PROGRAMME SWITCHING UNIT UN1/89

Introduction

The UN1/89 is an auxiliary unit for use with Type-D sound control equipment. It carries the talkback, monitoring and tone-switching relays associated with the main and clean feed outputs, and also the foldback amplifier with its input and output transformers. A third transformer provides a tone input to the unit reduced in level by 3 dB for use on stereo circuits.

The equipment is mounted in a chassis based on the CH1/18C, having dimensions of 5 by 4¼ by 10½ inches, and it plugs into a PN3/23 mounting.

General Description

Relays XO, CFTB, OTB, TN, MND, MNL and TNF are carried on a hinged mounting which when opened gives access to the wiring. The amplifier AM9/8 and transformers T1, T2 and T3 are mounted on a removable plate.

Circuit Description (Fig. 1)

The relays are energised by the operation of keys in the monitoring panel PA8/321, the talkback panel PA8/284 and the main module (relay XO). Prototype circuits showing the interconnections of these units are given in Instruction P.9, Figs. 5.7 and 5.8. Relay TFN is not shown in those diagrams but it has been added to the circuit with this Instruction, and the operating circuit is given in the PA8/284 diagram.

The amplifier AM9/8 raises the volume of the foldback output from the main module from −25 dB to 0 dB, and its output feeds the studio foldback loudspeaker. Separate 24-volt d.c. supplies are required for the amplifier and relays.

