S-5-DTR
S-5-RTR
S-22-RTR

TECHNICAL SPECIFICATIONS

SUNAIR 5-CHANNEL TRANSCEIVER

SUNAIR 22-CHANNEL TRANSCEIVER

(As filed with Federal Communications Commission)

MANUFACTURER'S NAME and ADDRESS:	Sunny South Aircraft Service, Inc., Broward County International Airport Fort Lauderdale, Florida
MODEL NUMBER:	S-5-DTR -- S-5-RTR -- S-22-RTR
CLASS and MAXIMUM PERCENTAGE MODULATION:	High Level Plate Modulation 90%
RADIO STAGE MODULATED:	Final RF Amplifier
OSCILLATOR CIRCUIT:	Crystal Colpitts Oscillator Frequency equals Output Frequency
GUARANTEED Tolerance of OPERATING FREQUENCY:	.005 percent
MANUFACTURER'S RATED POWER OUTPUT:	Rated Power Output-35 Watts Measured Power Output into 72 Ohm Line (at Manufacturer's rated Input Volts)- 46.08 Watts 2nd Harmonic Radiation less than -60DB of Carrier Output
FINAL RADIO STAGE:	1 Type 6146 or 1 Type 6159 depending on Supply Voltage Available (14 or 28 Volt Source)
NORMAL OPERATING PLATE CURRENT OF FINAL RF STAGE	.175 Amps
NORMAL OPERATING PLATE VOLTAGE OF FINAL RF STAGE	450 Volts
FREQUENCY RANGE:	2 to 10 Megacycles Depending on Frequencies selected
OSCILLATOR:	1 - 12AQ5
MODULATOR:	1 - 6146 or 6159
FINAL RF STAGE	1 - 6146 or 6159

IMPORTANT ANTENNA INFORMATION

(Applies to all SUNAIR Models)

Antenna impedance for all SUNAIR Transceivers is 80 ohms at 2 megacycles, decreasing to 16 ohms at 10 megacycles. RG-58-AU coaxial lead is employed for connecting the SUNAIR Transceivers to the reel type trailing wire antenna, or to the loading device, if a fixed antenna is used. The connecting wire between the loading coil and the antenna should be well insulated, unshielded type of the shortest length possible. The voltage at this point can reach a very high value and standard Packard cable or similar wire will burn through.

FIXED ANTENNAS

Satisfactory operation of a SUNAIR Transceiver is not possible from a fixed antenna only, and the exclusive use of same cannot be recommended unless very limited operating range is considered to be adequate. No method of loading the SUNAIR Transceiver to a fixed antenna is incorporated in the unit itself and if a fixed antenna is desired, some external method for loading must be provided. The maximum length of the fixed antenna will be dictated by the highest frequency to be employed in the SUNAIR Transceiver and should be any length shorter than a quarter wavelength at this frequency, using the loading coil to resonate the fixed antenna to this frequency and the lower frequencies.

REEL TYPE TRAILING WIRE ANTENNAS

The reel type trailing wire antenna provides the maximum possible performance for the SUNAIR Transceiver and must be used if long range operation is to be expected. No loading device is necessary where the reel type trailing wire is employed, as the length of the trailing wire can be adjusted by the operator to represent a quarter wavelength at the frequency of the channel in use. Adjustment of the antenna to this point is accomplished by reeling out the antenna from the in position that gives the greatest brilliance on the indicator bulb, this operation being performed with the microphone button depressed. After the operator becomes acquainted with the approximate number of turns off the reel for each frequency employed, it is possible to return to this position, then depress the microphone button and adjust for maximum brilliance on the indicator bulb. The first increase in brilliance as indicated by the indicator bulb is the position to be employed and reeling out additional wire will result in decreased range. The coaxial lead employed between the SUNAIR Transceiver and the reel type trailing wire antenna can be any length necessary for the installation involved.

IMPORTANT: The outside shield on the coaxial lead must be grounded at the Transceiver by the proper attachment in the coax fitting, and also must be grounded at or near where the lead attaches to the trail antenna reel. If the fixed antenna is used, the shield must be grounded near the loading device.

RECEIVER ALIGNMENT AND RECEIVER COIL INFORMATION

SUNAIR MODELS S-5-DTR S-5-RTR

The intermediate frequency amplifier section of the SUNAIR Transceiver is aligned to the standard I.F. frequency of 455 KC. Alignment of this section of the Transceiver should not be necessary unless there is good reason to believe that it has become misaligned. Replacement of some component part, such as an I.F. transformer, would be adequate reason for readjustment. In order to realign the intermediate frequency amplifier, a modulated signal generator of reliable calibration with controllable output should be used. In addition, it is desirable that an output meter be on hand. If no output meter is available alignment can be accomplished by adjusting for maximum audio output by ear. In both cases it will be necessary to keep the signal generator output to a minimum in order to prevent actuating the AVC circuit. Alignment should be started at the last tuned circuit, the output section of the last I.F. transformer, then proceed toward the front end tuning for maximum in each case.

Adequate signal input can usually be obtained for I.F. alignment by connecting the signal generator directly to the antenna lead and removing the receive crystal from the channel at which the channel selector is set. The signal generator output will have to be set high enough to get an audible signal from the output of the receiver. As the I.F. transformers are aligned for maximum, the signal generator output should be decreased proportionately.

ALIGNMENT OF MIXER GRID AND ANTENNA COILS

Alignment of the mixer grid is accomplished in a similar manner to that prescribed for the I.F. amplifier section. Alignment is for maximum output. All receive crystals should be in their respective sockets. The signal generator should be adjusted to the frequency of the channel designated by the channel selector. A method of decoupling may be necessary between the output of the signal generator and the antenna lead from the transceiver, as very few signal generators can be adjusted to a minimum output sufficient for proper alignment of a sensitive receiver. If this is found to be true, disconnect the signal generator from the antenna lead and connect it to a short piece of insulated wire. Wrap the insulated wire around the unshielded portion of the antenna lead sufficient to give the desired coupling.

