

## SECTION 48

### TIMING PULSE GENERATOR GE2/548

#### Introduction

THE GE2M/548 provides feeds of sync pulses and delayed trigger pulses which are used to initiate the generation of the component parts of an augmented pulse-and-bar waveform.

The unit, which is a sub-unit of the GE2M/547, is mounted on a printed-circuit board. Power supplies at +12 volts and -12 volts are obtained via the parent unit.

#### Circuit Description

A circuit diagram is shown in Fig. 48.1.

#### *Sync Pulse Generator*

Transistors TR1 and TR2 form an emitter-coupled astable multivibrator which functions as a line-sync pulse generator. When switch SA is in the *Int Syncs* position the output of this generator is applied to the bases of transistors TR3 and TR4. TR3 provides positive-going trigger pulses for use in the bar-delay stage of the GE2/547, as described in the previous section. TR4 forms, with TR5, a window or slicer stage which clips both the positive and negative extremities of the signal. The output of the stage is developed at the collector of TR5 and consists of negative-going line-sync pulses with an amplitude of 0.3 volts.

#### *Trigger Generators*

When trigger pulses are applied to the base of TR6 a positive-going signal is developed at the emitter of TR6 and this is applied, via diodes D4, D8, D12 and D16 to the four monostable trigger-pulse generators consisting of transistors TR8-TR9, TR10-TR11, TR12-TR13 and TR14-TR15.

The delay caused by each of these stages can be varied by altering the value of the relevant timing capacitor (C13, C16, C19 or C22).

The output of the first trigger generator, taken from the collector of TR9, is differentiated and is then applied, via a diode which removes the positive-going portion of the waveform, to pin 12. The other 3 trigger generators function in the same manner and the outputs are taken to pins 13, 14 and 15 respectively.

When switch SA (in the associated GE2/547 unit) is set to *Ext Syncs*, mixed-blanking pulses are fed to the base of TR7. Inverted blanking pulses are developed at the collector of TR7 and these are applied, via diodes D7, D11, D15 and D19, to blank the outputs of the four trigger generators. Thus, when SA is set to *Ext Syncs*, blanking is added to the outputs of the trigger generators.

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See overleaf for Fig. 48.1

Instruction V.10  
Part 2, Section 48

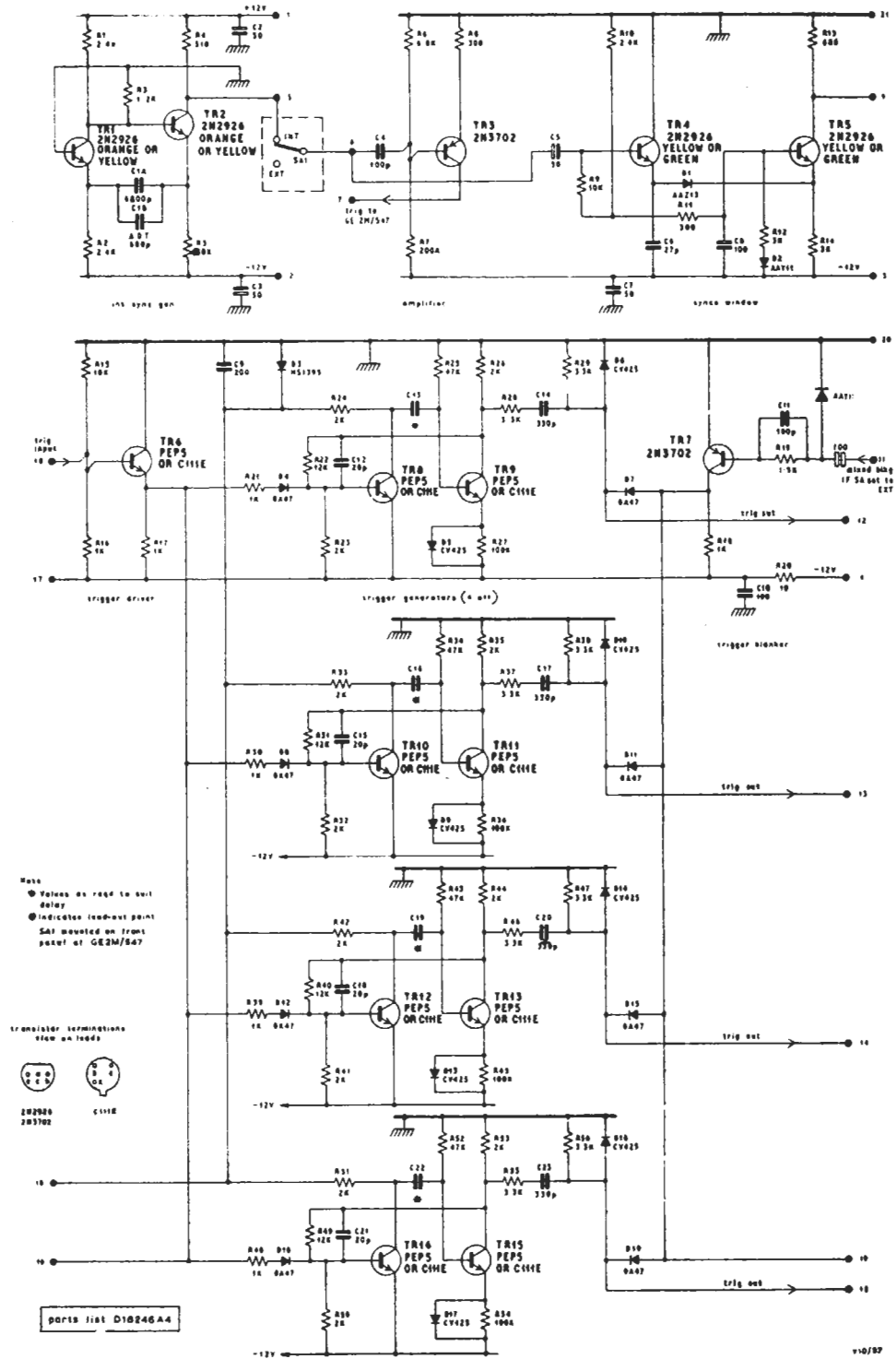


Fig. 48.1 Circuit of the GE2/548