

# WaveCart 5.0

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# Introduction

WaveCart is the original on-screen, Cart Machine in use by thousands of broadcasters around the World and was even used at the Atlanta Olympic Games!



WaveCart uses a standard PC and sound-card to play back multiple audio files, optionally to different audio outputs and can automatically sequence from one deck to another.

Each of the decks has a label clearly showing information about the audio file being played and there are timers showing Elapsed, Remaining and even an Intro countdown.

As well as up to 10 on-screen decks, an additional 24 HotKeys are available for frequently used audio files.

Individual play decks or audio files can be **triggered** using the BSI Trigger Kit (or other optional hardware devices) making it easy to interface to satellite receivers, mixing consoles or button boxes etc. Up to 24 incoming triggers are available.

Information about how to get started with WaveCart is explained in the [QuickStart](#) section.

For any questions of a technical nature related to WaveCart, please refer to <http://support.bsiusa.com>

# Getting Started

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Consult the following sections for information on installation, configuring, using and getting the most out of WaveCart.

- Installation
- Starting the program
- QuickStart Guide
- Adding New Files
- Main Screen
- Security Options
- Event Logs
- Registration & Validation
- Support

# Installing WaveCart

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## System Requirements

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The computer system needed to run WaveCart very much depends on exactly what you want to do. WaveCart will run on a wide range of computers, but some features will require more than a bare-bones minimum.

### **Bare-bones Minimum**

Intel Pentium 4, 1.8Ghz Processor (we do not recommend AMD, Cyrix or Celeron processors)  
Microsoft Windows XP Professional SP2 (we do not recommend using any operating system designed for Servers as these are not optimized for multimedia use)  
1GB memory  
USB Port (for Hardware Key)  
At least one Sound Card, with Windows MME Wave Drivers

### **Recommended Configuration**

Intel Core2 Duo, 2.4Ghz or higher  
Windows XP Professional SP3 or Windows 7 Professional 32bit  
2GB Memory  
USB Port (for Hardware Key)  
2 x SATA Hard Drives (one for Windows, one for audio files)  
Professional Sound Card with multiple audio streams

## Optimization

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Most off-the-shelf PCs are designed and configured for home or small office use. The demands of a multimedia computer running 24/7 are very different.

While WaveCart will run with either configuration, for maximum performance and long-term stability we highly recommend purchasing a correctly configured, custom multimedia PC directly from BSI.

Our technical support department can assist you with any software or hardware purchased directly from BSI, but we cannot guarantee to assist you configuring computers purchased elsewhere and / or may make a charge for doing so.

If you plan to supply and configure your own PC, we highly recommend obtaining a copy of the Microsoft Resource Kit and ensuring that you have optimized your computer for performance rather than appearance.

## Installation

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To Install WaveCart from the BSI Install CD, insert the CD into your CD-ROM drive.

If you have disabled the autorun feature of your CD-ROM, run the **setup.exe** file on the CD.

Use the drop-down box to select **WaveCart** and then click the **Install** button

Follow the on-screen prompts, and selecting **Full** if you are installing for the first time, or **Upgrade** to preserve settings from a previous installation of WaveCart.

### IMPORTANT NOTE:

WaveCart 5.0 requires a Hardware Key to validate the program. Please ensure that you have installed the **Sentinel Driver** before trying to register the program. You'll find a copy on the BSI Install CD and on the drivers page of our Web Site.

## Uninstalling

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To Uninstall WaveCart

1. Click the **Start** button.
2. Select **Control Panel**.
3. Double-click **Add/Remove Programs**.
4. Click **Change or Remove Programs**.
5. Then select **WaveCart** from the list of programs that can be automatically removed.
6. Click the **Remove** button to uninstall WaveCart.

WaveCart's uninstall program will have deleted any files it created that are no longer in use by any other programs still installed on your PC.

It will not delete any user generated files, including Audio Files, Events Logs, Stacks etc.

# QuickStart

## Starting WaveCart

To start WaveCart, click the WaveCart icon found in the **Start** menu, in **Programs > Broadcast Software**.

You can also double-click the Desktop Icon. \

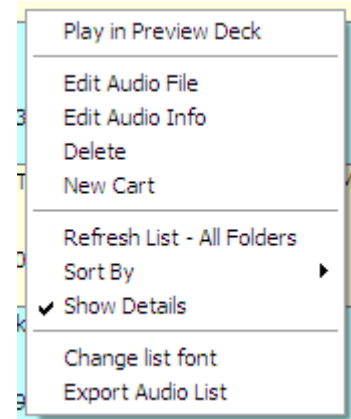
WaveCart installs some sample audio files\* which by default are installed in **c:\bsi32\audio**.

You'll see the sample audio files in the **Audio List** on the right-hand side of WaveCart's main window.

If you have difficulty reading the details, **Right-Click** and select **Change list font** to select a larger font.

To view more than just the Artist and Title, select **Show Details** from the same menu. You'll then be able to see more information about the audio file such as OutCue, Intro, Length and Start and End Dates.

\* To reduce size, the supplied sample audio files are 16-bit, 22Khz, Mono. When you add your own audio files, we suggest using 16-bit, 44.1Khz, Stereo files (linear PCM .wav) although WaveCart will also play MP3 and MPEG Layer 2 files (if your audio card supports MPEG Layer 2 playback, or if you have a suitable audio codec).



To load audio files into the play decks, **click** the audio file and then the numbered button of the deck you wish to load. (You can also **drag and drop** the audio file into the play deck too).

The control buttons will no longer be grayed out and you can **Play, Pause, or Eject** the audio file by clicking the relevant buttons.





When a file is playing, the eject button is replaced by a **Stop** button.


## Adding New Files


As previously mentioned, sample audio files are installed in **c:\bsi32\audio** and any additional files saved into the same folder will appear in the **Audio List**.

We recommend using a separate hard drive for your audio files and it's easy to configure WaveCart to monitor additional folders for new audio files using the companion **SoundHound** utility. The utility constantly monitors selected folders for new or modified audio files and keeps WaveCart's **Audio List** up-to-date.

 **SoundHound** is usually automatically launched when WaveCart starts and appears as a pair of binoculars in the System Tray. Double-click the icon to view **SoundHound**.

 From the **Folders** tab click the **Add a folder** icon and browse to the folder you want to add. We recommend using up to 8 folders and that all folders should be on your local hard drive. While there are no physical limitations in WaveCart that prevent you doing otherwise, we are unable to support any issues arising out of your failure to adhere to our recommendations.

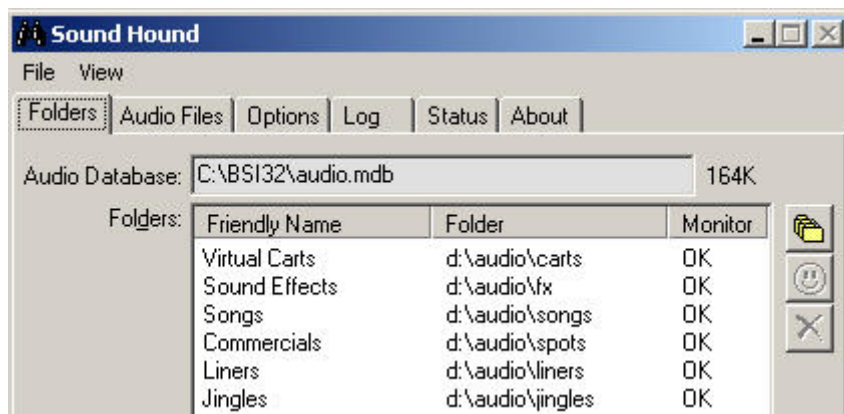
 Rather than reference different folders by their actual paths, you can give each path a **friendly** name (for example, Songs, Spots, Sound Effects, etc.) and tell WaveCart to display the friendly name instead (in the Program Options).

 When you no longer want to monitor a folder, highlight the folder you want to remove and click the **Remove a folder** icon.

There are two diagnostic functions on the **Folders** tab which are useful when optimizing or troubleshooting your system.

Firstly, the location and size of the **Audio Database** are easily obtained from this screen. Over time, the database will increase and should be deleted (with WaveCart shut down). It will be automatically rebuilt once WaveCart is restarted.

Secondly, the **Monitor** column indicates whether or not there's a problem monitoring a particular folder. If all is well, you'll see an **OK** in this column.



**NOTE:** WaveCart has been designed to work optimally with the number of files most stations schedule, between 2,500 and 3,500. We do not recommend using more than 5,000 files (the number of songs you can comfortably store on a single 250 GB hard drive) as performance will reduce after that point due, in part to the larger database.



# Main Screen

WaveCart's main screen displays up to 10 Play Decks and the **Audio List**. Use the **Window > Optimize Display** menu option to fit the maximum number of decks on screen.



The left-hand scroll bar can be used to scroll the decks up and down if your display will not accommodate all ten decks on screen at the same time.

The right-hand scroll bar is used to navigate through the list of audio files.

Below the **Audio List** is the **Pass-Through Mute** button (this button can be hidden, so if you don't see it, go to the Window menu and choose Display Pass-Through Control). This button mutes or un-mutes a secondary source of audio input into your audio card's line in, and output through its line out (hence pass-through). Right-clicking on the button will lock the current muted/unmuted state so that the auto-mute feature (if enabled) won't change the pass-through mode if you don't want it to.

