INPUT PROCESSING PANEL PA1/516 SERIES

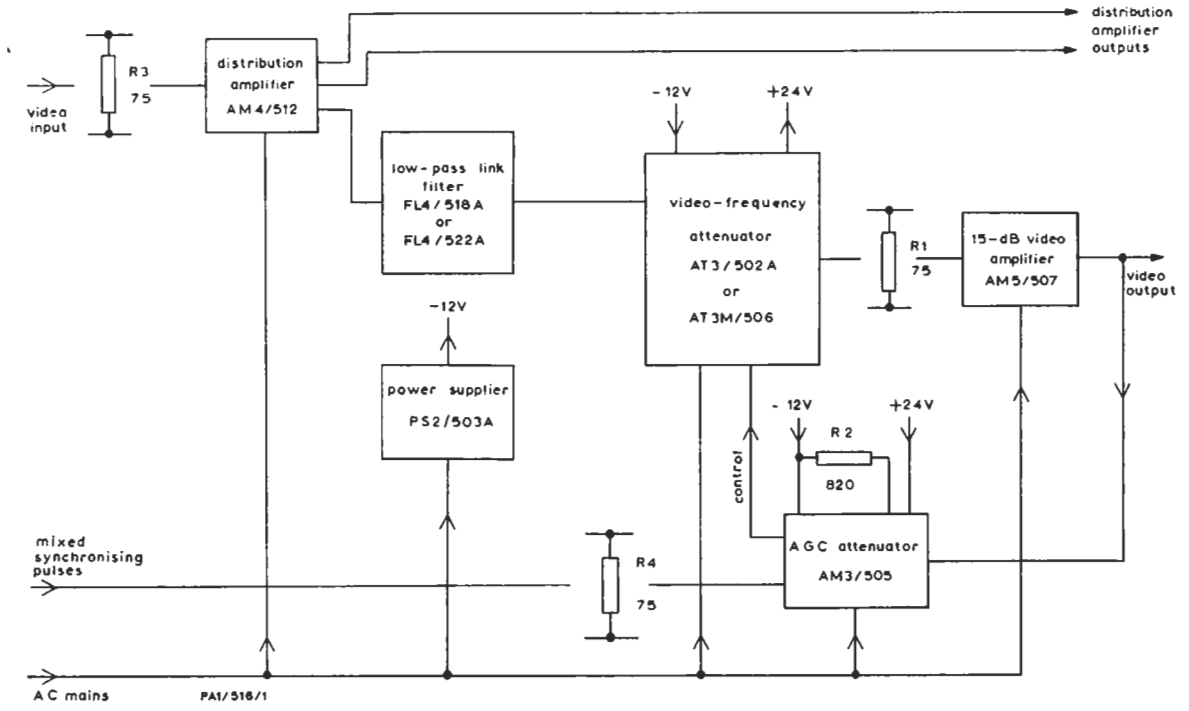

Fig. 1 Block Diagram of the PA1/516

Introduction

This panel accepts a 1-volt (±6 dB) video signal and a feed of mixed-synchronising pulses. It produces three video-signal outputs, one of which has an amplitude of one volt irrespective of the variation of input level. A supply of a.c. mains is required.

The equipment comprises the following units accommodated in a Panel Type PN3/23:

- A.G.C. Attenuator AM3/502 or AM3/505
- Distribution Amplifier AM4/512
- 15-dB Video Amplifier AM5/507
- Video-frequency Attenuator AT3/502A or AT3M/506
- Low-pass Link Filter FL4/518A or FL4/522A
- Power Supplier PS2/503A

The panel carries the connectors and wiring interconnecting these units, in conventional form.

General Specification

Power Supply	a.c. mains
Input-signal Amplitudes:	
Video signal	1 V p-p (nominal)
Mixed-synchronising pulses	2 V p-p
Input Impedances	75 ohms
Output-signal Amplitudes	1 V p-p
Output Impedances	75 ohms

Circuit Description

A block diagram of the panel is given in Fig. 1, and the wiring diagram in Fig. 2. The purpose of the link filter is to eliminate from the signal component frequencies outside the working spectrum of the associated equipment; (in a standards converter an input bandwidth of 4·6 MHz at 625 lines is required to produce the output bandwidth of 3 MHz at 405 lines and higher-frequency components, if remaining, would be liable to interact undesirably with other signals).

