KY-95

TRANSMITTER/RECEIVER

360 CHANNEL–50 KC SPACING

The KING KY-95 Transceiver with a KS-501A or KS-502A Power Supply Modulator, is compact, lightweight, and reliable airborne VHF communication equipment. It is designed and engineered especially for installation in light and medium aircraft where greater power and excellent receiver sensitivity and selectivity are desired or required. The KY - 95 has been type accepted by the F. C. C.

DESIGN FEATURES KY-95

360 PRE-SELECTED Crystal Controlled Channels.

TRANSMITTER POWER - 12 watts average unmodulated

RECEIVER SENSITIVITY- 1 Microvolt provides at least 2 watts Audio at 6 db Signal + Noise/Noise.

THREE FRONT PANEL CONTROL FUNCTIONS:
Squelch
Frequency Selector
Volume OFF/ON

MIKE GAIN — Adjustment accessible by removal of squelch control knob

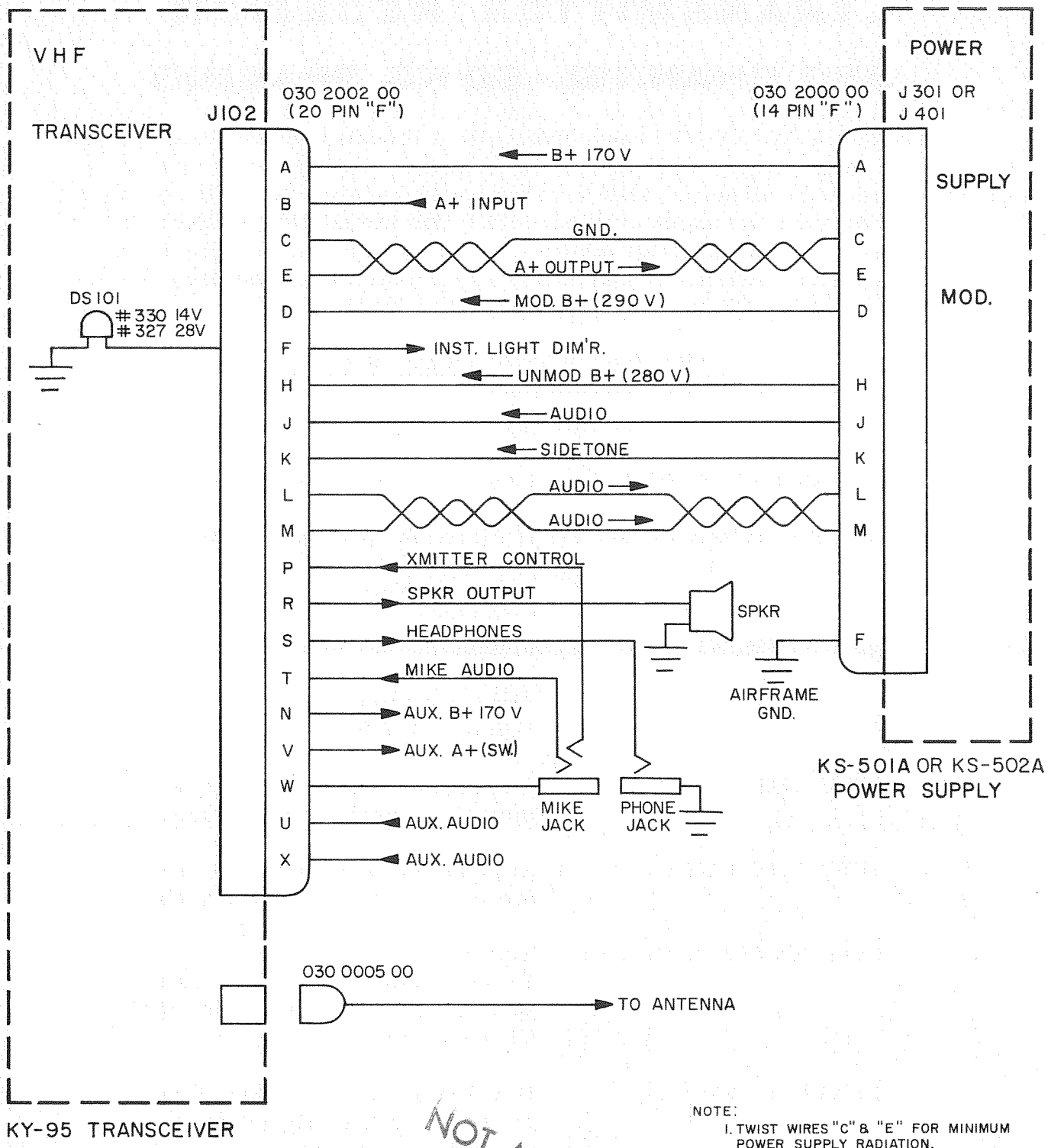
SIDETONE LEVEL — Adjustment accessible by removal of volume control knob

CONCENTRIC CHANNEL SELECTORS - Provide Rapid Control and Wide Angle Observation of Channel Selection.

PANEL LAMP — Brilliance can be controlled by the instrument light dimmer control if desired.

COMPACT - Front Panel Only - 6-1/2 x 3 inches.

WEIGHT	DIMENSIONS
KY-95 - 4.2 pounds	6-1/2" x 3" x 8-1/8"
KS-501A / KS-502A 3.2 pounds	3-1/2" x 3-1/2" x 7-3/4"



NOT APPLICABLE

NOTE:

1. TWIST WIRES "C" & "E" FOR MINIMUM POWER SUPPLY RADIATION.
2. TWIST WIRES "L" & "M" FOR MINIMUM HUM BETWEEN RECEIVER & POWER SUPPLY.
3. KS-501(A) & KS-502(A) ARE FUSED INTERNALLY (A+).
4. WIRE SIZE AS FOLLOWS:
   B, C, E & F — NO. 16 AWG.
   OTHERS — NO. 22 AWG.

FIGURE-1 KY-95 INTERCONNECTING CABLE DIAGRAM

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LIST OF ILLUSTRATIONS

FIGURE 1-1 **KY-95** MAJOR UNIT

GENERAL INFORMATION

THE KY-95 TRANSCEIVER makes available 360 crystal controlled channels in 50 kilocycle steps to cover every channel presently assigned and for future use in the VHF communication band of 118.00 to 135.95 megacycles. The KY-95 contains the R F , I F , detector, squelch, and low level audio circuits of the receiver, and all transmitter circuitry with the exception of the modulator. The KY-95 may be changed to 14 volt or 28 volt usage by the operation of an internal switch and the selection of the correct pilot light bulb and appropriate power supply modulator, KS-501A, or KS-502A .

THE KS-501A or KS-502A contains the power supply and high level audio-modulator circuits for the KY-95 and may be mounted in any convenient place in the aircraft. Power supply modulator KS-501A is designed to operate from a 14 volt source and KS-502A from a 28 volt source. Since there are major differences in these units, they are not convertible from 14 to 28 volts or vice versa.

PERFORMANCE SPECIFICATIONS

TRANSMITTER SECTION

FREQUENCY RANGE - 118.00 to 135.95 megacycles in 50 kilocycle steps to provide 360 channels.

FREQUENCY STABILITY - Within .005% under normal environmental conditions.

POWER OUTPUT - 12 watts average, unmodulated into 52 ohm antenna load.

MODULATION - At least 85% with over-modulation limiting provided by transistor saturation at approximately 90% level.

SIDETONE - Up to 100 Milliwatts into 300 ohms (two 600 ohm headphones.) Screwdriver adjustment by removal of volume control knob on the front panel.

MICROPHONE - Use standard or noise cancelling type carbon microphone or equivalent.

MAXIMUM HARMONIC & SPURIOUS OUTPUT - Less than 2.5×10^{-5} watts.

RECEIVER SECTION

FREQUENCY RANGE -118.00 to 135.95 megacycles in 50 kilocycle steps to provide 360 channels.

SENSITIVITY - 1.0 microvolt maximum will provide at least 2 watts output and better than 6 db signal-plus-noise to noise ratio.

SELECTIVITY - Average 32 kc. bandwidth at 6 db and 80 kc. bandwidth at 60 db down.

IMAGE REJECTION - At least 60 db.

AVC CHARACTERISTIC - Within signal levels of 10 to 10,000 microvolts, the audio output will not vary more than ± 3 db.

SQUELCH - Adjustable from the front panel. Positive Action. Carrier operated. Introduces negligible distortion.

AUDIO OUTPUT - 5 watts into 3.2 ohm speaker load. Separate headphone output. Frequency response 300 to 3500 cps within ± 3 db.

DUTY CYCLE - Continuous

POWER SUPPLY MODULATOR

KS-501A FOR 14 VOLT SYSTEM
KS-502A FOR 28 VOLT SYSTEM

D. C. POWER OUTPUT - 280 volt and 170 volt output taps are provided. Continuous power output rating 25 watts. One minute on, four minutes off rating 55 watts. Ratings apply to total drain from both taps. Power for additional receivers and / or omni converters may be supplied in addition to the KY-95 provided ratings are not exceeded. KY-95 power consumption is 53 watts transmit mode and 9.3 watts receive mode.

SPEAKER AND MODULATOR OUTPUT - Supplies headphone and audio output for speaker in receive mode and modulation for transmit mode.

LINE FILTERING - The power transformer is shielded and the primary line has an LC filter to minimize noise radiation into other aircraft equipment.

TOTAL POWER DRAIN

13.75 Volts (Typical)	Receive 4.2 Amps Xmit (Unmod.) 10.4 Amps	Xmit (Mod.) 14 Amps
27.5 Volts (Typical)	Receive 2.4 Amps Xmit (Unmod.) 6.0 Amps	Xmit (Mod.) 7.5 Amps

INSTALLATION

IMPORTANT CONSIDERATIONS

Adherance to the following suggestions will assure an easier and more satisfactory installation of the KY-95 TRANSCEIVER.

Unpack the equipment carefully. Small parts are packed in a pocket in one of the packing carton inner cushions. Save the cartons until installation is complete in case damage is discovered or the unit should be returned for any reason. If a check of the equipment shows shipping damage, a claim should be promptly filed with the transportation company.

Carefully plan the location of the KY-95 in the instrument panel. Assure yourself that air convection through the ventilation holes in the equipment covers is not shut off by other equipment. The KY-95 may be mounted back of a custom panel by removal of the knobs, attachment of the unit to the panel, and the replacement of the knobs. Drilling information for this method is shown in figure 2-1.

The temperature of the transistors must not exceed +80^{o} C. Longer life can be expected if lower temperatures are maintained. Vacuum tubes and other heat generating devices have been avoided in the Power Supply Modulator unit. This advantage will be lost if the unit is placed above or too near a heat generator in the airplane. The Power Supply Modulator should be mounted on a surface which has good heat conduction to the outer skin of the aircraft.

The Power Supply Modulator is filtered to reduce noise interference with other equipment in the aircraft. As in all transistor power supplies, some small radiation does exist. For this reason, it is suggested that the unit be mounted at least 6 feet from the ADF loop and the power leads run as a twisted pair. Make certain that clearance is available for the installation of cables, connectors, and mounting brackets and that normal vibration will not allow bumping against other equipment cases. Cables must be routed to avoid close proximity to heaters, heater ducts, or engine exhausts. AVOID SHARP BENDS IN THE CABLE.

KY-95 INSTALLATION

Equipment dimensions for thru panel mounting and other alternate methods are shown in figure 2-1. Make certain that your planned location leaves space to plug in and remove connectors and provide access to the quarter turn wing nut on the back of the KY-95. For thru panel mounting, cut an opening in the instrument panel and drill mounting holes as shown in figure 2-1. When installed, the front of the cover should extend in front of the instrument panel about 1/8". Install a support from the rear of the case to a nearby structural member. Make certain all fasteners are tight.

Check the position of the voltage changeover switch under the volume control on the KY-95 chassis. The switch should be pushed toward the side panel for 14 volt operation and away from the side panel for 28 volt operation. Check for correct pilot light #330 for 14V, or #327 for 28V. Make a final check to see that all tubes and shields are in place, then slide the KY-95 in its case and secure it with the quarter turn fastener on the rear of the case.

POWER SUPPLY MODULATOR INSTALLATION

Drill holes and fasten the Power Supply Modulator unit mounting plate to the chosen mounting surface of the aircraft. Refer to figure 2-2 for hole location. Place the Power Supply Modulator on the bracket and slide the unit so that the heads of the 8-32x3/8" screws are over the narrow part of the slotted holes. Tighten the screws securely.

ANTENNA

Any standard vertical or bent whip antenna may be used with the KY-95. No antenna switching relay is required unless it is desired to operate a second transceiver from the same antenna. The antenna should be mounted on the external surface of the airplane on a flat horizontal surface and well removed from other projections and from the engine(s).

ELECTRICAL

The antenna lead using RG-58A/U coaxial cable is installed from the antenna to the coaxial connector at the rear of the KY-95. Keep the antenna cable as short as possible and AVOID SHARP BENDS IN THE ROUTING. Use care in attaching and soldering the UG-88/U connector, noting that the tip of the center pin is flush with the end of the shell flange. Keep the ground as short as possible when attaching the cable at the antenna end.

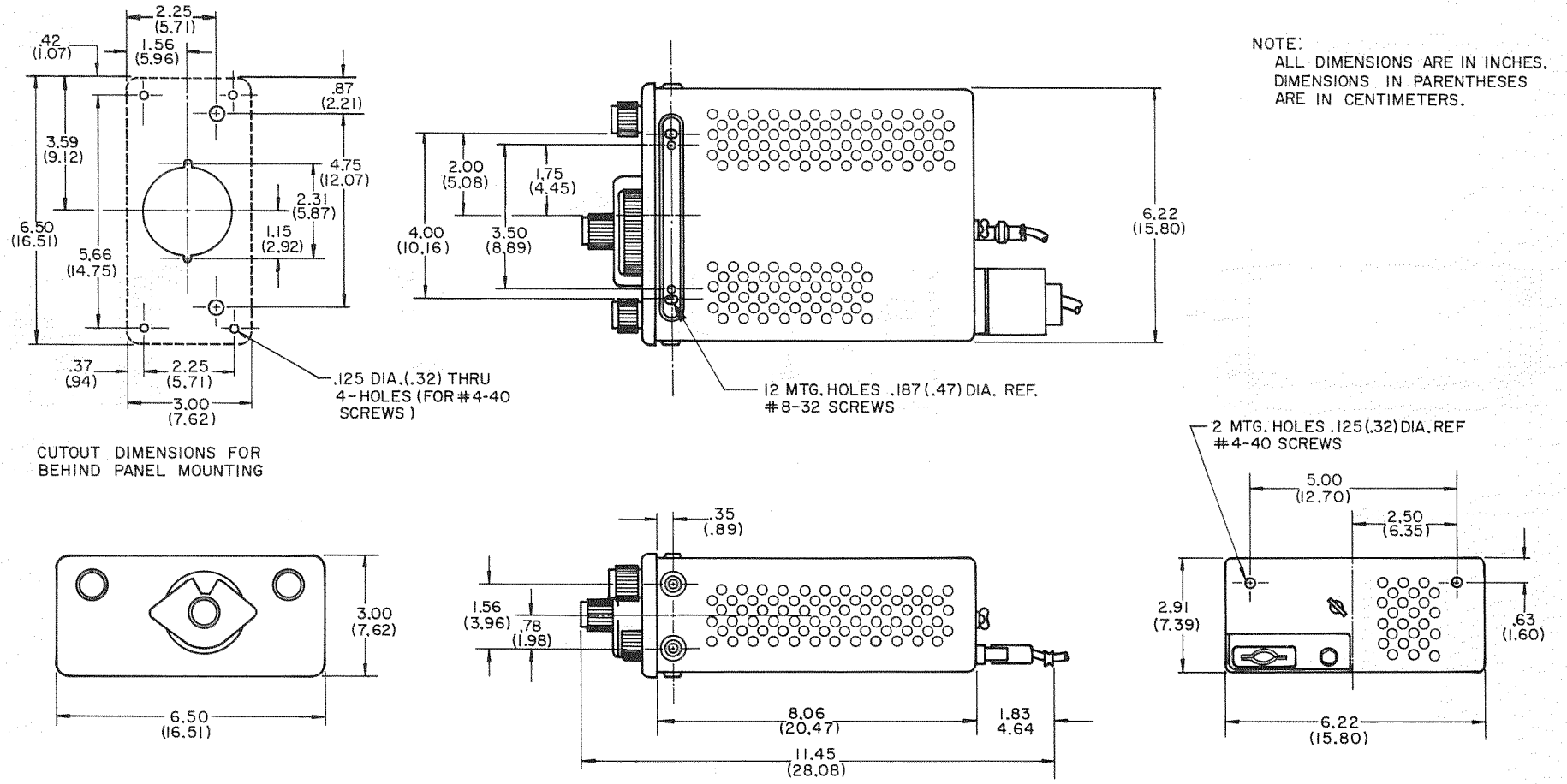


FIGURE 2-1 KY-95 TRANSCEIVER INSTALLATION

NOTE:
1. ALL DIMENSIONS ARE IN INCHES. DIMENSIONS IN PARENTHESES ARE IN CENTIMETERS.

