

Technical Reference

LR-MB Mounting Bracket for UHF Long-Range Readers

Installing the Mounting Bracket

AWID's Model LR-MB-0-0 Mounting Bracket, for UHF long-range readers, can be installed in a variety of ways. This memo suggests methods to attach the bracket to a wall, cabinet, pole, post or pedestal.

Purposes and Benefits

The LR-MB Mounting Bracket is used in most applications for AWID's UHF long-range readers -- Models LR-2000, LR-2200, LR-3000 and LR-911. (If the reader is aimed straight across the vehicle's path, the bracket may be omitted.)

The bracket offers two main benefits:

- The bracket's 11-inch-long arm moves the reader to an improved location for good tag reading; and
- The bracket's adjustable mounting head provides pan-and-tilt aiming for the reader.

These benefits are the same when you use a camera-mount with a CCTV security camera.

A UHF long-range reader gives best performance (usually stated as the *read range*) if:

- the vehicle's tag moves straight toward the reader's front face, not across the reader's *RF field**; and
- the tag and reader face each other, aligned on the same axis, spaced apart at the *rated reading distance***.

Construction

The LR-MB bracket is like a camera-mount arm, upside down (see Figures 1, 2 and 2) :

- The adjustable head has similar slots for standard size and spacing of the fastening screws, matching the two capture-nuts on the back-plate of AWID's long-range readers.
- The base is flat, approximately 2.9 inches wide and 3.6 inches high. The base has 4 holes for mounting screws.
- The open-box arm is about 11 inches long. (Install the arm with the open side facing down. Invert the adjustable head so that it is suspended beneath the arm.)

Fastening to a Flat Surface

The LR-MB bracket may be fastened directly to any flat surface of any material: a wall, ceiling, cabinet, etc. The arm may be installed horizontally or vertically.

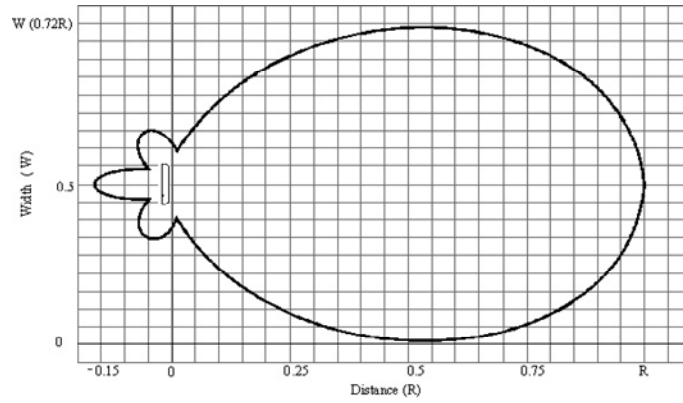
Fastening to a Square Post or Pedestal

The LR-MB bracket's base may be fastened directly to a 3-inch (or larger) post with rectangular cross-section. It can also be mounted on a narrower post, say 2 inches, if there is space for the bracket's 3-inch-wide base.

Fastening to a Round Pole or Pedestal

A popular way to attach the LR-MB bracket to a round pole or pedestal is by U-bolts and adapters with a flat surface. These are available from local suppliers and on-line. For quick-test mounting, automotive screw-type hose clamps or even long locking cable ties (as in the LR-KIT Installation Kit) may be used. Sources of universal post clamps (Figure 2, top) are security supply houses. Sources of U-bolt clamps are auto parts stores (Figure 2, right: a muffler clamp) and general hardware stores (Figure 2, left: standard U-bolt and plates).

* Effective RF Field diagram:



** *Rated reading distances* for AWIDø long-range readers with UHF tags and cards are in AWIDø product sheet
øCredentials for UHF readersö.



Figure 1. LR-MB Mounting Bracket, adjustable head inverted.

Figure 2. Clamps for LR-MB (available from others).



Figure 3. LR-MB with LR-3000 reader, clamped to round pole.