QUASonix HyperTrack Local Control Pendant User Manual

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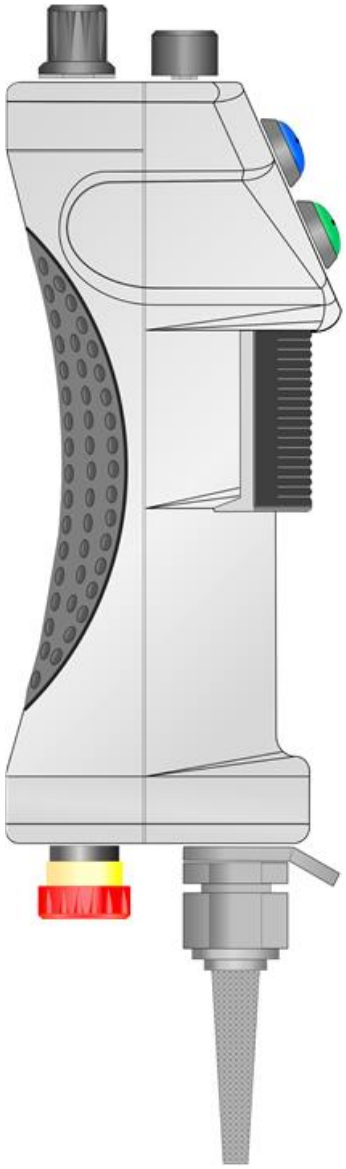


Introduction

Description This document describes the installation and operation of the Quasonix HyperTrack™ Local Control Pendant. The HyperTrack™ 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

