

Ed. 74815011



Heathkit
**SPECIFICATIONS
and SCHEMATICS**



HEATH COMPANY . . . BENTON HARBOR, MICH.

HEATHKIT SPECIFICATIONS AND SCHEMATICS is intended to provide reference information and to answer your questions pertinent to Heathkit design.

The Heath Company has always freely offered schematics and technical information in the sincere belief that the material is interesting and will prove helpful to many.

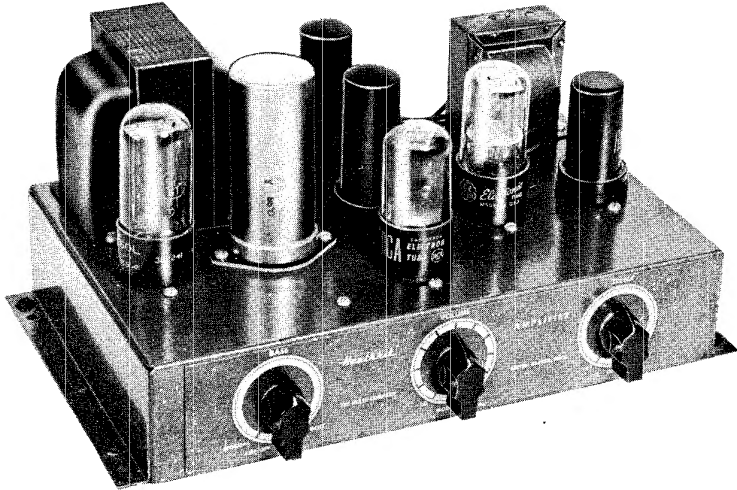
Heathkit pioneering in the electronic instrument kit field has resulted in the availability of a wide selection of useful well-designed, low cost electronic kit form equipment. Heathkits fulfill a major need in electronics and have been directly responsible for further stimulating interest particularly among electronics enthusiasts whose activity might be discouraged because of high equipment cost.

The combination of careful engineering, complete and detailed instruction manuals, use of highest quality components and exacting machine work in forming and punching of panels and chassis all combine to produce accurate, dependable test equipment which is a pleasure to construct and truly professional in appearance.

The advantages of constructing kit form test equipment are numerous. The builder saves the major portion of the cost of factory built equipment and becomes better acquainted with the circuitry and operation of the unit thereby gaining that important knowledge that will help him use the instrument far more intelligently over a wider range of applications. Should maintenance or repair ever be needed, the knowledge gained in construction will permit the kit builder to easily put the unit back into proper operating condition without delay.

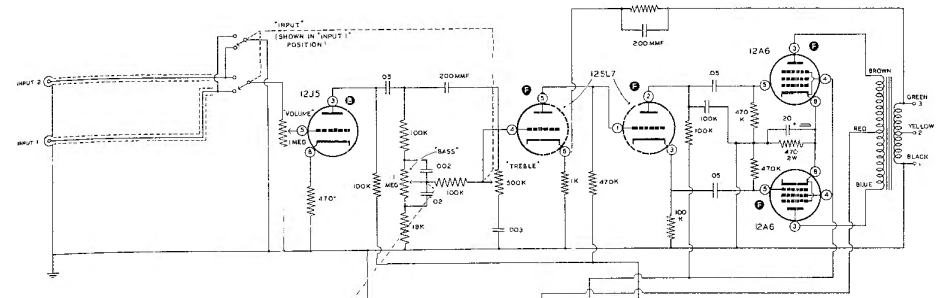
It always has been and it always shall be our sincere desire to produce the best possible kit form test equipment at the lowest possible cost. Furthermore, we are anxious to help the Heathkit user in any way and at all times for we want every Heathkit owner to receive the many years of excellent operation for which his kit was engineered.

HEATHKIT MODEL A-7B and A-7C AUDIO AMPLIFIERS

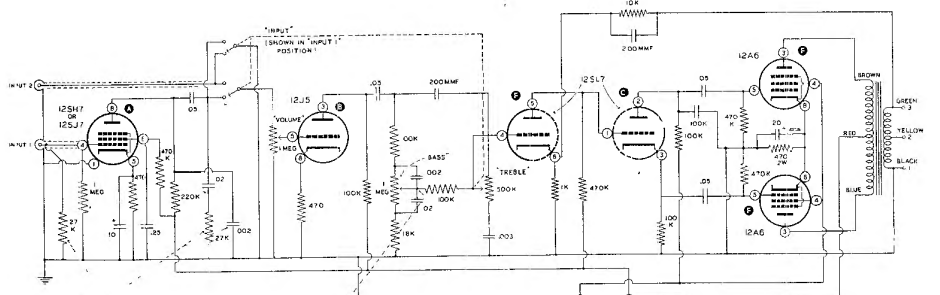


SPECIFICATIONS

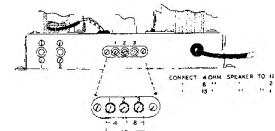
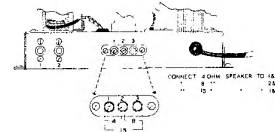
Frequency Response.....	+1.5 db 20 to 20,000 cps
Power Output.....	6 watts
Tube Complement.....	1 - 12J5 First Amplifier
	1 - 12SL7 Second Amplifier and Phase Splitter
	2 - 12A6 Beam Power Output
	1 - 5Y3 Rectifier
	1 - 12SH7 or 12SJ7 Preamplifier (A-7C only)
Output Impedance.....	4, 8, or 15 ohms
Input Voltage.....	110-125 volts AC 50/60 cycles
Physical Specifications.....	11 1/2" wide, 5 1/4" high, 6 1/2" deep
Shipping Weight.....	10 lbs.



