

AUXILIARY SIGNAL AND NIGHT BELL CIRCUITS No. 10 OFFICE

I. GENERAL:

- 1.1 This section provides for a current flow test of the auxiliary signal and night bell relays in No. 10 offices. Operating checks of these features are provided for in the performance of current flow tests of line relays as described in Section 235.101.
- 1.2 The tests are to be made on a one man basis at the relays in the rear of the switchboard.
- 1.3 Tests should be made during periods of light load, so as not to cause interference with subscribers' calls.

2. APPARATUS:

- 2.1 No. 35-C Test Set, or equivalent.
- 2.2 Two No. 893 Cords, each equipped with two No. 360-A Tools.
- 2.3 Two No. 364 Tools.
- 2.4 Two No. 365 Tools.

3. TEST SET PREPARATION:

- 3.1 Before using the current flow test set, care should be taken to see that all resistance

reading on the normal (.750 ampere) scale indicates that the current flow in the circuit does not exceed the scale range, as indicated by the designation of the position to which the key is to be operated. Before operating the MIL-AMPS key, a current flow which approximates the desired value should be set up on the normal (.750 ampere) scale of the milammeter; then the MIL-AMPS key should be operated to the .015 or .075 ampere position as required and the final value accurately set up. The position of any of the red slides should not be changed while the MIL-AMPS key is in an operated position. These precautions will keep the current value within the limits of the milammeter scale used, thus avoiding damage to the milammeter.

- 3.2 Arrange the test set keys and switches as shown in Fig. 1, for relays having battery on the winding.

- 3.3 When testing relays having battery on the winding, connect the test set to ground by attaching one end of a No. 893 cord to the tip cord fastener of any subscribers' cord

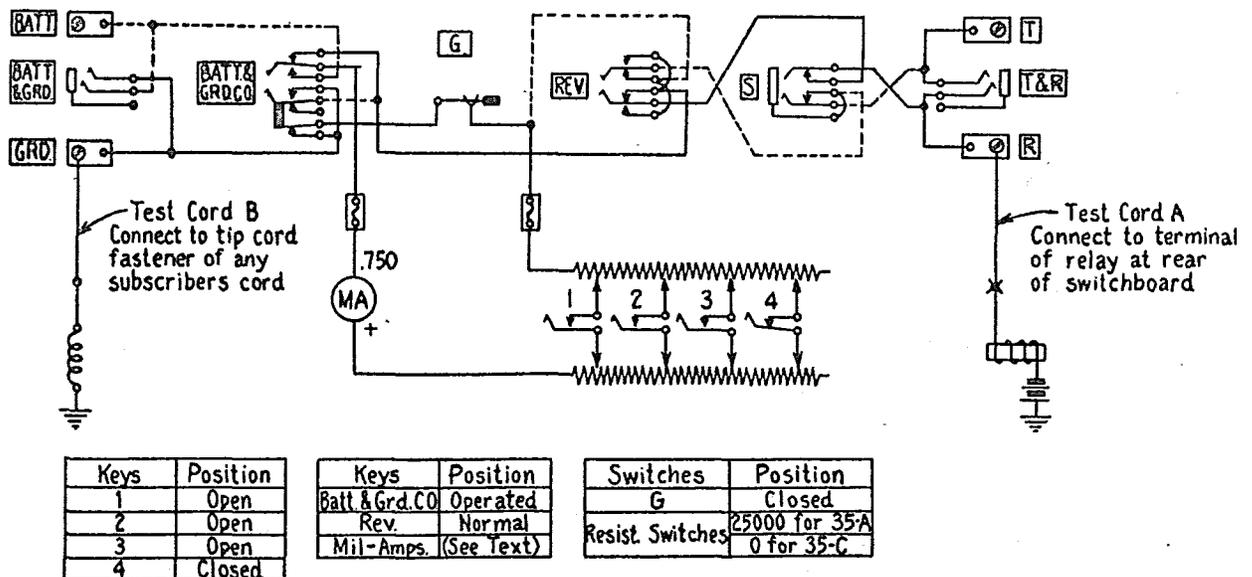


Fig. 1

is cut in to avoid damaging the milammeter. On the No. 35-C test set, all resistance is cut in when all slides are to the extreme right. Care should be taken to see that the scale change key, designated MIL-AMPS, is not operated from its normal position unless the

(temporarily removed from service) and to the GRD terminal of the test set.

- 3.4 Arrange the test set keys and switches as shown in Fig. 2, for relays having ground on the winding.

