

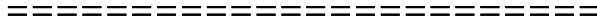


**REMOTE CONTROL
F25-7K/F25-810
O&M MANUAL**

Rev. 1



WARRANTY



REMOHAND[®] Remote Controllers must be handled, installed, operated, and maintained by (an) authorized and (a) qualified person(s), and

Upon the above condition guaranty period from the date of (delivery, installation, inspection) shall be one calendar year

Subject to confirming defects not caused by improper installation, improper operation and/or insufficient maintenance, unauthorized modification, ignorance of environmental specifications, or improper interfacing, irresistible forces such as war(s), strike(s), Act(s) of God, and so on; all such the defects shall be treated as in no warranty.

REMOHAND[®] INDUSTRIAL REMOTE CONTROLLER		
MODEL	REMOHAND F25 -	REMOHAND F25 -
SERIAL NO.		
CHANNEL		
LOT. NO.		

PRECAUTIONS

A. ANNOUNCEMENT

- ◎ This O&M Manual is for **REMOHAND**[®] F25-7K, F25-810 and the specification in each model is referred to Chapter 1.
- ◎ Before installation and operation look through this manual and make sure having a full acknowledgement of this manual.
- ◎ **REMOHAND**[®] F25 series' remote controllers compose a High-Tech systemized, and a full knowledge of this manual is a must in advance of installation as well as operation of this remote controllers.
- ◎ Do not try to dismantle or unscrew **REMOHAND**[®] F25 series except a skilful, an expert, and an authorized.
- ◎ This manual is for reference and good for installation and for maintenance. For more details consult an adjacent agent and/or supplier.
- ◎ Each and all the **REMOHAND**[®] F25 series' remote controller is tested under severe condition and passed without any default found at factory and is ready for an immediate use for a normal/insufficient condition or so, however, in an emergency and/or in an any dangerous possibility, do not use.
- ◎ After use switch off the main power of the equipment(ex. crane) and confirm the receiver power off, and then turn off the rotary key of the transmitter before pull out the key, and store the key in an isolated area.
- ◎ When not in use stay the transmitter in a safety area and do not allow an unauthorized to attempt to use it.
- ◎ Equipment(ex. crane) using this remote controller must have main relays, limit switches, separate COM lines, and other appropriate devices for safety operation.
- ◎ When metal container for receiver casing is used make sure Ground(GND) to be sure connected to metal part of equipment(ex. crane).
- ◎ Do not use in a severe interfered area and/or lightening or so.
- ◎ Make sure power sources are correct.
- ◎ Power off and do not use during installation and/or maintenance so as to avoid any electric shock or so.
- ◎ Do not try to copy, modify, or release this remote controllers without

permission in advance by Remohand, such an action is illegal. **REMOHAND**[®] F25 series' remote controller have many international patents, certificates, and so on.

©Without notice in advance and within Remohand's discretion this manual may be revised, added, and/or deleted for better use.

B. GENERAL CAUTIONS

- ☆ Operator must be healthy both physically and mentally.
- ☆ Even though this remote controller is versatile, durable, and good for outdoor use try to avoid an excessive shock, pressure, wind, snow, rain, ices, or sunlight, high temperature, humid, gas, and etc.
- ☆ During operation when found power is weak replace all the batteries with all new 4 AA batteries.
- ☆ When rechargeable batteries (however, it is not recommended because of shorter life) are used, use of AA 1.2V Ni-MH 2,500 mAH or above.
- ☆ When not in use take out batteries from the transmitter and put aside in a different area.
- ☆ In an emergency follow up the below emergency measures.

C. EMERGENCY MEASURES

REMOHAND[®] F25 series has designed for safety, meeting with various kind of emergencies and for self-recovering. Billions of different I.D. code, Self-Diagnoses, super qualified and isolated protection against voltage surges and/or interferes, etc. are the basic integral functions for solving any unexpected accident or trouble in an emergency. So when such an emergent function is detected, F25 series will off the work immediately and stop all the function automatically.

For emergency follow up the below procedure in advance and then call an adjacent Remohand agent and/or supplier for an emergency service.

1. Press EMS(Emergency Stop) Button. (red mushroom at top left)
2. Off the rotary key and pull out the key. (green key at top right)
3. Power off receiver power. Power off main power of Equipment.
4. Inquire adjacent JEICO agent and or supplier.

CHAPTER I : GENERAL SPECIFICATIONS

1.1. COMMON SPECIFICATION

- Frequencies : 447.6000 ~ 447.9875 MHz
- No. of Channels : 32
- I.D. Code : 2^{32} (Over 4 Billion)
- Temperature : -10 °C ~ +50 °C
- Remote Distance : 30 ~ 150 M.
- Case Construction : Glass-Fiber
- Protection Grade : IP55

1.2 Transmitter (F25-7K/F25-810)

- Power : 4 x 1.5 V Alkaline Battires (LR6 AA Size)
- Type: Single or Double Push Button Type
- Size : 206/233/ x 47 x 52 mm (L x W x H)
- Wgt : Approx. 310/365 gr. (Batteries Incl.)

