



SC5000 Runabout User Guide

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SC5000 Runabout User Guide

The **SC5000 Runabout** portable controller is a local control device that is intended for use during machine setup and load installation to alleviate the need for an operator to stand by on the main operator station. With the **SC5000 Runabout** an operator has the ability to jog any machine controlled by the SceneControl Motion control system.

The **SC5000 Runabout** requires the Main Console and **RAYNOK SOFTWARE** to be online and operational. This is because the Main Console and software are responsible for maintaining the restrictions and limitations on such features as *Link Groups*. If there is no communications with the software, a warning will be displayed in the main screen.

To use the **SC5000 Runabout**, plug the unit into any Ethernet outlet for the control system and the Emergency Stop Connector. Turn on the unit, and press the 'MODE' button on the screen to enter the main screen.

Once connected properly to the control system the **SC5000 Runabout** can be used to send *JOG* commands to specific equipment, execute pre-programmed cues and create and execute *Manual Move Cues*.

When the **SC5000 Runabout** is turned on and is set to one of the available modes, the Main Operator Station cannot be used to send move commands. The **SC5000 Runabout** will automatically disable these functions on the Main Operator Station. The Main Operator Station will however, still be able to send *STOP* commands and monitor all operations, position information and input devices while the **SC5000 Runabout** is being used.

This document will guide you through the use of your **SC5000 Runabout** by explaining the features, functions, buttons and operation of the unit. Please read this document carefully and practice safe operating procedures.

The **SC5000 Runabout** is dependent on the Main Operator Station and is not intended to be a backup device for that station.

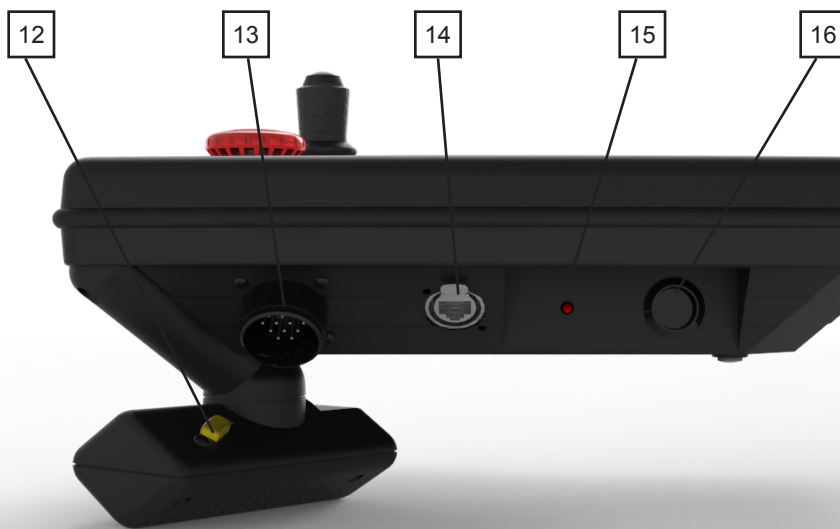
List of parts

Review the diagram below to familiarize yourself with the **SC5000 Runabout** operator buttons and physical features.

