

HEATHKIT

SUMMER

FLYER

1956



Heathkit Professional RADIATION COUNTER KIT



MODEL RC-1

\$79⁹⁵

Shpg. Wt. 8 Lbs.

High sensitivity and reliability.

Compact—Portable—Rugged

900-volt Bismuth tube in probe.

Large 4 1/2" meter and panel-mounted speaker for indication.

Stable, efficient circuit operates down to 40-volt "B" and 1-volt "A" potentials.

The Model RC-1 is simple to build successfully, even if you have never built a kit before. Complete step-by-step instructions combined with giant-sized pictorial diagrams. Now, you can have a modern-design professional radiation counter at a price far below what comparable units cost from other sources. High sensitivity is provided, with ranges of 0-100, 600, 6000, and 60,000 counts per minute, and 0-.02, .1, 1, and 10 milliroentgens per hour. Employs 900-volt Bismuth tube in beta/gamma sensitive probe. Probe, and coiled cable that expands up to 8 feet, are included in the kit price, as is a radiation sample for calibration. Fulfills the requirements of the seriously interested individual who wants a prospecting tool he can rely upon. Valuable, too, for use in measuring radioactive fallout or in determining other unknown radiation levels. Additional features are—selectable time constant, to allow for different rates of travel over the area being investigated—meter calibrated in cpm or mR/hr in addition to aural "beep" or "click" from panel-mounted speaker—pre-built, "packaged" HV power supply, with reserve capacity above 900-volt level at which it is regulated. Merely changing regulator tube type would allow use of scintillation probe if desired. Employs 67 1/2 volt "B" battery and two 1 1/2 volt "A" batteries for power. Uses five tubes (plus a transistor) to assure stable and reliable operation. Not to be confused with novelty radiation detection devices on the market.

HEATH COMPANY

A Subsidiary of Daystrom, Inc.

**BENTON HARBOR
MICHIGAN**

HEATHKIT

PROBE KITS

Extend the Function of
Your VTVM or Scope

LOW CAPACITY

This special low-capacity probe prevents loss of gain, circuit loading, or distortion in oscilloscope investigation of TV circuits. Features variable capacitor to provide correct instrument impedance match. Ratio of attenuation may be varied.



NO. 342
Shpg. Wt. 1 Lb. **\$3.50**

SCOPE DEMODULATOR



\$3.50 NO. 337-C
Shpg. Wt. 1 Lb.

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.

ETCHED CIRCUIT RF

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



NO. 309-C
\$3.50
Shpg. Wt. 1 Lb.



ETCHED CIRCUIT PEAK-TO-PEAK

Use this peak-to-peak probe with your 11-megohm VTVM to measure peak-to-peak voltages directly on the DC scales of the instrument. Will measure p-to-p voltages in the frequency range of 5 kc to 5 mc. Employs etched circuit boards for increased circuit stability and simplified construction. Extend the usefulness of your VTVM. NOTE: Not required for the Heathkit V-7A VTVM.

NO. 338-C
\$5.50 Shpg. Wt. 2 Lbs.

30,000 VOLT DC HIGH VOLTAGE

This probe provides a multiplication factor of 100 on the DC ranges of the Heathkit 11-megohm VTVM. Precision multiplier resistor 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
\$4.50
Shpg. Wt. 2 Lbs.



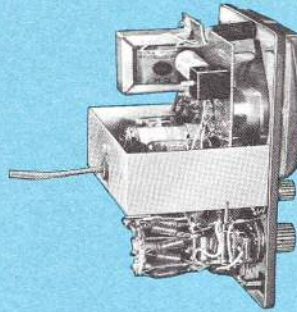
\$69.50 MODEL O-10
Shpg. Wt. 21 Lbs.

ETCHED CIRCUIT PUSH-PULL
5" OSCILLOSCOPE KIT
FOR COLOR-TV

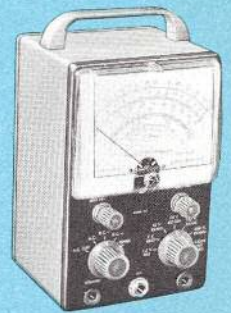


\$49.50 MODEL OM-1
Shpg. Wt. 21 Lbs.

ETCHED CIRCUIT PUSH-PULL
5" OSCILLOSCOPE KIT
FOR GENERAL PURPOSE



ETCHED CIRCUIT
VACUUM TUBE
VOLTMETER
KIT...



\$24.50 MODEL
V-7A

Shpg. Wt. 7 Lbs.



\$29.50 MODEL MM-1
Shpg. Wt. 6 Lbs.

20,000 OHM/VOLT
VOM KIT



\$14.50 MODEL M-1
Shpg. Wt. 3 Lbs.

HANDITESTER KIT

HEATHKITS ... FIRST IN DESIGN • PERFORMANCE • QUALITY • ECONOMY ...

because you buy direct from the manufacturer—because you can be sure of the very latest in modern circuit designs—and because you may depend on top-quality parts and complete assembly instructions. Be satisfied with nothing less than the world's finest electronic equipment in kit form.

Heathkit Model O-10 Color-TV Oscilloscope Kit.

The Model O-10 Oscilloscope is a *proven* instrument. It easily meets and exceeds the requirements for both color-TV and black-and-white TV servicing. In addition, it has found extensive application in electronic laboratories, where reliable and accurate wave shape and magnitude observations must be made. Just compare the technical specifications of the Model O-10 with those of other "servicemen's" scopes costing many dollars more. Its capabilities speak for themselves. Vertical channel frequency response is flat within +2 db —5 db from 2 cps to 5 mc without extra switching. Down only 1.5 db at 3.58 mc. Vertical sensitivity is 0.025 v. rms per inch at 1 kc. Sweep generator range extends from 20 cps up to 500 kc in five steps. Easily holds signals at even higher frequencies, and may be depended upon for single-cycle observation at 500 kc. Features step-type input attenuator—built-in peak-to-peak calibrating source—etched metal circuit boards—retrace blanking amplifier—regulated power supply—push-pull horizontal and vertical amplifiers. Outstanding dollar value by any standard.

Heathkit Model OM-1 Oscilloscope Kit.

