

InterferenceHunter™

Handheld Direction Finding System

MA2700A

Includes GPS and Electronic Compass

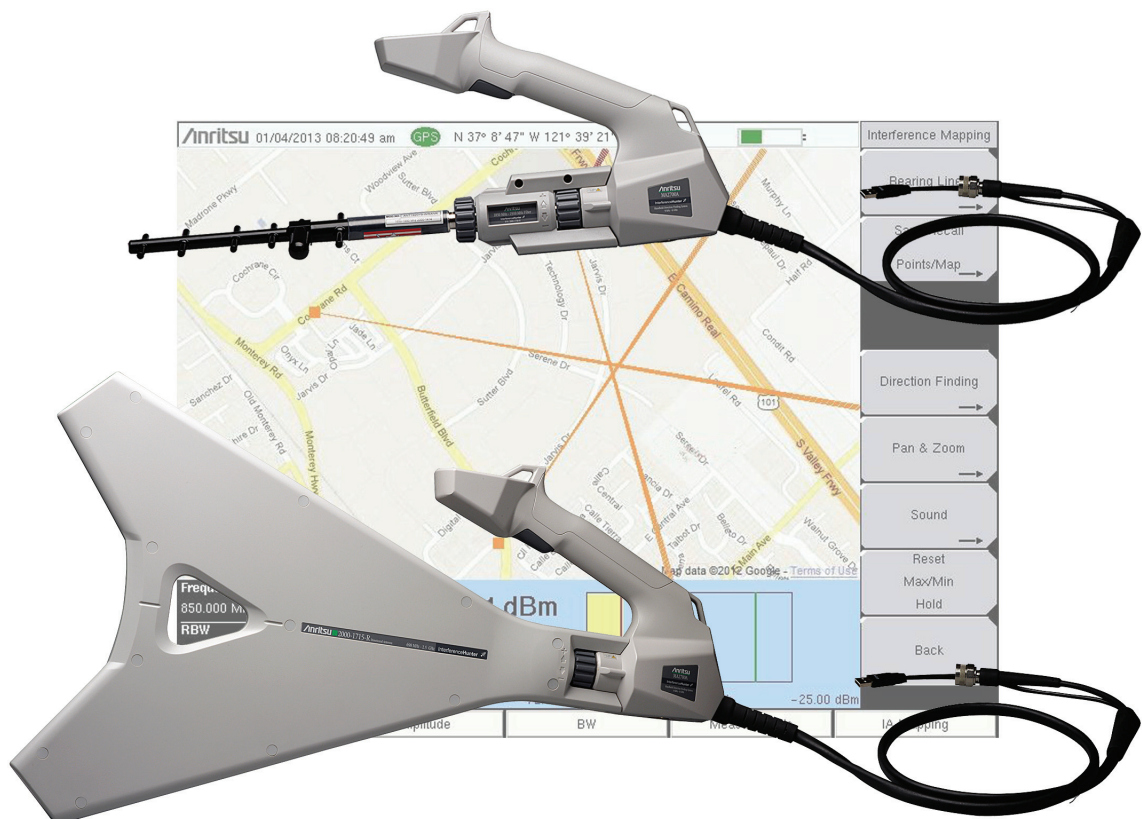
Introduction

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 (11410-00719B). 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.



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)

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

Electromagnetic Compatibility

European Union	CE Mark, EMC Directive 2004/108/EC and Low Voltage Directive 2006/95/EC
Interference	EN 61326-1
Emissions	EN 55011
Immunity	EN 61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-11
Australia and New Zealand	C-tick N274

Safety

Safety Class	EN 61010-1 Class 1
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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

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.

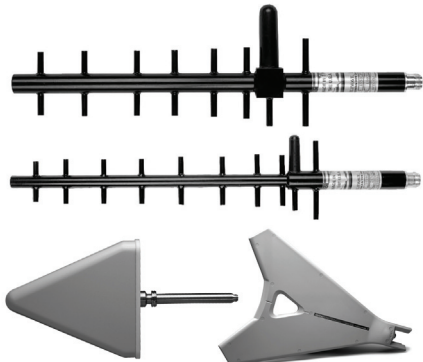
Mapping

- Anritsu easyMap Tools™ is used 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
10920-00060	Handheld Instruments Documentation Disc

Optional Accessories**Directional Antennas**

Part Number	Description
2000-1777-R	9 kHz to 20 MHz, N(f), Loop
2000-1778-R	20 MHz to 200 MHz, N(f), Loop
2000-1779-R	200 MHz to 500 MHz, N(f), Loop
2000-1812-R	450 MHz to 512 MHz, N(f), 5 dBd, Yagi
2000-1659-R	698 MHz to 787 MHz, N(f), 8 dBd, Yagi
2000-1411-R	822 MHz to 900 MHz, N(f), 10 dBd, Yagi
2000-1412-R	885 MHz to 975 MHz, N(f), 10 dBd, Yagi
2000-1660-R	1425 MHz to 1535 MHz, N(f), 12 dBd, Yagi
2000-1413-R	1710 MHz to 1880 MHz, N(f), 10 dBd, Yagi
2000-1414-R	1850 MHz to 1990 MHz, N(f), 9.3 dBd, Yagi
2000-1416-R	1920 MHz to 2170 MHz, N(f), 10 dBd, Yagi
2000-1415-R	2400 MHz to 2500 MHz, N(f), 10 dBd, Yagi
2000-1726-R	2500 MHz to 2700 MHz, N(f), 12 dBd, Yagi
2000-1747-R	300 MHz to 5000 MHz, N(f), Log Periodic
2000-1748-R	1 GHz to 18 GHz, N(f), Log Periodic
2000-1715-R	698 MHz to 2.5 GHz, N(f), Bi-blade Directional Antenna

