

frontrow™

Automatic Page Override using
Radio Design Labs ST-ACR
Audio Controlled Relay

INSTALLATION GUIDE

ST-ACR Audio Controlled Relay

The ST-ACR audio controlled relay activates a switch for a given amount of time when another audio signal is presented. As long the other audio signal is present, the switch (relay) will remain activated. When the audio signal is discontinued the relay will disengage. This delay period is user defined.

Figure 1 shows the AT-ACR1 stick-on audio controlled relay. The device has two user settings:

- sensitivity, defines the audio level that the relay will engage and
- delay, defines the time it will take to disengage the relay after the audio signal is removed.

The device has two relays allowing the switching of two speaker signals simultaneously. The device is powered by a 24VDC wall transformer.

The school PA system is interfaced by running the ST-ACR input to a split core transformer that detects voltage on the classroom PA speaker.

The ST-ACR accessory should be installed by a qualified professional.

The following items are not included with the ST-ACR:

- 24 Vdc wall transformer (CalRad 45-610 or equivalent).

You will need the following to install this module:

- Access to the primary side of a 25-, 70-, or 100-volt PA speaker (the side that connects to the PA amplifier).
- Two (2) wire nuts.
- Enough wire to connect between the PA speaker and the installed module (18 AWG to 22 AWG stranded twisted pair with outer jacket recommended). Be sure to use plenum-rated wire if it will pass through a plenum space.
- Small slotted screwdriver.
- An assistant who can make a PA announcement from the central office.

Installation Procedure

1. Remove ST-ACR from box and place double stick tape on the back of unit as demonstrated in Figure 2.
2. Make sure the power on the FrontRow system is in the OFF position and the ST-ACR is not connected to power.
3. Clean a small area on the case top of the FrontRow receiver near the speaker terminals at the rear of the receiver.
4. Remove the backing from the double stick tape and mount the ST-ACR to the case top as shown in Figure 3.



