Manudax Technical Notes

> Connections <

07.1989

Pinout of the 36 pin Centronics Connector

Pin no.	Signal	Signal dir.	Signal Descirption
1	STB	OUT	Strobe
2	DB 0	OUT	Data Line 0
3	DB 1	OUT	Data Line 1
4	DB 2	OUT	Data Line 2
5	DB 3	OUT	Data Line 3
6	DB 4	OUT	Data Line 4
7	DB 5	OUT	Data Line 5
8	DB 6	OUT	Data Line 6
9	DB 7	OUT	Data Line 7
10	ACK	IN	Acknowledge
11	RDY	IN	Ready
12	NPA	IN	No Paper
13	SLO	IN	Select Out
14	ALF	OUT	Auto Line Feed
15	---	---	Not Used
16	SG	---	Signal Ground
17	FG	---	Frame Ground
18	---	---	Not Used
19-30	SG	---	Signal Ground
31	RST	OUT	Reset
32	ERR	IN	Error
33	SG	---	Signal Ground
34	---	---	Not Used
35	PWF	IN	Power Failure
36	---	---	Not Used

Meaning of the signals

STB : Strobe (active Low).

DB 0 - DB 7 : Parallel data signals (Active High).

ACK : Data received and Ready to receive more data signal (Active Low).

RDY : Signal that indicates if the printer is ready to receive data (Active Low).

NPA : When High, this signal indicates that the printer is out of paper.

SLO : this signal will be high if the printer is selected.

ALF : This signal directs the printer to automatically make a line feed after each line that has been printed (Active low).

RST : This signal initializes the printer (Active Low).

ERR : This signal indicates that a printer error has occured (Active Low).

PWF : This signal indicates that the printer power is off (Active Low).

Pinout of the DB 25 Connector

Pin no.	Signal	Signal dir.	Signal Descirption
1	FG	----	Frame Ground
2	TXD	OUT	Transmit data
3	RXD	IN	Receive data
4	RTS	OUT	Request to send
5	CTS	IN	Clear to send
6	DSR	IN	Data set ready
7	SG	----	Signal ground
8	CD	IN	Carrier detect
20	DTR	OUT	Data terminal ready

Meaning of the signals

TXD : Transmit data is the signal on wich the information is passed from the host computer to the device connected to it. Data will only be transmitted if the Clear to send signal is High.

RXD : Receive data is the signal on wich information is transmitted from the periferal device to the host computer.

RTS : Request to send is the signal wich controls the communication between the host and his periferic devices. The periferic device will be ready to send when RTS becomes High.

CTS : Clear to send is the signal wich indicates if the periferic device is ready to accept data from the host. Transmission will go on until this signal becomes LOW.

DSR : Data set ready is the signal wich indicates if de periferic device is ready for operation. When this signal is HIGH, the periferic device is connected and ready to communicate.

CD : Carrier detect is a signal wich detects the carrier from a periferic device.

DTR : Data terminal ready is the signal wich indicates if the host is ready to receive data from a periferic device.

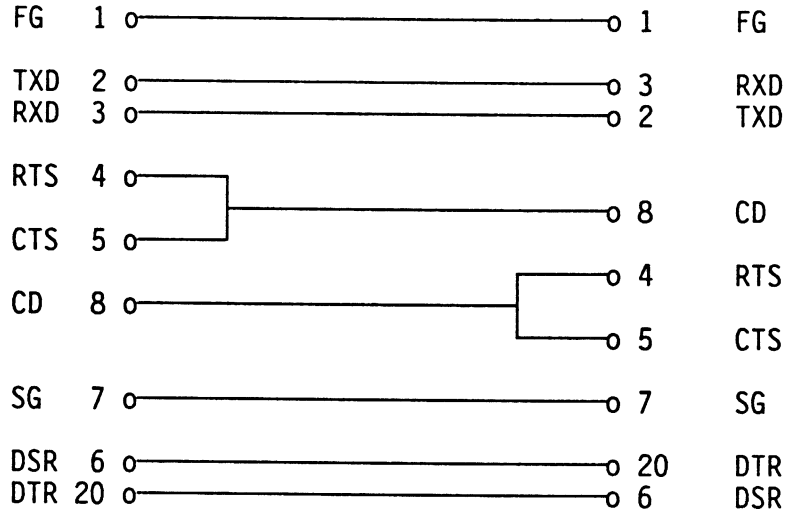
Electrical characteristics of the signals

A. Control signals : HIGH : +5 V to +15 V
LOW : -5 V to -15 V

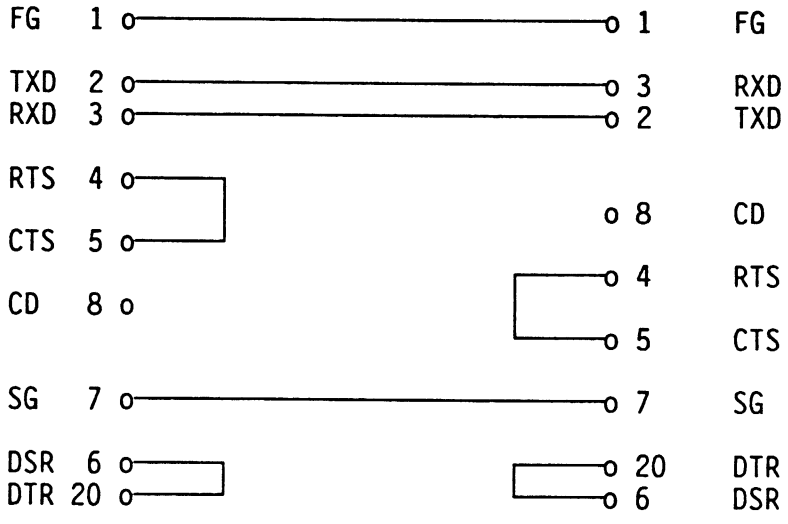
B. Data signals : Mark (logical 1) : -5 V to -15 V
Space (logical 0) : +5 V to +15 V

