Bar 66
4.2.3 Playback Tab 67
4.2.4 Record Tab 68
4.2.5 Status Tab 69
4.2.6 Connections Tab 70
4.2.7 Devices Tab 70
4.2.8 Program Log Display 71
4.3 Configuring the Audio Server Module 72
4.3.1 General Configuration Settings 74
4.3.2 Playback Configuration Settings 77
4.3.3 Auto Fill and Time Scaling Configuration Settings 79
4.3.4 Record Configuration Settings 82
4.3.5 Category Configuration Settings 83
4.3.6 Folder Configuration Settings 86
4.3.7 Device Configuration I/O Settings 87
4.3.8 Trigger Set Configuration Settings 109
4.3.9 Mixer Configuration Settings 112
4.3.10 Data Configuration Settings 115
4.3.11 Scheduled Event Set Configuration Settings 118
4.3.12 Mode and Log Configuration Settings 122
4.3.13 Closure and Relay Configuration Settings 123
4.4 Loading the Program Log 129
4.5 Adding, Editing, and Deleting Items in the Program Log 130
4.5.1 Adding Items to the Program Log 130
4.5.2 Editing Items in the Program Log 132
4.5.3 Deleting Items from the Program Log 133
4.6 Playing Back a Program Log Item 133

5 Auxiliary Audio Server Module 134

5.1 Starting the Auxiliary Audio Server Module 135

6 Studio Client Module 136

6.1 Starting the Studio Client Module 137
6.2 Quick Tour 138
6.2.1 Date/Time Panel 139
6.2.2 Station Panel 139
6.2.3 Playback Decks 139
6.2.4 Program Log 140
6.2.5 Navigation Bar 142
6.2.6 Menu Bar 143
6.2.7 Hot Key Panel 144
6.2.8 Insert Panel 145
6.3 Configuring the Studio Client Module 146
6.3.1 General Configuration Settings 148
6.3.2 Mode Configuration Settings 152
6.3.3 Playback Configuration Settings 154
6.3.4 Voicetracking Configuration Settings 155
6.3.5 Audition/Cue Configuration Settings 157
6.4 Operating Modes 159
6.5 Verifying a Program Log 161
6.6 Loading a Program Log 162
6.7 Playing Back a Log 164
6.8 Editing a Program Log 165
6.8.1 Adding Events 165
6.8.2 Removing an Event 166
6.8.3 Moving an Event 166
6.8.4 Copying an Event 167
6.9 Using Hot Keys 167
6.9.1 Adding an Event to a Hot Key 168
6.9.2 Creating Rotating Hot Keys 169
6.9.3 Working with Hot Keys 171
6.9.4 Setting Hot Key Properties 172
6.10 Using Hot Key Pages 175
6.10.1 Navigating Hot Key Pages 175
6.11 Saving the Hot Key Page to the File Server 175
6.11.1 Loading a Hot Key Page from the File Server 175
6.11.2 Refreshing a Hot Key Page 175
6.12 Using the Voicetrack Editor 176
6.12.1 Voicetrack Editor User Interface 176
6.12.2 Creating Voicetracks 179

6.12.3 Loading Audio Events into the Voicetrack Editor 179
6.12.4 Recording a Voicetrack 180
6.12.5 Previewing Your Voicetrack 182
6.12.6 Adjusting Segue/Start Points 183
6.12.7 Adjusting Ducking Levels 183
6.12.8 Inserting Your Completed Voicetrack into the Program Log 184
6.12.9 Customizing the Studio Client Appearance 185

7 File Manager Module 189

7.1 Starting the File Manager Module 190
7.2 Quick Tour 191
7.2.1 File Manager Module Menu Bar 192
7.2.2 Local File List 193
7.2.3 Server File List 194
7.2.4 Transfer Buttons 195
7.3 Configuring the File Manager Module 196
7.4 Transferring Files 198
7.4.1 Copying Files to Your File Server 198
7.4.2 Copying Files from Your File Server 200
7.5 Working with carts 202
7.5.1 Creating a New Cart 202
7.5.2 Using the Cart Editor to Edit a Cart 204
7.5.3 Adding Local Files Directly to Carts 205
7.6 Editing Local Audio File Tagging Info 208
7.7 Editing Audio Tagging Info on the File Server 211
7.8 Generating and Viewing Automation Reports 212
7.8.1 Creating a Report Template 212
7.8.2 Running a Report 217

8 Clock Builder Module 219

8.1 Starting the Clock Builder Module 220
8.2 Quick Tour 222
8.2.1 Menu Bar 223
8.2.2 Tool Bar and Station Selector 225
8.2.3 Grid Display 226
8.2.4 Status Bar 227
8.2.5 Navigating the Clock Editor Window 227
8.3 Configuring the Clock Builder Module 229
8.4 Creating a New Clock 231
8.4.1 Creating a New Satellite Show Start Event 233
8.4.2 Adding an Existing Satellite Show Start Event 245
8.4.3 Creating a Commercial Break Event 247

8.4.4 Creating a Custom Event 252
8.4.5 Creating a Stop Satellite Show Event 254
8.4.6 Creating Multi-Hour Satellite Show Clocks 256
8.4.7 Recording a Satellite Show 256
8.4.8 Time-Shifting a Satellite Show 256
8.5 Sample Clocks 258
8.5.1 Satellite Talk Show with Top-Of-The-Hour News Example 258
8.5.2 Satellite Music Show Example 259
8.5.3 Background Recording Example 260
8.5.4 Time-Shift Playback Example 261
8.5.5 Multi-Hour Satellite Show Example 261
8.5.6 Utility Tasks without Satellite Show Audio Example 264

9 Import-Merge Module 265

9.1 Starting the Import-Merge Module 266
9.2 Quick Tour 267
9.2.1 Import-Merge Module Menu Bar 268
9.2.2 Tool Bar 271
9.2.3 Log Name and Station Selector 272
9.2.4 Program Log Display 272
9.3 Third-Party Log Requirements for Importing 273
9.4 Configuring the Import – Merge Module 274
9.4.1 General Configuration Settings 275
9.4.2 Import Formats Configuration Settings 277
9.4.3 Log Type Configuration Settings 280
9.4.4 Block Marker Configuration Settings 284
9.4.5 Replacing Text Configuration Settings 286
9.5 Importing Program Logs 289
9.5.1 Importing Your Music Log 289
9.5.2 Importing Your Traffic Log 291
9.6 Exporting/Saving a Finished Program Log 293
9.6.1 Saving Your Program Log to the File Server 293
9.6.2 Exporting Your Program Log for Third-Party Applications 294
9.7 Manually Adding and Editing Program Log Events 295
9.7.1 Adding Audio Files Using the File Library 295
9.7.2 Adding New Events Manually 297
9.7.3 Editing Events in Your Program Log 298
9.7.4 Changing the Cue Type of Events In Your Program Log 298
9.8 Working with Carts 300
9.8.1 Creating a Cart 300
9.8.2 Editing a Cart 301
9.8.3 Saving a Cart 301

10 Info Editor Module 303

10.1 Starting the Info Editor Module 304
10.2 Quick Tour 305
10.2.1 File List 306
10.2.2 Editing Multiple Files 307
10.2.3 Tabbed Section 308
10.3 Setting Intro and Segue Times 313

11 File Sync Module 316

11.1 Starting the File Sync Module 317
11.2 Quick Tour 318
11.2.1 Menu Bar 319
11.2.2 Tool Bar 321
11.2.3 Event List 322
11.2.4 Status Bar 323
11.3 Configuring the File Sync Module 323
11.4 Synchronizing Files 325

12 Serial Device Server Module 326

12.1 Starting the Serial Device Server Module 327
12.2 Quick Tour 328
12.2.1 Menu Bar 329
12.2.2 Tool Bar 330
12.2.3 Device Tabs 331
12.2.4 Action History List 331
12.3 Configuring the Serial Device Server Module 332
12.4 Adding a New Profile 333
12.4.1 Adding a Serial Device Profile 333
12.4.2 Adding an XDS Receiver Profile 337
12.4.3 Adding a I/O Card Device Profile 339
12.5 Editing a Device Profile 340
12.6 Deleting a Device Profile 341
12.7 Using a Serial Server Device 341

13 Allow Stations Module 342

13.1 Starting the Allow Stations Module 343
13.2 Quick Tour 345
13.2.1 Menu Bar 346
13.2.2 Tool Bar 347
13.3 Configuring the Allow Stations Module 347
13.4 Limiting Station Profiles 348

14 FTP Server Module 350

14.1 Starting the FTP Server Module 351
14.2 Quick Tour 352
14.2.1 Menu Bar 353
14.2.2 Tool Bar 355
14.2.3 FTP Server Status 356
14.2.4 FTP Server Status List 356
14.3 Configuring the FTP Server Module 357
14.4 Starting and Stopping the FTP Server 357

15 UMix 359

15.1 Starting UMix 360
15.2 Quick Tour 361
15.2.1 Menu Bar 362
15.2.2 Tool Bar 364
15.2.3 Item List 365
15.2.4 Status Bar 365
15.2.5 Workspace 366
15.3 Creating Mixer Layouts 367
15.4 Opening Mixer Layouts 369

16 Data Repeater Module 370

16.1 Starting the Data Repeater Module 371
16.2 Quick Tour 372
16.2.1 Menu Bar 373
16.2.2 Tool Bar 374
16.2.3 Data Repeater Interface and Port 375
16.2.4 . Data Repeater Status List 375
16.3 Working with Data Repeaters 376
16.3.1 Creating a Data Repeater 376
16.3.2 Editing a Data Repeater 380
16.3.3 Deleting a Data Repeater 381
16.4 Changing the Network Interface and Port 382
16.5 Starting and Stopping the Data Repeater 382

17 Mobile Gateway/Client Module 383

17.1 Starting the Mobile Gateway/Client Module 384
17.2 Quick Tour 386
17.2.1 Menu Bar 387
17.2.2 Tool Bar 388
17.2.3 Connection List 388
17.2.4 Module Status Panel 388

17.3 Configuring the Mobile Gateway/Client Module....389
17.4 Starting and Stopping the Mobile Gateway/Client....390

18 Stinger Module....391

18.1 Starting the Stinger Module....392
18.2 Quick Tour....393
18.2.1 Tool Bar....394
18.2.2 Hot Key Set....396
18.2.3 Function Key Legend....396
18.2.4 Module Status Panel....396
18.3 Configuring the Stinger Module....397
18.3.1 General Configuration Settings....398
18.3.2 Playback Configuration Settings....400
18.3.3 Serial Server Configuration Settings....401
18.4 Setting Up Hot Keys....403
18.4.1 Loading a Hot Key Set....403
18.4.2 Adding Items to the Hot Key Set....405
18.5 Playing Items in a Hot Key Set....409
18.6 Configuring Item Properties....411
18.7 Listing Items....413
18.8 Deleting Items....414
18.9 Working with Stinger Decks....415
18.9.1 Configuring a Stinger Deck....416

19 Audio Server Watchdog Module....418

19.1 Starting the Watchdog Module....419
19.2 Quick Tour....420
19.2.1 Audio Server Watchdog Module Menu Bar....421
19.2.2 Last Event Field....422
19.2.3 Status Area....422
19.3 Configuring the Audio Server Watchdog Timer....422
19.4 Starting and Stopping the Audio Server Watchdog Timer....423

20 Troubleshooting....425

20.1 “Security key / driver is not installed” Message....426
20.2 Program Does Not Activate....427

Appendix A - Macros....428

A.1 List of Macros....429
A.2 Macro Descriptions....431

Appendix B - Cue Types 475

Appendix C - Glossary 476

Index 479

Introduction

This reference manual describes how to install and configure the OpX broadcast-automation system from Broadcast Software International (BSI). OpX has been designed from the ground up to deliver superior performance in single and multi-station environments. OpX offers an intuitive on-air environment, with full touch-screen capability, simple yet powerful voicetracking, and an easy-to-use production interface.

Before using this manual, familiarize yourself with the Table of Contents on page 3. All first-time users should read Chapter 1. A glossary of terms appears in Appendix C - Glossary and troubleshooting suggestions are in Chapter 20.

Audience

This guide is intended for the person who installs, uses, and maintains the OpX software. This document assumes the reader has moderate hardware, computer, and Internet skills.

Document Revision Level

This section provides a history of the revision changes to this document.

Revision	Document Version	Date	Description
A	Version 2	April 21, 2016	Initial release

Changes in this Revision

Created new format and organization.

Added the following new modules:

- FTP Server
- UMix
- Data Repeater
- Remote Voice track Transfer
- Mobile Gateway/Client
- Stinger
- AS Watchdog

Document Conventions

This guide uses the following conventions to draw your attention to certain information.

Safety and Warnings

This guide uses the following symbols to draw your attention to certain information.

Symbol	Meaning	Description
	Note	Notes emphasize or supplement important points of the main text.
	Tip	Tips provide helpful information, guidelines, or suggestions for performing tasks more effectively.
	Warning	Warnings indicate that failure to take a specified action could result in damage to the device, or could result in serious bodily injury.

Typographic Conventions

This guide also uses the following typographic conventions.

Convention	Description
Bold	Indicates text on a window, other than the window title, including menus, menu options, buttons, fields, and labels.
Italic	Indicates a variable, which is a placeholder for actual text provided by the user or system. Angled brackets (< >) are also used to indicate variables.
`screen/code`	Indicates text that is displayed on screen or entered by the user.
> bracket	Indicates a shortcut for selecting menu options. For example, Edit > Settings means to select the Settings option from the Edit menu.
< > angled brackets	Indicates a variable, which is a placeholder for actual text provided by the user or system. Italic font is also used to indicate variables.
[ ] square brackets	Indicates optional values.
{ } braces	Indicates required or expected values.
| vertical bar	Indicates that you have a choice between two or more options or arguments.

1 Product Overview

Topics:

- *OpX Modules (page 16)*
- *Matching User Tasks with Modules (page 17)*

This chapter provides an overview of the OpX broadcast-automation system.

1.1 OpX Modules

OpX is composed of separate modules. Each module can run on the same computer for single-station installations, or they can run on separate computers for redundancy and multi-station cluster setups.

Table 1-1 describes the OpX modules. For more information about a module, go to the page in the “See Page” column.

Table 1-1. OpX Modules

Module	Description	See Page
File Server	Tracks your audio files, their locations and attributes, stations to which they belong, and data transfer between OpX Audio Servers and OpX Studio Clients.	44
Audio Server	Plays logs, executes macros, and performs record functions.	60
Auxiliary Audio Server	Same as the main audio server, except that a studio client cannot connect to it. This module can do background recording, as well as run a full station.	134
Studio Client	Controls the audio server logs, plays back Hot Keys and used in voicetracking.	136
File Manager	Performs all Info Editor functions, with the added ability to transfer files.	189
Clock Builder	Creates clock templates.	219
Import-Merge	Imports program logs from traffic- and music log-generating software, and merges them into a single log along with clocks generated by the Clock Builder module.	265
Info Editor	Creates and modifies audio file tags. Also, sets intro and segue points of cuts.	303
File Sync	Transfers files between the file server and clients.	316
Serial Device Server	Allows a serial device, such as an audio switcher or trigger interface, to be shared between stations over your local-area network.	326
Allow Stations Module	Limits station profiles availability to OpX modules on the local machine.	342
FTP Server	Transfers files to audio servers.	350
UMix	Virtual mixer for incoming audio feeds from satellites and Internet streams.	359
Data Repeater	Takes the PAD data output from the audio server, reformats the output if necessary, and sends it to multiple destinations, such as RDS or stream encoders.	370
Mobile Gateway/Client	Used for IOS remote operation. • The gateway runs on the OpX network and allows access from the IOS device. • The client is the software that runs on the IOS device.	383
Stinger	Updates Hot Keys in real time across multiple clients.	391
AS Watchdog	Monitors the audio server process and restarts the Audio Server module if the module becomes nonresponsive.	418

1.2 Matching User Tasks with Modules

The information in this guide is designed so that you can begin using OpX modules in the shortest possible time, without having to read the entire guide. In fact, you might not have to read some chapters and appendixes, except out of curiosity. To find out which chapters and appendixes you need to read, identify the type of reader you are in Table 1-2.

Table 1-2. Matching Readers with Modules

Chapter	User Type					
	On-Air Personality	Satellite Program User	Program Director	Engineer	Traffic Personnel	Support Technician
2				●		●
3				●		●
4		●	●	●		●
5		●	●	●		●
6	●	●	●	●		
7			●	●	●	●
8		●	●	●	●	●
9		●	●	●	●	●
10			●	●	●	
11			●	●		●
12		●	●	●		●
13				●		●
14				●		●
15		●		●		●
16				●		●
17				●		●
18	●		●	●		
19				●		●
20		●	●	●		●
Appendix	**On-Air Personality**	**Satellite Program User**	**Program Director**	**Engineer**	**Traffic Personnel**	**Support Technician**
A				●		●
B	●			●		
C				●		●
D	●	●	●	●		●

2 Installing the OpX Software

Topics:

- *Installation Configurations (page 19)*
- *System Requirements (page 24)*
- *Installation Instructions (page 25)*
- *Installing the USB Registration Key (page 35)*
- *Registering Your OpX System (page 41)*
- *Modifying the Current Authorization Code (page 42)*
- *Where to Go from Here (page 43)*

This chapter describes how to install the OpX software.

2.1 Installation Configurations

OpX supports several installation configurations. Because OpX is modular, you can run all of its components from a single computer or divide the modules between several computers in varying degrees. For the most common setup variations, see figures 14.1, 14.2, 14.3, 14.4, and 14.5. Because the Studio Client, Audio Server, and File Server are separate modules, there are other setup configurations possible. Production workstations can also be added (see Figure 14.6 for an example).

2.1.1 Single Workstation/Single Station

Figure 2-1 shows the simplest installation configuration, where all modules are installed and run from a single machine. This installation is the easiest to maintain, but offers the least flexibility. If your hardware fails, there is not a quick way to get your station back on the air quickly.

Figure 2-1. All-in-One Configuration

2.1.2 Dual Workstation/Single Station

Figure 2-2 shows an installation where the File Server is installed on a second computer and the Audio Server is installed on both computers, but run on only one server at a time. This arrangement offers redundancy by enabling you to switch the computer quickly that is creating your audio output in case of hardware failure. If the Studio client fails for any reason, such as from a hard drive failure, the Audio Server can be opened and run on the File Server to get you back on the air until the hardware issue is corrected on the Studio Client workstation.

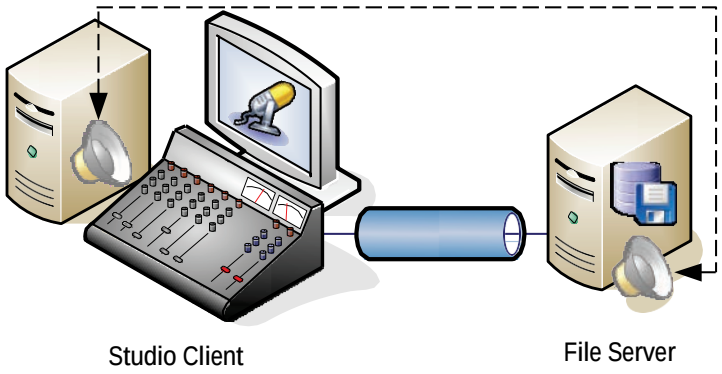


Figure 2-2. Dual Workstation/Single Station Configuration

2.1.3 Triple Workstation/Single Station

Figure 2-3 shows the most expanded and highly redundant installation configuration for a single station. In this configuration, the Audio Server module and Studio Client module are installed on all workstations, but active on only one workstation at a time. A hardware failure on the Studio Client or Audio Server will not render the system inoperable. This configuration is also recommended if you will add other OpX stations to your cluster at a later time.

You can also install the File Server on multiple machines, have the active version running on one workstation at a time, and then use File Sync, OpX's file-mirroring utility, to keep a completely redundant set of audio files and program logs. If your main file server has a hardware failure, you can close the File Server module on the main file server workstation, open it on your secondary file server workstation, and you'll be back up and running in no time.

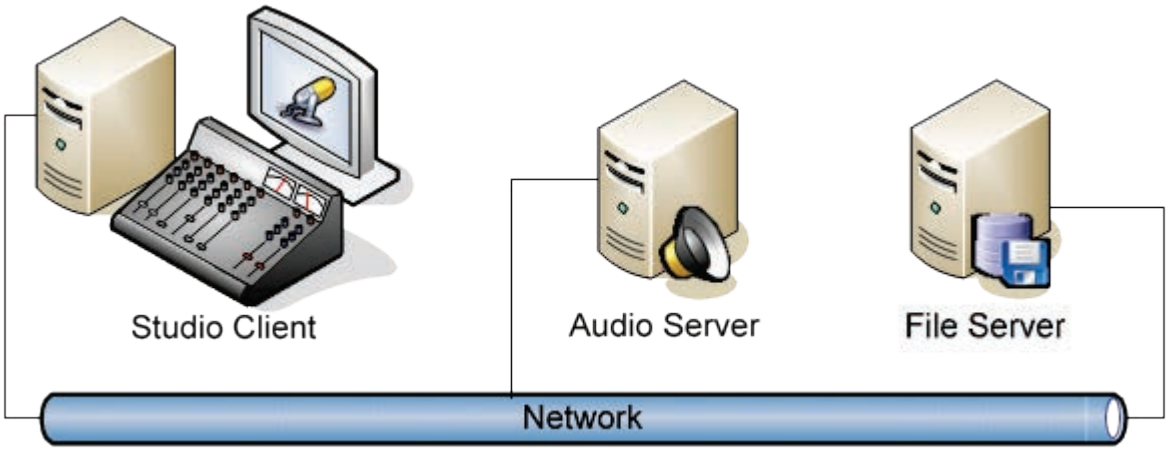


Figure 2-3. Triple Workstation/Single Station Configuration

2.1.4 Simple Multi-Station

Figure 2-4 shows the simplest configuration for a multi-station cluster. The on-air workstations have both the Studio Client module and the Audio Server module installed. The File Server module is installed on its own workstation. All the on-air workstations access the audio files and program logs on the file server through the network.

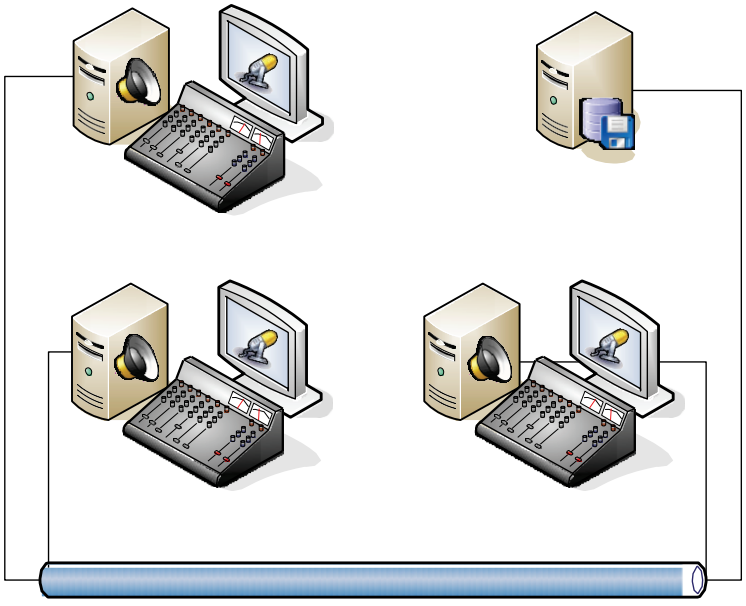


Figure 2-4. Simple Multi-Station Configuration

2.1.5 Robust Multi-Station

Figure 2-5 shows the most robust installation supported:

- The on-air workstations only have the Studio Client module installed.
- The Audio Server workstations have only the Audio Server module installed.
- The file server houses all the audio and program logs for all the workstations to access.

With this arrangement, multiple Studio Clients and Audio Servers can access the file server and run their own program logs, have their own audio, and share some audio. New Studio Clients and Audio Servers can be added to expand your cluster at any time, and extra Studio Clients can be added to your production room. As in Figure 2-2 on page 20, the Studio Client and Audio Server can be installed on redundant machines for quick recovery in case of hardware failure.

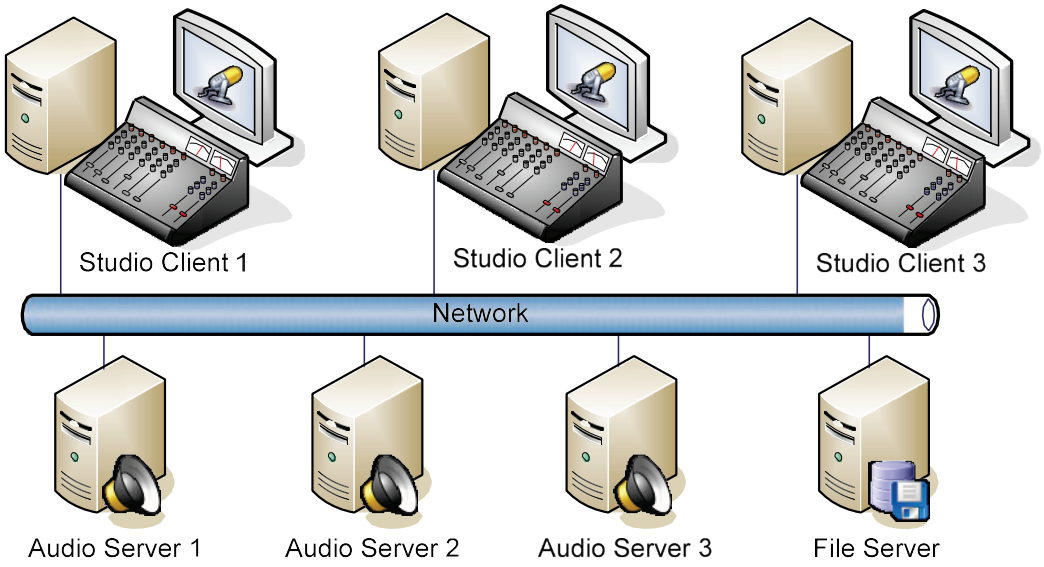


Figure 2-5. Robust Multi-Station Configuration

2.1.6 Production Workstation

An OpX production workstation is a workstation with the Studio Client module installed along with the utility modules: Clock Builder, Import-Merge, and File Manager. The production workstation will access all the same audio and program logs as the on-air workstations. OpX production workstations can be added to your network, so you can import logs and voice track independently of the on-air workstations.

Tip: Because any Studio Client can access all the Audio Servers on your network, a Studio Client can control or perform production work for any other station. If your on-air workstation has a hardware failure, or if you need to perform maintenance, you can run your station from a production workstation.

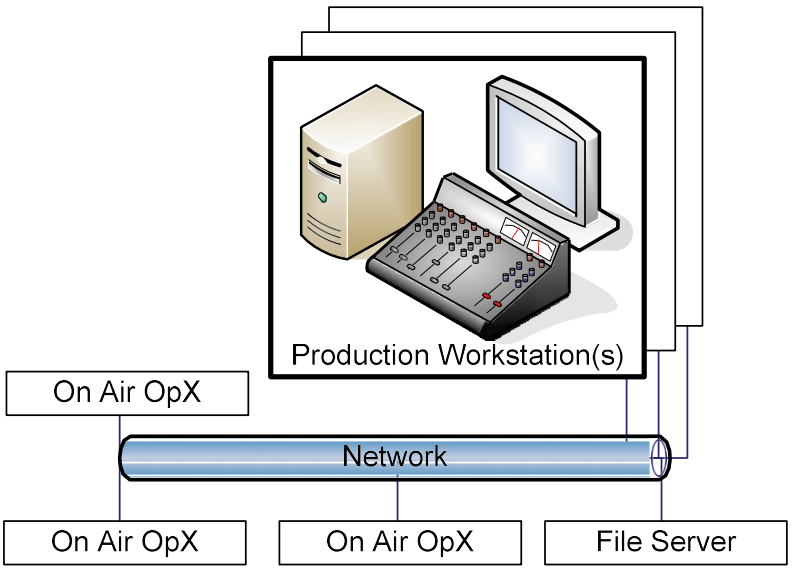


Figure 2-6. Production Workstation Configuration

2.2 System Requirements

OpX was designed and tested with the specifications in Table 2-1. Using hardware that has not been tested and certified by BSI can cause issues that can be avoided by using the following specifications.

Table 2-1. System Requirements

Specification	Description
Processor	Intel Xeon i5 or i7
RAM	4 GB
File server	File server with hard drive for operating system and applications, with one or more separate hard drives for audio files. For clients/audio servers, use RAID 1. For file server, use RAID 10.
Operating system	• Microsoft Windows 7 • Microsoft Windows 10 • Microsoft Windows Server 2008 • Microsoft Windows Server 2012
Network	Two Gigabit Ethernet network-interface cards (NICs) and switches
Audio cards	AudioScience 5xxx and 6xxx series PCI and PCIe audio cards, including: • Digital and analog audio cards • Livewire cards • AXIA or WheatStone AoIP drivers
Broadcast tools	• SS8.2 – 8-channel audio switcher/16 channel GPIO • SS16.4 – 16-channel audio switcher/24 channel GPIO • ACS 8.2 – 8-channel audio switcher/16 channel GPIO • GPI-32 – 32-channel GPI • SRC 8-III – 8-channel GPIO • SRC 16 – 16-channel GPIO
Miscellaneous	• Telos Axia audio drivers: – Analog and digital audio nodes GPIO nodes – Element control surfaces • Audio nodes • Control surfaces • GPIO nodes
Audio files	• All audio files must have the same sample rate: 44.1 kHz, 32 kHz, or 22.05 kHz. If you have audio files with differing sample rates, convert the files to a single sample rate. Tools such as Adobe Audition have a batch-convert function to convert the sample rate for multiple audio files. • You can mix mono and stereo audio files, as long as they are the same sample rate. • OpX supports PCM wave 16-bit, MPEG 1 layer 2 (AKA MPEG 2), and mp3 audio files as long as: – A suitable Windows ACM codec is installed for compressed format audio files, and – The extension of each audio file is .wav (for example, “my audio file.wav”), even if the audio file is formatted as an mpeg 2 or mp3 internally.

2.3 Installation Instructions

This section provides instructions for installing the OpX software.

Before you install the OpX software:

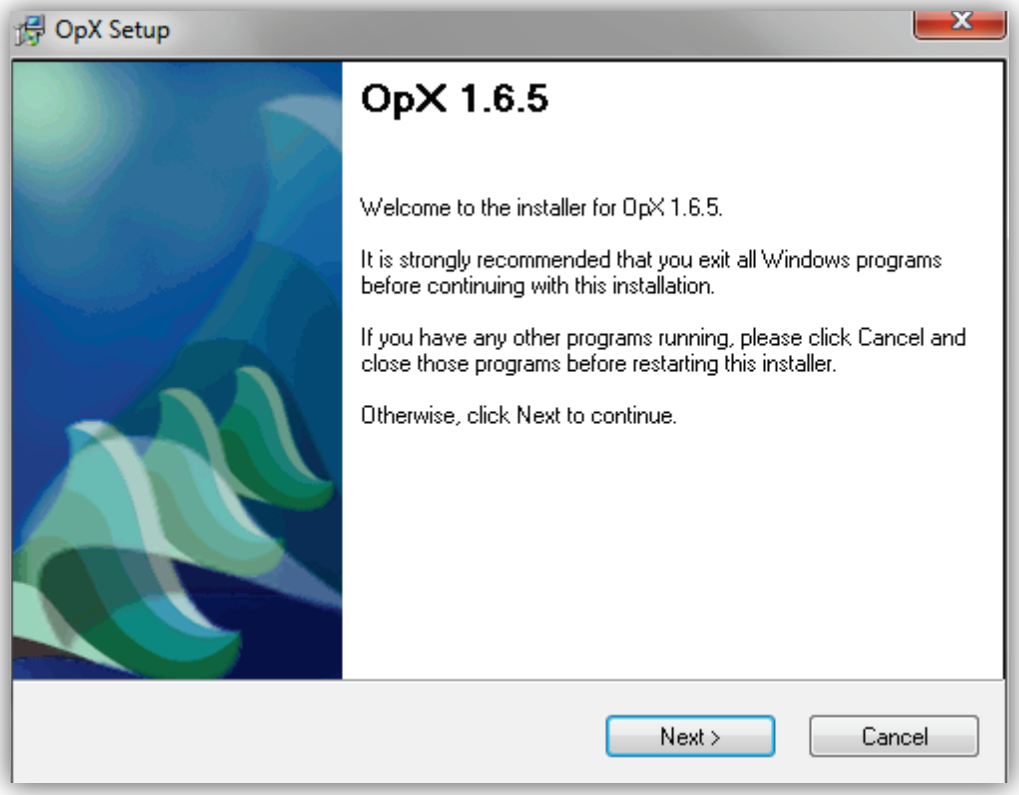
- Identify the installation configuration in section 2.1 that is best suited to your requirements.
- Identify two static IP addresses that are available for use: one for the local PC on which you will install the software and one for the OpX file server. These are long-term IP addresses that must remain static during the entire time you use OpX. The installation uses this information in the configuration files and shortcuts.

Tip: If you want to add modules to an OpX workstation at a later time, run the installer again and add just the modules you want. If you accidentally add a module that is already installed, do not worry. The installer will not overwrite your configuration and preferences for existing modules.

➢ **To install the OpX software**

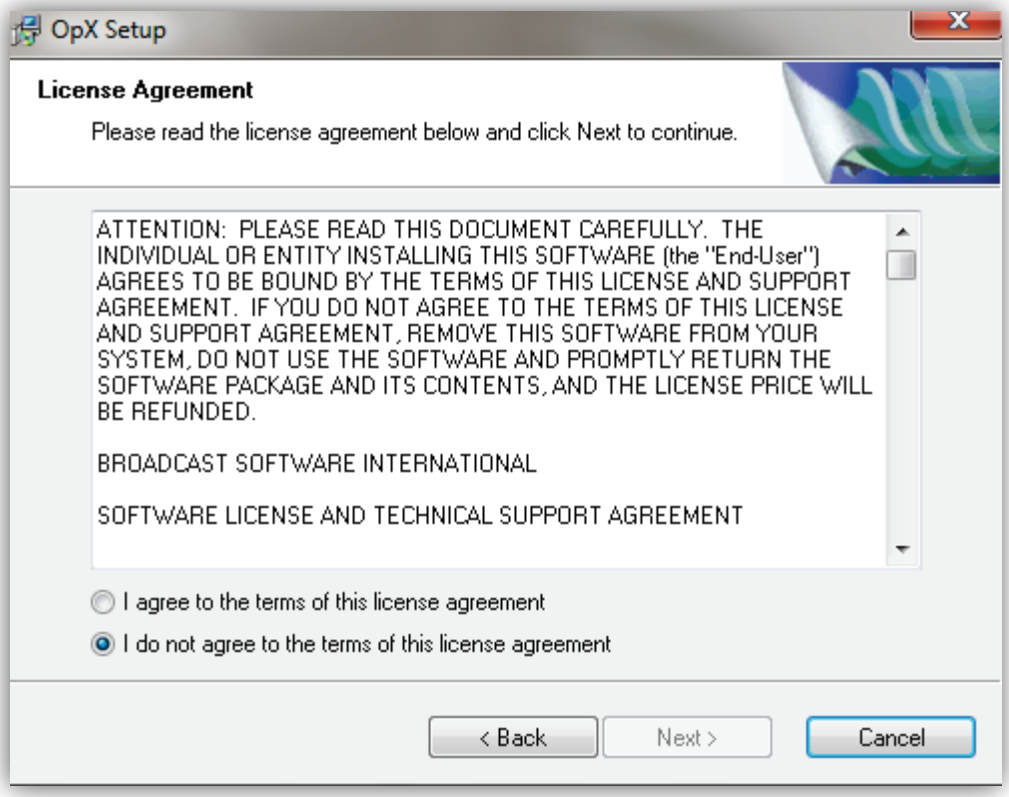
1. Exit all Windows programs.
2. Obtain the `OpX_Setup` executable file and double-click it.

   The Welcome screen appears.



3. Click **Next**.

   The license agreement appears.

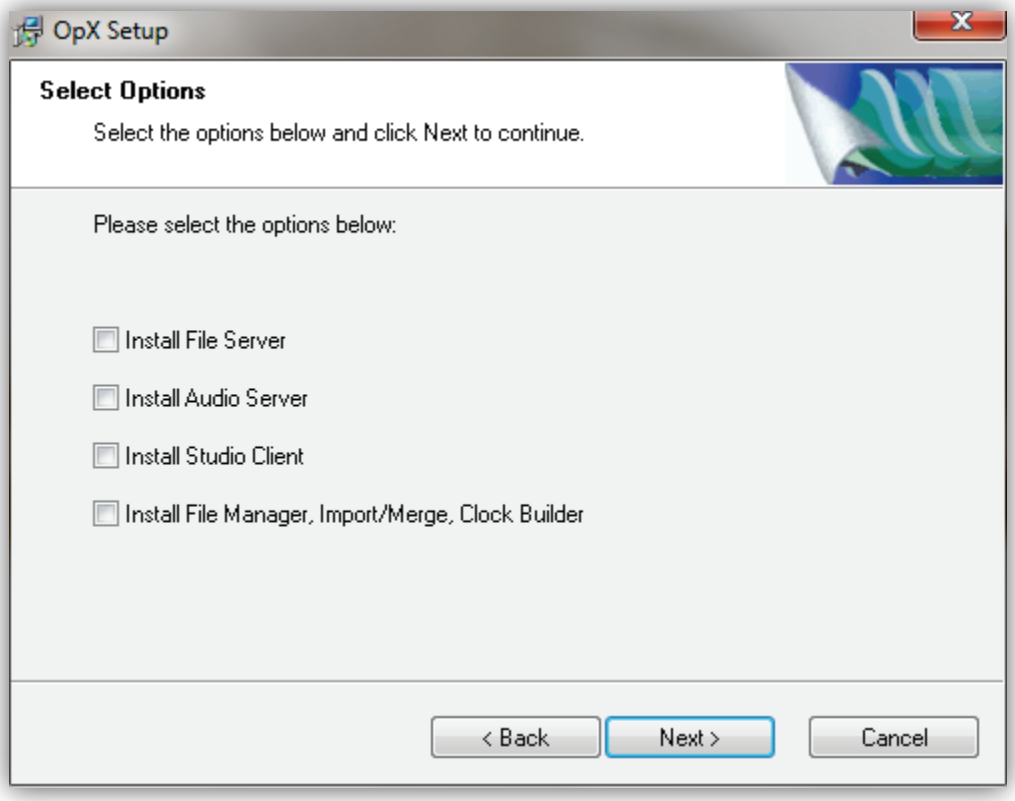


4. Read the license agreement, and then click **I agree to the terms of this license agreement**.

Note: You must agree to the terms to proceed with the installation.

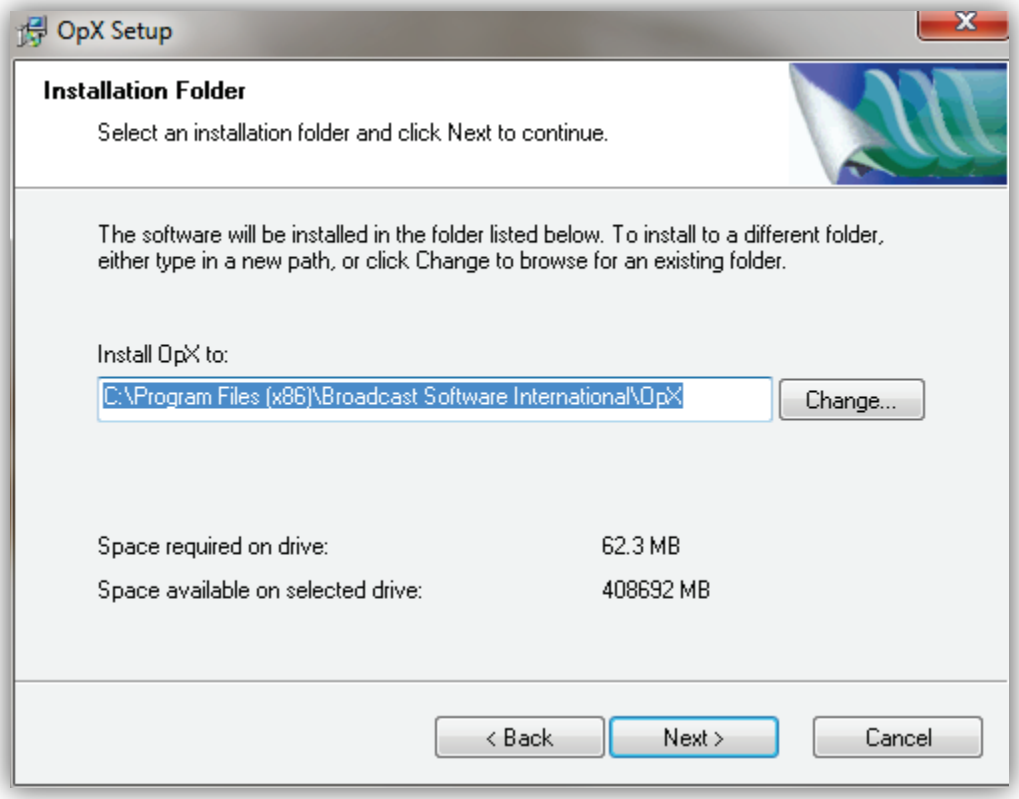
5. Click **Next**.

You are prompted to select the options you want to install on this computer.



6. Check the options you want to install on this computer. Click **Next**.

   You are prompted for a folder where the selected options will be installed.



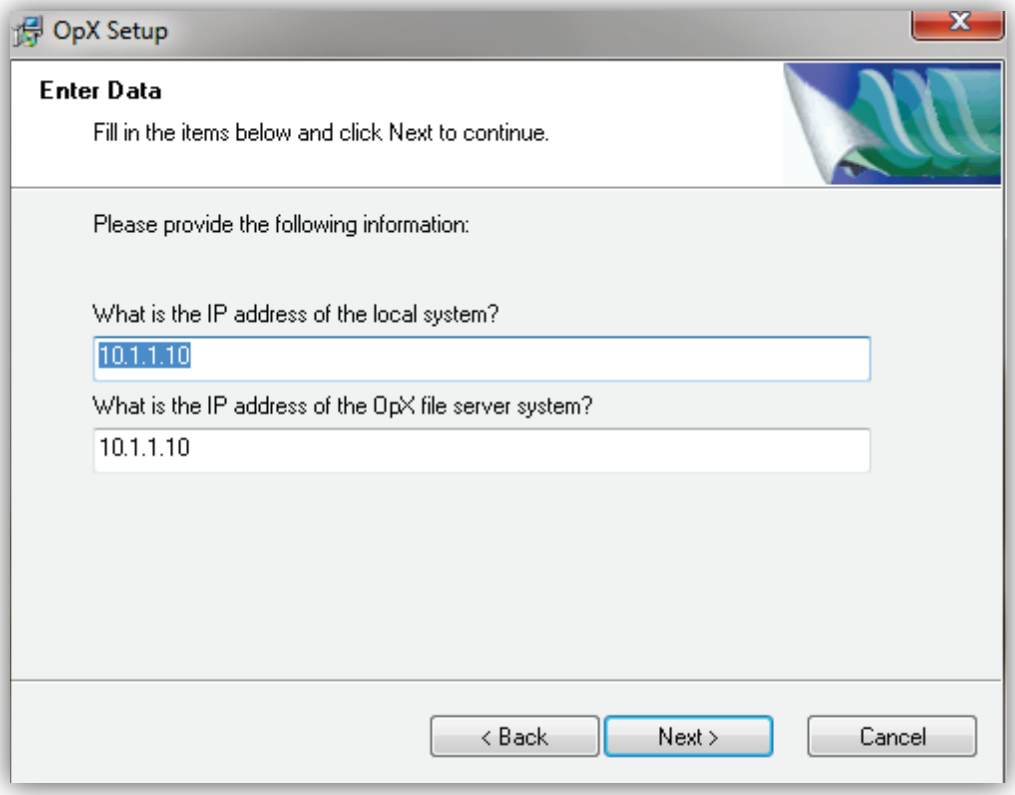
7. Accept the default location shown, or enter a different location or click the **Change** button and select the location where you want to install the OpX options.

   The bottom of the page shows the amount of space required to install the selected options and the amount of space available on the selected drive.

8. Click **Next**.

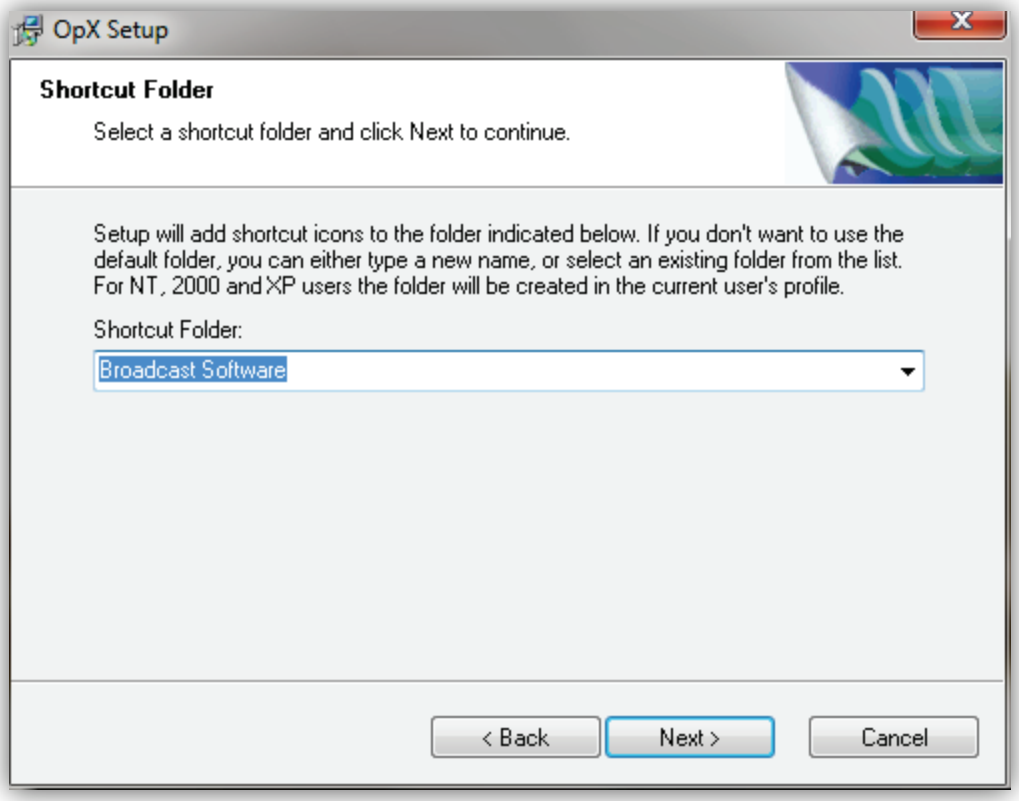
   You are prompted for IP addresses of the local system and the OpX file server system.

Note: If you need to change the IP address of the OpX file server system, use **Edit > Settings** in the OpX File Server module (see section 3.3).



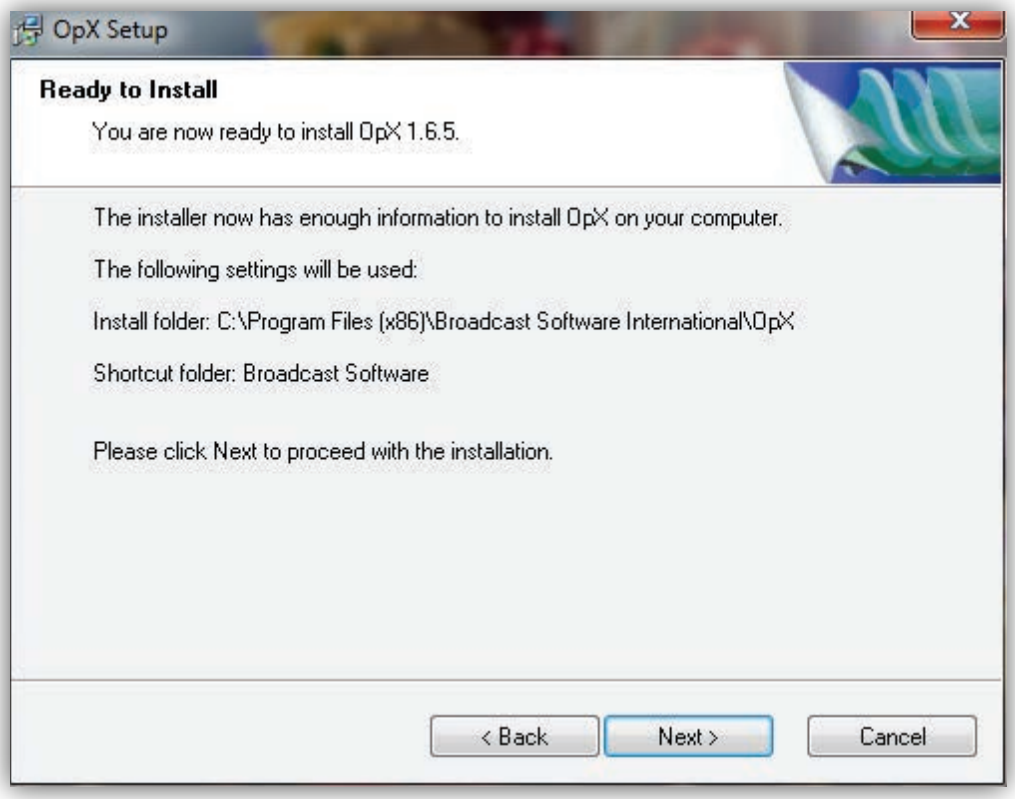
9. Enter the IP addresses in their respective fields, and then click **Next**.

   You are prompted to select a shortcut folder.

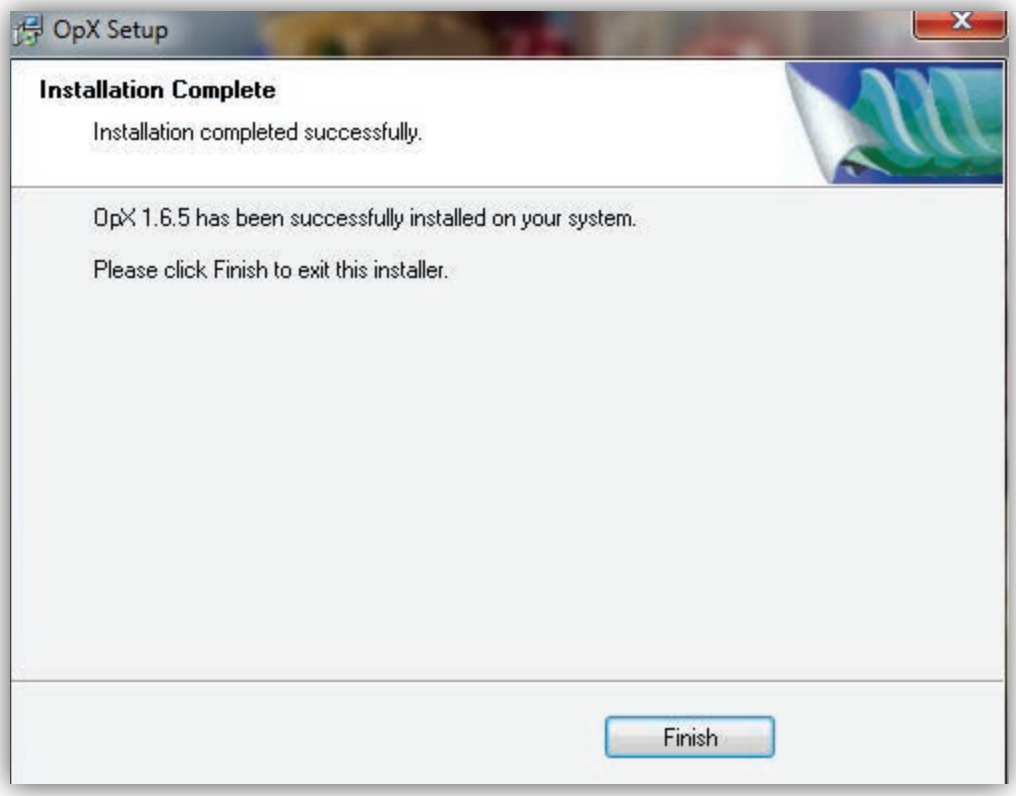


10. Accept the default folder shown or select a different folder, and then click **Next**.

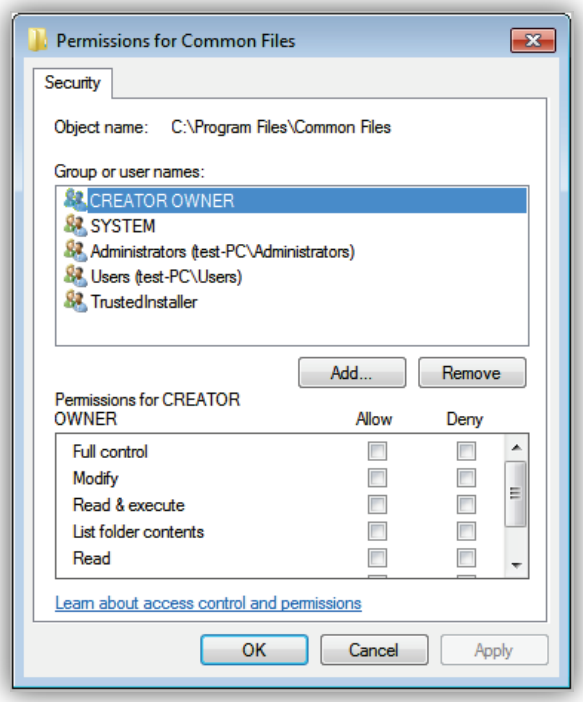
    The Ready to Install screen tells you that there is enough information to install OpX on your computer.



11. To review or change your settings, click **Back** until you reach the appropriate screen, make the required changes, and then click **Next** until the screen above appears.
12. Click **Next** to install OpX using the settings you specified. The OpX software is installed and the Installation Complete screen appears.



13. Click **Finish** to close the screen.
14. Change the permissions of the BSI folder in `%PROGRAMFILES%` so that everyone can modify the folder. Otherwise, the system places user data in `%PROGRAMDATA%` instead of `%PROGRAMFILES%`. For Microsoft Windows systems:
    a. Right-click the BSI folder, click **Properties**.
    b. Click the **Security** tab, and then click the **Edit** button.



c. Click the **Add** button.

d. At the Select Users or Groups dialog box, type **Everyone** in the **Enter the object names to select** field.

e. Click **Check Names**.

f. At the Permissions for VNC Shortcuts dialog box, click **Everyone** in the **Security** tab, check **Modify** in the **Allow** column, and click **OK**.

15. Proceed to the next section to register your OpX system.

2.4 Installing the USB Registration Key

After you install the OpX software, you install the USB registration key. Registration is performed using a hardware registration key on the supplied Universal Serial Bus (USB) memory (data) stick.

The hardware key requires a software diver called the Sentinel Protection Windows driver in order for the File Server to access the hardware. The driver can be provided on a BSI installation CD (see section 2.4.1) or downloaded from the Drivers page on the BSI website (see section 2.4.2). Always ensure that you have the latest BSI-tested driver when purchasing a new product.

Note: Install the driver and USB registration key and driver on your File Server workstation only. Other BSI products may require their own hardware key. Only one hardware key can be installed per workstation. If you received multiple registration keys for BSI products you intend to run on a single machine, contact BSI Sales.

Warning: Do not insert the registration key into a USB port on your file server until the Windows software driver is installed using the following procedure.

2.4.1 Installing the driver from the BSI Installation CD

The following procedure describes how to install the Sentinel Protection Windows driver from a BSI Installation CD. If you downloaded the driver from the BSI website, use the drive-installation instructions in section 2.4.2 instead.

➢ **To install the driver from the BSI Installation CD**

1. Insert the supplied CD into your computer's CD-ROM or DVD-ROM drive.

   *The BSI utility launches automatically. In the unlikely event that the BSI utility does not launch, use Windows Explorer to browse to your computer's CD-ROM or DVD-ROM drive and double-click the **Install.exe** file on the CD. The application selection window appears.*

2. Using the **Application** drop-down list, click **Sentinel Protection Installer – for BSI Dongle**. This is the first option from the drop-down list.
3. Click **Install**.
4. Proceed to section 2.4.3 to install the Sentinel Protection Windows driver.

2.4.2 Downloading the Driver from the BSI Website

The following procedure describes how to install the Sentinel Protection Windows driver from a BSI Installation CD. To install the driver from CD, use the drive-installation instructions in section 2.4.1 instead.

1. Launch a web browser and go to the BSI Drivers page at http://www.bsiusa.com.
2. Download the driver into a new folder.
3. After downloading the driver, extract the files into the new folder.
4. Double-click the `.exe` file that was extracted in the previous step.
5. Proceed to section 2.4.3 to install the Sentinel Protection Windows driver.

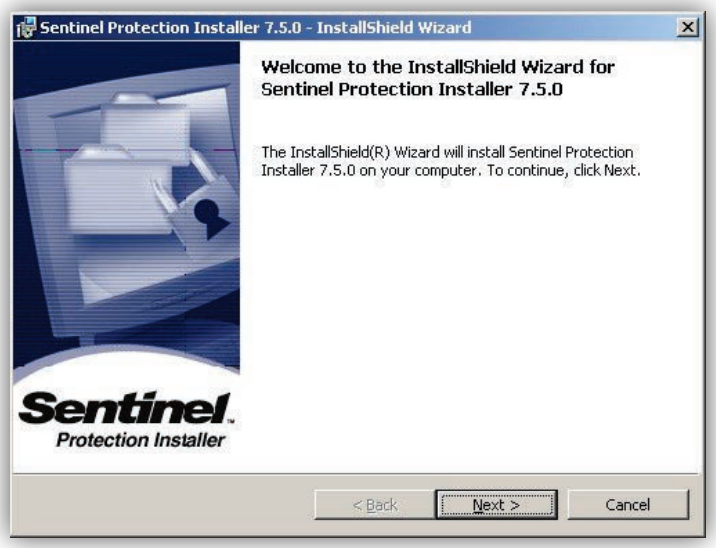
2.4.3 Installing the Sentinel Protection Windows Driver

After starting the Sentinel Protection Installer from the BSI Installation CD or by downloading from the internet, use the following procedure to complete the installation.

➢ **To install the Sentinel Protection Windows driver**

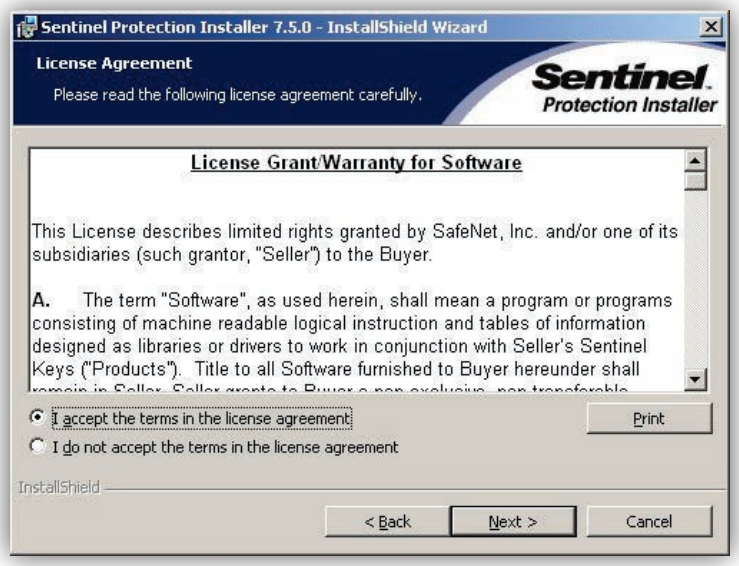
1. If the following security warning appears, click the **Run** button.

2. At the next screen, click **Next**.

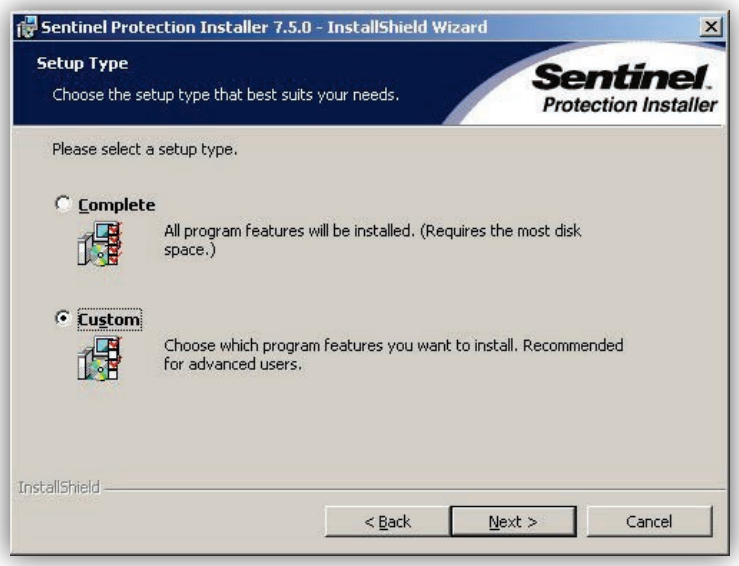


3. When the License Agreement page appears, read the Software License Agreement. If you agree to its terms, click the **I accept** radio button, and then click **Next**.

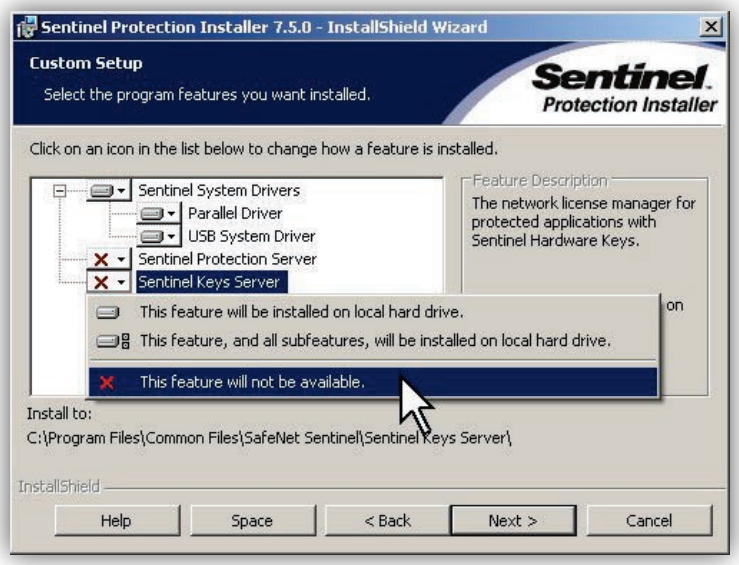
Note: You must agree to the terms to continue with the installation.



4. At the Setup Type page, click **Custom**, and then click **Next**.

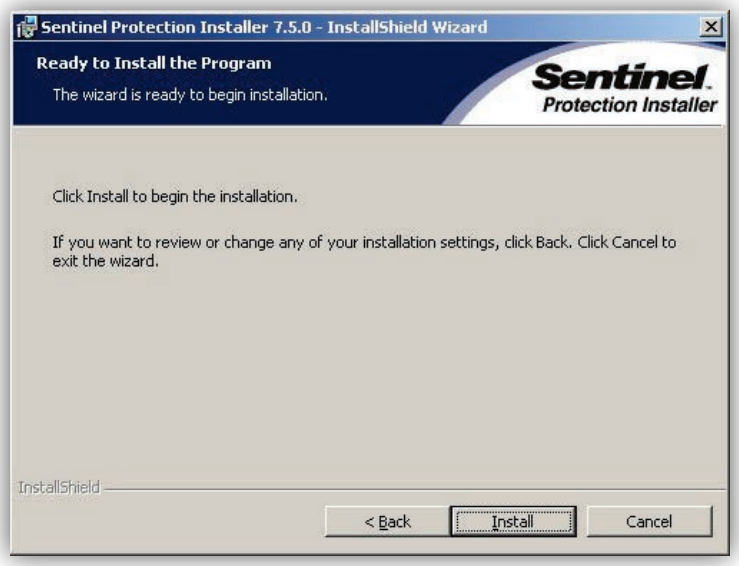


5. At the Custom Setup page, disable all options for installing the Sentinel Protection Server driver component and the Sentinel Keys Server driver component by clicking the **Selection** button, and then clicking **This feature will not be available**, as shown below.



6. Click **Next**.

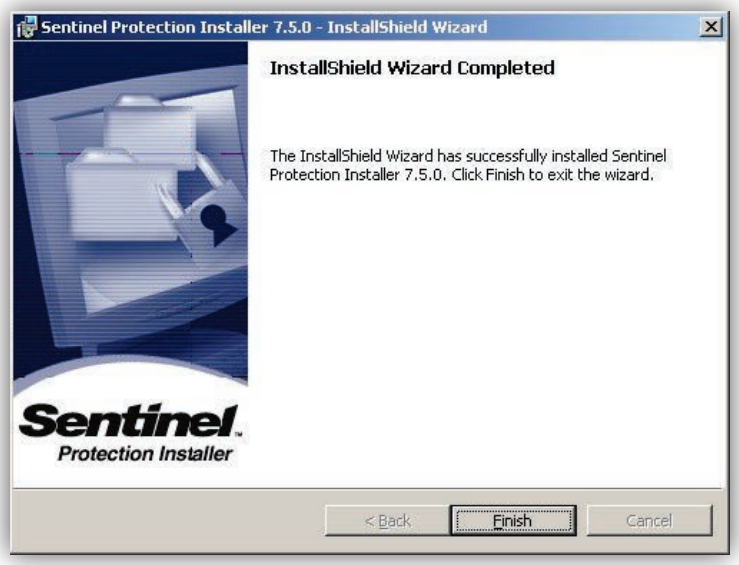
   The installer is ready to copy its files to your computer's hard drive.



7. Click **Install**.

   The files are copied to your hard drive.

8. After the Sentinel Protection driver is installed, click **Finish** at the InstallShield Wizard Complete page to complete the installation.



9. Reboot your computer.
10. After the computer reboots, insert the USB memory stick into an available USB port on your computer.

    *Windows detects the hardware key and displays the **Found New Hardware** message in the system tray.*

11. You now have installed the USB Registration Key. Proceed to section 2.5 to enter the Validation Code to register your OpX system.

2.5 Registering Your OpX System

OpX is licensed by the number of Audio Servers (or “stations”) you can run concurrently. The File Server module handles registration information for your OpX system. The registration (or “validation”) code you received when you purchased your OpX system determines the number of Audio Servers the File Server will allow to connect at the same time.

Neither the number of station profiles you can define on the File Server, nor the number of Studio Clients (or any other OpX module) you can run, is limited in any way. Only the number of Audio Servers that can be run at the same time are limited by your registration license.

Before you enter your registration code into the OpX File Server module, you must install the Sentinel Protection driver, which is the driver for the USB Registration Key (see section 2.4). If you have not already done so, install the driver, and then register your OpX system.

➢ **To register your OpX system**

1. Insert the USB Registration Key driver into an available USB port on the workstation running the OpX File Server module.

2. Click the Windows Start menu and click **Programs > Broadcast Software > OpX File Server**.

   The OpX File Server module opens and the Register page prompts you for an authorization code.

Note: In the unlikely event the Register page does not appear, go to the **Edit** menu in the File Server module and click **Register**.

3. Enter your authorization code in the **Authorization Code** field. The authorization code consists of five sets of four digits, separated by dashes (for example, **####-####-####-####-####**). Your authorization code is provided by your OpX Distributor. If you do not have an Authorization Code, or if you lost it, contact your distributor or BSI sales.

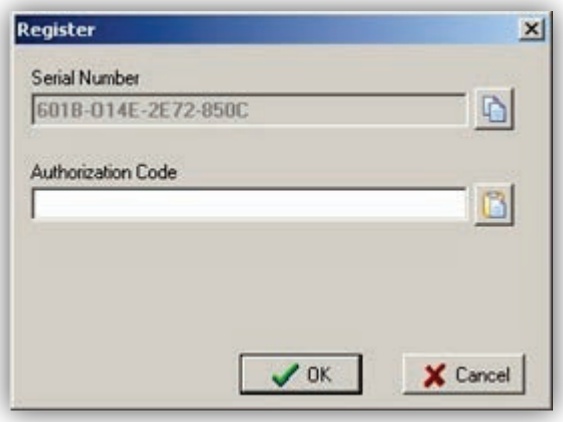


Figure 2-7. Register Window

4. After you enter your authorization code, click **OK**.

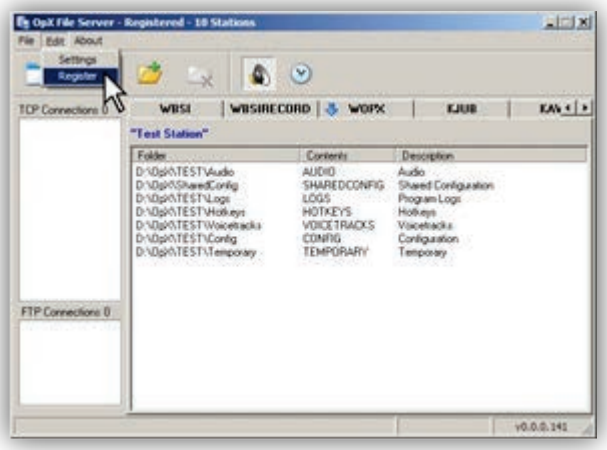
Your OpX system is registered and your File Server is now ready to accept connections from Audio Servers, Studio Clients, and all other OpX modules.

2.6 Modifying the Current Authorization Code

In the unlikely event that your authorization code is not accepted, or if you want to modify your authorization code because you purchased an upgrade registration with more stations:

1. Go to the **Edit** menu in the File Server module and click **Register**.

   The Register window in Figure 2-7 appears.



2. In the **Authorization** Code field, enter your new authorization code, and then click OK.
3. Restart the File Server for your changes to take effect.

2.7 Where to Go from Here

You have now installed OpX on your workstation. If you are installing all the components of OpX on a single workstation for a single workstation/single station installation (as in Figure 2-1 on page 19), you have finished the installation.

If you are installing the OpX modules across multiple workstations, repeat the procedure in section 2.3 for each workstation. After you finish installing OpX on all your workstations, you are ready to configure the modules. Proceed to the remaining chapters in this guide for information about configuring the OpX modules you intend to use. For assistance matching users and modules, see Table 1-2 on page 17.

3 File Server Module

Topics:

- *Starting the File Server Module (page 45)*
- *Quick Tour (page 46)*
- *Configuring the File Server Module (page 51)*
- *Adding and Removing Stations (page 52)*
- *Enabling or Disabling the Virtual Audio Server (page 57)*
- *Enabling or Disabling the Voicetrack Transfer Module (page 58)*
- *Remote Voice Track Transfer Module (page 59)*

This chapter describes the OpX File Server module.

The OpX File Server module acts as the traffic cop that oversees the repository for all your audio files and configuration files. The File Server tracks your audio files, their locations, their attributes (Artist, Title, Genre, etc.), the stations to which they belong, and data transfer to and from the OpX Audio Servers and OpX Studio Client. An OpX system contains a singular OpX File Server, regardless of whether your system is a single station or a multi-station cluster.

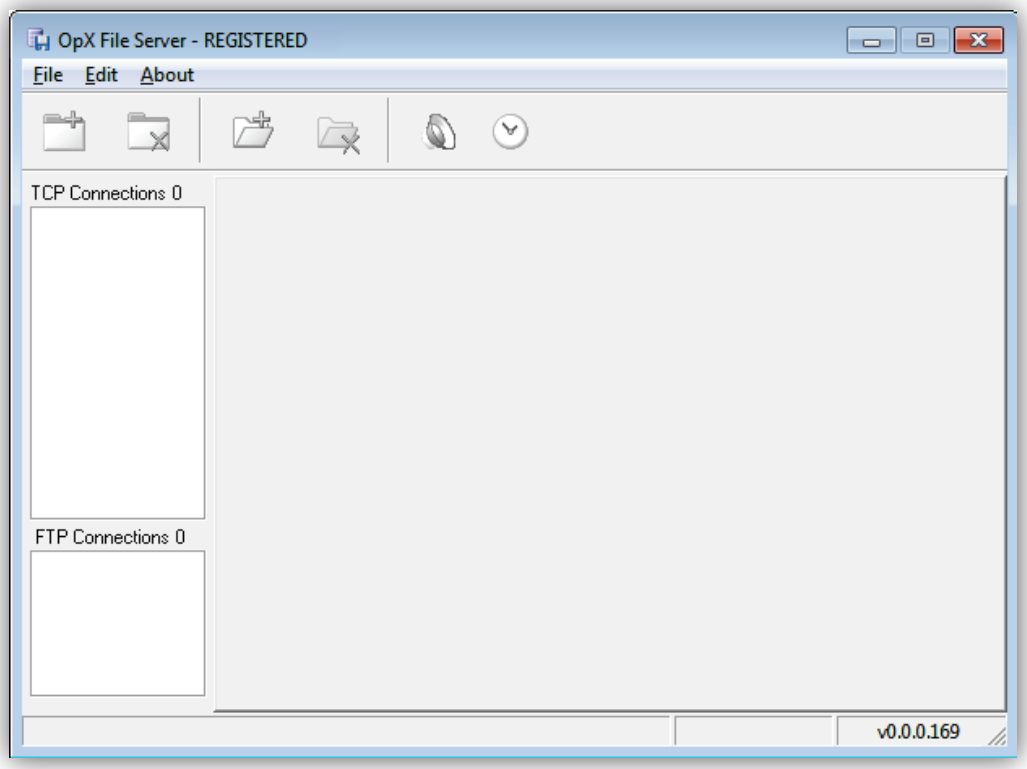
3.1 Starting the File Server Module

The File Server module is the foundation of the OpX system. It directs communications between the other OpX modules. Therefore, you must start the File Server module before you start any other OpX module.

➢ **To start the File Server module**

1. In an available Universal Serial Bus (USB) port on your PC, insert the supplied dongle containing the OpX serial number and authentication code.
2. On your PC, click the **Start** button on the Windows taskbar, and then click **Programs > Broadcast Software > OpX File Server**.

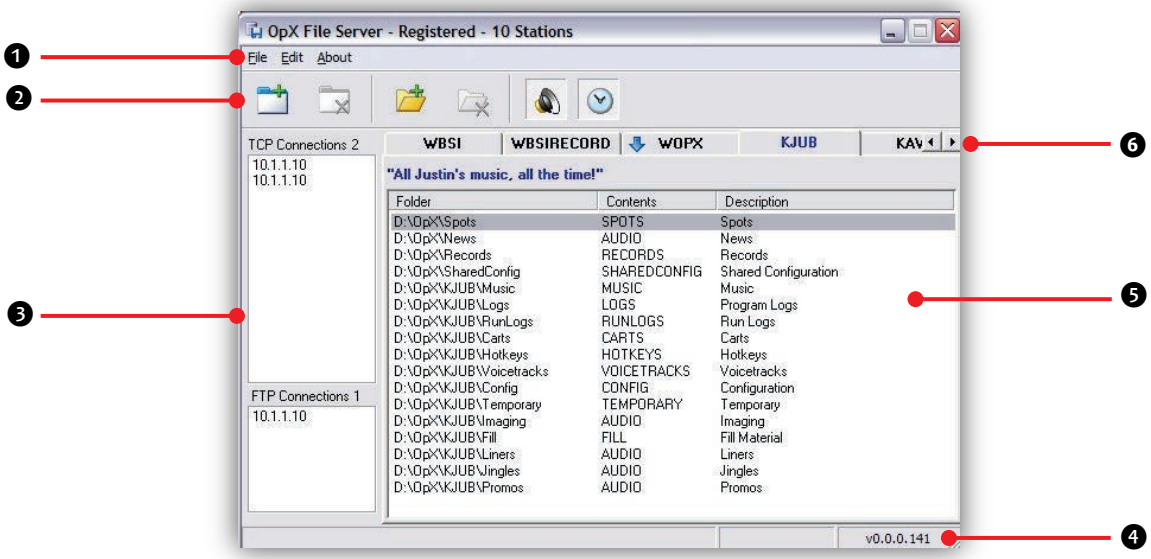
   An OpX File Server window similar to the following appears. The first time the window appears, it will be empty.



Note: If the message **Security key / driver is not installed** appears, see section 20.1.

3.2 Quick Tour

The following sections provide a quick tour of the File Server module interface.

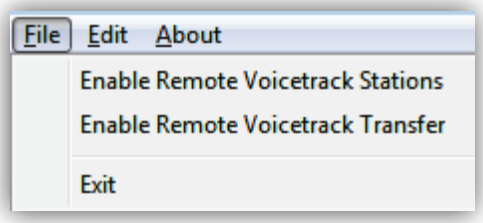


Number	Description
❶	Menu bar. See section 3.2.1.
❷	Tool bar. See section 3.2.2.
❸	Connection list. See section 3.2.3.
❹	File Server module version.
❺	Station folder list. See section 3.2.4.
❻	Each station appears as a tab. Click the tab to view the contents in the station folder. If the number of folders exceeds what can be shown, use the ◀ or ▶ button to scroll left or right.

3.2.1 Menu Bar

The menu bar appears at the top of the File Server window. The following sections describe the menu options.

3.2.1.1 File Menu

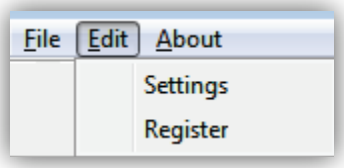


Enable Remove Voicetrack Stations = enables or disables the Audio Server to allow studio clients to edit voice tracks on other OpX system locations. See section 3.5.

Enable Remove Voicetrack Transfer = enables or disables the Voicetrack Transfer module. This module updates your local OpX File Server with the latest voicetrack and log information from remote OpX systems. See section 3.6.

Exit = exits the File Server module.

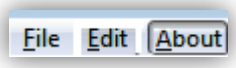
3.2.1.2 Edit Menu



Settings = configures File Server module settings. See section 3.3.

Register = shows the serial number and validation code for your OpX software. If the message **Security key / driver is not installed** appears, see section 20.1.

3.2.1.3 About Menu



Opens a window that shows the version and build date of the File Server module you are running. This window also shows the amount of memory and virtual memory being used, and the amount of time that the File Server module has been running. See Figure 3-1 for an example. To close the window, click **OK**.

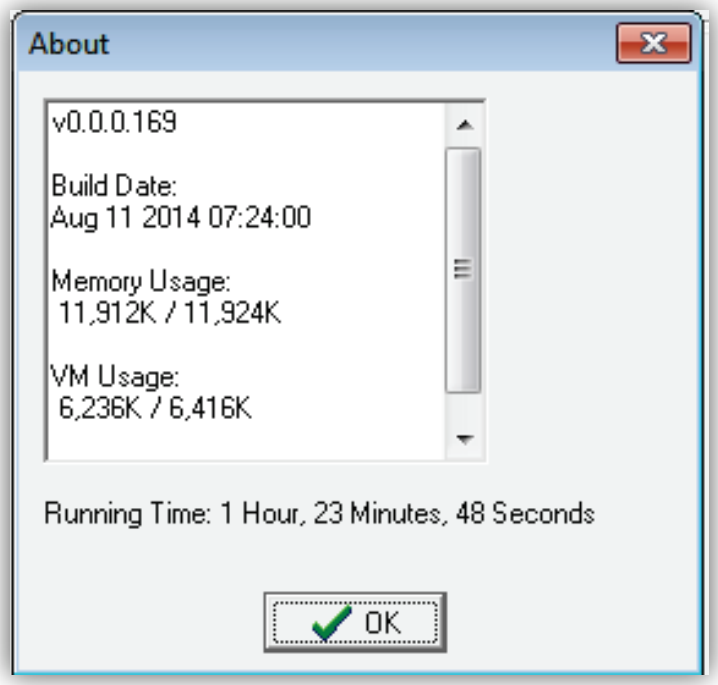
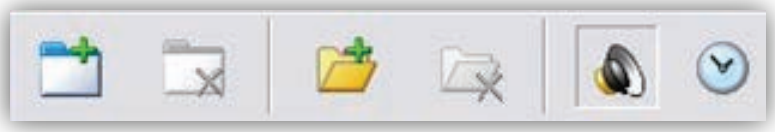


Figure 3-1. Example of About Information

3.2.2 Tool Bar

The File Server module tool bar appears below the menu bar.



Moving the screen pointer over a tool displays the tool's function as a tooltip. For example:

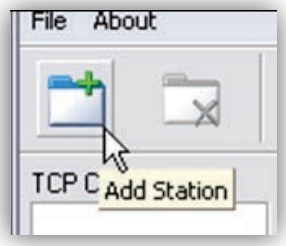


Table 3-1 describes the tools on the tool bar.

Table 3-1. File Server Module Tool Bar

Tool	Tool Name	Description	Tool	Tool Name	Description
	Add Station	Adds stations to the File Server module. See section 3.4.1.		Remove Folder	This function is disabled. Contact BSI for information about removing folders.
	Remove Station	This function is disabled. Contact BSI for information about removing stations.		Enable Remote Voicetrack Stations	Enables remote voicetrack stations. See section 3.5.
	Add Folder	Adds folders to a station. See section 3.4.2.		Enable Automatic Voicetrack Transfers	Updates the latest voicetrack and log information between the local and remote OpX systems. See section 3.6.

3.2.3 Connections List

The Connections List shows the IP address of each module accessing the File Server. If multiple modules are accessing the File Server at the same time from the same machine, the same IP address might be shown multiple times.

The Connections List has two fields:

- **TCP Connections** at the top shows connections by any module performing real-time control. Examples include Studio Clients, Audio Servers and Auxiliary Audio Servers, the Import – Merge module, or the Clock Builder module. A number at the top-right (3 in the example to the right) shows the number of current connections.
- **FTP Connections** at the bottom shows any connections that are transferring files. Examples include the File Manager module, Info Edit module, or an Audio Server actively transferring audio files. A number at the top-right (1 in the example on the right) shows the number of current connections.

3.2.4 Station Folder List

The Station Folder List creates a tab for each station you add to your OpX system. Each tab shows a list of the folders available to each station and contains the following columns:

- **Folder** = full path to the folder.
- **Contents** = type of data in the folder (for example, AUDIO, RECORDS, LOGS).
- **Description** = description of folder contents (for example, News, Records, Music).

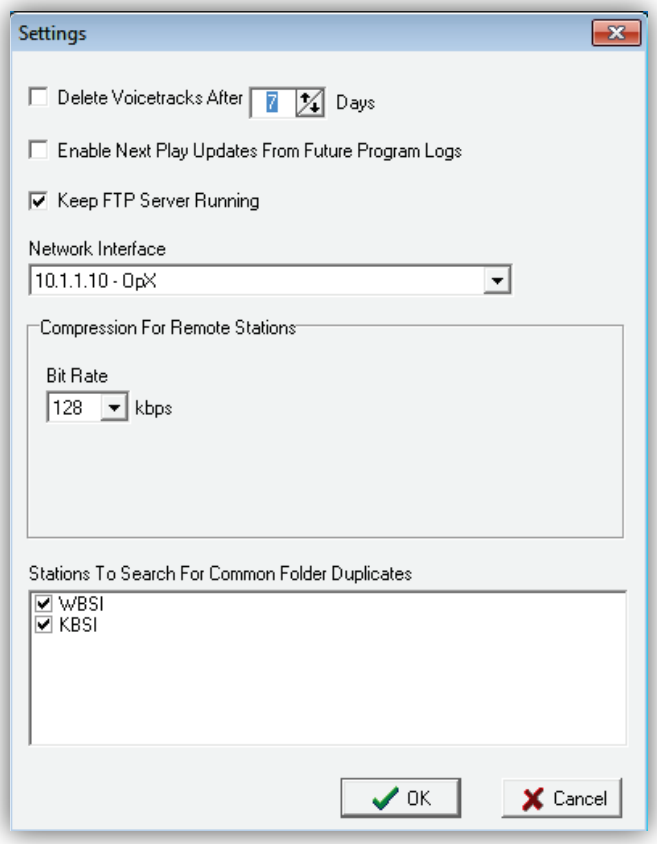
3.3 Configuring the File Server Module

The File Server module comes with default configuration settings that should suit most users. Using the **Settings** option on the **Edit** menu, you can change these settings to suit your requirements.

➢ **To configure the File Server module settings**

1. On the **Edit** menu, click **Settings**.

   The Settings dialog box appears.



2. Complete the fields in the dialog box (see Table 3-2).
3. Click **OK**.

Table 3-2. Fields in the Settings Dialog Box

Field	Description	Default
Delete Voicetracks After *n* Days	Maximum number of days that the system retains voice tracks before deleting them. To enable this option, check the check box, and then either accept the preset value (7) or change it.	Disabled
Enable Next Play Updates From Future Program Logs	When using the studio interface, enabling this option allows the jock to see when a selected item is going to play next, If this option is enabled, OpX looks at future logs as well as today's log to find the item.	Disabled
Keep FTP Server Running	Allows the File Server to check whether the FTP server is running and restarts it if it is not running.	Enabled
Network Interface	IP address of the OpX network interface.	See GUI
Bit Rate	Allows you to change the native bitrate of the audio files in OpX. Only files that are encoded with that bit rate will be able to be imported.	128 kbps
Stations To Search For Common Folder Duplicates	Check to have OpX search for files with the same name in other folders for the stations you are managing.	Enabled

3.4 Adding and Removing Stations

The OpX system is organized by "station." This means you must create a station on the File Server for each Audio Server or Auxiliary Audio Server you want to run.

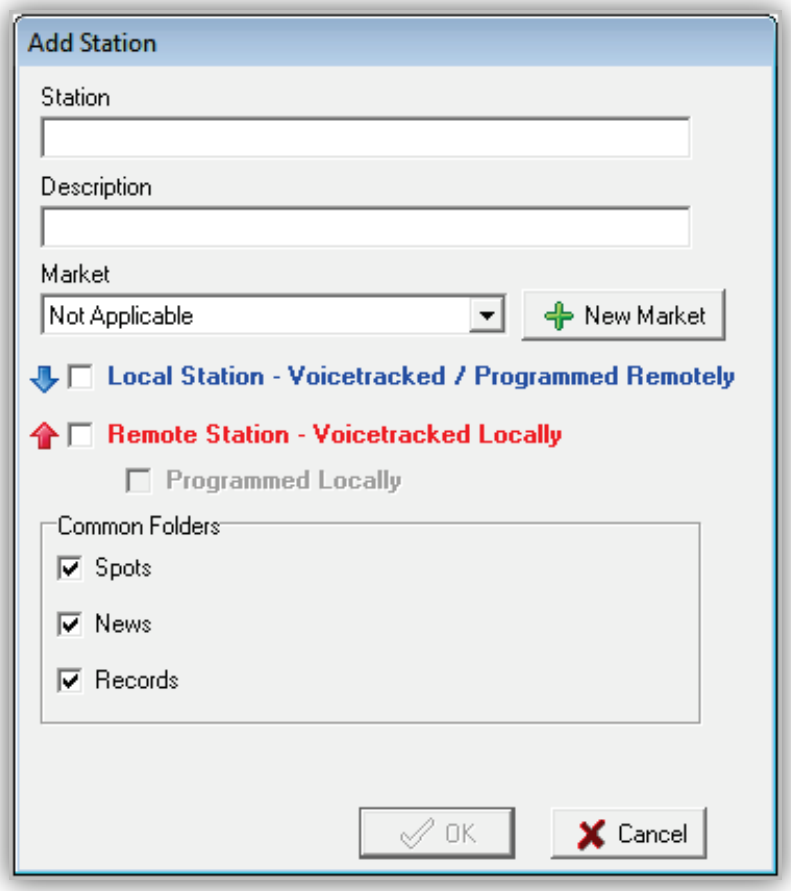
3.4.1 Adding Stations to Your File Server

The following procedure describes how to create a single station. To create multiple stations, repeat this procedure for each additional station you want to create.

➢ **To create a single station**

1. On the tool bar, click

   The Add Station dialog box appears.



2. Complete the fields in the dialog box (see Table 3-3).
3. Click **OK**.
4. To create additional stations, repeat this procedure.

Table 3-3. Fields in the Add Station Dialog Box

Field	Description	Default
Station	Enter the call sign for identifying this station.	—
Description	Enter a full description of the station. This description will identify this station in OpX.	—
Market	Use this field and the New Market button when using Remote Voicetracking (see section 3.7). For a standard station profile, you can leave this field set to "Not Applicable," although you can configure a market name if desired.	Not Applicable
Local Station – Voicetracked /Programmed Remotely	Check this check box when using Remote Voicetracking (see section 3.7). For a standard station profile, you can leave this check box unchecked.	Not checked
Remote Station – Voicetracked Locally	Check this check box when using Remote Voicetracking (see section 3.7). For a standard station profile, you can leave this check box unchecked.	Not checked

Field	Description	Default
Programmed Locally	Check this check box when logs are being built at the same offsite location where voice tracks are being recorded. Leave this check box unchecked when logs are merged back at the primary location.	Not checked
Common Folders	Check the folders you want this station to use. All files in the Common folders can be made available to any other stations.	Checked

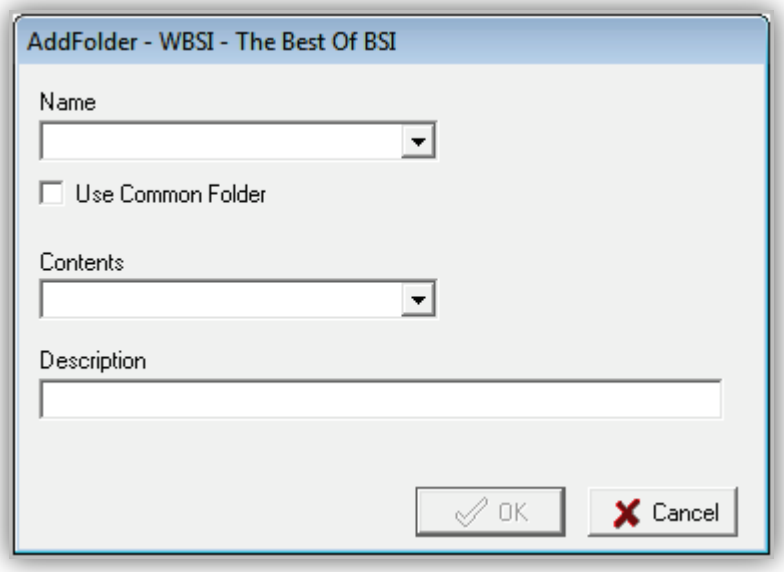
3.4.2 Adding a New Folder to a Station

When you create a station in OpX, a set of default folders is created for that station. However, you can add more folders to organize your audio files or other file types to your liking.

➢ **To add a new folder to a station**

1. On the tool bar, click

   An Add Folder dialog box similar to the following appears.



2. Complete the fields in the dialog box (see Table 3-4).
3. Click **OK**.
4. Restart the station's FTP server, Audio server and File Sync modules for the change to take effect.

Table 3-4. Fields in the Add Folder Dialog Box

Field	Description	Default
Name	Enter the name of the folder. This name should allow you to differentiate this folder from other folders.	—
Use Common Folder	To share this folder with other stations in your OpX system, check this check box. You can then share this station with other stations using the procedure in section 55. When checked, OpX does not add the folder to other stations automatically.	Not checked
Contents	Select the type of data you will store in the folder.	—
Description	Enter a description of the contents in the folder.	—

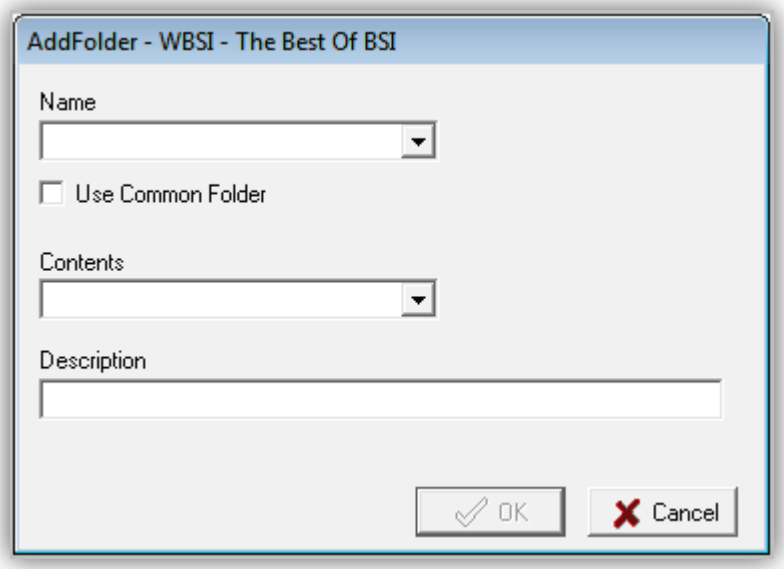
3.4.3 Adding a Common Folder to a Station

After you add a new folder to a station using the procedure in section 3.4.2, you can make that folder available on another station. This feature is useful if you want to share the same content, such as spots, jingles, sound effects, between stations.

➢ **To add a common folder to a station**

1. On the tool bar, click

   An Add Folder dialog box similar to the following appears.



2. Complete the fields in the dialog box (see Table 3-5).
3. Click **OK**.

4. Restart the FTP server followed by the Audio Server and File Sync modules for the change to take effect.

Table 3-5. Fields in the Add Folder Dialog Box

Field	Description	Default
Name	Use the drop-down list to select the folder you want to make available to this station.	—
Use Common Folder	Check this check box to make this folder available to this station.	Not checked
Contents	Select the type of data you will store in the folder.	—
Description	Enter a description of the contents in the folder.	—

3.5 Enabling or Disabling the Virtual Audio Server

The File Server's Virtual Audio Server must be enabled to allow studio clients to edit voice tracks on other OpX system locations. If the File Server's Virtual Audio Server is not running, the Remote Voicetrack station profile will not appear in the Station Selection window of the studio client.

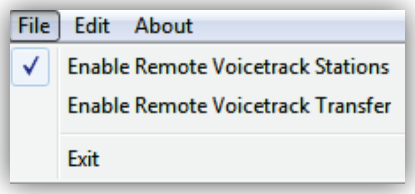
➢ **To enable the Virtual Audio Server**

1. Click **Enable Remote Voicetrack Stations** on the **File** menu.

   OR

   Click the icon.

2. To confirm that the Virtual Audio Server is running, click the **File** menu and confirm that a check mark appears next to **Enable Remote Voicetrack Stations**.



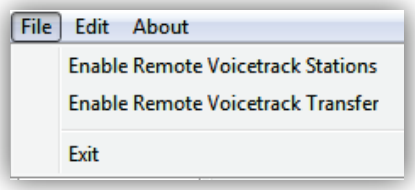
➢ **To disable the Virtual Audio Server**

1. Click **Enable Remote Voicetrack Stations** on the **File** menu.

   OR

   Click the icon.

2. To confirm that the Virtual Audio Server is no longer running, click the **File** menu and confirm that a check mark no longer appears next to **Enable Remote Voicetrack Stations**.



3.6 Enabling or Disabling the Voicetrack Transfer Module

The File Server's Voicetrack Transfer module updates the latest voicetrack and log information between the local OpX File Server and remote OpX systems.

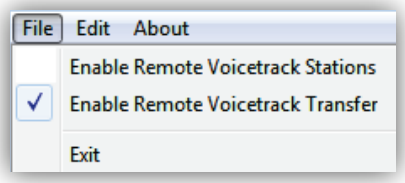
➢ **To enable the Voicetrack Transfer module**

1. Click **Enable Remote Voicetrack Transfer** on the **File** menu.

   OR

   Click the icon.

2. To confirm that Voicetrack Transfer module is running, click the **File** menu and confirm that a check mark appears next to **Enable Remote Voicetrack Transfer**.



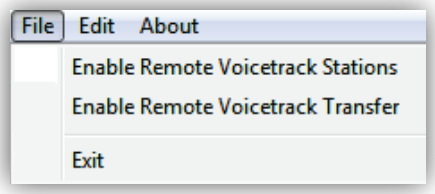
➢ **To disable the Voicetrack Transfer module**

1. Click **Enable Remote Voicetrack Transfer** on the **File** menu.

   OR

   Click the icon.

2. To confirm that the Voicetrack Transfer module is no longer running, click the **File** menu and confirm that a check mark no longer appears next to **Enable Remote Voicetrack Transfer**.



3.7 Remote Voice Track Transfer Module

The Remote Voice Track Transfer module transfers voice tracks from a remote studio to the primary OpX network automatically, without requiring user intervention. Just run this module on the local and remote file servers, and the files transfer between the serves automatically.

4 Audio Server Module

Topics:

- *Starting the Audio Server Module (page 61)*
- *Quick Tour (page 63)*
- *Configuring the Audio Server Module (page 72)*
- *Loading the Program Log (page 129)*
- *Adding, Editing, and Deleting Items in the Program Log (page 130)*
- *Playing Back a Program Log Item (page 133)*

This chapter describes the OpX Audio Server module.

The OpX Audio Server module handles audio playback and recording. If you have a multi-station cluster, you have an OpX Audio Server for each station.

The OpX Audio Server module reads your program log, requests songs and audio content from the File Server for playback, interfaces with general-purpose input/output (GPIO) devices and your audio switcher, and handles background recording of audio.

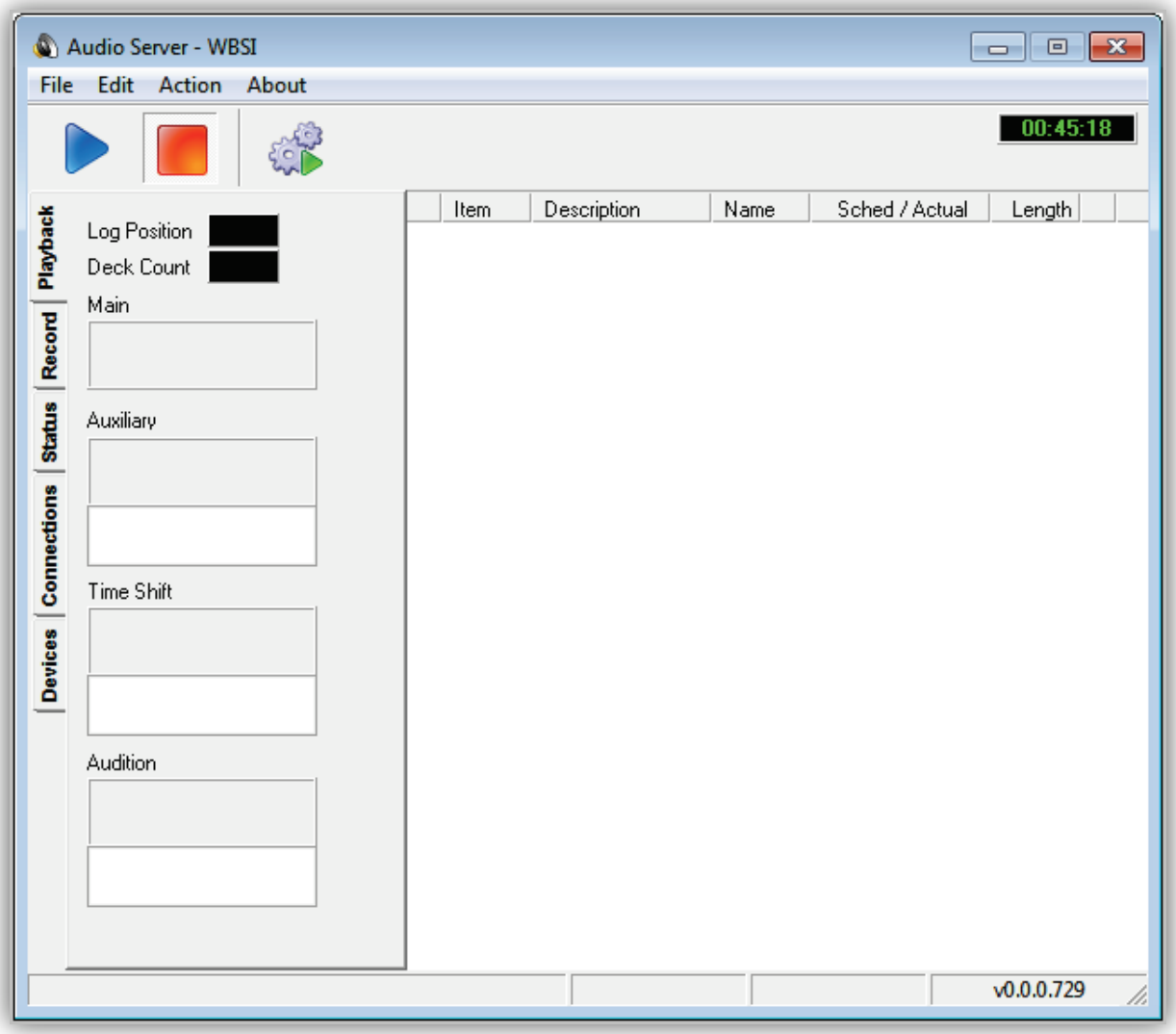
4.1 Starting the Audio Server Module

You must start the File Server module before you start the Audio Server module.

➢ **To start the Audio Server module**

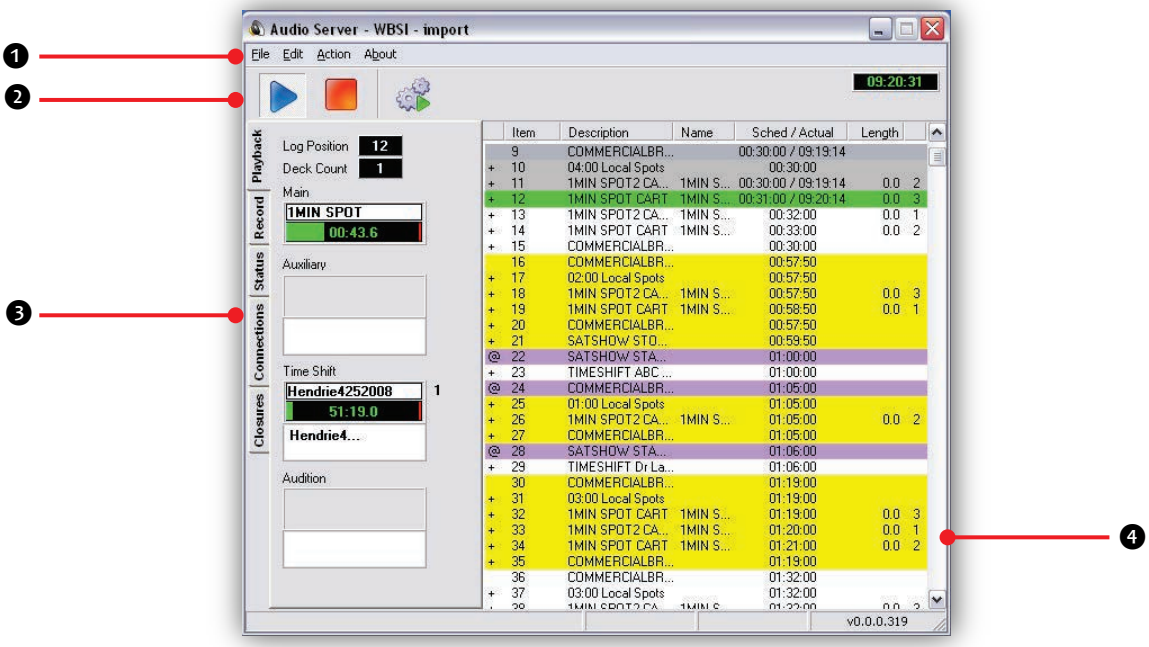
1. Start the File Server module (see section 3.1).
2. Double-click the Audio Server icon on your desktop or click the Windows Start button and click **Programs > Broadcast Software > OpX Audio Server**.

   An Audio Server window similar to the following appears. The first time the window appears, it will be empty.


Audio Server - WBSI
File
Edit
Action
About
00:45:18
Playback
Record
Status
Connections
Devices
Log Position
Deck Count
Main
Auxiliary
Time Shift
Audition
Item
Description
Name
Sched / Actual
Length
v0.0.0.729

4.2 Quick Tour

The following sections provide a quick tour of the Audio Server module interface.

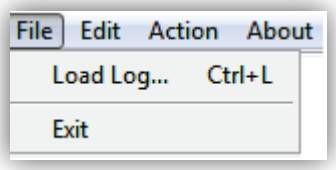


Number	Description
❶	Menu bar. See section 4.2.1.
❷	Tool bar. See section 4.2.2.
❸	Playback, Record, Status, Connections, and Devices tabs. See sections 4.2.3, 4.2.4, 4.2.5, 4.2.6, and 4.2.7.
❹	Program log display. See section 4.2.8.

4.2.1 Audio Server Module Menu Bar

The menu bar appears at the top of the Audio Server window. The following sections describe the menus on the menu bar.

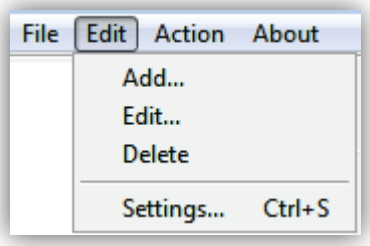
4.2.1.1 File Menu



Load Log = loads logs manually. See section 4.4.

Exit = exits the Audio Server module.

4.2.1.2 Edit Menu



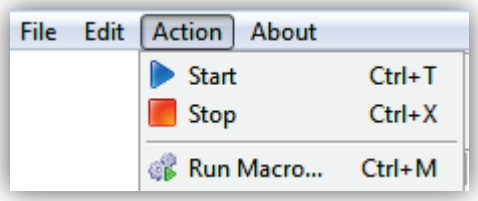
Add = inserts items manually into the currently loaded program log. See section 4.5.1.

Edit = edits items in the program log. See section 4.5.2.

Delete = deletes items from the program log. See section 4.5.3.

Settings = configures the Audio Server module settings. See section 4.3.

4.2.1.3 Action Menu

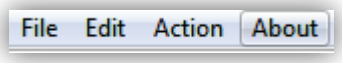


Start = starts playback of the highlighted item in the program log. See section 4.5.

Stop = stops all audio playback, including the Main, Auxiliary, Time Shift, and Audition decks. It does not stop playback of Hot Keys playing on a Studio Client module. See section 4.5.

Run Macro = allows you to run macros. Common uses are to run maintenance macros or one-time on-the-fly macros. See Appendix A - Macros.

4.2.1.4 About Menu



Opens a window that shows the version and build date of the Audio Server module you are running. This window also shows the amount of memory and virtual memory being used, and the amount of time that the Audio Server module has been running. See Figure 4-1for an example. To close the window, click **OK**.

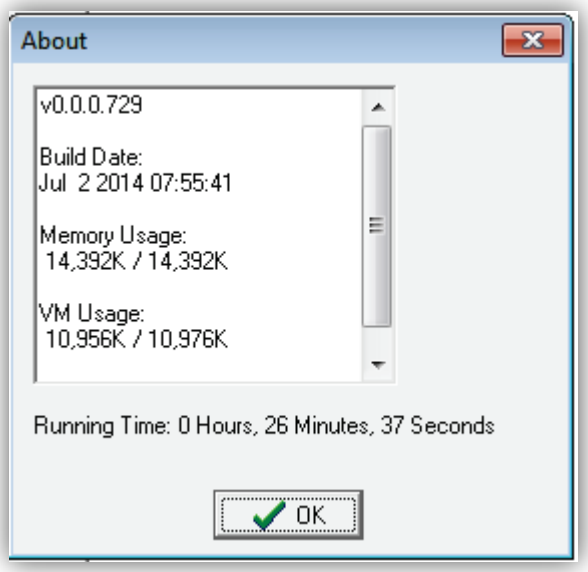
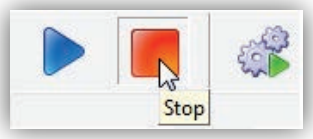


Figure 4-1. Example of About Information

4.2.2 Audio Server Tool Bar

The Audio Server module tool bar appears below the menu bar.

Moving the screen pointer over a tool displays the tool's function as a tooltip. For example:

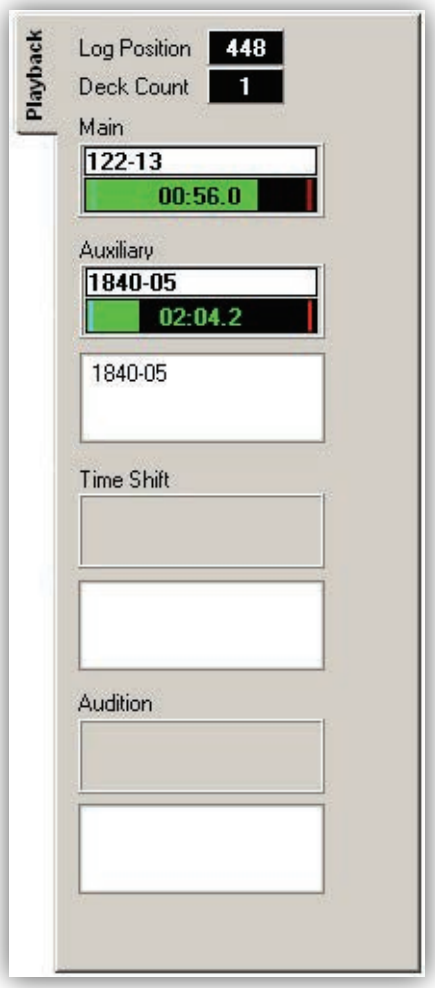


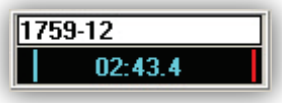
The following table describes the tools on the tool bar.

Tool	Description
	Starts playback of the highlighted item in the program log. See section 4.6.
	Stops all audio playback, including the Main, Auxiliary, Time Shift, and Audition decks. It does not stop playback of Hot Keys playing on a Studio Client module. See section 4.6.
	Allows you to run macros. Common uses are to run maintenance macros or one-time on-the-fly macros. See Appendix A - Macros.

