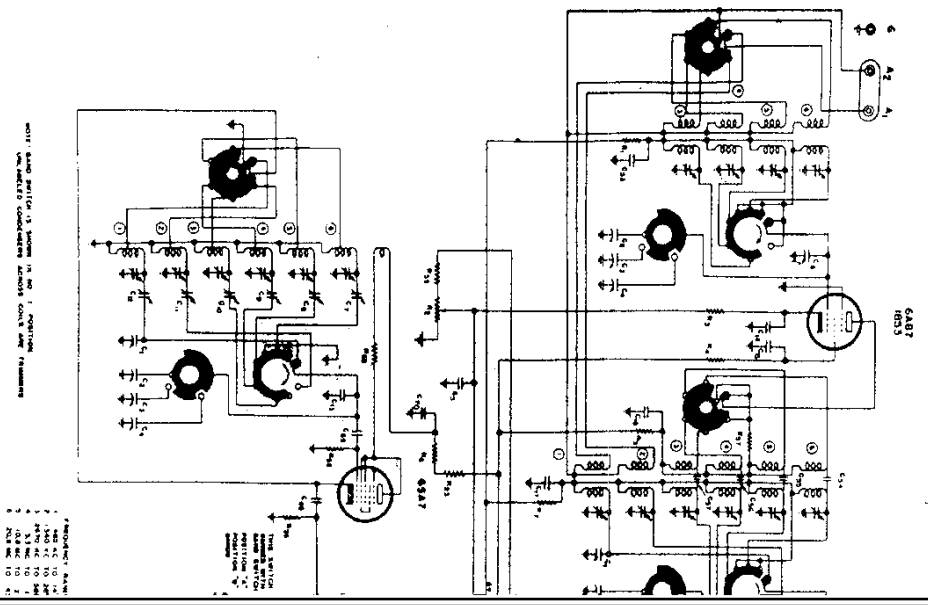
Hallicrafters, Inc.

Model: SX-32	Chassis:	Year: Pre March 1942
Power:	Circuit:	IF:
Tubes:		
Bands:		

Resources
Riders Volume 13 - HALLICRAFTERS 13-7, 8
Riders Volume 13 - HALLICRAFTERS 13-9
Riders Volume 13 - HALLICRAFTERS 13-10
Riders Volume 13 - HALLICRAFTERS 13-11
Riders Volume 13 - HALLICRAFTERS 13-12
Riders Volume 13 - HALLICRAFTERS 13-13
Riders Volume 13 - HALLICRAFTERS 13-14



THE HALLICRAFTERS INC.