1.3 Receiver (Rx)

	F25-7K Rx (Single & Creep)	F25-7K/810 Rx
Power Source	AC24/48V, AC48/110V AC48/220V, AC220/380V DC 14~40V	AC24/42/230V, AC48/110/220V AC110/220/380V, AC48/220/380V DC 14~40V
Relay	5A/250VAC, 8A/30VDC	5A/250VAC, 8A/30VDC
Size, mm	185(L) x 85(W) x 125(H)	210(L) x 125(W) x 160(H)
Weight	Approx. 550 grams(Cable Excl.)	Approx. 1,250 grams(Cable Excl.)
Type	MAIN Lamp Display	MAIN Lamp Display (& Self Horn)

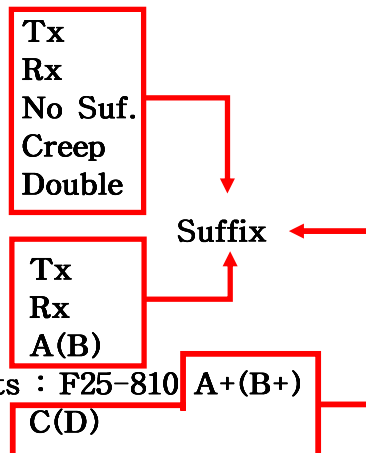
1.4 Models (Suffix puts normally at the end of Serial No. but not all.)

A. F25-7K

- Transmitter (Tx) Only : F25-7K Tx
- Receiver (Rx) Only : F25-7K Rx
- All Single Pushbutton : F25-7K No Suf.
- U/D Creep (Double P/B) : F25-7K Creep
- All Double Pushbutton : F25-7K Double

B. F25-810

- Transmitter (Tx) Only : F25-810 Tx
- Receiver (Rx) Only : F25-810 Rx
- 8 Single(Double) P/B : F25-810 A(B)
- 8 Single(Double) P/B w/ two hoists : F25-810 A+(B+)
- 10 Single(Double) P/B : F25-810 C(D)



CHAPTER 3 **REMOHAND®** F25-7K Standard Set

Remohand F25-7K Standard Set comprises one transmitter and one receiver as following as a set