Adjust the signal generator to give the desired output, then adjust the mixer grid coil for maximum. As the mixer grid is adjusted, it will be noted that a very pronounced dip in the signal level will be observed as the coil is adjusted through the receive crystal frequency. If the receive crystal is ground to 455KC below the desired frequency, then it is known that the coil must be adjusted to a position higher in frequency, and a pronounced rise in signal level will be observed as this position is located. In the event the receive crystal is cut to 455 KC higher than the receive frequency, then the above procedure would be reversed, as the null point would be above the desired frequency and the coil would have to be adjusted to the point of maximum signal lower in frequency than the crystal frequency.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Use T-5 Coils

In the event that no null point can be found, it is very likely that the coil-condenser combination in this particular position of the channel selector is not proper for the frequency at which it is being attempted to operate. In this case it will be necessary to change the capacitor across this particular coil. The mixer coil for channel one has a condenser connected directly across the terminals. The condensers for channel two, three, four and five are connected across two sections of the channel selector switch directly behind the 12BE6 mixer tube. These condensers can be identified as to their respective channel positions by the color of the wires connected to one end, which run to their respective coils. Coding is standard RMA and this coding is used throughout the transceiver for channel identification. BROWN is channel one, RED is channel two, ORANGE is channel three, YELLOW is channel four and GREEN is channel five. Should it be impossible to resonate the coil to the desired frequency without going to a condenser in excess of 150 mmf or less than 5 mmf, it will be necessary to change the coil to one of the desired range. Four different coils are available for the mixer grid and the antenna input circuits. Their ranges are as follows:

Coil Set No. 1	Range 2mc to 3.8mc	Color Code: GREEN
Coil Set No. 2	Range 3.8mc to 5.8mc	Color Code: YELLOW
Coil Set No. 3	Range 5.8mc to 7mc	Color Code: RED
Coil Set No. 4	Range 7mc to 10mc	Color Code: WHITE

NOTE:
Prior to June 1st, 1955, color coding was at random and cannot be relied upon. Model S-5-DTR after serial number 4105, S-5-RTR after serial number 8007 will conform to the color code for coils as stated above.

The receiver mixer grid coils are located just above the crystal sockets with channel one coil in the position closest to the front panel, with coil number two directly behind number one, etc. It will be noted from the drawing of the mixer circuit that all condensers and coils not in use in a particular position of the channel selector switch, are disconnected from each other and from the mixer grid circuit. This is to prevent possible absorbtion loss from the coil-condenser combination that is in use. This practice is also followed in the antenna input circuit for the same reason.

Tuning of the antenna input circuit is accomplished by tuning all coils for maximum, taking care to see that the signal generator is always adjusted to the lowest possible output level to give a sharp indication. The details as given for the mixer grid coils will apply to the antenna input coils as well. No null point will be in evidence, however, and the only indication of resonance will be a sharp rise in the output level when resonance is reached. Coil and condenser combinations will have to be changed to suit the frequency in use. This of course, will only be necessary in the condition whereby a frequency change has been made, as all SUNAIR Transceivers are tuned to the frequencies specified, when desired frequencies are stated at date of order. The receiver antenna input coils are mounted one above the other on a bracket just in back of the faceplate. The lower coil is the number 1 coil with number 2 coil mounted directly over number 1, etc., with number 5 coil being located at the top of the bracket.

TRANSMITTER ADJUSTMENTS

SUNAIR MODELS S-5-DTR S-5-RTR

The transmitter section of the SUNAIR Transceiver employs a 12AQ5 type tube in a modified Colpitts Crystal controlled oscillator circuit. The transmit crystals are switched by the channel selector switch common to the receiver. This same switch also selects the transmitter oscillator plate coil and the proper tap on the final R.F. amplifier plate coil for each of the five positions of the selector switch. The transmitter oscillator plate coils are selected to resonate at the transmit frequency for the particular channel. Adjustable iron core coils are used and the range of each coil, and their respective color coding, is in conformity with that given for the receiver mixer grid coil and the antenna input coil, as follows:

Coil No. 1	Range 2mc to 3.8mc	Color Code: Green
Coil No. 2	Range 3.8mc to 5.8mc	Color Code: Yellow
Coil No. 3	Range 5.8mc to 7mc	Color Code: Red
Coil No. 4	Range 7mc to 10mc	Color Code: White

NOTES:

The transmitter oscillator plate coils are of a larger type than the receiver coils and are not interchangeable with receiver coils.

Coil set numbers for the receiver and for the transmitter are not related to the channel selector positions of one through five and any set of coils can be installed in any channel selector position to give the desired selection of frequencies.

Cross band or simplex operation can be used in any channel selector position, provided the proper transmit and receive coils and crystals are installed in their respective positions.

The first step in tuning the transmitter is the adjustment of the oscillator plate coils and before this is attempted it is recommended that the high voltage for the final R. F. amplifier be disconnected. This is accomplished in the Model S-5-DTR by disconnecting the quick disconnects in the ORANGE lead coming from the dynamotor-power-supply. In the Model S-5-RTR it will be necessary to remove the bottom cover from the dynamotor-power-supply and insert a thin piece of insulating material between the down contacts of the high voltage switching relay. Do not block the relay in such manner as to prevent it from operating, as this relay also inserts a 5,000 ohm 10 watt resistor in the medium voltage lead in the transmit position, and without it the full high voltage will be applied to the transmitter oscillator.

ADDITIONAL NOTE: Block only the high voltage contact side of this relay.

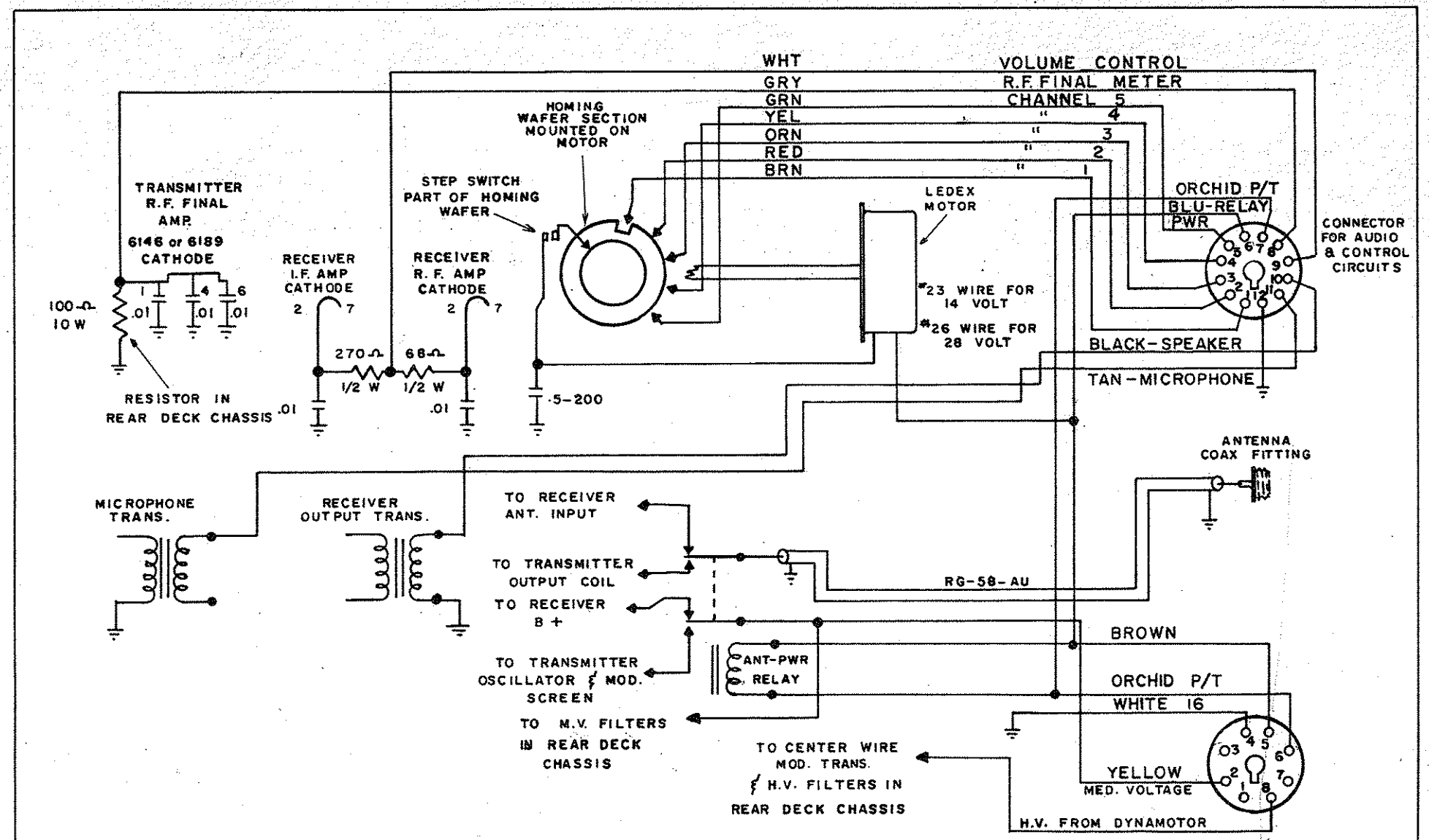
Adjustment of the transmitter oscillator plate coils is accomplished by connecting a voltmeter, of the 20,000 ohm per volt type, between the grid terminal of the final R.F. amplifier and the chassis, with a 100K ½ watt resistor inserted between the grid terminal and the negative lead of the meter, and the positive lead of the meter connected to the chassis. The final R.F. amplifier is a 6146 type tube in the 12/24 volt model and a 6159 type tube in the 24/28 volt model.

