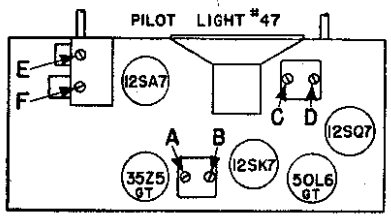
MODEL 5B1
MODEL 5B1A
MODEL 6A1, Issue B

ADMIRAL CORPORATION

MODEL 5B1A *ALIGNMENT PROCEDURE* MODEL 5B1

1. Be sure Radio Receiver and Signal Generator are thoroughly warmed up before starting alignment procedure.
2. Check setting of Pointer Extremes and note correct 600 K.C. and 1400 K.C. positions on Dial Background. (See Dial Diagram)
3. Connect Output Meter across Voice Coil.
4. Turn Receiver Volume Control—full on.
5. Use lowest Output setting of Signal Generator capable of producing adequate Output Meter indication and then proceed in the following sequence.
6. Repeat adjustments to insure final overall maximum results.

TOP VIEW — TUBE & TRIMMER LOCATION



BACK OF CHASSIS

Connect Signal Generator to—	Dummy Antenna Between Radio and Generator	Set Generator Frequency to—	Set Receiver Dial Frequency to—	Adjust Following Trimmers	Type of Adjustment
Tuning Condenser Antenna Stator	250 mmfd. Condenser	455 KC.	High frequency end of Dial	C—D 2nd I. F. A—B 1st I. F.	Adjust to maximum Output
Tuning Condenser Antenna Stator	250 mmfd. Condenser	1630 KC.	High frequency end of Dial	E—Osc.	Adjust to maximum Output
Loop radiator (or place pickup lead from gen. close to loop of set to obtain adequate signal).	No actual connection between set and generator.	1400 KC.	Tune in generator signal	F—Ant. (See Note)	Adjust to maximum Output

NOTE: Antenna trimmer "F" must be aligned after chassis and loop are mounted in the cabinet. This adjustment can be made by lifting up the top cover and removing the plug button which is directly above trimmer "F."

MODEL 5B1 - PHONO REPLACEMENT PARTS

PAPER CONDENSERS

Part No.	Symbol	Description
64B1-12	C12	.005 mfd., 600 V.
64B1-22	C11	.05 mfd., 400 V.
64B1-24	C3, C8	.02 mfd., 400 V.
64B1-25	C15, C18; C4, C5,	.01 mfd., 400 V.
64B1-30	C1	.1 mfd., 200 V.
64A2-1	C10, C17	.2 mfd., 400 V.

VARIABLE CONDENSERS

68A2	C13a, C13b	Condenser, Gang

CERAMIC OR MICA CONDENSERS

6585-5	C14	Mica, 20 mmf. ±10%
6586-10	C18	Ceramic, 35 mmf. ±20%
6587-12	C2	Mica, 50 mmf. ±20%
6587-22	C6	Mica, 250 mmf. ±20%
6587-27	C7	Mica, 500 mmf. ±20%

ELECTROLYTIC CONDENSERS

67A4 or 67A8	C20a	30 mfd. 150 V.
	C20b	50 mfd. 150 V.
	C9a	30 mfd. 150 V.
	C9b	30 mfd. 150 V.
	C9c	20 mfd. 150 V.

RESISTORS

Part No.	Symbol	Description
60B28-3	R13	33 ohm ±10%, 1 W.
60B8-151	R6	150 ohm ±10%, ½ W.
60B38-1	R11	150 ohm ±10%, 1 W.
60B28-2	R12	1000 ohm ±10%, 1 W.
64B8-223	R1	22,000 ohm ±10%, ½ W.
60B8-273	R10	27,000 ohm ±10%, ½ W.
60B8-473	R9	47,000 ohm ±10%, ½ W.
60B8-154	R7	150,000 ohm ±10%, ½ W.
60B8-224	R4	220,000 ohm ±10%, ½ W.
60B8-474	R5	470,000 ohm ±10%, ½ W.
60B8-105	R2	1 meg ±10%, ½ W.
60B8-106	R3	10 meg ±10%, ½ W.
75B3-2	R8	½ meg Volume Control & Switch

TRANSFORMERS and COILS

69B6 or 69B10	L1	Antenna, Loop (6RT41 Cabinet); Antenna, Loop (6RT42, 6RT43 Cabinet)
72B3	L2	Transformer, 1st I. F.
72B4	L3	Transformer, 2nd I. F.
69A5	L4	Oscillator, Coil
74A1	L5	Choke Coil (Filter)
*	T1	Transformer, Output

*(When ordering, specify all numbers on speaker and transformer.)

