



Medialon MAS Pro

User Reference Manual

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M516-2

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1 Safety, license and warranty

Before installing and using your Medialon MAS Pro Dante, please refer to these essential standard Medialon documents:

- M561 End User's License Agreement for Medialon Software and Plug-Ins, Warranty Terms and Conditions for Medialon Hardware
- M562 Medialon Safety Instructions for installation, use and service

2 Medialon MAS Pro Dante

In this section you will discover the main architecture of MAS Pro (Medialon Audio Server), what its main elements are and how they interact with each other.

This section also helps those who are new to MAS Pro to understand its core engine and ease their understanding of the following chapters.

2.1 Introduction

MAS Pro (Medialon Audio Server) is a professional audio server for both multi-track application as well as multi zoning.

MAS Pro is designed to ensure maximum reliability for demanding live entertainment or rides audio control, as well as for centralized control of large amount of audio channels in museums or showrooms.

MAS Pro allows playback of multiple audio channels. It is not a regular multi-track playback unit which plays all files at the same time but a real independent channels server where each file can be started when needed. Each of its multiple channels can be synchronized together or by groups. Its high-quality Dante interface provides state-of-the-art audio quality.

Using MAS Pro's local interface, each channel can be started independently and at any time.

With Medialon Audio Client Pro software, external control of each channel can be managed independently per channel or all together.

Thanks to MAS Pro's position tracking capability, programming video and light effects synchronized to audio is very easy with Medialon Manager or Showmaster show control products.

Several MAS Pro audio servers can be linked over IP and synchronized together.

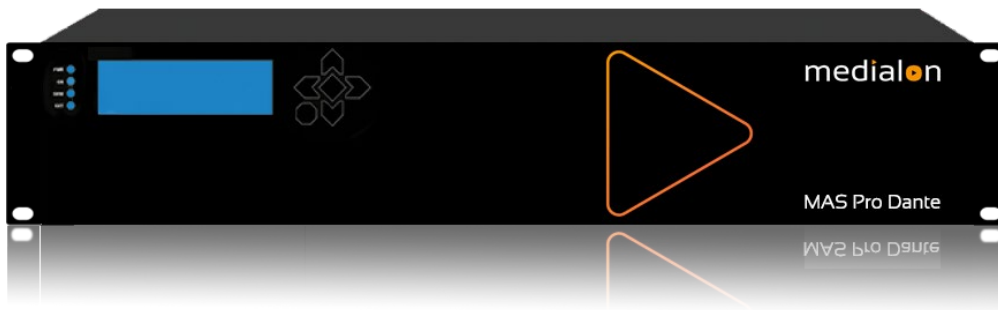
2.2 Overview of Medialon Audio Server

MAS Pro is a system which can playback digital audio on up to 128 mono audio output channels. Channels may be played either independently or synchronized by groups. The audio files (WAV files) played by MAS Pro can be multi-track, and the tracks can be routed to various output channels.

2.2.1 Main Features

Hardware/Software Platform

The MAS Pro is a pre-configured hardware and software package running Windows 10 Enterprise LTSC. Configuration and playback control can be done directly on the MAS Pro hardware or from Medialon Audio Client software installed on another Windows PC, connected to MAS Pro via the network. Medialon show controllers can control and synchronize playback on MAS Pro. Multiple simultaneous network connections are supported, so multiple show controllers can be connected, each managing different Players, making MAS Pro a true network audio appliance.



Showmaster Go is a compact, rugged show controller and audio server in one small lightweight piece of hardware. It is built for mobile applications such as theme park ride vehicles, parade floats, trams, and tour busses. It includes both the Medialon Manager show control software and the Medialon Audio Server software.



Dante Configurations

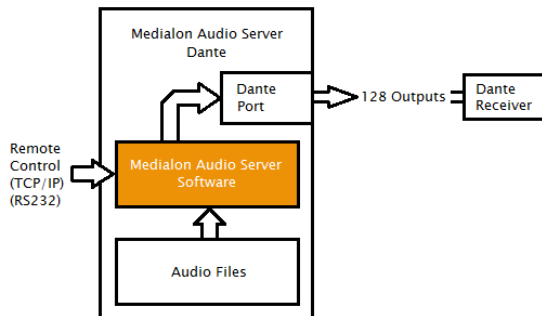
The MAS PRO Dante 'DC' models are equipped with dual redundant Dante ports which can provide up to 128 audio output channels and can also provide a master clock on the network.

The MAS PRO Dante 'D' models use the on-board NIC and can provide up to 64 audio output channels. **Note:** no master clock is available from these models, as it uses Audinate's Dante Virtual Soundcard.

Showmaster Go uses the Dante Virtual Soundcard as well, so it is subject to the same limitations as the 'D' model (16 bit format, 48 kHz sample rate).

2.2.2 Architecture

The following diagram shows Medialon Audio Server architecture.



Audio File Formats

MAS Pro supports Stereo, Mono, or Multitrack WAV files. Some audio software such as ProTools outputs Broadcast WAV files, which contain additional header metadata and are incompatible with MAS Pro. It is possible to strip the header metadata from Broadcast WAV files by running them through software like Audacity.

MAS Pro ‘DC’ models support WAV files in 16- or 24-bit format.

MAS Pro ‘D’ models support WAV files in 16-bit format only. Showmaster Go is considered a ‘D’ model for purposes of this limitation.

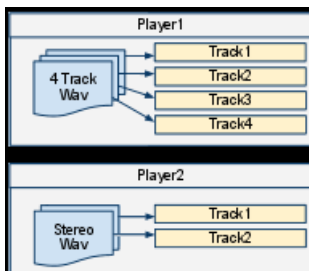
See more about [Audio File Format](#).

Important: MAS Pro only supports 48 kHz sample rate.

Audio Players

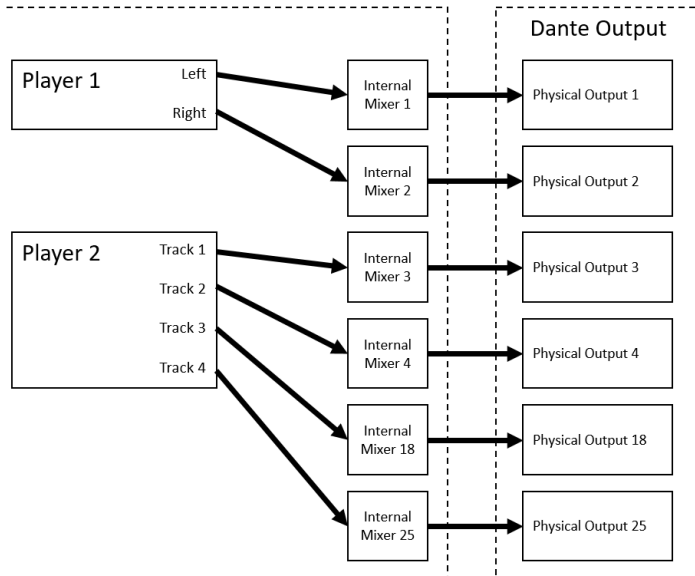
The MAS Pro can be configured for concurrent use of mono, stereo and multi-track media files. Medialon Audio Server uses “Players” to perform these files.

A Player is defined by one or more audio tracks. The number of tracks correspond to the type of file played, i.e. mono (1 track), stereo (2 tracks Left and Right) and multi tracks where the number of tracks depends of the file.

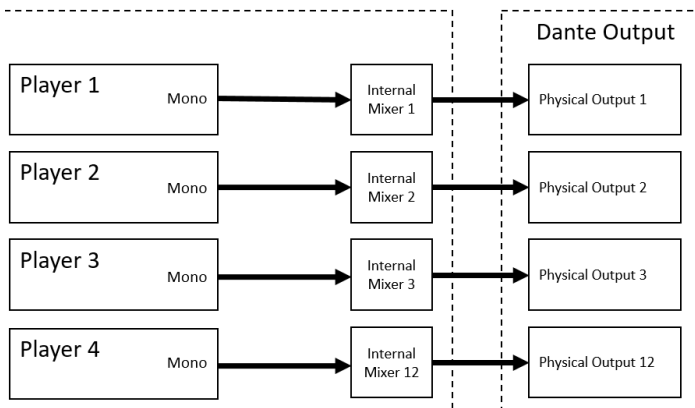


Audio Output Mapping

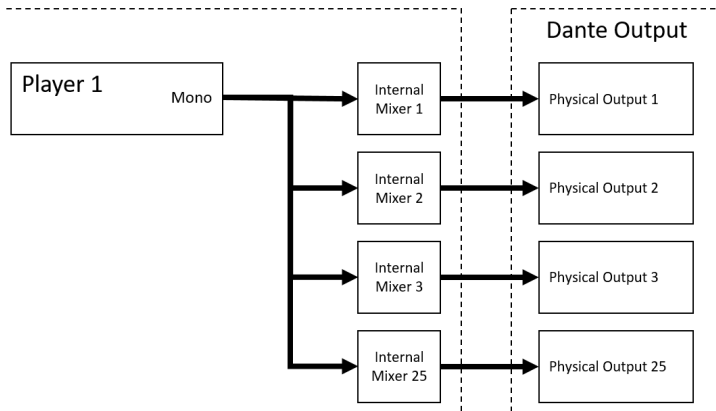
From the user standpoint, MAS Pro manages a set of logical Players. This is done by the following logical track and physical output mapping for each Player.



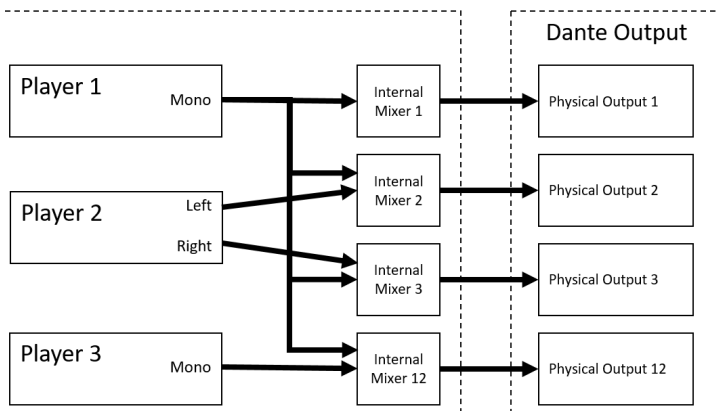
Below is a configuration where all of the Players are set to mono.



An audio player track can be mapped to several physical outputs. see below a mono Player mapped to 4 outputs.

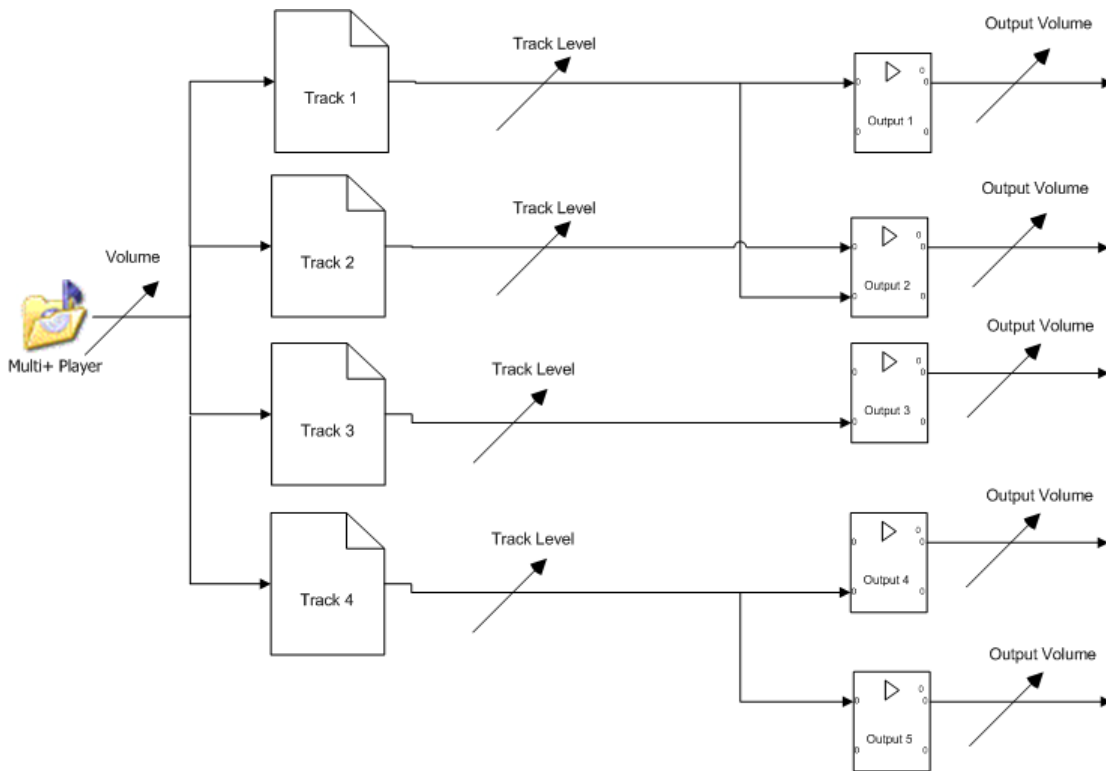


Internal mixer and mapping allows sharing the same physical output with several Player tracks.



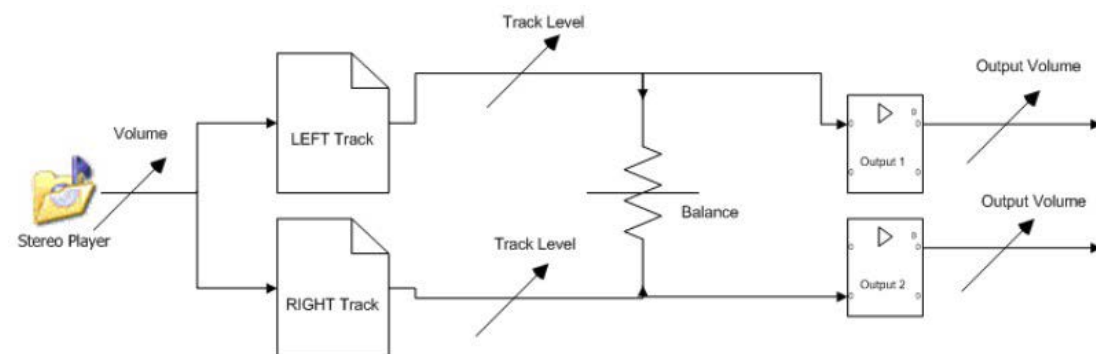
Audio Diagram

Different audio levels can be adjusted in MAS Pro.



- Player Volume adjusts the audio level of all tracks, it is the master audio level.
- Track Level adjusts the audio level of each track independently.
- Output Volume is used to adapt the MAS Pro audio output for the next audio device's input.

Stereo players have a specific fader to manage the audio balance left and right.



Remote Control

Although it can be run as a standalone system, MAS Pro's main purpose is to be controlled from a Medialon Control System through a TCP/IP Network. See more about Medialon Control System at <http://www.medialon.com/>.

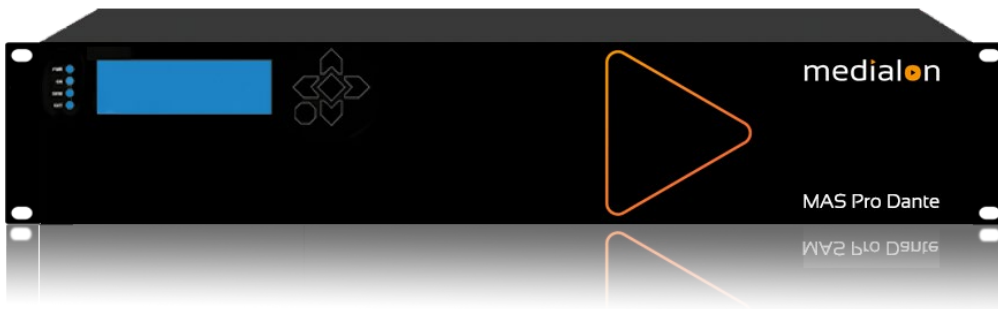
A remote client software (Medialon Audio Client) which replicates the local MAS Pro user interface is also provided. MAS Pro can also be controlled through a serial connection.

3 Installation

In this section you will learn how to correctly connect and start using your Medialon Audio Server.

3.1 Get Started

MAS Pro is shipped pre-configured and requires only a few steps to make it ready for use.



3.1.1 Contents of the Package

- MAS Pro Dante DC (Dante hardware) or MAS Pro Dante D (Dante Virtual Soundcard)
- 1 × IEC power cord and 12 volt DC adapter
- 2 × rack mounting brackets (attached)

3.1.2 Connecting to MAS Pro

Few connections are required to start your MAS Pro.

Keyboard, mouse and monitor are needed for the first start and setup. If you plan to control remotely your MAS Pro, the keyboard, mouse, and monitor can be removed after the initial setup.

- **MAS Pro Dante DC:** Dante Primary and/or Secondary ports must be connected to the Dante network. If a secondary (redundant) Dante network is used, it is typically a separate physical network, so the Secondary Dante port would be connected to a separate physical network switch than the Primary Dante port.
- **MAS Pro Dante D:** LAN 1 should be connected to the Dante network in order to use the Dante Controller utility which is installed on the MAS Pro. See more about [Dante Configuration](#). Use LAN 2 for Ethernet connection and remote control of your Medialon Audio Server.

Installation

- **Showmaster Go:** NIC 1 (Lower) should be connected to the Dante network. This network is set up for both Dante output as well as for using the Dante Controller utility which is installed on Showmaster Go. Use NIC 2 (Upper) for Ethernet connection and remote control of your MAS Pro / Showmaster Go.

