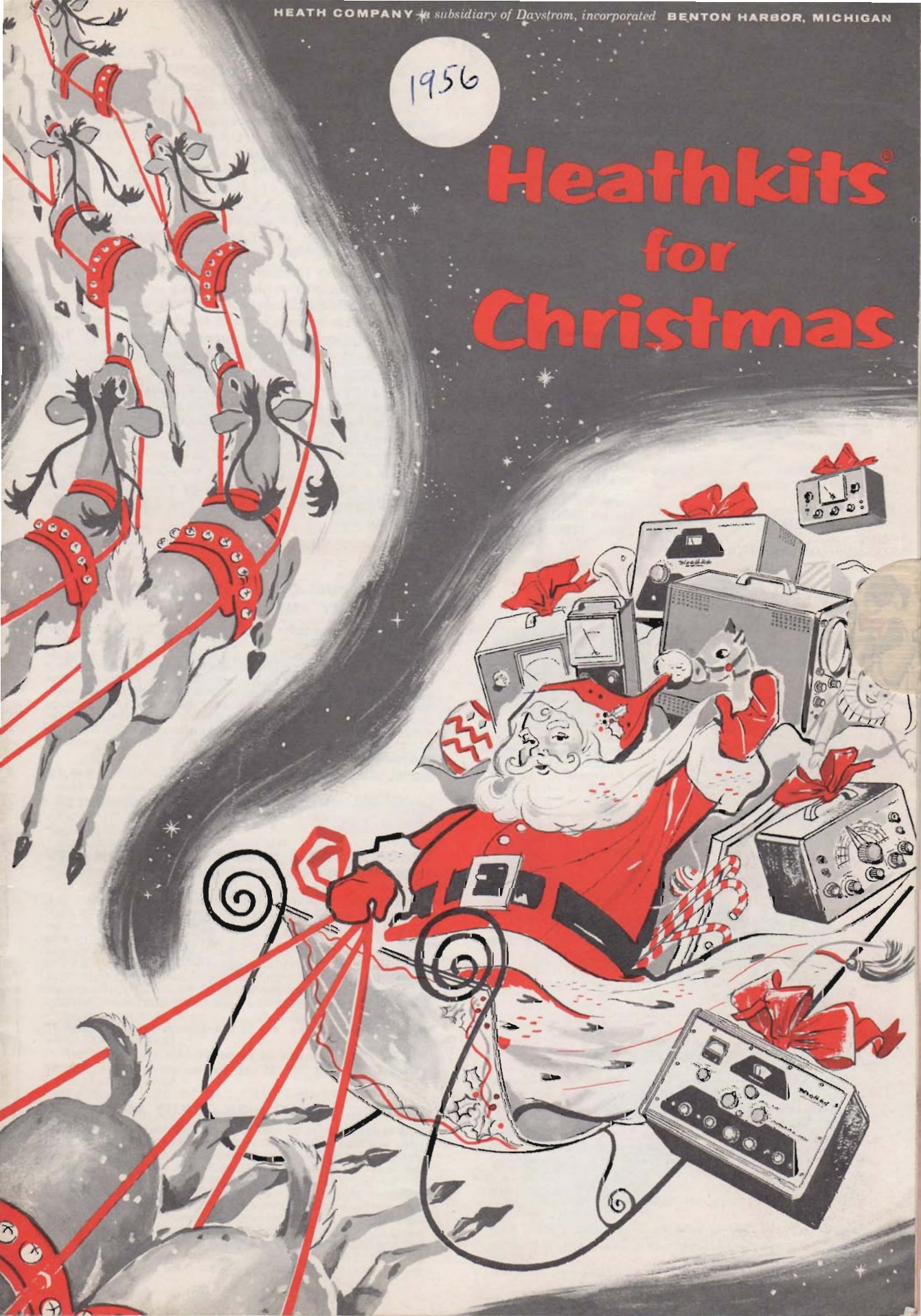


1956

# Heathkits<sup>®</sup> for Christmas



# Amplifier Kit



MODEL W-5M  
Shpg. Wt. 31 Lbs.  
Express Only

**\$59<sup>75</sup>**

\$5.98 Down  
\$5.02 Mo.

- \* Full 25 watt output with KT-66 output tubes.
- \* All connectors brought out to front chassis apron.
- \* Protective cover over all above-chassis components.

## MODEL W-5

Consists of Model W-5M plus Model WA-P2 pre-amplifier.

Shpg. Wt. 38 Lbs.  
Express only.... **\$79.50**  
\$7.95 Down — \$6.68 Mo.

This 25 watt unit is our finest high-fidelity amplifier. Using a special design peerless output transformer, and KT-66 output tubes by Genalex, the Model W-5M provides performance characteristics unsurpassed at this price level. Frequency response is  $\pm 1$  DB from 5 to 160,000 CPS at 1 watt. Harmonic distortion is less than 1% at 25 watts and 1M distortion is less than 1% at 20 watts (60 and 3,000 CPS, 4 to 1). Hum and noise are 99 DB below 25 watts. Damping factor is 40 to 1. Input voltage for 5 watts output is 1 volt. Tubes employed are a pair of 12AU7's, a pair of KT-66's and a 5R4GY rectifier. Measures 13-3/32" W. x 8 1/2" D. x 8 1/4" H. Output impedance is 4, 8, or 16 ohms. Featured, also, is the "tweeter saver" which suppresses high frequency oscillation, and a new type balancing circuit requiring only a voltmeter for indication. This balance is easier to adjust, and results in a closer "dynamic" balance between output tubes. The Model W-5M provides improved phase shift characteristics, reduced IM and harmonic distortion, and improved frequency response. Conservatively rated high-quality components are used throughout to insure years of trouble-free operation. No technical background or training is required for assembly. Step-by-step instructions are provided for every stage of construction, and large pictorial diagrams illustrate exactly where each wire and component is to be placed. An amplifier for music lovers who can appreciate subtle differences in performance. Just ask the audiophile who owns one!



MODEL W-3M



MODEL W-4AM



MODEL A-9B



MODEL A-7D

## HEATHKIT 7-WATT AMPLIFIER KIT

This amplifier is more limited in power than other Heathkit models, but it still qualifies as a high-fidelity unit, and its performance definitely exceeds that of many so-called "high-fidelity" phonograph amplifiers. Using a tapped-screen output transformer of new design, the Model A-7D provides a frequency response of  $\pm 1\frac{1}{2}$  DB from 20 to 20,000 CPS. Total distortion is held to a surprisingly low level. Output stage is push pull, and separate bass and treble tone controls are provided. Shpg. Wt. 10 lbs.

MODEL A-7D  
**\$17<sup>95</sup>**

INCLUDING NEW EXCISE TAX  
\$1.80 Down — \$1.51 Mo.

MODEL A-7E: Similar to the A-7D, except that a 12SL7 tube has been added for preamplification. Two inputs, RIAA compensation, and extra gain..... **\$19.95**  
\$2.00 Down — \$1.68 Mo.

## HEATHKIT DUAL-CHASSIS—WILLIAMSON TYPE HIGH FIDELITY AMPLIFIER KIT

This 20-watt high-fidelity amplifier employs the famous Acrosound Model TO-300 "ultra-linear" output transformer and uses 5881 output tubes. The power supply is built on a separate chassis, and the two chassis are inter-connected with a power cable. This provides additional flexibility in mounting. Frequency response is  $\pm 1$  DB from 6 CPS to 150 kc at 1 watt. Harmonic distortion is only 1% at 21 watts, and 1M distortion is only 1.3% at 20 watts. (60 and 3,000 CPS). Output impedance is 4, 8, or 16 ohms. Hum and noise are 88 DB below 20 watts. A very popular high-fidelity unit employing top-quality components throughout.

MODEL W-3M: Shpg. Wt. 29 Lbs. Express only..... **\$49.75**  
\$4.98 Down — \$4.18 Mo.

MODEL W-3: Consists of Model W-3M plus Model WA-P2 pre-amplifier. Shpg. Wt. 37 Lbs. Express only..... **\$69.50**  
\$6.95 Down — \$5.84 Mo.

## HEATHKIT SINGLE CHASSIS—WILLIAMSON TYPE HIGH FIDELITY AMPLIFIER KIT

The 20-watt Model W-4AM Williamson type amplifier is a tremendous high-fidelity bargain. Combining the power supply and main amplifier on one chassis, and using a special-design output transformer by Chicago Standard brings you savings without a sacrifice in quality. Employing 5881 output tubes, the frequency response of the W-4AM is  $\pm 1$  DB from 10 CPS to 100 kc at 1 watt. Harmonic distortion is only 1.5% at 20 watts. 1M distortion is only 2.7%. Output impedance is 4, 8, or 16 ohms. Hum and noise are 95 DB below 20 watts.

MODEL W-4AM: Shpg. Wt. 28 Lbs. Express only..... **\$39.75**  
\$3.98 Down — \$3.34 Mo.

MODEL W-4A: Consists of Model W-4AM plus Model WA-P2 preamplifier. Shpg. Wt. 35 Lbs. Express only..... **\$59.50**  
\$5.95 Down — \$5.00 Mo.

