

Tek-ENTRY TekTip: Common Sense Troubleshooting: Ohming Speakers

In the majority of our entrance panels and remote stations, we use speakers to broadcast audio and also to serve as microphones. When a problem is encountered in the field, where the audio is not working in either direction, the speaker in one of the devices should be suspect.

A good way to check a speaker is to use an ohm meter to check the voice coil within. The ohms rating of most speakers is listed on the back, but if this cannot be determined easily, please contact the Technical Support line for assistance. Once the ohms rating has been determined, the ohm meter's probes should be applied to the speaker's terminals. The reading on the meter should correspond with the ohms value specified for the speaker (Note: This reading can vary slightly; i.e., you might read 41 ohms on a 45 ohm speaker). If there is no reading, or the reading is significantly off, the speaker should be suspected to be bad. A second test may be performed by desoldering one side of the speaker to allow an 'out of circuit' reading, which will be more accurate. If the reading does not improve, then the device should be replaced or repaired.

If the speaker has no reading (which is referred to as an "open" state) it should be inspected for problems. The wires and solder joints that connect the speaker into the device should be checked for damage. Another place to check is beneath the solder points of the speaker. There should be two, very fine, copper braids connecting the solder points to the actual speaker coil. If one or both of these are damaged then the speaker will not work.

Remember as a final point, if the audio path associated with the speaker works in one direction, but not the other, the speaker is most likely good. A speaker will not typically work in one direction only.

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