INSTRUCTION BOOK FOR

NAVY MODEL

REH

Entertainment Radio Receiver

Type CDL-46271

BELMONT RADIO CORPORATION

Chicago 39, Illinois

Contract
NXsr 88879

Navy Department
Bureau of Ships

WARNING

This receiver shall not be used on board ship because of unsafe radiation limits.

This receiver is intended for providing radio broadcast news or entertainment programs to service personnel. It is designed for good reproduction of voice and music and for ease of installation and operation.

The set covers the five bands ordinarily used in commercial broadcasting and communications, employing "band-spread" tuning. Through the use of band-spread tuning, only those frequency ranges actually used are covered, and tuning is thus no more critical on short wave bands than it is over the low frequency American broadcast band. The following frequencies are covered by the receiver.

Band	Frequency Range
Standard Broadcast	540 to 1600 kilocycles
49 Meter	5.96 to 6.19 megacycles
31 Meter	9.1 to 10.0 megacycles
25 Meter	11.45 to 12.16 megacycles
19 Meter	14.14 to 15.46 megacycles

The receiver operates at 110 or 220 volts, 50 to 60 cps, drawing 60 watts. CAUTION: DO NOT USE THE RECEIVER ON DIRECT CURRENT OR AT FREQUENCIES BELOW 50 CPS. Frequencies above 60 cps can be used without harm to the set.

A switch and an input receptacle are provided for a phonograph attachment. The set incorporates automatic volume control, and has a three-position tone control which selects bass, normal, or treble tone.

INSTALLATION...

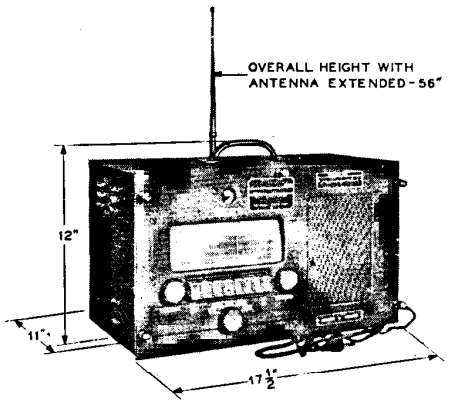
The illustration at the right gives dimensions of the receiver so that provisions for its permanent installation can be made if desired.

VOLTAGE. Before applying power to the set, determine the voltage of the power available. The receiver operates only on 110-120 or 220-240 volts, 50 to 60 cps. A switch on the chassis must be set for the line voltage to be used. Remove the chassis from its cabinet as described below and set the switch to correspond to the line voltage. Again, DO NOT USE THE RECEIVER ON D-C OR ON FREQUENCIES BELOW 50 CPS.

CHASSIS REMOVAL. The whip antenna has a flexible lead running to the screw-type antenna terminal at the rear of the set. Loosen the screw and disconnect this lead. If there should be a ground lead connected to the ground terminal, remove it. See that the a-c line cord is not connected and that it is free to be drawn through the rear of the cabinet. Now loosen the seven captive screws on the front panel and slide the front panel, to which the chassis is connected, forward and out of the cabinet.

ANTENNA. An eight-section whip antenna is permanently attached to the rear of the cabinet. This antenna can be used for the reception of nearby stations, but it is recommended that a longer antenna, as described below, be used whenever possible. To use the whip antenna, see that its flexible lead is securely attached to the antenna binding post at the rear of the set, and that the eight sections are fully extended. No part of the antenna should touch metal. No antenna matching adjustments are necessary in the set.

A fifty-foot length of insulated single-conductor wire with a terminal on one end is held in a clamp on



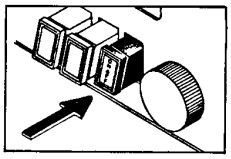
Receiver outline dimensions

the rear of the cabinet. When it is at all possible to use this wire as an antenna, do so, unless a good permanent antenna is available. To use this wire, connect its terminal in place of the whip antenna lead at the antenna terminal at the rear of the set. String out the full fifty feet of wire as far above ground as possible, avoiding contact with metal, and staying away from power or communication lines.

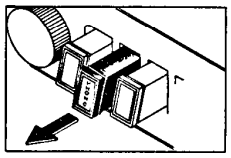
If a permanent radio antenna should be available, use it, since its use will provide best reception with the receiver. Any antenna that has been erected properly with attention to placement, insulation, and proximity to power or communication lines, can be used. In this case, the fifty-foot length of insulated wire provided with the set can be used as an antenna lead-in.

GROUND. If it is possible to provide a ground connection for the receiver, doing so will help to increase signal strength and reduce noise. A good ground is a cold water pipe or a metal pipe driven firmly into the ground. Connections should be soldered if possible. Connect the ground to the ground terminal at the rear of the set.

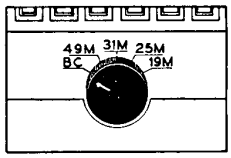
OPERATION...



1 Press the ON-OFF push-button (extreme right) in to turn the set on. Allow the set 30 seconds to warm up. Press the same push-button again to turn the set off.

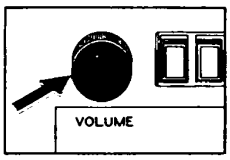


2 Press the PHONO push-button in for radio reception, pull the button out to use the set as an amplifier for a phonograph attachment.

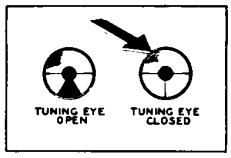


3 Turn the BAND SWITCH control to the desired band. For initial operation, select a band in which strong local stations are known to be operating.

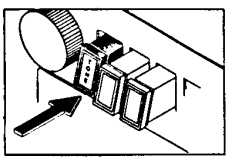
4 Turn the VOLUME control to the right until background noise or a station can be heard. Final adjustment is made after the desired station has been tuned in.



5 Turn the TUNING control to the right or left to select the desired station. Watch the tuning eye; when the eye comes closest to closing, the station is tuned.

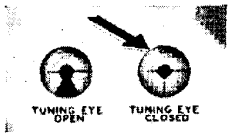


6 Press the TONE push-button in. Note the tone. Press it again and note the change. Three shades of tone are available successively as this button is pressed.



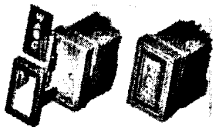
Setting the Push-buttons...

1 There are five push-buttons available as station selectors. The five stations need not be in the same band, but the buttons will not change bands. First, pull a button way out.



2 With a button pulled out, tune very carefully to the station desired, watching the tuning eye for the most accurate tuning. Do this with care to insure best reception.

3 Press the button in all of the way very firmly until it locks. If this button is not pressed in far enough, the setting will not be locked. Pulling the button way out unlocks it.



4 With a knife blade, pull the metal frame holding the call-letter tab out toward the front of the button. Select a printed tab, insert it in the recess and replace the metal frame.

The five stations selected need not all be on the same band, but if they are not, it will be necessary to change the position of the BAND SWITCH when going from one button to another, since pressing the button does not change bands. The setting of any push-button can be changed at any time by following these four steps. If there is no printed tab for the desired station, letter one of the proper size.

MAINTENANCE...

