

Industrial remote control

**EASY TO CONTROL**

**Prowinch LLC**  
**www.prowinch.com**

**TELEcontrol**<sup>TM</sup>  
Professional solution  
for industrial remote control



English version

Prowinch LLC  
www.prowinch.com

**EASY TO CONTROL**



# [Simple question]

## Why is the TELEcontrol remote

- The present device can also be used...
- Product is great but it would be a little expensive...
- Compared with other company's products, what the advantages are...
- Our present operation may be improper...
- Send an inquiry to try it...
- If we choose it, we will do well...
- .....

## control easy to use?



We meet the need of  
**SAFETY DURABILITY ENVIRONMENT** Protection etc

The best cost performance

**TELEcontrol F** SERIES industrial remote control

## ABOUT TELEcontrol

### Safe and reliable wireless remote control

We develop, manufacture and sell industrial radio control system. With long-term accumulated experience, it is believed that most industrial equipment can be operated by the wireless remote controls.

Along with the development of society and economy, modern industry requires perfect balance between human and technology. Therefore, selection of appropriate control devices is of key importance. The wireless remote control system is the wise choice to ergonomics and environment.

### Focus on improving the efficiency and flexibility

Industrial remote control system is more and more widely applied in various industrial fields and brings much positive influence. With industrial remote control systems, industrial workers handhold portable transmitters, walk freely and choose the best position to operate it. This improves the working environment and safety, reduces accidents, such as injury and saves manpower during operation. With remote controls, the operator can finish the various works independently that improve the working efficiency.

### Wireless remote control can be applied in most fields

We can boldly announce that wireless remote control can be used in most areas. At present, TELEcontrol wireless remote control system, mainly used in four areas, vehicles equipment, industrial control, lifting machinery and door control system. Such as crane, engineering machinery, lifting platform, traveling crane, hydraulic equipment, automobile tail board, emergency workers van, conveyor belts, industrial door and robot, etc.

### Comprehensive remote control solutions

One of the main purposes is to make the customer to be satisfied with TELEcontrol brand and products. If our standard products cannot meet your needs, we can launch the project cooperation with you, go all out to handle the related issues and put forward reasonable solutions to realize your requirements. We have all kinds of special solutions. With customized transmitter panels and software modification, we try our best to produce the most suitable remote control system for you.

The delivery time is from twenty-four hours to two weeks based on the types and quantity etc. The warranty period is one year.

The service department is with professional senior technicians who can offer best service to you.

### Many years of professional experience, accumulation of knowledge, innovation course

Face of the broad market and with a solid professional competence, TELEcontrol is the leadership of innovation and technology and it is committed to break through the limits to become one of the leaders of radio remote controls. With market-oriented and demand-oriented, we develop products and focus on the close cooperation between remote control solutions and customer needs. Therefore, we are very confident to meet the various requirements on the industrial wireless remote control.

### Global Multinational Corporation

In the international market, the products have obtained a high praise and widely been used in various fields. At present, Our business have spread all over the world. The headquarters is located in the Victoria, Seychelles. The global manufacturing center is located in Ningbo, China. There are subsidiaries in Netherlands, Germany, Norway, Britain, the United States, Estonia, Turkey and Sweden. Our dealers are throughout Australia, France, Spain and Denmark, etc.

### Vision

In wireless remote control and wireless applications, TELEcontrol become a prestigious, international and high-speed growth enterprise and be respected by all.

### Business Concepts

To make man-machine communication become effective, convenient and safe. To exceed customers' demands of equipment control and communication. To realize our operation principle through the continuous development, manufacturing, sales of good wireless remote control and communication system.

## 3E Module

We put forward the concept of the module.

Develop and evolve further and provide project with demands of the time.

Easy

Evolution

Economy

- Promote the product research and manufacturing
- Improve marketing and service quality
- Enhance customer satisfaction
- Grow with customers

Expansible



3E EVOLUTION



www.e-telecontrol.com  
www.uting3e.com



**TELEcontrol**

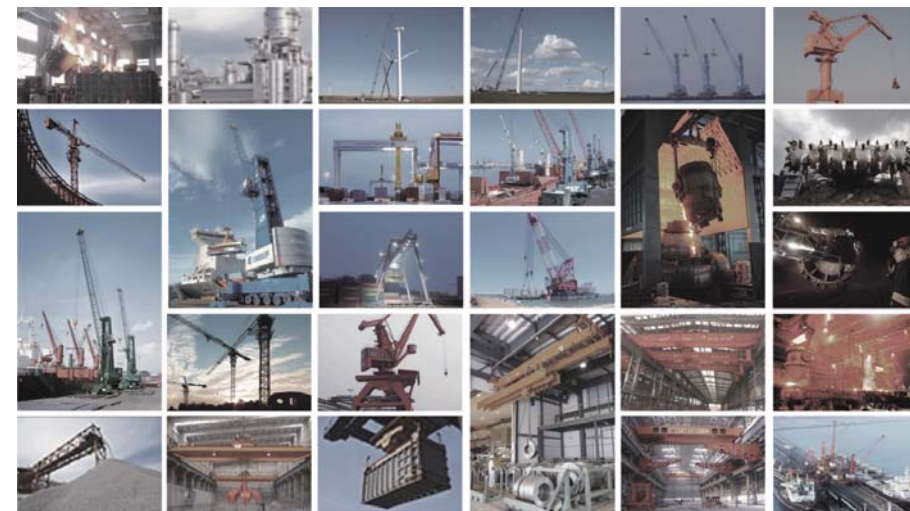
**Application**



# CONTENTS

**Professional solution  
for industrial remote control**

- 01 F21-2S/D
- 03 F21-4S/D
- 05 F21-E1/E2/E1B
- 07 F23-A++/BB
- 09 F24-6S/D、8S/D、10S/D、12S/D
- 11 F24-D
- 13 F24-60
- 17 F26-A1/A2/A3、B1/B2/B3、C1/C2/C3
- 19 EF24-6S/D、8S/D、10S/D、12S/D
- 21 EF24-60
- 23 Solutions
- 24 Accessories



# F21-2S/2D TRANSMITTER

Small, economical, convenient



MODEL: F21-2S-TX  
ITEM CODE: 921-002-001  
Dimension: 132 x 45 x 28mm  
Weight: 98g(without batteries)

MODEL: F21-2D-TX  
ITEM CODE: 921-002-002  
Dimension: 132 x 45 x 28mm  
Weight: 98g(without batteries)



F21-2S

F21-2D

## Product Features

- Two single/double speed buttons, one "STOP"
- 6 control contactors
- With battery voltage warning device, the power supply is cut off during low power
- Safety key switch is to prevent from unauthorized user
- Program the button function by computer interface
- Up/down can be programmed to interlock or non-interlock
- The spare button can be programmed to start, toggle or normal, etc

## Transmitter Parameters: F21-TX

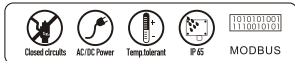
Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310~331MHz; UHF: 425~446MHz
Transmitter power	≤ 10dBm
Transmitter power supply	2 AA batteries
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C
Control distance	Approx 60m(100 meters is customized)

## Standard Configuration

- One transmitter (with hanging belt)
- One dust bag
- One receiver
- Receiver is with 1.6 meter cable
- Battery: one pair
- One receive antenna
- Operation and maintenance manual

## Safety features

Each radio remote control system functions in all manner of operational conditions equipped with their own unique identity code (ID-code). This means that only the correct control unit can activate and control its matching receiver (crane/machine) for maximum safety. The system is with FCC and CE certificates.



# F21-2S/2D RECEIVER



F21-2S

F21-2D

MODEL: F21-2S RXC  
ITEM CODE: 921-102-011  
Dimension: 88x92x62mm  
Weight: 290g

MODEL: F21-2DRXC  
ITEM CODE: 921-103-011  
Dimension: 88x92x62mm  
Weight: 320g

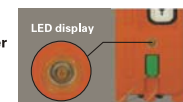


## Receiver Parameters: F21-RXC

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310~331MHz; UHF: 425~446MHz
Receiver sensitivity	-110dBm
Receiver power supply	18~65V AC/DC, 65~440V AC/DC ( optional )
Output contactor capacity	8A sealed relay output (with AC 250V/10A relays, 10A fuse)
Control distance	Approx 60m (100 meters is customized)
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C



The series NO. and production date are laser markings of anti-counterfeit.



The transmitter is with LED display. When power is low, it provides optical signal to warn the user to replace batteries.

## Application:

Single-hook, single-speed electric hoist or hoist-type traffic and industrial remote control with 6 contacts or less.