SC5000 Runabout Top View Layout



SC5000 Runabout Rear View Layout



List of Parts Cont'd

- 1 - Touch Screen Display
 - Display touch screen of the unit
- 2 - Mode Selector Button
 - Used to select the desired operational function
 - o Controller Stand-by
 - o Jog Mode
 - o Cue Execute Mode
 - o Manual Cue Mode
 - o E-Stop Viewer Mode
- 3 - E-stop Reset Button
 - Resets the main E-stop system
- 4 - E-stop Button
 - Stops all motion and disables the main Emergency Stop System
- 5 - M1 through M8 Macro Buttons
 - Used to access commonly used features and functions of the **SC5000 Runabout** and the **RAYNOK SOFTWARE**.
 - The macro buttons are assigned in the current show file by creating a macro group with sixteen macro functions and assigning the group to this controller (see Macro View sections in the **RAYNOK SOFTWARE GUIDE**). The first eight macros are used in JOG MODE and macros nine to sixteen are used in CUE EXECUTE MODE.
 - Although it is possible to assign any macro functions to these buttons, it is standard and recommended practice to assign the first eight as AXIS SELECT and the next eight as CUE SELECT macro functions to allow fast scrolling through axis and cue lists.
- 6 - GO
 - Used to send the GO command
- 7 - Scroll UP and DOWN Buttons
 - Scrolls through the axis list, cue list, or activated E-Stop signals on the onboard display
- 8 - STOP
 - Used to send the STOP command
- 9 - CL (Reset)
 - Used to reset the CONTROL SYSTEM axes
- 10 -EN (Stand-By)
 - Used to issue the Stand-By command
 - Used in conjunction with Cue mode and Manual mode
 - In JOG MODE and MANUAL CUE MODE pressing and holding this button will display the currently selected axis details including status of the drive and all interlocks.
- 11 - Joystick
 - Selects speed and direction of the selected axis when JOG MODE is selected
 - Includes an integral Enable Button on the top of the joystick
- 12 - HTR Button
 - Must be held in the middle position before pressing the GO button
- 13 - E-STOP port
 - Connect your E-Stop system 14PIN CPC connector to this port
- 14 - Network port
 - Connect your E-Stop system ethercon connector to this port
- 15 - Heartbeat LED
 - Should flash 1 second on and 1 second off when the power is turned on
- 16 - Power Button
 - Flip this switch to turn the **SC5000 Runabout** on. The touch screen will flash a logo before entering into the main standby mode.

Operation Modes

GENERAL

1. **BEFORE USING YOUR SC5000 Runabout BE SURE YOU UNDERSTAND AND FOLLOW ALL BASIC SAFETY GUIDELINES AS LAID OUT BY YOUR SYSTEM ADMINISTRATOR.**
2. Ensure that the E-stop button on the **SC5000 Runabout** is pushed in.
3. Press and pull out any local E-stop button to disable the system.
4. Using an E-Stop/Data cable, connect the **SC5000 Runabout** to the E-Stop System and Control System Network.
5. Pull out the E-stop button on the **SC5000 Runabout**.
6. Press the E-stop Reset button.
7. Press the MODE selector button to select the desired function.

There are no high voltage signals inside the **SC5000 Runabout** handheld controller. Present signals do not exceed 24 VDC. Observe care in handling the cables and should a cable become worn or damaged remove the unit from service until it is repaired. A damaged cable could cause undesired operation of the unit.

When any mode is selected the **SC5000 Runabout's** display screen will clearly indicate what mode is selected. Information listed below the Mode Title will inform the operator with details regarding the actions that they are attempting to execute.

STAND-BY MODE

Mode : STAND-BY
RAYNOK RUNABOUT
192.168.1.70
Version 1.01A

Mode : STAND-BY ERM
RAYNOK RUNABOUT
192.168.1.70
Press GO to exit ERM

When the unit's power is turned on the default mode will always be *Stand-By Mode*. The screen displayed at the start gives the user basic information about the unit. Press the MODE button to begin communications with the **RAYNOK SOFTWARE**.

In the *Stand-By Mode* of operation the display will show a welcome screen that will tell the operator that the *Stand-by Mode* is selected, the TCP/IP address of the unit and the software version number installed on the unit. When the **SC5000 Runabout** is communicating with the **RAYNOK SOFTWARE**, the fourth line displays the number of status packets processed by this controller.

In systems where the ESTOP RESET MODE functionality is enabled in the **RAYNOK SOFTWARE**, the GO button can be used to exit ESTOP RESET MODE when it is active. The display is updated accordingly (see above).

JOG MODE

```
Mode : JOG MODE
Axis :  LINESET 24
Ready      P= 250.00
JOG ENABLED  S= 8.50
```

In this mode the operator can use the on-board joystick to jog an individual selected non-linked axis. An axis can be selected by scrolling through the list with the scroll up or down buttons. The displayed axis is the one ready to be jogged.

