



# STAGE

Owner's Manual

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Preliminary Draft

## Table of Contents

<b>Packing List</b> .....	<b>3</b>
<b>Speaker System</b> .....	<b>3</b>
<b>Control Center</b> .....	<b>3</b>
<b>Setup</b>	
Setup - Choosing a Location .....	4
Placement – Speaker System .....	4
Placement – Desk Top .....	4
Placement – Television or A/V Furniture .....	5
Placement – Free Space or Stand Mounted .....	5
Placement – Control Center .....	6
Setup – Cabling .....	6
Setup – Initial Turn On .....	7
<b>Operation</b>	
Operation – Stand-Alone Mode .....	7
Operation – Host Mode .....	8
Host Mode – Windows XP .....	8
Host Mode – Windows Vista, Windows 7, and Windows 8 .....	10
Host Mode – OSX .....	13
Host Mode – iPad, iPhone, and iPod Touch .....	15

Thank you for your purchase of STAGE - HRT's complete audio solution. This owner's manual will guide you through unpacking, setting up, and operating your audio system. Please read the entire document and if you have any questions or concerns, please contact either your HRT dealer or HRT directly before proceeding. HRT may be reached by email at support@hirestech.com, we generally respond to all inquiries with 24 hours, often much sooner.

In addition to the accessories included with STAGE, you may need some additional items. These will be discussed in this document as the setup proceeds. For any ancillary items needed, you may wish to contact your HRT dealer.

### **Packing list**

STAGE is sold as two separate parts, packaged in separate cartons consisting of the Speaker System (STGSS) and the Control Center (STGCC). In addition to the two parts are the color options of black and white for both Speaker System and Control Center. Finally, for the Control Center, there are two different mains voltage ranges - specifically 115V and 230V.

### **Speaker System**

The Speaker System includes a set of self-adhesive 'feet' that can optionally be applied to either the bottom surface of each Speaker or to the surface that the Speaker sits upon. If you choose to use these 'feet' we recommend that they be placed in the corners of the enclosure about ½" (12mm) from the outside edges.

The rear of each Speaker also includes a pair of co-molded threaded inserts. These inserts can be used with an appropriate bracket for hanging the Speaker on a wall or similar surface. The threaded inserts have a M6 screw pitch so be certain to use the correct fastener so as to not damage the insert. In addition to selecting the appropriate fastener, it is equally important to select a bracket and a surface to which it will be mounted that can accommodate the weight of each Speaker (9.5lbs or 4.2 kg). Be certain to consult the instructions included with the bracket you choose and be certain that it is rated to handle the task of safely supporting the Speakers.

**Safety is a paramount consideration, whenever something, including either the STAGE Speaker System and or the Control Center is going to be suspended in an area where people are present, if you are at all uncertain as to this task, consult a professional installer to ensure that the installation is done properly.**

### **Control Center**

The Control Center includes a number of accessories which is dependent upon the location of the country where your purchase was made. In addition to the Control Center itself, all versions will include a pair of HRT speaker cables. These two cables are

identical and both ends are also identical and can be used in either orientation. For purchases made in North America, a NEMA equipped IEC mains cable will be included in the package. For purchases made in other countries, your HRT dealer will be able to assist you with obtaining an appropriate IEC mains cable for your country's power outlets.

Optionally, you may have a 'wireless master' module if your STAGE Control Center includes the wireless option (this will be covered in more detail in a separate document which describes this accessory).

For all configurations of the Control Center, you will need an appropriate length USB A to B cable. The appropriate length will be determined by a number of factors - including where the Control Center will be placed, and if you will be using the Control Center with a host (computer or similar) or in stand-alone mode (without a host). If used in stand-alone mode, an additional accessory power supply (again appropriate for your country) will be required.

Self-adhesive 'feet' are attached to molded points on the underside of the Control Center. These feet help to protect the surface that it sits upon.

As the Control Center is a modular design, other accessories may be packaged with the Control Center depending upon the optional features purchased.

