

## 1. WARRANTY

### 1-1 Limited Warranty

TELECRANE guarantees that this product meets its published specifications at the time of shipment from the factory. Under proper installation it should work as expected. However, TELECRANE cannot guarantee that operation in TELECRANE system is absolutely error-free, or without interruption.

### 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 proven to be defective.

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

### 1-3 Excluded Items

This warranty does not include consumable parts such as batteries, fuses, buttons, and relays. Also this warranty does not cover failure or damage resulting from misuse, accident, unauthorized modification, unsuitable operating environment, natural disasters, improper software setting or improper maintenance.

### 1-4 Limitation of liability and remedy

If your TELECRANE product fails to work as warranted above, TELECRANE maximum liability under this limited warranty is expressly limited to the lesser of the price you have paid for the product. TELECRANE disclaims any liability as a result of any direct/indirect, special, incidental or consequential damages.

### 1-5 Remarks

No other warranty is expressed or implied, except for the above mentioned. Any use of this remote control product would be regarded the same as agreed to all clauses within this user manual.

## 2. ATTENTION

### 2-1 Attention

- The manual must be read thoroughly before proceeding with installing and operating the device.
- Only properly trained persons designated by management should be permitted to operate radio controlled equipment, as the remote control pertains to the crane, hoist, lifting device or other material handling equipment being operated.
- Avoid installing in areas affected by strong vibration.
- Place the receiver well away from wind, damp and water.

- Cable glands and vent plugs must face down to prevent water from seeping in.
- Make sure that the user is not under the influence of drugs, alcohol and medicines.
- Make sure that the user always turns the remote control off when not in use.
- Make sure that the user does not leave the transmitter unsupervised.
- The crane should be equipped with main power relay, limit switch and other safety devices.
- Don't use during lightening or high electrical interference conditions.
- Make sure that the batteries are in good condition and power for receiver is correct. The LED indicator on transmitter will flash in red constantly when low battery, all the batteries must be replaced at the same time.
- The user should test the emergency stop function and all warning devices before operating; test should be done on each shift, without a load.
- 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 remote control as necessary; therefore, the descriptions may change.

## 2-2 Precautions

- The operator shall not change any settings or controls without authorization and proper training.
- If the severe interference occurred, the remote control should be stopped at once.
- Please take the batteries out when the transmitter will not be used for a long time.
- Be sure to know the "Procedures of Emergency" as follows.

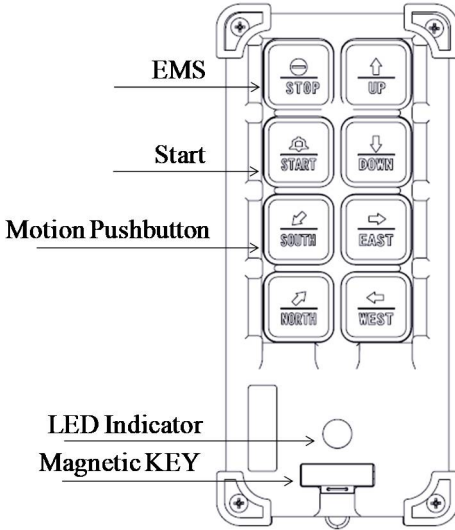
## 3. PROCEDURES OF EMERGENCY

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

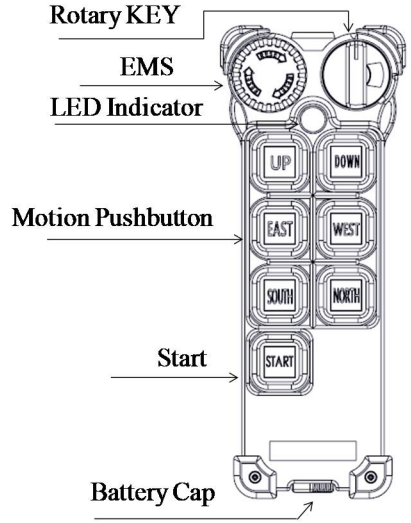
1. Press "EMS" button.
2. Turn the key to "OFF" position and remove it.  
(For E3S/E3M, turn the rotary key to "OFF" position and unplug. For E3B, take off the magnetic key.)
3. Switch off the main power of crane.
4. Contact the distributor for inspection and service.

