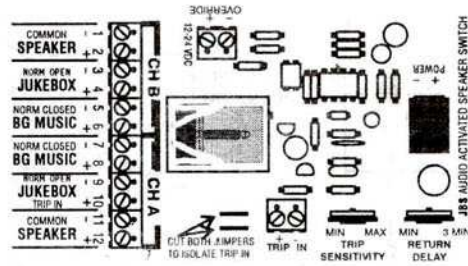


INSTALLATION INSTRUCTIONS

JBS

AUDIO ACTIVATED SPEAKER SWITCH



CAUTION!

The JBS **MUST** be powered by a dedicated AC adapter/wall transformer. The output requirements are 12 VDC , 200MA., 3.5mm miniature plug, polarity TIP POSITIVE. Failure to use a supply dedicated to the JBS can result in ground loops, possible unreliable operation or damage.

Most jukeboxes and commercial amplifiers connect one side of the speaker output to chassis ground and the equipment grounding conductor. To prevent possible damage to amplifiers and other equipment, before connecting the JBS or any other equipment, it is absolutely necessary to identify the type of output circuits and all grounded connections. All wiring should be checked for grounds and shorts between conductors. Speaker lines are not normally grounded, and the presence of a ground may indicate a short or other undesirable condition.

Additionally, all speaker lines should be measured with a speaker line test set to determine proper load impedance. Speakers may be of the low impedance type (4 ohms to 16 ohms) or 70 volts. Low impedance speakers should not be connected to 70 volt output without proper transformers.

Consumer stereo receivers and amplifiers may not operate safely if the speaker wiring is run in shielded cable, metal conduit or in contact with metal ducts or pipes. If this type of installation is necessary, service personnel should check for proper operation.

The JBS is intended to be installed by qualified sound system technicians. Conditions and uses extend beyond the cases presented in these instructions. To prevent damage to equipment, all installations should be closely analyzed by competent personnel. **DO NOT ASSUME ANYTHING!**

CONVENTIONS

Text references in all capital letters i.e., RETURN DELAY, refer to markings on the JBS or other equipment.

NORM CLOSED = normally closed (relay contacts closed when the JBS is not tripped).

NORM OPEN = normally open (relay contacts closed when the JBS is tripped).

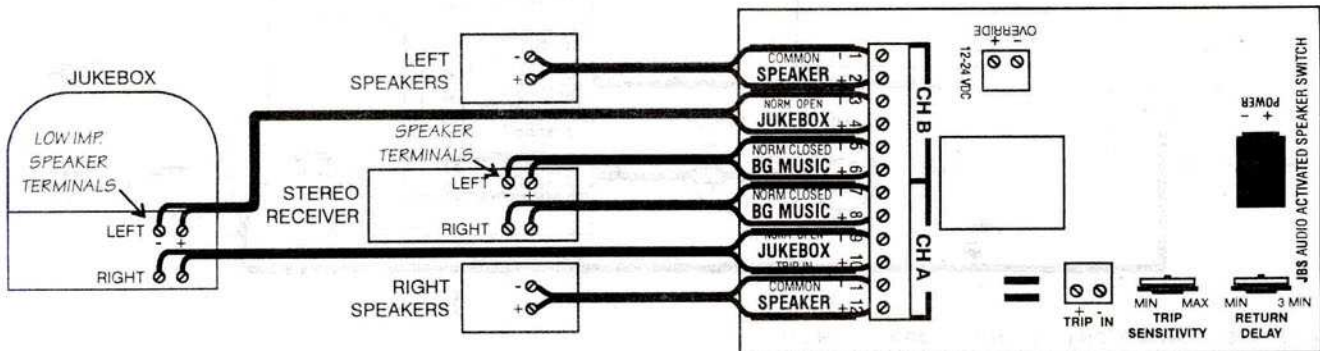
COMMON = the switched contacts.

TRIP IN

The CH A JUKEBOX terminals (#9 and #10) are internally jumpered to the isolated TRIP IN terminal block through the 2 orange jumpers. When using the JBS to play the jukebox through speakers connected through the JBS, the jukebox connection to the CH A JUKEBOX terminals provides the trip in. **DO NOT CUT THE ORANGE JUMPERS.**

Cutting the orange jumpers isolates the TRIP IN terminal block from the relay, and is only necessary when the trip in audio is not wanted on the speakers connected through the JBS..

