1B AND 1BA TELEPHONE ANSWERING SETS

OPERATION

1.00 GENERAL

1.01 This section provides operation information for the 1B and 1BA telephone answering sets.

1.02 Sequence charts, operational sketches, and circuitry information are for the 1BA telephone answering set, except Fig. 13 and 14 which give circuitry information for the 1B telephone answering set.

1.03 Sequence charts and operational sketches for the 1BA telephone answering set are as follows:

- Announcement Dictate (Fig. 1 and 2)
- Announcement Check (Fig. 3 and 4)
- Message Playback (Fig. 5 and 6)
- Automatic Answer — Answer Only (Fig. 7 and 8)
- Automatic Answer — Answer and Record (Fig. 9 and 10)

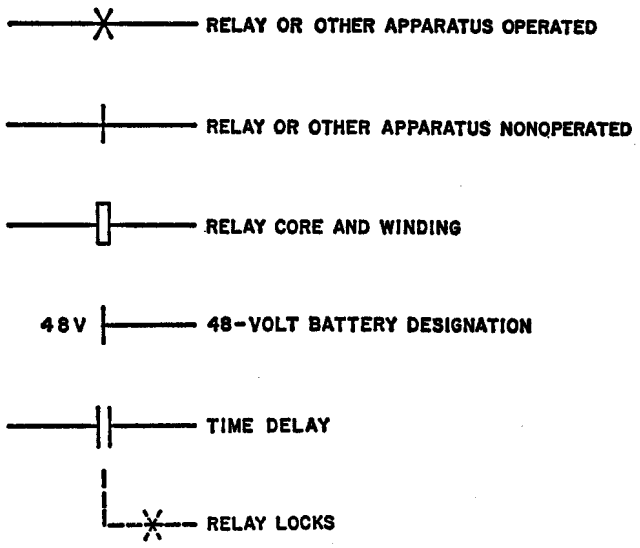
1.04 The following circuit information applies to the 1BA telephone answering set:

- Fig. 11 — Control Circuit.
- Fig. 12 — Amplifier and Power Supply Circuit

1.05 The following circuit information applies to the 1B telephone answering set.

- Fig. 13 — Control Circuit
- Fig. 14 — Amplifier and Power Supply Circuit

1.06 Symbols for sequence charts are as follows:



2.00 ANNOUNCEMENT DICTATE

To dictate an announcement message:

1. Turn off-on knob (S4) to ON (Bell System medallion is illuminated).

2. Turn function selector knob (S1) to ANNOUNCEMENT DICTATE.
   - Green light under ANSWER & RECORD lights.

3. Pick up associated telephone handset.

4. Depress START button (S2 momentarily).
   - Green light under ANSWER & RECORD is extinguished.

5. As soon as red DICTATE light appears, dictate announcement message clearly and distinctly into the handset transmitter.
   - A red warning DICTATE light flashes several times approximately 5 seconds before end of maximum recording time.

6. Depress STOP button (S3) promptly on completion of message, then hang up the telephone.
   - This will prevent the sound of the hang up from being recorded. It also minimizes the silent period between the end of announcement, and tone signals (two beeps) which indicate that machine is ready to record an incoming message.
   - Green light under ANSWER & RECORD relights.

Note: If message is incomplete when recording drum stops, the content of the announcement must be modified so that it will not exceed a maximum of 30 seconds. The recorded announcement is automatically erased as a new announcement message is recorded.