A-7B SCHEMATIC DIAGRAM

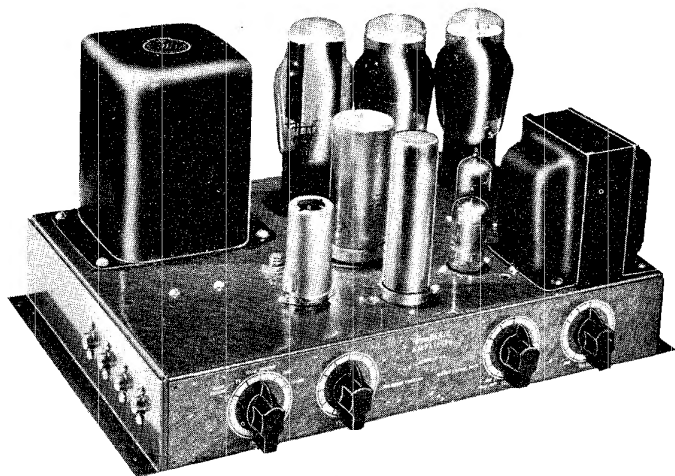


A-7C SCHEMATIC DIAGRAM



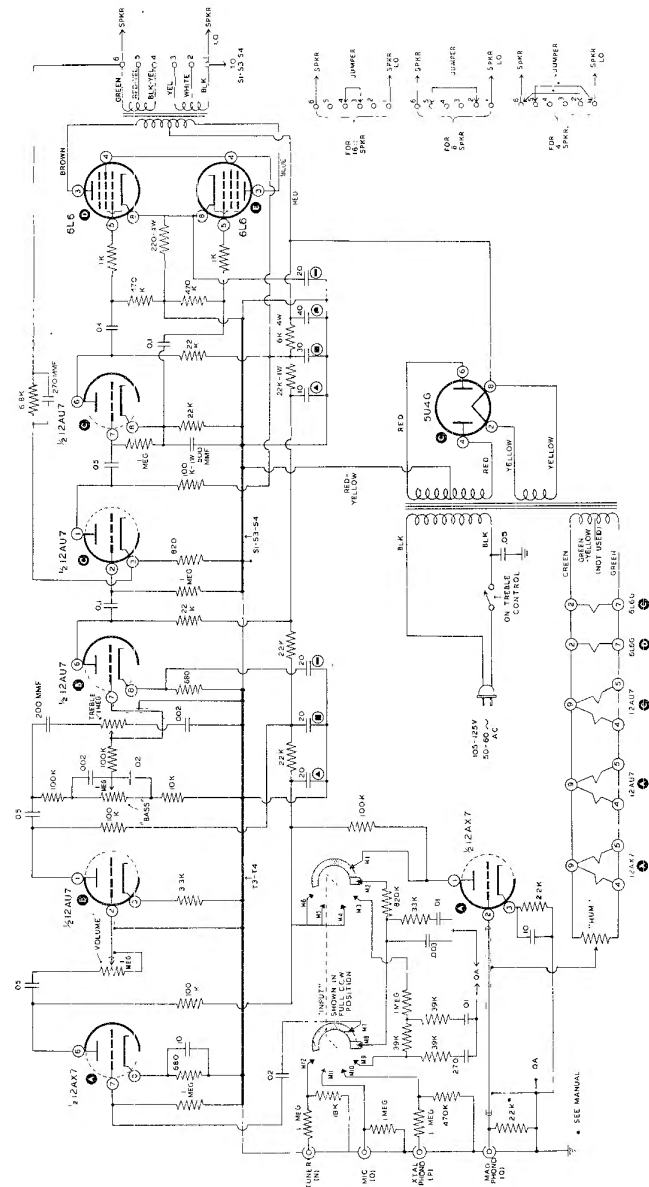
HEATHKIT AUDIO AMPLIFIER

MODEL A-9A



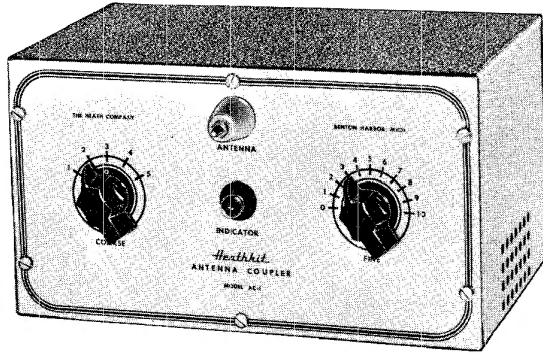
SPECIFICATIONS

Frequency Response.....	±1 db 20 to 20,000 cps
Power Output.....	20 watts
Total Harmonic Distortion.....	1% (at 3 db below rated output)
Input Requirements (for 15 watts output)	
Magnetic Phono Input.....	0.007 volts
Microphone Input.....	0.01 volts
Crystal Phono Input.....	0.08 volts
Tuner Input.....	0.6 volts
Tone Controls	
Bass (at 30 cps).....	15 db boost, 15 db cut
Treble (at 15 kc).....	15 db boost, 20 db cut
Power Requirements.....	100 watts, 105-125 volts 50/60 cycle AC
Tube Complement.....	12AX7 magnetic phono preamplifier and input amplifier 12AU7 voltage amplifier and tone control amplifier 12AU7 voltage amplifier and phase splitter Two 6L6G push-pull pentode power amplifiers 5U4G Rectifier
Dimensions.....	13 1/4" x 8 1/2" x 6 5/8" high
Shipping Weight.....	17 lbs.



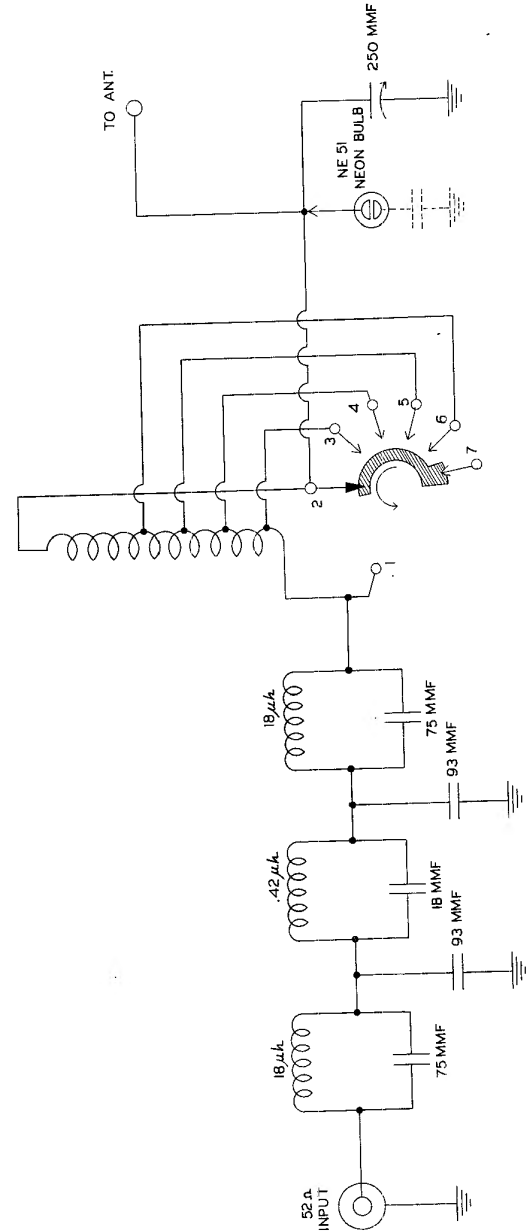
HEATHKIT ANTENNA COUPLER

MODEL AC-1



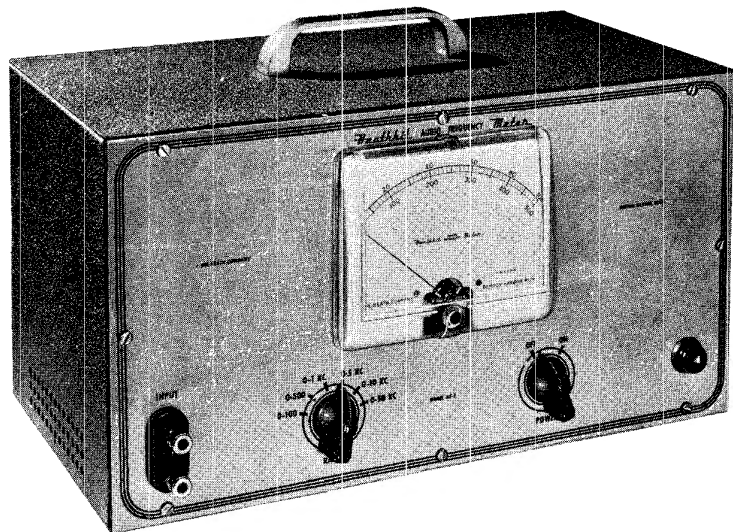
SPECIFICATIONS

Maximum RF Power Input.....	75 watt
Input Connection.....	52 ohm coaxial cable
Output Connection.....	Single-ended
Low Pass Filter Cut-off Frequency.....	36 megacycles
Dimensions.....	7 1/8" x 4 3/8" x 4 7/8"
Net Weight.....	2 lbs.
Shipping Weight.....	3 lbs.