Rear Panel – MAS Pro



Left to right (DC model shown):

- [POWER]: Power Connector 12 V DC 5 A. See [Power section](#) for details.
- [USB 1-2]: USB 3.0 ports available for mouse and keyboard, also used for MAS PRO updates.
- [DVI]: DVI-D video output connector.
- [DisplayPort]: DisplayPort 1.2 monitor output
- [HDMI]: monitor output
- [LAN 1]: Ethernet connector for Dante mapping (on 'D' model, this is the default Dante output.)
- [LAN 2]: Ethernet connector for external control or FTP.
- [USB 3-4]: USB 3.0 ports available for general use or MAS Pro updates.
- [USB 5-6]: USB 2 ports available for general use or for MAS Pro updates.
- [SERIAL]: serial port used for external control, See more about [Serial External Control](#).

DC model only:

- [SYS]: multi-color LED indicating the Dante system status:
 - Green: normal operation.
 - Orange: system failure.
- [CLK]: multi-color LED indicating the Dante sync status:
 - Green (steady): confirms card is a Dante PTP slave; the card will sync to the clock embedded in the incoming Dante bitstream.
 - Green (blinking): confirms card is a Dante PTP master; the card is set (in Dante Controller) to generate the Dante clock which will be used by other units.
 - Orange: Sync failure

Installation

- [ERR]: reserved for future use.
- [Dante Primary]: Dante port 1.
- [Dante Secondary]: Dante port 2.

Rear Panel – Showmaster Go



Left to right:

- [POWER]: Power Connector 12 - 19 Volts DC 4.7 A. See [Power section](#) for details.
- [DisplayPort 1-4]: DisplayPort monitor outputs.
- [GPIO]: General Purpose Input/Output connector (used by Medialon Manager).
- [NIC 1]: Ethernet connector for Dante mapping.
- [NIC 2]: Ethernet connector for external control, FTP, and Show Control.
- [USB 1-2]: USB 2.0 ports available for general use or MAS Pro updates.

3.1.3 First Start

We recommend you connect Mouse, Keyboard and Monitor for the first use of MAS Pro. If you plan to control the MAS Pro remotely, the Keyboard, Mouse and Display are not necessary after the first setup.

Front Panel Controls

The figure below shows the front panel of MAS Pro.

- [LED]: Four LEDs indicate MAS Pro status.
- [LCD]: Status messages display on the 4-line LCD.
- [KP]: Six-button Function Keypad.

Installation

Use the keypad to scroll through MAS PRO's status information.



Keypad Functions



OK key

Hold this key for more than 1 second to power on MAS Pro.

Hold this key for more than 4 seconds while the MAS Pro is powered on to reset MAS Pro.



Cancel key

Hold this key for more than 4 seconds to power off (soft power) MAS Pro.



Up arrow

Scrolls display up.

Holding this key for more than 1 second scrolls the display to the home position when the button is released.



Down arrow

Scrolls display down.



Left arrow

Not used.



Right arrow

Not used.

Startup Procedure

Connect the power supply and press and hold the [OK] key to start MAS Pro.

The front panel LCD displays the startup message.



LCD Display Messages

Each time an arrow button is pressed, the next line of information is displayed.

1. [Name] MAS Pro's user-defined Name.
2. [Mode] MAS Pro's current mode:
 - **Starting Up:** MAS Pro is starting up (from power-on until it is ready)
 - **Running:** MAS Pro is running .
 - **Shutdown:** MAS Pro is shutting down.
 - **Reboot:** MAS Pro is rebooting.
3. [Vers] MAS PRO's current firmware version.
4. [SerN] Serial Number.
5. [Addr] Current IP address.
6. [Mask] Subnet mask.
7. [Gway] IP Gateway address.
8. [MacA] MAC address.

LED Status Messages

Two LEDs give a quick overview of the main status of MAS Pro.



- PWR: Power LED, this LED lights green when power is present, regardless of whether MAS Pro is powered on.
- OS: MAS Pro software LED, this LED indicates the current status of MAS Pro software.
 - **Green:** MAS Pro software is ready.
 - **Yellow:** MAS Pro software is starting up.
 - **Red:** Error, MAS Pro software has an internal system failure.
 - **Off:** MAS Pro software is not running.

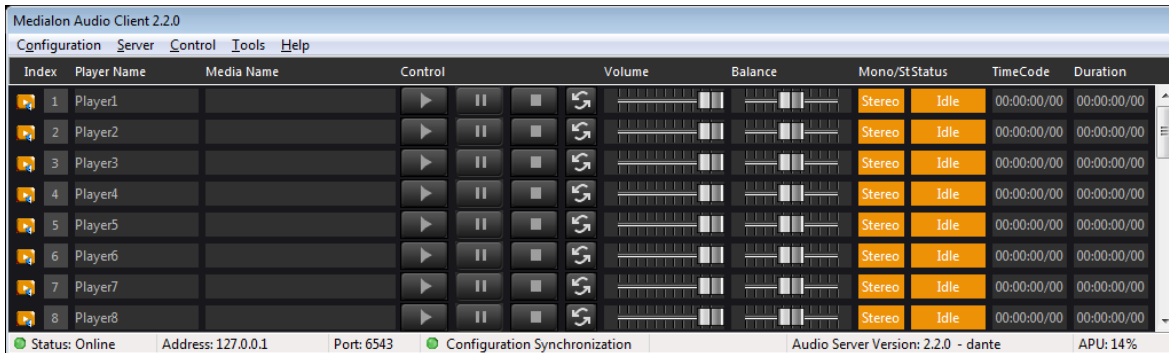
Installation

Network Settings

MAS Pro is configured to use DHCP to get its IP address. If your network installation has no DHCP server or requires static IP address, this address can be modified via the configuration menu. See more about [Network Settings Definition](#).

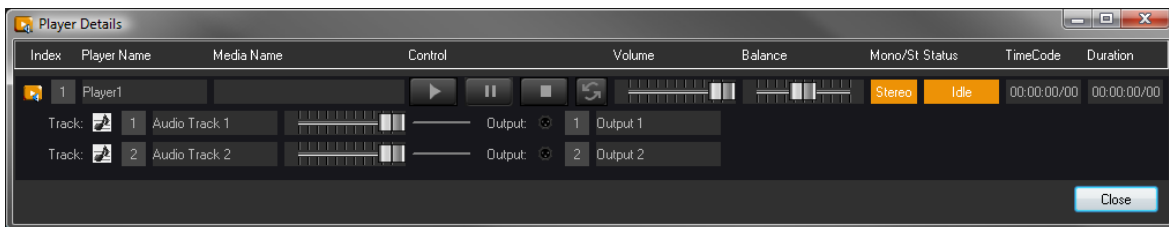
3.1.4 MAS PRO Startup Configuration

MAS Pro is delivered with a default audio configuration. See more about [Audio Configuration](#).



Players Configuration

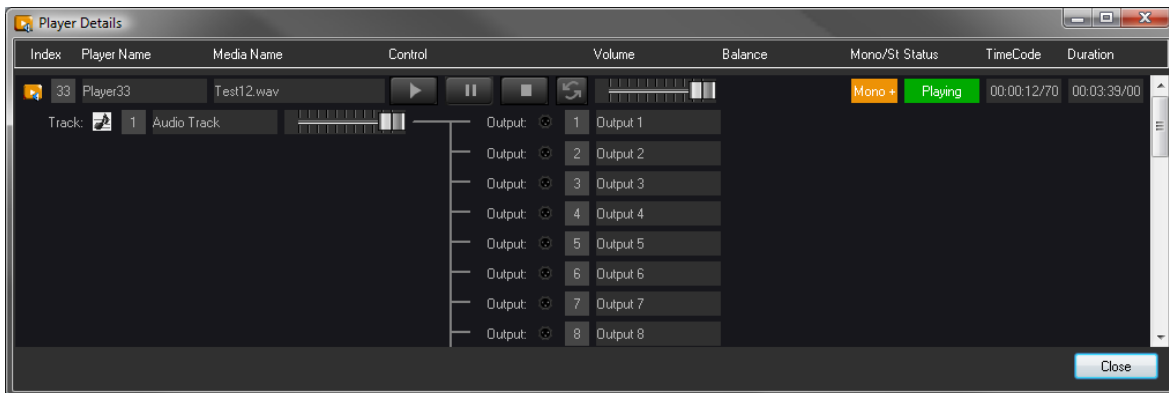
At first start, 32 stereo players are available plus one mono+ player.



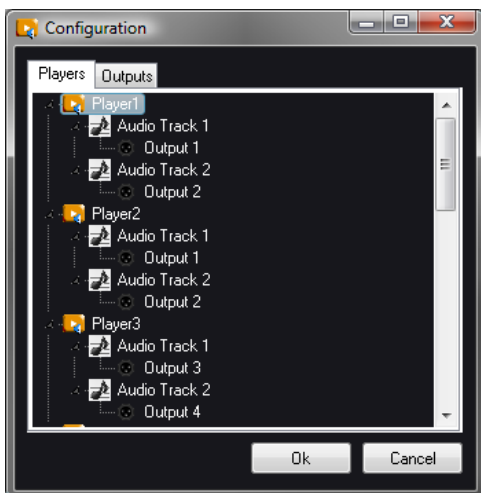
Installation

Output Mapping

Player 33 is a mono track player. This audio track is mapped to all 32 audio outputs.

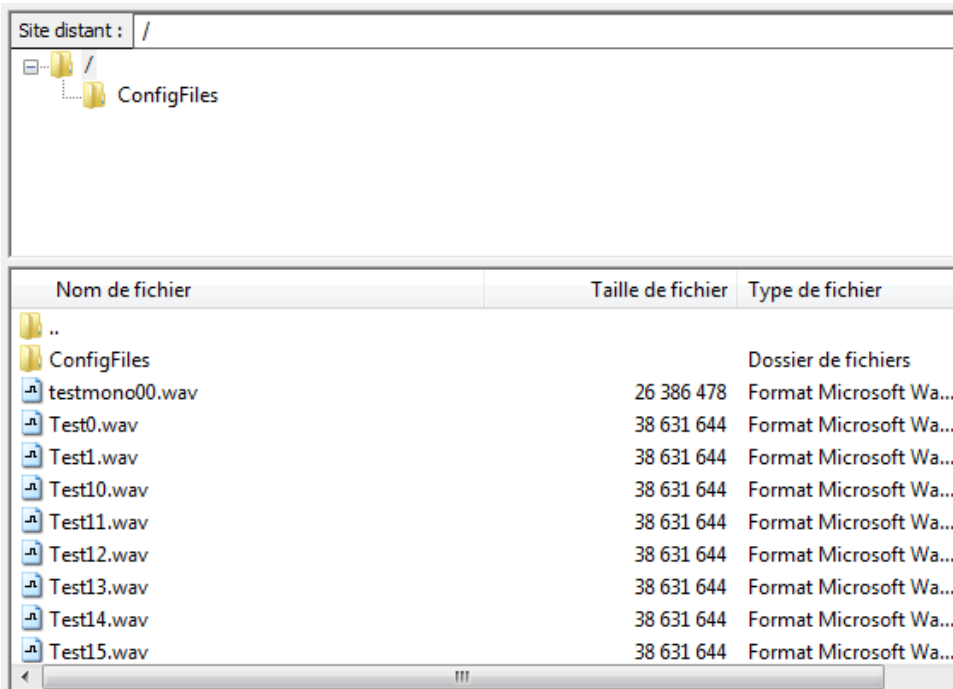


Each pair of stereo players shares their outputs.



3.1.5 Add Audio Files

Any FTP client software can be used to transfer files to MAS Pro.



MAS Pro FTP parameters:

- FTP address: MAS Pro IP address.
- FTP Port: 21.
- Login username: medialon
- Login password: medialon

As an example, here is the procedure to transfer files using a web browser:

- Start your browser (Internet Explorer, Firefox, Chrome etc.)
- Type 'ftp://medialon:medialon@xxx.xxx.xxx.xxx' (xxx.xxx.xxx.xxx is MAS Pro's IP address) in the address bar and press the Enter key.

FTP root at 192.168.144.25

To view this FTP site in Windows Explorer, click **Page**, and then click **Open FTP Site in Windows Explorer**.

01/10/2008 03:53	38,631,644	Test1.wav
06/17/2004 09:35	26,386,478	testmono01.wav

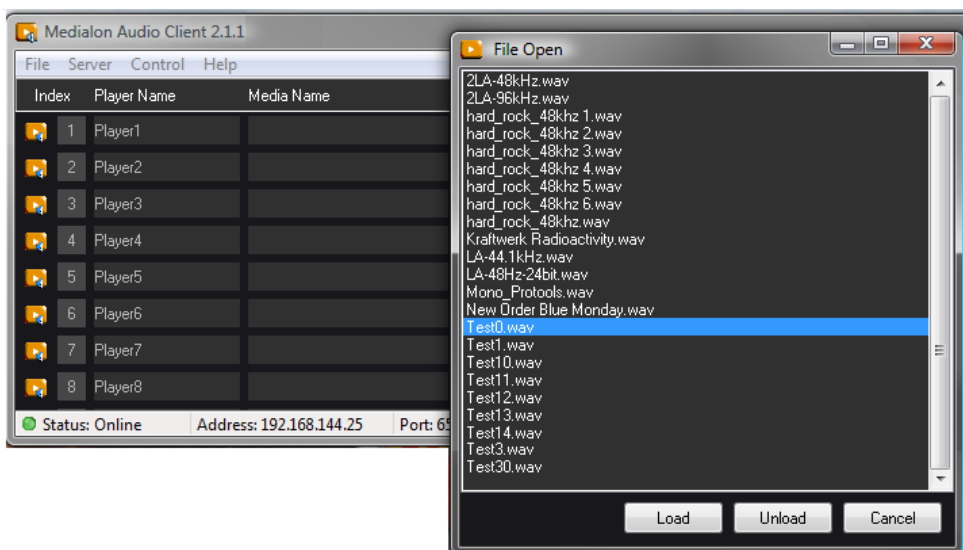
Installation

- The browser page displays the content of the media folder.
- Drag/drop or copy/paste media files to the folder.

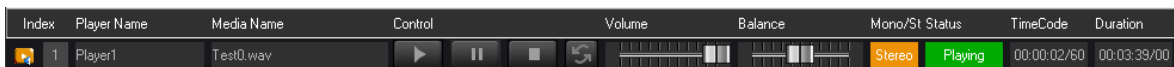
In addition to FTP, a shared directory has been set up at \\xxx.xxx.xxx.xxx\Sounds\
You can point Windows to this network location using the same credentials (username: medialon, password: medialon)

3.1.6 Play Audio Files

1. From the main page, click on the Media Name area corresponding to the player you want to use.



2. The media list opens.
3. Select a file and click Load
4. Press Play to start the media.
5. Use volume and balance fader to adjust the audio level.



See more about [MAS Pro Interface](#).

4 Using the Audio Server

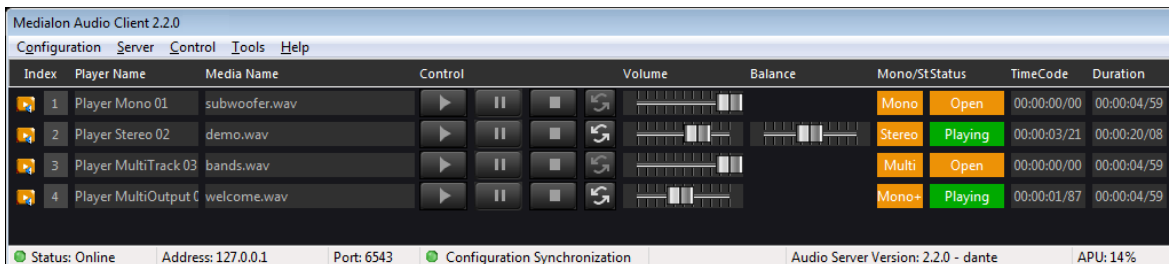
In this section you will learn how to use your MAS Pro.

4.1 MAS Pro Interface

MAS Pro provides a local user interface in order to play audio files and configure the system.

4.1.1 The Main Window

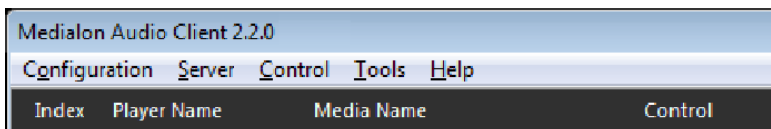
The MAS Pro interface is automatically displayed after the system boots up.



MAS Pro's main window is composed of a Menu bar, a Status bar and several Player bars.

Menu Bar

The MAS Pro interface provides 5 main menus:



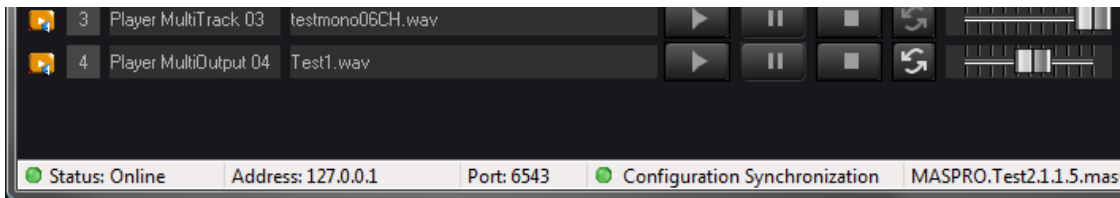
- **Configuration:** this menu allows you to
 - create, open, or save audio configuration files. See more about [Configuration Files](#).
 - edit the audio configuration, see [Edit Configuration](#).
- **Server:** use this menu to:
 - setup MAS Pro, see [MAS Pro Setup](#).
 - upgrade your MAS Pro, see [Updating MAS Pro](#).
 - Shutdown or reboot MAS Pro.
 - set the Startup State of the Audio Server, see [MAS PRO Startup Status](#).

