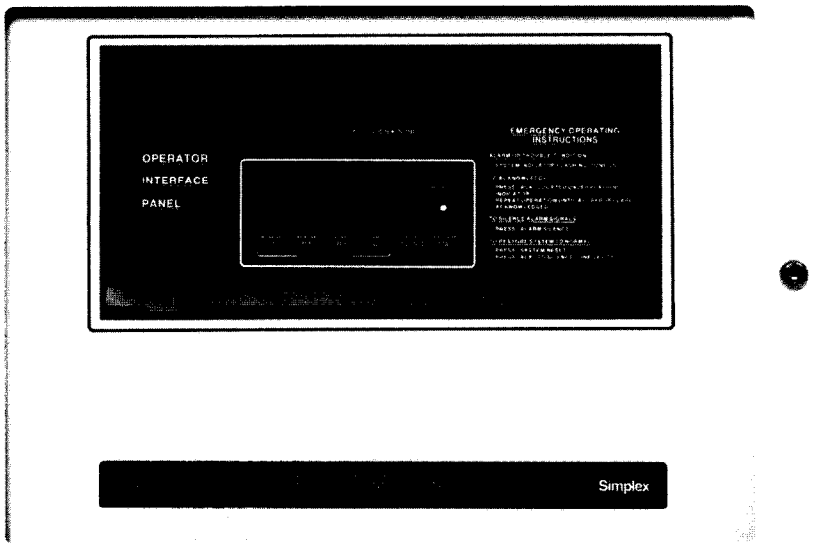
Simplex

4020 Fire Alarm

Jumper Placements and Switch Settings



© 1994 Simplex Time Recorder Co.

All specifications and other information shown were current as of publication, and are subject to change without notice.

FA4-21-405 (574-065)
Ed 5 94

TABLE OF CONTENTS

Master Controller Assemblies

565-209 Master Controller Assy 1

565-325 Master Controller Assy 2

Power Supply Interface Assemblies

565-220 Power Supply Interface Assy 3

565-256 Power Supply Interface Assy 3

Standard Slave Board Assemblies

565-222 Standard Slave Board Assy 4

565-368 Standard Slave Board Assy 6

565-241 (Optional) MAPNET® Transceiver Assy 7

565-211 (Optional) 8-Point I/O Board Assy 8

565-224 2120/RS-232 Interface Assy 9

576-288 4020/4002 4120 Network Modular Assy 10

Appendix

How to Adjust the NiCad Battery Charger 12

System Configuration Jumper Kits are available from Fitchburg under Part No. 740-769.

Each kit contains:

Quantity	Part No.	Description
9	733-712	Configures I/O port for Monitor Zone (features red wires)
3	733-713	Configures I/O port for Signal Zone (features blue wires)
2	733-806	Configures I/O port for Security Zone (features white wires)
4	166-250	Enables power supply voltages

MASTER CONTROLLER ASSEMBLIES

565-209 MASTER CONTROLLER ASSY (Figure 1)

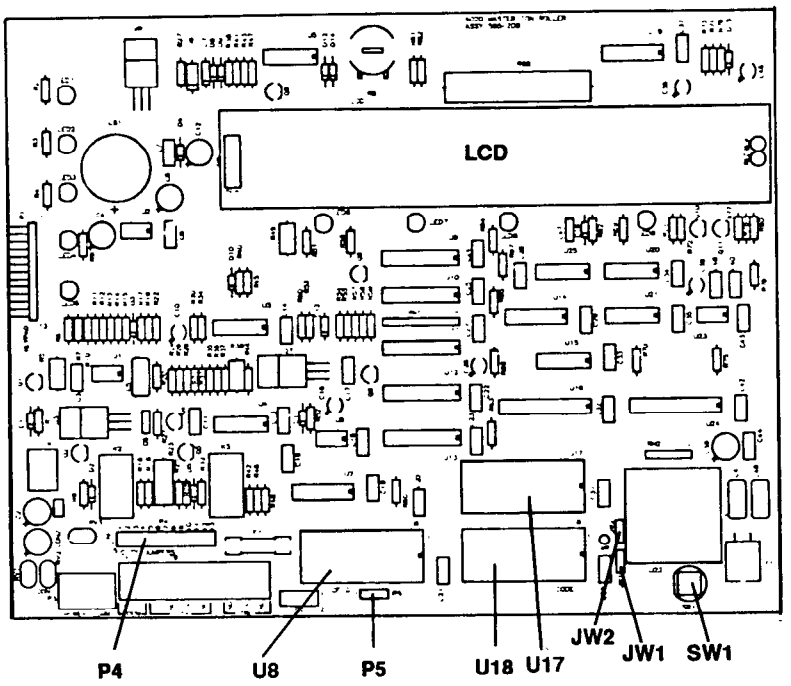


Figure 1

Jumper Package P4 (City Connection Configuration Jumpers)

To configure system for city connection, install jumpers on jumper package P4 where indicated by Xs (Table 1).

JUMPER P4-	1	2	3	4	5	6	7	8	9	10	11	12	13
Local Energy		X			X		X		X			X	X
Reverse Polarity	X		X				X	X				X	
Shunt	X				X								X
Radio				X		X							X
Form C													X

Table 1

Jumper Package P5 (Write Enable Jumpers for CFIG "Flash" EPROM U8)

Pins 1 and 2 to enable CFIG programming (disables system operation); pins 2 and 3 to enable system operation (disables CFIG programming).

