

*User Manual*

# ***Wireless Audio Adapter***

## **Federal Communication Commission Interference Statement**

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, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, 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 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 that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

### **IMPORTANT NOTE:**

#### **FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

USI declared that WAA-B-AGB-01 is limited in CH1~11 by specified firmware controlled in USA.

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## Revision History

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# Wireless Audio Adapter

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## Overview

With the Wireless Audio Adapter (WAA) you are able to break away from your home office and enjoy digital music anywhere in the home. The Wireless Audio Adapter plugs into any audio system (analog or digital) and connects wirelessly to a PC or directly to the Internet. You can control the Wireless Audio Adapter and select your music using a simple remote control and the built-in LCD display.

Based on sophisticated radio station database management and automatic network management, your Wireless Audio Adapter is easy to set up on a wireless network. The Personal Jukebox Application allows you to browse media files on any PC on the network and play them back on the Wireless Audio Adapter. The Wireless Audio Adapter is a complete package to enjoy the digital music experience within minutes, out-of-the-box.

## Key Features

- Listen to Internet Radio stations and MP3 files over your audio system
- Browse and update the Internet Radio station database from the Wireless Audio Adapter
- Browse MP3 file content on your PC from the Wireless Audio Adapter
- Browse and search content by Song, All Tracks, Albums, Artist, Genres, Playlists
- Install software easily using the PC Installer program provided
- The Wireless Audio Adapter automatically configures itself on startup for quick operation





## Before You Start

Please read the following sections and the chapter "Getting Started" on page 5 before operating the device.

### Important Safety Information

The Wireless Audio Adapter is an electrical device. Keep the device away from children. Do not expose the device to extreme sources of heat and cold, rain, moisture, dust or other hazards. To reduce the risk of fire or electric shock, do not remove the cover from the device. Ensure the device has adequate ventilation. The Wireless Audio Adapter meets the safety standards for the country for the countries listed under "Standards" on page 21.

Turn off power to all devices and remove power plugs from wall socket before connecting or disconnecting cables between components.

Repairs should only be carried out by qualified service personnel. Unauthorized changes or modifications to the equipment may void the warranty and the user's authority to operate the product. See "Customer Service" on page 23 for warranty details.

Please read and follow the instructions in this section and the Getting Started section before attempting to operate the device.

### Package Checklist

Please ensure that you have unpacked all of the components before you start the installation. If any components are missing, please contact the vendor from whom you purchased the product.

Your MyCompany Wireless Audio Adapter is delivered with the following components:

- 1 x Wireless Audio Adapter device
- 1 x remote control including battery
- 1 x power supply (90-230V) including cable adapter and power cable
- 1 x stereo RCA cable and 1 x RCA to 1/8" adapter cable
- 1 x CD-ROM

The CD-ROM contains:

- This manual
- MUSICMATCH Jukebox 8.0 Basic software including the UPnP Media Server
- A collection of sample MP3 files

### System Requirements

The Wireless Audio Adapter is designed to operate with your personal computer and a wireless local area network with a connection to the Internet.

Please check that you have the following minimum system requirements before you start the installation.

### **Audio System Requirements**

- Audio system (amplifier, VCR, DVD etc) with auxiliary inputs (RCA connection).

### **Personal Computer (PC) Requirements**

- 300 MHz Pentium class processor or better.
- Microsoft® Windows® XP Service Pack (SP) 1
- 96 MB RAM.
- 50 MB hard drive space.
- SVGA or higher resolution monitor (minimum resolution of 800x600).
- 4x CD-ROM drive.

### **Network Requirements**

- A wireless interface needs to be available, being it the PC with a wireless network interface, an access point or both .
- It is strongly recommended to install your wireless network before setting up the WAA

## Getting Started

Before operating the Wireless Audio Adapter, you need to perform these steps:

1. Install the Wireless Audio Adapter Hardware
2. Configure your wireless network.
3. Install the Wireless Audio Adapter Software on your PC.
4. Configure the Software on the PC.
5. Configure the Wireless Audio Adapter.

### Installing the Wireless Audio Adapter Hardware

1. Unpack the Wireless Audio Adapter device and the remote control.
1. Remove the battery cover from the remote control, insert the battery provided and replace the cover.
2. Connect the Wireless Audio Adapter to your audio system amplifier using the Stereo RCA cable provided (you may need to use the RCA to 1/8" adapter cable, depending on your audio system's audio IN connection type).

#### Figure 3-1: Connecting the Wireless Audio Adapter to your audio system

INSERT DIAGRAM

### Configuring your Wireless Network

Please ensure that your wireless network meets the minimum specification under "System Requirements" on page 3. Please note: the *installation* of your wireless network is device-dependent and thus outside the scope of this document.

#### About the Wireless Audio Adapter MAC Address

If you are using MAC Address Control on your wireless network, you will need to know the MAC address of your Wireless Audio Adapter.

The MAC address is a unique number that identifies your device on the network. It consists of a series of numbers and letters in the following format:

*x.xx.xx.xx.xx.xx*

The MAC address for your Wireless Audio Adapter is printed on the device and on the packaging. It can also be displayed on the LCD screen. See "Use the remote control and follow these steps to display any of the network status settings from the above table:" on page 23 for details.

### Installing the Wireless Audio Adapter Software on your PC

#### Installing the WAA Installer and Configuration Software

The WAA Installer and Configuration Software allows you to configure and install the WAA for your wireless network. It also allows

1. Ensure that your PC meets the minimum specification listed under "System Requirements" on page 3.
2. Start the PC, and login using an "Administrator" account (this account allows you to install new software under Windows XP).

3. Insert the CD-ROM provided into your PC's CD-ROM drive.
4. Locate the *WAAI* directory on the CD-ROM drive.
5. Double-click on the file *Wireless Audio Adapter Installer.exe*
6. Follow the installation instructions on the screen.

### **Installing the MUSICMATCH Jukebox Software**

The MUSICMATCH Jukebox software allows the Wireless Audio Adapter to browse MP3 files on your PC.

1. Ensure that your PC meets the minimum specification listed under "System Requirements" on page 3.
2. Start the PC, and login using an "Administrator" account (this account allows you to install new software under Windows XP).
3. Insert the CD-ROM provided into your PC's CD-ROM drive.
4. Locate the *MUSICMATCH* directory on the CD-ROM drive.
5. Double-click on the file *mm\_setup.exe* to run it.
6. Follow the installation instructions on the screen. Please refer to the MUSICMATCH documentation on the CD-ROM for more details on installing this software.

### **Creating an MP3 Collection**

Before you can browse MP3 music files from the Wireless Audio Adapter, you need to make them accessible by adding them to the MUSICMATCH Jukebox Music Library on your PC.

1. Note the folder name where your MP3 files are stored on your PC. This folder is used in step 5.
2. Start the MUSICMATCH program (click on the *MUSICMATCH* icon on your desktop or taskbar or select it from the Windows *Start/Programs* menu).
3. From the *View* menu, choose *My Library* to open the Music Library (if it is not already open).
4. From the *File* menu, choose *Add New Track(s) to Music Library ...*
5. Locate the folder on your hard disk used in step 1 and select the MP3 files to be added to the Music Library. Click the *Add* button to add the files to the Music Library.

## **Configuring the Wireless Audio Adapter (WAA)**

The Wireless Audio Adapter Installer (WAAI) is a tool for managing the configuration of your Wireless Audio Adapter(s) from your computer. Although the Wireless Audio Adapter is delivered out of the box pre-configured with default factory settings, it is likely that you will need to modify this configuration to suit your own wireless network. The WAAI's main task is therefore to configure Wireless Audio Adapters being added to your wireless network. In addition, you can upload new firmware for your Wireless Audio Adapter.