# ➤ F21-4S/4D TRANSMITTER

Economical, safe, convenient



MODEL: F21-4S-TX  
ITEM CODE: 921-004-001  
Dimension: 156 x 61 x 51 mm  
Weight: 255g (without batteries)

MODEL: F21-4D-TX  
ITEM CODE: 921-004-002  
Dimension: 156 x 61 x 51 mm  
Weight: 255g (without batteries)



F21-4S

F21-4D

## Product features

- 4 buttons (D means double steps), spare button
- 8 control contactors
- With battery voltage warning device, the power supply is cut off during low power
- Program the button function by computer interface
- Up/down, east/west can be programmed to interlock or non-interlock
- The spare button can be programmed to start, toggle or normal, etc

## Transmitter Parameters: F21-TX

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310-331MHz; UHF: 425-446MHz
Transmitter power	≤10dBm
Transmitter power supply	2 AA batteries
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C
Control distance	Approx 100m (200 meters is customized)

## Standard Configuration

- One transmitter (with hanging belt)
- One dust bag
- One receiver
- Receiver is with 1.6 meter cable
- Battery: one pair
- One receive antenna
- Operation and maintenance manual

## Safety features

Mechanical equipment safety 2006/42: Priority Emergency Stop "Stop"  
According to EN61508 to SIL3 level On the basis of EN13849-1 and 2, PLe performance level Electromagnetic compatibility EMC protection. The system is with FCC and CE certificates.



# ➤ F21-4S/4D RECEIVER



MODEL: F21-RXC  
ITEM CODE: 921-100-112  
Dimension: 205x86x80mm  
Weight: 620g



## Receiver Parameters: F21-RXC

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310-331MHz; UHF: 425-446MHz
Receiver sensitivity	-110dBm
Receiver power supply	18-65V AC/DC, 65-440V AC/DC (optional)
Output contactor capacity	8A sealed relay output (with AC 250V/10A relays, 10A fuse)
Control distance	Approx 100m (200 meters is customized)
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C



**The green technology innovation**  
The green design of power supply is to enhance not only the products adaptability on the environment, but also the concern on the social green idea. We will certainly progress with the times.



## Application:

Single-hook, single-speed electric hoist or hoist-type traffic and industrial remote control with 8 contacts or less

# F21-E1/E2/E1B TRANSMITTER

Economical, safe, convenient



MODEL: F21-E1-TX  
ITEM CODE: 921-006-001  
Dimension: 156 x 61 x 51 mm  
Weight: 255g (without batteries)

MODEL: F21-E2-TX  
ITEM CODE: 921-006-002  
Dimension: 156 x 61 x 51 mm  
Weight: 255g (without batteries)

MODEL: F21-E1B-TX  
ITEM CODE: 921-006-101  
Dimension: 164 x 75 x 46 mm  
Weight: 315g (without batteries)



F21-E1

F21-E2

F21-E1B

## Product features

- 8 operation buttons, 6 single-speed buttons and "STOP"
- 8 control contactors
- With battery voltage warning device, the power supply is cut off during low power
- Program the button function by computer interface
- Up/down, east/west, north/south can be programmed to interlock or non-interlock.
- The spare button can be programmed to start, toggle or normal, etc

## Transmitter Parameters: F21-TX

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310-331MHz; UHF: 425-446MHz
Transmitter power	≤10dBm
Transmitter power supply	2 AA batteries
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C
Control distance	Approx 100m (200 meters is customized)

## Standard Configuration

- One transmitter (with hanging belt)
- One dust bag
- One receiver
- Receiver is with 1.6 meter cable
- Battery: one pair
- Operation and maintenance manual

## Safety features

- Unique 4.3 billion ID code
- Hamming code
- Enhanced watch-dog circuit
- With FCC and CE certificate



# F21-RXC RECEIVER

## Start protection circuit

Each system has a dedicated testing circuit. Before the system start, the transmitting system test all switch contacts and receiving system test relays. Only both procedures are passed, then whole system start working.

MODEL: F21-RXC  
ITEM CODE: 921-100-112  
Dimension: 205x86x80mm  
Weight: 620g



## Receiver Parameters: F21-RXC

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310-331MHz; UHF: 425-446MHz
Receiver sensitivity	-110dBm
Receiver power supply	18-65V AC/DC, 65-440V AC/DC (optional)
Output contactor capacity	8A sealed relay output (with AC 250V/10A relays, 10A fuse)
Control distance	Approx 100m (200 meters is customized)
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C



Connect buckle



Damping rubber



Safety code

## Application:

Single-hook, single-speed electric hoist or hoist-type traffic and industrial remote control with 8 contacts or less.

# F23-A++/BB TRANSMITTER

Economical, safe, durable



MODEL: F23-A++-TX  
ITEM CODE: 923-010-101  
Dimension: 164 x 75 x 46 mm  
Weight: 328g (without batteries)

MODEL: F23-BB-TX  
ITEM CODE: 923-012-101  
Dimension: 164 x 75 x 46 mm  
Weight: 328g (without batteries)

disabled NO.3  
and NO.4 buttons



F23-A++

F23-BB

## Product Features

- 12 single speed buttons, one "STOP"
- 12 control contactors
- With battery voltage warning device, the power supply is cut off during low power
- Safety switch key is to prevent from unauthorized user
- Program the button function by computer interface
- Up/down, east/west, south/north can be programmed to interlock or non-interlock
- Start key can be programmed to start, toggle switch, normal or other functions
- The spare buttons can be programmed to normal, interlock, toggle or start, etc

## Transmitter Parameters: F23-TX

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310-331MHz; UHF: 425-446MHz
Transmitter power	≤10dBm
Transmitter power supply	2 AA batteries
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C
Control distance	Approx 100m (200 meters is customized)

## Standard Configuration

- One transmitter (with hanging belt)
- One dust bag
- One receiver
- Receiver is with 1.6 meter cable
- Battery: one pair
- One receive antenna
- Operation and maintain manual

## Safety features

Each radio remote control system functions in all manner of operational conditions equipped with their own unique identity code (ID-code). This means that only the correct control unit can activate and control its matching receiver (crane/machine) for maximum safety With FCC and CE Certificates.



# F23-A++/BB RECEIVER



F23-A++

F23-BB

MODEL: F23-A++-RXC  
ITEM CODE: 923-100-012  
Dimension: 168x166x93mm  
Weight: 780g

MODEL: F23-BB-RXC  
ITEM CODE: 923-610-011  
Dimension: 320x253x107mm  
Weight: 2020g



## Receiver Parameters: F23-RXC

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310-331MHz; UHF: 425-446MHz
Receiver sensitivity	-110dBm
Receiver power supply	18-65V AC/DC, 65-440V AC/DC (optional)
Output contactor capacity	8A sealed relay output (with AC 250V/10A relays, 10A fuse)
Control distance	Approx 100m (200 meters is customized)
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C



Button is English or arrow  
(optional, customized)



Standard antenna interface  
optional enhanced antenna

## Application:

MD double-speed electric hoist or double-speed, double-hook/single-speed crane or any industrial remote control with 12 contacts or less.



# F24 SERIES TRANSMITTER

Safe, reliable, functional, operational



MODEL: F24-6S/D-TX  
ITEM CODE: 924-006-001  
Dimension: 156 x 61 x 51 mm  
Weight: 255g(without batteries)

MODEL: F24-8S/D-TX  
ITEM CODE: 924-008-001  
Dimension: 186 x 61 x 51 mm  
Weight: 280g(without batteries)

MODEL: F24-10S/D-TX  
ITEM CODE: 924-010-001  
Dimension: 186 x 61 x 51 mm  
Weight: 280g(without batteries)

MODEL: F24-12S/D-TX  
ITEM CODE: 924-012-001  
Dimension: 186 x 61 x 51 mm  
Weight: 280g(without batteries)



## Product features

- 7-12 buttons (D means double steps), STOP, START, spare buttons
- Up to 20 control contacts
- With battery voltage warning device, the power supply is cut off during low power
- Safety switch key is to prevent from unauthorized user
- Program the button function by computer interface
- Up/down, east/west, south/north can be programmed to interlock or non-interlock
- Power key can be programmed to start, toggle switch, normal or other functions
- The spare buttons can be programmed to normal, interlock, toggle or start, etc

## Transmitter Parameters: F24-TX

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310-331MHz; UHF: 425-446MHz
Transmitter power	≤ 10dBm
Transmitter power supply	2 AA batteries
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C
Control distance	Approx 100m (200 meters is customized)

## Standard Configuration

- One transmitter (with hanging belt)
- One dust bag
- One receiver
- Receiver is with 1.6 meter cable
- Battery: one pair
- One receive antenna
- Operation and maintenance manual

## Safety features

Each radio remote control system functions in all manner of operational conditions equipped with their own unique identity code (ID-code). This means that only the correct control unit can activate and control its matching receiver (crane/machine) for maximum safety.



