Assembly Notes

Stainless Steel Case
For Nixie Clock
Type Spectrum 18 / 1040

REVISION HISTORY

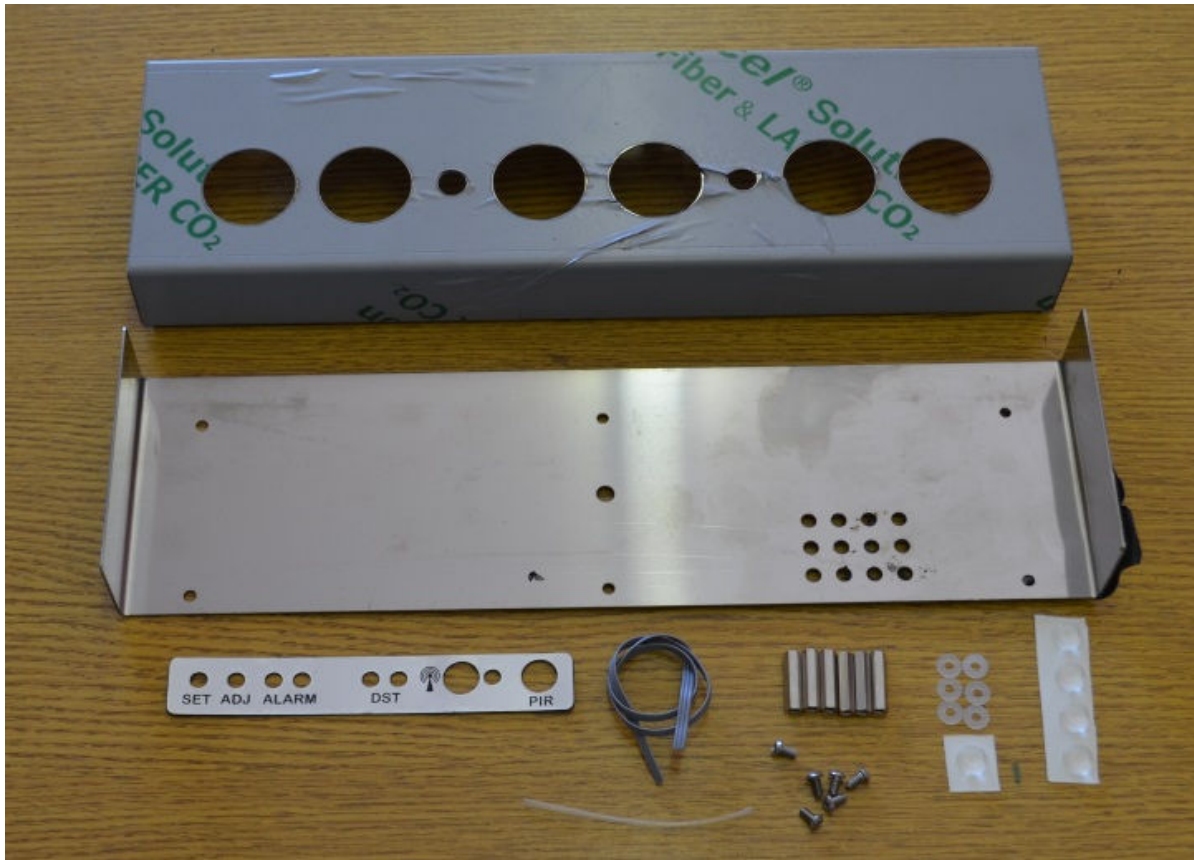| Issue Number	Date	Reason for Issue
1	20 July 2016	New document

1. APPLICABILITY

This case is suitable for the following versions of the Spectrum Nixie clock:

Spectrum 18: PCB date 1 October 2015, Assembled according to Issue 6 instructions

