Quasonix

ISO 9001:2015
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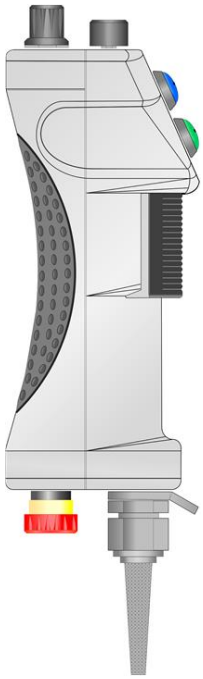
Installation and Operation Manual

HyperTrack™ Local Control Pendant



Quasonix, Inc.
6025 Schumacher Park Dr.
West Chester, OH 45069
01 May 2021

****** Revision 1.0 ******

Specifications subject to change without notice.

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1 Introduction

1.1 Description

This document describes the installation and operation of the Quasonix HyperTrack™ Local Control Pendant. The HyperTrack TM Local Control Pendant is a hand-held device used to manually control motion of the Azimuth and Elevation Axes of the HyperTrack™ Antenna System Pedestal. It electrically connects directly to the Servo Box and does not require any other controller (such as HTAC) connected to the system. It facilitates initial pedestal set up, as well as periodic maintenance and troubleshooting activities.

Key features include:

- Light weight
- Ambidextrous
- Ergonomically designed for easy operation
- Rubber Palm Grip for comfortable and sure grasping
- E-Stop Pushbutton for safe operation
- 10m long PUR cable with disconnect plug
- Lanyard bracket
- Color coded RESET and RUN pushbuttons with integrated LED status indicators
- 3-Position rotary switch for axis selection
- Analog rotary potentiometer for axis velocity and motion direction setting

The HyperTrack™ Local Control Pendant is manufactured by:

Quasonix, Inc.
6025 Schumacher Park Drive
West Chester, OH 45069
CAGE code: 3CJA9

2 Installation

The Servo Box Connector Panel is shown in Figure 1.

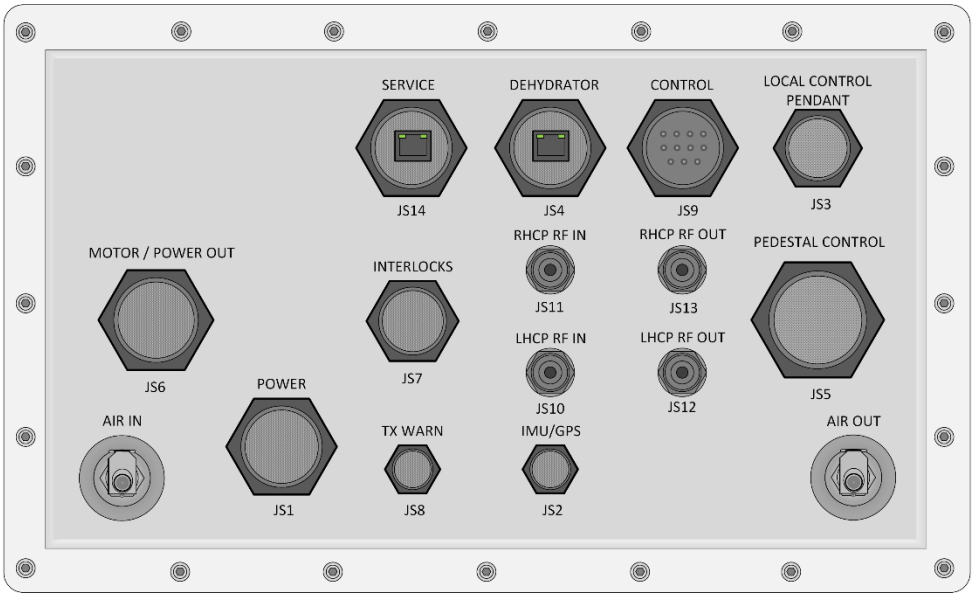

Figure 1: Servo Box Connector Panel

The Shorting Plug, shown in Figure 2, is installed for HTAC system operation.