# F24 SERIES RECEIVER

MODEL: F24-RXC  
ITEM CODE: 924-100-102~112  
Dimension: 210x162x107mm  
Weight: 1220g



F24 series remote control system have 80 channels in its frequency range. Even in situation where many sets of remote control are used in the same time, working channel can be easily chose without interfering with other signals and hundred-percent safe and reliable. With advanced design and high quality components, the system is durable and easy to operate. It can easily adapt to complicated and harsh industrial environments such as extra-high/low temperature, dusty, strong vibration, greasy, heavy humidity, etc.

Transmitter and receiver have many functions used in conjunction. The emergency stop button is located in the upper left of transmitter which meets the safety and ergonomics. When stop button is pressed, the system stop working immediately and unconditionally. Transmitter is equipped with a shell of more consistent with ergonomics. The new shell material is more durable, lighter and thinner.

There are 30 types of different configurations based on customer's requirements. Maximum 20 control contacts are sufficient to meet most of requirements. The technique, function, security and flexibility satisfy all your requirements. It is the most advanced remote control system.

## Receiver Parameters: F24-RXC

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310-331MHz; UHF: 425-446MHz
Receiver sensitivity	-110dBm
Receiver power supply	18-65V AC/DC, 65-440V AC/DC (optional)
Output contactor capacity	8A sealed relay output (with AC 250V/10A relays, 10A fuse)
Control distance	Approx 100m (200 meters is customized)
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C



Standard antenna interface optional enhanced antenna



The on/off switch on the transmitter is to prevent from being used by the unauthorized persons.



Dual switch power supply

## Application:

The heavy industrial machinery, such as lifting machinery, crane, hydraulic crane, concrete pump, roller coaster, mining machinery, hoist, truck crane, dump truck, lifting locomotive, lifting machine etc



# F24-D TRANSMITTER

Safe, reliable, functional, operational



MODEL: F24-D-TX  
 ITEM CODE: 924-010-101  
 Dimension: 186 x 61 x 51 mm  
 Weight: 280g (without batteries)

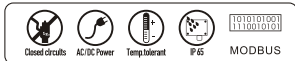
With full sealed and two steps buttons, the products' performance is improved and service life is longer. The "mushroom" emergency stop button is with self-locking function which ensures complete safety. Enhanced transmitter power is to increase the control distance to be 200meters.

### Product features

- 10 double speed buttons, stop, start, spare buttons
- 22 control contactors
- Battery voltage warning device, the power supply is cut off during low power
- Safety key switch is to prevent from unauthorized users
- Program the button function by computer interface
- Up/down, east/west, south/north can be programmed to interlock or non-interlock
- Start key can be programmed to start, toggle switch, normal or other functions
- The spare buttons can be programmed to start, toggle, interlock or normal, etc

### Transmitter Parameters: F24-TX

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310~331MHz; UHF: 425~446MHz
Transmitter power	≤10dBm
Transmitter power supply	2 AA batteries
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C
Control distance	Approx 100m (200 meters is customized)



F24-D

### Standard Configuration

- One transmitter (with hanging belt)
- One dust bag
- One receiver
- Receiver is with 1.6 meter cable
- Battery: one pair
- One receive antenna
- Operation and maintenance manual

### Safety features

Each radio remote control system functions in all manner of operational conditions equipped with their own unique identity code (ID-code). This means that only the correct control unit can activate and control its matching receiver (crane/machine) for maximum safety.

# F24-D RECEIVER

MODEL: F24-D-RXC  
 ITEM CODE: 924-610-012  
 Dimension: 320x253x107mm  
 Weight: 2020g



### Receiver Parameters: F24-RXC

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310~331MHz; UHF: 425~446MHz
Receiver sensitivity	-110dBm
Receiver power supply	18~65V AC/DC; 65~440V AC/DC ( optional )
Output contactor capacity	8A sealed relay output (with AC 250V/10A relays, 10A fuse)
Control distance	Approx 100m (200 meters is customized)
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C



Connection method is flexible and suitable for special requirements.



The LED of receiving system indicates the working states to see the operation voltage of the receiving system

### Application:

It is mainly used in metallurgy, shipbuilding, container terminals, warehousing, machinery manufacturing, chemical industry, paper, construction and engineering machinery and other fields with lifting controlled by remote controls.



# ➤ F24-60 TRANSMITTER

Intelligent, powerful, safe, reliable, outstanding

### Main performance of TELEcontrol remote control system

The emergency stop signal of telecontrol remote control system includes emergency stop signal and power off signal during off work. Emergency stop signal command switches off the receiving system actively (without any effective output). It needs only 20ms from signal sending to receiving. The power off signal during off work is that the receiving system does not receive effective signals from transmitter during certain time (for examples, the battery is low power, the distance is out of control range and no operation for long time etc.), then the receiving system is off automatically. The time can be programmed (10 minutes, 20 minutes, 1 hour, 4 hours etc.)

### System address

Each remote control system is programmed with different system address codes. Each code is used only one time and they are not repeated to avoid interference and wrong signal between the systems.

### Digital processing system

With CPU microprocessor and transmitting RFID chip, the transmitting system assures the instruction codes be transmitted accurately and fast. With CPU microprocessor and receiving RFID chip, the receiving system assures accurate and reliable decoding. To ensure the perfect safety and reliability, the receiving system is featured with brake monitor circuit which makes correction on the received signals and decoded digital signals. The CPU makes self-testing to ensure the stability of the remote control system.



### The display panel

The LED of receiving system indicates the working states to see the operation voltage of the receiving system, signal transmitting, the first and second testing circuit is normal or not. It is used for system adjustment and maintenance.



### Start protection circuit

Each system has a dedicated testing circuit. Before the system start, the transmitting system test all switch contacts and receiving system test relays. Only both procedures are passed, then whole system start working.



### Transmitter letterings

The letters and graphics are clear. The panel makes the operation to be more intuitive, more convenient

The on/off button on the transmitter prevent from being used by those unauthorized persons.



### TELEcontrol miniature joysticks

With twenty years application and improving, TELEcontrol joysticks of special material are proved to be the best products. Ten years guarantee eliminates the customers worries.



### The green technology innovation

The green design of power supply is to enhance not only the products adaptability on the environment, but also the concern on social hot green idea. We will certainly progress with the times.



# F24-60 TRANSMITTER

Intelligent, powerful, safe, reliable, outstanding



MODEL: F24-60-TX  
ITEM CODE: 924-600-001  
Dimension: 210 x 152 x 128 mm  
Weight: 980g (without batteries)



F24-60

## Product features

- 6 buttons, 4 three-position or two-position rotating switch, stop, start, spare button.
- 2 five-step joysticks with 10 million times of mechanical life and pure proportion.
- Up to 40 control contacts
- With battery voltage warning device, the power supply is cut off during low power
- Safety switch key is to prevent from unauthorized user
- Program the button function by computer interface
- Start key can be programmed to start, toggle switch, normal or other functions
- The spare buttons can be programmed to start, toggle, interlock or normal, etc
- Installed with proportional module for analog signal output (optional)

## Transmitter Parameters: F24-TX

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310-331MHz; UHF: 425-446MHz
Transmitter power	≤10dBm
Transmitter power supply	2 AA batteries
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C
Control distance	Approx 300m

## Standard Configuration

- One transmitter (with waist belt)
- One receiver
- Receiver is with 2.5 meter cable
- Battery: two pairs
- One receive antenna
- One battery box
- Operation and maintenance manual

**Safety** Each radio remote control system functions in all manner of operational conditions equipped with their own unique identity code (ID-code). This means that only the correct control unit can activate and control its matching receiver (crane/machine) for maximum safety.



# F24-60 RECEIVER

MODEL: F24-60-RXC  
ITEM CODE: 924-610-011  
Dimension: 320x253x107mm  
Weight: 2020g



As double joystick remote control, F24-60 is one of the most advanced crane controllers on the market and it is developed in ISO9001 certificated factory with more than 21 years history.

F24-60 is designed with strong safety features. It has more than 4.3 billion unique safety code, automatic frequency tracking and locking and failure self-diagnosis, etc. Stop button is automatic. When components such as switches, joysticks, or relays are in fault, The system stops working till it is fixed.

