

## **TECHNICAL INFORMATION DOCUMENT** Only For The Sinclair Spectrum 128K (Toastrack)

RGB Scart, Blanking Signal Mod v1.1 - 24/09/2019

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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 (Picture sync issue), ghosting or very dark picture, when using an RGB Scart Lead with some LCD TV's, by disconnecting the Composite video signal on pin 1 of the Spectrums video socket, and replacing it with +12V, which with attenuation, provides the correct blanking signal voltage on pin 16, of the Scart plug, thus switching the TV into RGB mode.

- **1.** Open the Spectrum case, taking care not to damage the keyboard ribbon cable. Remove the circuit board.
- 2. Remove resistor R134 and replace with a 4700 ¼ watt resistor, but only solder in the left side leg of the resistor (at the RGB connector side)
- 3. Bend the right leg of the resistor R134, at a right angle and solder to the right (+) side of C131 (Electrolytic Capacitor) which is +12V DC. Make sure the resistor leg doesn't touch everything else!

The impedance of R134 (470Ω), combined with the 75Ω input impedance of the blanking signal on pin 16 of the Scart plug, forms a voltage divider circuit, which will supply a voltage of about 1.5v DC on pin 16 of the Scart plug, which will now switch the TV into RGB mode, and should fix all the issues mentioned above. Without this mod, the Spectrum 128 uses the Composite video signal to supply the blanking signal voltage, 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 (Composite Video) mode 0-0.4V RGB mode 1-3V.

