

11. TUNING THE VIDEO CIRCUIT FOR A BETTER QUALITY DISPLAY

IMPROVING THE MOVING STRIATIONS ON THE SIDE OF CHARACTERS

Many Spectrum computers suffer from annoying striations on the side of video characters. These are caused by an interaction of the ULA 14MHz clock with the video display which it is used to generate. The striations can be improved by altering the clock frequency very slightly using VC1.

To do this, you should fill the Spectrum screen with some text. Any old program listing will do. Then turn the computer over so that it is resting on the keyboard. If you have an early version of the Spectrum, a small hole should be present on the right hand side. A small screw head should be visible inside the hole. If your Spectrum has not got a hole then it will be necessary to open the case. To do this, remove the 5 retaining screws that are visible on the underside of the Spectrum and lift off the keyboard as far as you can. Locate and remove the small retaining screw on the component side of the board near the middle. The circuit board should now be free from the bottom of the case. Turn the circuit board upside down. You should see a small hole with a screw head inside on the right hand side of the board. Using a small screwdriver carefully turn this screw a little way clockwise then back a little way anticlockwise. This should give you a feel for the effect of the adjustment. You should then be able to adjust the setting to produce the most pleasing display possible. Note that turning the screw through one complete revolution will set the adjustment back to its original value.

Sometimes it will help to readjust the channel setting on your television. Unfortunately, as the computer warms up, the crystal expands and its frequency changes. Bad striations may therefore reoccur whenever the temperature of the computer changes a lot. You should therefore let it warm up a bit before trying any adjustments. If the striations do become bad again, the only solution is to readjust the frequency as before using VC1.

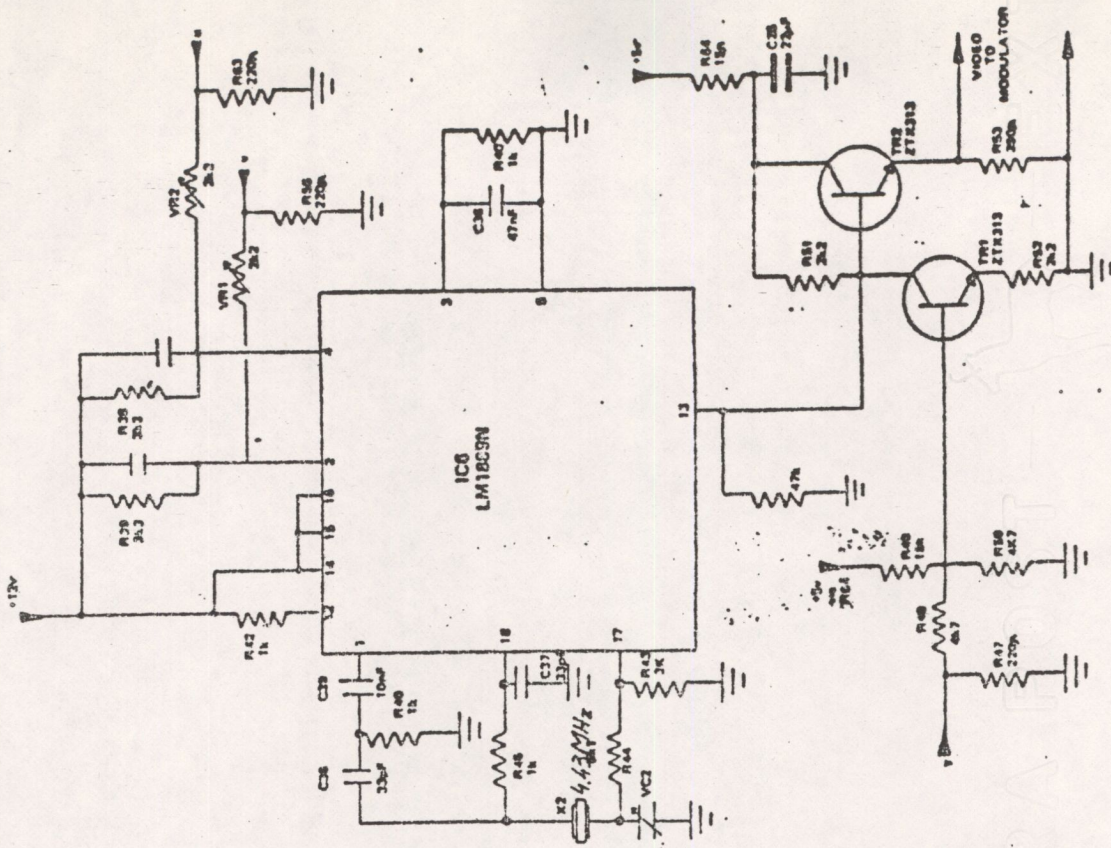


FIG 9b - VIDEO CIRCUIT DIAGRAM