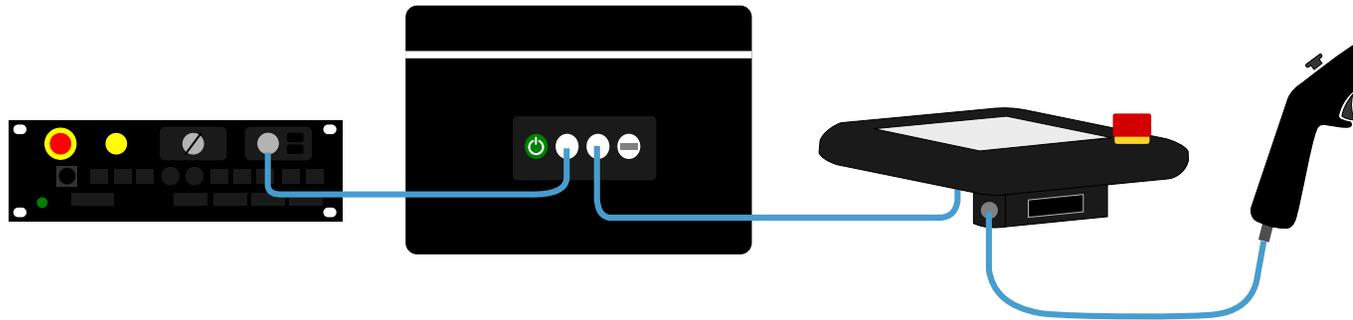


1 Connect the SIM to the case

2 Connect the tablet to the case

3 Connect the wand to the under side of the tablet

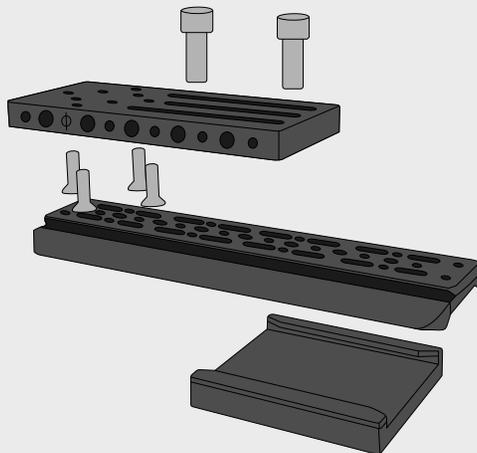


4 Connect the reference switch to the under side of the KRC4

5 Connect the robot to the KRC4 via the ground wire and two main connectors

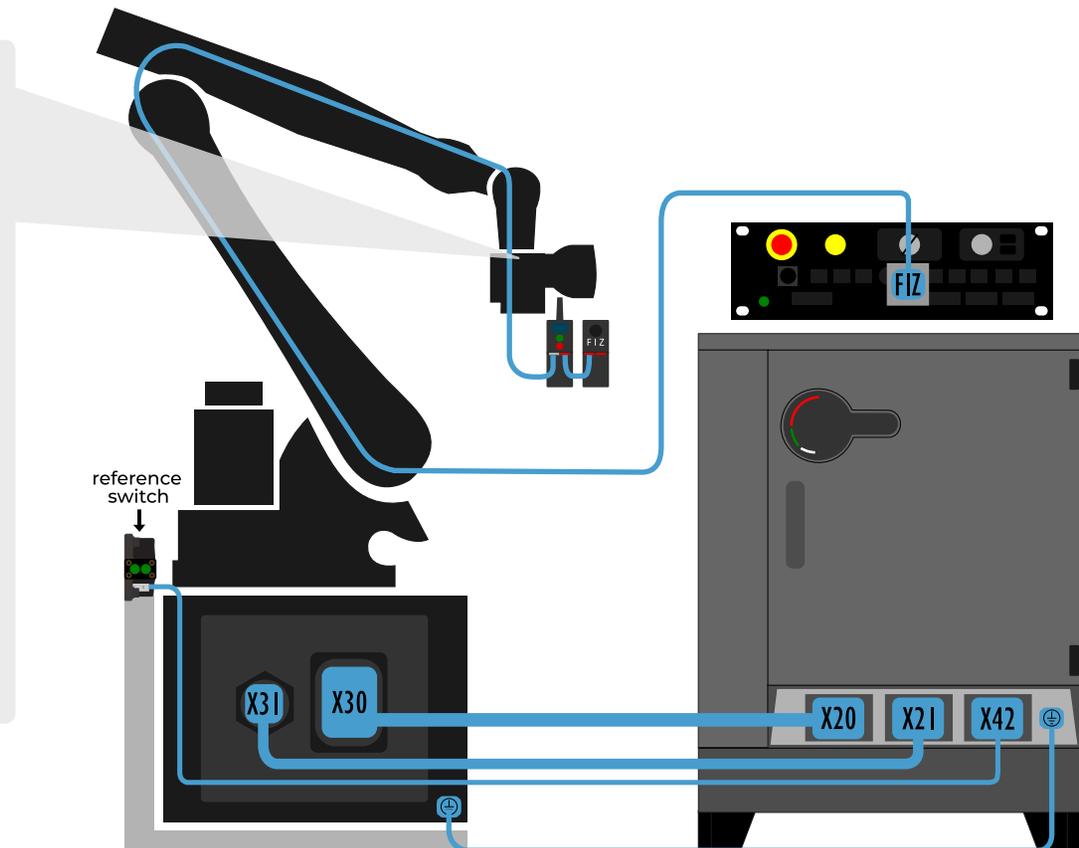
6 Mount the camera and connect the FIZ motors to the SIM