There are typically three ways in which the WAAI software can communicate with a Wireless Audio Adapter device:

- Peer-to-peer (ad-hoc)  
The PC running the WAAI software has a wireless network interface card installed and you do not use an Access Point (AP).
- Wireless, via an Access Point (AP)  
The PC running the WAAI software has a wireless network interface card installed and an Access Point is used as a hub; it is likely that you have multiple wireless devices communicating to the Internet via that AP.
- Wired, via an Access Point (AP)

The PC running the WAAI has a wired connection to an AP and the Wireless Audio Adapter communicates wirelessly with the AP.

The WAAI software assumes that if you have wireless network interface card installed, you already have a wireless network set up. The WAAI can only read the wireless network configuration (used to set up new Audio Adapters) if the wireless network interface card is connected to that wireless network. If the WAAI detects that the wireless network interface card on your system has no network connection, it displays a warning.

### **Configure New Wireless Audio Adapter - PC on Wireless Network**

1. Connect the electrical cable to the Wireless Audio Adapter and connect it to the power supply.
2. Turn on the power on the Wireless Audio Adapter. The device is now in its default wireless settings. These settings are used by the WAA Installer software to configure the WAA.
3. Open the WAA Installer Software
4. Once the main panel is displayed, click the button "Add WAA ..."

The Add New Audio Adapter Wizard will help you to configure a new Wireless Audio Adapter. This allows the WAAI software to discover the Wireless Audio Adapter on the network.

This wizard is started when the PC running the WAAI Software has a wireless network interface card installed. The wizard will attempt to setup a new Wireless Audio Adapter to run on your wireless network.

**IMPORTANT:** The WAAI software can only detect new Wireless Audio Adapters when they are configured with the default factory settings.

**NOTE:** The WAAI software may conflict with your network interface card's wireless management program. If you encounter problems, disable the client management application and try again.

In general, the wizard will:

- assume that the Wireless Audio Adapter is configured with factory settings, is powered on and is in range
- read the wireless network settings from your wireless network interface card
- temporarily change the wireless configuration of your wireless network interface card to match the factory settings of the Wireless Audio Adapter
- write the wireless settings for your wireless network to the Wireless Audio Adapter
- restore the previous settings to your wireless network interface card

The wireless network configuration is read from your wireless network interface card. If WEP protection is enabled, a WEP key is required. For security reasons, the WEP key is write only and thus cannot be read by the WAAI application from your wireless network interface card. If the WAAI application detects that WEP protection is enabled, it will ask you to enter the WEP key. The WEP key will be used to configure the Wireless Audio Adapter.

#### Step 1

The wizard displays the current wireless network configuration based on your wireless network interface card settings. If WEP protection is enabled, you must enter the WEP key here.

#### Step 2

The wireless configuration of your local wireless network interface card is temporarily changed to match the Wireless Audio Adapter's factory settings.

If this step fails, check the following:

- Make sure the Wireless Audio Adapter is powered on.
- Make sure the Wireless Audio Adapter is in range.
- Make sure the Wireless Audio Adapter is using factory settings (use the Reset button).
- Disable your wireless network interface card client management program, and restart the WAAI application.

Step 3

- The wireless connection is set up during Step 2 and the wizard will try to detect the Wireless Audio Adapter for verification. If this fails, perform Step 2 again.

Step 4

The wizard displays the suggested settings for the Wireless Audio Adapter. Although possible, it is not recommended that you change these.

Step 5

The WAAI application will change the settings on the Wireless Audio Adapter to match those in Step 4.

Step 6

The WAAI application restores the wireless configuration of your local network interface card to its previous settings. If you disabled a wireless client management program manually, you should restart it after you close the WAAI application.

Step 7

For verification, the WAAI application tries to detect the new Wireless Audio Adapter on the network.

Step 8

Setup was successful.

In some cases, for the Wireless Audio Adapter to operate correctly you may also need to set up Internet Sharing on your PC. Click the Info button for more information on Internet Sharing.

Click the Finish button to close this wizard and start the IP configuration wizard.

**Configure new Wireless Audio Adapter - PC on Wired Network**

1. Connect the electrical cable to the Wireless Audio Adapter and connect it to the power supply.
2. Turn on the power on the Wireless Audio Adapter. The device is now in its default wireless settings. These settings are used by the WAA Installer software to configure the WAA.
3. Open the WAA Installer Software
4. Once the main panel is displayed, click the button "Add WAA ..."

The Add New Audio Adapter Wizard will help you to configure a new Wireless Audio Adapter. This allows the WAAI software to discover the Wireless Audio Adapter on the network.

This wizard is started when the PC running the WAAI Software does NOT have a wireless network interface card installed.

The wizard will attempt to setup a new Wireless Audio Adapter to run on your wireless network.

**IMPORTANT:** The WAAI software can only detect new Wireless Audio Adapters when they are configured with the default factory settings.

In general, the wizard will:

- assume that the Wireless Audio Adapter is configured with factory settings, is powered on and is in range and also, that if MAC filtering is enabled on the Access Point (AP), the MAC address of the new Wireless Audio Adapter has been added to the MAC filter list
- ask for the current Access point settings
- prompt you to temporarily change the configuration of your Access Point to match the factory settings of the Wireless Audio Adapter
- write the Access Point settings for your wireless network to the Wireless Audio Adapter
- restore the previous settings to your Access Point

The WAAI application will try to configure the Wireless Audio Adapter using the settings on the Access Point. The Access Point must temporarily use wireless settings that match those used by the Wireless Audio Adapter. The wizard will provide guidance on the Access Point settings to change.

#### Step 1

The wizard displays a warning that it could not find a wireless network interface card on your system. If you normally do use a wireless network interface card, close the WAAI application, install the network interface card and restart the WAAI application.

#### Step 2

The wizard prompts you for the current Access Point settings. Use the management program provided with your Access Point to obtain this information.

#### Step 3

The wizard displays the default factory settings for the Wireless Audio Adapter and prompts you to enter these settings into your Access Point. Use the management program provided with your Access Point to enter these settings.

#### Step 4

The wireless connection is set up during Step 3 and the wizard will try to detect the Wireless Audio Adapter for verification. If this fails, restore the Wireless Audio Adapter to its factory settings (using the Reset button) and start again. If the problem still occurs, verify the Access Point settings and try again.

#### Step 5

The wizard displays the suggested settings for the Wireless Audio Adapter. Although possible, it is not recommended that you change these. These are the settings you entered during Step 2.

#### Step 6

The WAAI application will change the settings on the Wireless Audio Adapter to match those in Step 5.

#### Step 7

The WAAI application restores the wireless configuration of your Access Point to its previous settings. It displays the information you need to set up our Access Point (use your Access Point management program to do this).

#### Step 8

For verification, the WAAI application tries to detect the new Wireless Audio Adapter on the network.

#### Step 9

Setup was successful.

In some cases, for the Wireless Audio Adapter to operate correctly you may also need to set up Internet Sharing on your PC. Click the Info button for more information on Internet Sharing.

Click the Finish button to close this wizard and start the IP configuration wizard.

#### ***Set-up an already configured WAA in a new environment***

1. Set the WAA into its default configuration either via the LCD or via the Installer Software
2. Open the WAA Installer Software
3. Once the main panel is displayed, click the button "Add WAA ..."
4. Follow the instructions on the screen.

## Configuring Muiscmatch on your PC

### Starting the MUSICMATCH UPnP Media Server

The MUSICMATCH UPnP Media Server allows your Wireless Audio Adapter to automatically discover the MP3 files in the *MUSICMATCH MusicLibrary* on your PC.

