Admiral

	Model: 4D13	Chassis:	Year: Pre 1950
	Power:	Circuit:	IF:
	Tubes:		
	Bands:		

Resources
Riders Volume 18 - ADMIRAL 18-2
Riders Volume 18 - ADMIRAL 18-3

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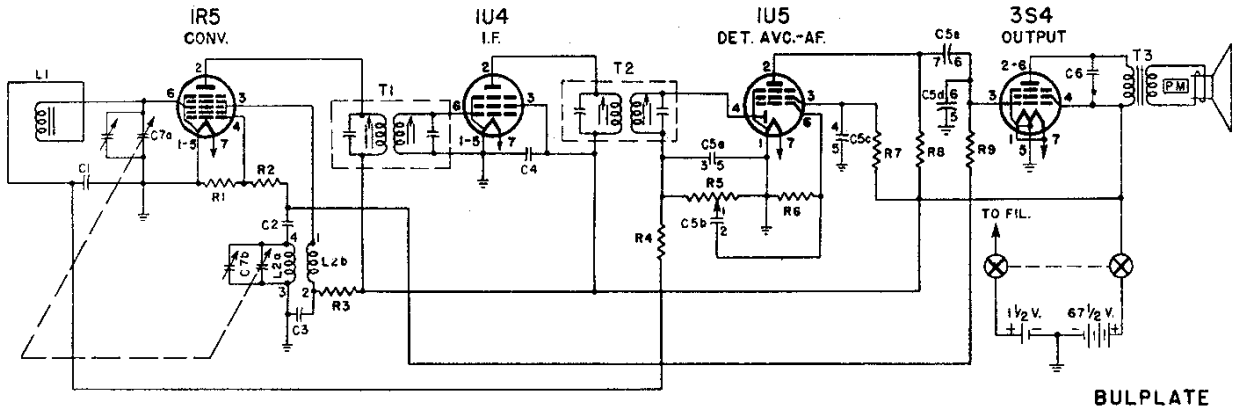


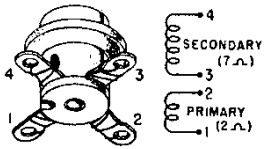
RESISTORS

Symbol		Part No.
R1	47,000 Ohms, ¼ Watt	60B 3-473
R2	560 Ohms, ¼ Watt	60B 2-561
R3	10,000 Ohms, ¼ Watt	60B 3-103
R4	3.3 Megohms, ¼ Watt	60B 3-335
R5	1 Megohm Volume Control and Switch SWI	75B 1-22
R6	10 Megohms, ¼ Watt	60B 3-106
R7	4.7 Meghoms ¼ Watt	60B 3-475
R8	1 Meghom, ¼ Watt	60B 3-105
R9	2.2 Meghoms, ¼ Watt	60B 3-225

CONDENSERS

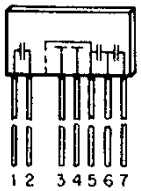
Symbol		Part No.
C1	.01 mfd., 600 Volts, Paper	64B 1-10
C2	.0001 mfd., Ceramic	65B 6-3
C3	.1 mfd. 200 Volts, Paper	64B 1-30
C4	.25 mfd., 200 Volts, Paper	64B -128
C5a	150 mmfd., Ceramic	Bulpate 63A 2 * See Schematic
C5b	.002 mfd., Ceramic	
C5c	.006 mfd., Ceramic	
C5d	100 mmfd., Ceramic	
C5e	.005 mfd., Ceramic	
C6	.002 mfd., 600 Volts, Paper	64B 1-14
C7a	0 to 354 mmfd., Gang	68B 13
C7b	0 to 107.2 mmfd., Gang	

OSCILLATOR COIL



NOTE: C5a, C5b, C5c, C5d and C5e are contained in a single unit (Bulplate). The numbers next to the C5 condenser plates on the schematic correspond to the lead numbers as shown on the drawing of the "BULPLATE" (see inset). If sections of this unit should open or short it will not be necessary to replace the entire Bulplate. Replace the bad section with a condenser of proper value.
Note that leads 5 and 6 are common to more than one section.

BULPLATE



COILS, TRANSFORMERS, Etc.

Symbol		Part No.
L1	Antenna, Loop	69B 38
L2a, L2b	Coil, Oscillator	69A 39-1
T1	Transformer, 1st I.F.	72B 28-1
T2	Transformer, 2nd I.F.	72B 28-1
T3	Transformer, Output	98A 13
	Speaker (3½" PM) & Output Transformer	78C 33
SWI	Switch, On-Off	Part of R5

NOTE: Some microphonic howling may occur on strong signals if the volume control is turned beyond the overload point.
The following changes have been made in late production because some "B" batteries, with high internal resistance, may cause squealing at normal volume levels.

(a) Condenser C3 (.005 mfd. 600 volt, oscillator plate bypass) has been replaced with a .1 mfd. 200 volt condenser.
(b) Condenser C6 (.002 mfd. 600 volt, 3S4 late bypass) has been returned to the screen grid (pin 4) rather than to ground.
(c) The speaker leads have been reversed, the red lead has been connected to the plate and the blue lead to the screen of the 3S4.
(d) For early production chassis which do not have the above changes, the same results can usually be secured by adding 4 mfd. 200 volt electrolytic condenser from B+ to chassis. Be sure the condenser is connected in the circuit on the set side of the on-off switch. Do not connect it to the battery side of the switch or the inherent leakage of the condenser will appreciably shorten the "B" battery life.

