USER'S GUIDE

SAGA1-L Series
- SAGA1-L10
- SAGA1-L12

SAGA1-L10/L12 User's Guide

Contents

Warranty

Gain Electronic Co., Ltd. guarantees that this equipment meets its published specifications at the time of shipment from the factory. Under proper installation it should work as expected. However, GAIN does not guarantee that operation in SAGA1 system is error free or without intermission.

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, GAIN 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 GAIN. Buyer will pay shipping charges to GAIN, while GAIN will pay return shipping charges.

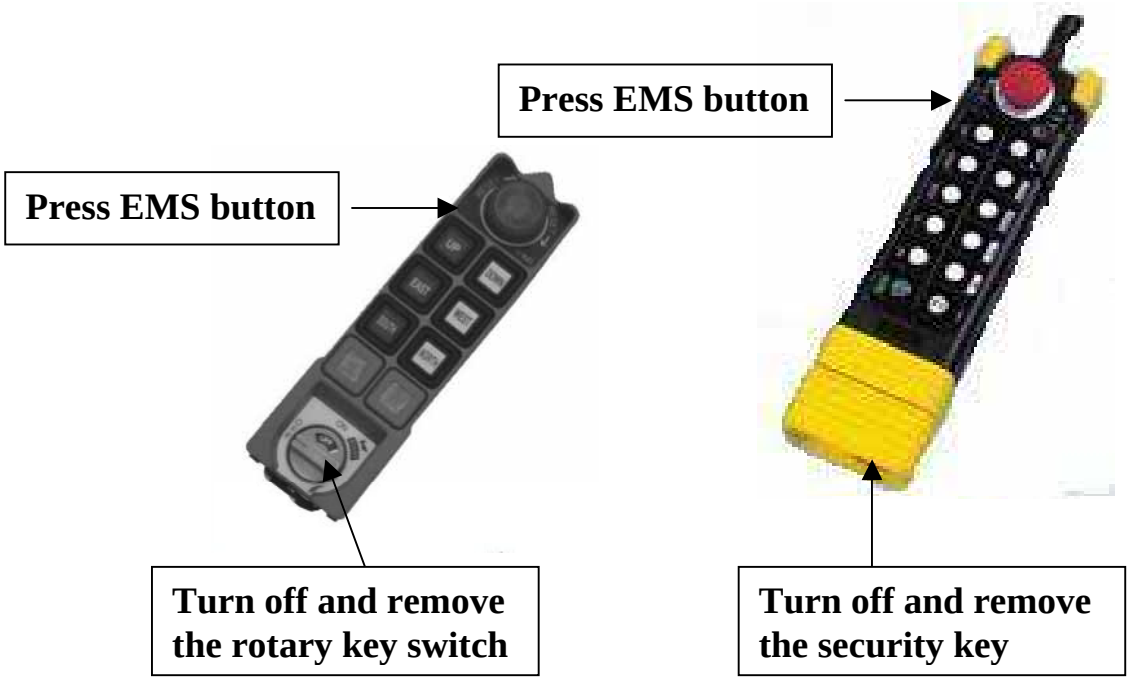
This warranty does not include consumptive parts such as batteries, fuses, buttons, and relays. Also this warranty does not cover defects caused by improper installation, improper or insufficient maintenance, unauthorized modification, improper operation, ignorance of environmental specifications, or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

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

Emergency Procedures

In case of any emergency, please follow the steps below and ask the distributor for service immediately:

1. Press EMS mushroom.
2. Turn the security key or rotary key switch to "OFF" position.
3. Remove the battery box and key.
4. Shut off the main power of the Crane and discontinue the operation.
5. Contact the distributor to find out reasons.



SAGA1-L10 **SAGA1-L12 TX**

General Operation

1) Turn on the main power switch of the equipment (Crane).
2) Install two AA size alkaline batteries in the transmitter.
3) Turn the security key to “ON” position and press the Start pushbutton to turn on the main relay inside the receiver (For SAGA1-L12).
   *For SAGA1-L10 turn the rotary key switch clockwise to “ON” position, then continue to turn it to “START” position to Power-On.
4) Operate normally according to the function setting has done.
5) Please proceed the following procedure after operation:
   a) Press EMS mushroom and turn the security key or rotary key switch of the transmitter to “OFF” position to shut off the motion of the receiver and remove the key.
   b) Switch off the main power switch of the equipment (Crane).
   c) Remove the batteries when the equipment is not going to be in use for a long period of time.