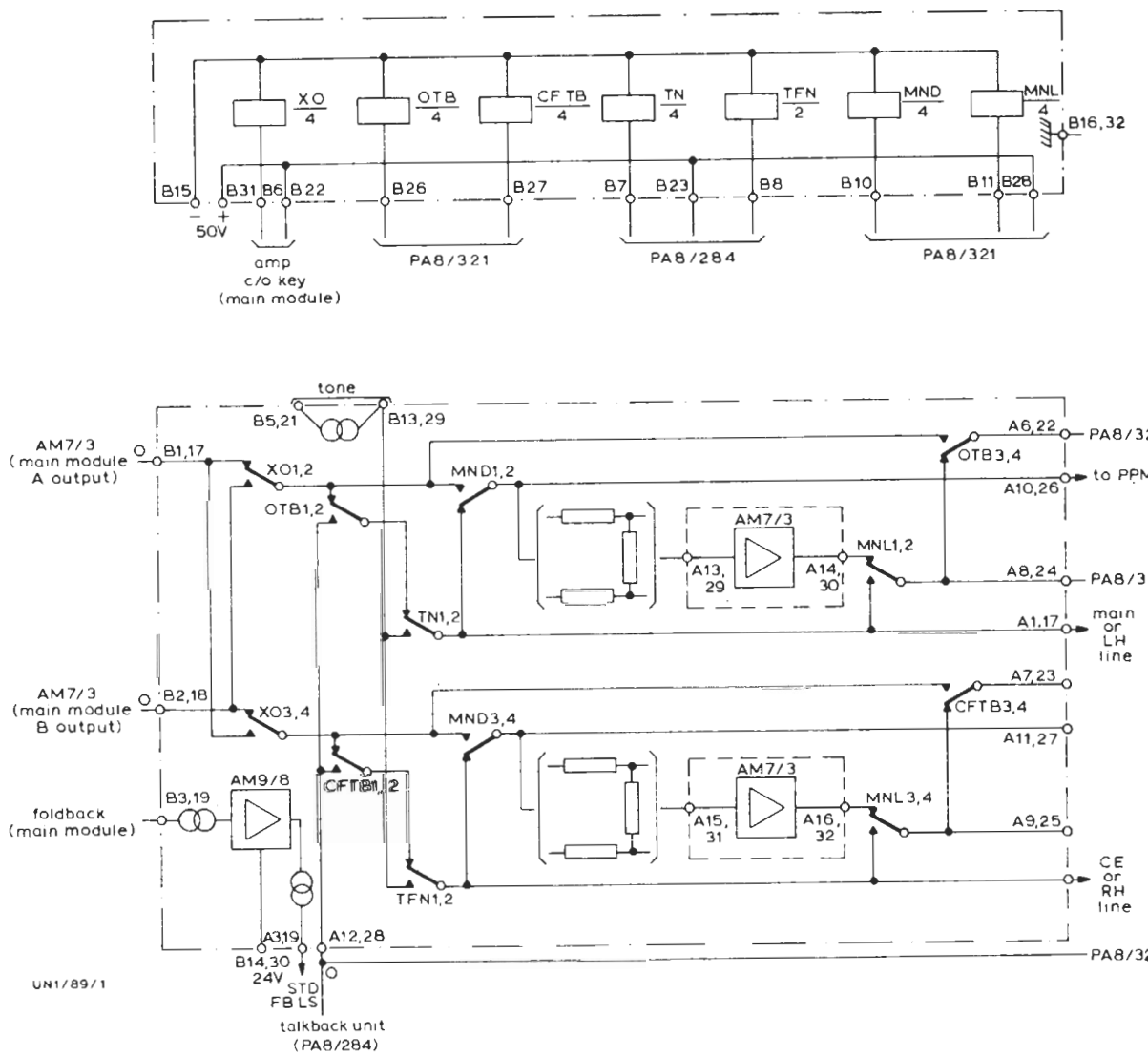

Fig. 1. Circuit of the UN1/89

Test Procedure

Apparatus Required

Tone Source TS/10
Amplifier Detector ATM/1
24-volt Power Supplier (Stabilised)
50-volt Power Supplier

Circuit Tests

Connect the 50-volt d.c. supply to tag B15 (negative) and tag B31 (positive).

Connect the 24-volt d.c. supply to tag B14 (negative) and tag B30 (positive).

1. (a) Connect 1-kHz tone at zero level to tags B1, 17.
   (b) Measure tone at zero level on tags A1, 17 and A10, 26, and at −25 dB on tags A13, 29.
   (c) Connect B22 to B26 to operate relay OTB.
   (d) Measure tone at zero level on tags A6, 22.
   (e) Connect B10 to B22 to operate relay MND.
   (f) Measure tone at zero level on tags A10, 26.
   (g) Connect B11 to B22 to operate relay MNL.
   (h) Measure tone at zero level on tags A6, 22 and A8, 24.
   (i) Connect B6 to B22 to operate relay XO.
   (j) Measure tone at zero level on tags A2, 18.
2. (a) Connect tone at zero level to tags B2, 18.
   (b) Measure tone at zero level on tags A2, 18 and A11, 27, and at −25 dB on tags A15, 31.
   (c) Connect B22 to B27 to operate relay CFTB.
   (d) Measure tone at zero level on tags A7, 23.
   (e) Connect B22 to B10 to operate relay MND.
   (f) Measure tone at zero level on tags A11, 27.
   (g) Connect B22 to B11 to operate relay MNL.
   (h) Measure tone at zero level on tags A7, 23 and A9, 25.
   (i) Connect B22 to B6 to operate relay XO.
   (j) Measure tone at zero level on tags A1, 17.
3. (a) Connect tone at zero level to tags B13, 29.
   (b) Connect B22 to B7 to operate relay TN.
   (c) Measure tone at zero level on tags A1, 17.
   (d) Connect B22 to B8 to operate relay TFN.
   (e) Measure tone at zero level on tags A2, 18.
4. (a) Connect tone at −25 dB to tags B3, 19.
   (b) Measure tone at zero level on tags A3, 19.
5. (a) Connect tone at zero level to tags A14, 30.
   (b) Measure tone at zero level on tags A8, 24.
   (c) Connect tone at zero level to tags A16, 32.
   (d) Measure tone at zero level on tags A9, 25.

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