This oscilloscope is designed for general application wherever a reliable instrument with good response characteristics may be required. Ideal for schools or as a training model. More than adequate for ordinary service applications or for use by radio amateurs or in the home workshop. Modern, etched circuit design, push-pull deflection amplifiers, 5BP1 cathode ray tube. A real dollar value. Easy to build, even for a beginner, with the complete step-by-step instructions provided in the manual. Features external and internal sweep and sync—1-volt peak-to-peak reference voltage. Sweep generator provides frequency range of 20 to 100,000 cps. Etched circuit wiring insures duplication of laboratory pilot model performance, and reduces assembly time. Vertical amplifier features 3-position step attenuated input with response within ± 3 db from 2 cps to 200 kc. Push-pull horizontal and vertical amplifiers. Features adjustable spot shape control, RF connection to deflection plates, external and internal sweep and sync, many other extras not expected at this price level.

Heathkit Model V-7A Vacuum Tube Voltmeter Kit.

This outstanding vacuum tube voltmeter will measure AC voltage (rms), AC voltage (peak-to-peak), DC voltage, and resistance. Two front-panel rotary switches control function selection and range selection. Zero-adjust and ohmmeter-adjust controls also provided on front panel. Large $4\frac{1}{2}$ " 200 microampere meter featured. Low voltage scale provides well over $2\frac{1}{4}$ " of scale length per volt measured!

The V-7A employs an etched metal circuit board for increased circuit efficiency and stability, along with easier kit construction. Time-proven VTVM circuit provides trouble-free operation for maximum accuracy and stability. Uses a 6AL5 twin-diode, full-

wave rectifier and a 12AU7 twin-triode meter bridge. Built-in transformer type power supply for operation direct from the power line. Top-quality 1% precision resistors employed in multiplier circuits for maximum accuracy.

Affords 7 AC (rms) and DC voltage ranges of 0-1.5, 5, 15, 50, 150, 500, and 1500. Seven peak-to-peak AC voltage ranges are 0-4, 14, 40, 140, 400, 1400, and 4,000. Seven ohmmeter ranges provide multiplying factors of X1, X10, X100, X1000, X10K, X100K, 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. A real professional instrument, the V-7A is commonly used in the laboratory as well as the service shop, and home workshop. Attractive and functional styling increases its utility. As the world's largest selling VTVM, this is an instrument that commands respect at all levels of electronic activity—from the most elaborate scientific laboratory to the most modest home workshop. The kind of instrument you will be proud to own and use.

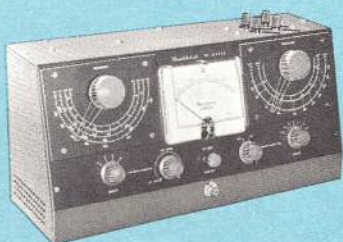
Heathkit Model MM-1 VOM Kit.

This fine instrument provides a total of 35 meter ranges on its two-color scale. It employs a sensitive 50 microampere $4\frac{1}{2}$ " 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. Sensitivity is 20,000 ohms-per-volt DC and 5000 ohms-per-volt AC. Measuring ranges are 0-1.5, 5, 50, 150, 500, 1500, and 5000 volts for AC and DC. 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, with center scale readings of 15, 15,000, and 150,000 ohms. DB ranges cover from -10 db to +65 db. The instrument is housed in an attractive black bakelite case with plastic carrying handle. A single volt on the lowest voltage range produces a meter deflection of $2\frac{1}{2}$ " for accurate test.

Heathkit Model M-1 Handitester Kit.

The Heathkit handitester is a very popular test device for the home experimenter, electricians and appliance repairmen, and for use as an "extra" instrument in the service shop, when the main instruments are occupied. Perfect for any portable application. Easily slips into your tool box, glove compartment, coat pocket, or desk drawer.

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 400 microampere meter for sensitivity of 1000 ohms-per-volt. Top quality components employed throughout. Nowhere else can you buy so many years service for such a small amount of money.



\$44⁵⁰

MODEL QM-1
Shpg. Wt. 14 Lbs.

"Q" METER KIT

Heathkit Model QM-1 "Q" Meter Kit. The use of a Q meter was heretofore restricted to the electronic laboratory because of its cost. However, the low-cost Heathkit Model QM-1 is priced so reasonably that any individual can afford to have his own Q meter for use in coil winding, determining unknown condenser values, etc. This instrument makes it possible to test components at the frequencies at which they are normally used. Measures the Q of inductances and the RF resistance and distributed capacity of the coils. Functions between 150 kc and 18 mc. Wide inductance, capacitance and Q ranges will cover practically all values encountered. Values read directly on panel meter or on panel calibrations. Features large 4½" 50 microampere meter. Measures capacity from 40 mmf to 450 mmf within ±3 mmf. Voltage regulated and transformer operated power supply utilizes 6X5 full wave rectifier and OD3 regulator tube. 12AT7 tube employed in oscillator stage, and 6AL5 and 12AU7 employed in VTVM circuit used as resonance indicator. Essential in the laboratory or service shop, and priced so low that it now finds application in the ham shack or home lab.



\$59⁵⁰

MODEL IB-2
Shpg. Wt. 12 Lbs.

IMPEDANCE BRIDGE KIT

Heathkit Model IB-2 Impedance Bridge Kit. The Heathkit Model IB-2 Impedance Bridge is designed to measure resistance, capacitance, inductance, dissipation factors of condensers, and the storage factor of inductance. Employs a Wheatstone bridge, a Capacity Comparison bridge, a Maxwell bridge, and a Hay bridge. Operating from the power line, this instrument incorporates its own power supply, its own vacuum tube phase shift generator, and its own vacuum tube detecting unit. A 100-0-100 ua. meter is used for determining balance. A two-section CRL dial provides ten separate "units" with an accuracy of 0.5%. Fractions of units read on a continuously variable control. D, Q, and DQ functions are all combined in a single knob. ½% precision resistors and ½% silver-mica capacitors are used in critical circuits. Because of its low price, the Heathkit Model IB-2 is available for use in the service shop, by the radio amateur, and even the home experimenter. Use it to determine values of unmarked components, to check production of design samples, etc. Performance can be extended further by use of external generator.



