S Simplex

Introduction

This publication describes the installation procedure for the 4100-0304/1291 Remote Unit Interface (RUI) card.

Inspecting Contents of Shipment

Upon unpacking your Simplex product, inspect the contents of the carton for shipping damage. If damage is apparent, immediately file a claim with the carrier and notify Simplex.

Related Documentation

- 4100 Field Wiring Diagrams 841-731 (power-limited) or 841-995 (non power-limited)

- *4100U System Installation Guide* (574-848)

In this Publication

This publication discusses the following topics:

Topic	See Page #
Cautions and Warnings	2
Introduction to the RUI Card	3
Configuring the Card	4
Installing Motherboards into 2975-91xx Back Boxes (4100)	6
Installing Motherboards into 2975-94xx Back Boxes (4100U)	10
Installing the Daughter Card	15
Wiring	16

firealarmresources.com

Cautions and Warnings

READ AND SAVE THESE INSTRUCTIONS. Follow the instructions in this installation manual. These instructions must be followed to avoid damage to this product and associated equipment. Product operation and reliability depends upon proper installation.

DO NOT INSTALL ANY SIMPLEX PRODUCT THAT APPEARS DAMAGED. Upon unpacking your Simplex product, inspect the contents of the carton for shipping damage. If damage is apparent, immediately file a claim with the carrier and notify Simplex.

ELECTRICAL HAZARD - Disconnect electrical field power when making any internal adjustments or repairs. Servicing should be performed by qualified Simplex Representatives.

STATIC HAZARD - Static electricity can damage components. Therefore, handle as follows:

- Ground yourself before opening or installing components (use the 553-484 Static Control Kit).

- Prior to installation, keep components wrapped in anti-static material at all times.

EYE SAFETY HAZARD - Under certain fiber optic application conditions, the optical output of this device may exceed eye safety limits. Do not use magnification (such as a microscope or other focusing equipment) when viewing the output of this device.

RADIO FREQUENCY ENERGY - This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area may cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

SYSTEM REACCEPTANCE TEST AFTER SOFTWARE CHANGES - To ensure proper system operation, this product must be tested in accordance with NFPA72-1996, Chapter 7 after any programming operation or change in site-specific software. Reacceptance testing is required after any change, addition or deletion of system components, or after any modification, repair or adjustment to system hardware or wiring.

All components, circuits, system operations, or software functions known to be affected by a change must be 100% tested. In addition, to ensure that other operations are not inadvertently affected, at least 10% of initiating devices that are not directly affected by the change, up to a maximum of 50 devices, must also be tested and proper system operation verified. –

Introduction to the RUI Card

Overview

The RUI card is used in MINIPLEX systems to extend the length of communications wire to reach remote bays.

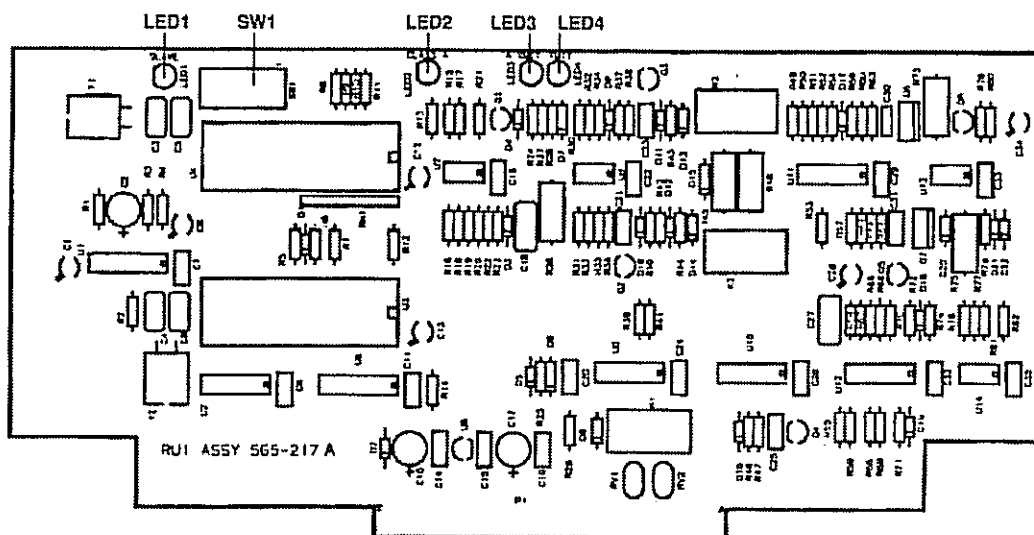Figure 1, below, is an illustration of the RUI card.

Figure 1. The Remote Unit Interface Card

The RUI card mounts onto a 562-799 or 562-856 Motherboard.

LEDs

LED 1 lights when there is a Slave trouble from a connected MINIPLEX Transponder.

LED 2 lights when there is a Class A trouble on the communications line.

LED 3 lights when there is a XMIT short trouble.

- Class A w/o RIC II remote or Class B = on steady until short is removed.
- Class A w/RIC II remote or Style 7 = on only if short is between RUI and the first RIC II.

LED 4 lights when there is a Class A XMIT short trouble.

- Class A w/o RIC II remote or Class B = on steady until short is removed.
- Class A w/RIC II remote or Style 7 = on only if short is between RUI and the first RIC II.

Specifications

Refer to Table 1 for electrical and environmental requirements.

Table 1. Specifications

Description	Specification
Power	24 VDC @ 170 mA
Baud Rate (Selectable)	1200, 2400, 4800
Temperature	32° to 120° F (0° to 50° C)
Humidity	5% to 85% Non-condensing

Configuring the Card

Overview

Switch SW1 on the is a bank of eight dip switches. From left to right (see Figure 2, below) these switches are designated as SW1-1 through SW1-8. The function of these switches is as follows:

- **SW1-1.** This switch sets the baud rate for the internal 4100 communications line running between the card and the 4100 CPU. Set this switch to ON.

- **SW1-2 through SW1-8.** These switches set the card's address within the 4100 FACP. Refer to Table 5 for a complete list of the switch settings for all of the possible card addresses.

Note: You must set these switches to the value assigned to the card by the 4100 Programmer.
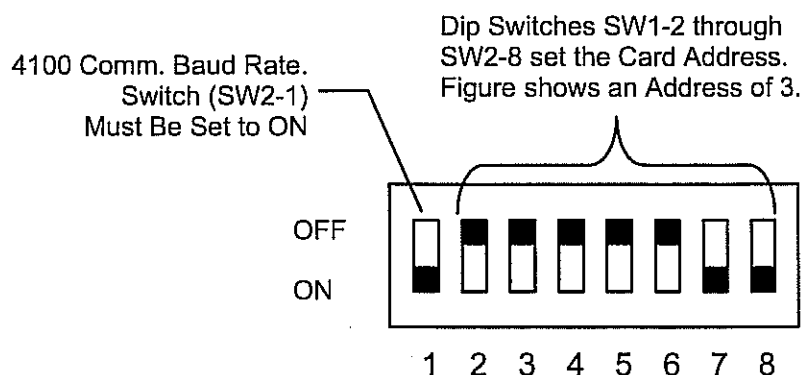

4100 Comm. Baud Rate. Switch (SW2-1) Must Be Set to ON

Dip Switches SW1-2 through SW2-8 set the Card Address. Figure shows an Address of 3.

