

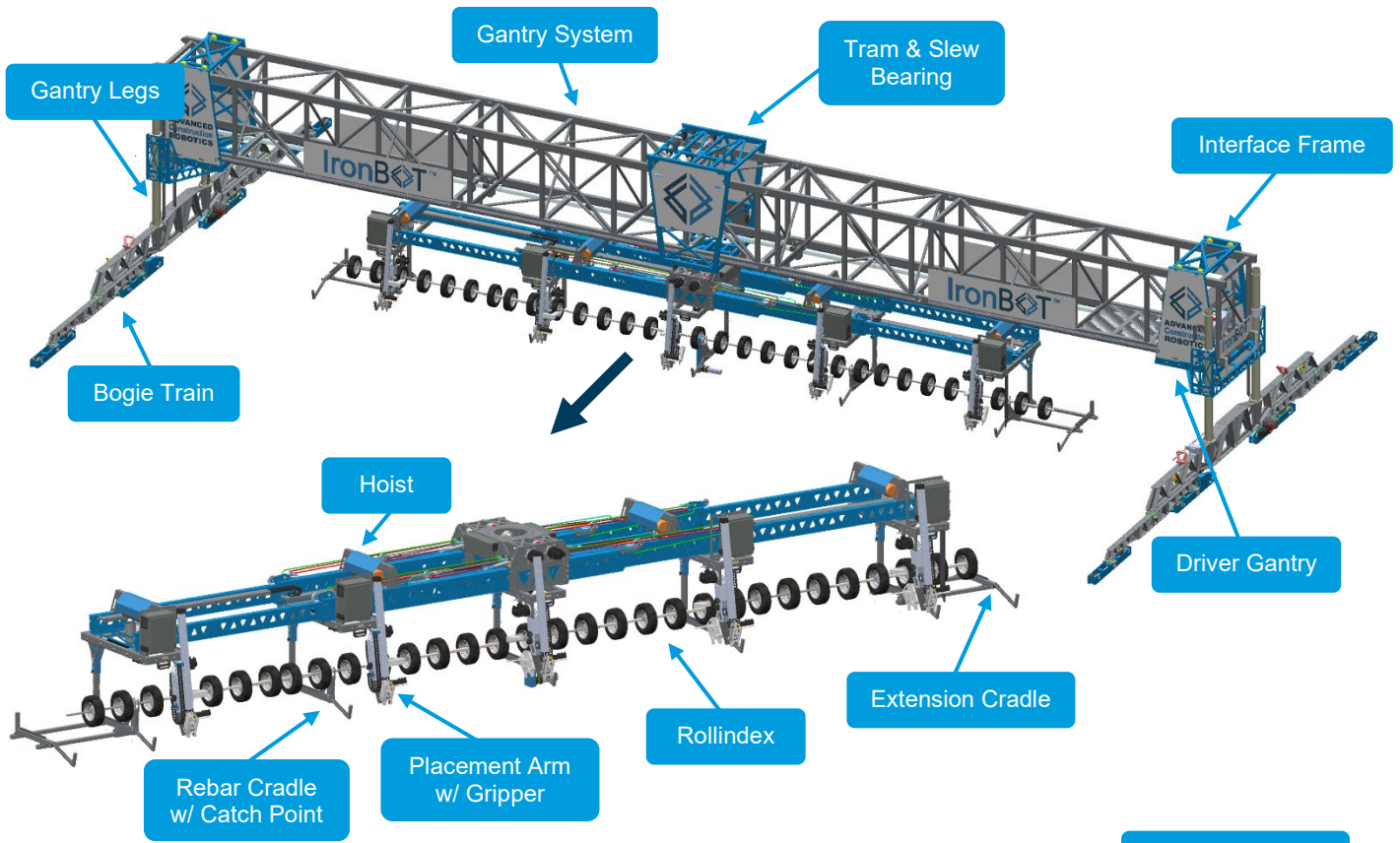


# **CARRY FUNCTION QUICK REFERENCE GUIDE**

50-004-0013-A



# IronBOT and Belly Box Reference



Status Indicator

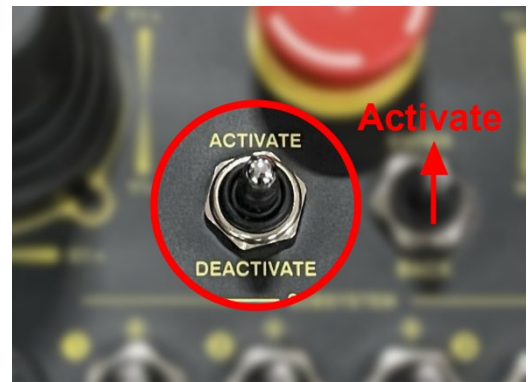
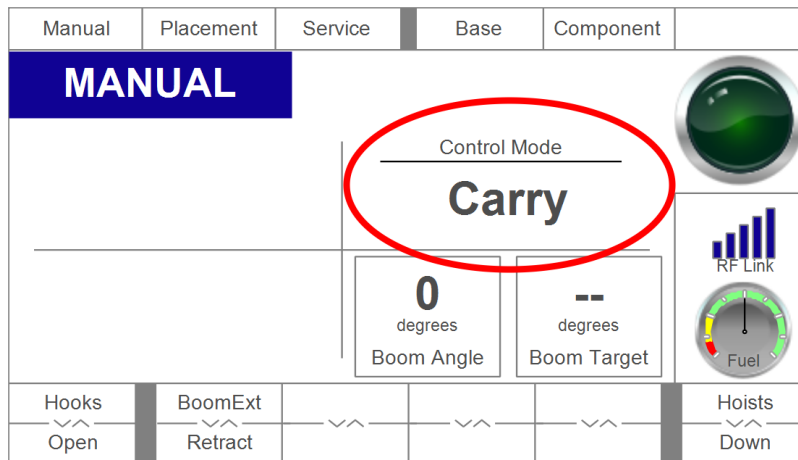
Manual	Placement	Service	Base	Component
<b>MANUAL</b>				
Control Mode				
<b>Carry</b>				
0 degrees Boom Angle		-- degrees Boom Target		
Hooks Open		BoomExt Retract		
				Hoists Down

Control buttons for auxiliary functions:

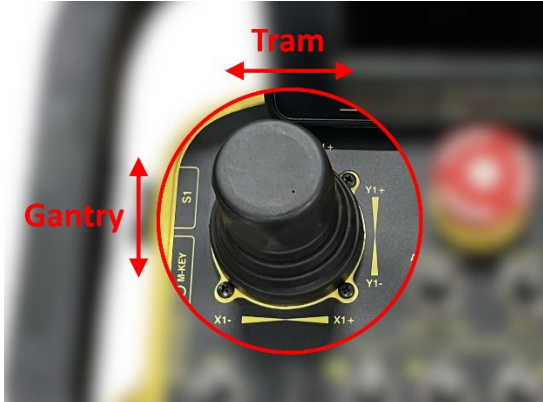
- Aux1
- Aux2
- Sub1 +
- Sub1 -
- Aux3
- Aux4