Local Control Pendant Components

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

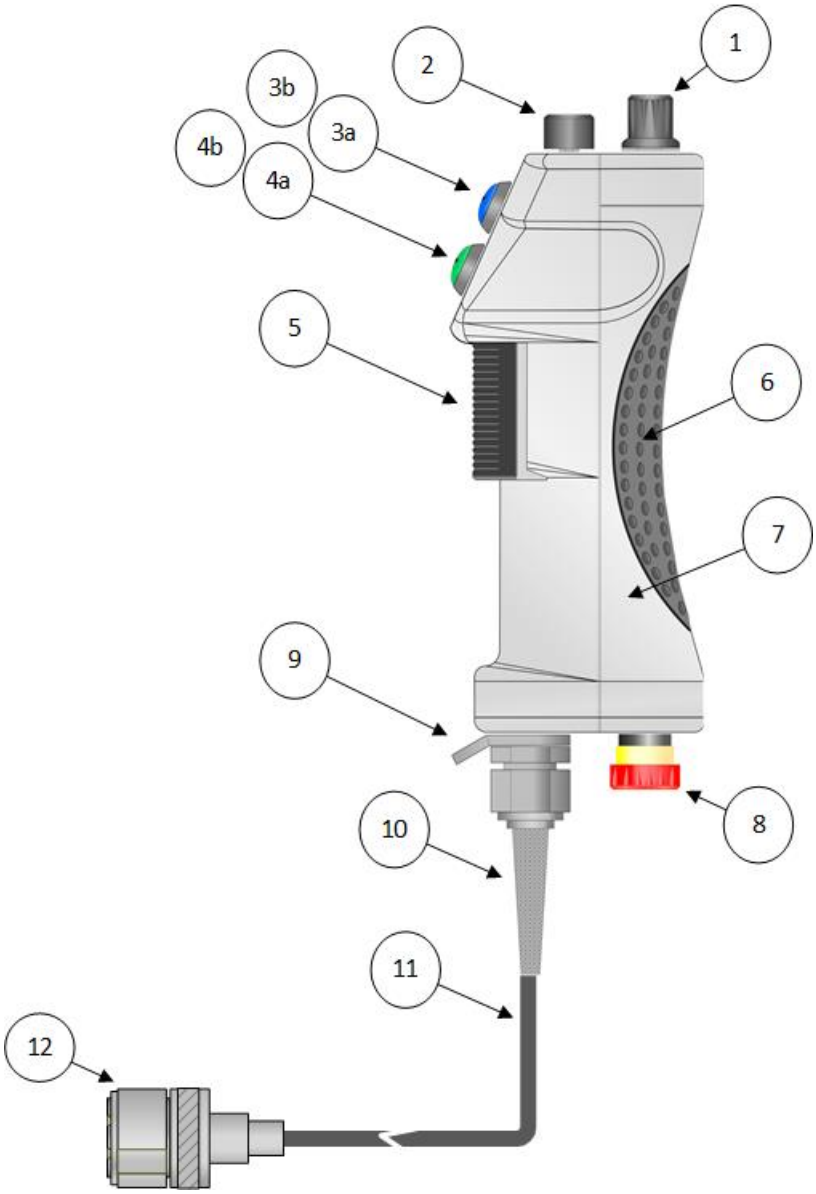


Table 1: Local Control Pendant Component Descriptions

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 P otentiometer	+/-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 in itial 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 Saf ety System · LED On = System Ready · LED Off = System Not Ready (Reset action may be required or Axis Select Switch in Off state) · LED Blinking = Safe Mode Expiration Timer is active
4a	Run Pushbutton	Green Illuminated Momentary Action Pushbutton Used in conjunction with Enabling Switch to activate motion of Selecte d Axis while Run Enable Status LED is illuminated
4b	Run Enabled Status L ED	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 engag ed or system not ready)

Component	**Name**	**Description**

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)
6	Rubber Palm Grip	Ambidextrous grasping region of housing for hand palm gripping of pe ndant
7	Piezo Buzzer	Located inside of housing Annunciates while Run Pushbutton is enabled and activated
8	Emergency Stop (E-S TOP) Pushbutton	2- Position Maintained E-STOP Pushbutton Safety Switch Used to saf ely inhibit Antenna motion · Pulled Out = Normal operation · Pushed In = Servo drives disabled
9	Lanyard Bracket	Used for mechanically tethering pendant
10	Strain Relief Cable Gri p	

11	10m Flexible PUR Cable	
12	Disconnect Plug	Used for electrically connecting pendant to servo box

Installation

The Servo Box Connector Panel is shown in Figure 2.

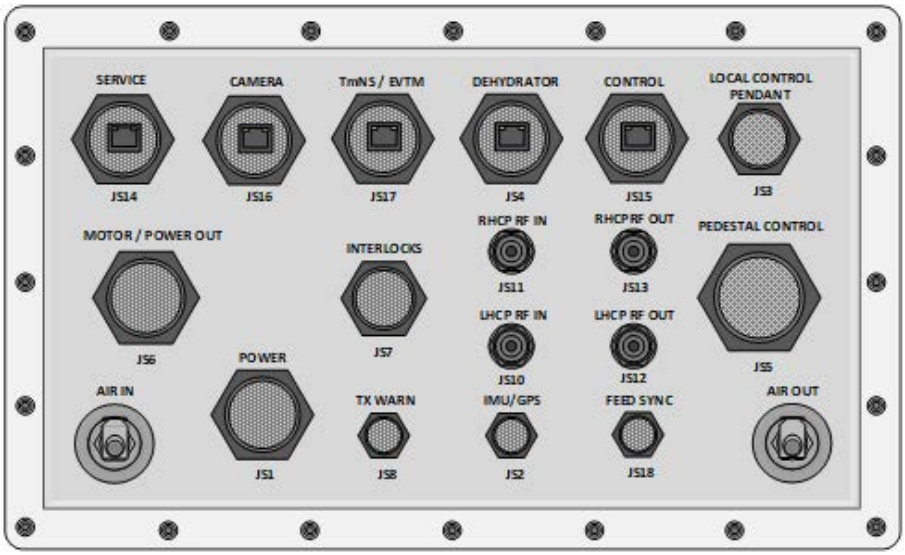


Figure 2: Servo Box Connector Panel The Shorting Plug, shown in Figure 3, is installed for HTAC system operation.

