

## Heath Company

Model: **BR-1**

Chassis:

Year: **Pre 1951**

Power:

Circuit:

IF:

Tubes:

Bands:

### Resources

[Riders Volume 21 - HEATH 21-8](#)

[Riders Volume 21 - HEATH 21-9](#)

[Riders Volume 21 - HEATH 21-10](#)

[Riders Volume 21 - HEATH 21-11](#)

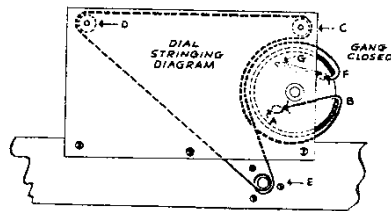
MODEL BR-1

A ground connection may improve reception also, and should be tried if maximum performance is desired. For a good ground, use a COLD water pipe or a ground rod. Use as short and direct a wire as possible between the pipe or rod and the ground terminal (screw terminal farthest from edge of chassis).

A loudspeaker of the PM dynamic type with 3-4 ohm voice coil impedance should be connected to the set by attaching the two prong speaker plug to the speaker leads and plugging into the speaker socket. If a 6-8 ohm speaker is available, it may be used without materially affecting the performance.

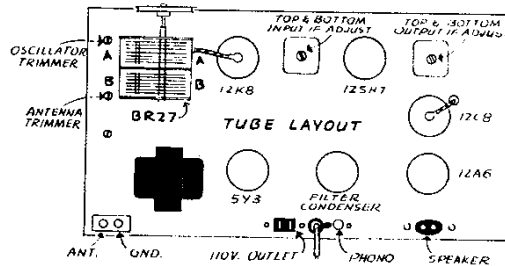
A record player or changer using a crystal type pickup cartridge may be connected to this receiver to provide superior reproduction of recordings. Connect the pickup by plugging the lead into the phono socket. If your player does not have the standard plug, remove existing plug and attach the phono plug supplied with the kit. Plug the line cord for the turn table motor into the 110V. outlet on the chassis. Turn the phono switch clockwise to switch from radio to record player.

**NOTE:** The pilot light is connected in the rectifier circuit to permit the use of a standard pilot light bulb. The socket is, therefore, about 300 Volts above chassis. **DO NOT TOUCH SOCKET WITH SET TURNED ON.**