1. Observe that on startup, the robot defaults into Carry Control Mode. In this mode, faults from systems not related to the Carry Function will be hidden.

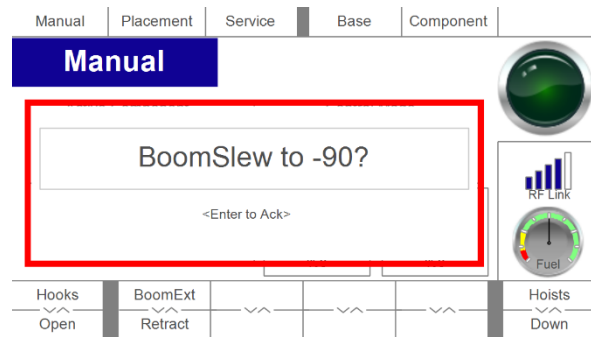


2. If in Standard Control Mode, toggle to Carry Control Mode by pressing and releasing the S2 button. You can observe the control mode change on the belly box screen.
3. Use the left center switch to toggle the status to Activate. The status indicator on the screen should be illuminated green.

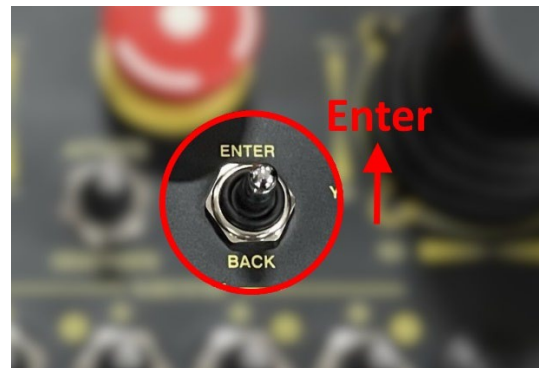


- 4. With the status indicator green, move the Gantry and Tram above the rebar bundle with the left joystick.