CAMERA MOUNT GUIDE



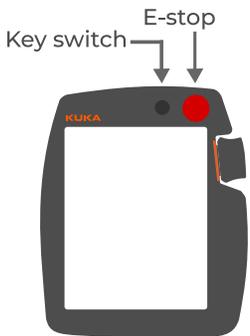
- 1) Mount cheese plate to robot with the front towards the unthreaded hole
- 2) Mount dovetail to cheese plate
- 3) Mount dovetail clamp to camera
- 4) Slide camera/clamp assembly onto dovetail

Place the case at least 3 ft. above the ground.

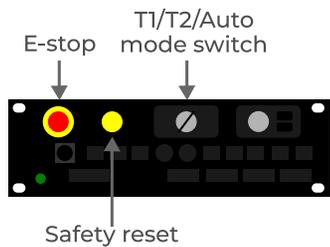


Labeled Hardware

1 KUKA pendant

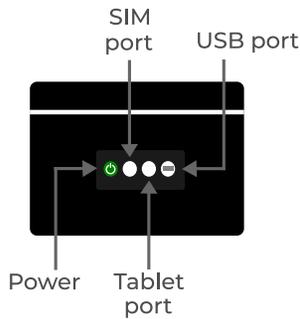


2 SIM

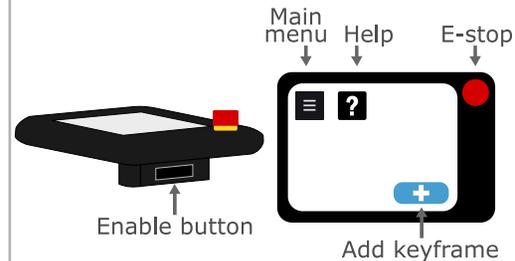


The mode switch is on the controls cart for C11/C14 robots

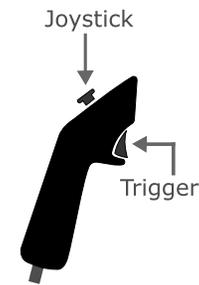
3 Case



4 Tablet

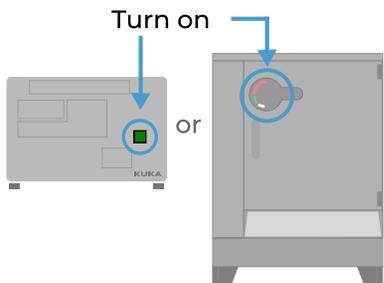


5 Wand

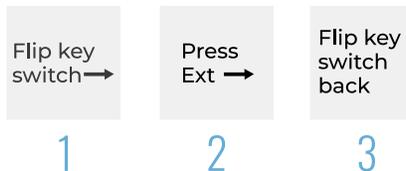


Start Up

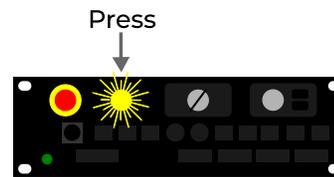
1 Turn on KRC4 or KRC4 compact



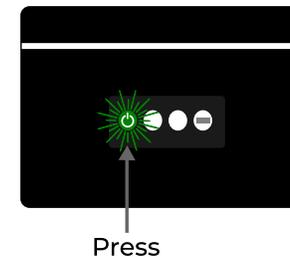
2 Set KUKA pendant to External



3 Press safety reset on the SIM



4 Turn on case



Shut Down

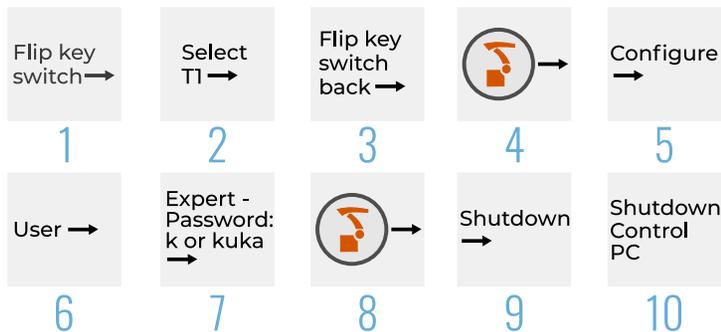
1 Shut down on tablet: Main Menu → Shutdown



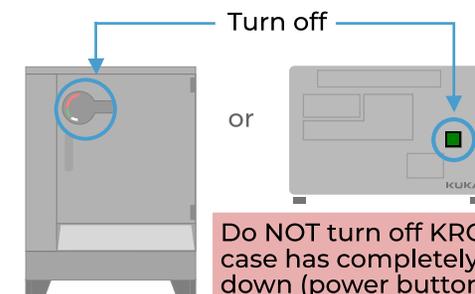
