

Technical Reference

Proximity Readers – Basic Tests Trouble-Shooting by End Users

Change History

Version	Date	Author	Comments
1.0	11 April 2012	L. Hickcox	First release.

When an AWID proximity (125 kHz low-frequency) reader is not working, the problem may be in the reader itself, but also may be in the power, the cabling, the wire connections, and the host access control system.

We can start by seeing if the reader is working by itself. Our proximity readers are all self-testing, as described in AWID's Technical Reference for technicians, "Proximity Readers – Basic Tests – Isolation".

- (a) Is the reader's LED lighted all of the time? The common LED color for standby in a powered reader is **red**. This shows that the reader is probably receiving correct power from the system's controller.
- (b) Does the reader respond to a presented card or tag? When you present to the reader an AWID card or tag that you know is working correctly (perhaps by unlocking a different door that has a reader), the reader should beep once, and the LED should change color for a short time, then revert to **red** for standby. This shows that the reader is reading the card or tag, and probably transmitting its code to the controller.
- (c) Does the reader's LED change from **red** to **green** for 5 seconds or more after reading the card or tag? If so, the reader works and the system is normal through the controller and the PC's program. The problem may be the door lock.
- (d) Does the reader's LED change to standby-**amber** after reading a card or tag? This "reset" condition is caused by a problem in the power to the reader, or by electrical noise that reaches the reader because of a problem in the wiring or shielding of the system's cable. The reader itself is probably normal.
- (e) Does the system's controller indicate a code input when the card or tag is presented to the reader? There may be an LED on the controller's panel that changes color when the panel receives a code input. Or there may be a relay that clicks when the reader reads the card or tag. If so, the reader and controller are normal, but the system's PC programming or the door lock may have a problem.
- (f) Does the system's access control program, running on a PC, display an event when the card or tag is presented to the reader? If it does, the problem is probably in the programming of the access control system in the PC. Perhaps the card's code is not programmed for access to this door, at this time of day, or for this day of the week.
- (g) Does the door lock operate normally when one presses a Request To Exit button inside the locked door, or if the host system is programmed for Door Unlock at this time of day? If so, we know that the door lock is functioning properly. The problem may be the card reader. Run the Basic Isolation Test, described below.

See the test procedure in the Technical Reference "Proximity Readers – Basic Tests – Isolation". The reader should be removed entirely from its installation location, and all wires disconnected behind the reader. The 10 wires in the reader's cable should be spread out so that each wire is touching nothing, including the shielding under the gray plastic sheath of the reader's cable. For smaller proximity readers (excluding MR-1824-series readers), clip a small 9 volt battery to the reader's **black** (negative) and **red** (positive) wires. A 12 volt battery is fine for all proximity readers including MR-1824.

(continued)

Now hold a good card or tag to the reader. Does the reader's LED light? Does the reader beep, and does its LED change color from standby-**red** to **amber** for ½ second, then revert to **red**? If so, the reader is almost certainly normal, and the problem is elsewhere in the system.

- If this testing does not answer the questions, the customer should contact the local access control professional who installed the system, for trouble-shooting and correction.
- If the customer can not identify or locate the original installer, contact the company that manufactured the access control system, and ask their Sales Department how to contact their local dealer.
- If you need further support, please contact AWID's Technical Support.

Reference

Technical Reference, "Proximity Readers – Basic Tests – Isolation"