## HEATHKIT 20-WATT HIGH FIDELITY AMPLIFIER KIT

This high-fidelity amplifier features full 20-watt output using push pull 6L6 tubes. Built-in preamplifier provides 4 separate inputs, selected by a panel-mounted switch. It has separate bass and treble tone controls, each offering 15 DB boost and cut. Output transformer is tapped at 4, 8, 16, and 500 ohms. Designed primarily for home installations, but also used extensively for public address applications. True high-fidelity performance with frequency response of  $\pm 1$  DB from 20 CPS to 20,000 CPS. Total harmonic distortion only 1% (at 3 DB below rated output).

MODEL A-9B  
**\$35<sup>50</sup>**

\$3.55 Down — \$2.98 Mo.

HEATHKIT HIGH FIDELITY

# Preamplifier Kit

- \* 5 switch-selected inputs, each with its own level control.
- \* Equalization for LP, RIAA, AES, and Early 78's.
- \* Separate bass and treble tone controls, and special hum control.
- \* Clean, modern lines and satin-gold enamel finish.



Literally thousands of these preamplifiers are in use today, because the kit meets or exceeds specifications for the most rigorous high-fidelity applications, and will do justice to the finest available program sources. Provides a total of 5 inputs, each with individual level controls (three high-level and two low-level). Frequency response is within 1 DB from 25 CPS to 30,000 CPS, or within 1½ DB from 15 CPS to 35,000 CPS. Hum and noise are extremely low, with special balance control for absolute minimum hum level. Tone control provides 18 DB boost and 12 DB cut at 50 CPS, and 15 DB boost and 20 DB cut at 15,000 CPS. Cabinet measures only 12-9/16" W. x 3¾" H. x 4¾" D, and it is finished in beautiful satin-gold enamel. 4-position turnover and 4 position roll-off controls provide "LP," "RIAA," "AES," and "early 78" equalization, and 8, 12, 16, and 1 flat position for roll-off. Derives operating power from the main amplifier, requiring only 6.3 VAC at 1 ampere and 300 VDC at 10 MA. Easy to construct from step-by-step instructions and pictorial diagrams provided.

MODEL WA-P2  
(With Cabinet)

**\$19<sup>75</sup>**

\$1.98 Down — \$1.66 Mo.

Shpg. Wt. 7 Lbs.

**HIGH FIDELITY**

... a perfect gift for the whole family!

## HEATHKIT HIGH FIDELITY FM TUNER KIT

- \* Illuminated slide-rule dial covers 88 to 108 MC.
- \* Modern circuit emphasizes sensitivity and stability.
- \* Housed in attractive satin-gold cabinet to match WA-P2 and BC-1.

This amazing new FM tuner can provide you with real high-fidelity performance at an unbelievably low price level. Covering 88 to 108 MC, the modern circuit features a stabilized, temperature-compensated, oscillator, A.G.C., broadbanded IF circuits, and better than 10 UV sensitivity for 20 DB of quieting. A high gain, cascaded, RF amplifier is used ahead of the mixer to increase overall gain and reduce oscillator leakage. It employs a ratio detector for high efficiency without sacrifice in high-fidelity performance. IF and ratio transformers are pre-aligned, as is the front end tuning unit. This means the kit can be constructed by a beginner, without elaborate test and alignment equipment. The FM-3A is designed to match the WA-P2 preamplifier and the BC-1 AM tuner. An illuminated slide-rule dial is employed for frequency indication. Step-by-step instructions and large pictorial diagrams assure success.

MODEL FM-3A

**\$25<sup>95</sup>**

INCLUDING NEW EXCISE TAX  
(With Cabinet)

\$2.60 Down — \$2.18 Mo.

## HEATHKIT BROADBAND AM TUNER KIT

This AM tuner has been designed especially for high-fidelity applications. It incorporates a low-distortion detector, a broadband IF, and other features essential to usefulness in high-fidelity. Special voltage-doubler detector employs crystal diodes for low distortion. Sensitivity and selectivity are excellent. Audio response is ± 1 DB from 20 CPS to 9 kc, with 5 DB of pre-emphasis at 10 kc to compensate for station roll-off. Covers the standard broadcast band from 550 to 1600 kc. Incorporates a 10 kc whistle-filter and provides a 6 DB signal-to-noise ratio at 2.5 UV. RF and IF coils are pre-aligned, and power supply is built-in. Incorporates AVC, two outputs, and two antenna inputs.

MODEL BC-1

**\$25<sup>95</sup>**

INCLUDING NEW EXCISE TAX  
(With Cabinet)

\$2.60 Down — \$2.18 Mo.

## HEATHKIT ELECTRONIC CROSS-OVER KIT

This unusual device functions to separate low frequencies and high frequencies so that they may be fed to separate amplifiers and to separate speakers. This eliminates the need for conventional cross-over circuits, since the Model XO-1 does the complete job electronically. Cross-over frequencies of 100, 200, 400, 700, 1,200, 2,000 and 3,500 CPS are selectable with front panel controls on the XO-1, and a separate level control is provided for each channel. Minimizes inter-modulation distortion problems. Handles unlimited power, since frequency division is accomplished ahead of the power stage. Attenuation is 12 DB per octave, with sharp "knee" at cut-off frequency.

MODEL XO-1

**\$18<sup>95</sup>**

\$1.90 Down — \$1.59 Mo.



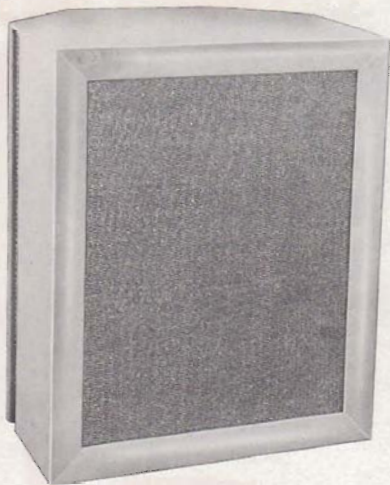
MODEL FM-3A  
Shpg. Wt. 7 Lbs.

MODEL BC-1  
Shpg. Wt. 8 Lbs.

MODEL XO-1  
Shpg. Wt. 6 Lbs.

HEATHKIT HIGH FIDELITY

# Range Extending Speaker System Kit



MODEL SS-1B  
Shpg. Wt. 80 Lbs.

**\$99<sup>95</sup>**

\$10.00 DOWN  
\$ 8.40 MO.

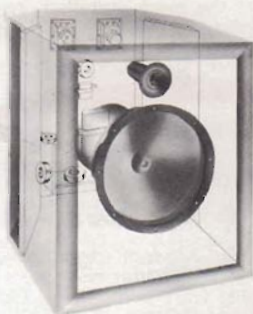
- \* High quality speakers of special design — 15" woofer and compression-type super-tweeter.
- \* Easy-to-assemble cabinet of furniture-grade plywood.
- \* Attractively styled to fit into any living room.
- \* Matches Model SS-1.

The Model SS-1 and the Model SS-1B are designed as matching units, both physically and audio-wise. The Model SS-1B completes the audio spectrum when used with the Model SS-1, and the smaller unit fits neatly on top of the larger enclosure to form an integrated 4-speaker system.



Speaker system kits available only as described. Speakers and enclosures not available separately.

This range extending unit is designed especially for use with the Model SS-1 speaker system. It consists of a 15" woofer, providing output between 35 and 600 CPS, and a compression-type super-tweeter that provides output between 4,000 and 16,000 CPS. Cross-over frequencies are 600, 1,600, and 4,000 CPS. The SS-1 provides the mid-range, and the SS-1B extends the coverage at both ends of the spectrum. Together, the two speaker systems provide output from 35 to 16,000 CPS within  $\pm 5$  DB. This easy-to-assemble speaker enclosure kit is made of top-quality furniture-grade plywood. All parts are pre-cut and pre-drilled, ready for assembly and the finish of your choice. Complete step-by-step instructions are provided for quick assembly by one not necessarily experienced in woodworking. Coils and capacitors for proper cross-over network are included, as is a balance control for super-tweeter output level. The SS-1 and SS-1B can provide you with unbelievably rich audio reproduction, and yet these units are priced reasonably. The SS-1B measures 29" H. x 23" W. x 17½" D. The speakers are both special-design Jensens, and the power rating is 35 watts. Impedance is 16 ohms.



HEATHKIT HIGH FIDELITY

# Speaker System Kit



MODEL SS-1  
Shpg. Wt. 30 Lbs.

**\$39<sup>95</sup>**

\$4.00 DOWN - \$3.36 MO.

- \* Special design ducted-port, bass-reflex enclosure.
- \* Two separate speakers for high and low frequencies.
- \* Kit includes all parts and complete instructions for assembly.

