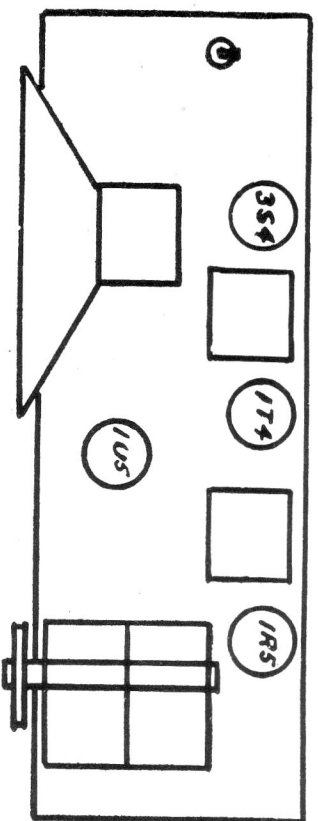


77 DENOTES CHASSIS  
" " COMMON NEGATIVE  
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## TUBE LOCATION & LAYOUT DIAGRAM



**IMPORTANT**—When set is out of use for periods over a month, remove battery to prevent damage.

**CAUTION**—Do not remove or replace tubes while set is switched on.

# ALIGNMENT ON DATA SHEET 4

1F. = 455 KC.

1947-48

# AC-DC. BATTERY PORTABLE MODEL

JB L 37

# ALIGNMENT PROCEDURE AND SERVICE NOTES

**I.F. ALIGNMENT:** I.F. transformers are to be aligned at 455 Kc; to feed signal into set, place output lead of signal generator on, or close to, loop antenna in lid of cabinet. Do not connect ground lead of generator to chassis. If I.F.'s are badly off and signal cannot be heard, connect generator temporarily to grid end of antenna by means of the lug on the inside of the case. (The grid lead goes to the side of the variable tuning condenser). Tune I.F. Transformers for maximum output by means of a small insulated screw-driver, starting on the end nearest the 3S4 tube. If set oscillates or hisses excessively slightly detune one side of one or both I.F. transformers until the trouble disappears.

**R.F. ALIGNMENT:** Loosen locking nut on oscillator adjusting screw, which protrudes through the chassis between the control shafts. With tuning condenser closed (low end) and signal generator set to 540 Kc. adjust oscillator screw for maximum output. Next, with tuning condenser open all the way (high end) and generator set to 1650 Kc. adjust oscillator trimmer (on side of front tuning condenser section) for maximum output. Repeat the 540 Kc. adjustment (leaving the oscillator trimmer unchanged) and so on, until neither one requires appreciable readjustment as the dial is turned from one end to the other. Now set generator to about 1400 Kc. and adjust antenna trimmer on side of rear gang for maximum output. This will usually be at or near the minimum trimmer capacity (wide open); should it be impossible to reach a peak, tighten oscillator trimmer slightly and try again until a peak can be noticed on the antenna trimmer. If the dial setting has moved appreciably it will be necessary to readjust the low end by means of the oscillator screw.

## SERVICE NOTES:

- IMPORTANT** - Never remove or replace tubes while power is on; or blown filaments will result.
- Motorboating and howling - Check that the center shields on the IR5 and IT4 sockets are solidly grounded to pin 5 and/or a filament pin; also that the .1 mfd. grounding condenser is properly connected. On occasional sets, the peak I.F. alignment will be found a little too sharp and this may be corrected as explained above under "I.F. Alignment".
- If set output fluctuates rapidly (flutters) at maximum volume, disconnect the .05 mfd. A.V.C. condenser from the chassis lug (just under the first I.F. transformer) and reconnect to the adjoining line negative terminal.
- On sets manufactured after Sept. 1st, 1948, the following deviations from the circuit diagram should be noted:-

- 300 Ohm bias resistor changed to 470 ohms.
- Plate load resistor of IT5 changed to .5 Meg.
- Oscillator plate section fed from IT4 screen supply; IT4 screen dropping resistor changed from 15,000 ohms to 7500 ohms.
- Resistor across IR5 filament changed from 500 to 270 ohms.
- The change noted under section (C).
- On all sets, whenever made, except a few sold in the West and the Maritimes, the main filter

capacity is 80/80/200 instead of 40/40/200 to take care of possible 25 cycle operation.

(E) Batteries may be considered worn out when "B" section voltage falls below 60 and/or "A" section falls below 6.0. Should the "A" section be worn out (between 5 and 6 volts) while the "B" section is still good, a temporary increase in the life of the battery may be obtained by moving the "A+" lead from the + 7 1/2" to the +9" pin of the battery plug, but the connection must be restored when a new battery is installed.

## VOLUME CONTROL

Circuit Designation	Value	Mfrs. No.	IRC No.
	1 Meg.		13-137 Sw.No. 22

## CAPACITORS

Same as JBL 27

**NOTE:** No manufacturers numbers for misc. parts. Order by name of part and model number. Exact size of speaker not available at time of publication but note that Jensen 4 and 5 inch speakers are P4V and P5V respectively.

## IRC FIXED RESISTORS

Metalized:	Type	Wire Wound:	Type
1/2 watt 470Ω to 22 meg. BTS	1/2 watt .47 to 820Ω BW-1/2		
1 watt 350Ω to 22 meg. BTA	1 watt .47 to 5100Ω BW-1		
2 watt 470Ω to 22 meg. BT-2	2 watt 1 to 8200Ω BW-2		

For replacing resistors rated from 5 to 10 watts, IRC type AB is recommended. Their resistance values range from 1 to 50,000 ohms. Note however that above 25,000 ohms type AB should not be called upon to dissipate more than 5 watts. Type DG is recommended in this case.

AC-DC BATTERY  
PORTABLE

MODEL

JBL 37

CIRCUIT ON  
DATA SHEET 3

BRADNA

DATA SHEET

4