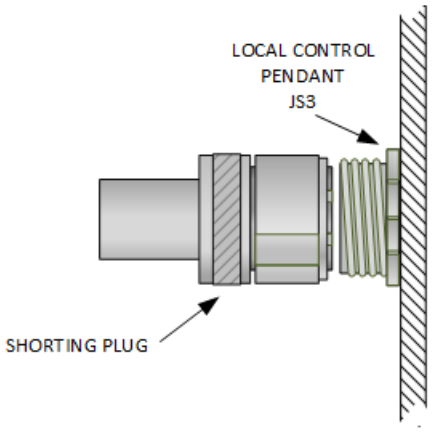

Figure 2: Local Control Pendant with Shorting Plug Installed

During initial system set up or system maintenance, the Local Control Pendant is installed as shown in Figure 3.

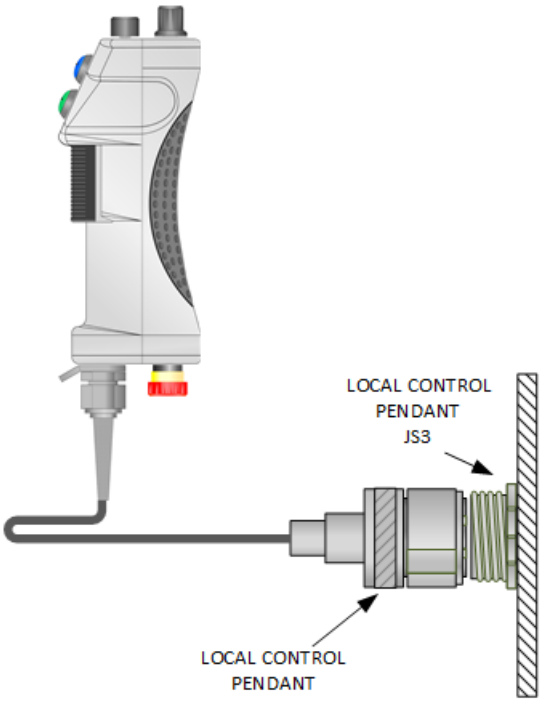

Figure 3: Local Control Pendant Installed

2.1 Connect Local Control Pendant to Servo Box

To connect the Local Control Pendant to the servo box:

1. Disconnect the Shorting Plug from the JS3 receptacle, as shown in Figure 4. The Shorting Plug can be disconnected without turning off power to the servo box.

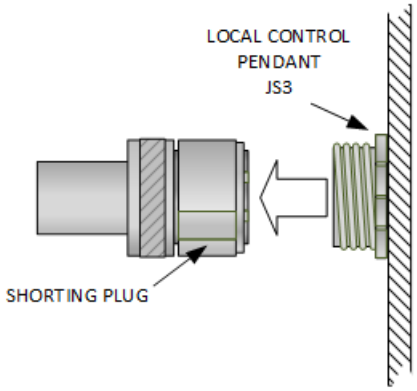

Figure 4: Disconnect Shorting Plug

2. Before connecting the Local Control Pendant:
   a. Rotate the Analog Velocity Potentiometer to the Zero (0) position, as shown in Figure 5.
   b. Rotate the Axis Selector Switch to the middle Off position.

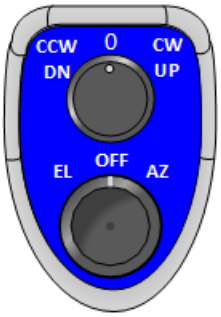

Figure 5: Local Control Pendant Settings to Zero and Off

3. Connect the Local Control Pendant plug to the JS3 receptacle, as shown in Figure 6. The Local Control Pendant can be connected without turning off power to the servo box.

