

1. WARRANTY

1-1 Warranty

Lee's Hi-Tech Enterprises Co., Ltd. guarantees that this product meets its published specifications at the time of shipment from the factory. Under proper installation it should work as expected.

1-2 Warranty period

This equipment is warranted against defects in material and manufacturing for a period of one year from the date of shipment. During the warranty period, TELECRANE is responsible for necessary repairs as long as the product can be proved to be defective.

For warranty service or repair this product must be returned to a service facility designated by TELECRANE. Buyer will pay shipping charges to TELECRANE while TELECRANE will pay return shipping charges.

1-3 Excluded Items

This warranty does not include consumptive parts such as batteries, fuses, buttons, and relays. Also this warranty does not cover defects caused by improper installation, improper or insufficient maintenance, unauthorized modification, and improper operation, ignorance of environmental specifications, or improper software or interfacing.

1-4 Remarks

- No other warranty is expressed or implied, except for the above mentioned.
- The remedies provided herein are the buyer's sole and exclusive remedies. TELECRANE shall not be liable for any direct, indirect, special, incidental or consequential damages.

2. ATTENTION

2-1 Attention

- Please carefully read the manual before installing and operating this device.
- Due to the complex nature of this equipment it is necessary to read the entire manual before installation.
- Never dismantle the equipment by any unauthorized personnel, or equipment may be damaged.
- This manual is for reference only. Please consult your distributor for further assistance.

- The equipment has been strictly tested for quality before delivery from our plant. However, this equipment must not be used in dangerous situations or where damage may result.
- After the operation finished, please close the crane main power source, the receiver power supply.
- Transmitter when not in use, should be placed in a safe place to avoid the accidental touching the buttons by mistake.
- The crane should be equipped with main power relay, limit switch and other safety devices.
- Don't use equipment during lightening or high electrical interference conditions.
- Make sure that the batteries are in good condition and power for receiver is correct.
- Maintenance should only be done while the crane's main power is off to prevent electrical shock.
- The contents of this manual may be amended by the manufacturer without notice.
- The manufacturer may introduce new functions to the equipment as necessary; therefore, the descriptions may change.

2-2 Precautions

- Operating in an industrial facility is relatively dangerous; therefore, operator must have taken the adequate trainings in using F21-E2 system.
- Those who operate the machine should be healthy and have good judgment in regard to safety.
- Although the F21-E2 transmitter is so durable and resistant for the fluctuating temperature, it still needs to take care to prevent it from the severe impact or pressure.
- During operation, if the power supply of the transmitter's batteries is insufficient, the transmitter will send out EMS signal first to de-energize all of motion relays inside the receiver to stop crane's moving, and then the LED indicator on transmitter will flash in red constantly. At this moment, the batteries need to be replaced and all of two batteries should be replaced at the same time.
- If the severe interference occurred the equipment should be stopped at once.
- Please take the batteries out when the equipment will not be used for a long time.
- Make sure "Procedures of Emergency" is fully known as following.

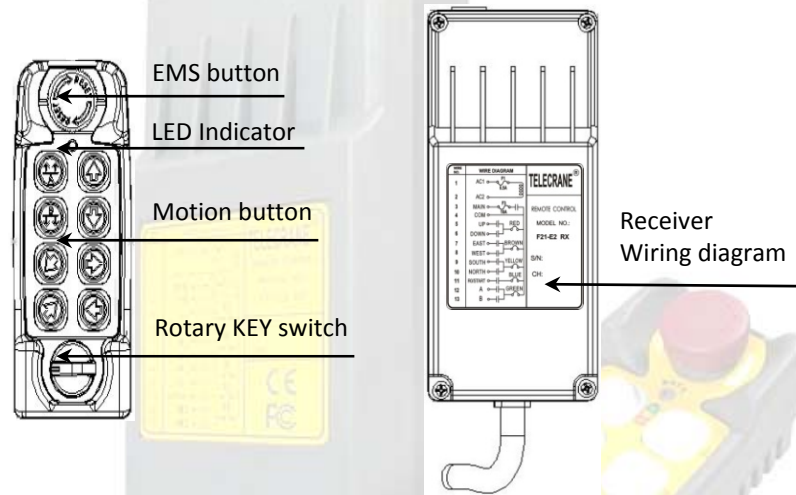
3. PROCEDURES OF EMERGENCY

In case of an Emergency, please follow the steps below and ask the distributor for service immediately.

1. Press "EMS" button.
2. Turn the key to "OFF" position and remove it.
3. Switch off the main power of crane.
4. Advise the distributor to find out the reason.

4. HOW TO START

4-1 F21-E2 feature



4-2 Operation

4-2-1 Procedure

1. Put two AA batteries on the release ribbon. And lock the battery cover.
Note: Before placing the batteries, make sure the Rotary KEY is on the "OFF" position.
2. Turn the Rotary KEY into START position. (Or depend on the setting mode of power on.)
3. In accordance with the function setting of pushbutton to operate correctly.
4. After the operation, please do the following steps to turn off.
 - a) Press EMS button.
 - b) Turn the rotary key to "OFF" position.
 - c) Remove the batteries when the remote is not going to be used for a long period of time.

4-2-2 Transmitter LED indicator

There is a 3-stage power indicating function with LED display.

1."Green color": Sufficient power to operate transmitter.



2."Yellow color": Power is depleting. Operation must be stopped immediately (for example: down the loads to ground) to replace batteries.

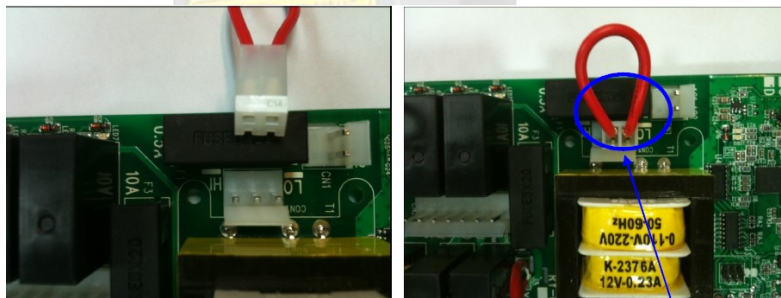


3."Red color": Insufficient power. Transmitter will send out an emergency stop signal to the receiver due to insufficient power. Operator should avoid this situation in order to maintain the safety of operation.

5. RECEIVER POWER SELECTION

5-1 Receiver power transformer voltage selection

F21-E2 receiver provides with 5 kinds of Transformer (24V/48 VAC 、 48/110 VAC 、 48/220 VAC 、 110V/220 VAC 、 220V/380 VAC) that allows user to choose based on the power input on site and the designated voltage will be set when the receiver is made in factory.



5-2 Change power supply voltage

1. Disconnect the power of receiver.
2. Remove the connector plug of the transformer from its original position.
3. Insert the connector plug into the new position.
4. Complete the procedure.

Transformer Jumper	24/48 VAC	48/110 VAC	48/220 VAC	110/220 VAC	220/380 VAC
LO position	24VAC	48VAC	48VAC	110VAC	220VAC
HI position	48VAC	110VAC	220VAC	220VAC	380VAC

Note: Users are allowed to select the different power source according to the respective requirement. However, the transformer must be changed. Please check with your local distributor for replacement of the transformer if necessary.

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.

Industry Canada Notice

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.

Industry Canada Caution

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'IndustrieCanada 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.

FCC Caution:

1. The 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.
2. This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.
3. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.