PHONOGRAPH PARTS

See Record Changer Service Manual for Detailed Parts List.

G400A12	Centerpost
409A1	Crystal Cartridge
G400A23	Idler Wheel (407B2 Motor)
G400A52	Idler Wheel (407B2 Motor)
G400A53	Idler Wheel (407B1 Motor)
407B3	Motor, 60 Cycle 115 volt, A.C. (Types 407B1 & 407B2 also used)

MISCELLANEOUS

Part No.	Description
13A1-3-2	Background, Dial
13A1-2-47	Buttons, Snap (Dial)
13A1-2-47	Buttons, Snap (Cabinet back)
34D3-11	Cabinet Body less cover (6RT41 Mahogany)
34D3-10	Cabinet Cover (6RT41 Mahogany)
27A7-1	Cover Support
A1012	Drum and Hub Assembly
28A7-1	Escutcheon, On-Off
28A7-3	Escutcheon, Radio-Phono
12A1-2	Grommet, Rubber ¼"×¼"
406A2	Grommet, Rubber
33A1-2	Knob, Walnut-Mahog.
81A1-8	Pilot Light #47
82A2-1	Pilot Light Socket and Leads
85A3-5	Plug (Phono Leads)
13A2-1-57	Plug, Button
88A3-1	Plug, Alden (Motor Leads)
88A3-4	Plug Shell (Phono Leads)
25A2	Pointer, Dial Slide
25A3	Pointer less slide
17A1-3	Pulley, Fibre Dial
21B4-1	Scale, Plastic Dial
28A1-2	Shaft, Tuning
89A6-1	Socket and Leads (Alden)
87A10-2	Socket, Octal Tube
78B4-3	Speaker, 5" PM & Output Transformer
19A1-3	Spring, Dial Cord Tension
77B1-11	Switch SPDT Radio-Phono
77B1-44	Switch SPST On-Off
5A1-6	Washer, Flat Insulating
5A2-5	Washer, Offset Insulating
4A4-1	Washer, C
4A5-3-0	Washer, Spring

REPLACEMENT PARTS MODEL 5B1 - NON-PHONO

PAPER CONDENSERS

Part No.	Symbol	Description
64B1-12	C12	.006 mfd. 600 V.
64B1-22	C11	.05 mfd. 400 V.
64B1-24	C3, C8	.02 mfd. 400 V.
64B1-25	C4, C5	.01 mfd. 400 V.
64B1-30	C1	.01 mfd. 200 V.
64A3-1	C10	.2 mfd. 400 V.

VARIABLE CONDENSERS

P4975 or 68A2	C13a, C13b	Gang (2 Section)

(Specify correct part no. when ordering as gangs are not interchangeable)

MICA CONDENSERS

65B5-6	C14	Mica 20 mmf. ±10%
65B6-11	C2	Mica 50 mmf. ±20%
65B7-22	C6	Mica 250 mmf. ±20%
65B7-27	C7	Mica 500 mmf. ±20%

ELECTROLYTIC CONDENSERS

67A8 or 67A8	C20a	30 mfd. 150 V.
	C20b	50 mfd. 150 V.
	C9a	30 mfd. 150 V.
	C9b	30 mfd. 150 V.
	C9c	20 mfd. 150 V.

RESISTORS

Part No.	Symbol	Description
60B28-3	R11	33 ohm ±10%, 1 W.
60B8-151	R8	150 ohm ±10%, ½ W.
60B28-1	R5	180 ohm ±10%, 1 W.
60B28-2	R10	1000 ohm ±10%, 1 W.
60B8-228	R1	22,000 ohm ±10%, ½ W.
60B8-154	R7	150,000 ohm ±10%, ½ W.
60B8-224	R4	220,000 ohm ±10%, ½ W.
60B8-474	R5	470,000 ohm ±10%, ½ W.
60B8-105	R2	1 meg ±10%, ½ W.
60B8-106	R3	10 meg ±10%, ½ W.
75B1-6	R8	1 meg Volume Control & Switch

TRANSFORMERS and COILS

69B4	L1	Antenna, Loop
72B3	L2	Transformer, 1st I.F.
72B4	L3	Transformer, 2nd I.F.
69A6	L4	Oscillator Coil
74A1	L5	Choke Coil (Filter)
*	T1	Transformer, Output

*When ordering, specify all numbers on speaker and transformer.

