

Anritsu Advancing beyond

InterferenceHunter™

Handheld Direction Finding System

MA2700A

Includes GPS and Electronic Compass



InterferenceHunter™ MA2700A Handheld Direction Finding System

Compact Size: 303 mm x 220 mm x 70 mm (11.9 in x 8.7 in x 2.76 in), Lightweight: < 1 kg (2.2 lb)

Introduction

Simplify your interference hunting tasks with the handheld InterferenceHunter™ from Anritsu Company.

This broadband, easy-to-use handheld direction finding antenna system includes everything you need to find the sources of signals. With a broadband preamplifier, the system is sensitive. With a GPS receiver, it knows where it is. With the electronic compass it knows where it is aimed. With an antenna attached, the InterferenceHunter captures a direction and signal level when the user presses the trigger on the ergonomic handle.

The included adjustable shoulder strap conveniently holds the MA2700A when out in the field. The ergonomic handle can be used with antennas having a female Type-N connector located at the back of the antenna. The included coupling nut allows for easy antenna connection. Compatible antennas and filters in many cellular bands are available from Anritsu. For details on antennas, including frequency range, gain, and pattern information, refer to the Directional Antennas Technical Data Sheet (11410-00376); for details on filters, refer to the Bandpass Filters Technical Data Sheet (11410-00719). Both are available for download from the Anritsu web site (www.anritsu.com).

Combined with Interference Analysis (Option 25) on Anritsu handheld instruments with spectrum analyzers, the captured location and bearing data is displayed on the instrument.

✂ Specifications		All specifications and characteristics apply to Revision 1 instruments. All published specifications are typical.
Power Consumption		
	Preamplifier On	0.6 Watts
	Preamplifier Off	0.5 Watts
Bandwidth		
		9 kHz to 6 GHz
Preamplifier		
	Bandwidth	10 MHz to 6 GHz
	Gain	≥ 8 dB: 10 MHz to 2.4 GHz ≥ 5 dB: > 2.4 GHz to 4 GHz ≥ 3 dB: > 4 GHz to 6 GHz
Electronic Compass		
	Power	Powered from USB
	Accuracy	≤ 5°, nominal
	Interface	USB
GPS Receiver		
	Satellites Tracked	12 (maximum)
	GPS Locking Time	Cold start: 30 s, typical, with a clear view of the sky Warm start: 2 s, typical, with a clear view of the sky
	Position Uncertainty	± 2 meter, typical
Cables		
		USB cable terminated with a USB Type A Female Plug, 1.5 meters Coaxial cable with Type-N male connector, 1.5 meters
Tripod Mount		
		1/4 - 20 UNC x 7 mm
Regulatory Compliance		
	European Union	EMC 2014/30/EU, EN 61326-1:2013 CISPR 11/EN 55011, IEC/EN 61000-4-2/3/4/5/6/8/11 Low Voltage Directive 2014/35/EU Safety EN 61010-1:2010 RoHS Directive 2011/65/EU + 2015/863
	United Kingdom	EMC SI 2016/1091; BS EN 55011 & BS 61000-4-2/3/4/5/6/8/11 Consumer Protection (Safety) SI 2016/1101; BS EN 61010-1:2010 Environmental Protection SI 2012/3032; 2011/65/EU & 2015/863
	Australia and New Zealand	RCM AS/NZS 4417:2012
	South Korea	KCC-REM-A21+-0004
	Canada	ICES-1(A)/NMB-1(A)
	United States	FCC ID: SQG-60SIPT
Environmental		
	Operating Temperature	-10°C to +55°C
	Maximum Humidity	95 % non-condensing
	Altitude	4600 meters
	Shock	MIL-PRF-28800F Class 2
	Storage	-40°C to 71°C
Size and Weight (antenna not included)		
	Size	303 mm x 220 mm x 70 mm (11.9 in x 8.7 in x 2.76 in)
	Weight	< 1 kg (2.2 lb)

How to Use the MA2700A

Connections

- Connect an antenna to the male N-connector (inside the coupling nut).
- Connect USB cable between the MA2700A and the instrument. Connect coaxial cable between the MA2700A and the instrument's RF Input connector.

