Receiver wiring Diagram Instruction

The wire contact of this industrial R/C allows you to design variety possible configuration of your own, including MAIN, COM and NC/NO relay are interchangeable freely.

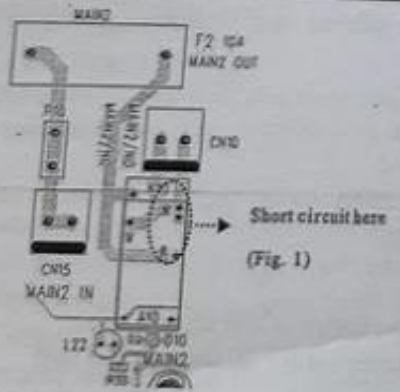
(1) Wiring Diagram
When application requirement confirm, use attached wiring diagram to configure the diagram. Point out the contact of each relay and COM by using "•" with marker pen. Finally link up and remark the wire No. and its function. (Please refer to the demo diagram for detail.)

(2) Output of COM & Relay
The CN1~CN15(3.96 mm male connector) on the relay module is output connection for both COM and relay. Pre-insert the COM/relay output wires with the attached 3.96mm pin connectors into the socket provided. Then plug the socket into each corresponding COM / relay contact follow by the prepared diagram. The standard relay is based on NO type (normal open SDT-S-112LMR). But it can be interchanged freely for NC/NO relay (PCH-112D2H) as user's option. *(Lee's Hi - Tech also offers the 30 output wires with 3.96 mm pin-ready as option accessory and is available upon order)*

(3) P1~P26 Terminal (refer to the relay module)
The terminal between P1~P26 is for COM purpose. Use the attached 3 different length of wire jumper to configure the COM.

(4) CN1~CN15 Connector (refer to the relay module)
For the CN12~15 male connectors, both contacts of each 3.96 mm connector are shorted circuit. Simply insert the wire into either contact of each connector will do. The label indication on the relay module must be followed for wiring between connectors CN1~CN11.

(5) MAIN 2 OUT substitute as COM
Main 2 Out connector can be substituted as COM when standard COM (CN12 ~ 14) is not sufficient. Follow the instruction below to modify the Main 2 Out into COM: (a) Shorted the both circuit of NO Output and F2 fuse contact. (b) Therefore P10 becomes the COM contact and Main2/ NO contact become the output wire for COM. **(Refer to the Fig. 1 for detail)*



(Fig. 1)

Customer : _____ Channel : _____
Installation Engineer : _____ Wiring Diagram ID Code : _____
Date of Installation : _____ Serial # : _____

Relay Contact	Common Line	Function Description	Wire No.
	COM1	COM1	5
	COM2	COM2	6
	COM3	COM3	7
MAIN1		MAIN-IN	3
MAIN1/NO 10A		MAIN-OUT	4
MAIN1/NC 10A			
R0/NO		ALARM	8
COM			
R0/NC			
UP1/NO		UP 1st speed	9
COM			
UP1/NC			
UP2/NO		UP 2nd speed	10
COM			
UP2/NC			
DN1/NO		DN 1st speed	11
COM			
DN1/NC			
DN2/NO		DN 2nd speed	12
COM			
DN2/NC			
ET1/NO		LEFT 1st speed	13
COM			
ET1/NC			
ET2/NO		LEFT 2nd speed	14
COM			
ET2/NC			
WT1/NO		RIGHT 1st speed	15
COM			
WT1/NC			
WT2/NO		RIGHT 2nd speed	16
COM			
WT2/NC			
SH1/NO			
COM			
SH1/NC		BREAKER	17

No.01

(Demonstration of wiring diagram)

Instructions:

(1) Depress the TX Emergency Stop (For those systems without a Mushroom style stop button that stays depressed, please hold down the "STOP" pushbutton)
(2) Press UP pushbutton and hold it.
(3) Press DOWN pushbutton 4 times and release "STOP & UP" pushbuttons when red LED flash.
(4) Start the system as usual.

Note: (1) By follow the procedures above, all the radios of same model within its radio operating distance, might be affecting by ID code remote setting.
(2) ID code remote setting only transmits data of ID code only.
(3) The position of magnetic key or Rotary key will not affect to the ID code remote setting.