Using the Audio Server

- **Control:** this menu provides server playback control, see [Menu Control](#).
 - Audio output volume control.
 - global player commands.
- **Tools:** use this menu to launch the Dante Controller utility for the audio network configuration.
- **Help:** See more about [Help](#).

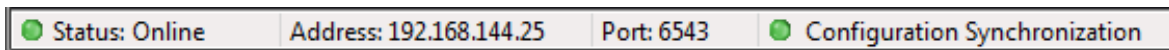
Status Bar

At the bottom of the MAS Pro interface, there is a Status bar.



The Status bar gives the following information:

- **Status:** indicates if the server is online or not. LED turns to green or red.



- **Address:** it is the connected MAS Pro's address.
- **Port:** it is the TCP Port used by the MAS Pro to listen for client connections.
- **Configuration Synchronization:** indicates if the audio configuration is synchronized between the server and the client. LED turns to green or red.



- **Filename.masConfig:** name of the current loaded audio configuration. This section could be blank if no configuration is loaded in the Client software.
- **Audio Server:** Current version of MAS Pro and its model.



- **APU (Audio Processing Unit):** represents the amount of audio processing power used by MAS Pro. APU close to 100% may cause sound drops, pops...

Player Bar

A Player Bar provides the necessary controls and displays related to that Player. The number of Player bars depends of the audio configuration. The window can be scrolled with the vertical scroll bar located at the right of the window.

Index	Player Name	Media Name	Control	Volume	Balance	Mono/StStatus	TimeCode	Duration
1	Player Mono 01	subwoofer.wav	[Play] [Pause] [Stop] [Refresh]	[Volume Slider]	[Balance Slider]	Mono Open	00:00:00/00	00:00:04/59
2	Player Stereo 02	demo.wav	[Play] [Pause] [Stop] [Refresh]	[Volume Slider]	[Balance Slider]	Stereo Playing	00:00:03/21	00:00:20/08
3	Player MultiTrack 03	bands.wav	[Play] [Pause] [Stop] [Refresh]	[Volume Slider]	[Balance Slider]	Multi Open	00:00:00/00	00:00:04/59
4	Player MultiOutput 04	welcome.wav	[Play] [Pause] [Stop] [Refresh]	[Volume Slider]	[Balance Slider]	Mono+ Playing	00:00:01/87	00:00:04/59

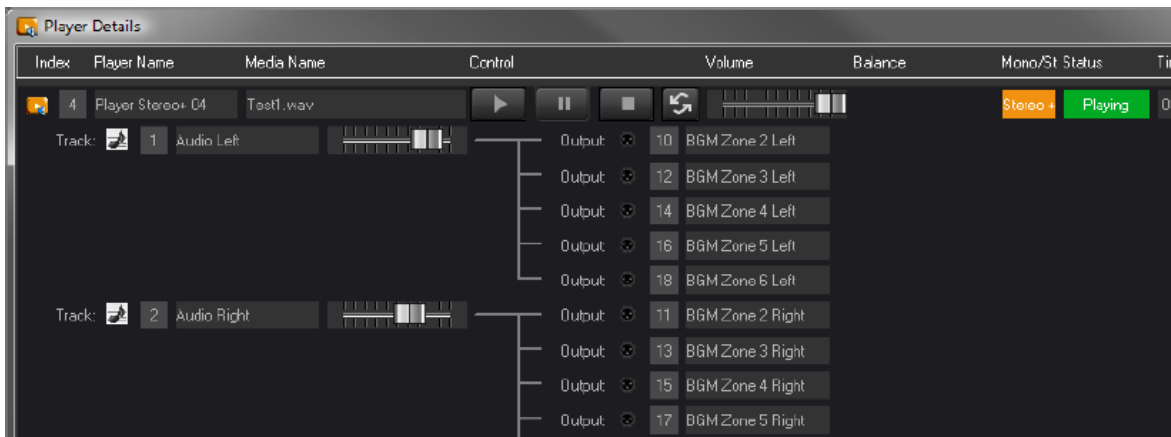
Details of all controls are shown in the following paragraphs.

Click on the index icon to open the Player Details window.

4.1.2 Player Details

The Player Details window gives access to the same Player controls available in the main window. In addition, you can also act on each audio track available in the Player.

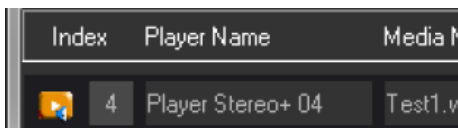
The following paragraphs detail the use of the elements of a Player.



Player Controls

This section is common to the Player bar in the main window.

Player Name



Using the Audio Server

This is the name of the Player.

You can change the Player's name when you edit the MAS Pro configuration.

Each Player is also identified by a Player Index.

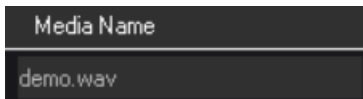


In main window, click on the index icon to open the Player Details window.

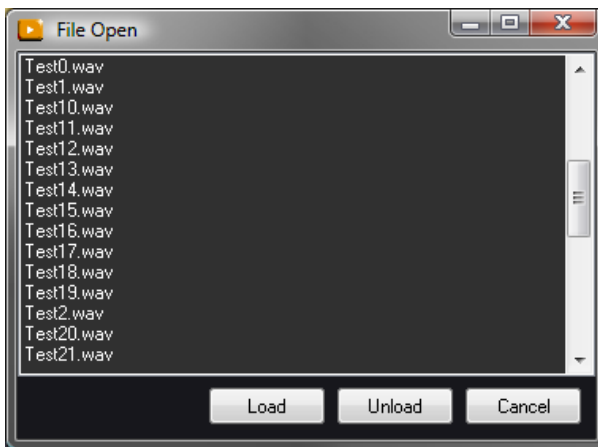
Media Name

This text box shows the name of the audio file currently loaded on the Audio Player. It is blank if no media is loaded.

To load media:



- Click on the Media Name text box to open the Media Library.
- This displays a media selector which shows all available audio files.



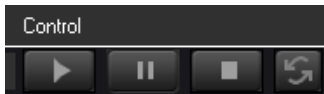
- Select an audio file and click the OK button (or double-click on the file name).
- The audio file name appears in the Media Name text box if it is successfully loaded.
- Click on Unload button to close the media. This clears the Media Name text display showing the Player has no media to play.



Consult [Add Audio Files](#) to add new audio files.

Transport Commands

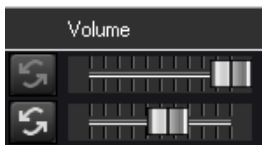
Play, Pause and Stop commands are available in the Control section.



Click on the Loop toggle button to turn media looping On or Off.

Volume

The Volume slider sets the volume of the Player:



- Move the slider to its rightmost position for full volume.
- Move the slider to the leftmost position to mute the Audio Player.



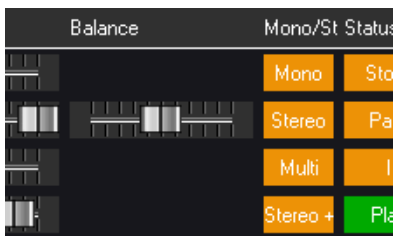
Hold the CTRL key to move all volume sliders to the same level.

Balance

A Balance slider is available with stereo players. With it, you can adjust the proportion between the left and right audio track.

Mono/Stereo/Multi

Players can be Stereo, Mono, or Multitrack ; the Mono/ST display indicates the type of Player:



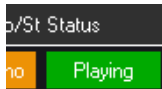
- **Mono:** Player with 1 audio track mapped to 1 audio output.
- **Mono+:** Player with 1 track mapped to several outputs.
- **Stereo:** Player with 2 audio tracks, each track mapped to a different output.

Using the Audio Server

- **Stereo+**: Player with 2 audio tracks, audio tracks are mapped to several outputs or to the same output.
- **Multi**: Player with more than 2 audio tracks, each track goes to a different output.
- **Multi+**: Player with more than 2 audio tracks, audio tracks are mapped to several outputs or to the same output.

Status

This text box shows the status of the Player:

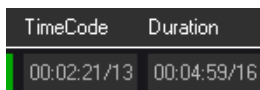


Different Player Status are:

- **Idle**: no media file has been loaded on this Player since MAS PRO power up
- **Open**: a media file is loaded on this Player
- **Closed**: the media file couldn't be loaded
- **Playing**: the media is playing
- **Paused**: the media is paused
- **Stopped**: the media is stopped
- **Not Online**: the Medialon Audio Server is not online

TimeCode / Duration

TimeCode shows the current position of the media:



TimeCode is displayed with hundredth of second unit precision. The format is hh:mm:ss/ff where:

hh = Hours

mm = Minutes

ss = Seconds

ff = Hundredths of seconds

The media duration is set to 00:00:00/00 if no audio file is loaded.

Track Controls

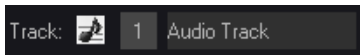
This section presents the audio track controls; the number of tracks depends on the Player's configuration.



This section also displays the output mapping.

Track Name

This is the name of the Audio track:



You can change this name when you edit the MAS Pro configuration. Each Audio track is also identified by a track Index.

Track Volume

The Volume slider sets the volume of the Audio track.

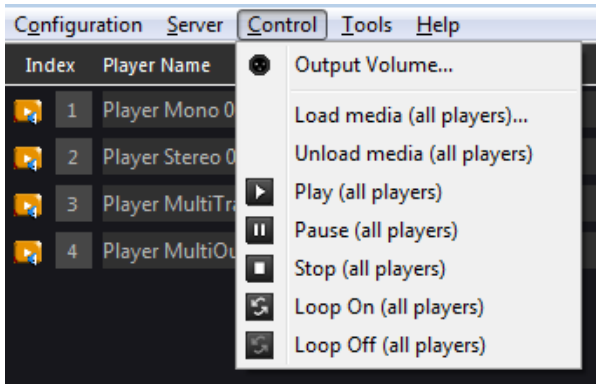


- Move the slider to its rightmost position for full volume.
- Move the slider to the leftmost position to mute the Audio Track.



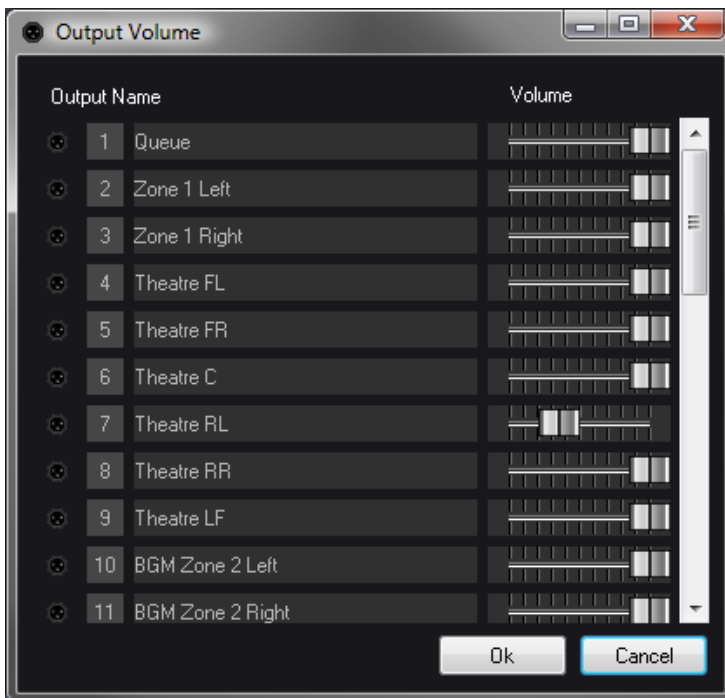
Hold the CTRL key to move all track volume sliders to the same level.

4.1.3 Control Menu



Output Volume

The Volume sliders set the volume of the Audio outputs.



- Move the slider to its rightmost position for full volume.
- Move the slider to the leftmost position to mute the Audio Output.



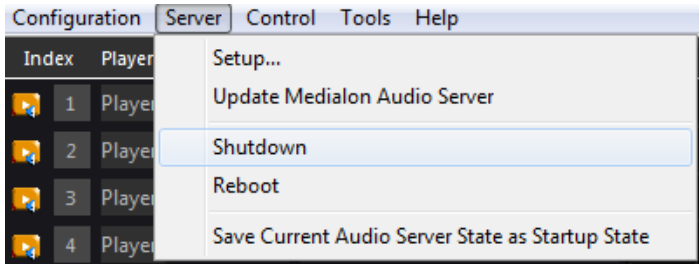
Hold the CTRL key to move all volume sliders to the same level.

Command All Players

With these commands (Play, Pause, Stop, Load/Unload media, Loop On/Off), you send the order to all the Players present in the MAS Pro at the same time.

4.1.4 Shutdown / Reboot

The MAS Pro can be shut down or rebooted by using the Server Menu.



These functionalities are available on the Medialon Audio Client when a connection is established with an Audio Server (Status Online).

4.2 Audio Configuration

MAS Pro can be used with different audio configurations.

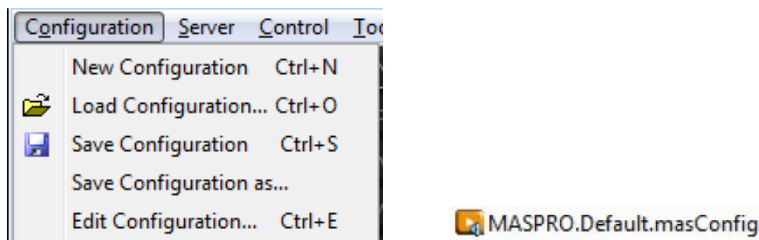
4.2.1 Configuration Management

The audio configuration can be edited with the local interface or remotely from a Medialon Audio Client Pro software.

Configuration Files

MAS Pro audio configurations can be saved as files.

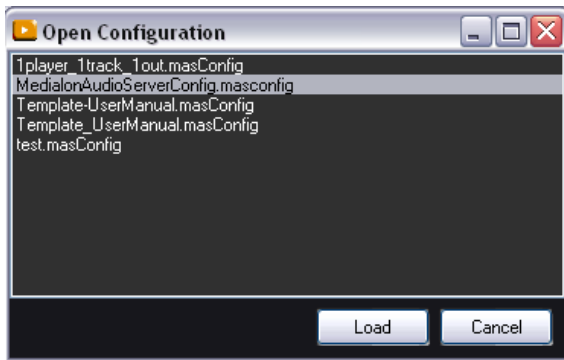
- Go to Configuration menu:



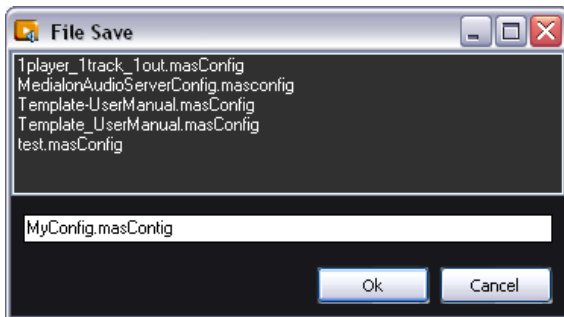
- **New Configuration:** create a new empty configuration.

Using the Audio Server

- **Load Configuration:** load an existing configuration file.

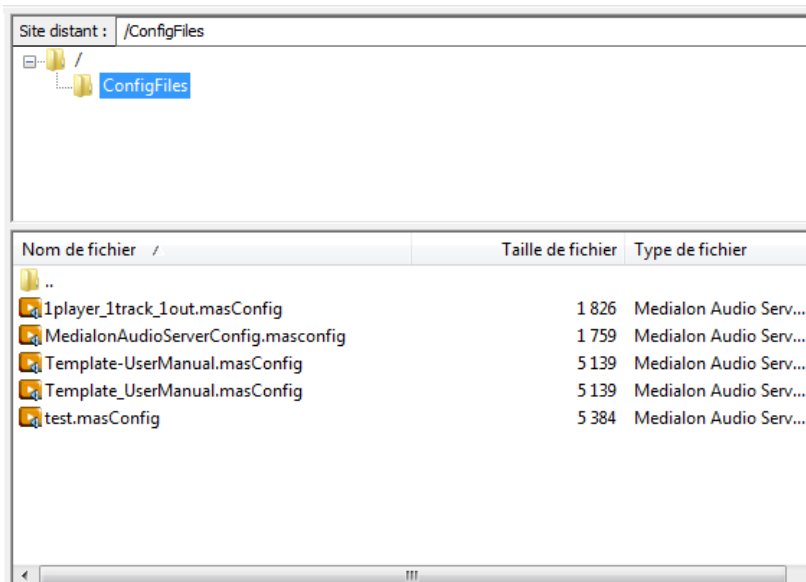


- **Save Configuration:** save the current configuration.
- **Save Configuration as:** save the current configuration into a new file.



Configuration Files Location

Configuration files are saved in a folder called “ConfigFiles”.

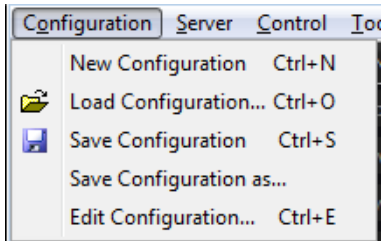


This folder is accessible with the FTP connection. See more about [FTP Server](#).

