



User Manual

GeoMax TRU35

English

Version 1.0

Introduction

Purchase

Congratulations on the purchase of the GeoMax TRU35 High Power Radio.

Terminology

The term **Wireless Data Transceiver** is used synonymously with **High Power Radio**.



This manual contains important safety directions as well as instructions for setting up the product and operating it. Refer to [1 Safety Directions](#) for further information.

Read carefully through the User Manual before you install and switch on the product.



The content of this document is subject to change without prior notice. Ensure that the product is used in accordance with the latest version of this document.

Updated versions are available for download at the following Internet address:

<https://geomax-positioning.com/partner-area>

Product identification

The model and serial number of your product are indicated on the type plate.

Always refer to this information when you contact your agency or GeoMax authorised service workshop.

Trademarks

Trademarks and trade names are the property of their respective owners.

Validity of this manual

This manual applies to the TRU35 High Power Radio instrument.

Available documentation

Name	Description/Format		
TRU35 Quick Guide	Provides an overview of the product together with technical data and safety directions. Intended as a quick reference guide.	✓	✓
TRU35 User Manual	All instructions required in order to operate the product to a basic level are contained in the User Manual. Provides an overview of the product together with technical data and safety directions.	-	✓

GeoMax Technical Library

Refer to the Technical Library web page for all GeoMax TRU35 documentation and software:

- <https://portal.hexagon.com/>

GeoMax Technical Library offers a wide range of services and information. With direct access to GeoMax Technical Library, you are able to access all relevant services whenever it is convenient for you.



The availability of services depends on the instrument model.

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1

Safety Directions

1.1

General Introduction

Description

The following directions enable the person responsible for the product, and the person who actually uses the equipment, to anticipate and avoid operational hazards.

The person responsible for the product must ensure that all users understand these directions and adhere to them.

About warning messages

Warning messages are an essential part of the safety concept of the instrument. They appear wherever hazards or hazardous situations can occur.

Warning messages...

- make the user alert about direct and indirect hazards concerning the use of the product.
- contain general rules of behaviour.

For the users' safety, all safety instructions and safety messages shall be strictly observed and followed! Therefore, the manual must always be available to all persons performing any tasks described here.

DANGER, WARNING, CAUTION and **NOTICE** are standardised signal words for identifying levels of hazards and risks related to personal injury and property damage. For your safety, it is important to read and fully understand the following table with the different signal words and their definitions! Supplementary safety information symbols may be placed within a warning message as well as supplementary text.

Type	Description
 DANGER	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
 WARNING	Indicates a potentially hazardous situation or an unintended use which, if not avoided, could result in death or serious injury.
 CAUTION	Indicates a potentially hazardous situation or an unintended use which, if not avoided, may result in minor or moderate injury.
NOTICE	Indicates a potentially hazardous situation or an unintended use which, if not avoided, may result in appreciable material, financial and environmental damage.
	Important paragraphs which must be adhered to in practice as they enable the product to be used in a technically correct and efficient manner.

1.2

Definition of Use

Intended use

- Remote control of product
- Data communication with external appliances
- Transmitting of GNSS correction data



The user must ensure that the device is not operated on frequencies or output power levels other than those intended for use according to local authorities and regulations.

Reasonably foreseeable misuse

- Use of the product without instructions
- Use outside of the intended use and limits
- Disabling of safety systems
- Removal of hazard notices
- Opening the product using tools, for example a screwdriver, unless this is permitted for certain functions
- Modification or conversion of the product
- Use after misappropriation
- Use of products with recognisable damage or defects
- Use with accessories from other manufacturers without the prior explicit approval of GeoMax
- Inadequate safeguards at the working site
- Controlling of machines, moving objects or similar monitoring applications without additional control and safety installations
- Use of any other firmware than the official GeoMax TRU35 High Power Radio firmware

1.3

Limits of Use

Environment

Suitable for use in an atmosphere appropriate for permanent human habitation. Not suitable for use in aggressive or explosive environments.

WARNING

Working in hazardous areas or close to electrical installations or similar situations
Life Risk.

