1B AND 1BA TELEPHONE ANSWERING SETS

MAINTENANCE

1.00 GENERAL

1.01 This section covers information that may be helpful in caring for the most common troubles encountered with 1B and 1BA telephone answering sets.

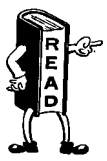
1.02 A working understanding of telephone answering set operation is advisable before the methods described in this section are undertaken.

1.03 Work done on customer's premises should be limited and only undertaken with supervisory approval.

1.04 Care should be taken not to erase existing messages without first consulting with customer.

1.05 The 1B and1BA telephone answering sets can only be connected to 105-120 volts ac. Where only a dc power source is available, the KS-15662 inverter is required. Refer to section entitled KS-15662 DC-AC Inverter for Use with Telephone Answering Sets.

1.06 The use of a 1542A inductor may eliminate the presence of radio interference experienced on either announcement or recorded messages. See section entitled Radio Signal Suppression in Telephone Sets.



It is important that section entitled Packaging and Handling of Disconnected 1-type Telephone Answering Sets be closely followed when shipping or transporting the 1-type answering set.

1.07 Care must be used when working on 1B and 1BA telephone answering sets with cover removed as ac power supply voltage (115 volts 60 cycles ac) is on contacts of *K5* and *K6* relays, terminals of K9, associated resistors, S42 and S43 switches, 4B thermistor, and *F1* fuse holder. Only one side of ac power supply is opened when OFF-ON knob is turned to OFF.

2.00 COMPONENTS AND PIECE PARTS

2.01 The effect of customer's power supply failure is as follows:

- Telephone answering set will not operate.
- With OFF-ON knob in OFF position normal telephone service will not be affected.
- With OFF-ON knob in ON position there will be an audible signal in case of an incoming call.

2.02 When ordering parts for replacement purposes, give both piece part number and name of piece part; for example, P-18A704 indicator assembly. If a part identified by other than a piece part number is required, order the part by detail number and part name and specify the coded apparatus on which it is used; for example, B-177725 spring for No. 1BA telephone answering set. Do not refer to the BSP number.

INDEX	ORDERING INFORMATION DESCRIPTION AND USE
Buttons	**B-178353-1, Lever** START button.
	B-178353-2, Lever STOP button.
Cleaner	**Cleaner KS-16328, L2** Cleaner and lubricant for magnetic bands available in 2 oz and 1 qt screw-cap glass bottles.
Cords	**Cord, R2DB, Equipped With 347B Plug** Used for headset playback.
	Cord, D3AY
	Cord, D4AN
	Cord, D4AS
	Cord, D5AA Used to connect telephone answering set and telephone set to connector block or 531C subset as required.
Cover	**B-179086-2, Cover** Cover for 1B and 1BA telephone answering sets.
Drive Belts	**B-177478-1, Drive Belt 15 in. Long** First-stage drive belt.
	B-177478-2, Drive Belt 17-1/8 in. Long Second-stage drive belt.
Fuse	**Fuse, Slo-Blow Type, MDL 1 amp (Littlefuse)** Power supply fuse.
Grommet	**B-179099, Grommet** Used with telephone set and answering set mounting cords.
Headband	**Headband, 15A** Used for headset playback.
Holder	**Holder, Fuse, HKP (Bussman Mfg Co)** Power supply fuse holder
Indicators	**KB-179830, Indicator Assembly** DICTATE indicator (red) For 1B telephone answering set.
	KB-179862-1, Indicator Assembly ANSWER and RECORD indicator (green) For 1B telephone answering set.
	KB-179862-2, Indicator Assembly ANSWER ONLY indicator (amber) For 1B telephone answering set.
	P-18A704, Indicator Assembly DICTATE indicator (red) For 1BA telephone answering set.
	P-18A705, Indicator Assembly ANSWER ONLY indicator (amber) For 1BA telephone answering set.
	P-18A706, Indicator Assembly ANSWER and RECORD indicator (green) For 1BA telephone answering set.
	P-19B951, Medallion
	P-13A833, Retainer
Lamps	**Lamp, T2** Used in all lights of 1B telephone answering set.
	Lamp, 1847 Used in all lights of 1BA telephone answering set.
Nut	**Nut, 4-40 Hex Std** Locknut on vertical adjustment set screw.

INDEX	ORDERING INFORMATION DESCRIPTION AND USE
Plate	**B-177738, Cover, Plate** Access plate to relay punchings and TS1 lugs.
Receiver	**Receiver, 723A** Used in headset playback.
Screws	**B-177700, Screw** Captive front panel support screw.
	B-177861, Screw Telephone answering set cover set screw.
	Screw, Hex Socket Head Steel Set 4.40 x 1 in. Flat Point Vertical adjustment hex socket set screw.
	Screw, Hex Socket Headset 6-32 x 1/8 in. Flat Point Hex socket set screw in first stage idler pulley post.
	Screw, Hex Socket Steel Set 0.164-32 x 1/4 in. Used to secure knobs and dials on their respective shafts.
	Screw, bd hd 5-40 x 3/16 in. Terminal screws on TS1 and TS6.
	Screw, bd hd 6-32 x 1/4 in. Front panel support screw.
	Screw, bd hd CAD PL 6-32 x 3/8 in. Used for telephone cord retainer bracket and to fasten mounting cord stay hook on left side of TS1 terminal strip.
	Screw, bd hd 6-32 x 5/16 in. Plate screws for access to relay punchings and TS1 lugs.
	Screw, bd hd 8-32 x 1/2 in. Control chassis mounting screw.
Sleeve	**B-179866, Sleeve** Use with ANSWER AND RECORD and ANSWER ONLY indicator assembly.
Spring	**B-177725, Spring** Tension spring for start and stop buttons.
Tubes	**Tube, Electron, CK-512AX**
	Tube, Electron, 3V4 Used in amplifier circuit.
Washers	**B-170011, Washer** No. 6 lockwasher used with telephone cord retainer bracket screw, front panel support screw, mounting cord stay-hook screw, and plate screw for access to relay punchings and TS1 lugs.
	Washer, Plain No. 4 (0.028 in. thick x 5/16 in.) Used with locknut on vertical adjustment set screw.
	Washer, Plain No. 6 Used with front panel support screw, telephone cord retainer bracket screw, and mounting cord stay-hook screw.
	Washer, Lock No. 8 Shakeproof No. 1208-00 Used with control chassis screws.

