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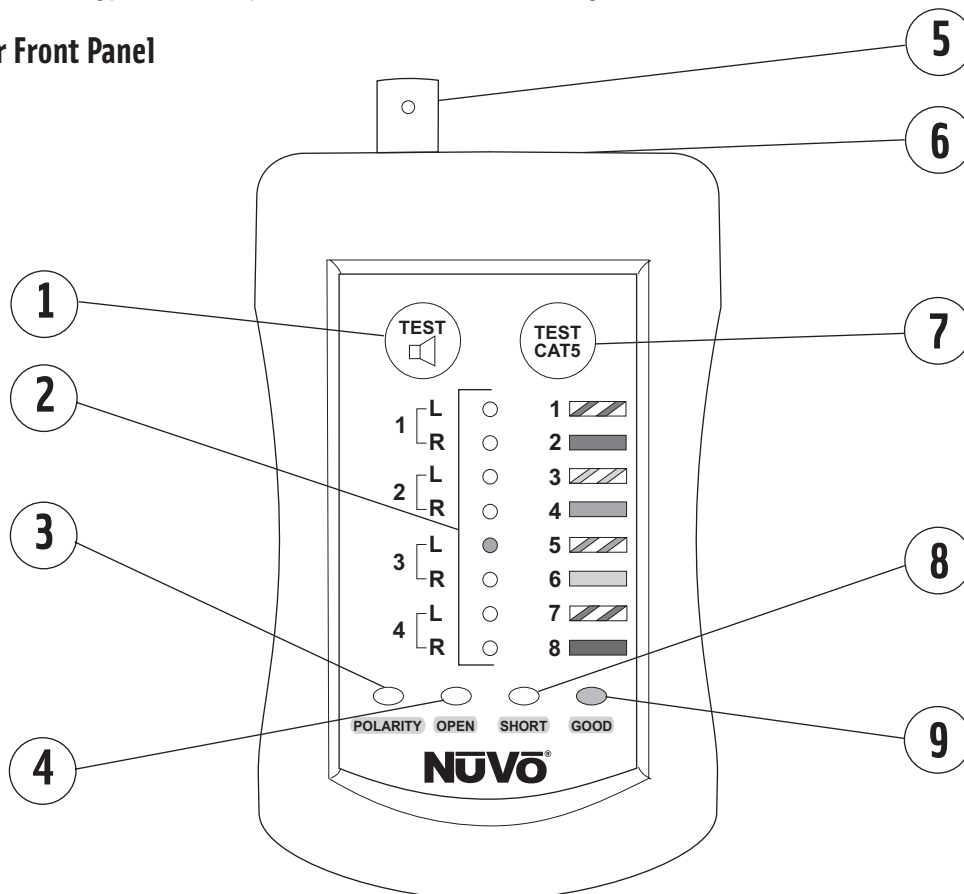
NV-AWT1

Allport Speaker Wire and CAT5
Wire Tester

Overview

The Allport Wire Tester is a tool that can be used to verify the correctness of the Wire connections between the Allport™ and the keypads and speakers in different rooms in the house. This tool is to be used after a complete pre-wiring has been completed. This consists of an Allport with all speaker wires and CAT5 cables connected, but with no speakers, keypads or amplifiers connected to the system.