Precautions:

- ▶ Local safety authorities and safety experts must be contacted by the person responsible for the product before working in such conditions.

1.4

Responsibilities

Manufacturer of the product

GeoMax AG, CH-9443 Widnau, hereinafter referred to as GeoMax, is responsible for supplying the product, including the user manual and original accessories, in a safe condition.

Person responsible for the product

The person responsible for the product has the following duties:

- To understand the safety instructions on the product and the instructions in the User Manual
- To ensure that the product is used in accordance with the instructions
- To be familiar with local regulations relating to safety and accident prevention
- To stop operating the system and inform GeoMax immediately if the product and the application become unsafe
- To ensure that the national laws, regulations and conditions for the operation of the product are respected
- Only certified operators who attended the training and read the User Manual should operate the TRU35
- To ensure that radio modems are not operated without the permission of the local authorities on frequencies and/or output power levels other than those specifically reserved and intended for use without a specific permit. The internal and external radio modems have been designed to operate on frequency ranges and output power ranges, the exact use of which differs from one region and/or country to another.

1.5

Hazards of Use

WARNING

Distraction/loss of attention

During dynamic applications, for example stakeout procedures, there is a danger of accidents occurring if the user does not pay attention to the environmental conditions around, for example obstacles, excavations or traffic.

Precautions:

- ▶ The person responsible for the product must make all users fully aware of the existing dangers.

WARNING

Inadequate securing of the working site

This can lead to dangerous situations, for example in traffic, on building sites and at industrial installations.

Precautions:

- ▶ Always ensure that the working site is adequately secured.
- ▶ Adhere to the regulations governing safety, accident prevention and road traffic.

WARNING

Lightning strike

If the product is used with accessories, for example masts, staffs, poles, you may increase the risk of being struck by lightning.

Precautions:

- ▶ Do not use the product in a thunderstorm.

CAUTION

Dropping the product

When being dropped, the product can cause personal injury and/or mechanical damage.

Precautions:

- ▶ Secure the product when operating it.

CAUTION

Not properly secured accessories

If the accessories used with the product are not properly secured and the product is subjected to mechanical shock, for example blows or falling, the product may be damaged or people can sustain injury.

Precautions:

- ▶ When setting up the product, make sure that the accessories are correctly adapted, fitted, secured, and locked in position.
- ▶ Avoid subjecting the product to mechanical stress.

CAUTION

Product may get hot during operation and stay hot after operation

Risk of burning injuries.

Precautions:

- ▶ Avoid touching hot product.
- ▶ Wait until hot product cools down after operation.
- ▶ Wear gloves if you have to touch possibly hot product.

DANGER

Risk of electrocution

Because of the risk of electrocution, it is dangerous to use poles, levelling staffs and extensions in the vicinity of electrical installations such as power cables or electrical railways.

Precautions:

- ▶ Keep at a safe distance from electrical installations. If it is essential to work in this environment, first contact the safety authorities responsible for the electrical installations and follow their instructions.



⚠ DANGER

Risk of being struck by lightning

If the product is used with accessories, for example on masts, staffs, poles, you may increase the risk of being struck by lightning. Danger from high voltages also exists near power lines. Lightning, voltage peaks, or the touching of power lines can cause damage, injury and death.

Precautions:

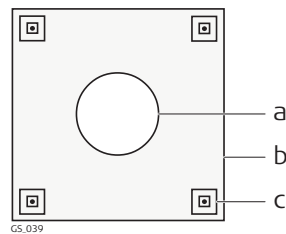
- ▶ Do not use the product in a thunderstorm as you can increase the risk of being struck by lightning.
- ▶ Be sure to remain at a safe distance from electrical installations. Do not use the product directly under or close to power lines. If it is essential to work in such an environment contact the safety authorities responsible for electrical installations and follow their instructions.
- ▶ If the product has to be permanently mounted in an exposed location, it is advisable to provide a lightning conductor system. A suggestion on how to design a lightning conductor for the product is given below. Always follow the regulations in force in your country regarding grounding antennas and masts. These installations must be carried out by an authorised specialist.
- ▶ To prevent damages due to indirect lightning strikes (voltage spikes) cables, for example for antenna, power source or modem should be protected with appropriate protection elements, like a lightning arrester. These installations must be carried out by an authorised specialist.
- ▶ If there is a risk of a thunderstorm, or if the equipment is to remain unused and unattended for a long period, protect your product additionally by unplugging all systems components and disconnecting all connecting cables and supply cables, for example, instrument - antenna.

