

4.1 PURPOSE

This section deals primarily with switch settings for correct system integration. Mounting procedures and dimensions are not discussed due to their more than adequate coverage in the previously listed Modicon manuals.

4.2 SWITCH SETTINGS

4.2.1 J200 Unit

No switch settings are required on the J200 but special attention must be paid to the F connector attachment of the unit. Since this is the main (and only) link for grounding and signal paths, ensure that main trunk cable F connector is properly constructed and tightly secured to the J200 unit.

4.2.2 P451 Unit

Refer to Figure 4-1. A set of DIP switches is located near the front of the P451 power supply just behind a moveable plate. Switches 1 through 8 are used to identify each remote I/O drop by channel number (see Table 4-1).

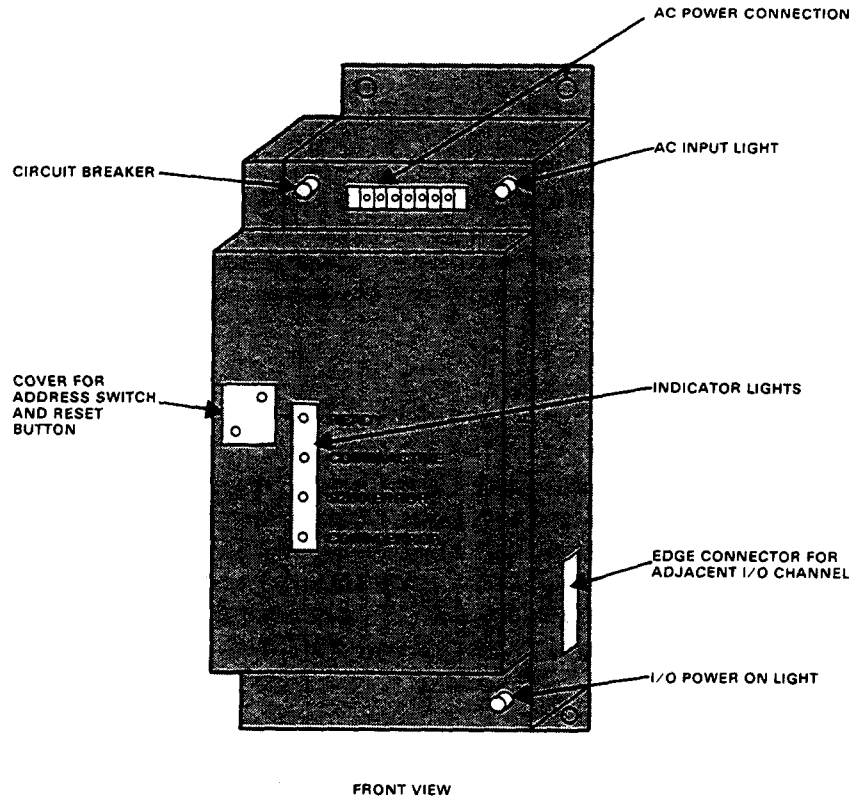


Figure 4-1. P451 Power Supply Physical Design

Table 4-1. DIP Switch Settings/Channel Numbers -
P451 and P421

P451 DIP Switch Settings								Channel Number Associated	
<u>S8</u>	<u>S7</u>	<u>S6</u>	<u>S5</u>	<u>S4</u>	<u>S3</u>	<u>S2</u>	<u>S1</u>	<u>P451</u>	<u>P421</u>
0	0	0	0	0	0	0	0	(INVALID ADDRESS)	
0	0	0	0	0	0	0	1	5	6
0	0	0	0	0	0	1	0	7	8
0	0	0	0	0	0	1	1	9	10
0	0	0	0	0	1	0	0	11	12
0	0	0	0	0	1	0	1	13	14
0	0	0	0	0	1	1	0	15	16
0	0	0	0	0	1	1	1	17	18
0	0	0	0	1	0	0	0	19	20
0	0	0	0	1	0	0	1	21	22
0	0	0	0	1	0	1	0	23	24
0	0	0	0	1	0	1	1	25	26
0	0	0	0	1	1	0	0	27	28
0	0	0	0	1	1	0	1	29	30
0	0	0	0	1	1	1	0	31	32
0	0	0	0	1	1	1	1	(INVALID ADDRESS)	