Jumpers JW1 and JW2 (Factory Installed)

JW1 in, JW2 out when System Executive EPROM U18 = 2 Meg
JW2 in, JW1 out when System Executive EPROM U18 = 4 Meg

SW1 (N/O Software Reset Switch)

Resets system microprocessor when pressed (causes warm start).

565-325 MASTER CONTROLLER ASSY (Figure 2)

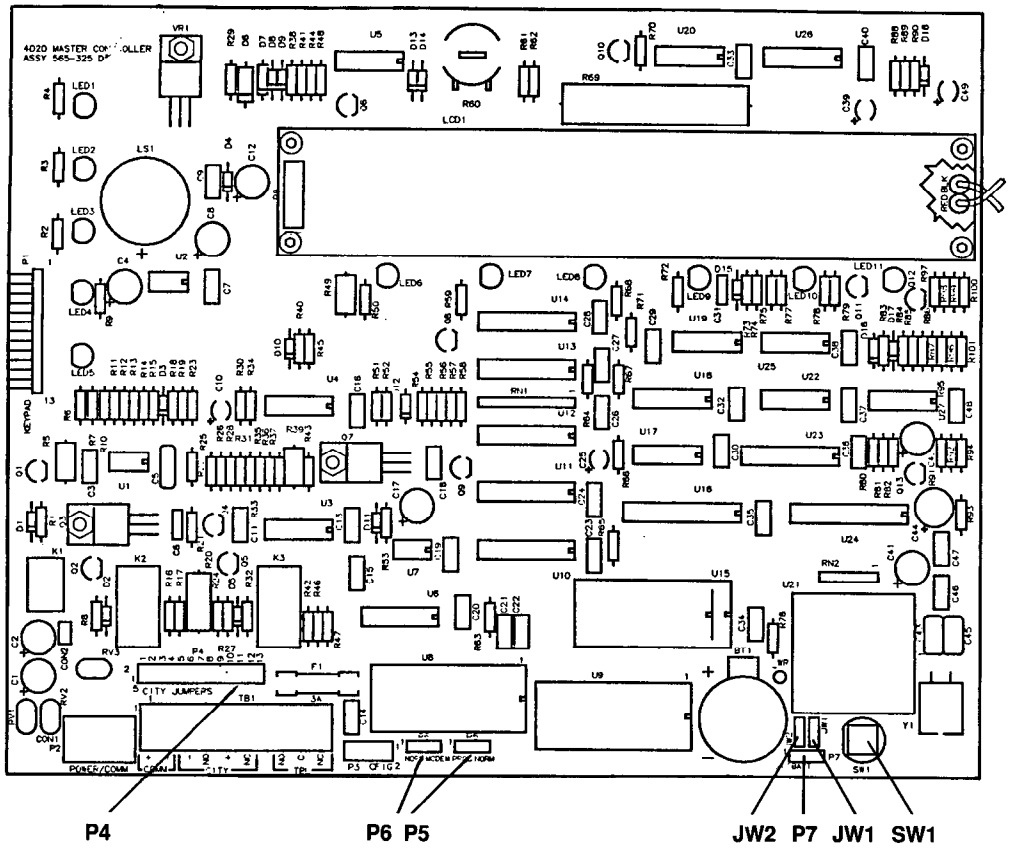


Figure 2

Jumper Package P4 (City Connection Configuration Jumpers)

See Table 1 (page 1)

Jumper Package P5 (Write Enable Jumper for CFIG 'Flash' EPROM U8)

Pins 1 and 2 to enable CFIG programming; pins 2 and 3 to enable system operation (disables CFIG programming).

Jumper Package P6 (Enable Jumper for CFIG File Download)

Pins 1 and 2 to enable CFIG file to be downloaded locally; pins 2 and 3 to enable CFIG file to be downloaded via modem.

Jumper Package P7 (Enable Jumper for RAM Battery Backup)

Pins 1 and 2 to enable RAM battery backup at panel startup; pins 2 and 3 to disable RAM battery backup at panel startup.

Jumpers JW1 and JW2 (Factory Installed)

JW1 in, JW2 out when System Executive EPROM U9 = 2 Meg
JW2 in, JW1 out when System Executive EPROM U9 = 4 Meg

Note: Software Version 7.1 systems require a 4 Meg Executive EPROM.

SW1 (N/O Software Reset Switch)

Resets system microprocessor when pressed (causes warm start).

POWER SUPPLY INTERFACE ASSEMBLIES

565-220 POWER SUPPLY INTERFACE ASSY (Figure 3)

Note: Compatible with 565-222 Standard Slave Board Assembly (page 4).

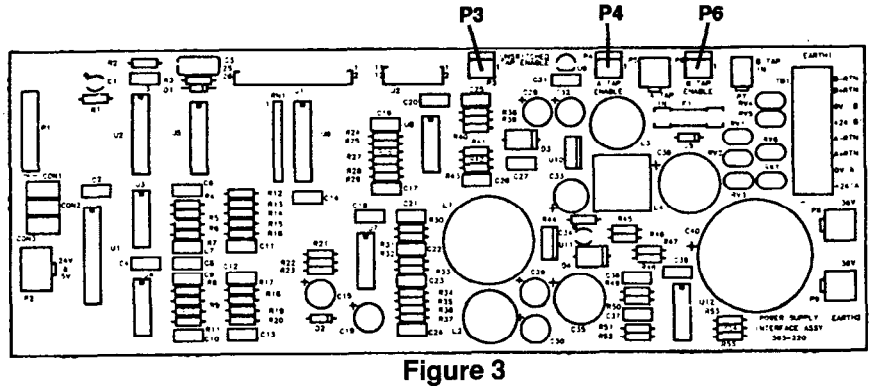


Figure 3

Power Supply Enable Jumpers P3, P4, and P6 (Part No. 166-250)

Note 1: All three jumpers are required for system operation.