2.03 The following special tools are required for maintenance of the 1B and 1BA telephone answering sets:

INDEX	ORDERING INFORMATION DESCRIPTION AND USE
Cloth	**Cloth, Twill Jean, KS-2423**
Tools	**Tool, 373D** Burnishing blade holder. **Tool, 374A** Burnishing blade. **Tool, 374B** Burnishing Blade. **Tool, 374C** Burnishing blade. **Tool, 474A** Box-end wrench used for locknut on idler pulley post. **P-220366, Dental Mirror**
Wrenches	**Wrench, Hexagonal, Key (Allen), 0.050 in.** 0.050-in. Allen wrench. **Wrench, Hexagonal, Key (Allen), 1/16 in.** 1/16-in. Allen wrench. **Wrench, Hexagonal, Key (Allen), 5/64 in.** 5/64-in. Allen wrench. **Wrench, Hexagonal, Key (Allen), 3/32 in.** 3/32-in. Allen wrench

3.00 PROCEDURES

3.01 The 1B telephone answering set is equipped with a fuse *F1* mounted in an HKP fuse holder. For fuse inspection, turn top of fuse holder counterclockwise and withdraw.

3.02 The 1B telephone answering set has a thermal time delay relay *K9* to protect the erase coils in event of mechanical or electrical failure. Depress reset button to restore power supply.

3.03 Some 1BA telephone answering sets are equipped with a thermal time delay relay *K9* and fuse *F1*. Others are equipped with a circuit breaker (CB1) for protection in event of mechanical or electrical failure. If 1BA set has a thermal time delay relay *K9* and fuse *F1* power supply, erase coil circuit is same as 1B telephone answering set.

3.04 There may be cases where excessive vibrator noise is introduced into answering set recordings. Where vibrator noise is objectionable, the noise can be suppressed by grounding chassis of answering set as shown in Table A.

TABLE A

Type of Service	Ground-Conductor Connections	
	531C Subset Term.	1B-1BA Set Term.
Individual Line Bridged Ringing Low Impedance		Strap G and F on TS1
High Impedance	GRD*	F
2-Party and 4-Party Selective — Parties on Ring and Tip	GRD†	F
+ Parties on Ring and Tip		Strap R and F on TS1
2-Party Selective — and + Tip Parties in AMA, Zone or Multiple Registration, and Automatic Ticketing		Strap G1 and F on TS1

* Use D5AA mounting cord or equivalent.

† Use D4AN mounting cord or equivalent.

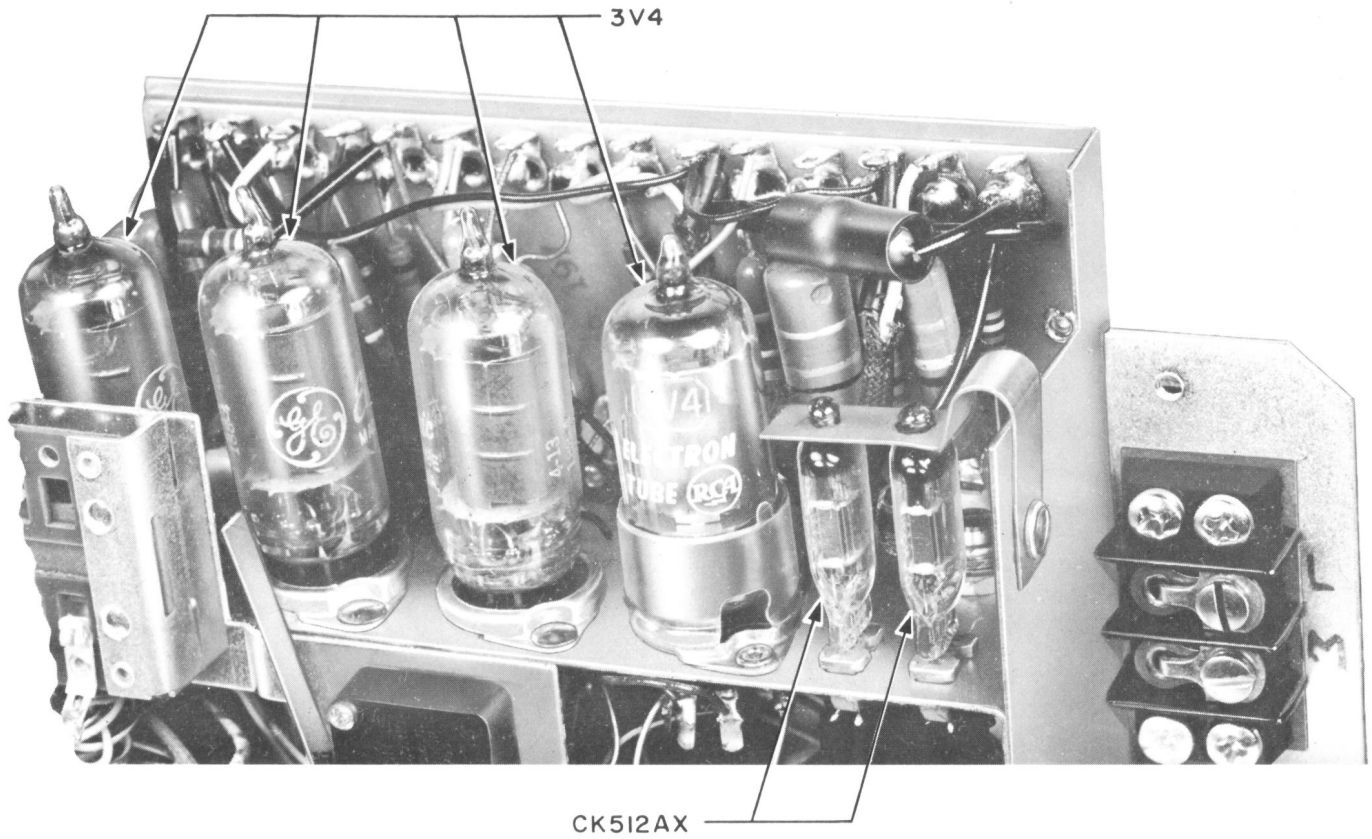


Fig. 1 — Electron Tube, Locations

3.05 Where a KS-14782 heater base is in use, maintenance information may be found in section entitled Heater Base for Use with Telephone Answering Sets.