The receiver is not intended for use under severe service conditions. It is built so that with normal care it will operate satisfactorily with a minimum need for repairs. Spare tubes and pilot lamps are included with the receiver and are packed on a shelf above the tuner mechanism on the chassis.

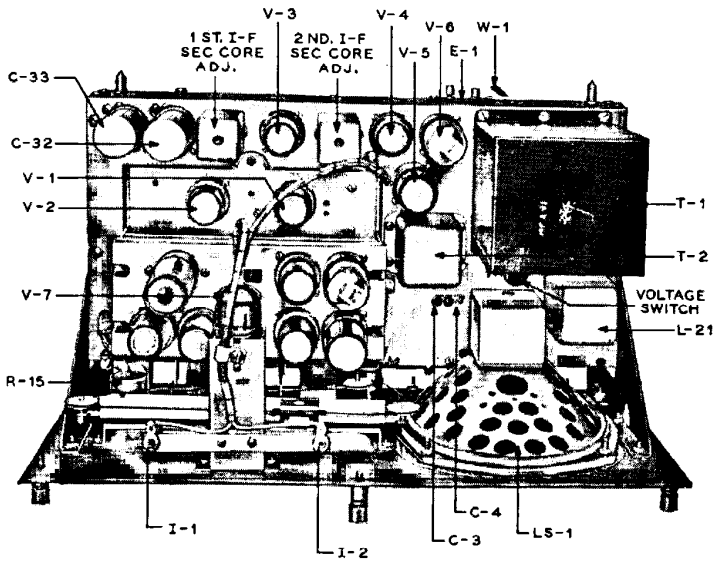
If the receiver fails to operate, the first check is to see that the switch on the chassis is set to the correct a-c supply voltage. If the switch has been set for 110 volts and 220 volts have been applied, the tubes most likely will have burned out.

Should the on-off switch (incorporated in a push-button) fail, it is possible to by-pass the switch by moving the line cord wire connected to a terminal strip to terminal 4 on the transformer. Be sure to disconnect the a-c cord before doing this. After this operation, it will be necessary to remove the a-c plug from the power receptacle to turn the set off.

A check of the tubes, with a tube checker or by replacement, will show up many troubles likely to arise in the receiver. Too short an antenna, poor antenna connections, or a grounded antenna will result in lack of volume or faulty operation. The addition of a good ground if one is not used, or a check of ground connections may show good results if reception is noisy or weak.

A check of voltages and resistances, according to the illustrations on a later page, should indicate the failure of any parts.

Under ordinary circumstances, it should not be necessary to realign the receiver. If, however, the set should be handled very roughly or dropped so as to jar it out of alignment, the adjustments can be made according to the procedure given on the following page. **Alignment should not be attempted without the instruments called for.**



Chassis removed from cabinet, top view

ALIGNMENT...

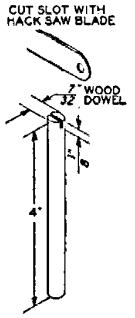
To align the set, the following instruments and tools are required: an accurately calibrated signal generator having a range sufficient to cover the frequencies listed in the chart below; an output meter; a .1 mf capacitor, a 200 mmf capacitor, and a 400 ohm resistor, all to be used as dummy antennas; a non-metallic alignment tool corresponding to the illustration below. This can readily be fashioned from hard wood or a plastic material.

A rectangular steel plate below the control knobs on the front panel must be removed for access to some of the trimmers. Remove the four screws holding the plate, and remove the BAND SWITCH knob, using the Allen-head wrench which is packed with the spare tubes. Remove the chassis from its case as described in the installation paragraphs. Set the chassis on one end so as to be able to reach the i-f trimmers on top and bottom of the chassis.

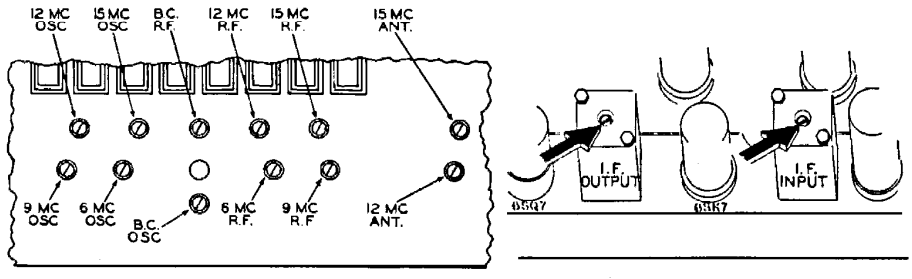
Make the following preliminary arrangements: set the TONE push-button for treble tone; set the VOLUME control at maximum; connect the radio chassis to the ground post of the signal generator; connect the output meter to the voice coil terminals of the speaker, these may be reached from the underside of the chassis; turn on the receiver and the signal generator and allow them to warm up for several minutes.

Align the receiver following the chart below. The illustrations below and on the following page indicate the alignment points referred to in the chart. Connect the indicated dummy antenna in series between the signal generator output lead and the noted point in the set for each series of adjustments. Adjust the trimmers in the order given for maximum output as indicated by the output meter.

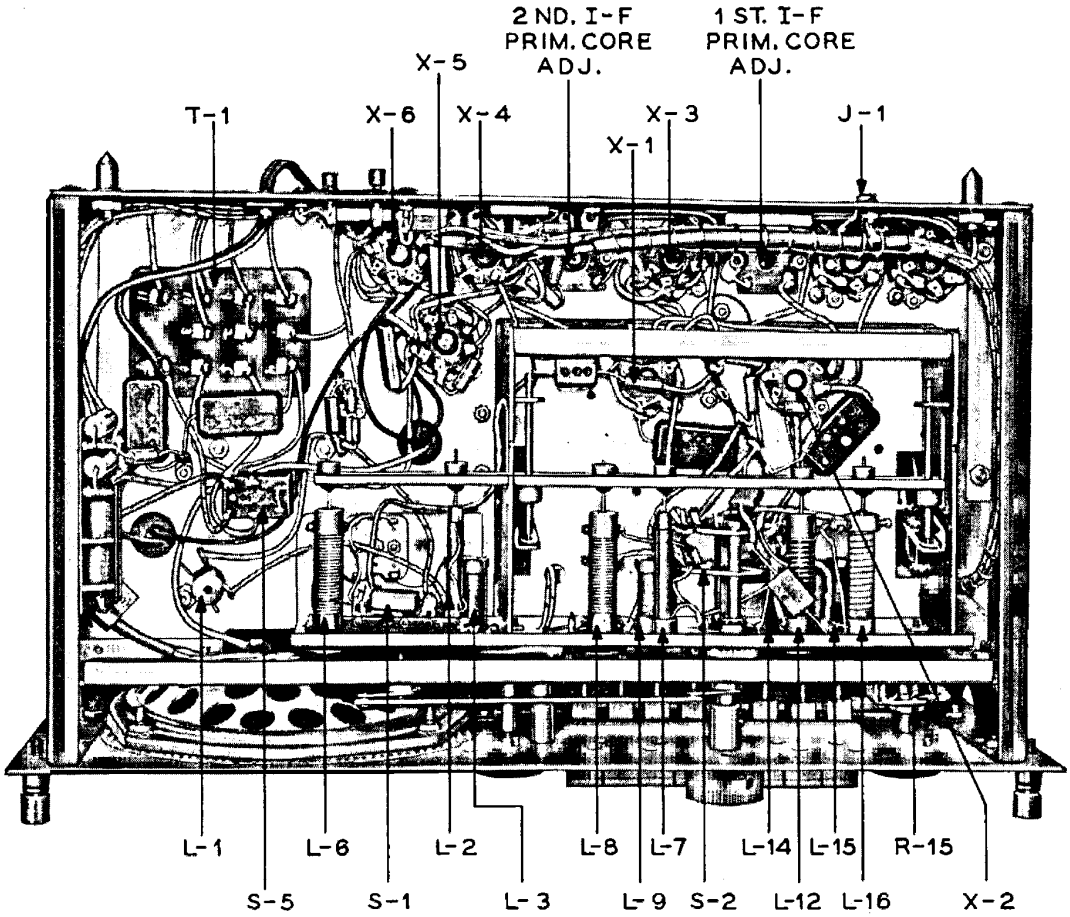
BAND SWITCH SETTING	GENERATOR FREQUENCY	DUMMY ANTENNA	CONNECTION TO RADIO	DIAL SETTING	TRIMMER TO BE ADJUSTED	LOCATION OF TRIMMER
Broadcast (For i-f alignment)	455 kc	.1 mf	Grid of 6SA7	1600 kc	I-F output secondary and primary I-F input secondary and primary	Bottom Top Bottom Top
31 Meters	9.6 mc	400 ohms	Antenna terminal	9.6 mc	10 MC Oscillator 10 MC R-F 10 MC Antenna	Front Front Front
49 Meters	6.1 mc	400 ohms	Antenna terminal	6.1 mc	6 MC Oscillator 6 MC R-F	Front Front
25 Meters	11.8 mc	400 ohms	Antenna terminal	11.8 mc	12 MC Oscillator 12 MC R-F 12 MC Antenna	Front Front Front
19 Meters	15.2 mc	400 ohms	Antenna terminal	15.2 mc	15 MC Oscillator 15 MC R-F 15 MC Antenna	Front Front Front
Broadcast	1400 kc	200 mmf	Antenna terminal	1400 kc	Broadcast Oscillator Broadcast R-F Broadcast Antenna	Front Front Front