Note 2: The jumpers are shipped separate from the 4020 panel, and must be installed by a Simplex Representative.

P3 = Enables +5V to system, and +24V for board use.
P4 = Enables +28.5V power from 'A' tap, power to 36V converter, and system 24V.
P6 = Enables +28.5V power from 'B' tap.

565-256 POWER SUPPLY INTERFACE ASSY (Figure 4)

Note: Compatible with 565-368 Standard Slave Board Assembly (page 6).

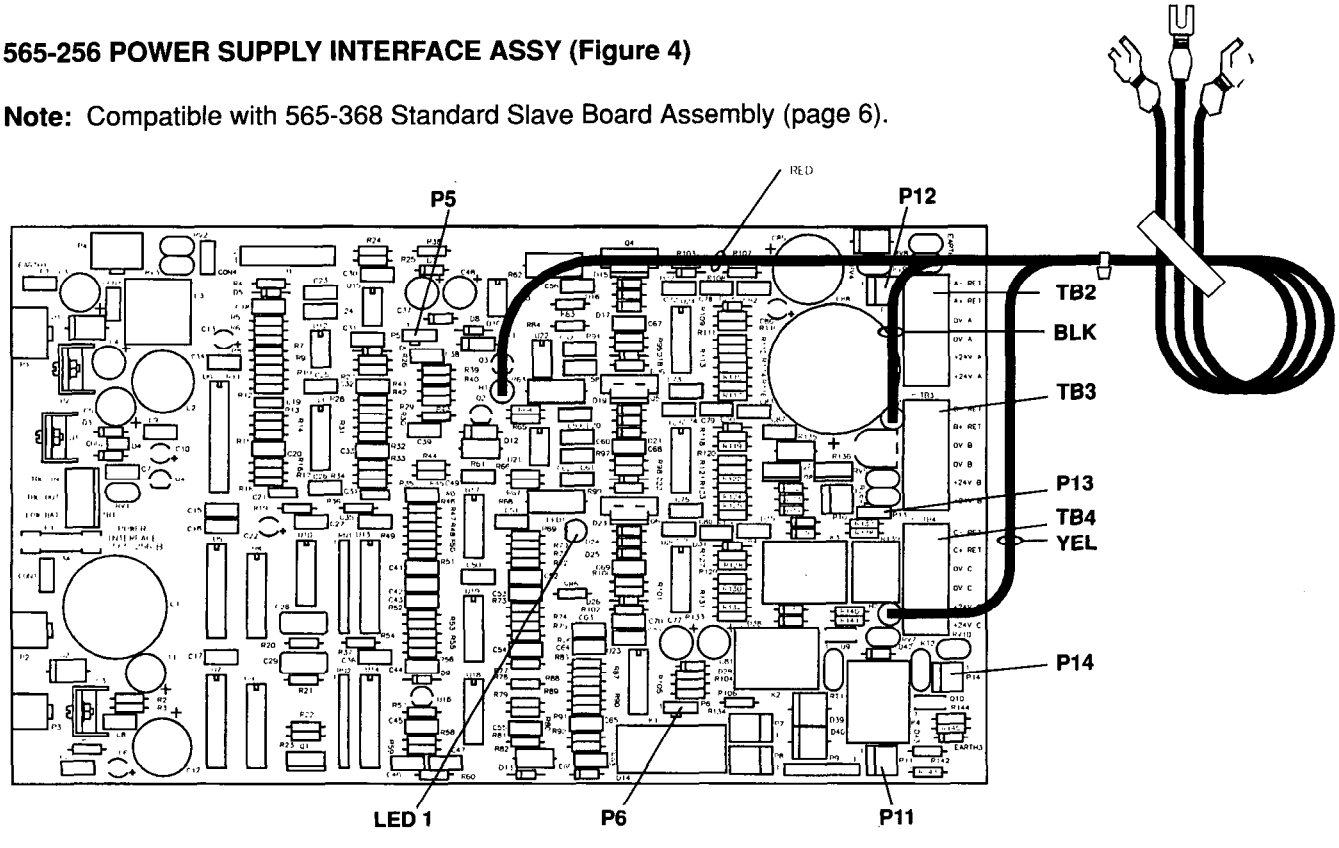


Figure 4

Jumper Plug P5 (Battery Disconnect)

Across pins 1 and 2 = System configured for battery backup (causes trouble indication upon battery disconnection).
Across pins 2 and 3 = System *NOT* configured for battery backup.

IMPORTANT: Never jumper pins 2 and 3 (to prevent a trouble indication) when batteries are disconnected or defective.

Jumper Plugs P6 and P13

Across pins 1 and 2 for normal operation; across pins 2 and 3 when adjusting NiCad battery charger.

- See page 10 for NiCad battery charger adjustments.