- 5. Rotate the Boom in the direction of the rebar bundle to be carried. This is achieved by twisting the joystick either in a clockwise or counterclockwise direction.

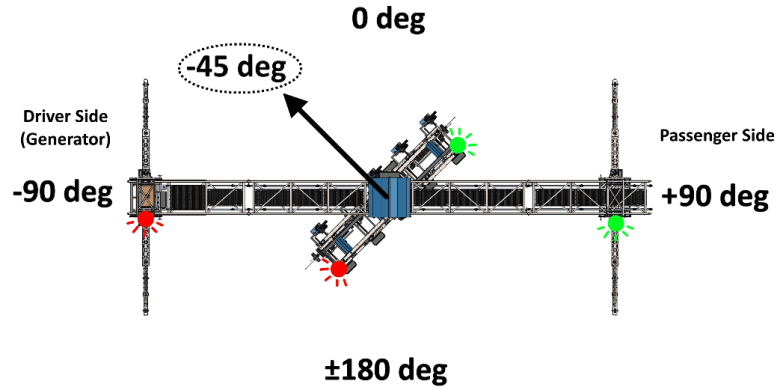


Or, it can be automatically rotated to one of the four (4) programmed directions: 0, 90, -90, and 180 degrees. This is done by pushing the right joystick in the desired direction. The belly box screen will require the user to confirm direction selection by pressing the "Enter" switch.

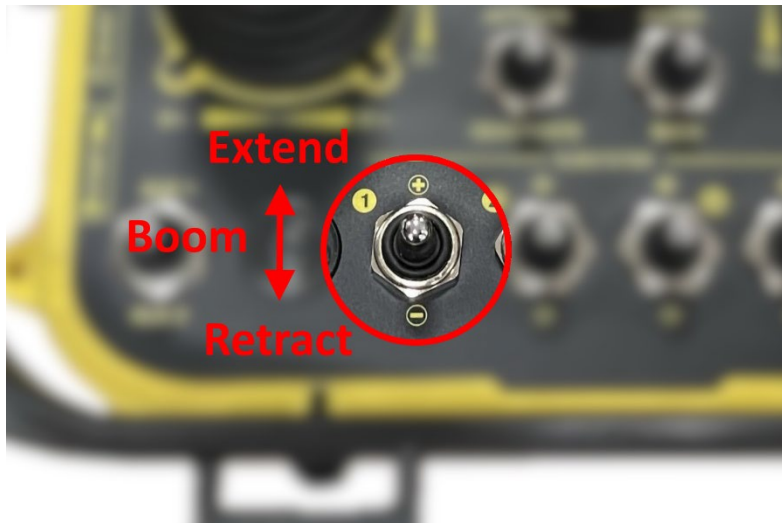


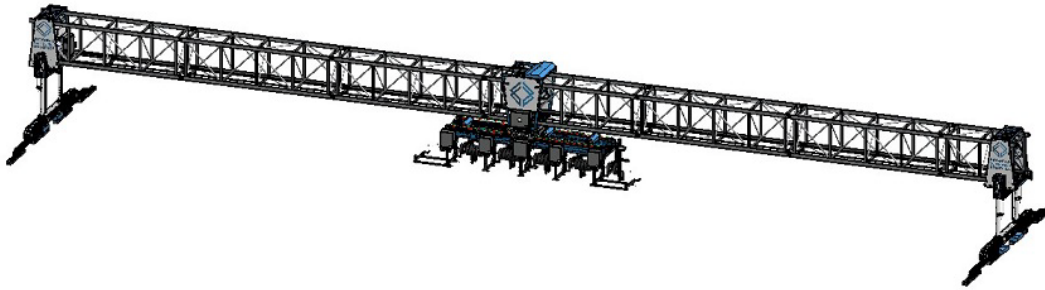


The Boom's "forward" direction is on the side with the Placement Arms with Grippers. You can also use the green and red lights located on the Legs and Boom to observe orientation.