Figure 2. DIP Switch SW1

Configuring the Card, *Continued*

Overview
(*continued*)

Table 2. Card Addresses

Address	SW 2-2	SW 2-3	SW 2-4	SW 2-5	SW 2-6	SW 2-7	SW 2-8
1	ON	ON	ON	ON	ON	ON	OFF
2	ON	ON	ON	ON	ON	OFF	ON
3	ON	ON	ON	ON	ON	OFF	OFF
4	ON	ON	ON	ON	OFF	ON	ON
5	ON	ON	ON	ON	OFF	ON	OFF
6	ON	ON	ON	ON	OFF	OFF	ON
7	ON	ON	ON	ON	OFF	OFF	OFF
8	ON	ON	ON	OFF	ON	ON	ON
9	ON	ON	ON	OFF	ON	ON	OFF
10	ON	ON	ON	OFF	ON	OFF	ON
11	ON	ON	ON	OFF	ON	OFF	OFF
12	ON	ON	ON	OFF	OFF	ON	ON
13	ON	ON	ON	OFF	OFF	ON	OFF
14	ON	ON	ON	OFF	OFF	OFF	ON
15	ON	ON	ON	OFF	OFF	OFF	OFF
16	ON	ON	OFF	ON	ON	ON	ON
17	ON	ON	OFF	ON	ON	ON	OFF
18	ON	ON	OFF	ON	ON	OFF	ON
19	ON	ON	OFF	ON	ON	OFF	OFF
20	ON	ON	OFF	ON	OFF	ON	ON
21	ON	ON	OFF	ON	OFF	ON	OFF
22	ON	ON	OFF	ON	OFF	OFF	ON
23	ON	ON	OFF	ON	OFF	OFF	OFF
24	ON	ON	OFF	OFF	ON	ON	ON
25	ON	ON	OFF	OFF	ON	ON	OFF
26	ON	ON	OFF	OFF	ON	OFF	ON
27	ON	ON	OFF	OFF	ON	OFF	OFF
28	ON	ON	OFF	OFF	OFF	ON	ON
29	ON	ON	OFF	OFF	OFF	ON	OFF
30	ON	ON	OFF	OFF	OFF	OFF	ON
31	ON	ON	OFF	OFF	OFF	OFF	OFF
32	ON	OFF	ON	ON	ON	ON	ON
33	ON	OFF	ON	ON	ON	ON	OFF
34	ON	OFF	ON	ON	ON	OFF	ON
35	ON	OFF	ON	ON	ON	OFF	OFF
36	ON	OFF	ON	ON	OFF	ON	ON
37	ON	OFF	ON	ON	OFF	ON	OFF
38	ON	OFF	ON	ON	OFF	OFF	ON
39	ON	OFF	ON	ON	OFF	OFF	OFF
40	ON	OFF	ON	OFF	ON	ON	ON
41	ON	OFF	ON	OFF	ON	ON	OFF
42	ON	OFF	ON	OFF	ON	OFF	ON
43	ON	OFF	ON	OFF	ON	OFF	OFF
44	ON	OFF	ON	OFF	OFF	ON	ON
45	ON	OFF	ON	OFF	OFF	ON	OFF
46	ON	OFF	ON	OFF	OFF	OFF	ON
47	ON	OFF	ON	OFF	OFF	OFF	OFF
48	ON	OFF	OFF	ON	ON	ON	ON
49	ON	OFF	OFF	ON	ON	ON	OFF
50	ON	OFF	OFF	ON	ON	OFF	ON
51	ON	OFF	OFF	ON	ON	OFF	OFF
52	ON	OFF	OFF	ON	OFF	ON	ON
53	ON	OFF	OFF	ON	OFF	ON	OFF
54	ON	OFF	OFF	ON	OFF	OFF	ON
55	ON	OFF	OFF	ON	OFF	OFF	OFF
56	ON	OFF	OFF	OFF	ON	ON	ON
57	ON	OFF	OFF	OFF	ON	ON	OFF
58	ON	OFF	OFF	OFF	ON	OFF	ON
59	ON	OFF	OFF	OFF	ON	OFF	OFF
60	ON	OFF	OFF	OFF	OFF	ON	ON

Address	SW 2-2	SW 2-3	SW 2-4	SW 2-5	SW 2-6	SW 2-7	SW 2-8
61	ON	OFF	OFF	OFF	OFF	ON	OFF
62	ON	OFF	OFF	OFF	OFF	OFF	ON
63	ON	OFF	OFF	OFF	OFF	OFF	OFF
64	OFF	ON	ON	ON	ON	ON	ON
65	OFF	ON	ON	ON	ON	ON	OFF
66	OFF	ON	ON	ON	ON	OFF	ON
67	OFF	ON	ON	ON	ON	OFF	OFF
68	OFF	ON	ON	ON	OFF	ON	ON
69	OFF	ON	ON	ON	OFF	ON	OFF
70	OFF	ON	ON	ON	OFF	OFF	ON
71	OFF	ON	ON	ON	OFF	OFF	OFF
72	OFF	ON	ON	OFF	ON	ON	ON
73	OFF	ON	ON	OFF	ON	ON	OFF
74	OFF	ON	ON	OFF	ON	OFF	ON
75	OFF	ON	ON	OFF	ON	OFF	OFF
76	OFF	ON	ON	OFF	OFF	ON	ON
77	OFF	ON	ON	OFF	OFF	ON	OFF
78	OFF	ON	ON	OFF	OFF	OFF	ON
79	OFF	ON	ON	OFF	OFF	OFF	OFF
80	OFF	ON	OFF	ON	ON	ON	ON
81	OFF	ON	OFF	ON	ON	ON	OFF
82	OFF	ON	OFF	ON	ON	OFF	ON
83	OFF	ON	OFF	ON	ON	OFF	OFF
84	OFF	ON	OFF	ON	OFF	ON	ON
85	OFF	ON	OFF	ON	OFF	ON	OFF
86	OFF	ON	OFF	ON	OFF	OFF	ON
87	OFF	ON	OFF	ON	OFF	OFF	OFF
88	OFF	ON	OFF	OFF	ON	ON	ON
89	OFF	ON	OFF	OFF	ON	ON	OFF
90	OFF	ON	OFF	OFF	ON	OFF	ON
91	OFF	ON	OFF	OFF	ON	OFF	OFF
92	OFF	ON	OFF	OFF	OFF	ON	ON
93	OFF	ON	OFF	OFF	OFF	ON	OFF
94	OFF	ON	OFF	OFF	OFF	OFF	ON
95	OFF	ON	OFF	OFF	OFF	OFF	OFF
96	OFF	OFF	ON	ON	ON	ON	ON
97	OFF	OFF	ON	ON	ON	ON	OFF
98	OFF	OFF	ON	ON	ON	OFF	ON
99	OFF	OFF	ON	ON	ON	OFF	OFF
100	OFF	OFF	ON	ON	OFF	ON	ON
101	OFF	OFF	ON	ON	OFF	ON	OFF
102	OFF	OFF	ON	ON	OFF	OFF	ON
103	OFF	OFF	ON	ON	OFF	OFF	OFF
104	OFF	OFF	ON	OFF	ON	ON	ON
105	OFF	OFF	ON	OFF	ON	ON	OFF
106	OFF	OFF	ON	OFF	ON	OFF	ON
107	OFF	OFF	ON	OFF	ON	OFF	OFF
108	OFF	OFF	ON	OFF	OFF	ON	ON
109	OFF	OFF	ON	OFF	OFF	ON	OFF
110	OFF	OFF	ON	OFF	OFF	OFF	ON
111	OFF	OFF	ON	OFF	OFF	OFF	OFF
112	OFF	OFF	OFF	ON	ON	ON	ON
113	OFF	OFF	OFF	ON	ON	ON	OFF
114	OFF	OFF	OFF	ON	ON	OFF	ON
115	OFF	OFF	OFF	ON	ON	OFF	OFF
116	OFF	OFF	OFF	ON	OFF	ON	ON
117	OFF	OFF	OFF	ON	OFF	ON	OFF
118	OFF	OFF	OFF	ON	OFF	OFF	ON
119	OFF	OFF	OFF	ON	OFF	OFF	OFF

5

Installing Motherboards into 2975-91xx Back Boxes (4100)

Overview

The RUI motherboard can be mounted to either 4100 Back Boxes (PID series 2975-91xx) or 4100U Back Boxes (PID series 2975-94xx).

- The 4100-0304 version is used for systems with 4100 Back Boxes.

- The 4100-1291 version is used for systems with 4100U Back Boxes

This section describes mounting the 4100-0304 version into 4100 Back Boxes.

Installing into a 2975-91xx Master Controller Bay

Use the following guidelines and instruction when installing into a master controller bay.

- If the 575-274 Master Motherboard is used, it must be installed in the leftmost position of this bay. If the 575-274 Master Motherboard is not used, the CPU motherboard must be installed in the leftmost position of the bay.

- The power supply must be installed in the rightmost position of the bay.

- Relay cards must be installed in the slots immediately to the left of the power supply. This is necessary to allow for the proper routing of non-power limited wiring (120 VAC wiring connected to the relay card).

- If used, the Class B motherboard (575-275) must be installed to the left of the relay cards. If a physical bridge is used with the Class B motherboard, it must be to the right of any motherboards using NICs. This allows for earth ground detection via the physical bridge.