\$22⁵⁰

MODEL LP-2
Shpg. Wt. 7 Lbs.

LINEARITY PATTERN
GENERATOR KIT

Heathkit Model LP-2 Linearity Pattern Generator Kit. This instrument supplies information for white dots, cross hatch pattern, horizontal bar pattern, or vertical bar pattern. It feeds audio, video, and sync signals to the set under test, with completely controlled gain. It covers channels 2 to 13, and will produce five to six vertical bars and 4 to 5 horizontal bars. Dot pattern presentation is a *must* for the setting of color convergence controls in the color TV set. Also, panel provision for external sync is available if desired. Use for adjustment of vertical and horizontal linearity, picture size, aspect ratio, and focus. Power supply is regulated for additional stability.



\$19⁵⁰

MODEL SG-8
Shpg. Wt. 8 Lbs.

RF SIGNAL GENERATOR KIT

Heathkit Model SG-8 RF Signal Generator Kit. This signal generator covers from 160 kc to 110 mc on fundamentals and from 110 mc to 220 mc on calibrated harmonics. Total coverage is more than adequate for most service operations, and RF output is in excess of 100,000 microvolts. For only \$19.50 and a little construction time you can own a good service instrument that will compare in every way with generators in much higher price brackets. Too, no calibration is required. Pre-wound and pre-calibrated coils, and close tolerances on critical parts, insure final calibration that is within the limits required for service work. The signal available at the RF output connector may be unmodulated RF, RF modulated at 400 cps, or 400 cps audio. This generator employs a 12AU7 RF oscillator-cathode follower, a 6C4 AF oscillator, and a transformer-operated power supply. Output controlled with a step-type attenuator and a continuously variable control. An outstanding instrument and one that is difficult to match for the price. Complete construction manual with step-by-step instructions and large pictorial diagrams insure successful kit assembly.

Heathkit BAR GENERATOR KIT

This instrument represents an efficient and simple way to adjust the vertical or horizontal linearity of your TV set. Provides vertical and horizontal bars so that even the beginning serviceman can make adjustments. Functions on channels 4 or 5. Special clip connects directly to the antenna terminals of the receiver under test. No other connections to the TV receiver required.

MODEL BG-1
\$14⁵⁰
Shpg. Wt.
4 Lbs.



Heathkit TV ALIGNMENT SWEEP GENERATOR KIT



\$49⁵⁰ MODEL TS-4A
Shpg. Wt. 16 Lbs.

This fine television alignment instrument offers stability and flexibility difficult to obtain even in instruments costing several times its low Heathkit price. It covers 3.6 mc to 220 mc in 4 bands, and provides plenty of output within this range. Provides usable output, even on harmonics. Sweep deviation is controllable from 0-42 mc, depending on the base frequency. Linearity is especially good. All-electronic sweep circuit is featured in the Model TS-4A, eliminating unwieldy mechanical arrangements that often cause hum, vibration, or instability. Provision has been made for external marker generator to be used with this instrument. Also, however, there are two marker sources built in. A crystal marker generator provides output at 4.5 mc and multiples thereof. The crystal is included with the kit. A variable marker generator provides output from 19 to 60 megacycles on fundamentals and from 57 to 180 mc on harmonics. A step-switch controls sweep oscillator and marker oscillator output together, plus separate variable controls provided for each output. Effective two-way blanking is employed to eliminate return trace. A phasing control is also available. This kit is complete, even to the inclusion of three output cables. This improved sweep generator model can provide you with the modern alignment facilities for work on FM, monochrome TV, or color TV sets. The kind of instrument you can learn to rely upon in your service work.



\$31⁵⁰ MODEL BE-4
Shpg. Wt. 17 Lbs.

6-12 VOLT BATTERY
ELIMINATOR KIT



\$23⁵⁰ MODEL T-3
Shpg. Wt. 9 Lbs.

VISUAL-AURAL
SIGNAL TRACER KIT

Heathkit Model BE-4 6-12 V Battery Eliminator Kit. This completely modern battery eliminator will supply output in two ranges for both 6-volt or 12-volt auto radios. The output voltage is continuously variable in each case. Range is 0-8 volts DC or 0-16 volts DC. Will deliver up to 15 amperes at 6 volts, or up to 7 amperes at 12 volts. Two 10,000 microfarad output filter capacitors insure smooth DC output. Two separate panel meters indicate output voltage or output current. Will also double as a battery charger.

Heathkit Model T-3 Visual-Aural Signal Tracer Kit. Although this signal tracer was originally developed for use in AM radio service work, it is very useful in many sections of FM and TV circuits as well. The kit includes both audio and RF probes, and can be used to trace signals through a complete radio receiver. Signal strength is indicated by a built-in speaker as well as an electron beam "eye" tube. Provides two input channels, one for audio and one for RF, to take care of all sections of receiver under test. In addition to its signal tracing capabilities, the Model T-3 incorporates a built-in wattmeter and a "noise locator" for locating noisy components. Provision is made for "patching" the output transformer or speaker into a set under test.

Heathkit Model LG-1 Laboratory Generator Kit. The Model LG-1 is a precision laboratory instrument. It provides RF output from 100 kc to 30 mc (all on fundamentals) in five switch selected ranges. Both step-type and variable attenuation provided at the output. Will provide up to 100,000 microvolts across 50 ohms. The RF signal may be modulated to a depth of 50% either by a 400 cps internal audio oscillator, or from an external audio source between 60 cps and 10,000 cps. Modulation is variable from 0 up to the maximum of 50%. A 200 ua. panel meter reads output in microvolts or will read modulation directly in percentage. Provided with coaxial output cable, terminated at a plastic "pod." Features a regulated power supply and other features that make for extremely stable and reliable operation.

Heathkit Model VT-1 6-Volt Vibrator Tester Kit. This instrument functions very much like a tube checker, to test auto radio vibrators. Condition is indicated on a simple "good bad" scale. Tests for proper starting and quality of operation of both interrupter and self-rectifier types of 6-volt vibrators. The 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. Construction book contains vibrator test chart for popular 6-volt vibrator types.



