OHM TCT-A12 Handheld Keypad Remote Control Transmitter Instruction Manual

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Contents

Quality Assurance

OHM (Chongqing) Electronics Technology CO., LTD. (hereinafter referred to as OHM) warrants that the product completely conforms to various technical parameters listed in the instructions at delivery and that it can be able to normally function as long as it is correctly installed and operated as required.

Warranty Commitment

This product has a one -year warranty period from the date of delivery. The company promises to make repairs when any damage or fault that is not caused by human factors occurs during the warranty period. The product needing repair must be sent to a maintenance station designated by the company.
The foregoing warranty scope does not include consumable parts like relays, fuses, batteries, and so on, or system damages caused by installation error, as well as faults that are caused by improper use or unauthorized changes by the customer.

Remark

This manual describes the basic principle, operation and application, installation and system maintenance of TCS-A series. Before installation and operation, carefully read this manual and properly keep it for future reference. This manual may be updated at any time as needed. If needed, contact the dealer or manufacturer to obtain the latest version.

Pictographs

 Danger due to electrical voltage. Touching live parts inside the unit can be fatal or cause serious injuries.

 Instructions for occupational health and safety. Not following these instructions can cause accidents, which can cause damage, serious injuries or even death.

 Important information about the operation of the radio system.

Safety Instructions

- Read through these operating instructions carefully before working with the radio control system.
- As an integral part of the radio control system, the operating instructions shall be always kept by specially-assigned personnel.
- The term “machine” used in the operating instructions refers to various equipment controlled by the radio control system in general;

Purpose

- The radio control system is used to control machines and for data transfer. Observe the job safety and accident prevention regulations applicable to each application.
- The use also includes reading the operating instructions and adhering to all safety information contained therein.
- The radio control system must not be used in areas where there is a risk of explosion, nor for the control of machines used to convey persons, unless it is explicitly approved by the manufacturer for these uses.
- Modifications to the radio control system must only be carried out by specialist personnel who have been trained and authorized by OHM. All modifications must be documented at the factory in the form of documents.
- The safety devices of radio control system must not be modified, removed or bypassed. It is absolutely forbidden to make modifications to any part of complete emergency stop link of the radio control system.

Safety instructions for installation and operation

- Power connection for the receiver can only be made by professional electricians. The Power line shall be connected as per bundled output wire diagram.
- The receiver can only be opened by trained personnel. Some parts inside the system may have life-threatening voltage. Make sure to cut off the power supply to the machine before opening it.
- Note the presence of persons in the danger zone. In particular, beneath the load of cranes is prohibited in every instance.
- Select a safe operation location for the radio control system, from which you have a good and complete view of the working movements of the machine, the load movements,and…… the surrounding working conditions.
- Do not leave the radio remote control transmitter system switched on unattended. Always switch the radio transmitter off when it is not required. This applies in particular if you change location, when working without radio control, during breaks and at the end of work. Always safeguard the radio transmitter against use by unauthorized persons, for example by locking it away.
- In the event of an emergency or a fault of the crane or machine, make sure to immediately press the emergency stop switch on the transmitter.
- Only operate the radio system when it is in perfect working order. Faults and defects that could influence safety must be rectified before the system is put back into operation, by specialists who have been trained and authorized by OHM company.
- Note that the operational directions of the machine may appear inverted depending on operating location and viewing angle to the machine. This will apply in particular to rotary cranes, if your location changes from inside to outside the radius of the crane. The operator must make himself familiar with directional markings on the machine before the start of work.
- Repairs to the radio control system may only be carried out by specialist personnel who have been trained and authorized by OHM. Use OEM replacement parts and accessories; otherwise,the safety of the radio control

system can no longer be guaranteed and our extended warranty will be avoided.

- Remain vigilant when working with the radio system and familiarize yourself with its functions.
  This applies in particular if you are working with it for the first time or if you work with it only occasionally.
- Check the function of the Emergency Stop switch before starting work each time. If you start the transmitter with the emergency stop switch pressed, the status indicator lamp will go out. If the status indicator lamp does not go out, you have to disable the radio control system immediately by removing the battery from the transmitter and contact the radio control system service engineer.

Precautions

- Always check the housing and push-buttons of the transmitter. In case of damage is found, immediately replace it.
- Always pay attention to and check voltage of the transmitter; in case of no power or insufficient the voltage, immediately replace the battery.
- In case of any abnormal condition, immediately press the emergency stop switch.
- In case of temporary disuse or end of the operation, press the emergency stop switch.
- Do not use 2 (or more) transmitters to operate the same equipment at the same time.
- Do not use the same frequency within the same factory area (or 300m scope) to avoid mutual interference.
- Do not use this transmitter in a strong magnetic field environment, away from equipment that may generate magnetic fields.