## **Setup – Choosing a Location**

The choice of location for both the Speaker System and Control Center will be determined by a number of factors including: maximum and practical cable lengths, environmental factors (for example, room furnishings), acoustical considerations, and general aesthetics. The time you invest in properly locating STAGE will pay large dividends in the performance you can achieve, so we recommend taking the necessary time to make the best decisions.

### **Placement - Speaker System**

STAGE was conceived of as a multi-mission solution and can work in a number of different applications. These applications include desktop, wall mount, various free space (either with or without a speaker stand), meter bridge, and many others.

### **Placement - Desktop**

Whether for general computing, gaming or professional audio, STAGE is well suited to desktop usage. The angle of the Speaker System when placed on a typical desktop was designed to place the tweeter (the smallest of the four individual speaker elements) at both the correct angle and height for an average seated user. In addition, the distributed woofer array (the three larger of the four individual speaker elements) largely cancels the

effect of the reflection from the desk surface. This will help prevent reinforcement and cancellation of the frequency spectrum these elements produce.

The usual placement would be flanking the monitor - the choice of width and distance to the listener should be considered. With their ability to generate a sound stage that is both wide and deep, a bit of experimentation in placement will help find the optimum position for any situation. The distance to the listener's ears is best if at least 3 feet (1 meter) as this will give the best integration. The angle of the speakers in relationship to the listener's ears can also have an effect on the resulting sound. Often a small amount of 'toe-in' or angling toward the center can be helpful. Do keep in mind that the Speaker System has a rear vent that generates a portion of the low frequency (bass) energy that the Speaker System produces so do not place the Speakers directly in contact with a wall or other surface; a minimum of 3 inches (75mm) is the recommended rear clearance.

### **Placement - Television or A/V Furniture**

You may elect to place the Speaker System on either side of your television monitor or screen. Keep in mind that the STAGE Speaker System does contain magnets and while the field strength of magnetic materials is minimal, it is possible that if you have a CRT (so called 'picture tube') monitor there can be distortions caused by the magnetic force the Speakers create. Look for things like color errors or distortions to straight lines; if you experience these, consider increasing the distance between the monitor and Speakers. Most modern televisions and monitors are immune to this effect so this will likely not be an issue.

If your A/V installation is a wall mounted one, please consult the previously mentioned bracket considerations and be certain to pay attention to the safety issues presented.

Similar to the desktop installation already mentioned, the minimum distance to a wall or any other surface to the rear of the Speakers should be 3 inches (75mm). This is to not only accommodate the speaker cable but also the rear vent's acoustic output.

If your A/V installation is on a shelf or dedicated furniture and the size of the surface allows for some range of placement choices, then better results will be achieved if the Speakers are as far forward as possible. Increasing the distance of the area behind the Speakers is preferable. Depending upon the width of your television or monitor, you may wish to increase the distance between the two Speakers. STAGE is very capable of generating a very strong center fill so you can take advantage of this and use a wider than normal distance. As with all environments and applications, take a bit of time to experiment to discover what works best for your situation.

### **Placement - Free Space or Stand Mounted**

This is the configuration that will allow STAGE to achieve the best results. You will need a pair of speaker stands that are about 24 inches (60 cm) in height. Other height stands can be used, but our recommendation is to use ones of the appropriate size.

The location of stands and the Speakers in your listening environment will be influenced by a number of factors. These factors include other furnishing in the room, placement of the primary listening position, symmetry of the room, and practical considerations like aesthetics. As with all Speaker placements, symmetry is a desirable goal. The best results will occur when both the listener and the Speakers are symmetrically located in the listening room. Free space placement is best when the minimum distance to any room boundary or large furnishings is a minimum of 3 feet (1 meter) from the Speakers. This will allow the radiated energy from the Speakers to be unaffected by the other surfaces.