\$39⁷⁵ MODEL LG-1
Shpg. Wt. 16 Lbs.

LABORATORY GENERATOR KIT



\$14⁵⁰ MODEL VT-1
Shpg. Wt. 6 Lbs.

6-VOLT VIBRATOR TESTER KIT

Heathkit Model TC-2 Tube Checker Kit. This modern tube checker will test all tubes commonly encountered in radio and TV service work. Tube sockets provided for 4, 5, 6, and 7-pin, octal and loctal tubes, 7 and 9-pin miniature tubes, and the 5-pin Hytron tubes. A blank space is provided for future socket addition. Ten separate 3-position lever switches check each tube element for "open" or "short" individually. Tubes are tested on the basis of total emission, and their condition is indicated on a large 4½" meter with three-color "good" and "bad" scale. Close tolerance resistors are employed in critical test circuits. The built-in roll chart is illuminated. Fourteen different filament voltage values are available. Attractive counter-style cabinet. A pre-cabled wiring harness is supplied to simplify assembly.

Heathkit Model TC-2P Portable Tube Checker Kit. The Model TC-2P is the same as the Model TC-2 except that it is housed in a rugged carrying case. This attractive and practical case is finished in proxylin impregnated fabric. Ideal for home service calls.

Heathkit TV Picture Tube Test Adapter. Designed for use with the Model TC-2. Tests picture tubes for emission and shorts. 12-pin TV tube socket, 4 ft. cable, octal connector, and technical data.



MODEL 355

\$4.50 Shpg. Wt. 1 Lb.

Heathkit Model CC-1 Cathode Ray Tube Checker Kit. This instrument safely checks all electro-magnetic deflection picture tube types normally used in TV receivers. Tests tubes without removing them from the receivers or cartons, if desired. It simulates actual operating potentials for the tube under test. Condition of CRT indicated on large "good" "bad" scale. Shorted elements or a leakage path of as much as 10 megohms resistance will cause a strong glow in neon indicator. Shadowgraph test reveals condition of tube face coating by allowing observation of spot of light on screen. The CC-1 is a completely self-contained instrument, and all cables are provided for test. It is housed in a compact plastic covered wooden case, very handy for home service calls. Provision right in carrying case for cables and 12-pin duo-decal socket. Test switch spring loaded for safety of operator.

Heathkit Model C-3 Condenser Checker Kit. The Model C-3 checks paper, mica, ceramic, and electrolytic capacitors, and will also measure resistance. Handy for measuring unknown condenser and resistor values in the laboratory, service shop, or home workshop. All readings are taken directly from the calibrated panel scale, after adjusting for "null" on electron "eye" tube. No calculation involved. Measures capacity in four ranges of 0.00001 mfd to 0.005 mfd, 0.01 mfd to 0.5 mfd, 0.1 mfd to 50 mfd, and 20 mfd to 1,000 mfd. Features leakage test switch, with selec-

tion of five polarizing voltages. Checks electrolytic condensers under actual load conditions. Spring-return test switch automatically discharges condenser under test and eliminates shock hazard. Measures resistance from 100 ohms to 5 megohms.

Heathkit Model PS-3 Variable Voltage Regulated Power Supply Kit. The Model PS-3 is a power supply that features electronically regulated output for stability. In addition, the output voltage can be varied from 0 to 500 volts with a manual voltage level control. In this way, it can be used as a DC power supply for almost any equipment in the laboratory. Will deliver from 0 to 130 ma at the 200 volt level, and from 0 to 10 ma at 450 volts. Output voltage or current is indicated on a large 4½" panel meter.

This power supply also furnishes filament voltage at 6.3 volts AC. Will provide up to 4 amperes at 6.3 volts. Ideal for powering all types of experimental circuits, and for determining power supply design requirements for test circuits. Both the AC filament voltage and the DC output voltage of the PS-3 are isolated from ground.

Heathkit Model AV-2 AC Vacuum Tube Voltmeter Kit. This vacuum tube voltmeter is designed especially to make low-level AC measurements through a wide frequency range. Especially valuable in audio work. It features ranges of 0 to .01, .03, .1, .3, 1, 3, 10, 30, 100, and 300 volts AC. Input impedance is 1 megohm at 1 kc, and frequency response is substantially flat from 10 cps to 50 kc. Its sensitivity allows measurement as low as 1 millivolt at high impedance. It also incorporates a DB range covering -52 to +52 db. It employs precision voltage divider resistors for maximum accuracy, and features a large 4½" meter.

Heathkit Direct Reading Capacity Meter Kit. The Model CM-1 is a most unusual type instrument. It uniquely measures capacity directly on a large 4½" panel meter. The scale is directly calibrated in micro-microfarads and microfarads, and provides linear indication of even small capacity values. Features 4 ranges of 0-100 mmf, 0-1000 mmf, 0-.01 mfd, and 0-.1 mfd. One has merely to connect the unknown capacity to the terminal posts on the instrument, select the proper range, and read the capacity value directly. Will even measure the value of small trimmers and variable air capacitors! The capacity meter is not susceptible to hand capacity effects. Residual capacity is less than 1 mmf. An extremely valuable instrument, particularly for production line checking, or selecting matched pairs, where quick indication of capacity value is necessary without "nulling" or other extra operations.

TIME PAYMENTS . . .

Take advantage of the Heath Time Payment Plan on any order totaling \$90.00 or more. See order blank for details.

Heathkit ELECTRONIC SWITCH KIT

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

\$21.95

MODEL S-3
Shpg. Wt.
8 Lbs.

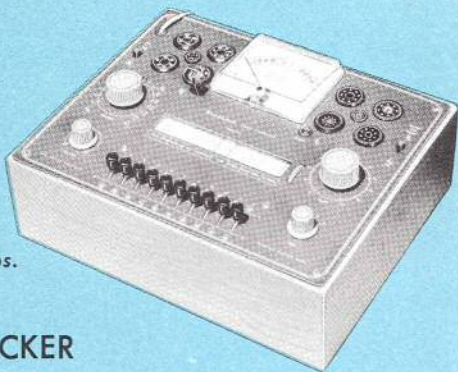


\$29⁵⁰

Shpg. Wt. 12 Lbs.

