VIDEO AMPLIFIER AM1/570

Introduction

This unit accepts a coded video signal and a colour-burst error signal[1]; it provides a video output signal in which the phase and amplitude of the colour-burst component of the video signal is corrected by the addition of the burst-error signal[2]. An auxiliary output, consisting of the uncorrected video signal, is provided also.

The unit is constructed on a CH1/43 chassis with index-peg positions 1, 2 and 3. A *Burst Error* monitor point is provided on the front panel of the unit. Power supplies at + 9 volts and − 14 volts are required[3].

General Specification

Inputs

Video Signal	2 dB (w.r.t. 1 volt p-p)
Error Signal	100 mV p-p (approx.)

Input Impedances

Video Signal	high
Error Signal	Variable (about 50 ohms for small error signals, increasing with amplitude)

Output Levels

Corrected Video	2 dB (w.r.t. 1 volt p-p)
Uncorrected Video (early video)	1 V p-p

Operating Temperature	0–45° C
Weight	about 1 lb.

Circuit Description

The circuit diagram is shown in Fig. 1 on page 3. The burst-error input signal is applied, via amplifier stage TR8, to emitter-follower TR9; a.c. negative feedback, determined by the setting of gain control R30, is applied over these two stages. The signal developed at the emitter of TR9 feeds the *Burst Error* monitor point, the common-base stage TR10 and, via emitter-follower TR11, the negative-feedback loop to the base of TR8.

From the collector of TR10 the burst-error signal is applied via buffer emitter-follower TR4 to the junction of resistor R11 and capacitor C7, at which point it is added to the video signal. The amplitude of the added signal is determined by the setting of R38; phase correction is provided by C25 and C26.

The video input signal (labelled *Early Video* on the circuit diagram) is applied to a complementary feedback amplifier comprising transistors TR1 and TR2. From this amplifier the signal is applied to a delay network and also to the *Early Video Output* connector. The delay network ensures that the video signal is coincident in time with the burst-error signal when the two signals are combined in the adding stage. The delayed signal is then added, via emitter-follower TR3, to the burst-error output from TR4 and the error-corrected signal is fed via the emitter-coupled pair TR5-TR6 to the output stage TR7.

Alignment

See parent unit[2].

References to Typical Associated Equipment

1. Burst Error Amplifier AM1/558.
2. Sync Pulse Stabilising Amplifier AM18/513.
3. Stabilised Power Supplier PS2/57A.

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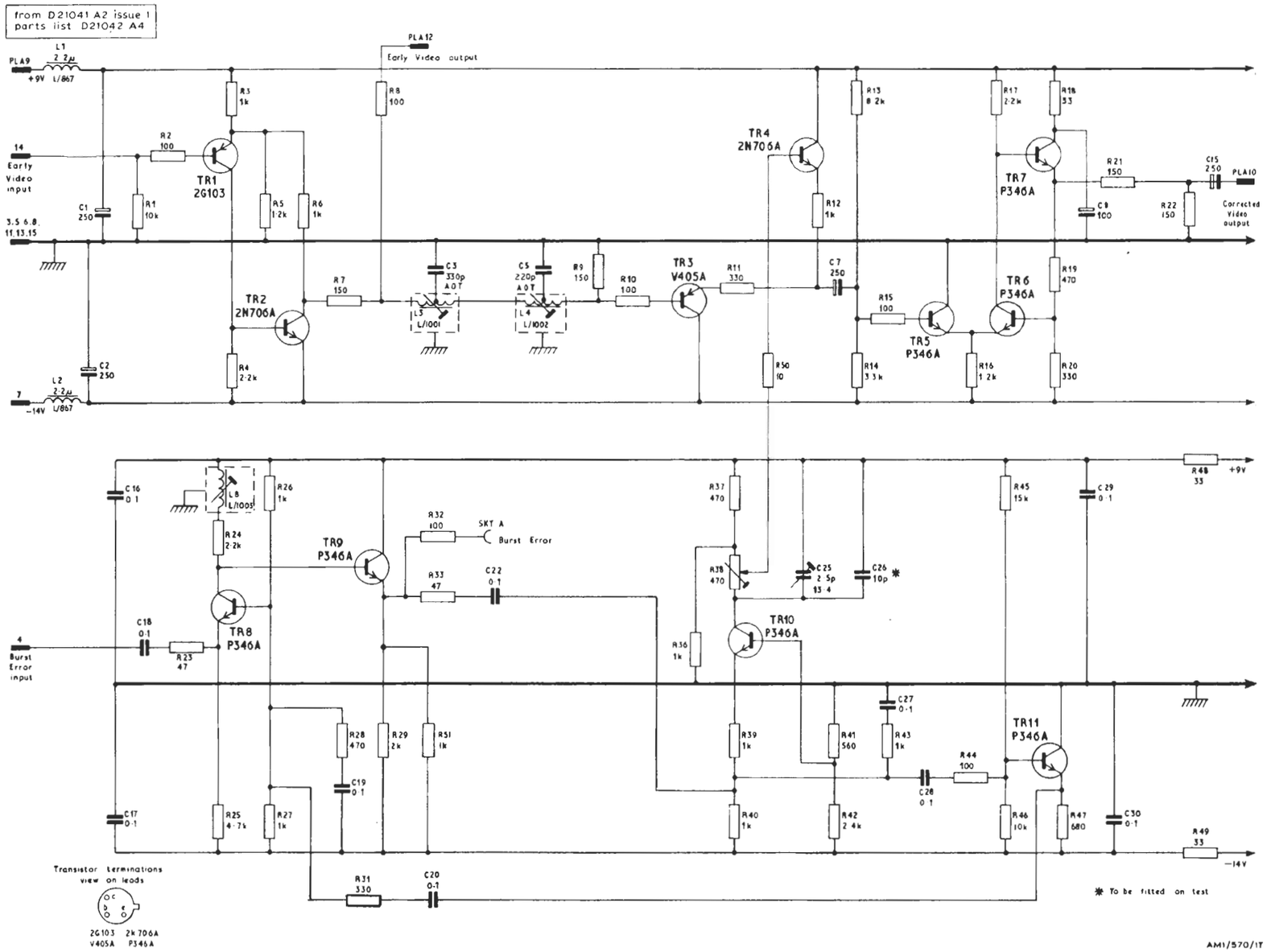

Fig. 1 Circuit of the AM1/570