



Stereo Speaker and Speaker Selector Connection Guide

(This is a guide only-there are numerous ways in which to connect equipment and you should be very familiar with your equipment capabilities and manuals before attempting connections)

All speaker wires are paired, either red=+ and black=- or white=+ and green=-. Each speaker will have a red and black pair or a green and white pair connected to it. The outer jacket of the wire (usually white, orange, gray or blue) will need to be stripped back to reveal the red/black and green/white wires. If you have surround sound wiring, all speaker wire from the family room speakers is 2 conductor wire home run to the media niche (see specific surround sound section for more detailed info).

To identify a speaker by it's wire in the family room, turn all volume controls in the house fully clockwise (all the way up). Strip back the wire pair you wish to identify so that about 1/2" of copper wire is revealed. Take a fresh 9 volt battery (the rectangular type with two contacts on top) and hold one wire on one of the batteries terminals while touching the other wire to the other terminal. Listen carefully as you touch the second wire and you will hear the speaker that is connected to this wire pair "pop". For rooms other than the family room, you may need to have someone else in the room with the speakers as with some speakers, the "pop" is very subtle.

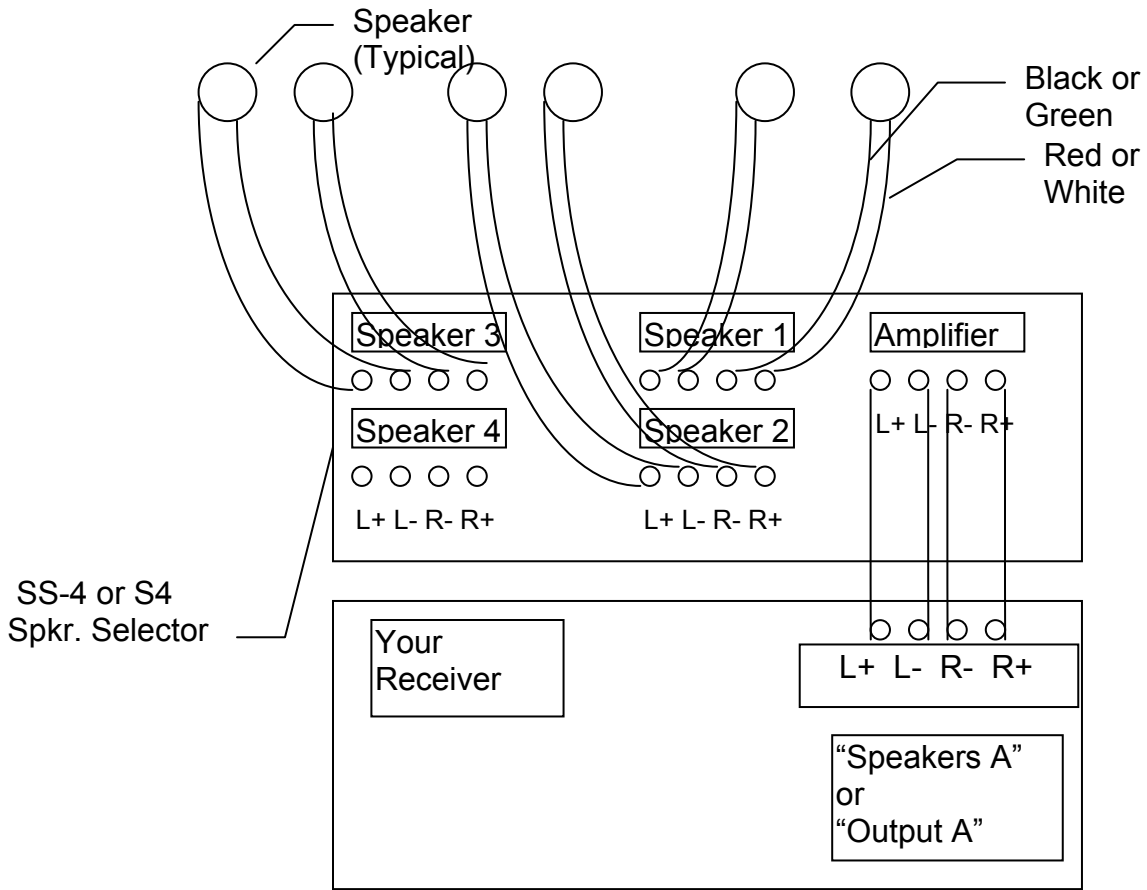
After identifying all the wires, insert the stripped ends of the wire pairs into the appropriate terminals on the SS-4 or S-4 speaker selector, as shown in Figure 1 or the back of your receiver or amplifier, keeping the polarity correct, i.e., green and black are always negative (-) and red and white are always positive (+).