F24-60 has extraordinary communication design—simultaneous encoding and decoding transmission, interference elimination, error detection and correction, and frequency resettable manually.

F24-60 has large amounts of programmable functions and is extensible using Windows compatible software with free update. Functions are all programmable.

## Receiver Parameters: F24-RXC

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310-331MHz; UHF: 425-446MHz
Receiver sensitivity	-110dBm
Receiver power supply	18-65V AC/DC, 65-440V AC/DC (optional)
Output contactor capacity	8A sealed relay output (with AC 250V/10A relays, 10A fuse)
Control distance	Approx 300m
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C



**The green technology innovation**  
The green design of power supply is to enhance not only the products adaptability on the environment, but also the concern on social hot green idea. We will certainly progress with the times.



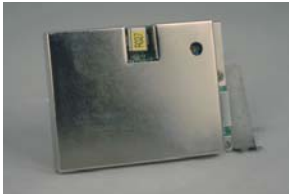
Installation of battery box

**Application:**  
Double joystick wireless remote control, F24-60 is suitable for double hooks and multi-speed, multi-function and proportional crane and industrial remote controls with complicated functions.



# F26 SERIES TRANSMITTER

Intelligent, flexible, safe, reliable



MODEL: F26-A-TX  
ITEM CODE: 926-010-101  
Dimension: 186x 61 x 51 mm  
Weight: 255g(without batteries)

MODEL: F26-B-TX  
ITEM CODE: 926-012-101  
Dimension: 186x 61 x 51 mm  
Weight: 255g(without batteries)

MODEL: F26-C-TX  
ITEM CODE: 926-006-101  
Dimension: 156 x 61 x 51 mm  
Weight: 255g(without batteries)



## Product features

- 7-11 buttons, stop and spare button
- Up to 18 control contacts
- With battery voltage warning device, the power supply is cut off during low power
- Program the button function by computer interface
- Up/down, east/west, south/north can be programmed to interlock or non-interlock
- Start key can be programmed to start, toggle switch, normal or other functions
- The spare buttons can be programmed to start, toggle, interlock or normal, etc

## Transmitter Parameters: F26-TX

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310-331MHz; UHF: 425-446MHz
Transmitter power	≤10dBm
Transmitter power supply	2 AA batteries
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C
Control distance	Approx 100m (200 meters is customized)

## Standard Configuration

- One transmitter (with hanging belt)
- One dust bag
- One receiver
- Receiver is with 1.6 meter cable
- Battery: one pair
- One receive antenna
- Operation and maintenance manual

## Dual power supply:

Focus on power supply module for thirteen years, the power supply is more stable and energy saving. It is with dual power supply, AC/DC 18-65V and 65-440v which can be switched by user.



# F26 SERIES RECEIVER

MODEL: F26-RXC  
ITEM CODE: 923-100-012  
Dimension: 168x166x93mm  
Weight: 780g



The frequency range for F26 series remote control system is 315MHz and 433MHz. With narrowband FM method, it has 80 channels. Even in situation where many sets of remote control are used in the same time, working channel can be easily chose without interfering with other signals and hundred-percent safe and reliable. It is the choice for vehicle equipments, winches, cranes, and other remote controls. With advanced design and high quality components, the system is durable and easy to operate.

F26 series remote control system can easily adapt to complicated and harsh industrial environments such as extra-high/low temperature, dusty, strong vibration, greasy, heavy humidity, etc. An emergency stop button is located in the upper left of transmitter which meets the safety and principle of human body engineering. When stop button is pressed, the system stop working immediately and unconditionally. Transmitter is in accordance with EN954-1, 3 safety standard. Transmitter is equipped with a shell of more consistent with human body engineering. The new shell material is more durable, lighter and thinner.

## Receiver Parameters: F26-RXC

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310-331MHz; UHF: 425-446MHz
Receiver sensitivity	-110dBm
Receiver power supply	18-65V AC/DC, 65-440V AC/DC (optional)
Output contactor capacity	8A sealed relay output (with AC 250V/10A relays, 10A fuse)
Control distance	Approx 100m (200 meters is customized)
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C

## Model Name Function Description

Model Name	Function Description
F26-A1	Eight single-speed buttons
F26-A2	The first two buttons are double speed and others are single speed.
F26-A3	Eight two-speed buttons
F26-B1	Ten single-speed buttons
F26-B2	The first two buttons are double speed and others are single speed
F26-B3	Ten two-speed buttons
F26-C1	The first two buttons are double speed and others are single speed.
F26-C2	The first four buttons are double speed and others are single speed.
F26-C3	Six two-speed buttons

## Application:

MD double-speed electric hoist or double-speed, double-hook/single-speed crane and industrial remote control with 18 contacts or less.

# EF-24 TRANSMITTER

Explosion-proof design



MODEL: EF24-TX  
ITEM CODE: 924-400-001  
Dimension: 186 x 61 x 51 mm  
Weight: 280g(without batteries)



EF24-6S/D

EF24-8S/D

EF24-10S/D

EF24-12S/D

## Product features

- 10 double steps pushbuttons + EMERGENCY STOP + START KEY + SPARE
- 20 control contactors
- Battery voltage warning device, the power supply is cut off during low power
- Safety key switch is to prevent from unauthorized users
- Program the button function by computer interface
- Up/down, east/west, south/north can be programmed to to interlock or non-interlock
- Start key can be programmed to start, toggle switch, normal or other functions
- The spare buttons can be programmed to start, toggle, interlock or normal, etc

## Transmitter Parameters: EF24-TX

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310-331MHz; UHF: 425-446MHz
Transmitter power	≤10dBm
Transmitter power supply	4 AA batteries
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C
Control distance	Approx 100m (200 meters is customized)

## Standard Configuration

- One transmitter(with hanging belt)
- One dust bag
- One receiver
- Receiver is with 1.6 meter cable
- Battery: one pair
- One receive antenna
- Operation and maintenance manual

## Dual power supply:

EF24 is new series explosion-proof radio remote control based on F24 series, strictly complies with explosion-proof criterion GB3638.1 and GB3836.4, and has passed EXIBII BT4 intrinsic safety certification, can operate safely in the chemical and petrochemical industries, mining and other flammable, explosive and hazardous environments,



# EF-24 RECEIVER

MODEL: EF24-RXC  
ITEM CODE: 924-100-103  
Dimension: 210x162x107mm  
Weight: 1220g



## Safety of Receiver Operation

The system is with explosion-proof casing and inner electronic circuit safe solution and it meets ATEX rules and strictly complies with explosion-proof standard. The emergency stop circuit and control with duplex redundant and safety relay with forcibly guided (mechanically linked) contacts which make it meets the E-stop class Gat.3 in The European mechanical equipment standard.

To ensure safety, continuous wireless communication device make receiver stop passively when the radio signal is disconnected or is interfered.

Buttons can be programmed to interlock to avoid opposite operation.



SPECIAL PRODUCT

## Receiver Parameters: EF24-RXC

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310-331MHz; UHF: 425-446MHz
Receiver sensitivity	-110dBm
Receiver power supply	18-65V AC/DC, 65-440V AC/DC ( optional )
Output contactor capacity	8A sealed relay output (with AC 250V/10A relays, 10A fuse)
Control distance	Approx 100m (200 meters is customized)
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C



Shell is of antistatic material, and adding antistatic agent, the maximum enhancement in the anti-static grade products.

## Application:

Typical applications: It can be widely used in offshore oil field, oil tankers, onshore oilfield, chemical industry, oil refinery, coal mines, paint factory and aircraft maintenance factory.

# EF24-60 TRANSMITTER

Explosion-proof design



MODEL: EF24-60-TX  
ITEM CODE: 924-600-002  
Dimension: 210 x 152 x 128 mm  
Weight: 980g (without batteries)



EF24-60

## Product features

- 6 buttons, 4 three-position or two-position rotating switch, stop, start, spared button.
- 2 five-step joysticks with 10 million times of mechanical life and pure proportion.
- Up to 40 control contacts
- With battery voltage warning device, the power supply is cut off during low power
- Safety switch key is to prevent from unauthorized user
- Program the button function by computer interface
- Start key can be programmed to start, toggle switch, normal or other functions
- The spare buttons can be programmed to start, toggle, interlock or normal, etc
- Installed with proportional module for analog signal output (optional)

## Transmitter Parameters: EF24-TX

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF: 310~331MHz; UHF: 425~446MHz
Transmitter power	≤10dBm
Transmitter power supply	2 AA batteries
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C
Control distance	Approx 300m

## Standard Configuration

- One transmitter (with waist belt)
- One receiver
- Receiver is with 2.5 meter cable
- Battery: two pairs
- One receive antenna
- One battery box
- Operation and maintenance manual

## Dual power supply:

EF24 is new series explosion-proof radio remote control based on F24 series, strictly complies with explosion-proof criterion GB3638.1 and GB3836.4, and passed EXIBII BT4 intrinsic safety certification, can operate safely in the chemical and petrochemical industries, mining and other flammable, explosive and hazardous environments.



