

CORD CIRCUIT SUPERVISORY RELAYS

"A" SWITCHBOARD

NO. 11 OFFICE

1. GENERAL

1.01 This section describes a method of making current flow tests of cord circuit supervisory relays in No.11 offices. The tests described are made at the front of the switchboard and are as follows:

- (A) Machine Ringing Calling Cords and Manual Ringing Calling and Answering Cords
- (B) Line Lamp Recall Answering Cords
- (C) Flashing Recall Answering Cords

1.02 This section has been reissued to change the method in tests (A) and (C) to apply flashing requirement "C" shown on the circuit requirement table, to supervisory relays using either the interrupter circuit in the switchboard or the manual method for flashing. Test (B) has been changed to make the operate test with the release current disconnected.

1.03 Test (B) does not check the relay itself for the flashing requirements. Flashing cannot be applied to the answering cord supervisory relay of line lamp recall cord circuits at the front of the switchboard. The flashing requirement should be applied on a readjust basis only.

2. APPARATUS

All Tests

2.01 35-type Test Set.

Tests (A) and (C) Using Switchboard Test Circuit SD-12848-01

2.02 No. 109 Plug.

2.03 P3F Cord equipped with a No. 109 and a No. 110 Plug.

3. PREPARATION

3.01 If test (A) or (C) is to be made using the interrupter circuit, strap the test set binding posts S and L together with a piece of insulated wire.

3.02 Note that all keys of the test set are normal and that all resistance slides are in their extreme right positions. Arrange the test set keys and switches as follows:

Keys	Position	Switches	Position
1	Open	G	Open
2	Open	L	Closed to 10
3	Open	Res.	0 for 35C 25,000 for 35A
4	Open		
BATT & GRD CO		Operated	
REV		Normal	

3.03 If the manual flashing method is to be used, insert the plug of an idle calling cord into the SIGNAL BATT & GRD jack. See Fig. 1.

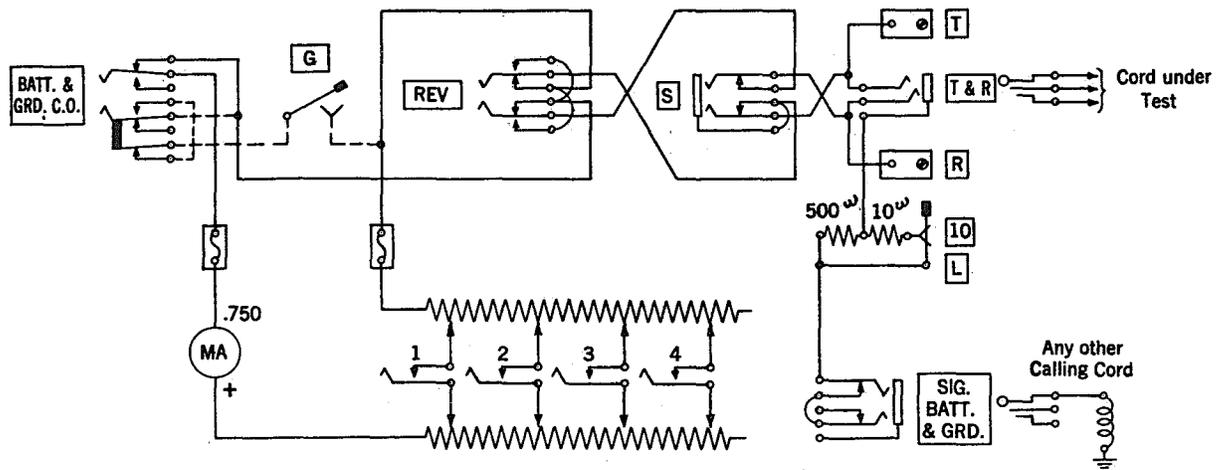


Fig. 1 - Manual Flashing Test.

3.04 If the interrupter circuit is to be used, connect the 3R jack of the test set to the interrupter circuit jack in the switchboard with a P3F cord. See Fig. 2.

3.05 Insert the plug of a calling cord into the T&R jack of the test set.

3.06 Depress key 2 and set the No. 2 resistance slides to obtain the specified "soak" value of current.

3.07 Depress key 3 and set the No. 3 resistance slides for the specified test "operate" value.

Note: If the interrupter circuit is being used, insert a spare plug into the SIGNAL BATT & GRD jack (or open the strap between the S and L1 binding posts) to cut off the interruptions while obtaining the current value.

3.08 Depress key 4 and set the No. 4 resistance slides for the specified test "release" value.

4. METHOD

(A) Machine Ringing Calling Cords and Manual Ringing Calling and Answering Cords

4.01 Insert the plug of the cord to be tested into the T&R jack of the test set. The supervisory lamp of the cord will light. At a flashing recall position, the ringing pilot lamp will also light. At a

line lamp recall position, the ringing pilot lamp and the supervisory lamp of the answering cord associated with the cord under test will light.

Release Test

4.02 Apply the "soak" current to the supervisory relay by depressing keys 2 and 4 at the same time. After approximately one second, release key 2, holding key 4 depressed. The supervisory lamp of the cord under test should be extinguished while the keys are depressed and it should light promptly when key 2 is released, indicating that the relay releases properly on the test "release" current. Repeat the release test several times.

4.03 If the relay meets the release test apply the flashing test using the interrupter circuit, if provided, as outlined in 4.04; otherwise use the manual method as outlined in 4.05 and 4.06.