If you have more than 2 pairs of speakers

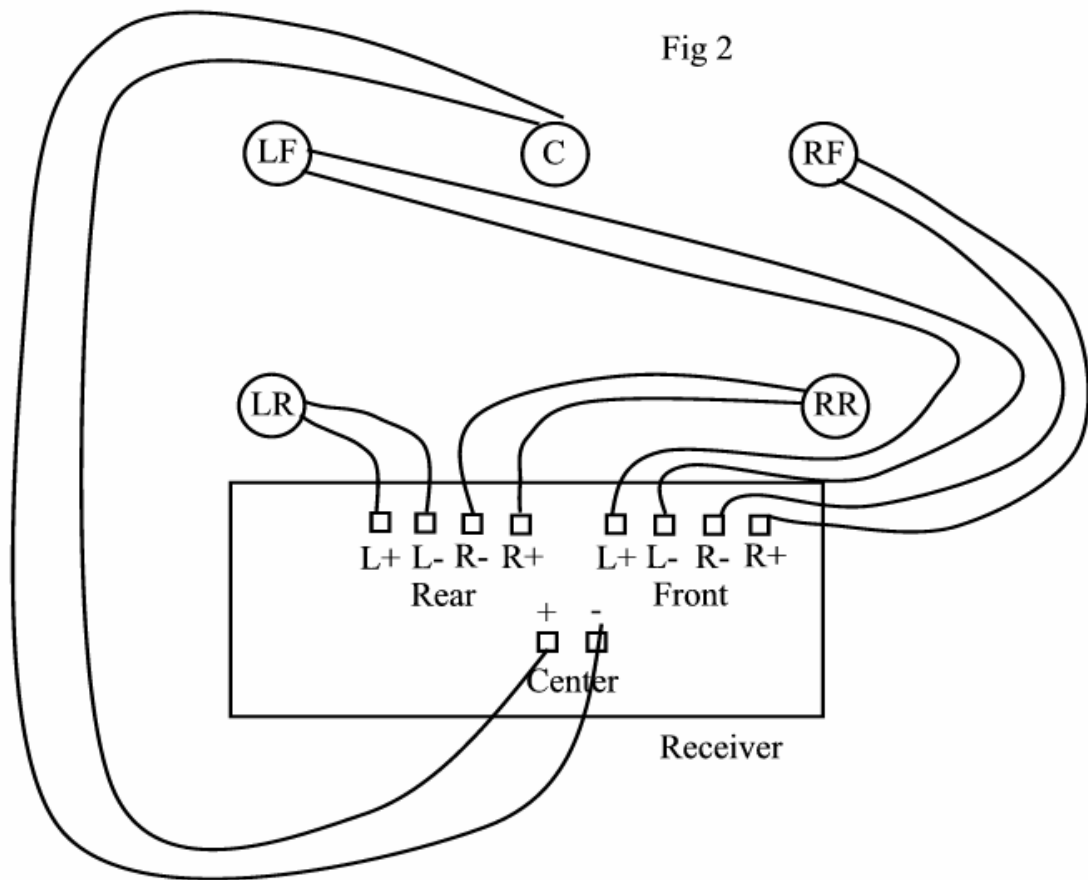
With four separate wires, connect the SS-4 or S-4 "amplifier" or "input" terminals to your amplifier or receiver, as shown in Figure1, keeping polarity correct. Your amplifier must be capable of handling the SS-4's or S-4's minimum impedance of 5 ohms. This is assuming all speakers are 8 ohm speakers. It is not recommended that speakers other than 8 ohms be used in this system. If your amplifier or speakers are rated at anything other than 8 ohms, you may have problems with all components working properly and you may damage equipment. The recommended power of the amplifier or receiver should be no

more than 100 watts per channel, RMS. If the SS-4 or S-4 is over driven by higher power, damage will occur.