Install the motherboard as described below.

1. Orient the 562-799 or 562-856 Motherboard so that the connector labeled J1 is on the right and the header labeled P1 is on the left.

2. Slide the motherboard to the left until the pins are completely inserted in the connector of a previously installed motherboard.

3. Secure the motherboard to the chassis with four torx screws.

CPU or 575-274 Motherboard

The motherboard can be installed in any of these slots. If the bay has relay cards, they must be installed to the immediate left of the power supply.

P1

J1

Power Supply
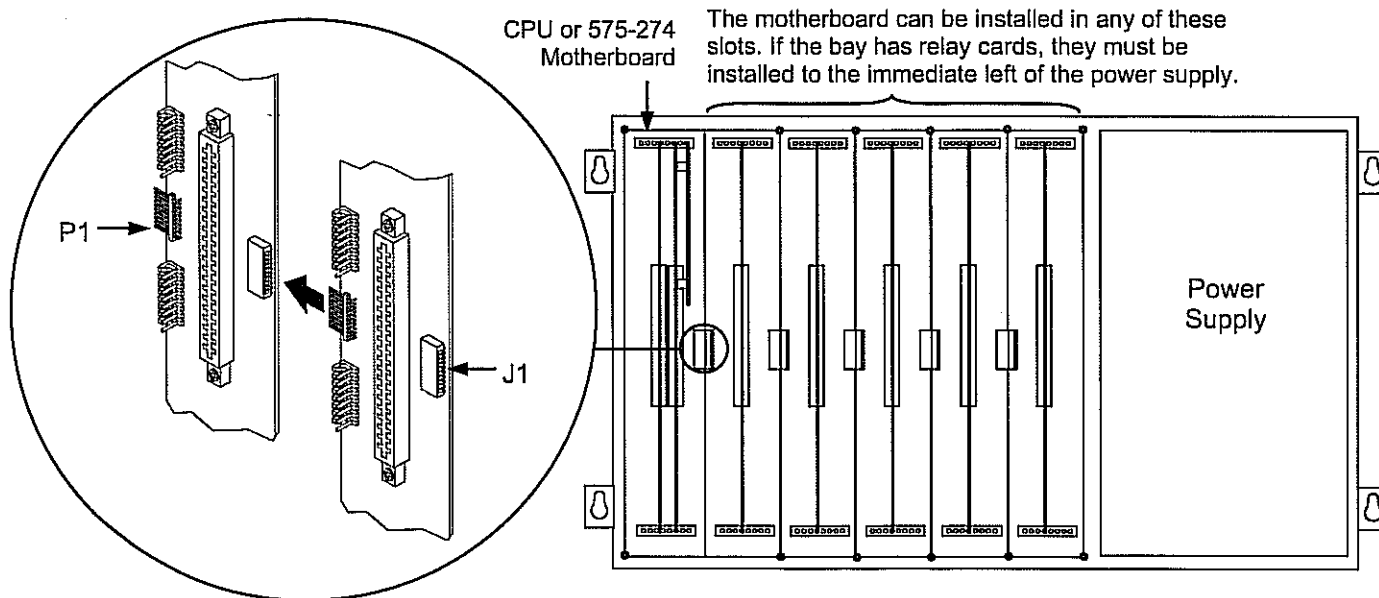
Figure 2. Installing the Motherboard into a 4100 Master Controller Bay

6

**Installing into a
2975-91xx
Expansion Bay**

Review the following guidelines before mounting the motherboard into a 2975-91xx Expansion Bay.

- If a power supply is installed in the bay, it must be installed on the far right of the bay and any relay modules must be installed in the slots immediately to its left.

- Relay cards must be installed in the rightmost possible slots. This is necessary to allow for the proper routing of non-power limited wiring (typically 120 VAC wiring), which could be connected to a relay module.

- If a 4100-0155 SDACT or a 4100-0153 CCDACT is installed in the bay, it must be installed in the far left or far right slot. Neither of these modules contains the J1 or P1 connectors, which are used to distribute power and communications to adjacent modules.

Use the following directions and Figure 4 to install a motherboard into an expansion bay.

1. Orient the motherboard with the connector labeled J1 on the right and the header labeled P1 on the left.

2. Match the connector on the previously installed motherboard with the pins on the motherboard you are installing. Slide the motherboard to the left until the pins are completely inserted in the connector of the previously installed motherboard. If you are installing the leftmost board, the pins will remain unconnected.

3. Secure the motherboard to the chassis with four torx screws.
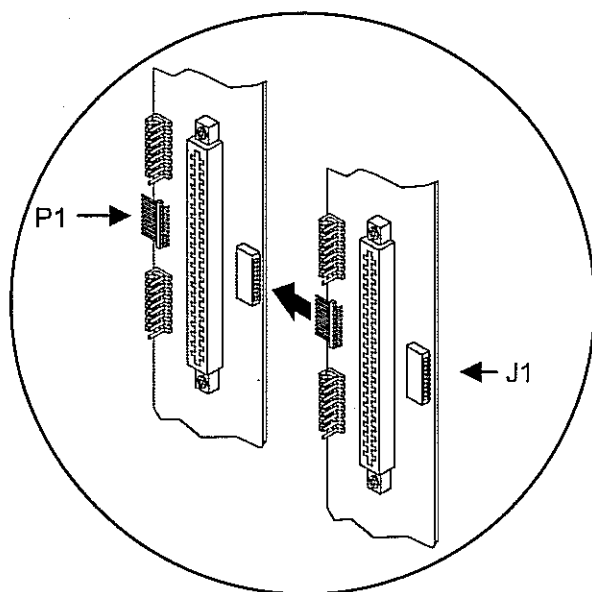
The motherboard can be installed in any of the eight slots. If the bay has relay cards, they must be installed on the far right of the bay.
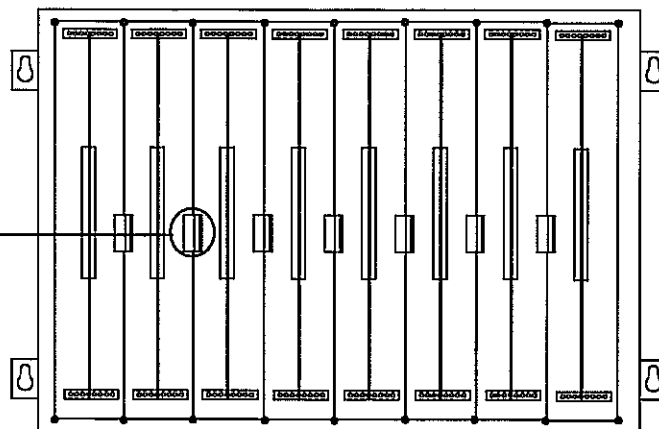
Figure 3. Installing the Motherboard into a 4100 Expansion Bay

4. If you are installing the leftmost motherboard, connect a 733-525 Power and Communication Harness. Continue to the next topic to connect the harness.

7

Connecting the 733-525 Harness

If you need to connect a 733-525 Harness to a motherboard, refer to Figure 4 and follow these steps. Make sure to route the power and communication wiring on the left side of the bay.

1. Connect one end of the harness to a motherboard in an adjacent bay.

    If the adjacent bay is a master controller bay, connect the harness to the P2 and P3 connectors of the master controller motherboard and continue to step 2.

    If the adjacent bay is an expansion bay, connect the harness to the P2 and P3 connectors of the motherboard installed in the leftmost slot. (If a 4100-0155 SDACT or a 4100-0153 CCDACT occupies the leftmost slot, connect the harness to the motherboard in the second slot from the left.) Connect the harness as follows:

    a. Insert the harness connector with the blue wire into the P2 connector. Note that the P2 connector has eight pins. Insert the harness connector on either the top four pins or the bottom four pins, not in the middle.

    b. Insert the harness connector with the white wire into the P3 connector. Note that the P3 connector has eight pins. Insert the harness connector on either the top four pins or the bottom four pins, not in the middle.