MODEL SX-32, Sky Rider

MODEL SX-32 SKYRIDER CONDENSERS

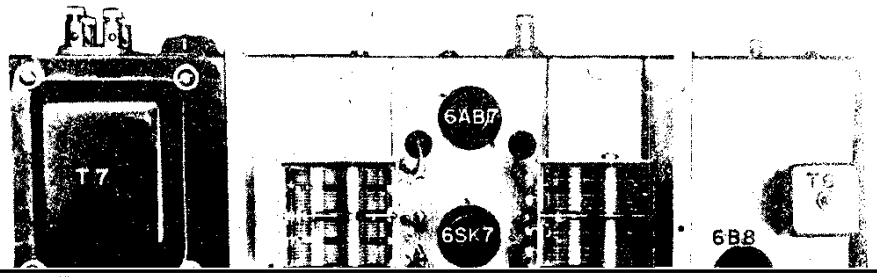
No.	Value	Voltage or Purpose	Type
C 1	Band No. 1	tuning condenser	....
C 2	Main	tuning condenser	....
C 3	3 plate	band spread cond.	....
C 4	5 plate	band spread cond.	....
C 5	.25 mfd	200	tubular
C 6	50 mmf	condenser	Variable Air
C 7	1550 mmf	Band No. 6 pad	mica
C 8	3160 mmf	Band No. 5 pad	mica
C 9	2830 mmf	Band No. 4 pad	mica
C10	1430 mmf	Band No. 3 pad	mica
C11	790 mmf	Band No. 2 pad	mica
C12	380 mmf	Band No. 1 pad	mica
C13	temperature	Compensated condenser	....
C14	.02 mfd	400	tubular
C15	.02 mfd	400	tubular
C16	.02 mfd	400	tubular
C17	.05 mfd	200	tubular
C18	.02 mfd	400	tubular
C19	.02 mfd	400	tubular
C20	.02 mfd	400	tubular
C21	.05 mfd	200	tubular
C22	.02 mfd	400	tubular
C23	.02 mfd	400	tubular
C24	.02 mfd	400	tubular
C25	2000 mmf	....	mica
C26	.02 mfd	400	tubular
C27	.02 mfd	400	tubular
C28	.02 mfd	400	tubular
C29	20 mmf	trimming condenser	....
C30	20 mmf	trimming condenser	....
C31	20 mmf	trimming condenser	....
C32	20 mmf	crystal phasing	air
C33	.02 mfd	400	tubular
C34	.02 mfd	400	tubular
C35	.05 mfd	200	tubular
C36	2000 mmf	....	mica
C37	50 mmf	....	mica
C38	.05 mfd	200	tubular
C39	.01 mfd	400	tubular
C40	500 mmf	....	mica
C41	30 mfd	25	electrolytic
C42	.02 mfd	400	tubular
C43	2 mmf	....	twisted leads
C44	500 mmf	10%	mica
C45	.05 mfd	400	tubular
C46	.05 mfd	400	tubular
C47	2000 mmf	....	mica
C48	30 mfd	450	electrolytic
C49	30 mfd	450	electrolytic
C50	.02 mfd	400	tubular
C51	.01 mfd	600	tubular
C52	.01 mfd	600	tubular
C53	.05 mfd	200	tubular
C54	10 mmf	....	ceramic
C55	5 mmf	....	ceramic
C56	5 mmf	....	ceramic
C57	2 mmf	twisted leads	....
C58	10 mmf	....	ceramic
C59	5 mmf	....	ceramic
C60	2 mmf	twisted leads	....
C61	250 mmf	....	mica IN-TI
C62	.02 mfd	400	tubular
C63	.05 mfd	200	tubular
C64	100 mmf	....	mica
C65	.02 mfd	400	tubular
C66	.05 mfd	200	tubular
C67	.02 mfd	400	tubular
C68	50 mmf	....	mica
C69	50 mmf	....	mica
C70	2000 mmf	....	mica
C71	100 mmf	....	mica
C72	2 mmf	twisted leads	....
C73	2 mmf	twisted leads	....
C74	25 mmf	....	mica

MODEL SX-32 SKYRIDER RESISTORS

No.	Value in Ohms	Wattage or Purpose
R 1	100,000	1/3
R 2	10,000	RF Gain
R 3	300	1/3
R 4	25,000	1/2
R 5	1,000	1/3
R 6	7,000	2
R 7	100,000	1/3
R 8	300	1/3
R 9	1,000	1/3
R10	3,000	1/3
R11	100,000	1/3
R31	11,000	Candohm 1-1/2 Watts
R32	4,000	Candohm 7 Watts
R33	500,000	Audio Gain
R34	1,000	1/3
R35	500,000	Tone Control
R36	100,000	1/3
R37	100,000	1/3
R38	2,500	2
R39	200,000	1/3
R40	250,000	1/3
R41	250,000	1/3

MODEL SX-32, Sky Rider

THE HALLICRAFTERS INC.