This speaker system is a fine reproducer in its own right, covering 50 to 12,000 CPS within  $\pm 5$  DB. However, the story does not end there. Should you desire to expand the system later, the SS-1 is designed to work with the SS-1B range extending unit — providing additional frequency coverage at both ends of the spectrum. It can fulfill your present needs, and still provide for the future. The SS-1 uses two Jensen speakers; an 8" midrange-woofer, and a compression-type tweeter. Cross-over frequency is 1,600 CPS, and the system is rated at 25 watts. Nominal impedance is 16 ohms. The cabinet is a ducted-port bass-reflex type. Attractively styled, the Model SS-1 features a broad "picture-frame" molding that will blend with any room decorating scheme. Pre-cut and pre-drilled wood parts are of furniture grade plywood. The kit is easy-to-build, and all component parts are included, along with complete step-by-step instructions for assembly. Can be built in just one evening, and will provide you with many years of listening enjoyment thereafter.



**Brand New** HIGH FIDELITY

# Heath "Legato" Speaker System Kit

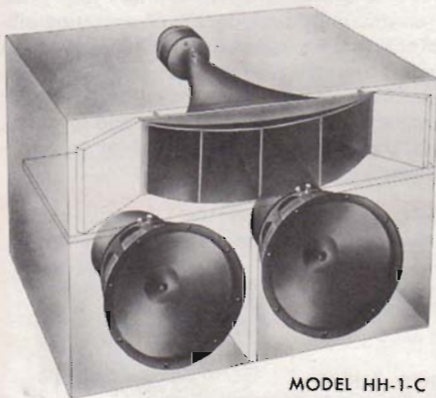
- \* Theater-type Altec-Lansing speakers and "C-P" (critical phasing).
- \* Precisely balanced high and low frequency sound sources.
- \* Choice of beautiful contemporary or traditional cabinets.
- \* Easy to build—all components and instructions included.



"CONTEMPORARY"

**\$325<sup>00</sup>**

\$32.50 DOWN  
\$27.30 MO.



MODEL HH-1-C

Shpg. Wt. 231 lbs.

This brand new speaker system provides a *new kind* of high fidelity performance. Wide range — yes; from 25 to 20,000 CPS,  $\pm 5$  db. But, with perfect balance between low and high frequency channels, and precise phasing at the cross-over frequency. This makes it possible for you to forget the speaker — and listen only to the sound. You will sense the presence of the artist in the same room with you.

There is no "revolutionary" new principle to which this performance may be credited. It's a matter of taking the pains to obtain perfect balance, critical phasing, adequate driver design, and proper enclosure design. Heath Company, working closely with Altec-Lansing engineers, has permitted no compromise. We asked for the finest speaker system it is possible to produce; and we got it!

The Legato employs two 15" Altec-Lansing theater-type bass drivers in a modified infinite baffle enclosure. These cover the frequencies from 20 to 500 CPS. Above 500 cycles, a multicellular exponential horn driven by a specially designed Altec-Lansing unit covers mid-range and higher frequencies. Precise phase shift at 500 cycles assures smooth transition to the high frequency channel. There are no disturbing discontinuities, mis-phasings, or "beams" of highs. Internal reflections are absorbed by a 3" fiber glass lining. There are no critical adjustments for you to make. Designed to satisfy even the most critical audio requirements.

Frequency Response.....	$\pm 5$ db, 25 to 20,000 cps.
Cross-over Frequencies.....	500 cps.
Power Rating.....	50 watts program material
Nominal Impedance.....	15 ohms
Cabinet Type.....	(Modified infinite baffle)

**Cabinet Dimensions:**

Contemporary.....	41" long x 22 $\frac{3}{4}$ " deep x 34" high
Traditional.....	41 $\frac{1}{2}$ " long x 22 $\frac{3}{4}$ " deep x 33" high
Speakers:	2—15" Altec low frequency drivers
	1—Altec high frequency driver with special horn
Magnet Weights.....	Low frequency drivers—2.4 pounds each
	High frequency driver—1.2 pounds
Divider Network.....	M derived (M = .6)—Parallel filter type

This fine cabinet features simplicity of line and form. The design is straight forward to blend with your modern furnishings, and yet is not so plain as to be uninteresting. Slim, tapered struts run vertically across the grille cloth to produce a strikingly attractive shadowline. Wood parts are precut and predrilled for simple assembly. Supplied in African mahogany for dark finishes unless you specify imported white birch for light finishes.



"TRADITIONAL"  
MODEL HH-1-T

**\$345<sup>00</sup>**

\$34.50 DOWN  
\$28.98 MO.  
Shpg. Wt. 246 lbs.

This very attractive cabinet has been styled in classic lines to blend with period furniture of all types. The paneled doors capture the dignity of classic furniture pieces. Doors close fully, and swing back against the side of the enclosure when open. Precut and predrilled parts assure simple construction. Furnished in African mahogany for dark finishes unless you specify imported white birch for light finishes.

## HEATHKIT

# Audio Generator Kit



MODEL AG-9  
Shpg. Wt. 8 Lbs.

**\$34.50**

\$3.45 Down  
\$2.90 Mo.

- \* Less than 0.1% distortion — ideal for hi fi work.
- \* Large 4½" meter indicates output.
- \* Step-type tuning for maximum convenience.

This particular audio generator is "made to order" for high fidelity applications. It provides quick and accurate selection of low-distortion signals throughout the audio range. Three rotary selector switches on the front panel allow selection of two significant figures and a multiplier for determining audio frequency. In addition, it incorporates a step-type output attenuator and a continuously variable attenuator. Output is indicated on a large 4½" panel meter calibrated in volts and in db. Attenuator system operates in steps of 10 db, corresponding with the meter calibration. Output ranges are 0-.003, .01, .03, .1, .3, 1, 3, and 10 volts rms. A "load" switch provides for the use of a built-in 600 ohm load or an external load of higher impedance when required. Output and frequency indicators accurate to within ± 5%. Distortion is less than .1 of 1% between 20 cps and 20,000 cps. Total range is 10 cps to 100 kc. New engineering details combine to provide the user with an unusually high degree of operating efficiency. Oscillator frequency selected entirely by the switch method means that accurate resetability is provided. Comparable to units costing many dollars more, and ideal for use in critical high fidelity applications. Shop and compare, and you will appreciate the genuine value of this professional instrument.

Shpg. Wt. 17 Lbs.



### HEATHKIT VARIABLE VOLTAGE REGULATED POWER SUPPLY KIT

This power supply is regulated for stability, and the amount of DC output available from the power supply can be controlled manually from zero to 500 volts. Will provide regulated output at 450 volts up to 10 ma, or up to 130 ma at 200 volts output. In addition to furnishing B-plus, the power supply provides 6 volts AC at 4 amperes for filaments. Both the B-plus output and the filament output are isolated from ground. Ideal power supply for use in experimental work in the laboratory, the home workshop, or the ham shack. Large 4½" panel meter indicates output voltage or current.

MODEL PS-3

**\$35.50**

\$3.55 Down  
\$2.98 Mo.

Shpg. Wt. 11 Lbs.



### HEATHKIT AUDIO GENERATOR KIT

The Model AG-8 is a low cost, high performance unit for use in service shop, or home workshop. It covers the frequency range of 20 cps to 1 mc in five ranges. Output is 600 ohms, and overall distortion will be less than .4 of 1% from 100 cps through the audible range. Output is available up to 10 volts, under no load conditions, and output remains constant within ± 1 db from 20 cps to 400 kc. A five-step attenuator provides control of the output. Precision resistors are employed in the frequency determining network.

MODEL AG-8

**\$29.50**

\$2.95 Down — \$2.48 Mo.

### HEATHKIT RESISTANCE SUBSTITUTION BOX KIT

The RS-1 contains 36 10% 1-watt resistors ranging from 15 ohms to 10 megohms in standard RETMA values. All values are switch-selected for use in determining desirable resistance values in experimental circuits. Many applications in radio and TV service work. 55c Down — 46c Mo.

**\$5.50**



MODEL RS-1  
Shpg. Wt. 2 Lbs.

### HEATHKIT CONDENSER SUBSTITUTION BOX KIT

This kit contains 18 RETMA standard condenser values that can be selected by a rotary switch. Values range from 0.00001 mfd to 0.22 mfd. All capacitors rated at 400 volts or higher. Capacitors are either silver-mica, or plastic molded. 55c Down — 46c Mo.

**\$5.50**



MODEL CS-1  
Shpg. Wt. 2 Lbs.

### HEATHKIT DECADE CONDENSER KIT

Precision, 1% silver-mica capacitors are employed in the Model DC-1 in such a way that a selection of precision capacitor values is provided ranging from 100 mmf (.0001 mfd) to 0.11 mfd (110,000 mmf) in 100 mmf steps. Extremely valuable in all types of design and development work. Switches are ceramic wafer types. \$1.65 Down — \$1.39 Mo.

**\$16.50**



MODEL DC-1  
Shpg. Wt. 3 Lbs.

### HEATHKIT DECADE RESISTANCE KIT

The Model DR-1 incorporates twenty 1% precision resistors arranged around five rugged switches so that various combinations of switch positions will provide a total range of 1 ohm to 99,999 ohms in 1-ohm steps. Switches are labeled "units," "tens," "hundreds," "thousands," and "tenthousands." Use it for ohmmeter calibration in bridge circuits as test values in multiplier circuits, etc.