0 = OPEN (RIGHT)

1 = CLOSED (LEFT)

NOTES

1. Power must be recycled on the unit whenever DIP switch settings are changed.

2. P451 with Rev. B firmware operates in a unique mode. P451 with Rev. C firmware operates in a nonunique mode.

Unique = Polled on demand

Nonunique = Continuously polled

DIP switches S5 through S8 should be left in the open position. Setting an illegal address or closing switches S5 through S8 will cause the P451 to perform a diagnostic test, as signified by a continuous strobing of the COMM ERROR, S200 ERROR, COMM ACTIVE, and READY lights. To cause the P451 to perform diagnostic tests, close S8; the positions S1 through S7 are set to does not matter.

4.2.3 P453 Unit

The P453 supply should not be directly connected to the J200 unit without a minimum of 6 dB attenuation in-line between the two. This is done to prevent swamping of the P453's sensitive receiver by the high signal level of the J200 unit.

If a direct connection to the J200 is necessary, a simple way to achieve it is to use a terminated TAP (since TAP loss is -12 dB).

4.2.3.1 ASCII Board (P.N. AS-212P-020) RS-232-C Port Address Switch Settings for ASCII Board

Refer to Figure 4-2 for location of DIP switches and to Table 4-2 for the switch settings.

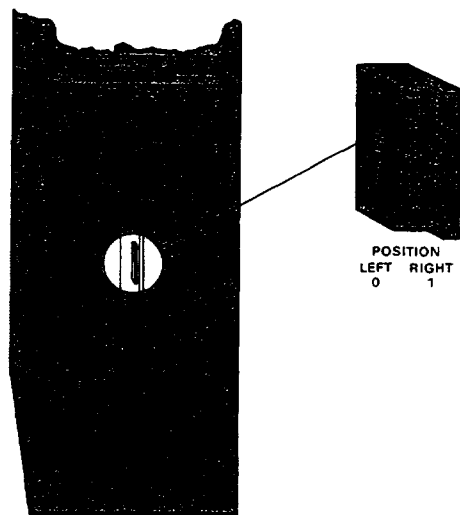


Figure 4-2. ASCII Board Address DIP Switches

NOTE

Note that in Figure 4-2, the ASCII board can occupy either or both of the right-hand positions in the P453.

Table 4-2. RS-232-C Port Address Switch
Settings for the ASCII Board

Switches 1 - 8 left to right (0 = open, 1 = closed)	Port 1 Address	Port 2 Address
00000000	1	2
00100000	3	4
00010000	5	6
00110000	7	8
00001000	9	10
00010100	11	12
00011000	13	14
00111000	15	16
00000100	17	18
00100100	19	20
00010100	21	22
00110100	23	24
00001100	25	26
00101100	27	28
00011100	29	30
00111100	31	32

Dip Switch 8 (S8) not used

NOTE

Power must be recycled on unit whenever DIP
switch settings are changed.

Nonunique	-	Continuously polled
Unique	-	Polled on demand

1. To cause P453 to perform diagnostic tests, close S7; the positions S1 through S6 are set to does not matter.
2. If two boards are in the unit (ASCII and ASCII or ASCII and I/O), and the above diagnostic tests are selected, switch S7 on both boards must be selected for diagnostics to function correctly.

4.2.3.2 ASCII Board (P.N. AS-212P-220) Switch Settings

Refer to Figure 4-3 for location of DIP switch rotary switch, and to Table 4-3 for switch settings.