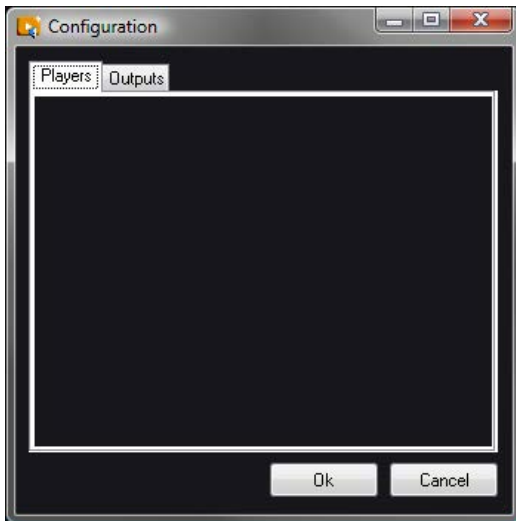
Edit Configuration

Medialon Audio Server PRO audio configuration can be edited even if you are disconnected from the MAS PRO.

- Go to Configuration menu and select Edit Configuration.



- Or use [CTRL+E] on your keyboard to open the Configuration editor.



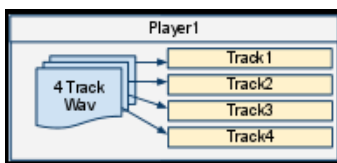
- Once your audio configuration is completed, click on Ok button to validate it.



Each time you send a configuration, MAS PRO is reset and all media are unloaded.

4.2.2 Players Configuration

A MAS PRO Player is the logical entity where audio files are loaded and played. A player is defined by one or several audio tracks corresponding to the type of recording.



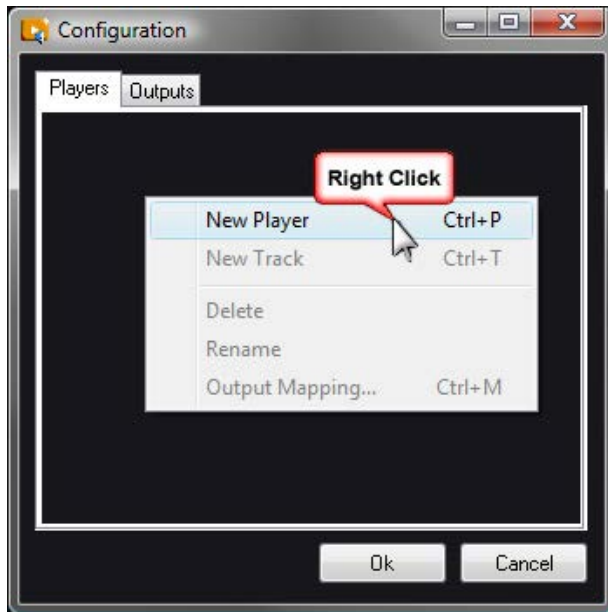
Using the Audio Server

Medialon Audio Server can host as many players as you need.

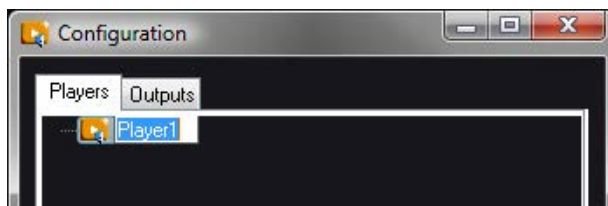
Add New Player

To add a Player in your configuration:

1. Use the right click menu or [CTRL+P] shortcut.



2. You can give a name to the player. Medialon Audio Server attributes an automatic player name based on the index in the player list.



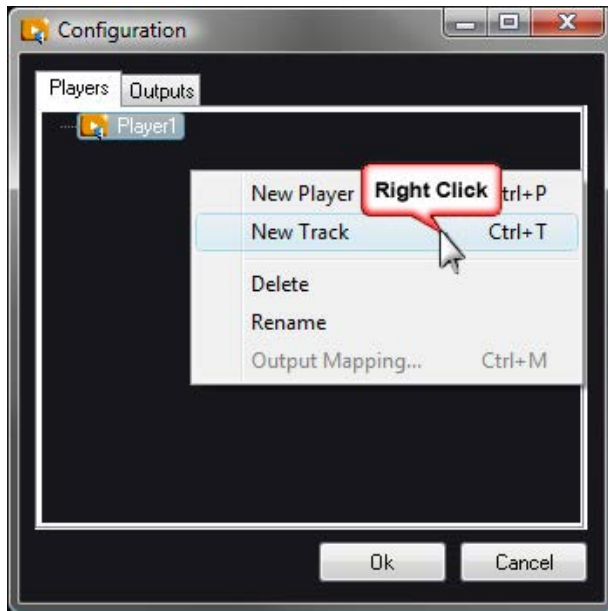
With the right click menu, you can also rename the player or delete it.

Add New Tracks

Once a player is created, you need to add one or more tracks to play the audio.

1. Select a Player
2. Use the right click menu or [CTRL+T] shortcut.

Using the Audio Server



3. You can give a name to the tracks. Medialon Audio Server attributes an automatic track name based on the index in the player track list.



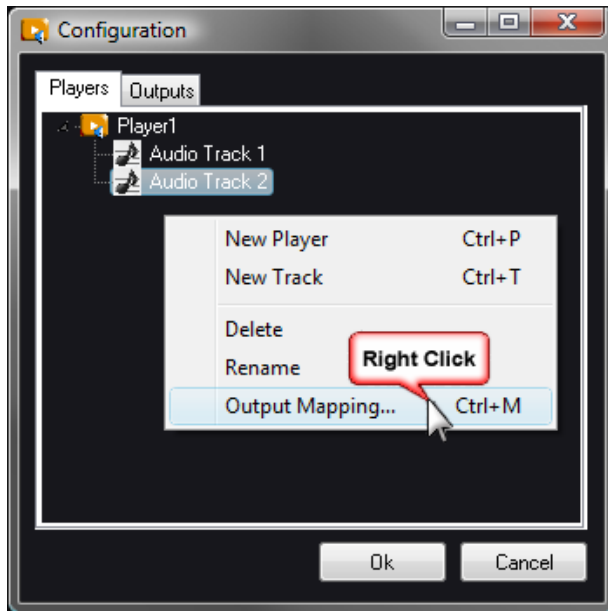
With the right click menu, you can also rename the track or delete it.

Output Mapping

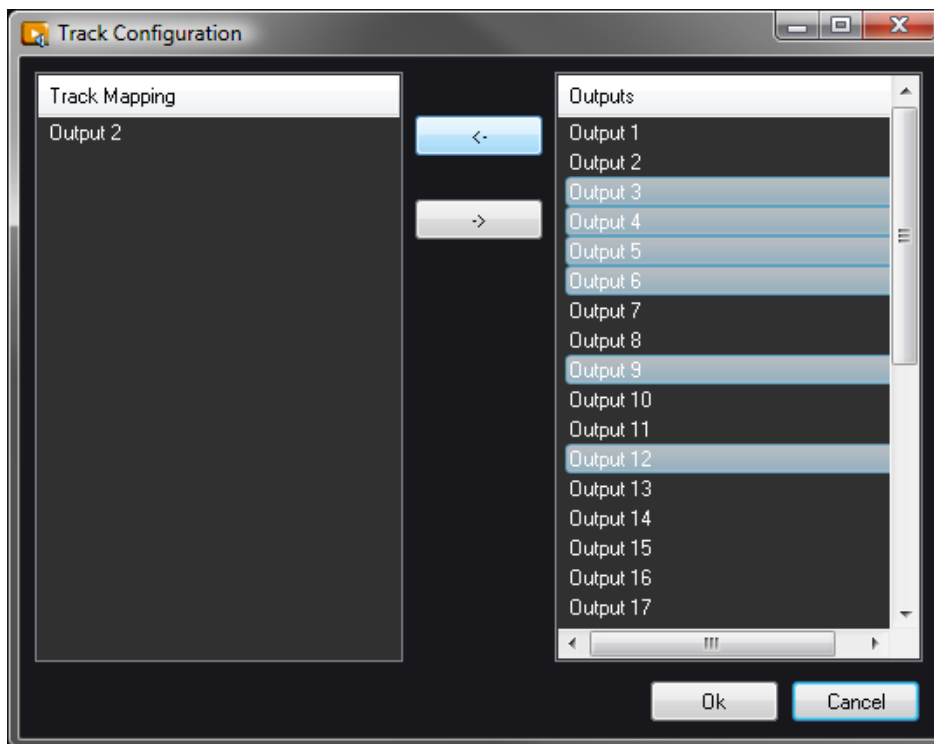
Once player and tracks are created, you need to select the physical audio outputs used to perform the audio file.


1. Select a track
2. Use the right click menu or [CTRL+M] shortcut.

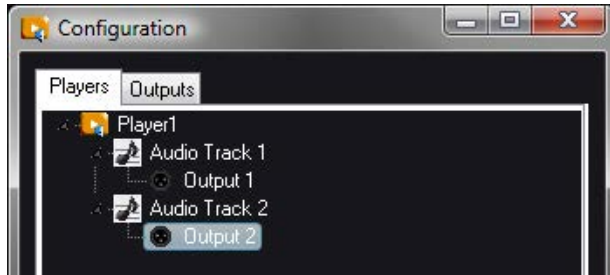
Using the Audio Server



3. Select one or several outputs in the right list.



4. Click on the Add Outputs  button to route the track to the selected outputs.
5. Click on OK to validate the output mapping. You can change the output mapping, execute step 1 and 2 as described above.

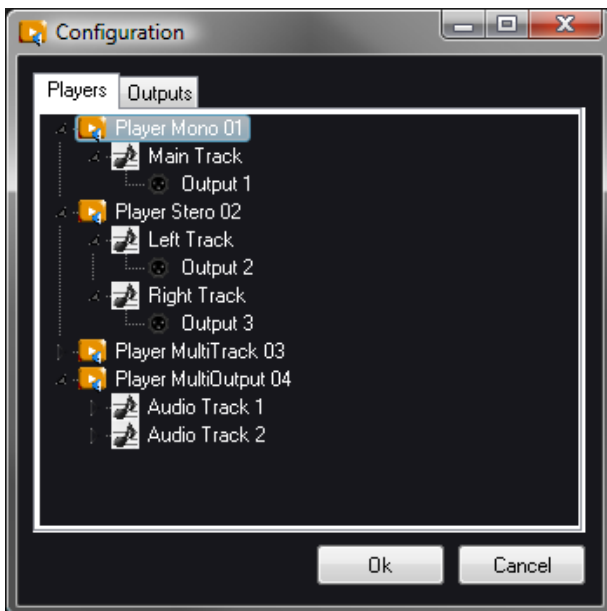


6. Select on the left list the outputs you want to remove.

7. Click on the Remove Outputs  button to unroute the track.

Players List

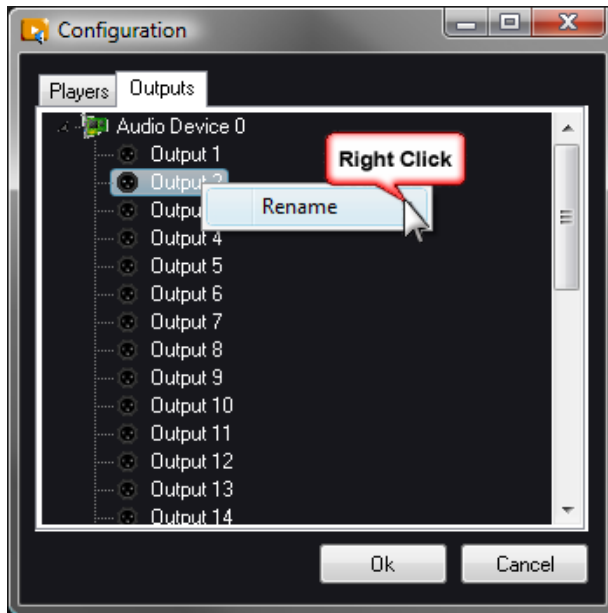
From the Players tabs, you can expand or collapse the players configuration



4.2.3 Outputs Configuration

Physical outputs can be renamed, the output mapping will be easier to do.

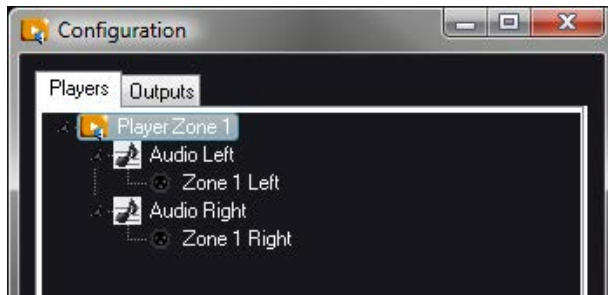
1. Select an output.
2. Right click to rename it.



3. Click on Ok button to validate the new output names.



New output names are not changed in the Player output mapping until you validate your changes.



4.2.4 MAS PRO Startup Status

Once the audio configuration of your Medialon Audio Server PRO is completed, you can also define a default status for all players. This default status will be loaded each time Medialon Audio Server PRO will power on.

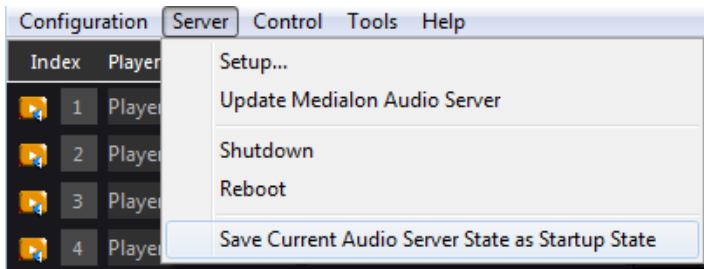
This startup status contains:

- Media file loaded or not in each player.
- Volume and Track level for each Player.
- Transport command (Play or Stop, Repeat) for each Player.
- Audio Output levels.

Using the Audio Server

Save a startup state

1. Load and start or not media files in the players
2. Set all audio levels
3. Activate the play repeat where it is needed.
4. Goto Server menu.



5. Select "Save Current Audio Server State as Startup State".



Warning! the startup state is deleted each time you send a configuration to the server.

4.2.5 Tools

The Dante Controller utility can be launched from the Tools menu in order to route the MAS Pro outputs with other external devices.

5 Remote Control

This section will teach you different ways to control your Medialon Audio Server.

5.1 Medialon Audio Client Pro

A remote client software is provided on the [Medialon website](#). This program, named Medialon Audio Client Pro allows to interact with the Medialon Audio Server from any Windows based personal computer (for example, a laptop). Basically, this software emulates the same user interface as the local Medialon Audio Server PRO user interface.

5.1.1 Client Installation

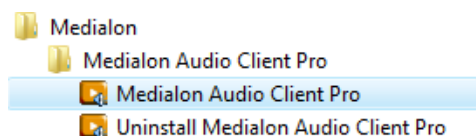
Medialon Software Products are compatible with Windows 10 (32-bit). However, they can run on Windows 64-bit platforms (Windows 10 64-bit) in 32-bit compatibility mode.

To install Medialon Audio Client Pro software:

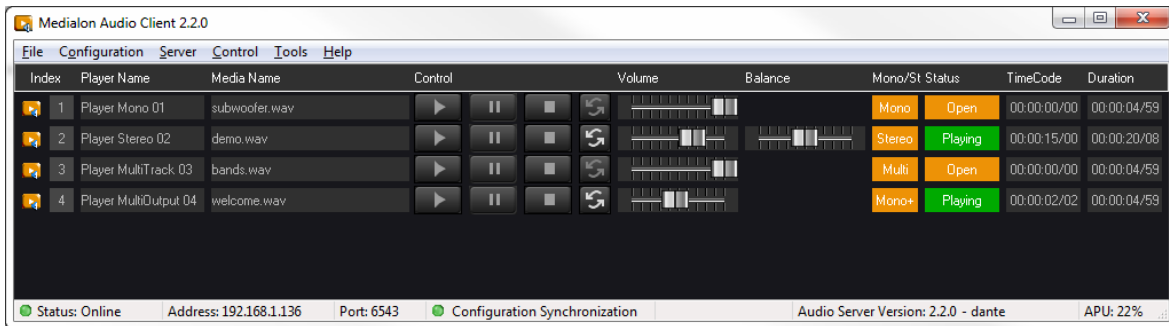
1. Launch the MedialonAudioClientPro.X.X.X_Setup.exe installer.
2. Read the Software License Agreement, then click “I accept”.
3. Click “Next” on the Welcome page.
4. Select the destination folder location and click “Next”.
5. Select the Start Menu folder for program shortcuts and click “Next”.
6. Choose to have a desktop icon and click “Next”.
7. Review your choices and click “Next” to install the program.
8. Click “Finish” to complete Medialon Audio Client Pro installation.

5.1.2 Starting Medialon Audio Client Pro

Start the Audio Client Pro from Start > Programs > Medialon > Medialon Audio Client Pro.



Remote Control

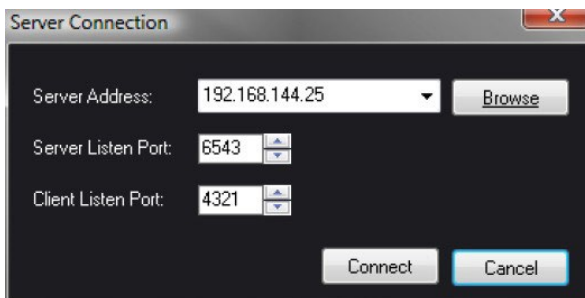
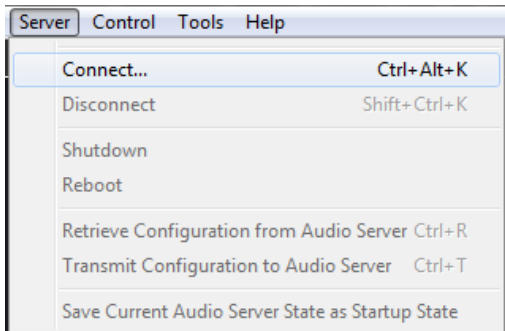


Note: If Firewall activated, there may be a message box asking to block or unblock the communication port used by the Medialon Audio Client PRO. Choose “Unblock” and click “OK”.