3.06 In 1B telephone answering set, K2 lamps shall be replaced by 2T lamps. The 2T lamp is interchangeable both electrically and mechanically.

3.07 The 1847 bayonet-type lamp is used in all lamp sockets in the 1BA telephone answering set.

Caution: Remove front panel before replacing lamps.

3.08 To replace lamp in 1B set, grasp wooden base of lamp with long-nose pliers and withdraw carefully from lamp socket.

3.09 To replace lamp in 1BA set, press lamp into socket, turn counterclockwise until free, and withdraw. Press replacement lamp into socket and turn clockwise until secure. It may be necessary to loosen clamp in order to remove lamp. Tighten clamp securely after placing new lamp.

3.10 To replace answer and record and answer only lamps, loosen clamp enough to withdraw lamp socket assembly. After lamp has been replaced, place socket assembly in its original position and tighten clamps.

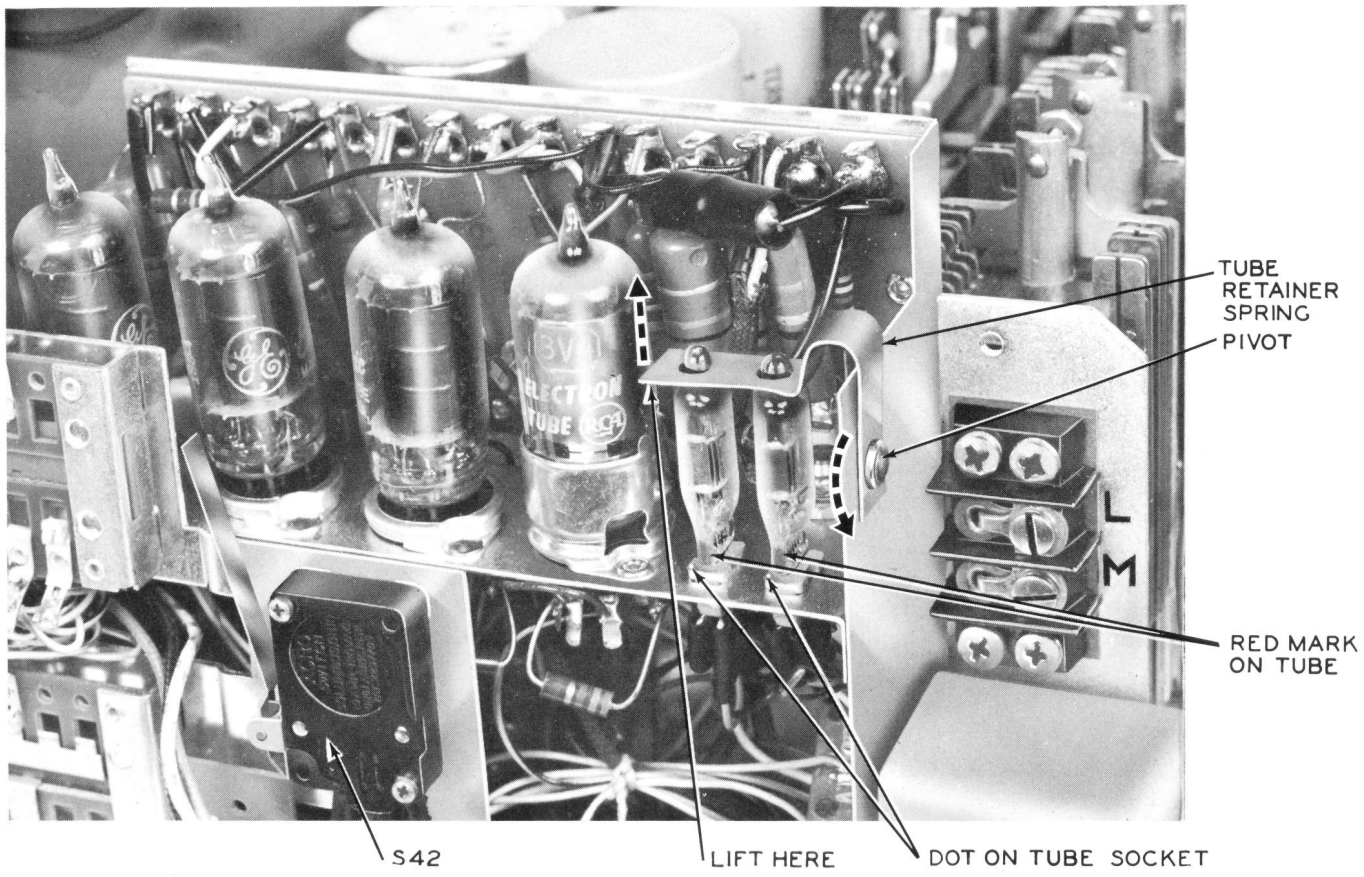


Fig. 2 — CK512AX Electron Tubes, Retainer

3.11 If trouble is suspected in an amplifier circuit which uses two CK512AX and four 3V4 electron tubes, the condition of tubes cannot be determined by visual inspection. Substitute individual tubes until defective tube is located (see Fig. 1). If replacing tubes does not clear trouble in amplifier, replace answering set.

THINK *Power must be turned off when tubes are being replaced.*

3.12 To remove and replace a CK512AX electron tube (see Fig. 2), the following steps should be followed:

1. Lift end of spring (tube retainer) until it clears tips of CK512AX tubes, then rotate until it does not touch tubes when it is released.

2. Gently withdraw the tube, to be removed, from its socket.

3. When replacing CK512AX tubes, cut leads to length of 1/4 inch measured from base of tube.

4. Be certain that CK512AX tubes are reinserted in their sockets so that the red mark on tube base coincides with molded dot on socket and dot on chassis.

5. Lift spring (tube retainer) and rotate to a position above tubes. Release retainer gently, allowing tubes to protrude through holes in retainer.

4.00 REQUIREMENTS

Recording Heads and Bands

Appearance

4.01 Bands

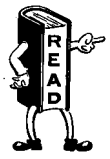
- Should have a clean, dry, polished appearance.
- Should be free of embedded dirt, and foreign material such as small particles of lint, glue, and paper fibers from packing details, etc.

Dirty bands should be cleaned as described below.

4.02 Heads (Working Surfaces)

- Should be examined with P-220366 dental mirror for dirt and mechanical damage.
- Should be clean and polished, and free of dirt and scratches. The pole pieces must be in good alignment.

Dirty heads shall be cleaned; sets having severely scratched or damaged heads shall be replaced.