Allport Wire Tester Front Panel

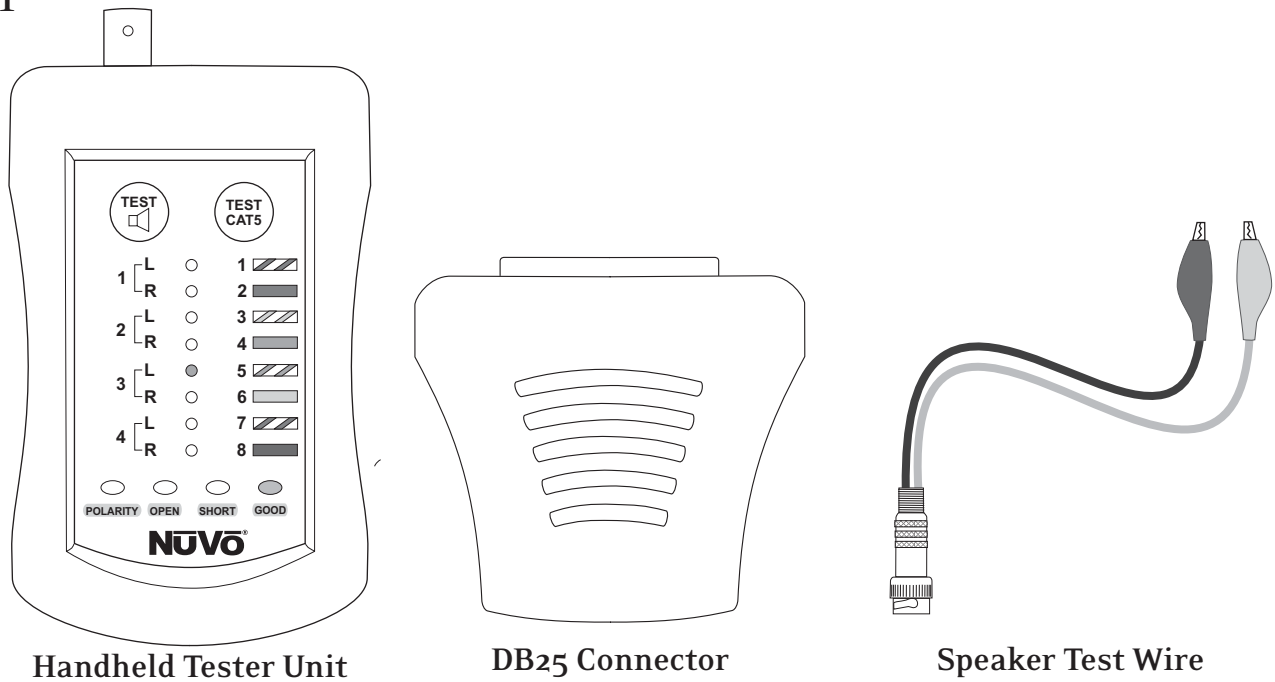


1. **Speaker Test Button:** This button is used to perform a test on integrity of the speaker wire termination and polarity.
2. **Speaker/Zone LEDs:** These LEDs (light emitting diodes) indicate the zone location and left/right polarity of the speaker wire being tested. They also indicate specific CAT5 leads.
3. **POLARITY LED:** This LED indicates a crossed wire either in the speaker termination or CAT5 RJ-45 termination.
4. **OPEN LED:** When lit, the LED indicates a wire that is not making a good connection.
5. **BNC Speaker Connection:** Connection for the Speaker Wire Test Cable to perform a termination test on each speaker wire.
6. **RJ-45 Connection:** Connection for the CAT5 cable test on each RJ-45 termination.
7. **TEST CAT5 Button:** This button is used to perform a test on the integrity of the CAT5 terminations throughout the system.
8. **SHORT LED:** This LED indicates that two wires are shorted together.
9. **GOOD LED:** This LED indicates a good termination.

Allport Wire Tester Connection

The Allport Wire Tester consists of three components. The Handheld Test unit, the DB25 Connector, and the Speaker Test Wire, fig. 1. The Handheld Test unit requires three AAA 1.5 volt batteries. The DB25 connector should be plugged into the 25 pin connection on the Allport. The Handheld Tester is taken from room to room to test the speaker and CAT5 terminations.

Fig. 1

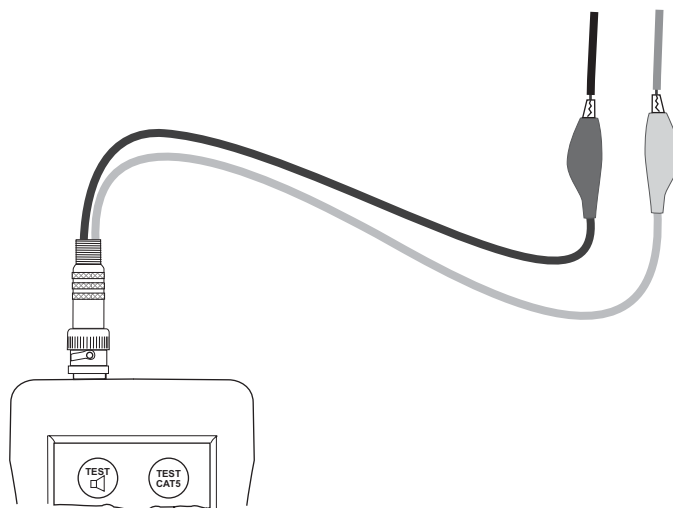


Testing the Speaker Connections

The speaker connection test is completed using the Speaker Test Wire included in the Allport Tester package. This test must be performed before the speakers are installed in their location in each room.

