

SECTION 6

STUDIO VIDEO MIXER MX6/501

Introduction

The MX6/501 is a 6-channel remotely-controlled video mixing unit which provides mix, cut and fade facilities between composite signals applied to its inputs; see also EP5/503, Instruction V.15. The mixer accepts either synchronous or non-synchronous signals and will handle encoded colour signals.

The MX6/501 uses six Cut-fade Amplifiers AM1/508 which feed into a common Mixing Amplifier AM1/510; see Instruction V.7. Power supplies are provided by an integral unit in the AM1/510 and by a Power Supplier PS2/505 (Instruction G.2). These eight units plug into a single panel PN3/23.

The MX6/501 is controlled remotely by means of a Mixer Desk Panel PA8/507 which exercises control through a Control Panel PA6/511 and a Relay Panel PA17/512 all three of which are described in Instruction V.13.

General Description

A simplified block diagram of the mixer is shown in Fig. 6.1 and wiring external to the sub-units is shown in Fig. 6.2.

Each input to the mixer feeds one of the cut-fade amplifiers which are triggered between *On*, *Off* and *Fade* modes of operation by pulses. The pulses are generated in a Sync Switch Panel PA18/509 (Instruction V.13), external to the mixer, and occur during the field back-porch period so that switching between sources does not interfere with the operation of picture monitors and receivers.

When a channel is triggered into either the *On* or *Fade* modes, all unwanted channels are triggered automatically into the *Off* mode. Channels are triggered into the *On* mode only one at a time but any number may be triggered into the *Fade* mode.

