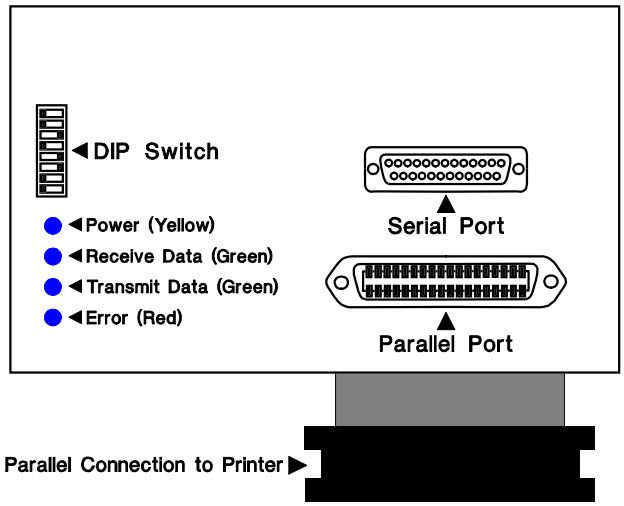
1 PRODUCT DESCRIPTION

The ASeries A700 MultiPort allows two computers to share the same printer. It provides one Serial input port and one Parallel input port. The A700 is connected to the parallel port of the printer and takes its power from this port. Switching between the two input ports is fully automatic but no buffering will occur.

Figure 1

A700 MultiPort



2 INSTALLATION (Lexmark 23xx Series Printers)

Before installing the A700 MultiPort, please make sure that the DIP Switches are set correctly to meet your requirements. Please refer to Section 4 for complete details of the DIP Switch Settings.

Once the DIP Switches are set, the A700 may be simply hooked into place on the rear of the Lexmark 23xx printer and the parallel output connector plugged directly into the printer.

Turn the printer ON and observe the LEDs on the A700 MultiPort . The ‘Power’ LED should light up and remain alight. The 'Data' LEDs should light up and then extinguish within 2 seconds. After this sequence the unit is ready for operation.

Power the printer OFF and connect the correct cables between the A700 MultiPort and the host devices. Use only cables which you know to have the correct pin configurations to match the A700 to your equipment. Cable requirements are discussed in Sections 5 and 6.

WARNING: All devices must be powered OFF before connecting cables to them.

3 SELF TEST FUNCTION

The A700 MultiPort has an built-in Self Test Mode. In this mode the A700 will output a continuous stream of printable ASCII characters to the Lexmark printer. This function may be used to self test the A700 MultiPort and is activated in the following manner:

Step 1: Take note of the original DIP Switch settings on the A700 MultiPort and then turn the Lexmark printer OFF.

Step 2: Select ‘Self Test’ mode by setting the DIP Switch as follows:

DIP Switch Number	6	7	8
Setting	On	On	Off

Step 3: Turn the Lexmark printer ON.

The output produced by the Self Test function is as follows:

```
0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_’abcdefghijklmnopqrstuvwxyz{|}~
0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_’abcdefghijklmnopqrstuvwxyz{|}~
0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_’abcdefghijklmnopqrstuvwxyz{|}~
0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_’abcdefghijklmnopqrstuvwxyz{|}~
0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_’abcdefghijklmnopqrstuvwxyz{|}~
0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_’abcdefghijklmnopqrstuvwxyz{|}~
0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_’abcdefghijklmnopqrstuvwxyz{|}~
0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_’abcdefghijklmnopqrstuvwxyz{|}~
0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_’abcdefghijklmnopqrstuvwxyz{|}~
```

This output will continue as long as the printer is powered ON. To stop the output simply turn the printer OFF.

Once the Self Test is complete, the A700 DIP Switches should be returned to their original settings for normal use.

4 HARDWARE CONFIGURATION

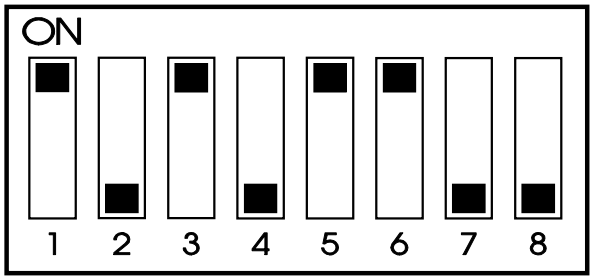
Setting the DIP Switch

Before attempting to change the DIP Switch settings, disconnect the A700 from its power source. The DIP switches are only read when the A700 is powered on. They are located above the LEDs as shown in Section 1, Figure 1.

