COMMON SYSTEMS

VOICE ALARM CIRCUIT FOR ANNOUNCEMENT CIRCUITS

CONTENTS

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1. GENERAL INFORMATION

1.1 Description: This section describes a method of testing the Voice Alarm Circuit associated with announcement circuits in various Common Systems.

1.2 Circuit Tested

SD-95959-01 Voice Alarm Circuit

1.3 Precautions: This equipment contains semiconductor devices and coils subject to damage by improper procedures. Methods of Section 0.3 of this handbook must be observed.

1.4 Alarms: The associated alarm cut-off key may be operated during these tests to avoid sounding office alarms.

1.5 The associated announcement set and amplifiers should be tested and adjusted for normal operation before use for this test.

2. RECORDS AND REQUIREMENTS

2.1 Records: Forms SD-4-1313 and SD-4-1315 are required for recording the results of these tests. For further information on records, refer to Section 3 of Handbook 50.

2.2 Requirements: Bell System Practice requirements are specified in the paragraphs describing the particular tests.

3. TEST EQUIPMENT

3.1 Test Sets

Amt.	ITE	Description
1	4002	Tone Buzzer
1	4089	21A Transmission Measuring Set
1	4442	Volt-Ohmmeter
1	4509	Vacuum Tube Voltmeter

3.2 Miscellaneous

Amt.	Code	Description
1	R-3314	Watch, Stop

4. FUSING AND CONTINUITY

4.1 Use ITE-4002 Tone Buzzer or X1000 range of ITE-4442 Volt-Ohmmeter to verify proper options and continuity of all job wiring.

4.2 Install fuse as specified in circuit note 101 on SD-95959-01 in accordance with the following:

(a) Check that fuse stud is free of battery or direct ground with ITE-4442 Volt-Ohmmeter.

(b) Install fuse and check that -48 volts battery appears at punching 31 of unit T.S.

5. ALIGNMENT★

5.01 Make test setup shown in Figure 1 as follows:

5.0101 Connect power cord of ITE-4089 21A Transmission Measuring Set (TMS).

5.0102 Operate ON - OFF switch to ON and allow at least 10 minutes for TMS to warm up before use.

5.0103 Perform calibration procedure of TM0-4089 or BSP A702.614 if accuracy of oscillator or detector of TMS is in doubt.

5.0104 Adjust TMS controls to following settings:

FREQ MULT	X100
FREQ	10
OSC OUTPUT	0 (black)
DET INPUT	+ 20

5.0105 Connect power cord to ITE-4509 Vacuum Tube Voltmeter (VTVM). Turn on AC line switch. Allow 10 minute warm up before use.

5.0106 Check that VTVM pointer lines up exactly with the black scale 0 mark with range switch set to OFF. If it does not, adjust by means of the pointer adjustment screw just above "OFF" designation.

5.0107 Plug in the ITE-9441 DCV-OHM lead and ITE-9439 ground lead. Verify that green sleeve of the probe is turned out to the stop clockwise.

5.0108 Set VTVM switch to -V and 10 volt DC range.

★ Strap on Capacitor D should be connected before alignment.

5.0109 Connect the ground lead of VTVM to contact "2 Make" of ST relay on Voice Alarm unit. Connect VTVM probe lead to contact "2 Break" of ST relay.

5.0110 Connect DET IN jacks of TMS to T and R leads of announcement bus output as shown in Figure 2 for typical applications.

5.0111 Remove T and R leads temporarily from input of announcement amplifier. Connect OSC OUT jacks of TMS to input terminals of the amplifier.

5.0112 From schematic drawings of connecting circuits or from Figure 2, determine relay operations necessary to close announcement bus through to TMS. Block these relays operated.

5.0113 Connect ground to punching 37 of Voice Alarm unit T.S. The ST relay operates.

5.02 Observe level indicated on TMS and record in test record.

5.03 Adjust gain control of announcement amplifier until TMS indicates 1 db less than level observed in Paragraph 5.2. (For example: -10 db less 1 db is -11 db.)