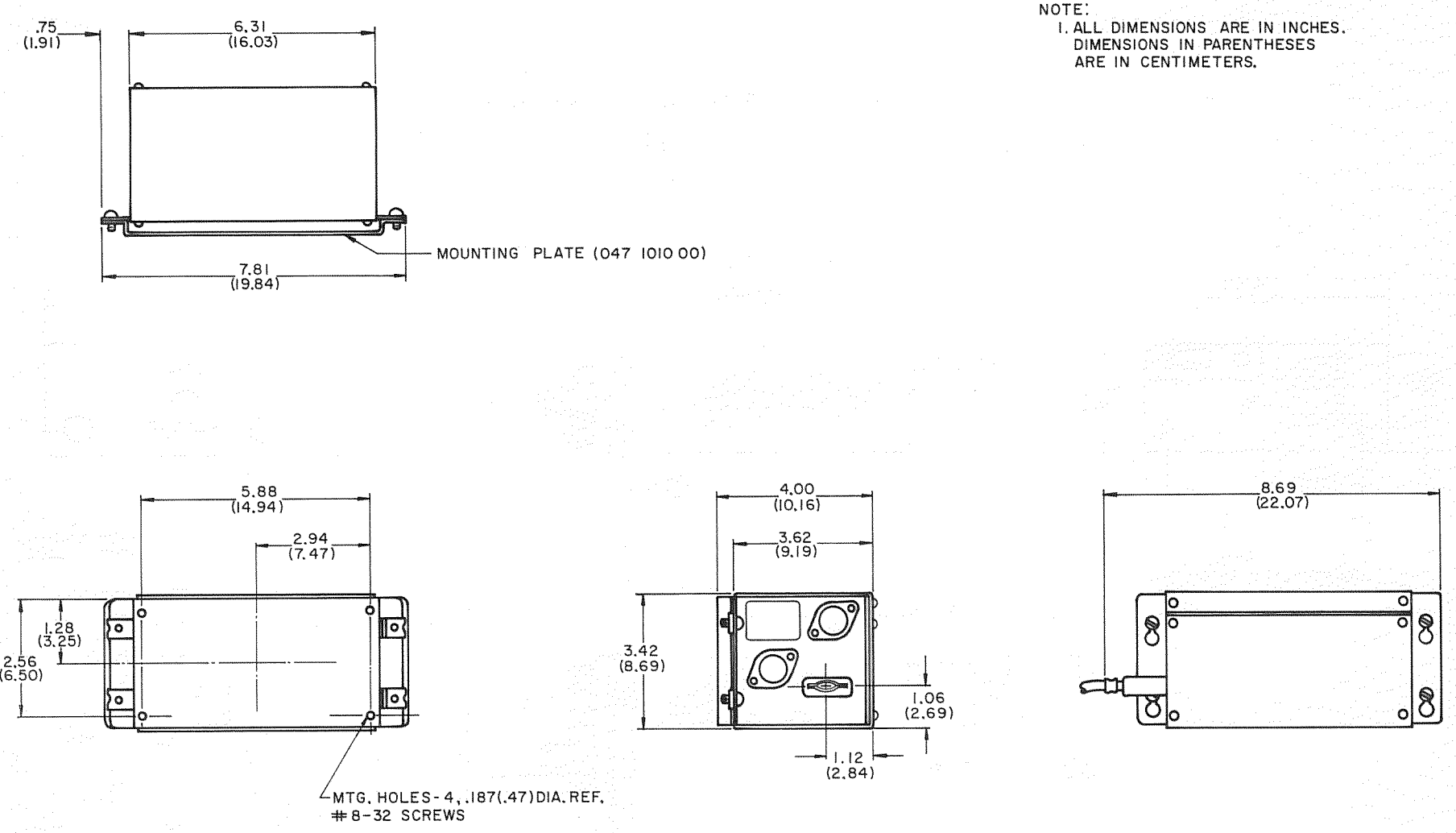


FIGURE 2-2 POWER SUPPLY MODULATOR INSTALLATION

Refer to figure 1 for cabling information. Since the other radio and navigation equipment in the airplane will share the speaker, headphones, and microphone, no attempt is made to cover circuits except those associated with the KY-95. Circuits for speaker selection and muting and microphone switching must be devised by the installer. The KY-95 will not shunt the speaker line of other equipment when it is turned off. An extra circuit on the power switch opens the KY-95 speaker circuit in the power off position. Cabling is identical for 14 volt and 28 volt systems except heavier wire is required in the primary leads on 14 volt systems. Refer to interconnecting cable assembly figure 1 for wire sizes to be used in the cable. Use a good quality stranded wire with at least 600 volt insulation.

FINAL ADJUSTMENTS

The KY-95 has been thoroughly tuned and tested at the factory and no further tuning is necessary except the following adjustments which are all made with the engine(s) running and the usual flight equipment turned on. DO NOT ATTEMPT ANY RECEIVER ADJUSTMENTS WITHOUT FIRST READING THE RECEIVER ALIGNMENT PROCEDURE.

TRANSMITTER TEST

Disconnect the antenna lead at the KY-95 and attach an RF wattmeter to the unit with coaxial cable. Check for power output at several frequencies in the lower, middle, and upper regions of the frequency range.

MICROPHONE GAIN ADJUSTMENT

Terminate the KY-95 in an RF wattmeter or other suitable low radiation load. Tune a monitor receiver to the transmitted frequency. Plug in the microphone which will be used in the aircraft. Remove the Squelch control knob, depress the microphone button and speak in a normal loud voice. Using a slender shank screwdriver, adjust the microphone gain control clockwise until clipping is detected in a listening test on the monitor receiver. An alternate test could be made by connecting an oscilloscope to the audio output of the receiver in which case visual evidence of clipping is available. After locating the setting of the microphone gain control which produces distortion, the control should be backed off 5 to 10 degrees. Replace the Squelch control knob.

SIDETONE ADJUSTMENT

Remove the Volume control knob and put on the headphones which will be used in the airplane. With the engine(s) running under power loading, speak into the microphone while transmitting and then adjust recessed sidetone gain control until a desired sidetone level is obtained. Replace the Volume control knob.

FINAL CHECKS

Check the operation of the Squelch control, Volume control, and the Speaker, Headphone, and Mike selector switches which you have designed into the custom control system before making a flight test. Label all custom control switches and be sure your customer understands how the equipment is to be operated.

OPERATOR'S SECTION

All controls required in flight are positioned on the front panel of the KY-95. The volume knob (marked VOL) is rotated clockwise from the OFF position to apply power to the set. In turning the set on, rotate the VOL knob about 1/2 turn. Now turn the squelch knob (marked SQ) fully clock-wise. Next select the desired frequency channel by rotating the large outer knob until the desired megacycle appears in the window. Rotate the small knob below the window until the correct decimal number appears. Both the receiver and transmitter are now tuned to correct frequency. All 360 channels are selected in this manner.

As the tubes warm to operating condition, a slight hiss or ignition noise may be heard from the speaker. After the set has become operative, turn the squelch knob counterclockwise until the noise just ceases to be heard. You are now ready to transmit and receive. No further adjustments are required except to change the receiver volume to your preferred level. In no case should the squelch control be turned further counter-clockwise than that position just necessary to shut out undesired noise; otherwise, the squelch may not open on a weak signal which you desire to hear. Each time the frequency is changed, the squelch should be readjusted.

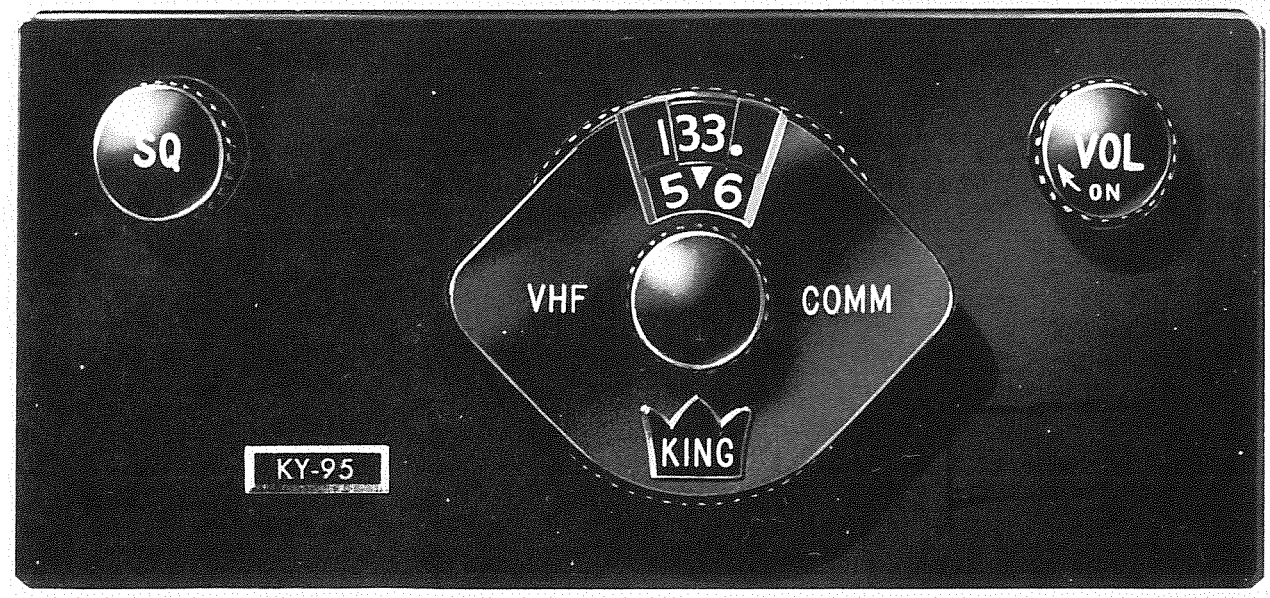


FIGURE 3-1 OPERATORS FRONT PANEL

SECTION IV

CIRCUIT THEORY

TRANSCEIVER

The basic functional arrangement of the circuits are as shown in figure 4-1. Reference to this overall functional block diagram will assist in understanding the text. Complex or unusual sections of the circuits will be explained using supplemental illustrations, but the complete schematic diagrams at the rear of this manual are sufficient for most circuit analysis.

The KY-95 Transceiver contains all receiver circuitry through the low level audio stages and all transmitter circuits except the modulator. The KY-95 also contains the relays for switching signals, voltages, and the antenna for transmit-receive operations.

The receiver is a dual conversion superheterodyne type with IF frequencies of 33.5 mc. and 2.0 mc. The Receiver High Frequency Oscillator frequency is controlled by the megacycle selector and its output is mixed, in the 1st Mixer, with received frequencies from the RF Amplifier. Since the decimal selector might be in any of 20 positions, (corresponding to a range of 950 kc.) the 33.5 mc. IF Amplifier and its associated transformers must pass frequencies throughout the 950 kc. range. The frequency of the Low Frequency Oscillator is determined by the decimal selector. This frequency is mixed with the output of the 33.5 mc. IF Amplifier in the Second Mixer. The two 2 mc. IF Amplifiers and the 4 associated IF transformers give the receiver its high selectivity. The signal is then rectified and filtered and the resulting audio undergoes one stage of amplification before being routed to the Power Supply Modulator.

The transmitter of the KY-95 uses two crystal controlled oscillators to determine the frequency of the transmitted signal. The Transmitter High Frequency Oscillator generates a frequency which is determined by the megacycle selector. The Low Frequency Oscillator, which is used in both transmit and receive modes, generates a frequency which is determined by the decimal selector. These two frequencies are mixed in the transmitter mixer and the sum of the two is applied to the RF amplifier. The RF amplifier drives the driver which in turn drives the push pull output stage. The push pull output stage is amplitude modulated by applying audio voltage at the plates and screen grids of both tubes.

The resulting amplitude modulated carrier is applied to the antenna through the antenna transfer relay.

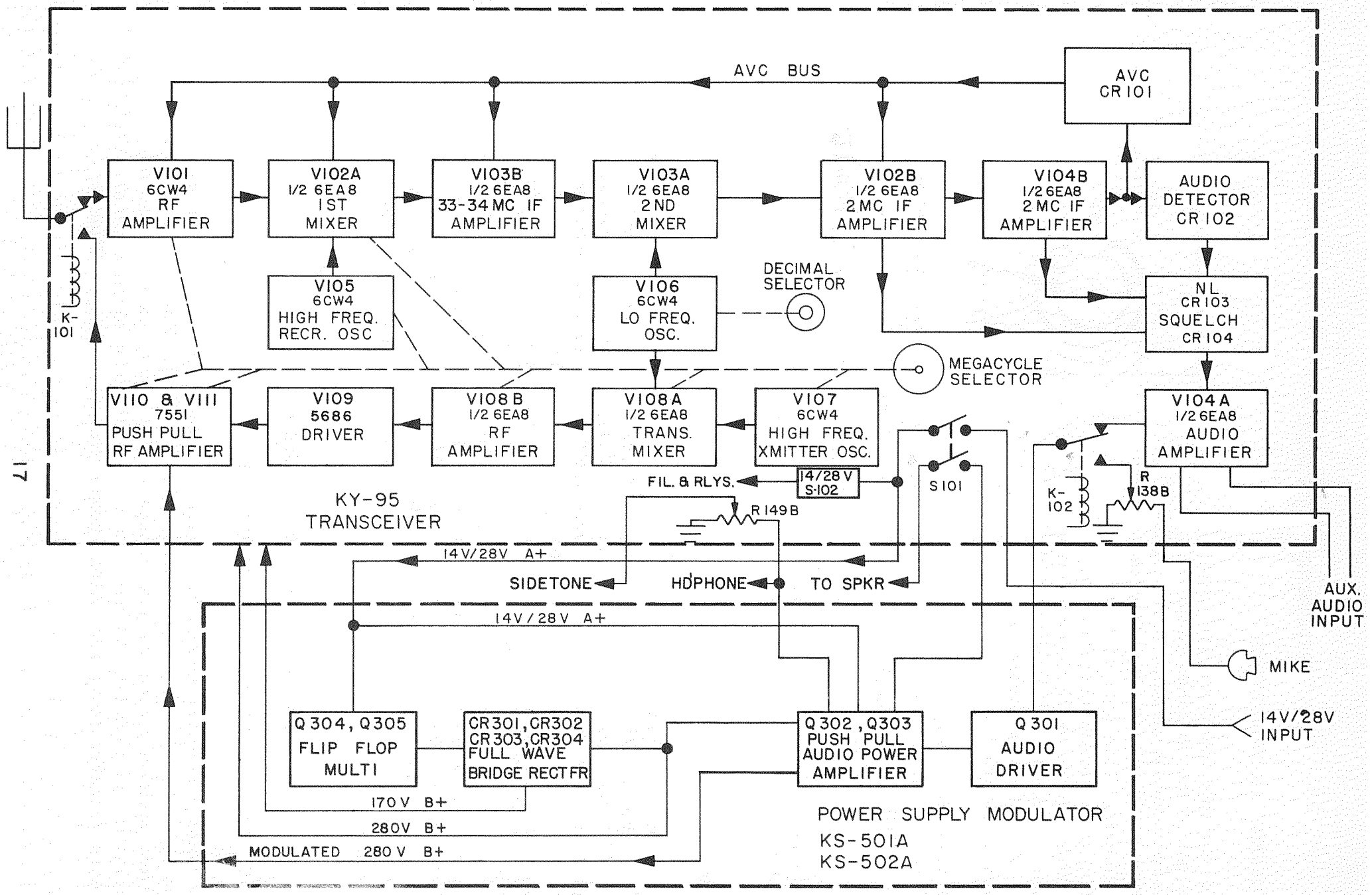
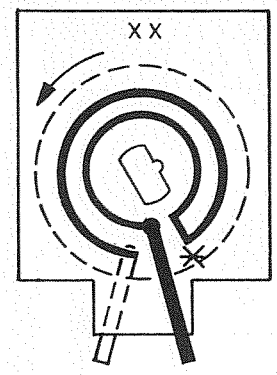


FIGURE 4-1 KY-95 FUNCTIONAL BLOCK DIAGRAM

FREQUENCY CONTROL

TUNING INDUCTORS

Nine variable inductors are used to tune all of the switched radio frequency resonant circuits in the transmitter and receiver, including the oscillators. This type of switch tuning gives outstanding frequency tracking across the entire operating range. A simplified drawing of the type of variable inductor used is shown in figure 4-2.



