

Setup Utility Guide

*SonaFlex*TM
SERIES

SF-16M 16-Channel Digital Matrix Amplifier



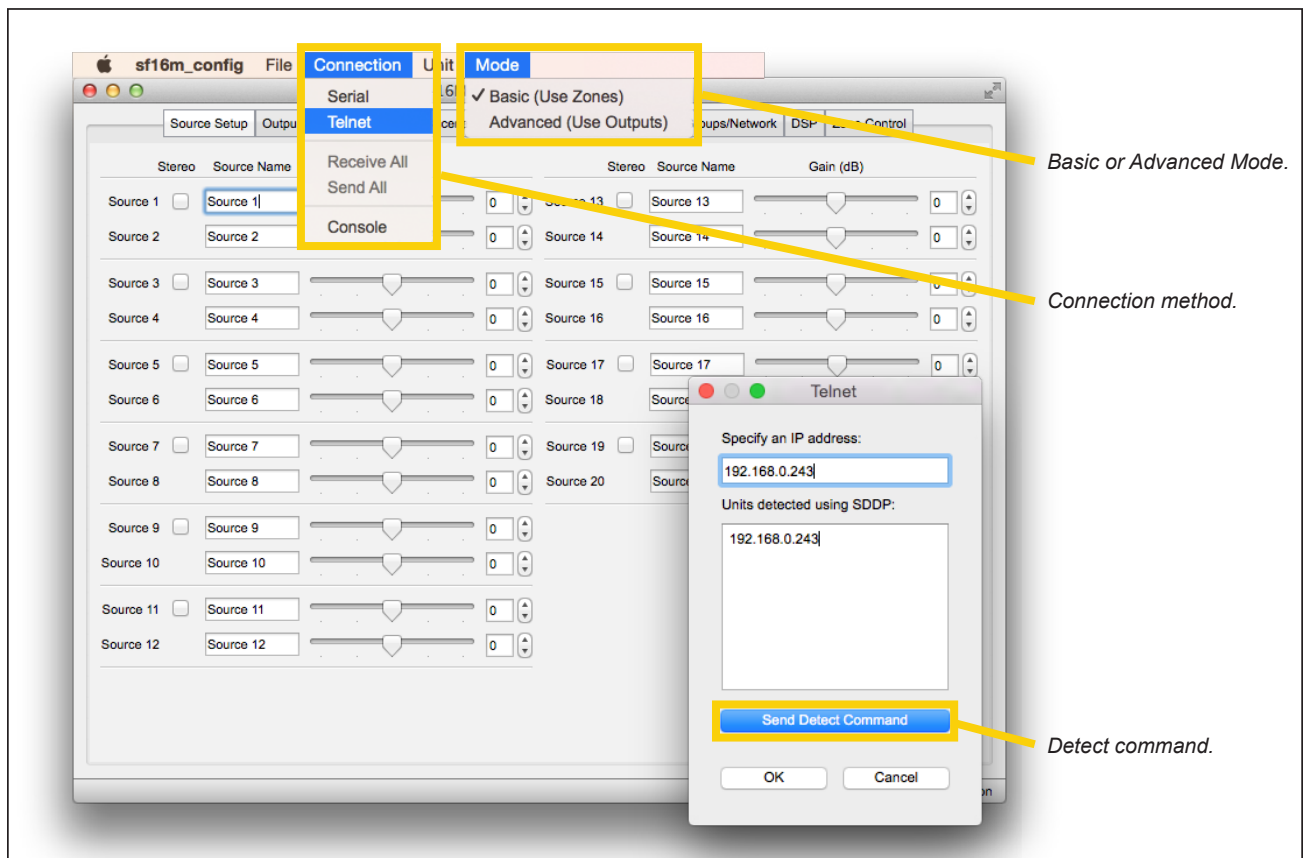
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Advanced Configuration Using the Setup Utility

The Setup Utility is the most efficient way to set up SF-16M advanced features (using *Mac or PC), and provides an easy way to save a copy of each configuration to edit off-site, or for backup. For more detail, see video tutorials at www.audioauthority.com/sonaflex_tip4. The following settings can only be configured using Ethernet/serial commands or the Setup Utility (not front panel controls): Advanced DSP (EQ), Network Settings, System Trigger, Contact Closure, Groups, Scenes, Overrides, Sleep Timer, and Lockouts. Some of the SF-16M features are not compatible with third party controllers that are designed to perform similar functions.

Setup Tips:

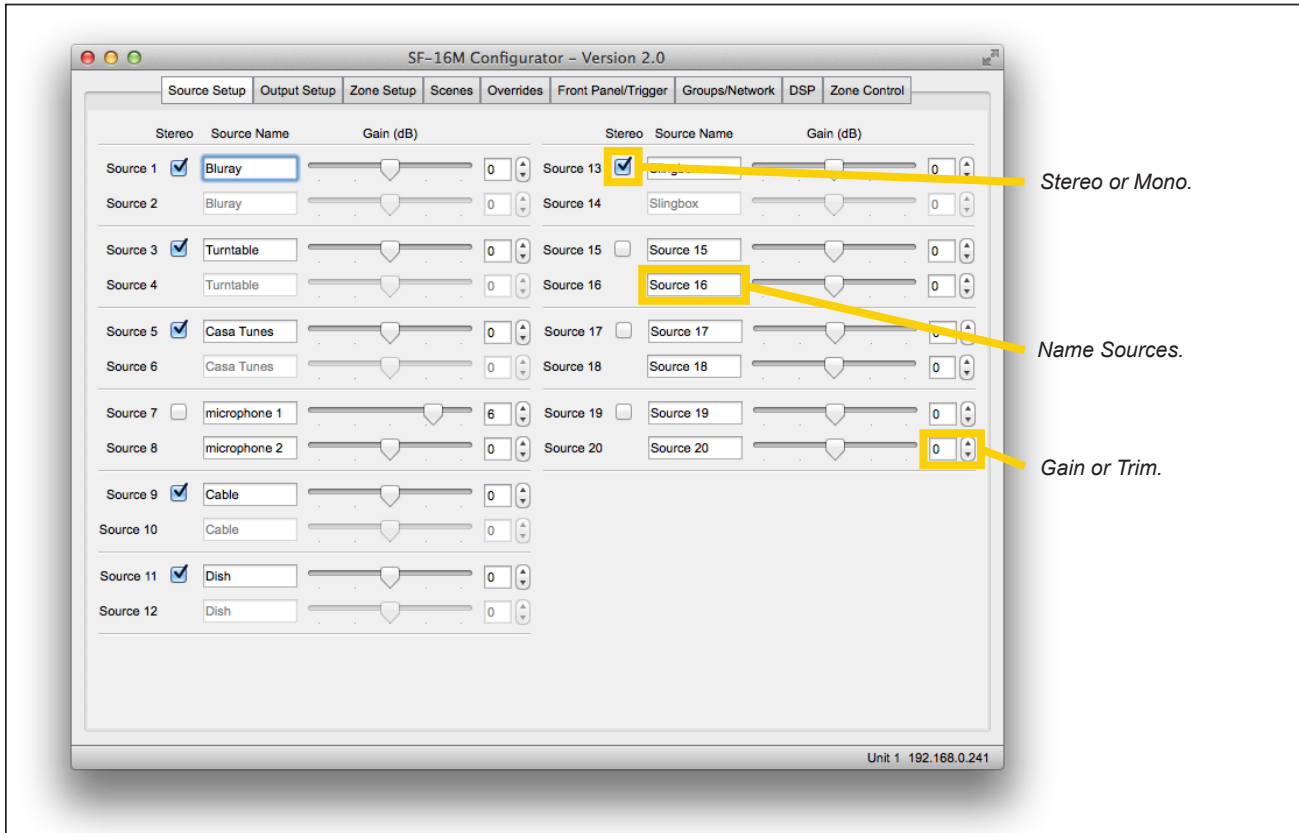
1. **Choose Advanced or Basic Mode** - Advanced mode allows Sound Scenes and advanced DSP, and allows control per individual speaker output, whereas Basic Mode simplifies the front panel interface, combining outputs into “Zones” for control, and is limited to Bass and Treble DSP settings. You can use Basic Mode if you do not plan to use a third party control system such as Control4, URC, CasaTunes, or RTI; these systems have their own methods of grouping outputs into Zones or rooms. Zones are only useful for front panel control.
2. **Connect to the SonaFlex** - To connect via Ethernet, connect the SonaFlex to the network via DHCP, and click Connection>Telnet; click the Detect button, or enter the IP address manually.
3. **Existing Systems** - Import your SF-16M configuration from your SonaFlex using Receive All from the Connection menu or File>Load a previously saved configuration from your computer hard drive or a USB drive.