Alignment tool



Alignment points, front panel with plate removed, and top of chassis



Chassis removed from cabinet, bottom view

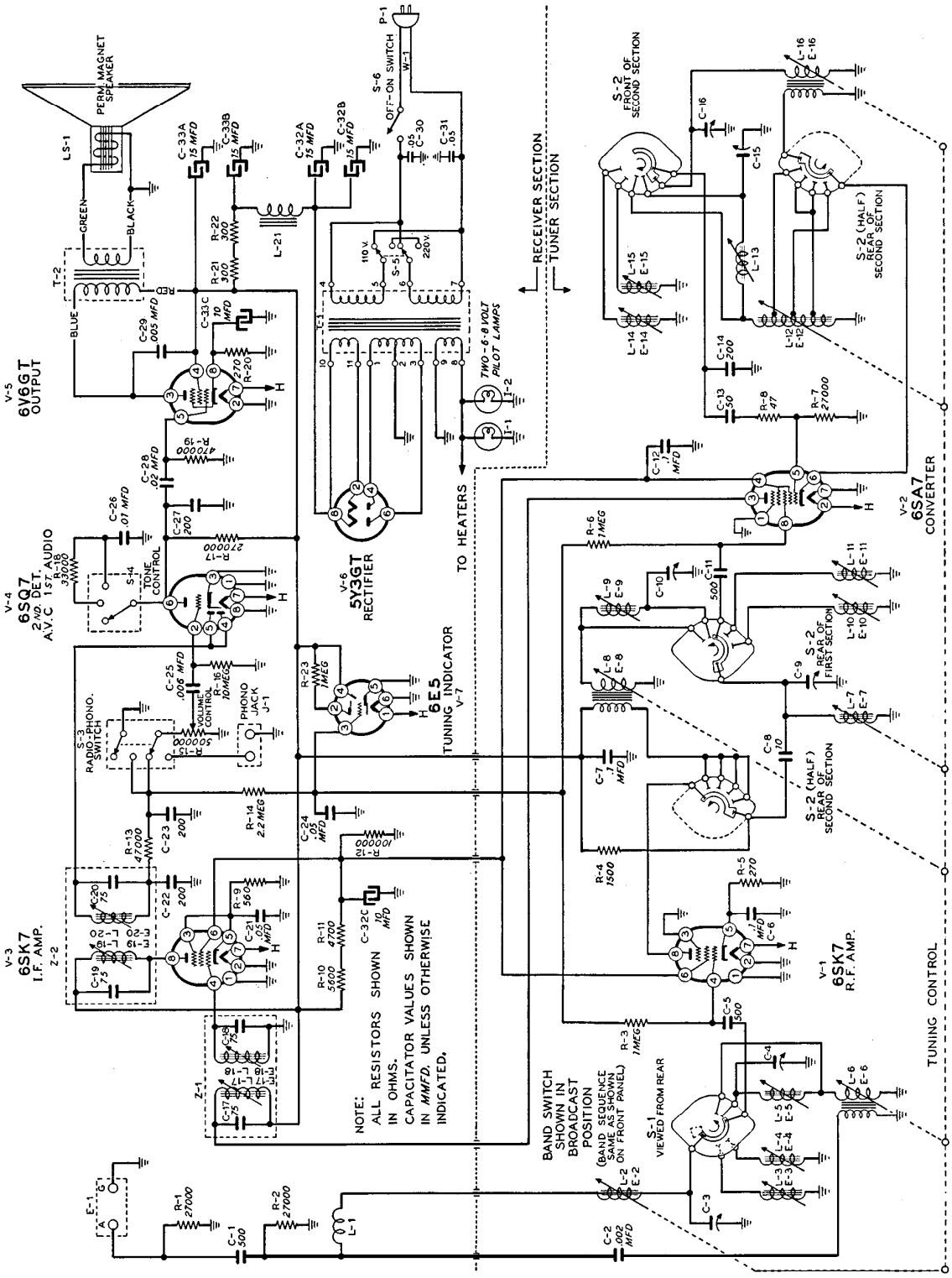
GUARANTEE

The equipment including all parts and spare parts, except vacuum tubes, batteries, rubber and material normally consumed in operation, is guaranteed for a period of one year from the date of delivery of the equipment to and acceptance by the Government with the understanding that all such items found to be defective as to material, workmanship or manufacture will be repaired or replaced, f.o.b. any point within the continental limits of the United States designated by the Government, without delay and at no expense to the Government; provided that such guarantee will not obligate the Contractor to make repair or replacement of any such defective items unless the defect appears within the aforementioned period and the Contractor is notified thereof in writing within a reasonable time and the defect is not the result of normal expected shelf life deterioration.

To the extent the equipment, including all parts and spare parts, as defined above, is of the Contractor's design or is of a design selected by the Contractor, it is also guaranteed, subject to the foregoing conditions, against defects in design with the understanding that if ten per cent (10%) or more of any such said item, but not less than two of any such item, of the total quantity comprising such item furnished under the contract, are found to be defective as to design, such item will be conclusively presumed to be of defective design and subject to one hundred per cent (100%) correction or replacement by a suitably redesigned item.