System is completely shut down when case power button is no longer lit



2 Shut down on KUKA pendant



3 Turn off KRC4 or KRC4 compact



Do NOT turn off KRC4 until case has completely shut down (power button light on case turns off)

Calibrating System

1 **Calibrate Wand**
Wand Notifier →
Run Calibration



Select

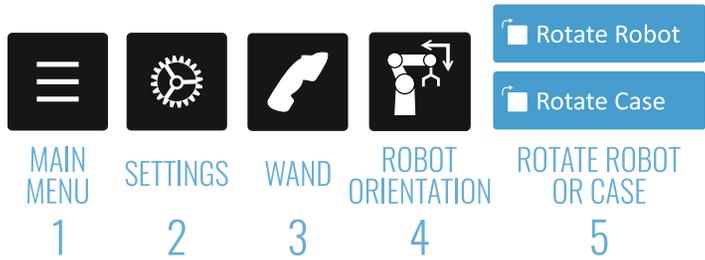
2 **Calibrate FIZ**
FIZ Notifier →
Initialize FIZ



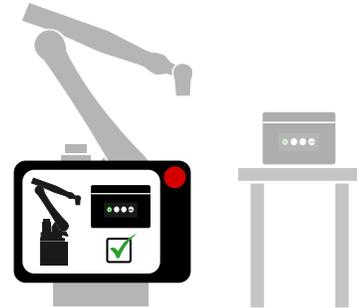
Select

Robot Orientation

1 **Tablet:**
Main Menu → Settings → Wand →
Robot Orientation → Rotate Robot or Rotate Case

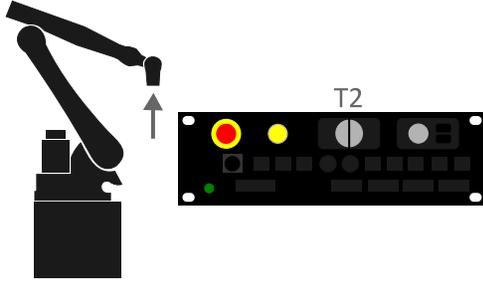


2 Turn virtual case and robot until they match what you see in real life. Exit settings



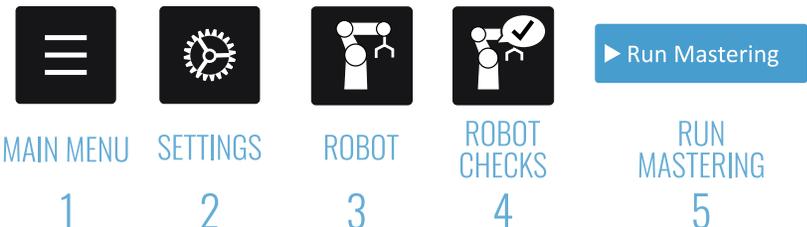
Mastering Check

1 **Remove camera and dovetail clamp** from the end of the robot and set mode switch to T2

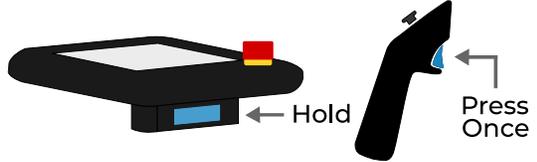


The mastering check should be done after every reboot of the KRC4, and before each day of robot usage.