Receiver Voltage Selection

There are two types of power voltages (DC and AC) available for the SAGA1-L series:

1) DC Type:

Input Voltage : 12~24 VDC
Relay Contact: 10A-36VDC

2) AC Type:

Three different AC transformers: 48/110/220V, 48/220/380V, 110/220/380V.
Please disconnect the RX's power, select the proper voltage and plug in the connector.

SAGA1-L10 RX

SAGA1-L12 RX

Switch the plug to choose voltage

ID-Code Remote Setting

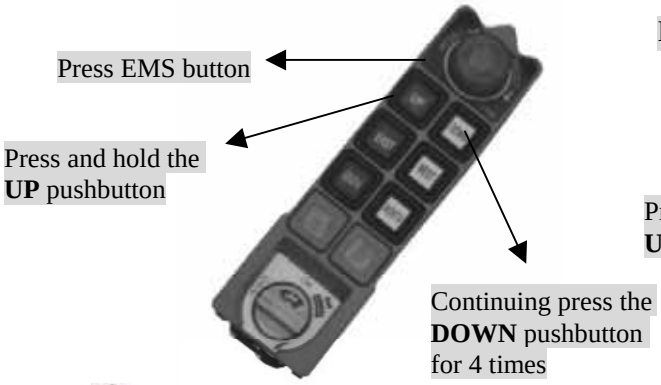
ID-Code remote setting allows you to pair the new TX or RX if one of them is damaged. Using ID-Code remote setting will make both the TX and RX to have the same ID-Code.

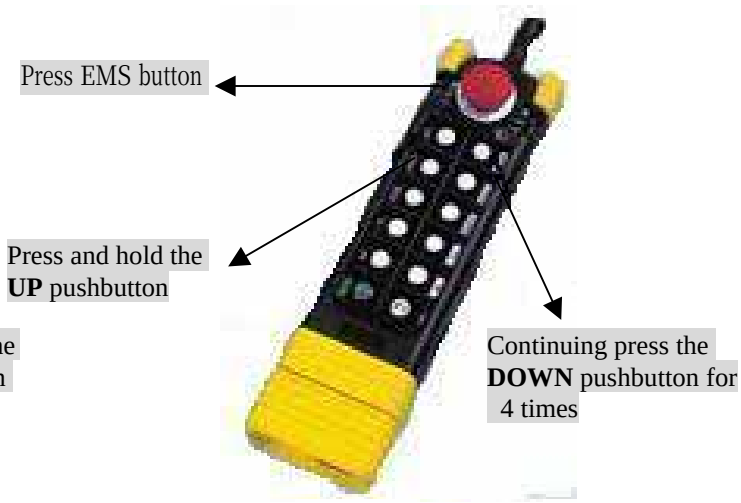
1). Please make sure the following conditions before ID-Code remote setting:

(a) Both TX and RX are of the SAME model and frequency.
(b) Place the transmitter as close as possible to the receiver to avoid interference.
(c) Turn off the RX power more than 10 seconds and turn it on again.

2). ID-Code remote setting Instructions:

(a) Press and hold the transmitter EMS button.
(b) Press UP pushbutton and hold it.
(c) Press DOWN pushbutton 4 times and release "EMS & UP" pushbuttons when the red light on the transmitter is flashing.
(d) Start the system as usual.