Fig. 1

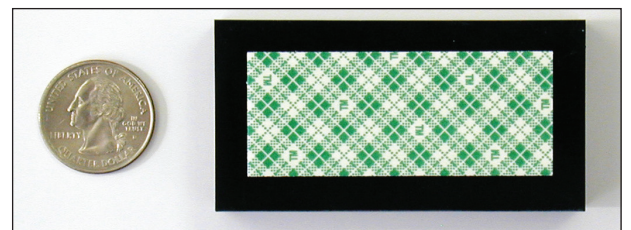


Fig. 2

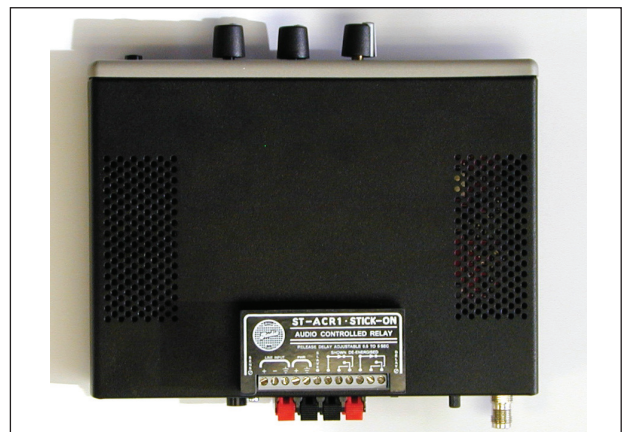


Fig. 3

5. Wire the FrontRow connections as shown in Figure 4.

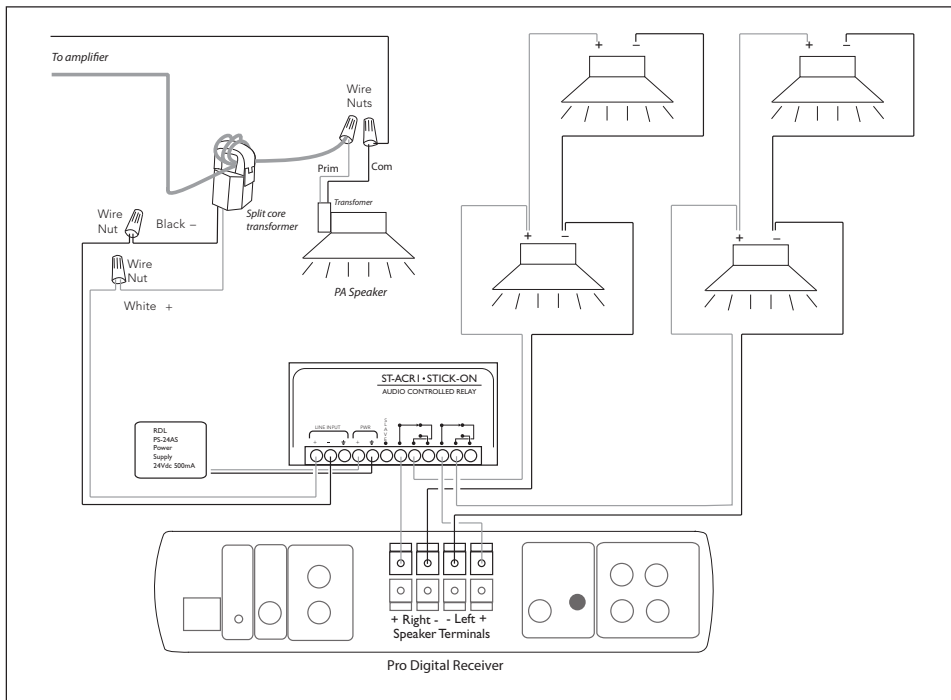


Fig. 4

NOTE: Depending on the voltage of your PA system, follow the guide below for how many times to wrap around split core transformer.

IMPORTANT! Wrap ONLY the primary wire around the split core transformer.

- 100-volt: Wrap 1-2 times
- 70-volt: Wrap 2-3 times
- 25-volt: Wrap 3-4 times

6. Power up the FrontRow receiver and plug the transformer for the ST-ACR in to an AC plug.

7. Test the FrontRow system by turning on the transmitter to make sure it is wired correctly. If no sound is coming from the FrontRow speaker, check your wiring and try again.

8. Play music or some other continuous source of audio through the FrontRow receiver's aux input. This will be used while setting the sensitivity of the ST-ACR. (Figure 5)

9. To set the sensitivity of the ST-ACR, have someone make a long announcement on the school PA system. While the announcement is being read, set the sensitivity adjustment until the speakers on the FrontRow system are muted. A red light on the ST-ACR will illuminate when this occurs. (Figure 6)

10. To set the delay to the desired level, have several short announcements made on the school PA. Using a flat head screwdriver set the delay control to the desired delay. (Figure 7)

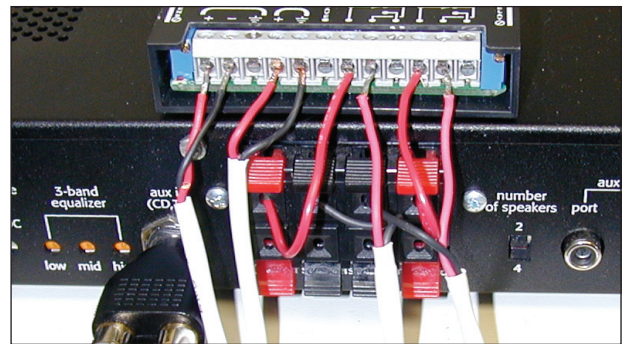


Fig. 5

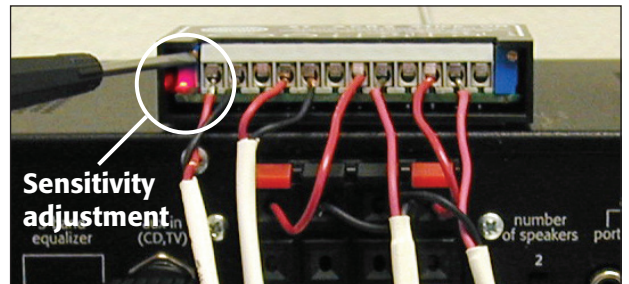


Fig. 6

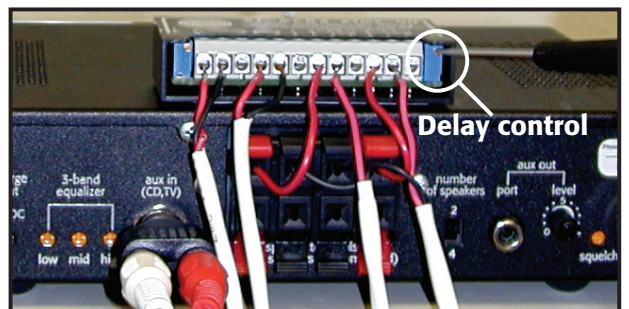


Fig. 7

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