Lightning conductors

Suggestion for design of a lightning conductor for a GNSS system:

1. On non-metallic structures
Protection by air terminals is recommended. An air terminal is a pointed solid or tubular rod of conducting material with proper mounting and connection to a conductor. The position of four air terminals can be uniformly distributed around the antenna at a distance equal to the height of the air terminal.
The air terminal diameter should be 12 mm for copper or 15 mm for aluminium. The height of the air terminals should be 25 cm to 50 cm. All air terminals should be connected to the down conductors. The diameter of the air terminal should be kept to a minimum to reduce GNSS signal shading.
2. On metallic structures
Protection is as described for non-metallic structures, but the air terminals can be connected directly to the conducting structure without the need for down conductors.

Air terminal arrangement, plan view



- a Antenna
- b Support structure
- c Air terminal

NOTICE

Remote control of product

With the remote control of products, it is possible that extraneous targets will be picked out and measured.

Precautions:

- ▶ When measuring in remote control mode, always check your results for plausibility.

⚠ CAUTION

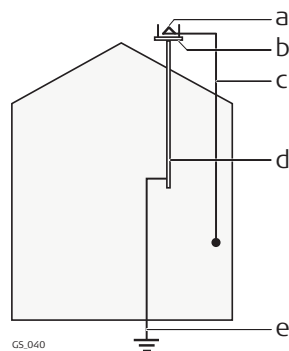
Damage to unused connectors

Moisture, dirt or mechanical impact may damage unused connectors.

Precautions:

- ▶ Attach dust/protection cap on open/unused connectors.

Grounding the instrument/antenna



- a Antenna
- b Lightning conductor array
- c Antenna/instrument connection
- d Metallic mast
- e Connection to earth

WARNING

If the product is improperly disposed of, the following can happen:

- If polymer parts are burnt, poisonous gases are produced which may impair health.
- By disposing of the product irresponsibly you may enable unauthorised persons to use it in contravention of the regulations, exposing themselves and third parties to the risk of severe injury and rendering the environment liable to contamination.

Precautions:



The product must not be disposed with household waste.
Dispose of the product appropriately in accordance with the national regulations in force in your country.
Always prevent access to the product by unauthorised personnel.

Product-specific treatment and waste management information is available from GeoMax AG.

WARNING

Improperly repaired equipment

Risk of injuries to users and equipment destruction due to lack of repair knowledge.

Precautions:

- Only authorised GeoMax Service Centres are entitled to repair these products.

1.5.1

External battery

For the external battery (not included):

WARNING

Exposure of batteries to high mechanical stress, high ambient temperatures or immersion into fluids

This can cause leakage, fire or explosion of the batteries.

Precautions:

- Protect the batteries from mechanical influences and high ambient temperatures.
- Consider the respective IP class restrictions in chapter [Environmental specifications](#).
- Do not drop or immerse batteries into fluids.

WARNING

Short circuit of battery terminals

If battery terminals are short circuited e.g. by coming in contact with jewellery, keys, metallised paper or other metals, the battery can overheat and cause injury or fire, for example by storing or transporting in pockets.

Precautions:

- Make sure that the battery terminals do not come into contact with metallic/conductive objects.

 WARNING

Short circuit of battery terminals

Risk of fire, electric shock and damage.

Precautions:

- ▶ Do not open the battery housing.
- ▶ Keep away any metallic or wet objects from the battery terminals.

 WARNING

Unauthorised opening of the product

Either of the following actions may cause you to receive an electric shock:

- Touching live components
- Using the product after incorrect attempts were made to carry out repairs.

Precautions:

- ▶ Do not open the product!
- ▶ Only authorised GeoMax Service Centres are entitled to repair these products.

