OWNER'S MANUAL

MS-1

Music Server

NOTE: Before installing your new component, please read this manual carefully as it will inform you of the product specifications, proper installation and correct operating procedures for your unit. Also included in this manual are guidelines on how to service and care for your new Cary Audio Design product.

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IMPORTANT SAFETY INSTRUCTIONS

WARNING: The triangle with the lightning flash symbol displayed on the unit advises the user of dangerous uninsulated voltage inside the product's enclosure.

CAUTION: To reduce the risk of electric shock, do not remove the cover. There are no user-serviceable parts inside; it is recommended that only qualified personnel service this component.





ALERT: The triangle with the exclamation point symbol on the component suggests that the owner refer to important operating and maintenance instructions in the owner's manual.

- OWNER'S MANUAL: Before powering up the equipment, read all safety and operating instructions and follow them as instructed. Retain the safety and operating instructions for future reference.
- ATTACHMENTS: Use only those attachments recommended by the unit manufacturer, as others may cause hazards.
- 3. **ACCESSORIES:** Do not place the unit on an unstable cart, stand, tripod, bracket, or table. The unit may fall, causing injury to a person or damage to the unit. Mount the unit according to the manufacturer's instructions with the suggested mounting accessory.
- WALL OR CEILING MOUNTING: Mount the unit to a wall or ceiling only in the manner recommended by the manufacturer.
- 5. **WATER AND MOISTURE:** Do not use the unit near water (for example, near a swimming pool, bath tub, wash bowl, kitchen sink, or laundry tub) or in a damp environment (like a basement or outside in the rain).
- 6. **OBJECT AND LIQUID ENTRY:** Do not push objects of any kind into the unit through openings as they could touch dangerous voltage points and short-out parts, possibly resulting in a fire or electric shock. Avoid spilling liquid of any kind on the unit. If water or any metal object (such as a paper clip, coin, or staple) accidentally falls inside the unit, disconnect it from the AC power source immediately and contact Cary Audio Design for further instructions.
- 7. **HEAT:** Position the unit away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.
- 8. **VENTILATION:** Slots and openings in the cabinet create ventilation to protect the component from overheating. These openings on the top and bottom panels must remain unobstructed. Allow at least six inches (16 cm.) of clearance above the unit and an opening behind the unit for airflow. Do not place the unit on a bed, sofa, rug, built-in bookcase, or rack without adequate ventilation.
- 9. **GROUNDING OR POLARIZATION:** As a safety feature, the unit may be equipped with a polarized alternating current line plug in which one blade is wider than the other. This plug will fit into the power outlet only one way. If you cannot insert the plug fully into the outlet, try reversing the plug. If the plug still will not fit, contact a licensed electrician to update your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- 10. POWER SOURCES: Operate the unit only from the power source indicated on the marking label. If you are unsure of the type of power supplied to your home, consult your unit dealer or local power company.
- 11. **POWER CORD PROTECTION:** Arrange power supply cords so that they do not suffer from foot traffic or pinching by items placed on or against them. Pay close attention to cords where plugs enter the AC outlet and where they exit from the unit.
- 12. **LIGHTNING:** For added protection during a lightning storm or when the component is idle for long periods of time, unplug the unit from the wall outlet and disconnect the antenna or cable system. This will help protect the unit from lightning and power line surge damage.
- 13. **POWER LINES:** Do not locate an outside antenna system in the vicinity of overhead power lines or other electric light or power circuits. When installing an outside antenna system, take extreme care to avoid touching the power lines or circuits; contact with them could be fatal.
- OVERLOADING: Do not overload wall outlets, extension cords, or integral convenience receptacles as this
 increases the risk of fire or electric shock.

IMPORTANT SAFETY INSTRUCTIONS

- 15. **REPLACEMENT PARTS:** When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or those having the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock or other hazards.
- 16. **SAFETY CHECK:** Upon completion of any service or repairs to the unit, ask the service technician to perform safety checks to ensure the unit is in proper operating condition.

17. **IMPORTANT SAFETY NOTE:**

- Before connecting a new product such as the Cary Audio Design MS-1 to your audio or home theater system, turn off all other equipment (preferably unplugging them from the AC power source). Many audio components feature automatic turn-on circuits that may activate during an installation, potentially causing damage to electronic components or speakers. This type of damage is not covered by product warranties, and Cary Audio Design specifically disclaims responsibility for any such damage.
- Power Cord: The removable power cord provided with your player was specifically designed for use with this product, but other AC cords may be used. Consult your dealer for advice on AC power cords and high quality wire in your system.



- AC Fuse: The fuse is located inside the chassis and is not user serviceable. If the unit does not power up, contact an authorized service representative.
- Wiring: Cables running inside walls should have the appropriate markings to indicate compliance and listing by
 the UL, CSA or other standards required by the UL, CSA, NEC, or your local building code. Questions about
 cables inside of walls should be directed to a qualified custom installer, licensed electrician, or low-voltage
 contractor.
- 18. **RECORDING COPYRIGHT:** Recording of copyrighted material for other than personal use is illegal without permission of the copyright holder.
- 19. NOTE TO CATV SYSTEM INSTALLER: This reminder is provided to call the CATV system installer's attention to article 820-40 of the NEC, ANSI/NFPA 70, which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

20. FCC INFORMATION FOR USER:

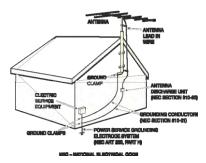
- CAUTION: Any changes or modifications not expressly approved by Cary Audio Design could void the user's authority to operate the equipment.
- NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules.



- These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates and can radiate radio frequency energy, and if not installed and used in accordance with the instructions it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - Connect the equipment into an outlet on a circuit different from where the receiver is connected.

21. OUTDOOR ANTENNA INSTALLATION/SAFE ANTENNA AND CABLE CONNECTION:

- If an outside antenna or cable system is connected to the equipment, be sure the antenna or cable system is grounded in order to provide protection against built-up static charges and voltage surges. Article 810 of the National Electrical Code, ANSI/NFPA 70 (in Canada, Part 1 of the Canadian Electrical Code) provides information regarding proper grounding of the mast and supporting structure, grounding of the leadin wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes and requirements for the grounding electrode.
- Outside antenna system should be located well away from power lines, electric light or power circuits and where it will never come into contact with these power sources if it should happen to fall. When installing an outside antenna, take extreme care to avoid touching power lines, circuits and other power sources as this could be fatal. Because of the hazards involved, antenna installation should be left to a professional.



WELCOME

PRODUCT OVERVIEW

Thank you for purchasing the latest design in a long line of outstanding digital source equipment from Cary Audio Design. The MS-1 is a new breed of audio component designed to use an iPhone, iPod Touch, or iPad as its remote control device. Enjoy the simplicity of fingertip commands along with the vivid color displays of album cover art.

To begin your musical experience, just insert a CD, and the MS-1 will copy the disc to the one-terabyte hard drive, which is capable of storing roughly 2,800 CDs in FLAC format; the disc ejects automatically when the transfer is complete. The MS-1 then searches Internet archives for the song list, artist information, and album art. Once the information is added to the music library, your music becomes searchable using your iPhone, iPod Touch, or iPad as a remote control device. An extremely efficient and fast internal operating system quickly locates and plays your music at the highest level of quality over a USB output.

Downloading the custom Cary Audio Design application available free from the iTunes App Store gives you complete wireless control of the MS-1. Simply launch the Cary Audio Design application, and you can begin exploring your entire music library with the swipe of a finger. Never before has your music library been this easy to enjoy. SHOUTcast™ Radio is also included as part of the MS-1, enabling you to stream thousands of Internet radio stations.