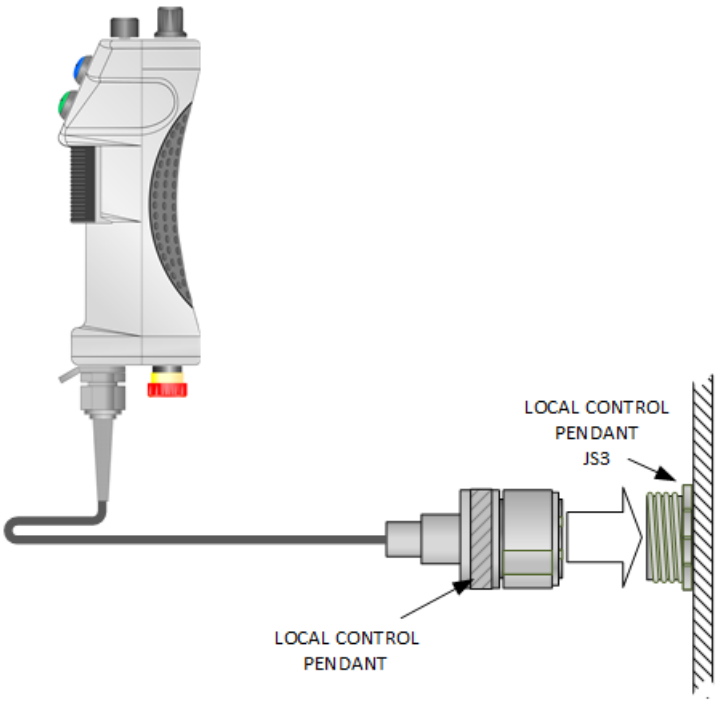

Figure 6: Connect Local Control Pendant to JS3 Receptacle

3 Operating Instructions

3.1 Local Control Pendant Components

The components of the Local Control Pendant are shown in Figure 7. Each component is described in Table 1.