1.6

Description

Electromagnetic Compatibility (EMC)

The term Electromagnetic Compatibility is taken to mean the capability of the product to function smoothly in an environment where electromagnetic radiation and electrostatic discharges are present, and without causing electromagnetic disturbances to other equipment.

 CAUTION

Electromagnetic radiation

Electromagnetic radiation can cause disturbances in other equipment.

Precautions:

- ▶ Although the product meets the strict regulations and standards which are in force in this respect, GeoMax cannot completely exclude the possibility that other equipment may be disturbed.

 CAUTION

Use of the product with accessories from other manufacturers. For example, field computers, personal computers or other electronic equipment, non-standard cables or external batteries

This may cause disturbances in other equipment.

Precautions:

- ▶ Use only the equipment and accessories recommended by GeoMax.
- ▶ When combined with the product, other accessories must meet the strict requirements stipulated by the guidelines and standards.
- ▶ When using computers, two-way radios or other electronic equipment, pay attention to the information about electromagnetic compatibility provided by the manufacturer.

 CAUTION

Intense electromagnetic radiation. For example, near radio transmitters, transponders, two-way radios or diesel generators

Although the product meets the strict regulations and standards which are in force in this respect, GeoMax cannot completely exclude the possibility that the function of the product may be disturbed in such an electromagnetic environment.

Precautions:

- ▶ Check the plausibility of results obtained under these conditions.

 CAUTION

Electromagnetic radiation due to improper connection of cables

If the product is operated with connecting cables, attached at only one of their two ends, the permitted level of electromagnetic radiation may be exceeded and the correct functioning of other products may be impaired. For example, external supply cables or interface cables.

Precautions:

- ▶ While the product is in use, connecting cables, for example product to external battery or product to computer, must be connected at both ends.

 WARNING

Use of product with radio or digital cellular phone devices

Electromagnetic fields can cause disturbances in other equipment, installations, medical devices, for example pacemakers or hearing aids, and aircrafts. Electromagnetic fields can also affect humans and animals.

Precautions:

- ▶ Although the product meets the strict regulations and standards which are in force in this respect, GeoMax cannot completely exclude the possibility that other equipment can be disturbed or that humans or animals can be affected.
 - ▶ Do not operate the product with radio or digital cellular phone devices in the vicinity of filling stations or chemical installations, or in other areas where an explosion hazard exists.
 - ▶ Do not operate the product with radio or digital cellular phone devices near medical equipment.
 - ▶ Do not operate the product with radio or digital cellular phone devices in aircrafts.
 - ▶ Do not operate the product with radio or digital cellular phone devices for long periods with the product immediately next to your body.
-

2

Description of the System

2.1

General Information

Key features

Feature	Description
All in one	Integrated transmission and reception.
Power and polarity protection	A dual-stage surge protection system is used to protect the radio from potential damage in instances of input voltage or current surpassing the standard range, or in cases of polarity reversal.
Standing wave detection protection	Standing wave detection is used to prevent damage caused by long-time open and short circuits.
Thermal protection	TRU35 can adjust the transmitting power adaptively, automatically reduce the power when the instrument temperature is too high, and automatically increase the power when the instrument temperature decreases, to ensure that the instrument is always in a stable power range, and will not be damaged due to overheating.
IP67 Protection	Waterproof to 1 m temporary immersion. Dust tight.
Shell and heat sink intergration technology	Without assembly, integrated shell, high overall heat conduction efficiency and good heat dissipation.
Radio	Configuration of operational mode, protocol, frequency, power level, and facilitates both data reception and transmission via radio.
16 channels	16 radio channels for transmitting and receiving.
Long transmission distance	The transmission distance can reach 14 kilometers with high power level. (Depending on the base station height and the surrounding environment)

2.2

System Components

Main components

Component	Description
TRU35	A high-power, half-duplex digital radio
Smart antenna	A GNSS smart antenna with integrated communication devices.
Field controller	A multi-purpose device enabling the control of GeoMax instruments.
Zenith Manager	An Android based software, used to manage and configure the TRU35 High Power Radio.

