

GTE AUTOMATIC ELECTRIC
TYPE 101 DIRECTOR SYSTEM
REGISTER-SENDER B AND C RELAYS
TIMING TEST

1. GENERAL

1.01 This section has been revised to incorporate the latest timing and adjustment procedures, and to include system standard tools and test equipment. Marginal arrows have been omitted because of the extensive changes. Remove and destroy all previous issues of this GTE Practice.

1.02 This section provides procedures for testing the timing of B and C relays used in register-sender circuits H-850215-A, -B, and -C of the Type 101 Director System.

1.03 Timing tests of the B and C relays may be necessary when it appears that residuals have been worn to a degree and release time is excessive, or if tests during normal office routines indicate that the relays are not functioning properly. If changes in residuals or relay adjustments are made, both timing and pulsing tests should be performed to ensure proper operation. For information on pulsing tests, refer to the appropriate section in the 240-205 series of GTE Practices.

1.04 The relay adjustment sheets, AH-850215-A, -B, and -C, include the timing requirements for the B and C relays.

2. TEST EQUIPMENT

2.01 The following test equipment (or equivalent) is required for performing timing tests on the B and C relays:

- (a) Set, Test, Timing, Relay, 75A (part No. FD-1067-BD).
- (b) Assembly, Cord, Battery Supply (part No. D-543175-C).
- (c) Assembly, Cord, Test (part No. D-543172-A).

2.02 For additional information on the Relay Timing Test Set refer to Section 108-204-152.

3. TIMING TESTS

3.01 Table 1 presents the timing tests for the B and C relays.

Table 1. B and C Relay Timing Test.

PRELIMINARY INSTRUCTIONS:

- (1) Observe the SUPY lamp for register-sender to be tested. When register-sender is idle (supy lamp extinguished, manually busy out the register-sender by operating the BSY key.
- (2) Remove the dust cover on the register-sender.
- (3) Connect plug end of battery supply cord (D-543175-C) to one of the -48V jacks located at the bottom center of the relay Timing Test Set.
- (4) Connect the other end of the battery supply cord to a source of office battery. Power lamp (green) lights.

CAUTION: Steps 3 and 4 must be performed in sequence.

- (5) Ensure the OPERATE - CALIBRATE lever key is in the OPERATE position and the START A - START B lever key is in the center position.

STEP	PROCEDURE	RESULT
1.	Connect the plug end of test cord D-543172-A to the V-BR jack located on the bottom left of the test set.	SUPY indicator lamp lights.
2.	Connect the other end of the test cord to the register-sender test jack springs 1, 2, 3, and 4.	
3.	On the test set, operate the A selector switch to the 200 position, and the B selector switch to the 333 position.	The A selector switch sets the hold time, and the B selector switch sets the release time.
4.	Block relay C operated.	
5.	Operate the START A - START B lever key to the START A position.	Relay B operates.
6.	Operate the START A - START B lever key to the START B position.	Relay B releases.
7.	If relay B does not hold throughout its intended hold time, or if it does not release within the specified limits, readjust the relay in accordance with the appropriate adjustment sheet (AH-850215-A, -B, or -C.)	
8.	When all timing specifications of relay B are met, restore the C relay and proceed as follows.	

Table 1. B and C Relay Timing Test (Continued).

STEP	PROCEDURE	RESULT
9.	Remove plug end of patch cord D-543172-A from the V-BR jack and insert it into the V-M jack located to the right of the V-BR jack.	The A selector switch sets the hold time and the B selector switch sets the release time.
10.	Change the setting of the A selector switch from the 200 position to the 90 position and the B selector switch from the 333 position to the 100 position.	
11.	Block relay B operated.	
12.	Operate the START A - START B lever key to the START A position.	Relay C operates.
13.	Operate the START A - START B lever key to the START B position.	Relay C releases.
14.	If relay C does not hold throughout its intended hold time, or if it does not release within the specified limits, readjust the relay in accordance with the appropriate adjustment sheet (AH-850215-A, -B, or -C.)	
15.	When all timing specifications of relay C are met, restore the B relay and disconnect all test equipment.	
16.	Replace the dust cover on the register-sender.	
17.	Restore the register-sender to service by operating the BSY key to its normal position.	