The final R.F. amplifier tube is located at the rear-right of the main chassis. The grid terminal for the R.F. amplifier is the number 5 pin.

The transmitter oscillator plate coils are located in the center of the main chassis, the coil part underneath the chassis with the screw tuning adjustment and lock above the chassis, near the bottom of the channel selector switch. The transmitter oscillator coils can be identified as to their respective channel by the color of the wire attaching to each coil. Channel one BROWN, Channel two RED, Channel three ORANGE, Channel four YELLOW and Channel five GREEN.

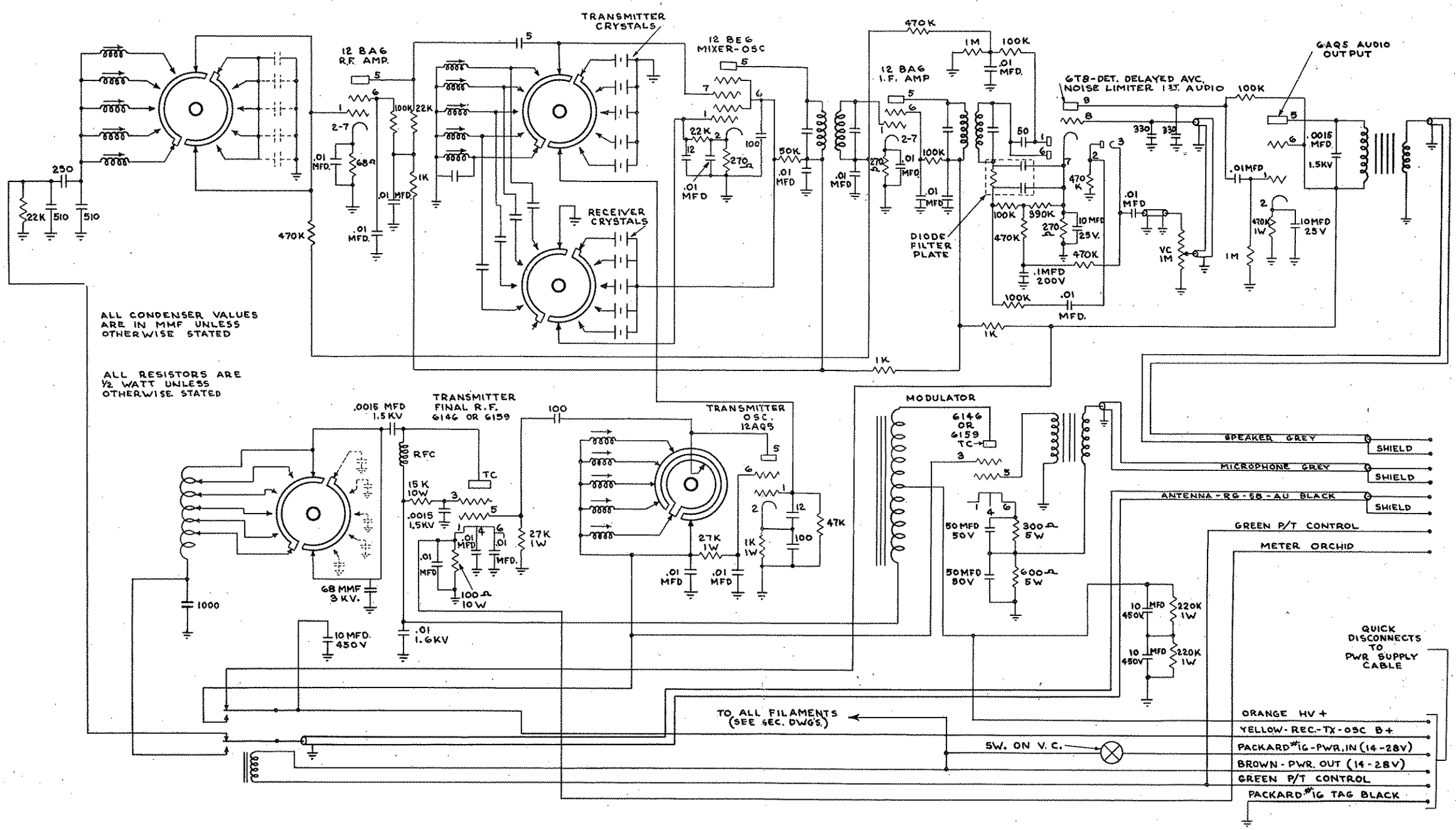
To proceed with the transmitter tune-up, set channel selector to the channel to be tuned. Set voltmeter to 250 or 300 volt scale. Depress the microphone button and adjust the proper oscillator plate coil to give the maximum reading on the voltmeter. Grid excitation voltage for the final R.F. amplifier will vary between 75 volts and 125 volts depending on frequency and battery source voltage. After all of the oscillator plate coils are properly adjusted for maximum grid excitation to the final R.F. amplifier, it is permissable to proceed with the tuning of the final amplifier. Reconnect the ORANGE wire in the case of the S-5-DTR or remove the insulating material from the contacts of the high voltage relay in the case of the S-5-RTR. Remove the $\frac{1}{2}$ watt resistor from pin 5 of the final amplifier. Connect the positive lead of the voltmeter to either pin 1, 4, or six with the negative lead attached to the chassis. Set the voltmeter to 50 volt scale. IMPORTANT: See that the antenna lead from the transceiver is disconnected from the antenna or any form of the load. Loosen the tap on the final amplifier plate coil that corresponds with the setting of the channel selector (wire lead color coding is the same as previously stated). Depress the microphone button and move the tap across the final amplifier coil while watching the voltmeter. Attach the tap on the turn of the coil that gives the minimum reading on the voltmeter. Care should be taken to set the tap at the fundamental frequency as the final amplifier will double with good output.