Follow these steps to start the UPnP Media Server:

1. Start the *MUSICMATCH* program (click on the *MUSICMATCH* icon on your desktop or taskbar, or select it from the Windows *Start/Programs* Menu).
2. From the *Options* menu, choose *Settings*.
3. Click on the *CD Lookup/Connectivity* tab.
4. To start the UPnP Media Server, click the Enable Music Server checkbox. The message "Starting Up " will appear briefly in the Status field, followed by the message "Running".

The UPnP Media Server will continue to run even after you have closed the *MUSICMATCH* program.

### Stopping the UPnP Media Server

If you are using a *different* UPnP server program, follow the instructions supplied with it to start the server. In this case you will need to first ensure that the MUSICMATCH UPnP Media Server is not running.

Follow these steps to stop the UPnP Media Server:

1. Start the *MUSICMATCH* program (click on the *MUSICMATCH* icon on your desktop or taskbar, or select it from the Windows *Start/Programs* Menu).
2. From the *Options* menu, choose *Settings*.
3. Click on the *CD Lookup/Connectivity* tab.
4. Check that the Status of the Server is "Running".
5. To stop the UPnP Media Server, click the Enable Music Server checkbox to deselect it. The message "Shutting Down " will appear briefly in the Status field, followed by the message "Not Running".

## Operating the Wireless Audio Adapter

Before operating the device, please read and follow the instructions under “Before You Start” on page 3 and “Getting Started” on page 5.

### Introduction

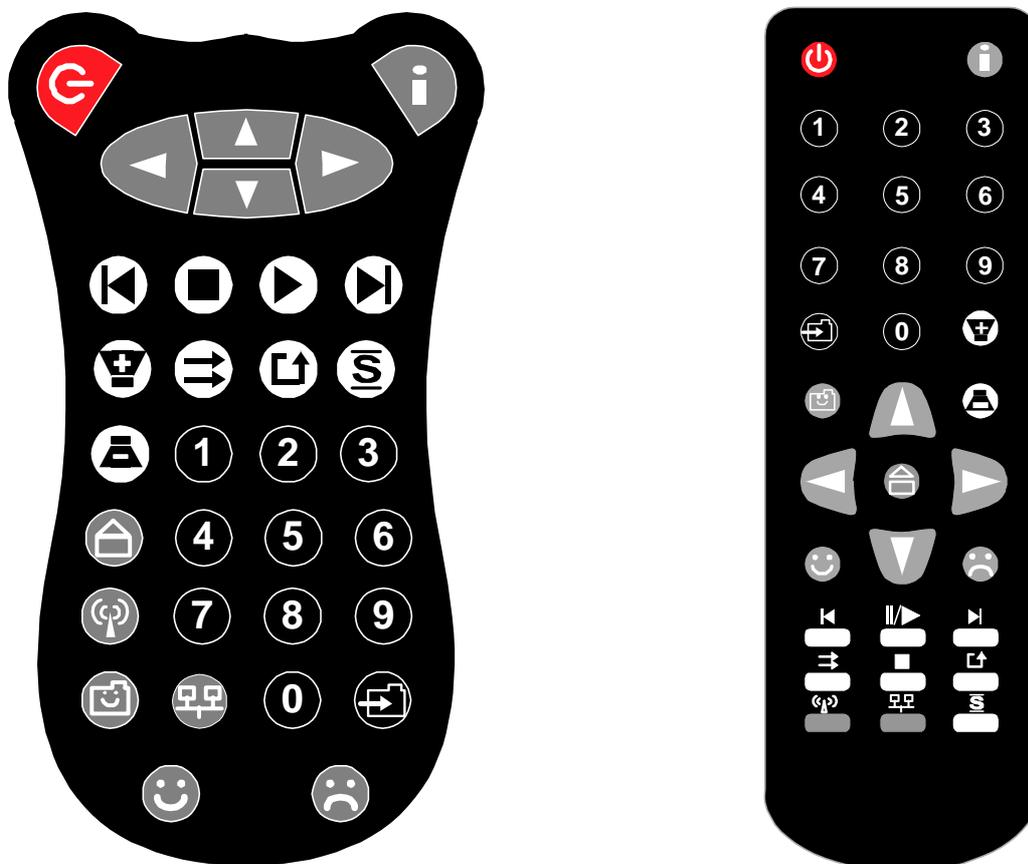
Using the remote control device and the LCD display on the Wireless Audio Adapter you can:

- Browse and listen to MP3 files stored on your PC through your audio system.
- Browse and listen to Internet Radio stations through your audio system.
- Store and play Internet Radio stations using presets.
- Save and play Internet Radio stations and MP3 files using the Favorites list.
- Display and configure your Network Setup.

These features are described in later sections. The following section describes the remote control and its functions in detail.

### Remote Control Functions.

Figure 4-1: Remote Control Devices

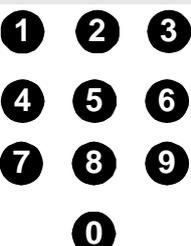


The remote control device is illustrated in Figure 4-1: "Remote Control Devices" on page 11. The following table explains the functions of each button.

**Table 4-1: Remote Control Buttons and their Functions**

Button	Function
On/Standby 	Turns the Wireless Audio Adapter on. Pressing the button again turns the device off (in standby mode).
Information 	Displays additional information on the currently selected Internet Radio station. Pressing the button again returns you to the current menu display.
Scroll Up 	Scrolls up through the current menu level. Press this button for longer than 2 seconds to increase the scroll speed 2x. Press this button for longer than 4 seconds to increase the scroll speed 4x.
Scroll Down 	Scrolls down through the current menu level. Press this button for longer than 2 seconds to increase the scroll speed 2x. Press this button for longer than 4 seconds to increase the scroll speed 4x.
Cancel 	Moves one level up the menu hierarchy. Example: If Artist is displayed, pressing Cancel returns you to the UPnP Server menu.
Select 	Selects / plays the currently displayed menu item. Examples: If the currently displayed item is... ...an Album, pressing Select will display a list of all songs in that album. ...an Internet Radio station, pressing Select will start playing that station. ...a song, pressing Select will start playing that song.
Play 	If the item currently displayed is an Internet Radio station, MP3 file, playlist, album, artist, genre or song title, pressing the Play button will play that item. If no valid item is currently displayed, the Play command is ignored.
Stop 	Stops playing the song or Internet Radio station.
FF/Next 	This button has two functions: Next and Fast Forward. Press the button once to jump to the next song in the playlist, album, artist or radio station list. If it reaches the end of a list, it wraps around to the beginning of the list. If no next song is available, the Next command is ignored. Press and hold this button for longer than 2 seconds to fast forward the current song. Play recommences when the button is released.
RF/Prev 	This button has two functions: Previous and Fast Rewind. Press the button once to jump to the previous song in the playlist, album, artist or radio station list. If it reaches the beginning of a list, it wraps around to the end of the list. If no previous song is available, the Previous command is ignored. Press and hold this button for longer than 2 seconds to fast rewind the current song. Play recommences when the button is released.
Vol Up 	Increases the volume.
Vol Down 	Decreases the volume.
Play All 	Plays all the files in your MP3 collection on the PC. (See "Creating an MP3 Collection" on page 6)