The Status Bar at the bottom of the user interface contains 10 deck position indicators and buttons for **AutoStep**, **Loop**, and **TimeEvents**.

## AutoStep & Loop

The **AutoStep** feature allows play decks to sequence automatically. This is useful for segueing songs automatically, or running a spot break.

**Loop** allows play back to continuously sequence through the decks (this relies on the Program Option to reload a deck once playback has finished). This is especially useful where virtual carts are used and can form a rudimentary automation or sustaining service.

The **AutoStep** and **Loop** indicators can also be used to toggle each option on and off. Green indicates the feature is active, while red shows that the feature is not in use.



## TimeEvents

The **TimeEvents** option enables/disables the **Scheduled Stacks** feature, which allows you to load pre-saved **Stacks** at scheduled times throughout the day/week.

To display the **Scheduled Stacks**, go to the Edit menu and choose Scheduled Stack Setup. The window below will appear.

The screenshot shows a dialog box titled "Scheduled Stack Loading Configuration". It features a "Show Alternate Scheduled Stacks" button at the top right. Below this is a section for "Weekly Scheduled Stacks" containing a table with columns for "Day of the Week" (Mo, Tu, We, Th, Fr, Sa, Su), "Time", and "Stack Path/Name". Each row has a checkbox for each day of the week, a time value, and a dropdown menu for the stack path. At the bottom, there is a checked checkbox for "Log Scheduled Stacks" and "Done" and "Cancel" buttons.

Day of the Week							Time	Stack Path/Name
Mo	Tu	We	Th	Fr	Sa	Su		
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	08:00:00	FaithlessTheDance.wcs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	09:00:00	Massive Attack - Heligoland.wcs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	10:00:00	Ratatat.wcs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	11:00:00	HowtoDestroyAngels.wcs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	12:00:00	MyMusicCarts.wcs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	13:00:00	Massive Attack - Collection Disk 1.wcs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	14:00:00	FaithlessToAllNewArivals.wcs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	15:00:00	Ratatat.wcs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	16:00:00	MyMusicCarts.wcs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	17:00:00	Massive Attack - Collection Disk 2.wcs

Log Scheduled Stacks

Scheduled Stack Setup is covered more in depth in the chapter titled [Scheduled Stacks](#).

## Level Meters

If the sound card you're using provides a Windows MME compliant Peak Meter control (such as our recommended AudioScience cards) then WaveCart will display the audio level on each deck's level meters. Most domestic and many semi-pro sound cards do not provide a Peak Meter control.



## Timers

Each deck has three timers; an **Intro** countdown is displayed in blue, the **Elapsed** time is shown in green, and the **Remaining** time is shown in red.



## Deck Label

When loaded, the play deck label will display the audio filename, Artist & Title information together with (depending on the display height chosen) the **OutCue**, **Length**, **Intro**, **Segue**, **File Type**, **Category**, **Start Date**, and **End Date**.



While playing, the label background turns **Green**.

When a deck is paused, it turns **Cyan** and (if **Attempt Segues** is checked) will automatically start when the deck before it reaches the Segue point.

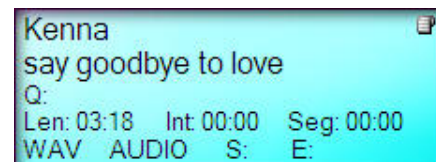
While a deck is fading out (if the pertinent fade options have been configured), the label turns **Yellow**.

WaveCart will also look at the Start and End Date of an audio file and warn you that the audio file is not valid for play by turning the background color **Red**. WaveCart will not prevent you from playing the file though. The label will also be turned **Red** when an error situation occurs, such as attempting to load an audio file that can not be found.

Double-clicking on the deck label will perform a search of the currently displayed audio list for the currently loaded audio file. If a cart is loaded in the deck, double-clicking on the label will search for the cart file, but holding down the Shift key and double clicking will search for the current audio file from that cart.

Hovering the mouse cursor over the artist or title fields will pop-up a tool-tip with the file name of the currently loaded audio file

When a Cart is loaded, the Cart logo will be displayed in the upper right corner of the deck label. If that deck is not currently playing, single left-clicking on the icon will load the next item in the cart. Double left-clicking on the icon will reload the next-to-play event for non-randomized carts. Right clicking on the icon will open the currently loaded cart in the Cart Editor.



Hovering the mouse cursor over the cart icon will pop-up a tool-tip with the file name of the currently loaded cart.

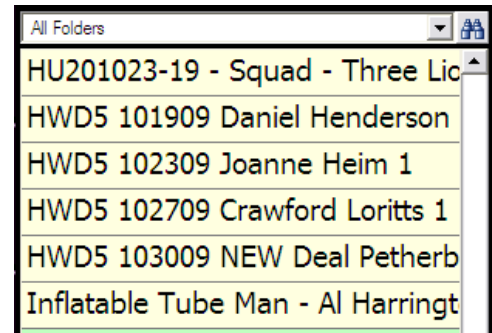
## Play Controls

The touch-screen compatible **Play Controls** allow you to Play, Pause and Stop a file. (If the file is already stopped, you can Eject the deck).

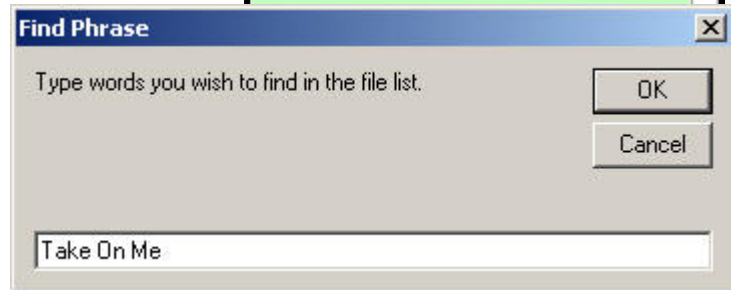


## Audio List Controls

By default, the **Audio List** will show the contents of all folders monitored by **SoundHound**. Using the drop down box you can limit the audio list display to any single folder that SoundHound is monitoring.



Using the **Find** button, you can search the **Audio List** for a particular phrase (for example, Artist or Title).



## Status Bar

The **Status Bar** provides a handy visual reference to the play position of each of the decks. Clicking on any of the deck position indicators will cause the deck stack to scroll to that deck if your current WaveCart window isn't showing all decks on the screen at once.



## Menus

### File

- **Open Stack** – Opens a previously saved **Stack** of play decks
- **Save Stack** – Saves the currently loaded **Stack** of play decks
- **Save Stack As** – Allows you to save the current **Stack** of play decks with a different name
- **Exit** – Shuts down WaveCart

## **Edit**

- **New Cart** – To create a new **Virtual Cart**, click this option
- **Edit Audio File** – Opens your (optional) Audio Editor application, such as Adobe Audition. (The path to this must be setup in the **Program Options**).
- **Edit Audio Info** – Launches the BSI Info Editor allowing you to store additional information inside the audio file itself
- **View Event Logs** – WaveCart will optionally keep track of every audio file played in either ASCII or Microsoft Access format. Use this option to select and view any Event Log.
- **HotKeys Setup** – Launches the HotKeys setup allowing you to select the Current and StartUp HotKeys sets.
- **Triggers Setup** – Launches the Triggers Setup
- **Scheduled Stacks Setup** – Opens the Scheduled Stack Loading Configuration window
- **Find** – Allows you to search the Audio List for a phrase (such as Artist or Title)
- **Find Again** – Searches the Audio List for the next instance of a phrase

## **Tools**

- **Update Folder List** – Refreshes the audio folders and the Audio List with the current SoundHound data.
- **AutoStep** – Activates automatic sequencing of the decks
- **HotKeys** – Displays the current HotKeys Palette
- **Loop** – If decks are not cleared after they have played, then WaveCart will sequence from deck 1 to 10 and then restart deck 1 again and loop the decks.
- **Triggers** – Turns on or off incoming Triggers
- **TimeEvents** – Enables or disables the Scheduled Stack Loading features.
- **Deck Height** – Adjust the height of the Play Decks
- **Clear Decks** – Unloads all decks
- **Pause All Decks** – Pauses all currently loaded decks, allowing them to sequence automatically if the relevant options are selected
- **UnPause All Decks** – Clears pause and places decks into stopped mode. Decks will no longer automatically sequence
- **Program Options** – Displays WaveCart's Program Options

## **Window**

- **Optimize Display** – Maximizes the number of decks displayed on screen based on your screen resolution.

- **Show Pass-Through Control** – Shows or hides the **Pass-Through Mute** button

## Help

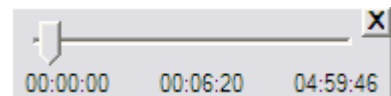
- **WaveCart Help** – Opens the Help File
- **Technical Support** – Opens your default Web Browser and navigates to the BSI Support Centre (requires Internet Access)
- **Security** – Allows access to WaveCart's Security Options
- **Register** – Validates your Hardware Key with the provided Validation Code to prevent WaveCart shutting down every few minutes
- **About** – Display the Registration Status and WaveCart Version.