The MS-1 offers many exciting new ways to enjoy your music collection. Using the Subsonic app/program you can access your server's music from anywhere you have an Internet connection (Wi Fi or 3G/4G), with a computer, a tablet, or even your Smartphone. Subsonic also allows you to easily build playlists and edit the album art and metadata of your music collection. UPnP capability (Universal Plug and Play) allows you to stream music stored your computer or hard drives over the network to your MS-1. You can also stream multiple feeds out of the MS-1 to any of a number of other devices to listen to your music all around the house. Music is a big part of our lives, and the MS-1 lets you share it and enjoy around your home and around the world!

The MS-1 is the modern day equivalent of a high-end audio transport and is designed to be paired with a USB D/A converter. To achieve the best in high-end sound, we suggest that the MS-1 be paired with the Xciter Series USB D/A converter. This combination of Cary products provides you with a system whose ease of use and sound quality is difficult to match at any price.

Congratulations on your fine choice, the Cary Audio Design MS-1. We are confident the MS-1 will bring you many years of musical satisfaction, and we sincerely welcome you to the Cary family.

WELCOME

UNPACKING AND INSTALLATION

Unpacking

Your Cary Audio Design product was shipped in a carton particularly designed to protect its contents, and special care has been taken to prevent damage during shipping. Carefully remove your new component from its packing carton and examine it closely for signs of shipping damage. If shipping damage is discovered, document the damage with photographs, contact the transport carrier immediately, and retain the packing as evidence.

We strongly recommend saving all original packing cartons to protect your component for storage or future shipping.

Included in the Box

When unpacking your MS-1 Music Server, make sure the following is included:

- MS-1 Music Server
- RESTORE DVD
- Power Supply
- Owner's Manual
- Warranty Card

Power Requirement

The MS-1 is designed to operate from AC mains current. This is a linear power supply designed to operate at a specified AC voltage.

Warranty Card

If you are the original purchaser of this unit and you purchased it in the United States, complete the enclosed warranty registration card and return it to Cary Audio Design within fifteen days of your purchase. Warranty restrictions apply. Consult the warranty section of this manual for details. Please keep a copy of the original sales receipt from your Authorized Cary Audio Design dealer to validate the warranty if necessary.

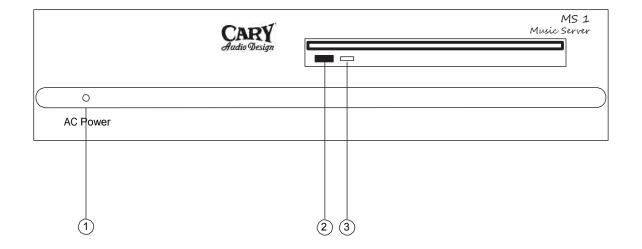
SPECIFICATIONS

Operating the MS-1 is a simple procedure since each unit is designed for long-term stability in virtually any home operating situation. However, if the unit is operated outside the parameters outlined in this owner's manual, damage may occur. Please read this manual carefully before operating your new MS-1.

GENERAL SPECIFICATIONS		
Hard Drive	1 terabyte SATA (About 842GB of space for music)	
Optical Drive	24x slot loading drive	
Audio Output	via USB 2.0 ports on rear panel	
Network Connection	10/100/1000 Ethernet	
Music Formats Supported	FLAC, OGG, WAV, M4A, WV	
Digital Output Rate	24 bit 96 kHz max	
Power Input	100-240 VAC, 50-60 Hz, auto switching	
Power Consumption	~30 watts	
Finish	Black matte cabinet, silver anodized- aluminum faceplate standard (black optional)	
Weight	8 lbs.	
Dimensions	3.5H x 11W x 12.5D	

GETTING STARTED

FRONT PANEL OVERVIEW



1. AC POWER

A blue LED will illuminate when the power is on.

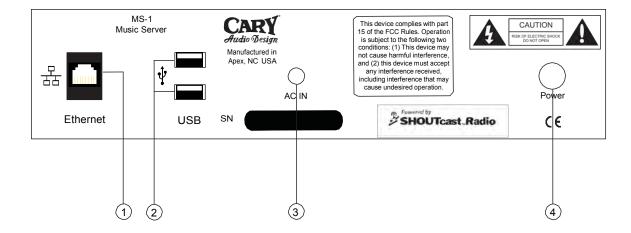
2. DISC EJECT

Pressing this button ejects the disc from the MS-1.

3. DISC ACTIVITY LIGHT

This light will blink while a CD is being imported.

REAR PANEL OVERVIEW



1. ETHERNET

Connect to your network using this 10/100/1000 Ethernet jack

2. USB

Two USB ports are provided to connect both a DAC and an external hard drive.

3. AC IN

Plug in the power supply here.

4. POWER

Press once to turn on.

Press once more to shut down the MS-1.

The blue LED on the front of the MS-1 will illuminate when AC power is on.

GETTING STARTED

CONNECTING TO YOUR HOME NETWORK

The MS-1 system will need both wireless and wired access to your home network. The wired access is required to establish the MS-1 music server connection while the wireless connection allows your iPhone, iPod Touch, or iPad to interface with the MS-1 as a remote control device.

Simply plug the MS-1 into your router with a standard CAT5 Ethernet cable. From there, the MS-1 will obtain its IP address automatically from the router and connect to your home network.

If there is no wired Ethernet network in your home, use a power line network adapter such as those made by Linksys, Netgear, and Belkin. This adapter will send your data over home power lines at speeds similar to a wired Ethernet network. This adapter is usually sold as a two-part device; connect one part to your router and the other to your MS-1 server.

Except when accessing SHOUTcast[™] Radio, the MS-1 plays music without an Internet connection; however, it requires an Internet connection to retrieve information about CDs while they are importing to the MS-1 library.

If you have turned off the DHCP server in your router, the MS-1 cannot obtain an IP address. At this time, the MS-1 does not support the use of proxy servers.

CONNECTING TO YOUR AUDIO SYSTEM

The MS-1 will send audio to a DAC via USB. Simply connect a USB cable from the USB port on the rear of the MS-1 to your USB DAC.

The MS-1 is compatible with any USB DAC supporting the Universal Serial Bus Device Class Definition for Audio Devices v1.0. The MS-1 will not work with DACs requiring special drivers.

CONNECTING THE POWER

Plug in the MS-1 power adapter to the back of the unit, and then plug the other end into the wall. Press the power button on the rear of the chassis, and the front LED will illuminate as the server begins its start-up sequence. The server will be ready to use in less than a minute.

GETTING STARTED

SETTING UP THE REMOTE CONTROL DEVICE

An iPhone, iPod Touch, or iPad is required to control the MS-1 system. The latest version of the Cary Audio Design MS-1 Remote App is available through iTunes free of charge; choose one of these two methods:

- From your computer, go to the iTunes App Store and search for CARY AUDIO.
- From your iPhone, iPod Touch, or iPad, access the iTunes App Store and search for CARY AUDIO.

CONNECT TO YOUR WI-FI NETWORK

If your iPhone, iPod Touch, or iPad already connects to the web using your Wi-Fi network, skip this step. If not, go to your remote control device's SETTINGS \rightarrow WI-FI menu.





IMPORTING MUSIC

FROM A CD

Place the CD in the slot-loading CD drive, and the MS-1 automatically copies the CD to the internal storage. With an established Internet connection, the MS-1 will retrieve CD information such as album, artist, genre, and track names. The CD will eject when the import is complete. CDs are copied into FLAC format; this is a lossless audio storage format.

USING FTP

File Transfer Protocol (FTP) is a standard network protocol used to exchange files over a network. The MS-1 features a built-in FTP server to upload an existing collection of digital music files. Refer to the BACKUP AND FILE MANAGEMENT section for more information.

FROM EXTERNAL USB DRIVES

To import music files from USB hard drives and USB thumb drives, refer to the USB HARD DRIVE SYNC section.

