

Installation Instructions

NGX Dual Amplifier Kit Kit #26679601

These instructions outline the procedures to install the Dual Amplifier Kit in your NGX Jukebox.

Tools Required

11/32" Nut Driver

Parts Included with this Kit:

<u>Item #</u>	<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
1	40991701	Mounting Bracket (2 nd Amp)	1
2	40991402	500W Amp Assembly	1
3	40912014	Harness 110 VAC	1
4	30934230	Audio Cable	1
5	34103002	Modular Cable (Red)	1
6	87843000	#8-32 Hex Nuts (Not Shown)	4
		These Instructions	

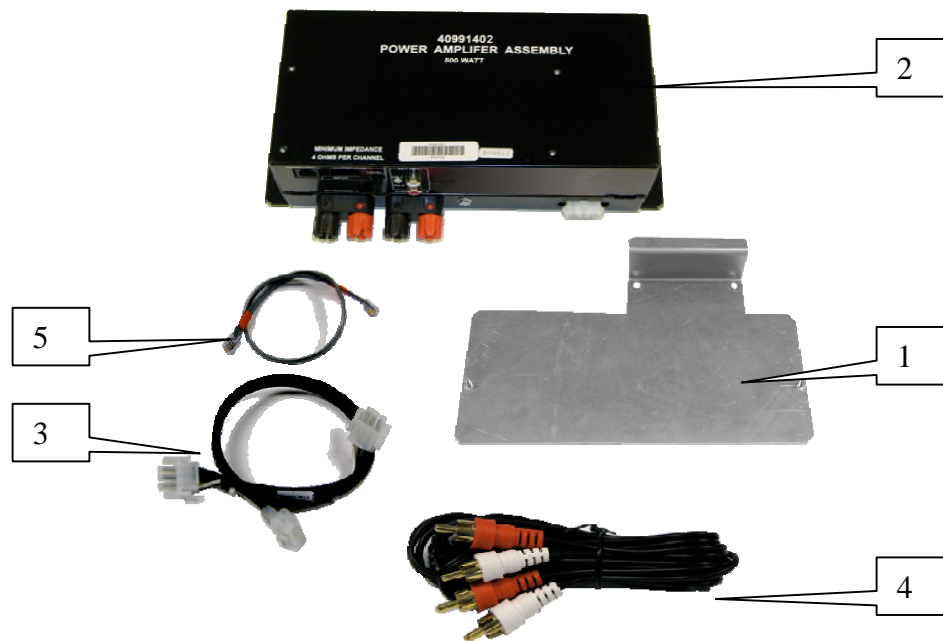


Figure 1

1. Press the “SERVICE” button on the computer core assembly and then touch the **Shutdown Jukebox** button on the screen. Confirm that you want to shut it down by touching **Shutdown**. Once the jukebox software shuts down, unplug the power cord from the wall outlet.
2. Mount the 2nd 500W Amplifier (Item #2) to the Amplifier Mounting Bracket (Item #1) using two #8-32 hex nuts (Item #6).

Note: If you have a router kit installed you must remove the lower router-mounting bracket. The Amplifier Mounting Bracket will double as the router-mounting bracket.

3. Mount the 2nd Amplifier and bracket assembly to the two studs located to the lower right of the main amplifier with the remaining two #8-32 hex nuts. See Figure 2.
4. Unplug the Modular Cable from the jack labeled “ROWELINK” on the main amplifier. Reroute this cable to the 2nd Amplifier and connect it to the modular jack labeled “ROWELINK IN”. See Figure 2.
5. Connect the 34103002 Modular Cable (Item #5) to the modular jack on the 2nd amplifier labeled “ROWELINK OUT”. Connect the other end of this cable to the main amplifier modular jack labeled “ROWELINK”. See Figure 2.
6. Unplug the three-pin power connector from the main amplifier and connect it to the short branch of the 110VAC Harness 40912014 (Item #3). Connect the Long Branch of the 110VAC harness to the three-pin housing of the 2nd amplifier. Connect the remaining connector on the 110VAC harness to the three-pin housing on the main amplifier. See Figure 2.
7. Connect the Audio Cable 30934230 (Item #4) to the “EXT OUT” of the main amplifier (connecting white to white and red to red). Connect the other end of the audio cable to the “CH 1/3 INPUTS” and the “CH 2/4 INPUTS”. See Figure 2.
8. Plug the power cord of the jukebox back into the wall outlet and turn the jukebox on. After power up, verify the jukebox is functioning properly.

