

PRIVATE LINE SERVICE
 INSTALLATION AND MAINTENANCE
 PROGRAM CIRCUITS

1. GENERAL

1.01 This addendum supplements Section A399.006 and C70.904.

1.02 This addendum is reissued to add to and change Paragraph 9.04, and provide a description of the GB-731 Portable Program Equalizer.

1.03 By standardizing one set, locally assembled sets can be eliminated.

7. REPEATING COILS

The following changes apply to Part 7 of the section:

1. 7.01 - Revised

2. Fig. 7 - Add drawing of 175A repeating coil to the three existing drawings.

7.01 The 111C, 119C, 119E and 175A repeating coils are similar electrically and are used for:

- (a) Isolation, for noise reasons, of telephone facilities from a possible unbalanced customer termination.
- (b) Impedance matching where cable pairs of different impedances are interconnected; for example, B22 loaded and nonloaded facilities.
- (c) Aid in equalizing.

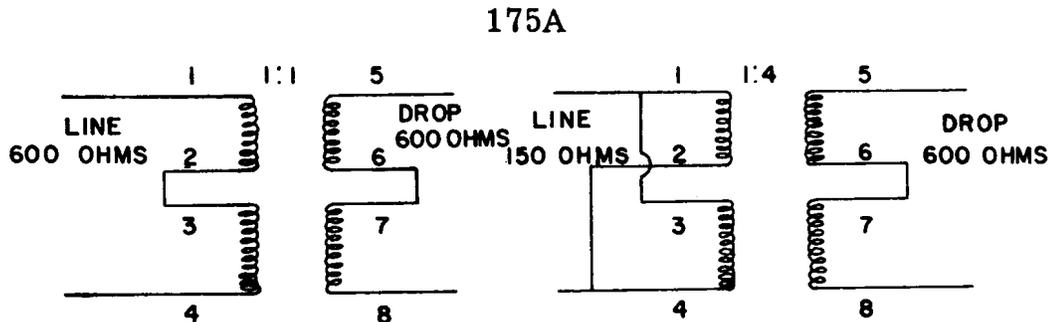


Fig. 7

9. EQUALIZATION PROCEDURES - GENERAL

9.04 The GB-731 Portable Test Equalizer contains all the component parts of a 23A and DE-69010-01 (15 KC) equalizer and is arranged, via switches, to equalize 5, 8 and 15 KC program channels.

The test set temporarily replaces the permanent equalizer during equalization and is connected by use of either the jacks or binding posts.

When equalization is completed, the permanent equalizer and repeating coil are then strapped for the same values as set up on the portable test set. Some minor changes may be required to assure proper equalization on limiting length loops.

This portable test set eliminates the need for decade boxes. It is used at either customer premises or Central Offices.

ADDENDUM A399.006
ADDENDUM C70.904

9.04.1 Design and Switch Functions -

The set is contained in a metal covered case and weighs about ten pounds. There are two input and output connections, jacks and binding posts. The jack takes 241-type plugs.

Connect the test set in the following manner:

- (a) To 14-type amplifiers:
 - 1. "In" to "Trsg. Lp." - "Out" to "Amp. In"
- (b) To 12-type amplifiers:
 - 1. "In" to "Lp. In" - "Out" to "Amp. In"
- (c) S17 System
 - 1. "In" to "Eql. Conn."
 - 2. No connection is made to the "Out" jack.
 - 3. The test set is not required for 5 and 8 KC circuits.
- (d) Customer Premises Equipped with Jacks:
 - 1. "In" to bare loop line jack, "Out" to T.M.S.
- (e) Customer Premises Not Equipped With Jacks:
 - 1. Connect bare line to "In" - Connect "Out" to T.M.S.

The ratio switch determines the repeat coil impedance, either 1:1 (600:600) or 1:4 (150:600).

The equalizer switch connects the 23A or 15 KC equalizer. Only the 15 KC position connects the capacitance and inductance switches. In either position, the resistance switches are connected.

The capacitance switch provides the same range as the 187A capacitor found on the 15 KC equalizer panel.

The inductance switch provides the inductance value along with the terminal numbers on the 251A retard. For example, .003 henries is terminals 2 and 5 of the 251A inductor.

MEASURING PROCEDURE

9.04.2 15 KC Circuits

To equalize 15 KC circuits, set the equalizer switch to 15 KC and the ratio switch to 1:4. Select capacitance and inductance values in accordance with Paragraph 11.04 (g). Equalize in exactly the same manner as described in the remainder of the paragraph.

When equalizing 15 KC circuits on S17 systems, connect the set to temporarily replace the equalizer as shown, 11.08 (f), Figure 11. The "Out-Measure" jacks are not used. The equalizer is in a bridged position.

9.04.3 5 and 8 KC Circuits

To equalize 5 and 8 KC circuits, set the equalizer switch to 23A, the ratio switch to 1:4, and follow instructions covered in Section 10.