Bandpass Filters and Port Extender

Part Number	Description
2000-1798-R	Port Extender, DC to 6 GHz
2000-1734-R	699 to 715 MHz, 50 ohm, N(m) and N(f)
2000-1735-R	776 to 788 MHz, 50 ohm, N(m) and N(f)
2000-1736-R	815 to 850 MHz, 50 ohm, N(m) and N(f)
2000-1737-R	1711 to 1756 MHz, 50 ohm, N(m) and N(f)
2000-1738-R	1850 to 1910 MHz, 50 ohm, N(m) and N(f)
2000-1739-R	880 to 915 MHz, 50 ohm, type N(m) and N(f)
2000-1740-R	1710 to 1785 MHz, 50 ohm, type N(m) and N(f)
2000-1741-R	1920 to 1980 MHz, 50 ohm, type N(m) and N(f)
2000-1742-R	832 to 862 MHz, 50 ohm, type N(m) and N(f)
2000-1743-R	2500 to 2570 MHz, 50 ohm, type N(m) and N(f)
2000-1799-R	2305 to 2320 MHz, 50 ohm, type N(m) and N(f)

MA2700A Transit Cases

Part Number	Description
760-261-R	Transit Case, space for MA2700A, antennas, filters, instrument inside softcase, and other interference hunting accessories/tools
760-262-R	Transit Case for MA2700A, several Yagi antennas and filters
2000-1727	Monopod, extends to 180 cm (72 in)

Additional Documents and Software

- 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.
- The User Guide for your Anritsu instrument.

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).



The Master Users Group is an organization dedicated to providing training, technical support, networking opportunities and links to Master product development teams. As a member you will receive the Insite Quarterly Newsletter with user stories, measurement tips, new product news and more.

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• United States

Anritsu Company
1155 East Collins Blvd, Suite 100
Richardson, TX 75081, U.S.A.
Toll Free: 1-800-267-4878
Phone: +1-972-644-1777
Fax: +1-972-671-1877

• 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 Eletrônica Ltda.
Praça Amadeu Amaral, 27 - 1 Andar
01327-010 Bela Vista, São Paulo, Brazil
Phone: +55-11-3283-2511
Fax: +55-11-3288-6940

• Mexico

Anritsu Company, S.A. de C.V.
Av. Ejército Nacional No. 579 Piso 9, Col. Granada
11520 México, D.F., México
Phone: +52-55-1101-2370
Fax: +52-55-5254-3147

• United Kingdom

Anritsu EMEA Ltd.
200 Capability Green
Luton, Bedfordshire LU1 3LU
United Kingdom
Phone: +44-1582-433280
Fax: +44-1582-731303

• France

Anritsu S.A.
12 Avenue du Québec
Bâtiment Iris 1-Silic 612
91140 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: +39-06-509-9711
Fax: +39-06-502-2425

• Sweden

Anritsu AB
Kistagången 20B
164 40 KISTA, Sweden
Phone: +46-8-534-707-00
Fax: +46-8-534-707-30

• Finland

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

• Denmark

Anritsu A/S
Kay Fiskers Plads 9
2300 Copenhagen S, 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
Russia, 125009, Moscow
Phone: +7-495-363-1694
Fax: +7-495-935-8962

• United Arab Emirates

Anritsu EMEA Ltd.
Dubai Liaison Office
P O Box 500413 - Dubai Internet City
Al Thuraya Building, Tower 1, Suite 701, 7th Floor
Dubai, United Arab Emirates
Phone: +971-4-3670352
Fax: +971-4-3688460

• Singapore

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

• India

Anritsu India Private Limited
2nd & 3rd Floor, #837/1, Binnamangla 1st Stage
Indiranagar, 100ft Road, Bangalore - 560038, India
Phone: +91-80-4058-1300
Fax: +91-80-4058-1301

• P.R. China (Shanghai)

Anritsu (China) Co., Ltd.
27th Floor, Tower A
New Caohejing International Business Center
No. 391 Gui Ping Road Shanghai, Xu Hui Di District
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: +81-46-296-1221
Fax: +81-46-296-1238

• Korea

Anritsu Corporation, Ltd.
5FL, 235 Pangyoeyeok-ro, Bundang-gu
Seongnam-si
Gyeonggi-do, 463-400 Korea
Phone: +82-31-696-7750
Fax: +82-31-696-7751

• Australia

Anritsu Pty Ltd.
Unit 21/270 Ferntree Gully Road
Notting Hill, Victoria, 3168, 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

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This Technical Data Sheet applies to Revision 1 of the MA2700A Interference Hunter. Instruments not indicating a revision level are Revision 1



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