## 4. HOW TO START

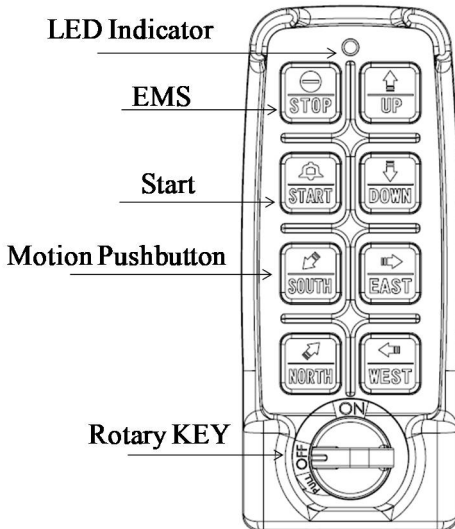
### 4-1 F21-E3 transmitter & receiver deployment



**F21-E3B Transmitter**

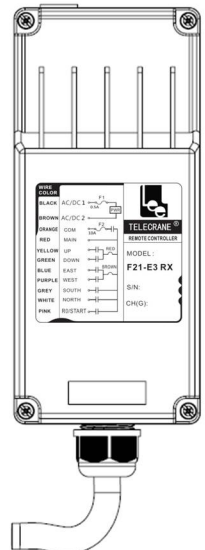


**F21-E3M Transmitter**



**F21-E3S Transmitter**

Rx wiring diagram →



**F21-E3 Receiver**

### 4-2 Operation

#### 4-2-1 Pre-inspection

1. Load two AA batteries on the correct direction. (For F21-E3S, the release ribbon must be placed under the batteries.) And lock the battery cover.

Note: Before placing the batteries, make sure the Rotary KEY (or the magnetic key) is on the "OFF" position.

2. Turn on the transmitter (For E3B, put on the magnetic KEY; For E3S, turn the Rotary KEY into "ON" position; For E3M, release the EMS button clockwise then turn the Rotary KEY into "ON" position), and press the "Start" pushbutton to 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 STOP or EMS button.
  - b) Take off KEY.

Note: For E3S/E3M, turn the rotary key to "OFF" position and unplug the KEY; For E3B, remove the magnetic KEY.

- 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

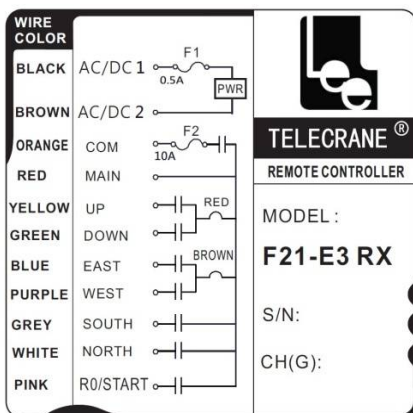
There is a 3-stage power indicating function with LED display.

1. "Green color": Sufficient power to operate transmitter.
2. "Yellow color": Power is depleting. Operation must be stopped immediately (for example: hang down the loads to ground) to replace new 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.

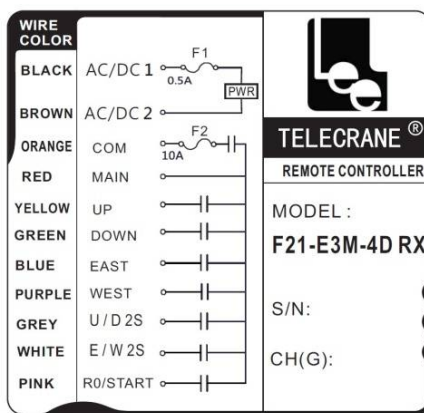
## 5. RECEIVER POWER SELECTION

F21-E3 receiver provides with 2 kinds of switching power supply, HIGH voltage (48~456VAC/VDC), LOW voltage (10~43VAC/VDC) for selection. The designated voltage will be set when the receiver is made in factory.

## 6. RECEIVER WIRING DIAGRAM



**E3M/E3S/E3B**



**E3M-4D**