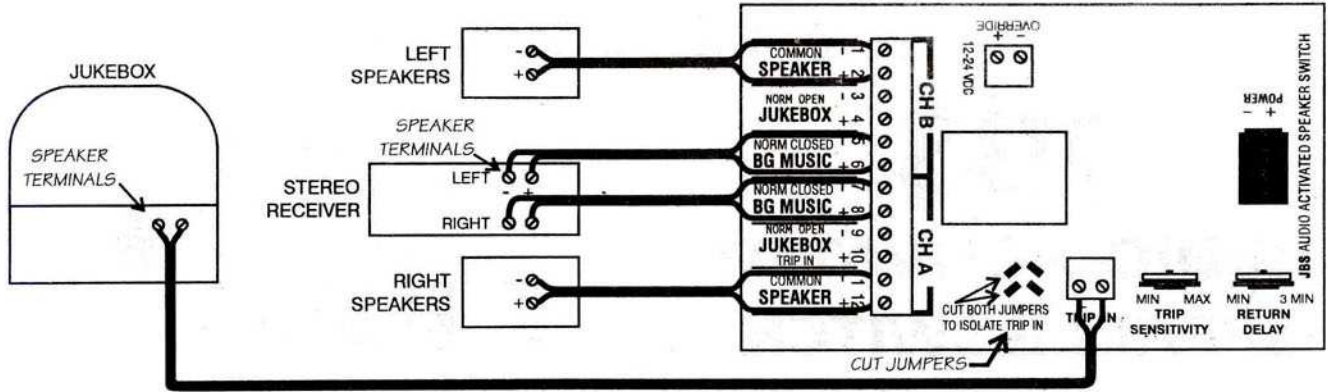
TO PLAY THE JUKEBOX THROUGH THE STEREO SYSTEM SPEAKERS



1. TURN OFF THE JUKEBOX AND STEREO RECEIVER (AMPLIFIER) POWER!
2. Disconnect the wires feeding the right stereo speakers from the stereo receiver (amplifier) right speaker terminals (- and +) and connect to the JBS CH A SPEAKER terminals (- to #11 and + to #12).
3. Disconnect the wires feeding the left stereo speakers from the stereo receiver (amplifier) left speaker terminals (- and +) and connect to the JBS CH B SPEAKER terminals (- to #1 and + to #2).
4. Connect a pair of wires from the stereo receiver (amplifier) right speaker terminals to the JBS CH A BG MUSIC terminals (- to #7 and to #8).
5. Connect a pair of wires from the stereo receiver (amplifier) left speaker terminals to the JBS CH B BG MUSIC terminals (- to #5 and + to #6).
6. Connect a pair of wires from the jukebox right channel low impedance speaker terminals to the JBS CH A JUKEBOX terminals (- to #9 and + to #10).
7. Connect a pair of wires from the jukebox left channel low impedance speaker terminals to the JBS CH B JUKEBOX terminals (- to #3 and + to #4).

TO SILENCE A STEREO SYSTEM DURING JUKEBOX PLAY BUT NOT PLAY THE JUKEBOX THROUGH THE STEREO SYSTEM SPEAKERS

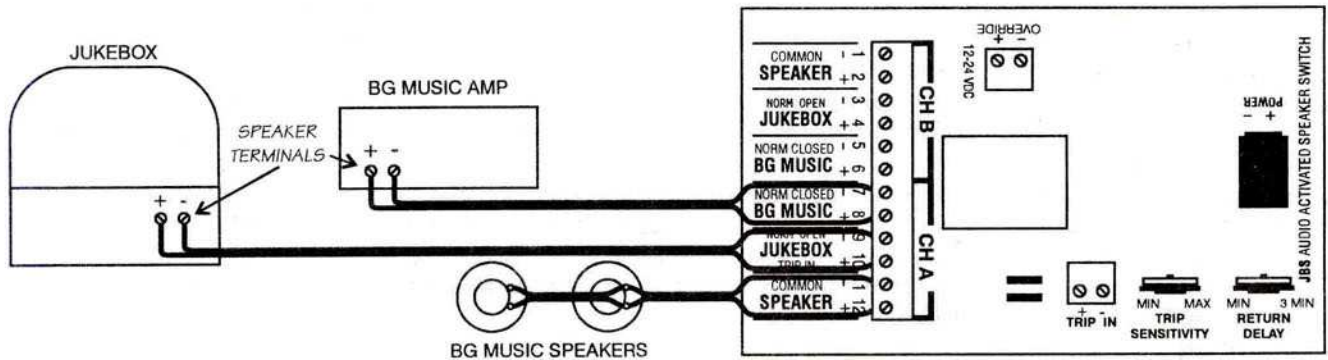
1. TURN OFF THE JUKEBOX AND STEREO RECEIVER (AMPLIFIER) POWER!
2. Disconnect the wires feeding the right stereo speakers from the stereo receiver (amplifier) right speaker terminals (- and +) and connect to the JBS CH A SPEAKER terminals (- to #11 and + to #12).
3. Disconnect the wires feeding the left stereo speakers from the stereo receiver (amplifier) left speaker terminals (- and +) and connect to the JBS CH B SPEAKER terminals (- to #1 and + to #2).
4. Connect a pair of wires from the stereo receiver (amplifier) right speaker terminals to the JBS CH A BG MUSIC terminals (- to #7 and + to #8).
5. Connect a pair of wires from the stereo receiver (amplifier) left speaker terminals to the JBS CH B BG MUSIC terminals (- to



#5 and + to #6).