The choice for the distance between the two Speakers is somewhat dependent upon the distance to the primary listening position. If possible, the distance between speakers should be at least as great as the distance to the listener, preferably 1.25 to 1.5 times the listening distance is best. “Toe-in” or “toe-out” the angle (as if viewed from above) to achieve optimal sound. In general “toeing-in”, or angling the speakers toward the middle of the listening space, will beneficially affect the shape of the sound stage (the perceived area where the audio comes from) and increase the focus in the center area between the two Speakers. Since STAGE is very capable of generating a very convincing center image, normal center (or dialogue) speakers are not necessary. Likewise, with this capability much less “toeing-in” than with other speakers is required. Keeping this to a minimum will enhance the sonic focus at the edges of the sound stage.

Whichever environment you place your Speakers in, take the time to move them around. Even a very small movement can make changes that, when done properly, will enhance the performance of the system.

### **Placement - Control Center**

The Control Center’s placement needs to take into account practical factors, such as distance to a mains power outlet, distance to the Speaker System, distance to a USB host and / or an analog source (should you be using one), and access to the front panel display and controls.

Once you have selected a location that takes into account all of these factors, you will be ready to proceed onto the next section; the connections to the Control Center and other parts of your system.

### **Setup - Cabling**

Now that you have reached this point, you are ready to begin making the connections to the Control Center, the Speaker System, your host computer, and other audio sources (if you plan to use one with STAGE).

Make certain that you have all the necessary cables before beginning. At a minimum you will need the speaker cables included with STAGE (2 cables), an IEC mains cable for

connection between the Control Center and a mains outlet, and a USB A to B cable of adequate length to connect to either the host (computer) or to a USB power supply (optional).

For the initial connections, the desired order is as follows:

- 1) Connect the USB A to B cable to either the host (computer) or a USB power supply of the correct voltage for your location.
- 2) Connect an RCA cable pair to the line input on the input panel of the Control Center to an analog audio source should you plan to use one.
- 3) Connect the IEC mains cable to both the Control Center and to the mains outlet.
- 4) Connect both speaker cables to the output connectors of the control center (labeled L & R for left and right) and to the left and right Speakers. Make certain that the speaker cables don't cross, or the audio channels will also be crossed.

### **Setup - Initial Turn On**

You have now reached the point where you can begin to use STAGE. Since there are two distinct modes of operation - specifically host mode (connected to a computer or similar device) and stand-alone mode - these will be discussed as separate turn on instructions.

### **Operation – Stand-Alone Mode**

When connected to a USB power supply as opposed to a host, STAGE Control Center will modify its behavior to accommodate this mode of operation. You will know that you are in stand-alone mode as none of the sample rate LEDs (32k, 44k1, 48k, 88k2 or 96k) will be illuminated. In their place, the analog LED will be illuminated. When in stand-alone mode, the small switch next to the analog LED will be inactive. In this mode, you can't select the digital mode as there is no USB host connected to the USB port on the Control Center. The only controls that are active in this mode are the two volume and mute buttons on the front of the Control Center. These three controls function as follows:

The upper button in the row of three is used to increase the volume; the lower of the three buttons is used to decrease the volume. The middle of the three buttons controls the mute circuit. This button functions as a toggle; one press will place the Control Center into mute (silenced), a second press will release mute. There is a corresponding LED which when illuminated indicates that mute is activated.

A standard line level audio signal (typically 1 to 2 volts RMS) is sufficient to drive the input of the Control Center. A phonograph cannot be connected without an intervening phonograph preamplifier, as this input on the Control Center is not a RIAA equalized one.

The source connected to this input can be from any number of different sources including: a television audio output, a tuner, a cable box, a DVR, a satellite receiver, a professional audio source (such as a mixer), or from a preamplifier or other multiple audio source routing device. Nearly anything that can be used to select and / or control an audio source can be used with the line input of the Control Center.

When you are not listening to STAGE, you may wish to place the Control Center in mute to prevent any unwanted sound source from being reproduced.