**\$19.50**

\$1.95 Down  
\$1.64 Mo.



MODEL DR-1  
Shpg. Wt. 4 Lbs.

## HEATHKIT NEW AUDIO VACUUM TUBE

# Voltmeter Kit

- \* Brand new circuit for extended frequency response and added stability.
- \* Ten accurate ranges from 0-.01 to 0-300 volts.
- \* Modern, functional panel styling. "On-off" switch at both extreme ends of range switch.

This brand new AC vacuum tube voltmeter emphasizes stability, broad frequency response, and sensitivity. It is designed especially for audio measurements, and low-level AC measurements in power supply filters, etc. Employs a cascade amplifier circuit with cathode-follower isolation between the input and the amplifier, and between the output stage and the preceding stages. An extremely stable circuit with high input impedance (1 megohm at 1000 CPS). Response of the AV-3 is essentially flat from 10 CPS to 200 kc, and is usable for tests even beyond these frequency limits. Increased damping in the meter circuit stabilizes the meter for low frequency tests. Nylon insulating bushings at the input terminals reduce leakage, and permit the use of the 5-way Heath binding post.

The extremely wide voltage range covered by the AV-3 makes it especially valuable not only in high-fidelity and service work, but also in experimental laboratories. AC (RMS) voltage ranges are 0-.01, .03, .1, .3, 1, 3, 10, 30, 100, and 300 V. Decibel ranges cover -52 DB to +52 DB. An entirely new circuit as compared to the previous model. Employs 1% precision multiplier resistors for maximum accuracy. Handles AC measurements from a low value of one millivolt to a maximum of 300 volts.



MODEL AV-3

**\$29<sup>95</sup>**

\$3.00 Down  
\$2.52 Mo.

Shpg. Wt.  
5 lbs.

## HEATHKIT HARMONIC DISTORTION METER KIT

The HD-1 is equally valuable for the audio engineer or the serious audiophile. Used with a low-distortion audio signal generator, this instrument will measure the harmonic content of various amplifiers under a variety of conditions. Functions between 20 and 20,000 CPS, and reads distortion directly on the panel meter in ranges of 0-1, 3, 10, 30, and 100 percent full scale. Built-in VTVM for initial reference settings and final distortion readings has voltage ranges of 0-1, 3, 10, and 30 volts. 1% precision resistors employed for maximum accuracy. Features voltage regulation and other "extras". Meter calibrated in volts (RMS), percent distortion, and DB.

MODEL HD-1

**\$49<sup>50</sup>**

\$4.95 Down  
\$4.16 Mo.

## HEATHKIT AUDIO OSCILLATOR KIT

Producing both sine waves and square waves, the Model AO-1 covers a frequency range of 20 to 20,000 CPS in three ranges. An extra feature is thermistor regulation of output for flat response through the entire frequency range. AF output is provided at low impedance, and with low distortion. Produces good sine waves, and good, clean square waves with a rise time of only two micro-seconds for checking square wave response of audio amplifiers, etc. Designed especially for the serviceman and high-fidelity enthusiast. A real dollar value in test equipment.

MODEL AO-1

**\$24<sup>50</sup>**

\$2.45 Down  
\$2.06 Mo.

## HEATHKIT AUDIO ANALYZER KIT

Increased sales permit price reduction of almost ten dollars! This multi-function instrument combines an AC VTVM, an audio wattmeter, and an intermodulation analyzer into one case, with combined input and output terminals and built-in high and low frequency oscillators. The VTVM ranges are .01, .03, .1, .3, 1, 3, 10, 30, 100, and 300 volts (RMS). Wattmeter ranges are .15 MW, 1.5 MW, 15 MW, 150 MW, 1.5 W, 15 W, 150 W. IM scales are 1%, 3%, 10%, 30%, and 100%. Provides internal load resistors of 4, 8, 16, or 600 ohms. A valuable instrument for the engineer or serious audiophile. A tremendous dollar value.

MODEL AA-1

**\$49<sup>95</sup>**

\$5.00 Down  
\$4.20 Mo.

## HEATHKIT AUDIO WATTMETER KIT

This instrument measures audio power directly at 4, 8, 16, or 600 ohms. Load resistors are built in. Covers 0-5 MW, 50 MW, 500 MW, 5 W, and 50 W full scale. Provides 5 switch-selected DB ranges covering from -10 DB to +30 DB. Large 4 1/2" 200 microampere meter and precision multiplier resistors insure accuracy. Frequency response is ± 1 DB from 10 CPS to 250 kc. Functions from AC power line. Use in the audio laboratory or in home workshop.

MODEL AW-1

**\$29<sup>50</sup>**

\$2.95 Down  
\$2.48 Mo.



MODEL HD-1  
Shpg. Wt. 13 Lbs.



MODEL AA-1  
Shpg. Wt. 13 Lbs.



MODEL AW-1  
Shpg. Wt. 6 Lbs.



MODEL AO-1  
Shpg. Wt. 10 Lbs.



## HEATHKIT VACUUM TUBE

# Voltmeter Kit

MODEL V-7A

**\$24<sup>50</sup>**

\$2.45 Down  
\$2.06 Mo.

Shpg. Wt. 7 Lbs.

- \* Easy to build — a pleasure to use.
- \* 1% precision resistors employed for high accuracy.
- \* Etched circuit board cuts assembly time in half.

The fact that this instrument is the world's largest-selling VTVM says a great deal about its accuracy, reliability, and overall quality. The V-7A is equally popular in the laboratory or service shop, and represents an unbelievable test equipment bargain, without a corresponding sacrifice in quality. Its appearance reflects the performance of which it is capable. A large 4½" panel meter is used for indication, with clear, sharp calibrations for all ranges. Front panel controls consist of a rotary function switch and a rotary range selector switch, zero-adjust, and ohms-adjust controls. Precision 1% resistors are used in the voltage divider circuits and etched circuits are employed for most of the circuitry. This makes the kit much easier to build, eliminates the possibility of wiring errors, and

assures duplication of laboratory instrument performance. This multi-function VTVM will measure AC voltage (rms), AC voltage (peak-to-peak), DC voltage, and resistance. There are 7 AC (rms) and DC voltage ranges of 0-1.5, 5, 15, 50, 150, 500, and 1500. In addition, there are 7 peak-to-peak AC ranges of 0-4, 14, 40, 140, 400, 1400, and 4000. 7 ohmmeter ranges provide multiplying factors of X1, X10, X100, X1000, X10K, X100K, and X1 megohm. Center-scale resistance readings are 10, 100, 1000, 10K, 100K ohms, 1 megohm, and 10 megohms. A DB scale is also provided. The precision and quality of the components used in this VTVM cannot be duplicated at this price through any other source. Model V-7A is the kind of instrument you will be proud to own and use.

### HEATHKIT HANDITESTER KIT

The Model M-1 measures AC or DC voltage at 0-10, 30, 300, 1000, and 5000 volts. Direct current ranges are 0-10 ma, and 0-100 ma. Ohmmeter ranges are 0-3000 (30 ohm center scale) and 0-300,000 ohms (3,000 ohms center scale). Uses a 400 microampere meter for sensitivity of 1000 ohms-per-volt. A very popular test device for the home experimenter, electricians, and appliance repairmen, and for use as an "extra" instrument in the service shop. Its small size and rugged construction make it perfect for any portable application. Easily slips into your tool box, glove compartment, coat pocket, or desk drawer. Top quality, precision components employed throughout.

MODEL M-1

**\$14<sup>50</sup>**

\$1.45 Down — \$1.22 Mo.



Shpg. Wt. 6 Lbs.

Shpg. Wt. 3 Lbs.



### HEATHKIT 20,000 OHMS/VOLT VOM KIT

Sensitivity of this instrument is 20,000 ohms-per-volt DC and 5,000 ohms-per-volt AC. Measuring ranges are 0-1.5, 5, 50, 150, 500, 1500, and 5000 volts for both AC and DC. Also measures current in the ranges of 0-150 microamperes, 15 ma, 150 ma, 500 ma, and 15 a. Resistance ranges provide multipliers of X1, X100, and X10,000, resulting in center scale readings of 15, 15,000, and 150,000 ohms. DB ranges cover from -10 db to +65 db. Housed in attractive black bakelite case with plastic carrying handle, this fine instrument provides a total of 25 meter ranges on its two-color scale. It employs a sensitive 50 microampere, 4½" meter and features all 1% precision multiplier resistors. Requires no external power, and is, therefore, valuable in portable applications where no AC power is available.

MODEL MM-1

**\$29<sup>50</sup>**

\$2.95 Down

\$2.48 Mo.

### HEATHKIT Etched Circuit RF PROBE KIT

This RF probe extends the frequency response of any 11-megohm VTVM so that it will measure RF up to 250 megacycles within ± 10%. Employs printed circuits for increased stability and ease of assembly. Ideal for extending service and laboratory applications of your Heathkit VTVM.

No. 309-C

**\$3<sup>50</sup>**

35c Down  
30c Mo.



Shpg. Wt.  
1 Lb.