Connection Menu and Mode Menu

**All examples show setup using a Mac for configuration. Using Windows OS, the Advanced mode is selected by unchecking Basic.*

Source Setup Tab - Type a name for each source, select gain adjustment (if any), and choose mono or stereo. All inputs and outputs are mono by default. Designating a source as stereo ties the selected odd numbered source to the next even number for switching, volume and DSP. Mono sources appear without a checked box (example Source 7, microphone 1), while stereo pairs appear with a checked box and the even numbered source name greyed out (e.g. Source 1, 2 Blu-ray).



Source Setup

Output Setup Assignment Tab - In Basic Mode, assign each output to a Zone, and/or name the outputs and indicate whether the outputs are mono or stereo. In Advanced Mode, Zone assignments are ignored, and all of the DSP settings are available. Source switching is included for convenience; this utility is not intended to be a day to day user interface.

Stereo	Output Name	Zone	Vol(dB)	Mute	Power	Source	Loud	Bass	Treble	Max Vol	POV Mir	POV Max	Balance
<input checked="" type="checkbox"/>	L Rm Subs	Zone 1	-50	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Bluray	<input type="checkbox"/>	0	0	-5	-80	-5	0
<input type="checkbox"/>	L Rm Subs	Zone 2	-50	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Bluray	<input type="checkbox"/>	0	0	-5	-80	-5	0
<input checked="" type="checkbox"/>	L Rm Satellites	Zone 3	-40	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Turntable	<input type="checkbox"/>	0	0	0	-80	0	0
<input type="checkbox"/>	L Rm Satellites	Zone 4	-40	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Turntable	<input type="checkbox"/>	0	0	0	-80	0	0
<input checked="" type="checkbox"/>	Dining rm Full	Zone 5	-40	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Casa Tune	<input type="checkbox"/>	0	0	0	-80	0	0
<input type="checkbox"/>	Dining rm Full	Zone 6	-40	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Casa Tune	<input type="checkbox"/>	0	0	0	-80	0	0
<input checked="" type="checkbox"/>	Kitchen Full	Zone 7	-40	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	microphone	<input type="checkbox"/>	0	0	0	-80	0	0
<input type="checkbox"/>	Kitchen Full	Zone 8	-40	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	microphone	<input type="checkbox"/>	0	0	0	-80	0	0
<input checked="" type="checkbox"/>	Kids Full	Zone 9	-40	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Cable	<input type="checkbox"/>	0	0	0	-80	0	0
<input type="checkbox"/>	Kids Full	Zone 10	-40	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Cable	<input type="checkbox"/>	0	0	0	-80	0	0
<input type="checkbox"/>	G rm Full	Zone 11	-40	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Dish	<input type="checkbox"/>	0	0	0	-80	0	0
<input type="checkbox"/>	Study Full	Zone 12	-40	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Dish	<input type="checkbox"/>	0	0	0	-80	0	0
<input checked="" type="checkbox"/>	P Subs	Zone 13	-40	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Source 13	<input type="checkbox"/>	0	0	0	-80	0	0
<input type="checkbox"/>	P Subs	Zone 14	-40	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Source 14	<input type="checkbox"/>	0	0	0	-80	0	0
<input checked="" type="checkbox"/>	P Satellites	Zone 15	-40	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Source 15	<input type="checkbox"/>	0	0	0	-80	0	0
<input type="checkbox"/>	P Satellites	Zone 16	-40	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Source 16	<input type="checkbox"/>	0	0	0	-80	0	0