## Operation - Host Mode

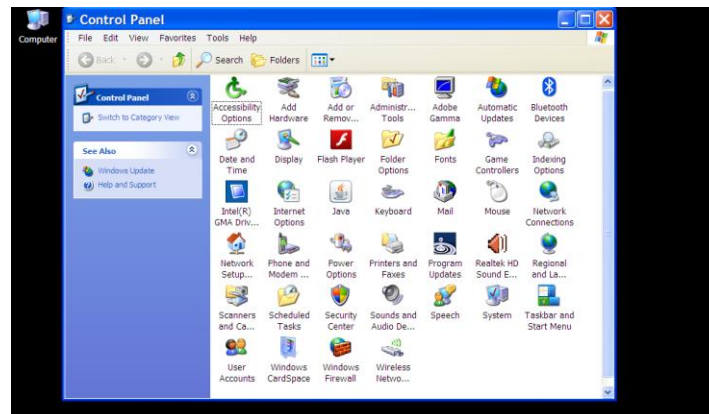
This mode requires that the Control Center be connected to an appropriate host. The range of devices include a computer (Windows, Mac or Linux), a tablet (may require using a USB hub), a smart phone (may require using a USB hub), a NAS (Network Attached Storage) appliance, or any other host which can be paired with a USB audio device.

For many, the most common use will be with a computer. When used with a computer, you may need to 'setup' the computer to inform it of your desire to route audio to the Control Center and STAGE in general. As each computer's setup is different, we will address many of the popular ones in the following sections. These will be brief and condensed instructions, not in depth detail oriented. You can consult your HRT dealer or HRT's support staff for more detail if necessary.

### Host mode - Windows XP

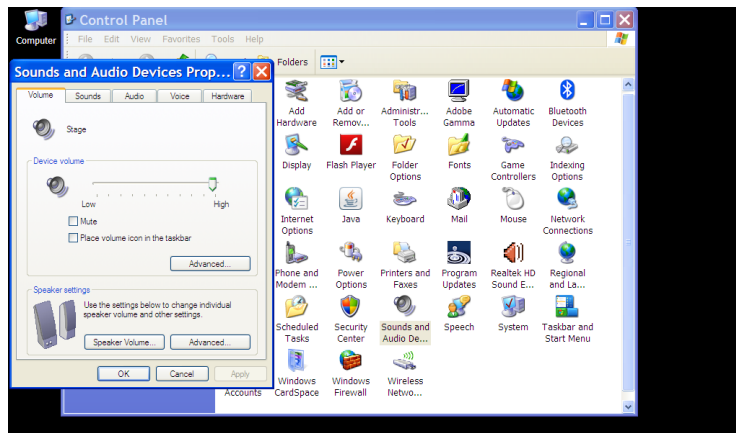
The minimum version of Windows, which supports an asynchronous USB transfer protocol interface such as used in STAGE Control Center, is Windows XP SP 3. Any version of Windows prior to this is not compatible with STAGE or any other asynchronous device.

The primary task will be to inform the OS that STAGE is your destination for audio. Making the OS aware of this choice for XP is done using the Control Panel.

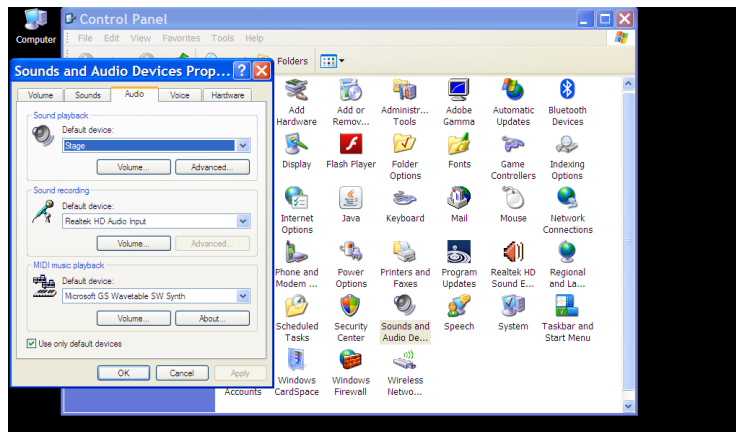




Open 'Control Panel' on your computer and then select the 'Sounds and Audio Devices' option; under 'Sound Playback' in the 'Audio' tab, make certain that STAGE is selected as the audio destination.



You may now use whatever media player you prefer, but be aware that some may require to select STAGE, as not all players honor the preferences choice that you made using the Sound and Audio Devices Properties selection.

