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## CasaTunes TechNote

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# Using the CasaTunes XLe Trigger Outputs and Mute Input

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# CasaTunes

Multi-Room Music Server

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## Introduction

There are five trigger outputs and one mute/page trigger input on each XLe expansion chassis. The trigger outputs are divided into two functions, individual zone triggers and group zone triggers. There are three individual zone trigger outputs that respond to the activity of the first three zones in the chassis and there are two group zone trigger outputs that respond to the activity of the first and second group of 6 zones in that chassis. The mute input, on the other hand, only works in the first chassis and gives the user a way to mute the system or page through the zone outputs.

All of these triggers use standard mono or stereo 3.5mm to 3.5mm (1/8”) cables.

## Individual Zone Triggers

The three individual zone triggers, labeled “Zone Triggers 1, 2, and 3” on the back panel, are 12V signals that follow the activity of Zones 1, 2 and 3. When the power at zone 1 is on and the volume is not set to zero or muted, the Zone Trigger 1 output goes to 12 volts. When the power is off, the volume is set to zero or the room is muted, the Zone Trigger 1 output goes to 0 volts. Zone Triggers 2 and 3 work the same way for zones 2 and 3, respectively.

These outputs can be used if you have a requirement to use a set of speakers in Room 1, for example, which are also used by a local sound source, such as a TV. The Zone Trigger 1 output, in this example, would go to a switch that switches the speakers from the TV output to the XLe Zone 1 output when Zone 1 is on and back to the TV audio output when the CasaTunes Zone 1 output is off.

## Group Zone Triggers

The two zone triggers, labeled “Triggers 1-6 and 7-12” on the back panel are 12V signals that follow the activity of the group of zone 1 through zone 6 and the group of zone 7 through zone 12, respectively. If any of the first six zones are turned on, not muted and their volume is not set to zero, the trigger labeled “1-6” will go to 12 volts. If ALL the first 6 zones are off (or their volumes are set to 0 or muted), the trigger labeled “1-6” will go to 0 volts. In the same way, the trigger labeled “7-12” will follow the second 6 zones.

These triggers can be used to turn 12 channel (6 room) amplifiers on and off. By plugging a cable from the group trigger output to the trigger input on your amplifier, the amplifier will turn on when the audio going to any of the rooms served by that amplifier are turned on.

## Mute (or Page) Input

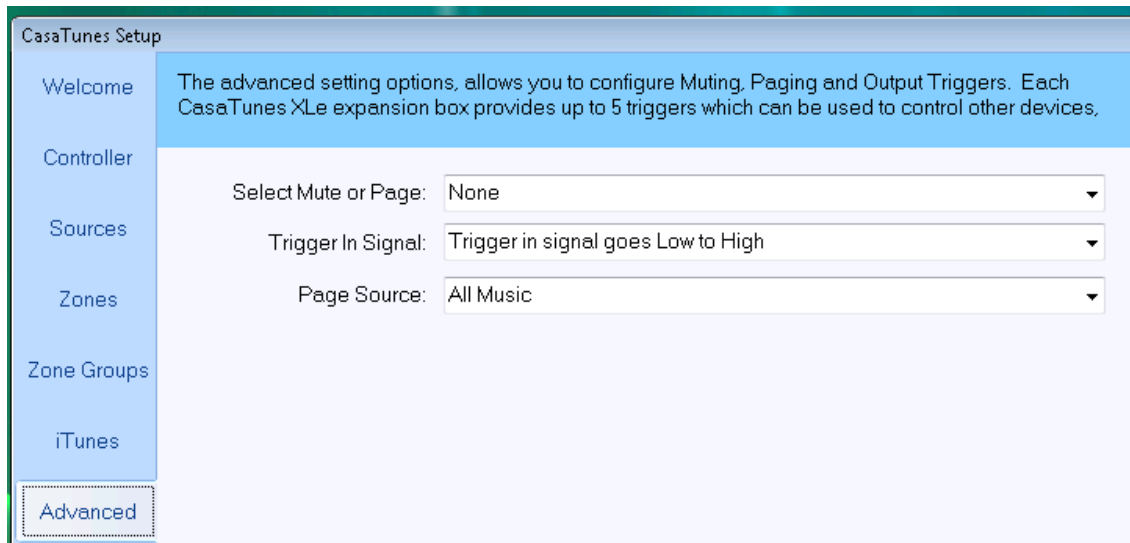
The jack labeled “Mute” on the back panel is actually used for muting zone audio outputs OR switching paging audio to zone audio outputs. If you have more than one expansion chassis (greater than 12 zones), you must use the Mute input on the chassis that is connected directly to the PC.