## Audio List (Right-Click Menu)

- **Play** – Auditions the highlighted file
- **Edit Info** – Launches the Info Edito
- **Edit Audio** – Opens your (optional) Audio Editor
- **Delete** – Permanently deletes the currently highlighted file
- **New Cart** – Creates new Virtual Cart
- **Refresh List** – Refreshes the audio list (forcing a database refresh)
- **Sort By** – Sorts the audio list using any one of the following parameters:
  - Artist/Advertiser
  - Category
  - Description
  - End Date
  - Length
  - Name
  - Start Date
- **Ascending** – Sorts the list in Ascending order
- **Descending** – Sorts the list in Descending order
- **Show Details** – Toggles whether full or limited details of each audio file are displayed
- **Change list font** – Allows you select a different Windows font for the Audio List

## Play Deck (Right-Click Menu)

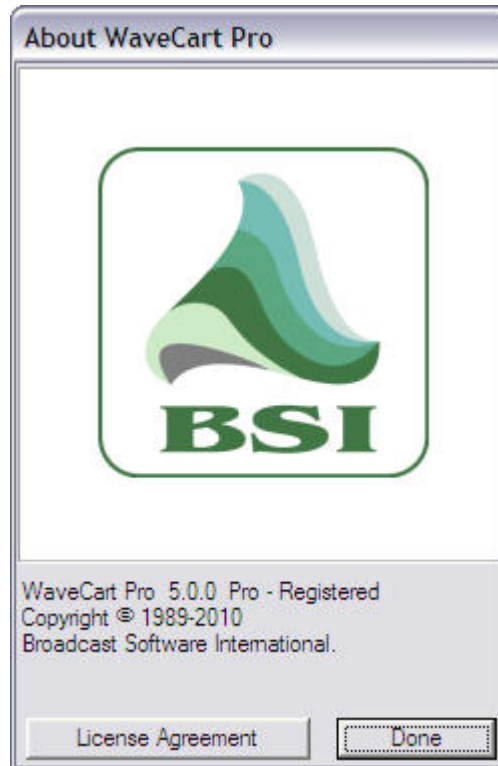
- **Quick Load** – Allows you to quickly enter a known filename to load into the selected deck
- **Scrubber** – Opens up a scrubber allowing you to navigate through the audio file. Click the **X** to close the scrubber.





## **About**

The **Help > About** menu option displays information about WaveCart including the full version number and registration status.



You can also view the full **License Agreement** from this screen.

# Cart Viewer

As well as audio files, WaveCart supports the use of **Virtual Carts** (the ability to store multiple audio files in a single file). Within WaveCart (and BSI Simian) Virtual Carts are often abbreviated to Carts but are otherwise identical.

Events inside a virtual cart can either be played individually, with the next (or optionally random) file played next time the cart is played...or multiple events can be played 'back-to-back' (but not overlapped).

Launch the **Cart Viewer** from the Audio List's right-click menu or right-click any existing cart (colored green in the Audio List). You can also open the Cart Viewer using the **Edit > New Cart** or **CTRL+R** shortcut.



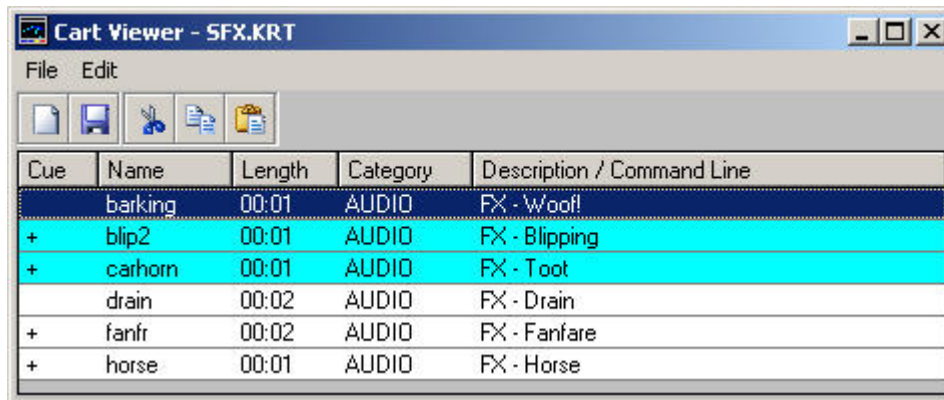
Create a new blank cart by clicking the **New Cart** icon and drag files from the Audio List into the cart.



Using the **Edit** menu, you can Cut, Copy, or Paste files within a cart. To make an individual item in a cart next to play, use the **Edit > Make Next** option.

If you need to play multiple events in a cart back-to-back (it is not possible to overlap items within a cart, only between **different** carts and / or audio files) use the **+** key on each subsequent event you want to play. (The first item in a cart cannot have a **+** mark otherwise the cart would loop continuously).

In the example below, three events will play each time the cart is used. You can toggle the **+** mark with the **+** key on your keyboard.





Before saving the cart, select the cart **Properties** from the Save Dialog, or **File > Properties** menu. Although the information is optional, it's helpful to enter as much information as possible as it can be useful in the future.

## Average Length

Although optional, it's useful to enter an accurate value here so that when the Audio List is sorted, the cart is displayed in the correct position.

Carts are colored green in the Audio List.

SONGS - Randomized Songs

## Randomize

Events within a virtual cart can be randomized. This makes them ideal for things like rotating liners, jingles, filler music, etc.

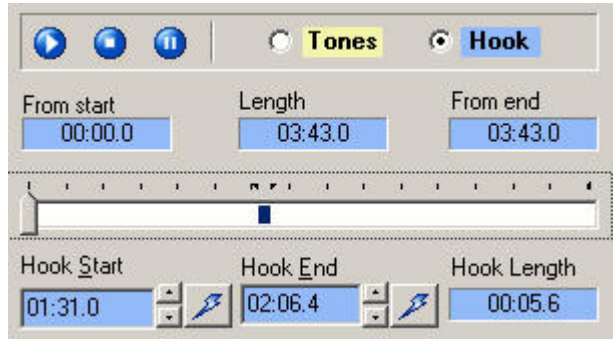
When the randomized option is selected, each time the cart is played a random event will be selected from those events in the cart that have not already been played. When all events have been played, the process is restarted.

As carts are written to each time they're played (to update this information) it's important to ensure that carts are in a folder of their own. Otherwise, each time a cart is played it could trigger a SoundHound refresh of your entire music library.

## Play Hooks Only

When this option is selected, WaveCart will only play the section of the song in the cart that you have designated as the **Hook** using the Info Editor tool.

Utilizing this feature provides the opportunity to forward sell songs that are coming up by dragging a selection of upcoming songs into a cart and selecting the **Play Hooks Only** option.

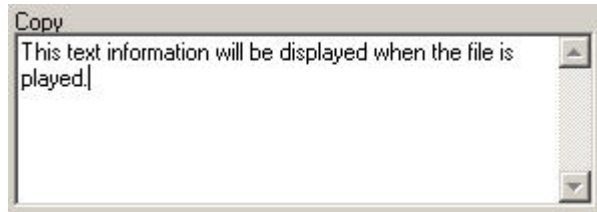


## Copy Text

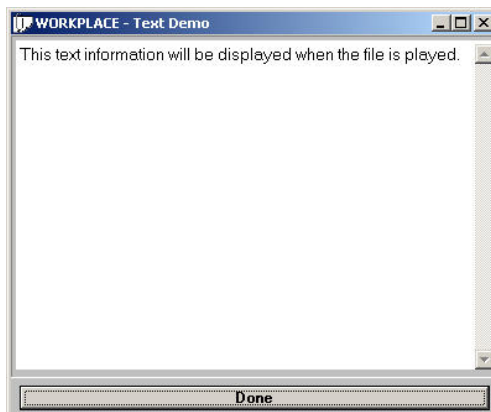
Although originally intended to display live copy for spots, WaveCart customers around the World have also found other novel uses of embedding textual information into their audio files which is displayed when the file is played.

For example, the latest Weather or Traffic Reports can be displayed when the relevant bed is played; or the latest news headlines when the News Sounder fires. Or you could embed liner notes for all your latest play list songs.

The information displayed is embedded into the audio file using the Info Editor **Copy** field.



Any information entered into that field can be displayed each time that file is played. Just activate the option from the main **Program Options**.



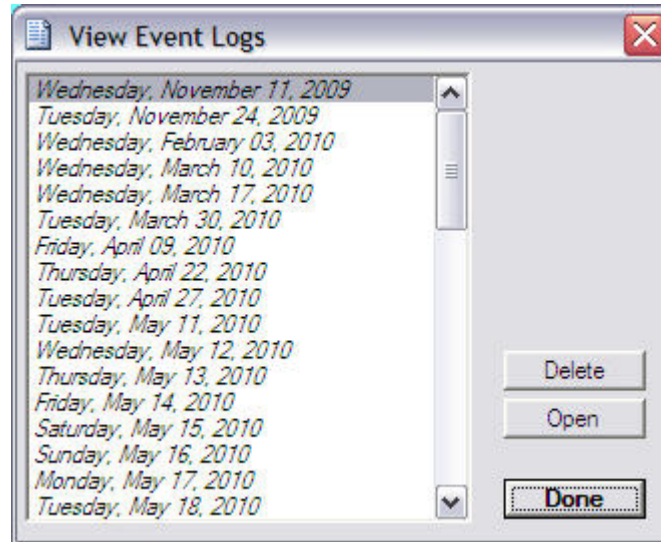
# Event Log

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WaveCart will optionally create an Event Log of every audio file played.