2 **Tablet:**
Main Menu → Settings → Robot → Robot Checks → Run Mastering



3 Hold enable button and push the trigger once to start test

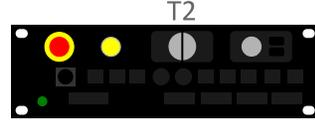


You will need to keep the enable button held down until check is done

If the mastering check fails, you must restart the system and run the mastering check again. See manual for other possible solutions

Brake Check

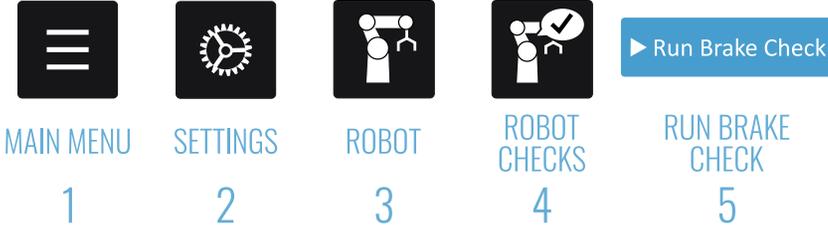
1 **Remove camera and dovetail clamp**
Set mode switch to T2



The brake check should be done after every reboot of the KRC4, and before each day of robot usage

Clear the space of all obstacles before running brake check

2 **Tablet:**
Main Menu → Settings → Robot → Robot Checks → Run Brake Check



3 Hold enable button to start the brake check. **Do not release until all 6 joints have moved**



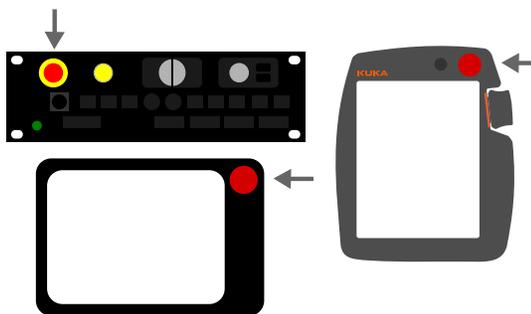
Robot will start moving and will not stop until you release enable button

Stopping Robot Motion

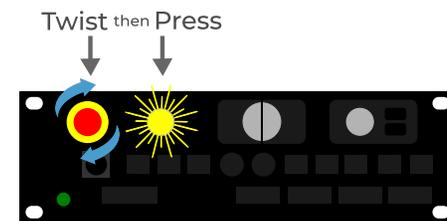
1 Stop robot motion:
 Let go OR completely press in enable button
 Release joystick
 Let go of wand trigger



2a E-Stop buttons:
 Push one of the Emergency stop buttons

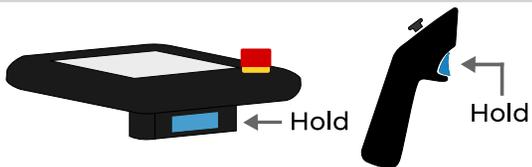


2b Reset and clear errors:
 Twist E-stop button and push safety reset

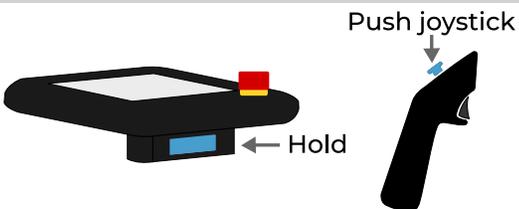


Moving Robot

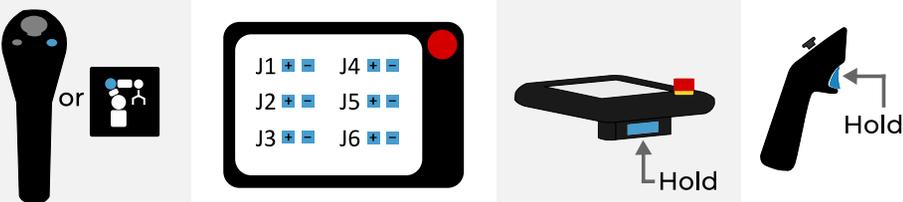
1 Trigger control:
 Set key switch to T1. Hold down enable button and trigger. Move hand and arm to initiate robot movement