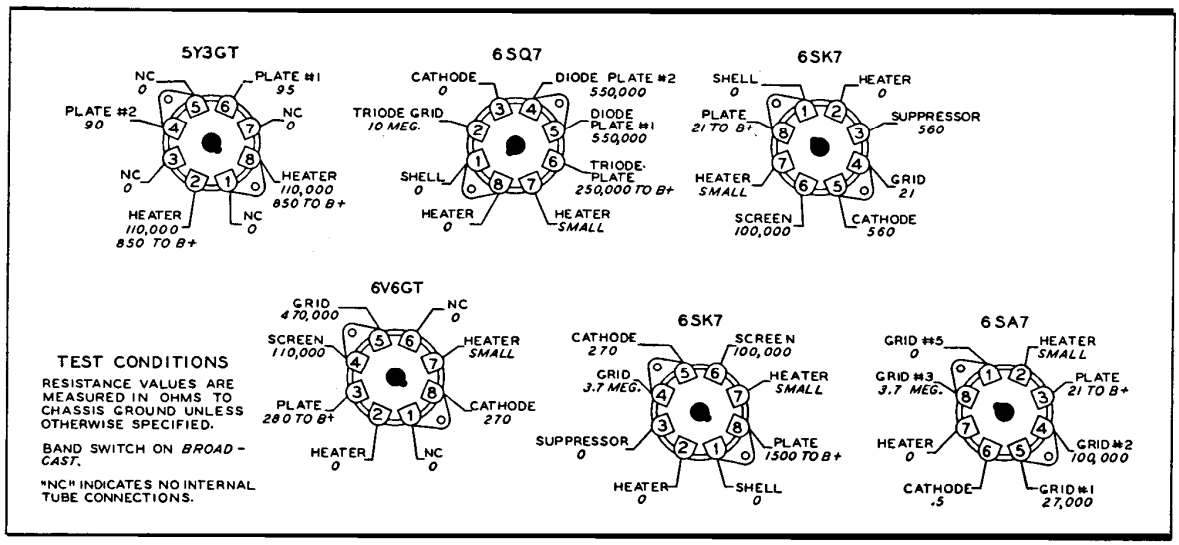
All such defective items will be subject to ultimate return to the Contractor. In view of the fact that normal activities of the Naval Service may result in the use of equipment in such remote portions of the world or under such conditions as to preclude the return of the defective items for repair or replacement without jeopardizing the integrity of Naval communications, the exigencies of the Service, therefore, may necessitate expeditious repair of such items in order to prevent extended interruption of communications. In such cases the return of the defective items for examination by the Contractor prior to repair or replacement will not be mandatory. The report of a responsible authority, including details of the conditions surrounding the failure, will be acceptable as a basis for affecting expeditious adjustment under the provisions of this contractual guarantee.

The above one year period will not include any portion of time the equipment fails to perform satisfactorily due to any such defects, and any items repaired or replaced by the Contractor will be guaranteed anew under this provision.



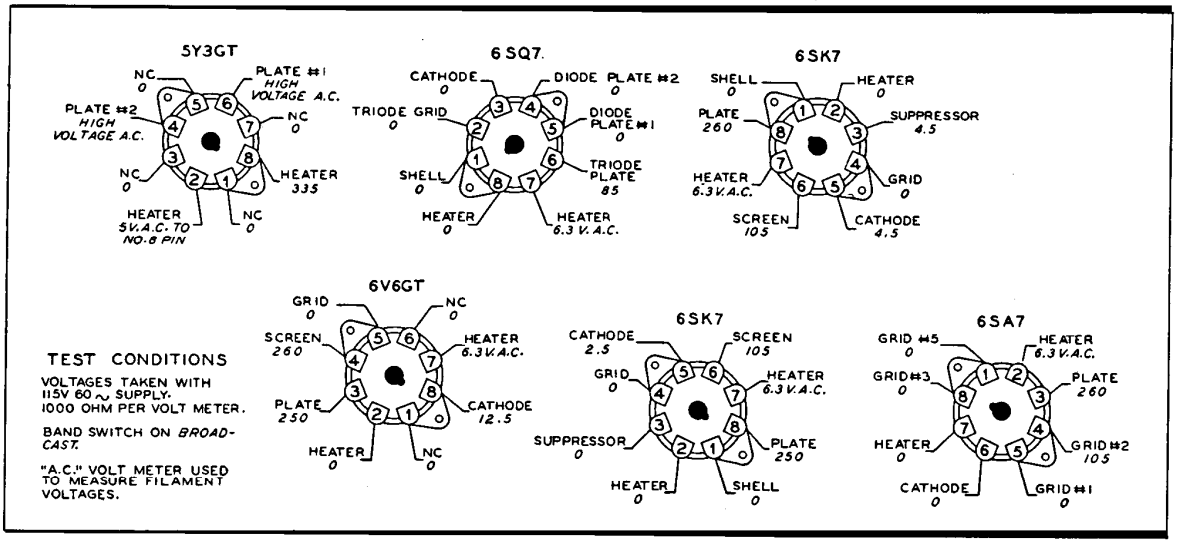
Receiver schematic diagram

COIL L-1, INTENDED FOR LOOP COMPENSATION IS NOT USED, SINCE A WHIP ANTENNA IS USED ELIMINATE L-1 FROM SCHEMATIC, BOTTOM PHOTOGRAPH, AND PARTS LIST.