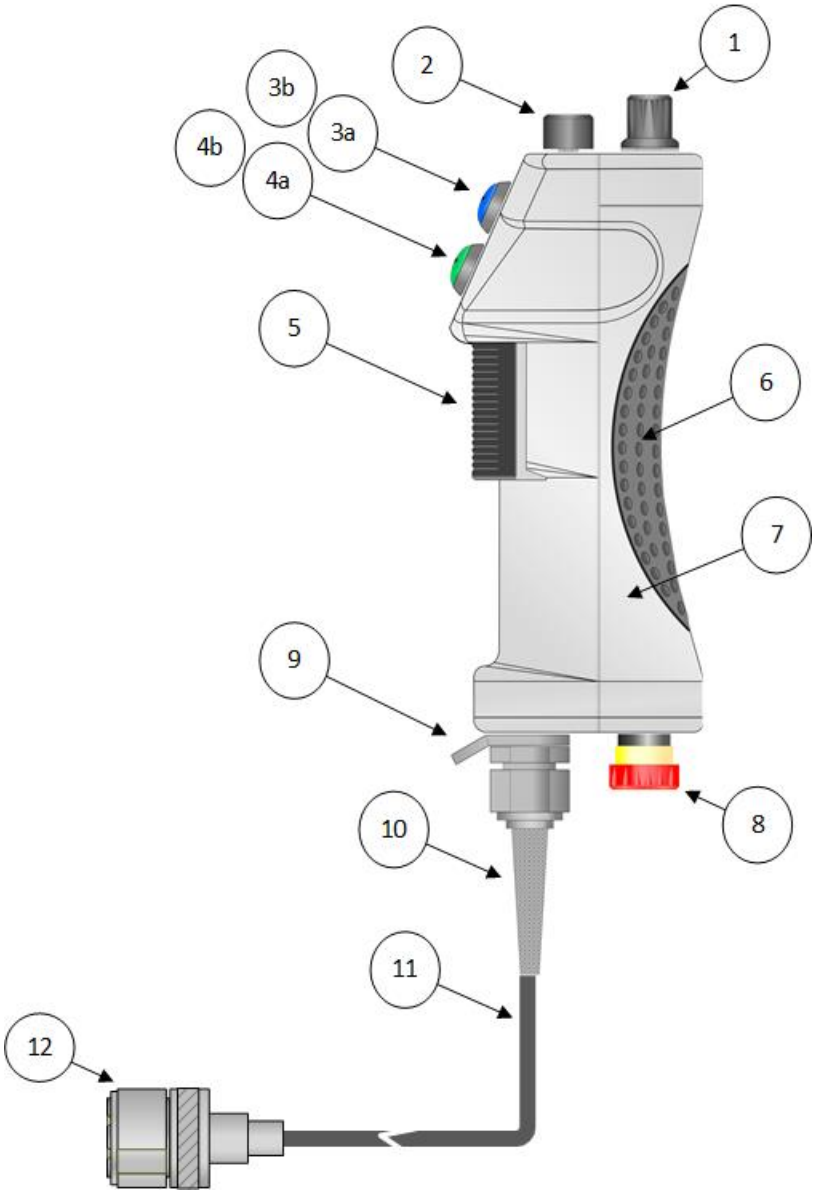

Figure 7: Local Control Pendant

Table 1: Local Control Pendant Component Descriptions

Component	Name	Description
1	Axis Select Switch	3-position Rotary Selector Switch Used to select the desired Antenna Drive Axis • EL = Elevation Axis • Off • AZ = Azimuth Axis
2	Axis Velocity Analog Potentiometer	+/-5 V Rotary Analog Potentiometer Used to adjust the Velocity and Direction of Motion of the selected axis • CW (+) or CCW (-) for Azimuth Axis • UP (+) or DN (-) for Elevation Axis
3a	Reset Pushbutton	Blue Illuminated Momentary Action Pushbutton Used to manually reset Servo Drives and Safety Controller following initial system power-up, a manual E-Stop, transition from Safe to Run, or a system fault condition
3b	System Ready Status LED	Blue LED integrated inside of Reset Pushbutton Indicates the readiness state of the selected Axis Servo Drive and Safety System • LED On = System Ready. • LED Off = System Not Ready (Reset action required or Axis Select Switch in Off state)
4a	Run Pushbutton	Green Illuminated Momentary Action Pushbutton Used in conjunction with Enabling Switch to activate motion of Selected Axis while Run Enable Status LED is illuminated
4b	Run Enabled Status LED	Green LED integrated inside of Run Pushbutton Indicates the Enabled Status of the Run Pushbutton • LED On = Run Pushbutton enabled (Enabling Switch is engaged and system is ready) • LED Off = Run Pushbutton disabled (Enabling Switch not engaged or system not ready)
5	Enabling Switch	Black 3-Stage Live-Man Safety Switch Used to enable Reset and Run Pushbuttons • 1st Stage is the unpressed position = de-activated state • 2nd stage is the center position = activated state • 3rd stage is the fully pressed position = de-activated state (stops and disables any active reset process or run state)

Component	Name	Description
6	Rubber Palm Grip	Ambidextrous grasping region of housing for hand palm gripping of pendant
7	Piezo Buzzer	Located inside of housing Annunciates while Run Pushbutton is enabled and activated (Antenna motion possible)
8	Emergency Stop (E-STOP) Pushbutton	2-Position Maintained E-STOP Pushbutton Safety Switch Used to safely inhibit Antenna motion • Pulled Out = Normal operation • Pushed In = Servo drives disabled
9	Lanyard Bracket	Used for mechanically tethering pendant
10	Strain Relief Cable Grip	
11	10m Flexible PUR Cable	
12	Disconnect Plug	Used for electrically connecting pendant to servo box

3.2 Operation Modes

3.2.1 Move the Antenna Using the Local Control Pendant

The blue System Ready Status LED must be illuminated, as shown in Figure 8, in order to move the antenna with the Local Control Pendant. If it is not illuminated, refer to the System Reset procedure in section 3.2.2.

System Ready System Not Ready

Figure 8: System Ready Status LED

To move the antenna:

1. Select the desired axis (AZ or EL) using the Axis Selector Switch. Figure 9 shows the Azimuth Axis selected.

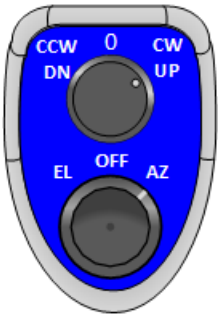

Figure 9: Azimuth Axis Selected

2. Rotate the Analog Velocity Potentiometer to the Zero position.
3. Gently squeeze and hold the Enabling Switch at its 2nd Stage position until the green Run Enable Status LED illuminates, as shown in Figure 10.

   Note: If a pronounced click is heard or felt from the Enabling Switch, fully release it, and try again.