The signal fed into the Mute input must be a 12 volt signal. It can either go to 12 volts to do the muting or paging and back to 0 volts when the muting or paging is over, or it can go the opposite polarity. You can decide which of the zones are used for this. Here is how you do it:

### Muting

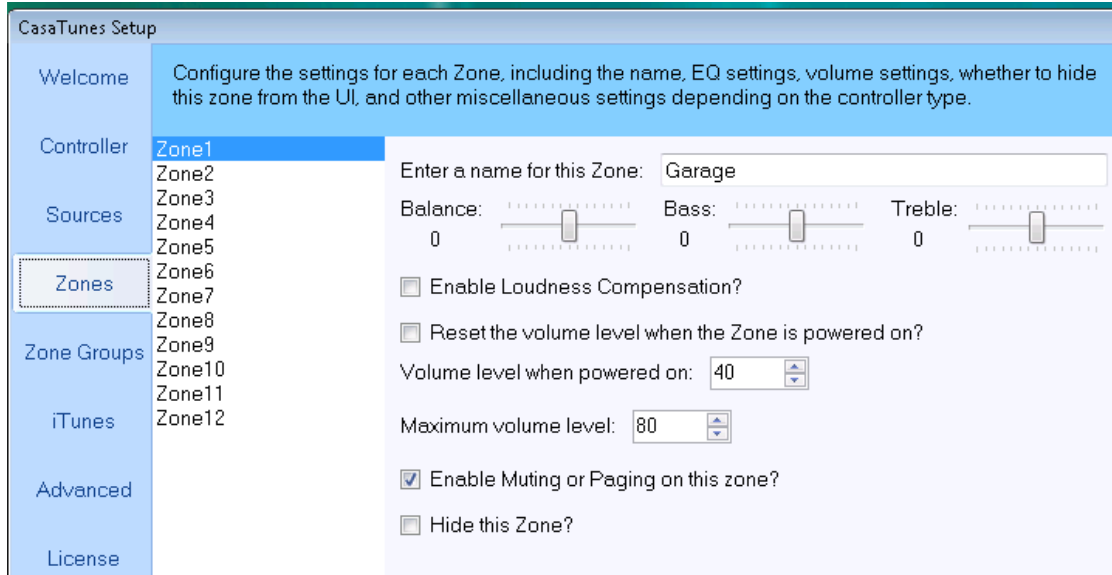
An example of using muting would be if your phone system has a mute output that goes active when you are on a phone call. This can be used to turn off the music while you are talking on the phone. To use the Mute input for muting zone outputs, connect the output of the device that supplies the signal to the Mute input on the back panel using a 3.5mm to 3.5mm mono (or stereo) cable. (If the muting device does not use a 3.5mm jack, purchase the correct adapting cable so that the positive 12 volt signal is on the tip of the 3.5mm plug and ground is on the sleeve at the XLe end. The sleeve is the conductor furthest from the tip of the plug).

Start CasaTunes Setup and click on the “Advanced” tab so that you see this window:



In the window, select “Mute speaker on trigger in” on the first line. Set the second line to have the mute start when the trigger signal goes to 12 volts (default, “Low to High”) or when it goes to 0 volts (“High to Low”). If you are not sure, leave it at the default and try it. If the music plays normally and mutes when the muting device sends its signal, then the setting is right. Don’t worry about the “Page Source”, since you are muting, not paging.

Next, go to the Zones tab:



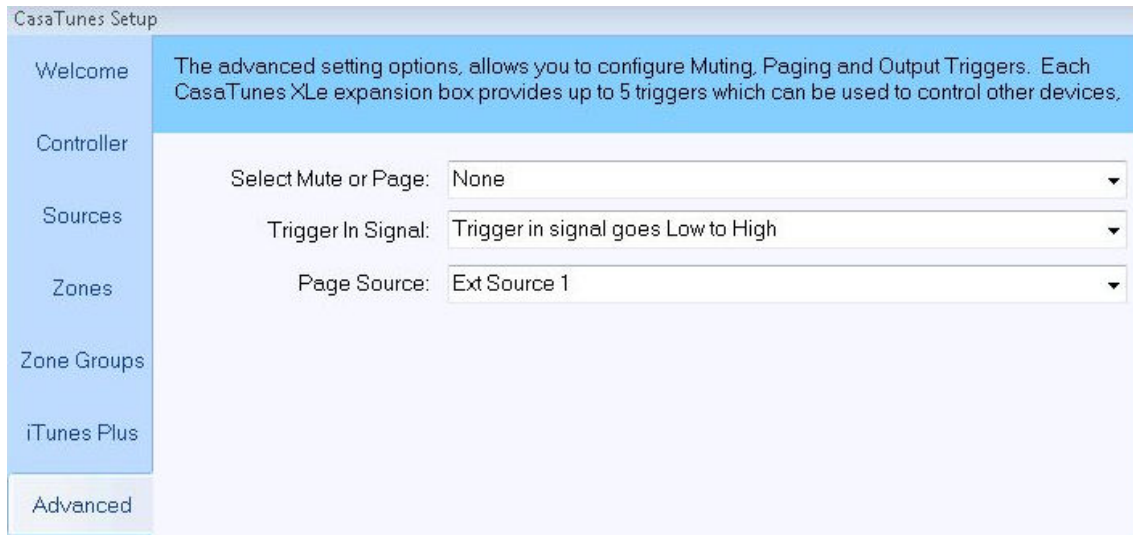
In this Window you can decide which zones you want to Mute when the signal comes in. The CasaTunes default is for all zones to mute. If you want a zone to keep playing any time the mute signal comes in, remove the check mark in the box next to “Enable Muting or Paging on this zone?” by clicking on the box. Do this for any zone that you don’t want to respond to the muting signal. Keep in mind that you can also, temporarily, keep the mute signal from muting a room by clicking the DND indicator for that room in the CasaTunes user interface.