### HEATHKIT SCOPE DEMODULATOR PROBE KIT

This probe functions like an AM detector to pass only modulation of signal and not signal itself. Permits observation of modulation from RF or IF carriers in TV and radio receivers. Extends usefulness of your oscilloscope. Voltage limits are 30 V. rms, and 500 V. DC. Very valuable in service or laboratory applications.

No. 337-C

**\$3<sup>50</sup>**

35c Down  
30c Mo.



Shpg. Wt.  
1 Lb.

### HEATHKIT 30,000 VOLT DC HIGH VOLTAGE PROBE KIT

This probe provides a multiplication factor of 100 on the DC ranges of the Heathkit 11-megohm VTVM. Precision multiplier mounted inside the two-color plastic probe body. Plenty of insulation for completely safe operation, even at highest TV potentials. Designed especially for TV service work.

No. 336

**\$4<sup>50</sup>**

45c Down  
38c Mo.



Shpg. Wt. 2 Lbs.





HEATHKIT

# Signal Generator Kit

- \* No calibration required with pre-aligned coils.
- \* Modulated or unmodulated RF output.
- \* 110 mc to 220 mc frequency coverage.



MODEL SG-8

**\$19<sup>50</sup>**

\$1.95 Down — \$1.64 Mo.

Shpg. Wt. 8 Lbs.

Here is an RF signal generator for alignment applications in the service shop or the home workshop. Thousands of these units are in use in service shops all over the country. Produces RF signals from 160 kc to 110 mc on fundamentals on five bands. Also covers from 110 mc to 220 mc on calibrated harmonics. RF output is in excess of 100,000 microvolts at low impedance. Output is controllable with a step-type and a continuously variable attenuator. Front panel controls provide selection of either unmodulated RF output or RF modulated at 400 cps. In addition, two to three volts of audio at approximately 400 cps are available at the output terminals for testing AF circuits. Employs a 12AU7 and a 6C4 tube. Built-in power supply uses a selenium rectifier.

One of the most outstanding features about the Model SG-8 is the fact that it can be built in just a few hours, even by one not thoroughly experienced in electronics work. Complete step-by-step instructions combined with large pictorial diagrams assure successful assembly. Pre-aligned coils make calibration from an external source unnecessary.



## HEATHKIT LABORATORY GENERATOR KIT

This laboratory RF signal generator covers from 100 kc to 30 mc on fundamentals in five bands. The output signal may be pure RF, or may be modulated at 400 cycles from 0 to 50%. Provision for external modulation has been made. RF output available up to 100,000 microvolts. Output controlled by a fixed step and a variable attenuator. Output impedance is 50 ohms. Panel meter reads RF output or percentage of modulation. Incorporates voltage regulated B+ supply, double shielding of oscillator circuits, copper plated chassis, and other "extras."

MODEL LG-1

**\$48<sup>95</sup>**

\$4.90 Down — \$4.11 Mo.

## HEATHKIT TV ALIGNMENT GENERATOR KIT

This improved sweep generator model provides essential stability and flexibility for work on FM, monochrome TV, or color TV sets. Covers 3.6 mc to 220 mc in four bands. Provides usable output even on harmonics. Sweep deviation from 0-42 mc, depending on base frequency. All-electronic sweep circuit eliminates unwieldy mechanical arrangements. Includes built-in crystal marker generator providing output at 4.5 mc and multiples thereof, and variable marker covering 19 to 60 mc on fundamentals and from 57 to 180 mc on harmonics. Effective two-way blanking.

MODEL TS-4A

**\$49<sup>50</sup>**

\$4.95 Down — \$4.16 Mo.

## HEATHKIT LINEARITY PATTERN GENERATOR KIT

This instrument supplies information for white dots, cross-hatch pattern, horizontal bar pattern, or vertical bar pattern. It feeds video and sync signals to the set under test, with completely controlled gain, and unusual stability. Covering channels 2 to 13, the LP-2 will produce 5 to 6 vertical bars and 4 to 5 horizontal bars. The dot pattern presentation is a *must* for the setting of color convergence controls in the color TV set. Panel provision made for external sync if desired. Use for adjustment of vertical and horizontal linearity, picture size, aspect ratio, and focus. Power supply is regulated for added stability. Essential in the up-to-date TV service shop.

MODEL LP-2

**\$22<sup>50</sup>**

\$2.25 Down — \$1.89 Mo.

## HEATHKIT CATHODE RAY TUBE CHECKER KIT

This instrument checks cathode emission, beam current, shorted elements, and leakage between elements in electro-magnetic picture tube types. It eliminates all doubt for the TV serviceman, and even more important, for the customer. Features its own self-contained power supply, transformer operated to furnish normal test voltages for the CRT. Employs spring-loaded switches for maximum operator protection. Large 4½" meter indicates CRT condition on "good-bad" scale. Luggage-type portable case ideal for home service calls. Special "shadowgraph" test permits projection of light spot on screen. Also gives relative check of picture tube screen coating.

MODEL CC-1

**\$22<sup>50</sup>**

\$2.25 Down — \$1.89 Mo.



MODEL LG-1

Shpg. Wt. 16 Lbs.



MODEL TS-4A

Shpg. Wt. 16 Lbs.



MODEL LP-2

Shpg. Wt. 7 Lbs.



MODEL CC-1

Shpg. Wt. 10 Lbs.

## HEATHKIT

# Tube Checker Kit



**\$29<sup>50</sup>**

MODEL TC-2  
Shpg. Wt. 12 Lbs.

\$2.95 Down  
\$2.48 Mo.

- \* Attractive counter-style cabinet.
- \* Wiring-harness simplifies assembly.
- \* Large 4½" meter with two-color "good-bad" scale.
- \* Separate tube element switches prevent obsolescence.

This fine piece of test gear checks tubes for quality, emission, shorted elements, open elements, and filament continuity. Will test all tube types normally encountered in radio and TV service work. Sockets provided for 4, 5, 6, and 7-pin large, rectangular, and miniature types, octal and loctal types, the Hytron 9-pin miniatures, and pilot lamps. Condition of tubes indicated on a large 4½" meter with multi-color "good-bad" scale. An illuminated roll chart is built right in, providing test data for various tube types. This tester provides switch selection of 14 different filament voltage values from 0.75 volts to 117 volts. Individual switches control each tube element. Close tolerance resistors employed in critical test circuits for maximum accuracy. A professional instrument both in appearance and performance.

The Model TC-2 is very simple to build, even for a beginner. It employs a color-coded cable harness for neat, professional under-chassis wiring. Comes with attractive counter style cabinet, and portable cabinet is available separately. At this price, even the part-time serviceman can afford his own tube checker for maximum efficiency in service work.

### HEATHKIT TV PICTURE TUBE TEST ADAPTER

Designed especially for use with the Model TC-2 tube checker. Use it to test TV picture tubes for emission, shorts, etc. Consists of 12-pin TV tube socket, 4 ft. cable, octal connector, and necessary technical data. Not a kit.



MODEL 355

**\$4<sup>50</sup>**

45c Down  
38c Mo.  
Shpg. Wt.  
1 Lb.

### HEATHKIT VISUAL-AURAL SIGNAL TRACER KIT

Although designed primarily for radio receiver work, this valuable instrument finds extensive application in FM and TV servicing as well. Features a high-gain channel with demodulator probe, and a low-gain channel with audio probe. Will trace signals in all sections of a radio receiver and in many sections of a FM set or TV receiver. Uses built-in speaker and electron beam eye tube for indication. Also features built-in wattmeter and a noise locator circuit. Provision for patching speaker and/or output transformer into external set.

MODEL T-3

**\$23<sup>50</sup>**

\$2.35 Down — \$1.97 Mo.



MODEL T-3 Shpg. Wt. 9 Lbs.



MODEL C-3 Shpg. Wt. 7 Lbs.

### HEATHKIT CONDENSER CHECKER KIT

The Model C-3 consists of an AC powered bridge for both capacitive and resistive measurements. Bridge balance is indicated on electron beam eye tube, and capacity or resistance value is indicated on front panel calibrations. Measures capacity in four ranges from .00001 mfd to .005 mfd, .001 mfd to .5 mfd, .1 mfd to 50 mfd, and 20 mfd to 1000 mfd. Measures resistance in two ranges, from 100 ohms to 50,000 ohms, and from 10,000 ohms to 5 megohms. Selection of five different polarizing voltages for checking capacitors, from 25 volts DC to 450 volts DC. Checks paper, mica, ceramic, and electrolytic capacitors. Indicates power factor of electrolytic condensers.

MODEL C-3

**\$19<sup>50</sup>**

\$1.95 Down — \$1.64 Mo.

### HEATHKIT PORTABLE TUBE CHECKER KIT

This portable tube checker is identical, electrically, with the Model TC-2. However, it is housed in an attractive and practical carrying case, finished in prolylin impregnated material. The cover is detachable, and the hardware is brass plated. This rugged unit is ideal for home service calls or any portable application.

MODEL TC-2P

**\$34<sup>50</sup>**

\$3.45 Down — \$2.90 Mo.



MODEL TC-2P Shpg. Wt. 15 Lbs.