FRONT OF CHASSIS
R. E. H. RECEIVER

Tube socket resistances



FRONT OF CHASSIS
R. E. H. RECEIVER

Tube socket voltages

PARTS AND SPARE PARTS LIST

SYMBOL	FUNCTION	DESCRIPTION	①NAVY STOCK NO. ②AWS OR JAN NO.	MFG.	MFG. DESIG.	CONTRACTOR'S PART NO.	QUAN. SPARES
C-1	Ant. coupling capacitor	CAPACITOR, FIXED: mica, 500 mmf, ±20%, 500 VDCW.		21	type MW	B-8F-5958	1
C-2	Ant. coupling capacitor	CAPACITOR, FIXED: mica; 2000 mmf, ±10%; 500 VDCW.	CM30202K②			B-8F-1308	1
C-3	Trimmer	CAPACITOR, VARIABLE: mica trimmer, 95 mmf, ±30%; working range, overall tolerance ±10%.		4		A-8E-7359	
C-4	Trimmer	CAPACITOR, VARIABLE: mica trimmer, 95 mmf; ±30%; working range, overall tolerance ±10%.		4		A-8E-7359	
C-5	Grid coupling (V-1)	CAPACITOR: mica; .0005 mfd x 500 volts, ±10%.		16	type O	B-8F-2715	2
C-6	Cathode bypass (V-1)	CAPACITOR: molded case, .1 mfd, ±10%, 400 W. V.		16	type 345-21	B-8J-909	8
C-7	Plate bypass (V-1)	CAPACITOR: same as C-6.					
C-8	Coupling capacitor	CAPACITOR, FIXED: silver mica; 10 mmf, ±10%; 500 VDCW.	CM20D100K②	10		B-8F-6690	1
C-9	Trimmer (V-1)	CAPACITOR, VARIABLE: mica trimmer, 170 mmf; ±30%; working range, overall tolerance ±5%.		4		A-8G-7205	
C-10	Trimmer (V-2)	CAPACITOR, VARIABLE: mica trimmer, 85 mmf, ±30%; working range, overall tolerance ±5%.		4		A-8G-7206	
C-11	Grid coupling (V-2)	CAPACITOR: same as C-5.					
C-12	Screen bypass (V-2)	CAPACITOR: same as C-6.					
C-13	Grid coupling (V-2)	CAPACITOR, FIXED: mica, 50 mmf, ±10%, 500 VDC.		16	type PO	B-8F-1554	
C-14	Grid bypass (V-2)	CAPACITOR, FIXED: silver mica; 200 mmf, ±3%, 500 VDCW.		16	type PO	B-8F-734	1
C-15	Cathode trimmer (V-2)	CAPACITOR, VARIABLE: ceramic trimmer, 6.5 mmf to 36 mmf working range, overall tolerance .05%.		7		A-8G-7207	
C-16	Grid trimmer (V-2)	CAPACITOR, VARIABLE: mica trimmer, 21 mmf, ±30% working range, overall tolerance 1%.		4		A-8E-7358	
C-21	Cathode bypass (V-3)	CAPACITOR, FIXED: paper, 50,000 mmf, ±20%; 600 VDCW.		16	type #345-22	B-8J-1995	10
C-22	R-f bypass (V-4)	CAPACITOR, FIXED: mica; 200 mmf, ±20%; 500 VDCW.		10	type CM20	B-8F-7616	3
C-23	R-f bypass (V-4)	CAPACITOR, FIXED: same as C-22.					
C-24	Filter capacitor (AVC)	CAPACITOR, FIXED: same as C-19.					
C-25	Grid coupling (V-4)	CAPACITOR, FIXED: paper; 6000 mmf, ±20%; 600 VDCW		16	type #340-24	B-8J-1851	3
C-26	Tone control capacitor	CAPACITOR: molded case; .01 mfd, ±20%, 600 volts.		16	type #342-17	A-8J-3424	2
C-27	Plate bypass (V-4)	CAPACITOR, FIXED: same as C-22.					
C-28	Grid coupling (V-5)	CAPACITOR, FIXED: paper; 20,000 mmf, ±20%, 600 VDCW		16	type #345-9	B-8J-4352	2

C-29	Plate bypass (V-5)	CAPACITOR, FIXED: paper; 5000 mmf, ±20%, 600 VDC.	16	type #340-25	B-8J-3654	2
C-30	A-c input filter	CAPACITOR: same as C-19.				
C-31	A-c input filter	CAPACITOR: same as C-19.				
C-32A	Filter (V-6)	CAPACITOR, FIXED: electrolytic; 3 section; 15 mfd x 450 VDCW, 15 mfd x 450 VDCW, 10 mfd x 350 VDCW.	22	type DEA	A-8C-7185	6
C-32B	Filter (V-6)	One section of C-32A.				
C-32C	Plate bypass (V-3)	One section of C-32A.				
C-33A	Filter (V-6)	CAPACITOR, FIXED: same as C-32A.				
C-33B	Filter (V-6)	One section of C-33A.				
C-33C	Cathode bypass (V-5)	One section of C-33A.				
E-2 thru E-16	Cores of inductances	CORE, ADJUSTABLE TUNING: r-f section.				
E-21	Antenna	ANTENNA, TELESCOPING: pin stainless steel, all other parts brass; gray chrome finish.	5		B-55N-7323	2
E-30	Lamp holder	LAMP HOLDER: two bayonet type sockets, sockets mtg on steel bracket.	17		A-47A-7141	1
E-31	Tuning	TUNING ASSEMBLY, R-F: R-f amplifier & selector; complete tuning assembly including mechanical push button control, five band iron core tuner with associated r-f amplifier & converter, tube sockets completely wired.	6		211-1797	1
I-1	Pilot lamp	BULB: pilot light, bayonet base, 6.3 volt, 4 watt.	11	type 44	A-46A-1621	12
I-2	Pilot lamp	BULB: same as I-1.				
J-1	Phono jack	CONNECTOR, FEMALE CONTACT: round female contact.	9		A-55A-7386	2
L-1	Antenna inductance	COIL, RADIO, R-F: antenna loading coil; single layer wound.	9	#1466	A-13G-7377	3
L-2	Var. ant. ind.	COIL, RADIO, R-F: antenna; single winding unshielded.	1	#7-450	A-13E-7356	3
L-3	Var. ind. trim.	COIL, RADIO, R-F: antenna, 12 mc; single layer wound.	6		B-13E-7329	
L-4	Var. ind. trim.	COIL, RADIO, R-F: antenna; 15 mc; single layer wound.	6		B-13E-7330	
L-5	Tuned series inductance	COIL, RADIO, R-F: antenna; 15 mc; single layer wound.	6		B-13E-7376	
L-6	Tuned grid	COIL, RADIO, R-F: antenna; 9 mc; two windings; unshielded.	1		B-13E-7328	3
L-7	Tuned plate ind.	COIL, RADIO, R-F: 230 turns of #7/44 SSE wire.	1	#7-451	A-13C-7248	3
L-8	Tuned grid ind.	COIL, RADIO, R-F: two windings; unshielded.	1		B-13C-7332	3
L-9	Tuned series ind.	COIL, RADIO, R-F: 6 mc; single layer wound; unshielded.	6		B-13E-7331	
L-10	Var. ind. trim. (V-2)	COIL, RADIO, R-F: 12 mc; single layer wound; unshielded.	6		B-13C-7333	

PARTS AND SPARE PARTS LIST (Cont'd.)

