

# RDF PRODUCTS

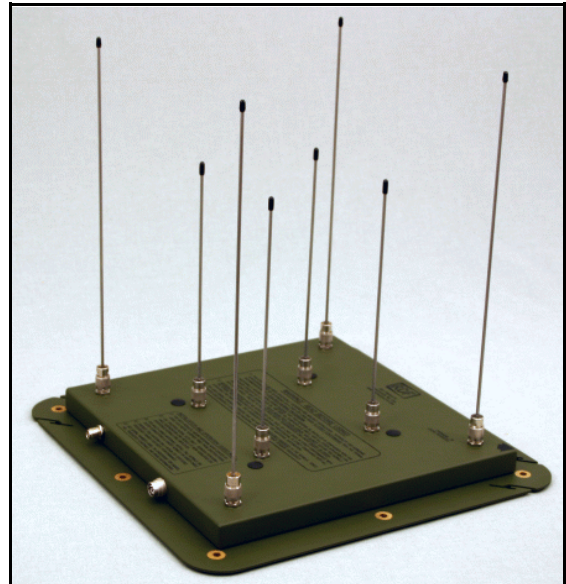
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**Product Data Sheet; Model DMA-1315B1** Wide Coverage VHF/  
UHF Mobile Adcock Radio Direction Finding Antenna (Replaces DMA-1315R0)

## FEATURES

- C 80-520 MHz Frequency Coverage in Two Bands
- C True Adcock Design - Does Not Use Inferior Loops
- C 1.5/2.0° (VHF/UHF) RMS Typical Bearing Accuracy
- C Ultra-High Signal Handling Capability
- C Low-Profile Platform with Removable Aerials
- C Vehicle Roof-Top or Aircraft Installation
- C Built-In RS-232 Personality Module



## DESCRIPTION

The RDF Products Model DMA-1315B1 is a dual 4-aerial VHF/UHF monopole Adcock single-channel radio direction finding antenna covering 80-520 MHz in two bands (80-250/250-520 MHz). 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. 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 of a true Adcock design, the DMA-1315B1 avoids the erratic performance associated with inferior loop DF antennas and provides sensitivity and listen-thru capability superior to that of comparable pseudo-Doppler units. The DMA-1315B1 has also been designed with ultra-high signal-handling capability for reliable performance in dense signal environments. The unit is particularly attractive for aircraft installations due to its low profile (15.75" height) and overall compactness for an antenna covering such a wide frequency range.

The DMA-1315B1 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 (derived sense)
Frequency Coverage:	80-520 MHz (two bands)
Bearing Accuracy:	3° RMS maximum; 1.5° RMS typical (VHF) 2.0° RMS typical (UHF) (ideal siting conditions)
Polarization:	Vertical
Output Impedance:	50 ohms nominal
2nd Order Intercept:	+40/+36 dBm typical (VHF/UHF, referenced to derived sense input)
3rd Order Intercept:	+25/+25 dBm typical (VHF/UHF, referenced to derived sense input)
Power Requirements:	11-16 VDC @ 170 mA (negative ground)
Operating Temperature:	-40 to +60 degrees C
Storage Temperature:	-40 to +70 degrees C
Humidity:	0-100%
Dimensions:	15.75"x15.875"x15.875" (HxWxD; with baseplate less cables)
Weight:	7.5 lbs. (less cables)

Note: Specifications are subject to change without notice.  
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## APPLICATIONS INFORMATION

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The RDF Products Model DMA-1315B1 has been designed as a general-purpose VHF/UHF mobile DF antenna covering a very wide frequency range in a compact, light-weight package. One of the outstanding features of this unit is its ability to cover its full 80-520 MHz range without the inconvenient requirement for removing the unused aerial set. More specifically, it is not necessary to remove the VHF (outer) aerial set for UHF operation (a common requirement for dual 4-aerial Adcock designs). This unit replaces the earlier 80-520 MHz DMA-1315R0.

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-1315B1 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-1100B), the DMA-1315B1 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-1315B1 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.