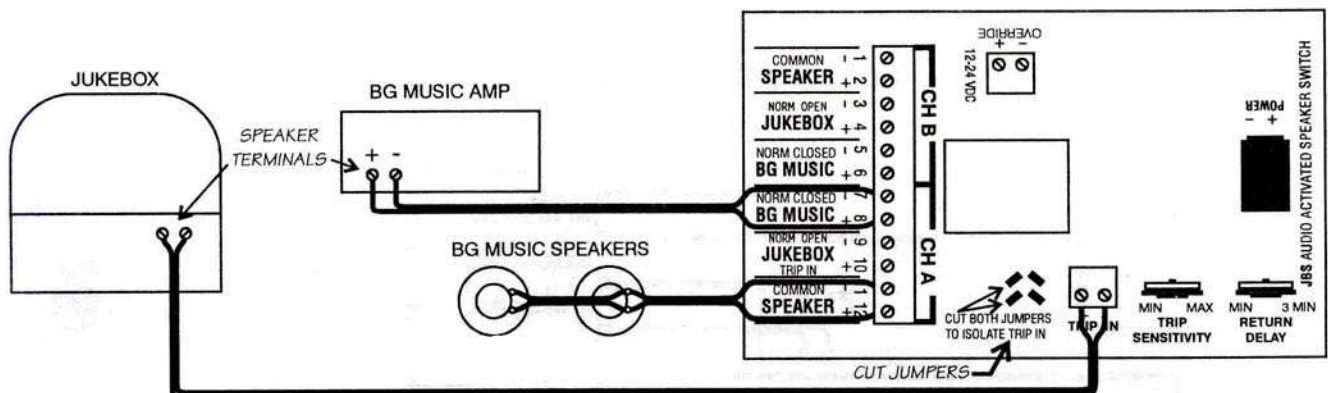
6. Cut both orange jumpers on the JBS near the isolated TRIP IN terminals.
7. Connect a pair of wires from the jukebox speaker terminals (low impedance or 70 volt) to the JBS TRIP IN terminal strip.

TO PLAY THE JUKEBOX THROUGH A MONO BACKGROUND MUSIC (BGM) SYSTEM SPEAKERS



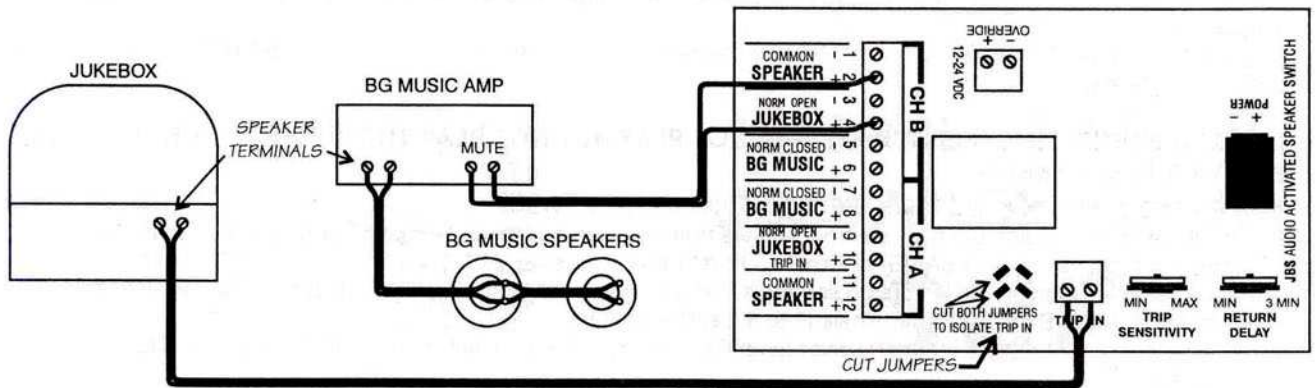
1. TURN OFF THE JUKEBOX AND BGM AMPLIFIER POWER!
2. Disconnect the wires feeding the BGM speakers and connect to the JBS CH A SPEAKER terminals (- to #11 and + to #12).
3. Connect a pair of wires from the BGM amplifier speaker terminals to the JBS CH A BG MUSIC terminals (- to #7 and + to #8).
4. Connect a pair of wires from the jukebox speaker terminals to the JBS CH A JUKEBOX terminals (- to #9 and + to #10). Be sure to match the jukebox speaker output to the type of speakers being used, low impedance or 70 volt. Use the mono terminals or switch the jukebox to mono operation.