**Connecting the
733-525 Harness**
(*continued*)

2. Connect the other end of the harness to the leftmost motherboard in the next bay, as described below. Make sure to route the wiring on the left side of the bay.

a. Insert the harness connector with the blue wire into the P2 connector. Note that the P2 connector has eight pins. Insert the harness connector on either the top four pins or the bottom four pins, not in the middle.

b. Insert the harness connector with the white wire into the P3 connector. Note that the P3 connector has eight pins. Insert the harness connector on either the top four pins or the bottom four pins, not in the middle.
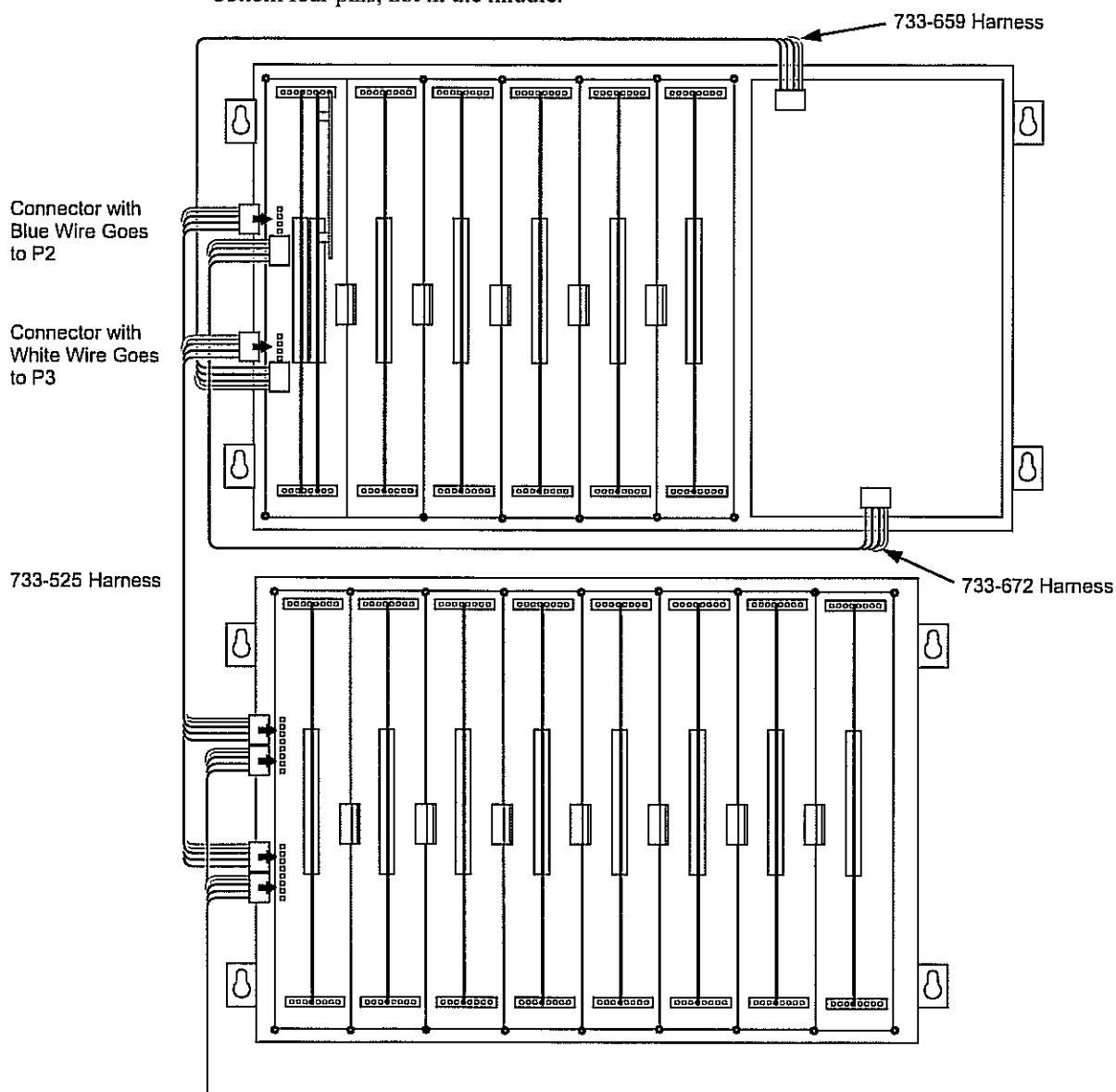
Figure 4. Power and Communication Wiring for Motherboards (4100)

Installing Motherboards into 2975-94xx Back Boxes (4100U)

Overview

The RUI motherboard can be mounted to either 4100 Back Boxes (PID series 2975-91xx) or 4100U Back Boxes (PID series 2975-94xx).

- The 4100-0304 version is used for systems with 4100 Back Boxes.
- The 4100-1291 version is used for systems with 4100U Back Boxes

This section describes mounting the 4100-1291 version into 4100U Back Boxes.

Installing into a 2975-94xx CPU Bay

Up to two motherboards may be installed with the system CPU in the CPU bay.

Use the following directions to mount a motherboard into a CPU bay.

1. Orient the motherboard with the connector labeled J1 on the right and the header labeled P1 on the left.

2. Slide the motherboard to the right until the pins from P1 on the motherboard to the right are completely inserted in the motherboard's J1 connector.

3. Attach four lockwashers and metal standoffs to the chassis, and secure the motherboard to the chassis using four #6 screws.
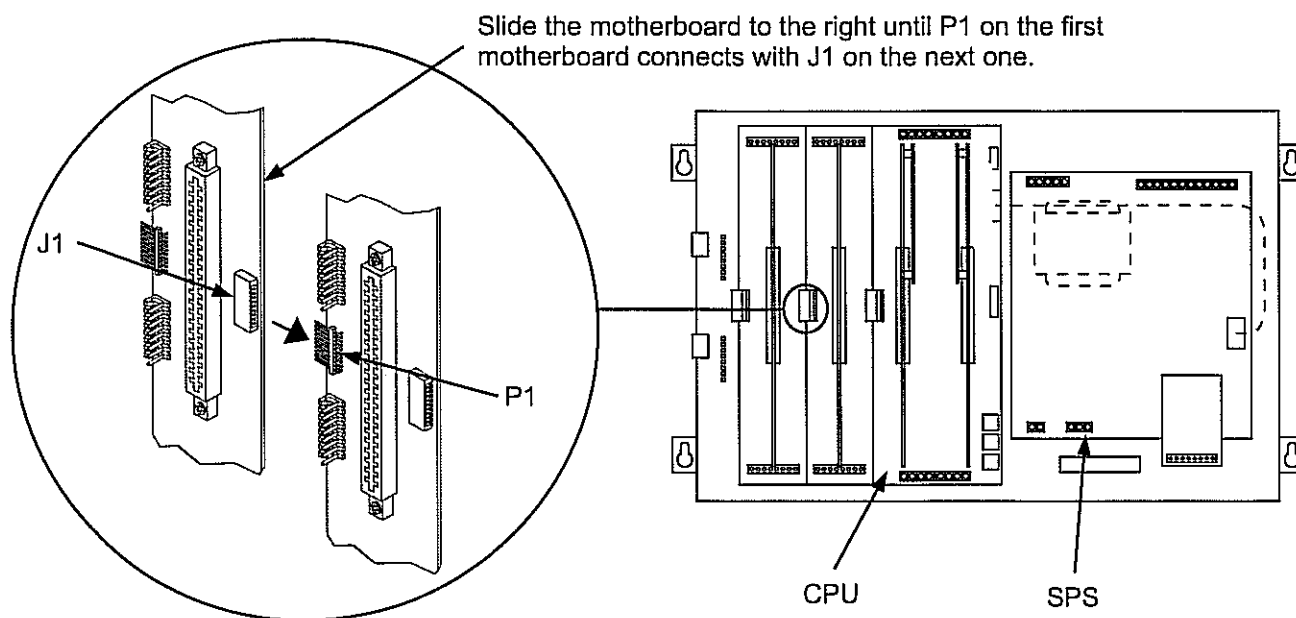
Figure 5. Installing the Motherboard into a 4100U CPU Bay

firealarmresources.com

Installing into a 2975-94xx Expansion Bay

When installing 2 x 11 ½-inch motherboards in a 4100U expansion bay, adhere to the following guidelines:

- Each expansion bay assembly includes a chassis, two end supports, one LED/switch frame, and a power distribution interface (PDI) board.

- An expansion bay holds up to eight 4" x 5" modules. A double-size module, such as the expansion power supply (XPS), takes up two blocks of space as shown below.