When Spots are being played using WaveCart, the Event Log can form the basis of your Affidavit or might be useful during trouble-shooting, etc.

To view previously created logs, select the **Edit > View Events Logs** option from the main menu and then select the date you want to view (your computer regional date settings should be set to Month, Day, Year).



WaveCart can produce Microsoft Access compatible logs, or plain ASCII text files which are pipe delimited.

# HotKeys

As well as WaveCart's 10 play decks, there are an additional 24 **HotKeys** which are played using the F1 to F12 and SHIFT+F1 to SHIFT+F12 buttons on your keyboard, or from the **HotKeys** palette.

To view the HotKeys palette, click **Tools > HotKeys** from the main menu. You can re-size the palette horizontally if you find that, as in the example below, not all the HotKey names fit in the default space provided.

F1 - FX - DTMF Tones	F2 - FX - Time Signal	F3 - Reel World - Kiss 108 FM Boston
F4 - Reel World - KASE 101 Austin	F5 - Reel World - WLIT Chicago	F6 - Various - Randomized Jingles
F7 - Production FX Library - News Sounder	F8 - Alan Jackson - Mercury Blues	F9 - George Michael - Faith
F10 - The Knack - My Sharona	F11 - Celine Dion - That's The Way It Is	F12 - 10,000 Maniacs - Hey Jack Kerouac
Shift+F1 - Mariah Carey - Prisoner	Shift+F2 - Gloria Estefan - Miami Sound Machine - Conga!	Shift+F3 - Various - Hooks Only Demo
Shift+F4 - Various - Randomized Songs	Shift+F5 - WaveCart - Play Hooks Intro	Shift+F6 - FX - DTMF Tones
Shift+F7 - FX - Time Signal	Shift+F8 - Reel World - Kiss 108 FM Boston	Shift+F9 - Reel World - KASE 101 Austin
Shift+F10 - Reel World - WLIT Chicago	Shift+F11 - Production FX Library - News Sounder	Shift+F12 - Alan Jackson - Mercury Blues

WaveCart supports multiple Hotkeys Palettes which are setup from the **Edit > HotKeys Setup** menu.



Click the **New HotKeys Set** icon to create a new set...



...or open an existing HotKeys Set to modify it.

Assign the HotKeys by dragging files from the **Audio List**. (F13 to F24 refer to the SHIFT+F1 to SHIFT+F12 buttons).



To remove a previously assigned event, highlight it and click the **Clear HotKey Event** icon.



Click the **Save HotKeys Set** button when finished.

Use the drop down boxes to select the **Current HotKeys** and the HotKeys set loaded when WaveCart is restarted.

T#	Name	Length	Category	Description / Command Line
F1	euro1	00:10	AUDIO	The Normandy Jingle Choir - Europe 2
F2	drain	00:02	AUDIO	FX - Drain
F3	euro1	00:10	AUDIO	The Normandy Jingle Choir - Europe 2
F4	euro2	00:06	AUDIO	The Normandy Jingle Choir - Europe 2 Sting
F5	fanfr	00:02	AUDIO	FX - Fanfare
F6	goodbye	00:01	AUDIO	PCX Production Demo Library - Sexy Goodbye
F7	kewl	00:01	AUDIO	Drop In - KE'WL!
F8	kiss	00:01	AUDIO	FX - Kiss
F9	letter	00:01	AUDIO	Drop In - Letter
F10	lazer	00:01	AUDIO	Laser - Rapid Fire
F11	radio	00:14	AUDIO	Billy Hanford & The Hooters - Radio Wave Jingle
F12	rxnoise	00:02	AUDIO	FX - Radio Noise
F13	scream	00:01	AUDIO	FX - Arrrgggghh!
F14	toons	00:01	AUDIO	Bed - Out Stab 3
F15	winner	00:06	AUDIO	Killer Tracks Demo - Winner
F16	wolfwsl	00:01	AUDIO	FX - Whistle
F17	workplace	00:04	AUDIO	Drop In - Lovely Place To Work
F18	xfer	00:01	AUDIO	Drop In - Data Transfer
F19	xfer	00:01	AUDIO	Drop In - Data Transfer

StartUp HotKeys: Demo.vey  
Current HotKeys: Demo.vey

# Scheduled Stacks

The Weekly Scheduled Stacks feature will load stacks that you have created automatically on the days of the week, at the times you specify. For holidays or out-of-the-ordinary days, the Scheduled Stacks feature offers an additional set of schedulable fields for Alternate Scheduled Stacks. This feature is useful for users whom use WaveCart for very simple automation, or for station ID replacement on translator stations.

To schedule a Weekly Scheduled Stack, select one of your stacks from the Stack Path/Name dropdown, and then click into the Time field. You will be presented with a pop-up window that

allows you to select your desired time. Once you have selected the time, place check marks into your desired days in the Day of the Week column.

Repeat the above process for each stack you wish to load at the scheduled time.

When you anticipate a holiday or special day that uses different stacks than your normal weekly schedule, you can set up scheduled stacks on the Alternate Scheduled Stacks page. To access this page, click on the **Show Alternate Scheduled Stacks** button shown in the above image.

To schedule an Alternate Scheduled Stack, select your desired stack from the Stack Path/Name dropdown column, click in the Time field and select a time from the pop-up, then select the date on which you wish to load the stack.

Note that when you set an Alternate Scheduled Stack on a particular date, all Weekly Scheduled Stacks will be ignored on that date.

Day of the Week							Time	Stack Path/Name
Mo	Tu	We	Th	Fr	Sa	Su		
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	08:00:00	Faithless TheDance.wcs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	09:00:00	Massive Attack - Heligoland.wcs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	10:00:00	Ratatat.wcs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	11:00:00	HowtoDestroyAngels.wcs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	12:00:00	MyMusicCarts.wcs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	13:00:00	Massive Attack - Collection Disk 1.wcs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	14:00:00	Faithless ToAllNewArivals.wcs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	15:00:00	Ratatat.wcs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	16:00:00	MyMusicCarts.wcs
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	17:00:00	Massive Attack - Collection Disk 2.wcs

Log Scheduled Stacks

Date	Time	Stack Path/Name
	11:33:03	(None)
01/18/2011	01:00:00	SpotReplace.wcs
01/25/2011	00:00:00	SpotReplace.wcs
	00:00:00	(None)
	00:00:00	(None)
	00:00:00	(None)
	00:00:00	(None)
	00:00:00	(None)
	00:00:00	(None)
	00:00:00	(None)

NOTE: Setting any Alternate Scheduled Stack on a particular date will disable and supercede ALL Weekly Scheduled Stacks for that date.

Log Scheduled Stacks



# Registration

To purchase a copy of WaveCart, visit <http://www.bsiusa.com>.

**IMPORTANT NOTE:** WaveCart requires a Hardware Dongle; please ensure that you have installed the **Sentinel Driver** and inserted the USB Hardware key before registering the program.

Once you have purchased your copy of WaveCart, you will be provided with a USB Hardware Key and corresponding **Validation Code**.

You need to **Register** the program with the **Validation Code** to prevent the program shutting down every few minutes.

1. Select **Help > Register** from the main menu
2. Check that **Your serial number** matches the one written on the tag attached to your Hardware Key and enter all your information shown on the screen below.

WaveCart Pro Registration - Registered

Your serial number: 4F56-6D46-73EE-4E12

Hardware Key Found, using Driver: 7.4.0-5

Please input your customer information and validation code.

First Name\* Last Name\*

Alex Roy

Company / Organization

Broadcast Software International

Street 1

503 E 11th Ave

Street 2

City State or Province Zip or Postal Code

Eugene OR 97401

Nation Customer ID / BSI Invoice number \*

USA 12345

Daytime phone number\* Email address\*

541-338-8588 sales@bsiusa.com

Enter validation code: Q3R5-258X-322B-4X7N-3941

WaveCart requires a Hardware Key and Validation Code. The same Validation Code can be used on multiple computers. To purchase a Hardware Dongle please call BSI sales at 541-338.8588.

Done

You must provide information with the asterisks (\*) in order to complete validation. Cancel

3. **Enter validation code** as provided with your hardware key. Click **Done** when finished.
4. WaveCart is now registered (you can check on the **Help > About** screen and will no longer shut down every few minutes).

# Security

To prevent users having access to all of WaveCart's features, you can optionally password protect some of the main menu options.

To setup WaveCart's security options, click **Help > Security** from the main menu. The first time you do this, you'll be asked to choose a **Security password**.



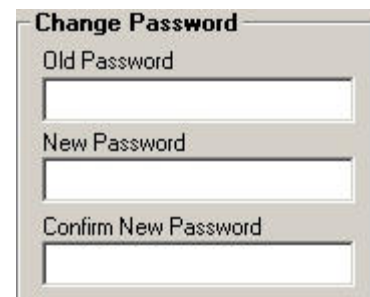
**PLEASE DO NOT FORGET THIS PASSWORD AS YOU CANNOT MODIFY THE SECURITY SETTINGS WITHOUT IT!**

Make a note of your chosen password in safe place, enter it twice as directed, and click **OK** when done.