PA1/516A and PA1/516B

The panel Type PA1/516A differs from the basic panel in containing a link filter Type FL4/507A in place of either of those listed above. The panel Type PA1/516B contains the following group of units:

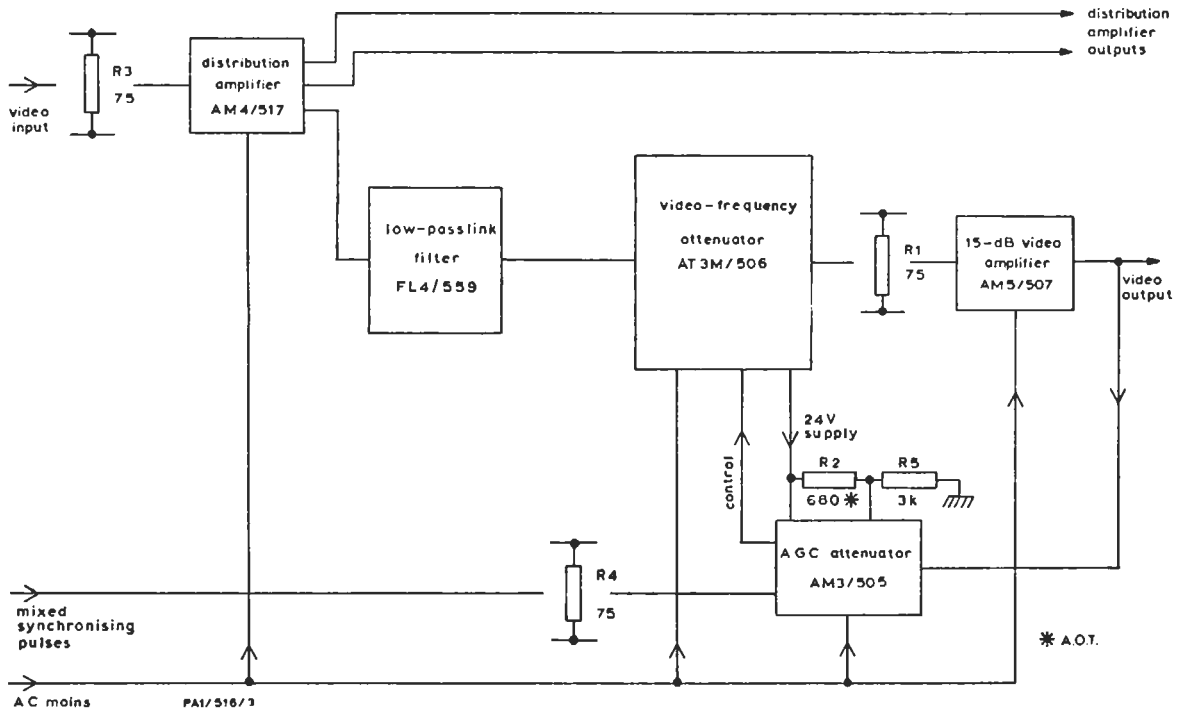

Fig. 3 Block Diagram of the PA1/516B

A.G.C. Attenuator AM3/505
Distribution Amplifier AM4/517
15-dB Video Amplifier AM5/507
Video-frequency Attenuator AT3M/506
Low-pass Link Filter FL4/559

A block diagram of the panel Type PA1/516B is given in Fig. 3, and a wiring diagram in Fig. 4.

Maintenance

Apparatus required

Cathode-ray oscilloscope
Pulse-and-bar Generator GE4/504C
Non-linearity Test Signal Generator GE4/505A
Non-linearity Measurement Filter FL1/509B
Non-linearity Measurement Processing Amplifier AM1/505
75-ohm video-frequency attenuator
Source of video signal
Source of mixed-synchronising pulses (synchronous with those of video signal)
A.C. mains supply

Test Procedure

Note: it is necessary for the feed of mixed-synchronising pulses mentioned in 1 below to remain connected throughout the following procedure.