NOTE:
During the final tune-up procedure, the final amplifier plate coil is sprayed with a fungicidal mix, insulating lacquer. In adjusting the taps on this coil, it will be necessary to remove this coating before a proper indication will be obtained.



CONTROL & INDEXING CIRCUITS S-5-RTR CHASSIS

OTHER CIRCUITRY SAME AS S-5-DTR



S-5-DTR TRANSCEIVER

SEE SECTIONAL DRAWINGS FOR ADDITIONAL DETAIL

SUNAIR PARTS LIST

MODELS S-5-DTR and S-5-RTR

DISC CERAMIC CONDENSERS

VALUE	CIRCUIT LOCATION	LIST $
.01 mfd - 500 volt	Cathode by-pass, RF Amplifier	
"	Screen by-pass, RF Amplifier	
"	Isolation by-pass, RF Amplifier	
"	Cathode by-pass Mixer-osc	
"	Plate isolation Mixer-osc	
"	Grid isolation IF Amplifier	
"	Plate isolation IF Amplifier	
"	Cathode by-pass IF Amplifier	
"	Screen by-pass IF Amplifier	
"	AVC Filter	
"	Audio to NL Diode	
"	Audio from NL Diode	
"	Audio to Grid of 2nd Audio Amp.	
"	Cathode by-pass Final RF Amp Pin 1	
"	Cathode by-pass Final RF Amp Pin 4	
"	Cathode by-pass Final RF Amp Pin 6	
"	Plate isolation Trans-osc	
"	Screen by-pass Trans-osc	
.0015 mfd - 3 KV	Plate by-pass 2nd Audio Amp	
"	Screen by-pass Final RF Amp	
"	Plate coupling Final RF Amp	
.01 mfd - 1.6 KV	Plate by-pass Final RF Amp	
68 mmf - 1.5 KV	Plate Tuning, Final RF Amp	

TUBULAR CERAMIC CONDENSERS
SUNAIR PARTS LIST
TRANSCEIVER UNIT
MODELS S-5-DTR and S-5-RTR

VALUE	CIRCUIT LOCATION	LIS
510 mmf - 500 Volt	Ant input, receiver	
"	Ant input, receiver	
330 mmf - 500 Volt	Plate by-pass, 1st audio	
"	Grid by-pass, 1st audio	
250 mmf - 500 Volt	Ant input receiver	
100 mmf - 500 Volt	Screen by-pass, Mixer-osc	
"	Cathode by-pass, Trans-osc	
"	Coupling to RF Final Amp Grid	
500 mmf - 500 Volt	AVC Diode coupling	
12 mmf - 500 Volt	Grid by-pass, Receiver osc	
"	Grid-Cathode Coupling, Trans-osc	
5 mmf - 500 Volt	Coupling to Receiver Mixer grid	
1000 mmf - 500 Volt	Ant output, Transmitter	
	CARBON RESISTORS - ½ WATT	
1 M	Grid resistor, 2nd audio	
"	AVC Load resistor	
470 K	Grid resistor, RF amp	
"	AVC Filter	
"	NL Circuit	
"	NL Circuit	
"	NL Circuit	
390 K	NL Circuit Voltage Divider	
100 K	Screen resistor, RF amp	
"	AVC Diode resistor	
"	Screen resistor, 1st Audio	
"	Audio filter, to NL Diode	
"	Plate resistor, 1st Audio	
"	NL Circuit, Voltage Divider	
47 K	Screen resistor, Trans-osc	
"	Grid resistor, Trans-osc	
22 K	Anti Static discharge	
"	Plate resistor, RF Amp	
"	Grid resistor, Rec-osc	
1 K	Plate isolation, RF Amp	
"	Plate isolation, Mixer-osc	
"	Plate isolation, IF Amp	

CARBON RESISTORS - ½ WATT

VALUE	CIRCUIT LOCATION	LIS
270 OHM	Cathode resistor, IF Amp	
"	Cathode resistor, 1st Audio	
68 OHM	Cathode resistor, RF Amp	

CARBON RESISTORS - 1 WATT

220 K	HV Filter equalizer	
"	HV Filter equalizer	
27 K	Screen Resistor, Trans-osc	
"	Grid Resistor, RF Amp-TRANSMIT	
1 K	Cathode Resistor, Trans-Osc	
470 OHM	Cathode Resistor, 2nd Audio	
330 OHM	Filament equalixing (28 volt only)	
270 OHM	Filament equalizing (28 volt only)	

WIREWOUND RESISTORS - 10 WATT

15 K	Screen Resistor, RF Amp	
100 OHM	Cathode Resistor, RF Amp	

WIREWOUND RESISTORS - 5 WATT

600 OHM	Cathode Resistor, Modulator	
300 OHM	Cathode Resistor, Modulator	

PART NO.	ELECTROLYTIC CONDENSERS	
10 mfd-450V TVA-1705	HV Filter	
10 mfd-450V TVA-1705	HV Filter	
10 mfd-450V TVA-1705	MV Filter	
50 mfd- 50V TVA-1308	Cathode by-pass, Modulator	
50 mfd- 50V TVA-1308	Cathode by-pass, Modulator	
10 mfd- 25V TVA-1204	Cathode by-pass, 1st Audio	
10 mfd- 25V TVA-1204	Cathode by-pass, 2nd Audio	

NUMBER	AUDIO TRANSFORMERS	
306A3	Microphone Transformers use 48117	
306A2 48090	Receiver Output Transformer	
306C1 — 48105	Modulation Transformer T-22-Ra	
306A1 48179	MATCHING TRANSFORMER 3.2 OHM to 500 OHM	

I.F. AMPLIFIER TRANSFORMERS

BC 35L3 } 48052	Inp ut I.F.	
BC 35L4 }	Output I.F.	

