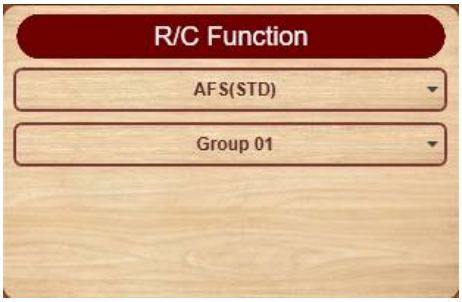
TELERANGER

TR1 User Manual

TR1 Function Setting

1. R/C Function



1.1 AFS (Auto Frequency Selection)

AFS (ECO): Selecting a best channel within the selected channel group when turning on R/C.

AFS (STD): Selecting a best channel within the selected channel group after turning on R/C, even if interfered by same channel, it will move to the available one without interference.

Single CH: Selecting a desire channel and fixed.

1.2 Channel

Group: There are 32 channel groups can be select by user (each group included 5 different channels combination).

2. START

2.1 START Key function

Normal: The relative relay is "ON" when the pushbutton is pressed and held, and relay is “OFF” when the pushbutton is released.

Toggle: The relay is operated by pressing and releasing. Press the pushbutton and release once for "ON", press and release again to turn off the relay.(for example: lighting control)

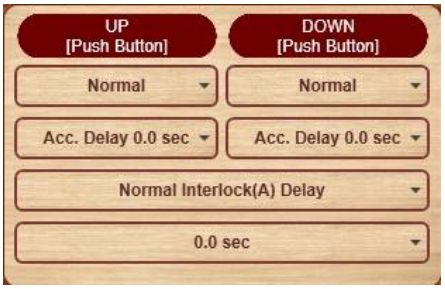
Toggle-Inching: Switch "START" key and released, then press any motion pushbutton to perform inching motion. To disengage Toggle Inching function, just to switch "START" key again (When “Toggle Inching” is chosen.)

Normal-Inching: Switch "START" key and hold it, then press any motion pushbutton to perform inching motion. (When “Normal Inching" is chosen.)

The timing of **inching** mode use is: The specified motion relays need to be conducted within a very short time, in order to remote control precision movement.

Hydraulic Pump: This function allows a pushbutton having multiple auxiliary relay outputs, mainly being used such as hydraulic motors with hydraulic valves.

3. Button Function



Normal: The relative relay is "ON" when the pushbutton is pressed and held, and relay is “OFF” when the pushbutton is pressed.

Toggle: The relay is operated by pressing and releasing. Press the pushbutton and release once for "ON", press and release again to turn off the relay. For example: lighting control

ON/OFF: Both opposite directional pushbuttons are used to operate the same relay. Press the ”ON” pushbutton to activate the relay and press the “OFF” pushbutton to de-activate the relay. For example: water pump control

Magnetic ON/OFF: Both opposite directional pushbuttons are used to operate the same relay. Press the "Magnetic ON" pushbutton to activate the relay. If the operator wants to de-activate the relay, he must keep pressing the "Magnetic ON" pushbutton and then press the "Magnetic OFF" pushbutton in the meantime. The purpose is to prevent the operator from accidentally pressing the "Magnetic OFF" pushbutton and dropping the heavy load held by the electromagnetic holdings.

ON/OFF/ON: This function will set up a pair of opposite directional pushbuttons to control 2 relays output: When the 1st relay turns on, if you push the 2nd pushbutton, then this setting will shut down the 1st relay only, then user must press the 2nd button again to turn the 2nd relay on. This function can prevent rapid motor reversal condition occurs and protect the motor equipment safety.

Dual Motor 1: When 1st. step pushbutton is pressed, the 1st step relay turns ON, if 2nd. step is pressed then 2nd step relay turns ON and 1st step relay turns OFF. (For dual motor hoist)
Dual Motor 2: When 1st. step pushbutton is pressed, the 1st. step relay turns ON, if 2nd. step is pressed then 2nd step relay turns ON and 1st step relay turns OFF. The 1st step relay will not be activated (bypass) while pushbutton is returning from 2nd step to 1st step.
Control by EMS: Control by EMS/Bypass EMS, when pushbutton set “Toggle”, “ON/OFF”, “Magnetic ON/OFF”, or “ON/OFF/ON”, user can select if the activated relay is controlled by EMS. If “Control by EMS”, the activated relay will be turned off when pressing EMS button, if “Bypass EMS”, the activated relay will be remaining on when pressing EMS button.
Acc. Delay: This function is to set the time interval between acceleration relay (i.e. conduction-delayed time of acceleration relay). It is adding duration between two events in order to prevent the cranes directly runs to highest speed and causing some damage on motors.
Normal Interlock (A) Delay: the 2 opposite pushbuttons set “Normal” are interlocked and not allowed to activate at the same time. For example: UP/Down set Normal Interlock(A), when UP is activated, and pressing DOWN both UP and DOWN will turn off.
Normal Interlock (B) Delay: the 2 opposite pushbuttons set “Normal” are interlocked and not allowed to activate at the same time. But the activated relay won’t be turned off when pressing another pushbutton. For example: UP/Down set Normal Interlock(B), when UP is activated, UP will remain on if pressing DOWN at the same time.
Non-Interlock: These 2 opposite directional pushbuttons can be operated at the same time. This application allows 2 opposite motions operating at the same time.

