AN 08-35C131-2

HANDBOOK

OF

MAINTENANCE INSTRUCTIONS

FOR THE

AUTOMATIC SELECTOR MECHANISM

With Adapter for ARA or AN/ARC-5 Receiver

(Spot Tuner)

Navy Type No. C 131/AR

UNCLASSIFIED (8-13-47)

~~RESTRICTED~~

(For Official Use Only)

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LIST OF REVISED PAGES ISSUED

NOTE: A heavy black vertical line, to the left of the text on revised pages, indicates the extent of the revision. This line is omitted where more than 50 percent of the page is revised.

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UNSATISFACTORY REPORT

For U.S. Army Force Personnel:

In the event of malfunctioning, unsatisfactory design, or unsatisfactory installation of any of the component units of this equipment, or if the material contained in this book is considered inadequate or erroneous, an Unsatisfactory Report, AAF form No. 54, or a report in similar form, shall be submitted in accordance with the provisions of Army Air Force Regulation No. 15-54, listing:

1. Station and organization.
2. Nameplate data (type number or complete nomenclature if nameplate is not attached to equipment).
3. Date and nature of failure.
4. Airplane model and serial number.
5. Remedy used or proposed to prevent recurrence.
6. Handbook errors or inadequacies, if applicable.

For U.S. Navy Personnel:

Report of failure of any part of this equipment during its guaranteed life shall be made on Form N. Aer. 4112, "Report of Unsatisfactory or Defective Material", or a report in similar form, and forwarded in accordance with the latest instructions of the Bureau of Aeronautics. In addition to other distribution required, one copy shall be furnished to the Inspector of Naval Material (location to be specified) and the Bureau of Ships. Such reports of failure shall include:

1. Reporting activity.
2. Nameplate data.
3. Date placed in service.
4. Part which failed.
5. Nature and cause of failure.
6. Replacement needed (yes-no).
7. Remedy used or proposed to prevent recurrence.

For British Personnel:

Form 1022 procedure shall be used when reporting failure of radio equipment.

★

DESTRUCTION OF ABANDONED MATERIAL IN THE COMBAT ZONE

In case it should become necessary to prevent the capture of this equipment and when ordered to do so, DESTROY IT SO THAT NO PART OF IT CAN BE SALVAGED, RECOGNIZED OR USED BY THE ENEMY. BURN ALL PAPERS AND BOOKS.

Means:—

1. Explosives, when provided.
2. Hammers, axes, sledges or whatever heavy object is readily available.
3. Burning by means of incendiaries such as gasoline, oil, paper or wood.
4. Grenades and shots from available arms.
5. Where possible, and when time permits, bury all debris or dispose of it in streams or other bodies of water.

Procedure:—

1. Obliterate all identifying marks. Destroy nameplates and circuit labels.
2. Demolish all panels, castings, switch and instrument boards.
3. Destroy all controls, switches, relays, connections and motors.
4. Rip out all wiring in electrical equipment. Smash gas, oil and water cooling systems in gas-engine generators, etc.
5. Smash every electrical or mechanical part whether rotating, moving or fixed.
6. Break up all operating instruments such as keys, phones, microphones, etc.
7. Destroy all classes of carrying cases, straps, containers, etc.

SECTION I
GENERAL DESCRIPTION

1. GENERAL

a. PURPOSE OF MANUAL.—This manual has been prepared to supply information to authorized personnel on the installation, adjustment and operation of the Automatic Selector Mechanism (Spot Tuner). See Fig. 4.

b. CHARACTERISTICS OF EQUIPMENT.—The Automatic Selector Mechanism is an electro-mechanical device, designed to facilitate the tuning of a radio receiver. The mechanism tunes the receiver automatically and accurately to one of six (or fewer) predetermined frequency channels. The channels shall be separated by not less than 5 scale divisions of the spot tuner dial. For remote control, place the master switch in the "AUTO" position and operate the tuner from the six-channel remote control switch. For manual tuning of the receiver turn the master switch to the "MAN" position and set the receiver to any desired frequency within its range with the knob and tuning dial provided for this purpose on the tuning mechanism.

c. ADAPTABILITY.—The Automatic Selector Mechanism (Spot Tuner) as described herein, is so designed that it can be easily installed on an ARA or AN/ARC-5 receiver by any competent mechanic in the field with the aid of ordinary tools. After the installation has been completed the tuner is adjusted to tune automatically to the desired frequency channels. The channels can be reset by the pilot or operator whenever he so desires. No other tool than a screw driver is needed for this operation.

d. VOLTAGE REQUIREMENTS.—The automatic tuner is designed to operate from a source of 20 to 30 volts D.C. The instrument will operate reliably on an airplane under all climatic and temperature conditions. At 30 volts the stand-by current is 1.6 amperes and the operating current 2.2 amperes.

2. MAIN PARTS

a. GENERAL.—The Automatic Selector Mechanism (Spot Tuner) as supplied for use in combination with an ARA or AN/ARC-5 receiver consists of four principal parts as specified in Table I. The total weight of the mechanism and the fittings (unpacked) is 3.72 lbs.

TABLE I
(Principal Parts—Supplied)

Quantity	*Description of Part*	*Dimensions (Inches)*	*Weight (Lbs)*
1	Operating Unit (A in Fig. 4) containing the six control discs, relays, motor, etc. for operating the tuning condenser of the receiver. The 19 prong male receptacle for the control cable plug is part of this unit.	Height 4¾″ Width 4½″ Depth 2⅜″	3.05
1	Control Cable Plug (B in Fig. 4). The plug is equipped with a screw cap, fitting the corresponding collar of the receptacle.	Max. Diam. 1½″ Length 2¼″ Cable Insert Diam. ⅝″	0.166
1	Adapter or Transmission Assembly as specified in Table II, Paragraph 3. It is the connecting link between the main control shaft of the selector unit and the condenser shaft of the ARA receiver.	.....	0.355
1	Remote Control Switch (C in Fig. 4) and Knob. Single ⅜″ hole mounting provides for easy installation on panel, dashboard, etc.	See Note Paragraph 4-d	0.166

Note: The control cable (minimum 16 conductors for six channels) between the tuning unit and the remote control switch is not a part of this contract.

3. ADAPTER ASSEMBLY

a. GENERAL.—The adapter or transmission assembly consists of the parts and sub-assemblies as listed below:

TABLE II
(Adapter Parts—Supplied)

Item	*Description*	*Manufacturer's Number*	*Fig.*
1	Flexible Coupling	ADS — 30	5 and 20
2	Spiral Gear and Disc Sub-Assembly	ADS — 28	14
3	Gear Shaft and Mounting Plate	ADS — 27	14
4	Spring Disc Assembly	ADS — 29	16
5	Tension Spring	AD — 313	16
6	Back Plate	AD — 300	19
7	Adapter Base Sub-Assembly	ADS — 25	20

Note: For complete list of parts shipped see pages 29 and 30 and Fig. 23.

