

BRCN

5423A

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TYPE

PV 500 HME
RADIO TRANSMITTER

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BRCN
5423A

TYPE
PV 500 HM 3
RADIO TRANSMITTER.

THIS HANDBOOK IS INTENDED TO BE
USED IN CONJUNCTION WITH BRCN.5423
(PV 500 HM 2 HANDBOOK)

Produced by the Electrical
Engineering Department,
HMC Dockyard, Esquimalt, B. C.

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GENERAL DESCRIPTION

1.1 Concurrent with the present modernization programme underway in the Naval Service, the existing PV500HM2 transmitters are being modified to make their circuitry adaptable to the later types of ancillary equipment in use.

The incorporation of the following three modifications will result in the transmitters henceforth being known as PV500HM3.

1.2 MODIFICATION #1

It has become increasingly evident during the past few years that it would be necessary to fit whip antennae on H.M.C. Ships. The adaptation of existing equipment to whip antenna has necessitated modifying and moving to a remote point the antenna impedance matching network. In the former type of system, the antenna radiated from the position where it left the transmitter resulting in a high loss from standing waves in the trunking particularly on certain frequencies. In order to adapt whip antenna to existing equipment, it was necessary to fulfil the following three conditions:

- (a) To effect a match between the low impedance co-axial transmission line and the plate tank circuit of the transmitter. The use of this cable has the advantages of being easier to install and maintain, as well as having a much higher efficiency than trunking over a wide band of frequencies.
- (b) To locate the antenna coupling components between the co-axial cable and whip antenna, permitting the co-axial cable impedance to be matched to the whip antenna.
- (c) To add and subtract capacitive and inductive reactance to the whip by varying inductance and capacitance in order to cause it to resonate at the frequency of the transmitter. ALI

To accomplish these adjustments from the transmitter, it is necessary, of course, that they be remotely controlled.

The antenna coupling circuits have therefore been removed from the transmitter proper and mounted on a separate chassis. This unit is then housed at the base of the whip antenna. Electro-mechanical devices control the rotation of the antenna tuning capacitor and the antenna tuning inductor rotary switches. The movements of the inductor rotary switches are repeated back to the transmitter by means of selsyn generators, thereby indicating to the operator the position of the switches in the remote coupling unit. Repeaters are mounted in the space in the transmitter formerly occupied by the antenna coupling section. Three lever control switches are mounted on the front of the transmitter cabinet directly above the metering panel. The variable antenna tuning capacitor is driven by a selsyn motor, which is in turn driven by a voltage produced by a selsyn generator attached to the antenna capacitor dial in the R.F. Unit. The ambient temperature in the supporting base of the antenna is kept at 70 degrees F. by the inclusion of electrical strip heaters which are thermostatically controlled.

1.3 MODIFICATION #2

Some difficulty has been evident in tuning of the PV500HM2 due mainly to the fact that on the low frequencies there was an excessive amount of grid excitation, to the final amplifier; while on the higher frequencies, there was insufficient. This resulted in the multiplier stage being de-tuned on the low frequencies in order to reduce the drive. This de-tuning, in many cases, resulted in the generation of harmonics and parasitics which subsequently appeared in the final plate tank circuit and were transferred to and radiated by the antenna. This has been reduced by the addition of a control tube which limits the drive to the final amplifier to a predetermined maximum which may be reduced by a potentiometer designated "Excitation" mounted on the front panel of the transmitter.

1.4 MODIFICATION #3

Transmitter PV500HM2 made no provision for the connecting of a Frequency Shift Keyer (which is necessary for the utilization of the equipment on RATT) to the oscillator control unit. This has been provided for in Transmitter PV500HM3 by the inclusion of a suitable "jack" on the front of the oscillator control panel, a three position switch, and a screw driver adjusted variable capacitor.

*The main shift unit
A 5000 power phone jack between set & remote.*

INSTALLATIONSECTION II:

2.1 The installation procedure for Transmitter PV500HM3 is similar to that of PV500HM2 with the exception that consideration must be given to the installation of the remote antenna coupling unit in a suitable housing at the base of the antenna. The design of this housing is to be in accordance with Esquimalt Drawing No. 3696.

2.2 Aerial trunking is not required in this installation. The radio frequency output of the transmitter is fed to the remote coupling unit by a co-axial cable type RG18/U. The length of co-axial cable utilized in installation is not critical but should be kept within reasonable limits as the attenuation will increase where excessive lengths are used. No special precautions in fitting the co-axial cable need be observed, other than those currently in use with co-axial cables, such as maintaining a minimum radius of bending, not allowing metal particles to become embedded in the polythene, and installing the cable in such a manner as to preclude the possibility of displacement of the inner conductor through softening of the polythene due to excessive heat. Three multi-core cables type MHFA-10 are required for the electrical control of the remote coupling mechanism. This cable contains conductors for:

- (a) Supplying alternating current of 115 volts 60 cycles for the operation of the mechanism, the heaters and the rotors of the selsyns.
- (b) The various tuning switches.
- (c) Sound power phone communication between the transmitter and the remote coupling unit.
- (d) Supplying voltage from the stators of the selsyns used as generators, to the stators of the selsyns used as motors.
- (e) Supplying power to a 115V 7 watt lamp on the indicator assembly through a switch on the variable capacitor assembly for the purpose of indicating to the operator when the variable capacitor is at minimum capacity.

SECTION III - OPERATION

3.1 The operation of the PV500HM3 is similar to that of the PV500HM2 with the following exceptions.

3.2 The power requirement to operate the antenna coupling mechanism at the base of the antenna is controlled by a switch at the left of the control unit panel and is indicated by an amber indicating light located on the same panel. The operation of the rotary ceramic switches in the remote antenna coupler is accomplished by three lever switches located at the top of the transmitter cabinet. These switches are marked from left to right as follows:

"R./COUPLING" (Remote Coupling)

"LOADING"

"ANT. TUNE" (Antenna Tune)

The PV500HM3 like the PV500HM2 has a total of five controls for the adjustment of the antenna circuits. The series tune capacitor C45A has been removed. A manual coupling switch has been fitted so that the PV500HM3 has two coupling controls whereas the PV500HM2 has one only. These are known as the "Local Coupling" and "Remote Coupling" controls. They are located at either end of the co-axial cable; one for link coupling the output of the transmitter into the co-axial cable and the other for coupling the co-axial cable to the antenna network.

The rotation of the remote rotary switches is accomplished by operating the appropriate lever switch. Pressure to the left will cause the corresponding rotary switch in the remote antenna coupling assembly to rotate one division in a counter-clockwise direction, while pressure to the right will cause the switch to rotate in a clockwise direction one division. Releasing the lever switch, permitting it to return to the neutral position, will allow repetition of the cycle.

3.3 The indicating repeaters are located on the right hand side of the radio frequency unit and consist of three selsyn motors. Attached to the shafts of the selsyn motors are three dials, which indicate to the operator the position of the three switches in the remote coupling mechanism. They are marked "R/Coupling", "Loading" and "Antenna Tune". Immediately below the three dials will be found the vernier dial marked "Antenna" which is used for adjusting the variable capacitor in the remote coupling mechanism. Through the use of a selsyn generator attached to the vernier dial, the selsyn motor attached to the variable capacitor is caused to take up a position indicated by the vernier dial. Directly above the "R/Coupling" dial is located the "Local Coupling" switch. This is a manually operated rotary switch which taps more or less turns in the coupling link and thus allows the coupling link to be tapped at the correct impedance point to match the co-axial cable over the frequency range of the PV500HM3.

3.4 Between the "R/Coupling" dial and the "Local Coupling" knob will be found a hole, behind which is located a lamp. By rotating the vernier dial marked "Antenna", the lamp can be made to "light up" when the vernier dial reads 10 (variable capacitor at minimum). Should the lamp light at any other position of the dial, it indicates the vernier dial has been rotated with the power off. To re-establish alignment of the dial with capacitor

turn the vernier dial until the lamp lights; turn the power to the remote coupling unit off and rotate the vernier dial to read 100. The two selsyns concerned will now be in alignment.

3.5 The general procedure for the tuning adjustments of the antenna circuit will follow what has been laid down in the PV500HM2 Handbook, Page 10, Section 2.26 with the exception of the adjustment of the series tuning capacitor.

3.6 A key operated lock is located at the right hand side of the oscillator control unit panel. The barrel of the lock has been arranged in such a manner as to engage a single throw toggle switch which is in series with the safety gate switches of the transmitter, breaking the primary supply of the high voltage circuits. This functions as a safety lock or "Safe to Transmit Board". The operation of the transmitter is not possible without the key being inserted and turned in the lock. The key cannot be removed in the "Safe to Transmit Position".

3.7 A jack has been provided in each unit to allow the use of a sound power telephone for communication between the transmitter and the antenna coupling unit.

3.8 The need for increased grid drive to the final amplifier on the higher frequencies has necessitated an additional 807 be fitted in parallel with the existing 807 driver. However, some means of controlling the amount of excessive drive on the lower frequencies is necessary. This has been accomplished by the addition of an 807 current control tube. A potentiometer installed on the radio frequency unit above the range switch makes the grid of the 807 control tube more or less positive, thereby effecting a control of the passage of current through the control tube. This tube is in series with the screen supply of the 807 driver stage. The potentiometer has been calibrated and is marked "EXCITATION". An additional wafer switch "D" ganged to "S 21" (the band change switch) taps resistances in or out in series with the potentiometer to limit grid current to approximately 40 MA.

3.9 The modification of the XTAL-MO circuit permits the introduction of a signal from a teletype Frequency Shift Keyer. The previous two position XTAL-MO switch has been removed and replaced with a three position switch designated on the front panel as "FSK-XTAL-MO".

A JONES connector has been fitted directly above the switch shaft into which the output of the Frequency Shift Keyer may be plugged. To the left is a variable capacitor which is screw-driver adjusted for the correct drive as indicated by a reading of 2 to 2.5 MA on position "one" of the multimeter.

3.10 - ADJUSTMENT PROCEDURE

- (A) Select the correct RANGE according to frequency.
- (B) Select the correct colour of RF GENERATOR.
- (C) Select XTAL, MO or FSK.
- (D)
 1. For XTAL, adjust RF GENERATOR for minimum oscillator plate and screen current in multimeter position 2.
 2. For MO, adjust RF GENERATOR to the correct reading for the frequency as shown on the calibration chart.
 3. For FSK, adjust RF GENERATOR to the approximate reading for the frequency as shown on the calibration chart. Apply the signal from the Frequency Shift Keyer; repeat the adjustment of the RF GENERATOR for maximum reading of the milli-ammeter in position one. Adjust the FSK series drive capacitor for a reading of 2.0 to 2.5 MA with the multimeter in position one.
- (E) Adjust the multiplier for maximum driver cathode current.
- (F) Adjust the driver for maximum grid current to the final amplifier, then adjust the "EXCITATION CONTROL" so that the final grid current is approximately 25 MA. Note that pos. 5 of the multiplier is now multiplied by 2.
- (G) Adjust P-A condenser for minimum cathode currents.
- ~~(H) Adjust the "Antenna Condenser", "Antenna Tune", "Loading" and both "Coupling Controls" for maximum antenna current on the 0.5 RANGE of the RF Ammeter with the power amplifier ADJUST-OPERATE switch in the ADJUST position.~~
- (H) Adjust ANTENNA condenser, ANT. TUNE, LOADING, and COUPLING controls for maximum antenna current (on 0.5 amp. range) when the power amplifier is tuned and the ADJUST-OPERATE switch in the ADJUST position.
- (I) Switch the ANTENNA METER to the 10 amp. range, switch to OPERATE and make adjustments until both of the P.A. cathode meters read 240 MA. when the P.A. condenser is tuned to maximum antenna current. With the multimeter on position 5, check that the grid current to the final tubes is 25 milli-amperes.

SECTION 4 - MECHANICAL DESCRIPTION - Antenna Coupler Mechanism

4.1 This section deals with the transmission of power from the main motor to the antenna coupling switches and is comprised of four parts, namely;

- (A) Motor and Safety Clutch.
- (B) Eccentric clutch assembly.
- (C) Escapement plate and pawls.
- (D) Ratchet wheels.

4.2 (A) The motor and safety clutch mechanism consists of an alternating current motor coupled to the safety clutch shaft by means of a worm and worm wheel. The front end of the safety clutch shaft is fitted into a bronze bearing in the safety clutch hub. A pin through this shaft engages a slot in the safety clutch drive plate.

4.2 (B) The component parts of the eccentric clutch assembly are mounted on a shaft and are driven by the safety clutch. The shaft is fitted into the safety clutch hub and secured by a set-screw. Bearings for the shaft are fitted in the back plate and in the centre bearing block adjacent to the safety clutch. The escapement eccentric clutch is divided into two parts. The front half or driving section, is pinned to the shaft, while the rear half, or driven section idles on the shaft. The driven section of the clutch, when disengaged, is in a neutral position and is held stationary by the clutch pawl engaging a detent on the circumference of the driven section of the clutch. Releasing the clutch pawl from detent causes the driven section of the clutch to move towards the driving section, being assisted by the pressure of a spring on the back face of the driven section. The faces of both halves of the clutch are of a saw tooth design, and their engaging causes the clutch to revolve as a whole. At the end of one revolution of the eccentric clutch, the clutch pawl will engage the detent and cause the driven section of the eccentric clutch to stop rotating and to become disengaged from the driving section of the eccentric clutch.

4.2 (C) At the instant of engagement of the clutch pawl with the detent, the subsequent motion of the eccentric clutch as a whole is transmitted to the escapement plate through the connecting rod and the escapement eccentric. The escapement plate is thereby caused to make a downward motion and in so doing causes a pawl at either side of the escapement plate to drag one of the ratchet wheels in a clockwise or anti-clockwise direction for thirty-six degrees of rotation. The escapement plate having completed the length of its downward stroke proceeds to move back up to its starting position, and in so doing causes the pawl to disengage itself from the tooth of the ratchet wheel. Since the rotational force that is used to drive the escapement plate down and up is removed some degree before the plate has completed its upward motion, a spring is fitted between the connecting rod and a pin on the rear vertical support plate which pulls the connecting rod to its completion of 360 degrees of rotation.

