



Anritsu envision:ensure Technical Data Sheet

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 61326:2013, 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
	Australia and New Zealand	RCM AS/NZS 4417:2012
	South Korea	KCC-REM-A21-0004
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 SPA module V6.00 or higher.
- Select the Interference Analysis (Option 25) mode on the instrument, then select Interference Mapping measurement.
- The instrument will detect the connected MA2700A and display the message **MA2700 detected - Device is ready to use**. After GPS lock, the instrument will use GPS data from the MA2700A.
- To manually select the MA2700A: In the Measurements menu, press Interference Mapping twice. Choose the Direction Finding submenu then Direction Finding Antenna Selection, and select MA2700 Handheld.

Mapping

- Use Anritsu easyMap Tools™ to create maps that are displayed on the Anritsu instrument. The software is available from the Anritsu web site: www.anritsu.com

Standard Accessories (included with instrument)



Part Number	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		2000-1747-R Antenna, Log Periodic, 300 MHz to 7000 MHz, N(f), 5.1 dBi, typical
	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
	2000-1715-R Directional Antenna, 698 MHz to 2500 MHz, N(f), gain of 2 dBi to 10 dBi, typical		2000-1798-R Port Extender, DC to 6 GHz

Bandpass Filters



Filter in Supplied Mounting Case



Filter Without Mounting Case

Part Number	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, type N(m) and N(f), 50 Ω
2000-1740-R	1710 MHz to 1785 MHz, type N(m) and N(f), 50 Ω
2000-1741-R	1920 MHz to 1980 MHz, type N(m) and N(f), 50 Ω
2000-1742-R	832 MHz to 862 MHz, type N(m) and N(f), 50 Ω
2000-1743-R	2500 MHz to 2570 MHz, type N(m) and N(f), 50 Ω
2000-1799-R	2305 MHz to 2320 MHz, type N(m) and N(f), 50 Ω
2000-1911-R	703 MHz to 748 MHz, type N(m) and N(f), 50 Ω
2000-1912-R	788 MHz to 798 MHz, type N(m) and N(f), 50 Ω
2000-1925-R	663 MHz to 698 MHz, type N(m) and N(f), 50 Ω
2000-1926-R	776 MHz to 806 MHz, type N(m) and N(f), 50 Ω

MA2700A Transit Cases



Part Number	Description
760-261-R	760-261-R Large Transit Case with Wheels and Handle 63.1 cm x 50 cm x 30 cm (24.83" x 19.69" x 11.88"), space for MA2700A, antennas, filters, instrument inside soft case, and other interference hunting accessories/tools



760-262-R	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" x 16.00" x 6.12")
-----------	---



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

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/training



• United States

Anritsu Company

450 Century Parkway, Suite 190, Allen,
TX 75013 U.S.A.
Toll Free: +1-800-267-4878
Phone: +1-972-644-1777

• Canada

Anritsu Electronics Ltd.

700 Silver Seven Road, Suite 120, Kanata,
Ontario K2V 1C3, Canada
Phone: +1-613-591-2003
Fax: +1-613-591-1006

• 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 L td.

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, Bâtiment Iris 1- Silic 612,
81829 VILLEBON SUR YVETTE, France
Phone: +33-1-60-92-15-50
Fax: +33-1-64-46-10-65

• 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.

Via Elio Vittorini 129, 00144 Roma, Italy
Phone: +39-6-509-9711
Fax: +39-6-502-2425

List Revision Date: 20180621

• Sweden

Anritsu AB

Isafjordsgatan 32C, 164 40 KISTA, Sweden
Phone: +46-8-534-707-00

• Finland

Anritsu AB

Teknobulevardi 3-5, FI-01530 VANTAA, Finland
Phone: +358-20-741-8100
Fax: +358-20-741-8111

• Denmark

Anritsu A/S

Torveporten 2, 2500 Valby, Denmark
Phone: +45-7211-2200
Fax: +45-7211-2210

• Russia

Anritsu EMEA Ltd.

Representation Office in Russia

Tverskaya str. 16/2, bld. 1, 7th floor.
Moscow, 125009, Russia
Phone: +7-495-363-1694
Fax: +7-495-935-8962

• Spain

Anritsu EMEA Ltd.

Representation Office in Spain

Edificio Cuzco IV, Po. de la Castellana, 141, Pta. 5
28046, Madrid, Spain
Phone: +34-915-726-761
Fax: +34-915-726-621

• United Arab Emirates

Anritsu EMEA Ltd.

Dubai Liaison Office

902, Aurora Tower,
P O Box: 500311- Dubai Internet City
Dubai, United Arab Emirates
Phone: +971-4-3758479
Fax: +971-4-4249036

• India

Anritsu India Private Limited

6th Floor, Indiqube 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.

11 Chang Charn Road, #04-01, Shriro House
Singapore 159640
Phone: +65-6282-2400
Fax: +65-6282-2533

• 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

• Korea

Anritsu Corporation, Ltd.

5FL, 235 Pangyoyeok-ro, Bundang-gu, Seongnam-si,
Gyeonggi-do, 13494 Korea
Phone: +82-31-696-7750
Fax: +82-31-696-7751

• 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