Possible connections between RS-232-C devices

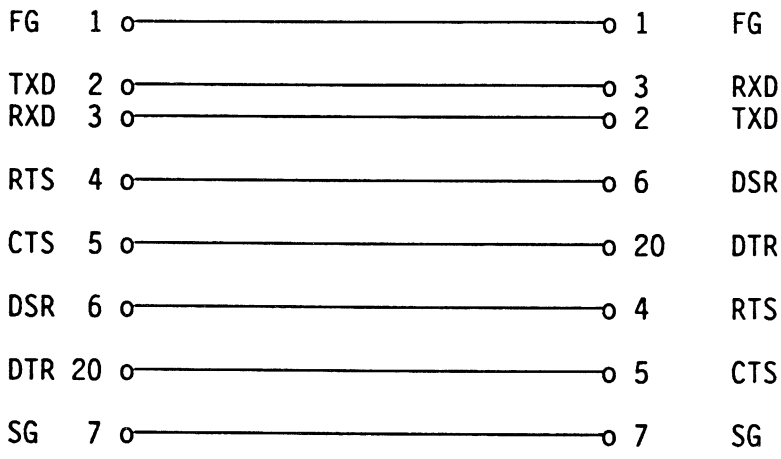
First solution



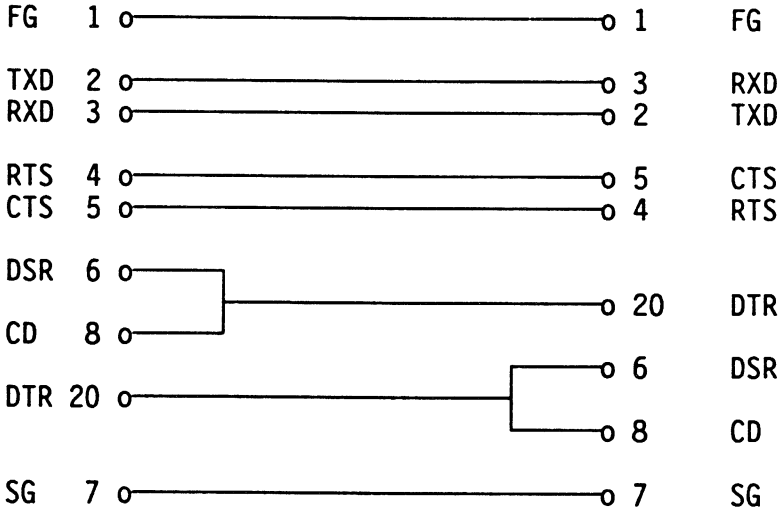
Second solution



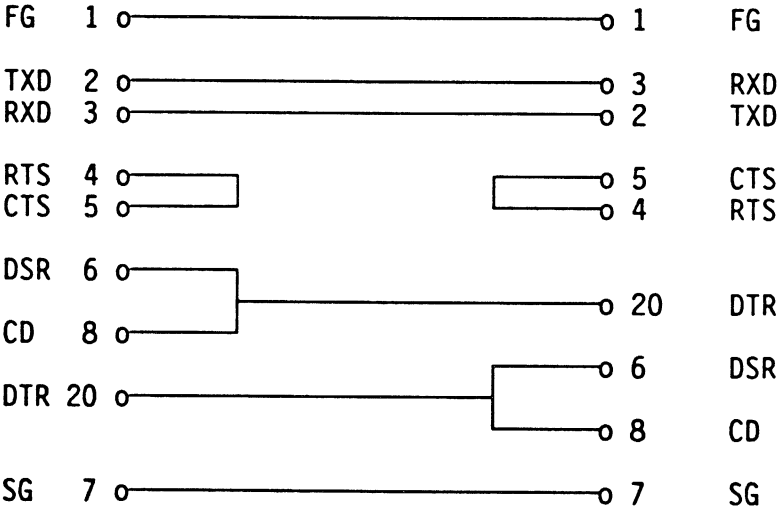
Third solution



Fourth solution



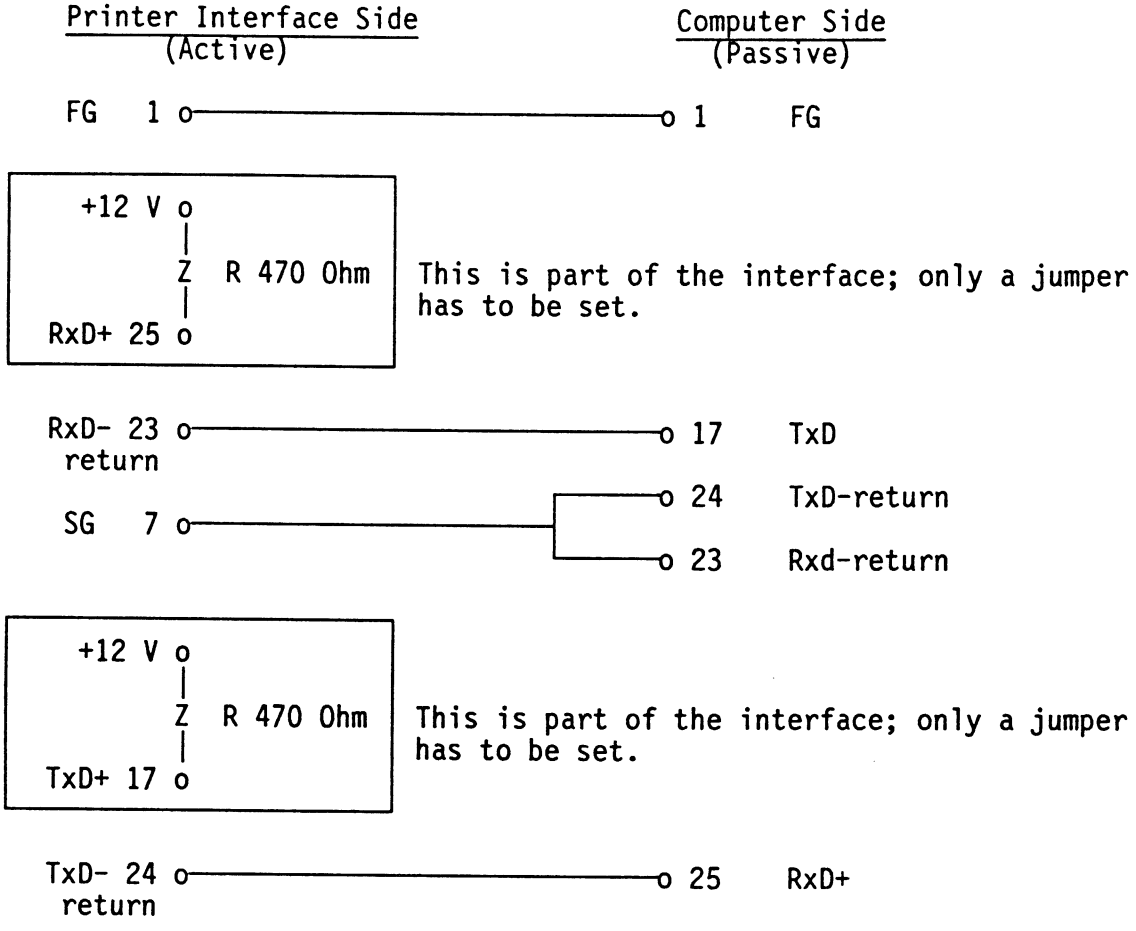
Fifth solution



Use : To connect a computer with current loop protocol to a printer with a Current Loop Interface. One of the two devices must be actif i.e. delivers the current of 20mA. The active device, has through a resistance of 470 ohm a connection to the 12 V powerline. In the connection schema below, the printer is the active one.

Connectors : Computer side : DB-25 female Connector
Printer Interface: DB-25 male Connector

Cable connections



Use : To tranfer files from one computer to another via the parallel interface, a parallel Cable (type #INT2581) and the Rocket Socket.

Connectors : Computer side : DB-25 male Connector
Interface cable side : Centronics (36 pin) female Connector

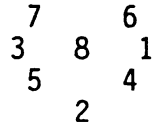
Cable connections

Centonics connector	DB-25 Connector
2	15
3	13
4	12
5	10
6	11
10	5
11	6
12	4
13	3
19	18
21	19
23	20
25	21
27	22
29	23
30	24
32	2
33	25

RS-232-C interface

Use : Interface connector for data transmission/reception between the HX-20 and other devices.