MISCELLANEOUS

Part No.	Description
22B7-1	Background, Dial
15A14	Bracket, Loop Retainer

MISCELLANEOUS (Cont'd)

Part No.	Description
34D7-2	Cabinet (6T02 Mahog.)
43B8	Cover, Back (6T04 Wood)
43B6	Cover, Back (6T02 Plastic)
A1012	Drum and Hub Assembly
12A1-2	Grommet, Rubber ¼" x ¼"
33A1-1	Knob, Ivory
33A1-2	Knob, Walnut-Mahog.
81A1-8	Pilot Light #47
82A2-1	Pilot Light Socket and Leads
AA106	Pointer & Slide (Order pointer or pointer slide as needed)
13A1-2-47	Buttons (Cabinet Back), Snap
13A1-3-2	Buttons (Dial), Snap
34D7-1	Cabinet (6T02 Ivory)
25A2	Pointer Slide
25A3	Pointer less slide
17A1-3	Pulley, Fibre Dial
21B6-1	Scale, Glass Dial (6T02)
21B4-1	Scale, Plastic Dial
28A1-1	Shaft, Tuning
87A10-2	Socket, Octal Tube
78B4-1	Speaker (5" PM) and Output Transformer
19A1-3	Spring, Dial Cord Tension
5A1-6	Washer, Flat Fibre Insulating
5A2-5	Washer, Offset Fibre Insulating

DIAL DRUM POSITION — MODEL 6A1 - ISSUE B

If the dial drum position is disturbed, it should be carefully re-positioned to insure correct tuning of the permeability tuned coil. When the gang condenser is fully open, the drum will be properly positioned if the center of the condenser shaft and the dial cable hole on the drum are in a straight line parallel to the chassis base. Note that the dial cable hole should be on the left side (looking at front) of the chassis.

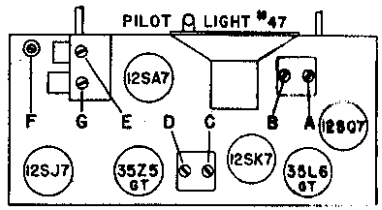
ALIGNMENT PROCEDURE

1. Be sure Radio Receiver and Signal Generator are thoroughly warmed up before starting alignment procedure.
2. Check setting of Pointer Extremes and note correct 600 K.C. and 1400 K.C. positions on Dial Background. (See Dial Diagram on reverse side.)
3. Connect Output Meter across Voice Coil.
4. Turn Receiver Volume Control full on.
5. Use lowest Output setting of Signal Generator capable of producing adequate Output Meter indication and then proceed as outlined in chart below.
6. Repeat adjustments to insure final overall maximum results.

R. F. SLUG POSITION

If the tuned coil slug needs replacing or re-positioning, first see that the dial drum is in its proper position. Then with the threaded stud half-way through the bakelite, note that the top of the slug is flush with the top of coil form. Then re-align.

TOP VIEW — TUBE & TRIMMER LOCATION



BACK OF CHASSIS

Connect Signal Generator To—	*Dummy Antenna Between Radio and Generator*	*Set Generator Frequency To—*	*Set Receiver Dial Frequency To—*	*Adjust Following Trimmers*	*Type of Adjustment*
12SA7 Control Grid	250 mmfd. Mica Condenser	455 KC.	High frequency end of Dial	A and B—2nd I. F. C and D—1st I. F.	Adjust to maximum Output
External Antenna Wire on Loop	250 mmfd. Mica Condenser	1630 KC.	High frequency end of Dial	E—Osc.	Adjust to maximum Output
External Antenna Wire on Loop	250 mmfd. Mica Condenser	1400 KC.	Tune in Generator signal	F—R. F. (Iron Core)	See Note Below
Loop radiator (or place pickup lead from gen. close to loop of set to obtain adequate signal).	No actual connection between set and generator.	1400 KC.	Tune in Generator signal	G—Ant.	Adjust to maximum Output

NOTE: Adjustment F is the threaded stud at the top end of the slug wire. Screw stud up or down in the bakelite for maximum output. Alignment is correct if the output is reduced when the position of the lever arm is changed slightly in either direction (up or down).