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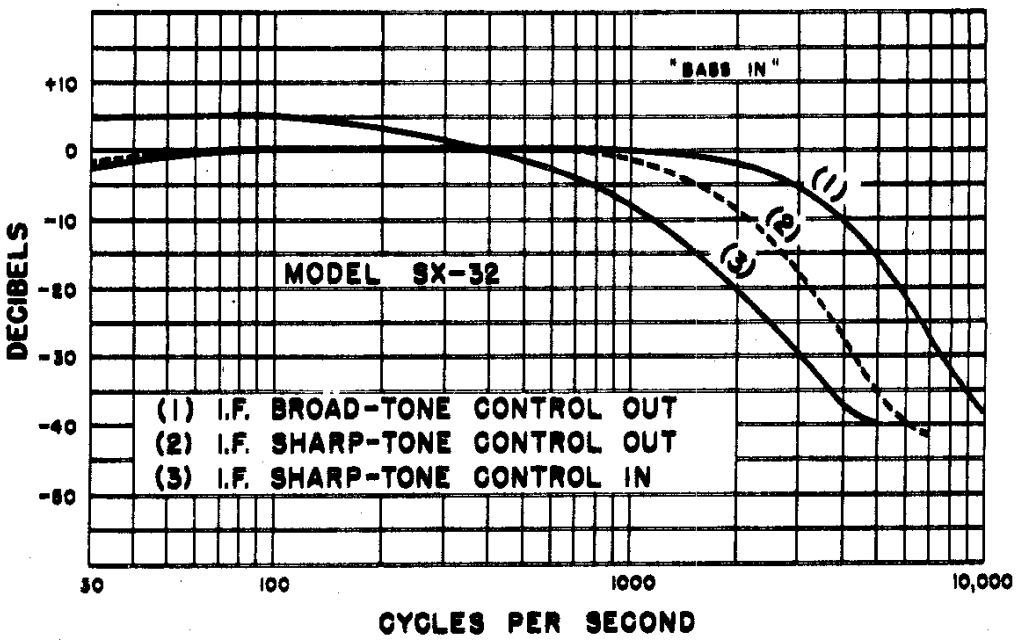
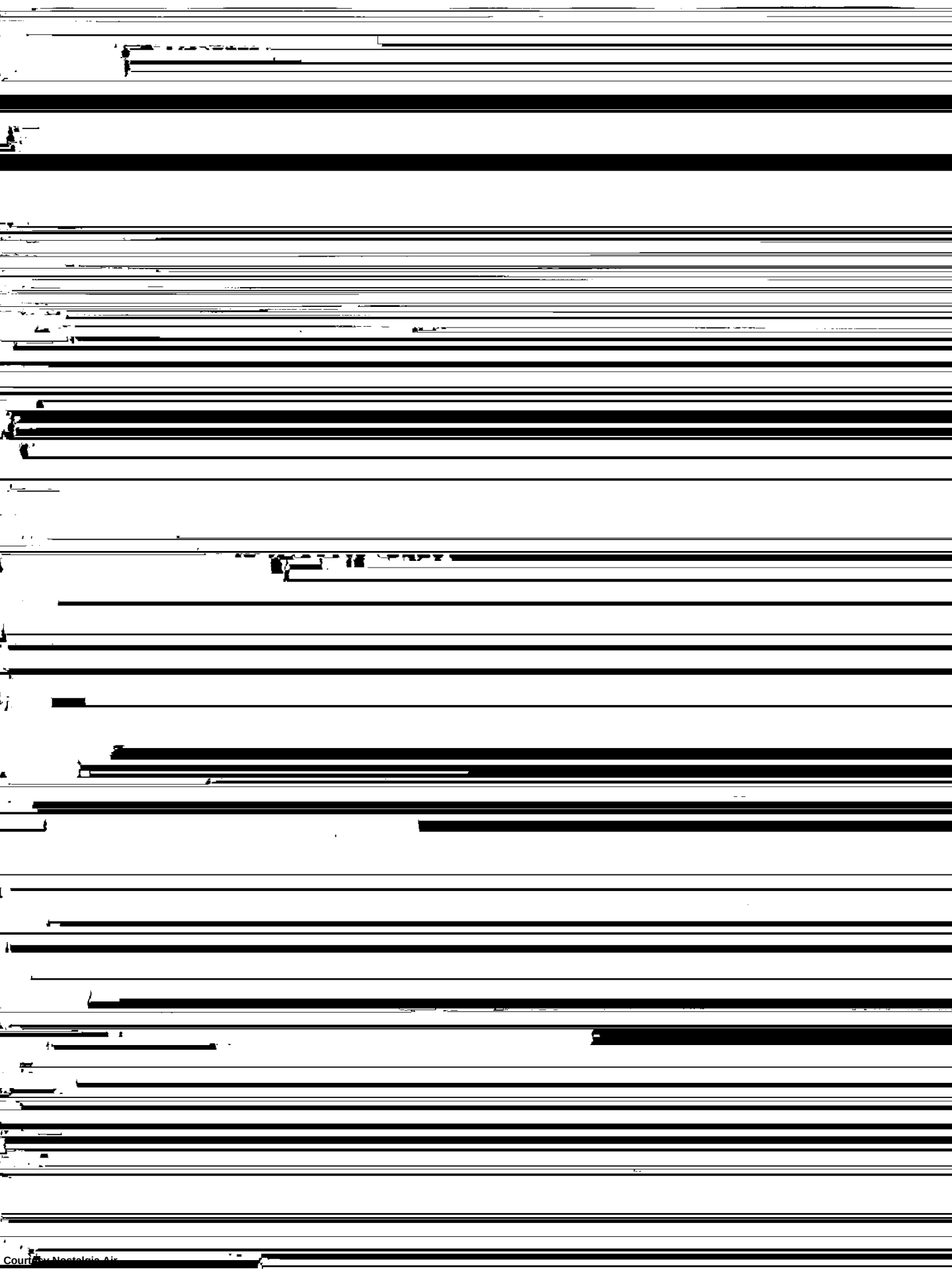
AUDIO FIDELITY CURVE



