



Model 42600 Antenna 2.0 GHz Air-Launched



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Limited Warranty, Limitations Of Liability And Restrictions

Geophysical Survey Systems, Inc. hereinafter referred to as GSSI, warrants that for a period of 24 months from the delivery date to the original purchaser this product will be free from defects in materials and workmanship. EXCEPT FOR THE FOREGOING LIMITED WARRANTY, GSSI DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. GSSI's obligation is limited to repairing or replacing parts or equipment which are returned to GSSI, transportation and insurance pre-paid, without alteration or further damage, and which in GSSI's judgment, were defective or became defective during normal use.

GSSI ASSUMES NO LIABILITY FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR INJURIES CAUSED BY PROPER OR IMPROPER OPERATION OF ITS EQUIPMENT, WHETHER OR NOT DEFECTIVE.

Before returning any equipment to GSSI, a Return Material Authorization (RMA) number must be obtained. Please call the GSSI Customer Service Manager who will assign an RMA number. Be sure to have the serial number of the unit available

Regulatory Information

Please see the GSSI Manual CD or our website, www.geophysical.com/regulatoryinformation.htm, for current information and FCC Registration Form, including:

- FCC Notice for U.S. Customer
- Canadian Requirements for RSS-220

Declaration of CE Conformance

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2.0 GHz, Model 42600 Antenna

The Model 42600 antenna represents the state of the art in high-frequency, air-launched GPR antennas for near surface infrastructure assessment. It has excellent near surface resolution in a revolutionary small form factor. The Model 42600 is an air-launched antenna and is designed to be used suspended over the survey surface and not in contact with it. The Model 42600 can be used in distance (survey wheel) or time (continuous) modes.

Smart Antenna

The Model 42600 is a 2.0 GHz “smart” antenna. This antenna has a special chip in it that will work with the SIR-4000, SIR-30, and future control units (not the SIR-3000 or SIR-20). This chip will identify the antenna to the SIR-system control unit so that the controller will be able to automatically load up the correct default settings. The 42600 will not function with a SIR-3000, SIR-20 or any of GSSI’s previous controllers, as these previous controllers are not compatible with digital antennas. By digital antenna, we mean an antenna that digitizes the analog signal received before sending it to the controller. An analog antenna will send the signal to be digitized on a controller.

System Setup - Standard Settings

Preset Settings:

Range/Depth is approximately 20 cm (8 inches) assuming a dielectric constant of 5.

Collect Mode: Distance (recommended) or Time

Scans per Second: 150 (recommended)

Samples per Scan: 512

Depth Range: 20 cm (8 inches)

Bits per Sample: 32

Specifications

Center frequency: 2.0 GHz

Pulse duration: 0.5 ns

Depth of penetration: 0-0.75 ft depending on dielectric permittivity

The following pages are additional documents included in the GSSI Manual CD which ships with each product.

FCC Notice (for U.S. Customers):

This device complies with part 15, class F of the FCC Rules:

Operation is subject to the following conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Parties operating this equipment must be eligible for licensing under the provisions of part 90 of 47 CFR.

Operation of this device is restricted to law enforcement, fire and rescue officials, scientific research institutes, commercial mining companies, construction companies and private parties operating on behalf of these groups. Operation by any other party is a violation of 47 U.S.C. § 301 and could subject the operator to serious legal penalties.

Coordination Requirements

- (a) UWB imaging systems require coordination through the FCC before the equipment may be used. The operator shall comply with any constraints on equipment usage resulting from this coordination.
- (b) The operator of an imaging system used for fixed operation shall supply a specific geographical location or address at which the equipment will be operated. This material shall be submitted to the Federal Communications Commission, 445 12th Street, SW Washington D.C. 20554. Attention UWB Coordination.
- (c) Users of authorized, coordinated UWB systems may transfer them to other qualified users and to different locations upon coordination of change of ownership or location to the FCC and coordination with existing authorized operations.
- (d) The NTIA/FCC coordination report shall include any needed constraints that apply to day-to-day operations. Such constraints could specify prohibited areas of operations or areas located near authorized radio stations for which additional coordination is required before operation of the UWB equipment. If additional local coordination is required, a local coordination contact will be provided.