Flashing Test with Interrupter Circuit

4.04 Depress and hold key 2 for approximately one second to apply the "soak" current. Immediately after releasing key 2 depress key 3 and observe that the supervisory lamp flashes at half-second intervals. After three flashes release key 3. If it is desired to obtain more flashes, the "soak" current should be applied again for a period of one second for each three flashes. The proper flashing of the lamp as noted indicates that the relay meets flashing requirement "C".

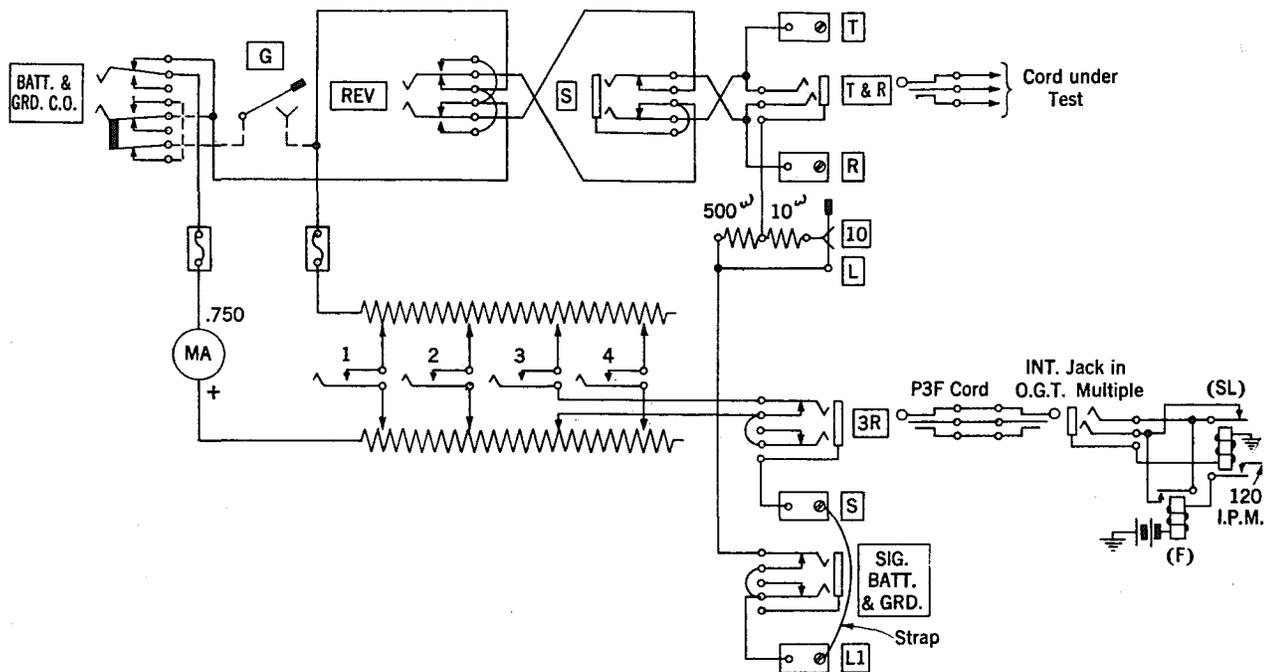


Fig. 2 - Flashing Test Using Interrupter Circuit.

Flashing Test - Manual Method

4.05 Depress and hold key 2 for one second to apply the "soak" current. One-half second after releasing the key depress and release key 3 four times at a rate of two times per second. The period of make to break (key depressed to released) should be at the ratio of 3 to 2.

Note: This rate of interruption provides for the exact requirements set up for the relays but it is recognized that the manual method can obtain these requirements only approximately.

4.06 Observe that the supervisory lamp flashes three times, that is, each time that key 3 is released, indicating that the relay meets flashing requirement "C".

(B) Line Lamp Recall Answering Cords

4.07 Insert the plug of the cord to be tested into the T&R jack of the test set. The supervisory lamp of the cord will remain extinguished. The P3F cord, if connected to the 3R jack, should be disconnected.

4.08 Depress keys 2 and 4 and while holding these keys operated, insert the plug of the calling cord of the pair under test into the holding jack. The ringing pilot lamp will light. Holding key 4 depressed, release key 2 and observe that the answering supervisory lamp lights immediately after key 2 is released. Release key 4.

4.09 Remove the plug of the calling cord from the holding jack. The answering supervisory lamp will be extinguished. Hold key 3 operated and again insert the plug of the calling cord into the holding jack. The ringing pilot lamp will light.

The answering cord supervisory lamp should remain extinguished. Release key 3 and observe that the answering supervisory lamp lights immediately. Remove the plug of the calling cord from the holding jack. The answering supervisory lamp and the ringing pilot lamp will be extinguished.

(C) Flashing Recall Answering Cords

4.10 Insert the plug of the cord under test into the T&R jack of the test set. The supervisory lamp of the cord should light.

4.11 Insert the plug of the calling cord of the pair under test into the holding jack. The ringing pilot lamp will light. Depress the TRK key. The ringing pilot lamp will be extinguished and the answering cord supervisory lamp should remain lighted.

Release Test

4.12 Depress keys 2 and 4. The answering cord supervisory lamp should start flashing and the audible recall signal should be heard.

4.13 While holding key 4 depressed, release key 2. The supervisory lamp should change from flashing to steadily lighted. Release key 4.

Flashing Test with Interrupter Circuit

4.14 Operate the cord circuit talking key and proceed according to 4.04.

Flashing Test - Manual Method

4.15 Operate the cord circuit talking key and proceed according to 4.05 and 4.06.

5. REPORTS

5.01 The required record of these tests should be entered on the proper form.