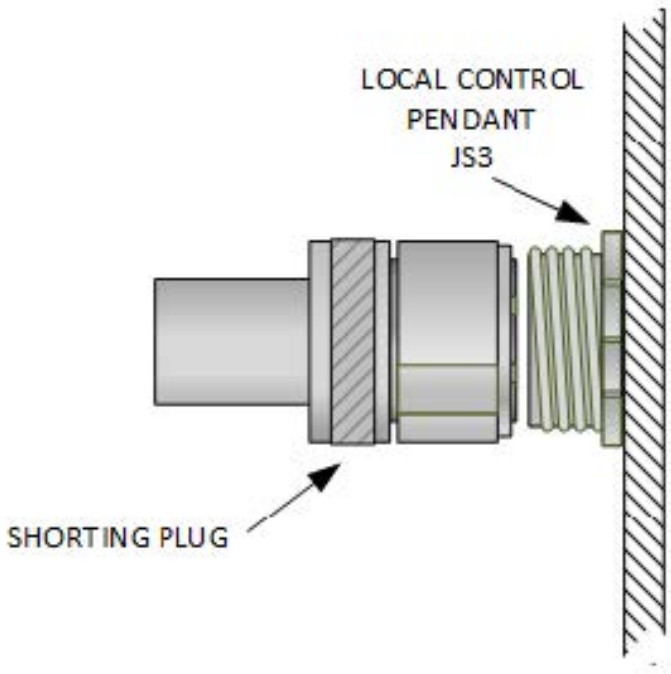


Figure 3: Local Control Pendant with Shorting Plug Installed During initial system set up or system maintenance, the Local Control Pendant is installed as shown in Figure 4.

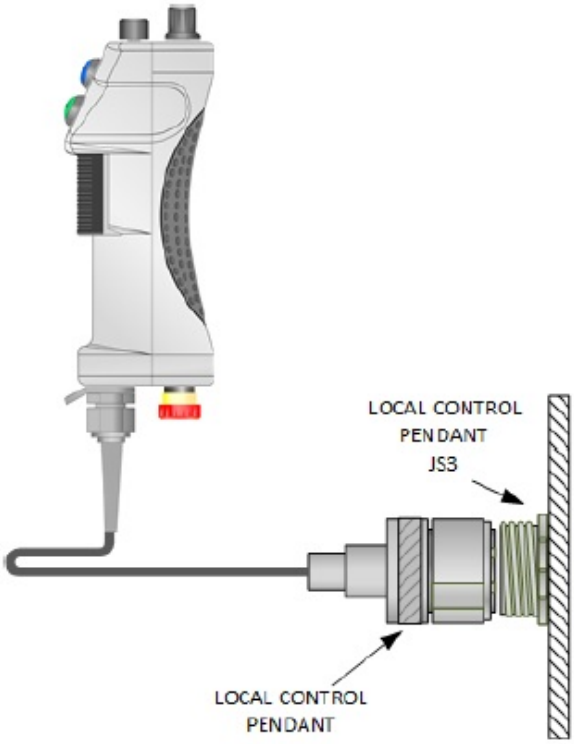
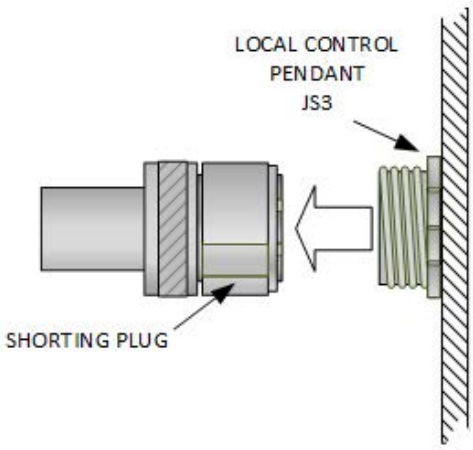