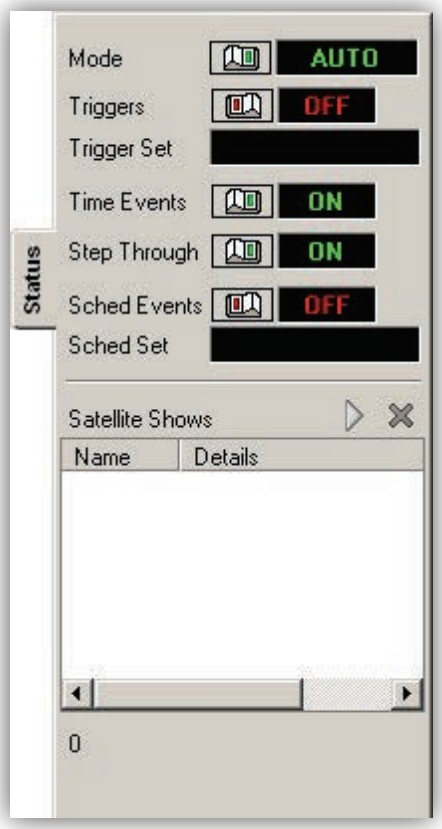
4.2.3 Playback Tab

The **Playback** tab on the left side of the Audio Server window shows the current status of all the audio playback devices. The following table describes the fields on the tab.



Field	Description
Log Position	Line item in the program log that is currently playing. If playback is stopped, Log Position is the item that will play next.
Deck Count	Total number of audio files playing on the Main Deck. For example: • If two tracks are segueing, the Deck Count increments from 1 to 2. • When a voice track occurs, the Deck Count can increment up to 3 to show the total number of elements playing at the same time.
Main	Shows the most recently started audio event in the Playback Deck Stack. There are three playback decks in the Playback Deck stack that cycle through the audio events in the program log. If a segue starts or multiple audio files are playing, the display shows the segueing in audio file, not the audio file segueing out. The top half of the display shows the name of the audio file that is currently playing. The bottom half shows the time until the end of the file is reached. A blue bar on the left side shows the intro point and a red bar is the segue point embedded into the playing audio file. The example below looks slightly different than the example to the right. The example below shows a song that is 02:43.6 long (2 minutes and 43.6 seconds) and has just started, while the example to the right shows a track that is 03:50.4 in length and has played ¾ of the way through, with 56.0 seconds remaining in the track.  The solid green bar in the example to the right shows the position of playback within the audio file and moves from left to right as the audio file playback progresses.
Auxiliary	Shows audio events playing in the Auxiliary deck. The Auxiliary deck is used by events from trigger sets, scheduled events sets, and some macros that play audio events.
Time Shift Display and Time Shift event list box	The Time Shift display shows audio events for the Time Shift function (see Chapter 8). The Time Shift event list box shows stacked-up events.
Audition display and Audition event list box	Show items being auditioned, including audio elements played while an OpX Studio Client is in Cue mode (see Chapter 5).

4.2.4 Record Tab



The **Record** tab shows the status of all four Audio Server record decks. If enough audio recording devices (audio cards) are installed on your Audio Server, you can record four separate audio streams at the same time.

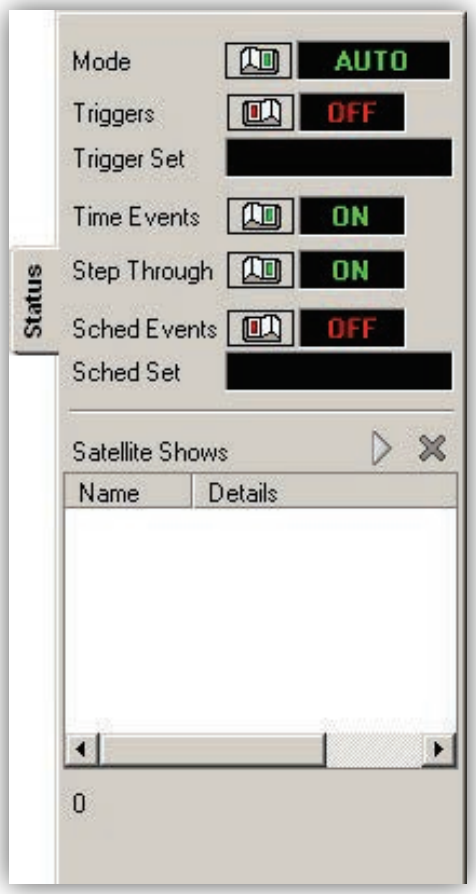
While actively recording each deck display shows the name of the audio file being recorded on the top half, while the bottom half shows the current record position. For example, in the figure to the right, Record Deck One is recording a half-hour program and is 04:28.7 into the file. The green bar shows the progress of the audio file, with a specified length.

When performing a record with no specified length, no progress bar will appear; however, a countdown timer shows the maximum length possible, along with the available hard drive space.

4.2.5 Status Tab

The **Status** tab shows all real- time modifiable settings that affect the way OpX plays audio and interacts with outboard hardware. Exercise care when changing these settings. The following table describes the fields on the tab.

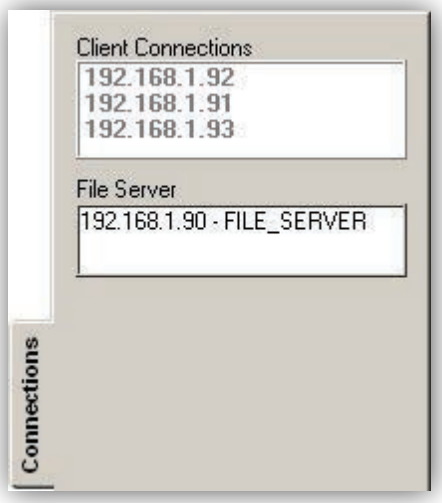
Field	Description
Mode	Adjusts how items in the program log progress. To adjust the mode click the On ( ) or Off ( ) icon. Three modes are available: • In Auto mode, playback of the program log follows the specified cue types of each event. The system obeys the Start Items Using Remote Channel check box setting (see Table 4-2 on page 78). • In Assist mode, similar to Auto mode, but items must be started manually. The system obeys the Start Items Using Remote Channel check box setting (see Table 4-2 on page 78). • In Manual mode, cue types are ignored and each event in the program log is treated as a manual cue. The system ignores the Start Items Using Remote Channel check box.
Triggers	Show On when the Audio Server is monitoring incoming triggers or Off when incoming triggers are disregarded. To toggle the Triggers indicator between On and Off, click the On ( ) or Off ( ) icon.
Trigger Set	Shows the name of the currently loaded Trigger set. If no set is loaded, this field is blank. You cannot change this field from this tab. To change it, run the LOADTRIGGERS macro from a scheduled event, trigger set, program log, Hot Key, or by clicking the Run Macro button in the Audio Server tool bar. For more information, see Appendix A - Macros.



Time Events	Shows whether the Audio Server is monitoring events in the program log with time-based cues. When Time Events are set to On, scheduled events are played at the specified times. If Time Events is set to Off, all time-based functions of the Audio Server are ignored. To toggle the Time Events indicator between On and Off, click the On ( ) or Off ( ) icon.
Step Through	This is an automatic system function.
Sched Events	Shows whether the Audio Server is monitoring the currently selected scheduled events set. When set to On, events in the scheduled events set run at the times specified in the set. When set to Off, all events in the set are ignored. To toggle the Sched Events indicator between On and Off, click the On ( ) or Off ( ) icon.
Sched Set	Shows currently loaded scheduled events. This field usually is used to run macros at specific times without being subject to what is happening in the program log. For more information, see section 4.3.11. You cannot change this field from this tab. To change it, run the LOADSCHEDULED macro from a scheduled event, trigger set, program log, Hot Key, or by clicking the Run Macro button in the Audio Server tool bar. For more information, see Appendix A - Macros.

Satellite Shows	Lists all Satellite Shows scheduled in the current hour's Clock (created using the OpX Clock Builder described in Chapter 8). Satellite Shows in this field can be started manually by highlighting the Satellite Show in the list and clicking the Start button at the top of the Satellite Shows list.

4.2.6 Connections Tab



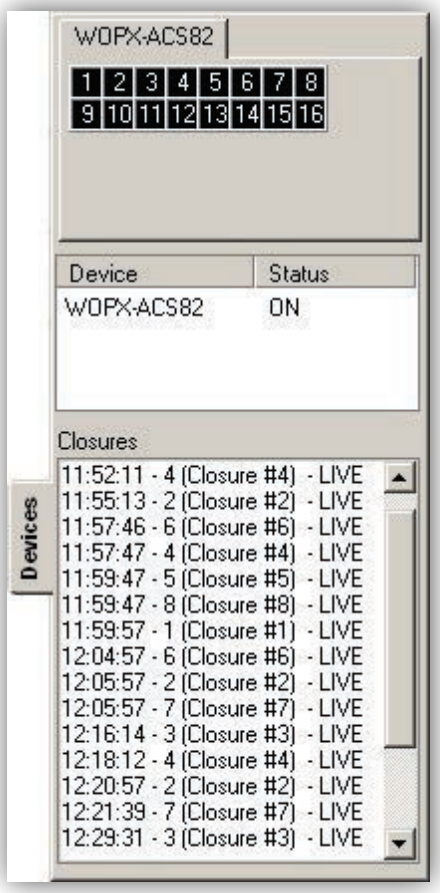
The **Connections** tab shows the IP addresses of:

- Workstations connected to the Audio Server.
- The File Server to which the Audio Server is connected.

The following table describes the fields on the tab.

Field	Description
Client Connections	Shows the IP address of any workstation running the OpX Studio Client. If more than one Audio Server is running on your network, Client Connections lists only the Studio Clients that are connected to this Audio Server
File Server	Shows the IP address of the File Server to which the Audio Server is connected.

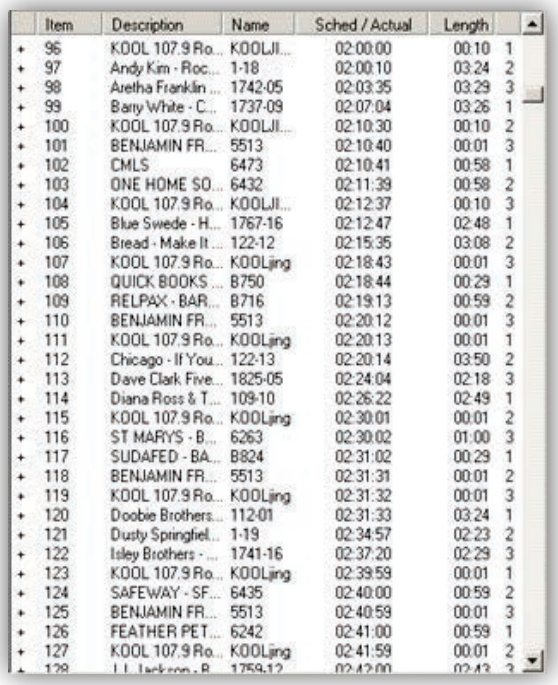
4.2.7 Devices Tab



The **Devices** tab shows the status of incoming triggers. The following table describes the fields on the tab.

Field	Description
Closure Grid	Shows the status of each closure input. This display is useful when setting up or troubleshooting closures to verify that your wiring connections are correct. Each indicator turns green when a closure is received. If more than one device is configured, tabs at the top appear for each. For troubleshooting, closure numbers in the grid are clickable. When you click a number a pseudo closure is generated and any function using that closure is triggered.
Device list	Shows the name and status of all hardware I/O devices configured on your Audio Server. You cannot change the statuses from this tab. To change it, run the DEVICE macro by clicking the Run Macro button in the Audio Server tool bar. For more information, see Appendix A - Macros.
Closures History List	Shows the history of all closure activity since the Audio Server was last started. The most recently activated closure appears at the bottom of the list. This list is useful when troubleshooting missing, incorrectly timed, or repeated closures to see which closures have or have not been activated.

4.2.8 Program Log Display



	Item	Description	Name	Sched / Actual	Length	
+	96	KOOL 107.9 Ro...	KOOLJI...	02:00:00	00:10	1
+	97	Andy Kim - Roc...	1-18	02:00:10	03:24	2
+	98	Aretha Franklin ...	1742-05	02:03:35	03:29	3
+	99	Barry White - C...	1737-09	02:07:04	03:26	1
+	100	KOOL 107.9 Ro...	KOOLJI...	02:10:30	00:10	2
+	101	BENJAMIN FR...	5513	02:10:40	00:01	3
+	102	CMLS	6473	02:10:41	00:58	1
+	103	ONE HOME SO...	6432	02:11:39	00:58	2
+	104	KOOL 107.9 Ro...	KOOLJI...	02:12:37	00:10	3
+	105	Blue Swede - H...	1767-16	02:12:47	02:48	1
+	106	Bread - Make It ...	122-12	02:15:35	03:08	2
+	107	KOOL 107.9 Ro...	KOOLjing	02:18:43	00:01	3
+	108	QUICK BOOKS ...	B750	02:18:44	00:29	1
+	109	RELPAX - BAR...	B716	02:19:13	00:59	2
+	110	BENJAMIN FR...	5513	02:20:12	00:01	3
+	111	KOOL 107.9 Ro...	KOOLjing	02:20:13	00:01	1
+	112	Chicago - If You...	122-13	02:20:14	03:50	2
+	113	Dave Clark Five...	1825-05	02:24:04	02:18	3
+	114	Diana Ross & T...	109-10	02:26:22	02:49	1
+	115	KOOL 107.9 Ro...	KOOLjing	02:30:01	00:01	2
+	116	ST MARYS - B...	6263	02:30:02	01:00	3
+	117	SUDAFED - BA...	B824	02:31:02	00:29	1
+	118	BENJAMIN FR...	5513	02:31:31	00:01	2
+	119	KOOL 107.9 Ro...	KOOLjing	02:31:32	00:01	3
+	120	Doobie Brothers...	112-01	02:31:33	03:24	1
+	121	Dusty Springfiel...	1-19	02:34:57	02:23	2
+	122	Isley Brothers - ...	1741-16	02:37:20	02:29	3
+	123	KOOL 107.9 Ro...	KOOLjing	02:39:59	00:01	1
+	124	SAFEWAY - SF...	6435	02:40:00	00:59	2
+	125	BENJAMIN FR...	5513	02:40:59	00:01	3
+	126	FEATHER PET...	6242	02:41:00	00:59	1
+	127	KOOL 107.9 Ro...	KOOLjing	02:41:59	00:01	2
+	128	J.J. Jackson - B...	1759-12	02:42:00	02:43	3

Program log display lists the audio files and other automation (macro) events to be executed throughout the day (audio and macro events can also be executed from the scheduled events and Hot Keys). Think of the program log as the piano-roll and the Audio Server as the player-piano.

Program logs in OpX are expected to be for a 24-hour period. Usually, program logs are imported from Traffic Log- and Music Log-generating applications. However, they can also be generated manually using the OpX Import – Merge application (see Chapter 9).

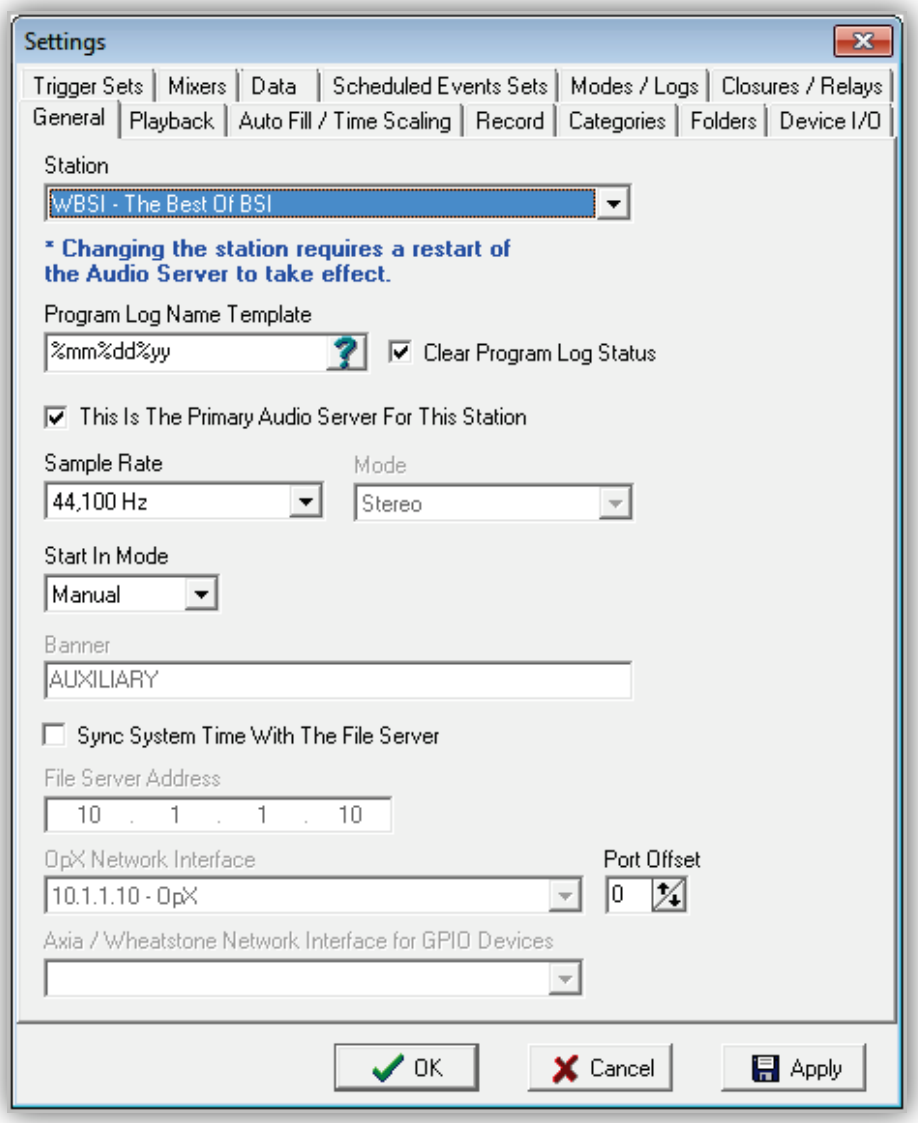
4.3 Configuring the Audio Server Module

The Audio Server module comes with default configuration settings. Using the **Settings** option on the **Edit** menu, you can change these settings to suit your requirements. For convenience, the settings are organized in tabs in the Settings window.

➢ **To configure the Audio Server module settings**

1. On the **Edit** menu, click **Settings**.

   *The Settings dialog box appears, with the **General** tab displayed.*



2. Complete the fields in the dialog box tabs.

General Settings – see section 4.3.1	Folder settings – see section 4.3.6	Scheduled event sets – see section 4.3.11
Playback settings – see section 4.3.2	Device I/O settings – see section 4.3.7	Modes and logs – see section 4.3.12
Auto fill and time scaling settings – see section 4.3.3	Trigger sets – see section 4.3.8	Closures and relays – see section 4.3.13
Record settings – see section 4.3.4	Mixer settings – see section 4.3.9	
Category settings – see section 4.3.5	Data settings – see section 4.3.10	

3. When you finish, click **Apply** and **OK**.

4.3.1 General Configuration Settings

The **General** tab contains basic settings for setting up your Audio Server.

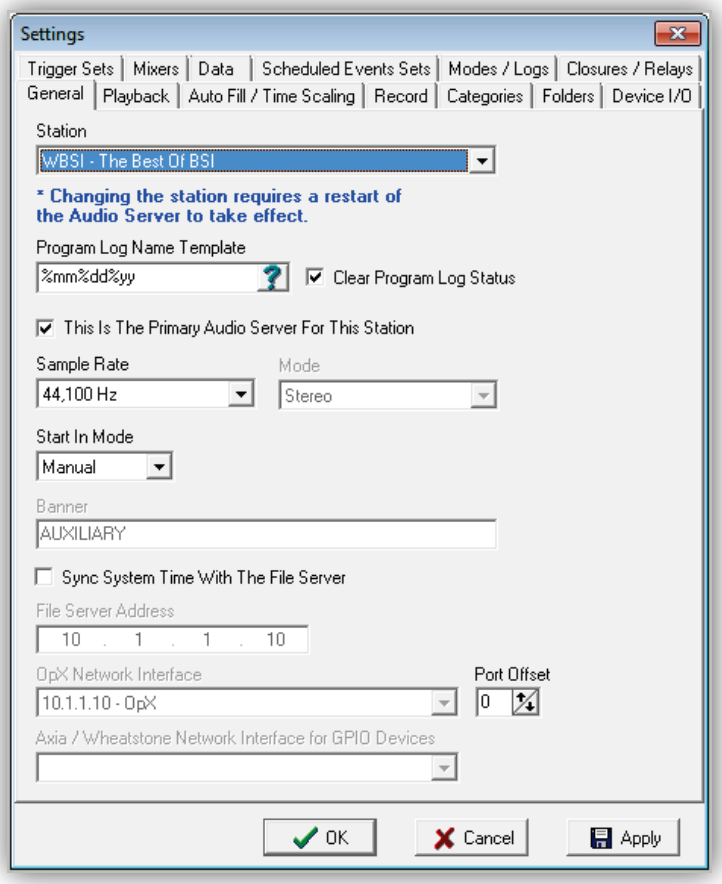


Figure 4-2. General Tab

Table 4-1. Fields in the General Tab

Field	Description	Default
Station	Allows you to select the default station. All Stations configured on your OpX File Server will be listed.	Varies by setup

Field	Description	Default
Program Log Name Template	Determines the file name that OpX loads when the log automatically loads at midnight. Your entry can include standard characters and meta-variables, which are used to add a dynamic element to program log loading. Rather than limiting the log to a static name, specific sequences of characters can be used to represent dynamically changing information, such as the date, day, year, and day of the week. The following meta-variables can be entered into this field: • %yy Year as a 2-digit number. Examples: For 2009, replace %yy with “09”. For 2016, replace %yy with “16”. • %yyyy Year as a 4-digit number. Example: For 2016, replace %yyyy with “2016”. • %m Month as a 1- or 2-digit number without a leading zero. Examples: For June, replace %m with “6”. For November, replace %m with “11”. • %mm Month as a 2-digit number with a leading zero. Examples: For July, replace %mm with “07”. For October, replace %mm with “10”. • %mmm Month as a 3-letter abbreviation. Example: For November, replace %mmm with “Nov”. • %mmmm Month as a full name. Example: For August, replace %mmmm with “August”. • %d Day as a 1- or2-digit number without a leading zero. Examples: For the 5th, replace %d with “5.” For the 12th, replace %d with “12”. • %dd Day as a 2-digit number with a leading zero Examples: For the 7th, replace %d with “07”. For the 24th, replace %d with “24”, • %ddd Day as a 3-letter abbreviation. Example: For Tuesday, replace %ddd with “Tue”. • %dddd Day as a full name. Example: For Friday, replace %dddd with “Friday”. If you generate new logs every day and your log-generation software creates logs with titles such as: • “020108t.log”, “102607t.log”, or “120708t.log”, enter “%mm%dd%yyt.log” into this field. • Monday.txt”, “Wednesday.txt”, or “Saturday.txt”, enter “%dddd” into this field. • “Jan 2, 2008.log”, “Nov 30, 2009.log”, or “Jul 4, 2008”, enter “%mmm %d, %yyyy” into this field. Do not include extensions. The OpX import process adds a .xml extension automatically. For more information about importing and merging logs, see Chapter 9.	%mm%dd%yy

Field	Description	Default
Clear Program Log Status	Automatically clears as- played information when a program log is loaded. This is useful for re-using logs or to ensure that the information shown when airing a log is not from a previous playback.	Checked
This Is The Primary Audio Server For This Station	Check this check box to have your station's main ("Primary") Audio Server write all hardware settings to the server, so the Clock Builder module and any backup Audio Servers that are running are aware of the hardware settings from your station's Primary Audio Server, such as names you assigned to audio switcher channels, triggers and relays. On backup Audio Servers, uncheck this check box to prevent inadvertent changes you make on the backup server from overwriting critical settings on your on-air Primary Audio Server.	Checked
Sample Rate	Selects the output sample rate (very significant when used with a digital audio card) and the rate of the audio files that OpX will play. OpX plays audio files that have a singular rate, so be sure all your audio files have the same sample rate.	44,100 MHz
Mode	Output stereo/mono mode. A mix of stereo and mono audio files is acceptable to play with OpX, but they must be the same sample rate. If mono is selected, all stereo and mono audio files played will be summed and output to both left and right channels. If Stereo is selected, stereo audio files remain stereo and mono files are summed out both left and right channels.	Stereo
Start in Mode	Determines the automation mode in which the application starts. Always use Auto.	Manual
Banner	Not used with a standard Audio Server. This field is reserved for naming the Auxiliary Audio Server. See Chapter 5.	AUXILIARY
Sync System Time With The File Server	Do not use (for legacy systems only).	Unchecked
File Server Address	IP address of the File Server.	
OpX Network Interface	OpX can communicate with Axia/Wheatstone hardware on a separate NIC. If OpX detects an Axia or Wheatstone audio driver installed, select the NIC used for your Axia or Wheatstone audio network; otherwise, this field is unavailable.	10.1.1.10 – OpX
Port Offset	The communication port for clients. This value must be unique for each Audio Server.	0
Axia/Wheatstone Network Interface for GPIO Devices	If OpX detects an Axia or Wheatstone audio driver installed, enter the local IP address of the NIC that will use the Axia or Wheatstone audio network; otherwise, this field is unavailable.	—

4.3.2 Playback Configuration Settings

The **Playback** tab contains configuration settings for audio playback devices are designated for each playback deck in OpX.

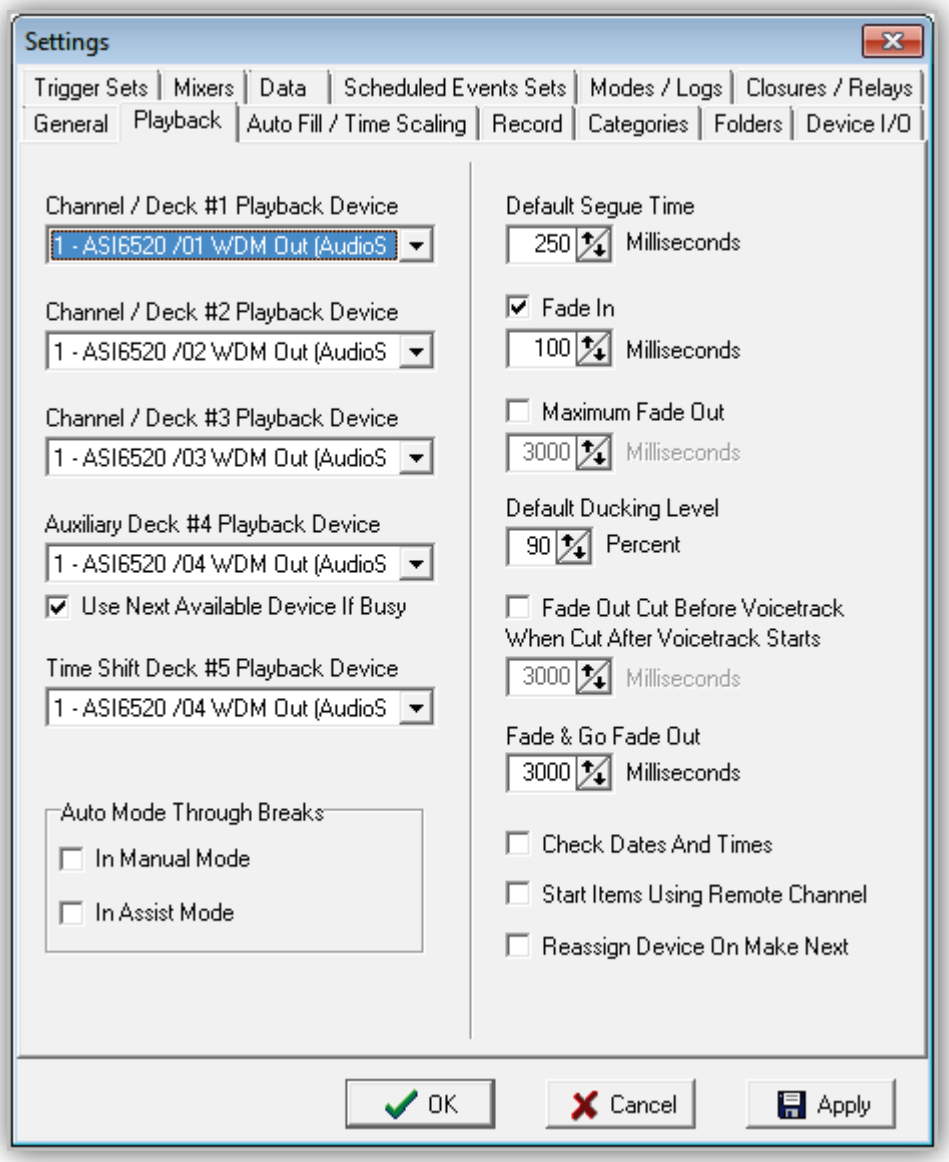


Figure 4-3. Playback Tab

Table 4-2. Fields in the Playback Tab

Field	Description	Default
Channel/Deck #1 Playback Device Channel/Deck #2 Playback Device Channel/Deck #3 Playback Device	These fields determine which audio devices are used for each of the three main playback decks. The main playback decks are rotated as playback occurs. The deck with which each item will play appears in the far-right column of the Program Log Display in the Audio Server. Because OpX uses a software-based audio mixing engine, all three Channel Playback fields can be set to the same device or, for more control, to their own individual device. We recommend you set each deck to its own device. Typically, deck 1 would be 1WDML, deck 2 would be 2WDML, and so on. Setting each Channel Playback Device field to a different audio device is useful for manual control over fades when each device is connected to a separate channel strip on your console. Note: Always use WDM drivers. Never select Wave, even if Wave drivers are installed.	1 – AS16520/01 WDM Out (AudioS) 1 – AS16520/02 WDM Out (AudioS) 1 – AS16520/03 WDM Out (AudioS)
Auxiliary Deck #4 Playback Device	Used to playback triggered events. You can select an independent device for flexibility or the same device as your main decks playback device. Because OpX has internal mixing, multiple decks can use the same playback device.	1 – AS16520/04 WDM Out (AudioS)
Use Next Available Device If Busy	Do not use for legacy systems.	Checked
Time Shift Deck #5 Playback Device	Used to play back satellite shows recorded using the Clock Builder Record function. If you use Time Shift functionality, select a unique device for this deck and configure a Mixer that controls this deck, so the Satellite Show settings can mute and unmute this channel independently of other playback decks for spot-replacement functionality.	1 – AS16520/04 WDM Out (AudioS)
Auto Mode Through Breaks	These options allow the Audio Server to enter Auto mode automatically when breaks are encountered in Manual or Assist mode. This means that when a break starts, all the audio files segue automatically and continue to play through as if in Auto mode.	Unchecked
Default Segue Time	OpX segues between audio cuts at the points you set in each audio file. To segue between cuts, even if the cuts do not have segue points set, set this option to the length a default segue should take to overlap the cuts. Even with this feature enabled, the set cue points are used if they are set in the particular cuts. This setting applies only when one or both cuts have no segue points set (see Chapter 10).	250 milliseconds
Fade In	Determines the fade-in time applied to the starting audio element when a segue occurs.	Checked 100 milliseconds
Maximum Fade Out	Maximum fade out time of the audio element that is ending during a segue. • Unchecked = time of the full intro/segue (length of either the ending element's segue time or the starting element's intro time, whichever is shorter) is used as the fade out length. • Checked = fade out time is either the full intro/segue time determined on-the-fly or the length set here, whichever is shorter.	Unchecked 300 milliseconds
Default Ducking Level	Ducking attenuates audio elements when a voicetrack is playing. This option ducks songs or other audio element types down under a voice track. You can set the ducking level on a per-voicetrack basis, but this setting determines the default level on new voicetracks.	90 percent
Fade Out Cut Before Voicetrack	Fades down the volume of the cut before a voicetrack. Use only with cuts produced in a manner that requires this feature.	Unchecked
When Cut After Voicetrack Starts		3000 milliseconds

Field	Description	Default
Fade & Go Fade Out	Length of the cut fade when using the "Fade-and-Go" feature on the studio client.	3000 milliseconds
Check Dates And Times	To have OpX check that all your audio elements are valid for the dates set in the audio files, enable this option (see Chapter 10). If OpX finds an audio file that is outside its date range, playback of that audio event causes an error and the event is skipped.	Unchecked
Start Items Using Remote Channel	When checked, the next playback deck changes to whichever pot the Start Next button is on. If Deck 2 is next and you push start on remote start 1, for example, the next cut plays out of deck 1.	Unchecked
Reassign Device on Make Next	When using the Make Next feature, this option always changes the device on that item to deck 1.	Unchecked

4.3.3 Auto Fill and Time Scaling Configuration Settings

The **Auto Fill / Time Scaling** tab contains configuration settings for auto-fill and time scaling.

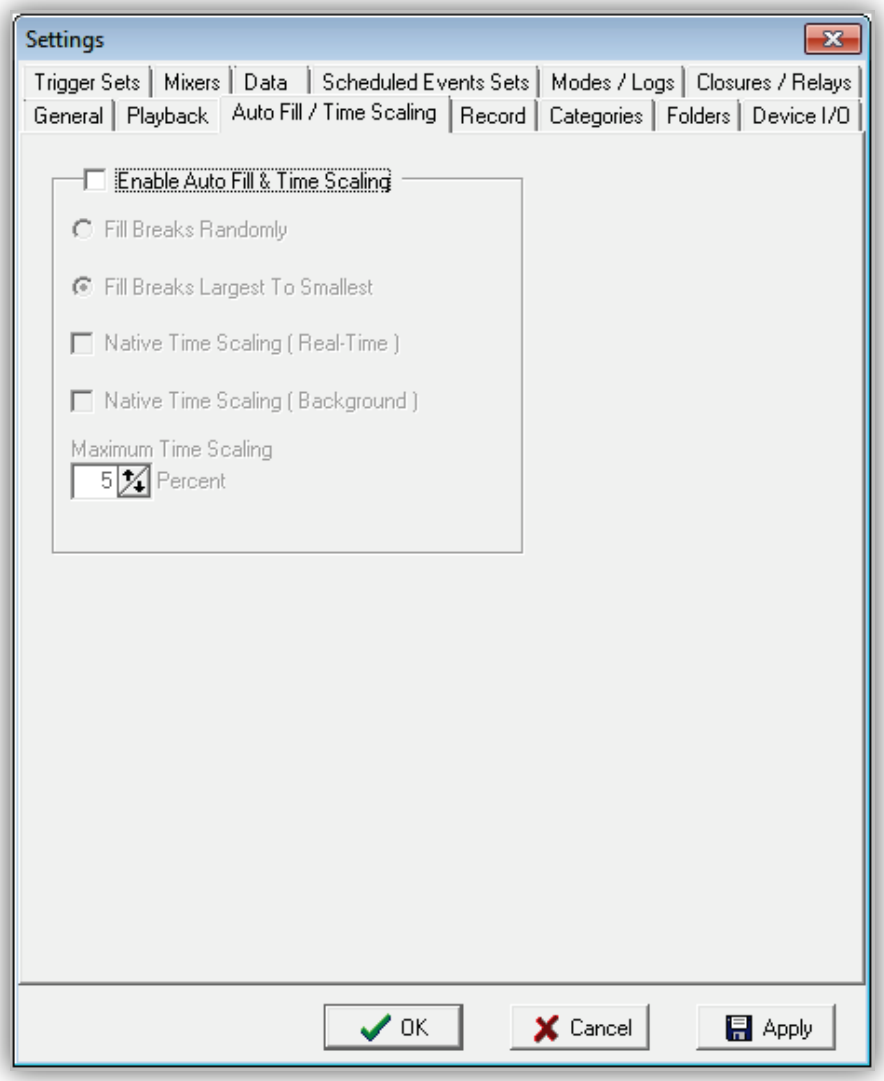


Figure 4-4. Auto Fill / Time Scaling Tab

Table 4-3. Fields in the Auto Fill / Time Scaling Tab

Field	Description	Default
Enable Auto Fill and Time Scaling	When checked, Auto Fill fills mandatory breaks automatically (created with OpX's Clock Builder module) that do not have enough content to complete their set length. The Auto Fill function uses audio files you place in your station's Fill folder. Checking this check box enables the remaining options in this tab.	Unchecked
Fill Breaks Randomly	When checked, audio events are chosen at random from your Fill folder until your break is filled.	Disabled
Fill Breaks Largest To Smallest	When checked, the longest audio file from your Fill folder that will fit your remaining break period is added to your break. If there is time in your break, that time continues to be filled with the largest file that fits that time until your break is filled completely.	Disabled

Field	Description	Default
Native Time Scaling (Real-Time)	Select Native Real Time. Other selections are provided for legacy or special-case use.	Disabled
Native Time Scaling (Background)	Select Native Real Time. Other selections are provided for legacy or special-case use.	Disabled
Maximum Time Scaling	Determines the maximum time scaling percentage possible. For best results, use a value from 5 to 15%,	Disabled

4.3.4 Record Configuration Settings

The **Record** tab has drop-down lists for selecting the record device for each record deck. You can set record decks to their own specific device for flexibility, allowing you to record four sources simultaneously. If the audio hardware installed on your system does not have four record devices available, decks can share the same record device. When two or more decks share the same record device, only one can access it at a time. The first deck to start recording with a device locks out other decks that try to use that same device until the first deck finishes recording.

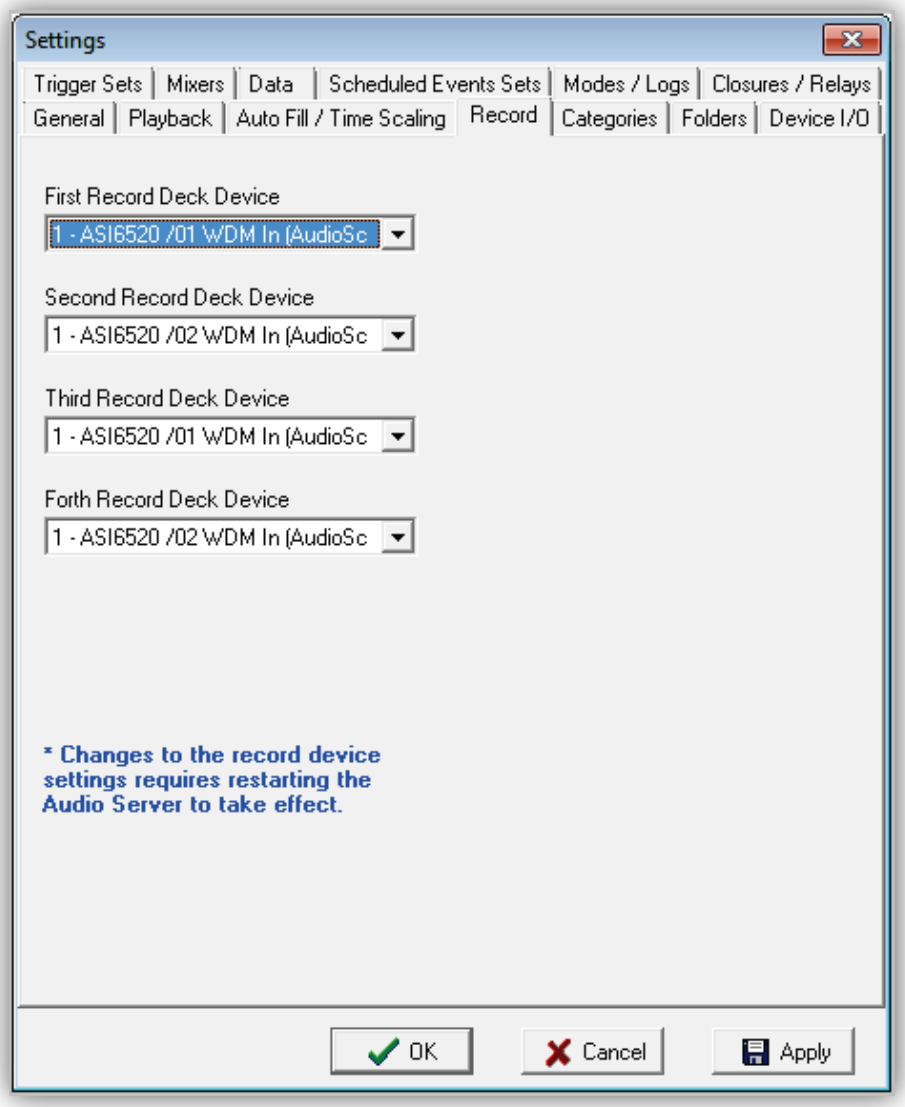


Figure 4-5. Record Tab

4.3.5 Category Configuration Settings

OpX uses categories to organize your audio and add another dimension to the types of searches you can do when adding audio files to your logs. You add, delete, or edit categories using the **Categories** tab. You set an audio cut's category using the Info Edit module (see Chapter 10).

If you define a category field to import, you must specify it here.

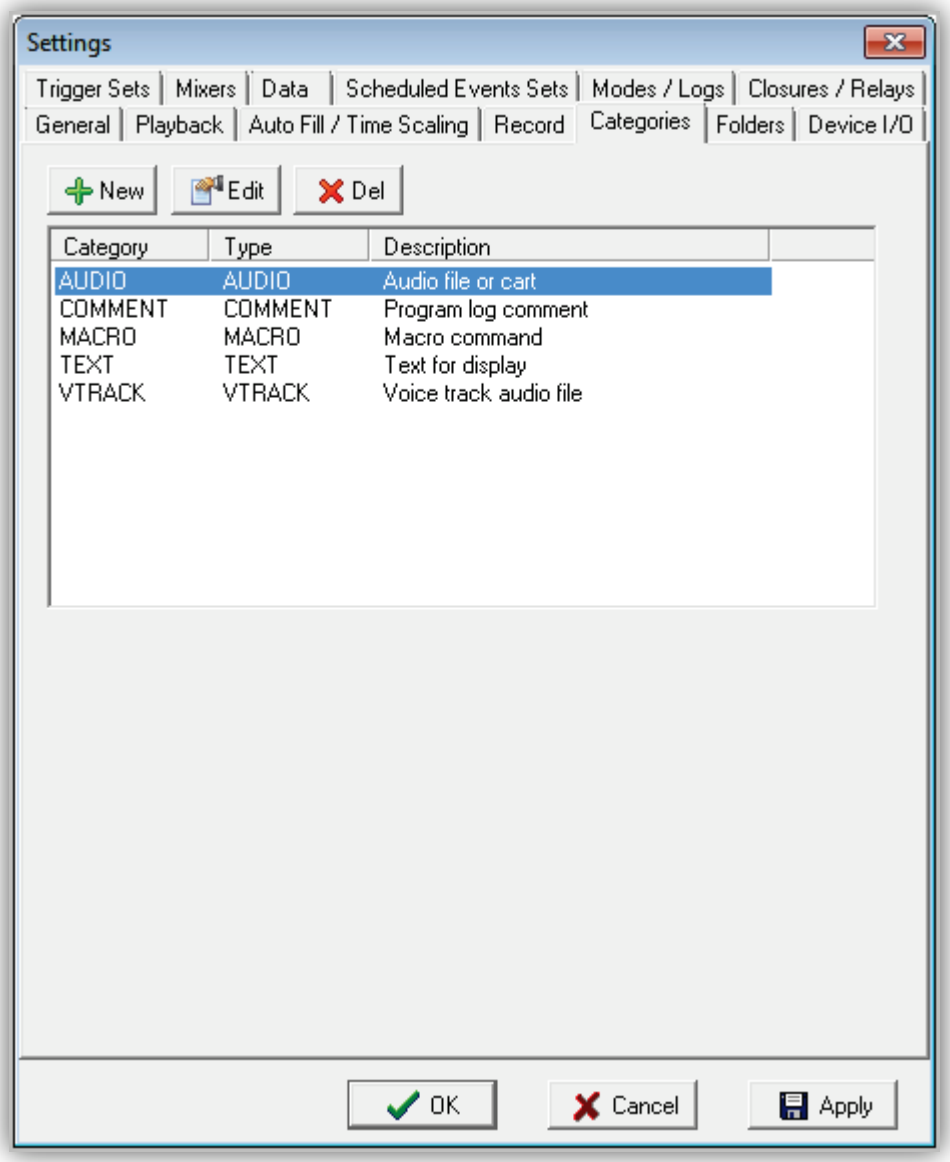


Figure 4-6. Categories Tab

The following sections describe how to add, edit, or delete categories.

4.3.5.1 Adding Categories

➢ **To add a category to your Audio Server**

1. In the **Categories** tab, click the **New** button

   The Category dialog box appears.

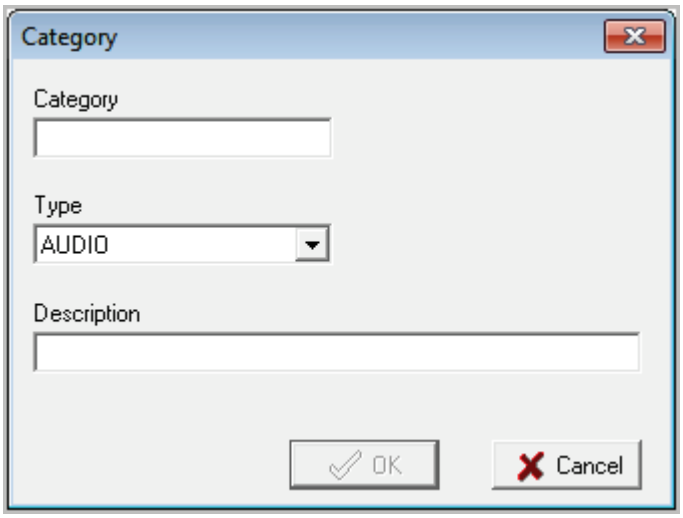


Figure 4-7. Category Dialog Box

2. Complete the fields in the dialog box (see Table 4-4).
3. Click **OK**.

Table 4-4. Fields in the Category Dialog Box

Field	Description	Default
Category	Enter a short name.	—
Type	Select the content type. Generally, Audio should be selected.	AUDIO
Description	Enter a description of the category.	—

4.3.5.2 Editing Categories

There might be times when you need to edit a category. For example, you might want to change the category name, type, or description.

Note: You cannot edit default categories.

➢ **To edit a category**

1. In the **Categories** tab, click the category you want to edit.
2. Click the **Edit** button

   The Category dialog box appears.
3. Edit the fields you want to change (see Table 4-4).
4. Click **OK**.

4.3.5.3 Deleting Categories

If you no longer need a category, you can delete it. You can delete any category, except default categories.

Note: A precautionary message does not appear before you delete a category. Therefore, be sure you do not need a category before you delete it. You cannot undo a category after it has been deleted.

➢ **To delete a category**

1. In the **Categories** tab, click the category you want to delete.
2. Click the **Del** button

4.3.6 Folder Configuration Settings

The **Folders** tab allows you to select a path for the local storage of your audio, carts, logs, and items. **Local Audio Folder** shows the path where the files are stored. For example, in Figure 4-8, the path in Local Audio Folder is “D:\” and the path for Liners is “D:\WBSI\Liners”. To specify the path, either enter it in the **Local Audio Folder** field or click the icon, navigate to the desired folder, and then click the folder and click **OK**.

Note: Do not use the root folder to store files. Always use *Drive*:\OpXAudio.

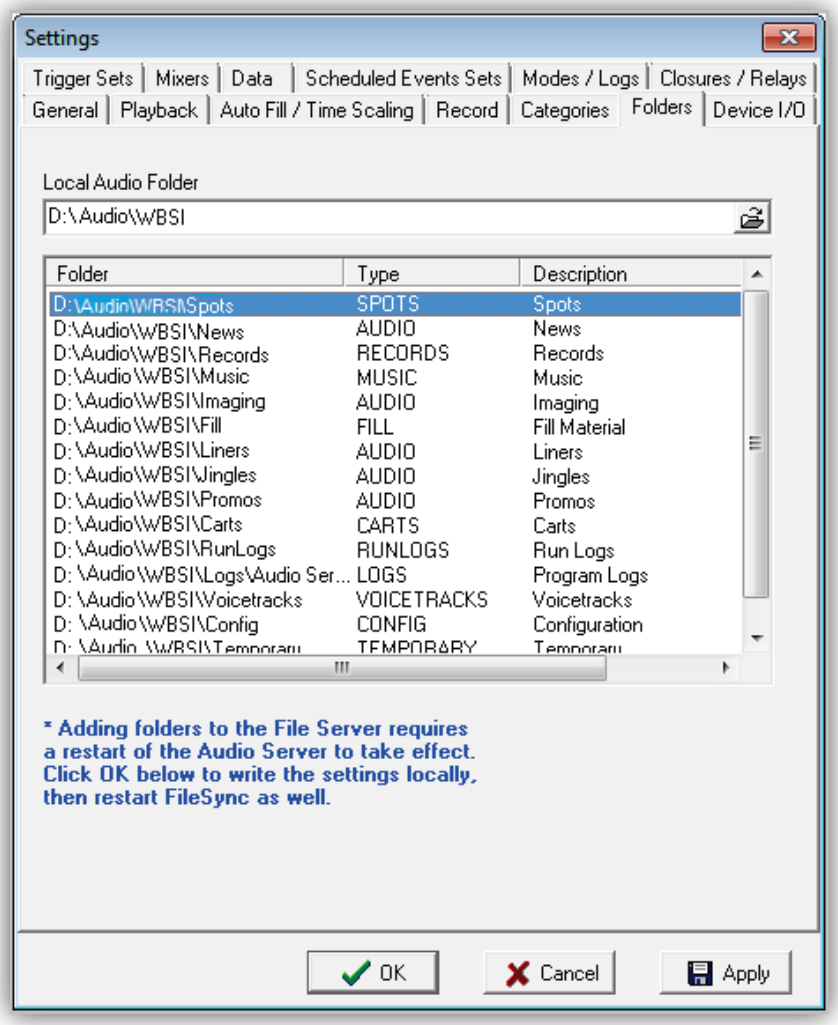


Figure 4-8. Folders Tab

4.3.7 Device Configuration I/O Settings

Any device that sends closures to outboard devices, receives closures from other devices, or switches audio is considered an I/O device. The **Device I/O** tab allows you to configure these devices.

Figure 4-9. Device I/O Tab

4.3.7.1 Adding a Serial Device

Serial devices supported by OpX are the Broadcast Tools SS 8.2, ACS 8.2, SS 16.4, GPI-32, and SRC 8-III.

➢ **To add a serial device**

1. Be sure the device you are configuring for OpX is connected and configured properly.
2. In the **Device I/O** tab, click the **Serial Device** button

   The Serial Device dialog box appears.

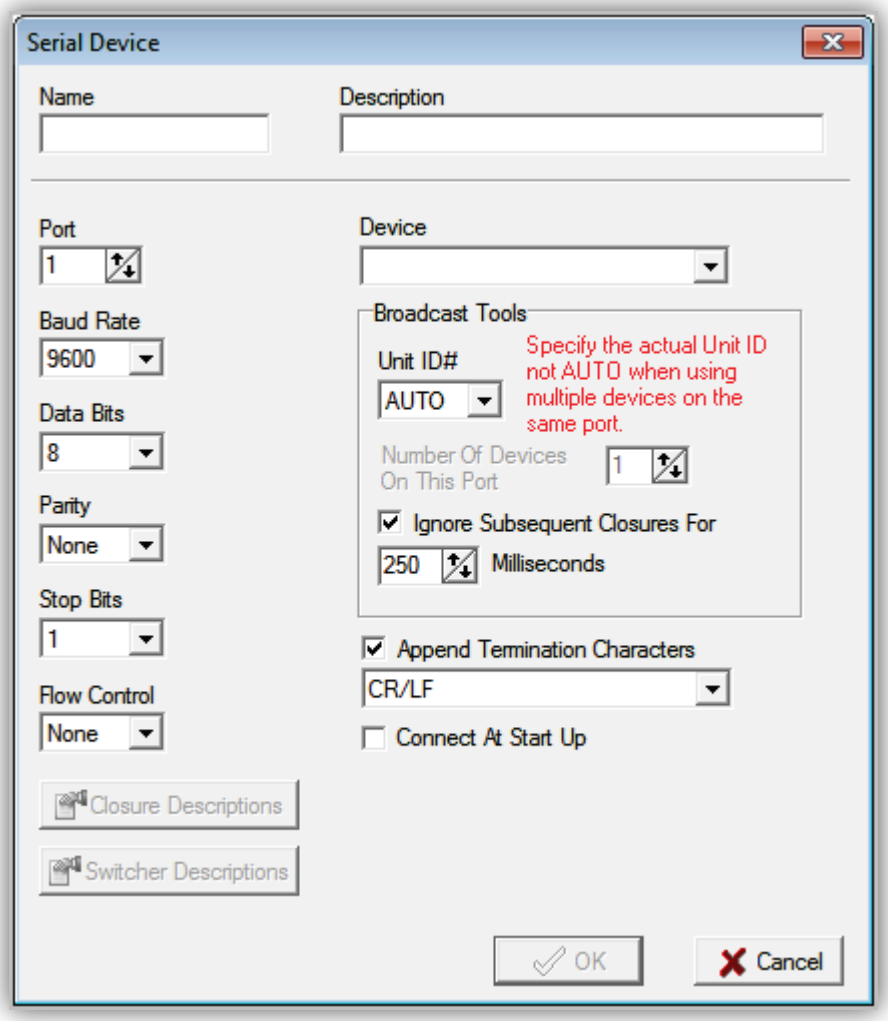


Figure 4-10. Serial Device Dialog Box

3. Complete the fields in the dialog box (see Table 4-5).

4. Click **OK**.

Table 4-5. Fields in the Serial Device Dialog Box

Field	Description	Default
Name	Enter a short identification name for your serial device. This name should allow you to differentiate this device from other devices.	—
Description	Enter a verbose description for your serial device.	—
Port	Enter the port number based on the requirements for your serial device. Refer to the documentation for your serial device.	1
Baud Rate	Set the baud rate, in bits per second (bps), based on the requirements for your serial device. Refer to the documentation for your serial device.	9600
Data Bits	Set the number of data bits based on the requirements for your serial device. Refer to the documentation for your serial device.	8
Parity	Set the parity setting based on the requirements for your serial device.	None
Stop Bits	Set the number of stop bits based on the requirements for your serial device. Refer to the documentation for your serial device.	1
Flow Control	Set the flow control based on the requirements for your serial device. Refer to the documentation for your serial device.	None
Device	Available options are for Raw Serial Device (used for serial devices not explicitly supported by OpX), Broadcast Tools SS 8.2, ACS 8.2, SS 16.4, GPI-32, SRC 8-III, 8&2 D/ev, SRC-16, and GPI-16. For Broadcast Tools devices: • Select the ID address that your device is set to from the Unit ID# drop-down list. The default device ID for Broadcast Tools switchers purchased through BSI is “1”. • To avoid invalid or “chattering” relays, set a period of time for OpX to ignore subsequent closures after an initial closure is received enable by enabling the Ignore Subsequent Closures For… option and selecting a time-out time (in milliseconds). • To aid identification of what is connected to your Broadcast Tools device, click the Closure Descriptions and/or Switcher Descriptions buttons. Figure 4-11 shows an example Closure Descriptions list. As this example shows, it is easier to remember the friendly closure name “Rosh Limberg Commercial Break Start” after several months than it is to remember “Closure #2”. Figure 4-12 and Figure 4-13 show input and output description lists which are editable by clicking on the Switcher Descriptions button.	—
Append Termination Characters	Select the terminating characters that will be appended to the end of each command sent to the serial device. The default termination characters are a carriage return and line feed.	Checked CR/LF
Connect At Start Up	To have your Audio Server connect to this serial device automatically at startup, check this check box.	Unchecked

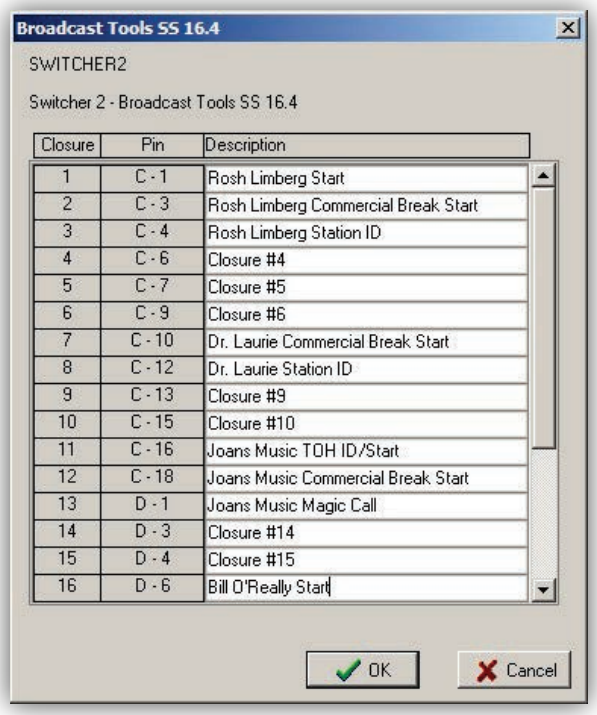


Figure 4-11. Closure Description List for a Broadcast Tools Switcher/Trigger Device

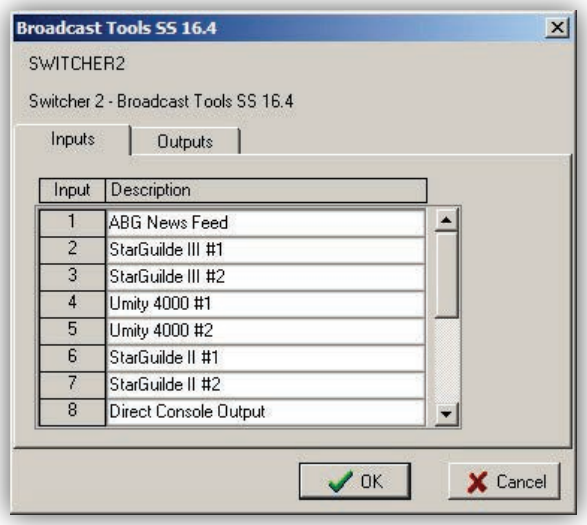


Figure 4-12. Input Description List for a Broadcast Tools Switcher Device

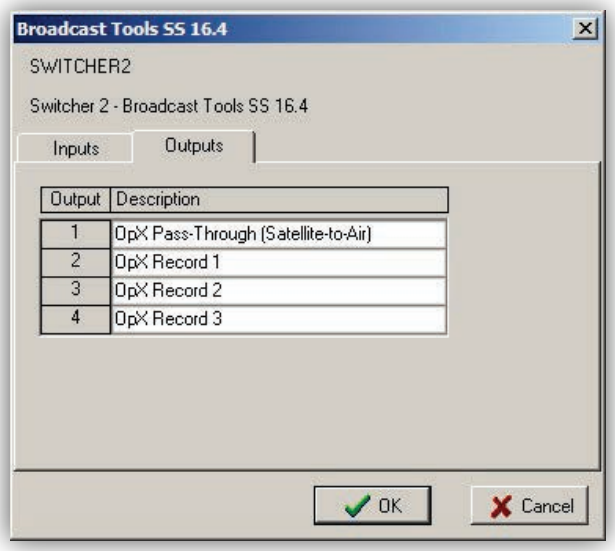
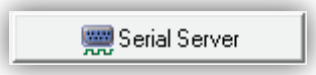


Figure 4-13. Output Description List for a Broadcast Tools Switcher Device

4.3.7.2 Adding a Remote Serial Device Server

To allow your Audio Server to access a Serial Device Server's serial device, add a Remote Serial Server Device definition to your Audio Server.

- **To add a remote serial device server**

1. In the **Device I/O** tab, click the **Serial Server** button 

   The Serial Server Device dialog box appears.

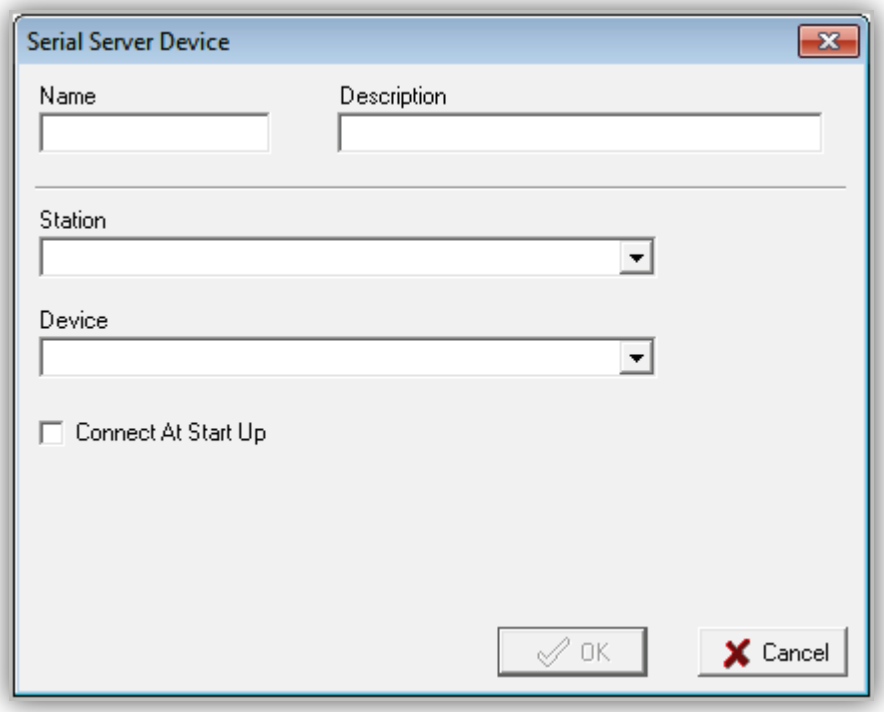


Figure 4-14. Serial Server Device Dialog Box

2. Complete the fields in the dialog box (see Table 4-6).
3. Click **OK**.

Table 4-6. Fields in the Serial Server Device Dialog Box

Field	Description	Default
Name	Enter a short identification name for your serial server device. This name should allow you to differentiate this device from other devices.	—
Description	Enter a verbose description for your serial server device.	—
Station	Select the audio server that is running the Serial Device Server. Only stations with currently running Serial Device Servers are shown in the drop-down list.	—
Device	Select a remote device.	—
Connect At Start Up	To have your Audio Server connect to this serial server device automatically at startup, check this check box.	Unchecked

4.3.7.3 Adding an IP Connection

You can add a TCP or UDP IP connection to the Audio Server.

➢ **To add an IP connection**

1. In the **Device I/O** tab, click the **IP Connection** button

   The IP Connection dialog box appears.

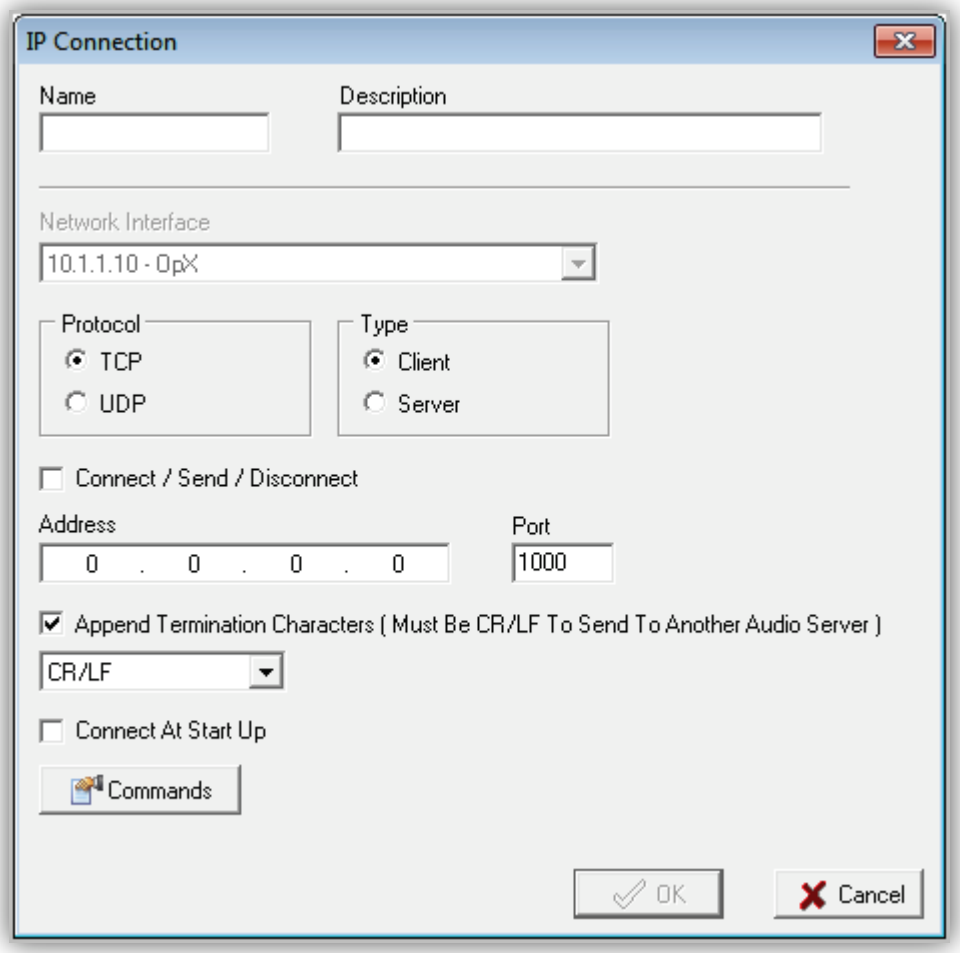


Figure 4-15. IP Connection Dialog Box

2. Complete the fields in the dialog box (see Table 4-7).
3. Click **OK**.

Table 4-7. Fields in the IP Connection Dialog Box

Field	Description	Default
Name	Enter a short identification name for your IP connection. This name should allow you to differentiate this IP connection from other IP connections.	—
Description	Enter a verbose description for your IP connection.	—
Network Interface	Select the IP address of the OpX network interface for this IP connection.	10.1.1.20 - OpX
Protocol	Select the protocol used with this IP connection: TCP or UDP	TCP
Type	Select whether the device at the other end of the IP connection is a client or server of the Audio Server.	Client
Connect/Send/Disconnect	To send requests to and disconnect from the IP connection, check this check box.	Unchecked
Address	Enter the IP address of the device at the other end of the IP connection.	0.0.0.0
Port	Enter the port number based on the requirements for your device. Refer to the documentation for your device.	1000
Append Termination Characters	Select the terminating characters that will be appended to the end of each command sent to the device at the other end of the IP connection. The default termination characters are a carriage return and line feed.	Checked CR/LF
Connect At Start Up	To have your Audio Server connect to this IP connection automatically at startup, check this check box.	Unchecked
Commands	Click this button to open the Watch Text dialog box (see Figure 4-16). Use this dialog box to add, edit, or delete watch text.	—

4.3.7.3.1 Adding Watch Text

This function sends the system a command via TCP/UDP and ties that command to a macro. When the Audio Server sees that watch string, it executes the defined macro.

➢ **To add watch text**

1. In the IP Connection dialog box, click the **Commands** button

   The Watch Text dialog box appears.

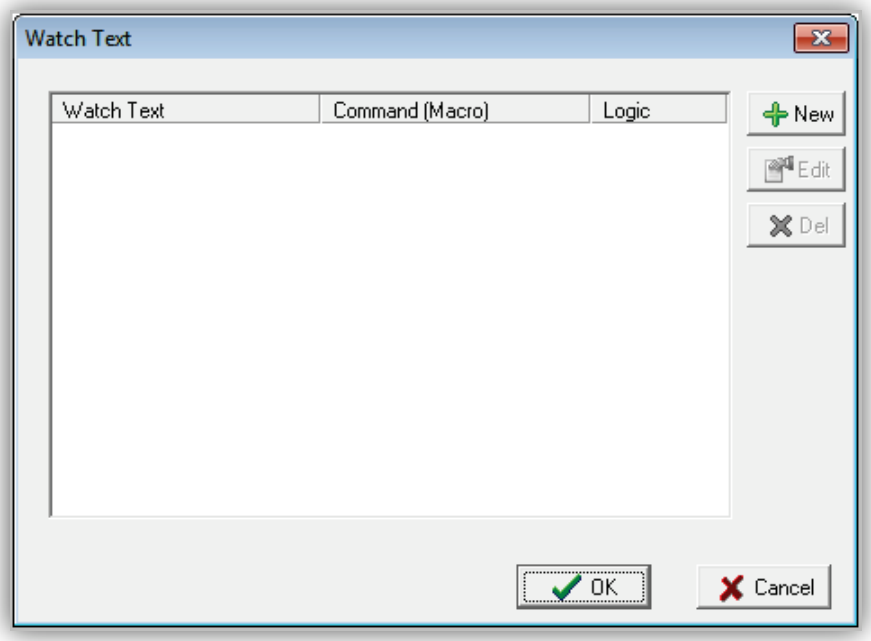


Figure 4-16. Watch Text Dialog Box

2. Click the **New** button

   The Watch Text Item dialog box appears.

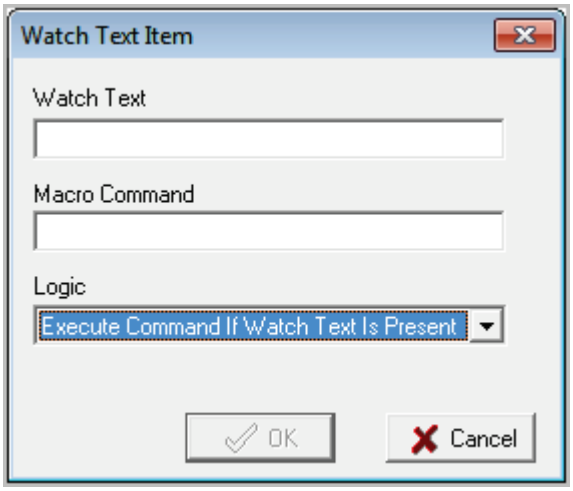


Figure 4-17. Watch Text Item Dialog Box

3. Complete the fields in the dialog box (see Table 4-8).
4. Click **OK**.

Table 4-8. Fields in the Watch Text Time Dialog Box

Field	Description	Default
Watch Text	Enter a short identification name for your device. This name should allow you to differentiate this device from other devices.	—
Macro Command	Enter the macro command. For more information, see Appendix A - Macros.	—
Logic	Select whether the command is to be executed when the watch text is present or missing.	Execute Command If Watch Text Is Present

4.3.7.3.2 Editing Watch Text

There might be times when you need to edit watch text. For example, you may want to change the macro associated with the watch text.

➢ **To edit watch text**

1. In the IP Connection dialog box, click the **Commands** button

   The Watch Text dialog box appears (see Figure 4-16).
2. Click the watch text you want to edit, and then click the **Edit** button

   The Watch Text Item dialog box appears (see Figure 4-17).
3. Edit the fields you want to change (see Table 4-8).
4. Click **OK**.

4.3.7.3.3 Deleting Watch Text

If you no longer need watch text, you can delete it.

Note: A precautionary message does not appear before you delete watch text. Therefore, be sure you do not need watch text before you delete it. You cannot undo watch text after it has been deleted.

➢ **To delete watch text**

1. In the IP Connection dialog box, click the **Commands** button

   The Watch Text dialog box appears (see Figure 4-16).
2. Click the watch text you want to delete.
3. Click the **Del** button

4.3.7.4 Adding an Axia GPIO Node

➢ **To add an Axia I/O GPIO node to your OpX Audio Server**

1. In the **Device I/O** tab, click the **AXIA GPIO Node** button

   The Axia GPIO dialog box appears.

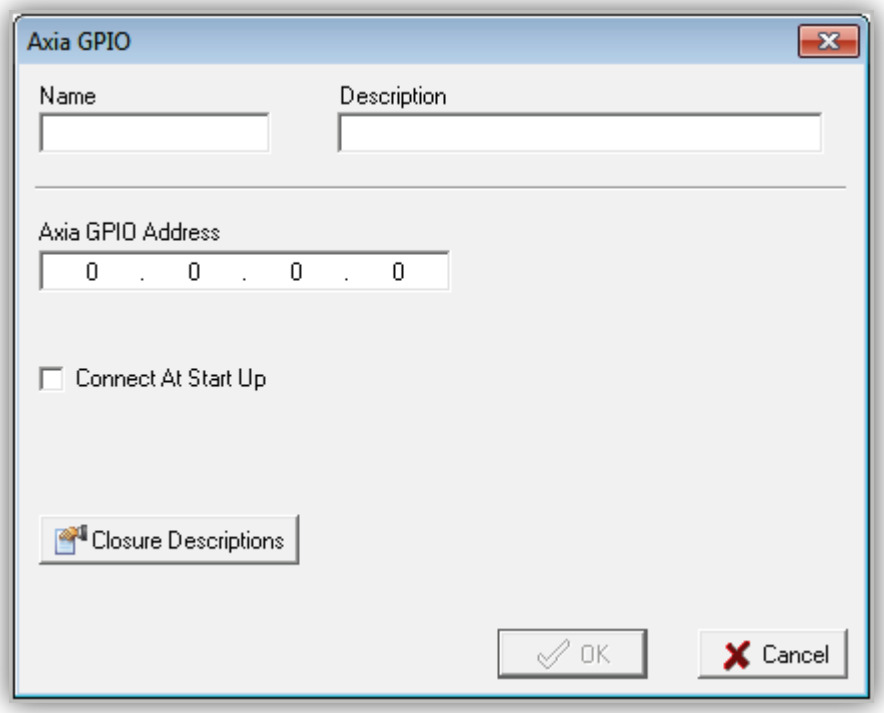


Figure 4-18. Axia GPIO Dialog Box

2. Complete the fields in the dialog box (see Table 4-9).
3. Click **OK**.

Table 4-9. Fields in the Axia GPIO Dialog Box

Field	Description	Default
Name	Enter a short identification name for your Axia GPIO node. This name should allow you to differentiate this device from other devices.	—
Description	Enter a verbose description for your Axia GPIO node.	—
Axia GPIO Address	Enter the IP address of your Axia I/O device.	0.0.0.0
Connect At Start Up	To have your Audio Server connect to this Axia GPIO node automatically at startup, check this check box.	Unchecked

Field	Description	Default
Closure Descriptions	To make identification of what is connected to your Axia I/O device's closures, click this button and enter friendly names for each connected closure. Figure 4-19 shows an example of a closure list.	—

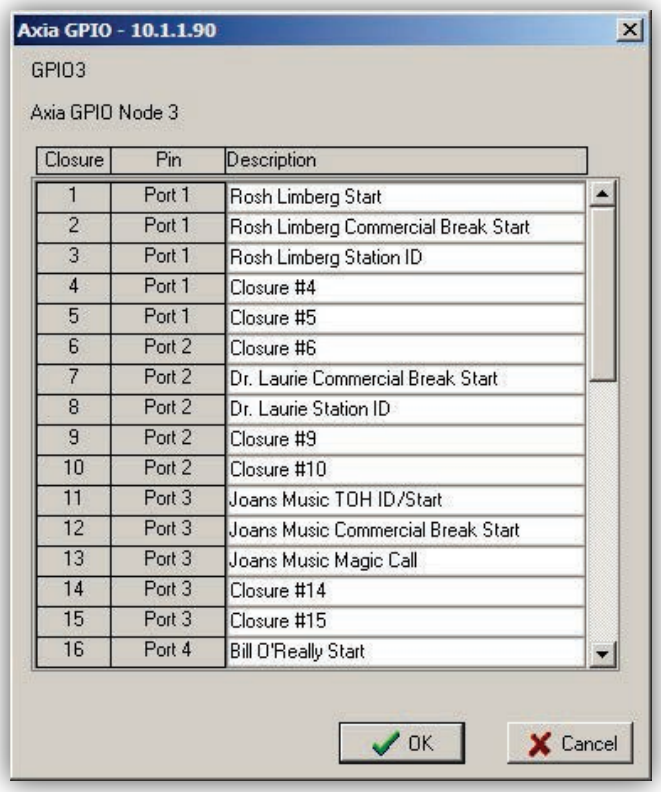
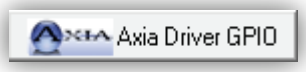


Figure 4-19. Example of a Closure List

4.3.7.5 Adding an Axia Driver GPIO

➢ **To add an Axia I/O Driver GPIO to your OpX Audio Server**

1. In the **Device I/O** tab, click the **AXIA Driver GPIO** button 

   The Axia GPIO dialog box appears.

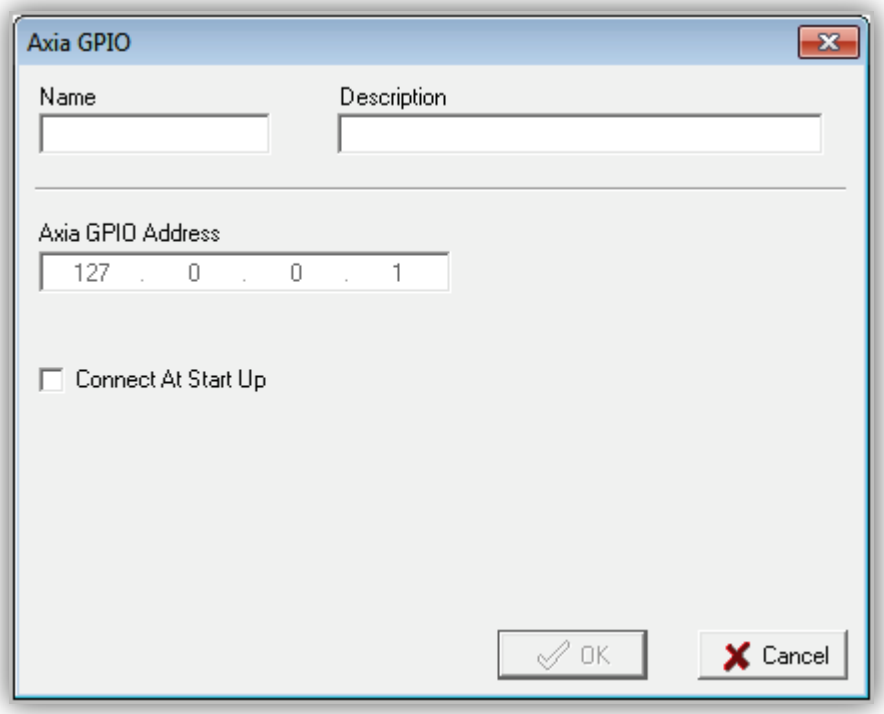


Figure 4-20. Axia GPIO Dialog Box

2. Complete the fields in the dialog box (see Table 4-10).
3. Click **OK**.

Table 4-10. Fields in the Axia GPIO Dialog Box

Field	Description	Default
Name	Enter a short identification name for your Axia Driver GPIO device. This name should allow you to differentiate this device from other devices.	—
Description	Enter a verbose description for your Axia driver GPIO device.	—
Axia GPIO Address	Enter the IP address of your Axia driver GPIO device.	0.0.0.0
Connect At Start Up	To have your Audio Server connect to this Axia driver GPIO device automatically at startup, check this check box.	Unchecked

4.3.7.6 Adding an Audio Server

➢ **To add an audio server to your OpX Audio Server**

1. In the **Device I/O** tab, click the **Audio Server** button

   The Audio Server dialog box appears.

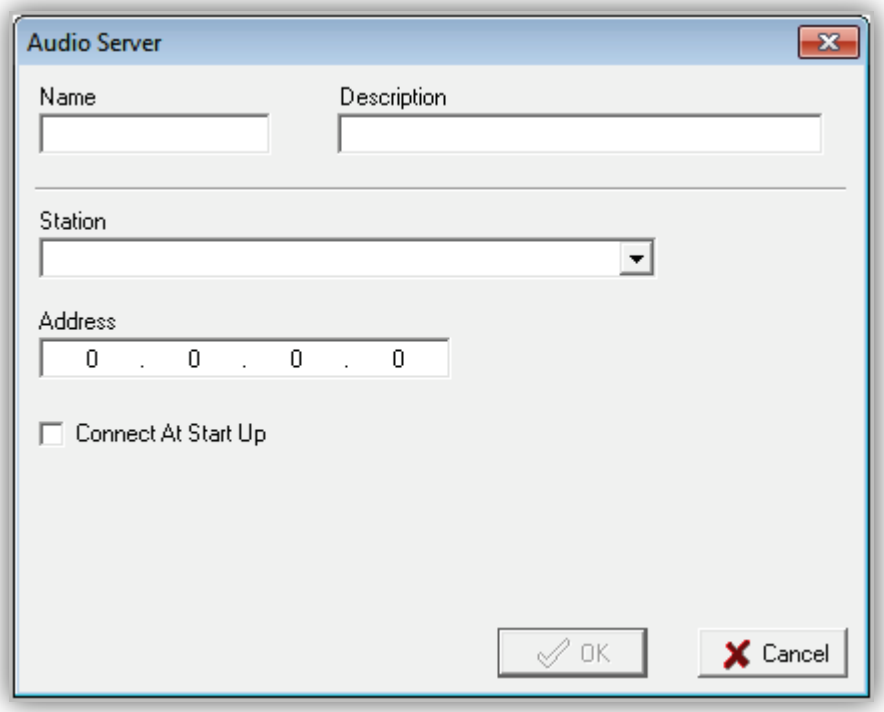


Figure 4-21. Audio Server Dialog Box

2. Complete the fields in the dialog box (see Table 4-11).
3. Click **OK**.

Table 4-11. Fields in the Audio Server Dialog Box

Field	Description	Default
Name	Enter a short identification name for your audio server. This name should allow you to differentiate this device from other devices.	—
Description	Enter a verbose description for your audio server.	—
Station	Select a station that will be used with this audio server. Only stations with currently running Serial Device Servers are shown in the drop-down list.	
Address	Enter the IP address of the audio server.	0.0.0.0

Field	Description	Default
Connect At Start Up	To have your Audio Server connect to this audio server automatically at startup, check this check box.	Unchecked

4.3.7.7 Adding a Wheatstone Console

➢ **To add a Wheatstone console to your OpX Audio Server**

1. In the **Device I/O** tab, click the **Wheatstone Console** button

   The Wheatstone Console dialog box appears.

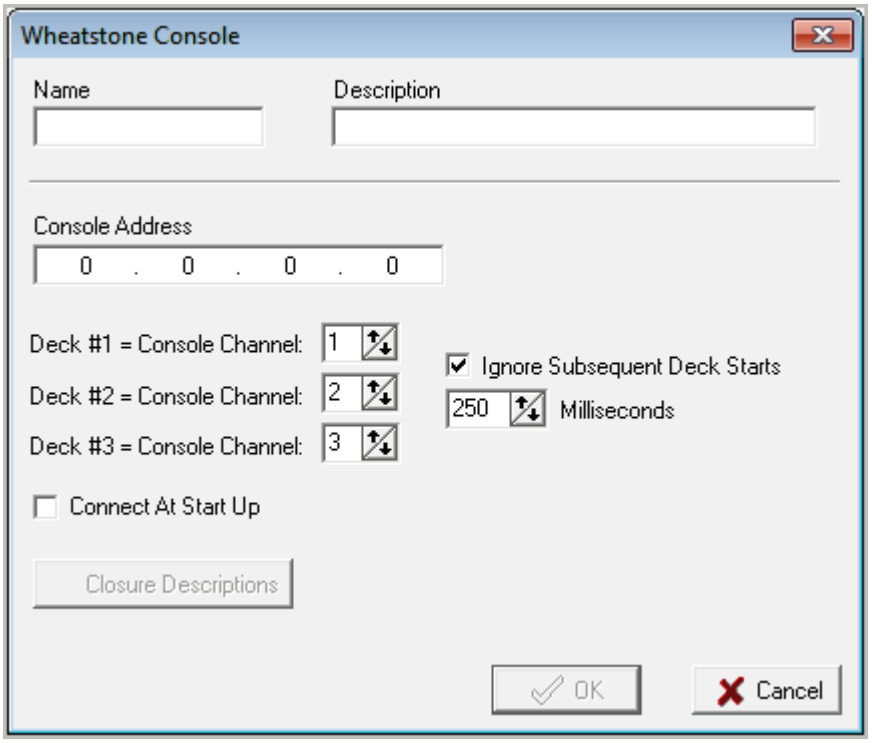


Figure 4-22. Wheatstone Console Dialog Box

2. Complete the fields in the dialog box (see Table 4-12).
3. Click **OK**.

Table 4-12. Fields in the Wheatstone Console Dialog Box

Field	Description	Default
Name	Enter a short identification name for your Wheatstone console. This name should allow you to differentiate this device from other devices.	—

Field	Description	Default
Description	Enter a verbose description for your Wheatstone console.	—
Console Address	Enter the IP address of your Wheatstone console.	0.0.0.0
Deck #1 – Console Channel Deck #2 – Console Channel Deck #3 – Console Channel	Select a remote device.	1 2 3
Ignore Subsequent Deck Starts	To have your Audio Server connect to this Wheatstone console automatically at startup, check this check box and either accept the default value or change it.	Unchecked 250 milliseconds
Connect At Start Up	To have your Audio Server connect to this Wheatstone console automatically at startup, check this check box.	Unchecked
Closure Descriptions	To make identification of what is connected to your Wheatstone console's closures, click this button and enter friendly names for each connected closure.	—

4.3.7.8 Adding a Wheatstone Blade

- **To add a Wheatstone blade to your OpX Audio Server**

1. In the **Device I/O** tab, click the **Wheatstone Blade** button

   The Wheatstone Blade dialog box appears.

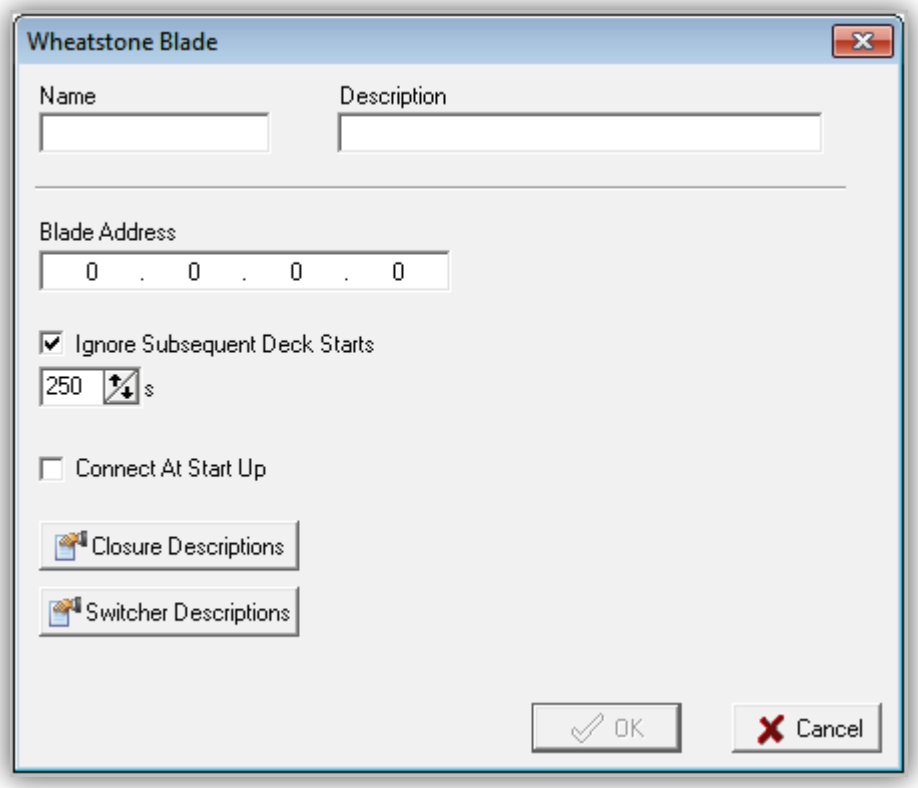


Figure 4-23. Wheatstone Blade Dialog Box

2. Complete the fields in the dialog box (see Table 4-13).
3. Click **OK**.

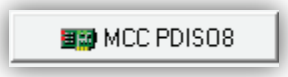
Table 4-13. Fields in the Wheatstone Blade Dialog Box

Field	Description	Default
Name	Enter a short identification name for your Wheatstone blade. This name should allow you to differentiate this device from other devices.	—
Description	Enter a verbose description for your Wheatstone blade.	—
Blade Address	Enter the IP address of your Wheatstone blade.	0.0.0.0
Ignore Subsequent Deck Starts	To have your Audio Server connect to this Wheatstone blade automatically at startup, check this check box and either accept the default value or change it.	Unchecked 250 milliseconds
Connect At Start Up	To have your Audio Server connect to this Wheatstone blade automatically at startup, check this check box and either accept the default value or change it.	Unchecked 250 milliseconds
Closure Descriptions	To make identification of what is connected to your Wheatstone blade's closures, click this button and enter friendly names for each connected closure.	—

Field	Description	Default
Switcher Descriptions	To make identification of the inputs and outputs connected to your switcher, click this button and enter friendly names for each input and output.	—

4.3.7.9 Adding an MCC PDISO8

➢ **To add an MCC PDISO8 to your OpX Audio Server**

1. Install and configure the device (refer to the documentation for your device).
2. In the **Device I/O** tab, click the **MCC PDIS08** button 

The Measurement Computing Device dialog box appears.

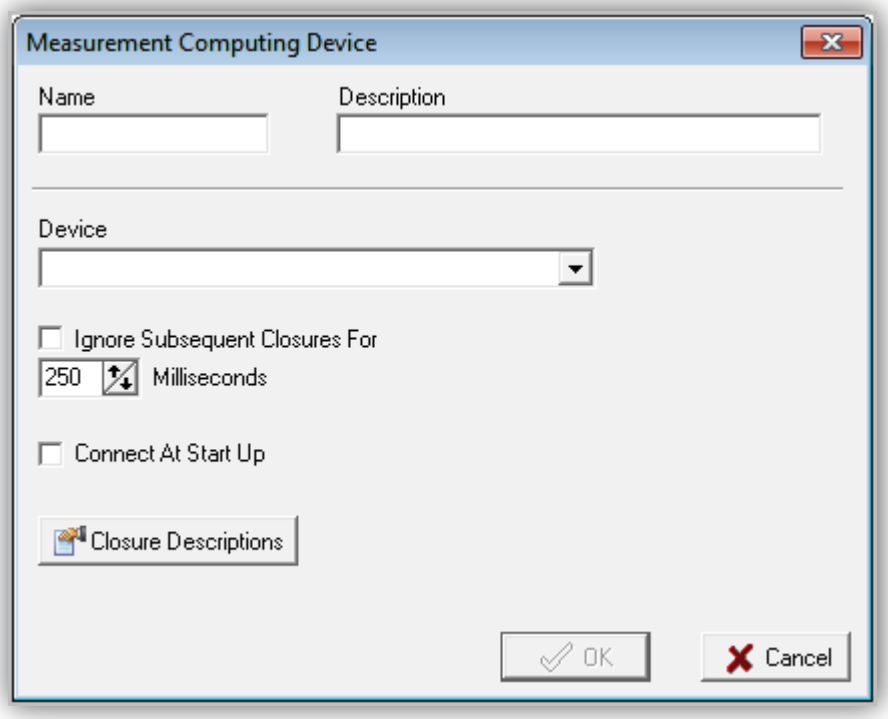


Figure 4-24. Measurement Computing Device Dialog Box

3. Complete the fields in the dialog box (see Table 4-14).
4. Click **OK**.

Table 4-14. Fields in the Measurement Computing Device Dialog Box

Field	Description	Default
Name	Enter a short identification name for your device. This name should allow you to differentiate this device from other devices.	—
Description	Enter a verbose description for your serial server device.	—
Device	Select a remote device.	—
Ignore Subsequent Closures For	To minimize accidental double-clicks, check this check box to set a period of time that each console button will be ignored after it is clicked.	Unchecked 250 milliseconds
Connect At Start Up	To have your Audio Server connect to this device automatically at startup, check this check box.	Unchecked
Closure Descriptions	To make identification of what is connected to your Wheatstone blade's closures, click this button and enter friendly names for each connected closure.	—

4.3.7.10 Adding a SAS Console

➢ **To add a SAS console to your OpX Audio Server**

1. In the **Device I/O** tab, click the **SAS Console** button

   The SAS Console dialog box appears.

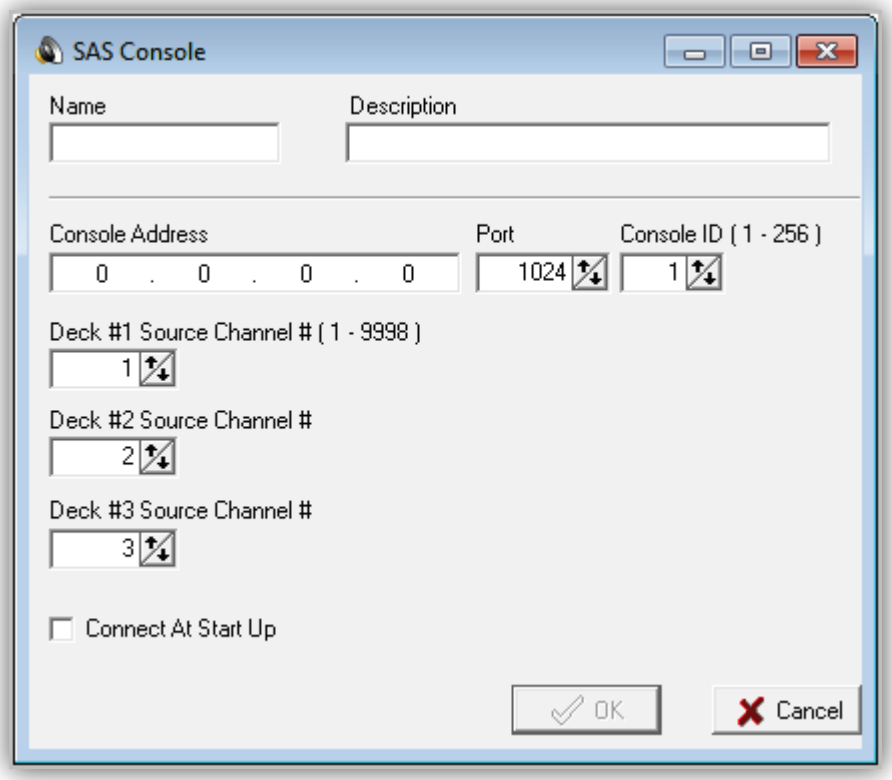


Figure 4-25. SAS Console Dialog Box

2. Complete the fields in the dialog box (see Table 4-15).
3. Click **OK**.

Table 4-15. Fields in the SAS Console Dialog Box

Field	Description	Default
Name	Enter a short identification name for your SAS console. This name should allow you to differentiate this device from other devices.	—
Description	Enter a verbose description for your SAS console.	—
Console Address	Enter the IP address of the SAS console.	0.0.0.0
Port	Enter the port number based on the requirements for your SAS console. Refer to the documentation for your SAS console.	1024
Console ID	Enter a unique ID to identify this SAS console.	1

Field	Description	Default
Deck #1 Source Channel # Deck #2 Source Channel # Deck #3 Source Channel #	Determine which audio devices are used for each of the three main playback decks. The main playback decks are rotated as playback occurs. The deck with which each item will play appears in the far-right column of the Program Log Display in the Audio Server. Because OpX uses a software-based audio mixing engine, all three Channel Playback fields can be set to the same device or, for more control, to their own individual device. Setting each Channel Playback Device field to a different audio device is useful for manual control over fades when each device is connected to a separate channel strip on your console.	1 2 3
Connect At Start Up	To have your Audio Server connect to this device automatically at startup, check this check box.	Unchecked

4.3.7.11 Adding an Advantech Device

➢ **To add an Advantech Device to your OpX Audio Server**

1. In the **Device I/O** tab, click the **Advantech** button

   The I/O Card Device dialog box appears.

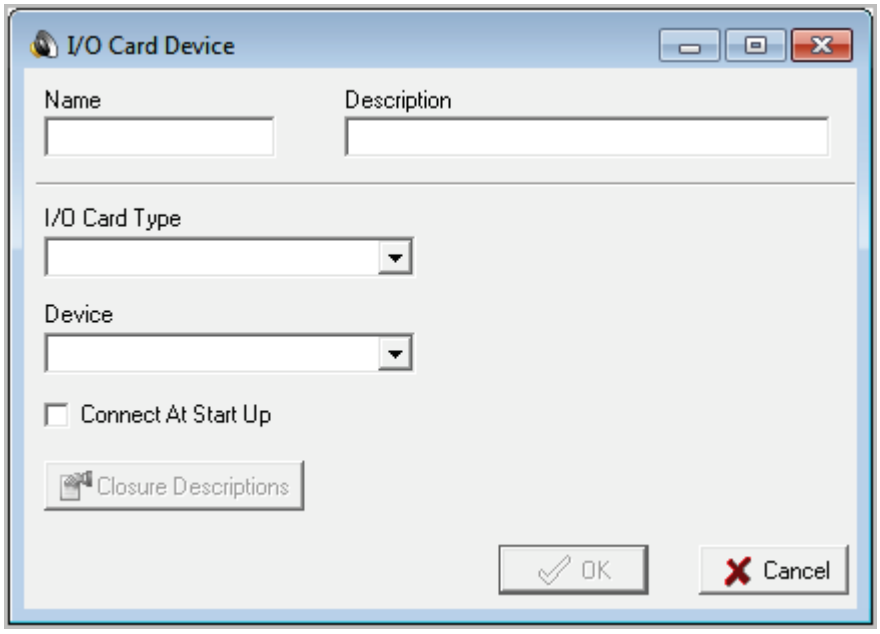


Figure 4-26. I/O Card Device Dialog Box

2. Complete the fields in the dialog box (see Table 4-16).
3. Click **OK**.

Table 4-16. Fields in the I/O Card Device Dialog Box

Field	Description	Default
Name	Enter a short identification name for your I/O card device. This name should allow you to differentiate this device from other devices.	—
Description	Enter a verbose description for your I/O card device.	—
I/O Card Type	Select the type of I/O card.	—
Device	Select the device.	—
Connect At Start Up	To have your Audio Server connect to this I/O card automatically at startup, check this check box.	Unchecked
Closure Descriptions	To make identification of what is connected to your Axia I/O device's closures, click this button and enter friendly names for each connected closure. Figure 4-19 on page 98 shows an example of a closure list.	

4.3.8 Trigger Set Configuration Settings

You can use triggers to execute (play) audio events, carts, or macros when a closure is received by your I/O device hardware. Common uses for this function are to use Start and/or Stop buttons on your console, or “button boxes” for sound effects or other audio events.

A “trigger set” is a list of audio or macro events that are executed when a closure is received. OpX allows you to define multiple trigger sets and load them at will. They can be loaded using the `LOADTRIGGERS` macro (see Appendix A - Macros).

4.3.8.1 Creating Trigger Sets

➢ **To create a new trigger set**

1. From the Settings dialog box, click the **Trigger Sets** tab.

   The Trigger Sets tab appears.

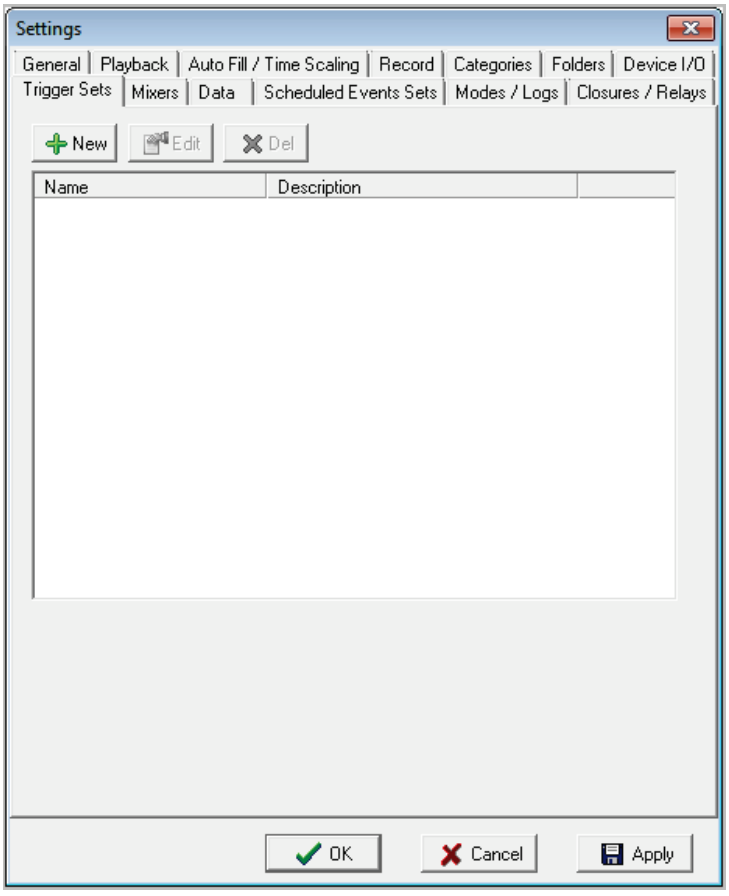


Figure 4-27. Trigger Sets Tab

2. Click the **New** button

   The Trigger Set dialog box appears.

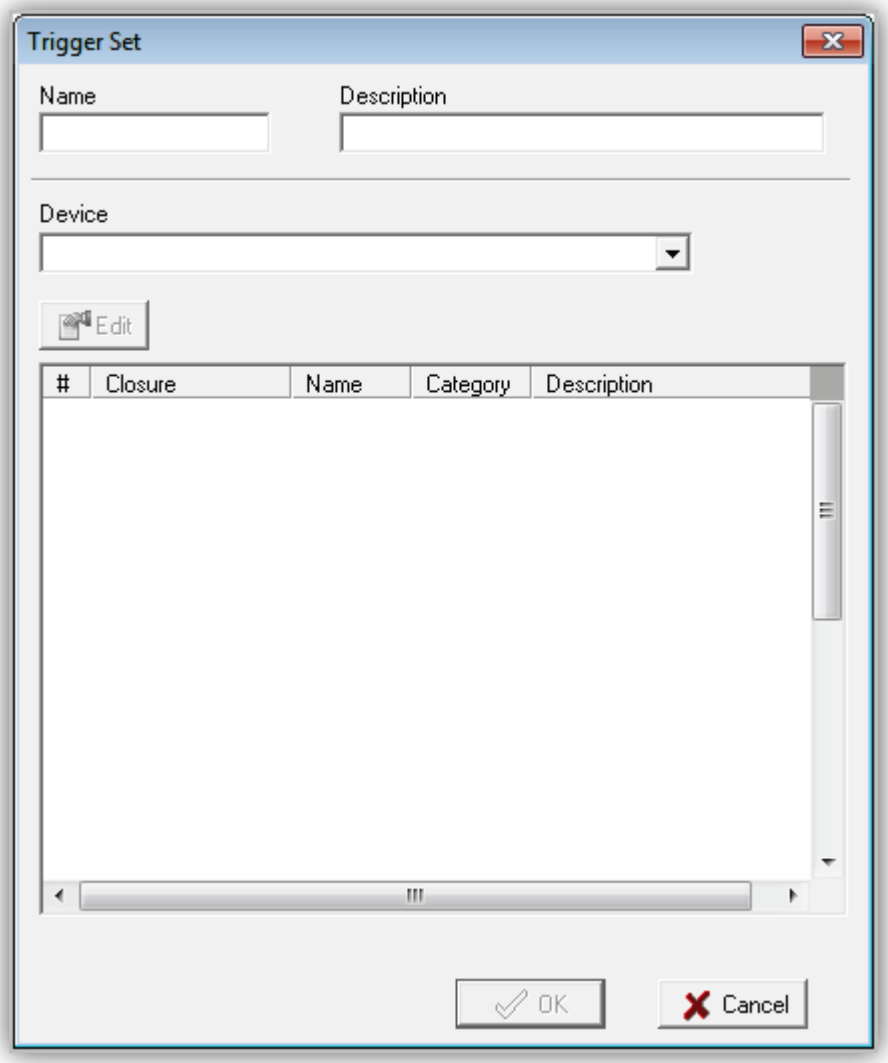


Figure 4-28. Trigger Set Dialog Box

3. Complete the fields in the dialog box (see Table 4-17).
4. Click **OK**.

Table 4-17. Fields in the Trigger Set Dialog Box

Field	Description	Default
Name	Enter a short identification name for your trigger set. This name should allow you to differentiate this trigger from other trigger sets.	—

Field	Description	Default
Description	Enter a verbose description for the trigger set.	—
Device	Select the device from which triggers will be received for this trigger set.	—

4.3.8.1.1 Editing Trigger Sets

There might be times when you need to edit a trigger set. For example, you may want to change the macro associated with the trigger set.

➢ **To edit a trigger set**

1. From the Settings dialog box, click the **Trigger Sets** tab.

   The Trigger Sets tab appears (see Figure 4-27).

2. Click the trigger set you want to edit, and then click the **Edit** button

   The Trigger Set Item dialog box appears (see Figure 4-28).

3. Edit the fields you want to change (see Table 4-17).
4. Click **OK**.

4.3.8.1.2 Deleting Trigger Sets

If you no longer need a trigger set, you can delete it.

Note: A precautionary message does not appear before you delete a trigger set. Therefore, be sure you do not need a trigger set before you delete it. You cannot undo a trigger set after it has been deleted.

➢ **To delete a trigger set**

1. From the Settings dialog box, click the **Trigger Sets** tab.

   The Trigger Sets tab appears (see Figure 4-27).

2. Click the trigger set you want to delete.
3. Click the **Del** button

4.3.9 Mixer Configuration Settings

The **Mixers** tab allows OpX to control the volume levels of the audio devices installed on your Audio Server machine. The main use for this function is control of audio feeds from satellite. The Audio Server allows you to configure 10 mixer profiles, each of which is controllable using macros or the Clock Builder.

4.3.9.1 Creating and Editing Mixers

➢ **To create and edit mixers**

1. From the Settings dialog box, click the **Mixers** tab.

   A tab similar to the following appears.

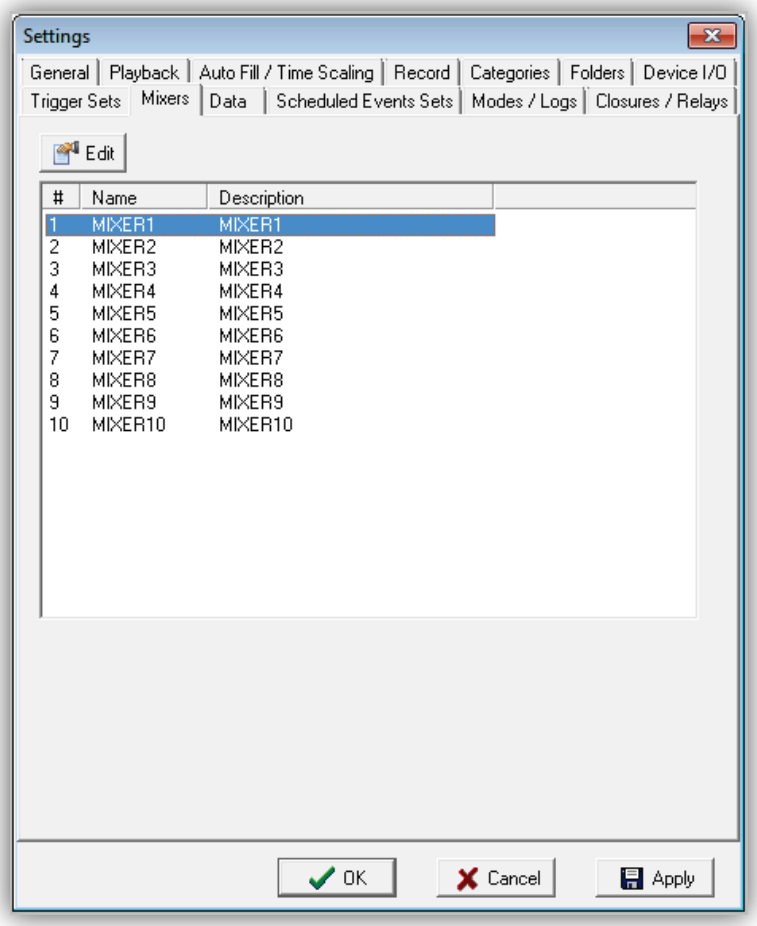


Figure 4-29. Mixers Tab

2. Click a mixer profile, and then click the **Edit** button

   A Mixer dialog box similar to the following appears. The left pane shows the installed audio devices and each controllable function of that audio card.

