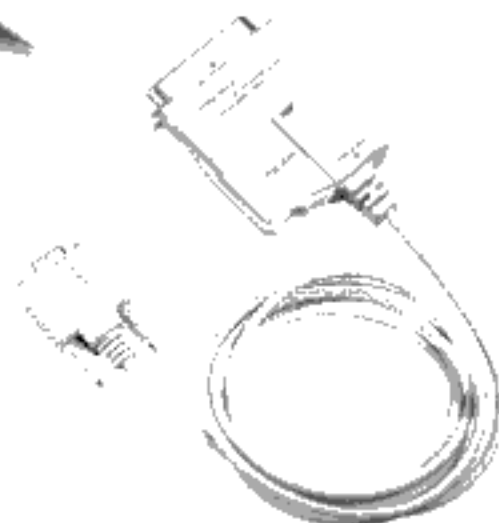


RS232/ PARALLEL

HIGH SPEED
BIDIRECTIONAL
CONVERTER



USER'S MANUAL

SXP-500

Read this guide thoroughly and follow the installation and operation procedures carefully to prevent any damage to the unit and/or any of the devices it connects to.

This package contains:

- * Bidirectional Serial/Parallel Converter (SXP-500)
- * User Manual

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Table of Contents

Overview

Front View

Rear View

Features

Installation

Switch Configuration Overview

DIP Switch Settings

Cabling

Operation

Appendix

Specifications

Centronics Interface Timing Chart

Centronics Interface Specifications

RS-232C Interface Specifications

Troubleshooting

Radio & TV Interference

Limited Warranty

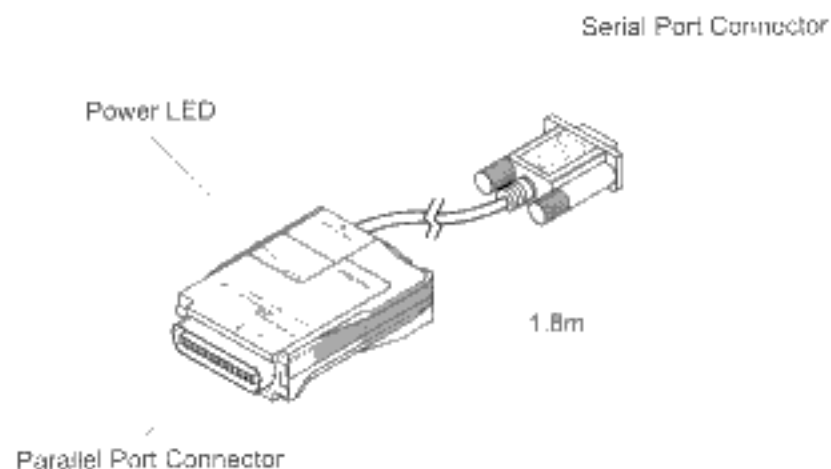
Overview

The SXP-500 is an interface converter that allows Centronics and RS-232 devices to communicate with each other (a computer with an RS-232 output to a Centronics printer, for example).

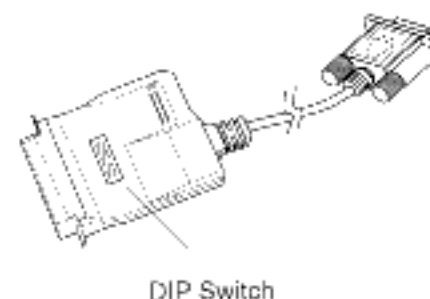
The SXP-500 provides a DB-9 RS-232C (DCE) compatible connector, and a C-36 Centronics connector. The serial baud rate is from 1200 to 115200 bps., selectable by a combination of DIP Switch and Jumper. The parallel interface speed is 92.16 KB/sec.

The unit supports both hardware and software (XON/XOFF) handshaking. Setup is extremely easy. All that is involved is setting the DIP Switch, Jumper (JP1), and connecting the cables.

