

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 measurement guide for detailed information.
- Follow the instructions in the individual spectrum analyzer user guide on how to turn on GPS or GNSS (GPS) and preamp enabling.

Installing Digital Maps

- Field Master Series 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

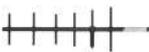
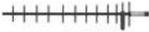
Below are the list of Anritsu spectrum analyzers that support Interference Analysis (Option 25) or Interference Finder (Option 24):

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

Standard Accessories (included with instrument)

Accessory	Description
	2000-1729-R Shoulder Strap

Optional Accessories

Directional Antenna 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	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	Description
	2000-1727 Monopod, extends to 180 cm (72 in)

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	Field Master Series 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).

Anritsu Advancing beyond

• United States

Anritsu Americas Sales Company
450 Century Parkway, Suite 190,
Allen, TX 75013, U.S.A.
Phone: +1-800-Anritsu (1-800-267-4878)

• Canada

**Anritsu Electronics Ltd.
Americas Sales and Support**
450 Century Parkway, Suite 190,
Allen, TX 75013, U.S.A.
Phone: +1-800-Anritsu (1-800-267-4878)

• Brazil

Anritsu Eletronica Ltda.
Praça Amadeu Amaral, 27 - 1 Andar
01327-010 - Bela Vista - Sao Paulo - SP, Brazil
Phone: +55-11-3283-2511
Fax: +55-11-3288-6940

• Mexico

Anritsu Company, S.A. de C.V.
Blvd Miguel de Cervantes Saavedra #169 Piso 1,
Col. Granada, Mexico, Ciudad de Mexico,
11520, MEXICO
Phone: +52-55-4169-7104

• United Kingdom

Anritsu EMEA Ltd.
200 Capability Green,
Luton, Bedfordshire, LU1 3LU, U.K.
Phone: +44-1582-433200
Fax: +44-1582-731303

• France

Anritsu S.A.
12 avenue du Québec, Immeuble Goyave,
91140 VILLEBON SUR YVETTE, France
Phone: +33-1-60-92-15-50

• Germany

Anritsu GmbH
Nemetschek Haus, Konrad-Zuse-Platz 1,
81829 München, Germany
Phone: +49-89-442308-0
Fax: +49-89-442308-55

• Italy

Anritsu S.r.l.
Spaces Eur Arte, Viale dell'Arte 25, 00144 Roma, Italy
Phone: +39-6-509-9711

List Revision Date: 20230901

• Sweden

Anritsu AB
Kistagången 20 B, 2 tr, 164 40 Kista, Sweden
Phone: +46-8-534-707-00

• Finland

Anritsu AB
Technopolis Aviapolis, Teknobulevardi 3-5 (D208.5),
FI-01530 Vantaa, Finland
Phone: +358-20-741-8100

• Denmark

Anritsu A/S
c/o Regus Winghouse, Ørestads Boulevard 73, 4th
floor,
2300 Copenhagen S, Denmark
Phone: +45-7211-2200

• Spain

**Anritsu EMEA Ltd.
Representation Office in Spain**
Paseo de la Castellana, 141.
Planta 5, Edificio Cuzco IV
28046, Madrid, Spain
Phone: +34-91-572-6761

• Austria

Anritsu EMEA GmbH
Am Belvedere 10, A-1100 Vienna, Austria
Phone: +43-(0)1-717-28-710

• United Arab Emirates

Anritsu EMEA Ltd.
Anritsu A/S
Office No. 164, Building 17, Dubai Internet City
P. O. Box - 501901, Dubai, United Arab Emirates
Phone: +971-4-3758479

• India

Anritsu India Private Limited
6th Floor, Indique ETA, No.38/4, Adjacent to EMC2,
Doddanekundi, Outer Ring Road,
Bengaluru - 560048, India
Phone: +91-80-6728-1300
Fax: +91-80-6728-1301

• Singapore

Anritsu Pte. Ltd.
1 Jalan Kilang Timor, #07-04/06 Pacific Tech Centre
Singapore 159303
Phone: +65-6282-2400
Fax: +65-6282-2533

• Vietnam

Anritsu Company Limited
16th Floor, Peakview Tower, 36 Hoang Cau Street,
O Cho Dua Ward, Dong Da District, Hanoi, Vietnam
Phone: +84-24-3201-2730

• P.R. China (Shanghai)

Anritsu (China) Co., Ltd.
Room 2701-2705, Tower A, New Caohejing
International Business Center No. 391 Gui Ping Road
Shanghai, 200233, P.R. China
Phone: +86-21-6237-0898
Fax: +86-21-6237-0899

• P.R. China (Hong Kong)

Anritsu Company Ltd.
Unit 1006-7, 10/F., Greenfield Tower, Concordia Plaza,
No. 1 Science Museum Road, Tsim Sha Tsui East,
Kowloon, Hong Kong, P.R. China
Phone: +852-2301-4980
Fax: +852-2301-3545

• Japan

Anritsu Corporation
8-5, Tamura-cho, Atsugi-shi, Kanagawa, 243-0016
Japan
Phone: +81-46-296-6509
Fax: +81-46-225-8352

• South Korea

Anritsu Corporation, Ltd.
8F, A TOWER, 20, Gwacheondaero 7-gil, Gwacheon-si,
Gyeonggi-do, 13840, Republic of Korea
Phone: +82-2-6259-7300
Fax: +82-2-6259-7301

• Australia

Anritsu Pty. Ltd.
Unit 20, 21-35 Ricketts Road,
Mount Waverley, Victoria 3149, Australia
Phone: +61-3-9558-8177
Fax: +61-3-9558-8255

• Taiwan

Anritsu Company Inc.
7F, No. 316, Sec. 1, NeiHu Rd., Taipei 114, Taiwan
Phone: +886-2-8751-1816
Fax: +886-2-8751-1817