Figure 4: Local Control Pendant Installed

Connect Local Control Pendant to Servo Box

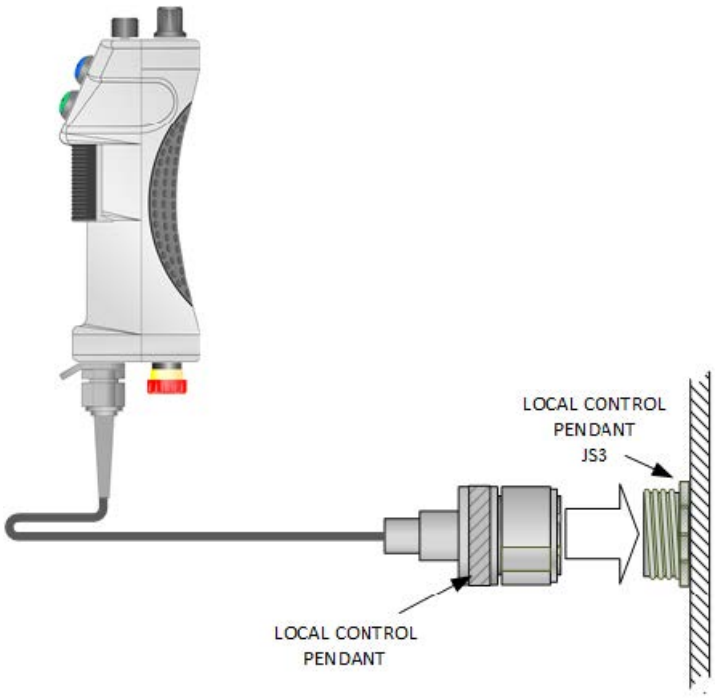
To connect the Local Control Pendant to the servo box:

1. Disconnect the Shorting Plug from the servo box JS3 receptacle, as shown in Figure 5. The Shorting Plug can be disconnected without turning off power to the servo box.



2. Before connecting the Local Control Pendant: Rotate the Analog Velocity Potentiometer to the Zero (0) position, as shown in Figure 6. Rotate the Axis Selector Switch to the middle Off position, as shown in Figure 6

3. Connect the Local Control Pendant plug to the servo box JS3 receptacle, as shown in Figure 7. The Local Control Pendant can be connected without turning off power to the servo box.



4. A Reset action must be performed with the Local Control Pendant before it can be used. To perform a Reset, refer to the System Reset Procedure in section 3.1.2.

Operating Instructions

Operation Modes Move the Antenna Using the Local Control Pendant The blue System Ready Status LED must

be illuminated, as shown in Figure 8, to move the antenna with the Local Control Pendant. If it is not illuminated, verify that the Axis Selector Switch is positioned on AZ or EL axis, or refer to the System Reset procedure in section 3.1.2.

- System Ready
- System Not Ready

To move the antenna:

1. Select the desired axis (AZ or EL) using the Axis Selector Switch. Figure 9 shows the Azimuth Axis selected. The System Ready Status LED should illuminate when AZ or EL is selected using the Axis Selector Switch.