- Up to seven 2" x 11 ½" motherboards can be installed in an expansion bay **if no 4" x 5" modules are installed in the bay.** Motherboards are mounted on top of the PDI in expansion bays. The data and power that would normally be bussed via the PDI is instead routed across the boards via ribbon cable from one board to the next.

- As shown in the figure below, motherboards can be installed alongside 4" x 5" cards, if necessary.

- The leftmost slot must not contain a motherboard.

- 4" x 5" cards must be added from right to left.

- Motherboards must be added from left to right.
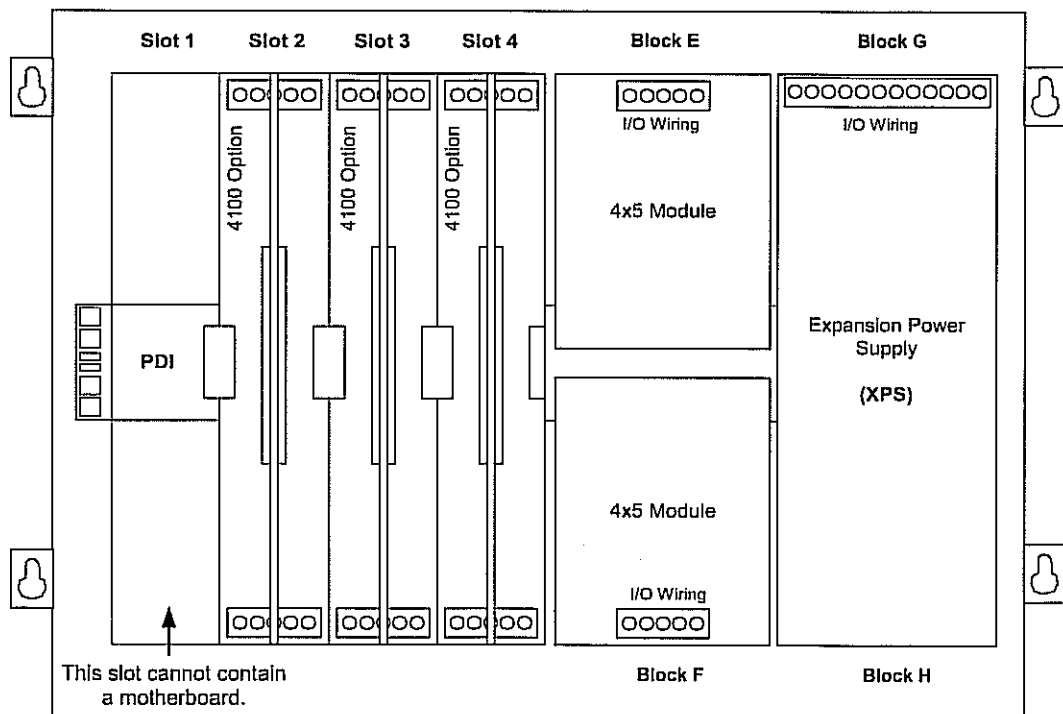
Figure 6. Installing the Motherboard in a 4100U Expansion Bay

**Installing into a
2975-94xx
Expansion Bay**
(*continued*)

Use the following procedure when installing motherboards in an expansion bay. Start with the second slot from the left and fill to the right.

1. Orient the motherboard with the connector labeled J1 on the right and the header labeled P1 on the left.

2. Attach four metal threaded standoffs and lockwashers into the screw holes on the chassis.

3. Secure the motherboard to the standoffs using four #6 torx screws as shown in Figure 7.
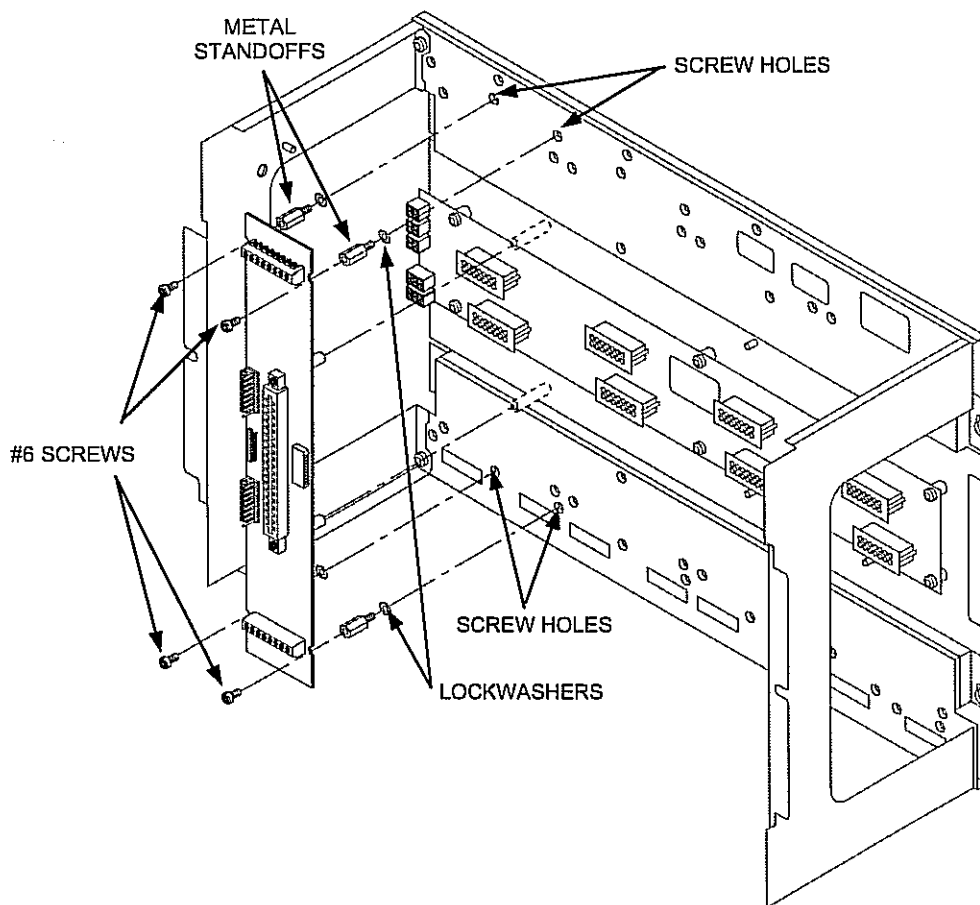
Figure 7. Installing the Motherboard in a 4100U Expansion Bay

4. If you are installing the leftmost motherboard, connect a 733-525 Power and Communication Harness. Continue to the next topic to connect the harness.

Connecting the 733-525 Harness

If you need to connect a 733-525 Harness to a motherboard, refer to Figure 8 and follow these steps. Make sure to route the power and communication wiring on the left side of the bay.

1. Connect one end of the harness to a motherboard in an adjacent bay.

    If the adjacent bay is the CPU bay, connect the harness to the P8 and P7 connectors of the CPU motherboard.

    *   Insert the harness connector with the blue wire into the P8 connector. Note that the P8 connector has eight pins. Insert the harness connector on either the top four pins or the bottom four pins, not in the middle.

    *   Insert the harness connector with the white wire into the P7 connector. Note that the P7 connector has eight pins. Insert the harness connector on either the top four pins or the bottom four pins, not in the middle.

    If the adjacent bay is an expansion bay, connect the harness to the P2 and P3 connectors of the motherboard installed in the leftmost slot. (If an SDACT or CCDACT occupies the leftmost slot, connect the harness to the motherboard in the second slot from the left.) Connect the harness as follows:

    *   Insert the harness connector with the blue wire into the P2 connector. Note that the P2 connector has eight pins. Insert the harness connector on either the top four pins or the bottom four pins, not in the middle.

    *   Insert the harness connector with the white wire into the P3 connector. Note that the P3 connector has eight pins. Insert the harness connector on either the top four pins or the bottom four pins, not in the middle.

2. Connect the other end of the harness to the leftmost motherboard in the next bay, as described below. Make sure to route the wiring on the left side of the bay.

    *   Insert the harness connector with the blue wire into the P2 connector. Note that the P2 connector has eight pins. Insert the harness connector on either the top four pins or the bottom four pins, not in the middle.

    *   Insert the harness connector with the white wire into the P3 connector. Note that the P3 connector has eight pins. Insert the harness connector on either the top four pins or the bottom four pins, not in the middle.