## Security Options

- **Hide FILE menu** – This hides the main **File** menu and removes all the options, including the ability to shut down WaveCart.
- **Hide TOOLS menu** – This hides the main **Tools** menu and removes all the options, including the **Program Options**. As hiding this menu also removes the shortcut to pause or clear all decks, most users are likely to choose to hide the [Program] options only.
- **Hide [PROGRAM] OPTIONS menu** – Rather than restrict use of all the features available on the **Tools** menu, selecting this option will just hide the **Program Options** menu.
- **Change Password** – From time to time, you may wish to update the security password. Please make a careful note of the new password and update your records as you will not be able to access the security settings without the password.

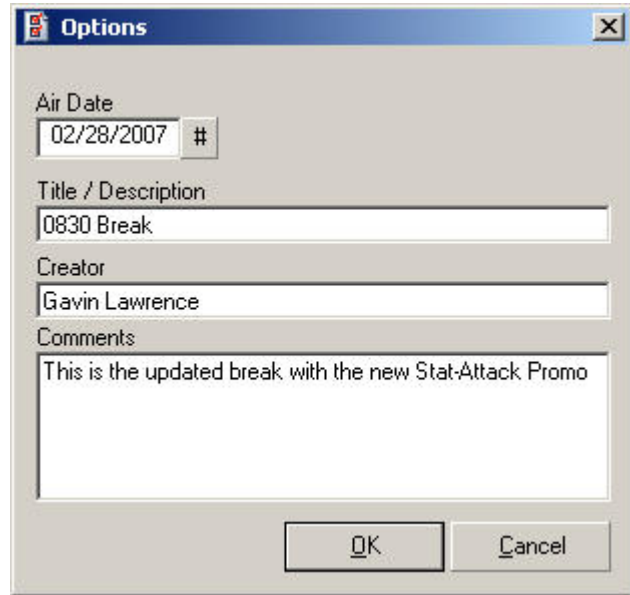


# Stacks

WaveCart can save and recall stacks of decks, making it easy to save, load, and reuse frequently used collections of carts or event entire spot breaks.

When **Stacks** are saved, you can optionally enter additional information such as an **Air Date** together with Description and additional comments.

This information is then displayed in the **File > Open Stacks** menu option.





# Triggers Sets

Using an optional hardware device, WaveCart can respond to up to 24 incoming **Triggers**.

Supported hardware devices include legacy DIO 24 cards from Computer Boards / Measurement Computing, the BSI Trigger Kit using a PMD/USB-1024LS, legacy ASI 4346 and 4336 cards, and the Current ASI 5211 model.

The number of available triggers is determined by the hardware device used; the BSI Trigger Kit provides the full 24 triggers, the ASI 4346 and 4336 cards support 16 triggers, and the ASI 5211 card supports 2 triggers.

To setup triggers, select the **Edit > Triggers Setup** option from the main menu.



Click the **New Triggers Set** icon to create a new set...

...or open an existing set using the **Open Triggers Set** icon



Use the drop down **Macro** list to select a desired action for an incoming trigger.



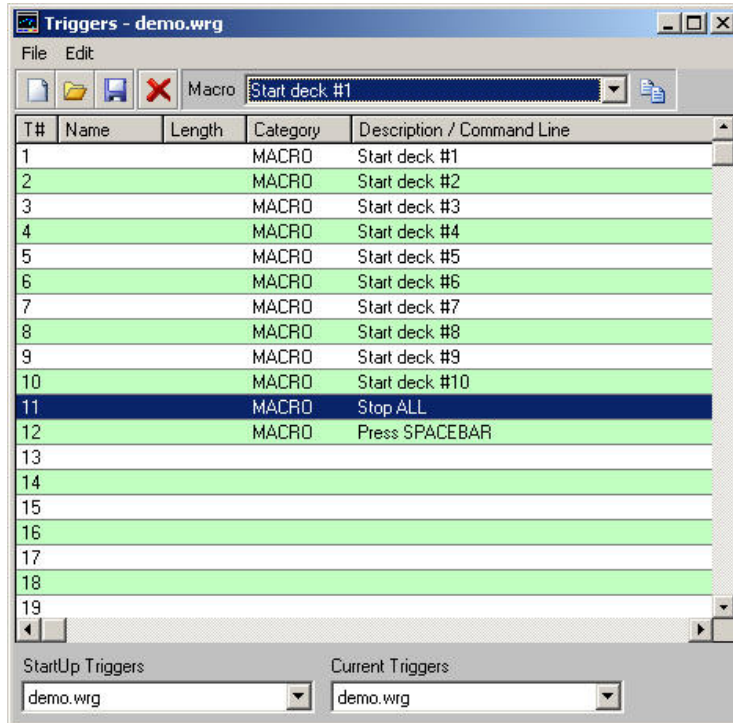
Drag the Macro to the Triggers Set using the **Drag Macro to Triggers** icon.



To remove an individual trigger, highlight it and click the **Clear Trigger Event** icon



When finished, click the **Save Triggers Set** icon

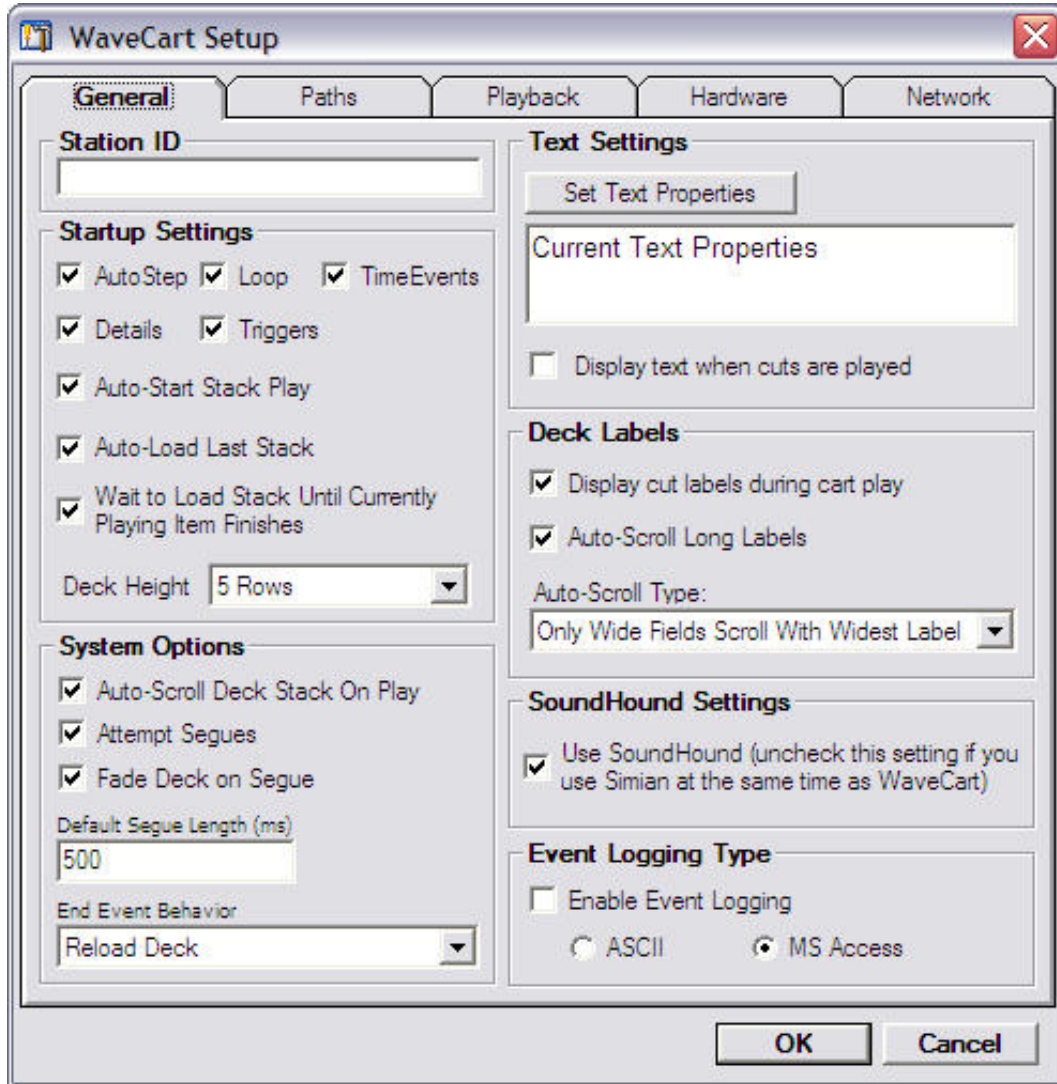


Select the **Startup Triggers** and **Current Triggers** using the drop down boxes.

# Program Options

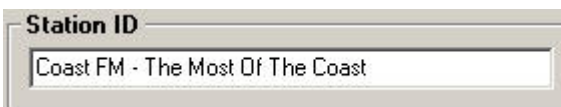
To setup WaveCart's **Program Options** select **Tools > Program Options** from the main menu.