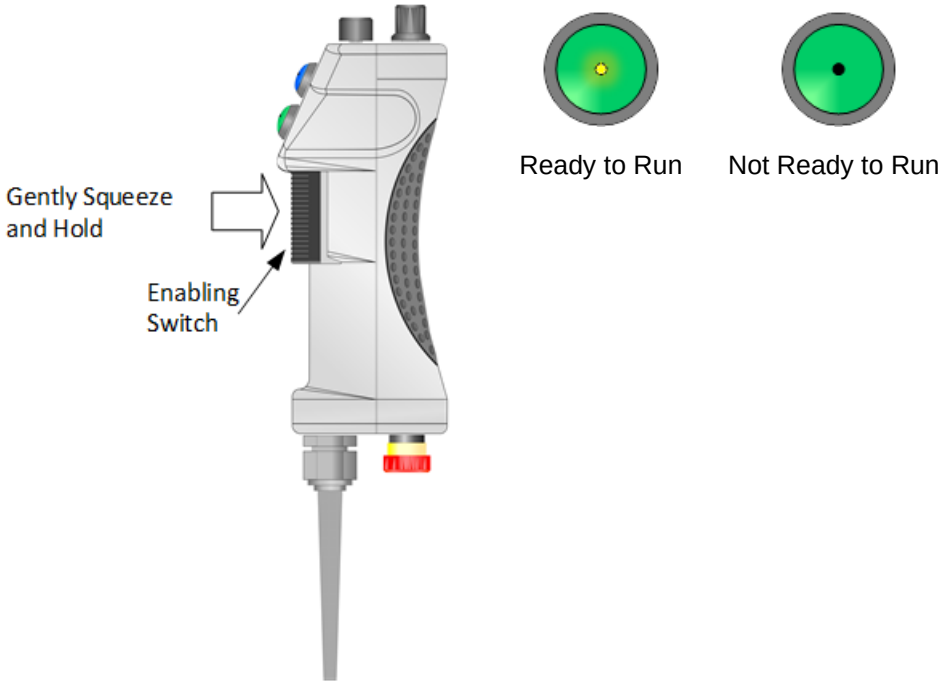

Figure 10: Enabling Switch and Run Enable Status LED

4. While maintaining a light grip on the Enabling Switch, press and hold the green Run Pushbutton.
5. Slowly rotate the Analog Velocity Potentiometer in the desired direction. The selected antenna axis begins moving in the selected direction at the set velocity.

   Note: The internal Piezo Buzzer will annunciate while antenna is in motion.

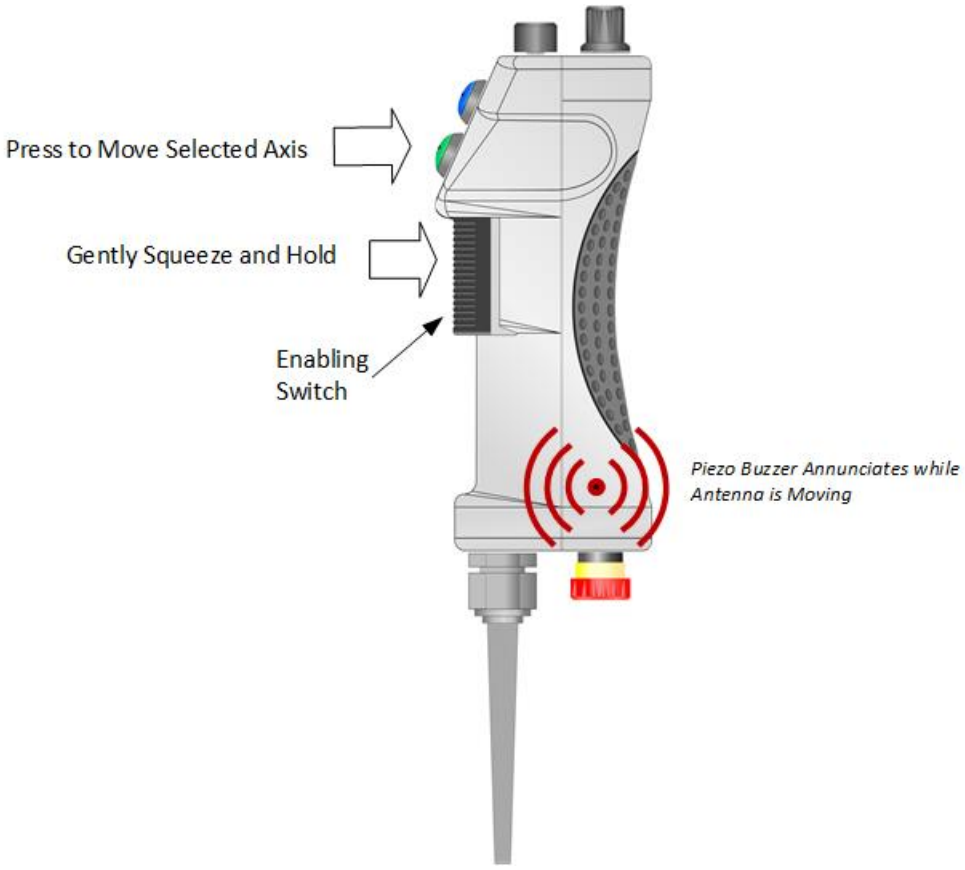

Figure 11: Moving the Antenna with the Local Control Pendant

The velocity may be increased or decreased while the antenna is moving by rotating the Analog Velocity Potentiometer, as shown in Figure 12.