3-1 Standard Set



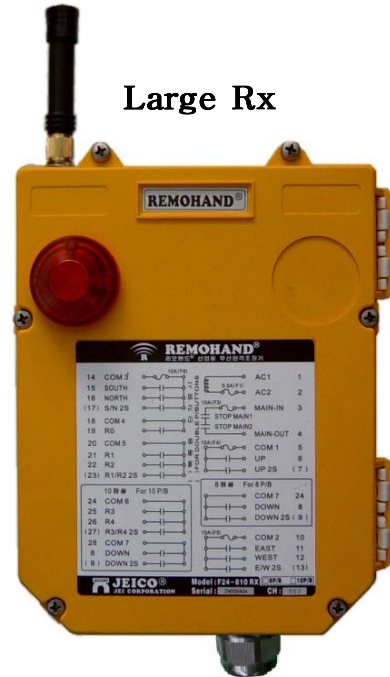
Transmitter

Small Rx



or

Large Rx



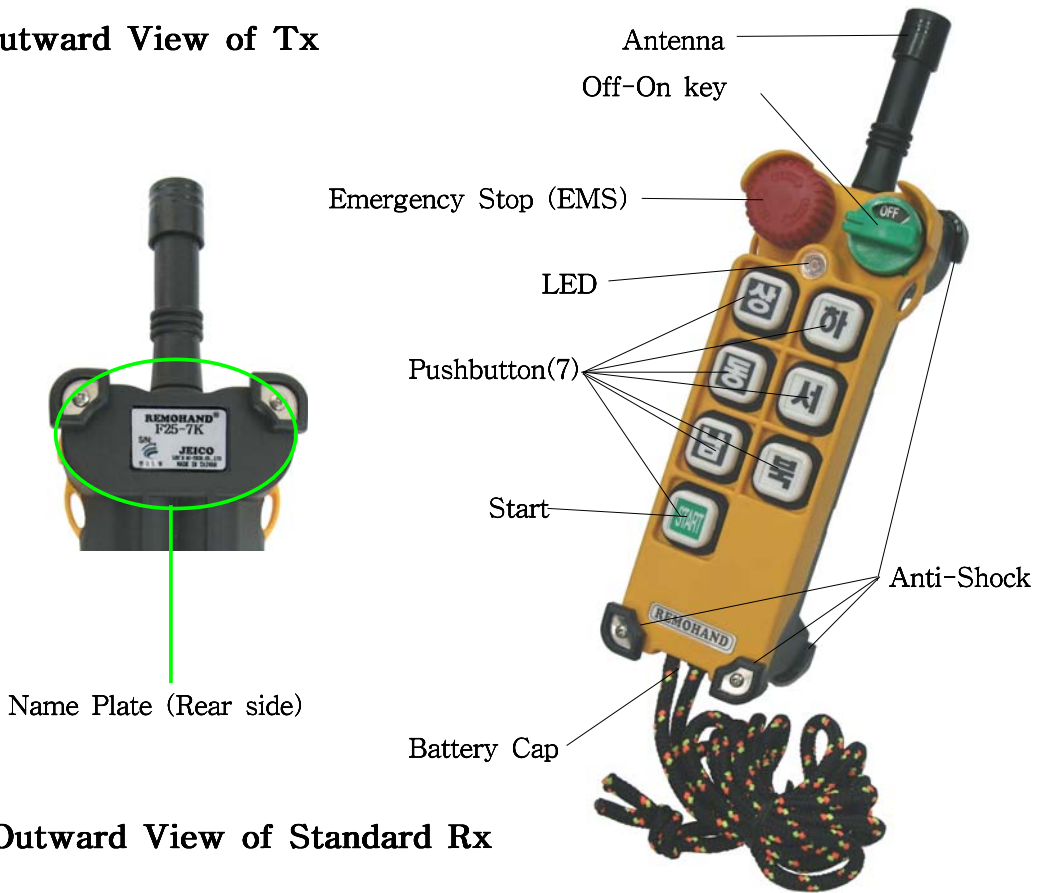
Transmitter

3-2 SIZES AND WEIGHTS

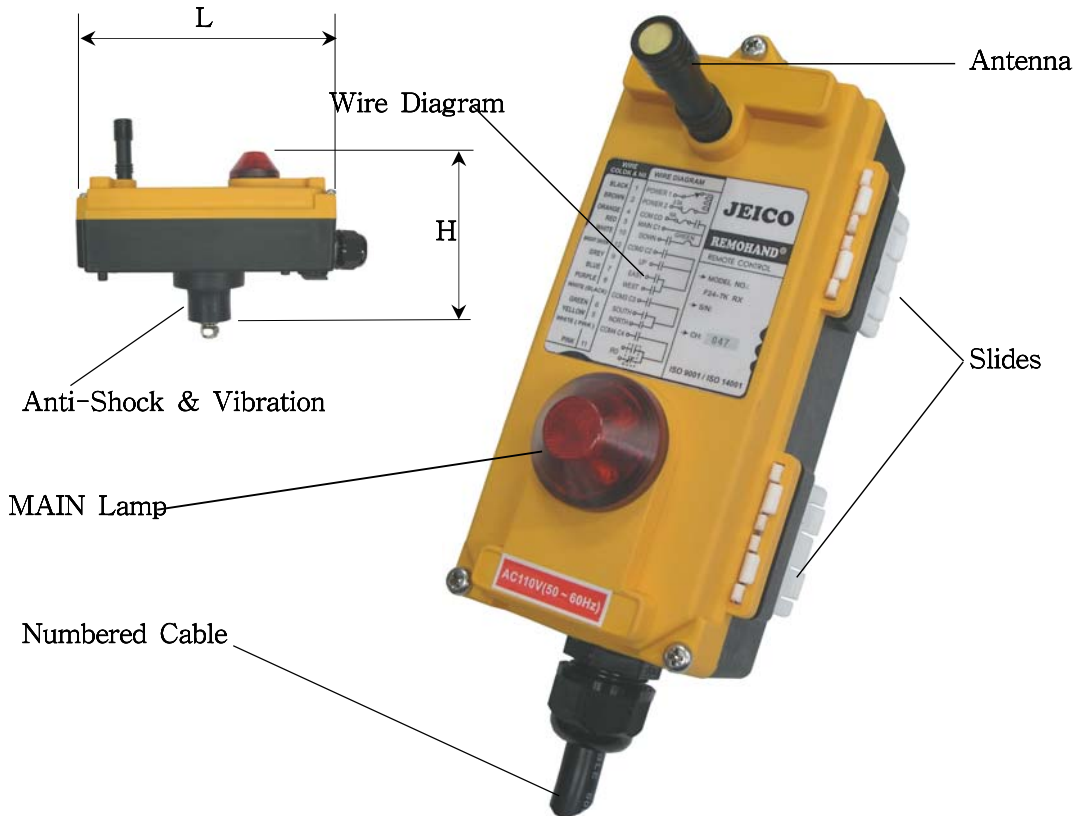
	TRANSMITTER (Rx)	RECEIVER (Rx)	
		Small Rx (STD) (Single P/B)	Large Rx (Creep & Double)
Weight (*)	About 310 gr.	About 550 gr.	About 1,250 gr.
L x W x H, mm	206 x 47 x 52	185 x 85 x 125	210 x 125 x 160
Protection, Temp.	IP 55, -10 ~ +50℃		
Casing	Glass-Fiber		

Note : Weight(*) indicates batteries incl. to Tx and cables not incl. to Rx.