2.3

Soft bag Contents

Soft bag for TRU35 High Power Radio



- a Soft bag
- b TRU35 high power radio
- c ZDC510 cable (to connect Zenith GNSS smart antenna and external battery)

2.4

System Concept

2.4.1

Software Concept

TRU35 Configuration

The Zenith Manager for Android allows to configure the TRU35 High Power Radio.

2.4.2

Power Concept

Power options

Power for the TRU35 can be supplied externally.

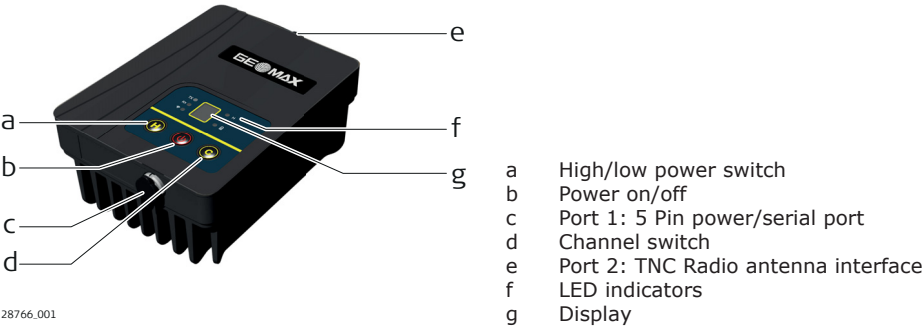
External power supply:

10.8 V DC to 15 V DC external power input.

2.5

Instrument Components

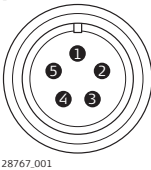
TRU35 components



2.6

Pin Assignments

Pin assignments for power/serial port



Pin	Pin definition	Input/Output
1	VCC, 5.5–16 V	Input
2	GND	Input/Output
3	RXD	Input
4	GND	Input/Output
5	TXD	Output

Plug types

Port 1:

LEMO-1, 5 pin, LEMO EEG.0B.305.CLN

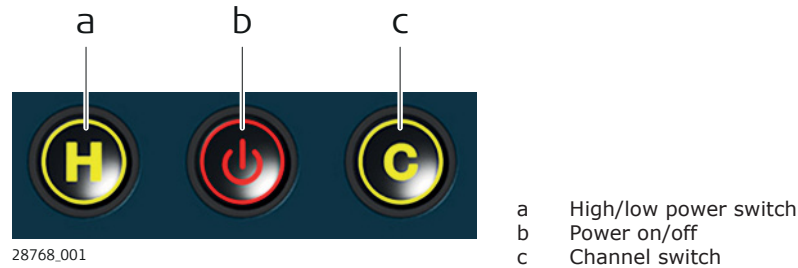
Port 2:

TNC interface

3 User Interface

3.1 Keyboard

Description



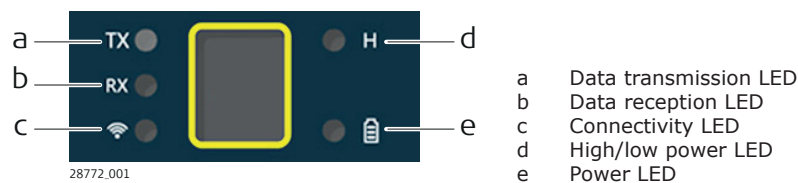
Buttons

Button	Status	Function
Power on/off	If TRU35 is off If TRU35 is on	Turns on the TRU35. Turns off the TRU35.
High/low power switch		Switch between high and low transmitting power.
Channel switch		Switch radio working channel. Only TX channel can be switched. RX channel must be switched through the TRU35 configuration tool Configuration tool is included in Zenith Manager for Android.

3.2 LED Indicators

LED indicators

The TRU35 has **L**ight **E**mitting **D**iode indicators. They indicate the basic instrument status.



Description of the LED

LED	Status	Description
TX	Data transmission LED Flashing green	Flashes according to the transmission frequency. The default status is off.
RX	Data reception LED Flashing green	Flashes according to the receiving frequency. The default status is off.