# EF24-60 RECEIVER

MODEL: EF24-60-RXC  
ITEM CODE: 924-610-012  
Dimension: 320x253x107mm  
Weight: 2020g



## Safety Features

**Wireless Communication Safety between Transmitter and Receiver**

Continuous wireless communication connection: Based on omnibearing wireless signal transmitting design and barrier free features, operators can handle with lifting equipment precisely and avoid dangerous areas.

Non-repeated 4.3 billion codes are used for system decoding of transmitter and receiver.

Digital communication Hamming code correcting distance is 4 bits (minimum information difference between two groups digital communication)



SPECIAL PRODUCT

## Receiver Parameters: EF24-RXC

Material	Glass-Fiber PA
Enclosure protection class	IP65
Frequency range	VHF310~331MHz, UHF425~446MHz
Receiver sensitivity	-110dBm
Receiver power supply	18~65V AC/DC, 65~440V AC/DC ( optional )
Output contactor capacity	8A sealed relay output (with AC 250V/10A relays, 10A fuse)
Control distance	Approx 300m
Safety code	32 bits (4.3 billion)
Temperature range	-40°C~+85°C



Shell is of antistatic material, and adding antistatic agent, the maximum enhancement in the anti-static grade products.

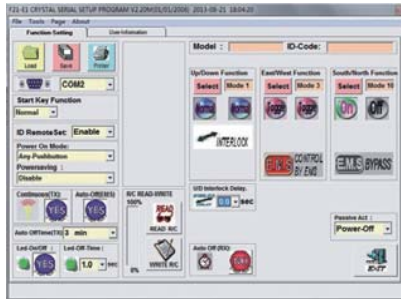
## Application:

Typical applications: It can be widely used in offshore oil field, oil tankers, onshore oilfield, chemical industry, oil refinery, coal mines, paint factory and aircraft maintenance factory.

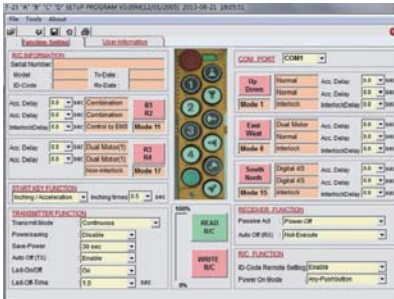
# SOLUTIONS

# ACCESSORIES

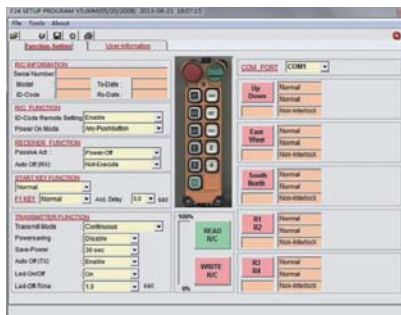
## F21 Function of the software



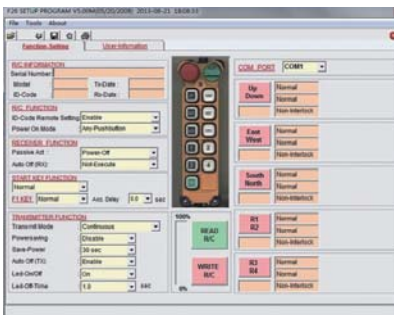
## F23 Function of the software



## F24 Function of the software



## F26 Function of the software



## F24-60 Function of the software



## Maintenance tools



Copier  
920-101-001



Data line and software  
920-101-002



Shockproof base  
701-924-001



Waist belt  
701-924-002



shoulder strap  
701-924-003



Joystick  
701-924-004



Battery box  
701-924-005



Emergency stop button  
701-924-006



Rotary switch  
701-924-007



Toggle switch  
701-924-008



Frequency decoding board  
701-924-009



Tag  
701-924-010



Antenna  
701-901-001



Antenna  
701-901-002



Antenna  
701-901-003



Antenna  
701-901-101



Start Switch  
701-901-004



Rubber button  
701-921-001



Emergency stop board  
701-924-011



Relay  
701-901-005



Double speed button  
701-901-006



Single speed button  
701-921-002



Crystal  
701-901-007



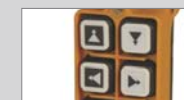
Magnet Key  
701-921-003



Dust bag  
701-924-012



Dust bag  
701-921-004



button label  
701-901-008



Battery  
701-901-009



## F21SERIES E1,E2,E1B,4D,4S,4SB,2D,2S

### I. Warranty

#### Quality Assurance

UTING company assure that the end products conform to the known specifications. It works normally after proper installation. However UTING company do not assure that the products do not break in the least or zero error.

#### Warranty period

The product has one year warranty period since ex-factory date and the company assure that the products work normal during warranty period. In warranty period, UTING company would repair the products with quality problems. Any products service required should be sent to assigned repairing place. The user pay the one way freight cost and the UTING company return the products in certain time and pay one way freight cost.

#### Items out of repairing

The repairing range above does not include button, relay, fuse wire, battery and other wearing parts, the damaged board caused by handling mistake or the problems caused by improper using, act of God, natural hazards, insufficient maintenance, ignored operational environment standard, modification without permission, wrong using or site setting by users.

#### Remarks

- \*\* The warranty items above do not have other stated or implied items.
- \*\* The compensation in the warranty is the only compensation. ANT company is not responsible for direct, indirect, special, unexpected or causal present damaging.

### II. Attentions

#### General attentions

- \*\* The products should not be disassembled by personal without professional training. Otherwise it may cause damaging or injured person.
- \*\* The overhead traveling crane should be power off after using to cut off the receiver power and the transmitter key switch should be pulled out.
- \*\* The overhead traveling crane should have power relay, limit switch and other safety equipments.

#### Installation notice

- (I) The receiver's installation site should be away from inverter, motor and their cables to keep from disturbing. The further, the better.
- (II) The receiver should not be installed electric cabinet. The correct installation is to fix the receiver on the outside top or surface of the electric cabinet and connect the receiver cable with the electric cabinet.
- (III) The remote controllers of the series are with 4 billion groups' safety code and the end products are with different safety code. Please be sure that there is not products with the same code in the same working zone to avoid malfunction of disturbing.



(IV) In 20 meters' zone, there should not be equipments with same frequency channel to avoid mutual disturbing.

### III. Emergency situation handling

Please handle as following steps and inform the dealer.

1. Press emergency button( STOP).
2. Pull out the transmitter's key switch.
3. Turn off the crane power
4. Inform the dealer to find the reasons.

### IV. Normal operation

1. Insert the batteries of AA type with full power in the transmitter.
2. Power on the controller according as the power on mode.  
Note: The red LED indicator flashes if the operation is not according as power on steps.
3. Operate the transmitter on the buttons function.
4. Handling after operation:(1) Press emergency button(2) Turn off the key switch and pull it out( to F21-E1B/4SB/2D/2S, pull out magnetic key.
5. Take out the batteries if it would be not used for long time.

### V. Batteries

The transmitter are with two alkaline AA batteries. The LED indicator flash green after pressing the button if the batteries are full electric. Otherwise the LED Indicator flash red or does not flash if the electric is not enough. Then the batteries should be changed soon.

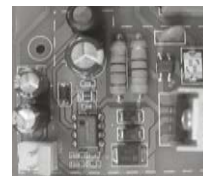
### VI. Receiver, s power choices.