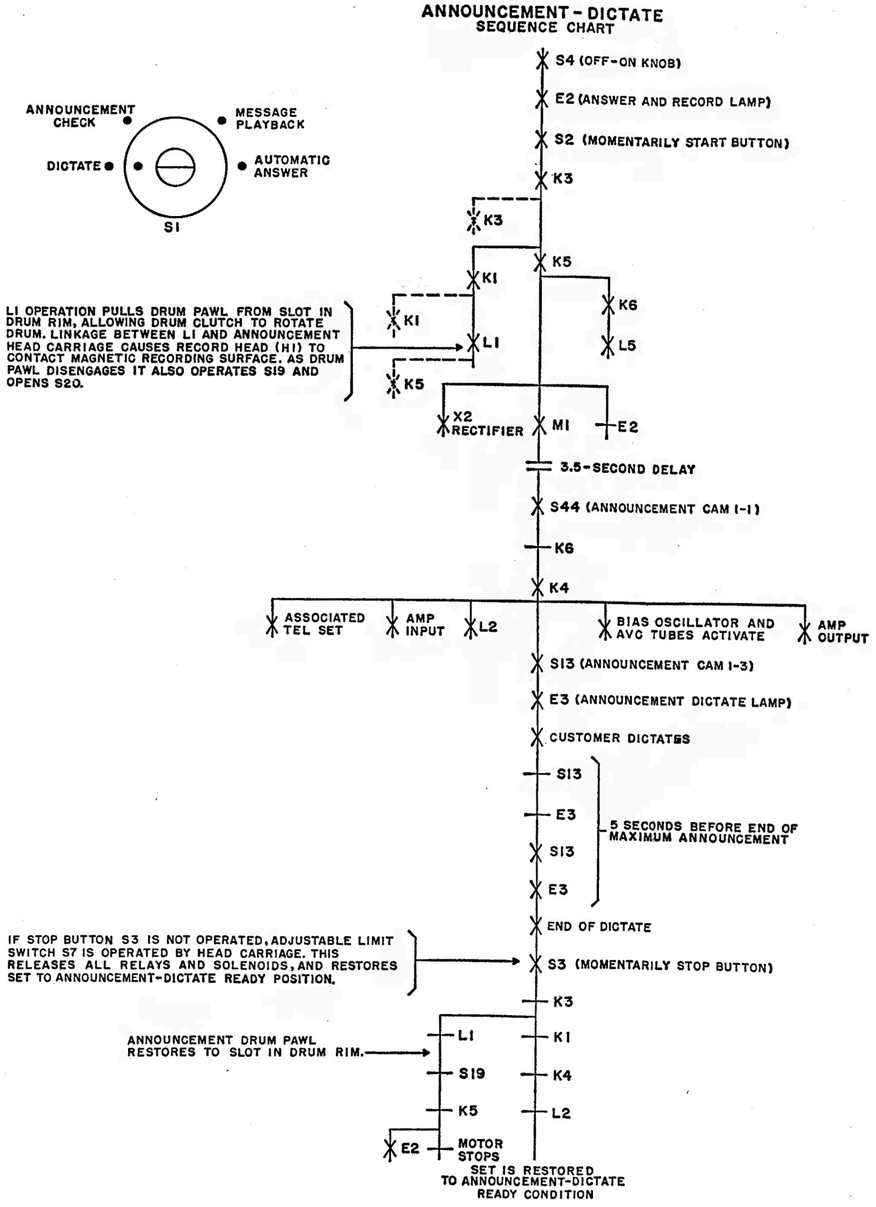


Fig. 1

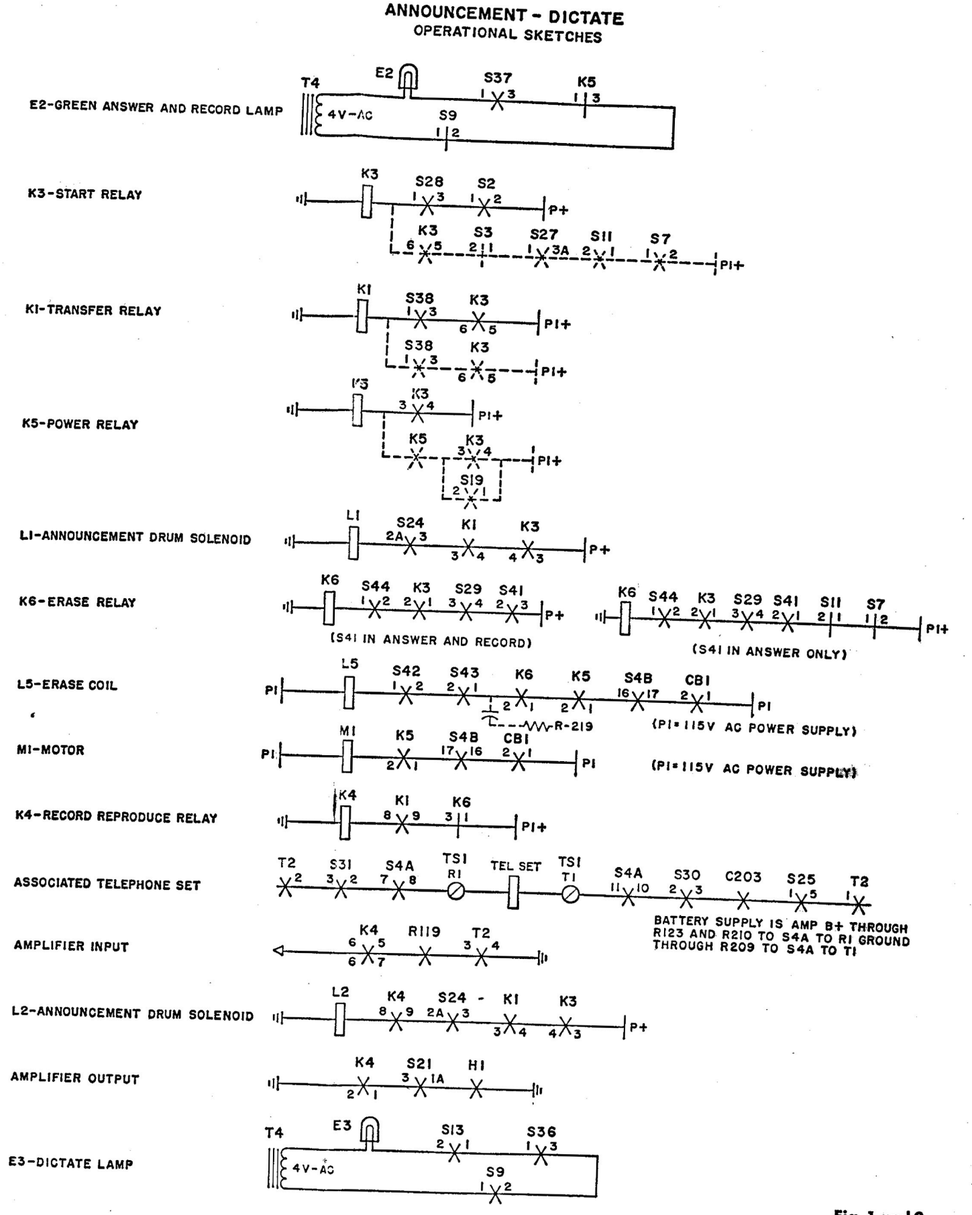


Fig. 2

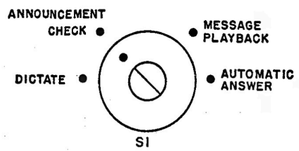
Fig. 1 and 2

3.00 ANNOUNCEMENT CHECK

1. Turn off-on knob (S4) to ON (Bell System medallion is illuminated).
2. Turn function selector knob (S1) to ANNOUNCEMENT CHECK.
3. Pick up associated telephone handset.
4. Depress START button (S2 momentarily).
5. Listen to recorded announcement message reproduced in the telephone handset receiver.

Note: A new announcement message should be recorded if:

- The message is not clearly understandable.
- The message is not appropriate for the intended use.



NOTE 1: STOP BUTTON (S3) MAY BE OPERATED AT ANYTIME IN THIS FUNCTION, RELEASING K3 AND RESTORING SET TO NORMAL.

