SECTION 1

PICTURE PHASE METER PA15/501

Introduction

The Picture Phase Meter is used to give a remote indication on a control desk of the phase difference between the two input signals of a Picture Phase Indicator (see IN1/501, Instruction V.9). It accepts two 25-Hz rectangular waveform input signals which have a variable mark-space ratio; these signals have identical waveforms but one is inverted with respect to the other.

The unit has a meter with a 100 μA movement calibrated 0° to 360° and 0° to ±36°. The PA15/501 is mounted on a panel which measures $2\frac{1}{8}$ in. by $4\frac{1}{8}$ in.

Circuit Description

The circuit of the Meter is given in Fig. 1.1. The rectangular waveforms from a Picture Phase Indicator are fed to a 3-position switch labelled *Sensitivity*. The meter integrates the waveform and is calibrated directly in degrees of phase difference. The three ranges on the *Sensitivity* switch are:

normal (lead × 1)
Lead × *10*
Lag × *10*

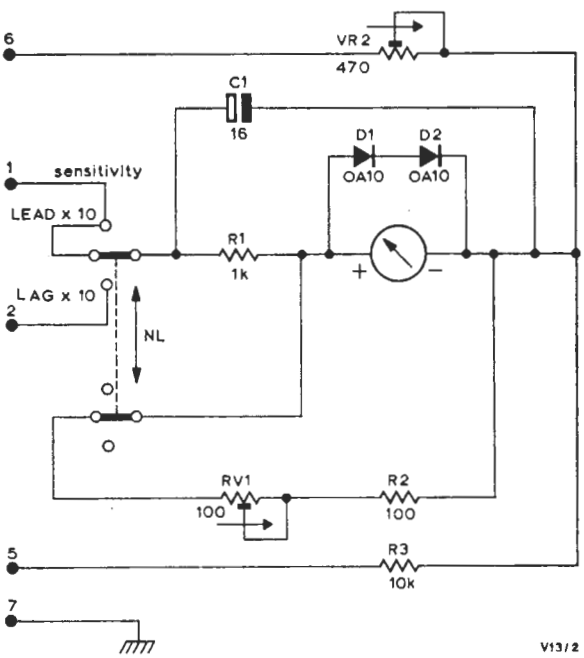

Fig. 1.1 Circuit of the PA15/501

Test Schedule

Apparatus Required

Tested Picture Phase Indicator IN1/501
Two sources of 625-line signals derived from separate sync pulse-generators; manual picture phasing must be available on one of these generators.

Test Procedure

1. Connect the Meter to the Indicator as shown in Fig. 14.2 in Instruction V.9.
   Adjust the mechanical zero of the meter.
   Connect one of the video sources to the terminated *Local* input of the Indicator. The meter should read 0° in the normal and *Lead* × *10* positions of the *Sensitivity* switch. If necessary zero the meter by adjusting the variable resistor RV2.
2. Reconnect the video signal to the terminated *Remote* input of the Indicator.
   Check that the meter reads 360° on the normal position of the *Sensitivity* switch. If necessary adjust the variable resistor RV1.
   Check that the meter reads 0° with the switch in the *Lag* × *10* position. An error in this reading indicates a possible fault in the IN1/501.
3. Connect the second source to the terminated *Local* input of the Indicator.
   Manually picture phase one of the sources and check that the meter follows the change of phase.

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