

DIAL TONE SPEED REGISTER CIRCUIT AND  
DIAL TONE SPEED INDICATING CIRCUIT  
ALARM ROUTINE  
NO. 1 CROSSBAR OFFICES

1. GENERAL

- 1.01 This section covers the procedures to be followed in response to alarms in the dial tone speed register and dial tone speed indicator circuits used in No. 1 crossbar offices
- 1.02 This section is reissued to bring it in conformity with other material in the Plant Series. In this process marginal arrows have been omitted.
- 1.03 The alarms are as follows:
- (A) Stuck Selector and Central Office Circuit Trouble Alarm
  - (B) Dial Tone Relay Alarm
  - (C) Speed Indicator Overload Alarm
- 1.04 The alarm covered by method (C) may be used as an indication for controlling line load control equipment or in determining when additional central office switching apparatus is justified.

2. METHOD

(A) Stuck Selector and Central Office Circuit Trouble Alarm

- 2.01 When the DT (dial tone) lamp lights and the office audible visual alarms are brought in, with the SD (sender delay) key normal, this is an indication that the A or B selector of the dial tone speed register circuit failed to advance or that dial tone was not furnished by the central office circuits within a 2 to 4 minute interval.
- 2.02 First determine the group of central office lines under test from the position of the C selector together with that of the A or B selector.
- 2.03 Then determine the particular line under test from the position of the brush on the A or B arc. Determine from the office wiring plan the particular line connected to this selector terminal.
- 2.04 The position of the relays and selector will be an indication of the cause of the alarm. Several characteristic failures are as follows:

Relay

Trouble

- Step A magnet operated  
S1 relay operated, RC  
and RC1 relays normal.
- The trouble is in the releasing circuit of the A selector magnet thereby preventing the advance of the A selector brush.
- RC, RC1 and D operated  
and Step A magnet non-operated.
- The trouble is in the operating circuit to the selector magnet.
- D relay operated, Step A magnet operated.
- Failure of central office circuits to provide dial tone on first cycle of test.
- 2.05 If the indications point to failure of the selectors to operate, restore the ST key to normal and then check the operation and adjustment of the A and B selectors. If the failure is not in the adjustment of the selectors, inspect the wiring and check the T tube.
- 2.06 If it is desired to advance the dial tone speed register which is blocked due to trouble in the central office circuits, momentarily operate the T1 relay manually.
- 2.07 The alarms will be retired when the circuit is advanced, releasing the A relay.
- (B) Dial Tone Delay Alarm
- 2.08 If with the SD key operated, the DT lamp lights and the office audible and visual alarms are brought in, it is an indication of failure to receive dial tone within three seconds.
- 2.09 Determine the particular line under test as outlined in 2.02.
- 2.10 Restore the SD key to normal to retire the alarms and to advance the test circuit.
- 2.11 Proceed in accordance with local instructions.

(C) Speed Indicator Overload Alarm

2.12 The AIM lamp lights and the buzzer sounds when a predetermined number of calls requiring more than three seconds to receive dial tone are registered on the T or B selectors, indicating an overload on the central office equipment. By controlling the bank strapping of the No. 4 arc on the T and B selectors, the number of three second calls required to bring in the alarm can be made a desired percentage of the total test calls in a test cycle.

2.13 Momentarily operate the ACO key and observe that the alarm is retired.

2.14 Proceed in accordance with local instructions.

3. REPORTS

3.01 The required report of these alarms should be entered on the proper form.