2 Joystick control:
 Set key switch to T1. Hold down enable button. Push joystick to move robot

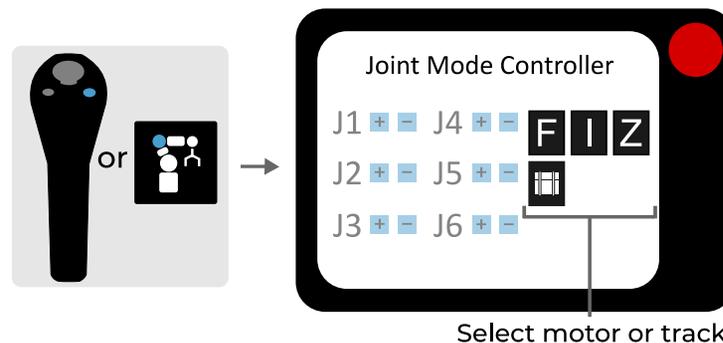


3 Joint mode:
 Enter/exit joint mode by pressing the right button on the wand or selecting the joint mode icon. Select desired joint and direction (+ or -). Hold down enable button. Squeeze trigger to move robot

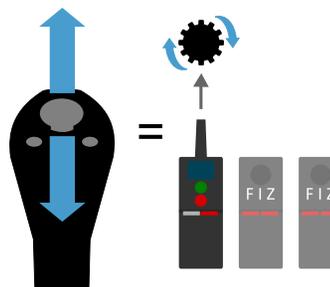


Moving FIZ Motors & Track

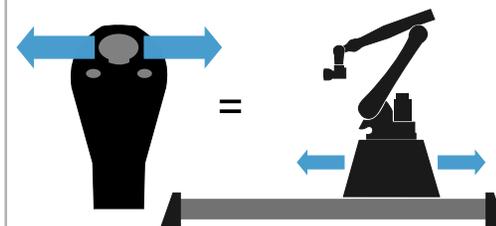
1 Tablet - Select FIZ Motors OR Track:
 Joint Mode → F I Z motors OR track button



2a Move FIZ Motors:
 Move selected FIZ motor by pushing forward or backward on joystick



2b Move Track (if applicable):
 Move track by pushing left or right on the joystick



Writing Program #1

1 Set Lens Configuration:

Main Menu → Settings → FIZ



MAIN MENU 1
SETTINGS 2
FIZ 3

2 Set Camera Tool:

Main Menu → Settings → Robot → Camera Tool



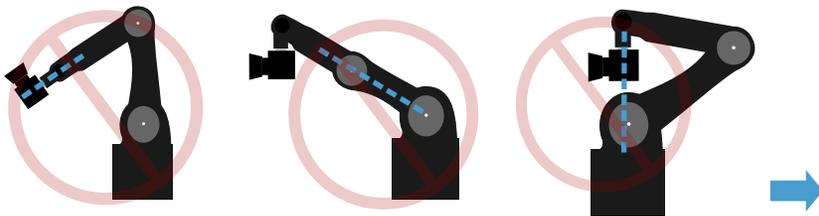
MAIN MENU 1
SETTINGS 2
ROBOT 3
CAMERA TOOLS 4

3 Move Robot and Add Keyframes:

- a) Move the robot to the desired position
- b) Click the left wand button or the Add Keyframe button

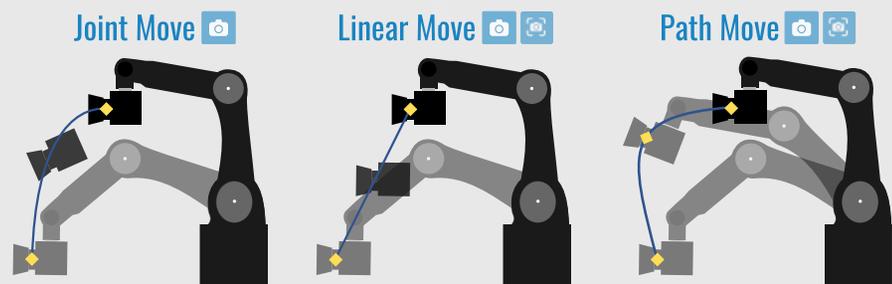


SINGULARITIES - positions to avoid



4 Choose move type (for camera and target channel):

Click on the move type in front of keyframe. Choose from options



The path in between the keyframe points is not controlled

The selected camera center moves in a straight line between keyframe points

Will pass through all points exactly but the path in between the points is undetermined