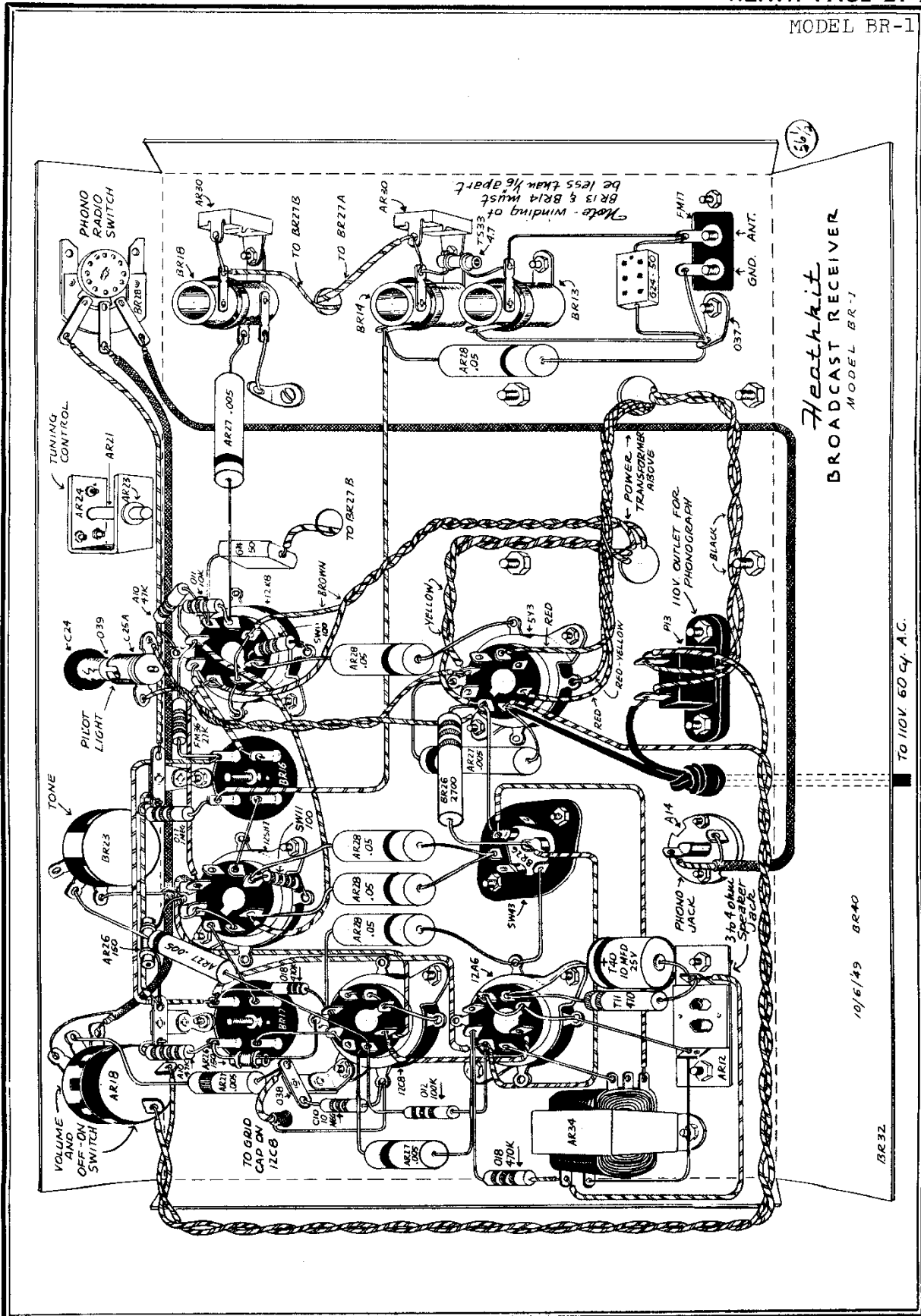
### ALIGNMENT

Connect a signal generator ground lead to the chassis. Connect the signal generator output ("hot") lead through a .01 MFD condenser to pin #4 on the 12SH7 socket (IF grid). Turn signal generator on and set dial to 456 Kc. The signal, if modulated, may be observed by noting the loudness at the speaker, or on the scale of an output meter connected across the speaker terminals, or with the aid of a vacuum tube voltmeter across the volume control. With the volume and tone controls turned fully clockwise, turn the brass screws in the output IF transformer for maximum indication. Use as low an indication as possible by reducing the output from the signal generator as the receiver sensitivity increases.



Without disturbing the signal generator dial, remove the .01 MFD condenser from pin #4 on the 12SH7 socket and connect to the grid cap of the 12K8 tube. Adjust the brass screws in the input IF transformer as above. **NOTE:** Do not adjust the output IF screws with the signal fed into the 12K8 tube. This completes the IF alignment.

Connect the signal generator output lead through a 200-300 MMF condenser to the ANT. terminal. Turn the tuning control until the condenser plates are fully unmeshed. Set the signal generator to 1720 Kc. Adjust the oscillator trimmer till the signal is noted. Reset the signal generator to 1400 Kc. Find the signal by turning the receiver tuning control. Now adjust the antenna trimmer for maximum indication. This completes the alignment. A short antenna should now bring in many stations.



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Heathkit  
BROADCAST RECEIVER  
MODEL BR-1

TO 110V 60 CY. A.C.

10/15/49 BR40

BR32

MODEL BR-1

5Y3

12A6

12C8

12SH7

12K8

Pin No.