Default Factory Settings

The A700 is factory pre-set to the following configuration:

- Timeout of 10 seconds
- 9600 bits per second
- 8 Data Bits
- No Parity
- DTR/DSR Handshaking
- 1 Stop Bit



TIMEOUT Settings

The Timeout is used to tell the A700 how long to wait for data from one port before switching to the other port. A Timeout of 10 seconds is recommended for most applications and 20 seconds is recommended for CAD, Windows and programs which tend to periodically pause during printing.

DIP Switch Settings

Table 4-1

Switch	Function	OFF	ON
1	Timeout	20 sec	10 sec
2	Handshaking	DTR/DSR	Robust Xon/Xoff
3	Bits Per Second (refer to Table 4-2)		
4			
5			
6	Data Bits, Parity & Test Mode (refer to Table 4-3)		
7			
8			

Table 4-2

Switc	300	600	1200	2400	4800	9600	19.2K	38.4K
3	Off	On	Off	On	Off	On	Off	On
4	Off	Off	On	On	Off	Off	On	On
5	Off	Off	Off	Off	On	On	On	On

Table 4-3

Switch			Data Bits	Parity	Stop Bits	Self Test
6	7	8				
On	On	On	8	Even	1	No
On	On	Off	8	None	1	Yes
On	Off	On	8	Odd	1	No
On	Off	Off	8	None	1	No
Off	On	On	7	Even	1	No
Off	On	Off	7	None	2	Yes
Off	Off	On	7	Odd	1	No
Off	Off	Off	7	None	2	No

5 CABLE REQUIREMENTS

Use Shielded Cable

Alfatron Pty Ltd recommends the use of shielded cable with all of its products. Shielding reduces EMI radiation and improves noise immunity. This will help to minimise interference to other equipment and will improve the communications reliability.

The recommended cable construction is as follows:

(1) Take the shield (surrounding cable wires) and solder it to the Frame Ground (FG) pin.

If FG is not available then connect the shield to Signal Ground but, in this case, always use a separate wire to connect Signal Ground at both ends.

(2) The shield must only be connected at one end of the cable and must run the full length of the cable.

(3) We recommend connecting shield at the cable end which is not attached to the A700.