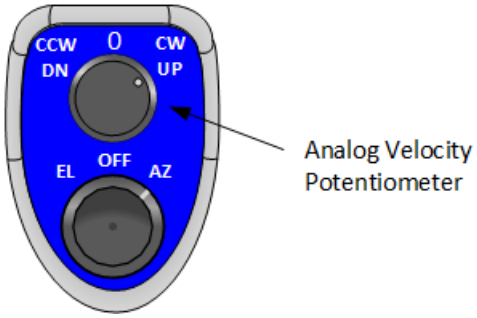

Figure 12: Adjusting the Analog Velocity Potentiometer

6. To stop motion, rotate the Analog Velocity Potentiometer to the zero position, then release the Enabling Switch after the axis motion has stopped.

3.2.2 Reset the System Using the Local Control Pendant

The Pedestal Buzzer annunciates during Enabling Switch activation when either the selected Axis Servo Drive or the Safety System requires resetting.

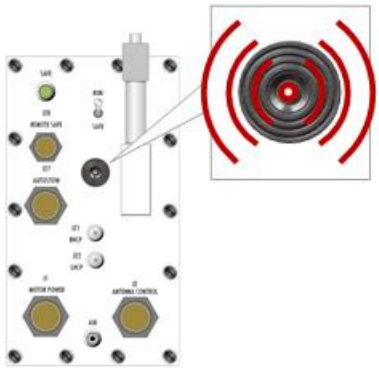

Figure 13: Pedestal Buzzer Notification

To reset the system:

1. Be sure that all safety interlocks are in their operational states, the pendant E-STOP Pushbutton is in its OUT position, the pedestal RUN/SAFE Switch is in the Run position, and the servo box door is either closed, or its safety switch bypass actuator is in place.
2. Select desired axis (EL or AZ) using the Axis Selector Switch, as shown in Figure 14.
3. Gently squeeze and hold the Enabling Switch at its 2nd Stage position.
4. Press the blue Reset Pushbutton.
5. Release then re-activate the Enabling Switch. If the Pedestal Buzzer annunciates, then repeat the Reset procedure again until the System Ready status LED illuminates, as shown in Figure 14.

