

The Director Model M4800D User Manual

8 Channel Multi-Zone Network Amplifier with Dante



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When a whole-house audio system demands high levels of audio performance, but the physical installation space is limited, the AudioControl Director M4800 is an ideal solution. Requiring only one rack space, the M4800D produces at least 100 watts per channel into 8 ohms, and 200 watts per channel into 4 ohms. With the addition of the Dante audio network, the M4800D can seamlessly communicate with other AudioControl Dante amplifiers, and share sources with other devices using the Dante Controller.

Features

- Digital and analog input matrix
- High-resolution digital inputs, 32-96 kHz, 16/24-bit digital signals
- 100 watts per channel at 8 ohms, or 200 watts at 4 ohms, all channels actively driven
- Bridged for mono operation for 400 watts per bridged zone at 8 ohms.
- Discrete amp modules designed for long-term operation and optimal audio performance.
- Superior sound quality
- Energy efficient Class D amplifier technology
- LightDrive Anti-clipping
- Control system integration
- Digital Signal Processing
- Graphic and Parametric equalization settings
- Customizable high-pass and low-pass crossover filters
- Speaker profiles designed by popular speaker manufacturers
- Dante spoken here
- Self resetting protection features.
- Backed by a conditional five-year warranty.

Whats in the box

- The Director Model M4800D
- Speaker connectors
- Trigger connector with jumper
- Power cord
- Rack-mounts
- A hint of oregano

Photo of what is in the box

Specifications

AudioControl

Inputs	
Digital Inputs	4 Stereo Analog Local Inputs
Analog Inputs	4 Coaxial/TOSLINK S/PDIF Inputs
Dante Inputs	16 channels (Broadway chipset)
Input Sensitivity	1 Vrms for full output, level at maximum
Output	
Amplifier Channels	8
Power Output 8Ω	100 W per channel
Power Output 4Ω	200 W per channel
Power Output (8 Ω Bridged Mono)	400 W
Minimum Speaker Load	4 Ω
Preamp Outputs	2 Coaxial Digital S/PDIF BUS Outputs
Dante Outputs	16 channels (Broadway chipset)
Performance	
Signal to Noise Ratio	>95 dB, A-wtd, ref full output
DAC Specifications	32 to 96 kHz sample rate, 16-/24-bit depth
Control	
12 Volt Trigger Inputs	+12 VDC or Dry Contact Closure
IP Control	10Base-T Ethernet TCP/IP
Communication Protocol	HTTP or Telnet
AC Power Requirements	
Standby	<1.9 Watts
Idle (main power on, all channels off)	41 watts
All channels 1/8th rated power	186 watts
Full power (20 A residential service limited)	1800 watts
BTU/HR Output	
Standby	6.5 BTU/hr
Idle (main power on, all channels off)	140 BTU/hr
All channels 1/8th rated power	270 BTU/hr
Full power (20 A residential service limited)	1560 BTU/hr
Weight and Dimensions	
Dimensions	17" W x 15.5" D x 1.75" H (1 RU)
Weight	16.5 lbs. (9.5 kg)

Compatible Products

AudioControl

M6800D

ACP-M6800D

- 16 Channel Matrix amplifier
- Easily share Dante sources with M4800D



CM4-750 Dante

SKU Number

- 4 Channel 70V Matrix amplifier
- Easily share Dante sources with M4800D



Dante Encoder

ACP-DANTE-E-POE

- Add audio signals from anywhere in the system onto the Dante network.

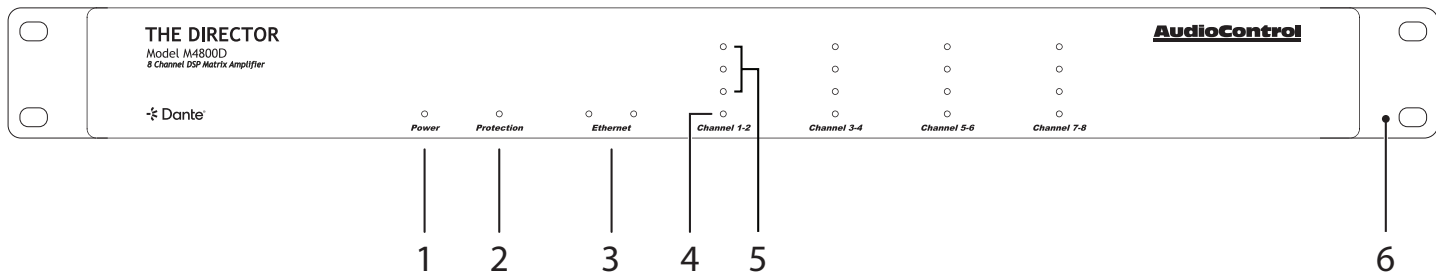


Dante Decoder

ACP-DANTE-D-POE







- Send Dante audio signal to non-Dante amplifiers

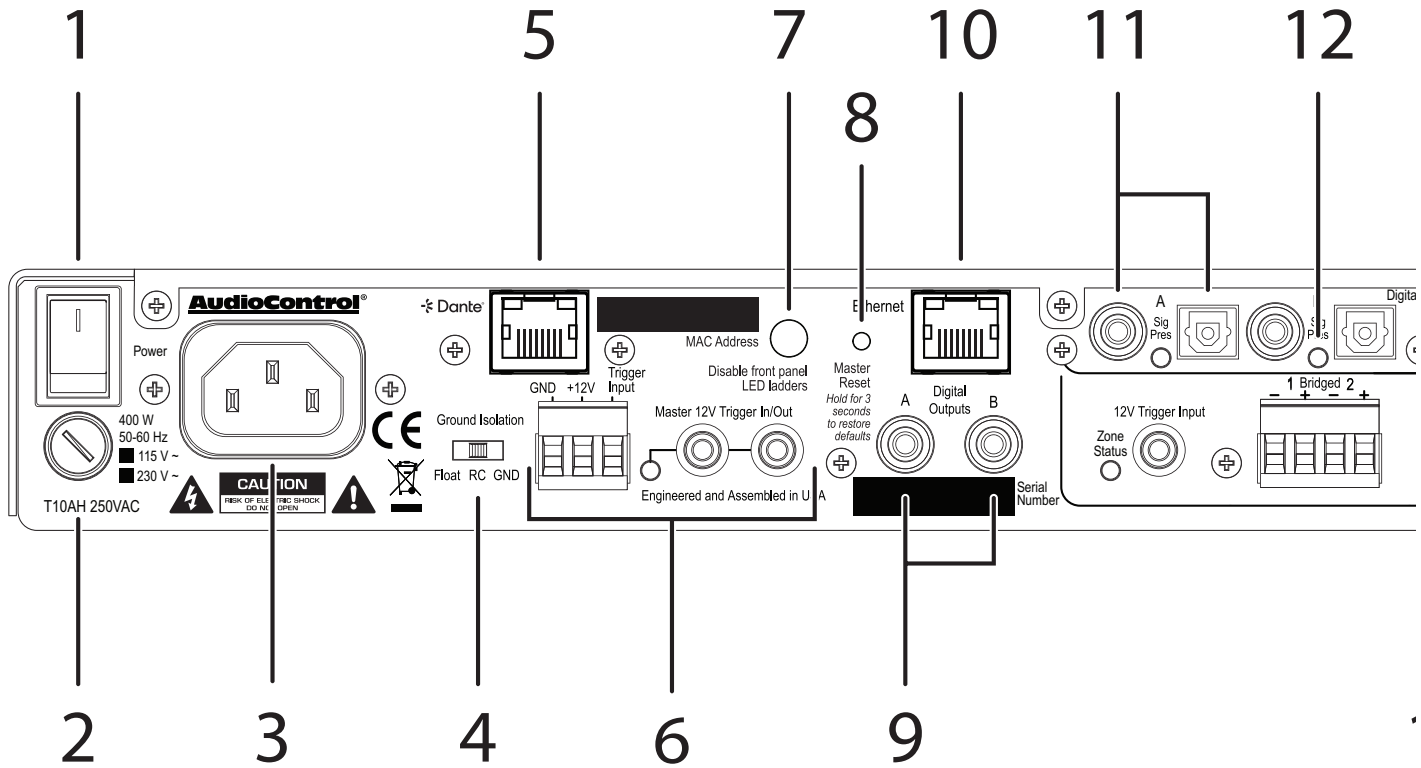




1. **Power LED** - This dual color LED indicates when the unit is in standby, on, or off.
 - Red:** The unit is in standby and is ready to be turned on via Ethernet or 12v Trigger.
 - Blue:** The unit is on.
 - Off:** The unit is off.
2. **Protection LED** - This red LED will illuminate briefly during turn on/off phases, and if a fault is detected in any amp channel or the power supply. If a fault is detected, the unit will go into its protection mode to prevent any damage to loudspeakers and to allow cooling.
3. **Ethernet LEDs** - These indicate the status, readiness, and willingness of The Director's Ethernet communications protocol. The green LED glows when Ethernet is connected and operational, the yellow LED blinks during data activity.
4. **Zone Status LED** - This dual color LED indicates when the zone is active, in standby, or in fault mode.
 - Red:** The zone has detected a fault, such as DC offset or a short circuit.
 - Blue:** The zone is active.
 - Off:** The zone is in standby.
5. **Zone Level LEDs** - These three LEDs light from the bottom to the top depending on the zone's output level (-33, -20, -10 dBFS). These LEDs can be turned off using the rear panel switch.
6. **Rack-Mount Ears** - The unit comes supplied with removable rack-mount ears. These allow the unit to be rack mounted in a standard 19" wide rack, with a 1U height. Use standard rack-mount screws and washers to secure the unit in a rack. The unit does not have to be supported at the rear if the rack is located in a fixed location.

To remove the rack ears (making the unit 17" wide), first unplug the power cord, undo the four screws securing each ear to the side of the chassis, and remove the ears. Replace the screws securely back into the chassis. Do not remove any of the other screws from the chassis or top cover. **Keep the rack ears in a safe place.**

LED	Color	Description
 Power	Red	The unit is in standby mode
	Blue	The unit is on
	Off	The unit is powered off, or all the lights are off in your town
 Protection	Red	The unit has detected a fault and is in protect mode*
	Off	The unit is operating normally, or it is powered off
ZONE LEDs	Color	Description
	Blue	-10 dBFS zone output level
	Blue	-20 dBFS zone output level
	Blue	-33 dBFS zone output level
 Channel 1-2	Red	The zone has detected a fault, or a smooth-jazz saxophone solo, and is in protect mode
	Blue	The zone is active
	Off	The zone is in standby

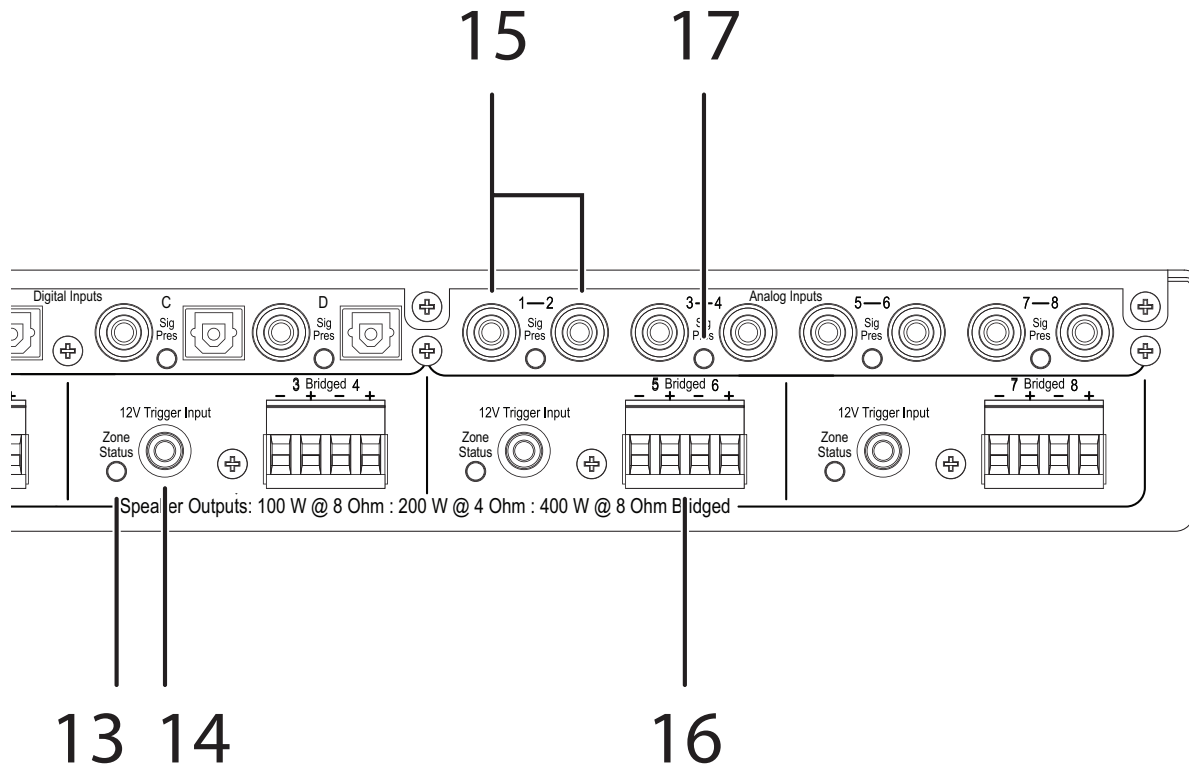


1. **AC Power Switch** - This switch shuts off the main AC power. Leave this switch on, and use IP Commands or 12v triggers to turn the amp on and put it into standby.