Front View



Rear View



Features

- DIP Switch Sets Data Direction
- Both Hardware and XON/XOFF Handshaking
- Non-powered
- Easy Installation
- Compact Size

Installation

Switch Configuration Overview:

The SXP-500 is configured by setting an eight segment DIP Switch as follows:

Switch	Purpose
1	
2	Baud rate setting
3	
4	Handshake setting
5	Data and Stop Bits setting
6	
7	Parity setting
8	Conversion Direction setting

An explanation of each DIP Switch setting is given below.

- Note:**
1. When the segment is set in the direction of the arrow, it is ON.
 2. In each table, the default setting is highlighted.

DIP Switch Settings

Baud Rate:

The baud rate is set with DIP Switch segments 1 - 3 (located on the bottom panel), and JP1 (located inside the housing), as shown in the table, below:

DIP Switch Segment			Baud Rate (bps)	
1	2	3	JP1 Short	JP1 Open
ON	ON	ON	1200	38400
ON	ON	OFF	2400	57600
ON	OFF	ON	9600	76800
ON	OFF	OFF	14400	115200
OFF	ON	ON	19200	153600
OFF	ON	OFF	38400	230400
OFF	OFF	ON	57600	460800
OFF	OFF	OFF	115200	921600

Handshake:

DIP Switch Segment	Handshake
4	
ON	XON/XOFF
OFF	Hardware

Data and Stop Bits:

DIP Switch Segment	Data Bits	Stop Bits
5		
ON	7	2
OFF	8	1

Parity:

DIP Switch Segment		Parity
6	7	
ON	Either	Parity Inhibit
OFF	ON	Even Parity
OFF	OFF	Odd Parity

Conversion Direction:

DIP Switch Segment	Conversion Direction
8	
ON	Parallel to Serial
OFF	Serial to Parallel

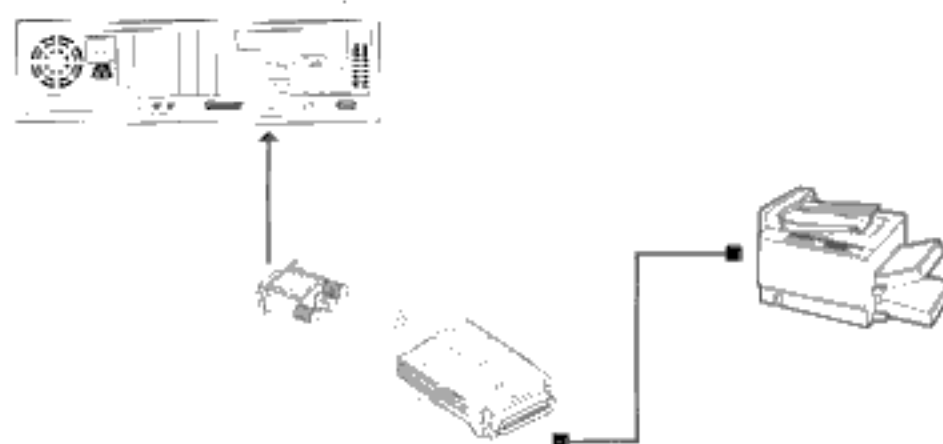
Cabling

Serial to Parallel:

When performing a Serial to Parallel interface conversion:

1. Plug the attached serial cable (with DB 9 female connector) leading out of the SXP-500 into the PC's serial port
2. Plug the female end of a C-36 male/female printer cable into the SXP-500's printer connector
3. Plug the male end of the C-36 male/female printer cable into the printer.

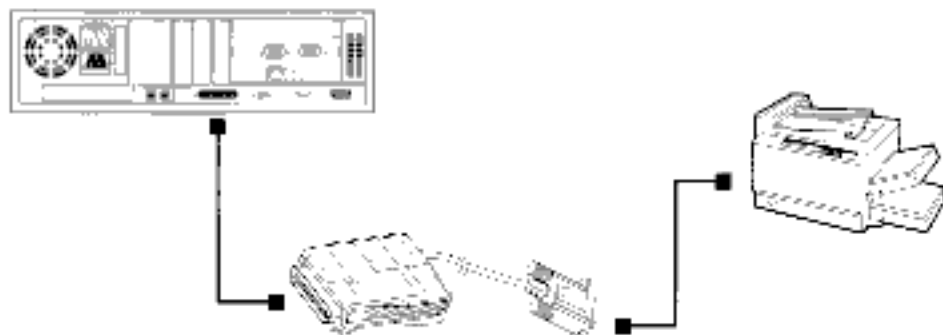
Note: If the distance to the printer is close enough, you can plug the SXP-500 directly into the printer, without the need for a printer cable.