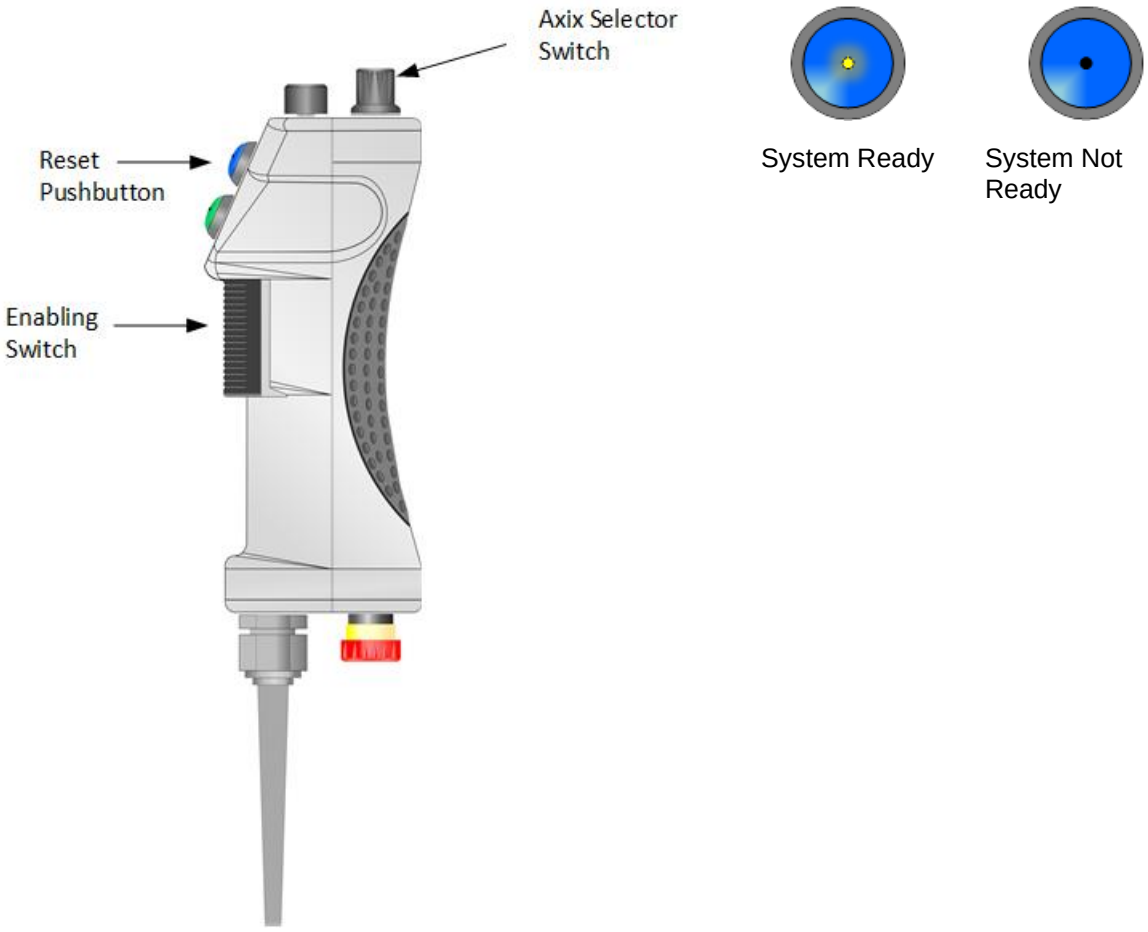

Figure 14: Reset the System with the Local Control Pendant

4 Troubleshooting

Problem #1: The blue System Ready status LED is not illuminated.	
Possible Causes	**Possible Solutions**
Safety System needs resetting	Perform the Local Control Pendant system reset procedure
Local Control Pendant E-Stopped	Pull E-Stop Pushbutton out to its Run position
Axis Selector Switch is in Off position	Select either EL or AZ Axis
Servo Drive of selected axis requires resetting	Perform the Local Control Pendant system reset procedure
Pedestal Run/Safe Switch not in Run position	Toggle the Run/Safe Switch to the Run position
Servo Box Door not closed	Close the Servo Box door or install its Safety Switch Bypass Trigger Assembly
Manual Stow Pin not in its holder on the pedestal	Insert Manual Stow Pin into its holder on the pedestal
Problem #2: The Antenna does not move and the Pedestal Buzzer annunciates when the Enabling Switch is activated.	
Possible Causes	**Possible Solutions**
Servo Drive of selected axis requires resetting	Perform the Local Control Pendant system reset procedure
Problem #3: The Antenna does not move when the green Run Pushbutton is pressed.	
Possible Causes	**Possible Solutions**
Enabling Switch not properly actuated	Make sure the Enabling Switch is properly squeezed to its 2nd-Stage (middle) position
The blue System Ready status LED is not illuminated	Refer to Problem #1

5 Maintenance Instructions

The HyperTrack™ Local Control Pendant requires no regular maintenance, and there are no user-serviceable parts inside.

6 Product Warranty

The HyperTrack™ Local Control Pendant carries a standard parts and labor warranty of one (1) year from the date of delivery.

7 Technical Support and RMA Requests

In the event of a product issue, customers should contact Quasonix via phone (1-513-942-1287) or e-mail (support@quasonix.com) to seek technical support. If the Quasonix representative determines that the product issue must be addressed at Quasonix, a returned materials authorization (RMA) number will be provided for return shipment.

Authorized return shipments must be addressed in the following manner:

Quasonix, Inc.
ATTN: Repair, RMA #
6025 Schumacher Park Drive
West Chester, OH 45069

To ensure that your shipment is processed most efficiently, please include the following information with your product return:

- Ship To – Company name, address, zip code, and internal mail-drop, if applicable
- Attention/Contact person – Name, Title, Department, Phone number, email address
- Purchase Order Number – If applicable
- RMA Number – provided by the Quasonix representative

Please note that Quasonix reserves the right to refuse shipments that arrive without RMA numbers.