To complete the test, connect the red (positive) and black (negative) leads of the Speaker Test Wire to the corresponding speaker wires run for the left and right speakers in each room, fig. 2. **Note that if you are using a single stereo speaker, an individual test should be run on each pair of wires that run to that location.**

Fig. 2




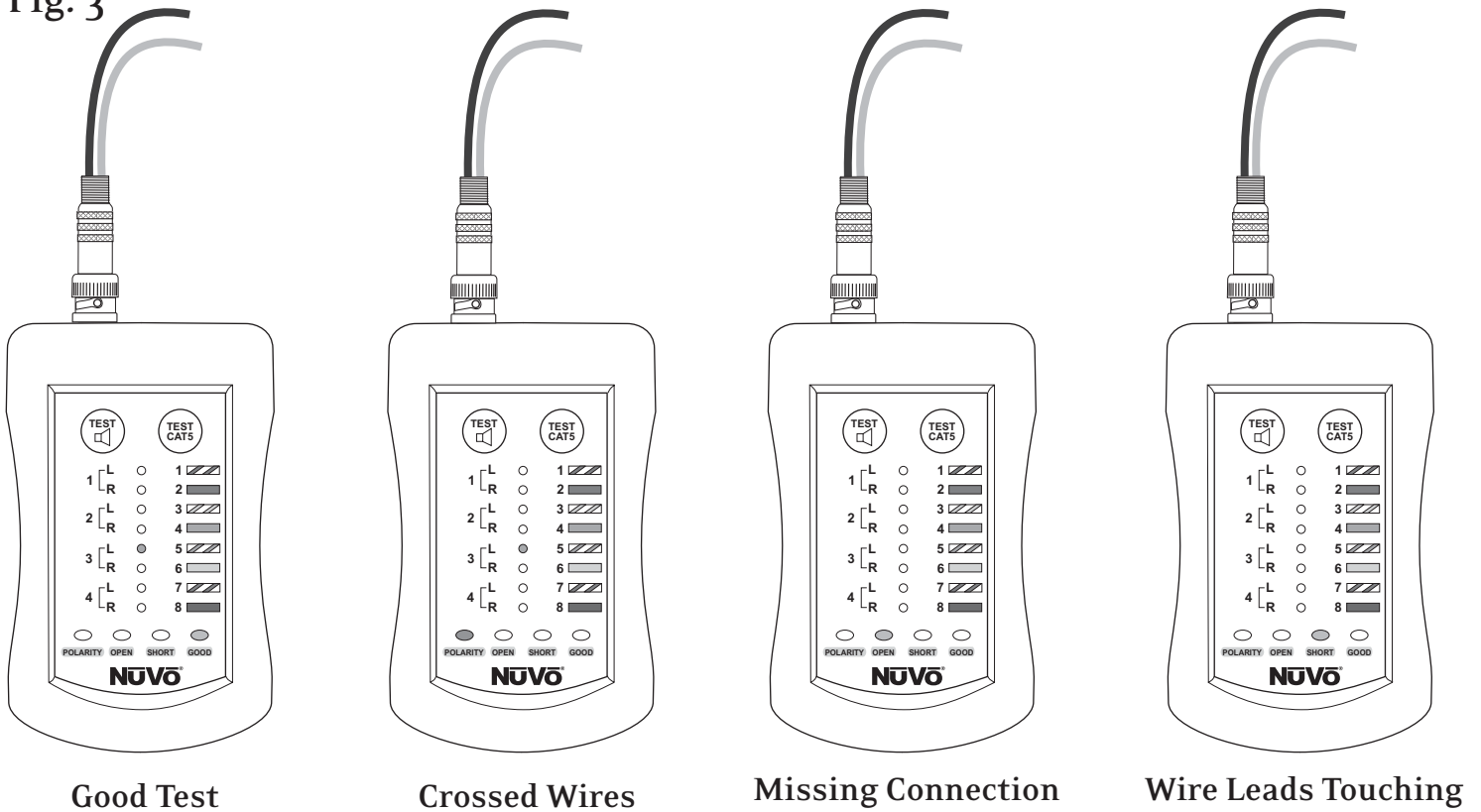
With the Speaker Test Wire connected to the speaker wires running to the Allport and the DB25 plugged into the Allport at the equipment location, press the Speaker Test button . The speaker test has four possible results. They are open (one or both of the wires not making contact at the Allport), short (both leads touching each other), polarity (the wires are reversed), and good, fig. 3. A successful test is when the green GOOD LED and the zone left or right LED are both lit. If you see a zone LED other than the wires you are testing and or one of the test LEDs (POLARITY, OPEN, or SHORT) you need to re-terminate the wires at the Allport.

Fig. 3



Single Test

A single press of the Test button will perform a single test across the wire and display the result for approximately 5 seconds.