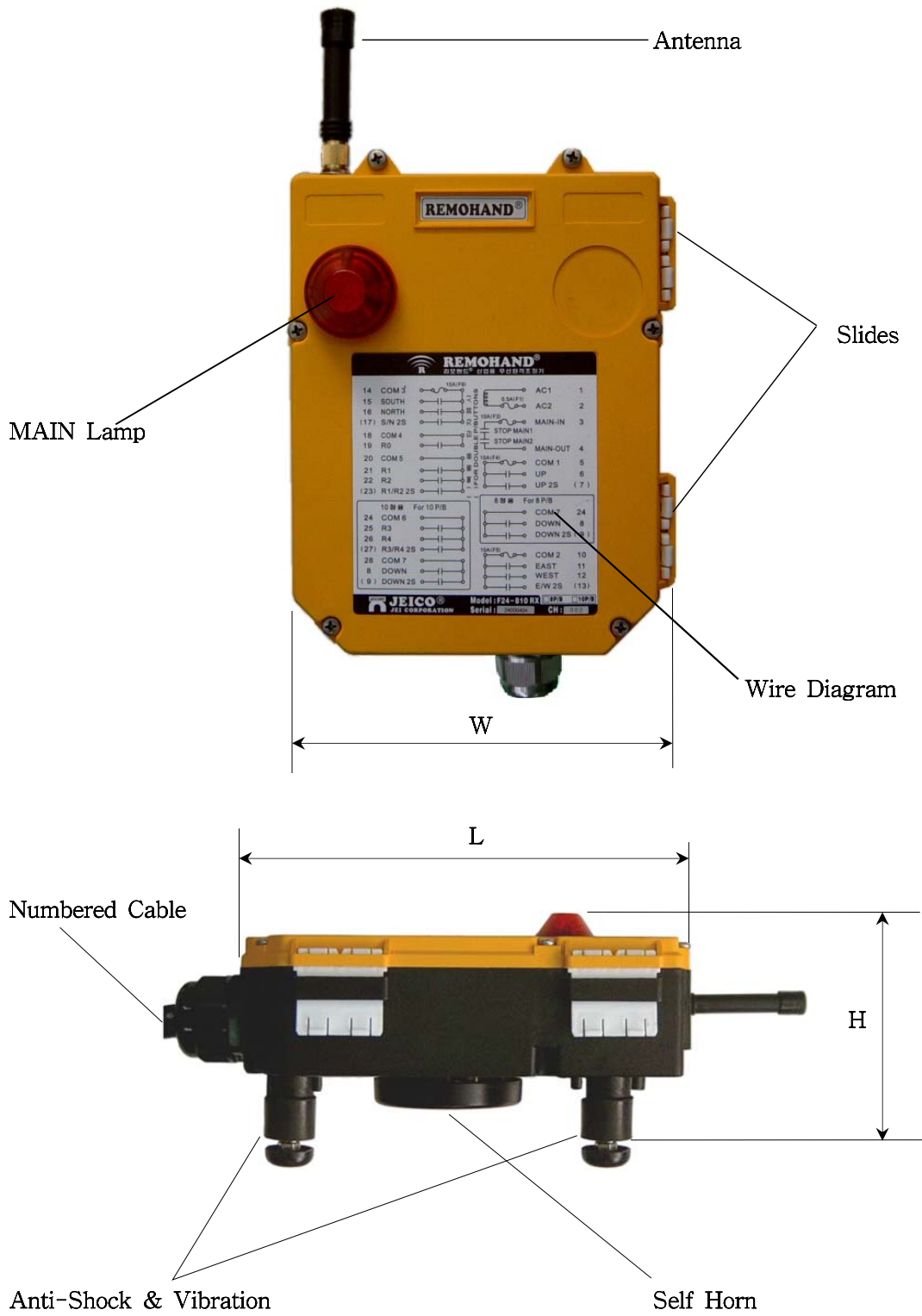
3-3 Outward View of Tx



3-4 Outward View of Standard Rx



3-4 Outward View of Large Rx



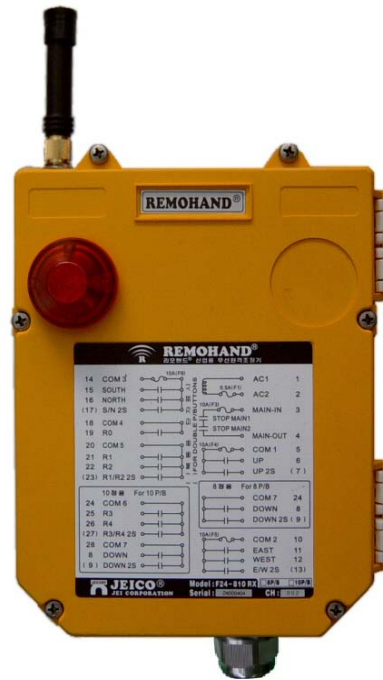
CHAPTER 4 **REMOHAND®** F25-810 Standard Set

Remohand F25-810 Standard Set comprises one transmitter and one receiver as following as a set

4-1 Standard Set



Transmitter (Tx)



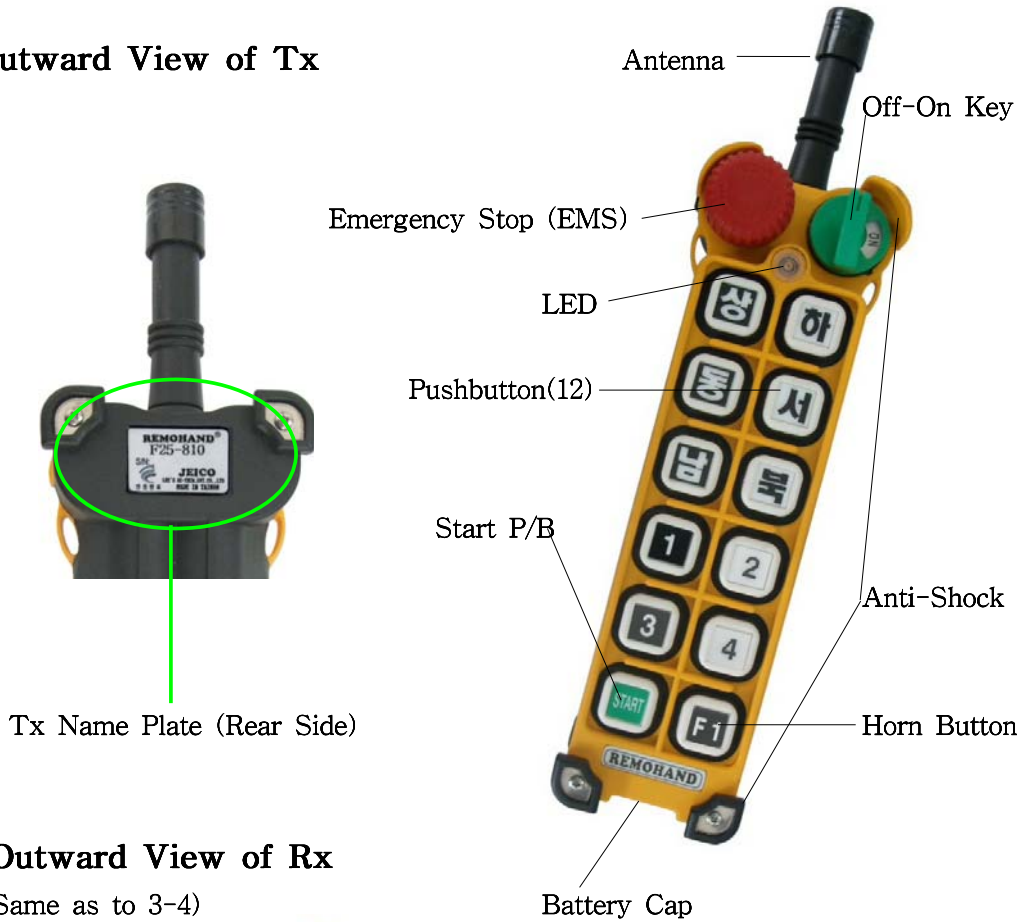
Receiver (Rx)