63569

ANTENNA INPUT AND MIXER GRID COILS

LIS

Code - GREEN	2 mc to 3.8 mc
" - YELLOW	3.8 mc to 5.6 mc
" - RED 63375	5.6 mc to 7 mc
" - WHITE	7 mc to 10 mc

(SPECIFY FOR RECEIVER)

64575

TRANSMITTER OSCILLATOR PLATE COILS

Same Range Color Coding (SPECIFY FOR TRANS OSC)
2.5 MH 300 Mil RF Choke Plate choke RF Final Amp Part No. R300S
Filter Plate Diode Filter Part No. pc-51
Relay, Antenna Changeover (Specify) (14V-C-5376) (28V-C-5375)
Volume Control (S-5-DTR only) 32273
RTR also

TUBES SOCKETS

NUMBER	POSITION
8AM	Modulator
7EM	Final RF Amp
7EM	RF Amp Rec
7EM	Mixer Osc Rec
7EM	IF Amp Rec
7EM	2nd Audio
9EM	Det - 1st Audio
7EM	Osc-Trans

TYPE		TUBES APPLICATION
6146	(12/14 volt)	MODULATOR
6146	(12/14 volt)	FINAL RF AMP
6159	(24/28 volt)	MODULATOR
6159	(24/28 volt)	FINAL RF AMP
12 BA6		RF AMP REC
12 BA6		IF AMP REC
12 B E6		MIXER-OSC REC
6T8		DET-1st AUDIO
6AQ5		2nd AUDIO
12AQ5		OSC-TRANS

PLUG CONNECTORS

NUMBER		LOCATION
92 F 1	74257	4 PIN HD POWER
79 0 8 F 1	74269	CABLE, PS TO TRANSCEIVER PS END
79 0 8 F 1		CABLE, PS TO TRANSCEIVER TRANSCEIVER END (S-5-RTR ONLY)
79 0 12 F 1	74271	CONTROL AND INDEXING CABLE TRANSCEIVER END (S-5-RTR ONLY)
79 PO 8 M	74233	PS CONNECTOR AT TRANSCEIVER (S-5-RTR ONLY)
79 PO 12 M	74245	CONTROL AND INDEXING CONNECTOR AT TRANSCEIVER (S-5-RTR ONLY)
79 0 12 F 1	74271	CONTROL AND INDEXING CABLE CONTROL END (S-5-RTR)
79 012 M 1		CABLE CONNECTOR ATTACHED TO CONTROL CABLE (S-5-RTR)

CHANNEL SELECTOR SWITCH ASSEMBLY, wired, less coils
SPECIFY S-5-DTR, S-5-RTR

CASE SPECIFY S-5-DTR, S-5-RTR

FACEPLATE SPECIFY S-5-DTR, S-5-RTR (ONLY)

FACEPLATE S-5-DTR COMPLETE

BLACK INDEX CONTROL KNOB

BLACK VOLUME CONTROL KNOB

ADDITIONAL PARTS LIST S-5-RTR ONLY

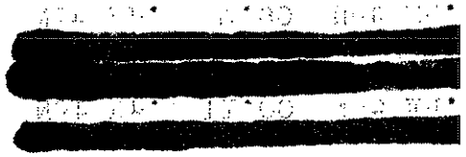
LEDEX CHANNEL SELECTOR MOTOR (Specify 14-28 volt)

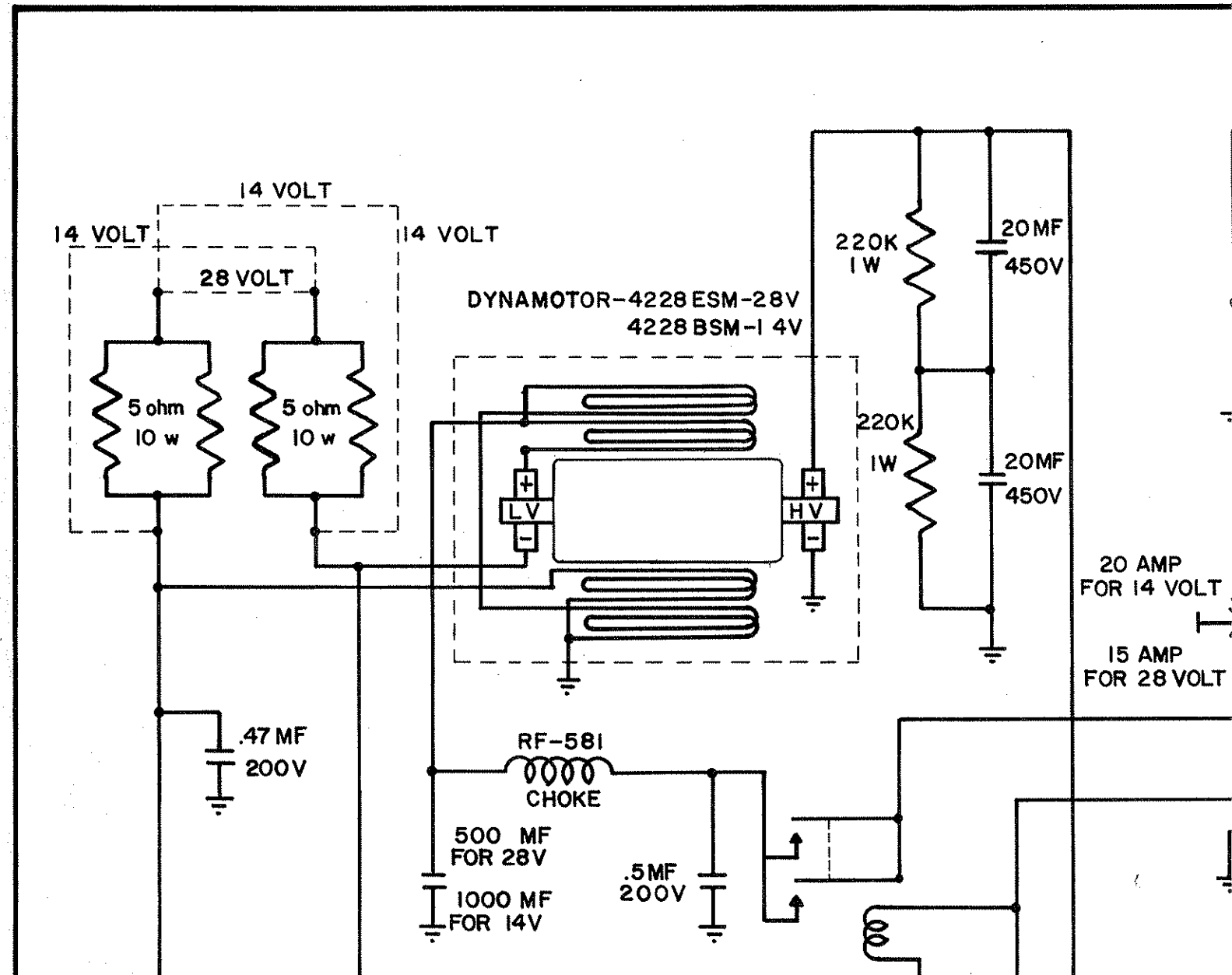
79 PO 8 M	8 pin chassis connector
79 PO 12 M	12 pin chassis connector
83 1R	Coax connector, chassis mtg,
83 1 SP	Antenna lead connector, coaxial
83 185	Reducer, coaxial

