International Radio Corp.

	Model: 52	Chassis:	Year: Pre November 1935
	Power:	Circuit:	IF:
	Tubes:		
	Bands:		

Resources
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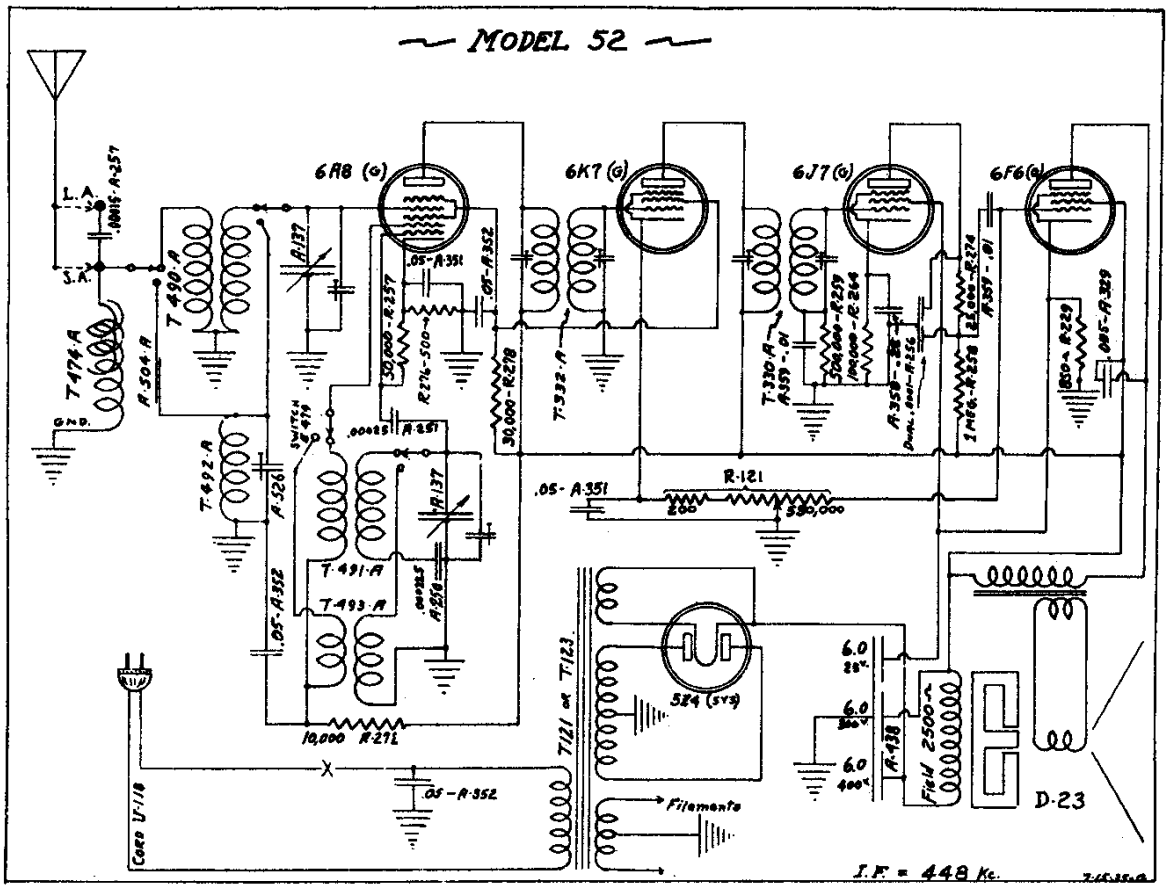
MODEL 52
Schematic
Parts

INTERNATIONAL RADIO CORP.