TR1 transmitter and receiver setting

1. Power-On Mode

1.1 Any Pushbutton: The receiver will be power-on (Main Relay activated) once EMS button releasing and any of pushbutton on transmitter is being pressed.

1.2 Start Pushbutton: The receiver will be power-on (Main Relay activated) once EMS button releasing and START pushbutton on transmitter is being pressed.

1.3 Password: The receiver will be power-on (Main Relay activated) once the correct preset password is being entered. The password could be up to 6 digits. This feature can prevent unauthorized operation.

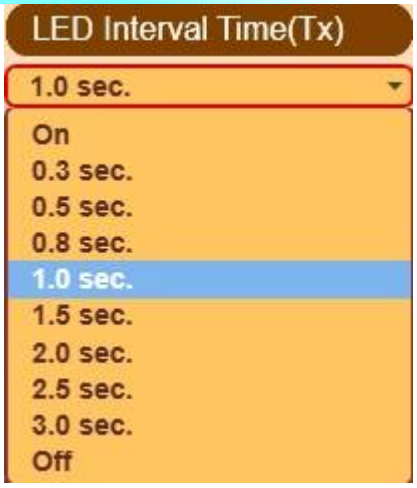
2. Transmission Mode(TX):

   Non-continuous: After “Power-On", the transmitter will transmit the signal only when the pushbutton is pressed. This mode can save the power of transmitter.

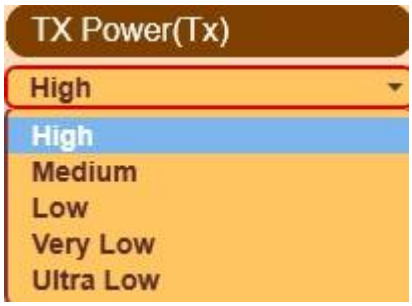
   Continuous: Transmitter will continuously transmit signal once transmitter is being Power-On. (Idle time period can be set from 30 sec ~ 10 min, and never off)

3. Auto OFF (Tx): Before the Transmitter go into idle time, transmitter will transmit stop signal to switch off the receiver main relay.
   *Only available under “Continuous transmitting " mode.

4. LED Interval Time (Tx): This setting allows you to select the transmitter LED On Off Cycle to save transmitter power (can be set 0.3 ~ 3 sec, and light On or off).
   For example: If “**LED Interval Time” set** “3 sec” , then the LED On Off Cycle is 3 seconds. The transmitter LED lighting duration 0.6 sec is fixed.



5. TX Power (Tx): To set the emission power in 5 stages (Ultra Low ~ High). Higher emission power transmit longer distance and less interruption, but more power consumption. On the contrary less power consumption in lower emission power.

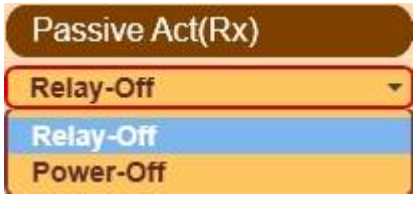


6. Start-Alarm(Rx)

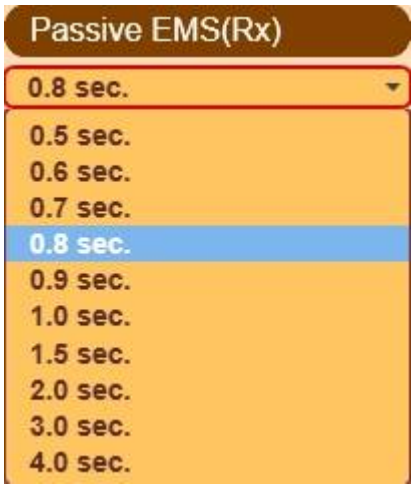
   When enable, R0 relay work as alarm contact. R0 relay activated for 2 seconds (preset) when receiver turns on and off. Select enable to active this function or disable to cancel. Alarm signal duration time 2 ~ 6 sec or disable.

7. Passive Act (Rx): If receiver doesn't receive the correct signal over a particular time, then the receiver will go into "**Relay-Off**" or "**Power-Off**" mode.
   Relay-Off (Stop motion): The Main Relay is still on but the other Relays with the function of "Normal" are all de-energized. There is not necessary to recommence the procedure of "Power-On" again to continuously operate.