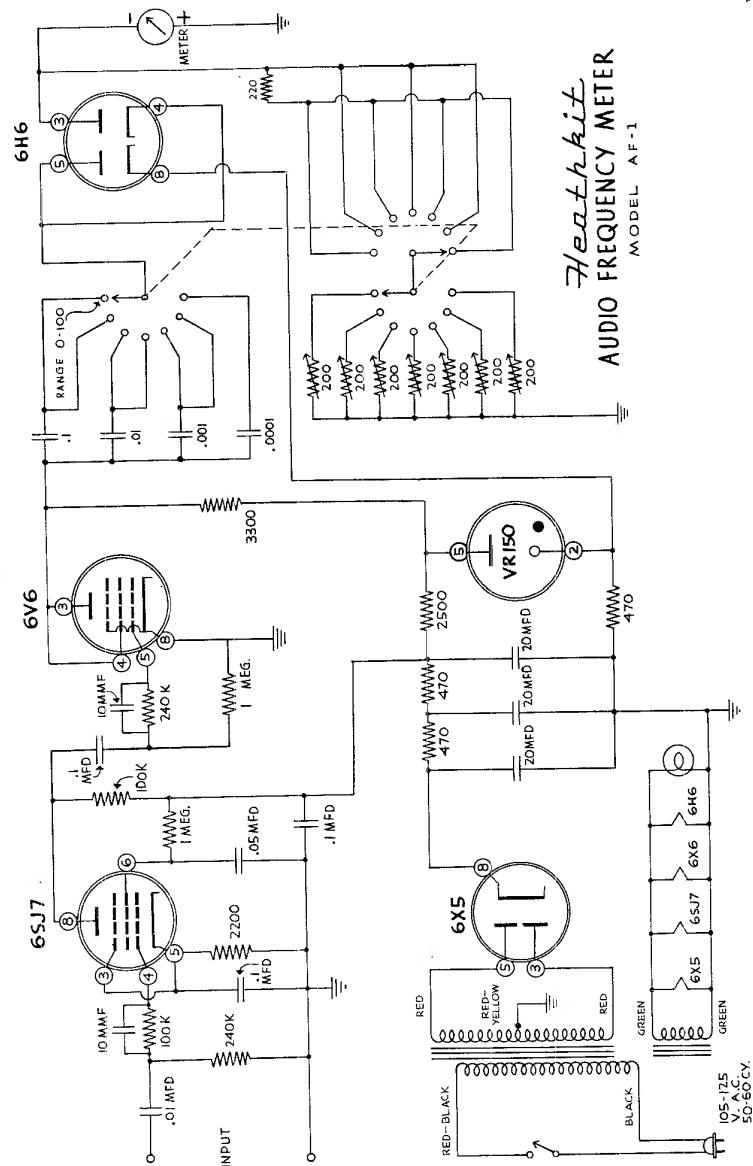
SCHEMATIC ANTENNA COUPLER

HEATHKIT AUDIO FREQUENCY METER MODEL AF-1



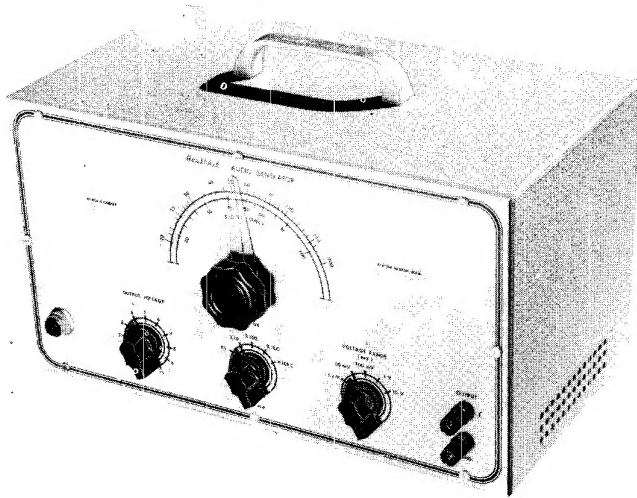
TECHNICAL SPECIFICATIONS

- Power Requirements: 105-125 V AC 50-60 cycles, 35 Watts
- Tube Complement: 1 - 6V6 1 - 6H6 1 - 6X5
1 - 6SJ7 1 - VR150
- Ranges: 0-100, 0-300, 0-1KC, 0-3KC, 0-10KC, 0-30KC, 0-100KC.
- Input: Impedance 250,000 Ohms at 1,000 CPS
Voltage 2-300 Volts RMS
- Physical Specifications: 12½" long x 7" high x 7½" deep, Shipping Wt. 12 lbs.