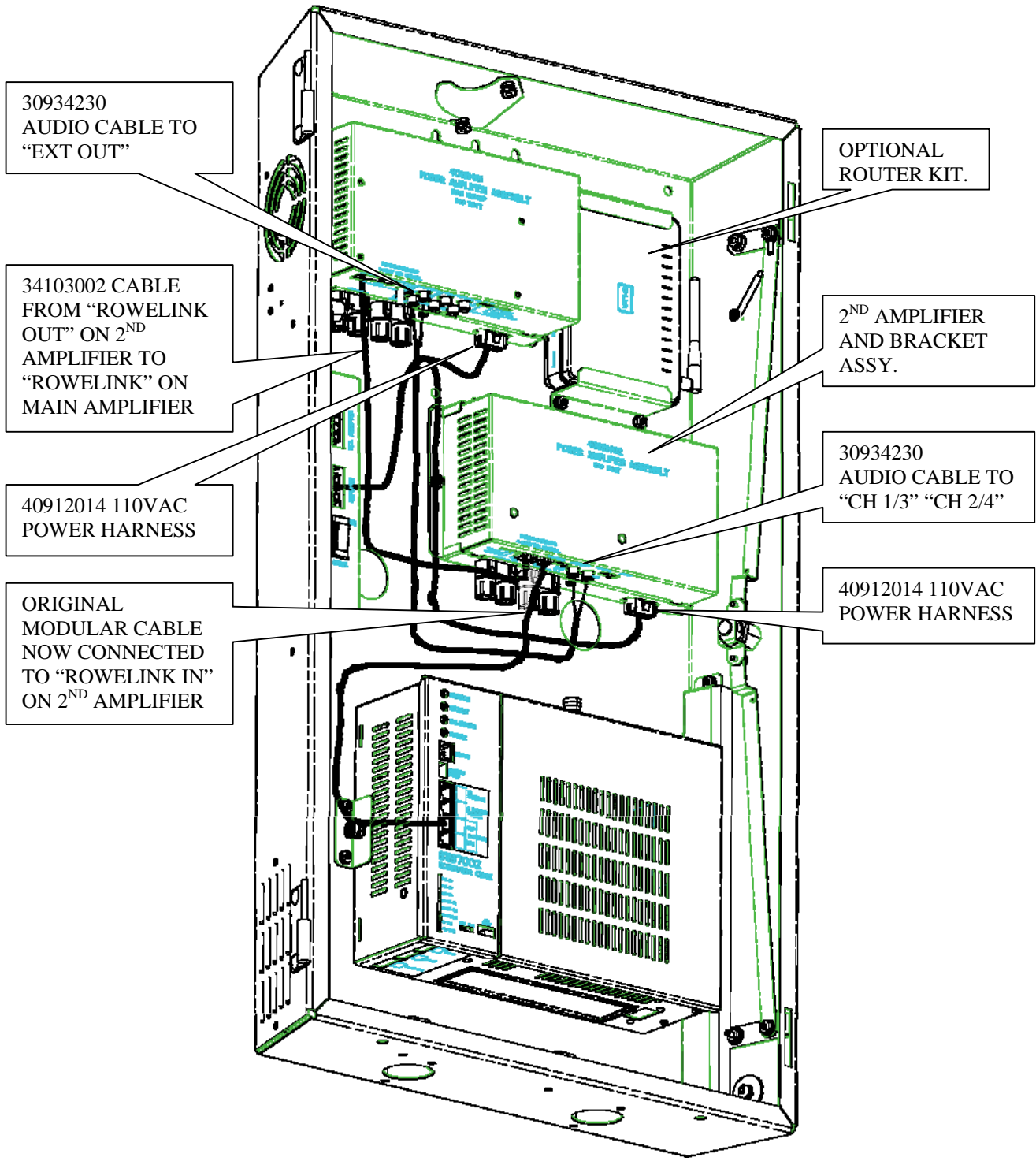


Figure 2

Sound System Set Up

The NGX jukebox sound system is powered by ICEpower 250ASX2 Class 2 power amplifiers manufactured by Bang & Olufsen. Speaker terminals are provided to connect extension speakers directly to the amplifiers. An Audio Output Transformer kit (part number 22180806) is available if your installation uses 70 volt speakers or you need to connect extension speakers using various power taps.

Refer to Section C in the NGX Service Manual for information regarding the selection of extension speakers and power consumption calculations. Use the tables and worksheets for each amplifier separately.

Ensure that your speaker load does not exceed 250 watts per channel for either amplifier.

Amplifier Indicators

There are three indicator LEDs visible on the front of both the primary and secondary amplifiers.

Power – when lit, indicates power is applied to the amplifier

Thermal – when lit, indicates the amplifier shut down due to overheating

Over Current – when lit, indicates the amplifier shut down due to a speaker overload

Amplifier Switches

Primary amplifier – **MODE**: The Mode switch on the front of the primary amplifier is used to choose stereo or mono modes. Move the switch to the “S” position for stereo output. Move the switch to the “M” position for mono output. This switch affects the primary amplifier output and the EXT OUT signal going to the secondary amplifier.

Secondary amplifier – **MUTING**: This switch must be set to the “A” position when the amplifier is used as a secondary amplifier.

Secondary amplifier – **OUTPUT**: the Output switch on the front of the secondary amplifier is used to choose bridged or unbridged output mode. Move the switch to the “Non Bridge” position for normal unbridged output. Move the switch to the “Bridge” position for bridged mode. This switch affects only the secondary amplifier. Note: In some early amplifiers the Non Bridge position was labeled “Stereo”.

Bridge Mode

The secondary amplifier can be configured to run in bridged mode. In this mode, the audio signal to Channel 1/3 is inverted. This allows speaker connections directly across the Channel 1/3 + and Channel 2/4 + terminals. In this configuration, the full 500 watt amplifier power can be used to drive appropriate speakers or a sub-woofer. **In bridge mode the minimum speaker impedance is 8 ohms.** If driving a sub-woofer, choose one that incorporates a low pass filter and make sure it can handle 500 watts.

Sound System Configuration

The NGX sound system with a secondary amplifier can be configured to operate up to four separate zones. When the system is configured for three or four zones, the MODE switch on the primary amplifier should be set to the “M” position (mono mode). Refer to Section 3 - Subsection 6.6 in the NGX *Network Setup, Jukebox Operation, and Operator Setup Screens* manual for information on setting up Mode Linkage, Channel Linkage, and volume control unit configurations.