PARTS LIST

Part No.	Description	List Price
A-137	2 gang tuning condenser	$1.65
A-208	150 mmf. mica condenser	.20
A-250	325 mmf. mica condenser	.20
A-251	.00025 mf. mica condenser	.20
A-256	Dual .0001 mf. mica condenser	.20
A-329	.005 mf., 600v. paper condenser	.15
A-351	.05 mf., 200v. paper condenser	.15
A-352	.05 mf., 300v. paper condenser	.15
A-358	.25 mf., 120v. paper condenser	.20
A-359	.01 mf., 400v. paper condenser	.15
A-438	6-6-6 mf. electrolytic filter condenser	1.35
A-526	Semi-variable trimmer condenser	.15
D-29	5 inch dynamic speaker	3.50
E-157	Black and silver knobs	.15
E-160	Black and silver knob with yellow and red dots	.15
E-265	Dial assembly	1.50
E-472	Pilot light bulbs 6-8 volts	.15
E-476	Antenna and ground strip	.10
E-479	Wave band switch	.45
H-49	6A8 tube socket	.10
H-53	6J7 tube socket	.10
H-54	6K7 tube socket	.10
H-56	6F6 tube socket	.10
H-57	5Y3 tube socket	.10
R-121	Volume control with power switch	.75
R-229	850 ohm, 1/2 w. carbon resistor	.20
R-257	50M ohm, 1/3 w. carbon resistor	.20
R-258	1 megohm, 1/3 w. carbon resistor	.20
R-259	500M ohm, 1/3 w. carbon resistor	.20
R-264	100M ohm, 1/3 w. carbon resistor	.20
R-272	10M ohm, 1/3 w. carbon resistor	.20
R-274	25M ohm, 1/3 w. carbon resistor	.20
R-276	500 ohm, 1/3 w. carbon resistor	.20
R-278	30M ohm, 1 w. carbon resistor	.20
S-102	Goat tube shield	.10
T-121	Power transformer	2.35
T-330A	2nd I.F. transformer	1.25
T-332A	1st I.F. transformer	1.25
T-474A	448 Kc. wave trap	.35
T-490A	Broadcast detector coil	1.00
T-491A	Broadcast oscillator coil	1.00
T-492A	Short wave detector coil	.35
T-493A	Short wave oscillator coil	.35
U-118	A.C. cord and plug	.30
U-206	4 wire speaker cable	.20
X-343	Cabinet	5.70

SEPTEMBER, 1935 *Prices Subject to Change Without Notice*

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MODEL 52
Voltage
Alignment

INTERNATIONAL RADIO CORP.

AVERAGE SOCKET VOLTAGES

Bottom View of Socket. VOLTAGES SHOWN ARE FROM TUBE PINS TO GROUND

	Position	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
6A8	Det.-Osc.	Shell	HTR.	195	70	—10	140	HTR.	3
6K7	I. F.	Shell	HTR.	210	90	1.5	—	HTR.	1.5
6J7	2nd Det.	Shell	HTR.	50	15	4	—	HTR.	.4
6F6	A. F.	Shell	HTR.	200	210	0	—	HTR.	15
5Z4	Rect.	Shell	300	—	A.C.	—	A.C.	—	300

Line 118 volts. Switch on Broadcast Position. Volume Control Full On. 10% Variation Allowable.

Model 52 is designed to operate from 115 volts, 60 cycle alternating current power lines. It is a two band receiver covering the American broadcast and Foreign short wave bands.

The following tubes are employed:

6A8 (metal) or 6A8G (glass) 1st Detector-Oscillator
6K7 (metal) or 6K7G (glass) I.F. Amplifier
6J7 (metal) or 6J7G (glass) 2nd Detector
6F6 (metal) or 6F6G (glass) Pentode output
5Z4 (metal) or 5Y3 (glass) Rectifier

The metal and glass tubes are interchangeable but when changing from one type to the other it is advisable to realign for perfect resonance. The 6J7G tube should be shielded but shielding may be omitted when using the all metal 6J7.

ALIGNMENT

The standard type of output meter should be used to indicate signal strength. It should be connected from the plate (pin No. 3) of the 6F6 to ground. The signal from the signal generator *must be kept at a very low level.*

ESSENTIAL DATA: The intermediate frequency used is 448 Kc. On the broadcast band the oscillator frequency is 448 Kc. higher than the signal frequency. On the short wave band it is 448 Kc. lower than the signal frequency.

Aligning should be done on the following frequencies: Broadcast band 1400 and 600 kilocycles; Short wave band 12 and 6 megacycles.

It is permissible to bend condenser plates when aligning the broadcast band but not the short wave band.

INTERMEDIATES: To align the I.F. circuits, set the signal generator to 448 Kc. and feed its modulated signal direct to the antenna. Short out the oscillator section of the two gang condenser. Adjust the first I.F. transformer trimmers for maximum meter reading. Go over both adjustments at least three or four times for accuracy. Repeat this process on the second I.F. transformer. If adjustments are not made accurately, selectivity will be poor and I.F. oscillation may result.

BROADCAST BAND: Place the band change switch on Broadcast position. Turn the dial to 1400 Kc. and feed a *very weak* 1400 Kc. modulated signal from your signal generator to the antenna. Adjust the broadcast oscillator trimmer (on condenser gang) for maximum reading.

There is no adjustable padder condenser in this model so resonance on the low frequency end is accomplished by bending plates on the tuning condensers.

SHORT WAVE BAND: There is a separate trimmer condenser across the short wave detector coil. It is mounted on the bottom of the chassis at the end. Adjustment should be made at 12 megacycles. Instead of bending condenser plates at 6 megacycles, alignment is accomplished by spreading or crowding turns on the short wave detector coil. If much crowding or spreading is necessary it is advisable to go back and recheck at 12 megacycles.

MICROPHONIC HOWL

The tuning condenser is cushion mounted to eliminate vibration. Do not allow the dial to touch the escutcheon plate on the cabinet or a microphonic condition will be created.

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