

Instructions for Product Operated Network Interface Cards Used in INCOM Networks

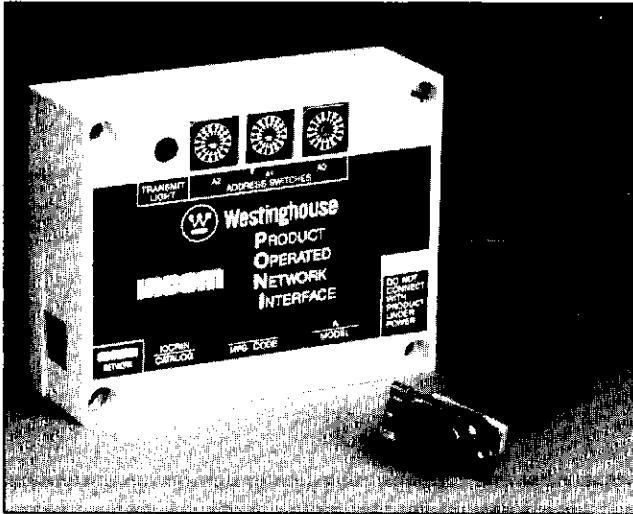


Fig. 1 PONI Card Assembly

THE PONI CARD

A Product Operated Network Interface (PONI) Card is designed to communicate information from a solid-state control product to a computer control station. The PONI Card is powered by the product it is attached to and needs no other source of power. The PONI card can operate over a temperature range of 0° to 70°C.

Each PONI card has three hexadecimal (digits 0 through 9, plus A through F) selector switches that must be used to assign a unique address to each card in the INCOM network. A light emitting diode (LED) located to the left of the three address switches lights while the PONI card is transmitting information into the INCOM network. See Figures 1 and 2. The LED does not light while the PONI card is receiving instructions.

RECEIVING DEVICE

The control station for the INCOM network must be an IBM personal computer or equivalent (compatible) or a translator unit that will accept the INCOM network signals and convert them to RS 232 format for transmission to the controlling computer.

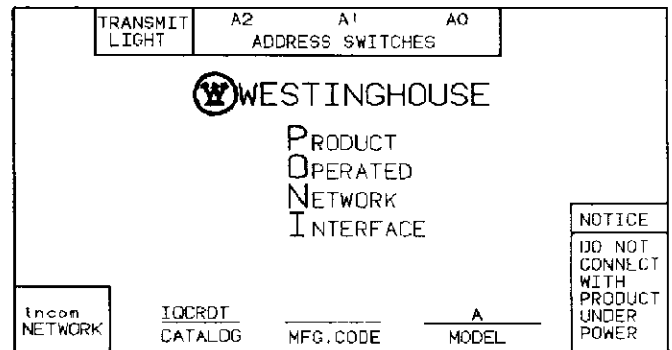


Fig. 2 PONI Card Nameplate

TRANSMITTING DEVICES

A PONI Card can be used with any of the following Westinghouse products:

1. IQ 1000
2. IQ Data Plus
3. Custom and future microprocessor based products

INSTALLATION

This industrial type control is designed to be installed, operated, and maintained by adequately trained workmen. These instructions do not cover all details, variations, or combinations of the equipment, its storage, delivery, installation, check out, safe operation, or maintenance. Care must be exercised to comply with local, state, and national regulations, as well as safety practices, for this class of equipment.

CAUTION: Remove power from (deenergize) the device to which the PONI card is being attached or wired, otherwise damage will result.

Use twisted pair wire (telephone or instrumentation wire) to connect each PONI card to the INCOM network, daisy-chain style. Attach the twisted pairs to the two-pole plug located on the side of the PONI card assembly. See Figure 3. Where the terminating PONI card is installed more than 500 feet from the control station computer connect a 150 ohm, ½ watt, carbon composition resistor across the two-pole terminal block shown in Figure 3. Consult the factory for information regarding transmission line terminations if any PONI card is installed more than 2500 feet from the control station computer.