**Connecting the
733-525 Harness**
(*continued*)

733-996
HARNESS

733-525 Harness

Connector with
Blue Wire Goes
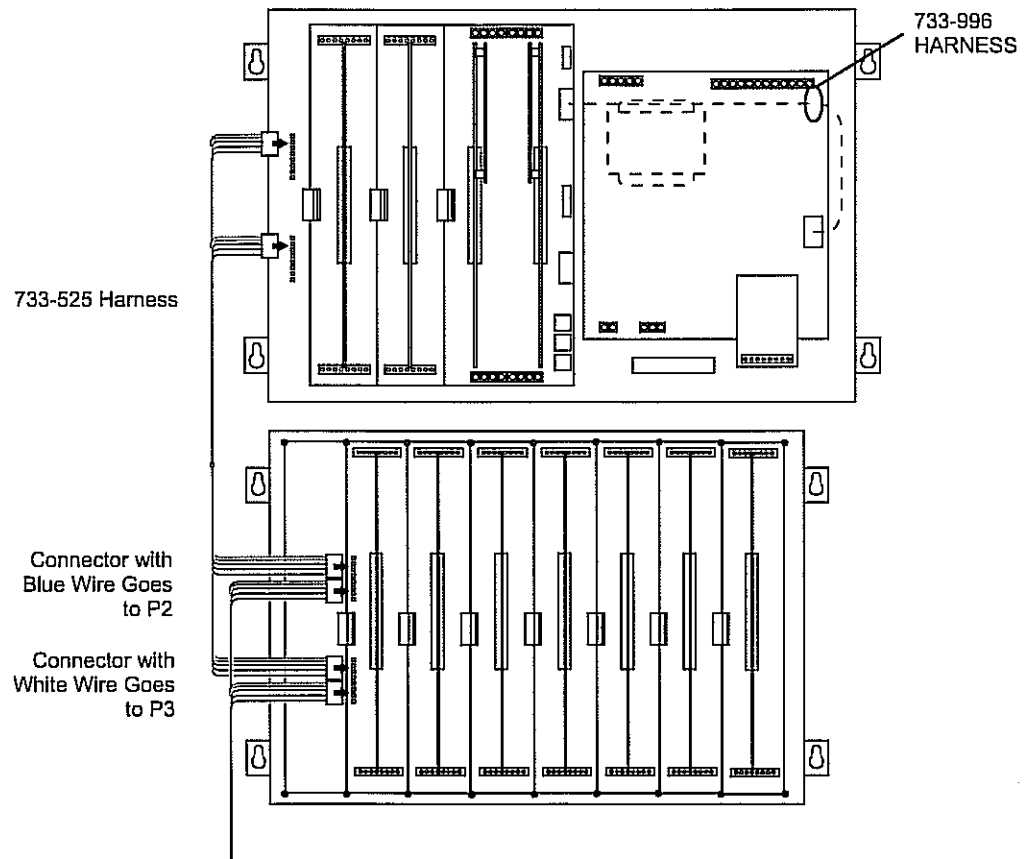to P2

Connector with
White Wire Goes
to P3

Figure 8. Power and Communication Wiring for Motherboards (4100U)

Installing the Daughter Card

Installing the Daughter Card

The daughter card inserts into the connector located in the center of the motherboard. The connector is keyed so that the daughter card fits only one way. Before installing the card, examine the slot in the motherboard and the fingers on the daughter card and note where the key is located.

Note: The figure below is a general-purpose illustration that applies to all daughter cards.
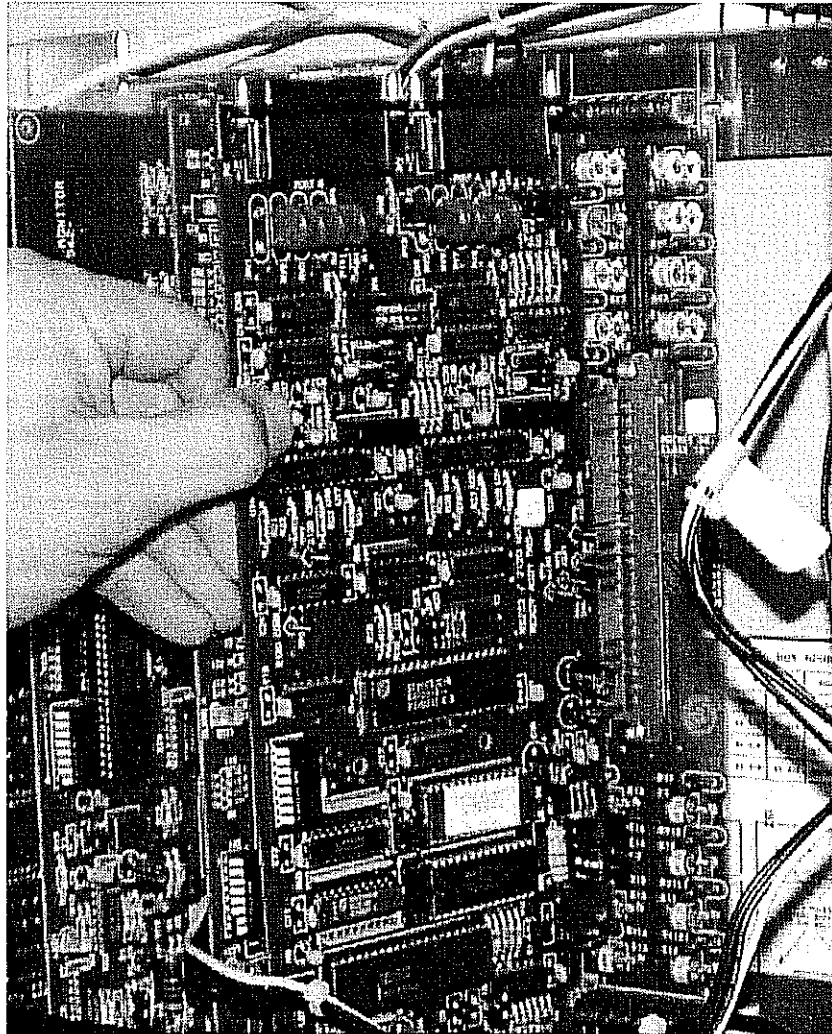
Figure 9. Installing the Daughter Card

Wiring

Introduction

This section contains guidelines and instructions for wiring the RUI module to remote annunciators, 24-point graphic I/O modules, remote serial interface cards, and RIC II cards.

General Guidelines

Make sure these guidelines are accounted for before wiring:

- All wires must be 18 AWG, twisted/shielded pair.

- Maximum one-way line communication line wire length is 2,500 feet at 32 VDC/ 130 mA maximum, 1200 or 9600 baud.

- All wiring is supervised.

- Conductors must test free of all grounds.

- Power must come from a Simplex-approved power supply.

- All wiring must be done using copper conductors only, unless noted otherwise.

- If shielded wire is used,

  - the metallic continuity of the shield must be maintained throughout the entire cable length.

  - the entire length of the cable must have a resistance greater than 1 Megohm to earth ground.

- Underground wiring must be free of all water.

- In areas of high lightning activity, or in areas that have large power surges, the 2081-9027 Transient Suppressor should be used on monitor points.

- Wires must not be run through elevator shafts.

- Wires that run in plenum must be in conduit.

- Splicing is permitted. All spliced connections must either be soldered (resin-core solder), crimped in metal sleeves, or encapsulated with an epoxy resin. When soldering or crimped metal sleeves are used, the junction must be insulated with a high-grade electrical tape that is as sound as the original insulating jacket. Shield continuity must be maintained throughout.

- A system ground must be provided for earth detection and lightning protection devices. This connection must comply with approved earth detection per NFPA780.

- Only system wiring can be run together in the same conduit.

- Any wiring leaving the building requires overload protectors (2081-9044). Use one overvoltage protector where wiring leaves the building and another where the wiring enters the other building.

firealarmresources.com

Power-Limited Guidelines

Make sure these guidelines are accounted for before wiring for power-limited systems:

- Non-power limited field wiring (AC power, batteries, City connection) must be installed and routed in the shaded areas shown in Figure 10.

- Power-limited field wiring must be installed and routed in the non-shaded areas shown in Figure 10, with the exception of City wiring.