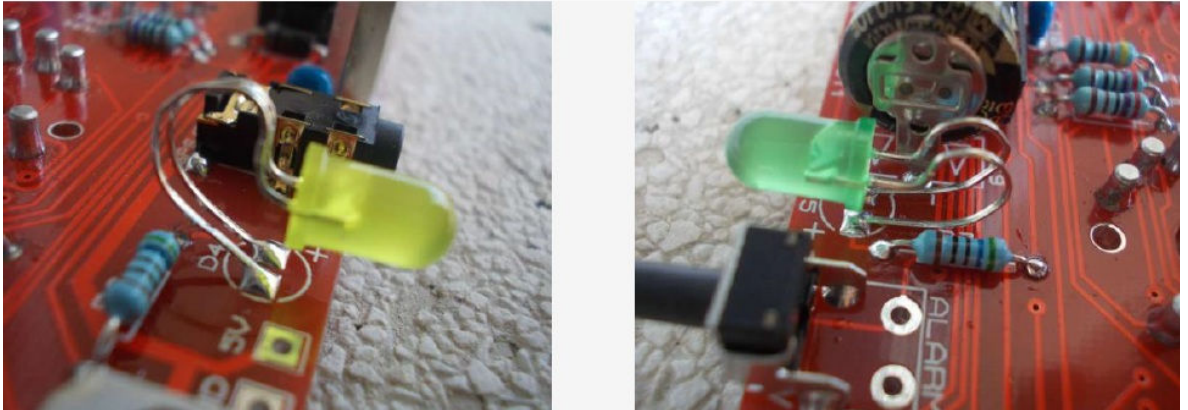**Spectrum 1040:** PCB date 5 November 2015, Assembled according to Issue 6 instructions

2. PACK CONTENTS

3.   ASSEMBLY GUIDE

3.1   Prepare the PCB
D4, D6 (5mm Yellow LED)
D5 (5mm Green LED)
LEDs D4, D5 and D6 need to be mounted as shown below (your PCB may look a little different, but note the bending of the LED leads). The originally longer lead goes to the pad marked +.

Place a self adhesive rubber foot on the base of the HV module as shown, to prevent any possibility of contact with the metal case
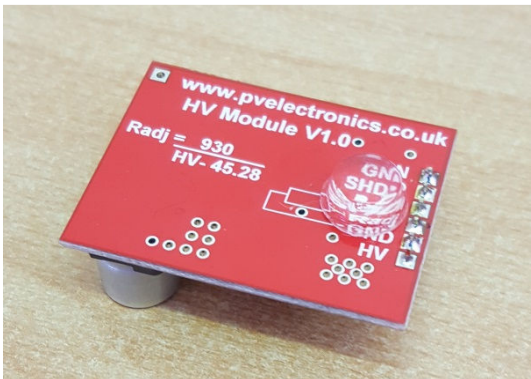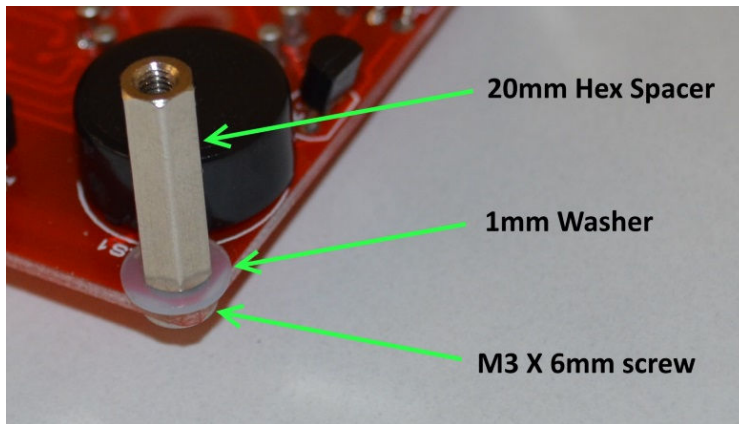

3.2   Prepare the Case
Carefully remove all protective film from the stainless steel case components. Peel from one corner.
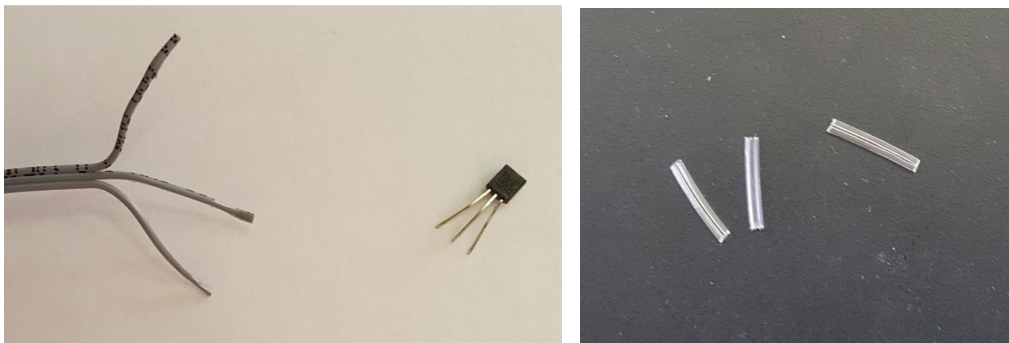
3.3 Mount the PCB spacers on the PCB

Mount the components onto the PCB as shown below. Do this for all six PCB mounting holes.