Power Supply Enable Jumpers P10, P11, P12, and P14 (Part No. 166-250)

Note 1: These jumpers are all required for system operation.

Note 2: The jumpers are shipped separate from the 4020 panel, and must be installed by a Simplex Representative.

Jumper Plug P10

Enables +28.5V power from 'B' tap to TB3.

Jumper Plug P11

Enables +5V power to system and +24V uninterruptable power for board use.

Jumper Plug P12

Enables +28.5V power from 'A' tap to TB2.

Jumper Plug P14

Enables +28.5V power from 'C' tap to TB4.

LED1

On when AC power is present at P9; otherwise off.

Note: An illuminated LED1 indicates that AC power is being applied to the power supply. *It DOES NOT indicate that the power supply presently provides system operating power.*

STANDARD SLAVE BOARD ASSEMBLIES

565-222 STANDARD SLAVE BOARD ASSY (Figure 7)

DIP Switch SW1 (Address and Baud Rate Select)

Switches must be set as shown in Figure 5.

DIP Switch SW2 (Power Supply Select)

Set switches in accordance with Table 2 (next page).

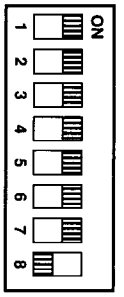


Figure 5

Note: Figure 6 depicts SW2 as set during manufacture, configuring the power supply for sealed lead acid batteries.

SWITCHES SW2-	1	2	3	4
No Power Supply	ON	ON	OFF	OFF
Lead Acid Battery	ON	ON	ON	OFF
Not Applicable	ON	ON	OFF	ON
No Battery	ON	ON	ON	ON

Table 2

SW2

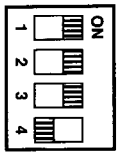


Figure 6

Note: 565-222 Standard Slave Boards cannot charge NiCad batteries.

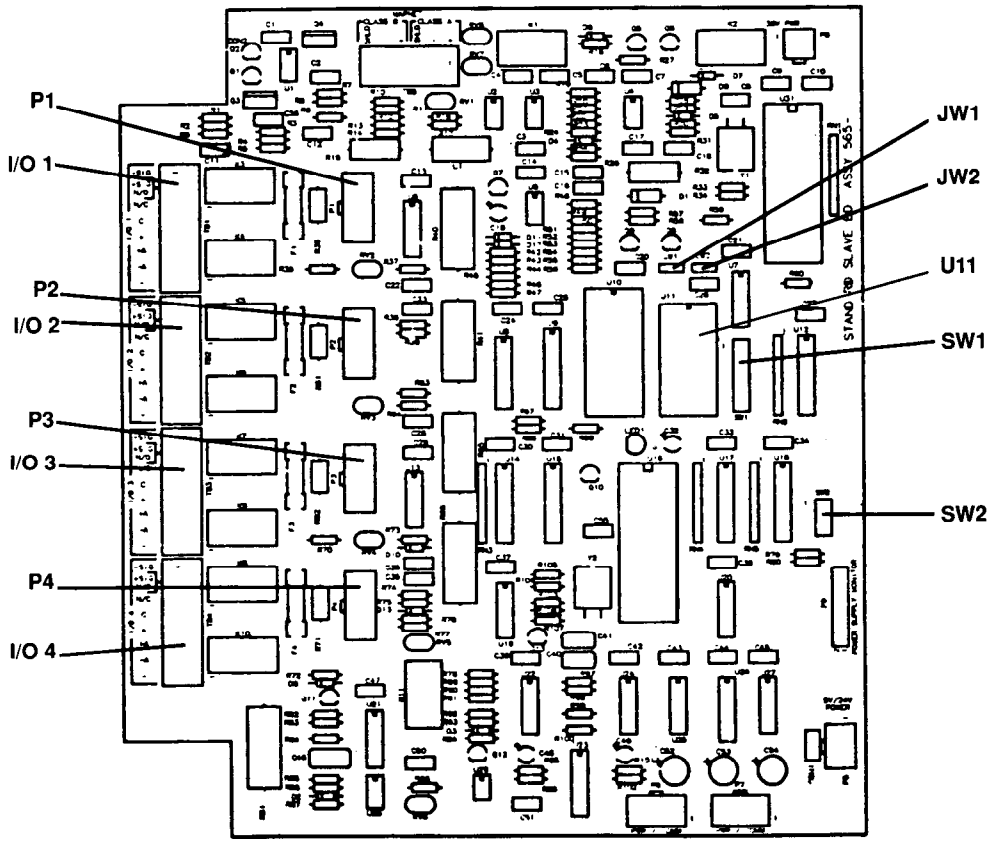


Figure 7

Jumpers JW1 and JW2 (Memory Configuration Jumpers [Factory Installed])

JW1 in, JW2 out when Memory EPROM U11 = 32 x 8 (256) K; JW1 out, JW2 in when Memory EPROM U11 = 64 x 8 (512) K

Configuration Jumpers for Input/Output (I/O) Terminal Blocks

Note: Configuration jumper packages are stocked as in-branch parts, and are to be installed only by Simplex Representatives.

I/O terminal/configuration plug relationships are:

I/O 1 = P1 I/O 2 = P2 I/O 3 = P3 I/O 4 = P4

To configure an I/O terminal block for:

Monitor zone operation, use a red-wired jumper package (Part No. 733-712)
Signal zone operation, use a blue-wired jumper package (Part No. 733-713)
Security zone operation, use a white-wired jumper package (Part No. 733-806)
AUX relay operation, leave the block's configuration plug empty.

