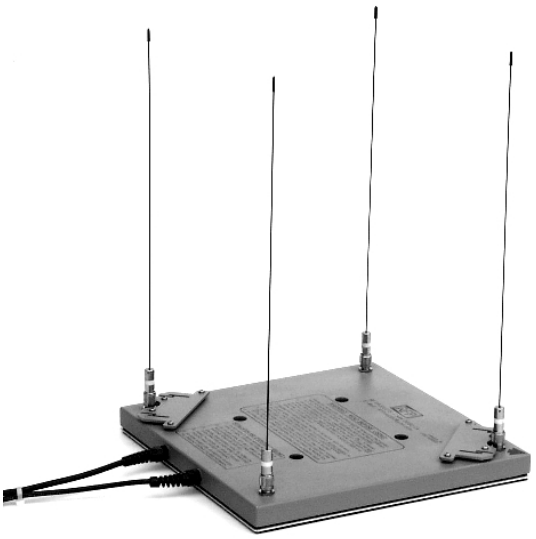
RDF PRODUCTS

Vancouver, Washington, USA +1-360-253-2181

Product Data Sheet; Model DMA-1310R1 Wide-Coverage VHF Mobile Adcock Radio Direction Finding Antenna

FEATURES

- **118-174 MHz Continuous Frequency Coverage**
- **True Adcock Design - Does Not Use Inferior Loops**
- **1.5 Degrees RMS Typical Bearing Accuracy**
- **Ultra-High Signal Handling Capability**
- **Vehicle Roof-Top or Aircraft Installation**
- **Low-Profile Platform with Removable Aerials**
- **Multiple Mounting Configurations**



DESCRIPTION

The RDF Products Model DMA-1310R1 is a 4-aerial VHF monopole Adcock single-channel radio direction finding antenna continuously covering 118-174 MHz without the requirement for changing aerials or bandswitching. This rugged, compact, light-weight, weather-sealed unit is specifically designed for mobile DF applications, and is easily installed on cars, vans, aircraft, or any platform having a sizeable metallic ground plane.

Being of a true Adcock design, the DMA-1310R1 avoids the erratic performance associated with inferior loop DF antennas and provides sensitivity superior to that of comparable pseudo-Doppler DF antennas.

The DMA-1310R1 has been designed with superb signal-handling capability for reliable performance in dense signal environments. Similar models having built-in filters for restricted frequency ranges are also available.

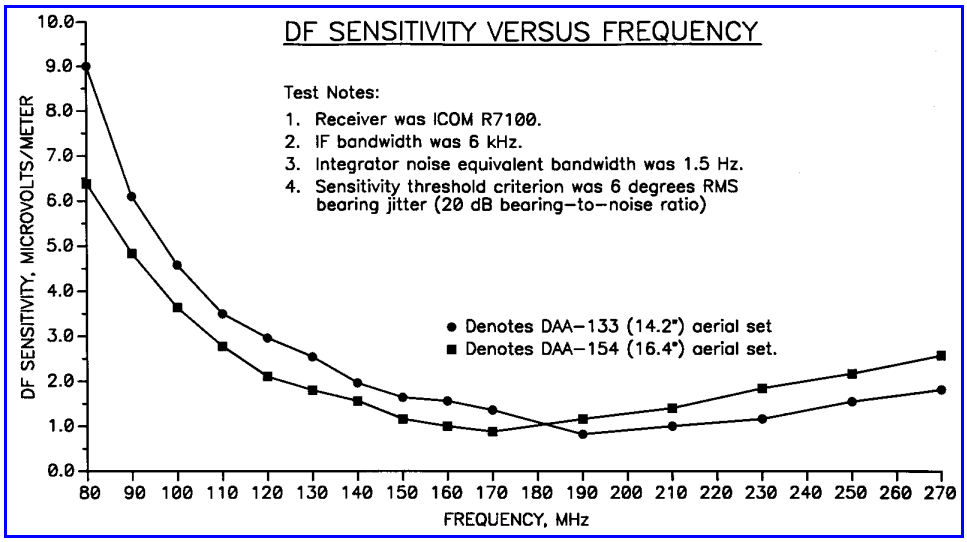
The DMA-1310R1 directly interfaces with all RDF Products DF receivers and bearing processors via two captive 15' interface cables (the DMA-1310R1/D employs detachable cables). A variety of aerial sets is available for best performance for the user's specific application. Aerials are removable for convenience of shipping and storage.

SPECIFICATIONS

DF Technique:	Single-channel 2-phase Adcock (derived sense)
Frequency Coverage:	118-174 MHz continuous
Bearing Accuracy:	3 degrees RMS max.; 1.5 degrees RMS typical (ideal siting conditions)
Polarization:	Vertical
Output Impedance:	50 ohms nominal
2nd Order Intercept:	+40 dBm typical (referenced to derived sense input)
3rd Order Intercept:	+25 dBm typical (referenced to derived sense input)
Power Requirements:	11-16 VDC @ 75 mA (negative ground)
Operating Temperature:	-40 to +60 degrees C
Storage Temperature:	-40 to +70 degrees C
Humidity:	0-100%
Dimensions:	17.9"x12.75"x12.75" (HxWxD using standard aerial set and baseplate)
Weight:	4.9 lbs. (using standard aerial set and baseplate)

Note: Specifications are subject to change without notice.

Rev B08/04-02/dma1310r0_pds_01



APPLICATIONS INFORMATION

The RDF Products Model DMA-1310R1 has been designed as a general-purpose mobile high-VHF DF antenna. Both the standard DAA-133 (14.2") and the taller DAA-154 (16.4") aerial sets are available for best performance for the user's specific application. The standard 14.2" set is recommended for applications where the lowest profile is important or where best DF sensitivity above 180 MHz is required. The taller 16.4" set is recommended where best DF sensitivity below 180 MHz is required. These taller aerials are particularly recommended where the majority of the user's applications fall in the 148-174 MHz civil band.

For user applications where best sensitivity is required from 80-150 MHz (particularly in the 118-137 MHz aircraft band), the Model DMA-1309R0 should be considered (see DMA-1309R0 Product Data Sheet). This model is very similar in design and appearance to the DMA-1310R1, but employs taller aerials for improved sensitivity in this lower frequency range.

Three different aerial styles are available. The DAA-series are designed for land-mobile applications. These aerials are only 1/16" diameter and are thus preferred for covert applications. The DAB-series are also designed for land-mobile use, but employ rugged 1/8" diameter stainless steel rods and are intended for heavy-duty applications where greater rigidity is required. The DAC-series are identical to the DAB-series but include safety locking pins that prevent the aerial from rotating loose. The DAC-series is intended primarily for aircraft applications where extra-ordinary measures are necessary to guarantee that aerials will not fall off during flight.

A number of different mounting configurations are available. For car-top installations, captive strap brackets are supplied along with a small-footprint bottom plate with an attached rubber pad to protect painted vehicle roof-tops. For aircraft or other bulkhead-mount installations, a flanged bottom plate with eight 1/4" mounting holes is supplied. Custom mounting configurations are also available where the cables must be brought directly through the bottom plate rather than out the side.