The following measurements made with a 20,000 ohms per volt meter and taken from the socket terminal indicated to ground or receiver chassis. Antenna and ground were disconnected from the receiver when these measurements were taken and the RF and AF gain controls set at maximum. "DL" means Dead Lug but will indicate voltage when used as a tie. Normal tolerance allows a variation of ±10% from the indicated values.

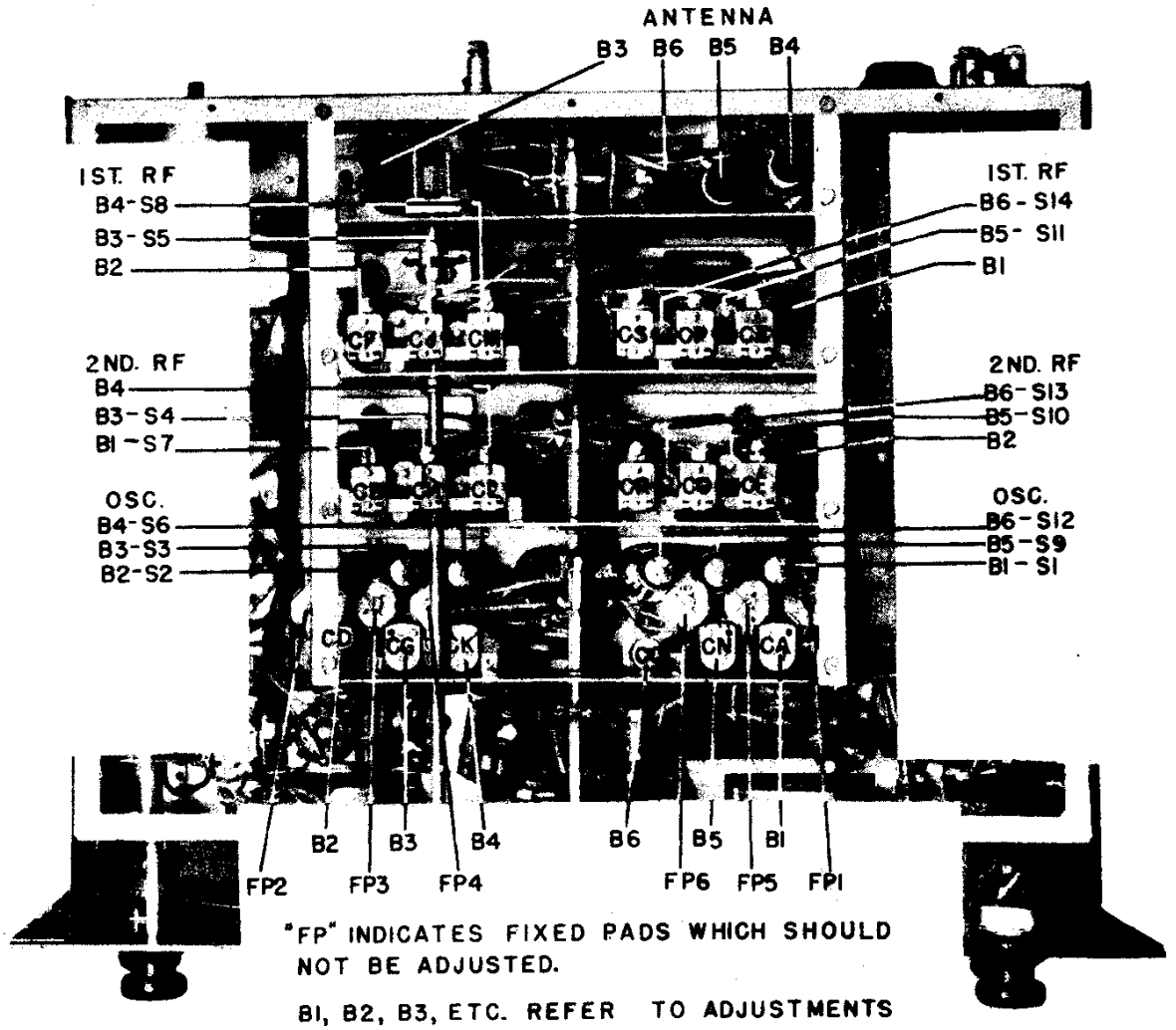
TUBE	FUNCTION	SOCKET TERMINALS								
		1	2	3	4	5	6	7	8	Cap.
6AB7	RF Amp. (1)	...	...	...	...	4.5	180	6.3	245	...
6SK7	RF Amp. (2)	...	...	4.35	0.1	4.35	120	6.3	230	...
6SA7	Mixer	...	...	250	100	...	3.7	6.3	...	...
6SA7	HF Osc.	...	...	120	120	0.3	...	6.3	120	...
6K7	IF Amp. (1)	...	...	280	120	...	...	6.3	4	=.075
6SK7	IF Amp. 2	...	...	4	...	4	120	6.3	280	...
6B8	AVC Amp.	...	...	230	0.2	0.2	120	6.3	2	...
6H6	ANL and DET.	...	...	...	...	...	...	6.3	...	...
6J5	Beat Osc.	...	...	130	...	—7	...	6.3	...	BFO ON ONLY FOR TEST
6SC7	1st Audio Amp.	...	140	...	...	137	1.4	6.3	...	...
6V6GT	P.P. Audio Amp.	...	...	290	265	...	...	6.3	17	...
6V6GT	P.P. Audio Amp.	...	...	290	265	...	...	6.3	17	...
5Z3	Rectifier	320	340 AC	340 AC	320	...	...	...	...	...