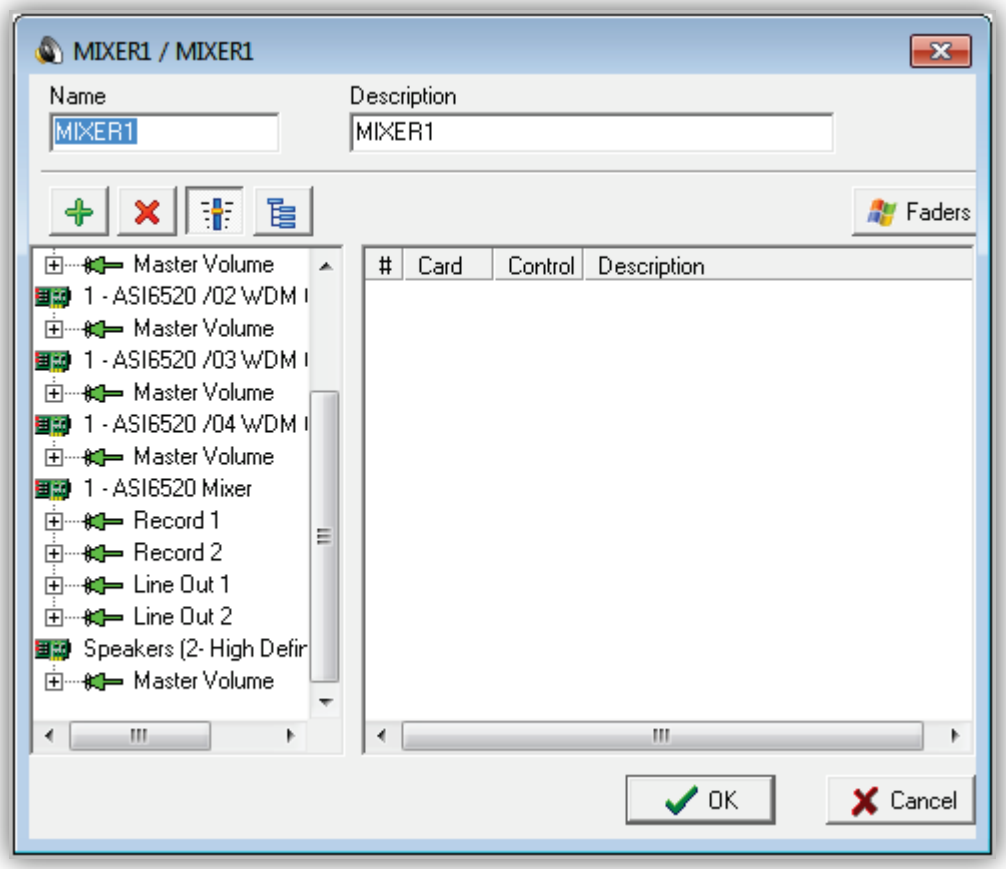


Figure 4-30. Mixer Dialog Box

3. Browse through the list in the left pane, and then click the volume control of your desired device's input or output channel.
4. To add a device to the mixer's configuration, click the **Add** button
5. To remove a control from the mixer's configuration, click the control in the list on the right (see Figure 4-31), and then click the **Delete** button
6. When you finish, click **OK**.

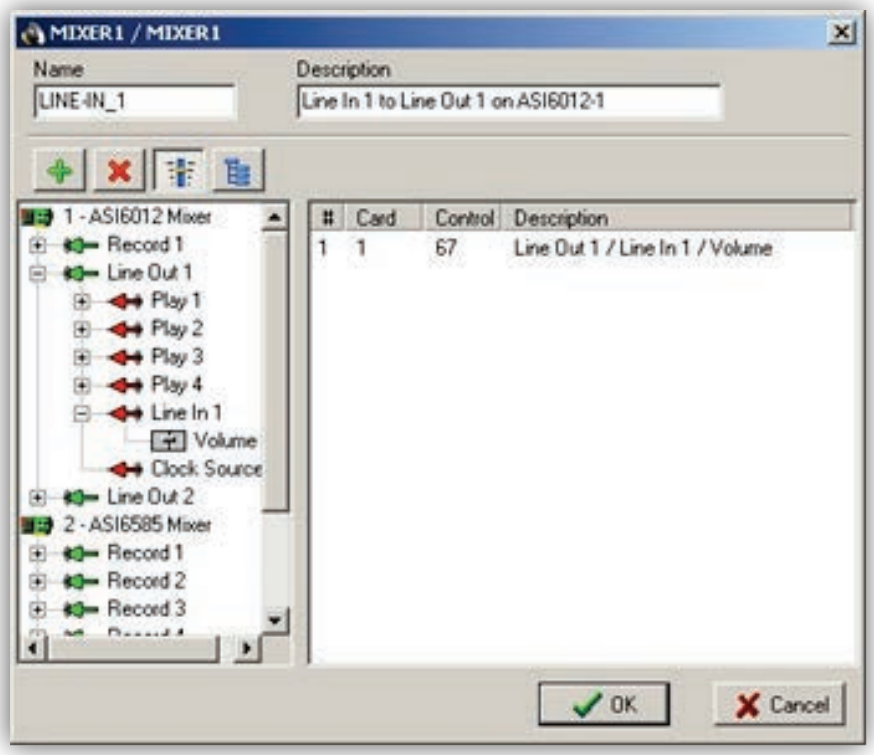


Figure 4-31. Mixer Editor with an AudioScience 6012 Model's Line In 1 Pass-through Volume Control Selected

4.3.10 Data Configuration Settings

PAD data is an industry-standard format of data output used by HD radio transmitters and RDS encoders to communicate artist, title, description, and other information. PAD data can either be transmitted from the OpX system as a .xml file or sent directly to a device in the network using that device's IP address.

To set up PAD data output, use the **Data** tab.

➢ **To configure data settings**

1. From the Settings dialog box, click the **Data** tab.

   A tab similar to the following appears.

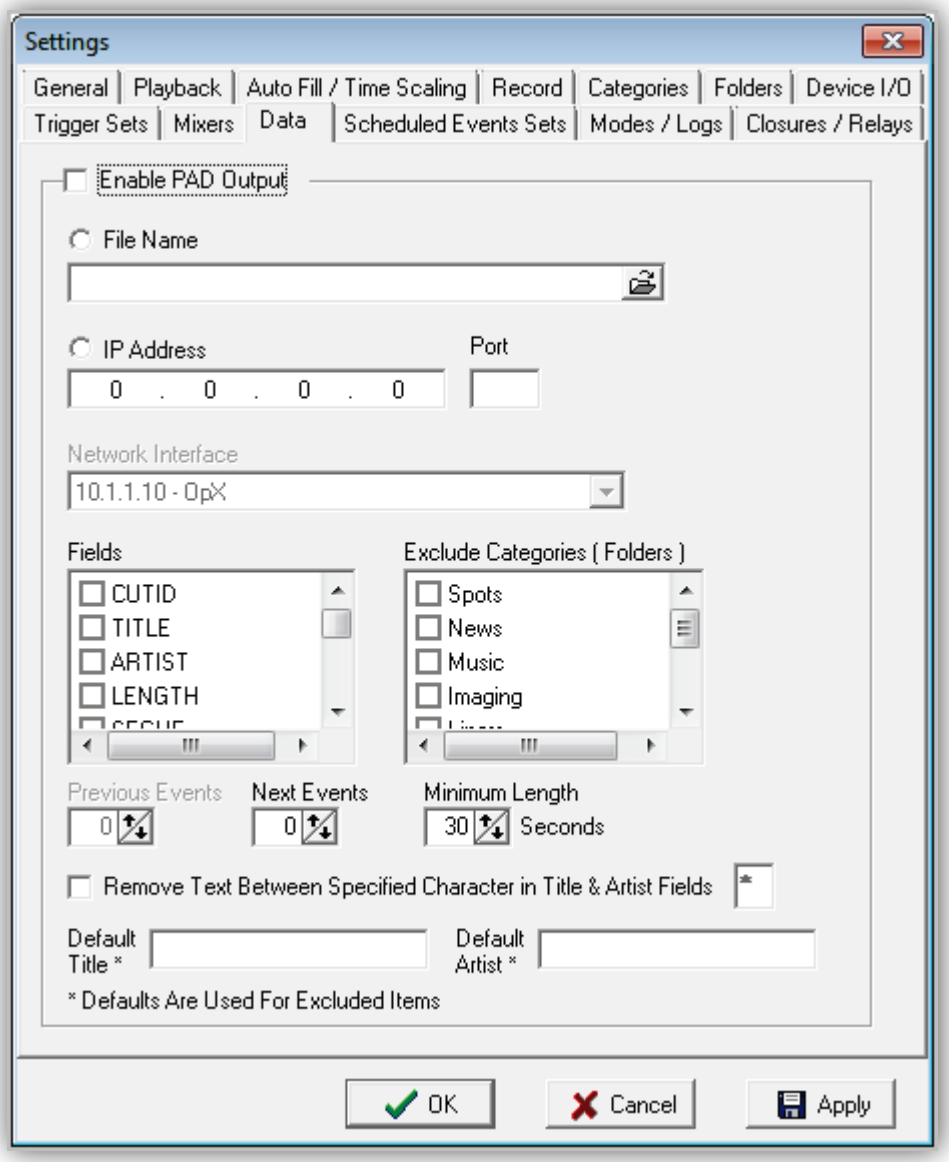


Figure 4-32. Data Tab

2. Complete the fields in the dialog box (see Table 4-18).
3. Click **OK**.

Table 4-18. Fields in the Data Tab

Field	Description	Default
Enable PAD Output	To enable output of PAD data, check this check box. Checking this check box enables the remaining options in this tab. To stop PAD data output, uncheck this check box.	Unchecked

Field	Description	Default
File Name	To output PAD data to an .xml-formatted file, check this option, and then either enter the path in the field or click the icon, go to the desired location in the Browse dialog box, and click Open. Each time the PAD data is updated, the specified filename are overwritten with a new copy of the .xml file with the current data	—
IP Address Port	To have OpX output PAD data directly to an IP address, check this option and enter the IP address and port number.	0.0.0.0 —
Network Interface	Select the IP address of the OpX network interface for this IP connection.	10.1.1.20 - OpX
Fields	Check the types of data you want the Audio Server to output as PAD data.	Unchecked
Exclude Categories (Folders)	Each audio event category you defined appears in this list. Enabling one of the categories in this list causes the Audio Server to NOT output the data of that event to the PAD data.	Unchecked
Previous Events	Allows you to transmit a desired number of data about the previously played audio events.	0
Next Events	Allows you to set a desired number of upcoming audio events for which to send data.	0
Minimum Length	Allows you to exclude events from transmitting PAD data. This option allows you to set a limit by the minimum length audio events that must send PAD data (in seconds).	30 seconds
Remove Text Between Specified Characters in Title & Artist Fields	Data from the artist or title fields to be removed when sending pad data. This is determined using a special character. If you have an artist that looked like "grateful dead 1972 Europe," for example, and you want the pad to display only "grateful dead," you can change it to "grateful dead *1972 Europe*" and set the asterisk to be our delimiting character.	*
Default Title	Default information to show if the title field is missing or if the data is being skipped.	—
Default Artist	Default information to show if the artist field is missing or if the data is being skipped.	—

4.3.11 Scheduled Event Set Configuration Settings

Scheduled events are events – audio files or macros – that you want executed automatically, regardless of other activities being performed in the program log or any other area of the OpX system. They are ideal for starting records, sending serial strings, controlling switchers, or any other event you want to occur in the background.

Scheduled events are added to a Scheduled Events Set. OpX works with only one Scheduled events set at a time. It is possible to switch which Scheduled Events Set is loaded using the `LOADSCHEDULED` macro. You can also run the `LOADSCHEDULED` macro from within a Scheduled Events Set to load another Scheduled Events Set.

4.3.11.1 Adding Scheduled Events

➢ **To configure a new scheduled event**

1. From the Settings dialog box, click the **Scheduled Events Sets** tab.

   A tab similar to the following appears.

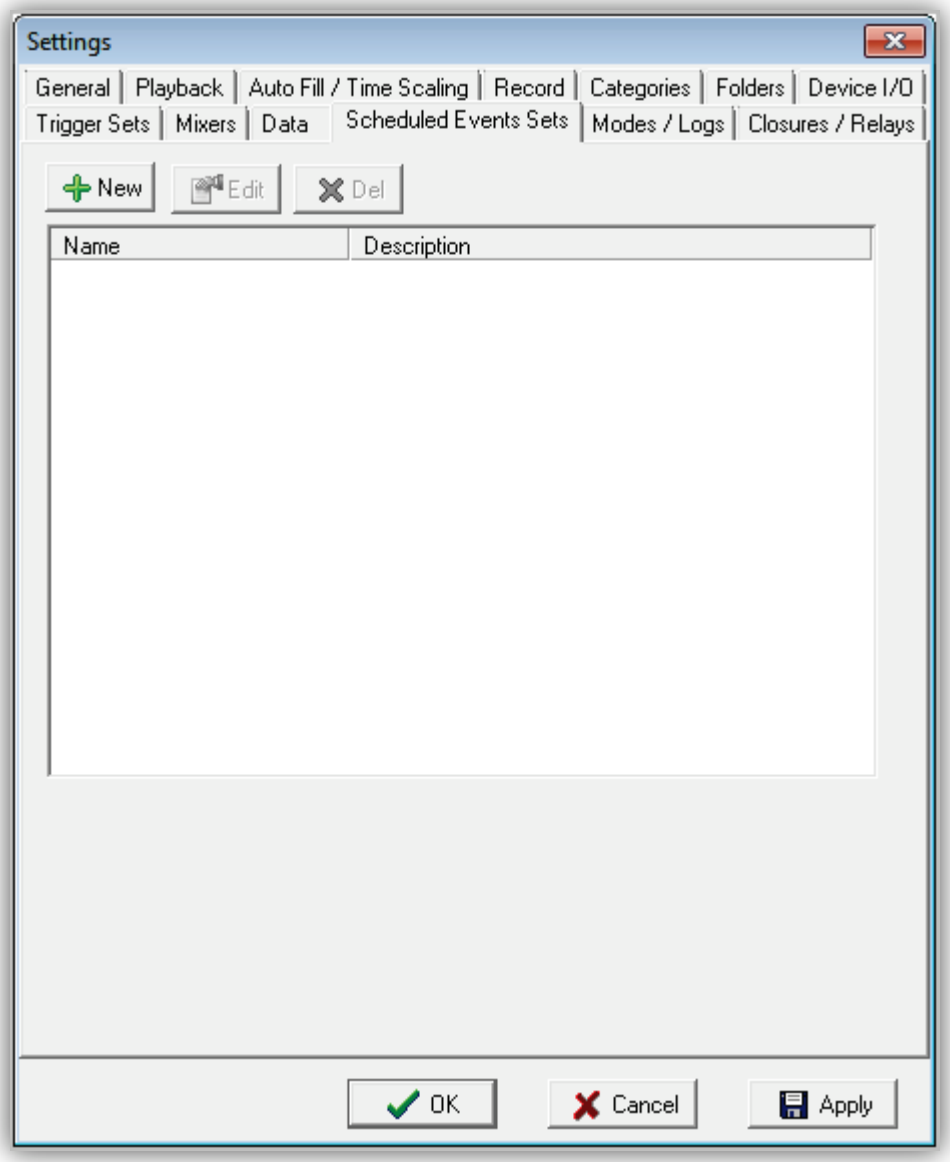


Figure 4-33. Scheduled Events Sets Tab

2. Click the **New** button

   The Scheduled Event Sets dialog box appears.

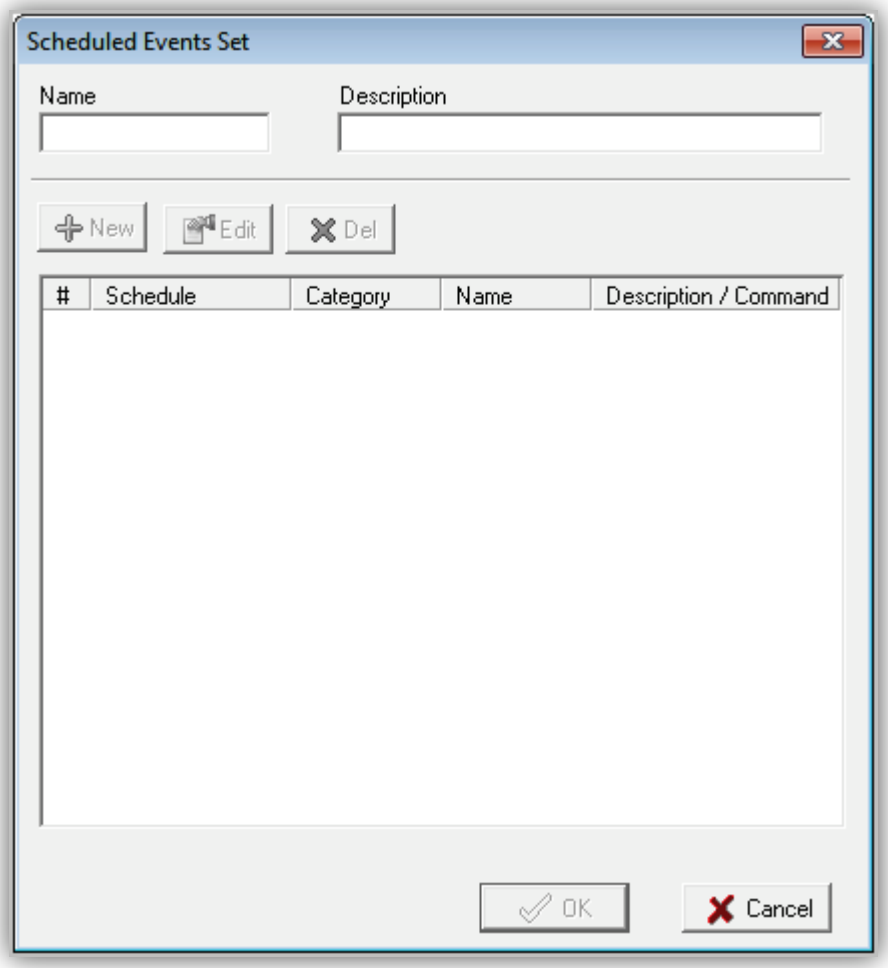


Figure 4-34. Scheduled Event Sets Dialog Box

3. Complete the fields in the dialog box (see Table 4-19).
4. Click **OK**.

Table 4-19. Fields in the Scheduled Event Sets Dialog Box

Field	Description	Default
Name	Enter a short identification name for your scheduled event. This name should allow you to differentiate this trigger from other scheduled events.	—
Description	Enter a verbose description for the Scheduled Event Set.	—

4.3.11.2 Editing Scheduled Events

There might be times when you need to edit scheduled events. For example, you may want to change the name or description associated with the scheduled event.

➢ **To edit a scheduled event**

1. From the Settings dialog box, click the **Scheduled Event Sets** tab.

   The Scheduled Event Sets tab appears (see Figure 4-33).

2. Click the Scheduled Event Sets you want to edit, and then click the **Edit** button

   The Scheduled Event Sets Item dialog box appears (see Figure 4-34).

3. Edit the fields you want to change (see Table 4-19).
4. Click **OK**.

4.3.11.3 Deleting Scheduled Events

If you no longer need a scheduled event, you can delete it.

Note: A precautionary message does not appear before you delete a scheduled event. Therefore, be sure you do not need a scheduled event before you delete it. You cannot undo a scheduled event after it has been deleted.

➢ **To delete scheduled events**

1. From the Settings dialog box, click the **Scheduled Event Sets** tab.

   The Scheduled Event Sets tab appears (see Figure 4-33).

2. Click the scheduled event you want to delete.
3. Click the **Del** button

4.3.12 Mode and Log Configuration Settings

The **Modes** tab allows you to configure OpX modes, program log options, and macro options.

To configure modes and logs

1. In the **Device I/O** tab, click the **Modes / Logs** tab.

   The following tab appears.

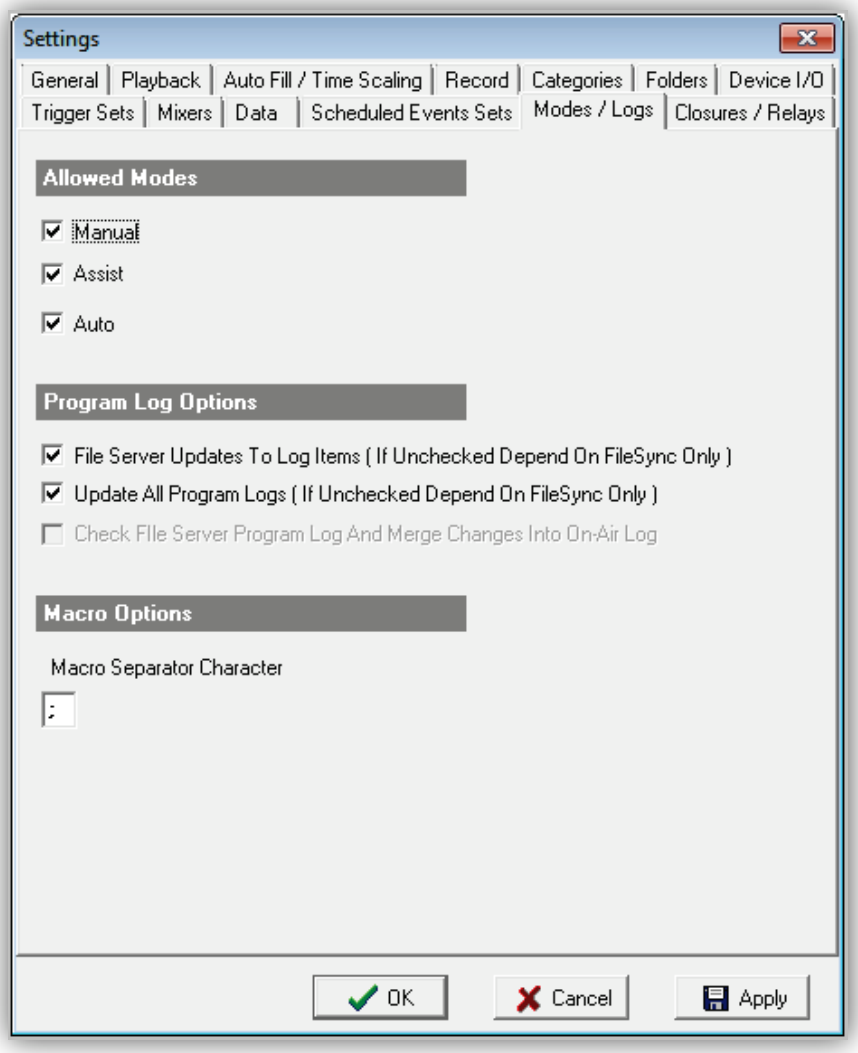


Figure 4-35. Modes / Logs Tab

2. Complete the fields in the tab (see Table 4-20).

3. Click **OK**.

Table 4-20. Fields in the Modes / Logs Tab

Field	Description	Default
Allowed Modes	Designates how each OpX Audio Server advances through a program log. There are three modes for each Audio Server: manual, assist, and auto. • Manual mode = the Audio Server steps through the log manually, relying on outside input before advancing. • Assist mode = intended for use by live talent. Audio events load from the program log into the Playback Deck Stack, but segues do not execute automatically as they are in auto mode. Events are played by clicking the Start/Start Next button, an individual deck's play button, a timed event, or by a closure (if configured) • Auto mode = the Audio Server advances through the log automatically, unless it encounters a command in a log directing it to do otherwise.	Checked
Program Log Options	Allows you to configure the following options: • File Server Updates = when checked, the Audio Server transfers new program logs. Not necessary with FileSync. • Update All Program Logs = updates anything in the Logs folder, not just logs that match the program log template. For example, TESTLOG transfers, even though the template is %mm%dd%yy. • Check File Server Program Log = moves updates in real-time into the program log.	Checked
Macro Options	Allows you to define the character that separates macros.	;

4.3.13 Closure and Relay Configuration Settings

The **Closure/Relay** tab allows you to configure the following settings:

- Start deck closures — see section 4.3.13.1.
- Stop deck closures — see section 4.3.13.2.
- Channel on relays — see section 4.3.13.3.
- Channel off relays — see section 4.3.13.4.
- Voicetrack relays — see section 4.3.13.5.

4.3.13.1 Configuring Start Deck Closures

The **Start Deck Closures** tab allows you to configure incoming closures to trigger Deck #1, Deck #2, and Deck #3 to start playing their currently loaded events. This feature is most commonly used with Start buttons on your station's console. The **Ignore Start Closure For** option allows you to set an ignore period for the incoming closure so that an accidental double-press of the button will not cause the deck to play 2 items.

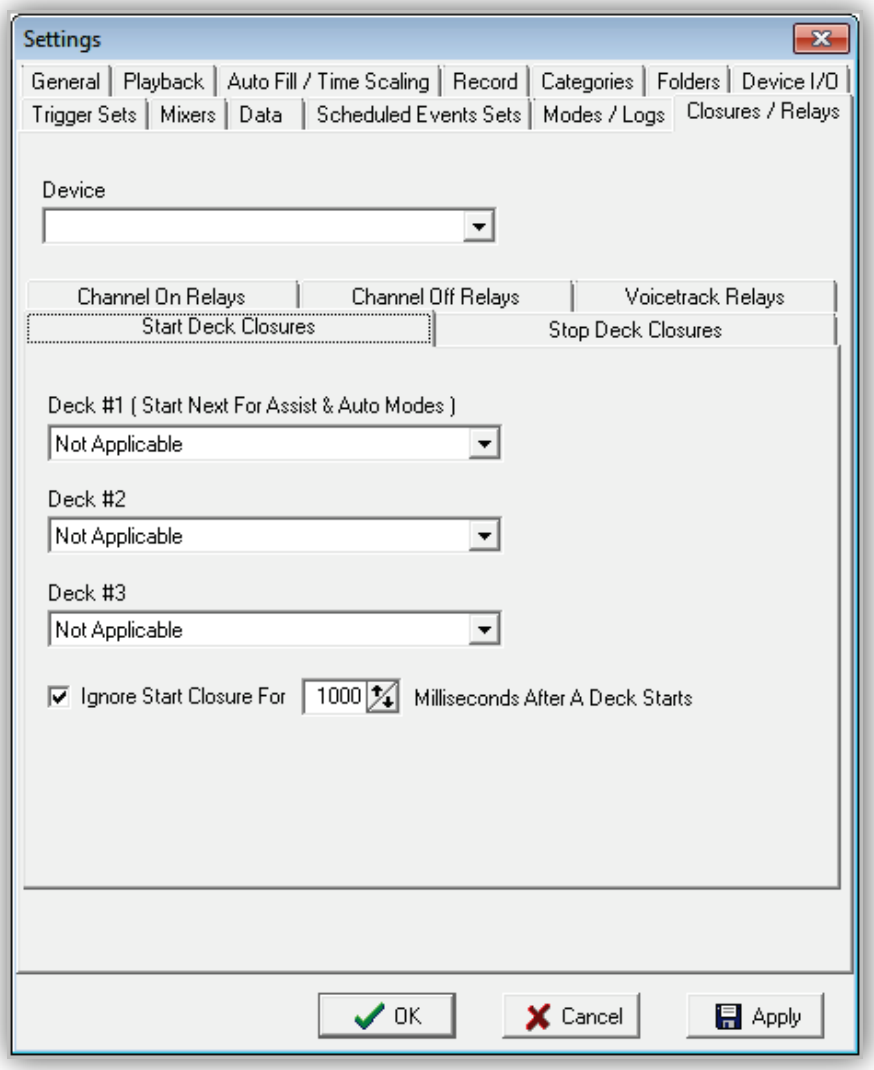


Figure 4-36. Start Deck Closures Tab

4.3.13.2 Configuring Stop Deck Closures

The **Stop Deck Closures** tab allows you to configure incoming closures to trigger Deck #1, Deck #2, and Deck #3 to stop playing their currently playing event

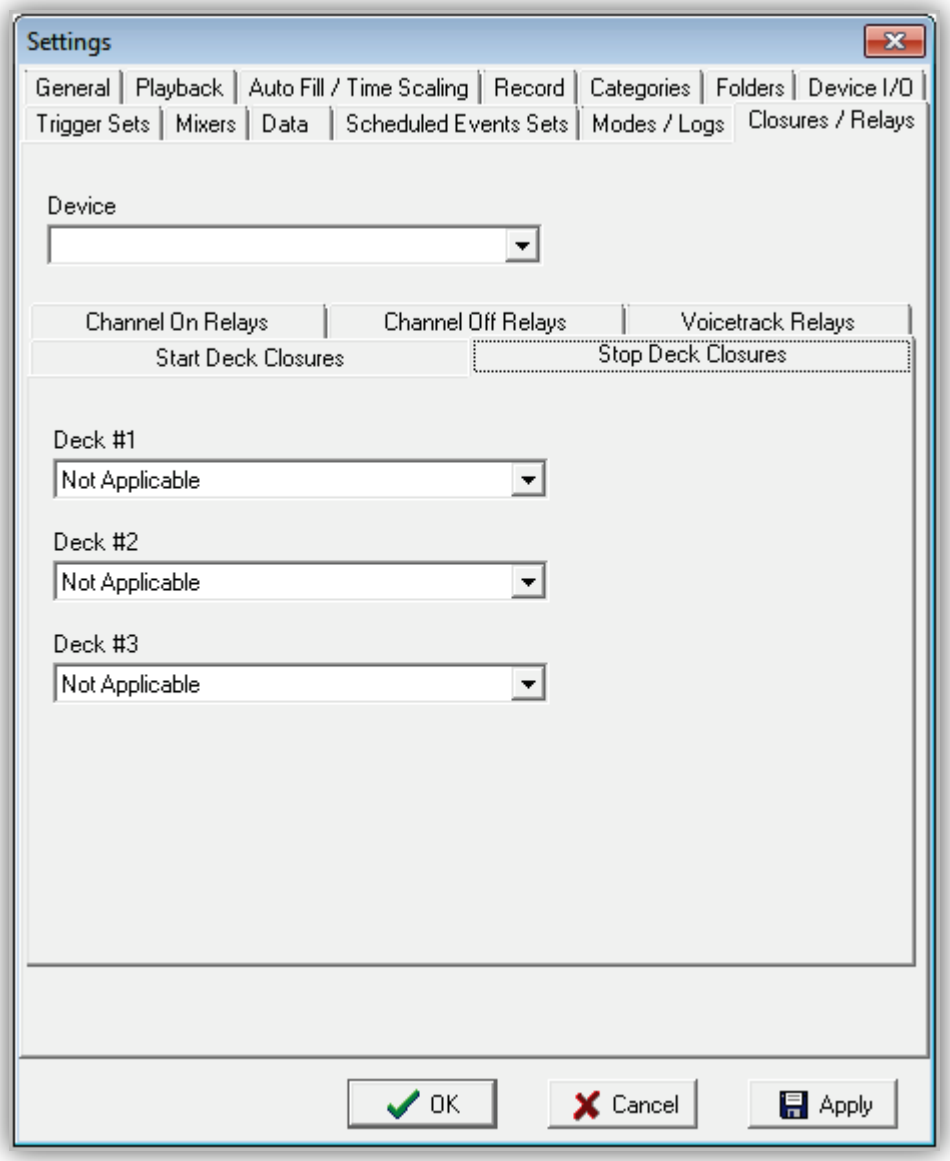


Figure 4-37. Stop Deck Closures Tab

4.3.13.3 Configuring Channel On Relays

The **Channel On Relays** tab allows you to configure outgoing relay closures to pulse or latch on when Deck #1, Deck #2, or Deck #3 are playing on the Audio Server.

If using **Pulse At Beginning Of Playback For**, specify the duration of the pulse from the **Milliseconds** selector (for a secondary closure when each deck stops, see section 4.3.13.4). Otherwise, to keep the relay latched, select **On For Duration Of Playback**

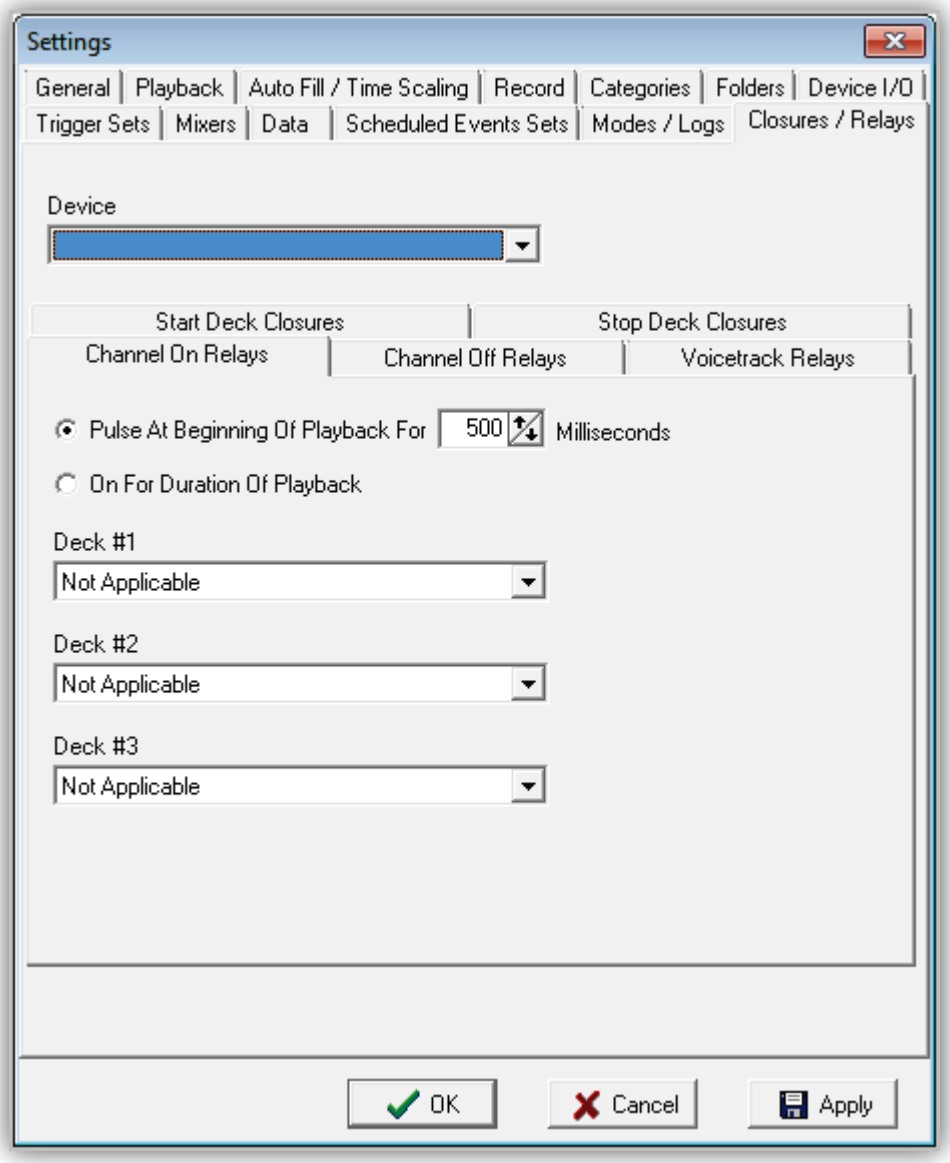


Figure 4-38. Channel On Relays Tab

4.3.13.4 Configuring Channel Off Relays

The **Channel Off Relay** tab settings are used to configure a momentary outgoing relay closure to for Playback Deck #1, Deck#2, or Deck #3 when and will pulse the selected relay when playback is stopped.

The relay options on this tab are used only when the **Pulse At Beginning Of Playback** option on the **Channel On Relays** tab is enabled (see section 4.3.13.3). The pulse length setting for the Channel Off Relays are the same as those configured in the **Millisecond** field on the **Channel On Relays** tab.

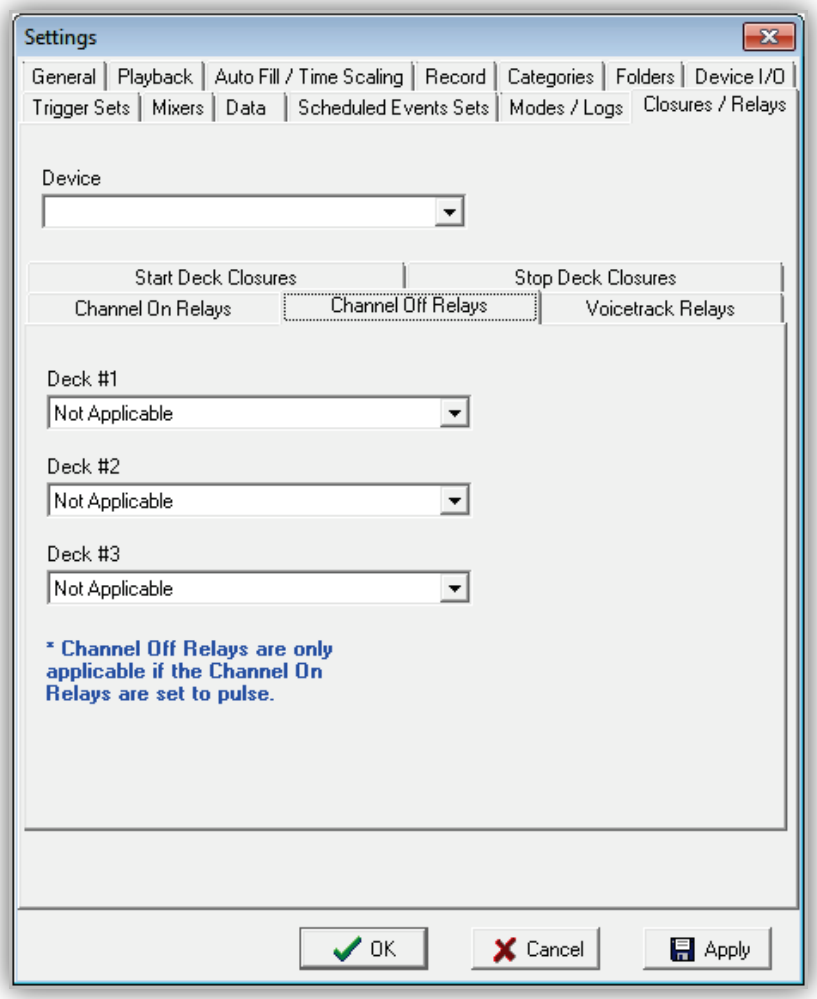


Figure 4-39. Channel Off Relays Tab

4.3.13.5 Configuring Voicetrack Relays

The voicetrack relay function works with BSI Skimmer Plus to enhance your skimming functionality and the validity of what is played on the air.

When a voicetrack is played over the air, the relay chosen in the **Playing Voicetrack Relay** field will be latched closed.

Voicetrack Inhibit Relay is used to have Skimmer Plus ignore its “mic open” closure while the OpX Studio Client is in the Voicetrack Editor. This prevents Skimmer Plus from recording the creation of your voicetrack before it is completed so that the voicetrack is not recorded as if it was played over the air.

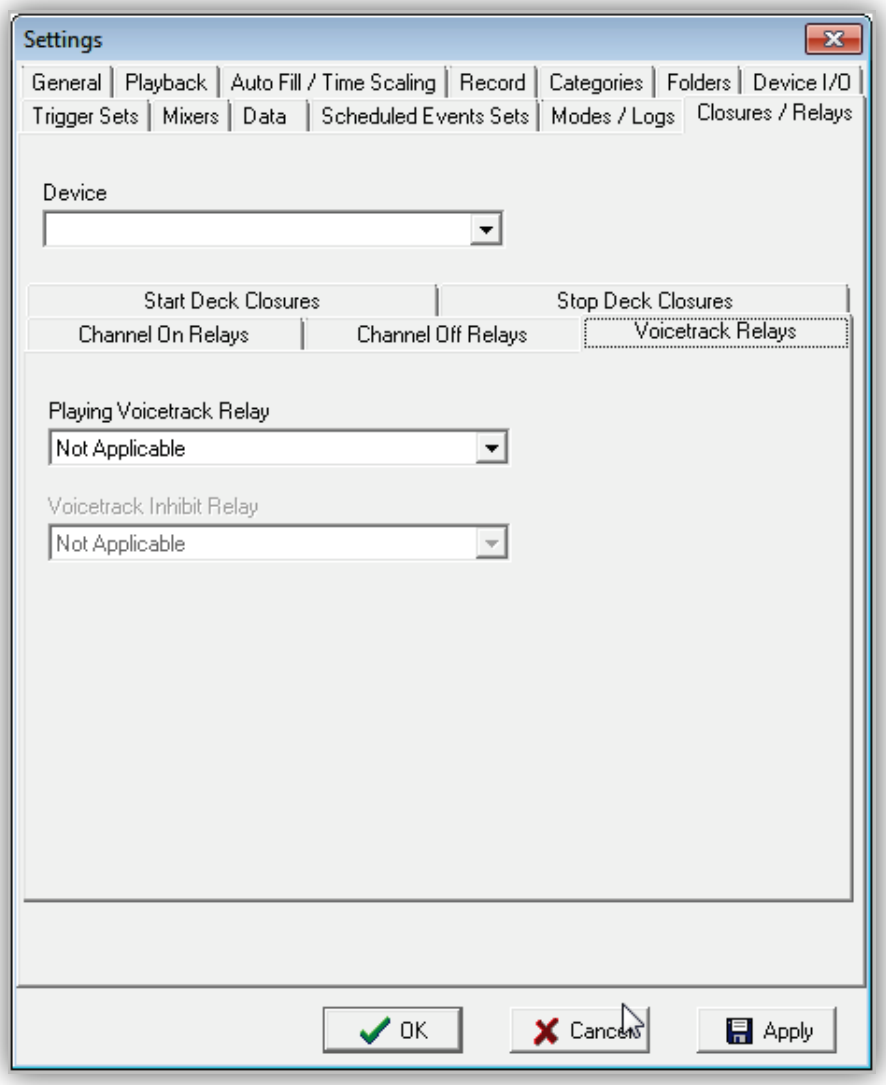


Figure 4-40. Voicetrack Relays Tab

4.4 Loading the Program Log

Clicking **Load Log** on the **File** menu allows you to load a log ad-hoc manually. This is useful when you want to play content that is not part of your scheduled programming, or need to reload or restart a log.

➢ **To load the program log**

1. On the **File** menu, click **Load Log**.

   The Load Program Log dialog box appears.

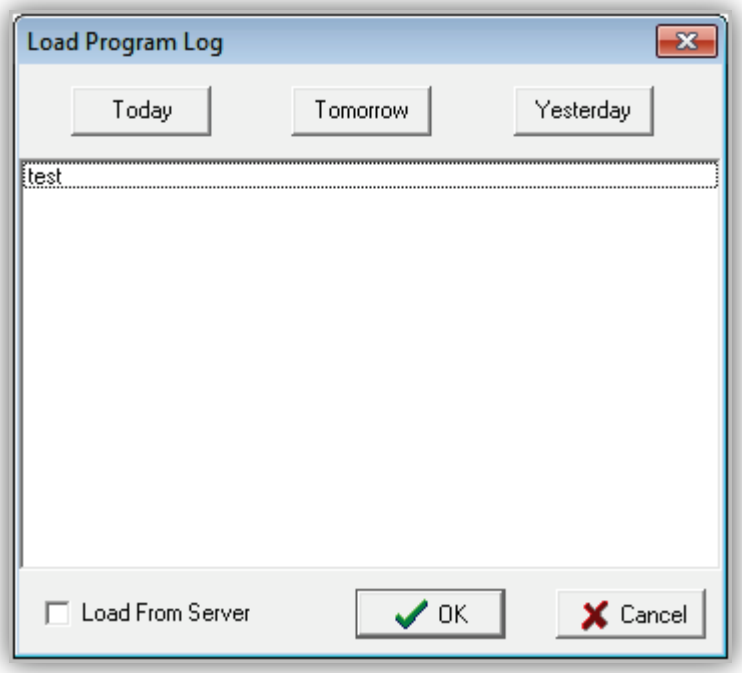


Figure 4-41. Load Program Log Dialog Box

2. Complete the fields in the dialog box (see Table 4-21).
3. Click **OK**.

Table 4-21. Fields in the Load Program Log Dialog Box

Field	Description	Default
Today Tomorrow Yesterday	Automatically loads the log specified for each day based on the "Program Log Name Template" setting in the General tab of the Settings window (see section 4.3.1). Clicking one of the Today, Tomorrow, or Yesterday buttons loads the specified log instantly and closes the dialog box. To select a specific log instead of using the Today, Tomorrow, and Yesterday buttons, click the name of the log in the log list and click OK. If you do not want to load a log, click the Cancel button.	—
Load From Server	By default, logs are loaded from the Audio Server's local hard drive. Checking this check box shows the logs stored on your File Server.	Unchecked

4.5 Adding, Editing, and Deleting Items in the Program Log

The **Edit** menu has **Add**, **Edit**, and **Delete** options for adding, editing, and deleting items in the program log.

4.5.1 Adding Items to the Program Log

Use the **Add** button on the File menu to insert files manually into the currently loaded program log ad-hoc.

➢ **To add an item**

1. In the program log, click the item above where you want to insert the item.
2. On the **Edit** menu, click **Add**.

   The Add dialog box appears.

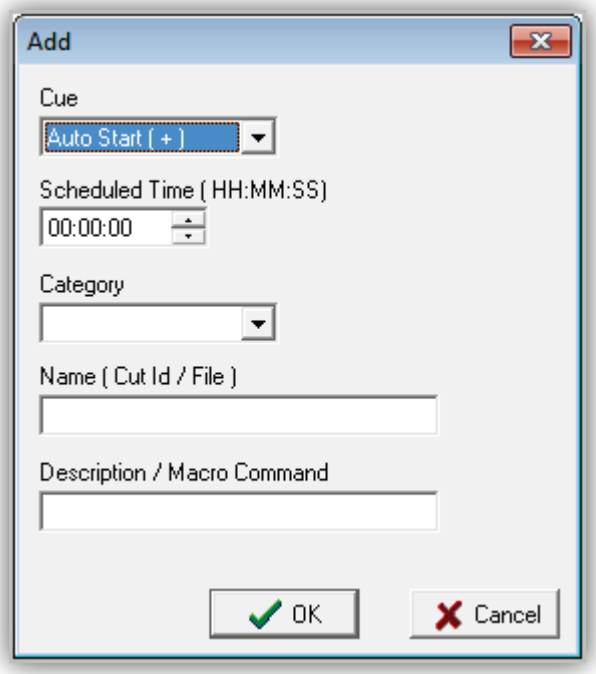


Figure 4-42. Add Dialog Box

3. Complete the fields in the dialog box (see Figure 4-42).
4. Click **OK**.

Table 4-22. Fields in the Add/Edit Dialog Box

Field	Description	Default
Cue	Allows you to set the cue type for the item being inserted. For more information, see Appendix B - Cue Types.	Auto Start (+)
Scheduled Time	Set the time the event is scheduled to play. This setting is not required for events with a cue type of Auto Start or Stop because it has no effect on playback, although it is useful to track when your events should play. With Time Immediate and Time Next events, however, the Scheduled Time is required because it determines when OpX plays the event. Enter the time in HH:MM:SS format (2 digits for the hour, 2 digits for the minutes, and 2 digits for the seconds, each separated by a colon).	00:00:00
Category	Three types of events can be added: • Audio = all Audio files belong to the type 'Audio' (even if they were given a custom category) • Macro • Comment = remarks that can help you track of your log, but do not perform a function. The cue type of a comment does affect the flow of playback; a Stop cue on a comment stops playback, as it would on an audio file.	—

Field	Description	Default
Name	Enter the name of the audio file you want to insert. This field is used only by the add function when entering items with “Audio” selected from the Category drop-down list.	—
Description / Macro Command	All categories use this field. • Audio events = enter the description of what you are entering. • Comments = enter the text of the comment. • Macro = enter the command to be performed (see Appendix A - Macros for information about the available macros and their command structure).	—

4.5.2 Editing Items in the Program Log

There might be times when you need to edit items in the program log.

➢ **To edit an item**

1. In the program log, click the item you want to edit.
2. On the **Edit** menu, click **Edit**.

   An Edit dialog box similar to the following appears.

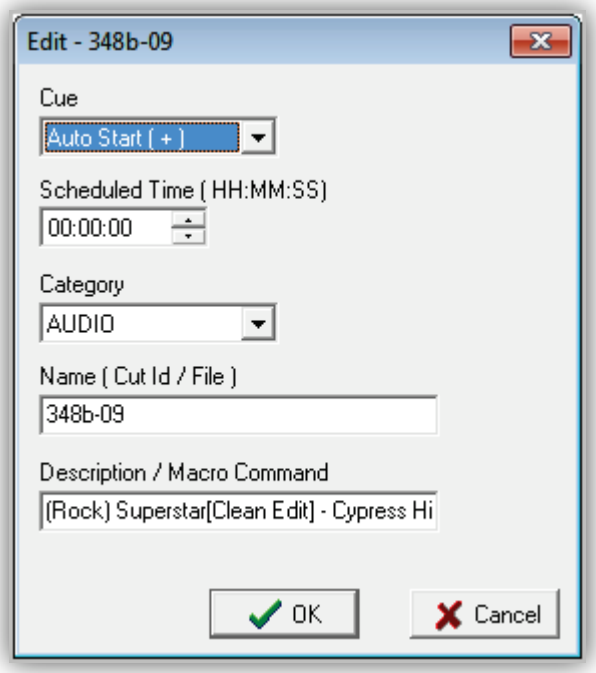


Figure 4-43. Edit Dialog Box

3. Edit the fields you want to change (see Table 4-22).

4. Click **OK**.

4.5.3 Deleting Items from the Program Log

If you no longer need an item in the program log, you can delete the item.

Note: A precautionary message does not appear before you delete an item. Therefore, be sure you do not need the item before you delete it. You cannot undo an item after it has been deleted.

➢ **To delete an item**

1. In the program log, click the item you want to edit.
2. On the **Edit** menu, click **Delete**.

4.6 Playing Back a Program Log Item

The following procedure describes how to play back an item in the program log.

If the program log is playing when you click the **Start** option or button, playback of the current item continues and the selected item will play back at the highlighted point. To move playback to a new point in the program log from the Audio Server, use the Stop option or button to stop playback, then select the item in the program log at the point where you want to restart playback and click the **Start** option or button.

➢ **To play back an item in the program log**

1. In the program log, click the item you want to play back.
2. Perform one of the following steps:
   – On the **Action** menu, click **Start**.
   – On the tool bar, click
3. To stop playback, perform one of the following steps:
   – On the **Action** menu, click **Stop**.
   – On the tool bar, click

5 Auxiliary Audio Server Module

Topics:

- *Starting the Auxiliary Audio Server Module (page 135)*

This chapter describes the OpX Auxiliary Audio Server module.

The OpX Auxiliary Audio Server is an OpX Audio Server that you can run to perform tasks such as performing background recordings. Performing recordings and other utility tasks in the background removes these tasks from having to be performed by the main Audio Server. The Auxiliary Audio Server has the same functions as the main Audio Server, except that it is not accessible from an OpX Studio Client. Consequently, only an engineer with permission to the workstation running the Auxiliary Audio Server can modify it.

5.1 Starting the Auxiliary Audio Server Module

You must start the File Server module before you start the Auxiliary Audio Server.

➢ **To start the Auxiliary Audio Server module**

1. Start the File Server module (see section 3.1).
2. Click the Windows Start button and click **Programs > Broadcast Software > AUXILIARYOpX AudioServer**.

   The Auxiliary Audio Server module appears.

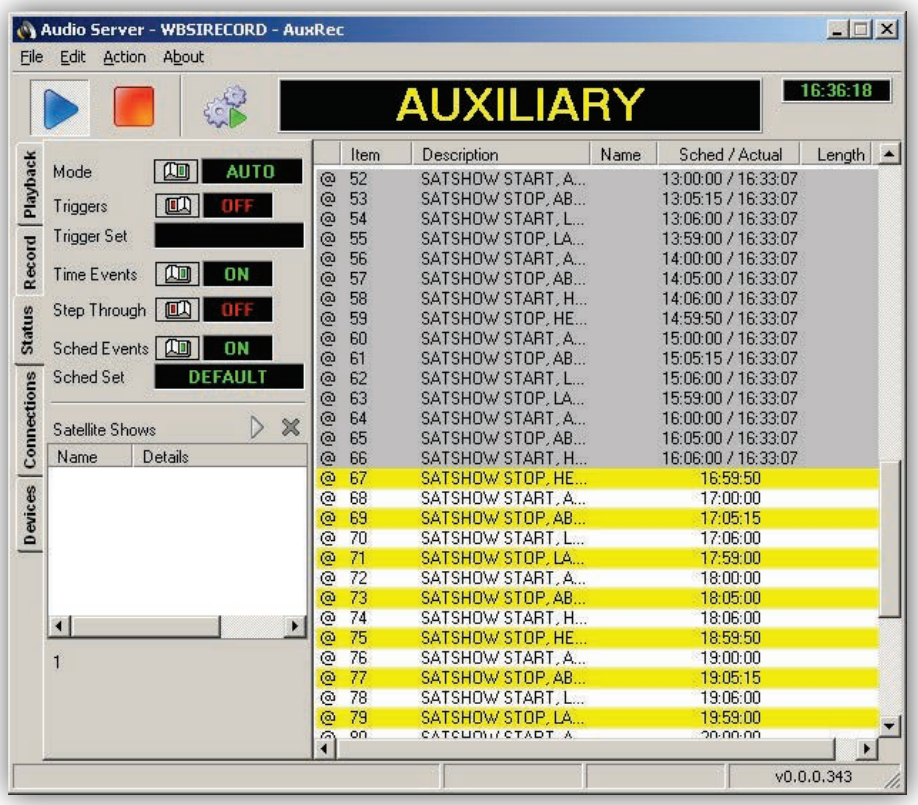


Figure 5-1. Auxiliary Audio Server Module

3. Refer to the equivalent sections in Chapter 4, as the module setup and usage are the same as the Audio Server module.

6 Studio Client Module

Topics:

- *Starting the Studio Client Module (page 137)*
- *Quick Tour (page 138)*
- *Configuring the Studio Client Module (page 146)*
- *Operating Modes (page 159)*
- *Verifying a Program Log (page 161)*
- *Loading a Program Log (page 162)*
- *Playing Back a Log (page 164)*
- *Editing a Program Log (page 165)*
- *Using Hot Keys (page 167)*
- *Saving the Hot Key Page to the File Server (page 175)*
- *Using the Voicetrack Editor (page 176)*

This chapter describes the OpX Studio Client module.

The OpX Studio Client module is the module used in the on-air studio and production studio. The Studio Client module includes the Voicetrack Editor, which allows you to edit voicetracks for the program log currently on the air.

6.1 Starting the Studio Client Module

You must start the File Server module before you start the Studio Client module.

➢ **To start the Studio Client module**

1. Start the File Server module (see section 3.1).
2. Click the Windows Start button and click **Programs > Broadcast Software > OpX Studio Client**.

   OpX searches for stations, and then shows the stations found.
3. Click a station, and then click **Done**.

   A Studio Client window similar to the following appears.

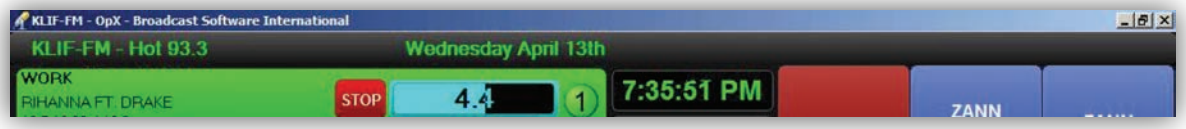
6.2 Quick Tour

The following sections provide a quick tour of the Studio Client module interface.

Number	Description
❶	Date/time panel. See section 6.2.1.
❷	Station panel. See section 6.2.2.
❸	Hot Key panel. See section 6.2.7.
❹	Navigation bar. See section 6.2.5.
❺	Menu bar. See section 6.2.6.
❻	Program log. See section 6.2.4.
❼	Playback decks. See section 6.2.3.

6.2.1 Date/Time Panel

The date/time panel shows the current system date and time.



Clicking the **Time** section allows you to toggle between 12-hour and 24-hour display formats.

Clicking the weather information opens a pop-up window that shows current weather and forecast details.

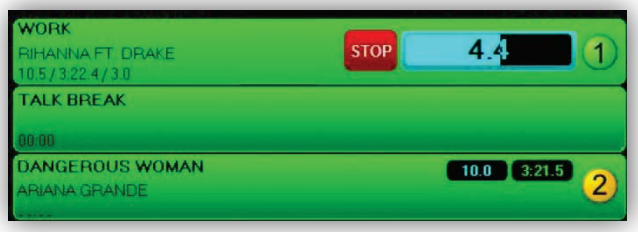
6.2.2 Station Panel

The station panel shows the logo of the station (Audio Server) to which the Studio Client is connected. You can click the station panel to change stations.

Tip: To add a station logo to this panel, save a picture in .jpg format in the Shared Config folder on your file server. Name the file after the station name. In the example above, for instance, the file is named wopx.jpg.

6.2.3 Playback Decks

The playback deck stack shows the currently playing audio files along with those that are upcoming. As your program log runs, it populates the decks with the audio files to be played.



The three decks in the stack are shown in the example above, with the top-most deck currently playing an audio file. The currently playing audio file always moves to the top of the stack, with the next-to-play audio file second, and third-to-play deck last. This is referred to as a stack because the decks are not in order numerically; instead they are in order by which file is currently playing, then the next to play, and then third to play. When the currently playing deck finishes with its event, it rotates out of the stack, the next items move up, and a new third-to-play item is added to the bottom of the stack.

When an audio file is playing, you can use the **Stop Button** to stop playback of the deck. The progress meter shows the length remaining of the audio file in text. In the example above, 2 minutes, 39.7 seconds remain) and creates a bar-graph representation in the background.

The color of the text and progress bar depends on the portion of the audio file that is playing:

- Blue = appears during intro.
- Green = appears during the main section.
- Red appears during the segue.

The deck from which the audio file is playing appears at the far right, with a 1, 2, or 3 icon.

6.2.4 Program Log

The program log shows the schedule of events that will be played, including audio files, carts, and macros.

The name of the currently loaded log appears after the Log: tag at the top of the log. If the intended air date of the log is set, it appears after the Air Date: tag.

Except for the first and last columns, the header of the list contains titles for the data type of each column of the program log. Table 6-1 describes each column in the program log.

Table 6-1. Columns in the Program Log

Column	Description
Cue	Uses an icon to show the cue type of each program log item: • [No Icon] Auto Start = Auto Start cued events have no icon in the Studio Client's program log display. This is equivalent to the + cue the Audio Server shows for Auto Start events. • Time Immediate = event with a cue type of Time Immediate. This icon is equivalent to the @ cue on the Audio Server. • Time Next = items with a cue type of Time Next. This icon appears for events designated with the # cue on the Audio Server. • Stop Cue = audio playback will stop. This icon appears for items with no cue type on the Audio Server.
#	Shows the event number of each event in the program log. The first event at the top of the program log is event 1 and each event after that is incremented. This makes it easy to track your location in your log should you exit and re-open OpX or edit in a production room. The currently playing event displays **Play** rather than its event number.
Description	Shows the Artist and Title data from your audio files and carts. For Macro events or Comments, the specified entry is shown. For quick identification, an icon appears to the right of the description text for common category types: • = commercials • = music • = cart • = voice track • = macro
Name	Shows the physical file name (the name the audio file on the hard drive) of audio events.
Time	Shows the time your audio file is scheduled to play. The time can be configured to show the estimated time, scheduled time, or both using the **Log Time** drop-down list in the **General** tab of the Studio Client module (see Table 6-5 on page 149). If no time is specified by your traffic or music log-generating software, OpX estimates when the subsequent files will play based on the currently playing item and the system clock setting. This field changes to a Play button (or a Stop button on the currently playing event) on the highlighted event in the program log.
Length	Shows (from left to right) the intro length, total length, and segue length of audio events. Macros and comments do not have an associated length and do not show a length.
Deck Number	Uses an icon to show which deck number will be used to play each item. This is useful if you configure your audio server to use separate line outputs to your console for performing manual fades, etc. If you force a re-load of the decks or change the next-to-play item, the playback order in this column is reset and the order can change.

6.2.5 Navigation Bar

The navigation bar runs along the right side of the program log. It contains the icons in Table 6-2 that simplify navigation in the program log.

Table 6-2. Icons in the Program Log Navigation Bar

Icon	Icon Name	Description
	Page Up	Click to move the program log up one page at a time.
	Event Up	Click to move up one item at a time.
	Current Event	Automatically scrolls the program log to the currently playing event.
	Go To Time	Click to go to a specific time in your program log. A grid appears with a button for each hour of the day. Click the desired hour to go to that portion of your program log.
	Detach Hotkey Panel	If you have two monitors, click to place the Hot Keys to detach the Hot Key Panel from the main user interface and make the panel a separate user-sizable window.
	Event Down	Click to move down one item at a time.
	Page Down	Click to move the program log down one page at a time.

6.2.6 Menu Bar

The menu bar contains the main function buttons of the user interface. The buttons that appear on the menu bar vary with the operating mode selected using the **Mode** button (the far left button in the figure below, shown set to Auto mode). Table 6-3 describes the buttons in the menu bar.

For more information about operating modes of the Studio Client module, see section 6.4.

Table 6-3. Menu Bar Buttons

Button	Description
AUTO	Use to switch operating modes of the Studio Client module.
DELETE	Highlight an item in the program log and click this button to delete the event.
MOVE	Highlight an event in the program log, click this button, and then click another location to move the event.
COPY	Highlight an event in the program log, click this button, and then click another location to copy the event.
CUE	Sets the program log to cue mode to preview intros and segues of each audio event.
MAKE NEXT	To reload the Playback Deck Stack with the currently highlighted event in the Program Log as the next-to-play item, click this button.
START NEXT	Starts playback or forces a segue to the next event.
INSERT	Opens the Event Insert window to add items to the program log or Hot Keys.
EDIT SEGUE	Edits the cross-over length and type for an individual segue, click this button to open the Segue Editor.
OPTIONS	Provides access to various Studio Client options, including voicetracking and loading and saving of logs.

6.2.7 Hot Key Panel

Hot Keys are “instant-fire” audio files, carts, or macro commands available at the touch of a button. You create Hot Key Sets to organize the Hot Keys available.

The Hot Key Panel has a Hot Key Set loaded with audio files and carts. Clicking any Hot Key plays the specified audio event.

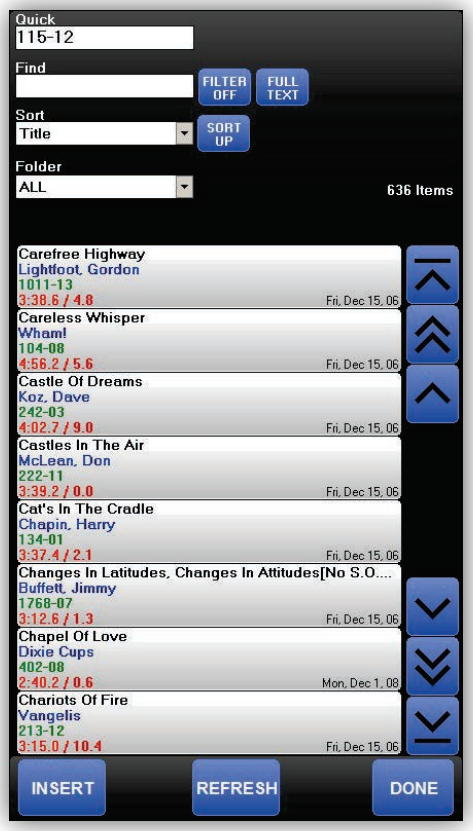
Adding or replacing items is as easy as dragging-and-dropping from the Insert Item window (shown in Figure 6.4) onto the desired Hot Key.

To edit the color, options, or clear a Hot Key right-click a Hot Key and click the corresponding option from the pop-up menu.

To switch between Hot Key Sets, click the **Next** or **Previous** button.

To save Hot Key Sets to your local machine, click the **Save To Server** button. To load a previously saved Hot Key Set from the server, click the **Load From Server** button. To refresh the currently loaded Hot Key Set, click the **Refresh** button. To adjust the number of rows and columns displayed on the Hot Key Panel, click the **Hot Buttons Settings** button.

6.2.8 Insert Panel



The Insert Panel inserts audio events into the program log display and adds audio events to the Hot Keys.

To access the insert panel, click the **Insert** button in the menu bar at the bottom of the Studio Client user interface. The insert panel can be displayed in two locations:

- Superimposed over the top of the Hotkeys Panel.
- Over top of the left side of the program log display.

To switch orientations, click the **Insert** button on the menu bar to toggle between views. The panel switches between the orientations with each click. This allows you to drag audio events into the program log (when the panel is over the Hot Keys) or to the Hot Keys (when the panel overlaps the program log).

The **Quick** field shows the file name of the event you highlighted in the event list. If you know the name of the event you want to insert, enter the file name using your keyboard. After you select and highlight your event, the insert method you use depends on where you place your event:

- To insert an event into the program log, click the **Insert**

button. The button will switch its label to **Insert Where?**

, at which point you can click on the location in your program log where you want your event placed. The event you click shifts down, along with all subsequent events, and the new event is inserted.
- To add your event to a Hot Key, use your mouse cursor to drag the event from the event list and drop it onto your desired Hot Key.

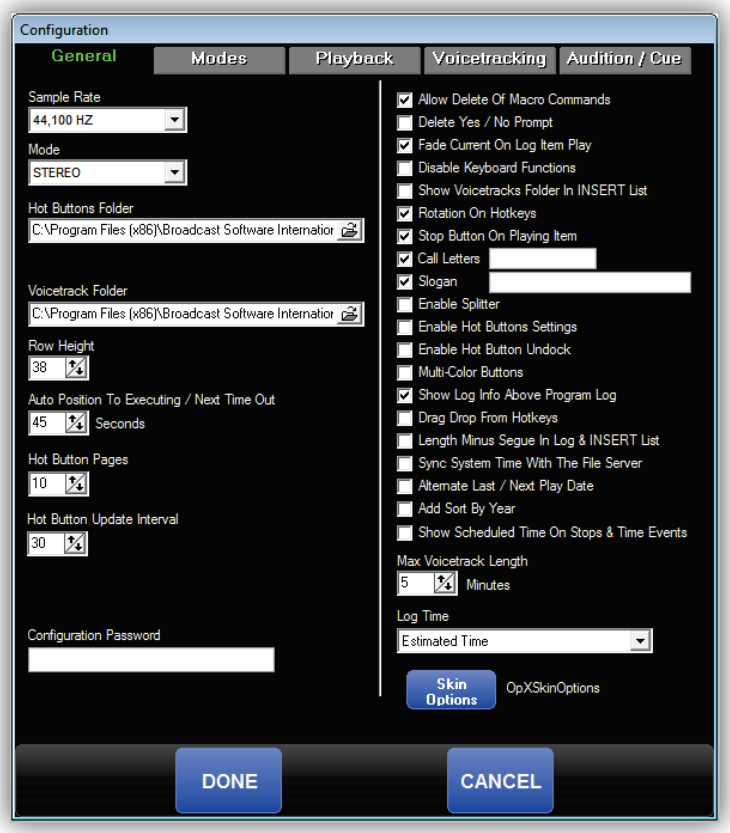
6.3 Configuring the Studio Client Module

The Studio Client module comes with default configuration settings. Using the **Config** option on the **Options** menu, you can change these settings to suit your requirements. For convenience, the settings are organized in tabs in the Settings window.

➢ **To configure the Studio Client module settings**

1. On the **Options** menu, click **Config**.

   *The Configuration dialog box appears, with the **General** tab displayed.*



2. Complete the fields in the dialog box tabs.

General Settings – see section 6.3.1	Voicetracking settings – see section 6.3.4
Mode settings – see section 6.3.2	Audition/cue settings – see section 6.3.5
Playback settings – see section 6.3.3	

3. When you finish, click **Done**.

6.3.1 General Configuration Settings

The **General** tab contains basic settings for setting up your Studio Client module.

Table 6-4. General Tab

Table 6-5. Fields in the General Tab

Field	Description	Default
Sample Rate	Output sample rate for all audio files played by the Studio Client (for example, monitoring voice tracks, intros, segues, and Hot Keys).	44,100 HZ
Mode	Determines whether audio will be stereo or mono (summed) for all audio files played by the Studio Client (for example, monitoring voice tracks, intros, segues, and Hot Keys).	Stereo
Hot Buttons Folder	Path where audio files used in Hot Key sets will be cached.	See the tab
Voicetrack Folder	Path where voicetrack files, and associated intro and segue audio file portions used to create and edit your voicetracks, will be cached.	See the tab
Row Height	Amount of space each line of the program log display is allowed to use. A higher number allows more data to be displayed per event. A lower number allows more events to be displayed at the expense of the amount of data per event that can be shown.	38
Auto Position To Executing/Next Time Out	Number of seconds before the position line reappears on the voicetrack and segue editors.	45
Hot Button Pages	Maximum number of Hot Key sets that the Hot Key panel will show. A lower number is non-destructive, so setting the maximum page lower than an existing Hot Key set does not delete or destroy the Hot Key sets above the maximum number set.	10
Hot Button Update interval	Amount of time before the studio client checks for new version of the file associated with the hot button.	30
Configuration Password	Security password that allows only intended users can access the Configuration window. After a case-sensitive password is entered in this field, a prompt appears when a user tries to go to the Configuration window.	—
Allow Delete Of Macro Commands	Allows you to delete macro commands from the Studio Client program log display.	Checked
Delete Yes/No Prompt	• Checked = a confirmation prompt appears before items are deleted. • Unchecked = a confirmation prompt does not appear before items are deleted.	Unchecked
Fade Current On Log Item Play	• Checked = currently playing audio event fades out when the log loads and the first event in the newly loaded program log starts to play. • Unchecked = when a new log is loaded, the currently playing event stops playing before the first item in the next log starts.	Checked
Disable Keyboard Functions	• Checked = disable Studio Client Control + [Key] shortcuts. Normal keyboard usage, such as typing in a name to search, is still possible. This setting is helpful if you accidentally press or bump keys on your keyboard that unintentionally affect playback. • Unchecked = enable Studio Client Control + [Key] shortcuts.	Unchecked
Show Voicetracks Folder in INSERT List	• Checked = insert previously created voicetrack files into the program log or Hot Keys. • Unchecked = hides the voicetrack folder in the Insert window's Folder drop-down list.	Unchecked

Field	Description	Default
Rotation On Hotkeys	• Checked = adding an audio event to a Hot Key that has an audio event already associated with it displays a prompt to replace the existing audio event or add it as a rotation. Each time you click the Hot Key, it plays one of the audio events in the rotation. • Unchecked = the added audio event always replaces the one associated with the Hot Key without displaying a prompt.	Checked
Stop Button On Playing Item	• Checked = currently playing event displays a stop button in the program log display rather than a play button. This setting does not affect the Stop button in the decks on the Playback Deck Stack. • Unchecked = currently playing event displays a play button in the program log display.	Checked
Call Letters	• Checked = call letters appear to the left of the date/weather information in the Studio Client interface. A field is provided for entering the call letters. • Unchecked = call letters do not appear in the Studio Client user interface.	Checked
Slogan	• Checked = slogan appears to the left of the date/weather information in the Studio Client interface. A field is provided for entering the slogan. • Unchecked = slogan does not appear in the Studio Client user interface.	Checked
Enable Splitter	• Checked = program log and Hot Key Panel widths can be moved by dragging the splitter bar between them. • Unchecked = program log and Hot Key Panel widths are locked to their current position.	Unchecked
Enable Hot Buttons Settings	• Checked = number of Hot Key rows and columns can be changed. • Unchecked = number of Hot Key rows and columns is locked.	Unchecked
Enable Hot Button Unlock	• Checked = Hot Key panel can be unlocked. • Unchecked = Hot Key panel cannot be unlocked.	Unchecked
Multi-Color Buttons	• Checked = color layout of the Studio Client can be changed. • Unchecked = color layout of the Studio Client cannot be changed.	Unchecked
Show Log Info Above Program Log	• Checked = shows program log info information, including the name of the program log, at the top of the program log display. • Unchecked = hides program log info information.	Checked
Drag Drop From Hotkeys	• Checked = items from the currently showing Hot Key Set can be dragged and dropped into the program log. • Unchecked = events cannot be dragged from your Hot Keys to the program log.	Unchecked
Length Minus Segue In Log & INSERT List	Track length as calculated at the segue marker, not as calculated from the end of the track.	Unchecked
Sync System Time With The File Server	Do not use this check box.	Unchecked
Alternate Last/Next Play Date	• Checked = last and next play dates are alternated. • Unchecked = last and next play dates are not alternated.	Unchecked
Add Sort By Year	Allows you to sort songs by the year they were produced. For example, this feature is useful with classic rock stations.	Unchecked

Field	Description	Default
Show Scheduled Time On Stops & Time Events	Time that items are scheduled to run, instead of the estimated time they will play. Timed events can be programmed, so they will hit the scheduled time exactly by using the @ cue type.	Unchecked
Max Voicetrack Length	Maximum allowed length of the voicetracks.	5
Log Time	• Estimated Time = time when the system thinks the item will play. • Scheduled Time = scheduled time derived from an external scheduling software application. • Both Estimated & Scheduled Times = estimated and scheduled times.	Estimated Time
Skin Options	Allows you to customize the appearance of the Studio Client user interface. For more information, see section 6.12.9.	—

6.3.2 Mode Configuration Settings

The **Modes** tab allows you to configure the initial and available modes for the Studio Client module.

Table 6-6. Modes Tab

Table 6-7. Fields in the Modes Tab

Field	Description	Default
Initial Mode	Allows you to set the default mode for the Studio Client when you open the Studio Client Module.	Air
Available Modes	Uncheck options to disable modes from the Studio Client on your machine. This is useful for production machines that you do not want to potentially allow to control the on-air playback	Air Edit Voicetrack

6.3.3 Playback Configuration Settings

Hot Keys are one of two types of audio events not played by the Audio Server module (voicetrack editing is the other). The **Playback** tab allows you to select which playback devices the Hot Keys will use. The Studio Client can use three playback devices for Hot Key playback. You can either choose an independent device for each of the three selections, or use the same device for all three.

By default, the left-most column of Hot Keys use Hotkey Playback Device #1, the middle column uses Device #2, and the right column uses Device #3.

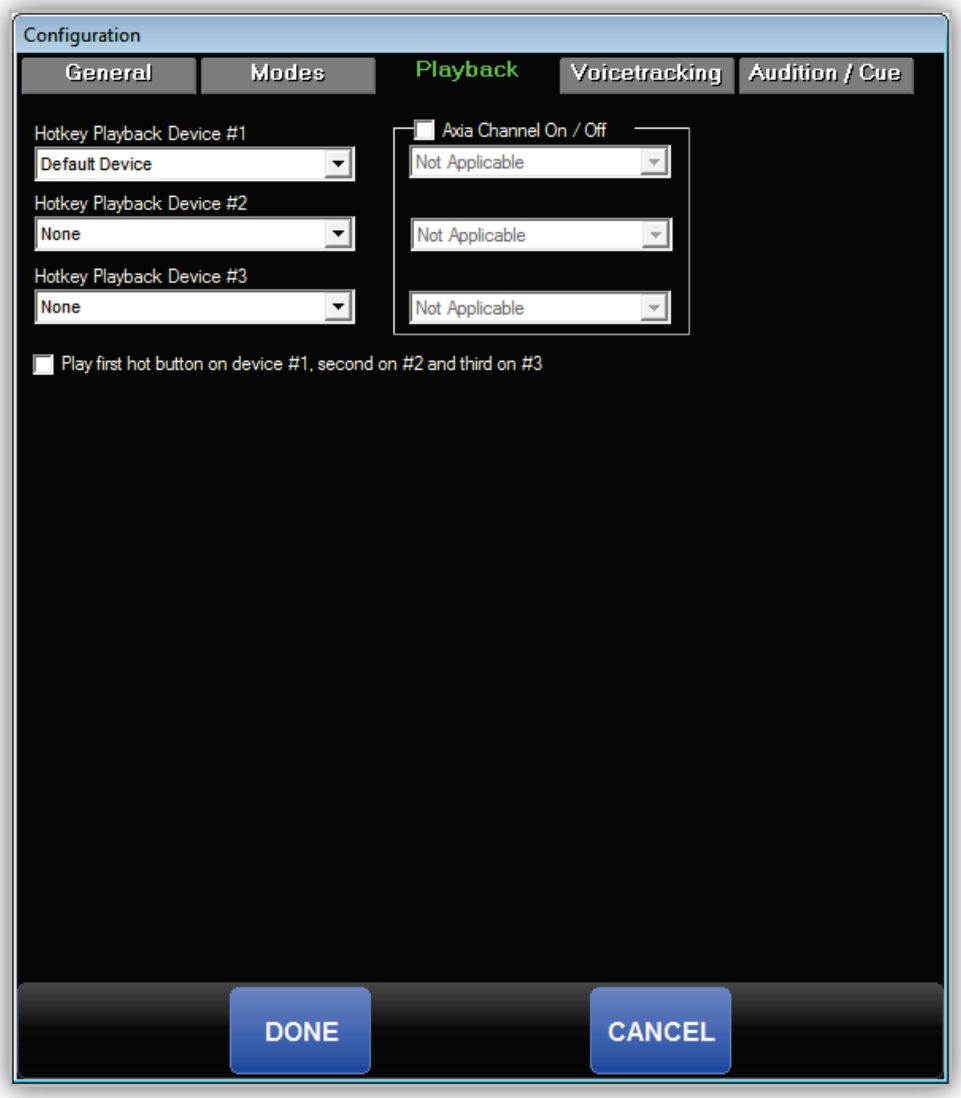


Table 6-8. Playback Tab

6.3.4 Voicetracking Configuration Settings

The **Voicetracking** tab allows you to configure voicetrack settings.

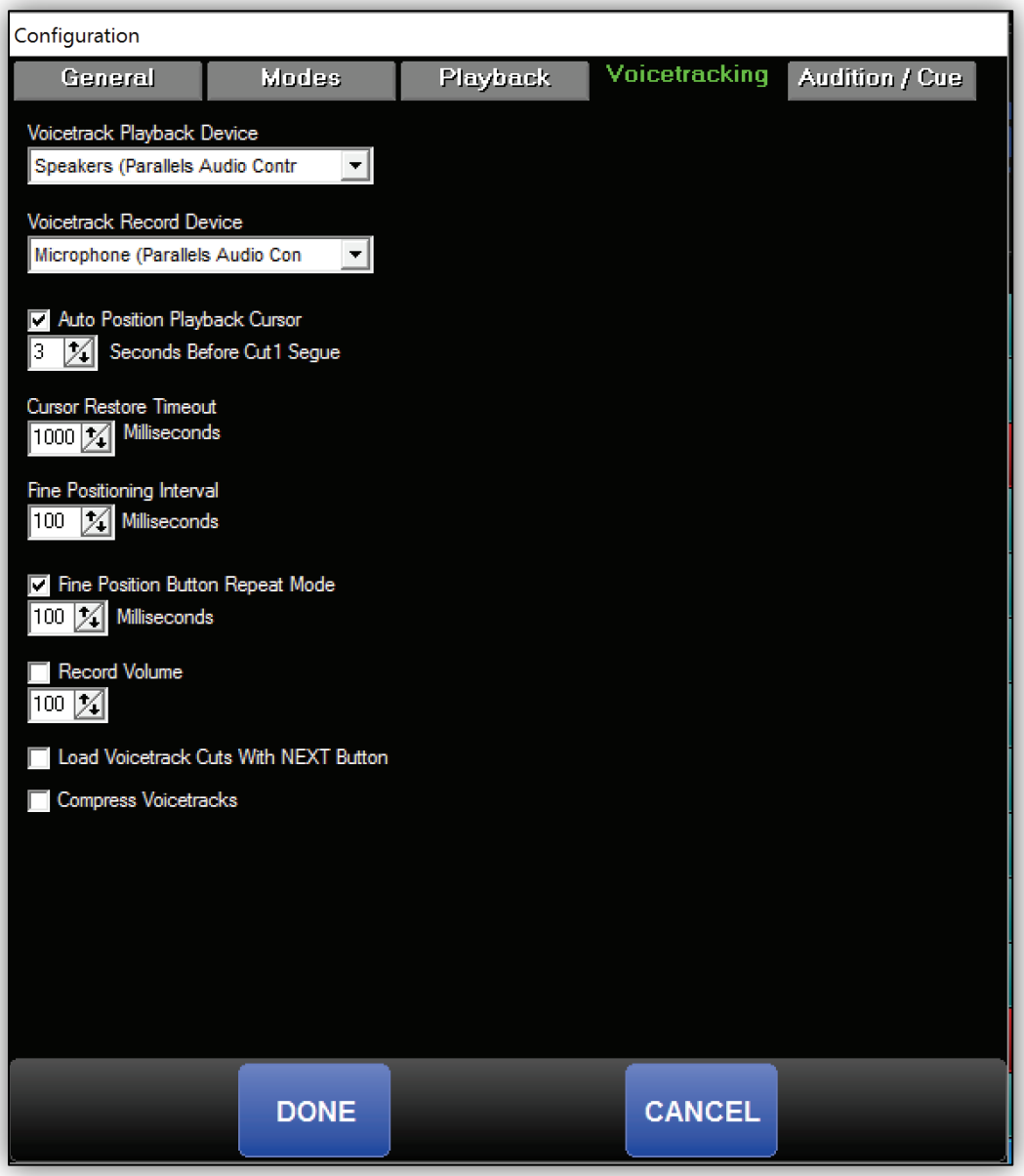


Table 6-9. Voicetracking Tab

Table 6-10. Fields in the Voicetracking Tab

Field	Description	Default
Voicetrack Playback Device	Playback device the Voicetrack Editor will use.	See the tab
Voicetrack Record Device	Record device the Voicetrack Editor will use.	See the tab
Auto Position Playback Cursor	Allows you to choose the default position of playback start.	Checked 3
Cursor Restore Timeout	Number of milliseconds before the cursor reappears after adjusting the start point of the voicetrack or Cut 2.	1000
Fine Positioning Interval	Number of milliseconds by which each track will be shifted when clicking the advance or recede buttons.	100
Fine Position Button Repeat Mode	Allows you to enable a repeat function when holding the advance and pull-back buttons and adjust the amount of time between each repeat.	Checked 100
Record Volume	The Voicetrack Editor records at the full volume coming into the audio device being used. Use this field to set a specific record volume other than 100%.	Unchecked 100
Load Voicetrack Cuts With NEXT Button	Used with the voicetrack marker configured in the Import-Merge module's Import Format settings. Importing voicetrack markers into your program log simplifies voicetracking by allowing your talent to click the NEXT button in the Voicetrack Editor to automatically move the Voicetrack Editor to the position in the program log for which they need to record the next voicetrack.	Unchecked
Compress Voicetracks	Check to have the system compress the audio. (Instead of using WAV, the system uses the method defined in the file server.)	Unchecked

6.3.5 Audition/Cue Configuration Settings

If you use the audition/cue function, you can check the Audition check box and configure the following settings.

Table 6-11. Audition/Cue Tab

Table 6-12. Fields in the Audition/Cue Tab

Field	Description	Default
Countdown Segue	• Checked = when auditioning the segue, the timer counts down to zero at the segue point, and then restarts the timer and count down through the segue length. • Unchecked = countdown clock counts down the length to the end of the track.	Unchecked
Seconds After Intro / Prior To Segue	Starting point of the segue audition. With the default of 10 seconds, the segue audition starts its playback 10 seconds prior to the segue point. For example, a segue point of 13 seconds before the end of a song plays the last 23 seconds of your audio file.	10
Play Out Assigned Audio Server Channel	Plays the audition channel out of the audition device on the audio server instead of the audition channel on the studio client.	Checked

6.4 Operating Modes

The Studio Client module has several operating modes that affect the playback of the program log. You select an operating mode by clicking the left button in the tool bar, and then clicking a button from the Pop-up menu.

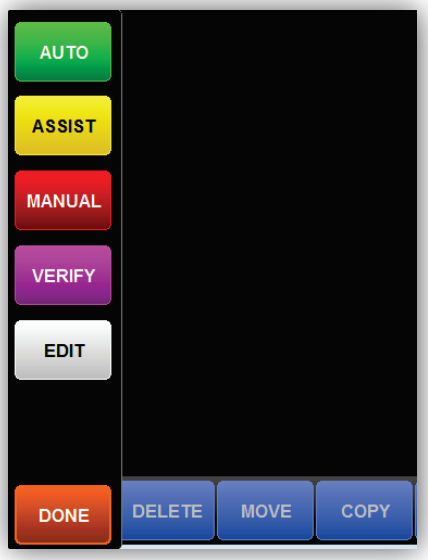


Figure 6-1. Pop-up Menu for Selecting Operating Modes

Table 6-13. Operating Modes

Button	Mode	Description
AUTO	Auto	Auto mode is the most widely used operating mode. In Auto mode, all cue types are adhered to and full automation is possible.
ASSIST	Live Assist	Live Assist mode is used by live talent. Audio events load from the program log into the Playback Deck Stack, but segues do not automatically execute, as they are in Auto Mode. Events are played by clicking the Start/Start Next button, an individual deck's play button, a timed event, or they can be started by a closure (if configured). OpX can respect cues for breaks, so that your entire break can be played as if in Auto mode. This allows your break to play in its entirety without stopping between each break element/commercial/PSA if you configured Audio Server preferences to do so.
MANUAL	Manual	In Manual mode, no items are automatically placed into the Playback Deck Stack. Instead you click the individual Play button on the desired event in the program log. While in Manual mode, no timed events or Auto Start cued events execute automatically. OpX can respect cues for breaks, so that your entire break can be played as if in Auto mode. This allows your break to play in its entirety without stopping between each break element/commercial/PSA if you configured Audio Server preferences to do so.

Button	Mode	Description
VERIFY	Verify	After importing or creating a Program Log, verify your program log to be sure all the events are valid to be played — that the audio files exist, and that the start and end dates allow the events to be played: 1. Click the Mode button, and then click Verify from the Mode menu. 2. When the verification process ends, a window similar to the one in Figure 6-2 appears, with a list of all faults shown in your program log. 3. Go to the position of the errored item by clicking its listing in the error log. 4. When you finish with the report, click Done.
EDIT	Edit	Edit mode is the most common mode to enter when working in your production room or on-air studio to add voicetracks and edit logs. It is the only mode you can enter in the Studio Client that allows you to work with OpX without directly affecting the on-air playback of the Audio Server module for the station to which you are connected. Edit mode allows you to edit a program log other than the one currently being aired or edit the on-air log without affecting the on-the-air playback. When you enter Edit mode, a pop-up window prompts you to select the log you want to edit. Click the log and commence your edits. When you finish, click the Options menu and click Save Log.

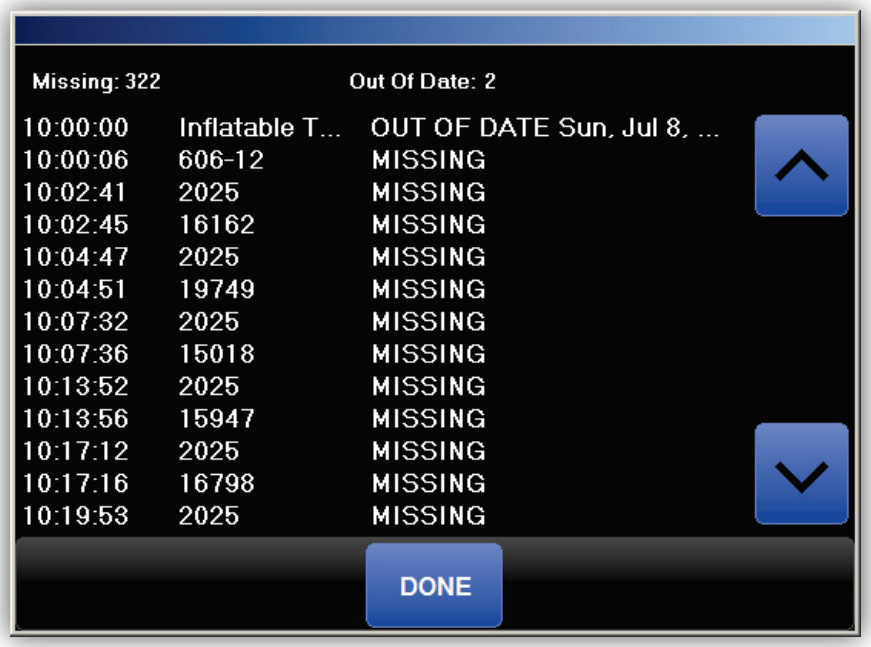


Figure 6-2. Example of Faults in the Program Log

6.5 Verifying a Program Log

After you import or create a program log, verify your program log to be sure all the events are valid to be played — that the audio files exist, and that the start and end dates allow the events to be played.

➢ **To verify a program log**

1. Click the **Mode** button on the menu bar, and then click **Verify**.

   At the end of the verification process, a window similar to the one in Figure 6-4 lists all faults in your program log.

Figure 6-3. Clicking Verify from the Mode Button

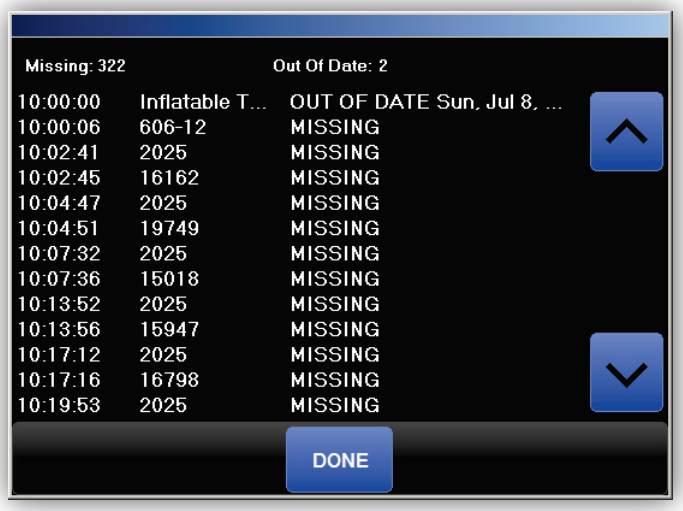


Figure 6-4. Example of Errors in Program Log

2. Go to the position of the error by clicking its listing in the error log.
3. Click **Done** when you finish with the report.

6.6 Loading a Program Log

➢ **To load an existing log from the Studio Client module**

1. Click the **Options** menu button on the menu bar, and then click **Load Log** (see Figure 6-5).

   The Program Log window appears (see Figure 6-6).

Figure 6-5. Clicking Load Log from the Options Menu

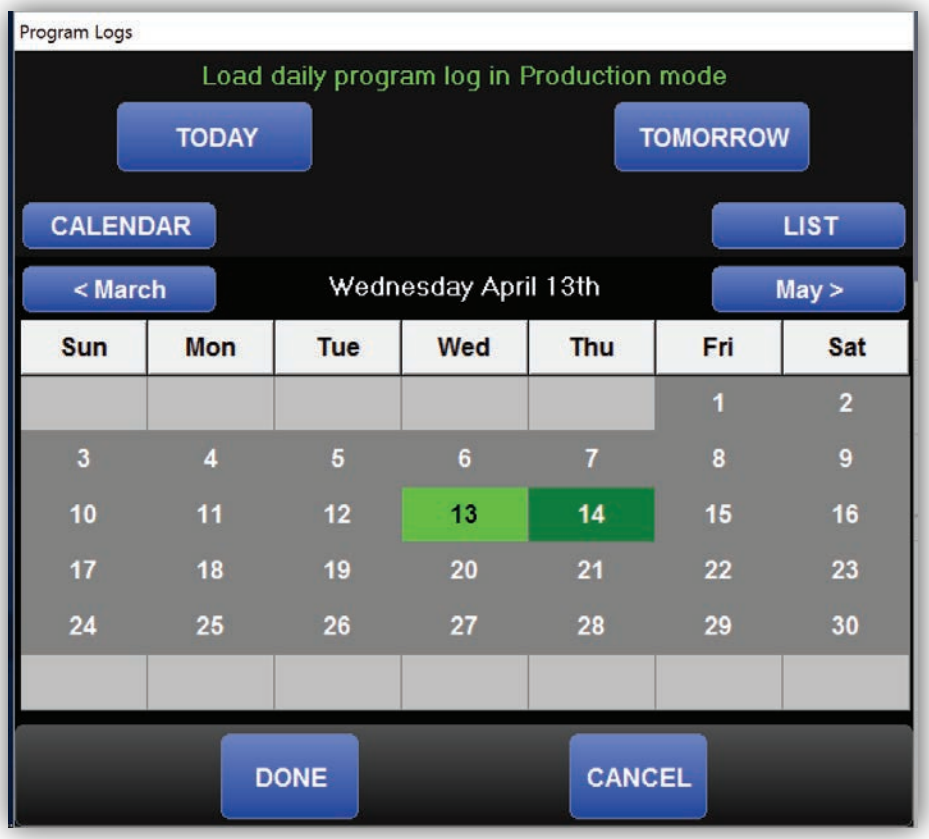


Figure 6-6. Example of Errors in Program Log

2. To load the log specified for today, tomorrow, or yesterday, as determined by the Audio Server's **Program Log Name Template** setting, click the **Today**, **Tomorrow**, or **Yesterday** button.
3. To load a specific log by file name, click the desired program log in the Logs list.
4. When you finish, click the **Done** button.

6.7 Playing Back a Log

In Auto mode, loading a log executes the first event in the log automatically.

In Assist or Manual mode, perform the following procedure to play back a log. You can also use this procedure to start playback at a specific point while in any mode.

➢ **To play back a log**

1. Click the event you want to play.
2. Click the **Make Next** button, and then click the **Start** or **Start Next** button.

6.8 Editing a Program Log

You can use the Studio Client to edit the currently playing program log while in Auto, Live Assist, or Manual mode. You can also use it to edit a log in Edit mode while the on air program log is playing. The procedure for editing the program log (add events, remove events, move events, or copy events) in any mode is the same.

6.8.1 Adding Events

➢ **To add an event**

1. Click the **Insert** button in the tool bar

   The Insert Panel appears.

2. Find the event you want to add to your program log, and then click the **Insert** button on the **Insert** panel. Do not click the **Insert** button on the tool bar.

   *The **Insert** button changes to **Insert Where?***

3. Click the location in the program log where you want to place your event.

   The event is placed in the location you clicked and the item you clicked in the program log and all items below it shift down.

6.8.2 Removing an Event

Note: A precautionary message does not appear before you remove an event. Therefore, be sure you do not need an event before you remove it. You cannot undo an event after it has been removed from the program list.

➢ **To remove an existing event from your program log**

1. Click the item to highlight it, and then click the **Delete** button in the tool bar

   The item is removed from the program log.

6.8.3 Moving an Event

The following procedure describes how to move an existing event from one location to another location in your program log (for example, how to move a song from before a break to after a break, or switch the order of commercials in a break).

➢ **To move an existing event from one location to another location in your program log**

1. Click the item you want to move in the program log.
2. Click the **Move** button in the tool bar

   *The **Move** button changes to **Move Where?***

3. Click the location in your program log to where you want to move the event.

   The event moves to the new location and the events between the old and new locations shift to accommodate the move.

Note: If you decide not to move an event after clicking the **Move** button, click the **Move Where?** button to cancel the move process

6.8.4 Copying an Event

You can copy an event in your program log to another location. This procedure creates a duplicate event at a different point in your program log.

➢ **To copy an event**

1. Click the event.
2. Click the **Copy** button

   *The **Copy** button changes to **"Copy Where?"***

3. Click the location in your program log where you want to place the copy of the event.

   The duplicate event is added to the location where you clicked in the program log and the event that was at that location, and all subsequent events, shift down.

Note: If you decide not to copy an event after clicking the **Copy** button, click the **Copy Where?** button to cancel the copy process

6.9 Using Hot Keys

Hot Keys are used for instant playback of events. The most common uses of the Hot Keys are for sound effects, jingles, or weather beds for live shows.

Playing a **Hot Key** is as simple as clicking the Hot Key event button or touching the desired event button if you use a touch screen.

Initially, there will be no events in your Hot Keys.

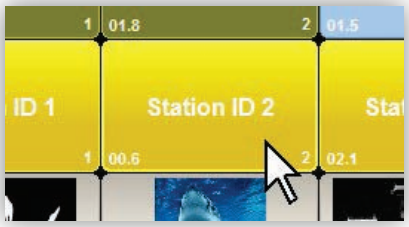


Figure 6-7. Clicking a Hot Key to Play an Event

6.9.1 Adding an Event to a Hot Key

➢ **To add an event to a Hot Key**

1. Click the **Insert** button in the tool bar two times

The **Insert Panel** opens.

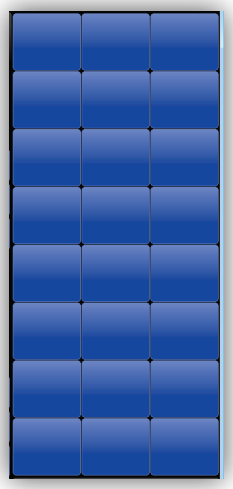


Figure 6-8. Insert Panel

2. In the list of events, find the event you want to add to your Hot Key.
3. Click-and-drag the event from the Insert Panel event list and to the desired Hot Key.

   The event is added to the Hot Key.

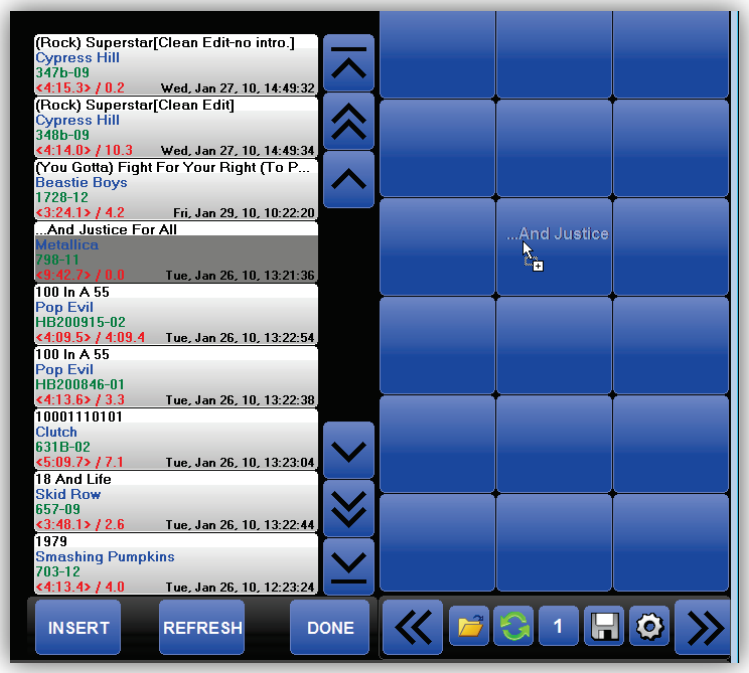


Figure 6-9. Example of Dragging an Event to a Hot Key

6.9.2 Creating Rotating Hot Keys

If you add an event to a Hot Key that has an event associated with it, you are prompted by one of the following windows, depending on how the **Rotation On Hotkeys** is configured in the Studio Client's configuration settings.

6.9.2.1 Rotation On Hotkeys is Enabled

➢ **If Rotation On Hotkeys is enabled**

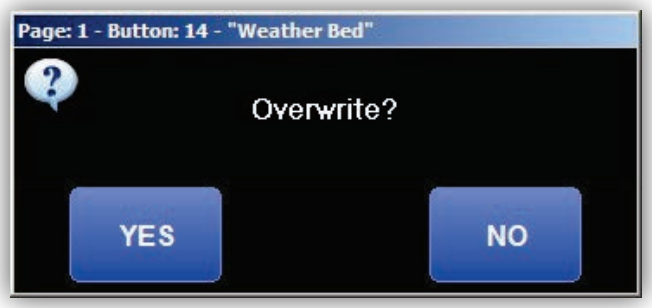
1. You are prompted by a window similar to the following:

2. Perform one of the following steps:
   - To add the event to the existing list of rotation events, click the **Add To Rotation** button.
   - To delete the existing list of rotation events and replace it with the newly added event, click the **Replace All** button.
   - To cancel the procedure, click the **Cancel** button.

6.9.2.2 Rotation On Hotkeys is Not Enabled

➢ **If Rotation On Hotkeys is not enabled**

1. You are prompted by a window similar to the following:



2. Perform one of the following steps:
   - To replace the existing event with the new one, click the **Yes** button.
   - To keep the old event or cancel the procedure, click the **No** button.

6.9.3 Working with Hot Keys

When a Hot Key is set up as a Rotating Hot Key, the Hot Key button adds a caption to the top-right corner that shows which event file will play next and the total number of events in the rotation (see Figure 6-10).

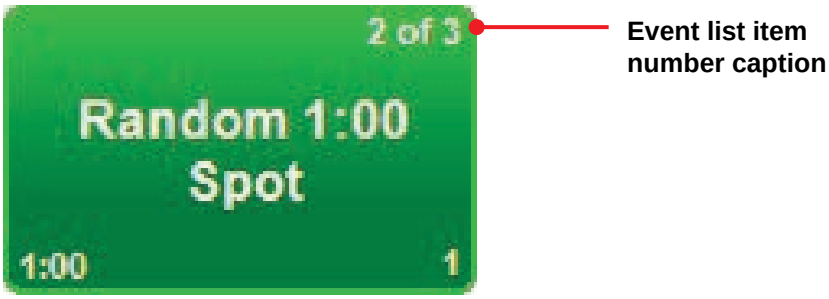


Figure 6-10. Example of a Rotating Hot Key

➢ **To view the list of events in the rotation**

1. Right click the Hot Key, and then click **List…**.

   An Event Rotation List window similar to the one in Figure 6-11 appears.

Figure 6-11. Sample Event Rotation List Window

2. To select which event will be the next event to play, highlight the event, or clicking the **Up** or **Down** button
3. To remove an event from the list, highlight it and click the **Delete** button

6.9.4 Setting Hot Key Properties

You can select the color of Hot Key buttons, the button's caption, and which playback device each Hot Key will use.

You can also configure a Hot Key to act as an "Insert" button rather than a playback button. This feature allows you to insert a commonly used event into your program log directly from the Hot Key panel.

➢ **To configure Hot Key properties**

1. Right-click the Hot Key whose properties you want to set.
2. From the pop-up menu, click **Properties** (see Figure 6-12).

The Properties dialog box appears (see Figure 6-13).

Figure 6-12. Clicking Properties from the Pop-up Window

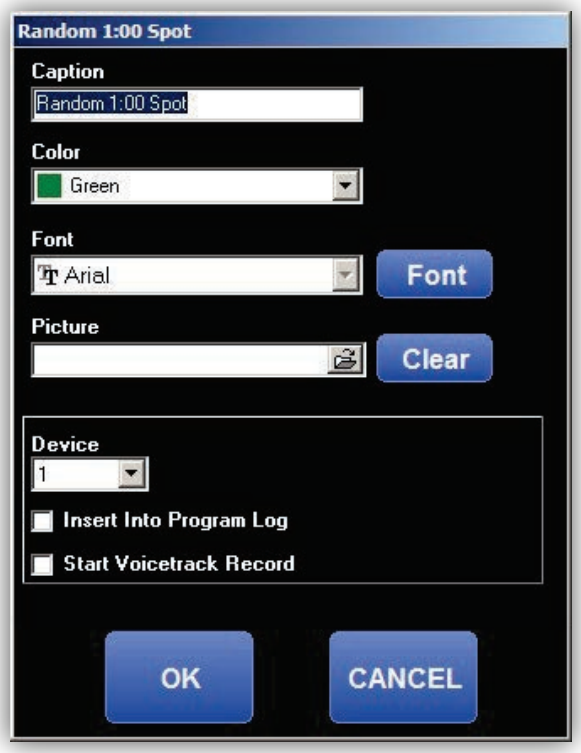


Figure 6-13. Properties Dialog Box

3. Complete fields in the dialog box (see Table 6-14).
4. Click **OK**.

Table 6-14. Fields in the Properties Dialog Box

Field	Description	Default
Caption	By default, your Hot Key shows the file name of the audio event you've added. To change the caption, change the text in this field.	File name of the audio event
Color	Changes the background color of the Hot Key.	Green
Font	Changes the font style, size, and color.	Arial
Picture	Replaces the Hot Key caption text with a picture. Click the Browse button to select your picture. To remove a picture and return to showing the caption text, click the Clear button.	—
Device	Hot Keys use the audio playback device associated with each column of Hot Key buttons, as configured in the Studio Client's configuration settings. If you want a Hot Key to use a different column's playback device, select it from this drop-down list.	

Field	Description	Default
Insert Into Program Log	Changes the operation of the Hot Key without affecting other Hot Keys in your Hot Key Set. Enabling this option changes the behavior of the Hot Key to act as an Insert key. This means that rather than playing an event, as a normal Hot Key does, the Hot Key will allow you to insert the associated event into your program log. When you click an Insert Hot Key, its caption changes to Insert Where? You can then click a location in your program log to insert the Hot Key's event. Use this as a quick shortcut for inserting a commonly used event without having to use the Insert Panel. Insert Hot Keys can be easily identified by the Insert tag added to the top corner of the specific Hot Key (see the Weather Bed Hotkey in Figure 6.2)	
Start Voicetrack Record	Enabling this option make a Hot Key to initiate voicetrack recording, enable this option.	

6.10 Using Hot Key Pages

The previous sections described how to use individual Hot Keys. The following sections describe how to use a Hot Key page.

6.10.1 Navigating Hot Key Pages

➢ **To switching between Hot Key pages**

1. Click the **Next** or **Previous** button.

   The counter above the ***Refresh*** *button indicates which Hot Key page is loaded.*

6.11 Saving the Hot Key Page to the File Server

The Hot Key page is saved to your local machine. However, you can save a copy of it to the File Server.

➢ **To save a Hot Key page to the file server**

1. Click the Save Page To Server button.

6.11.1 Loading a Hot Key Page from the File Server

➢ **To load a previously saved Hot Key page from the file**

1. Click the **Load Page From Server** button.

6.11.2 Refreshing a Hot Key Page

➢ **To refresh the currently loaded Hot Key page**

1. Click the **Refresh** button.

6.12 Using the Voicetrack Editor

Voicetracking is the act of pre-recording voiceovers specific to the content of your program log to give your listening audience the impression that your station has live talent on the air. Users produce their voicetracks ahead of the scheduled air time of their program log. It is common to find stations that appear to be staffed 24 hours a day because of content-specific voiceovers that are, in reality, voice tracked by only a couple staff members. Each on-air talent need only spend a couple hours a day recording their voicetracks for 4, 8, or more hour shifts. Some talent can even record full shifts for multiple different stations using voicetracking.

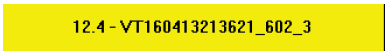
The following sections assume you created a program log and configured the Studio Client settings with appropriate recording and playback audio devices for the Voicetrack Editor. If you produce voicetracks on your on-air workstation, be sure the audio playback device you configured for voicetracking does not go on.

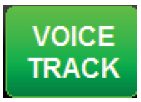
6.12.1 Voicetrack Editor User Interface

The following figure shows the Voicetrack Editor user interface. The following sections describe the Voicetrack Editor user interface. Table 6-15 describes the key user interface components shown in Figure 6-14.

Figure 6-14. Voicetrack Editor

Table 6-15. Key Components in the Voicetrack Editor User Interface

Component	Component Name	Description
	Start Point Shift Earlier Button	Clicking Cut 2's Shift Earlier button shifts the start time of the second audio file earlier as compared to the end of Cut 1. Clicking voicetrack's Shift Earlier button shifts the start time of the voicetrack and the Cut 2 audio file earlier.
	Go To Cut 1 Button	If you venture elsewhere in the program log while creating voicetracks, clicking this button scrolls the program log display to the Cut 1 audio file loaded in the Voicetrack Editor.
	Cut 1	The dark green bar represents the first cut of the segue between which you are inserting your voicetrack. The light green section shows the Artist and Title data from the audio file. The dark green section represents the segue portion of the cut and displays that length.
	Voicetrack	The middle yellow bar represents the voicetrack that has been recorded. This bar does not appear until you record your voicetrack, and its width depends on the length of the file recorded. The bar shows the length and filename automatically given to the file. The voicetrack start position can be shifted by clicking on the left or right side of the yellow bar (great for touchscreen users).
	Cut 2	The lower green bar represents the second cut of the segue that you are inserting your voicetrack between. The light green section shows the Artist and Title data from the audio file. The dark green section represents the intro portion of the cut and displays that length. Cut 2's start position can be shifted by clicking on the left or right side of the green bar (great for touchscreen users).
	Channel Mute Buttons	To temporarily mute audio cuts, click the corresponding Channel Mute buttons. The button's text shows ON when a channel is unmuted or OFF when it is muted.
	Start Point Shift Later Buttons	Clicking Cut 2's Shift Later button shifts the start time of the second audio file later as compared to the end of Cut 1. Clicking Voicetrack's Shift Later button shifts the start time of the voicetrack and the Cut 2 audio file later.

Component	Component Name	Description
	Ducking Level Adjust Buttons & Ducking Level Display	Each track, Cut 1, voicetrack, and Cut 2, have adjustment buttons for their ducking levels. Each cut automatically ducks its volume to the percentage chosen while the voicetrack is actively playing.
	Play All Button	Click this button to preview the full voicetrack, including the ducking levels set, the segue of Cut 1, and the intro of Cut 2 as currently set.
	Stop Button	This button is active only while playback or recording is taking place. Click this button to stop playback after clicking the Play All button or to stop recording when creating a Voicetrack.
	Voice Track Button	This button is used when creating your voicetrack. During the creation process this button is used multiple times and acquires different functions as the voice track is recorded: 1. Click to start playback of Cut 1. The button caption changes to RECORD. 2. When Cut 1 is playing, clicking the button a second time starts recording from your microphone and the button caption changes to PLAY CUT2. 3. Clicking once more sets the start point of Cut 2. 4. Click the STOP button to stop recording from your microphone.
	Load Button	Click this button to load the audio event you've highlighted in the Program Log Display into the Cut 1 and the subsequent event into Cut 2.
	Align Button	To quickly reset the start position of the recorded voicetrack and Cut 2 to the segue point of Cut 1, click this button.
	Insert Button	After you finish creating and editing your voicetrack, click this button to insert the voicetrack into your program log.
	Time Scale Display	The length of time selected here determines the length of time represented by the full width of the Voicetrack Editor graphic display.
	Done Button	When you finish creating or editing voicetracks, click this button to exit the Voicetrack Editor.

6.12.2 Creating Voicetracks

You can perform voicetracking in any mode (Auto, Live Assist, and Manual); more often than not, however, you will perform voicetracking in Edit mode. The Studio Client is set up so that you can edit the voicetracks for the program log loaded on your screen. This means you can edit voicetracks in the currently playing program log while you are in Auto, Live Assist, or Manual mode, or you can edit a completely separate program log from the on-air content using the Studio Client's Edit mode.