PAPER CONDENSERS

Part No.	Symbol	Description
64B1-12	C-1	.005 mfd 600 V.
64B1-22	C-3, C-14	.05 mfd 400 V.
64B1-24	C-4, C-12	.02 mfd 400 V.
64B1-25	C-7, C-8, C-9, C-11	.01 mfd 400 V.
64B1-30	C-17	.1 mfd 200 V.
64A2-1	C-15	.2 mfd 400 V.

CERAMIC or MICA CONDENSERS

6585-5	C-18	20 mmfd ±10%
6587-11	C-3	50 mmfd ±20%
6587-22	C-6, C-16	250 mmfd ±20%
6587-27	C-10	500 mmfd ±20%
65B1-8	C-2	795 mmfd ±5%-(silver)

VARIABLE RESISTORS

75B3-2	R-9	Volume Control (½ megohm) and Switch (Tapped)

TRANSFORMERS, COILS, & CORES

69B4	L1	Aerascope (Loop)
A1032	L2	R. F. Coil and Mounting
71B1-2		Slug, R.F. Iron Core
69A5	L3	Oscillator Coil
72B3	L4	1st I. F. Transformer
72B4	L5	2nd I. F. Transformer
74A1	L6	Choke, Filter
*	T1	Transformer, Output

*When ordering, specify all numbers on speaker and transformer.

ELECTROLYTIC CONDENSERS

Part No.	Symbol	Description
67A8 or 67A3	C-13a	30 mfd 150 V
	C-13b	50 mfd 150 V.
	C-13c	20 mfd 150 V.
	C-20a	30 mfd 150 V.
	C-20b	50 mfd 150 V.

VARIABLE CONDENSERS

68A2	C-19a, C-19b	Condenser, Gang

RESISTORS

60B28-3	R-16	33 ohm ±10%, 1 W.
60B8-101	R-4	100 ohm ±10%, ½ W.
60B8-151	R-12	150 ohm ±10%, ½ W.
60B14-151	R-14	150 ohm ±10%, 1 W.
60B14-102	R-15	1,000 ohm ±10%, 1 W.
60B8-103	R-1	10,000 ohm ±10%, ½ W.
60B8-223	R-3	22,000 ohm ±10%, ½ W.
60B8-273	R-7	27,000 ohm ±10%, ½ W.
60B8-473	R-6	47,000 ohm ±10%, ½ W.
60B8-134	R-13	130,000 ohm ±10%, ½ W.
60B8-274	R-10	270,000 ohm ±10%, ½ W.
60B8-474	R-11	470,000 ohm ±10%, ½ W.
60B8-105	R-5	1 meg ohm ±10%, ½ W.
60B8-475	R-9	4.7 meg ohm ±10%, ½ W.
60B8-106	R-2	10 meg ohm ±10%, ½ W.