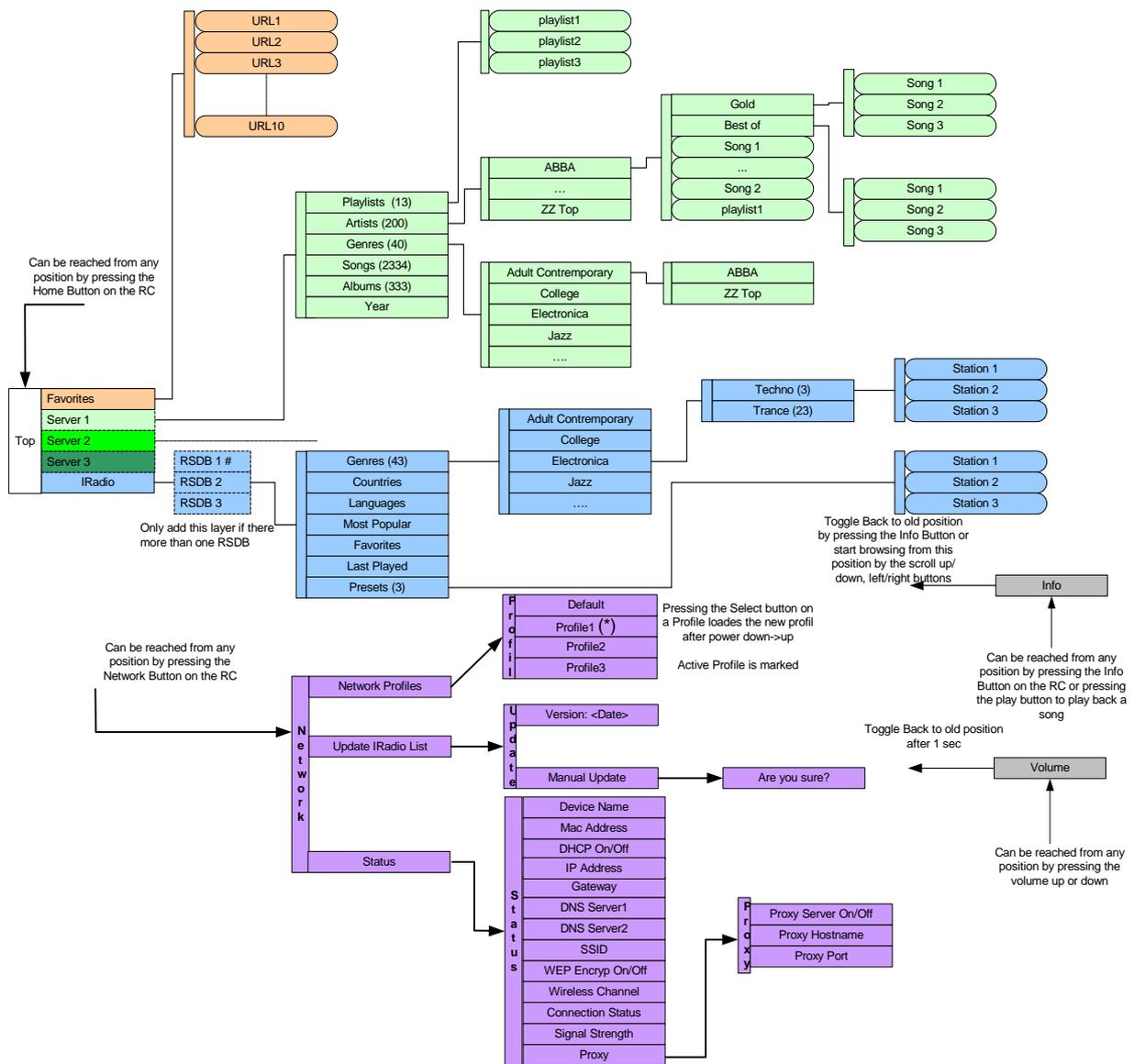
**Table 4-1: Remote Control Buttons and their Functions**

Button	Function
Shuffle 	Toggles between random and ordered playback modes. Note: The chosen mode is stored permanently until you press the Shuffle button again.
Repeat 	Repeats the song currently playing (MP3 files only).
Home 	Displays the top level menu.
IRadio 	Displays the top level of the Internet Radio station menu.
Favorites 	Displays the Favorites list that is stored on the Wireless Audio Adapter.
Like It 	Adds the currently playing song or Internet Radio station to a Favorites list that is stored on the Wireless Audio Adapter.
Dislike It 	Deletes the currently playing song or Internet Radio station from the Favorites list that is stored on the Wireless Audio Adapter.
Store 	Pressing this button followed by one of the number buttons 0 to 9 stores the currently selected item against the preset number selected. The following items can be stored against presets: Internet Radio station album artist playlist song Note: There is no "delete" function - storing an item simply replaces any item that may have been previously stored against the same preset number.
0 to 9 	Automatically starts playing the item stored against the selected preset number.
Network 	Displays the top level of the Network Setup menu.

## LCD Display Menu Structure

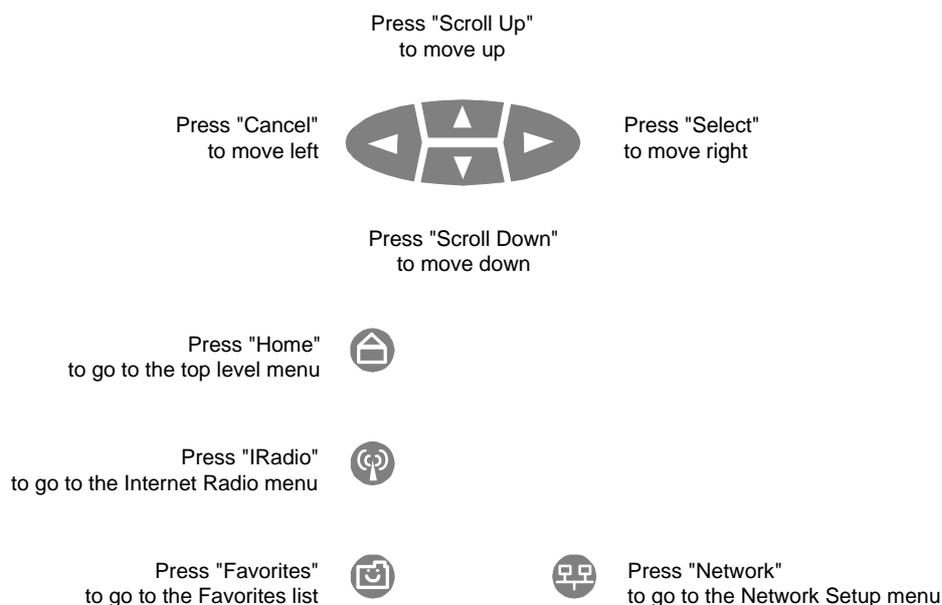
The menu on the Wireless Audio Adapter LCD display is organized as a hierarchy, enabling access to an Internet Radio stations database as well as MP3 files stored in your PC's *MUSICMATCH Music Library*. The top level menu structure is shown below.

Figure 4-2: LCD Display Menu Structure



## Navigating Within the Menu Structure

Figure 4-3: Remote Control Menu Navigation Buttons



## Listening to Internet Radio

The Wireless Audio Adapter allows you to listen to Internet Radio stations through your audio system.