➢ **To access the Voicetrack Editor**

1. Click the **Options** button in the menu bar.
2. Click the **Voice Track** button in the pop- up menu.

   The Studio Client displays the Voicetrack Editor at the bottom of the user interface (see Figure 6-14 on page 176).

6.12.3 Loading Audio Events into the Voicetrack Editor

You can load any audio events into the Voicetrack Editor, whether they are music, talk, or other audio content.

➢ **To load events into the Voicetrack Editor**

1. Highlight the first of the two adjacent tracks in the program log event list between which you want to insert your voicetrack (see Figure 6-15).

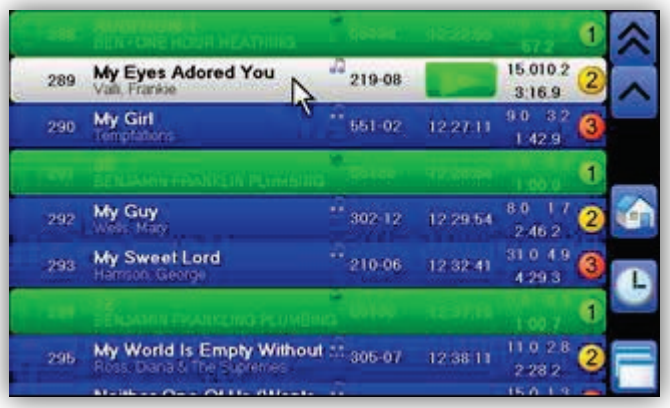


Figure 6-15. Highlighting a Track After which a Voicetrack will be Placed

2. Click the **Load** button in the lower left corner of the Voicetrack Editor (see Figure 6-16).

   Your two audio events are loaded as Cut 1 and Cut 2 in the Voicetrack Editor, as in Figure 6-14 on page 176.

Figure 6-16. Clicking the Load Button

6.12.4 Recording a Voicetrack

After you load your audio events into the Voicetrack Editor using the previous procedure, you can record your voicetrack. Recording the voicetrack involves multiple presses of a single button to simplify recording your voicetrack.

➢ **To record a voicetrack**

1. Click the **Voice Track** button (see Figure 6-17).

   *Playback of Cut 1 begins and the button toggles to **Record**. As playback progresses, a vertical line moves from left to right to show the progress through the playback of your audio event (see Figure 6-14 on page 176).*

Figure 6-17. Clicking the Voice Track Button

g. As Cut 1 plays, click the **Record** button at the point you want to start recording from your microphone (see Figure 6-18).

Figure 6-18. Clicking the Record Button

h. As the voicetrack is being recorded, a yellow bar appears on the track display. The yellow bar, as shown in Figure 6-19 represents the playback position and length of your recorded voicetrack.

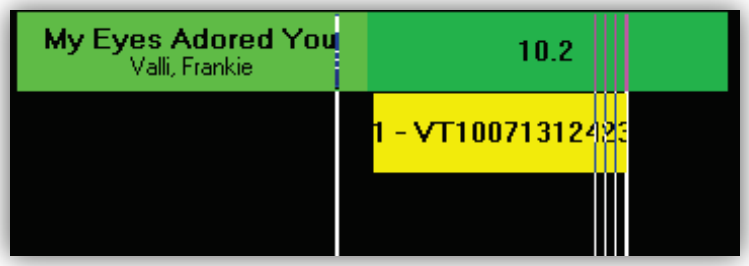


Figure 6-19. Yellow Bar Representing Recorded Audio

2. To set the start point of Cut 2, click the **Play Cut 2** button (see Figure 6-20).

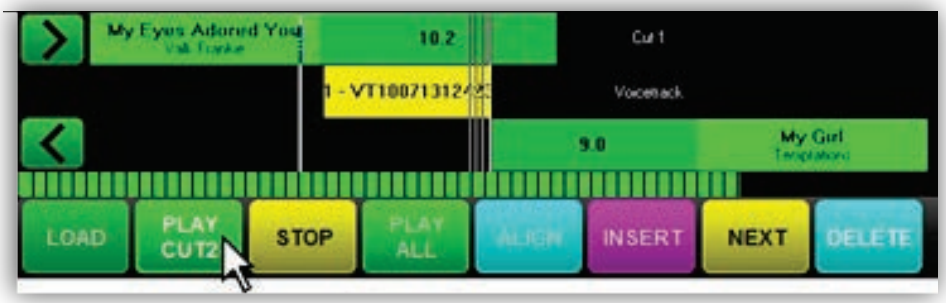


Figure 6-20. Clicking the Play Cut 2 Button

3. To end the recording progress, click the **Stop** button (see Figure 6-21).

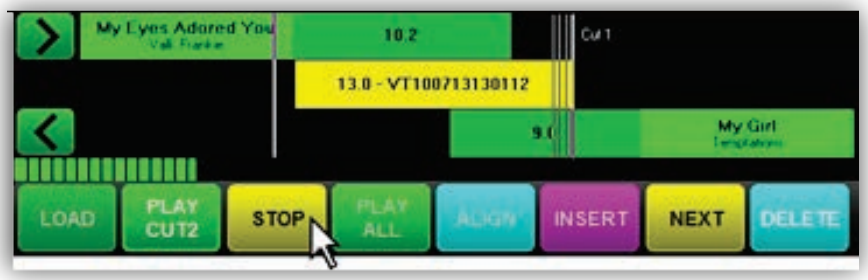


Figure 6-21. Clicking the STOP Button

You have now recorded a voicetrack. To preview it, go to section 6.12.5.

6.12.5 Previewing Your Voicetrack

After you use the procedure in the previous section to record your voicetrack, you can preview your voicetrack.

➢ **To hear a preview of your voicetrack**

1. Click the **Play All** button (see Figure 6-22).

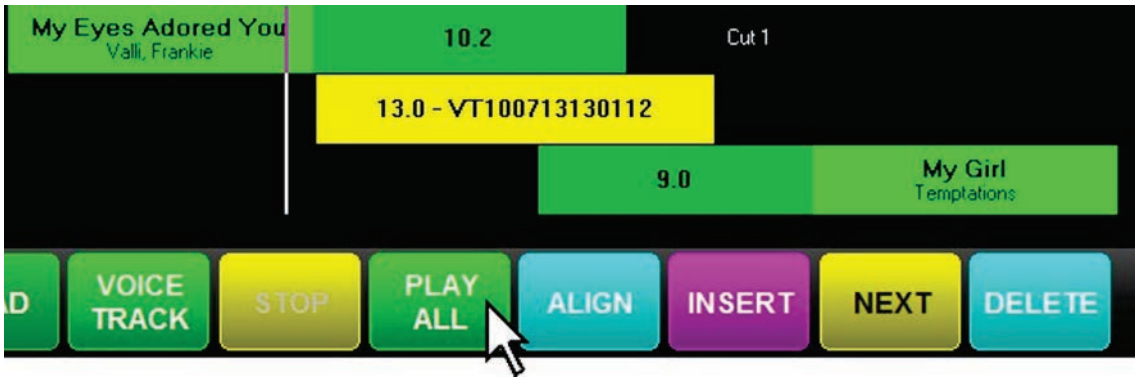


Figure 6-22. Clicking the Play All Button

2. To stop playback, click the **Stop** button.

6.12.6 Adjusting Segue/Start Points

After you preview your voicetrack, you can adjust the start points of the voicetrack audio or Cut 2 if they are not to your liking.

➢ **To adjust segue/start points**

1. Click the segue or start point, and then drag it to the desired location.

Note: You can also use the **Align** button to adjust segues and start points automatically or use the arrow buttons to adjust segues and start points manually.

6.12.7 Adjusting Ducking Levels

The term “ducking” means: to turn down a portion of overlapping audio to de-emphasize one part (the ducked audio track) and emphasize another (the non-ducked audio track).

You can perform ducking with the Voicetrack Editor independently for each portion of the voicetrack. The ducking effect for all tracks occurs while the voicetrack audio portion is playing. This means that if you set a ducking level on Cut 1, it will not be turned down – or ducked – until the voicetrack audio starts. When ducking is set on Cut 2, it will not return to its normal, non- ducking level until the end of the voicetrack audio is reached.

The voicetrack itself has a ducking level. Since all ducking occurs while the voicetrack audio is playing, this setting is useful for adjusting the overall volume of the voicetrack.

Note: Normally, you should not have to adjust ducking levels. Instead, use the voice track level setting in the Studio Client to set the level at which the voice track is played back and use the ducking level setting in the Audio Server songs to set the level at which songs are ducked.

➢ **To adjust the ducking level of Cut 1, the voicetrack, or Cut 2**

1. Click the Ducking Level Adjustment buttons next to the Ducking Level Display (see Figure 3-1) to adjust in 5% volume increments.

   *The **Ducking Level Adjust Up** button increases the volume of the corresponding track, up to a maximum of 100% of the audio file's actual recorded volume. The **Ducking Level Adjust Down** button decreases the volume of the corresponding track while the voicetrack is playing. You can adjust this a minimum of 5% of its original volume.*

Figure 6-23. Ducking Level Adjustment Buttons with Current Ducking level Set to 90%

6.12.8 Inserting Your Completed Voicetrack into the Program Log

After you create and edit your voicetrack, you can insert tor completed voicetrack into the program log.

➢ **To insert the completed voicetrack into the program log**

1. Click the **Insert** INSERT button.

   The voicetrack audio file are saved to the OpX Audio Server and inserted into the program log directly below the currently highlighted item in the program log.

Note: If you inadvertently highlight an item other than the audio event that loaded into the Voicetrack Editor's Cut 1 position, confirm that the Voicetrack Editor's Cut 1 event is the same event highlighted in the program log before you click the Voicetrack Editor **Insert** INSERT button so that you are inserting your voicetrack into the proper location.

Figure 6-24. Clicking Insert

6.12.9 Customizing the Studio Client Appearance

Since most users of OpX will spend hours a day using the Studio Client, OpX allows you to create custom themes (or “skins”) to enhance your experience using the Studio Client.

➢ **To change the skin options**

1. Click the **Options** button on the main menu bar, and then click **Config**.

   The Studio Client’s Configuration window appears.

2. Click the **Skin Options** button in the lower right corner of the **General** tab on the Configuration window (see Figure 6-25).

   The Skin Options window appears (see Figure 6-26). The top section of the Skin Options window has buttons for each skin option you can customize.

Figure 6-25. Clicking the Skin Options Button

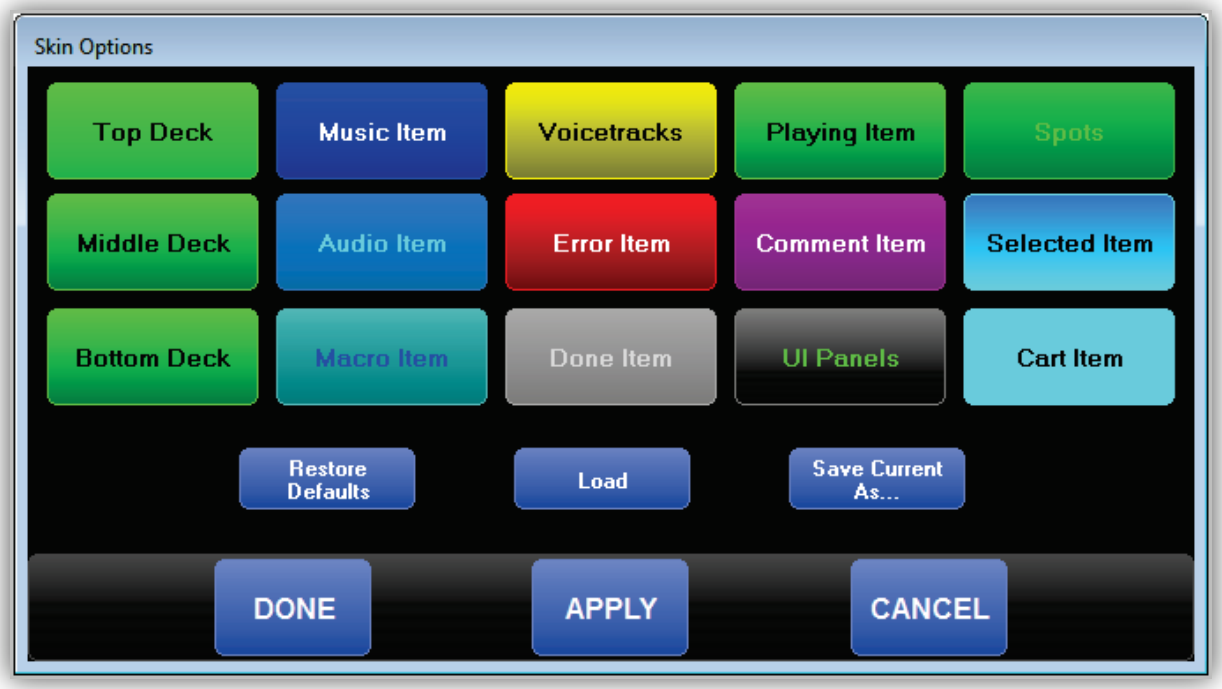


Figure 6-26. Skin Options Window

3. Click a button in the top section.

   The Skin Item Option dialog box appears (see Figure 6-27).

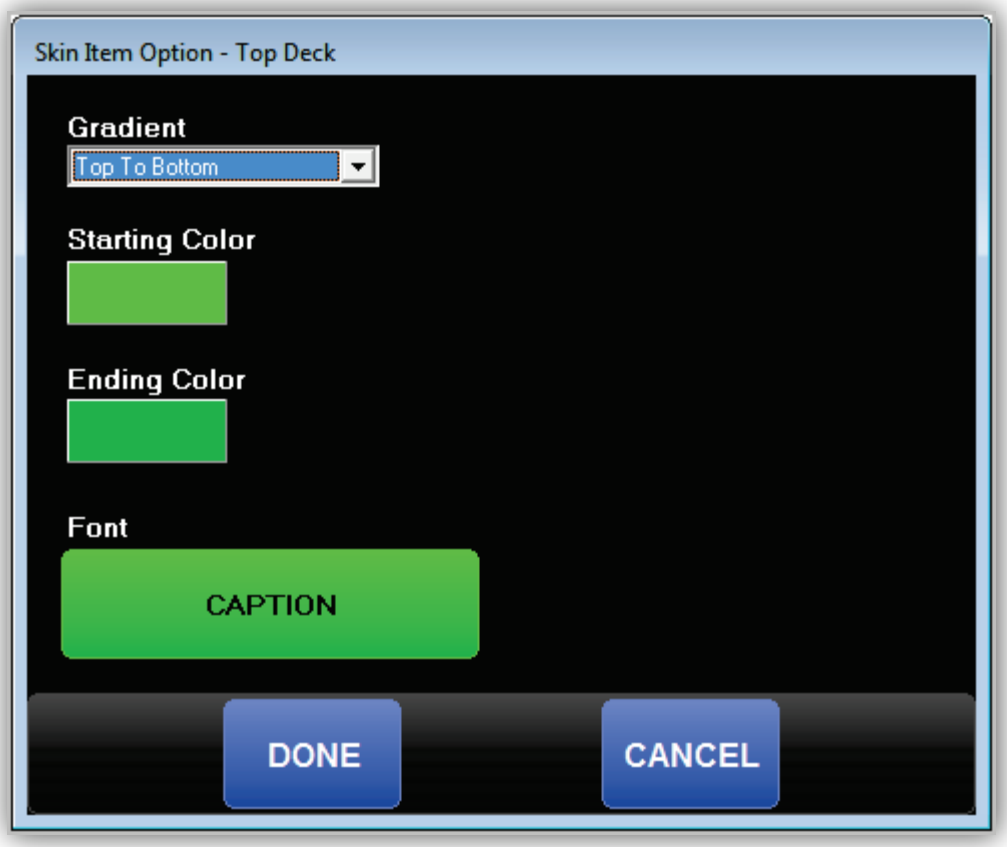


Figure 6-27. Skin Item Option Dialog Box

4. Use this window to edit the skin option as desired (see Table 6-16).

Table 6-16. Fields in the Skin Item Option Dialog Box (Top Section)

Field	Description	Default
Gradient	Most skin items are displayed with a gradient (fading between two colors). This drop-down list allows you to choose the format of the gradient.	Top To Bottom
Starting Color	Click the color block to select the top color for your gradient.	—
Ending Color	Click this color block to select the ending color for the gradient	—
Font	Click the Caption button to display the Font Selection dialog box (see Figure 6-28). Select the font, style, size, and color for your skin option.	—

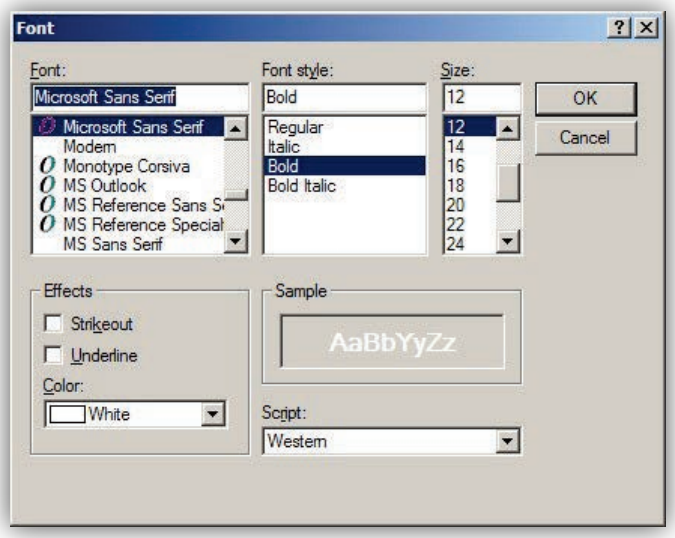


Figure 6-28. Font Selection Dialog Box

5. Use the buttons in the middle section of the Skin Item Option dialog box as appropriate (see Table 6-17).

Table 6-17. Buttons in the Skin Item Option Dialog Box (Middle Section)

Field	Click This Button to...
Restore Defaults	Restore all default colors and fonts for your skin.
Load	Load a previously saved Skin Item Option Profile.
Save Current As	Save your current skin options as a new skin options profile.

6. When you finish, click the appropriate button at the bottom of the Skin Item Option dialog box (see Table 6-18).

Table 6-18. Buttons in the Skin Item Option Dialog Box (Bottom Section)

Field	Click This Button to...
Done	Apply any changes you made and close the Skin Item Option dialog box.
Apply	Save the changes you made and leave the Skin Item Option dialog box open for you to make further refinements to your skin's settings.
Cancel	Close the Skin Item Option dialog box and discard all changes you made since you opened the Skin Item Option dialog box or clicked the Apply button.

7 File Manager Module

Topics:

- *Starting the File Manager Module (page 190)*
- *Quick Tour (page 191)*
- *Configuring the File Manager Module (page 196)*
- *Transferring Files (page 198)*
- *Working with carts (page 202)*
- *Editing Local Audio File Tagging Info (page 208)*
- *Editing Audio Tagging Info on the File Server (page 211)*
- *Generating and Viewing Automation Reports (page 212)*

This chapter describes the OpX File Manager module.

The File Manager module shows the files each station has available. It also allows you to transfer your audio files from your production machines into the OpX File Server, generate reports, and create carts. When you create audio files to put on the air, you use the File Manager module to transfer those audio files into the File Server.

Note: Although you can put audio files directly into the File Server using disks, flash drives, and mapped network drives, we recommend you use the File Manager to perform these tasks. This is because the File Manager communicates directly with the File Server module to notify it of newly added files. Not using the File Manager to copy files delays the recognition of audio files that you add.

Tip: Because the File Manager module does not use mapped drives to communicate with the File Server module, mapped drives are not necessary with the OpX system. Without mapped drives on the PC running OpX, you'll have greatly enhanced network security.

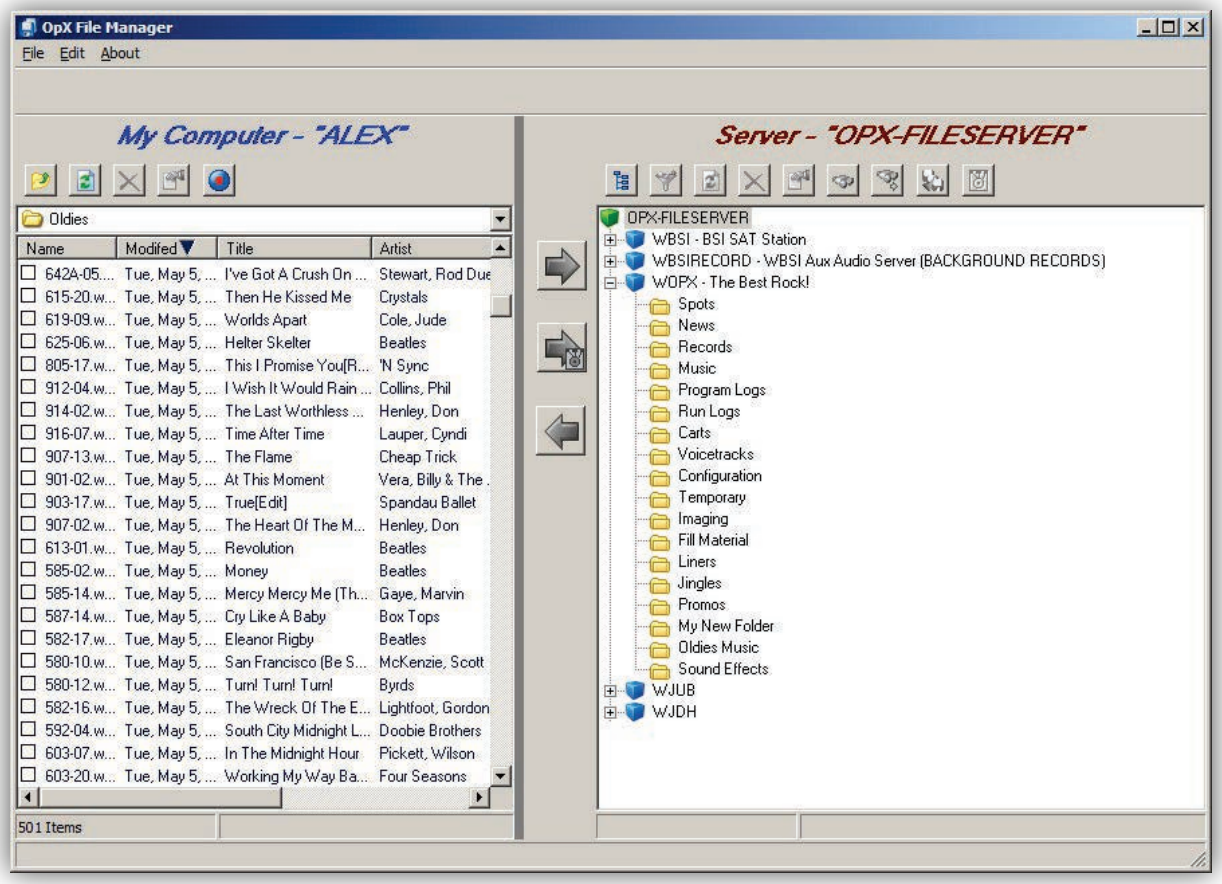
7.1 Starting the File Manager Module

You must start the File Server module before you start the File Manager module.

➢ **To start the File Manager module**

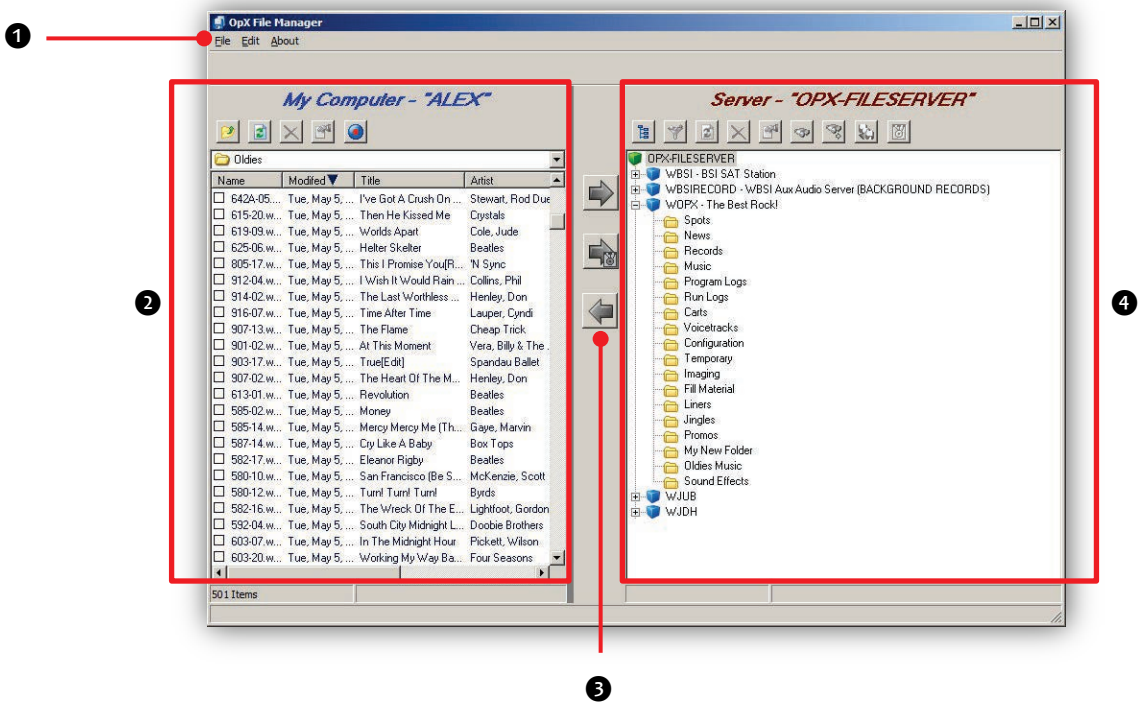
1. Start the File Server module (see section 3.1).
2. Click the Windows Start button and click **Programs > Broadcast Software > OpX File Manager**.

   An OpX File Manager window similar to the following appears.



7.2 Quick Tour

The following sections provide a quick tour of the File Manager module interface.

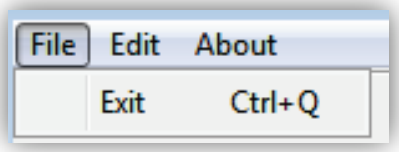


Number	Description
❶	Menu bar. See section 7.2.1.
❷	Local file list See section 7.2.2.
❸	Transfer buttons. See section 7.2.4.
❹	Server file list. See section 7.2.3.

7.2.1 File Manager Module Menu Bar

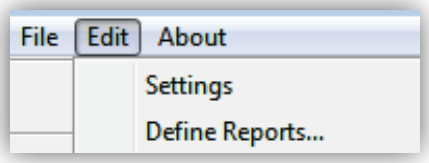
The menu bar appears at the top of the File Manager window. The following sections describe the menus on the menu bar.

7.2.1.1 File Menu



Exit = exits the File Manager Module.

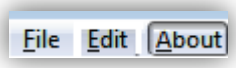
7.2.1.2 Edit Menu



Settings = inserts items manually into the currently loaded program log. See section 7.3.

Define Reports = allows you to create report templates. See section 7.8.1.

7.2.1.3 About Menu



Opens a window that shows the version and build date of the File Manager module you are running. This window also shows the amount of memory and virtual memory being used, and the amount of time that the File Manager module has been running. See Figure 7-1 for an example. To close the window, click **OK**.

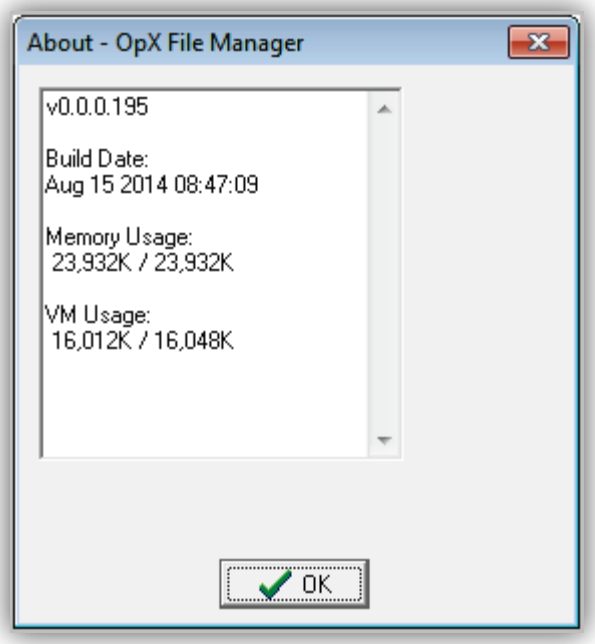


Figure 7-1. Example of About Information

7.2.2 Local File List

The local file list allows you to browse through the drives and folders on your local computer. Use this list to browse the audio files you want to transfer to your OpX File Server.

The local file list has several icons at the top of the list. Table 7-1 describes these icons.

The local file list also contains a location drop-down list. Clicking this drop-down list shows a list of your drives and the folder you are currently viewing. In Figure 7-2, the **Spots** folder appears at the top of the drop-down list because it is the folder currently displayed.

Table 7-1. Local File List Icons

Icon	Icon Name	Description
	Parent Folder	To display the contents of the folder one level above (that is, the parent folder), click this button.
	Refresh	To get the most up-to-date list of files on the local hard drive, click this button to refresh the list of files.
	Delete	To delete the files selected in the local file list, click this button. Files are deleted permanently, so exercise care when deleting files.
	Info Tags	Click this button to open a pop-up window for editing common audio file tags. This feature can be thought of as a trimmed down (or "light") version of the Info Edit module.
	Record	When you need to record a file ASAP while using the File Manager module, click this button to open a pop-up window with a simple record deck.

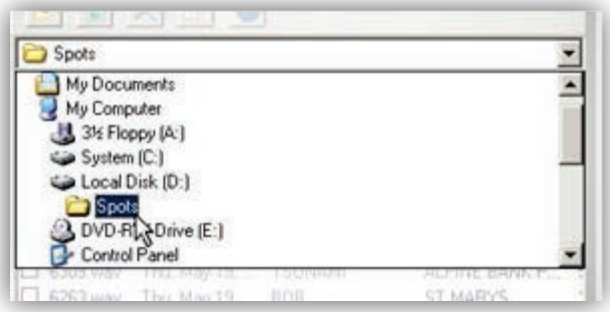


Figure 7-2. Example of Location Drop-Down List

7.2.3 Server File List

To browse the folders for each configured station on your File Server, use the server file list.

The server file list has two display modes:

- Directory Tree mode. You use this mode while browsing the available stations and their subfolders. When you double-click a station's folder, the server file list switches to File List mode, so you can see the files in the station's folders. Figure 7-3 shows an example of Directory Tree mode, with the station's directory tree expanded to show its subfolders.
- File List mode. You use this mode when you are inside a folder.

Figure 7-3. Example of Directory Tree Mode

The server file list contains icons across the top of the list of files. Table 7-2 describes these icons.

Table 7-2. Server File List Icons

Icon	Icon Name	Description
	Station View	Returns the file list to the 'top level', showing all the stations available.
	Filter	To filter the types of files shown in the server file list, click this button.
	Refresh	To get the most up-to-date list of files on the File Server, click this button to refresh the list of files.
	Delete	To delete the files selected in the server file list, click this button. Files are deleted permanently, so exercise care when deleting files.
	Info Tags	Click this button to open a pop-up window for editing common audio file tags. This feature can be thought of as a trimmed down (or "light") version of the Info Edit module.
	Find	To search for a file by name, click this button,
	Find Next	After using the Find button to find an item, click this button to find the next file using the same search criteria.
	Check For Duplicates	To have OpX search for files with the same name in other folders for the station you are managing, click this button.
	New Cart	To create a new cart, click this button. When prompted, enter a name for your cart and click the OK button. When the Cart Editor window appears, drag items from the Server's file list on the right side of the File Manager window into the Cart's Event List in the cart editor. The new cart will be saved into the Carts folder of the current station's profile.

7.2.4 Transfer Buttons

After you find the audio file you want to transfer and the location to where you want to transfer it, click the appropriate transfer button to copy your file.

- The button with the arrow pointing to the right transfers the file selected in the **Local File List** to the location selected in the server file list.
- The button with the arrow pointing to the left copies the file selected in the **Server File List** to the location selected in the local file list.

To copy a file from your local drive to your File Server and add it to a cart at the same time, click the **Transfer File To Cart** button. You are prompted to enter the name of the cart to which you want to add the file.

Note: The arrows will be gray if the **All** folder is selected. Choose an actual station within a folder.

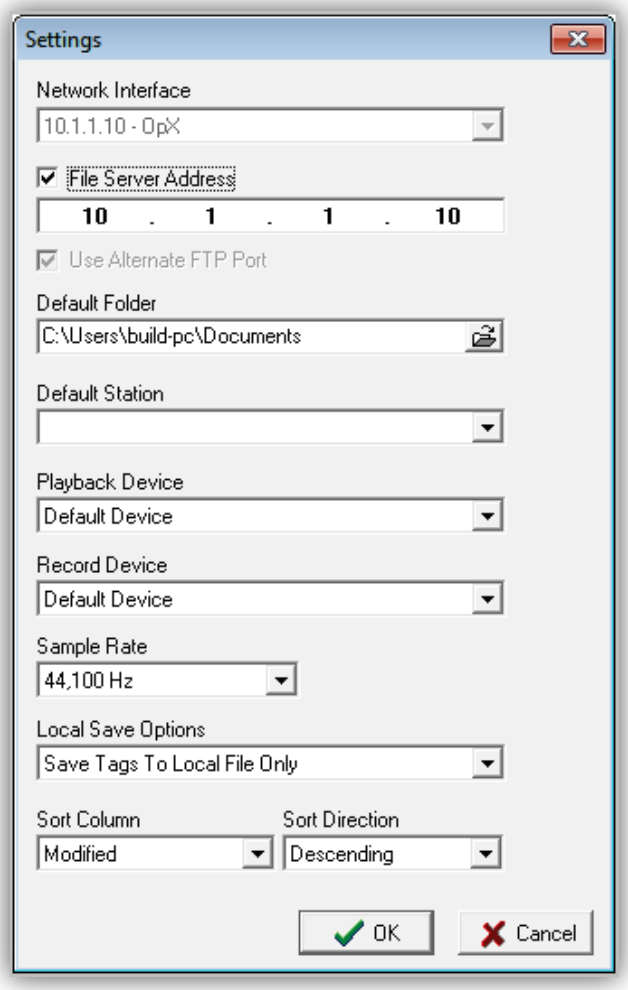
7.3 Configuring the File Manager Module

The File Manager module comes with default configuration settings that should suit most users. Using the **Settings** option on the **Edit** menu, you can change these settings to suit your requirements.

➢ **To configure the File Manager module settings**

1. On the **Edit** menu, click **Settings**.

   The Settings dialog box appears.



2. Complete the fields in the dialog box (see Table 7-3).
3. Click **OK**.

Table 7-3. Fields in the Settings Dialog Box

Field	Description	Default
Network interface	A read-only field that shows the IP address to which the OpX File Server module is connected.	See the dialog box
File Server Address	• Checked = enter an IP address of the File Server module to which the File Manager will connect. • Unchecked = shows the IP address of the server to which the File Manager is connected.	Checked
Use Alternate FTP Port	Leave at its default setting.	Checked
Default Folder	Allows you to set a specific 'home' folder that the File Manager displays automatically in the local file list when the File Manager opens initially.	See the dialog box
Default Station	Allows you to select the station that appears when you open the File Server. You can still switch to other stations at will. However, if you spend most of your time working on one of your stations, selecting that station here can save you time.	—
Playback Device	Select an audio device that the File Manager uses to preview audio files. The default setting means that the File Manager will use the same audio device Microsoft Windows selected when previewing audio.	Default Device
Record Device	Select the device the File Manager uses to record audio with its record deck. The default setting means that the File Manager will use the same audio device Microsoft Windows selected as the recording device.	Default Device
Sample Rate	Select the audio sample rate for recording and playback of audio using the File Manager.	44.100 MHz
Local Save Options	Select how the Edit Tags function saves changes to the tags of audio files.	Save Tags To Local File Only
Sort Column	Select how files are ordered in the local file list and the server file list. Choices are: • Name • Modified (date) • Title • Artist • Length • Start Date • End Date	Modified
Sort Direction	Select whether files listed in the local file list and the server file list are ordered in ascending order (0-9, A-Z) or descending order (9-0, Z-A).	Descending

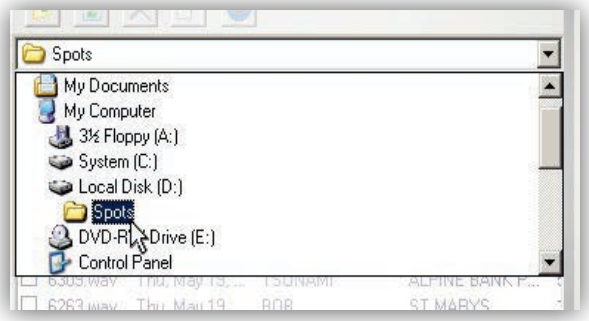
7.4 Transferring Files

You can use the File Manager to transfer files to and from your File Server.

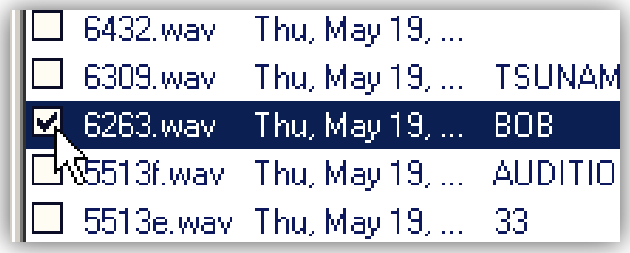
7.4.1 Copying Files to Your File Server

➢ **To copy files to your file server**

1. Using the **Local File List** on the left side of the File Manager, browse to the desired audio file on your local hard drive.



2. Check each audio file you want to transfer.

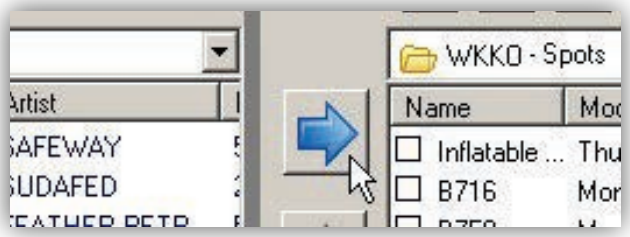


3. Click the plus ⊞ button to expand the list of folders for the station to which you want to copy your audio files.

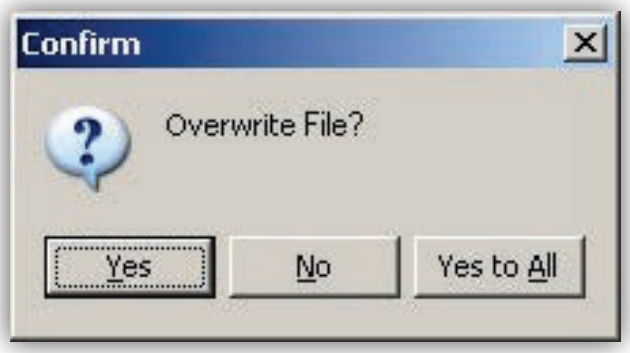
Note: You can choose a valid file (44.1khz 16 bit Windows PCM wave) only. If there is no check box to select the cut, double-check the format and sample rate.

4. Click the subfolder of the station to display its contents.

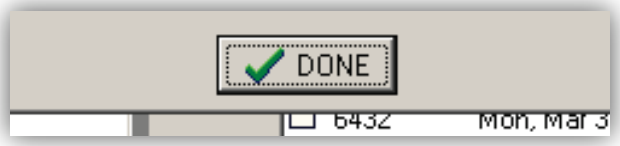
5. Click the right-pointing **File Transfer** button to start copying.



6. If the File Manager finds files with the same name on the server, a message asks whether you want to keep or overwrite the file. Click **Yes** (or **Yes to All** in the case of multiple files) to overwrite or **No** to not overwrite.



7. When the transfer completes, click the **Done** button.

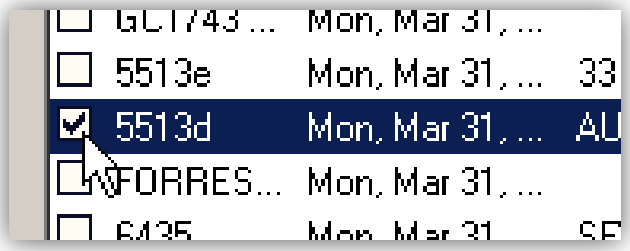


7.4.2 Copying Files from Your File Server

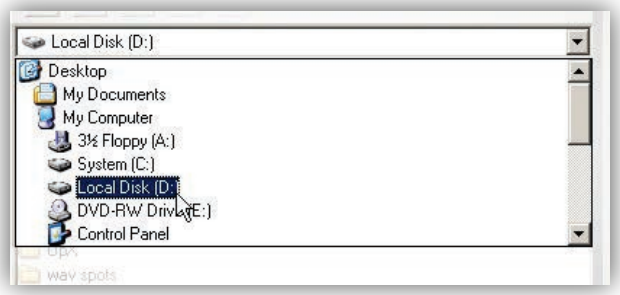
➢ **To copy files from your file server**

1. Using the **Server File List** on the right side of the File Manager, browse to the desired audio file.

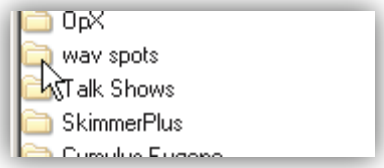
2. Check each audio file you want to transfer.



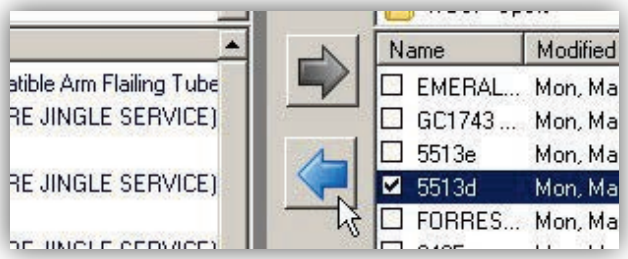
3. Using the Location drop down on the **Local File List**, click the drive to which you want like to copy the files.



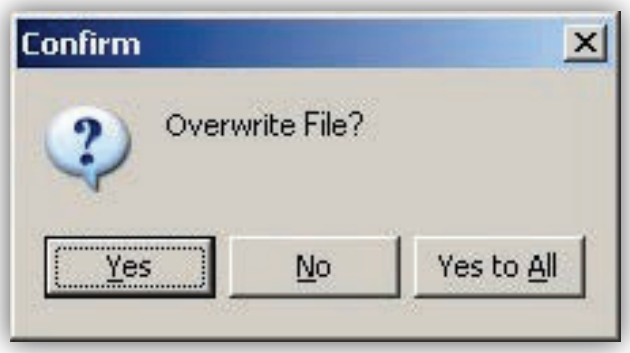
4. Browse to the folder to where you want to transfer the server's file.



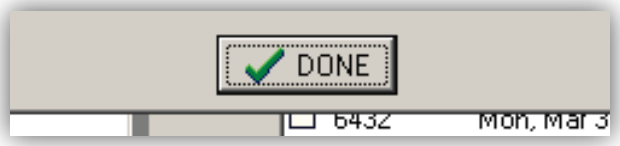
5. Click the left-pointing **File Transfer** button to start copying.



6. If the File Manager finds files with the same name on the server, a message asks whether you want to keep or overwrite the file. Click **Yes** (or **Yes to All** in the case of multiple files) to overwrite or **No** not to overwrite.



7. When the transfer completes, click the **Done** button.



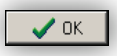
7.5 Working with carts

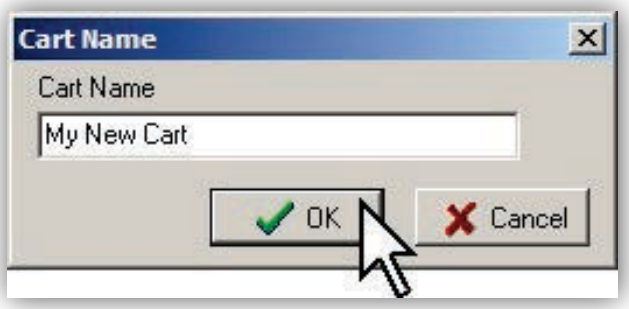
7.5.1 Creating a New Cart

➢ **To create a new cart**

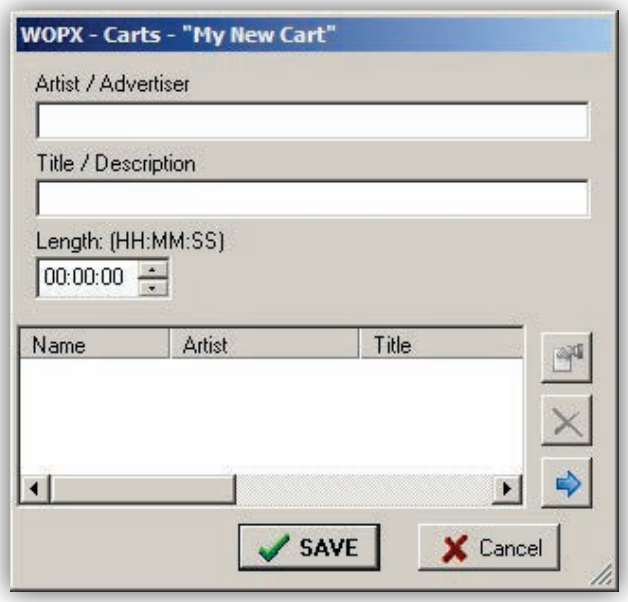
1. At the top of the File Server List, click the **New Cart** button

   The Cart Name dialog box appears.

2. Enter a new name for your cart, and then click the **OK**  button.



The Cart Editor dialog box appears.



3. Complete the fields in the dialog box (see Table 7-4).
4. To add items to the cart editor's event list, find items in your station's audio folders in the File Manager's server file list and drag and drop them into the cart editor's event list.
5. After you have events in your cart's event list, you can edit an event's tag info by clicking the **Edit Tags** button.
6. To remove events from the cart's event list, click the **Delete** button.
7. To set the next-to-play item in the cart, highlight the desired event in the cart's event list and click the **Make Next** button.
8. When you finish creating your cart, click SAVE **Save**.

Table 7-4. Fields in the Cart Editor Dialog Box

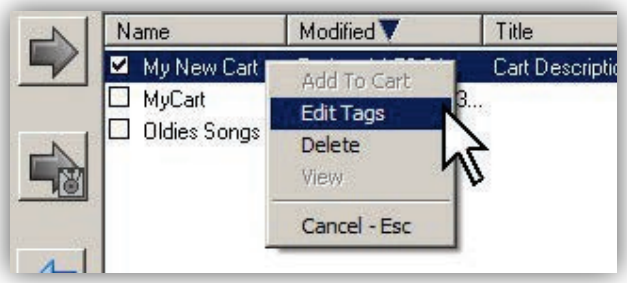
Field	Description	Default
Artist/Advertiser	Enter an artist or advertiser that describes the contents of your cart.	—
Title/Description	Enter a title or description about the contents of your cart.	—
Length	Enter an average length of the items that will be in your cart.	00:00:00

7.5.2 Using the Cart Editor to Edit a Cart

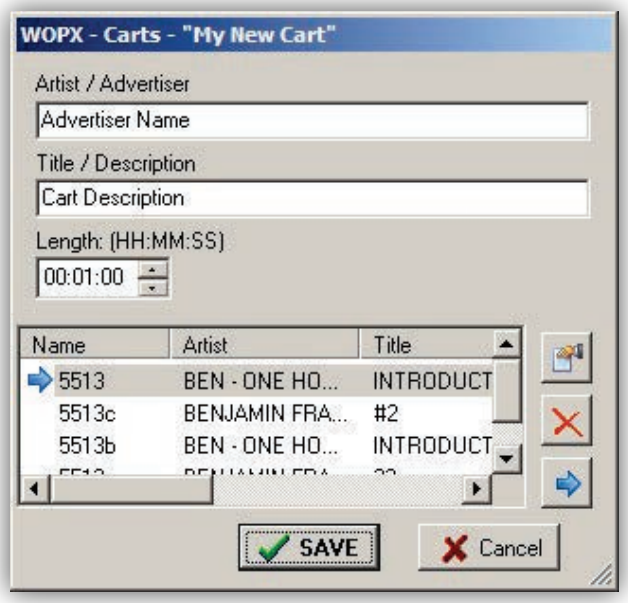
Using the Cart Editor, you can edit the contents of an existing cart, including adding new files, removing events from the event list, or modifying the Artist/Advertiser and Title/Description tags.

➢ **To edit a cart**

1. Browse to your desired cart file in the server file list.
2. Right-click the cart file, and then click **Edit Tags**.



The Cart Editor window appears.



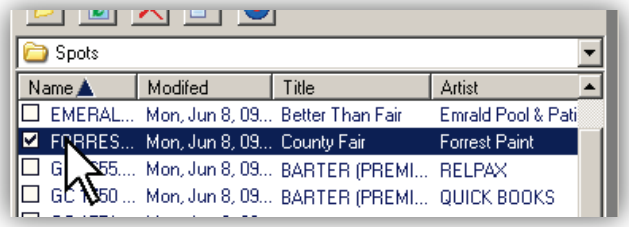
3. Edit the files as desired
4. When you finish, click SAVE **Save**.

7.5.3 Adding Local Files Directly to Carts

➢ **To add local files directly to carts**

1. In the local file list (the left list in the File Manager), highlight the audio file you want to add to a cart on the file server.

   A check mark appears next to the item.



2. On the server file list (the right list in the File Manager), browse to the folder where you want to store the actual audio file (not the location of the cart).

3. Click the **Add To Cart** button.

The Cart Names dialog box appears.

4. Enter the name of the carts to which you want to add audio files.

   If you selected a shared folder, the Cart Name dialog in Figure 7-4 appears. Otherwise, the Cart Name dialog box in Figure 7-5 appears.

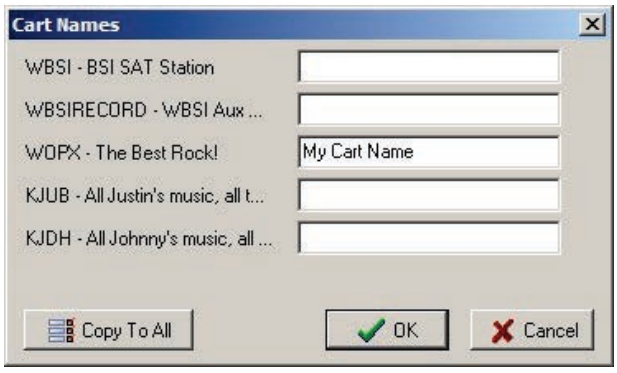


Figure 7-4. Cart Name When Selecting a Shared Folder

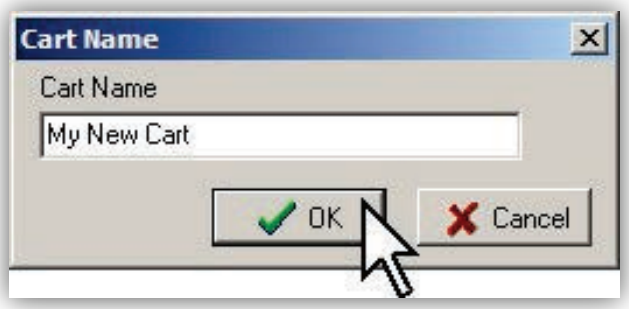
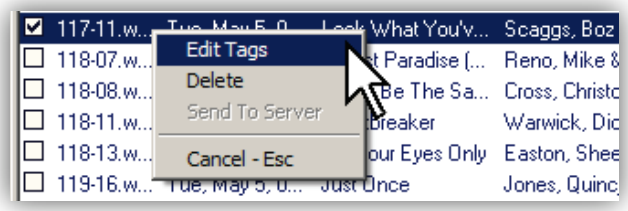


Figure 7-5. Cart Name When Selecting a Non-shared Folder

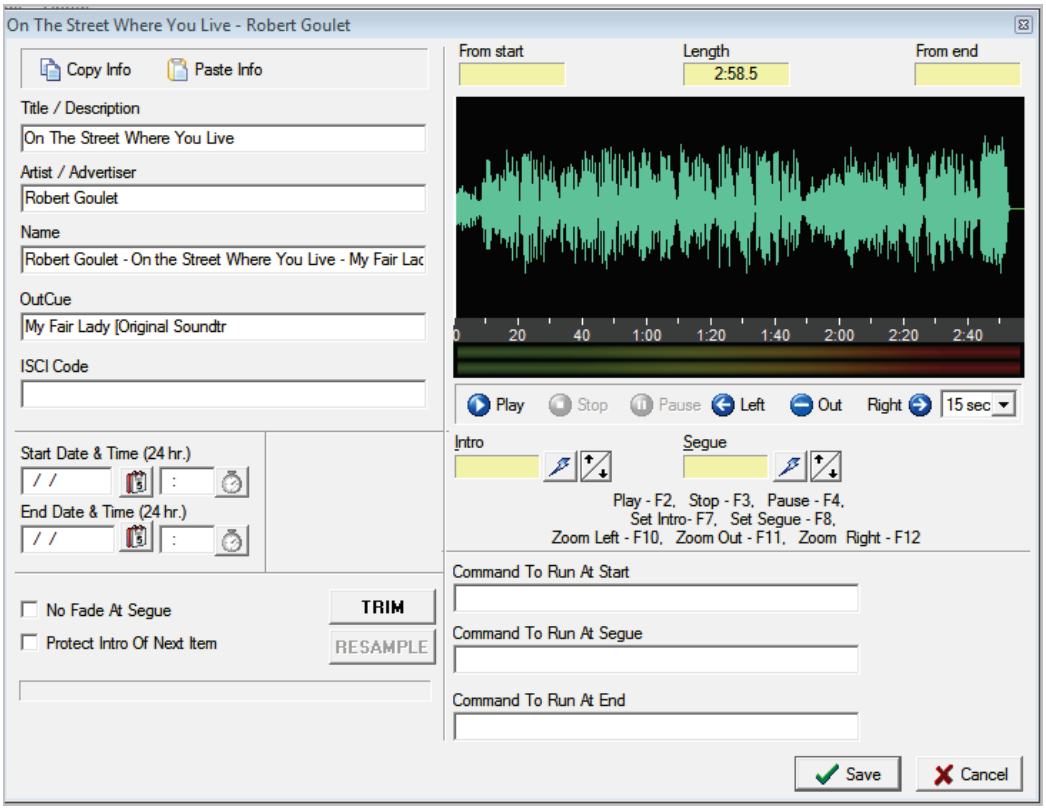
7.6 Editing Local Audio File Tagging Info

➢ **To edit local audio file tagging info**

1. Right-click an audio file in the local file list (left side in the File Manager), and then click **Edit Tags** from the pop-up menu.



A Tag Editor dialog box similar to the following appears.



2. Complete the fields in the dialog box (see Table 7-5).
3. When you finish, click SAVE **Save**.

Table 7-5. Fields in the Tag Editor Dialog Box

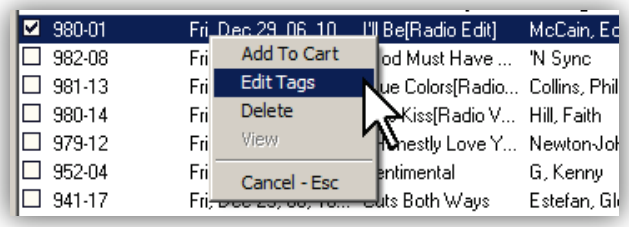
Field	Description
Copy Info button	Click this button to copy the current tags to the Windows' Clipboard.
Paste Info button	Click this button to paste the current tags from the Windows' Clipboard.
Title/Description	Enter a title or description about the contents of your cart.
Artist/Advertiser	Enter an artist or advertiser that describes the contents of your cart.
Name	Name of the file in the system. Edit the name if desired.
OutCue	Enter the words at the end of a vocal or commercial so they know when it is time to talk.
ISCI Code	Enter Industry Standard Coding Identification (ISCI) code if applicable.
Start Date & Time	Date and time when a commercial is to start running.
End Date & Time	Date and time when a commercial is to stop running.
No Fade at Segue	As a file plays, the system applies a fade when the file hits a segue point. If a song has a fade at the end, check this check box unchecked to avoid applying a second fade.
Protect Intro Of Next Item	Controls overlap between items. For example, if an item has a long segue and is followed by another item that has a short intro, checking this check box protects the intro of the second item. In this example, if you uncheck the check box, the segue point of the first item would trail over the vocals of the next item. Typically, you would check this box for items that end with long segues.
TRIM button	Click this button to remove silence from the beginning and end of the item.
RESAMPLE button	If an item has a sample rate that is different from the other items in your audio library, click this button to resample the audio for consistency with your other items.
From start	Read-only field that shows the amount of time from the start of the item.
Length	Read-only field that shows the duration of the item.
From end	Read-only field that shows the amount of time to the end of the item.
Waveform	Shows the waveform of the currently playing item. You can click in the waveform, and then use the lightning bolt icon to set intro and segue points in the waveform.
Play button	Click this button to play the file. You can also play the file by pressing the F2 key on your keyboard.
Stop button	Click this button to stop the file. You can also stop the file by pressing the F3 key on your keyboard.
Pause button	Click this button to pause playing. You can also pause playing by pressing the F4 key on your keyboard.
Left button	Click this button to zoom into the left of the waveform. You can also zoom to the left by pressing the F10 key on your keyboard.
Out button	Click this button to zoom out to the normal waveform view. You can also zoom out by pressing the F11 key on your keyboard.
Right button	Click this button to zoom into the right of the waveform. You can also zoom in to the right by pressing the F12 key on your keyboard.
Zoom Dropdown	Sets the zoom view time period.
Intro	Length of the item's intro.
Segue	Length of the item's segue.

Field	Description
Command To Run At Start	Allows you to run a macro command as soon as the audio starts playing.
Command To Run At Segue	Allows you to run a macro command when the audio start segue point is reached. For example, you might want to run a macro that triggers an external Emergency Alert System (EAS) device after running an EAS message.
Command To Run At End	Allows you to run a macro command when the audio end point is reached.

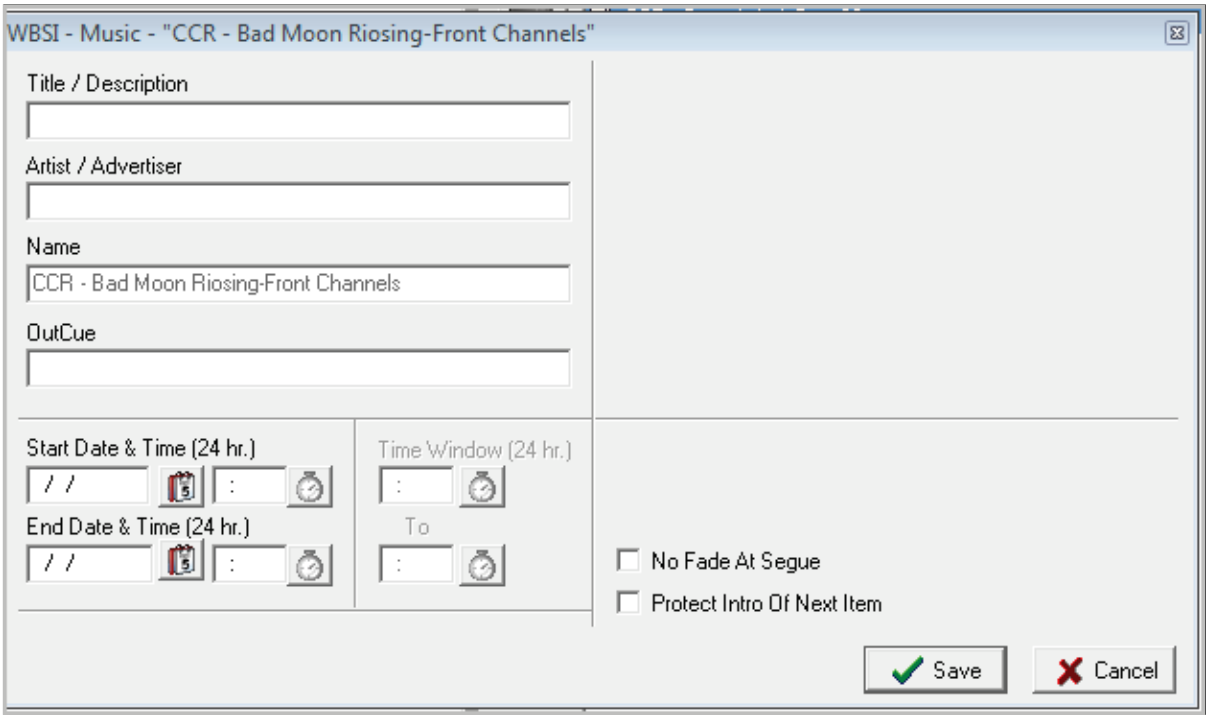
7.7 Editing Audio Tagging Info on the File Server

➢ **To edit audio tagging info on the file server**

1. Right-click an audio file in the file server list (right side in the File Manager), and then click **Edit Tags** from the pop-up menu.



An Tag Editor dialog box similar to the following appears.



2. Complete the fields in the dialog box (see Table 7-5 on page 209).
3. When you finish, click SAVE **Save**.

7.8 Generating and Viewing Automation Reports

Automation system reports are an important and indispensable feature used by general managers and traffic managers. They are most commonly used to verify aired spots and promos to ensure your customer spots are getting aired in accordance with your promise to your customers. In addition, many traffic and billing software packages use automation reports to create affidavits and automatically verify spots and insert “make goods” for your station(s) later program logs.

OpX’s report generating facilities allow you to create report templates to include or ignore data types of your choosing. The following sections describe how to create a report template and run a report.

7.8.1 Creating a Report Template

Report templates in OpX define the information that will be added to a report when a report is run. Defining a template involves selecting the types of data you want the report to show and selecting a format for your report. Table 7-6 describes the data types you can include in your report.

Table 7-6. Report Data Types

Data Type	Description
Spots	Events playing from a folder, with its Contents type set to “Spots” and all events inserted into the program log by importing a traffic log.
Skipped Spots	Spot events skipped over because of timed events or time syncs, but not errored.
Music	Events playing from a folder, with its Contents type set to “Music” and all events inserted into the program log by importing a music log.
Skipped Music	Music events skipped because of timed events or time syncs, but not errored.
Carts	Any cart played will record this data type.
Other Audio	Anything event stored in a folder, with its contents type set to “Audio” will record this data type when played.
Errors	Events attempted to be played that cannot play because the item does not exist, is in an incorrect format, or a playback device is not available will record this data type.
Warnings	Started a new sat show while one was already running.
Infos	Internal system tasks, such as getting files from the server or updating program logs, or uploading run logs, and so on.
Closures	Any time a trigger device receives a closure, it will record that event with this data type.
Inserts	When an item is inserted into the program log, a record of this occurrence is recorded with this data type.
Deletes	If a user deletes an item from the program log, this data type keeps record of that occurring.
Stops	Clicking the Stop button of a deck will report this data type.

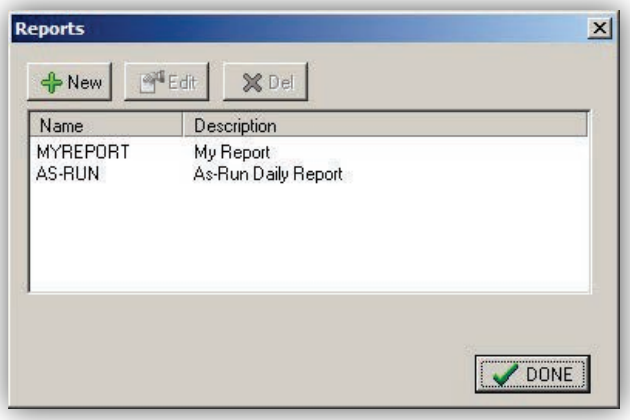
Data Type	Description
Macros	Executing a macro by a playback deck will record this data type.
Time Events	Any event that has a set time — including music, spots, or macros — that have a cue type of Time Immediate or Time Next. Includes any event added to the Scheduled Events.

OpX automation reports can be generated in ASCII text formats, with either a position-dependent or delimited format. Column order and position are user configurable.

➢ **To create an automation report template**

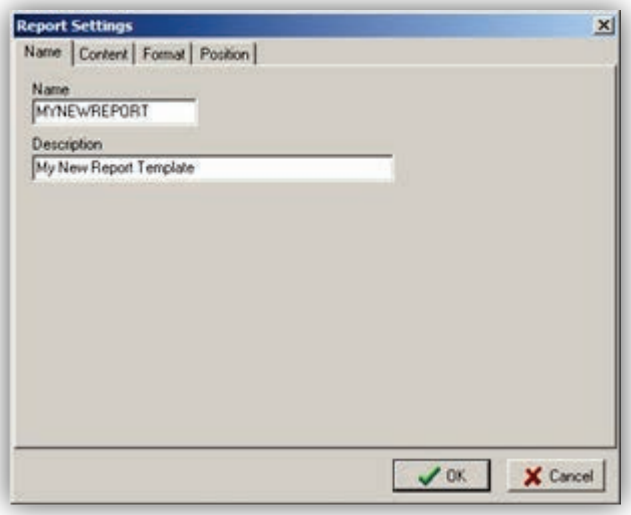
1. On the Edit menu, click **Define Reports**.

The Reports dialog box appears.

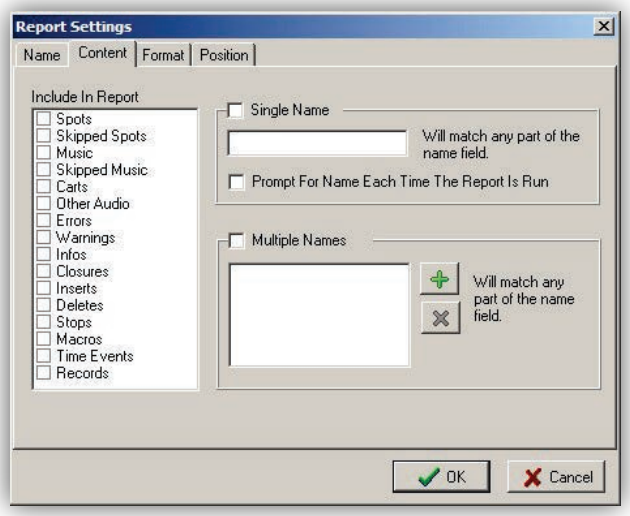


2. From this dialog box, you can:
   - Define a new report: Click the **New** button.
   - Edit a report: Highlight the report from the list, and then click the **Edit** button.
   - Delete a report: Highlight the report from the list, and then click the **Delete** button.

*If you clicked **New** or **Edit**, the Report Settings dialog box appears.*

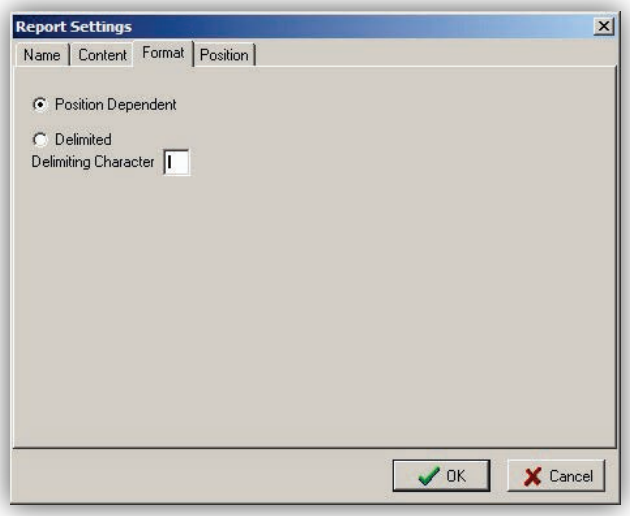


3. For a new report, enter a short name in the **Name** field and enter a description in the **Description** field. Click the **Content** tab.
4. On the **Content** tab, select the types of data want to include in your report. The example in the figure below includes events that did not play, which is useful for determining your "make-goods." To limit your report to show only data pertaining to a single file name, or several particular file names, use the **Single Name** or **Multiple Names** section to configure file name filters.

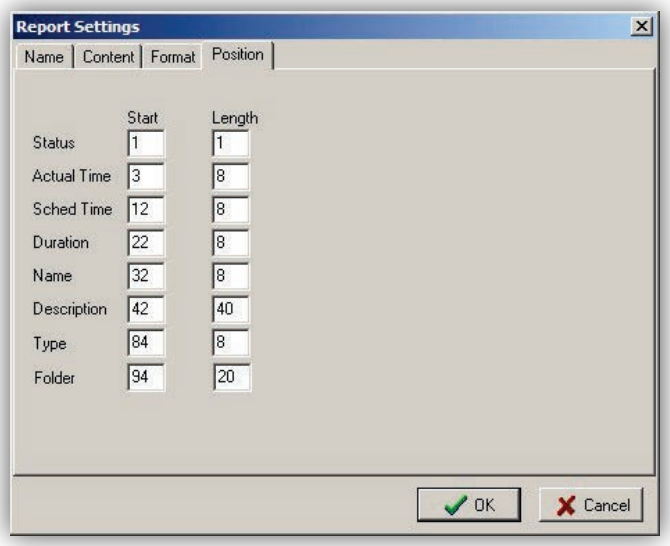


5. Check the types of content to include.
6. After you select all the data types you want to include, click the **Format** tab.

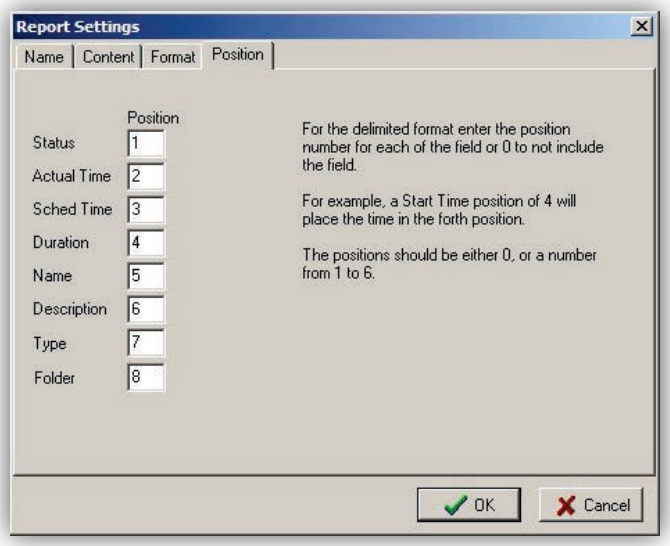
7. The **Format** tab allows you to select the output format of your report. Two formats are available:
   - **Position Dependent** — select this format to read your report directly or if the application you want to import the report into asks for this data type.
   - **Delimited** — select this format if the application you want to import specifies this format or allows you to make your own choice. Setup for this format is easier than position dependent.



   - If you selected **Position Dependent,** click the **Position** tab. The following dialog box appears, except that a new report template has zeros for all the **Start** and **Length** settings. The **Start** and **Length** settings depend on what you are importing the data into. If you are going to view the report directly without importing your data into another application, the settings in the following figure will work for most cases.



– If you selected **Delimited,** enter the delimiting character into the **Delimiting Character** field on the **Format** tab (most applications use the | symbol). Click the **Position** tab. A tab similar to the one below appears, except that a new report template has zeros for all the **Position** settings. The **Position** settings determine the order each field will be added to the report.



8. After completing the Report Settings dialog box, click **OK**.

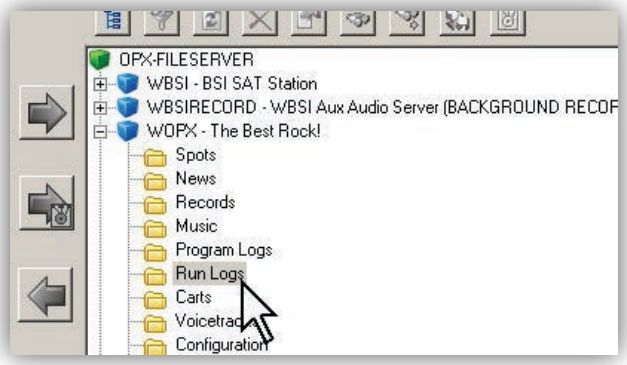
7.8.2 Running a Report

The following procedure describes how to run a report. This procedure assumes you created a report template (see section 7.8.1).

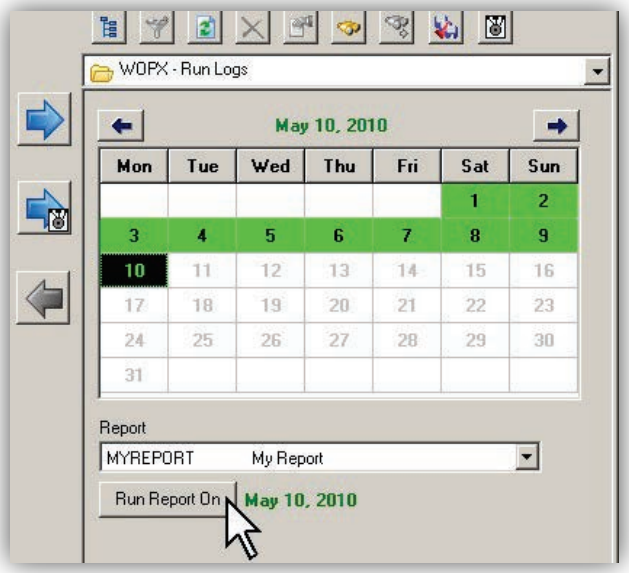
➢ **To run a report using an automation report template you created**

1. Browse through the station folder tree on the right side of the File Manager module to find the **Run Logs** folder for your desired station, and then click it.

   The right-side of the window switches to Report Viewer mode.



2. Select the month and date that the report will cover.



3. Using the **Report Template** drop-down list, select a report template.

4. Click the **Run Report On** button.

   The report is generated and automatically opens in your default .txt viewing application (typically Windows Notepad).

8 Clock Builder Module

Topics:

- *Starting the Clock Builder Module (page 220)*
- *Quick Tour (page 222)*
- *Configuring the Clock Builder Module (page 229)*
- *Creating a New Clock (page 231)*
- *Sample Clocks (page 258)*

This chapter describes the OpX Clock Builder module. This module creates clock templates.

Many stations require the ability to rebroadcast satellite originated shows. These shows include signals (closures) to tell automation systems such as OpX when the show starts, stops, and when to play ID's, liners, and breaks.

Unlike other automation systems, OpX uses a Clock Builder to determine how to work with your satellite broadcasts. Not only does the Clock Builder offer a visually familiar method of configuration, it offers an intuitive and quick method to add or modify shows, schedule satellite breaks, and more in a visual, easy-to-understand way.

With the multitude of station formats, some stations will have all their content originate from files stored on their local hard drive (such as with "music—from—hard—drive" stations), while other stations will have a combination of local from-hard-drive content and satellite rebroadcasts. The extreme case is a station that gets all of its content from satellite, as in Figure 8-1 on page 221. The OpX Clock Builder module allows easy handling of these situations without requiring you to memorize or look up special commands to enter. The result is simplified setup and modification of your station's format.

8.1 Starting the Clock Builder Module

Before you set up clocks or schedule breaks:

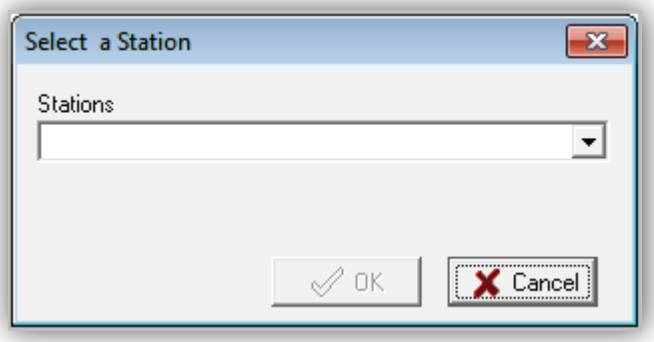
- Configure the OpX Audio Server because clock setup depends on the configuration of your Audio Server. See Chapter 4 for information about setting up your OpX Audio Server.
- Confirm that the following parts of OpX are configured:
  - Your switcher device, so OpX can switch between sources automatically
  - Your closure device, so OpX can respond to network triggers
  - A mixer in your OpX Audio Server, so OpX can control the volume of your source
- Connect and configure your hardware, including your trigger device, any switcher, and your OpX Mixers. See Chapter 4.

After you perform these tasks, start the Clock Builder module.

➢ **To start the Clock Builder module**

1. Start the File Server module (see section 3.1).
2. Click the Windows Start button and click **Programs > Broadcast Software > Clock Builder**.

   You are prompted to select a station.



3. Using the **Stations** drop-down list, click a station.
4. Click **OK**.

   The OpX Clock Builder module is populated with the information from the selected station.

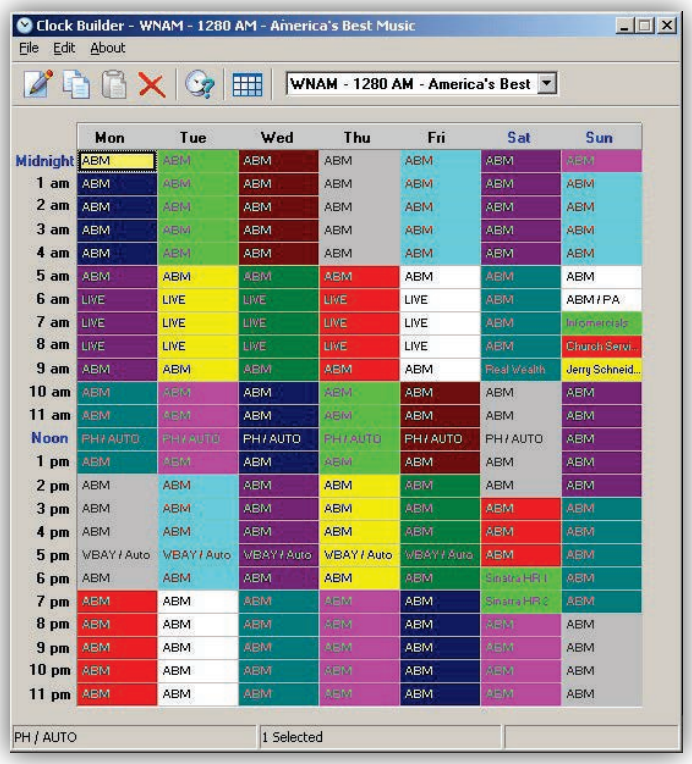
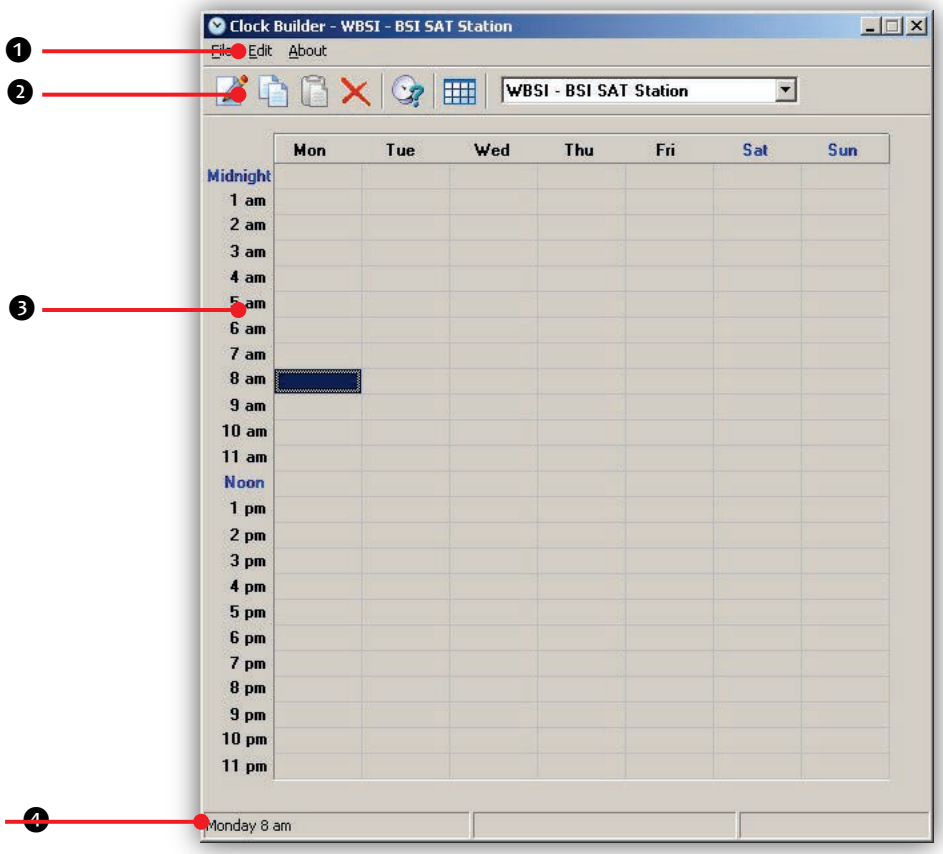


Figure 8-1. Example of Clock Builder Module

8.2 Quick Tour

The following sections provide a quick tour of the Clock Builder module interface.

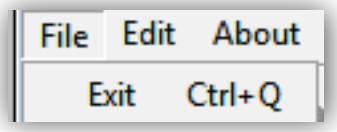


Number	Description
❶	Menu bar. See section 8.2.1.
❷	Tool bar and station selector. See section 8.2.2.
❸	Grid display. See section 8.2.3.
❹	Status bar. See section 8.2.4.

8.2.1 Menu Bar

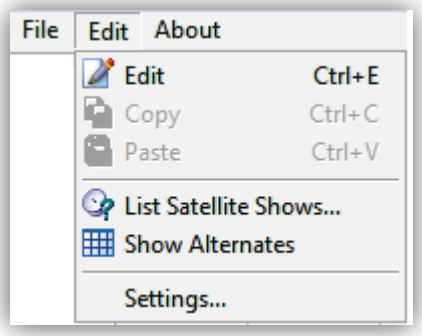
The menu bar appears at the top of the Clock Builder window. The following sections describe the menu options.

8.2.1.1 File Menu



Exit = exits the Clock Builder module.

8.2.1.2 Edit Menu



Edit = opens the Clock Editor for the highlighted clock on the grid display.

Cut = removes the highlighted clock from the grid display and copies it to the Windows' Clipboard.

Copy = copies to the Windows' Clipboard the highlighted clock on the grid display.

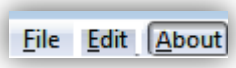
Paste = pastes a cut or copied clock from the Windows' Clipboard over the currently highlighted clock on the grid display.

List Satellite Shows = shows all Satellite Show Start events in a list or tree view window.

Show Alternates = switches the current grid display view to show alternate clocks instead of Monday-Sunday clocks.

Settings = configures Clock Builder module settings. See section 8.3.

8.2.1.3 About Menu



Opens a window that shows the version and build date of the Clock Builder module you are running. This window also shows the amount of memory and virtual memory being used,

and the amount of time that the Clock Builder module has been running See Figure 8-2 for an example. To close the window, click **OK**.

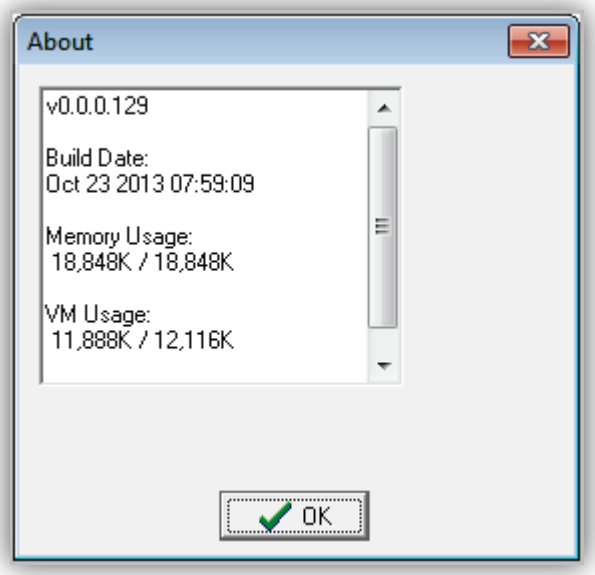


Figure 8-2. Example of About Information

8.2.2 Tool Bar and Station Selector

The tool bar and station selector appear below the menu bar. Table 8-1describes the tools on the tool bar.

Figure 8-3. Log Name and Station Selector

Table 8-1. Clock Builder Tool Bar and Station Selector

Tool	Tool Name	Description	Tool	Tool Name	Description
	Edit Clock	Opens the Clock Editor for the highlighted hour on the grid display.		List Satellite Shows	Shows all satellite show start events in a list or tree view window.
	Copy	Copies the highlighted hour in the grid display to the Windows' Clipboard.		Show Alternates	Switches the grid display current view to show alternate clocks instead of the Monday-Sunday clocks.
	Paste	Pastes a copied clock from the Clipboard to the highlighted hour in the grid display and replaces any existing clock settings.		Station Selector drop-down list	Switches between stations on your OpX system to view and edit the clock sets for each.
	Delete	Removes all clock settings from the currently highlighted clock on the grid display.			

8.2.3 Grid Display

The grid display is a spread-sheet style diagram of the clocks you create for each hour of each day of the week.

- The x-axis (horizontal) has columns for each day of the week or, while in the Show Alternates view, the columns are for each alternate day.
- The y- axis (vertical) has rows for each hour of the day.

To edit a clock, double-click the clock block in the grid display to open that time period's clock in the Clock Editor.

Figure 8-4. Sample Grid Display

8.2.4 Status Bar

The status bar shows the title of the currently highlighted clock. If you have multiple items selected (by shift-clicking or ctrl-clicking), the status bar also shows the number of items selected.

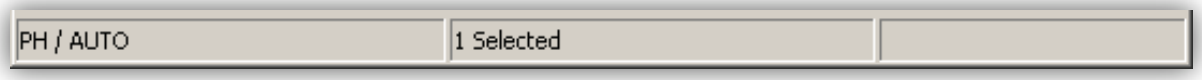
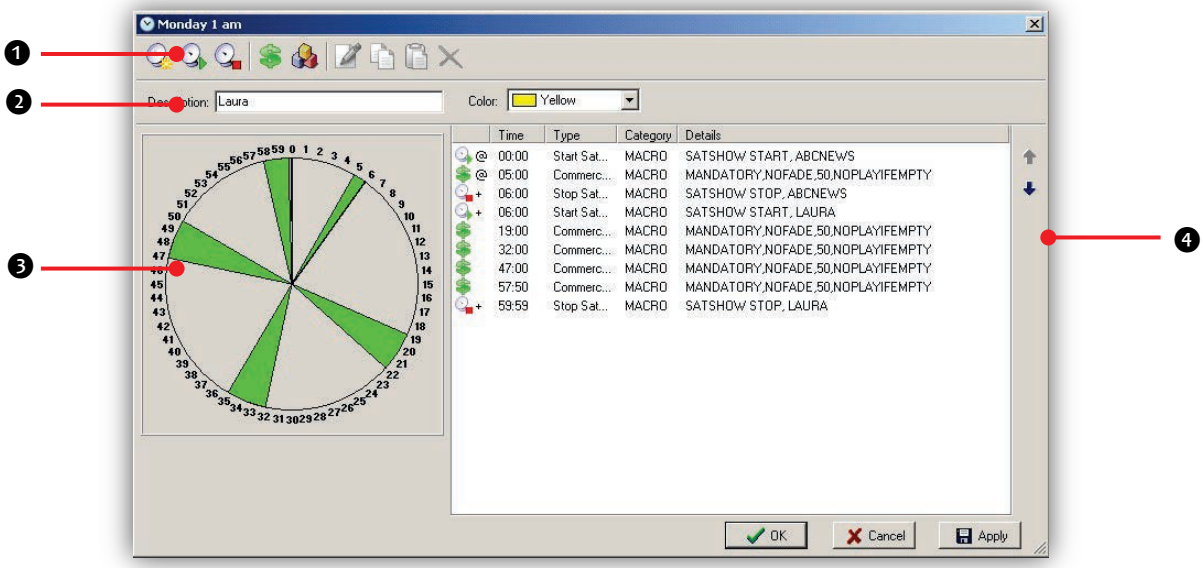


Figure 8-5. Status Bar

8.2.5 Navigating the Clock Editor Window

The Clock Editor has its own tool bar and description bar for creating and modifying clocks.



Number	Description
❶	Tool bar. See section 8.2.5.1.
❷	Description bar. See section 8.2.5.2.
❸	Clock display. See section 8.2.5.3.
❹	Event List. See section 8.2.5.4.

8.2.5.1 Clock Editor Window Tool Bar

The Clock Editor tool bar contains icons for performing the tasks described in Table 8-2.

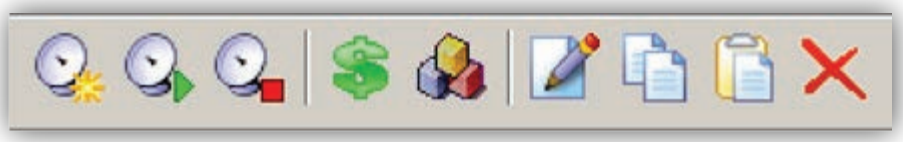


Figure 8-6. Clock Editor Toolbar

Table 8-2. Clock Editor Tool Bar

Tool	Tool Name	Description	Tool	Tool Name	Description
	New Satellite Show	Opens the Satellite Show editor to create a new satellite show start event.		Edit Event	Edits an event that has been added to your clock.
	Start Existing Satellite Show	Creates a new satellite show start event from a previously created satellite show item.		Copy	Copies the highlighted event to the Windows' Clipboard.
	Stop Satellite Show	Returns the automation system to local audio playback or stops the satellite audio.		Paste	Pastes a copied event from the Clipboard to the highlighted event in your event list.
	New Commercial Break	Adds commercial breaks to your clock.		Delete	Removes an event that you added to your clock.
	New Event	Creates new non-stopset events such as audio events, macros, or comments.			

8.2.5.2 Clock Editor Window Description Bar

The Description Bar contains the **Description** field and the **Color** drop-down list. The text you type into the **Description** field and the color you select from the **Color** drop-down list allow you to name and color your clock's block on the grid display for easy identification in the Clock Builder. Figure 8-1 on page 221 shows an example of a grid display that has descriptions and colors selected for each clock.

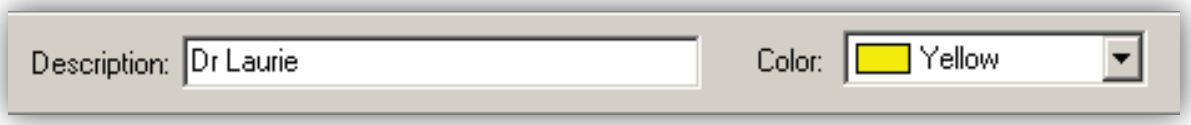
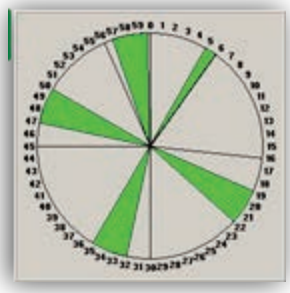


Figure 8-7. Description Bar

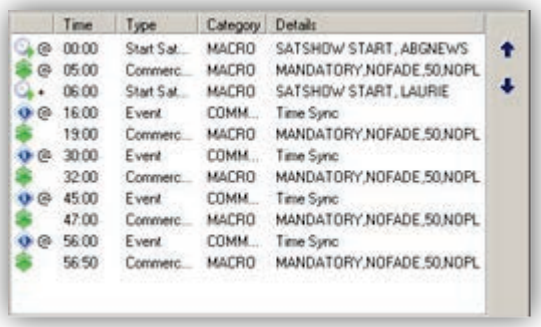
8.2.5.3 Clock Display



The clock display provides a visual representation of the events you add to the event list.

- Green “pie wedges” represent breaks.
- Thin black radius lines represent satellite show start, satellite show stop, and custom events.

8.2.5.4 Event List



The event list shows all the events your clock will perform. To shuffle an event up or down in the list, highlight the desired event and click the Up or Down icon in the top-right corner of the event list.

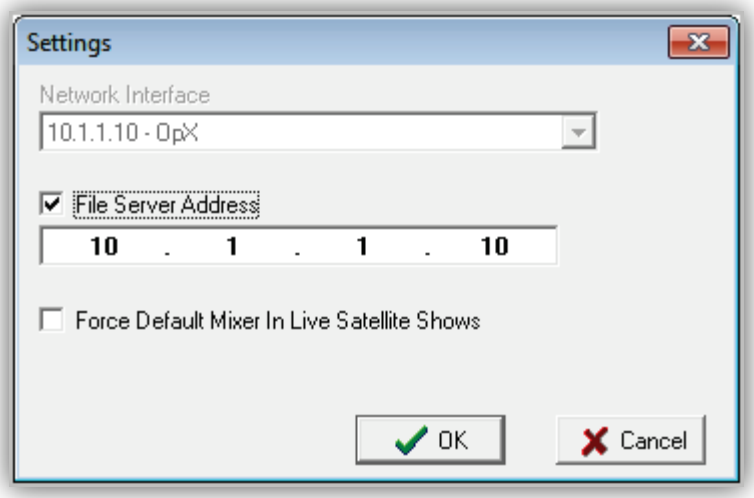
8.3 Configuring the Clock Builder Module

The Clock Builder module comes with default configuration settings that should suit most users. Using the **Settings** option on the **Edit** menu, you can change these settings to suit your requirements.

➢ **To configure the Clock Builder module settings**

1. On the **Edit** menu, click **Settings**.

   The Settings dialog box appears.



2. Complete the fields in the dialog box (see Table 8-3).
3. Click **OK**.

Table 8-3. Fields in the Settings Dialog Box

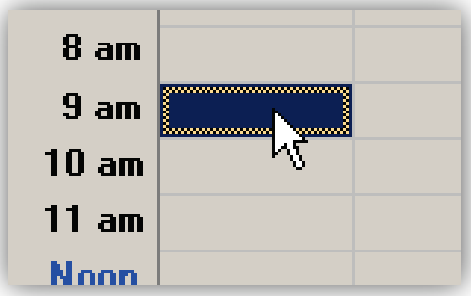
Field	Description	Default
Network Interface	Read-only field that shows the IP address to which the OpX network interface is connected	10.1.1.10 - OpX
File Server Address	• Checked = use the FTP server IP address. Enter the IP address in the dotted-decimal field. • Unchecked = do not use the FTP server IP address.	Unchecked
Force Default Mixer In Live Satellite Shows	Check this check box to have the system pick the first mixer configured on the New Satellite Show dialog box.	Unchecked

8.4 Creating a New Clock

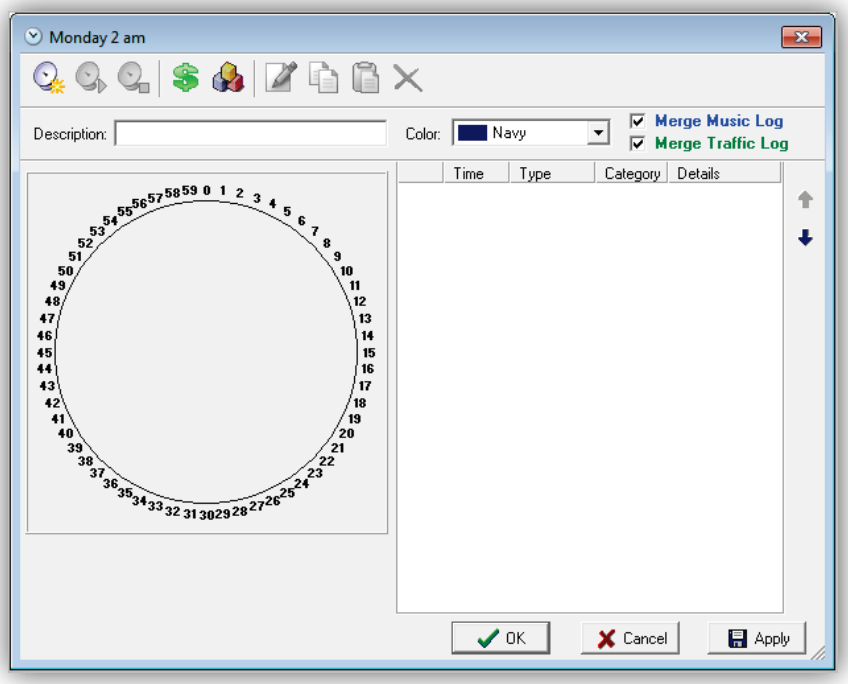
To set up your satellite clocks, open the OpX Clock Builder module. You will be prompted to select which station you would like to work on (see Figure 9.3). Figure 9.2 shows the initial screen you will see when opening the Clock Builder. It is a grid representation with columns for each day and rows for each hour of the day. The grid will be empty until clocks are added. Figure 9.1 shows what a Clock Builder grid looks like when fully populated with clocks

➢ **To create a new clock**

1. In the Clock Editor, double-click the hour block for the hour/day on which you want to create the clock.



The Clock Editor appears for the hour you selected.



2. In the **Description** field, enter a title for this clock.
3. If desired, select a color for the clock's hour-block in the Clock Builder grid display for easy identification.
4. The most common satellite rebroadcast clock consists of the following events:
   - A command to put your satellite show on the air (a satellite show start event), which controls your audio switching and I/O hardware.
   - Commercial break periods, where OpX is to replace network spots with your local content (a commercial break event).
   - A command to turn off the satellite show and return the automation system to local audio (a satellite show stop event) or another satellite show.

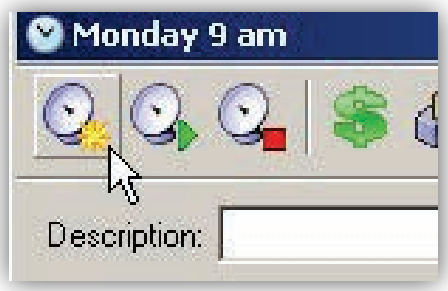
   To put your satellite show on the air, OpX must know how to start your satellite show- what inputs to turn on, what triggers to use, and how to behave. Leave the Clock Builder open and see the following sections for procedures about performing these tasks.

8.4.1 Creating a New Satellite Show Start Event

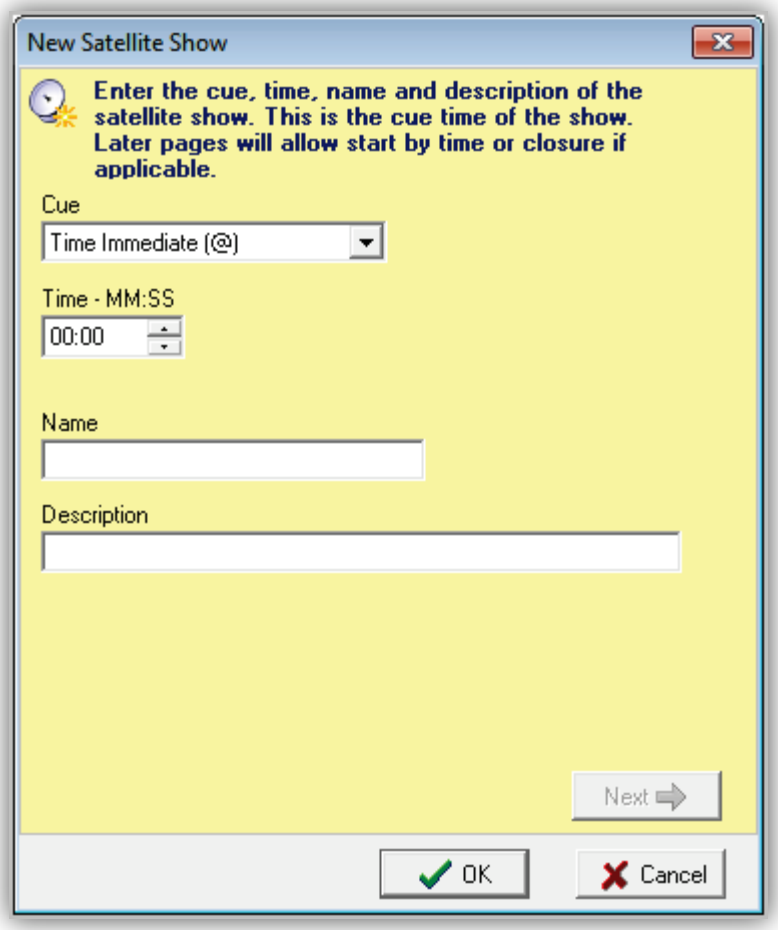
You create a new satellite show start event using the New Satellite Show dialog box. This dialog box presents a number of pages containing configuration settings. To see examples of completed clocks, see section 8.5.

➢ **To create a new satellite start event**

1. Click the **New Satellite Show** icon.



The New Satellite Show dialog box appears.



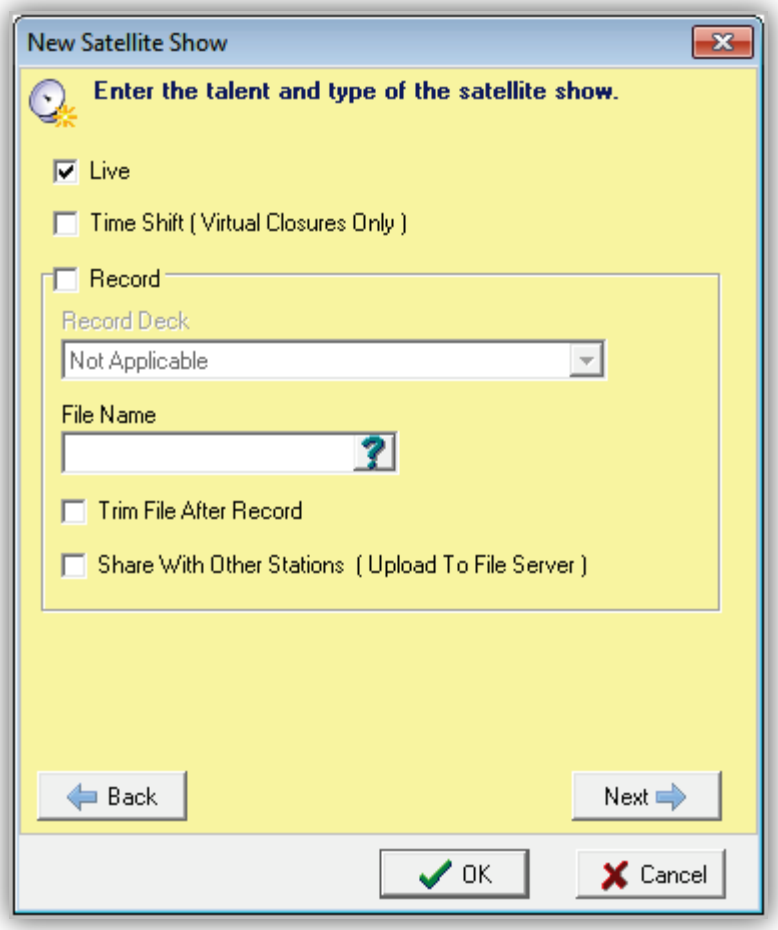
2. Complete the fields in the dialog box (see Table 8-4).

Table 8-4. Page 1 Fields in the New Satellite Show Settings Dialog Box

Field	Description	Default
Cue	Under most circumstances, select Time Immediate [@].	Time Immediate [@}
Time	Select start time of your satellite show. For shows that start at the top of the hour, select 00:00.	00:00
Name	Enter a short name for your show.	—
Description	Enter a name that will be added to the list of created satellite shows.	—

3. Click **Next**.

The second page appears in the New Satellite Show dialog box.



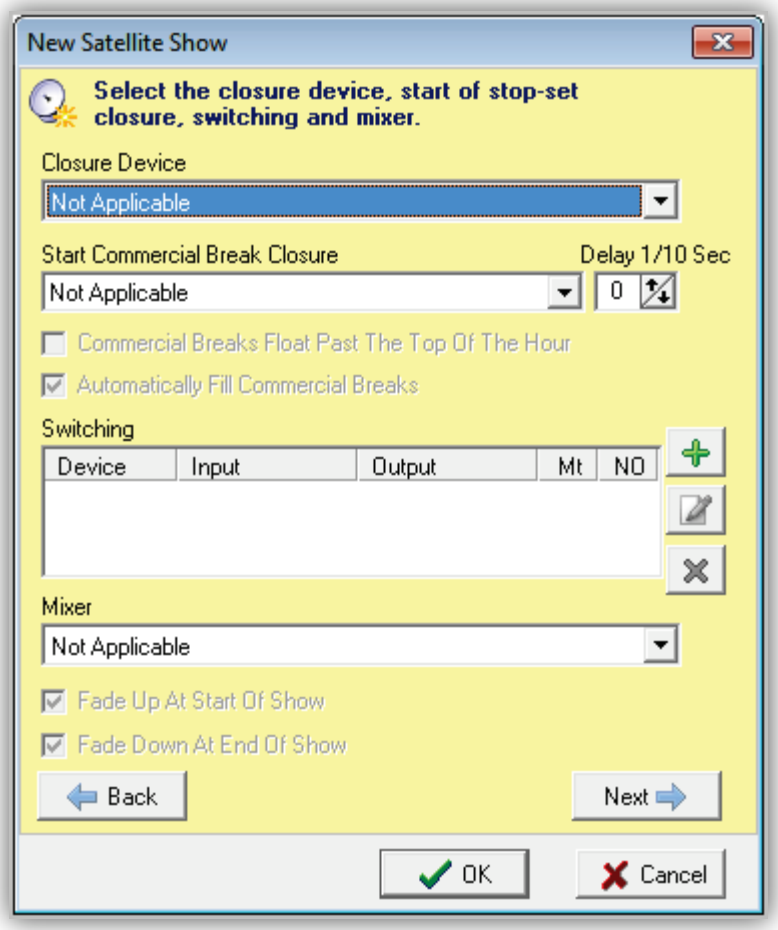
4. Complete the fields in the dialog box (see Table 8-5).

Table 8-5. Page 2 Fields in the New Satellite Show Settings Dialog Box

Field	Description	Default
Live	Check this check box to go to the satellite feed playing at that time.	Checked
Time Shift	Check this box to play back a previously recorded show.	Unchecked
Record	If you want to record a satellite show at a time other than when the show is being broadcast, check this check. The file will then be recorded at the time you specified in the previous dialog box.	Unchecked
Record Deck	Select one of the four record decks in the system.	Not Applicable
File Name	Enter the name you want to assign to the recorded file.	—
Trim File After Record	Check this check box to remove the silence from the recorded file.	Unchecked
Share With Other Stations	Check this check box to upload the recorded file to the File Server, so the file can be shared with other stations.	Unchecked

5. Click **Next**.

The third page appears in the New Satellite Show dialog box.



6. Complete the fields in the dialog box (see Table 8-6).

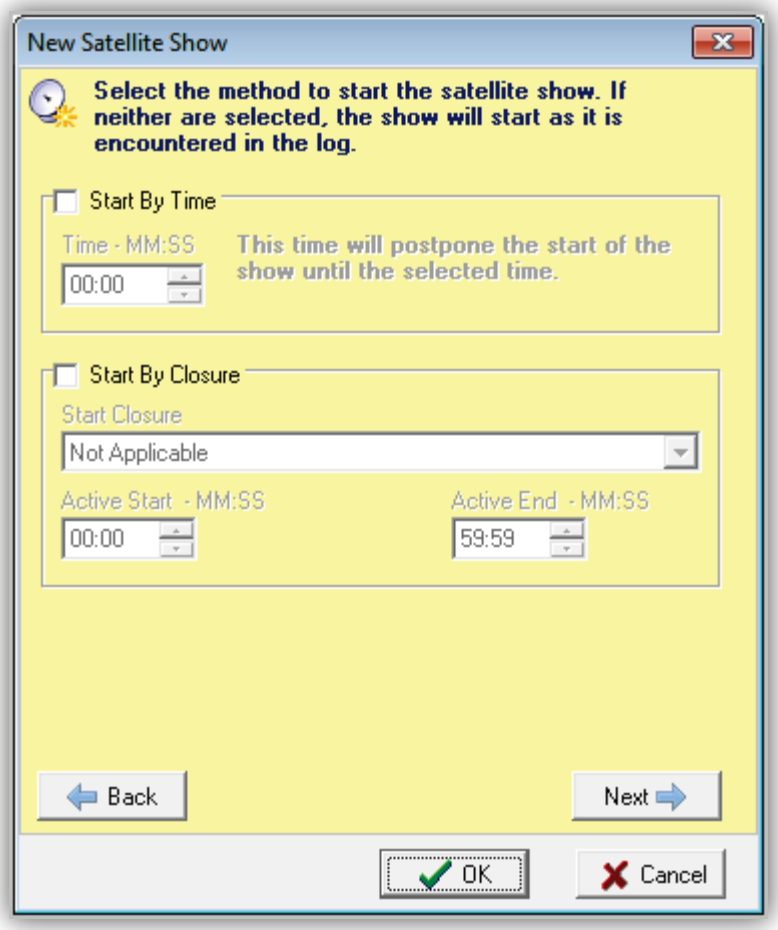
Table 8-6. Page 3 Fields in the New Satellite Show Settings Dialog Box

Field	Description	Default
Closure Device	Select your closure hardware device.	Not Applicable
Start Commercial Break Closure	Select your local break trigger.	Not Applicable
Delay	Adds a delay to the commercial break closure.	0
Commercial Breaks Float Past The Top Of The Hour	Causes OpX to look ahead in your clock each time a break start trigger is received. • Checked = if more break closures are received and there are no more breaks in your clock (for example, all expected breaks have been played), the closure is ignored. • Unchecked = use this setting if you set up multi-hour satellite shows that only have a satellite show start event in the first hour's clock.	Unchecked
Automatically Fill Commercial Breaks	• Checked = OpX automatically fills breaks that are not filled with content from your traffic software. • Unchecked = OpX does not automatically fill breaks.	Checked

Field	Description	Default
Switching	Add profiles to determine the routing of audio-switching devices for this satellite show. If you do not have any audio routing/switching hardware, leave this field empty. • Click the Add Switcher Routing button to add a profile. • Click the Delete Switcher Routing button to remove the highlighted device from the list.	—
Mixer	Determines what input/output of your audio card(s) are unmuted at the start of your satellite show, muted during breaks, and muted at the end of your show. For configurations with an audio switcher, connect your audio switcher's output to an input on your soundcard and set up the audio switcher as a mixer in your audio server configuration. For configurations without an audio switcher, connect your satellite's output directly to the audio card's input and configure the audio card as a mixer in your audio server's settings. For information about setting up OpX's mixers, see Chapter 4.	Not Applicable
Fade Up At Start Of Show	Check this check box to have the mixer adjust the volume control up at the start of the show.	Checked
Fade Down At Start Of Show	Check this check box to have the mixer adjust the volume control down at the end of the show.	Checked

7. Click **Next**.

The fourth page appears in the New Satellite Show dialog box.