- Excess slack should be kept to a minimum inside the back box enclosure. The wiring should be neatly dressed and bundled together using the wire ties provided with the equipment. Anchor power-limited wiring to tie points, as shown in Figure 10.
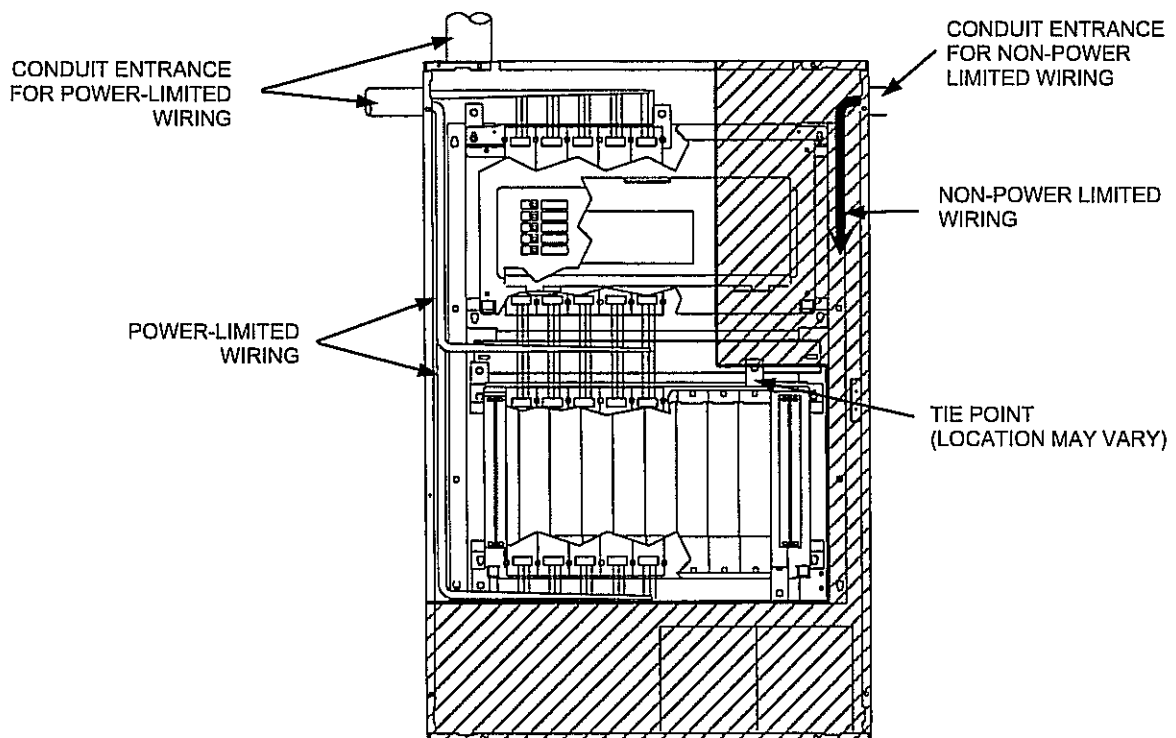
Figure 10. Power-Limited Wiring

- Tie the wiring located between bays to the internal wiring troughs, if applicable.

- When powering remote units or switching power through relay contacts, power for these circuits must be provided by a UPS-style power supply, the 4100-1108 Power Supply (8 A), or a power-limited power supply that listed for fire-protective signaling use.

firealarmresources.com

Wiring, *Continued*

**Power-Limited
Guidelines**
(*continued*)

- *Auxiliary power only:* In order to connect a circuit using power-limited wiring, the devices being powered must all be addressable, or a UL Listed EOL relay must be used to supervise the circuit. Refer to Figure 11 for wiring directions for the EOL relay.

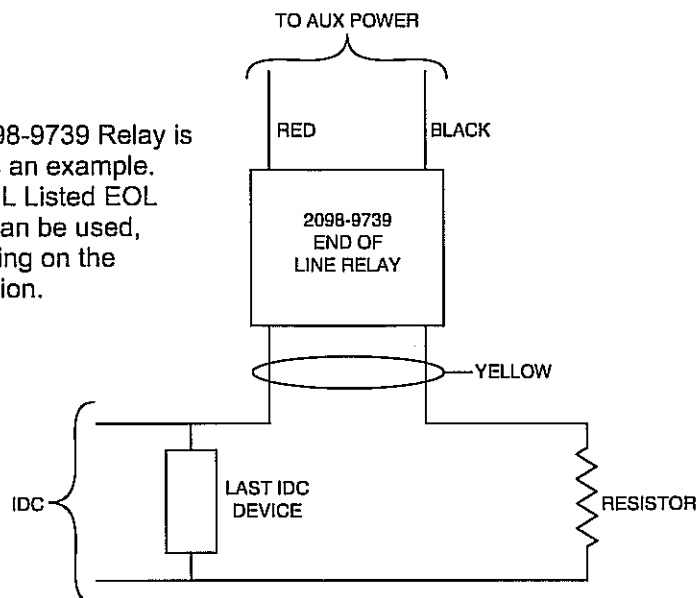**Note:** The 2098-9739 Relay is used as an example. Other UL Listed EOL relays can be used, depending on the application.

Figure 11. The EOL Relay

Connecting to a Transponder with an LED/Switch Controller

Use Figure 12, and the notes below, to connect the RUI motherboard to a transponder with an LED/Switch Controller.
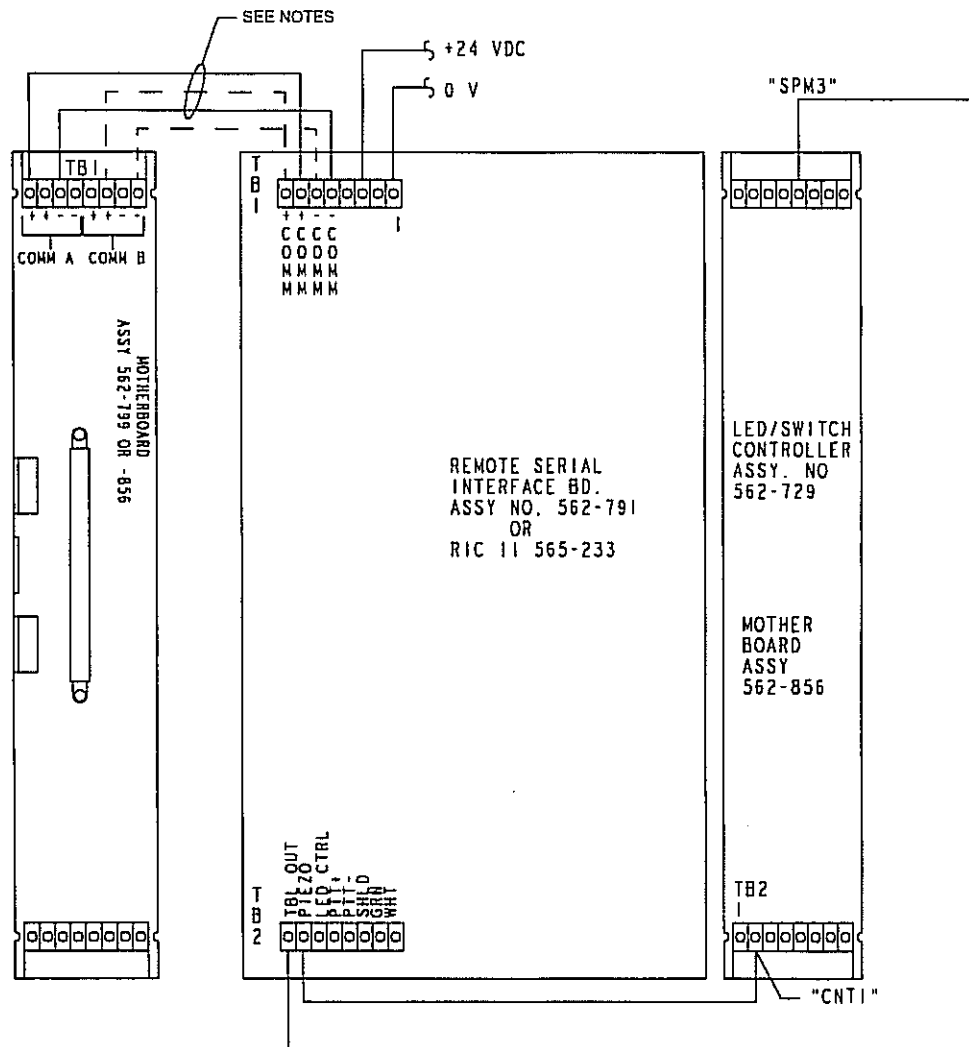

Figure 12. Wiring to a Transponder with an LED/Switch Module

Notes:

- Use the first LED/switch card for the piezo/ RUI comms trouble connection. RUI comms trouble is available with the 565-233 RIC II module only.