SUPPORTED FORMATS

The MS-1 will play the following formats:

- FLAC Free Lossless Audio Codec
- OGG Ogg Vorbis
- WAV WAVE
- M4A Apple Lossless
- WV WavPack

Files without metadata (such as WAV files) must be played through the SOURCES \rightarrow FILE SYSTEM menu. They will not show up in the Albums / Artists / Genres / Songs tabs.

Any files with DRM (Digital Rights Management) are not compatible with the MS-1.

REMOTE CONTROL DEVICE SET UP

Select the CARY AUDIO Application on your iPhone, iPod Touch, or iPad.

• Press the SETTINGS button in the top left corner.





• Select DISCOVER SERVERS and the remote control device will search your network for servers.





• Select your server when it is identified.





• When a checkmark appears beside the server name, press DONE in the top left corner.



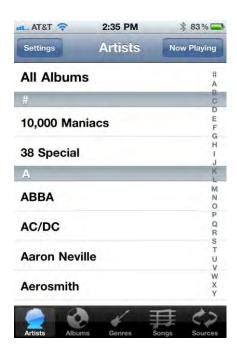
HARD DRIVE DISK SPACE

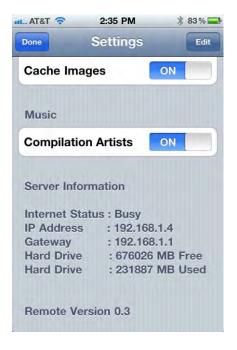
The MS-1 comes with a 1 TB hard drive and is partitioned into two separate spaces. One is for the operating system and the other for music storage. The music storage partition is approximately 842 GB while the operating system partition is approximately 30 GB. The remaining few GB are the actual partitions themselves. In today's memory and storage based devices such as music servers, computers, Smartphone's, etc., it is normal for the actual available storage space for content to be somewhat less then overall specified capacity.

CHECKING AVAILABLE AND USED STORAGE SPACE

The MS-1 lets you check the available free and used space of the hard drive via the Cary Audio Remote App for iPhone. Follow these steps to check the available space.

- 1. Open the Cary Audio Remote App.
- 2. Tap the "Settings" button in the upper left corner.
- 3. Scroll to the bottom of the Settings page.
- 4. Notice at the bottom it lists "Hard Drive Free" and "Hard Drive Used"





Note:

• Please take care in being aware of how much music you are copying or may be transferring over to the MS-1 hard drive. Once the hard drive is filled to capacity it will no longer copy music files. However, if you continue to attempt to load more music than it is capable of storing, it may list those artists and tracks while not actually copying the music files. Also be aware hi-res music files can be several times larger than FLAC or other file formats, and can fill the hard drive more rapidly.

LISTENING TO MUSIC

You can now browse the music library and start listening. Use the bar on the right side of the remote control device screen to jump to a specific letter in the list.





If it is available, album art will display on the NOW PLAYING screen. Use the volume slider to control the listening level of the audio sent to your DAC. Keep this digital volume control at 100% for critical listening.



Press the INFO button in the bottom right hand corner to view more information about the track currently playing

Tap the screen again to go back to the NOW PLAYING screen





LISTENING TO SHOUTCAST™ RADIO

SHOUTcast™ Radio is one of the world's largest online radio stations. Currently, SHOUTcast™ Radio features over 35,000 stations from around the globe. Whether you are looking for popular or indie music or want to check out local or world programming, you're sure to find something you like on SHOUTcast™ Radio.



To access SHOUTcast™ Radio content, go to the SOURCES tab and select SHOUTcast™ Radio.





A listing of genres will appear. Use the bar on the right side to jump to a specific letters in the list.





After selecting a genre, choose a particular station.





The NOW PLAYING screen will appear.



TURNING OFF THE SERVER

To protect your music library contents and MS-1 system files, a proper shut down is recommended. Press and release the MS-1 power button to initiate shutdown of the system.

If the server will not respond to the remote or will not turn off with a single power button press, a "hard reset" is in order. This is performed by holding the power button down for approximately five seconds. Avoid a "hard reset" unless you cannot get a response from the remote or a single press of the power button will not turn the MS-1 off. A hard reset is necessary after a software update/restore. Hold the power button down to shut the unit off after the software update disc has ejected.

Backup music from the MS-1 using either an external USB hard drive or the FTP server. Delete music from the MS-1 with either the FTP server or web interface.

USB HARD DRIVE SYNC

The MS-1 automatically syncs music with an external USB drive providing two functions: to import new music to the MS-1 and to backup music from the MS-1.

The MS-1 compares the files on a connected external drive to those on the MS-1 and copies any new and updated files onto the MS-1. Additionally, if the external drive has more than 300 GB in size, new and updated files from the MS-1 to the external USB drive.

Because the speeds of USB drives vary, it is recommend that the USB remain connected for an extended period of time to ensure that the backup process completes, ideally overnight. Before removing the USB drive, power down the MS-1.

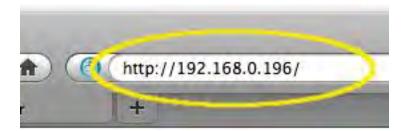
For backups, we recommend that you purchase an NTFS-formatted drive free of any built-in backup software designed for a specific operating system. Drives with automatic backup software programs similar to Western Digital's WD SmartWare are not supported. The drive capacity needs to be equal to or greater than the MS-1 internal storage capacity. Two recommended USB drives are the Iomega Prestige 1.0 TB USB 2.0 and the Western Digital WD Elements 1.0 TB USB 2.

WEB INTERFACE

Use the web interface to access and delete files on your MS-1. To connect, determine your server's IP Address from the SETTINGS menu on your remote control device.



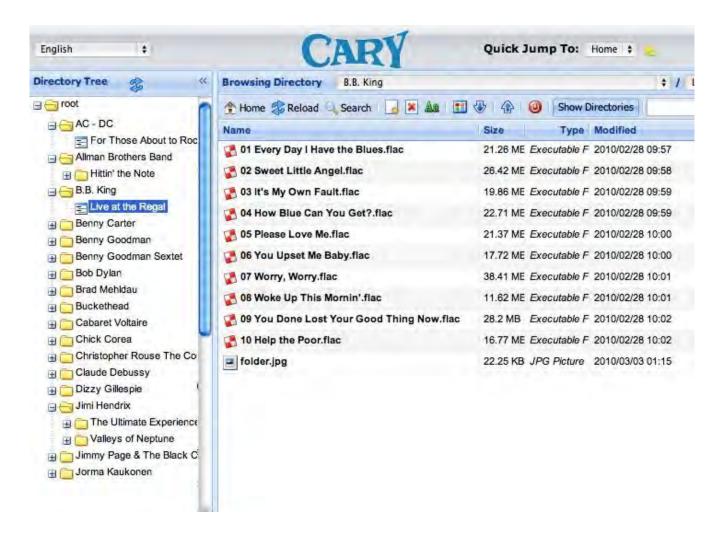
Enter the IP Address into your web browser as shown below.



When the LOGIN SCREEN appears, enter the word *music* (all lowercase) for both the username and password.



After logging in, you will be able to browse through the MS-1 file system.



Highlight unwanted files and folders, and then use the DELETE button to remove them.



FTP INTERFACE

Use your favorite FTP client to access the FTP server in the following manner:

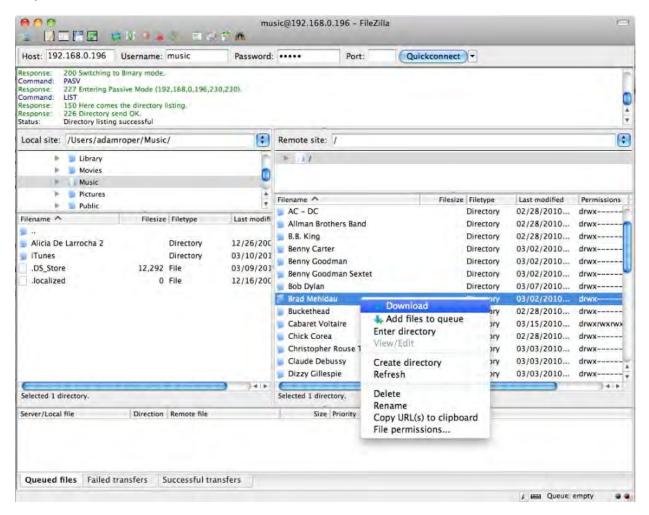
Host IP Address: obtain from the SETTINGS menu on the remote control device.