4.2 (D) The rotation of the ratchet wheels causes the ceramic wafer switches to rotate a like amount with the assistance of the star wheels attached to the switch shaft directly in front of the switch.

SECTION V - TECHNICAL DESCRIPTION

5.1 This section outlines the preventive maintenance, adjustment and replacement procedure of the mechanical components.

5.2 Lubrication:

Oil - 3-GP-37

Grease - Norma #51

Main Motor - 2 drops oil - every 100 operating hours.

switch shaft bearings - grease - every 100 operating hours.

Switch Sprocket Wheels - grease - every 100 operating hours.

Clutch Shaft Bearings - 1 drop oil - every 50 operating hours.

Worm and Fibre Gear - Grease - every 100 operating hours.

Solenoid armature shaft Bogey Wheels - 1 drop oil - every 100
operating hours.

All Moving Parts Escapement Plate - 1 drop - every 100 operating
hours.

Connecting Rod - 2 drops - every 100 operating hours.

Grease or Oil MUST NOT be applied to any switches, solenoid armatures, selsyn motors or generators.

5.3 SAFETY CLUTCH

In the event of any component of the eccentric clutch, escapement plate, escapement plate pawls, ratchet wheels or rotary switches becoming jammed, the mechanism would cease to function and cause the main motor to stop. As a protection against this, and to prevent subsequent motor breakdown, a safety clutch has been fitted between the motor and the escapement assembly. The SAFETY CLUTCH is a friction drive type and will permit the motor to continue to rotate though the mechanism is jammed. It is necessary that the correct amount of internal pressure be applied by the spring upon the pressure plate of the safety clutch so that the clutch will neither slip when being driven under normal conditions nor will it grip when the mechanism becomes locked.

To adjust the safety clutch, loosen the grub screw located on the adjusting cap. Holding the drum hub in the left hand, adjust the knurled cap to acquire the desired amount of friction. Sufficient friction must be obtained so that no slippage will occur through normal operation. To test the friction, place the machine in motion by depressing the clutch throw-out pawl. Place a hand on the top of the escapement plate and press down momentarily, the clutch should then slip before the motor will stall.

5.4 ADJUSTMENT OF INNER AND OUTER ESCAPEMENT PLATE PAWL STOPS

The outer pawl eccentric stops are to be adjusted so that the pawl driving pin will clear the circumference of the ratchet wheel by a minimum of .0625 (plus or minus .01).

The inner pawl eccentric stops are to be adjusted so that a clearance of .005 of an inch should be maintained between the pawl pin and the inner face of the ratchet wheel detent.

5.5 REPLACEMENT AND ADJUSTMENT OF THE ESCAPEMENT PAWL SOLENOID

To replace the pawl solenoids, unsolder the wires attached to the solenoid. Remove the armature guide screw and withdraw the armature from the solenoid taking care that the armature drive shaft does not become bent. Remove the solenoid retaining clamp, and the screw that holds the solenoid. This screw is accessible from the back of the rear plate. Place the new solenoid in position and secure. Replace retaining clamp, armature and guide screw.

5.6 REPLACEMENT AND ADJUSTMENT OF MICRO-SWITCHES

Remove screws holding micro-switch mounting block, which are accessible from rear of plate. Unsolder wires to upper terminals. Remove both micro-switch retaining screws, taking care to retain actuator, and both clamping plates. Put screws, which should be through the outer clamping plate, through the new micro-switch and attach to block by threading screws into rear clamping plate. Place micro-switch mounting block in position and replace screws. Having fastened the micro-switch in position, press the armature of the solenoid in towards the pawl and make certain that the micro-switch clicks into the "on" position when the pawl driving pin does not exceed more than .0625 of an inch from the inner face of the ratchet wheel tooth. Should the micro-switch click into the "on" position before the pawl driving pin has engaged the ratchet wheel tooth, the mechanism will operate and the pawl driving pin not having engaged the tooth, will leave the ratchet wheel and rotary switch in the same position. When the exact location of the micro-switch has been established, tighten micro-switch retaining screws.

5.7 ADJUSTMENT OF THE ESCAPEMENT PAWL RETURN SPRING

Too great a pull by the spring on the escapement pawl will cause it to be difficult for the escapement pawl solenoid to drive the pawl into the ratchet wheel. Therefore, it is necessary that they be adjusted by repositioning the spring retaining bracket. Conversely the springs should have sufficient tension to make the pawl break away from the ratchet wheel cleanly, without hesitation.

SECTION VI - ELECTRICAL MAINTENANCE

6.1 Little difficulty should be experienced with the maintenance of the electrical components within the mechanism. That which will be necessary will be the normal replacement of defective components, such as capacitors, selenium rectifiers, switches, solenoids, etc.

6.2 SOLENOID D/C SUPPLIED

There are two selenium rectifier assemblies utilized during the operation of the remote control coupling unit. These are RS1 and RS2 and are mounted at the rear underside of the variable capacitor base. RS1 supplies direct current to L 39, the clutch trip solenoid; while RS2 supplies direct current to L 33-38, the pawl driving solenoids.

6.3 FUSES

The PV500HM3 has four additional fuses. Two of these will be found immediately above the power supply on the right hand side of the transmitter case. They are rated at 10 amperes and used for the protection of the remote coupling unit and the indicator assembly. The remaining two fuses are for the protection of the selsyns. The selsyns, eight in number, are divided into two groups of four. One group in the remote coupling mechanism, which has all four rotors connected in series across 115 volts 60 cycles, is fused by a 3AG 2 ampere fuse mounted on the front end of the variable capacitor base plate. The other four selsyns are mounted in the indicator assembly. They are protected by a similar fuse 3AG 2 ampere mounted on the front vertical plate of the indicator assembly.

NOTES

PARTS LIST REMOTE ANTENNA COUPLING MECHANISM

Structural Components of Mechanism

<u>ITEM</u> <u>No.</u>	<u>PART NAME</u>	<u>PART OF</u>	<u>R.C.N.</u> <u>REF. No.</u>	<u>PLATE</u> <u>No.</u>	<u>REMARKS</u>
101	PLATE, base	Remote Coupling Mechanism		5	
101A	PLATE, sub base	Remote Coupling Mechanism		5	
102	PLATE, rear vertical	Remote Coupling Mechanism		2-5	
103	SCREWS, rear plate rtg.	Remote Coupling Mechanism	616-6813		
104	PLATE, vertical front	Remote Coupling Mechanism		2	
105	SCREWS, plate front rtg.	Remote Coupling Mechanism	616-6813		
106	RODS, spacer front and rear plates	Remote Coupling Mechanism		2-5	
107	SCREWS, rod front plate rtg.	Remote Coupling Mechanism	616-6813		
108	SCREWS, rod rear plate rtg.	Remote Coupling Mechanism	616-3062		
109	BLOCK, motor main mtg.	Eccentric Clutch Assembly		3	
110	SHIMS, block main motor	Eccentric Clutch Assembly			
111	SCREWS, block main motor rtg.	Eccentric Clutch Assembly	617-0006		
112	WASHERS, main motor rtg. screws	Eccentric Clutch Assembly			1/4" Brass
113	NUTS, main motor rtg. screws	Eccentric Clutch Assembly	619-7976		
114	BLOCK, bell crank mtg.	Eccentric Clutch Assembly		4	

<u>ITEM</u> <u>No.</u>	<u>PART NAME</u>	<u>R.C.N.</u> <u>REF. No.</u>	<u>FLATE</u> <u>No.</u>	<u>REMARKS</u>
115	SCREWS, rtg. bell crank block	616-2623		
116F	BLOCK, bearing shaft front		4	
117	SCREWS, shaft front bearing block rtg.	616-7212		
118C	BLOCK, bearing shaft centre		4	
119	SCREWS, shaft centre bearing block rtg.	616-7212		
120	BLOCK, armature spring rtg.		6	
121	SCREW, armature spring adjustment	616-7213		
122	COVER, gears driving main motor			
123	SCREWS, cover main motor gears	617-0146		
124	FLATE, mtg. selsyn generators vertical		5-2	
125	SCREWS, rtg. selsyn generators mtg. plate	616-6813		
125A	BLOCKS, mtg. selsyn generators			
126	SCREWS, rtg. selsyn generator blocks	616-3224		No.6 Shakerroof
127	WASHERS, selsyn generator blocks			
128	CLAMPS, selsyn generator		2	
129	SCREWS, selsyn generator clamp	617-0147		
130LH	BRACKETS, mtg. left solenoid		2	

<u>ITEM</u> <u>No.</u>	<u>PART NAME</u>	<u>PART OF</u>	<u>R.C.N.</u> <u>REF.No.</u>	<u>PLATE</u> <u>No.</u>	<u>REMARKS</u>
130RH	BRACKETS, mtg. right solenoid	Rear Vertical Plate		5-6	
131	SCREWS, mtg. bracket solenoid	Rear Vertical Plate	616-7210		
132	WASHERS, mtg. bracket solenoid	Rear Vertical Plate			No. 10 Shakeproof
133	STRAP, rtg. solenoid	Rear Vertical Plate		4	
134	SCREW, rtg. strap solenoid	Rear Vertical Plate	617-0137		
135	NUTS, rtg. strap solenoid	Rear Vertical Plate	619-7930		
136	MOUNTS, shock base plate	Remote Coupling Mechanism	3EM/5	6	
137	SCREWS, base plate shock mount	Remote Coupling Mechanism	616-3372		
138	SCREWS, sub base plate shock mount	Remote Coupling Mechanism	616-3235		

All Components Comprising Variable Capacitor Assembly and Attached to

Variable Capacitor Base Plate

<u>ITEM</u> <u>No.</u>	<u>PART NAME</u>	<u>FART OF</u>	<u>R.C.N.</u> <u>REF. No.</u>	<u>PLATE</u> <u>No.</u>	<u>REMARKS</u>
201	CAPACITOR, variable	Variable Capacitor Assembly	410 0084	5	Hammond 16126
202	INSULATORS, support variable capacitor	Variable Capacitor Assembly		5	
203	SCREWS, rtg. variable capacitor insulator	Variable Capacitor Assembly	616-3236		
204	PLATE, base variable capacitor	Variable Capacitor Assembly		5	
205	SCREWS, rtg. variable capacitor base	Variable Capacitor Assembly	617-7210		
206	MOTOR, selsyn "Antenna"	Variable Capacitor Assembly		5	
207	BLOCKS, mtg. Selsyn motor	Variable Capacitor Assembly		5	
208	SCREWS, rtg. Selsyn motor block	Variable Capacitor Assembly	616-3224		
209	CLAMPS, rtg. Selsyn motor	Variable Capacitor Assembly		5	
210	SCREWS, rtg. Selsyn motor clamp	Variable Capacitor Assembly	617-0147		
211	COUPLER, flexible Selsyn motor	Variable Capacitor Assembly		5	
212	GEAR, driving Selsyn motor	Variable Capacitor Assembly			
213	NUT, rtg. Selsyn motor driving gear	Variable Capacitor Assembly	619-8307		
214	GEAR, driven variable capacitor	Variable Capacitor Assembly			5-3
215	SCREWS, set driven gear	Variable Capacitor Assembly	5/40 Allen		
216	SWITCH, micro variable capacitor align.	Variable Capacitor Assembly	3FS/621		
217	SCREWS, rtg. variable capacitor align.	switch Variable Capacitor Assembly	616-3222		

<u>ITEM</u> <u>NO.</u>	<u>PART NAME</u>	<u>PART OF</u>	<u>R.C.N.</u> <u>REF. NO.</u>	<u>PLATE</u> <u>No.</u>	<u>REMARKS</u>
218	HOUSING, switch micro variable capacitor align.	Variable Capacitor Assembly		5	
219	SCREWS, rtg. align. switch housing	Variable Capacitor Assembly	616-3235		
220	WASHERS, rtg. align. switch housing	Variable Capacitor Assembly			No.8 Shakerroof
221	COVER, housing align. switch	Variable Capacitor Assembly		5	
222	SCREWS, rtg. align. switch housing cover	Variable Capacitor Assembly	616-3224		
224	SHAFT, variable capacitor drive	Variable Capacitor Assembly			
225	BEARINGS, horizontal shaft	Variable Capacitor Assembly			
226	COVERS, horizontal shaft bearing	Variable Capacitor Assembly			
227	SCREWS, rtg. shaft bearing cover	Variable Capacitor Assembly	617-0147		
228	HOLDER, fuse selsyn supply	Variable Capacitor Assembly	3FM/19	5	3AG F6
229	FUSE, supply selsyn motor	Variable Capacitor Assembly			
236	RECTIFIERS, selenium supply power solenoid	Variable Capacitor Assembly	3DR/39	5	Federal-1022
237	RESISTORS, supply power solenoid	Variable Capacitor Assembly	3DR/5012		5 ohm 10 watt
238	CAPACITORS, supply power solenoid	Variable Capacitor Assembly		5	Cornwall-Dubillier BR 5025
239	BOARD, mtg. supply power solenoid	Variable Capacitor Assembly			
240	SCREWS, terminals board supply power	Variable Capacitor Assembly	616-3235		
241	SCREWS, rtg. solenoid power supply	Variable Capacitor Assembly	616-7210		

<u>ITEM</u> <u>No.</u>	<u>PART NAME</u>	<u>PART OF</u>	<u>R.C.N. FLATE</u>		<u>REMARKS</u>
			<u>REF. No.</u>	<u>No.</u>	
242	NUTS, rtg. solenoid power supply	Variable Capacitor Assembly	619-7661		
243	PLATES, support variable capacitor base	Variable Capacitor Assembly		3-5	
244	SCREWS, rtg. variable capacitor base support plate	Variable Capacitor Assembly	616-6813		
245	SWITCH, thermal heater	Variable Capacitor Assembly			R.C.A. S7194
246	HOLDER, thermal heater switch	Variable Capacitor Assembly			
247	COUNTERBALANCE, variable capacitor	Variable Capacitor Assembly			