## General



### Station ID

This field allows you to customize the display in the title bar of WaveCart. This could also be used as reminder of your station's strap line.



**Coast FM - The Most On The Coast**

## **Startup Settings**

Use these options to select which features are active when WaveCart is started. These options can also be turned on and off while WaveCart is running.

- **Triggers** – When checked, WaveCart will respond to incoming **Triggers**
- **Loop** – WaveCart will be placed into **Loop** mode, continuously sequencing play decks
- **Details** – Audio List **Show Full Details** selected
- **AutoStep** – Play Decks will automatically sequence
- **Deck Height** – Selects the vertical size of the Play Decks.

## **System Options**

- **Event Logging** – Activates WaveCart's built-in Event Log
- **Attempt Segues** – If supported by your sound card, WaveCart attempt to overlap play decks when in AutoStep mode. The next deck will be started when the Segue point of the previously playing deck is reached.
- **Fade Deck on Segue** – Enabling this option will fade the currently playing deck when its segue point is reached and start the next deck playing.
- **Default Segue** – If no Segue Marker has been placed in the audio file, the default segue length is used.
- **End Event Behavior** – Usually, it's desirable to **Clear Deck** to prevent replay of the same event. The **Reload Deck** option is useful when WaveCart is in **Loop** mode, perhaps with randomized carts, to provide a continuous audio feed.

## **Text Settings**

- You can customize the font and font size when the **Display text when cuts are played** option is selected. This display any text entered in the **Copy** field of the audio file using **Info Editor**.

## **Deck Labels**

- **Display Cut Labels During Cart Play** – This option forces the Play Deck label to display the audio file information from within the cart, rather than the generic Virtual Cart information.
- **Auto-Scroll Long Labels** – With this option enabled, if the text in a deck's display label is too wide, it will automatically scroll so you can see the full text. Several scroll styles are available from the **Auto-Scroll** dropdown.

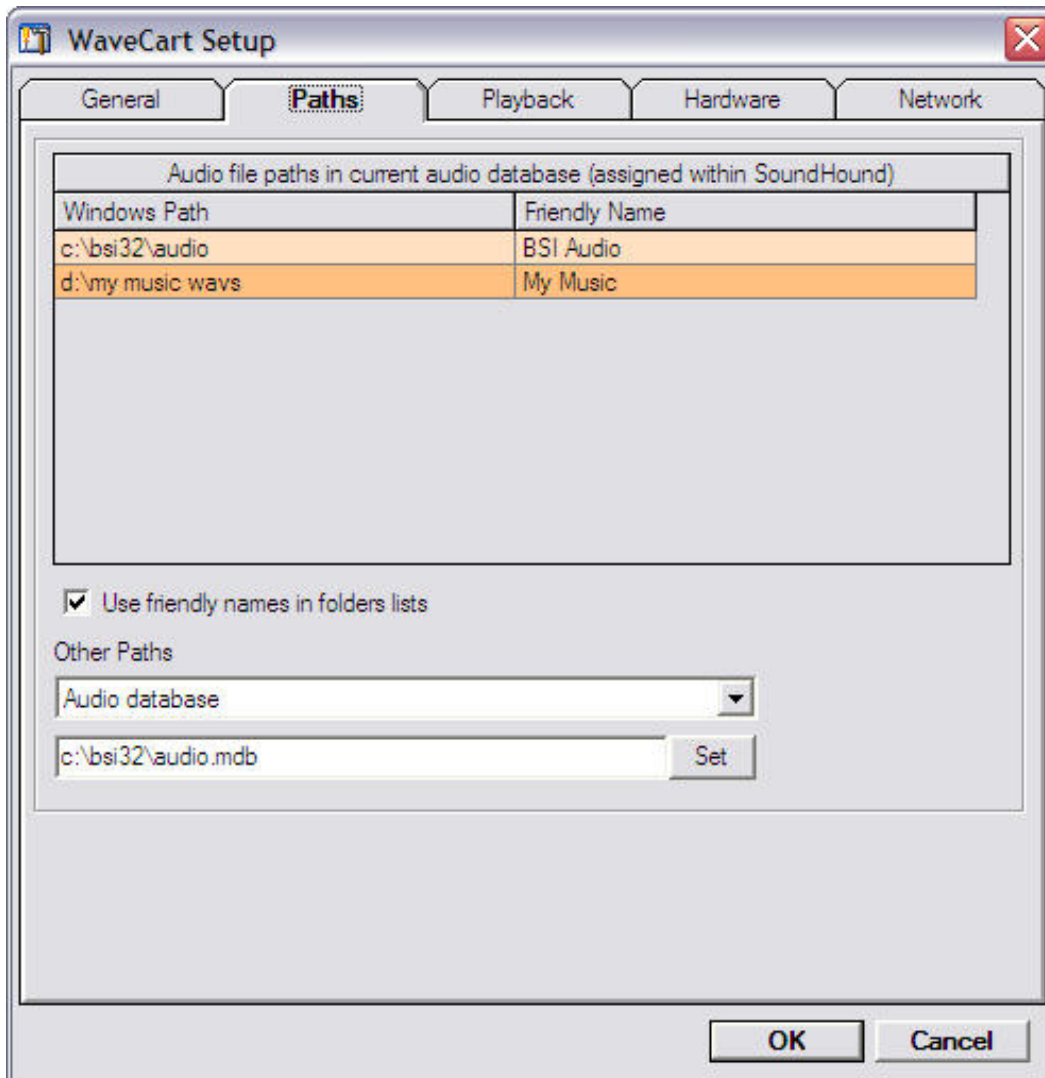
## **Event Logging Type**

- Selects the format of the Event Log, either plain text **ASCII**, or **Microsoft Access** format.

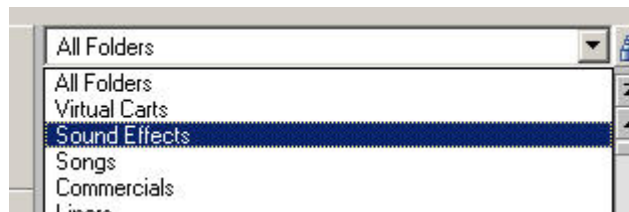
## **SoundHound Settings**

- Use SoundHound  
Unless another BSI application is already running SoundHound on your PC, then this option should be checked. WaveCart will continue to work if SoundHound is not running, but will not add any new files to the Audio list.

## Paths



Audio file paths are setup using the **SoundHound** utility, selecting the **Use friendly names in folders lists** option displayed the friendly name in the Audio Folder List instead of the full file path.



- **Other Paths** – Allows you to set paths to a different audio database, an optional Audio Editor (not supplied) and folders for Event Logs and Stacks.

## Playback

The Playback tab allows you to assign a different wave out device or sound card for each of the Play Decks, the HotKey & Trigger Decks and the Audio list Preview Deck.

It is not uncommon to only use two wave out devices for the main play decks, routed to two different physical outputs, with odd decks assigned to one output and even decks to the other - with a domestic on-board audio card routed to a pair of PC speakers for audition / preview purposes.

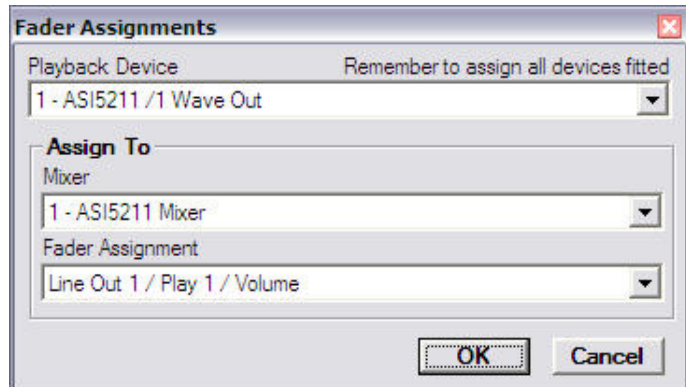
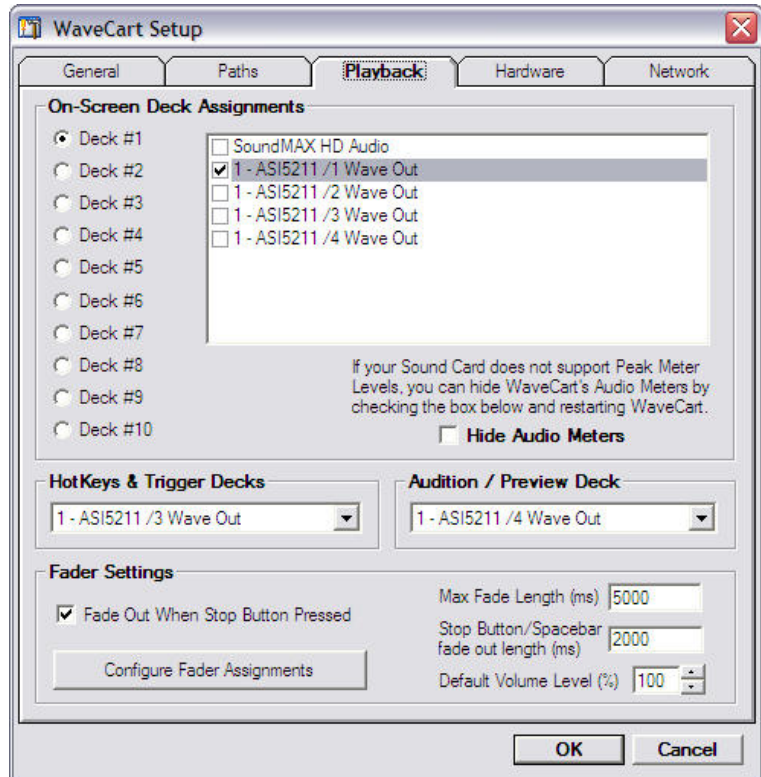
However, WaveCart supports a different output for each of the 10 on-screen and two hidden decks (HotKeys/Triggers deck & Preview deck). The capability of your sound card will determine how many files can be played back at the same time and how many different devices are available.