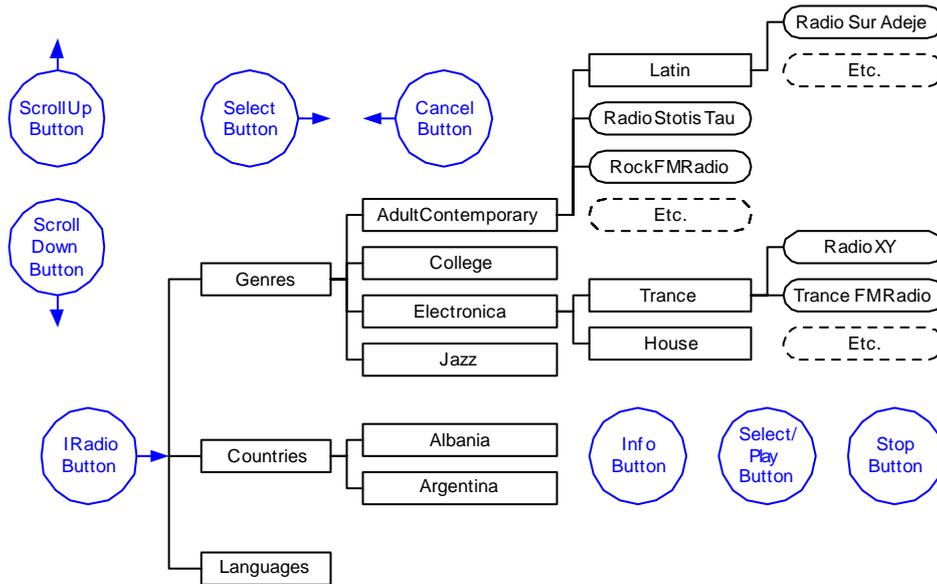
### Before You Start

1. The Wireless Audio Adapter must be connected to the wireless network (see "Configuring the Wireless Audio Adapter (WAA)" on page 6).
2. The wireless network must be currently connected to the Internet.

### Browsing for an Internet Radio Station

You can browse the Internet Radio station database by genre (music style), language and country. The stations are organized in a hierarchy of subdirectories, similar to the way in which files are organized in subdirectories on a PC.

Figure 4-4: LCD Display Internet Radio Menu Structure



Use the remote control and follow these steps to browse for a station:

1. Press the *IRadio* button.
2. To browse through the subdirectories, press the *Scroll Up/Down* buttons. To enter the displayed subdirectory, press the *Select* button. To return to the previous (parent) directory, press the *Cancel* button. To return to the top of the *IRadio* directory, press the *IRadio* button. To return to the start of the menu, press the *Home* button.
3. To display information about the selected station, press the *Info* button. Pressing the *Info* button repeatedly displays more pages of information (if available).
4. Press the *Play* button to listen to the selected station.
5. Press the *Stop* button to stop listening to the selected station.

### Storing an Internet Radio Station Preset

You can store a selected Internet Radio station using one of 10 presets. Follow these steps to store a station:

1. Browse for an Internet Radio Station (see above) and check that it is an active station by playing it.
2. Press the *Store* button, followed by the preset number (0 to 9) where you want to store the station. Note: There is no "erase" function; simply overwrite an existing preset with the new station.

### Selecting a Preset Internet Radio Station

You can select from up to 10 preset stations. Follow these steps to select a preset station:

1. Press the *IRadio* button.??check

## Wireless Audio Adapter

1. Press the relevant preset number (0 to 9).
2. To display information about the selected station, press the *Info* button. Pressing the *Info* button repeatedly displays more pages of information (if available).
3. Press the *Select/Play* button to listen to the selected station.??check
4. Press the *Stop* button to stop listening to selected station.

### Displaying Internet Radio Station Information

The Wireless Audio Adapter LCD screen can display various information during playback of an Internet Radio station.

To display information about the station currently playing:

1. Press the *Information* button.

The following is an example:

**Table 4-2: LCD Display Internet Radio Station Example**

Example Display Text	Explanation
CMG- Sun station	Name of the radio station.
Title Streaming	Currently Played song Other information displayed in this line: <ul style="list-style-type: none"><li>• Incoming bit rate</li><li>• Encoded bit rate</li></ul>
 or	Play or Paused
 and/or 	Playback Modes <ul style="list-style-type: none"><li>• Repeat mode enabled</li><li>• Shuffle mode enabled</li></ul>
	Streaming buffer fill indicator. Indicates that the station signal is being buffered to the device and will begin to play in a few seconds.
	WiFi Signal Strength Indicator

### Listening to MP3 Files Stored on your PC

The Wireless Audio Adapter allows you to listen to MP3 files that are stored on your PC through your audio system.

#### Before You Start

1. The Wireless Audio Adapter must be connected to the wireless network (see “Configuring the Wireless Audio Adapter (WAA)” on page 6).
2. The UPnP Media Server must be running on your PC containing the MUSICMATCH Music Library (see “Starting the MUSICMATCH UPnP Media Server” on page 10).

- There must be at least one MP3 file in the MUSICMATCH Music Library on your PC (see "Creating an MP3 Collection" on page 6).

**Browsing for MP3 Files**

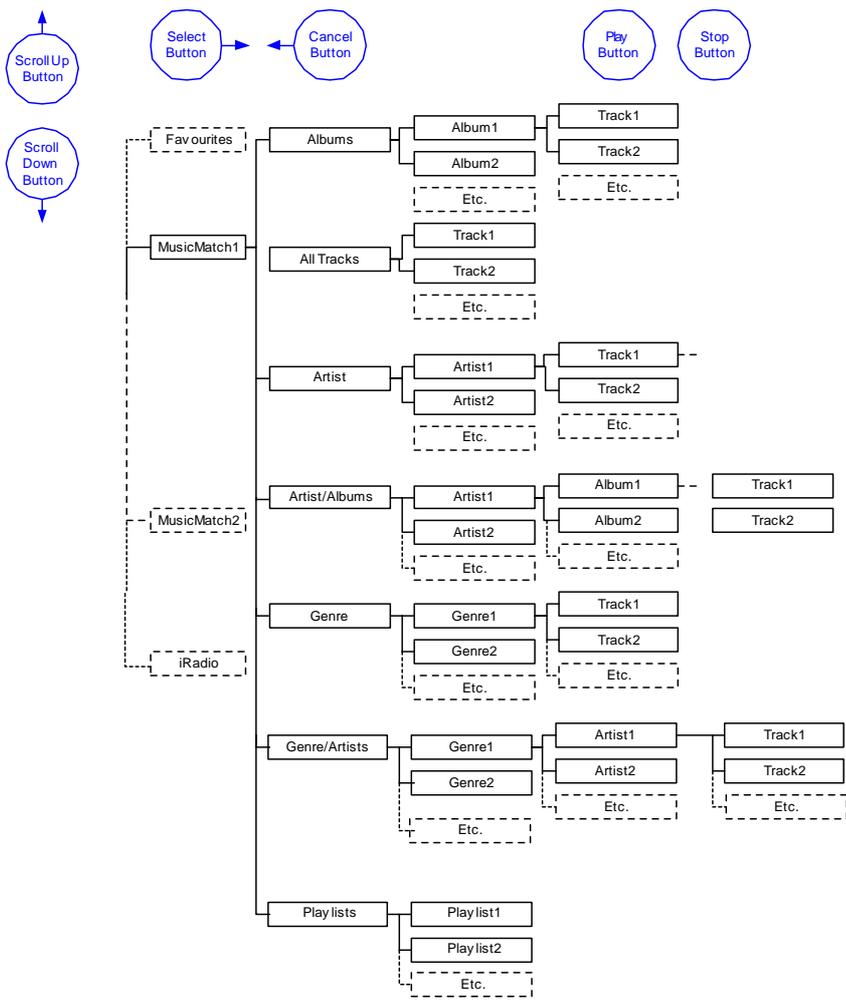
You can browse MP3 files by genre (music style), language and country using the remote control and the LCD display on the Wireless Audio Adapter.

The MP3 files are organized in a hierarchy of subdirectories, similar to the way in which files are organized in subdirectories on a PC. The content of each sub-directory is determined by the structure of your MUSICMATCH Music Library.