POSITION SHOWN FREQ. IS 118.00mc,
* WHEN LOOP ROTATED TO CONTACT HERE FREQ. IS 135.00 mc.

FIGURE 4-2 VARIABLE INDUCTOR

The variable inductor may be visualized as a hairpin bent into a circle. As the megacycle setting is increased by selector rotation, the effective length of the hairpin is shortened. In the 135 mc position, the loop has been completely shorted and nearly all of the circuit inductance is in the series tracking inductor.

CRYSTAL SELECTION

Two banks of crystals are used to operate the crystal controlled oscillators in the KY-95. One bank contains 20 crystals; they cover frequencies of 34.9733 mc through 35.9239 mc in 50 KC steps. The Low Frequency Oscillator uses these crystals as selected by the decimal selector switch. The second crystal bank serves both the transmitter and receiver High Frequency Oscillators. 20 crystals cover frequencies from 83.0250 mc through 102.0250 mc in one megacycle steps. The transmitter makes use of the 18 lower frequency crystals and the receiver uses the 18 higher frequencies. The crystal selectors contacts (on the megacycle selector switch) are synchronized so that the receiver oscillator is always two crystals, or two megacycles, above the transmitter oscillator. In this manner, the transmitter and receiver are made to operate at the same frequency.

FILAMENT AND RELAY CIRCUITS

S102 AND FILAMENT CIRCUITS

The voltage selector switch S102 must be placed in the position corresponding to the primary input voltage (14/28 volts). Placing S102 in the 14 volt position places the two groups of filaments, as shown on the schematic, in parallel. 14 volts is applied directly to the coils of K101 antenna transfer relay and K102 power transfer relay. Placing

S102 in the 28 volt position connects the two filament groups in series so that approximately 14 volts is dropped across each, and puts a 3 watt resistor in series with the coils of relays K101 and K102 as a voltage dropping element.

RELAY CIRCUITS

Relays K101 and K102 are operated simultaneously by grounding one side of the coils through the push-to-talk button on the microphone. Relay K101 is the antenna transfer relay. In the de-energized position, the antenna is connected to the tuned input transformer of the receiver. In the energized position, the antenna is connected to the final of the transmitter. The power transfer relay K102 has 6 sets of contacts, and controls all plate voltage and signal transfer functions for the transmit and receive operations.

KS-501A POWER SUPPLY MODULATOR

The KS-501A operates from a 14 volt source and has two basic functions. It provides B+ voltages from a transistorized oscillator power supply and it contains an all transistor amplifier which serves both as an audio amplifier and modulator for the transceiver. The power supply consists of a transistor multivibrator, a voltage step-up transformer, and a full wave bridge rectifier using silicon diodes. Positive 280 volts and 170 volts are produced by the power supply.

The amplifier consists of a driver stage transformer coupled to a push-pull power amplifier. The transformer which supplies the audio input to the driver has two primary windings and the amplifier output transformer has two secondary windings. The transmit-receive relay simply determines which windings are connected in the receive and transmit mode, thereby causing the amplifier to function either as the speaker amplifier or the modulator.

POWER SUPPLY

The 14 volt input is fused and fed to the center tap on the primary transformer T303. The oscillator for the power supply uses two transistors Q-304 and Q-305 operating in a simple multivibrator circuit. The primary input voltage is routed in through a pi section LC filter which prevents AC generated in the power supply from being fed back into power line. The emitter of each transistor is tied to a low level tap on the primary, and each base through a current limiting resistor to the ends of the primary. Bias is established by the resistance values in the base circuit; the inphase feedback from base to emitter causes the pair of transistors to operate in an on-off mode to produce an AC voltage across the power transformer. The full wave rectifier circuit has been modified such

that rectifiers CR-301 and CR-303 feed back to the input circuit to regulate output voltage as higher loads are placed on the power supply output, and a level of 170 volts DC is taken from the center tap of the power transformer secondary. The two voltages are filtered and routed to connector J-301.

AUDIO AMPLIFIER AND MODULATOR

The audio amplifier serves both as a headphone and speaker amplifier for the receiver and as modulator for the transmitter obtaining its signal from the secondary of T107 in the transceiver. This transformer has one primary in the audio section of the receiver and another primary fed by the microphone circuit. Relay K102 in the transceiver determines which windings are connected in the receive and transmit mode, thereby causing the amplifier to function either as the speech amplifier or the modulator. The driver stage operates as a conventional amplifier circuit. The balanced output of driver transformer T301 is used to feed a pair of transistors operating in push-pull. These transistors operate directly into the output transformer T-302 which has two secondaries: one providing output to drive a 3.2 ohm speaker, the other is a modulation winding for the transmitter.

GENERAL MAINTENANCE

The maintenance section serves as a guide in trouble shooting the equipment and making replacements and repairs. This section contains alignment procedures for the operating equipment as well as a generalized trouble shooting chart for locating inoperative sections. Voltage and resistance measurements are on the KY-95 schematic diagram.

TEST EQUIPMENT

WATT METER - Bird Model 611 Termination Watt Meter or equivalent.
SIGNAL GENERATOR - Hewlett-Packard Model 606A or equivalent.
SIGNAL GENERATOR - Boonton Radio Model 211A or equivalent. 14 volt or 28 volt DC power source with good regulation (14 volts if the KS-501A is used, and 28 volts if the KS-502A is used).
MICROPHONE with push-to-talk button.
LOUDSPEAKER - 3.2 ohm impedance (or equivalent resistance).
VTVM - RCA Senior Voltohmyst or equivalent (DO NOT use a meter with a low impedance).
OSCILLOSCOPE, small soldering iron, clip leads, and alignment tools.

SERVICING NOTES

There are two areas where extreme caution is required in servicing this or similar equipment; the tuned RF circuits, and the transistor circuits. The tuned circuits in the KY-95 have been designed for high reliability and factory aligned for optimum performance. While the alignment is not difficult, be sure you are going to improve operation before altering factory settings. In no case should you use unnecessary force in or near the tuned RF components. DO NOT ATTEMPT TO ALIGN RECEIVER WITHOUT FIRST READING THE INSTRUCTIONS IN FULL.

The transistor circuits require a certain amount of care when trouble shooting. or replacing components. Transistors are particularly sensitive to certain kinds of abuse: HEAT - When soldering near transistors, care should be taken not to get the iron against the transistor. When soldering directly on a transistor lead, hold the lead tightly with pliers between the soldering operation and the transistor body. Use a small soldering tip with a low heat. CURRENT - The transistor will easily break down under excessive currents. Ground test equipment to the unit when making tests on these circuits. Ground soldering irons to the unit when working on transistor circuits. DO NOT use a low impedance meter to measure circuit parameters while the circuits are in operation. MECHANICAL SHOCK-Since transistors are often rigidly mounted and have rather fragile internal connections, be especially careful with hand tools when working near these elements.

BENCH TEST PROCEDURE

With the equipment covers removed from the KY-95 and the Power Supply Modulator being used, turn the power switch off and properly connect the DC power source, headphones, microphone, wattmeter, and speaker to the units under test. If a repair is being made, inspect the equipment for mechanical damage or signs of excessive heating. If foreign matter has accumulated in the unit, clean it carefully before proceding with tests. Turn the volume and squelch controls fully clockwise and allow the equipment to operate for 5 minutes to let the temperature stabilize.

TROUBLE-SHOOTING

The purpose of the trouble shooting charts is to localize the cause of circuit malfunctions by a logical sequence of checks. These checks which are on pages 23 and 24,will aid the technician in locating the particular electrical area which is inoperative. No attempt is made to define specific component failures, however, complete voltage and resistance measurements are given on the KY-95 schematic diagram at the end of the section.

WARNING
MAKE SURE POWER IS TURNED OFF AND ALLOW SUFFICIENT TIME FOR HIGH VOLTAGES TO BLEED OFF BEFORE MAKING RESISTANCE MEASUREMENTS.

AUDIO TEST

Auxiliary Audio Test-Insert an audio signal (1KC sine wave) at junction of R-203 and R-204 and check for unit gain. Example - 1.0 volt RMS input results in approximately 1.0 volt RMS output across speaker or dummy load.

Receiver Audio Test - Insert .01 volt 1 KC sine wave audio signal at junction of R-150 and R-151 (located on terminal board) and check for approximately 1.8 volts output across speaker or dummy load.

GENERAL REPAIR

If the preceeding checks fail to isolate the trouble, check the equipment as follows: Visually inspect the connectors and cabling between the units and inside the units for broken or shorted wiring; check all tubes and voltages; set and clean relay contacts; check all aircraft wiring such as connectors, cables, circuit breakers, etc.

AIRCRAFT CHECKS

Indication	Probable Cause
No power supply noise heard in phones or in speaker. No audible relay click when mike button is depressed.	Break in interconnecting cable between Transceiver and Power Supply Modulator or ground lead from Power Supply Modulator to airframe. Blown fuse in Power Supply Modulator. CAUTION - Make sure Power Supply Modulator circuit is checked to determine defect before replacing fuse - probably a shorted transistor.
Excessive Power Supply noise in headphone and speaker output.	Inadequate ground from Power Supply Modulator to airframe. Wire (L&M) in interconnecting cable not twisted pairs as shown on interconnecting cable diagram Fig. - 1.

BENCH CHECK - POWER SUPPLY MODULATOR

Indication	Cause	Remedy
Blown Fuse: No 170V or 280V B+ No audio or modulation	Defective component in transistorized Power Supply or amplifier circuit.	Check for shorted transistors diodes, or electrolytic capacitor.

BENCH CHECK KY-95 TRANSCEIVER

RECEIVER FAILURE

Indication	Cause	Remedy
No reception on any channel.	Receiver megacycle or decimal oscillator not oscillating.	Check filament voltage at V105, V106, V107. Check tubes and oscillator alignment as per Alignment Instructions.
Receiver H. F. oscillator bias low on one or more channels.	The Transmitter H. F. oscillator is not tracking and is tuned to the same frequency as the Receiver H. F. oscillator.	The Receiver H. F. oscillator should always be 2 mc above Transmitter H. F. oscillator. Align tracking of both oscillators as per Alignment Instructions.

RECEIVER FAILURE

Indication	Cause	Remedy
No Reception on one channel.	Defective Crystal	Replace
Headphone output but no speaker output.	Defective component in speaker circuit.	Check switch S101 and relay K102.
Receiver sensitivity weak	Defective or weak tubes.	Check tubes and voltages.
	Low Audio Output.	Check Audio Test Data.
	Power Supply Modulator.	Make Aux. Audio Test.
	Transceiver Unit	Make receiver Audio Test
CAUTION - do not attempt to align receiver without reading Receiver Alignment Instructions in full.	Defect in I F and R F amplifier circuits or alignment.	Check receiver gain measurements under Receiver Alignment data to isolate trouble. Check C159.
AVC circuit inoperative does not meet receiver specifications distortion on strong signals	Defective tubes or component in AVC circuit	Check V101, C147, C155.
Range of Squelch control will not mute receiver background noise or open with strong RF signal.	Defective or weak tubes.	Replace V102 and,or V104. Compare voltages on Pin 3 of V104 and V102 with Schematic.
CAUTION - Squelch range can only be established after receiver sensitivity and gain measurements are satisfactorily completed.	R130 (selected value) is to establish squelch range	Value may vary from 470K to 1 meg.

BENCH CHECK KY-95 TRANSCEIVER

TRANSMITTER FAILURES

Indication	Cause	Remedy
No transmitting power on any channel	Antenna relay K101.	Check relay contacts.
	Transmitter megacycle or decimal oscillator not oscillating.	Check filament voltage at V105, V106, V107. Check tubes and oscillator alignment as per Alignment Instructions.
Transmitter H. F. oscillator bias low on one or more channels	The Receiver H. F. oscillator is not tracking and is tuned to the same frequency as the Transmitter H. F. oscillator.	The Transmitter H. F. oscillator should always be 2 mc below Receiver H. F. oscillator. Align tracking of both H. F. oscillators as per Alignment Instructions.
No transmitting power on one channel	Defective crystal	Replace
Low Power output	Defective or weak tubes or transmitter mis-alignment.	Check tube and test point voltages and compare with KY-95 schematic. Recheck alignment as per transmitter Alignment Data.
Low or no modulation.	Position of R138B mike gain control	Check and adjust as described under Final Adjustments.
	No mike current	Check mike bias at junction of R200 & C250 at terminal board.
Low or no sidetone	Position of R149B sidetone level control	Check and adjust as described under Final Adjustments.

REPLACEMENT OF CRYSTALS & INDUCTORS

Despite the compactness of the KY-95 and associated Power Supply Modulator, replacement of components, in general, presents no unusual problem. Use small soldering iron when working in rear inductor and oscillator housing and on ceramic feed thru capacitors. Replacement of the crystal holders or the inductor wafers on the megacycle selector however, may be simplified by the following procedure.

If it is desired to replace the decimal or megacycle crystal holder, first remove crystals from defective holder and then follow shaft removel instructions. Install new crystalholder with index mark at top center as shown in figure 5-1. Replace shaft as per shaft installation instructions and then replace crystals as shown in figure 5-2.

INDUCTOR WAFER REPLACEMENT

If it is desired to replace an inductor wafer on the megacycle selector, unsolder the defective wafer and then follow shaft removal instructions. After shaft has been removed, lift wafer from inductor housing. Note position of inductor and preset new inductor wafer to same position. Hold inductor wafer so that the side on which the part number appears is to the front of the unit and slide into housing. Replace the shaft as per shaft installation instructions and solder the new inductor wafer terminals.

SHAFT REMOVAL & INSTALLATION

Turn the megacycle and decimal selectors to 128.50 mc. and note position of the shaft, inductor wafers, and index mark on crystal holders. Remove the two screws holding the knob cover and remove the knob cover. Remove split "C" retaining washer from shaft at rear of bushing in front sub-panel. Grip megacycle knob and carefully pull forward keeping the flat sides of inner and outer shaft aligned and remove from unit.

