

Date: August 30 2019

### **Situation:**

It has been discovered, with a small number of traffic cabinets, where some AC interference has been observed on the PED Isolator, that the iN2 (running in 3 - Wire mode) or the iN3 APS buttons will not detect the button press of the other APS Button on the same Phase; even though the button wires of the two APS Buttons are connected in parallel at the Ped Isolator.

The result of this situation, is that when the first APS Button is pressed, the second APS Button, on the same Phase, does not illuminate its Pilot Light; neither does the second APS Button sound when the Walk interval is entered. Three solutions to address this condition are presented.

**Note:** This situation has only been observed with DC PED Isolators; therefore, the scope of this technical brief is confined to the connection of APS buttons to DC PED Isolators.

### **Solution1:**

From the Polara Service Application, activate Wireless Sync on both buttons. This will ensure that the Pilot Light and the audio will work on the second APS Button.

### **Solution 2:**

From the Polara Service Application, set the Walk Sound Trigger function to the: ALWAYS ON setting for both buttons. This will **NOT** activate the Pilot Light on the second APS Button when the first is pressed, but the audio for this button **WILL** sound when the WALK interval is entered.

### **Solution 3:**

**Note:** The following solution is only recommended, at this time, for DC voltage PED Isolators. The steps are as follows:

1. On the first APS Button, remove the APS Button Cover. The Button/PLC - 2 position terminal block (Black), and the Data, GND and PWR – 3 position terminal block (Green) are now visible, as shown in Figure 1 below.

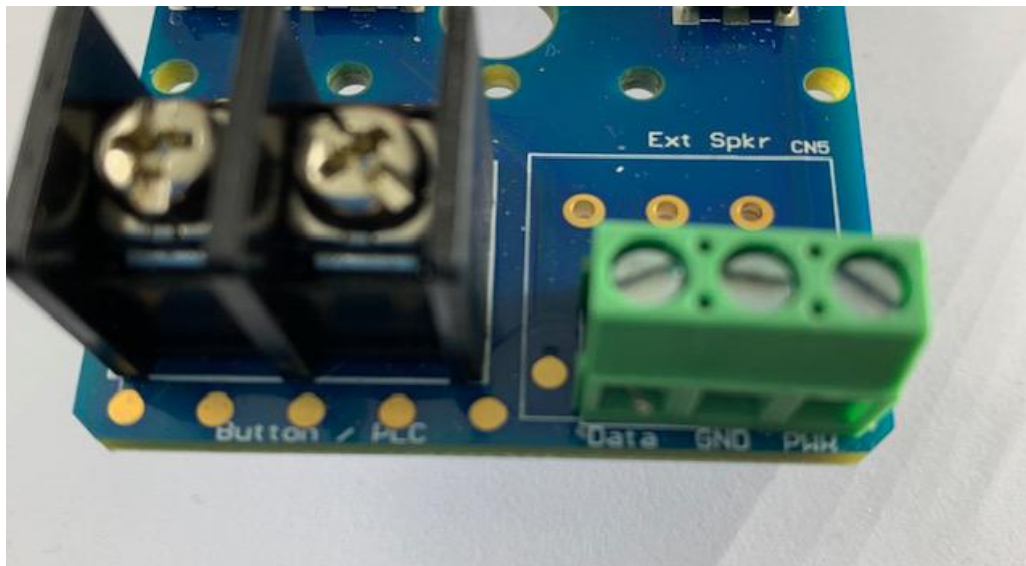


Figure 1

**Note:** The Button/PLC wires and the Data GND and PWR wires, that would be part of the normal installation and operation of the button, have been removed for the purposes of clarity.

A simple diagram of the iN3 terminals only, from Figure 1, is shown below in Figure 2, with the addition of a Digital Multimeter:

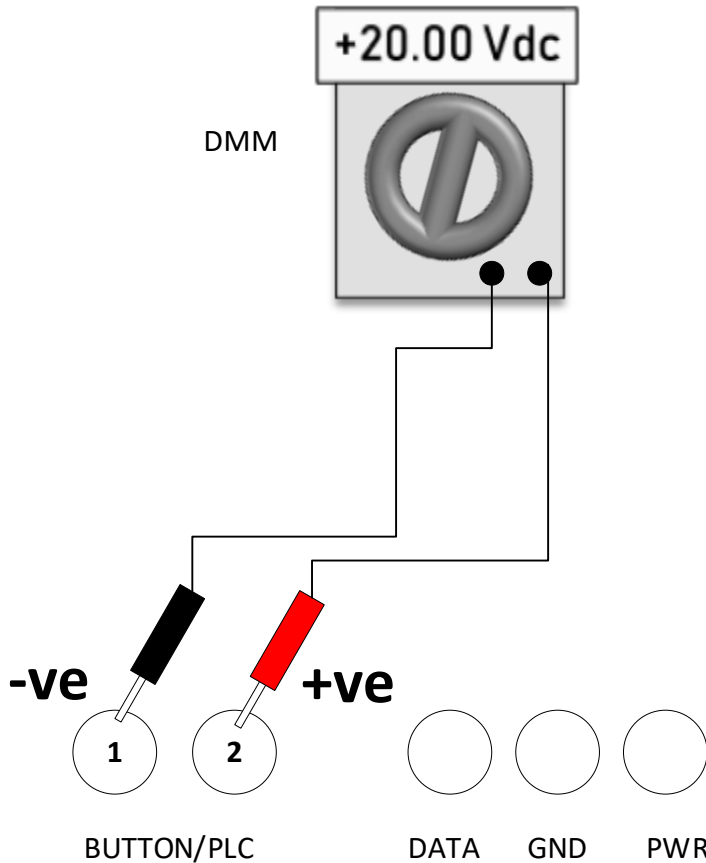


Figure 2 A simple diagram of the iN3 terminals only, with the addition of a Digital Multimeter.

2. Use a DMM (Digital Multimeter), on the DC Volts setting, to determine which of the two Button/PLC terminals is at a potential of 0 Volts with respect to the other. For example: If, with the black(-ve) probe of the DMM on terminal 1 and the red(+ve) probe of the DMM on terminal 2, the voltage reading is positive( say +20.00 Volts ), then terminal 1 is at 0 Volts with respect to the voltage measured on terminal 2. Having determined which of the two BUTTON/PLC terminals is at 0 Volts, proceed to the next step.

3. Place a short jumper wire between the Button/PLC terminal that is at 0 Volts (in the above example that would be terminal 1) and the GND terminal block; as shown in Figure 3 below:

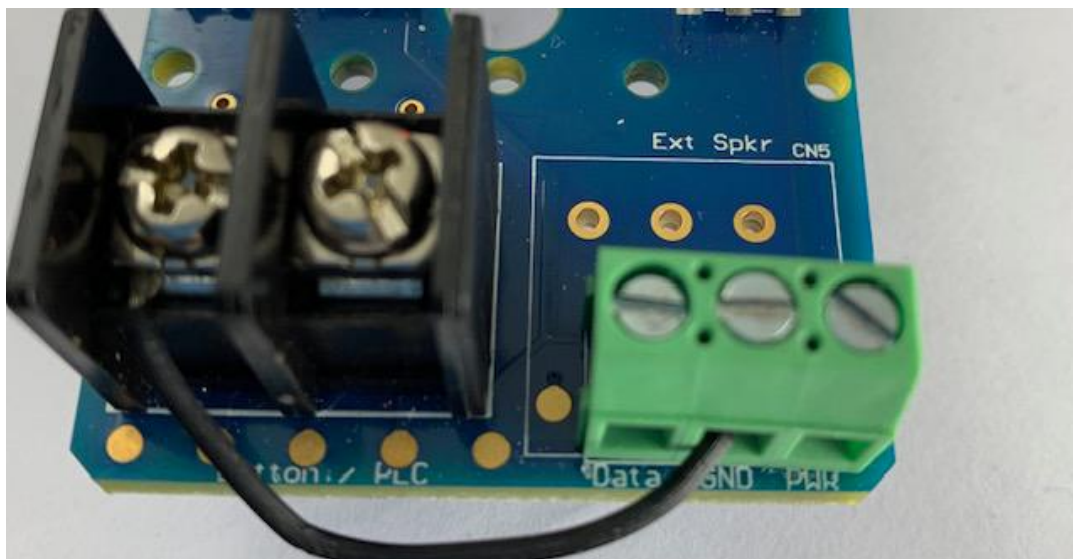


Figure 3 Connection of jumper wire from Button/PLC terminal 1 at 0 Volts to the GND terminal.

Note: The Button/PLC wires and the Data GND and PWR wires, that would be part of the normal installation and operation of the button, have been removed for the purposes of clarity.

4. Replace the button cover.

5. Repeat steps 1 to 4 for the second APS Button on the other phase. **Note:** it is critical, for this to work correctly, that **BOTH** buttons have a jumper wire correctly installed.

With the jumper wire correctly installed on BOTH buttons, the Pilot Light will now activate on the second APS Button when the first is pressed, and the audio will also play on the second APS Button when the WALK interval is entered.

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