

JP9 LCD Cable for Chickadee Instructions

Parts Supplied

- 1) 1 2 ft. cable with IDC16 header on one end and IDC14 header on other end
- 2) 1 IDC16 header

The JP9 LCD Cable is designed to connect LCD character modules which use the HD44780 controller to the Chickadee LCD Port. There are two standard pin configurations for LCD modules: a single row of 14 pins (14x1), and a dual row of 7 pins (7x2). These will accommodate LCD modules up to 80 characters with headers mounted on the back side of the module. Unfortunately, there are no consistent industry standards for 40x4 LCD connections. In the absence of a standard, the JP9 cable has been designed for easy modification to work with your 40x4 LCD module.

When connecting a LCD module to the Chickadee for the first time, use an adjustable current-limiting power supply if you are not sure of the correctness of the connection. Set the current limit for about 300 mA. Then power up the Chickadee and LCD module. If the current limit kicks in, the connections may not be correct. The worst thing that can happen if the LCD module connections are incorrect is the module will be destroyed -- the Chickadee will not be damaged by incorrect LCD cabling.

Connection to LCD modules of 80 or fewer characters

No modification of the JP9 cable is required. Connect the LCD module as shown in Figure 1.

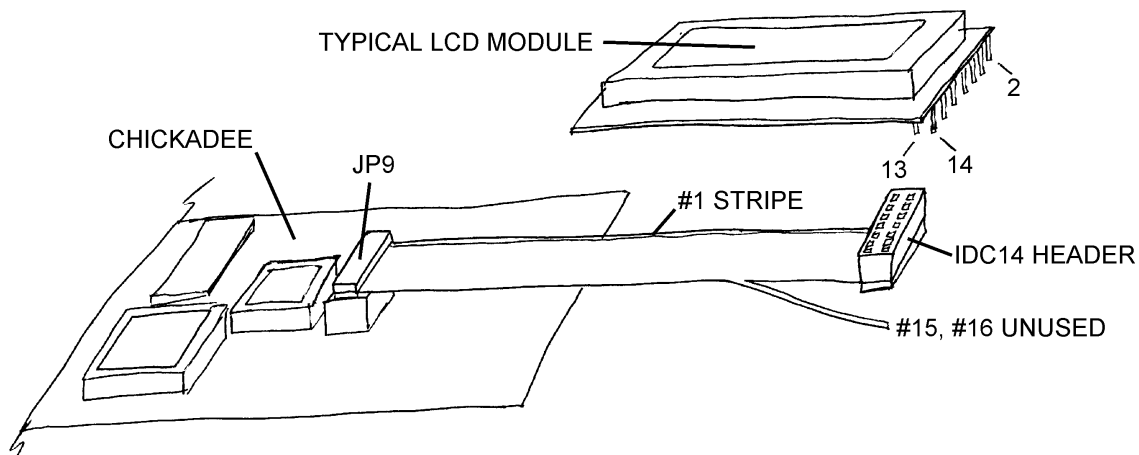


Figure 1

Connection to 40x4 LCD modules

Modification of the JP9 cable is required for use with your 40x4 LCD module. Two example configurations are shown; one for Optrex 40x4 and one for FEMA 40x4.

Optrex 40x4 modules require that the first two conductors (red striped wire = #1, adjacent wire = #2) be swapped. The best way to do this is to take a sharp knife and slit the bond between wires #2 and #3 in the cable for about 2 inches. Then twist the #1 and #2 wires over so that #2 is the outer wire and the red striped wire #1 is the inner wire. Now bring the two spare wires (#15 and #16) over the cable to the opposite side and place them next to the previously swapped #1 and #2 wires. See Figure 2. Carefully place these wires in the supplied IDC16 header and squeeze the header halves together in a vise. Make sure that the wires do not move out of position during this step.

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JP9 Cable Wire Sequence:

<u>Before</u>	<u>After</u>
1 (red stripe)	15
2	16
3	2
4	1 (red stripe)
5	3
6	4
7	5
8	6
9	7
10	8
11	9
12	10
13	11
14	12
15	13
16	14

FOR OPTREX 40X4 LCD MODULES

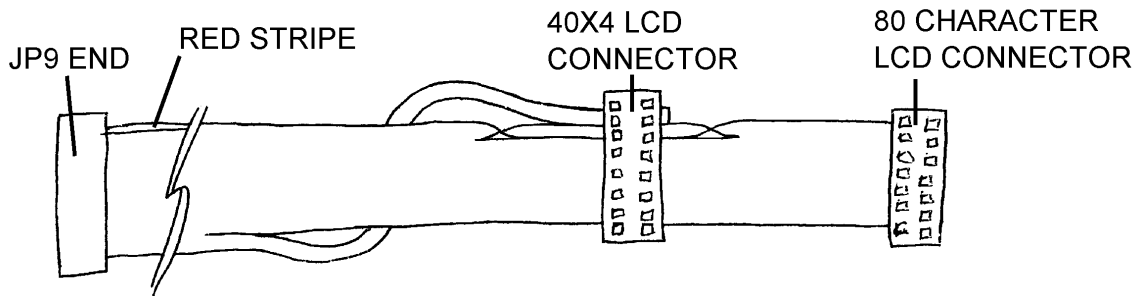


Figure 2

FEMA LCD modules do not require any rearrangement of the wires in the JP9 cable, only the attachment of the IDC16 header at a point before the two spare wires split off. See Figure 3.

FOR FEMA 40X4 LCD MODULES

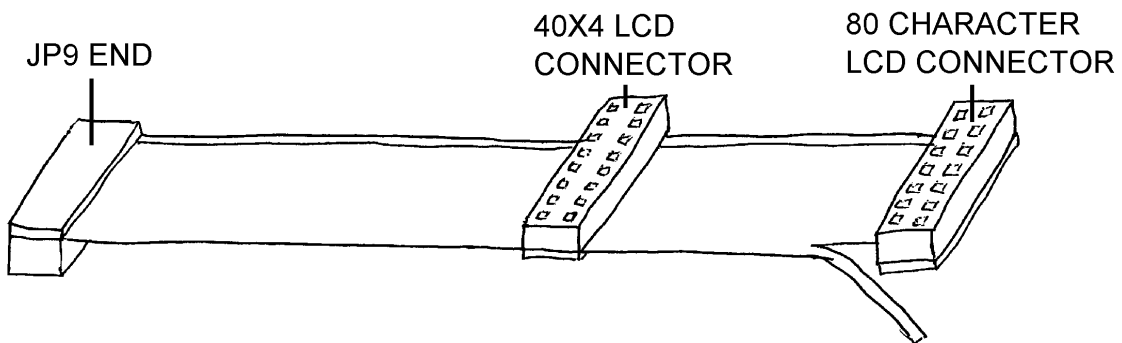


Figure 3