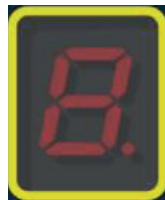
LED	Status	Description
	Radio LED	Solid blue
		Radio is connected.
	Off	Radio is not connected.
	High/low power LED	Flashing blue
		Data transmission.
		Green
	Power LED	High power.
		Off
		Low power.
	Power LED	Solid green
		Power on.
	Flashing green	Warning
		- Voltage < 11.3 V: Normal data transmission. - Voltage < 10.5 V: Data transmission stops. - Temperature > 90 °C: Data transmission stops.

3.3

Display

Display

The digital display on the TRU35 panel shows the current transmitting channel. The Transmitting frequency is generally different for different channels.



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1 - 9 - 0 (channels 1 - 10)
a - f (channels 11 - 16)

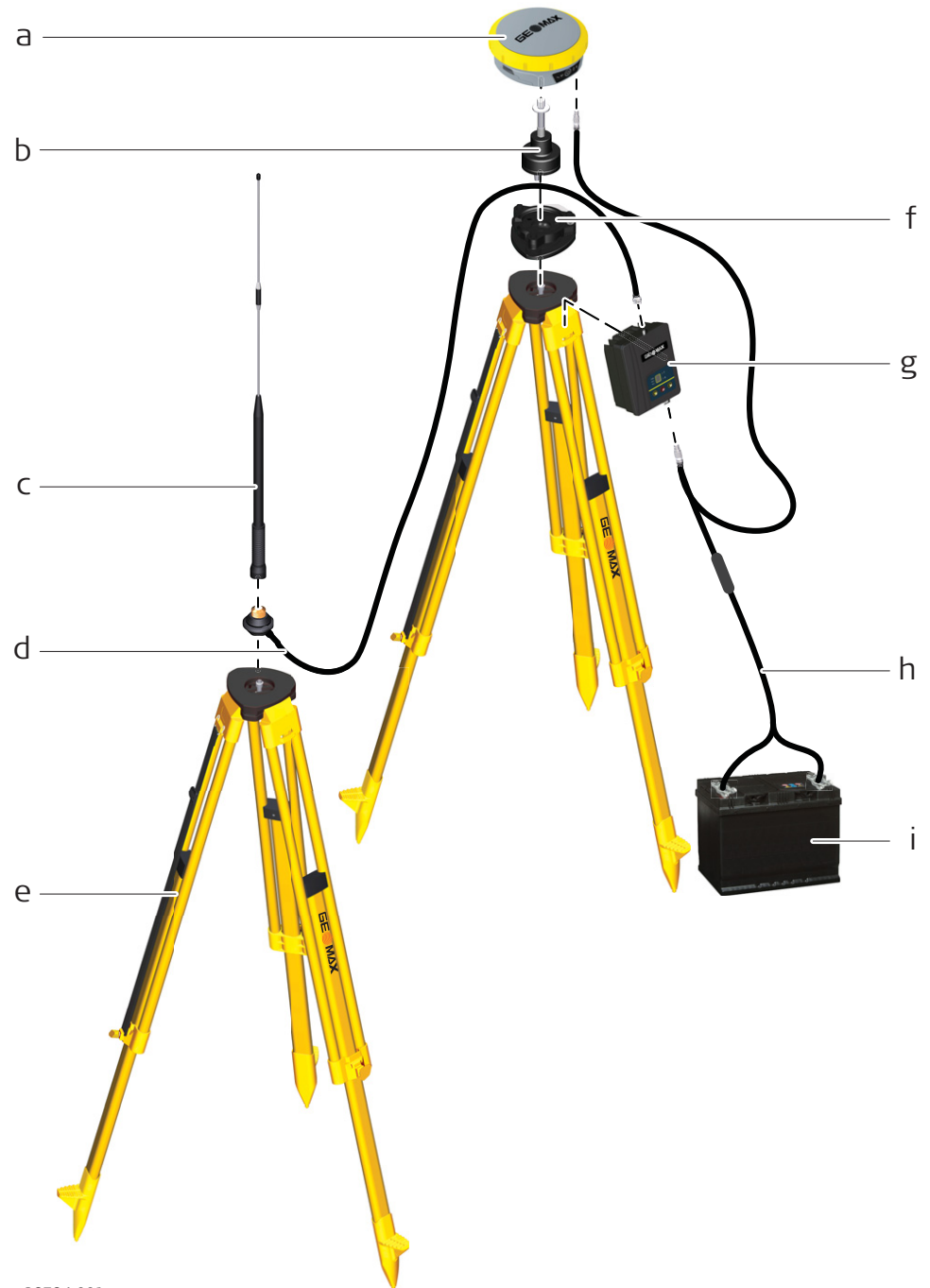
4

Operation

4.1

Equipment Setup

Equipment setup - TRU35



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- a GNSS Base
- b Carrier
- c UHF Antenna
- d Antenna cable
- e Tripod
- f Tribrach
- g TRU35 High Power Radio
- h Y-Cable Base-Radio-Battery
- i Battery

Equipment setup step-by-step

1. Setup the GNSS base on a tripod at the base point
2. Mount the radio on one tripod leg
3. Setup the UHF antenna on a second tripod nearby
4. Connect base, radio and external battery with the Y-cable
5. Connect the radio antenna to the radio
6. Turn on base and radio

Radio settings



To meet country radio licence requirements, the UHF radio must be set before use to legally allowed local frequencies as defined by local or governmental authorities. Use of forbidden frequencies may lead to prosecution and penalties.



Please refer to the separate work instructions for the GeoMax TRU35 High Power Radio configuration.

5 Care and Transport

5.1 Transport

Transport in the field	When transporting the equipment in the field, always make sure that you carry the product in its original soft bag.
Transport in a road vehicle	Never carry the product loose in a road vehicle, as it can be affected by shock and vibration. Always carry the product in its soft bag and secure it.