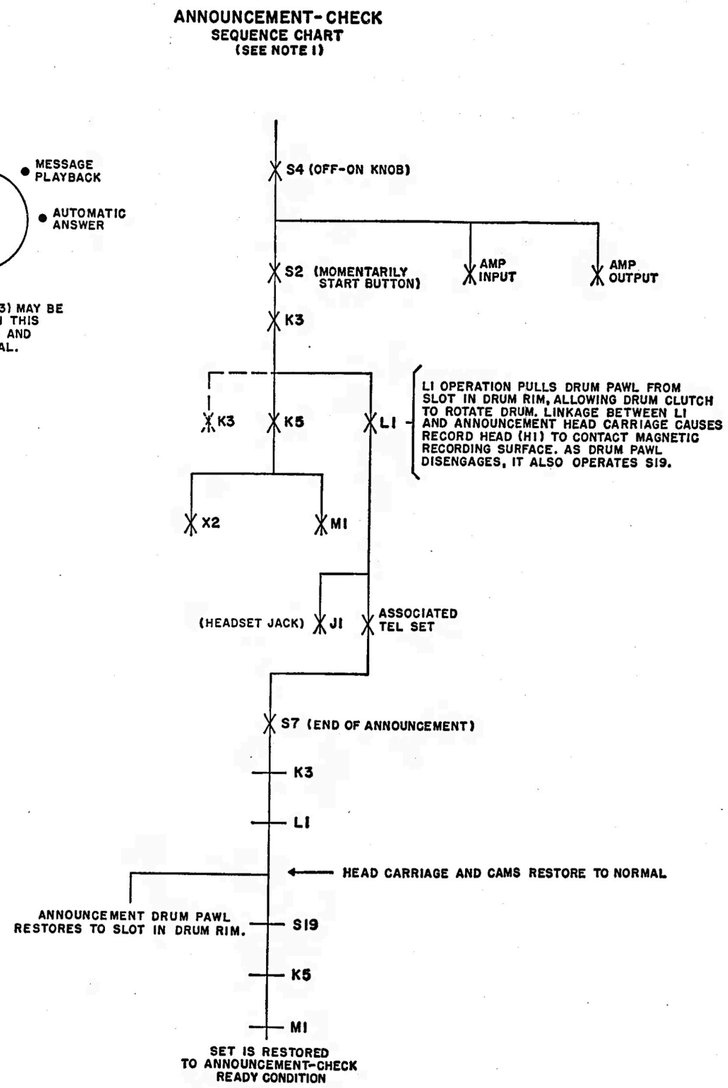


Fig. 3

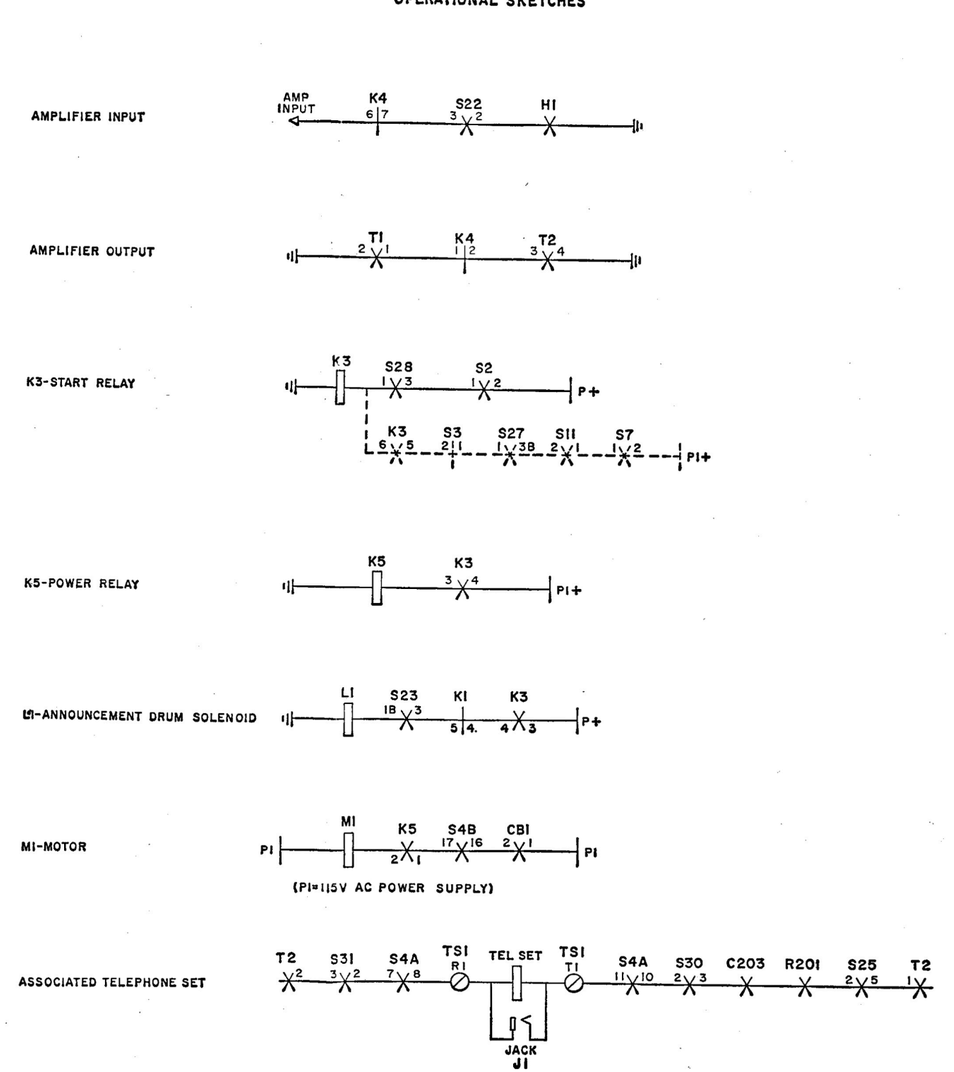


Fig. 4

Fig. 3 and 4

4.00 MESSAGE PLAYBACK

1. Turn off-on knob (S4) to ON (Bell System medallion is illuminated).

2. Turn function selector knob (S1) to MESSAGE PLAYBACK.

3. Push message selector in and turn counterclockwise until it is against its stop. The indicator on the knob skirt should then be below the dot on the panel. This permits all the incoming messages to be played back. A specific message can be selected if the message selector knob is pushed in, rotated counterclockwise to the desired position, and then released.

4. Pick up the associated telephone handset, or an auxiliary head receiver plugged into the auxiliary receiver jack.

5. Depress START button (S2 momentarily).

6. Listen to the recorded incoming messages.

7. Turn playback volume knob clockwise to increase volume (1B telephone answering set only).

8. Depress the STOP button (S3) promptly after the last message has been heard, or earlier if desired.

MESSAGE PLAYBACK
SEQUENCE CHART

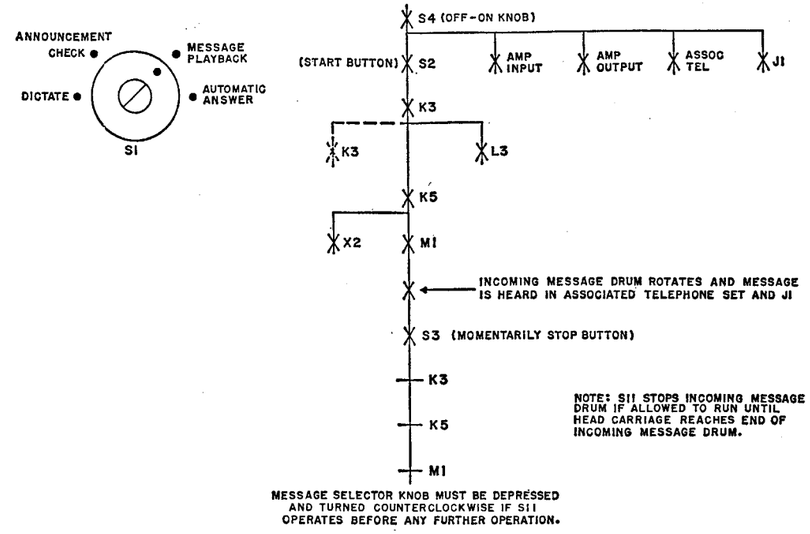


Fig. 5

MESSAGE PLAYBACK
OPERATIONAL SKETCHES

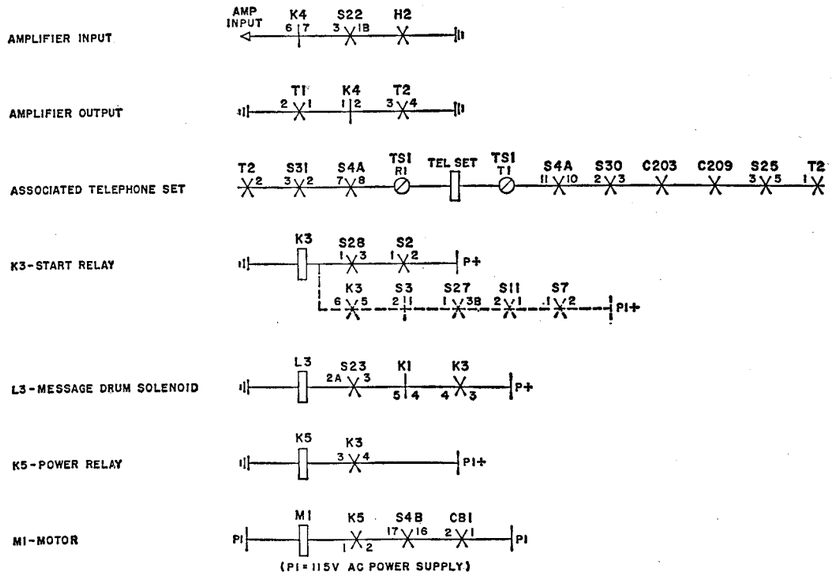


Fig. 6

Fig. 5 and 6

5.00 AUTOMATIC ANSWER

5.01 Answer Only

1. Turn off-on knob (S4) to ON (Bell System medallion is illuminated).

2. Turn function selector knob (S1) to AUTOMATIC ANSWER.

   • The position of the indicator on the message selector knob skirt must be adjacent to the zero mark on the message indicator dial.