MODEL CM-1 Shpg. Wt. 7 Lbs.

### HEATHKIT DIRECT READING CAPACITY METER KIT

Operation of this instrument is simplicity itself. One has only to connect a capacitor to the terminals, select the proper range, and read the capacity value directly on the large 4½" meter calibrated in mmf and mfd. Ranges are 0 to 100 mmf, 1,000 mmf, 0.01 mfd, and 0.1 mfd full scale. Precision calibrating capacitors supplied. Not susceptible to hand capacity effects. Residual capacity less than 1 mmf. Especially valuable in production line checking, or in quality control.

MODEL CM-1

**\$29<sup>50</sup>**

\$2.95 Down  
\$2.48 Mo.

## HEATHKIT

# Impedance Bridge Kit

- \*  $\frac{1}{2}$ % precision resistors and silver-mica capacitors.
- \* Battery-type tubes, no warm-up required.
- \* Built-in phase shift generator and amplifier.

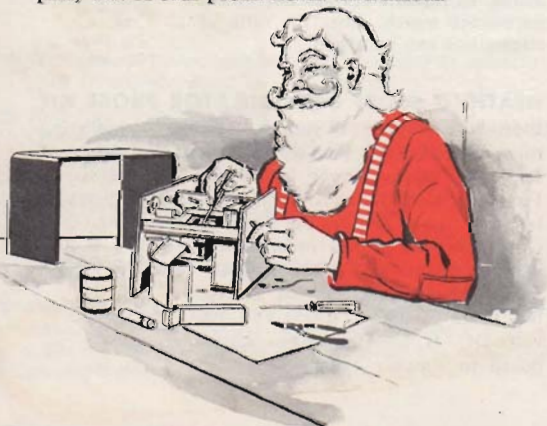


MODEL IB-2

**\$59<sup>50</sup>**

\$5.95 Down — \$5.00 Mo.  
Shpg. Wt. 12 Lbs.

The Model IB-2 is a completely self-contained unit. It has a built-in power supply, a built-in 1000 cycle generator, and a built-in vacuum tube detector. Provision has been made on the panel for connection to an external detector, an external signal generator, or an external power supply. A 100-0-100 micro-ampere meter on the front panel provides for null indications. Measures resistance from 0.1 ohm to 10 megohms, capacitance from 10 mmf to 100 mfd, inductance from 10 mh to 100 h, dissipation factor (D) from 0.002 to 1, and storage factor (Q) from 0.1 to 1000.  $\frac{1}{2}$  of 1% decade resistors employed for maximum accuracy. Typical accuracy figures are: resistance,  $\pm 3\%$ ; capacitance,  $\pm 3\%$ ; inductance,  $\pm 10\%$ ; dissipation factor,  $\pm 20\%$ ; storage factor,  $\pm 20\%$ . Employs a Wheatstone bridge, a Capacity Comparison bridge, a Maxwell bridge, and a Hay bridge. Special two-section CRL dial provides maximum convenience in operation. Use the Model IB-2 for determining values of unmarked components, checking production or design samples, etc. A real professional instrument.



## HEATHKIT "Q" METER KIT

The Q Meter permits measurement of inductance from 1 microhenry to 10 millihenries, "Q" on a scale calibrated up to 250 full scale, with multiplying factors of 1 or 2, and capacitance from 40 mmf to 450 mmf,  $\pm 3$  mmf. Built-in variable oscillator permits testing components from 150 kc to 18 mc. Large  $4\frac{1}{2}$ " panel-mounted meter is featured. Very handy for checking peaking coils, chokes, etc. Use to determine values of unknown condensers, both variable and fixed. Compile data for coil winding purposes, or measure RF resistance. Distributed capacity, and Q of coils.

MODEL QM-1

**\$44<sup>50</sup>**

\$4.45 Down — \$3.74 Mo.



MODEL QM-1

Shpg. Wt. 14 Lbs.



MODEL BE-4

Shpg. Wt. 17 Lbs.

## HEATHKIT 6-12 VOLT BATTERY ELIMINATOR KIT

This completely modern battery eliminator will supply DC output in two ranges for both 6-volt and 12-volt automobile radios. The output is variable for each range, so that operating voltage can be raised or lowered to determine how the receiver functions under adverse conditions. Range is 0-8 volts DC or 0-16 volts DC. Will supply up to 15 amperes on the 6-volt range, or up to 7 amperes on the 12-volt range. Two 10,000 microfarad output filter capacitors insure smooth DC output. Two separate panel meters indicate output voltage or output current. Makes it possible to test automobile radios inside at the workbench. Will also double as a battery charger.

MODEL BE-4

**\$31<sup>50</sup>**

\$3.15 Down — \$2.65 Mo.

## HEATHKIT ISOLATION TRANSFORMER KIT

This device isolates equipment under test from the power line. It is rated at 100 volt-amperes continuously, or 200 volt-amperes intermittently. AC-DC sets may be plugged directly into the IT-1 without the chassis becoming "hot." Additionally, since the IT-1 is fused, it is ideal for use as a buffer between the power line and a questionable receiver, or a new piece of equipment. Protects main fuses. Features voltage control, allowing control of the output from 90 volts to 130 volts. Panel meter monitors output voltage. A very handy device at an extremely low price.

MODEL IT-1

**\$16<sup>50</sup>**

\$1.65 Down — \$1.39 Mo.



MODEL IT-1

Shpg. Wt. 9 Lbs.



MODEL VT-1

Shpg. Wt. 6 Lbs.

## HEATHKIT 6-VOLT VIBRATOR TESTER KIT

This instrument functions very much like a tube checker, to test auto radio vibrators. Vibrator condition is indicated on a simple "good-bad" scale. Tests for proper starting and overall quality of operation, of both interrupter and self-rectifier types of 6-volt vibrators. The model VT-1 is designed to operate from any battery eliminator capable of delivering continuously variable output from 4 to 6 volts DC at 4 amperes or more. It is an ideal companion unit for the Heathkit Model BE-4 battery eliminator. The construction book for the VT-1 contains vibrator test chart for popular 6-volt vibrator types. A real time saver!

MODEL VT-1

**\$14<sup>50</sup>**

\$1.45 Down — \$1.22 Mo.



**MODEL O-11**

Shpg. Wt.  
21 Lbs.

**\$69<sup>50</sup>**

\$6.95 Down  
\$5.84 Mo.

- \* An improved model of what was already an outstanding instrument.
- \* Performance is unmatched in this price range.
- \* Incorporates the extra features required for color TV servicing.

The previous Heathkit oscilloscope (Model O-10) which was already a most remarkable instrument, has been improved even further with the release of the Heathkit Model O-11. It incorporates all the outstanding features of the preceding model, plus improved vertical linearity, better sync stability, especially at low frequencies, and much-improved over-all stability of operation, including less vertical bounce with changes in level. These improvements in the Model O-11 circuit make it even more ideally

**New!**



**HEATHKIT**

**ETCHED CIRCUIT PUSH-PULL**

**5" Oscilloscope Kit**

**COLOR TV**

sued for color TV servicing, and for critical observations in the electronic laboratory. Vertical response extends from 2 CPS to 5 MC without extra switching. Response only down 2.2 DB at 3.58 MC. The 11-tube circuit features a 5UP1 cathode-ray tube. Sync circuit functions effectively from 20 CPS to better than 500 kc in five steps. Modern etched circuit boards employed in the oscilloscope circuit cut assembly time almost in half, permit a level of circuit stability never before achieved in an oscilloscope of this type, and insure against errors in assembly. Both vertical and horizontal output amplifiers are push-pull. Built-in peak-to-peak calibrating source — step-attenuated input — plastic molded capacitors and top-quality parts throughout — pre-formed and cabled wiring harness — and numerous other "extra" features. A professional instrument for the service shop or laboratory. Compare its specifications with those of scopes selling in much higher price brackets. You can't beat it!



MODEL S-3 Shpg. Wt. 8 Lbs.



MODEL VC-3 Shpg. Wt. 4 Lbs.



No. 342 Shpg. Wt. 1 Lb.



No. 337-C Shpg. Wt. 1 Lb.

**HEATHKIT ELECTRONIC SWITCH KIT**

This handy device allows simultaneous oscilloscope observation of two signals by producing both signals, alternately, at its output. It features an all-electronic switching circuit, with no moving parts. Four switching rates are selected by a panel switch. Provides actual gain for input signals, and has a frequency response of  $\pm 1$  DB from 0 to 100 kc. Sync output provided to control and stabilize scope sweep. Will function at signal levels as low as 0.1 volt. This modern device finds many applications in the laboratory and service shop. It employs an entirely new circuit, and yet is priced lower than its predecessor.

MODEL S-3

**\$21<sup>95</sup>**

\$2.20 Down  
\$1.84 Mo.