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Basic Mode

Stereo	Output Name	Zone	Vol(dB)	Mute	Power	Source	Loud	Bass	Treble	Max Vol	POV Mir	POV Max	Balance
<input checked="" type="checkbox"/>	Room 1	Zone 1	-40	<input type="checkbox"/>	<input type="checkbox"/>	CD 1	<input type="checkbox"/>	0	0	0	-80	0	0
<input type="checkbox"/>	Room 1	Zone 1	-40	<input type="checkbox"/>	<input type="checkbox"/>	CD 1	<input type="checkbox"/>	0	0	0	-80	0	0
<input checked="" type="checkbox"/>	Room 2	Zone 3	-44	<input type="checkbox"/>	<input checked="" type="checkbox"/>	CD 1	<input type="checkbox"/>	0	0	0	-80	0	0
<input type="checkbox"/>	Room 2	Zone 3	-44	<input type="checkbox"/>	<input checked="" type="checkbox"/>	CD 1	<input type="checkbox"/>	0	0	0	-80	0	0
<input checked="" type="checkbox"/>	Room 3	Zone 5	-40	<input type="checkbox"/>	<input type="checkbox"/>	CD 1	<input type="checkbox"/>	0	0	0	-80	0	0
<input type="checkbox"/>	Room 3	Zone 5	-40	<input type="checkbox"/>	<input type="checkbox"/>	CD 1	<input type="checkbox"/>	0	0	0	-80	0	0
<input checked="" type="checkbox"/>	Room 4	Zone 7	-40	<input type="checkbox"/>	<input type="checkbox"/>	CD 1	<input type="checkbox"/>	0	0	0	-80	0	0
<input type="checkbox"/>	Room 4	Zone 7	-40	<input type="checkbox"/>	<input type="checkbox"/>	CD 1	<input type="checkbox"/>	0	0	0	-80	0	0
<input checked="" type="checkbox"/>	Room 5	Zone 9	-40	<input type="checkbox"/>	<input type="checkbox"/>	CD 1	<input type="checkbox"/>	0	0	0	-80	0	0
<input type="checkbox"/>	Room 5	Zone 9	-40	<input type="checkbox"/>	<input type="checkbox"/>	CD 1	<input type="checkbox"/>	0	0	0	-80	0	0
<input checked="" type="checkbox"/>	Room 6	Zone 11	-40	<input type="checkbox"/>	<input type="checkbox"/>	CD 1	<input type="checkbox"/>	0	0	0	-80	0	0
<input type="checkbox"/>	Room 6	Zone 11	-40	<input type="checkbox"/>	<input type="checkbox"/>	CD 1	<input type="checkbox"/>	0	0	0	-80	0	0
<input checked="" type="checkbox"/>	Room 7	Zone 13	-40	<input type="checkbox"/>	<input type="checkbox"/>	CD 1	<input type="checkbox"/>	0	0	0	-80	0	0
<input type="checkbox"/>	Room 7	Zone 13	-40	<input type="checkbox"/>	<input type="checkbox"/>	CD 1	<input type="checkbox"/>	0	0	0	-80	0	0
<input checked="" type="checkbox"/>	Room 8	Zone 15	-40	<input type="checkbox"/>	<input type="checkbox"/>	CD 1	<input type="checkbox"/>	0	0	0	-80	0	0
<input type="checkbox"/>	Room 8	Zone 15	-40	<input type="checkbox"/>	<input type="checkbox"/>	CD 1	<input type="checkbox"/>	0	0	0	-80	0	0

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Advanced Mode

Zone Setup Tab - Switch to Basic Mode to use Zones instead of Outputs. Set volume levels, loudness, bass, treble, and maximum volume levels. Some settings on this tab are permanent (e.g. volume and maximum volume levels, etc.), and some are intended for temporary convenience while setting up levels (e.g. source, mute, power off, etc.). Set Power On Minimum and Maximum levels to ensure moderate volume levels when an output is powered on (limits do not apply after mute).

Zone	Zone Name	Volume (dB)	Mute	Source	Loudness	Bass	Treble	Max Vol	POV Min	POV Max
Zone 1	Zone 1	-40	<input checked="" type="checkbox"/>	Bluray	<input type="checkbox"/>	0	0	0	-80	0
Zone 2	Zone 2	-40	<input checked="" type="checkbox"/>	Bluray	<input type="checkbox"/>	0	0	0	-80	0
Zone 3	Zone 3	-40	<input checked="" type="checkbox"/>	Turntable	<input type="checkbox"/>	0	0	0	-80	0
Zone 4	Zone 4	-40	<input checked="" type="checkbox"/>	Turntable	<input type="checkbox"/>	0	0	0	-80	0
Zone 5	Zone 5	-40	<input checked="" type="checkbox"/>	Casa Tunes	<input type="checkbox"/>	0	0	0	-80	0
Zone 6	Zone 6	-40	<input checked="" type="checkbox"/>	Casa Tunes	<input type="checkbox"/>	0	0	0	-80	0
Zone 7	Zone 7	-40	<input checked="" type="checkbox"/>	microphone 1	<input type="checkbox"/>	0	0	0	-80	0
Zone 8	Zone 8	-40	<input checked="" type="checkbox"/>	microphone 2	<input type="checkbox"/>	0	0	0	-80	0
Zone 9	Zone 9	-40	<input checked="" type="checkbox"/>	Cable	<input type="checkbox"/>	0	0	0	-80	0
Zone 10	Zone 10	-40	<input checked="" type="checkbox"/>	Cable	<input type="checkbox"/>	0	0	0	-80	0
Zone 11	Zone 11	-40	<input checked="" type="checkbox"/>	Dish	<input type="checkbox"/>	0	0	0	-80	0
Zone 12	Zone 12	-40	<input checked="" type="checkbox"/>	Dish	<input type="checkbox"/>	0	0	0	-80	0
Zone 13	Zone 13	-40	<input checked="" type="checkbox"/>	Slingbox	<input type="checkbox"/>	0	0	0	-80	0
Zone 14	Zone 14	-40	<input checked="" type="checkbox"/>	Slingbox	<input type="checkbox"/>	0	0	0	-80	0
Zone 15	Zone 15	-40	<input checked="" type="checkbox"/>	Source 15	<input type="checkbox"/>	0	0	0	-80	0
Zone 16	Zone 16	-40	<input checked="" type="checkbox"/>	Source 16	<input type="checkbox"/>	0	0	0	-80	0

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Power On minimum and maximum volume limits.

Maximum Volume.

Bass and Treble are available in Basic Mode but not advanced DSP.

Loudness on or off.

Name the Zones you plan to use. Zones with no outputs assigned do not appear on the front panel.

Zone Setup (available in Basic Mode)

Scenes Tab - Sound Scene Presets are available only in Advanced Mode but you can apply a Scene from the front panel. A Scene is a system-wide snapshot of all volume levels and source assignments. Scenes allow the end-user to recall previously captured system settings with a single button press. Up to 10 sound Scenes can be saved and recalled per SF-16M. Scenes can also be saved and recalled across multiple SF-16M amplifiers linked together, however each individual SF-16M has a maximum of 10 unit or “global” Scenes. Scene settings include Scene naming, source selection, volume levels, mute status and an “Bypass” option which allows any output to always ignore a Scene preset.

Scene Name/Active	Bypass	Source	Volume (dB)	Mute	Power
Scene 1	<input type="checkbox"/>		-40	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Scene 2	<input type="checkbox"/>	Bluray	-40	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Scene 3	<input type="checkbox"/>		-40	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Scene 4	<input type="checkbox"/>	Bluray	-40	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Scene 5	<input type="checkbox"/>		-40	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Scene 6	<input type="checkbox"/>	Bluray	-40	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Scene 7	<input type="checkbox"/>		-40	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Scene 8	<input type="checkbox"/>	Bluray	-40	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Scene 9	<input type="checkbox"/>		-40	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Scene 10	<input type="checkbox"/>	Bluray	-40	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>		-40	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	Source 20	-40	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	Source 20	-40	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>		-40	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	Bluray	-40	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>		-40	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	Bluray	-40	<input type="checkbox"/>	<input type="checkbox"/>

Choose a Scene (one of ten).

Choose a Source for each included Output.

Set Volume for each Output.

Set Mute and Power status.

Bypass = Output 15 *not* included in this Scene.