3. Turn the answer and record (S41) and the answer only dial to ANSWER ONLY.

   • Amber answer only lamp lights (if lamp does not light, machine will not operate).

4. Check position of the message indicator dial and the message selector knob.

   • The telephone answering set is now ready to automatically answer a call.

Note 1: Zero on message-indicator dial and white line on message-selector knob must be adjacent, or S8 switch will be open and the E4 lamp will not light.

Note 2: About one second after line is seized, announcement cam 1-2 opens S14A and S14B. Opening of S14A places *K2* relay under control of *K7*. Opening of S14B enables *K7* to respond when central office battery is interrupted at the instant of calling party disconnect.

Note 3: If calling party disconnects during announcement, *K7* releases which releases *K2*. Open contacts of S20, associated with announcement drum pawl, prevents a new call from being received until drum indexes.

AUTOMATIC ANSWER
ANSWER ONLY
SEQUENCE CHART

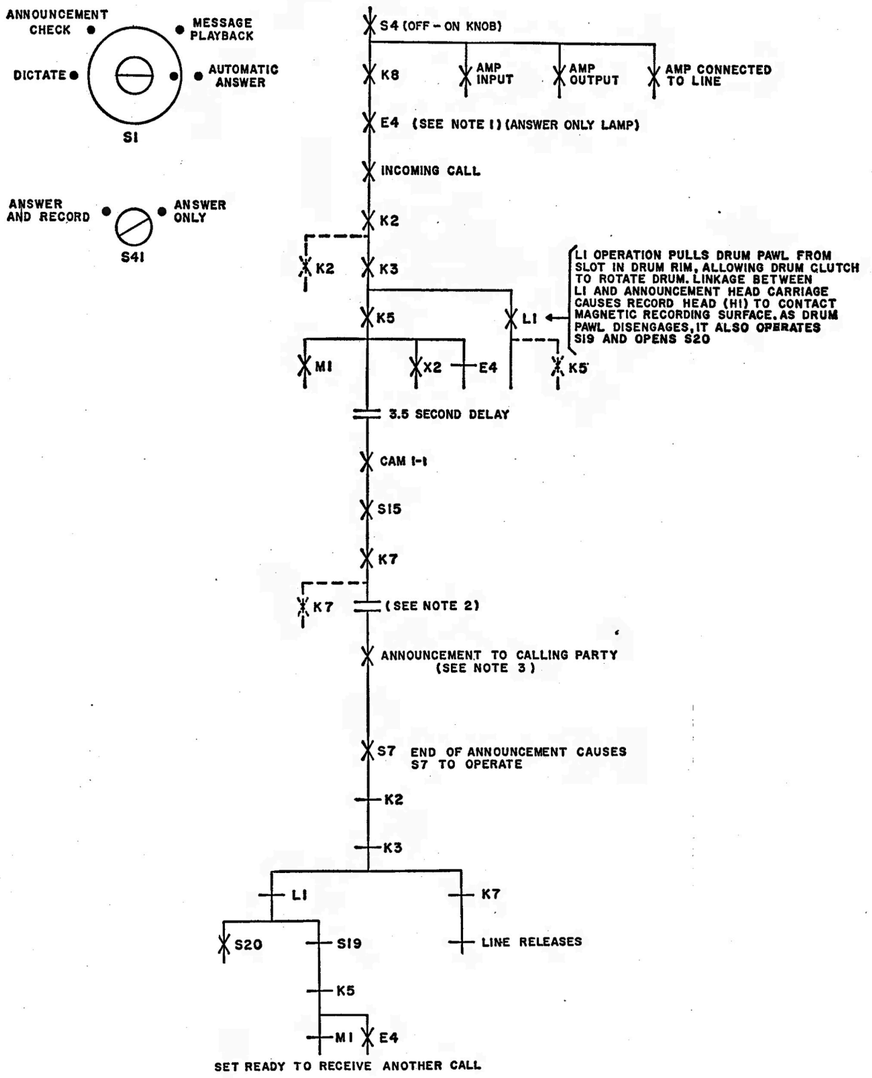


Fig. 7

AUTOMATIC ANSWER
ANSWER ONLY
OPERATIONAL SKETCHES

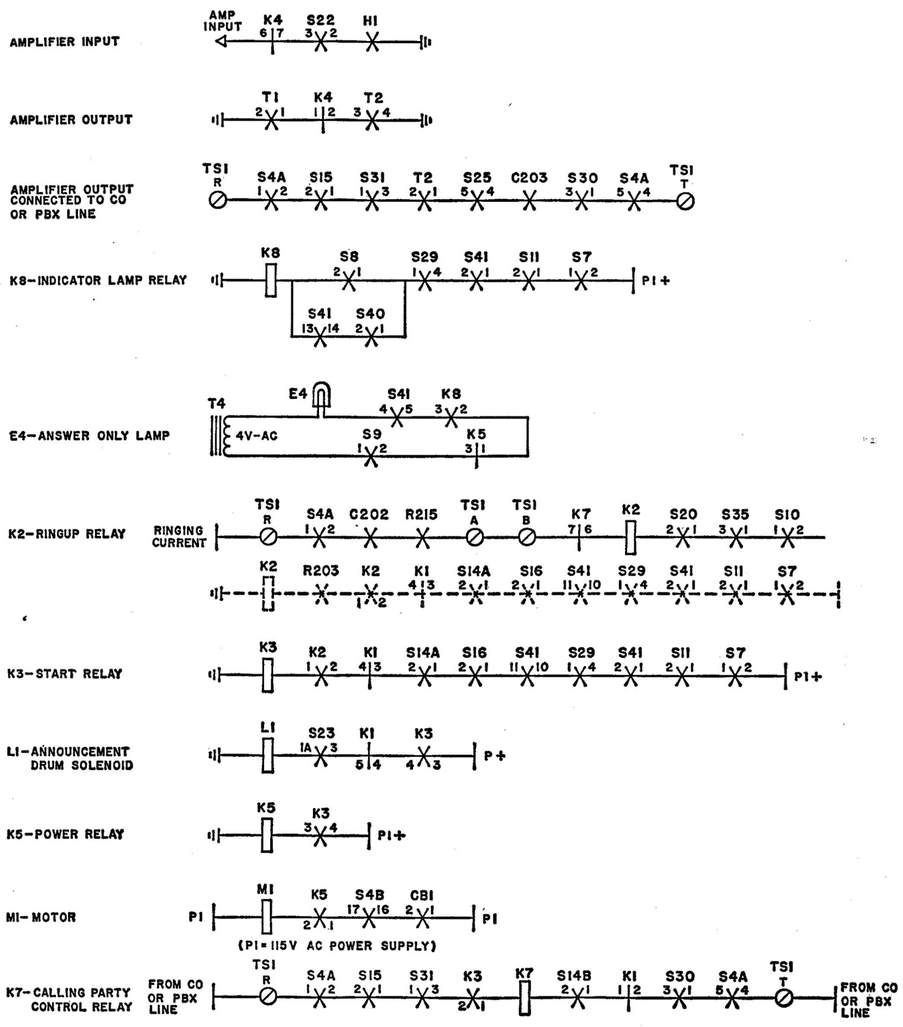


Fig. 8

5.02 Answer and Record

1. Turn off-on knob (S4) to ON (Bell System medallion is illuminated).
2. Push message selector knob in and turn counterclockwise until it is against its stop and the indicator on the knob skirt is below the dot on the panel.
3. Turn message indicator dial counterclockwise until it is against its stop and the zero is also below the dot on the panel.
4. Turn function selector knob (S1) to AUTOMATIC ANSWER.
5. Turn the answer and record and the answer only dial (S41) to ANSWER & RECORD.
   - Green answer and record lamp lights (if lamp does not light machine will not operate).
6. Check the position of message indicator dial and message selector knob.
   - The telephone answering set is now ready to automatically answer a call and record a message. All previous incoming messages will be erased automatically when the next incoming call is answered.

5.03 Alternate Answer and Record

- If retention of the existing incoming messages is desired and it is understood that the set will be able to receive less than its full capacity of incoming messages, use the following procedure:

1. Turn off-on knob (S4) to ON (Bell System medallion is illuminated).
2. Turn function selector knob (S1) to AUTOMATIC ANSWER.
   - The position of the indicator on the message selector knob skirt must be adjacent to the zero message mark on the message indicator dial.
3. Turn the answer and record and the answer only dial (S41) to ANSWER & RECORD position.
   - Green answer and record lamp lights (if lamp does not light, the machine will not operate).
4. Check the setting of the message indicator dial.
   - The telephone answering set is now ready to automatically answer calls and record messages.

5.04 Lights under ANSWER & RECORD and ANSWER ONLY will not be lighted when the telephone answering set is automatically answering a call.

Note 1: If previously recorded messages are to be erased, turn message selector knob counterclockwise against its stop. White line on the knob should be below white dot on panel.

Note 2: If previously recorded messages are to be retained, zero on MESSAGE INDICATOR dial and white line on MESSAGE SELECTOR knob must be adjacent to each other.

Note 3: If the calling party disconnects before the 30-second incoming message recording time has elapsed, the *K7* relay releases, restoring the set to normal ready to receive another call. This applies only to calling party control central offices where there is a momentary open of central office battery when the calling party releases.

Note 4: When the incoming message head reaches the point on the drum where only 35 seconds of message recording time remains, the S9 contacts are opened by the cam attached to the message selector knob assembly. The ANSWER & RECORD and ANSWER ONLY lamps will not light after this point has been reached.

Note 5: Approximately 5 seconds later the cam which opened S9 opens S10. S10 opens the telephone ground circuit and subsequent calls will encounter a "don't answer" condition.

Note 6: The last call which the set is able to receive will have the full 30-second message recording time.

Note 7: Switch positions are as follows:

Switch	Position			
	AUTO. ANSWER	MESSAGE PLAYBACK	ANNOUNCE-MENT CHECK	ANNOUNCE-MENT DICTATE
S21	2-3	1B-3	2-3	3-1A
S22	2-3	1B-3	2-3	3-1A
S23	1A-3	2A-2B-3	1B-3	2B-3
S24	1-3	2B-3	1-3	3-2A
S25	4-5	3-5	2-5	1-5
S26	0	3-1	3-1	3-1
S27	0	3B-1	3B-1-3A	1-3A
S28	0	1-3	1-3	1-3
S29	1-4	0	0	4-3
S30	1-3	3-2	3-2	3-2
S31	1-3	3-2	3-2	3-2
S32	1-3	0	0	0
S33	1-3	0	0	0
S34	1-3	0	0	0
S35	1-3	0	0	0
S36	0	0	0	1-3
S37	0	0	0	1-3
S38	0	0	0	1-3
S42	2-3	2-3	2-3	2-1

5.05 The subscriber may answer an incoming call that the telephone answering set is automatically answering by picking up the associated telephone handset and turning the off-on knob to OFF.

5.06 The 1B and 1BA telephone answering sets are arranged for calling party control and will restore to a standby or ready condition if the calling party disconnects before the set has completed a full cycle of ANSWER & RECORD or ANSWER ONLY. This will be the case in most step-by-step panel and manual central offices.