6 CABLE EXAMPLES

Diagram 1. Serial Cable for IBM PC/XT and PS/2

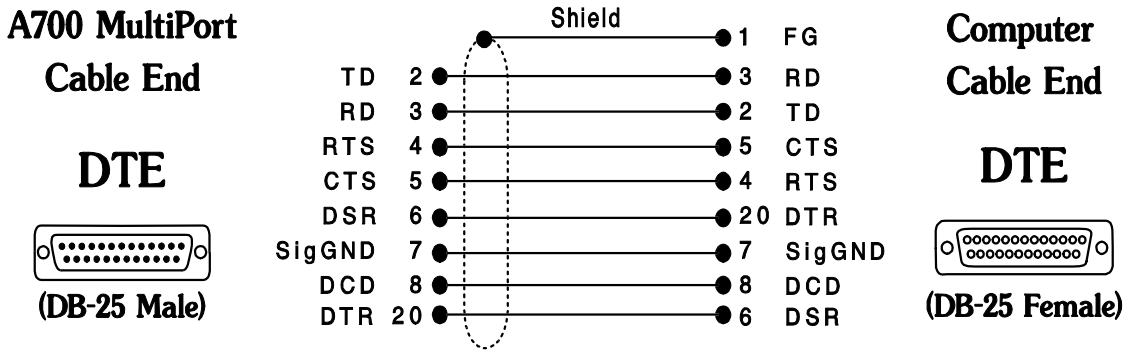


Diagram 2. Serial Cable for IBM AT

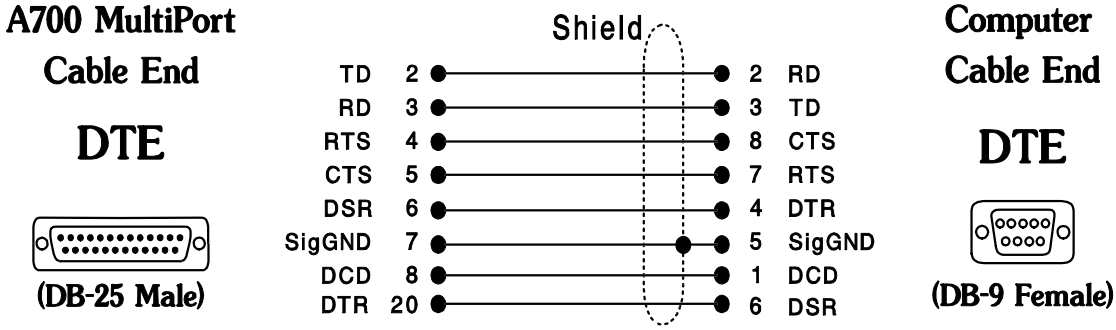
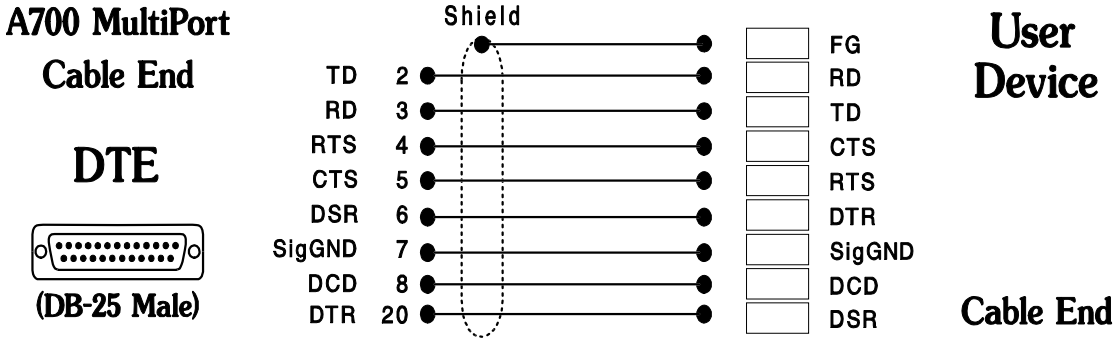


Diagram 3. Serial Cable for Other Devices



7 PORT PINOUTS

Centronics Parallel Port

Pin	*Signal*	*Description*	*Pin*	*Signal*	*Description*
1	Data Strobe	Active Low	19	Ground	-
2	Data Bit 1	Active High	20	Ground	-
3	Data Bit 2	Active High	21	Ground	-
4	Data Bit 3	Active High	22	Ground	-
5	Data Bit 4	Active High	23	Ground	-
6	Data Bit 5	Active High	24	Ground	-
7	Data Bit 6	Active High	25	Ground	-
8	Data Bit 7	Active High	26	Ground	-
9	Data Bit 8	Active High	27	Ground	-
10	Acknowledge	Active Low	28	Ground	-
11	Busy	Active High	29	Ground	-
12	Paper End	Pulled Low	30	Ground	-
13	Select	Pulled High	31	Initialize	Not Connected
14	Autofeed	Pulled High	32	Error	Pulled High
15	Not Connected	-	33	Ground	-
16	Ground	-	34	Not Connected	-
17	Ground	-	35	Not Connected	-
18	Not Connected	-	36	Select In	Pulled Low

RS-232C Serial Port

The RS-232 Serial Port of the A700 MultiPort is configuired as DTE.

Pin	*Status*	*Signal*	*Description*
1	Used	FG	Frame Ground
2	Output	TD	Transmit Data
3	Input	RD	Receive Data
4	Not used - Pulled High	RTS	Request To Send
5	Not used - Pulled High	CTS	Clear To Send
6	Input	DSR	Data Set Ready
7	Used	SG	Signal Ground
8	Not used - Pulled High	DCD	Data Carrier Detect
20	Output	DTR	Data Terminal Ready
22	Not Used - Pulled High	RI	Ring Indicator

8 SPECIFICATIONS

CPU: 80C31 Microprocessor

Parallel Ports: Centronics Parallel
Input - 36-pin Centronics female connector
Output - 36-pin Centronics male connector

Serial Port: Asynchronous RS-232D
Full duplex communication
DB-25 female connector

DIP Switch Selection:

Baud Rate: (bps)	300, 600, 1200, 2400, 4800, 9600,19200 and 38400.
Data Bits:	7 or 8
Parity:	None, Odd or Even
Stop Bits:	1 or 2
Handshaking:	Software (Robust Xon/Xoff) Hardware (DTR/DSR)

Flow Control Buffer: 60 byte receive buffer

LED Indicators:

Power On	(Yellow)
Receive Data	(Green)
Transmit Data	(Green)
Data Error	(Red)

Power Supply: 5Vdc from printer parallel connector - Pin 18

Dimensions: 154mm x 95mm x 13mm

Weight: 225 grams

Operating Temperature: 0° to 40° C

Stroage Temperature: -20° to 70° C

All specifications subject to change without notice