To replace shaft, hold knobs at 128.50 and place shaft through bushing in front of the sub-panel and push through wafers, turning slightly from side to side to pass through inductor wafers always keeping the flat sides of the inner and outer shaft aligned. When in position to pass shaft through space between front and rear inductor housing units, note position of switch shaft ground washer and be sure shaft is aligned before pushing shaft through (see in figure 5-1). Push shaft carefully through oscillator wafers and megacycle crystal holder through bushing and into decimal crystal holder. Replace split "C" retaining washer to hold shaft in place. Recheck positions of inductor wafers and index mark on crystal holders as shown in figure 5-1.

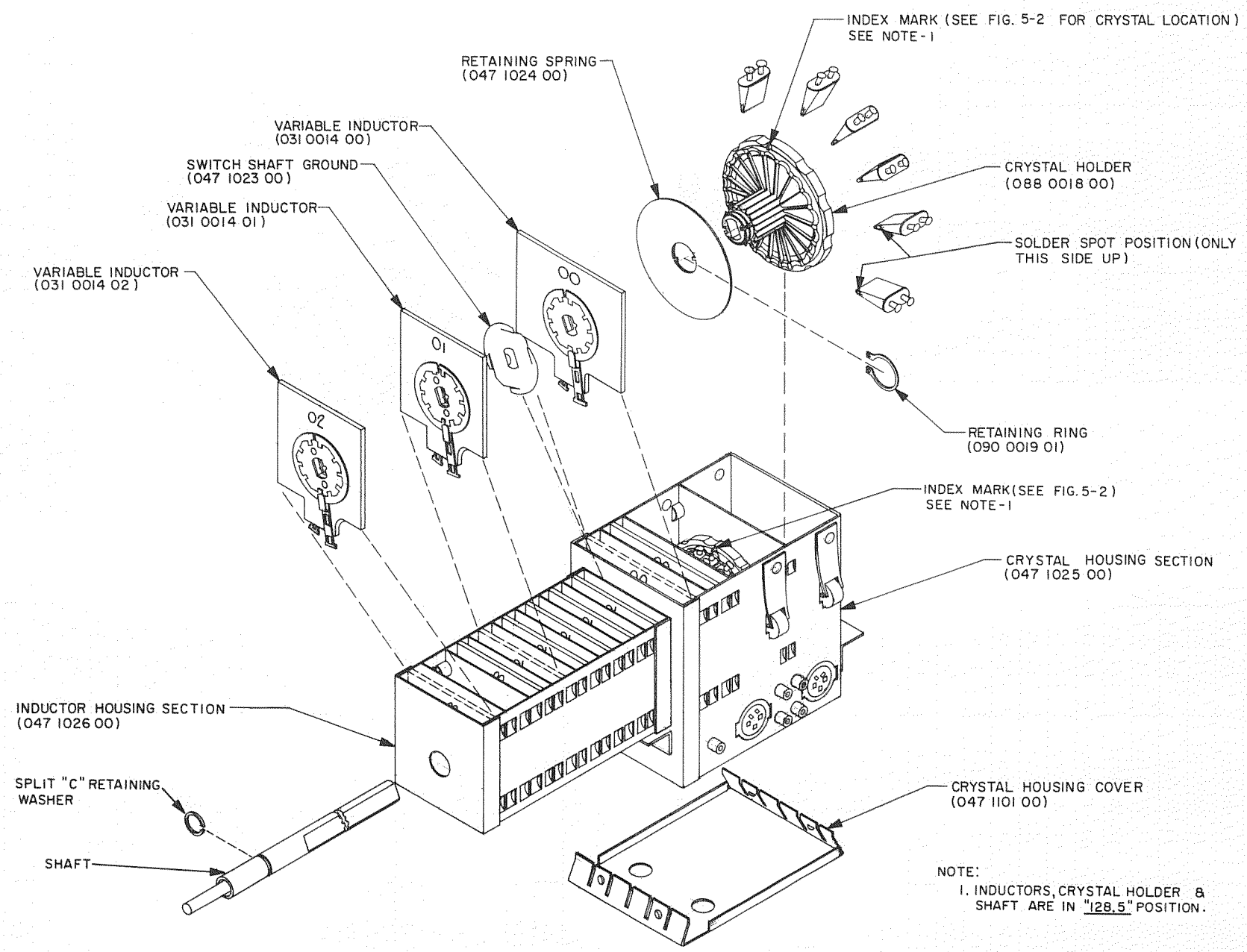


FIGURE 5-1 INDUCTOR & CRYSTAL INSTALLATION

CRYSTAL NO.	CRYSTAL FREQ.	CHANNEL FREQ.
Y122	83.0250mc	118.mc
Y123	84.0250mc	119.mc
Y124	85.0250mc	120.mc
Y125	86.0250mc	121.mc
Y126	87.0250mc	122.mc
Y127	88.0250mc	123.mc
Y128	89.0250mc	124.mc
Y129	90.0250mc	125.mc
Y130	91.0250mc	126.mc
Y131	92.0250mc	127.mc
Y132	93.0250mc	128.mc
Y133	94.0250mc	129.mc
Y134	95.0250mc	130.mc
Y135	96.0250mc	131.mc
Y136	97.0250mc	132.mc
Y137	98.0250mc	133.mc
Y138	99.0250mc	134.mc
Y139	100.0250mc	135.mc

TRANSMITTER CRYSTAL CHART

A

CRYSTAL NO	CRYSTAL FREQ.	CHANNEL FREQ.
Y101	34.9733 mc	.00 mc
Y102	35.0233 mc	.05 mc
Y103	35.0734 mc	.10 mc
Y104	35.1234 mc	.15 mc
Y105	35.1734 mc	.20 mc
Y106	35.2235 mc	.25 mc
Y107	35.2735 mc	.30 mc
Y108	35.3235 mc	.35 mc
Y109	35.3736 mc	.40 mc
Y110	35.4236 mc	.45 mc
Y111	35.4736 mc	.50 mc
Y112	35.5237 mc	.55 mc
Y113	35.5737 mc	.60 mc
Y114	35.6237 mc	.65 mc
Y115	35.6738 mc	.70 mc
Y116	35.7238 mc	.75 mc
Y117	35.7738 mc	.80 mc
Y118	35.8239 mc	.85 mc
Y119	35.8739 mc	.90 mc
Y120	35.9239 mc	.95 mc

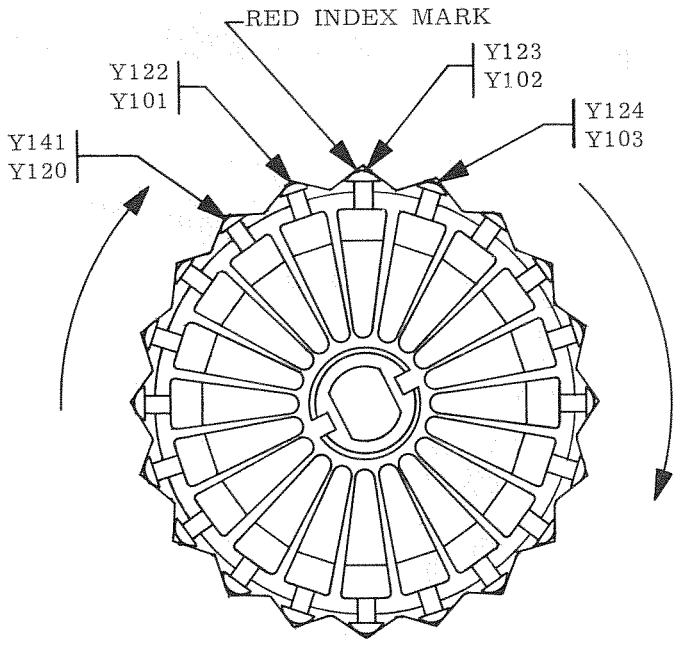
LOW FREQ. CRYSTAL CHART

B

CRYSTAL NO.	CRYSTAL FREQ.	CHANNEL FREQ.
Y124	85.0250mc	118.mc
Y125	86.0250mc	119.mc
Y126	87.0250mc	120.mc
Y127	88.0250mc	121.mc
Y128	89.0250mc	122.mc
Y129	90.0250mc	123.mc
Y130	91.0250mc	124.mc
Y131	92.0250mc	125.mc
Y132	93.0250mc	126.mc
Y133	94.0250mc	127.mc
Y134	95.0250mc	128.mc
Y135	96.0250mc	129.mc
Y136	97.0250mc	130.mc
Y137	98.0250mc	131.mc
Y138	99.0250mc	132.mc
Y139	100.0250mc	133.mc
Y140	101.0250mc	134.mc
Y141	102.0250mc	135.mc

RECEIVER CRYSTAL CHART

C



CRYSTALS ARE LOADED IN CLOCKWISE SEQUENCE, TOP NO'S. ARE FOR THE FORWARD HOLDER, LOWER NO'S. ARE FOR THE REAR HOLDER. CRYSTAL HOLDERS ARE IN 128.50 POSITION.

FIGURE 5-2 CRYSTAL HOLDER ASSEMBLY

ALIGNMENT PROCEDURES

TRANSMITTER ALIGNMENT

Connect RF Wattmeter to the antenna connection on rear panel of KY-95. Approximate test point voltages are on the KY-95 schematic diagram, figure 7-2 in the back of this Manual.

(1) TRANSMITTER H.F. OSCILLATOR - Connect VTVM (-DC scale) to test point TP103. Turn megacycle selector knob to 126.00 mc and adjust C219 for maximum VTVM indication. Check oscillator tracking by switching megacycle selector from 118.50 mc to 135.50 mc. If it is necessary to adjust tracking, adjust C219 with megacycle selector set at 118.50 mc and L150 with megacycle selector set at 135.50 mc.

(2) MIXER ALIGNMENT - Connect VTVM (-DC scale) to test point TP105. With RF cover in place, and megacycle and decimal selector knobs set for 126.50 mc, depress microphone "push-to-talk" button and adjust C204 for maximum VTVM indication. Check tracking by switching megacycle selector from 118.50 mc to 135.50 mc. If it is necessary to adjust tracking, adjust C204 at 118.50 mc and L147 at 135.50 mc.

(3) AMPLIFIER - Connect VTVM to test point TP106. With megacycle and decimal selector knobs set for 126.50 mc, depress mike button and adjust C208 for maximum VTVM indication. Check tracking by switching megacycle selector from 118.50 mc to 135.50 mc. If it is necessary to adjust tracking, adjust C208 at 118.50mc and L138 at 135.50 mc.

(4) PUSH-PULL FINAL (GRID) - Connect VTVM to test point TP 107. With megacycle and decimal selector knobs set for 126.50 mc, depress mike button and adjust C185 for maximum VTVM indication. Check Tracking by switching megacycle selector from 118.50 mc to 135.50 mc. If it is necessary to adjust tracking, adjust C185 at 118.50 mc and adjust inductance of L129 at 135.50 mc by increasing or decreasing spacing between turns.

(5) PUSH-PULL FINAL (PLATE) - With megacycle and decimal selector knobs set for 126.50 mc, depress mike button and adjust C173 for maximum power output on RF Wattmeter. Check tracking by switching megacycle selector from 118.50 mc to 135.50 mc. If it is necessary to adjust tracking, adjust C173 at 118.50 mc. and adjust inductance of L130 (A) (B) at 135.50 mc by increasing or decreasing spacing between turns. Power output should average at least 12 watts over all channels, with a minimum of 10 watts on any one frequency.

RECEIVER ALIGNMENT

DO NOT ATTEMPT TO ALIGN RECEIVER WITHOUT FIRST READING INSTRUCTION IN FULL. Do not depress the mike button when signal generator is connected to the antenna connector.

INSTRUCTIONS: Turn on equipment and adjust the volume and squelch knobs to maximum clockwise. Always reduce signal generator output to keep VTVM indication below 1.0 volts RMS when aligning IF and RF components. Terminate signal generator coax with a 50 ohm resistor and inject signal through a .01 uf capacitor for alignment and gain measurements.

(1) LOW FREQUENCY OSCILLATOR - Turn the front panel decimal selector knob to .50 position. Remove the cover from the bottom of rear oscillator housing. Connect VTVM (DC scale) to test point TP-101. Slide tuning band on L-151 (2.2 uh choke) for maximum VTVM indication. Check .00 .95 positions of decimal selector. Use glyptal cement to secure in place. Replace cover on bottom of rear oscillator housing and recheck.

(2) RECEIVER H.F. OSCILLATOR - Connect VTVM (DC scale) to test point TP-102. Turn megacycle selector knob to 126.00 mc and adjust C-120 for maximum VTVM indication. Check oscillator tracking by switching megacycle selector from 118.00 mc to 135.00 mc. If it is necessary to adjust tracking, adjust C-120 with the megacycle selector set at 118.00 mc and L-116 with the megacycle selector set at 135.00 mc, until above requirement is satisfied.

(3) ALIGN 2 MC IF - Connect VTVM (AC scale) across loudspeaker or dummy load. Using Hewlett-Packard 606A signal generator, inject a 2 mc signal modulated 1 KC at 30% through a .01 capacitor to pin 9 of V103A. Reduce signal generator output to keep VTVM indication below 1.0 volts RMS. Place a 470 ohm load resistor across the outside terminals on the three terminal side of IF transformer T-106 and increase the signal generator output for VTVM reading and adjust top slug in T-106 for maximum. Move 470 ohm load successively to the three terminal side of T-105, T-104, T-103 and adjust top slugs for maximum. Place 470 ohm load across the two terminal side of T-106 and adjust bottom slug for maximum. Move 470 ohm load successively to the two terminal side of T-105, T-104, T-103 and adjust bottom slug for maximum.

Turn volume and squelch control clockwise to the maximum. Read approximately 1.8 volts RMS on VTVM with 65 uv. input. Bandwidth 6 db approximately 32 KC, 60 db approximately 80 KC.

(4) Align 33.5 MC IF - Set decimal selector knob to .50 position. Using a Hewlett-Packard 606A signal generator inject a 33.475 mc signal modulated 1 KC at 30% through a .01 uf capacitor to pin 9 of V102A. Place a 470 ohm load resistor across unmarked side of T102 and adjust bottom slug for maximum move 470 ohm load resistor to the unmarked side of T101 and adjust bottom slug for maximum. Place 470 ohm load across marked side of T102 and adjust top slug, move 470 ohm load to marked side of T101 and adjust top slug.

ALIGNMENT CHECK

Turn volume and squelch controls clockwise to the maximum. Read approximately 1.8 volts RMS on VTVM with 15 uv. input. Tune decimal selector knob from .00 throught to .95 with proper signal generator frequencies, and note bandwidth of 1 mc approximately ± 2 db.

(5) RECEIVER RF ALIGNMENT- Connect Boonton 211A signal generator to the antenna connection on rear panel of KY-95 transceiver. Signal generator output 126.50 mc modulated 1 kc at 30%. Have RF cover in place, set megacycle and decimal selector knobs to 126.50 and tune C104, C106, C-111 for maximum indication on VTVM reducing signal generator output to keep VTVM indication below 1.0 volt RMS.

Check RF tracking by switching megacycle selector from 118.50 mc to 135.50 mc noting that 1uv provides 1 watt audio (1.8 volts across 3.2 ohm load) and at least 6 db Signal+Noise/Noise.

If RF tracking does not meet above requirement, it will be necessary to adjust tracking. Adjust C104, C106, C111 at 118.50 mc and L102, L104, L106 at 135.50 mc until above requirement is satisfied.

KY-95

PARTS LIST

ALWAYS INCLUDE THE MODEL NO. AND SERIAL NO. OF THE UNIT ALONG WITH THE KING PART NO. AND REFERENCE SYMBOL WITH YOUR ORDER.