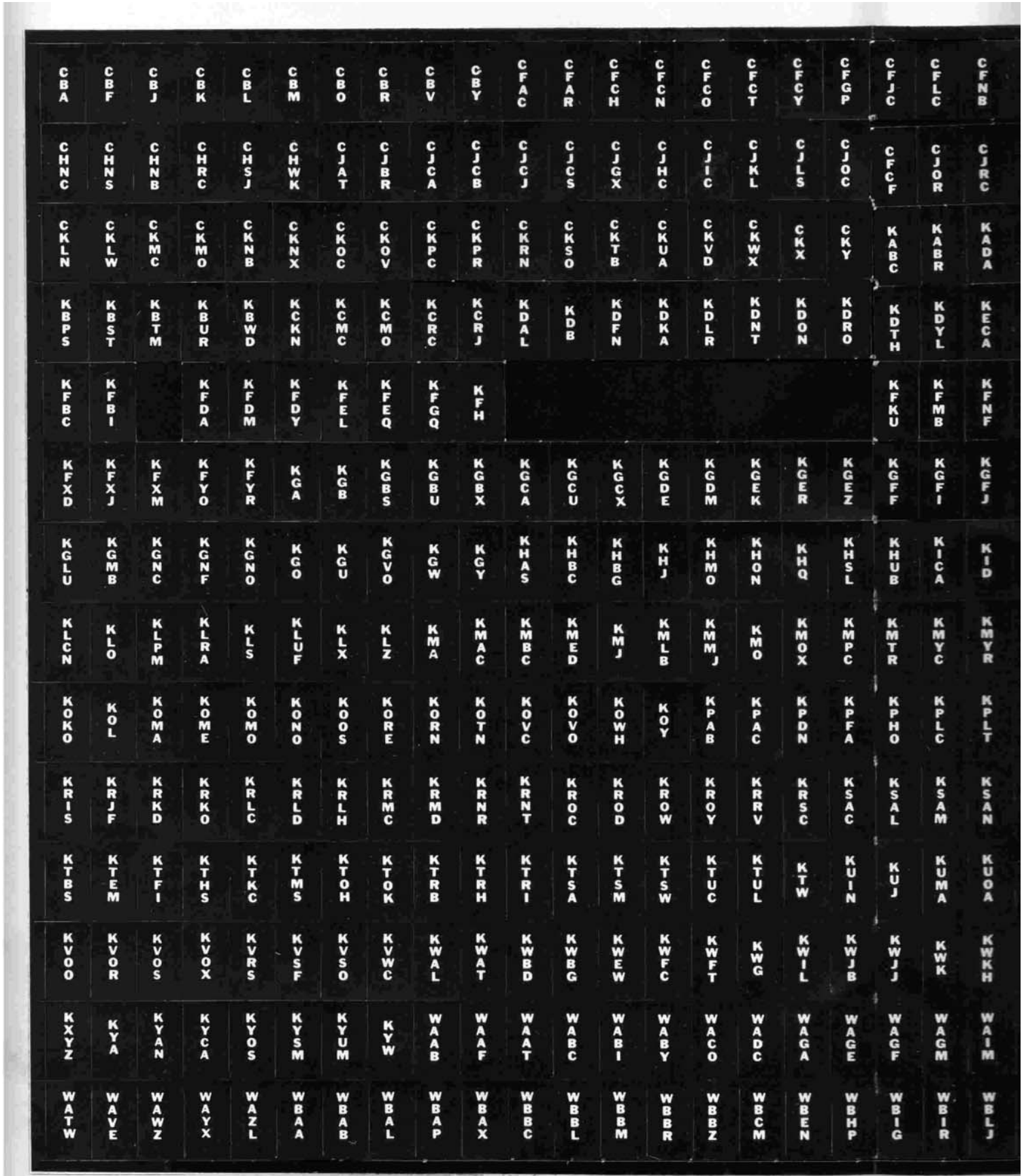
SYMBOL	FUNCTION	DESCRIPTION	①NAVY STOCK NO. ②AWS OR JAN NO.	MFG.	MFG. DESIG.	CONTRACTOR'S PART NO.	QUAN. SPARES
L-11	Var. ind. trim. (V-2)	COIL, RADIO, R-F: 15 mc; single layer wound; unshielded.		6		B-13C-7334	
L-12	Tuned cathode ind.	COIL, RADIO, R-F: oscillator; 9 mc; single winding; unshielded.		1		B-13D-7368	3
L-13	Var. ind. trim. (V-2)	COIL, RADIO, R-F: oscillator, 6 mc; single layer wound.		6		B-13D-7327	
L-14	Var. ind. trim. (V-2)	COIL, RADIO, R-F: oscillator, 15 mc; single layer wound, shielded.		6		B-13D-7355	
L-15	Var. ind. trim. (V-2)	COIL, RADIO, R-F: oscillator, 12 mc; single layer wound.		6		B-13D-7369	
L-16	Tuned grid ind. (V-2)	COIL, RADIO, R-F: oscillator, two windings; unshielded.		1	#49-139-A	B-13D-7357	3
L-21	Filter choke (V-6)	COIL, RADIO, R-F: filter choke; single winding; inductance greater than 5 henrys measured with .075 A.D.C., 3 V.A.C., 200 cycles; D-C resistance 270 ohms, ±10%, enclosed metal case.		23	#2C23	B-16B-7220	3
P-2	Phone-plug	CONNECTOR, MALE CONTACT: round male contact.		9		A-19A-7387	
R-I	Antenna filter resistor	RESISTOR, FIXED: composition; 27,000 ohms, ±10%, ½ watt.	3RC20BF-273K②			A-9B1-79	15
R-2	Antenna filter resistor	RESISTOR, FIXED: same as R-1.					
R-3	Grid isolating (V-1)	RESISTOR, FIXED: composition; 1 megohm, ±10%; ½ watt.	3RC20BF105K②			A-9B1-98	10
R-4	Plate load (V-1)	RESISTOR, FIXED: composition; 1500 ohms, ±10%; ½ watt.	3RC20BF152K②			A-9B1-64	5
R-5	Cathode resistor (V-1)	RESISTOR, FIXED: composition; 270 ohms, ±10%; ½ watt.	3RC20BF271K②			A-9B1-55	5
R-6	A.V.C. grid isolating (V-2)	RESISTOR, FIXED: same as R-3.					
R-7	Grid leak (V-2)	RESISTOR, FIXED: same as R-1.					
R-8	Grid isolating (V-2)	RESISTOR, FIXED: composition; 47 ohms, ±10%; ½ watt.	3RC20BF470K②			A-9B1-46	5
R-9	Cathode resistor (V-3)	RESISTOR, FIXED: composition; 560 ohms, ±10%; ½ watt.	3RC20BF561K②			A-9B1-59	5
R-10	Screen dropping (V-1)	RESISTOR, FIXED: composition; 4700 ohms, ±10%; 2 watts.	3RC40BF472K②			A-9B4-70	5
R-11	Screen dropping (V-1)	RESISTOR, FIXED: composition; 5600 ohms, ±10%; 2 watts.	3RC40BF562K②			A-9B4-71	5
R-12	Screen bleeder (V-1)	RESISTOR, FIXED: composition; 100,000 ohms, ±10%; 1 watt.	3RC30BF104K②			A-9B2-86	5
R-13	Detector load (V-4)	RESISTOR, FIXED: composition; 47,000 ohms, ±10%; ½ watt.	3RC20BF473K②			A-9B1-82	5
R-14	A.V.C. filter resistor	RESISTOR, FIXED: composition; 2.2 megohms, ±10%; ½ watt.	3RC20BF225K②			A-9B1-102	5
R-15	Volume control (V-4)	RESISTOR, VARIABLE: single section; carbon element; max. resistance 500,000 ohms.		7	#6	A-10B-7146	5
R-16	Grid load (V-4)	RESISTOR, FIXED: composition; insulated; 10 megohms, ±10%; ½ watt.	3RC20BF106K②			A-9B1-110	5
R-17	Plate load (V-4)	RESISTOR, FIXED: composition; 270,000 ohms, ±10%; ½ watt.	3RC20BF274②			A-9B1-91	5

