

# Operator Panel

## INSTALLATION MANUAL



## 1 INTRODUCTION

### 1.1 Overview

System Components:

- X15-10-01 Operator Panel
- X15-20-01 MPG Pendant (Optional)

### 1.2 Tools Required

- Small flat head screw driver
- 1/16" Allen Wrench



X15-20-01 Pendant

## 2 HARDWARE STARTUP

### 2.1 Operator Panel Wiring

1. The USB cable runs from the back of the operator panel (see Figure 1) to the control (see Figure 2).

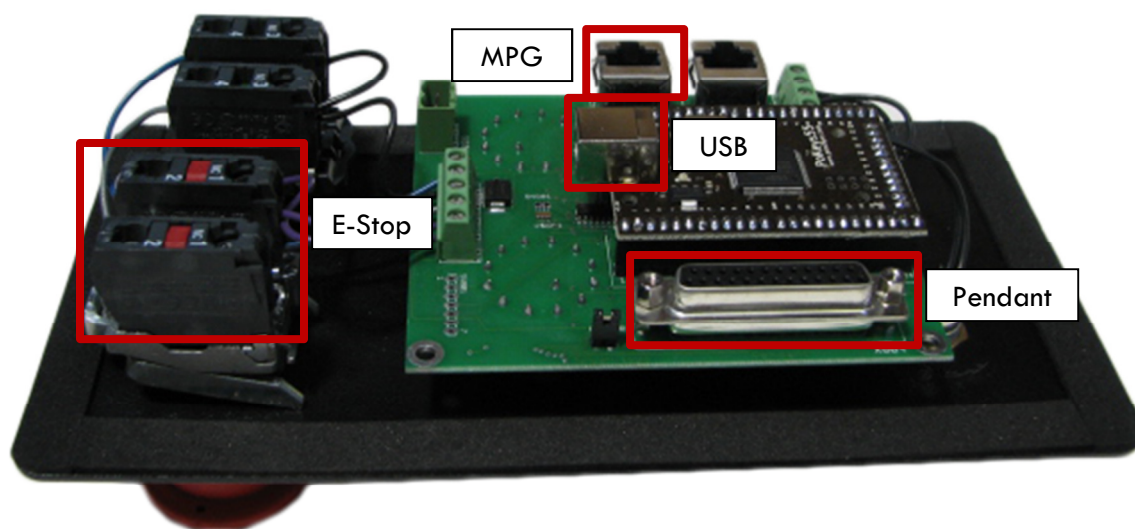


FIGURE 1 - BACK OF OPERATOR PANEL

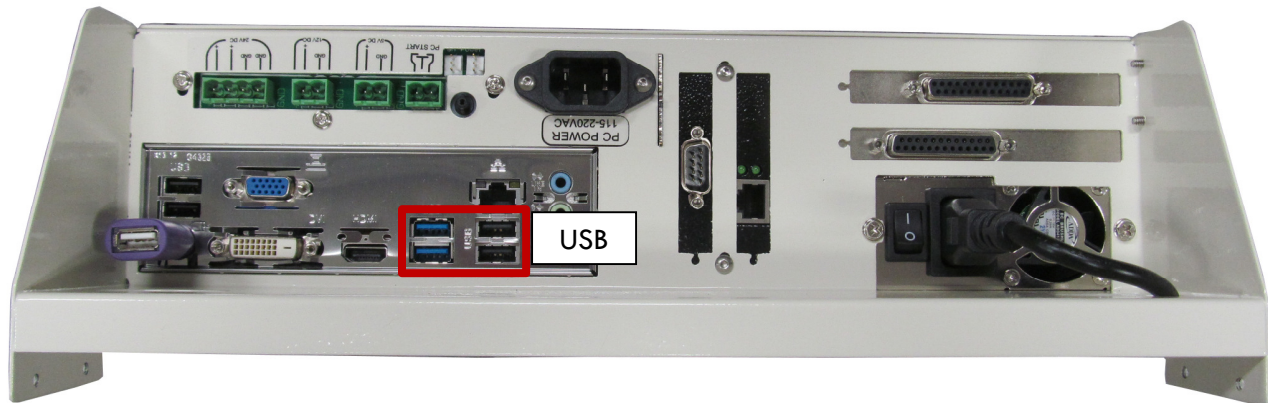


FIGURE 2 - CONTROL USB WIRING CONNECTIONS

2. The E-Stop circuit goes from the back of the mushroom E-Stop button (see Figure 1) to the motion controller E-Stop connection (see Figure 3 for an example).