Courtesy Nostalgia Air

THE HALLICRAFTERS INC.

MODEL SX-32, Sky Rider



"FP" INDICATES FIXED PADS WHICH SHOULD NOT BE ADJUSTED.

B1, B2, B3, ETC. REFER TO ADJUSTMENTS ON BAND 1, BAND 2, BAND 3, ETC.

RF ALIGNMENT

Connect hot lead of signal generator to A_1—through dummy antenna shown in table. Leave jumper connected between A_2 and G. Ground of Generator to Chassis.

Band	Rec. Dial Setting	Sig. Gen. Freq.	Dummy Antenna	HIGH FREQUENCY END		LOW FREQUENCY END	
				Adjust Osc. With	Adjust Trimmers for Max. Gain	Adjust Osc. With	Permeability Tuned By
1	1.2 mc	1.2 mc	200 mmf	C_A	C_B C_C	....	.....
1	.6	.6	200 mmf	....	.....	S_1	.....
2	2.6	2.6	400 ohms	C_D	C_E C_F	....	.....
2	1.5	1.5	400 ohms	....	.....	S_2	.....
3	5	5	400 ohms	C_G	C_H C_J	....	.....
3	3.0	3	400 ohms	....	.....	S_3	S_4 S_5
4	10	10	400 ohms	C_K	C_L C_M	....	.....
4	5.6	5.6	400 ohms	....	.....	S_6	S_7 S_8
5	20	20	400 ohms	C_N	C_O C_P	....	.....
5	11	11	400 ohms	....	.....	S_9	S_{10} S_{11}
6	38	38	400 ohms	C_Q	C_R C_S	....	.....
6	22	22	400 ohms	....	.....	S_{12}	S_{13} S_{14}

THE HALLICRAFTERS INC.