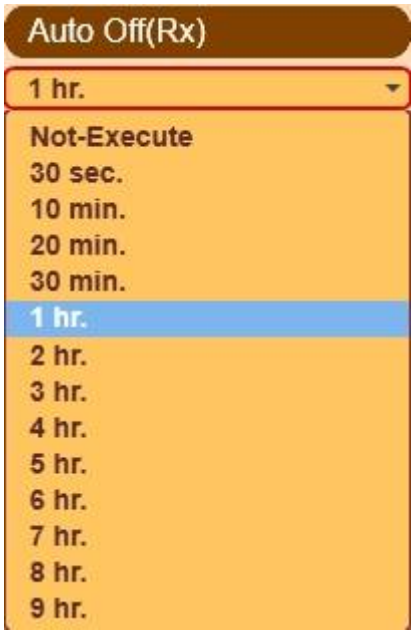
Power-Off (Shutdown): The Main Relay and all of the other relays with the function of “Normal” and “Control by EMS” are going to de-energize and it is essential to recommence the procedures of “Power-On” again to continuously operate.



8. Passive EMS (Rx): It’s to set the duration of “Interference Neglected Time”. It is able to set upon environment conditions, that means the duration of practical interfering time is less than the duration of “Interference Neglected Time” then the remote controller will continuous perform its function to make cranes keep moving without interruption. The setting time can be set 0.5 ~ 4 sec.



9. Auto Off(Rx): User can set the receiver standby time(30 sec ~ 9 hr, or Not-execute); exceeds the setting time then the receiver MAIN Relay will be turned off automatically. Normally this function is cooperated with "non-continuous transmitting" mode.



10. e-Card Copy: This setting is to protect the e-Card data being duplicated. Once the e-Card disable " e-Card Copy" function, then it won't be duplicated until enable it.

TR1 series Application Program functioning button

1. Load file 

   To load file (data): Click "Open File" button, select the file name then press "OPEN".

2. Save file 

   To complete function setting and customer information of the remote, please make a copy on your computer for after service and future data management. Click "Save file" button, select the saving folder and file name, then save the file.

3. Print 

   To print a file, click "Print" button. **Note:** Printing function only print the current page when printing. To print another page, please select the screen to another page and then click the print button.

4. USB COM Port 

   Click "Select COM Port" icon to select the correct COM.

5. Read file 

   Read setting from e-Card.

6. Write file 

   Write setting to e-Card.

7. PC program version information 

   To show the information of program version.

TR1 series Multi systems

Take & Release

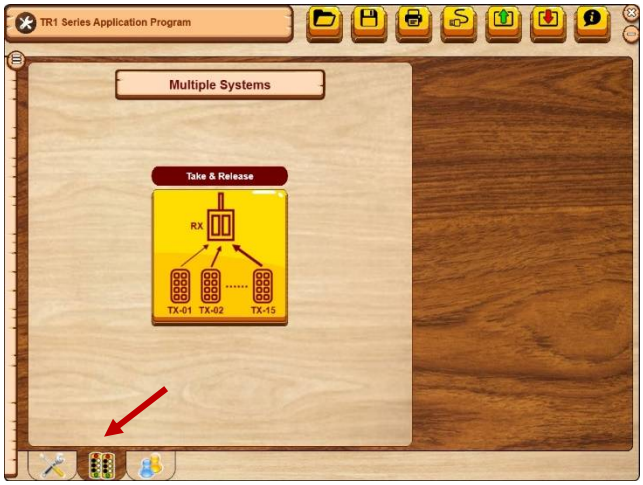
1. When multiple users operate one remote control, only allows the first one whoever starting the remote control to operate and never interrupted by other transmitters. And when the operator pushing “EMS” releasing operate right, the next one whoever starting the remote control can take the right to operate the remote control.

   Setting process:

   a. Click Take & Release Icon on the bottom of main page.
   b. Click Take & Release picture to enable the function.
   c. Select the number of transmitter or receiver to be program and click write setting icon. (Maximum 15 transmitters can be set)

   Important:

   When “Take & Release” function enable, DO NOT interchanges the e-Card between transmitter and receiver.



Filing user information

You may store user information such as company name, purchasing date, address, and phone etc.

Duplicating e-Card (Copy)

**Before copy e-Card, one must make sure the battery power in full condition.

1. Plug in the source e-Card into transmitter for duplicating (Copy). Then put the battery back.
2. Turn the rotary key to OFF position and press down EMS.
3. Press and hold **UP** button then switch rotary key to ON position. The green LED lite on 3 sec. Now the uploading data is done.
4. Turn rotary key to OFF position.
5. Remove the source e-Card from transmitter and plug in the destination e-Card for duplicating. Put the battery back.
6. Press and hold **DOWN** button then switch rotary key to ON position. The green LED lite on 3 sec. Now the destination e-Card is being duplicated.