R-18	Tone resistor	RESISTOR, FIXED: composition; 33,000 ohms, ±10%; ½ watt.	3RC20BF333K②			A-9B1-80	5
R-19	Grid load (V-5)	RESISTOR, FIXED: composition; 470,000 ohms, ±10%; ½ watt.	3RC20BF474K②			A-9B1-94	5
R-20	Cathode resistor (V-5)	RESISTOR, FIXED: composition; 270 ohms, ±10%; 1 watt.	3RC30BF271K②			A-9B2-55	5
R-21	Filter resistor (V-6)	RESISTOR: wire wound, 300 ohms, ±10%; 10 watt.		22		B-9C-7384	10
R-22	Filter resistor (V-6)	RESISTOR: same as R-21.					
S-4	Tone control switch	SWITCH, ROTARY: 3 position; bakelite body.		14	type WL20A	A-20F-7322	1
S-5	110-220 volt input selector switch	SWITCH, TOGGLE: D.P.D.T. black phenolic; fungus resistant.		3	C75.15	B-20C-3774	1
S-6	On-off switch	SWITCH, PUSH: on and off type.		14	#579	A-20F-7417	1
T-1	Power supply transformer	TRANSFORMER, POWER: filament & plate; electrostatic shield & core, grounded to case internally.		15		C-12A-7317	3
T-2	Output transformer	TRANSFORMER, A-F: output; secondary 3.5 ohms to reflect into primary 5000 ohms; steel rectangular case.		23	#2A94	B-12C-7219	3
Z-1	Input i-f transformer	TRANSFORMER, I-F: 455 kc; coupling transformer; shielded; 1⅜" x 1⅜" x 3" shield; permeability tuned intermediate frequency transformer assembly. Includes C-17, E-17, L-17, E-18, L-18, and C-18.		6		B-203-1813	6
Z-2	Output i-f transformer	TRANSFORMER, I-F: same as Z-1 except includes C-19, E-19, L-19, C-20, E-20, and L-20.					
LS-1	Loudspeaker	SPEAKER, MAGNETIC: cone type, oval shaped; PM type.		19	#X-6668	C-18A-7113	1

LIST OF MANUFACTURERS

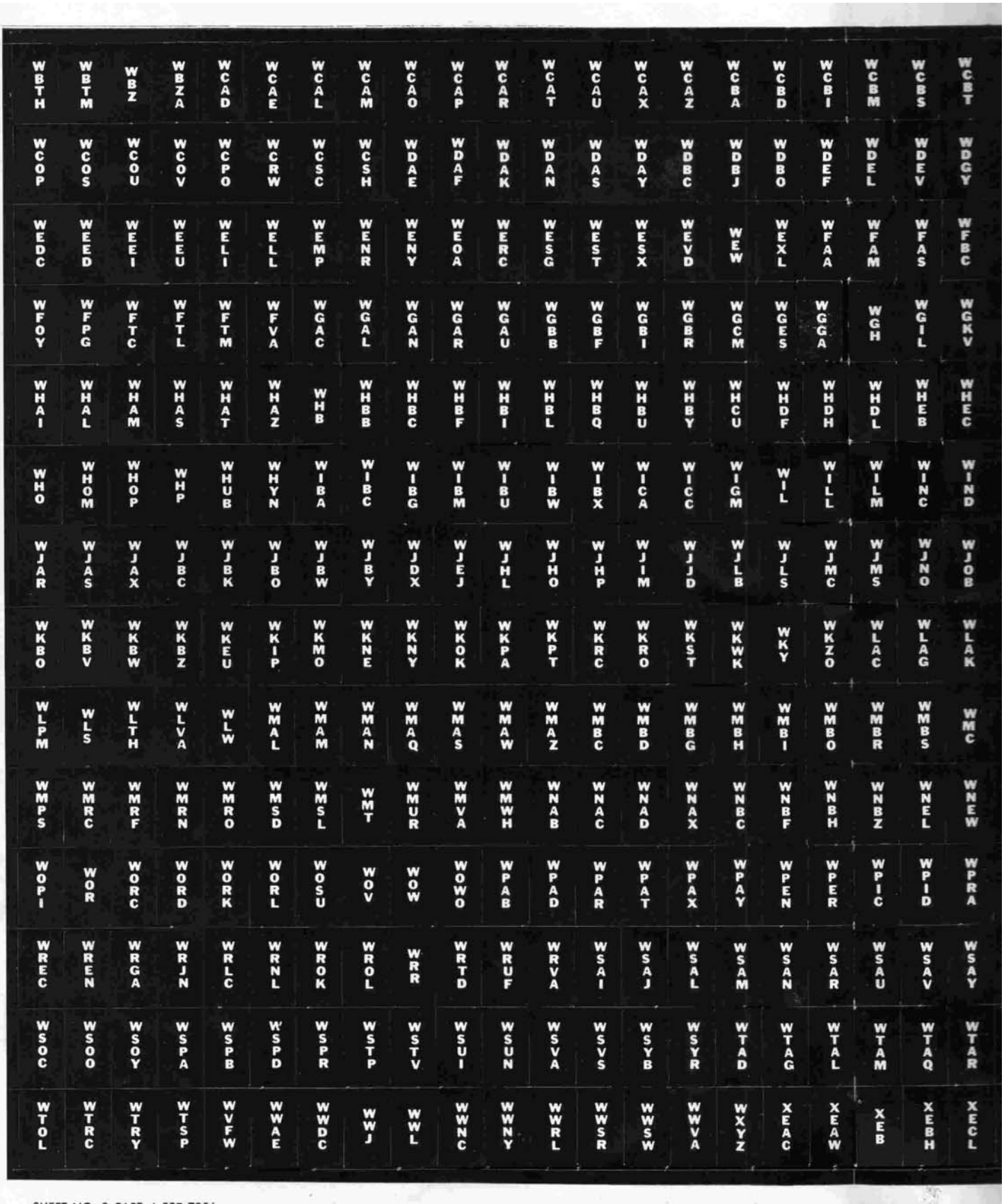
1. Aladdin Radio Industries
   501 West 35th St. ..... Chicago, Ill.
2. American Phenolic Co.
   1250 West Van Buren St. ..... Chicago, Ill.
3. Arrow, Hart & Hegeman Co.
   103 Hawthorne St. ..... Hartford, Conn.
4. Automatic Electric Co.
   1033 West Van Buren St. ..... Chicago 7, Ill.
5. Ward Products Corp. ..... Cleveland, Ohio
6. Belmont Radio Corp.
   5921 West Dickens Ave. ..... Chicago, Ill.
7. Centralab, 900 E. Keefe Ave. ..... Milwaukee, Wisc.
8. Central Die Casting Co.
   2935 West 47th St. ..... Chicago, Ill.
9. Cinch Mfg. Co.
   2335 West Van Buren St. ..... Chicago, Ill.
10. Electromotive Mfg. Co. ..... Willimantic, Conn.
11. General Electric (Mazda)
    431 West Pershing ..... Chicago, Ill.
12. International Spring Co.
    222 North Washtenaw ..... Chicago, Ill.
13. Lavelle Rubber Co.
    424 North Wood St. ..... Chicago, Ill.
14. Leviton Co., 236 Greenpoint Ave., Brooklyn, N. Y.
15. Merit Coil & Transformer
    311 North Desplaines ..... Chicago, Ill.
16. Micamold Radio Corp.
    1087 Flushing Ave. ..... Brooklyn, N. Y.
17. Micarta Fabricators, Inc.
    5324 Ravenswood Ave. ..... Chicago, Ill.
18. Parisian Novelty Co.
    3504 South Western Ave. ..... Chicago, Ill.
19. Radio Speakers, Inc.
    221 East Cullerton ..... Chicago, Ill.
20. Richardson Corp., Lake & 26th St. .. Melrose Park, Ill.
21. Solar Mfg. Co., 588 Ave. "A" ..... Bayonne, N. J.
22. Sprague Electric Co. ..... No. Adams, Mass.
23. Standard Transformer Corp.
    1500 North Halsted St. ..... Chicago, Ill.
24. Steiner Electric Co.
    3500 Milwaukee Ave. ..... Chicago, Ill.
25. Stackpole Carbon Co. ..... St. Mary's, Pa.
26. United Screw & Bolt Co.
    2513 West Cullerton ..... Chicago, Ill.