Also turn the power switch off during lightning storms, wind storms with frequent power outages, or when a giant asteroid is heading toward the power station (again).

2. **AC Fuse** - The main power supply fuse may be checked or replaced. Make sure that the power cord is unplugged, a use a flat-headed screwdriver to undo the fuse carrier from the fuse holder. If necessary, replace with the exact same type indicated on the unit. If the fuse blows again, immediately unplug the power cord and contact our fine folks in tech support.
3. **AC Input** - Connect the supplied AC power cord securely to this input. Plug the other end into an AC mains outlet of the correct voltage rating for your unit. They are either 100 -120 VAC (50 - 60 Hz) or 220 - 240 VAC (50 - 60 Hz), indicated by the marking by the AC Fuse. The voltage setting is not user-settable. This unit is a class 1 device, do not defeat the safety ground connection or use a power cord that does not have the safety ground pin.

4. **Ground Isolation Switch** - This switch selects the level of isolation between the audio signal ground and the AC earth ground. In normal operation this switch should be in the GND Ground position. If there is trouble with an AC ground hum, try the other two settings for the best operation. For safety, the chassis is always connected to the earth ground regardless of the switch setting.
5. **Dante Port** - Connecting this RJ-45 port to a network switch supporting Dante audio streams allows the Director to decode network information into uncompressed audio signals via Cat5 (or better) cabling.
6. **Master Trigger** - There are three methods to turn on the unit or to place it into standby mode: via Ethernet, the TS 1/8" mono 12V trigger jacks, and the 3-pin block connector. If ethernet is not used to power on the Director, and no trigger voltage is present at any trigger input, the unit will remain in standby and all zones will be muted.
7. **Disable front panel LEDs** - The front panel LED ladders show the output levels of each zone. If this is distracting, or your pets or children keep getting hypnotized, press this switch in to turn off the LED ladders. This switch does not affect the Power, Protection, or Zone Status LEDs.
8. **Master Reset** - If things are not going well, for example you are unable to communicate with The Director, press and hold down this button for more than 3 seconds. This will reset the M4800D to its default settings, and hopefully lead you along the pathway to Ethernet communications once again.
WARNING: Do not do this while turning on the power switch. All flash memory will be erased, and the milk in your fridge will go bad. You will have to go to the store and get more milk, and inquire from our fine folks in technical support about the latest firmware file.
9. **Digital Outputs** - These S/PDIF digital outputs use standard RCA coaxial connectors. All digital and analog inputs can be routed to the digital outputs, and fully controlled like any other audio zone.
10. **Ethernet LAN Port** - This port allows The Director to be connected to a 10BaseT network via CAT5 cabling. The unit can then be controlled using its internal web server, accessible through standard and popular (and some unpopular) web browsers. See the section on Internet Connectivity and Control for detailed information.
11. **Digital Inputs** - 4 sets of Optical and Coax ports are available as inputs A, B, C, and D. The digital signals are transferred directly to the Director's DSP, and are then available to any zone or all zones at the same time. The digital inputs are selected for any or all zones using The Director's web page interface.
12. **Digital Signal Present LEDs** - These LEDs illuminate whenever a digital input signal is present at a digital input.

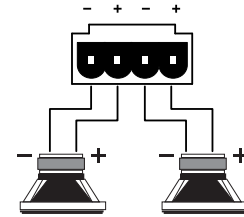


- 13. Zone Status LED** - These will illuminate whenever a zone is active.
- 14. Local Trigger Input** - Individual zones can be turned on using a +12VDC trigger.
- 15. Analog Inputs** - These are line-level analog RCA inputs. Analog signals entering maybe selected to play in its matching zone, or any combination of zones and digital outputs.
- 16. Speaker Outputs** - This 4-pin connector allows easy connection for two stereo speakers, or one speaker in bridged mono operation.

Stereo Speaker Connection:

Note the polarity markings for each pair of outputs.

The speaker impedance should be 4 ohms minimum in stereo operation.

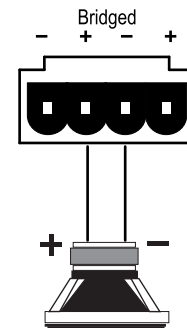


Bridged Mono Speaker Connection:

Note the polarity markings of the inner pair of connections. In this mode, the input signals are combined in mono, and the power from both channels is combined to drive a single, more powerful, speaker.

The speaker impedance should be 8 ohms minimum in bridged mono operation.

To set the output to mono, use The Director's web interface and click the Stereo/Mono button for this zone.



Speaker Wiring

Establish a standard connection color code and stick with it. One conductor of the speaker wire is normally marked by a different color (silver versus copper) or there is a ribbing on one side. Typically this marked conductor is used for the positive (+) speaker leads. Some wires have positive and negative printed right onto the wire jacket.

Match the polarity markings on the unit with the polarity markings on your speakers. If the wiring is incorrect then the speakers will be out-of-phase, with a noticeable decrease in the bass response and less than goodly-sounding awesomeness.

Speaker Impedance

We've said it before, and we'll say it again: Minimum impedance for stereo operation is 4 ohms, and the minimum for Bridged operation is 8 ohms. If lower impedances are connected to the speaker channel, the amp will go into protect.

If you plan to run two speakers in parallel on one channel, be aware of how that affects the total impedance. When connected parallel to each other, two 8 ohm speakers will have their total impedance halved, and present a 4 ohm load to the amplifier.

The Director M4800D can be woken from standby to turn on in five different ways. Additionally, you can use the triggers from the Director to turn on other components in your system. Here's the break down to (hopefully) clear up any confusion:

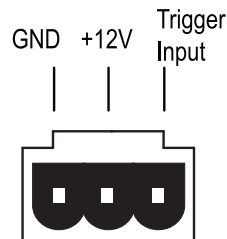
Trigger Method	LED Indicators
Ethernet / IP commands	Ethernet Triggered
12 Volt mini plug input	12V Trigger Activated
Jumped Phoenix connector	12V Trigger Activated
Contact Closure on Phoenix connector	12V Trigger Activated
12 Volt input on Phoenix connector	12V Trigger Activated

When using a Dante Enabled matrixing amplifier, IP commands from the Director's web GUI or a control system will be the most common way to power zones on and off. The following details apply if you do not want to use IP commands.

3-pin Phoenix Connector - To remotely turn on the Director, use either a contact closure between the Trigger Input and +12V output, or an external +12V trigger between the Trigger Input and GND Terminals. The +12V output is not designed to power other pieces of equipment or jump start your car. To trigger other units using the Director, use the Master Trigger mono jacks.

Pinout

1. **GND** - Ground
2. **+12V** - Constant +12V output
3. **Trigger Input** - +12V Input



Master 1/8" TS Mono Jacks - These are wired in parallel to each other and work in conjunction with the 3-pin connector. Either input can receive a +12V input to turn the Director on, and the unused jack can output +12V to turn on a second unit. If the 3-pin connector is used to turn the Director on, both jacks can be used to output +12V to other units.

Pinout

- Tip** = +12V Input
- Sleeve** = Ground

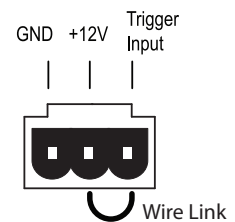
Power up & Power down

After any master trigger input receives a +3 to +12V signal, the master trigger LED will illuminate blue. All zones will be held in standby for about 2 seconds while the power supplies charge up and perform their self-tests. During this time the Power and Protect LEDs will be red. Once this is complete, the Power LED will turn blue and the Protect LED will turn off.

As soon as voltage is removed from the trigger inputs, all zones will be muted and placed in standby, and the master trigger LED will turn off. After about 2 seconds, the front panel power LED will turn red, and the protect light may flash red during the power down process.

Signal Sense and Local Triggers

If you plan to turn on zones using signal sense or local triggers, the Director's master trigger must be active. If you are not using a separate master trigger, you must use the 3-pin connector with a short wire between the +12V output to the trigger input.



Using External Triggers on the 3-pin Connector

- 1. Trigger ON with a contact closure:**
Connect the contact closure between the +12V Trigger input.
- 2. Trigger OFF with a contact closure:**
Connect a 1 k Ω resistor between +12V and Trigger Input.
Connect the contact closure between Trigger Input and GND.
- 3. Use an external +12V Trigger:**
Connect the ground wire to GND.
Connect the external +12V to Trigger Input.

An amplifier is much like a person, in the way that it requires a proper flow of air to continue working properly. The Director M4800D features cool-running efficient switch mode power supplies and Class D amplifiers, and they are equipped with thermally controlled fans. Despite its impressive build quality, it is still an 8-channel amplifier, and therefore requires plenty of good ventilation to properly cool.



Please be advised that no more than 4 Director amplifiers may be stacked together. Any more than that, then a rack space above and below is required for adequate ventilation.



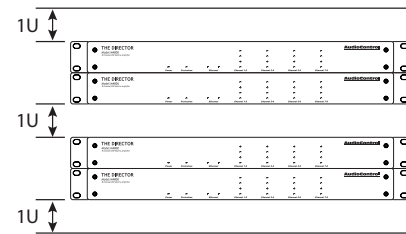
Review the heat load specifications and ensure that your rack room meets these requirements.

Ideal spacing is at least 1U of rack space above and below every two amplifiers, and no more than four units can be stacked without a rack space between them.

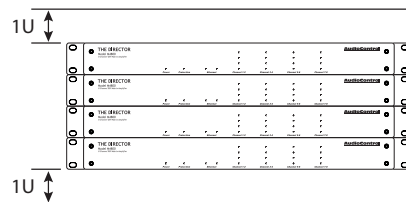
If the amplifier should overheat, a thermal sensor will trigger the amp into standby mode, allowing it to cool down. Once the amplifier has cooled to a safe operating temperature, the amplifier will reactivate. If this occurs often, identify the cause of the problem and take corrective action. For example:

- Provide additional ventilation.
- Do not installed in a sealed location with limited or no airflow.
- Install a fan in the rack.
- Make sure that the amplifiers re not overloaded with speaker impedances below the minimum recommendation.
- Check that there are no short circuits in speaker cables or speakers. Each zone will shout off independently when a short circuit is detected.

Ideal Spacing 1U rack space or more above and below each pair



No more than four units can be stacked without a rack space between them. Allow 1U rack space or more above and below each stack of four.



When the M4800D is first connected to an existing network, the DHCP server will assign an IP address to the Director. Take note of the unit's MAC address on the back, it can help you find the amp's IP address on a network scan. Once you find the unit's IP address, type it into your browser of choice and the Director's web GUI will open.

On the web GUI, the amp can be configured and EQ'd to your hearts content. With the Director on the network, you will also be able to control the amplifier via Telnet. The M4800D uses telnet port 23.

Connecting without a DHCP server

If no DHCP server has been enabled on your network, or you want to connect directly to the Director, use an ethernet cable to connect the amplifier to your computer. The default IP address of the Director is **192.168.0.249** when a DHCP is unavailable. In order to connect to this IP address, you will need to give your computer a matching static IP address.

Change your computer's IP address to a static address of 192.168.0.x – where x is a value between 1 through 254, but not using 249.