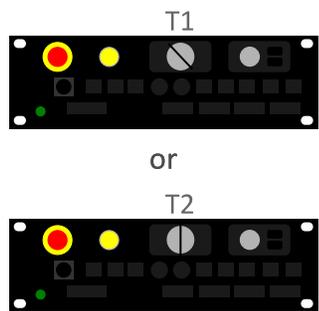
5 Preview program:

Click on preview button to preview program before running it



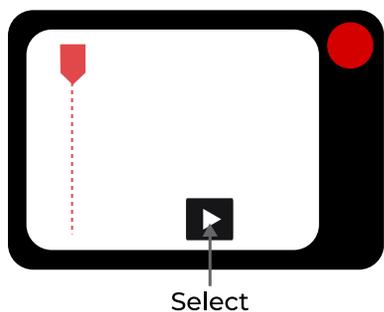
Run program in T1 & T2

1 Set mode switch to T1 or T2

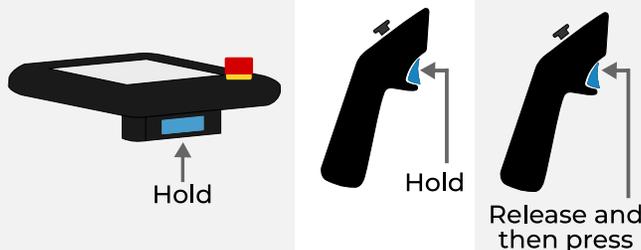


2 Tablet:

Set cursor to start time → Run Program button



3a Run with trigger: Hold enable button & trigger to get to 1st position. Release & squeeze trigger again to run program



You can control the speed at which the program will run by how hard you squeeze the trigger

3b Run with Start button: Use the Start button to play and pause program



DANGER: Robot can run at 100% speed in T2 mode

Writing Program #2

1 Quick Set Tray Icons

(Manual: section 5.6)

| TRANSLATION / ROTATION | | | MOVE SPEED | | |
|---|---|---|---|---|---|
|  |  |  |  |  | |
| Free Motion Mode | Translation Only Mode | Rotation Only Mode | Fast Speed | Slow Speed | |
| JOYSTICK REFERENCE | | SNAP to AXIS | | HORIZON LOCK | |
|  |  |  |  |  |  |
| Camera Reference | Crane Reference | Snap to Axis ON | Snap to Axis OFF | Horizon Lock ON | Horizon Lock OFF |

2 Header Icons and Functions

(Manual: section 6.3.2)

| RIPPLE FUNCTION | | ZOOM FUNCTION | | |
|---|---|---|---|---|
|  |  |  |  | |
| Ripple ON | Ripple OFF | Zoom OUT | Zoom IN | |
| MISCELLANEOUS HEADER FUNCTIONS | | | | |
|  |  |  |  |  |
| Main Menu | Help Page | Joint Mode | Undo Action | Redo Action |

3 Mode Indicators

(Manual: section 4.4)

| | | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| Wand Calibrated | Wand Calibrating | Wand Disconnected | Wand Not Calibrated | Track Calibrated |
|  |  |  |  |  |
| FIZ Calibrated | FIZ Calibrating | FIZ External / Disconnected | FIZ Not Calibrated | Track Not Calibrated |
|  |  |  |  |  |
| Robot Engaged | Robot Disengaged | Robot Disconnected | Robot Safety Stop | Track Disconnected |

4 Channel Icons

(Manual: sections 6.4 & 6.6)

| | | | | | |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| Camera Channel | Focus Channel | Target Channel | Iris Channel | Zoom Channel | Trigger Channel |

*You can have either a Focus channel or a Target channel, but not both at the same time

5 Miscellaneous Icons

(Manual: chapter 6)

| | | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| Move Robot to Selected Keyframe's Position | Preview Program | Run Current Program | Add Keyframe | Timeline Properties |

For additional help please consult the user's manual or contact SISU Cinema Robotics support:
support@sisucinemarobotics.com
 512-377-6075