MODEL TC-2

**TUBE CHECKER
KIT . . .**

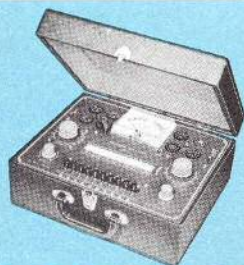


\$22⁵⁰

MODEL CC-1

Shpg. Wt.
10 Lbs.

**CATHODE RAY TUBE
CHECKER KIT**



\$34⁵⁰

MODEL TC-2P

Shpg. Wt.
15 Lbs.

**PORTABLE TUBE
CHECKER KIT**



\$19⁵⁰

MODEL C-3

Shpg. Wt.
7 Lbs.

**CONDENSER
CHECKER KIT**



\$35⁵⁰

MODEL PS-3

Shpg. Wt.
17 Lbs.

**VARIABLE VOLTAGE
REGULATED POWER
SUPPLY KIT**



\$29⁵⁰

MODEL AV-2

Shpg. Wt.
5 Lbs.

**AC VACUUM TUBE
VOLTMETER KIT**



\$29⁵⁰

MODEL CM-1

Shpg. Wt.
7 Lbs.

**DIRECT READING
CAPACITY METER KIT**

**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. Permits selection of precision capacity values in compensating networks, filters, tuned circuits, etc. Switches are ceramic wafer types for minimum loss.



MODEL DC-1

\$16⁵⁰ Shpg. Wt. 3 Lbs.



**HEATHKIT DECADE
RESISTANCE KIT**

MODEL DR-1

\$19⁵⁰ Shpg. Wt. 4 Lbs.

The Model DR-1 incorporates 20 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 "ten thousands." Use it for ohmmeter calibration in bridge circuits as test values in multiplier circuits, etc.

**HEATHKIT VOLTAGE
CALIBRATOR KIT**

The Heathkit voltage calibrator measures unknown voltages by the comparison method. The output of the VC-2 is fed to an oscilloscope and compared to an unknown voltage value. The peak-to-peak value of the unknown signal may then be read on the VC-2. Operates in three ranges from 0 to .1 volt, 0-10 volts, and 0-100 volts. Variable control divides steps into 10 units. A very useful oscilloscope accessory.



MODEL VC-2
\$11⁵⁰ Shpg. Wt. 2 Lbs.

**HEATHKIT RESISTANCE
SUBSTITUTION
BOX KIT**

The RS-1 contains 36 10% 1-watt resistors ranging from 15 ohms to 10 megohms in standard RTMA values. All values are switch selected for use in determining desirable resistance values in experimental circuits. Many applications in radio and TV service work. Unit housed in an attractive bakelite case.



MODEL RS-1
\$5⁵⁰ Shpg. Wt. 2 Lbs.

**HEATHKIT CONDENSER
SUBSTITUTION
BOX KIT**

MODEL CS-1
\$5⁵⁰

This kit contains 18 RTMA standard condenser values that can be selected by a rotary switch for use in an external circuit. Capacitor values range from 0.00001 mfd to 0.22 mfd. All capacitors rated at 600 volts with the exception of the three largest, which are 400 volts. Capacitors are either silver-mica, or plastic molded tubular types. Unit is housed in attractive bakelite case.

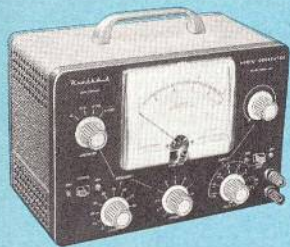


Shpg. Wt. 2 Lbs.



\$49⁵⁰ MODEL HD-1
Shpg. Wt. 13 Lbs.
**HARMONIC DISTORTION
METER KIT**

Heathkit Model HD-1 Harmonic Distortion Meter Kit—This instrument can prove extremely valuable to the audio engineer, or the serious audiophile. With it, and a low distortion signal generator, the harmonic content of the output of various amplifiers under a variety of conditions can be determined. Operating between 20 and 20,000 cps, the Model HD-1 reads distortion directly on the panel meter in ranges of 0-1, 3, 10, 30, and 100% full scale. Full-scale voltage ranges of 0-1, 3, 10, 30 volts are provided for initial reference settings. Reads distortion as a percentage of the input signal. High impedance input (300,000 ohms) and 1% precision resistors in the VTVM voltage divider circuit assure excellent sensitivity and accuracy. Featuring voltage regulation and other "extra" features, this instrument can definitely add to the audio test facilities in your laboratory. Meter scales calibrated in volts rms, % distortion, and db.



\$34⁵⁰ MODEL AG-9
Shpg. Wt. 8 Lbs.
**AUDIO
GENERATOR KIT**

Heathkit Model AG-9 Audio Generator Kit—This compact little audio generator produces near-perfect sine waves with close frequency control and metered output voltage. A large 4½" meter reads output in volts, and DB, with an accuracy of ±5%. Distortion is actually less than .1 of 1% between 20 cps and 20,000 cps. Step-type tuning provides switch selection of two significant figures, and a multiplier to cover a total range of from 10 cps to 100 kc. Output ranges are 0-.003, .01, .03, .1, .3, 1, 3, and 10 volts. Provides needed low-distortion output signal for high fidelity applications. Ideal for use with HD-1 Harmonic Distortion Meter Kit. Attenuation is both continuous and in calibrated steps. Built-in 600-ohm load is switch selected. An outstanding audio signal generator bargain. Compares to other units selling for several times the low Heathkit price. Front panel controls located for maximum convenience in use. Attractively styled in charcoal gray with white lettering.



\$29⁵⁰ MODEL AG-8
Shpg. Wt. 11 Lbs.
**AUDIO
GENERATOR KIT**

Heathkit Model AG-8 Audio Generator Kit—The Heathkit Model AG-8 produces audio signals from 20 cps to 1 mc in five ranges. Output constant within ± 1 db from 20 cps to 400 kc. A basic audio reference generator for use in almost any type of audio work. Produces good sine waves with distortion percentage below .4% from 100 cps through the audible range. Provides up to 10 volts output under no-load conditions. Features continuous-variable and step-type attenuator with settings of 1 mv, 100 mv, 1 volt, and 10 volts. Cathode follower output for stability.