Port: 21

Username: musicPassword: music

If you do not have an FTP client installed on your computer, download FileZilla at http://filezilla-project.org/. The program is free and runs on Windows, Mac OS X, and Linux.

Once the FTP connection is established, the local file system will display on one side of the screen while the MS-1 file system displays on the other. From this computer page, you can upload, download, and delete files from the MS-1.



STREAMING DEVICES

Connecting a streaming device to your existing network will allow you to control and play music files from the MS-1 to the streaming device. Typically, a streaming device is located in a different location from the MS-1 or the hard drive containing your music library, and is connected to your network with either a wired or wireless connection. The device is then connected to an audio system via its analog or digital outputs. Because the MS-1 rips CDs in FLAC, the streaming device must be FLAC compatible. However, as mentioned previously in this manual, the MS-1 can play back file types other than FLAC. If you wish to copy non FLAC files to the MS-1, please consult the FTP section of this manual.

SETTING UP UPnP STREAMING DEVICES

UPnP (Universal Plug and Play) is a communication protocol for compatible devices to recognize and communicate with one another.

- Set up your UPnP device on your network as directed by the manufacturer's instructions.
- Connect the MS-1 to your network with a standard Ethernet connection. This may have already been done as outlined earlier in this manual.
- Once the UPnP device is connected and operating, browse the UPnP device's available libraries or servers. Select the "Cary Audio MS-1 Music Server". If you do not see the MS-1 listed, you may need to restart or reboot your UPnP streaming device.
- You will then be able to browse and play the MS-1 music library by Artist, Album, Genre, or Year.

SETTING UP DEVICES WITH SMB SHARING

If your streaming device is not UPnP (Universal Plug & Play), it may still be possible to access the MS-1 music library for streaming. This is done through the SMB Share protocol that allows devices to see and connect to shared network drives. Two of the most popular non UPnP streaming devices that use SMB Sharing are Sonos and Squeezebox. Each requires specific procedures and you should consult and follow the manufacturer's instructions. Once set up to work on your network, please follow the directions below to connect the MS-1.

SONOS

Sonos also includes a desktop application that you can install on your PC for controlling the Sonos device. However, it is NOT necessary to install it unless you plan to use your PC to control the Sonos. If using a Sonos control device or a Sonos Smartphone app for control, please consult the manufacturer's instructions to activate and connect them to the Sonos Player. The MS-1 must remain on to play back its music files. However, the PC does not need to remain on.

This setup example shows how to use the Sonos iPhone App.

- 1. Make sure the MS-1 is connected to your network.
- 2. Install the Sonos device as per the manufacturer's instructions.
- 3. Once installed, go to "Settings" under Music Menu.



4. Select "Music Library Management"



5. Select "Music Library Setup"



6. Select "**Add New Share**", then press the "**Done**" button at the top right on the next screen and proceed to step 7 if the MS-1 is the first library you're adding to the Sonos. Otherwise, go to step 6a if you are adding the MS-1 to previously added libraries.





A. If you have already added shared music libraries to your Sonos and you are adding the MS-1, select "Scan my network for Shares"



7. Select the "//MUSICSERVER/music". This is the name of the MS-1 shared music folder.



8. When asked for the username and password, please enter the following;

Username: **cary** Password: **music**

9. Follow any additional instructions from the manufacturer.

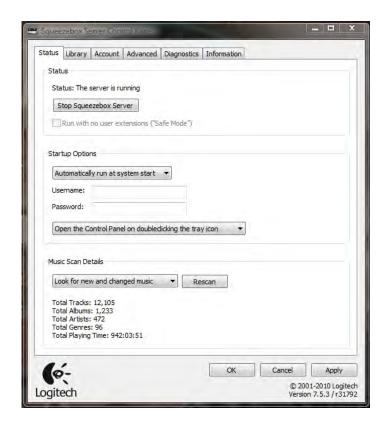
You should now be able see the contents of the MS-1 when browsing the library by Album, Artist, Titles, Genre, etc.

SQUEEZEBOX

Squeezebox **DOES** require that you install their Squeezebox Server Software on your PC.

The PC **MUST** remain on in order for you to access the music on the MS-1.

- 1. Make sure the MS-1 is on and connected to your network.
- 2. Install the Squeezebox Server Software following the manufacturer's instructions. Run the software after installation is complete and the following will display.



3. Select the "Library" Tab



4. Select "Browse" Under "Music Sources"



5. Click on "Network" to expand the selection. Next, Click "MUSICSERVER" to expand it. Then, Select "Music" and click "OK"

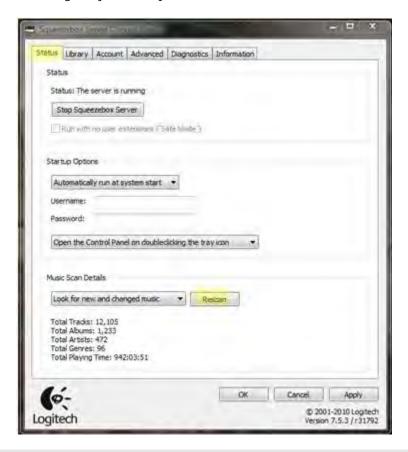


6. Notice the Music Folder now says "\\MUSICSERVER\music". You can give the library a custom name by typing it under the "Music library name" section. In this graphic, we called it "Cary Audio MS-1", but you can name it anything you like. Click "Apply" and "OK" to exit.



NOTE:

- The MS-1 does not inherently support playlists. Therefore, the "Playlists Folder" can be left empty, or pointed towards another music library that has saved playlists within it.
- 7. Go back to the "**Status**" Tab. You may want to select the "**Rescan**" button each time you make a change to your library. Click "**OK**" to exit.



STREAMING TO MULTIPLE ZONES

You may set up multiple and different streaming devices in multiple rooms. Just connect the device(s) as listed above in each room or zone. Once connected, you can stream MS-1 content to each of the devices simultaneously and independently. That means someone can listen to Bach in one room while another listens to Beethoven in a different zone. The MS-1 has been tested to handle a minimum of four independent zones. However, this is somewhat network dependent. It is quite possible if you have a robust network that you could connect even more! Please keep in mind that when you stream content from the MS-1 to a device, it does NOT affect the MS-1's USB output. This means that in addition to streaming to multiple locations and devices that you can still independently control the MS-1 with the Cary Remote App for iPhone, or the web interface, for playback over its USB output. The USB output is of the highest fidelity and it is recommended the MS-1 be placed next to a USB capable DAC (Digital to Analog Converter), such as our Xciter DAC which in turn is connected to a hi-fidelity system for the highest quality playback.

When streaming music from the MS-1 to a device, the data travels over the wired or wireless network. Although quite good, it can introduce jitter and other artifacts. This is why we recommend connecting the MS-1's USB output directly to your main audio system for the best fidelity.

MEDIA RENDERING

Sending Music to the MS-1 from a Computer

Media rendering allows you to stream music files <u>to</u> the MS-1 for playback through its USB output. This is useful if you have an additional computer or music library that is different from the MS-1's content. For example; playing music files through the MS-1 from a guest laptop.

Please Note:

• The guest computer or PC must be connected to the same network the MS-1 is connected to. You must also be sure that media sharing is enabled on your computer for the appropriate devices. The example below shows Media Rendering with a compatible OS and media player such as Windows 7 and Windows Media Player 12. Consult your OS and media player for Media Rendering compatibilities. The files you send to the MS-1 must be file types supported by the MS-1 as specified elsewhere in this manual.