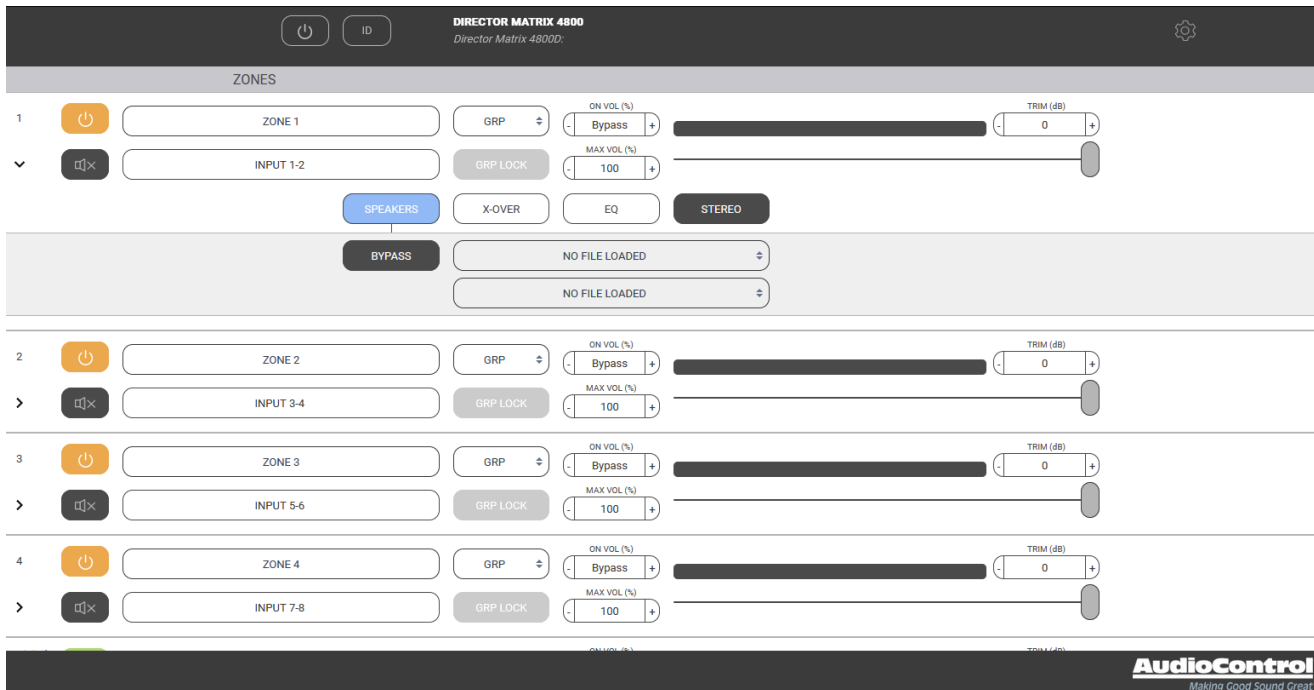
On a Windows computer, you can change your IP address in the Control Panel.

On an Apple computer, the IP address can be changed in System Preferences.

If you don't know how to give your computer a static IP address, please consult your local search engine.

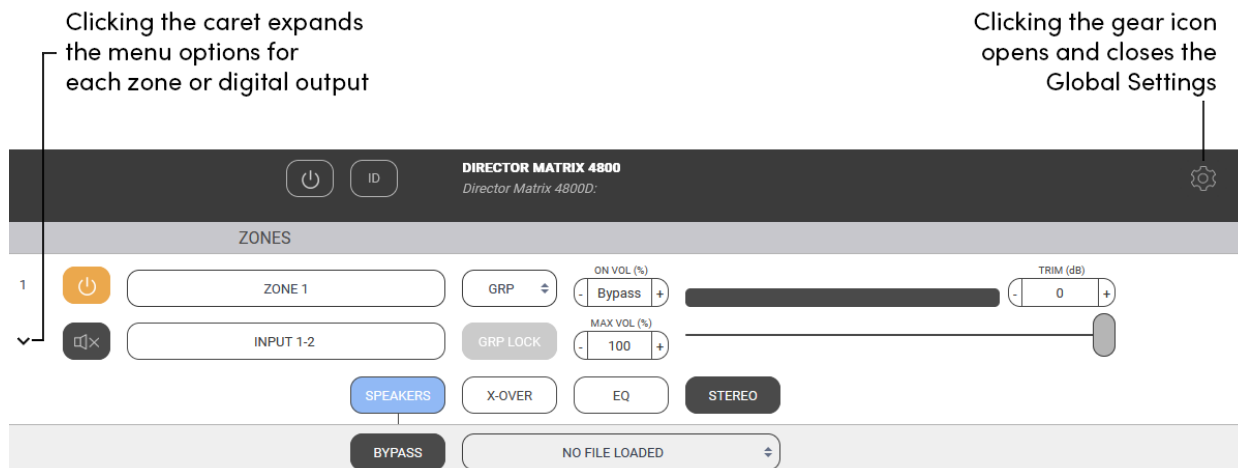
Be sure to use a static IP address for your computer that is NOT in use by another device – an IP address should be unique across the local network – if it's not, you're going to have a bad time.

Upon opening the Director M4800D's web GUI for the first time, you will be greeted with the page seen here:



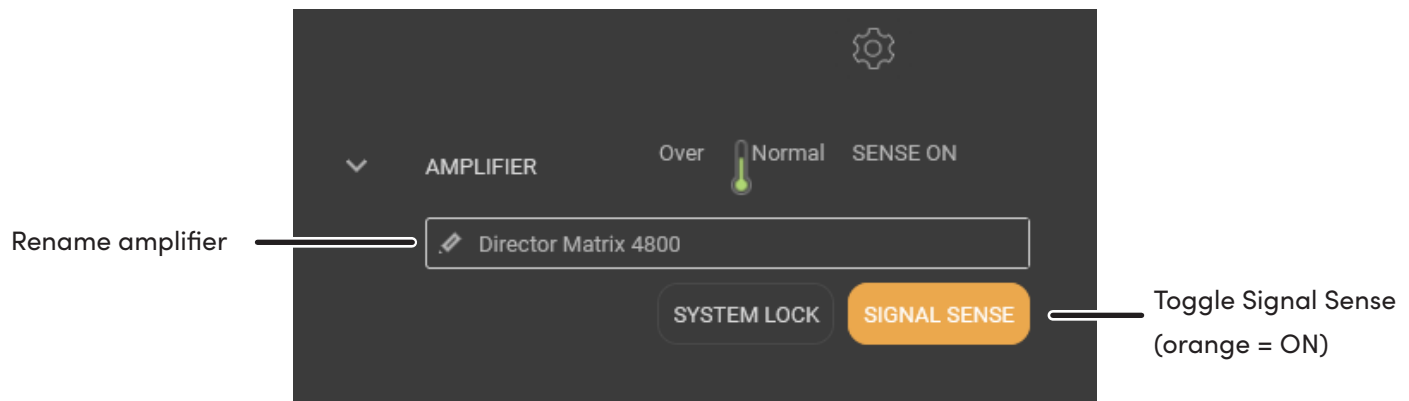
The web page is responsive, meaning it will auto size to your screen. If you have a small phone, the layout adjusts to that size, and is touch sensitive. On a computer, the web page is sized according to your browser.

Through this interface, you will configure all the parameters of The Director. The initial view of the web page shown below illustrates the current state of the unit. To change global settings, click on the “gear” icon in the top right of the page. To change zone settings, click on the caret (the “>” icon) to expand the selections. Simply clicking on an option will expand the adjustable parameters.

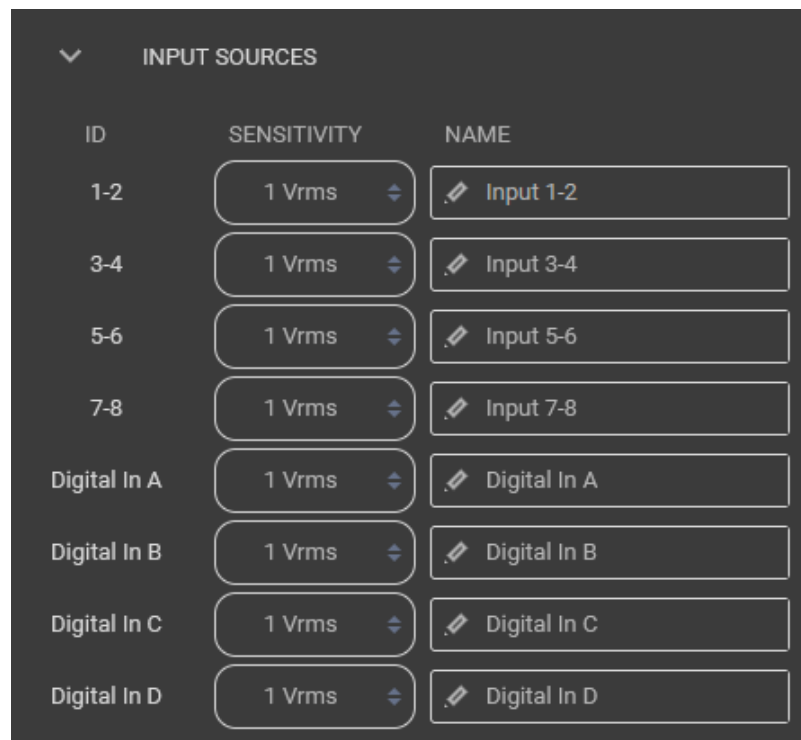


By default, signal sense is on, and the amp zones will not turn on until signal is present on their assigned inputs. If you are going to use a control system or 12V triggers to control the zones, go to the Global Settings, and turn signal sense Off in the Amplifier panel.

If there are multiple amps in the system, now is a good time to rename the amp in the same panel. We recommend calling it something that helps you keep track of which amp you're working on. For example, common names include "Amp 1," "First Floor Amplifier," and "Marvin."



Next, rename all inputs and set the input sensitivity in the Input Sources panel.

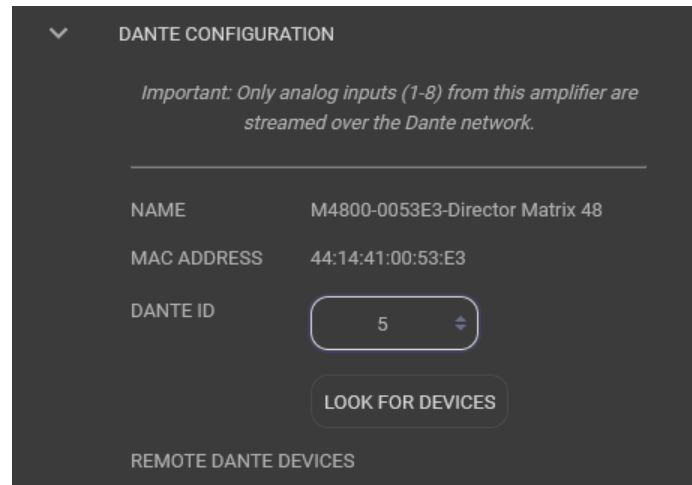


Go to the Dante Configuration panel, set an ID for the M4800D, and click Look for Devices. The page will reload and all inputs from other AudioControl Dante Amplifiers on the network will be available to use on this amplifier, and all inputs on this amp will be shared with the others.

Connect sources and speakers to the inputs and outputs of your AudioControl Dante amplifiers, and any other audio gear you have in the system.

The Director M4800D is now ready to play audio from local sources connected directly into it, and from Dante sources streamed over the network.

We'll dig deeper into the specific details of all the Web GUI's settings in the next section. Speaking of...





Global Standby - This is basically a main power-off where the amp, power supply and DSP are shut down. Power up from this state is about 10 seconds. If you plan on leaving the 3-pin connector with the jumper in place, or using an external 12V trigger, the amp will remain on even when this button is off.

On = Green

Off = Grey

ID - Pressing this button will cause the two ethernet lights to flash in tandem on the front of the unit to help you identify the amp you are working on.