Connector : 8 pin DIN 270° type TCS 4480



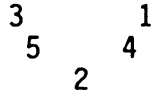
Pinout of the 8 pin DIN connector

Pin no.	Signal	Signal dir.	Signal Descirption
1	GND	----	Signal Ground
2	TXD	OUT	Transmit data
3	RXD	IN	Receive data
4	RTS	OUT	Request to send
5	CTS	IN	Clear to send
6	DSR	IN	Data set ready
7	DTR	OUT	Data terminal ready
8	CD	IN	Carrier detect
E	FG	----	Frame ground

Serial interface

Use : High speed serial interface connector for data transmission/reception between the HX-20 and floppy-disk unit or video adaptor.

Connector : 5 pin DIN 180° type TCS 4450



Pinout of the 5 pin DIN connector

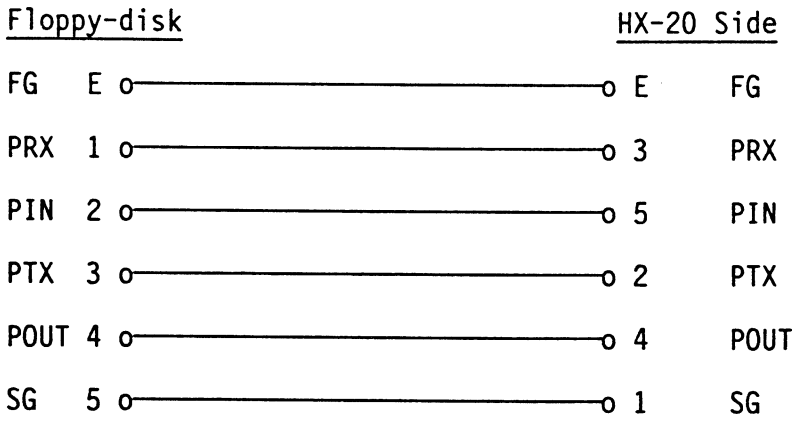
Pin no.	Signal	Signal dir.	Signal Descirption
1	GND	----	Signal Ground
2	PTX	OUT	Transmit data
3	PRX	IN	Receive data
4	POUT	IN	Transmit mode
5	PIN	OUT	Receive mode
E	FG	----	Frame ground

Serial Connection cable #707

Use : Connect the HX-20 to the floppy-disk unit.

Connectors : HX-20 side : 5 pin DIN male connector
Floppy-disk : 6 pin DIN male connector

Cable connections

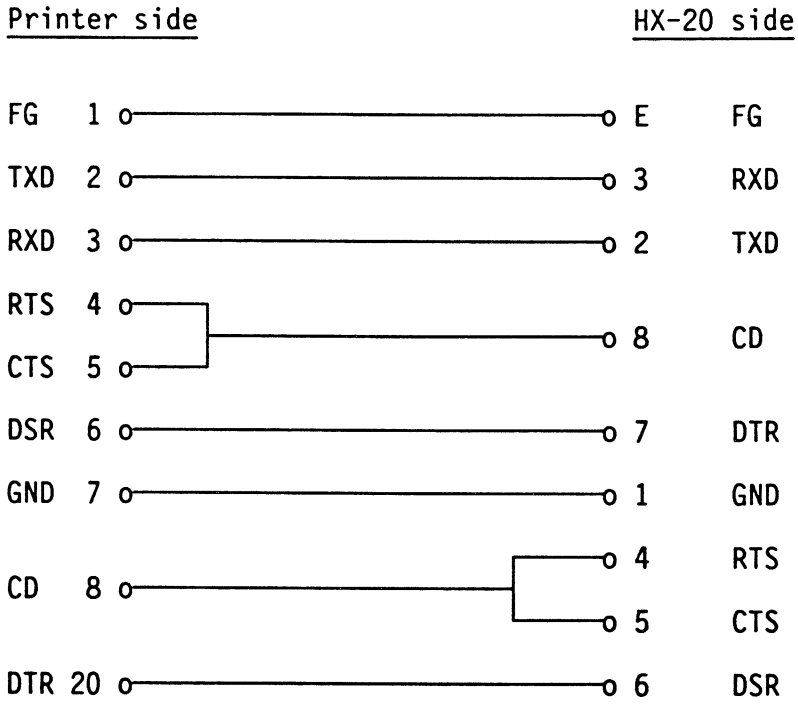


Serial Connection cable #714 - #715

Use : Connect the HX-20 to a MX-, RX-, FX-, LQ, SQ-printer equipted with a serial interface.

Connectors : HX-20 side : 8 pin DIN male connector
Printer side: DB-25 male connector

Cable connections

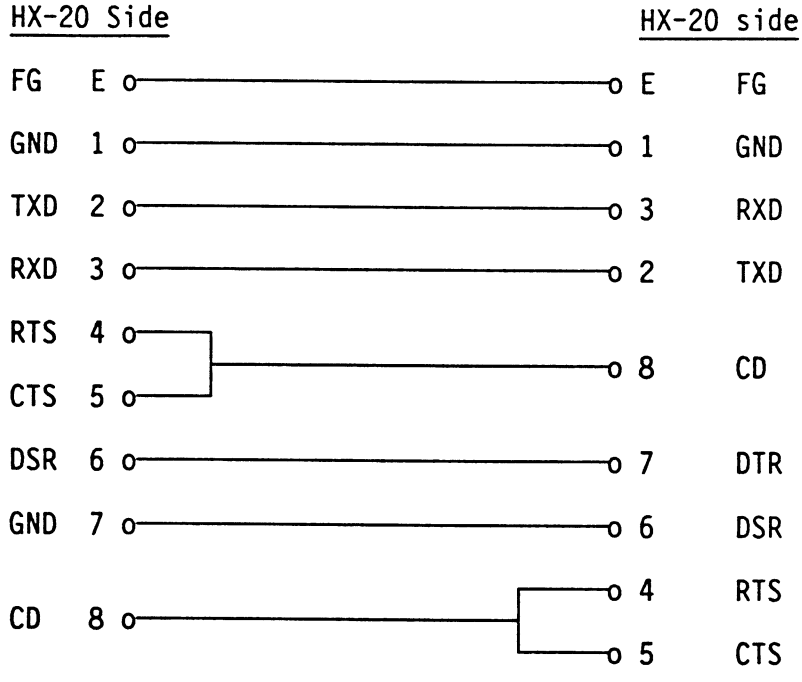


Serial Connection cable #716

Use : To Connect two HX-20 via their RS-232-C connector.

Connectors : Two 8 pin DIN male connectors

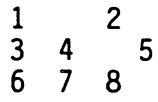
Cable connections



RS-232-C interface

Use : Interface connector for data transmission/reception between the PX-8, PX-4 or EHT-10 and other devices.

