

SYNC STABILISER PRE-AMPLIFIER AND VIDEO DELAY LINE UN13/501

Introduction

The UN13/501 is a pre-amplifier for the sync pulse stabilising side chain of the AM18/504 Stabilising Amplifier. It accepts a composite video signal input and provides two outputs, one delayed and the other clamped. It is built on to a CH1/12A chassis with index pegs 1 and 18.

General Specification

Signal Input (composite video) 1.5 V p-p
 Input Impedance 820 ohms $\pm 5\%$

Signal Outputs

A. Clamped Composite Video 4 V p-p with back porch at 0 V
 B. Delayed Video 0.75 V p-p

Output Impedance

A 1.5 kilohms $\pm 5\%$
 B 205 ohms $\pm 5\%$

Maximum Ambient

Operating Temperature 40°C

Power Required

35 mA at +12 V
 21 mA at -4 V

Circuit Description

The circuit diagram is given in Fig. 1. The input signal passes via two emitter followers, TR1 and TR3, to the feedback pair TR4, TR5 which provides the required gain. The signal is clamped during the back porch period, on the base of TR6. The d.c. output potential at the emitter of TR6 is 0 volts.

The clamping pulses are developed by TR2 and T1 from driving pulses supplied from an associated unit³. At the input, the driving pulses consist of positive and negative going pairs. Only the negative pulses (which occur during the back porch period) are wanted, the positive pulses being removed partly by TR2 and finally by D1. T1 provides a balanced pulse input to the clamping bridge and RV1 sets the clamping

potential so that the back porch potential at the emitter of TR6 is 0 volts.

The input signal is also fed to the delay line which introduces a delay of approximately 0.3 μs .

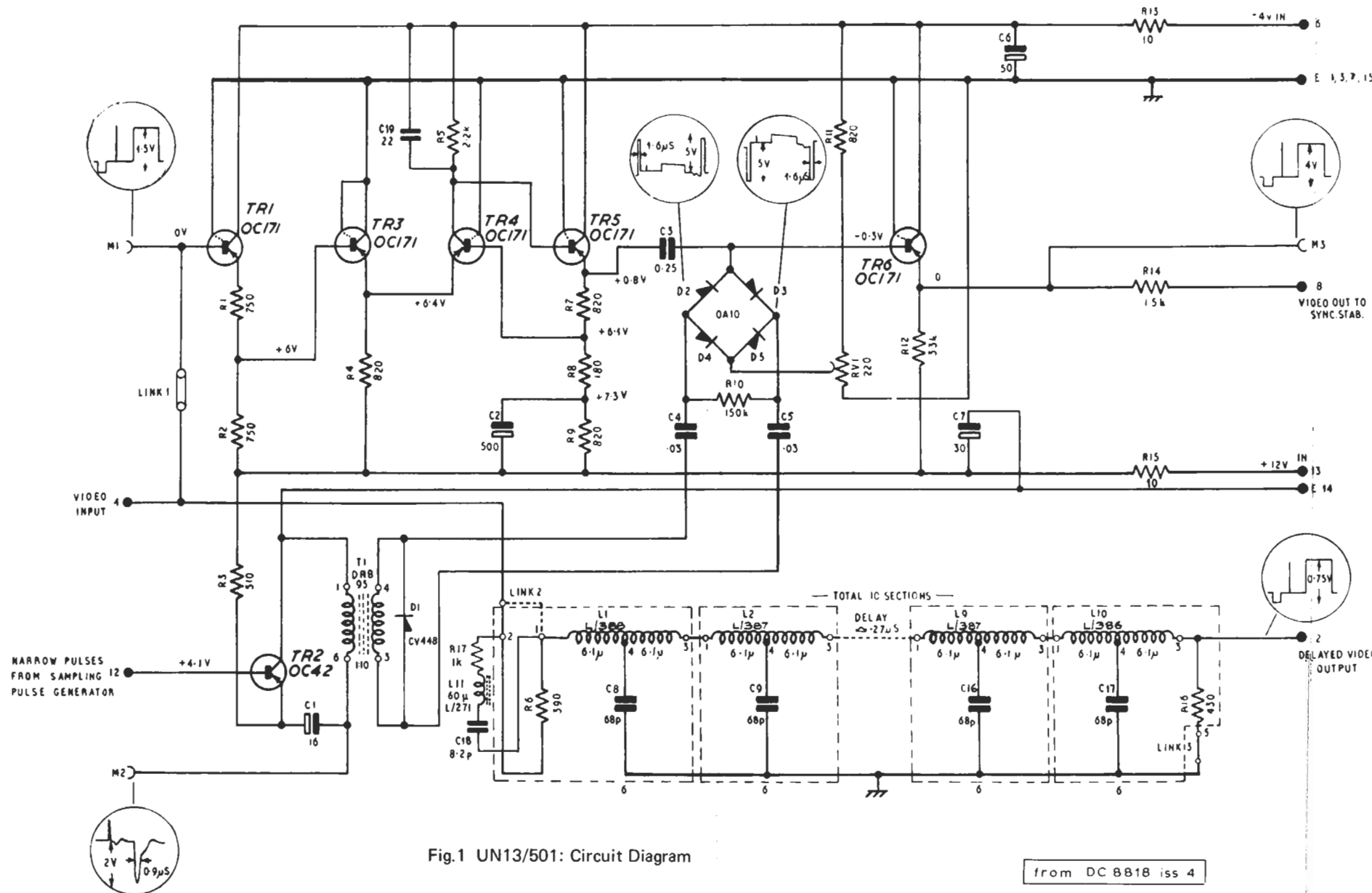
Maintenance

Routine maintenance is not required, but the setting of RV1 should be checked occasionally. The waveforms to be expected at various points of the circuit are shown on Fig. 1.

References

1. Designs Department Specification No.6.102(65)
2. Video Amplifier AM18/506
3. Sampling Pulse Generator GE2/502A

AIB 1/72



UN13/501/1

NOTE
 1. WAVEFORMS AND BLANKING LEVEL POTENTIALS MEASURED WITH A HIGH IMPEDANCE OSCILLOSCOPE PROBE
 INPUT SIGNAL 1.5V P-P 625 LINE 2T PULSE AND BAR
 2. LINK 1 & 3 NORMALLY CLOSED, LINK 2 OPEN