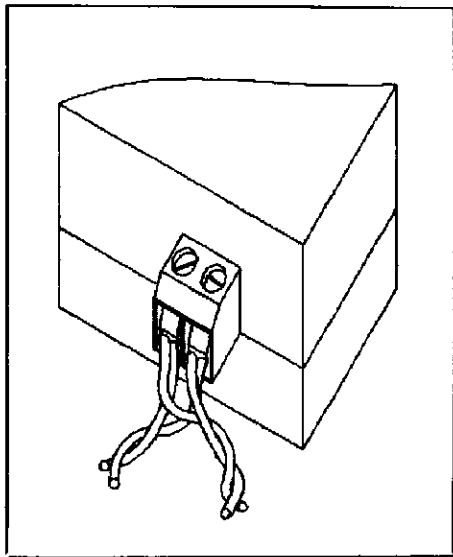


Fig. 3A Twisted Pair Termination

MOUNTING TO IQ 1000

Disconnect power to the IQ 1000. Mount bracket as shown in **Figure 4**, using the hardware indicated. Mount the PONI card assembly to the bracket with LED and address switches on top and ribbon cable on the right. Insert the nine-pin connector attached to the PONI card ribbon cable into the matching receptacle on the IQ 1000. With the plug lock assembly in position, tighten the lock assembly screws. See Figure 5. Wire into network with twisted pair.

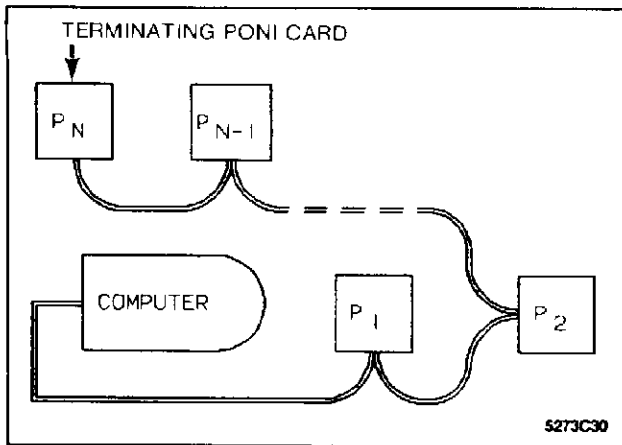


Fig. 3B Network Interwiring

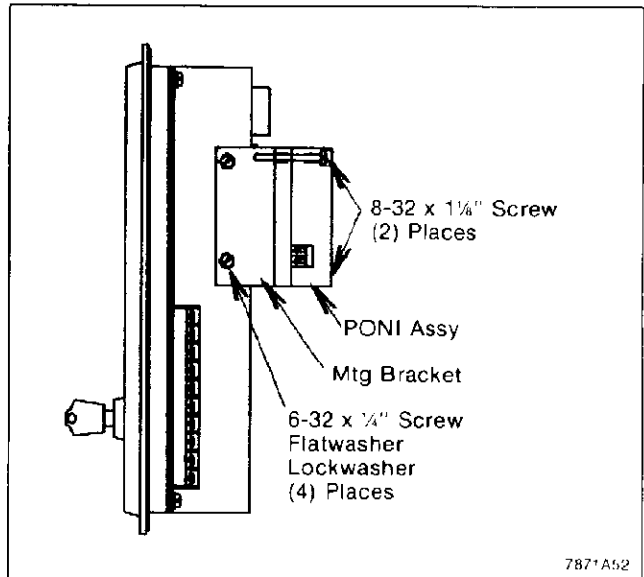


Fig. 4 IQ 1000 Mounting

MOUNTING HARDWARE

Each PONI card assembly includes the hardware needed to attach the PONI card assembly to a transmitting device. Discard the hardware not used.