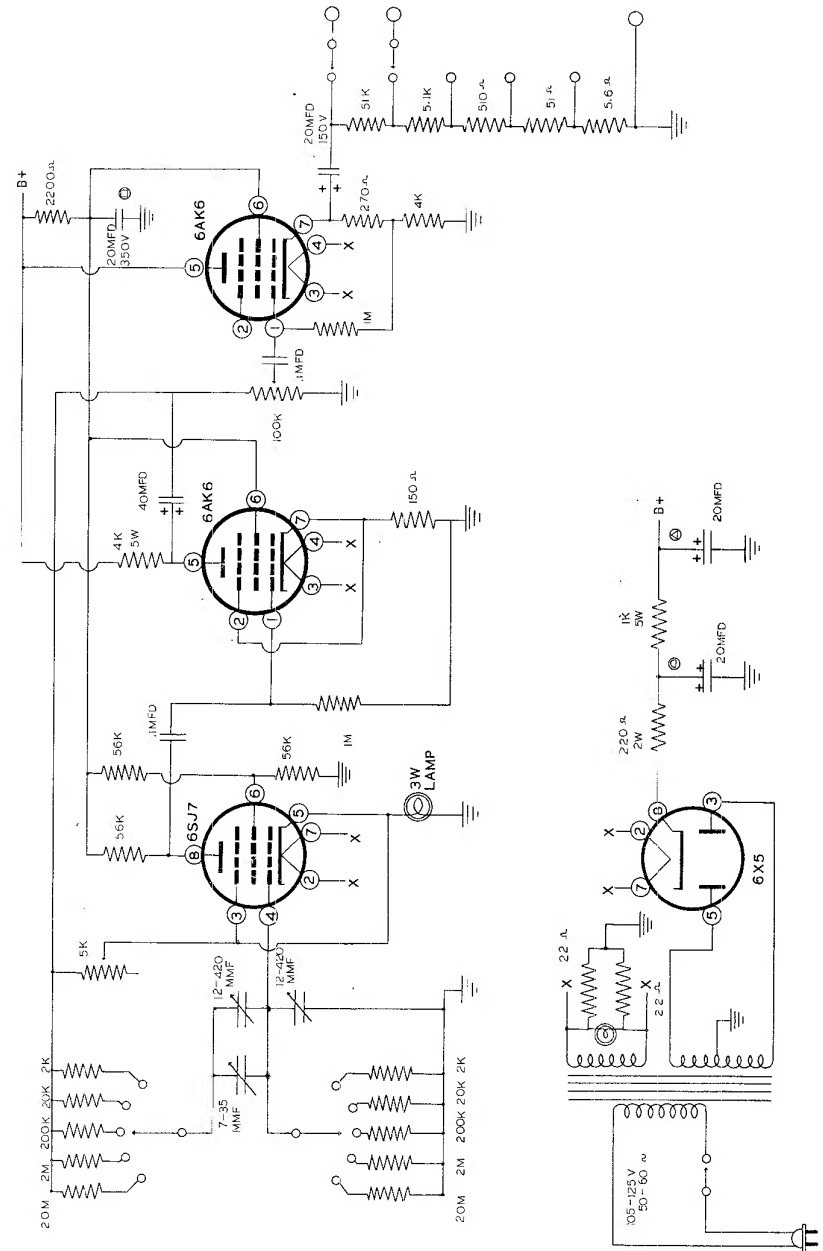
HEATHKIT AUDIO GENERATOR

MODEL AG-8



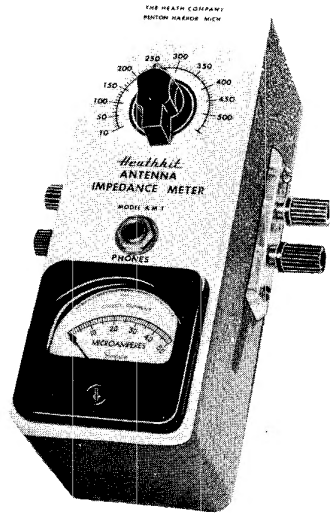
SPECIFICATIONS

Frequency range	20 cps to 1 mc in five ranges
Output voltage	10 volts (no load) plus or minus 1 db 20 cps to 400 kc; down 3 db at 600 kc; down 8 db at 1 mc.
Generator impedance	600 ohms
Distortion	less than 0.4%, 100 cps through audible range
Power requirements	30 watts, 105-125 volts 50-60 cycles AC
Dimensions	7½" high, 13¼" wide, 7½" deep
Shipping weight	15 lbs.



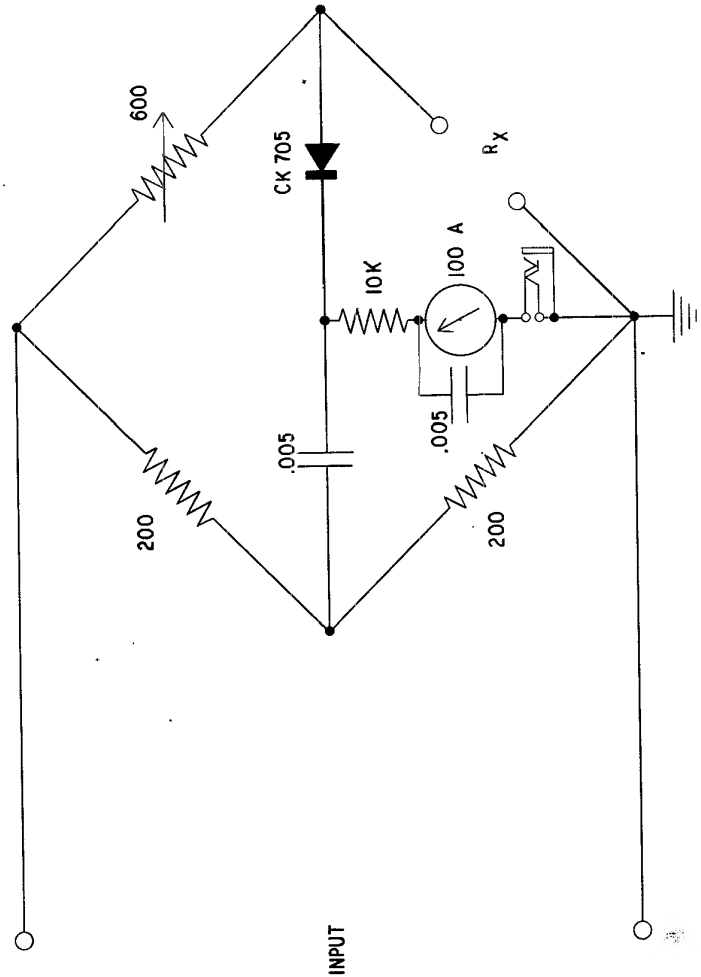
HEATHKIT ANTENNA IMPEDANCE METER

MODEL AM-1



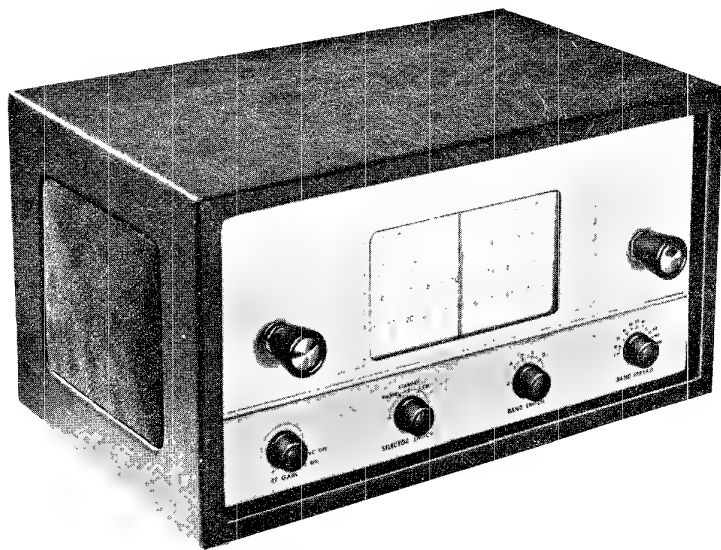
SPECIFICATIONS

Frequency Range.....	0-150 megacycles
Impedance Range.....	0-600 ohms
Null Indicator.....	100 μ ampere meter
Dimensions.....	2 1/2" x 3" x 7"
Net Weight.....	1 lb.
Shipping Weight.....	.3 lbs.