In handling or cleaning recording heads, tools which might become magnetized, such as screwdrivers, should not be allowed to touch the heads. Use of magnetized tools will magnetize the heads, and cause them to become noisy.

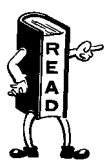
Cleaning

4.03 While dirt on the band will not in itself cause loss in output unless there is a very heavy deposit or coating, loss in output most often occurs after the dirt is picked up from the bands and is collected on the head. Normally, if there is loss in output due to dirt, it will be visible on the head in the area of the gap. If dirt is not visible on the head, it is unlikely that dirt is the cause of the trouble, and it may be necessary to look further. Deep scratches on the head will aggravate the trouble condition, as such heads more readily pick up dirt from the band.

4.04 Where the band has a polished appearance, but loose dirt is present, clean using a dry lint free cloth.

4.05 Where the band is dull in appearance or where the dirt cannot be removed with a dry cloth, use the KS-16328, List 2 cleaner and lubricant as follows: Shake container well, as components have a tendency to separate. Use small quantity of cleaner on a KS-2423 cloth and wipe recording bands while they rotate. With another clean KS-2423 cloth, wipe cleaner and foreign material from drums. Drums should then have a clean, polished appearance. Repeat process if necessary. Cleaner contains adequate lubricant, therefore, it is not necessary to perform a separate lubrication operation. Cleaner may also be used to clean recording heads by using one of the methods used to clean bands.

Caution: After cleaning operation make sure recording heads are completely dry. Do not allow cleaner to contact metal parts.



Cleaner is flammable to a small degree and susceptible to freezing temperatures. All precautions should be taken to prevent exposure to sparks, open flames, and freezing temperatures.

4.06 If either band is loose or shows signs of irregularities, replace answering set.

Front Panel Controls

4.07 If alignment of knobs is necessary, loosen hexagonal set screws with 5/64-inch Allen wrench (see Fig. 3) and adjust as follows:

- **OFF-ON Knob:** Dot on skirt should be adjacent to OFF in counterclockwise position and adjacent to ON in the clockwise position.

- **Playback Volume Knob (1B set only):** Dot on knob end should be at 12 o'clock when knob is in extreme counterclockwise position, as required for minimum volume.

- **ANSWER AND RECORD/ANSWER ONLY Dial:** Notch in dial edge should be adjacent to indicator for ANSWER AND RECORD in extreme counterclockwise position and adjacent to indicator for ANSWER ONLY in extreme clockwise position.

- **Message Selector Knob:** Indicator on knob skirt should be directly under the dot under MESSAGES on the front panel when incoming message recording head is in its extreme left position.

5.00 LUBRICATION

5.01 When lubricating, care must be taken not to apply lubrication to such an extent as to cause contamination of other apparatus. (See Fig. 4.)

5.02 Recommended lubrication interval is one year. However, the interval may be extended when inspection indicates that conditions are such as to assure satisfactory operation during the extended interval.

6.00 LOCATING COMPONENT PARTS

Fig. 5, 6, 7, and 8 are attached as an aid in locating components parts of the telephone answering sets covered in this section.

7.00 TROUBLES

7.01 Refer to sequence charts and operational sketches in section entitled 1B and 1BA Telephone Answering Sets, Operation.

7.02 Refer to section entitled 1B and 1BA Telephone Answering Sets, Requirements and Adjustments when working with the trouble shooting chart.

7.03 The following is a list of some of the most common troubles, their causes, and recommended cures.

TROUBLE SHOOTING CHART

ANNOUNCEMENT DICTATE POSITION

Trouble	Causes	Recommended Cure
No medallion light	Thermal relay operated	Reset thermal relay and check erase circuit.
	Blown fuse	Replace fuse. If fuse does not hold, replace set.
	Burned out lamp	Replace lamp.
	Defective on-off switch	Replace set.
No ready light	Burned out lamp	Replace lamp.
	Dirty contacts on relay *K5*	Clean contacts **1T** and **3T** of relay *K5*
	Switch S9 open	Clean switch S9.
Relay *K3* does not operate	Defective start switch	Inspect switch contacts.
Relay *K3* does not hold	Defective stop switch S3	
	Switch S11 open	Adjust switch S11.
	Dirty contacts on relay *K3*	Clean relay contacts.
	Limit switch S7 defective	Refer to section entitled Requirements and Adjustments.
Relay *K5* does not operate	Dirty contacts on relay *K3*	Clean *K3* relay contacts.
Motor does not turn	Dirty contacts on relay *K5*	Clean contacts **1B** and **2B** of relay *K5*.
Announcement drum does not turn	Drive belt slips	Check stalling force of drums, by feel; adjust belt as necessary.
	Front panel jammed against bail	Realign front panel.
	Solenoid L1 does not bottom	Refer to section entitled Requirements and Adjustments.
	Solenoid L1 does not operate	
Solenoid L1 does not operate	*K1* fails to operate	Check further as indicated below.
	Dirty contacts on *K1*	Clean *K1* relay contacts.

TROUBLE SHOOTING CHART

ANNOUNCEMENT DICTATE POSITION (Cont)

Trouble	Causes	Recommended Cure
K1 does not operate	Dirty contacts on relay *K3*	Clean *K3* relay contacts.
Solenoid L2 fails to operate		
Thermal relay operates	Erase current does not shut off	Replace set.
	Defective thermal relay	
Dictate lamp does not light	Lamp burned out	Replace lamp.
	Switch S13 not adjusted correctly	
Set stops before stop button is pushed (about 15 seconds)	S7 limit switch brake shoe binds	Refer to section entitled Requirements and Adjustments.
	Solenoid L2 not bottoming	
Announcement carriage fails to return to left	Nylon cord disconnected from announcement carriage return spring	Refasten cord.
	Insufficient tension on announcement carriage return spring	Refer to section entitled Requirements and Adjustments.
Dictate lamps fail to flash at end of announcement cycle	Solenoid L1 not bottoming	Refer to section entitled Requirements and Adjustments.
	Switches S19 and S20 improperly adjusted	
	Linkage from solenoid L1 to lower cams improperly adjusted	
	Clutch for lower cams slipping	
Announcement drum does not index	Switches S19 and S20 out of adjustment	
Motor continues to turn	Relay *K5* remains operated	
Stop switch does not operate	Broken stop button	
	Stop switch out of adjustment	