All Components Comprising Indicator Assembly, Including Local Coupling Switch

<u>ITEM</u> <u>No.</u>	<u>PART NAME</u>	<u>PART OF</u>	<u>R.C.N.</u> <u>REF. NO.</u>	<u>PLATE</u> <u>NO.</u>	<u>REMARKS</u>
301	PLATE, front vertical	Indicator Assembly - R.F. Unit			
302	SCREWS, rtg. plate front vertical	Indicator Assembly - R.F. Unit	616-6813		
303	SCREWS, mtg. plate front vertical	Indicator Assembly - R.F. Unit	616-7212		
304	SPACERS, chassis plate front vertical	Indicator Assembly - R.F. Unit		7	
305	PLATE, rear vertical	Indicator Assembly - R.F. Unit		7	
306	SCREWS, rtg. plate rear vertical	Indicator Assembly - R.F. Unit	616-6813		
307	PLATE, base	Indicator Assembly - R.F. Unit		7	
308	SCREWS, rtg. plate base	Indicator Assembly - R.F. Unit	616-7210		
309	RODS, spacers front to rear plates	Indicator Assembly - R.F. Unit			
310	SCREWS, rtg. spacers rods	Indicator Assembly - R.F. Unit	616-6813		
311	BLOCKS, mtg. selsyn generator	Indicator Assembly - R.F. Unit		7	
312	CLAMPS, rtg. selsyn generator	Indicator Assembly - R.F. Unit	616-6813		
313	BOARDS, mtg. terminal strip	Indicator Assembly - R.F. Unit		7	
314	SCREWS, rtg. board mtg. terminal strip	Indicator Assembly - R.F. Unit	617-0024		
315	TERMINALS, strips 12 contact	Indicator Assembly - R.F. Unit		7	Jones 12-140
316	SCREWS, rtg. strips terminal 12 contact	Indicator Assembly - R.F. Unit	616-3224		
317	CONNECTORS, cable 12 contact	Indicator Assembly - R.F. Unit			Jones 12-160

ITEM No.	PART NAME	PART OF	R.C.N.	PLATE	REMARKS
			REF.No.	No.	
318	BUSHING, shaft "Local Coupling"	Indicator Assembly - R.F. Unit			
319	NUT, bushing shaft "Local Coupling"	Indicator Assembly - R.F. Unit			
320	SHAFT, switch "Local Coupling"	Indicator Assembly - R.F. Unit			
321	COUPLER, shaft switch "Local Coupling"	Indicator Assembly - R.F. Unit		7	
322	SCREWS, couler shaft switch	Indicator Assembly - R.F. Unit			8-32 Allen
323	SWITCH, rotary "Local Coupling"	Indicator Assembly - R.F. Unit			S48 S49
324	SCREWS, mtg. switch "Local Coupling"	Indicator Assembly - R.F. Unit	616-3235		
325	WASHERS, mtg. switch "Local Coupling"	Indicator Assembly - R.F. Unit			No.8 Shakerroof
326	BLOCKS, rtg. selsyn motors	Indicator Assembly - R.F. Unit			
327	SCREWS, rtg. selsyn motors rtg. block	Indicator Assembly - R.F. Unit	616-3224		
329	MOTOR, selsyns (same as item 206)	Indicator Assembly - R.F. Unit	30M/14	7	
330	WASHERS, selsyn motors rtg. block	Indicator Assembly - R.F. Unit			No.6 Shake roof
331	INSULATORS, ceramic stand-off	Indicator Assembly - R.F. Unit	3SI/43	7	
332	BUSHINGS, knob selsyn motor indicator	Indicator Assembly - R.F. Unit			
333	KNOBS, indicator selsyn motor	Indicator Assembly - R.F. Unit		1	
334	SCREWS, knob indicator selsyn motor	Indicator Assembly - R.F. Unit			5-40 Allen
335	PLATE, indicator selsyn motors	Indicator Assembly - R.F. Unit		7	

ITEM NO.	PART NAME	PART OF		R.C.N. REF. No.	PLATE No.	REMARKS
336	SCREWS, rtg. plate indicator	Indicator Assembly	- R.F. Unit	617-0145		
337	GEAR, driving "Ant.Tune" selsyn generator	Indicator Assembly	- R.F. Unit		7	
338	GEAR, driven "Ant.Tune" selsyn generator	Indicator Assembly	- R.F. Unit			
339	BRACKET, bearing "Ant.Tune" driving gear	Indicator Assembly	- R.F. Unit		7	
340	SCREWS, rtg. driving gear bearing bracket	Indicator Assembly	- R.F. Unit			
341	KNOBS, switch "Local Coupling"	Indicator Assembly	- R.F. Unit			
342	DIAL, vernier "Antenna Tune"	Indicator Assembly	- R.F. Unit			
343	LAMP, variable capacitor alignment	Indicator Assembly	- R.F. Unit	3TL/53	7	7W Bayonet
344	HOLDER, fuse selsyns supply	Indicator Assembly	- R.F. Unit	3FM/19	7	
345	FUSE, suprlly selsyns	Indicator Assembly	- R.F. Unit	3FF/2		3AG F5
346	SCREWS, rtg. stand-off insulators	Indicator Assembly	- R.F. Unit	616-3235		
347	NUT, rtg. selsyn motor driven gear	Indicator Assembly	- R.F. Unit	619-8307		
348	MARKERS, terminal strips 1-12	Indicator Assembly	- R.F. Unit		7	
349	SELSYN, generator (same as item 206)	Indicator Assembly	- R.F. Unit			

All Mechanical Components of Escapement Assembly

<u>ITEM</u> <u>No.</u>	<u>PART NAME</u>	<u>PART OF</u>	<u>R.C.N.</u> <u>REF. No.</u>	<u>PLATE</u> <u>No.</u>	<u>REMARKS</u>
401	MOTOR, driving main	Escapement Eccentric Clutch Assembly		3	Westinghouse H-53246 1/20 HF
402	GEAR, worm driving motor main	Escapement Eccentric Clutch Assembly		4	Teletype 74912
403	SCREW, rtg. gear worm motor	Escapement Eccentric Clutch Assembly			Part of 402
404	GEAR, fibre worm driving motor	Escapement Eccentric Clutch Assembly		4	Teletype 74913
405	HUB, gear fibre driving	Escapement Eccentric Clutch Assembly		4	Teletype 74916
406	SCREW, rtg. hub gear fibre driving	Escapement Eccentric Clutch Assembly	616-7212		
407	SHAFT, gear driving fibre	Escapement Eccentric Clutch Assembly		4	
408	BEARING, shaft gear driving	Escapement Eccentric Clutch Assembly			
409	FIN, shaft gear clutch safety	Escapement Eccentric Clutch Assembly			
410	CAP, clutch safety	Escapement Eccentric Clutch Assembly		4	
411	SPRING, pressure clutch safety	Escapement Eccentric Clutch Assembly			
412	PLATE, face clutch safety	Escapement Eccentric Clutch Assembly			Teletype 76086
413	LINING, clutch safety	Escapement Eccentric Clutch Assembly			
414	PLATE, drive clutch safety	Escapement Eccentric Clutch Assembly			
415	BUSHING, clutch safety	Escapement Eccentric Clutch Assembly			
416	DRUM, clutch safety	Escapement Eccentric Clutch Assembly			
417	SCREW, set drum clutch safety	Escapement Eccentric Clutch Assembly			

ITEM No.	PART NAME	PART OF	R.C.N.		REMARKS
			REF. No.	PLATE No.	
418	SCREW, set cap clutch safety	Escapement Eccentric Clutch Assembly			LB-10-3581
419	SHAFT, clutch	Escapement Eccentric Clutch Assembly			
420	BEARINGS, shaft clutch	Escapement Eccentric Clutch Assembly			
421	CLUTCH, driving	Escapement Eccentric Clutch Assembly			
422	PIN, clutch driving	Escapement Eccentric Clutch Assembly			Creed AP22025
423	BUSHING, clutch	Escapement Eccentric Clutch Assembly			
424	CLUTCH, driven	Escapement Eccentric Clutch Assembly			
425	SPRING, pressure clutch driven.	Escapement Eccentric Clutch Assembly			Creed 22014
426	HUB	Escapement Eccentric Clutch Assembly			
427	BUSHING, hub	Escapement Eccentric Clutch Assembly			
428	ECCENTRIC, escapement	Escapement Eccentric Clutch Assembly			
429	FELTS, small rod connecting	Escapement Eccentric Clutch Assembly			Creed AP22318
430	FELT, large rod connecting	Escapement Eccentric Clutch Assembly			Creed AP22319
431	ROD, connecting	Escapement Eccentric Clutch Assembly		4	
432	RETAINERS, rod connecting	Escapement Eccentric Clutch Assembly		4	
433	KEY, hub	Escapement Eccentric Clutch Assembly			
436	NUT, hub locking	Escapement Eccentric Clutch Assembly			

ITEM No.	PART NAME	P. ART OF	R.C.N.		PLATE No.	REMARKS
			REF. No.	No.		
437	PIN, wrist rod connecting	Escapement Plate Assembly			4	
438	NUT, pin wrist rod connecting	Escapement Plate Assembly	619-7976		4	
439	PLATE, drive pin wrist	Escapement Plate Assembly			4	
440	PLATE, escapement	Escapement Plate Assembly			4	
441	STUDS, guide	Escapement Plate Assembly			4	
442	NUTS, studs guide	Escapement Plate Assembly			4	
443	WASHERS, studs guide	Escapement Plate Assembly			4	
444	PAWLS	Escapement Plate Assembly			4	
445	STUDS, pawls eccentric	Escapement Plate Assembly			4	
446	NUT, stud eccentric	Escapement Plate Assembly			4	
447LH	PEDESTAL, pawl left	Escapement Plate Assembly			4	
447LCRH	PEDESTAL, pawl lower and centre right hand	Escapement Plate Assembly			4	
449URH	PEDESTAL, pawl upper right hand	Escapement Plate Assembly			4	
450	NUTS, rtg. pedestal	Escapement Plate Assembly			4	
451	NUTS, rtg. pawl	Escapement Plate Assembly	619-7482		4	
452	WASHERS, rtg. pawl	Escapement Plate Assembly			4	
453LH	STOPS, eccentric left	Escapement Plate Assembly			4	

<u>ITEM</u> <u>NO.</u>	<u>PART NAME</u>	<u>FART OF</u>	<u>R.C.N.</u> <u>REF. NO.</u>	<u>PLATE</u> <u>NO.</u>	<u>REMARKS</u>
454	SCREWS, rtg. eccentric stops	Escapement Plate Assembly	617-0137		
455	NUTS	Escapement Plate Assembly			
456RH	STOPS, eccentric right	Escapement Plate Assembly			
457	SCREWS, rtg. eccentric stops	Escapement Plate Assembly	617-0142		Modified
458	SPRINGS, return pawls	Escapement Plate Assembly		4	
459LH	BRACKETS, springs return pawls left	Escapement Plate Assembly		4	
460RH	BRACKETS, springs return pawls right	Escapement Plate Assembly			
461	SCREWS, brackets spring return pawls	Escapement Plate Assembly	617-0137		
462	SPRING, return locking eccentric	Escapement Clutch Assembly			
463	STUD, spring return locking	Escapement Clutch Assembly			
464	PAWL, clutch eccentric	Escapement Clutch Assembly			
465	SHAFT, pawl clutch eccentric	Escapement Clutch Assembly			
466	COLLARS, shaft clutch pawl	Escapement Clutch Assembly			
467	SPRING, return clutch pawl	Escapement Clutch Assembly			
468	WASHERS, spacer clutch pawl	Escapement Clutch Assembly			
469	BLOCK, mtg. tripping solenoid	Escapement Clutch Assembly			
470	SCREWS, rtg. tripping solenoid block	Escapement Clutch Assembly	616-3235		

<u>ITEM</u> No.	<u>PART NAME</u>	<u>PART OF</u>	<u>R.C.N.</u> <u>REF. NO.</u>	<u>PLATE</u> <u>No.</u>	<u>REMARKS</u>
471	LEVER, latch trip pawl	Escapement Clutch Assembly			
472	SPRING, return lever latch trip	Escapement Clutch Assembly			
473	STUD, spring return lever latch trip	Escapement Clutch Assembly			
474	CRANK, bell	Escapement Clutch Assembly			
475	SCREW, rtg. crank bell	Escapement Clutch Assembly	617-0137		
476	LINK, solenoid tripping clutch	Escapement Clutch Assembly			
477	SCREW, rtg. link solenoid tripping	Escapement Clutch Assembly	617-0145		
478	RATCHETS, wheels front and rear	Escapement Plate Assembly		4	
479	HUBS, wheels ratchet	Escapement Plate Assembly		4	
480	SCREWS, rtg. wheels ratchet	Escapement Plate Assembly	617-0137		
481	SCREWS, set hubs wheels	Escapement Plate Assembly			LB-10-3581
482	SEPARATORS, wheels ratchet	Escapement Plate Assembly			
483	RATCHETS, wheels assembly	Escapement Plate Assembly			
484	GEARS, driven selsyn generators	Front Vertical Plate		2-4	
485	NUTS, rtg. selsyn generators gears	Front Vertical Plate	619-8307		
486	GEARS, driving selsyn generators	Front Vertical Plate			
487	SCREWS, set driving gears	Front Vertical Plate			5-40 Allen