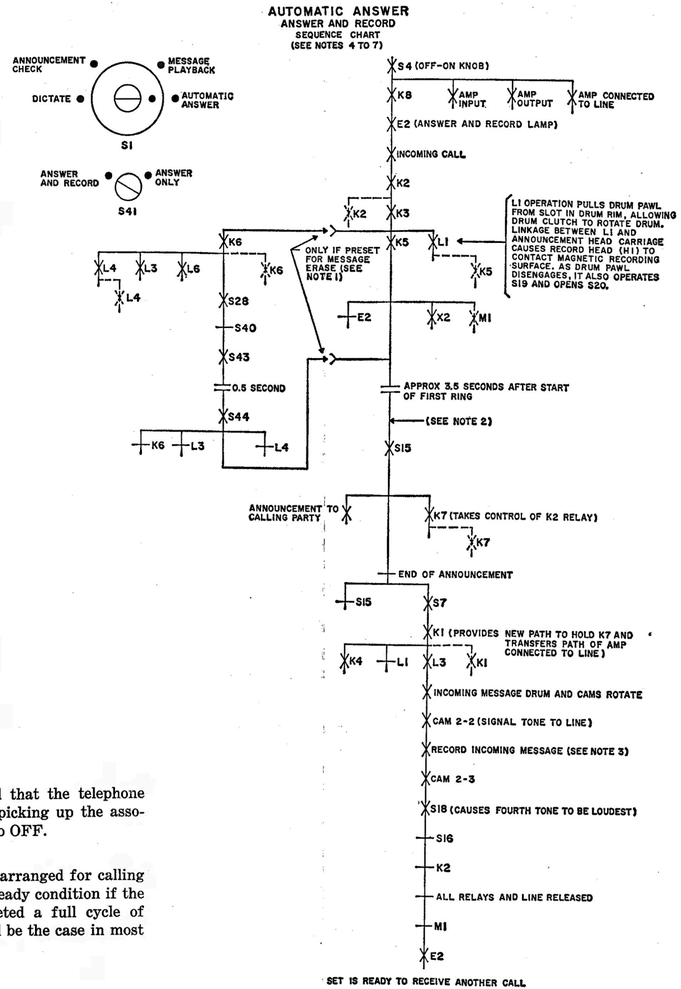


Fig. 9

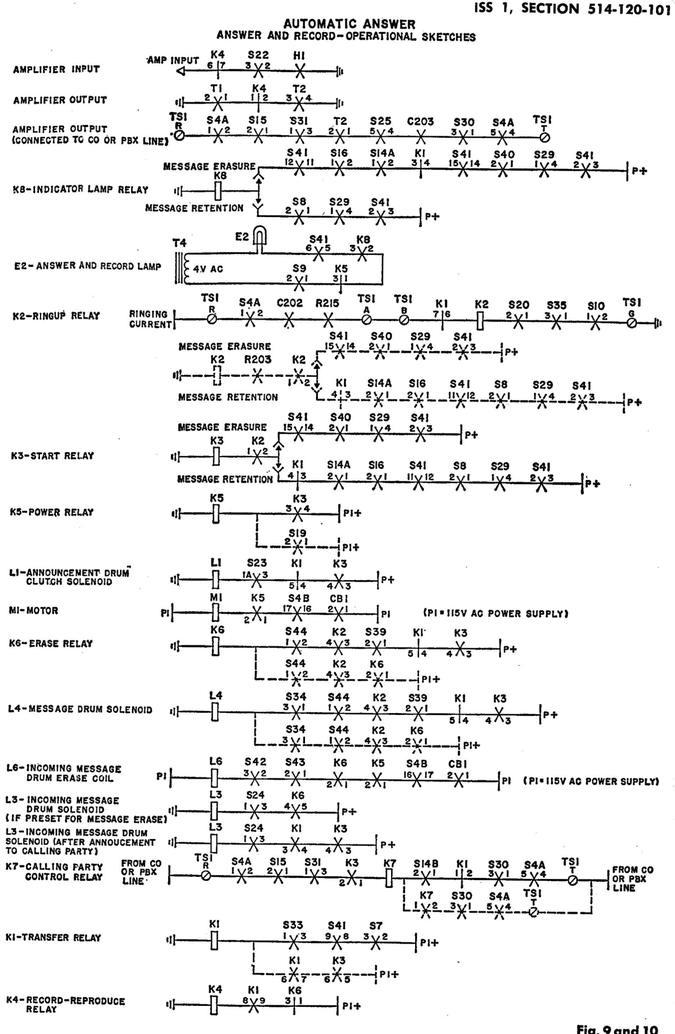


Fig. 10

