AUTOMATIC CARRIER FAILURE MONITOR MN2/516 SERIES

Introduction

The MN2/516 monitor is designed to detect the presence of a d.c. signal derived from the intercarrier sound discriminator of a u.h.f. television receiver. [1.2.]

A and B versions of the monitor are manufactured. The MN2/516A incorporates a relay and a ***Signals Present*** indicator lamp. The MN2/516B is an MN2/516A which is fitted with a second relay, a ***Signals Failed*** lamp and a push-button switch; if the input signal is lost the ***Signals Failed*** lamp lights and stays on until manually reset by the switch. The monitor is powered from an integral PS2/22B power supplier and is built on a standard CH1/12A chassis with index peg positions 29 and 39.

General Specification

Power Requirements	240 volts, 50 Hz
Relay Contact Ratings	1 amp at 24 volts 600 mA at 48 volts 100 mA at 300 volts

Circuit Description

Fig.1 is a circuit diagram of both the MN2/516A and the MN2/516B. The input signal is applied through pin PLA6 to the base of transistor TR1 which, together with TR2, forms an emitter coupled pair. The operating bias of TR2 is set by variable resistor R7. Normally the input signal is present, transistor TR3 is conducting and relay RLA is energised. If the input signal fails, or differs appreciably from a preset level, TR3 is driven towards cut-off sufficiently to de-energise RLA and extinguish the ***Signals Present*** lamp which is connected in parallel with the relay coil.

The MN2/516B has the additional components mentioned previously. When relay RLA is de-energised contact RLA-2 completes a circuit to energise relay RLB which locks on through its own contact RLB-2. At the same time the ***Signals Failed*** lamp lights. The lamp can be reset only by operating switch SA.

Test Procedure

Apparatus Required

A source of direct voltage variable up to nine volts.

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1. Adjust variable resistor RV1 on the PS2/22B printed wiring board to give a potential, at pin PLA5, of -12 volts with respect to pin PLA4.

2. Apply the variable direct voltage source between pins PLA4 and PLA6 with the negative terminal to pin PLA6.

3. Adjust variable resistor R7 so that the ***Signals Present*** lamp is not alight when the input voltage is less than four volts and is alight when the voltage is greater than five volts.

4. Check that RLA is energised when the ***Signals Present*** lamp is alight.

References to Typical Associated Equipment

1. U.H.F. Off-air Cue Receivers UN1/584 and UN1/584A.

2. U.H.F. Off-air Cue Receiver UN1/604.

LPB 3/70

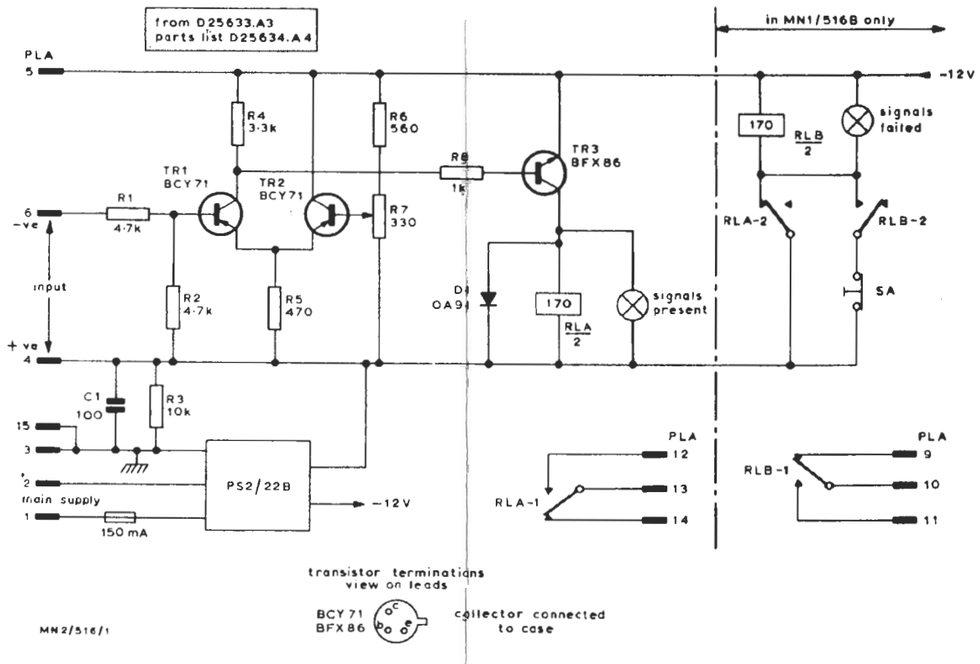

Fig. 1. Circuit Diagram of the MN2/516A and MN2/516B