1. Connect the mains supply to the panel and apply a 1-volt p-p video signal and a feed of mixed-synchronising pulses to the appropriate input connectors.
2. Check that the video signal at the output connector remains unchanged when the input-signal amplitude is reduced by 3 dB.
3. Measure the pulse-and-bar response. With a 2T pulse the *k*-rating should be less than 2% and for a 1T pulse less than 4%.
4. Measure the non-linearity distortion. This should be less than 2%.

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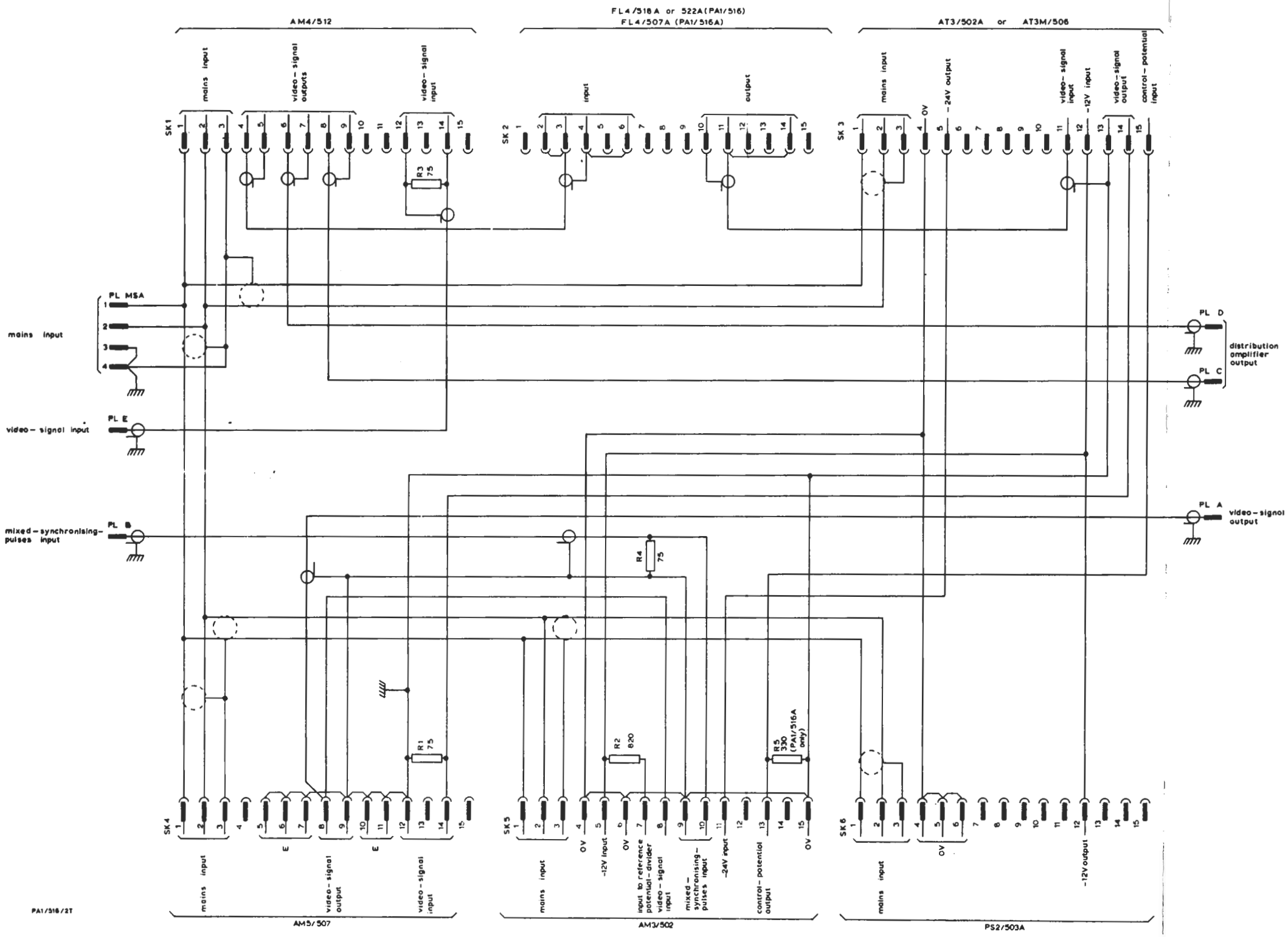