Parallel to Serial:

When performing a Parallel to Serial interface conversion:

1. Use an IEEE1284 Parallel cable with a male D25 connector at one end, and a female C-36 connector at the other:
 - a) Plug the D25 end of the cable into the PC's parallel port
 - b) Plug the C-36 end of the cable into the SXP-500's Centronics connector
2. Use a serial cable with a male D9 connector at one end, and a male D25 connector at the other:
 - a) Plug the D9 end of the cable into the SXP-500's attached serial cable.
 - b) Plug the D25 end of the serial cable into the printer's serial port.



Serial Port Cabling

Device Connector's Pin #				Cables	SXP-500
DCE DB-9	DTE DB-9	DCE DB-25	DTE DB-25	a 25-pin/25-pin cable or a 9-pin/25-pin cable	DCE DB-9
2	3	3	2	Tx ----->	Rx
3	2	2	3	Rx <-----	Tx
8	7	5	4	RTS ----->	CTS
7	8	4	5	CTS <-----	RTS
4	6	20	6	DSR <-----	DTR
6	4	6	20	DTR <-----	DSR
5	5	7	7	GND ----->	GND

Parallel Port Cabling

Device's Pin #		Cables	SXP-500
DB-25	C-36	a 25-pin/36-pin Cables or a 36-pin/36-pin cable	C-36
1	1	STROBE	1
2-9	2-9	D0-D7	2-9
10	10	ACK	10
11	11	BUSY	11
12	12	PE	12
13	13	SLCT	13
14	14	AUTOFEED-XT	14
15	32	ERROR	32
16	31	INIT	31
17	36	SLCT-IN	36
18-25	19-30	GND	19-30

Operation

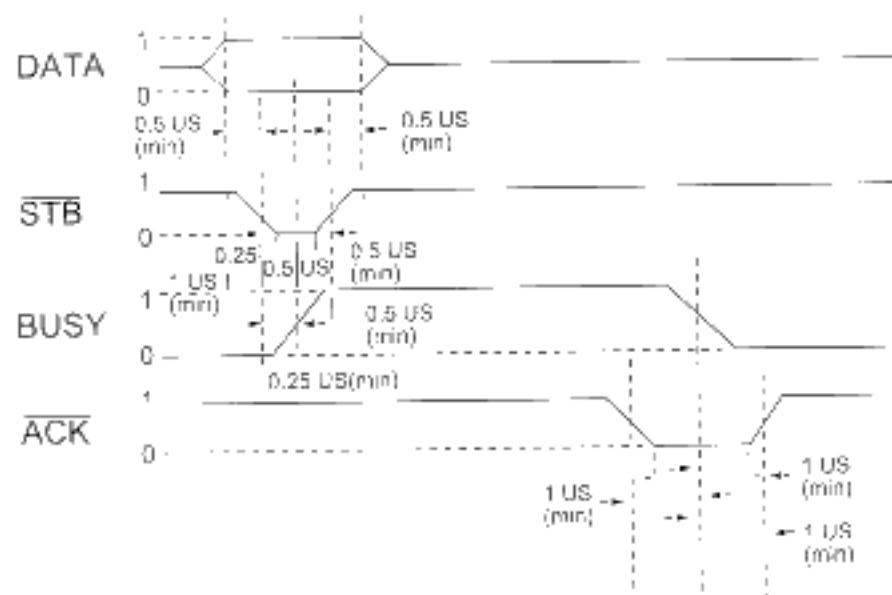
When operating the SXP-500, please take note of the following:

1. Since the SXP-500 is a DCE device, the serial device it connects to must be configured as a DTE device.
2. In DCE mode, the unit uses RTS/DTR (pins 6 and 8) handshaking. When RTS/DTR is set High, the computer is allowed to transmit data. When the unit is busy, it sets the RTS/DTR line to Low, and the computer stops transmitting data. Consequently, if the computer can not identify the RTS/DTR signal, it may result in data loss.
3. The unit's baud rate, data length, stop bits and parity settings must be configured to match those of the computer.
4. You must reset the parallel printer before printing.
5. Make sure you have set the desired Conversion Direction (with DIP switch 8).