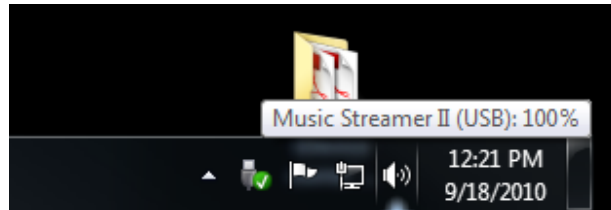


Volume and mute can be controlled by the mixer of XP, or by the front panel of the STAGE Control Center. A change on either will be reflected on both. You may also elect to select an analog source by pressing the button next to the analog LED on the Control Center. When in analog mode, any analog audio source that is connected to the input on the Control Center can be played, and volume and mute can be controlled by either the host XP computer or by the front panel controls.

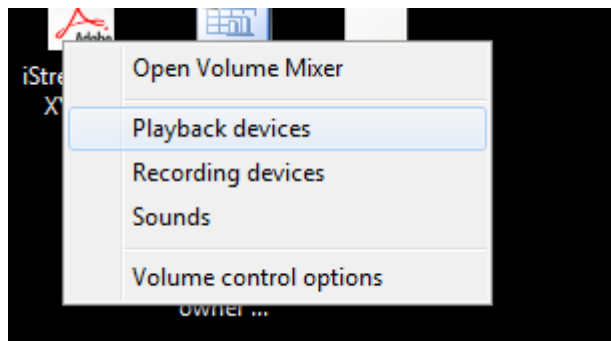
To return to digital mode, press the analog switch a second time. When in digital mode, the analog LED will not be illuminated.

## Host Mode - Windows Vista, 7, 8 or 8.1

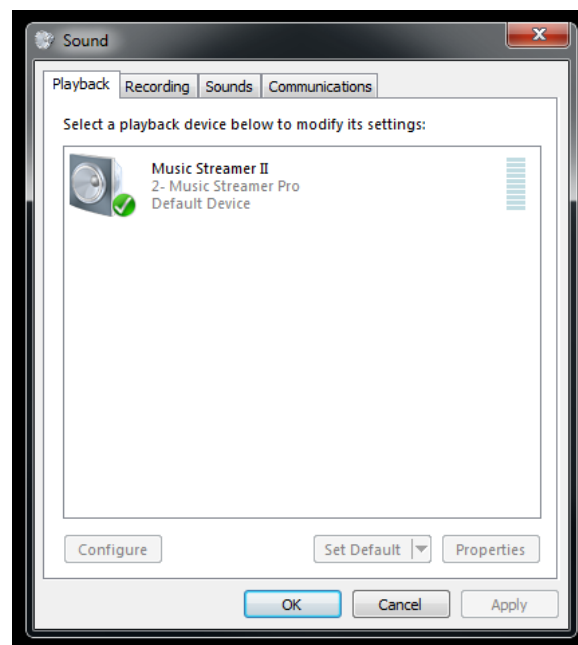
For a Windows Vista, Windows 7, Windows 8 or Windows 8.1 host, the choice for the audio destination of any computer based material is made from the 'Playback devices' option of the audio icon located on the task bar at the bottom of the desktop. For Windows 8 or 8.1, you must be on the desktop tile in order to access this icon.



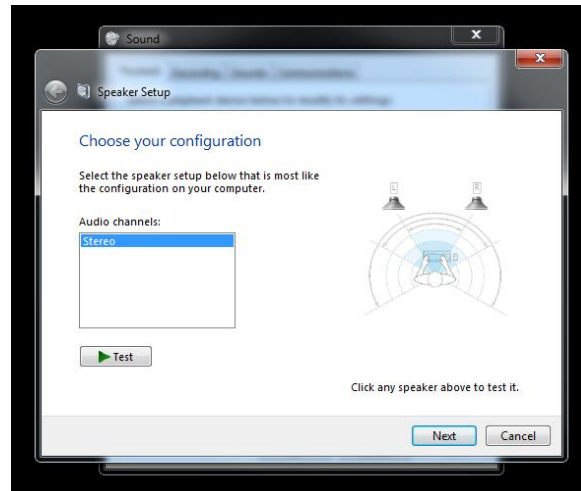
Right click on the speaker icon on the task bar this will expose a series of options. Select (using a left mouse click) the 'Playback devices' option from the list.