Scenes

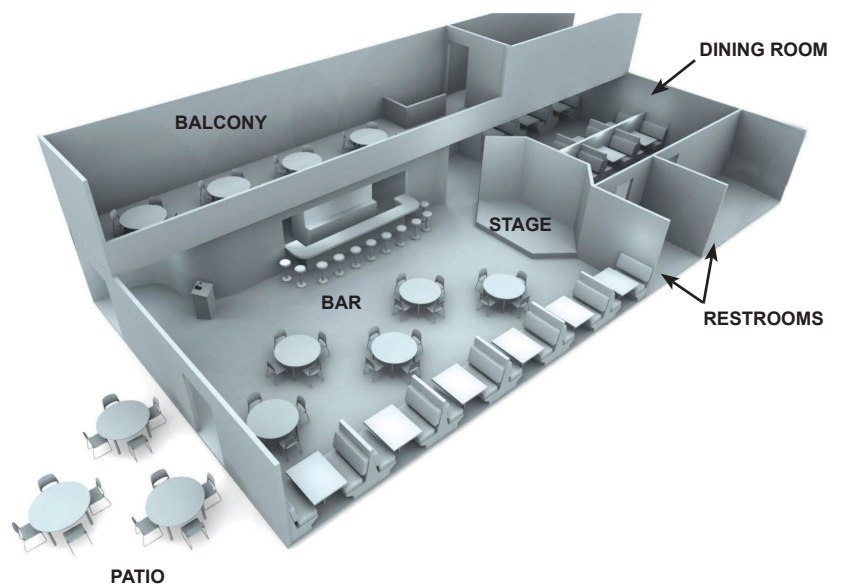
Sound Scene Examples:

Live Music

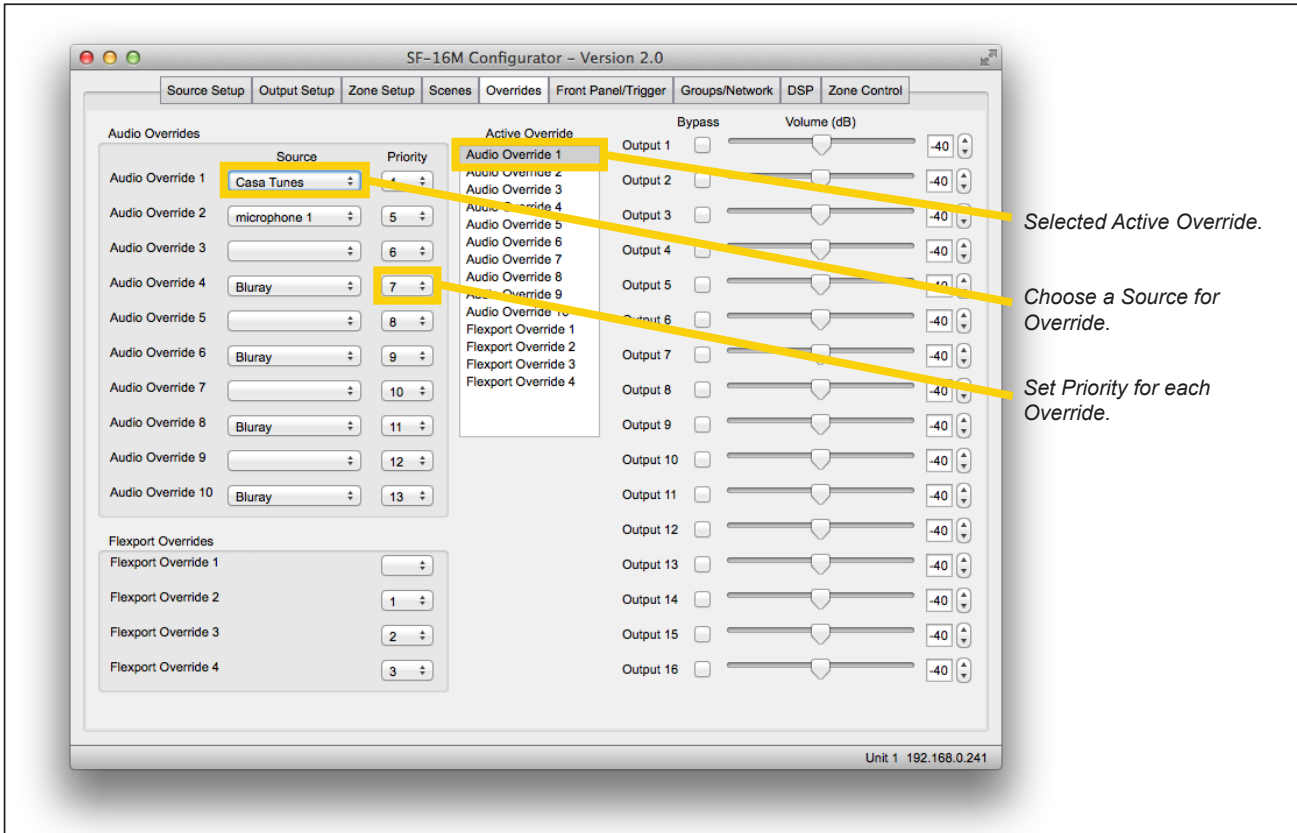
Apply the Live Music Scene when a band is playing on the stage. The band’s mixer can connect to the SonaFlex via a FlexPort transmitter at the stage. The SonaFlex can provide high volume sound reinforcement in the bar area, and lower volume in the balcony. The dining room and restrooms can be playing background music from a music server at a lower volume. Guests on the patio can be listening to a different source at a higher volume.

Lunchtime

During the day, it’s easy to set up a standard sound Scene with background music playing from a music server in all areas, louder on the patio and quiet in the restrooms.



Overrides Tab - The purpose of audio override is to provide a convenient method of temporarily switching a pre-defined Group of outputs to a specific input. Once the audio override is released or cancelled, the outputs effected by the override return to their previous inputs and volume levels. Overrides can be brief, for applications like paging and doorbells, or longer duration for local source selection like an iPod, AppleTV, or audio mixer. Audio override can be triggered by two contact closure inputs on the back of the SF-16M, as well as specific serial, IR commands, and Flex Port triggers. Up to 10 audio override configurations can be set up per SF-16M, plus FlexPort overrides (see *FlexPort Manual*). Audio override settings include source assignment, output members, output levels, and override priority. An override with a low number (e.g., 1) outranks an override with a high number priority (e.g., 3).