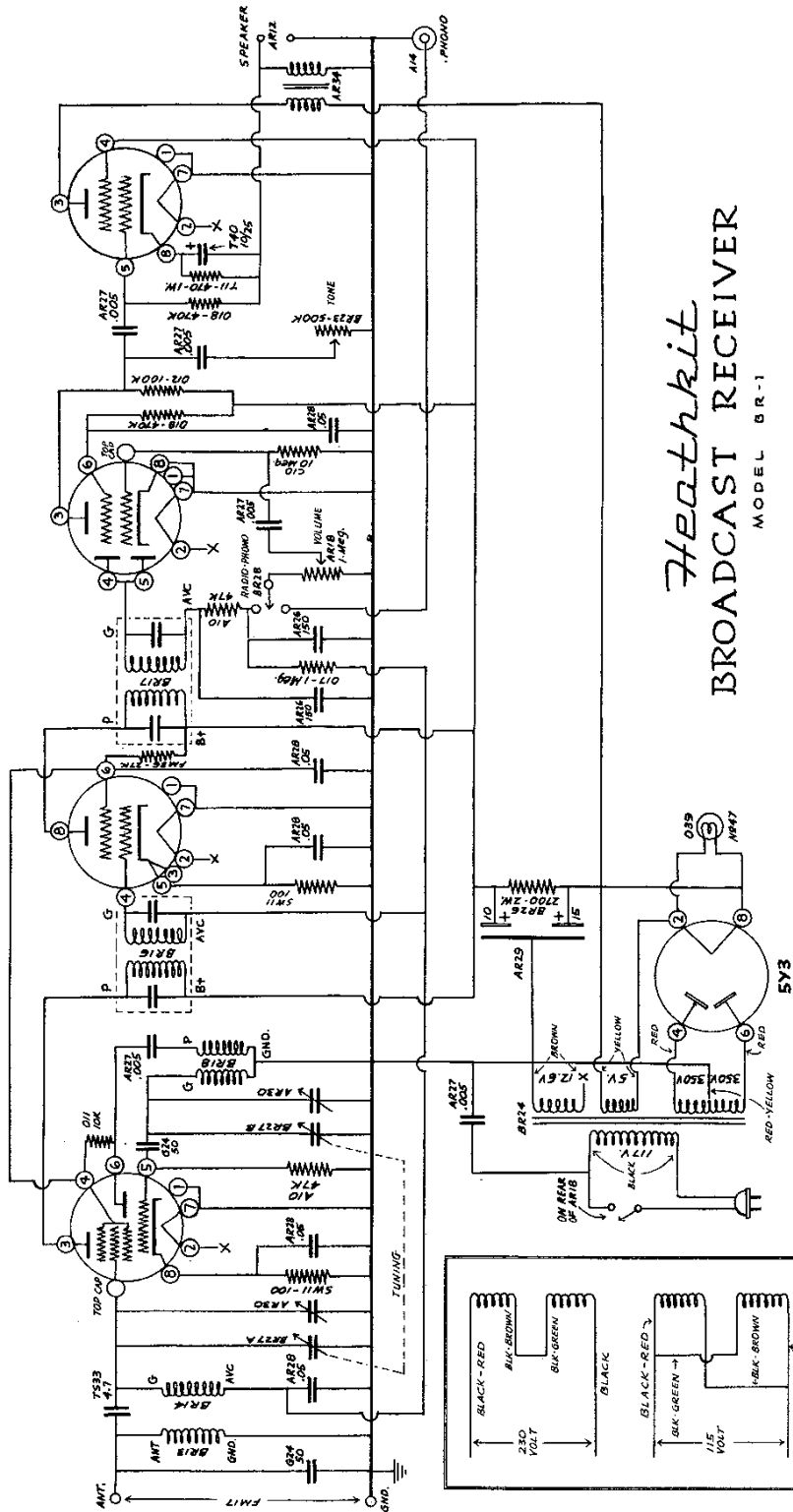
1	0	0	0	0	0
2	11-14 VAC	11-14 VAC	11-14 VAC	11-14 VAC	11-14 VAC
3	250-290	40-60 (15-30)	300-340	300-340	300-340
4	100-130	Very slight neg.	Very slight neg.	Very slight neg.	Very slight neg.
5	5-15 V neg.	$\frac{1}{2}$ - $1\frac{1}{2}$	$\frac{1}{2}$ - $1\frac{1}{2}$	0	0
6	80-100	25-45 (10-20)	25-45 (10-20)	300-340 VAC	300-340 VAC
7	0	0	0	300-340 VAC	300-340 VAC
8	$\frac{1}{2}$ - $1\frac{1}{2}$	250-290	14-19	Tie Point	Tie Point

12A6

12C8

12SH7

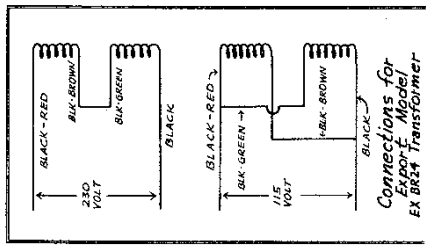
12K8



Heathkit  
BROADCAST RECEIVER  
MODEL BR-1

10/6/49 BR39

IF = 456 kc.