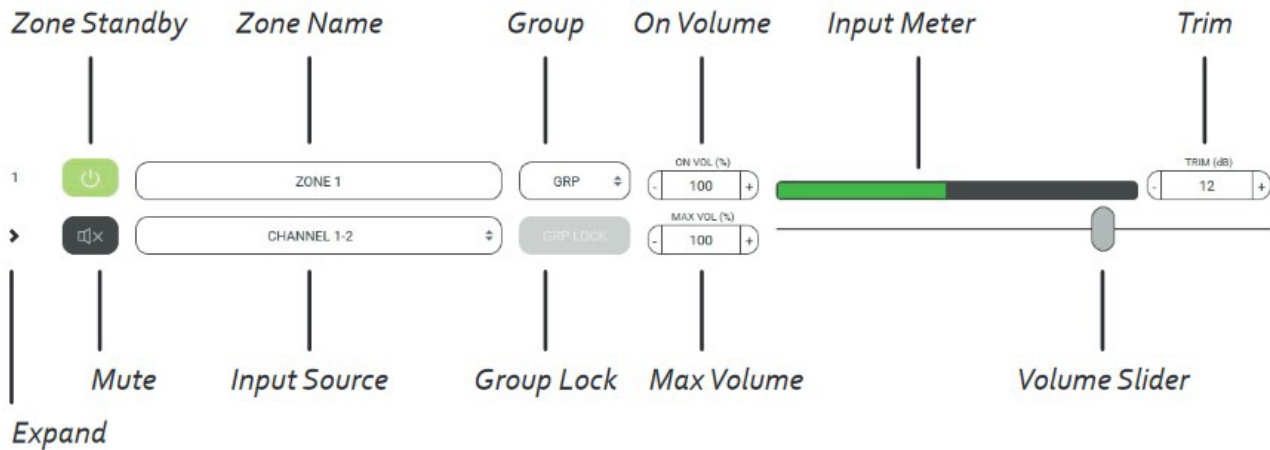
Global Settings - Expand this panel for additional controls.

Zones 1-4 - The settings in each section defines the rear panel speaker-level output to each of these 4 zones.

Digital Outs A & B - The settings in these sections are identical to those in the zone outputs, and control the 2 Digital Coax outputs on the rear of the amplifier.

ZONES					
1		ZONE 1	GRP	ON VOL (%) Bypass	TRIM (dB) 0
>		INPUT 1-2	GRP LOCK	MAX VOL (%) 100	
2		ZONE 2	GRP	ON VOL (%) Bypass	TRIM (dB) 0
>		INPUT 3-4	GRP LOCK	MAX VOL (%) 100	
3		ZONE 3	GRP	ON VOL (%) Bypass	TRIM (dB) 0
>		INPUT 5-6	GRP LOCK	MAX VOL (%) 100	
4		ZONE 4	GRP	ON VOL (%) Bypass	TRIM (dB) 0
>		INPUT 7-8	GRP LOCK	MAX VOL (%) 100	
Digital Out A		DIGITAL OUT A	GRP	ON VOL (%) Bypass	TRIM (dB) 0
>		DIGITAL IN A	GRP LOCK	MAX VOL (%) 100	
Digital Out B		DIGITAL OUT B	GRP	ON VOL (%) Bypass	TRIM (dB) 0
>		DIGITAL IN B	GRP LOCK	MAX VOL (%) 100	

Zone Controls



Zone Standby - This turns its respective zone on and off, allowing for a quick time to power output. Turn this on and in less than 500ms you'll have sound. No boot-up time to worry about. It's important to note, if you are using signal sense, the local zone will need to be on, and either an external trigger will need to be in place or the global standby button will need to be on.

- On** = Green
- Awaiting signal sense** = Orange
- Standby** = Grey

Zone Name - The zone name can be changed by typing in this box. As you do this, a small tick mark box appears at the right. Remember to click on it to save your changes, or they will be lost. Up to 30 characters and spaces are available to express yourself.

Expand - Click here to expand and collapse the zone settings.

Mute - Click here to quickly mute or unmute the output from this zone during accordion/harmonica/yodeling/smooth jazz solos.

- Muted** = Red
- Unmuted** = Grey

Input Source - This drop down menu allows you to select the input source to play in this zone. We have thoughtfully included Pink Noise to assist when setting volumes and calibrations of each zone.

If your amplifier is on a Dante network, the menu will show you Local inputs, inputs from other AudioControl Dante amplifiers, and any other Dante sources you may have.

Group - Each zone can be assigned to a group using this drop down. Each zone in a group should share the same group number. Leave this on *GRP* if you are not using grouping for the zone.

Group Lock - If the zone is assigned to a group, click here ensure the zones work together.

A warning message will appear:

“Proceeding will set the volume of all the zones in the group (that also have group lock engaged) to the minimum of them.” You are then given the opportunity to continue, or go home and rethink your life.

As an example, if Zones 1, 2, and 3 are assigned to group 1, select Group Lock for each of these three zones. Each group lock button will turn orange when engaged. The volume will change to the current lowest volume.

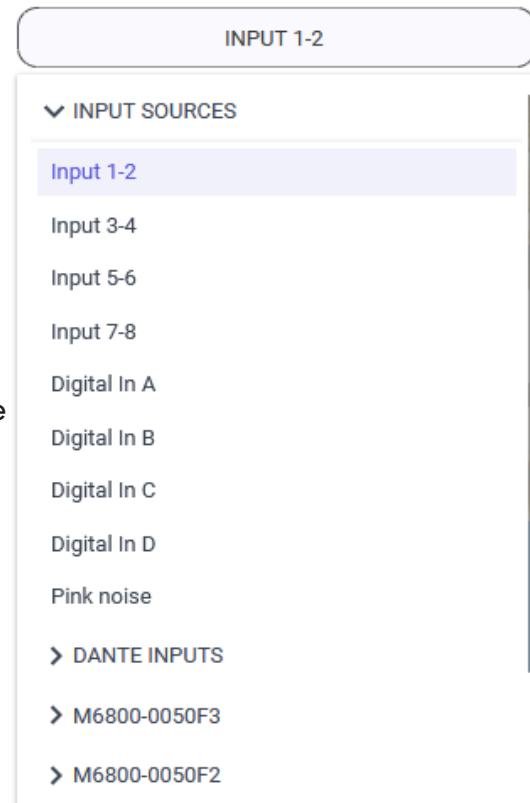
If you raise the volume of Zone 1, the volume of Zones 2 and 3 will raise to match it.

Any changes to zone power, volume, input, Bass, and Treble will affect every zone in a group. All other settings (EQ, Crossover, Trim, etc) will remain independent to each zone.

On Volume - Sets the zone volume to a specific value at when powered on, if the volume was at a higher level than what is defined here. If lower, then the lower value is used at startup.

Max Volume - Sets the maximum volume level of the zone.

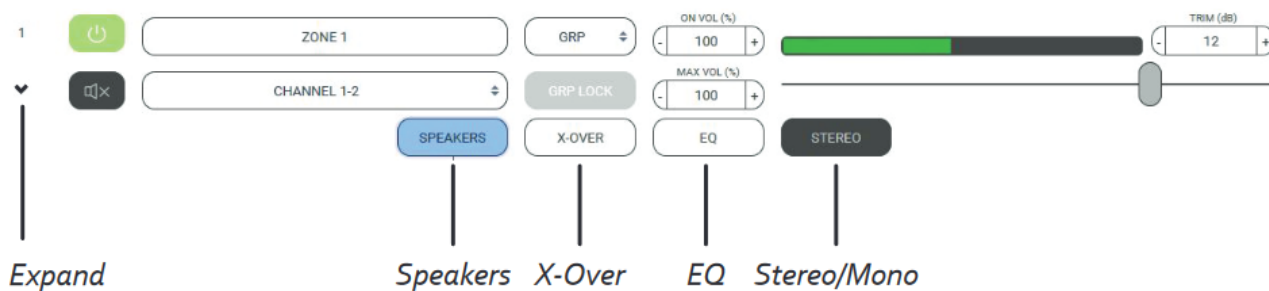
Input Meter - This was designed to hypnotize little kittens and the effect is quite adorable as the music goes up and down.



Volume - The volume slider is used to set the volume in the zone.

Trim - This trims the level of the zone output. The range of adjustment is suitable for balancing SPL in grouped zones, for example, 3 sets of speakers grouped for a living room. It will also serve as a way to limit volume in a particular zone if, for some reason, you don't want to use the maximum volume setting.

Zone Options



Speakers - Here you can set your speaker profile. The speaker profile is an optimized settings file that the speaker manufacturer has designed to maximize the speakers performance with the Director.

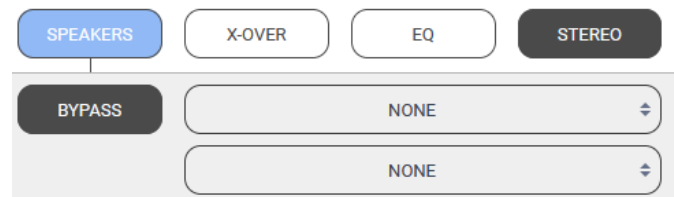
X-Over - Here you can set the low-pass, band-pass, and High-pass crossover filters to control the frequencies being sent to your speakers.

EQ - In this section, you can control both the graphic and parametric EQ filters to dial in your speakers' performance.

Stereo/Mono - With this button, you can set the output to mono or stereo. When mono mode is engaged, the button will change to say "Mono."

Speakers

Speaker Calibration Profiles - Each Speaker Profile contains equalization and crossovers that have been carefully crafted by the speaker manufacturers as the best curve for that particular speaker model.



The profile is applied in the background, and you will not see the EQ sliders move. With the speaker profile applied, you can still adjust the graphic EQ to fine tune the response to the room, and/or client preferences, but crossover and parametric EQ will be locked.

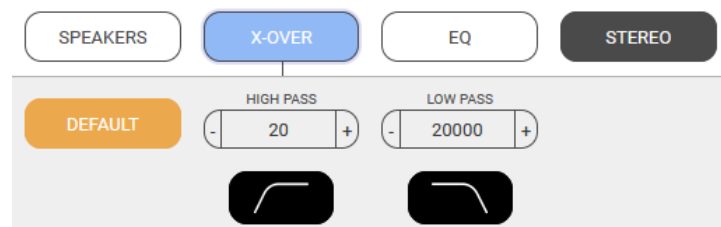
Each output zone can be assigned to a different speaker profile to accommodate different models.

Speaker profiles do not come pre-loaded on the Director, but are downloadable from our website. The speaker profiles we have available grow regularly, so keep an eye on our website for the latest information.

Crossover

The crossover allows you to create different filters for each zone. By default, the crossover is set wide open, with virtually no limit to frequency response at 20Hz to 20,000Hz.

The high-pass filter determines the lowest frequency that will pass through the zone. The low-pass filter determines the highest frequency that will pass through the zone.



These two filters work together to create a specified frequency range between the High and low-pass.

A crossover can protect speakers from playing frequencies too low or too high for their design. The filters should be chosen slowly, with considerable forethought and care, possibly while mulling things over in your favorite comfy chair.

Each speaker has its own frequency range that should be listed by the manufacturer. Take that into consideration when setting a crossover for your speaker.

To prevent over-stress of speakers by sending frequencies lower than they are physically able to handle, use the subsonic filter. For most in-wall speakers, we recommend setting the high-pass filter to 40 Hz or higher.

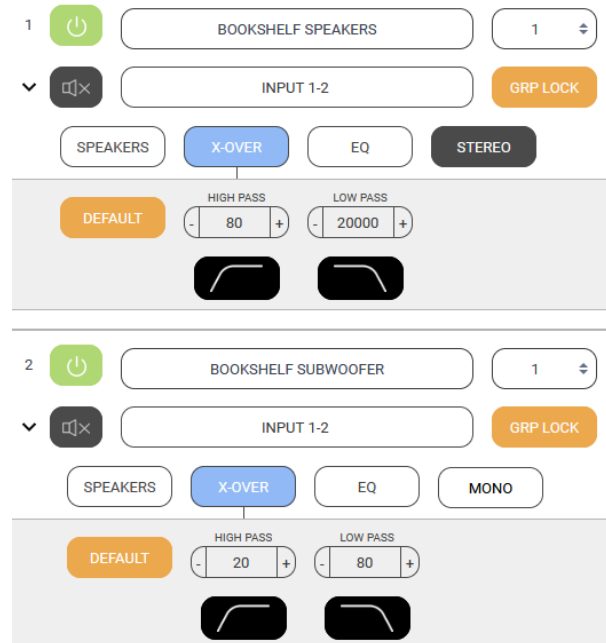
A common use of this feature is to set up a 2-way crossover, with a pair of stereo speakers playing the mids and highs, and a subwoofer for the lows.

