

# RDF PRODUCTS

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**Product Data Sheet; Model DMA-1286B2** Ultra-Wide Coverage  
V/UHF Mobile Adcock Radio Direction Finding Antenna (low-profile)

## FEATURES

- 30-1,000 MHz Ultra-Wide Coverage in Four Bands
- True Adcock Design - Does Not Use Inferior Loops
- Ultra-Low-Profile Design Retains High Sensitivity
- No Requirement to Change Aerial Sets
- High Signal Handling Capability
- Roof-Top or In-Vehicle Installation
- Low-Profile Platform with Removable Aerials
- Built-In RS-232 Personality Module



## DESCRIPTION

The RDF Products Model DMA-1286B2 is a dual array VHF/UHF monopole Adcock single-channel radio direction finding antenna covering 30-1,000 MHz in four bands. This rugged, compact, light-weight, weather-sealed unit is specifically designed for mobile DF applications and is easily installed on cars, vans, utility vehicles, 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 if necessary.

Being of a true Adcock design, the DMA-1286B2 avoids the erratic performance associated with inferior loop DF antennas and provides sensitivity and listen-thru capability superior to that of comparable pseudo-Doppler and slot DF antennas. The DMA-1286B2 has also been designed with exceptional signal-handling capability for reliable performance in dense signal environments. The unit is particularly attractive in that it offers ultra-wide frequency coverage in a modestly-sized, low-profile package.

The DMA-1286B2 directly interfaces with all RDF Products DF receivers and bearing processors via a 4.5-meter interface cable. With its built-in personality module, the unit automatically conveys model and band information via RS-232 to RDF Products "B"-series DF processors.

## SPECIFICATIONS

DF Technique:	Single-channel 2-phase Adcock (mixed sense)
Frequency Coverage:	30-75/75-300/300-520 520-1,000 MHz
Bearing Accuracy:	3° RMS (VHF) 5° RMS (UHF) (ideal siting conditions)
Polarization:	Vertical
Output Impedance:	50 ohms nominal
2nd Order Intercept:	+25 dBm (30-75 MHz) +40 dBm (75-300 MHz) +25 dBm (300-520 MHz) +25 dBm (520-1,000 MHz)
3rd Order Intercept:	+15 dBm (30-75 MHz) +25 dBm (75-300 MHz) +12 dBm (300-520 MHz) +12 dBm (520-1,000 MHz)
Power Requirements:	11-16 VDC @440 mA
Operating Temperature:	-40 to +60 degrees C
Storage Temperature:	-40 to +70 degrees C
Humidity:	0-100%
Dimensions:	6.2"x22.0"x22.0" (HxWxD; with baseplate less cables)
Weight:	15.0 lbs. (less cables).

Note: Specifications are subject to change without notice.

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The RDF Products Model DMA-1286B2 has been designed as a general-purpose VHF/UHF mobile DF antenna covering an ultra-wide frequency range in a compact, light-weight package. One of the outstanding features of this unit is its ability to cover its full 30-1,000 MHz range without the inconvenient requirement for removing unused aerial sets. More specifically, it is not necessary to remove the VHF (outer) aerial set for UHF operation (a common requirement for dual-array Adcock designs).

Even more importantly, although the antenna profile is just over 1/3 that of earlier versions of this model, this has been accomplished without compromising sensitivity. In sharp contrast, competing low-profile DF antennas achieve this height reduction by employing annular slot or loop designs that badly compromise sensitivity and/or rejection of horizontally-polarized signals.

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 supplied that can be 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.

The DMA-1286B2 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-1286B2 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-1286B2 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.

The DMA-1286B2 is different than its DMA-1286B1 predecessor primarily due to its low-profile design for covert applications. With an overall height of only 6.2", this unit can be concealed beneath radomes, vehicle air conditioning vents, and other non-conductive covers for concealment. The unit is also well-suited for custom in-vehicle mounting for the ultimate in covertness.