Technical Reference

LR-3000 for Portable Offline Testing

AWID's LR-3000 UHF Long-Range Reader can be used even before it is installed. It is self-testing through its two LEDs, which indicate DC power applied and each read of a compatible credential. By powering the LR-3000 with a battery and holding a credential in front of the reader, it acts as a portable tester, completely isolated from the rest of the access control system. This is done before the actual installation, resulting in high confidence of excellent performance.

Components of the Test Pack

- **LR-3000**-B-U UHF long-range reader (standard reader, ready for installation)
- **Battery** for reader power (standard backup battery for alarm panels, 12 volts, 7.5 ampere-hours, full charge)
- **Credential** – tag or card for the LR-3000 reader (from the customer's stock, or from AWID's demo/test kit)
- (Optional) **LR-Sounder** test unit (from the LR-TEK or LR-2000KIT demo/test kit; powered by the battery)

Applications

A. Scan the entire area of the planned installation, to be certain that it is suitable for these products.
B. Observe good reading distance, for confidence that the reader and the tag are functioning normally.
C. Quickly replicate the planned location of the reader, and of the tag, to predict good results for the installation.
D. Identify external features that might interfere with good performance: tree, wall, structure, pole, RF source, etc.
E. Move the tag or card to various positions and orientations, inside or outside the vehicle, for best performance.

Procedure

1. Collect the test pack's components. Include the optional LR-Sounder only if desired. (See Note 1.)

2. Test the items at your shop or in an off-site place, to be sure of its operation. Watch for full rated reading distance for the selected tag or card, as listed in the "Credentials for UHF LR-2000-3000 Reader" product sheet.

3. Move to the proposed site. Suspend the reader so that it has open space in front of it in a "balloon" 30 feet long and 18 feet diameter. For full effective RF field, have nothing in front of the reader, or close beside the reader.

4. To arm the reader, connect the reader's yellow wire to its black wire.

5. To power the reader, connect the reader's black and red wires to the battery's negative and positive terminals.

6. The reader's red LED indicates the DC power. The green LED blinks off briefly for each read of the test tag.

7. When testing, have a single tag in front of the reader. Move all other tags 30 feet behind the reader.

8. First, do hand-held testing with the tag or card. With no vehicle present, move the selected tag to map the space in which reads occur.

9. Second, test the selected tag or card in a typical vehicle. Try different locations and orientations as the vehicle moves through the reading space. Observe the reading distance, and compare it with the published ratings.

Notes

1. For **one-person** operation, clip the optional LR-Sounder test unit to the black, orange and red wires on the LR-3000 reader's cable. The LR-Sounder beeps and shows an LED color change for every read of the tag or card by the LR-3000 reader. The operator then does not need to watch the LR-3000 reader's green LED.

2. For convenience in handling the battery, use a **long cable** (18 gauge, 2 conductors, perhaps **20 feet** long) between the battery and the reader.

3. For quick and simple support for the reader, use a **camera tripod**. This raises the reader as high as 6 feet. The ¼"-20 screw in the tripod's camera pad matches the capture nuts behind the LR-3000 reader.

4. Observe AWID's "**Guidelines**" for good performance. They are important to assure excellent results.

Reference

- **LR-3000** Reader's product sheet and Quick Installation Guide
- **LR-TEK** product sheet and instructions
- "**Credentials** for UHF LR-2000-3000 Readers" product sheet and instructions