Instrument Setup

- Confirm that the instrument has Interference Analyzer (Option 25) or Interference Finder (Option 24) with the latest software installed.
- Select the Interference Analyzer (Option 25) or Interference Finder (Option 24) mode on the instrument. Refer to your instrument's spectrum analyzer measurement guide for detailed information.
- Follow the instructions in the instrument's user guide on how to turn on GPS or GNSS (GPS) and preamp enabling.

Installing Digital Maps

- Field Master and Site Master instruments use NetToolKit® and OpenStreetMap™ to create maps to be installed unto internal memory via an Internet connection.
- All other spectrum analyzers use easyMap Tools™ to create maps that are displayed on the instrument screen. The easyMap Tools™ software can be downloaded from the Anritsu web site: www.anritsu.com.

Supported Spectrum Analyzers

Below are the list of Anritsu spectrum analyzers that support Interference Analysis (Option 25) or Interference Finder (Option 24):

- MS2090A, MS2080A, MS2070A Field Master™ Series Instruments and MS2089A Site Master™
- S332E, S362E Site Master™
- MT8213E Cell Master™
- MS2720T, MT2713E Spectrum Master™
- S412E LMR Master™
- MS2034B, MS2035B, MS2036C VNA Master™ with Spectrum Analyzer

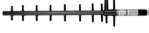
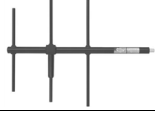
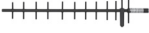
Note

Secure Communication, Option 17 is now supported in Field Master and Site Master instruments. The MA2700A is compatible for use with instruments installed with Option 17. Option 17 creates a secure tunnel on the spectrum analyzer with certain ports kept close while others are open. Security certificates can be loaded onto the instrument to establish a secure connection. Remote access to the instrument ports can be password protected. The USBTMC connection interface does not work with instruments installed with secure communication Option 17.

Standard Accessories (included with instrument)

Accessory	Description
	2000-1729-R Shoulder Strap

Optional Accessories

Directional Antennas Accessory	Description	Accessory	Description
	2000-1411-R 824 MHz to 896 MHz, N(f), 12.3 dBi, Yagi		2000-1726-R Antenna, 2500 MHz to 2700 MHz, N(f), 14.1 dBi, Yagi
	2000-1412-R 885 MHz to 975 MHz, N(f), 12.6 dBi, Yagi		2000-1798-R Port Extender, DC to 6 GHz
	2000-1413-R 1710 MHz to 1880 MHz, N(f), 12.3 dBi, Yagi		2000-1748-R Antenna, Log Periodic, 1 GHz to 18 GHz, N(f), 6 dBi, typical
	2000-1414-R 1850 MHz to 1990 MHz, N(f), 11.4 dBi, Yagi		2000-1777-R Portable Directional Antenna, 9 kHz to 20 MHz, N(f) (requires Port Extender 2000-1798-R)
	2000-1415-R 2400 MHz to 2500 MHz, N(f), 14.1 dBi, Yagi		2000-1778-R Portable Directional Antenna, 20 MHz to 200 MHz, N(f) (requires Port Extender 2000-1798-R)
	2000-1416-R 1920 MHz to 2170 MHz, N(f), 14.3 dBi, Yagi		2000-1779-R Portable Directional Antenna, 200 MHz to 500 MHz, N(f) (requires Port Extender 2000-1798-R)
	2000-1659-R 698 MHz to 787 MHz, N(f), 10.1 dBi, Yagi		2000-1812-R Portable Yagi Antenna, 450 MHz to 512 MHz, N(f), 7.1 dBi
	2000-1660-R 1425 MHz to 1535 MHz, N(f), 14.3 dBi, Yagi		2000-1825-R Portable Yagi Antenna, 380 MHz to 430 MHz, N(f), 7.1 dBi
	2000-2107-R Log Periodic, 20 MHz to 8.5 GHz		