#### Power Supply

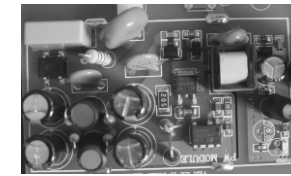
F-21 is with switching power

- (1) AC/DC 18~65V
- (2) AC/DC 65~440V

The advantage of switching power, small volume, light weight, high efficiency, strong anti-interference, wide input power and modularization



(Pic.1)



(Pic.2)

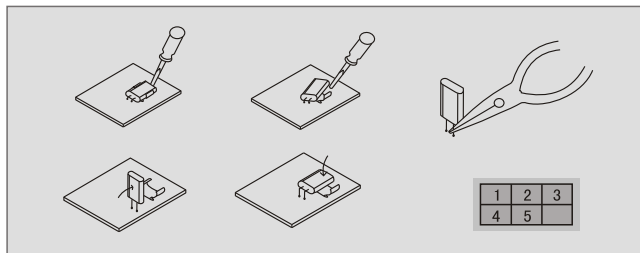


- 1.Low power of 18V~65VDC/AC power unit(Refer to above pic1)
- 2.High power of 65V~440VDC/AC power unit(Refer to above pic2)

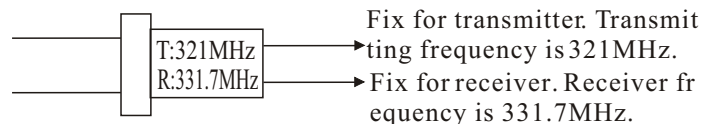
## VII. The transmitter and receiver's changing and labels.

The controller have different circuits for frequency bands, VHF(300MHz) and UHF (400MHz).In same band, please change the quartz crystal to change the channel. The quartz crystals of transmitter and receiver should be in matching pairs.Pay attention to the VHF or UHF frequency band and choose right quartz crystal with VHF or UHF. In the circuitboard, there is“√”behind the letter V or U to imply the frequency band. Followings are the changing steps:

- (1) Pry the front part of the quartz crystal.
- (2) Take out the quartz crystal.
- (3) Make the quartz crystal's pins to be straight by sharp-nose pliers.
- (4) Insert the quartz crystal to the blocks in the circuit board.
- (5) Press the quartz crystal into the protecting block slantingly.



Quartz crystal labeling



Fix for transmitter. Transmitting frequency is 321MHz.  
Fix for receiver. Receiver frequency is 331.7MHz.

Note: The transmitting and receiving frequency must be same.

## VIII. Fuse wire's changing

Push down the fuse blocks' cover by screw driver, contra rotate it and take out the fuse. Then put correct fuse on the cover and put them together in the fuse block. Then fasten the cover.

## IX.LED indicators error warning

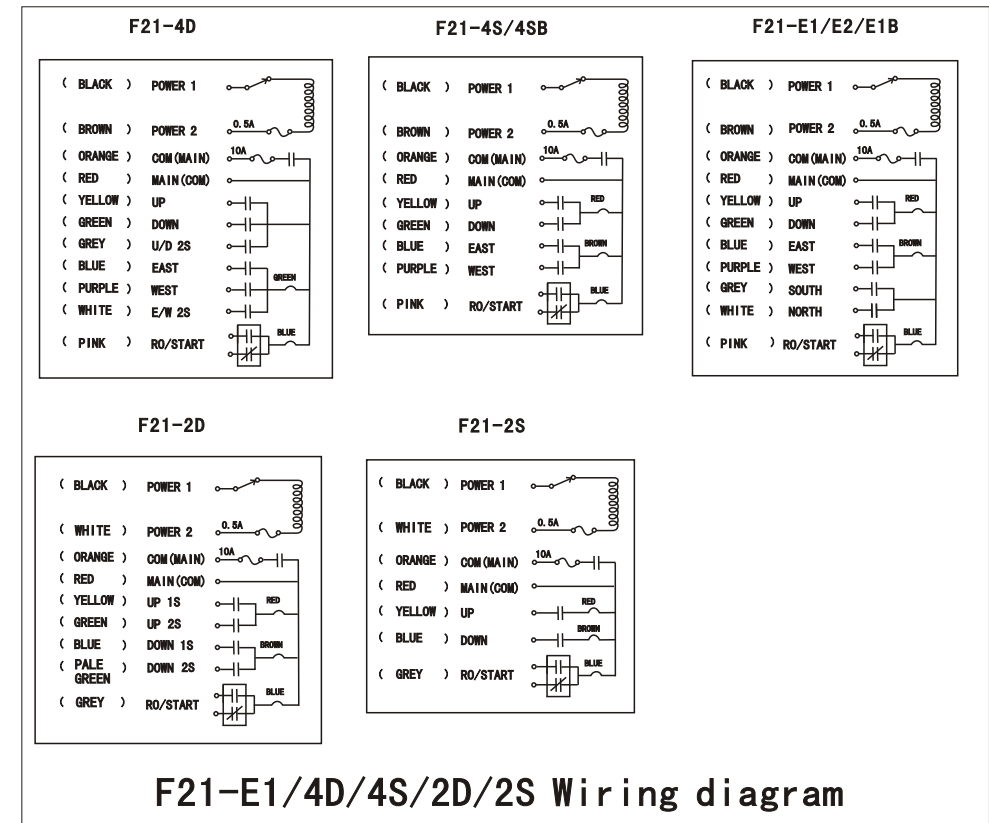
Push down the fuse blocks' cover by screw driver, contra rotate it and take out the fuse. Then put correct fuse on the cover and put them together in the fuse block. Then fasten the cover.

## IX.LED indicators error warning

- 1.Insert the batteries and press the buttons. If the LED flashes red quickly, check following items:
  - A. Buttons are stuck( inform the dealer)
  - B. Stop button has not been rotated and pulled up.
  - C. Power on is not in right steps.
2. The transmitter LED indicator flashes yellow slowly.  
The transmitter memory goes wrong. Please inform the dealer to deal with it.

## X.Easy trouble clearing ways:

- 1.Because of wrong operation or improper operation,transmitter's LED Indicator flashes red.Please take out the batteries,insert and power on the transmitter again.
- 2.The receiver does not act.Please power off the receiver for more than 20seconds. Then power on again.



## F24- 60 SERIES

### 1. Warranty

Utting electronic 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. 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, UTING 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 UTING. Buyer will pay shipping charges to UTING service facility while UTING service facility will pay return shipping charges.

#### Excluded Items

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

#### Remarks

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

### 2. Attention

#### Attention

- ⊙ Never dismantle the equipment by any unauthorized personnel, or equipment may be damaged.
- ⊙ After finishing operation of UTING radio controller shut off main power to the crane, power to receiver, and remove transmitter key.
- ⊙ The crane should be equipped with main power relay, limit switch and other safety devices.

#### Precautions (I)

To avoid any interference, the receiver must be placed as far as possible from frequency inverter and power cable as possible.

#### Precaution (II)

The receiver should be installed on the top of the electrical control box. Do not mount the receiver inside the electrical control box.

### 3. Emergency

In case of Emergency, please follow the procedure below and contact the distributor for service immediately.

1. Press STOP button of transmitter.
2. Remove the key from transmitter.
3. Switch off the main power of crane.
4. Contact distributor nearest you immediately.

### 4. Normal operation

1. Insert 2 AA-size alkaline batteries into battery compartment.
2. Insert magnetic key or rotary key and switch to ON position.
3. Follow the Power-On procedure to energize the main relay inside receiver.



4. Operate normally according to the function settings have been done. The LED flash red quickly during wrong operation.
5. After operation, please proceed as following: (1) Press EMS pushbutton /mushroom, (2) remove the key and keep it in safe place, (3) Remove the batteries when it is not used for long time.

### 5. Transmitter Batteries

2AA size alkaline batteries are required for the transmitter. **DO NOT** use rechargeable batteries. During operation, the LED flash green when battery power is full and flash red intermittent every 2 seconds when battery power is low. When battery power is low, the operating distance will become shorter. For safety reason, replace new batteries immediately when battery power is low.

### 6. Power Supplies

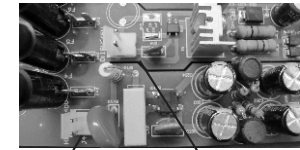
F-26 is with switching power

- (1) AC/DC 18~65V
- (2) AC/DC 65~440V

The advantage of switching power, small volume, light weight, high efficiency, strong anti-interference, wide input power and modularization



Power plug (Pic. 1)



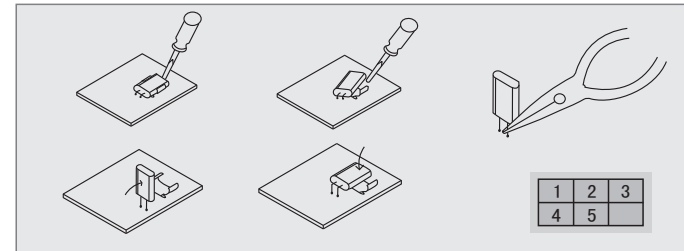
AC/DC 65V~440V AC/DC 18V~65V

1. Close the receiver power supply
2. The receiver power plug from the preset position pull up (Pic. 1)
3. The power plug is inserted into the desired location (Pic. 2)

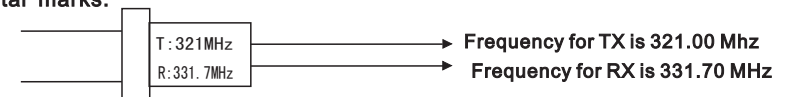
### 7. How to change quartz from transmitter/ receiver & identify frequency quartz

It is simple to change frequency of the new F23 series. The system frequency can be changed simply by replacing correspondent frequency quartz in both the TX and RX.

