tynemouth software

TYNEMOUTH SOFTWARE VIC20 DIAGNOSTICS LOOPBACKS

LOOPBACK CONNECTORS

To assist the diagnostics software checking the various ports of the VIC20, a set of loopback plugs are used. These are assembled from a single PCB. The first step is to break out the 4 individual boards, and clean up the edges. Be aware fibre glass dust is not good, so use suitable protection in a well ventilated area.

JOYSTICK PORT LOOPBACK

PARTS

- Joystick Loopback PCB
- 9 way D female connector (solder bucket type)

ASSEMBLY

Push the PCB between the pins on the back of the connector. It may be a tight fit depending on the brand of socket. All the pins should line up with solder pads, 5 on the top, 4 below. Once aligned, solder the connector into place.

DATASETTE PORT LOOPBACK

PARTS

- Datasette Loopback PCB
- 12 way (2x6) 0.156" edge connector. Pin or solder tab version
- 2 x 27 Ω ½W resistors

ASSEMBLY

Solder the two resistors in place. Then push the PCB between the pins on the back of the connector. To hold this in place, it may be necessary to bend the pins inwards slightly so that they make contact with the PCB. All the pins should line up with solder pads, 6 on the top, 6 below. Once aligned, solder the connector into place.

KEYBOARD LOOPBACK

PARTS

- Keyboard Loopback PCB
- 20 way 0.1" header socket – right angled or straight

ASSEMBLY

Remove the second pin along in the connector, with will align with the missing pin on the keyboard connector and the gap on the PCB. Solder the connector in place so the board is vertical above the socket when completed. Right angled connectors will use the holes, straight connector could be soldered to the pads only.

USER PORT LOOPBACK

PARTS

- User port Loopback PCB
- 24 way (2x12) 0.156" edge connector. Pin or solder tab version

ASSEMBLY

Push the PCB between the pins on the back of the connector. To hold this in place, it may be necessary to bend the pins inwards slightly so that they make contact with the PCB. All the pins should line up with solder pads, 12 on the top, 12 below. Once aligned, solder the connector into place.

PARTS

- 6 pin DIN plug

ASSEMBLY

Solder a short length a wire (an offcut from one of the resistor leads is ideal) between pins 1 and 3 of the DIN connector, and attach a purple wire to pin 5 and a blue wire to pin 4 (or use whatever colours you find aesthetically pleasing or happen to have lying around). Leave pins 2 and 6 unconnected and make sure none of the other pins are touching.
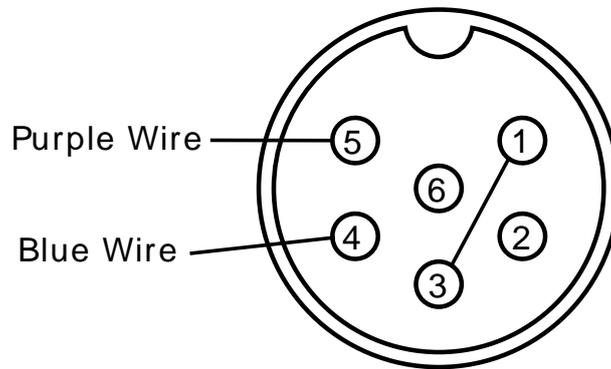
This view is looking into the socket on the back of the VIC20, and the back of the loopback connector.

These two wires attach to the userport loopback connector. The blue wire goes to the first of the three pins on the right hand side, and the purple to the middle. The pin closest to the edge is unused (it is 0V, and could be connected to pin 2 or used to attached a screened cable, neither of which are required).

The pin on the left is connected to the keyboard loopback, using another blue wire. The wire can be threaded through the extra holes on the PCB as a strain relief, if required.