

Brother FAX-645 LCD initialisation sequence

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LCD 6 pin interface : DATA, CLK, STB, GND, +5V, GND

DATA Data, write clocked on rising edge of CLK.
Sent least-significant-bit first, 8 bit words, 800uS delay between bytes.

CLK Clock, 28uS (35.714kHz), only present during STB period.

STB Strobe, active low, transitions on the falling edge of CLK. Held low for duration of a byte, or continuously for duration of a byte sequence.

GND 0V

VDD +5V

LCD initialisation:

```
08 20 f8 01
06 0c 40 0a 00 0e 01 0f 11 0f 00 0a 00 0e 11 11 11 0e 00 0a 00 11 11 11 13
0d 00 06 09 1c 80 1c 09 06 00
0c 80 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 80 0c
...
0c 80 50 4c 45 41 53 45 20 57 41 49 54 20 20 20 20 20 8f 0c
...
```

Initial code, each byte written with a single pulse to the STB line,

```
08 Display off, cursor off, blink off
20 Mode 4 bit, 1 line, 5x7 font
f8 Set Data cursor to 0x78 (but writes no data as strobe goes high again)
01 Clear display.
```

20mS delay

Second initialisation sequence after 24mS, 800uS between bytes

```
06 Right data entry, no scroll
0c Display on, cursor off, blink off
```

The following bytes are written with STB held low for the duration

```
40 Write to character generator (characters 0, 1, 2, 3 written)
0a .■.■.
00 .....
0e .■■■.
01 .....
0f .■■■■.
11 ■■■■.
0f .■■■■.
00 .....
```


The following two bytes are written with separate strobes and terminate the displayed character write

80 Position cursor to position 0, but writes no characters as strobe goes high again

0c Display on, cursor off, blink off

Text written at 198mS, then repeated sequence of blanking and rewriting again at 2.9S, 3.6S and 4.0S

0C Display on, cursor off, blink off

The following bytes are written with STB held low for the duration

80 Write characters to display starting at cursor position 0

"PLEASE WAIT "

50

4c

45

41

53

45

20

57

41

49

54

20

20

20

20

20

The following two bytes are written with separate strobes and terminate the displayed character write

8f Position cursor to position 15, but writes no characters as strobe goes high again

0c Display on, cursor off, blink off

At 4.5S Display then blanked again and

"TELEPHONE " displayed