Sample speaker connection schematics

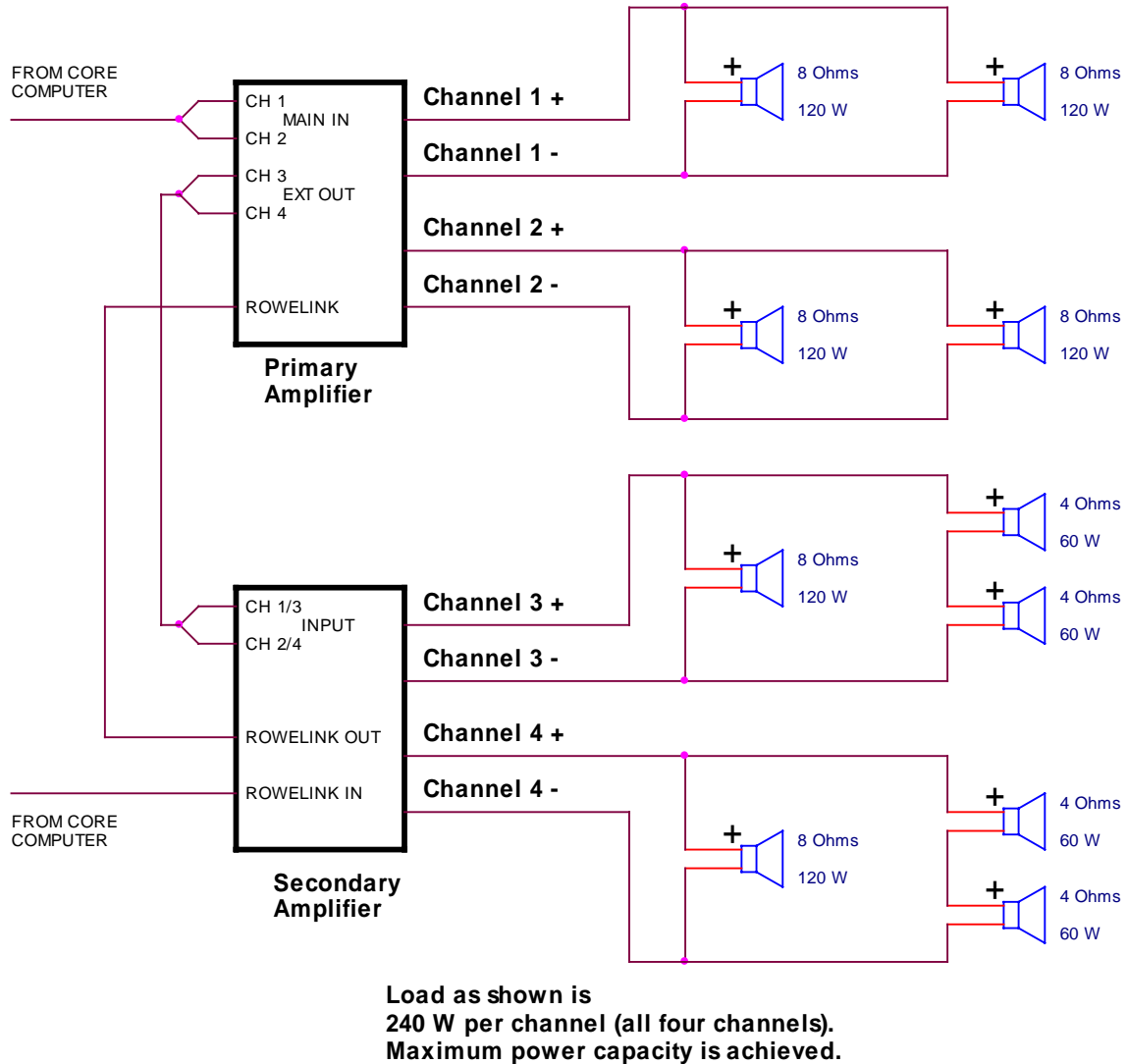