5.1.3 Connection to MAS Pro

Start a connection

Select “Connect” in the “Server” menu item: this will open the Server connection dialog box.



- Server Address: Enter the IP Address or computer name of the MAS Pro.
- Browse: Use this button to start a network scan and detect all MAS Pro audio servers present on the network.



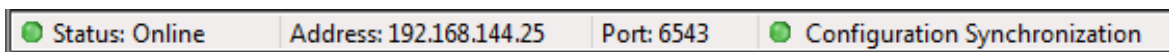
Network scan is not able to detect MAS24-96 “Legacy” models.

Remote Control

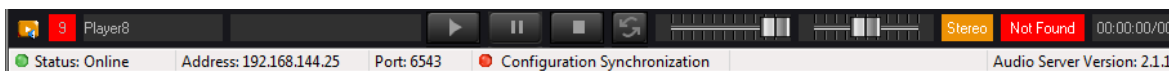
- **Server Listen Port:** Enter the IP Port used by the MAS Pro to listen to new client. Don't change this value (default is "6543") unless this setting has been modified in the MAS Pro.
- **Client Listen Port:** Enter the IP Port opened by Medialon Audio Client software to communicate with the MAS Pro. Don't change this value (default is "4321") unless this port is already used on the client computer.
- **Connect:** use this button to open the connection.

MAS PRO Connected

When connection is established, status bar will indicate if client audio configuration is synchronized with the configuration on the MAS Pro hardware.



When audio configuration is different between the server and the client, the Configuration Synchronization LED turns to red.

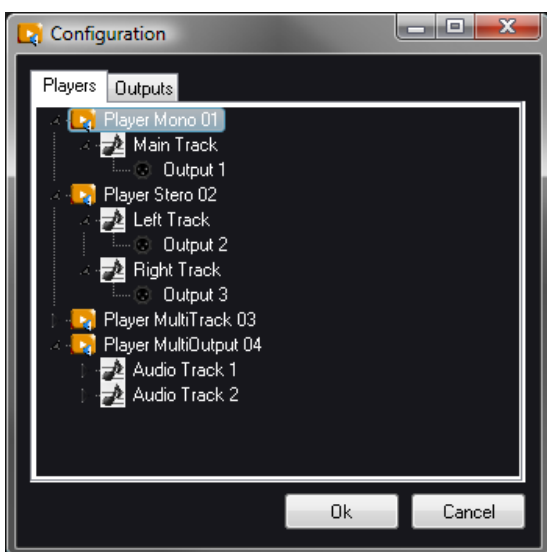


5.1.4 Setting Audio Configuration

Whether you are connected to a MAS PRO or not, the Audio configuration can be changed.

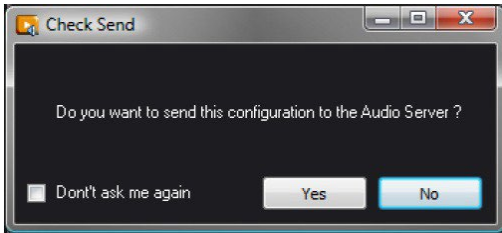
Edit Configuration

With Medialon Audio Client software you can edit the audio configuration.

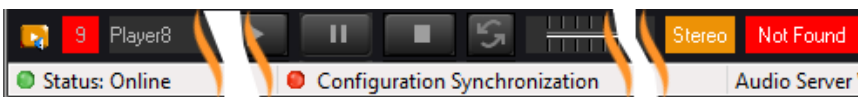


Remote Control

Even if MAS Pro is not Online, you can create a new audio configuration. See more about [Audio Configuration](#).

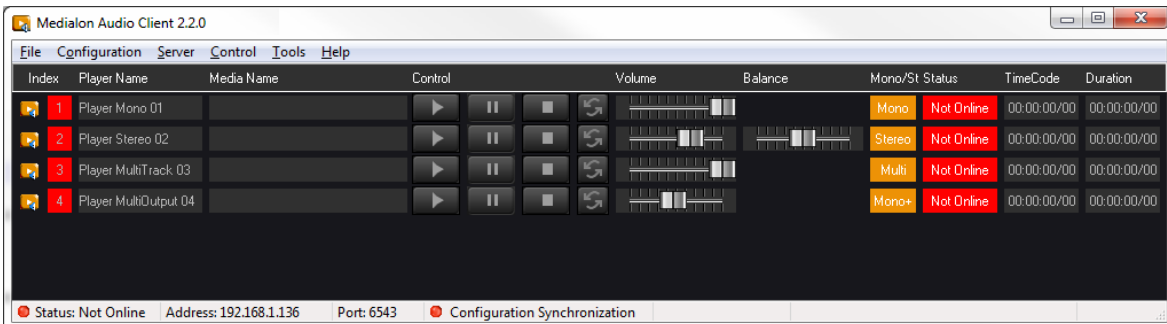


If you don't send the configuration to the server, the Medialon Audio Client software displays a non-sync configuration.



When a player name does not match with the current server configuration, player status turns to “Not Sync”.

You can also work on the audio configuration offline.



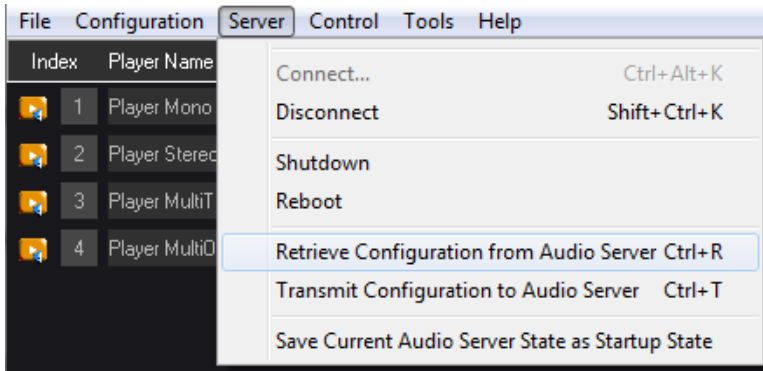
Configuration Synchronization

After any change in the audio configuration, the server and the client are desynchronized.

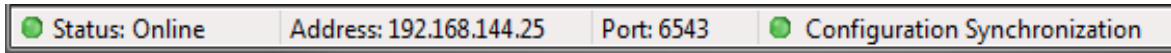


From this state you can execute a synchronization in one direction or the other.

- Go to Server menu.



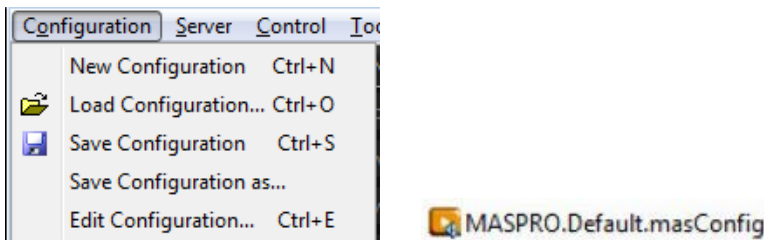
- Select 'Retrieve Configuration ...' to synchronize your client.
- Select 'Send Configuration ...' to push the Medialon Audio Client software's configuration to the MAS Pro hardware.



Configuration Synchronization LED turns to green when Client and Server are in sync.

Configuration Files

The MAS Pro audio configuration can be saved as files.

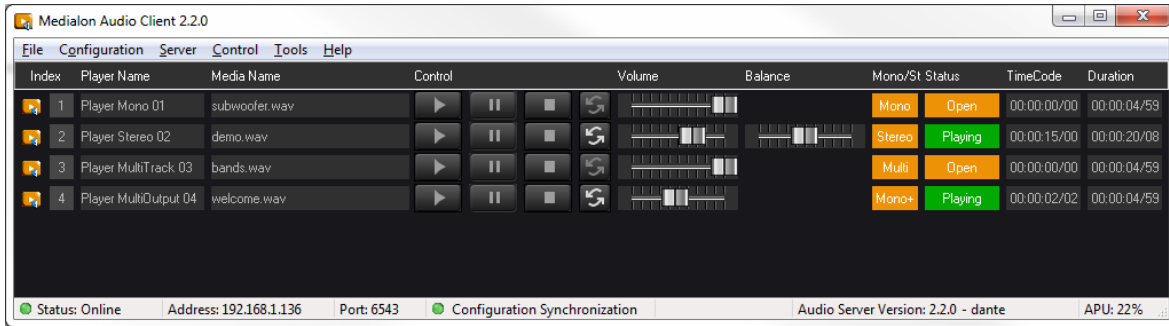


In this way you can keep a copy of your different configurations in your Client host PC.

5.1.5 Using Medialon Audio Client software

At startup Medialon Audio Client software automatically connects to the last specified MAS Pro and retrieves its audio configuration.

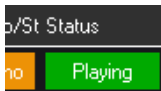
Remote Control



The Medialon Audio Client software replicates the main window and the player bars of the MAS Pro's local interface. See more about [MAS Pro Interface](#).

Status

This text box shows the status of the Player:



Different Player Status are:

- Idle: no media file has been loaded on this Player since MAS Pro was powered up.
- Open: a media file is loaded on this Player.
- Closed: the media file couldn't be loaded. Playing: the media is playing.
- Paused: the media is paused
- Stopped: the media is stopped
- Not Online: the MAS Pro is not online.
- Not Sync: the MAS Pro Audio Configuration is not synchronized. Configuration Synchronization LED is also red to indicate this Not Sync status.



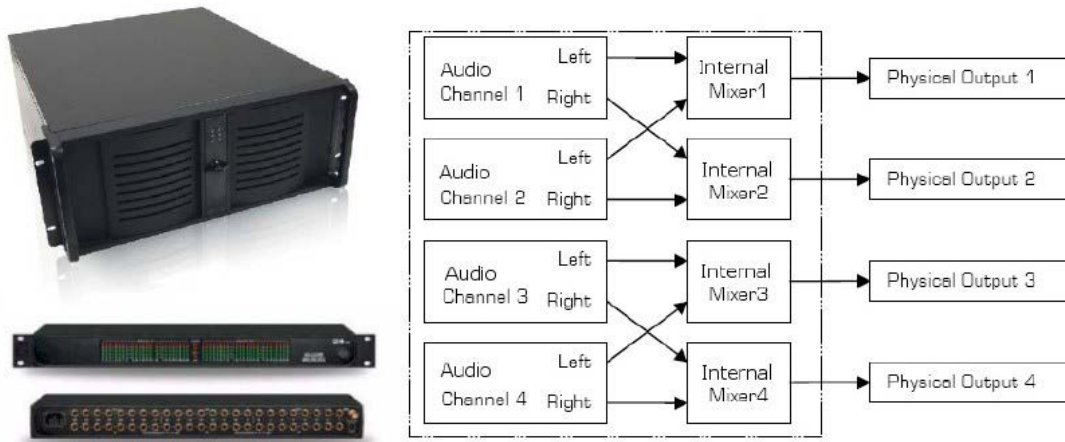
Load media file and volume adjustment can only be done when Medialon Audio Client PRO is connected to a MAS.

5.1.6 Controlling Medialon Audio Server (MAS 24-96)

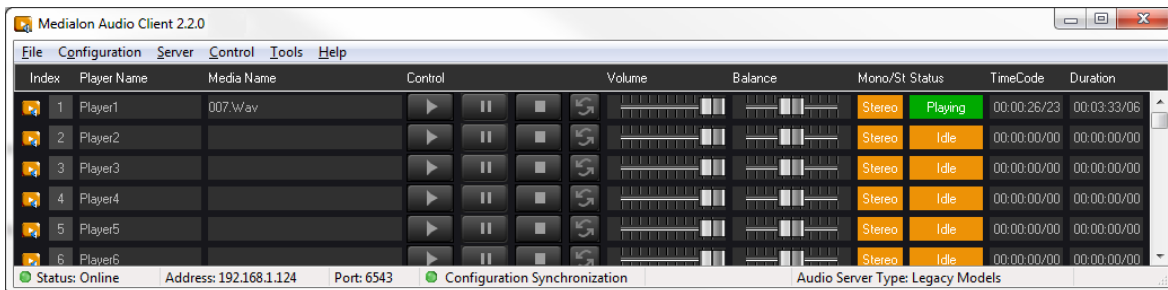
It is possible to use Medialon Audio Client software to control a Medialon Audio Server first generation.

MAS 24-96 Configuration

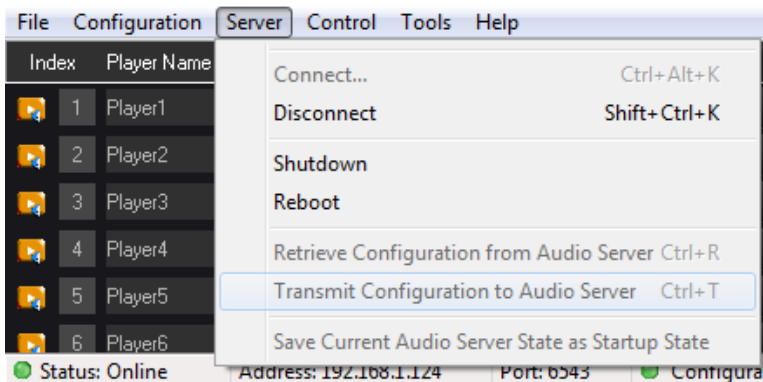
With these models the audio configuration is static (24/48/72/96 audio outputs), when Medialon Audio Client software is connected to one of these models, a Legacy Models configuration is automatically loaded.



This legacy configuration gives access to 96 stereo players mapped to a pair of outputs.

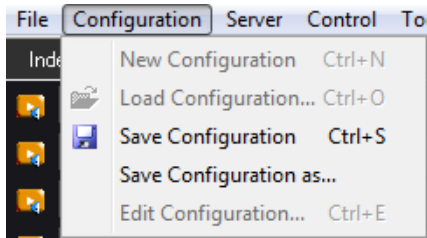


It is not possible to retrieve or to transmit another configuration to the MAS (legacy version).



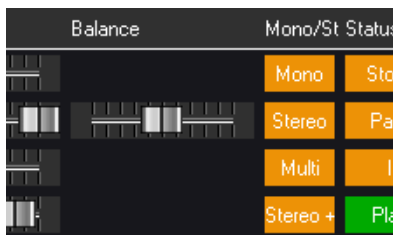
Remote Control

Players cannot be edited, and Player details are not available. there is no track audio level in this configuration.



Mono/Stereo and Balance

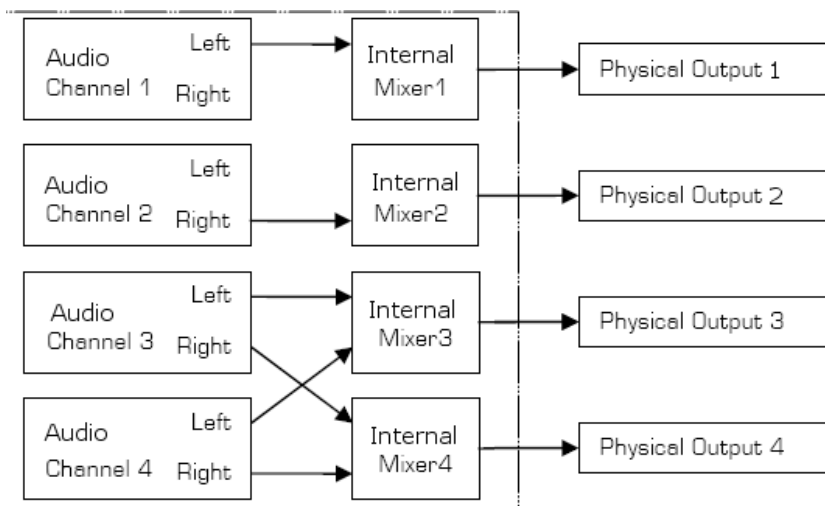
Stereo Players can be used as Stereo or Mono channel.



Click on the Mono/Stereo control to switch between mono or stereo mode.

In stereo mode, the Balance slider sets the balance between the physical left and right outputs of the Audio Channel.

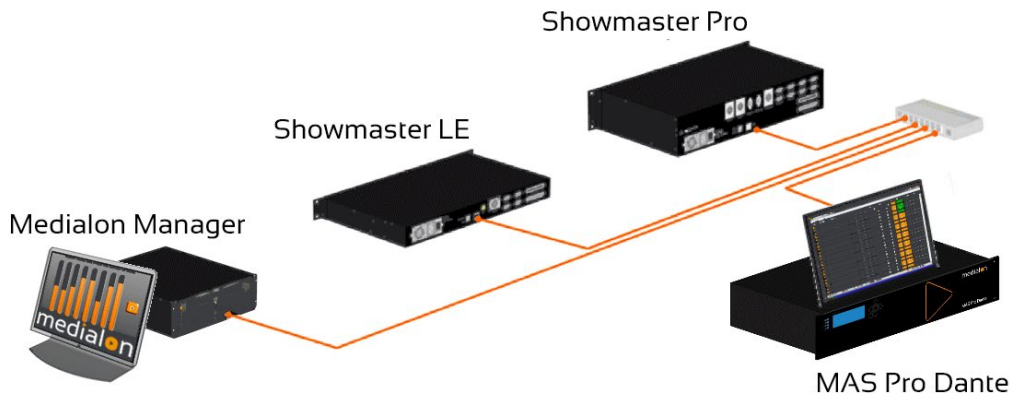
For example: the Audio Player with an ID of 3 will route its audio to physical outputs 3 and 4.