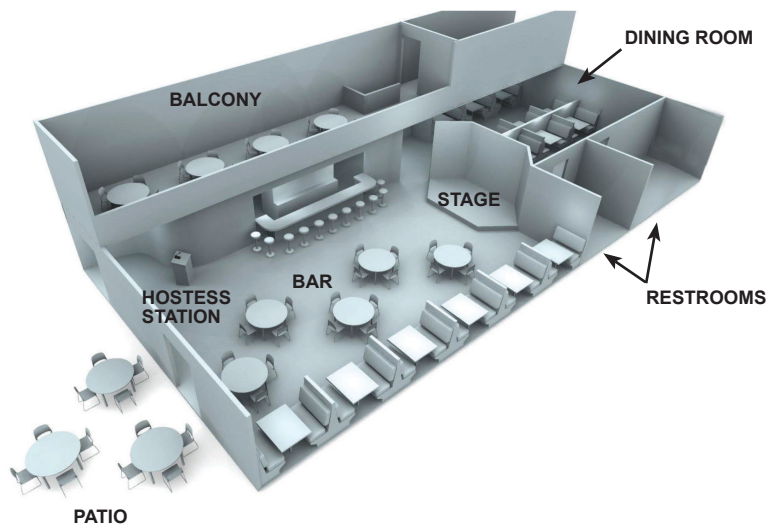


Overrides

Audio Override Examples:

Announcements

A practical example of this feature is a Host/Hostess station. The speakers in the restaurant normally play background music from a satellite radio receiver or music server. The microphone push-to-talk button triggers Override 1 which is programmed to switch the speaker outputs for all rooms from background music to the Microphone 1 input. When the button is released, all speakers return to the previous source.

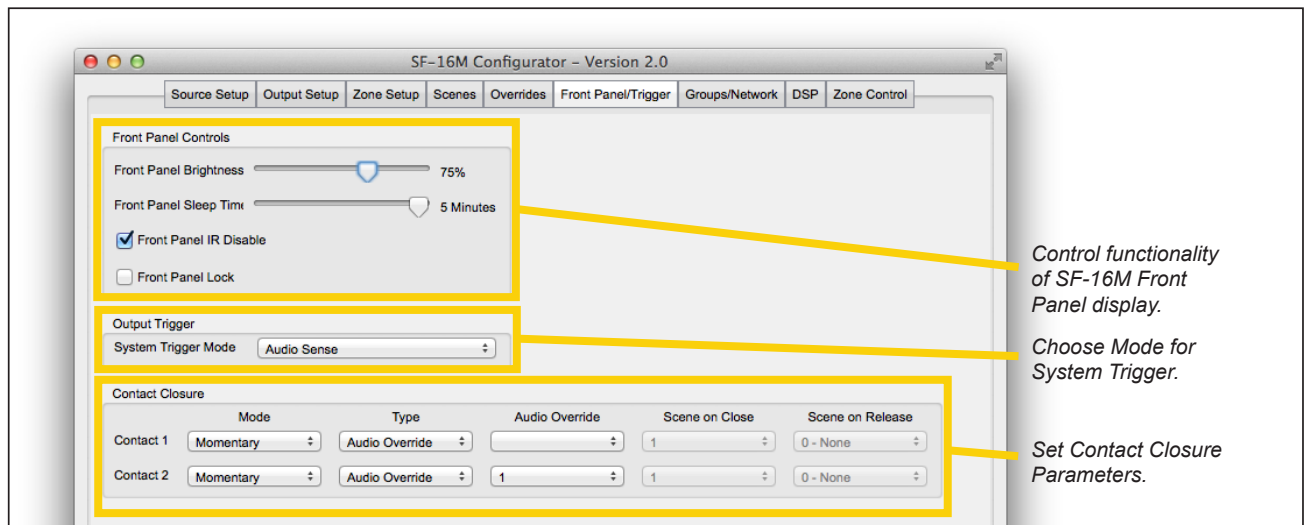


Front Panel Controls Tab - Adjust the SF-16M front panel display settings here. Set Front Panel Brightness (the brightness of the keys and front panel display) by adjusting the slider (25, 50, 75, or 100%). The Sleep Timer slider (0, 1, 2, or 5 minutes) indicates when to turn off the front display after the front panel keys and knob have not been used for a period of time. Set the Front Panel IR On/Off to disable or enable front panel IR sensor (If not required for control, leave it off to avoid issues with sunlight or other interference). Set the Front Panel Lock to disable or enable the front panel controls (disable if IR is not required for daily use).

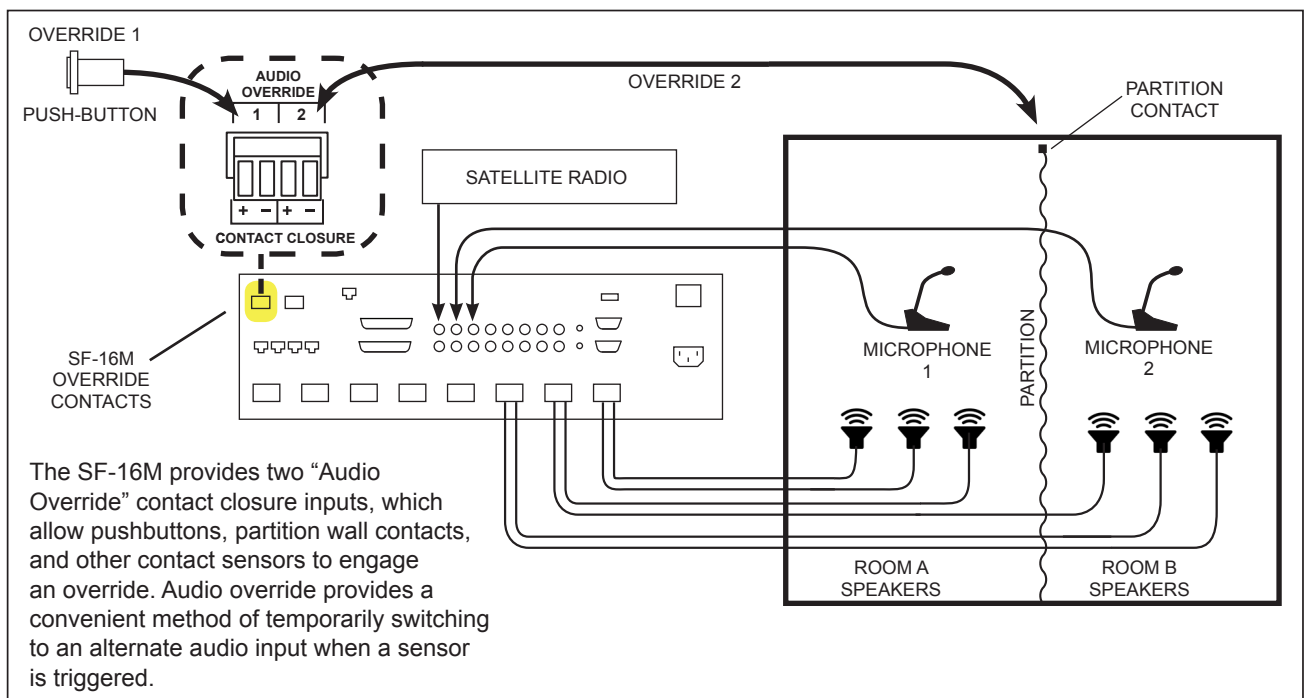
Output Trigger, and Contact Closure - The SF-16M provides two “Audio Override” contact closure inputs, which allow pushbuttons, partition wall contacts, and other contact sensors to engage an override.