METHOD A

Using a Media Player to send and play music files located on a network computer to the MS-1

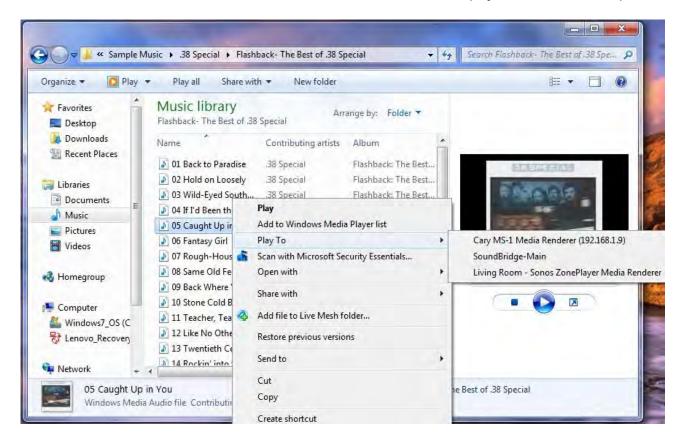
Open up the media player and music library to where the files are located. **Right click** on the album or track, mouse-over "**Play to**" and **click** on "**Cary MS-1 Media Renderer**". This will send that album or track to the MS-1 for playback through its USB output.



METHOD B

Sending and playing music files located on a network computer folder to the MS-1.

- 1. Open up the folder where the music files are located.
- 2. **Right click** on the album or track, mouse-over "**Play to**" and **click** on "**Cary MS-1 Media Renderer**". This will send that album or track to the MS-1 for playback over its USB output.



SMB NETWORK SHARING

Playing MS-1 music from a computer through its speakers.

SMB Sharing allows the MS-1 to be seen on the network. When seen as a shared folder the MS-1's music library can be accessed and played back with a compatible media player and over the computer speakers. Since the MS-1 rips music in FLAC format, the media player you choose must be able to play FLAC files or other compatible files types you may have FTP'd to the MS-1 hard drive.

METHOD A

Play music stored on the MS-1 music server on a networked computer within a compatible media player.

Procedures will vary depending on the media player you choose.

- 1. Open the media player.
- 2. Select the "Cary Audio MS-1 Music Server" from the "Other Libraries" in the left pane.
- 3. Navigate to "Music" folder and select your preference of Artists, Album or Genre.
- 4. **Double Click** on the file to begin playback. **This will playback the music file** from the MS-1 within the media player itself and send sound to the computer's speakers.



METHOD B

Play MS-1 music files from its network location.

Procedures will vary depending on the OS you are using.

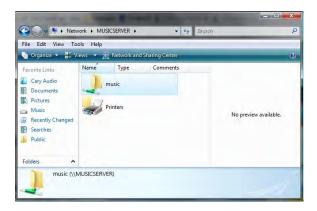
1. Click the "Start" button and select "Network"



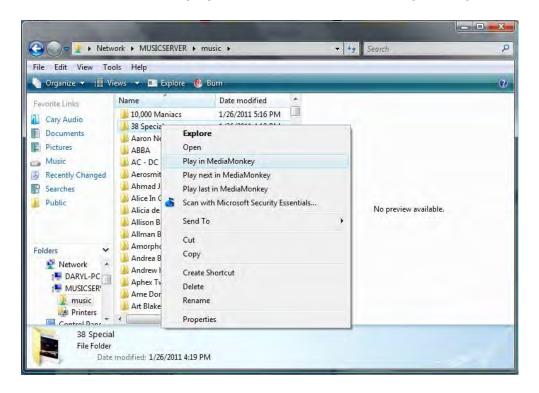
2. **Double click** on "MUSICSERVER" from the network folder.



3. **Double Click** on the "**music**" Folder to view the music library.



4. **Right Click** on an artist folder or track and **select and click** the media player you wish to play the music in. You can also double click the folder to expand it to view the albums and track lists. **Double clicking** a track will automatically start playing that track on your compatible default media player. **This will play back the music files on the MS-1 within the media player and send sound to the computers speakers.**



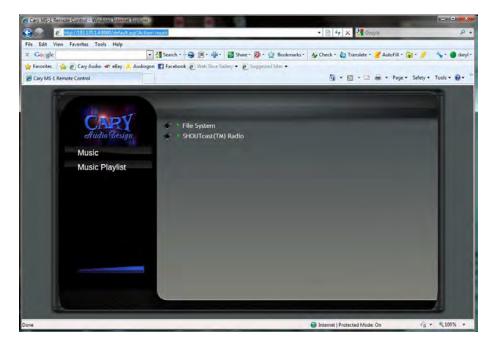
WEB CONTROL INTERFACE

Controlling the MS-1 USB output through a computer's web browser.

The web interface allows for controlling the MS-1 from a networked computer. This sends audio out over the MS-1's USB output and NOT the computer's speakers. If you wish to have audio playback through a computer's speakers, refer to the SMB Sharing section of this manual.

Control and play back files on the MS-1 from a computer.

- 1. Open your web browser and type the MS-1's IP address followed by: 8080
 - A. For example: http//193.178.1.4:8080



- 2. Click on the **File System** or **SHOUTcast Radio** to view the files and stations.
 - A. Click on an artist, album, and track to play. This will play that file through the MS-1's USB output.



BUILDING A PLAYLIST AND CONTROLLING THE VOLUME

NOTE:

• These features only work with Safari, Opera, Chrome, or Firefox web browsers. They are NOT available when using Internet Explorer. It is also important to mention that playlists cannot be saved.

Creating a Playlist

- 1. **Click** on the green arrow next to the artist, album or track. This will save it in the playlist queue.
- 2. Repeat for all desired.



Removing artist, albums or tracks from playlist queue

1. **Click** on the green arrow next to the artist, album or track. This will remove the song from the playlist queue.



2. Repeat for all desired.

Playing a playlist

- 1. Once you have finished adding music to your playlist, simply **click** the **Playlist** link on the left of the screen. This will display the songs in your Playlist.
- 2. Move your mouse to the left of the Playlist link until the **Green Arrow** appears and **click** it.



Clearing out a Playlist

- 1. Scroll down to the bottom of the playlist
- 2. Click in the Clear Playlist link. This will clear out and delete the playlist.



Controlling the Volume

Move your mouse over the **blue volume ramp** in the lower left of the control
panel until the **Slider** appears. Simply **move the slider** to the desired position.
This will adjust the level of the MS-1 USB output.



SUBSONIC OVERVIEW

Subsonic (http://www.subsonic.org) is a third-party application that runs on the MS-1. It allows you to listen to your music collection anywhere you have Internet access using a web browser interface and/or applications written for smart phones and tablets (iPhone/iPad/iPod Touch, Android, & Windows Phone 7). Most of the smart phone and tablet applications also allow you to cache music onto your device for offline listening. When you register Subsonic, you get a personal http://yourname.subsonic.org server address which can be accessed anywhere.

The major features provided by Subsonic on the MS-1 include:

- 1. Streaming to smart phones and tablets over the Internet
- 2. Streaming to web browsers over the Internet
- 3. Music files tag editing via the Subsonic web interface
- 4. Cover art selection via the Subsonic web interface
- 5. Podcast receiver Subsonic can take an RSS feed and download podcasts; files go to a "Podcasts" folder in the file system

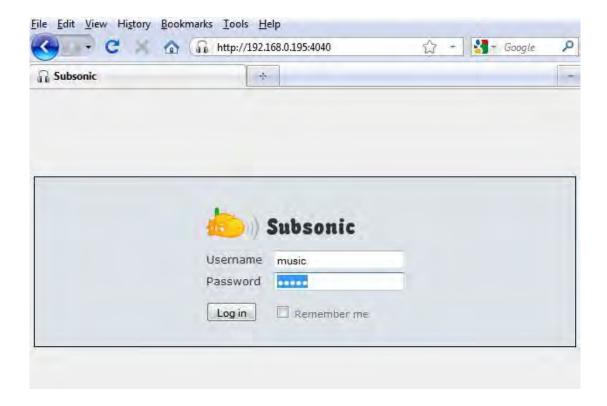
For a full list of the various applications available for iPhone/iPad/iPod Touch, Android, Windows Phone 7, and Windows/Mac/Linux, see the Apps section on the Subsonic website (http://www.subsonic.org/pages/apps.jsp).

