DB9 SOCKET PIN LAYOUT
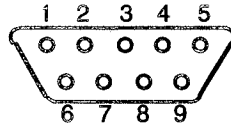
1. DCD	6. DSR
2. RxD	7. RTS
3. TxD	8. CTS
4. DTR	9. RI
5. GND	

```
  1  2  3  4  5
  o  o  o  o  o
   o  o  o  o
   6  7  8  9
```

Peripheral (printer)

DS7412 9-pin connector	DCE 9-pin	DTE 9-pin	DCE 25-pin	DTE 25-pin
1 DCD(not used)	1 DCD	1 DCD(6)	8 DCD	8 DCD (6)
2 RxD	**2 RxD**	**3 TxD**	**3 RxD**	**2 TxD**
3 TxD	**3 TxD**	**2 RxD**	**2 TxD**	**3 RxD**
4 DTR	4 DTR	6 DSR	20 DTR	6 DSR
5 GND	**5 GND**	**5 GND**	**7 GND**	**7 GND**
6 DSR	6 DSR	4 DTR	6 DSR	20 DTR
7 RTS	7 RTS	8 CTS	4 RTS	5 CTS
8 CTS	8 CTS	7 RTS	5 CTS	4 RTS
9 RI (not used)	9 RI	9 RI	22 RI	22 RI

Note: The DS7412 serial port is wired as a DTE device; therefore, if the printer is a DCE device (most common) a straight 9-pin to 9-pin or straight 9-pin to 25-pin cable may be used. If the printer is wired as a DTE device, a null modem 9-pin to 9-pin or null modem 9-pin to 25-pin cable is required. Consult the operating guide provided with your printer for wiring requirements.

If you are using a non-standard printer configuration, you must make a custom cable using the diagram and table above.

Connections shown in **bold** are the minimum required connections when using XON/XOFF software flow control. If using the configuration, these are the only connections needed.

Connections in (parentheses) are optional.

Installation Instructions
for
DS7412 RS232 Serial Interface Module

Description: The DS7412 is an RS232 Serial Interface designed to operate with the DS7400Xi Control/Communicators. It provides a means of connecting to a serial printer to print history events as they occur or at a later time using a keypad command.

Control Panel Requirements: DS7400Xi Control/Communicator with Control ROM version 2.02 or higher.

Current Draw: 25mA nominal, 35 mA (with diagnostic LED's enabled)

Default Configuration: 8 data bits, 1 stop bit, No parity, 300Baud

INSTALLATION

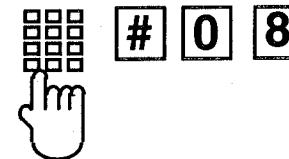These instructions assume that the Control Panel is installed and is working properly.

( ) Disconnect power to the control panel by unplugging the transformer and removing the red battery lead.

Note: Before handling the DS7412 circuit board, touch the control panel cabinet or another source of ground to discharge any static electricity that may be in your body. Failing to do so could damage the circuit board.

( ) Mount the DS7412 in the Control Panel Enclosure using the supplied clips and screws.

( ) Install the program plugs and connect wiring as shown on page two.

( ) Re-apply Power and set the panel time and date using a master PIN.
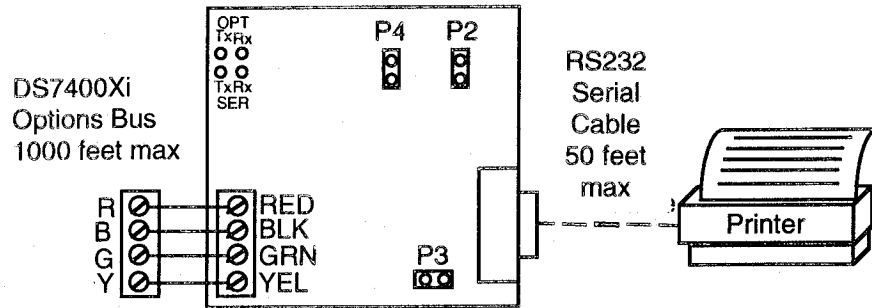
KEYPAD OPERATION

To print the history buffer starting from the most recent event, enter a "Master PIN" followed by # 0 and the press the 8 key.

MASTER PIN

To stop printing, repeat the above sequence.

DS7400Xi
Options Bus
1000 feet max

OPT
TxRx
○ ○
○ ○
TxRx
SER

P4   P2

RS232
Serial
Cable
50 feet
max

Printer

R — RED
B — BLK
G — GRN
Y — YEL

P3

SET THE CONFIGURATION JUMPERS

P2 - Diagnostic LED's

Enable diagnostic LED's

Disable Diagnostic LED's

The diagnostic LED's can be used as a troubleshooting aid. To enable the LED's place P2 on both pins. The DS7412 draws more current in this mode so P2 should not be in place under normal conditions.

OPT   OPT Tx = Option bus transmit data to control panel
TxRx
○ ○   OPT Rx = Option bus receive data from control panel
○ ○   SER Rx = RS232 receive data from printer
TxRx
SER   SER Tx = RS232 transmit data to printer

P3 - RS232 Cable Ground

Connect Cable Ground to Cabinet Ground

Disconnect Cable Ground

Some printers may cause a ground fault condition on the control panel. If this occurs, remove P3, this will disconnect the printer cable ground from cabinet ground.

Some desktop computers can cause a ground fault even if P3 is removed. If connecting the DS7412 to a desktop PC and a ground fault occurs, use the connection only temporarily and disconnect for normal control operation.

P4 - Option Bus Address

Options Bus Address 13

Options Bus Address 14

Add this jumper if there is another device at options bus address 14.

DS7412 RS232 Interface Control: Program Address (0206)

Use this chart to select which history events are sent to the printer as they occur. Selecting "No Events" will cause the history to be printed only on command.

Data Digit 1   2

Enter this value in data digit one	
DS7412 Disabled*	0
DS7412 Enabled	1

	Enter this value in data digit two							
	0	1	2	3	4	5	6	7
No Events*	●							
Alarms, Troubles, and Restorals		●		●		●		●
Opens and Closes			●	●			●	●
All Other Events					●	●	●	●

DS7412 RS232 Interface Configuration: Program Address (0207)

Use these charts to configure the DS7412 for your printer. Most printers will operate using the default values for the DS7412. Some printers may operate more efficiently using optional program values.

Consult the operating guide provided with your printer to be sure that its configuration matches the one programmed here.

Data Digit 1   2

Enter this value in data digit one	
300 Baud*	0
1200 Baud	1
2400 Baud	2
4800 Baud	3
9600 Baud	4
14400 Baud	5

	Enter this value in data digit two							
	0	1	2	3	4	5	6	7
No Parity*	●	●	●	●				
ODD Parity					●	●		
EVEN Parity							●	●
Software Flow Control*	●		●		●		●	
Hardware Flow Control		●		●		●		●
1 Stop Bit*	●	●			●	●		●
2 Stop Bits			●	●			●	
8 data bits*	●	●	●	●	●	●	●	●

*=Default value