The **Fader Settings** section allows you to configure the faders controls that WaveCart will use for each play device. Clicking on the **Configure Fader Assignments** button will display the pop-up window as shown at right.

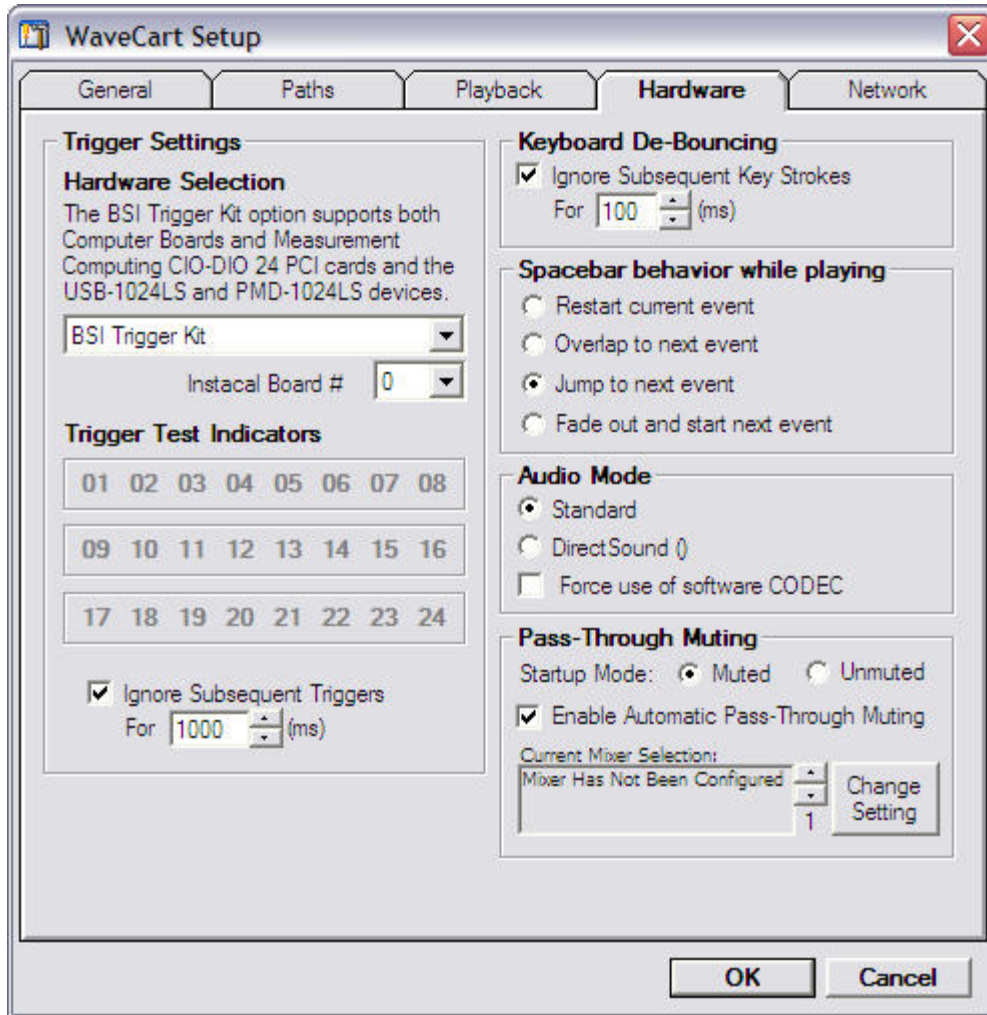
Select a play device from the **Playback Device** dropdown and then set the corresponding **Mixer** and **Fader Assignment** for that device. Repeat the above steps for each playback device available in the **Playback Device** dropdown list, and then click **OK** to save the changes.

The **Fade Out When Stop Button Pressed** option will cause a playing deck to fade out over the duration specified by the **Stop Button/Spacebar fade out length (ms)** field. While the fade-out is occurring, you can press the Stop button again to instantly stop the deck, or press the Play button to cancel the fade-out and return the volume to the percent specified in the **Default Volume Level (%)** field.

The **Maximum Fade Length (ms)** field specifies the absolute maximum amount of time any fade-out is allowed to take.



# Hardware



## Hardware Selection

The drop down box allows you to select which optional hardware trigger device you are using. WaveCart supports the Measurement Computing DIO 24 boards (no longer available) as well as the current USB-1024LS devices used with the BSI Trigger Kit. Although no longer available, support also remains for customers with AudioScience 4336/4346 with 16 integrated triggers. WaveCart also supports the new ASI 5211 audio card with 2 integrated triggers.

The selected option will determine how many triggers are available.

When using a BSI (USB) Trigger Kit, you must select the Instacal Board #.

## Trigger Test Indicators

These buttons will turn green momentarily if an incoming trigger is received. The buttons can also be clicked to test a trigger assignment.



## **Ignore Subsequent Triggers**

If you find your self receiving erroneous triggers, or you just want the triggers to not respond to any further triggers for a certain amount of time after an initial trigger is received, enable the **Ignore Subsequent Triggers** option and set the time to a desired ignore time period.

## **Keyboard De-Bouncing**

If you find that keys are accidentally being double-pressed, you can configure the **Keyboard De-Bouncing** option to ignore keyboard presses that occur more often than a specified length of time. Simply enable the **Ignore Subsequent Key Strokes** check box, and set the time selector to the desired number of milliseconds.

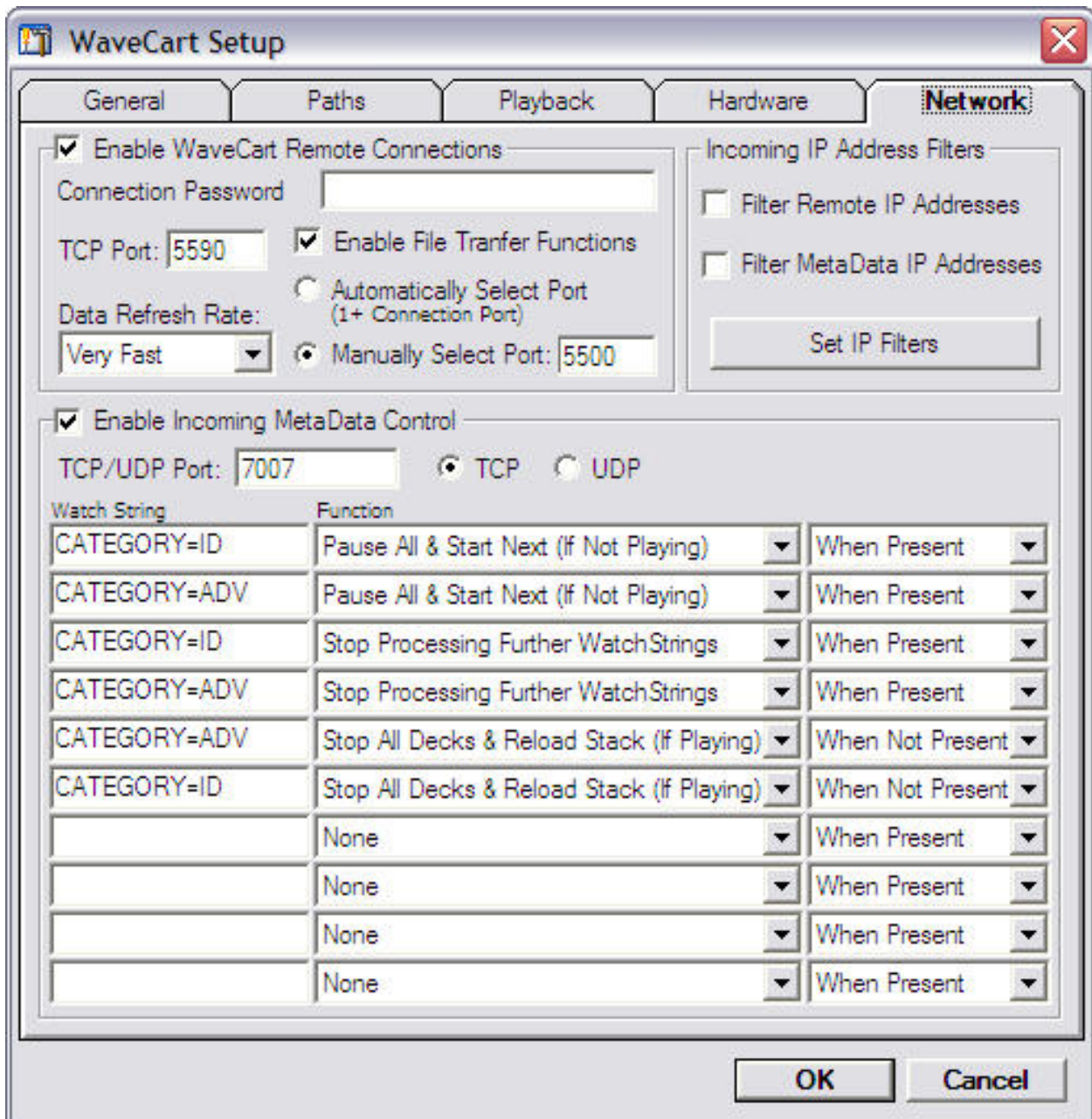
## **Spacebar Behavior While Playing**

Use this option to determine what effect pressing the Spacebar has when a deck is playing.