Notice: Use of this device as a wall imaging system is prohibited by FCC regulations.
For U.S. Customers

Ground Penetrating Radar Coordination Notice And Equipment Registration

Note: This form is only for Domestic United States users. The Federal Communications Commission (FCC) requires that all users of GPR who purchased antennas after July 15th, 2002 register their equipment and areas of operation. It is required that you fill out this form and fax or mail to the FCC. Failure to do this is a violation of Federal law.

1. **Date:**

2. **Company name:**

3. **Address:**

4. **Contact Information [contact name and phone number]:**

5. **Area Of Operation [state(s)]:**

---Continued on next page.

6. **Equipment Identification:**
Brand Name: Geophysical Survey Systems, Inc.
Antenna Model No. (center frequency): *List all antennas being registered.*

Model	Frequency	FCC ID (QF7 followed by Model #)

7. Receipt Date Of Equipment:

Fax this form to the FCC at: 202-418-1944

Or

Mail to:

Frequency Coordination Branch, OET
Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

ATTN: UWB Coordination

Do not send this information to GSSI.

Canadian Requirements for RSS-220

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Canadian Requirements of RSS-220 for Ground Antennas

This Ground Penetrating Radar Device shall be operated only when in contact with or within 1 m of the ground.

This Ground Penetrating Radar Device shall be operated only by law enforcement agencies, scientific research institutes, commercial mining companies, construction companies, and emergency rescue or firefighting organizations.

Cet appareil de radar de sol (ou géoradar) ne doit être utilisé qu'en contact avec le sol ou à 1 m maximum au dessus du sol.

Cet appareil de radar de sol ne doit être utilisé que par les forces de l'ordre, les instituts de recherche scientifiques, les sociétés minières, les sociétés de construction, et les organisations de secours d'urgence ou de combat du feu.

Canadian Requirements of RSS-220 for Hand-held Antennas

This In-wall Radar Imaging Device shall be operated where the device is directed at the wall and in contact with or within 20 cm of the wall surface.

This In-wall Radar Imaging Device shall be operated only by law enforcement agencies, scientific research institutes, commercial mining companies, construction companies, and emergency rescue or firefighting organizations.

Cet appareil de radar de structure (murs, poutres, dalles...) ne doit être utilisé qu'en contact avec la structure ou à 20 cm maximum décollé de cette structure.

Cet appareil de radar de sol ne doit être utilisé que par les forces de l'ordre, les instituts de recherche scientifiques, les sociétés minières, les sociétés de construction, et les organisations de secours d'urgence ou de combat du feu.

Canadian Requirements of RSS-220 for Search and Rescue Antennas

This Through-wall Radar Imaging Device shall be operated only by law enforcement agencies or emergency rescue or firefighting organizations that are under a local, provincial or federal authority. The equipment is to be operated only in providing services and for necessary training operations.

Cet appareil de radar au travers des murs ne doit être utilisé que par les forces de l'ordre ou les organisations de secours d'urgence ou de combat du feu qui sont sous une autorité locale, provinciale ou fédérale. Cet équipement ne doit être utilisé que dans le cadre de services et pour les opérations d'entraînement nécessaires.



Declaration of CE Conformance

Geophysical Survey Systems, Inc. hereby confirms that the following named products have been tested and meet the requirements of the European standards as indicated:

Models: 3101A, 5106A, 5100B, 5101, 52600, 62000, MINISIR, MINIHR, LL3P, 41000SA, 42000S, 50400S, 50270S, D50300/800, 350HS, 42600

Description: Ground Penetrating Radar Antennas

European Standards: ETSI EN 301 489-32 V1.1.1 (2005-09), ETSI EN 301 489-V1.6.1 (2005-09), ETSI EN 302 066-1 V1.1.1(2005-09), ETSI EN302 066-2 V1.1.1 (2005-09), ETSI EN 302 066-1 V1.2.1(2008-02), ETSI EN302 066-2 V1.2.1 (2008-02), ECC/DEC/(06)08

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Compliance Worldwide 03.23.12 09.25.09 11.1.16