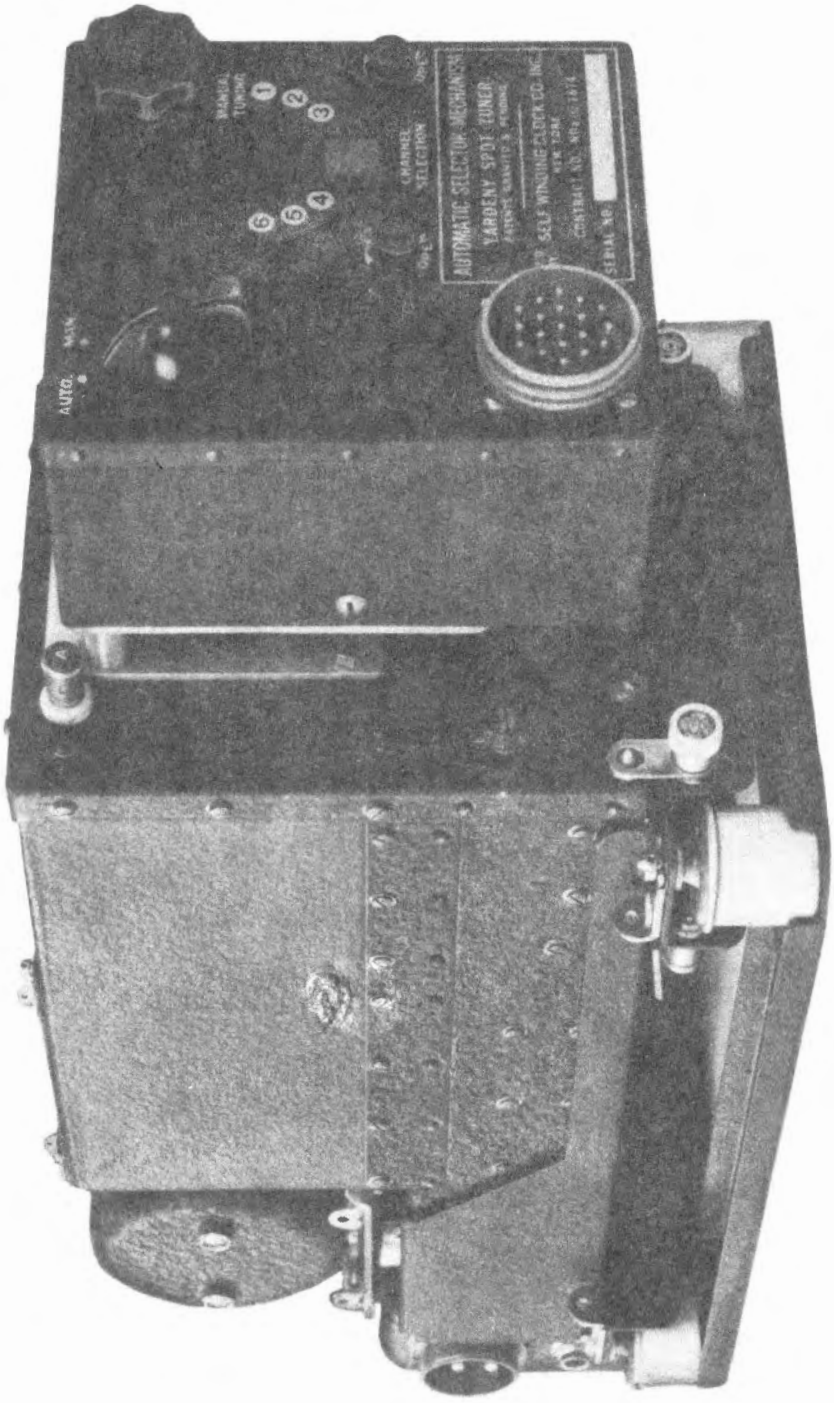


Figure 1 — Automatic Selector Mechanism Mounted on ARA or AN/ARC-5 Receiver

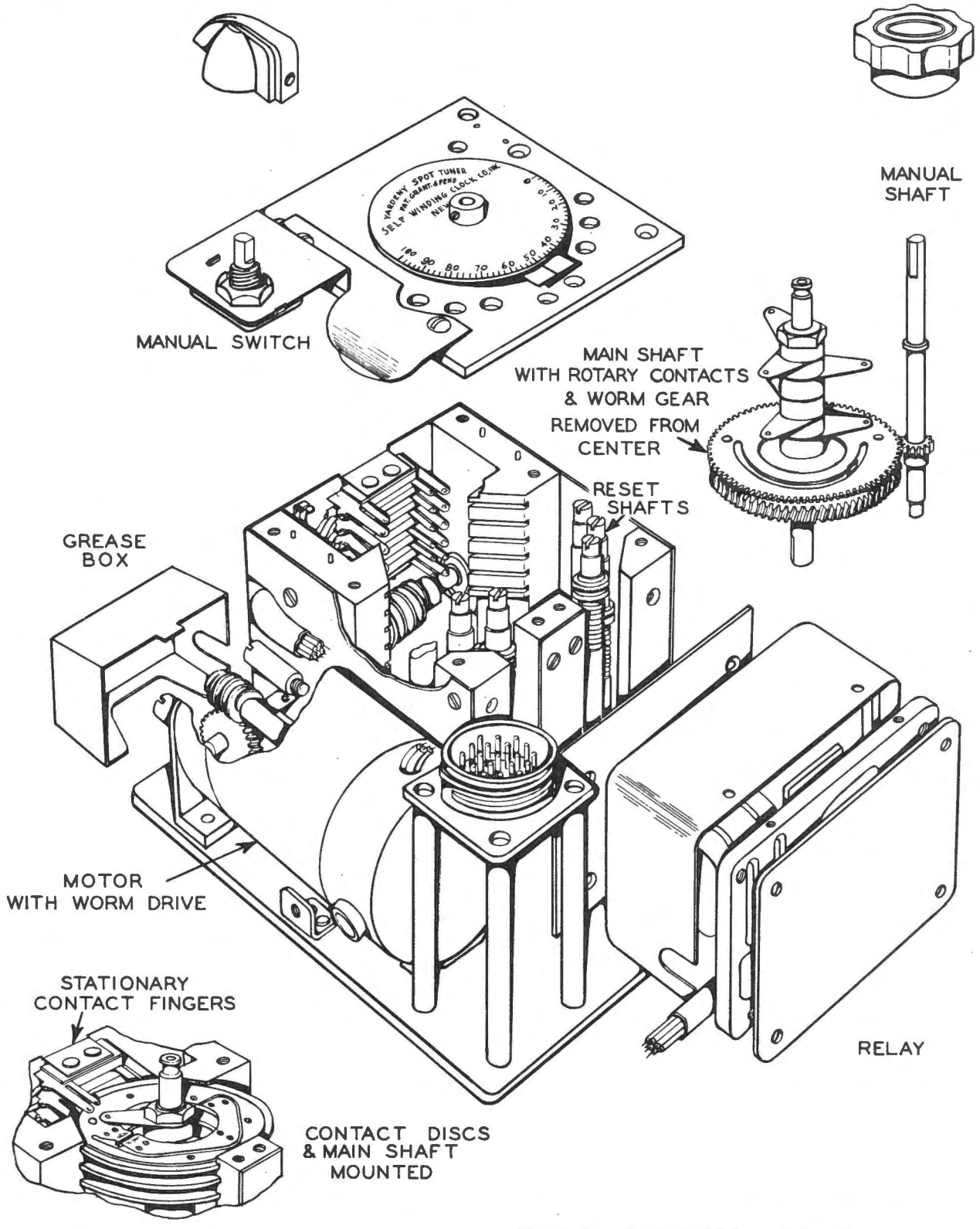


Figure 2 — Exploded View of Spot Tuner

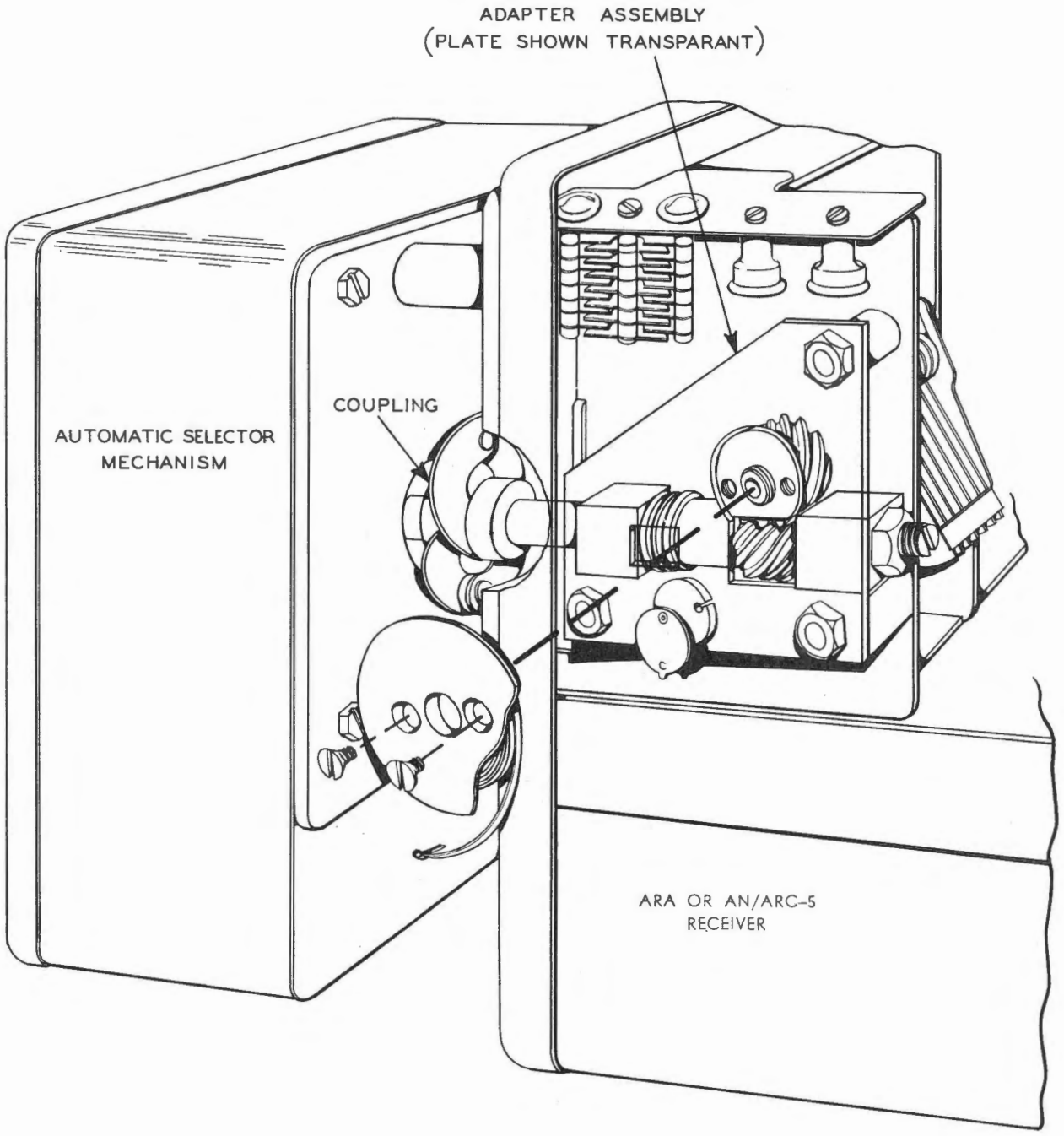


Figure 3 — Cutaway View of Adapter

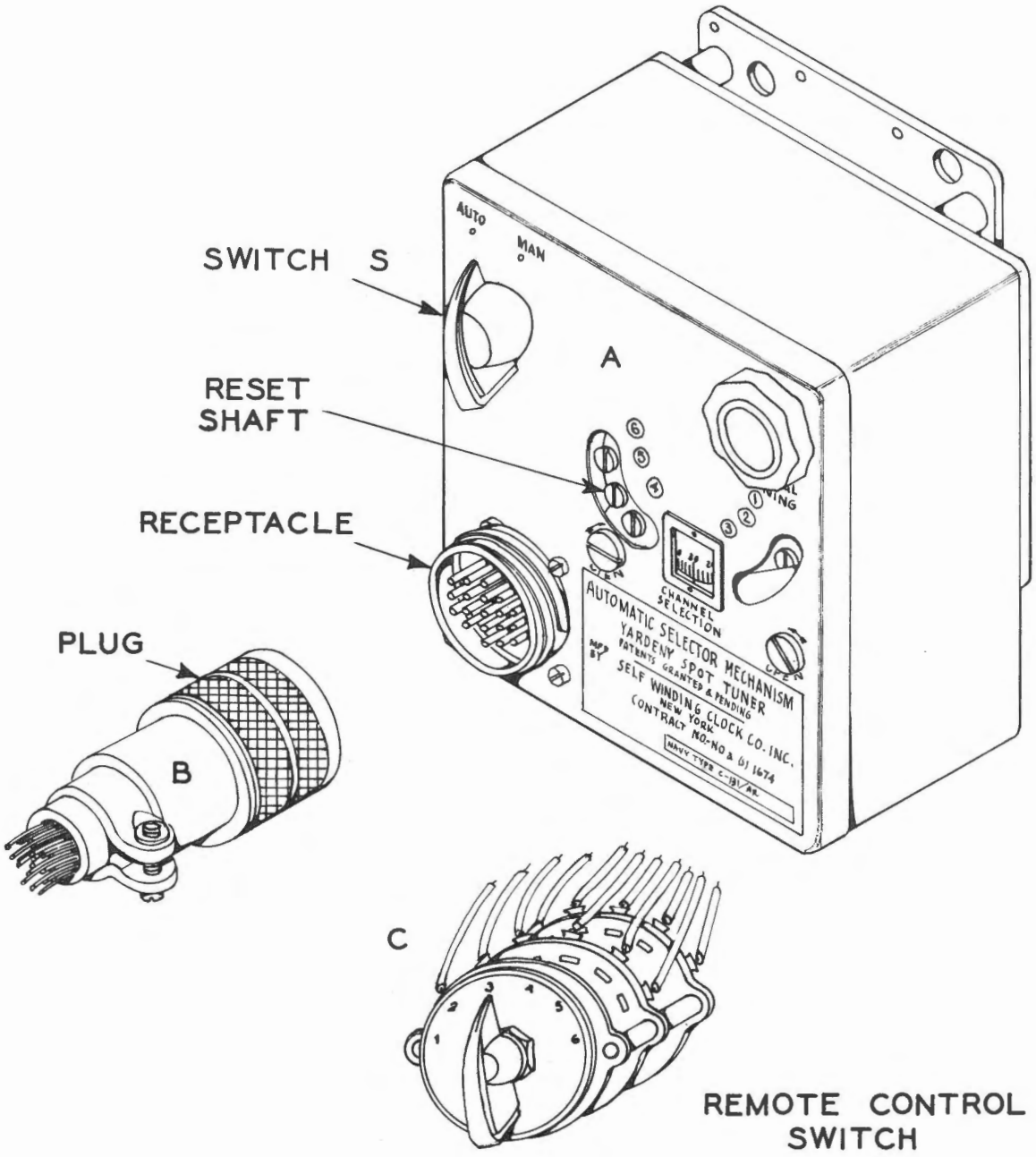


Figure 4 — Automatic Selector Mechanism with Plug Connector and Remote Control Switch

SECTION II
INSTALLATION AND ADJUSTMENT

1. INSTALLATION

a. GENERAL.—The installation of the Automatic Selector Mechanism (Spot Tuner) consists of the following operations:

1. Attaching the adapter or transmission assembly between tuning mechanism and the condenser shaft of the receiver.

2. Installing the selector unit on the receiver.

3. Mounting the remote control switch.

b. ATTACHING THE ADAPTER.—This requires the partial dismantling of the ARA or AN/ARC-5 receiver for gaining access to the condenser drive, removing parts of the manual drive supplied as a standard part on the receiver, and the mounting of the adapter. The sequence of operations is as follows:

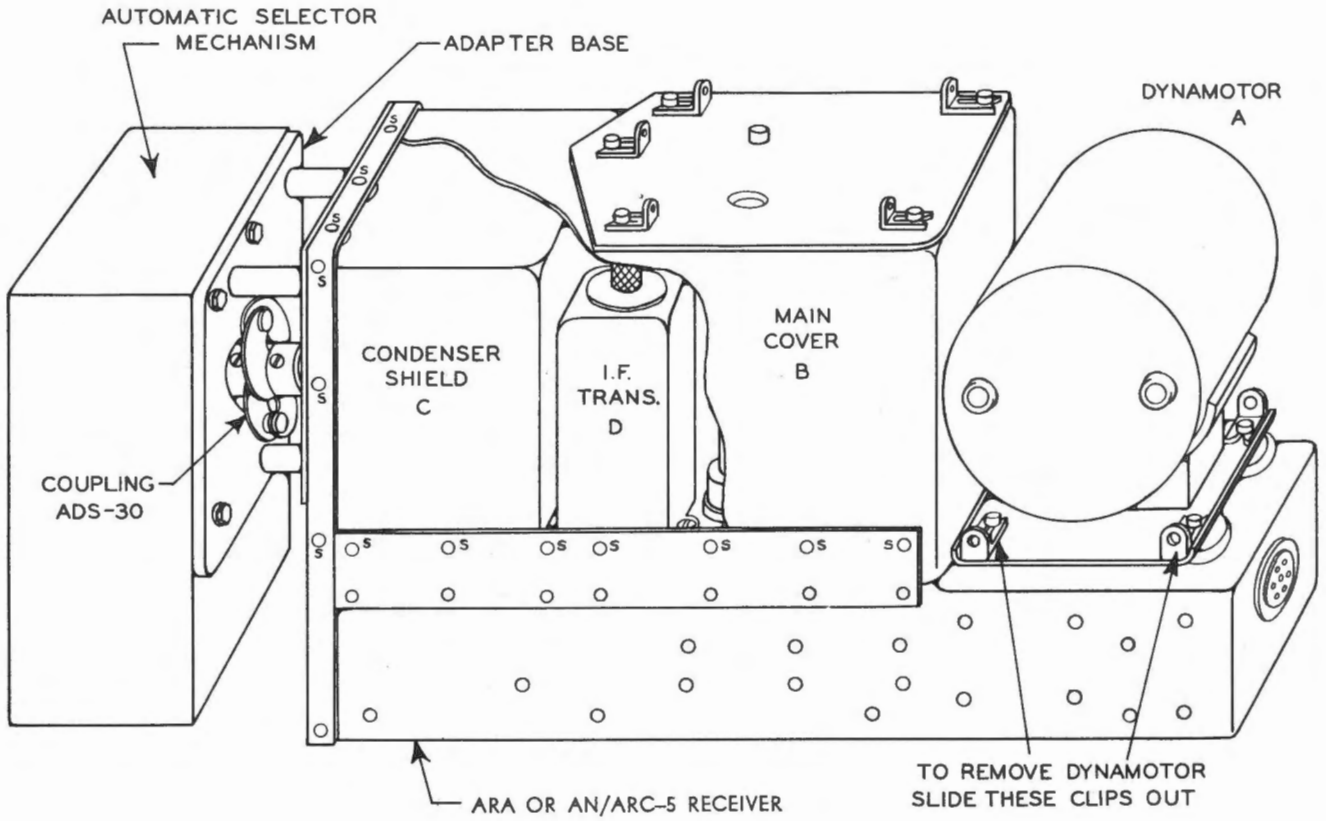


Figure 5 — Receiver with Automatic Tuner ARA or AN/ARC-5 Receiver

1. Remove the ARA or AN/ARC-5 receiver from its rack and place on suitable bench.

2. (FIG. 5) Remove dynamotor (A) and the main cover (B) by loosening screws (S) on top and both sides of the cover.

3. (FIG. 5) Remove condenser shield (C), tubes and IF transformers (D).

Note: Mark the transformers to facilitate their replacements in the correct positions.