KY-95 TRANSCEIVER

REF. SYMBOL	DESCRIPTION	LIST PRICE	KING PART NO.
C-101	Capacitor, Ceramic 12 pf, 5%	$ .15	113-3120-00
C-102	Capacitor, Feed Thru 39 pf, 5%	.25	106-0004-00
C-103	Capacitor, Ceramic 4.7 pf, 5%	.15	113-3047-00
C-104	Capacitor, Trimmer, Variable .5-4.5 pf	1.32	102-0002-00
C-105	Capacitor, Ceramic 6.8 pf, 5%	.15	113-3068-00
C-106	Capacitor, Trimmer, Variable .5-4.5 pf	1.32	102-0002-00
C-107	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-108	Capacitor, Composition .24 pf, 10%	.25	106-0001-00
C-109	Capacitor, Feed Thru 1K pf, 20%	.25	106-0004-00
C-110	Capacitor, Ceramic .01 uf, 50V+80%-20%	.15	113-6103-00
C-111	Capacitor, Trimmer, Variable, .5-4.5 pf	.32	102-0002-00
C-117	Capacitor, Ceramic 100 pf, 5%	.20	113-3101-00
C-118	Capacitor, Ceramic 4.7 pf, 5%	.15	113-3047-00
C-119	Capacitor, Ceramic 22 pf, 5%	.15	113-3220-00
C-120	Capacitor, Trimmer, Variable 2-8 pf	1.23	102-0009-00
C-121	Capacitor, Ceramic 12 pf, 5%	.15	113-3120-00
C-122	Capacitor, Ceramic 68 pf, 5%	.20	113-3680-00
C-123	Capacitor, Feed Thru 100 pf, 20%	.25	106-0004-01
C-124	Capacitor, Ceramic 22 pf, 5%	.15	113-3220-00
C-125	Capacitor, Ceramic 1K pf, GMV	.15	113-8102-00
C-126	Capacitor, Ceramic 1K pf, GMV	.15	113-8102-00
C-127	Capacitor, Ceramic 15 pf, 5%	.15	113-3150-00
C-128	Capacitor, Ceramic 1K pf, GMV	.15	113-8102-00
C-131	Capacitor, Ceramic .01 uf, 50V+80%-20%	.15	113-6103-00
C-132	Capacitor, Ceramic 1K pf, GMV	.15	113-8102-00
C-133	Capacitor, Ceramic 4.7K pf, +80%-20%	.15	114-6472-00
C-134	Capacitor, Ceramic 4.7K pf, +80%-20%	.15	114-6472-00
C-135	Capacitor, Ceramic 4.7 pf 5%	.15	113-3047-00
C-137	Capacitor, Ceramic .01 uf, 50V+80%-20%	.15	113-6103-00
C-138	Capacitor, Ceramic 220 pf, 5%	.15	113-3221-00
C-140	Capacitor, Ceramic 3.3 pf, 5%	.15	113-3033-00
C-141	Capacitor, 1.5 pf, 10%	.10	106-0001-02
C-142	Capacitor, Ceramic 3.3 pf, 5%	.15	113-3033-00
C-143	Capacitor, Ceramic 4.7K pf, +80%-20%	.15	114-6472-00
C-144	Capacitor, Ceramic .01 uf, 50V+80%-20%	.15	113-6103-00
C-145	Capacitor, Ceramic 3.3 pf, 5%	.15	113-3033-00

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KY-95 TRANSCEIVER

REF. SYMBOL	DESCRIPTION	LIST PRICE	KING PART NO.
C-146	Capacitor, Ceramic .01 uf, 20%	$ .15	115-7103-00
C-147	Capacitor, Mylar .1 uf, 20% 100 WVDC	.35	105-0004-00
C-151	Capacitor, Ceramic 4.7K pf, +80% -20%	.15	114-6472-00
C-152	Capacitor, Ceramic .01 uf, 20%	.15	115-7103-00
C-153	Capacitor, Ceramic .01 uf, 20%	.15	115-7103-00
C-154	Capacitor, Ceramic 100 pf, 5%	.20	113-3101-00
C-155	Capacitor, Mylar .1 uf, 20%, 100 WVDC	.35	105-0004-00
C-156	Capacitor, Ceramic 4.7K pf, +80%-20%	.15	114-6472-00
C-157	Capacitor, Ceramic 2.7 pf, 5%	.15	113-3027-00
C-158	Capacitor, Ceramic 100 pf, 5%	.20	113-3101-00
C-159	Capacitor, Mylar .1 uf, 20%, 100 WVDC	.35	105-0004-00
C-160	Capacitor, Mylar .01 uf, 200 WVDC	.30	105-0003-00
C-161	Capacitor, Mylar .01 uf, 200 WVDC	.30	105-0003-00
C-162	Capacitor, Ceramic .01 uf, 20%	.15	115-7103-00
C-163	Capacitor, Ceramic 220 pf, 5%	.15	113-3221-00
C-165	Capacitor, Ceramic .01 uf, 20%	.15	115-7103-00
C-171	Capacitor, Ceramic 22 pf, 5%	.15	113-3220-00
C-173	Capacitor, Trimmer, Variable .5-4.5 pf	1.32	102-0002-00
C-174	Capacitor, Ceramic 18 pf, 5%	.15	113-3180-00
C-175	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-176	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-177	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-178	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-179	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-180	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-181	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-182	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-183	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-184	Capacitor, Ceramic 3.3 pf, 10%	.15	113-5033-00
C-185	Capacitor, Trimmer, Variable. 5-4.5 pf	1.32	102-0002-00
C-186	Capacitor, Ceramic 12 pf, 5%	.15	113-3120-00
C-187	Capacitor, Ceramic 470 pf, 20%	.10	113-7471-00
C-188	Capacitor, Composition .47 pf, 10%	.10	106-0001-00

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KY-95 TRANSCEIVER

REF. SYMBOL	DESCRIPTION	LIST PRICE	KING PART NO.
C-193	Capacitor, Ceramic 27 pf, 5%	$ .15	113-3270-00
C-194	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-195	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-196	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-197	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-198	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-199	Capacitor, Ceramic 470 pf, 20%	.10	113-7471-00
C-200	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-201	Capacitor, Ceramic 10 pf, 5%	.15	113-3100-00
C-202	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-203	Capacitor, Ceramic 10 pf, 5%	.15	113-3100-00
C-204	Capacitor, Trimmer, Variable .5-4.5 pf	1.32	102-0002-00
C-205	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-206	Capacitor, Ceramic 470 pf, 20%	.10	113-7471-00
C-207	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-208	Capacitor, Trimmer, Variable .5-4.5 pf	1.32	102-0002-00
C-214	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-215	Capacitor, Ceramic 1K pf, GMV	.15	113-8102-00
C-216	Capacitor, Feed Thru 100 pf, 20%	.25	106-0004-01
C-217	Capacitor, Ceramic 18 pf, 5%	.15	113-3180-00
C-218	Capacitor, Ceramic 12 pf, 5%	.15	113-3120-00
C-219	Capacitor, Trimmer, Variable 2-8 pf	1.23	102-0009-00
C-220	Capacitor, Ceramic 47 pf, 5%	.15	113-3470-00
C-221	Capacitor, Ceramic 2.7 pf, 5%	.15	113-3027-00
C-222	Capacitor, Feed Thru 100 pf, 20%	.25	106-0004-01
C-223	Capacitor, Ceramic 2.2 pf, 10%	.15	113-5022-00
C-225	Capacitor, Ceramic 6.8 pf, 5%	.15	113-3068-00
C-226	Capacitor, Ceramic 22 pf, 5%	.15	113-3220-00
C-227	Capacitor, Feed Thru, 1K pf, 20%	.25	106-0004-02
C-228	Capacitor, Feed Thru, 1K pf, 20%	.25	106-0004-02
C-229	Capacitor, Ceramic 6.8 pf, 5%	.15	113-3068-00
C-230	Capacitor, Ceramic 1K pf, GMV	.15	113-8102-00
C-231	Capacitor, Composition 3.3 pf, 10%	.15	113-5033-00
C-232	Capacitor, Ceramic 4.7 K pf, +80%-20%	.15	114-6472-00
C-234	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00

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KY-95 TRANSCEIVER

REF. SYMBOL	DESCRIPTION	LIST PRICE	KING PART NO.
C-235	Capacitor, Ceramic 150 pf, 5%	$ .20	113-3151-00
C-236	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-237	Capacitor, Feed Thru 1K pf, 20%	.25	106-0004-02
C-238	Capacitor, Ceramic 1K pf, GMV	.15	113-8102-00
C-239	Capacitor, Ceramic .01 uf, 50V+80%-20%	.15	113-6103-00
C-240	Capacitor, Feed Thru 1K pf, 20%	.25	106-0004-02
C-241	Capacitor, Feed Thru 1K pf, 20%	.25	106-0004-02
C-242	Capacitor, Ceramic 1K pf, GMV	.15	113-8102-00
C-243	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-244	Capacitor, Ceramic .01 uf, 50V+80%-20%	.15	113-6103-00
C-245	Capacitor, Ceramic 1K pf, GMV	.15	113-8102-00
C-246	Capacitor, Ceramic .01 uf, 50V +80%-20%	.15	113-6103-00
C-247	Capacitor, Ceramic 150 pf, 5%	.20	113-3151-00
C-248	Capacitor, Feed Thru 1K pf, 20%	.25	106-0004-02
C-249	Capacitor, Electrolytic 75 uf, 20 WVDC	.76	097-0024-00
C-250	Capacitor, Electrolytic 6 uf, 20 WVDC	.56	097-0015-00
C-251	Capacitor, Ceramic 1K pf, 10%	.15	113-5102-00
CR-101	Diode, Silicon	1.22	007-6014-00
CR-102	Diode, Germanium	1.35	007-6004-00
CR-103	Diode, Silicon	1.22	007-6007-00
CR-104	Diode, Silicon	1.22	007-6008-00
DS-101	Lamp Bulb, #330 14V	.30	037-0007-01
DS-101	Lamp Bulb, #327 28V	.44	037-0007-02
J-101	Connector, Co-ax, Receptacle	1.25	030-0013-00
J-102	Connector, Plug, 20 Pin	4.02	030-2003-00
K-101	Relay, Antenna	11.10	032-0005-00
K-102	Relay, Power	14.60	032-0004-00
L-101	Receiver Input Transformer	.25	019-3002-00
L-102	RF Tracking Coil	.60	019-2033-00
L-103	Variable Inductor Wafer	2.52	031-0014-01
L-104	RF Tracking Coil	.60	019-2033-00
L-105	Variable Inductor Wafer	2.52	031-0014-01
L-106	RF Tracking Coil	.60	019-2033-00
L-107	Variable Inductor Wafer	2.52	031-0014-01
L-108	Molded Coil, 1.0 uf	.40	019-2005-00

ALWAYS INCLUDE THE MODEL NO. AND SERIAL NO. OF THE UNIT ALONG WITH THE KING PART NO. AND REFERENCE SYMBOL WITH YOUR ORDER.

KY-95 TRANSCEIVER

REF. SYMBOL	DESCRIPTION	LIST PRICE	KING PART NO.
L-115	Choke, HF Oscillator	$ 1.60	019-2035-00
L-116	Oscillator, Coil	.81	019-2034-00
L-117	Variable Inductor Wafer	2.73	031-0014-00
L-126	Variable Inductor Wafer	5.90	031-0014-02
L-127	Molded Coil, 2.2 uh	.40	019-2004-00
L-128	Variable Inductor Wafer	5.90	031-0014-02
L-129A	Coil, Grid Tank A, B,	1.25	019-2038-00
L-129B		1.25	019-2038-00
L-130A L-130B L-130C	Coil, Plate Tank A, B, C,	2.10	019-2039-00
L-136	Molded Coil, 2.2 uh	.40	019-2004-00
L-137	Molded Coil, 2.2 uh	.40	019-2004-00
L-138	R. F. Tracking Coil	.75	019-2033-01
L-139	Variable Inductor Wafer	2.52	031-0014-01
L-146	Variable Inductor Wafer	2.52	031-0014-01
L-147	R.F. Tracking Coil	.75	019-2033-01
L-148	Choke, HF Oscillator	1.60	019-2035-00
L-149	Variable Inductor Wafer	2.73	031-0014-00
L-150	Oscillator, Coil	.81	019-2034-00
L-151	Variable Inductor	.75	019-2040-01
L-152	Molded Coil, 15 uh	.60	019-2032-00
L-153	Molded Coil, 1.0 uh	.40	019-2005-00
L-159	Molded Coil, 1.0 uh	.40	019-2005-00
L-160	Molded Coil, 1.0 uh	.40	019-2005-00
L-161	Molded Coil, 4.7 uh	.60	019-2036-00
L-162	Molded Coil, 1.0 uh	.40	019-2005-00
N-101	Harmonic Trap		250-1045-00
R-101	Resistor, 10 ohms 10% 1/4 watt	.25	130-0100-25
R-102	Resistor W/W 10K ohms 10% 3 watt	.85	132-0011-00
R-103	Resistor 100K ohms 10% 1/2 watt	.10	130-0104-35
R-104	Resistor Composition 10 ohms 10% 1/4 watt	.25	130-0100-25
R-105	Resistor 10K ohms 10% 1/4 watt	.15	130-0103-25

ALWAYS INCLUDE THE MODEL NO. AND SERIAL NO. OF THE UNIT ALONG WITH THE KING PART NO. AND REFERENCE SYMBOL WITH YOUR ORDER.

KY-95 TRANSCEIVER

REF. SYMBOL	DESCRIPTION	LIST PRICE	KING PART NO.
R-111	Resistor, 470 ohms, 10% 1/4 watt	$ .15	130-0471-25
R-112	Resistor, 10K ohms, 10%, 1 watt	.15	130-0103-45
R-113	Resistor, 1 Meg ohm, 10%, 1/2 watt	.10	130-0105-35
R-114	Resistor, 1K ohms, 10%, 1/2 watt	.10	130-0102-35
R-115	Resistor, 10K ohms, 10%, 1/2 watt	.10	130-0103-35
R-116	Resistor, 100K ohms, 10%, 1/2 watt	.10	130-0104-35
R-117	Resistor, 10K ohms, 10%, 1/2 watt	.10	130-0103-35
R-118	Resistor, 47 ohms, 10%, 1/2 watt	.25	130-0470-35
R-121	Resistor, 180 ohms, 10%, 1/2 watt	.15	130-0181-35
R-122	Resistor, 47K ohms, 10%, 1/2 watt	.10	130-0473-35
R-123	Resistor, 27K ohms, 10%, 1/2 watt	.10	130-0273-35
R-124	Resistor, 4.7K ohms, 10%, 1/2 watt	.10	130-0472-35
R-125	Resistor, 1 Meg. ohm, 10%, 1/2 watt	.10	130-0105-35
R-126	Resistor, 1K ohms, 10%, 1/2 watt	.10	130-0102-35
R-127	Resistor, 1K ohms, 10%, 1/2 watt	.10	130-0102-35
R-128	Resistor, 1 Meg ohm 10%, 1/2 watt	.10	130-0105-35
R-129	Resistor, 180 ohms 10% 1/2 watt	.15	130-0181-35
R-130	Resistor, SELECTED		
R-135	Resistor, 68 K ohms, 10%, 1/2 watt	.10	130-0683-35
R-136	Resistor, 4.7K ohms, 10%, 1/2 watt	.10	130-0472-35
R-137	Resistor 180 ohms, 10%, 1/2 watt	.10	130-0181-35
R-138A	Resistor Variable 2 section pot	1.19	133-0009-00
R-138B	(A) 1K ohms Squelch (B) 1K ohms Mike Gain		
R-139	Resistor, 82K ohms, 10%, 1/2 watt	.15	130-0823-35
R-140	Resistor, 1 Meg ohm 10%, 1/2 watt	.10	130-0105-35
R-141	Resistor, 1 Meg ohm 10%, 1/2 watt	.10	130-0105-35
R-142	Resistor, 4.7K ohms 10%, 1/2 watt	.10	130-0472-35
R-143	Resistor, 270K ohms 10%, 1/2 watt	.10	130-0274-35
R-144	Resistor, 270K ohms 10%, 1/2 watt	.10	130-0274-35
R-145	Resistor, 47K ohms 10%, 1/2 watt	.10	130-0473-35
R-146	Resistor, 100K ohms 10%, 1/2 watt	.10	130-0104-35
R-147	Resistor, 270K ohms 10%, 1/2 watt	.10	130-0274-35
R-148	Resistor, 100K ohms 10%, 1/2 watt	.10	130-0104-35
R-149A	Resistor, Variable 2 section Pot, Special	1.19	133-0010-01
R-149B	(A) 100K ohms volume (B) 1K ohms Sidetone		
R-150	Resistor 270K ohms 10%, 1/2 watt	.10	130-0274-35

ALWAYS INCLUDE THE MODEL NO. AND SERIAL NO. OF THE UNIT ALONG WITH THE KING PART NO. AND REFERENCE SYMBOL WITH YOUR ORDER .