Item	Qty.
Plug Lock Assembly	1
8-32 x 1/4" Screw	2
6-32 x 1/4" Screw	4
#6 Flatwasher	4
#6 Lockwasher	4
Mounting Bracket for IQ 1000	1
Mounting Bracket for Custom Panels	1

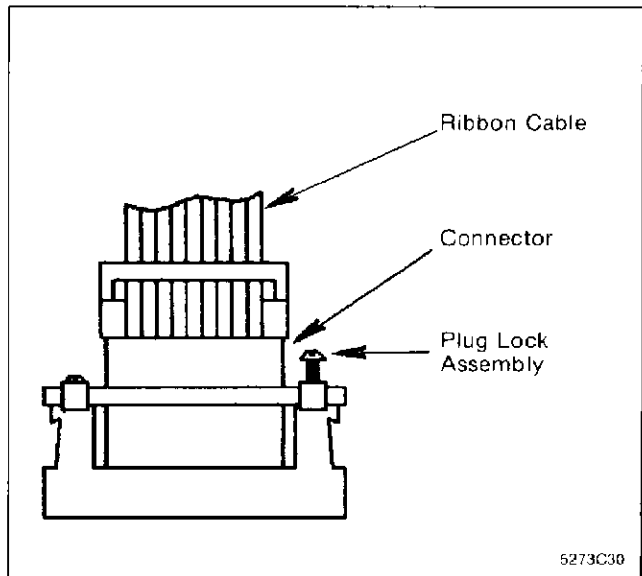


Fig. 5 Plug Lock Assembly

**MOUNTING TO IQ DATA PLUS
(without Power Module)**

Disconnect power to the IQ Data Plus. Mount PONI card assembly on the back of the IQ Data Plus as shown in **Figure 6**, using hardware indicated, with the LED and address switches on top and the ribbon cable on the right. Connect the ribbon cable from the PONI card to the receptacle of the IQ Data Plus and screw the plug lock assembly tight as shown in Figure 5.

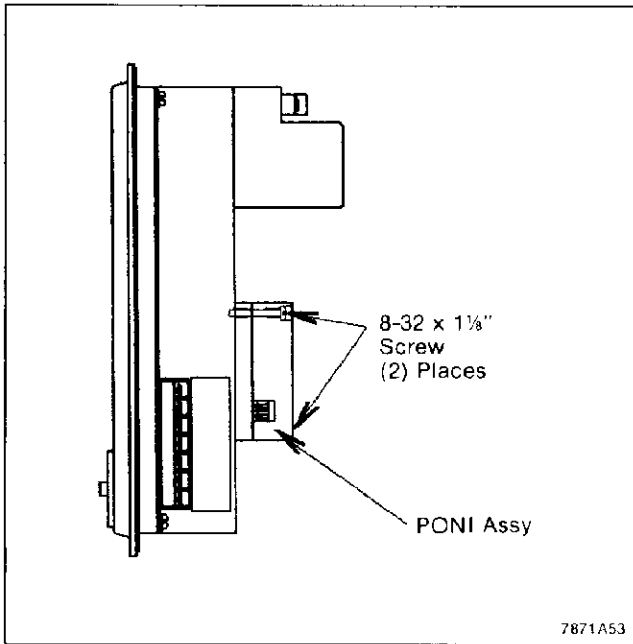


Fig. 6 IQ Data Plus without Power Module

**MOUNTING TO IQ DATA PLUS
(with Power Module)**

Disconnect power to the IQ Data Plus. Mount PONI card assembly on the back of the IQ Data Plus as shown in **Figure 7**, using hardware indicated, with the LED and address switches on top and the ribbon cable on the right. Connect the ribbon cable from the PONI card to the receptacle of the IQ Data Plus and screw the plug lock assembly tight as shown in Figure 5.

