LINE SAWTOOTH GENERATORS GE1/507 AND GE1/507A

Introduction

The GE1/507 accepts inputs of mixed sync pulses and a variable d.c. line-control input: it produces outputs of mixed sync pulses; a line sawtooth waveform with sync pulses and a d.c. component added; and a reversible and adjustable d.c. supply for a line-control potential divider. The positive or negative excursions of the sawtooth output may be intentionally crushed according to its d.c. component. A dummy partial load is provided that can be switched out by means of a relay circuit. The GE1/507A and GE1/507 are identical except that the GE1/507A has a lower resistance on its line control input.

The GE1/507 is constructed on a CH1/12A chassis with index peg positions 5 and 6.

Circuit Description

The circuit of the GE1/507, given in Fig. 1, has an input buffer amplifier and sawtooth generator similar to that of the GE1/506 described in the previous Section.

The line sawtooth waveform is fed to the emitter of transistor TR9 via an amplitude control RV1. Sync pulses, clipped by diode D2 to remove any mains hum, are fed to the base of transistor TR9. The d.c. input is fed via transistor TR10 to the common collector load of transistors TR9 and TR10 where the signals are mixed. Diodes D3 and D4 limit the excursions of the signal. Transistor TR1 is also connected to this common collector load via a relay contact RL1A-1. This transistor is used to replace part of the external load of the GE1/507 when it is switched out of circuit.

Relay CQ is used to reverse the polarity of the d.c. output to the line-control potential divider.

Test Procedure

The GE1/507 is tested as part of its parent unit 1,2,3.

References to Typical Associated Equipment

1. Keying Waveform Generator PA1/512.
2. Split Screen Effects Unit UN4/501.
3. Split Screen Effects Unit UN4/502.

MJR 2/67

TES 9/71

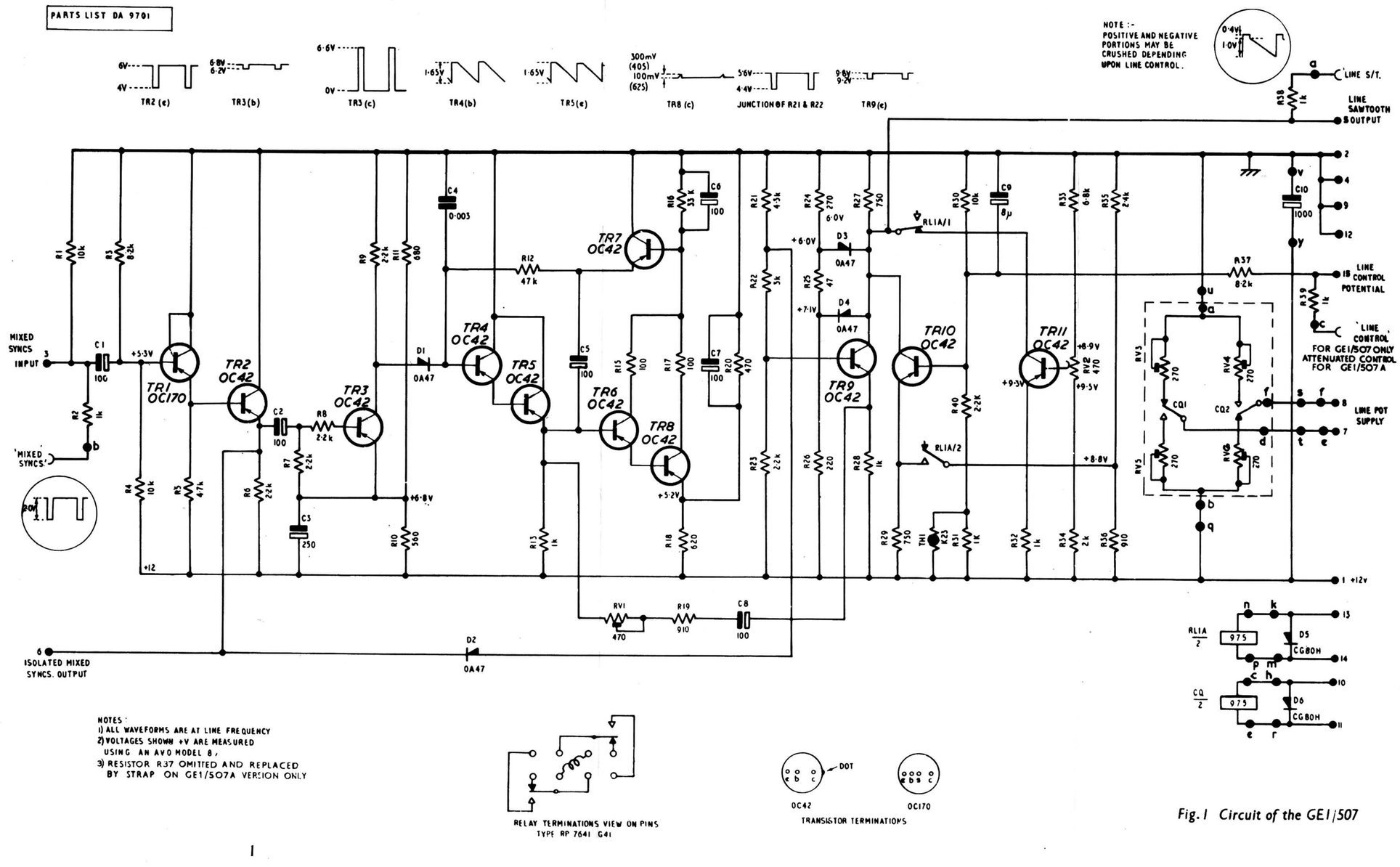


Fig. 1 Circuit of the GE1/507