



MA-308 Handheld DF Antenna

The MA-308 Handheld DF Antenna is a compact, lightweight direction finding (DF) antenna used for search near-in field (SNIF) manpack missions.

The antenna is used in conjunction with either the MD-403A or MD-405A SIGINT Receiver/Processors. The operator steers the antenna in azimuth to sweep an amplitude null across the signal of interest (SOI). A tone generator contained in the receiver/processor changes frequency in proportion to the signal's strength. As the antenna is swept across the SOI, the tone heard in the headset goes from high, to low, to high again. This allows the operator to localize the direction of arrival of the signal.

The null depth of the MA-308 is typically 20 dB. Since a signal's dynamic range can easily exceed the typical null depth, a trigger switch is placed in the handgrip of the MA-308. This trigger is used to change the receiver/processors from DF to monitor mode. A "double click" of this switch causes the receiver/processors to re-normalize the tone generator so that the antenna null depth can track the receiver's full dynamic range. When used with the receiver/processor's step attenuator, the MA-308 can get within a few feet of a medium power transmitter without overload.

In the MD-405A receiver/processor a voice synthesizer can be enabled in the System Setup Display to provide frequency and detector information via the headset whenever the operator presses the thumb switch mounted on the back of the MA-308.



**MA-308 HANDHELD DF
ANTENNA AS PART OF
MANPACK MISSION
EQUIPMENT**



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MA-308 Handheld DF Antenna Features

Performance Characteristics	
Frequency Coverage	2–500 Mhz
Azimuth Coverage	360°
Polarization	Vertical
Sensitivity ¹	Typical: 2 MHz: 300 µV/m 4 MHz: 175 µV/m 10 MHz: 40 µV/m 100 MHz: 20 µV/m
Output Impedance	50 Ohms unbalanced
Connectors	BNC, AMP 22 pin JT series
Physical and Environmental Characteristics	
Size	362 x 134 x 22 mm (14.25 x 5.25 x 0.88 in.)
Cable, Captive	2.44 m (8 ft)
Weight	1.3 kg (2.9 lbs.)
Power	2–50 MHz: 10–15 Volts, 50 mA maximum 50–500 MHz: 5.5–9 Volts, 10 mA maximum
Temperature	Operating: –20° to +60° C Storage: –40° to +70° C
Humidity	0 to 100% Condensing

110 dB S/N, receiver with 10 dB NF, 10 kHz BW.

Note: All specifications subject to change without notice

Part Number	Description	Includes
02-102930-01	MA-308 Antenna	Antenna, Manuals
05-103068-01	Cable Assembly RF/Control	Cable

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