TROUBLE SHOOTING CHART

ANNOUNCEMENT CHECK POSITION

Trouble	Causes	Recommended Cure
Announcement drum does not turn	Solenoid L1 does not operate	Clean contacts of *K1* and *K3* relays.
No speech heard in handset	Relay *K4* failed to operate in announcement dictate position	Clean contacts of relay *K1*.
	Dirty contacts on relay *K4*	Clean *K4* relay contacts.
	Bad electron tube (V1, V2, or V3)	Replace electron tube.
	No amplifier B+	Clean *K5* contacts for B+.
	Open recording announcement head	Proceed with automatic answer and check for message playback to eliminate amplifier as source of trouble.
		Check for loose lead and resolder.
Noted distortion in higher speech levels	Faulty AVC amplifier tube V4	Replace electron tube.
Distortion at all levels	Faulty bias oscillator tube V5	
	Loose recording band	Replace set.
	Improper indexing of drum	Check carriage return.
	Slipping belt	Check stalling torque of drums, adjust as necessary. Tighten pulleys to give proper belt tension as needed.
	Defective recording band	Replace set.
	Relay *K4* contacts out of adjustment	Clean and adjust relay *K4* contacts.
	Defective electron tube (V1, V2, V3, V4, or V5)	Replace tubes and check for distortion.
	Dirty recording band	Clean recording band with KS-2423 cloth and KS-16328, L1 cleaner.
Low level of speech	Defective electron tube (V1, V2, or V3)	Replace electron tube and check new recording.

TROUBLE SHOOTING CHART

ANNOUNCEMENT CHECK POSITION (Cont)

Trouble	Causes	Recommended Cure
Dead space at end of announcement	Limit switch friction pad not holding	Refer to section entitled Requirements and Adjustments.
Excessive noise	Dirty recording band	Clean recording band with KS-2423 cloth and KS-16328, L1 cleaner.
	Defective electron tube (V1, V2, V3, V4, or V5)	Replace electron tube.
	110 volts grounded to chassis	Replace set.
	Message head not grounded out during recording	Clean contacts *K4* relay.
	Dirty announcement recording head	Clean recording head with KS-2423 cloth and KS-16328, L2 cleaner.

AUTOMATIC ANSWER POSITION

Trouble	Causes	Recommended Cure
Ready lamp does not light	Burned out lamp	Replace lamp.
	Message selector knob not in proper position	Move message selector knob to proper position so ready lamp lights.
	Switches S9 and S8 open	Clean switches and *K5* relay contacts.
K2 relay does not respond to 20-cycle ringing current	Local ground open	Repair as needed.
	Thermistor *R215* open	Replace set.
	Capacitor *C202* open	
	Switch S10 open	Full message drum.
Relay *K2* does not lock	*K7* relay contacts dirty	Clean *K7* relay contacts.
	Relay contacts of *K1* open	Adjust *K1* relay contacts.
	K2 relay contacts dirty	Clean *K2* relay contacts.
Motor does not turn	*K9* operated	Reset thermal switch.
	Relay *K3* does not operate	Clean contacts of relays *K2* and *K5*.

TROUBLE SHOOTING CHART

AUTOMATIC ANSWER POSITION (Cont)

Trouble	Causes	Recommended Cure
K7 fails to operate and hold	Contacts of relay *K1* open	Clean or adjust *K1* relay contacts.
	Contacts of relay *K7* open	Clean or adjust *K7* relay contacts.
No announcement heard on line telephone	Dirty *K4* relay contacts	Clean or adjust *K4* relay contacts.
Dead spot after announcement	Limit switch S7 brake shoe not holding	Refer to section entitled Requirements and Adjustments.
Set fails to transfer from announcement incoming message position (Relay *K1* fails to operate)	Faulty limit switch S7	Replace set.
	Dirty contacts on relay *K1*	Clean *K1* relay contacts.
	Dirty contacts on relay *K3*	Clean *K3* relay contacts.
Message drum fails to rotate	Belt slips	Check stalling torque of drums (check by feel); adjust belt as necessary. Check further as indicated below.
	Solenoid L3 fails to operate	
Solenoid L3 fails to operate	Dirty contacts on relay *K1*	Clean *K1* relay contacts.
	Dirty contacts on relay *K3*	Clean *K3* relay contacts.
No beep tones heard	Switch S17 of cam 2-2 out of adjustment	Adjust switch S17 for proper operation.
	Defective tube in tone amplifier *V6*	Replace electron tube.
	Switch S18 dirty	Clean switch S18 contacts.
Last beep tone not heard	Switch S18 dirty or out of adjustment	Adjust and clean switch S18.
Set fails to stop	Switch S16 of cam 2-1 does not open	Adjust switch S16 so it opens with operation of cam 2-1.
	Upper cam clutch slips	Replace set.

TROUBLE SHOOTING CHART

AUTOMATIC ANSWER POSITION — INCOMING MESSAGE ERASURE

Trouble	Causes	Recommended Cure
No ready lamp or unsteady ready lamp	Dirty *K5* relay contacts	Clean *K5* relay contacts.
Solenoid L4 does not operate and solenoid L3 does not operate	Relay *K6* does not operate	Clean *K6* relay contacts.
	Dirty contacts on relay *K6*	
Relay *K6* does not operate	Dirty contacts on relay *K2*	Clean *K2* relay contacts.
Erase coils move but switch S8 does not operate	Solenoid L4 not bottoming	Replace set.
	Solenoid L4 linkage out of adjustment	
Thermal relay *K9* operates	Switch S6 not operated by erase coil	Refer to section entitled Requirements and Adjustments.
	K6 remains operated	
Set stops after 5 to 10 seconds of recording	Slide switch S8 not making	Adjust spring on sliding portion of switch S8 to allow for complete return of switch to left. Adjust so that no **creeping** is present.

TROUBLE SHOOTING CHART

MESSAGE PLAYBACK POSITION

Trouble	Causes	Recommended Cure
No message heard	Dirty contacts on relay *K4*	Clean *K4* relay contacts.
	Dirty recording head or magnetic drum	Clean with KS-2423 cloth and KS-16328, L2 cleaner.
	Loose lead to recording head	Reconnect loose lead.
Excessive noise	Dirty drum or head	Clean drum with KS-2423 twill Jean cloth and KS-16328, L2 cleaner.
		Clean head with cloth held on orange stick and KS-16328, L2 cleaner.
	Announce head not grounded out	Clean *K4* relay contacts.
Low level of speech	Dirty drum or recording head	Clean drum and recording head with KS-16328, L2 cleaner.
	Defective volume control circuit	Replace set.
Distortion, double speech heard	Improper erasure of previously recorded messages	
Set fails to shut itself off after last message is heard	Switch S11 out of adjustment	Adjust switch S11.
	Carriage stop out of position	Refer to section entitled Requirements and Adjustments.