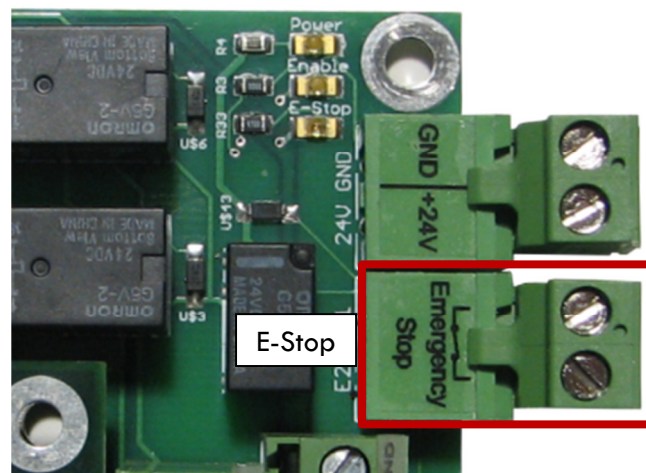


FIGURE 3 - APOLLO E-STOP CONNECTION

## 2.2 Pendant Wiring

1. The 25 pin pendant cable plugs into the back of the operator panel (see Figure 1).
2. If a motion controller being used in the system the MPG signal must be passed back to it for the pendant to work.
  - a. Apollo I: There is no additional wiring beyond the pendant plug necessary.
  - b. Apollo III: An Ethernet cable must be run from the MPG plug on the operator panel (see Figure 1) to MPG #1 on the Apollo III board (see Figure 4).

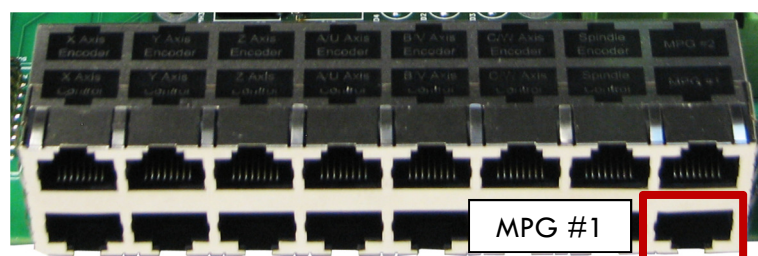


FIGURE 4 - APOLLO III MPG SOCKET

- c. Interpreter 1000: An Ethernet cable must be run from the MPG socket on the operator panel (see Figure 1) to an open encoder on the Interpreter 1000 (see Figure 6). See Figure 5 for the cable pin out.

MPG Mod-Jacks		
Pin #	Function	Color
1	A+	White/Orange
2	A-	Orange
3	B+	White/Green
4	+5VDC	Blue
5	GND	White/Blue
6	B-	Green
7	Unused	White/Brown
8	Unused	Brown

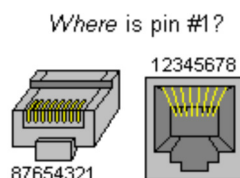


FIGURE 5 - MPG ETHERNET CABLE PINOUT



FIGURE 6 - INTERPRETER 1000 ENCODER INPUT

## 3 SOFTWARE SETUP

### 3.1 PoKeys Setup

The X15-10-01 Operator panel and the X15-20-01 Pendant use PoKeys interface software to communicate between the hardware and Mach3. To set up the PoKeys software follow the steps below.

1. Install and run the PoKeys Setup executable
2. Open Mach3
3. Go to Config->Config Plugins
4. Enable the PoKeys plugin
5. Close Mach3 and open it again
6. Go to Config->Config Plugins
7. Press the **CONFIG** button on the PoKeys-PoLabs-vX.XX line