**HEATHKIT VOLTAGE CALIBRATOR KIT**

This entirely new voltage calibrator produces near-perfect square wave signals of known amplitude. Precision 1% attenuator resistors assure accurate output amplitude, and multivibrator circuit guarantees good, sharp square waves, as distinguished from clipped sine waves. Output frequency is approximately 1000 CPS. Fixed outputs selected by panel switch are: .03, 0.1, 0.3, 1.0, 3.0, 10, 30, and 100 volts peak-to-peak. Allows measurement of unknown signal amplitudes by comparing to known peak-to-peak output of VC-3 on an oscilloscope. Will also double as a square wave generator at 1000 cycles for determining gain, frequency response, or phase-shift characteristics of audio amplifiers. Equally valuable in the laboratory or in radio and TV service shops.

MODEL VC-3

**\$12<sup>50</sup>**

\$1.25 Down  
\$1.05 Mo.

**HEATHKIT LOW CAPACITY PROBE KIT**

Oscilloscope investigation of high frequency, high impedance, or broad bandwidth circuits encountered in television requires the use of a low-capacity probe to prevent loss of gain, circuit loading, or waveform distortion. The Heathkit low-capacity probe may be used with your oscilloscope to eliminate these effects. It features a variable capacitor, to provide correct instrument impedance match. Also, the ratio of attenuation can be varied.

No. 342

**\$3<sup>50</sup>**

35c Down  
30c Mo.

**HEATHKIT SCOPE DEMODULATOR PROBE KIT**

Extend the usefulness of your oscilloscope by employing this probe. Makes it possible to observe modulation of RF or IF carriers found in TV and radio receivers. Functions much like an AM detector to pass only modulation of signal, and not the signal itself. Among other uses, it will be helpful in alignment work, as a signal tracer, and for determining relative gain. Applied voltage limits are 30 volts (RMS) and 500 volts DC. It uses an etched circuit board to simplify assembly.

NO. 337-C

**\$3<sup>50</sup>**

35c Down  
30c Mo.

# New HEATHKIT ETCHED CIRCUIT 5" Oscilloscope Kit

- \* Brand new model with improved performance specifications.
- \* Full 5" scope for service work at a remarkably low price.
- \* Attractively styled front panel in charcoal gray with sharp white lettering.
- \* Easy to build from step-by-step instructions and large pictorials. Not necessary to read schematic.

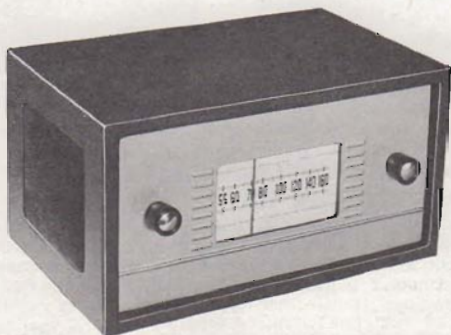
This new and improved oscilloscope retains all the outstanding features of the preceding model, but provides wider vertical frequency response, extended sweep-generator coverage, and increased stability. A new tube complement and improvements in the circuit make these new features possible. Vertical frequency response is essentially flat over 1 mc, and down only 1½ DB at 500 kc. The sweep generator multivibrator functions reliably from 30 to 150,000 CPS. Deflection amplifiers are push-pull, and modern etched circuits are employed in critical parts of the design. A 5BP1 cathode-ray tube is used. The scope features external or internal sweep and sync, one volt peak-to-peak reference voltage, 3-position step-attenuated input, adjustable spot-shape control, and many other "extras" not expected at this price level. A calibrated grid screen is also provided for the face of the CRT, allowing more precise observation of wave shapes displayed. The new Model OM-2 is designed for general application wherever a reliable instrument with good response characteristics may be required. Complete step-by-step instructions and large pictorial diagrams assure easy assembly.



MODEL OM-2  
Shpg. Wt. 21 Lbs.

**\$42.50**

\$4.25 Down  
\$3.57 Mo.



MODEL BR-2  
(Less Cabinet)  
Shpg. Wt. 10 Lbs.

**\$18.95**

INCLUDING NEW  
EXCISE TAX

\$1.90 Down - \$1.59 Mo.

- \* Miniature tubes and high-gain IF transformer.
- \* Rod-type built-in antenna. Good sensitivity and selectivity.
- \* 5½-inch PM speaker.
- \* Provision for phono jack.
- \* Transformer-operated power supply.

## ATTENTION BEGINNERS . . .

This kit is an ideal "first project" if you have never built a Heathkit before. A good chance to "learn by doing."

**CABINET:** Proxilyn impregnated fabric covered plywood cabinet available for the BR-2 receiver as shown. Complete with aluminum panel, reinforced speaker grill, and protective rubber feet. Shipping weight 5 lbs., part No. 91-9A, \$4.95 50c Down - 42c Mo.

## HEATHKIT BROADCAST BAND

# Receiver Kit

You need no previous experience in electronics to build this table-model radio. The Model BR-2 receiver covers 550 kc to 1620 kc and features good sensitivity and selectivity over the entire band. A 5½" PM speaker is employed, along with high gain miniature tubes and a new rod-type built-in antenna. Provision has been made in the design of this receiver for its use as a phonograph amplifier. The phono jack is located on the back chassis apron. A transformer operated power supply is featured for safety of operation, as opposed to the usual AC-DC supply commonly found in "economy radio kits." Don't let the low Heathkit price deceive you. This is the kind of set you will want to show off to your family and friends after you have finished building it.

Construction of this radio kit is very simple. Giant size pictorial diagrams and detailed step-by-step instructions assure your success. The construction manual also includes an explanation of basic receiver circuit theory so you can "learn by doing" as the receiver is built. The manual even provides information on resistor and capacitor color codes, soldering techniques, use of tools, etc. If you have ever had the urge to build your own radio receiver, the outstanding features of this popular Heathkit deserve your attention.

## HEATHKIT DX-100 PHONE AND CW

# Transmitter Kit



MODEL  
DX-100

Shpg. Wt. 107 Lbs.

**\$189<sup>50</sup>** \$18.95 DOWN—\$15.92 MO.  
\$50.00 Deposit required on C.O.D. orders  
shipped by motor freight unless  
otherwise specified.

- \* Phone or CW on 160, 80, 40, 20, 15, 11 and 10 meters.
- \* Built-in VFO, modulator, and power supplies.
- \* High quality components used throughout for reliable performance.
- \* Features 5-point TVI suppression.

The Heathkit DX-100 transmitter is in a class by itself in that it offers features far beyond those normally received at this price level. It takes very little listening on the bands to discover how many of these transmitters are in operation today. A truly amazing piece of amateur gear. The DX-100 features a built-in VFO and a built-in modulator. It is TVI suppressed, and uses pi network interstage coupling and output coupling. Will match antenna impedances from approximately 50 to 600 ohms. Extensive shielding is employed, and all incoming and outgoing circuits are filtered. The cabinet features interlocking seams for simplified assembly and minimum RF radiation outside of the cabinet. Provides a clean strong signal on either phone or CW, with RF output in excess of 100 watts on phone, and 120 watts on CW. Completely bandswitching from 160 through 10 meters. A pair of 1625 tubes are used in push-pull for the modulator, and the final consists of a pair of 6146 tubes in parallel. The VFO dial and meter face are illuminated, and all front panel controls are located for maximum convenience. Panel meter reads driver plate I, final grid I, final plate I, final plate voltage, and modulator current. The chassis is constructed of heavy #16 gauge copper-plated steel. Other high-quality components include potted transformers, ceramic switch and variable capacitor insulation, silver-plated or solid-silver switch terminals, etc. All coils are pre-wound, and the main wiring cable is pre-harnessed. The kit can be built by a beginner from the comprehensive step-by-step instructions supplied. It is a proven, trouble-free rig, that will insure many hours of "on-the-air" enjoyment in your ham shack.



Brand  
New  
Model

MODEL DX-20  
Shpg. Wt. 18 Lbs.

**\$35<sup>95</sup>** \$3.60 Down  
\$3.02 Mo.

- \* Designed especially for CW operation.
- \* 50 watts plate power input — pi network output.
- \* Bandswitching on 80, 40, 20, 15, 11 and 10.

### HEATHKIT CW TRANSMITTER KIT

Here is a transmitter that has been designed especially for CW work. Ideal for the novice, or for the advanced-class CW operator. Just the ticket for any ham who appreciates a good clean signal, and wants the most "watts per dollar" in his shack. Plate power input is 50 watts, and the rig covers 80, 40, 20, 15, 11 and 10 meters. It is designed for crystal excitation, but an external VFO may be used. Pi network output is featured, to match antenna impedances between 50 and 1000 ohms. A 6DQ6A final amplifier is employed, and a 6CL6 oscillator drives the final. The rectifier is a 5U4GB. It incorporates single-knob band switching, uses potted transformers, and high quality components throughout. Truly the CW man's transmitter. Top performances for minimum investment.



MODEL AR-3 Shpg. Wt. 12 Lbs.



MODEL VF-1 Shpg. Wt. 7 Lbs.

### HEATHKIT COMMUNICATIONS TYPE ALL BAND RECEIVER KIT

This receiver covers 550 kc to 30 mc in four bands, and is ideal for the short-wave listener or beginning amateur. It provides good sensitivity and selectivity, combined with good image rejection. Amateur bands clearly marked on illuminated dial scale. Employs transformer type power supply—electrical bandspread—antenna trimmer—separate RF and AF gain controls—noise limiter—head-phone jack—and automatic gain control. Has built-in BFO for CW reception.