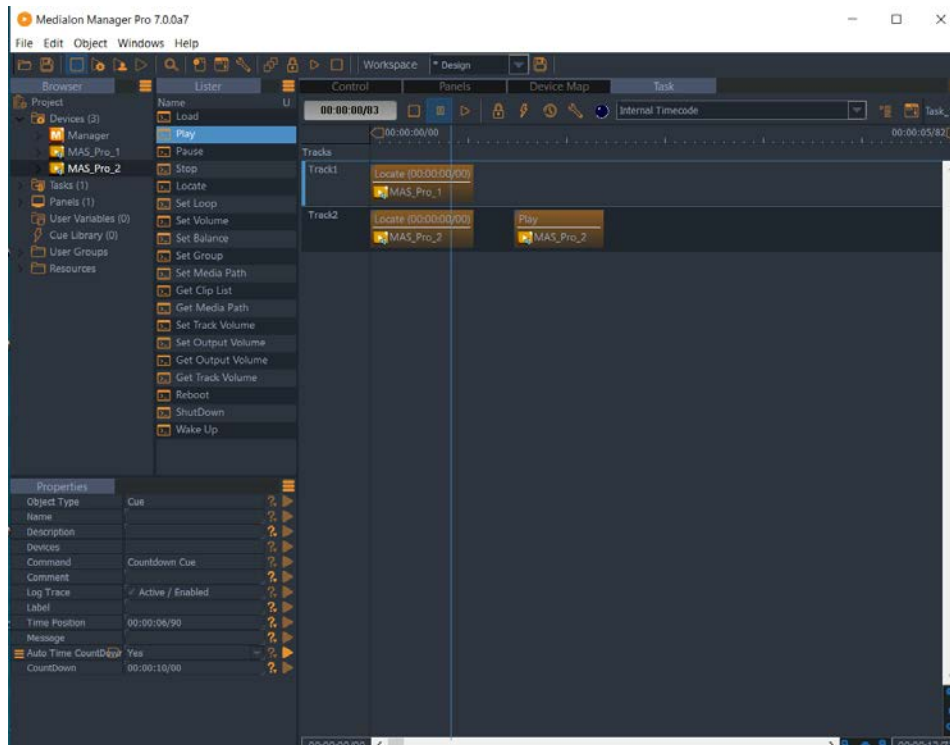
In Mono mode, the Balance slider is not shown, and the audio signal is routed to the same physical output as the Audio Player ID.

5.2 Medialon Control System

MAS Pro can be controlled remotely from Medialon Showmaster hardware or Medialon Manager show control software.

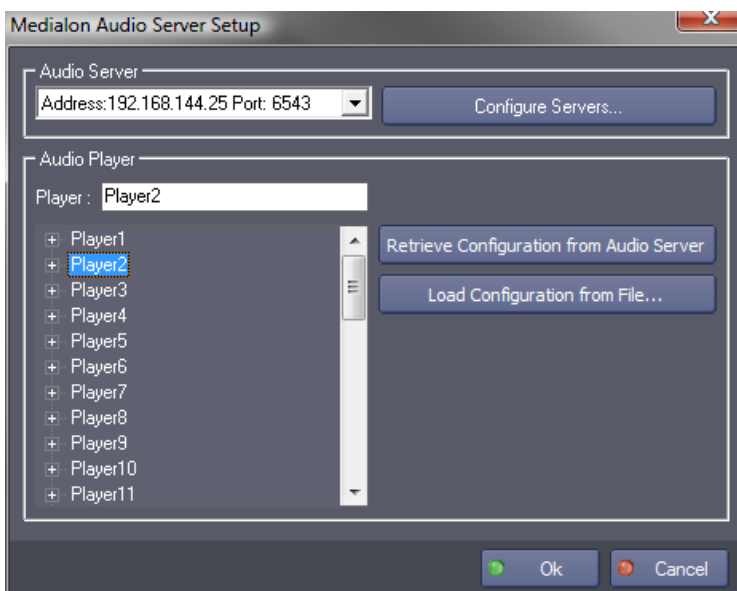
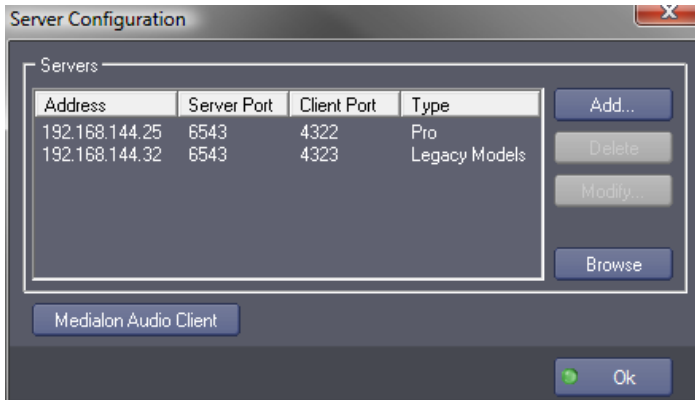


Medialon Control System software controls audiovisual devices through the use of a software plug-in called MxMs. The MxM for Medialon Audio Server fully integrates one or more MAS Pro servers in a show installation.



Remote Control

Audio Players are declared as Medialon Devices.



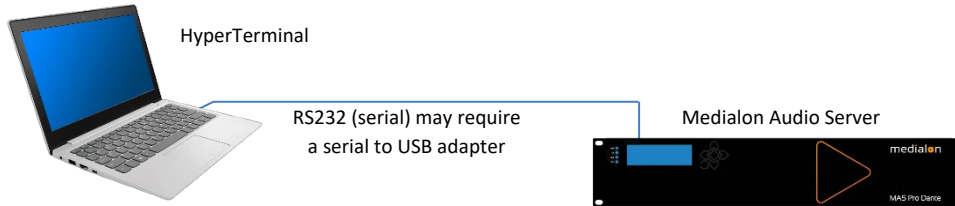
The list of available Players can be retrieved from the MAS Pro.

Medialon Control System offers the capability to create group of players to insure the synchronous execution of a command for this group of players. Several commands like Play, Pause, Stop, Locate are concerned. For more about MxM Medialon Audio Server see the Medialon Control System user manual.

To discover the power of Medialon Control System, visit the [Medialon website](#).

5.3 Serial External Control

MAS Pro is designed to be controlled remotely from another system by using serial connection.



Connect an RS232 cross cable to the SERIAL port on the rear of MAS Pro and use HyperTerminal for external commands.

RS232 Wiring Diagram

PC (sub D9 F)	Pin		Pin	MAS Pro (sub D9 F)
TxD	2		3	RxD
RxD	3		2	TxD
GND	5		5	GND

Refer to the [RS232 Protocol](#) for command details.

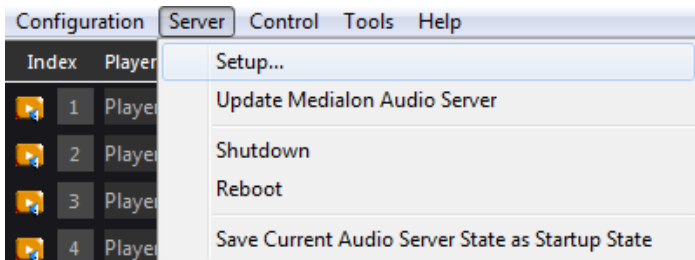
6 Maintenance

In this section, you will learn how to maintain your MAS Pro audio server.

6.1 Medialon Audio Server Setup

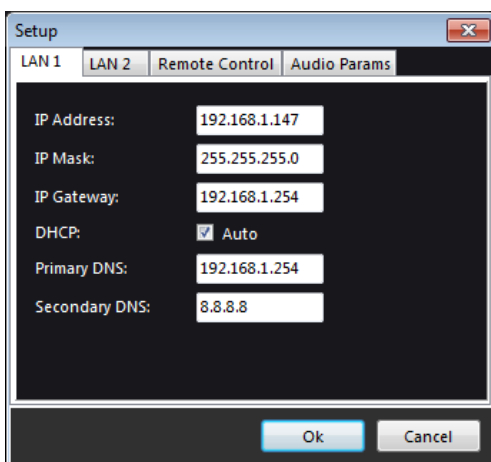
MAS Pro settings are changed locally on the MAS Pro hardware. Remote Medialon Audio Client software cannot change the system setup.

Clicking on the “Server > Setup...” menu item displays the Setup dialog box which allows to set up various system parameters of the MAS Pro.



6.1.1 LAN 1

It is recommended to plug the LAN 1 on the Audio network (Dante) in order to use the Dante controller utility. MAS Pro is configured to use DHCP to get its IP address. If your network installation has no DHCP server or requires another IP address, open the Setup menu and change the Network settings.



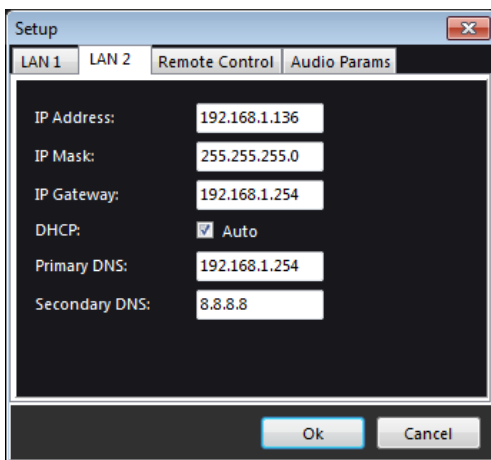
- **IP Address:** defines the network address of the MAS Pro. You may need to modify it if the default IP Address doesn't match your network configuration.
- **IP Mask:** defines the network subnet the MAS Pro belongs to.
- **IP Gateway:** defines the network gateway.
- **DHCP:** use DHCP for automatic IP address.
- **Primary DNS:** only required if you want your MAS Pro to access the Internet (not recommended)
- **Secondary DNS:** only required if you want your MAS Pro to access the Internet (not recommended)



Network settings should be changed with caution, improper settings may cause a malfunction of the MAS Pro.

6.1.2 LAN 2

LAN 2 should be used for remote control. It is better to separate the remote control network and the Audio network (Dante). MAS Pro is configured to use DHCP to get its IP address. If your network installation has no DHCP server or requires another IP address, open the Setup menu and change the Network settings.



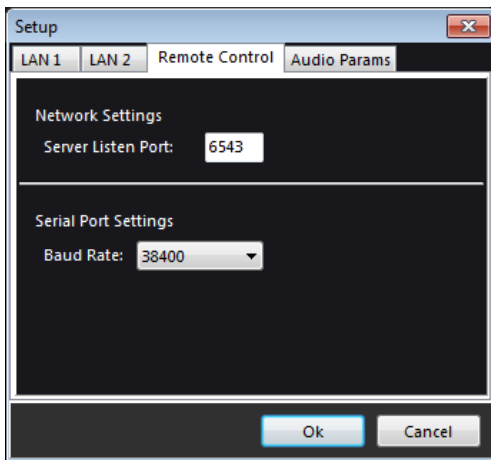
- **IP Address:** defines the network address of the MAS PRO. You may need to modify it if the default IP Address doesn't match your network configuration.
- **IP Mask:** defines the network subnet the MAS PRO belongs to. **IP Gateway:** defines the network gateway.
- **DHCP:** use DHCP for automatic IP address.
- **Primary DNS:** only required if you want your MAS Pro to access the Internet (not recommended)

- **Secondary DNS:** only required if you want your MAS Pro to access the Internet (not recommended)



Network settings should be changed with caution, improper settings may cause a malfunction of the MAS Pro.

6.1.3 Remote Control



Network Settings

MAS Pro can be controlled remotely by using the Medialon Audio Client software or the mxmMedialonAudioClient.

- **Server Listen Port:** this value doesn't need to be modified unless a special configuration of your network doesn't allow this port. The default value is 6543.

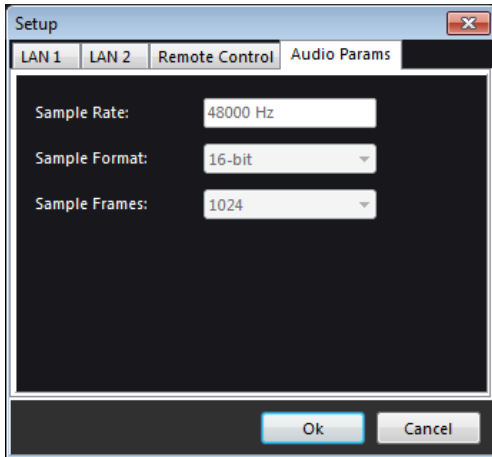
Serial Port Settings

MAS Pro can be controlled through its SERIAL port and a RS232 communication.

- **Baud Rate:** select speed of communication.

6.1.4 Audio Parameters

In this section, you set the type of audio files used with MAS Pro.



- **Sample Rate:** The sample rate is fixed at 48kHz for the audio files.
- **Sample Format:** defines the quality of the sound played by the MAS Pro. By default, sample format is set to 16 bits. To obtain the best audio quality, you can use 24 bits audio files and configure MAS Pro to 24 bits format (24 bit format is only applicable to MAS Pro DC models).
- **Sample Frames:** defines the size of the audio buffer. This parameter is reserved to expert, the default value (1024) covers all typical installations.



Any change in Audio Parameters will reboot the MAS Pro.

6.2 Updating Medialon Audio Server

This section helps you upgrade the software on your MAS Pro.

Download the latest Medialon Audio Server from the [Medialon website](#).

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Language: English

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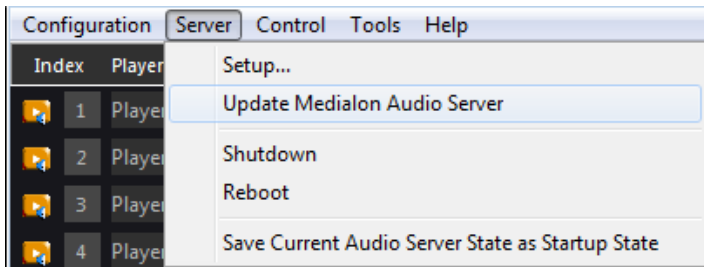
- Download the Medialon Audio Server Firmware Update Package
- Unzip “MedialonPackage_Sx.x.x_Cx.x.x.zip” file at the root of a USB disk.
- Insert the USB disk into the MAS Pro



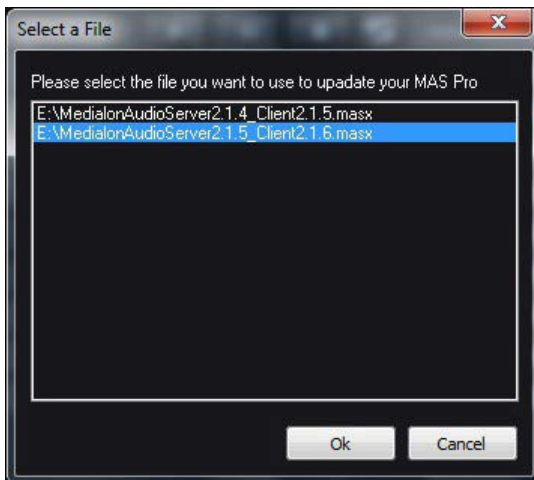
For more information about MAS Pro updates, contact your dealer

6.2.1 Method for MAS Pro Client 2.1.6 / Server 2.1.5 and greater

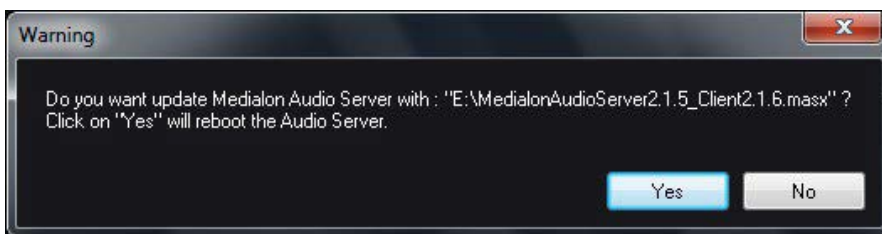
1. Select Server > Update Medialon Audio Server menu.



2. Select Medialon Audio Server firmware (.masx) you want to install (this is showing the USB drive).



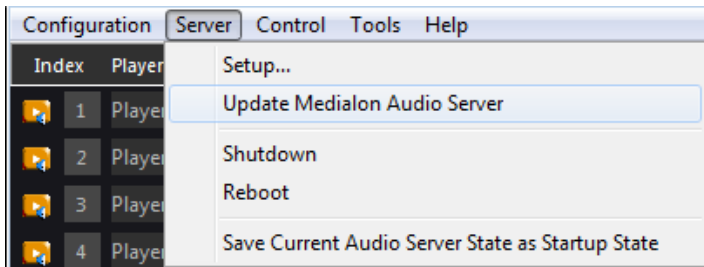
3. Start the update.



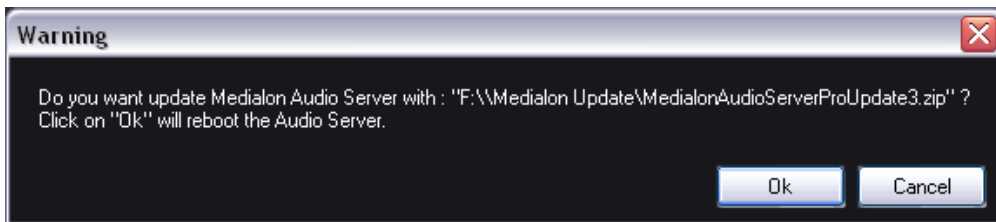
4. MAS Pro closes its main interface, executes the update and then reboots to complete the update.