ANTENNA IMPEDANCE METER SCHEMATIC

HEATHKIT MODEL AR-2 COMMUNICATIONS RECEIVER



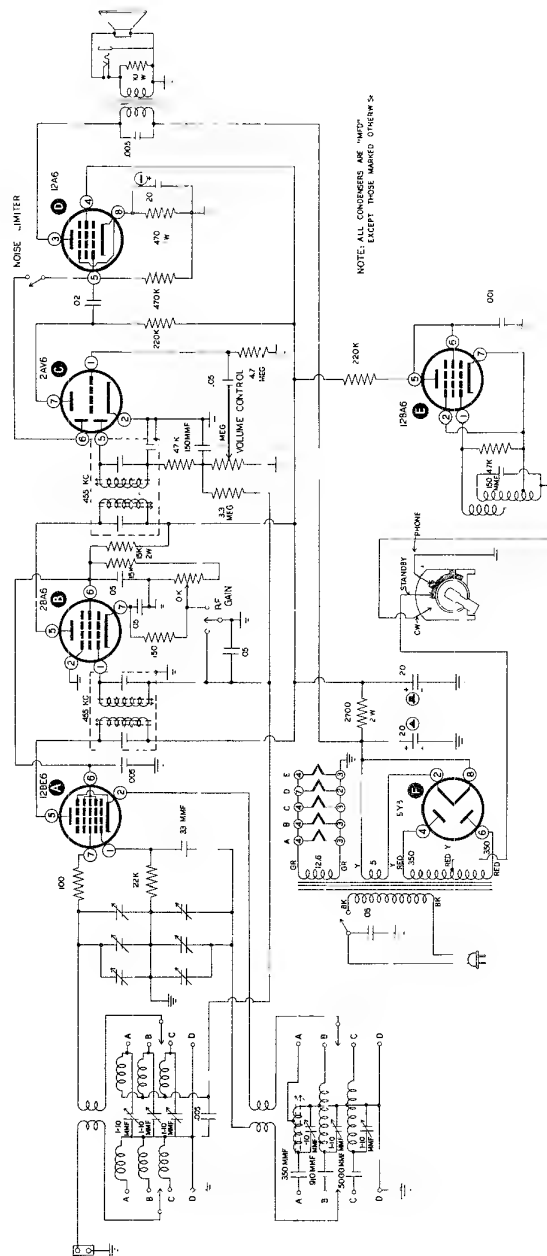
SPECIFICATIONS

Frequency Range.....	.550 kc to 35 mc on four bands
Tube Complement.....	1 - 12BE6 Oscillator and Mixer 1 - 12BA6 IF Amplifier 1 - 12AV6 Second Detector and First Audio Amplifier 1 - 12A6 Beam Power Output 1 - 12BA6 BFO Tube 1 - 5Y3 Full Wave Rectifier
Power Requirements.....	105-125 volts AC 50/60 cycles 45 watts
Dimensions.....	11 1/2" wide x 5 3/4" high x 6 3/4" deep
Shipping Weight.....	12 lbs.

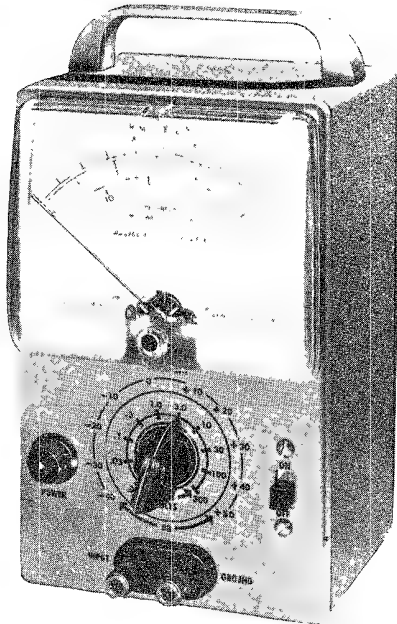
FEATURES

Band Spread Tuning
Phone - Standby - CW
Headphone Jack

Noise Limiter
RF Gain Control
Ham Band Identifications

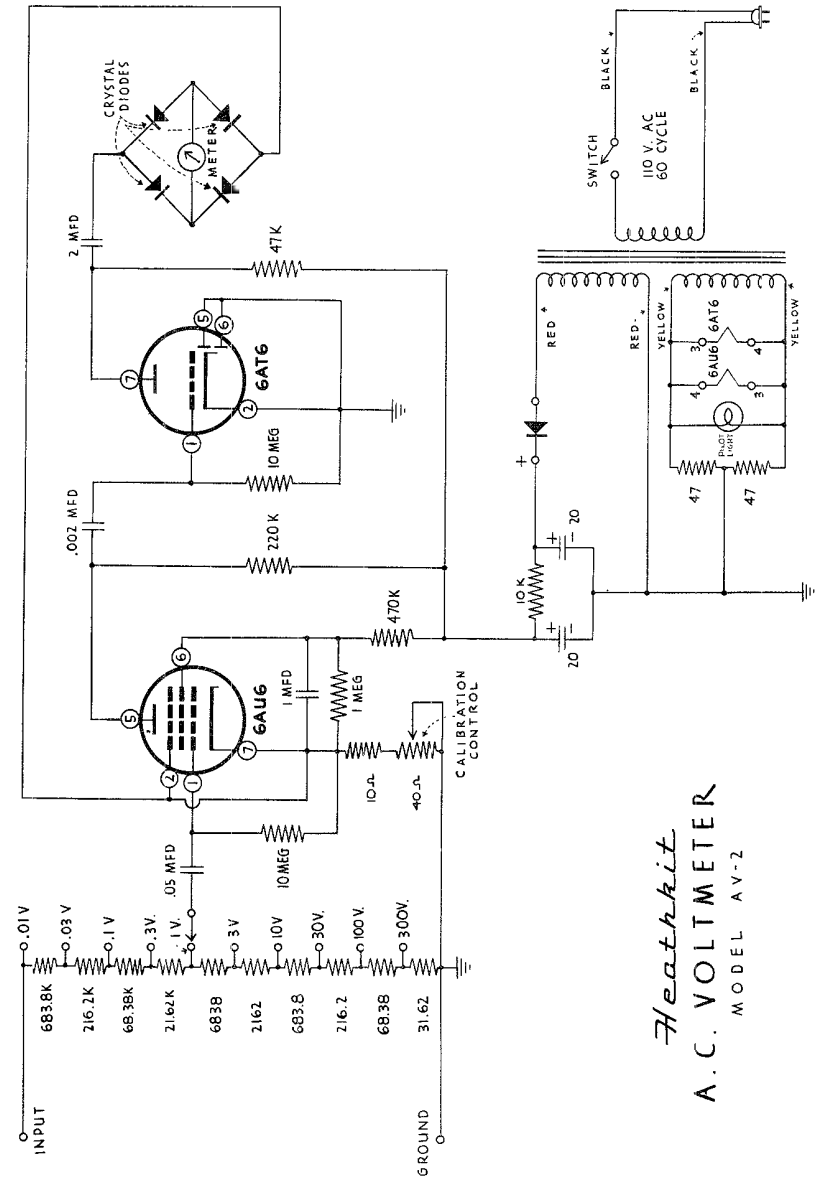


HEATHKIT MODEL AV-2 A. C. VOLTMETER



Technical Specifications

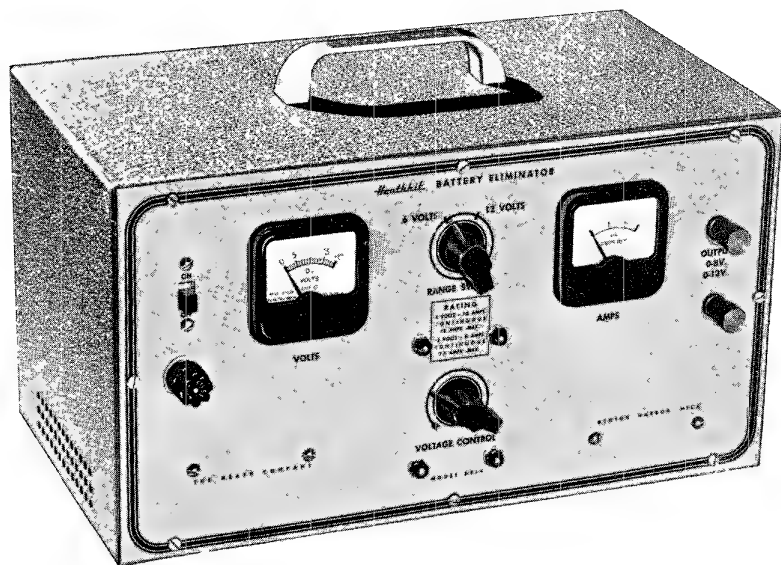
Power Requirement:	105-125V AC, 50-60 cycles, 10 Watts
Tube Complement:	1 - 6AU6 1 - 6AT6
Input Impedance:	1 Megohm at 1 KC
Ranges:	.01, .03, .1, .3, 1, 3, 10, 30, 100, 300 V RMS
Decibels:	Total range -52 to +52 db, scale -12 to +2 db. (1 MW - 600 ohm) ten switch selected ranges from -40 to +50 db.
Physical Specifications:	7-3/8" high x 4-11/16" wide x 4-1/8" deep
Net Weight 3 1/2 lbs.	Shipping Weight 5 lbs.