FUNCTION SELECTOR KNOB

- Announcement Dictate: Allows subscriber to record an announcement message for the calling party.
- Announcement Check: The recorded announcement may be checked by listening with the associated telephone set.
- Message Playback: The calling party's messages may be played back through the associated telephone set.
- Automatic Answer: The set automatically answers incoming calls according to the setting of the Answer and Record—Answer Only knob.

ANSWER AND RECORD — ANSWER ONLY KNOB

- Answer and Record: Allows answer of the incoming call with the recorded message and also allows recording of the calling party's message.
- Answer Only: Allows answer of the incoming call only. The calling party has no recording time.

DICTATE LAMP

Lights as described in the section on set operation.

OFF-ON KNOB

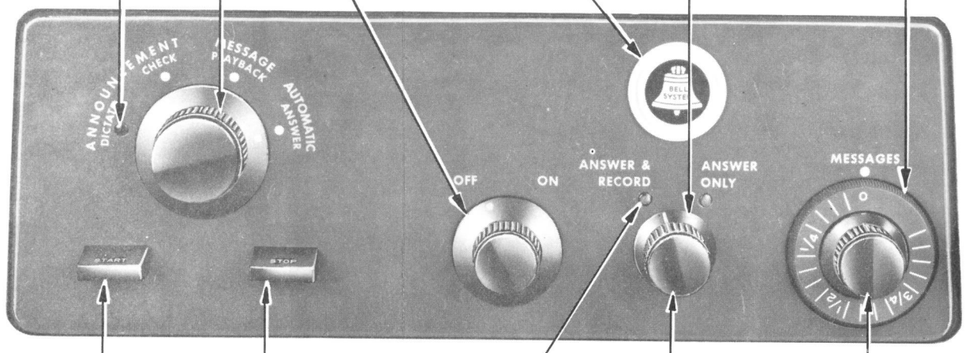
Permits the set to be turned off and on.

MEDALLION

Lights when the set is turned on.

MESSAGE INDICATOR DIAL

Indicates the amount of calling party recording time used.



START BUTTON
STOP BUTTON

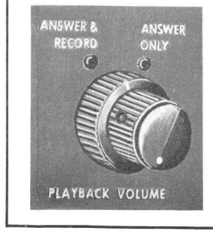
Controls the set under various conditions described in the section on set operation.

ANSWER AND RECORD
ANSWER ONLY LAMPS

Lights when the set is ready to answer a call.

MESSAGE SELECTOR KNOB

Moves the pickup head along the recording drum to select the message desired for playback.



PLAYBACK VOLUME CONTROL

Provided on the 1B set only to allow adjustment of the volume during playback.