NOTE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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

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

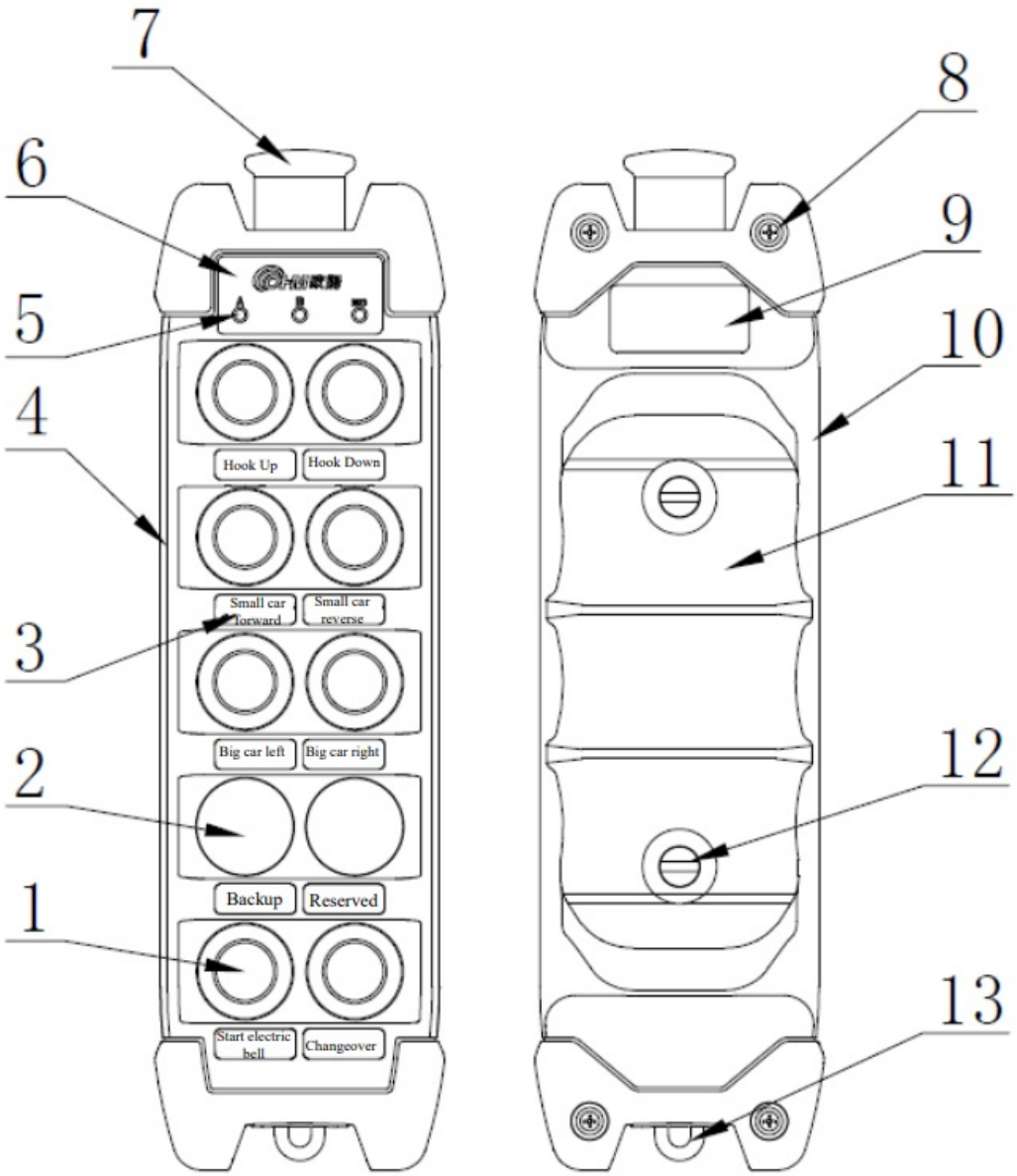
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Introduction

TCT-A12 is a handheld keypad remote control transmitter developed by Ohm Corporation. It is powered by 2 dry-cell batteries and features 10 button switches and 1 emergency stop switch. It is compatible with various models of Ohm receivers.