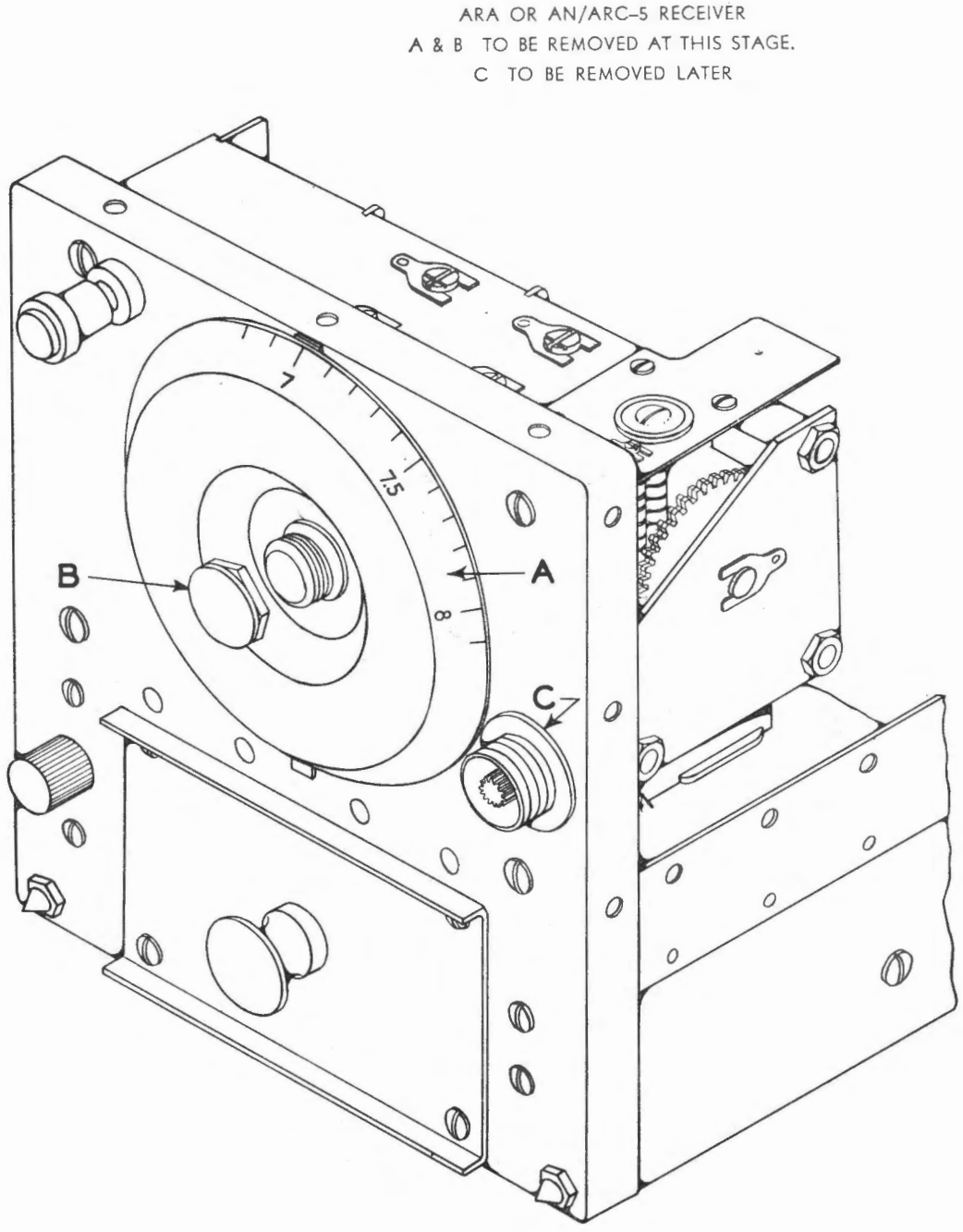


Figure 6 — Front End of Receiver ARA or AN/ARC-5 Receiver

4. (FIG. 6) Unscrew nut (B) and remove dial (A) from the front of the receiver.

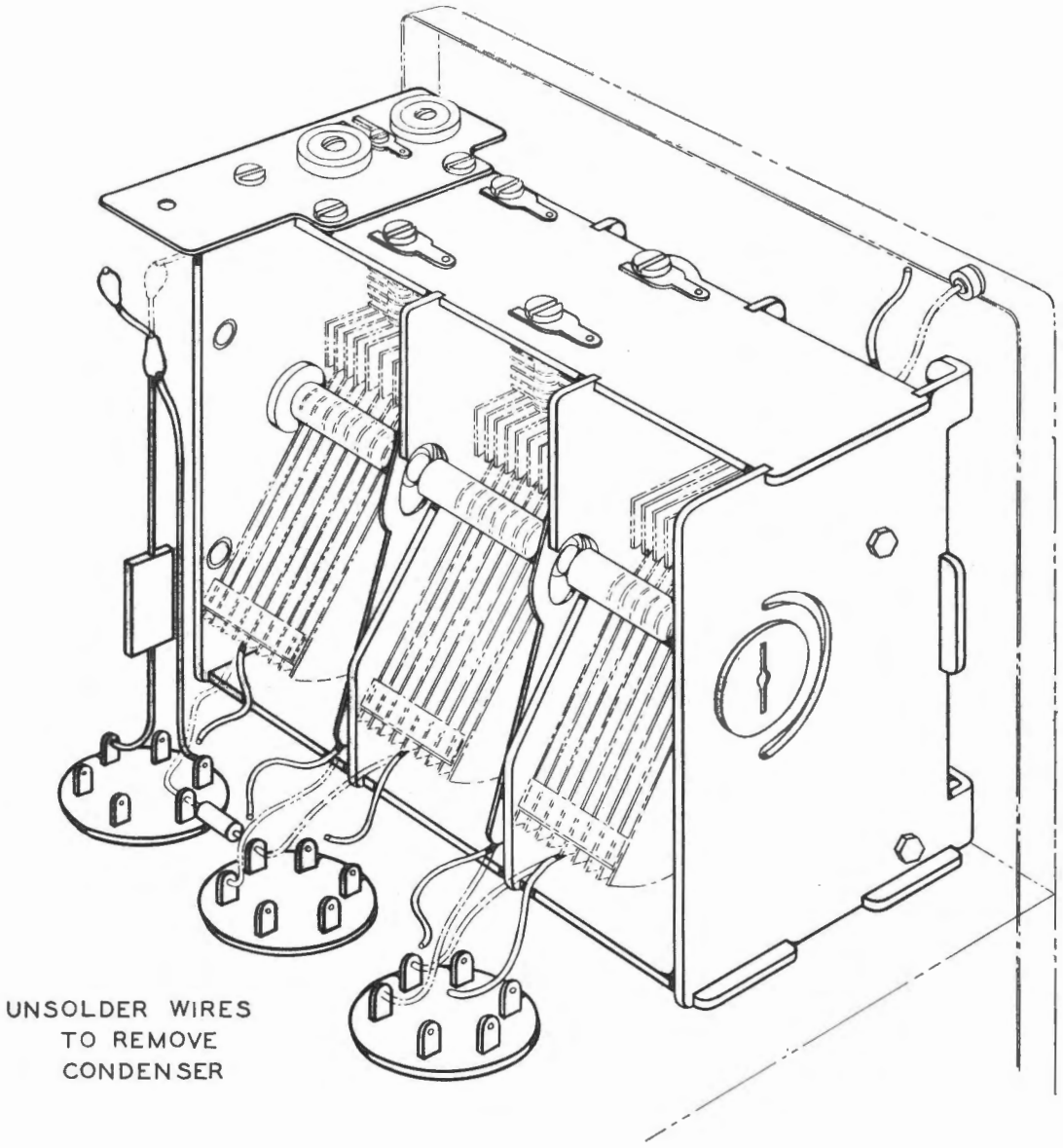


Figure 7 — Condenser Assembly ARA or AN/ARC-5 Receiver

5. (**FIG. 7**) Unsolder and identify for reconnection all such condenser connections as are necessary for the removal of the tuning condenser.

Note: Do not clip wires.

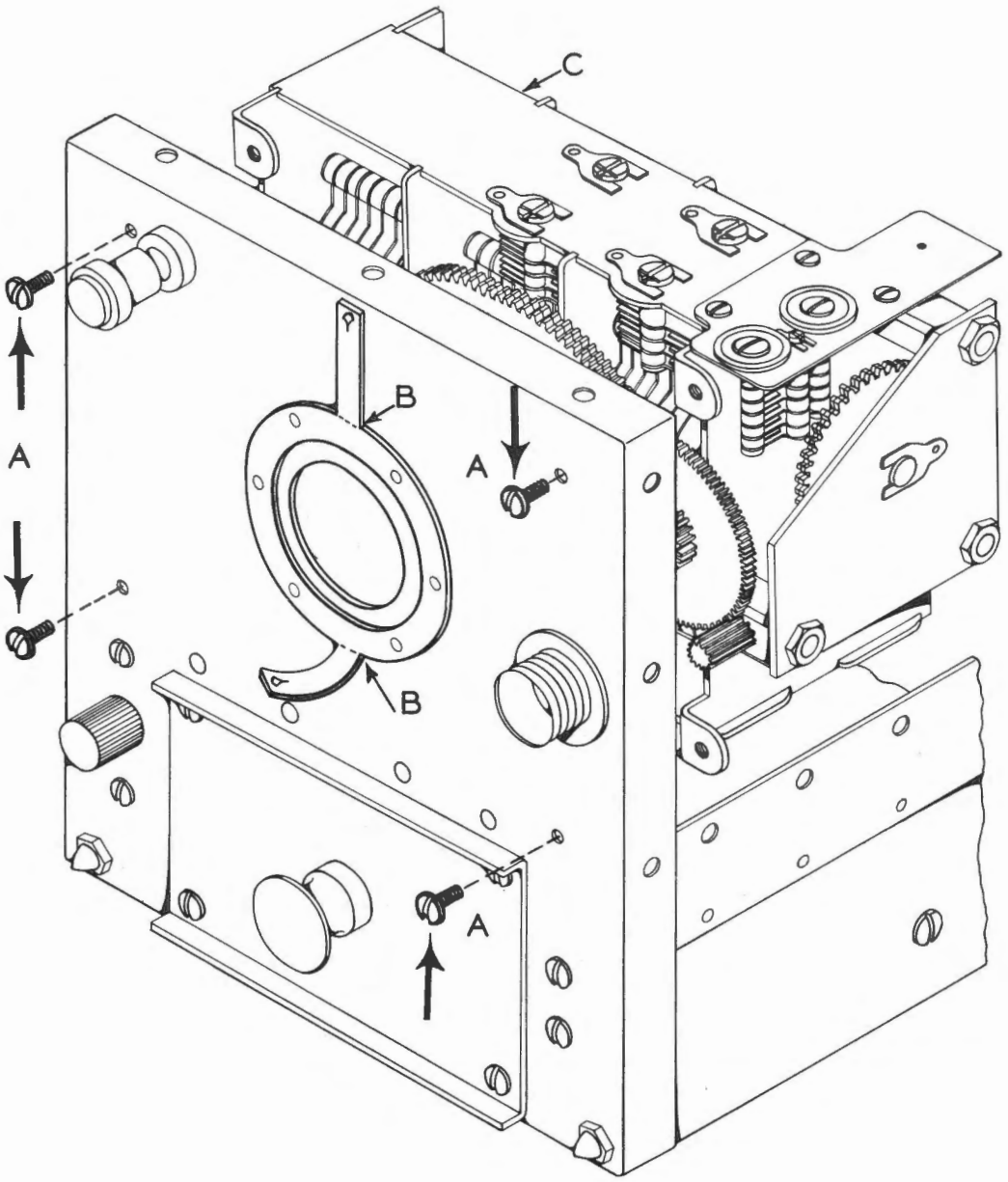


Figure 8 — Front View of Receiver with Dial Removed ARA or AN/ARC-5 Receiver

6. (FIG. 8) Remove the four screws (A) in front of the receiver to free the condenser. Save the screws which are to be used again for remounting the condenser. Remove the dial setting indicators by breaking them off at the locations (B).

7. (FIG. 8) Remove the condenser (C).

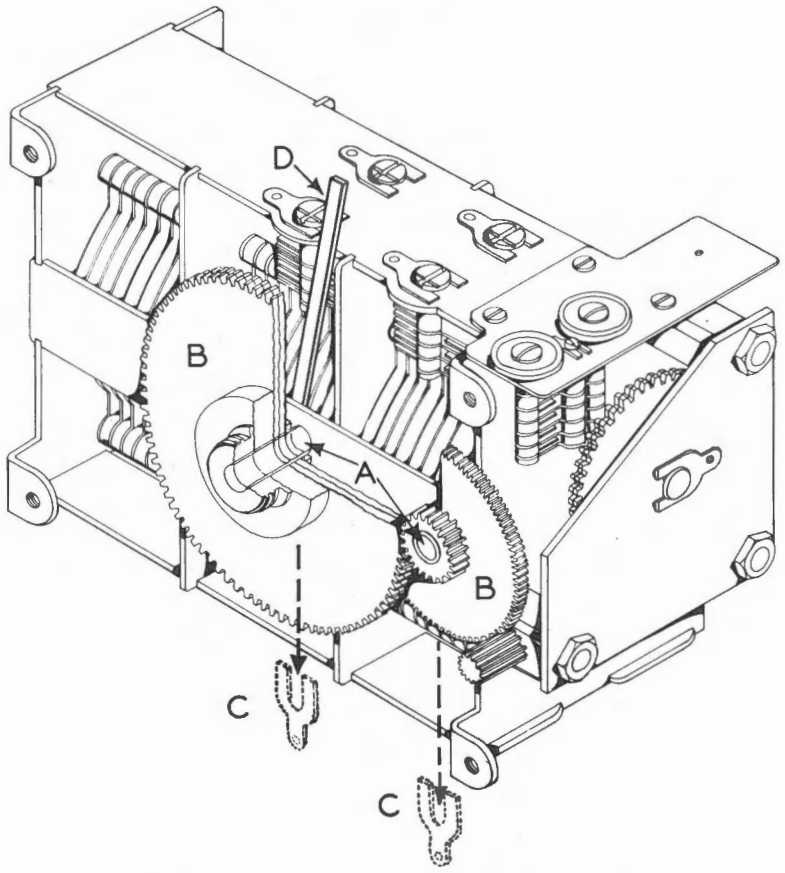


Figure 9 — Condenser — Removal of Drive Gears ARA or AN/ARC-5 Receiver

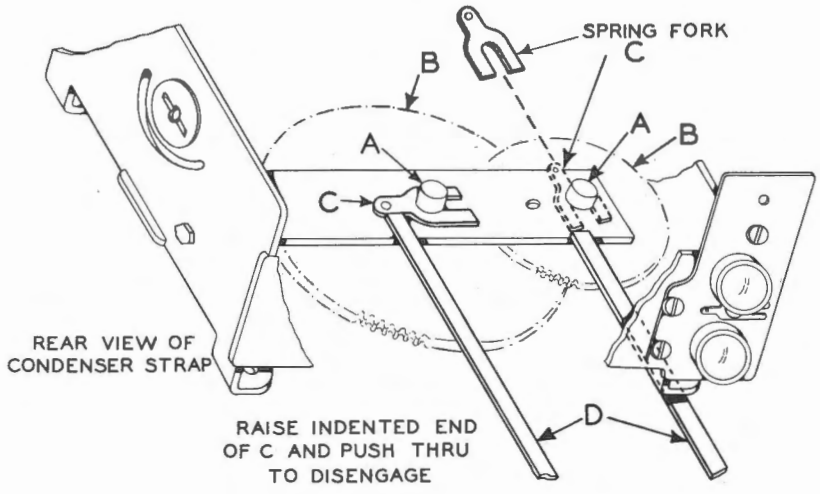


Figure 10 — Condenser — Removal of Drive Gears (Rear View) ARA or AN/ARC-5 Receiver

8. (FIG. 9 and 10) Remove the gears (B) by removing spring forks (C) from the rear ends of the two shafts (A). Remove the forks by raising the dented ends and pushing them out. Use any piece of suitable flat metal about the size and shape as shown (D).