The System Trigger contacts on the SF-16M allow equipment such as A-V receivers or power management devices to put the SF-16M in standby to conserve energy. Choose Audio Sense or Audio Sense Plus Trigger for the trigger mode.

Contact closures may be used to engage an override or a sound Scene preset. Choose toggle or momentary. Contact closures can not be used to trigger a FlexPort override (see *FlexPort Manual*).

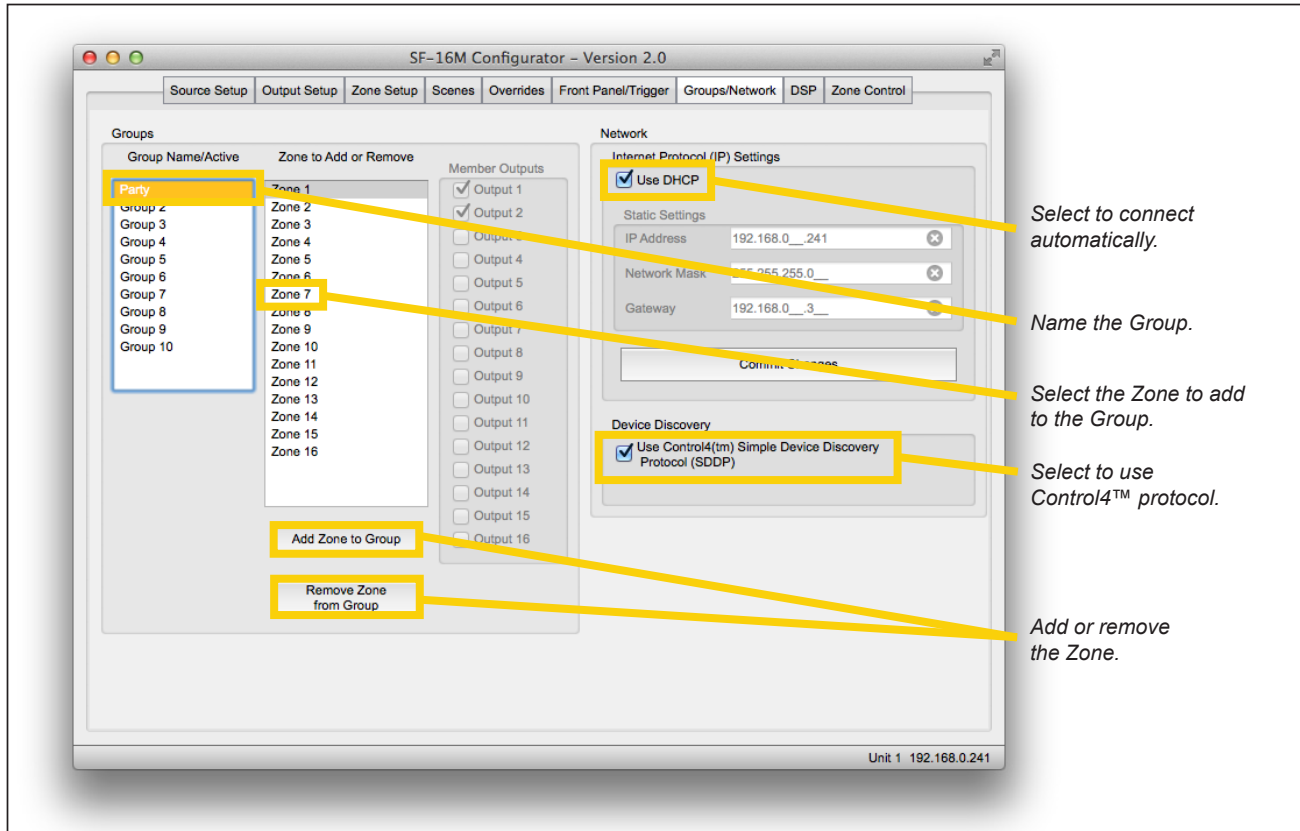


Front Panel, Contacts and Trigger



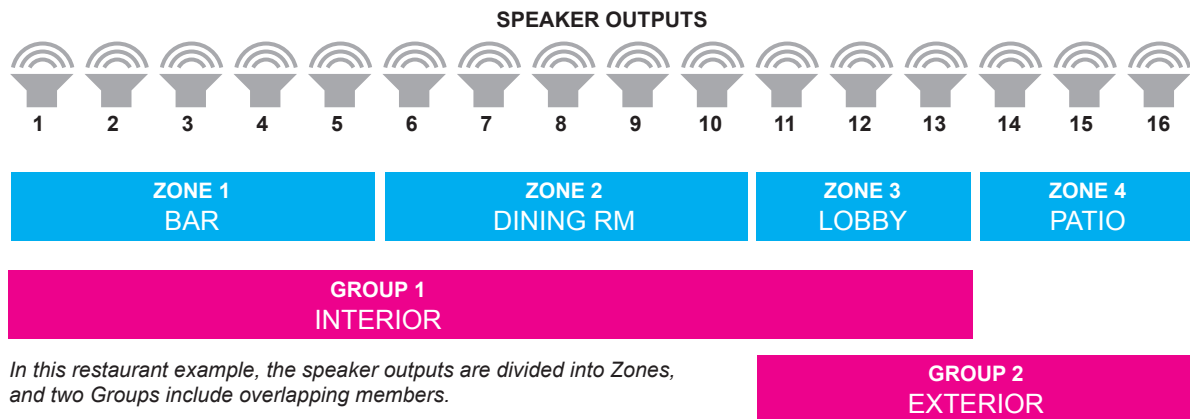
Groups Tab - Groups are a collection of Zones that can be controlled simultaneously using Group volume and Group switching commands, etc. When several Zones are members of a Group, you can still adjust their settings individually, but when a Group command is issued, all member Zones respond. Up to 10 Groups can be created per SF-16M. Group settings include Group naming and output Zone members.

Network - This displays the status of the network, the native IP address, gateway, subnet mask, and MAC address. It is often convenient to turn DHCP on to connect automatically to a DHCP network for initial setup. Once the SF-16M is installed, use a static IP address and turn DHCP off. Use Simple Device Discovery Protocol (SDDP) when using Control4 products to connect to the SF-16M.