Connector : 8 pin mini connector



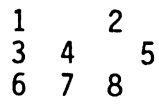
Pinout of the 8 pin mini connector

Pin no.	Signal	Signal dir.	Signal Descirption
1	GND	----	Signal Ground
2	TXD	OUT	Transmit data
3	RXD	IN	Receive data
4	RTS	OUT	Request to send
5	CTS	IN	Clear to send
6	DSR	IN	Data set ready
7	DTR	OUT	Data terminal ready
8	CD	IN	Carrier detect
E	FG	----	Frame ground

Serial interface

Use : High speed serial interface connector for data transmission/reception between the PX-8 or PX-4 and floppy-disk unit or video adaptor.

Connector : 5 pin mini connector



Pinout of the 8 pin mini connector

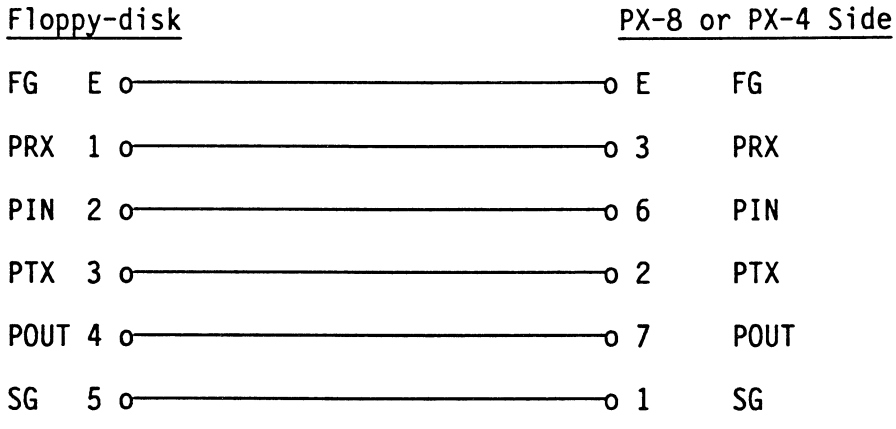
Pin no.	Signal	Signal dir.	Signal Descirption
1	GND	----	Signal Ground
2	TXD	OUT	Transmit data
3	RXD	IN	Receive data
4	RTS	OUT	Request to send
5	CTS	IN	Clear to send
6	DSR	IN	Data set ready
7	DTR	OUT	Data terminal ready
8	CD	IN	Carrier detect
E	FG	----	Frame ground

Serial Connection cable #723

Use : Connect the PX-8 or PX-4 to the floppy-disk unit.

Connectors : PX-8 or PX-4: 8 pin mini connector
Floppy-disk : 6 pin DIN male connector

Cable connections

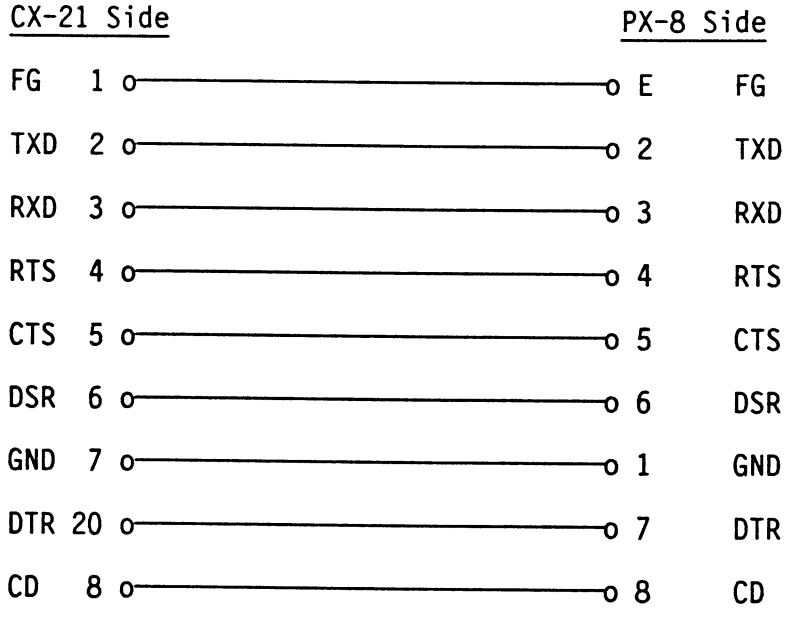


Serial Connection cable #724

Use : Connect the PX-8, PX-4 or EHT-10 to an acoustical coupler (CX-21)

Connectors : PX-8 side : 8 pin mini connector
CX-21 Side : DB-25 male connector

Cable connections

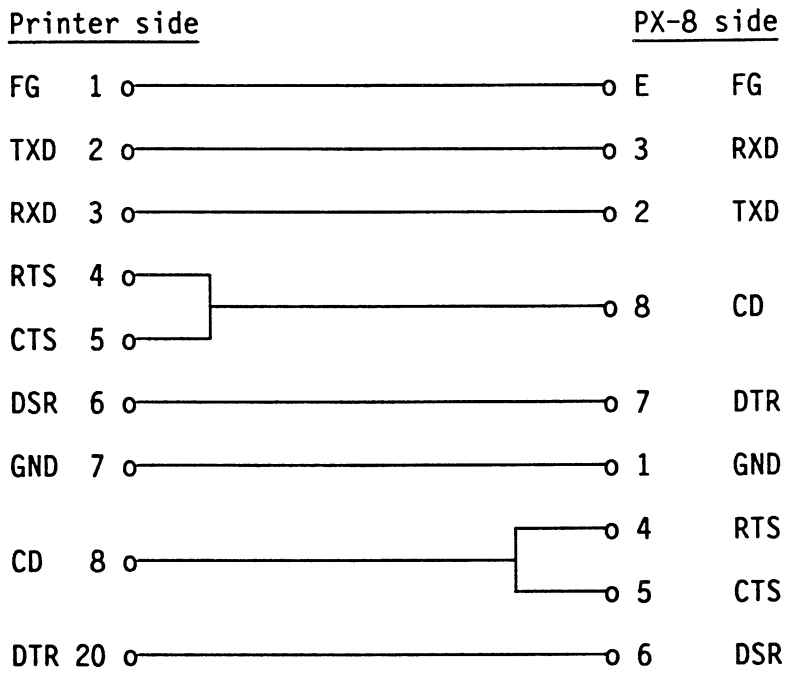


Serial Connection cable #725

Use : To Connect the PX-8, PX-4 or EHT-10 to a MX-, RX-, FX, EX, LQ- or SQ-printer equipted with a serial interface.