C ACTION

n is used. The RF and mixer tubes
ally tuned carrier coming through
rcuits. The final signal however
nd IF circuits. As a result, when
tenuated, the receiver output has
while the AVC action has dropped
sults in a reduction of between-
ore sharply defined aural tuning.

L INTENSITY METER

per S unit equivalent is 6 DB's.
r decibel, is a unit of change in
ted as being the least detectable
can appreciate when listening to
3DB is the least change the ear
to sounds varying in both ampli-
parison, a variation of one S unit
cate a change of two detectable
hematically, a DB gain or loss
) where E_1 = input voltage and

OND DETECTOR

diode type of second detector is
32. Its choice was prompted by
ector is capable of handling large
tion with very little distortion.
t of the diode being easily filtered
tion, the rectified output contains
h can be used for AVC purposes.

QUENCY OSCILLATOR

with the switch below the band-
adjusted by the slotted knob
control. The BFO circuit, as will
the schematic, is the well known
ill be noticed that a plate drop-
o compensate for plate voltage
: in receiver voltage causes an
ment of the oscillator. This in-
: voltage drop across the resistor
aining a more constant voltage
oscillator tube. A favorable ratio
e is used. The fixed tank capacity
d by alternately exposing it to
w temperatures. In this manner
he component parts are removed
he condenser remains constant.
ability tuned which further re-
drift which would occur should
be used to resonate the circuit.
he Beat Oscillator tube and its
plus excellent shielding and me-
h to keep stray fields from being
leakage is to be expected in the
s" or BFO harmonics will not

IO AMPLIFIER

: stage of the audio amplifier in
r uses two 6V6GT tubes connec-
: tubes are driven by the 6SC7
the triode sections of the 6SC7
ner to the 6V6GT tubes. A por-
the plate circuit of the first 6SC7
triode is fed to the grid of the other 6SC7 triode Section, thereby giving two output voltages in opposite phase suitable for exciting the push-pull 6V6GT output amplifier.

THE POWER SUPPLY

The power supply in the Model SX-32 is quite normal except that it supplies voltage for the 6V6GT output tubes directly from the rectifier or before the filter system. Voltage fluctuations in the receiver are greatly reduced—increasing the audio output of the receiver and stabilizing the operation of all circuits.

The filter circuit consisting of a total of 60 mfds of capacity and a 12 henry choke keep the hum level of the receiver in excess of 60 DB below maximum output. The power transformer is built to withstand continuous operation at 250 degrees F but has been designed to run at approximately 140 degrees F under normal conditions.

SPECIFICATIONS

Tubes:

1—6AB7	1st RF Amplifier
1—6SK7	2nd RF Amplifier
1—6SA7	Mixer
1—6SA7	HF Oscillator
1—6K7	1st IF Amplifier
1—6SK7	2nd IF Amplifier
1—6B8	AVC Amplifier
1—6H6	2nd Detector and A.N.L. Tube
1—6J5	Beat Oscillator
1—6SC7	1st Audio Amplifier
2—6V6GT	Push-Pull Output Amplifiers
1—5Z3	Rectifier

Power Consumption—at 117 volts—60 cycles—138 watts
Power Consumption—DC operation—18 amp. at 6 volts or 108 watts
Power Output —8 watts undistorted
Sensitivity—(for .05 watts output) Bands 1 to 5—2 MV and under; 6th band 4 MV

	2 x	1000 x
Selectivity—IF broad (high fidelity)	12 kc	36 kc
IF Sharp	4.1 kc	22 kc

Frequency Range RF—Note: These are the actual frequencies covered corresponding to nominal figures indicated on the front panel.

500	to	1450	kilocycles
1.4	to	2.8	megacycles
2.7	to	5.4	megacycles
5.2	to	11	megacycles
10.5	to	22	megacycles
21	to	42	megacycles

Frequency response AF broad IF—tone control high-70 to 3000 cycles ± 2½ DB
Speaker Output Impedances—5000 and 500 ohms
Intermediate Frequency—455 kc
Table cabinet dimensions—20½" long x 10" high x 14⅝" deep
Relay Rack dust cover dimensions—14⅝" deep x 17⅞" long x 8¾" high
Panel dimensions—19" x 8¾"
Chassis dimensions—17⅝" x 13½"
Weight—(unpacked)—75 lbs.—packed 87 lbs.