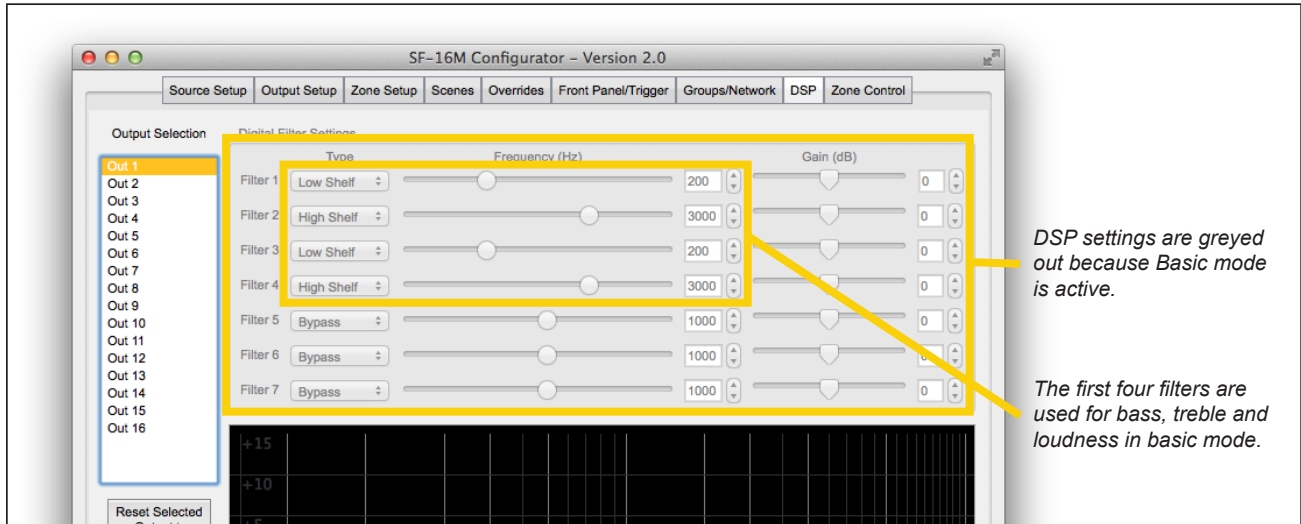
Groups and Networks

Zones and Groups are useful for control of SonaFlex speaker outputs – they are not compatible with third party controllers, which have their own methods of controlling multiple outputs at once. Each Zone may contain one or many speaker outputs, which can be mono and/or stereo. Zones may not overlap. Groups can contain one or many Zones, and their members can overlap, as shown below.



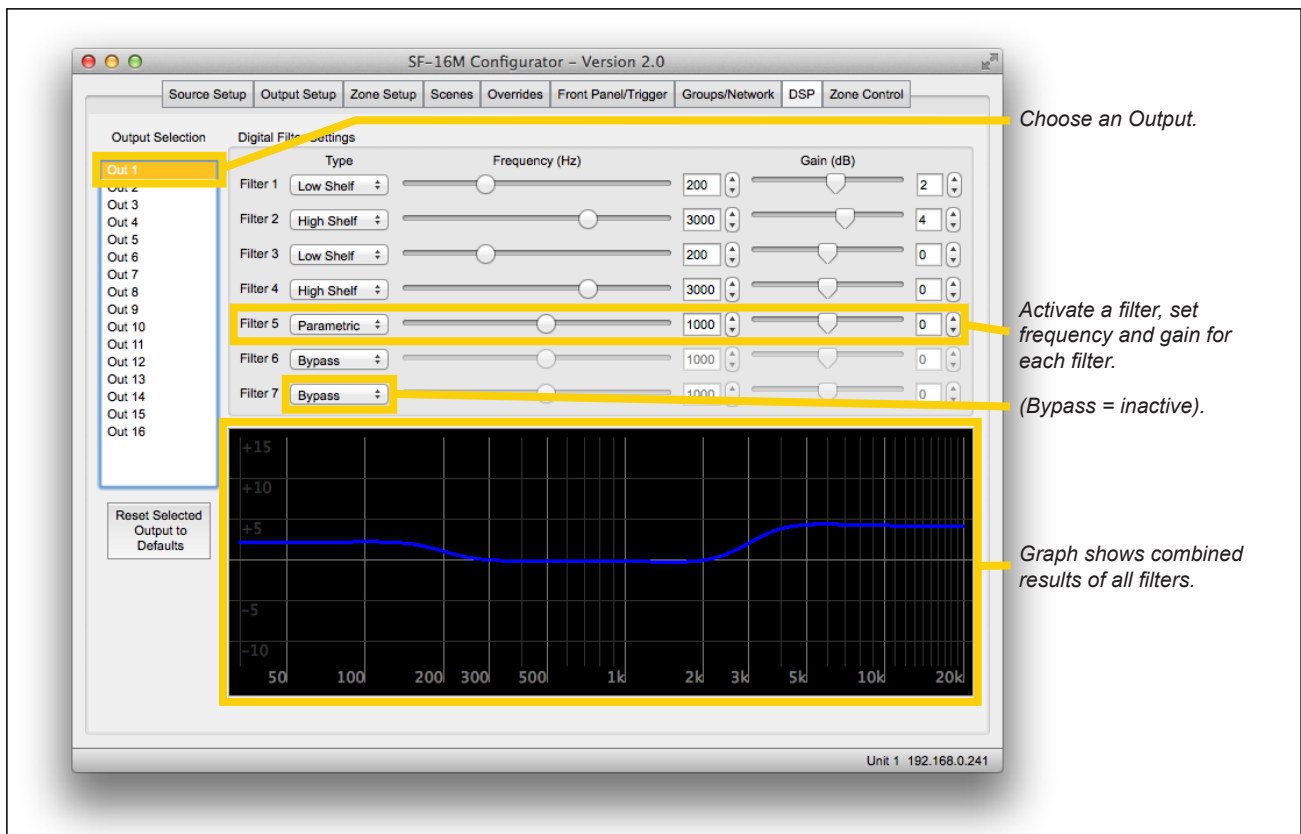
In this restaurant example, the speaker outputs are divided into Zones, and two Groups include overlapping members.

DSP Tab - The Digital Signal Processing tab is available only in Advanced Mode. Seven filters are available, to be used individually and/or as a multi-band EQ. Filters include high-pass, low-pass, high shelf, low shelf, and parametric. To create a seven-band parametric EQ (shown on page 11), select type: parametric for all filters, then set frequencies at regular intervals. Set levels to compensate according to requirements for each output. High-pass and low-pass filters are intended for passive subwoofers and full range speakers. If low-pass or high-pass filter is used, always use filter slot 1.