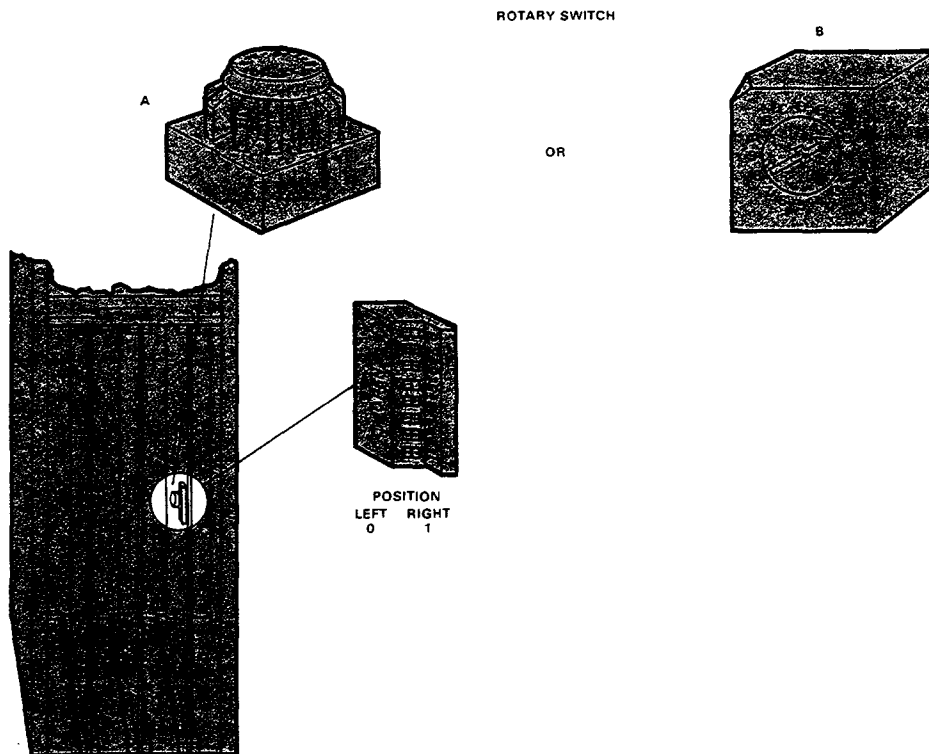


Figure 4-3. ASCII Board Address DIP and Rotary Switches

NOTE

With reference to Figure 4-3, the ASCII board can occupy either or both right-hand slots.

Table 4-3. Switch Settings for P453 ASCII Board

DIP Switches 1 and 2

<u>SW2</u>	<u>SW1</u>	<u>RS-232 Handshake</u>
0	0	Low Port and High Port X-ON/X-OFF
0	1	Low Port DTR, High Port X-ON/X-OFF
1	0	Low Port X-ON/X-OFF, High Port DTR
1	1	Low Port and High Port DTR

NOTE

Low port is forward; high port is to the rear.

DIP Switch 3Software Revision Select

0	Revision A Software (No Handshake)
1	Revision B Software (RS-232 Handshake)

DIP Switches 4, 5, and 6

Not Used

NOTE

Switch 3 is used for the software option. The remaining three switches cannot make up the sixteen combinations necessary for port addressing. Therefore, an auxiliary sixteen-position rotary switch is used (see Figure 4-3). The following table shows settings for this switch.

Table 4-3. Switch Settings for P453 ASCII Board (cont)

Rotary Switch

<u>Rotary Switch Device Address</u>	<u>Port</u>	
	<u>Low</u>	<u>High</u>
0	1	2
1	3	4
2	5	6
3	7	8
4	9	10
5	11	12
6	13	14
7	15	16
8	17	18
9	19	20
A	21	22
B	23	24
C	25	26
D	27	28
E	29	30
F	31	32

NOTES

1. Odd Numbers and the letters B, D, and F are represented by dots on Rotary Switch "A".
2. A small 1/8" flat bladed screwdriver is required to change positions on Rotary Switch "B".