- If Class B wiring is used, jumper TB1-2 to TB1-5 and TB1-4 to TB1-7 using the 733-716 Harness.

- If Class A wiring is used, Harness 733-716 is removed, and the second pair (shown with dashed lines) is used.

Connecting to a Transponder with a Graphic I/O Card

Use Figure 13, and the notes below, to connect the RUI motherboard to a transponder with a 24-point I/O card.
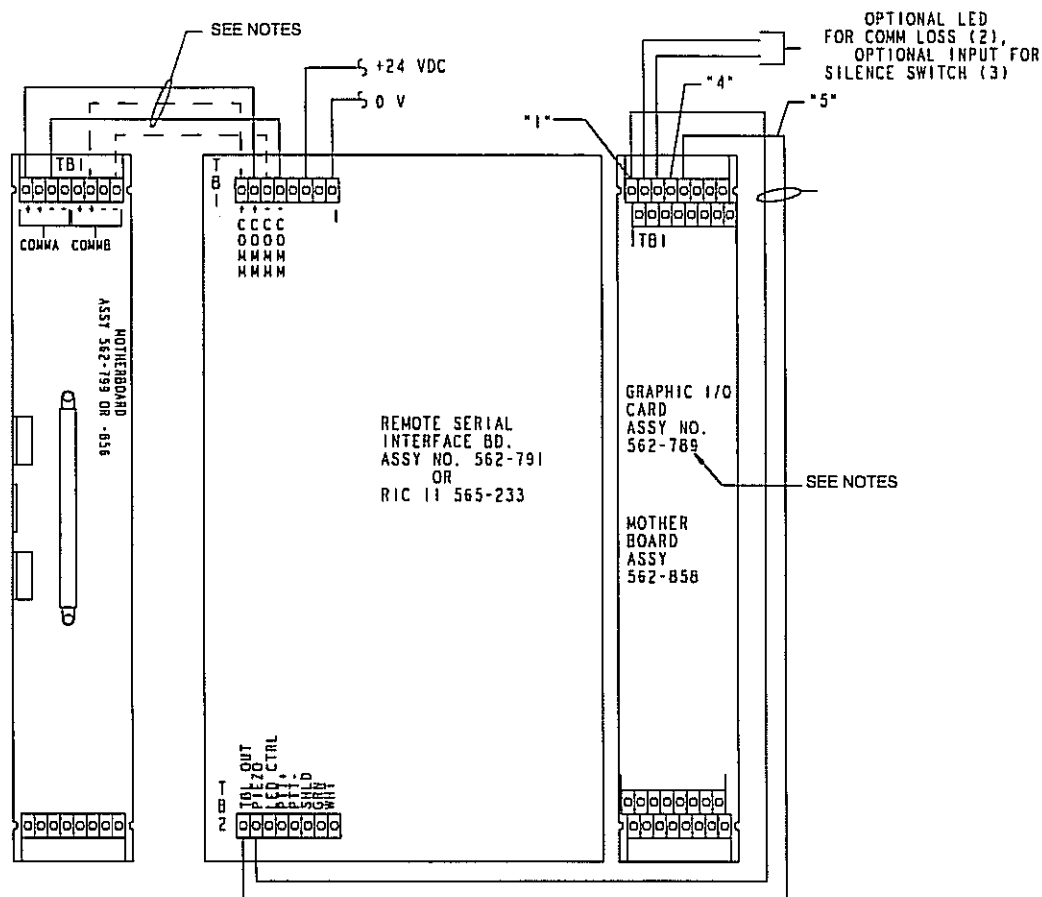

Figure 13. Wiring to a Transponder with a 24-Point Graphic I/O Module

Notes:

• Use the first graphic I/O card for the piezo/ RUI comms trouble connection. RUI comms trouble is available with the 565-233 RIC II module only.

• If Class B wiring is used, jumper TB1-2 to TB1-5 and TB1-4 to TB1-7 using the 733-716 Harness.

• If Class A wiring is used, Harness 733-716 is removed, and the second pair (shown with dashed lines) is used.

Connecting to a Transponder with an LCD Annunciator

Use Figure 14, and the notes below, to connect the RUI card to an LCD annunciator.
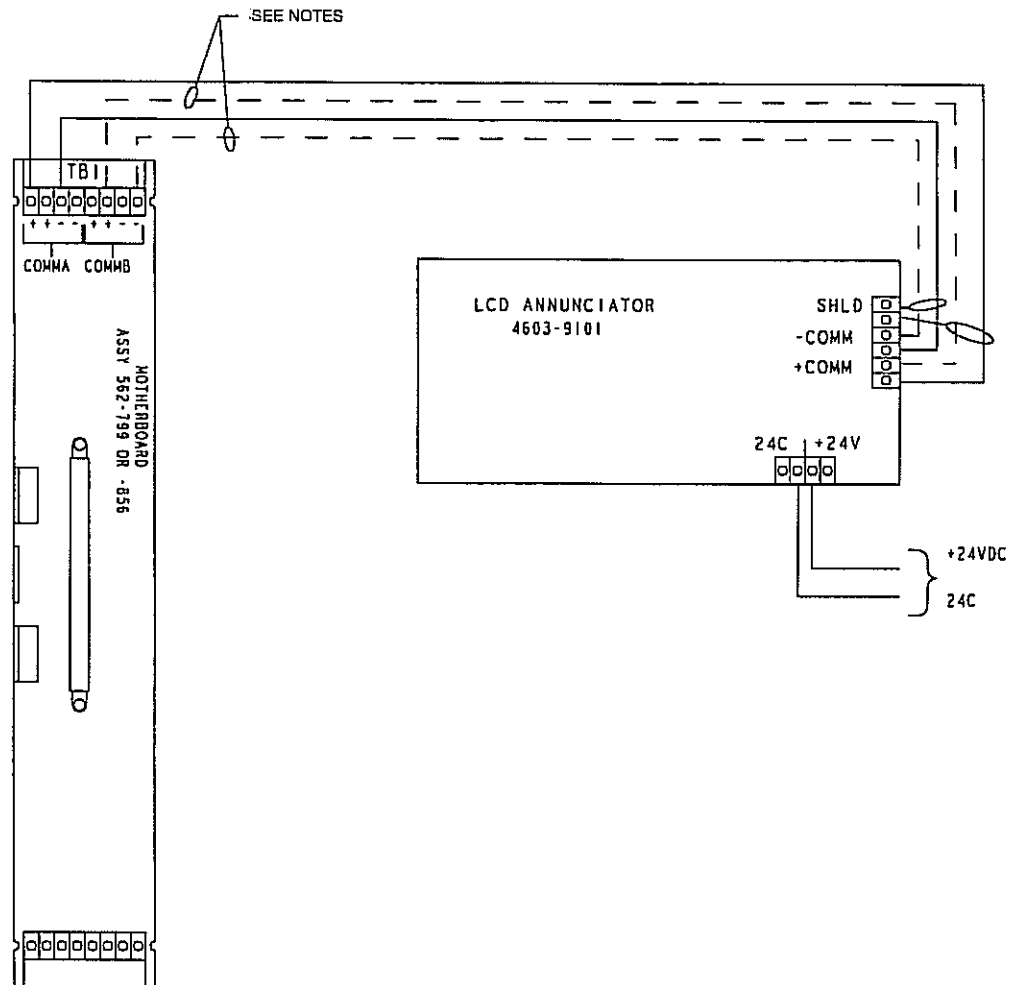

Figure 14. Wiring to an LCD Annunciator

Notes:

- If Class B wiring is used, jumper TB1-2 to TB1-5 and TB1-4 to TB1-7 using the 733-716 Harness.

- If Class A wiring is used, Harness 733-716 is removed, and the second pair (shown with dashed lines) is used.

firealarmresources.com