MISCELLANEOUS

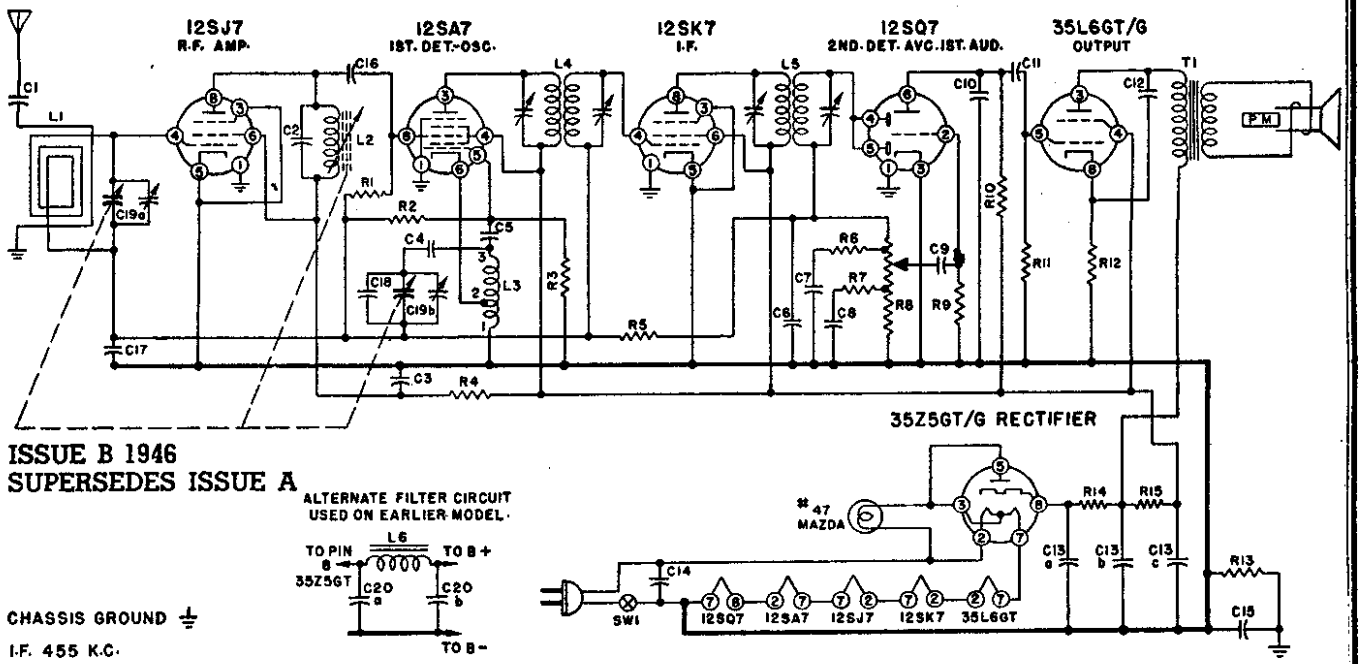
Part No.	Description
22B7-1	Background, Dial (Plastic)
13A1-2-47	Buttons, Snap (For Cabinet Back)

MISCELLANEOUS (Cont'd)

Part No.	Description
13A1-3-2	Buttons, Snap (Dial & R.F. Coil)
15A14	Bracket Plate, Loop Retainer
34D1-1	Cabinet, Plastic (6T01 Ivory)
34D1-2	Cabinet, Plastic (6T01 Mahog.)
43B5	Cover, Chipboard Back (For 6T01 Plastic)
43B3	Cover, Chipboard Back (For 6T05 Wood)
50A1-1	Cord, Dial (42")
A1049	Drum & Cam Assembly
12A1-2	Grommet, Rubber (3/16"x5/16")
33A1-1	Knob (Ivory)
33A1-2	Knob (Walnut or Mahog.)
A1050	Lever Arm Assembly (R.F.)
81A1-8	Pilot Light #47
82A2-1	Pilot Light Socket & Leads
AA106	Pointer and Slide (order pointer or pointer slide as needed)
25A3	Pointer (less slide)
25A2	Pointer Slide
17A1-3	Pulley, Fibre ½"x½" O.D.
21B4-1	Scale, Dial (Plastic)
28A1-1	Shaft Tuning
78B4-2	Speaker & Trans. 5" P.M.
19A1-3	Spring, Tension (Dial)
19A4	Spring, Lever Arm (R.F.)
29A2-3-21	Spacer, T (R.F.)
87A10-2	Socket, Octal Tube
27A4	Stud, Threaded Slug Adj. (R.F.)
4A4-1	Washer, C (Tuning Shaft)
5A1-6	Washer, Flat Fibre Insulating
5A2-5	Washer, Flat Fibre Insulating
4A5-3-0	Washer, Spring (Tuning Shaft)

MODEL 6A1, Issue B

ADMIRAL CORPORATION



ISSUE B 1946
SUPERSEDES ISSUE A

NOTE: 1. In later production R14 and C13a are disconnected from pin #8 of the 35Z5 and a 33-ohm 1W resistor (R16) is connected from pin #8 to the junction of R14 and C13a. 2. The jumper between pins 4 and 5 on the 12SQ7 is removed and one pin is connected to the secondary of the second I.F. (L5) and the other pin is connected directly to the junction point of R5 and the secondary of the 1st I.F. (L4).