In a stereo zone, set the high-pass to around 80Hz (or to your preference) and the low-pass up to 20,000Hz allowing it to play the mid-to-high frequencies, while the sub handles the lows.

In a bridged mono zone for the subwoofer, set the low-pass crossover to match the high-pass of the stereo zone. Set this zone's high-pass filter to around 20Hz, or whatever is recommended by the manufacturer. The sub will only receive the low frequencies and receive the combined power from both channels.

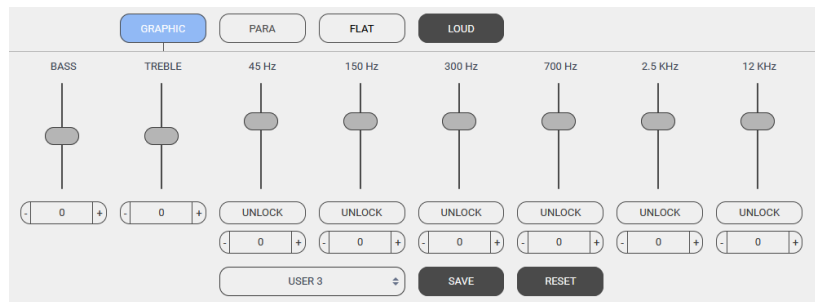
Group the two zones together, and they will act in perfect auditory harmony.

The crossover cannot be adjusted if a speaker profile is active.



Graphic EQ

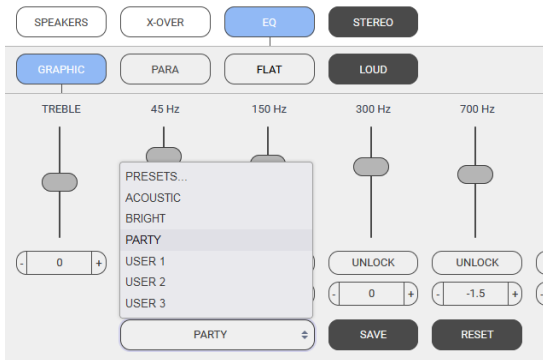
The Director M4800D comes with 2 types of EQ, a 6-band Graphic EQ with Bass and Treble adjustment, and an 8-band Parametric EQ.



Adjustment of the Graphic EQ of the selected zone is done by dragging the EQ sliders to the desired position, by clicking the +/- buttons under the slider, or by typing the desired value between +6 to -6 into the number field.

By default, the EQ bands control both the outputs of a zone as one. Click "Unlock" to adjust the left and right channels separately.

There are some presets available using the large button at the bottom of this menu. Once you have the EQ settings just the way you like them, you must save the settings as user presets. Select User 1, User 2, or User 3 from the drop down menu, set your EQ and press SAVE to copy your EQ to the user preset. RESET returns the user preset to a flat EQ.



You can save different settings to different user presets and see which one the clients like. Their taste may be different than yours.

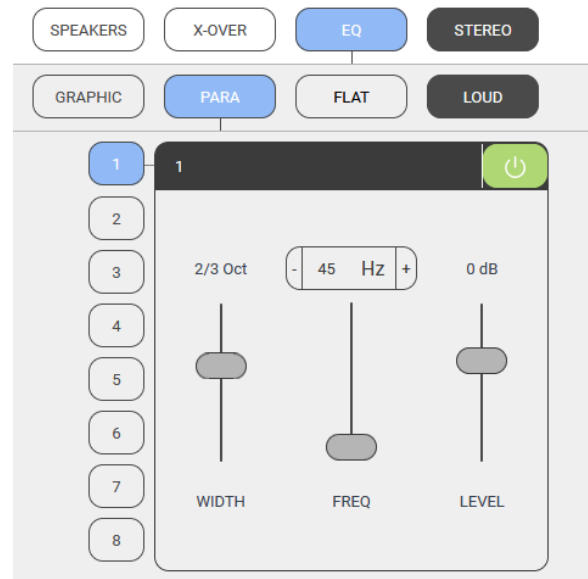
Bass and Treble - At no extra charge, two of the sliders offer bass and treble EQ adjustment of the shelving kind. Shelving EQ, used in combination with the graphic EQ and parametric EQ, gives you a high level of adjustment in any system. Start with the graphic EQ flat, apply a bit of shelving bass or treble EQ, and see how that sounds. Maybe that will do.

Parametric EQ

In addition (or subtraction) to the graphic EQ sliders, there are 8 separate parametric equalizers per zone, for the ultimate in room-acoustics problem solving.

Each parametric EQ has adjustments for the frequency, octave width, and the level boost or cut. For an example of their use, if a certain frequency sets all the kitchen teacups rattling, a narrow width filter can be tried at the teacup-rattling-onset-frequency, with a cut in the level.

Once you have the EQ settings just the way you like them, you must save the settings, or you will lose them. Go back to the Graphic EQ area and use the SAVE button.



Flat & Loud Buttons

The Flat button will set the current graphic and parametric EQ settings to zero, flattening out the EQ curve. A warning will pop up asking if you want to continue before resetting the EQ, just in case a keyboard-crossing-cat clicked Flat by accident.

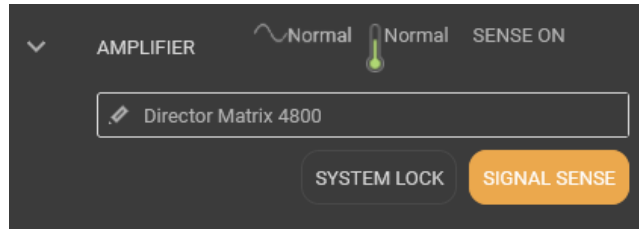
When active, the Loud button will turn orange. It will also set both the treble and bass EQ sliders to +5dB for a pleasing low frequency boost at lower listening levels. Deactivating Loud mode will revert the treble and bass sliders to their original positions.

Global Settings

Clicking the Gear Icon in the top right corner of the Web GUI will bring up the global settings options. If your screen is large enough, the global settings will already be open.

Amplifier

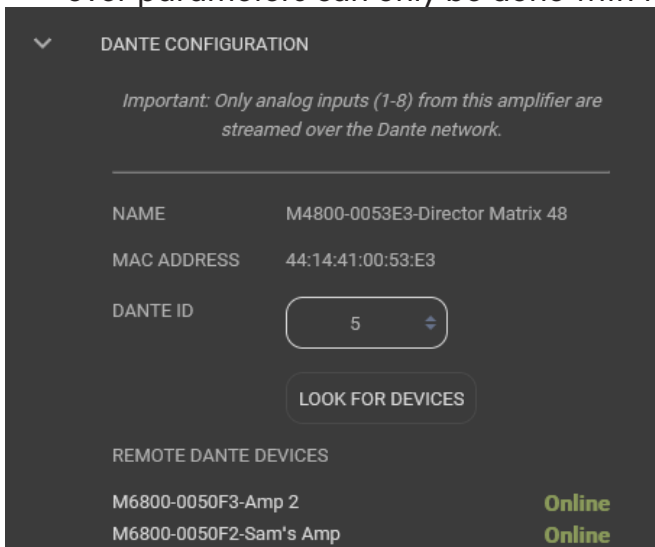
When collapsed, the Amplifier settings panel will give you a quick glimpse of the amp's status. It will report if voltage is normal, high, or low; if temperature is normal or too hot; and whether signal sense is on or off.



The expanded menu will let you change the name of the amplifier, make sure to click the check mark that appears when you edit the name to save your settings.

You can also turn signal sense on or off with the toggle button here, and use the system lock feature to keep out users who think they know what they're doing.

System Lock requires you to enter in a system password. Once system is locked, control over parameters can only be done with the password you entered here, so make sure to write it down, or you will have to perform a master reset.



Dante Configuration

This setting panel allows your AudioControl Dante amplifier to easily share and matrix sources from any other AudioControl Dante amp on the network.

Pretty simple to get started: open the Dante Configuration, set the IDs for each amp, then click "Look for other devices." The page will refresh, and the inputs from all available devices will populate the input selection menus. This means that inputs on those other devices are available to your local amp. Pretty great!

Set the first Dante-enabled unit that you log into as #1. The unit will scan for other Dante devices and make sure that the sought-after position of #1 isn't taken. If the all clear has been obtained, henceforth, this device will now be known as #1 (along with the MAC address).

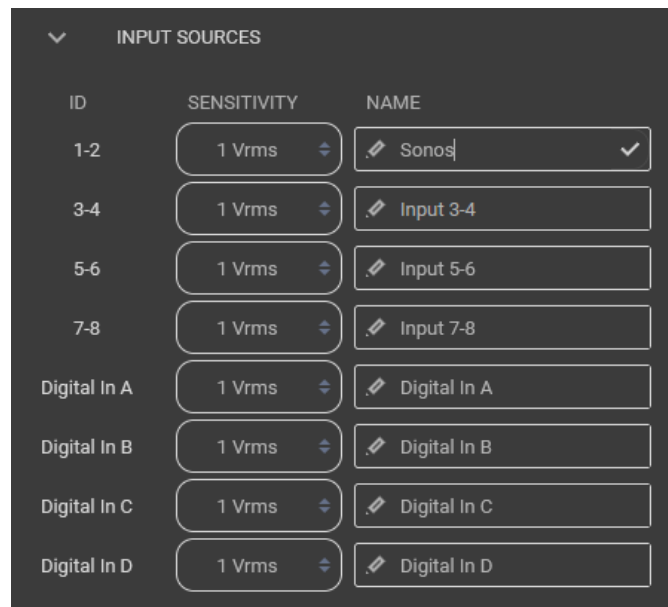
Set your other Dante AudioControl amps with ID 2, ID 3, etc. This designation will enable remote control over Dante routing through these amps via 3rd party automation systems like Crestron/Control 4, Elan and others! Very cool!

Dante sources that are not connected to a Dante-enabled AudioControl CM or Director amplifier can be routed to these amplifiers using Dante Controller, we'll talk about that more in the next section.

Input Sources

This settings panel allows you to rename the input sources to something witty and charming. Click on the small check mark that appears at the right in each box, to save your changes. (Do this before renaming the next input, or your changes will not be saved.) The new names will then appear in each Zone's list of inputs.

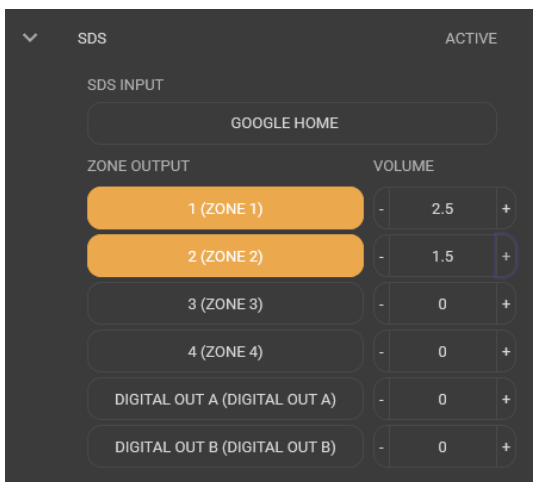
You can also change the input voltage sensitivity from 0.5Vrms to 4Vrms - the lower the number the more sensitive the input becomes. This setting can boost the output of a low-powered source, or prevent clipping from a high-powered source.



Most home audio products output around 1-2Vrms.

SDS - Signal Detecting Switching

SDS enables third party automation systems to route doorbell audio, or any voice activated device into the M4800D for distribution through residential or commercial audio systems.



Any input may be configured as the designated SDS input, while any or all outputs may be selected as announcement or paging zones. When an incoming audio signal is detected at the SDS input, audio present in assigned SDS output zones is muted until the announcement has been completed, at which time previous signals will resume playing.

In the SDS input drop down list, select the input that will be assigned as the SDS input.

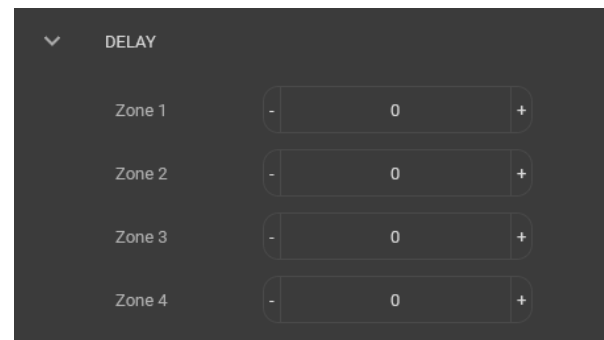
Select the zone outputs that will output SDS audio when

it is detected. The zone buttons while highlight orange when they are selected.