CABINET PARTS

Description	Part No.
Cabinet (Includes Body, Handle & Escutcheon)	
Maroon (4D11)	34D 16-5
Ebony (4D12)	34D 16-10
Ivory (4D13)	34D 16-15
Cabinet Base	
Maroon (4D11)	34D 16-2
Ebony (4D12)	34D 16-7
Ivory (4D13)	34D 16-12
Handle (includes two drive lock pins)	
Maroon (4D11)	34D 16-3
Ebony (4D12)	34D 16-8
Ivory (4D13)	34D 16-13

CABINET PARTS (Continued)

Description	Part No.
Knob, Tuning	
Maroon (4D11)	33B 29-1
Ebony (4D12)	33B 29-3
Ivory (4D13)	33B 29-5
Knob, Volume Control	
Maroon (4D11)	33B 29-2
Ebony (4D12)	33B 29-4
Ivory (4D13)	33B 29-6
Grill Cloth	36B 3-6
Washer, Felt (used under Knobs)	5A 4-7

MISCELLANEOUS

Description	Part No.
Clip (with leads) for "B" Battery	90A 5-1
Compression Ring for knob	19A 31-2
Contact Plate for "A" Battery	15A 261
Grommet, Fibre (for "A" Battery)	12A 13-4
Snap Button, Antenna	13A 1-3-2
Tube Socket	87A 3-4
Wing Nut	2A 5-5
Screw, No. 8-32x2¾	80-2750-C2-2

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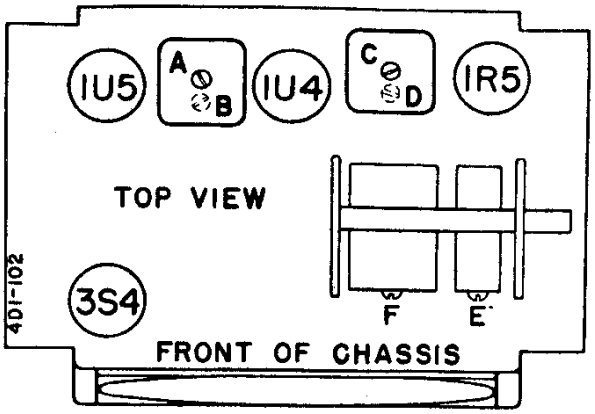
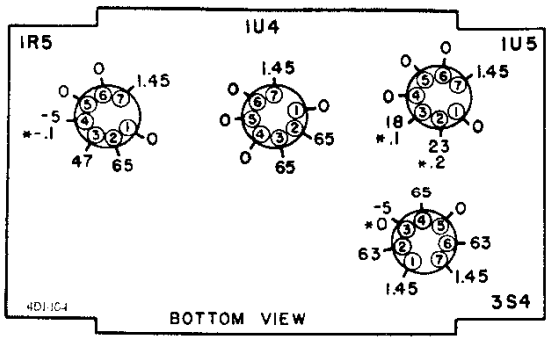
ALIGNMENT PROCEDURE

1. Remove chassis from cabinet.
2. Install a fresh set of batteries.
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 good results.

Step	Dummy Antenna in Series with Signal Generator	Connection of Signal Generator (High Side)	Signal Generator Frequency	Receiver Gang Setting	Trimmer Description	Trimmer Designation	Type of Adjustment
1	.1 Mfd.	Stator Lug, Left Section of Tuning Condenser (Antenna Stator)	455 K.C.	Tuning Gang Wide Open	2nd I.F. 1st I.F.	A, B C, D	Maximum Deflection; then repeat
2	.1 Mfd.	Stator Lug, Left Section of Tuning Condenser (Antenna Stator)	1630 K.C.	Tuning Gang Wide Open	Oscillator	E	Maximum Deflection
3	No physical connection between generator and set.	Loop radiator (or place generator lead close enough to receiver loop to obtain adequate signal)	1400 K.C.	Tune in Generator Signal	Antenna	F	Maximum Deflection

TUBE AND TRIMMER LOCATION





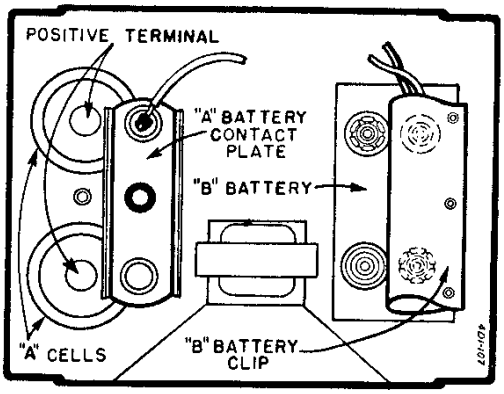
BATTERY REPLACEMENT

"A BATTERY": two flashlight cells (1-5/16 x 2-3/8 inches) Ensign F2, Burgess No. 2, Eveready 950 or equivalent.

"B BATTERY": one Ensign B67, Burgess XX45, Eveready 467 or equivalent.

"A" Battery life about 15 hours.

"B" Battery life about 30 hours.



Install both "A" cells with the positive terminal against removable contact plate.

VOLTAGE DATA

- Readings made between point indicated and chassis.
- Measured using a fresh set of batteries.
- Turned to low frequency end, no signal.
- Voltages measured with Vacuum-Tube Voltmeter.
- A second voltage reading (marked with an asterisk *) indicates readings made with a 1000 ohm-per-volt meter when use of this instrument would result in appreciably lower readings.

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