Electrical Components of Antenna Assembly

ITEM No.	PART NAME	PART OF	R.C.N. REF. NO.	PLATE No.	REM. PKGS
501	TERMINALS, strip 12 contact - (TS1, TS2, TS3, TS4)	Base Plate - Remote Mechanism		6	Jones 12-140
502	CONNECTORS, cable 12 contact - (same as item 317)	Base Plate - Remote Mechanism			Jones 12-160
503	SCREWS, mtg. strip terminal	Base Plate - Remote Mechanism	616-3224		
504	MARKERS, terminals strip 1-12	Base Plate - Remote Mechanism		5	
505	SOLENOIDS, pawl escapement	Rear Vertical Plate - Remote Mechanism		3	L33-38
506	ARMATURES, solenoid pawl escapement	Rear Vertical Plate - Remote Mechanism		2	
507	SPRINGS, armature solenoid	Rear Vertical Plate - Remote Mechanism			
508	WASHERS, armature solenoid	Rear Vertical Plate - Remote Mechanism			1/4 x 1/2 Brass
509	FINS, cotter armature solenoid	Rear Vertical Plate - Remote Mechanism			
510	SCREW, guide armature stud	Rear Vertical Plate - Remote Mechanism			
512	SWITCHES, solenoid tripping pawl clutch	Rear Vertical Plate - Remote Mechanism	3FS/621	3-4	S36 41
513	ACTUATOR, switch solenoid tripping	Rear Vertical Plate - Remote Mechanism	3FX/132	3	
514	SCREWS, switch solenoid tripping	Rear Vertical Plate - Remote Mechanism	617-0150		
515	WASHERS, rtg. switch solenoid tripping	Rear Vertical Plate - Remote Mechanism			No. 4 Shakeproof
516	NUTS, rtg. switch solenoid tripping	Rear Vertical Plate - Remote Mechanism	619-7932		
517	ARMATURE, solenoid tripping	Eccentric Clutch Assembly			
517A	SOLENOID, tripping	" "			

ITEM No.	PART NAME	PART OF		REMARKS
		P.C.N. REF. NO.	FLATE No.	
518	SCREWS, mtg. solenoid tripping	616-7213		
521	SCREW, linking solenoid armature	617-0137		Modified
524	SEISYNS, generators (same as item 206)		2	
525	SWITCH, rotary "Ant. Tune"		5	S27-28
526	SWITCH, rotary "Loading"		5	S25-26
527	SWITCH, rotary "R/Coupling"		5	S24
528	SOCKET, polarized A.C.	3SC/38	5	SC-2
529	SCREWS, rtg. polarized socket	616-3222		
530	BOARD, terminal antenna		2	
531	INSULATORS, terminal board antenna	3SI/20		
532	SCREWS, rtg. Terminal board	616-6818		
533	BRACKETS, mtg. termina board			
534	SCREWS, mtg. board terminal	616-3236		
535	SHAFT, "R/Coupling" rotary switch			1/4" Brass
536	COUPLER, shaft switch "R/Coupling"			
537	SCREWS, coupler shaft switch			
538	CONNECTOR, motor main	LF3602		BX 3/8"
539	HEATERS, strip 115 volt 250 watt	LF4309		R77-78
				Antenna Trunk

<u>ITEM</u> <u>NO.</u>	<u>PART NAME</u>	<u>PART OF</u>	<u>R.C.N.</u> <u>REF. NO.</u>	<u>PLATE</u> <u>NO.</u>	<u>REMARKS</u>
540	PLUG, Polarized A.C.	Antenna Trunk	3SC/33		FL2
541	JACK, phone power sound	Front Vertical Plate	3SJ/7	3	J2
542	PLATE, indicator switches rotary	Front Vertical Plate			Lamikoid
543	SCREWS, rtg. plate indicator	Front Vertical Plate	617-0849		
544	KNOBS, switches rotary	Front Vertical Plate	3ZK/23	3	
545	PLATE, indicator phone jack	Front Vertical Plate		3	Lamikoid
546	CONNECTOR, ground cable RGL8/U	Mechanism End of RGL8U Cable	UGL67/U		Modified
547	RECTIFIER, meter antenna current	Antenna Terminal Board		2-5	602
548	INSULATOR, terminal antenna	Antenna Terminal Board	3SI/20	2	Modified
549	COLLAR, insulating phone jack	Front Vertical Plate			
550	TERMINALS, rectifier antenna current	Antenna Terminal Board		2	

Components Concerned with Modification of Transmitter

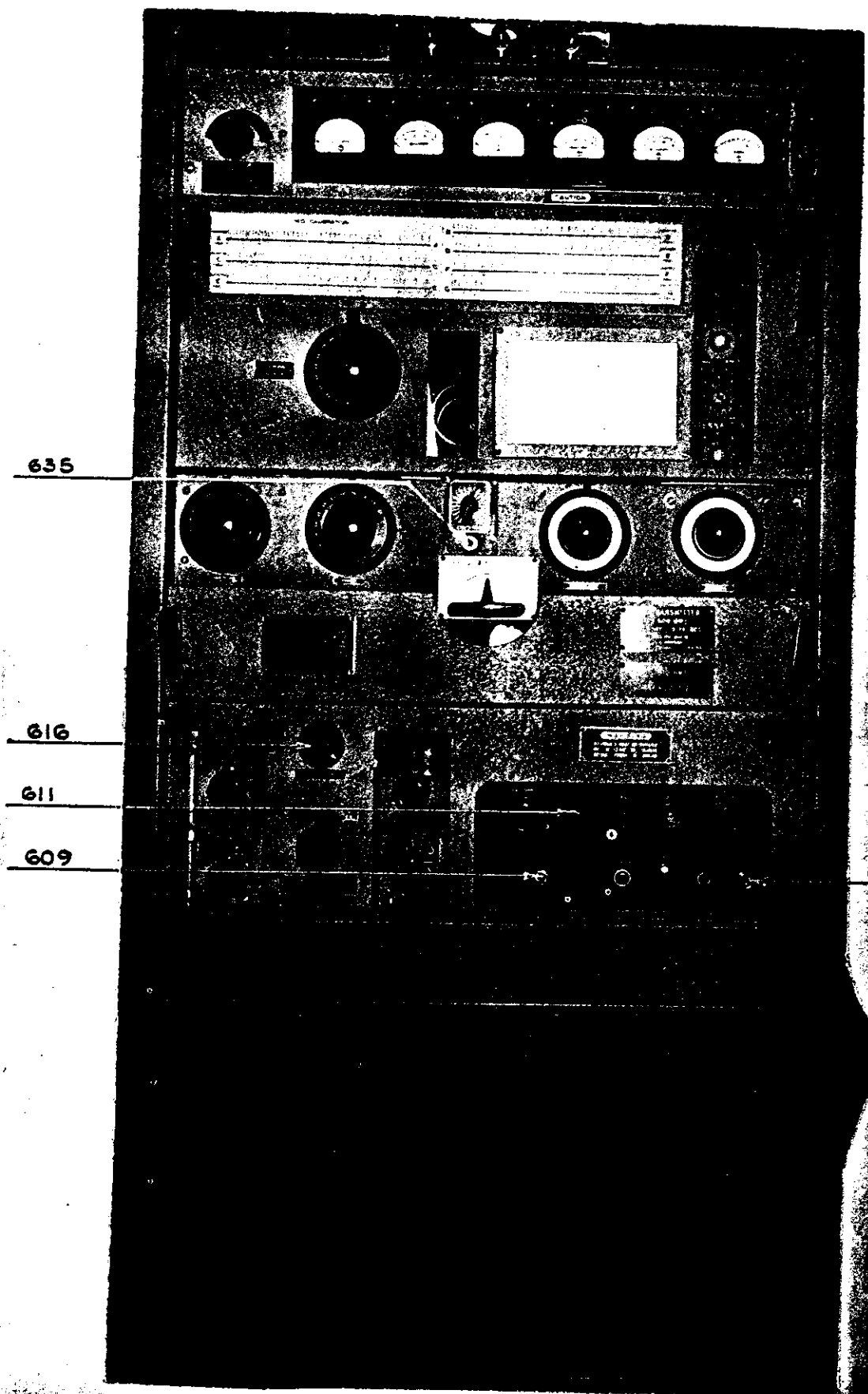
ITEM No.	PART NAME	LOCATION	R.C.N. PLATE		REMARKS
			REF. NO.	NO.	
601	SWITCHES, lever operating solenoid pawl	Upper Front Transmitter		1	MCM-M3-F-000 General Control Co.
602	PLATE, mtg. switch lever operating	Upper Front Transmitter			
603	SCREWS, mtg. switch lever operating	Upper Front Transmitter	616-3224		
604	TERMINALS, strips 12 point	Upper Right Inside Transmitter			Jones 12-140 TS7
605	SCREWS, mtg. strips terminal 12 point	Upper Right Inside Transmitter	616-3224		
606	TUBES, terminal cable MHFA-10	Top Rear Transmitter			Type "J"
607	GLAND, cable RGL8/U	Top Right Transmitter			TDQ Modified
608	BLOCK, fuse	Lower Right Inside Transmitter	LF4208		F4
609	SWITCH, toggle operating mechanism	Oscillator Control Unit Panel	3FS/170	1	S47
610	LAMP, indicator "off-on" mechanism	Oscillator Control Unit Panel	3TL/47		F4
611	HOLDER, lamp indicator	Oscillator Control Unit Panel	3SL/73	1	I4
612	SWITCH, rotary selector FSK-XTAL-MO	Oscillator Unit	3FS/179		S49
613	SHAFT, extension switch rotary	Oscillator Unit			Part of S49
614	COUPLER, shaft extension switch	Oscillator Unit	3EZ-10		Part of S49
615	RESISTOR, load FSK	Oscillator Unit	3R/21C28		R74
616	CAPACITOR, series inrnut FSK	Oscillator Unit	3CV/80003		C76
617	SCREWS, mtg. capacitor series	Oscillator Unit	616-0812		

ITEM NO.	PART NAME	LOCATION	R.C.N.		REMARKS
			REF. NO.	PLATE NO.	
618	PLUG, input cable FSK	Oscillator Unit	3SC/21		PL1
619	CONNECTOR, cable input FSK	From FSK	3SC/22		
620	LOCK, barrel "SAFE TO TRANSMIT"	Oscillator Control Unit Panel		1	Dominion
621	SWITCH, toggle lock operated	Oscillator Control Unit Panel	3FS/170		327 S48
622	BRACKET, switch toggle	Oscillator Control Unit Panel			
623	SCREWS, rtg. bracket switch toggle	Oscillator Control Unit Panel	616-7210		
624	VALVES, 807	Radio Frequency Unit	CV124	8	V17-18
625	SOCKETS, valve 807	Radio Frequency Unit	3SS/17		V17-18
626	SUPPORTS, socket valve 807	Radio Frequency Unit			
627	SWITCH, rotary wafer	Radio Frequency Unit	3FS/124	8	S210
628	INSULATOR, chassis feed three	Radio Frequency Unit	3SI/49		
629	CAPS, valve anode 807	Radio Frequency Unit	3EF/17	8	
630	GROMMETS, chassis rubber 1/2"	Radio Frequency Unit	3EB/65		
631	GROMMETS, chassis rubber 1/4"	Radio Frequency Unit	3EB/61		
632	KNOB, bar 1 1/4" "Excitation"	Radio Frequency Unit	3ZK/21	1	
633	PLATE, indicator 0-10 "Excitation"	Radio Frequency Unit		1	Croname 571
634	STAKONS,	Radio Frequency Unit			B14-6

ITEM NO.	PART NAME	LOCATION	R.C.N. FLUATE		REMARKS
			REF. NO.	No.	
635	JACK, phone sound power	Radio Frequency Unit	3SJ/7	1	J1
638	TRANSFORMER, filament Valve 807	Radio Frequency Unit	3UF/87	8	T11
639	BEADS, fish	"Local Coupling" Switch			
640	WIRE, plastic covered 10 colours	"Local Coupling" Switch	3WB/259/268		
641	STAKONS				D8-14
642	RESISTOR, "Excitation" circuit	Radio Frequency Unit	3R/15102		R71
643	RESISTOR, "Excitation" circuit	Radio Frequency Unit	3R/21028		R70
644	RESISTOR, "Excitation" circuit	Radio Frequency Unit	3R/42041		R27A
645	RESISTOR, "Excitation" circuit	Radio Frequency Unit	3R/45017	8	R67
646	RESISTOR, "Excitation" circuit	Radio Frequency Unit	3R/51048	8	R60-68
647	RESISTOR, multimeter switch position 5	Radio Frequency Unit	3R/51048		Modified
648	POTENTIOMETER, "Excitation" circuit	Radio Frequency Unit	3R/81070		R66
649	TERMINAL, strip 4 point Antenna Ammeter	Upper Right Inside Transmitter			Jones 4-140 TS8
650	SCREWS, rtg. strip terminal 4 point	Upper Right Inside Transmitter	616-3224		
651	NUTS, rtg. strip terminal 4 point	Upper Right Inside Transmitter	619-7482		
652	CONNECTOR, ground shield RGL8/U	Top Inside Transmitter			

ITEM No.	PART NAME	LOCATION	K.C.N. PLATE	
			REF. NO.	No. REMAINS
653	CONNECTOR, core RG18/U	Tog Inside Transmitter		
654	SCREWS, mtg. tubes terminal	Top Rear Transmitter	616-3235	
655	NUTS, mtg. tubes terminal	Top Rear Transmitter	616-3236	
656	WASHERS, mtg. tubes terminal	Top Rear Transmitter		No.8 Shakerproof
657	SCREWS, mtg. flange gland cable RG18/U	Top Rear Transmitter	616-7210	
658	NUTS, mtg. flange gland cable RG18/U	Top Rear Transmitter	619-76610	
659	WASHERS, mtg. flange gland cable RG18/U	Tog Rear Transmitter		No.10 Shakerproof
660	SCREWS, rtg. support socket valve	Radio Frequency Unit	616-3222	
661	NUTS, rtg. support socket valve	Radio Frequency Unit	619-7842	
662	WASHERS, rtg. support socket valve	Radio Frequency Unit		No.6 Shakerproof
663	SCREWS, rtg. socket valve	Radio Frequency Unit	616-3224	
664	NUTS, rtg. socket valve	Radio Frequency Unit	619-7482	
665	STAXONS			C10-10
666	TUBING, spaghetti			#8
667	PLATE, indicator multimeter switch	Left Upper Front Transmitter		1 1/16 Lamikoid
668	MARKER S, terminal strip 1-4	Left Upper Front Transmitter		1/16 Lamikoid