Volume levels for the announcements are adjustable in each output zone using the + and - buttons next to the selected zones.

Delay

This is where you can adjust the time delay for all speaker zones in 5 millisecond increments, up to 85 milliseconds. AudioControl engineers are hard at work to make audio travel back in time.

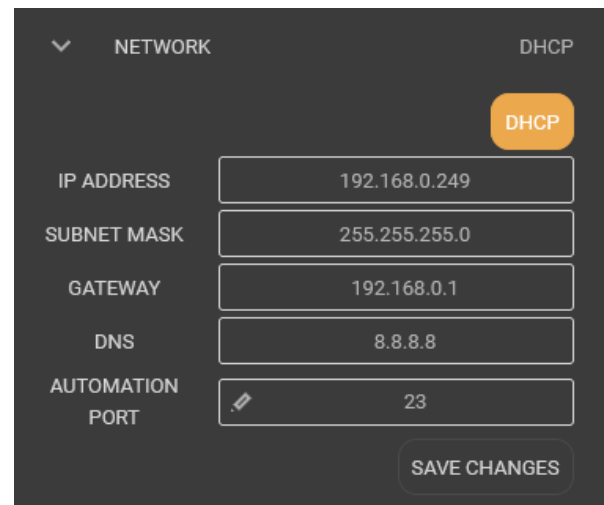


Network

Here you can set your static IP, or leave thing. If you don't need to set a static IP there's not much to do here other than ensure the DHCP button is selected.

De-select the DHCP button, edit all the IP address settings appropriately for your network, and click Save Changes to set your static IP.

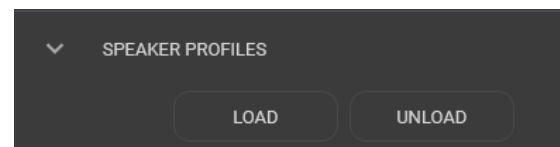
Double check that the IP address you've chosen for a static IP is not being used by another device on the network! If you gave the amplifier another unit's IP address, you'll need to take a trip to the amp's Master Rest button.



If you are having trouble connecting, the default IP address of the unit 192.168.0.249. You can connect manually peer to peer to troubleshoot.

Speaker Profiles

Here you can load in the latest and greatest profiles from our speaker partners. All available speaker profiles* come loaded in a single .csv file, can be downloaded from www.audiocontrolpro.com, and uploaded to the Director using the LOAD option.



**Attempting to read Speaker Profiles without loading them into The Director may cause headaches. Code carefully!*

Firmware

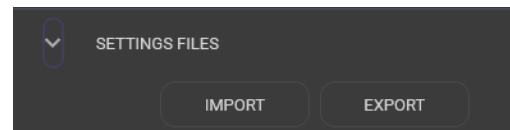
Check your device's firmware here, and run an update if one is available at www.audiocontrolpro.com.

A step by step guide to updating firmware can be found in a later section.



Settings Files

Here you can back up the settings of The Director. All parameters are stored into a single external file.



It is important to save each zone configuration settings to a user memory. If you do not need to have multiple EQ memories for recall, it is still necessary for the zone configurations to be saved should the power go out. The Save function in the graphic EQ section of each zone saves the EQ for that zone as user presets.

The Export button allows you to save the settings for all zones onto your computer. All the graphic and parametric EQ settings, crossover setting, input and zone names, and more will be retained in the exported file.

If you need to restore settings to the amplifier, or you save the perfect template you want to load into multiple Directors, use the Import button to load a previously exported settings file. Be patient, it can take about 2 minutes for the Director to load a settings file, depending on the amount of adjusting it needs to make.

Dante Configuration

Using Dante with AudioControl Amplifiers

All Dante-enabled AudioControl Amplifiers are able to easily find and share sources with each other over the Dante network. To achieve this, the amp requires 2 ethernet connections: one to allow access to the web GUI and IP controls, and another to send and receive Dante audio signals.

When all of the amps are connected to the network, we recommend taking the following steps:

1. Setup the amplifiers

Begin by setting up this amplifier as you would with any other non-Dante amp.

Connect inputs and speakers, make sure audio passes through, and adjust input sensitivity as needed.

Set a static IP address if you plan to use one, upload speaker profiles, and make sure that the firmware is up to date.

2. Rename the amplifier, inputs and zones

Since you're likely going to have multiple AudioControl Dante amps on the network, we recommend naming them before connecting the devices together. Otherwise, you'll be looking at a list of seemingly identical amps with no way to distinguish between them, and even more unnamed inputs.

Rename the amplifier in the Amplifier panel, and rename the inputs in the Input Sources panel. You can name them however you like, but best practice is to name them by the signal they are receiving.

Renaming the zones will help you keep track of where the selected audio is outputting to, so update the zone names now unless you regularly refer to your kitchen as "Zone 2".

3. Route audio in Dante Controller

If you have sources that need to be routed via the Dante Controller (from sources other than AudioControl Dante Amplifiers), create those connections in the Dante Controller App now. There are a limited number of Dante Inputs on each amp, so make sure not to fill every slot if you're using a mix of AudioControl Dante amps and other Dante products. We go into this more in a later section.

4. Set IDs

You can have up to 8 Dante-enabled AudioControl amplifiers connected together, and each of them need to have their own ID number.

In the Global Settings on the amp's web interface, open the Dante Configuration tab, and select an ID between 1 and 8.

Go through each amp in your system and give them their own ID. If you named your amps Amp 1, Amp 2, Amp 3, etc, we recommend setting them with ID 1, ID 2, and ID 3 respectively.

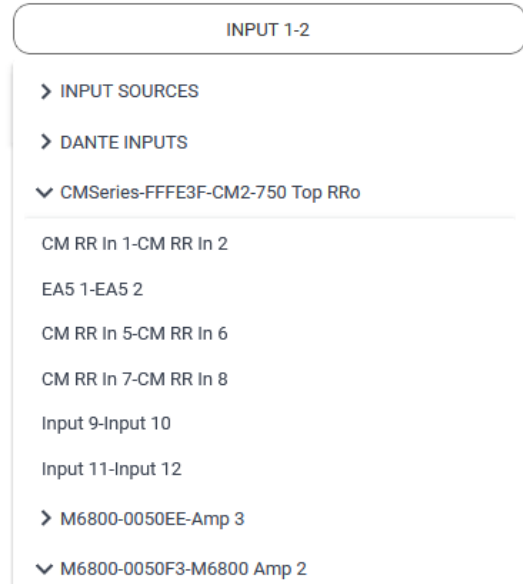
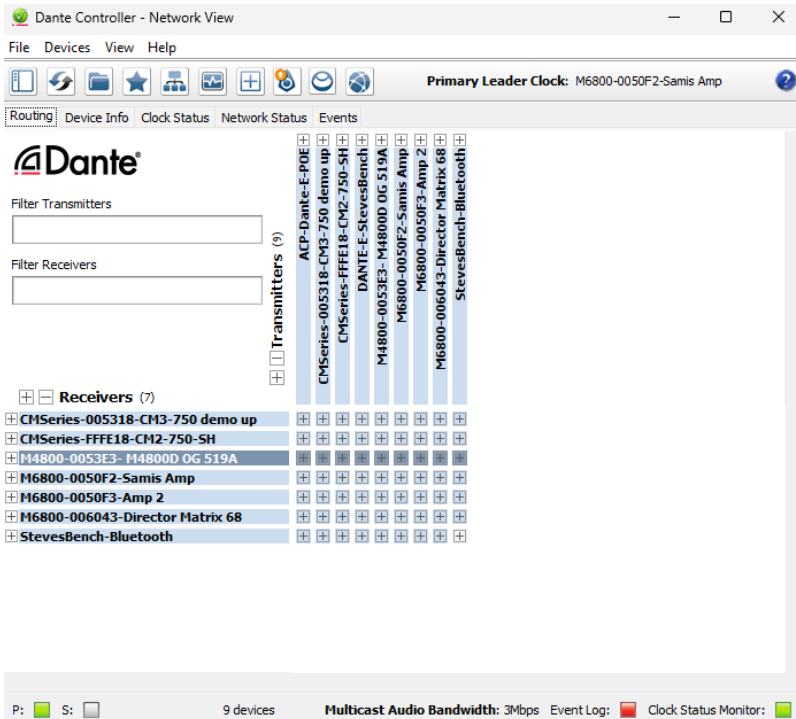
4. Look for Devices

Once all of the IDs are set, go through and click Look for Devices on each amplifier. The amps' web pages will refresh, the available Dante amps in the system will all appear under Remote Dante Devices, and all of their inputs will be selectable in the input selection drop down menus.

Using Dante Controller

In order to use Dante to its fullest, you will need to download the Dante Controller software from Audinate's website: <https://my.audinate.com/support/downloads/dante-controller>

If you are only using AudioControl's Dante enabled Director and CM amplifiers, there's no need to use Dante Controller. However, if you're using any other Dante products like our Dante Encoder, any non-AudioControl Dante product, or even AES67 Audio-over-Ethernet products, you will need to use Dante Controller.



Your computer will need to have an ethernet connection to the same network as all the Dante devices.

When Dante Controller opens, it will show you all available Dante devices. Since our amplifiers can input and output audio over Dante, they will show up in both the Receivers and Transmitters sections. Some products, like the Dante Encoder and Decoder, will only show up as either a Receiver or a Transmitter.

Clicking any of the "+" buttons will expand the selected products, showing you a matrix grid of all available inputs and outputs.

With the matrix open, you can send the signal from any transmitter to any receiver by simply clicking on where the Transmitter and Receiver meet on the grid. Successful connections will display a green check mark, are immediately available on M4800D as a Dante Input.

Audio signals from one transmitter can be routed to multiple receivers, as long as the transmitter can Multicast audio streams.

You can also transmit audio from an AudioControl amplifier to different Dante devices in the same way.

Note: Though it is hard to do, there is a possibility that a connection made in Dante Controller could be disconnected, and will need to be manually reconnected. There are only 16 Dante inputs available at any given time. If all 16 of those inputs are taken by AudioControl Dante sources, any other Dante Connection will be disconnected. The AudioControl amplifiers will try their best not to let this happen.

Renaming inputs from Dante Controller

The Director amplifier’s web GUI allows you to edit the names of all its inputs, except for the Dante inputs. To rename the Dante inputs, open Dante Controller and double click the amp whose input you wish to name and a Device View window will open.

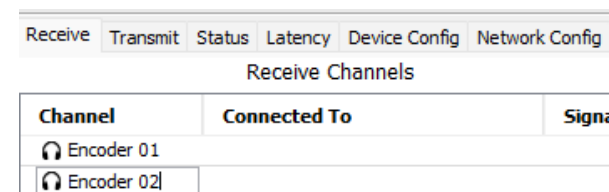
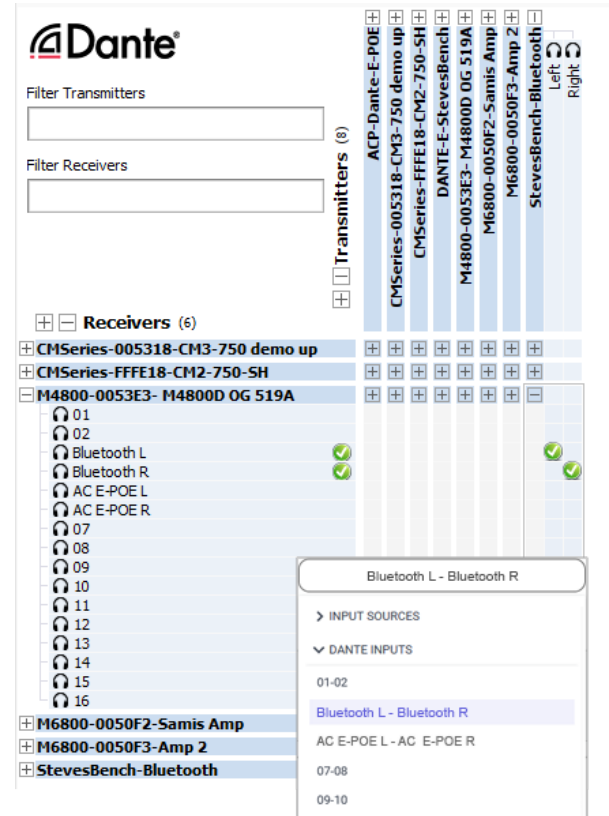
In this window’s “Receive” tab, click on the input channel and you can type in a new name for it. Do this for every input you’d like to rename, then power cycle the Director. When the Director is back on, all the Dante inputs will have their chosen names.