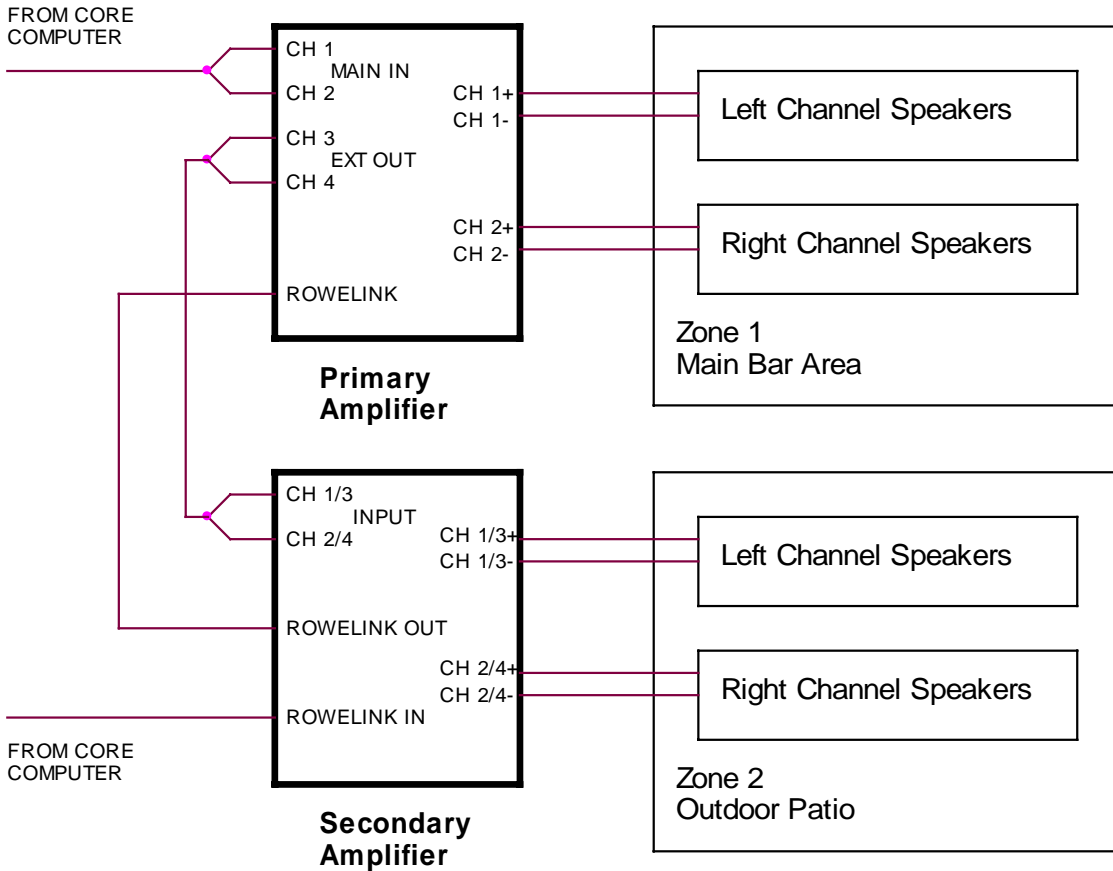