4-2 Size and Weight

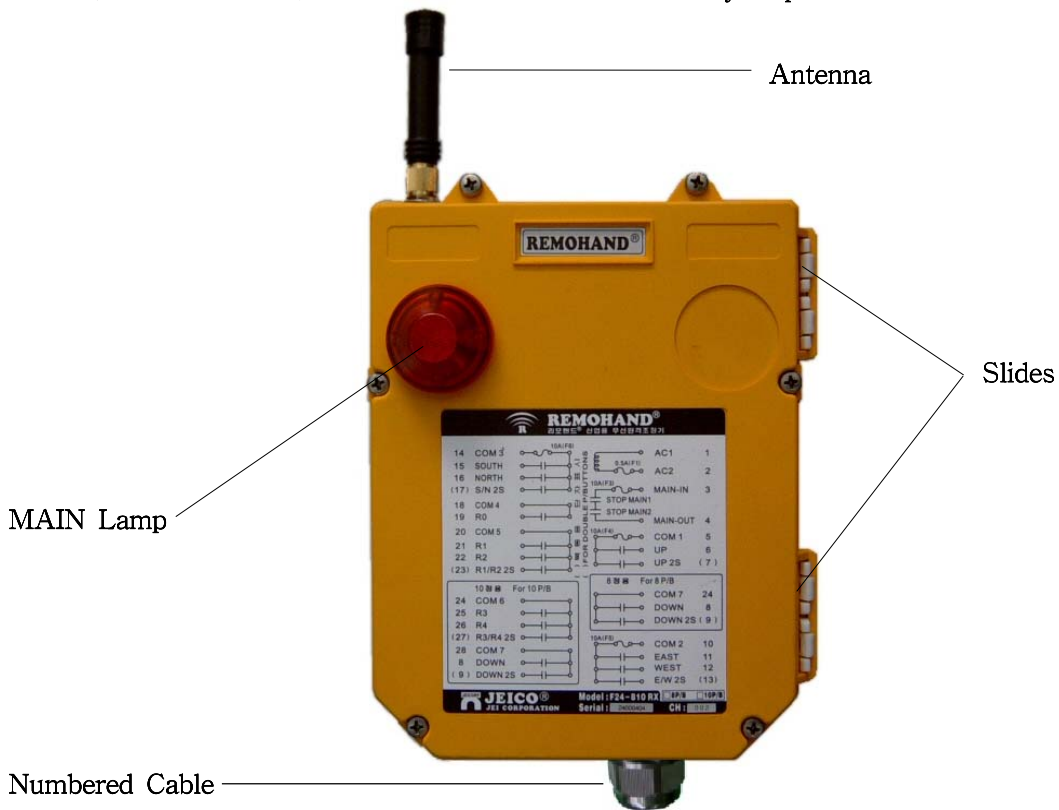
	Transmitter (Tx)	Receiver (Rx)
Weight (*)	About 365 gr.	About 1,250 gr.
L x W x H, mm	233 x 47 x 51	210 x 125 x 160
Protection, Temperature	IP 55, -10 ~ +50℃	
Casing	Glass-Fiber	

Note : Weight(*) indicates batteries incl. to Tx and cables not incl. to Rx.

4-3 Outward View of Tx



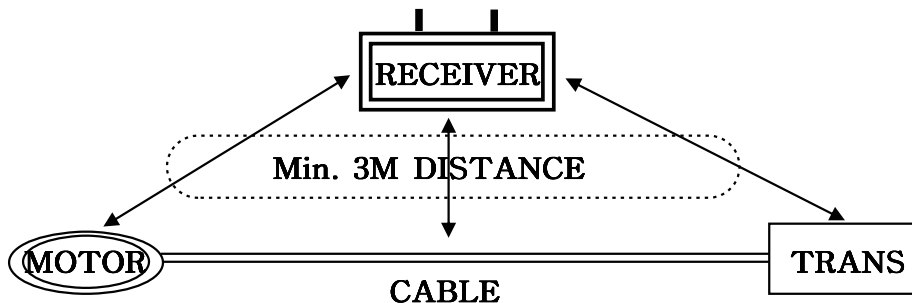
4-4 Outward View of Rx
(Same as to 3-4)