Note: I/O 5 through I/O 8 are unavailable.

SW1

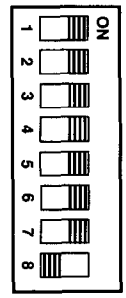


Figure 8

565-368 STANDARD SLAVE BOARD ASSY (Figure 10)

DIP Switch SW1 (Address and Baud Rate Select)

Switches must be set as shown in Figure 8.

DIP Switch SW2 (Power Supply Select)

Set switches in accordance with Table 3 below.

Note: Figure 9 depicts SW2 as set during manufacture, (configuring the power supply for sealed lead acid batteries).

SWITCHES SW2-	1	2	3	4
No Power Supply	ON	ON	OFF	OFF
Lead Acid Battery	ON	ON	ON	OFF
NiCad Battery	ON	ON	OFF	ON
No Battery	ON	ON	ON	ON

Table 3

SW2

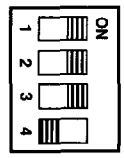


Figure 9

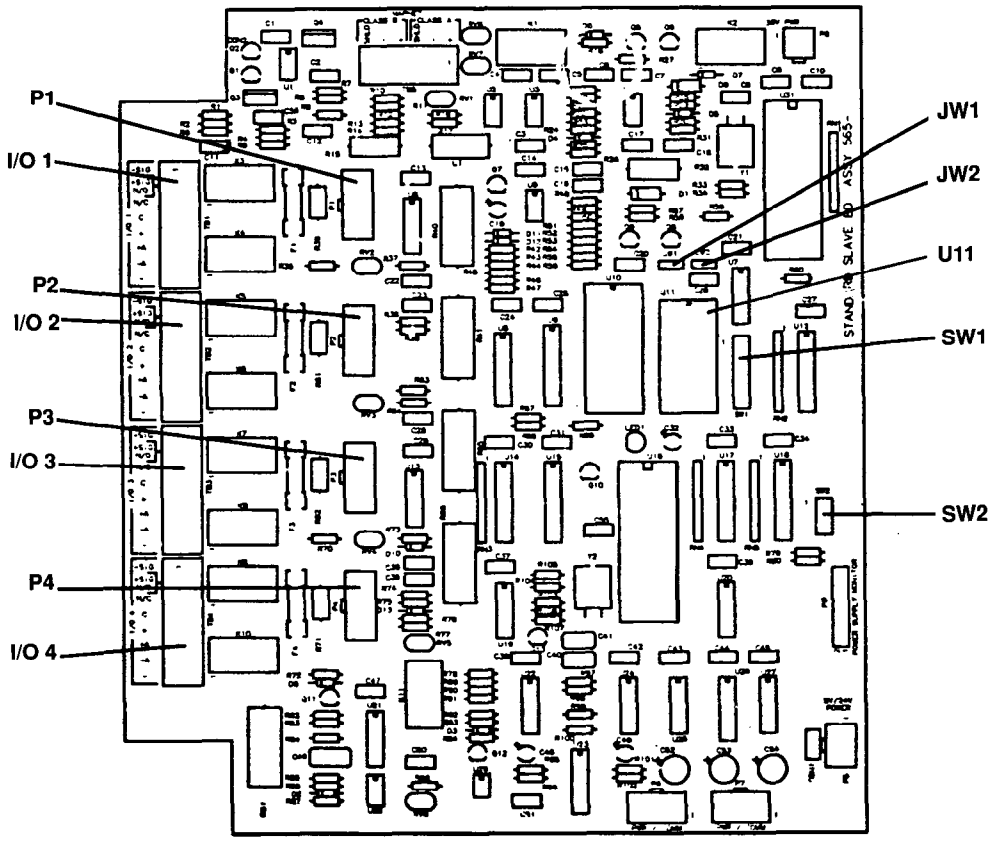


Figure 10

Jumpers JW1 and JW2 (Memory Configuration Jumpers [Factory Installed])

JW1 in, JW2 out when Memory EPROM U11 = 32 x 8 (256) K; JW1 out, JW2 in when Memory EPROM U11 = 64 x 8 (512) K

Configuration Jumpers for Input/Output (I/O) Terminal Blocks

Note: Configuration jumper packages are stocked as in-branch parts, and are to be installed only by Simplex Representatives.

I/O terminal/configuration plug relationships are:

I/O 1 = P1 I/O 2 = P2 I/O 3 = P3 I/O 4 = P4

To configure an I/O terminal block for:

- Monitor zone operation, use a red-wired jumper package (Part No. 733-712)
- Signal zone operation, use a blue-wired jumper package (Part No. 733-713)
- Security zone operation, use a white-wired jumper package (Part No. 733-806)
- AUX relay operation, leave the block's configuration slot empty.

Note 1: I/O 5 through I/O 8 are unavailable.

Note 2: Security zone operation requires System Software Version 7.01.