Fig. 9 and 10

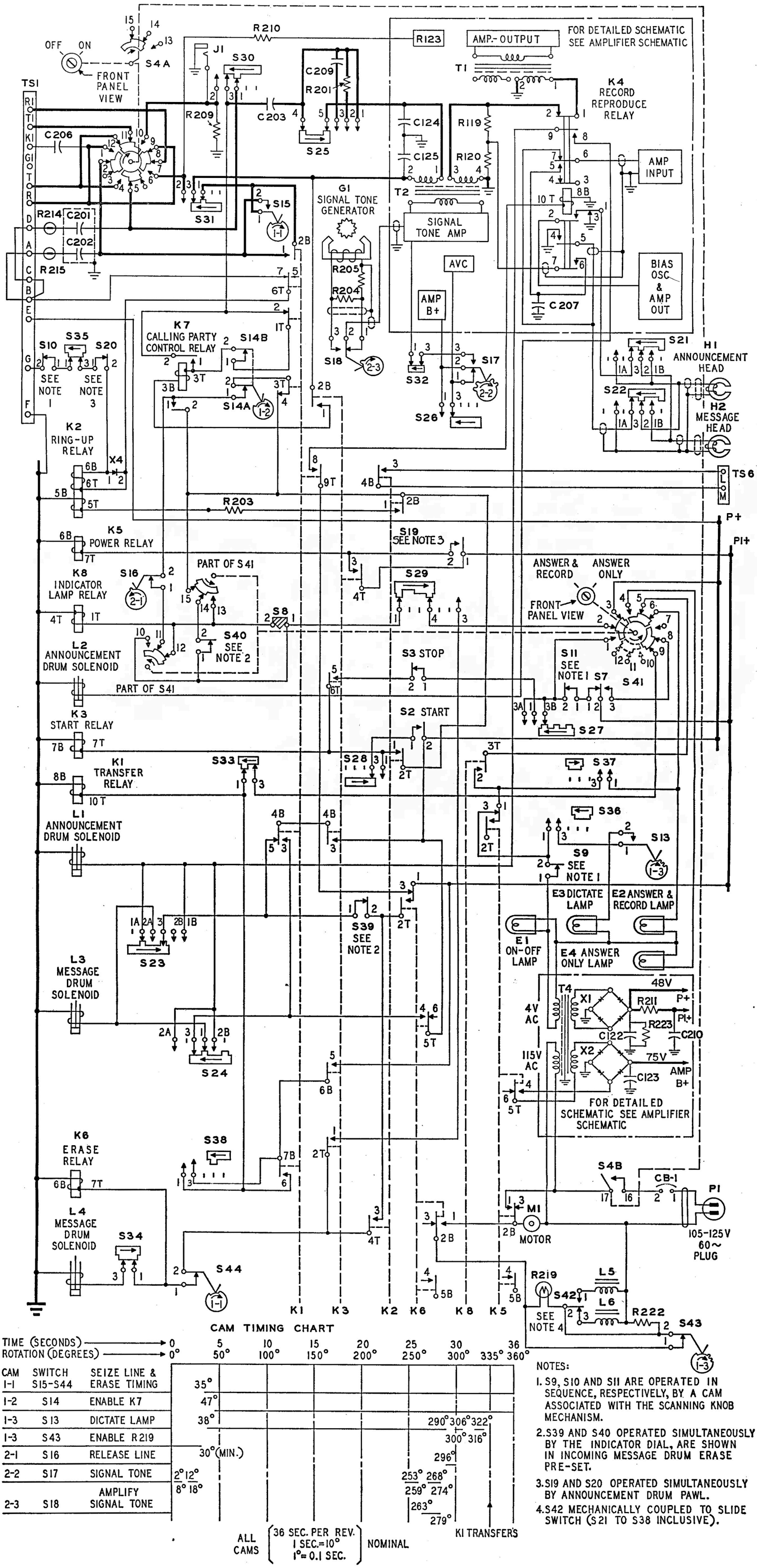
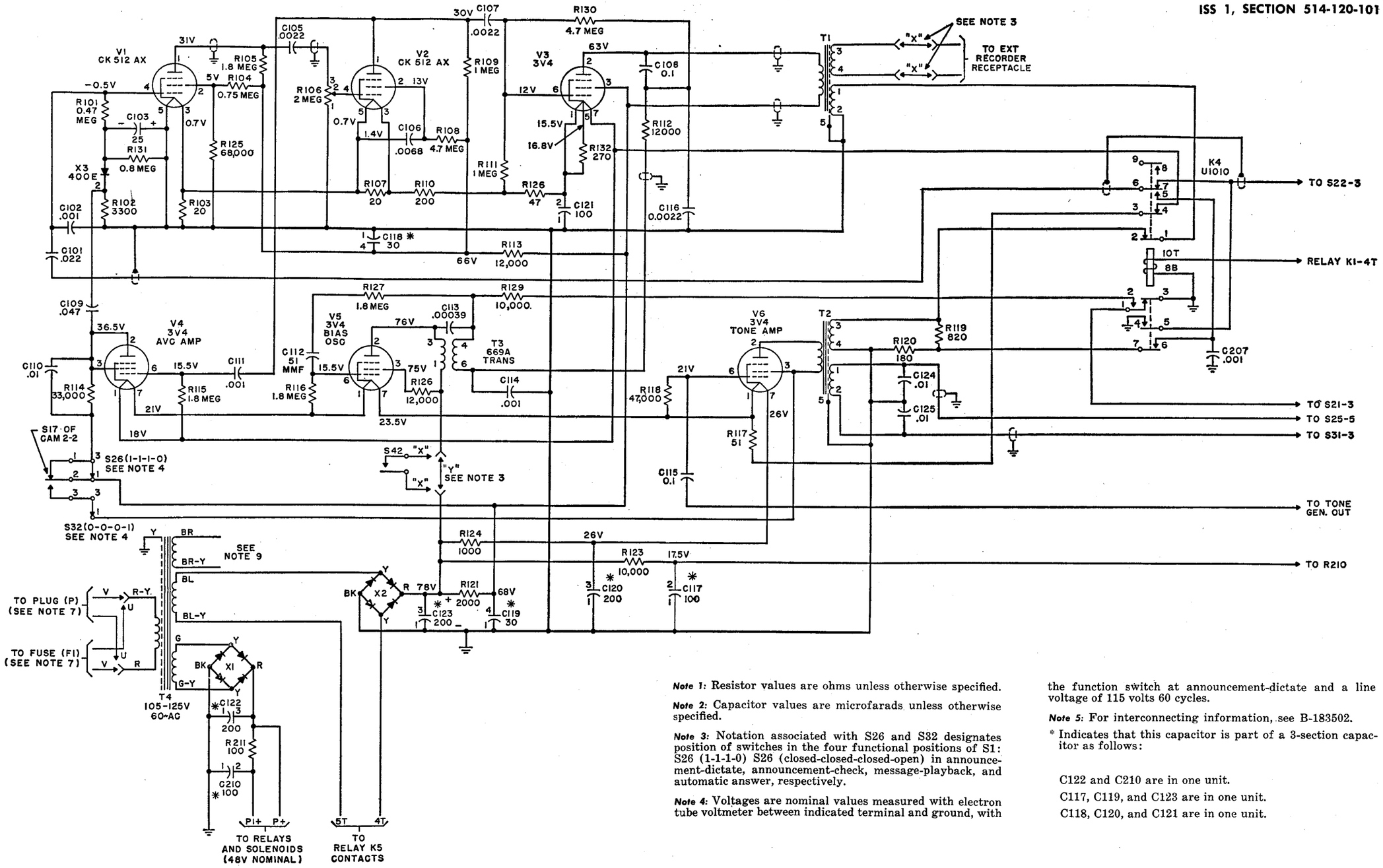