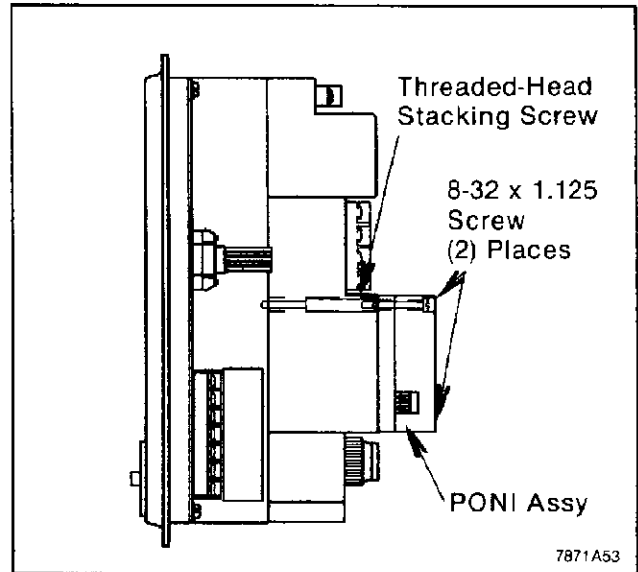


Fig. 7 IQ Data Plus, with Power Module and threaded-head stacking screw

MOUNTING TO CUSTOM PANEL (EXAMPLE)

Disconnect power to the panel. Attach bracket as shown in **Figure 8**, using the hardware that supports the panel. Mount the PONI card assembly to the bracket with two 8-32 x 1 1/8 inch screws, in the orientation shown in Figure 9. Connect the ribbon cable from the PONI card to the receptacle of the panel and screw the plug lock assembly tight as shown in Figure 5.

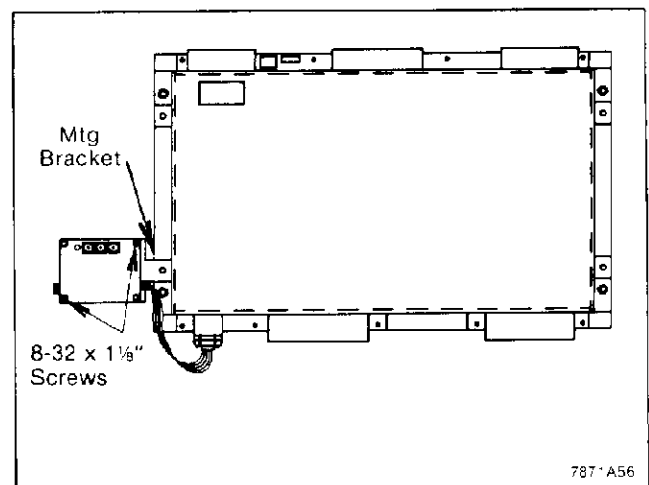


Fig. 8 Typical Custom Panel Mounting

PRODUCT OPERATED NETWORK INTERFACE

I.L. 17158A

ADDRESSING

Each PONI card assembly installed in any one network must have a unique address. The three hexadecimal selector switches offer 4096 different addresses (16x16x16), ranging from 000 to FFF. Records of addresses may be maintained in terms of the hexadecimal number (recommended) or deci-

To convert from a hexadecimal number to a decimal number multiply the setting on the first (L.H.) switch by 256, and add to it the product of 16 times the setting on the center switch, and to that sum add the setting of the right hand switch. For the second example in **Figure 9**, $(2 \times 256) + (1 \times 16) + 10 = 538$.

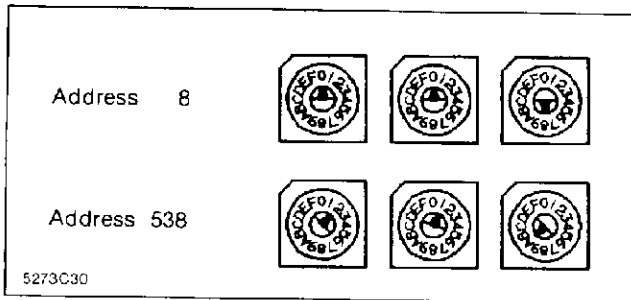


Fig. 9 Address Switch Examples

mal equivalent. In a hexadecimal system, A=10, B=11, C=12, D=13, E=14 and F=15. Examples of switch settings are shown in **Figure 9**.

OPERATION CHECK

After the INCOM system has been installed, check the operation of each PONI card by applying power to the parent unit and issuing an INCOM command through the system to each PONI card in turn, using the selected addresses. If the product responds by flashing the LED (OFF to receive, ON while transmitting, OFF to receive) all connections are correct. If the LED remains OFF replace the PONI card assembly and consult the factory, (704-684-2381).