565-241 (OPTIONAL) MAPNET® TRANSCEIVER ASSY (Figure 11)

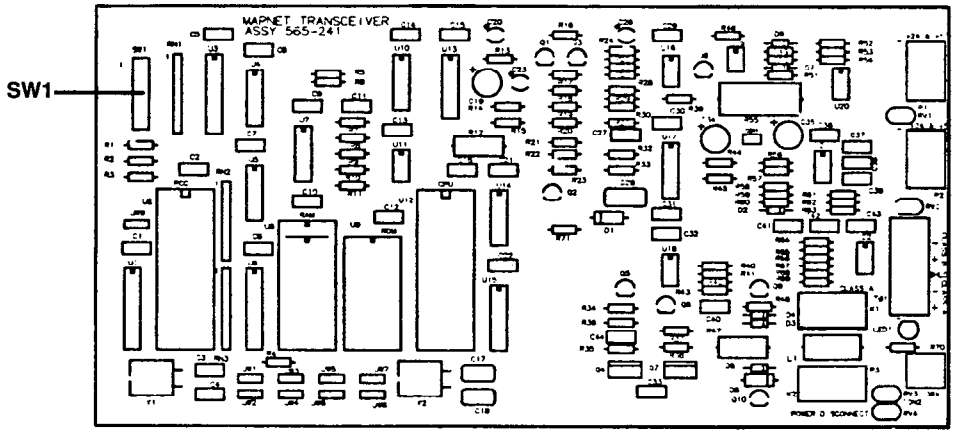


Figure 11

DIP Switch SW1 (Address and Baud Rate Select)

Switches must be set as shown in Figure 12.

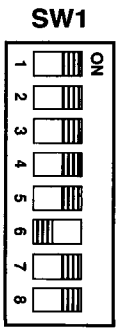


Figure 12

565-211 (OPTIONAL) 8-POINT I/O BOARD ASSY (Figure 15)

DIP Switch SW1 (Address and Baud Rate Select)

For left-hand I/O board, set switches as shown in Figure 13; For right-hand I/O board (if used), set switches as shown in Figure 14.

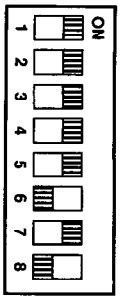


Figure 13

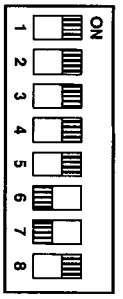


Figure 14

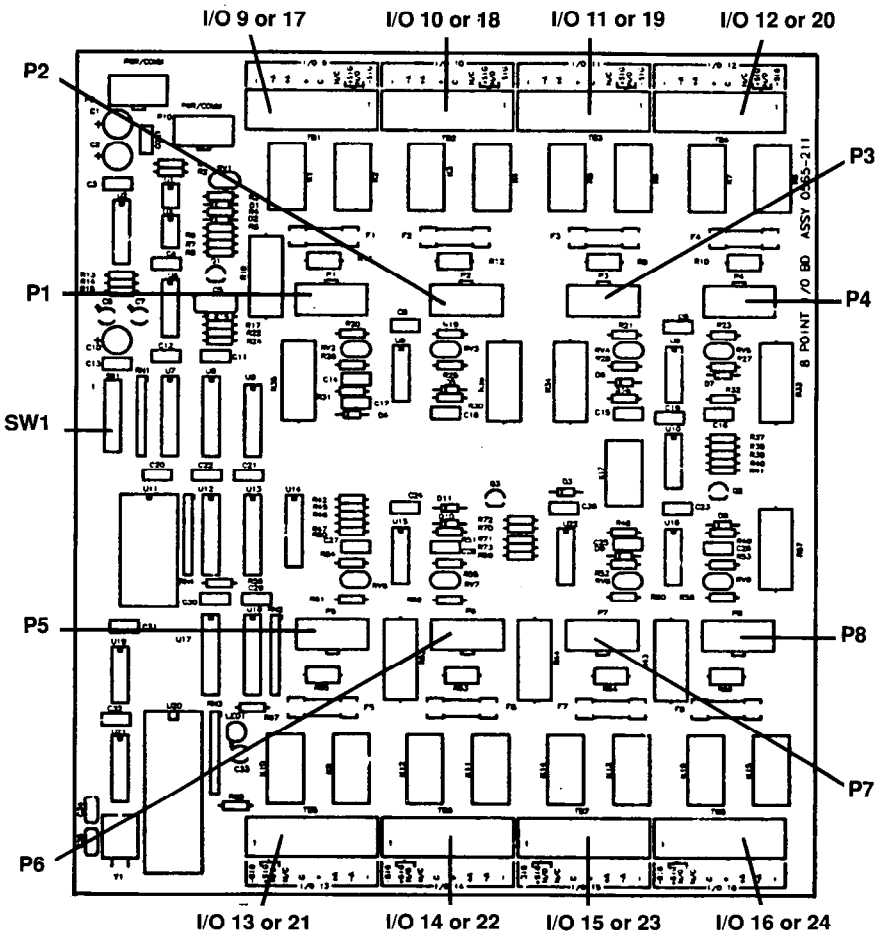


Figure 15

Configuration Jumpers for Input/Output Terminal Blocks

I/O terminal/configuration plug relationships are:

For left-hand board

I/O 9 = P1	I/O 13 = P5
I/O 10 = P2	I/O 14 = P6
I/O 11 = P3	I/O 15 = P7
I/O 12 = P4	I/O 16 = P8

For right-hand board

I/O 17 = P1	I/O 21 = P5
I/O 18 = P2	I/O 22 = P6
I/O 19 = P3	I/O 23 = P7
I/O 20 = P4	I/O 24 = P8

To configure an I/O terminal block for:

Monitor zone operation, use a red-wired jumper package (Part No. 733-712)

Signal zone operation, use a blue-wired jumper package (Part No. 733-713)

Security zone operation, use a white-wired jumper package (Part N. 733-806)

AUX relay operation, leave the block's configuration plug empty.