5.04 Adjust A potentiometer on Voice Alarm unit until 6 to 7 volt is indicated on VTVM and holds approximately 10 seconds.

5.05 Adjust gain control of announcement amplifier until TMS indicates 6 db less than level observed in Paragraph 5.2. (For example: -10 db less 6 db is -16 db.) ALM relay operates on Voice Alarm unit and voltage across A relay is greater than 8 volts.

5.06 Adjust gain control of announcement amplifier to provide TMS indication observed in Paragraph 5.2. ALM relay releases and voltage across A relay is less than 3 volts.

5.07 Reconnect T and R leads from announcement set to input of announcement amplifier and feed a voice recording into the announcement amplifier.

5.08 Adjust output of amplifier to 6 db less than required as measured on the volume level indicator. The A relay should operate after a short delay depending on which strap on the D capacitor is used.

5.09 Repeat Paragraph 5.06.

5.10 Remove ground connection from punching 37 of unit T.S. Remove all blocks from relays. Remove connections from TMS and VTVM.

→ Arrowed lines indicate new or changed information.

Manager, Panel and Step-by-Step Engineering

ATTACHMENT
Figures 1 and 2 on pages 3 and 4.

Reason for Reissue:
To change Paragraph 5.04 and minor corrections.
To change Figure 1, added 600 ohm

Replaces Section 411 dated 1-19-67.