Heathkit Model AO-1 Audio Oscillator Kit—This audio generator produces both sine waves and square waves in the frequency range of 20 cps to 20,000 cps. It covers these frequencies in three ranges. Extra feature is thermistor regulation of output for flat response through the entire frequency range. Plenty of AF output is provided at low impedance, and with low distortion. Sine wave output is excellent for audio testing, or the instrument will produce good, clean square waves with a rise time of only 2 microseconds for checking square wave response of audio amplifiers, or other applications. Designed to fulfill the needs of the serviceman and high fidelity enthusiast. Compare the specifications and capabilities of the Model AO-1 with those of other audio oscillators on the market today. Consider, too, that the AO-1 will supply square wave signals in addition to the sine wave output. Shop and compare, and you will decide on this excellent unit.



\$24⁵⁰ MODEL AO-1
Shpg. Wt. 10 Lbs.
**AUDIO
OSCILLATOR KIT**
(Sine Wave—Square Wave)



**Heathkit
AUDIO WATTMETER KIT**

MODEL AW-1
\$29⁵⁰
Shpg. Wt. 6 Lbs.

Measures audio power directly at 4, 8, 16, or 600 ohms. Load resistors built in. Covers 0-5 mw, 50 mw, 500 mw, 5w, and 50 w full scale. Provides five switch-selected db ranges covering from -10 db to +30 db. Large 4½" 200 ua. meter and precision multiplier resistors insure accuracy. Response is ±1 db from 10 cps to 250 kc. Functions from AC power line. An extremely valuable instrument.

Heathkit CRYSTAL RECEIVER KIT



MODEL CR-1

\$7.95

Shpg. Wt. 3 Lbs.

- ▶ Easy to build—ideal “first project” for the beginner.
- ▶ Two high-Q tuned circuits insure good selectivity.

- ▶ No external power required.
- ▶ Kit includes pair of high impedance headphones.

The popularity of this little crystal receiver has been astounding. Here, for only \$7.95 you can have a “do it yourself” radio set, that you can build in just a few short hours to give many years of reliable service. Requires no external power for operation, and incorporates sealed germanium diode, eliminating the critical “cat’s whisker.” Definitely not a “toy.” Employs high-quality standard components throughout. Covering from 540 to 1600 kc, the CR-1 has two high-Q tank circuits that employ ferrite coils and conventional air tuning capacitors. Capacitors are tuned individually to the desired station. The receiver is most attractively styled in a black bakelite case, and the kit price includes a pair of high impedance head sets. Such a unit could prove extremely valuable for emergency reception of civil defense signals, should there be a power failure.

Procedure for constructing this unit is such that even a complete novice can build the kit successfully. Educational treatment of the construction manual provides the essential fundamentals of signal reception as construction proceeds. An interesting project for all ages!

Heathkit AUDIO ANALYZER KIT



MODEL AA-1

\$59.50

Shpg. Wt. 13 Lbs.

Normally three separate instruments would be required to perform the functions of the Model AA-1. It incorporates, in one package, the functions of a VTVM, an audio wattmeter, and a complete IM analyzer with filters and high and low signal sources. Designed for the audio engineer, the serious audiophile, and service shops where high fidelity repair work is performed. VTVM ranges are 0-.01, .03, .1, .3, 1, 3, 10, 30, 100, and 300 volts rms. DB scale reads from -65 to +52 dbm. Wattmeter scales are .15 mw, 1.5 mw, 15 mw, 150 mw, 1.5 w, 15 w, and 150 w. IM analyzer ranges are 0-1%, 3%, 10%, 30%, and 100% full scale. Features 4, 8, 16, or 600 ohm, 25-watt load resistors built in. Essential for making complete analysis of high fidelity system performance. Combining and consolidating functions reduces the number of test leads and controls required for the same test. Use the VTVM circuit for measuring noise, output, gain, power supply ripple, etc. The built-in wattmeter allows simple measurement of power output with either internal or external loads. All meter readings are direct, with no calculation or conversion necessary. Only four meter scales are necessary, and one of these is in color for maximum convenience. A really outstanding instrument for the price.

Heathkit BROADCAST BAND RECEIVER KIT



MODEL BR-2

\$17.50

(less cabinet)

Shpg. Wt. 10 Lbs.

Here's an opportunity to “learn by doing” and acquire a completely usable table-model radio. This receiver covers the standard broadcast band from 550 to 1600 kc, and features good selectivity and sensitivity, a 5½” chassis-mounted speaker, and an efficient rod-type built-in antenna. Simple to construct from step-by-step instructions and large pictorial diagrams provided. Manual also includes fundamentals of receiver operation.

CABINET: Fabric-covered plywood cabinet as shown. Shipping weight 5 lbs. Part No. 91-9A. \$4.50.

Heathkit ENLARGER TIMER KIT

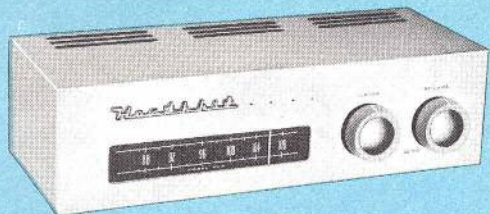


MODEL ET-1

\$11.50

Shpg. Wt. 3 Lbs.

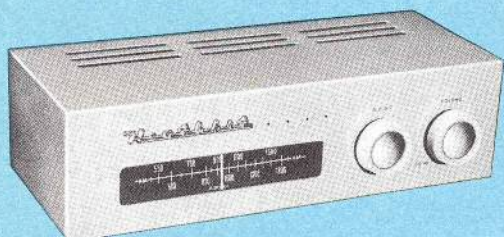
This device automatically provides time intervals from 5 to 60 seconds for photographic exposures in the enlargement process. Enlarger and safelight plug into receptacles on front panel, and timer automatically turns on enlarger for preset period of time. Automatically turns safelight off when enlarger is off. Merely depressing “print” switch initiates timing cycle. Internal relay handles up to 350 watts. Easy to build from complete instructions supplied.