PV500HM3



635

616

611

609

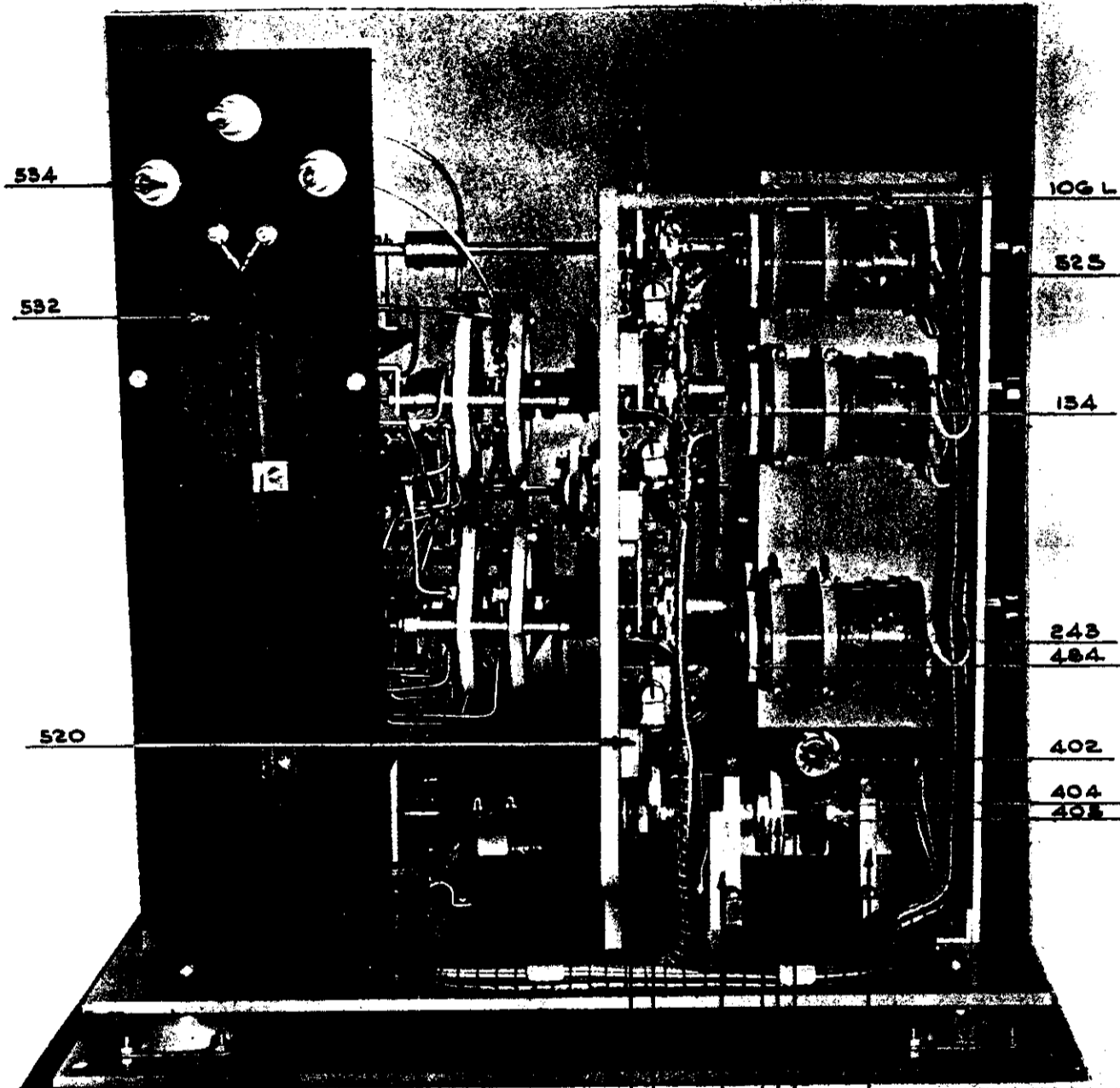
612

FRONT VIEW

AL.1

PLATE ONE

PV500HM3



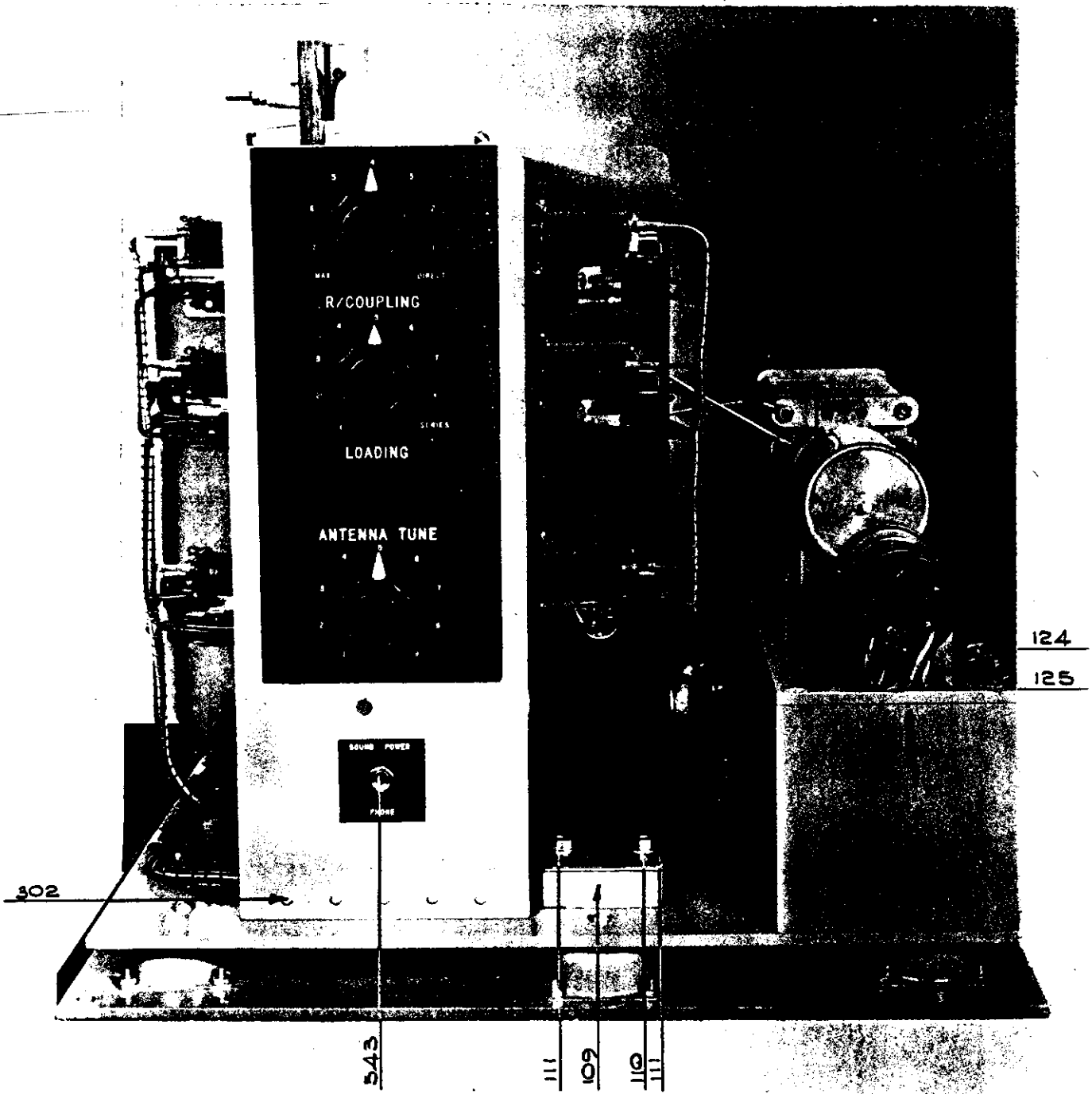
LEFT SIDE VIEW

REMOTE COUPLING MECHANISM

AL1.