Heathkit
A. C. VOLTMETER
MODEL AV-2

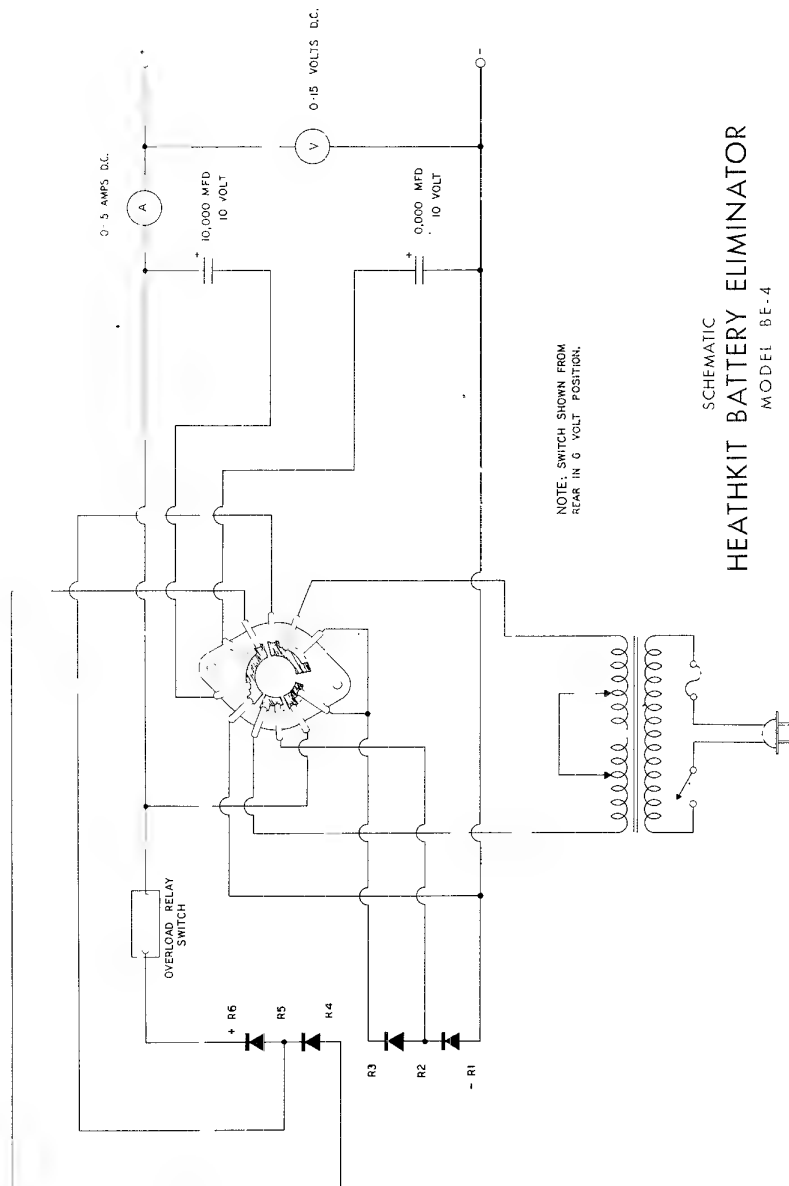
HEATHKIT BATTERY ELIMINATOR

MODEL BE-4



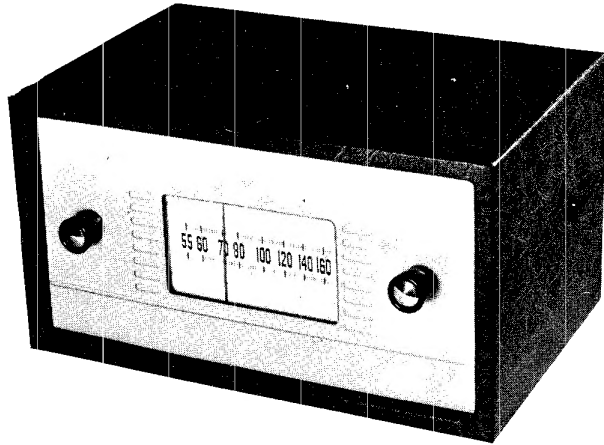
SPECIFICATIONS

Continuously variable voltage output	
0-8 volts DC.....	.10 amperes continuously
	15 amperes maximum intermittent
0-16 volts DC.....	.5 amperes continuously
	7.5 amperes maximum intermittent
Power Requirements.....	105-125 V., 50-60 cycles AC at 175 watts
Dimensions.....	13 1/4" wide x 7 1/2" deep x 7 1/4" high
Approximate shipping weight.....	22 lbs.



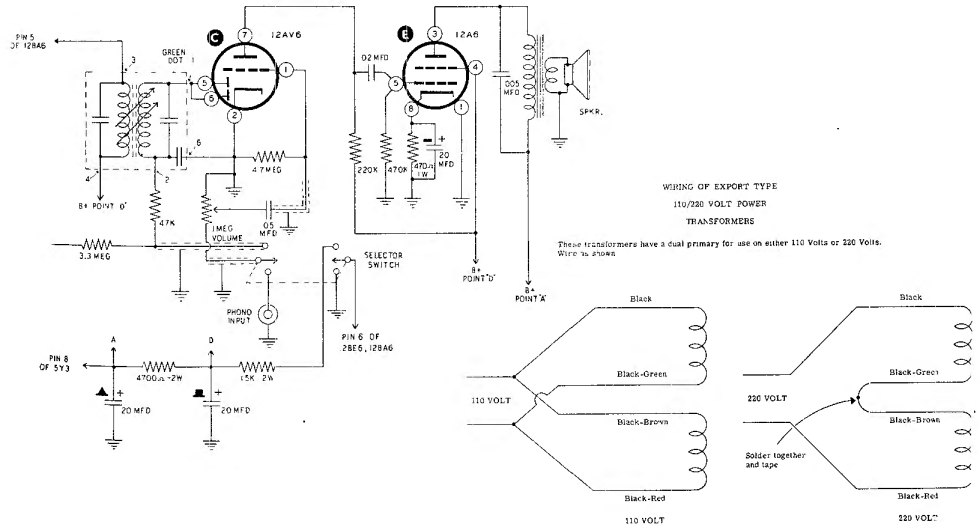
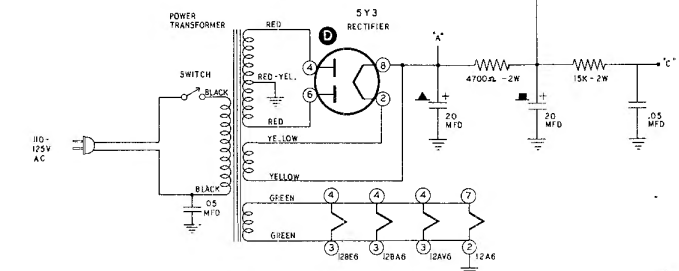
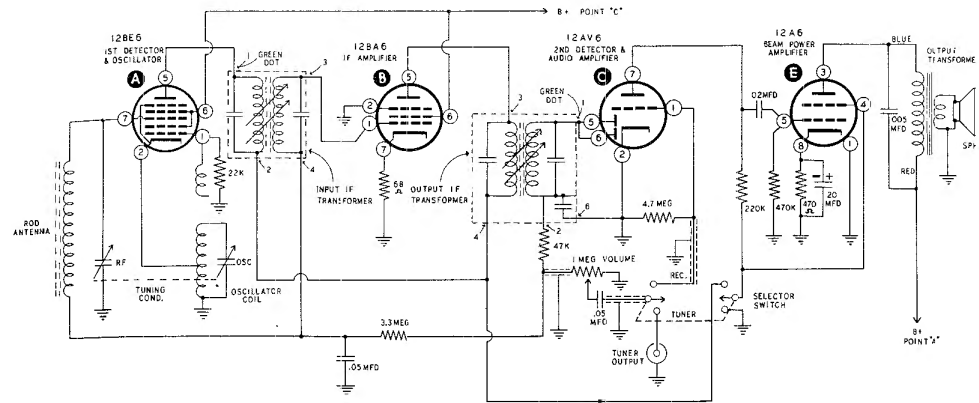
SCHMATIC
HEATHKIT BATTERY ELIMINATOR
MODEL BE-4