**Instructions:** (1). Pry up the crystal unit with a flat screwdriver (2). Remove the crystal unit from the system. (3). Use a needle nose pliers to straighten both pins of the new crystal unit. (4). Insert the new crystal unit vertically into the PC board. (5). Press the new crystal down into the socket.



crystal marks:



Not: The transmitting and receiving frequency must be same.



## 8.ID code Remote Settin

ID Code Remote setting allows you to overwrite receiver ID code by a new one from transmitter. Before making ID code remote setting, make sure both TX and RX are in same frequency channel and try to operate them in short distance..

### Instructions:

- (1) Turn off receiver power supply completely (MAIN SWITCH) and turn on again after 20 seconds.
- (2) Press transmitter Emergency Stop
- (3) Press R1 pushbutton and hold it (Do not release R1 pushbutton until next step is completed).
- (4) Press R2 pushbutton 4 times and release "STOP & UP" pushbuttons when red LED flash.
- (5) Release all buttons
- (6) Start the system as usual.

Notes:(a) After power on the receiver again, there is only 4 minutes to finish the setting. If setting can not be finished in 4 minutes, the receiver would not receive the setting signal and would receive normal working signals.

(b) ID code remote setting jumper (JP1) on receiver must be installed in order to perform ID code setting.

(c) Any other receiver ID code with same model may be overwritten also if located within control distance.

(d) ID code remote setting only transmits ID code data. No any other data will be overwritten.

(e) The position of the key and START will not influence the ID code setting

## 9. Fuse wire's changing

Push down the fuse blocks' cover by screw driver, contra rotac it and take out the fuse Then put correct fuse on the cover and put them together in the fuse block. Then fasten the cover.

## 10. COM Configuration

P1~P44 are terminal for COM, changing COM configuration by using wire included inside the packages. Different size of wire is available.

## 11. Troubleshooting

1. Transmitter red LED indicator flashing quickly (every 0.2 sec) when operating
  - a. One of the pushbuttons is jammed.
  - b. Joystick is not in neutral position.
  - c. The EMS mushroom is not released completely.
  - d. The transmitter is not properly Power-On.
2. Transmitter green/Yellow LED indicator flashing crossly when start key switch on.
  - (The joystick #1 memory is damaged. Contact the distributor for service.)
3. Transmitter red/yellow LED indicator flashing crossly when start key switch on.
  - (The joystick #2 memory is damaged. Contact the distributor for service.)
4. Red LED indicator flashing quickly when start key switch on.
  - (Transmitter main memory is damaged. Contact the distributor for service.)
5. Transmitter red LED indicator remains on permanent.
  - (Remove the batteries and re-insert again.)
6. Receiver LED1 indicator flashing quickly.
  - (Receiver main memory is damaged. Contact the distributor for service.)
7. Receiver does not respond at all
  - (Switch off main power and switch on again after 20 seconds.)

## 12. NC/NO output connection

Relay module are designed for both type of relay such NO and NC/NO. Both outputs connection of NC/NO relay are available on the relay module. To replace NC/NO relay, remove existing NO relay and insert a new NC/NO relay. Follow the relay module indication for new output wire connections for NC/NO relay.

## 13.F24-60 Wiring diagram

Common line	Relay contact	Command	Wire N0.	Remark	
	F1 0.5A	AC-1	2-1		
		AC-2	2-2		
	F3 10A	MAIN-IN	2-3		
	DB1 DB2	MAIN-OUT	2-4		
	F4 10A	COM1	2-21		
	F7 10A	COM2	2-22		
	F5 10A	COM3	2-23		
	F8 10A	COM4	2-24		
		Ry1	F1	1-1	
		Ry2	R0/START	1-2	
		Ry3	R1	1-3	
		Ry4	R2	1-4	
		Ry5	R3	1-5	
		Ry6	R4	1-6	
		Ry7	SWA	1-7	
		Ry8	SW BA	1-8	
		Ry9	SW BB	1-9	
		Ry10	SW CA	1-10	
		Ry11	SW CB	1-11	
		Ry12	SW D	1-12	
		Ry13	1Y(U)1	1-13	
		Ry14	1Y(D)1	1-14	
		Ry15	1Y(U/D)2	1-15	
		Ry16	1Y(U/D)3	1-16	
		Ry17	1Y(U/D)4	1-17	
		Ry18	1Y(U/D)5	1-18	
		Ry19	1X(L)1	1-19	
		Ry20	1X(R)1	1-20	
		Ry21	1X(L/R)2	1-21	
		Ry22	1X(L/R)3	1-22	
		Ry23	1X(L/R)4	1-23	
		Ry24	1X(L/R)5	1-24	
		Ry25	2Y(U)1	2-5	
		Ry26	2Y(D)1	2-6	
		Ry27	2Y(U/D)2	2-7	
		Ry28	2Y(U/D)3	2-8	
		Ry29	2Y(U/D)4	2-8	
		Ry30	2Y(U/D)5	2-10	
		Ry31	2X(L)1	2-11	
		Ry32	2X(R)1	2-12	
	Ry33	2X(L/R)2	2-13		
	Ry34	2X(L/R)3	2-14		
	Ry35	2X(L/R)4	2-15		
	Ry36	2X(L/R)5	2-16		
	Ry37	(AUX)1	2-17		
	Ry38	(AUX)2	2-18		
	Ry39	(AUX)3	2-19		
	Ry40	(AUX)4	2-20		

## F24 SERIES 6S/D,8S/D,10S/D,12S/D

### 1. Warranty

Utting electronic 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. 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, UTING 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 UTING. Buyer will pay shipping charges to UTING service facility while UTING service facility will pay return shipping charges.

#### Excluded Items

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

#### Remarks

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

### 2. Attention

#### Attention

- ⊙ Never dismantle the equipment by any unauthorized personnel, or equipment may be damaged.
- ⊙ After finishing operation of UTING radio controller shut off main power to the crane, power to receiver, and remove transmitter key.
- ⊙ The crane should be equipped with main power relay, limit switch and other safety devices.

#### Precautions (I)

To avoid any interference, the receiver must be placed as far as possible from frequency inverter and power cable as possible.

#### Precaution (II)

The receiver should be installed on the top of the electrical control box. Do not mount the receiver inside the electrical control box.

### 3. Emergency

In case of Emergency, please follow the procedure below and contact the distributor for service immediately.

1. Press STOP button of transmitter.
2. Remove the key from transmitter.
3. Switch off the main power of crane.
4. Contact distributor nearest you immediately.

### 4. Normal operation

1. Insert 2 AA-size alkaline batteries into battery compartment.
2. Insert magnetic key or rotary key and switch to ON position.
3. Follow the Power-On procedure to energize the main relay inside receiver.



4. Operate normally according to the function settings have been done. The LED flash red quickly during wrong operation.
5. After operation, please proceed as following: (1) Press EMS pushbutton /mushroom, (2) remove the key and keep it in safe place, (3) Remove the batteries when it is not used for long time.

### 5. Transmitter Batteries

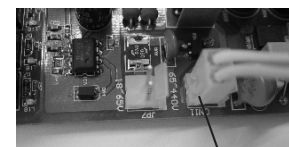
2AA size alkaline batteries are required for the transmitter. **DO NOT** use rechargeable batteries. During operation, the LED flash green when battery power is full and flash red intermittent every 2 seconds when battery power is low. When battery power is low, the operating distance will become shorter. For safety reason, replace new batteries immediately when battery power is low.