Fig. 2 Circuit of the PA1/516

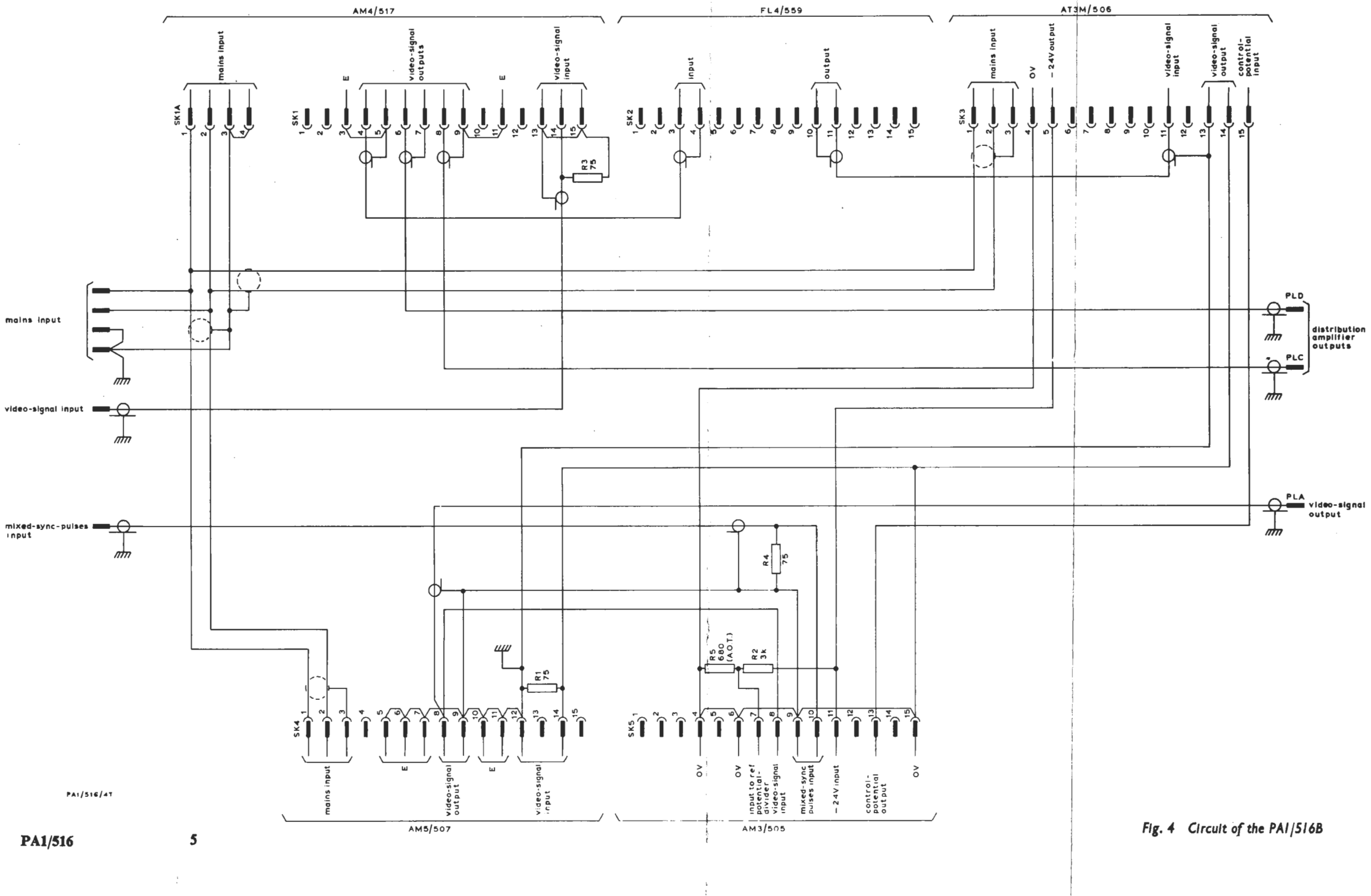

Fig. 4 Circuit of the PA1/516B