SECTION 13

SYNC PULSE SEPARATION AND MONITOR PANEL PA1/513

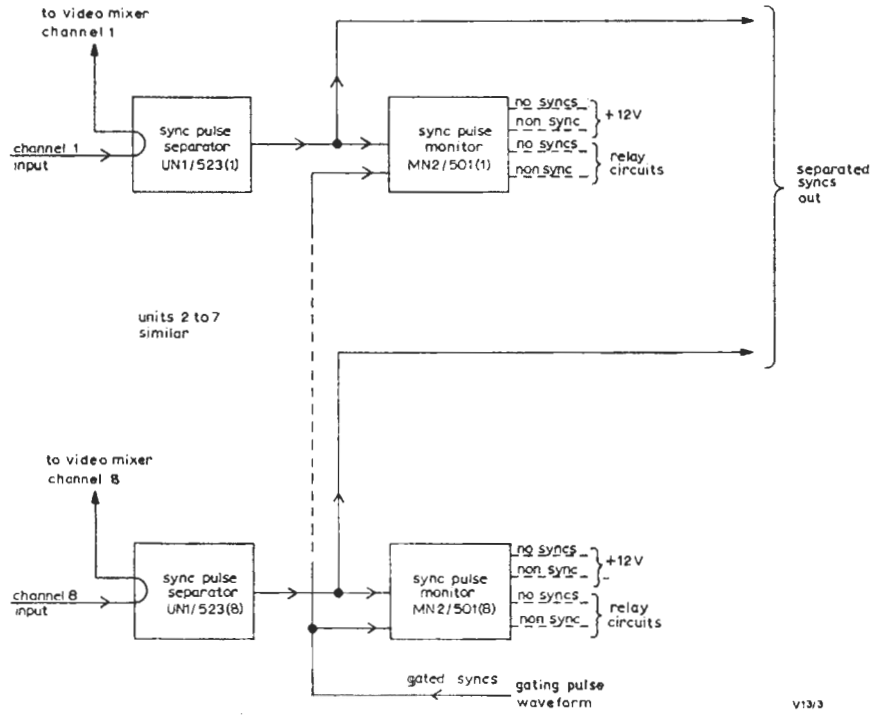

Fig. 13.1 Simplified Block Diagram of PA1/513

Introduction

The PA1/513 accepts up to 8 composite video signals and a gating pulse waveform and provides feeds of separated sync pulses[1] and relay logic information[2,3] which indicates when the inputs are either non-synchronous or not present. The panel operates on 405, 525 or 625 line-standards without adjustment but with 525-line colour signals a relay must be operated in each of 8 sub-units (UN1/523) as described in Instruction V.14.

The PA1/513 consists of the following sub-units mounted on a double PN3/23 panel:

8 Sync Pulse Separator Units UN1/523
8 Sync Pulse Monitors MN2/501

Power supplies at +12 volts and at −6 volts are obtained from two Stabilised Power Suppliers PS2/20[4] which are external to the panel.

General Specification

Signal Inputs	
Video	1 volt p-p ± 6 dB
Gating Pulse	2 volts p-p ±1 dB
Signal Outputs	
Separated Syncs	2 volts p-p
Non-sync signals	+12 volts relay switched connections
No-sync signals	+12 volts relay switched connections
Impedances	
Video Input	high impedance
Gating Pulse Input	75 ohms
Separated Syncs Output	75 ohms

Power Inputs (Two of each)	+ 12 volts ±4% at 640 mA −6 volts ±4% at 120 mA
Relay Supply (525-line colour)	−50 volts
Max. Ambient Temperature	45 degrees C
Weight	30 lbs. (fully equipped)

General Description

A block diagram showing interconnections between the sub-units is given in Fig. 13.1; all components are contained within the sub-units and so a chassis-wiring circuit is not given.

The high-impedance inputs of the UN1/523 sync pulse separators are bridged across the video inputs to the associated channels of a video mixer. From these they derive feeds of separated sync pulses which are fed to the associated sync-pulse monitor units and also to a sync-switch panel.

Each sync-pulse monitor compares one of the feeds of separated syncs with a reference feed of gating pulses derived from station syncs. If the two waveforms are coincident (*sync* condition) the unit does not produce an output. If the waveforms are not coincident (*non-sync* condition) or if there is no output from the preceding sync separator (*no-sync* condition) an output of +12 volts is provided and a relay-switched circuit is completed.

Maintenance

Maintenance instructions are not given for the panel as a whole. For maintenance of the sub-units see the relevant Instructions.

References to Typical Associated Equipment

1. Sync Switch Panel PA18/508.
2. Group Relay Panel PA6/510.
3. Studio Video Mixing Equipment EP5/502, Instruction V.15.
4. Stabilised Power Supplier PS2/20, Instruction G.2.

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