## **Audio Mode**

- **Standard** – This is the default audio mode, requiring multiple play streams (or multiple sound cards) in order to overlap files.
- **DirectSound** – When DirectSound mode is selected, then providing your sound card has full (not emulated) DirectSound support (and DirectSound is available on your PC) you can overlap multiple audio files using a single audio device even if your audio card usually only allows a single audio file to be played at the same time.
- **Force use of software CODEC** – WaveCart supports playback of Linear PCM (.wav), ADPCM, MP3 and MPEG Layer 3 file formats. If a format is not directly support by your audio card, this option forces audio to be played through an optional Windows ACM codec instead. Most modern PCs are supplied with an MP3 codec, but you may need to purchase a special MPEG Layer 2 ACM codec from BSI to support playback of MPEG Layer 2 (including Content Depot) files.

## Network



The network tab allows you to configure the host settings to allow connections from **WaveCart Remote** clients and configure **MetaData Control** to allow you to have WaveCart automatically perform actions based on received MetaData (IE: data from an automation system, or other TCP/UDP based data source). There are also **Incoming IP Address Filters** available, should you want to limit connections to only certain incoming IP addresses. For more info on the WaveCart Remote application, see the section titled **WaveCart Remote Client** in this manual.



## **WaveCart Remote Connections**

This section is used to configure your settings for use with the WaveCart Remote application to allow remote clients to connect to and control your WaveCart host. The **Connection Password** field allows you to set up a password which the remote user must use to log in to your WaveCart host.

The number entered into the **TCP Port** field determines what TCP/IP port your WaveCart host will listen to for remote connections. By default, WaveCart will listen to port 6500.

The **Enable File Transfer Functions** option allows remote client users to transfer audio files from their machine into the audio library, and even directly into a playback deck. The port the file transfer function uses is 1 higher than the TCP Port configured (6501 by default), but can be configured to any port desired by choosing the **Manually Select Port** option and entering the desired port number into the available field.

The **Data Refresh Rate** drop-down allows you to set how often the WaveCart Host will send update information, including the VU meter state, the deck labels, and the application labels. If you have a slow connection, or your internet service provider charges by the amount of bandwidth, you may want to set the data refresh rate to a lower value. Conversely, if you have a fast connection and don't have a bandwidth cap on your internet connection, you can set this value higher. This setting does not effect the reaction speed of asynchronous functions like clicking on the play or stop buttons, just the refresh rate of the data types mentioned above.

## **Incoming IP Address Filters**

If the IP addresses of your remote clients or MetaData sources are static, you can set up Incoming IP Address filtering. With this option enabled, WaveCart will only allow incoming connections from the IP addresses specified, and reject all others.

You can enable or disable IP filtering for either the remote clients, or the meta-data control functions.

To add your desired IP addresses to the filter, click on the **Set IP Filters** button and the window at right will appear. Enter your desired IP addresses into the fields, then click Done. NOTE: wild cards are not allowed, the IP addresses entered must be the full, valid IP address.

## **Incoming MetaData Control**

The **Incoming MetaData Control** function allows you to set up WaveCart to be controlled by TCP or UDP data sources. With this option enabled and configured, WaveCart will listen to the desired port for specific “watch strings”, and take the specified actions when a watch string is found in the data stream.

The list of watch strings is processed in sequential order from top to bottom, so you can implement simple logic functions by using the **Stop Processing Further Watch Strings** function and the **When Present/When Not Present** function modifier.

**TIP:** The screen-shot of the WaveCart Setup – Network tab shown at the start of this section implements a station ID & commercial replacement technique that will mute the configured pass-through mixer and start playing the current stack when the watch strings “CATEGORY=ID” or “CATEGORY=ADV” are found in a metadata stream, and will stop playing the stack when neither the “CATEGORY=ID” nor “CATEGORY=ADV” watch strings are detected in the metadata stream. This is the type of setup used when using WaveCart Pro for station ID replacement on a translator/repeater station.

To configure a Watch String, type the text string (a “string” is a word or sentence of alpha/numeric text) into an available Watch String field, then select the function you want WaveCart to perform when that string is encountered from the **Function** dropdown. You can reverse the logic of the watch string by setting the function modifier to **When Not Present**, rather than **When Present**, so that the function is performed when the Watch String specified is not found in a metadata stream.

# WaveCart Remote Client



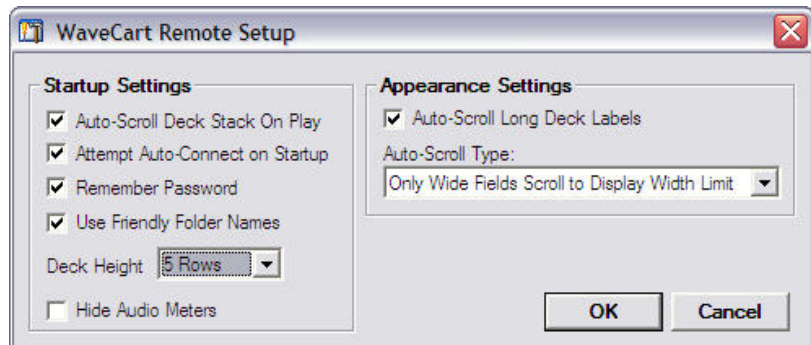
The WaveCart Remote Client allows you to connect to a running WaveCart Host to start decks playing, load audio files into decks, load stacks, change Scheduled Stack settings, play HotKeys, load HotKey sets, load Trigger sets, and more.

The user interface is nearly identical to WaveCart itself. The main difference being the connection details at the top of the Audio List.

## Setup

To configure the WaveCart Remote Client, go to the **Tools** menu and choose **Program Options**. You will be presented with the window shown at right.

The **Auto-Scroll Deck Stack On Play** option will cause the stack of decks to scroll automatically if a deck is started that is above or below the currently visible decks.



The **Attempt Auto-Connect on Startup** option will cause the WaveCart Remote Client to try to connect to a WaveCart Host with the last configured IP address and Port.

With the **Remember Password** option enabled, the last successfully used password will be remembered and automatically used the next time you connect to a host. If that password is no longer valid, you will be prompted to enter the current one when attempting to connect.

The Use Friendly Names option will cause the folder list displayed above the Audio List to show their configured friendly names. If no friendly name has been configured for a path, or this option is disabled, the folder list will display the actual path (the path to the audio file on the WaveCart Host).

The **Deck Height** option will determine what deck height mode WaveCart is set to when the application is started.

The **Hide Audio Meters** option will either show, or hide the VU meters on the left of each playback deck. If you don't need to see meters, or your audio card doesn't support audio meters, enable this option.

In the **Appearance Settings** section, you can set the deck labels to automatically scroll in several different styles to show any Artist or Title data that is too long to show in the width of the deck label field.

## Use

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To use the WaveCart Remote Client, you must first set up WaveCart (the Host) and enable it to accept remote connections. When configuring WaveCart, you will need to take note of that machine's IP address, the connection port(s) you select to use (the default is 6500 for the remote connection, 6501 for file transfer functions), and the password you set.

With your WaveCart Host up and running, and waiting for connections, you can open WaveCart Remote on another machine and enter the Host's IP address and port number into the appropriate fields in the upper right corner and click on the **Connect** button. WaveCart Remote will connect to the WaveCart Host and download it's audio file library information (the Artist/Title info, not the actual audio files).

Once the library is downloaded, you will have full control over the WaveCart Host. You can play, stop, pause, load decks, save stacks, edit Scheduled Stacks, play Hotkeys, load Trigger sets, and more!

# Support

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Technical Support for WaveCart is provided by our online Support Center at <http://support.bsiusa.com>.

Information about product updates and answers to common questions are available 24-hours-a-day.

If our **FAQ** or **User Forum** doesn't provide the answers you need, or if you have a problem of a technical nature relating to our software or any hardware we have supplied, then please use the links provided to submit a Support Ticket.

We aim to respond to all **Support Tickets** within 60-minutes during normal weekdays, from 6am to 6pm (PST).

Please note that **Telephone Support** for WaveCart is only available to customers that have purchased a Tech Support Plan; and we cannot undertake to diagnose or configure hardware that we have not directly supplied.

# Copyright

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