Device View

In addition being able to rename inputs on your amp with the Device View window, there are many other useful tools you can use here as well.

The Transmit tab allows you to see the active audio channels, and where they are streaming their signal to.

The Status tab displays all current information about the Dante card.



The Latency tab allows Dante to show off how cool it is, by showing how low the latency is between connected Dante streams

Device Config lets you change the type of digital audio encoding that Dante is using, set a desired maximum latency, and to rename the device in Dante Controller. Note, this will not change the Director's name on the web interface, but it may make it easier to find in Dante Controller.

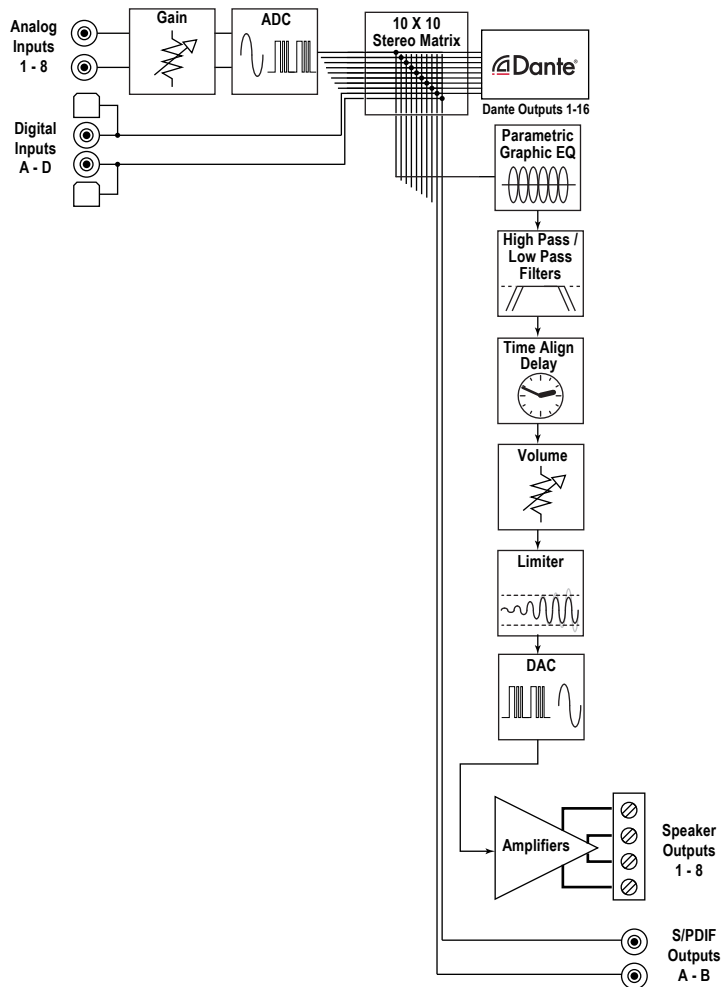
The AES67 Config tab lets you configure AES67. What does that mean? Well...

AES67

AES67 is an Audio-over-Ethernet protocol similar to Dante, and is used by manufacturers like Crestron to send and receive audio signals across a local area network.

If you have AES67-capable devices in your system you can enable AES67 communication in the AES67 Config tab. Otherwise, leave this disabled.

Here's a block diagram:



EQ

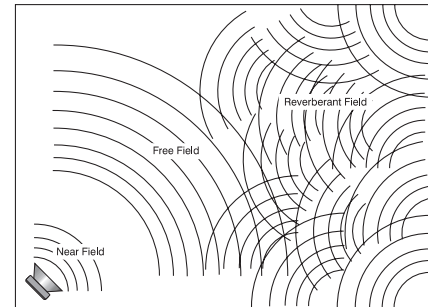
Once your head has stopped racing from the possibilities opened by Dante, it's time we talk about Equalization - the easiest way to improve (or ruin) the audio quality in a zone.

Acoustics

Room acoustics is a complicated subject about which hefty textbooks have been written, and entire galaxies have gone to war over. We simply want you to be aware of a few basics that have a direct effect on real time audio analysis.

The sound waves that emanate from your speakers may be perfect and pristine, but rooms are rarely designed with acoustics in mind. Just as waves in a pond reach the bank and reflect back, sound waves bounce off walls, ceilings, and floors, reflecting, reinforcing and canceling each other.

Unless your living room is a perfect enclosed ellipse, and your speakers and listening position are situated at the foci, sound waves will reflect from all around and create a less-than-ideal listening situation.



Room acoustics is an important but complicated subject. To learn more, we recommend AudioControl's Technical Paper 107, "Small Room Acoustics De-Mythologized". You can download this paper from support.audiocontrolpro.com (search "De-mythologized").

The overall point is that the rooms in a home function as gigantic, clunky EQs, boosting or cutting frequencies depending on how the room is built, and the position of the speakers.

Benefits of Equalization

The laws of physics are hard to violate, sound waves will reflect and diminish in even the best circumstances. Equalization is here to level the playing field, improving the user's listening experience in even the most sound wave-reflective room in their home.

How to EQ

To begin, make sure the Director whose rooms you wish to equalize is powered on and connected to the network.

The process can be done by ear, but you won't get the most accurate results. An RTA (Real Time Analyzer) and a measurement microphone are the best tools to even out the peaks and valleys caused by the room.

1. Set the measurement microphone in the middle of the listening area, at the height of the typical listener's head.
2. Access the Director's web GUI, and navigate to the zone you want to adjust. Expand the zone settings to access the EQ sliders, and change the zone's input to the built-in Pink Noise channel.
3. Pink Noise plays all frequencies at the same level, and the RTA will show you which frequencies are being cut and which are being boosted from the room acoustics.

4. In general, the goal is to flatten the audio so the RTA displays all frequencies equally. Use the graphic and parametric EQ controls to lower peaks in the frequency response, first. Peaks obscure the surrounding sounds and lowering the peaks will unleash overshadowed sounds.
5. Save different settings to different memories and see which one the clients like. Their taste may be different than yours.

Graphic equalization controls in The Director M4800D are selected to correspond with the characteristics of wall and ceiling speakers, and as such are very effective. This provides a “graphic” representation of what the adjustments are.

Parametric equalization requires selecting the frequency, the bandwidth of the control, as well as the level of adjustment, not an easy task to get correct. In general, parametric equalization is valuable for very large areas of change, or very narrow areas.

It is best used for taming very narrow peaks. Do not use for very narrow dips as these dips are likely caused by cancellations and will not respond to equalization boost.

Graphic EQ Frequency Controls

45 Hz — Low bass. This is about the lowest frequency in-wall, extension and small bookshelf speakers can achieve. Boosting it too far might cause problems, but if your speakers can take it, a mild boost will enhance bass instruments such as Fender bass, kick drum, floor toms, timpani and double bass viols.

150 Hz — High bass. There’s a lot of bass information at this frequency. In fact, most modern music is mixed to enhance this area of the frequency spectrum. 150Hz also determines the depth of male vocals and contains reverberant information which contributes to the spaciousness of sound. Boosting 150Hz can add “POW!” and impact to bass or it can make the sound “bonky” and “boomy”. This is a critical adjustment with small or in-wall speakers. Experiment with it.

300 Hz and 700 Hz — High and low midrange. These controls directly affect the sound of instruments and vocals. These bands also determine the speaker’s presence (whether the music sounds far away or close in). Small speakers often produce too much midrange, so these controls can be turned down slightly during your initial experimentation. Consider reducing 700Hz if you are only using extension speakers for background music.

2500 Hz — Treble. Female vocals and the “edge” of instruments such as guitars, snare drums, saxes, violins, etc. are found in this range. If accentuated too much (by boosting this control) sounds in the 2500Hz range can seem harsh and fatiguing to the ear due to excessive output by the speaker or because of live, reflective room acoustics.

12 kHz — High treble. The fine detail, texture and sheen of music is found here. The breathiness of vocals, the “sheen” of cymbals, the high overtones of piano and strings. Actually, there’s audible music information up to 20,000Hz on some CDs and most adult’s hearing is still pretty good at 15,000Hz. We’ve chosen 12,000Hz because it provides more useful control to compensate for room acoustics and common small-speaker deficiencies.

Remember, if you are using your speaker model's Speaker Profile, the parametric EQ will already be tuned and locked to the manufacturer's specification.

Subsonic and Tweeter Protection Filters

The Subsonic (high-pass) filter and Tweeter Protection (low-pass) filter are adjusted on the along with EQ. Their function is simply to make the speakers sound better, play louder, and last longer.

All speakers have frequency response limitations. For the best performance, operate speakers in their linear zone, the frequencies where their sound reproduction is not compromised by mechanical limitations.

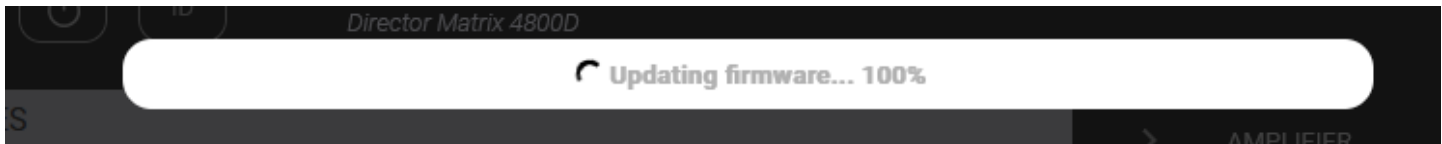
If you operate speakers at their mechanical limits, sound is compromised, parts of the speakers are stressed and can heat up, shortening their life. In other words, both the tweeter protection and subsonic filter are very important tools.

Experiment with higher subsonic filters and lower tweeter protection settings than you might think from the speaker's published specifications. You may find the system actually sounds much better than pushing the frequency limits. For sure, the speaker will be less stressed and last longer.

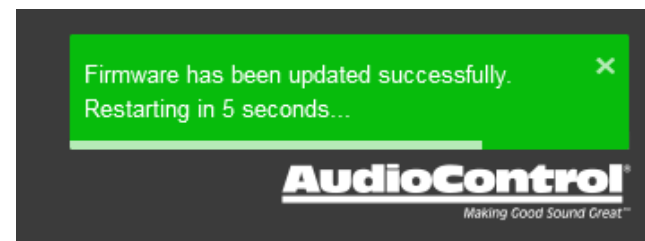
Before starting a firmware update, we recommend saving a backup of your settings by going to the M4800D's web GUI, opening the Global Settings, expanding the Settings Files panel, and clicking **EXPORT**.

Your settings should stay the same after the update, but in our modern world it's always better to practice safe updating.

1. Go to www.audiocontrolpro.com and navigate to the Director M4800D's product page. Locate and download the firmware .zip file from the Resources section.
2. In your computer's download folder, extract the files from the .zip folder.
3. Navigate to the M4800D's web GUI by typing its IP address into your browser.
4. Go to the amp's Global Settings, open the Firmware panel, and select Update.
5. In the navigator window that opens, locate the downloaded and extracted .bnc firmware file, select it, and open it.
6. The processor will begin to update, progress will be indicated by a bar at the top of the page, and a notification will pop up in the bottom right corner of the screen when the update is complete, and the amp will restart.



7. After the amp restarts, it will reload it's save settings and apply the update. The process takes about a minute to complete.
8. When the Director's web GUI is refreshed, the amplifier will be on the latest firmware.



Many problems can be eliminated by re-checking the wiring and settings of the unit. If a problem cannot be solved using the guide below, please call the AudioControl team for further assistance, or e-mail us at techsupport@audiocontrolpro.com.

No Sound

1. Verify the Power LED is Blue.
2. Verify Protection LED is Off.
3. Verify Zone Status LED is Blue.
4. Verify that the correct input has been selected in the web server menus
5. Verify the source unit is operating.
6. Check the speaker connector plugs on the rear panel are secure.
7. Unplug the power cord and check the AC Power Fuse on the rear panel.