DIP Switch 7Mode

- 0 - On-line
- 1 - Local Diagnostic

NOTE

Power must be recycled on the unit whenever any switch settings are changed.

4.2.3.3 I/O Board (P.N. AS-212P-010) Switch Settings for
Nonredundant System I/O Board

Refer to Figure 4-4 for location of DIP switches and
to Table 4-4 for the switch settings.

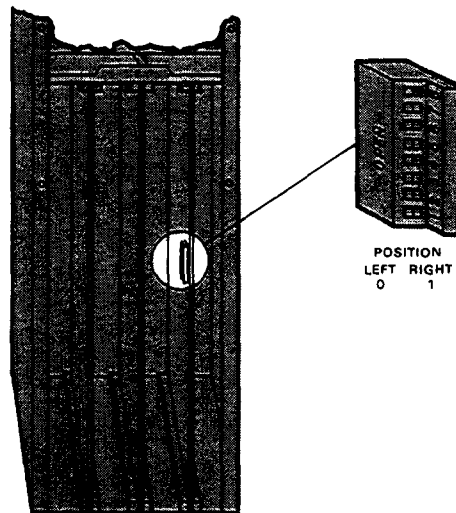


Figure 4-4. I/O Board Address DIP Switches,
Nonredundant System

NOTE

Look at Figure 4-4, and notice that the I/O
board only occupies the position shown.

Table 4-4. Switch Settings for P453 I/O Board,
Nonredundant SystemP453-511, 611, 531, 631

(0 = Open)

DIP Switches 1 and 2

<u>SW2</u>	<u>SW1</u>	
0	0	Low and high channels nonunique
0	1	Low channel unique, high channel nonunique
1	0	Low channel nonunique, high channel unique
1	1	Low and high channels unique

NOTE

Low channel is adjacent to the unit, high channel is out the bottom of the unit.

DIP Switches 3, 4, 5, and 6

<u>SW6</u>	<u>SW5</u>	<u>SW4</u>	<u>SW3</u>	<u>CHANNEL</u>	
				<u>Low</u>	<u>High</u>
0	0	0	1	5	6
0	0	1	0	7	8
0	0	1	1	9	10
0	1	0	0	11	12
0	1	0	1	13	14
0	1	1	0	15	16
0	1	1	1	17	18
1	0	0	0	19	20
1	0	0	1	21	22
1	0	1	0	23	24
1	0	1	1	25	26
1	1	0	0	27	28
1	1	0	1	29	30
1	1	1	0	31	32

DIP Switch 7

0 - Normal Mode
1 - Diagnostic Mode

Table 4-4. Switch Settings for P453 I/O Board,
Nonredundant System (cont)

DIP Switch 8

Not used

NOTES

1. Power must be recycled on unit whenever DIP switch settings are changed.
 2. Nonunique - Continuously polled
Unique - Polled on demand
-

4.2.3.4 I/O Board (P.N. AS-212P-110) Switch Settings for Redundancy System I/O Board
Refer to Figure 4-5 for location of DIP Switches (4 and 7 position) and to Table 4-5 for switch settings.

