

RDF PRODUCTS

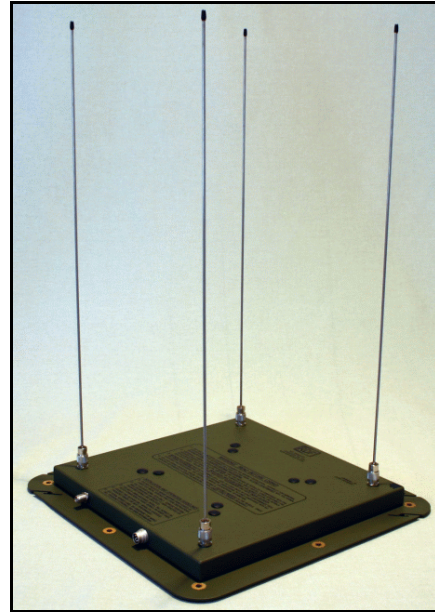
Vancouver, Washington, USA +1-360-253-2181



Product Data Sheet; Model DMA-1270B1 Wide Coverage VHF Mobile Adcock Radio Direction Finding Antenna (Replaces DMA-1270E1)

FEATURES

- 27-280 MHz Continuous Frequency Coverage
- True Adcock Design - Does Not Use Inferior Loops
- Optimized Sensitivity for 118-137 MHz Aircraft Band
- 1.5° RMS Typical Bearing Accuracy
- Ultra-High Signal Handling Capability
- Low-Profile Platform with Removable Aerials
- Vehicle Roof-Top Installation
- Built-In RS-232 Personality Module



DESCRIPTION

The RDF Products Model DMA-1270B1 is a 4-aerial VHF/UHF monopole Adcock single-channel radio direction finding antenna continuously covering 27-280 MHz in a two bands (27-88/88-280 MHz) without the requirement for changing aerials. 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 for convenience of shipping and storage.

Being of a true Adcock design, the DMA-1270B1 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-1270B1 has also been designed with ultra-high signal-handling capability for reliable performance in dense signal environments. The unit has furthermore been optimized for best sensitivity in the 118-137 MHz aircraft band.

The DMA-1270B1 directly interfaces with all RDF Products DF bearing processors via a detachable 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: | 27-88/88-280 MHz |
| Bearing Accuracy: | 3.0 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 @ 90 mA (negative ground) |
| Operating Temperature: | -40 to +60 degrees C |
| Storage Temperature: | -40 to +70 degrees C |
| Humidity: | 0-100% |
| Dimensions: | 24"x15.875"x15.875" (HxWxD; with baseplate less cables) |
| Weight: | 7.0 lbs. (less cables) |

(#) - Indicated specifications apply to 88-280 MHz range only.
Note: Specifications are subject to change without notice.

Rev A03/02-09/dma1270b1_pds_01

APPLICATIONS INFORMATION

DMA-1270B1 - Page 2

The RDF Products Model DMA-1270B1 has been designed as a general-purpose VHF mobile DF antenna with optimized sensitivity in the 118-137 MHz aircraft band. Covering 27-280 MHz, this unit also offers exceptionally wide frequency coverage for VHF applications. This unit replaces the earlier 80-220 MHz DMA-1270E1.

In addition to being intended for general-purpose applications, the DMA-1270B1 is specifically oriented toward interference location missions for civil aviation applications. In addition to being optimized for sensitivity in the 118-137 MHz civil air traffic control band, the DMA-1270B1 covers the 75 MHz runway marker landing beacon frequency, the 108-118 MHz navigation band, and the 243.0 MHz military air distress frequency.

Although the specified high band-edge limit is 280 MHz, the DMA-1270B1 can be used up to 300 MHz with only very slight performance degradation.

For vehicle roof-top installations, nylon mounting straps and rain-gutter hooks are supplied. 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-1270B1 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-1270B1 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-1270B1 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.