For example:

- Albums
- Artists
- Genres
- Playlists

**Figure 4-5: Example LCD Display Server Menu and MP3 File Structure**



# Wireless Audio Adapter

Use the remote control and follow these steps to browse for and play MP3 files:

1. Press the *Home* button on the remote control.
2. If you have only one *MusicLibrary* server, Server 1 is displayed. If you have multiple servers, use the Scroll Up/Down buttons to select between Server 1, Server 2 etc.
3. Press the *Select* button to select the server.
4. To play all all songs in the MUSICMATCH MusicLibrary on your PC, press *Play All*.
5. To select a genre, album, artist, playlist or song, use the Scroll Up/Down and Select buttons until the desired subdirectory is displayed.
6. To play the whole subdirectory (eg all tracks on an album), press the Play button.
7. To play an individual song, use the Scroll Up/Down and select buttons to select the desired song, then press the Play button.

For example:

If you press the *Play* button while *Playlist1* is displayed, all of the tracks on *Playlist1* will be played.

If you press the *Play* button while *Artist1* is displayed, all of the tracks on all albums by *Artist1* will be played.

If you press the *Play* button while *Album1* is displayed, all of the tracks on *Album1* will be played.

If you press the *Play* button while *Track1* is displayed, only *Track1* will be played.

8. Press the *Repeat* button to repeat the current song.
9. Press the *Stop* button to stop playing the file(s).

## MP3 File LCD Display

The Wireless Audio Adapter LCD screen displays various information during playback of an MP3 file. The following is an example:



**Table 4-3: MP3 File LCD Display Example**

Example Display Text	Explanation
Let's spend the night	Song title
Length: 01:56/04:48	Shows elapsed vs total time This line will display other information as long as the Information Screen is displayed <ul style="list-style-type: none"> <li>• Artist Name</li> <li>• Album Name</li> <li>• Encoded bit rate</li> <li>• Elapsed/Total time</li> </ul>
 or	Play or Paused

**Table 4-3: MP3 File LCD Display Example**

Example Display Text	Explanation
 and/or	Playback Modes <ul style="list-style-type: none"> <li>• Repeat mode enabled</li> <li>• Shuffle mode enabled</li> </ul>
	Streaming buffer fill indicator. Indicates that the station signal is being buffered to the device and will begin to play in a few seconds.
	WiFi Signal Strength Indicator

## Creating and Using the Favorites List

You can save your favorite Internet Radio stations and songs to a Favorites list stored locally on the Wireless Audio Adapter.

To add the song or Internet Radio station currently playing to your Favorites list:

1. Click the *Like It* button.

To remove the song or Internet Radio station currently playing from your Favorites list:

1. Click the *Dislike It* button.  
 Note: If the song or station is not in the Favorites list, the command is ignored.

To display and play the Favorites list:

1. Click the *Favorites* button.  
 OR  
 from the top level menu, use the *Scroll Up/Down* buttons until "*Favorites*" is displayed. Press the *Select* button.
2. To play the entire Favorites list, click the *Play* button.
3. To play a specific item from the Favorites list, press the *Scroll Up/Down* buttons until the desired item is displayed, then press the *Select* button to select the item. Press the *Play* button to begin playing the item.

## Using the Network Functions

The Wireless Audio Adapter normally configures itself automatically on startup. However, there may be occasions when you need to view the current settings for troubleshooting purposes, or change the default settings to suit a special kind of network setup.

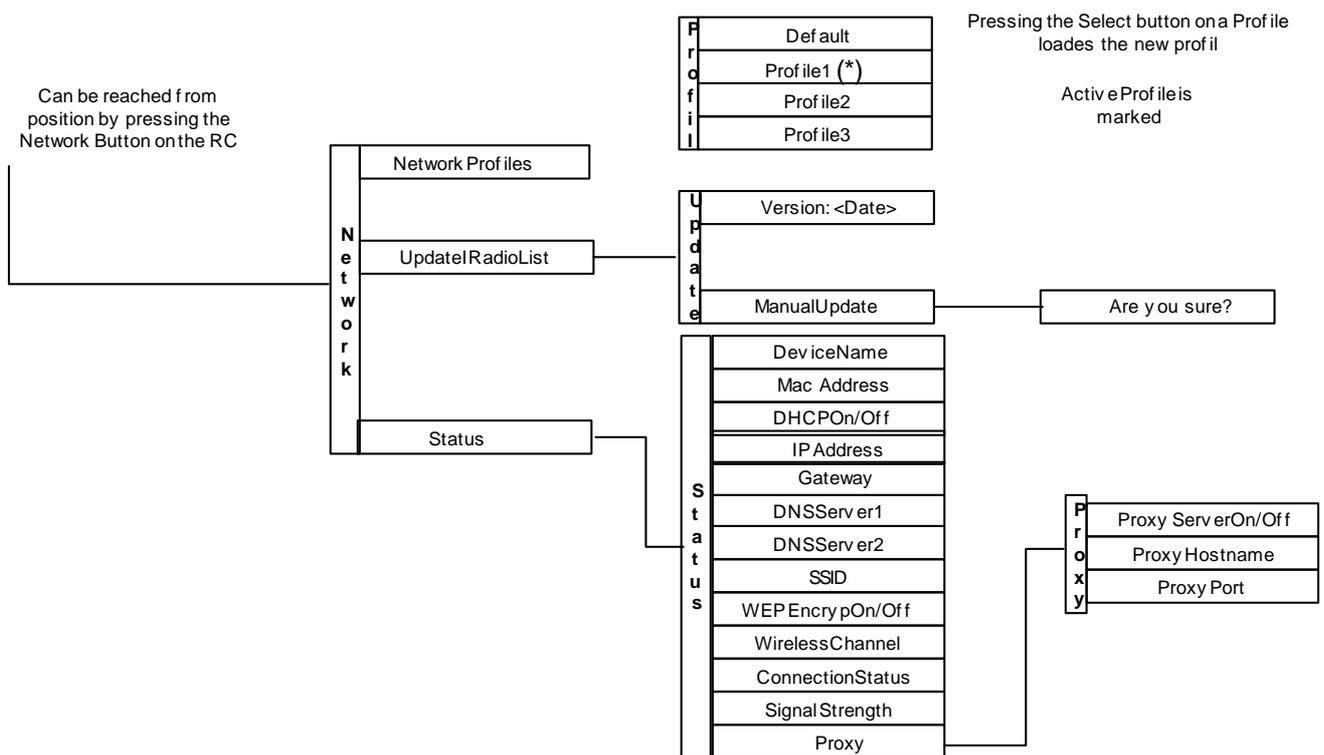
The network functions allow you to:

- Select a Network Profile
- Update the IRadio List
- View and/or Change the Status Settings

### Before You Start

1. The Wireless Audio Adapter must be connected to the wireless network (see “Configuring the Wireless Audio Adapter (WAA)” on page 6).

**Figure 4-6: Network Menu Structure**



### Editing a Network Profile

Your Wireless Audio Adapter is supplied with a default network profile. However, you may wish to add other profiles, depending on how your network is set up.

Follow these steps to edit a new profile:

1. Open the WAA Installer Software
1. In the main window, select your wireless audio adapter
1. Click the Button "Profiles"
1. Click the respective profile tab to display the profile
1. Click the "Edit" button to make changes in the profile settings

### Selecting a Network Profile

The "Default" network profile is loaded automatically when you turn on the Wireless Audio Adapter. However, you may wish to choose an alternative network profile (to select a different profile, see "Selecting a Network Profile" above).

Follow these steps to select a new network profile using the LCD display:

1. Press the *Network* button to display the top level network menu.
2. Press the *Scroll Down* button until Network Profile is displayed. Press the *Select* button.
3. Use the *Scroll Up/Down* buttons to find the desired. The currently active profile is denoted by an asterisk \*.
4. Press the *Select* button to select the new profile.
5. Turn off the Wireless Audio Adapter and turn it on again. The new profile is automatically loaded on startup.