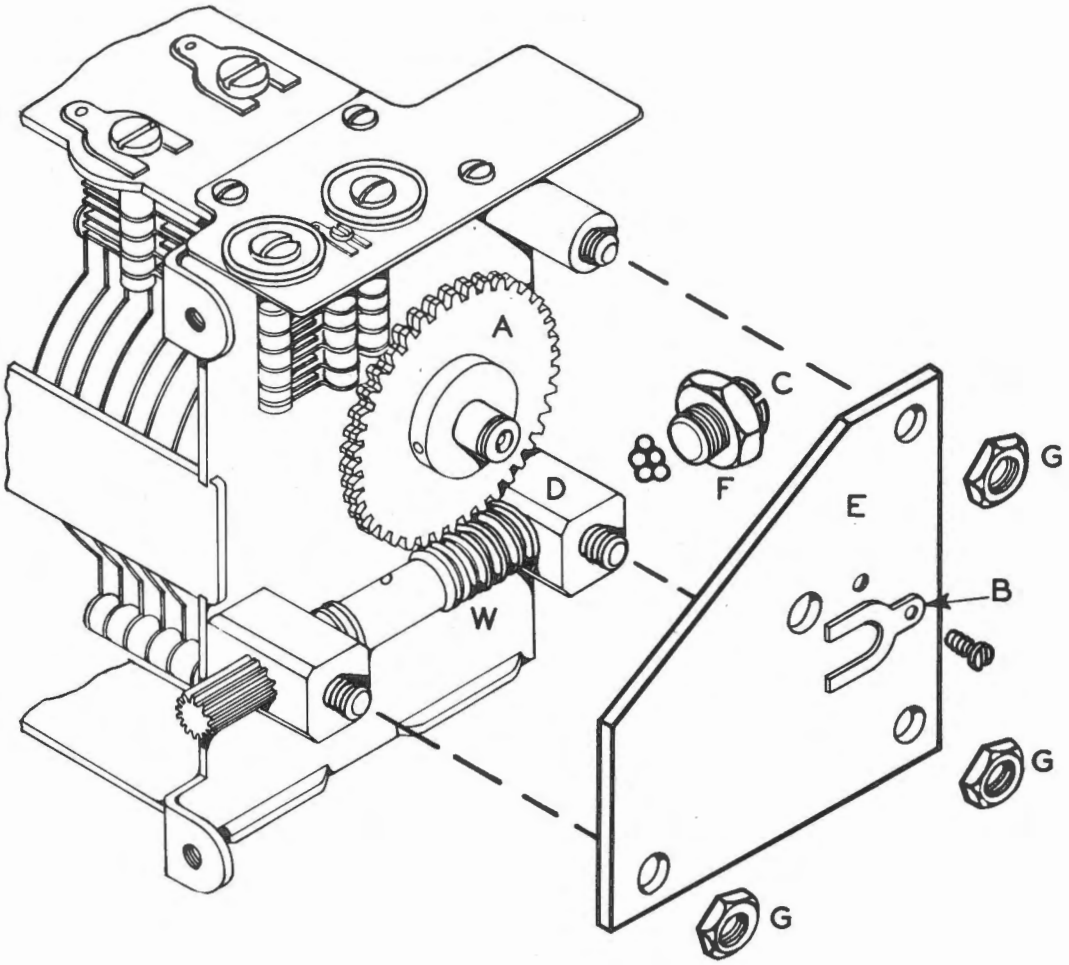


Figure 11 — Condenser — Removal of Plate and other Parts ARA or AN/ARC-5 Receiver

9. (FIG. 11) For removing the gear (A) and the worm (W) six operations are needed as follows:

a. (FIG. 11) Remove spring fork (B).

b. (FIG. 11) Remove the plate (E) by unscrewing the three nuts (G).

c. (FIG. 11) Remove screw (C), locknut (F) and steel balls from the rear of stud (D).

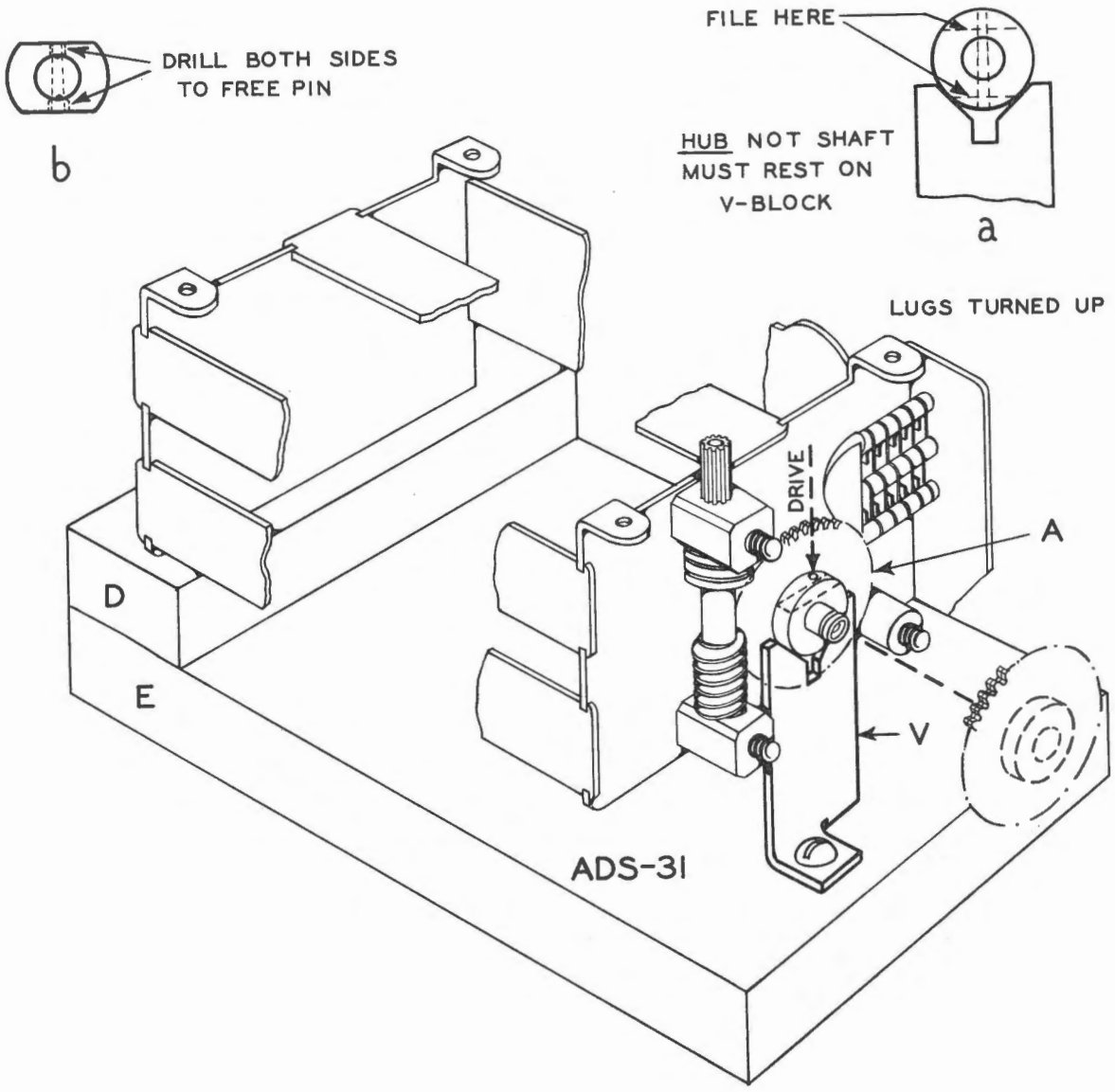


Figure 12 — Condenser — Removal of Condenser Shaft Gear ARA or AN/ARC-5 Receiver

d. (FIG. 12) To remove taper pin in gear (A) use wooden blocks (D) and (E) furnished. Then file the hub flat at both ends of the pin. (Detail a.) If frozen drill out the pin as shown at (b). Take care not to drill through the condenser shaft. Rest the hub on Vee-block (V) during the operation to avoid bending of the shaft.

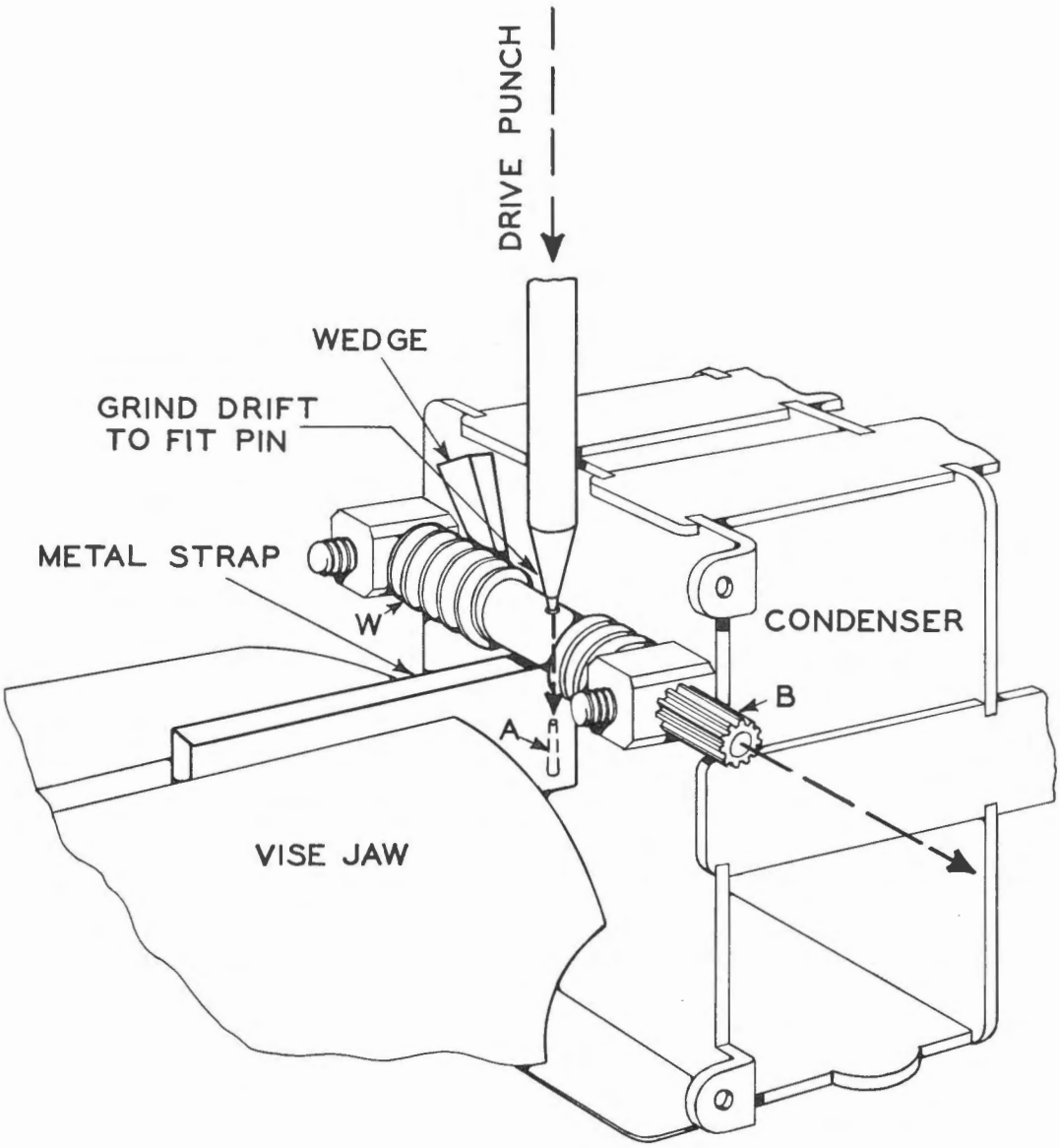


Figure 13 — Condenser — Removal of Worm ARA or AN/ARC-5 Receiver

e. (FIG. 13) To drive taper pin (A) from the worm hub, cover the condenser shaft, bearings and trimming condenser to protect them against damage. Next, place a wooden wedge between the worm and the end wall of the condenser to prevent the shaft from turning. Drive out the taper pin with a suitable driver as shown.

f. (FIG. 13) Remove the shaft (B) and worm (W). *Notes:* The condenser should be closed (plates meshed) at all times when handling it. Worm (W) and shaft (B) can be discarded.