Bandpass Filters

Accessory	Description
	2000-1734-R 699 MHz to 715 MHz, N(m) and N(f), 50 Ω
	2000-1735-R 776 MHz to 788 MHz, N(m) and N(f), 50 Ω
	2000-1736-R 815 MHz to 850 MHz, N(m) and N(f), 50 Ω
	2000-1737-R 1711 MHz to 1756 MHz, N(m) and N(f), 50 Ω
	2000-1738-R 1850 MHz to 1910 MHz, N(m) and N(f), 50 Ω
	2000-1739-R 880 MHz to 915 MHz, N(m) and N(f), 50 Ω
	2000-1740-R 1710 MHz to 1785 MHz, N(m) and N(f), 50 Ω
	2000-1741-R 1920 MHz to 1980 MHz, N(m) and N(f), 50 Ω

Accessory

Accessory	Description
	2000-1742-R 832 MHz to 862 MHz, N(m) and N(f), 50 Ω
	2000-1743-R 2500 MHz to 2570 MHz, N(m) and N(f), 50 Ω
	2000-1799-R 2305 MHz to 2320 MHz, N(m) and N(f), 50 Ω
	2000-1911-R 703 MHz to 748 MHz, N(m) to N(f), 50 Ω
	2000-1912-R 788 MHz to 798 MHz, N(m) to N(f), 50 Ω
	2000-1925-R 663 MHz to 698 MHz, N(m) to N(f), 50 Ω
	2000-1926-R 776 MHz to 806 MHz, N(m) to N(f), 50 Ω
	2000-2147-R 3700 MHz to 3980 MHz, N(m) to N(f), 50 Ω

MA2700A Transit Cases

Accessory	Description
	760-261-R Large Transit Case with Wheels and Handle 63.1 cm x 50 cm x 30 cm (24.83 in x 19.69 in x 11.88 in), space for MA2700A, antennas, filters, instrument inside soft case, and other interference hunting accessories/tools
	760-262-R Transit Case for MA2700A, holds several Yagi antennas and filters/port extender 96.8 x 40.6 x 15.5 cm (38.12 in x 16.00 in x 6.12 in)

Accessory

Accessory	Description
	2000-1727 Monopod, extends to 180 cm (72 in)
	760-271-R Transit Case (For Portable Directional Antennas and Port Extender P/N 2000-1777-R, 2000-1778-R, 2000-1779-R and 2000-1798-R) (Case can contain all loop antennas at once)

Related Manuals (available at www.anritsu.com)

Part Number	Description
10580-00361	MA2700A Interference Master User Guide
10580-00349	Spectrum Analyzer Measurement Guide
11410-00376	Directional Antennas Technical Data Sheet
10580-00444	Field Master Pro User Guide
10580-00447	Spectrum Analyzer Measurement Guide
10580-00483	Field Master User Guide
	Anritsu easyMap Tools software

Additional Documents and Software

- The *User Guide* and *Spectrum Analyzer Measurement Guide* applicable for your Anritsu instrument. The Interference Analysis chapter will include a section on "Interference Mapping" with information on setup and selecting the MA2700A as the Direction Finding Antenna.
- Anritsu easyMap Tools software creates Geo-enabled maps which are viewed on the Anritsu instruments during interference hunting.
- Directional Antennas Technical Data Sheet (11410-00376) lists compatible antennas in many frequency bands and applications.

These documents and programs, along with additional applications notes, white papers, and videos covering interference analysis are available from the Anritsu web site (www.anritsu.com).

Training at Anritsu

Anritsu has designed courses to help you stay up to date with technologies important to your job. For available training courses, visit: www.anritsu.com and search for training and education.



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