1. Keypad
2. Dummy plug
3. Function label

4. Upper shell
5. Indicators
6. Indicator light label
7. Emergency stop switch
8. Shell fixing screws
9. Machine number label
10. Lower shell
11. Battery cover
12. Battery cover fixing screws
13. Lanyard hole



Indicator light status

Device start: When the device starts and performs hardware self-test, all lights will go through three on-off cycles simultaneously, then the lights will turn on once slowly in sequence.
Emergency stop activated: When the emergency stop switch is pressed, the red light will stay on for 1 second and then turn off. Pressing any key at this point will cause all lights to blink once before turning off.
Emergency stop canceled: When the emergency stop switch is released, the green light will stay on for 1 second and then turn off. Pressing a non-start key will cause the red status indicator light to blink once before turning off.
Operating state: After releasing the emergency stop, press the bottom-left key to enter this state. Pressing any

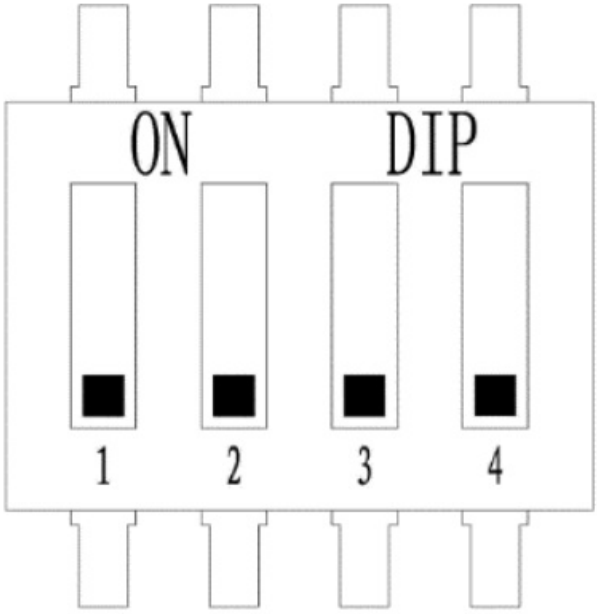
key will cause the status indicator light to blink. When the voltage is low, the status indicator light will flash in red. When the voltage is sufficient, the status indicator light will flash in green.
Sleep mode: When there is no key operation under non-configuration mode, the device will automatically enter the sleep mode, and all status indicator lights will turn off.

System Settings

Frequency adjustment

Frequency modifications within the same frequency group can be made by adjusting the DIP switch S11 located on the back of the transmitter. Please refer to the table below for details:

Same frequency group	S11-1	S11-2	S11-3	S11-4
Channel 1	OFF	OFF	–	–
Channel 2	ON	OFF	–	–
Channel 3	OFF	ON	–	–



Operating Procedure

Transmitter Installation

- Transmitter Battery Installation: Before installation, check the battery's charge to ensure proper functionality. Pay attention to the battery's orientation during installation and ensure it is securely placed. After installation, tighten the battery cover screws. When the transmitter is not in use for an extended period, open the battery cover and remove the batteries. If any battery leakage occurs and causes equipment corrosion, clean the affected area thoroughly.
- Transmitter Placement: Place the transmitter in a safe and visible location to avoid damage from accidental falls.

Transmitter Power On

- Insert two fully charged alkaline AA batteries or rechargeable batteries correctly into the battery compartment, then close the back cover and tighten the screws.
- After powering on, the transmitter will start up, and the top indicator light will go through three on-off cycles, followed by alternating flashing once in sequence.
- Pull out the transmitter's emergency stop switch, and the top power indicator light will stay on (green) for 1 second before turning off, indicating a successful cancellation of the emergency stop.
- Press the "Start" button (bottom-left corner) to activate the transmitter, and the power indicator light will start flashing.
- Once the direct-insert receiver receives the activation signal, the green status light will stay on for 2 seconds, and the buzzer will sound for 2 seconds, indicating successful communication between the transmitter and the receiver.

Transmitter Power Off

- Press the emergency stop switch on the transmitter, and the top power indicator light will stay on for 1 second (red) before turning off, indicating that the transmitter is powered off.
- When the battery voltage is low, the power indicator light on the transmitter will flash red to give an under-voltage warning.
- When the battery voltage is critically low, the transmitter will shut down automatically and cannot be reactivated.