1. Select an axis by highlighting it with the scroll up or the scroll down button.
2. Alternatively, if the macro buttons M1 to M8 are programmed to select particular axes, they can be used to quickly scroll through the axis list.
3. The selected axis will appear within the display window.
4. Allow the joystick to sit in its centre "off" position without the aid of your hand.
5. Press and hold the Drive Enable button located on the top of the joystick.
6. Wait approximately 2 seconds for the drive to produce torque and engage the brake relays.
7. While watching the machine, scenery or load in motion, gently ease the joystick in the direction of intended travel.
8. Ease up on the joystick as you approach the intended stopping point.
9. For a quick stop, release the Drive Enable button. (CAUTION: Be certain that a quick stop will NOT damage attached equipment BEFORE attempting to release the Drive Enable while in motion)

CUE MODE

```
Mode : CUE EXECUTE
Cue : BANNERS OUT
all 10 to outtrim
moving : 10
```

In this mode the operator can access and execute pre-programmed cues. Cues can be selected by scrolling through the list with the scroll up or down buttons. The screen will display the cue notes contained in the selected cue. It is recommended practice to put some reminders in the cue notes field in order to make sure the proper cue is selected when scrolling through the cue list. Also, the number of moving machines is displayed on the last line and updated as the status changes.

1. This mode is used to move multiple axis or multiple axis groups and linked groups from specific pre-programmed cues.
2. Groups, linked groups and cues must be arranged and programmed on the main operator station to be made available to the **SC5000 Runabout**. See your **RAYNOK SOFTWARE GUIDE** for information on how to program and store cues for the **SC5000 Runabout**.
3. Using the scroll buttons select the cue that you wish to operate
4. Alternatively, if the macro buttons M1 to M8 are programmed to select particular cue, they can be used to quickly scroll through the cue list.
5. Once you have selected the cue, ensure that the area in which the machinery is moving the equipment into is clear and all personnel are at a safe distance, press the *GO* button to execute the move.
6. Pressing the *STOP* button will abort the move.
7. In systems where ESTOP RESET MODE functionality is enabled in the **RAYNOK SOFTWARE**, and ESTOP RESET MODE is active, the following screen is displayed and cue execution is disabled.

```
Mode : CUE EXECUTE ERM
Cue : BANNERS OUT
No cue execute in
ESTOP RESET MODE
```

MANUAL MODE

Mode : MANUAL CUE Axis : BATTEN 27 Ready P= 27' 9.0" T= 10' 5.0" Sp= 50%
--

The screen in this mode displays the *Axis Name, Axis Status, Current Position, Intended Target Position and the Intended Velocity*. The *Manual Mode* allows the operator to set a defined target and velocity of an individual non-linked axis. Once the target and velocity are set on the displayed axis the operator can press the 'GO' button to execute the move.

1. This mode is used to move individual, non-linked axis to specific target positions.
2. Set the unit to Manual Mode.
3. Using the scroll buttons select the axis that you wish to operate.
4. Using one of the pre-programmed macro buttons select a target position and speed:

M1	- Sets target to preprogrammed target position "Outtrim"
M2	- Increases target by 12.00 units
M3	- Increases target by 1.00 unit
M4	- Increase speed by 1.00 unit
M5	- Sets target to preprogrammed target position "Intrim"
M6	- Decreases target by 12.00 units
M7	- Decreases target by 1.00 unit
M8	- Decreases speed by 1.00 unit

The display is updated accordingly.

5. Once you have programmed the cue, ensured that the area in which the machinery is moving the equipment into is clear and all personnel are at a safe distance, press the *GO* button to execute the move.
6. Pressing the *STOP* button will abort the move.

E-STOP VIEWER MODE

Mode : ESTOP VIEWER
No Estops triggered

This screen allows for the viewing of activated E-Stop signals. This way any pressed E-Stop button can be quickly located. The E-Stop Signals are setup on the main computer station in the signal group called 'All estops'. See the **RAYNOK SOFTWARE GUIDE** on how to setup and edit signal groups.

1. This mode is used to help identify triggered E-Stop buttons located throughout the system.
2. When the Emergency Stop system is operating in a ready state, with no activated E-Stop buttons the E-Stop Viewer Mode should look as shown above with 'No Estops triggered' displayed.
3. If one or more E-Stop buttons are pressed the screen will read 'ESTOP ACTIVE (01/16)', indicating the number of E-Stop buttons pressed out of the total number of E-Stop reporting points in the system.
4. The name of the activated E-Stop signal will be displayed at the bottom of the view. When there is more than one E-Stop button triggered, the scroll buttons can be used to scroll through the names of the activated locations.
5. The status of the currently activated E-Stop signals will updated as activated E-Stop buttons are reset.

Mode : ESTOP VIEWER
ESTOP ACTIVE (01/16)
SL CTWK 5

NOTES