5A ATTENUATOR

1. GENERAL

1.01 The purpose of this section is to make available to the central office maintenance forces information covering the 5A attenuator.

1.02 In addition to Part 1 GENERAL, it includes the attached Section E40.613, Issue 1. When next reissued the section will be dually numbered A702.687 — E40.613.

Attached:

Section E40.613 Issue 1

5A ATTENUATOR

1. GENERAL

1.01 This section describes the 5A attenuator, which supersedes the 1A attenuator for all applications. It is useful for general testing work where a 600-ohm balanced attenuator is required, such as for certain carrier applications and for miscellaneous telephone repeater and radio applications.

1.02 The attenuator is well shielded, making it suitable for use up to frequencies of approximately 100 kc.

2. DESCRIPTION

2.01 The circuit of the 5A attenuator, which is also given on a circuit label fastened inside the box which houses the attenuator, is shown schematically in Fig. 1.

2.02 The attenuator is made up of seven balanced resistance pads some of the "O" (square) type and some of the "H" type. These pads are of 600 ohms impedance and provide a

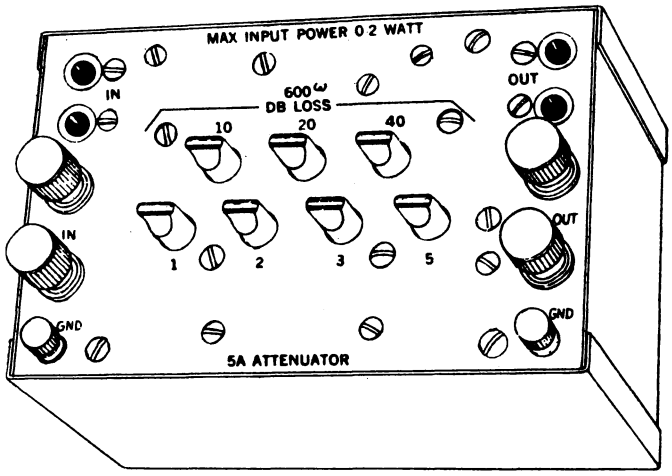

Fig. 2 - Top View

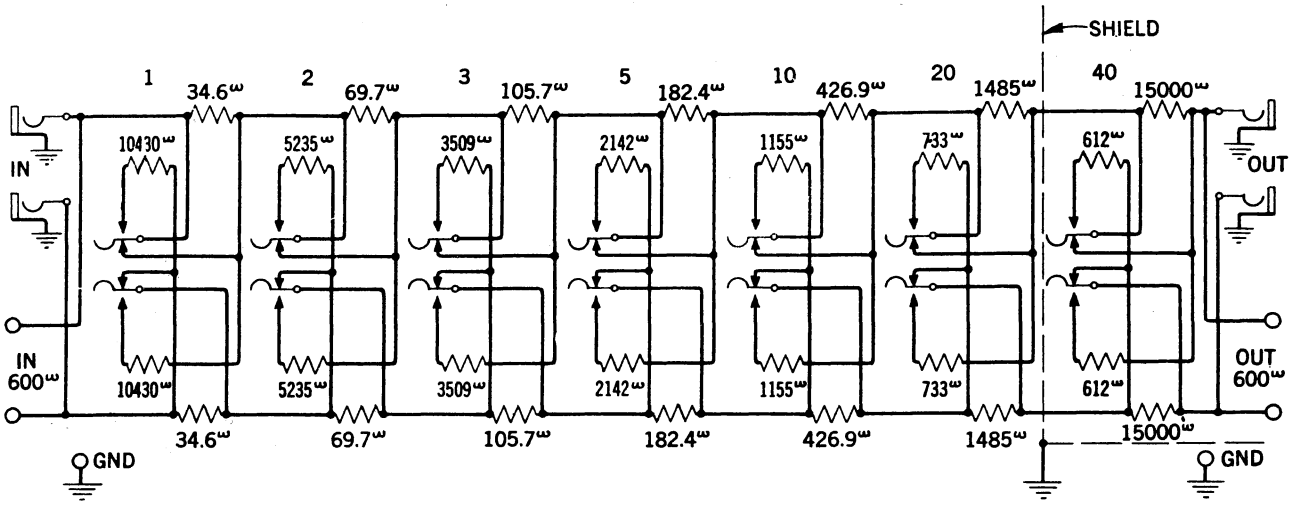

Fig. 1 - Schematic Circuit

total loss range of 0 through 81 db under the control of seven turn-button keys.

2.03 The accuracy of the adjustment of the attenuator setting is ± 0.2 db for frequencies up to 50 kc and is approximately ± 0.3 db for frequencies up to 100 kc.

2.04 The set will dissipate 200 milliwatts continuously and for short periods will dissipate 500 milliwatts, without impairing the accuracy after cooling.

2.05 The attenuator is contained in a metal box with a metal panel and is approximately 6-3/4 inches long by 4-1/8 inches wide by 5 inches high, and weighs about 5 pounds. There is no cover for this set. It is equipped with rubber cushioned glider or leather (desk stand type) feet.

2.06 Fig. 2 shows the arrangement of the top of the attenuator. It will be noted that the seven turn-button keys are arranged in two rows and that the input and output are carried through both binding posts and double jacks. Binding posts marked GND are provided at the input and output sides of the panel and are connected to the grounded parts of the set, which consist of the case and the internal shield.

2.07 The jacks are of the type to take the usual 241-type plugs commonly employed in the test room.

2.08 The pads are connected to introduce loss into the circuit by operating the turn-button keys so that the white lines point to the desired loss components.