To equalize a 5 or 8 KC circuit, using a 15 KC equalizer (usually associated with a 14C amplifier), set the test set equalizer switch to 15 KC and the ratio switch to 1:4. Set the capacitance and inductance switches to the same values as in a 23A equalizer (Fig. 2). Equalize as covered in Section 10. When equalization is complete, strap the same values of resistance, capacitance and inductance in the permanent equalizer as obtained using the test set.

9.04.4 Figure 13 is a simple schematic of the GB-731 Program Equalizer.

GB731 PORTABLE TEST EQUALIZER

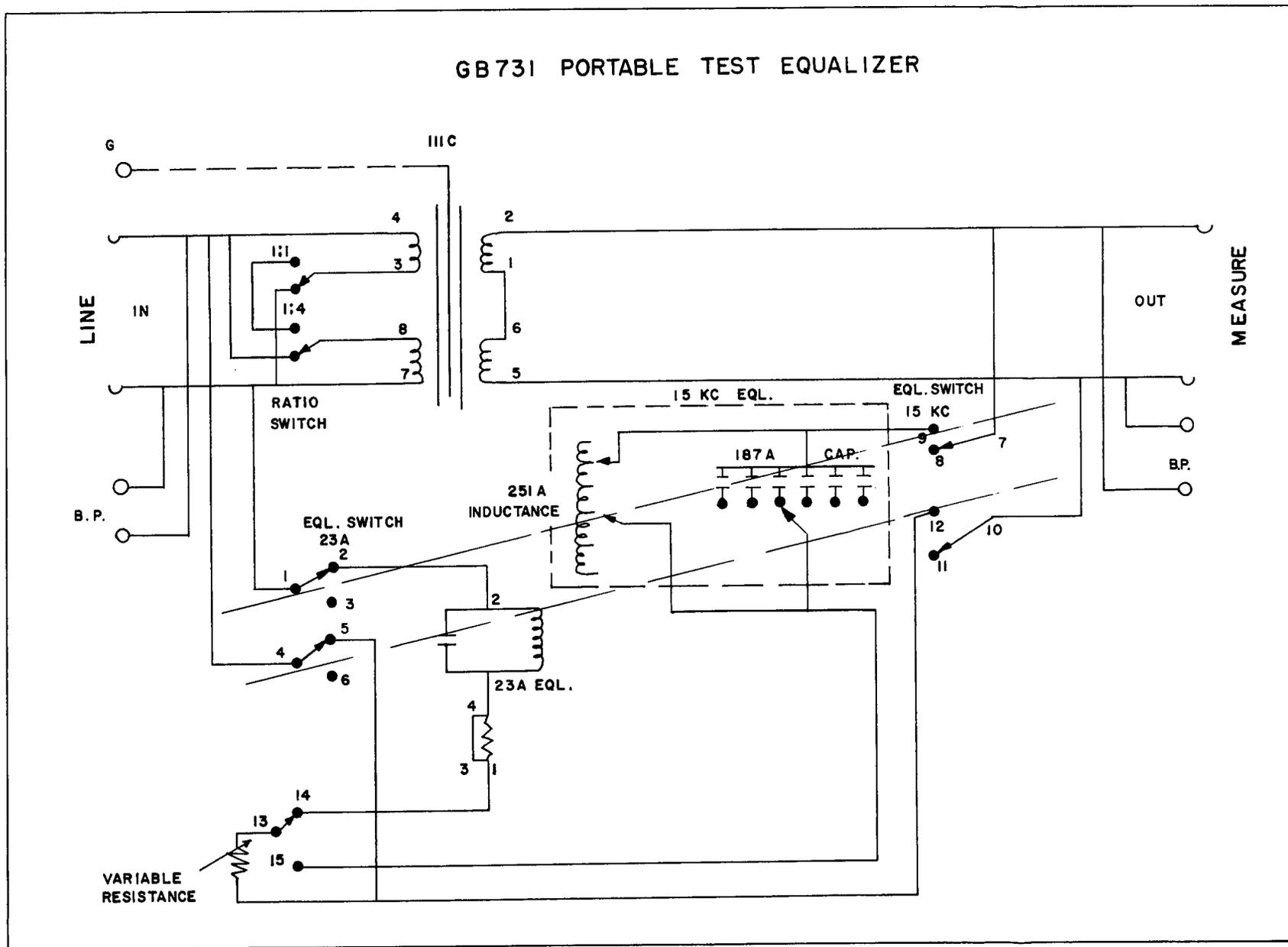


FIG. 13

ADDENDUM A399.006
ADDENDUM C70.904

18. SUPPLIES

The following changes apply to Part 18 of the section.

Delete: Box and J-98610B L2 equalizer descriptions.

Change to read: COIL - Repeating, 111C, 119C, 119E or 175A

Add: J98610B L1 and L2 Subscriber Line terminating equipment consist of the following:

One Repeating Coil 175A
One 23A Equalizer

These units are mounted on Key Telephone Units in a 105A apparatus box.