CONDENSERS

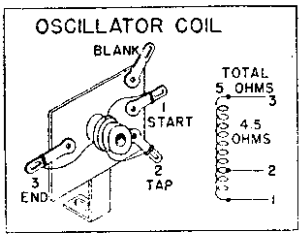
Symbol	Capacity	Type
C-1	.005 mfd	600 V.
C-2	785. mmfd	Mica
C-3	.05 mfd	400 V.
C-4	.02 mfd	400 V.
C-5	50. mmfd	Mica
C-6	250. mmfd	Mica
C-7	.01 mfd	400 V.
C-8	.01 mfd	400 V.
C-9	.01 mfd	400 V.
C-10	500. mmfd	Mica
C-11	.01 mfd	400 V.
C-12	.02 mfd	400 V.
C-13a	30. mfd	Elect. 150 V.
C-13b	30. mfd	Elect. 150 V.
C-13c	20. mfd	Elect. 150 V.
C-14	.05 mfd	400 V.
C-15	.2 mfd	400 V.
C-16	250. mmfd	Mica
C-17	.1 mfd	200 V.
C-18	20. mmfd	Mica
C-19a	420. mmfd	(max).. Var.
C-19b	180. mmfd	(max.).. Var.
C-20a	30. mfd	Elect. 150 V.
C-20b	50. mfd	Elect. 150 V.

COILS

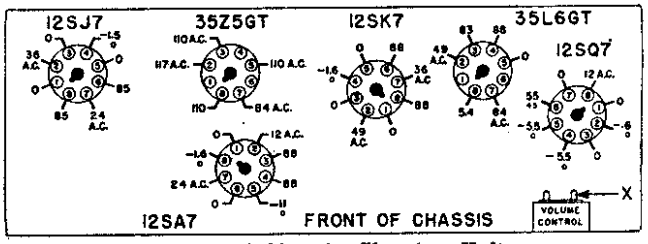
Symbol	Description
L-1	(Sec. 2.3 ohms) Loop
L-2	(2.5 ohms) R. F. Coil
L-3	Osc. Coil
L-4	1st I. F. Trans.
L-5	2nd I. F. Trans.
L-6	(325 ohms) Choke, Filter

RESISTORS

Symbol	Resistance	Type
R-1	10,000 ohms	C½W
R-2	10 meg ohm	C½W
R-3	22,000 ohms	C½W
R-4	100 ohms	C½W
R-5	1 meg ohm	C½W
R-6	47,000 ohms	C½W
R-7	27,000 ohms	C½W
R-8	500,000 ohm Volume Control, (Tapped at 1/3 and 2/3 of Rotation which is 100,000 ohms and 200,000 ohms from the start, due to the taper).	
R-9	5 meg ohm	C½W
R-10	270,000 ohms	C½W
R-11	470,000 ohms	C½W
R-12	150 ohms	C½W
R-13	150,000 ohms	C½W
R-14	150 ohms	C1W
R-15	1,000 ohms	C1W
R-16	33 ohms	C1W



VOLTAGE DATA:—



Bottom View of Chassis, Showing Voltages.

—All readings made between Tube Socket Terminals and Switch Lug on volume control (Point "X" on drawing).

—Measured on a 117 Volt A.C. line.

—Volume control full on.

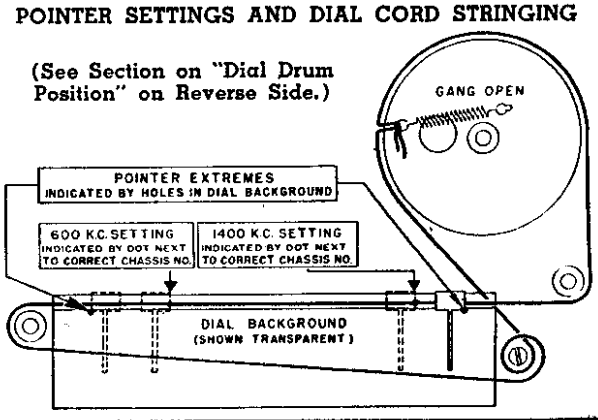
—Dial tuned to low frequency end, no signal.

—Voltages indicated obtained on Vacuum Tube voltmeter.

—A second voltage reading is shown made with a 1000 ohm-per-volt meter when use of this instrument would result in appreciably lower readings.

POINTER SETTINGS AND DIAL CORD STRINGING

(See Section on "Dial Drum Position" on Reverse Side.)



SPECIFICATIONS

POWER SUPPLY:—

110-120 Volts A.C. or D.C.
Frequency 50-60 cycles.
Power Consumption—30 watts.

CIRCUIT:—

Chassis 6A1 A.C.—D.C. 6 Tube Superheterodyne, with R.F. stage; Single tuning range, 540 Kc. to 1630 Kc., covering standard broadcast band; built-in AEROSCOPE loop antenna, with provision for connecting an external antenna.

For Alignment and Parts, see P.15-12