BLANKING PULSE GENERATORS GE2/525 AND GE2/525A

Introduction

The GE2/525 forms part of a Split-screen Effects Unit UN4/501; it accepts feeds of mixed-sync and field-drive pulses and provides a pseudo mixed-blanking output signal. The output is added to a keying waveform generated in the parent unit and prevents the occurrence of switching during the back-porch and field-sync periods.

The GE2/525A forms part of a Split-screen Effects Units UN4/501A; it performs all the functions of the GE2/525 and, additionally, carries out switching operations for colour-separation-overlay working.

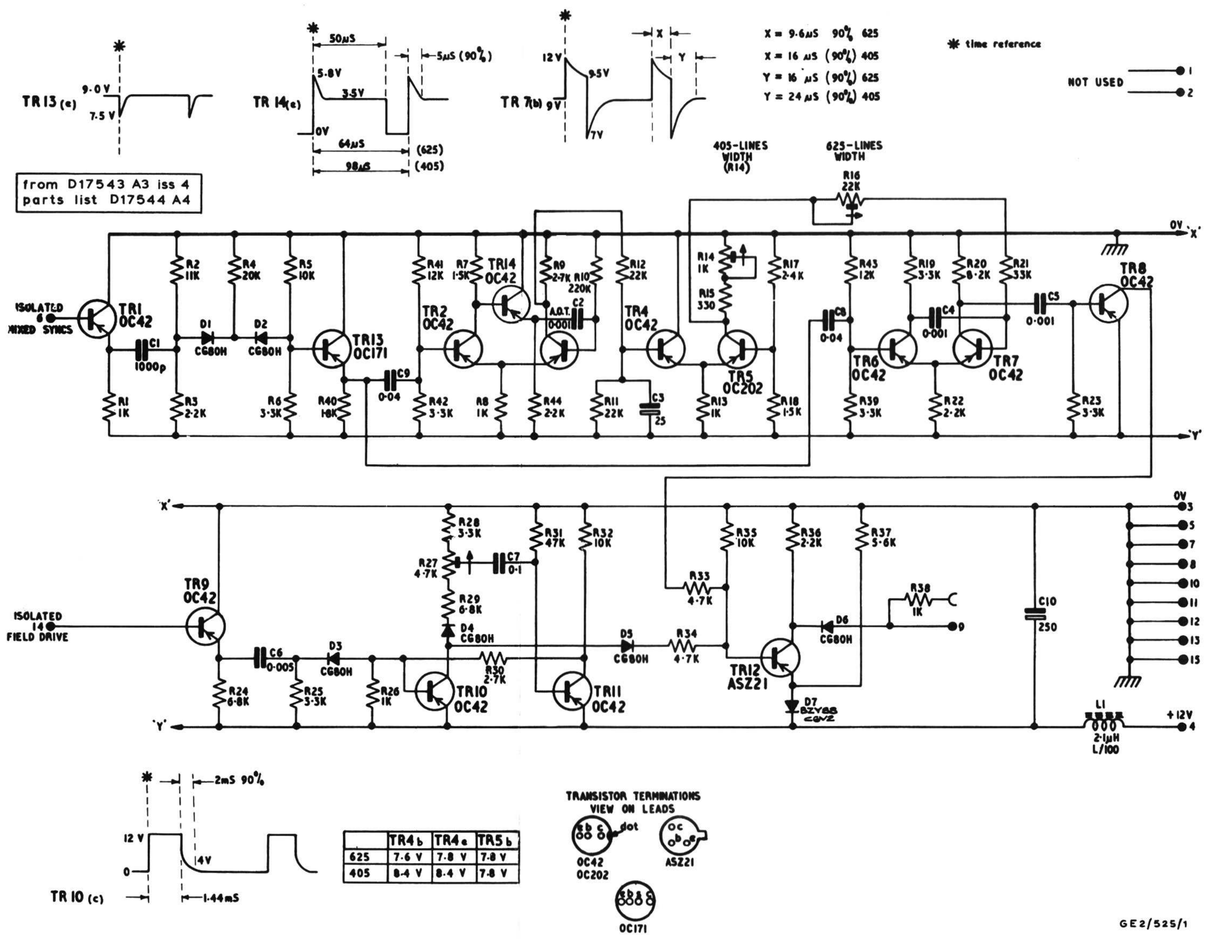
The GE2/525 is constructed on a CH1/12A chassis with index-peg positions 11 and 30. It requires a power supply at +12 volts. The GE2/525A is constructed on a CH1/26A chassis with index positions 11 and 30. It requires power supplies at +12 volts and −24 volts.