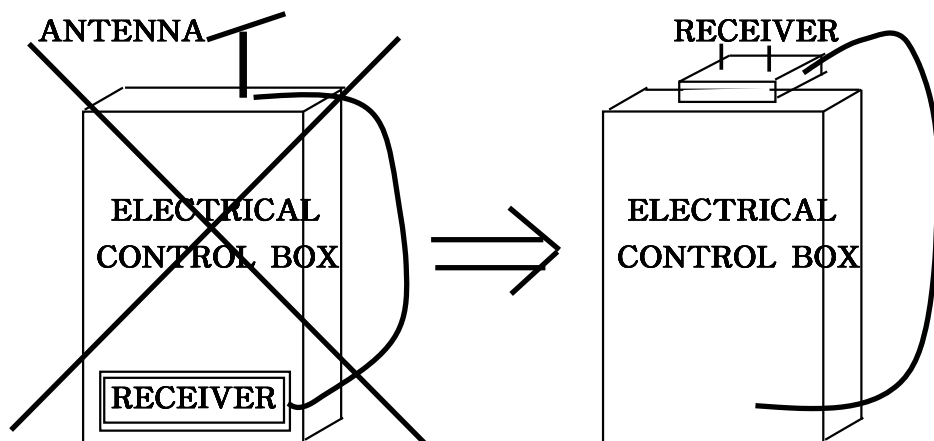
CHAPTER 5 : INSTALLATION & FUNCTION SETTING

5-1 CAUTIONS FOR INSTALLATION

1. Follow up all the safety rule of equipment (ex. crane)
2. Switch off the main power of equipment (ex. crane) in a first action.
3. Install receiver where there will have any other obstructions.
4. Fix receiver firmly.
5. Use an optional external antenna in case receiver installs inside the metal closed box or electrical panel.
6. Check safety devices of equipment(ex. crane) before installation and confirm it is under utmost safety condition.
7. Do not try to install without gaining in skill for electrical circuit diagrams and operation circuits of equipment(ex. crane), remote controller's functions, etc for avoiding an unexpected accident, wrong functions, etc.
8. For avoiding any possible interferences install receiver far from motor and transducer as following illustration :



9. Install receiver top outside of electrical control box and installation in inside the control box is not a proper method.



5-2 HOW TO INSTALL **REMOHAND**[®] F25-7K/810 Tx

5-2-1. BATTERIES

- A. Insert 4 AA batteries at right position with + and -.

An opposite position will cause an excessive heat to cause battery leakage, burning, and so on, any malfunction caused by such the poor batteries' handling will not be of free recovery no matter how long the guarantee period remained.

- B. Precautions

1 : Do not use low power type rechargeable batteries.

Recommend : Use 2500mAH or above.

2 : Use all new & fully charged batteries for replacement.

Any un-fully charged one(s) may cause the same to the above clause 5-2-1 A matters.

- B. Change of Batteries : When led signals with yellow it shows battery low. Replace them all immediately with new ones.

- C. When not in use turn the rotary switch to the left position OFF for saving battery life as well as off the battery power.

5-2-2. FUNCTION SETTING

In case change either transmitter or receiver, or modify functions its mating transmitter and receiver must be identical and set both at the same time for sure identification. Function setting can be done either by the copier or by software. Both are optional setting.

- A. Function set by Copier

1. Unscrew Battery Cap at Tx and Open the top cover at Rx.
(Please note when the Copier to use both Tx and Rx power should be shut down.)
2. Connect Copier either to Tx or Rx.
3. Follow the instruction of Copier Manual that will be provided as an optional order.



- B. Function set by Software

1. Software can be provided as an optional order and
2. it needs another connector with the software, consult JEICO distributor and/or agent for further support.

5-3 HOW TO INSTALL **REMOHAND**[®] F25-7K/810 Rx

5-3-1. PREPARATIONS

A. Prepare tools.

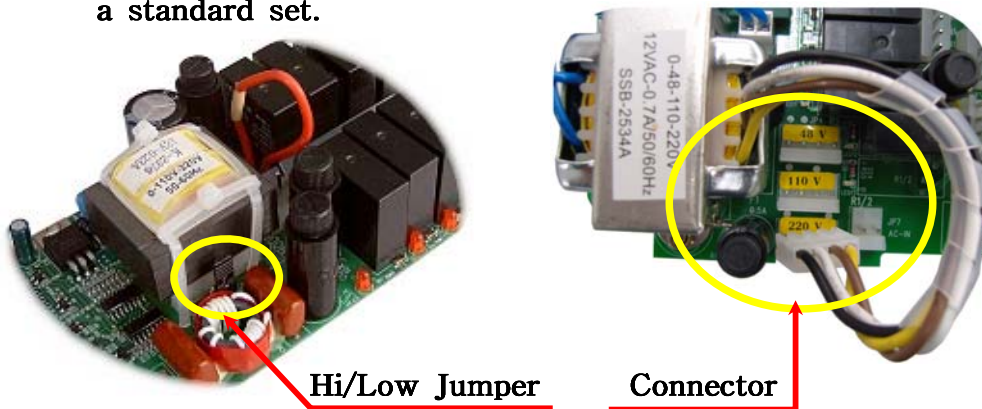
B. Select a proper place for installation.

1. Choose a safe area, a visible area of receiver or antenna.
2. Avoid a spark area (ex. motors, relays, magnet switches, electric cables are likely generating sparks and interferes)
3. Avoid high voltage and current area.
4. Receiver is to be distanced at least 3cm from obstacles.

C. Match receiver power

1. Check input power source and make sure to connect to the right position.
2. In case DC power, make sure receiver is also for DC.
3. Receiver for F25-7K Double P/B & F25-810 (Large Receiver).

Open the top cover and there has a power terminal just beside the transformer having with 3 connectors, and set a proper one to connect the power. Standard 3 connectors are of 48/110/220 VAC and connected to 110V connector as a standard set.