Figure 3

Figure 3 demonstrates speaker connections using maximum speaker load on all four channels. In this configuration the MODE switch on the Primary Amplifier can be set to either the Stereo or Mono mode. If configured for other than two zones, Mono mode should be used.

The MUTE switch on the Secondary Amplifier must be set to the “A” position. The OUTPUT switch should be set to the NON BRIDGE position for unbridged operation.



Two Stereo Zone Configuration

Primary Amplifier
- Mode = Stereo

Secondary Amplifier
- Mute = A
- Output = Non Bridge

Channel Linkage
(Ch1 + Ch2) (Ch3 + Ch4)

Figure 4

Figure 4 shows a two zone stereo configuration with each amplifier controlling one stereo zone. Speaker connections should be made based on the example in Figure 3. Be sure to calculate speaker power so that no more than 250 watts are consumed by any single channel. Also be sure speakers are properly connected with respect to polarity.

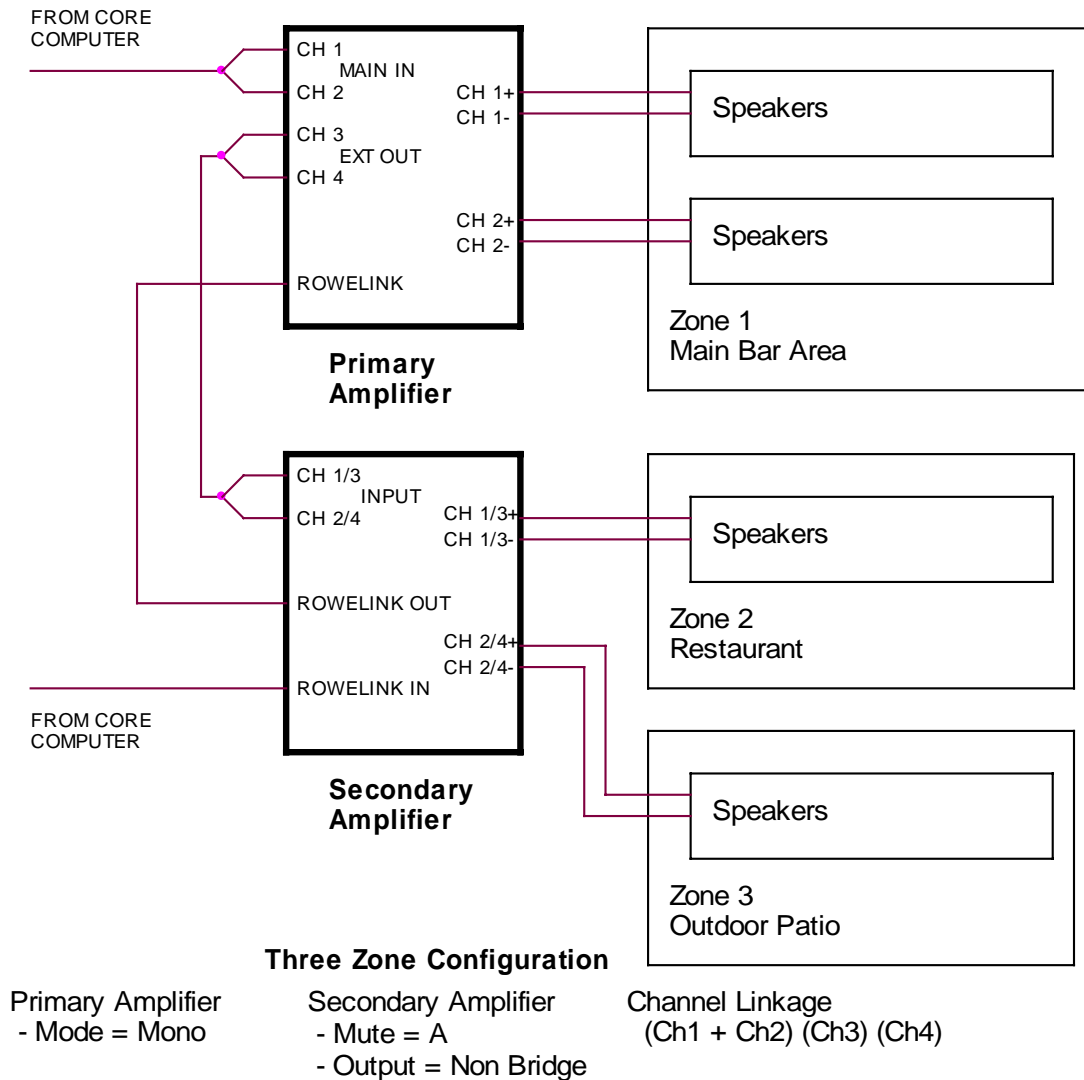
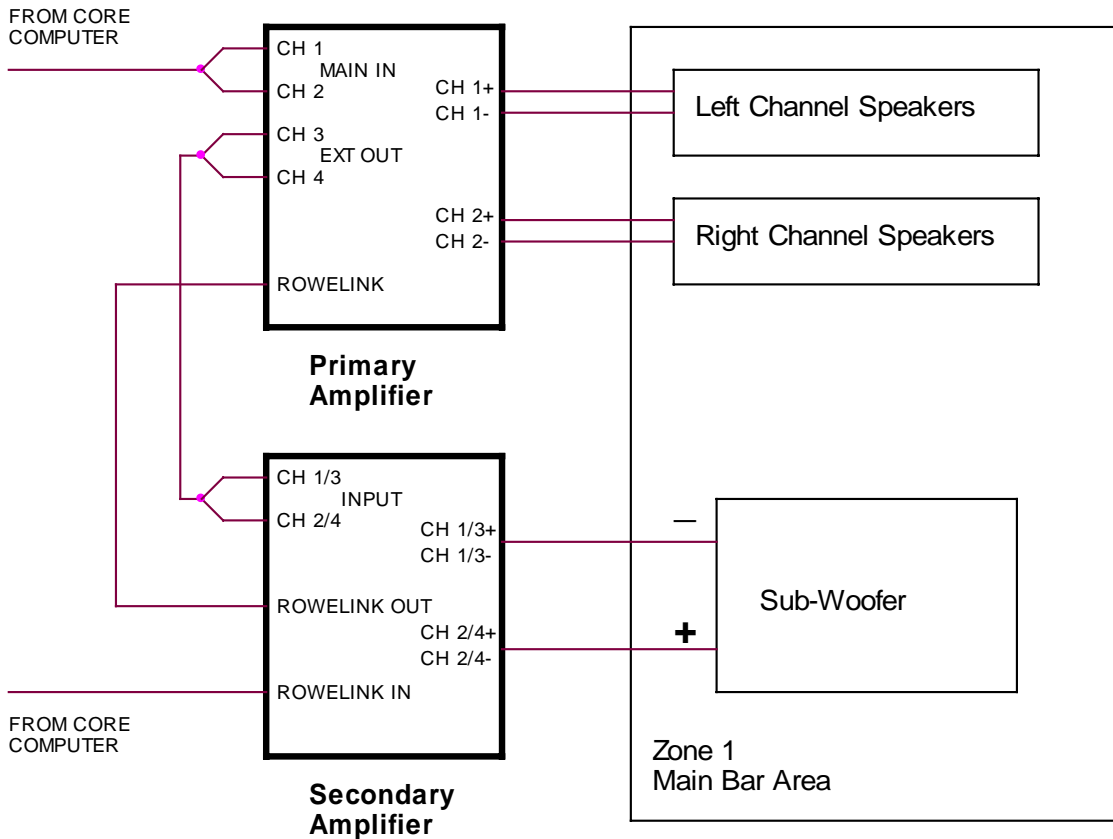