Connections for  
Export Model  
EX BR24 Transformer

## BR 1 RECEIVER PARTS LIST

Part No.	Parts Per Kit	Description	Part No.	Parts Per Kit	Description
<b>Resistors</b>			<b>Tubes and Lamps</b>		
SW11	2	100 Ohm Resistor	O66	1	5Y3 Tube
O11	1	10000 Ohm Resistor	K23	1	12A6 Tube
BR 43	1	25000 Ohm Resistor <b>2 W</b>	K24	1	12C8 Tube
A10	2	47000 Ohm Resistor	BR29	1	12K8 Tube
O12	1	100000 Ohm Resistor	AR31	1	12SH7 Tube
O18	2	470000 Ohm Resistors	O39	1	6V Pilot Lamp
O17	1	1 Megohm Resistor	<b>Miscellaneous</b>		
C10	1	10 Megohm Resistor	BR19	4	Angle brackets
T11	1	470 Ohm 1 Watt Resistor	BR22	1	Condenser Mounting Bracket
BR26	1	2700 Ohm 2 Watt Resistor	BR21	1	Dial Drum Assembly
<b>Condensers</b>			BR30	1	Dial Plate Assembly
TS33	1	4.7 MMF Fixed Condenser	FM21	1	Dial Spring
G24	2	47-50 MMF Fixed Cond.	BR31	1	Dial Cable (31")
AR26	2	150 MMF Fixed Cond.	AR33	1	Pointer
AR27	5	.005 MFD Fixed Cond.	AR21	1	Dial Drive Shaft
AR28	5	.05 MFD Fixed Cond.	AR23	2	Dial Drive E Washers
T40	1	10 MFD 25V Electrolytic Cond.	AR24	1	Drive Shaft Bracket
AR29	1	15 + 10 MFD 450V Electrolytic Cond.	TS55	1	#8-32 X $\frac{1}{2}$ " Set Screw
AR30	2	3-30 MMF Trimmer Cond.	SW43	1	Condenser Mounting Wafer
BR27	1	Dual Tuning Cond.	O31	32	#6-32 X $\frac{1}{2}$ " Screws
<b>Coils</b>			TS74	3	#8-32 X $\frac{1}{4}$ " Screws
BR13	1	Antenna Primary Coil	G52	4	#8-32 X $\frac{3}{8}$ " Screws
BR14	1	Antenna Secondary Coil	O102	3	#6- $\frac{3}{8}$ " Sheet Metal Screws
BR18	1	Oscillator Coil	TC46	7	#6- $\frac{3}{8}$ " Sheet Metal Screws
BR16	1	IF Trans. (Input)	S22	36	#6-32 Nuts
BR17	1	IF Trans. (Output)	TP16	4	#8-32 Nuts
<b>Controls and Switches</b>			O33	3	Control Nuts
BR23	1	500000 Ohm-6 Control	TS72	35	#6 Lock Washers
AR18	1	1 Megohm-6 Control with Sw.	BR36	7	#8 Lock Washers
BR28	1	SPDT Rotary Switch	O101	3	Control Lock Washers
<b>Knobs-Sockets-Terminal Strips</b>			AR35	3	$\frac{1}{2}$ " Spacers
V48	4	Knobs	AR36	4	$\frac{3}{4}$ " Spacers
AR32	5	Tube Sockets	K18	2	Grid Clips
AR12	1	Speaker Socket	O35	1	$\frac{3}{8}$ " Grommet
AR13	1	Speaker Plug	C24	1	7/16" Grommet
A14	1	Phono Socket	O37	2	Solder Lugs
A19	1	Phono Plug	BR24	1	Power Transformer
C25A	1	Pilot Socket	AR34	1	Output Transformer
P13	1	110V Socket	BR32	1	Chassis
FM17	1	Dual Binding Post	BR35	1	Panel
O38	3	Single Terminal Strips	AR19	1	Line Cord 8'
			BR33	1	Shielded Wire (30")
			IB43	1	Length Bare Wire (18")
			T24	1	Roll Hookup Wire (10")
			P24	1	Length of Spaghetti (6")
			BR1	1	Instruction Manual

Check the voltages at the tube sockets. A table of approximate voltages is given below. These readings were obtained with a Heathkit VTVM with 11 megohms input resistance. The occasional lower readings in brackets were obtained with a Heathkit Handitester at 1,000 ohms per volt. Variations of plus or minus 15% may be expected.