

G1SLE Repeater controller parts availability and costing

This project has been designed to be built ,consequently there are no nasty 'hard to get' parts. The main expense is in the 87c51 CPU which accounts for about half of the total cost. However I do feel that the advantages of using this device are well worth the expense. I could have used the much cheaper 80c31 and an external EPROM which would have resulted in a significant saving ,this would of course have also caused a significant increase in complexity and a likely increase in radiation of CPU generated noise ,which in the existing design is virtually completely absent. The following list is for guidance only and I would suggest that anybody buying all these parts new from the sources given is showing a sad lack of initiative!

Resistors can be just about any 0.25 watt metal or carbon type ,those resistors associated with the NE567 tone burst decoder should be of reasonable quality.

10,100 and 220nF capacitors again just about any will do ,the board is laid out for 0.2 inch pitch on all these components but 0.1 inch parts with formed leads would do just as well. Maplins monolithic resin dipped ceramics will do fine at a cost of approx. 25p each

Electrolytic capacitors are any miniature type of suitable voltage rating. 47mH chokes are Toko 10RB series available from Bonex at approx. 50p each.

Presets are all 1 k Ω 22 turn cermet types such as Maplins UH23A at £1.28 each.

Transistors can be just about any npn 100ma or more device I use ZTX 384 or ZTX 300 available from Maplins at 20p each.

Diodes are all the ubiquitous 1n4148 except for the polarity protection diode on the supply input which is an equally ubiquitous 1n4001 both are from Maplins at a few pence each.

Max1232 is from Maplins at £2.59

LM567 Maplins £1.75

LM324 Maplins 45p

87c51 is available from Farnell or RS at £25.00 or secondhand 8751 (non CMOS) types from me at £15.00 inc programming.

Etched undrilled PCB from me at £5.00