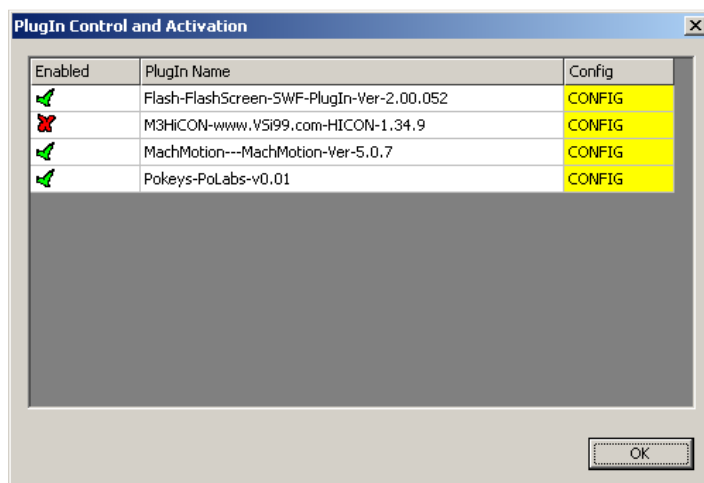


FIGURE 7 - PLUGIN CONTROL

8. Press the **[Add new]** button

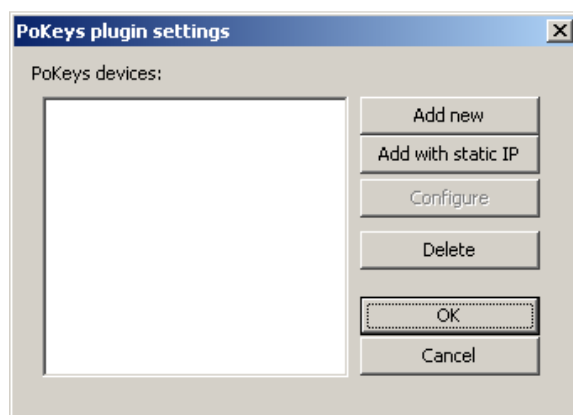


FIGURE 8 - POKEYS PLUGIN SETTINGS

9. Select the correct device from the drop down list (There will probably only be one)
10. Press **[OK]**

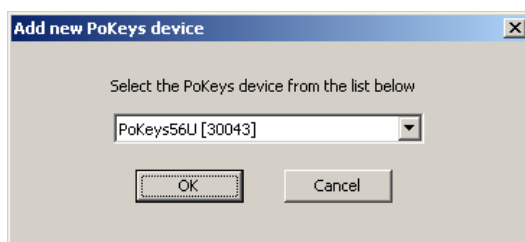


FIGURE 9 - POKEYS DEVICE SELECTION

11. Close out of the windows and Mach3 and then open Mach3 again
12. Go to PlugIn Control->Configure PoKeys

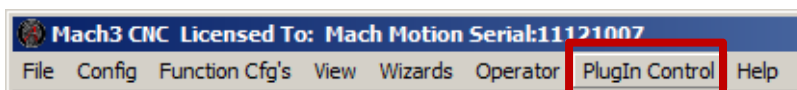


FIGURE 10 - PLUGIN CONTROL

13. Go to the Import/Export Settings tab
14. Check PoKeys pin mapping and Encoders settings and mapping (see Figure 11)
15. Press the **[Import]** button
16. Go to the Programs and Drivers folder on the desktop
17. Choose the correct PokeysConfig file and press **[OK]**
  - a. Apollo I: PokeysConfig.XML
  - b. Apollo III or Interpreter 1000: MotionControllerPokeysConfig.XML

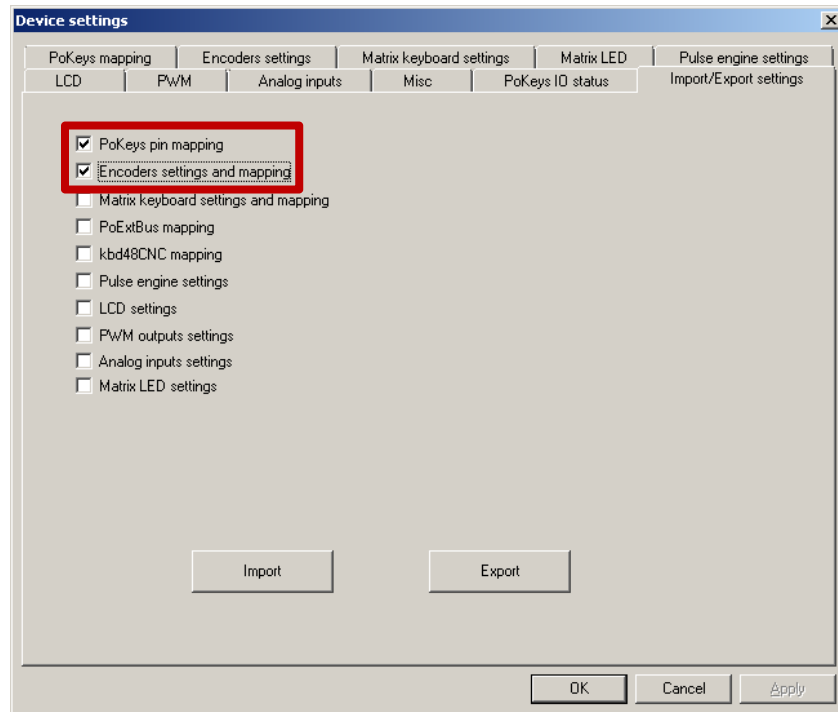


FIGURE 11 - POKEYS SETTINGS IMPORT

### 3.2 Operator Panel Setup

Once the PoKeys software is installed and configured the operator panel can be enabled in the software.

