PROCESSING AMPLIFIER AM18/507

Introduction

This amplifier accepts a video signal, two balanced feeds of 3·2-volt gating pulses and a feed of positive-going 1-volt mixed-synchronising pulses. The amplifier provides white-level clipping and replaces the synchronising pulses of the incoming video signal by syncs derived from the mixed-sync input. The output is a standard video signal. Connections are provided for a feedback clamp external to the unit [1,2,3].

The amplifier is assembled on a printed-wiring board, accommodated in a Chassis Type CH1/12A with index-peg positions 3 and 20. Supplies at +12, +4 and −4 volts are required.

General Specification

Power-supply Potentials	+12, +4, −4
Input-signal Amplitudes:	
Video	1 V p-p
Gating pulses	3·2 V p-p
Input Impedances:	
Video	High w.r.t. 75 ohms
Gating pulses	Non-linear
Output-signal Amplitudes:	
Video (terminated)	1 V p-p
Feedback to error-signal amplifier	1·5 V p-p
Output Impedances:	
Video	75 ohms (approx)
Feedback to error-signal amplifier	High w.r.t. 75 ohms

Circuit Description

The circuit diagram of the amplifier is given in Fig. 1. The thermistor TH1 is sensitive to variations of ambient temperature; its purpose is to counteract changes in the d.c. conditions of the directly-coupled stages TR1—TR5.

D1 is the white-level clipper; the clipping level is adjustable by means of RV1 which is a pre-set control inside the unit, on the printed-wiring board.

The feedback path via pins 8 and 7 of the connector is intended to be completed by an error-signal amplifier[1], the action of which constitutes a form of clamping at the base of TR2 (see AM18/509).

The gating pulses occur during blanking; their effect is to place two low-resistance shunt paths across the video-signal circuit and so attenuate the synchronising pulses of the signal at the base of TR6.

Synchronising pulses entering the unit via pin 14 of the connector are added to the signal by TR8.

RV4 is the pre-set control on the front of the amplifier, labelled *Video Gain*. RV5 provides a means of adjusting the standing potential of the output connection accurately to zero; it is a pre-set control, mounted inside the unit on the printed-wiring board.

Maintenance

The AM18/507 is maintained as part of its parent equipment.

References

1. Error Signal Amplifier AM3/501
2. Input Amplifying Panel PA1/517
3. Line-store Standards Converter CO6/501A
4. Designs Department Technical Memorandum No. 8.129(62)
5. Designs Department Specification No. 8.70(62)

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See page 3 for Fig. 1.

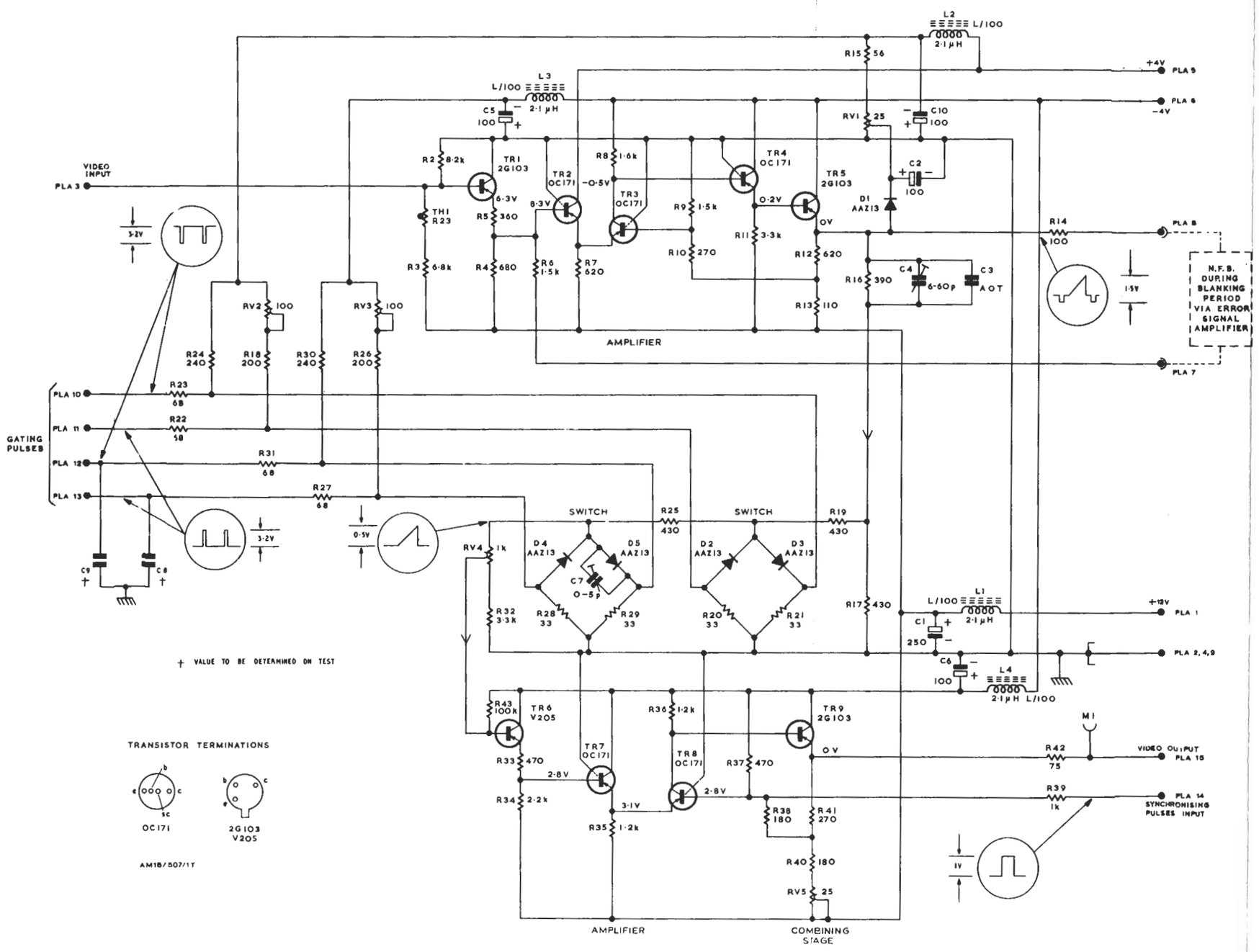

Fig. 1 Circuit of the AM18/507