Shipping	When transporting the product by rail, air or sea, always use the complete original GeoMax packaging, soft bag and cardboard box, or its equivalent, to protect against shock and vibration.
Shipping, transport of batteries	When transporting or shipping batteries, the person responsible for the product must ensure that the applicable national and international rules and regulations are observed. Before transportation or shipping, contact your local passenger or freight transport company.

5.2 Storage

Product	Respect the temperature limits when storing the equipment, particularly in summer if the equipment is inside a vehicle. Refer to 6 Technical Data for information about temperature limits.
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5.3 Cleaning and Drying

Product and accessories	Use only a clean, soft, lint-free cloth for cleaning. If necessary, moisten the cloth with water or pure alcohol. Do not use other liquids; these may attack the polymer components.
Damp products	Dry the product, the transport container, the foam inserts and the accessories at a temperature not greater than 40 °C/104 °F and clean them. Remove the battery cover and dry the battery compartment. Do not repack until everything is dry. Always close the transport container when using in the field.
Cables and plugs	Keep plugs clean and dry. Blow away any dirt lodged in the plugs of the connecting cables.
Connectors with dust caps	Wet connectors must be dry before attaching the dust cap.

6 Technical Data

6.1 TRU35 Specifications

General radio specifications

Description	Value
Frequency range	410 MHz–470 MHz
Operating mode	Half-duplex
Channel spacing	12.5 kHz/25 kHz
Channels	16
Frequency stability	$\leq \pm 1.0$ ppm
Modulation	GMSK/4FSK
Air transmission rate	9600 bps, 19200 bps
Antenna interface	TNC, female
Antenna interface impedance	50 Ω
Operating voltage	Nominal voltage 12.5 V (10.8~15 V)
Data interface	LEMO 5 pin

Transmitter specifications

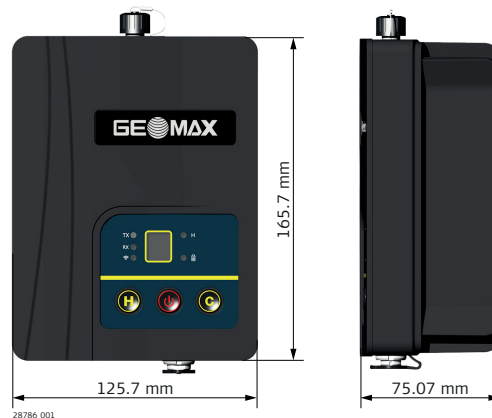
Description	Value
RF Power stability	± 1.5 dB
Adjacent channel inhibition	> 50dB