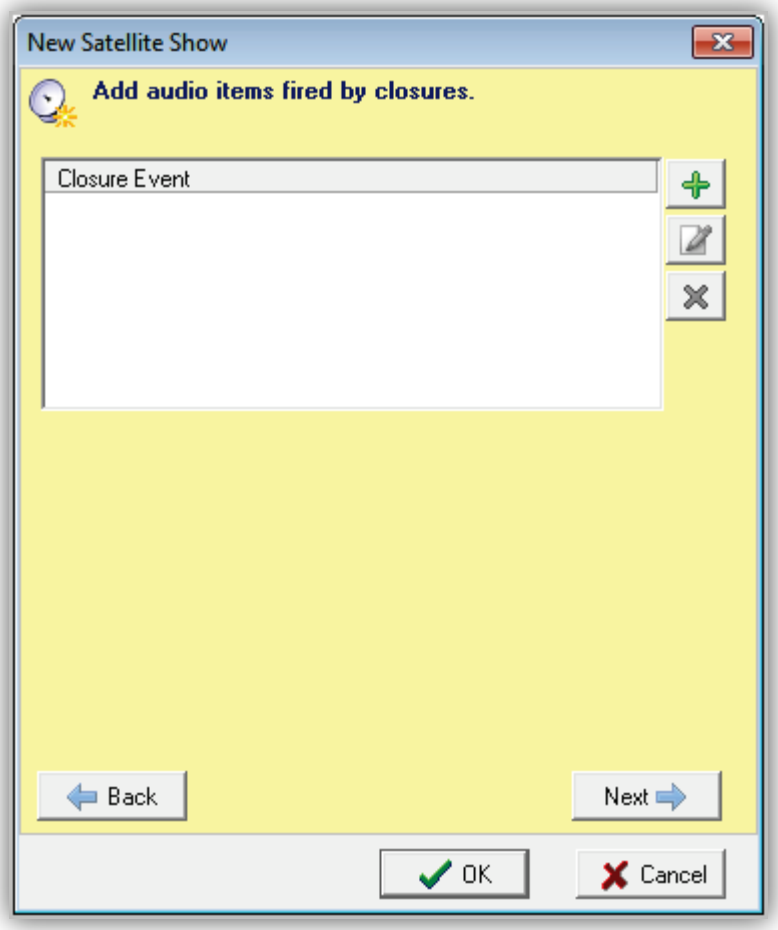
8. Complete the fields in the dialog box (see Table 8-7).

Table 8-7. Page 4 Fields in the New Satellite Show Settings Dialog Box

Field	Description	Default
Start By Time	Allows you to delay the start of your satellite show until a time of your choosing. Like an offset, if you set your satellite show event to start at the top of the hour and set this option to 5:00, your satellite show will not start until 5:00 minutes after. This option is not used in most circumstances.	Unchecked
Start By Closure	Allows you to start your satellite show by closure. If you air a satellite show that has a floating start, this option allows you to join when the satellite receiver sends a closure. By default, the closure selected is "listened to"' for the full hour, but you can limit the active window by setting the Active Start and Active End fields	Not Applicable
Active Start – SS:MM	Start time when this event will be active.	00:00
Active End – SS:MM	End time when this event will no longer be active.	59:59

9. Click **Next**.

The fourth page appears in the New Satellite Show dialog box.



10. Select audio files or carts to be played when specific closures are received from your satellite receiver via closure hardware connected to your OpX Audio Server. This function is useful for station ID closures or “magic calls.” If you do not need to handle these types of events, click **Next** to continue to the next page and go to the next step.

    To add a new event, click the **Add** button. When the Closure Event dialog box appears, complete the fields in the dialog box (see Table 8-8).

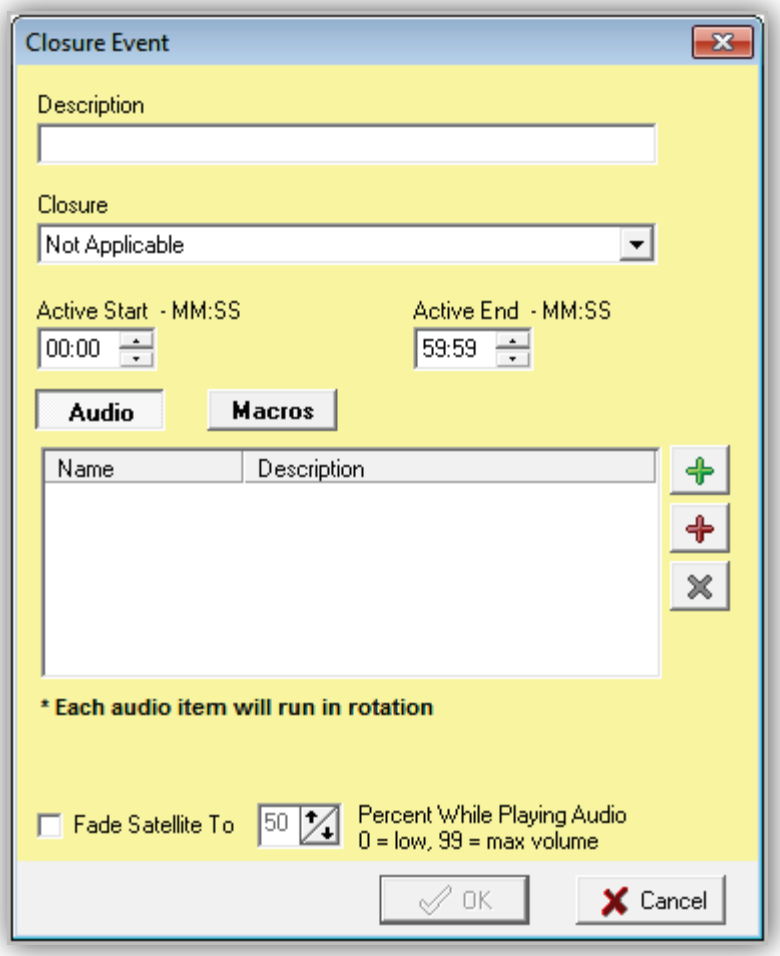


Table 8-8. Fields in the Closure Event Dialog Box

Field	Description	Default
Description	Enter a description for your closure event.	—
Closure	Select your incoming closure that will fire your event.	Not Applicable
Active Start – SS:MM	Start time when this event will be active.	00:00
Active End – SS:MM	End time when this event will no longer be active.	59:59
Name/Description	Add a new event by clicking the Add button. Drag and drop your audio files from the File Library to the Audio list, as shown in Figure 8-8. You can add multiple items audio list if want multiple items to all play consecutively each time the closure event is triggered. For rotator behavior, create a cart of items and add it to the closure event.	—
Fade Satellite To	• Checked = forces the main satellite feed to duck under your Closure Event rather than mute the satellite feed.	Unchecked

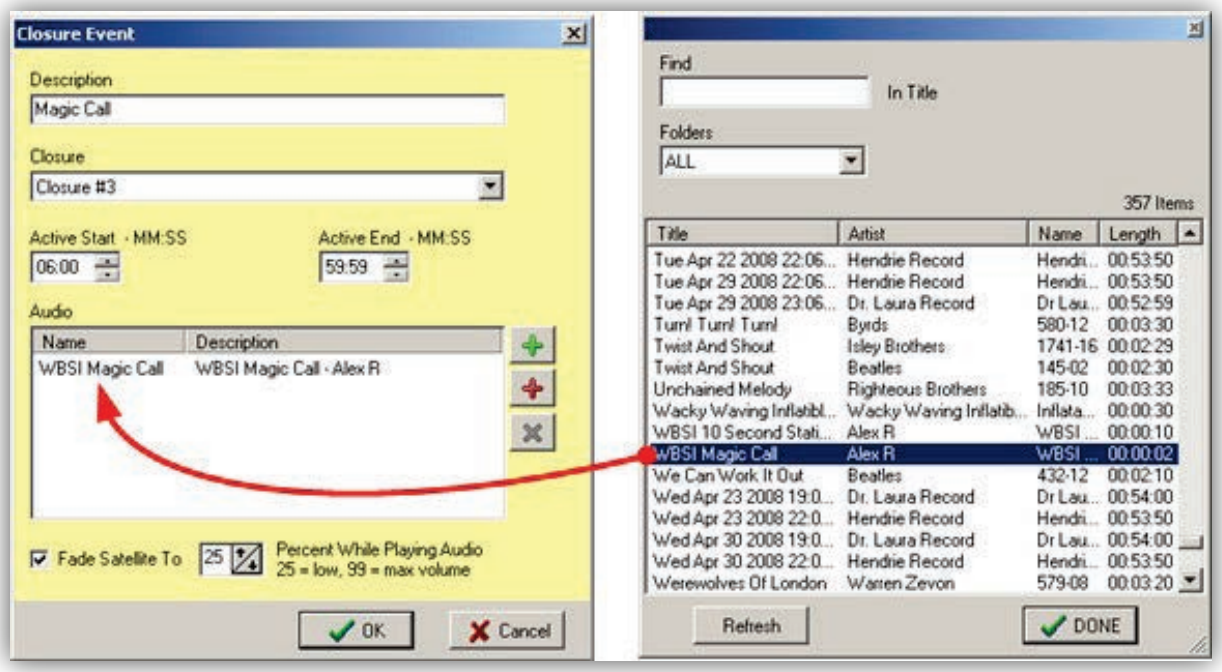
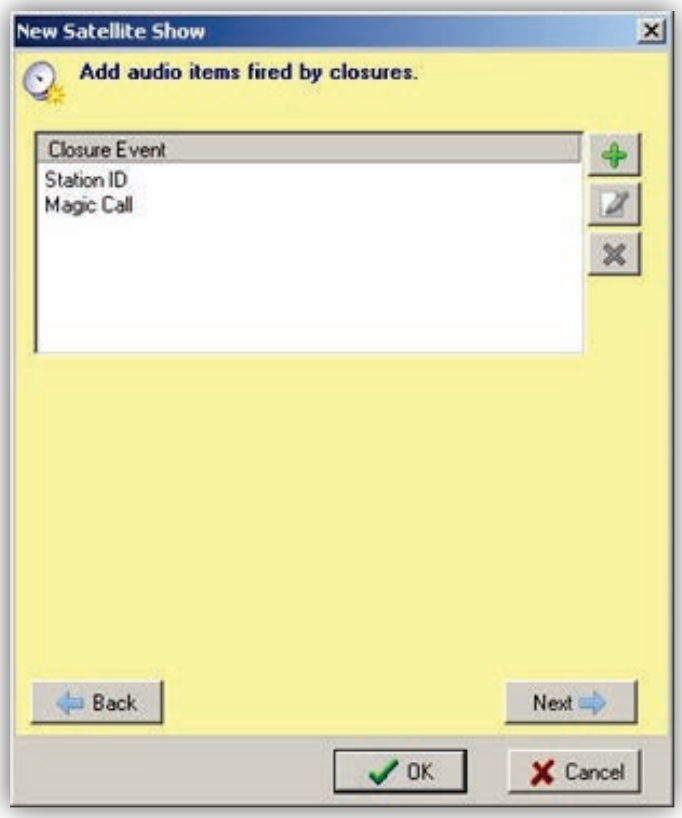


Figure 8-8. Dragging and Dropping Audio Files

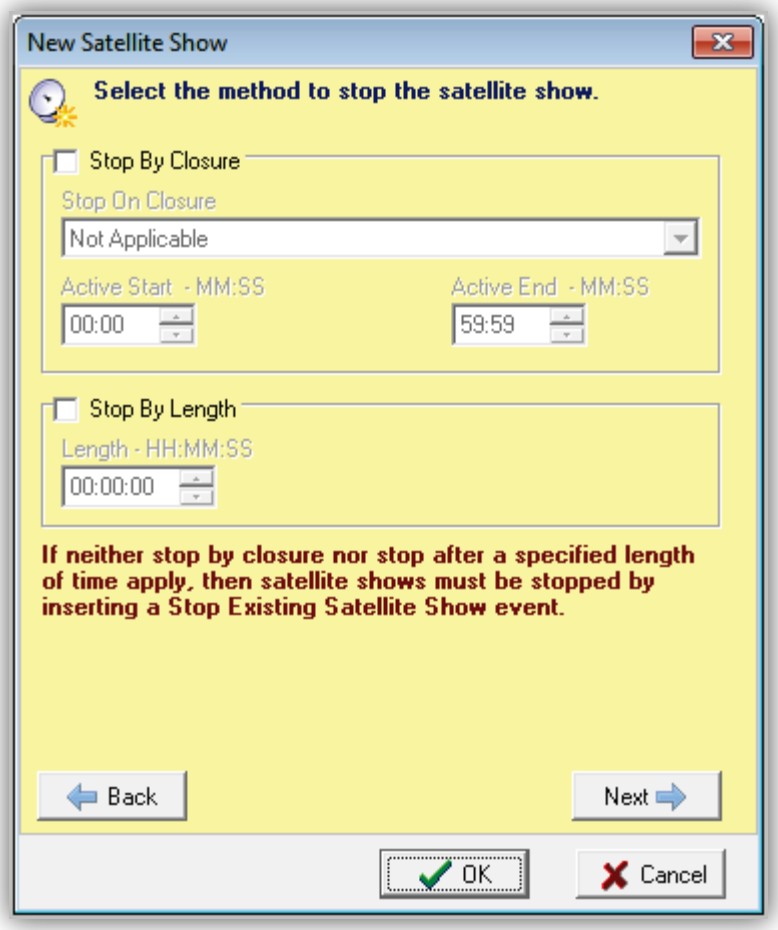
You can add multiple closure events, where each one handles the events for a single closure during a specified time period. In the figure below, two closure events are created: one to handle a “magic call” closure event and the other to handle a floating station ID closure event.



To edit a closure event, click it in the closure event list and click the **Edit** button. To delete a closure event, click it in the closure list and click the **Delete** button.

11. After you create, edit, or delete closure events, click the **Next** button to go to the next page.

The fifth page appears in the New Satellite Show dialog box. These settings determine how your satellite program will be stopped.



12. Complete the fields in the dialog box (see Table 8-9).

Table 8-9. Page 5 Fields in the New Satellite Show Settings Dialog Box

Field	Description	Default
Stop On Closure	Ends your satellite show when a specific closure is received during the time period you select from the Active Start to the Active End fields.	Not Applicable
Active Start – MM:SS	Start time when this satellite show will be active.	00:00
Active End – MM:SS	End time when this satellite show will no longer be active.	59:59
Stop By Length	Runs your satellite show for the specified length. The time you select is a count-down time. For example, if you select 00:45:00 and your satellite show starts at six minutes after the hour, your satellite show ends at 56 minutes past the hour.	Unchecked

Note: Many situations dictate that neither of the above satellite show stop methods be used. Commonly, a clock uses a separate satellite show stop

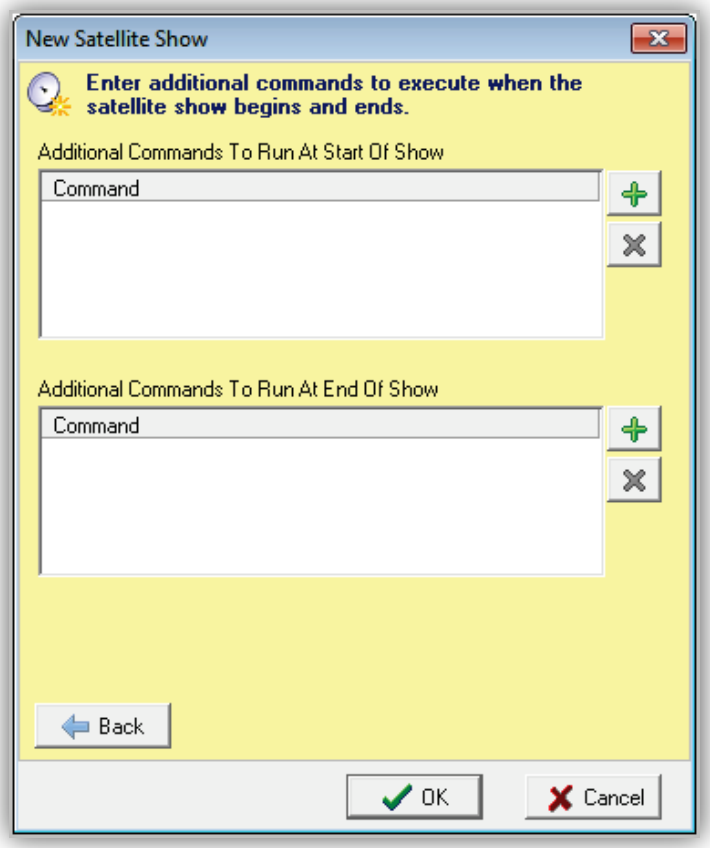
event at the end of the clock, without using the options available on this page (see section 8.4.5).

Tip: There are ways to stop a satellite show in a clock:

- Stopping a show by a closure received from your satellite receiver.
- Stopping a show by a specific length.
- Stopping a show by the starting of another show (either within the same clock, or a subsequent hour's clock).
- Stopping a show by adding a satellite show stop event.

13. Click **Next**.

The sixth page appears in the New Satellite Show dialog box.



14. Page 6 is for macro commands you want to execute at the beginning or end of the satellite show. Uses range from sending serial strings, setting mixer levels, and turning I/O devices on or off to running other applications. For more information, see Appendix A - Macros.

15. To add an item to either list, click the **Add** button next to the particular list and type your desired macro command into the command window that appears.
16. If you are satisfied with your settings, click **OK**.

8.4.2 Adding an Existing Satellite Show Start Event

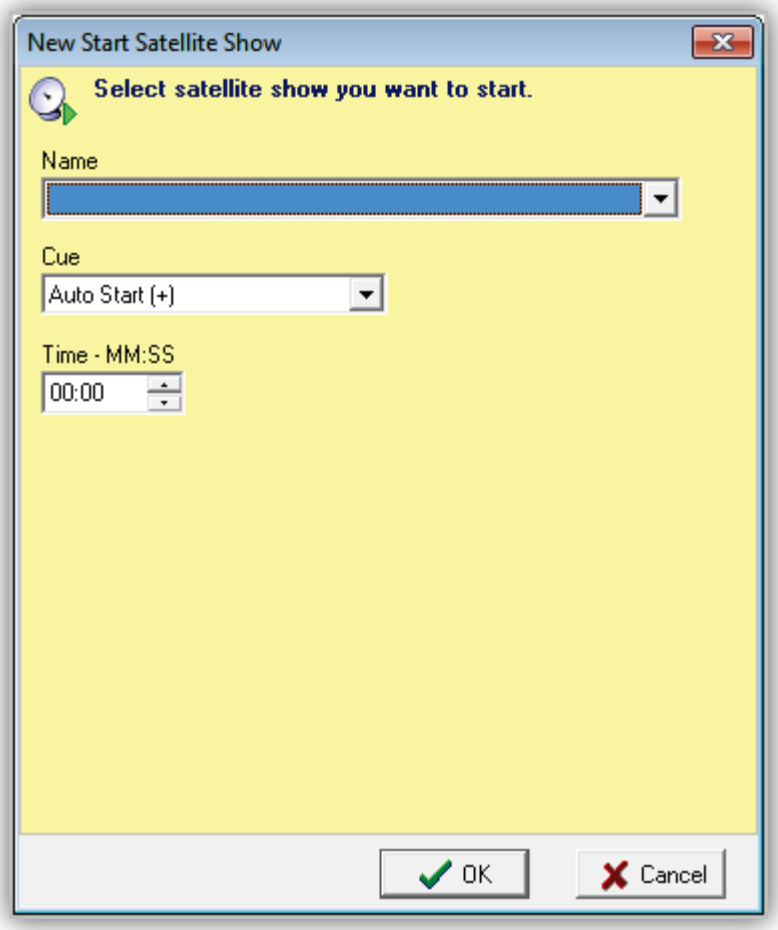
When you create a satellite show start event, as in the previous section, OpX adds it to a memorized list. This makes it easy to re-use the configuration of a previously set up satellite show start event without having to “re-invent the wheel.”

The following procedure describes how to add a previously defined satellite show start event to your clock. To see examples of completed clocks, see section 8.5.

➢ **To add an existing satellite show start event**

1. Click the **Start Existing Satellite Show** button.

The New Start Satellite Show dialog box appears.



2. Complete the fields in the dialog box (see Table 8-10).

Table 8-10. Fields in the New Start Satellite Show Dialog Box

Field	Description	Default
Name	Select a satellite show start event you created previously.	—
Cue	The cue type determines how the satellite show starts based on time or interaction with previous item execution. Under most circumstances, select Time Immediate. For a description of all available cue types, see Appendix B - Cue Types.	Audio Start [+]
Time – MM:SS	Select the start time of your satellite show. This usually is 00:00 for shows that start at the top of the hour.	00:00

3. Click **OK** to add the event to your clock.

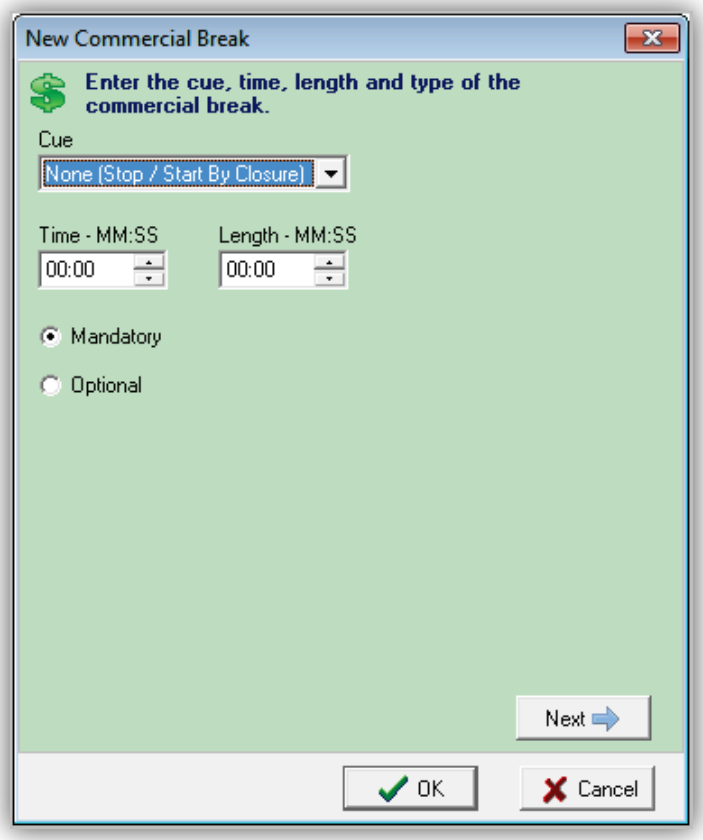
8.4.3 Creating a Commercial Break Event

The previous two sections described how to add a satellite show start event to turn on your satellite show at the correct time. As part of those procedures, you told OpX what trigger the satellite show will send to start a local break. Now you need to tell OpX when the breaks will occur, so that national breaks can be replaced with your local spots.

➢ **To create a commercial break event**

1. Click the **New Commercial Break** button.

The New Commercial Break dialog box appears.



2. Complete the fields in the dialog box (see Table 8-11).

Table 8-11. Page 1 Fields in the New Commercial Break Dialog Box

Field	Description	Default
Cue	Enter the desired cue type for the break. Choices are: • None = select for trigger-started breaks. • Time Immediate = select for most other non-triggered/non-floating breaks. For a description of all available cue types, see Appendix B - Cue Types.	None [Stop / Start By Closure]
Time – MM:SS	Enter the start time of the break in minutes and seconds (MM:SS format). • For floating (trigger-started) breaks, time is an estimate of the start time of the break. • For breaks with a cue type of Time Immediate or Time Next, time is the exact start time of the break.	Audio Start [+]
Mandatory	Always plays break content, including the audio files added in steps 3 and 4. If Auto Fill is configured on your Audio Server, breaks that are not fully filled by your traffic software are filled automatically with the content you selected.	Selected

Field	Description	Default
Options	Plays content only when your traffic software places spots or other content within the break. If no content is placed in this break's time period, OpX does not replace the satellite show content with local content (or the audio files selected in step 3 or 4 below), leaving the satellite show's underlying audio on the air.	Not selected

3. Click the **Next** button.

   The second page of the New Commercial Break dialog box appears. This page allows you to have an audio file of your choosing appended to the end of your break. This means that if you have set your break to 3:00 minutes in step 2, then add a 15-second station ID file to this page, your total break time will be 3:15 minutes.

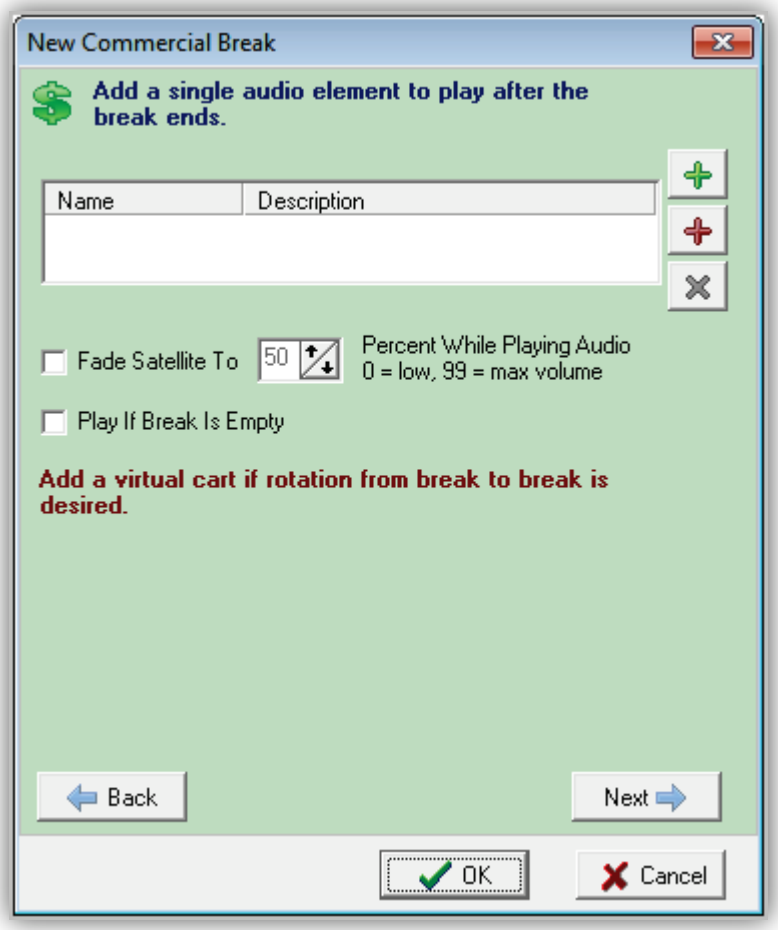


Figure 8-9. New Commercial Break Dialog Box (Page 2)

4. Complete the fields in the dialog box (see Table 8-12).

Table 8-12. Page 2 Fields in the New Commercial Break Dialog Box

Field	Description	Default
Name/Description	To add an audio element, click on the Add button. When the File Library window appears (similar to Figure 8-8 on page 241), drag and drop desired audio files to the list on this window. You can also add an audio element by typing in the name, rather than dragging and dropping, by clicking the Delete button. To remove an audio element from the list, click the selection and click the Delete button.	—
Fade To	• Checked = the selected audio element plays over top of the satellite show, causing a ducking effect. Use the selector to the right to select the volume level of the satellite show while the audio element plays.	Checked
Play If Break Is Empty	• Checked = the selected audio element plays even if the break is empty and the Optional option was selected in step 2.	Unchecked

5. Click the **Next** button.

   The third page of the New Commercial Break dialog box appears. This page allows you to specify audio elements that are added automatically to all breaks, except breaks you configure as Optional, which have not been filled in by your traffic software.

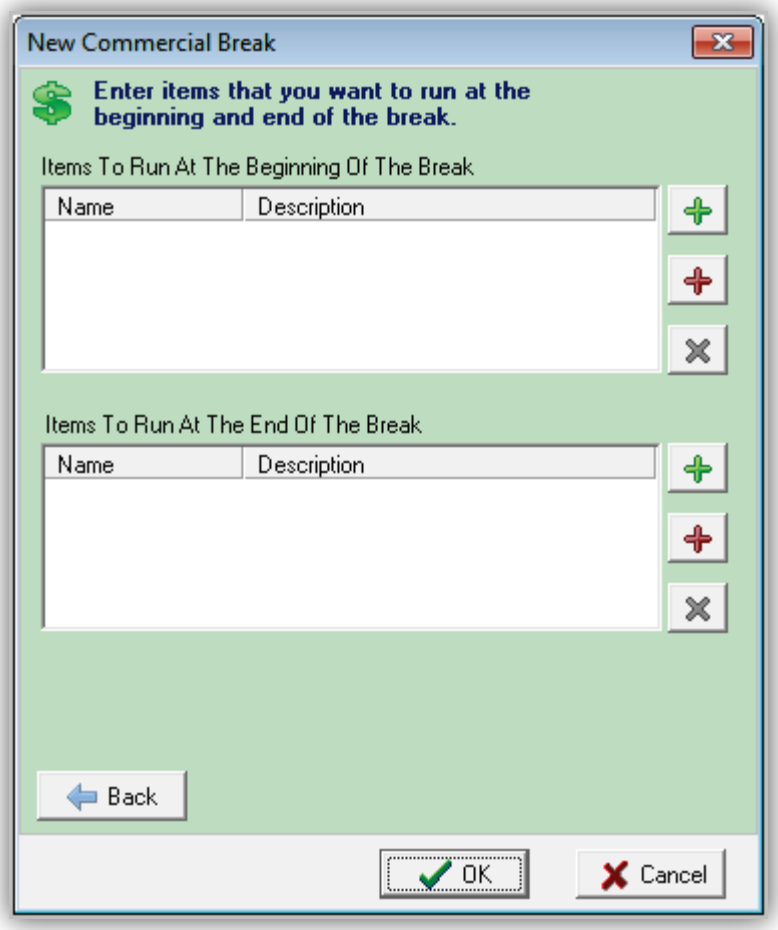


Figure 8-10. New Commercial Break Dialog Box (Page 3)

6. Complete the fields in the dialog box (see Table 8-13).

Table 8-13. Page 3 Fields in the New Commercial Break Dialog Box

Field	Description	Default
Items To Run At The Beginning Of The Break Items To Run At The End Of The Break	To add an audio element, click on the Add button. When the File Library window appears (similar to Figure 8-8 on page 241), drag and drop desired audio files to the list on this window. You can also add an audio element by typing in the name, rather than dragging and dropping, by clicking the Delete button. To remove an audio element from the list, click the selection and click the Delete button.	—

7. Click **OK** to add the commercial break to your clock.

8. Repeat this procedure for each additional break you have in the hour until you build up all the breaks specified by your syndicator for your satellite show.

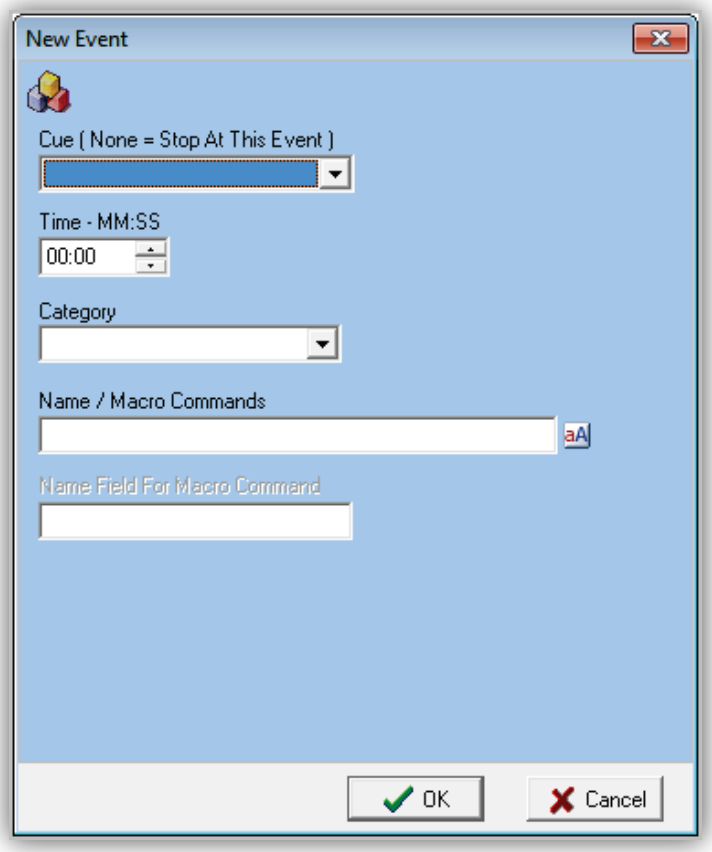
8.4.4 Creating a Custom Event

You can add custom events to your clock. Custom events allow the scheduling of macros, audio files, carts, or comments into your clock that are not part of a satellite show start event, commercial break, or satellite show end event. Uses of custom events range from playing station IDs, sending serial strings, setting mixer levels, turning on/off I/O devices, and running other applications to loading the log for the next day and more. You can even use custom events in clock hour-blocks that are not part of a satellite rebroadcast.

➢ **To add a custom event to your clock**

1. Click the **Add Event** button.

The New Event dialog box appears.



2. Complete the fields in the dialog box (see Table 8-13).

Table 8-14. Fields in the New Event Dialog Box

Field	Description	Default
Cue	Determines how OpX's automation will start your event. See Appendix B - Cue Types.	—
Time - MM:SS	Used with the timed cues Time Immediate and Time Next to determine when your custom event will be played.	00:00
Category	Select the category of your event.	—
Name/Macro Commands	The entry you add here depends on your selection in the Category drop-down list. • Audio = enter the name of your audio file. • Comment = enter the actual comment text. • Macro = enter the macro command followed by any required or optional variables. See Appendix A - Macros. • Text = the file name is entered without extension. When this event executes, the text file opens on the Studio Client modules. This function is useful for news/weather scripts or general information.	—
Name Field for Macro Commands		—

3. Click **OK** to add your event to your clock.

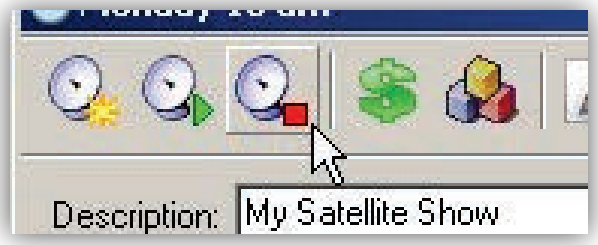
8.4.5 Creating a Stop Satellite Show Event

OpX needs to know how and when to end your satellite show, just as it needed to know how to start your show.

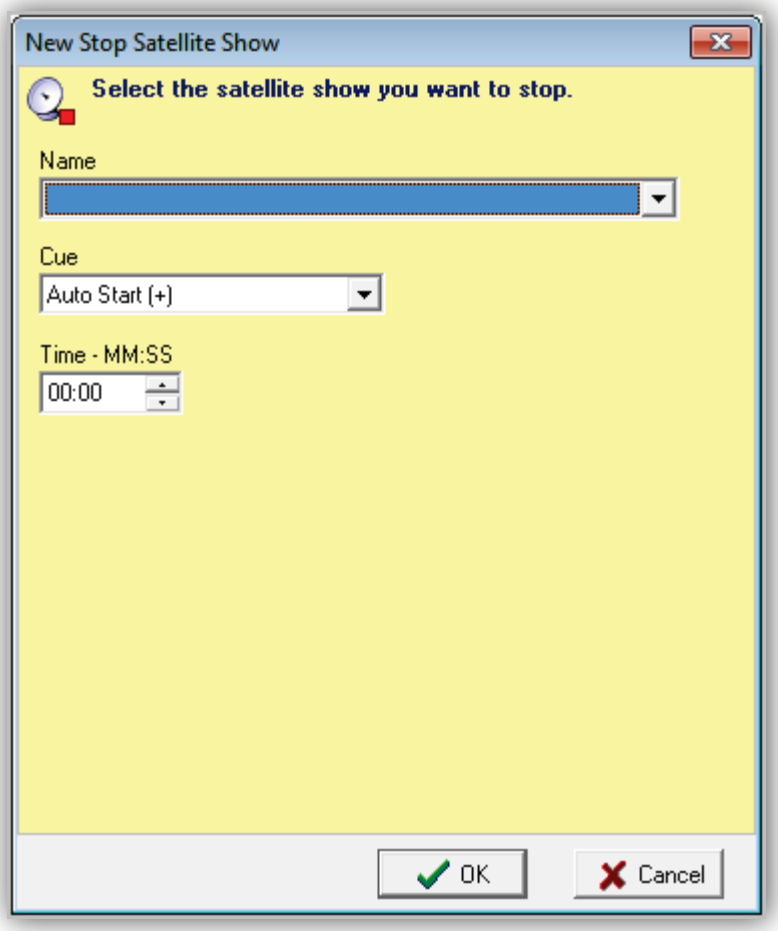
Stop satellite show events are needed only when transitioning from a satellite show to local audio for a live or time shift satellite show, or ending a recording for a recorded satellite show. A stop satellite show event is not needed if transitioning directly from one satellite show to another because the satellite show start event handles the ending the previous show when starting the next. To see examples of completed clocks, see section 8.5.

➢ **To add a stop satellite show event to your clock**

1. Click the **Stop Existing Satellite Show** button.



The New Stop Satellite Show dialog box appears.



2. Complete the fields in the dialog box (see Table 8-15).

Table 8-15. Fields in the New Stop Satellite Show Dialog Box

Field	Description	Default
Name	Name of the satellite show you want to end.	—
Cue	Type of cue for your stop satellite show event. For most situations, a stop satellite show event uses a Time Immediate cue.	—
Time - MM:SS	Time for the event to execute, in minutes and seconds (MM:SS) format.	00:00

3. Click **OK** to add your event to your clock.

8.4.6 Creating Multi-Hour Satellite Show Clocks

The procedure is the same as for creating clocks for a multi-hour satellite show and creating singular hour satellite show clocks, except that the events you place in the set of hour-long clocks changes subtly. The difference in how you set up your clocks must take into account:

- A satellite show start event is only required in the first hour of the string of the multi-hour satellite show clocks, although adding them will not hurt in most cases.
- Satellite show stop events are not needed until the end of the last hour of the string of satellite show clocks, although adding them will not hurt in most cases.

See section 8.5.5 for an example of how a multi-hour satellite show clock is set up.

8.4.7 Recording a Satellite Show

Recording a satellite show is easy to perform using OpX. The recording function of OpX records the audio content and includes the contact closures/triggers received throughout the recording. As a result, recording multi-part shows is simplified compared to other automation systems. Moreover, OpX can play back your recorded material in a completely automated fashion. You'll never again have to splice a long-form recording manually. You can even air a show live using the procedures in section 8.4 while recording it by checking the **Record** and **Live** options.

There is no need to add commercial break events to a clock that is strictly recording a satellite show. Playback of breaks is handled by the Time Shifting clock that plays back your recorded satellite show.

8.4.8 Time-Shifting a Satellite Show

For OpX, the term "Time Shift" refers to the play back of a satellite show previously recorded by OpX. When you record a satellite show with the clock builder's recording functions, the triggers received are also recorded (see section 8.4). This allows OpX to play back a recorded show with dynamically inserted spots and/or liners, jingles, and so on. Now you can record a show and play it back at a later date, with local spots inserted, without any complicated commands or manual audio file editing or splitting. OpX does it all for you.

The procedure is nearly the same for creating a time shifted satellite show clock and creating a clock for a live satellite show (section 8.4 describes how to configure a clock for live satellite shows). The major difference is that the satellite show start event uses the **Time Shift** option to play a previously recorded satellite show rather than airing live content from your satellite receiver. All other configuration steps for setting up your closure device, commercial break events, and so on are exactly the same as setting up a live satellite show.

Other than the following procedure, setting up a time-shifted show is the same as the procedure in section 8.4.1.

1. Perform steps 1 through 9 in section 8.4.1.
2. At step 10, add the `TIMESHIFT` macro to the **Additional Commands To Run At Start Of Show** section. This command prompts your recorded file to play and allows you to specify your recorded file using meta variables.

   To add the `TIMESHIFT` command:

   a. Click the **Add Event** button to the right of the **Additional Commands To Run At Start Of Show** field.

   b. Enter the command that specifies your recorded show to the **Macro Command** field of the Command window that pops up (for more information about the `TIMESHIFT` macro, see Appendix A - Macros).

   c. Click **OK**.

   The example shown in Figure 8-11 has a macro that specifies an audio file with the text **roshlimberg** followed by the current date. To put it another way, if today's date is December 23, 2008, the audio file **roshlimberg122308.wav** will be played.

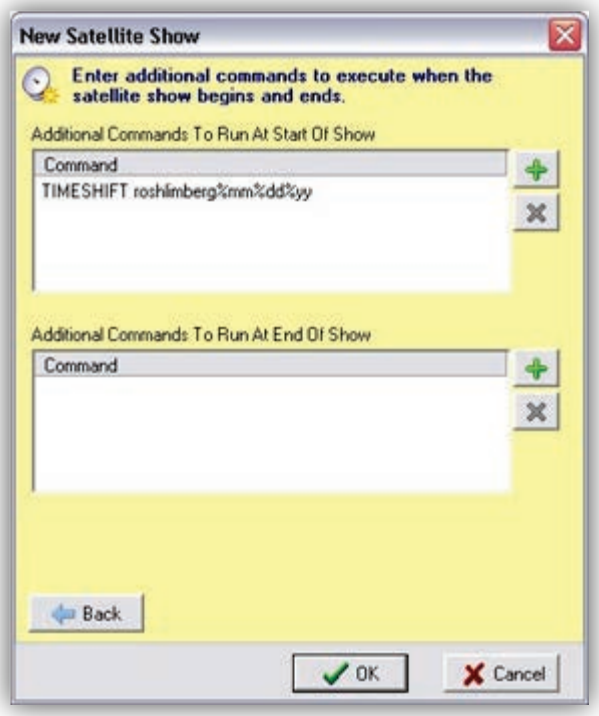


Figure 8-11. Example of Using the TIMESHIFT Macro

8.5 Sample Clocks

The previous sections describe how to create clocks. This section provides examples of clocks used for different purposes.

8.5.1 Satellite Talk Show with Top-Of-The-Hour News Example

It is common to use a news service at the top of the hour for the first 5-to-6 minutes of the hour. The example in Figure 8-12 shows a clock that contains a top-of-the-hour news broadcast with its break followed by a switch to a second satellite show.

Specifically, this clock contains a satellite show start event to:

- Switch to news, and then
- At 5 minutes past, play a local spot using a time immediate cued commercial break event, followed by.
- A satellite show start event for the rest of the hour's satellite show with its break events.

The stop satellite show event is set with an auto start cue type. This forces the satellite show to stop automatically at the break just before it finishes playing.

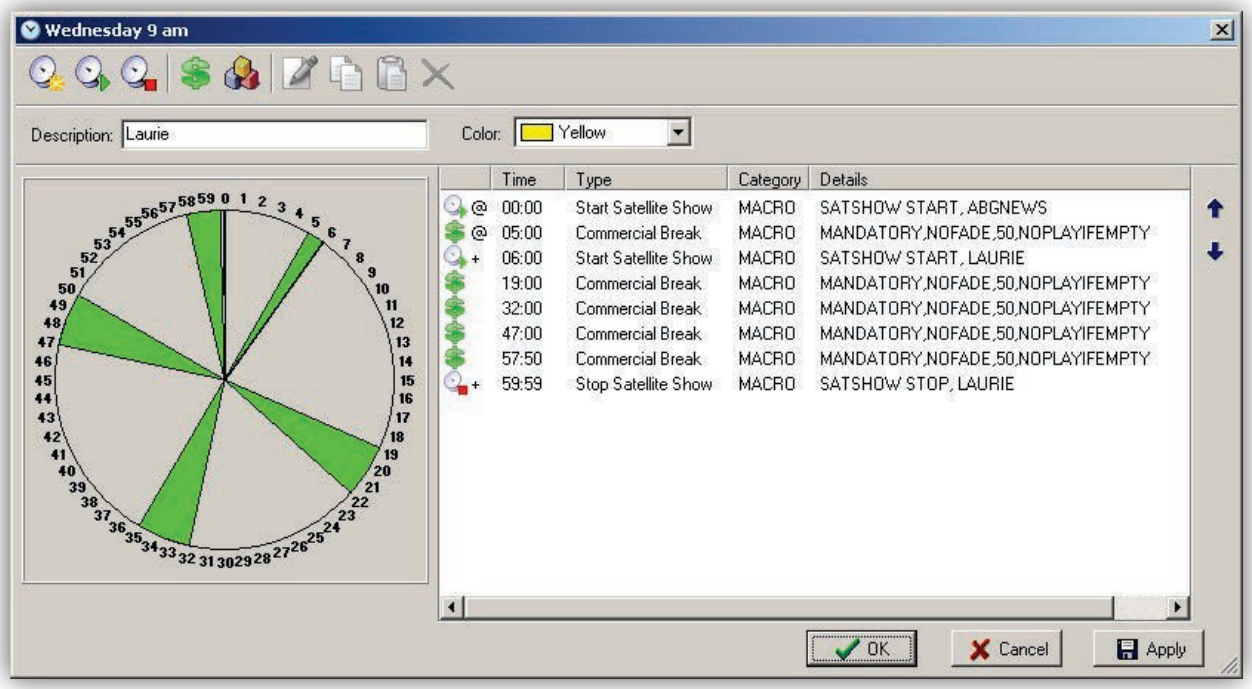


Figure 8-12. Sample Clock Containing a Top-of-the-Hour News Broadcast

8.5.2 Satellite Music Show Example

This example shows a simple music from satellite show. There is no top-of-the-hour news to worry about and there are four breaks started by trigger.

- At 59:50 past the hour, an audio event for “TOH Jingle” (top of the hour jingle) has been added as a time immediate event. This forces the top-of-the-hour jingle to play, no matter what else is going on.
- The stop satellite show event has a cue type of Auto Start, which means that it will execute automatically as soon as the top of the hour jingle has played.

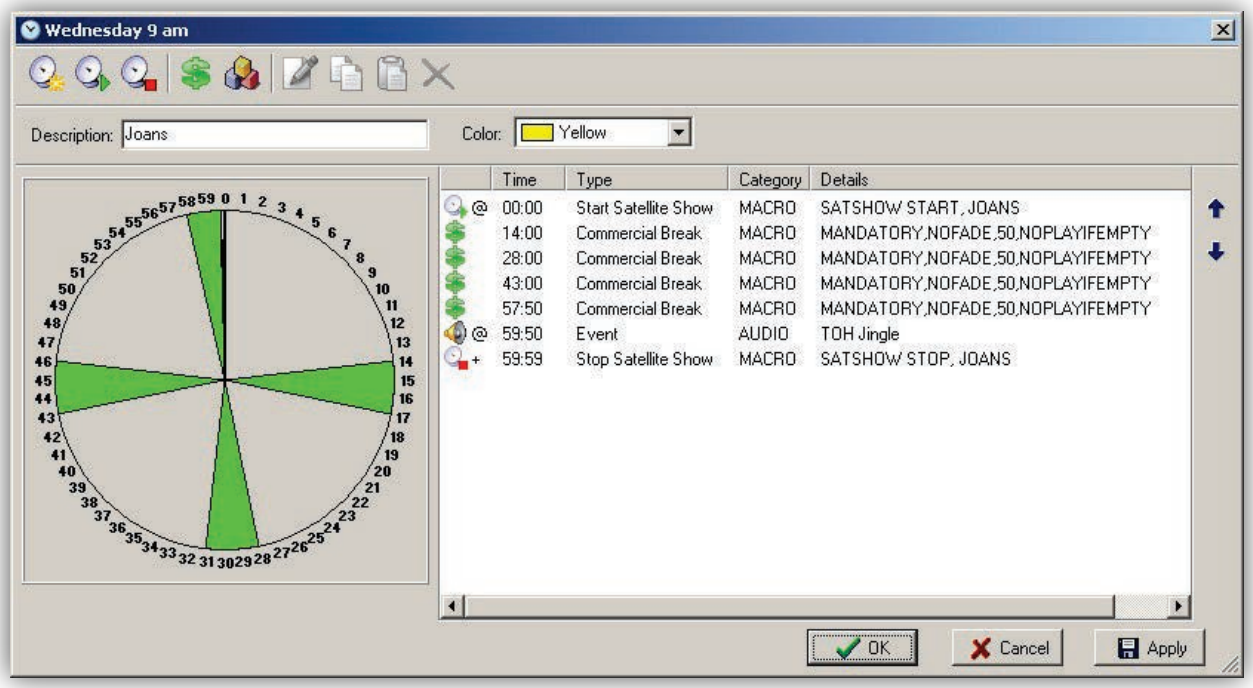


Figure 8-13. Satellite Music Show Example

8.5.3 Background Recording Example

Setting up a clock for recording is simple. As shown in the clock in Figure 8-14, all you need to add is the `satellite show start` command to start the recording and the `End Satellite Show` command to stop the recording. This example uses the auxiliary Audio Server, so there is only the recording function taking place. The triggers are recorded automatically along with the audio, so there is no need to configure anything for breaks or other events when recording.

To record a show while also airing it live, set up your satellite show start event for your live show, enabling both the **Live** option and the **Recording** option (see section 8.4.1).

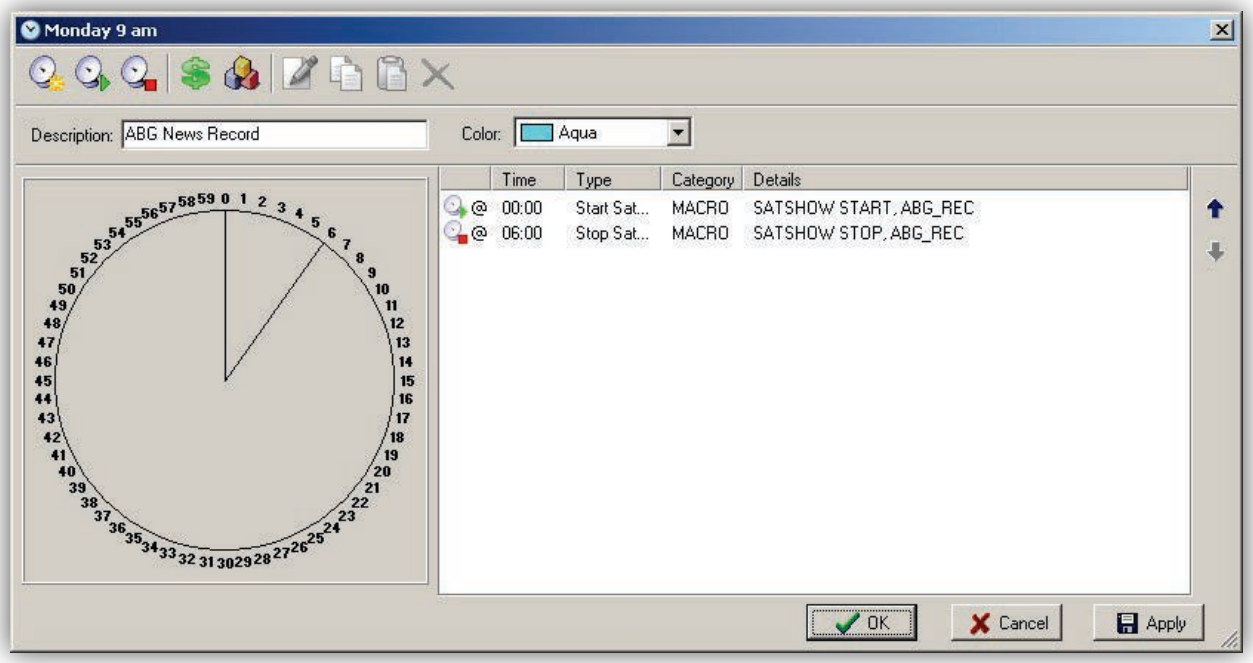


Figure 8-14. Background Recording Example

8.5.4 Time-Shift Playback Example

"Time shifting" refers to the playback of a previously recorded satellite show (see section 8.4.7 for setup instructions). A full satellite show including breaks is configured as if it was a live satellite show. The only differences is that the satellite show start events in this hour's clock specify "Record" as the show type, and after the satellite show start events, the `TIMESHIFT` macro has been inserted that references the recorded show to be played (the `TIMESHIFT` macro is the mechanism that starts the playback of the recording).

Figure 8-15 shows an example of a clock configured to play back a previously recorded satellite show.

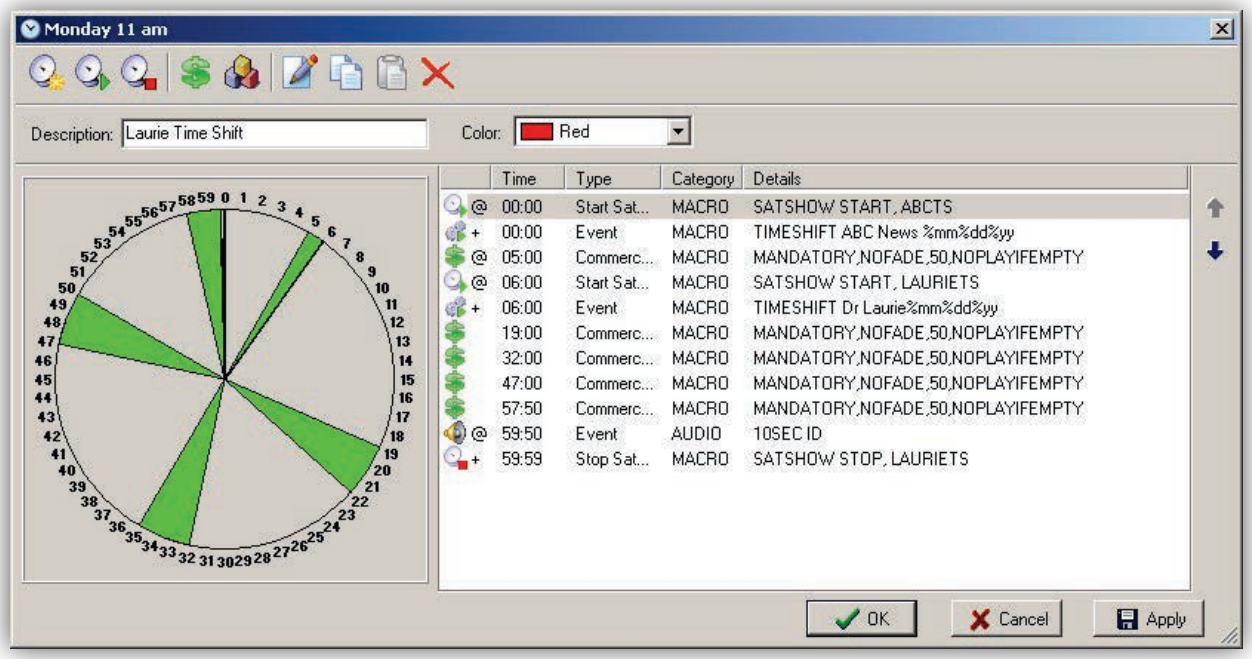


Figure 8-15. Time Shift Playback Example

8.5.5 Multi-Hour Satellite Show Example

Multi-hour satellite programs are common. Handling them in OpX is nearly the same as handling single-hour satellite programs.

This example shows a 3-hour-long satellite program. Since each OpX clock accounts for one hour, we create three clocks.

- In Figure 8-16, Figure 8-17, and Figure 8-18, each hour is nearly identical, except for the first two hours not containing a stop satellite show event, while the third hour does.

- The last event in hours 1 and 2 is a Station ID cart event (which your show may or may not require, as this is a situational example) with a time immediate cue, while that same event has an autostart cue in the third hour. This is because the stop satellite show event has a time immediate cue with the station ID cart event automatically starting after that event because of its autostart cue.

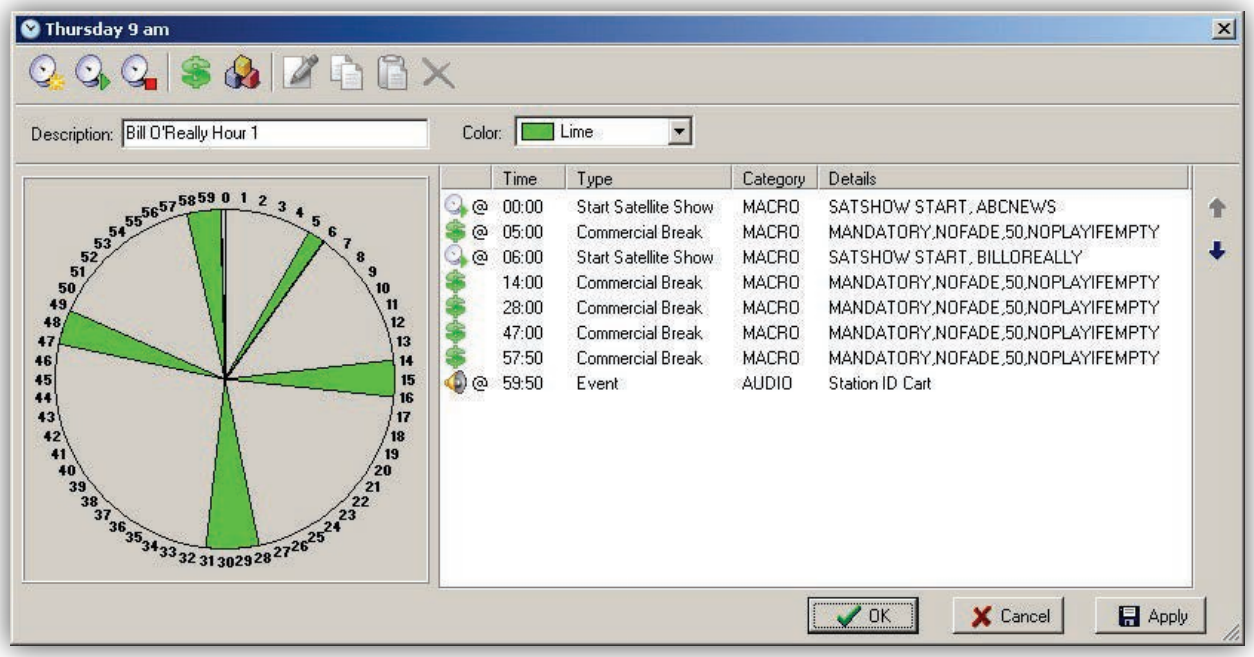


Figure 8-16. Hour One of a Multi-hour Satellite Show Example

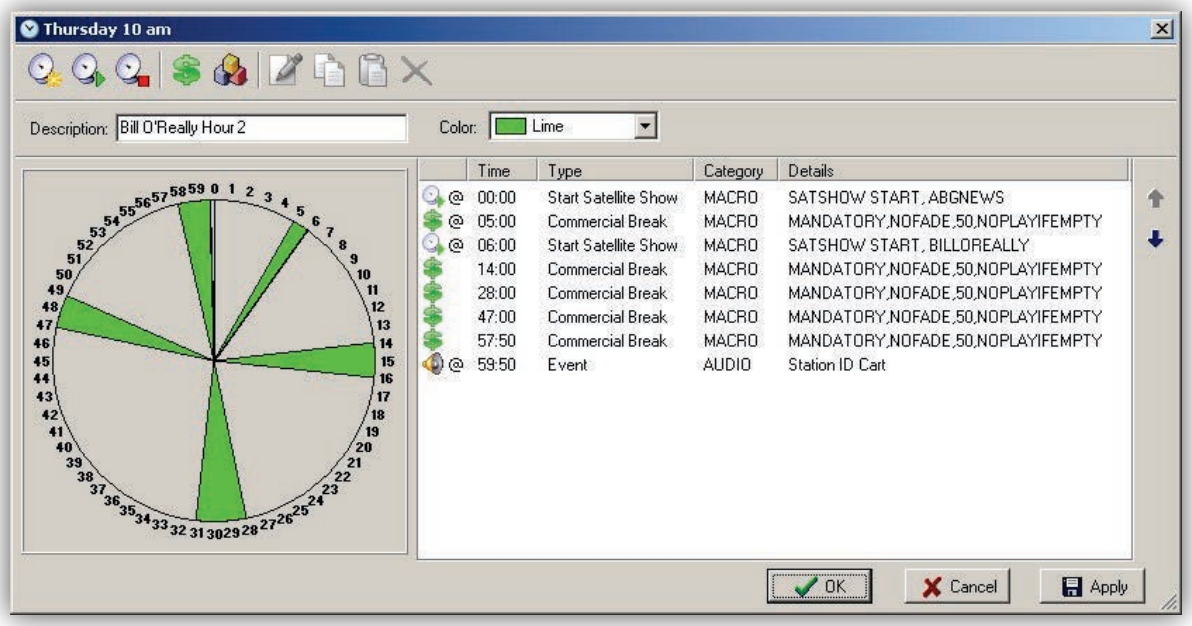


Figure 8-17. Hour Two of a Multi-hour Satellite Show Example

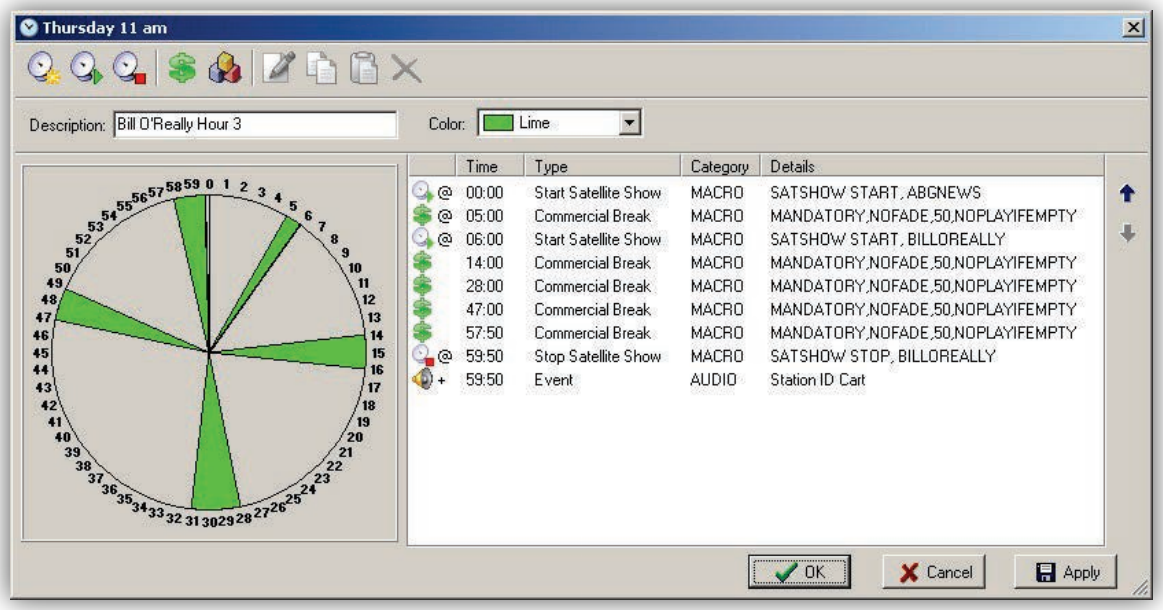


Figure 8-18. Hour Three of a Multi-hour Satellite Show Example

8.5.6 Utility Tasks without Satellite Show Audio Example

There are many instances where you might want to put utility tasks into your daily log, without having to worry about putting them into your traffic or music log software before importing into OpX. You can use the clock builder for these “set-it-and-forget-it” tasks.

The example in Figure 8-19 shows a clock for the last hour of the day that contains only a macro that tells the OpX Audio Server to load the log for the next day.

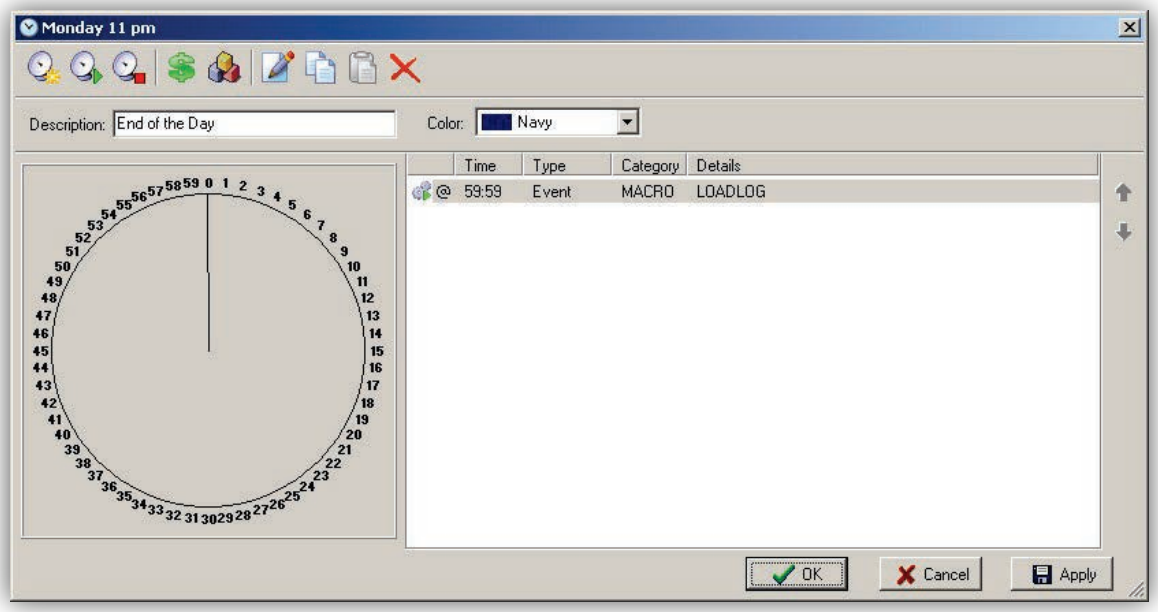


Figure 8-19. Utility Tasks without Satellite Show Audio Example

9 Import-Merge Module

Topics:

- *Starting the Import-Merge Module (page 266)*
- *Quick Tour (page 267)*
- *Third-Party Log Requirements for Importing (page 273)*
- *Configuring the Import – Merge Module (page 274)*
- *Importing Program Logs (page 289)*
- *Manually Adding and Editing Program Log Events (page 295)*
- *Working with Carts (page 300)*

This chapter describes the OpX Import-Merge module.

The Import-Merge module is used to import program logs from traffic- and music log-generating software, and merge them into a single log along with your clocks generated with OpX's Clock Builder.

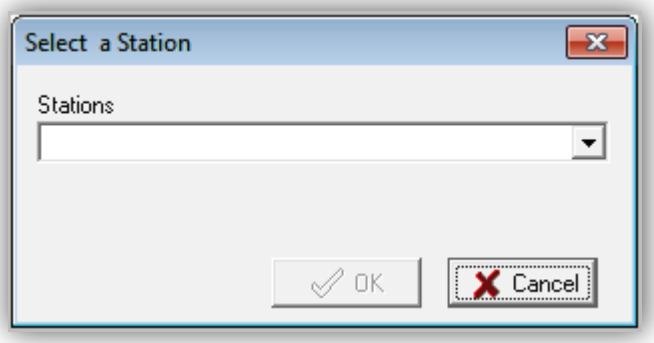
9.1 Starting the Import-Merge Module

You must start the File Server module before you start the OpX Import-Merge module.

➢ **To start the Import-Merge module**

1. Start the File Server module (see section 3.1).
2. Click the Windows Start button and click **Programs > Broadcast Software > Import-Merge**.

   You are prompted to select a station.

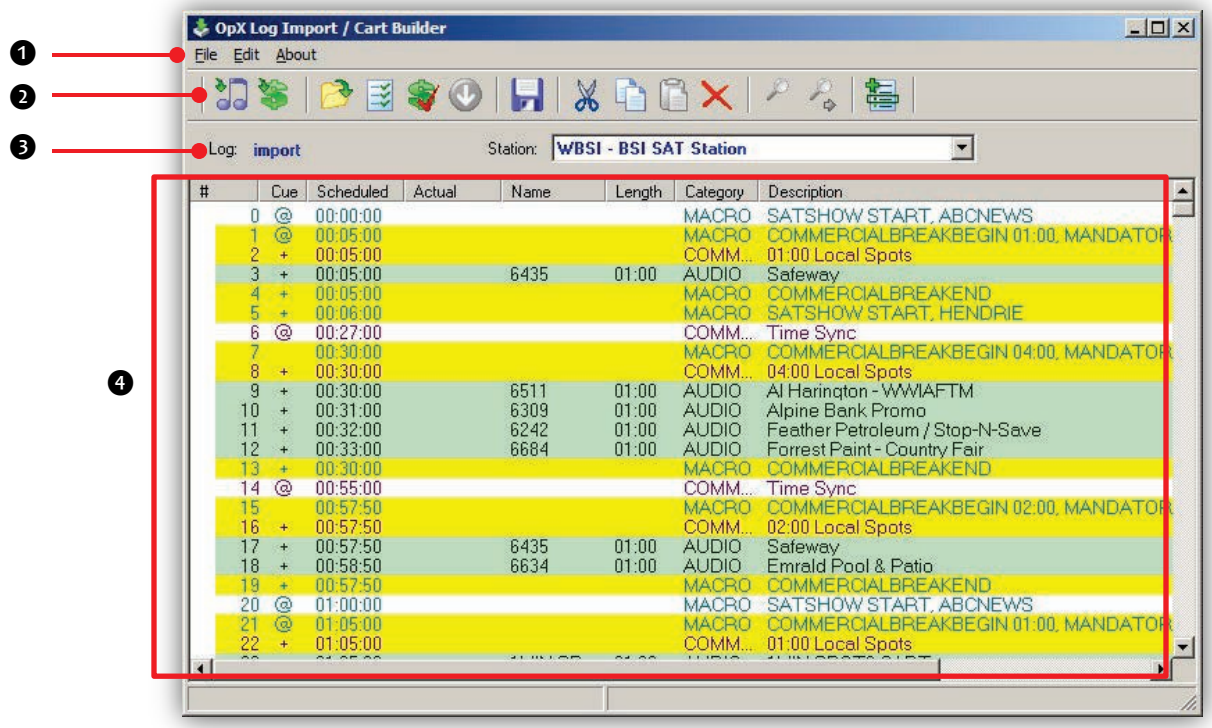


3. Using the **Stations** drop-down list, click a station.
4. Click **OK**.

   The Import-Merge module is populated with the information from the selected station.

9.2 Quick Tour

The following sections provide a quick tour of the Import-Merge module interface.

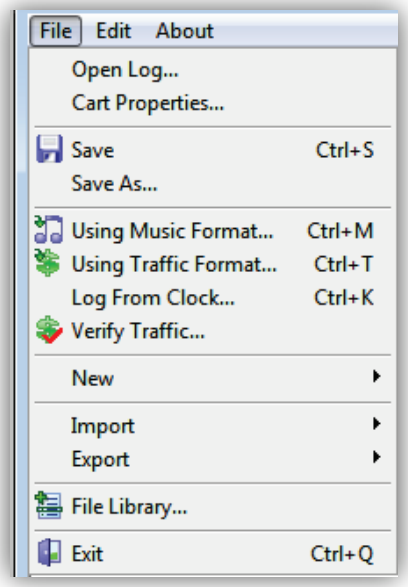


Number	Description
❶	Menu bar. See section 9.2.1
❷	Tool bar. See section 9.2.2.
❸	Log name and station selector. See section 9.2.3.
❹	Program log display. See section 9.2.4.

9.2.1 Import-Merge Module Menu Bar

The menu bar appears at the top of the Import-Merge window. The following sections describe the menus on the menu bar.

9.2.1.1 File Menu



Open Log = opens a program log so you can re-import traffic or modify the log.

Cart Properties = sets Artist/Advertiser and Title/Description information, as well as the average length.

Save = saves the current file.

Save As = saves the current file under a different name and/or location.

Using Music Format = imports from your Music Log software See section 9.5.1.

Using Traffic Format = imports from your Traffic Log software See section 9.5.2.

Log From Clock = imports data from the clocks you created using the Clock Builder Module into your program log.

Verify Traffic = checks the traffic event expire dates and file existence in your log.

New = creates a new program log or cart

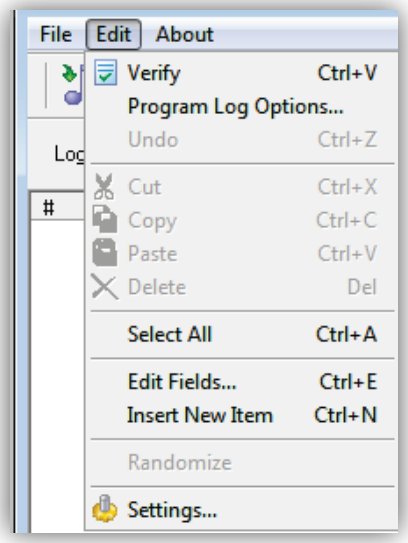
Import = imports music, traffic, alternate, CSV, and XML formats. See section 9.5.

Export = exports music, traffic, alternate, CSV, and XML formats. Also, allows you to save your log to your file server. See section 9.6.

File Library = adds events to your program log. See section 9.7.1.

Exit = exits the Import-Merge Module.

9.2.1.2 Edit Menu



Verify = checks your program log for errors or missing files.

Program Log Options = opens a calendar with dates you can click to see options configured for a particular day.

Undo = reverts to the version before you last saved the current file (helpful when you make an error while creating or editing a program).

Cut = removes the highlighted event from your program log and copies it to the Windows' Clipboard.

Copy = copies the highlighted event to the Windows' Clipboard.

Paste = pastes a cut or copied event from the Windows' Clipboard under the currently highlighted item in your program log.

Delete = removes an event from your program log, highlight it and choose this menu option. This option is similar to the Cut option, but the event is not copied to your Windows' Clipboard.

Select All = highlights all events in the program log. This option can be used with the Cut, Copy, Paste, and Delete menu options

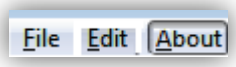
Edit Fields = edits the fields of the highlighted event in the program log. This is useful when you want to correct a mistake or slightly modify an existing entry.

Insert New Item = to add a new item to your program log, highlight the event in the program log previous to the location where you want to add your new event, and then click this menu option. You can then manually enter the command of your choice.

Randomize = randomize carts. This option is available when creating carts, not when creating program logs.

Settings = accesses the Import – Merge Module configuration settings and adds events to your program log.

9.2.1.3 About Menu



Opens a window that shows the version and build date of the Import-Merge module you are running. This window also shows the amount of memory and virtual memory being used, and the amount of time that the File Manager module has been running. See Figure 9-1 for an example. To close the window, click **OK**.

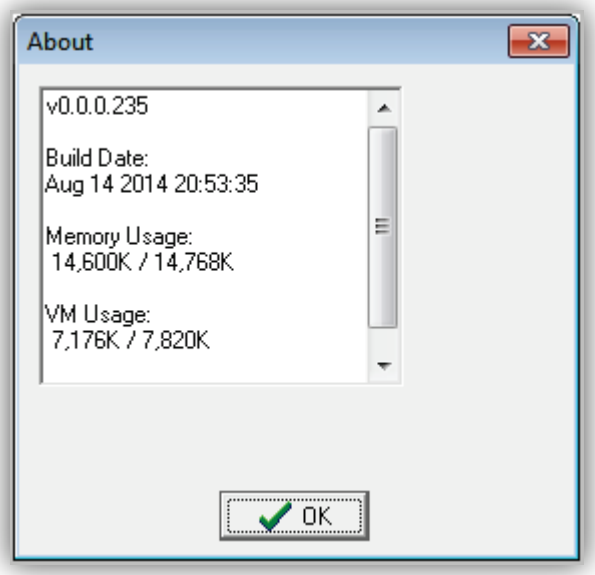


Figure 9-1. Example of About Information

9.2.2 Tool Bar

The Import-Merge module tool bar appears below the menu bar.

Table 9-1 describes the tools on the tool bar.

Table 9-1. Import-Merge Module Tool Bar

Tool	Tool Name	Description	Tool	Tool Name	Description
	Import Using Music Format	Imports from your music log software.		Cut	Removes the highlighted event from your program log and copies it to the Windows' Clipboard.
	Import Using Traffic Format	Imports from your traffic log software.		Copy	Copies the highlighted event from your program log to the Windows' Clipboard.
	Open Log From Server	Opens and modifies a log that has been saved to the File Server.		Paste	Pastes a cut or copied event from the Clipboard to the item below the highlighted item in your program log.
	Verify Program Log	Checks your program log for errors or missing files.		Delete	Removes an event from your program log.
	Verify Traffic Log	Checks a traffic log for missing or out- of-date audio files without importing it.		Find	Finds an event in your program log using the criteria you specify.
	Go To Next Error	Finds errors in the program log marked in red by the Program Log option.		Find Again	Finds the next instance of an event with the search criteria used with the Find option.
	Save To OpX Server	Saves the program log to the File Server.		File Library	Adds events to your program log.

9.2.3 Log Name and Station Selector

The log name and station selector appear below the tool bar. Table 9-1 describes the tools on the tool bar.

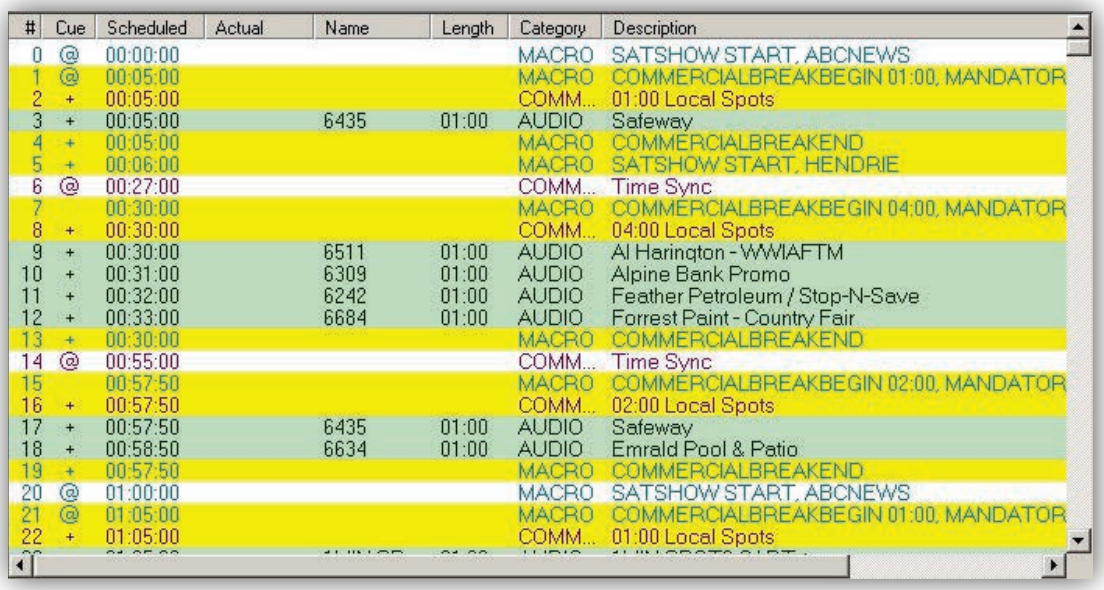
Figure 9-2. Log Name and Station Selector

Table 9-2. Import-Merge Module Log Name and Station Selector

Number	Description
❶	Name of the open program log. Your OpX program log is automatically named with the file name of the first imported item. For example, if you import a traffic log named “041208.log”, your OpX log automatically inherits “041208.xml” as its file name.
❷	The station you are creating logs for is determined by the station selected in this drop-down list. In the figure above, logs are being created for the station “WOPX”, with the configuration settings (import format settings, log locations, and so on) particular to the WOPX station.

9.2.4 Program Log Display

The program log display shows the program log events as they are imported. It uses the same display formatting as the Audio Server Module’s program log display.



#	Cue	Scheduled	Actual	Name	Length	Category	Description
0	@	00:00:00				MACRO	SATSHOW START, ABCNEWS
1	@	00:05:00				MACRO	COMMERCIALBREAKBEGIN 01:00, MANDATOR
2	+	00:05:00				COMM...	01:00 Local Spots
3	+	00:05:00		6435	01:00	AUDIO	Safeway
4	+	00:05:00				MACRO	COMMERCIALBREAKEND
5	+	00:06:00				MACRO	SATSHOW START, HENDRIE
6	@	00:27:00				COMM...	Time Sync
7		00:30:00				MACRO	COMMERCIALBREAKBEGIN 04:00, MANDATOR
8	+	00:30:00				COMM...	04:00 Local Spots
9	+	00:30:00		6511	01:00	AUDIO	Al Harington - WWIAFTM
10	+	00:31:00		6309	01:00	AUDIO	Alpine Bank Promo
11	+	00:32:00		6242	01:00	AUDIO	Feather Petroleum / Stop-N-Save
12	+	00:33:00		6684	01:00	AUDIO	Forrest Paint - Country Fair
13	+	00:30:00				MACRO	COMMERCIALBREAKEND
14	@	00:55:00				COMM...	Time Sync
15		00:57:50				MACRO	COMMERCIALBREAKBEGIN 02:00, MANDATOR
16	+	00:57:50				COMM...	02:00 Local Spots
17	+	00:57:50		6435	01:00	AUDIO	Safeway
18	+	00:58:50		6634	01:00	AUDIO	Emrald Pool & Patio
19	+	00:57:50				MACRO	COMMERCIALBREAKEND
20	@	01:00:00				MACRO	SATSHOW START, ABCNEWS
21	@	01:05:00				MACRO	COMMERCIALBREAKBEGIN 01:00, MANDATOR
22	+	01:05:00				COMM...	01:00 Local Spots

Figure 9-3. Program Log Display

9.3 Third-Party Log Requirements for Importing

The program logs you want to import into OpX must meet the following requirements.

- Files must either be delimited or in position-dependent ASCII text format
- Each break/stop set must contain a signifying event as the first event of the break, such as a comment of `BREAK START`, `STOPSET`, or `$$COMMERCIALS$$`. You configure the Import – Merge module to recognize your marker text, so it is actual text does not matter as long as it is consistent.
- At a minimum, every event must contain a scheduled time for each event, a category, and a file name (without file extension) for audio events.
- If combining a music log, traffic log, and clocks (from the OpX Clock Builder), ensure that each log/clock has the same number of breaks scheduled at corresponding times.

9.4 Configuring the Import – Merge Module

Configuration of the Import – Merge module is critical. In particular, the import format settings must be accurate for import operations to work properly. The following sections describe how to configure the Import – Merge module.

Note: Many settings are available only on the Import-Merge module on the File Server. To access these settings on a different system, you must import the settings from the File Server to the new machine using the **Restore from File Server** button (see the figure in section 9.4.2).

➢ **To configure the Import – Merge module settings**

1. On the **Edit** menu, click **Settings**.

   *The Settings dialog box appears, with the **General** tab displayed.*

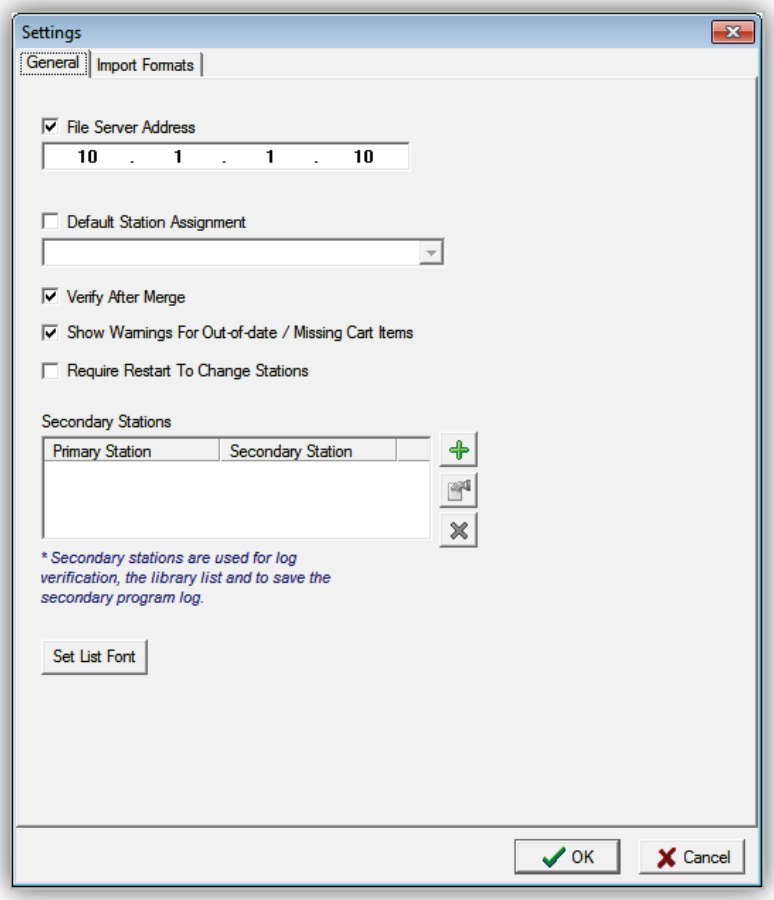


Figure 9-4. Settings Dialog Box with General Tab Displayed

2. Complete the fields in the dialog box tabs.
3. When you finish, click the **OK** button.

9.4.1 General Configuration Settings

Figure 9-5 shows the field in the **General** tab and Table 9-3 describes them.

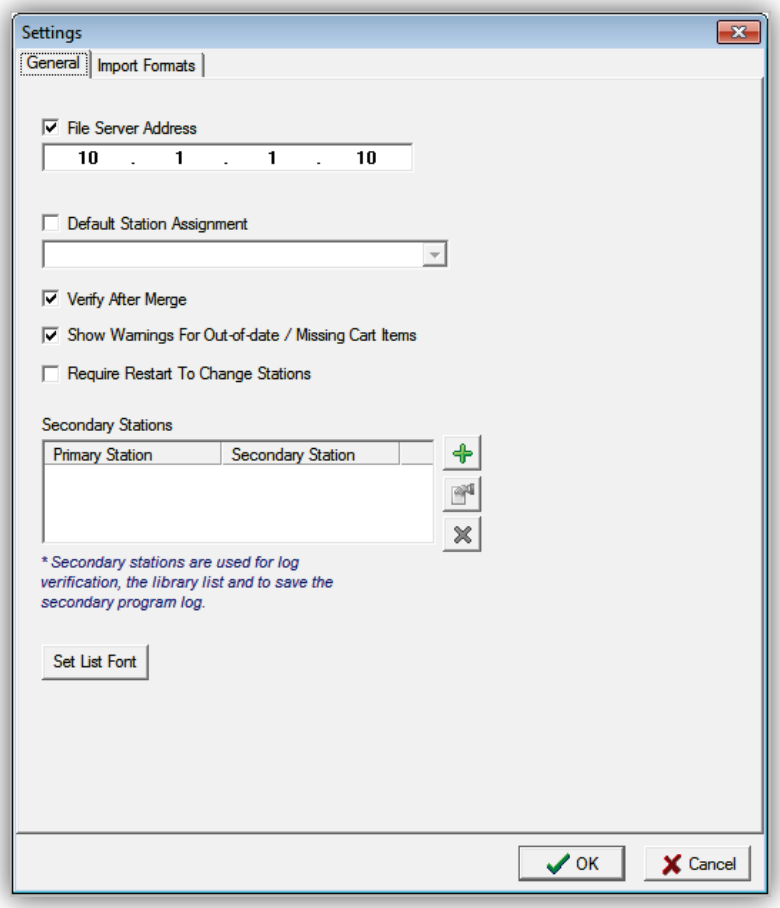


Figure 9-5. General Tab

Table 9-3. Fields in the General Tab

Field	Description	Default
File Server Address	• Unchecked = Import – Merge module searches your network for the OpX File Server. • Checked = Import – Merge module uses the IP address specified to find the OpX File Server. This can speed up start-up time or aid your computer in finding the OpX File Server.	10.1.1.10
Default Station Assignment	• Unchecked = you must select your desired station each time you open the Import-Merge module. • Checked = specify one of your stations to load automatically when opening the Import – Merge module.	Unchecked
Verify After Merge	Check this check box to have the system check for duplicate files and valid air dates as program logs are being imported into the system.	Checked
Show Warnings For Out-of-date/Missing Cart Items	Check this check box to have the system generate an error message if it finds a cart of items (such as commercials) that are out of date.	Checked

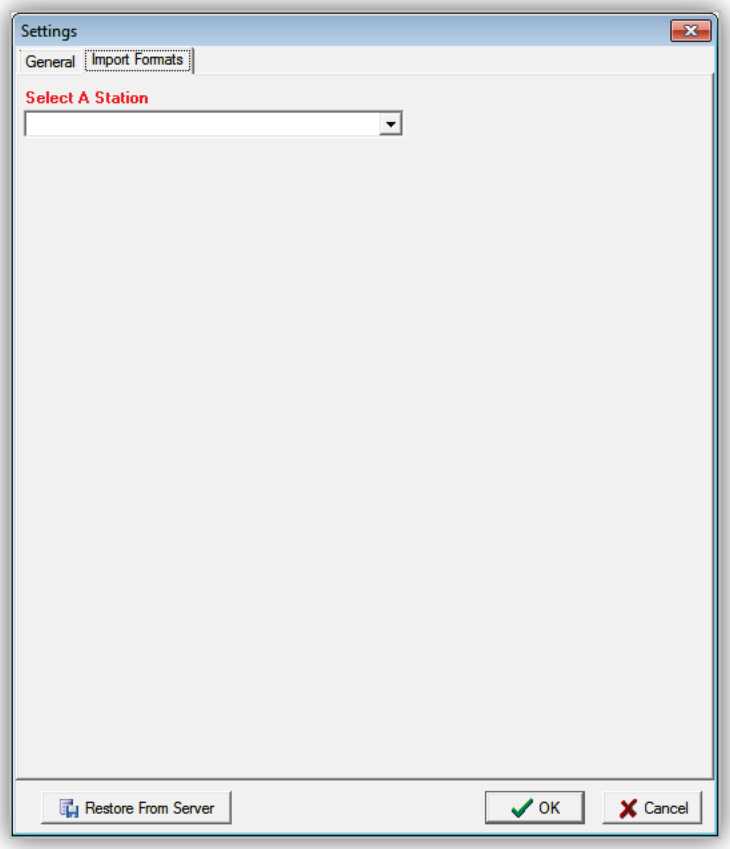
Field	Description	Default
Require Restart To Change Stations	Check this check box to force the Import-Merge module to be restarted before the station can be changed.	Unchecked
Secondary Stations	If you import program logs or virtual/nonexistent stations whose libraries reside on another station, this field allows verification to be performed by the secondary station.	—
Set List Font	Allows you to select the typeface for the Import-Merge module interface.	—

9.4.2 Import Formats Configuration Settings

The **Import Formats** tab allows you to define the settings for files you will import into the OpX system.

1. Click the **Import Formats** tab.

   A tab similar to the following appears.



2. Using the **Select A Station** drop-down list, click the station whose import format settings you want to configure. The import formats you select are particular to each station.

   *The **Import Formats** tab gets populated with fields and buttons (see Figure 9-6).*

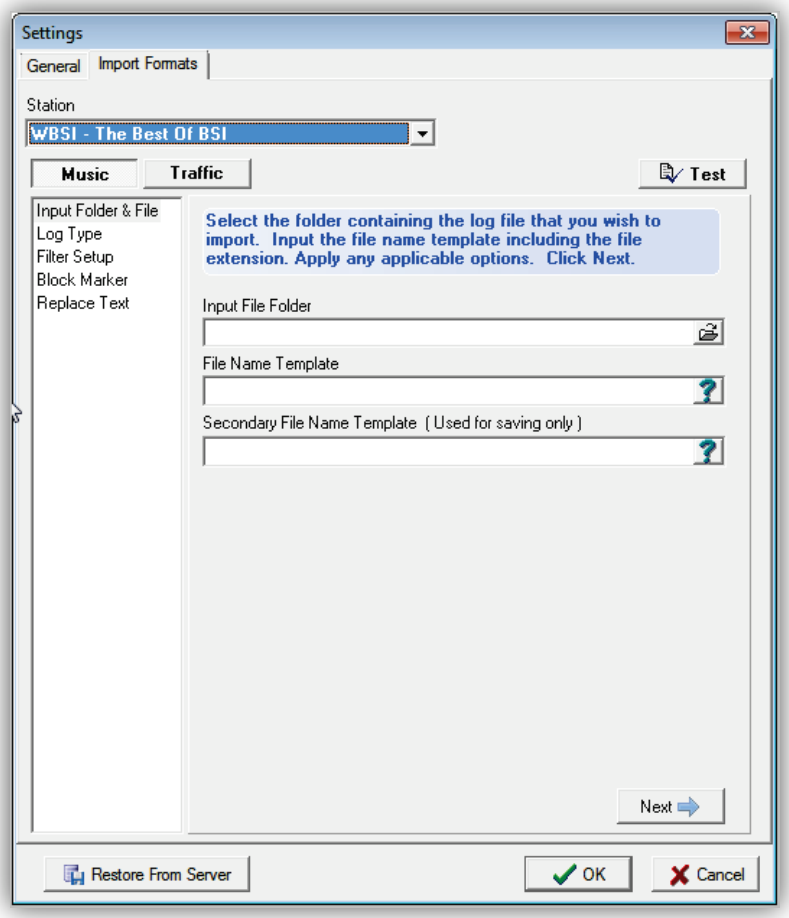


Figure 9-6. Input File Folder and File Settings

3. Click the type you want to configure or modify. There are three types of import format definitions for each station:
   - Music
   - Traffic
   - Alternate import format definition
4. Complete the remaining fields in the **Import Formats** tab (see Table 9-4).
5. If desired, click the **Test** button to test your settings.
6. Proceed to section 9.4.3.

Table 9-4. Fields in the Import Formats Tab

Field	Description	Default
Input File Folder	Enter the path to the directory where you save your traffic/music log software export files. Alternatively, click the Browse to Folder button on the far right side of the field and select the file.	—
File Name Template	Enter the naming format of your log. This can be either static text (such as "mylog.txt") or meta-variables so OpX will automatically recognize date/day specific log names. The meta-variables convert to the current day/date automatically (using your workstation's date and time) in the following formats: • %yy Year as a 2-digit number. Examples: For 2009, replace %yy with "09". For 2016, replace %yy with "16". • %yyyy Year as a 4-digit number. Example: For 2016, replace %yyyy with "2016". • %m Month as a 1- or 2-digit number without a leading zero. Examples: For June, replace %m with "6". For November, replace %m with "11". • %mm Month as a 2-digit number with a leading zero. Examples: For July, replace %mm with "07". For October, replace %mm with "10". • %mmm Month as a 3-letter abbreviation. Example: For November, replace %mmm with "Nov". • %mmmm Month as a full name. Example: For August, replace %mmmm with "August". • %d Day as a 1- or2-digit number without a leading zero. Examples: For the 5th, replace %d with "5." For the 12th, replace %d with "12". • %dd Day as a 2-digit number with a leading zero Examples: For the 7th, replace %d with "07". For the 24th, replace %d with "24", • %ddd Day as a 3-letter abbreviation. Example: For Tuesday, replace %ddd with "Tue". • %dddd Day as a full name. Example: For Friday, replace %dddd with "Friday". Figure 9-7 on page 280 shows an example of using meta-variables to represent a log naming convention that uses the month, day, and year as 2-digit numbers. This means that when you import your log for the next day by selecting "Tomorrow" during the import process described later in this chapter, on December 23, 2008, OpX looks automatically for a log file named "122408.log". Another example, if your traffic log-generating software created a file that looked like "122308t1.txt", you enter %mm%dd%yyt1.txt into the File Name Template field. OpX treats any character that is not part of a valid meta- variable as literal text. In this example, "t1" is not a meta-variable and is included as part of the file name.	—

9.4.3 Log Type Configuration Settings

1. Click the **Next** button or click **Log Type** in the left pane.

   The settings in Figure 9-7 appear.

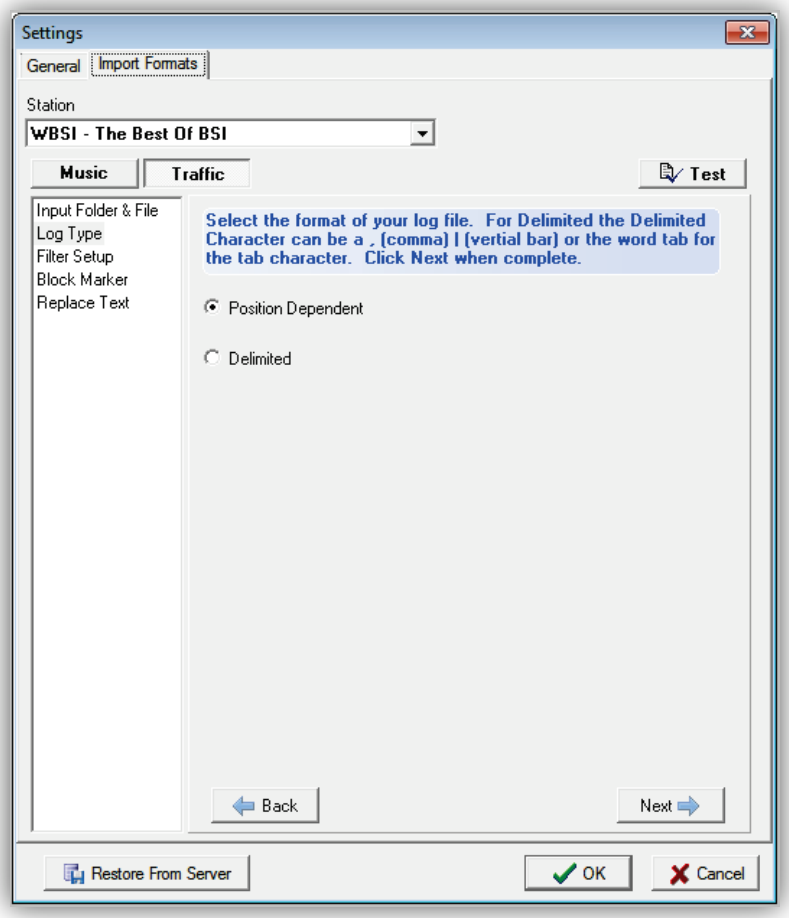


Figure 9-7. Log Type Settings

2. Click the format of your logs (**Position Dependent** or **Delimited**). See sections 9.4.3.1 and 9.4.3.2 to determine whether your music and traffic logs are in position-dependent or delimited format. Then proceed to the appropriate step:

   – If the log is in position-dependent format, click the **Next** button or click **File Setup** in the left pane. Proceed to step 3 below.

   – If the log is in delimited format, click the **Next** button or click **File Setup** in the left pane, and then enter the character used by your log-generation software to differentiate between its various fields. Proceed to step 4 on page 281.

3. When configuring a position-dependent import format, the settings in Figure 9-8 allow you to enter the position and length of each piece of data from your log. Enter the starting

character position of each field type into the Start column, and the total length of the field into the Length column. Use the **Scheduled Format** and **Length Format** fields to specify the time format your import file gives in the **Scheduled** and **Length** fields.

- hh = hour digits
- mm = minutes digits
- ss = seconds digits
- A/P = 12-hour time (AM or PM)
- Other options are in 24 hour format.

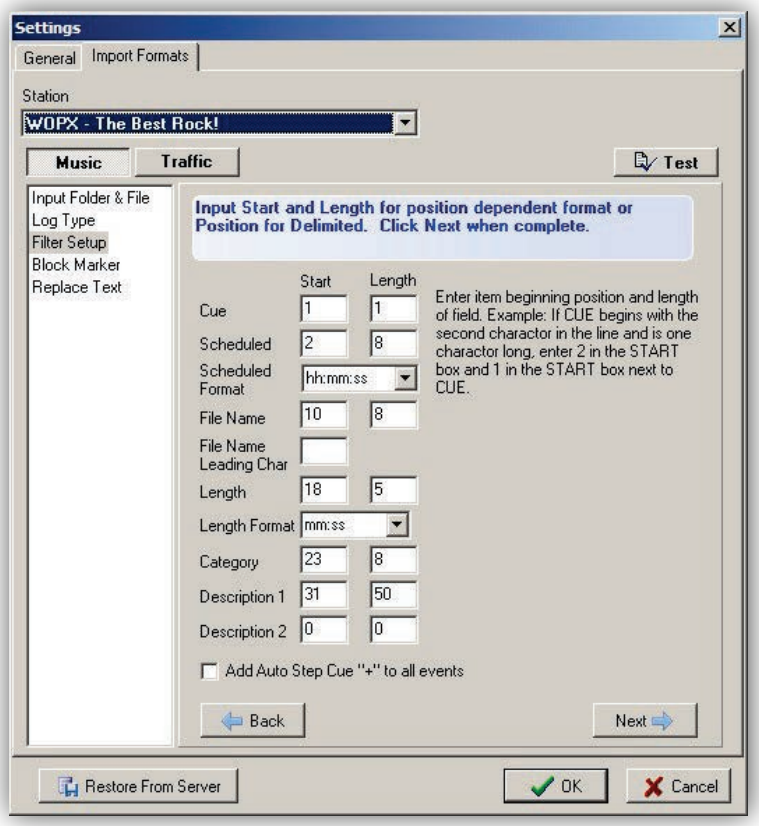


Figure 9-8. Example of Configuring a Position-Dependent Import Format

4. When configuring a delimited import format, enter the field order of each piece of data from your log (see Figure 9-9). Enter the field number of each field type into each corresponding **Position** field. Use the **Scheduled Format** and **length Format** fields to specify the time format your import file gives in the **Scheduled** and **Length** fields.
   - hh = hour digits
   - mm = minutes digits

- ss = seconds digits
- A/P = 12-hour time (AM or PM)
- Other options are in 24 hour format.

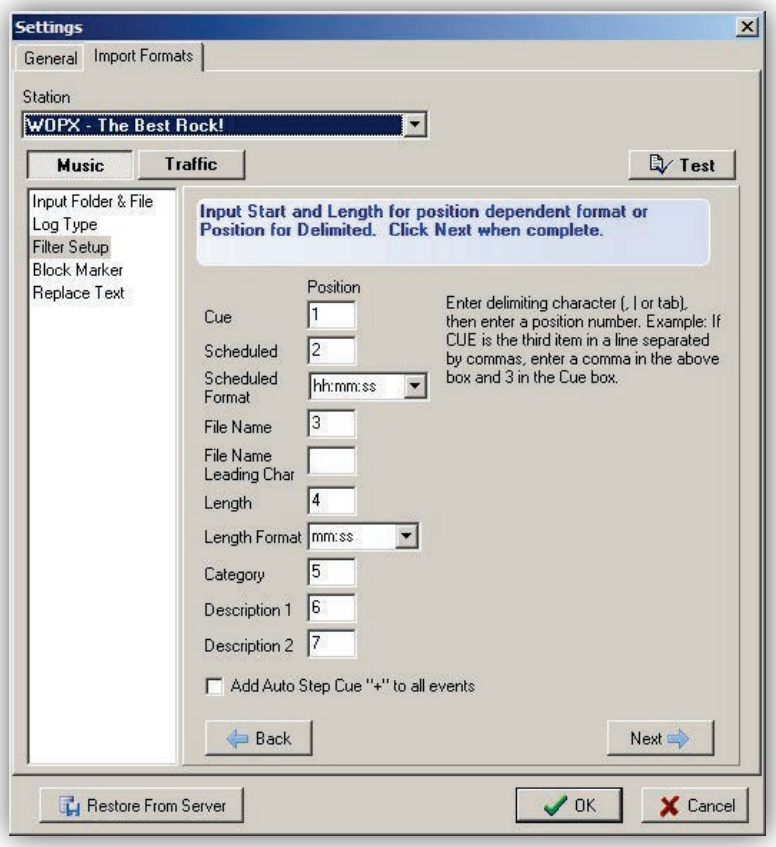


Figure 9-9. Example of Configuring a Delimited Import Format

5. Proceed to section 9.4.3.

9.4.3.1 Position-Dependent Format

Position-dependent program logs such as the one in Figure 9-10 are organized with the various pieces of data in nice columns that are easy for people (not just computers) to read. Each column starts at the same position on each line when you count the characters from the left side and each column always contains the same number of characters, including spaces. Another indicator of position-dependent program logs is that the “white space” is made up of spaces, not tabs or other characters. If your program log does not fit this description, you have a delimited program.

Figure 9-10 shows a typical position-dependent program. Each “field” is in a specific column, with each data type always starting at the same position on all lines/rows. Notice the cursor

positioned just before the Category column and the “Col 23” shown in the lower right corner. This indicates that the starting position of the category starts at character 23. Counting the number of characters to the right, we find that the column can fit 8 characters. Another indicator that this is a position-dependent log is that the “white space” is made up of spaces, not tabs or other character.

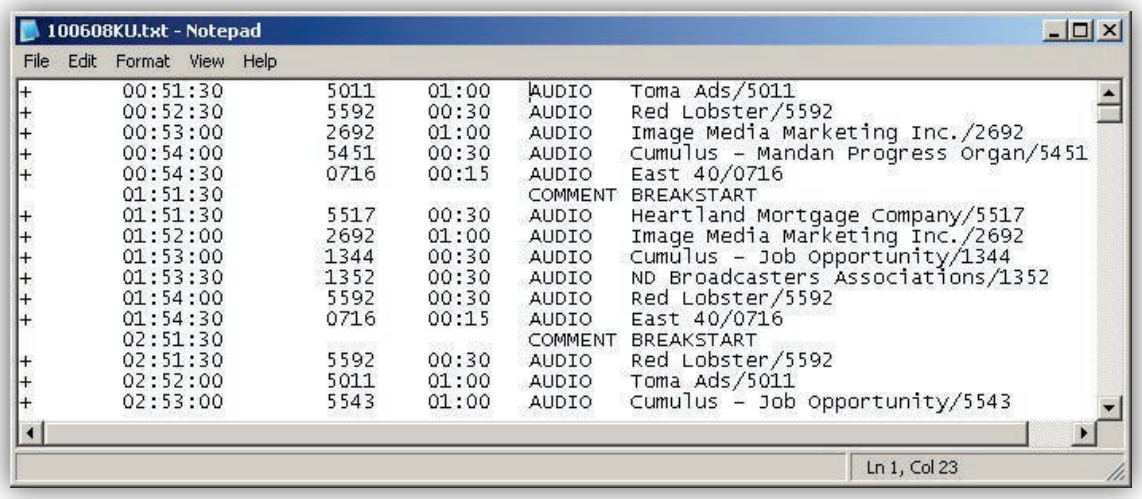


Figure 9-10. Sample Position-Dependent Program Log

To configure the Import-Merge module for a position-dependent file, collect the following information by analyzing your file:

- The starting position of each data type’s field (for example, Cue, Description, Length, Scheduled Time, Filename, and so on.).
- The maximum length of each field above.
- The format of each time field (mm:ss or hh:mm:ss).

Tip: To find the starting position of each column easily, enable Notepad’s Status Bar (on the **View** menu, and enable the **Status Bar** option). The cursor’s position appears as column numbers (“Col #”) and line numbers (“Ln #”) appear in the lower right corner of the Notepad window. Place your cursor at the start of a column to find the position, place your cursor at the end of the column, and then subtract that position from the previous one to get the column’s length.

9.4.3.2 Delimited Format

Delimited program logs are quickly apparent in their difference of style from position-dependent logs. Each piece of data is separated by a specific character, with no spaces

("white space") between the data and the separating character. This means that each row will have a differing overall length from other rows in your program log.

Figure 9-11 shows a typical delimited program log file. Every line and row is a single event, and each line contains the same number of "fields", separated by the "|" delimiting character. This example has Cue as field 1, Scheduled Time as field 2, File Name as field 3, Length as field 4, Category as field 5, and Description as field 6.