2. Rotate the Analog Velocity Potentiometer to the Zero (0) 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.

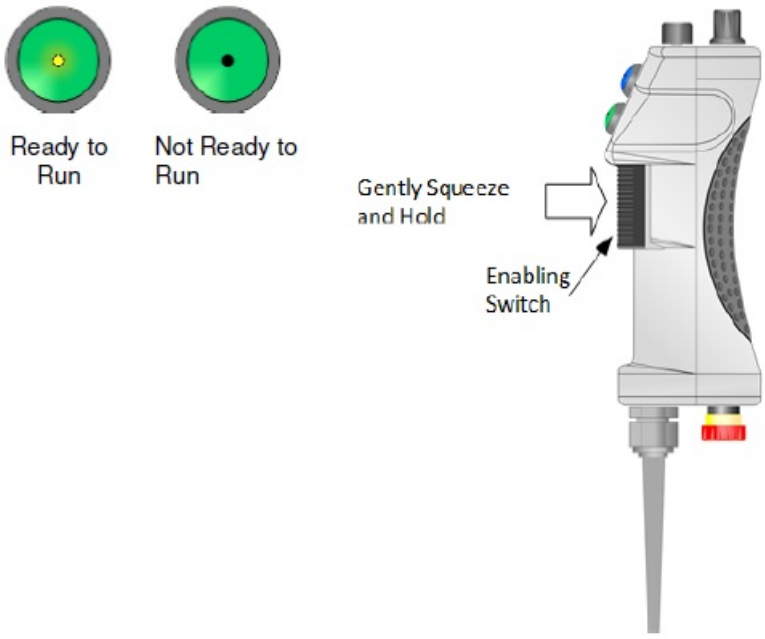
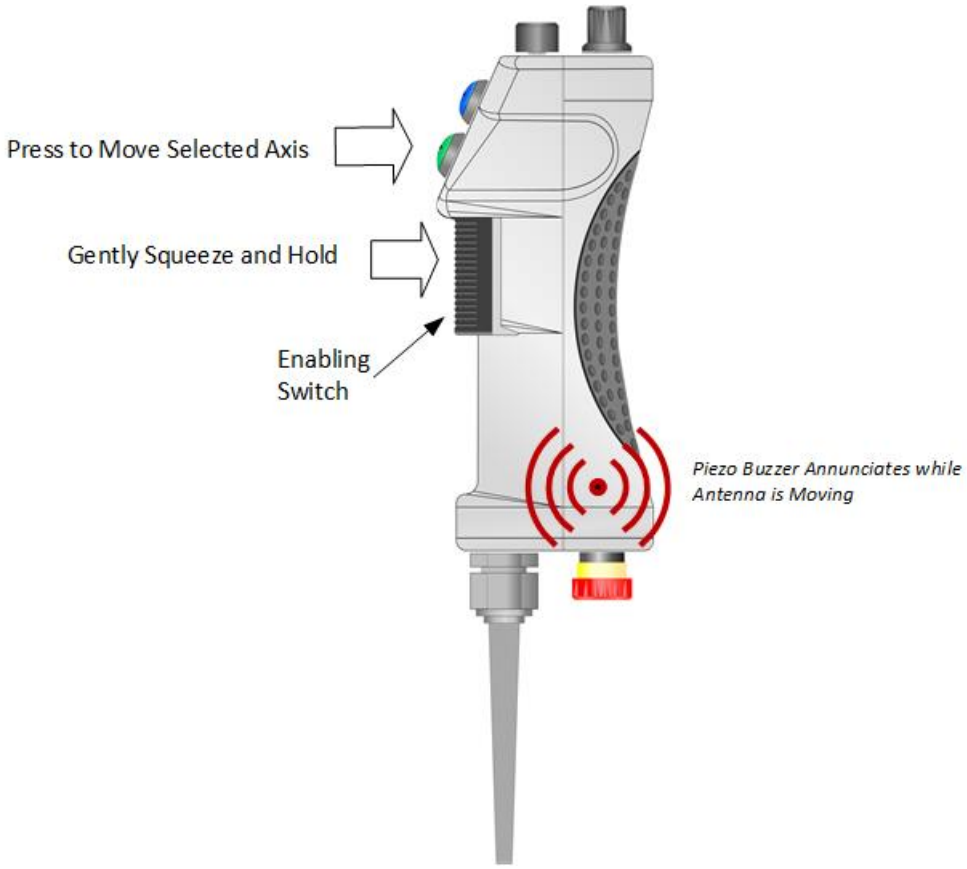
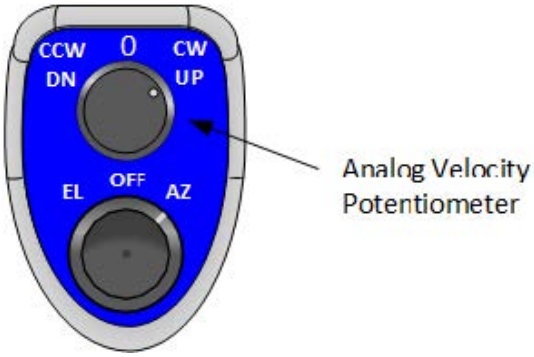


Figure 10: Enabling Switch and Run Enable Status LED

4. While maintaining a light grip on the Enabling Switch, press and hold the green Run Pushbutton, as shown in Figure 11.
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.