Transmitter Batteries

2 AA 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 when battery power is low. When battery power is low, transmitter may not work properly. For safety reason, replace new batteries immediately when battery power is low.

Power Supply

3 different AC transformers are available for F-23 series and power supplied to the F-23 Receiver as below
(1) 48/110/220 VAC
(2) 110/220/380 VAC
(3) 48/220/380 VAC
Each AC transformer provides 3 different voltages to meet different application's need. Please follow the procedures below to select the voltage.

(Fig. A)

(Fig. B)

1. Disconnect the receiver power.
2. Remove connector plug of the transformer from its original position (Fig A)
3 Insert connector plug into the new voltage position (Fig B)

Transmitter LED Malfunction Alert

(A) Red color LED flashing quickly when any pushbutton is pressed. The problem could be following:
(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 assistant 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.

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.

F-23 Operation Instruction

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.

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.

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 buyer's sole and exclusive remedies. TELECRANE shall not be liable for any direct, indirect, special, incidental or consequential damages.

Attention

◎Never dismantle the equipment by any unauthorized personnel, or equipment may be damaged.

◎After finishing operation of TELECRANE radio controller shut off main power to the crane, power to receiver, and remove transmitter key. If transmitter's power is controlled by "rotary key switch", then need turn the key to "OFF" position and remove it.

◎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.

Emergency

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

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

F-23 Operation

How to use

1. Insert 2 AA-size alkaline batteries into battery compartment.
2. Insert magnetic key to transmitter.
3. Follow the Power-On procedure to energize the receiver.
4. Operate normally according to the function settings.
5. Please follow the procedure to turn off radio controller after operation: (1) Press EMS pushbutton /mushroom, (2) remove the key and keep it in safe place, (3) Switch off the equipment's main power (e.g. Crane)

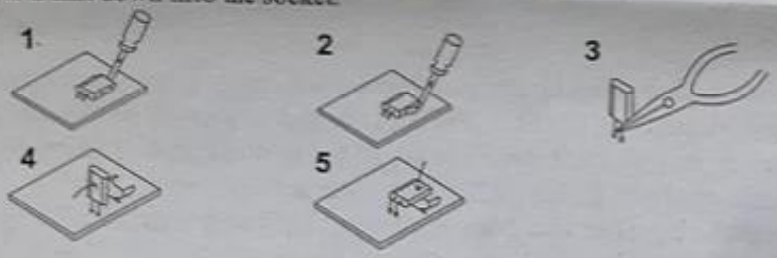
How to change quartz from transmitter/ receiver & identify frequency quartz

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

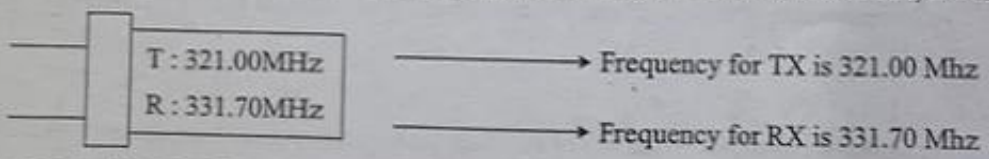
Note: For replacing the new crystal, there are 2 types of frequency are available (VHF & UHF). Do not replace the VHF crystal unit into UHF PC Board. The indication of frequency type (VHF or UHF) is shown on the PC Board with a check mark "v"

Instructions:

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



Note: The frequency will be different when plugging the same quartz unit into TX or RX, for example,



ID Code Remote Setting

ID Code Remote setting allows you to overwrite the receiver ID code in case Receiver or Transmitter is damaged. Before remote setting, one must make sure both TX and RX are in same frequency channel. By using remote setting, receiver ID code will be overwriting by the transmitter.

Prior to remote setting, please follow the instruction below,

(a) Make sure both TX and RX are same model and in the same frequency channel.
(b) To avoid interference during remote setting, place the transmitter to RX as close as possible.
(c) Turn off RX power completely (MAIN SWITCH) for 20 seconds and turn it on again.
(d) Complete the remote setting within 4 minutes after turning on the RX. The RX will NOT accept the remote setting signal after 4 minutes.