6.2.2 Method for MAS Pro Client 2.1.5 / Server 2.1.4 and earlier versions

1. Select Option > Update Medialon Audio Server menu.

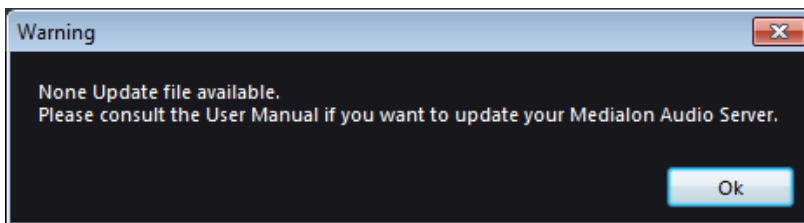


2. Start the update. MAS Pro looks for a “MedialonAudioServerXXX.ZIP” file in a folder named “Medialon Update” at the root of a USB disk.



3. MAS Pro closes its main interface, executes the update and then reboots to complete the update.

If any valid update file is not detected, a warning message is displayed.



7 References

7.1 Specifications

7.1.1 Rack Mount

WARNING – The unit is intended to be rack mounted as per applicable requirements so no imbalance likely to occur and adequate clearance is to be provided so ambient temperature does not exceed the limit. Please see [Mandatory Safety Rules and Precautions](#) section.

Installation

Note: You need a #2 Phillips screwdriver for rack mount installation. Complete the following steps to mount devices in a rack:

- Remove the rack mount kit from the shipping carton. The kit contains two L-shaped mounting brackets and four sink-head screws. The rack ears may be attached prior to shipping.
- Using a Phillips screwdriver, attach the mounting brackets to the sides of the device using four sink-head screws.
- Using a Phillips screwdriver, mount the device in the rack using four rack-mounting screws.

7.1.2 MAS Pro Hardware

Hardware Specification

- **Storage:** SSD with 256 GB of storage

System

- **CPU:** Intel® Core i3-7101E processor
- **System Chipset:** Intel C236
- **Memory:** 4 GB DDR3 2666 MHz
- **H/W Status Monitor:** Monitoring temperatures, voltages, and cooling fan status. Auto throttling control when CPU overheats

References

Display

- **Chipset:** Intel C236 chipset supports 3 displays (2x DisplayPort 1.2, 1x HDMI 1.4, 1x DVI-D)

Ethernet

- **LAN1:** Gigabit LAN
- **LAN2:** Gigabit LAN
- Wake on LAN supported

Mechanical & Environment

- **Rack** 19'' xU
- **Power Type:** 12 volts DC, 7 amps max
- **Operating Temperature:** 32°F – 104°F (0°C – 40°C)
- **Storage Temperature:** -4°F – 185°F (-20°C – 85°C)
- **Operating Humidity:** 10 – 80% RH non-condensing
- **Storage Humidity:** 5 – 90% RH non-condensing
- **Operating Altitude:** sea level to 2000 meters

Power

- **External Power Adapter** EDACPOWER ELEC
- **Model** EA10523C-120
- **AC Input:** 100-240 V AC – 1.8 A, 50-60 Hz
- **DC Output:** 12 V DC 7 A
- **Connector:** DC-Jack

Approvals

- FCC 47 CFR Part 15 Subpart B
- ICES-003 Canada
- EN 55032
- IEC 61000-3-2 & IEC 61000-3-3
- EN 55024

References

- IEC-61000-4-2 & IEC-61000-4-3 & IEC-61000-4-4 & IEC-61000-4-5 & IEC-61000-4-6 & IEC-61000-4-11
- IEC/EN/ UL 62368-1
- CSA C22.2#62368-1
- IEC 60950-1
- STL

Dante Output

- **Type:** Gigabit Ethernet interface
- **Connector:** RJ45
- **Precision:** 16 or 24 bit
- **Sample Rate:** 48 kHz
- **Latency:** 1 ms, 2 ms, 5 ms

Signal Processing

- **DSP Texas Instruments** TMS320C6713@300 MHz
- **Memory:** 8 MB
- **Audio Formats:** 16-, 24-bit signed PCM

Software Specification

- Medialon Audio Server V2
- Windows 10 Enterprise LTSC

FTP Server

- **FTP address:** MAS Pro IP address
- **FTP Port:** 21
- **Login username:** medialon
- **Login password:** medialon
- **Root folder:** Audio files storage
- **Sub folder:** "ConfigFiles": Configurations files storage

7.1.3 Audio File Format

WAV file format: 16 bit or 24 bit /48KHz

7.2 Dante

Dante is a combination of software, hardware, and network protocols that deliver uncompressed, multi-channel, low-latency digital audio over a standard Ethernet network. Developed in 2006 by a Sydney-based company named Audinate, Dante builds and improves on previous audio over Ethernet technologies, such as CobraNet® and EtherSound. Like most other audio over Ethernet technologies, Dante is primarily for professional, commercial applications. Most often, it is used in applications where a large number of audio channels must be transmitted over relatively long distances or to multiple locations.

Dante provides several advantages over traditional analog audio distribution. Audio transmitted over analog cables can be adversely affected by signal degradation due to electromagnetic interference, high-frequency attenuation, and voltage drop over long cable runs. Thanks to digital multiplexing, the cabling requirements for digital audio distribution are almost always reduced when compared to analog audio. Dante also provides specific advantages over first-generation audio over Ethernet technologies, such as CobraNet and EtherSound. Technological advancements include the ability to pass through network routers, native gigabit support, higher channel count, lower latency, and automatic configuration.

7.2.1 Dante Overview

Dante Terminology

- **Transmit (Tx) channel:** A transmit channel transmits audio from the audio hardware onto the network.
- **Receive (Rx) channel:** A receive channel receives audio from the network and sends it to the audio hardware.
- **Flow:** Dante audio routing creates flows. Each flow carries several channels of audio from a transmitter to one or more receivers. Unicast routing creates flows to single receivers. Multicast routing creates flows that can be received by multiple receivers. Multicast flows are assigned IDs enabling them to be identified in Dante Controller.
- **Unicast routing:** Unicast flows are point-to-point from a single transmitter to a single receiver. Unicast flows typically have room for 4 channels of audio.
- **Multicast routing:** Multicast flows are one-to-many from a single transmitter to any number of receivers. Unlike unicast routing, multicast flows consume network bandwidth even if there are no receivers, but do not require additional bandwidth to add more receivers.

Network recommendations

Make certain that your network is using good quality components and is running Gigabit throughout. This helps reducing latency and increases bandwidth flexibility.

As a rule of thumb, a separate dedicated Dante network is recommended for critical, high channel-count applications.

Audio Formats

Different Dante devices may support different audio formats. Most Dante devices support either 48 kHz 24-bit PCM or 96 kHz 24-bit PCM. Some devices can be switched between 48 kHz and 96 kHz, but will not support both at once.

It is only possible to set up a route between channels which have a common audio format. Channels having incompatible formats will not be routable.



Note: The MAS Pro Dante Audio Format is 48 kHz 16-bit ('D' and 'DC' models) or 24-bit ('DC' models only).

Flows

Dante audio routing creates 'flows'. Each flow carries one or more channels of audio from a transmitting device to one or more receiving devices. There are two types of flow, unicast and multicast.

Unicast routing creates flows to a single receiving device; a unicast flow typically assigns space for 4 channels of audio. Unicast flows are setup when a receiver subscribes to an available audio channel and are automatically removed when the receiver unsubscribes from all channels in that flow.

Multicast routing creates flows that can be received by multiple receivers. Multicast flows are assigned IDs enabling them to be identified and to facilitate their removal. In contrast to unicast flows, multicast flows must be set up on the transmitting Dante device before receivers can subscribe to these flows.

Advanced Routing: Using Multicast

Dante routing is unicast by default. This means that a separate flow is set up between each transmitter and receiver. If several receivers are all subscribed to the same channels of a transmitter, it may sometimes be more efficient to use multicast.

Multicast sends the same set of channels to multiple receivers. In practice, this usually means that the audio flow is flooded throughout the network. If many receivers want the same channels,

References

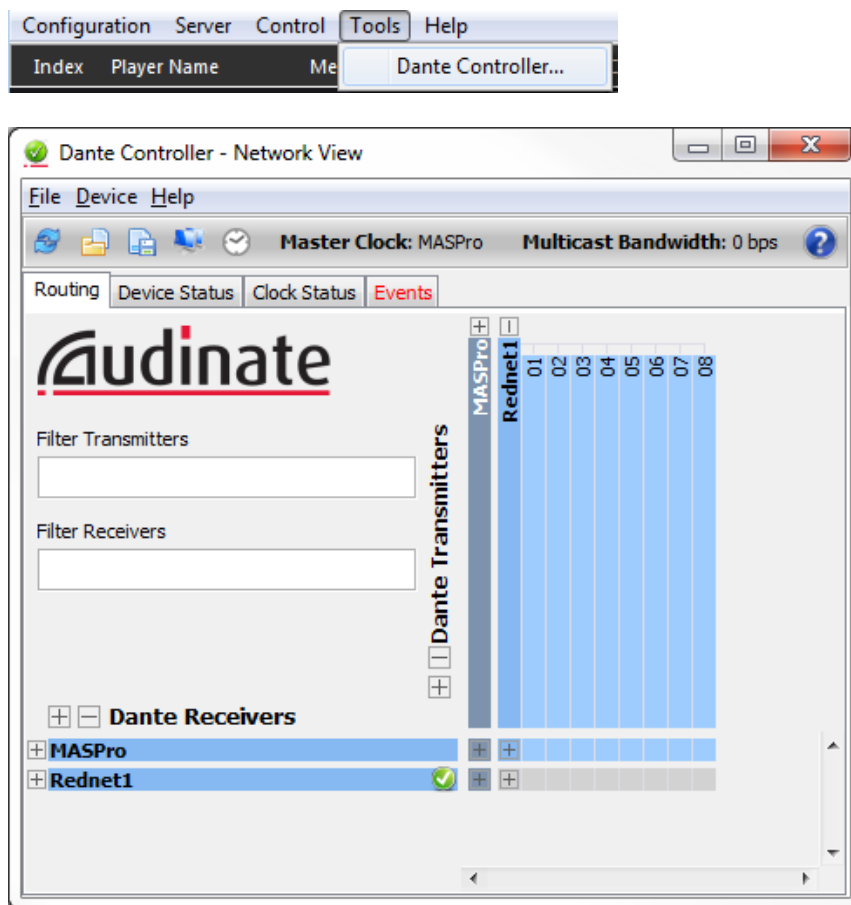
using multicast can reduce overall network use, especially on the transmitter, because only one copy of each audio channel needs to be sent, rather than many.

Dante receivers will automatically prefer multicast to unicast if it is available. This means that if a new multicast flow is created containing the channels that a receiver is currently receiving as unicast, the receiver will switch over to receiving audio from the multicast flow and the unicast flow will be removed.

7.2.2 Dante Configuration

MAS Pro is made with 1 Dante Port or Device. Its Dante configuration is done by using Dante Controller utility which can be downloaded from [Audinate website](#).

This utility is also installed on MAS Pro and it can be opened from the Tools menu.



Dante Controller is a software application provided by Audinate which allows users to configure and route audio around Dante networks.

It is available for PCs running Windows 7, 8 and 10, and Apple Macs running OS X 10.6.8 or newer.

References

Once you install Dante Controller on your PC or Mac and connect it to a Dante network, you can use Dante Controller to:

- View all Dante-enabled audio devices and their channels on the network
- View Dante, enabled device clock and network settings
- Route audio on these devices, and view the state of existing audio routes
- Change the labels of audio channels from numbers to names that suit you
- Customize the receive latency (latency before play out)
- Save audio routing presets
- Apply previously saved presets
- View and set per device configuration options including:
 - Changing the device name
 - Changing sample rate and clock settings
 - Viewing detailed network information
 - Access the device web page to upgrade firmware and license information (where supported)
 - Identify a device for example by flashing LEDs (where supported)

Audio Routing

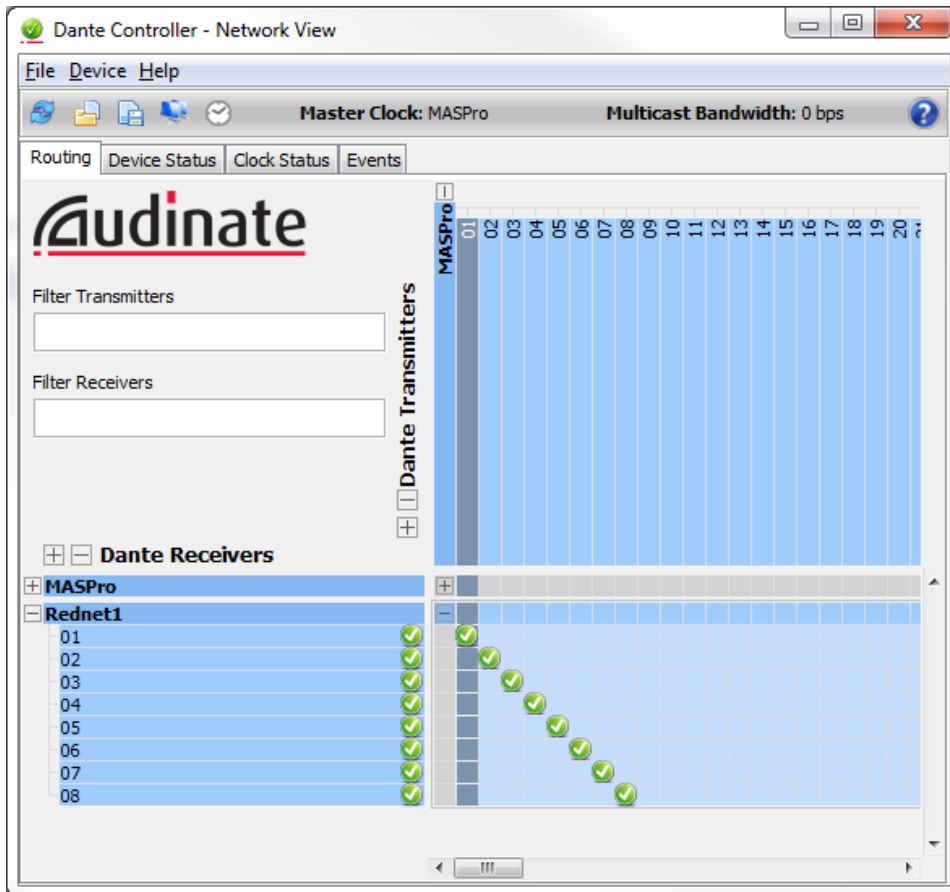
When Dante Controller is started, it always displays the Routing Tab within the Network View. In this view the network is shown in the form of a grid. Devices with Tx channels are displayed along the top row of the grid, and those with Rx channels are displayed along the left-hand column of the grid. Initially a collapsed view is presented; individual channels cannot be seen.



Note: If a device name is shown in red, it means Dante Controller has automatically detected an error condition. Double-click the device name to see more information.



Note: If a device has Tx and Rx channels, it is shown both along the top row of the grid and also along the left-hand edge.



Even if MAS Pro is detected as a receiver/transmitter in Dante controller, only the transmitter part is really available. MAS Pro Dante inputs should not be routed.

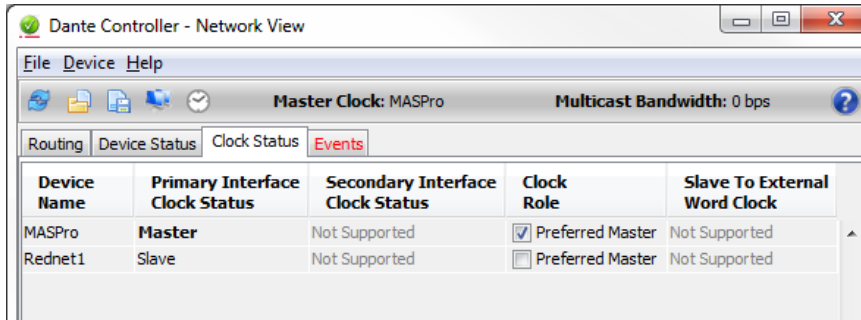
Clock Source Configuration

All Dante-enabled devices use the IEEE 1588 Precision Time Protocol (PTP) across the network to synchronize their local clocks to a master clock, providing sample-accurate time alignment throughout the network.

One Dante device will be elected as the PTP Master Clock for the network; all other Dante devices act as a PTP Slave Clocks to the elected master clock. Although many Dante devices may be capable of becoming PTP Master Clock, only one device will win the election. Devices with clock inputs (e.g. word clock or AES3) will be preferred in the election process. A gigabit connected device is preferred over a device connected via 100Mbps. A tie-breaker rule of the lowest MAC address is used if several equivalent candidate master clocks are available. The election process may be overridden by manually setting 'PTP Preferred' master on a device.