4. Receiver for F25-7K & CREEP (Small Receiver)

AC power sets with the Hi/Low Jumper where there is just beside the transformer.

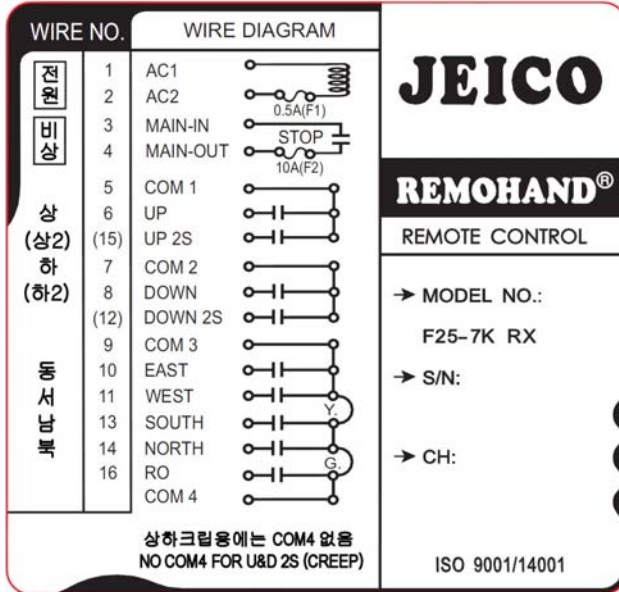
transformer jumper	24/48	48/110	48/220	110/220	220/380
LO	AC24V	AC48V	AC48V	AC110V	AC220V
HI	AC48V	AC110V	AC220V	AC220V	AC380V

5-3-2. INSTALLATION SEQUENCE

- A. Power off equipment(ex. crane).
- B. When a mating Fixing plate is used to place Receiver unto the equipment then just drill by screwing bolts to the bolt holes of it after the fixing plate fixed to the bottom of the receiver and skip the procedure C below.
- C. Drill one 6 mm bolt hole where the receiver to be installed and fasten receiver onto the hole.
Note : Do not try to unscrew shock absorbing bolt!
- D. Connect each wire end of receiver cable to a mating connector of equipment(ex. crane).
 - 1. Confirm both circuit diagram of receiver and equipment(ex. crane) are in sequence and connected correctly.
 - 2. Confirm ground is o.k.
 - 3. Check and confirm power source.
- E. Open upper case after unscrewing and match a right power source by referring to the above C of 5-3-1 PREPARATIONS.
- F. Switch on receiver power by setting to remote at the selector switch (manual/remote) if selector s/w is installed. If selector switch is not used and connected the power line to the main directly, then the receiver power is automatically on upon connected.
- G. Power on transmitter :
 - 1. Turn on the rotary s/w after released the EMS button.
 - 2. Press Start Pushbutton of the transmitter and
 - 3. Confirm if the receiver MAIN Lamp is on.
- G. Press each function button of transmitter and confirm remote operation in a good working condition by confirming led lights inside the relay board of receiver.
- I. Close upper case of receiver and set the selector switch to remote position.

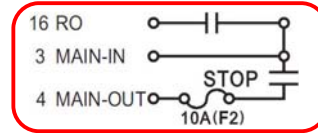
5-3-3 CONTROL CONTACTS WIRE DIAGRAMS

A. Standard Small Rx For F25-7K & F25-7K Creep : 16 Core Cable



Note :

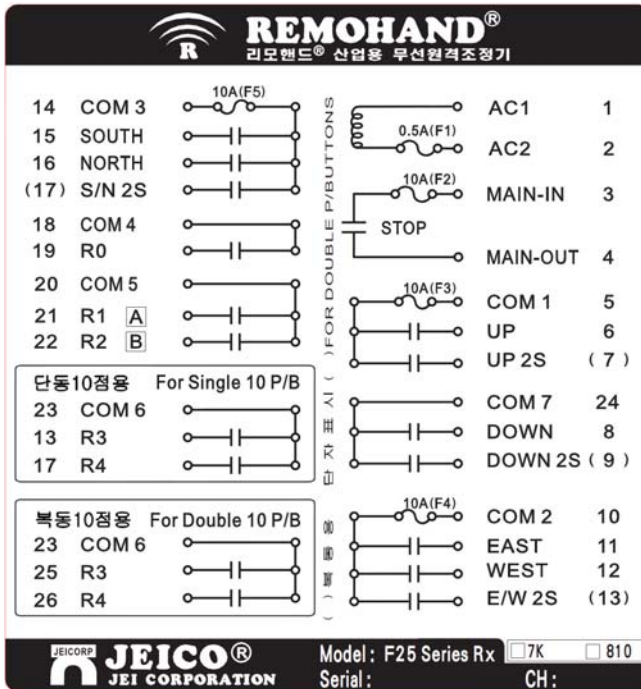
1. Initial Start (MAIN On) : EMS ON, ⇨
KEY ON ⇨ Press down START Button.
2. Standard Cable : 16 Core Numbered.
3. When R0 COM Required for U/D creep
Cut Jumper G. and connect to Wire No. 3
MAIN-IN as below. (Do not connect to
MAIN OUT)



4. When Travelling(S/N) COM required,
Cut Jumper Y. and pull out Wire No. (15)
from UP 2S terminal, and connect each
end to use Wire No. (15) as S/N COM.

5.. When Travelling(S/N) COM required at 7K Creep, use Large Rx with 24Core Cable. But if R0 may not be used then use Wire No. 16 as S/N COM.