Connectors : PX-8 side : 8 pin mini connector
Printer side : DB-25 connector

Cable connections

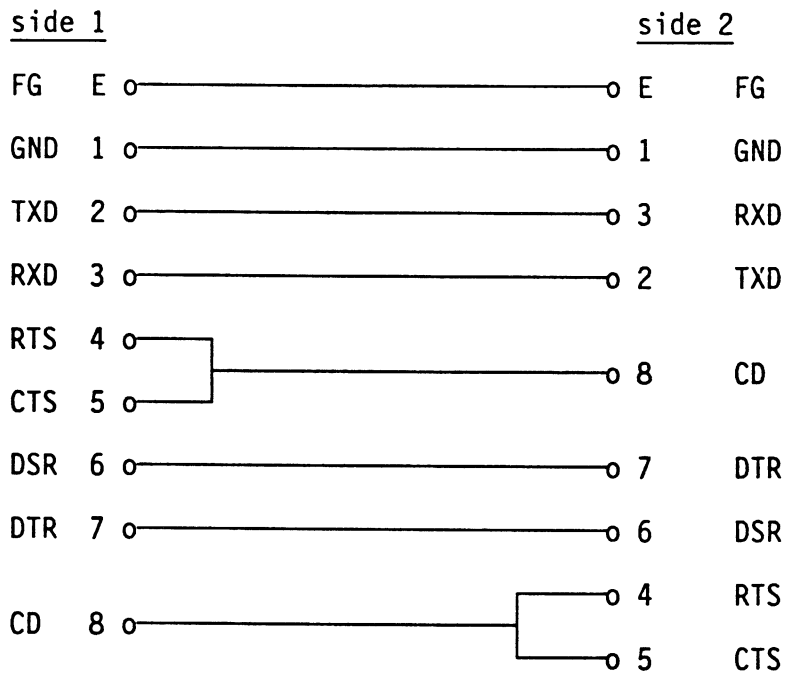


Serial Connection cable #726

Use : To Connect two PX-8, PX-4 or EHT-10 together via their RS-232-C connector.

Connectors : Two 8 pin mini connectors

Cable connections

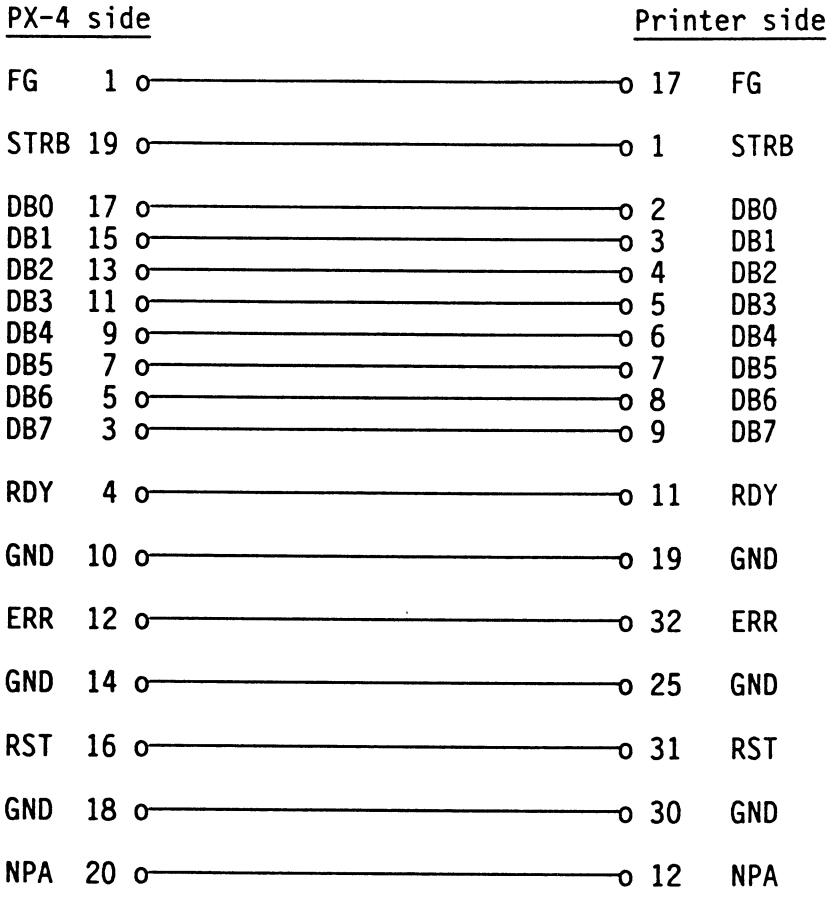


Parallel Connection cable #731

Use : To Connect the PX-4 to a standard Centronics printer.

Connectors : PX-4 side : 20 pin connector
Printer side : 36 pin Centronics connector

Cable connections



Introduction

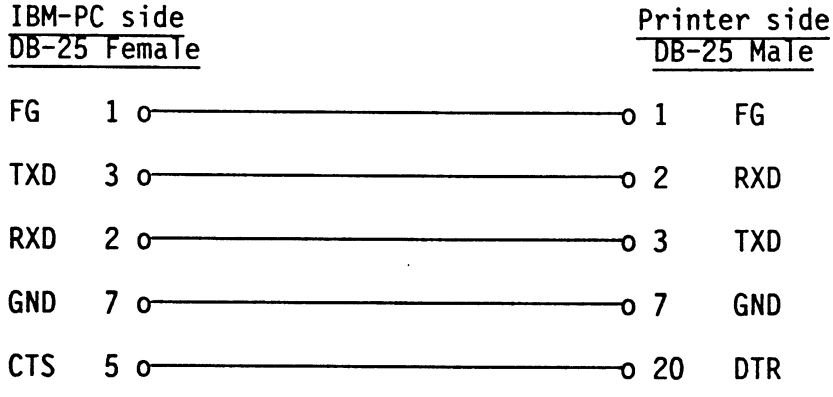
Most IBM programs are compatible with a HP-7470A-001 Plotter.
Therefore, Epson offers a RAM/ROM set to make the HI-80 Compatible with the HP Plotter.

You need to instal one of the following interfaces in the Epson printer :

#8148	Xon/Xoff + 2 K buffer
#8143	Xon/Xoff using printer CPU

If the Plotter is presumed to return some information (coördinates) to the computer, then only the #8143 could be used.

Serial connection

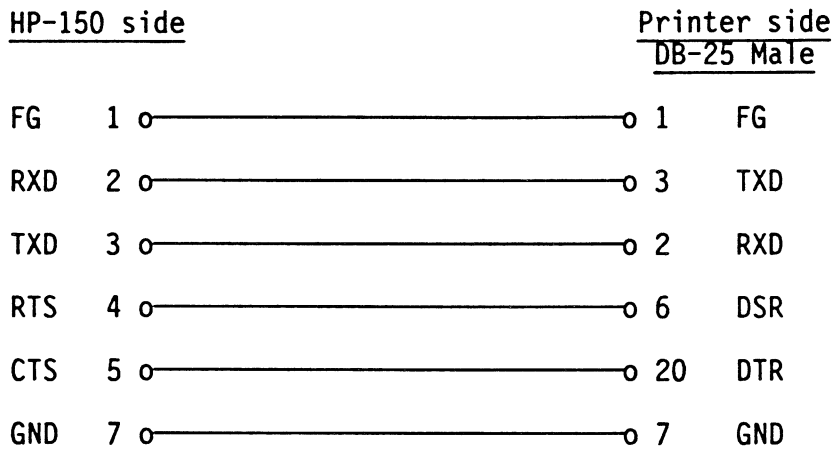


Note: The new option kit #EP9495 contains both the expansion ROM and the 8 Kbytes RAM.