\$24⁵⁰

MODEL FM-3
(with cabinet)
Shpg. Wt. 7 Lbs.

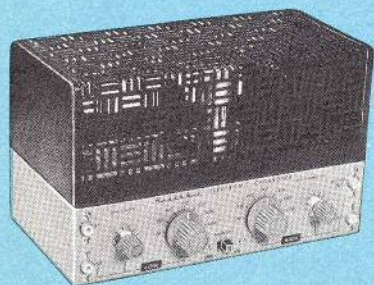
HIGH FIDELITY FM TUNER KIT



\$24⁵⁰

MODEL BC-1
(with cabinet)
Shpg. Wt. 8 Lbs.

BROADBAND AM TUNER KIT



\$18⁹⁵

MODEL XO-1
Shpg. Wt. 6 Lbs.

ELECTRONIC CROSS-OVER KIT

Heathkit Model FM-3 FM Tuner Kit—Do not be deceived by the low price of this completely modern FM tuner. It offers sensitivity, selectivity, stability, and overall quality, definitely not expected at this price level. It incorporates automatic gain control, and a stabilized, temperature-compensated oscillator circuit. The modern lineup of miniature tubes provides better than 10 microvolts sensitivity for 20 db of quieting. A high gain, cascode-type RF amplifier is used ahead of the tuner to increase overall gain. Covers the FM band from 88 to 108 megacycles. The IF frequency is 10.7 mc, and this tuner employs a ratio detector for efficiency without sacrifice in high fidelity performance. Both low-level and high-level outputs are provided, both at low impedance. Power supply is built in.

The Model FM-3 features an illuminated slide-rule dial, and is housed in an attractive ventilated cabinet that is included with the kit. This tuner is simple to build, even for the beginner in electronics. Pre-alignment of circuit components and complete step-by-step assembly instructions assure success.

Heathkit Model BC-1 AM Tuner Kit—This AM tuner circuit is unusual in that it has been designed especially for use with high fidelity systems. It features broad band-width, while still maintaining good sensitivity and selectivity, and it uses a special voltage-doubler detector employing crystal diodes for minimum signal distortion. The audio response of the BC-1 is ± 1 db from 20 cps to 2 kc, with 5 db of pre-emphasis at 10 kc to compensate for station rolloff above 5 kc. It covers the standard broadcast band from 550 to 1600 kc. The IF bandwidth is 20 kc. It features a 6 db signal-to-noise ratio at 2.5 microvolts. A 10 kc whistle filter is employed to suppress the heterodyne between adjacent AM stations. RF and IF coils are pre-aligned for simplified construction. Only three minor trimmer adjustments necessary. Two outputs are provided, one fixed, and one variable, and two antenna inputs are available for low impedance, low noise external loop, (furnished with kit), or for high impedance long wire. Power supply is built in. Physical dimensions and color styling match Heathkit WA-P2 and FM-3.

MATCHING CABINETS



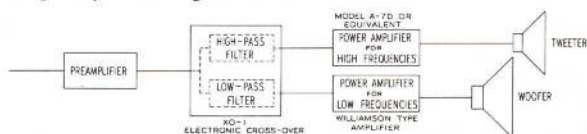
BC-1

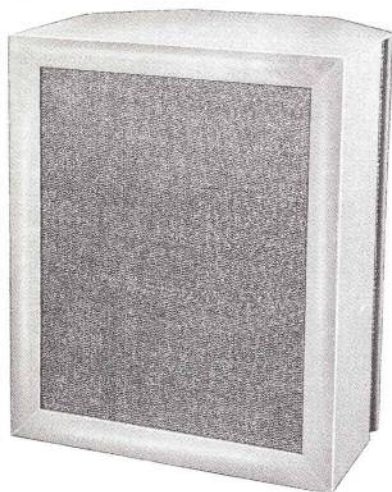
FM-3

WA-P2

The Heathkit AM tuner, FM tuner, and preamplifier kits may be stacked one on the other to form a compact "master control" for your hi-fi system. Since they are identical in physical size and color, the stacking arrangement is attractive as well as being practical and functional. Provides flexibility and convenience not possible with "multi-function" units, yet requires no more space.

Heathkit Model XO-1 Electronic Cross-Over Kit—As the block diagram below will indicate, this device is used between a preamplifier and two separate power amplifiers, one for high frequencies, and one for low frequencies, eliminating the need for conventional cross-over circuits. High frequency and low frequency speakers are then driven by separate amplifiers. It features selectable cross-over frequencies (100, 200, 400, 700, 1200, 2000, and 3500 cps), with built-in high pass and low pass filters. The circuit is all-electronic, and a separate level control is provided for both the high frequency and the low frequency output. Attenuation is 12 db per octave with a sharp "knee" at the cutoff frequency. Handles unlimited power since frequency division is performed ahead of the power stage. A unique answer to frequency division problems.





Heathkit HIGH FIDELITY SS-1B RANGE EXTENDING

SPEAKER SYSTEM KIT

- ▶ Designed especially to complete the audio range when used with the Model SS-1.
- ▶ High-quality speakers of special design—15" woofer and compression-type super tweeter.
- ▶ Easy-to-assemble cabinet of furniture-grade plywood. Kit includes all necessary parts.
- ▶ Attractively styled to fit into any living room. Matches Model SS-1.

MODEL SS-1B

Shpg. Wt. 80 Lbs. **\$99⁹⁵**

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.

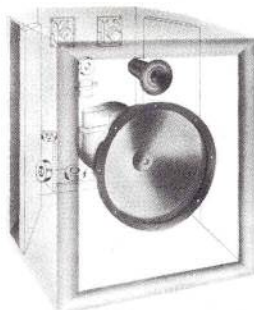
The Model SS-1B employs a super tweeter and a 15" woofer. These two speakers provide output between 35 and 600 cps, and between 4000 and 16000 cps. When used with the Heathkit Model SS-1, this larger speaker enclosure completes the audio spectrum to provide output from 35 to 16000 cps within ± 5 db. The system even includes the necessary coils and capacitors for the proper cross-over network, and a balance control is provided for the super-tweeter output level. In this way, the system can be adjusted for the acoustics of the particular room in which it is used. The complete 4-way speaker system consisting of the SS-1 and SS-1B can bring full high fidelity performance into your living room, at a price far below comparable units on the market. Very easy to assemble in only a few hours, and attractively styled to fit into any living room.