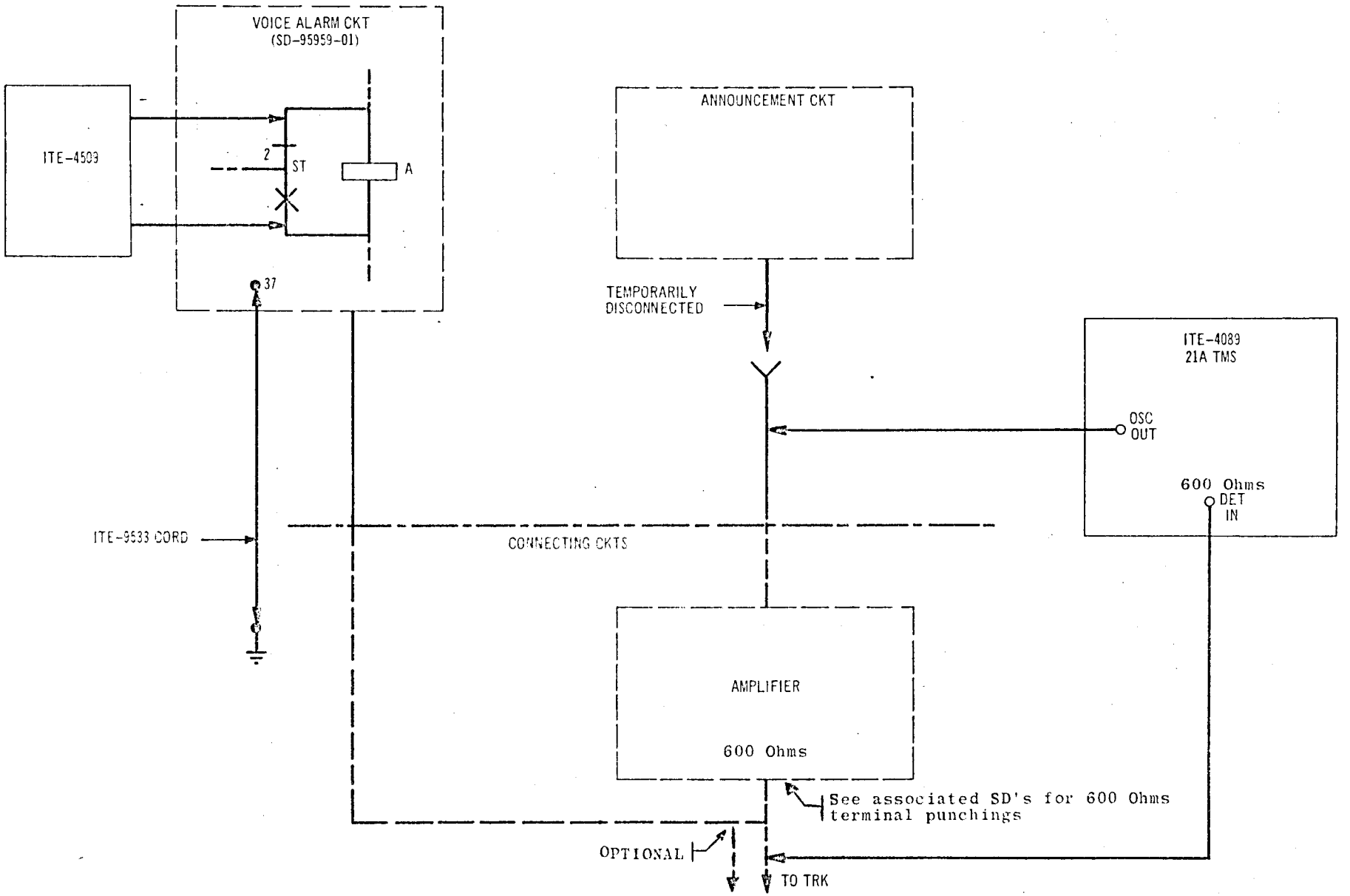
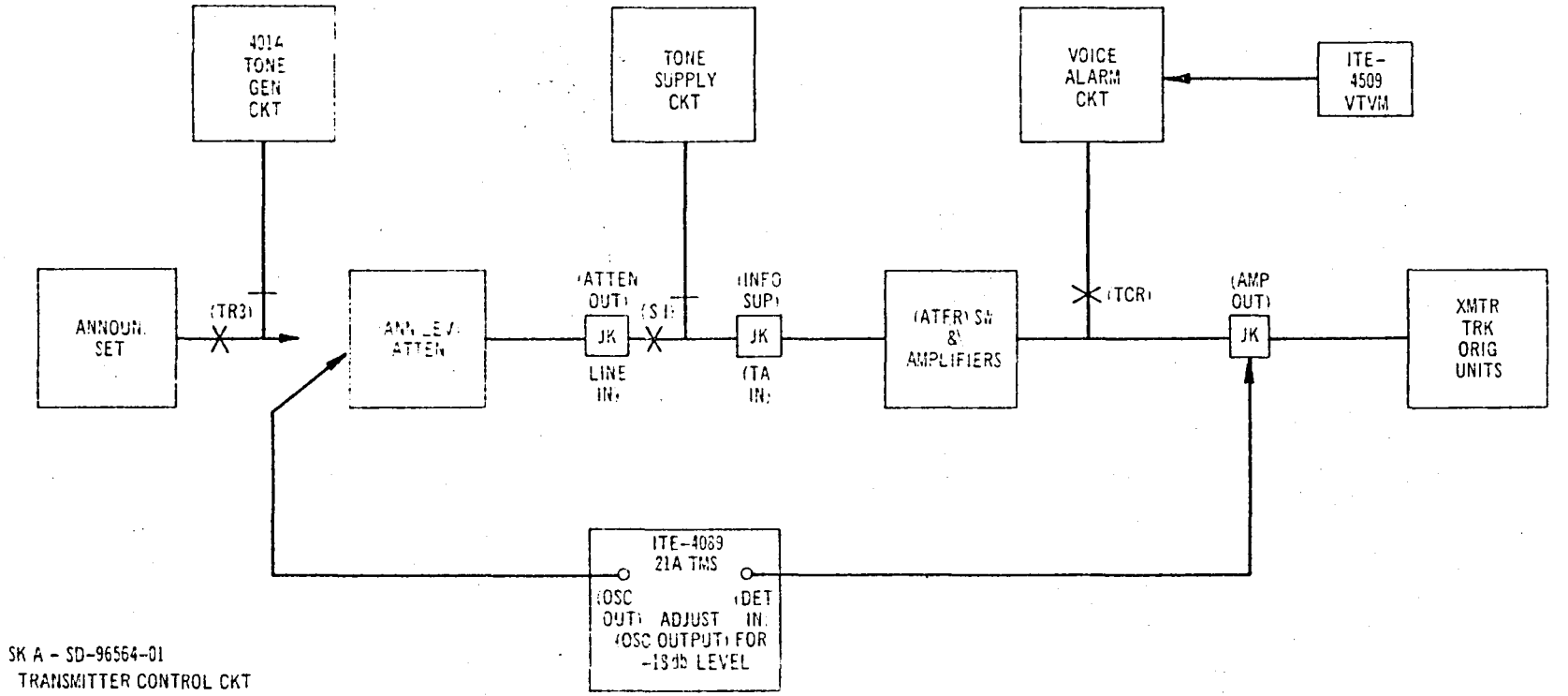
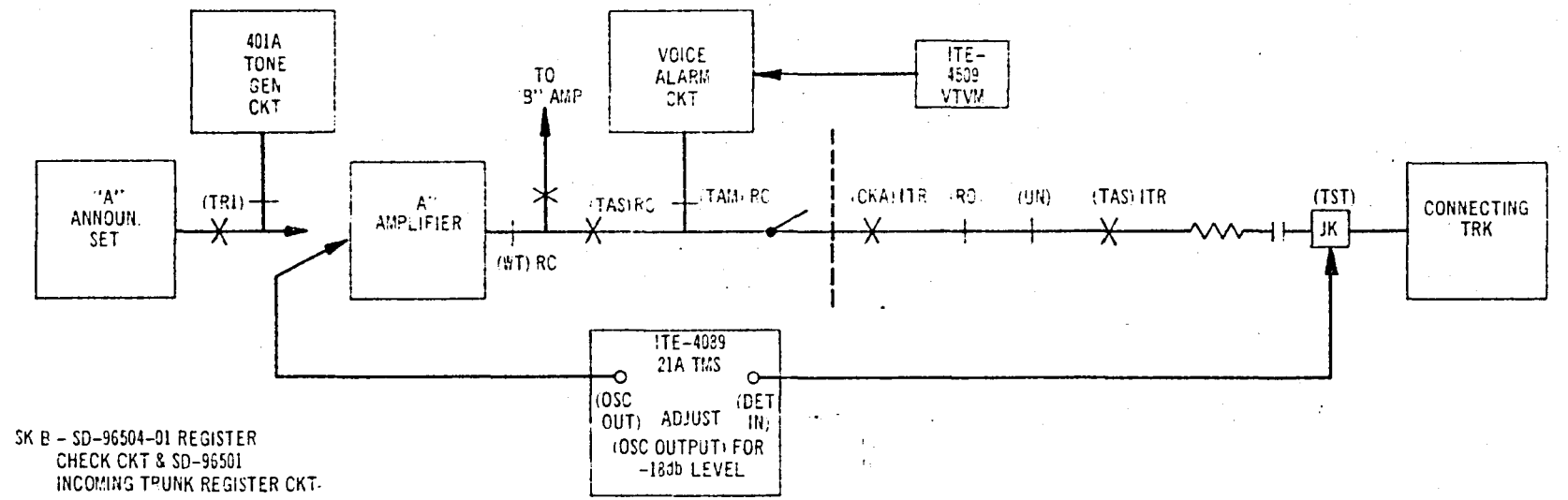


FIG. 1 GENERAL ALIGNMENT SETUP



SK A - SD-96564-01
TRANSMITTER CONTROL CKT



SK B - SD-96504-01 REGISTER
CHECK CKT & SD-96501
INCOMING TRUNK REGISTER CKT.

FIG. 2 ALIGNMENT SETUP FOR TYPICAL CONNECTING CIRCUITS