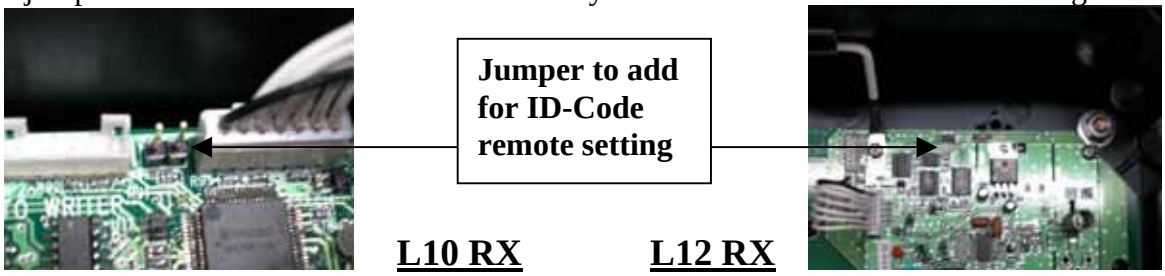




ATTENTION:

* In case ID-Code remote setting fails, repeat the instructions above within 4 minutes.
* ID-Code remote setting is available for ID Code only. It will not change function settings.
* Within the operating distance, all same model systems on the same frequency will be paired with the transmitters ID Code.

*A jumper added inside the receiver is necessary to enable the ID-Code remote setting function.



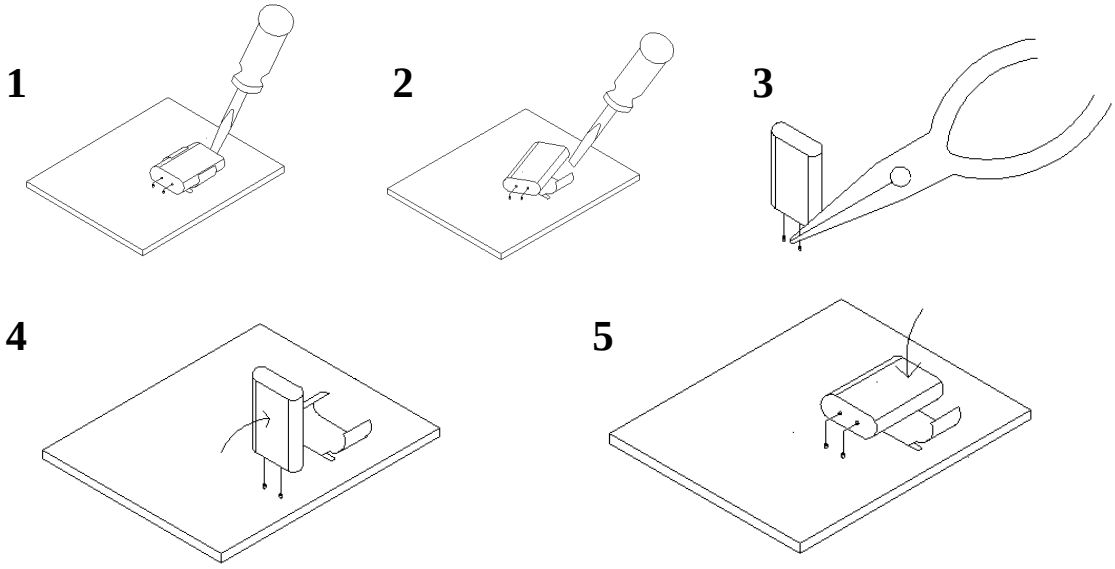
Changing the Frequency

It is easy to change frequency of the SAGA1-L series simply by replacing correspondent frequency crystal in both the TX and RX.

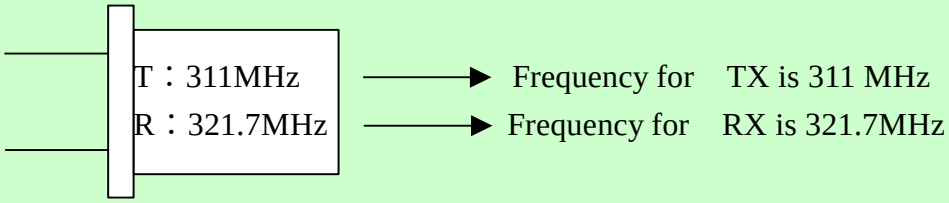
> ***Note**: To replace a new crystal, please note that there are two kinds of frequencies (VHF and UHF) available. The indication of VHF or UHF is shown on PC board with a check mark "V" and please make sure not to replace a VHF crystal unit into UHF PC board or vice versa.*

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.