Multiple Tests

Pressing and holding the Test button will perform continuous tests for as long as the button is held. The results of each previous test will remain lit. Should multiple errors be detected, the results will all display simultaneously on the Handheld Test Unit.

Testing the CAT5 Wires

The Handheld Test Unit has an RJ-45 jack for testing the CAT5 runs to each keypad location. Each CAT5 needs to be terminated on both ends using an RJ-45 connector and the standard EIA/TIA568A wiring scheme. The correct color order for 568A is demonstrated on the front panel of the Handheld Test Unit (if you are more familiar with the 568B wiring standard, that scheme will work as well).


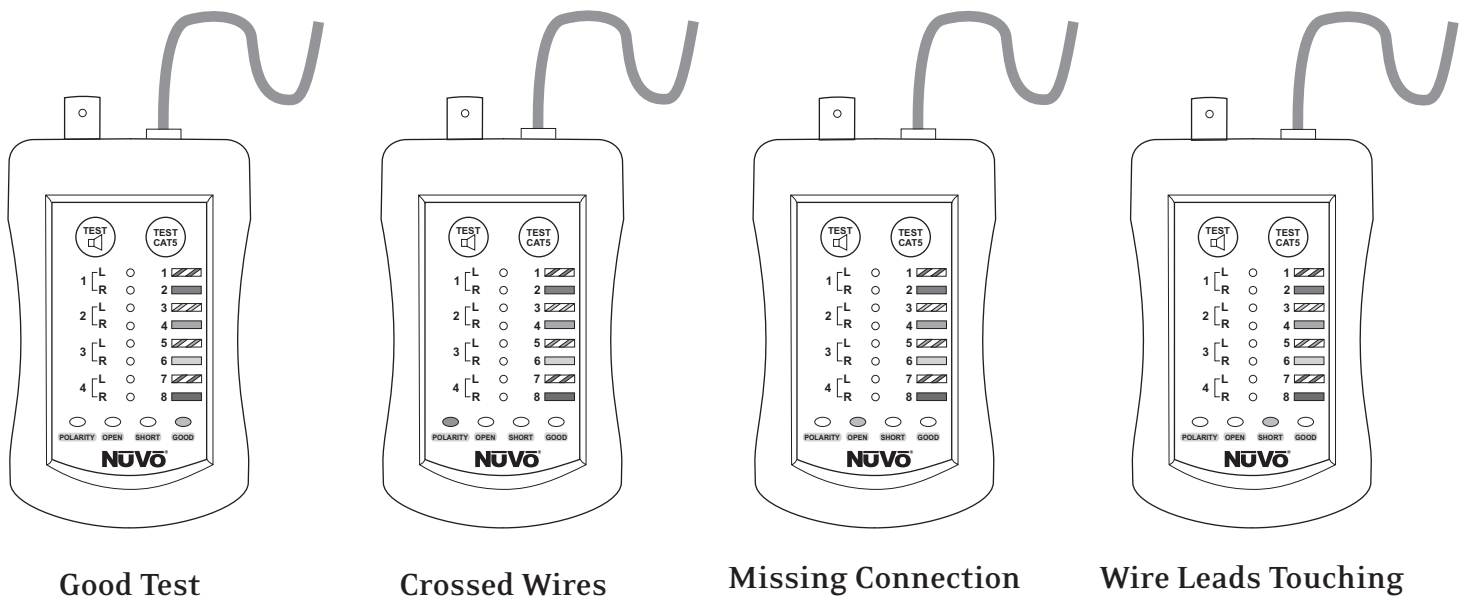
To perform the CAT5 test, plug the CAT5 cable into the Handheld Test Unit and into one of the RJ-45 jacks on the Allport. Press the TEST CAT5 button . The tester will automatically send a signal both directions across each of the eight conductors in sequence. A single green GOOD LED indicates that the termination is good on both ends of the cable. An illuminated SHORT, POLARITY, or OPEN LED indicates there is a problem with the termination, and one or both ends of the CAT5 must be re-terminated, fig. 4.

Fig. 4



Single Test

A single press of the Test button will perform a single test across the wire and display the result for approximately 5 seconds.

Multiple Tests

Pressing and holding the Test button will perform continuous tests for as long as the button is held. The results of each previous test will remain lit. Should multiple errors be detected, the results will all display simultaneously on the Handheld Test Unit.

Low Battery

When the battery power equals 2.7 volts or less, the POLARITY, OPEN, and, SHORT LEDs will flash for about 5 seconds and the unit will stop any test.