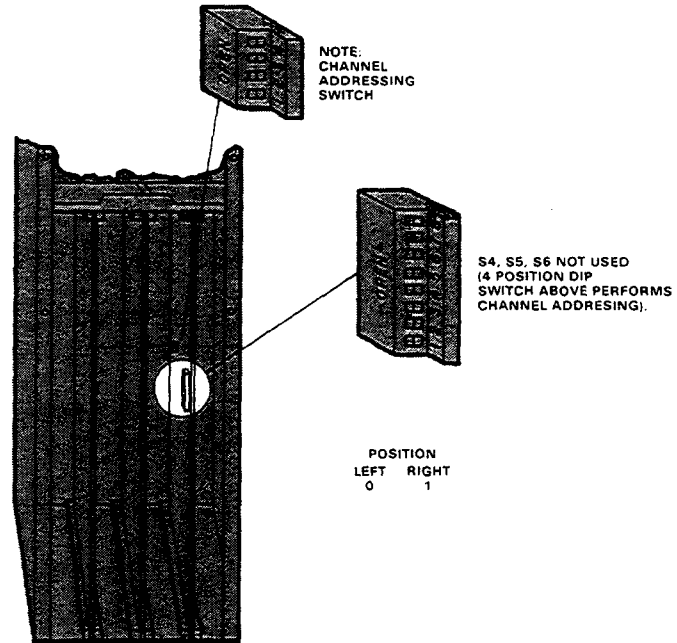


Figure 4-5. I/O Board Address DIP Switches (Regular and Auxiliary), Redundant System

NOTE

With reference to Figure 4-5, the I/O board only occupies the position shown.

Table 4-5. Switch Settings for P453 I/O Board with Auxiliary DIP Switch, Redundant System

P453-512, 612, 532, 632

DIP Switches 1 and 2

<u>SW2</u>	<u>SW1</u>	
0	0	Low and high channels nonunique
0	1	Low channel unique, high channel nonunique
1	0	Low channel nonunique, high channel unique
1	1	Low and high channels unique

NOTE

Low channel is adjacent to the unit, high channel is out the bottom of the unit.

DIP Switch 3

Redundancy Options

0	Series 200 Modules drop out after 200 ms. if 584 does not communicate.
1	Series 200 Modules drop out after 1.2 seconds if 584 does not communicate.

Table 4-5. Switch Settings for P453 I/O Board with Auxiliary DIP Switch, Redundant System (cont)

DIP Switches 4, 5, and 6

Not Used

NOTE

Switch 3 is used for the redundancy option. The remaining three switches cannot make up the sixteen combinations necessary for channel addressing. Therefore, an auxiliary four-position DIP switch is used (shown in Figure 4-5). The following table shows settings for this switch.

<u>SW4</u>	<u>SW3</u>	<u>SW2</u>	<u>SW1</u>	<u>Channel</u>	
				<u>Low</u>	<u>High</u>
0	0	0	0	1	2
0	0	0	1	3	4
0	0	1	0	5	6
0	0	1	1	7	8
0	1	0	0	9	10
0	1	0	1	11	12
0	1	1	0	13	14
0	1	1	1	15	16
1	0	0	0	17	18
1	0	0	1	19	20
1	0	1	0	21	22
1	0	1	1	23	24
1	1	0	0	25	26
1	1	0	1	27	28
1	1	1	0	29	30
1	1	1	1	31	32

DIP Switch 7

0 - Normal Mode
1 - Diagnostic Mode

Table 4-5. Switch Settings for P453 I/O Board with Auxiliary DIP Switch, Redundant System (cont)

NOTE

Power must be recycled on unit whenever DIP switch settings are changed.

Nonunique	-	Continuously polled
Unique	-	Polled on demand from the 584

4.2.3.5 I/O Board (P.N. AS-212P-210) Switch Settings for Redundant System I/O Board
 Refer to Figure 4-6 for location of DIP Switch/Rotary Switch and to Table 4-6 for switch settings.