WCBI	WCBM	WCBS	WCBT	WCCO	WCED	WCFL	WCHS	WCHV	WCKY	WCLE	WCLO	WCLS	WCMI	WCNC	WCNW	WCOA	WCOC	WCOL
WDEF	WDEL	WDEV	WDGY	WDLP	WDMJ	WDNC	WDOD	WDRC	WDSM	WDSU	WDWS	WDZ	WEAF	WEAN	WEAU	WEBC	WEBQ	WEBR
WFAA	WFAM	WFAS	WFBC	WFBG	WFBL	WFBM	WFBR	WFCI	WFDF	WFEA	WFHR	WFIG	WFIL	WFLA	WFMD	WFMJ	WFNC	WFOR
	WGH	WGIL	WGKV	WGL	WGN	WGNC	WGNY	WGOV	WGPC	WGR	WGRB	WGRC	WGRM	WGST	WGTC	WGTM	WGY	WHA
WHDH	WHDL	WHEB	WHEC	WHFC	WHIO	WHIP	WHIS	WHIZ	WHJB	WHK	WHKC	WHKY	WHLB	WHLD	WHLN	WHLS	WHMA	WHN
WILL	WILM	WINC	WIND	WING	WINN	WINS	WINX	WIOD	WIP	WIRE	WIS	WISE	WISH	WISN	WITH	WIZE	WJAC	WJAG
WJMC	WJMS	WJNO	WJOB	WJPF	WJPR	WJR	WJRD	WJSV	WJTN	WJW	WJZ	WJZM	WKAQ	WKAR	WKAT	WKBB	WKBH	WKBN
WKZO	WLAC	WLAG	WLAK	WLAP	WLAV	WLAW	WLB	WLBC	WLBJ	WLBL	WLBZ	WLEU	WLLH	WLNH	WLOF	WLOG	WLOK	WLOL
WMBO	WMBR	WMBS	WMC	WMCA	WMDF	WMEX	WMFD	WMFF	WMFG	WMFJ	WMFR	WMGA	WMIN	WMJM	WMMN	WMOB	WMOG	WMPC
WNBH	WNBZ	WNEL	WNEW	WNLC	WNOE	WNOX	WNYC	WOAI	WOC	WOCB	WOI	WOKO	WOL	WOLF	WOLS	WOMI	WOMT	WOOD
WPER	WPIC	WPID	WPRA	WPRO	WPRP	WPTF	WQAM	WQAN	WQBC	WQDM	WQXR	WRAK	WRAL	WRAW	WRBL	WRC	WRDO	WRDW
WSAR	WSAU	WSAV	WSAY	WSAZ	WSB	WSBC	WSBT	WSFA	WSGN	WSIX	WSJS	WSKB	WSLB	WSLI	WSLS	WSM	WSMB	WSNJ
WTAL	WTAM	WTAQ	WTAR	WTAW	WTAX	WTBO	WTCM	WTCN	WTEL	WTHT	WTIC	WTJS	WTMA	WTMC	WTMJ	WTMV	WTNJ	WTOC
XEAW	XEB	XEBH	XECL	XED	XEG	XEFO	XEHV	XEJ	XELO	XEMO	XEN	XENT	XEQ	XERA	XERB	XET	XEW	XEZ



SHEET NO. 1 PART A-23D-7954

CFGP	CFJC	CFLC	CFNB	CFOS	CFPL	CFPR	CFQC	CFRB	CFRC	CFRN	CHAB	CHCK	CHGB	CHGS	CHLN	CHLP	CHLT	CHML
CJOC	CFCF	CJOR	CJRC	CJRM	CKAC	CKBI	CKCA	CKCH	CKCK	CKCD	CKCL	CKCO	CKCR	CKCV	CKCW	CKFC	CKGB	CKIC
CKY	KABC	KABR	KADA	KALB	KALE	KAND	KANS	KARK	KARM	KASA	KAST	KATE	KAVE	KAWM	KBIX	KBIZ	KBKR	KBND
KDRO	KDTH	KDYL	KECA	KEEN	KELA	KELD	KELO	KENO	KERN	KEUB	KEVR	KEX	KEYS	KFAB	KFAC	KFAM	KFAR	KFBB
	KFKU	KFMB	KFNF	KFOR	KFOX	KFPL	KFPW	KFPY	KFQD		KFRO	KFRU	KFSD	KFSG	KFUO	KFVD	KFVS	KFWB
KGEZ	KGFF	KGFI	KGFJ	KGFL	KGFW	KGFX	KGGF	KGGM	KGHF	KGHI	KGHL	KGIR	KGIW	KGKB	KGKL	KGKO	KGKY	KGLO
KHSL	KHUB	KICA	KID	KIDO	KIDW	KIEM	KIEV	KINY	KIRO	KIT	KITE	KIUL	KIUN	KIUP	KJBS	KJR	KLAH	KLBM
KMPC	KMTR	KMYC	KMYR	KNEL	KNET	KNOW	KNX	KOA	KOAC	KOAM	KOB	KOBH	KOCA	KOCY	KODL	KOH	KOIL	KOIN
KPFA	KPHO	KPLC	KPLT	KPMC	KPO	KPOF	KPOW	KPPC	KPQ	KPRC	KQV	KQW	KRBA	KRBC	KRBM	KRE	KRGV	KRIC
KSAC	KSAL	KSAM	KSAN	KSCJ	KSD	KSEI			KSLM	KSO	KSOO	KSRO	KSTP	KSUB	KSUN	KSWO	KTAR	KTBC
KUIN	KUJ	KUMA	KUOA	KUSD	KUTA	KVAK	KVAN	KVCV	KVEC	KVFD	KVGB	KVI	KVIC	KVNU	KVOA	KVOD	KVOE	KVOL
KWJB	KWJJ	KWK	KWKH	KWLC	KWLK	KWLM	KWNO	KWOC	KWOS	KWSC	KWTO	KWYO	KXA	KXL	KXO	KXOK	KXOX	KXRO
WAGE	WAGF	WAGM	WAIM	WAIR	WAJR	WAKR	WALA	WALB	WAML	WAOV	WAPI	WAPO	WARD	WARM	WASH	WATL	WATN	WATR
WBHP	WBIG	WBIR	WBLJ	WBLK	WBML	WBNS	WBNX	WBNY	WBOC	WBOW	WBRB	WBRC	WBRE	WBRK	WBRW	WBRY	WBT	WBTA



SHEET NO. 2 PART A-23D-7954

UNITED STATES NAVAL AIR BASE
KISARAZU, TOKYO BAY, JAPAN

DATE 3 January 1946

BILL OF SALE

This is to certify that One Radio, model REH - CDL 46271 Serial No. 2005 has been sold to KAY, Clifford W., SK1c. at the established sale price of ¥1000.00 ($66.67).

C. E. KOROWICKI
Lt. (jg) (SC) USNR
Supply Officer