Interface data Epson printers to HP-150

This is only for the FX-printers serie and needs naturally an EPROM specially designed for the HP character set.
Those EPROM's are different for the FX-100 and the FX-80

RS-232-C (Serial) connection



Dip switch setting of the 8184 serial interface

1-1	1-2	1-3	1-4	1-5	1-6	1-7	1-8
OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF

2-1	2-2	2-3	2-4	2-5	2-6
ON	ON	ON	ON	OFF	OFF

9600 Baud
No Parity
8 bit Word length
1 Stop bit
Xon/Xoff protocol in use

Dip switch setting of the FX-100

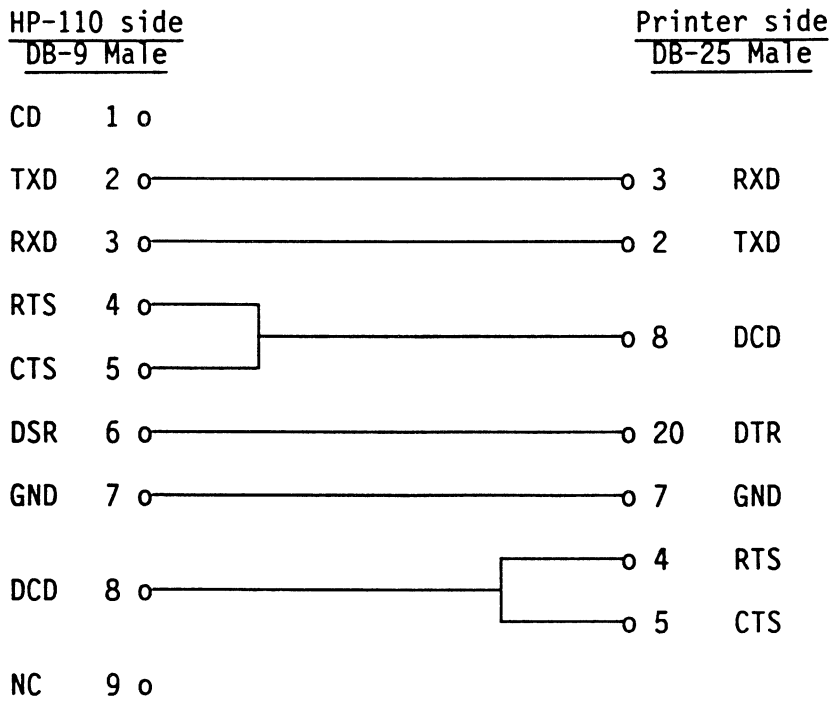
1-1	1-2	1-3	1-4	1-5	1-6	1-7	1-8
OFF	OFF	OFF	OFF	OFF	ON	ON	ON

Configuration of the HP-150 (Port 1 or 2)

Baudrate :	9600	Parity :	None
Clock :	Int	Enq Ack :	No
Asterisk :	Off	TR(CD) :	Lo
Check Parity :	No	SR(CH) :	Lo
Recv Pace :	Xon/Xoff		
Xmit Pace :	Xon/Xoff		
SRR Xmit :	NO	RR(CF) Recv :	No
SRR invert :	NO	CS(CB) Xmit :	No
DM(CC) :	No		
Databits :	8		
Stopbits :	1		

For this purpose, the printer must be equipted with a serial interface card wich allows Xon/Xoff protocol.

RS-232-C (Serial) connection



Interface data Epson printers to Siemens PC

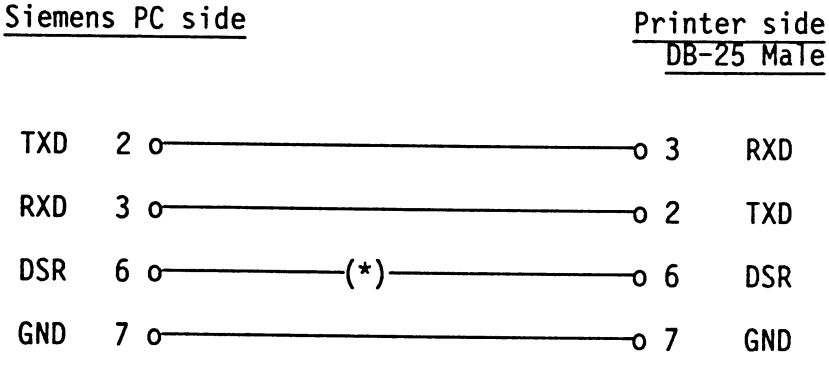
This allows the user to connect a serial printer to a Siemens PC with the use of the Xon/Xoff protocol. Therefore, a special program is needed. Without this program, the PC will give "Time-out" errors when the printbuffer becomes full.

Installation on the PC side

1. Start-up the PC
2. Start the BSPINST program
3. Make your chioise : both serial ports 1 or 2 can be used. Select one of those with the cursor keys.
4. Select an Epson printer, if possible a FX-100+ printer.
5. This is the end of the selection.

RS-232-C (Serial) connection

No hardware handshaking is possible.
Use a serial interface-board with Xon/Xoff protocol.