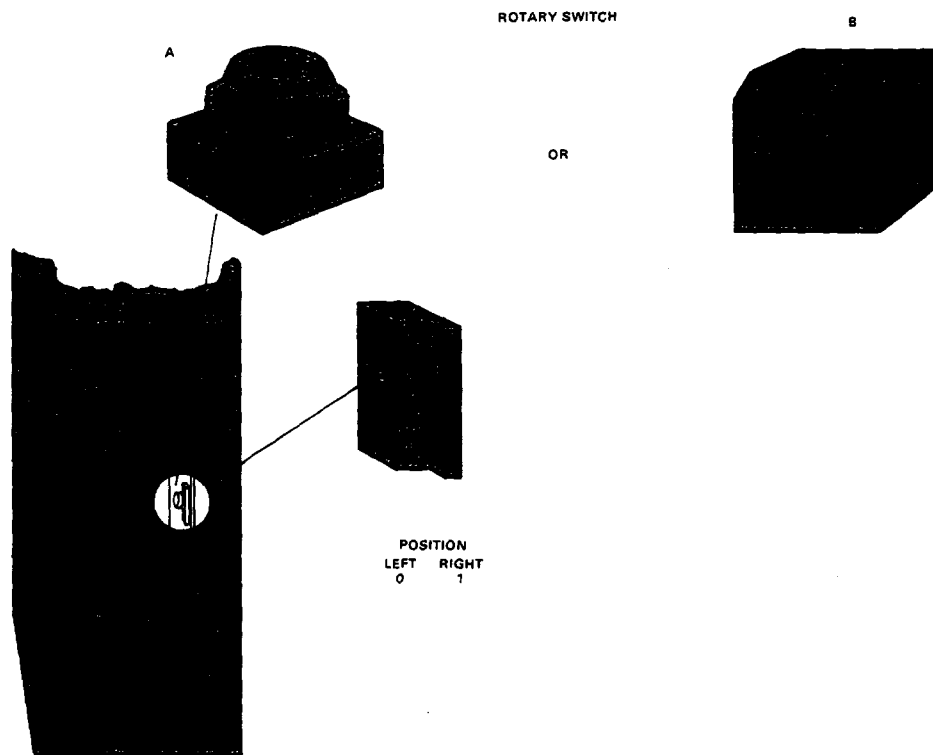


Figure 4-6. I/O Board Address Switches (DIP and Rotary), Redundant System

NOTE

With reference to Figure 4-6, the I/O Board only occupies the position shown.

Table 4-6. Switch Settings for P453 I/O Board
with Rotary Switch, Redundant System

P453-512, 612, 532, 632

DIP Switches 1 and 2

<u>SW2</u>	<u>SW1</u>	
0	0	Low and high channels nonunique
0	1	Low channel unique, high channel nonunique
1	0	Low channel nonunique, high channel unique
1	1	Low and high channels unique

NOTE

Low channel is adjacent to the unit,
high channel is out the bottom of the
unit.

DIP Switch 3

Redundancy Options

0	Series 200 Modules drop out after 200 ms. if 584 does not communicate.
1	Series 200 Modules drop out after 1.2 seconds if 584 does not communicate.

DIP Switches 4, 5, and 6

Not Used

Table 4-6. Switch Settings for P453 I/O Board
with Rotary Switch, Redundant System (cont)

NOTE

Switch 3 is used for the redundancy option. The remaining three switches cannot make up the sixteen combinations necessary for channel addressing. Therefore, an auxiliary sixteen-position rotary switch is used (shown in Figure 4-6). The following table shows settings for this switch.

Rotary Switch

<u>Rotary Switch Device Address</u>	<u>Channel</u>	
	<u>Low</u>	<u>High</u>
0	1	2
1	3	4
2	5	6
3	7	8
4	9	10
5	11	12
6	13	14
7	15	16
8	17	18
9	19	20
A	21	22
B	23	24
C	25	26
D	27	28
E	29	30
F	31	32

NOTES

1. Odd numbers and the letters B, D, and F are represented by dots on rotary switch "A."
2. A small, 1/8", flat bladed screwdriver is required to change positions on rotary switch "B."

Table 4-6. Switch Settings for P453 I/O Board
with Rotary Switch, Redundant System (cont)

DIP Switch 7

0 - Normal Mode
1 - Diagnostic Mode

NOTES

1. Power must be recycled on unit whenever any switch settings are changed.
 2. Nonunique - Continuously polled
Unique - Polled on demand from the 584
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