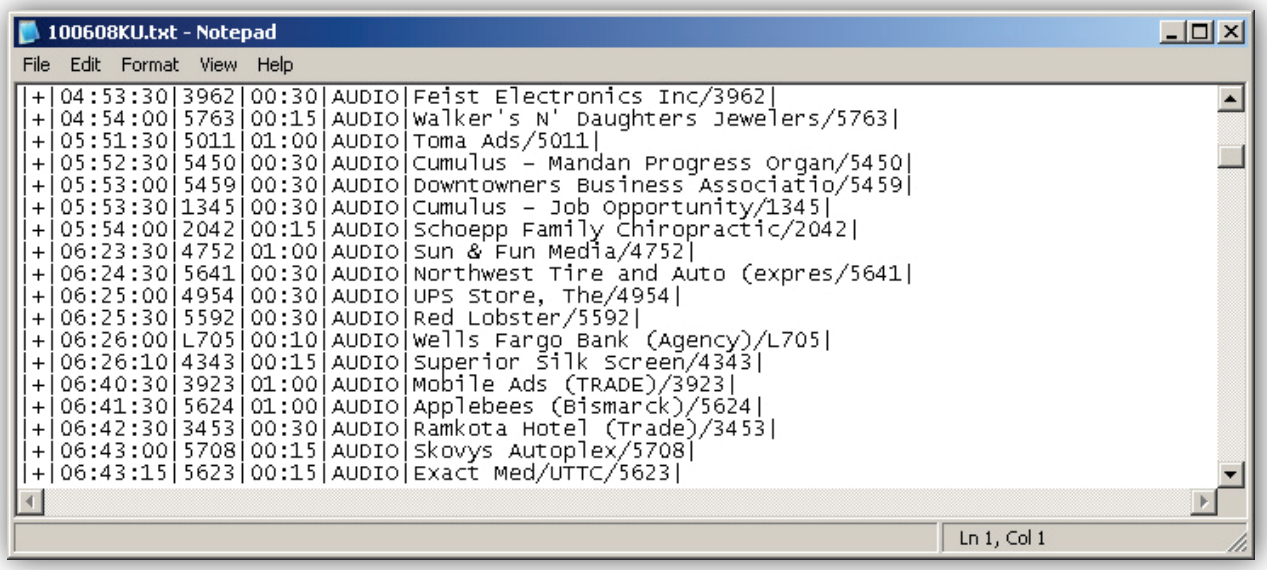


Figure 9-11. Sample Delimited Program

As Figure 9-11 shows, the most common delimiting character is the "|" pipe symbol (this is usually the upper-case character of the "\" key on your keyboard). If your file does not use the pipe symbol as its delimiting character, you should be able to recognize it by looking at the program log, since the delimiting character will be between each piece of data.

To configure the Import-Merge module for a delimited file, collect the following information by analyzing your file:

- The delimiting character.
- The order of the fields in each row is (for example, Cue, Description, Length, Scheduled Time, Filename, and so on). The left-most field is field 1, the next field is 2, and so on.
- The format of each time field (mm:ss or hh:mm:ss).

9.4.4 Block Marker Configuration Settings

1. Click the **Next** button or click **Block Marker** in the left pane.

   The settings in Figure 9-12 appear.

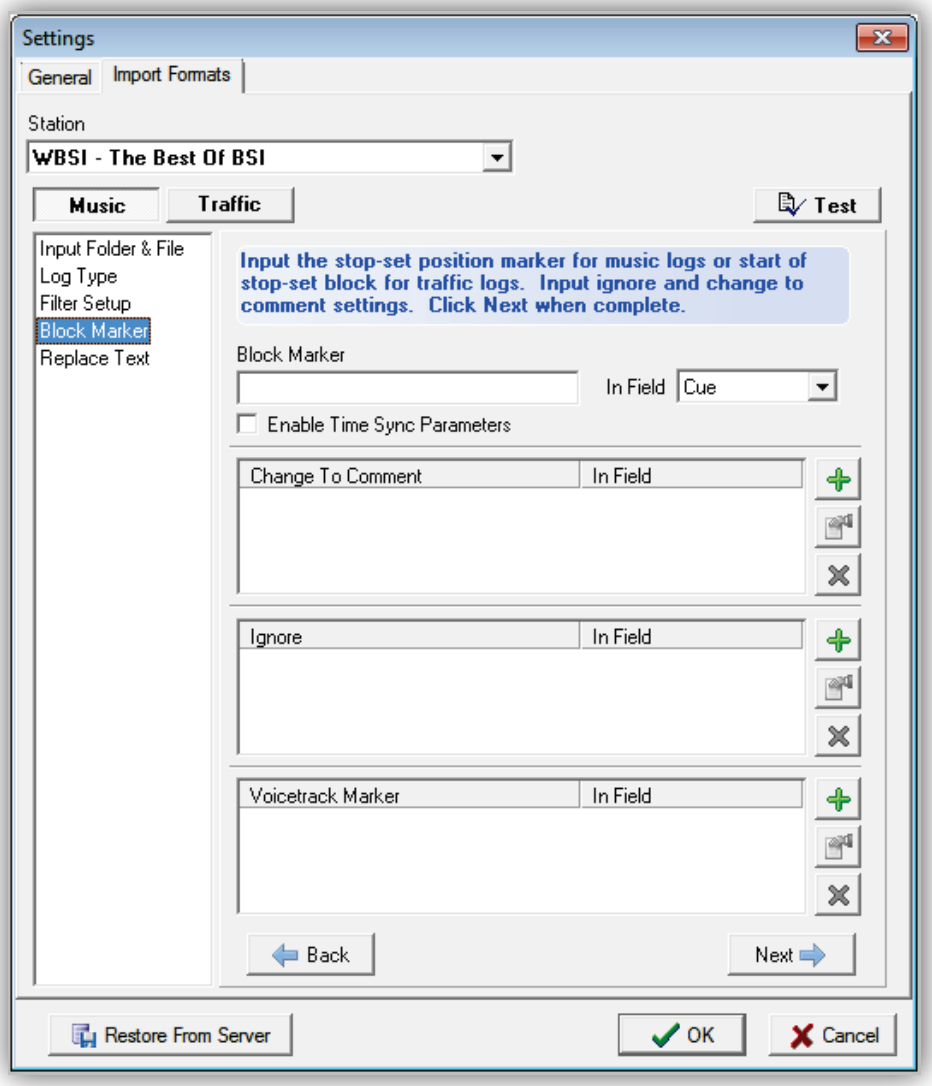


Figure 9-12. Block Maker Settings

2. Complete the fields in the **Import Formats** tab (see Table 9-5).
3. Proceed to section 9.4.5.

Table 9-5. Block Marker Fields in the Import Formats Tab

Field	Description	Default
Block Marker	Enter your Block Marker's text.	—
In Field	Select the field that contains that text you entered in the Block marker field.	Cue
Enable Time Sync Parameters	Enables the automatic insertion of a time-next event prior to the commercial break created by the text specified by the Block Marker field. For example, if the music log contained STOPSET 15:30:00, a time-next event is inserted automatically before the commercial break with a scheduled time of 15:30:00. You can specify an optional parameter of the number of elements preceding the commercial break. For example, STOPSET 15:30:00, 5 inserts the time-next event five elements prior to the commercial break.	—
Change To Comment	To convert imported events into comments, click the Add button to the right of the Change to Comment field. Complete the following fields in the Change to Comment pop-up window: • Text = enter the distinguishing text, such as a category of "TEXT" or "NOTE". • Field is Empty = if the field is empty, check this check box. • In field = select the field where OpX will find that text. Buttons are also provided for editing and deleting entries.	—
Ignore	If your log-generating software includes events that you do not want OpX to import, click the Add button to the right of the Ignore field to convert imported events into comments. Complete the following fields in the Ignore pop-up window: • Text = enter the distinguishing text to be ignored. • Field is Empty = if the field is empty, check this check box. • In field = select the field where OpX will find that text. Buttons are also provided for editing and deleting entries.	—
Voicetrack Marker	From your log-generating software (most commonly from your music log), you can add voicetrack markers to your program log using comments. This simplifies voicetracking with OpX's Studio Client by allowing your talent to click the NEXT button to automatically move the Voicetrack Editor to the position in the Program Log for which they need to record the next voicetrack. To define your voicetrack marker, click the Add button to the right of the Voicetrack Marker field. Complete the following fields in the Voicetrack marker pop-up window: • Text = enter the distinguishing text. • Field is Empty = if the field is empty, check this check box. • In field = select the field where OpX will find that text. Buttons are also provided for editing and deleting markers.	—

9.4.5 Replacing Text Configuration Settings

If you need to auto-replace text entries in your import logs, use the Replace Text settings to configure these entries.

1. Click the **Next** button or click **Replace Text** in the left pane.

   The settings in Figure 9-13 appear.

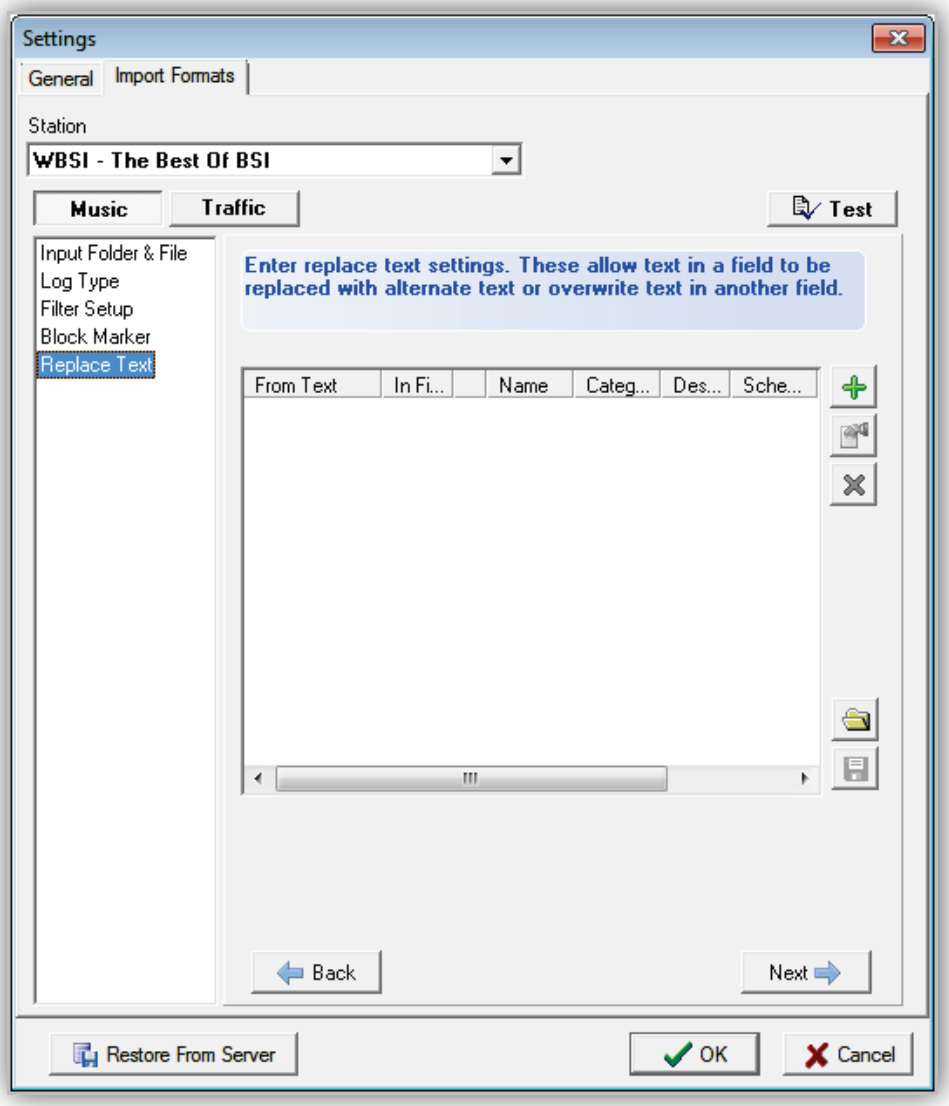


Figure 9-13. Replace Text Settings

2. Click the **Add** button.

   The Replace Text dialog box appears (see Figure 9-14).

3. Complete the fields in the dialog box (see Table 9-6).

4. Click **OK**.

5. If you need to edit or delete entries, use the appropriate buttons to the right of the field. Below these are buttons for replacing and exporting txt strings and importing replace text strings.

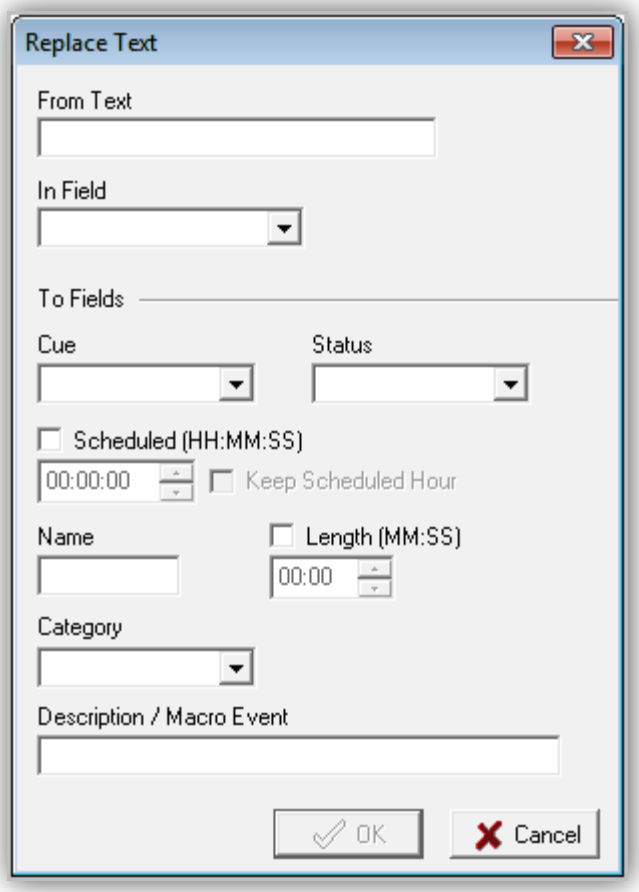


Figure 9-14. Replace Text Dialog Box

Table 9-6. Fields in the Replace Text Dialog Box

Field	Description	Default
From Text	Enter the text to be read.	—
In Field	Field from which the text is read.	—
Cue	Cue type to be inserted	—
Status	Status of the event to be inserted.	—
Scheduled	Date and time for which the item is scheduled. If unchecked, keeps the scheduled time in place.	00:00:00
Name	Name of the item.	—
Length	Duration of the item.	00:00
Category	Category to which the item belongs.	—
Description/Macro Event	Description of the audio item or the parameters of the macro.	—

9.5 Importing Program Logs

Most music-oriented stations import a music log containing all the music selections to play throughout the day, and a secondary traffic log that must be combined with the music log to insert all the advertisements to be played. These users start the import process described in section 9.5.1 followed by the procedure in section 9.5.2 on page 291.

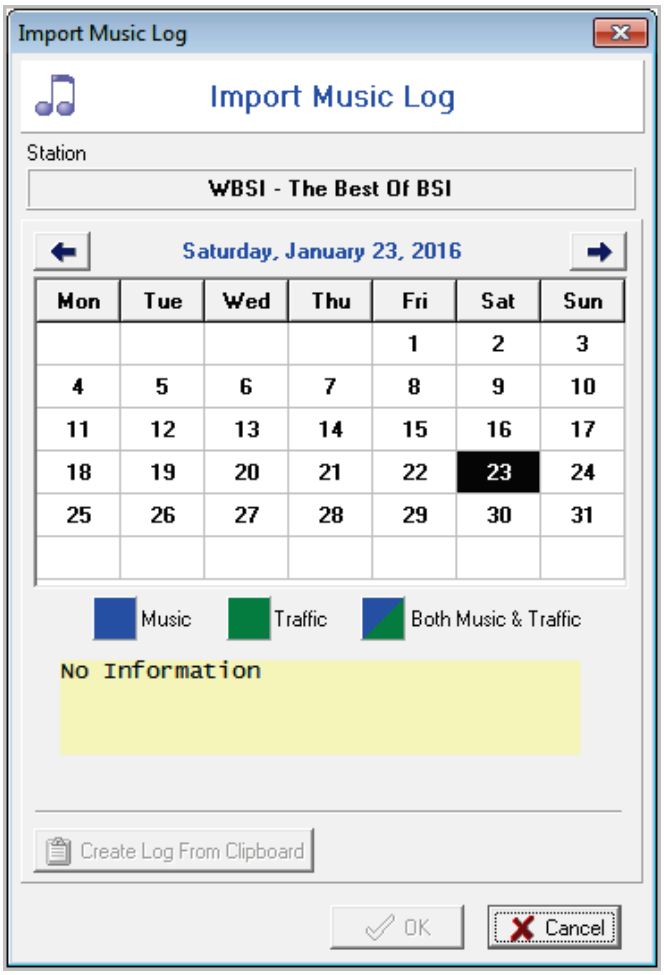
For talk stations that do not play music, or for stations that have only a traffic log to import, skip section 9.5.1 and proceed to section 9.5.2 on page 291. Conversely, to import a music log only and not a traffic log, perform the procedure in section 9.5.1.

9.5.1 Importing Your Music Log

➢ **To import your music log**

1. Click the **Import Using Music Import** button or click **File > Using Music Format**.

The Import Music Log dialog box appears.



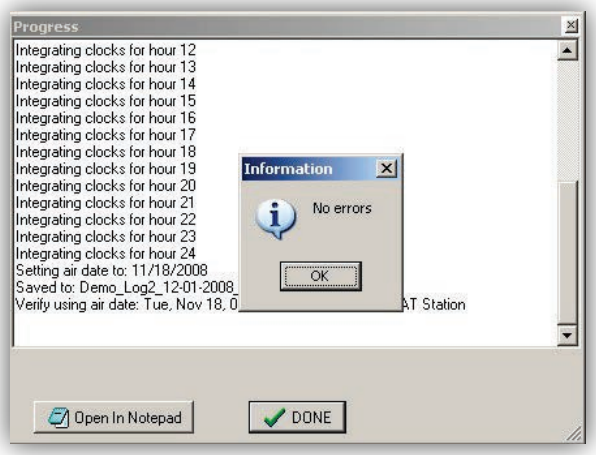
2. Select the month, day, and year from the calendar, and then click **OK**.

   *By default, the import function imports from your locally configured import path. To import from your File Server's import path for your station, choose the **Server** option.*

3. To import a log that does not conform to your configured File Name Template, click the **Browse For File** button on the right side of the **Local** field and select an import file.

4. Click **OK**.

   The events in your music log are imported. A progress window shows the progress of the import, along with any errors or warnings. After the logs are imported, an Information pop-up window alerts you to the number of errors generated during the import process.



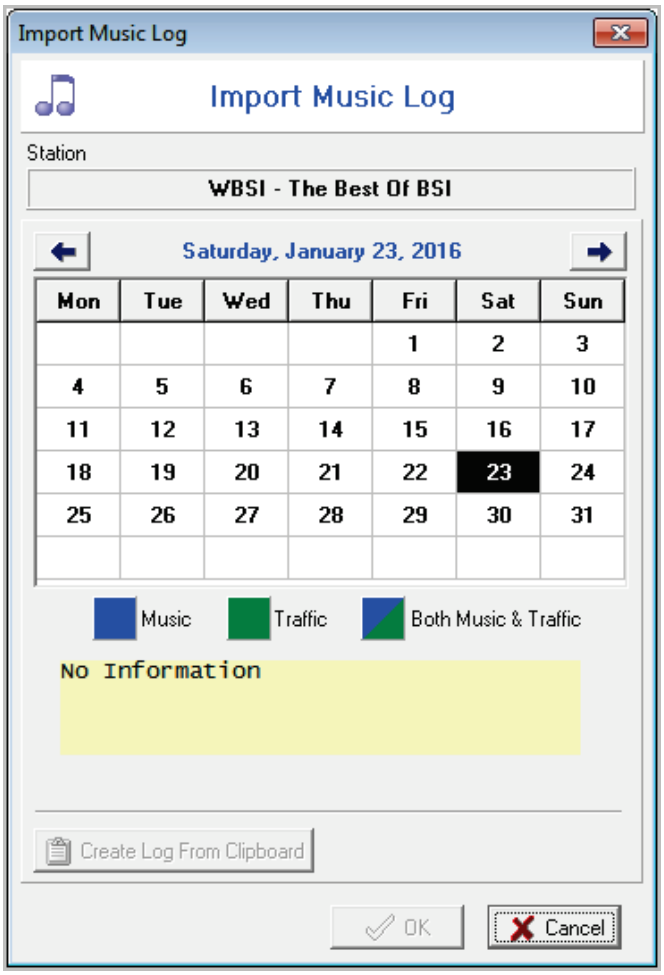
5. Click **OK** to remove the message.
6. Click **Done**.

9.5.2 Importing Your Traffic Log

➢ **To import your music log**

1. Click the **Merge Using Traffic Format** button or click **File > Using Traffic Format**.

The Import Music Log dialog box appears.



2. Select the month, day, and year from the calendar, and then click **OK**.

   *By default, the import function imports from your locally configured import path. To import from your File Server's import path for your station, choose the **Server** option.*

3. To import a log that does not conform to your configured File Name Template, click the **Browse For File** button on the right side of the **Local** field and select an import file.

4. Click **OK** to remove the message.

5. Click **Done**.

   If you imported a music log before importing the traffic log, the events from your traffic log and clocks are combined automatically with your music log events in the correct order. You can now edit your log, add new events, or remove events from your final log before saving it.

6. To save your finished program log to the File Server, click the **Save To OpX Server** button.

9.6 Exporting/Saving a Finished Program Log

The following sections describe how to save program logs to the file server and export program logs for use in third-party applications.

9.6.1 Saving Your Program Log to the File Server

➢ **To save the current program log to the File Server**

1. Click the **Save To OpX Server** button on the tool bar.

A progress window shows the progress of the save operation.

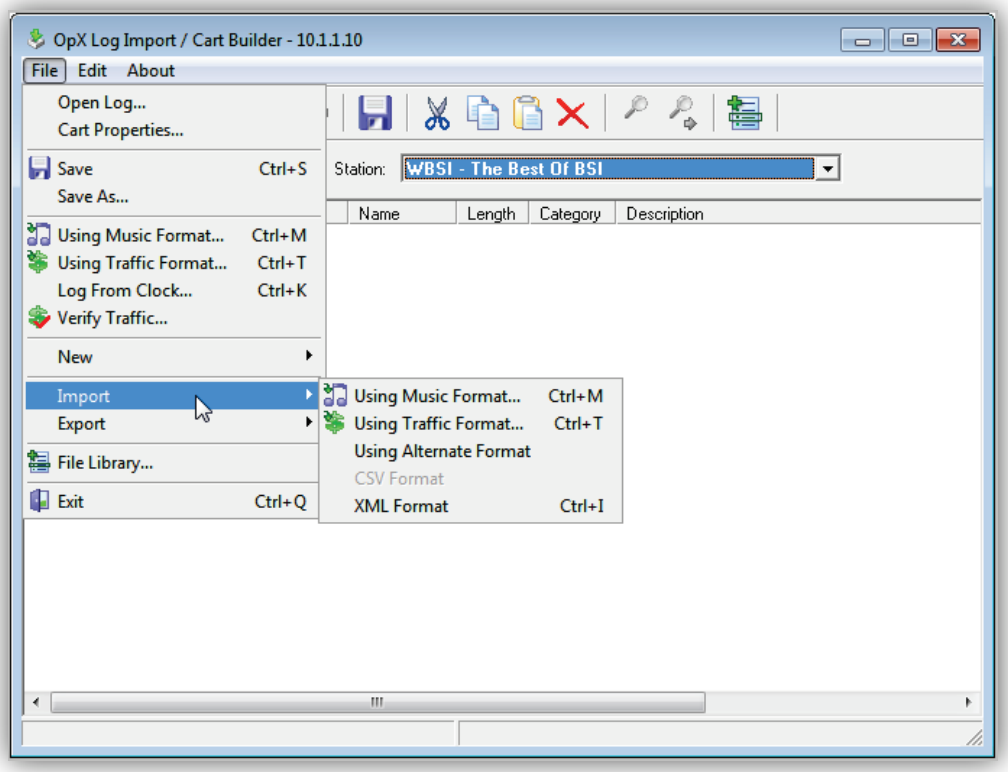
2. Click **Done** to remove the window.

9.6.2 Exporting Your Program Log for Third-Party Applications

➢ **To export your current program log for use by a third party**

1. On the **File** menu, click **Export**.

   The available import commands appear.



2. Click the appropriate option (see Table 9-7).

Table 9-7. Import Options

Option	Description
Using Music Format	Exports your program log using the settings configured in the preferences for importing in music format.
Using Traffic Format	Exports your program log using the settings configured in the preferences for importing in traffic format.
Using Alternate Format	Exports your program log using the settings configured in the preferences for importing in alternate format.
CSV Format	Exports your program log in comma-separated-value (CSV) format.
XML Format	Exports your program log as an .xml file. xml is the format OpX uses natively.

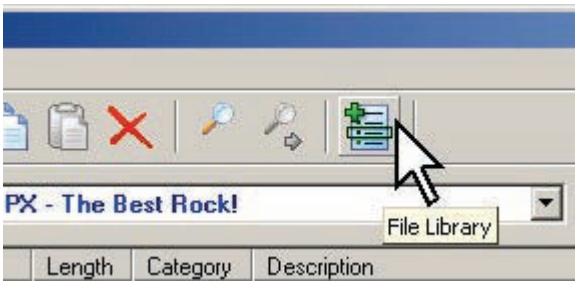
9.7 Manually Adding and Editing Program Log Events

9.7.1 Adding Audio Files Using the File Library

You can add audio files to your program log using the file library to browse through the audio files on your File Server and then dragging-and-dropping them to your program log. This method allows you to add audio files. You cannot use this method to add other commands to your program log. To add macros, or any other event type, to your program log, see Appendix A - Macros.

➢ **To add audio files using the file library**

1. Click the **File Library** icon on the tool bar or click **File > File Library**.



A File Library similar to the following appears, with all audio files from all folders displayed.

2. Use the following steps to enhance File Library viewing:
   – To limit the file list to show only a single folder, click the drop-down list and click the desired folder.

– To search through the file list by keyword, type text in the **Find** field. The label to the right of the **Find** field indicates what column will be searched. The column that will be searched is the same column by which the File List is sorted. As Figure 9-15 shows, the sort indicator is in the **Name** column, so OpX searches the Name column for the text you type in the **Find** field.

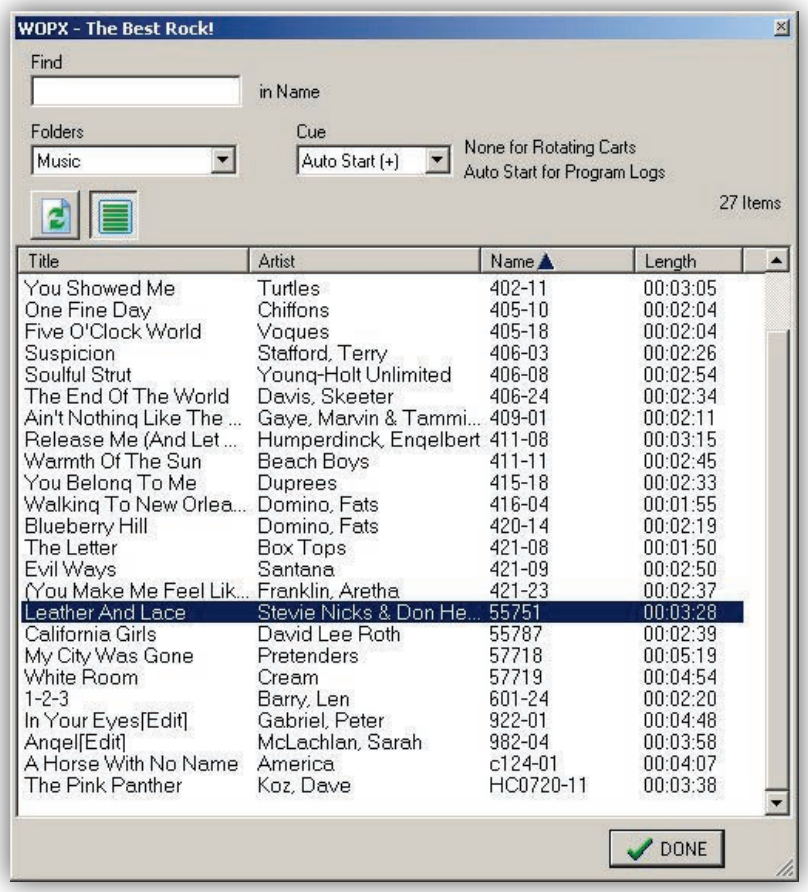


Figure 9-15. Sample File List

– To refresh the list to show new items added to your file server while the File Library window has been open, click the **Refresh** button.

3. Click and drag your desired item from the File Library's File List and drop it into your program log.

   – If you drop the event below another in the program log, the new event is added as the last item in the log.

   – If you drop your event on top of an existing event, the new event is added after that event and all subsequent events shift down to make room.

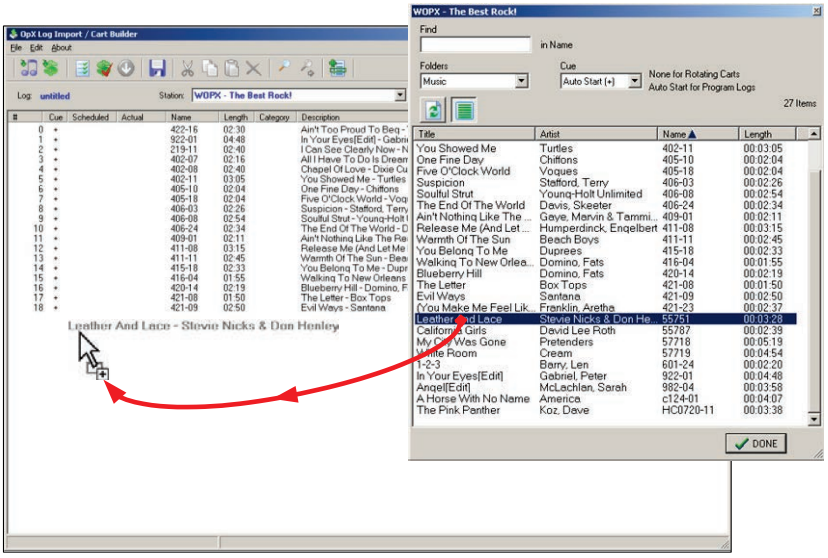


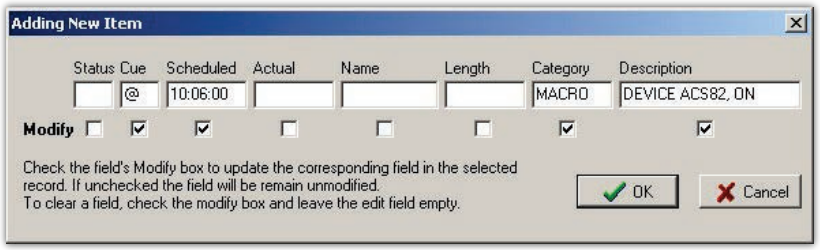
Figure 9-16. Dragging and Dropping from the File Library File List to the Program Log

9.7.2 Adding New Events Manually

➢ **To add new events manually**

1. In the program log, click the event above which you want to insert the new event.
2. On the **Edit** menu, click **Insert New Item**.

   An Adding New Item dialog box similar to the following appears.



3. Click in each field and enter the data pertinent to your event.
4. Click **OK**.

9.7.3 Editing Events in Your Program Log

➢ **To edit events in your program log**

1. In the program log, click the event you want to modify.
2. On the **Edit** menu, click **Edit Fields**.

   An Edit Item dialog box similar to the following appears.

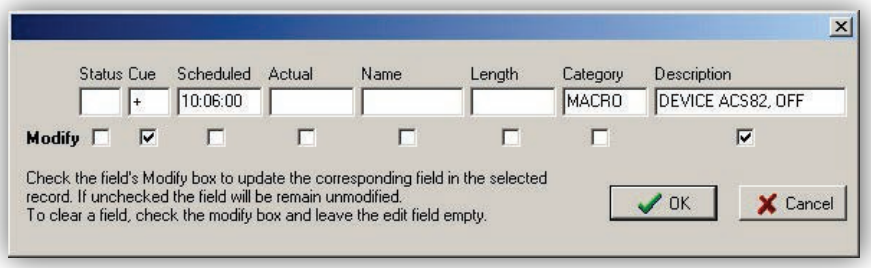


Figure 9-17. Edit Item Dialog Box

3. Click in each field you want to change and edit the value.

   *When you enter a value, the corresponding **Modify** box gets checked automatically.*

4. To clear a field, check the **Modify** check box and leave the corresponding entry blank.
5. Click **OK**.

9.7.4 Changing the Cue Type of Events In Your Program Log

The editing method described in section 9.7.3 allows you to edit all fields of an event in your program log. Sometimes, however, you need only change the cue type of an event.

➢ **To change the cue type**

1. Click the event in the program log.
2. Press the key on your keyboard for the new cue type you desire:
   - To set your event's cue type to Auto Start, press the + key.
   - To set your event's cue type to Time Immediate, press the @ key (Shift+2).

– To set your event's cue type to Time Next, press the # key (Shift+3).
– To toggle the event to Manual, press the same key as the existing cue type.

9.8 Working with Carts

9.8.1 Creating a Cart

You create a cart using the same procedure you use to create a program log. A cart is like a mini-program log. Carts allow you to create a singular item that contains links to multiple audio files and/or macros. When creating a program log or Hot Key, you can insert a single cart that you created instead of inserting multiple items to do the same thing. When creating a trigger set, scheduled event, or program log, using carts instead of single event, allows you to execute multiple items in succession.

The way carts behave depends how you set the cue types of the events in the cart. See Table 9-8.

Table 9-8. Cart Behaviors

Cue Type	Cart Behavior
All events in the cart have Manual Start (blank) cues	When you first play the cart, only the first event is played, and then the cart stops. The next time the cart is played, only the next event in the cart is played. The third time the cart is played, only the third item is played. This sequence continues until the cart is played enough times that all items in the cart have been played. At this point, the next time the cart is played, it starts from the top again. This type of cart is referred to as a "rotator.
All the events in the cart have Auto Start (+) cues.	When you play the cart, all events in the cart play in succession, from the first event in the cart through to the last event in the cart.
Some events have Auto Start cues and some have Manual Start cues.	The cart plays in order from top to bottom, continuing to play events from the cart until the cart encounters a Manual Start event, at which point the cart stops. The next time you play the cart, it starts from where it left off (the Manual Start item it stopped on last time) and plays the rest of the events until it encounters another Manual Start event. This sequence continues until the cart is played enough times that all items in it have been played. At this point, the next time the cart plays, it starts at the top again.

➢ **To create your cart**

1. On the **File** menu, click **New**, and then click **New Cart**.
2. Add events to your cart using the File Library (see section 9.7.1) or by using **Edit > Insert New Item** (see section 9.7.2).

Note: All events in a cart must have either an Auto Start (+) or Manual Start (blank) cue type. No other cue types are valid.

3. After you add the items to the cart, save the cart (see section 9.8.3).

9.8.2 Editing a Cart

➢ **To edit a cart**

1. Create a new cart.
2. Using the File Library, find the cart you want to edit and drag it into the new cart.

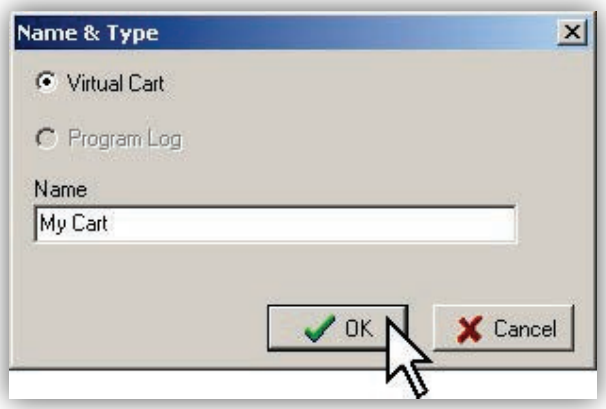
   The events are placed into the new cart and the file name is updated with the name of the existing cart.
3. Edit, add, or delete events from the cart.
4. Click the **Save To File Server** button to overwrite the previous file of the same name or click **File > Save As** to save the file under a different name, and then click **OK**.

9.8.3 Saving a Cart

➢ **To save the current cart**

1. Click the **Save To File Server** button on the tool bar.

You are prompted with the Name & Type dialog box.



2. In the **Name** field, enter a file name for your cart.
3. Click the **OK** button.

   Your cart is saved to the File Server, making it available to your station's Audio Server.

10 Info Editor Module

Topics:

- *Starting the Info Editor Module (page 304)*
- *Quick Tour (page 305)*
- *Setting Intro and Segue Times (page 313)*

This chapter describes the OpX Info Editor module.

The Info Editor module allows you to edit all available tags; set intro, segue, and hook times; and transfer audio files to the File Server.

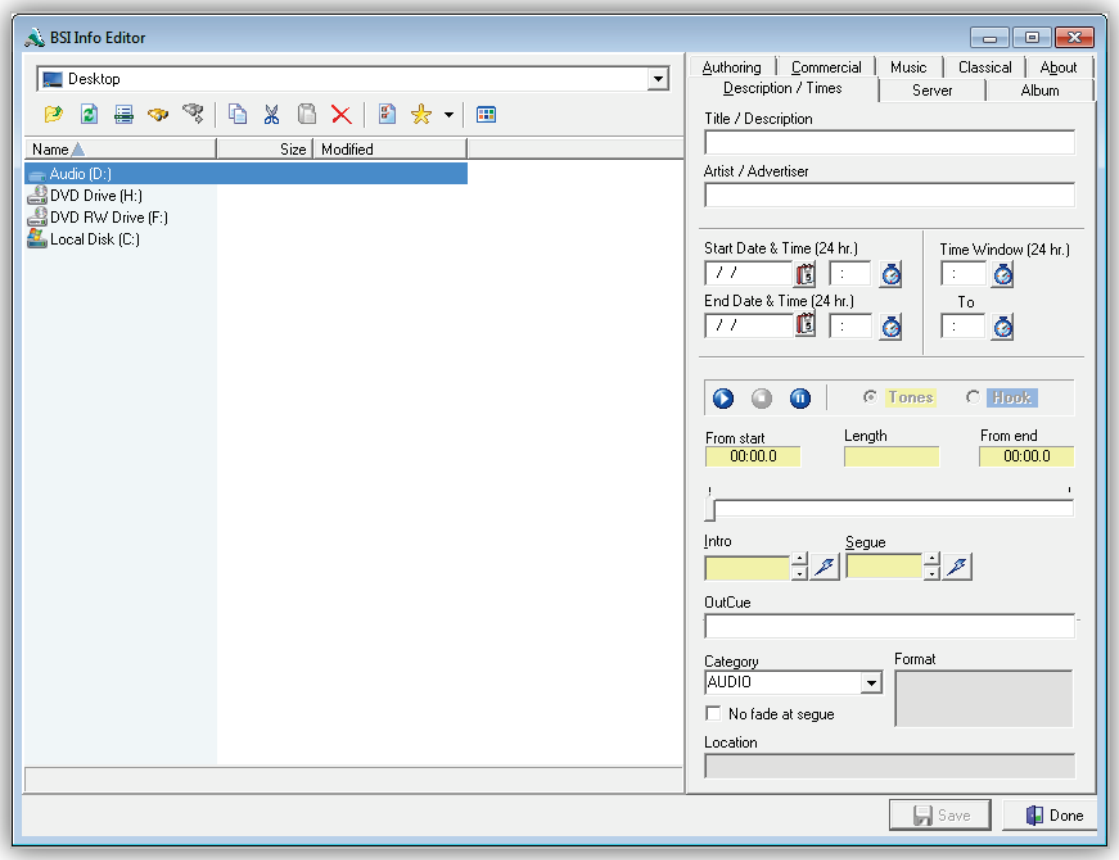
10.1 Starting the Info Editor Module

You must start the File Server module before you start the Info Editor module.

➢ **To start the Info Editor module**

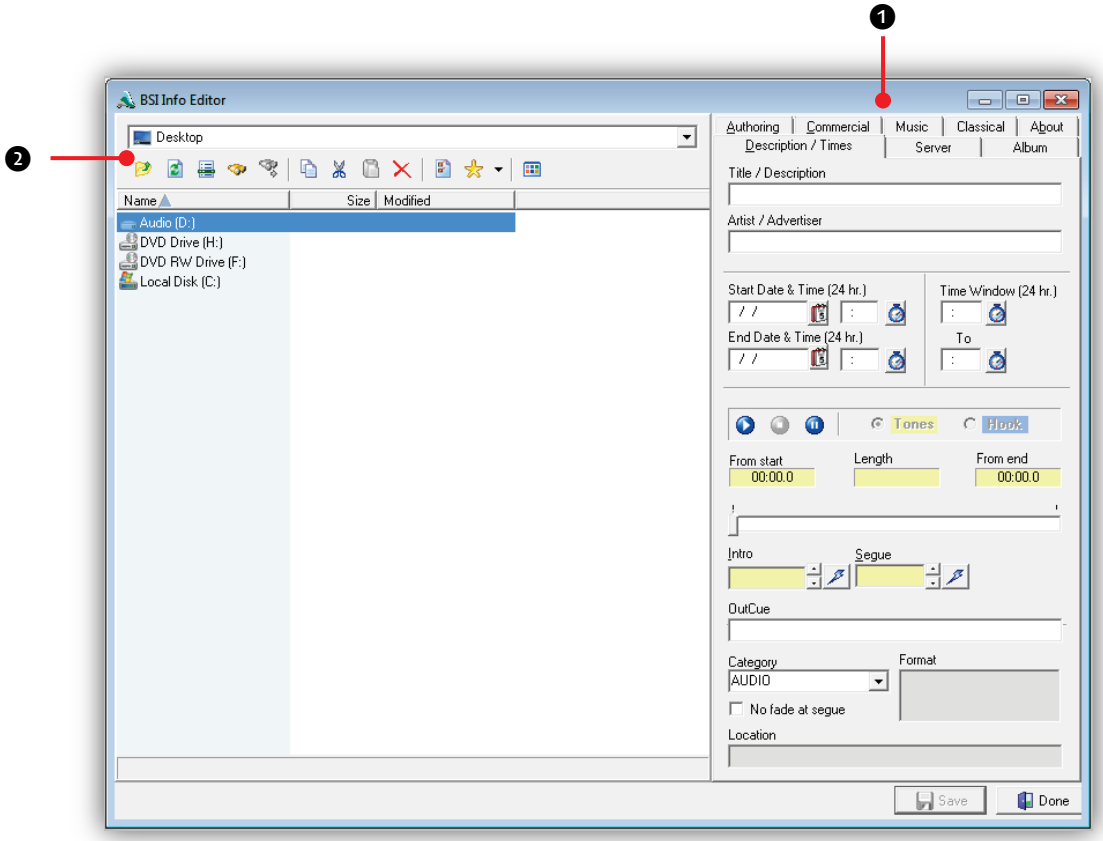
1. Start the File Server module (see section 3.1).
2. Click the Windows Start button and click **Programs > Broadcast Software > InfoEdit**.

   A BS Info Editor window similar to the following appears.



10.2 Quick Tour

The following sections provide a quick tour of the Info Editor module interface.



Number	Description
❶	File list. See section 10.2.1.
❷	Tabbed section. See section 10.2.3.

10.2.1 File List

The Info Editor's file list allows you to browse to any folder available on your workstation. It displays folders and audio files to simplify navigation through your audio files.

Table 10-1describes the tools on the file list.

Table 10-1. File List Tools

Tool	Tool Name	Description	Tool	Tool Name	Description
	Go up to parent folder	Shows the contents of the folder that contains the folder you are viewing.		Cut	Copies the highlighted file to the Clipboard, but once you paste the file to another location, the file is removed from its current location.
	Refresh current folder	Updates the files and folders in the file list.		Paste	Puts a cut or copy of the file currently from the Windows' Clipboard to the directory displayed in the file list.
	Go to selected item	Brings the item in the tabbed section of the Info Editor into view on the file list. Useful if you scroll the file list away from the tab's displayed file and want to find it.		Delete	Moves the highlighted file in the file list to the Windows' Recycle Bin.
	Find	Finds the first audio file in the file list based on your criteria.		Select Columns	Allows you to add or remove the columns in the file list.
	Find Next	Finds the next audio file using the criteria entered using the Find button.		Favorites	Adds the displayed folder to a list of favorite locations. Click the drop-down button to access or edit a list of favorite locations.
	Copy	Copies to the Windows Clipboard the currently highlighted file in the file list.		Explore current folder	Opens Windows Explorer to the Info Editor's currently displayed folder.

10.2.2 Editing Multiple Files

The Info Editor can edit the tags of multiple files at the same time.

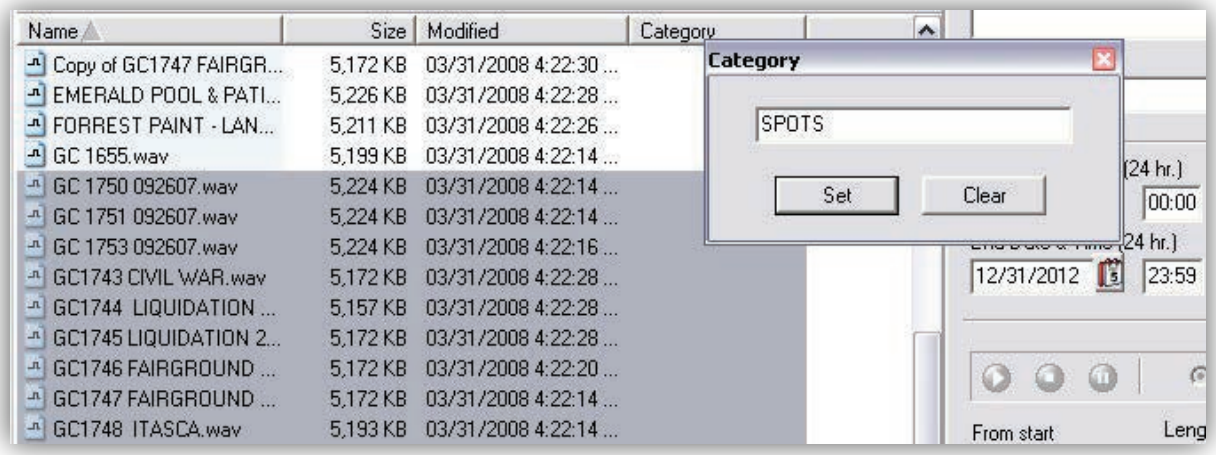
➢ **To edit multiple files**

1. Click the **Select Columns** button.

   The column for the tag you want to modify appears.

2. Click the first file you want to edit.
3. To edit additional files, perform the appropriate step:
   - If the files are contiguous to the one you clicked in step 2, hold sown the Shift key and click the last file. All files between the first and last ones you clicked are selected automatically.
   - If the files are not contiguous, hold down the Ctrl key and click each additional files.
   - If you change your mind about a selected file, hold down the Ctrl key and click the file to deselect it.
4. With all your files selected, right-click the column title.

   A Category pop-up window appears.



5. Enter the data you want to apply to all the selected files, and then click the **Set** button.
   OR
   To “blank-out” the entries for the highlighted files, click the **Clear** button.
   OR
   To cancel the procedure, click on the pop-up window’s Close button in the top-right corner.

10.2.3 Tabbed Section

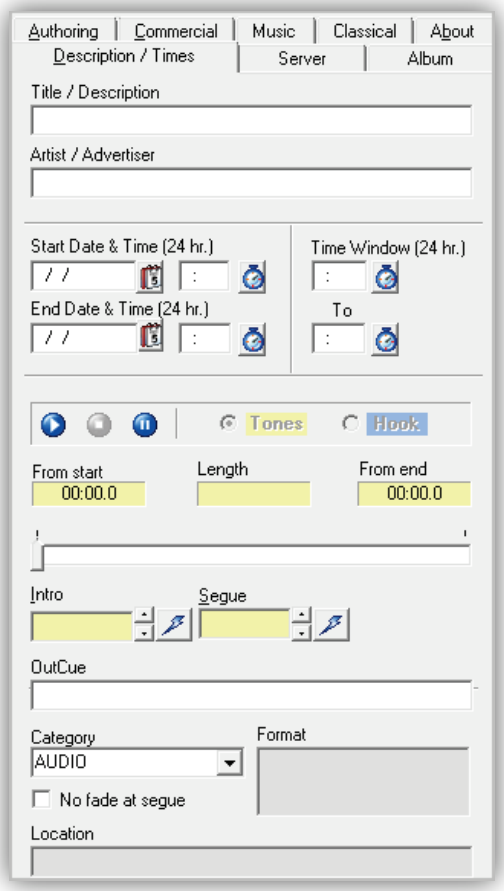
The Info Editor's tabbed section has seven tabs to allow you to enter various data into your audio files.

➢ **To edit an audio file's tags**

1. Using the **File List** on the left side of the Info Editor, browse to the file whose tags you want to edit, and then click it.
2. Edit the file's tags in the Info Editor's tabs on the left side of Info Editor.

The following sections describe the Info Editor tabs.

10.2.3.1 Fields in the Description/Times Tab

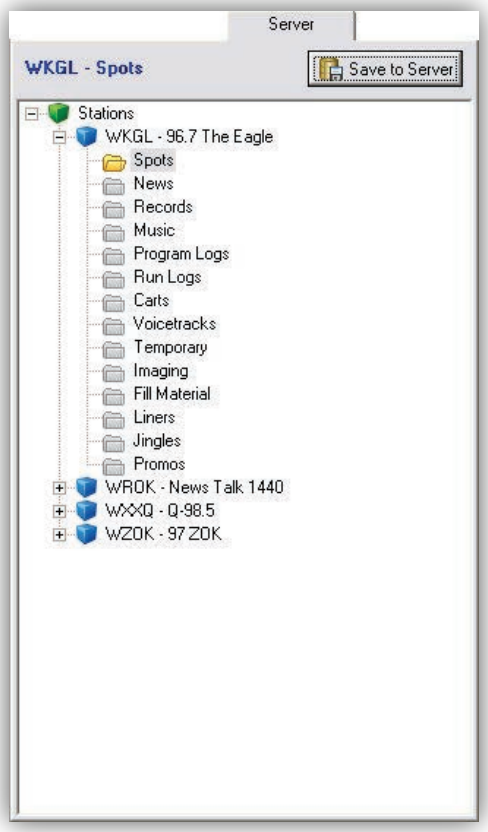


Option	Description
Title/Description	Enter the name of your audio file.
Artist/Advertiser	Enter the name for the creator of the file.
Start Date & Time	Sets the date range and time your file is to be played.
Time Window	When entered, the audio file will only be playable between the hours selected.
Play/Stop/Pause buttons	Allows you to preview your file inside the Info Editor.
Tones/Hook	When you set tones, you can set both regular Intro and Secondary Tones. You can also set Hook Tones for use with Simian's Hook Cart functionality.
From start	Allows you to see how far the slider is from the beginning of the file during playback.
Length	Shows the length of the file.
From end	Allows you to see how far the slider is from the end of the file during playback.
Slider	Allows you to scrub through the song during playback. You can see the Tones or Hook within the slider: Look for white space at both ends of the blue bar under the slider. The white at the beginning is your intro and the white at the end is your segue.
Intro button	Visible when Tones is selected. This button allows you to set the intro tone for the audio file, while the time window allows you to see exactly where the tone is set.
Segue button	Visible when Tones is selected. This button allows you to set the Secondary Tone for the audio file, while the time window allows you to see exactly where the Secondary Tone is set.

Option	Description
Outcue	Text that appears in the decks as the song is going out.
Hook Start	Visible when Hook is selected. Allows you to set the start for the "hook" for the audio file.
Hook End	Visible when Tones is selected. Allows you to set the end for the audio file's "hook."
Category	You can assign a category to a file so that it will always display the correct category in the audio list and event builder
Format	Shows the file attributes of your file.
No fade at segue	Assures that the file will never fade out at the end no matter what settings are configured in Simian. Great for spots.
Location	Shows you where the file is stored on your hard drive.

10.2.3.2 Fields in the Server Tab

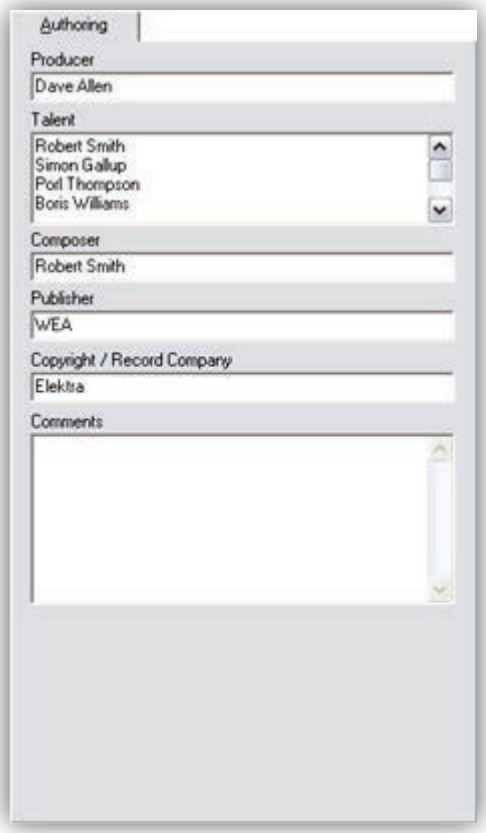
Option	Description
Folder List	Browse to a stations' audio folder.
Save To Server button	Click this button to transfer the currently loaded audio file to the selected folder on the file server.



10.2.3.3 Fields in the Album Tab

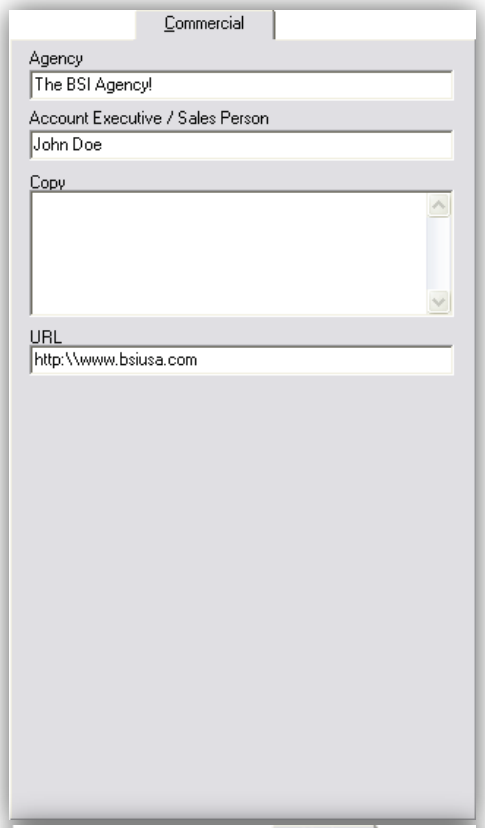
Option	Description
Album	Enter the album name.
Year	Holds the year information for the file.
Genre	Holds the genre information for the file.
Track#	Holds the track information for the file.

10.2.3.4 Fields in the Authoring Tab



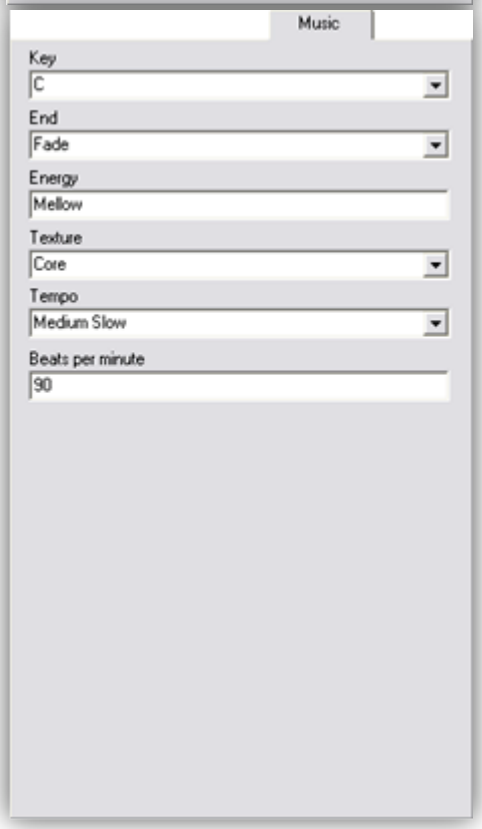
Option	Description
Producer	Holds the producer information for the file.
Talent	Holds the talent information for the file.
Composer	Holds the composer information for the file.
Publisher	Holds the publisher information for the file.
Copyright/Record Company	Holds the copyright information for the file.
Comments	Holds any comment information that you want to include in the file.

10.2.3.5 Fields in the Commercial Tab



Option	Description
Agency	Holds the agency information for the file.
Account Executive/Sales Person	Holds account executive and sales person information.
Copy	Holds information you want to add to the file. This tag can be displayed in a text box within Simian any time the file is played. Select Tools/Program Options/General and check in Display Copy Field option.
URL	You can associate a URL with each file and then send that URL to the Dynamic HTML Page, or the MS Encoder.

10.2.3.6 Fields in the Music Tab



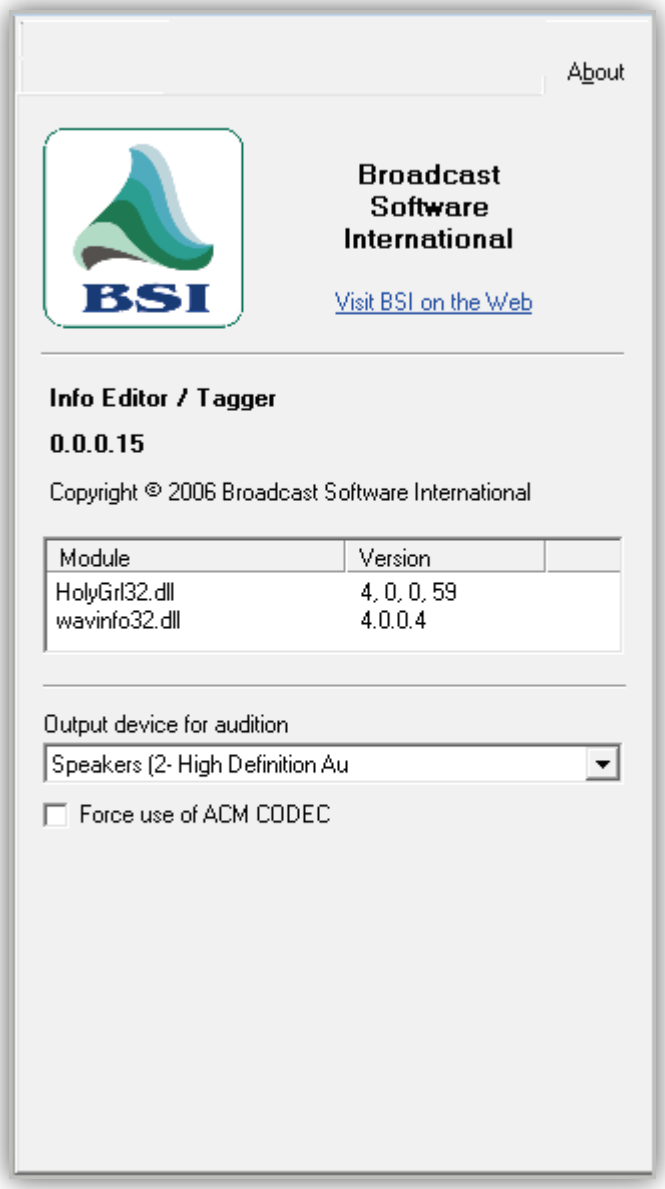
Option	Description
Key	Holds the key in which the cut was performed.
End	Holds information about how the cut ends.
Energy	Common descriptor for audio cuts.
Texture	Helps you sort your cuts by audience.
Tempo	Holds the tempo in which the cut was performed.
Beats Per Minute	Holds the BPM information for the file.

10.2.3.7 About Tab

The **About** tab shows the Info Editor version, a link to the BSI website, and information about the versions of supporting dynamic link library (DLL) files.

The **Output device for audition** drop-down list allows you to select the audio device you want to use for playback while you're tagging files.

To force your computer to use the Windows' CODEC instead of on-soundcard CODECs that you may have, check **Force use of ACM CODEC**.



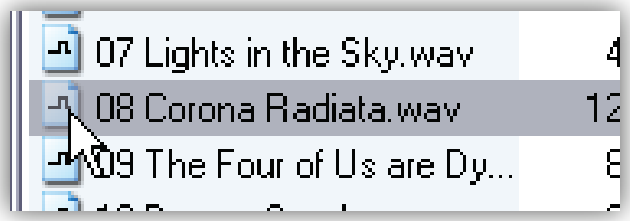
10.3 Setting Intro and Segue Times

Setting intro and segue points in your music files is critical to smooth-sounding transitions between songs on a music station. The Info Editor makes it easy to set intro and segue points.

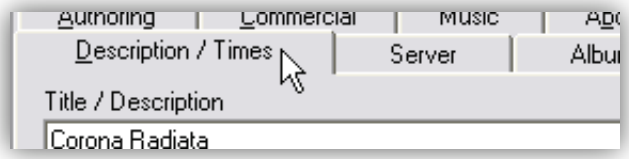
➢ **To set intro and segue times**

1. In the file list on the left side of the Info Editor, browse to and click the audio file to which you want to add intro and segue points.

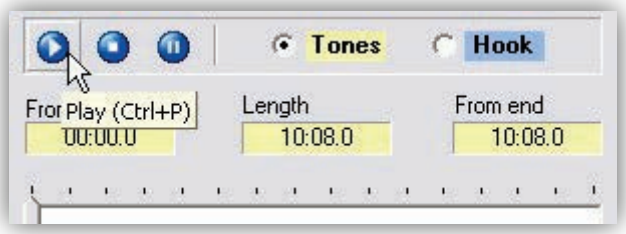
   The file loads into the tabbed section.



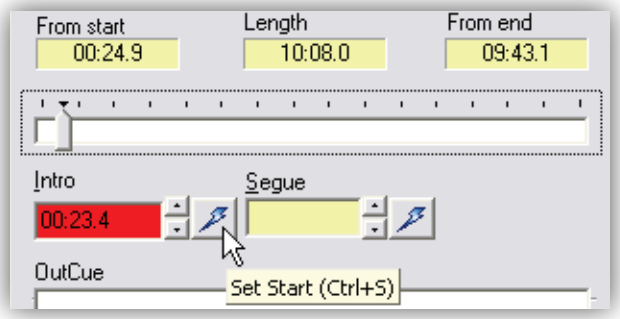
2. Go to the **Description/Times** tab on the tabbed section of the Info Editor.



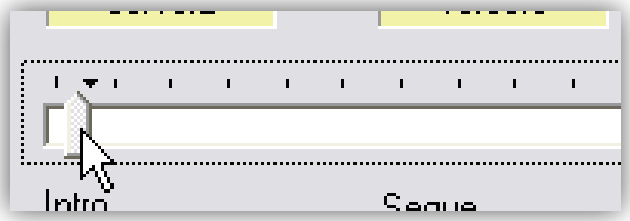
3. To set the intro point of your song, click the **Play** button to start playback of your audio file.



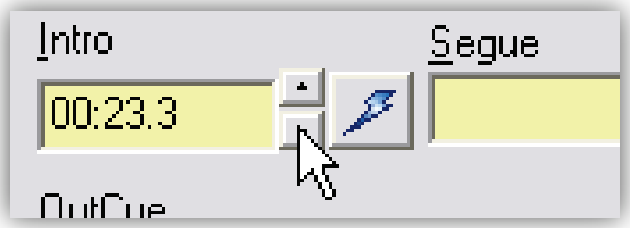
4. As your audio file plays back, listen to the track. When the track gets to the point where you want to set your intro point, click the **Set Start** button.



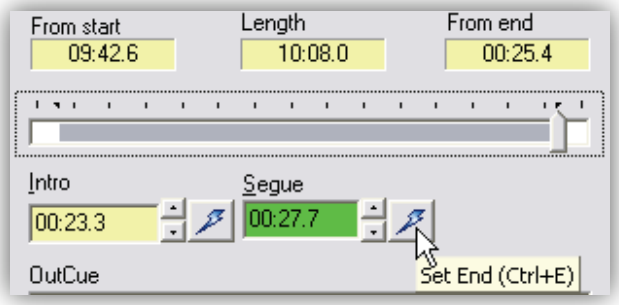
5. If you want to re-set the intro point, move the pointer on the scrubber back in the file.



6. To fine-tune your intro point, click the **Fine Adjust** buttons to increase or decrease the intro point in tenths of a second.



7. You add the segue point using the same procedure that is used to add the intro point. The only difference is that you click the **Set End** button to set the segue point.



8. Re-settings or adjusting the segue point uses the same technique shown in step 3.

11 File Sync Module

Topics:

- *Starting the File Sync Module (page 317)*
- *Quick Tour (page 318)*
- *Configuring the File Sync Module (page 323)*
- *Synchronizing Files (page 325)*

This chapter describes the OpX File Sync module.

The File Sync module backs up and maintains your station content automatically. Running this module copies all audio files and virtual carts, from your File Server's Music, Spots, Carts, Fill, Records and VoiceTrack folders to your Audio Server's local hard drive. If the hard drive fails on your File Server machine, you can use a copy of all your content (which is at most 24 hours out of date) to get your station up and running.

The File Sync module also acts as a housekeeper for the Audio Server by deleting obsolete material that has been deleted from the file server. It is critical for users who run the OpX Audio Server on a different machine than the File Server. Running the File Sync module on your Audio Server machine creates and maintains a current copy of all the files for that Audio Server's station on its local hard drive. You can configure the File Sync module to run once a day at a specific time.

Note: The File Sync module performs 1-way synchronization. This means it copies files only from your File Server to your Audio Server. To copy files to your File Server, use the File Manager module (see Chapter 7).

Tip: For quick recovery from a hardware failure on your File Server, install a copy of the OpX File Server on your Audio Server machine and leave it dormant (fully closed) because you can only have a single File Server running on any LAN. If your File Server machine fails, open the dormant File Server module on your Audio Server machine. The Audio Server's hard drive will have all the files needed to run the dormant File Server to keep your station on the air.

Only one OpX File Server can be run per network. If you have multiple stations, take each Audio Server machine off the network, so that each Audio Server's backup File Server does not conflict with the others.

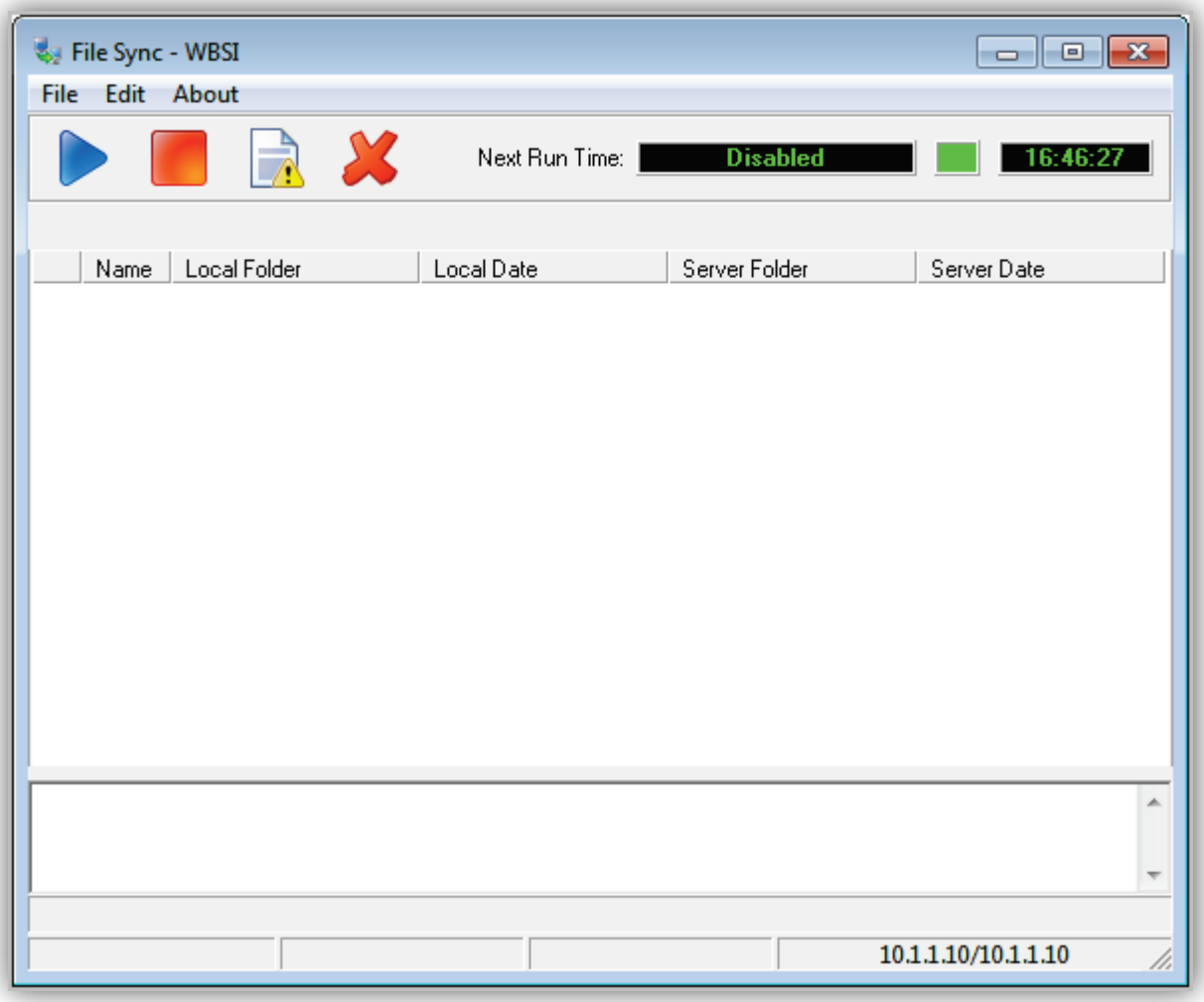
11.1 Starting the File Sync Module

You must start the File Server module before you start the File Sync module.

➢ **To start the File Sync module**

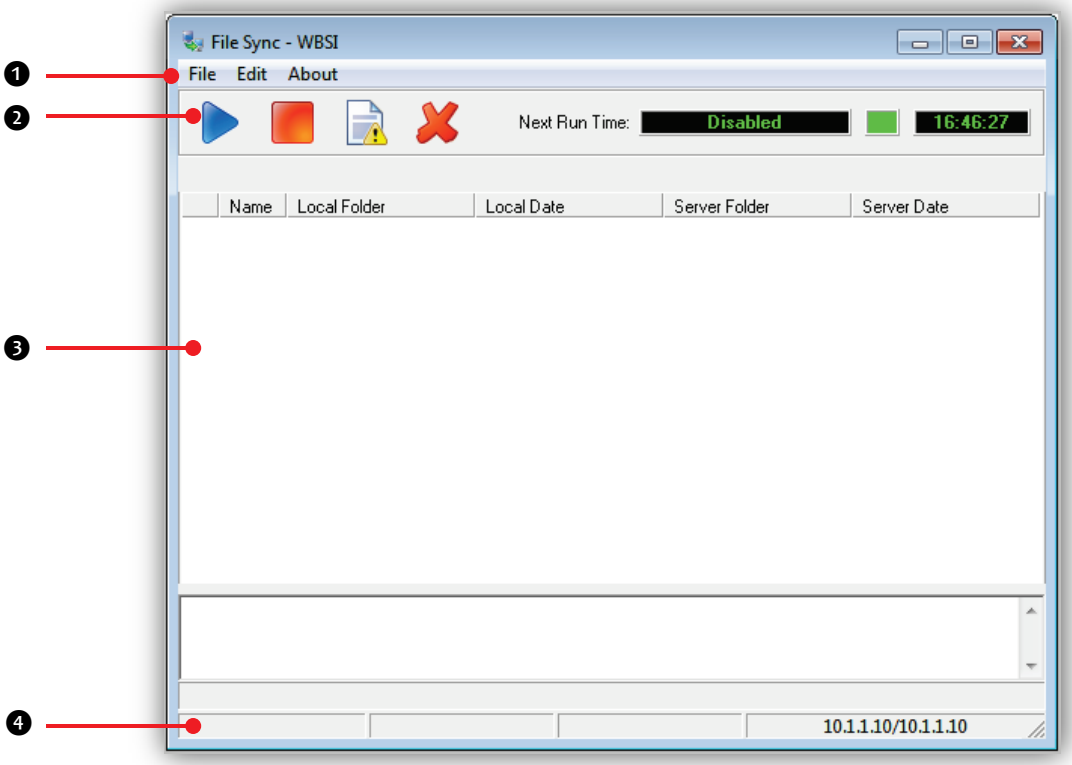
1. Start the File Server module (see section 3.1).
2. Click the Windows Start button and click **Programs > Broadcast Software > File Sync**.

   A File Sync - BSI window similar to the following appears.



11.2 Quick Tour

The following sections provide a quick tour of the File Sync module interface.

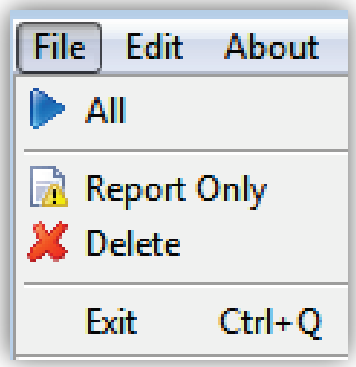


Number	Description
❶	Menu bar. See section 11.2.1.
❷	Tool bar. See section 11.2.2.
❸	Event list. See section 11.2.3.
❹	Status bar. See section 11.2.4.

11.2.1 Menu Bar

The menu bar appears at the top of the File Sync window. The following sections describe the menu options.

11.2.1.1 File Menu



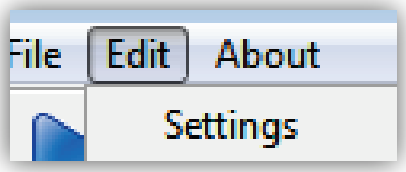
All = selects all files.

Report Only = toggles between Report Only mode.

Delete = deletes selected files.

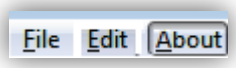
Exit = exits the File Sync module.

11.2.1.2 Edit Menu



Settings = configures File Sync module settings. See section 11.3.

11.2.1.3 About Menu



Opens a window that shows the version and build date of the File Sync module you are running. This window also shows the amount of memory and virtual memory being used. See Figure 11-1 for an example. To close the window, click **OK**.

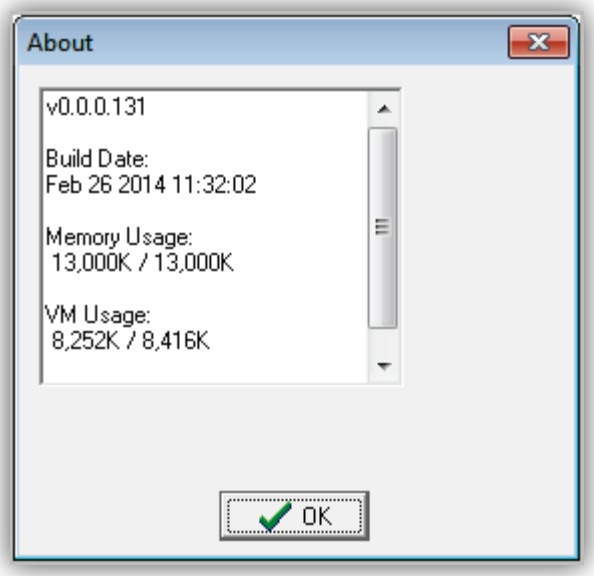


Figure 11-1. Example of About Information

11.2.2 Tool Bar

The File Server module tool bar appears below the menu bar.

Table 11-1 describes the tools on the tool bar.

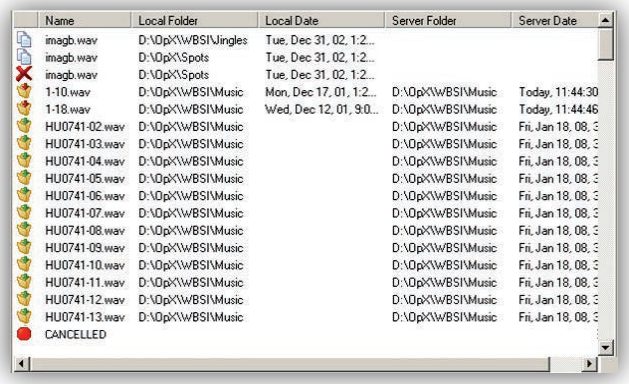
Table 11-1. File Sync Module Tool Bar

Tool	Tool Name	Description	Tool	Tool Name	Description
	Run	Triggers a synchronization operation. If the Report Only option is enabled, no files are copied.		Delete Files	Deletes files that are no longer applicable.
	Stop	Stops a running File Sync operation.	—	Next Run Time	Shows the scheduled time for the next automatic File Sync operation.
	Report Only	Runs a test synchronization. See the note below and section 11.4.	—	System Clock	Shows the system time.

Note: When Report Only is enabled, the File Sync module lists all events that would be performed during a full synchronization, without copying or deleting files. This allows you to find duplicate files between your local folders (if the Check for Duplicates, Keep Newest option is enabled), without removing the duplicates. It is also useful when you want to archive duplicate files before the system deletes them during a full synchronization.

The Report Only option stays enabled until you disable it. When enabled, timed syncs are performed as report-only syncs and your files are not copied. Disable this option after you finish using it.

11.2.3 Event List



The event list shows all the events performed during the last synchronization process. If **Report Only** is enabled, the event list shows the actions that would be performed.

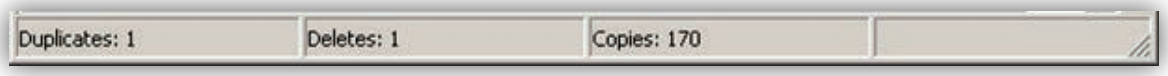
Table 11-2 describes the columns in the event list.

Table 11-2. Columns in the Event List

Column	Description
Event Type Icon	Each line in the event list represents a singular synchronization event. This column shows an icon for the type of event of each line item. The icons for the events performed are: • New file copy = file does not yet exist on local hard drive. • New version = local file is older than the version on the File Server. Overwrite old version on local hard drive with new version copied from the File Server. • Duplicate file = file in a local folder by the same name exists in another local folder. This icon indicates all duplicates by the same name and not the deletion of any files. • Delete file = when duplicate files are found, following the event line items of the duplicate files, the Delete File event(s) with this icon appears. This indicates the actual deletion of the specific file(s). • Synchronization Canceled = if the Cancel button is clicked while a file is being synchronized, a line item is added to the list indicating where the synchronization was canceled. To restart the synchronization, click the Run button in the tool bar.
Name	Shows the file name involved in each synchronization event.
Local Folder	Shows the path to the folder on the local hard drive where the file either exists or will be copied to.
Local Date	Shows the date and time of the most recent file modification. This field only applies to files that already exist. If a file does not exist locally (i.e., or a New file copy event), this field is blank.
Server Folder	Shows the path on the File Server where the audio is stored. This field is blank for events not involving file transfer from the File Server, such as duplicate file and delete file events.
Server Date	Shows the date and time of the file on the server involved with the event. This field is blank for events not involving file transfer from the File Server, such as duplicate file and delete file events.

11.2.4 Status Bar

The status bar shows the statistics of the items that will be copied during the current synchronization process. The statistic types displayed are Duplicates, Deletes, and Copies.



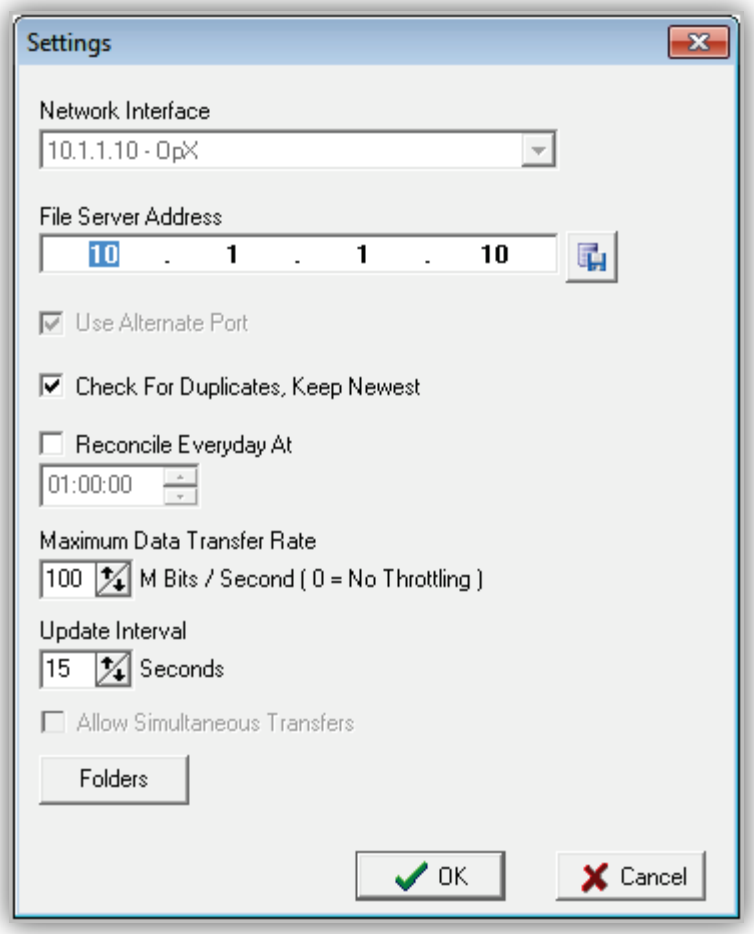
11.3 Configuring the File Sync Module

The File Sync module comes with default configuration settings that should suit most users. Using the **Settings** option on the **Edit** menu, you can change these settings to suit your requirements.

- **To configure the File Sync module settings**

1. On the **Edit** menu, click **Settings**.

   The Settings dialog box appears.



2. Complete the fields in the dialog box (see Table 11-3).
3. Click **OK**.

Table 11-3. Fields in the Settings Dialog Box

Field	Description	Default
Network Interface	If your system has more than one network interface, select the proper device for your OpX network.	10.1.1.10 – OpX Network
File Server Address	Enter the IP address of the machine running your OpX File Server module in this field. With an IP address entered the File Sync module will only connect to the File Server on a specific IP address and will not have to search your network.	10.1.1.10
Check For Duplicates, Keep Newest	• Checked = File Sync searches local audio folders for duplicates and deletes all but the newest copy. Duplicates are determined by their file name. If you have two files by the same name in two different folders, only the file modified most recently remains after this operation is performed • Unchecked = local audio folders are not searched.	Checked

Field	Description	Default
Reconcile Everyday At	• Checked = File Sync module runs automatically once a day. Use the time selector to select when the file synchronization occurs. Select a time of low network traffic to perform your synchronization (for example, in the middle of the night). • Unchecked = File Sync module does not run automatically once a day.	Unchecked
Maximum Data Transfer Rate	Set a maximum data throughput rate for the synchronization operation.	100 M Bits

11.4 Synchronizing Files

After you configure the File Sync module, you can leave it running to perform synchronizations at the time you scheduled, or you can perform synchronization on-demand.

Note: Because the File Server updates its file list on a cycle, it can take up to 5 minutes for new items to be available for the File Sync module to synchronize. This does not affect live on-air playback of audio files, since the Audio Server copies new files for playback on-the-fly automatically.

➢ **To start the OpX File Sync module**

1. To run a test sync without affecting files on the hard drive, click the **Report Only** button on the tool bar or click **File > Report Only**. With **Report Only** enabled, your timed syncs will be performed as report-only syncs and your files will not be copied.
2. Click the **Run** button to start a synchronization (or Report Only synchronization if you performed step 1).
3. After performing your test synchronization, disable the **Report Only** option if you no longer want to use it. This option stays enabled until you disable it.
4. Minimize the File Sync module if you want to leave it running in the background, or click **File > Exit** to exit the File Sync module.

Tip: You can place the File Sync module in your system's Startup folder, so the module will start automatically at system boot. Because the File Sync module must connect to your File Server to run, be sure your File Server is running before starting File Sync module.

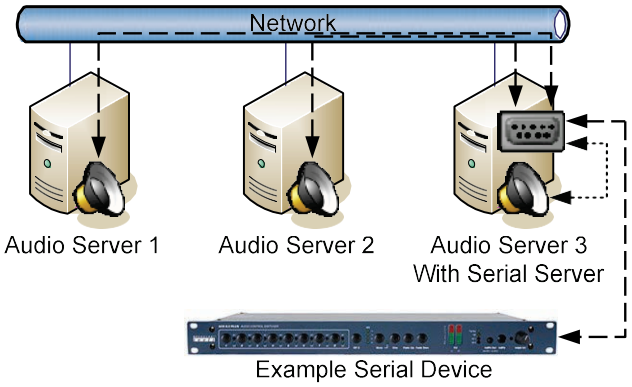
12 Serial Device Server Module

Topics:

- *Starting the Serial Device Server Module (page 327)*
- *Quick Tour (page 328)*
- *Configuring the Serial Device Server Module (page 332)*
- *Adding a New Profile (page 333)*
- *Editing a Device Profile (page 340)*
- *Deleting a Device Profile (page 341)*
- *Using a Serial Server Device (page 341)*

This chapter describes the OpX Serial Device Server module.

The Serial Server allows the sharing of a serial device, such as an audio switcher or a trigger interface, from one station (i.e., Audio Server) on another station across your local-area network. This means you can use audio switchers or trigger devices connected to one of your audio servers on multiple stations.



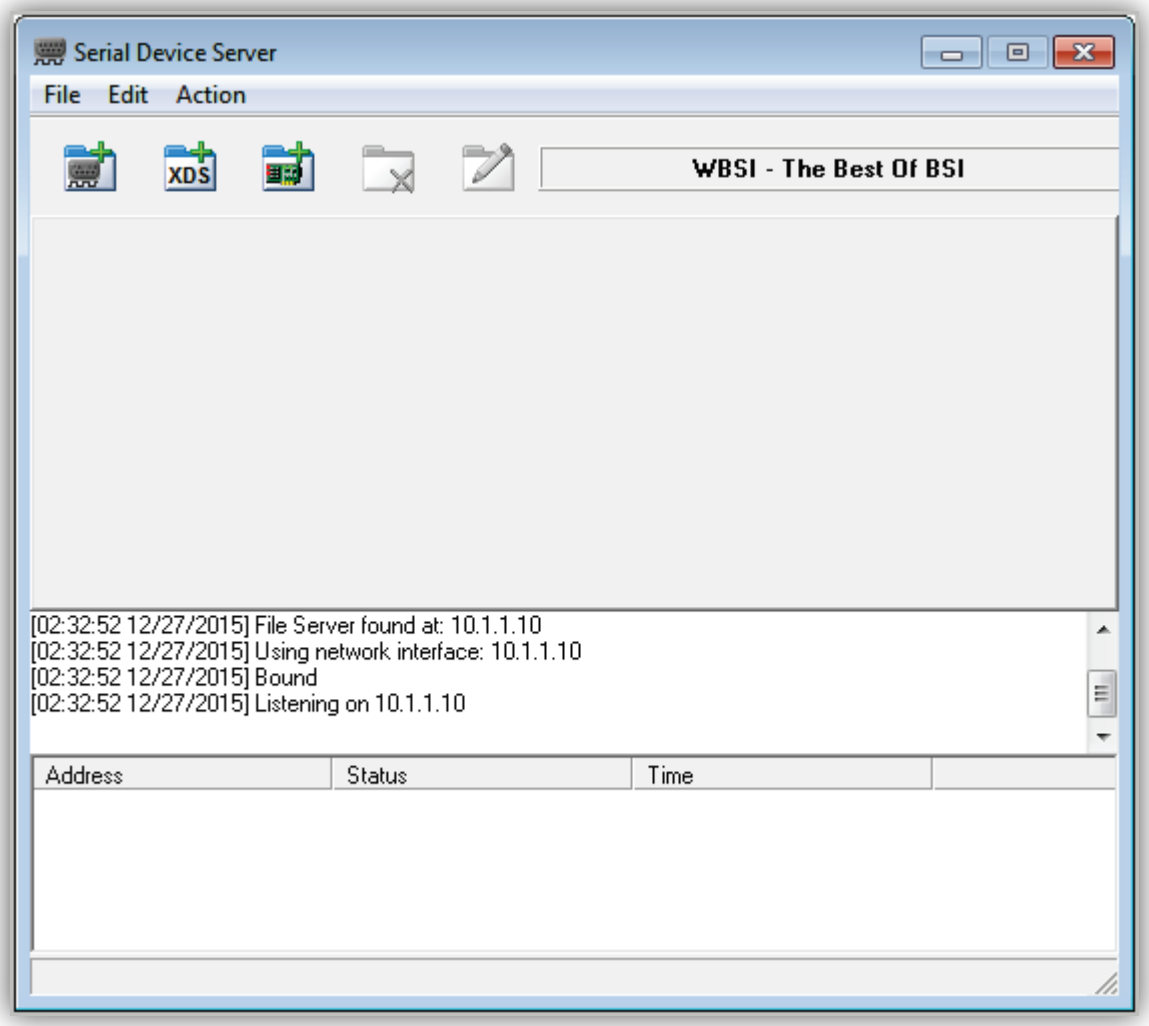
12.1 Starting the Serial Device Server Module

You must start the File Server module before you start the Serial Device Server module.

➢ **To start the Serial Device Server module**

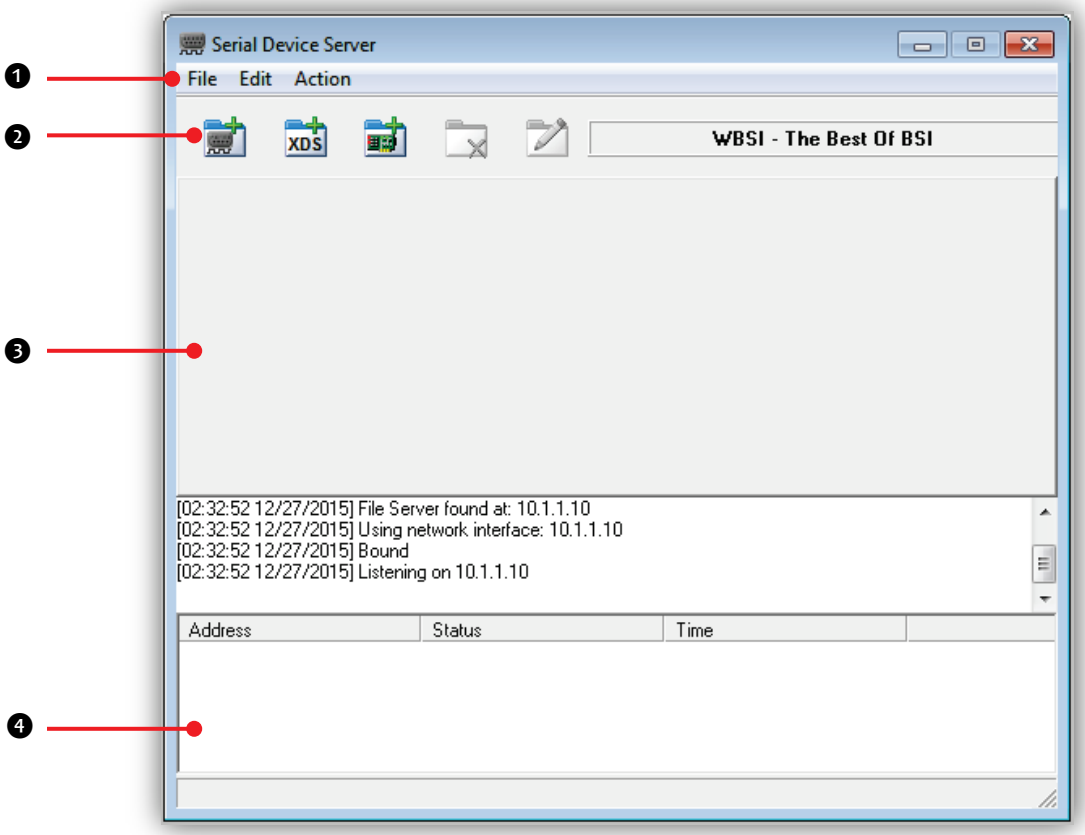
1. Start the File Server module (see section 3.1).
2. Click the Windows Start button and click **Programs > Broadcast Software > SerialServer**.

   A Serial Device Server window similar to the following appears.



12.2 Quick Tour

The following sections provide a quick tour of the Serial Device Server module interface.

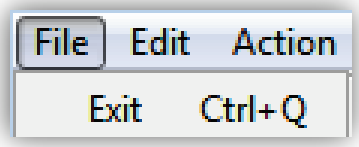


Number	Description
❶	Menu bar. See section 12.2.1.
❷	Tool bar. See section 12.2.2.
❸	Device tabs. See section 12.2.3.
❹	Action history. See section 12.2.4.

12.2.1 Menu Bar

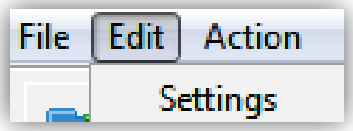
The menu bar appears at the top of the Serial Device Server window. The following sections describe the menu options.

12.2.1.1 File Menu



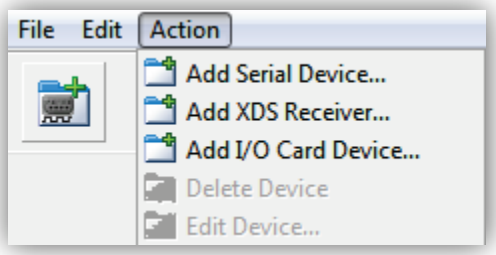
Exit = exits the Serial Device Server module.

12.2.1.2 Edit Menu



Settings = configures Serial Device Server module settings. See section 12.3.

12.2.1.3 About Menu



Add Serial Device = adds a new serial device profile. See section 12.4.1.

Add XDS Receiver = adds a new XDS receiver profile. See section 12.4.2.

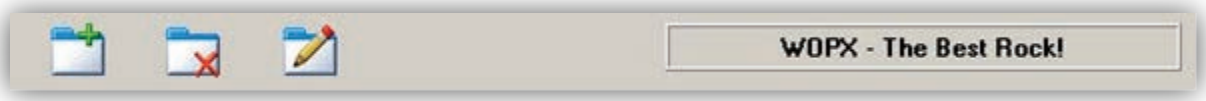
Add I/O Card Device = adds a new I/O card device profile. See section 12.4.3.

Delete Device = deletes a device profile. See section 12.6.

Edit Device = modifies the settings of a device profile. See section 12.5.

12.2.2 Tool Bar

The Serial Device Server module tool bar appears below the menu bar.



Moving the screen pointer over a tool displays the tool's function as a tooltip. For example:

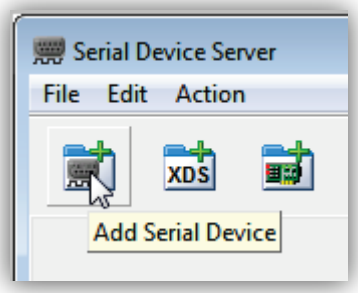


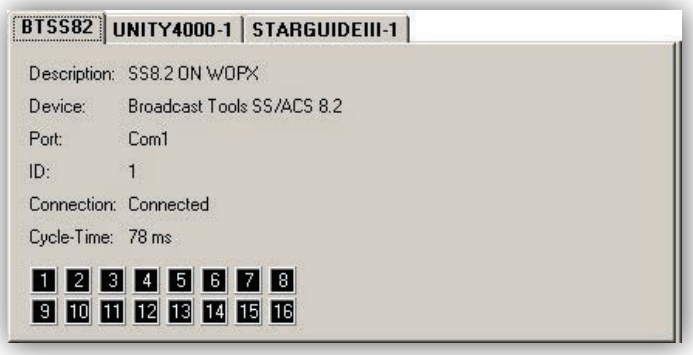
Table 12-1 describes the tools on the tool bar.

Table 12-1. Serial Device Server Module Tool Bar

Tool	Tool Name	Description
	Add Serial Device	Adds a new serial device profile. See section 12.4.1.
	Add XDS Receiver	Adds a new XDS Receiver profile. See section 12.4.2.
	Add I/O Card Device	Adds a new I/O card device profile. See section 12.4.3.
	Delete Device	Deletes a device profile. See section 12.6.

Tool	Tool Name	Description
	Edit Device	Modifies the settings of a device profile. See section 12.5.

12.2.3 Device Tabs



After you add devices to your Serial Device Server configuration, a tab appears for each device. The figure to the right shows a sample configuration of three devices.

Each tab shows device statistics that include the Description, Device type, Port, ID number, Connection status, and Cycle-Time for the device.

The closure grid shows the status of closures for the device. Some devices might not have closures and will not display the closure grid. When a closure is active, its grid block will be green for the duration of the closure.

12.2.4 Action History List

The bottom of the Serial Device Server module shows the action history list. This list shows the actions of all devices and commands from connected Audio Servers since the Serial Device Server module started.

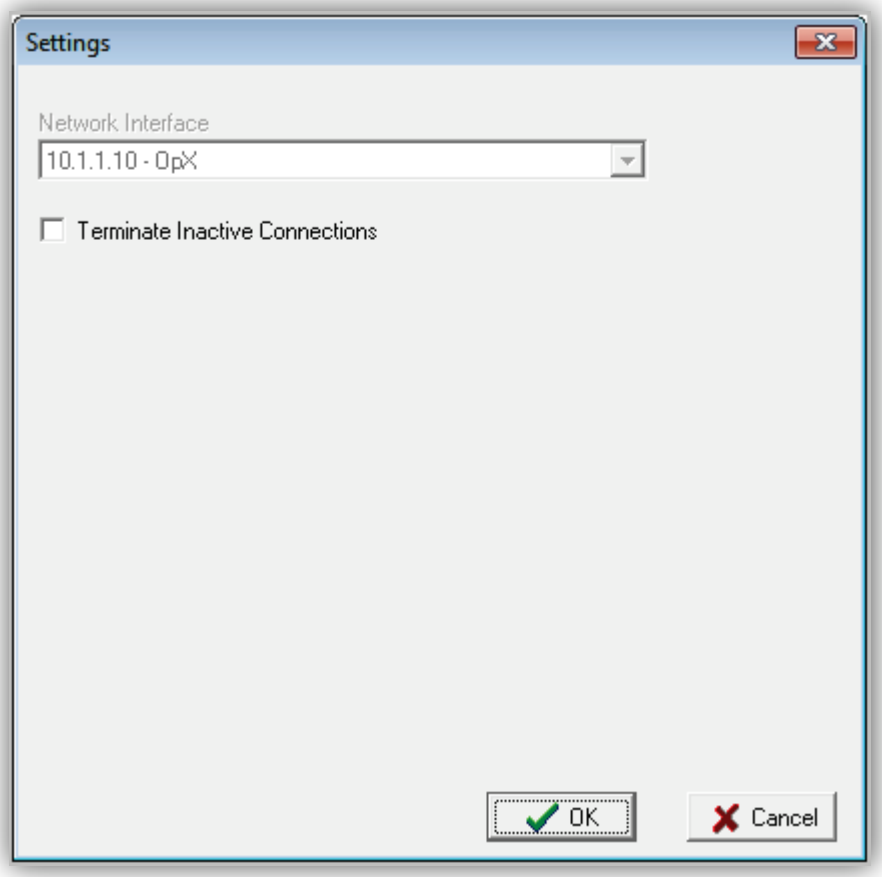
12.3 Configuring the Serial Device Server Module

Before you use the Serial Device Server module, you must configure its settings. After setting up the Serial Device Server, you add devices with which the module will communicate.

➢ **To configure the Serial Device Server module settings**

1. On the **Edit** menu, click **Settings**.

   The Settings dialog box appears.



2. Complete the fields in the dialog box (see Table 12-2).
3. Click **OK**.

Table 12-2. Fields in the Settings Dialog Box

Field	Description	Default
Network Interface	If the OpX system detects multiple NICs, this drop-down list allows you to select the NIC you want the Serial Device Server to use. If you have a single NIC on your machine, the Serial Device Server selects that NIC automatically, and the drop-down will be gray and unavailable.	10.1.1.10 – OpX Network
Terminate Inactive Connections	Check to terminate a connection from another OpX module.	Unchecked

12.4 Adding a New Profile

When you open the Serial Device Server module for the first time, there will be no device profiles. Using the buttons in the tool bar or the options in the **Action** menu, you can add profiles for serial devices, XDS receivers, and I/O Card devices.

12.4.1 Adding a Serial Device Profile

➢ **To add a profile for a serial device**

1. Click the **Add Serial Device** button, or click **Action > Add Serial Device.**

   The Serial Device dialog box appears.

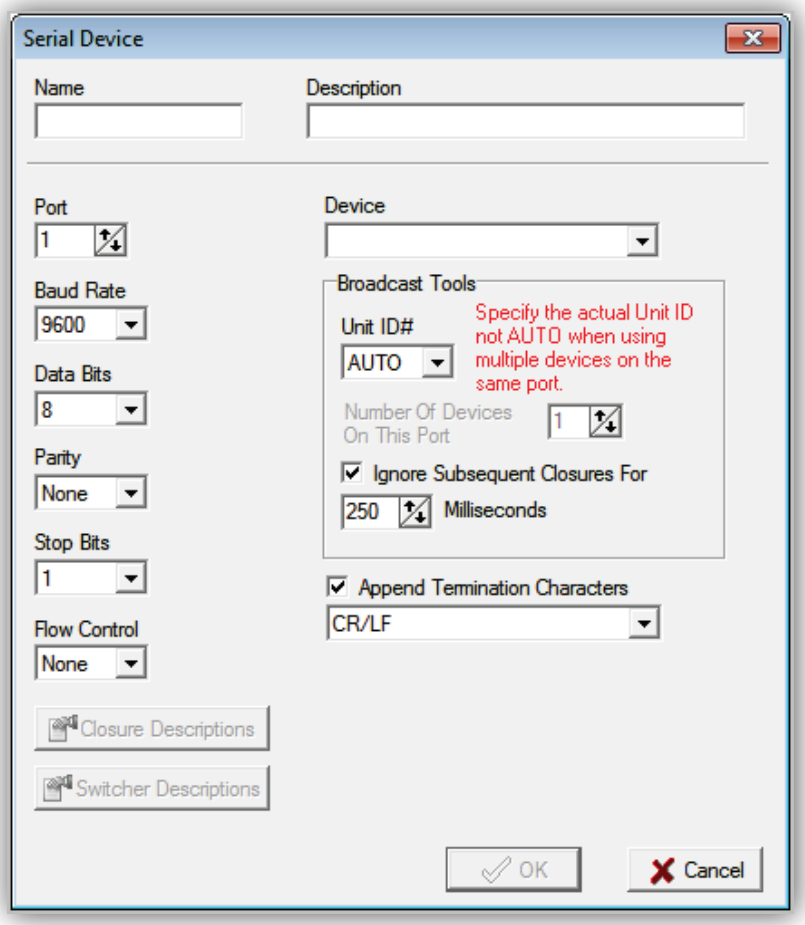


Figure 12-1. Serial Device Dialog Box for Serial Device

2. Complete the fields in the dialog box (see Table 12-3).
3. Click **OK**.

   A tab appears at the top of the Serial Device Server dialog box with the name of the device.

Table 12-3. Fields in the Serial Device Dialog Box (Serial Device)

Field	Description	Default
Name	Enter a short name to identify your device.	—
Description	Enter a more verbose description to make it easy to identify this device from others you might add.	—

Field	Description	Default
Device	Select your device. The following are built-in profiles you can select: • Broadcast Tools SS/ACS 8.2 • Broadcast Tools SS 16.4 • Broadcast Tools GPI-32 • Broadcast Tools SRC-8 III • Broadcast Tools 8x2 D/ev • Broadcast Tools SRC-16 • Broadcast Tools GPI-16 • XDS Receiver If your device is not listed, the "Raw Serial Device" option allows the output of serial data to the selected port using macros such as `SERIALOUT`. While this option does not support OpX built-in trigger, relay, or switcher functions, it is ideal for outputting serial data to a satellite receiver, or any other device that accepts ASCII serial commands.	—
Port	Select the port through which the OpX system will communicate with the device. Refer to the documentation for your device.	1
Baud Rate	Select the communication speed, data bits, parity, stop bits, flow control, and termination character required to communicate with the device. Refer to the documentation for your device.	9600
Data Bits		8
Parity		None
Stop Bits		1
Flow Control		None
Append Termination Characters		CR/LF
Unit ID#	Enter the ID number of the device with which the OpX will communicate. OpX requires your device to be set to a device ID number that does NOT have burst mode enabled. Unit ID 0 of most switchers automatically enables this function. Set your device to an ID other than 0 and enter that same ID number in this field. Refer to the documentation for your device. If only one device is connected to your selected serial port, accept the "AUTO" default. If multiple devices are configured, select a value corresponding to all connected devices.	AUTO
Number Of Devices On This Port	If this port is available, enter the number of devices with which OpX will communicate through the specified port.	1
Ignore Subsequent Closures For *n* Milliseconds	If you need the de-bounce feature, check this function and set a threshold in milliseconds. The number of milliseconds is case-specific, so you might have to try various values to find the one that suits your situation. If you do not need a de-bounce feature, uncheck this option.	Checked 250 milliseconds
Closure Descriptions	If Closures are applicable to your setup: 1. Click the Closure Descriptions button. The closure description dialog box appears (see Figure 12-2). 2. Change the descriptions in the Description field. 3. Click OK.	—
Switcher Descriptions	If switching is applicable to your setup: 1. Click the Switcher Descriptions button. The switcher description dialog box appears, with tabs for input and output channel names (see Figure 12-3). 2. Change the descriptions in the Description field. 3. Click OK.	—

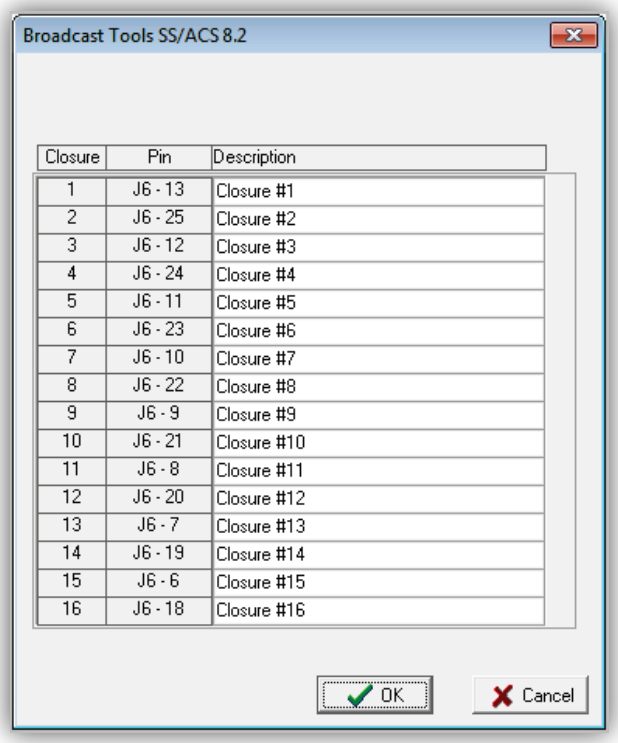


Figure 12-2. Closure Descriptions Dialog Box

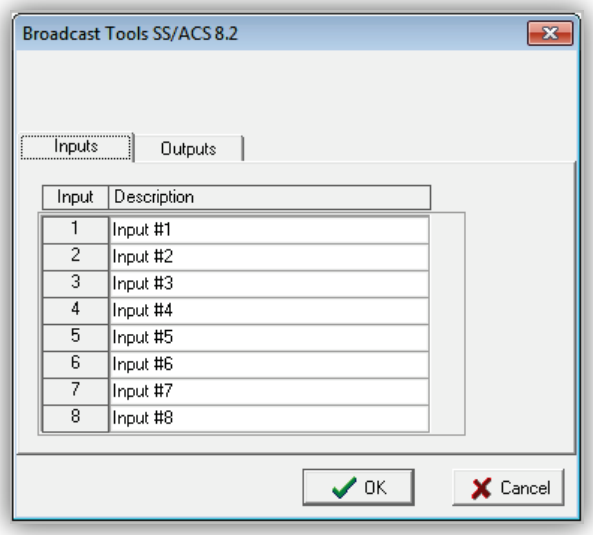


Figure 12-3. Switcher Descriptions Dialog Box

12.4.2 Adding an XDS Receiver Profile

➢ **To add a profile for an XDS receiver**

1. Click the **Add Serial Device**

button, or click **Action > Add XDS Receiver.**

   The Serial Device dialog box appears.

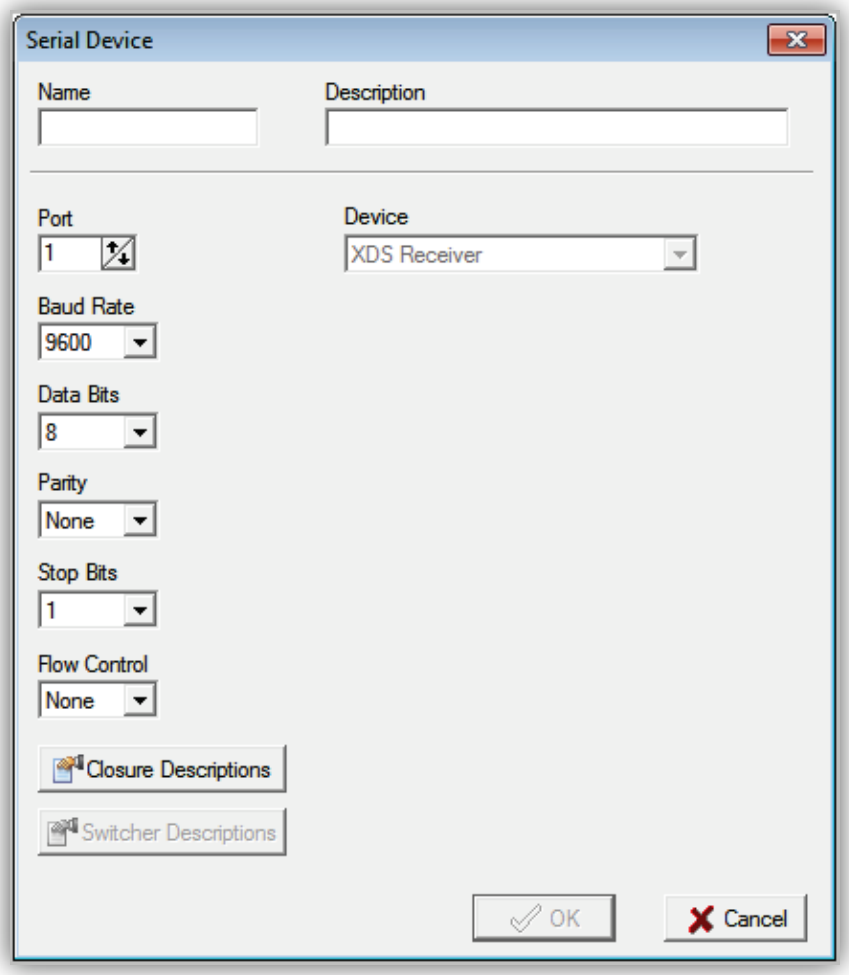


Figure 12-4. Serial Device Dialog Box for XDS Receiver

2. Complete the fields in the dialog box (see Table 12-4).
3. Click **OK**.

   A tab appears at the top of the Serial Device Server dialog box with the name of the device.

