

# ZX81 ULA Module.

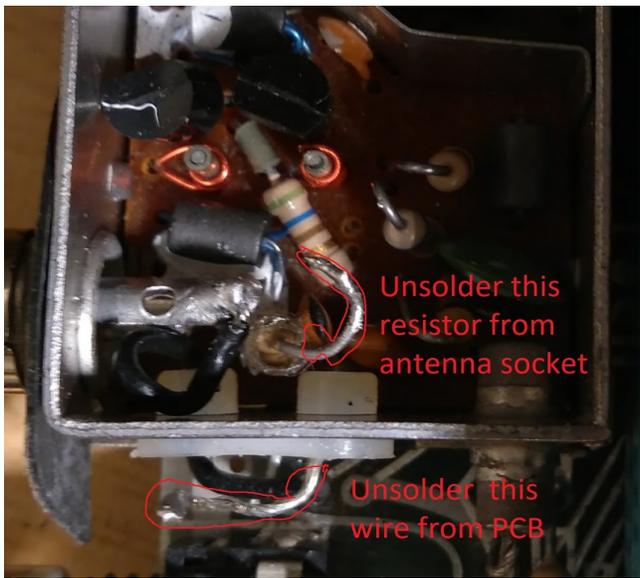


The replacement ZX81 ULA module is designed with modern surface mount components and recreates the logic of the original Ferranti Chip.

- No more dark unreadable images thanks to composite video output with back porch.
- Very simple mod to route video signal direct to antenna socket.
- Includes preamp stage to improve tape loading.
- On board crystal oscillator for improved frequency control.
- M1not can be enabled if required.
- Machined turned pins fit most IC sockets, but turned pin socket is recommended.

It is designed to output a black and white composite video signal ( complete with back porch so no more dark images ) into either  
75 ohm load composite input ( most tv's and monitors )  
Hi-impedance composite input (oddball tv's and some monitors )  
In most cases the tv type link will be left open circuit.

To take advantage of this composite video you will need to make a small non-destructive modification to your Zeddy as follows.



After unsoldering the resistor and the feed into the modulator solder a short piece of wire around 2 inches in length between the PCB were you unsoldered the modulator wire from and the antenna socket. On the um1233 modulator this new wire can be threaded through the plastic grommet and the lid put back on.

The TV-type link on the ULA when shorted provides a 75 Ohm load across the video signal in the case that your tv / monitor does not have the standard 75 Ohm impedance on its composite input.

If you prefer not to solder your ZX81 the ULA can be made to drive the UM1233 modulator as used in the UK by putting a 1 K resistor across the tv type link.

Optional M1NOT can be enabled by connecting pin 35 to ground. This location is not populated on the ULA replacement module.

This is PIN 1 with the square pad. ----->



←--- this unpopulated hole is M1not enable