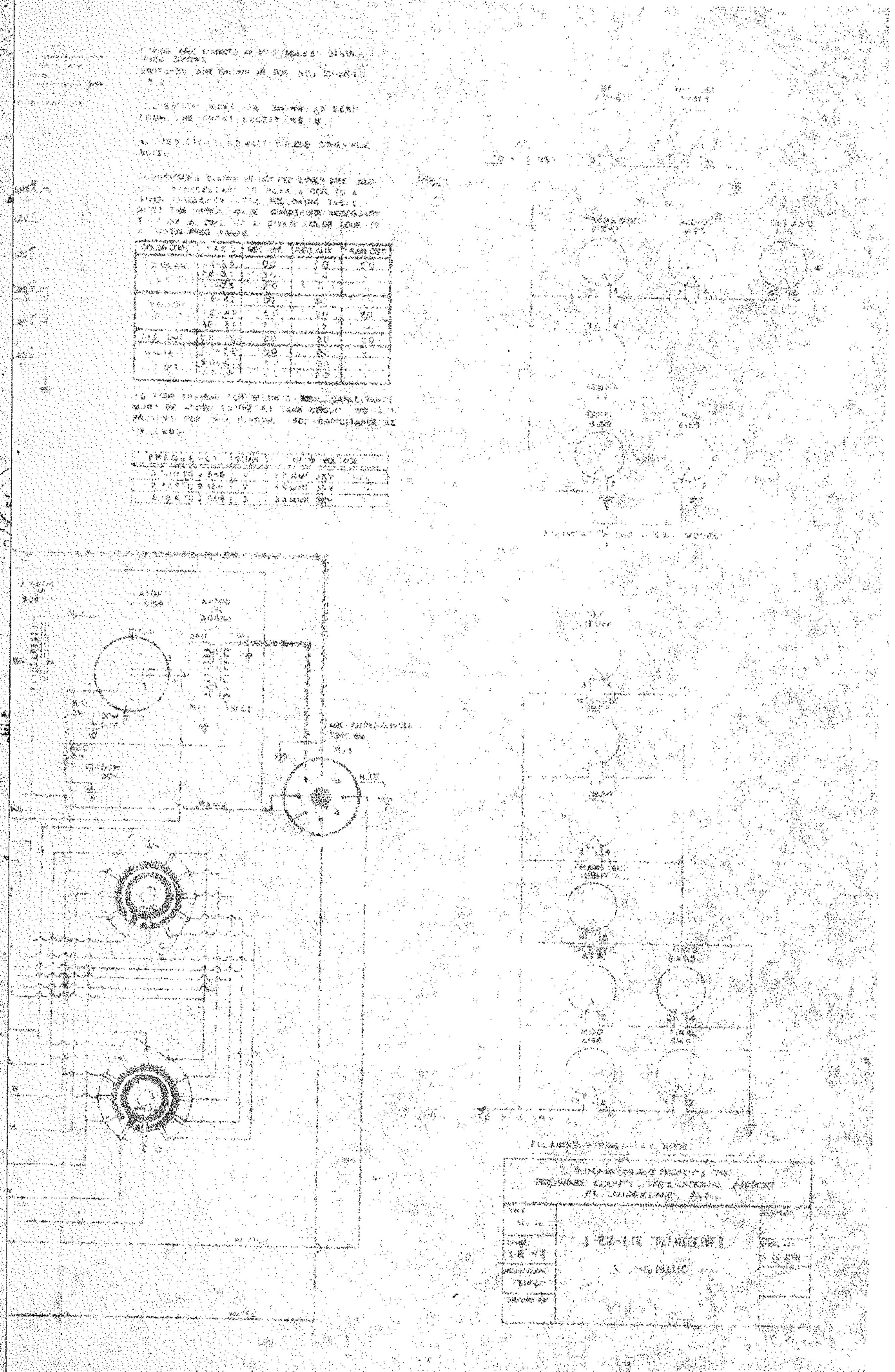
REMOTE CONTROL HEAD, INCLUDING VOLUME CONTROL,

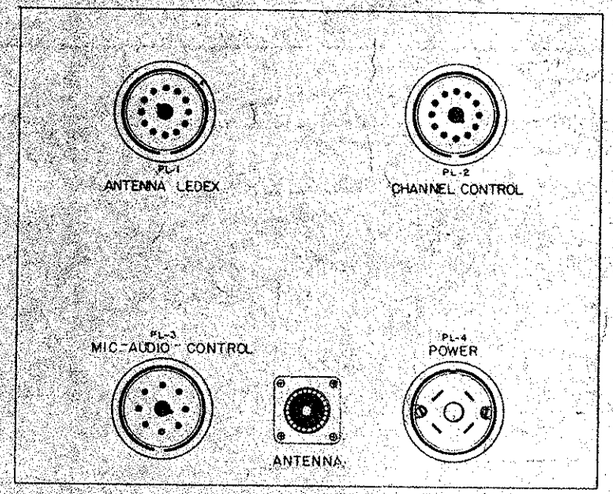
TRANSISTOR POWER SUPPLY

PART NO.	DESCRIPTION	LIST
C1	663UW, Capacitor 2 MF @ 200 Volt	
C2	TVA-1163, Capacitor, 1000 MF @ 15 Volt (14V) TVA-1209, Capacitor, 500 MF @ 25 Volt (28V)	
C3 C4 C5	TVA-1709, Capacitor, 20 MF @ 450 Volt	
C6 C7	Capacitor, .01 Mf @ 1.6 KV, Ceramic Disc.	
CR1 CR2 CR3 CR4	Diodes, Type 1N2071 Replacement 40335	
F1	Fuse, 15 Amp, AGC-15 (14V)	
F1	Fuse, 10 Amp, AGC-10 (28V)	
F2	Fuse, 15 Amp, AGC-15 (14V)	
F2	Fuse, 10 Amp, AGC-10 (28V)	
FH	Fuseholder, AGC-FH	
K1 K2	Relay, C-5375 (14V) C-5374 (28V)	
L1	Choke, 4.5 mh, 568-X-3 56085	
L2	Choke, 5 mh, #321 56114	
L3	Choke, 10 mh, #322	
L4	Choke, 2 Henry (iron Core), 306A2 94647	
P1	Plug, 4 Pin, #92-C1 74221	
P2	Plug, 8 Pin, #79-P0-8M	
R1	Resistor, 100 ohm 2 Watt (14V) Resistor, 50 ohm 5 Watt (28V)	
R2	Resistor, 470 ohm 2 Watt	
R3	Resistor, 10 ohm 5 Watt (For 14 Volt Only)	
R4	Resistor, 1 meg ohm 1 Watt	
R5	Resistor, 1K ohm ½ Watt	
T1	Toroid Transformer 14 Volt #14-500-3 90081 28 Volt # 28-500-3 90083	$100.00 List
TR1 TR2 TR3 TR4	Transistors 14V-2N277 [redacted] 28V-2N174 [redacted] 2N441	