Table 12-4. Fields in the Serial Device Dialog Box (XDS Receiver)

Field	Description	Default
Name	Enter a short name to identify your device.	—
Description	Enter a more verbose description to make it easy to identify this device from others you might add.	—
Device	Read-only field that shows the XSD Receiver. You cannot change this value.	XSD Receiver
Port	Select the port through which the OpX system will communicate with the device. Refer to the documentation for your device.	1
Baud Rate	Select the communication speed, data bits, parity, stop bits, flow control, and termination character required to communicate with the device. Refer to the documentation for your device.	9600
Data Bits		8
Parity		None
Stop Bits		1
Flow Control		None
Closure Descriptions	If Closures are applicable to your setup: 1. Click the Closure Descriptions button. The closure description dialog box appears (see Figure 12-2 on page 336). 2. Change the descriptions in the Description field. 3. Click OK.	—
Switcher Descriptions	If switching is applicable to your setup: 1. Click the Switcher Descriptions button. The switcher description dialog box appears, with tabs for input and output channel names (see Figure 12-3 on page 336. 2. Change the descriptions in the Description field. 3. Click OK.	—

12.4.3 Adding a I/O Card Device Profile

➢ **To add a profile for a I/O card device**

1. Click the **Add I/O Card Device** button, or click **Action > Add I/O Card Device.**

   The I/O Card Device dialog box appears.

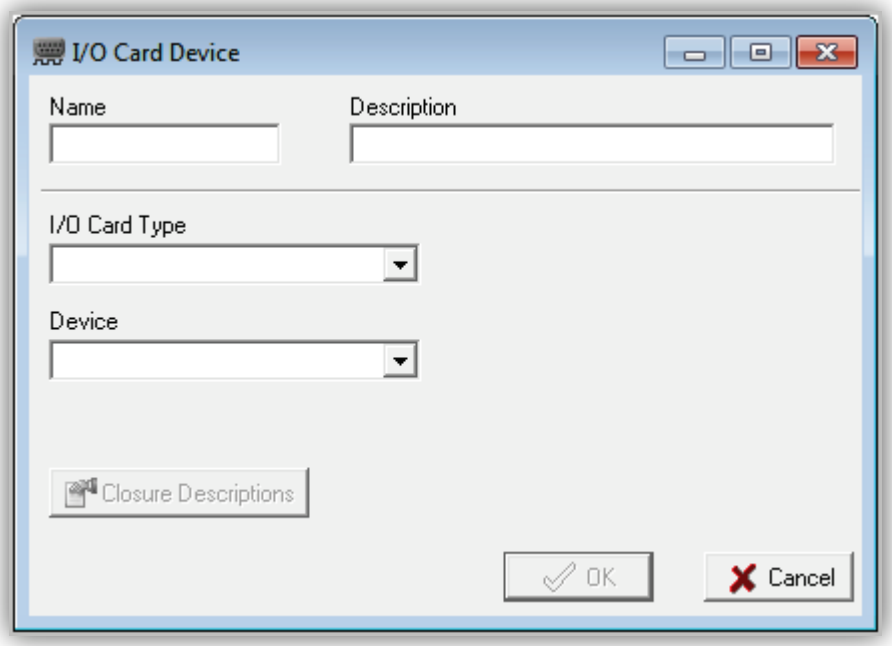


Figure 12-5. I/O Card Device Dialog Box for I/O Card Device

2. Complete the fields in the dialog box (see Table 12-5).
3. Click **OK**.

   A tab appears at the top of the Serial Device Server dialog box with the name of the device.

Table 12-5. Fields in the I/O Card Device Dialog Box (I/O Card Device)

Field	Description	Default
Name	Enter a short name to identify your device.	—
Description	Enter a more verbose description to make it easy to identify this device from others you might add.	—

Field	Description	Default
I/O Card Type	Select your device. The following are built-in profiles you can select: • Advantech 1756 • Sealevel 8004	—
Device	Select the device corresponding to the I/O card type you selected	—
Closure Descriptions	If Closures are applicable to your setup: 1. Click the Closure Descriptions button. The closure description dialog box appears (see Figure 12-2 on page 336). 2. Change the descriptions in the Description field. 3. Click OK.	—

12.5 Editing a Device Profile

There might be times when you need to edit device profiles. For example, you might need to change serial port settings, closure descriptions, or audio switcher input and output descriptions.

➢ **To edit a device profile**

1. In the Serial Device Server tool bar, click the tab of the serial device you want to edit.

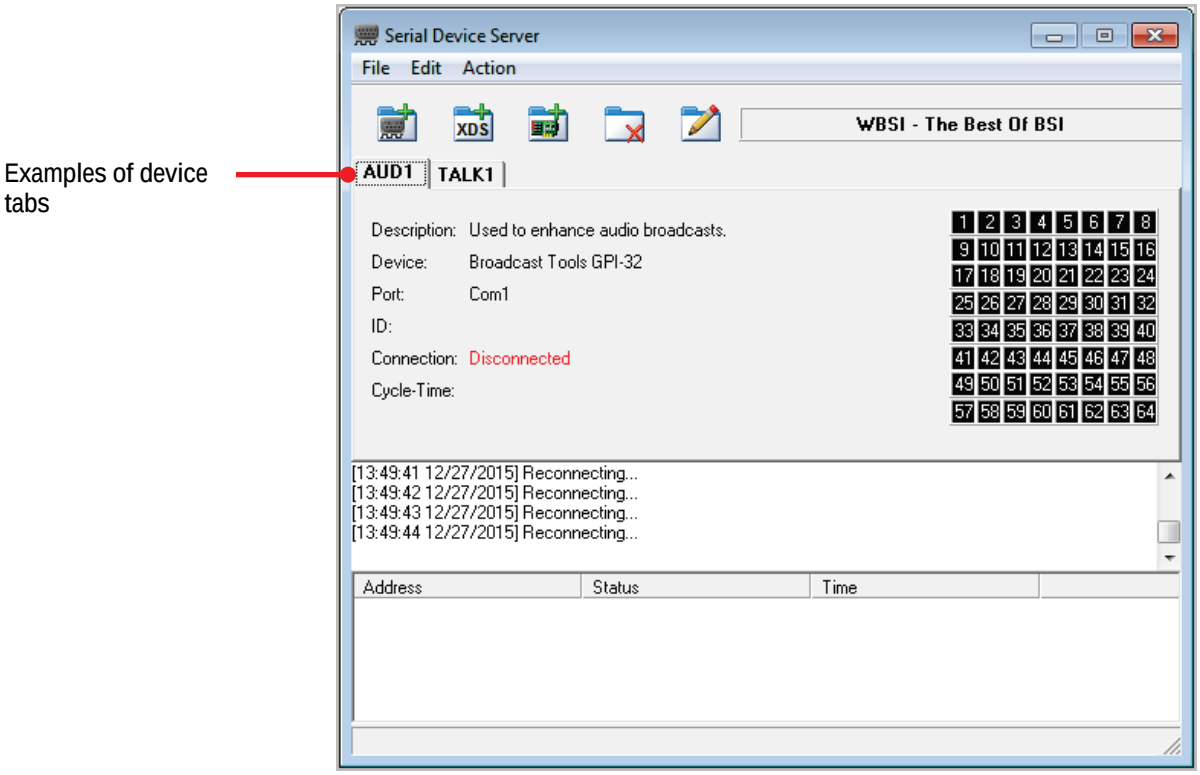


Figure 12-6. Examples of Device Tabs

2. Click the **Edit Device** button or click **Action > Edit Device**.

   The Serial Device dialog box appears, with the settings defined for that device.

3. Edit the settings as required.
4. When you finish, click the **OK** button.

12.6 Deleting a Device Profile

If you no longer need a serial device profile, you can delete it from the OpX system.

➢ **To delete a device profile**

1. In the Serial Device Server tool bar, click the tab of the serial device you want to delete (see Figure 12-6 on page 340).
2. Click the **Delete Device** button or click **Action > Delete Device**.

   A prompt asks whether you are sure you want to delete the device.

3. Click the **Yes** button to delete the device.

12.7 Using a Serial Server Device

After you configure your serial server devices in the OpX system, add the devices to your OpX Audio Servers (including the Audio Server on the same machine as your Serial Server is running) to have your Audio Servers use the devices. For instructions about adding serial server devices and other I/O devices to your OpX Audio Server, see Chapter 4.

13 Allow Stations Module

Topics:

- *Starting the Allow Stations Module (page 343)*
- *Quick Tour (page 345)*
- *Configuring the Allow Stations Module (page 347)*
- *Limiting Station Profiles (page 348)*

This chapter describes the OpX Allow Stations module.

The Allow Stations module permits the limitation of station profiles from being available to any OpX modules on the local machine.

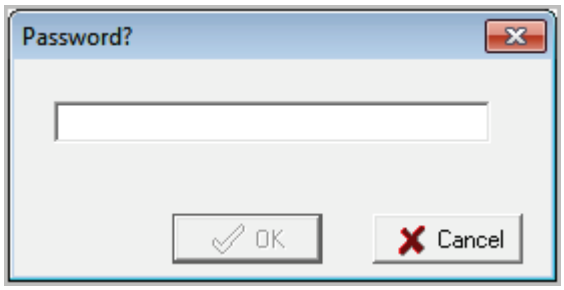
13.1 Starting the Allow Stations Module

You must start the File Server module before you start Allow Stations Module.

➢ **To start the Allow Stations Module**

1. Start the File Server module (see section 3.1).
2. Click the Windows Start button and click **Programs > Broadcast Software > Allow Stations**.

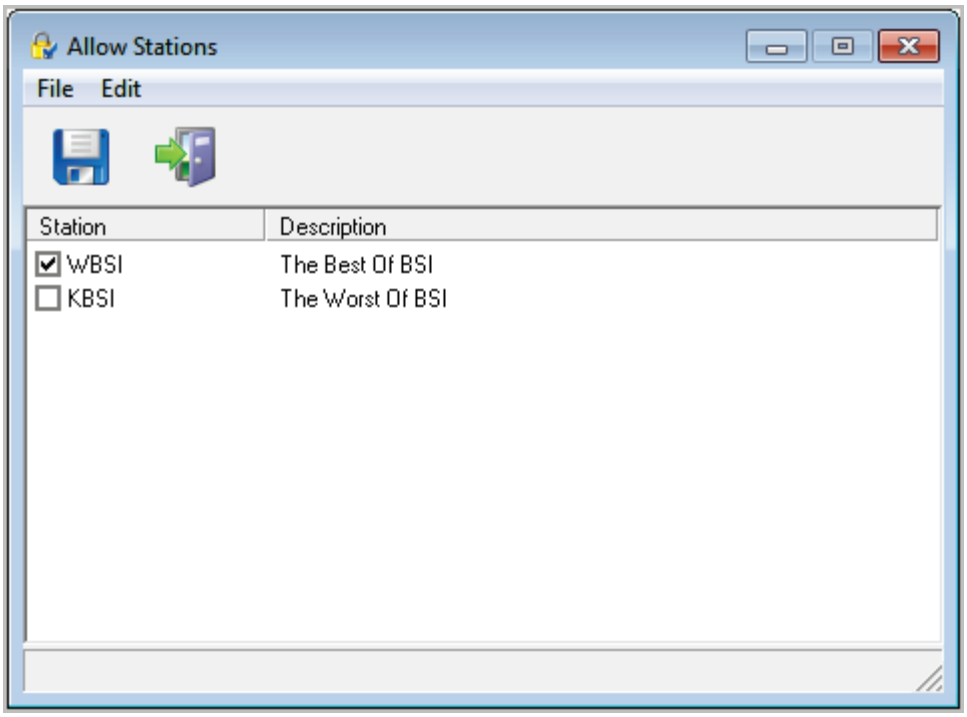
   You are prompted to enter a password.



3. In the field, type **password** (which is the default case-sensitive password), and then click **OK**.

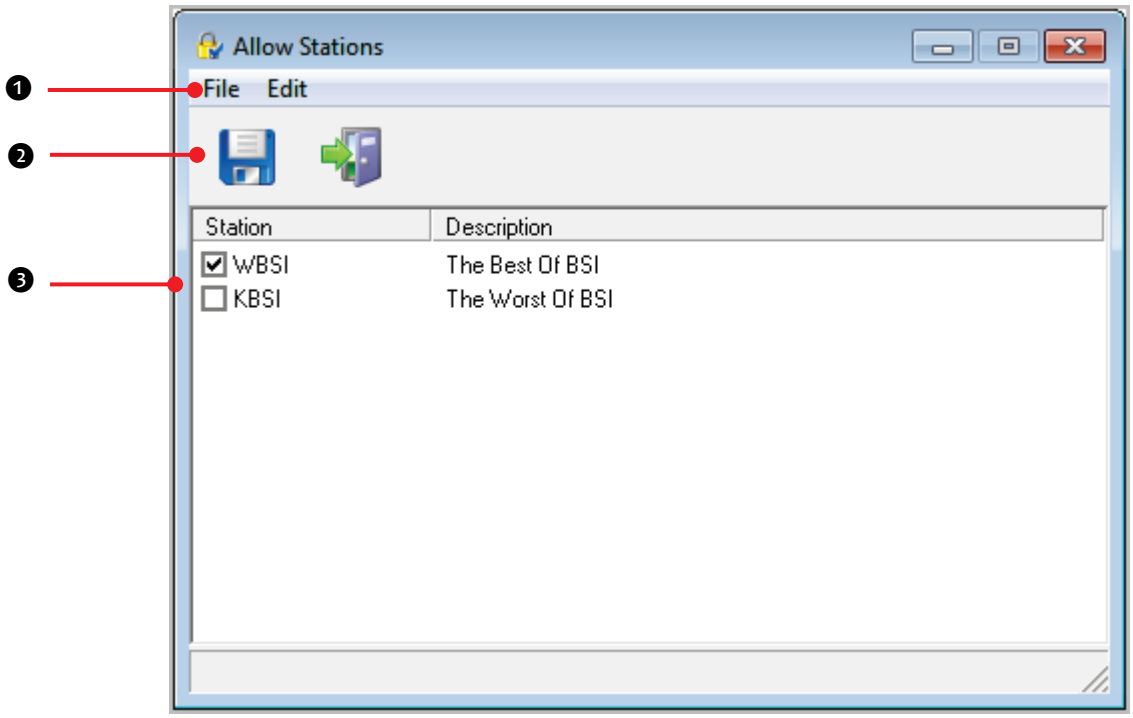
   An Allow Stations dialog box similar to the following appears

Note: You can change the default password using the **Settings** menu (see section 13.3).


Allow Stations
File
Edit
Station
Description
WBSI
The Best Of BSI
KBSI
The Worst Of BSI

13.2 Quick Tour

The following sections provide a quick tour of the Allow Stations module interface.

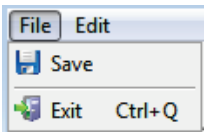


Number	Description
❶	Menu bar. See section 13.2.1.
❷	Tool bar. See section 13.2.2.
❸	Station list. See section 13.4.

13.2.1 Menu Bar

The menu bar appears at the top of the Mixer window. The following sections describe the menu options.

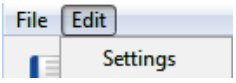
13.2.1.1 File Menu



Save = saves the allowed station configuration.

Exit = exits the Allow Stations module. If you have not saved your current configuration, you are prompted to save changes before exiting.

13.2.1.2 Edit Menu



Settings = allows you to configure the network interface, file server IP address, and password. See section 13.3.

13.2.2 Tool Bar

The Mixer tool bar appears below the menu bar.

Table 13-1 describes the tools on the tool bar.

Table 13-1. Allow Stations Tool Bar

Tool	Tool Name	Description
	Save	Saves the allowed station configuration.
	Exit	Exits you from the Allow Stations module. If you have not saved your current configuration, you are prompted to save changes before exiting.

13.3 Configuring the Allow Stations Module

Configuration of the Import – Merge module is critical. In particular, the import format settings must be accurate for import operations to work properly. The following sections describe how to configure the Import – Merge module.

➢ **To configure the Allow Stations module settings**

1. On the **Edit** menu, click **Settings**.

   The Settings dialog box appears.

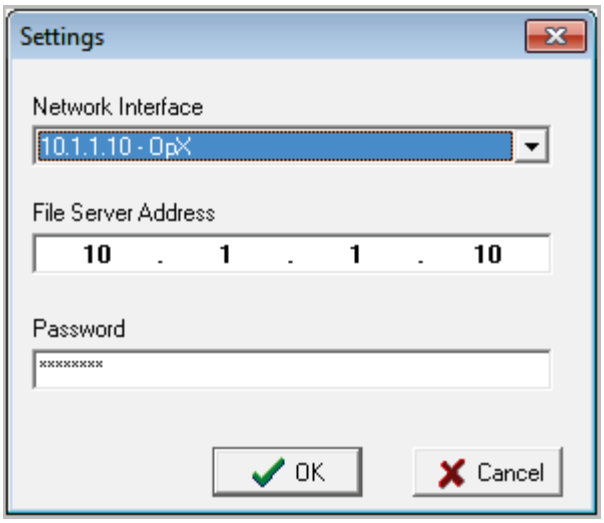


Figure 13-1. Settings Dialog Box

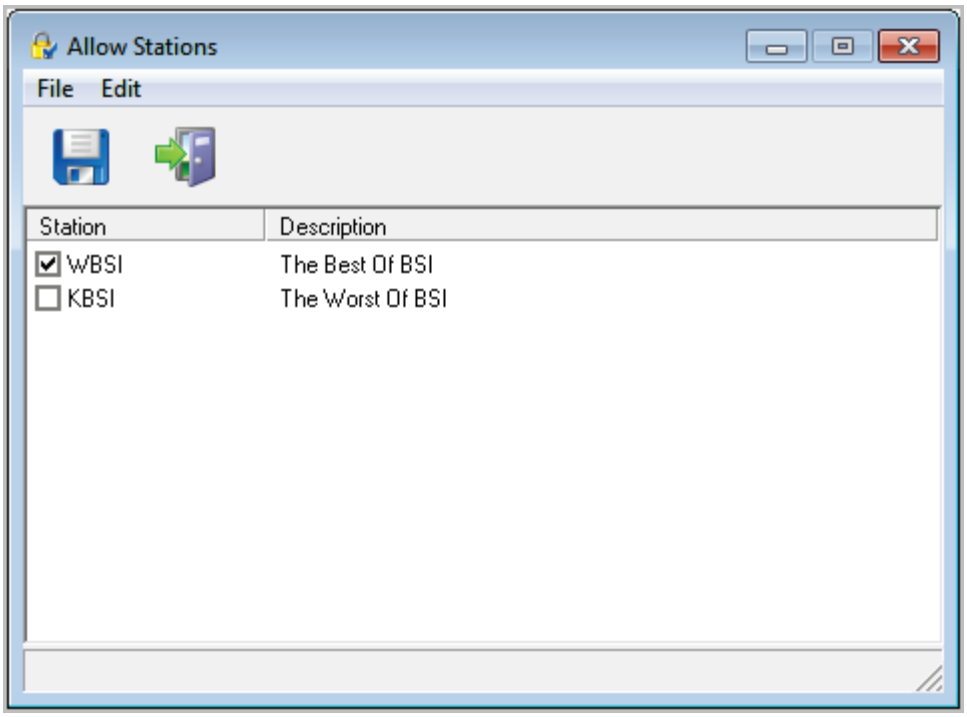
2. Complete the fields in the dialog box (see Table 13-2).
3. When you finish, click the **OK** button.

Table 13-2. Allow Stations Module Settings

Field	Description	Default
Network Interface	If the OpX system detects multiple NICs, this drop-down list allows you to select the NIC you want the Serial Device Server to use. If you have a single NIC on your machine, the Serial Device Server selects that NIC automatically, and the drop-down will be gray and unavailable.	10.1.1..10 - OpX
File Server Address	IP address of the file server..	10.1.1.10
Password	Case-sensitive password used to log in to the Allow Stations module.	—

13.4 Limiting Station Profiles

The Audio Stations window shows all of the stations associated with the IP addresses entered in the Settings dialog box (see section 13.3). Check boxes in front of each station allow you to limit station profiles from being available to any OpX modules on the local machine.



- **To limit station profiles**

1. Check the station so an X appears in the check box in front of the station.

- **To not limit station profiles**

1. Uncheck the station so the X does not appear in the check box.

14 FTP Server Module

Topics:

- *Starting the FTP Server Module (page 351)*
- *Quick Tour (page 352)*
- *Configuring the FTP Server Module (page 357)*
- *Starting and Stopping the FTP Server (page 357)*

This chapter describes the OpX FTP Server module.

The FTP Server module is responsible for transferring files to the audio servers.

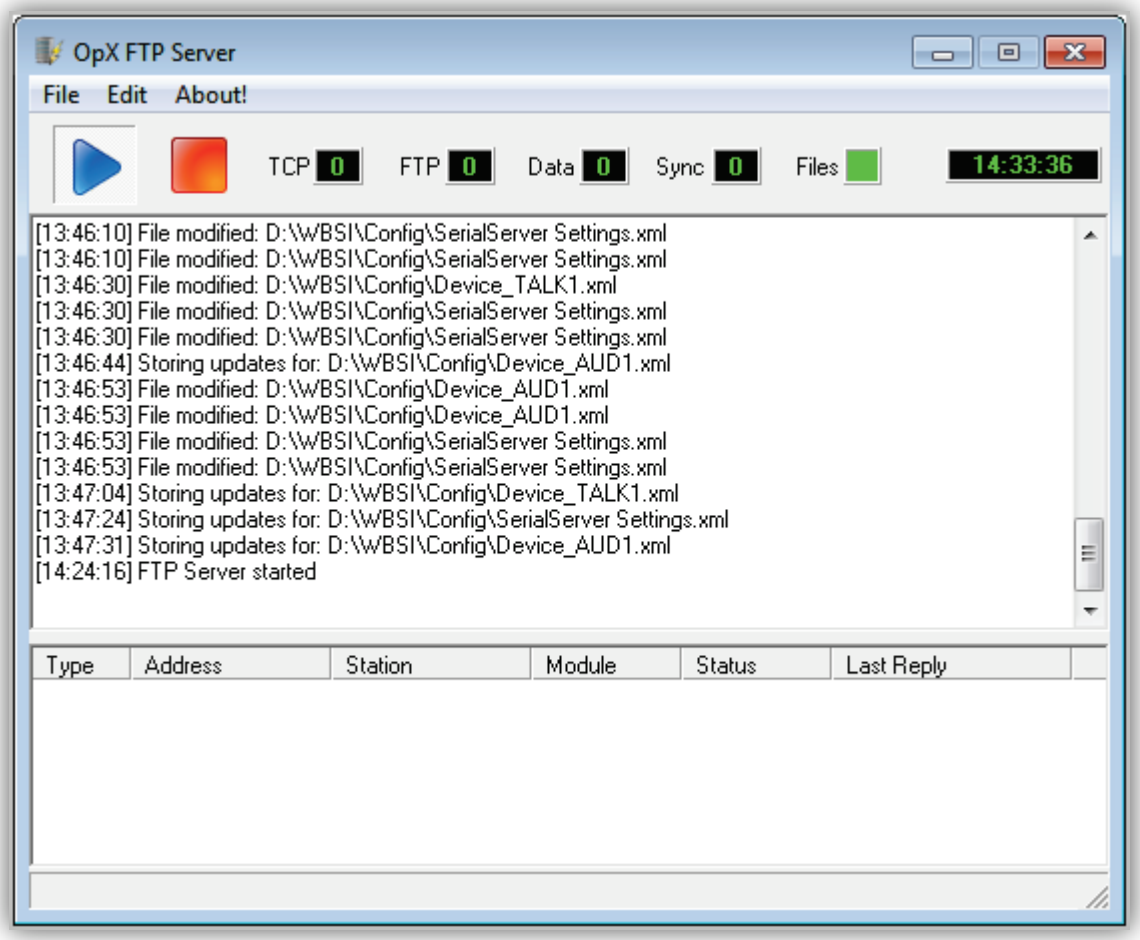
14.1 Starting the FTP Server Module

You must start the File Server module before you start the FTP Server module.

➢ **To start the FTP Server module**

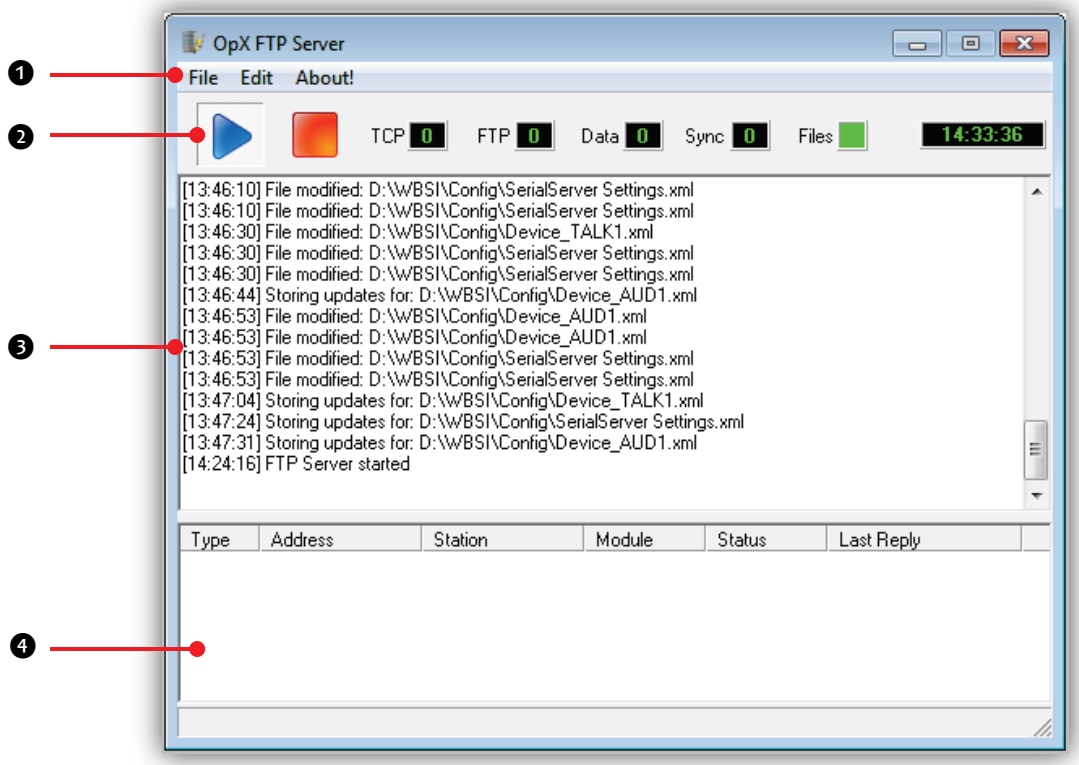
1. Start the File Server module (see section 3.1).
2. Click the Windows Start button and click **Programs > Broadcast Software > OpX FTP Server**.

   An OpX FTP Server window similar to the following appears.



14.2 Quick Tour

The following sections provide a quick tour of the FTP Server module interface.

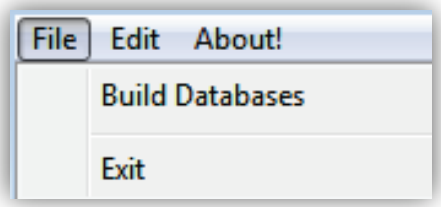


Number	Description
❶	Menu bar. See section 14.2.1.
❷	Tool bar. See section 14.2.2.
❸	FTP server status. See section 14.2.3.
❹	FTP server status list. See section 14.2.4.

14.2.1 Menu Bar

The menu bar appears at the top of the FTP Server window. The following sections describe the menu options.

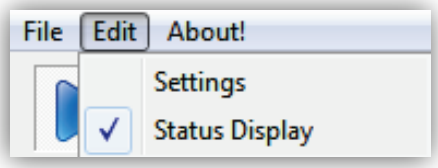
14.2.1.1 File Menu



Build Databases = rebuilds the FTP Server database.

Exit = exits the FTP Server module.

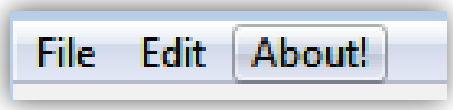
14.2.1.2 Edit Menu



Settings = configures FTP Server module settings. See section 14.3.

Status Display = shows (checked) or hides (unchecked) the status display.

14.2.1.3 About Menu



Opens a window that shows the version and build date of the FTP Server module you are running. This window also shows the amount of memory, virtual memory being used, and the amount of time that the FTP Server has been running. See Figure 14-1 for an example. To close the window, click **OK**.

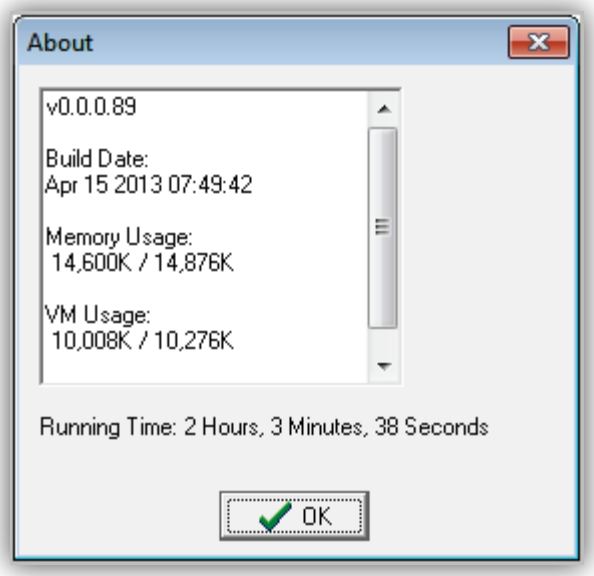


Figure 14-1. Example of About Information

14.2.2 Tool Bar

The FTP Server module tool bar appears below the menu bar.

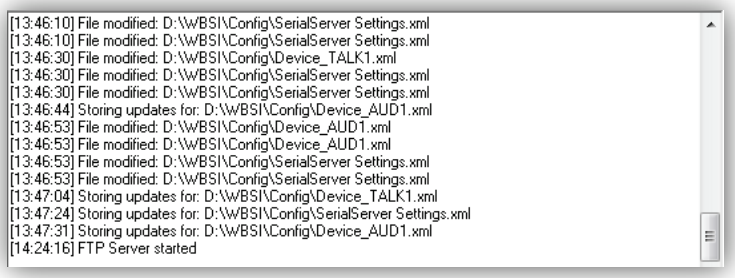
Table 14-1describes the tools on the tool bar.

Table 14-1. FTP Server Module Tool Bar

Tool	Tool Name	Description
	Start FTP Server	Starts the OpX FTP server. See section 14.4.
	Stop FTP Server	Stops the OpX FTP server. See section 14.4
	TCP	Shows the number of files transferred via TCP.
	FTP	Shows the number of files transferred via FTP.
	Data	Shows the number of pending database updates.
	Sync	Shows the number of files remaining to be synchronized between the FTP Server module and the File Sync module.
	Files	A color-coded field that shows the status of the transfers. • Green = normal operation. • Red = problem with transfers.
	Clock	Shows the amount of time that the OpX FTP server has been running.

14.2.3 FTP Server Status

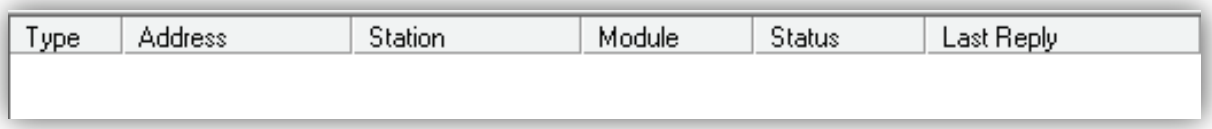
The FTP Server status shows any activity on the FTP Server module, such as files that are being retrieved and the status of the FTP Server itself.



.

14.2.4 FTP Server Status List

The bottom of the FTP Server module shows the FTP server status list. This list shows status of various connections to the FTP Server module.



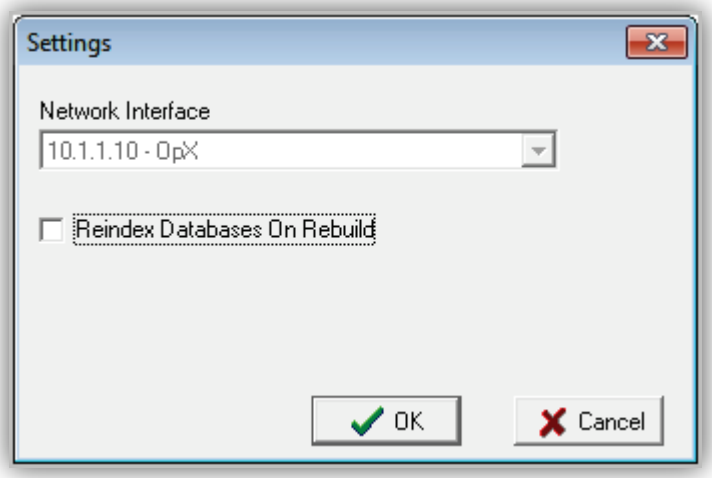
14.3 Configuring the FTP Server Module

Before you use the FTP Server module, you must configure its settings. After setting up the FTP Server, you add devices with which the module will communicate.

➢ **To configure the FTP Server module settings**

1. On the **Edit** menu, click **Settings**.

   The Settings dialog box appears.



2. Complete the fields in the dialog box (see Table 14-2).
3. Click **OK**.

Table 14-2. Fields in the Settings Dialog Box

Field	Description	Default
Network Interface	If the OpX system detects multiple NICs, this drop-down list allows you to select the NIC you want the FTP Server to use. If you have a single NIC on your machine, the FTP Server selects that NIC automatically, and the drop-down will be gray and unavailable.	10.1.1.10 – OpX
Reindex Database On Rebuild	Do not change the default setting unless otherwise instructed by BSI support.	Unchecked

14.4 Starting and Stopping the FTP Server

➢ **To start the OpX FTP server**

1. Click the **Start FTP Server** button

   A message in the FTP server status list shows that the FTP server started. If this message does not appear, check the FTP server settings (see section 14.3).

➢ **To stop the OpX FTP server**

1. Click the **Stop FTP Server** button

   A message in the FTP server status list shows that the FTP server stopped. If this message does not appear, check the FTP server settings (see section 14.3).

15 UMix

Topics:

- *Starting UMix (page 360)*
- *Quick Tour (page 361)*
- *Creating Mixer Layouts (page 367)*
- *Opening Mixer Layouts (page 369)*

This chapter describes UMix.

UMix is a virtual mixer used for incoming audio feeds from satellites or internet streams.

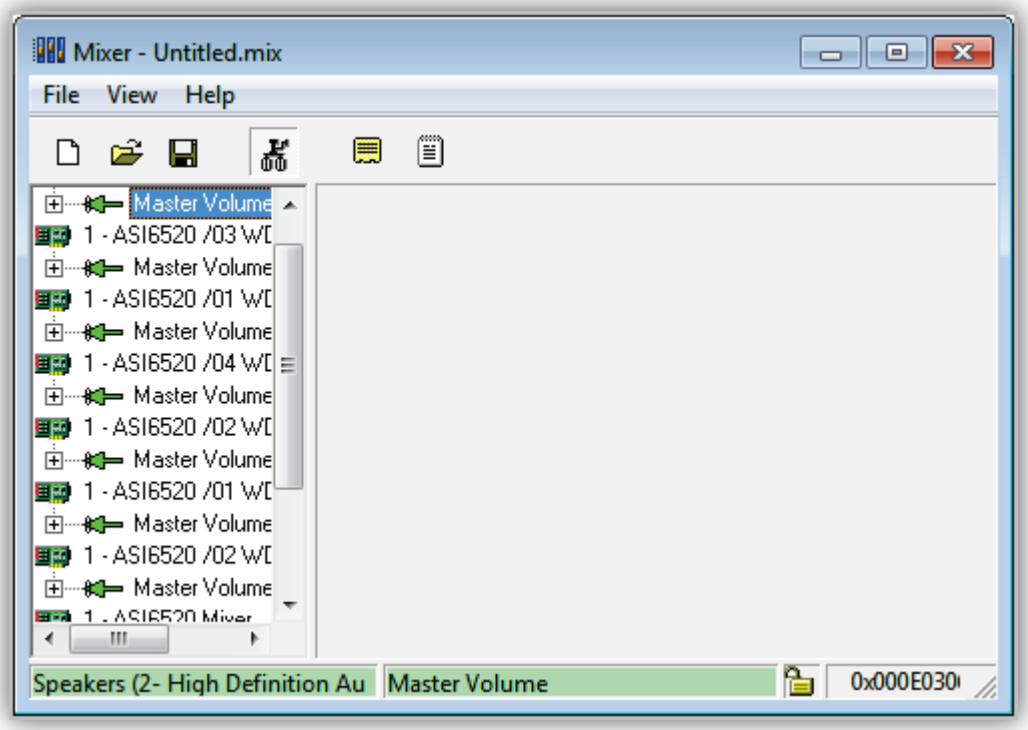
15.1 Starting UMix

You must start the File Server module before you start UMix.

➢ **To start UMix**

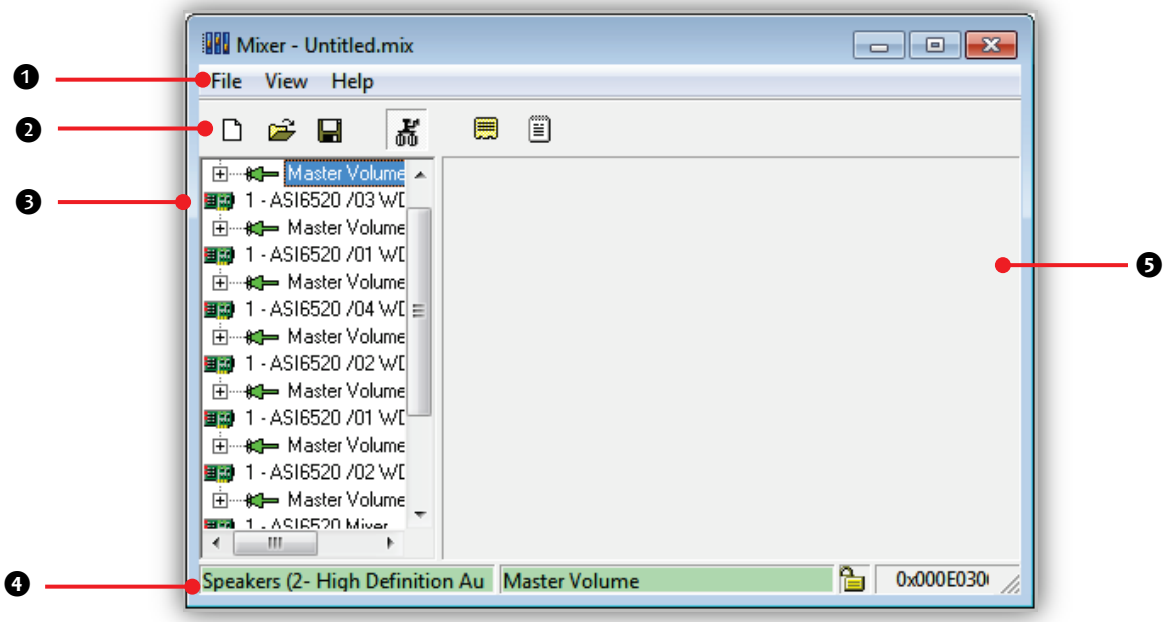
2. Start the File Server module (see section 3.1).
3. Click the Windows Start button and click **Programs > Broadcast Software > Mixer**.

   A Mixer window similar to the following appears.



15.2 Quick Tour

The following sections provide a quick tour of the Mixer interface.

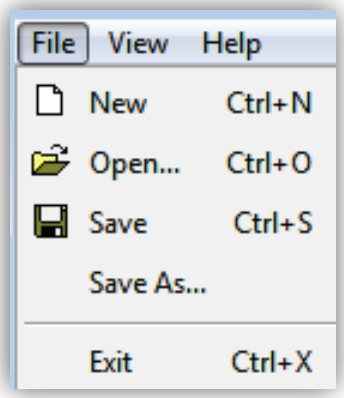


Number	Description
❶	Menu bar. See section 15.2.1.
❷	Tool bar. See section 15.2.2.
❸	Item list. See section 15.2.3.
❹	Status bar. See section 15.2.4
❺	Workspace. See section 15.2.5.

15.2.1 Menu Bar

The menu bar appears at the top of the Mixer window. The following sections describe the menu options.

15.2.1.1 File Menu



New = creates a new mixer layout,

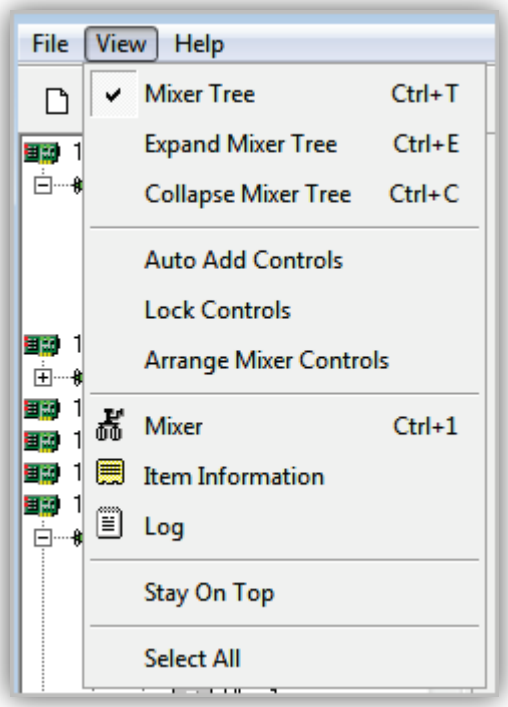
Open = opens an existing mixer layout.

Save = saves a mixer layout under its current name.

Save As = saves a mixer layout under a different name and/or location.

Exit = exits the Mixer.

15.2.1.2 View Menu



Mixer Tree = shows (checked) or hides (unchecked) the mixer tree in the left pane of the Mixer window.

Expand Mixer Tree = expands all subitems in the mixer tree.

Collapse Mixer Tree = hides all subitems in the mixer tree.

Auto Add Controls = adds mixer controls in the workspace.

Lock Controls = locks or unlocks mixer controls. When locked, the mixer controls cannot be changed. Clicking this option toggles the lock icon on the status bar between locked and unlocked.

Arrange Mixer Controls = arranges mixer controls in the workspace.

Mixer = shows mixers in the workspace.

Item Information = shows item information

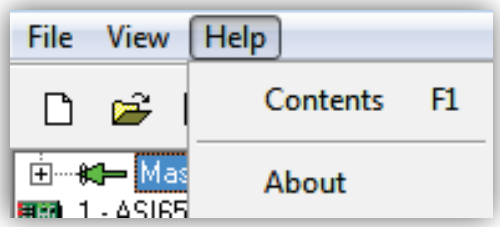
in the workspace. If you prefer to view item information as a popup, right-click the item in the item list and click **Item Info**.

Log = shows log information in the workspace.

Stay On Top = keeps the Mixer on top of other windows on the Desktop.

Select All = selects all mixer controls in the workspace.

15.2.1.3 Help Menu



About = opens a window that shows the build date of the Mixer you are running. See Figure 15-1 for an example. To close the window, click **OK**.

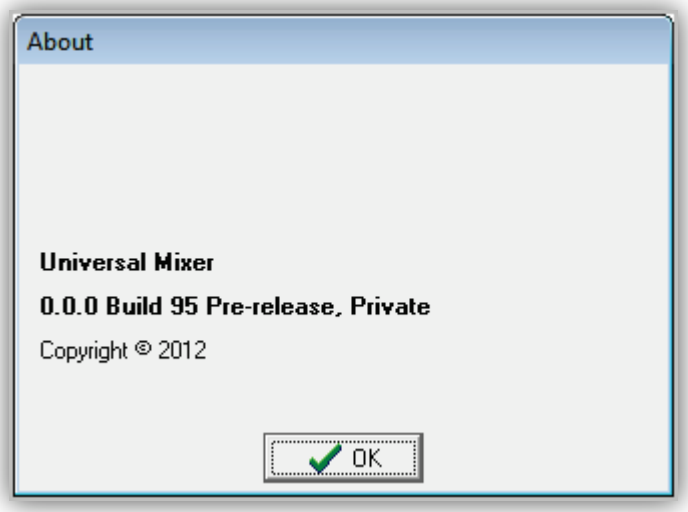


Figure 15-1. Example of About Information

15.2.2 Tool Bar

The Mixer tool bar appears below the menu bar.

Moving the screen pointer over a tool displays the tool's function as a tooltip. For example:

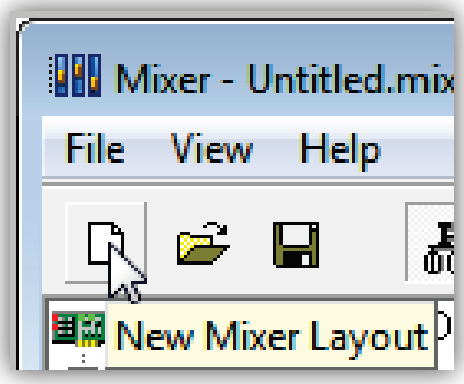


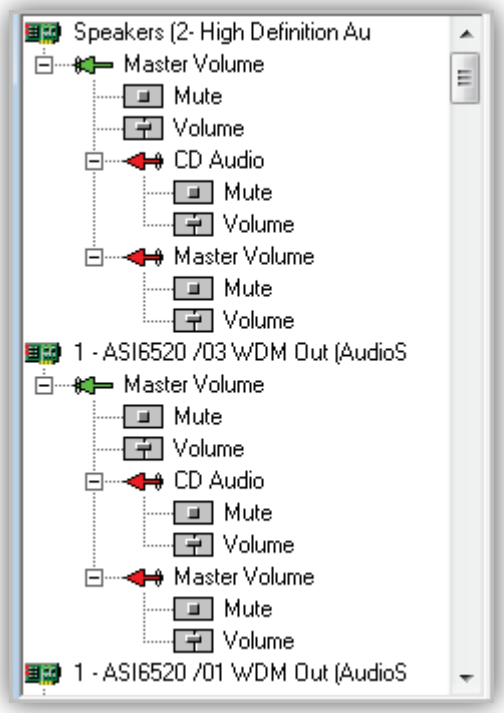
Table 15-1 describes the tools on the tool bar.

Table 15-1. Mixer Tool Bar

Tool	Tool Name	Description
	New Mixer Layout	Creates a new mixer layout.
	Open Mixer Layout	Opens an existing mixer layout.
	Save Mixer Layout	Saves the current mixer layout.
	Mixer	Shows mixers in the workspace.

Tool	Tool Name	Description
	Item Information	Shows item information in the workspace.
	Log	Shows log information in the workspace.

15.2.3 Item List

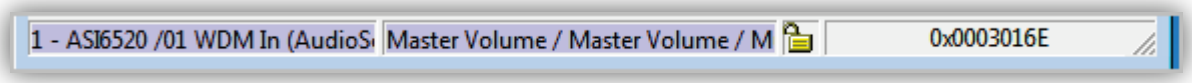


The item list shows the components you can add to your mixer layouts. Plus and minus signs allow you to expand or collapse the items shown. You can also use **Expand Mixer Tree** and **Collapse Mixer Tree** in the **View** menu to expand or collapse items.

When you click an item in the item list, a 1-line description of the item appears in the status bar.

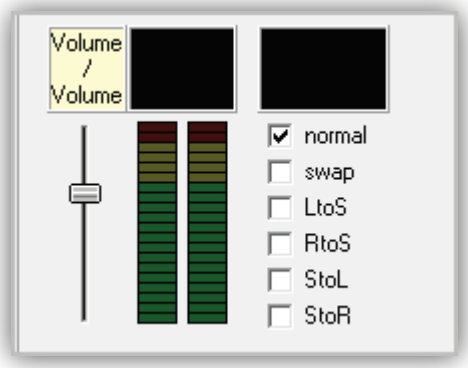
15.2.4 Status Bar

The status bar shows a 1-line description about the item selected in the item list, along with the item's hexadecimal value. An icon between the description and hex value shows whether the item is locked or unlocked. You can click this icon to lock or unlock the selected item.



15.2.5 Workspace

The workspace is the area where the items in your mixer layouts appear. If you use the **View** menu to display item information or log, that information appears in the workspace.

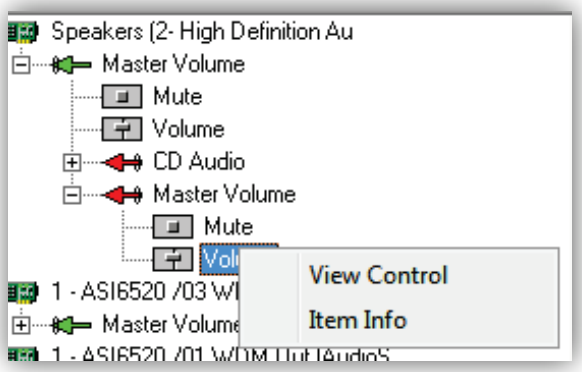


15.3 Creating Mixer Layouts

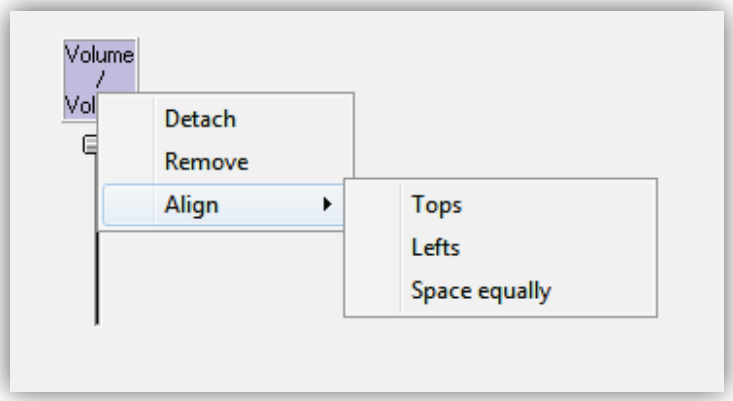
➢ **To create a new mixer layout**

1. Click the **New Mixer Layout** icon on the menu bar or click **File > New**.
2. Use the following steps to add volume controls, peak meters, and channel mode indicators to your mixer layout.
   – Expand the item list in the left pane, and then drag and drop items from the left pane onto the workspace.
   – On the **View** menu, click **Auto Add Controls** to add six sets of volume controls at a time to the workspace.

Tip: Before you drag items from the item list, right-click an item in the list and then use the **View Control** and **Item Info** options to make sure you drag the appropriate item to the workspace.



3. After the appropriate items appear in the workspace, you can right-click an item to detach, remove, or align it.



4. If you added volume controls, adjust the volume levels for each control in the workspace.
5. If you added channel mode indicators, check the indicators you want to monitor:

6. When you are satisfied with your layout, click the **Save** icon on the menu bar or click **File > Save**. (Or click **File > Save As** to save the layout under a different name and/or location.)

15.4 Opening Mixer Layouts

➢ **To open a mixer layout that you created previously**

1. Click the **Open** icon on the menu bar or click **File > Open**.

   The Open Picture dialog box appears.

2. In the Picture dialog box, go to the location where the mixer layout is located, and then click the layout and click **Open**.

   The mixer layout appears in the workspace.

16 Data Repeater Module

Topics:

- *Starting the Data Repeater Module (page 371)*
- *Quick Tour (page 372)*
- *Working with Data Repeaters (page 376)*
- *Changing the Network Interface and Port (page 382)*
- *Starting and Stopping the Data Repeater (page 382)*

This chapter describes the OpX Data Repeater module.

The Data Repeater module takes the PAD data output from the Audio Server, reformats it if needed, and sends it to multiple destinations, such as to RDS or stream encoders.

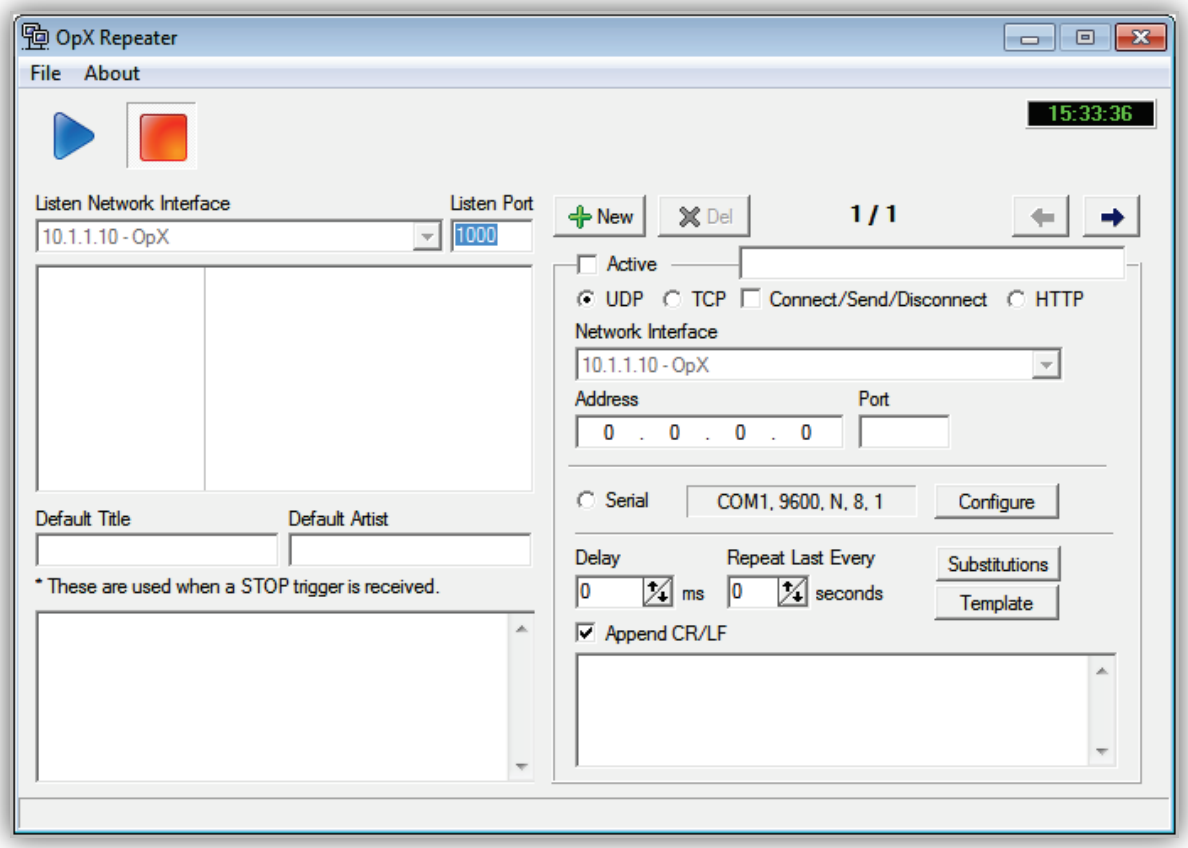
16.1 Starting the Data Repeater Module

You must start the File Server module before you start the Data Repeater module.

➢ **To start the Data Repeater module**

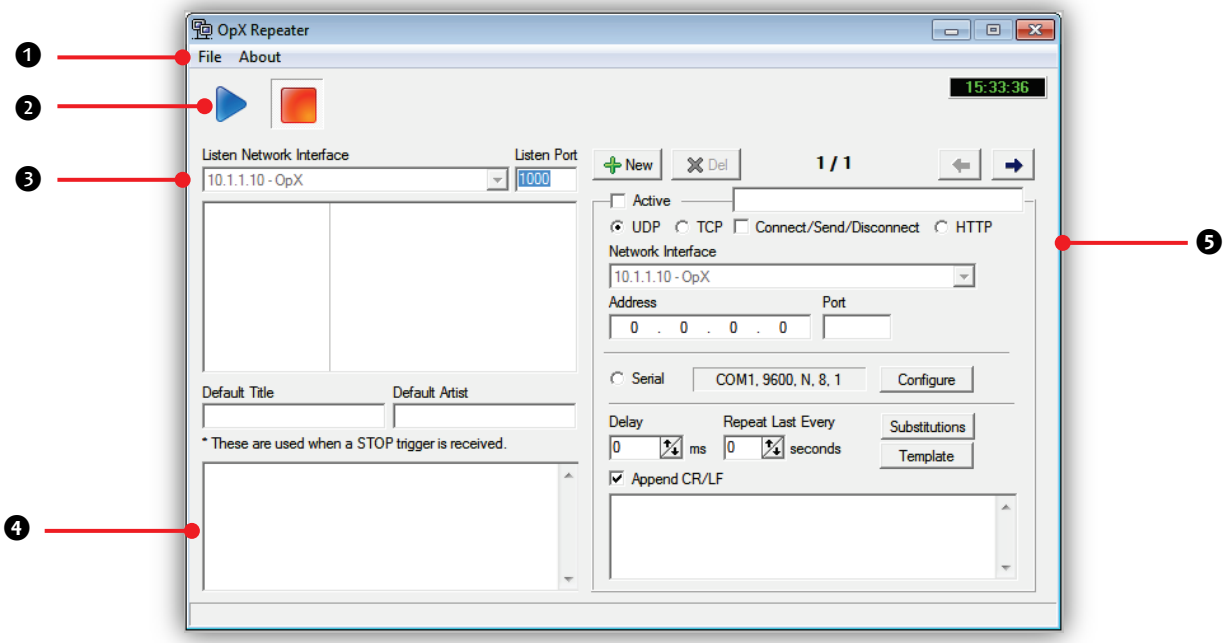
1. Start the File Server module (see section 3.1).
2. Click the Windows Start button and click **Programs > Broadcast Software > OpX Repeater**.

   An OpX Repeater window similar to the following appears.



16.2 Quick Tour

The following sections provide a quick tour of the Data Repeater module interface.

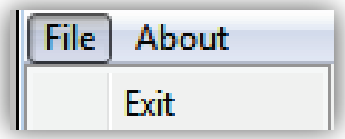


Number	Description
❶	Menu bar. See section 16.2.1.
❷	Tool bar. See section 16.2.2.
❸	Data repeater settings. See section 16.2.3.
❹	Data repeater status list. See section 16.2.4.
❺	Data repeater parameters. See section 16.3.

16.2.1 Menu Bar

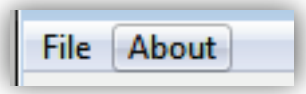
The menu bar appears at the top of the Data Repeater window. The following sections describe the menu options.

16.2.1.1 File Menu



Exit = exits the Data Repeater module.

16.2.1.2 About Menu



Opens a window that shows the version and build date of the Data Repeater module you are running. This window also shows the amount of memory, virtual memory being used, and the amount of time that the data repeater has been running. See Figure 16-1 for an example. To close the window, click **OK**.

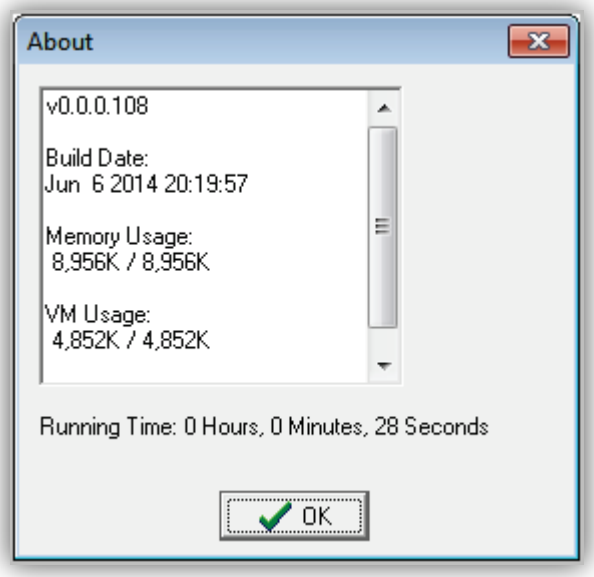
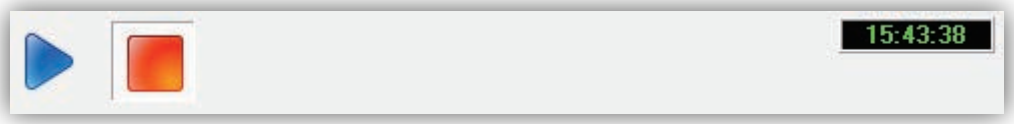


Figure 16-1. Example of About Information

16.2.2 Tool Bar

The Data Repeater module tool bar appears below the menu bar.



Moving the screen pointer over a tool displays the tool's function as a tooltip. For example:

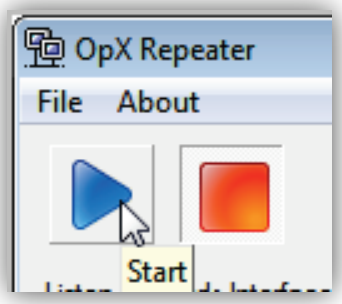
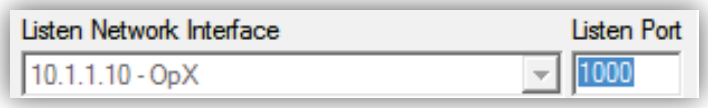


Table 14-1 describes the tools on the tool bar.

Table 16-1. Data Repeater Module Tool Bar

Tool	Tool Name	Description
	Start	Starts the Data Repeater. See section 14.4.
	Stop	Stops the Data Repeater. See section 14.4
	Clock	Shows the amount of time that the Data Repeater has been running.

16.2.3 Data Repeater Interface and Port



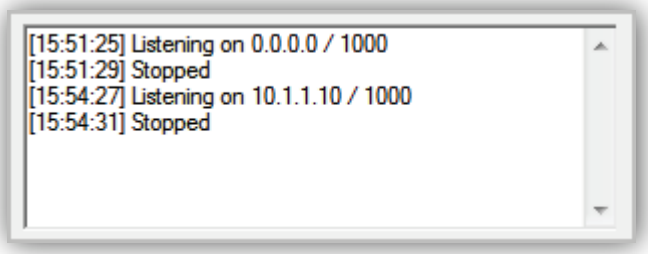
The **Listen Network Interface** and **Listen Port** fields show the IP address and port that the current data repeater is using to communicate.

If the OpX system detects multiple NICs, this drop-down list allows you to select the NIC you want the data repeater to use. If you have a single NIC on your machine, OpX selects that NIC automatically, and the drop-down will be gray and unavailable.

If you want to change the port number that the current data repeater is using, change the value in the **Listen Port** field.

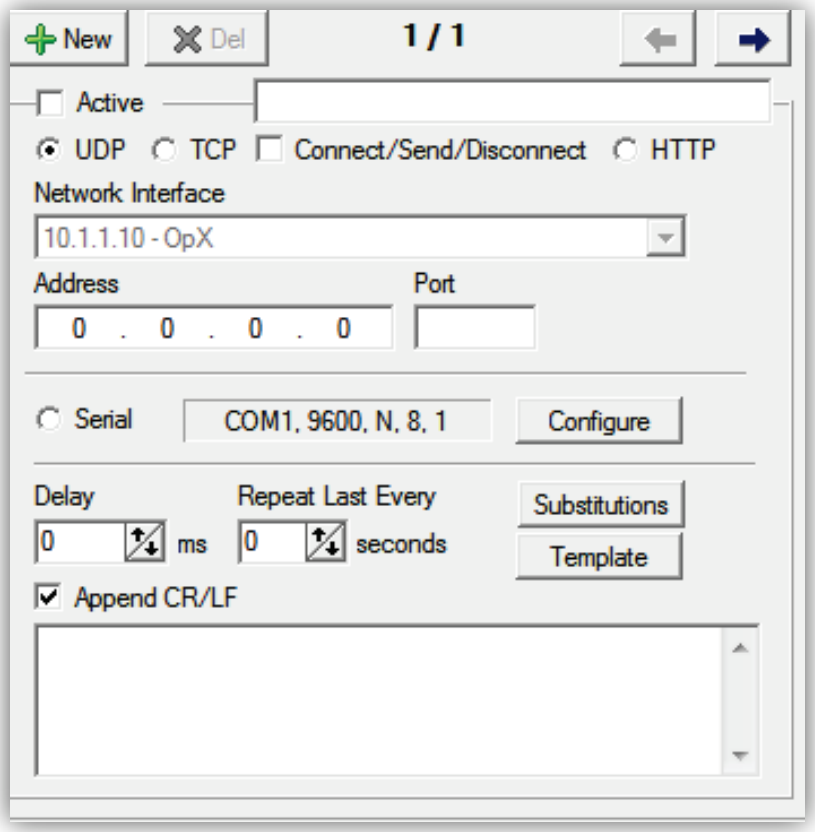
16.2.4 . Data Repeater Status List

The data repeater status list shows when the OpX data repeater is listening using the IP address and port number shown in the list. The IP address and port number are separated by a slash (/). This list also shows when the data repeater stops.



16.3 Working with Data Repeaters

The right side of the OpX Repeater window provides buttons and fields for creating, editing, and deleting data repeaters.



16.3.1 Creating a Data Repeater

➢ **To configure a data repeater**

1. You cannot create a data repeater while another data repeater is running. Check the data repeater status list to ensure that a data repeater is not running. If one is running, click the **Stop** button on the tool bar.
2. Click the **New** button

3. Complete the fields on the right side of the window (see Table 16-2).

Table 16-2. Fields in the OpX Repeater Window

Field	Description	Default
Active	You can set up multiple rata repeaters, but only one can be active. To make this repeater check this check box.	Unchecked
UCP/TCP/HTTP	Select the protocol that the data repeater will use.	UCP
Network Interface	If the OpX system detects multiple NICs, this drop-down list allows you to select the NIC you want the Data repeater to use. If you have a single NIC on your machine, the Data repeater selects that NIC automatically, and the drop-down will be gray and unavailable.	10.1.1.10 – OpX
Address	Enter the IP address for the data repeater.	0.0.0.0
Port	Enter the number of the port that the data repeater will use for communications.	—
Serial	If the device with which the data repeater will be communicating requires serial parameters be configured: 1. Click Serial. 2. If the serial device uses settings other than the OpX defaults, click the Configure button to display the Serial Device dialog box (see Figure 16-2). 3. Configure the settings based on the requirements of your serial device (refer to the documentation for your serial device). 4. Click OK.	COM1, 9600, N,8.1
Delay	Number of milliseconds between when data is received and when data is transmitted. This feature can be used to guard against profanities from being sent over the airwaves.	0
Repeat Last Every	Number of seconds when received data is transmitted repeatedly.	0
Substitutions button	If substitutions are applicable to your setup: 1. Click the Substitutions button to display the Substitutions dialog box (see Figure 16-3 on page 378). 2. Click the Add button to display the Substitutions dialog box (see Figure 16-4 on page 379). 3. Complete the fields in the dialog box (see Table 16-3 on page 379). 4. Click the OK button two times. The Substitution dialog box also has buttons for editing and deleting substitutions.	—
Template button	If templates are applicable to your setup: 1. Click the Template button to display the Template dialog box (see Figure 16-5 on page 380). 2. Click the buttons at the top of the dialog box to define your template. 3. Click the OK button.	—
Append CR/LF	• Checked = appends a carriage return when a line feed is received. • Unchecked = do not append a carriage return when a line feed is received.	Checked

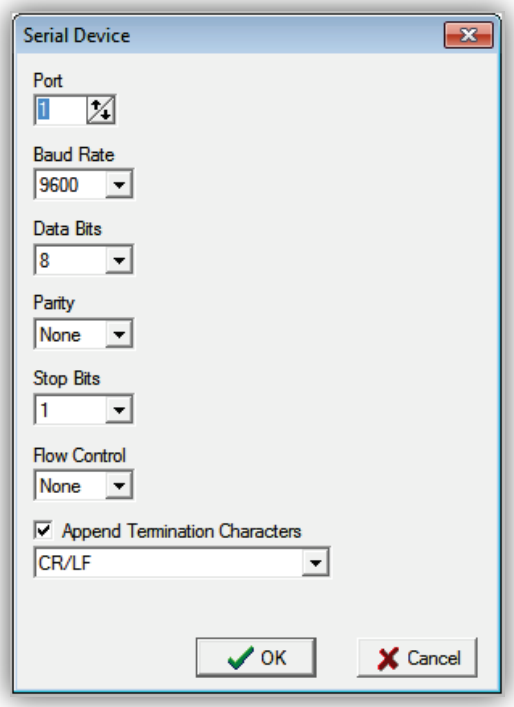


Figure 16-2. Serial Device Dialog Box

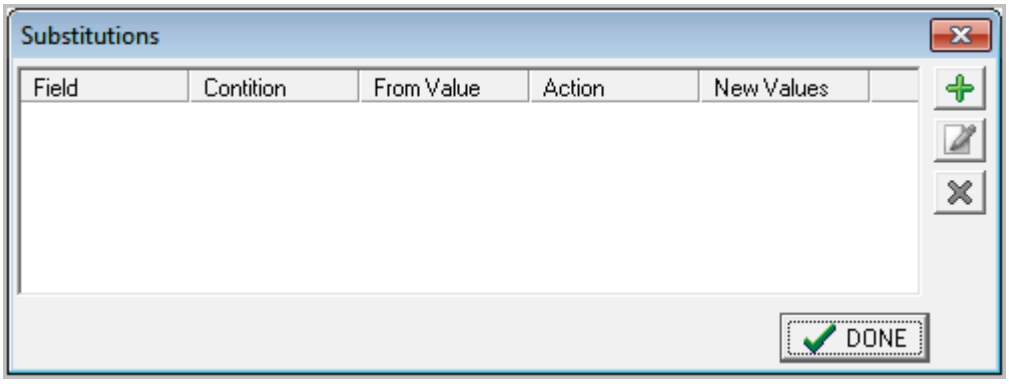


Figure 16-3. Substitutions Dialog Box

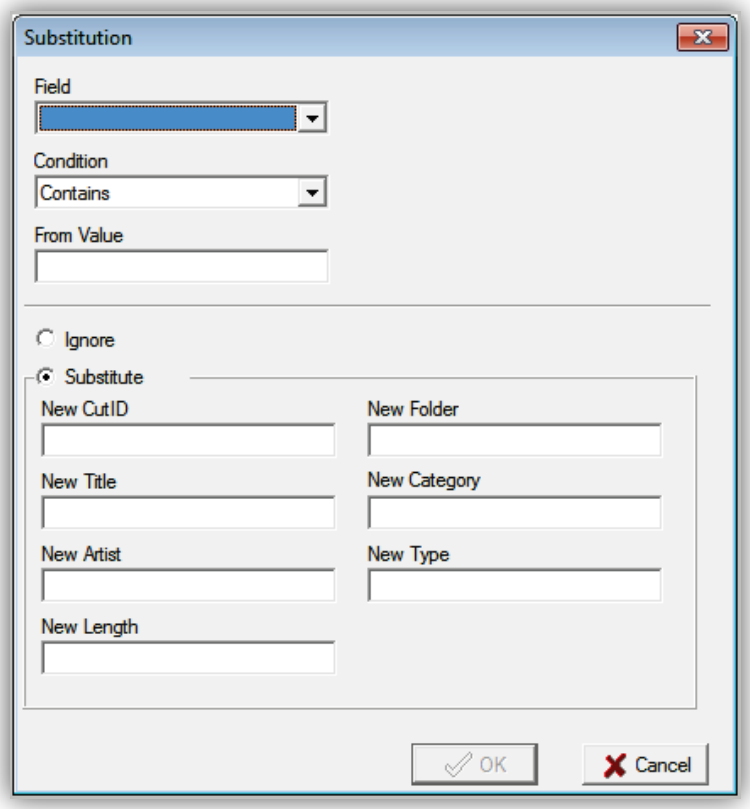


Figure 16-4. Substitution Dialog Box

Table 16-3. Fields in the Substitution Dialog Box

Field	Description	Default
Field	File to be searched for a specific string of text.	—
Condition	Condition associated with the search.	Contains
From Value	String that is being searched.	—
Ignore	Allows you to skip the data shown at the bottom of the dialog box.	—
Substitute	Replaces the string with the values shown at the bottom of the dialog box.	—

Note: Leave the tab blank for raw output.

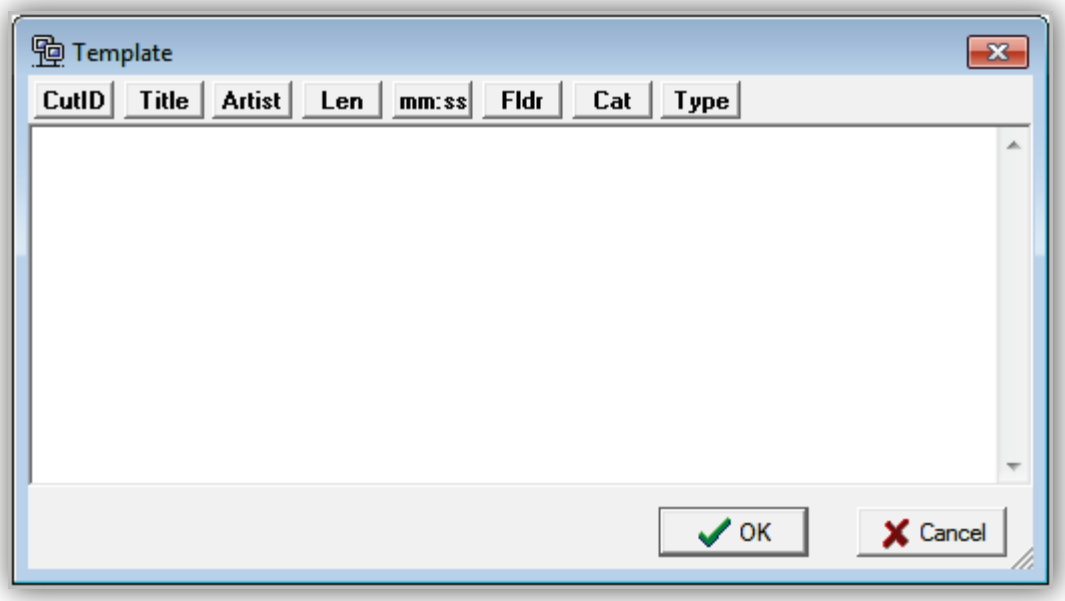


Figure 16-5. Template Dialog Box

16.3.2 Editing a Data Repeater

There may be times when you need to edit a data repeater. For example, you might have to change the serial settings.

➢ **To edit a data repeater**

1. You cannot edit a data repeater while a data repeater is running (either the one you want to edit or a different repeater). Check the data repeater status list to ensure that a data repeater is not running. If one is running, click the **Stop** button on the tool bar.
2. On the right side of the OpX Repeater window, use the scroll arrows to find the data repeater you want to edit (see Figure 16-6). The field to the left of the arrows shows the number for the current data repeater and the total number of data repeaters that have been set up (for example, **2/5** means the settings for data repeater number 2 is displayed out of 5 data repeaters that have been set up).

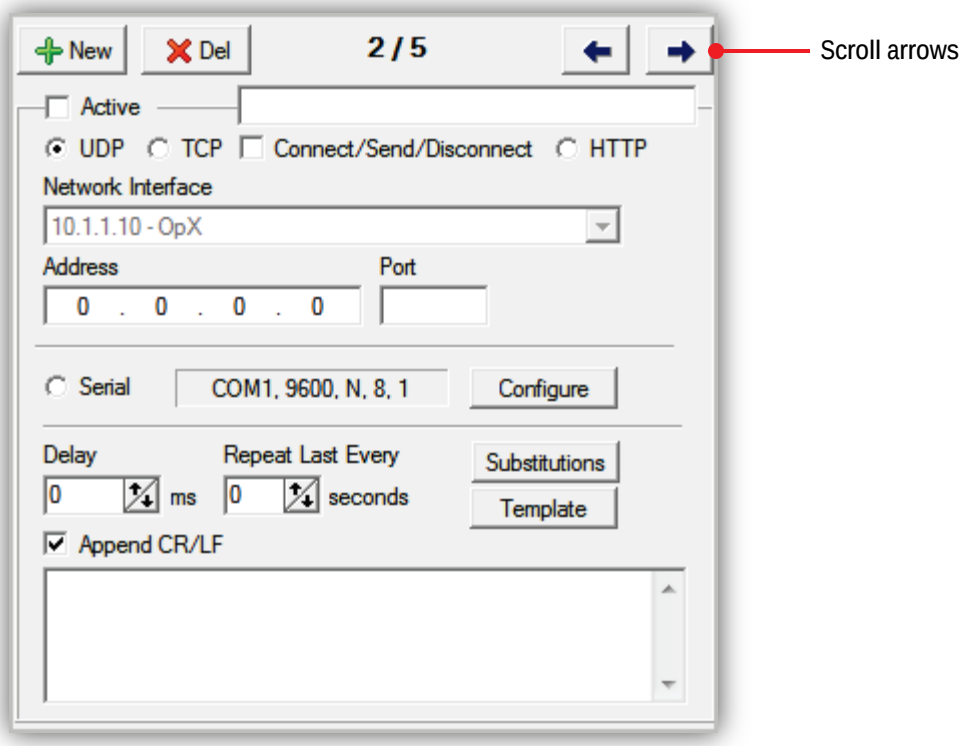


Figure 16-6. Scroll Arrows

3. Change the fields on the right side of the window (see Table 16-2 on page 377).

16.3.3 Deleting a Data Repeater

If you no longer need a data repeater, you can delete it from the OpX system.

Note: A precautionary message does not appear before you delete a data repeater. Therefore, be sure you do not need a data repeater before you delete it. You cannot undo a data repeater after it has been deleted.

➢ **To delete a data repeater**

1. You cannot delete a data repeater while a data repeater is running (either the one you want to delete or a different repeater). Check the data repeater status list to ensure that a data repeater is not running. If one is running, click the **Stop** button on the tool bar.

2. On the right side of the OpX Repeater window, use the scroll arrows to find the data repeater you want to delete (see Figure 16-6).

3. Click the **Delete** button

16.4 Changing the Network Interface and Port

The OpX Repeater window has a **Listen Network Interface** drop-down list and a **Port** button that make it easy to change these values for the currently used data repeater (see Table 16-4).

Table 16-4. Listen Network Interface and Port Fields in the OpX Repeater Window

Field	Description	Default
Listen Network Interface	If the OpX system detects multiple NICs, this drop-down list allows you to select the NIC you want the data repeater to use. If you have a single NIC on your machine, the data repeater selects that NIC automatically, and the drop-down will be gray and unavailable.	10.1.1.10 – OpX
Port	Enter the number of the port that the data repeater will use for communications.	—

16.5 Starting and Stopping the Data Repeater

➢ **To start the OpX Data Repeater**

1. Click the **Start** button

A message in the Data Repeater status list shows that the Data Repeater started. If this message does not appear, check the Data Repeater network interface and ports.

➢ **To stop the OpX Data Repeater**

1. Click the **Stop** button

A message in the Data Repeater status list shows that the Data Repeater stopped. If this message does not appear, check the Data Repeater network interface and ports.

17 Mobile Gateway/Client Module

Topics:

- *Starting the Mobile Gateway/Client Module (page 384)*
- *Quick Tour (page 386)*
- *Configuring the Mobile Gateway/Client Module (page 389)*
- *Starting and Stopping the Mobile Gateway/Client (page 390)*

This chapter describes the OpX Mobile Gateway/Client module.

The Mobile Gateway/Client module is used for IOS remote operation. The gateway runs on the OpX network and allows access from the IOS device.

17.1 Starting the Mobile Gateway/Client Module

You must start the File Server module before you start the Mobile Gateway/Client module.

➢ **To start the Mobile Gateway/Client module**

1. Start the File Server module (see section 3.1).
2. Click the Windows Start button and click **Programs > Broadcast Software > OpX Mobile Gateway**.

   A Settings dialog box similar to the following appears.

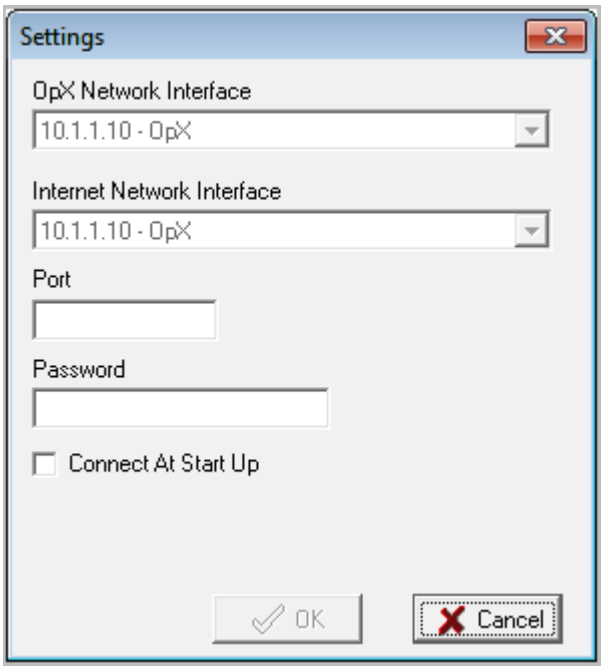


Figure 17-1. Settings Dialog Box

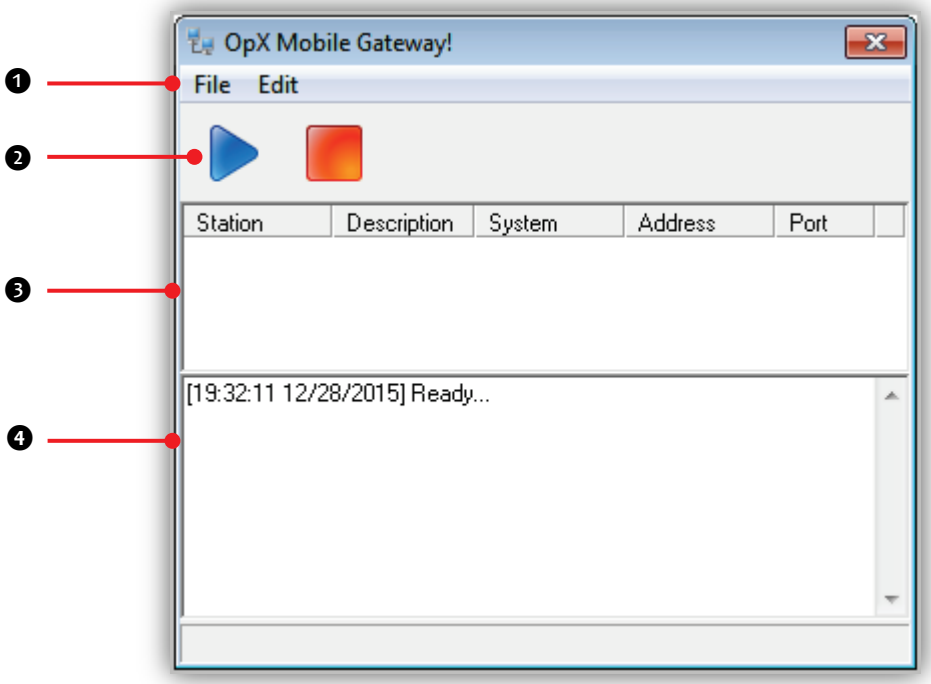
3. Complete the fields in the dialog box (see Table 17-1).
4. Click **OK**.

Table 17-1. Fields in the Settings Dialog Box

Field	Description	Default
OpX Network Interface	If the OpX system detects multiple NICs, this drop-down list allows you to select the NIC you want the mobile gateway/client module to use for accessing the OpX network. If you have a single NIC on your machine, the mobile gateway/client module selects that NIC automatically, and the drop-down will be gray and unavailable.	10.1.1.10 – OpX
Internet Network Interface	If the OpX system detects multiple NICs, this drop-down list allows you to select the NIC you want the mobile gateway/client module to use for accessing the Internet. If you have a single NIC on your machine, the mobile gateway/client module selects that NIC automatically, and the drop-down will be gray and unavailable.	10.1.1.10 – OpX
Port	Enter the number of the port that the mobile gateway/client module will use for communications.	—
Password	Enter the case-sensitive password for accessing the mobile gateway/client module. Record the password for future reference.	—
Connect At Startup	Select whether you want the mobile gateway/client module to start (check) or not start (uncheck) automatically when the OpX system starts. If configured to start automatically, a Mobile Gateway/Client module icon appears in the system tray.	Unchecked

17.2 Quick Tour

The following sections provide a quick tour of the Mobile Gateway/Client module interface.

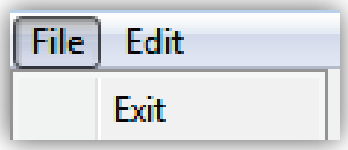


Number	Description
❶	Menu bar. See section 17.2.1.
❷	Tool bar. See section 17.2.2.
❸	Connection list. See section 17.2.3.
❹	Module status panel. See section 17.2.4.

17.2.1 Menu Bar

The menu bar appears at the top of the Mobile Gateway/Client window. The following sections describe the menu options.

17.2.1.1 File Menu



Exit = exits the Mobile Gateway/Client module.

17.2.1.2 Edit Menu

Settings = displays the Settings dialog box in Figure 17-1 on page 384.

17.2.2 Tool Bar

The Mobile Gateway/Client module tool bar appears below the menu bar.

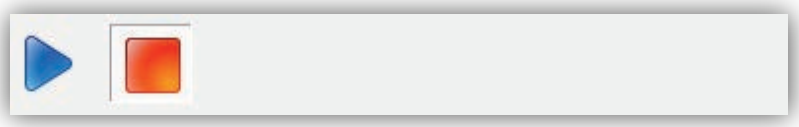


Table 14-1 describes the tools on the tool bar.

Table 17-2. Mobile Gateway/Client Module Tool Bar

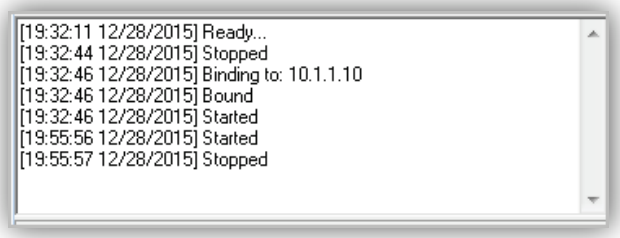
Tool	Tool Name	Description
	Start	Starts the Mobile Gateway/Client module and places a Mobile Gateway/Client module icon in the system tray.
	Stop	Stops the Mobile Gateway/Client module.

17.2.3 Connection List

The connection list shows the connections to the Mobile Gateway/Client module.

17.2.4 Module Status Panel

The module status panel shows the status of the Mobile Gateway/Client module.



17.3 Configuring the Mobile Gateway/Client Module

The Mobile Gateway/Client module prompts you for settings the first time you launch it.

If you need to change these settings, use the following procedure.

➢ **To change the Mobile Gateway/Client module settings**

1. If the Mobile Gateway/Client module is not displayed, double-click its icon in the system tray.

   The OpX Mobile Gateway window appears.

2. On the **Edit** menu, click **Settings**.

   The Settings dialog box appears (see Figure 17-1 on page 384).

3. Complete the fields in the dialog box (see Table 17-1 on page 385).
4. Click **OK**.

17.4 Starting and Stopping the Mobile Gateway/Client

➢ **To start the OpX Mobile Gateway/Client**

1. Click the **Start** button

   A message in the module status panel shows that the Mobile Gateway/Client started. If this message does not appear, check the Mobile Gateway/Client settings (see section 17.3).

➢ **To stop the OpX Mobile Gateway/Client**

1. Click the **Stop** button

   A message in the module status panel shows that the Mobile Gateway/Client stopped. If this message does not appear, check the Mobile Gateway/Client settings (see section 17.3).

18 Stinger Module

Topics:

- *Starting the Stinger Module (page 392)*
- *Quick Tour (page 393)*
- *Configuring the Stinger Module (page 397)*
- *Setting Up Hot Keys (page 403)*
- *Playing Items in a Hot Key Set (page 409)*
- *Configuring Item Properties (page 411)*
- *Listing Items (page 413)*
- *Deleting Items (page 414)*
- *Working with Stinger Decks (page 415)*

This chapter describes the OpX Stinger module.

OpX Stinger is a stand-alone Hot Key module that updates Hot Keys in real time across multiple clients.

18.1 Starting the Stinger Module

You must start the File Server module before you start the Stinger module.

➢ **To start the Stinger module**

1. Start the File Server module (see section 3.1).
2. Click the Windows Start button and click **Programs > Broadcast Software > OpX Stinger**.

   A screen appears briefly as OpX loads the pages associated with the Stinger module, and then a default OpX Stinger page similar to the following appears.

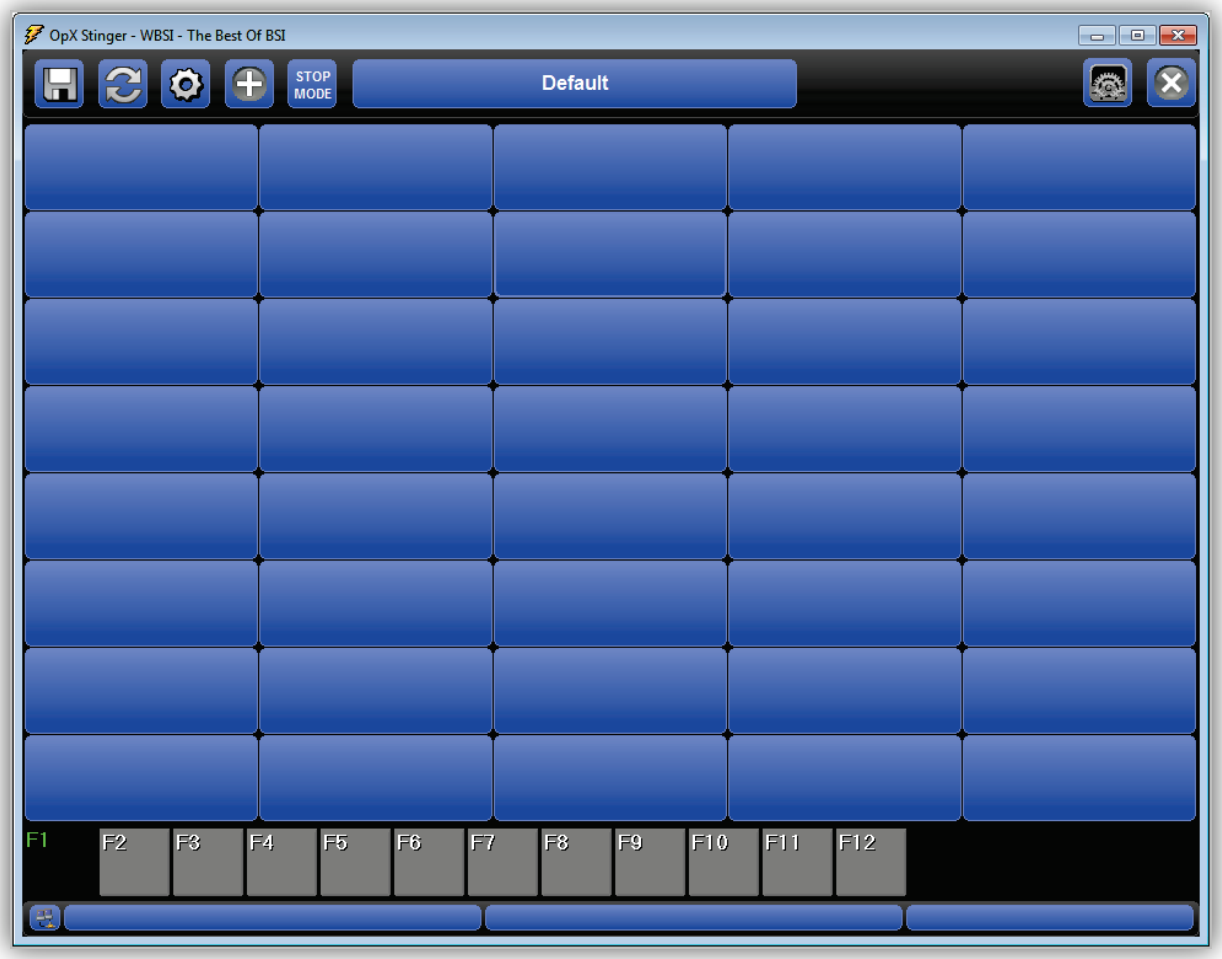
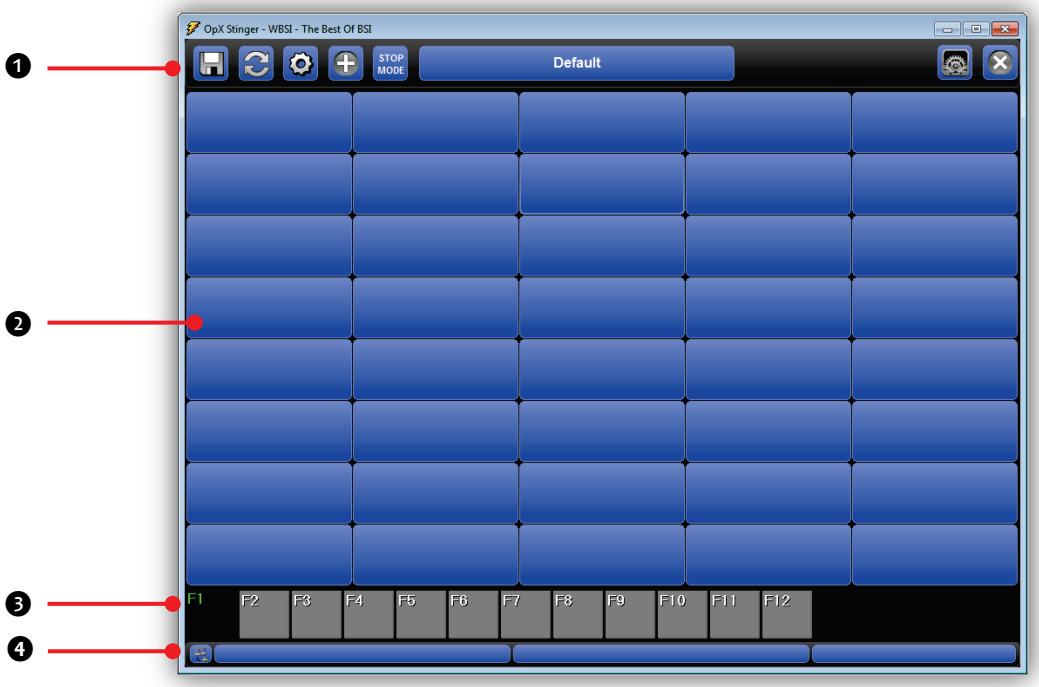


Figure 18-1. OpX Stinger Page

18.2 Quick Tour

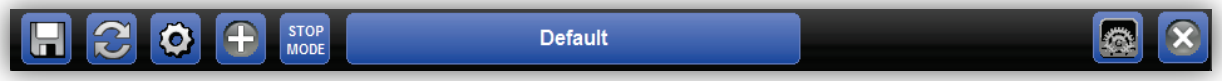
The following sections provide a quick tour of the Stinger module interface.



Number	Description
❶	Tool bar. See section 18.2.1
❷	Hot Key set. See section 18.2.2.
❸	Function key legend. See section 18.2.3.
❹	Module status panel. See section 18.2.4.

18.2.1 Tool Bar

The Stinger module tool bar appears below the menu bar.



Moving the screen pointer over a tool displays the tool's function as a tooltip in the module status panel. For example:

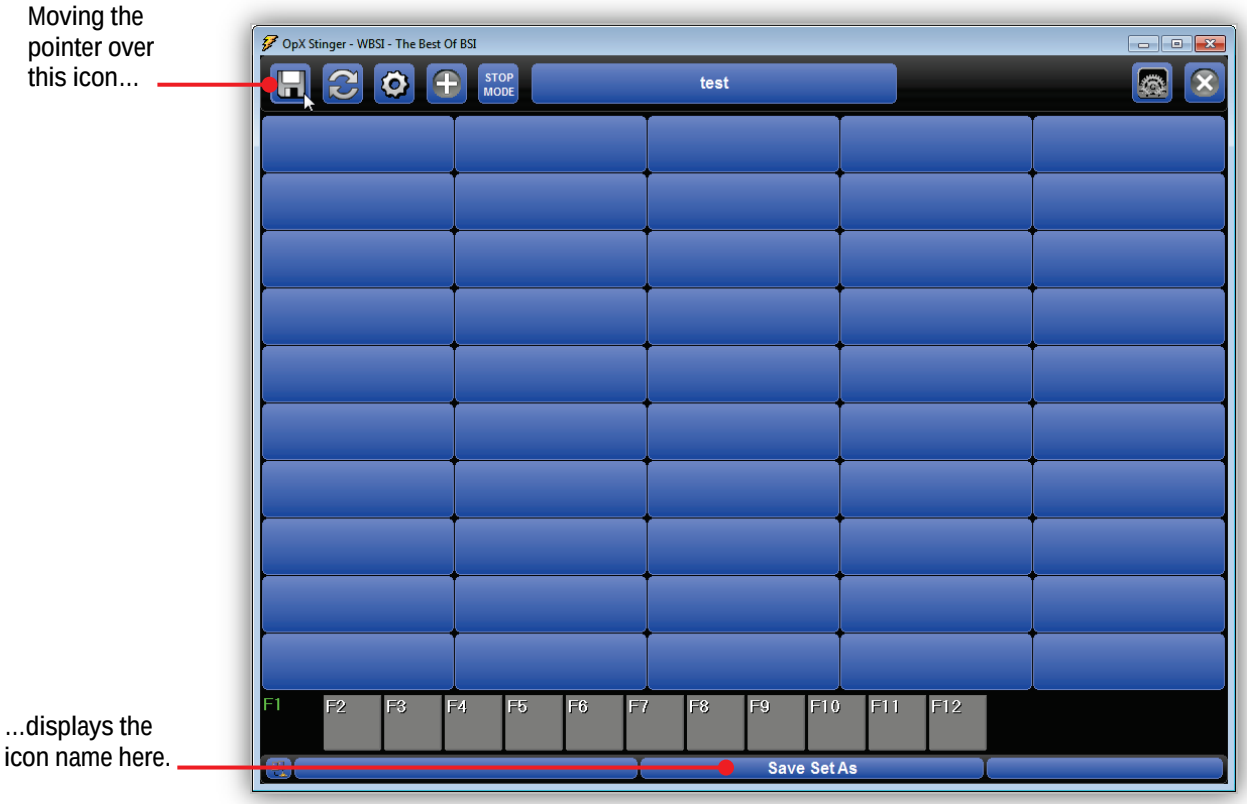


Table 18-1 describes the tools on the tool bar.

Table 18-1. Stinger Module Tool Bar

Tool	Tool Name	Description
	Save Set As	Saves the current Hot Key set.
	Refresh Page	Updates the information shown on the page.
	Page Settings	Configures the page settings for the current Hot Key set. See section 18.4.1.
	Insert	Displays the items you can add to Hot Key sets. See section 18.4.2.
	Button Mode	Toggles between pause and stop mode. • Pause mode = temporarily stops the cut at the location when you clicked this button. • Stop mode = stops the cut and reloads to the beginning.
	Select Set	Allows you to select Hot Key sets. See section 18.4.1.
	Settings	Configures Stinger module settings. See section 18.3.
	Exit	Exits the Stinger module.

18.2.2 Hot Key Set

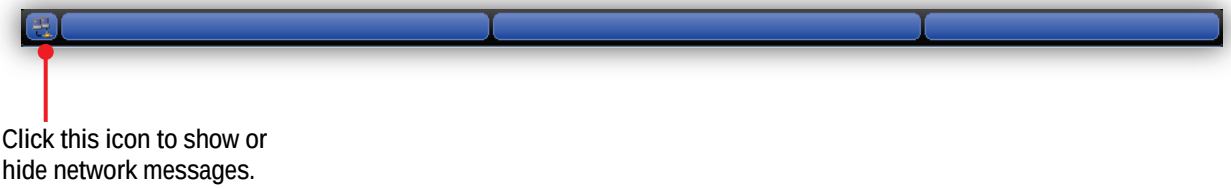
The Hot Key set has cells that hold items you drag from the Insert dialog box (see section 18.4.2). After you add items to the Hot Key set, you can play them (see section 18.5).

18.2.3 Function Key Legend

The function key legend shows the 12 function (or “F”) keys that can be assigned to a Hot Key set. To select a function key, either click a button in this legend or press the function key on your keyboard. Either step highlights the corresponding function key in the legend. In the following example, the **F1** key is highlighted.

18.2.4 Module Status Panel

The module status panel shows status messages. The left icon in module status panel allows you to show or hide network messages If you move the pointer over an icon in the tool bar, the tool function appears in the module status panel.



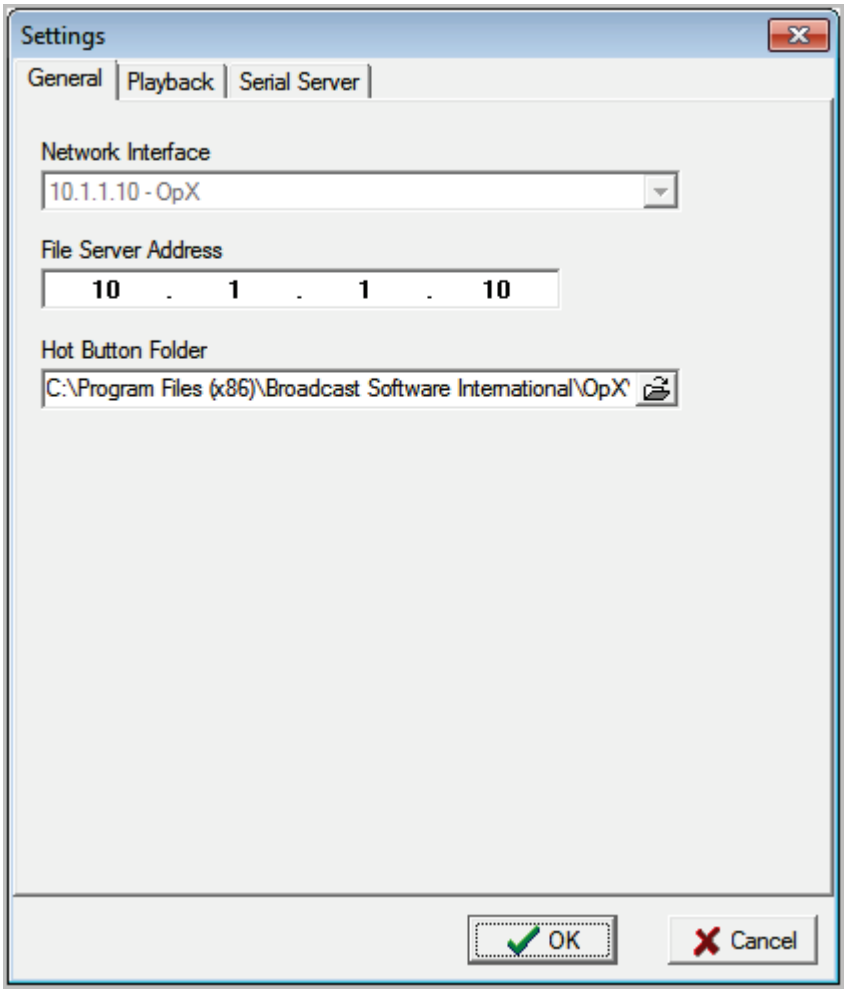
18.3 Configuring the Stinger Module

The Stinger module comes with default configuration settings that should suit most users. Using the **Settings** icon, you can change these settings to suit your requirements

➢ **To change the Stinger module settings**

1. Click the **Status** icon in the tool bar

   *The Settings dialog box appears, with the **General** tab displayed.*



2. Complete the fields in the dialog box tabs.

General Settings – see section 18.3.1
Playback settings – see section 18.3.2
Serial server settings – see section 18.3.3

3. When you finish, click the **OK** button.

18.3.1 General Configuration Settings

Figure 18-2 shows the configuration settings on the **General** tab and Table 18-2 describes them.

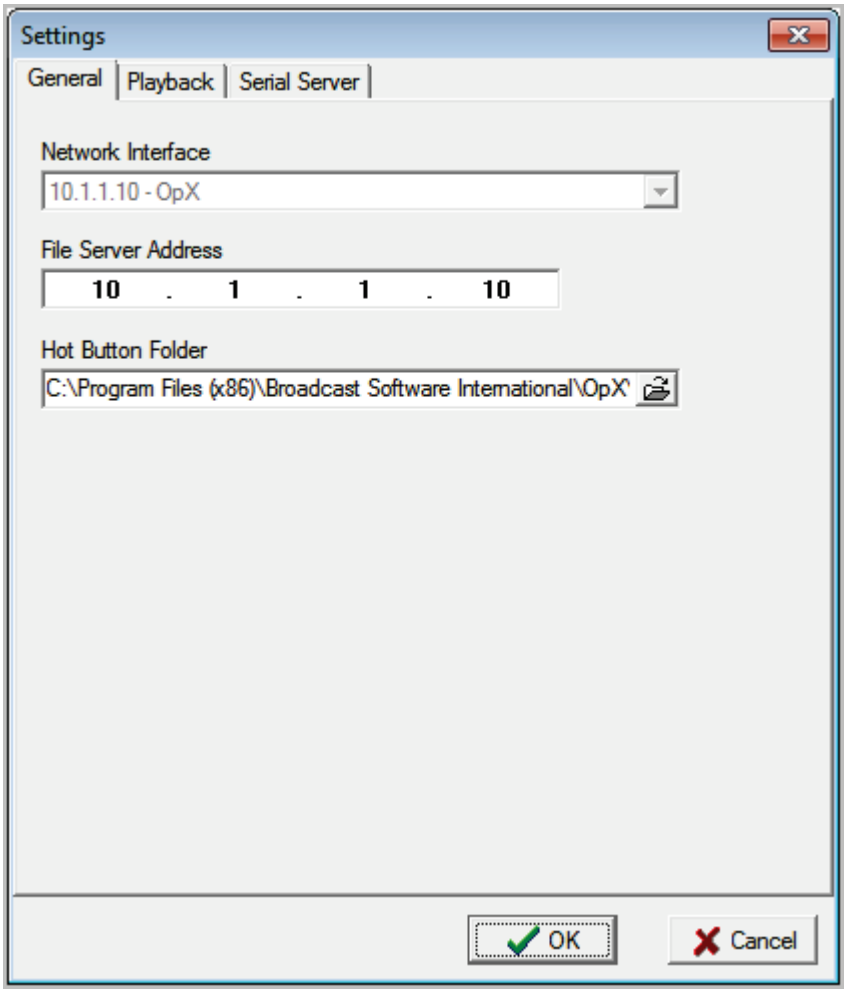


Figure 18-2. General Tab

Table 18-2. Fields in the General Tab

Field	Description	Default Value
Network Interface	If the OpX system detects multiple NICs, this drop-down list allows you to select the NIC you want the mobile gateway/client module to use for accessing the OpX network. If you have a single NIC on your machine, the mobile gateway/client module selects that NIC automatically, and the drop-down will be gray and unavailable.	
File Server Address	Accept or change the IP address of the File Server.	10.1.1.10
Hot Button Folder	Specify the location where the Hot Button profiles will be stored. To change this location, either change the path in the field or click the icon, go to a location in the Select Directory dialog box, and click OK.	See the tab

18.3.2 Playback Configuration Settings

Figure 18-3 shows the configuration settings on the **Playback** tab and Table 18-3 describes them.

