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# Section 1

## Introduction

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The Model 4824 Serial/Parallel Module provides one RS232 serial port and one parallel printer port. Eight 4824s could be used per system. You can use the 4824 for a variety of purposes, including programming a panel at the customer site using a portable computer (laptop). See Section 2.6.

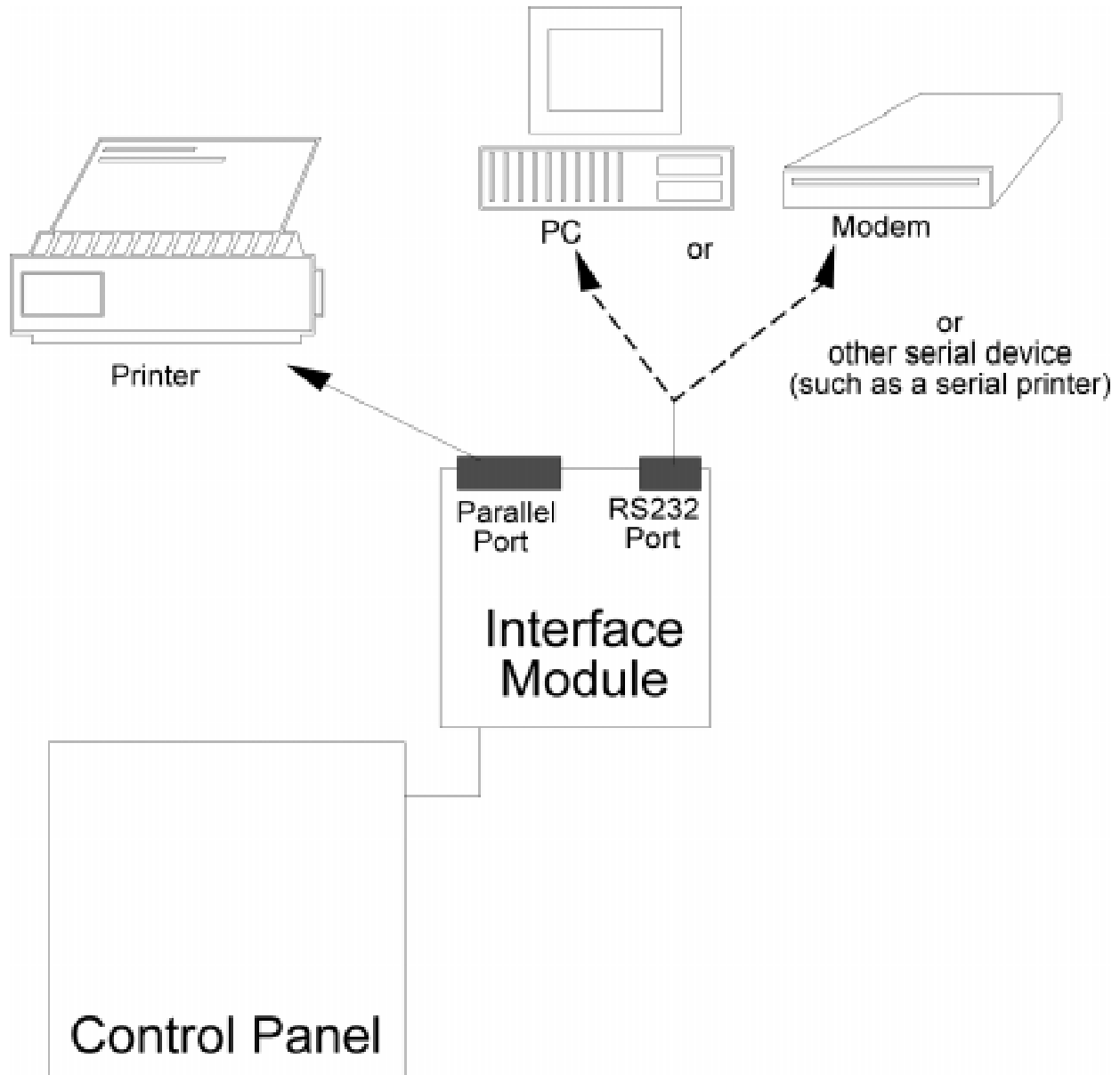


Figure 1-1 4824 Overview



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## Section 2