HEATHKIT BROADCAST BAND RECEIVER MODEL BR-2

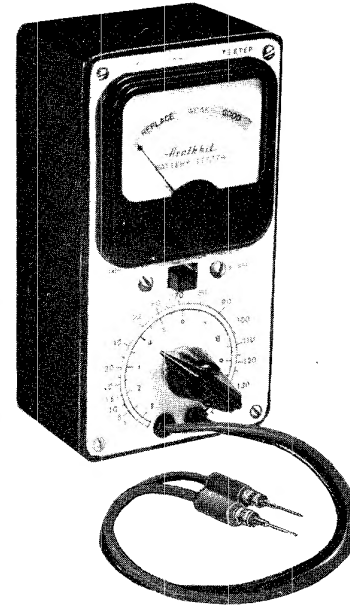


SPECIFICATIONS

Radio	
Tuning Range.....	550 kc to 1620 kc
I. F. Frequency.....	455 kc
Antenna.....	Built-in High Sensitivity Rod Type
Speaker (included).....	5 1/2" PM 4 ohm Voice Coil
Tuner Operation	
Output.....	High impedance to any amplifier input with resistance of 100,000 ohms or more. 110 V outlet provided for amplifier, phono player, etc.
Phonograph	
Input.....	1 megohm high impedance for optimum performance with any good quality crystal or ceramic phono pickup.
Tube Complement.....	
	1 - 5Y3 Rectifier
	1 - 12A6 Beam Power Amplifier
	1 - 12AV6 Detector, A.V.C. and Audio Amplifier
	1 - 12BA6 I. F. Amplifier
	1 - 12BE6 Pentagrid Converter
Power Requirements.....	105-125 V 50-60 cycles AC 40 watts
Dimensions.....	11 1/2" wide, 5 3/4" high, 6 3/4" deep



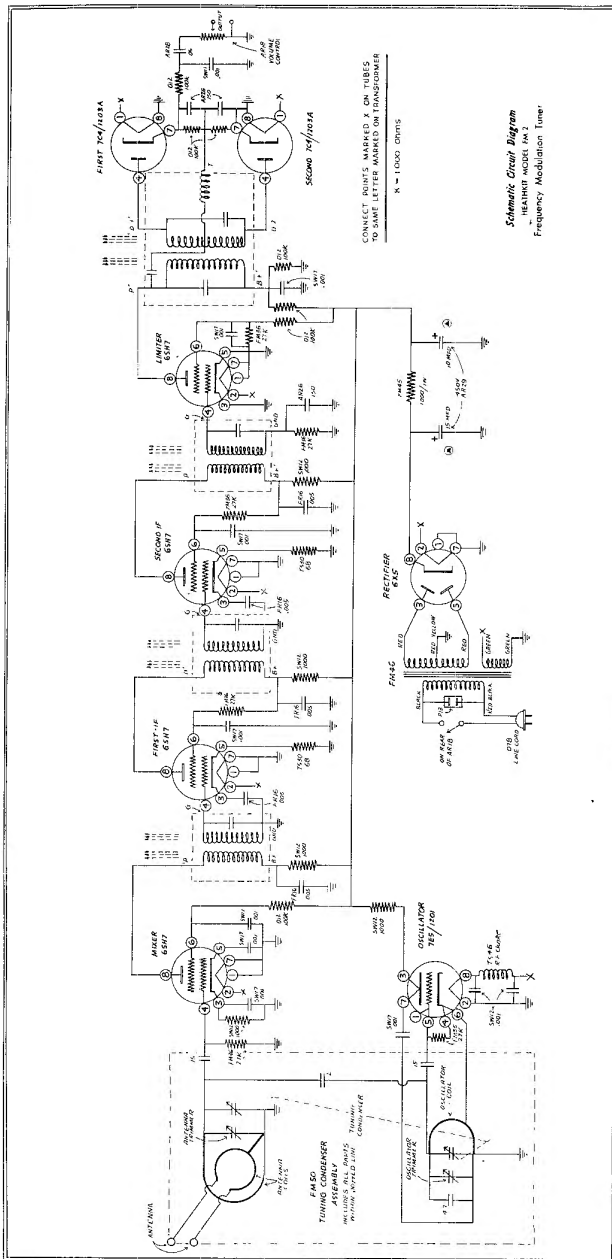
HEATHKIT MODEL BT-1 BATTERY TESTER



SPECIFICATIONS

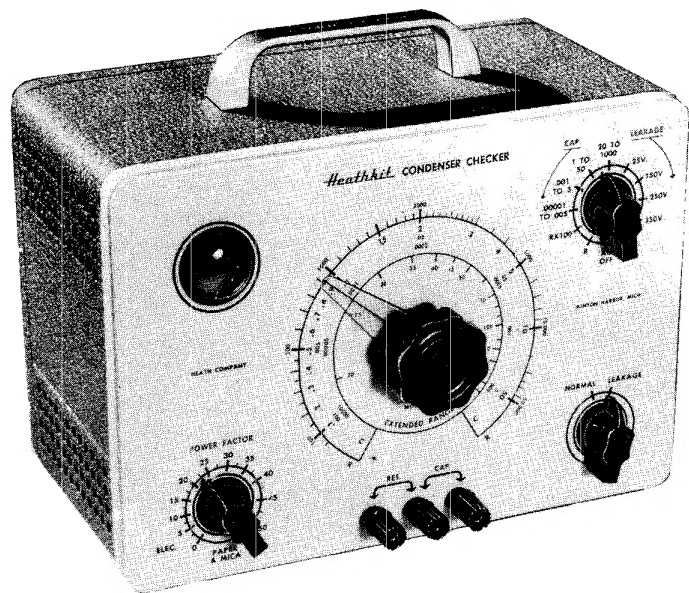
HEATHKIT BATTERY TESTER MODEL BT-1

Test Ranges	0 to 15 volts 0 to 100 mA
Load Current	"A-Batt" Range 100 MA. "B-Batt" Range 10 MA.
Meter Indications	GOOD—WEAK—REPLACE
Size	Length 5 7/8", Width 3", Height 2 3/4"
Shipping Weight	3 Pounds



