

KOMTRAX Terminal Instruction Manual

Model Name **TG200**

Thank you for your purchasing TG200 terminal.

■ Read this instruction manual and use your KOMTRAX terminal correctly ■

- Operators and service personnel for machines using KOMTRAX should make sure that they read and fully understand this document.
- Keep this document together with the Operation and Maintenance manual for the machine equipped with KOMTRAX, and read it repeatedly.

※KOMTRAX is a machine management system that uses wireless communications.

Features/Before using

■ What is TG200

TG200 is a communication terminal which is mounted on a vehicle to form a system together with server application software on the base station side and used to control movement of the vehicle and monitor it from a remote place.

■ Features

- TG200 uses Iridium satellite communication, so it can communicate in a lot of countries that they are used. (A communication contract is required in each place where TG200 will communicate, however.)
- TG200 has Wireless LAN function to be able to communicate other wireless equipment such as tablet PC.
- TG200 can connect ethernet network in the vehicle.

■ Before using



- Since TG200 is a wireless device using radio waves, so it is necessary to obtain authorization and conform to the laws of the country or territory where the machine equipped with TG200 is being used. It can be used only countries where use of it is permitted. For the countries where use of TG200 is permitted, ask your Komatsu distributor.
- Always contact your Komatsu distributor when exporting or reselling a vehicle equipped with TG200. Note that the radio communication function of TG200 may be turned off forcibly, when the vehicle is out of the countries or areas where use of TG200 is permitted.
- Before using TG200, you are required to take some procedures such as application for start of use. For details, ask your Komatsu distributor.
- KOMTRAX system uses wireless communications, so it cannot be used inside tunnels, underground inside buildings, or in mountain areas where radio waves cannot be received. Even when the machine is outside, it cannot be used in areas where the radio signal is weak or in areas outside the wireless communication.
- There is absolutely no need to inspect or operate TG200, but if any abnormality is found, please consult your Komatsu distributor.

Safety precautions




The items to be observed without fail are explained as shown below to prevent an injury to the user and other persons and damage to property.

If you do not obey these precautions, neither Komatsu nor your Komatsu distributor can take any responsibility for any problem that is caused or for any loss that results.

■ Injuries and damage which can be caused by wrong use of TG200 are explained as shown below.

	WARNING	In the column with this mark, an item which "can cause a death or a serious injury to a person" is explained.
	CAUTION	In the column with this mark, an item which "can cause an injury to a person or only damage to property" is explained.

■ The types of the items to be observed are indicated and explained by the following icons.

	This icon indicates an item "to be noted".
	This icon indicates an item "to be prohibited".
	This icon indicates an item "to be executed without fail".



WARNING

Do not install this set to a place where it will be an obstacle to view or operation.



Prohibit

Installation of this set to a place where it will be an obstacle to view or operation may cause an accident.

Do not install this set to a place where temperature rises or lowers extremely or a place where it will receive strong vibration or impacts.



Prohibit

Neglecting this may cause a skin burn, a trouble, or a fire.

Never disassemble, repair, modify, or move the communication terminal, antenna, or cables.



Prohibit

Neglecting this may cause a trouble, a fire, or an accident. Your Komatsu distributor will carry out removal and installation.

Installe the communication terminal at leaset 22cm (8.7 inch) from a operater.



Prohibit

For anyone wearing a pacemaker, the radio waves may have an adverse effect on the operation of the pacemaker.

Use a battery having rated voltage of DC12V or DC24V to supply DC power to this set.



This set is designed to be driven with DC power. Use a power supply in the rated range. Neglecting this may cause a trouble.

Connect this set to external devices correctly and securely according to this manual.



Neglecting this may cause a trouble or a fire.

Install the body of this set securely.



If the body is not installed securely, it may fall to cause an injury to a person or an accident.



CAUTION

Do not install this set to an outdoor place where it may be exposed to rainwater or seawater.



This set is not water-resistant.

Prohibit

This set can be used only in countries where use of it is permitted.



Since this set has a radio device, it can be used only in countries where use of it is permitted.

Prohibit

Do not pinch, tense, or damage the cables.



Neglecting this can cause a short circuit or a disconnection, which may cause a trouble or a fire.

Prohibit

Use a specified communication antenna.



Use a specified antenna.

Take the action given in "LONG-TERM STORAGE" in the Operation and Maintenance Manual for the machine, when putting the machine into long-term storage.



Even when the key is at the OFF position, a small amount of electric power is consumed by the KOMTRAX terminal.

Contact your Komatsu distributor before installing a top guard or other attachment that covers the antenna.



Attachments may cause a trouble of wireless communication.

FCC/ISED Statements

NOTICE:

This device complies with part 15 of FCC Rules and Industry Canada's applicable licence-exempt RSSs. 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.

NOTICE:

Changes or modifications made to this equipment not expressly approved by Komatsu Ltd may void the FCC authorization to operate this equipment.

NOTE: 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, may cause harmful interference to radio communications. However, there is no guarantee that interference will 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 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.