Figure 5

Figure 5 shows a three zone configuration. The primary amplifier is used to drive the speakers in the main bar area. The secondary amplifier is used to drive speakers in the restaurant and outdoor patio areas. The output mode of the secondary amplifier is set to NON BRIDGE for unbridged operation.

This configuration requires the primary amplifier be set to Mono mode. The volume in each of the three areas is controlled independently based on the Channel Linkage setup.

Speaker connections should be made based on the example in Figure 3. Be sure to calculate speaker power so that no more than 250 watts are consumed by any single channel. Also be sure speakers are properly connected with respect to polarity.



Single Stereo Zone with Sub-Woofer Configuration

- | | | |
|-------------------|---------------------|-------------------------|
| Primary Amplifier | Secondary Amplifier | Channel Linkage |
| - Mode = Stereo | - Mute = A | (Ch1 + Ch2 + Ch3 + Ch4) |
| | - Output = Bridge | |

Figure 6

Figure 6 shows a single stereo zone with a separate sub-woofer driven by the secondary amplifier. The primary amplifier is configured for Stereo mode, the secondary amplifier is configured for Bridge mode. The Left Channel and Right Channel speakers are connected based on the primary amplifier example in Figure 3.

Notice the Sub-Woofer speaker is connected (bridged) across the output of the secondary amplifier. When the secondary amplifier is set to Bridged mode, the Channel 1 audio signal is inverted. Be sure to connect the Channel 1/3 positive terminal to the negative terminal of the Sub-Woofer. Connect the Channel 2/4 positive terminal to the positive terminal of the Sub-Woofer.

Note: In bridged mode the minimum speaker impedance for the secondary amplifier is 8 ohms.