Attention: The frequency will be different when plugging the same crystal into the TX or RX. For example:



Batteries

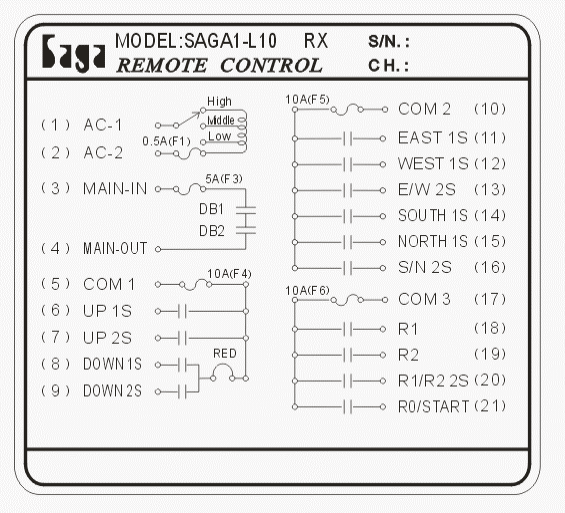
Two AA size alkaline batteries are required for the transmitter. The LED will flash green when the battery power is sufficient. The LED will flash red when the battery power is low.

* The operating distance will become shorter and intermittent when the battery is low.
* Replace with new battery when battery power is low.

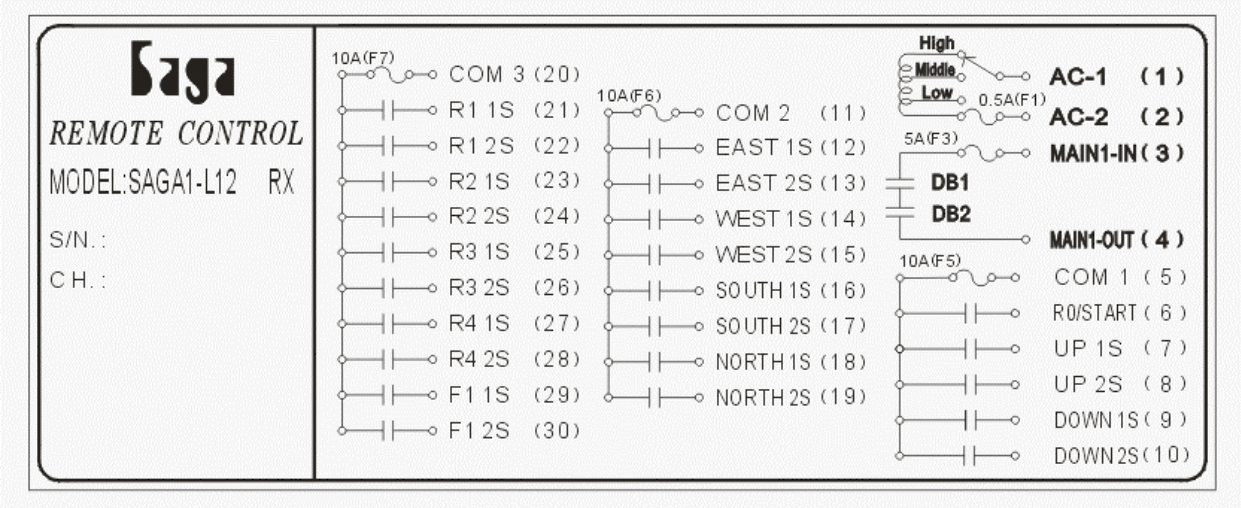
 **Do not use rechargeable batteries.**

Wiring

All SAGA1-L10/L10-1, L12/L12-1 are pre-wired, and the single and dual speed models are using the same cable. When it is single speed model (L10-1/L12-1), there are no relays for second speed contacts. In SAGA1-L10-1, cable number 7, 9, 13, 16, 20 are not used; in SAGA1-L12-1, cable number 8, 10, 13, 15, 17, 19, 22, 24, 26, 28, 30 are not used. When the second speed relays are added, and 2-step pushbuttons are changed, the SAGA1-L10-1or L12-1 will turn to SAGA1-L10 or L12 without other software or firmware reinstall needed.



SAGA1-L10 Wiring Diagram



SAGA1-L12 Wiring Diagram