1. Select PlugIn Control->MachMotion Config
2. Go to the Control Panels tab
3. Check the box for X15-10-01 Pendant (see Figure 12)
4. Set the PoKeys LED Offset to 1700 (see Figure 12)
5. Press the **[Save]** button

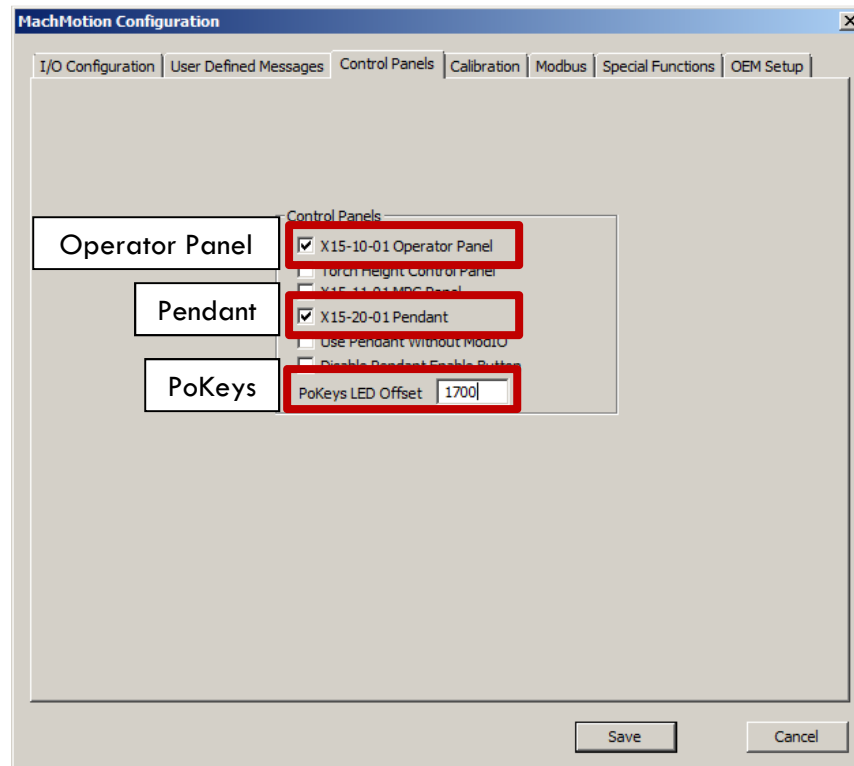


FIGURE 12 - MACHMOTION PLUGIN CONTROL PANEL OPTIONS

### 3.3 Pendant Setup

To set up the X15-20-01 Pendant, do the following.

1. Select PlugIn Control->MachMotion Config
2. Go to the Control Panels tab
3. Check the box for X15-20-01 Operator Panel (see Figure 12)
4. Press the **[Save]** button

If the system has a motion controller continue.

5. Go to Config->Config Plugins
6. Press the **CONFIG** button on the motion controller plugin line (M3HiCON or M3DSPMC)
7. In the MPG #1 box select the type of input and the index of MPG input used
  - a. Apollo III: For MPG #1 use index 7 (MPG #2 is index 8)
  - b. Interpreter 1000: Use the index of the axis the CAT5 cable is wired into

The image shows a software configuration window titled "HiCON Configuration". At the top, there is a "System" tab with sub-tabs for X(0), Y(1), Z(2), A(3), B(4), and C(5). Below this, there is a "HiCON Serial" field with the value "0" and a note: "six-character serial number, or leave blank". A checkbox labeled "Enable Debug Window" is present and unchecked. A "Threading" section contains "RPM Sync" (set to "Undefined") and "RPM Sync Index" (set to "0"). On the right, a section titled "MPG #1" is highlighted with a red rectangle; it contains "Type" (set to "Undefined") and "Index" (set to "0").

**FIGURE 13 - MOTION CONTROLLER MPG SETUP**