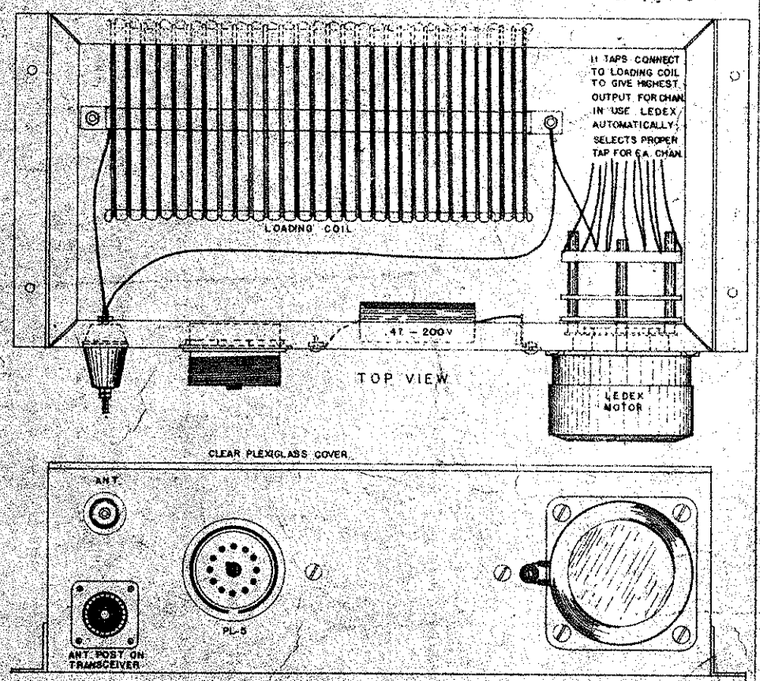



14 VOLT
14 VOLT
14 VOLT
28 VOLT
5 ohm
10 w
5 ohm
10 w
DYNAMOTOR-4228 ESM-28V
4228 BSM-14V
LV
HV
220K
1W
20MF
450V
220K
1W
20MF
450V
20 AMP
FOR 14 VOLT
15 AMP
FOR 28 VOLT
.47 MF
200V
RF-581
CHOKE
500 MF
FOR 28V
1000 MF
FOR 14V
.5MF
200V