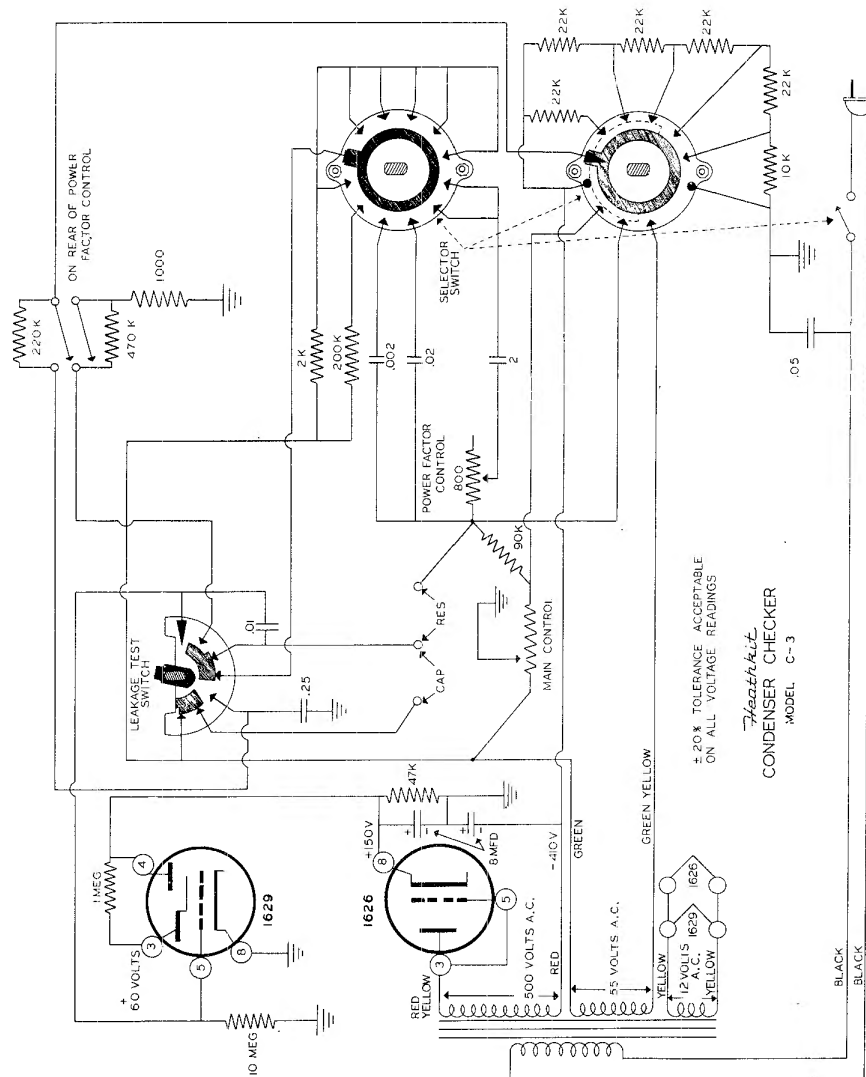
HEATHKIT CONDENSER CHECKER

MODEL C-3



SPECIFICATIONS

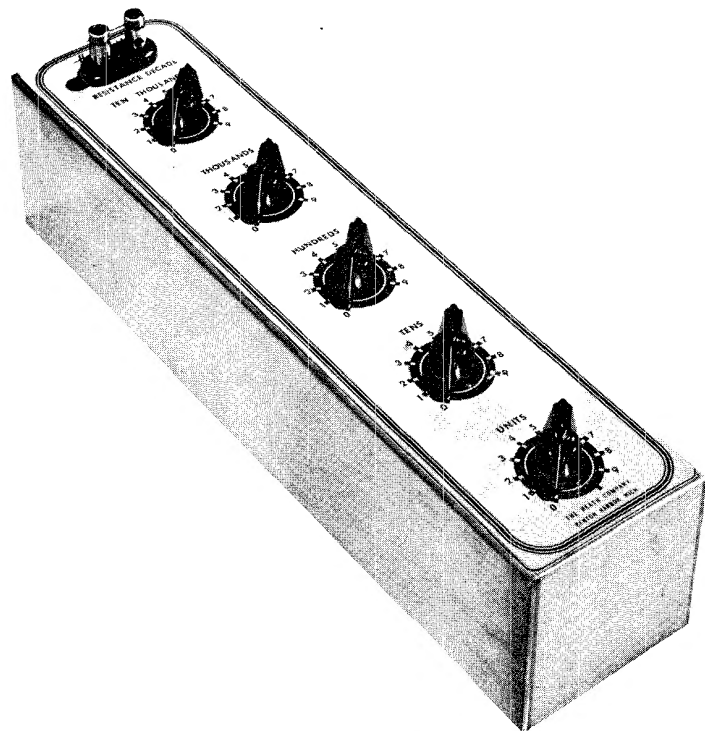
Power Requirements:	110-125 volts, 50-60 cycles a-c
Cabinet Size:	9½" wide x 6½" high x 5" deep
Kit Shipping Weight:	7 pounds
Power Supply:	Power transformer—half wave rectifier
Capacity: 4 Ranges:	.00001 mfd - .005 mfd .001 mfd - .5 mfd .1 mfd - 50 mfd 20 mfd - 1000 mfd
D-C Leakage Test	
Polarizing Voltages: 5 Ranges:	25 volts d-c 150 volts d-c 250 volts d-c 350 volts d-c 450 volts d-c
Resistance Ranges: 2 Ranges:	100 ohms to 50,000 ohms 10,000 ohms to 5 megohms
Circuit:	A-c powered bridge for both capacitive and resistive measurements. Maximum opening of electron beam indicator denotes bridge balance.



HEATHKIT

MODEL DR-1

DECADE RESISTANCE KIT

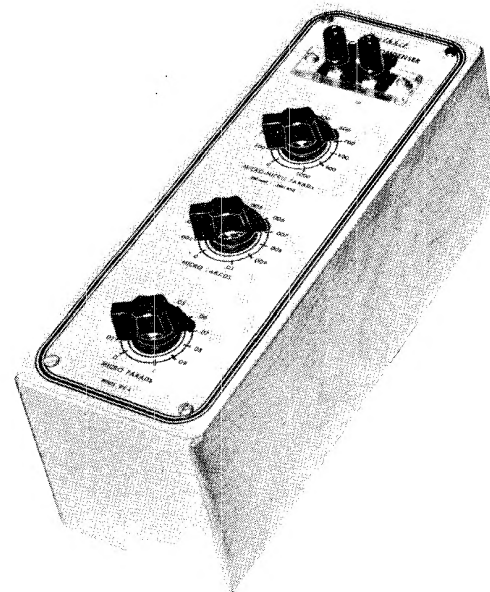


SPECIFICATIONS

Range.....	1 Ω to 99,999 Ω in one ohm steps
Components.....	Resistors: Precision - 1/2% accuracy Switches: Ceramic
Maximum Current.....	Units-----500 MA Tens-----150 MA Hundreds-----50 MA Thousands-----15 MA Ten Thousands-----5 MA
Dimensions.....	14 1/2" x 3 3/8" x 3 3/8" Birch Cabinet

HEATHKIT DECADE CONDENSER

MODEL DC-1



SPECIFICATIONS

Range.....	100 mmf. to 0.111 mfd. in increments of 100 mmf.
Voltage Rating.....	350 volts DC, continuous; 500 volts DC, intermittent, 1000 volts DC test.
Dielectric.....	Silver mica
Accuracy of Incremental Capacity.....	Plus or minus 1%
Zero capacitance.....	15 to 20 mmf. with all switches set at zero
Dimensions.....	3 3/4" wide, 4 3/4" high, 10 5/8" deep
Shipping Weight.....	4 lbs.