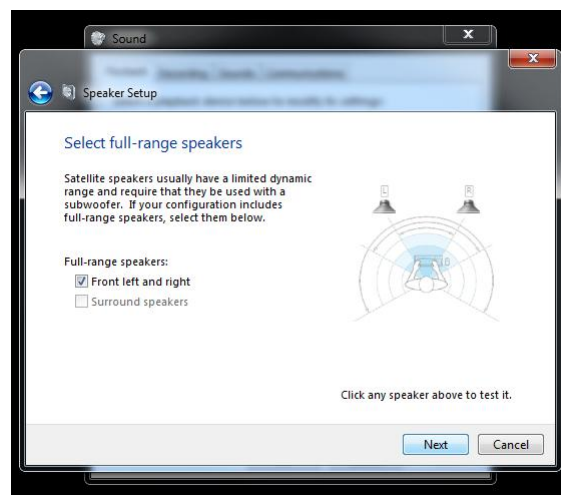
This will open up a separate window titled 'Sound'.



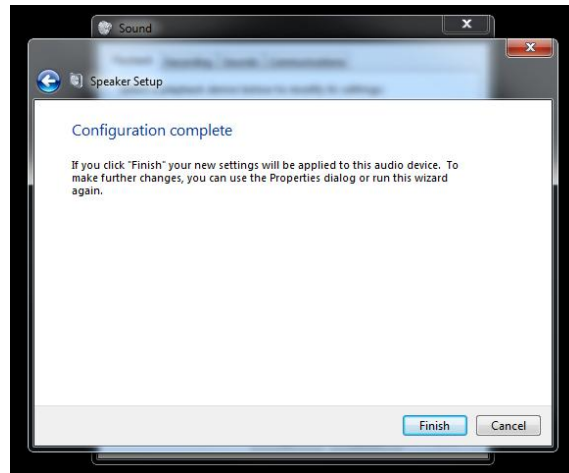
The 'Sound' window has a number of tabs - the first one to the left is the 'Playback' tab. Here, you will have one or more devices listed. STAGE will be one of these devices. Select STAGE by left clicking the entry to highlight it, and if you have more than one, you may wish to make this your default so that STAGE remains as the primary audio destination. You can override the default name and enter any that you wish to use, STAGE being one option. At a minimum, you will need to configure the entry to inform the OS that STAGE is a full range (as opposed to limited range) audio device. This is accomplished by left clicking on the 'Configure' button.



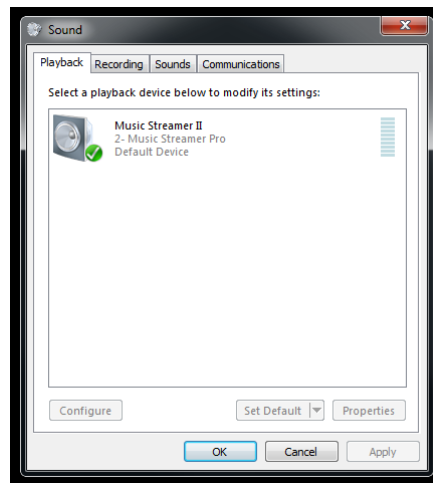
After pressing 'Configure', you will open up another window titled 'Speaker Setup'. You can click on the 'Test' button and Windows will send a series of tones to the left and right speakers. If STAGE is connected and not muted, it will play these tones on the appropriate Speakers. This is a good time to confirm that you have not interchanged the left and right channels. Once the 'Test' has been performed, click on the 'Next' button to proceed. This will expose another option, titled 'Full-range speakers'.



There will be an option box next to 'Front left and right', tick this option using a left click of the mouse. Once done, you can either retest the Speakers, or when you are ready to proceed, click the 'Next' button.