**CABINET:** Fabric covered cabinet with aluminum panel as shown. Part 91-15A. Shipping weight 5 Lbs. \$4.95. 50c Down—42c Mo.

MODEL AR-3

**\$29<sup>95</sup>**

INCLUDING NEW  
EXCISE TAX  
(Less Cabinet)

\$3.00 Down  
\$2.52 Mo.

### HEATHKIT VFO KIT

You can go VFO for less than you might expect. Here is a variable frequency oscillator that covers 160, 80, 40, 20, 15, 11, and 10 meters with three basic oscillator frequencies, that sells for less than \$20. Provides better than 10 volt average RF output on fundamentals. Plenty of drive for most modern transmitters. Requires a power source of only 250 VDC at 15 to 20 ma. and 6.3 VAC at 0.45A. Incorporates a regulator tube for stability. Illuminated frequency dial reads frequency directly on the band being employed. Temperature-compensated capacitors offset coil heating.

MODEL VF-1

**\$19<sup>50</sup>**

\$1.95 Down  
\$1.64 Mo.

## HEATHKIT PHONE AND CW

# Transmitter Kit

- \* 6146 final amplifier for full 65-watt plate power input.
- \* Phone and CW operation on 80, 40, 20, 15, 11, and 10 meters. Pi network output coupling.
- \* Switch selection of three crystals — provision for external VFO excitation.



MODEL DX-35

**\$56<sup>95</sup>** \$5.70 Down  
\$4.78 Mo.  
Shpg. Wt. 24 Lbs.



The DX-35 features a 6146 final amplifier to provide 65 watts plate power input on CW, with controlled carrier modulation peaks up to 50 watts on phone. In addition, it is a most attractive transmitter. Modulator and power supplies are built-in, and the rig covers 80, 40, 20, 15, 11, and 10 meters with a single band-change switch. Pi network output coupling provided for matching various antenna impedances. A 12BY7 buffer stage provided ahead of the final amplifier for plenty of drive on all bands. 12BY7 oscillator and 12AU7 modulator. Provision for switch selection of three different crystals. Crystals reached through access door at rear. Front panel controls marked "off-CW-stand-by-phone", "final tuning", "antenna coupling", "drive level control", and "band change switch". Panel meter indicates final grid current or final plate current. A perfect low-power transmitter both for the novice, and for the more experienced operator. A remarkable power package for the price. Incidentally, the price includes tubes, and all other components necessary for assembly. As with all Heathkits, comprehensive instruction manual assures successful assembly.

## New HEATHKIT

### VIBRATOR POWER SUPPLY KIT

Now you can obtain either a 6-volt or a 12-volt vibrator power supply in kit form. Each unit provides 260 volt DC output at up to 60 ma. Everything provided, including vibrator transformer, vibrator, 6X4 or 12X4 rectifier, and the necessary buffer capacitor, hash filter, and output filter capacitor. Ideal for operating various kinds of equipment away from power lines. Will supply B-plus for most communications receivers, small public address systems, or even a miniature transmitter. Use in automobiles, boats, light aircraft, or in field applications. Model VP-1-6 operates from a 6-volt battery, and the model VP-1-12 operates from a 12-volt battery. More than one unit of the same type may be connected in parallel for increased current capacity at the same output voltage!



6-Volt  
MODEL VP-1-6  
Shpg. Wt. 4 Lbs.

12-Volt  
MODEL VP-1-12  
Shpg. Wt. 4 Lbs.

**\$7<sup>95</sup>** EACH

80c Down — 67c Mo.

### HEATHKIT ANTENNA IMPEDANCE METER KIT

This instrument employs a 100 microampere panel meter and covers the impedance range of 0-600 ohms for RF tests. Functions up to 150 mc. Used in conjunction with signal source, such as the Heathkit Model GD-1B grid dip meter, the Model AM-1 will determine antenna resistance and resonance, match transmission lines for minimum standing wave ratio, determine receiver input impedance, etc. Will also double as a phone monitor. A very valuable device for many uses in the ham shack.

MODEL AM-1

**\$14<sup>50</sup>**

\$1.45 Down  
\$1.22 Mo.

### HEATHKIT ANTENNA COUPLER KIT

This device is designed to match the Model AT-1 transmitter to a long-wire antenna. In addition to impedance matching, this unit incorporates an L-type filter which attenuates signals above 36 megacycles, thereby reducing TVI. Designed for 52 ohm coaxial input. Handles power up to 75 watts, 10 through 80 meters. Uses a tapped inductor and variable capacitor. Neon RF indicator on front panel. Copper-plated chassis—high quality components throughout—simple to build. Eliminates waste of valuable communications power due to improper matching. A "natural" for all AT-1 transmitter owners.

MODEL AC-1

**\$14<sup>50</sup>**

\$1.45 Down  
\$1.22 Mo.

### HEATHKIT "Q" MULTIPLIER KIT

The QF-1 functions with any receiver with an IF frequency between 450 and 460 kc that is not AC-DC type. Operates from the receiver power supply, requiring only 6.3 VAC at 300 ma. or 12 VAC at 150 ma. and 150 to 250 VDC at 2 ma. Simple to connect with cable and plugs supplied. Provides additional selectivity for separating two signals, or will reject one signal and eliminate heterodyne. A big help on crowded bands. Provides an effective Q of approximately 4,000 for sharp "peak" or "null". Tunes to any signal within the IF bandpass of the receiver, without changing main receiver tuning dial.

MODEL QF-1

**\$9<sup>95</sup>**

\$1.00 Down  
84c Mo.

### HEATHKIT GRID DIP METER KIT

The grid dip meter was originally designed for the ham shack. However, its use has been extended into the service shop and laboratory. Continuous frequency coverage from 2 mc to 250 mc with pre-wound coils. 500 microampere panel meter employed for indication. Use for locating parasitics, neutralizing, determining RF circuit resonant frequencies, etc. Coils are included with kit, as is a coil rack. Front panel controls include sensitivity control for meter, and phone jack for listening to zero-beat. Will also double as an absorption-type wavemeter.

MODEL GD-1B

**\$19<sup>95</sup>**

\$2.00 Down  
\$1.68 Mo.

MODEL AC-1 Shpg. Wt. 4 Lbs.



MODEL GD-1B  
Shpg. Wt. 4 Lbs.



MODEL AM-1  
Shpg. Wt. 2 Lbs.



MODEL QF-1  
Shpg. Wt. 3 Lbs.



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Permit No. 273



MODEL ET-1  
Shpg. Wt. 3 Lbs.

### HEATHKIT ENLARGER TIMER KIT

The Model ET-1 is an easy-to-build device for use by amateur or professional photographers in controlling the timing cycle of an enlarger. It covers the range of 0 to 1 minute with a continuously variable, clearly calibrated scale. The timing period is pre-set, and the timing cycle is initiated by depressing the spring-return switch to the "print" position. Front panel provision is made for plugging in the enlarger and a safelight. The safelight is automatically turned "on" when the enlarger is "off". Handles up to 350 watts. The timing cycle is controlled electronically for maximum accuracy and reliability. Very simple to build in only one evening, even by a beginner.

MODEL ET-1  
**\$11.50**  
\$1.15 Down  
97c Mo.



MODEL CR-1  
Shpg. Wt. 3 Lbs.

### HEATHKIT CRYSTAL RECEIVER KIT

The crystal radio of Dad's day is back again, but with big improvements! The Model CR-1 employs a sealed germanium diode, eliminating the critical "cat's whisker" adjustment. It is housed in a compact plastic box, and features two Hi-Q tank circuits, employing ferrite core coils and variable air tuning capacitors. The CR-1 covers the standard broadcast band from 540 kc to 1600 kc, and no external power is required for operation. Could prove valuable for emergency signal reception. This easy-to-build kit is a real "learn by doing" experience for the beginner, and makes an interesting project for all ages.

MODEL CR-1  
**\$7.95**  
INCLUDING NEW  
EXCISE TAX  
80c Down  
67c Mo.

### HEATHKIT PROFESSIONAL RADIATION COUNTER KIT

This sensitive and reliable instrument has already found extensive application in prospecting, and also in medical and industrial laboratories. It offers outstanding performance at a reasonable price. Front-panel meter indicates radiation level, and aural indication produced by panel-mounted speaker. Meter ranges are 0-100, 600, 6,000 and 60,000 counts per minute, and 0-.02, .1, 1 and 10 milliroentgens per hour. The probe, with expansion cord, employs type 6306 bismuth counter tube, sensitive to both beta and gamma radiation. It is simple to build, even for a beginner.

MODEL RC-1  
**\$79.95**  
\$3.00 Down  
\$6.71 Mo.



Shpg. Wt. 8 Lbs.

- \* Amazing new circuit for high efficiency.
- \* Compact, portable and rugged.
- \* Stable circuit requires only one 67½ volt "B" battery and two 1½ volt "A" batteries.