Receiver specifications

Description	Value
Sensitivity	Better than -116 dBm @ BER 10-5, 9600 bps
Common channel rejection	> -12 dB
Blocking	> 70 dB
Adjacent channel selectivity	> 52 dB @ 25 kHz
Spurious immunity	> 55 dB

6.1.1 Technical Data

Dimensions



Description	Value
Dimensions	165.7 x 125.7 x 75.07 mm

Weight

Weight	Value
TRU35	1457±5 g

Power

Power	Value
Power consumption (typical)	Transmit (High Power) 91 W
	Receive 6.5 W
Voltage	10.8 V DC–15 V DC external power input LEMO 5pin

6.2

Environmental specifications

Environmental specifications

Temperature

Type	Operating temperature [°C]	Storage temperature [°C]
TRU35	-30 to +60	-40 to +80

Protection against water, dust and sand

Type	IP class
TRU35	IP67 (IEC 60529) Waterproof to 1 m temporary immersion. Dust tight.

Pollution degree

Type	Pollution degree
TRU35	4 Electrical equipment for indoor and outdoor use. Electrical equipment for usage in industrial environment.

Humidity

Type	Protection
TRU35	Max 95% non-condensing.

Altitude

Type	Range
TRU35	Unrestricted

Shock resistance

Type	Value
TRU35	Designed to endure to a 1.5 m free drop on hard surface with no damage.

Vibration

Type	Value
TRU35	50 Hz, ± 0.3 mm (amplitude), 5 minutes (duration)

6.3

Conformity to National Regulations

Labelling TRU35



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Antennas

Type	Antenna	Gain [dBi]
Radio	Internal antenna	0.0
UHF	Detachable rod antenna available options:	
	ZRA110/QC410A	5.5
	ZRA130/QC430A	5.5
	ZRA150/QC450A	5.5

Frequency bands, output power

Type	Frequency band [MHz]	Output power [mW]	Country restrictions
Radio	2402–2480	2.5	
UHF	410–470	10 000/30 000	see Canada

Radiation Exposure Statement

The radiated output power of the instrument is below the radio frequency exposure limits. Nevertheless, the instrument should be used in such a manner that the potential for human contact during normal operation is minimised.

In order to comply with FCC RF Exposure requirements, this device must be installed to provide at least 20 cm separation from the human body at all times.

EU



Hereby, GeoMax AG declares that the radio equipment type TRU35 is in compliance with Directive 2014/53/EU and other applicable European Directives. The full text of the EU declaration of conformity is available at the following Internet address: <https://geomax-positioning.com/partner-area>.

UK

Hereby, GeoMax AG declares that the radio equipment type TRU35 is following the provisions of the applicable relevant statutory requirement S.I. 2012 No. 3032 The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 and S.I. 2017 No. 1206 Radio Equipment Regulations 2017.

USA

FCC ID: 2AUW9-TRU35
FCC Part 15, 15B/C, 2, 90

This device complies with part 15 of the FCC Rules. Operation is subject to the following two 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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, it may cause harmful interference to radio communications.

However, there is no guarantee that interference does not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by GeoMax for compliance could void the user's authority to operate the equipment.

Canada

CAN ICES-003 B/NMB-003 B
IC: 9950A-TRU35

Canada Compliance Statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference
2. This device must accept any interference, including interference that may cause undesired operation of the device

Canada Déclaration de Conformité

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement du dispositif

The transmission of radio equipment within the 430–450 MHz band is restricted for use in Canada.

This band is reserved for public safety communications to avoid interference.

In order to comply with FCC / ISED RF Exposure requirements, this device must be installed to provide at least 20 cm separation from the human body at all times.

Others

The conformity for countries with other national regulations has to be approved prior to use and operation.

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