The final required step is to click on 'Finish'. This will return you to the 'Sound' window. Here, you may go deeper into the setup options by selecting Properties or you may exit by pressing 'OK'.

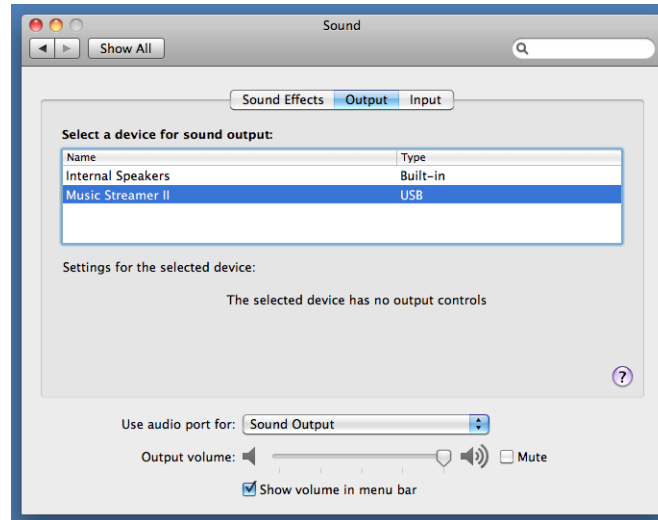


Should you elect to go deeper and select options to rename, change the level indication (either percentage or dB), enable or disable any enhancements or change the sample rate and/or bit depth of the Windows mixer and SRC, this can be accomplished using the various tabs. HRT can supply you an additional document that describes these more advanced features at your request.

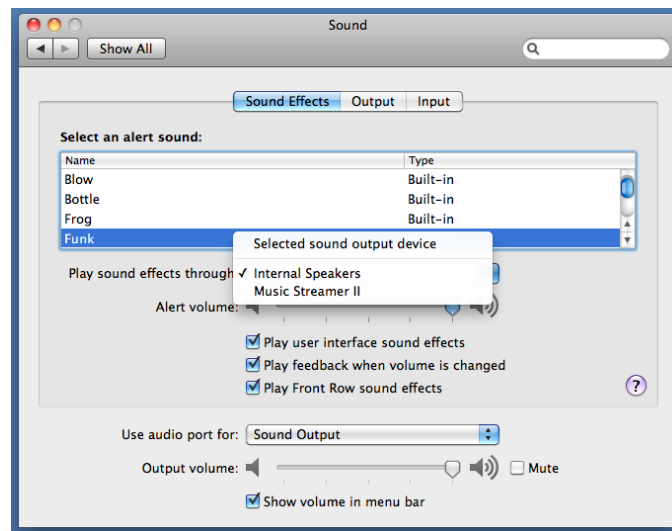
Additionally, the media player you choose may have other options for you to choose. Depending upon your media player and if you elected to make STAGE the default audio destination, you may need to inform any application that produces audio output that STAGE is your chosen destination for that material.

## Host Mode - OSX

Any modern version of OSX will support STAGE and its asynchronous audio transfer mode. The minimum requirement is to inform OSX that STAGE is your choice destination for audio content. This is accomplished by using the Sound portion of Preferences.



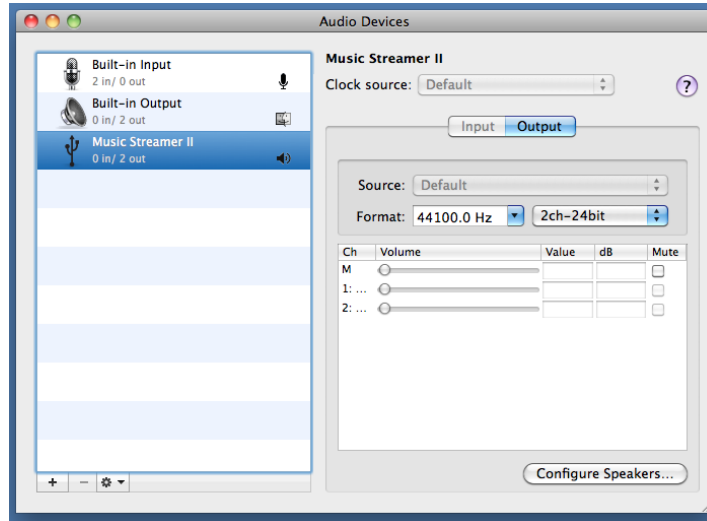
You may also want to redirect the Sound Effects (system sounds) away from STAGE and have those sounds produced by the internal speakers. To inform the OS of your preference for Sound Effects, open the Sound Effects tab.