KY-95 TRANSCEIVER

REF. SYMBOL	DESCRIPTION	LIST PRICE	KING PART NO.
R-151	Resistor, 470K ohms 10%, 1/2 watt	$ .35	130-0474-35
R-152	Resistor, 390 ohms, 10%, 1/2 watt	.10	130-0391-35
R-153	Resistor, 270K ohms, 10%, 1/2 watt	.10	130-0274-35
R-154	Resistor, 270K ohms, 10%, 1/2 watt	.10	130-0274-35
R-161	Resistor, 100 ohms, 10%, 1 watt	.15	130-0101-45
R-162	Resistor, 1K ohms, 10%, 1/2 watt	.10	130-0102-35
R-163	Resistor, 100 ohms, 10%, 1 watt	.15	130-0101-45
R-164	Resistor, 1K ohms, 10%, 1/2 watt	.10	130-0102-35
R-165	Resistor, 12K ohms, 10%, 1/2 watt	.10	130-0123-35
R-171	Resistor, 100K ohms, 10%, 1/2 watt	.10	130-0104-35
R-172	Resistor, 100 ohms, 10%, 1/2 watt	.10	130-0101-35
R-173	Resistor, 6.8K ohms, 10%,1/2 watt	.10	130-0682-35
R-174	Resistor, 4.7K ohms, 10%, 1/2 watt	.10	130-0472-35
R-175	Resistor, 100 ohms, 10%, 1/2 watt	.10	130-0101-35
R-176	Resistor, 47K ohms 10%, 1/2 watt		130-0473-35
R-177	Resistor, 100K ohms, 10%, 1/2 watt	.10	130-0104-35
R-178	Resistor, 1K ohms, 10%, 1/2 watt	.10	130-0102-35
R-179	Resistor, 39K ohms, 10%, 1/2 watt	.10	130-0393-35
R-184	Resistor, 270K ohms, 10% 1/2 watt	.10	130-0274-35
R-185	Resistor, 6.8K ohms, 10%, 1/4 watt	.15	130-0682-25
R-186	Resistor, 22K ohms, 10%, 1/2 watt	.15	130-0223-35
R-187	Resistor, 10K ohms, 10%, 1 watt	.15	130-0103-45
R-188	Resistor, 470 ohms, 10%, 1/4 watt	.15	130-0471-25
R-189	Resistor, 10 ohms, 10%, 1/4 watt	.15	130-0100-25
R-190	Resistor, 10 K ohms, 10% 1/4 watt	.15	130-0103-25
R-191	Resistor, 10K ohms, 10%, 1/4 watt	.15	130-0103-25
R-192	Resistor, 47 ohms, 10%, 1/4 watt	.10	130-0470-25
R-193	Resistor, 15K ohms, 10%, 1/2 watt	.10	130-0153-35
R-194	Resistor, 3.3 K ohms, 10%, 1/2 watt	.25	130-0332-35
R-195	Resistor, W/W 50 ohms, 10%, 3 watts	.76	132-0007-00
R-197	Resistor, 3.3 ohms, 10%, 1 watt W/W		132-0015-00
R-198	Resistor, W/W 18 ohms, 5%, 3 watts	.75	132-0009-00
R-199	Resistor, 100 ohms, 10%, 1/2 watt	.10	130-0101-35
R-200	Resistor, 470 ohms, 10%, 1/2 watt	.10	130-0471-35
R-201	Resistor, 3.3 Meg. ohms, 10%, 1/2 watt		130-0335-35
R-202	Resistor, W/W 10 ohms, 10%, 3 watts	.76	132-0006-00
R-203	Resistor, 8.2K ohms, 10%, 1/2 watt	.10	130-0822-35
R-204	Resistor, 470 ohms, 10%, 1/2 watt	.10	130-0471-35
R-205	Resistor, 8.2K ohms, 10%, 1/2 watt	.10	130-0822-35

ALWAYS INCLUDE THE MODEL NO. AND SERIAL NO. OF THE UNIT ALONG WITH THE KING PART NO. AND REFERENCE SYMBOL WITH YOUR ORDER.

KY- 95 TRANSCEIVER

REF. SYMBOL	DESCRIPTION	LIST PRICE	KING PART NO.
R-206	Resistor, 470 ohms, 10%, 1/2 watt	$ .10	130-0471-35
R-207	Resistor, W/W 150 ohms, 10%, 3 watts	.80	132-0010-00
S-101	Switch, Double pole, Single Throw	.60	031-0006-01
S-102	Switch, Triple pole, Double Throw	.85	031-0010-01
T-101	IF Transformer, 33.5 mc	3.65	019-8009-00
T-102	I F Transformer, 33.5 mc	3.65	019-8009-00
T-103	IF Transformer, 2 mc	3.78	019-8008-00
T-104	IF Transformer, 2 mc	3.78	019-8008-00
T-105	IF Transformer, 2 mc	3.78	019-8008-00
T-106	IF Transformer, 2 mc	3.78	019-8008-00
T-107	Transformer, Transistor Audio input	4.50	019-5017-00
V-101	Nuvistor: 6CW4	2.55	021-0012-00
V-102	Electron Tube: 6EA8	2.10	021-0013-00
V-103	Electron Tube: 6EA8	2.10	021-0013-00
V-104	Electron Tube: 6EA8	2.10	021-0013-00
V-105	Nuvistor: 6CW4	2.55	021-0012-00
V-106	Nuvistor: 6CW4	2.55	021-0012-00
V-107	Nuvistor: 6CW4	2.55	021-0012-00
V-108	Electron Tube: 6EA8	2.10	021-0013-00
V-109	Electron Tube: 5686	5.15	021-0004-00
V-110	Electron Tube: 7551	5.35	021-0014-00
V-111	Electron Tube: 7551	5.35	021-0014-00
Y-101	Crystal, Special, 34.9733 mc	11.40	041-8349-73
Y-102	Crystal, Special, 35.0233 mc	11.40	041-8350-23
Y-103	Crystal, Special, 35.0734 mc	11.40	041-8350-73
Y-104	Crystal, Special, 35.1234 mc	11.40	041-8351-23
Y-105	Crystal, Special, 35.1734 mc	11.40	041-8351-73
Y-106	Crystal, Special, 35.2235 mc	11.40	041-8352-23
Y-107	Crystal, Special, 35.2735 mc	11.40	041-8352-73
Y-108	Crystal, Special, 35.3235 mc	11.40	041-8353-23
Y-109	Crystal, Special, 35.3736 mc	11.40	041-8353-73
Y-110	Crystal, Special, 35.4236 mc	11.40	041-8354-23
Y-111	Crystal, Special, 35.4736 mc	11.40	041-8354-73
Y-112	Crystal, Special, 35.5237 mc	11.40	041-8355-23
Y-113	Crystal, Special, 35.5737 mc	11.40	041-8355-73

ALWAYS INCLUDE THE MODEL NO. AND SERIAL NO. OF THE UNIT ALONG WITH THE KING PART NO. AND REFERENCE SYMBOL WITH YOUR ORDER.

KY-95 TRANSCEIVER

REF. SYMBOL	DESCRIPTION	LIST PRICE	KING PART NO.
Y-114	Crystal, Special 35.6237 mc	$11.40	041-8356-23
Y-115	Crystal, Special 35.6738 mc	11.40	041-8356-73
Y-116	Crystal, Special 35.7238 mc	11.40	041-8357-23
Y-117	Crystal, Special 35.7738 mc	11.40	041-8357-73
Y-118	Crystal, Special 35.8239 mc	11.40	041-8358-23
Y-119	Crystal, Special 35.8739 mc	11.40	041-8358-73
Y-120	Crystal, Special 35.9239 mc	11.40	041-8359-23
Y-121	Crystal, Special 82.0250 mc	11.40	041-8820-25
Y-122	Crystal, Special 83.0250 mc	11.40	041-8830-25
Y-123	Crystal, Special 84.0250 mc	11.40	041-8840-25
Y-124	Crystal, Special 85.0250 mc	11.40	041-8850-25
Y-125	Crystal, Special 86.0250 mc	11.40	041-8860-25
Y-126	Crystal, Special 87.0250 mc	11.40	041-8870-25
Y-127	Crystal, Special 88.0250 mc	11.40	041-8880-25
Y-128	Crystal, Special 89.0250 mc	11.40	041-8890-25
Y-129	Crystal, Special 90.0250 mc	11.40	041-8900-25
Y-130	Crystal, Special 91,0250 mc	11.40	041-8910-25
Y-131	Crystal, Special 92,0250 mc	11.40	041-8920-25
Y-132	Crystal, Special 93.0250 mc	11.40	041-8930-25
Y-133	Crystal, Special 94.0250 mc	11.40	041-8940-25
Y-134	Crystal, Special 95.0250 mc	11.40	041-8950-25
Y-135	Crystal, Special 96.0250 mc	11.40	041-8960-25
Y-136	Crystal, Special 97.0250 mc	11.40	041-8970-25
Y-137	Crystal, Special 98.0250 mc	11.40	041-8980-25
Y-138	Crystal, Special 99.0250 mc	11.40	041-8990-25
Y-139	Crystal, Special 100.0250 mc	11.40	041-9100-02
Y-140	Crystal, Special 101.0250 mc	11.40	041-9101-02
Y-141	Crystal, Special 102,0250 mc	11.40	041-9102-02
TP-101	Part of C-227		106-0004-02
TP-102	Part of C-228		106-0004-02
TP-103	Part of C-109		106-0004-02
TP-104	Test Jack	.48	010-0002-00
TP-105	Test Jack	.48	010-0002-00
TP-106	Test Jack	.48	010-0002-00
TP-107	Test Jack	.48	010-0002-00

ALWAYS INCLUDE THE MODEL NO. AND SERIAL NO. OF THE UNIT ALONG WITH THE KING PART NO. AND REFERENCE SYMBOL WITH YOUR ORDER.

KY-95 TRANSCEIVER

REF. SYMBOL	DESCRIPTION	LIST PRICE	KING PART NO.
	Shield Nut (For Antenna Connector)	.75	030-1011-00
	Shield, Final Amplifier	2.70	047-1104-00
	Shield, Receiver Interstage	3.38	047-1105-00
	Shield, Transmitter Interstage	2.70	047-1106-00
	Front Mounting Bracket	6.90	047-1097-00
	Switch Mounting Plate	1.35	047-1098-00
	Switch Actuating Arm	1.20	047-1044-00
	Switch Shaft (outer)	3.85	031-0017-00
	Switch Shaft (inner)		031-0017-01
	Rear Mounting Bracket	2.55	047-1096-00
	Inductor Housing Assembly	5.35	047-1026-00
	Crystal Housing Assembly	5.65	047-1025-00
	Contact Holder	2.66	088-0020-00
	Crystal Contact Strip	.80	047-1029-00
	Terminal, Turret, Screw Type	.10	008-0017-01
	Crystal Holder and Switching Detent	.80	088-0018-00
	Crystal Retaining Spring Assembly	1.54	047-1024-00
	Tube Shield	.10	090-0005-00
	Crystal Housing Cover	4.35	047-1101-00
	Shield Plate Assembly	4.76	250-1046-08
	Switch Backing Plate	1.89	047-1046-00
	Knob, Megacycle Selector	5.25	088-0015-00
	Knob, Kilocycle Selector	4.32	088-0016-00
	Face Plate	3.15	047-1007-03
	Knob, Volume -"On"	2.45	088-0004-02
	Knob, Squelch	2.45	088-0004-01
	Equipment Cover	11.05	047-1006-00
	Dial Cover VHF - COMM	2.58	088-0013-00

ALWAYS INCLUDE THE MODEL NO. AND SERIAL NO. OF THE UNIT ALONG WITH THE KING PART NO. AND REFERENCE SYMBOL WITH YOUR ORDER.

KY-95 TRANSCEIVER

REF. SYMBOL	DESCRIPTION	LIST PRICE	KING PART NO.
	BENCH TEST KIT	$ 13.95	050-1007-00
	Receptacle (14 Pin)		030-2000-00
	Receptacle (20 Pin)		030-2002-00
	Hood (14 Pin)		030-1009-00
	Hood (20 Pin)		030-1010-00
	INSTALLATION KIT	19.40	050-1004-00
	Receptacle 14 Pin		030-2000-00
	Receptacle 20 Pin		030-2002-00
	Connector UG88/U Plug		030-0005-00
	Hood 14 Pin		030-1009-00
	Hood 20 Pin		030-1010-00
	Lever & Pivot Assembly		030-1008-00
	#8-32 x 3/8" Mounting Screw		089-5067-06
	U Nut #8-32		089-2037-30
	Mounting Base (Power Supply)		047-1010-00

ALWAYS INCLUDE THE MODEL NO. AND SERIAL NO. OF THE UNIT ALONG WITH THE KING PART NO. AND REFERENCE SYMBOL WITH YOUR ORDER.

KS-501A

REF. SYMBOL	DESCRIPTION	LIST PRICE	KING PART NO.
C-301	Capacitor, Electrolytic 150 uf 3 Volts DC	$ .72	097-0027-00
C-302	Capacitor, Electrolytic 150 uf 25 Volts DC	.84	097-0012-00
C-303	Capacitor, Ceramic .01 uf 500 Volts DC	.15	115-7103-00
C-305	Capacitor, Electrolytic 150 uf 25 Volts DC	.84	097-0012-00
C-306	Capacitor, Electrolytic 150 uf 25 Volts DC	.84	097-0012-00
C-307	Capacitor, Electrolytic 150 uf 25 Volts DC	.84	097-0012-00
C-308	Capacitor, Ceramic .01 uf, 500 V DC	.15	115-7103-00
C-309	Capacitor, Ceramic .01 uf, 500 V DC	.15	115-7103-00
C-310	Capacitor, Electrolytic 3 Sections:	1.89	097-0016-00
C-310A	40 uf 400 Volts DC		
C-310B	60 uf 200 Volts DC		
C-310C	60 uf 200 Volts DC		
CR-301	Diode, Silicon	1.62	007-6006-00
CR-302	Diode, Silicon	1.62	007-6006-00
CR-303	Diode, Silicon	1.62	007-6006-00
CR-304	Diode, Silicon	1.62	007-6006-00
F-301	Fuse, Slo-Blo, 8 Amp.	.32	036-0003-00
F-302	Fuse, Slo-Blo, 3 Amp.	.53	036-0008-00
J-301	Connector, Plug 14 Pin	2.91	030-2001-00
L-301	Torroid, Filter Choke	4.68	019-2002-01
L-302	Choke, Filter, 200 mh	7.10	019-2030-00
Q-301	Transistor, Power	3.24	007-0018-00
Q-302	Transistor, Power	3.24	007-0018-00
Q-303	Transistor, Power	3.24	007-0018-00
Q-304	Transistor, Power	3.24	007-0018-00
Q-305	Transistor, Power	3.24	007-0018-00
R-301	Resistor, Comp. 470 Ohms 10% 1/2 watt	.10	130-0471-35
R-302	Resistor, Comp. 27 Ohms 10% 1/2 watt	.10	130-0270-35
R-303	Resistor, Comp. 3.3 Ohms 10% 1/2 watt	.15	130-0033-45
R-304	Resistor, Comp. 27 Ohms 10% 1/2 watt	.10	130-0270-35
R-305	Resistor, Comp. 220 Ohms 10% 1 watt	.15	130-0221-45
R-307	Resistor, Comp. 680 Ohms 10% 1 watt	.10	130-0681-45
R-308	Resistor, Comp. 18 Ohms 10% 1 watt	.15	130-0180-45
R-309	Resistor, Comp. 18 Ohms 10% 1 watt	.15	130-0180-45

ALWAYS INCLUDE THE MODEL NO. AND SERIAL NO. OF THE UNIT ALONG WITH THE KING PART NO. AND REFERENCE SYMBOL WITH YOUR ORDER.

