

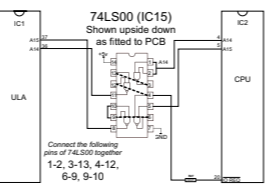
V1.00 DRAWN 2023 by David "Sleamy" Briggs .NOT FOR RESALE

KEY
DIODES
RESISTORS (140R and 5% tolerance) UNLESS STATED
CERAMIC CAPACITOR
ELECTROLYTIC CAPACITOR

Notes:

*1 "Dead Cockroach" mod, required for ULA 5C102E only. Bypasses a fault in the ULA I/O Contention Handler by rerouting CPU IOREQ to ULA Memory Contention Handler, via a 74LS00N. This allows the ULA to pause the CPU /CLK if it's making an I/O request while the ULA is writing to Screen RAM.

*2 Some Issue 1 Coil Windings had the following: Inner (primary 41 turns) 1-2; outer (secondary 15 turns) 3-4. This was later changed to the standard 39 and 13 turns. It's recommended to use an original Sinclair unregulated PSU with these coils. Using a 9V Switching PSU can cause a recurring problem with TR4 blowing.



*3 Connect a 100pF Capacitor between GND and LH side of R32. Creates a delay in the /RAS timing signal. For 5C102E ULA only.

*4 32k Upper RAM Expansion Board connectors.

*5 Factory modification. Add a resistor between 10K and 47K from the negative of C25 and pin 13 of LM1889N (Chroma Subcarrier) to balance RED and YELLOW.

*6 These capacitors get hot due to the heatsink location. It's recommended to use 105C rated capacitors in these locations.

*7 R57 connects the lower memory /RAS line to CPU /RFSH. This is not required. The ULA accesses lower memory often enough to sufficiently refresh DRAM. R57 should be removed to avoid excessive power consumption.