### 6. Power Supplies

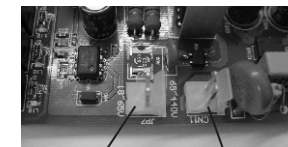
F-26 is with switching power

- (1) AC/DC 18~65V
- (2) AC/DC 65~440V

The advantage of switching power, small volume, light weight, high efficiency, strong anti-interference, wide input power and modularization



Power plug  
(Pic. 1)



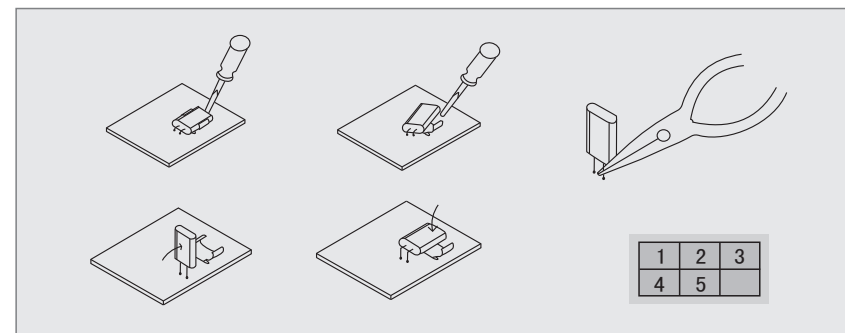
AC/DC 18V~65V AC/DC 65V~440V  
(Pic.2)

1. Close the receiver power supply
2. The receiver power plug from the preset position pull up (Pic.1)
3. The power plug is inserted into the desired location (Pic.2)

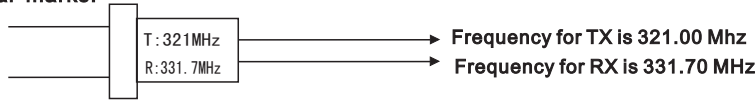
### 7. How to change quartz from transmitter/ receiver & identify frequency quartz

It is simple to change frequency of the new F23 series. The system frequency can be changed simply by replacing correspondent frequency quartz in both the TX and RX.

**Instructions:** (1). Pry up the crystal unit with a flat screwdriver (2). Remove the crystal unit from the system. (3). Use a needle nose pliers to straighten both pins of the new crystal unit. (4). Insert the new crystal unit vertically into the PC board. (5). Press the new crystal down into the socket.



crystal marks:



Not: The transmitting and receiving frequency must be same.

## 8. ID code Remote Setting

ID Code Remote setting allows you to overwrite receiver ID code by a new one from transmitter. Before making ID code remote setting, make sure both TX and RX are in same frequency channel and try to operate them in short distance..

### Instructions:

- (1) Turn off receiver power supply completely (MAIN SWITCH) and turn on again after 20 seconds.
- (2) Press transmitter Emergency Stop
- (3) Press UP pushbutton and hold it (Do not release UP pushbutton until next step is completed).
- (4) Press DOWN pushbutton 4 times and release "STOP & UP" pushbuttons when red LED flash.
- (5) Release all buttons
- (6) Start the system as usual.

Notes: (a) After power on the receiver again, there is only 4 minutes to finish the setting. If setting can not be finished in 4 minutes, the receiver would not receive the setting signal and would receive normal working signals.

- (b) ID code remote setting jumper (JP1) on receiver must be installed in order to perform ID code setting.
- (c) Any other receiver ID code with same model may be overwritten also if located within control distance.
- (d) ID code remote setting only transmits ID code data. No any other data will be overwritten.
- (e) The position of the key and START will not influence the ID code setting

## 9. Fuse wire's changing

Push down the fuse blocks' cover by screw driver, contra rotate it and take out the fuse. Then put correct fuse on the cover and put them together in the fuse block. Then fasten the cover.

## 10. Extra COM of down relays

Additional COM is available for DOWN relays. The red wire (Jump 1) is backup COM connection for down relays. If additional COM connection is required for the down relays, cut off red wire and connect new COM source for down relays.

## 11. Transmitter LED Malfunction Alert

(A) Red LED flashing quickly (every 0.2 sec) when any pushbutton is pressed. The problem could be: (1) One of the pushbuttons is jammed. (2) The EMS mushroom has not been released. (3) The transmitter is not properly Power-On according to the instructions.

Note: Please contact the distributor nearest you for further assistance if need.

(B) TX LED flashes slowly (every 0.5 sec intermittent). The problem could be: The memory of the TX is defective. Contact the distributor for repair.

## 12. Troubleshooting

(A) TX LED remains ON with red light.

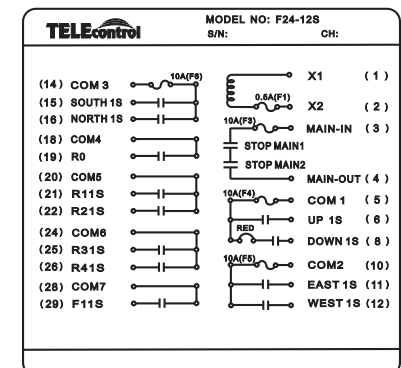
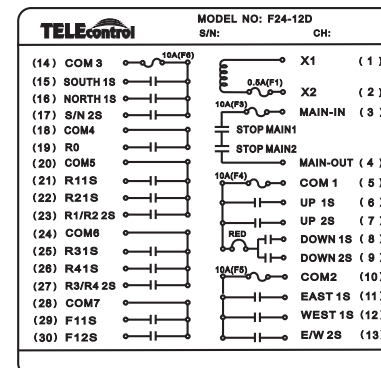
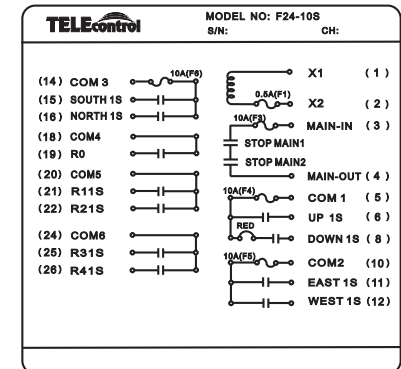
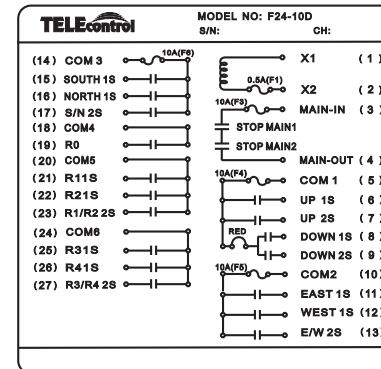
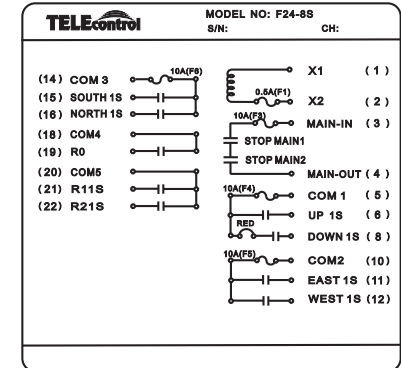
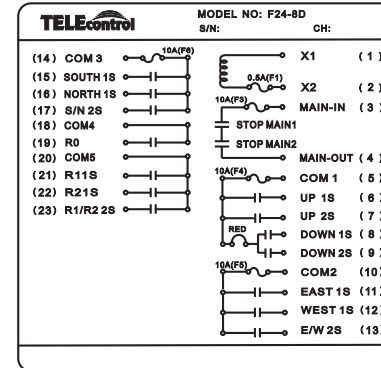
Solution: Please remove the batteries and insert again.

(B) The RX does not respond at all.

Solution: Turn the main power off for 20 seconds and turn it on again.



## 13. F24 Wiring diagram

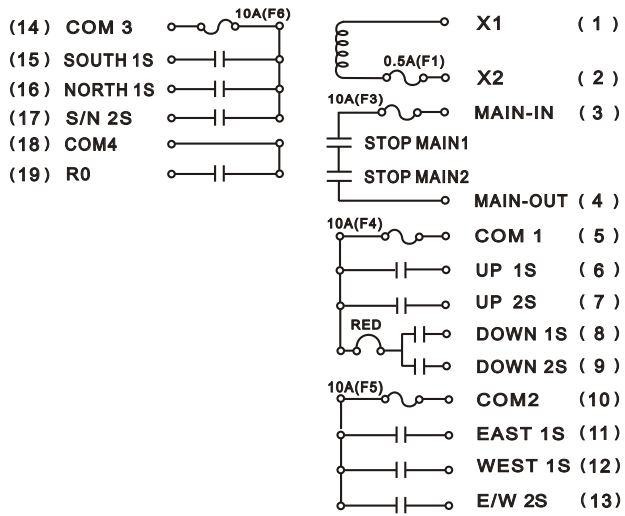


**TELEcontrol**

MODEL NO: F24-6D

S/N:

CH:

**TELEcontrol**

MODEL NO: F24-6S

S/N:

CH:

