TRUNK OPERATIONAL TEST
REMOTE OFFICE TEST LINE
NO. 5 CROSSBAR OFFICES

1. GENERAL

1.01 This section provides procedures for using the remote office test line (ROTL) SD-27698-01, remote office test control (ROTC) SD-27727-01, and remote office trunk make-busy (ROTMB) circuit SD-27799-01 located in a No. 5 crossbar remote office or the remote office test line (ROTL) SD-32521-01 located in a step-by-step remote office. These circuits are used to make manual operational tests and to make trunks busy through the use of the master test frame (MTF) or the outgoing trunk test (OGTT) circuit located in a control office.

1.02 This issue affects Equipment Test Lists.

1.03 The tests covered are:

A. ROTL Seizure Using MTF

B. ROTL Seizure Using OGTT

C. Trunk Operational Test

D. Trunk Make-Busy or Restore to Service

E. Individual or Trunk Group-Busy Check.

1.04 A connection is established on any outgoing trunk from the control office to the remote office test line. Information is then passed to the remote office equipment to cause connection to a particular outgoing trunk for testing or make-busy. The trunk is terminated to a synchronous or nonsynchronous test line in an end office, with results of the tests being passed to the control office. When the outgoing trunk is seized for a make-busy, the connection is established through make-busy selectors in the ROTL circuit. The trunk can be made busy, can be restored to service, or the circuit can test a particular trunk or any trunk in a group for a busy condition.

1.05 The procedures for seizing an access trunk and establishing a connection to the ROTL are covered in separate procedures: A for the MTF and B for the OGTT. When performing tests or making trunks busy, procedure A or B followed by C, D, or E must be performed to accomplish the desired test or function.

1.06 The manner of selecting some circuits and test conditions at the MTF and its associated circuits varies depending on the apparatus options furnished with these circuits. Therefore, where variable means of selection are provided, precise instructions for the selection of circuits and test conditions are not given. Precise instructions for the use of these variable means are given in Section 218-106-301.

1.07 The location statement, At MTF, is used to refer to all apparatus located on the four basic bays of the MTF.

2. APPARATUS

2.01 The following control office apparatus is used when performing remote office operational tests and make-busy functions.

(a) Patching cord, P3E cord, 3 feet long, equipped with two 310 plugs (3P7B cord) (for MTF control).

(b) Two patching cords, P3F cords, 4 feet long, each equipped with one 310 plug and one 309 plug (3P12A cords) (for OGTT control).

(c) 716D test receiver equipped with R20F cord and 310 plug.

(d) 322A (make-busy) plugs as required (for OGTT control).

3. METHOD

A. ROTL Seizure Using MTF

STEP	PROCEDURE
1	At MTF, operate RL key. All lamps are extinguished.
2	Select a marker.
3	Select a trunk outgoing to remote office.
4	Operate GPA/GPB keys as required.
5	Operate FS, TS, and KY keys.
6	Select A through G digits as required to reach the ROTL terminating test line appearance in the remote office.
7	Select an OR class of call with an LT translator indication.
8	Select class of service and/or rate treatment having access to trunk to remote office.
9	Select MISC class of test.
10	Patch TRK1 jack on TTC to TM or TM1 jack (Fig. 1).
11	Connect receiver to RCVR jack on TTC.
12	Operate DET key on TTC.
13	Operate ST key on MTF. The call is established to ROTL in remote office. When the ROTL is seized, 1 second of 2225-Hz tone is heard at the MTF receiver and the TD lamp lights at TTC. This completes ROTL seizure using the MTF. Proceed to C, D, or E to perform the desired tests of outgoing trunks from the remote office.

B. ROTL Seizure Using OGTT

STEP	PROCEDURE
1	At OGTT, restore all keys.
2	Momentarily operate KR, DISC 1, and DISC 2 keys to restore OGTT circuits to normal.
3	Patch T- jack of trunk chosen as an access trunk to TRK1 jack of TTC (Fig. 2). Patch T1 jack of OGTT to TST1 jack of TTC. These connections provide the seizure path of

STEP	PROCEDURE
	the access trunk and the interrupted tone dialing path for controlling the ROTL after it is seized.
4	Insert a make-busy plug into the MB- jack for the access trunk.
5	If the access trunk has battery on the tip and ground on the ring when the called end is off-hook, operate the RS1 key.
6	Depending on the type of signaling required, operate the appropriate key as follows:

SIGNALING	OPERATE KEYS
Revertive pulsing	RP
Multifrequency	MF, 0 TRK COMP RES
Dial pulsing	DP
Dialing loop basis	LPD
Resistance dial pulsing	LRD
Battery and ground dial pulsing	BGD

7	If the access trunk requires stop-pulse signal, operate S-GO key.
8	If the access trunk requires delayed dial start signal, operate DPL key.
9	Operate A RY OPR COMP RES- keys as required for the access trunk.
10	Operate TH, H, T, and U register keys as required to direct the call to the ROTL terminating test line appearance in the remote office.
11	Connect receiver to TTC RCVR jack.
12	Operate DET key on TTC.
13	Operate TST1 key on OGTT. The call is established to the ROTL in the remote office, and when the ROTL is seized, 1 second of 2225-Hz tone is heard at the TTC receiver and TD lamp lights.
14	At OGTT operate TLK1 key, restore TST1 key, and momentarily operate DISC 1 key. This completes ROTL seizure using the OGTT. Proceed to C, D, or E to perform the desired operational tests or make-busy function of the desired outgoing trunk in the remote office.

C. Trunk Operational Test

STEP	PROCEDURE
1	After performing procedure A or B, operate DC key at TTC.
2	If the trunk to be tested is made busy, at the MTF or OGTT, dial digit 4.
3	At MTF or OGTT, dial digit 2 followed by the four digits determined from office records to seize the trunk to be tested. The TD lamp is extinguished as soon as the dial is pulled off-normal. After dialing is complete, audible ringing is heard at the TTC receiver, followed by 2225-Hz tone bursts, indicating operation and release of the trunk supervisory relay.
4	If ***other*** trunks are to be tested, operate RL key at TTC for 1 second. The ROTL will release the trunk under test and return 2225-Hz tone for 1 second. This tone is heard at the TTC receiver and TD lamp lights. Tone and the lighted TD lamp indicate that the ROTL is ready to receive dialed digits for the next trunk to be tested.
5	Repeat Steps 2, 3, and 4 for other trunks to be tested.
6	If ***no other*** trunks are to be tested, restore DC and DET keys at TTC.
7	Restore all keys and switches at MTF or OGTT and remove all patching cords not required in the next test.

D. Trunk Make-Busy or Restore to Service

STEP	PROCEDURE
1	After performing procedure A or B, operate DC key at TTC.
2	At MTF or OGTT, dial digit 0 (make trunk busy) or digit 9 (restore trunk to service) followed by the four digits determined from office records to reach the trunk to be made busy or restored to service. After the last digit is dialed, the ROTL will establish a call to the line link appearance of the TTC and cause the MBT lamp to light.
3	When MBT lamp lights, momentarily operate MBT key. This sends a signal to the ROTL to verify that the make-busy request is originated by the control office. After the verification, if the call was to make a trunk busy, 5 seconds of 2225-Hz tone interrupted at 60-ipm is heard at the TTC receiver to indicate successful make-busy. If the call was to restore a trunk to service, 5 seconds of 2225-Hz tone interrupted at 120 ipm is heard at the TTC receiver to indicate trunk restored to service.

STEP	PROCEDURE
4	If ***other*** trunks are to be made busy or restored to service, after the tone is removed, dial a digit 0 or 9 followed by the four digits required for the next trunk. ***No*** make-busy verification will be required on subsequent use of the same access trunk.
5	If ***no other*** trunks are to be made busy or restored to service, restore DC and DET keys at TTC.
6	Restore all keys and switches at MTF or OGTT and remove all patching cords and make-busy plugs not required in the next test.

E. Individual or Trunk Group-Busy Check

STEP	PROCEDURE
1	After performing procedure A or B, operate DC key at TTC.
2	At MTF or OGTT, dial digits 4 and 0 (check a particular trunk) or 4 and 9 (check trunk group) followed by the four digits, determined from office records, to reach the particular trunk to be checked or any trunk in the trunk group to be checked. If the call was to check for a particular trunk busy, 5 seconds of ringing tone interrupted at 60 ipm is heard at the TTC receiver, indicating trunk busy or 5 seconds of continuous ringing indicating trunk idle. If the call was to check for any trunk in a group busy, 5 seconds of ringing tone interrupted at 120 ipm is heard to indicate at least one trunk in the group is busy or 5 seconds of continuous ringing to indicate all trunks in the group are idle.
3	If ***other*** trunks or trunk groups are to be checked, after tone is silenced, dial six more digits to perform the desired check.
4	If ***no other*** trunks are to be checked, restore DET and DC keys at TTC.
5	Restore all keys and switches at MTF or OGTT and remove all patching cords and make-busy plugs.

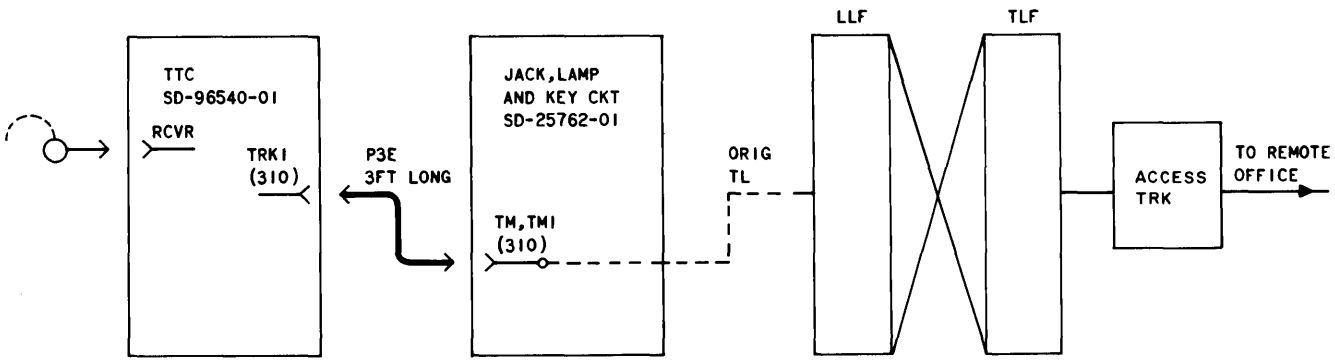

Fig. 1—MTF Originated Test

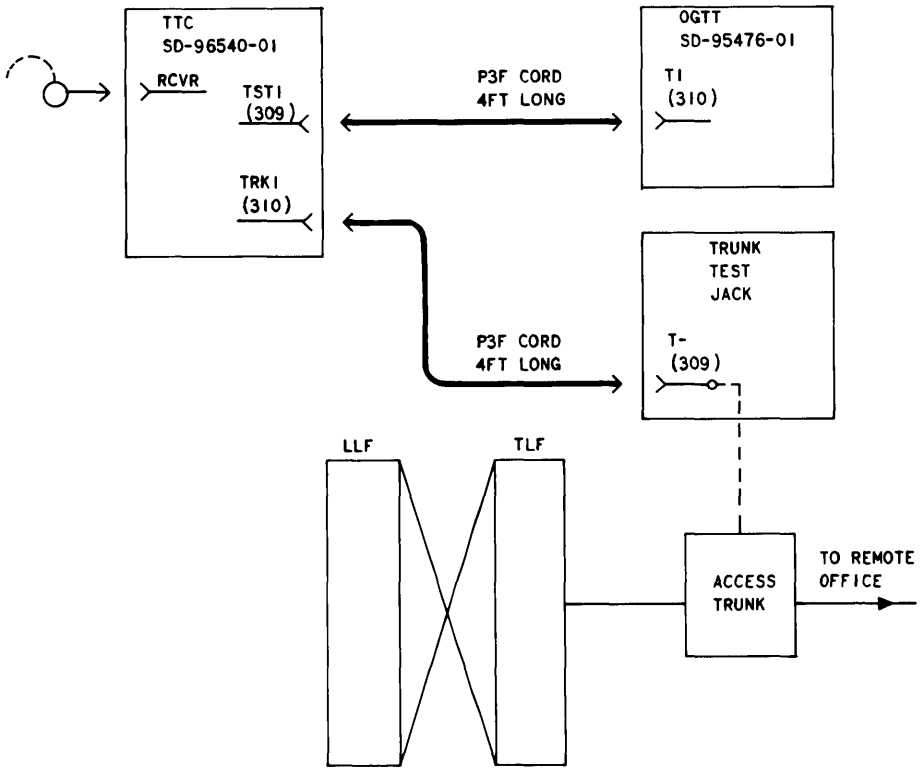

Fig. 2—OGTT Originated Test