565-224 2120 / RS232 INTERFACE ASSY (Figure 16)

Note: If the panel includes 8-Point I/O boards, the 2120/RS-232 Interface board will be found either on the back side of the display panel (if the system lacks a 4020-0110 MAPNET II® module) or behind the left-hand 8-Point I/O board (if the system includes a 4020-0110 MAPNET II® module).

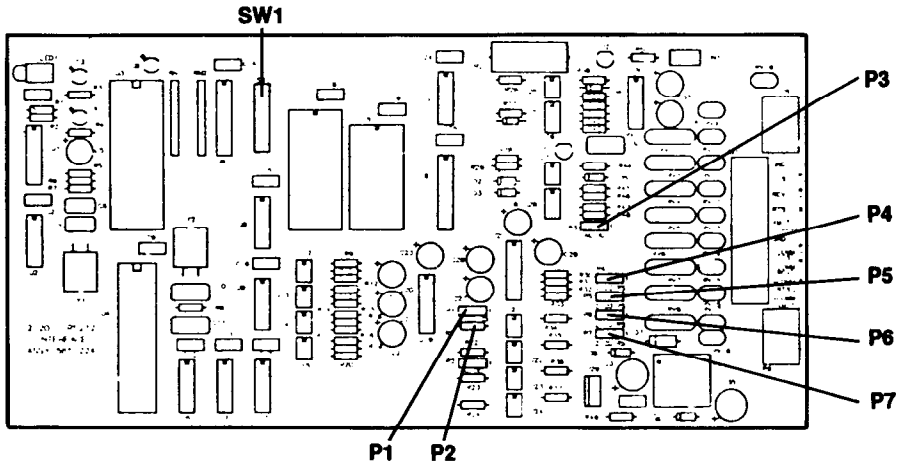


Figure 16

DIP Switch SW1 (Address and Baud Rate Select)

Switches must be set as shown in Figure 17.

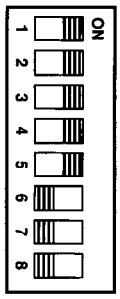


Figure 17

Jumpers

P2 and P3 (Figure 18)

- Depicts factory setting.

  AC pins = Port B configured for AC printer.

  DC pins = Port B configured for DC printer.



Figure 18

P1, P4, P5, P6 and P7 (Figure 19)

- Depicts factory setting.

  2120 pins = Port A configured for 2120 communications.

  RS pins = Port A configured for RS-232 communications.



Figure 19

576-288 4020/4002 4120 NETWORK MODULAR ASSY (Figure 20)

SW1 (N/O Reset Switch)

Resets microcontroller, DUART and steering logic.

DIP Switch SW2 (Address and Baud Rate Select)

Switches must be set as shown in Figure 21.

Jumpers

P2

Pins 1 and 2 = 9 Bit protocol (default)

Pins 2 and 3 = 8 Bit protocol

P5 and P6

Pins 1 and 2 = Always use

Note: To configure the board to operate with media cards that lack a DUART, jumper pins 2 and 3.

- Media cards that lack a DUART are presently unavailable.

P7

Pins 1 and 2 = Enables network transmission at 57.6 kbits/second (default).

Pins 2 and 3 = Enables network transmission at 9600 bits/second.

P8

Pins 1 and 2 = always use (identifies card as part of a 4020 system)

Note: Pins 2 and 3 identifies card as part of a 4002 system.

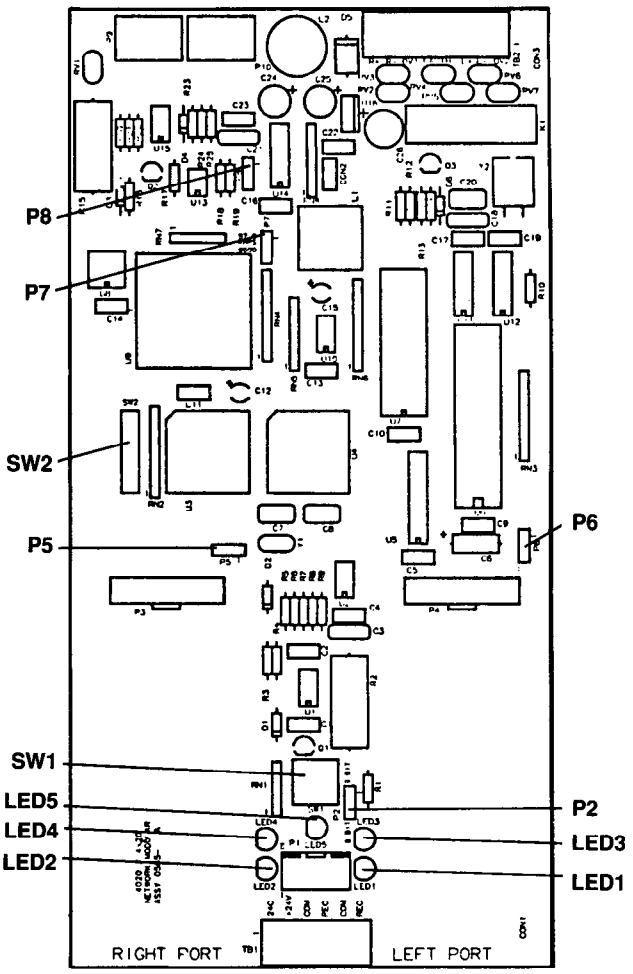


Figure 20

Indicators

LED1 (Left Port Transmit LED [green])

- Blinks while the network card's left port transmits a message.