Subsonic registration required. A nominal donation to the Subsonic project is required to enable streaming to these devices. Registration also allows you to access your music from a http://yourname.subsonic.org address.

USING SUBSONIC

Logging In

In the *Backup and File Management – Web Interface* section of the manual, we explain how to determine your MS-1's IP address and connect to the file management web interface. The process to connect to the Subsonic web interface is the same with one small change – the port number (4040) must be specified. If your MS-1 IP address is 192.168.0.195 then you would type http://192.168.0.195:4040 into your web browser. Note that this IP address is only used to access the MS-1 on your local network. Additional steps are required to access it on the Internet.



By default there are two accounts for Subsonic – an administrator account and a user account. The administrator account has full access to all Subsonic settings – the user account is more limited. The administrator can do things such as add new users and set bit rate limits for the users. The default user names and passwords are:

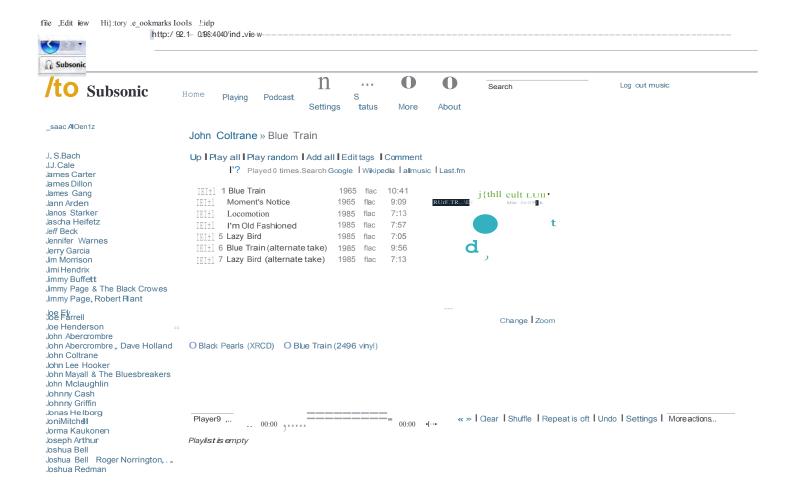
User: admin password: cary

User: music password: music

Please note that the user names and passwords are case sensitive.

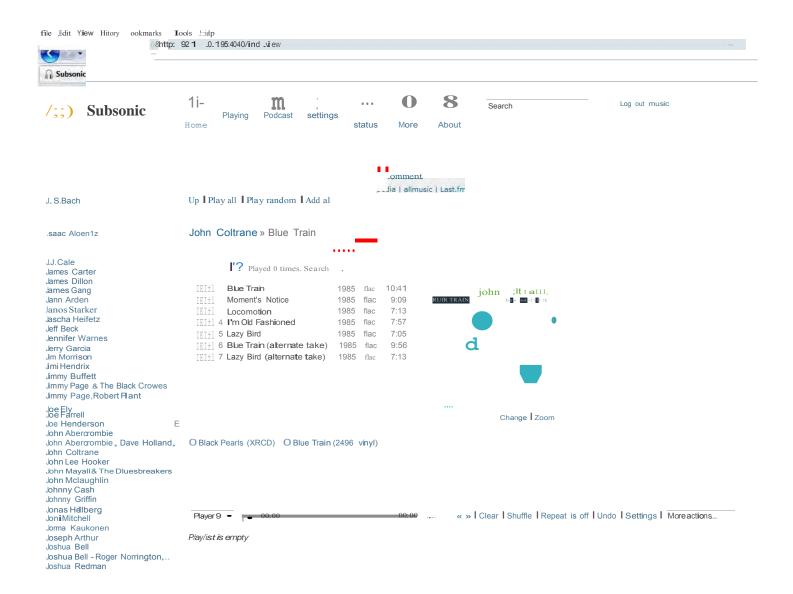
BROWSING/PLAYING MUSIC

Once you log in you will see a list of the MS-1's folders on the left side. You can browse the file system and play music:

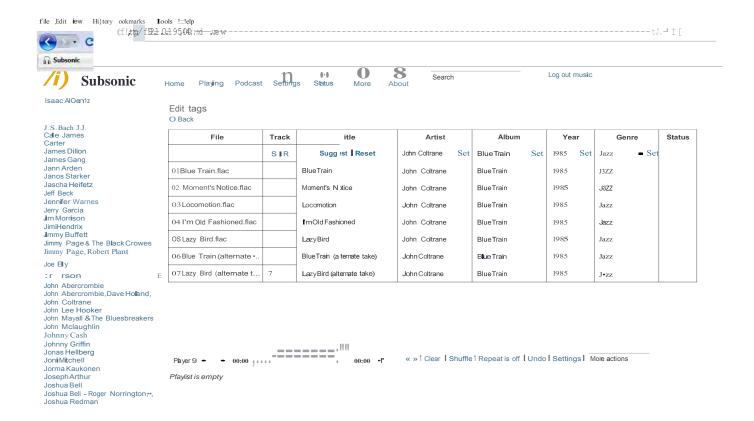


TAG EDITING

You can edit music file tags in Subsonic by selecting the "Edit tags" option:

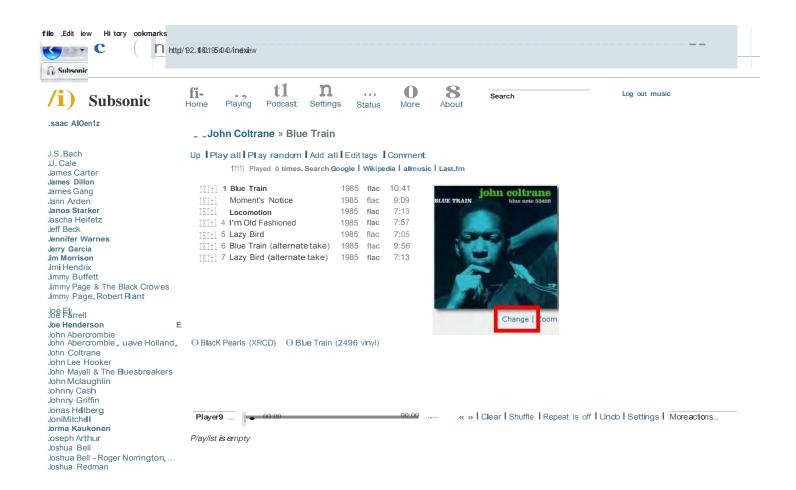


Simply make your changes and then press Save. These changes will be picked up by the MS-1's periodic library refresh, once this happens the changes will be visible in the MS-1's remote application.