# Installation

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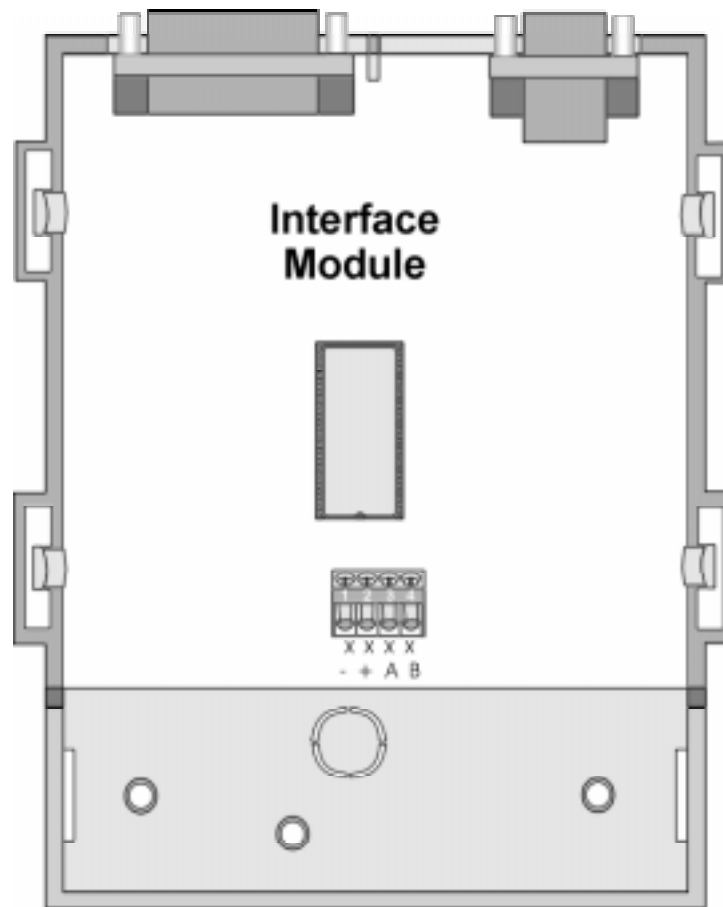


Figure 2-1 Model 4824 Board Layout

## 2.1 Installation Steps

1. Connect 4824 to 4821/4820. (See Section 2.2.)
2. Set up of equipment that will be attached to the 4824 (refer to device manual for complete information).
3. Add 4824 to device list and configure ports (through Select Devices menu of 5580 Down-loading Software). (See Section 2.5.)

## 2.2 Connection to the 4821/4820

The 4824 connects to the 4821/4820 via the SBUS.

