Programming of Scanreco Rc400G2Bradio remote control

These instructions are valid for standard radio remote controls. Special customized codes may have a different assignment of SETs to the machine operation modes (CRANE / PLATFORM). Please refer to the specific instructions.

Scanreco radio remote controls are preset in factory with appropriate settings suitable to the electro-hydraulic specifications communicated to us by the Customer during the order. However, it may be necessary to change the settings of the remote control to adapting it to particular conditions of the machine or to the different sensitivity of the operator.

The speeds of the RC400 G2B radio remote control can be adjusted from the transmitter, connecting it with the cable and entering in programming mode ("on-line"), as described here below.

The programming is performed in three phases:
- Enter in programming mode;
- Adjust the system;
- Exit from programming mode saving the effected modifications.

The programming is carried out in several steps. Each step is dedicated to the adjustment of a specific group of parameters.

The table here below specifies which is the programming step to be used, for each type of functions to be adjusted.

Enter in programming mode

To enter the programming mode, please follow these steps:
- Remove the battery from the transmitter;
- Connect the transmitter to the central unit with the serial cable;
- Press the emergency stop button on the crane and on the transmitter (be sure to start with everything off);
- Release the emergency stop button on the transmitter;
- Release the emergency stop button on the crane;
- Turn on the central unit in REMOTE mode;
- Turn on the transmitter pressing once the ON-SIGNAL button (the red LED lights up).
- Within 5 seconds, move many times the TURTLE/HARE switch towards RIGHT until the transmitter gives a "beep";
- You are now in programming mode.
- Select the step you want to modify pressing the ON-SIGNAL button "x" times;
(For example: press 3 times to enter in step 3). The chosen step will be indicated repeatedly, both visually (the red LED of the transmitter flashes for "x" times) and acoustically (the transmitter gives cyclically, every 5 seconds, the sounds described below).

STEP	FUNCTION	SOUND	SOUND DESCRIPTION
01	Inversion of the direction of movement	.	1 short beep
02	Adjustment of start speed (for CRANE mode = SET1)	..	2 short beeps
03	Adjustment of maximum speed in HARE mode (for CRANE mode)	...	3 short beeps
04	Adjustment of maximum speed in TURTLE mode (for CRANE mode)	....	4 short beeps
05	Adjustment of the acceleration ramps (for CRANE mode)	−.	1 long beep and 1 short one
06	Adjustment of the deceleration ramps (for CRANE mode)	−..	1 long beep and 2 short ones
07	Adjustment of start speed (for PLATFORM mode [WMB] = SET2)	−...	1 long beep and 3 short ones
08	Adjustment of maximum speed in HARE mode (for PLATFORM [WMB] mode)	−....	1 long beep and 4 short ones
09	Adjustment of maximum speed in TURTLE mode (for PLATFORM [WMB] mode)	−−.	2 long beeps and 1 short one
10	Adjustment of the acceleration ramps for PLATFORM [WMB] mode	−−..	2 long beeps and 2 short ones
11	Adjustment of the deceleration ramps for PLATFORM [WMB] mode	−−...	2 long beeps and 3 short ones

Other programming steps are RESERVED, and they must not be changed.

During programming, each time you press the ON-SIGNAL button, you skip to the next step.

To select a previous step, it is necessary to interrupt the programming (pushing the emergency button) and to restart from the beginning.

NOTE: when you are in a specific programming step, the radio system works with the speeds corresponding to the step in which you are, ignoring the input that normally sets the mode of functioning CRANE or PLATFORM.

For example: if the basket is not mounted on the crane, the radio system works in CRANE mode. But if you enter in programming mode and you select step no. 8 (Adjustment of maximum speed for PLATFORM [WMB] mode), the radio system works with speeds of PLATFORM mode – until you remain in programming mode, even if the basket is not mounted.

NOTE: if you set speeds of CRANE mode (so, step from 1 to 6) and when you exit from programming mode, the machine works with a different speed from the one set during the programming, maybe the radio system is working in PLATFORM mode.

The selection input of PLATFORM mode must be connected to the positive, in this way the machine works in CRANE mode.

ATTENTION!
During the programming the radio system works normally, please pay attention to the movement of the machine.

It is possible to program only one movement at a time. The lever, that is activated, identifies the movement that is changed.

In order to choose the movement to program, it is necessary that the lever is activated just out of the dead band, so that DV output turns on, indicating that the movement is in progress.

If during the programming it is necessary to place again the machine, you can use also more levers at the same time, but when you change the adjustment, only the lever that has to be programmed must be active.

