

RDF PRODUCTS

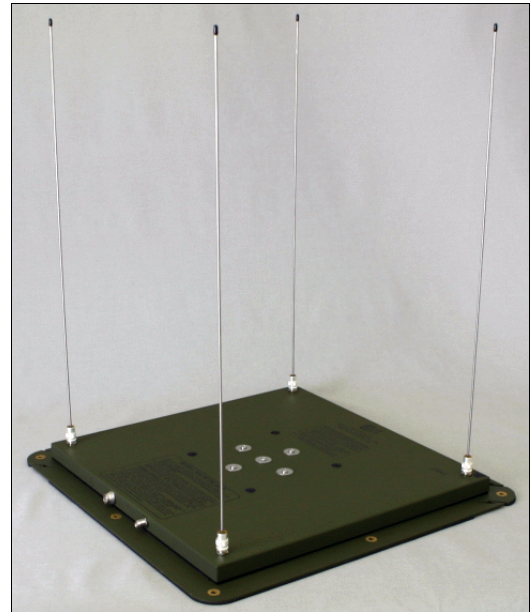
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Product Data Sheet; Model DMA-1248B1 & DMA-1254B1 Wide-Coverage VHF/UHF Mobile Adcock Radio Direction Finding Antennas

FEATURES

- C 20-174 MHz Frequency Coverage (DMA-1248B1)
- C 20-470 MHz Frequency Coverage (DMA-1254B1)
- C True Adcock Design - Does Not Use Inferior Loops
- C Wide Aerial Spacing For Enhanced Low-VHF Performance
- C 1.5/2.5 Degrees RMS Typical VHF/UHF Bearing Accuracy
- C Ultra-High Signal Handling Capability
- C Vehicle Roof-Top Installation
- C Built-In RS-232 Personality Module



DESCRIPTION

The RDF Products Model DMA-1248B1 is a 4-aerial VHF monopole Adcock single-channel radio direction finding antenna covering 20-174MHz in two bands (20-88/88-174 MHz). The DMA-1254B1 contains an additional inner UHF array (not illustrated) adding 174-470 MHz as a third band without the requirement for removing the outer VHF aerials. These rugged, compact, light-weight, weather-sealed units are specifically designed for mobile DF applications and are easily installed on cars, vans, or any platform having a sizeable metallic ground plane. The aerials do not need to be changed to cover the full specified frequency range, and are easily removed for convenience of shipping and storage.

Being true Adcock designs, these models avoid the erratic performance associated with inferior loop DF antennas and provide sensitivity superior to that of comparable pseudo-Doppler DF units. Both models have also been designed with ultra-high signal-handling capability for reliable performance in dense signal environments.

These models directly interface with all RDF Products DF bearing processors via a detachable 4.5-meter interface cable. Built-in personality modules automatically convey the model and band information via RS-232 to RDF Products "B-series" DF processors.

SPECIFICATIONS

DF Technique:	Single-channel 2-phase Adcock (derived sense)
Frequency Coverage:	DMA-1248B1: 20-88/88-174 MHz DMA-1254B1: 20-88/88-174/174-470 MHz
Bearing Accuracy:	3° RMS (20-174 MHz) 4.5° RMS (174-470 MHz) (ideal siting conditions)
Polarization:	Vertical
Output Impedance:	50 ohms nominal
2nd Order Intercept (#):	+40/+36 dBm typ. V/UHF
3rd Order Intercept (#):	+25/+25 dBm typ. V/UHF
Power Requirements:	11-16 VDC @ 160/280 mA ((negative ground)
Operating Temperature:	-40 to +60 degrees C
Storage Temperature:	-40 to +70 degrees C
Humidity:	0-100%
Dimensions:	26.5"x22.0"x22.0" (HxWxD; with baseplate less cables)
Weight:	13 lbs.

(#) - Indicated specifications apply to 88-470 MHz range.

(#) - Referenced to derived sense input.

Note: Specifications are subject to change without notice.

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APPLICATIONS INFORMATION

The RDF Products Model DMA-1248B1 has been designed as a general-purpose VHF mobile DF antenna. With its wide aerial spacing, it is particularly recommended for the 20-88 MHz low-VHF band. The DMA-1254B1 provides extended high-VHF and UHF coverage up to 470 MHz.

For vehicle roof-top installations, nylon mounting straps and rain-gutter hooks are supplied for fast and convenient temporary mounting to cars, vans, mini-vans, and utility vehicles. These mounting straps loop into the slots milled into the 1/8" thick bottom-plate for this purpose.

A rubber protective mounting pad is adhesively attached to the bottom-plate to protect painted vehicle roof-tops. The unit can also be bulkhead mounted using the 8 quarter-inch holes drilled into the bottom-plate flange. For the convenience of users contemplating bulkhead

mounting, the protective adhesive-backed mounting pad can be supplied detached from the bottom-plate upon request.

The DMA-1248B1 includes a digital "personality module" that reports model number and frequency coverage information for this DF antenna. When connected to any one of the RDF Products "B"-series DF processors (e.g., the DFP-1000B, DFP-1010B, or DFR-1000B), the DMA-1248B1 automatically reports its model number and frequency coverage information. This information is then displayed so that the user can easily avoid out-of-band operation.

The DMA-1248B1 is intended for law-enforcement, surveillance, signal intelligence, frequency management, interference location, search-and-rescue, scientific, and other applications requiring professional-quality radio direction finding equipment.