Fig. 11 – 1BA Telephone Answering Set Control Circuit



Note 1: Resistor values are ohms unless otherwise specified.

Note 2: Capacitor values are microfarads unless otherwise specified.

Note 3: Notation associated with S26 and S32 designates position of switches in the four functional positions of S1: S26 (1-1-1-0) S26 (closed-closed-closed-open) in announcement-dictate, announcement-check, message-playback, and automatic answer, respectively.

Note 4: Voltages are nominal values measured with electron tube voltmeter between indicated terminal and ground, with the function switch at announcement-dictate and a line voltage of 115 volts 60 cycles.

Note 5: For interconnecting information, see B-183502.

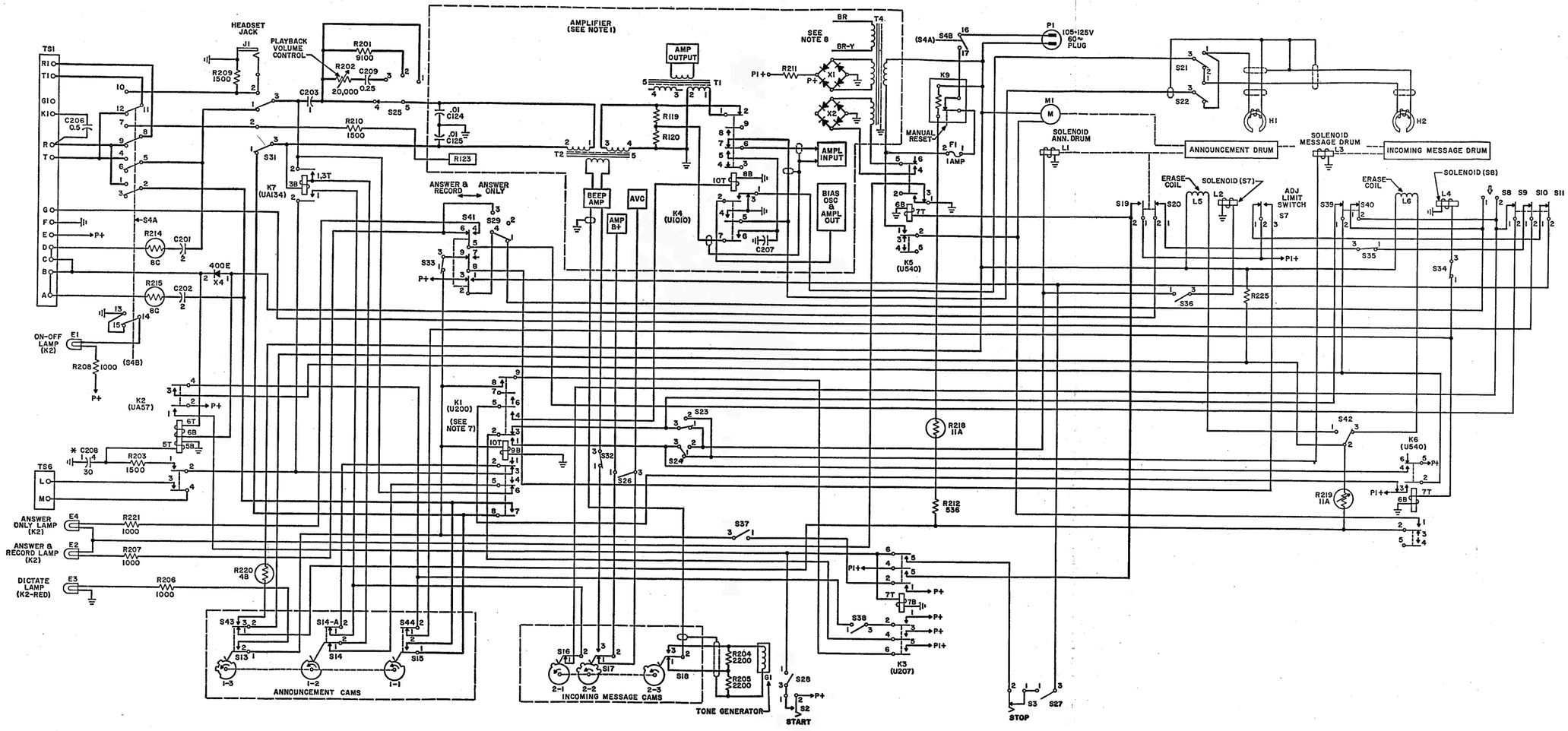
* Indicates that this capacitor is part of a 3-section capacitor as follows:

C122 and C210 are in one unit.