KS-501A

REF SYMBOL	DESCRIPTION	LIST PRICE	KING PART NO.
R-310	Resistor, Comp. 270K Ohms 10% 1 watt	$ .15	130-0274-45
T-301	Transformer, Audio Interstage	1.65	019-5018-00
T-302	Transformer, Audio Out and Modulator	2.91	019-5019-00
T-303	Transformer, Power	14.85	019-7008-00
	Terminal Board	2.66	009-0001-02
	Transistor Socket	.15	033-0001-00
	Mica Washer For Mounting Transistor	.10	091-0004-00
	Rubber Grommet	.10	091-0003-00
	Connector Lock Tab	.44	030-1007-00
	Fuse Post Assembly	.63	033-0013-00
	Equipment Cover	3.00	047-1004-00
	Rubber Grommet	.15	091-0001-00

ALWAYS INCLUDE THE MODEL NO. AND SERIAL NO. OF THE UNIT ALONG WITH THE KING PART NO. AND REFERENCE SYMBOL WITH YOUR ORDER.

KS-502A

REF. SYMBOL	DESCRIPTION	LIST PRICE	KING PART NO.
C-402	Capacitor, Electrolytic 150 uf 25 Volts DC	$ .84	097-0012-00
C-403	Capacitor, Ceramic .01 uf 10% 500 Volts DC	.15	115-7103-00
C-405	Capacitor, Electrolytic 75 uf 40 volts DC	.86	097-0014-00
C-406	Capacitor, Electrolytic 75 uf 40 Volts DC	.86	097-0014-00
C-407	Capacitor, Electrolytic 75 uf 40 Volts DC	.86	097-0014-00
C-408	Capacitor, Ceramic .0047 uf +80%-20% 500 V	.10	114-6472-00
C-409	Capacitor, Ceramic .0047 uf +80%-20% 500 V	.10	114-6472-00
C-410	Capacitor, Electrolytic, 3 Sections:	1.89	097-0016-00
C-410A	40 uf 400 Volts DC		
C-410B	60 uf 200 Volts DC		
C-410C	60 uf 200 Volts DC		
CR-401	Rectifier, Silicon	1.62	007-6006-00
CR-402	Rectifier, Silicon	1.62	007-6006-00
CR-403	Rectifier, Silicon	1.62	007-6006-00
CR-404	Rectifier, Silicon	1.62	007-6006-00
F-401	Fuse, Slo-Blo 4 Amp.	.40	036-0004-00
F-402	Fuse, Slo-Blo 1-1/2 Amp.	.52	036-0005-00
J-401	Connector, Plug, 14 Pin	2.91	030-2001-00
L-401	Torroid, Filter Choke	5.52	019-2019-01
L-402	Choke, Filter 200 mh	7.10	019-2030-00
Q-401	Transistor, Power	8.50	007-0004-00
Q-402	Transistor, Power	8.50	007-0004-00
Q-403	Transistor, Power	8.50	007-0004-00
Q-404	Transistor, Power	8.50	007-0004-00
Q-405	Transistor, Power	8.50	007-0004-00
R-401	Resistor, Comp. 1K Ohms 10% 1 watt	.15	130-0102-45
R-402	Resistor, Comp. 27 Ohms 10% 1/2 watt	.10	130-0270-35
R-403	Resistor, Comp. 3.3 Ohms 10% 1 watt	.15	130-0033-45
R-404	Resistor, Comp. 27 Ohms 10% 1/2 watt	.10	130-0270-35
R-405	Resistor, Comp. 220 Ohms 10% 1 watt	.15	130-0221-45
R-406	Resistor, Comp. 1.5K Ohms 10% 1 watt	.15	130-0152-45
R-407	Resistor, Comp. 1.5 K Ohms 10% 1 watt	.15	130-0152-45
R-408	Resistor, Comp. 100 Ohms 10% 1/2 watt	.15	130-0101-35
R-409	Resistor, Comp. 100 Ohms 10% 1/2 watt	.15	130-0101-35

ALWAYS INCLUDE THE MODEL NO. AND SERIAL NO. OF THE UNIT ALONG WITH THE KING PART NO. AND REFERENCE SYMBOL WITH YOUR ORDER.

KS-502A

REF. SYMBOL	DESCRIPTION	LIST PRICE	KING PART NO.
R-410	Resistor, Comp. 270K Ohms 10% 1 watt	$ .15	130-0274-45
T-401	Transformer, Audio Interstage	8.10	019-5013-00
T-402	Transformer, Audio Output & Modulator	7.70	019-5015-00
T-403	Transformer, Power	12.45	019-7009-00
	Terminal Board	2.66	009-0001-02
	Transistor Socket	.15	033-0001-00
	Mica Washer For Mounting Transistor	.10	091-0004-00
	Rubber Grommet	.10	091-0003-00
	Connector Lock Tab	.44	030-1007-00
	Fuse Post Assembly	.63	033-0013-00
	Equipment Cover	3.00	047-1004-00
	Rubber Grommet	.15	091-0001-00