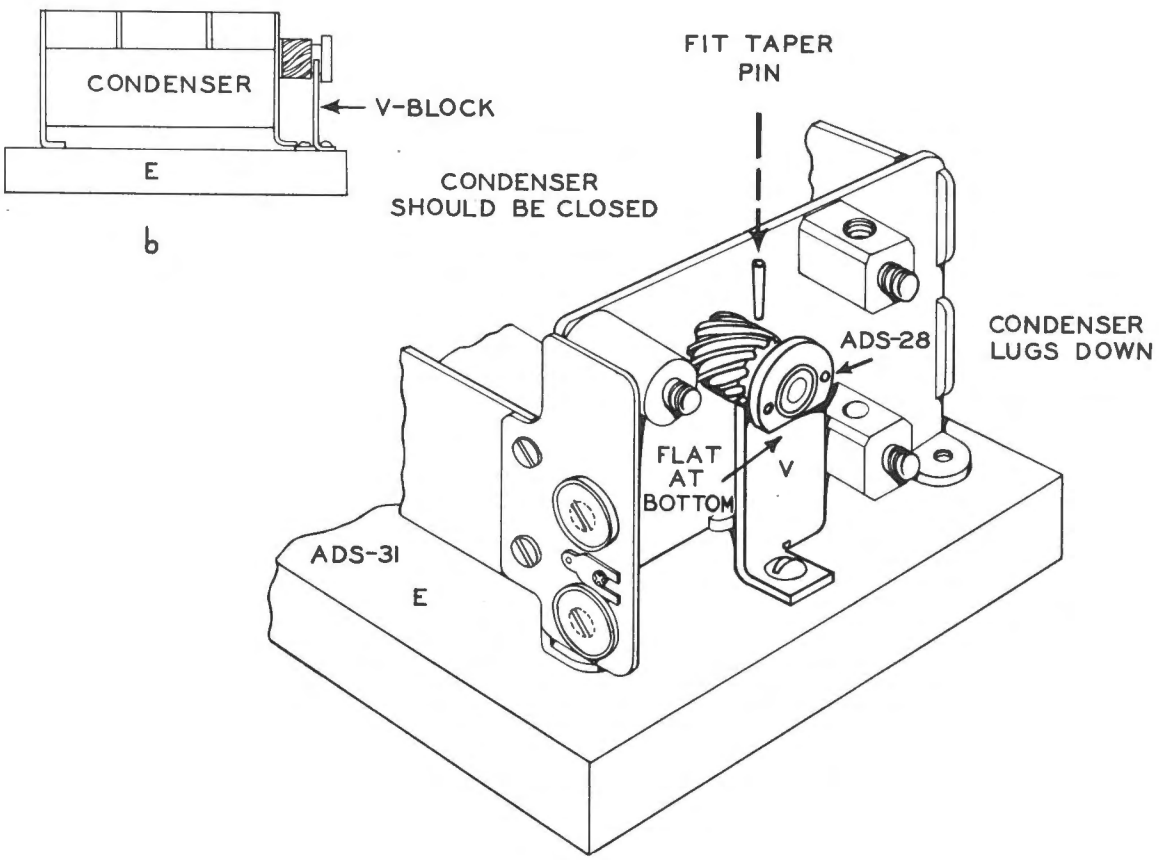


Figure 14 — Condenser — Mounting of Spiral Gear ARA or AN/ARC-5 Receiver

10. (FIG. 14) To install spiral gear use block (E) and Vee-block (V) and place the condenser on its mounting lugs as shown at (b). Mount the spiral gear and fit taper pin.

11. (FIG. 14) Drive new taper pin using the block supplied for this purpose as shown at (b). Both ends of the taper pin are to be flush with the root of the gear teeth.

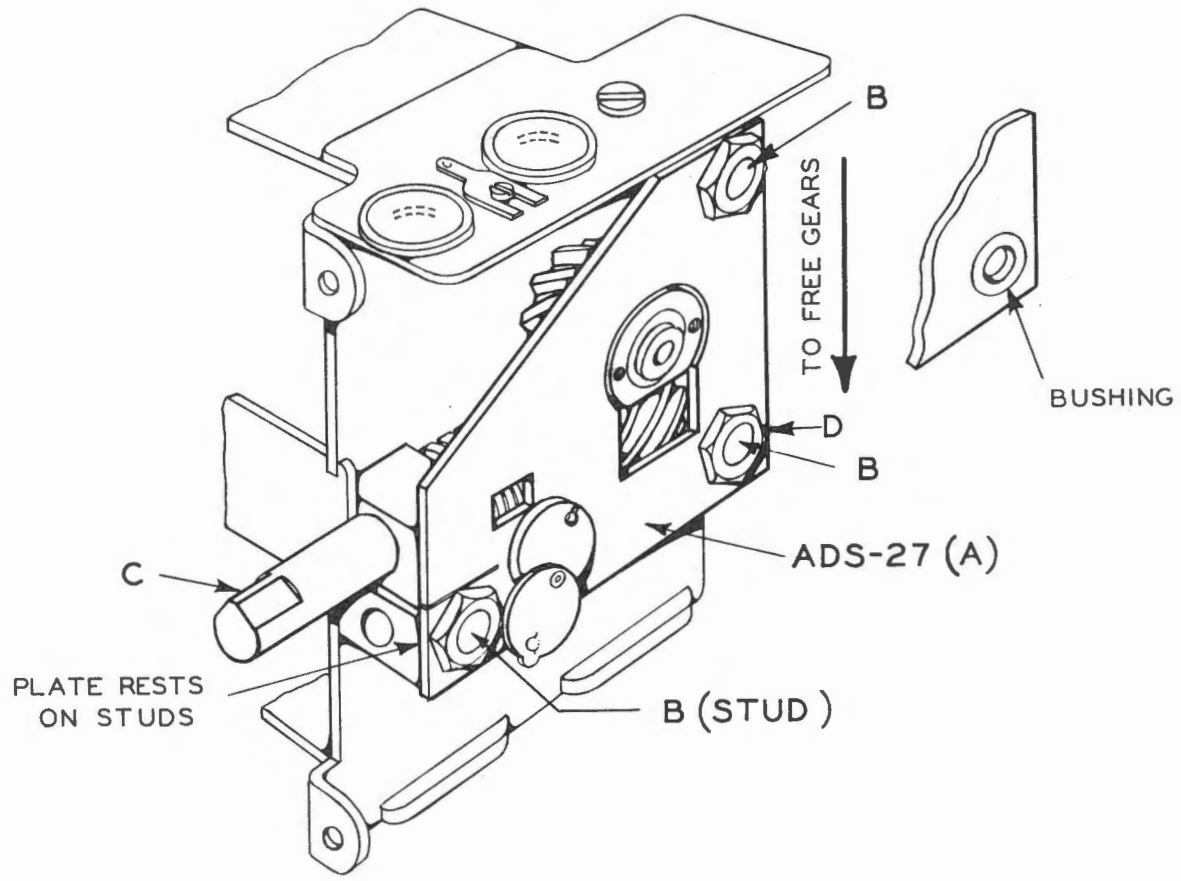


Figure 15 — Condenser — Mounting of Adapter Plate Assembly ARA or AN/ARC–5 Receiver

12. (FIG. 15) Install adapter plate Assembly ADS-27 (A) on the three studs (B).

Notes: In the two lower mounting holes of the plate (A) is a bushing which may be driven out if necessary. These bushings are used when the two lower studs are #10 gauge. When the studs are #12 gauge remove the bushings.

It is essential that the gears do not bind or move too easily, as accuracy in tuning will be impaired. First, tighten nuts (D) by hand and then check (C) for proper freedom of movement. If gears bind press the adapter plate down with fingers (direction indicated by arrow) before tightening nuts.

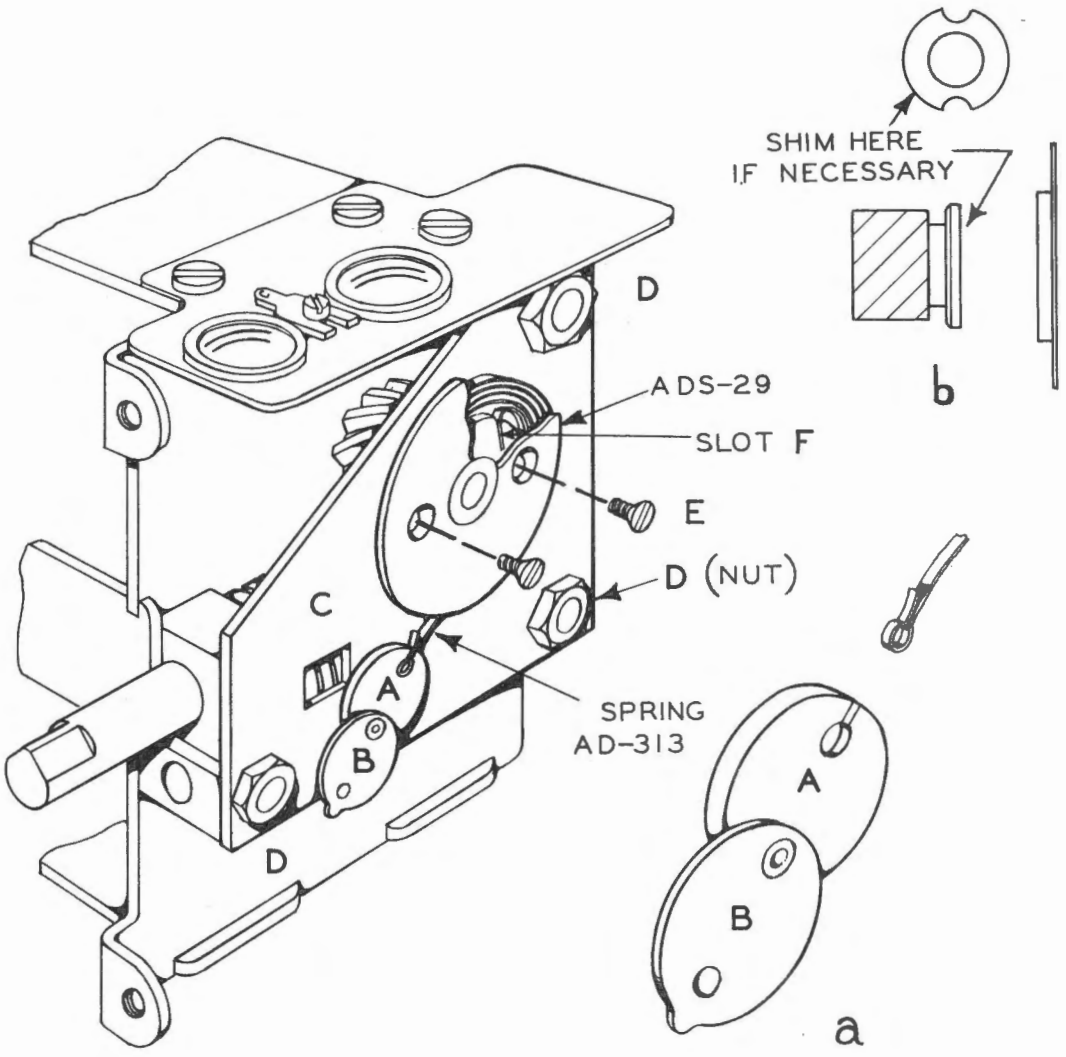


Figure 16 — Condenser — Spring Mounting ARA or AN/ARC-5 Receiver

13. (FIG. 16) To install the spring disc ADS-29, place the return bend of the spring in the spring disc with the slot of the disc at right as shown at (a). Hold spring and disc with one hand and fasten with the two flat head screws (E) provided. With the condenser closed, wrap the spring six turns clockwise and insert the loop in the latch (A). Then close the cover (B). If the back of the spring binds on the plate (C), remove the disc and the spring and add one spring washer as shown in (b). Repeat the operation as described.

14. (FIG. 16) Tighten nuts (D) and make sure that the condenser plates turn freely after this has been done.

Note: It is essential that the slot (F) is in the position as shown, with the condenser plates fully meshed when screwing on the spring disc ADS-29.

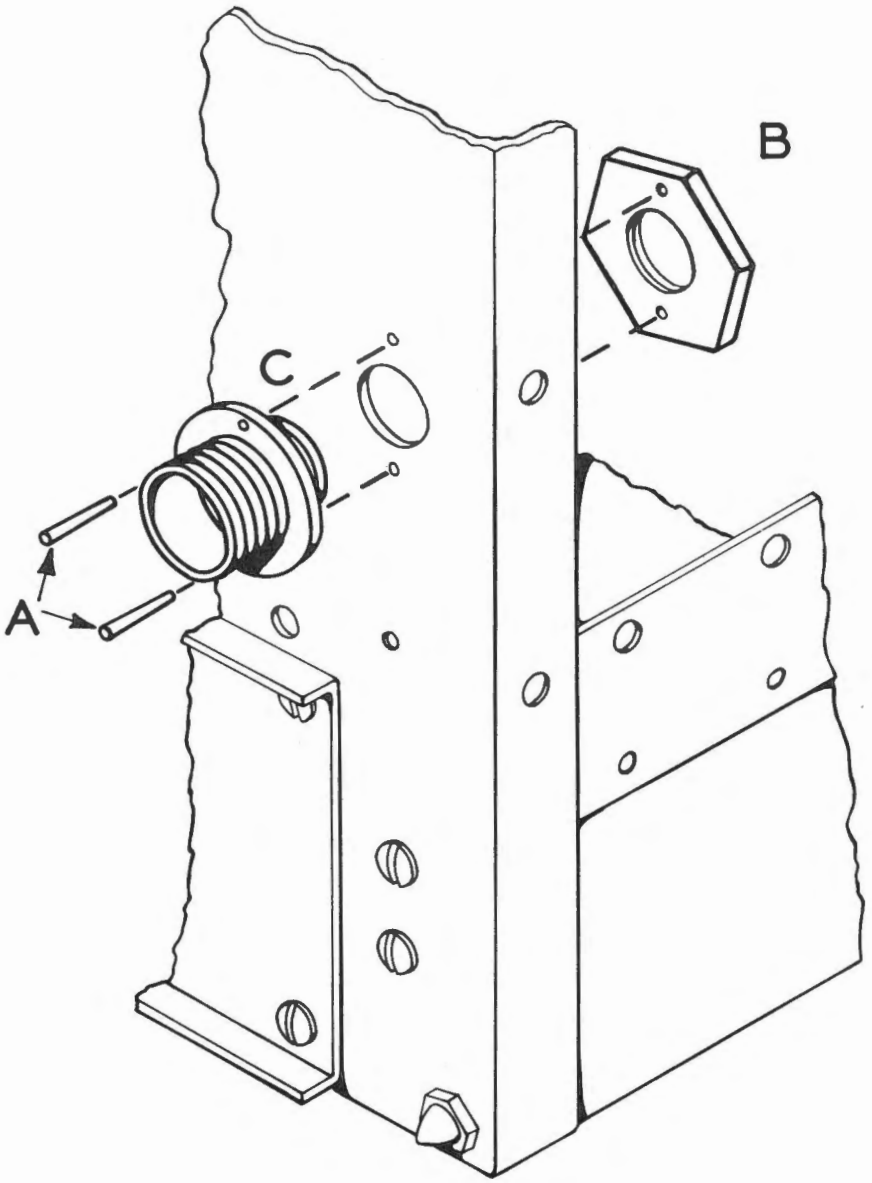


Figure 17 — Removal of Drive Shaft Bushing Receiver ARA or AN/ARC-5 Receiver

15. (FIG. 17) Remove the bushing (C) from the tuning knob of the ARA or AN/ARC-5 receiver by driving out the two small holding pins (A) with any suitable driver. After removing the pins unscrew the nut (B) from the rear. The fitting will come off easily.