Labels: 20mm Hex Spacer, 1mm Washer, M3 X 6mm screw

### 3.4 Prepare the DS18B20 Temperature Sensor

Separate the 3 way cable as shown and part the 3 leads of the DS18B20 a little. Also cut 3 small pieces of clear heat shrink insulation about 10mm long.


Strip 2mm of the insulation from the end of each of the 3 wires, and tin the exposed copper with solder. Then slip the heat shrink pieces over as shown below:

Then solder onto the DS18B20, slip the heat shrink over the exposed joints and shrink with a heat gun:
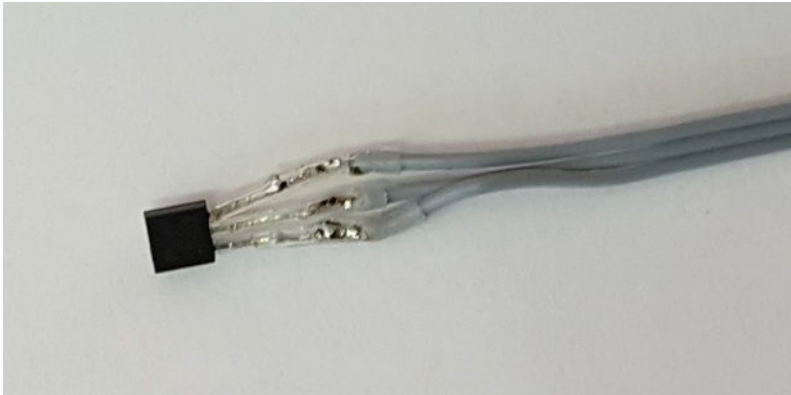
Finally, strip the insulation from the other end and solder to the PCB. Take great care to ensure the IC has the correct orientation with respect to the PCB markings. There is no need to feed the wires into the PCB holes, you can just lay the wires over the pads and solder in place:
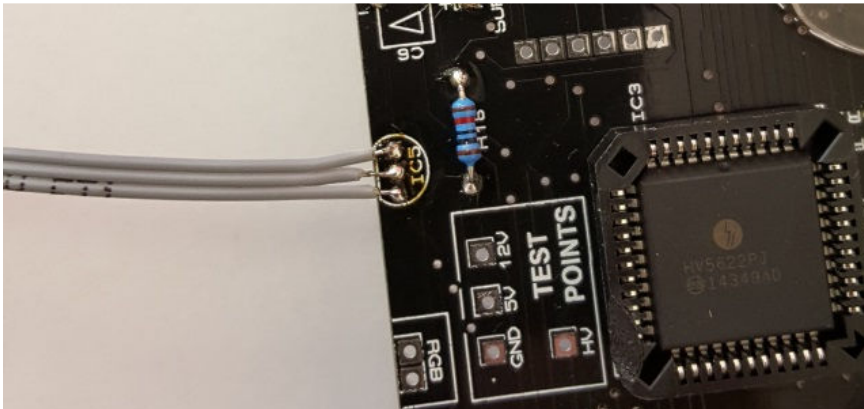
3.5 Apply rear legend

Remove the film from the adhesive side and attach the legend as shown. At the end of the case assembly, also remove the front film from the legend.

3.6 Feed the DS18B20 sensor through

From the inside of the case, feed the DS18B20 sensor through the 5mm rear hole which does not have a legend close to it.

3.7 Place PCB in case

Start by feeding both neons into their holes in the top part of the case. Then you can tilt the PCB forwards so that the front hex spaces clear the case. Push forwards, and then tilt the PCB back again and the rear hex spacers will clear the case.

At this point, the PCB will be loosely in the case top part.

It is now necessary to work the 3 LEDs into their respective holes. Temporarily secure the PCB in the correct position by using 4 of the 6mm screws to attach the 20mm hex spacers to the top case part.

When the LEDs are in their holes, you can remove the screws but do not allow the PCB to move with respect to the case, or the LEDs will come out of their holes. If you grip the assembly as shown below, you can keep the PCB in the correct position whilst you remove the screws and move to the next step:

3.8   Place base component
Keeping the PCB in position, place the base component, and then secure using the six M3 6mm screws. Do not overtighten the screws. Place the 4 rubber feet at the corners of the underside of the case.

3.9   Final assembly
Install the tubes into their sockets, remove the film from the rear legend and finally place the glass neon covers over the AM / PM neon indicators.