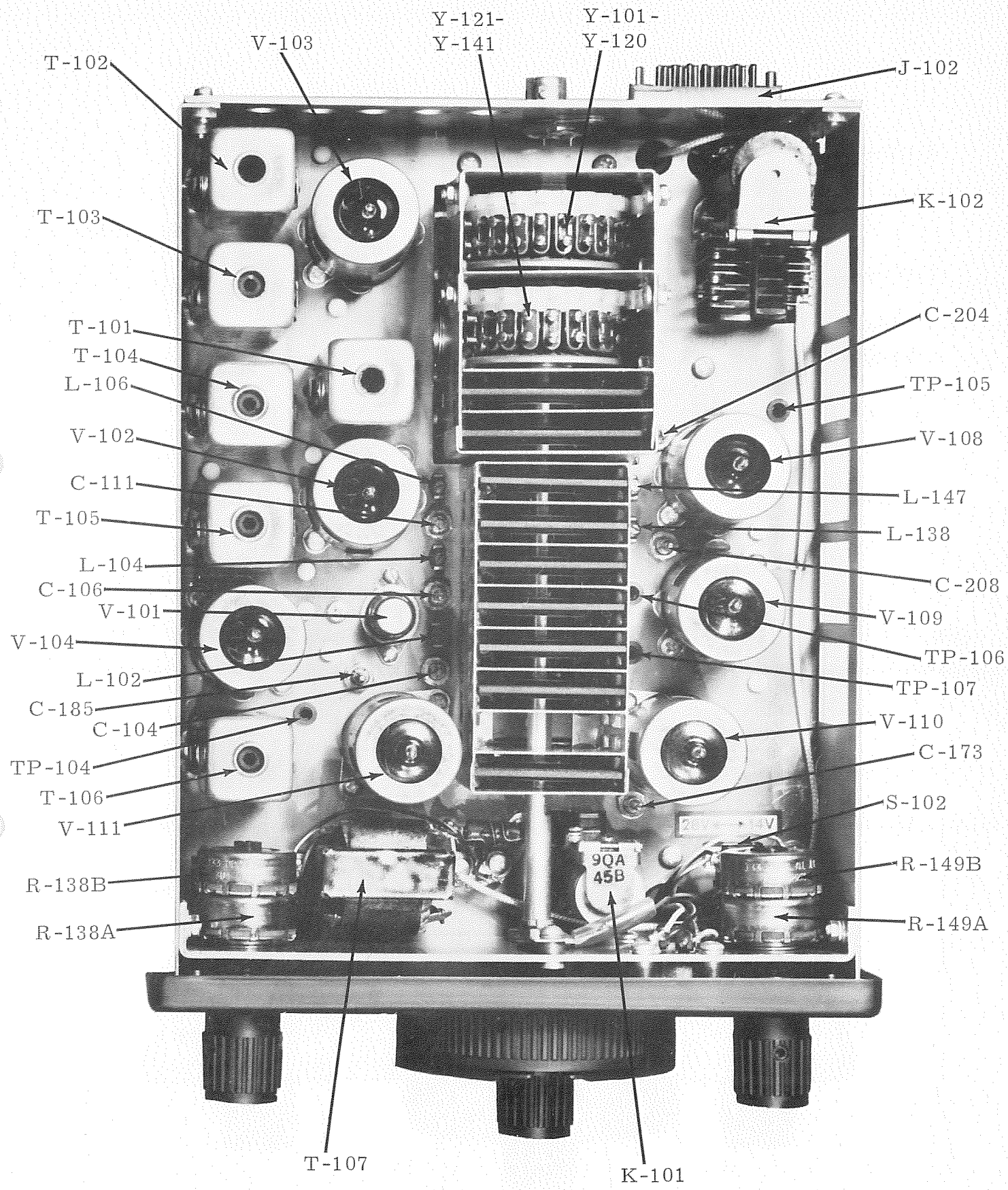


FIGURE 6-1 KY-95 CHASSIS TOP VIEW

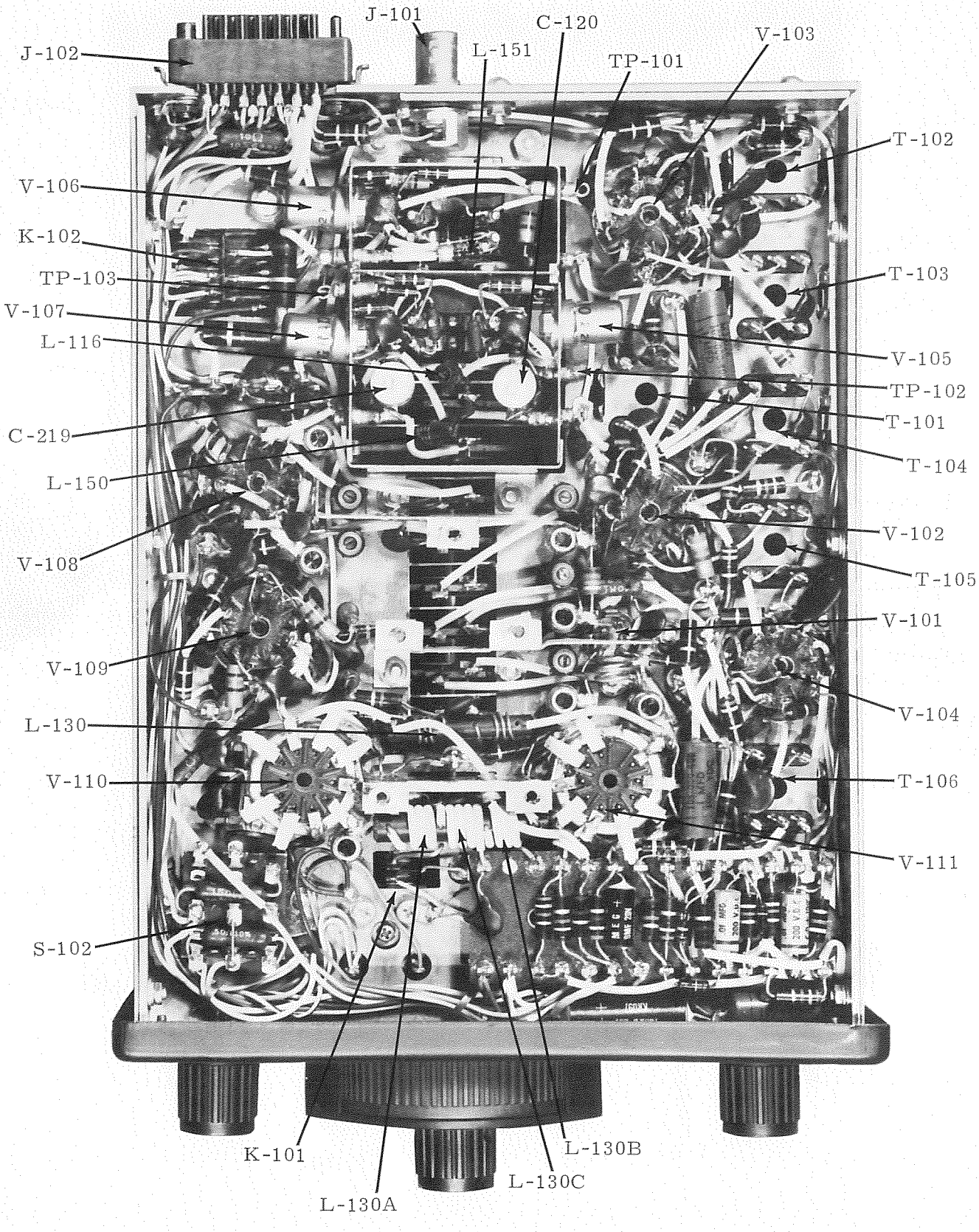


FIGURE 6-2 KY-95 CHASSIS BOTTOM VIEW

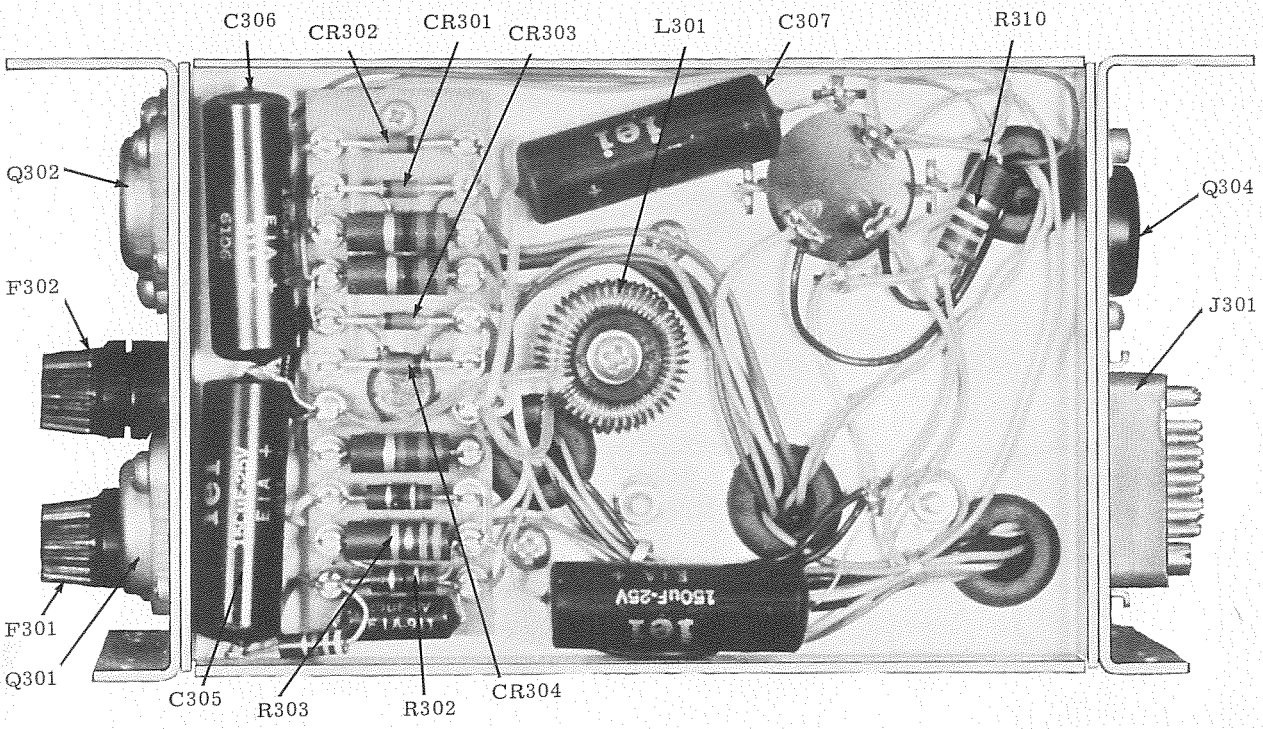


FIGURE 6-3 KS-501A POWER SUPPLY BOTTOM VIEW

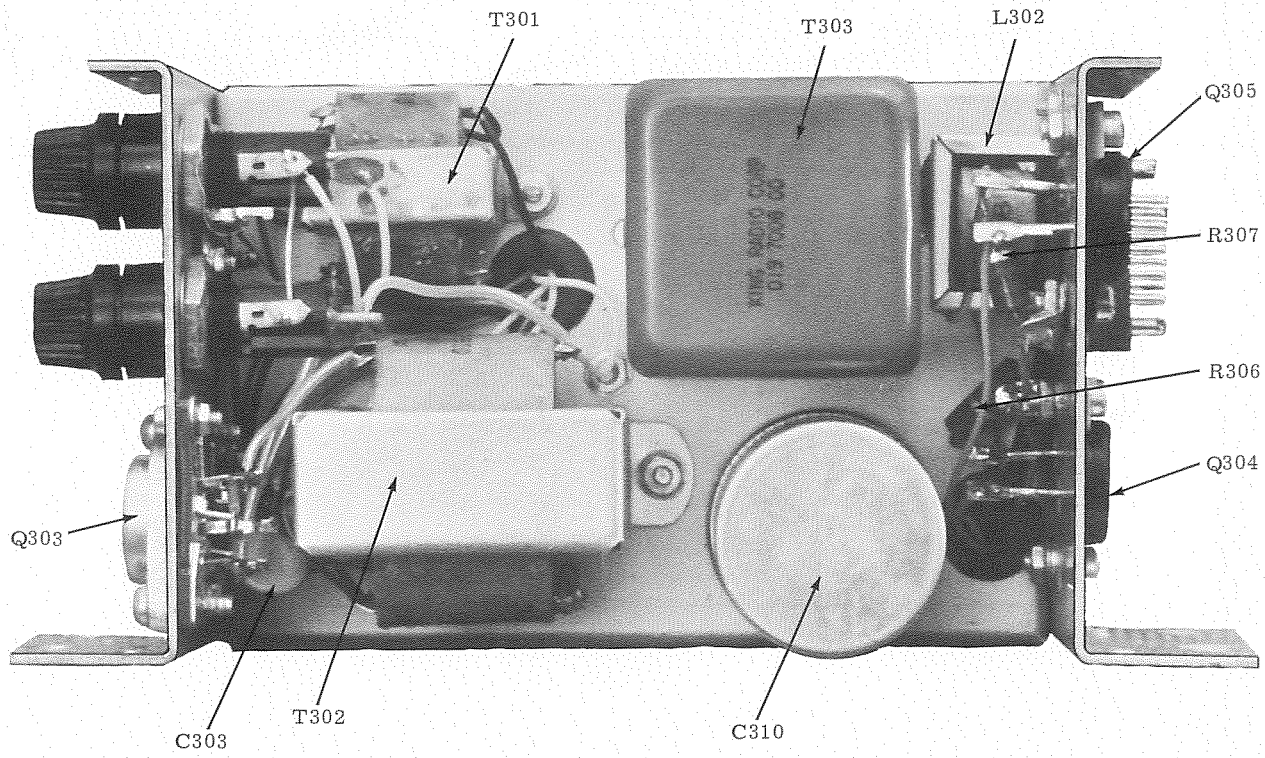


FIGURE 6-3 KS-501A POWER SUPPLY TOP VIEW

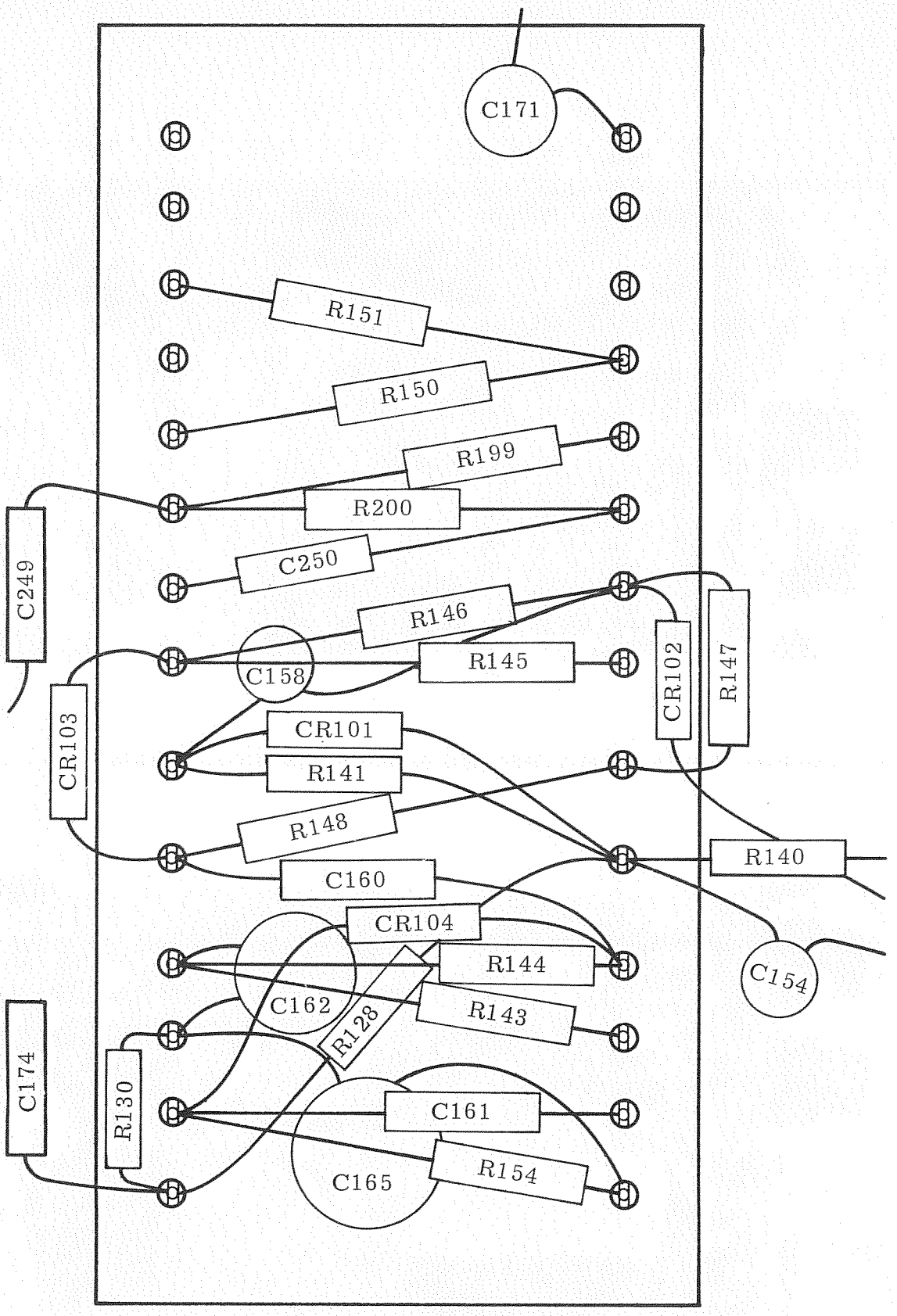
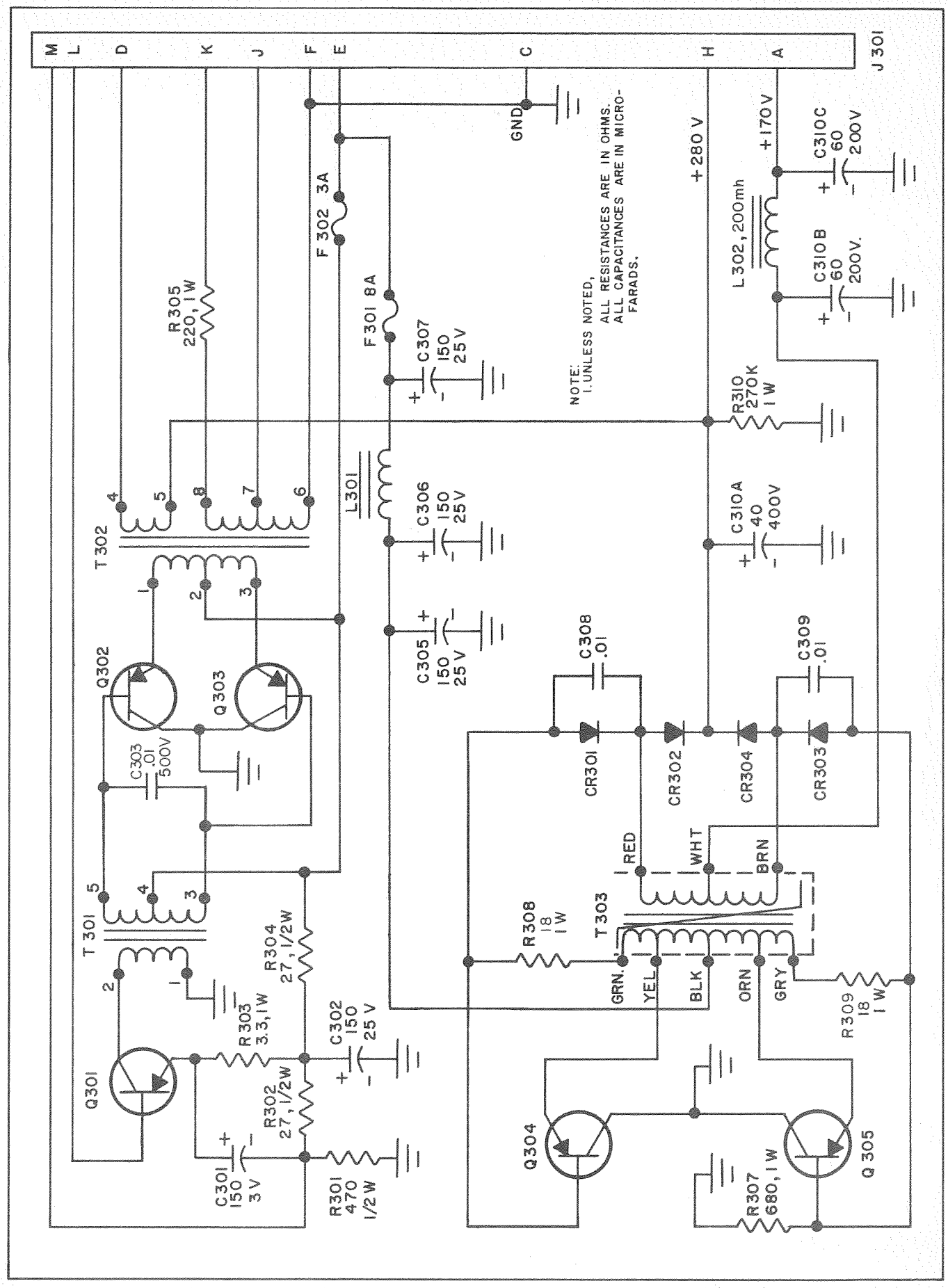
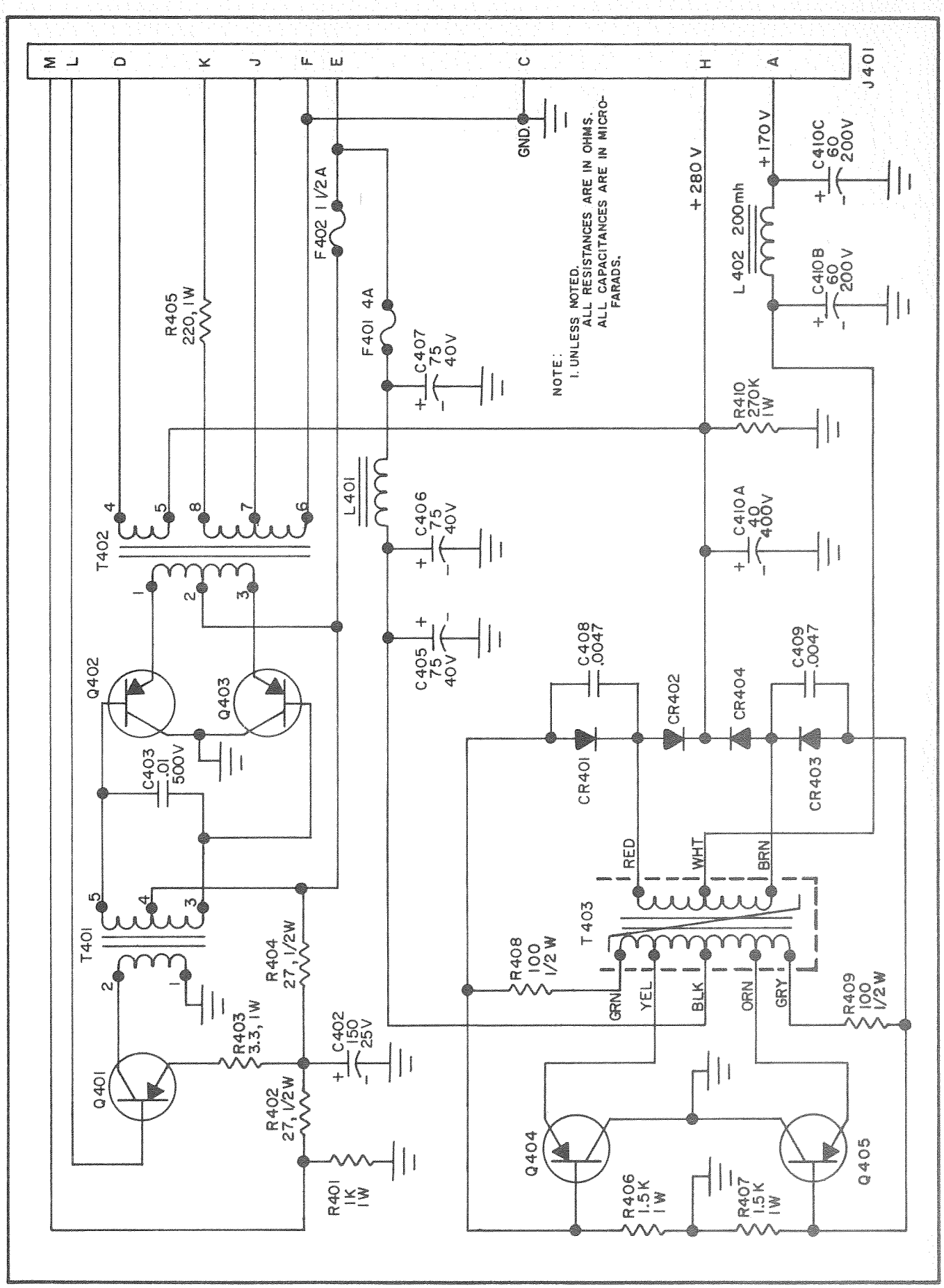


FIGURE 6-4 KY-95 TERMINAL BOARD COMPONENTS

SCHEMATIC



KS-501A POWER SUPPLY MODULATOR SCHEMATIC



KS-502A POWER SUPPLY SCHEMATIC