SECTION 11

VARIABLE PHASE EQUALISER EQ5/511

Introduction

The EQ5/511 is a switched variable phase equaliser. Eight steps of equalisation are provided which cover resonant frequencies at megahertz intervals from 3 MHz to 10 MHz.

The EQ5/511 is built on a CH1/12A chassis with index peg positions 9 and 10.

Circuit Description

Fig. 11.1 shows the circuit of the EQ5/511.

Each network is an unbalanced equivalent of an all-pass lattice section with a k value of 1·9. Resistors R1 to R8 are included to compensate for differences in Q between the coils and so to improve the impedance of the sections.

The signal to be equalised is introduced on pin 8 of the input connector. The eight networks are in two groups, four around switch SA and four around switch SB. Those around SA have even frequencies of resonance and those around SB odd frequencies of resonance. The switching is arranged so that each network can be used individually or one network from each group can be connected in series.

General Specification

Input impedance	75 ohms when output is terminated in 75 ohms
Insertion loss	Not greater than 0·5 dB, 10 kHz to 6 MHz
Weight	1 lb 5 oz

Maintenance

A detailed method of ensuring that each section is performing correctly is given in Designs Department Specification 6.94(63). A more convenient method is to check the insertion loss and the effect of the equaliser on the shape of a sine-squared pulse. The previously mentioned Specification gives, in addition to photographs of pulse waveforms, a table of insertion loss at various frequencies and for all settings of the equaliser controls.

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See page 11.3 for Fig. 11.1

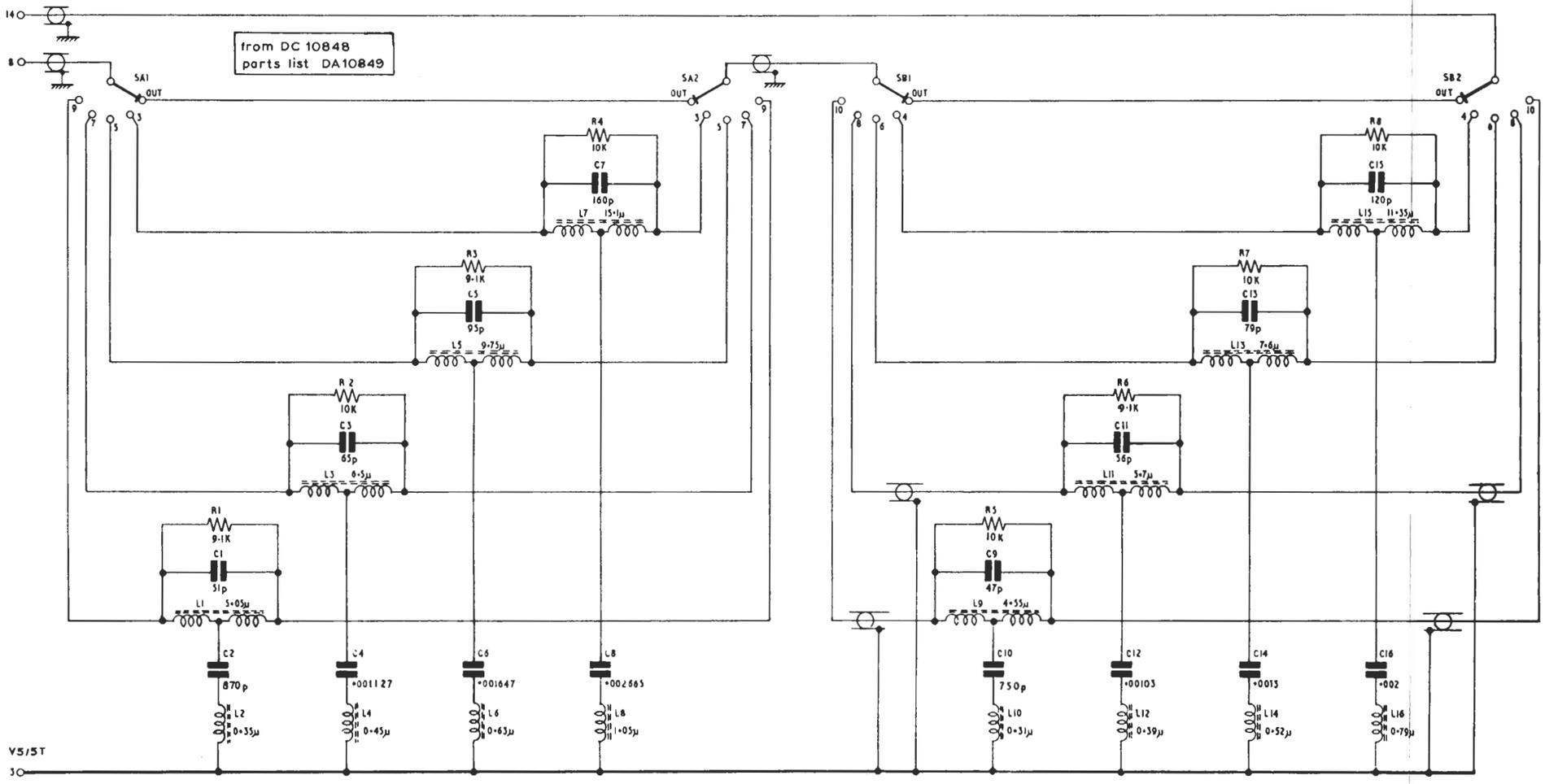

Fig. 11.1 Circuit of the EQ5/511