Circuit Description

GE2/525

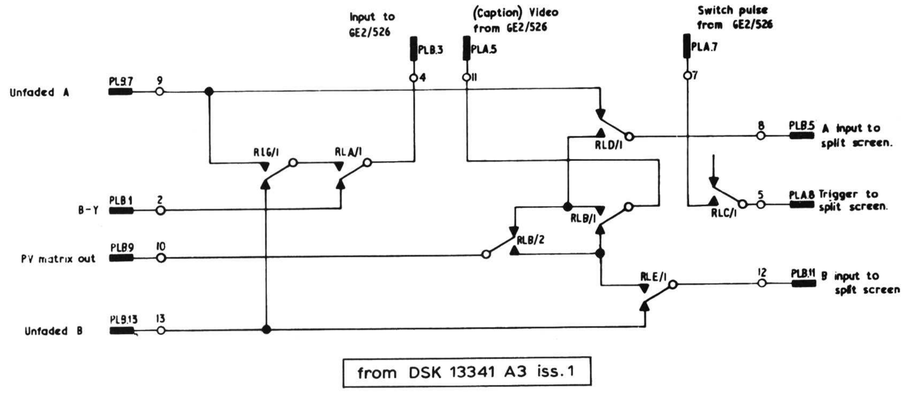
The circuit diagram is given in Fig. 1. The mixed-sync input signal is applied to emitter-follower TR1 and the output from TR1 is differentiated and fed via a two-level clipper to emitter-follower TR13. Negative-going line-frequency pulses are developed at the emitter of TR13 and these are fed as trigger pulses to transistors TR2 and TR6. Transistors TR2, TR3 and TR14 form an emitter coupled monostable multivibrator the output of which is applied to the long-tailed pair formed by TR4 and TR5.

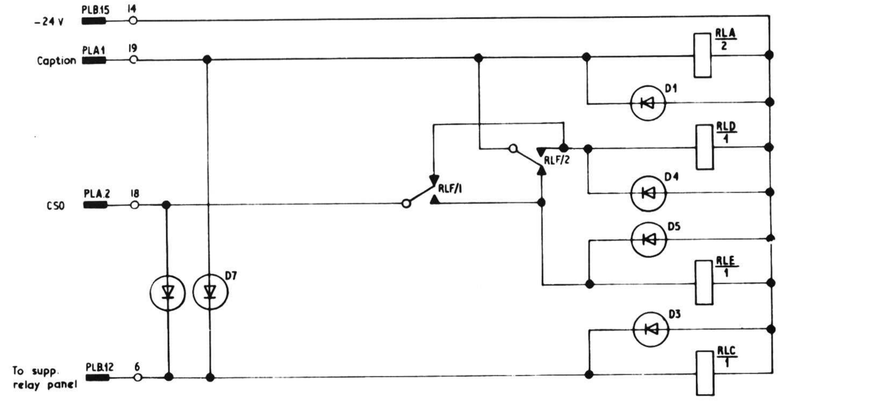
Transistors TR6 and TR7 form another monostable multivibrator and the stage is triggered once per line by the negative-going output of TR13. The duration of the unstable state is determined by the waveform fed from the collector of TR5 to the base of TR7; thus the output from the long-tailed pair controls the mark/space ratio of the stage and so determines the line standard of the signal developed at the collector of TR7. From TR7 the signal is applied via inverter-amplifier TR8 to the mixing-and-output stage TR12 where it is combined with the field blanking signal.

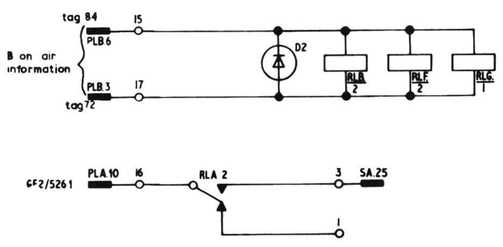


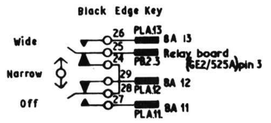
	TR4 b	TR4 e	TR5 b
625	7·6 V	7·8 V	7·8 V
405	8·4 V	8·4 V	7·8 V

Fig.1 Circuit of the Blanking Pulse Generator GE2/525









GE2/525/2

Fig.2 Supplementary Circuit of the GE2/525A

The field-drive signal applied to TR9 is differentiated and applied, via a clipper which removes the positive-going spike, to a monostable multivibrator formed by transistors TR10 and TR11. The duration of the unstable state of the stage is determined by R27 which functions as a field-blanking *Width* control. From the collector of TR10 the signal is applied via the isolating diode D5 to the base of TR12 where it is mixed with the line-blanking signal.

GE2/525A

The circuit of the GE2/525A is given in Figs. 1 and 2. The relay circuits shown in Fig. 2 form an integral part of the parent unit and are described in conjunction with that unit. The three-way key mounted on the relay board controls an external black-edge unit.

Alignment

See parent unit.

TES 3/69
TES 10/11