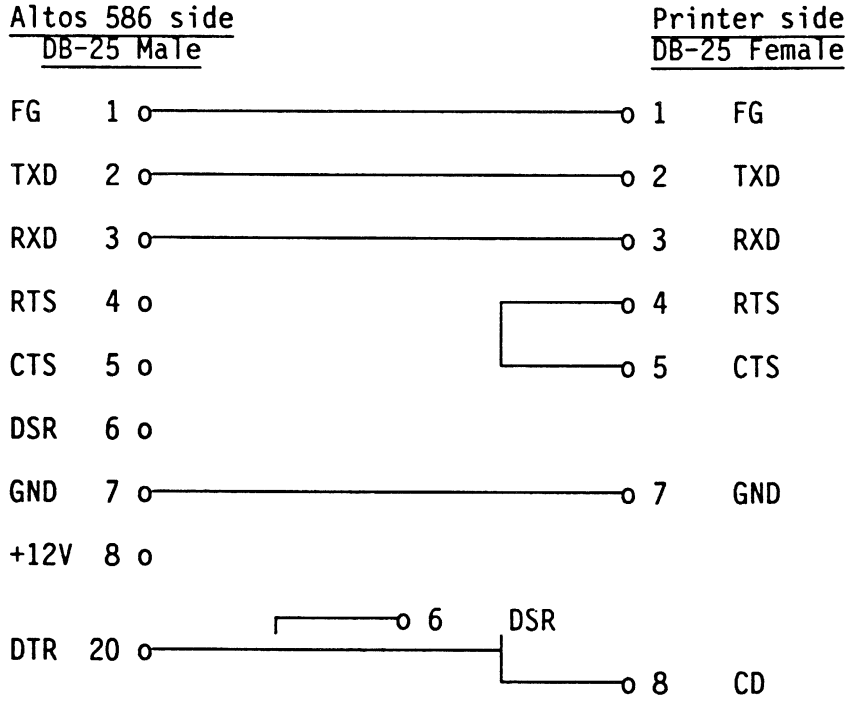
(*) Pulled-up in the serial interface

Interface data Epson printers to Altos 586

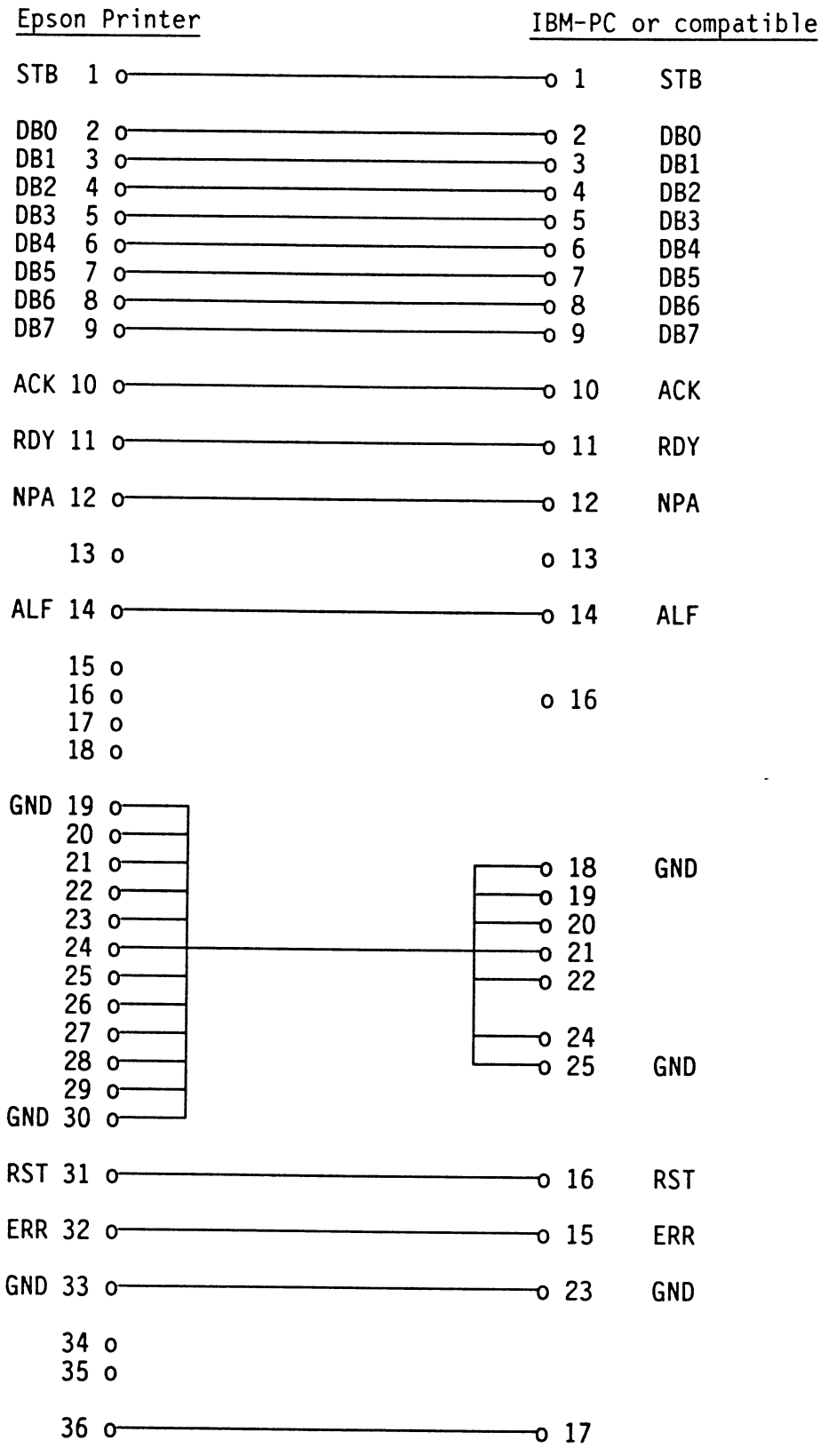
Use : This allows the user to connect a serial printer to an Altos 586 multi user UNIX PC.

Connectors : Altos 586 : DB-25 male connector
Printer side : DB-25 female connector

RS-232-C (Serial) connection



Connections between Epson Printer and IBM-PC

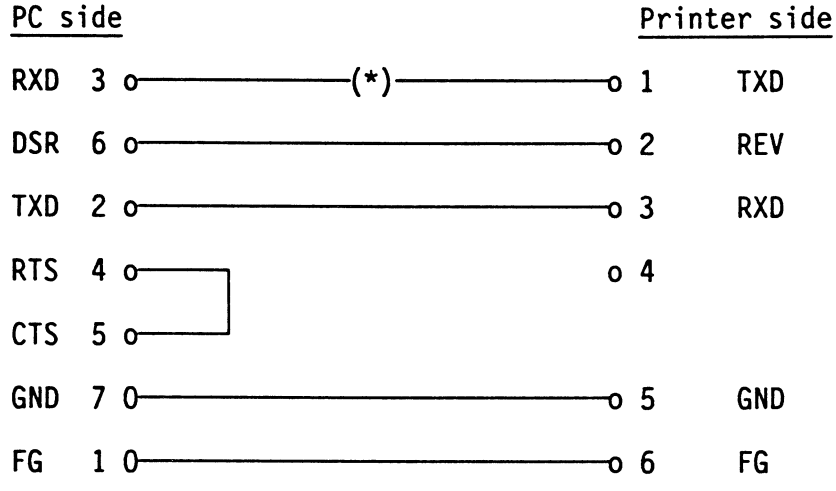


Introduction.

This cable will connect an IBM-PC or compatible with the internal serial interface of the Epson printers. See also the dip-switch setting of the printers for setting the baudrate and parity check.
All communication is hard- and software (X-on/X-off protocol) controlled, execpt for the LQ-800/1000 were only hardware control possible is.

Connectors : PC : DB 25 female connector
Printer side : DIN (DB 6) male connector

Cable connections



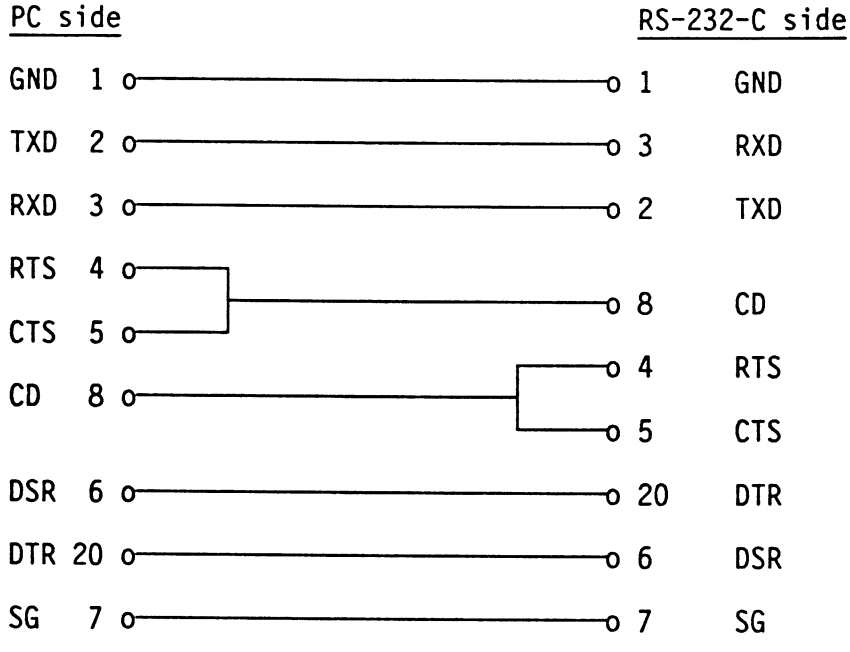
(*) Connection that can only be used with the X-on/X-off protocol. Not valid for the LQ-800/1000.