Figure 1



If you have a surround sound receiver and 5 speakers in the family room, (and other speakers in the home being powered by the same receiver) there are several ways to connect your equipment with a speaker selector. Your wiring is set up to be very flexible. All speaker wire is two conductor wire and is run directly to the media niche. You may connect all 5 pairs directly to your surround sound receiver not use the volume control at the wall. This would be the most common way of connection if you have two separate receivers, one for surround sound and one for stereo in the rest of the house. This method is shown in Figure 2.



Receivers may be configured differently than shown. 4 channel surround receivers may have the rear speakers labeled without distinction between the rear left and right. If this is the case, simply connect one speaker to one rear set of terminals and the other to the one that is left.

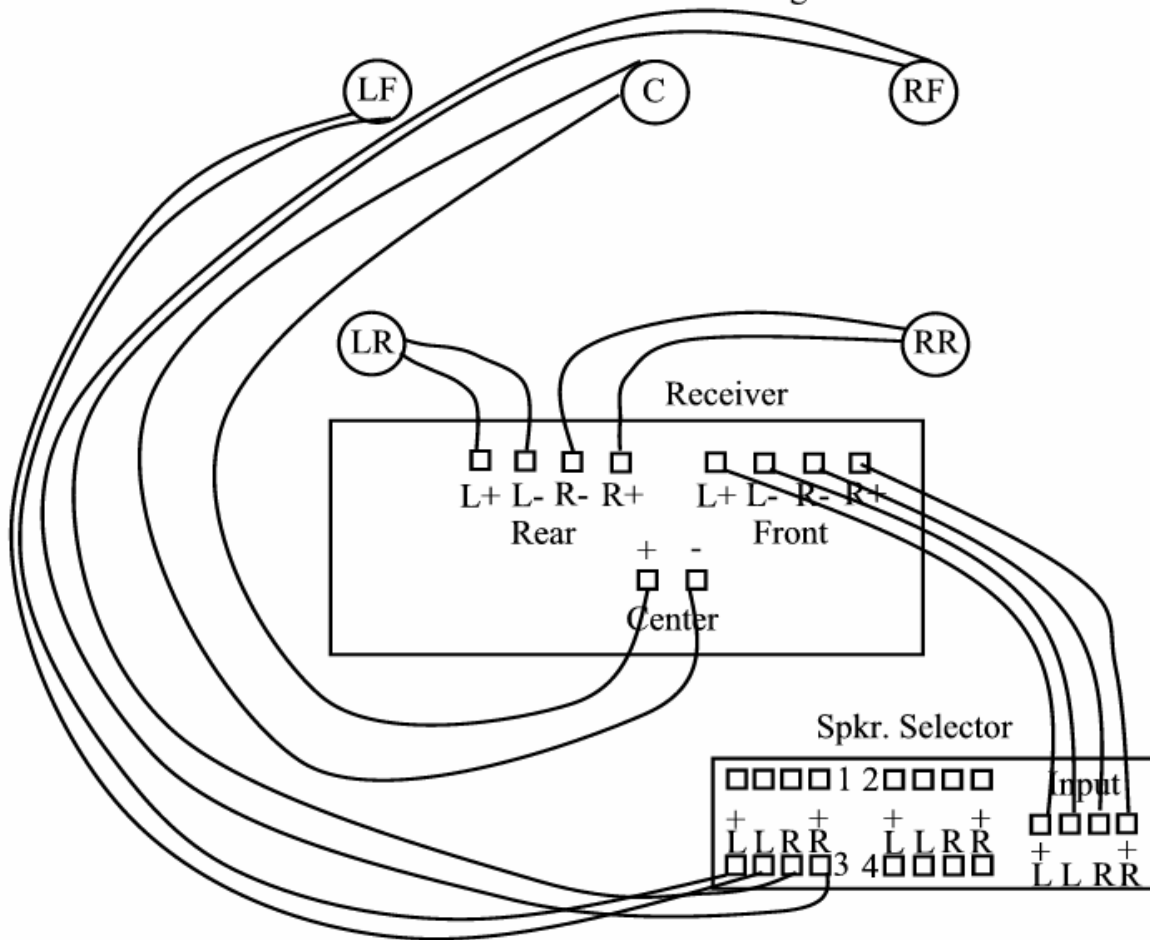
When playing in stereo mode only (i.e. music, not video) the front right and front left act as the stereo speakers. No sound will be heard on the center or rear speakers.