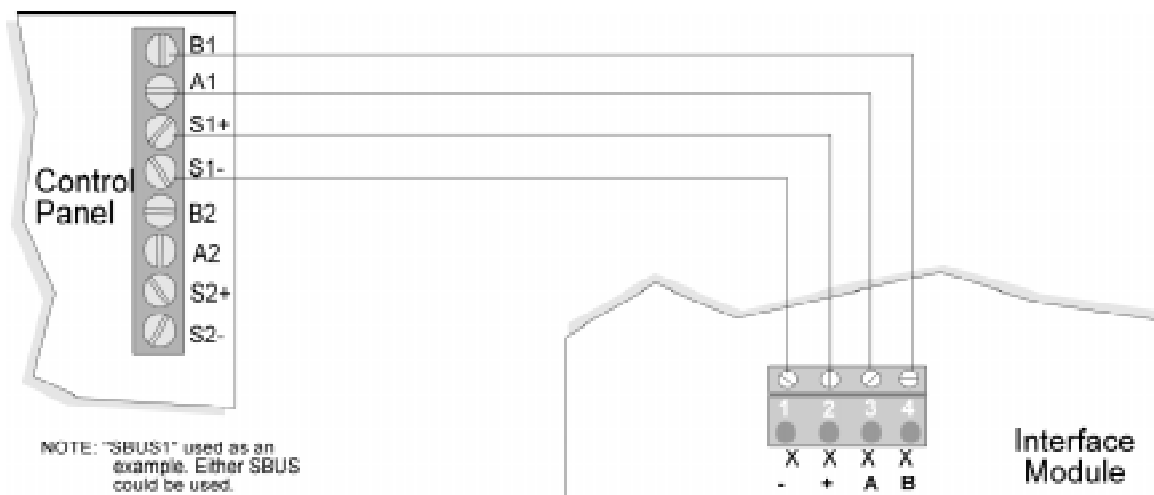


Figure 2-2 4824 Connection to the 4821/4820

Table 2-1: 4824 Terminal Description

Name	Terminal Description	Electrical Ratings
1 -	Expansion Bus (-)	0 VDC
2 +	Expansion Bus (+)	10.0 - 14.0 VDC
3 A	Expansion Bus (data)	0 - 5 VDC
4 B	Expansion Bus (data)	0 - 5 VDC

## 2.3 RS232 Serial Port

The RS232 port is for connecting a PC, modem or other serial device to the 4821/4820. Pin descriptions for the cable are shown in Table 2-2. Maximum distance from the 4824 to the printer is 30 feet. A null modem cable is required to connect the 4824 to a computer.

### 2.3.1 Signal Description:

**Table 2-2: RS232 Port (PC or Modem)**

Pin #	Signal	Direction	Description
1	CD	IN	Carrier detect
2	RXD	IN	Receive data
3	TXD	OUT	Transmit data
4	DTR	OUT	Data terminal ready
5	Ground	N/A	Logic ground connection
6	DSR	IN	Data set ready
7	RTS	OUT	Request to send
8	CTS	IN	Clear to send
9	RI	IN	Ring input

## 2.4 Parallel Port

The 4824 parallel port can be used for connecting a printer to the system. Pin descriptions for the cable are shown in Table 2-3. Maximum distance from the 4824 to the printer is 10 feet.

### 2.4.1 Signal Description

**Table 2-3: Parallel Port (Printer)**

Pin #	Signal	Direction	Description
1	/Strobe	OUT	A low strobe pulse to read data in. The pulse width is greater than 0.5 microseconds.
2	Data 1	OUT	These signals represent information of the first to eighth bits of parallel data. Each signal is at high level when the data is logical 1 and low when it is logical 0.
3	Data 2	OUT	
4	Data 3	OUT	
5	Data 4	OUT	
6	Data 5	OUT	
7	Data 6	OUT	
8	Data 7	OUT	
9	Data 8	OUT	
10	/AckNlg	IN	A low pulse from the printer signals the control that the printer is ready for additional data.
11	Busy	IN	A high level indicates that the printer is busy.
12	Paper Empty	IN	A high level indicates that the printer is out of paper.
13	not used	-	-
14	not used	-	-
15	not used	-	-
16	Logic Ground	-	Logic ground for printer.
17	not used	-	-
18 to 25	Logic Ground	-	Ground return for data lines.



## 2.6 Sending Data To and From the Panel

You can use the 4824 to send data to the panel. The procedure is shown below.