References

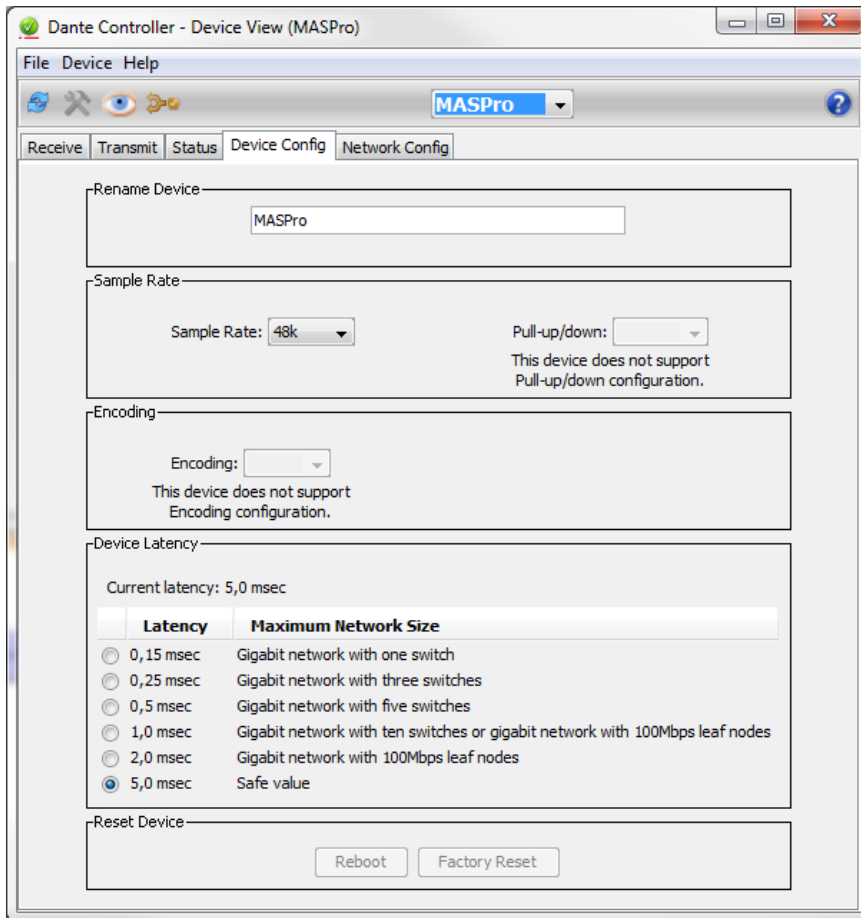
The MAS Pro Dante 'DC' model provides a high-quality on-board word clock, that means that the MAS Pro can be configured as preferred Master Clock on the Dante Network if needed.



Latency

In Dante, variation in latency in the network is compensated for at the receiver. Each receiver has an Rx latency setting. This setting defines the latency between the timestamps on the incoming audio samples and when those samples are played out.

The typical default latency for a Dante device is 1ms. This is sufficient for a very large network, consisting of a Gigabit network core (with up to 10 hops between edge switches) and 100 Mb links to Dante devices. Smaller, Gigabit-only networks can use lower values of latency (down to below 0.2 ms). We recommend setting the latency at 5 ms, which is safer.



Note: The minimum latency available for a device connected to a 100 Mbps network port is 1 ms.

7.3 RS232 Protocol

7.3.1 Overview

The MAS Pro ASCII control protocol is a client/server protocol. Requests are always initiated by the client and the server must reply to the client requests. There's no concept of 'event' messages which would be sent by the server without a request.

The underlying transport protocol is ASCII over a serial link (RS232) although the protocol itself is independent of the physical transport protocol.

RS232 Communication parameters

Parameter	Data
Baud rate	38400 to 115200 baud
Databits	8
Parity	No
Stopbits	1
Flow control	None

General message format

Syntax

A command is made of:

- A verb
- Zero, one or more parameters separated by commas and enclosed by brackets.

Example: "PLAY(2)"

A single command message is made of a command followed by a carriage return (0x13) or a line feed (0x0A).



Note: the verb is not case sensitive: that is "OpenMedia" is the same as "OPENMedia". Space characters (SPACE or TAB) are allowed:

- between verb and left brackets
- between parameters and separators (brackets and comma).

Example: "OPENMEDIA (2, testmedia.wav)\n".

However, reply messages returned from the server are guaranteed not to contain any spaces between verb, left brackets, parameters and right brackets.

A message can be made of one or more commands. Commands must be separated by one or more space character(s). The end of the message is delimited by a carriage return (0x0D or \r) or a line feed (0x0A or \n).

Example: "PLAY(2) STOP(4)\r"

Messages returned by the server always contain only one reply for each command.

References

Time values sent by the client are expressed either:

- as timecode string in hundredth of seconds format.
Example: "00:01:00/52" means one minute and 52 hundredth
- as time in milliseconds
Example: "60520" means one minute and 52 hundredth.

Each verb has shortcut in order to optimize communication throughput and/or ease typing the command on a terminal. See detail command description.

Example: "PLAY(2)" or "PL(2)" commands are equivalent.

Server Response

When MAS Pro receives a "command only" message. It sends back the command message, If the command is correctly formatted.

Example: Send a play command to Player #2:

- Client sends: PLAY(2)
- The server replies: PLAY(2).

When MAS Pro receives a "get information" message, the server sends back the requested information preceded by the same verb as the request message.

Example: In order to get the status of Player #4:

- Client sends: GETSTATUS(4)
- Server replies: GETSTATUS(4,3,00:05:23/45)

Error management:

If the command syntax is incorrect, the server sends back an error message followed by the incoming command.

Example: send a play command to Player #212 (which doesn't exist):

- Client sends: PLAY(212)
- The server sends back: Error(Invalid Channel) PLAY(212)

Note that no error is notified if the command syntax is correct, but the required action couldn't be performed depending upon the current state of the server.



The only exception is the OpenMedia() command which returns a “File Not Found” error if the specified media is not in the media directory.

It is allowed to send a command to the server before receiving the reply of the server for the previous command.

Group of Players

To ensure the synchronous execution of a command for a group of Players, several commands like Play, Pause, Stop, support multiple Players.

Example: PLAY(1,4,9,10) can be used to start playing Players 1, 4, 9 and 10 in sync.

7.3.2 Commands



Command shortcuts are shown within brackets.

Transport

PLAY

Send a Play to the specified Player(s).

Client sends:

Field	Value
Command	PLAY [PL]
PlayerIndex	1 to N

Server replies with the same message:

Example: PLAY(2)

This command also supports multiple Players using the following syntax: PLAY(,,...)

Example: PLAY(1,4,9,10) can be used to start playing Players 1, 4, 9 and 10 in sync.

PAUSE

Send a Pause to the specified Player(s).

References

Client sends:

Field	Value
Command	PAUSE [PA]
PlayerIndex	1 to N

Server replies with the same message:

Example: PAUSE(2) This command also supports multiple Players using the following syntax: PAUSE(,,...)

Example: PAUSE(1,4,9,10) can be used to pause Players 1, 4, 9 and 10 in sync.

STOP

Send a Stop to the specified Player(s).

Client sends:

Field	Value
Command	STOP [ST]
PlayerIndex	1 to N

Server replies with the same message:

Example: STOP(2)

This command also supports multiple Players using the following syntax: STOP(,,...)

Example: STOP(1,4,9,10) can be used to stop Players 1, 4, 9 and 10 in sync.

LOCATE

Locate the specified Player to the specified position.

Client sends:

Field	Value
Command	LOCATE [LC]
PlayerIndex	1 to N
Position	position to locate to (either in timecode or milliseconds format)

Server replies with the same message:

References

Example: LOCATE(2,00:03:25/45)

This command also supports multiple Player channels using the following syntax:

LOCATE(,,...,Position)

Example: STOP(1,4,9,10,00:01:00/00) can be used to locate Players 1, 4, 9 and 10 at the specified position.

OPENMEDIA

Open and load a media on the specified Player.

Client sends:

Field	Value
Command	OPENMEDIA [OP]
PlayerIndex	1 to N
MediaName	Media Name

Server replies with the same message:

Example: OPENMEDIA(4,testfile.wav)

If successful, this command increments the Player's OpenFileCounter (See [GETSTATUS](#) command).

CLOSEMEDIA

Close the currently loaded media on the specified Player.

Client sends:

Field	Value
Command	CLOSEMEDIA [CL]
PlayerIndex	1 to N

Server replies with the same message:

Example: CLOSEMEDIA(4)

References

SETVOLUME

Set the volume for the specified Player.

Client sends:

Field	Value
Command	SETVOLUME [VO]
PlayerIndex	1 to N
Volume	Volume gain in hundredth of dB (from 0dB to -100dB)

Server replies with the same message:

Example: SETVOLUME (4,-1000).

SETBALANCE

Set the balance for the specified Player.

Client sends:

Field	Value
Command	SETBALANCE [BA]
PlayerIndex	1 to N
Balance	Balance in hundredth of dB. Positive values for right channel, negative values for left channel.

Server replies with the same message:

Example: SETBALANCE (4,1000).

SETLOOP

Sets the number of times the current media should be looped on the specified Player.

Client sends:

Field	Value
Command	SETLOOP [LP]
PlayerIndex	1 to N
PlayCount	Number of times the media must loop after this command has been received. 0 means infinite loop.

Server replies with the same message:

References

Example: SETLOOP(12,3).

Send SETLOOP(#,1) to stop the loop, where # is the PlayerIndex.

FADE

Performs a volume fade on the specified Player.

Client sends:

Field	Value
Command	FADE [FA]
PlayerIndex	1 to N
PlayerVolume	Final Volume gain in hundredth of dB (from 0dB to -100dB)
FadeTime	fade time (either timecode or millisecond format)
FadeCurve	1 to 3 (selects from fade curves): 1: Standard Logarithmic Audio Curve 2: Crossfade Curve 3: Linear Curve

Server replies with the same message:

Example: FADE(4,-1000,3000,1)

SETMONO

Set the Mono/Stereo configuration of the specified Player.

Client sends:

Field	Value
Command	SETMONO [MO]
PlayerIndex	1 to N
MonoMode	1 for mono 0 for stereo

Server replies with the same message:

Example: SETMONO(8,1).

Request Commands

GETSTATUS

Get the short status for the specified Player.

Client sends:

Field	Value
Command	GETSTATUS [GS]
PlayerIndex	1 to N

Server replies with the same message:

Field	Value
Command	GETSTATUS [GS]
PlayerIndex	1 to N
Status	Status of the Player as an integer: 0: Idle 1: Open 2: Close 3: Playing 4: Paused 5: Stopped 8: Locating 9: NotOnline
Position	Position in timecode (hundredth of seconds format)

Example:

- Client sends: GETSTATUS(4)
- Server replies: GETSTATUS(4,3,00:05:23/45)

GETFULLSTATUS

Get the status for the specified Player.

Client sends:

Field	Value
Command	GETFULLSTATUS [GF]
PlayerIndex	1 to N

Server replies with the same message:

Field	Value
Command	GETFULLSTATUS [GF]
PlayerIndex	1 to N
Status	Status of the Player as an integer: 0: Idle 1: Open 2: Close 3: Playing 4: Paused 5: Stopped 8: Locating 9: NotOnline
MediaName	Name of the currently loaded media (empty if no media)
Position	Position in timecode (hundredth of seconds format)
Duration	Duration of the currently loaded media in timecode (hundredth of seconds format)
Volume	Level attenuation in hundredth of dB (from 0dB to -100dB)
Balance	Current balance
OpenFileCounter	Open File counter. The value is incremented each time a new file is opened on the specified Player.
PlayCount	Count of programmed loops (0 means infinite loop)

Example:

- Client sends: GETFULLSTATUS(4)
- Server replies: GETFULLSTATUS(4,playing,testfile.wav,00:05:23/45,00:10:00/00,0,0,55,1)

GETPOSITION

Get the position of the current media for the specified Player.

References

Client sends:

Field	Value
Command	GETPOSITION [GP]
PlayerIndex	1 to N

Server replies with the same message:

Field	Value
Command	GETPOSITION [GP]
PlayerIndex	1 to N
Position	Current position in timecode (hundredth of seconds format)

Example:

- Client sends: GETPOSITION (4)
- Server replies: GETPOSITION (4,00:05:23/45)

GETDURATION

Get the duration of the current media for the specified Player.

Client sends:

Field	Value
Command	GETDURATION [DU]
PlayerIndex	1 to N

Server replies with the same message:

Field	Value
Command	GETDURATION [DU]
PlayerIndex	1 to N
Duration	Duration of current media in timecode (hundredth of seconds format)

Example:

- Client sends: GETDURATION(4)
- Server replies: GETDURATION(4,00:05:23/45)

References

GETVOLUME

Get the current volume gain of the specified Player.

Client sends:

Field	Value
Command	GETVOLUME [GV]
PlayerIndex	1 to N

Server replies with the same message:

Field	Value
Command	GETVOLUME [GV]
PlayerIndex	1 to N
Volume	Level attenuation in hundredth of dB (from 0dB to -100dB)

Example:

- Client sends: GETVOLUME(4)
- Server replies: GETVOLUME(4,-1000)

GETBALANCE

Get the current balance of the specified Player.

Client sends:

Field	Value
Command	GETBALANCE [GB]
PlayerIndex	1 to N

Server replies with the same message:

Field	Value
Command	GETBALANCE [GB]
PlayerIndex	1 to N
Balance	Balance in hundredth of dB. Positive values for right channel, negative values for left channel.

Example:

References

- Client sends: GETBALANCE(4)
- Server replies: GETBALANCE(4,1000)

GETCURRENTMEDIA

Get the name of the current media for the specified Player.

Client sends:

Field	Value
Command	GETCURRENTMEDIA [GM]
PlayerIndex	1 to N

Server replies with the same message:

Field	Value
Command	GETCURRENTMEDIA [GM]
PlayerIndex	1 to N
MediaName	Name of the currently loaded media (empty if no media)

Example:

- Client sends: GETCURRENTMEDIA (4)
- Server replies: GETCURRENTMEDIA (4,testfile.wav)

GETMEDIADIRECTORY

Get the media directory of the whole audio server.

Client sends:

Field	Value
Command	GETMEDIADIRECTORY [GD]

Server replies with the same message:

Field	Value
Command	GETMEDIADIRECTORY [GD]
MediaDirectory	Path of the current media directory

Example:

References

- Client sends: GETMEDIADIRECTORY()
- Server replies: GETMEDIADIRECTORY(c:\sounds)

GETFILELIST

Get the list of the files located in the media directory of the audio server.

Client sends:

Field	Value
Command	GETFILELIST [LI]

Server replies with the same message:

Field	Value
Command	GETFILELIST [LI]
FileList	File list with filenames separated by CR/LF pairs (0x13,0x0D)

Example:

- Client sends: GETFILELIST()
- Server replies: GETFILELIST(testfile.wav\r\nring.wav\r\nhello.wav)



The following characters are not allowed in the filenames:

- ‘,’ comma
- ’)’ right bracket
- ‘(’ left bracket

GETVERSION

Get the version of MAS Pro software and the version of the ASCII protocol.

Client sends:

Field	Value
Command	GETVERSION [VE]

Server replies with the same message:

References

Field	Value
Command	GETVERSION [VE]
SoftwareVersion	Current version MAS Pro
ProtocolVersion	Current version of ASCII protocol

Example:

- Client sends: GETVERSION()
- Server replies: GETVERSION(1.0.7.0,1.0)
 - Software version is “1.0.7.0”.
 - ASCII Protocol Version is “1.0”.

7.3.3 Response Message

Error List

Possible values for error codes:

- *Syntax Error*: input is malformed
- *Unknown Command*: the command verb is not recognized
- *Invalid Channel*: the specified channel index is incorrect
- *Parameter Count*: the count of parameters of the command is incorrect
- *File Not Found*: the specified media name was not found in the media directory
- *Invalid Time*: the time parameter of the command is invalid

Channel Status

The status field of the reply message to the GetStatus command can have one of the following values:

- Idle: initial state after power up
- Open: a media has been successfully opened and loaded
- Close: last OPENMEDIA() command failed
- Playing: the media is currently playing
- Paused: the media is currently paused
- Stopped: the media is currently stopped

References

- Locating: the media is reaching its target position
- NotOnline: the channel is not online

7.4 Keyboard Shortcuts

7.4.1 File menu

Item	Shortcut	Action
Quit	Ctrl+Q	Quit the application



Note that this menu is not available locally on the MAS Pro user interface.

7.4.2 Configuration menu

Item	Shortcut	Action
New Configuration	Ctrl+N	Create a new empty configuration
Open Configuration	Ctrl+O	Open and load an existing configuration file
Save Configuration	Ctrl+S	Save the current configuration to disk
Edit Configuration	Ctrl+E	Edit the current configuration

7.4.3 Server menu

Item	Shortcut	Action
Connect	Ctrl+Alt+K	Launch Medialon Audio Server Browser
Disconnect	Shift+Ctrl+K	Close current Medialon Audio Server connection
Retrieve Configuration from Audio Server	Ctrl+R	Retrieve the configuration from Audio Server to the remote Audio Client
Transmit Configuration to Audio Server	Ctrl+T	Transmit the configuration from the remote Audio Client to the Audio Server

7.4.4 Help menu

Item	Shortcut	Action
Medialon Audio Client PRO Help	F1	Launch Medialon Audio Server User Manual

7.4.5 Configuration Editor

Item	Shortcut	Action
New Player	Ctrl+P	Create a new Player
New Track	Ctrl+T	Add a new track to the selected Player
Output Mapping	Ctrl+M	Open the Output Mapping for the selected Track

7.5 Action on click

7.5.1 Player Index click

Opens the Player details window.

7.5.2 Player Media Name click

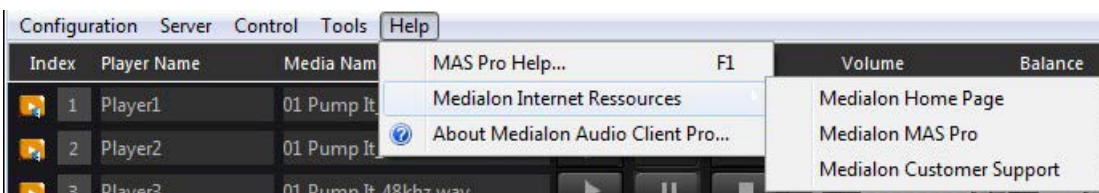
Opens the Media Library window.

7.5.3 Ctrl + Volume click

Set all volume sliders to the same level:

- In the main window, it concerns all Players volumes.
- All tracks levels change in a Player Detail.
- All output volumes are set in Output Control window

7.6 Help




7.6.1 About Dialog

Clicking on the “Help > About...” menu item displays the “About...” dialog box.

References



 The program version is shown at the bottom left of the box

8 Contact Us

Find more on our website <https://www.medialon.com/> and on social media



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