Serial Connection cable #INT2585

Use : To Connect a PC or a PCe to a RS-232-C device.

Connectors : PC /PCe : DB 25 female connector
RS-232 device : DB 25 male connector

Cable connections

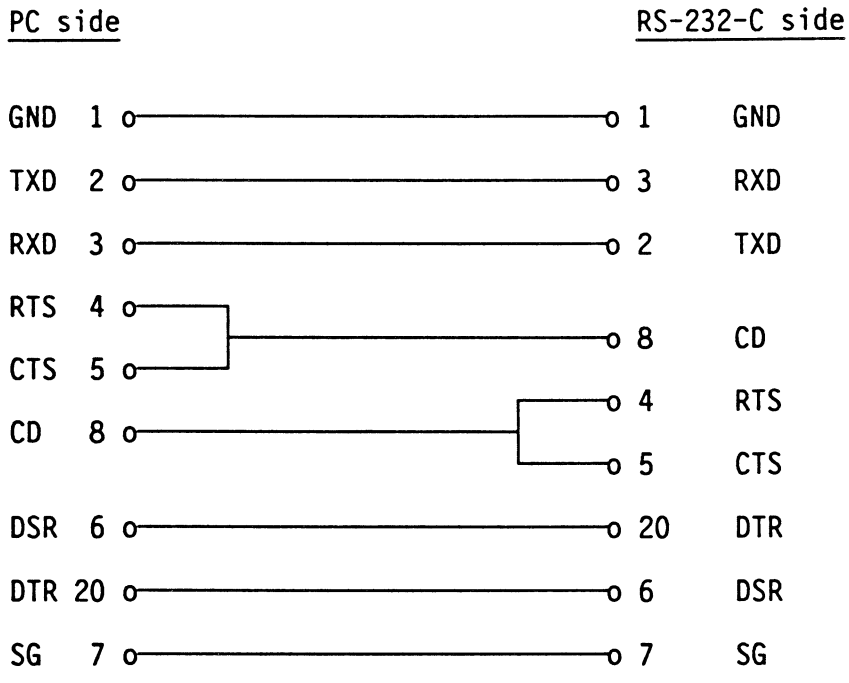


Serial Connection cable #INT2586

Use : To Connect a PC or a PCe to a RS-232-C device.

Connectors : PC /PCe : DB 25 male connector
RS-232 device : DB 25 male connector

Cable connections

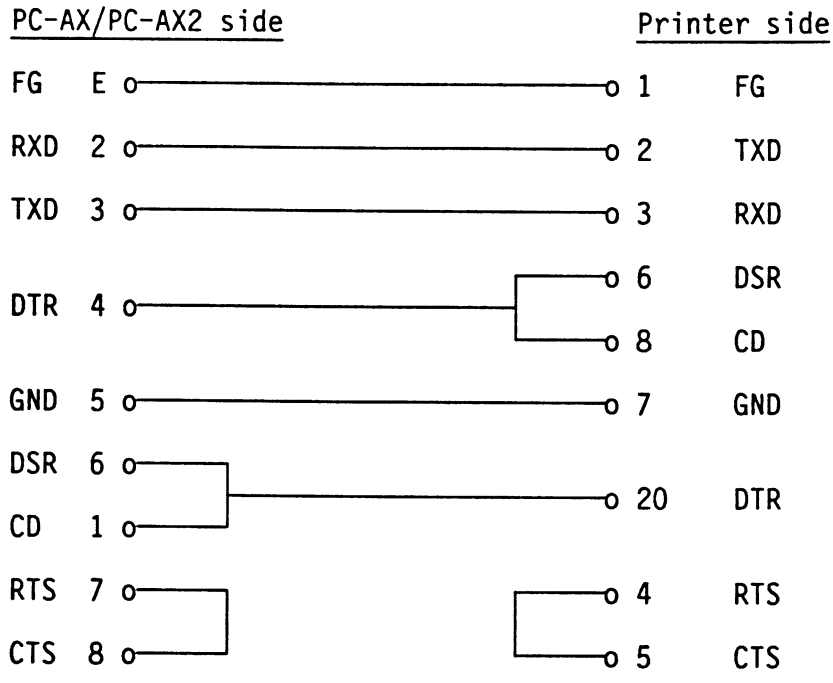


Serial Connection cable #INT2587

Use : To Connect a PC-AX or a PC-AX2 to an EPSON printer equipted with the RS-232-C connector.

Connectors : PC-AX/PC-AX2 : DB 9 female connector
Printer side : DB 25 female connector

Cable connections

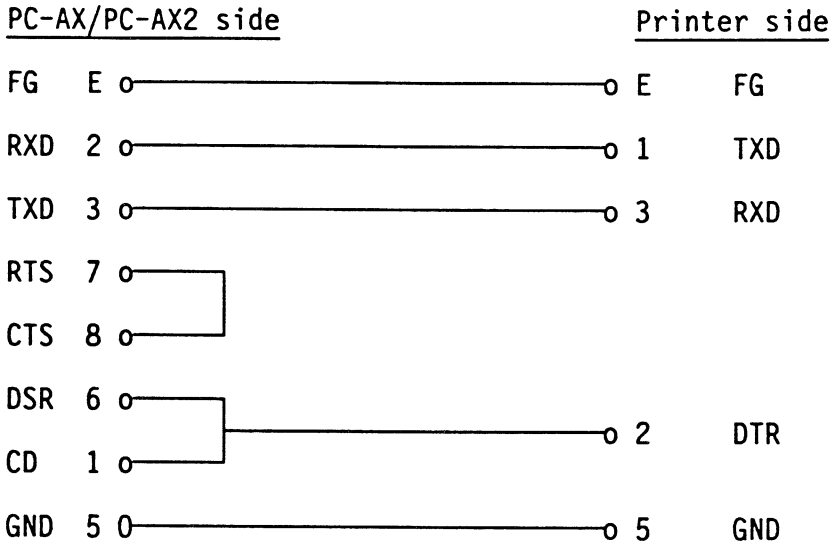


Serial Connection cable #INT2588

Use : To Connect a PC-AX or a PC-AX2 to an EPSON printer equipted with a 6 Pin DIN connector for the RS-232-C interface.

Connectors : PC-AX/PC-AX2 : DB 9 female connector
Printer side : 6 Pin DIN male connector

Cable connections



Serial Connection cable #INT2589

Use : To Connect a PC-AX or a PC-AX2 to a RS-232-C device.

Connectors : PC-AX/PC-AX2 : DB 9 female connector
Printer side : DB 25 male connector

Cable connections