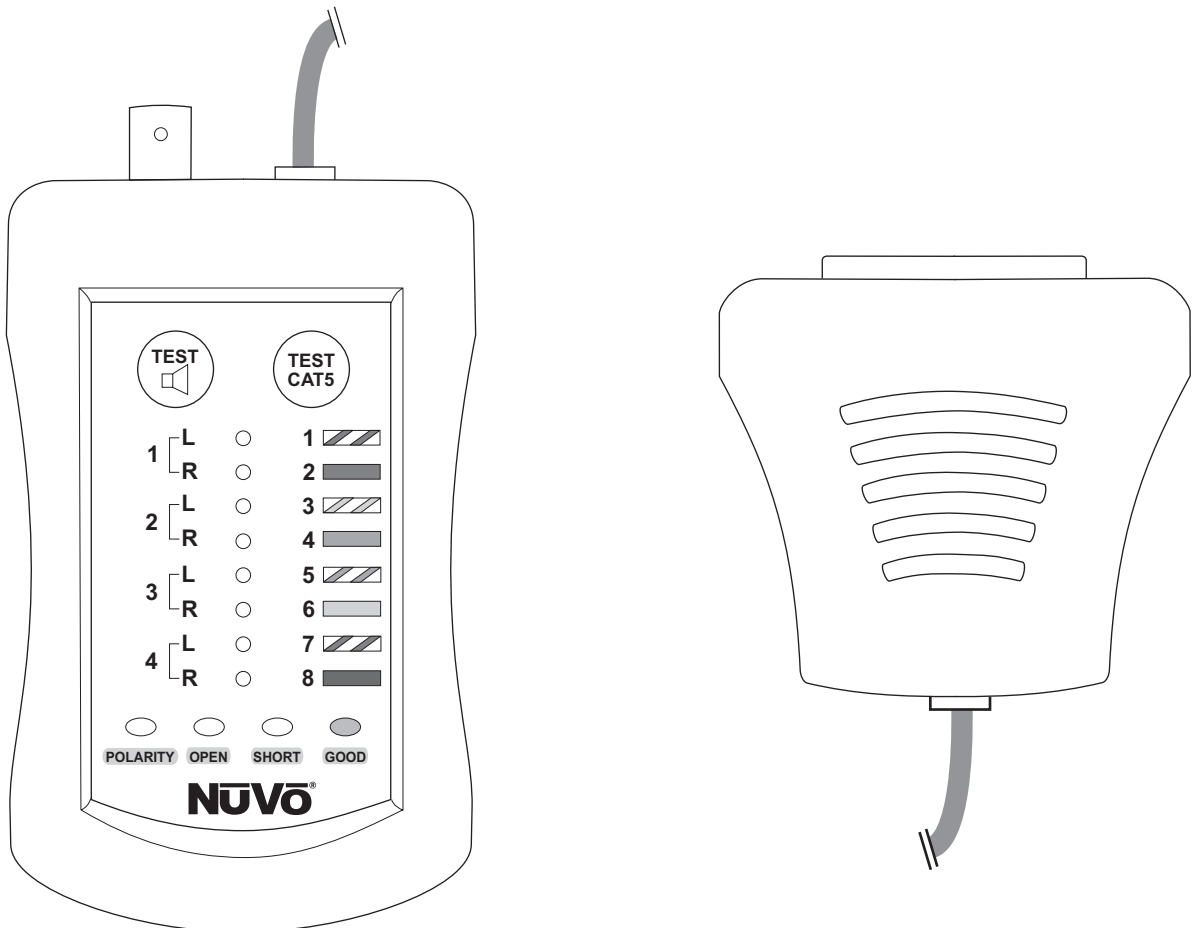
Self Test at Power-up

When the batteries are removed and replaced, the Handheld Test Unit will automatically perform a self test of each LED. This will cause each LED to individually light, and then it will return to normal operation.

Using the Allport Tester as a standard CAT5 Tester

The Allport Tester DB25 Connector has a separate RJ-45 jack for multipurpose testing. This termination is isolated from the 25-pin connection that plugs into the Allport and allows for individual CAT5 testing. This is very useful for testing any EIA/TIA 568A or 568B termination, regardless of its intended use. To do this, simply plug one end of the terminated CAT5 cable into the RJ-45 connector on the bottom of the DB25 Connector and the other end into the Handheld Test Unit, fig 5. Press the CAT5 Test button and look for the results. A good termination is indicated by a single, green GOOD LED. An unsuccessful termination is indicated as described in the Allport testing description, (see Testing the CAT5 Wires pg. 4).

Fig. 5



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NuVo Technologies
4940 Delhi Pike
Cincinnati, OH 45238
www.nuvotechnologies.com