C117, C119, and C123 are in one unit.

C118, C120, and C121 are in one unit.

Fig. 12 — 1BA Telephone Answering Set Amplifier and Power Supply Circuit



Note 1: See amplifier schematic B-177301.

Note 2: Operating conditions shown here:

A. ON-OFF switch (S4A-S4B) off

B. Slide switches S21 to S38 inclusive and S42 in AUTOMATIC ANSWER position

C. S30 and S40 in message drum erase preset position

D. S41 shown in ANSWER & RECORD position

Note 3: Unless otherwise specified, resistance values are ohms and capacitor values are microfarads.

Note 4: ✳ Part of 3-section capacitor.

Note 5: Indicates shielded pair.

Note 6: Indicates shielded single.

Note 7: Relay *K1* (U200) shall be adjusted to meet the following requirements:

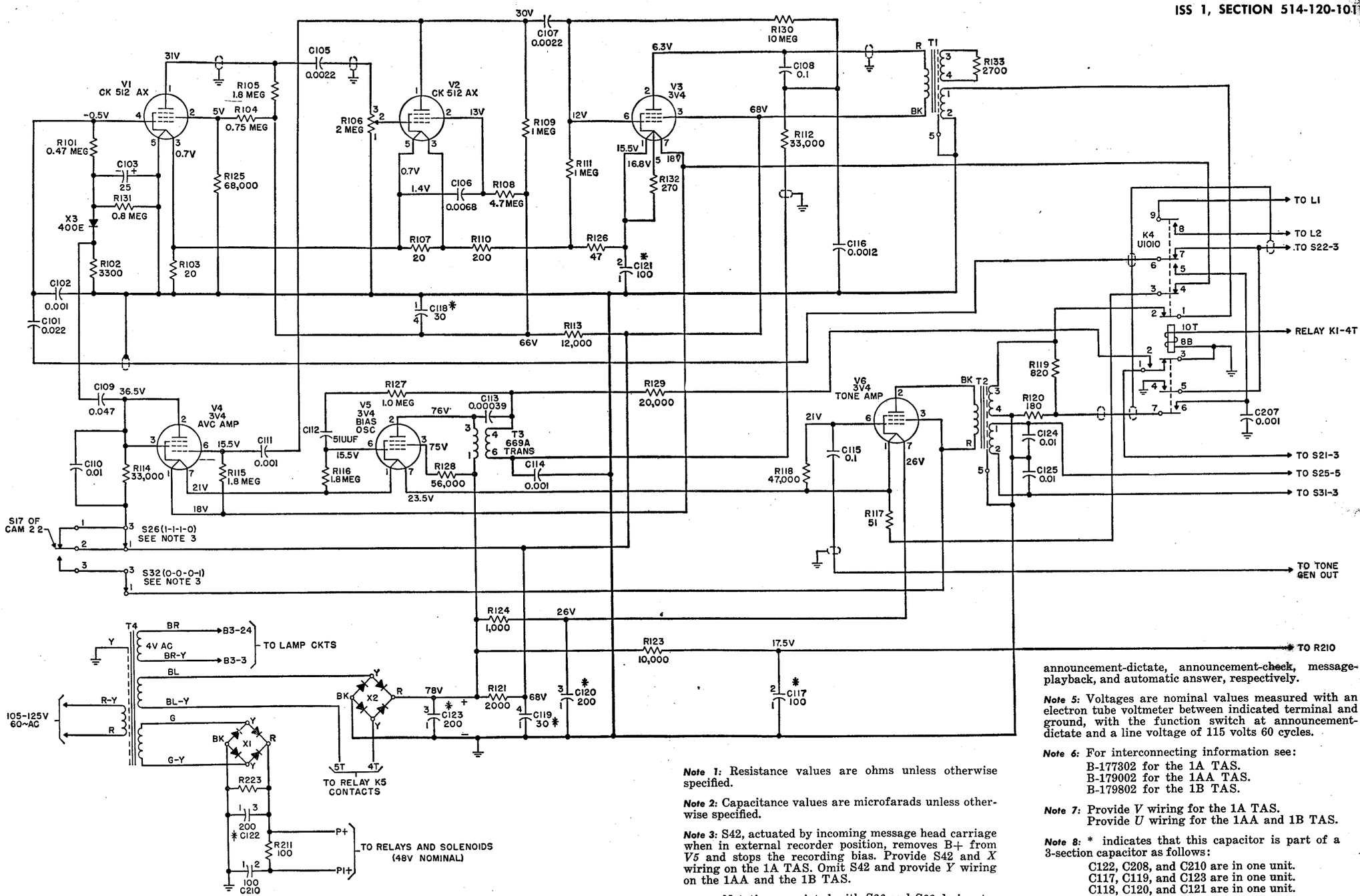
A. Readjust operate current, 12.1 ma.

B. Test operate current, 12.8 ma.

C. With a 32 gauge inserted between armature and core, 8T and 9T shall make and 2T and 3T shall not break. No-make requirements on contacts 8T-9T and minimum clearance requirements on springs 8T and 9T are waived.

Note 8: This winding is furnished with 2013A transformer only.

Fig. 13 — 1B Telephone Answering Set Control Circuit



Note 1: Resistance values are ohms unless otherwise specified.

Note 2: Capacitance values are microfarads unless otherwise specified.

Note 3: S42, actuated by incoming message head carriage when in external recorder position, removes B+ from *V5* and stops the recording bias. Provide S42 and *X* wiring on the 1A TAS. Omit S42 and provide *Y* wiring on the 1AA and the 1B TAS.

Note 4: Notation associated with *S26* and *S32* designates position of switches in the four functional positions of SI: S26 (1-1-1-0) S26 (closed-closed-closed-open) in announcement-dictate, announcement-check, message-playback, and automatic answer, respectively.

Note 5: Voltages are nominal values measured with an electron tube voltmeter between indicated terminal and ground, with the function switch at announcement-dictate and a line voltage of 115 volts 60 cycles.

Note 6: For interconnecting information see:
B-177302 for the 1A TAS.
B-179002 for the 1AA TAS.
B-179802 for the 1B TAS.

Note 7: Provide *V* wiring for the 1A TAS.
Provide *U* wiring for the 1AA and 1B TAS.

Note 8: * indicates that this capacitor is part of a 3-section capacitor as follows:
C122, C208, and C210 are in one unit.
C117, C119, and C123 are in one unit.
C118, C120, and C121 are in one unit.

Note 9: This winding is furnished with 2013A transformer only.

Fig. 14 — 1B Telephone Answering Set Amplifier and Power Supply Circuit