Now, click on the “Summary” tab and click on “Finish” to apply all of these changes. The muting signal from the external device will turn off the music in all of the rooms that are enabled for muting and that do not have DND set. As soon as the signal goes away the music will start again.

## **Paging**

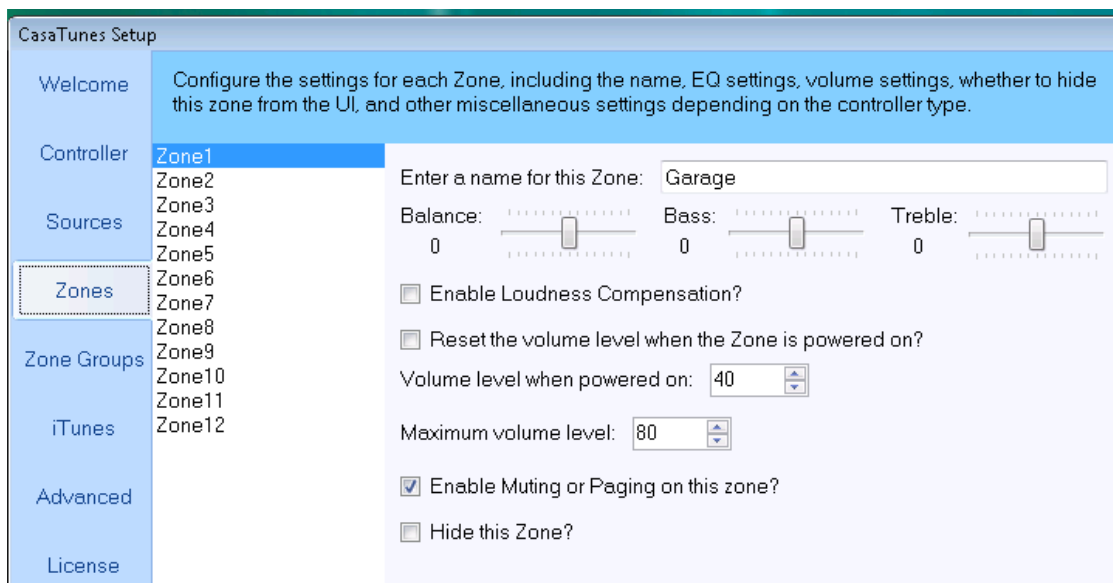
Paging can be used to switch a doorbell tone to the speakers in your house or for paging through the CasaTunes system using your telephone. The audio from the device (doorbell box or phone system) is plugged into a line input on the XLe interface card that is installed in your music server PC. The signal that switches the music from the currently playing music to the paging source goes to the Mute input. To use the Mute input, connect the switching output of the device that supplies the switching signal through a 3.5mm to 3.5mm mono (or stereo) cable from the switching output of the paging device to the Mute input. (The paging device may not use a 3.5mm jack for the switching signal. If not, purchase the correct adapting cable so that the positive 12 volt signal is on the tip of the 3.5mm plug and ground is on the sleeve at the XLe end of the cable. The sleeve is the conductor furthest from the tip of the plug).

Start CasaTunes Setup and click on the “Advanced” tab so that you see this window:



In the window, select “Page on trigger in” on the first line. Set the second line to have the page start when the trigger signal goes to 12 volts (default, “Low to High”) or when it goes to 0 volts (“High to Low”). If you are not sure, leave it at the default and try it. If the music plays normally and switches to the external paging device when the paging device sends its switching signal, then the setting is right. Select the “Page Source” on the third line. We usually recommend that you plug the external audio into the L4 input on the interface card and select “External Source 4” in this window.

Next, go to the Zones tab:



In this Window you can decide which zones you want to use for paging when the switching signal comes in. The CasaTunes default is for all zones to page. If you want a

zone to keep playing any time the page switching signal comes in, remove the check mark in the box next to “Enable Muting or Paging on this zone?” by clicking on the box. Do this for any zone that you don’t want to respond to the paging switching signal. Keep in mind that you can also, temporarily, keep the page switching signal from switching to the paging input in a room by clicking the DND indicator for that room in the CasaTunes user interface.

Now, click on the “Summary” tab and click on “Finish” to apply all of these changes. The paging switching signal from the external device will switch from the playing music to the paging audio input in all of the rooms that are enabled for paging and that do not have DND set. As soon as the signal goes away the music will start again. If the room is off, the switching signal will turn the room on and switch the room’s source to the paging input. After the page, the room will resume in the mode it was in before the page. The user interface does not show the source change when paging.