

Farnell Order Codes 654-632 and 882-884

Function

The unit is designed to interface between an RS232 port and a standard LCD display module based on the Hitachi HD44780 controller. Control codes are interpreted while standard ASCII characters are passed through to the display.

Control Codes

- ^A 01h CLEAR DISPLAY
- ^Bn 02h CLEAR LINE n (where n = 0 to 3 represents lines 1 to 4)
- ^Cxx 03h LINE 1 POSITION
- ^Dxx 04h LINE 2 POSITION
- ^Exx 05h LINE 3 POSITION
- ^Fxx 06h LINE 4 POSITION

where xx is the position on the line and is decoded from the ASCII table below

ASCII	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
Hex	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Position	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Remembering the cursor starts at 0, the following examples illustrate line positioning
 e.g. to position the cursor at the start of line 1 send ^C00
 to position the cursor at position 5 on line 2 send ^D04
 to position the cursor at position 12 on line 3 send ^E0;
 (; = 12)
 to position the cursor at position 20 on line 4 send ^F13 (10 = 17) + 3 = 20

- ^H 08h CURSOR ON
- ^I 09h CURSOR OFF

Interface

J1 - data link and power feed

- 3 RS232 data in
- 5 0V
- 9 +12v power feed

J4 - power feed

- 1 0V
- 2 0V
- 3 from pin 9 of J1
- 4 +9-18V power feed

* if power is to be fed via the RS232 lead, link pins 3&4 of J4 and feed from the host end of the cable

The module is not designed for use with the 4x40 displays.

NOTE Some LCD modules have slower response times than normal. This leads to irregular characters being displayed. If this occurs, increase the delay time

Switch Settings

Switch settings are read on power up only.

1	2	3	4	5	6	7	8	Function
1	1							600 baud
0	1							1200 baud
1	0							2400 baud
0	0							2400 baud
		1	1					1 line
		0	1					2 lines
		1	0					4 lines
		1	1					4 lines
				1	1	1		8+8 characters
				0	1	1		8 characters
				1	0	1		16 characters
				0	0	1		20 characters
				1	1	0		24 characters
				0	1	0		32 characters
				1	0	0		40 characters
				0	0	0		test mode

Test mode shows "Farnell" on line 1 and "654-632" on line2

LCD connections

Pin	Function
1	Vss
2	Vdd
3	Contrast
4	RS
5	R/W
6	E
7	DB0
8	DB1
9	DB2
10	DB3
11	DB4
12	DB5
13	DB6
14	DB7

Other Products

- LCD MC 654-632
- LCD MC x 10 882-884
- Developers Pack 942-698
- Includes Assembler, Source Code, 2 x PICless 654-632 Boards

Bluebird Electronics
 Suite 2, Townsend Barn, Poulshot,
 Devizes, Wilts SN10 1SD
 01 380 827 080

email info@ bluebird-electronics.co.uk
<http://www.bluebird-electronics.co.uk>