1. Download the data for the account that you want to send to the panel (via the 5580 software). The download request must be residing in the queue at the time you perform the next steps.
2. At a 4821/4820 touchpad, press [Limited Programming or Unlimited Access Code]
3. At the menu, select:
  - for 4824 Modem. Use this method if you want to connect to a Hayes® compatible modem for downloading. A modem is connected to both the 4824 and the modem.
  - for 4824 Direct: This option is for directly connecting the 4824 to the computer using a null modem cable (both the computer and the 4821/4820 are on-site).
4. You will be prompted to select the 4824. (Press if there is only one 4824 in the system.)
5. If the phone number that displays is not correct, enter the correct digits and press . (If the phone number is correct, press to bypass this step.) If you have selected the 4824 Direct option, this step will not appear.
6. If the Account number that displays is not correct, enter the correct digits and press . (If the account number is correct, press to bypass this step.) (You can press at any time to correct a mistake.)
7. The system will attempt to communicate. “Transfer Successful” displays on the LCD if communication was successful. If communication was not successful, the message “Transfer Unsuccessful” will display on the LCD.



## 2.6.1 Connecting the 4824 to a Modem Using a Second Phone Line

When connecting a modem to the 4824 a second phone should be used to assure uninterrupted communication from the 4821/4820 to central station during an alarm condition. (See Figure 2-3.)

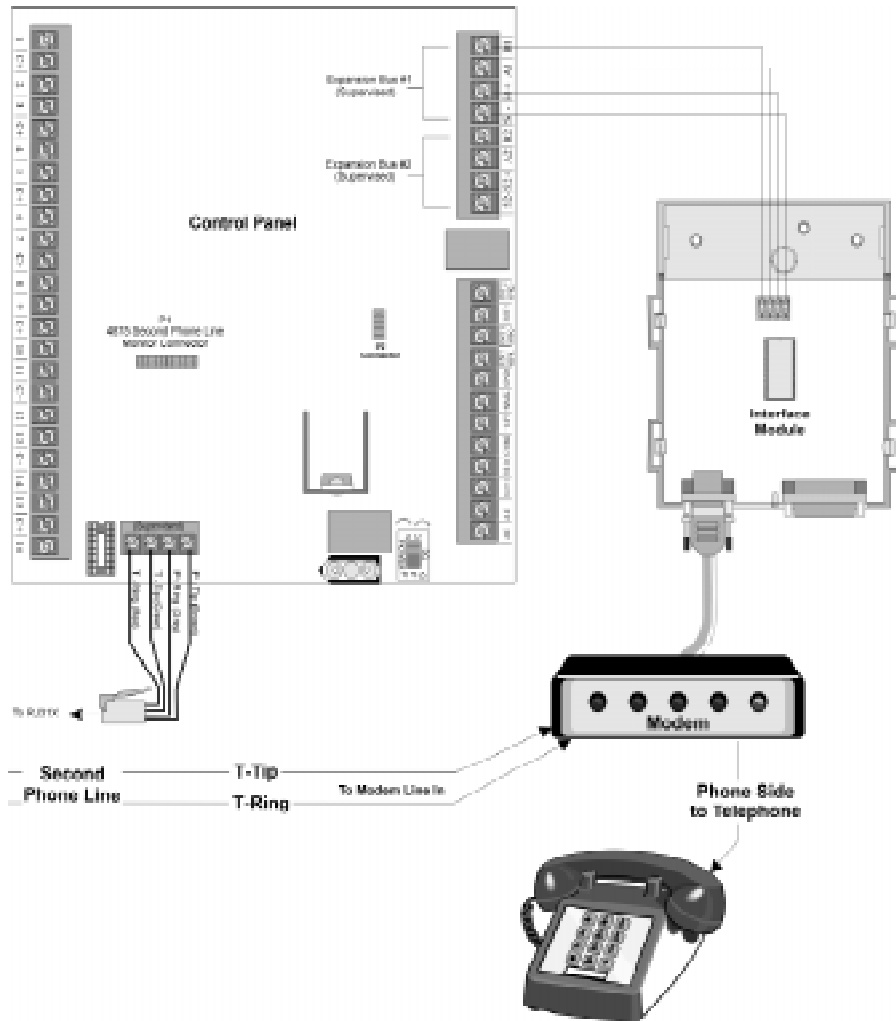


Figure 2-3 4824 Second Phone Line Configuration