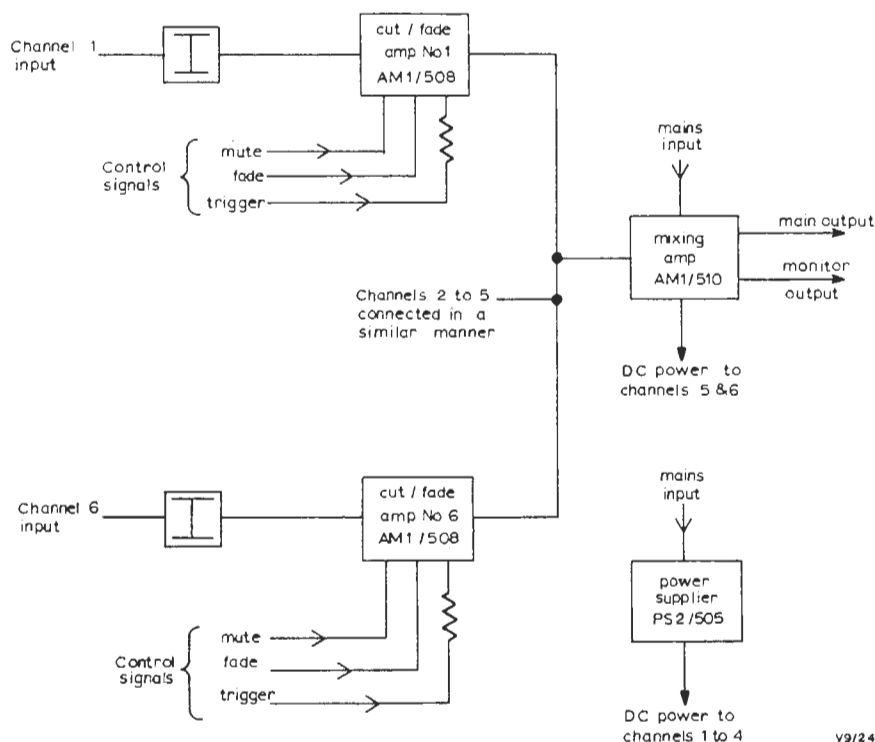


Fig. 6.1 Simplified Block Diagram of the MX6/501

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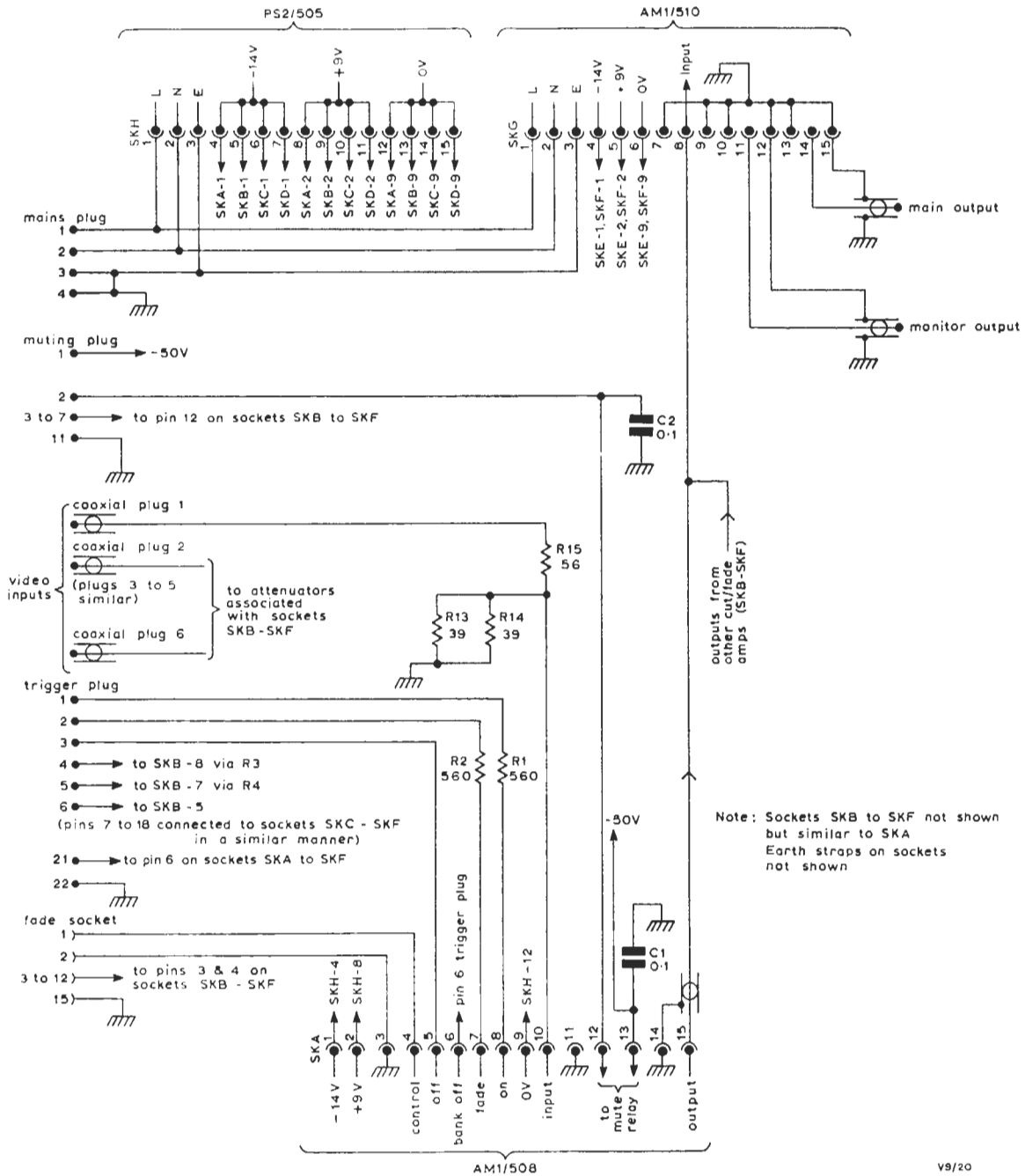


Fig. 6.2 Circuit of the MX6/501 Panel

General Specification

<i>Mains Input</i>	200—250 volts 20 watts	Main to Monitor Out- put	38 dB at 100 kHz 36 dB at 5 MHz
<i>Max Permitted Mains Bump</i>	15 per cent	<i>Pulse and Bar (625 lines)</i> 1T and 2T P/B Ratio Bar Distortion	1 ± 0.25 per cent Less than 0.75 per cent
<i>Impedances</i>	75 ohms ± 3 per cent 75 ohms ± 3 per cent	<i>50-Hz Square Wave</i>	Sag less than 1.5 per cent
<i>Signal Levels</i>	1 V p-p 1 V p-p (main) 0.5 V p-p (monitor)	<i>Non-linearity Distortion Test (CCIR)</i>	Less than 0.5 per cent
<i>Isolation</i>	80 dB at 100 kHz 60 dB at 5 MHz	<i>Differential Phase</i>	Less than 0.15 degrees at 4.43 MHz
<i>Monitor to Main Out- put</i>	70 dB at 100 kHz 36 dB at 5 MHz	<i>Delay at 4.43 MHz</i>	74 ns
		<i>Overload</i>	3.2 V p-p at 100 kHz
		<i>Ambient Temperature Range</i>	10—45 degrees C
		<i>Weight</i>	22 lb.

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