Fig. 3 — 1BA Telephone Answering Set Front Panel Controls

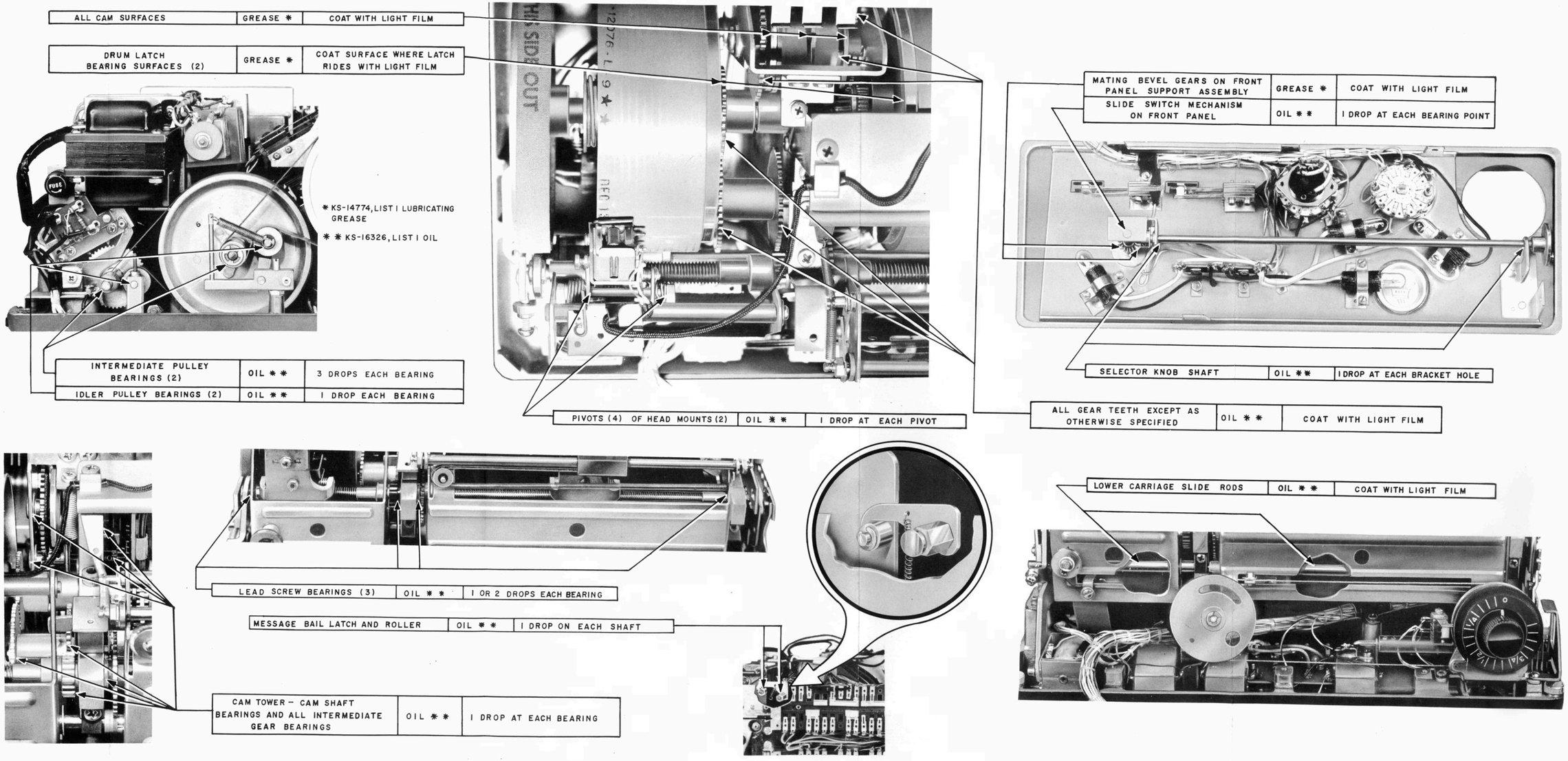


Fig. 4 — 1B and 1BA Telephone Answering Sets, Lubrication Chart

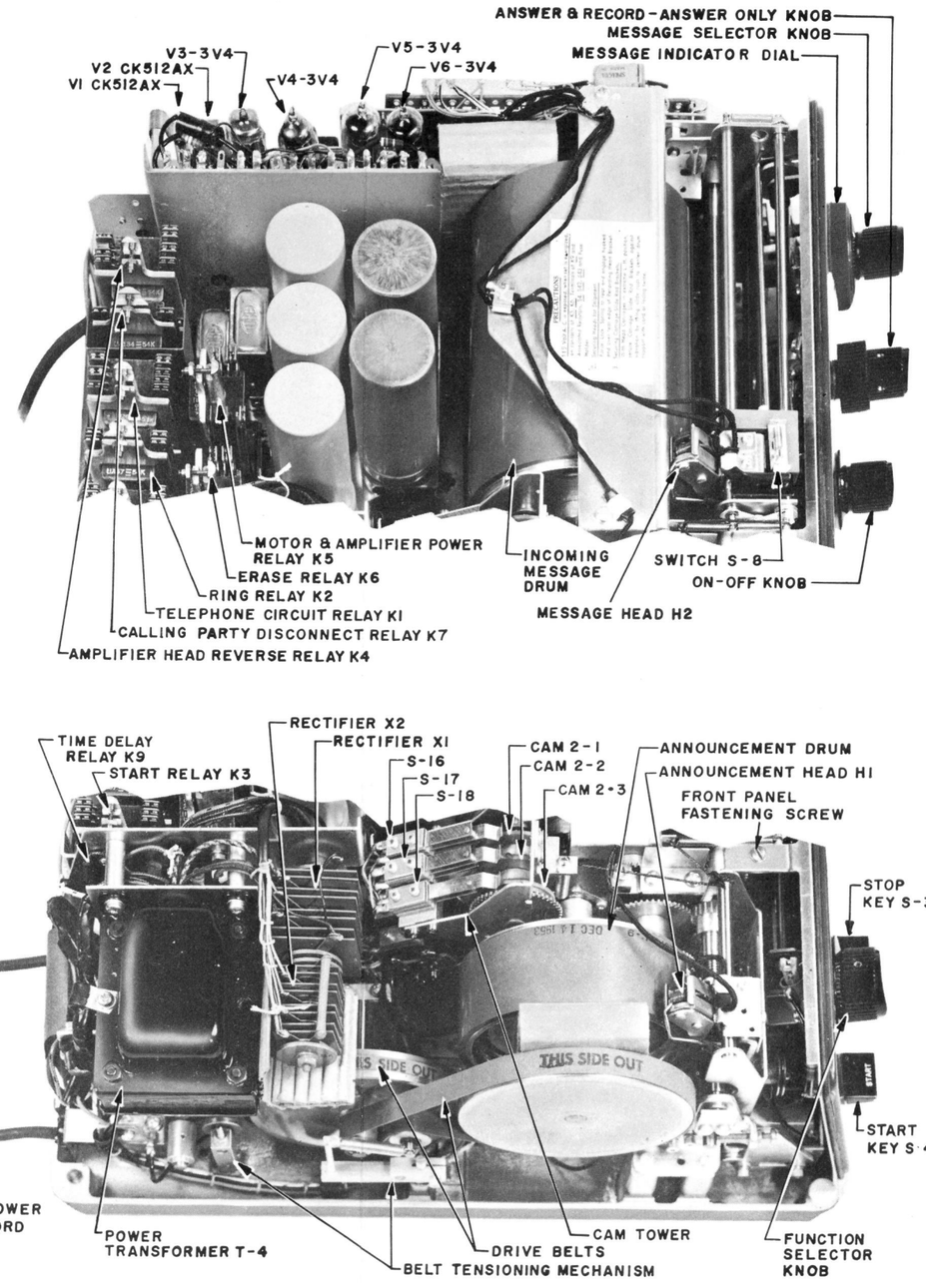


Fig. 5 — Assembled Parts of Telephone Answering Set

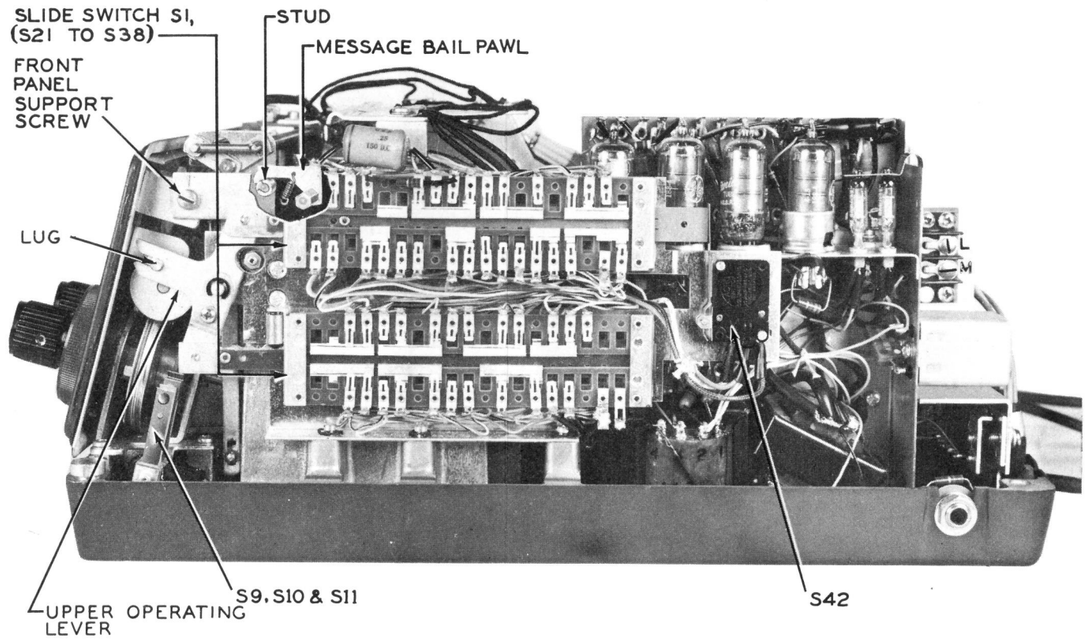


Fig. 6 — 1B Telephone Answering Set, Right Side

