



Do not attach other devices to the tone alert radio RJ-12 output jacks when using the ERM. If other devices must be attached, contact Warning Systems for technical assistance.

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The External Relay Module (ERM) is a device that attaches to a Warning Systems Tone Alert Radio (TAR) to enable activation of external devices requiring the switching of high current and/or high voltages, and for providing isolated receiver audio to an external amplifier or public address (PA) system. It is primarily intended for activating devices other than Warning Systems' proprietary alerting units such as the external strobe unit and text display. The TAR supplies the voltage necessary to run the ERM. *When the ERM is attached, no other external devices should be plugged into the RJ-12 data jacks on the rear panel of the TAR.*

The audio output of the ERM will drive a 600 ohm balanced input at approximately 0dBm. The two relay outputs are rated at 5 amperes at 250 volts alternating current (VAC) or 24 volts direct current (VDC). All outputs are DC isolated from the receiver to prevent receiver damage from an external event. The RJ-12 cable length should be kept as short as possible and should never exceed 50 feet. Refer to the manufacturer's specifications for maximum cable lengths for external amplifiers and alerting devices.

Using the ERM with an external amplifier or PA system.

1. Verify that the jumper is placed across terminals 2 & 3 on JP1. If this jumper is missing, no audio will be present at TB3.
2. Using standard speaker wire, strip about 3/16" of the insulation from both wires.
3. Insert the stripped ends into the terminals marked AU+ and AU- on TB3. Verify that both wires are inserted fully into the terminal strip.
4. Turn the compression screws on the top of the terminal strip until the wires are firmly clamped.
5. Attach the other end of the cable to a 600 ohm balanced input on the amplifier or PA system. Some systems may require a special connector.
6. Insert the RJ-12 male connector on one end of the RJ-12 cable assembly into the input jack on the ERM and insert the connector on the other end of the cable assembly into one of the RJ-12 jacks on the tone alert radio.
7. Press the WEATHER button on the tone alert radio to monitor the receiver frequency and adjust the amplifier or PA volume control to the desired level. If no signal is being transmitted, adjust using the noise level (static) as your reference.
8. Press the WEATHER button again to return to quiet operation.
9. Press the TEST/RESET button on the tone alert radio to confirm the alert tone level from the amplifier or PA system. Readjust the volume level if necessary.

Using the ERM with external signaling devices. Some devices contain internal power sources and do not require an external power supply.

1. Using standard speaker wire, strip about 3/16" of the insulation from both wires.
2. Insert the stripped ends into the terminals marked NO and CM on either TB1 or TB2. Both may be used with separate devices.
3. Strip the wires on the other end of the cable and attach it to the control inputs if you are using a self-powered buzzer or signaling device. There is no polarity restriction on the ERM.
4. If an external power supply is used, attach one of the wires from the ERM to the negative (-) side of the power supply.
5. Run a wire from the positive (+) side of the power supply to the positive input of the buzzer or signaling device.
6. Attach the remaining wire from the ERM to the negative (-) side of the buzzer or signaling device.
7. Insert the RJ-12 male connector on one end of the RJ-12 cable assembly into the input jack on the ERM and insert the connector on the other end of the cable assembly into one of the RJ-12 jacks on the tone alert radio.
8. Press the TEST/RESET button on the tone alert radio. The green LED on the ERM should illuminate momentarily. The buzzer or signaling device should also emit a short alert. If the ERM LED flashes but the signaling device fails to respond, recheck your wiring. If an external power supply is being used, verify that it is plugged into a live AC outlet and that voltage is present at the output connectors.
9. If the green LED on the ERM does not flash and the signaling device does not alert, verify that the RJ-12 cable connectors are firmly seated in their respective jacks.