Radiofrequency radiation exposure Information:

This equipment complies with FCC/ISED radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

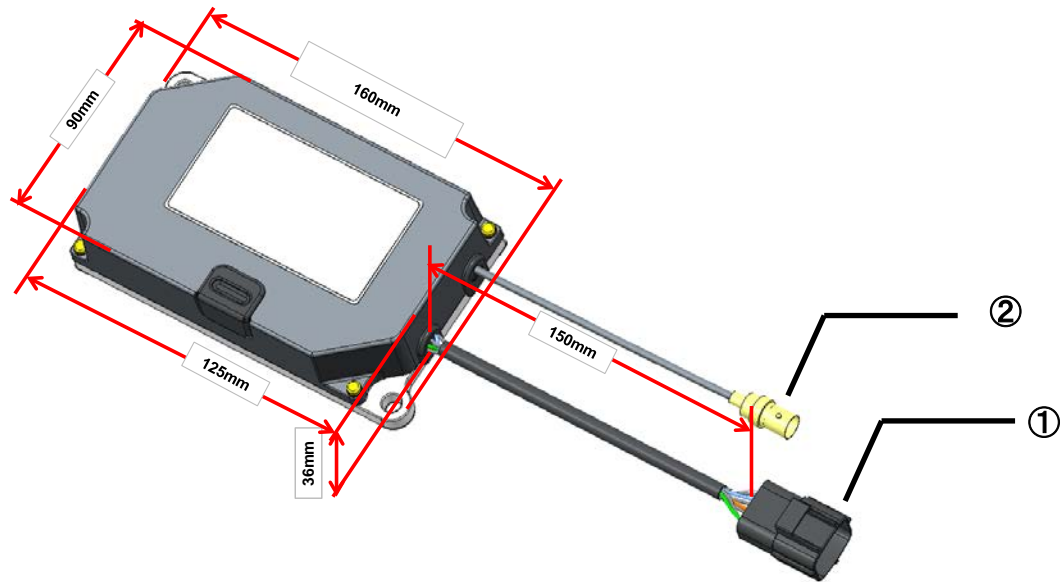
Request for correct use

■ Storage

Do not store TG200 in a place where it will be exposed to direct sunlight, a place where the temperature is extremely low or the humidity is high, a place where there is much corrosive gas. (If it is stored in such a place, its performance and appearance may be lowered.)

Size and Outline

TG200



① Interface connector (AMP)

Connects the power cable and signal lines on the vehicle side. For details, see the specifications of interface connector.

② Antenna connector (BNC)

Connects Iridium antenna.

Specifications of interface connector

Connector on TG200 side: 174684-2 (Manufactured by TE connectivity)

Pin Number	Name	I/O	Remark
1	PWR_IN_GW	–	Power supply
2	PWR_CTR_GW	In	Start up signal from another controller
3	GND_PWR_GW	–	GND
4	DOS_L_RING	Out	Start up signal for another controller
5	COMM_ETHER_RX+	In	Ethernet 100BASE-TX RX+
6	COMM_ETHER_RX–	In	Ethernet 100BASE-TX RX–
7	COMM_ETHER_TX+	Out	Ethernet 100BASE-TX TX+
8	COMM_ETHER_TX–	Out	Ethernet 100BASE-TX TX–

Specifications

TG200

Power source	DC12V or DC24V (Operating range : DC10V~30V)
Current consumption	Communication Enabled : 500mA Communication Disabled : 190mA Standby State : 1mA
Interface	
Ethernet	1ch 100BASE-TX
Digital input	1ch start up signal from another controller
Digital output	1ch start up signal for another controller
Communication band and Output power	Transmitter: Transmission Frequency/Power : 1616MHz~1626.5MHz 7W Reception Frequency/Sensibility: 1616MHz~1626.5MHz -118dBm
Wireless LAN	Standard: IEEE802.11b/g/n Output power: • IEEE802.11b: +13dBm with tolerance • IEEE802.11g/11n: +11dBm with tolerance
Connector	
Interface	174684-2 manufactured by TE connectivity
Operating temperature	-30°C~+60°C
Storing temperature	-40°C~+80°C
humidity	Under 98% (65°C)
Water resistance	R2
Vibration resistance	6.8G (5~200 Hz)
Impact-resistant	50G
Outside dimensions (mm)	160×90×36mm
Weight	0.8kg

Troubles and causes

Trouble	Possible cause	Remedy
TG200 cannot communicate.	Radio wave does not reach antenna because of obstacle around it.	Install antenna to place where there are no obstacles.
	Out of communicable range.	Move in communicable range.
	SIM card is not inserted.	Insert contracted SIM card.
	Power source is not supplied.	Check service power source, GND, and ACC line.
	TG200 has trouble.	Replace TG200.
When start up signal line is turned ON, TG200 does not operate.	Power source is not supplied.	Check service power source, GND, and ACC line.
	Interface connector pins are wrong.	Correct interface connector pins.
	TG200 has trouble.	Replace TG200.