TECHNICAL INFORMATION DOCUMENT

Only For The Sinclair Spectrum models +2A, +2B & +3

R44 Mod (Scart Blanking Signal Fix) v1.5 -12/02/2019

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ONLY CARRY OUT THIS MOD IF YOU ARE SUITABLY EXPERIENCED IN BASIC SOLDERING AND ELECTRONICS REPAIR

This Modification will usually cure a flickering, ghosting or very dark picture, when using an RGB Scart Lead with an LCD TV. Some TV's will work fine, other LCD TV's won't. A CRT type TV will usually work fine, without this mod, and will always display the best quality picture.

1. Open the Spectrum case, taking care not to damage the keyboard ribbon cable.
2. Carefully place the keyboard on the left side of the Spectrum base (or disconnect the keyboard altogether).
3. Locate R44 (1K Ω ¼ watt resistor) this is the 12v line that feeds pin 16, (blanking signal) of the Scart plug. (Pin 1 on the DIN plug).
4. Solder in another 1kΩ resistor in parallel as in Fig 1.

This effectively halves the resistance of R44, and combined with the 75Ω impedance of the blanking signal of pin 16, forming a voltage divider circuit, will give a voltage of about 1.5v which will now switch the TV into RGB mode, and should fix the screen flicker and or ghosting of the picture, when used with some LCD TV's. Without this mod the Spectrum can only supply about 0.8v to the blanking signal, and on some TV's this won't be enough to switch the TV into RGB mode, so will switch to Composite video (CVBS) mode instead, and display the symptoms above. Blanking signal Specs - CVBS MODE 0-0.4V RGB Mode 1-3V

The above method, is the easiest way to modify R44, as the board doesn't need to be removed, but you can also replace R44 altogether with a single 470Ω resistor.

I DON'T RECOMMENDED BYPASSING R44 ALTOGETHER, WITH A LINK, AS THIS WILL REMOVE ALL CURRENT LIMITING, AND A SUITABLE RESISTOR WILL THEN NEED FITTING TO PIN 16 OF THE SCART PLUG TO LOWER THE VOLTAGE TO A SUITABLE LEVEL.

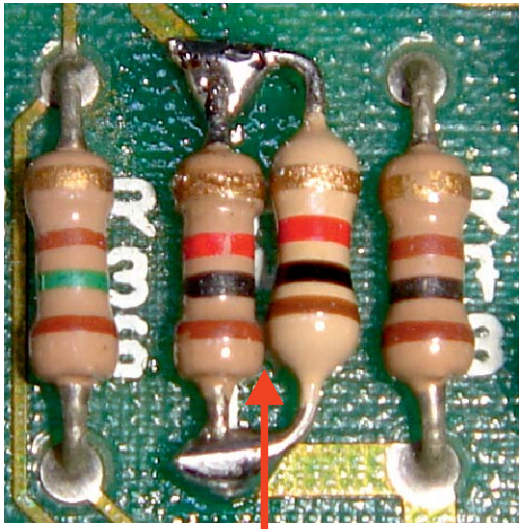
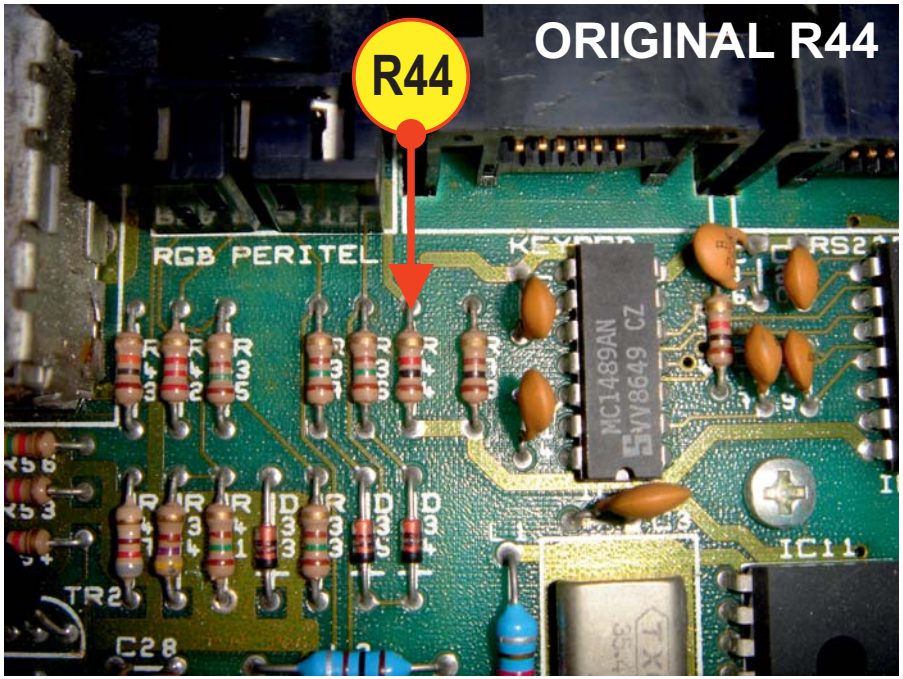


FIG 1. R44 MOD



NOT FOR THE SPECTRUM +2 (GREY MODEL)