Step 1 – Inversion of the direction of movement

In this step it is possible to invert the lever working direction. Once a lever working has been inverted, the function will work in opposite direction: moving forward the lever, output B will be commanded (instead of output A).

1. Enter in programming mode.

2. Choose step no. 1, pressing the ON-SIGNAL button once (the transmitter gives 1 short sound repeatedly, while the red LED flashes once every 5 seconds).

3. Move, at minimum, the lever of the function of that you want to invert the direction (pay attention to the movement of the machine!)

4. Keeping the lever activated move the TURTLE/HARE switch once towards RIGHT to invert the movement, or towards LEFT to turn back to original working direction.

Repeat the above procedure from step no. 3 for all levers to invert. At the end, if necessary, go to next programming step pressing START button, or save the modifications pressing the emergency stop button on the transmitter.

Steps 2, 3, 4 (or 7, 8, 9) – Adjustment of operating speeds in CRANE mode (or PLATFORM)

In these programming steps, it is possible to modify the following speeds:
- starting movement speed of the function (valid for both HARE and TURTLE sets);
- maximum speed of the function, used when acting a lever fully (for HARE set);
  – maximum speed of the function, used when acting a lever fully (for TURTLE set).

1. Enter in programming mode;

2. Choose the required step, pressing the ON-SIGNAL button 2, 3 or 4 (7, 8 or 9) times (please see the table on the first page for step's description and relative meaning). The chosen step defines if you are setting CRANE mode or PLATFORM mode.

3. Move the lever of the function to adjust. The operation works normally also during the programming. In order to see the effect of the modifications that you are making, try the starting speed of the movement or the maximum speed, depending on what you are programming.

4. Keeping the lever activated, move the TURTLE/HARE switch repeatedly:

- towards LEFT to decrease the output value (reduce the speed);
- towards RIGHT to increase the output value (increase the speed).

Repeat the above procedure from point no. 3 for each lever to adjust. At the end if necessary, go to next programming step pressing START button, or save the modifications pressing the emergency stop button on the transmitter.

Steps 5 and 6 (10 and 11) – Adjustment of start/release delays of operations in CRANE mode (PLATFORM)

In these programming steps, it is possible to program the acceleration and the deceleration delays of each function (individually for both directions A and B).
1. Enter in programming mode;

2. Choose the required step, pressing the ON-SIGNAL button 5 or 6 (10 or 11) times (please see the table on the first page for step's description and relative meaning). The chosen step defines if you are setting CRANE mode or PLATFORM mode.

3. Move the lever of the function to adjust.

4. Keeping the lever activated, move the TURTLE/HARE switch repeatedly:

- towards LEFT to decrease the duration of the ramp (lower delay, shorter execution time);
- towards RIGHT to increase the duration of the ramp (higher delay, longer execution time).

Repeat the above procedure from point no. 3 for each lever to adjust. At the end, if necessary, go to next programming step pressing START button, or save the modifications pressing the emergency stop button on the transmitter.
ATTENTION: Please set carefully deceleration ramps. If a deceleration ramp is set up and you release a lever, the movement does not stop immediately, but it takes more time to stop itself, with potential dangers in emergency situation.
Please limit the deceleration ramps to the essentials to dampen the oscillations due to a too rapid release of the lever.

Saving the adjustments

All adjustments made during the programming are in real-time and they are stored immediately. Once the adjustment has been completed, press the emergency stop button on the transmitter to exit from programming mode.

Usage of Central Unit's internal display

Programming can be carried out completely "blindly", following only the flash of the LED and the sound (beep) of the transmitter. It is however very useful to look at the 2-digit display, that is located inside the central unit and visible through a little transparent window on the cover. It will let you know the selected programming step and the value of the parameter that you are adjusting.
After entering in programming mode, the display shows "Po" and "00" alternatively (Po = programming mode, 00= programming step). Press the ON-SIGNAL button to go to next programming step.
While you are in any programming step, if you do not move any lever, the display alternatively shows "Po" and the number "nn" of programming step in which you are.
Moving a lever, the display shows shortly the number of the commanded function (for example: "1A" or "5B"), then it shows steady the value of the parameter that has been set up for that movement. The numerical value read has a different meaning depending on the parameter in question.
The shown values can be from 01 to 99, then "HI" that states for 100.
The meaning of the parameter value depends on the programming step you selected:

• For the inversion of the movements: "0" states the original directions, while "1" states that the movement has been inverted.

• For the start speed and HARE settings: the percentage value of the maximum current that has been set up on the radio remote control (set up in factory).

• For TURTLE speeds settings: the value of percentage reduction compared to HARE speed.

• For ramps settings: the time, in tenth of a second, that the output takes to go from minimum to maximum, if activated abruptly.