PLATE TWO

PV500HM3



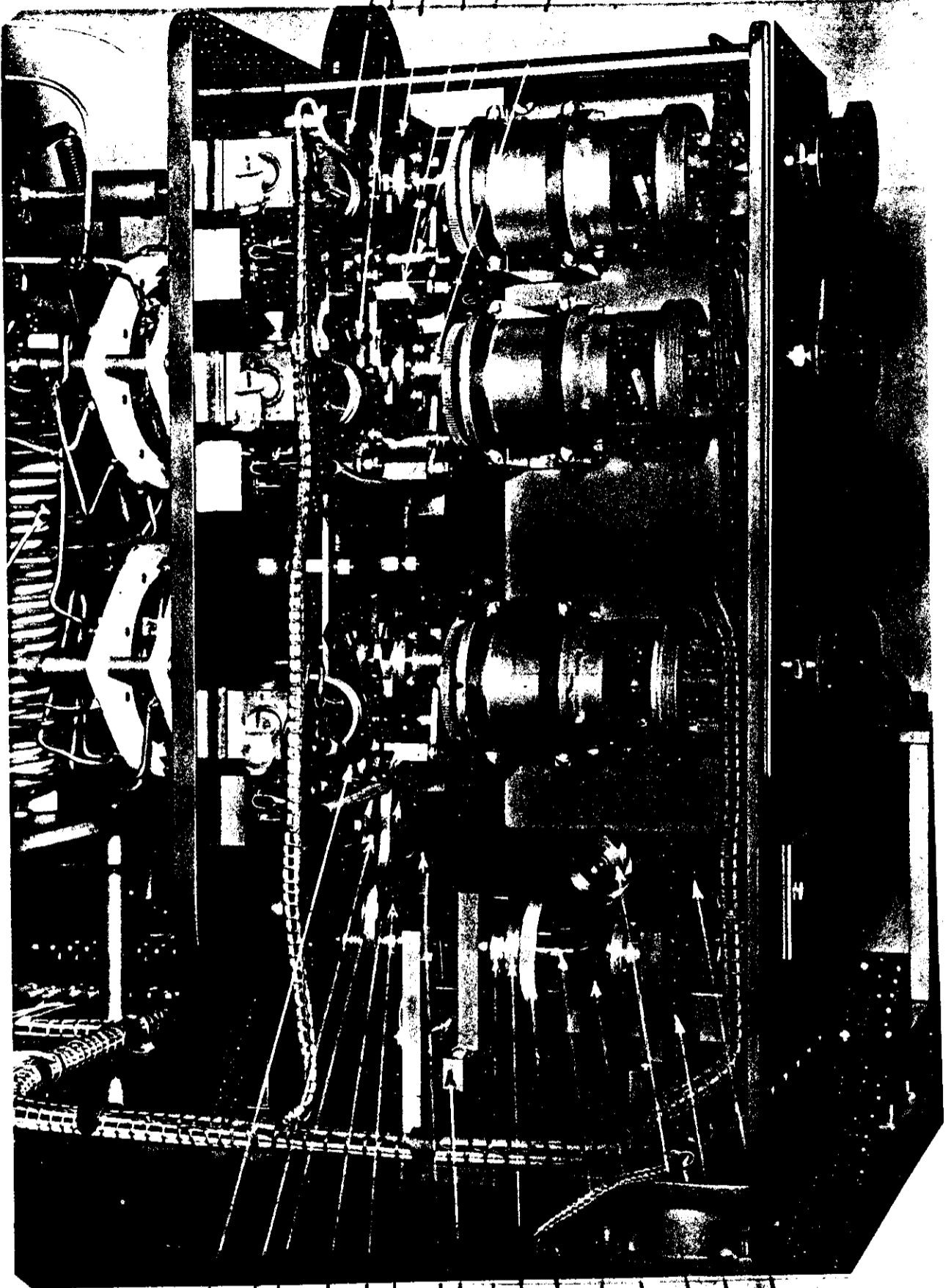
FRONT VIEW

REMOTE COUPLING MECHANISM

PLATE THREE

PV500HM3

458
444
478
447 LCRM
456 RH
479



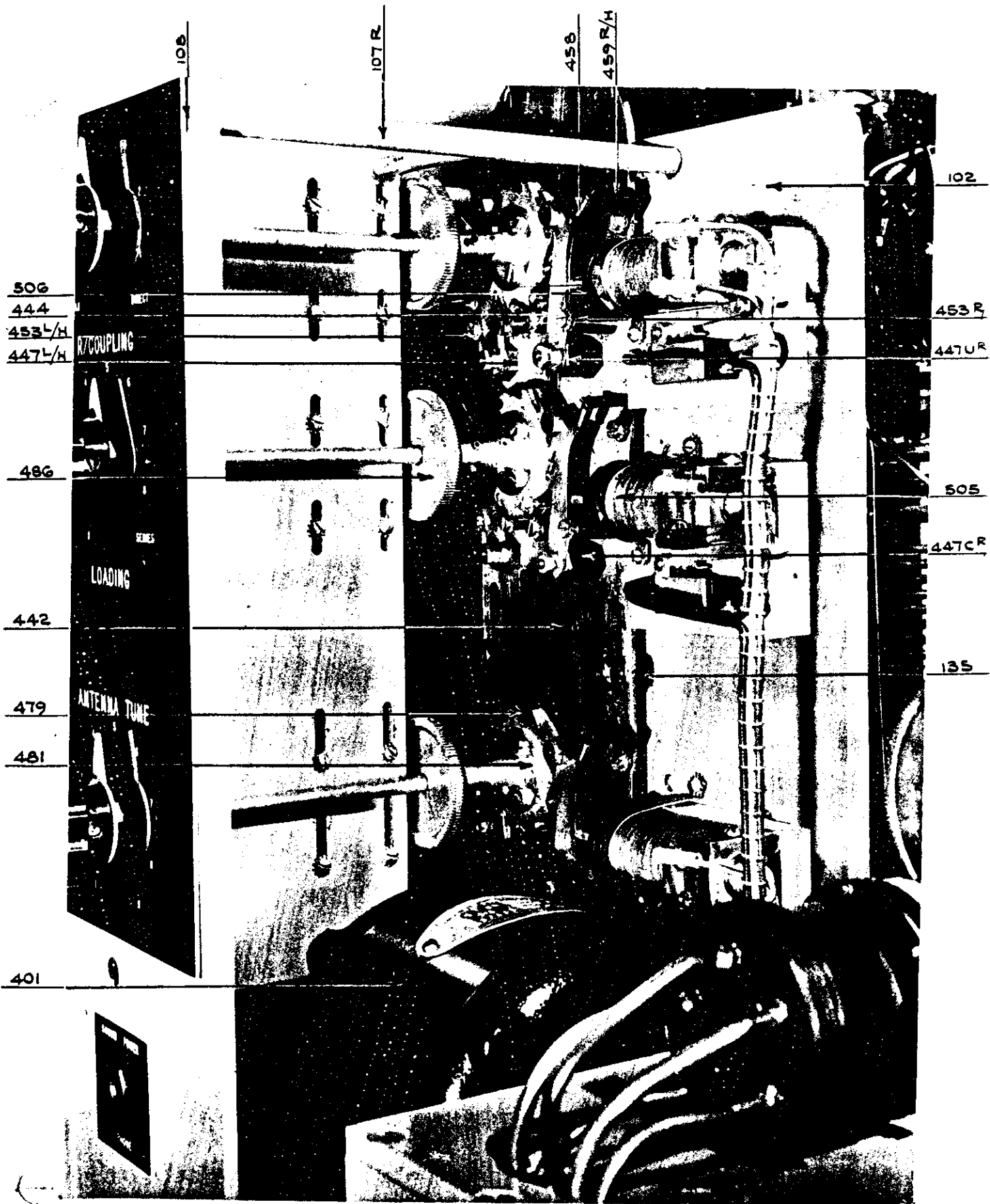
439
431
437
432
114
462
118C
415
416
410
407
404
403
116F
401

LEFT SIDE VIEW

CLUTCH & ESCAPEMENT PLATE ASSEMBLIES

AL.1. PLATE 4

PV500HM3

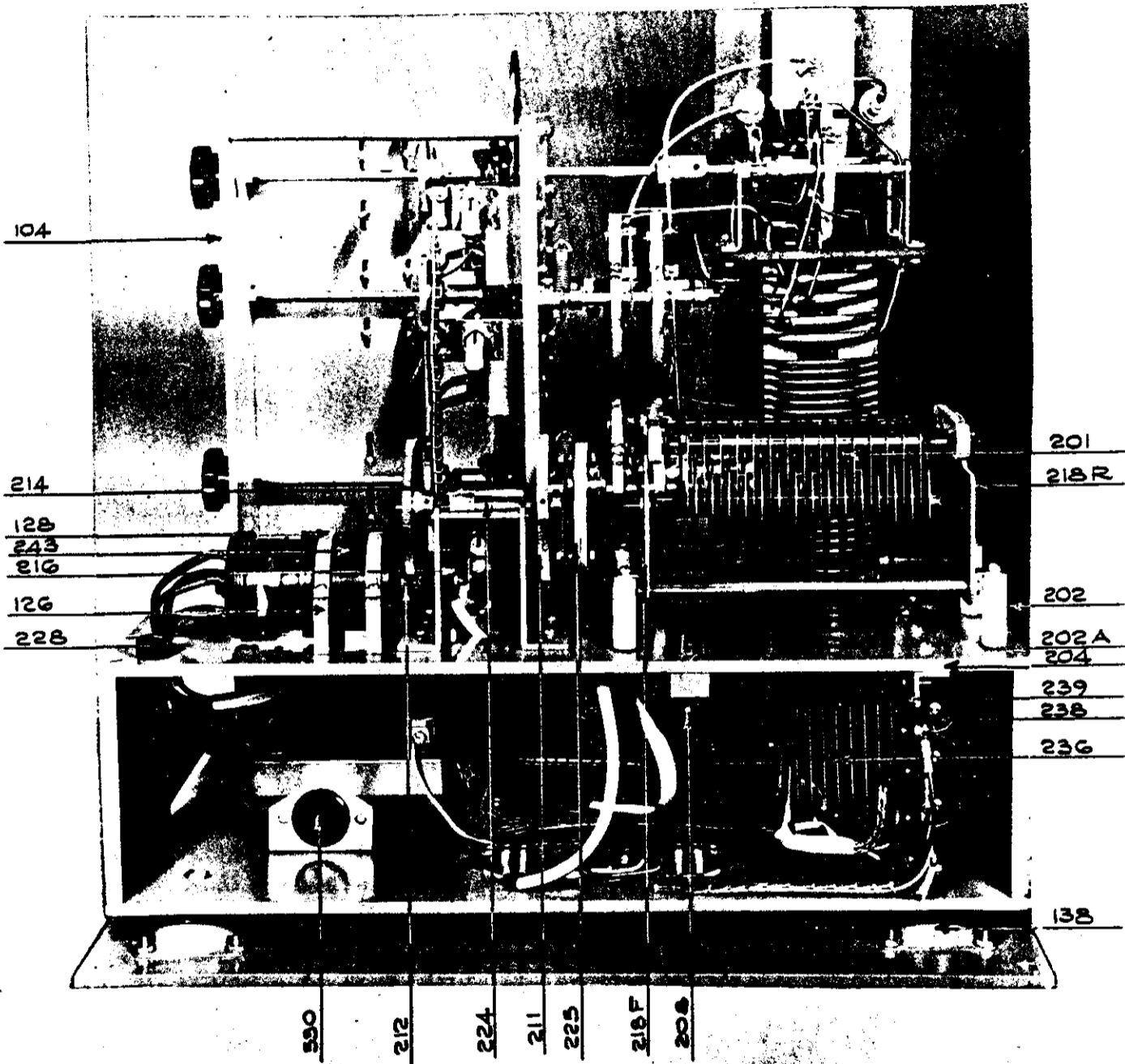


RIGHT SIDE VIEW
ESCAPEMENT

ALI.

PLATE FIVE

PV500HM3



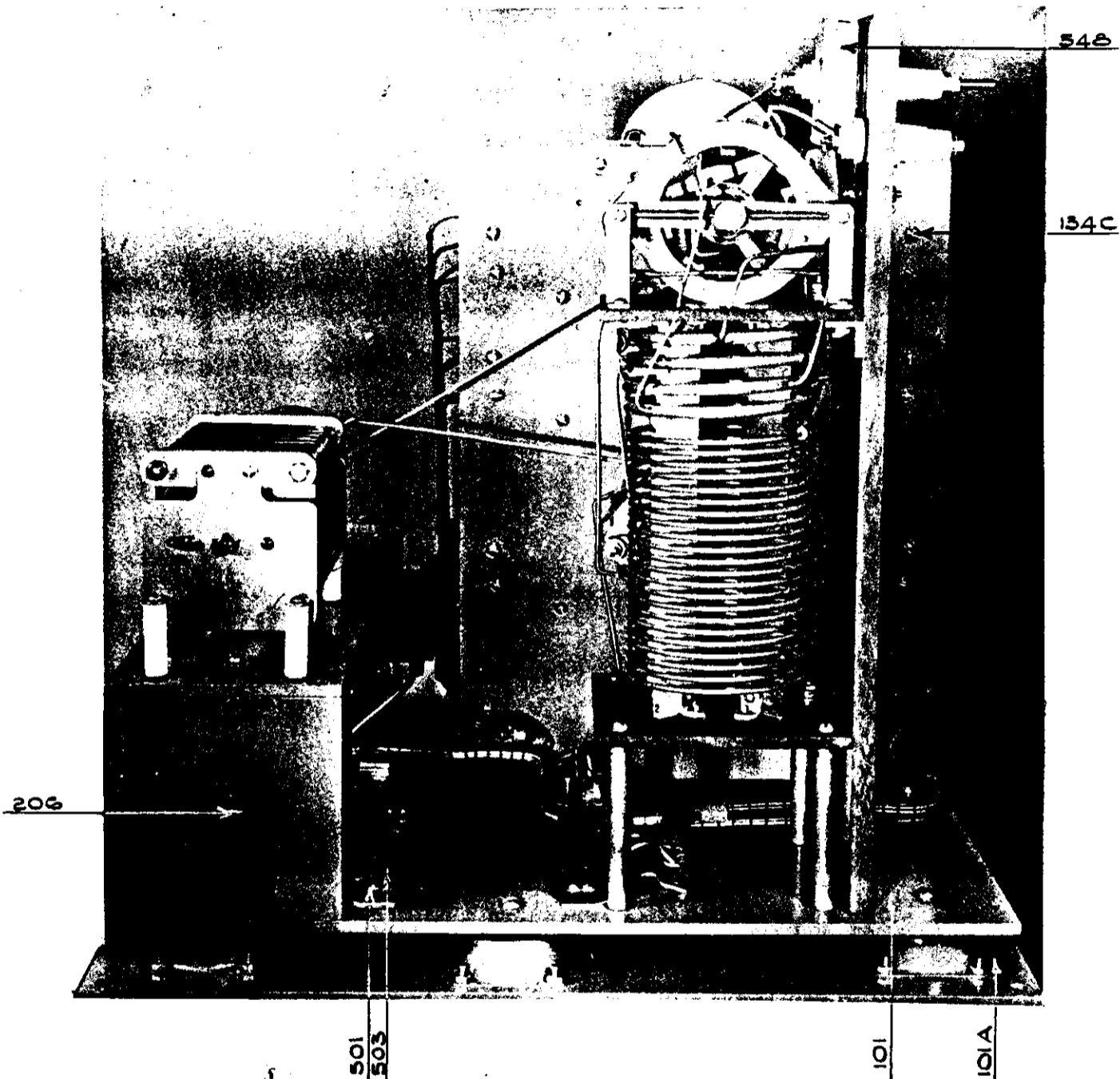
RIGHT SIDE VIEW

VARIABLE CAPACITOR ASSEMBLY

ALI.

PLATE SIX

PV500HM3



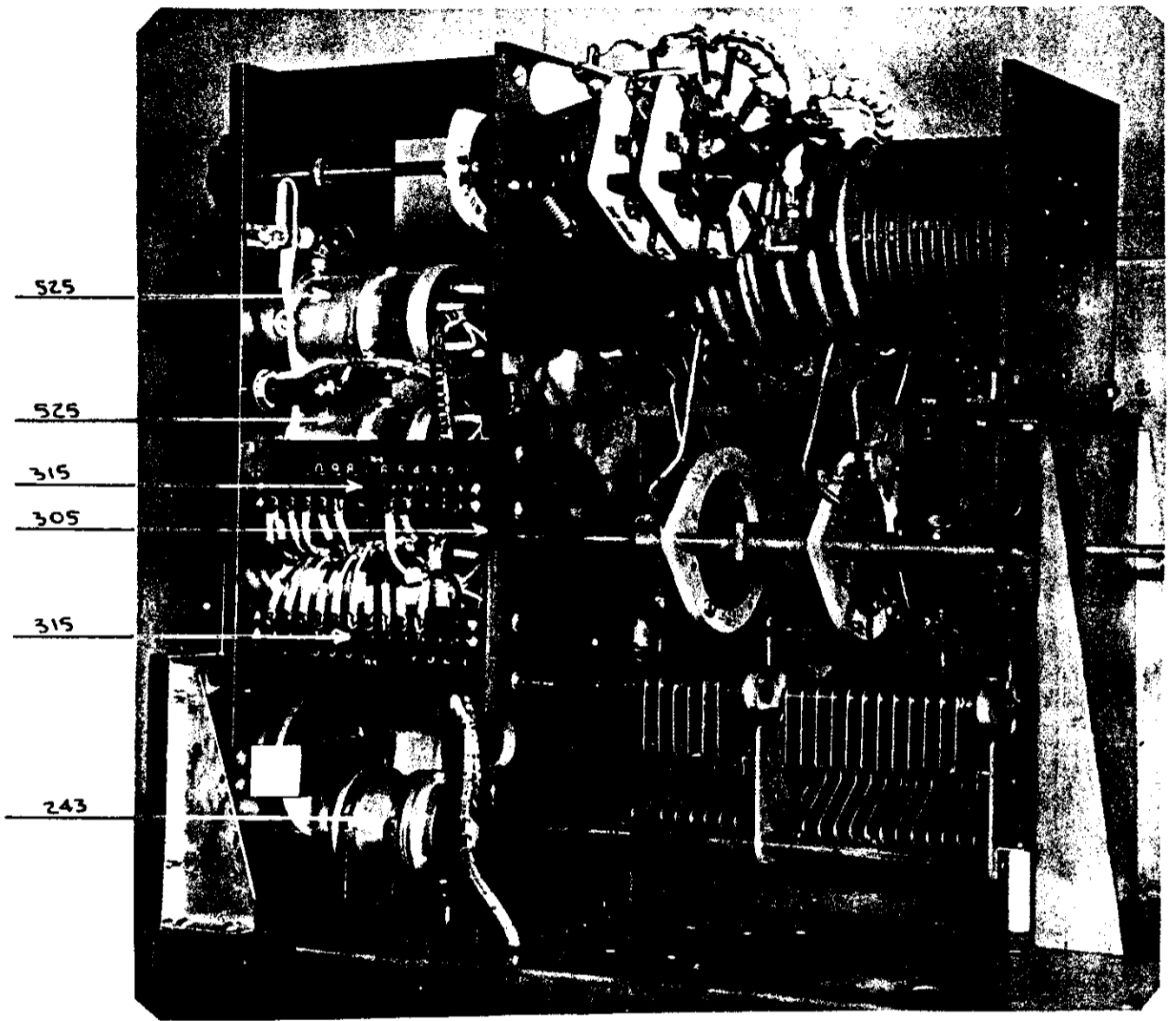
REAR VIEW

MHFA-10 CABLE CONNECTORS

AL.I.