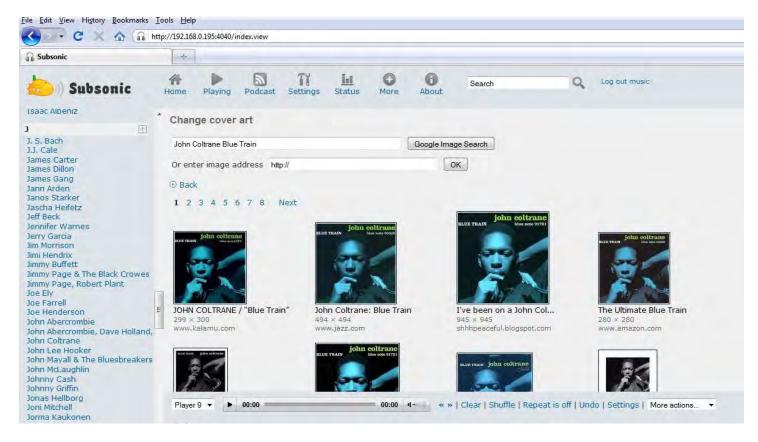


CHANGING COVER ART

With Subsonic you can change the cover art for albums. This is useful when the cover art is missing or incorrect.



COVER ART SEARCH

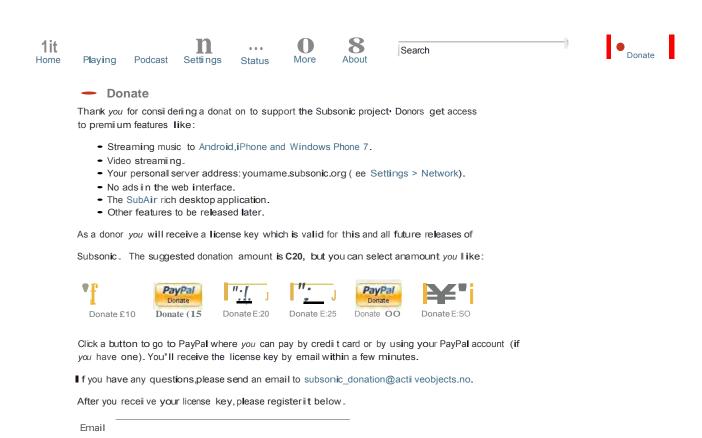


If you replace existing cover art with a different image, the MS-1 restore disk must be used for the MS-1 to generate new thumbnails for use in the MS-1's remote application. For this reason, we recommend importing a number of CDs before you change cover art and run the restore disc.

REGISTERING SUBSONIC

License

Subsonic must be registered for some features to work. Click "Donate" in the top right to go to the donate page. Once you receive a license key via email, you copy and paste it into the Donate page to register Subsonic.



NETWORK CONFIGURATION

Some configuration is required to access Subsonic outside of your local network (on the Internet). Log in using the admin account (default password: cary) and then choose Settings \rightarrow Network.



If your router supports UPnP or NAT-PMP port forwarding, then you should enable the first option to automatically forward connections on port 4040 from your router to your MS-1. If this does not work then you must consult your router documentation to forward port 4040 to your MS-1's local area network IP. Portforward.com is also a good resource to use to learn how to forward a port on your particular router.

The second option is available once you register Subsonic. Use this to reserve a yourname.subsonic.org address that links you to Subsonic running on your MS-1. Once port 4040 is forwarded to the Internet and you reserve your http://yourname.subsonic.org address, you can use Subsonic anywhere you have Internet access using a web browser or any smart phone or tablet running iOS, Android, or Windows Phone 7 using the various applications available on their respective App Stores/Markets.

NETWORK CONFIGURATION (STATIC IP)

We recommend that you reserve an IP address on your router so that when you boot up the MS-1 it always receives the same IP address from the DHCP server running on your router. Consult your router documentation for the details on how to do this.

If your router does not have a list of the MAC addresses for the devices on your network you can determine your MS-1's MAC address by doing the following:

- 1. Run "cmd" to bring up a command prompt in Windows or in Mac OS X bring up a Terminal window (Applications → Utilities → Terminal)
 - Ping your MS-1 using the IP address you use to access the MS-1 on your local network. In our case we used http://192.168.0.195:4040 so our IP address is 192.168.0.195.
 - A) In Windows the ping command would be: ping -n 1 192.168.0.195
 - B) In Mac OS X the ping command would be: ping -c 1 192.168.0.195
 - Next run the command:

arp –a

The Physical Address (MAC Address) for the MS-1 will be listed next to the MS-1's IP address.

Windows format: 00-01-2e-27-34-cc

Mac format: 0:1:2e:27:34:cc

Subsonic Links

™ Subsonic Website: http://www.subsonic.org

TM Subsonic Documentation: http://www.subsonic.org/pages/documentation.jsp

™ Subsonic Features: http://www.subsonic.org/pages/features.jsp

TM Subsonic Apps: http://www.subsonic.org/pages/apps.jsp

™ iSub Music Streamer (iOS): http://isubapp.com/

™ Z-Subsonic (iOS): http://z-subsonic.com

TM Subsonic Music Streamer (WP7): http://www.avzuylen.com/subsonic-music-streamer.aspx

™ SubAir (Windows/Mac/Linux): http://www.nonpixel.com/subair/

™ Subsonic Android Videos: http://www.subsonic.org/pages/screenshots.jsp#video

Check out the voice search feature!

RESTORE AND UPDATE

RESTORE AND UPDATE DVD

The RESTORE & UPDATE DVD restores the MS-1 system software back to factory settings, or updates the MS-1 with the latest software while leaving the music collection intact. This feature will give the MS-1 a new, clean database. It will rescan the music collection and regenerate thumbnails from the folder.jpg files (if any) inside the album directories.

If you manually edit tags, download and change cover art, or rename folders, use the RESTORE or UPDATE DVD to import the changes into a new, clean database.

It is possible to experience file system corruption from a power outage or hard reset. Use the RESTORE or UPDATE DVD if you begin to experience problems with your MS-1. It will erase and reinstall the system files while repairing issues associated with corrupted system files.

Please note that it will take some time to rescan a music collection, particularly a large one, so allow ample time; overnight is best.

To use the RESTORE DVD, follow these steps:

- Power down the MS-1.
- Turn the MS-1 back on, then insert the RESTORE or UPDATE DVD immediately after you
 hear the MS-1 optical drive go through the eject sequence. After the update process is
 completed (approximately ten minutes), the RESTORE or UPDATE DVD will eject.
- Once the DVD ejects, hold down the power button until the MS-1 turns off. Because the file system is not in use, it is acceptable to do a hard reset.
- Power up the MS-1 and it will rescan the music collection.

TROUBLESHOOTING

SHOUTCAST™ RADIO DOESN'T WORK

If you can connect to your MS-1 but SHOUTcast™ Radio does not work, check the INTERNET STATUS of MS-1 in the SETTINGS menu.



The server information data is created when the remote control device initially connects to the server. The optimal time to check the INTERNET STATUS is immediately after booting up the MS-1; however, you can refresh the server information data by exiting the application and reconnecting to the MS-1.

If the INTERNET STATUS reads *Connected*, there is no problem accessing the Internet. If the INTERNET STATUS reads *Not Connected*, make sure the Internet connection is working properly. If it reads *Busy*, the remote is unable to determine the Internet connection status; however, the device will still function properly.

UNKNOWN ARTIST AND UNKNOWN ALBUM DISPLAY

When the MS-1 cannot retrieve the necessary metadata from the Internet to tag the album, UNKNOWN ARTIST and UNKNOWN ALBUM will display with a music file. There are two possible solutions:

• Determine whether the MS-1 can successfully access the Internet; refer to the section above for instructions. Establishing an Internet connection may solve the problem.

TROUBLESHOOTING

• The MS-1 uses two services to retrieve metadata--MusicBrainz and FreeDB. If neither service can identify an album, the music files will still transfer to the MS-1 but will be tagged as UNKNOWN ARTIST and UNKNOWN ALBUM. Using the FTP server or the USB HARD DRIVE SYNC, copy the album to your computer, manually tag the album using a tag editor, and copy it back to the MS-1.

MUSIC COPIED TO THE MS-1 IS NOT VISIBLE ON THE REMOTE CONTROL DEVICE

The MS-1 refreshes its music library every five minutes. It searches for new music to add to the MS-1 library. Music must have metadata tags to be scanned to the library and be accessible via the Albums / Artists / Genres / Songs tabs. If files are not tagged, they will be accessed only through the SOURCES → FILE SYSTEM menu.