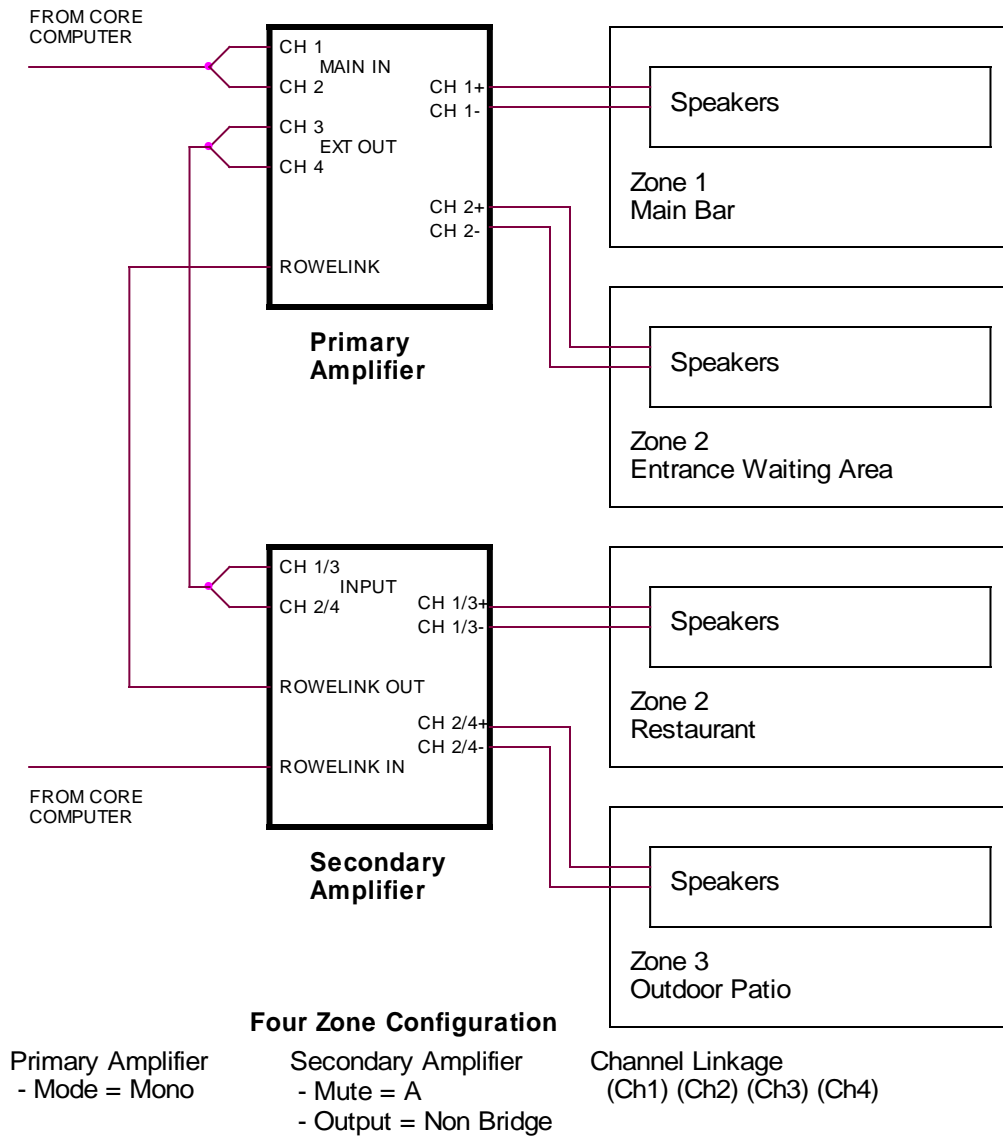


Figure 7

Figure 7 shows a four zone configuration. The primary amplifier is used to drive speakers in the main bar and the restaurant waiting area. The secondary amplifier is used to drive speakers in the restaurant and outdoor patio areas. The output mode of the secondary amplifier is set to NON BRIDGE for unbridged operation.

This configuration requires the primary amplifier be set to Mono mode. The volume in each of the four areas is controlled independently based on the Channel Linkage setup.

Speaker connections should be made based on the example in Figure 3. Be sure to calculate speaker power so no that more than 250 watts are consumed by any single channel. Also be sure speakers are properly connected with respect to polarity.