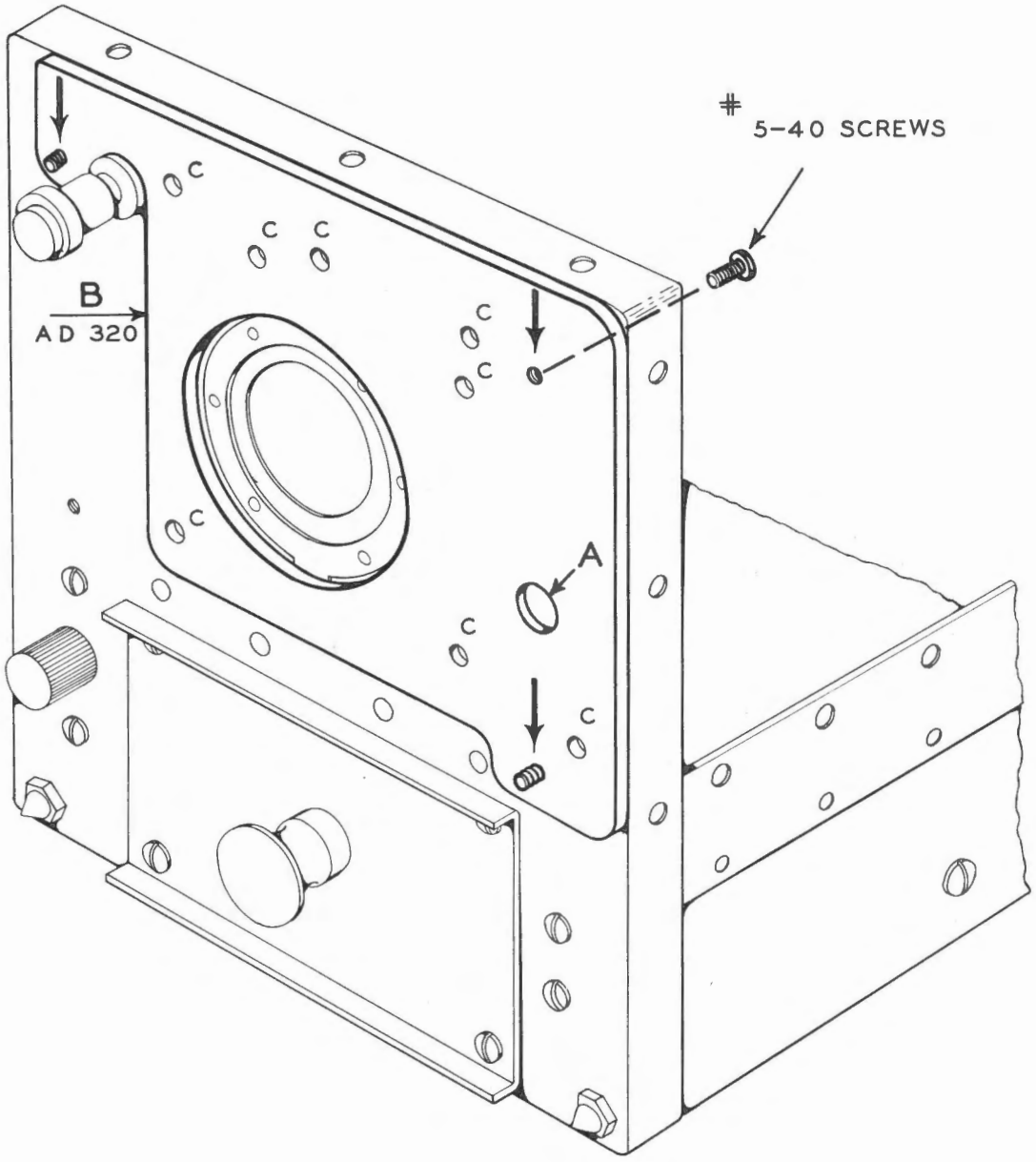


Figure 18 — Template for Drilling Front of Receiver ARA or AN/ARC-5 Receiver

16. (FIG. 18) Screw the template part AD-320 (B) to the front of the receiver. Utilize the holes in the condenser lugs, using the screws furnished.

17. (FIG. 18) Drill all the holes marked (C) according to the template drillings with #27 drill.

18. (FIG. 18) Drill hole (A) to minimum of 3/8 inch. Remove the template.

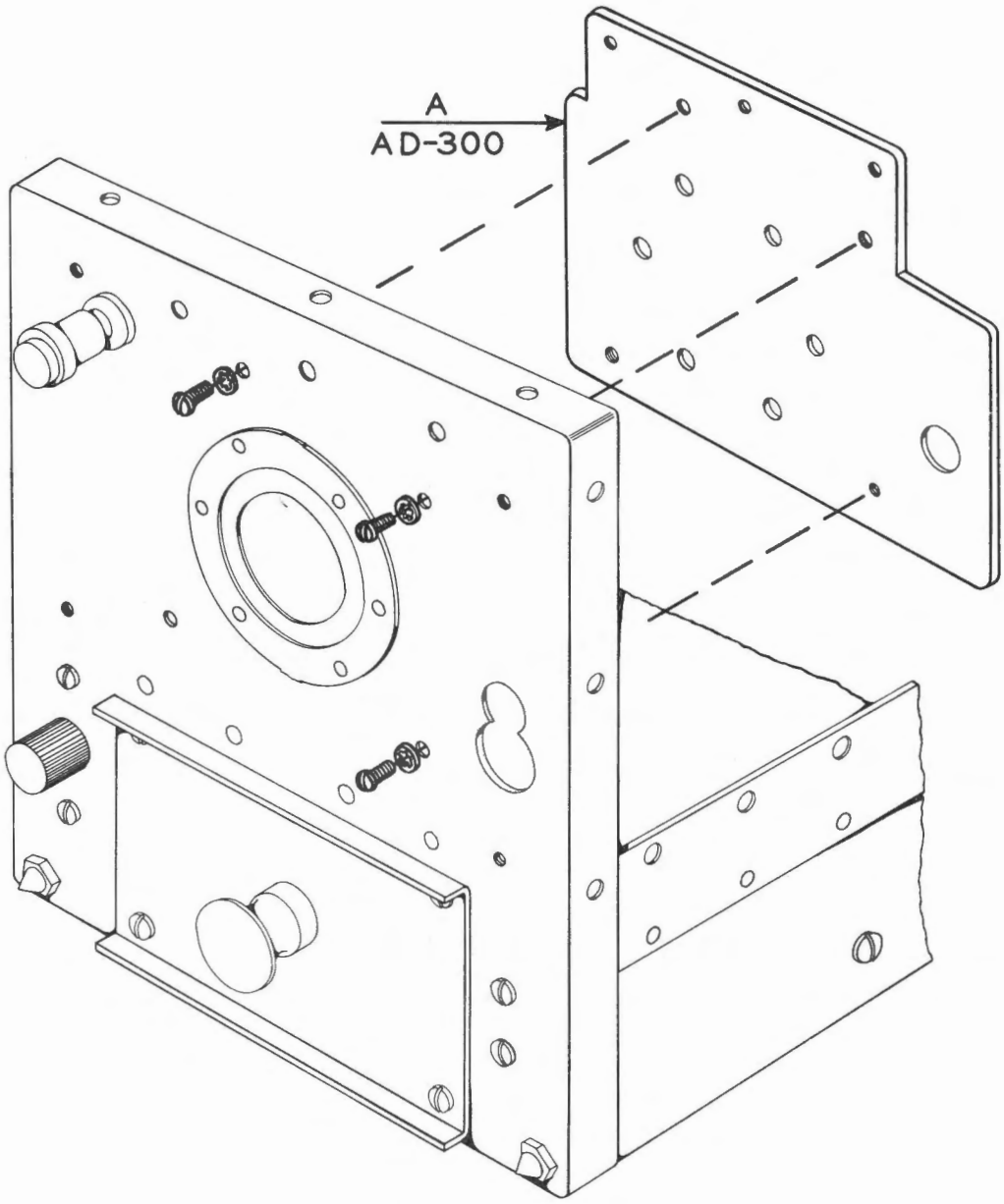


Figure 19 — Adapter Back Plate Mounting on Receiver ARA or AN/ARC-5 Receiver

19. (FIG. 19) Screw adapter plate AD-300 (A) to the rear of the receiver front. Use the shake-proof washers and the #6-32 machine screws furnished.

20. Re-install the condenser, using the original screws.

21. (FIG. 7) Re-solder all opened connections.

22. Check re-soldered condenser leads for sure electric contact. See note Section II paragraph 2.

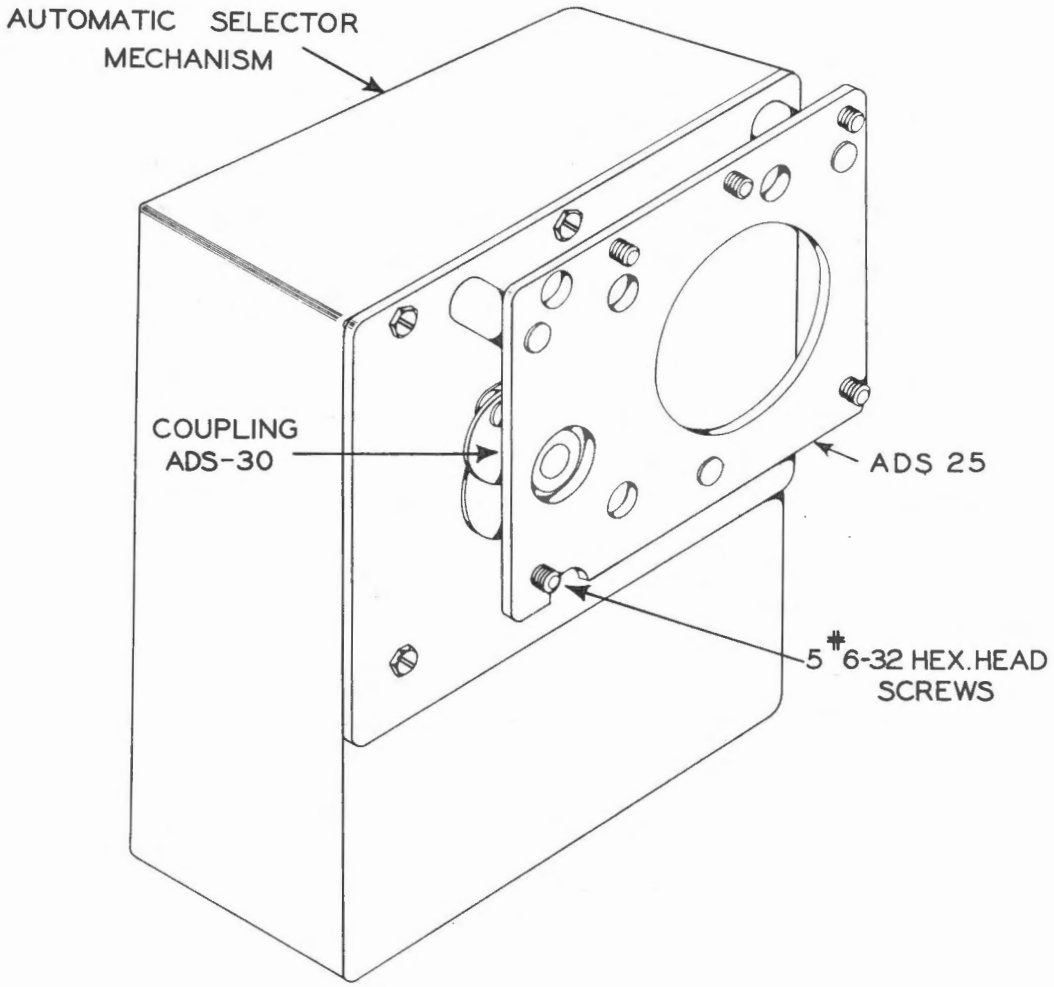


Figure 20 — Rear View of Tuner Showing Adapter Mounting

c. INSTALLING THE SELECTOR UNIT.—To install the Automatic Tuning Mechanism (Spot Tuner) proceed as follows:

1. (FIG. 20) Fasten the Automatic Selector Mechanism with the five hexagonal head screws and shake-proof washers furnished with the tuner. See to it that the shafts of the receiver and of the selector unit are accurately aligned. Before being tightened, the flexible coupling should spin freely when placed over both shafts. If not, loosen the five hexagonal head screws which hold the automatic tuner and shift slightly for correct alignment. If the result is still unsatisfactory loosen and shift the condenser. True alignment of the two shafts is essential for proper functioning of the tuning unit and the necessary care and time should be taken for attaining it. When it has been accomplished, make certain that all mounting screws, etc. are securely tightened.