Appendix Specifications

Power Consumption	AC 9V 50mA (max.)
Data Transmission Distance	Up to 5 m (30')
Connectors	RS-232C DB-9 female DCE Centronics C-36 male
Interface Exchange	In Serial or Parallel Out Parallel or Serial
Serial Communications Mode	DCE Only
LEDs	Green & Red
Microcontroller	ASIC
Temperature	Operating 5° - 40° C Storage -20° - 60° C
Humidity	0 - 80%
Housing	Plastic
Weight	120 g
Dimensions (L x W x H)	101 x 82 x 25.5 mm

Centronics Interface Timing Chart



Centronics Interface Specification

The Centronics Interface Specification is given in the table, below:

Pin	Name	Function
1	STB	DATA STROBE
2	DATA BIT 1	DATA BUS
3	DATA BIT 2	
4	DATA BIT 3	
5	DATA BIT 4	
6	DATA BIT 5	
7	DATA BIT 6	
8	DATA BIT 7	
9	DATA BIT 8	
10	ACK	DATA RECEIVED ACKNOWLEDGE
11	BUSY	DEVICE BUSY OR NOT
12	PAPER EMPTY	PULL UP
13	SLCT	PULL UP
14	A-F	PULL UP
15	N.C.	
16-17	GROUND	GROUND
18	N.C.	
19-30	GROUND	GROUND
31	INIT	PULL UP
32	ERR	PULL UP
33	GROUND	GROUND
34-35	N.C.	
36	SL-1	PULL DOWN

RS-232C Interface Specification

The RS-232C Interface DCE mode (default) specification is given in the table, below:

Pin	Name	Function
1	CD	PULL Up(+9v)
2	TxD	Transmit Data
3	RxD	Receive Data
4	DSR	Data Set Ready
5	GND	Ground
6	DTR	Data Terminal Ready
7	CTS	Clear to Send
8	RTS	Request to Send
9	RI	Ring Indicator

Troubleshooting

Problem	Cause	Solution
Power LED does not light	Cables are not properly plugged in.	Make sure that all cables are properly plugged in and fully seated in their connectors.
No Data Transmission	Cables are not properly plugged in.	Make sure that all cables are properly plugged in and fully seated in their connectors.
	Cables are not properly wired.	Rewire the cables making sure they are correctly wired
	Transmitting or Terminal device has not been set Ready for data transfer.	If powered Off, turn the device On. Otherwise, reset the Transmitting or Terminal device.
Incorrect Data Received	Transmitting or Terminal device is in incorrect DTE mode.	Change the Transmitting or Terminal device to the correct DTE mode, or user's cross line.
	Lines are not properly connected.	Rewire the cable lines to be sure they are properly connected.
	Incorrect serial transmission DIP Switch settings	Set the DIP Switch segments to their proper settings.

If the above solutions fail to alleviate the problem, contact your dealer for help.

Radio & TV Interference

Warning. This equipment generates, uses and radiates radio frequency energy and if not installed and used in accordance with the instruction manual may cause interference to radio and television reception. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart J of Part 15 of the 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 is likely to 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.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient the receiving antenna.
2. Relocate the computer with respect to the receiver.
3. Move the computer away from the receiver.
4. Plug the computer into a different outlet so that the computer and receiver are on different branch circuits.
5. Ensure that the mounting screws, attachment connector screws and ground wires are tightly secured.
6. Ensure that good quality shielded and grounded cables are used for data communications.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions.

Limited Warranty

IN NO EVENT SHALL THE DIRECT VENDOR'S LIABILITY FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, DISK, OR ITS DOCUMENTATION EXCEED THE PRICE PAID FOR THE PRODUCT.

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