LED2 (Right Port Transmit LED [green])

- Blinks while the network card's right port transmits a message.

LED3 (Left Port Receive LED [red])

- Blinks while the network card's left port receives a message.

LED4 (Right Port Receive LED [red])

- Blinks while the network card's right port receives a message.

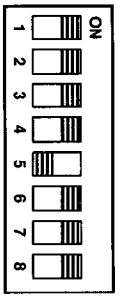


Figure 21

LED5 (Slave Card Indication LED [yellow])

- The network card turns LED5 on when:
  A. The master controller assembly tells the network card to turn LED5 on.
  B. The network card tried to transmit information but failed.
  C. The master controller assembly and the network card fail to communicate with one another.
  D. The network card is wrongly configured (incorrect jumper settings).

APPENDIX

How to Adjust the NiCad Battery Charger (Figure 22)

1. Disconnect the batteries.
2. On jumper packages P6 and P13, remove the jumpers from pins 1 and 2 and put them on pins 2 and 3.
3. With the plus lead of a DC voltmeter on pad H2 and the minus lead on a 0V C terminal, adjust potentiometer R136 to obtain 25.5 ± 0.1VDC.
4. Return the P6 and P13 jumpers to their original positions (jumpering pin 1 to pin 2).
5. Reconnect the batteries.

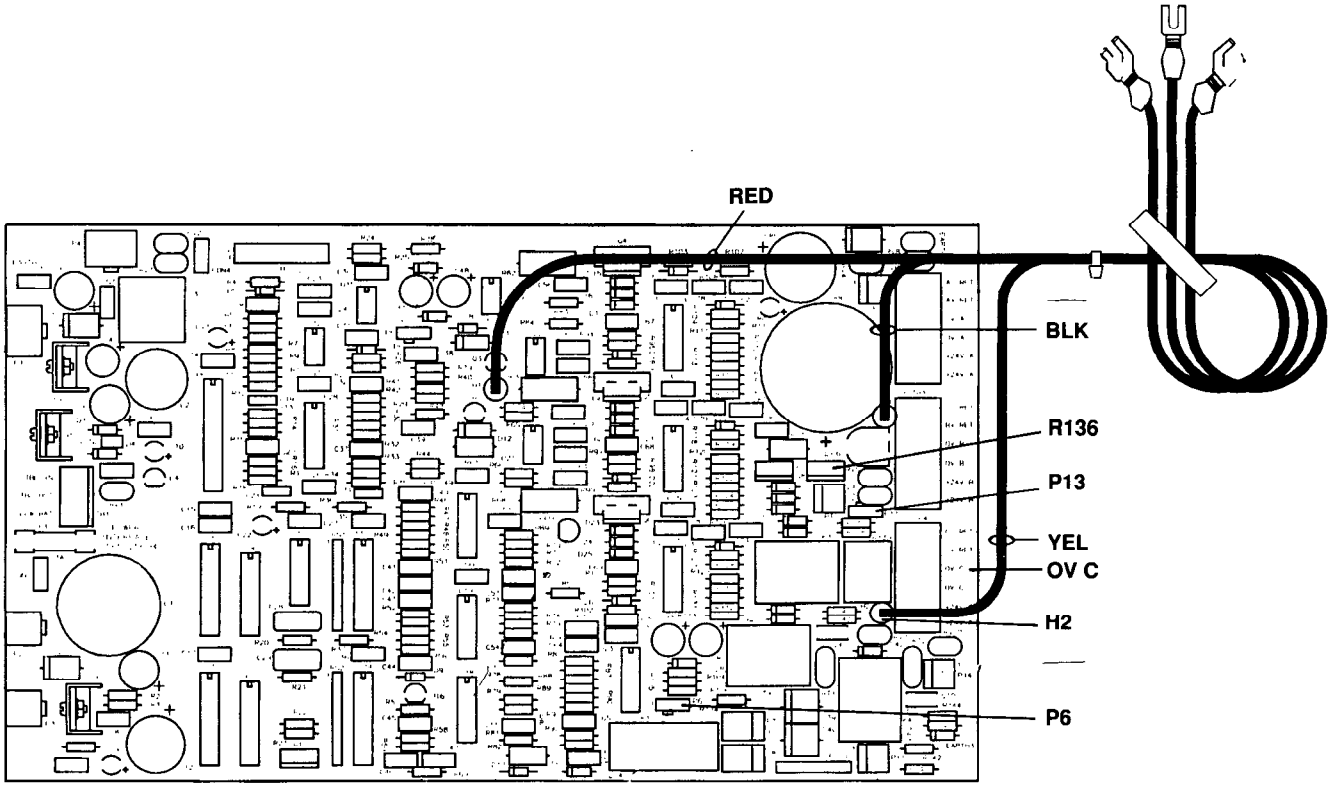


Figure 22

Simplex

FA4-21-405
Ed 5 94 Simplex Plaza • Gardner, Massachusetts 01441-0001 U.S.A. (574-065)