2. Fasten the set screws in the bushings of the flexible coupling making certain that they bear properly on the 90 degree flats of the two shafts.

3. (FIG. 21) Remove outer cover by removing four screws A. Then place the dial so that the 0 and 100 marks coincide with the end positions of the tuning condenser of the receiver, i.e. fully open and fully closed. If this is not the case, loosen the set screws in the dial hub and reset.

4. Replace cover.

5. Replace the IF transformers, tubes, dynamotor and the covers of the receiver.

d. MOUNTING THE REMOTE CONTROL SWITCH:

1. Decide on a location convenient to the operator.

2. Drill a 7/16″ mounting hole and a small hole for the steadying pin of the switch in the dashboard, a panel or a wall available at that location. Install the switch.

3. Determine the length of the cable which will be needed, wire and connect to switch and plug.

Note: See diagram Fig. 22 for cable connections.

The switch used for remote control of the tuning unit is a standard two-deck, six point commercial unit. The principal dimensions and space requirements are given below.

Shaft diam.	¼″
Shaft length (cut to length required)	1⅝″
Space Requirements Rear of Panel:	
Depth	1½″
Width (extreme diam. measured over contact tips)	2″

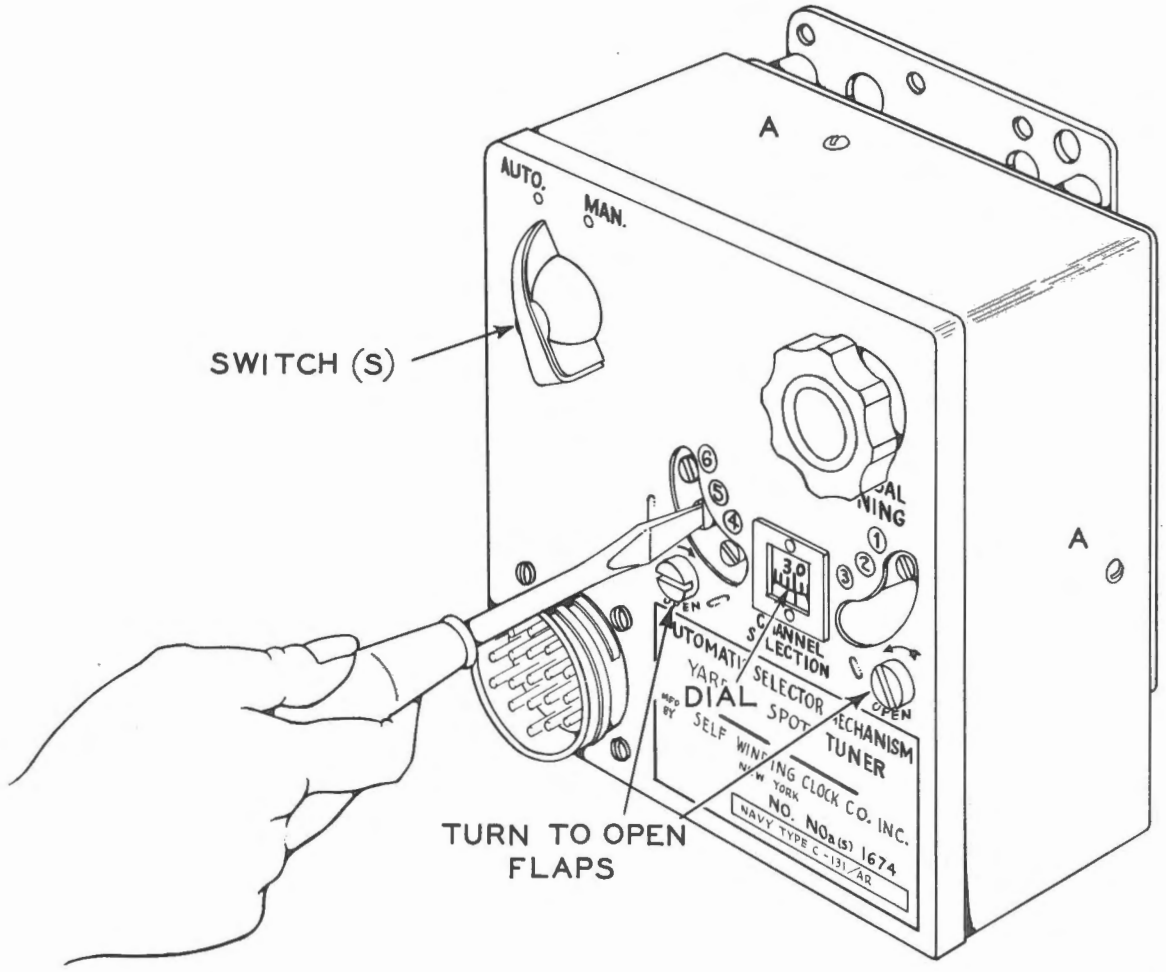


Figure 21 — Adjustment of Tuner

2. ADJUSTMENT

a. FOR AUTOMATIC OPERATION.—To set the Automatic Selector Mechanism to the desired channel frequencies within the AN/ARA or ARC-5 receiver ranges, proceed as follows:

(1) (FIG. 4) Insert the cable plug (B).

(2) Put on head set and switch on the power.

(3) (FIG. 21) To set the automatic tuner, set the master switch (S) to the "AUTO" position. Then open the flaps which cover the heads of the reset shafts by turning the large slotted heads which operate these flaps. With a screw driver adjust the reset shaft the number of which corresponds to the desired number on the remote control switch. Continue the adjustment until the signal comes in satisfactorily.

(4) To adjust the tuner for additional channel frequencies (Maximum 6) reset the remote control switch to the desired new number and adjust the corresponding reset shaft as described under (4).

(5) Any of the pre-selected channels can now be tuned in by turning the remote control switch to the corresponding number. The automatic tuning mechanism will always place the tuning condenser accurately in the correct position.

b. FOR MANUAL OPERATION.—Set the switch (S) in the upper left hand corner of the Automatic Selector Mechanism to the position marked "MAN". Tune the receiver with the manual tuning knob in the upper right hand corner of the instrument (FIG. 21). The frequency to be tuned can be determined with the 0 to 100 calibration on the tuning dial of the mechanism. The ratio between the main driving shaft and the manual tuning shaft is 1 to 6, facilitating accurate manual tuning.

Note: If in operation, a slight tapping or jarring of the receiver and the tuner causes a loss of signal, the trouble is apt to lie in the condenser leads that were removed when the tuner and adapter were installed.

SECTION III

OPERATION

OPERATION.—When—by setting the remote control switch to a desired position—the circuit is closed through any one segment (A), one of the two relays (R) will be energized through contact arm (B). This relay, in its turn, will close the motor circuit through one of the reversing windings (C) and turn the motor in the corresponding direction. The motor will turn the contact arms (B) and the tuning condenser of the receiver. This rotation will continue until the contact arm involved bridges the gap (E) between the two segments (A) of the corresponding selector disc. When this occurs both relays (R) will be energized, interrupting the motor circuit and causing the motor to stop in that particular position. This condition will prevail until the remote control switch is set for another channel causing the motor to move and tune the condenser for the newly chosen channel. Great accuracy in the positioning of the tuning condenser is attained due to the particular construction of the selector disc elements and also by the use of a clutch suppressing hunting of the motor when the gap (E) is closed in the exact reset position. The clutch is not shown in the diagram Fig. 24.

PRECAUTION

Before starting flight, make sure that the master switch (S) Fig. 4 is in the correct position, i.e. "AUTO" for remote automatic tuning and "MAN" when manual operation is desired.

SECTION IV

MECHANICAL AND ELECTRICAL CHARACTERISTICS

(See Figure 24)

CIRCUIT.—The Automatic Selector Mechanism (Spot Tuner) embodies six selector discs with contact segments (A) separated by gaps (E). The angular position of these gaps controls the setting of the receiver's tuning condenser and each selector disc can be individually adjusted for such setting. This is done by adjusting the corresponding reset shaft as is outlined in Section II of this manual and shown in Fig. 21. The circuit also contains the contact arms (B) which slide over the segments (A). The arms are mounted on a common shaft (D) driven by a motor through a worm and worm gear. The direction of rotation of the motor is determined by the reversing windings (C) and the relays (R). The remote control switch has six positions, each position provided with a set of two contacts and 2 common contacts. Each contact is connected to a corresponding segment (A) of the six selector discs. In wiring, the selector switch contacts, the two conductors of the power supply line and, if an armoured cable is used for the wiring, the outer metal braid (ground) of this cable are connected to the connector plug as shown in the diagram Fig. 24. The connector plug carries numbers at the beginning and end of each row of connector contacts which correspond to the numbers as shown in the diagram Fig. 24.

SECTION V

MAINTENANCE

1. MAINTENANCE

Little maintenance will be required after the unit has been installed. The lubricant in the grease box over the motor worm gear drive must be clean and free of foreign matter. If for any reason the gear box is removed, the grease is to be replaced. The lubricant used for this purpose is Beacon M-285.

If the motor brushes need renewal because of wear, instructions for doing this are given in paragraph 2, "Replacements".

2. REPLACEMENTS

A table of replaceable parts is given in Section VI.

To replace any one of the parts listed in the table remove the outside cover of the Automatic Selector Mechanism. To do this, take off the manual tuning and master switch knobs by loosening their set screws and pull off. Also, remove the nut under the master switch knob. Next, remove the four 4-40 fillister head screws holding the plug receptacle. Then, remove the four screws in the side of the cover. The cover can now be lifted off.

a. MOTOR BRUSHES.—First, loosen the screws holding the grease box at the front of the motor and take off this box. Next, take out the three 6-32 flat head screws holding the motor to the back plate of the Spot Tuner. Lift the motor gently from the chassis and twist it so that the brush holder screws (marked + and —) near the rear of the motor are exposed. Lift out the old brushes and insert the new ones, making certain that the + or — mark which is stamped on the brush faces the corresponding marking on the motor housing. Push down the brushes gently so that the little tongue of the top plate at the end of the brush spring falls into the slot provided for this purpose in the motor housing. Be sure to place the + brush in the + holder and the — brush in the — holder.

Re-install the motor by first fastening it to the back plate with the two shorter 6-32 flat head screws in the front end. Do not tighten these screws yet. Then, replace the stainless steel motor bottom support Part No. YST-213 in the rear of the motor by sliding it under the motor housing. Line up the hole in this bracket with the corresponding screw hole in the back plate and insert the longer of the three screws. Now, tighten the screws, making certain that sufficient free play is retained between the motor shaft worm and its gear, to assure free movement and proper operation. Replace the grease box cover, apply fresh grease to the gear drive.

b. THE MOTOR.—Complete with mounting bracket, worm, grease box and screws. First, remove the relay box by unscrewing the two 4-40 flat head screws holding the box to the back plate of the tuner. Remove the cover of the box by removing the four screws holding this bakelite cover to the relay mounting base which is inside the box. Release the relay assembly by unscrewing the four small 2-56 round head screws in the sides of the metal cover. The entire relay assembly on its bakelite base can now be carefully pried out with the point of a knfe or sharp screw driver.

Clip the blue and red wires connecting the motor to the relays and also the brown wire which is connected to one of the receptacle prongs. Leave the colored ends in for easy identification of the contacts. Release the wire clamp, Part No. YST-175 (See Fig. 22) and remove the old motor following the procedure as outlined under (a). Install the new motor following the instructions as previously outlined (a). Run the red and blue wires to the relays and the brown wire to the receptacle. Remove the clipped off ends of the old leads and solder the new ones in their places at the corresponding terminals. It is suggested to resolder one lead at a time, leaving the remaining old ends in place, to make certain that the new colors will correspond to the old ones. Replace the wire clamp and re-install the relay assembly, the box and the cover. Be sure that the new wires are neatly placed to avoid crowding or interference with the operation of the relays.

c. RELAY BOX ASSEMBLY.—Remove and open the relay box and covers as described under (b). Loosen the wire clamp and unsolder all the wire connections to the old assembly required to remove the old box. Identify all connecting points to which the various color coded leads are connected. The sketch Fig. 22 which shows the runs of the various wires in the back and the front of the relay foundation will aid in this identification. Solder and lay the old wires into place to the new relay assembly. Re-install the relay assembly, box and covers.