Pairing Procedure

- When the device does not detect any configuration data, pull out the emergency stop switch and press any key. All lights will turn on once rapidly in sequence.
- While holding down the start button (bottom-left key) on the transmitter, pull out the emergency stop switch. At this point, the working B light will stay on.
- Keep the start button pressed for 10 seconds to enter the "Waiting for Confirmation to Enter Configuration State." At this point, the working B light will flash rapidly.
- Press the confirmation key (bottom-right key) to enter the "Configuration State". At this point, the B light will flash slowly, and the status indicator light will flash rapidly. The transmitter will actively transmit broadcast configuration signals at this stage, which will last for 30 seconds.
- Power on the receiver. The receiver can receive configuration signals within 10 seconds after powering on, but can not enter the configuration state after 10 seconds.
- When the receiver receives the configuration message sent by the transmitter, the direct-insert receiver's green light will flash, the mini receiver's status indicator light will flash, and the B-series receiver's lights will all flash.
- After the transmitter receives the configuration message feedback from the receiver, the B light will flash slowly, and all other lights will turn off. At this point, pressing the start button will control the receiver's configuration light to stay on, and releasing the start button will return the receiver's configuration light to flashing.
- Press the confirmation key on the transmitter to save the transmitter's configuration data. If the transmitter activates the emergency stop during this process, it will stop the configuration process and restart the transmitter.
- The transmitter and the receiver will automatically reboot to complete the configuration.

Basic Troubleshooting

Fault	Analysis	Action
The transmitter shows no response after startup.	Transmitter power failure.	1. Carefully inspect the batteries for damage or any dirt that may cause poor contact. 2. Insert fully charged batteries and restart the transmitter. 3. Contact our service department for assistance as necessary.
The power indicator light on the transmitter flashes red when transmitting a signal.	Low battery.	1. Replace the batteries with fully charged ones promptly. 2. Contact our service department for assistance as necessary.
The transmitter displays normally,but the operations do not work..	1. The system has no communication connection. 2. key switch malfunction.	1. Press the “Start” button to reconnect. 2. Contact our service department for assistance as necessary.
The transmitter repeatedly has the phenomenon of emergency stop and switching.	1. Emergency stop switch failure. 2. Local magnetic field interference.	1. Return to factory to repair the emergency stop switch. 2. Stay away from devices that may generate magnetic fields.

Maintenance

- Regularly check the function of the emergency stop switch to ensure that the emergency stop switch is kept in normal working status.
- Keep the battery contacts clean.
- When a rechargeable battery is used, ensure the battery is fully charged for the first use; the battery not used for a long time shall be stored under normal temperature and shall be charged regularly, to prevent battery damages caused by self-discharge (it is recommended that the battery is charged once per 6 months)
- If the radio control system is not used for a long time, take its battery out.
- Do not clean the transmitter with a high-pressure air gun and the like.
- Wipe the system with a fine wool brush or soft dry cloth; do not wash it with water.
- Periodically check the integrity and airtightness of system covers and rubber protective cover.
- Whenever welding the machine or the system fails:
    - Switch off the radio system.
    - Switch off the controlled machine.
    - Disconnect all electrical connection to the receiver.
- Under harsh environments, exposed elements can be damaged; make sure to duly repair them.

Warning: Never operate a machine with a faulty or defective radio control system!

- If none of the measures mentioned resolve the problem, then please contact your service technician, dealer , or OHM company.
- For maintenance by mailing, confirm the address by phone; make an appointment on the phone in advance for maintenance by mailing.
- Hotline for after-sales service: 400 9209 120

Technical Data

Model	TCT-A12
Operating Temperature	-25℃ ~ 70℃
Storage Temperature	-40℃ ~ 80℃
Operating Humidity	≤ 97%RH
Communication Range	≥ 80 meters
Dimensions	198 mm x 58 mm x 49 mm
Product Weight	350 g (excluding batteries)
Shell Material	High-strength engineering plastic
IP Rating	IP66
Communication Method	Instant communication
Transmitting Frequency	433.05 ~ 434.79 MHz
Transmitting Power	≤ 10 mW
Operation Method	Keypad type
Number of Keypad Buttons	≤ 10
Power Supply	3.0V (two dry cell batteries in series)
Operating Current	≤ 15mA
Operating Time	≥ 200h
Status Display	LED
Antenna	Built-in

Attachments

Packing List	1 copy
Operating Manual	1 copy
Factory Certificate of Conformity	1 copy
Output Diagram	1 copy
Transmitter Rope	1 copy
AA battery	1 copy

Documents / Resources

	OHM TCT-A12 Handheld Keypad Remote Control Transmitter [pdf] Instruction Manual TCT-A12 Handheld Keypad Remote Control Transmitter, TCT-A12, Handheld Keypad Remote Control Transmitter, Keypad Remote Control Transmitter, Remote Control Transmitter, Control Transmitter, Transmitter

References

- User Manual