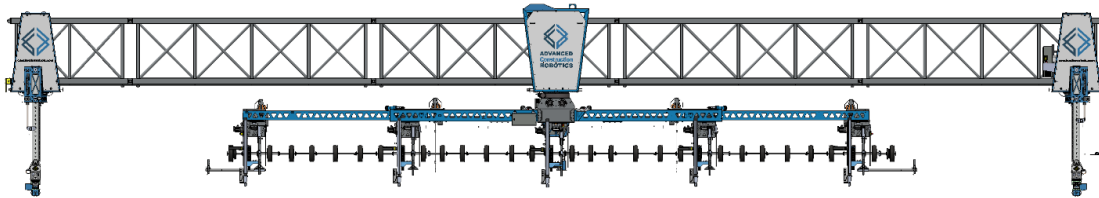


- Expand or contract the Boom to the size of the rebar bundle, referencing the measurements and arrow depicted on the Boom. Center the Boom over the rebar bundle.



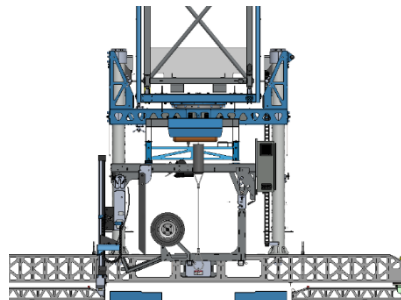
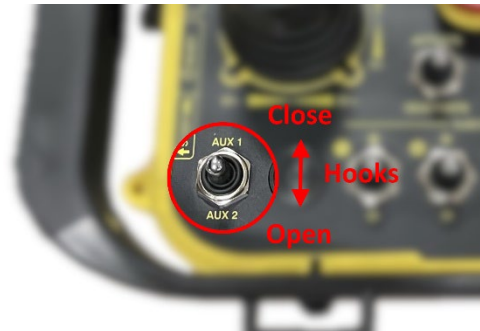


*Fully Contracted*

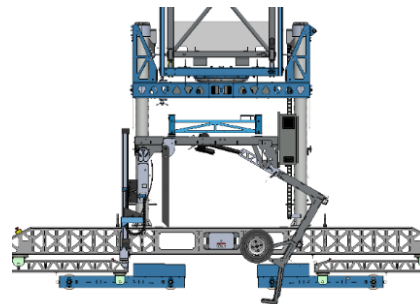


*Fully Expanded*

7. To prepare for hoisting the materials, the Rebar Cradle will need to start in the open position. Before opening the Rebar Cradle, ensure it will have enough ground clearance. This may involve stowing the Catch Point hooks. Then, fully open the Rebar Cradle.



*Rebar Cradle Closed*



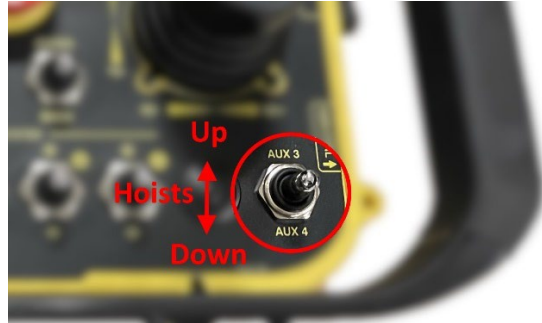
*Rebar Cradle Open*



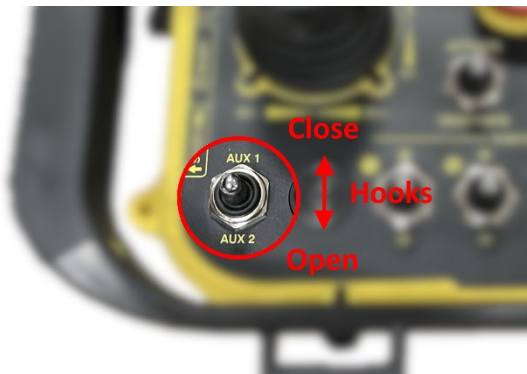
- 8. Lower the Hoists to the bundle and wrap the rigging cables around the bundle, attaching to the Hoist hook.



- 9. Using Aux 3, raise the Hoists, and make sure the bundle is raised all the way up to avoid collision with the hooks when they are closed.



- 10. Use Aux 1 to close the Rebar Cradle before moving the Gantry.



- 11. Lower the bundle into the Rebar Cradle for transport. Remove the load from the Hoist(s).

- 12. Once the material is in position, use Aux 2 to open the Rebar Cradle and Aux 4 to lower the Hoists to the ground.

- 13. Follow instructions on pages 2-3 to move the Gantry and Tram.