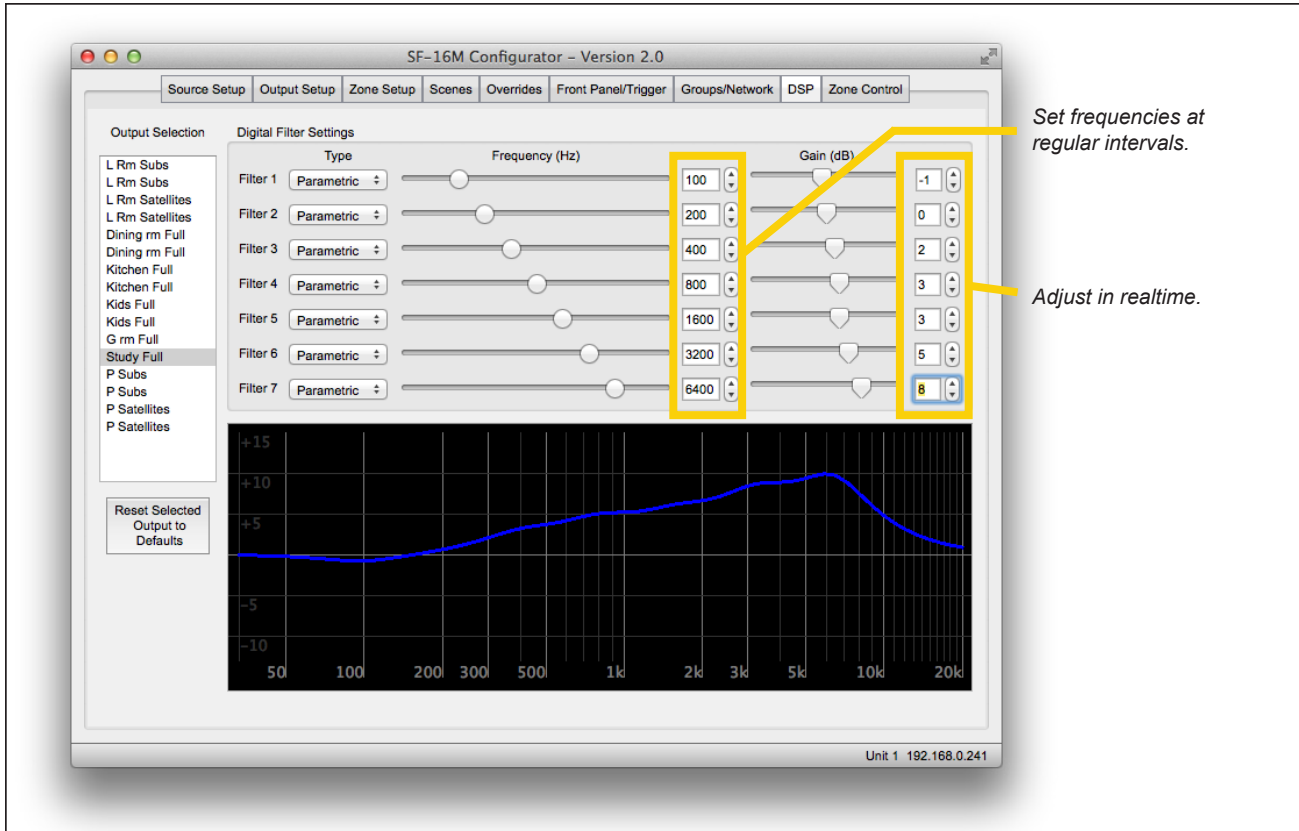


DSP Tab in Basic Mode

To use the DSP tab you must switch to Advanced Mode. Be aware that making this switch is semi-permanent, so you may wish to back up the Basic Mode configuration onto your computer or USB drive. Once you switch to Advanced Mode, bass and treble adjustments are no longer possible, because you have chosen to use advanced DSP adjustments on Outputs, not on Zones. To revert back to Basic Mode from Advanced Mode, you must either load the Basic Mode archived on your computer, or use the Front Panel menu to reset the SF-16M to Factory Default.

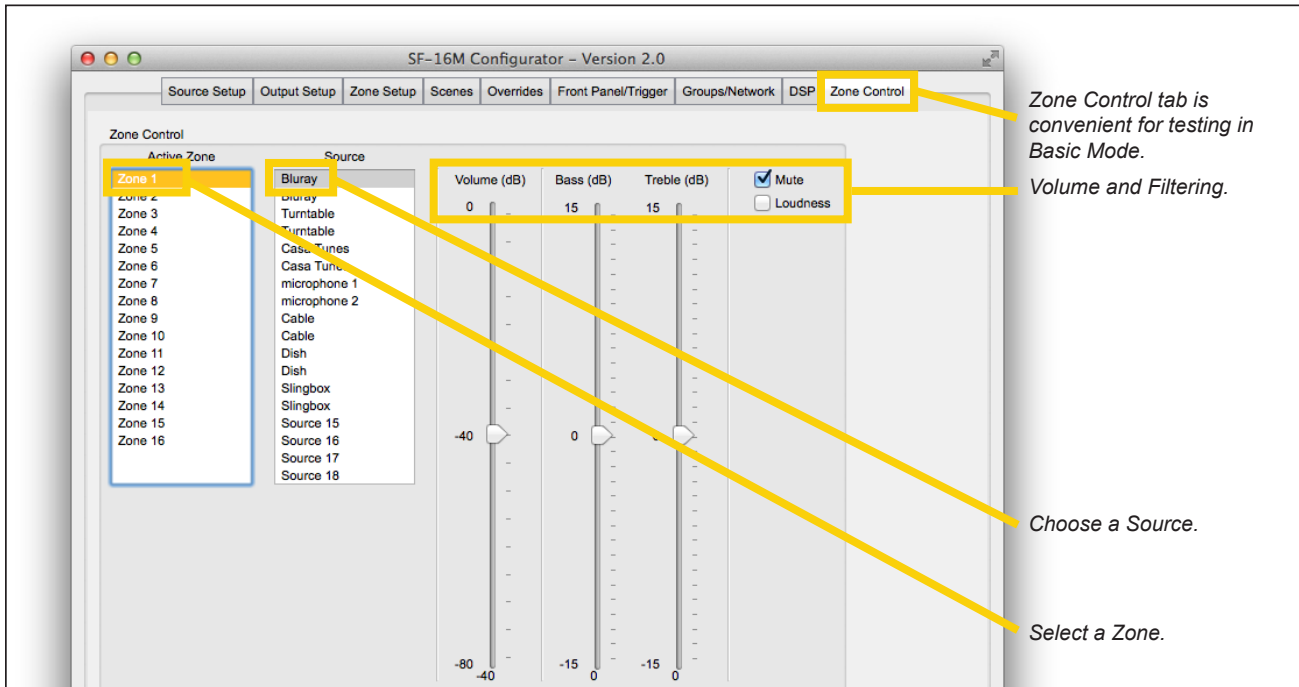


DSP Tab in Advanced Mode



DSP Tab in 7-band parametric configuration

Zone Control Tab - Use the Zone Control feature for troubleshooting or testing the SF-16M installation. Select a Zone, choose a Source, and adjust Volume, Treble, Bass, Mute and Loudness. This tab works in Basic Mode, and if all outputs are mapped to their own zone (default settings), it works in Advanced Mode as well.



Zone Control



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