PLATE SEVEN

PV500HM3



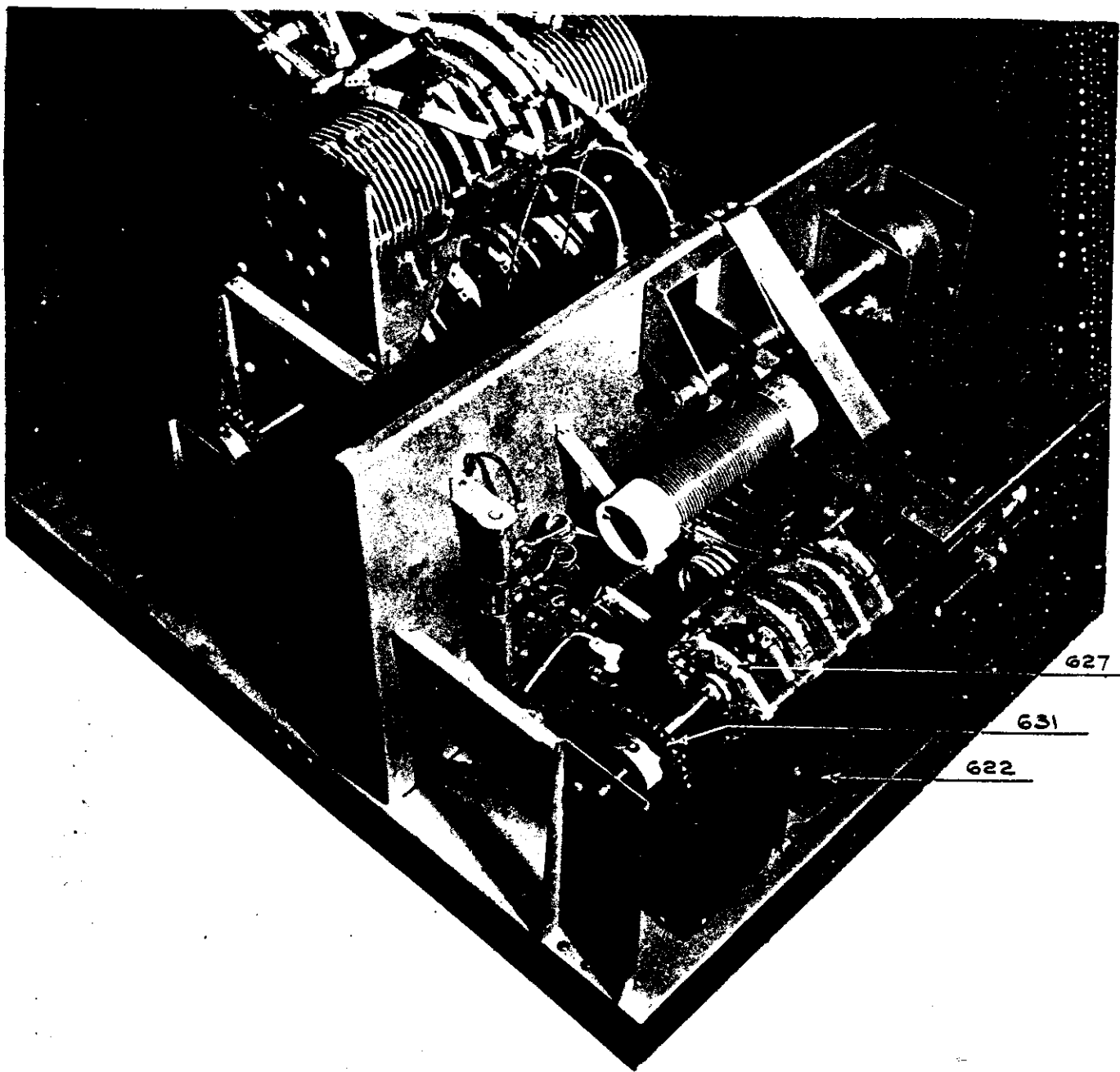
REAR VIEW

EXCITATION CIRCUIT ~ R.F. UNIT

AL.1.

PLATE EIGHT

PV500HM3



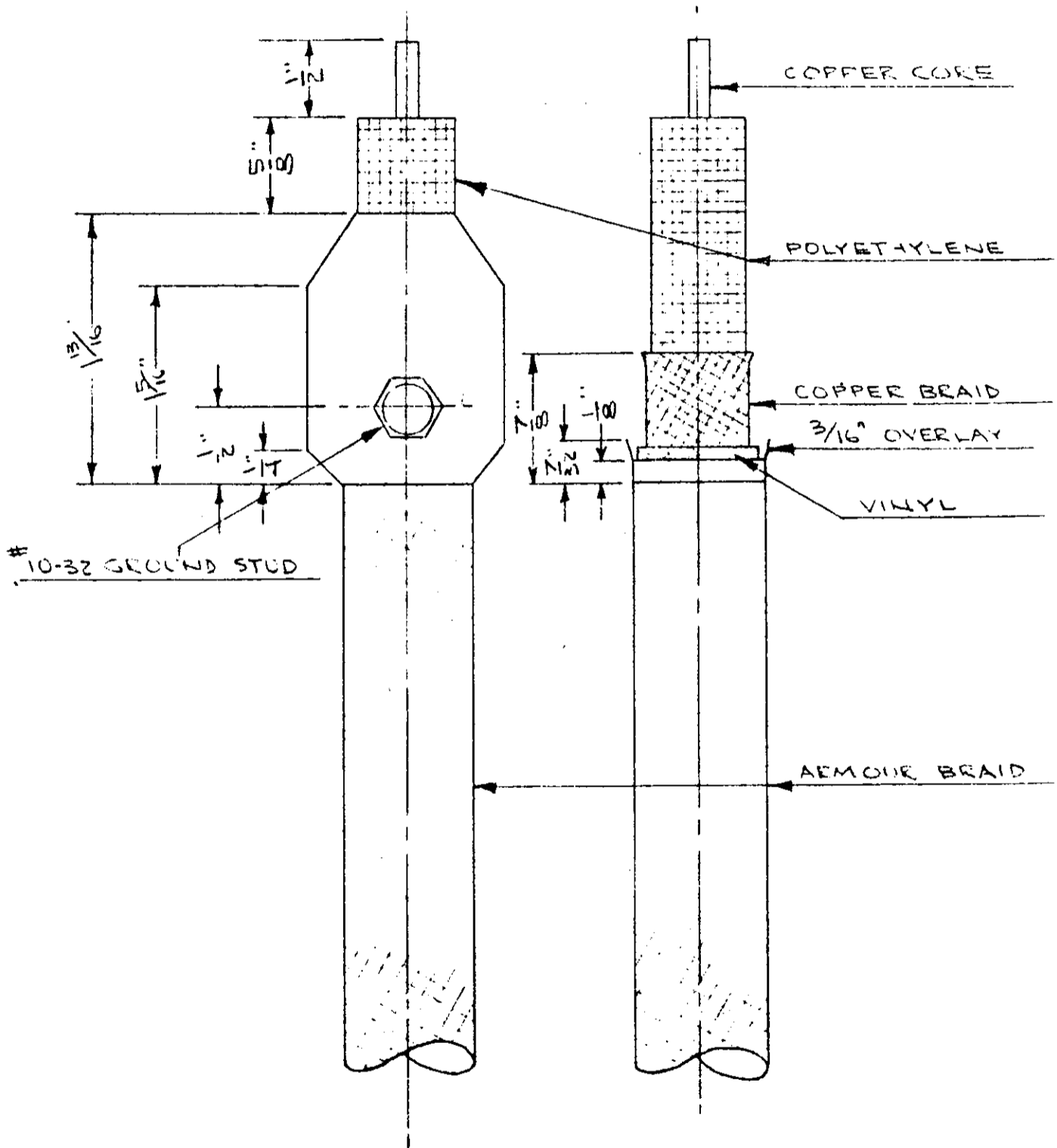
LEFT REAR VIEW

R.F. UNIT.

AL.1.

PLATE NINE

RG-18/U CABLE PREPARATION FOR UG-67/U
CONNECTOR (MODIFIED)



A.L.I.

PLATE TEN

PV 500HM3 ~ REMOTE ANTENNA TUNING

TRANSMITTER
REMOTE ANTENNA COUPLER

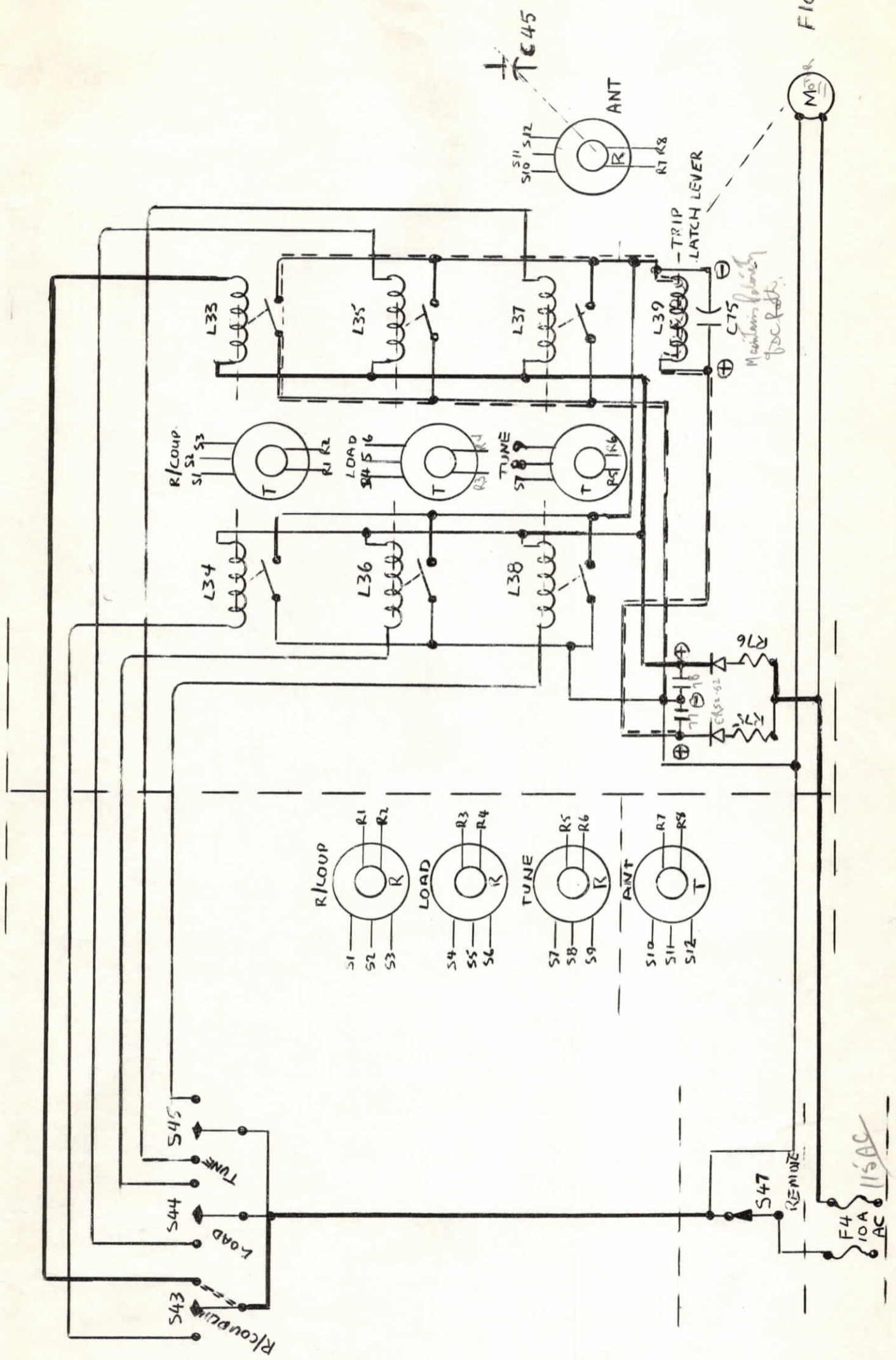


FIG. 5

PV 500HM3 ~ R.F. DRIVER & P.A.