Since WAV files do not have tagging capabilities, they cannot be accessed through the Albums / Artists /Genres / Songs tabs. They can be accessed only through the SOURCES → FILE SYSTEM menu.

REMOTE CONTROL DEVICE LOST CONNECTION WITH THE MS-1 AND CANNOT RECONNECT

Ensure that your iPhone, iPod Touch, or iPad is connected to the correct Wi-Fi access point. If it is not connected, correcting that issue may solve the problem. If it is properly connected, power down the MS-1 by pressing and releasing the power button and waiting for it to shut down. Then, turn the MS-1 back on and try to reconnect to the MS-1.

DUPLICATE SONGS

It is possible to encounter duplicate song files. When browsing the songs on an album, there may be two or more listings for a particular song. Importing a music file to the server when it was already there is the most common cause. Use the WEB interface to locate and delete the duplicates. Occasionally, an album may be placed not only in the correct Artist folder but also in the Various Artists folder. Deleting one copy of the songs will remedy the problem.

If the duplicates exist on a backup drive, remove them from that drive as well; otherwise, they will copy back to the MS-1 the next time it connects to the backup drive.

SERVICE AND CARE

CARE AND CLEANING

Unplug the unit from the wall outlet. Clean the cabinet housing and front panel of the MS-1 with a soft cloth and a glass cleaner. The frequency of cleaning will vary based on the cleanliness of the environment and the number of hours the MS-1 is operated.

FACTORY SERVICE

Careful consideration has been given to the design of the MS-1 to minimize maintenance issues. Any problems or requests for service should be referred to the Customer Service Department at 919.355.0010. Do not return the MS-1 to the factory without a return authorization number (RA). Refer to the next section for details about returning equipment to Cary Audio Design.

Should the unit be lost or damaged in shipment, Cary Audio Design will assume no responsibility if the shipping company refuses to pay for damage due to improper packing or lack of insurance. Please use the original carton for shipping the music server.

NON-WARRANTY REPAIRS

Cary Audio Design will provide repair service for its products charging on a time and expense basis. Please call Cary Audio Design at 919.355.0010 for more information about out-of-warranty service and repair fees.

LIMITED WARRANTY

Cary Audio Warrants to the original United States purchaser for use in the United States the Following Cary Audio Products for the Periods Indicated:

- 1. Power Amplifiers, Integrated Amplifiers, Surround Sound Processors, and Preamplifiers have a three (3) year parts and labor warranty from the date of the original purchase from Cary Audio.
- 2. CD or SACD players, DVD players, or Music Servers have an eighteen (18) month parts and labor warranty from the date of the original purchase from Cary Audio.
- 3. Vacuum tubes, if any are used in the component, are offered a 90-day exchange policy against defects with the exception of the CAVT 300B vacuum tube that has a one (1) year exchange policy from the date of the original purchase from Cary Audio.

What is Covered and What is Not Covered

Except as specified below, this warranty covers parts and labor to correct all defects in materials and workmanship. The following are not covered by the warranty:

- 1. Damage, deterioration, malfunction or failure to meet performance specifications resulting from:
 - a. Accident, acts of nature, misuse, abuse, neglect or unauthorized product modifications
 - b. Improper installation, removal or maintenance, or failure to follow instructions supplied with the product.
 - c. Repair or attempted repair by anyone not authorized by Cary Audio to repair the product.
 - d. Any shipment of the product (claims must be presented to the carrier).
 - e. Any cause other than a product defect.
- 2. Cleaning, initial set-up, check-ups with no defects found, or charges incurred for installation, removal or reinstallation of the product.
- 3. Any product, on which the serial number has been defaced, modified or removed.
- 4. Batteries.
- 5. Accessories, including but not limited to, batteries, cables, mounting hardware and brackets, cleaning accessories, antenna and detachable power cords.
- 6. Warranty is void if purchase was made from anyone other than an authorized Cary Audio dealer.

Who May Enforce the Warranty?

This warranty extends to products purchased directly from Cary Audio or an authorized Cary Audio dealer. Purchasers should inquire of the dealer regarding the nature and extent of the dealer's warranty, if any.

To obtain such warranty service, the original purchaser must complete and send in the Warranty Registration Card within 15 days of purchase.

LIMITED WARRANTY

What Will We Pay For?

We will pay for all labor and material expenses for items covered by the warranty. Payment of shipping charges is discussed in the next section of this warranty.

How You Can Get Service?

In the event that the owner needs to return the unit to Cary Audio for service or repair of a possible defect, he must follow the following steps:

- 1. Contact Cary Audio at 919-355-0010 to obtain a Return Merchandise Authorization (RMA) number prior to shipping; include this number with the package
- 2. Submit a copy of the original sales receipt; blank receipts will not validate the limited warranty for service by Cary Audio. The original sales receipt must contain the following information:
 - a. The authorized Cary Audio dealer's name
 - b. The date of purchase
 - c. The unit's sales price
 - d. The buyer's name and address
 - e. Describe in detail the problem.
 - f. Note the unit's model number and serial number.
- 3. Deliver by either of these methods:
 - With all freight and insurance charges prepaid and in its original packing container or equivalent, ship the component to Cary Audio, 1020 Goodworth Drive Apex, NC 27539.
 - b. Hand-deliver the product to Cary Audio (address noted above) or the nearest authorized service facility.

Limitation of Implied Warranties

All implied warranties, including warranties of merchantability and fitness for particular purchase, are limited in duration to the length of this warranty.

Exclusion of Damages

Cary Audio's liability for any defective product is limited to repair or replacement of the product at Cary Audio's option. Cary Audio shall not be liable for damage to other products caused by any defects in Cary Audio products, damages based upon inconvenience or loss of use of the product, or any other damages, whether incidental, consequential, or otherwise.

LIMITED WARRANTY

How State Law Relates to the Warranty

Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

International Purchasers (Export Markets)

Cary Audio warrants its merchandise to purchasers within the United States exclusively for use within the United States. It provides no other warranties, expressed or implied. If you are living outside of the United States, please consult your local dealer or distributor to determine the details of your local warranty.

LEGAL NOTICES

DATA LOSS

Cary Audio is not liable for data stored on the MS-1. As with any hard drive, failure can destroy data or render it inaccessible. For this reason, we provide a backup scheme to copy your files to an external data storage device. Always keep your original music discs and backup in a safe location.

MANUAL

Because the software for the MS-1 and the Cary Audio app can be updated, the images and screen captures used on this manual may not be current. Check www.caryaudio.com for the latest software updates and manual revisions.

TRADEMARKS

The Cary Audio Design logo and name are trademarks of Cary Audio Design.

iPhone, iPod Touch, and iPad are trademarks of Apple Inc., registered in the United States and other countries.

SHOUTcast™ Radio and the SHOUTcast™ Radio logo are trademarks of Nullsoft, Inc. Sonos © Sonos, Inc. . Squeezebox © Logitech

INTELLECTUAL PROPERTY

Cary Audio Design is all about music. This pertains to not only the products we make but also the artists who create the music. These artists deserve to be paid for their hard work. For this reason, we strongly recommend loading your MS-1 only with music CDs that you own. Music is intellectual property and is subject to worldwide copyright protection.

SOFTWARE

This product contains Linux which is made available under the GNU GPL license version 2. Upon request, Cary Audio Design will deliver or make available (for a charge no more than the cost of physically performing source distribution) a complete machine-readable copy of the corresponding source code used in the MS-1 on a medium customarily used for software interchange. This offer is valid for a period of three years after the date of purchase of this product.

CARY AUDIO DESIGN

1020 Goodworth Drive, Apex, NC 27539 phone 919-355-0010 fax 919-355-0013 www.caryaudio.com