Protection LED is off, but none of the Zone Status LEDs are on

1. Turn Signal Sense off in the web GUI. All of the zone status LEDs should turn on. If they do not, call AudioControl tech support.
2. Verify the audio source unit is operating.
3. Increase the preamp volume if signal sense is engaged, or just going steady.

Channel Status LED is Red

1. Check speaker leads for a short. Swap speaker connectors on rear to see if the problem moves with the wires.
2. If the unit is excessively hot, turn down the volume and allow it to cool off. The protection LED should turn off after a short while. Verify that any ventilation holes have not become blocked.
3. The speaker impedance may be too low. Use an ohmmeter to measure the impedance on the speaker wires.

Speaker channels are cutting in and out

1. If using external volume controls, check that they can handle the power output.
2. Make sure the speaker impedance is not less than 4 ohms, or 8 ohms when used in bridged mono.
3. There may be a short in the wires. Suspect a short if the problem happens only at the highest volumes.

Protection LED is Red

1. Disconnect power from the unit for 3 to 4 minutes and reconnect to power.
2. Disconnect all speaker wires. If it still turns red, and the unit has cooled, something rather serious has happened inside the unit. Call AudioControl's Lonely Support team.

Speaker Buzzing or Crackling at high volume

1. Reduce any preamplifier/equalizer low-frequency boost.
2. Turn off your “Sounds of the Pacific Northwest” chainsaw and bacon-frying CD.

There is no audio input signal, but the Zone Status LEDs are still blue

1. Check the signal sense status in the web GUI. If signal sense is off, the zone status LEDs will stay on as long as the master trigger is enabled.
2. When signal sense is on, the zone status LEDs stays on for 2 minutes after the audio signal has stopped. This delay prevents premature muting during quiet passages or song changes.

The unit is on but you cannot trigger it off

1. The unit will stay on if either the 12v master trigger is on, or jumpered on.

Is an in-wall volume control rated at 80 watts (continuous) adequate?

1. No, is the simple answer. The Director’s built-in volume controls and a third-party IP control system will always work best to control the audio volume.
2. If the customer still wants in-wall volume control, go for one with a higher rating than the output of the M4800D with a fixed 8 ohm impedance if you want reliable, long-lasting system.

The Director M4800D looks like this:

1. It has been installed upside down.
2. You are trying a new Yoga position



How many M4800Ds can be stacked top of each other without an air space in between?

You can stack a maximum of 4 units on top of one another, and allow a free rack space above and below.

Ideally, 2 units can be stacked with a free space above and below, as this will improve the ventilation to the units.

May you daisy chain or y-cord audio and power trigger connections?

Sharing audio is made easy with the M4800D's Dante capability, removing the need to split audio signal between amps

To share audio with non-Dante amplifiers, use the amplifier's digital outputs, or an analog Dante Decoder.

For power control, it's easiest to send IP commands to each amp. The 12 volt mini jacks can loop to multiple triggers, but if you need more than 15mA of current on the 12 volt output, use a relay.

What are the power requirements and BTU outputs of The Director?

Check the specifications section for detailed information. In general, 1/8th power is typical loud use of the amplifier. This will be a quite loud listening level for most rooms and assumes all zones driven at the same time.

How many units may I put on one 15 amp breaker?

Since you are limited to 1500 watts per device by most codes, there should be a separate 15 amp circuit for each unit, however, the circumstances where The Director M4800D draws maximum power are very rare outside of an engineering lab.

If the only use is background music, then the 1/8th power in the specifications is a reasonable power draw. Of course, you will want to include a margin of safety for unusual circumstances. And at the end of the day, defer to what the electrical inspector tells you.

What should I use the "Trim" controls for?

The Trim controls are an easy-to-access level setting control which you can use while in the zone. If the user thinks a zone should be louder or quieter at 60% volume, trim is there to help. These controls allow minor, not major, adjustments.

What about large rooms as well as rooms where the listener is far from the speakers?

Larger rooms will require larger speakers, and there are in-wall speakers designed for these longer "throw" distances. In general, larger rooms with more height require more speakers and speakers with tighter "directivity" to get party-level SPL.

Do you bite your thumb at us Sir?

I do bite my thumb sir.

What to do if you need service

If the unit needs service, then please contact AudioControl, either by e-mail or phone. We will verify if there is anything wrong in the system that you can correct yourself, or if it needs to be sent back to our factory.

Please include the following items when returning the unit:

1. A copy of your proof of purchase. No originals please. We cannot guarantee returning them to you.
2. A brief explanation of the trouble you are having with the unit. (You'd be surprised how many people forget this.) If you can supply a really detailed description of the problem, this would be so much better, and our service technicians may add you to their Christmas Card list. Please include any notes about the system and other components you are using. Is it an intermittent problem that only occurs on the first full moon of Spring?
3. A return street address. (No PO Boxes, please).
4. A daytime phone number in case our technicians have a question about the problem you are having, or if they are just feeling lonely.
5. Package the unit in the original packaging if you still have it. Use great care and plenty of good packing materials to protect the unit and prevent it from moving about inside the box. Do not use loose materials like packing peanuts or real peanuts.

You are responsible for the freight charges to us, but we'll pay the return freight back as long as the unit is under warranty. We match whatever shipping method you use to send it to us, so if you return the unit overnight freight, we send it back overnight. We recommend United Parcel Service (UPS) for most shipments.

Please do not return the unit to AudioControl if you have not received an RMA number from our masterful customer support team.

Phone 425-775-8461

techsupport@audiocontrolpro.com

support.audiocontrolpro.com

www.audiocontrolpro.com/contact-us

In just the same way as being covered in honey and thrown into a dark pit full of hungry woodchucks, people are scared of warranties. Lots of fine print. Months of waiting around. Well, fear no more. This warranty is designed to make you rave about AudioControl. It's a warranty that looks out for you and your client, plus helps you resist the temptation to have your friend Sparky, who's "good with electronics," try to repair your AudioControl product. So go ahead, grab a cup of tea, and carefully read through this warranty.

Our warranty has conditional conditions! "Conditional" doesn't mean anything ominous. The Federal Trade Commission tells all manufacturers to use the term to indicate that certain conditions have to be met before they'll honor the warranty. If you meet all of these conditions, AudioControl will, at its discretion, perform warranty service on any AudioControl products that exhibit defects in materials and/or workmanship during the warranty on your product for five (5) years from the date you bought it, and we will fix or replace it, at our option, during that time.

Here are the conditional conditions:

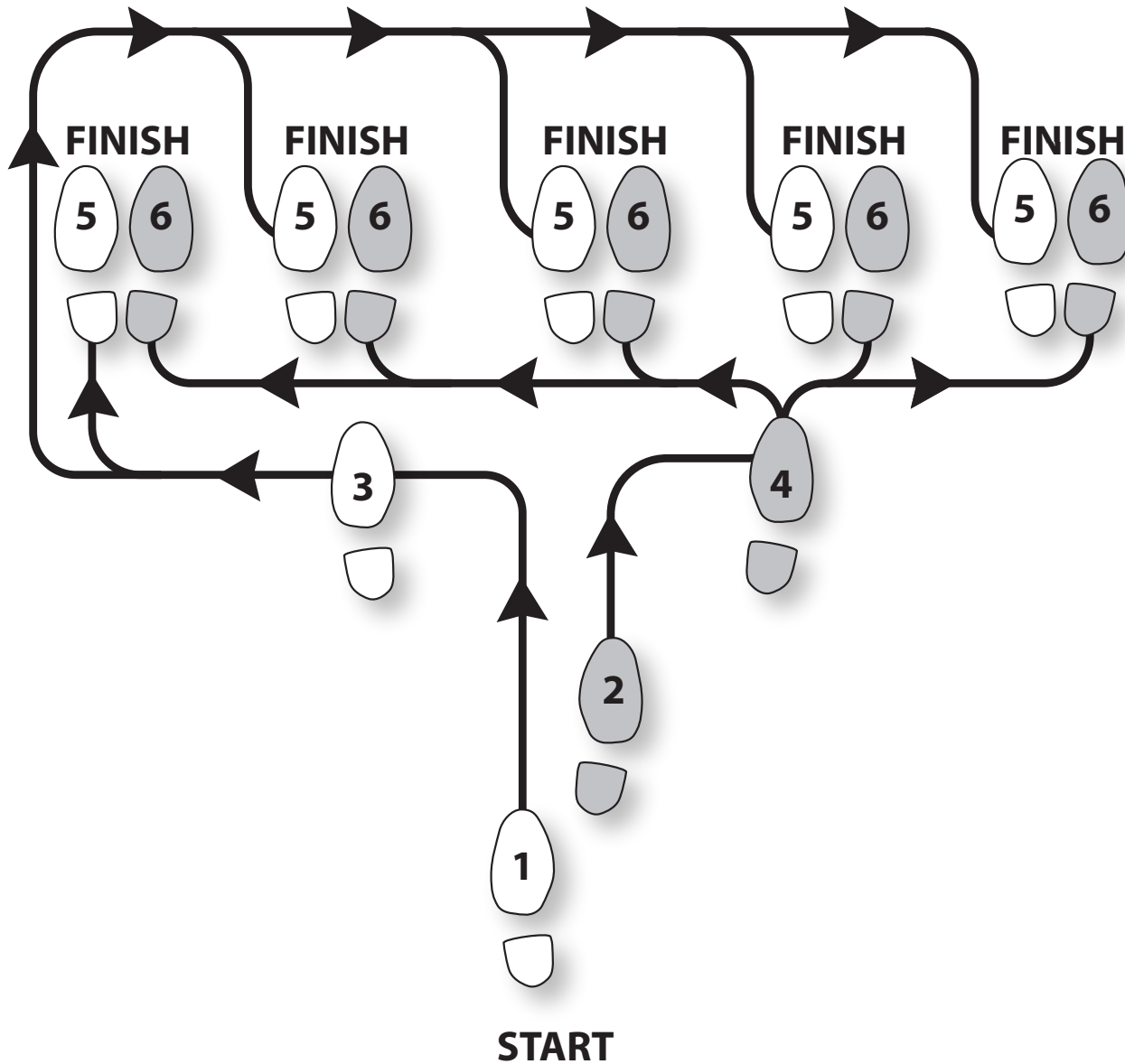
1. You need to hold on to your sales receipt! All warranty service requires original sales receipt documentation. The warranty only applies to the original purchaser from an authorized AudioControl dealer. Note: Products purchased from unauthorized dealers are not covered under warranty.
2. If an authorized AudioControl dealer installs your AudioControl product, the warranty is five years, otherwise the warranty is limited to one year.
3. Our warranty covers AudioControl products that have been installed according to the instructions in the installation manual.
4. You cannot let anybody who isn't: (A) the AudioControl factory; or (B) somebody authorized in writing by AudioControl service your AudioControl product. If anyone other than (A), or (B) messes with your AudioControl product, the warranty is void.
5. The warranty is void if the serial number is altered, defaced or removed, or if your product has been used improperly. Now that may sound like a big loophole, but here is what we mean by this: Unwarranted abuse is: (A) physical damage (don't use your product to level your dining room table); (B) improper connections (120 volts into the RCA jacks can fry the poor thing); (C) sadistic things! This is the best product we know how to build, but for example if you mount it to the front bumper of your car, drop it over the Niagara Falls or use it for Clay Pigeon shooting practice, something will go wrong.

Assuming you conform to 1 through 5, and it really isn't all that hard to do, we will have you send your product to us for warranty service.

Legalese Section

This is the only warranty issued by AudioControl. This warranty gives you specific legal rights, and you may also have rights that vary from state to state. Promises of how well your AudioControl product will work are not implied by this warranty. Other than what we've said we'll do in this warranty, we have no obligation, express or implied. We make no warranty of merchantability or fitness for any particular purpose. Also neither we nor anyone else who has been involved in the development or manufacture of the unit will have any liability of any incidental, consequential, special or punitive damages, including but not limited to any lost profits or damage to other parts of your system by hooking up to the unit (whether the claim is one for breach of warranty, negligence of other tort, or any other kind of claim). Some states do not allow limitations of consequential damages.

Hurrah, You are done!



Other common names for this dance:

- Dante Boogie Nights
- Dante 2 Electric Boogaloo
- Dante Inferno

Thank you

AudioControl 

Thank you for choosing AudioControl!
Please contact us with any questions, we are
happily at your service!



an **AVPro**  company

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