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



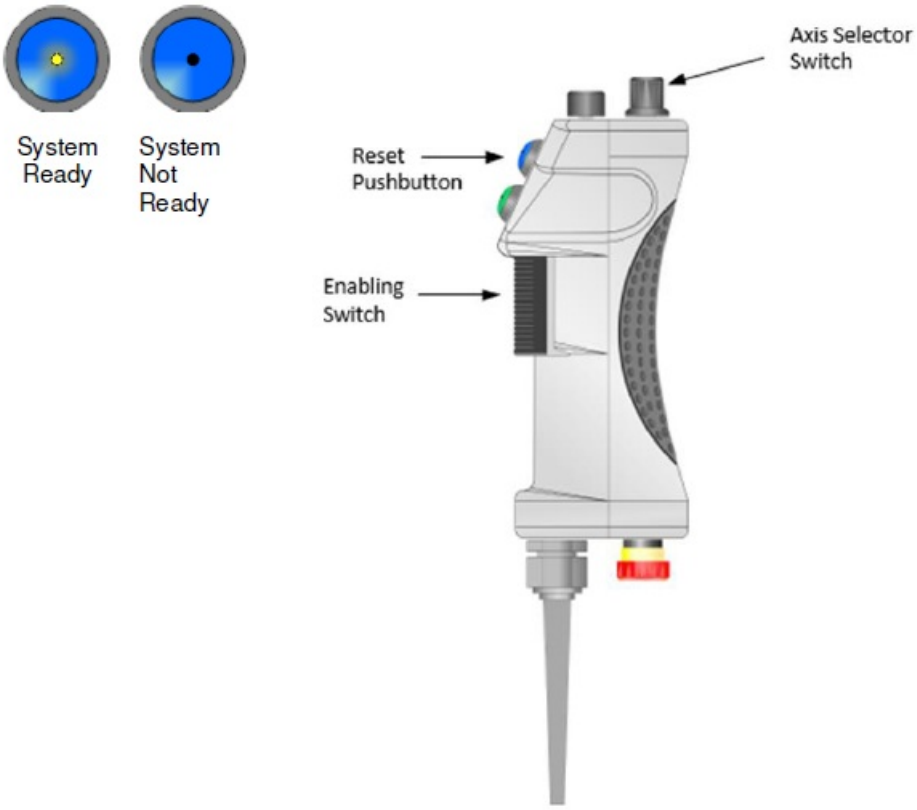
7. To stop motion, rotate the Analog Velocity Potentiometer to the zero (0) position, then release the Enabling Switch after the axis motion has stopped.

System Reset Procedure

The Axis Servo Drives or Safety System may need to be reset if one or both Axis Servo Drives stop responding to the local control pendant run sequence. To reset the system using the Local Control Pendant:

1. Be sure that all safety interlocks are in their operational (or Run) 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 13.

3. Gently squeeze and hold the Enabling Switch at its 2nd Stage position.
4. Press the blue Reset Pushbutton.
5. The System Ready Status LED should illuminate, as shown in Figure 13: Reset the System with the Local Control Pendant. If the System Ready Status LED does not illuminate, repeat the System Reset Procedure.



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 proce dure (refer to section 3.1.2)

Local Control Pendant E-Stopped	Pull E-Stop Pushbutton out to its Run position, then perform the Local Control Pendant system reset procedure (refer to section 3.1.2)
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 (refer to section 3.1.2)
Pedestal Run/Safe Switch not in Run position	Toggle the Run/Safe Switch to the Run position **Note:** Before toggling Run/Safe switch to the Run position, verify that no hazardous conditions exist to you or other individuals.
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 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 (refer to section 3.1.2)
The pedestal Run/Safe switch is in its Safe position	Toggle the Run/Safe Switch to the Run position **Note:** Before toggling Run/Safe switch to the Run position, verify that no hazardous conditions exist to you or other individuals.
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

Problem #4: The Run Status LED does not illuminate when the Enabling Switch is engaged.	
Possible Causes	**Possible Solutions**
The pedestal Run/Safe switch is in its Safe position	Toggle the Run/Safe Switch to the Run position **Note:** Before toggling Run/Safe switch to the Run position, verify that no hazardous conditions exist to you or other individuals.

Maintenance Instructions

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

Product Warranty

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

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.

Documents / Resources

Installation and Operation Manual
HyperTrack™ Local Control Pendant

[QUASonix HyperTrack Local Control Pendant] [pdf] User Manual
HyperTrack, Local Control Pendant