BROWARD COUNTY INTERNATIONAL AIRPORT

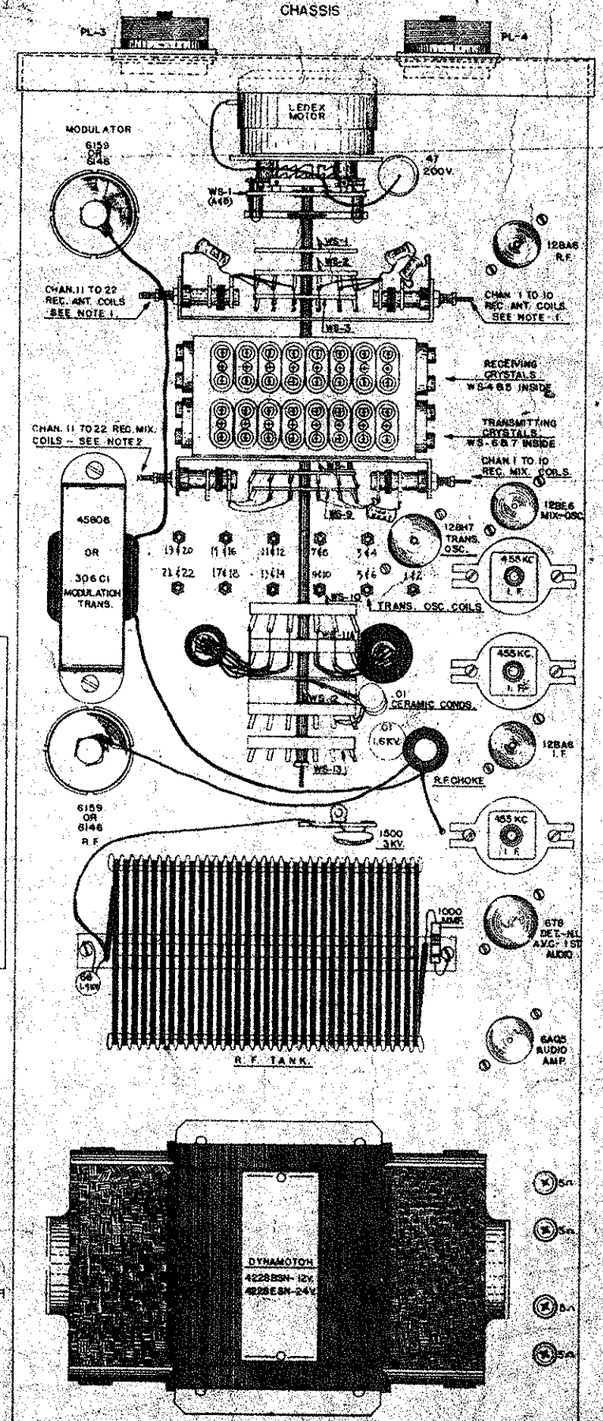


FRONT VIEW
TRANSCEIVER

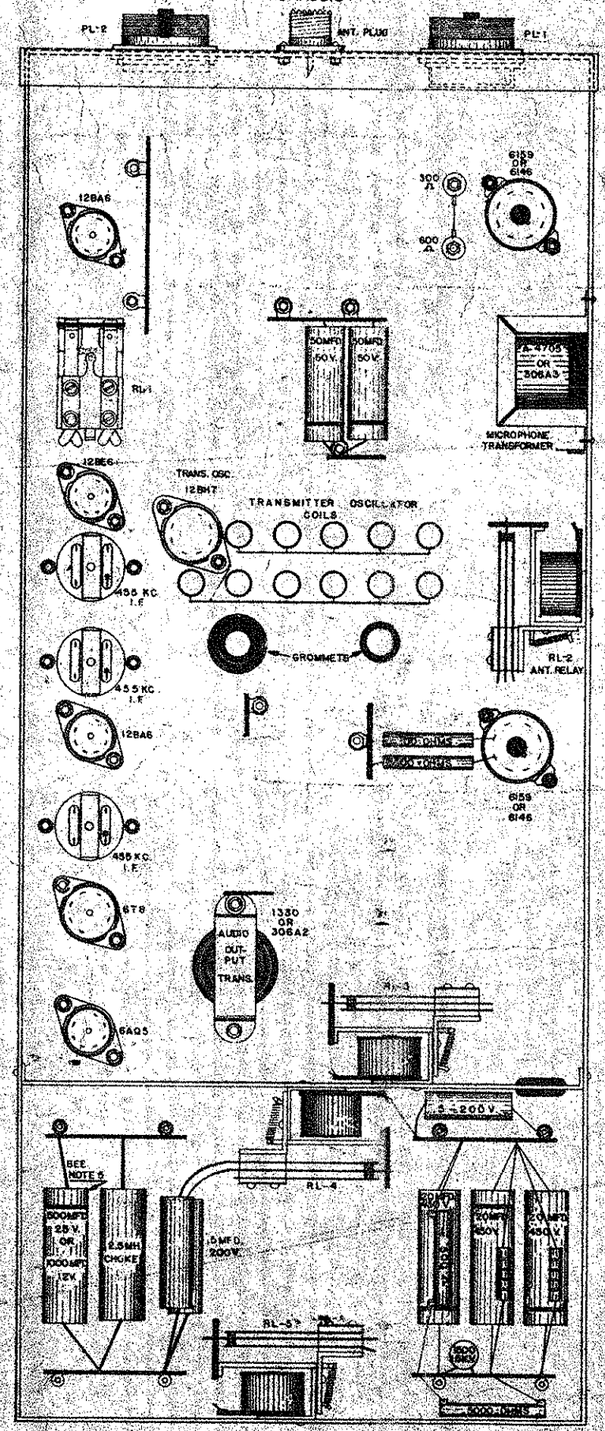


REMOTE ANTENNA LOADING UNIT
FRONT VIEW

TOP VIEW OF CHASSIS



BOTTOM VIEW OF CHASSIS



NOTE 1.
THERE ARE 11 RECEIVER ANTENNA COILS. EACH COIL SERVES FOR 2 CHANNELS. THE 2 CHANNELS MUST BE WITHIN 5% OF EACH OTHER.

NOTE 2.
THERE ARE 11 RECEIVER MIXER COILS THE SAME CONDITIONS AS GIVEN IN NOTE 1 APPLY.

NOTE 3.
THE TRANSMITTER OSCILLATOR COILS ALSO OPERATE AS DESCRIBED IN NOTE 1.

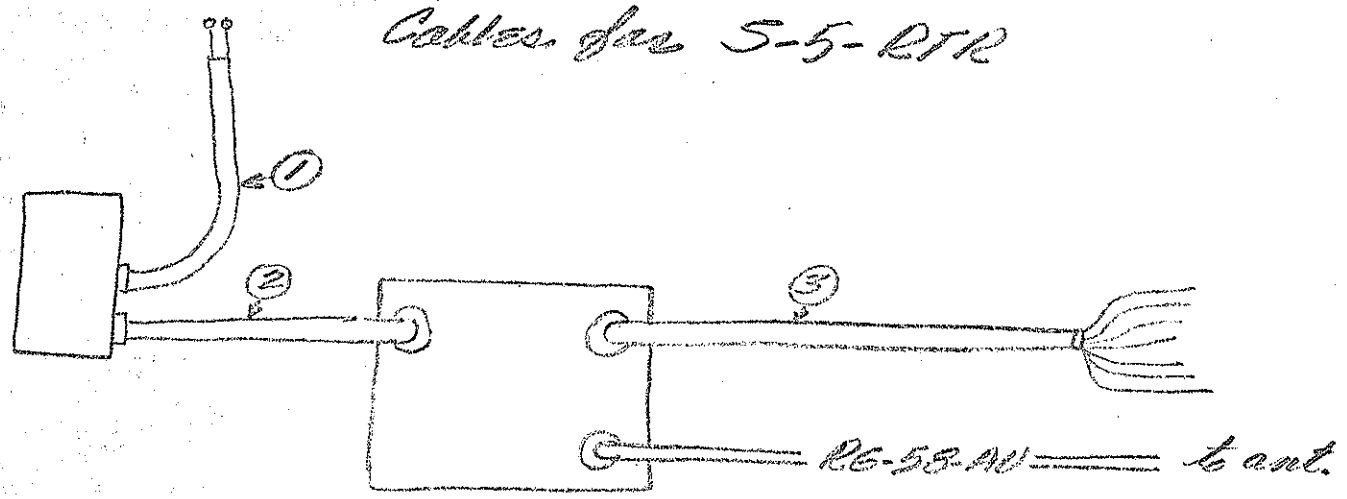
NOTE 4.
ALL COILS ARE CODED WITH A COLOR DOT. SEE THE SCHEMATIC DIAGRAM FOR THE TABLE GIVING THE FREQ. RANGE OF EACH COLOR COIL.

NOTE 5.
500MFD. USED IN 28V. SETS.
1000 MFD. USED IN 14V. SETS.

SUNAIR ELECTRONICS INC.
BROWARD COUNTY INTERNATIONAL AIRPORT
FT. LAUDERDALE, FLORIDA

DATE 7-27-61	SUNAIR S-22-R T/R TRANSCEIVER	REVISED
DRAWN		REV. NO. 2
CHECKED		DWG. NO. S-22-R T/R
APPROVED		

Cables for 5-5-RTL

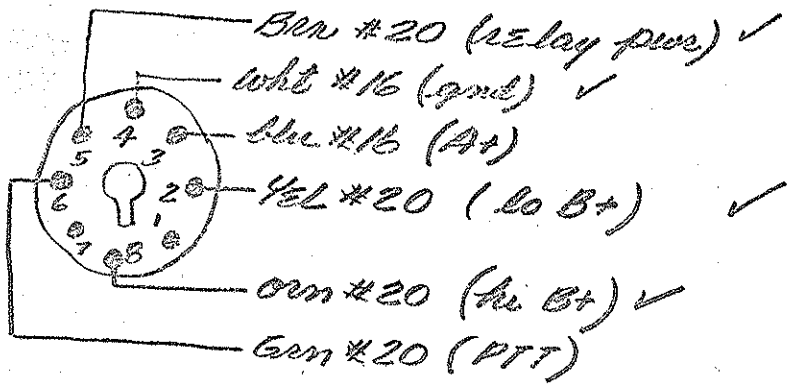


Cable 1 power in

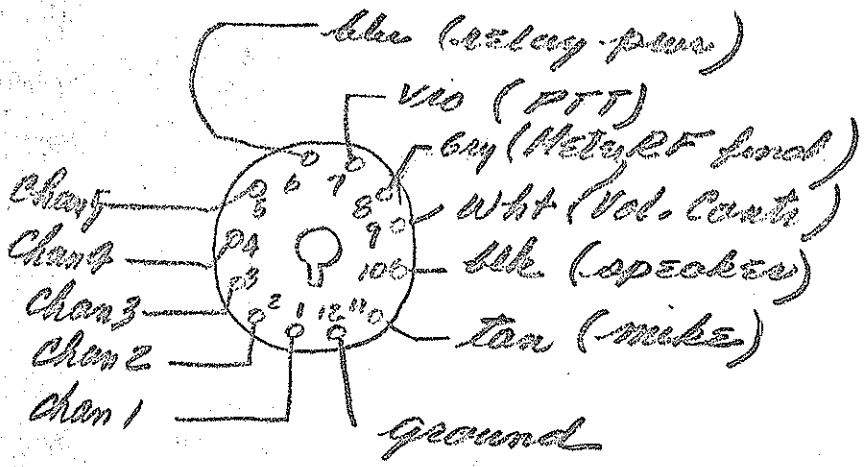
74257

Cable 2

74259 x2



between RS & Transceiver (wire pin to pin)



to control head

74271