Follow these steps to select a new network profile using the WAA Installer Software:

1. Start the WAA Installer Software
2. Select the WAA device
3. Click the "Profiles" Button
4. Click the respective profile tab to display the profile
5. Click the button "Set as Active" to active the profile

### Manually Updating the Internet Radio List

The Internet Radio list is updated automatically on a weekly base whenever the Wireless Audio Adapter is connected to the Internet. However, you can also choose to do this manually.

Follow these steps to manually update the Internet Radio list:

1. Press the *Network* button to display the top level Network menu.
2. Press the *Scroll Down* button until "Update IRadio List" is displayed. Press the *Select* button to display the current version (date) of the Internet Radio List.
3. Press the *Scroll Down* button until "Manual Update" is displayed. Press the *Select* button. Press the *Select* button again to confirm that you want to perform the manual update.

### Browse the Network Status Settings

If you followed the Getting Started section and are successfully operating the Wireless Audio Adapter without problems, you may never need to view the Network Status settings.

## Wireless Audio Adapter

However, for troubleshooting purposes the following network status functions can be displayed.

**Table 4-4: Network Status Menu**

Profile	Explanation
Device Name	The name of the Wireless Audio Adapter device ??what is this exactly??
MAC Address	The unique MAC address assigned to the Wireless Audio Adapter (see also "About the Wireless Audio Adapter MAC Address" on page 5)
DHCP On/Off	Indicates whether or not a DHCP server is available to allocate a dynamic IP address to the Wireless Audio Adapter. ON=server available, OFF=server not available.
IP Address	The IP address currently allocated to the Wireless Audio Adapter by the DHCP server, or the static address allocated to the Wireless Audio Adapter ??check??
Gateway	The IP address of the Gateway to which the Wireless Audio Adapter is connected.
DNS Server1	The IP address of an Internet DNS server to which the Wireless Audio Adapter is connected.
DNS Server2	The IP address of an alternative Internet DNS server to which the Wireless Audio Adapter is connected.
SSID	The SSID (Service Set Identifier) assigned to the Wireless Audio Adapter by your wireless network.
WEP Encryp On/Off	Indicates whether or not Wired Equivalent Privacy (WEP) is enabled on the DHCP server (or on the device??).
Wireless Channel	The wireless channel currently used by the Wireless Audio Adapter
Connection Status	The wireless connection status.
Signal Strength	Wireless network signal strength
Proxy	Selecting this option takes you to the Proxy submenu. The three submenu options are shown below.
Proxy Server On/Off	Indicates whether or not traffic to and from the Internet must first pass through a proxy server.
Proxy Hostname	Name of the proxy server host computer. Example: proxy.mydomain.com
Proxy Port	Port on the proxy server to which the device connects.. Example: 8080

Use the remote control and follow these steps to display any of the network status settings from the above table:

1. Turn on the Wireless Audio Adapter.
2. Press the *Network* button on the remote control until *Network* is displayed.
3. Press the *Scroll Down* button until *Status* is displayed. Press the *Select* button.
4. To browse through the network status menu, press the *Scroll Up/Down* buttons.
5. Press the *Select* button to display the desired network status setting.

## Operating the Wireless Audio Adapter Installer (WAAI) Software

### Introduction

The Wireless Audio Adapter Installer (WAAI) is a tool for managing the configuration of your Wireless Audio Adapter(s) from your computer. Although the Wireless Audio Adapter is delivered out of the box pre-configured with default factory settings, it is likely that you will need to modify this configuration to suit your own wireless network. The WAAI's main task is therefore to configure Wireless Audio Adapters being added to your wireless network. In addition, you can upload new firmware for your Wireless Audio Adapter.

There are typically three ways in which the WAAI software can communicate with a Wireless Audio Adapter device:

- Peer-to-peer (ad-hoc)  
The PC running the WAAI software has a wireless network interface card installed and you do not use an Access Point (AP).
- Wireless, via an Access Point (AP)  
The PC running the WAAI software has a wireless network interface card installed and an Access Point is used as a hub; it is likely that you have multiple wireless devices communicating to the Internet via that AP.
- Wired, via an Access Point (AP)  
The PC running the WAAI has a wired connection to an AP and the Wireless Audio Adapter communicates wirelessly with the AP.

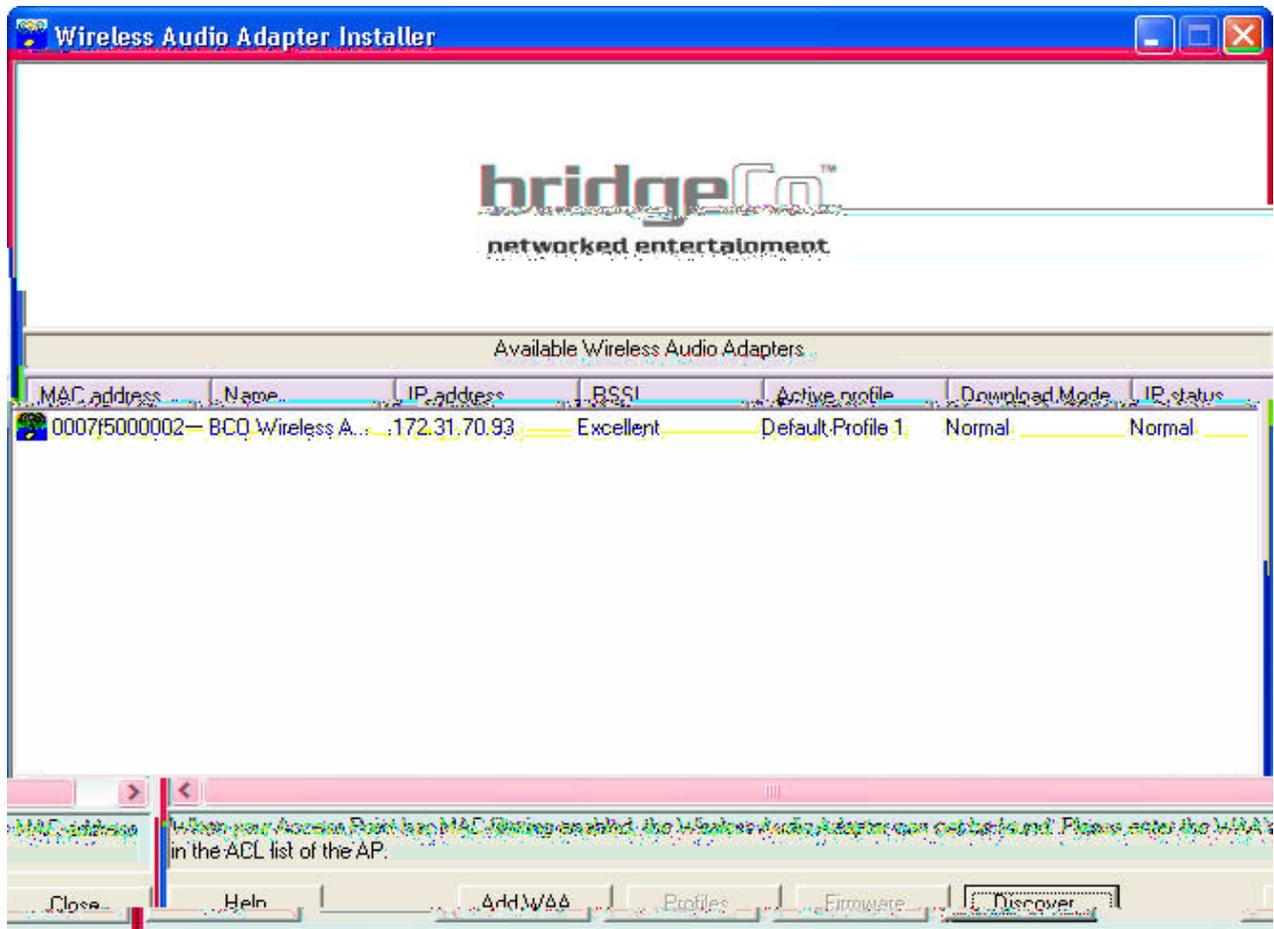
The WAAI software assumes that if you have wireless network interface card installed, you already have a wireless network set up. The WAAI can only read the wireless network configuration (used to set up new Audio Adapters) if the wireless network interface card is connected to that wireless network. If the WAAI detects that the wireless network interface card on your system has no network connection, it displays a warning.

