RS232/ PARALLEL

HIGH SPEED
BIDIRECTIONAL
CONVERTER

USER MANUAL

SXP-500

Read this guide thoroughly and follow the installation and operation procedures carefully in order to prevent any damage to the units and/or any devices that connect to them.

This package contains:

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

If anything is damaged or missing, contact your dealer.

Manual Part No. PAPE-1154-100
Printed in Taiwan 10/1999

2001 - 01 -10

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)

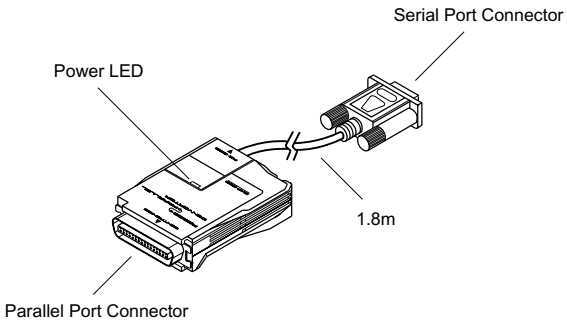
The SXP-500 provides a DB-9 RS-232C (DCE) compatible connector, and a C-36 Centronics connector. The serial baud rate is from 1200 to 115200 bps., selectable by a combination of DIP Switch and Jumper settings. The parallel interface speed is 92.16 KB/sec.

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.

Features

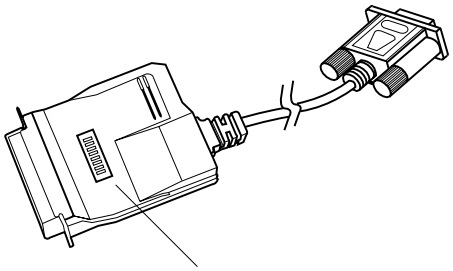
- Both Hardware and XON/XOFF Handshaking
- Non-powered
- Easy Installation
- Compact Size

Front View



2001 - 01 -10

Rear View



DIP Switch

DIP Switch Configuration

Overview:

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

Switch	Purpose
1 2 3	Baud rate Setting
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 in the next section.

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:

Segment	Handshake
4	
ON	XON / XOFF
OFF	Hardware

Data and Stop Bits:

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

Parity:

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

Conversion Direction:

Segment	Direction
8	
ON	Parallel to Serial
OFF	Serial to Parallel

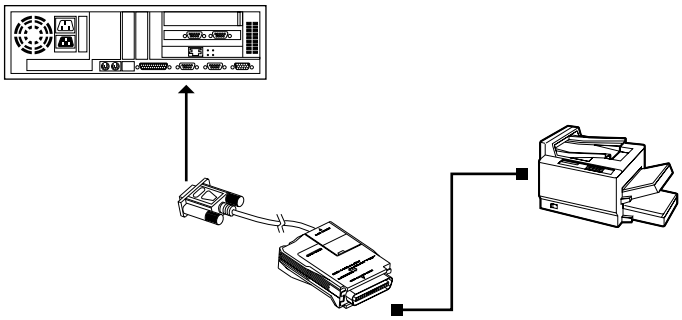
Cabling

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.

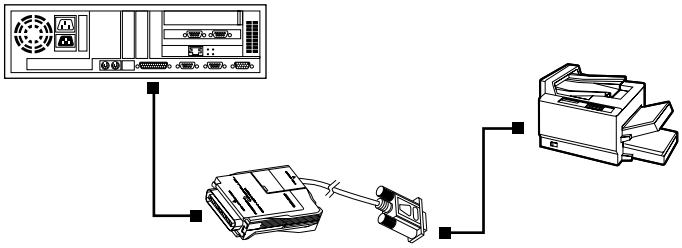
Note: If the distance to the printer is close enough, you can plug the SXP-500 directly into the printer, without the need for a printer cable.



Parallel to Serial:

When performing a Parallel to Serial interface conversion:

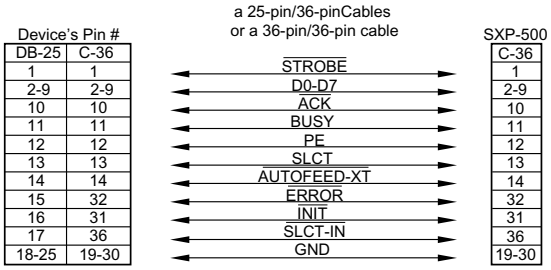
1. Use an IEEE1284 Parallel cable with a male D25 connector at one end, and a female C-36 connector at the other:
   a) Plug the D25 end of the cable into the PC's parallel port
   b) Plug the C-36 end of the cable into the SXP-500's Centronics connector
2. Use a serial cable with a male D9 connector 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
3	2	2	3	Rx ◄--------- Tx	2
8	7	5	4	RTS ---------► CTS	7
7	8	4	5	CTS ◄--------- RTS	8
4	6	20	6	DSR ◄--------- DTR	6
6	4	6	20	DTR ---------► DSR	4
5	5	7	7	GND ---------- GND	5

PARALLEL PORT CABLING:



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

Function		Specification
Power Consumption		AC 9V 50m A (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	50^0 - 40^0C
	Storage	-20^0-60^0C
Humidity		0 -80%
Housing		Plastic
Weight		120 g
Dimensions		(L x W x H) 101 x 62 x 25.5 mm

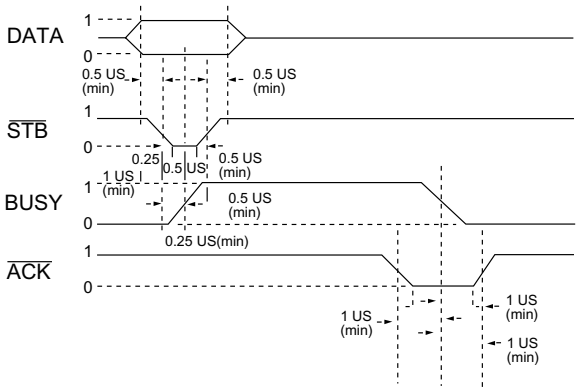
2001 - 01 -10

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

Centronics Interface Timing Chart



2001 - 01 -10

CENTRONICS INTERFACE SPECIFICATION

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

TROUBLESHOOTING

Symptom	Possible Cause	Action
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.
	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.
Incorrect Data Received	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 Statement

WARNING!!! This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications. This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Subpart J of Part 15 of 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.

Limited Warranty

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

The direct vendor makes no warranty or representation, expressed, implied, or statutory with respect to the contents or use of this documentation, and specially disclaims its quality, performance, merchantability, or fitness for any particular purpose.

The direct vendor also reserves the right to revise or update the device or documentation without obligation to notify any individual or entity of such revisions, or update. For further inquires please contact your direct vendor.