B. Large Rx For F25-7K Double P/B & F25-810



Note :

1. Wire Numbers in () are for double pushbuttons.
2. AC1, AC2 Standard Power Set :
110V with AC48/110V/220V Transformer.
Other AC and DC set is an optional.
3. Initial Start(MAIN On) : EMS ON ⇨
KEY ON⇨ Press down START Button.
4. Button F1 at Tx has no connection,
it is a self horn for signalling only.
5. A+B Button Set at F25-810 A+/B+ :
- Standard : without A+B Relay.
- Optional : with A+B Toggle Relay (R3).
6. Cable Specification
F25-7K Double : 24 Core Cable
F25-810 A / F25-810 B : 24 Core Cable
F25-810 A+ / F25-810 B+ : 24 Core Cable
F25-810 C : 24 Core Cable
F25-810 D : 30 Core Cable

CHAPTER 6 : TROUBLESHOOTING

6-1 SELF DIAGNOSIS (LED SIGNAL ERROR MESSAGE)

JEICO remote controllers have a renewed method of self diagnostic troubleshooting against so much complicated and riddled electronic structures, and yet it is easy to check and find causes and measures for any malfunctions may occur. JEICO takes a type of Led signaling error message for better, quick restoration in normal even at site.

6-2 LED Diagnosis

NOTE : Please check when Green Key(Off-On Rotary Key) must be On position.

	Causes	LED Signals	Measures
Transmitter	EMS Button not up	Red Flash 0.2sec. Int.	Pull up EMS Button
	Push Button defect	Red Flash 0.2sec. Int.	Replace with new button(s)
	Encoder Module defect	Red Flash 0.5sec. Int.	Replace with a new module
	Wrong batteries used	Red Flash 0.2sec. Int.	Replace with right batteries
	Batteries discharged	Red Flash On & Off	Replace with new batteries
Receiver	PC Board defect	Main Led 0.5sec. Int.	Replace with a new board

6-3 Troubleshooting

Appearances	Causes	Measures
Transmitter Led No Signal	1. Battery wrong placed 2. Battery discharged 3. Green Key not On	1. Place right pole direction 2. Replace with new batteries 3. On Green Key
Receiver No Response 1	Frequency interferes,	Off the power and on again after 20 seconds for emissioning
Receiver No Response 2	Rotary key off	Key on by turning right

APPENDIX I : 447 BAND FREQUENCY TABLE

TOTAL NUMBERS : 32 SPACING : 12.5Kc

CH. NO.	MHz
001	447.6000
002	447.6125
003	447.6250
004	447.6375
005	447.6500
006	447.6625
007	447.6750
008	447.6875
009	447.7000
010	447.7125
011	447.7250
012	447.7375
013	447.7500
014	447.7625
015	447.7750
016	447.7875
017	447.8000
018	447.8125
019	447.8250
020	447.8375
021	447.8500
022	447.8625
023	447.8750
024	447.8875
025	447.9000
026	447.9125
027	447.9250
028	447.9375
029	447.9500
030	447.9625
031	447.9750
032	447.9875

Calculation : Mhz = 447.6000 + (N-1) x 0.0125

APPENDIX II : OPTIONAL ACCESSORIES



For F25-7K Rx



For F25-810 Rx

RAIN/DUST COVER



EXT. MAGNET ANTENNA



RX FIXING PLATE

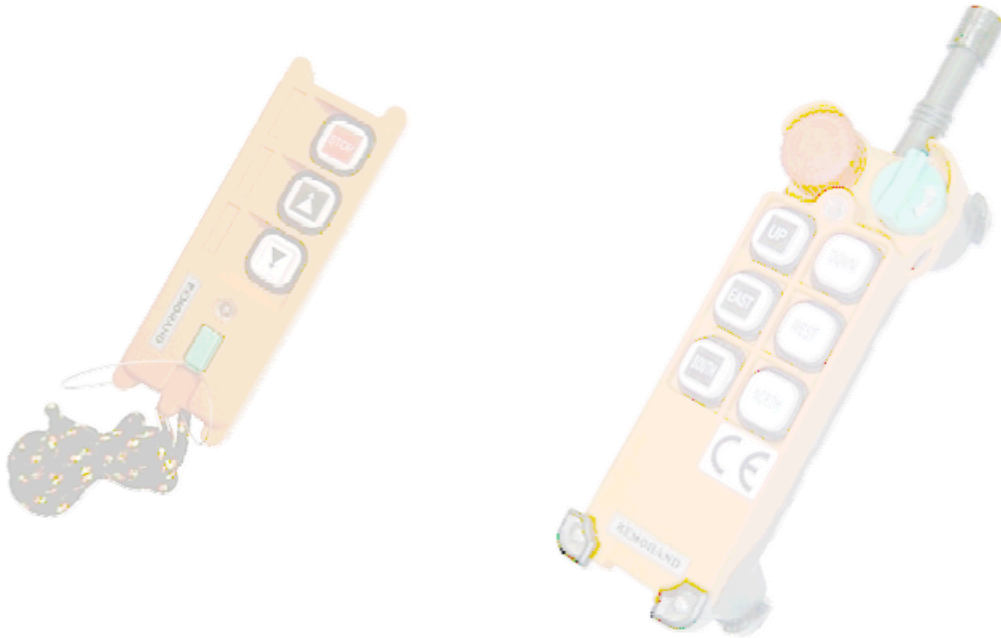


F25 COPIER



SELECTOR S/W

MEMO



제 이 코



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