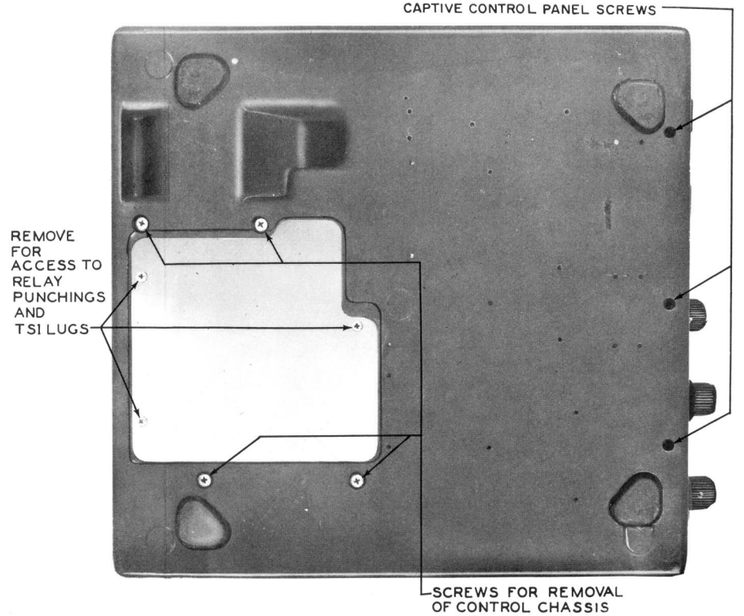
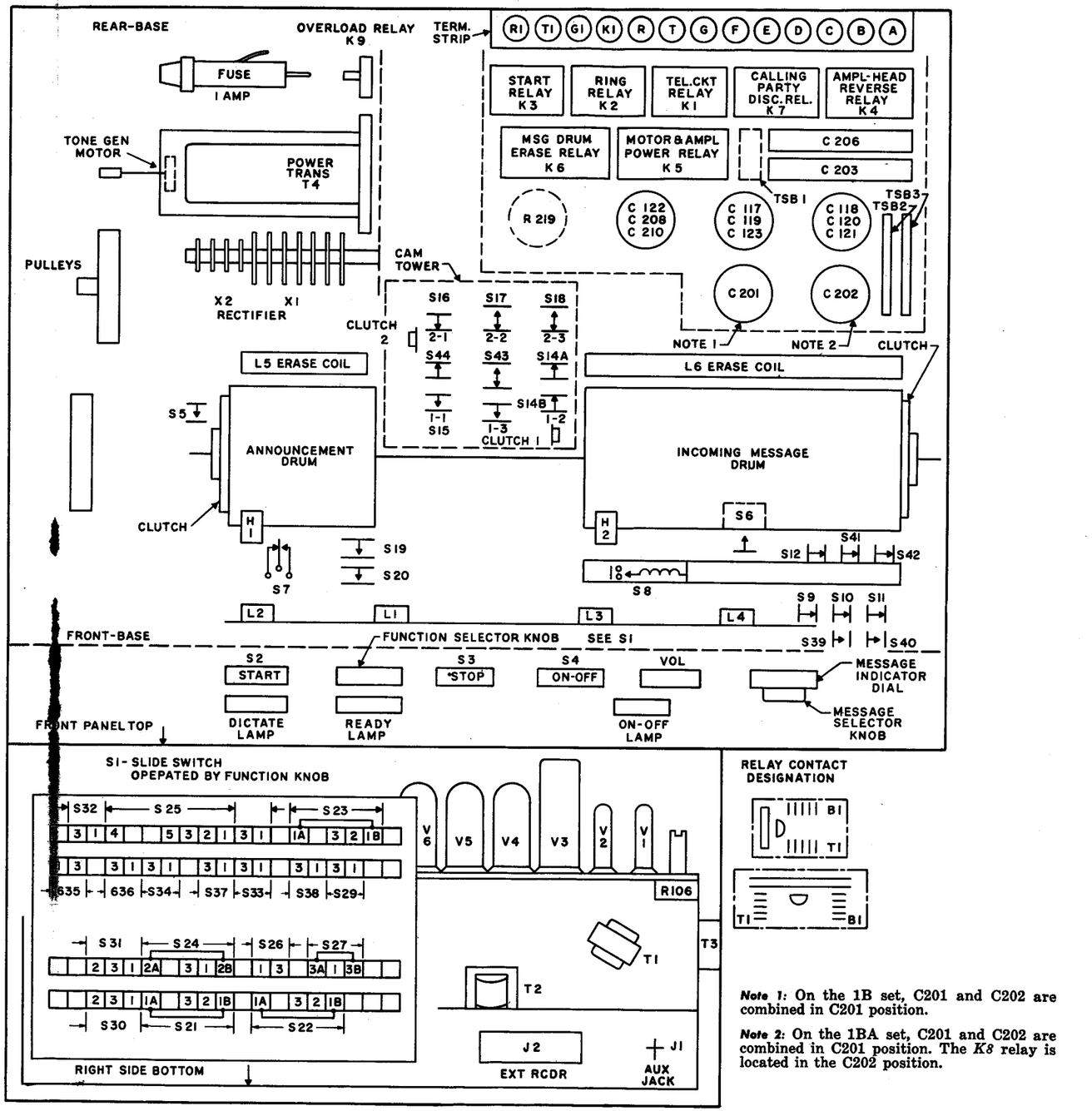


Fig. 7 — Telephone Answering Set Base



Note 1: On the 1B set, C201 and C202 are combined in C201 position.

Note 2: On the 1BA set, C201 and C202 are combined in C201 position. The *Ks* relay is located in the C202 position.

Fig. 8 — 1B and 1BA Telephone Answering Sets, Maintenance