SECTION 235.308

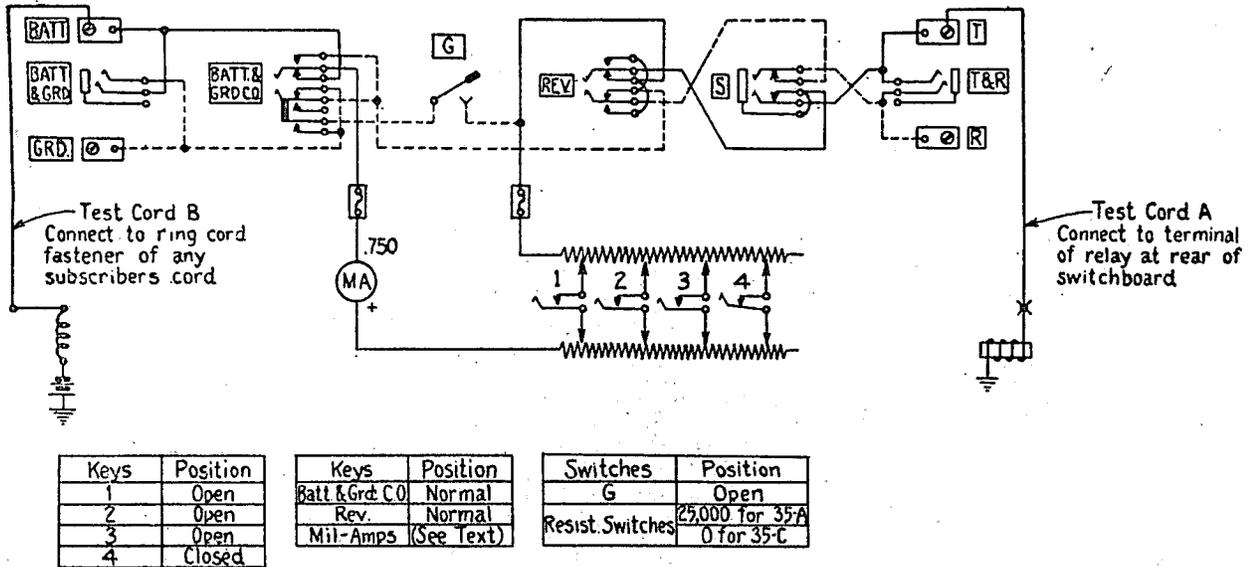


Fig. 2

- 3.5 When testing relays having ground on the winding, connect the test set to battery by attaching one end of a No. 893 cord "B" to the ring cord fastener of any subscribers' cord (temporarily removed from service) and to the BATT terminal of the test set.
- 3.6 Connect the test set to the first relay to be tested by attaching one end of a No. 893 cord "A" to the terminal not common and the other end of the cord to the T or R terminal of the test set as shown in either Fig. No. 1 or Fig. No. 2 as required.
- 3.7 After closing the locking lever of key No. 4, move the associated No. 4 resistance slides to the left until the specified TEST "release" value is observed on the milammeter. After the approximate value is obtained, operate key MIL-AMPS to 15 and check the accuracy of the reading on the .015 ampere scale. Make any further changes in the No. 4 resistance slides which may be necessary to obtain the exact specified TEST "release" value and then release the MIL-AMPS key.
- 3.8 Without releasing key No. 4 depress key No. 3 and move the associated No. 3 resistance slides to the left until the approximate specified TEST "operate" value is observed on the milammeter. After the approximate value is obtained, operate key MIL-AMPS to 75 and check the accuracy of the reading on the .075 ampere scale. Make any further changes in the No. 3 resistance slides which may be necessary to obtain the exact specified TEST "operate" value and then release the MIL-AMPS key and key No. 3.
- 3.9 Without releasing key No. 4 depress key No. 2 and move the associated No. 2 resistance

slides to the left until the exact specified "saturate" value is observed on the milammeter. Do not operate MIL-AMPS key at any time while key No. 2 is depressed. When the specified "saturate" value is obtained, release key No. 2.

- 3.10 The electrical values for auxiliary signal and night bell relays are given in an appendix to Section 491.597.

4. METHOD:

- 4.1 With the locking lever of key No. 4 operated continuously, proceed with the test as follows:
- 4.2 Depress keys No. 2 and 3 at the same time. After one second release key No. 2 and follow immediately by releasing and depressing key No. 3 three times.
- 4.3 Note operation of relay, when testing auxiliary signal circuits, by observing flashing of the auxiliary signal lamp from the rear of the switchboard as the operate key is depressed and released.
- 4.4 The night bell should be checked for immediate response to the operation and release of the night bell relay.

Note: In case the bell does not stop ringing promptly make sure that the night alarm relay is not being operated by a normally operated or sticking auxiliary signal relay.

5. REPORTS:

- 5.1 The required record of this routine should be entered on the proper form.