If you choose to use your surround sound receiver to also power the other speakers in the house, you will need to connect them as shown in Fig. 3. and as described below.

To protect your receiver, you must connect the front speakers to the speaker selector as a pair of normal stereo speakers. The only exception to this is if you only have one other pair somewhere else in the house and your receiver has a secondary speaker output for stereo (i.e. an A and B channel) and the second pair is connected to the B channel. In this case, you may connect the front speakers of the surround directly to the receiver's primary output (A) without a speaker selector. This is a more desirable way of connecting if you are more into music than movies. Equal power will be delivered to all speakers in stereo mode. In surround mode, the speaker selector will rob a bit of power from the front speakers.

Rear and center channel speakers are connected directly to your receiver's outputs for these specific channels.

Fig 3

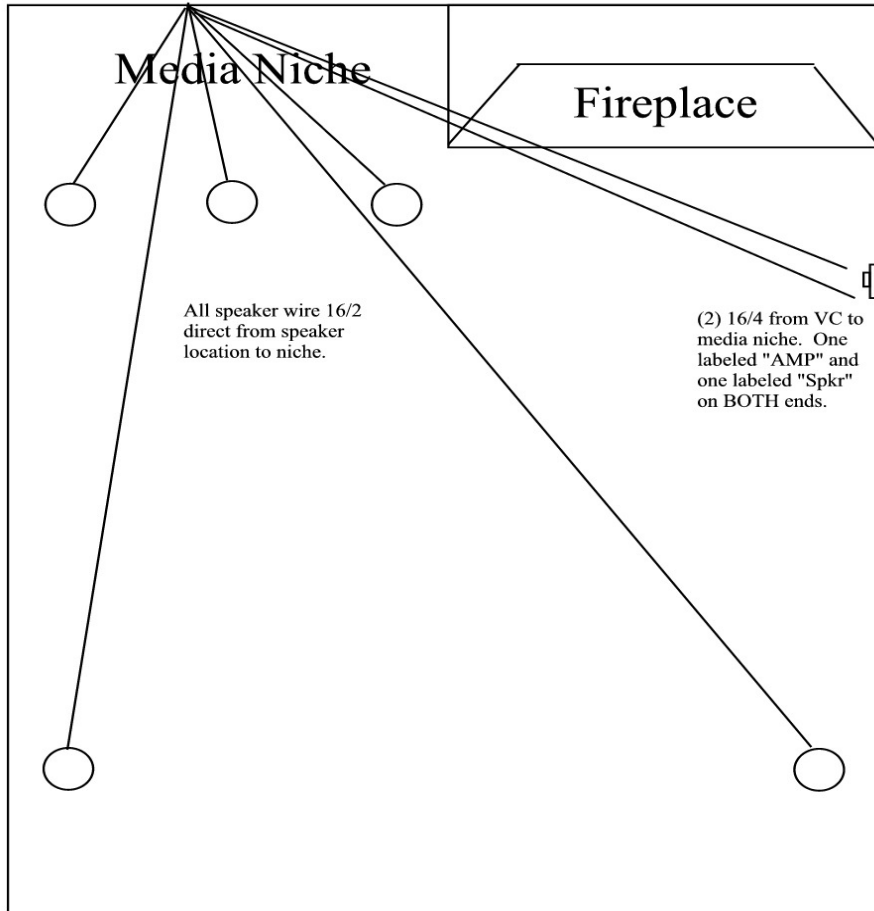


Another quite common scenario is to connect all 5 surround sound speakers directly to the receiver and connect all other speakers in the house to the speaker selector and then the speaker selector to the "B" receiver output. This is a more desirable way of connecting if you are more into movies than music in the family room. No power will be robbed from the front right and left speakers when listening to a movie. During music only listening, the output power to the front speakers will be slightly greater than the power to the speakers connected to the speaker selector.