TO SILENCE A MONO BACKGROUND MUSIC (BGM) SYSTEM DURING JUKEBOX PLAY



1. TURN OFF THE JUKEBOX AND BGM AMPLIFIER POWER!
2. Disconnect the wires feeding the BGM speakers and connect to the JBS CH A SPEAKER terminals (- to #11 and + to #12).
3. Connect a pair of wires from the BGM amplifier speaker terminals to the JBS CH A BG MUSIC terminals (- to #7 and + to #8).
4. Cut both orange jumpers on the JBS near the isolated TRIP IN terminals.
5. Connect a pair of wires from the jukebox speaker terminals to the JBS isolated TRIP IN terminals.

TO SILENCE A MONO BACKGROUND MUSIC (BGM) SYSTEM DURING JUKEBOX PLAY BUT PRESERVE BACKGROUND PAGING FUNCTION



1. TURN OFF THE JUKEBOX AND BGM AMPLIFIER POWER!
2. Connect a pair of wires from the BGM amplifier MUTE or PRECEDENCE terminals to the JBS CH B COMMON + terminal #2 and the JBS NORM OPEN + terminal #4.
3. Cut both orange jumpers on the JBS near the isolated TRIP IN terminals.
4. Connect a pair of wires from the jukebox speaker terminals to the JBS isolated TRIP IN terminals.

TO USE THE OVERRIDE

Applying a DC voltage in the range 12 - 24 volts to the OVERRIDE terminals while the JBS is tripped will turn the relay off. When this override voltage is removed, the JBS will return to the tripped state, provided that the audio signal to the TRIP IN has not terminated and that the return delay has not timed out. This input is optoisolated from the JBS. Observe polarity.

TO USE THE JBS WITH A JUKEBOX INSTALLED PAGING MICROPHONE

During jukebox play the microphone will operate normally, and the paging will be heard from all speakers connected to the jukebox. If the jukebox is not playing, the JBS will switch as soon as the paging begins. At the end of the page the JBS will switch back to the stereo system or BGM system after the return delay has timed out. Setting the return delay too short may result in the JBS switching back between selections.

TRIP SENSITIVITY ADJUSTMENT

The JBS TRIP SENSITIVITY is factory preset for most locations. To make a field adjustment:

1. Turn the TRIP SENSITIVITY control to minimum.
2. Start the audio feeding the TRIP IN and adjust for the lowest volume level that might be expected.
3. Turn the TRIP SENSITIVITY control CW to the point where the JBS just trips.

RETURN DELAY ADJUSTMENT

The return delay will keep the JBS from switching back from the tripped position after the audio signal to the TRIP IN ends. This delay is approximately 8 seconds (at minimum) to 3 minutes (at maximum). If the return delay is set too short, the JBS may switch back between selections.

TROUBLESHOOTING

The stereo receiver or BGM system plays through the speakers, but the speakers don't switch when the jukebox starts playing:

Check to see that the JBS power supply is plugged in and that the outlet is live.

Increase the TRIP SENSITIVITY.

Check wiring from the jukebox to the JBS screw terminals.

If isolated TRIP IN is not being used, make sure the orange jumpers are not cut.

There is no sound from the stereo receiver or BGM system when the jukebox is not playing:

Make sure the RETURN DELAY has timed out.

Check the stereo receiver or BGM system for:

Volume set for a normal level.

Function selector is set to AM or FM, a station tuned in and the TAPE MONITOR switch in the SOURCE position.

The TAPE MONITOR switch is in the TAPE position and a tape is playing.

Check wiring to the JBS.

The stereo receiver or BGM system comes on intermittently while the jukebox plays:

- Increase the TRIP SENSITIVITY.
- Increase the RETURN DELAY
- Check for intermittent connections.

The JBS switches when the jukebox is not playing:

- Check the jukebox amplifier for intermittent hum or noise.
- Decrease the TRIP SENSITIVITY
- Check that the wiring from the jukebox to the JBS is away from noise inducing sources such as fluorescent lights and neon signs.

Please note: the single biggest cause of the JBS not operating properly is incorrect wiring. Recheck all connections and phasing (+ to + and - to -). If all else fails, remove the JBS from the circuit and connect the speakers directly to the jukebox speaker terminals or to the stereo receiver or BGM amplifier speaker terminals. Check to see that the music plays. Remember that the JBS is a switch.

SPECIFICATIONS:

Relay contact rating:	5 A 70.7 V Res.
Min. RETURN DELAY:	8 sec. (nominal)
Max. RETURN DELAY:	3 min. (nominal)
Max. TRIP IN voltage:	70.7 V RMS
Min. TRIP IN voltage:	100 MVAC
OVERRIDE voltage:	12 - 24 VDC < 10 MA
Power (from AC adapter):	12 VDC 200 MA
	3.5mm plug, TIP POSITIVE