Regardless of whether your PC has a wireless or wired network interface card installed, you also need to have installed and configured TCP/IP for this card. Please see the manual for your operating system for details on how to do this.

NOTE: Only wireless NDIS 5.1-compliant network interface cards are supported!

### Starting the WAAI

To start the WAAI, double-click the WAAI icon on your desktop or open the wai.exe file in Windows Explorer under the folder where you installed the software (the default installation folder is C:\Program Files\MyCompany\Wireless Audio Adapter Installer).



The above window is displayed. The window consists of:

- A list of the Wireless Audio Adapters currently available on the network (if any)
- A status bar which displays messages about current items/actions.
- A navigation area with buttons for common tasks.

### **Available Wireless Audio Adapters List**

The list shows the current configuration details for each Wireless Audio Adapter device displayed. These details include the MAC address, Device Name, IP address, Status and Active profile.

### **Status Bar**

The message on this bar changes according to what is displayed in the Available Wireless Audio Adapter List or on the result of the last action you took.

### **Navigation buttons**

The buttons at the bottom of the screen are used to navigate around the WAAI application, as follows:

:

**Table 4-5: Navigation Buttons**

Button	Function
Help	Displays the Help window
Add WAA...	Starts the Add Audio Adapter wizard.
Profiles...	Displays and allows you to maintain the profile(s) of the selected Wireless Audio Adapter.
Firmware...	Uploads a new version of the firmware to your Wireless Audio Adapter.
Discover...	Attempts to automatically locate all available Wireless Audio Adapters on your wireless network.
Cancel	Cancel the current task being performed.
Prev	Goes to the previous page of the configuration details.
Next	Goes to the next page of the configuration details.
Close	Closes the application.

**Discovering Wireless Audio Adapter(s) Automatically**

To allow the WAAI to automatically discover the existing Wireless Audio Adapter(s) on your network, click the Discover... button.

This function is also done automatically after you have used the Profiles tool to modify Wireless Audio Adapter configurations.

**Configuring a New Wireless Audio Adapter**

To manually configure a new Wireless Audio Adapter, click the Add WAA... button. This will start a wizard that will help you to configure the new Wireless Audio Adapter.

If your computer has a wireless network interface card installed, the Add Audio Adapter using Ad-hoc mode window is displayed. Otherwise, the Add Audio Adapter using infrastructure mode window is displayed.

Click the Discover... button to start the automatic discovery process. The newly configured Wireless Audio Adapters should now appear in the Available list.

**Viewing the Available Wireless Audio Adapter(s)**

Once Wireless Audio Adapters have been added or found and appear in the Available list, the Profiles... and Firmware... buttons become available (ie they are no longer greyed out).

**Viewing and Editing a Wireless Audio Adapter Profile**

The WAAI allows you to view and edit the profiles of a Wireless Audio Adapter.

WARNING: Use with care – incorrect parameters can cause undefined behavior.

Click to highlight one of the Wireless Audio Adapters in the Available list, then click the Profiles... button.

**Uploading New Firmware**

The WAAI allows you to upload new firmware.

WARNING: Use with care – unsupported firmware can cause undefined behavior.

To start the upload, highlight one more Wireless Audio Adapters from the Available list (hold down the Ctrl key to select multiple items) and click the Firmware... button.

**Closing the WAAI Application**

Click the Close button to end the application.

## Troubleshooting

### Troubleshooting Guide

**Table 5-1: Common problems and their Solutions**

Problem	Possible Cause	Solution
The LCD display is black after the Wireless Audio Adapter is switched on.	Power unavailable.	Check that the Wireless Audio Adapter power cable is properly connected and that the power is switched on.
The WAA cannot be configured with the WAA Software	The WAA Installer might not operate properly with your wireless card. Please provide us detailed information on your wireless card so we can enhance the WAA software.	To set-up the WAA without an automatic change of the wireless card, do the following: 1. Set the WAA to the default profile using the Remote Control (Network->Network Profiles->Default) 2. Set your wireless network to use the SAME profile as the WAA: SSID: BridgeCo Ad-hoc Mode Enabled WEP: Off 3. Start the WAA Installer Software Now the WAA should be displayed in the main panel 4. Access the Profiles by using the Profile Button 5. Change the Profile 1 or 2 to your required settings using the Edit Button. DO NOT SAVE THE PROFILE after this step. 6. Active the Profile 7. Save the Profile 8. Close the WAA Installer 9. Change your wireless settings back to the required settings for your network 10. Open the WAA Installer Now the WAA should be displayed in the main panel as well and be part of your Network
Cannot connect to an Internet Radio station after pressing "Play" and an error is displayed	You are connected to a station that is running, but it is not currently broadcasting any music.	
	The buffer is full (everything else seems normal).	Wait a few seconds until the buffer clears. If the problem persists, turn off the Wireless Audio Adapter and turn it on again.
	Station is not up.	Try looking up the station's Web site to see if there are any changes. Try a different Internet Radio station.
	You need to use a proxy server to access the internet	Configure your WAA to use a proxy server.
Unable to browse MP3 files	No MP3 files in the MUSICMATCH Music Library.	Follow the instructions under "Creating an MP3 Collection" on page 6 to add files to the MusicLibrary.
	UPnP server is not running.	If running the MUSICMATCH server, follow the instructions under "Starting the MUSICMATCH UPnP Media Server" on page 10. If using a different server, refer to the documentation for that server to start it.
	There is a VPN (Virtual Private Network) running on your PC.	Disable the VPN.

**Table 5-1: Common problems and their Solutions**

Problem	Possible Cause	Solution
	The Internet access point and the PC are not on the same subnet.	The Internet access point and the PC must be on the same subnet.
	The Internet access point has a MAC filter enabled.	Disable the filter or add the MAC address of the Wireless Audio Adapter to the exception list??
	Your PC is running a third party software firewall that is preventing access to Internet Radio.	Disable the firewall for troubleshooting purposes. Warning: this may adversely affect other programs and data - proceed with caution.
	Your PC is using the Microsoft built-in firewall.	Disable the firewall for troubleshooting purposes. Warning: this may adversely affect other programs and data - proceed with caution.
	Your PC uses a Microsoft packet filter.	Disable the packet filter for troubleshooting purposes. Warning: this may adversely affect other programs and data - proceed with caution.
	Your PC uses a static IP address and therefore does not access a DHCP server.	??
No Musicmatch server is displayed in the WAA Menu but the Musicmatch server is running.	Your PC has changed the IP Address while the musicmatch server has been running.	Restart the musicmatch server using the Options Menu on the Musicmatch program. This will refresh the IP address for the UPnP Server

**CAUTION:** To maintain compliance with FCC's RF exposure guidelines, this equipment should be installed and operated with minimum distance 20cm between the radiator and your body. Use on the supplied antenna. Unauthorized antenna, modification, or attachments could damage the transmitter and may violate FCC regulations.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

## Technical Support

### **The identification of the product :**

Product Name : Wireless Audio Adapter

Model Name : WAA-B-AGB-01

### **Technical Contact :**

Universal Scientific Industrial Co., Ltd. ( Headquarters )

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