Select the internal speakers for these types of sounds.

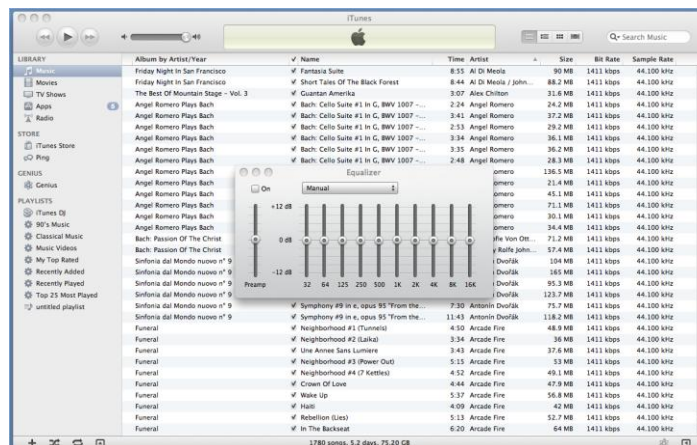
While OSX offers many options for media players, the most common will be the preinstalled iTunes player. This player uses the audio subsystem of OSX and routes all its audio through the system mixer and SRC (sample rate converter). The output sample

rate for any audio content will be determined by the settings of the SRC, not the source material itself. In order to have the best results, it is always best to avoid the SRC process. This can be accomplished by setting the output to match the sample rate of the source material you will be playing (most often 44.1 kHz). Setting the output sample rate is accomplished by using the Audio MIDI Setup utility.



Open Audio MIDI and select STAGE, next choose the output sample rate you will be playing using the Format: pull down menu. Note, it is unnecessary to match the bit depth, both 16 and 24 bit material can pass down a 24 bit path unaltered. The converse is however not the case. In most situations, select the 2ch-24bit option. Please note, for the best results, you should not make a change to the sample rate using the Audio MIDI utility while iTunes or any application which generates audio output is open in either the foreground or background. Always fully close iTunes or any other sound generating application before making any changes using Audio MIDI.

The last consideration for iTunes is the built in sound processing options, including equalization. Generally, you will get better results if you defeat this processing option.



This is accomplished from within the iTunes application. The Equalizer has an enable option labeled 'On'. If this option is unchecked, the equalizer is bypassed.

### **Host Mode – iPad, iPhone, or iPod Touch**

With the use of some additional accessories, you can connect STAGE directly to your appropriate iDevice (consult HRT or your HRT dealer to determine the most current supported platforms). For this mode of operation, you will require a few additional items including: a pair of USB A to B cables, a self (not bus) powered USB 2.0 hub and appropriate host mode adapter such as the Apple Camera Connection Kit (either 30 pin or Lightning version) or the HRT HMA-1 adapter (available from HRT or your HRT dealer).

To use STAGE in this configuration, your USB connection path is as follows:

- 1) Connect either the HMA-1 adapter or the Apple Camera Connection Kit adapter to the iDevice.
- 2) Connect a USB A to B cable from the adapter to the self powered USB 2.0 hub.
- 3) Connect a second USB A to B cable from a downstream port on the hub to the USB socket on the input panel of STAGE.

All audio which would normally be passed to the iDevice will be routed instead to STAGE. Volume and mute state can be controlled by either the iDevice or the front panel of the Control Center. You can also select the analog input on STAGE by pressing the button next to the analog LED on the Control Center. Volume and mute can be controlled by either the iDevice or the Control Center while in analog input mode.