If you ordered surround sound (5 ceiling speakers), your family room is wired to provide you with a volume control, if you choose to use it. There are several situations where a volume control comes in handy. With a volume control connected to the front surround speakers, you will be able to set your receiver's main volume control at a certain level which becomes a "master" volume level for any speakers in the house. This allows you to leave the receiver on with CD's or the radio playing. If music is desired in any room with speakers (including the

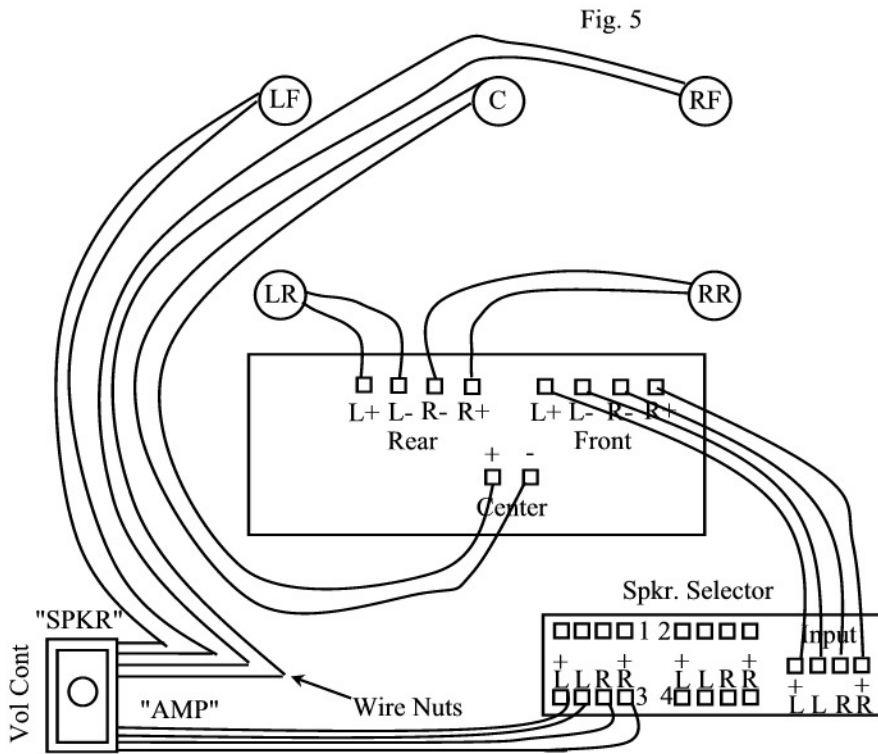
family room) you simply turn up the volume control in that room and you have music. This type of application is usually more desirable if you are more into music than surround sound. Your volume control is connected to two separate, 4-conductor wires, one for input and one for output. Both are run from the volume control to the media niche. If you care to utilize your volume control, you will first need to identify each speaker in the room by the battery method at outlined on page 1. Your volume control wires should be labeled "AMP" for amplifier or receiver (volume control input) and "SPKR" for speakers (volume control output). After identifying the front right and front left speaker wires at the media niche, you will need to strip back and wire nut these to the "SPKR" wire. The "AMP" wire is connected to the speaker selector or your receiver, depending on how your are connecting. Figure 4 shows how your family room is wired.

Figure 4



Typical Family Room Surround Sound Wiring

Figure 5 shows the connections when utilizing both a speaker selector and the volume control in the family room.



If you have two pairs of speakers

Most receivers will allow you to connect two pairs of speakers, A and B. The back of your (non-surround) receiver will have eight places to connect the speakers, 4 for A and 4 for B. Each will have left + & - and right + & -. Identify the speakers as explained above and connect to the receiver as shown in Figure 6.

Figure 6