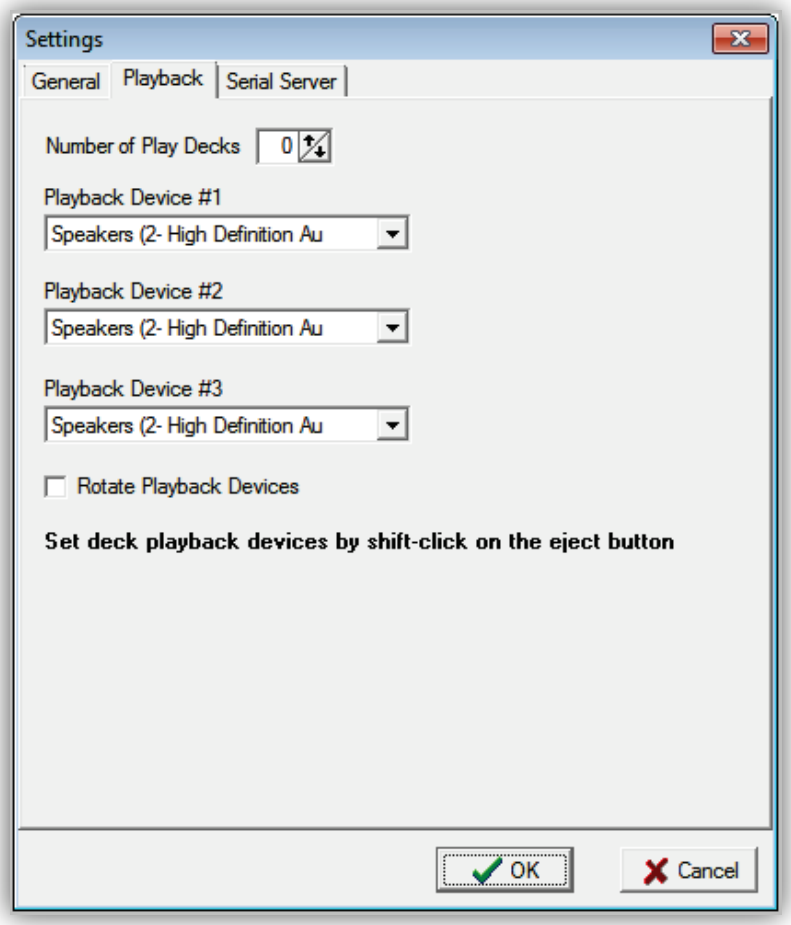


Figure 18-3. Playback Tab

Table 18-3. Fields in the Playback Tab

Field	Description	Default Value
Number of Play Decks	Select the number of playback decks.	0
Playback Device #1 Playback Device #2 Playback Device #3	Select the device that will be used as the playback device.	Speakers (2-High Definition Audio)
Rotate Playback Devices	• Checked = items are rotated among the three playback devices. • Unchecked = item playback starts at the beginning of the list each time an item is started.	Unchecked

18.3.3 Serial Server Configuration Settings

Figure 18-4 shows the configuration settings on the **Social Server** tab and Table 18-4 describes them.

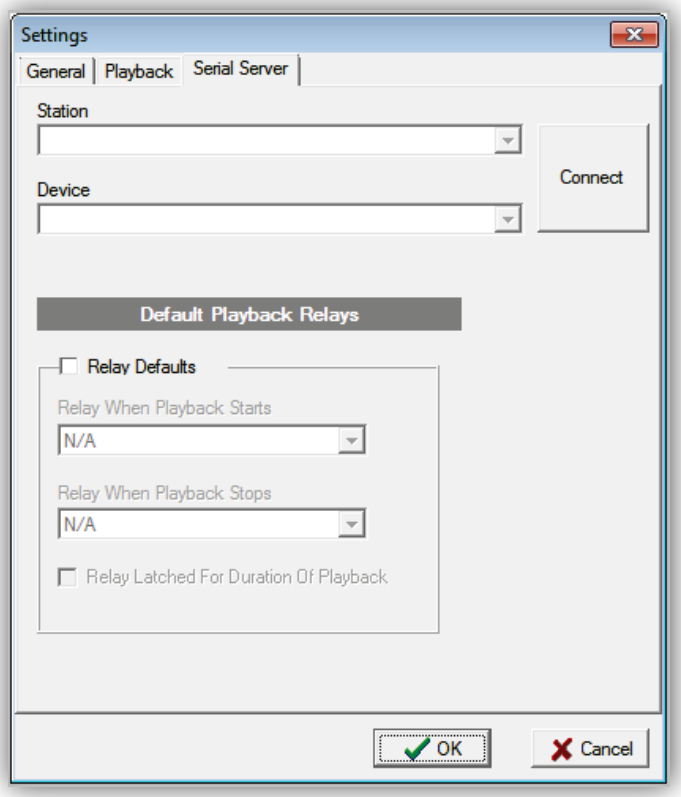


Figure 18-4. Serial Server Tab

Table 18-4. Fields in the Serial Server Tab

Field	Description	Default Value
Station	Station to which the serial device is connected.	—
Device	Serial device.	—
Connect button	Click this button to test your station and device settings.	—
Relay Defaults	Check this button to define the default relay playback settings.	Unchecked
Relay When Playback Starts	If you checked Relay Defaults, check to fire a relay at the same time that playback on stinger starts.	N/A
Relay When Playback Stops	If you checked Relay Defaults, check to fire a relay at the same time that playback on stinger stops.	N/A
Relay Latched For Duration Of Playback	If you checked Relay Defaults, check to keep the relay closed during the entire playback.	Unchecked

18.4 Setting Up Hot Keys

Setting up Hot Keys involves the following steps:

1. Load a Hot Key set. See section 18.4.1.
2. Add items to the Hot Key set. See section 18.4.2.
3. Assign the Hot Key set to a function key. See section 18.5.

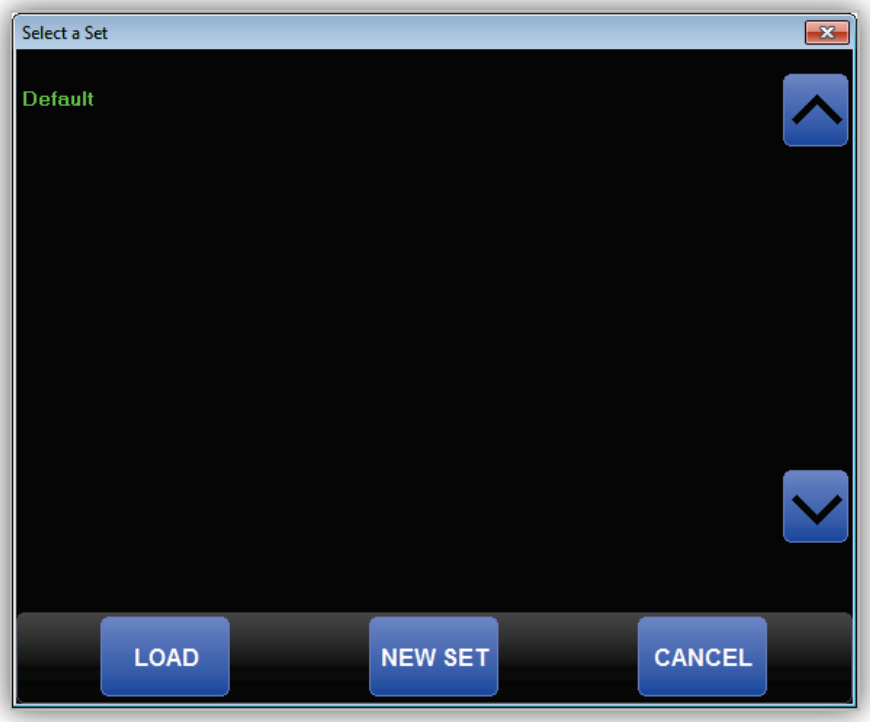
18.4.1 Loading a Hot Key Set

The first step when setting up Hot Keys is to load a Hot Key set. This can be a Hot Key set you previously created or a new one. As part of this effort, you can configure the number of Hot Key cells that will hold selected items (described in section 18.4.2).

➢ **To select a Hot Key set**

1. Click the **Select Set** drop-down list.

   The Select a Set dialog box appears.



2. Select the Hot Key set to which you want to add your Hot Keys:
   - If the set exists, click it in the dialog box, and then click **Load**.
   - If the set does not exist, click **New Set**. When the Save Set As dialog box appears (see Figure 18-5), enter a name for the set in the **Name** field and click **Done**.

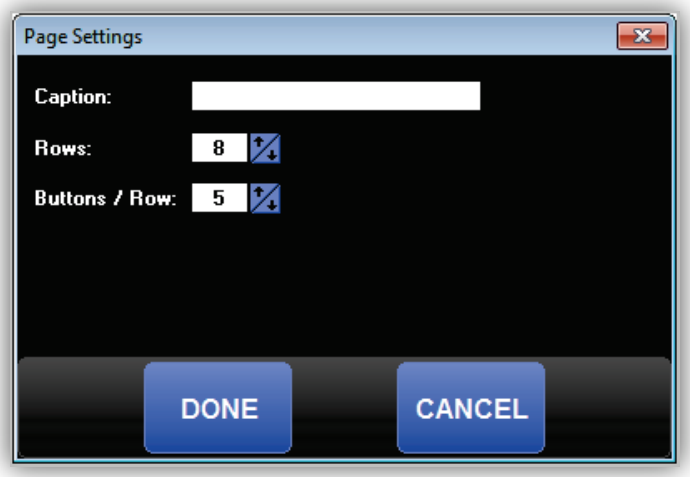
   *The Hot Key set appears in the workspace and the name of the selected set appears in the **Select Set** drop-down list.*

Figure 18-5. Save Set As Dialog Box

3. By default, a Hot Key set has five columns and eight rows of cells that can accommodate items. If this arrangement is satisfactory, proceed to the next step; otherwise, use the following steps to configure the Hot Key set.

   a. Click the **Page Settings** icon

   The Page Settings dialog box appears.



b. Complete the fields in the dialog box (see Table 18-5).

c. Click the **Done** button.

Table 18-5. Fields in the Page Settings Dialog Box

Field	Description	Default Value
Caption	Enter a name for this Hot Key set. The name should allow you to identify this Hot Key set from the others you configure.	—
Row	Select the number of rows to be displayed on the Hot Key set.	—
Buttons/Row	Select the number of rows to be displayed on the Hot Key set.	—

18.4.2 Adding Items to the Hot Key Set

After you select the Hot Key set, add items to it from the Insert dialog box. As part of this effort, you select the function keys that will be associated with the items.

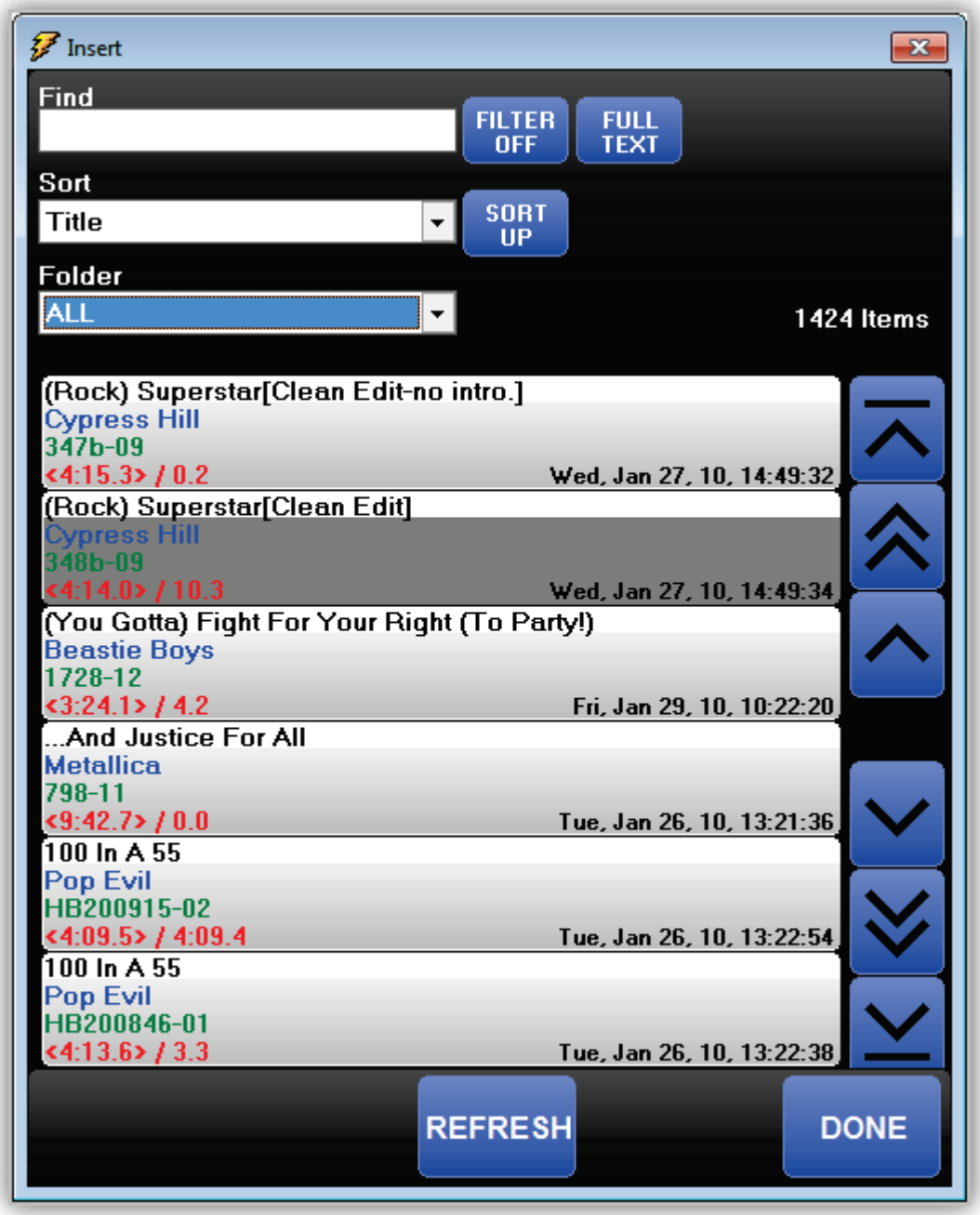
➢ **To add items to the Hot Key set**

1. By default, the items you select will be associated with the **F1** function key. To select a different function key, select the key at the bottom of the page.

   *The function key turns green to show it is selected. In the following example, the **F3** key is selected.*

2. Click the **Insert** icon

   An Insert dialog box similar to the following appears.



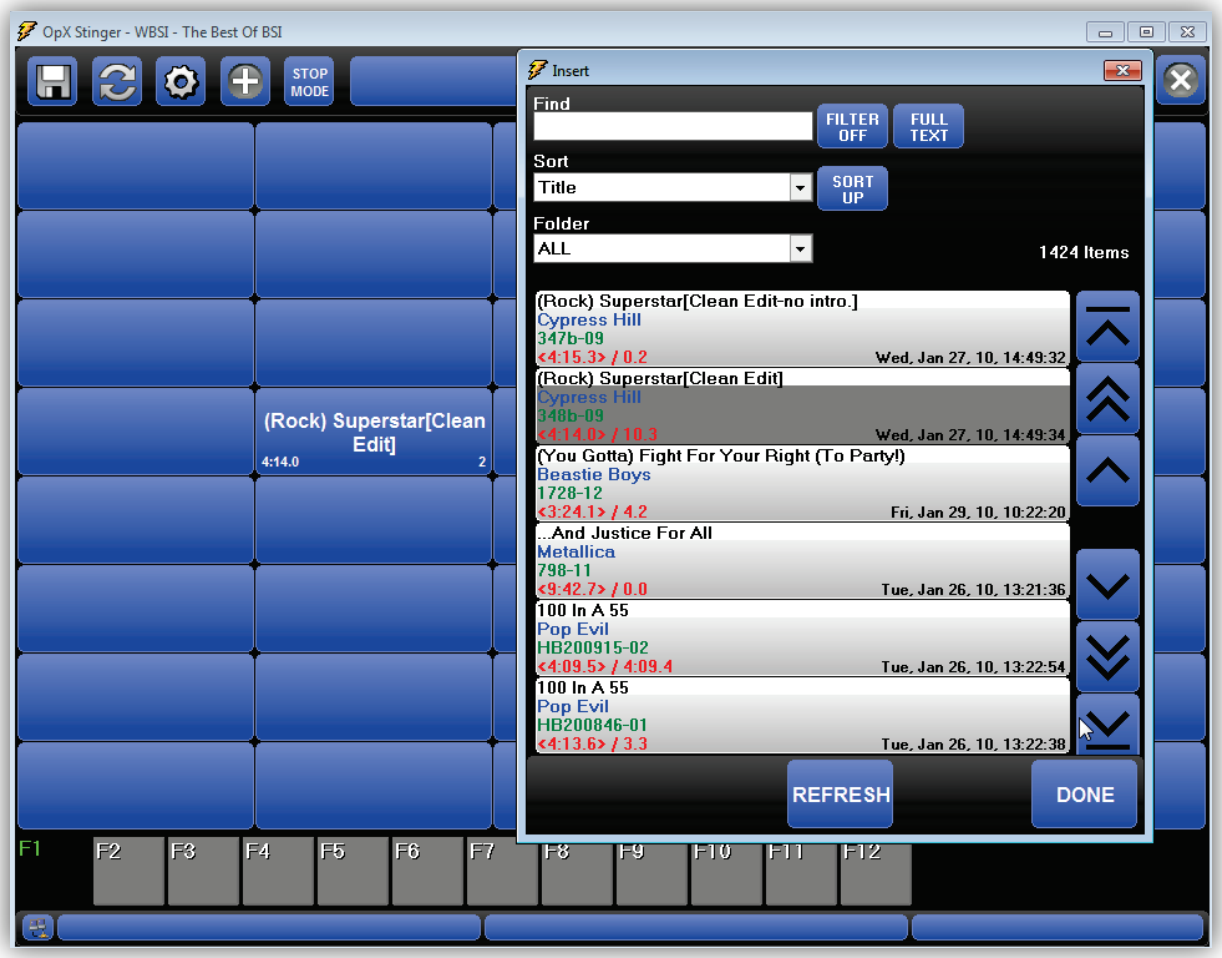
3. Use the fields and buttons at the top of the dialog box to find the items you want to add to the Hot Key set:

- **Find** = enter search criteria in the field, and then click the **Filter Off** button to show only the items that match your text. To show complete names, click the **Fulll Text** button.
- **Sort** = allows you to sort items by title, artist, name, length, or by title, artist, and name/ Use the **Sort Up** or **Sort Down** key to sort your selection in ascending (A-Z, 0-9) or descending (Z-A, 9-0) order.
- **Folder** = select the folder for the items you want to search and use, or click **All** to select all folders.
- Buttons on the right side of the dialog box allow you to move to the first last, previous, and next items.

4. Click an item in the Insert dialog box, hold down the mouse button, and drag the item to a cell on the Hot Key set.

   A green arrow shows the location where the item will be added to the Hot Key set.

5. When the green arrow is pointing to the desire cell, release the mouse button to add the item to that cell in the Hot Key set.



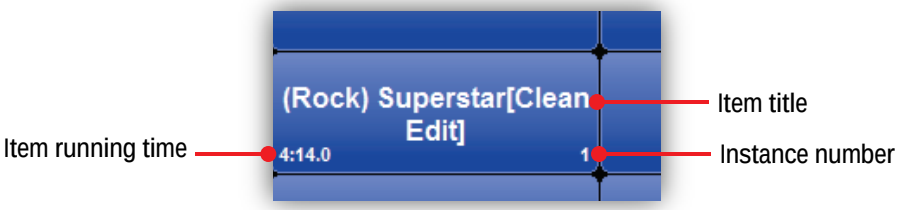
6. Repeat steps 4 and 5 to add more items to the Hot Key set.
7. When you finish adding items to the Hot Key set, click **Done** to close the Insert dialog box.
8. Click the **Save** icon

   The Save Set As dialog box appears.

9. To change the name of the Hot Key set, enter the name in the **Name** field. This is the name that will identify the Hot Key set in the Select Set drop-down list. The name should allow you to identify this Hot Key set from the others you configure.
10. Click **Done** to save the Hot Key set.

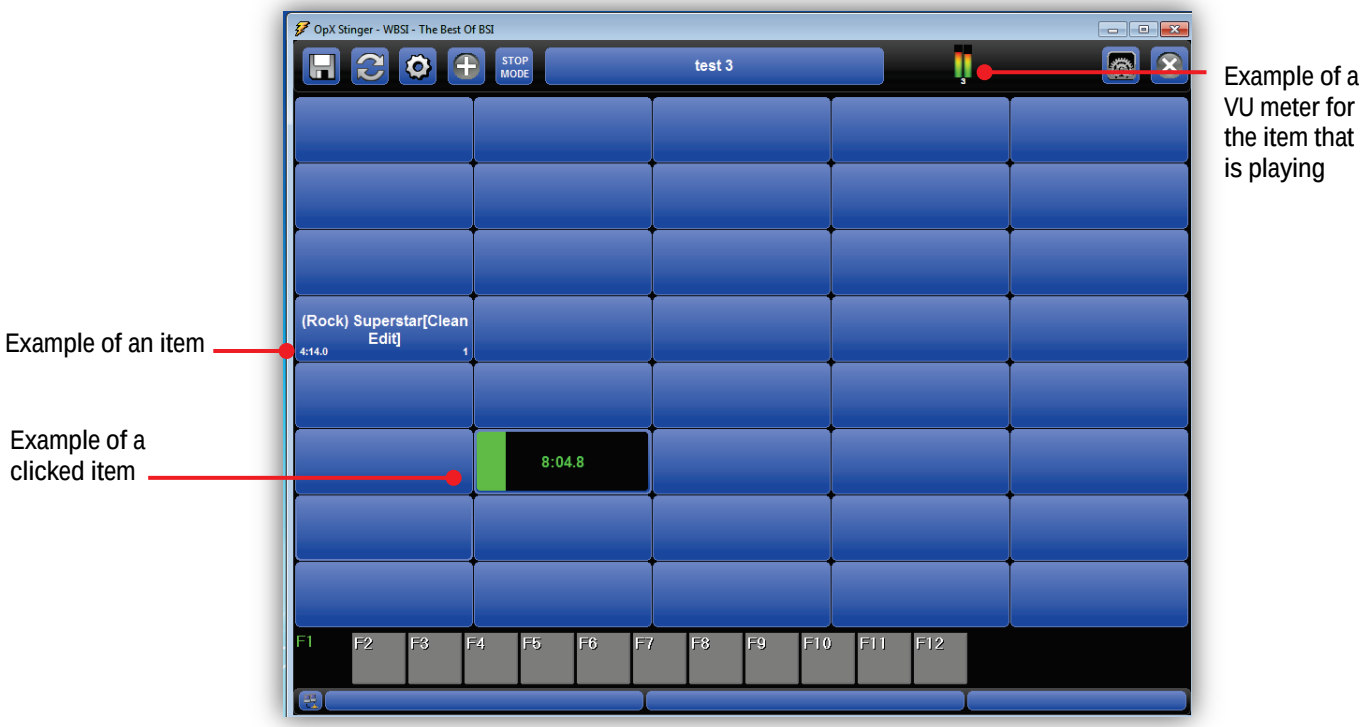
18.5 Playing Items in a Hot Key Set

After you add items to a Hot Key set, you can click one or more items to play them. The running time of an item appears in the bottom-left corner of the cell. The number in the bottom right shows the instance number. The number 1 in the figure below indicates that this is the first instance of this item. If you dropped the same item — **(Rock) Superstar[Clean Edit]** — in this Hot Key set, that item would have an instance number of 2. The item number will increment each time you add the same item to the Hot Key set.



When you click an item in the Hot Key set:

- The item plays.
- A timer in the cell shows the remaining play time.
- A VU meter of the item being played appears to the right of the **Select Set** drop-down list.



To stop an item from being played, click the item.

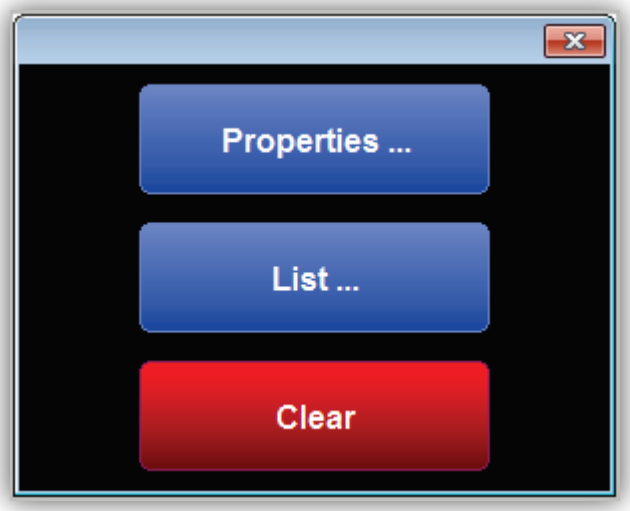
18.6 Configuring Item Properties

Each item you add to a Hot Key set has default properties. If desired, you can change these properties to suit your preferences.

➢ **To configure the properties for an item**

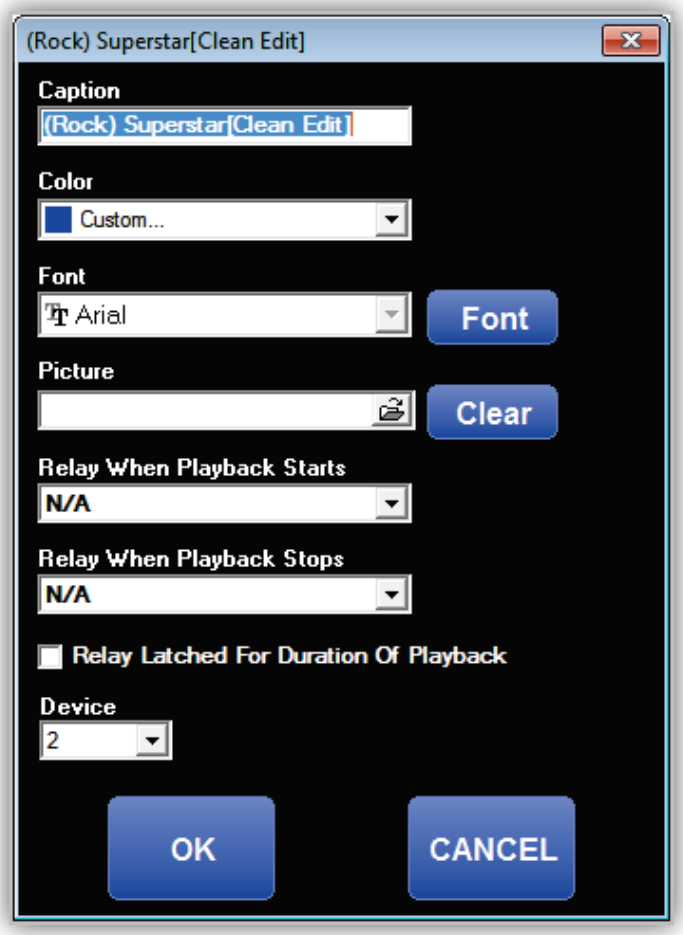
1. Load the appropriate Hot Key set (see section 18.4.1).
2. Right-click the item in the Hot Key set.

   The following pop-up menu appears.



3. Click **Properties**.

   The Properties dialog box appears.



4. Complete the fields in the dialog box (see Table 18-6).
5. Click **OK**.

Table 18-6. Fields in the Properties Dialog Box

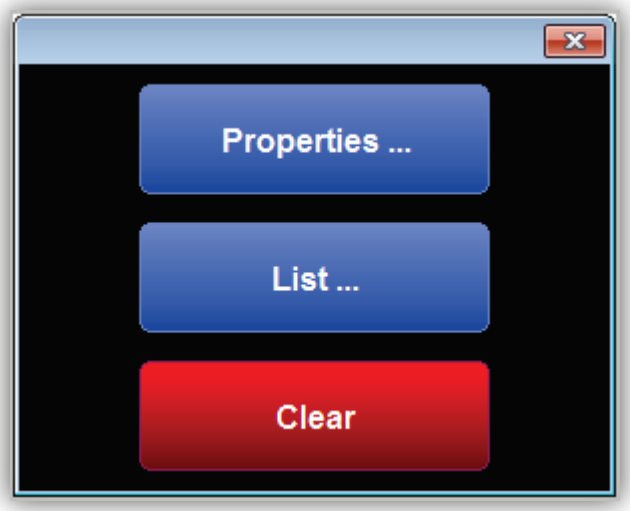
Field	Description	Default
Caption	Caption associated with the item.	See the dialog box
Color	Color of the caption.	Custom
Font	Typeface of the caption. Click the Font button to change the typeface.	Arial
Picture	Picture associated with the item. Click the icon to select a picture. Use the Clear button to remove the picture.	—
Relay When Playback Starts	Fires a relay at the same time that playback on stinger starts.	N/A
Relay When Playback Stops	Fires a relay at the same time that playback on stinger stops.	N/A
Relay Latched For Duration Of Playback	Check to keep the relay closed during the entire playback.	Unchecked
Device	Serial device connected to the serial server.	See the dialog box

18.7 Listing Items

You can create a rotator that allows you to have multiple items share the same Hot Key. For example, if you have 5 bumpers that essentially perform the same function, you can add them to the same Hot Key for convenience.

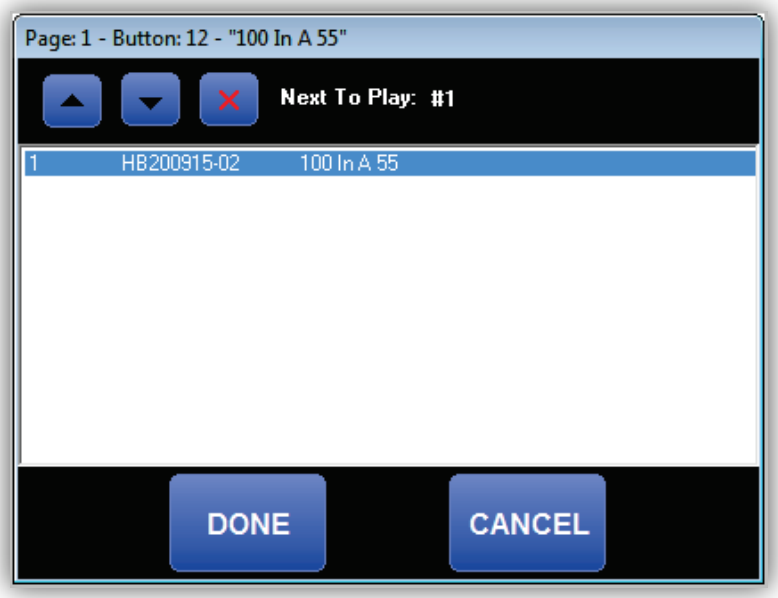
1. Load the appropriate Hot Key set (see section 18.4.1).
2. Right-click the item in the Hot Key set.

   The following pop-up menu appears.



3. Click **List**.

   A dialog box similar to the following appears.



4. Drag items from the file list to the dialog box shown above.
5. When you finish dragging items, click **Done**.

18.8 Deleting Items

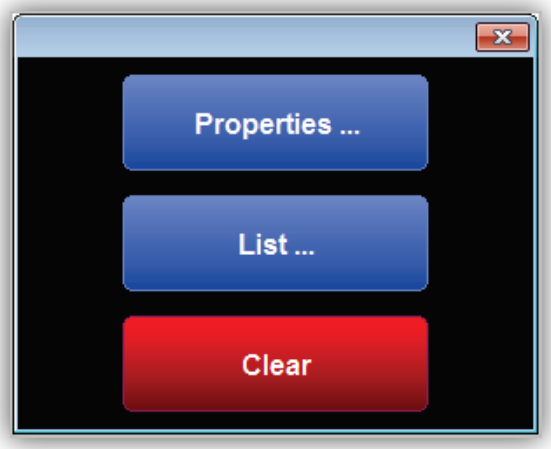
If you no longer need an item, you can delete it from your Hot Key set.

Note: A precautionary message does not appear before you delete an item. Therefore, be sure you do not need an item before you delete it. You cannot undo an item after it has been deleted.

➢ **To delete an item**

1. Load the appropriate Hot Key set (see section 18.4.1).
2. In the Hot Key set, right-click the item you want to delete.

   The following pop-up menu appears.



3. Click **Clear**.

   The item is deleted from the Hot Key set.

18.9 Working with Stinger Decks

Figure 18-6 shows an example of the Stinger deck user interface and Figure 18-6. Stinger Deck User Interface

Table 18-7 describes the key components. The same controls called out in Deck 1 below also apply to decks 2 and 3.

Figure 18-6. Stinger Deck User Interface

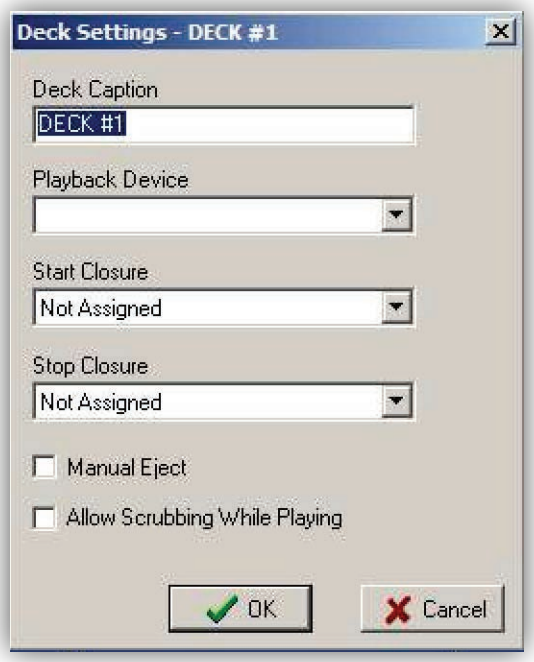
Table 18-7. Stinger Deck Buttons

Field	Description
❶	Name of the deck.
❷	Eject button. Click this button to remove items. To configure Stinger, hold down the Shift key and click this button.
❸	Play button. This button toggles to a pause button when playing.
❹	To toggle the plus sign, click the stop button when nothing is playing. This works like the + cue in the Program Log, where it will continue to play the next item.
❺	Time remaining bar. Includes a progress indicator. If configured, you can click inside the time remaining bar to jump back or forward.

18.9.1 Configuring a Stinger Deck

➢ **To configure a Stinger deck**

1. From the Stinger deck user interface, hold down the Shift key and click the Eject button (see Figure 18-6 and Table 18-7 on page 415). A dialog box similar to the following appears.



2. Complete the fields in the dialog box (see Table 18-8).
3. Click **OK**.

Table 18-8. Stinger Deck Settings

Field	Description
Deck Caption	Name displayed for the deck on the Stinger deck user interface.
Playback Device	Device where the audio goes.
Start Closure	Defined in the stinger configure Serial Server tab.
Stop Closure	
Manual Eject	Stops Stinger from automatically removing items from the deck list at the end of the file.
Allow Scrubbing When Playing	Allows you to click around inside the time remaining progress bar to jump around within the cut.

19 Audio Server Watchdog Module

Topics:

- *Starting the Watchdog Module (page 419)*
- *Quick Tour (page 420)*
- *Configuring the Audio Server Watchdog Timer (page 422)*
- *Starting and Stopping the Audio Server Watchdog Timer (page 423)*

This chapter describes the OpX Audio Server Watchdog module.

The Audio Server Watchdog module is a precautionary module that monitors the Audio Server process. If the Audio Server Watchdog module detects that the Audio Server stopped responding (or is “hanging”), it restarts the Audio Server module automatically.

19.1 Starting the Watchdog Module

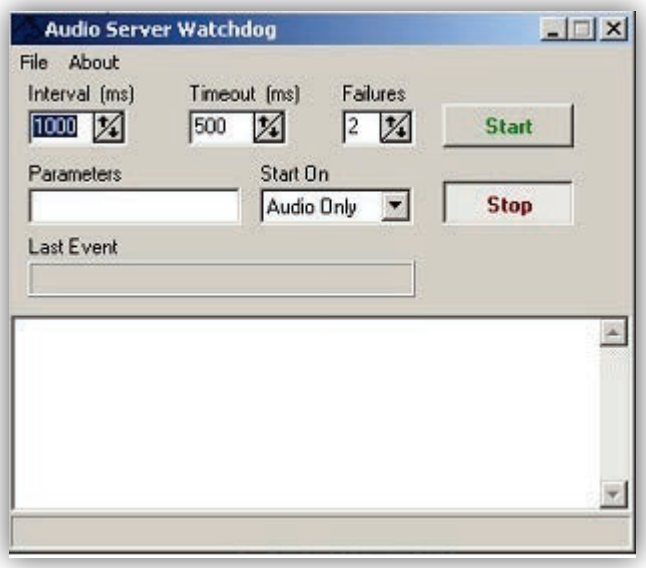
You must start the File Server module before you start the Watchdog module.

➢ **To Start the Audio Server Watchdog module**

1. Start the File Server module (see section 3.1).
2. Double-click the Audio Server Watchdog icon on your desktop

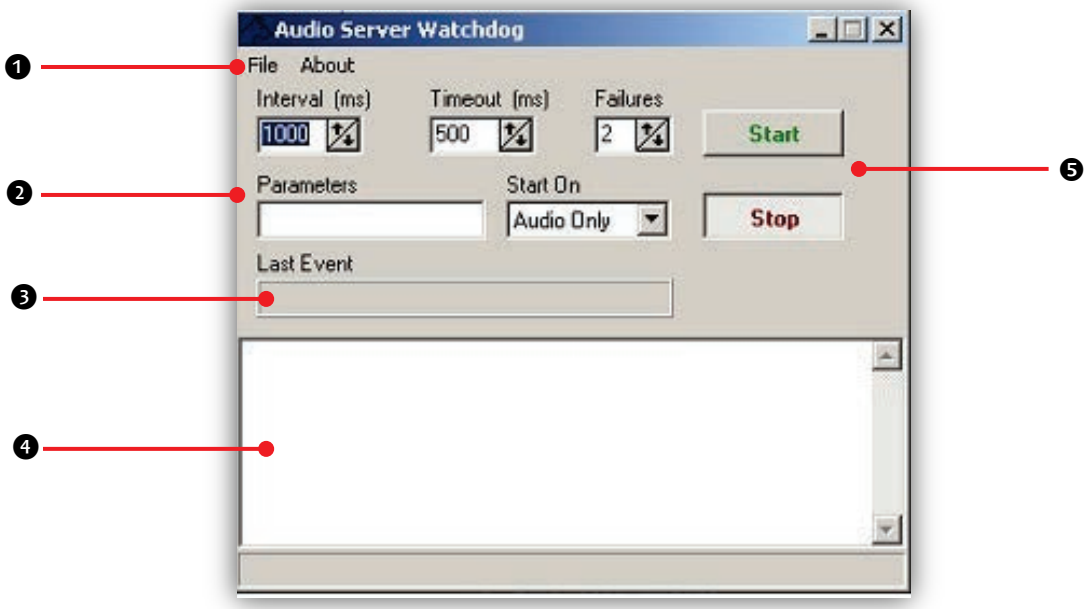
or click the Windows Start button and click **Programs > Broadcast Software > OpX Audio Server Watchdog**.

   An Audio Server Watchdog window similar to the following appears.



19.2 Quick Tour

The following sections provide a quick tour of the Audio Server Watchdog module interface.

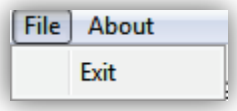


Number	Description
❶	Menu bar. See section 19.2.1.
❷	Parameters. See section 19.2.2.
❸	Last Event field. See section 19.2.2.
❹	Status area. See section 19.2.3.
❺	Start and Stop buttons. See section 19.4.

19.2.1 Audio Server Watchdog Module Menu Bar

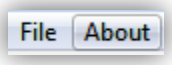
The menu bar appears at the top of the Audio Server Watchdog window. The following sections describe the menus on the menu bar.

19.2.1.1 File Menu



Exit = exits the Audio Server Watchdog module.

19.2.1.2 About Menu



Opens a window that shows the version and build date of the Audio Server Watchdog module you are running. This window also shows the amount of memory and virtual memory being used, and the amount of time that the Audio Server Watchdog module has been running. See Figure 19-1 for an example. To close the window, click **OK**.

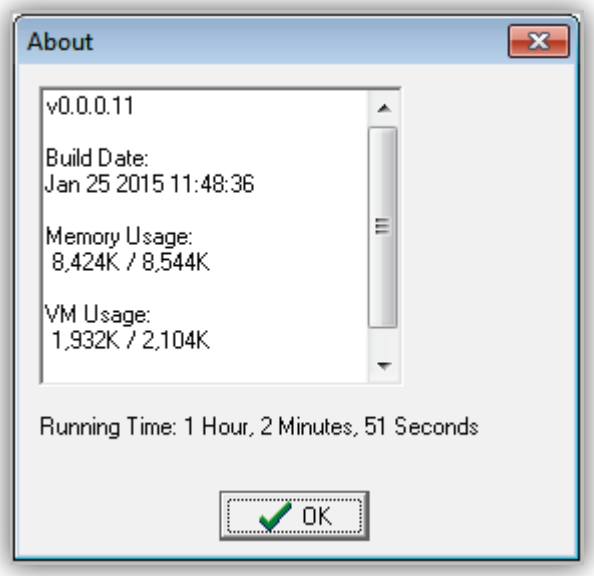
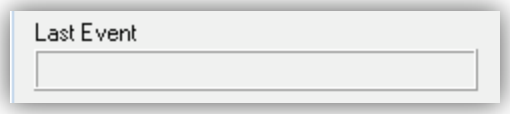


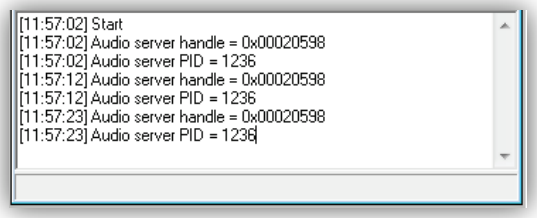
Figure 19-1. Example of About Information

19.2.2 Last Event Field



The **Last Event** field shows the date and time when the Audio Server Watchdog module detected that the Audio Server was not responding.

19.2.3 Status Area



The **Status** area shows the status of the Audio Server Watchdog time.

19.3 Configuring the Audio Server Watchdog Timer

You configure the Audio Server Watchdog Timer module using the fields on the module window. Figure 19-2 shows the fields and Table 19-1 describes them.

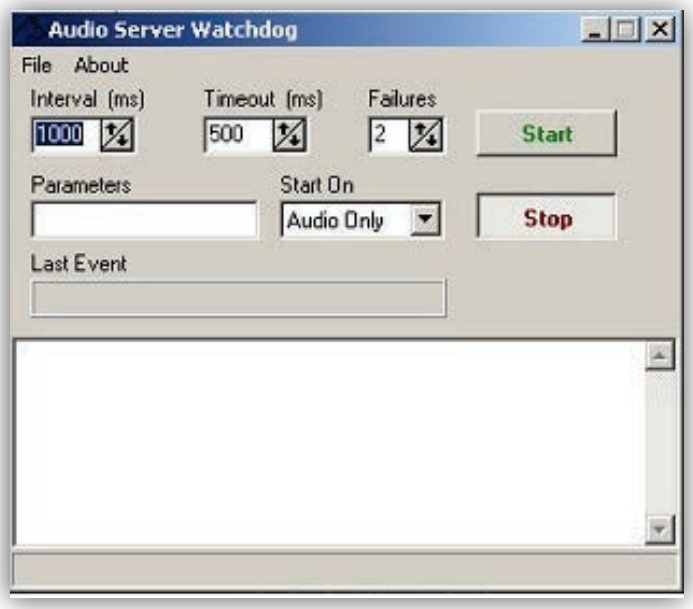


Figure 19-2. Audio Server Watchdog Module Configuration Fields

Table 19-1. Audio Server Watchdog Module Configuration Fields

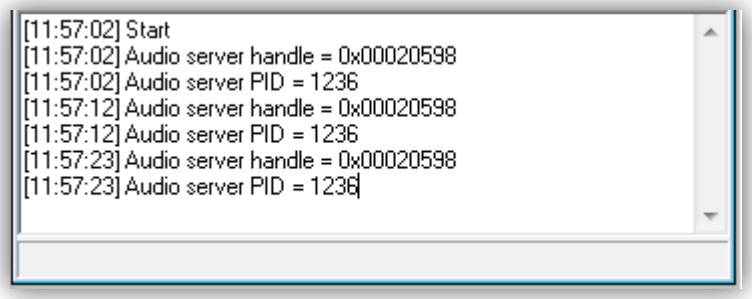
Field	Description	Default
Interval (ms)	How often the Audio Server Watchdog module checks that the Audio Server is running.	1000
Timeout (ms)	The maximum number of timeouts that must occur before the Audio Server Watchdog module resets the Audio Server.	500
Failures (ms)	The maximum number of failures that must occur before the Audio Server Watchdog module resets the Audio Server.	2
Parameters	Enter any of the following optional parameters you want to run with the Audio Server. Before using these parameters contact BSI technical support. • `-auxilialry` = starts the Audio Server as an auxiliary instead of as aa primary. • `- fs <ip address>` = tells the Audio Server where the file server is located. • `-nic <ip address>` = tells the Audio Server to use a specific network-interface card to use on the system.	—
Start On	Allows the Audio Server to start on a non-audio log item or requires the Audio Server to start on an audio item.	Audio Only

19.4 Starting and Stopping the Audio Server Watchdog Timer

➢ **To start the Audio Server Watchdog Timer**

1. Click the **Start** button

   Messages in the status area show that the Audio Server Watchdog Timer started.



➢ **To stop the Audio Server Watchdog Timer**

1. Click the **Stop** button

20 Troubleshooting

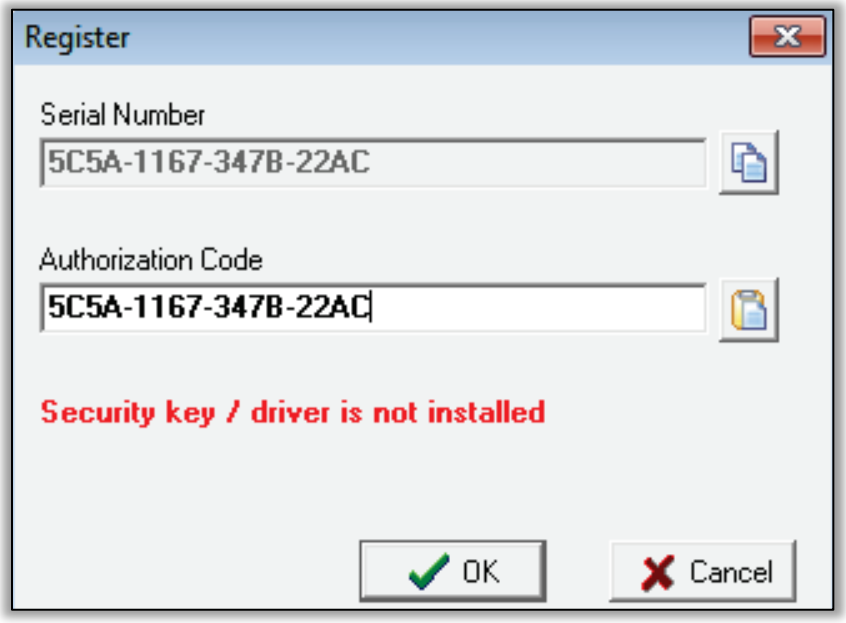
Topics:

- *“Security key / driver is not installed” Message (page 426)*
- *Program Does Not Activate (page 427)*

In the unlikely event you encounter a problem using OpX, refer to the information in this chapter to identify and correct the problem.

20.1 “Security key / driver is not installed” Message

If the message **Security key / driver is not installed** appears when you launch the File Server module or click **Edit > Register**:



1. Be sure the BSI-supplied dongle is inserted into a working USB port on your computer.
2. Remove the dongle and re-insert it into another USB port that is known to work. Confirm that a message in the system tray states that the device driver is being installed.

3. If all troubleshooting efforts fail, contact BSI technical support.

20.2 Program Does Not Activate

If your program does not activate:

1. Check the version of your program (**Help > About**) and confirm that it matches the code version given.
2. To avoid possible typing errors, copy the code and serial numbers provided, and paste them into the appropriate fields. Otherwise, check the characters in the authorization code:
   a. Codes are entered with all uppercase letters and a dash after every four characters.
   b. Codes contain the letters **A** – **F** only.
   c. The programs take up to 60 seconds to activate.
3. Is there a dongle key inserted into the same computer that is running your program?
4. Is your program using the dongle key serial number?
5. Do you have the latest version of the Sentinel hardware key drivers installed (see section 2.4).
6. If all troubleshooting efforts fail, contact BSI technical support.

Appendix A - Macros

Topics:

- *List of Macros (page 429)*
- *Macro Descriptions (page 431)*

This chapter describes the OpX macros.

In OpX, the term “macro” refers to commands that may use variables to allow you to perform automation functions. Using macros, for example, you can record audio files, send data via the serial port, enable or disable hardware devices, switch OpX’s playback mode, and add a comment to your program log.

You can add macros to program logs, carts, scheduled events, triggers, clocks, and Hot Keys.

Macros have a specific syntax that must be followed. In this appendix, macro names are shown in capital letters, required variables are enclosed in [brackets], and optional variables are enclosed in {squiggly brackets}.

Tip: Most users will not need to enter macros manually because the Clock Builder module enters automatically the most commonly used macros.

A.1 List of Macros

Table 20-1 lists the macros in alphabetical order and describes their function. For more information about a macro, go to the page in the “See Page” column.

Note: Some macros have abbreviated or alternate names that can be used to execute them. The `TCPOUT`, macro, for example, can also be executed by typing `UDPOUT`, `IPOUT`, or `IPSEND` instead of `TCPOUT`. If a macro has one or more alternative names, the names are shown in parentheses in the heading of the macro.

Table 20-1. Macros

Macro	Description	See Page
ADDTORUNLOG	Adds an entry to the run log.	431
APPLICATION	Runs the specified application.	431
ATTIME	Runs a command at a specified time.	432
AUTOFILLENABLE	Enables or disables auto-fill.	432
CHANNELRELAY	Enables or disables channel relays.	433
CLEARASYNC	Clears items from the auxiliary deck.	434
CLOSURE	Fire a specified closure.	434
COMMENT	Adds comments to your log.	435
COMMERCIALBREAKBEGIN	Starts a commercial break.	436
COMMECIALBREAKEND	Ends a commercial break.	437
CONSOLEOUT	Sends a command to an Axia console.	437
DECKTIMER	Superimposes a countdown timer over the top deck on the Studio Client Playback Deck Stack.	438
DEVICE	Enable or disables the use of a hardware I/O device.	439
FADECURRENT	Fades out the currently playing items.	440
FADEOUTLASTITEM	Looks ahead from the current item for a @ time-immediate cue, and then backs up to find an audio item before the time-immediate event.	440
FLUSHEVENTLOG	Flushes the run log.	440
GETFILLFILES	Scans the folders for your station that contain Fill material, and copy any new or modified files to the Audio Server’s local folder.	441
GETPROGRAMLOGS	Updates program logs form the file server.	442
GETVOICETRACKS	Gets voicetracks from the file server program log for the specified hour.	442
LOADLOG	Loads a program log.	443

Macro	Description	See Page
LOADLOGFROMSERVER	Loads a program log from the file server.	444
LOADSCHED	Loads a Scheduled Event Set.	444
LOADSCHEDULEDEVENTS	Switches between different Scheduled Events sets.	445
LOADTRIGGERS	Loads a trigger set.	446
MIXFADE	Forces one of the Audio Server's configured mixers to fade in, fade out, or fade to a specific level.	447
MIXVOLUME	Forces one of the Audio Server's configured mixers to cut to a specific volume level instantly.	448
MODE	Set the automation mode.	449
PADENABLE	Enables or disables PAD output.	450
PADOUT	Outputs PAD from the specified parameters.	450
PAUSE	Wait for pause time.	451
PLAYASYNC	Plays an audio file in the auxiliary playback deck.	451
PLAYTIMESHIFT	Plays a file in the timeshift deck.	452
RECORD	Records a file in the background.	453
RELAY	Runs a relay command.	455
RESETCART	Resets a cart to play at the first item.	456
RUN	Starts the next item regardless of cue.	456
RUNAPPLICATION	Allows you to enter the path to an executable file on your Audio Server machine.	457
SAVEPROGRAMLOG	Saves the program log.	457
SATSHOW	Starts or stops a satellite show.	458
SATSHOWTIMER	Shows a sat show count-up in the playback deck.	459
SCHED	Enables or disables the execution of scheduled events loaded in the Audio Server	460
SCHEDULEDEVENTS	Turns the scheduled events function on or off.	461
SENDPAD	Outputs PAD from a file name.	462
SERIALOUT	Sends a serial string out the serial port of any configured serial device.	462
START	Starts playback of the next event in your program log.	463
STARTDECK	Starts the specified deck.	463
STARTNEXT	Similar to the START macro, but changes its behavior based on the state of the Playback Deck Stack.	464
STARTENABLE	Enables or disables the start command.	464
STEPTHROUGH	Allows you to turn the Step-Through function on or off.	465
STOP	Stops playback of all events being played by the Playback Deck Stack.	466
STOPDECK	Stops the specified deck.	466

Macro	Description	See Page
SYNCRECORDSFOLDER	Immediately syncs the Records folder to the file server.	467
SUNCYRUNLOGSFOLDER	Immediately syncs the RunLogs folder to the file server.	467
TCPOUT	Sends a command to a TCP/UDP device	468
TIMEDBLOCKSTART	Specifies the length of a block of audio.	469
TIMEDBLOCKEND		470
TIMEEVENTS	Changes the Time Events mode on the Audio Server.	471
TIMESCALEITEM	Sets the time scaling for the specified program log item.	472
TRIGGERS	Enables or disables the trigger functionality of the Audio Server.	473
TRIM	Trims silence from the specified file	474

A.2 Macro Descriptions

A.2.1 ADDTORUNLOG (or RUNLOG)

This macro adds an entry to the run log.

ENTRY FORMAT

```
ADDTORUNLOG [CATEGORY], [DESCRIPTION]
```

VARIABLES

- `CATEGORY` = adds a category that can be used as a key when running reports.
- `DESCRIPTION` = any text.

EXAMPLE

This example adds the entry `BROWNS BENGALS GAME STARTED` to the run log.

```
ADDTORUNLOG INFO, BROWNS BENGALS GAME STARTED
```

A.2.2 APPLICATION (or APP)

This macro runs an external application.

ENTRY FORMAT

```
APPLICATION [NAME]
```

VARIABLES

- `NAME` = name of the application you want to run.

A.2.3 ATTIME

This macro runs a command at a specified time.

ENTRY FORMAT

```
ATTIME [TIME], [COMMAND]
```

VARIABLES

- `TIME` =time, in mm:ss format, when the command will run. Add a plus sign (+) in front of this variable to specify forward relative time. For example, `+0100` corresponds to one minute from the present time. Omitting the plus sign allows you to include a scheduled event in the program log. For example, `18000` means that an event will run at 18:00 (6:00 pm).
- `COMMAND` = command that is to run.

EXAMPLE 1

```
ATTIME +0010, START
```

A.2.4 AUTOFILLENABLE (or ENABLEAUTOFILL, FILLENABLE, or ENABLEFILL)

This macro enables or disables auto-fill.

ENTRY FORMAT

```
AUTOFILL [“ON / OFF”]
```

VARIABLES

- ON = enable autofill.
- OFF = disable autofill.

EXAMPLE 1

```
AUTOFILL ON
```

A.2.5 CHANNELRELAY (or CHANNELRELAYENABLE or CHANNELRELAYENABLED)

This macro enables or disables channel relays.

ENTRY FORMAT

```
CHANNELRELAY [“ON / OFF”]
```

VARIABLES

- ON = enable channel relays.
- OFF = disable channel relays.

EXAMPLE 1

```
CHANNELRELAY ON
```

A.2.6 CLEARSYNC (or CLEARAUX)

This macro enables or disables channel relays.

ENTRY FORMAT

```
CLEARSYNC
```

VARIABLES

None.

EXAMPLE 1

```
CLEARSYNC
```

A.2.7 CLOSURE (or TRIGGER)

This macro simulates the sending of a virtual closure from a device that supports closures to the Audio Server. For example, if you have a satellite receiver on closure 5, you can issue this macro to mimic the sending of a virtual closure from that receiver to the Audio Server. This macro often is used for troubleshooting. For ease of use, you might want to map this macro to a Hot Key.

ENTRY FORMAT

```
CLOSURE [NAME], #
```

VARIABLES

- `NAME` = name of the device, as configured in the Audio Server.
- `#` = number of the closure.

EXAMPLE 1

```
CLOSURE BTACS82, 1
```

A.2.8 COMMENT (or THECOMMENT)

This macro allows you to add comments to your run log. The cue type of comment macro events can be used to affect playback of your program log. Common examples are:

- Stopping playback and making it obvious why.
- Creating a `COMMENT` macro similar to Example 1 below with a Manual Start (aka Stop) cue type. You can mark your top of the hour with a comment by creating a `COMMENT` macro similar to Example 2, with a cue type of Time Immediate or Time Next.

These are but a few of the many functions you can perform using the `COMMENT` macro.

ENTRY FORMAT

```
COMMENT [THECOMMENT]
```

VARIABLES

- `THECOMMENT` = comment text.

EXAMPLE 1

This example shows a comment about going live on the air using a manual cue type.

```
COMMENT Talent: Go live on the air!
```

EXAMPLE 2

This example shows a comment about a top-of-the-hour resync, with a Time Immediate or Time Next cue type.

```
COMMENT Top of the hour re-sync
```

A.2.9 COMMERCIALBREAKBEGIN (or BREAKBEGIN)

This macro signifies the start of a commercial break.

ENTRY FORMAT

```
COMMERCIALBREAKBEGIN [LENGTH], ["MANDATORY/OPTIONAL"], {"FADE"}, {FADE%}, {"PLAYIFEMPTY }, {NAMETOPLAY}
```

VARIABLES

- `LENGTH` = length in mm:ss format.
- `MANDATORY` = the break must be filled with content. The system fills the break automatically to the alllotted time, even if there is no content.
- `OPTIONAL` = the system skips the break automatically if empty.
- `FADE` = uses the fade percentage specified.
- `FADE%` = if `FADE` is included, sets the volume of the “rejoin liner” (typically, a 10-second blurb of audio that you hear after a commercial break before returning to a satellite broadcast). If `FADE` is omitted, this variable is ignored.
- `PLAYIFEMPTY` = plays an event if a break has no items.
- `NAMETOPLAY` = filename of item to play if empty.

EXAMPLE

```
COMMERCIALBREAKBEGIN 3:00, MANDATORY
```

A.2.10 COMMERCIALBREAKEND (or BREAKEND)

This macro signifies the end of the break period.

ENTRY FORMAT

```
COMMERCIALBREAKEND
```

VARIABLES

None.

EXAMPLE

```
COMMERCIALBREAKEND
```

A.2.11 CONSOLEOUT

This macro sends a command to an Axia console.

ENTRY FORMAT

```
CONSOLEOUT [NAME], [COMMAND]
```

VARIABLES

- `NAME` = name of the Axia console.
- `COMMAND` = command to be sent to the Axia console.

EXAMPLE

```
COMMERCIALBREAKEND
```

A.2.12 DECKTIMER

This macro superimposes a countdown timer over the top deck on the Studio Client Playback Deck Stack. This is useful to run during a live show to display to the on-air talent the amount of time remaining in a show segment, among other uses. When a new event starts, or when the time runs out, the superimposed countdown timer disappears.

In the following figure, the countdown timer created by the `DECKTIMER` macro appears over top of the top deck in the Studio Client's Playback Deck Stack.

Entry Format

```
DECKTIMER [DESCRIPTION], [DURATION]
```

Variables

- `DESCRIPTION` = description to display on the deck.
- `DURATION` = duration of the countdown timer, in mm:ss format.

Example

```
DECKTIMER LIVE! – Dingo & The Baby Segment 1, 13:00
```

A.2.13 DEVICE

Use this macro to enable or disable the use of a hardware I/O device, such as a switcher or trigger/relay hardware.

Note: Use the exact name of the device you configured on the Device I/O page of your Audio Server module's configuration settings. If the name differs from the one specified in the macro or is misspelled, your macro will return an error when it executes.

ENTRY FORMAT

```
DEVICE [NAME],["ON" / "OFF”]
```

VARIABLES

- `NAME` = name of the device.
- `ON` = turn on the device.
- `OFF` = turn off the device.

EXAMPLE 1

This example turns on the Broadcast Tools ACS 8.2 audio switcher/GPIO device, which is named "WBSIACS8.2" when it was configured. This device connects to the WBSI Audio Server. This example makes the device available to send audio channel switching commands, relay commands, and receive triggers from OpX.

```
DEVICE WBSIACS8.2, ON
```

EXAMPLE 2

This example allows OpX to disable communications with the ACS 8.2 from Example 1. As a result, triggers are no longer acknowledged, and switching and relay commands are not sent to the device.

```
DEVICE WBSIACS8.2, OFF
```

A.2.14 FADECURRENT (or FADECUR)

This macro fades out the currently playing items.

Entry Format

```
FADECURRENT
```

Variables

None.

Example

```
FADECURRENT
```

A.2.15 FADEOUTLASTITEM (or FADE_OUT_LAST_ITEM)

This macro looks ahead from the current item for a @ time-immediate cue, and then backs up to find an audio item before the time-immediate event. It then sets the fade on that item, which will be the last audio item before the time-immediate.

Nothing happens when you run the macro. It merely sets the fade out on the last item before the time-immediate event. See the example below.

Entry Format

```
FADEOUTLASTITEM [TIME], [LENGTH]
```

Variables

- `TIME` = the time to start the fade in HH:MM:SS
- `LENGTH` = length of the fade, in milliseconds.

Example

Assume that your log looks resembles the following:

```
+ 17:56:00 SONG
+ 17:58:00 LAST
@ 18:00:00 SATSHOW START, THESHOW
```

Also, assume that some time before the last item in the hour starts, the following macro is executed:

```
FADEOUTLASTITEM 17:59:55, 4000
```

This macro sets the fade to start at 17:59:55 over four seconds, giving a second of silence before the satellite show starts at 18:00:00.

You can run the macro in the log, for example, 15 minutes prior to the end of the hour.

A.2.16 FLUSHEVENTLOG (or FLUSHRUNLOG)

This macro flushes the run log.

Entry Format

```
FLUSHEVENTLOG
```

Variables

None.

Example

```
FLUSHEVENTLOG
```

A.2.17 GETFILLFILES (or GETFILL)

This macro forces the File Server to scan the folders for your station that contain Fill material, and copy any new or modified files to the Audio Server's local folder.

Entry Format

```
GETFILLFILES
```

Variables

None.

Example

```
GETFILLFILES
```

A.2.18 GETPROGRAMLOGS

This macro forces the File Server to scan the program log folder for your station, and copy any new or modified program logs to the Audio Server's local folder.

Entry Format

```
GETPROGRAMLOGS
```

Variables

None.

Example

```
GETPROGRAMLOGS
```

A.2.19 GETVOICETRACKS

This macro forces the Audio Server to compare the specified hour of the currently loaded program log with the same hour in the File Server's copy of the program log, and update the on-air log with any new remotely created voicetracks.

Entry Format

```
GETVOICETRACKS [HH]
```

Variables

- `HH` = hour of voicetrack events update.

Example

The following example updates the voicetrack files in the current on-air log for the 2:00pm hour with any newly created or modified remote voicetrack files currently on the File Server.

```
GETVOICETRACKS 14
```

A.2.20 LOADLOG

This macro loads a program log using the entry in the **Program Log Name Template** field of the **General** tab in the Audio Server configuration settings.

This macro always loads the log using the date of your workstation's system date. If this macro is run before noon of the current day the current day's log is loaded. If after noon, the next day's log is loaded. This means that if your system's date is Tuesday December 23, 2015 at 11:55:25 PM when the LOADLOG macro is run, the program log for Wednesday December 24, 2015 is loaded. No variables apply to this macro.

For options about loading specifically named program logs and additional options for reloading today's log using the Audio Server's Program Log Name Template settings, see the LOADLOG macro later in section A.2.20.

If {NAME} is omitted, the configured program template log is loaded.

Entry FORMAT

```
LOADLOG {NAME}
```

VARIABLES

- NAME = name of the log to be loaded.

EXAMPLE

```
LOADLOG
```

A.2.21 LOADLOGFROMSERVER

This macro loads a program log from the file server. If {NAME} is omitted, the configured program log template is loaded.

Entry FORMAT

```
LOADLOGFROMSERVER {NAME}
```

VARIABLES

- NAME = name of the log to be loaded.

EXAMPLE

```
LOADLOGFROMSERVER
```

A.2.22 LOADSCHED (or LOADSCHEDULED or LOADSCHEDULEDEVENTS)

This macro loads a Scheduled Event set.

Entry FORMAT

```
LOADSCHED {NAME}
```

VARIABLES

- NAME = name of the Scheduled Event Set to be loaded.

EXAMPLE

```
LOADSCHED BEACHSONGEVENTSET
```

A.2.23 LOADSCHEDULEDEVENTS (or LOADSCHEDULED)

The OpX Audio Server can use only one Scheduled Events set at a time. Using this macro, however, makes it possible to switch between different Scheduled Events sets. Running this macro loads the named Scheduled Events set and unloads the previously loaded set. If the name of the Scheduled Events set is omitted, the Audio Server unloads any currently loaded scheduled events set.

Entry FORMAT

```
LOADSCHEDULEDEVENTS [NAME]
```

VARIABLES

- NAME = name of Scheduled Events set.

EXAMPLE 1

The following example unloads the currently loaded Scheduled Events set, so the events in that set will no longer execute. The **BaseballSchedSet** loads and all events in that set execute at their configured times, as long as the Scheduled Events function is enabled (turned on).

```
LOADSCHEDULEDEVENTS BaseballSchedSet
```

EXAMPLE 2

Since no scheduled events set name is specified, the Audio Server unloads any currently loaded scheduled events set. In this example, the alternate macro name LOADSCHEDULED is used instead of LOADSCHEDULEDEVENTS. The two macros are functionally equivalent. The only difference is that one macro name is longer than the other macro name.

```
LOADSCHEDULED
```

A.2.24 LOADTRIGGERS

This macro loads a trigger set. You can run this macro from a scheduled event, the program log, a cart, or another trigger set.

Entry Format

```
LOADTRIGGERS [NAME]
```

Variables

- NAME = filename of the trigger set.

Example 1

The following example loads a trigger set named **DavesTriggerSet**.

```
LOADTRIGGERS DavesTriggerSet
```

Example 2

Since no trigger set is named, running this example unloads the currently loaded trigger set.

```
LOADTRIGGERS
```

A.2.25 MIXFADE

Use this macro to force one of the Audio Server's configured mixers to fade in, fade out, or fade to a specific level (for ducking or other purposes). You can use either the name you've given your mixer or the mixer's number. Volume is in percent, with 100% being fully open/up and 0% being fully closed/down.

Entry FORMAT

```
MIXFADE [NAME OR #],[START%],[STOP%],[TIME]
```

VARIABLES

- `NAME OR #` = mixer name or number,
- `START%` = start volume percentage.
- `STOP%` = stop volume percentage.
- `TIME` = duration, in milliseconds.

EXAMPLE

The following example fades the mixer named **SATELLITE** from an initial 0% to a final 100% over a length (or ramp time) of 2.5 seconds.

```
MIXFADE SATELLITE, 0, 100, 2500
```

A.2.26 MIXVOLUME

Use this macro to force one of the Audio Server's configured mixers to cut to a specific volume level instantly. Use either the name you've given your mixer or the mixer's number. Volume is specified as a percentage, with 100% being fully open/up and 0% being fully closed/down.

Entry FORMAT

```
MIXVOLUME [NAME OR #],[PERCENT]
```

VARIABLES

- `NAME OR #` = mixer name or number.
- `PERCENT` = volume percentage.

EXAMPLE

The following example set the volume of the first defined mixer to 100%.

```
MIXVOLUME 1, 100
```

A.2.27 MODE

This macro allows you to change the Audio Server's automation mode to Auto, Assist, or Manual mode.

Entry Format

```
MODE [“AUTO” / “ASSIST” / “MANUAL”]
```

Variables

- `AUTO` = change the Audio Server's automation mode to auto.
- `ASSIST` = change the Audio Server's automation mode to assist.
- `MANUAL` = change the Audio Server's automation mode to manual.

Example 1

The following example sets change the Audio Server's automation mode to auto.

```
MODE auto
```

Example 2

The following example sets change the Audio Server's automation mode to assist.

```
MODE assist
```

Example 3

The following example sets change the Audio Server's automation mode to manual.

```
MODE manual
```

A.2.28 PADENABLE (or ENABLEPAD)

This macro enables or disables PAD output.

Entry Format

```
PADENABLE [“ON” / “OFF’]
```

Variables

- ON = enable PAD output.
- OFF = disable PAD output.

Example

```
PADENABLE ON
```

A.2.29 PADOUT (or OUTPAD)

This macro outputs PAD from the specified parameters.

Entry Format

```
PADOUT
```

Variables

None.

Example

```
PADOUT
```

A.2.30 PAUSE

This macro allows you to put a pause between events.

Entry Format

```
PAUSE [LENGTH]
```

Variables

- `LENGTH` = length of the pause, in mm:ss format.

Example

The following example pauses playback of events for 10 seconds.

```
PAUSE :10
```

A.2.31 PLAYASYNC (or PLAYAUX)

This macro plays an audio file in the auxiliary playback deck. This is useful to play a background audio file at the same time audio is playing in the main playback decks, such as a backing track behind a weather forecast.

Entry Format

```
PLAYASYNC [NAME]
```

Variables

- `NAME` = filename of audio file to play without extension.

Example

If the following macro is run from the program log followed by an audio file containing a dry reading of the weather, the audio file **weatherbed1.wav** executes on the Async deck, and then the weather would play immediately over top.

```
PLAYASYNC weatherbed1
```

A.2.32 PLAYTIMESHIFT (or PLAYTS or TIMESHIFT)

This macro plays a file in the timeshift deck. After using a clock from the Clock Builder to record a satellite show, this macro is added to a clock to play back the recorded audio. This macro prompts the OpX system to start playback of your pre-recorded satellite show's audio file.

Entry FORMAT

```
PLAYTIMESHIFT [NAME]
```

VARIABLES

- NAME = name of the audio file to play.

EXAMPLE

This example starts playback of the audio file **BILLOREALLYHR1.wav**. This file was created with the record function of the Clock Builder module.

```
PLAYTIMESHIFT BILLOREALLYHR1
```

A.2.33 RECORD

Use this macro to record audio using one of your Audio Server's record decks (for recording audio manually rather than using the record function of the Clock Builder).

Audio files can be recorded to a specified length by entering a [Length to record] variable with a specific time (such as 30:00). To record a variable-length audio file, specify the time as 00:00, and when you want to stop recording, run a second `RECORD STOP, [Deck #]` macro.

Time is interpreted as `mm:ss` if only five digits are entered (including the colon), or as `hh:mm:ss` if 8 digits are entered (including the two colons).

The `Filename`, `Title/Description`, and `Artist` variables you use can include meta variables for the date or time, as shown in the following table.

Meta Variable	Description
%yy	Year as a 2-digit number (00-99)
%yyyy	Year as a 4-digit number (0000-9999)
%m	Month as a number without a leading zero (1-12)
%mm	Month as a number with a leading zero (01-12)
%mmm	Month as a 3-letter abbreviation (Jan-Dec)
%mmmm	Month as a full name (January-December)
%d	Day as a number without a leading zero (1-31)
%dd	Day as a number with a leading zero (01-31)
%ddd	Day as a 3-letter abbreviation (Mon-Sun)
%dddd	Day as a full name (Monday-Sunday)

Entry FORMAT

```
RECORD  ["START"/"STOP"],  [DECK#], [NAME], [LENGTH], [TITLE],[Artist], [UPLOAD], [TRIM]
```

VARIABLES

- `START` = starts recording.
- `STOP` = stops recording.
- `DECK#` = number of the deck on which recording is to start or stop.
- `NAME` = filename to save to.
- `LENGTH` = length to record.

- `TITLE` = description.
- `ARTIST` = name of the artist.
- `UPLOAD` = copies a file from the Audio Server to the File Server.
- `TRIM` = removes the silence (“dead air”) from the start or end of the specified file.

EXAMPLE 1

This example records an audio file that will be 5 minutes long from Record Deck 1. The file will be saved with the file name **NEWS.wav** (or other extension for other file types), with the audio file’s Title field showing **ABG News** and the artist field showing **Doug Haiku**.

```
RECORD START, 1, NEWS, 05:00, ABG News, Doug Haiku
```

EXAMPLE 2

This example records an audio file of variable length that must be stopped at some point with the `RECORD STOP, 2` macro or it will eventually fill up the hard drive. The file is played from Record Deck 2 with the file name **Rosh-122315.wav** (if the file were recorded on December 23, 2015) and the audio file’s Title/Description field would show **Rosh Limberg Show – 12/23/2008**.

```
RECORD START, 2, Rosh-%mm%dd%yy, 00:00, Rosh Limberg Show - %mm/%dd/%yyyy
```

EXAMPLE 3

This example stops Record Deck 2 from recording and save its audio file to the File Server.

```
RECORD STOP, 2
```

A.2.34 RELAY

This macro forces a relay closure open (on), closed (off), or to pulse closed for a period of milliseconds.

Entry Format

```
RELAY [NAME], [#], [“ON” / “OFF” / MS]
```

Variables

- NAME = name of the device.
- # = relay number.
- ON = relay is turned on.
- OFF = relay is turned off.
- MS = milliseconds.

Example

This example pulses for 500 milliseconds the first relay on the device named **ACS8.2** configured in the Audio Server’s Device I/O settings.

```
RELAY ACS8.2, 1, 500
```

A.2.35 RESETCART

This macro resets a cart's "event executed" flags, so that all items within a cart are marked as unplayed. The next time the cart is played, the first item is played (or in randomized carts, all items within the cart will be available to play again).

Entry Format

```
RESETCART [NAME]
```

Variables

- NAME = name of the cart to reset.

Example

This example causes the cart named **STATIONIDCART** to remove the internal event executed flags from each event in the cart, so that the next time that cart executes, it starts playing from the first event in the cart.

```
RESETCART STATIONIDCART
```

A.2.36 RUN (or START)

This macro starts the next item regardless of cue.

Entry Format

```
RUN
```

Variables

None.

Example

```
RUN
```

A.2.37 RUNAPPLICATION

OpX can execute any application that can be executed using the Microsoft Windows Command Prompt. This allows you to have OpX start any custom application you might need.

This macro allows you to enter the path to an executable file on your Audio Server machine, including any parameters required by that executable file, as the macro's variable.

Entry Format

```
RUNAPPLICATION [PATH]
```

Variables

- `PATH` = full path and parameters for executable file.

Example

This example tells Windows to execute the command `C:\Program Files\My Apps\CustomApp.exe /x`, which starts the `CustomApp.exe` executable and passes it the parameter `/x`.

```
RUNAPPLICATION C:\Program Files\My Apps\CustomApp.exe /x
```

A.2.38 SAVEPROGRAMLOG

This macro saves the program log.

Entry Format

```
SAVEPROGRAMLOG
```

Variables

None

Example

```
SAVEPROGRAMLOG
```

A.2.39 SATSHOW

This macro is usually generated by the Clock Builder module to start a satellite show. However, it is possible to manually use this macro. If placed in a Hot Key, you can restart a satellite show if necessary.

Entry Format

```
SATSHOW ["START" / "STOP" / “STOPLIVE” / “STOPRECORD”], [NAME]
```

Variables

- START = start the satellite show.
- STOP = stop the satellite show.
- STOPLIVE = stop live satellite show.
- STOPRECORD = search the list of active satellite shows and stop the ones that are recording.
- NAME = name of the satellite show.

Example

This macro puts all the settings configured in the Clock Builder for the Satellite Show Start event titled **BILL OREALLY**.

```
SATSHOW START, BILL OREALLY
```

A.2.40 SATSHOWTIMER

This macro shows a sat show count-up in the playback deck.

Entry FORMAT

```
SATSHOWTIMER ["START" / "STOP"], [NAME], [DESCRIPTION]
```

VARIABLES

- `START` = start the satellite show count-up in the playback deck.
- `STOP` = stop the satellite show count-up in the playback deck.
- `NAME` = name of the satellite show count-up in the playback deck.
- `DESCRIPTION` = description of the satellite show count-up in the playback deck.

EXAMPLE

This macro puts all the settings configured in the Clock Builder for the Satellite Show Start event titled **BILL OREALLY**.

```
SATSHOWTIMER START, BILL OREALLY
```

A.2.41 SCHED (or SCHEDULED)

This macro enables or disables the execution of scheduled events loaded in the Audio Server.

Entry Format

```
SCHED ["ON" / "OFF"]
```

Variables

- `ON` = enable execution.
- `OFF` = disable execution.

Example

```
SCHED ON
```

See Also

LOADSCHED (or LOADSCHEDULED or LOADSCHEDULEDEVENTS) on page 444.

A.2.42 SCHEDULEDEVENTS (or SCHEDULED)

This macro turns the scheduled events function on or off.

Entry Format

```
SCHEDULEDEVENTS ["ON" / "OFF"]
```

Variables

- `ON` = enable the scheduled events function.
- `OFF` = disable the scheduled events function.

Example 1

This macro turns on the Scheduled Events function, so that the events in the currently loaded Scheduled Events set executes its events at the specified times.

```
SCHEDULEDEVENTS ON
```

Example 2

This macro turns off the Scheduled Events function, so if events in the currently loaded Scheduled Events set are set to execute at a specific time, they are ignored. In the following example, the command `SCHEDULED` is used instead of `SCHEDULEDEVENTS`. The two macros are functionally equivalent. The only difference is that one macro name is longer than the other macro name.

```
SCHEDULED OFF
```

A.2.43 SENDPAD (or PADSEND)

This macro outputs PAD from a file name.

Entry Format

```
SENDPAD
```

Variables

None.

Example

```
SENDPAD
```

A.2.44 SERIALOUT

This macro sends a serial string out the serial port of any configured serial device.

Entry Format

```
SERIALOUT [NAME], [COMMAND]
```

Variables

- `NAME` = name of the device.
- `COMMAND` = serial string.

Example

This macro sends the serial string ***1051** out the serial port or serial server to which the device named **ACS82** on the Audio Server is connected. This serial string is commonly used to switch most Broadcast Tools switchers, such as the ACS 8.2 and others, to set Output 1 to open Input 5.

```
SERIALOUT ACS82, *1051
```

A.2.45 START

This macro starts playback of the next event in your program log. If audio is already playing, this macro starts the next event playing at the same time, without cutting off the currently playing event. For a macro that stops the currently playing event and start the next event, see the STARTNEXT macro in section A.2.48.

Entry FORMAT

```
START
```

VARIABLES

None.

EXAMPLE

```
START
```

A.2.46 STARTDECK

This macro starts the specified deck.

Entry FORMAT

```
STARTDECK [DECK#]
```

VARIABLES

- DECK# = number of the deck to be started.

EXAMPLE

This example starts deck number 2.

```
STARTDECK 2
```

A.2.47 STARTENABLE

This macro enables or disables the start command. Use this macro when your programming is automated and you want to prevent manual intervention.

Entry Format

```
STARTENABLE [“ON” / “OFF”]
```

Variables

- `ON` = enable the start command.
- `OFF` = disable the start command.

Example

```
STARTENABLE ON
```

A.2.48 STARTNEXT

This macro is similar to the `START` macro, but changes its behavior based on the state of the Playback Deck Stack:

- If an event is playing when this macro executes, it fades out and the next event in the program log executes.
- If no event is playing in the Playback Deck Stack, the item loaded in the top of the Playback Deck Stack executes.

Entry Format

```
STARTNEXT
```

Variables

None.

Example

```
STARTNEXT
```

A.2.49 STEPTHROUGH

The Step-Through function of the Audio Server determines how timed events (events with a Time Immediate or Time Next cue type) start. This macro allows you to turn the Step-Through function on or off.

- If the Step-Through function is enabled, timed events start when their time is reached. If a particular timed event is reached before its scheduled time, that event starts automatically, as if it were an Auto Start cued event. This is useful for “Music-from-Hard-Drive” stations that encounter missing audio files and want their timed events to run early rather than having dead air until a timed event’s time is reached.
- If the Step-Through function is disabled, timed events do not execute until their specified time is reached. This is the standard setting for OpX, since it is the expected behavior of timed events for most users.

Entry Format

```
STEPTHROUGH [“ON” / “OFF”]
```

Variables

ON = enable stepthrough.

OFF = disable stepthrough.

Example 1

```
STEPTHROUGH ON
```

Example 2

```
STEPTHROUGH OFF
```

A.2.50 STOP

This macro stops playback of all events being played by the Playback Deck Stack. This macro is most commonly used with the trigger set function to allow you to configure stop buttons on consoles.

Entry Format

```
STOP
```

Variables

None.

Example

```
STOP
```

A.2.51 STOPDECK

This macro stops the specified deck.

Entry Format

```
STOPDECK [DECK#]
```

Variables

- DECK# = number of the deck to be stopped.

Example

This example stops deck number 2.

```
STOPDECK 2
```

A.2.52 SYNCRECORDSFOLDER (or SYNCRECORDS)

This macro forces the File Server and Audio Server to synchronize the `Records` folder for your station. It copies any new or modified files between the Audio Server's local folder and the File Server's `Records` folder, so both have the most recent versions of all files. You can use this macro to ensure that all files in the Audio Server's local folder are up to date.

Entry Format

```
SYNCRECORDSFOLDER
```

Variables

None.

Example

```
SYNCRECORDSFOLDER
```

A.2.53 SYNCRUNLOGSFOLDER (or SYNCRUNLOGS)

This macro forces the File Server and Audio Server to synchronize the `Runlogs` folder for your station. It copies any new or modified files between the Audio Server's local folder and the File Server's `Runlogs` folder, so both have the most recent versions of all files.

Entry Format

```
SYNCRECORDSFOLDER
```

Variables

None.

Example

```
SYNCRECORDSFOLDER
```

A.2.54 TCPOUT (or UDPOUT, IPOUT, or IPSEND)

This macro sends commands to a TCP/UDP device.

ENTRY FORMAT

```
TCPOUT [NAME], [COMMAND]
```

VARIABLES

- NAME = name of the device.
- COMMAND = command to be sent to the device.

EXAMPLE

```
SYNCRECORDSFOLDER
```

A.2.55 TIMEDBLOCKSTART

This macro is used with the TIMEDBLOCKEND macro to specify the length of a block of audio, such as a break, and have OpX “stretch” (slow down) or “squeeze” (speed up) the audio so that the audio fits the specified block length.

ENTRY FORMAT

```
TIMEDBLOCKSTART [LENGTH]
```

VARIABLES

- LENGTH = length of block, in hh:mm:ss format.

EXAMPLE

This example adds to the start of a break which the operators wants to be stretched or squeezed automatically to be a total of 3:00 minutes long. When using this macro, add the TIMEDBLOCKEND macro after the block of audio. The pair of these macros is the way OpX ascertains which audio files are to be stretched or squeezed. Without the TIMEDBLOCKEND macro at the end of your block of audio files, OpX would not know the end point of your block of audio and cannot fit your audio properly to the specified length.

```
TIMEDBLOCKSTART 03:00
```

Note: Do not use carts and timed events (events with a Time Immediate or Time Next cue type) within the TIMEDBLOCKSTART / TIMEDBLOCKEND macro pair. This is because the length of audio events within carts cannot be determined until the cart itself starts to play, and timed events affect the start point of playback (either stopping playback or starting early if their specified time is reached), Both of these actions are beyond the control of this macro.

A.2.56 TIMEDBLOCKEND

This macro is used with the `TIMEBLOCKSTART` macro to specify the length of a block of audio files, so that OpX can time scale the block of audio automatically to your desired length. The `TIMEDBLOCKEND` macro is added to the end of your block of audio (with the block started with the `TIMEDBLOCKSTART` macro), which is to be time-scaled.

Entry Format

```
TIMEBLOCKEND
```

Variables

None.

Example

```
TIMEBLOCKEND
```

A.2.57 TIMEEVENTS (or TIMEDEVENTS)

This macro changes the Time Events mode on the Audio Server to change OpX's behavior when playing time cued events in the Program Log and when executing events from your current Scheduled Events set.

Entry Format

```
TIMEEVENTS ["ON" / "OFF" / "ALL"
```

Variables

- ON = turn on time events.
- OFF = turn off time events.
- ALL = turn on stepthrough.

Example 1

```
TIMEEVENTS ON
```

Example 2

```
TIMEEVENTS OFF
```

Example 3

```
TIMEEVENTS ALL
```

A.2.58 TIMESCALEITEM (or SCALEITEM or TSITEM)

This macro sets the time scaling for the specified program log item. For example, if you have an infomercial that is 14:45 long, but must fit into a 15-minute timeframe, you can use this macro to stretch the infomercial so it fills the 15-minute spot. Similarly, you can use this macro to squeeze content that exceeds the time in which it is scheduled to play.

Entry FORMAT

```
TIMESCALEITEM [“NEXT” / +#, #]
```

VARIABLES

- NEXT = next program log item.
- +# = number of item forward from current position.
- # = absolute log position.

EXAMPLE

This example sets the time scaling for 5 items forward.

```
TIMESCALEITEM +5
```

A.2.59 TRIGGERS

This macro enables or disables the trigger functionality of the Audio Server.

- If triggers are turned on, all incoming triggers execute the events from your currently loaded Trigger Set.
- If triggers are turned off, all incoming triggers are ignored.

Entry Format

```
TRIGGERS ["ON" / "OFF"]
```

Variables

- `ON` = turn on triggers.
- `OFF` = turn off triggers.

Example 1

This example turns on triggers.

```
TRIGGERS ON
```

Example 2

This example turns off triggers.

```
TRIGGERS OFF
```

A.2.60 TRIM

This macro trims silence from the specified file.

Entry Format

```
TRIGGERS [NAME]
```

Variables

- NAME = name of the file.

Example

```
TRIM 50954
```

Appendix B - Cue Types

This appendix describes the cue types supported by OpX event playback. Cue types determine how events are started in the program log or from within carts.

- With program logs, every event is started by a scheduled time (such as with Time Immediate cued events) or from the interaction of previous items playing back. Examples of the latter include Auto Start cued events, which start when the previous event finishes, and Stop cued events, which stop playback after the previous event finishes.
- Carts use the Stop cue and Auto Start cue to determine how many events are played from a cart. When a Stop cued event is reached during cart play, the cart quits. If the cart is being played from a program log, the next event in the program log executes with respect to its specified cue type.

Cue Type	Description
Stop (blank)	Event will not start playing when the previous item finishes.
Auto Start (+)	Event starts playing automatically when the previous item finishes
Time Immediate (@)	If playback has not reached the event at the time set in the Scheduled Time field: • The currently playing event(s) stops. • All events in the program log between the currently playing event and the Time Immediate event are skipped. • The Time Immediate event plays. Playback continues from this point forward and all previous events are skipped. If playback reached the event at the time specified in the Scheduled Time field, playback stops until the specified scheduled time, at which time it starts playing the Time Immediate event.
Time Next (#)	The behavior of the Time Next cue type is almost identical to the Time Immediate cue type. The difference is in when the Time Next event executes. While the Time Immediate event cuts off any playing events and starts playing, a Time Next event waits for the currently playing event to finish before executing. The trade-off is that the Time Next event might be delayed by the end of the previous event, while the Time Immediate event will play at exactly the time specified in the Scheduled Time field. For most 'music-from-hard-drive' stations, close to the top-of-the-hour is satisfactory for station IDs, so a song is not cut off, which would offend the listening audience.

Appendix C - Glossary

Term	Definition
Audio pass-through	The ability of an audio device to route the audio coming through the line-in directly to the line-out, usually with the ability to control the volume of that audio from 0% (not passing through) to 100% (fully passed-through). This function is used for spot replacement when broadcasting syndicated satelliteshows.
Cart	In OpX, a cart is a special file created by the Log Import/ Cart Builder program that contains references to other files. Think of it as a mini program log. It can contain audio cuts to rotate or a list of macros to execute. OpX treats carts just like an audio cut, but the cart its self can contain a set of audio files/commands to execute (playing multiple audio files/commands when the cart is 'played'), or a rotation of audio files (playing a different audio file/command each time the cart is 'played).
Categories	OpX can visually differentiate different types of audio files in the OpX Studio Client. It does this according to which category each audio cut is assigned to. The category attribute is stored in the tagging information of each audio file.
Closures	Momentary contacts from an external source received through a *device* and relayed to an OpX Audio Server. Closures are also known as outgoing triggers, or relays.
Database	The internal database OpX keeps of all audio files and carts in your OpX system. The database exists on the OpX File Server.
De-bouncing	A function that allows a trigger system to ignore triggers for a specified amount of time after a trigger has been received. This helps combat accidentally repeated triggers from a satellite syndicator, sloppy relays in a satellite receiver, or if wired to a console switch, accidentally pressing a button multipletimes.
Default ducking level	The OpX Audio Server reduces the volume level of audio cuts playing underneath voicetracks by this amount unless a different amount is specified when a voicetrack is recorded.
Default segue time	If no segue time is specified in a certain audio cut, OpX uses the default segue time to determine when to segue into the next audio cut following it in the program log. The default value is 250 milliseconds or ¼ second.
Device	A piece of equipment that communicates with an OpX Audio Server to facilitate communication with external equipment or switch audio, such as a BSI Trigger Kit, Broadcast Tools audio switcher or an Axia node.
Device I/O	A setting in the OpX Audio Server module that allows the module to interface with external devices such as BSI Trigger Kits, Broadcast Tools switchers, and Axia nodes.
FTP	File Transfer Protocol. A standard "language" for communicating data/files across a network. It is also the means by which audio files and carts are transferred from one OpX module to another.
Macro	A command issued to the OpX Audio Server as a string of text or text and numbers to perform various functions.
Maximum fade out	A user-selectable option on each Audio Server that allows you to set a maximum amount of time OpX will fade each audio cut during playback. This is useful for song libraries where you want each song to fade over a certain period of time after the segue point of each song is reached. The default is 3,000 milliseconds or 3 seconds.

Term	Definition
Mixers	Each OpX Audio Server can control the audio levels of some audio devices such as audio pass-through in sound cards and Axia nodes. The level controls of each audio device are accessed through the mixers command.
Mode	Designates how each OpX Audio Server advances through a program log. There are two modes for each Audio Server – auto and manual. In auto mode, the audio server advances through the log automatically unless it encounters a command in a log directing it to do otherwise. In manual mode, the audio server steps through the log manually, relying on outside input before advancing
Network	A system of communication between 2 or more computers. This is also referred to as a LAN, or local area network. Some in the radio/broadcasting industry use the term "network" interchangeably to mean either a satellite show, or a computer network. This manual uses it to mean a computer network.
NIC	Network Interface Card. An expansion board you insert into a computer to connect to a network.
PAD	Program Associated Data. Each OpX Audio Server is capable of sending PAD data via UDP to a single device such as an HD Radio importer, streaming audio encoder or RDS encoder. PAD data is useful for providing artist / title information, commercial substitution, etc.
Playback device	An audio device in or connected to your OpX system for audio playback. For example: This could be an audio card, an individual channel of a multi- channel audio card, or individual output of an Axia node.
Record deck	A device that allows background recording of any type of audio. Recording is a function of the OpX Audio Server, with up to 4 simultaneous background records possible.
Satellite show	A function of the OpX Clock Builder – a simple, Q&A method of building clocks for syndicated programming. This is the same as what some refer to as a "network" show. The term "satellite show" is used to differentiate between it and a computer data network.
Sample rate	The number of samples taken of an audio source per second in digitally recorded audio. By default, OpX operates at a sample rate of 44,100 Hz.
Scheduled events	Events programmed to execute in the background on an OpX Audio Server, independent of the program log. Scheduled events are most commonly used for utility tasks or "set-it-and-forge- it" tasks.
Segue	A general term used to indicate the transition between two audio cuts. For example: This can be a "cold" transition, where one audio cut stops and the next one starts, or a cross-fade between two cuts.
Step through	A preference setting that, when enabled, causes timed events to automatically start if they are reached in the program log before their specified time effectively treats timed events as an "Auto Start" cued event. Disabling this setting (which is the default setting) causes playback of the program log to wait to play an item until its specified time. Typically used for non-music live, voicetracked or satellite programming.
System tray	Area in the Windows desktop that contains the system clock and status icons of many applications. The system tray usually appears the right side section of the Taskbar, which also contains the "Start" button. For example:
Time shift	Recording a satellite show for playback at a later time, complete with triggers. These are played back through a special deck in the OpX Audio Server.
Triggers	Also known as closures, they are signals typically from a satellite receiver relay closure or start/stop buttons on a console that OpX receives through a "trigger kit" device and uses to play audio files or perform commands.

Term	Definition
Trigger set	A collection of commands or audio files that OpX executes when specific closures are received. Each trigger set is individually named and can be loaded into the OpX Audio Server at any time.
Time events	Audio or Macro events scheduled to execute at a specific time. For example, a timed event is used to ensure that your top of the hour ID will play exactly at the top of the hour.
Verify	A command in the OpX Studio Client that checks to see whether the files specified in the currently loaded program log are available to play. This process also verifies that the artist, title, and description information listed in the program log matches the data imbedded within each specified audio cut.
Voicetrack	An audio file recorded in OpX Studio Client to be inserted between two audio cuts and simulate live air talent. A voice track is a pre-recorded voice-over.

Index

A

Adding
- a common folder to a station, 55
- a folder to a station, 54
- audio files using file library, 295
- categories, 84
- events to Hot Keys, 168
- events to program log, 165
- I/O card device profile, 339
- items to the program log, 130
- local files to carts, 205
- new program log events, 297
- satellite show start event, 245
- serial device profile, 333
- stations to file server, 52
- XDS receiver profile, 337

Adding items to Hot Key sets, 405
ADDTORUNLOG macro, 431
Allow Stations module, 342
- configuring, 347
- limiting station profiles, 348
- menu bar, 346
- quick tour, 345
- starting, 343

Allow Stations Module
- tool bar, 347

Appearance of Studio Client, 185
APPLICATION macro, 432
ATTIME macro, 432
Audience, 12
Audio events loading into Voicetrack Editor, 179
Audio files
- adding using file library, 295
- editing tagging info, 208

Audio Server module
- auto fill and time scaling configuration settings, 79
- closure and relay configuration settings, 123
- configuring, 72
- Connections tab, 70
- data configuration settings, 115
- device configuration settings, 87
- Devices tab, 70
- general configuration settings, 74
- menu bar, 64
- mixer configuration settings, 112
- mode and log configuration settings, 122
- playback configuration settings, 77
- Playback tab, 67
- program log display, 71
- quick tour, 63
- record configuration settings, 82
- Record tab, 68
- scheduled event set configuration settings, 118
- starting, 61
- Status tab, 69
- trigger set configuration settings, 109

Audio Server Watchdog module
- menu bar, 421
- quick tour, 420
- starting, 419

Audio tagging info, editing, 211
Audition/cue configuration settings, 157
Authorization code, modifying, 42
Auto fill and time scaling configuration settings, 79
AUTOFILLENABLE macro, 433
Automation report template, 212
Automation reports, 212
- running, 217

Auxiliary Audio Server module, starting, 135

B

Background recording example, 260
Block marker configuration settings, 284

C

Carts
  adding local files, 205
  creating, 202, 300
  editing, 204, 301
  saving, 301
Categories
  adding, 84
  deleting, 85
  editing, 85
CHANNELRELAY macro, 433
CLEARSYNC macro, 434
Clock Builder module
  adding a satellite show start event, 245
  configuring, 229
  creating a commercial break event, 247
  creating custom event, 252
  creating multi-hour satellite show clocks, 256
  creating satellite show start event, 233
  creating stop satellite show event, 254
  menu bar, 223
  quick tour, 222
  recording a satellite show, 256
  starting, 220
  time-shifting a satellite show, 256
  tool bar, 225
Clocks, samples, 258
Closure and relay configuration settings, 123
CLOSURE macro, 434
COMMENT macro, 435
Commercial break event, 247
COMMERCIALBREAKBEGIN macro, 436
COMMERCIALBREAKEND macro, 437
Configurations
  dual workstation/single station, 19
  production workstation, 23
  robust multi-station, 22
  simple multi-station, 21
  single workstation/single station, 19
  triple workstation/single station, 20
Configuring
  Allow Stations module, 347
  Audio Server module, 72
  Clock Builder module, 229
  File Manager module, 196
  File Server module, 51
  File Sync module, 323
  FTP Server module, 357
  Import-Merge module, 274
  item properties, 411
  Mobile Gateway/Client module, 389
  Serial Device Server module, 332
  stinger deck, 416
  Stinger module, 397
  studio client module items, 146
Connections List, File Server module, 50
Connections tab, Audio Server module, 70
CONSOLEOUT macro, 437
Conventions in this document, 13
Copying
  events to program log, 167
  files from file server, 200
  files to file server, 198
Creating
  automation report template, 212
  carts, 300
  commercial break event, 247
  custom event, 252
  data repeater, 376
  mixer layouts, 367
  multi-hour satellite show clocks, 256
  new carts, 202
  rotating Hot Keys, 169
  satellite show start event, 233
  stop satellite show event, 254
  voicetracks, 179
Cue types, 475
  program log events, 298
Current authorization code, modifying, 42
Custom event, 252

D

Data configuration settings, Audio Server module, 115
Data repeater
creating, 376
deleting, 381
editing, 380
starting and stoppping, 382
Data Repeater module
menu bar, 373
quick tour, 372
starting, 371
tool bar, 374
DECKTIMER macro, 438
Deleting
categories, 85
data repeater, 381
device profile, 341
items, 414
items from the program log, 133
Device configuration settings, Audio Server module, 87
DEVICE macro, 439
Device profile
deleting, 341
editing, 340
Devices tab, 70
Disabling
Virtual Audio Server, 57
Voictrack Transfer module, 58
Document conventions, 13
Dual workstation/single station configuration, 19
Ducking levels, 183

E

Editing
audio tagging info, 211
carts, 301
categories, 85
data repeater, 380
device profile, 340
items to the program log, 132
local audio file tagging info, 208
new carts, 204
program log, 165
program log events, 298
Enabling
Virtual Audio Server, 57
Voictrack Transfer module, 58
Events
adding to Hot Keys, 168
adding to program log, 165
changing cue types, 298
copying, 167
for Hot Keys, 171
loading into Voicetrack Editor, 179
moving from program log, 166
removing from program log, 166
Exporting
program log for third-party applications, 294
program log to file server, 293

F

FADECURRENT macro, 440
FADEOUTLASTITEM macro, 440
File library, using to add audio files, 295
File Manager module
quick tour, 191
starting, 190
File Server module
adding a common folder to a station, 55
adding a folder to a station, 54
adding stations, 52
configuring, 51
Connections List, 50
menu bar, 47
quick tour, 46
starting, 45
Station Folder List, 50
tool bar, 49
File Sync module
configuring, 323
menu bar, 319
quick tour, 318
starting, 317
tool bar, 321

Files
added to carts, 205
copying from file server, 200
copying to file server, 198
synchronizing, 325
Final Manager module, 196
Folders
adding a common folder to a station, 55
adding a new folder to a station, 54
FTP Server module
configuring, 357
menu bar, 353
quick tour, 352
starting, 351
tool bar, 355
FTP Server, starting and stoppping, 357

G

General configuration settings
Audio Server module, 74
Import-Merge module, 275
Stinger module, 398
Studio Client module, 148
GETFILLFILES macro, 441
GETPROGRAMLOGS macro, 442
GETVOICETRACKS macro, 442

H

Hot Key pages
loading from file server, 175
navigating, 175
refreshing, 175
saving, 175
Hot Key sets
adding items, 405
loading into Stinger module, 403
playing items, 409
Hot Keys
adding an event, 168
list of events, 171
properties, 172
rotating, 169

I

I/O card device profile, adding, 339
Import formats configuration settings, 277
Importing
music log, 265
third-party logs, 273
traffic log, 291
Import-Merge module
adding audio files using file library, 295
adding new program log events, 297
block marker configuration settings, 284
changing cue types for program log events, 298
configuring, 274
editing program log events, 298
exporting program log for third-party applications, 294
exporting program log to file server, 293
general configuration settings, 275
import formats configuration settings, 277
importing music log, 265
importing traffic log, 291
log type configuration settings, 280
menu bar, 268
quick tour, 267
replacing text configuration settings, 286
starting, 266
tool bar, 271
Info Editor module
quick tour, 305
starting, 304
Inserting voicetracks into program log, 184
Installing
OpX, 25
OpX system requirements, 24
USB registration key, 35
Intro times, 313
Item properties, Stinger module, 411
Items
deleting, 414
listing, 413

L

Limiting station profiles, 348
List of macros, 429
Listing items, 413
Loading
audio events into the Voicetrack Editor, 179
Hot Key pages from the file server, 175
Hot Key sets into the Stinger module, 403
program log, 129, 162
LOADLOG macro, 443
LOADLOGFROMSERVER macro, 444
LOADSCHED macro, 444
LOADSCHEDULEDEVENTS macro, 445
LOADTRIGGERS macro, 446
Local audio file tagging info, 208
Local files added to carts, 205
Log type configuration settings, 280
Logs
importing music, 265
importing traffic, 291

M

Macros, 428
ADDTORUNLOG, 431
APPLICATION, 432
ATTIME, 432
AUTOFILLENABLE, 433
CHANNELRELAY, 433
CLEARSYNC, 434
CLOSURE, 434
COMMENT, 435
COMMERCIALBREAKBEGIN, 436
COMMERCIALBREAKEND, 437
CONSOLEOUT, 437
DECKTIMER, 438
DEVICE, 439
FADECURRENT, 440
FADEOUTLASTITEM, 440
GETFILLFILES, 441
GETPROGRAMLOGS, 442
GETVOICETRACKS, 442
list, 429
LOADLOG, 443
LOADLOGFROMSERVER, 444
LOADLOGSCHED, 444
LOADSCHEDULEDEVENTS, 445
LOADTRIGGERS, 446
MIXFADE, 447
MIXVOLUME, 448
MODE, 449
PADENABLE, 450
PADOUT, 450
PAUSE, 451
PLAYASYNC, 451
PLAYTIMESHIFT, 452
RECORD, 453
RELAY, 455
RESETCART, 456
RUNAPPLICATION, 457
SATSHOW, 458
SATSHOWTIMER, 459
SAVEPROGRAMLOG, 457
SCHED, 460
SCHEDULEDEVENTS, 461
SENDPAD, 462
SERIALOUT, 462
START, 463
STARTDECK, 463
STARTENABLE, 464
STARTNEXT, 464
STEPTHROUGH, 465
STOP, 466
STOPDECK, 466
SYNCRECORDSFOLDER, 467
SYNCRUNLOGSFOLDER, 467
TCPOUT, 468
TIMEDBLOCKEND, 470
TIMEDBLOCKSTART, 469
TIMEEVENTS, 471
TIMESCALEITEM, 472
TRIGGERS, 473
TRIM, 474
Matching users with OpX modules, 17
Menu bar

Allow Stations module, 346
Clock Builder module, 223
Data Repeater module, 373
File Audio Server module, 64
File Audio Server Watchdog module, 421
File Serial Device Server module, 329
File Server module, 47
File Sync module, 319
FTP Server module, 353
Import-Merge module, 268
Mobile Gateway/Client module, 387
Stinger module, 394
UMix, 362
Mixer layouts
creating, 367
opening, 369
Mixers
configuration settings for Audio Server module, 112
creating and editing for Audio Server module, 112
MIXFADE macro, 447
MIXVOLUME macro, 448
Mobile Gateway/Client module
configuring, 389
menu bar, 387
quick tour, 386
starting, 384
tool bar, 388
Mobile Gateway/Client, starting and stoppping, 390
Mode and log configuration settings, Audio Server module, 122
Mode configuration settings, Studio Client module, 152
MODE macro, 449
Modifying current authorization code, 42
Moving events in program log, 166
Multi-hour satellite show
clocks, 256
example, 261

N

Navigating Hot Key pages, 175
Network interface and port, Data Repeater module, 382
New events, adding, 297

O

Opening mixer layouts, 369
Operating modes for Studio Client module, 159
OpX modules
Allow Stations, 342
AS Watchdog, 418
Audio Server, 60
Auxiliary Audio Server, 134
Clock Builder, 219
Data Repeater, 370
descriptions, 16
File Manager, 189
File Server, 44
File Sync, 316
FTP Server, 350
Import-Merge, 265
Info Editor, 303
matching users, 17
Mobile Gateway/Client, 383, 428
Remote Voice Track Transfer, 59
Serial Device Server, 326
Stinger, 391
Studio Client, 136
UMix, 359

P

PADENABLE macro, 450
PADOUT macro, 450
PAUSE macro, 451
PLAYASYNC macro, 451
Playback configuration settings
Audio Server module, 77
Stinger module, 400
Studio Client module, 154
Playback tab, Audio Server module, 67
Playing back
items from the program log, 133
program log, 164
Playing items in a Hot Key set, 409
PLAYTIMESHIFT macro, 452
Previewing voicetracks, 182
Production workstation configuration, 23

Program log
adding events, 165, 297
adding items, 130
changing event cue types, 298
copying events, 167
deleting items, 133
display on Audio Server module, 71
editing, 165
editing events, 298
editing items, 132
exporting for third-party applications, 294
exporting to file server, 293
inserting voicetracks, 184
loading, 129, 162
moving events, 166
playing back, 164
playing back items, 133
removing events, 166
verifying, 161
Properties, Hot Keys, 172

Q

Quick tour
Allow Stations module, 345
Audio Server module, 63
Audio Server Watchdog module, 420
Clock Builder module, 222
Data Repeater module, 372
File Manager module, 191
File Server module, 46
File Sync module, 318
FTP Server module, 352
Import-Merge module, 267
Info Editor module, 305
Mobile Gateway/Client module, 386
Serial Device Server module, 328
Stinger module, 393
Studio Client module, 138
UMix, 361

R

Record configuration settings, Audio Server module, 82
RECORD macro, 453
Record tab, Audio Server module, 68
Recording
satellite show, 256
voicetracks, 180
Refreshing Hot Key pages from the file server, 175
Registering the OpX system, 41
Registration key, 35
RELAY macro, 455
Remote Voice Track Transfer module, 59
Removing
events to program log, 166
Replacing text configuration settings, 286
Requirements for importing third-party logs, 273
RESETCART macro, 456
Robust multi-station configuration, 22
Rotating Hot Keys, 169
RUNAPPLICATION macro, 457
Running automation reports, 217

S

Sample clocks, 258
background recording, 260
multi-hour satellite show, 261
satellite music show, 259
satellite talk show with top-of-the-hour news, 258
time-shift playback, 261
utility tasks without satellite show audio, 264
Satellite
adding show start event, 245
background recording example, 260
commercial break event, 247
creating show start event, 233
custom event, 252
multi-hour satellite show example, 261
multi-hour show clocks, 256
music show example, 259
record show, 256
stop satellite show event, 254
talk show with top-of-the-hour news, 258
time-shift playback example, 261
time-shifting show, 256

utility tasks without satellite show audio example, 264
SATSHOW macro, 458
SATSHOWTIMER macro, 459
SAVEPROGRAMLOG macro, 457
Saving
carts, 301
Hot Key pages, 175
SCHED macro, 460
Scheduled event set configuration settings, Audio Server module, 118
SCHEDULEDEVENTS macro, 461
Segue
start points, 183
times, 313
SENDPAD macro, 462
Serial device profile, adding, 333
Serial Device Server module
configuring, 332
menu bar, 329
quick tour, 328
starting, 327
tool bar, 330
Serial server configuration settings, Stinger module, 401
SERIALOUT macro, 462
Simple multi-station configuration, 21
Single workstation/single station configuration, 19, 20
START macro, 463
STARTDECK macro, 463
STARTENABLE macro, 464
Starting
data repeater, 382
FTP Server, 357
Mobile Gateway/Client, 390
OpX modules
Allow Stations, 343
Audio Server, 61
Audio Server Watchdog, 419
Auxiliary Audio Server, 135
Clock Builder, 220
Data Repeater, 371
File Manager, 190
File Server, 45
File Sync, 317
FTP Server, 351
Import-Merge, 266
Info Editor, 304
Mobile Gateway/Client, 384
Serial Device Server, 327
Stinger, 392
Studio Client, 137
UMix, 360
STARTNEXT macro, 464
Station Folder List, File Server module, 50
Station profiles, limiting, 348
Stations
adding a common folder, 55
adding a folder, 54
adding to a file server, 52
Status tab, Audio Server module, 69
STEPTHROUGH macro, 465
Stinger deck
configuring, 416
Stinger module
configuring, 397
configuring item properties, 411
decks, 415
general configuration settings, 398
menu bar, 394
playback configuration settings, 400
quick tour, 393
serial server configuration settings, 401
starting, 392
STOP macro, 466
Stop Satellite show event, creating, 254
STOPDECK macro, 466
Stopping
data repeater, 382
FTP Server, 357
Mobile Gateway/Client, 390
Studio Client module
audio/cue configuration settings, 157
configuring, 146
general configuration settings, 148

mode configuration settings, 152
operating modes, 159
playback configuration settings, 154
quick tour, 138
starting, 137
verifying program log, 161
voicetracking configuration settings, 155
Studio Client, changing appearance, 185
Synchronizing files, 325
SYNCRECORDSFOLDER macro, 467
SYNCRUNLOGSFOLDER macro, 467
System requirements, 24

T

TCPOUT macro, 468
Third-party log import requirements, 273
TIMEDBLOCKEND macro, 470
TIMEDBLOCKSTART macro, 469
TIMEEVENTS macro, 471
TIMESCALEITEM macro, 472
Time-shift
playback example, 261
satellite show, 256
Tool bar
Allow Stations Module, 347
Clock Builder module, 225
Data Repeater module, 374
File Serial Device Server module, 330
File Server module, 49
File Sync module, 321
FTP Server module, 355
Import-Merge module, 271
Mobile Gateway/Client module, 388
UMix, 364
Trigger set configuration settings, Audio Server module, 109
TRIGGERS macro, 473
TRIM macro, 474

U

UMix
menu bar, 362
quick tour, 361
starting, 360
tool bar, 364
USB registration key, 35
Utility tasks without satellite show audio, 264

V

Verifying program log, 161
Virtual Audio Server, enabling or disabling, 57
Voicetrack Editor
creating voicetracks, 179
ducking levels, 183
inserting voicetracks into program log, 184
interface, 178
loading audio events, 179
previewing voicetracks, 182
recording voicetracks, 180
seque start points, 183
Voicetrack Transfer module, enabling or disabling, 58
Voicetracking configuration settings
Studio Client module, 155
Voicetracks
creating, 179
ducking levels, 183
inserting into program log, 184
previewing, 182
recording, 180
seque start points, 183

X

XDS receiver profile, adding, 337