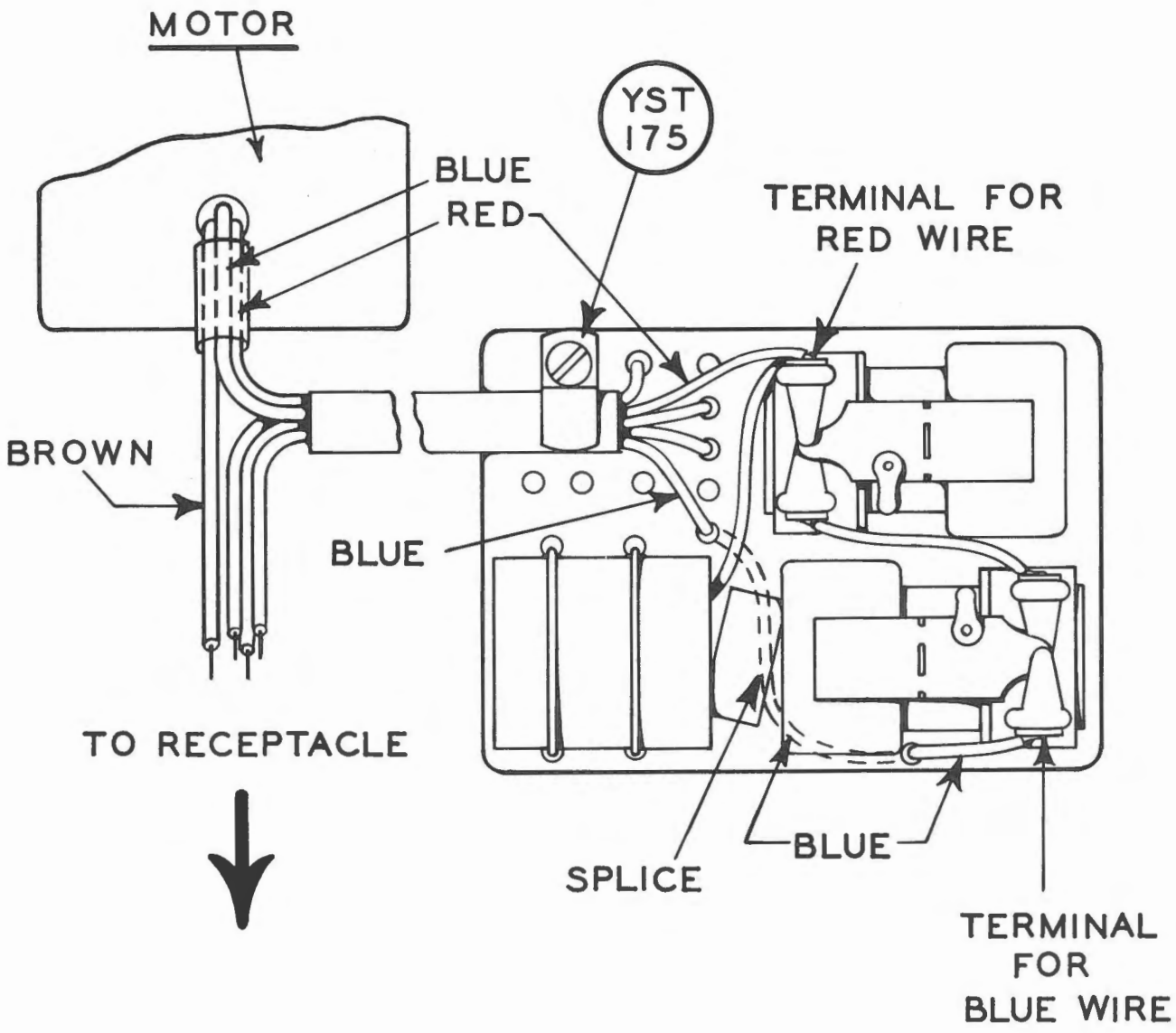


Figure 22 — Wiring Details of Relay Assembly

TABLE OF REPLACEABLE PARTS

MODEL: C-131/AR Automatic Selector Mechanism

Reference Symbol	*Army Stock Number Navy Type Number British Reference Number*	*NAME OF PART AND DESCRIPTION*	*Function*	*Mfr. and Designation*	*Drawing or Specification No.*
Rp-A		Motor Brushes	Motor Part of Spot Tuner	Samsel Time Control Inc., 600 No. Strong Ave., Spring Valley, Illinois	Specify for Motor Type #1610-102
Rp-B		Motor, complete with Mounting Bracket, Worm Gear Box and Screws.	Power Drive of Spot Tuner	Self Winding Clock Co., Inc., 205 Willoughby Ave., Brooklyn, N. Y.	S-13B
Rp-C		Relay box assembly	Tuner Motor Control	Self Winding Clock Co., Inc.	S-14D

SECTION VII

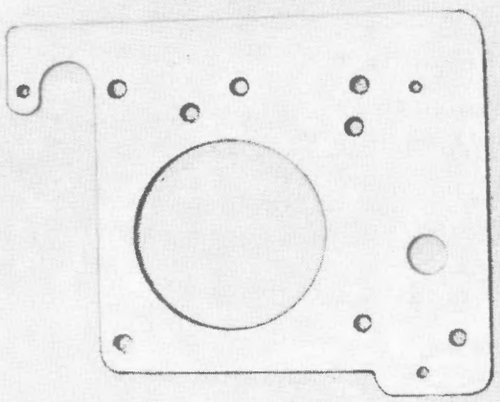
SUPPLEMENTARY DATA

LIST OF PARTS SHIPPED WITH AUTOMATIC SELECTOR MECHANISM & ADAPTER FOR ARA OR AN/ARC 5 RECEIVER (SPOT TUNER & ADAPTER) Navy Type #C-131/AR

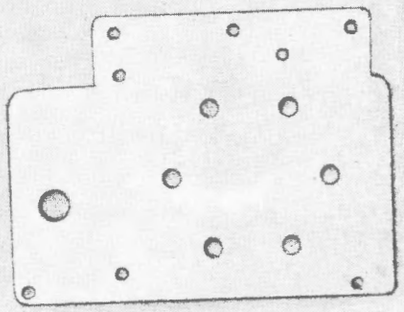
PACKING LIST

Package No.	*Description*	*Part. No.*
	Automatic Selector Mechanism complete with top cover and all knobs, Adapter Base Mounting and Coupling	FA-1
1	Drilling Template	AD-320
	3 (plus 1 Extra) Fastening Screws #5-40 x ½"	YST-413
2	Adapter Back Plate	AD-300
	3 (plus 2 Extra) #6-32 x 3/16" R.H. S.S. Screws for fastening AD-300	YST-414
	5 Lock Washers	YST-431-A
3	Gear Shaft and Mounting Plate Sub-assembly	ADS-27
	3 (plus 2 Extra) Nuts #10-32 for fastening	AD-304
4	5 (plus 2 Extra) Screws #6-32 x ¼" slotted Hex. Head S.S.	YST-416
	5 (plus 2 Extra) Lock Washers	YST-431-A
5	Spiral Gear and Disc Sub-assembly	ADS-28
	1 (plus 1 Extra) Taper Pin #6-0 x ½" S.S. for fastening ADS-28	YST-452
	Spring Disc Sub-assembly	ADS-29
	2 (plus 2 Extra) F.H. S.S. Screws #2-56 x ⅛" for fastening ADS-29	YST-400
	1 (plus 1 Extra) Shim Washer	AD-321
6	1 (plus 1 Extra) Clock Spring	AD-313
7	1 Cannon Connection Plug	YST-188
8	1 Six Position Rotary Switch complete with knob	YST-186 YST-164
	1 Metal "Vee" Block	AD-322
	1 Large Wood Block	AD-323
	1 Small Wood Block	AD-324
	2 Wood Screws #8 x ¾"	YST-475
	1 Handbook of Maintenance Instructions for the **AUTOMATIC SELECTOR MECHANISM C-131/AR** with **ADAPTER** for **ARA** or **AN/ARC-5 RECEIVER (SPOT TUNER)**	

Note: For illustration of parts see Fig. 23.



AD-320



AD-300

YST-414

YST-431A

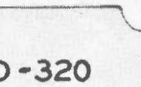
AD-304

YST-413

YST-416

YST-431-A

AD-321

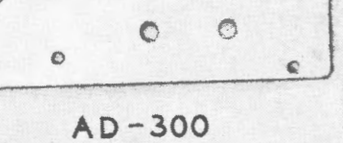


YST-452

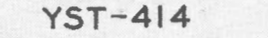
ADS-27

ADS-29

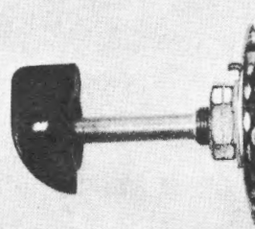
ADS-28



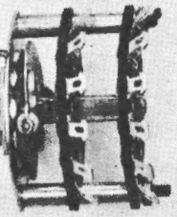
AD-313



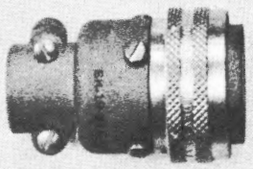
YST-400



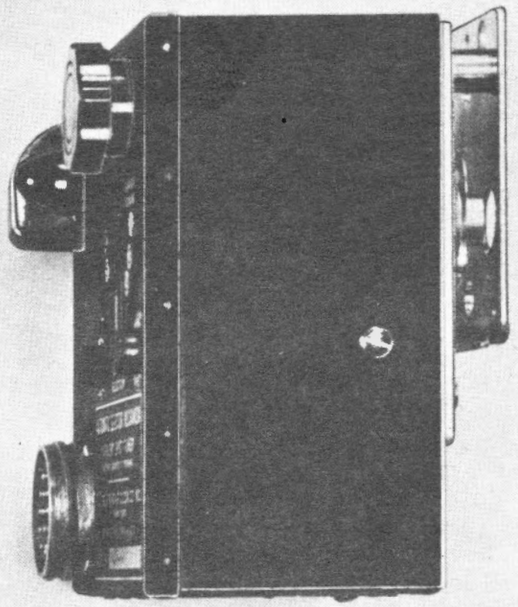
YST-164



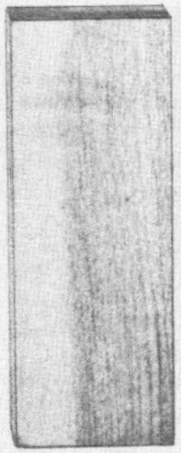
YST-186



YST-188



FA-1



AD-324

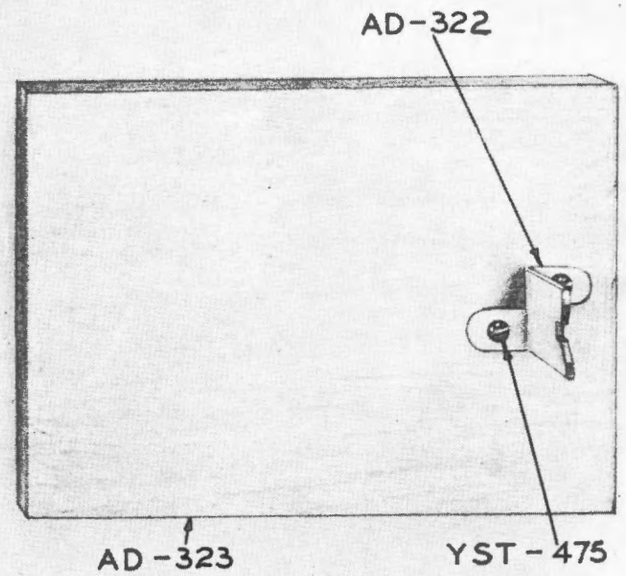


Figure 23 — Illustration of Parts Shipped

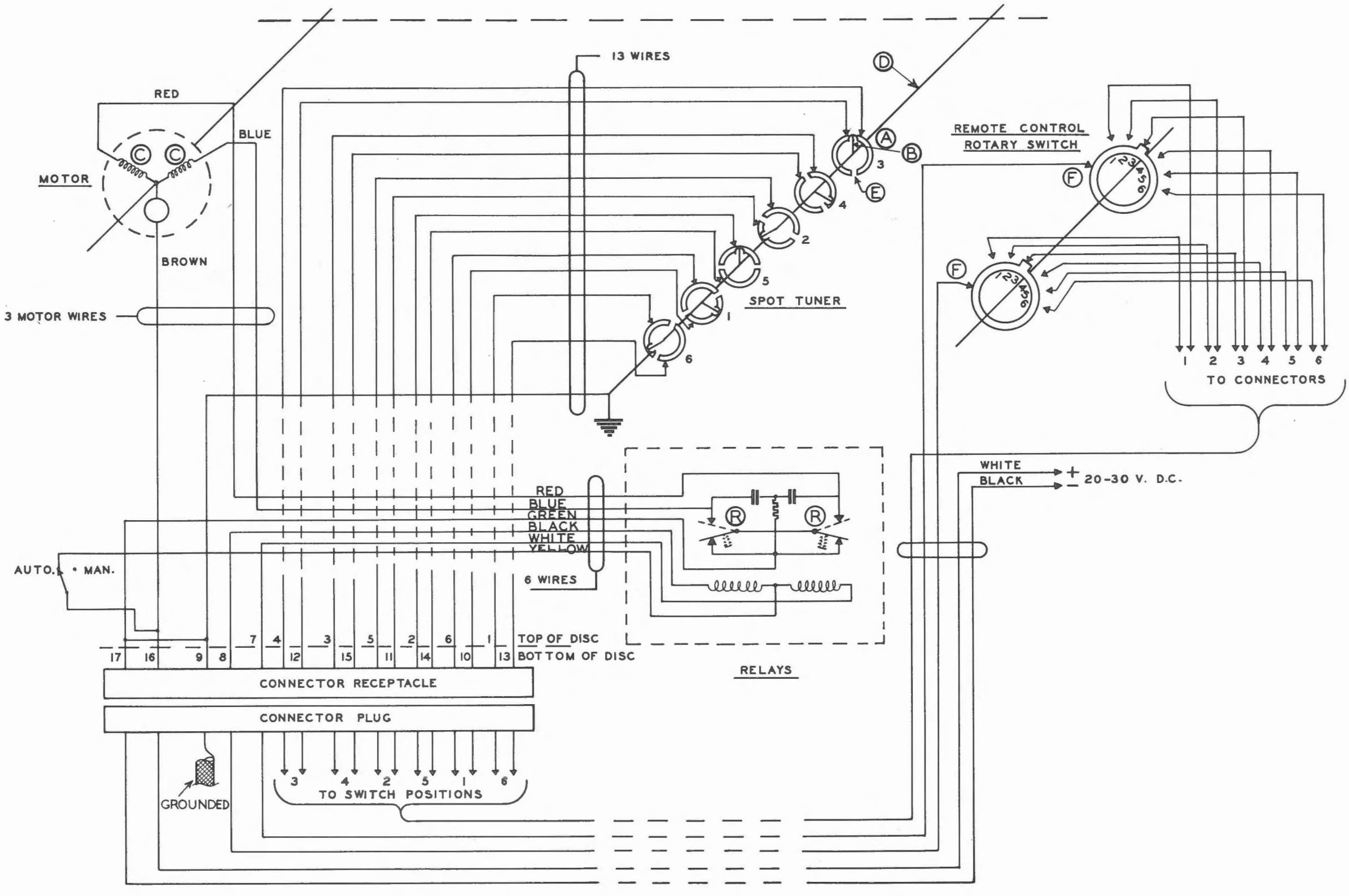


Figure 24 — Diagram of Tuner Operation and Connections