STUDIO LOUDSPEAKER SELECT PANEL PA8/286

Introduction

The PA8/286 is an auxiliary monitoring control panel, designed as part of the range of Type-D sound control equipment. It permits the selection of any one of up to 12 mono sources, and allows the level of a loudspeaker to be adjusted within a limited range. The controls are mounted on a chassis CH1/37A measuring 178 mm high by 57 mm wide by 267 mm deep (7 by 2¼ by 10½ inches) overall.

General Description

At the top of the panel is a 12-way rotary switch, designated Prog. Sel., and able to select any one of the following points as sources:

Desk Output
Network 1
Network 2
Prog. 1 to Prog. 7
P.P.M. 2
Misc.

The switch nas break-before-make operation, and is constructed from two Type Mini-12 wafers made by A.B. Metal Products Limited. The points marked Prog. 1 to Prog. 7 are connected externally to sources as required.

normal setting is denoted by a letter N at a position six-tenths of the total rotation from the right-hand end, which is the end giving maximum loudspeaker volume. The N corresponds to an attenuation of 14 dB; the attenuation at the right-hand end is 2 dB, and the attenuation at the left-hand end (corresponding to maximum attenuation and minimum loudspeaker volume) is 22 dB. The control is wired between the selector switch and key system (see below) and the panel output connections.

Underneath this control, at the bottom of the panel, are two miniature lever-keys mounted side-by-side. They are both two-position locking keys, P.O. Type 1102. One is designated Cut and the other Local. The Cut key, when operated, puts a short-circuit across the loudspeaker input, provided that the appropriate connections have been made externally to the panel, via connector B (Fig. 1). The Local key diverts the input to the L.S. Vol. control from the moving contacts of the Prog. Sel. switch to the connections to the first (i.e., Desk Output) position on this switch; the key thus allows the Prog. Sel. switch to be overridden to monitor the Desk Output directly.

There are no other controls, but at the rear of the

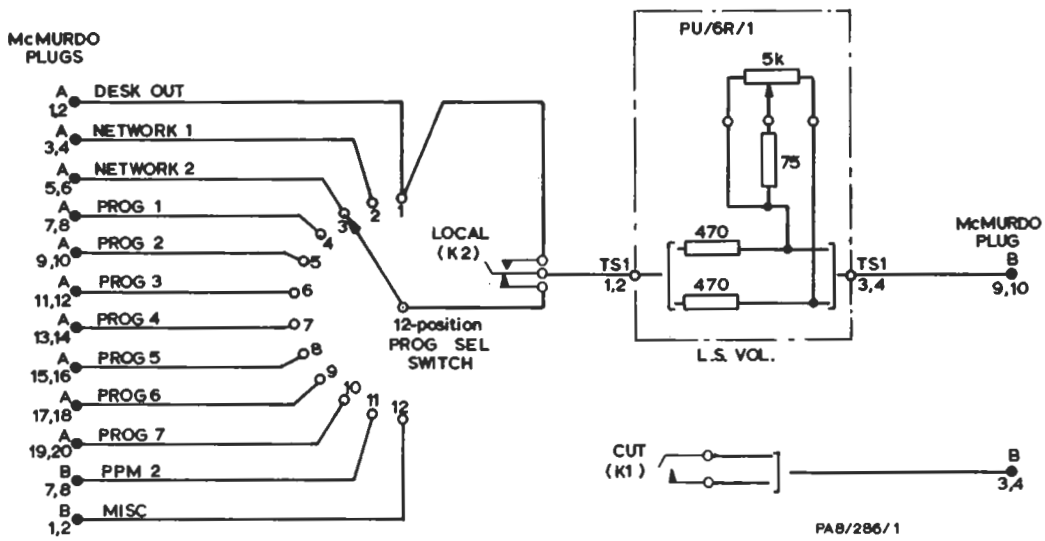

Fig. 1. Circuit of the PA8/286

In the centre of the panel is the L.S. Vol. control, an attenuator Type PU/6R/1. This is a continuously variable 5-kilohm carbon-track component with an added resistive network as shown in Fig. 1. The panel around the control is marked with 11 dots and the panel there are two 24-way McMurdo Red Range fixed plugs. The plug on the left as viewed from the rear is designated A and the one on the right is designated B. Connections to these plugs are shown in Fig. 1.

Test Procedure

Apparatus Required

Avometer
Tone source TS/10
600-ohm load jack
A.C. test meter ATM/1
Two McMurdo 24-way sockets

Procedure

1. Connect the tone source to the 600-ohm load jack and also, via a McMurdo socket, to plug A tags 1 and 2.
2. Connect the ATM/1 high-impedance input via the other McMurdo socket to plug B tags 9 and 10.
3. Set the tone source output to 0 dB at 1 kHz.
4. Set the L.S. Vol. control to position N and operate the Local key. An output level of −14 dB should be obtained, and this should not be affected in any way by the operation of the Prog. Sel. switch.
5. Check that variation of the tone-source frequency throughout the range of the instrument does not affect this level.
6. Vary the setting of the L.S. Vol. control, checking that the level at the extreme left-hand end is −22 dB and that the level at the extreme right-hand is −2 dB. Check also that the variation between these limits is smooth and progressive. Afterwards return the control to the N position
7. De-operate the Local key. Check that the output, at the same level as previously, is only obtainable with the Prog. Sel. switch on the Desk Output position. Check also that the L.S. Vol. control is still in circuit.
8. Check the connections to the other positions of the Prog. Sel. switch, using the same circuits as above, but moving the tone source connection to the appropriate tags for the various switch positions as shown in Fig. 1 and checking that there is an output as before.
9. Check the Cut key by connecting the Avometer on its normal ohms range via one of the McMurdo sockets to plug B tags 3 and 4. The Avometer should normally indicate an open-circuit, but should indicate a closed circuit when the Cut key is operated.

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