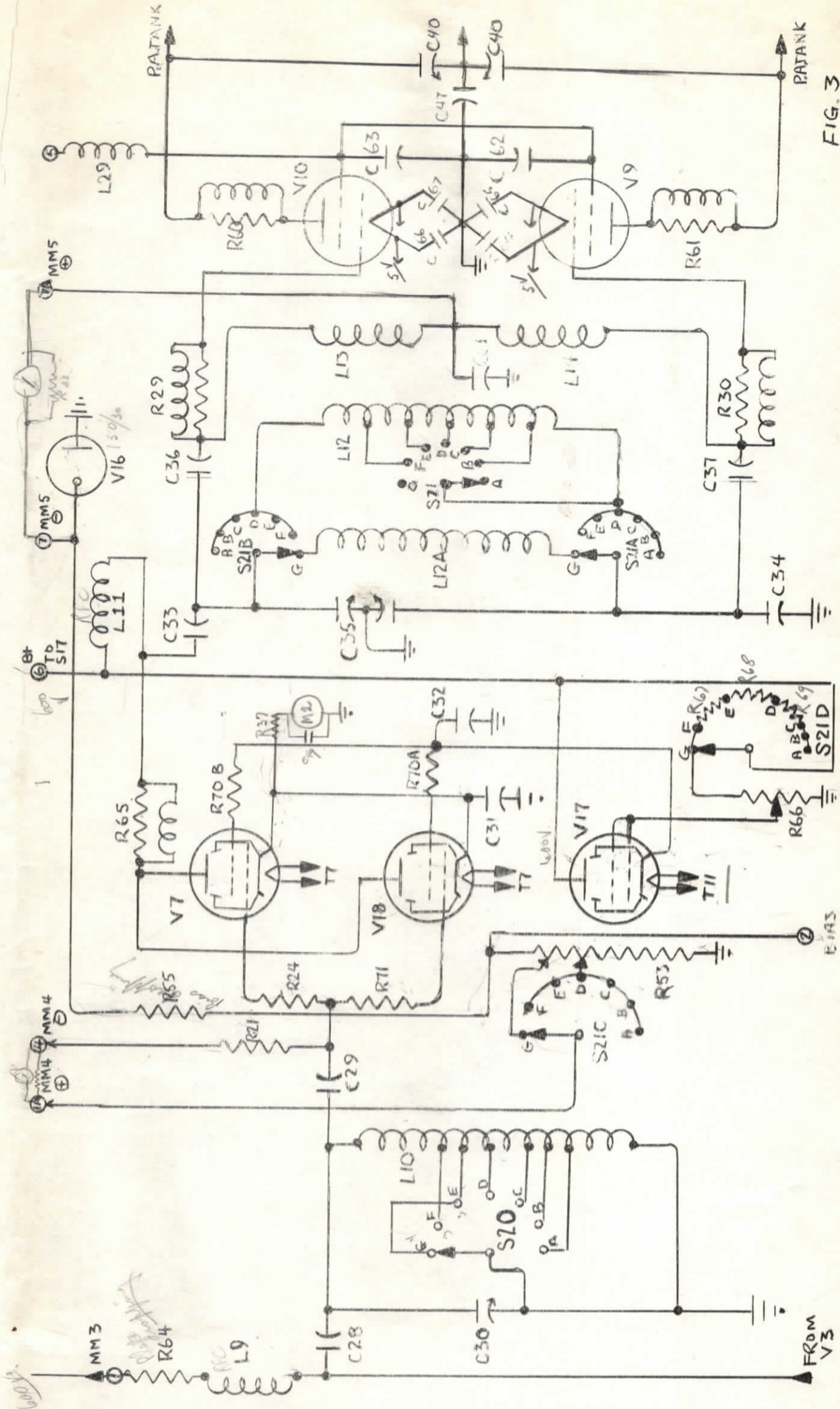
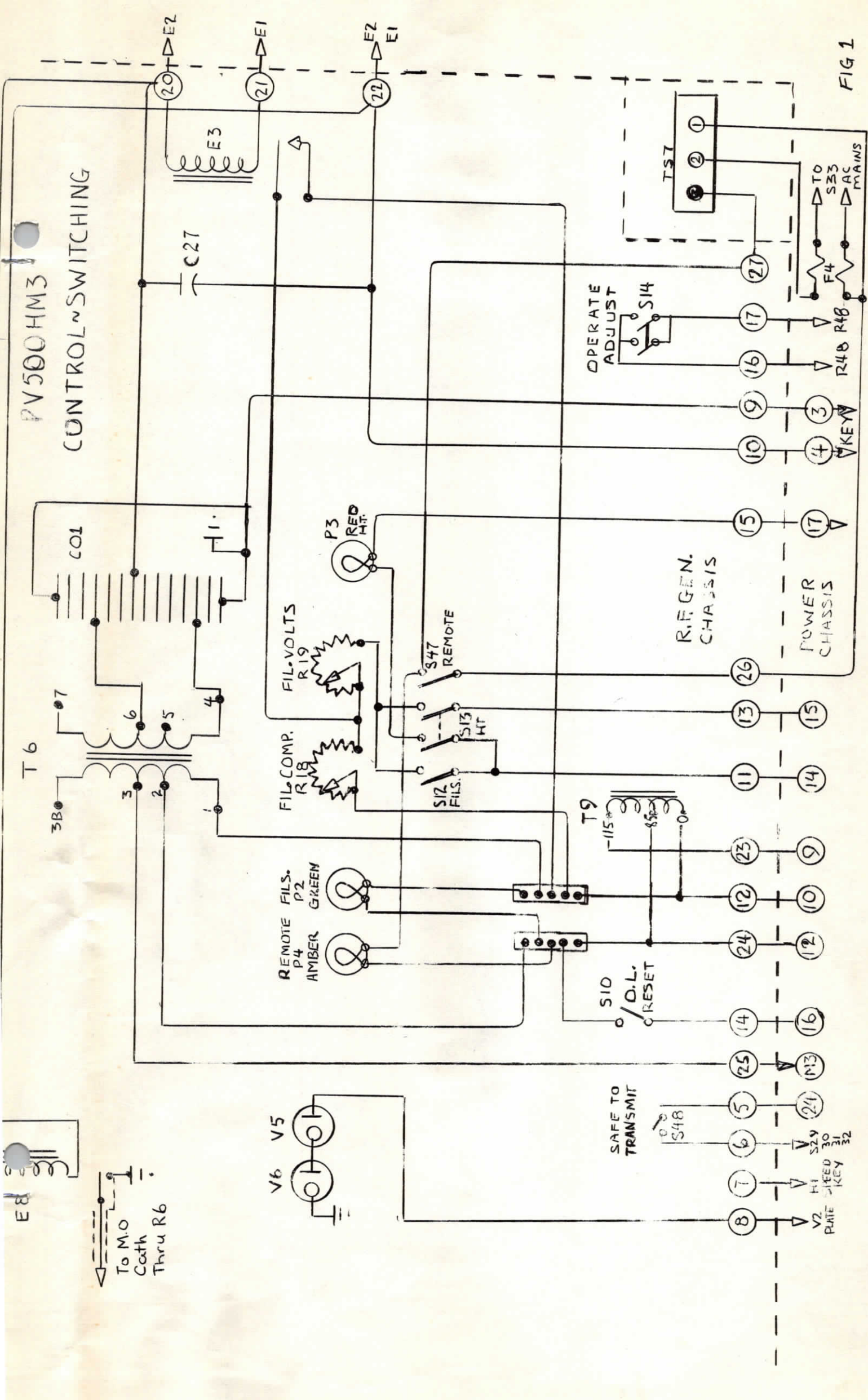


FIG. 3

FIG 1



PV 500-HM3 ~ POWER AMPLIFIER ~ OUTPUT.

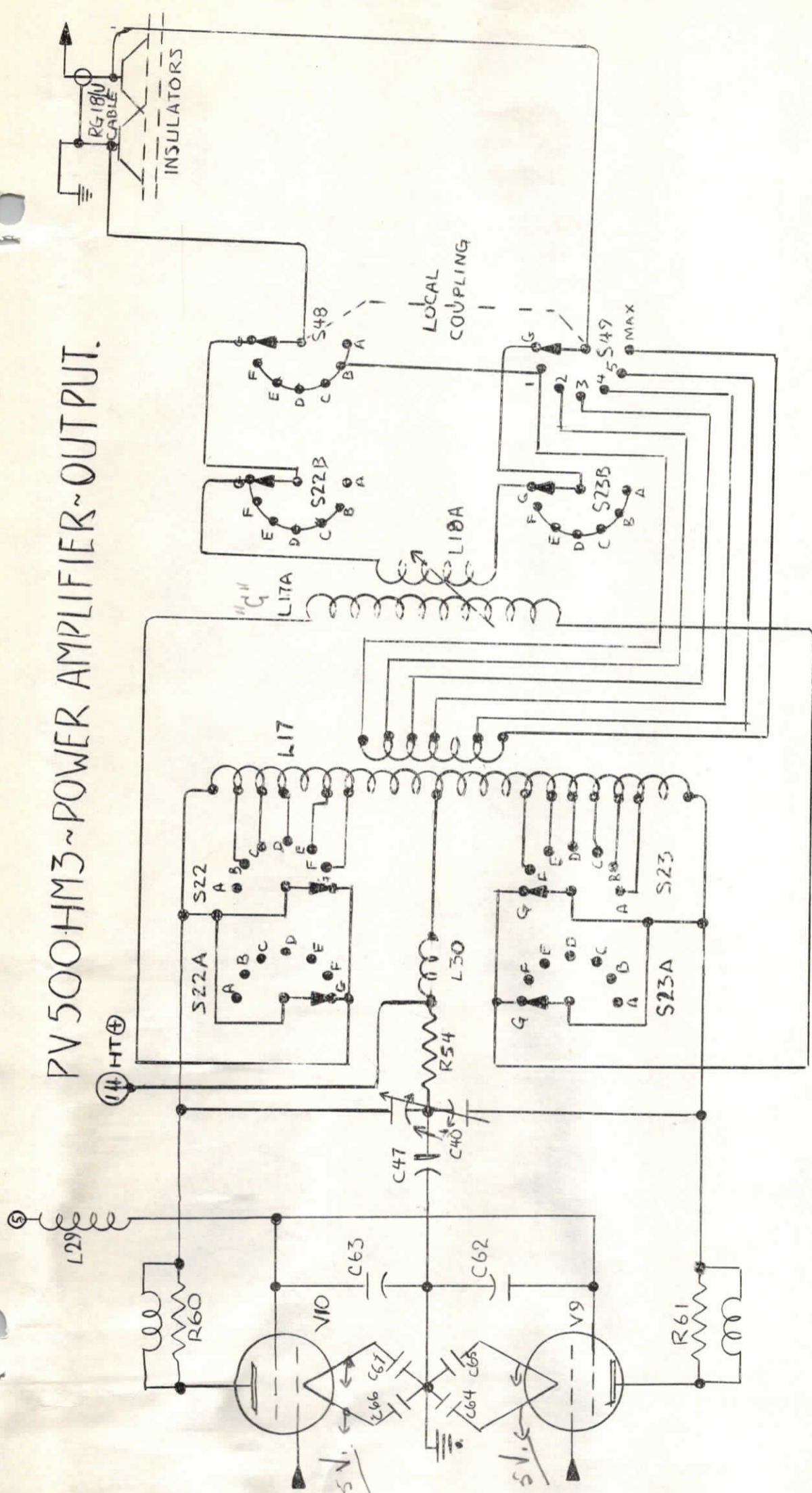


FIG. 4

K-F GENERATOR

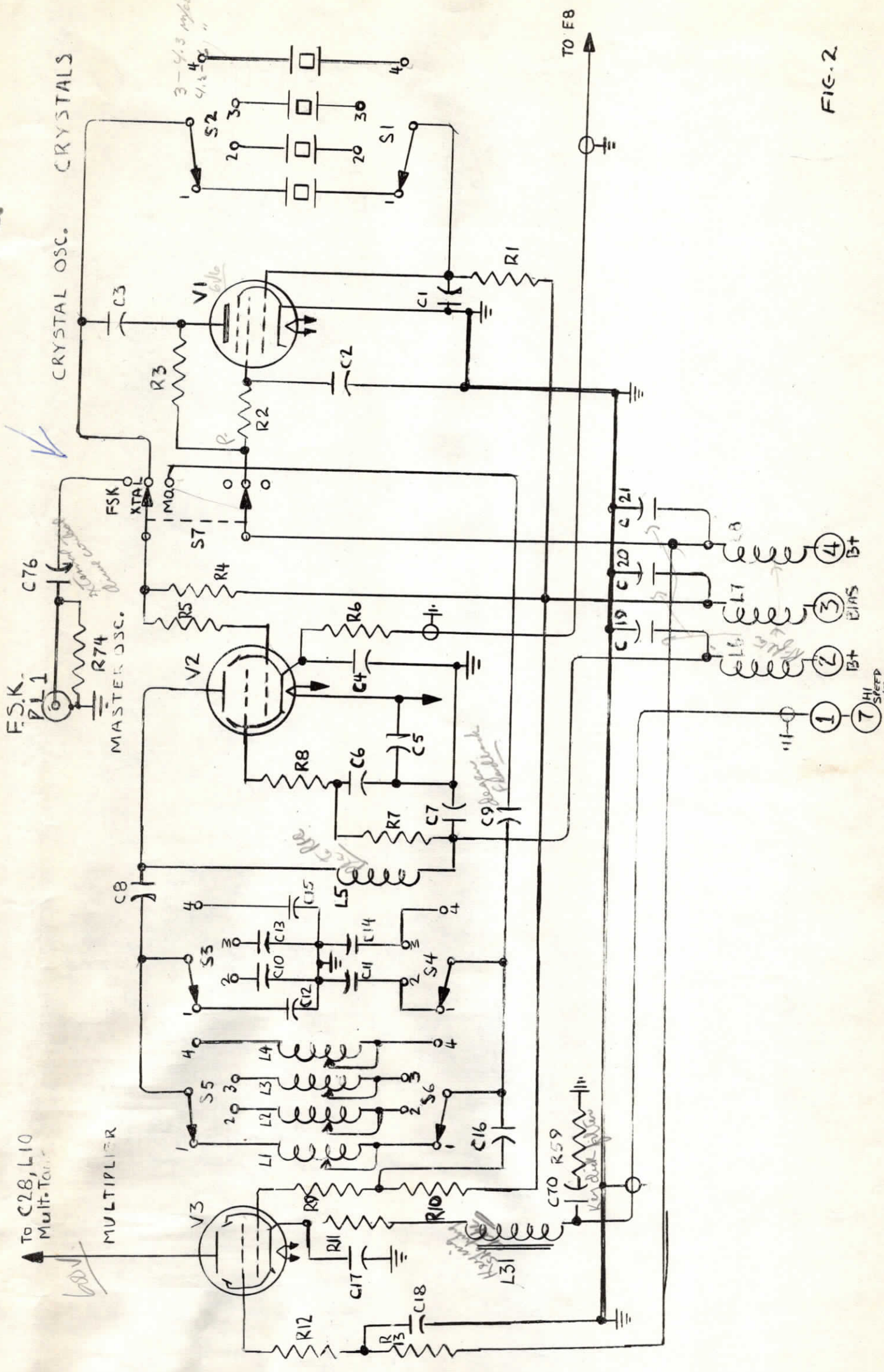


FIG. 2