SPECIFICATIONS:

SS-1 and SS-1B in Combination:
 Frequency Response..... ± 5 db, 35 to 16000 cps.
 Cross-over Frequencies... 600, 1600 and 4000 cps.
 Power Rating..... 35 watts speech and music.
 Nominal Impedance..... 16 ohms.

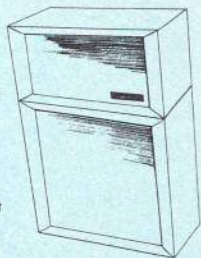
SS-1B ALONE:

Cabinet Type..... Ducted-Port Bass Reflex.
 Cabinet Dimensions..... 29" high x 23" wide x 17½" deep.
 Speakers..... Jensen Special Design 15" Edge-Damped Woofer; Compression type, Horn-Loaded Super Tweeter.



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

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.



Placing the Model SS-1 on top of the Model SS-1B gives the appearance of a single piece of furniture. Both units fit attractively into your living room.

Heathkit HIGH FIDELITY SS-1 SPEAKER SYSTEM KIT

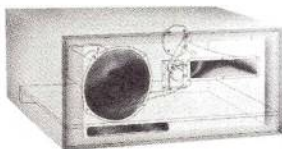
- ▶ Extremely fine audio reproduction for its size.
- ▶ Special-design, ducted-port, bass reflex enclosure.
- ▶ Two separate speakers for high and low frequencies.
- ▶ Kit includes all parts and complete instructions for assembly.



MODEL SS-1

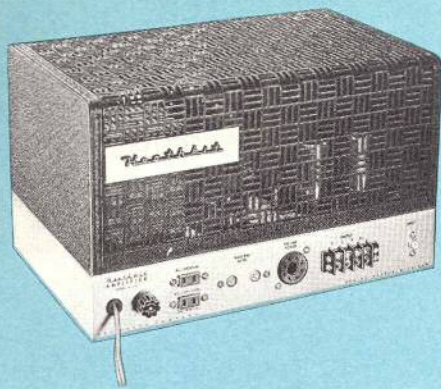
\$39⁹⁵

Shpg. Wt. 30 Lbs.



The very popular Heathkit Model SS-1 speaker system provides clean, clear audio reproduction within plus or minus 5 db from 20 to 12000 cps. It also provides for the growth of your high fidelity system by combining, later, with the Model SS-1B to provide even greater frequency coverage. Two separate speakers are used for high and low frequencies and a balance control is employed for the tweeter. Crossover frequency is 1600 cps and the system is rated at 25 watts. Nominal impedance is 16 ohms. The cabinet is a ducted port bass reflex type. An excellent speaker system in its own right.

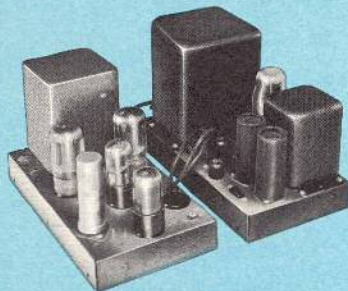
The attractively styled SS-1 can provide you with extremely fine audio reproduction for its size. In addition, it is simple to build, and the kit includes all parts and complete step-by-step instructions for assembly. Can be assembled in one evening, and will provide you with many hours of listening enjoyment thereafter.



\$59⁷⁵

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

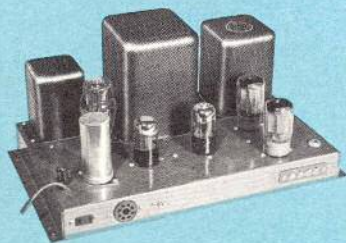
MODEL W-5:
Consists of Model W-5M
plus Model WA-P2
Preamplifier.
Shpg. Wt. 38 Lbs.
Express only \$79.50



\$49⁷⁵ **MODEL**
W-3M

Shpg. Wt. 29 Lbs.
Express only.

MODEL W-3:
Consists of Model W-3M plus
Model WA-P2 Preamplifier.
Shpg. Wt. 37 Lbs.
Express only \$69.50



\$39⁵⁰ **MODEL**
W-4M

Shpg. Wt. 28 Lbs.
Express Only

MODEL W-4A:
Consists of Model W-4M
plus Model WA-P2 Preamplifier.
Shpg. Wt. 35 Lbs.
Express only \$59.50



\$35⁵⁰ **MODEL**
A-9B

Shpg. Wt. 23 Lbs.



\$16⁹⁵ **MODEL**
A-7D

Shpg. Wt. 10 Lbs.

Heathkit Model W-5M Advanced Design High Fidelity Amplifier Kit—The quality and performance of this famous 25-watt amplifier cannot be duplicated at this price level. Its advanced design features make it one of the most outstanding amplifiers available today—at any price!

Features a Peerless output transformer of special design, and KT66 tubes by Genelax. This Peerless unit prevents loss in low frequency response, especially at moderate volume levels. The circuit follows instantaneous power peaks up to 42 watts. Also incorporates the "tweeter saver" to suppress high frequency oscillation, and a new type balancing circuit requiring only a voltmeter for balance. Frequency response is within ± 1 db from 5 cps to 160 kc at 1 watt. Harmonic distortion only 1% at 25 watts, 20 to 20,000 cps. IM distortion only 1% at 20 watts (60 and 3,000 cps). Output impedance is 4, 8, or 16 ohms. Hum and noise are 99 db below rated output. A protective cover is provided for all above-chassis components. An amplifier for the music lover who can appreciate subtle differences in performance.

Heathkit Model W-3M Dual-Chassis High Fidelity Amplifier Kit—The Model W-3M Amplifier features the famous Acrosound Model TO-300 "ultra linear" output transformer and 5881 tubes. The power supply of this amplifier is built on a separate chassis, and the two chassis are inter-connected with a power cable. This provides additional flexibility in mounting. The Model W-3M provides full 20 watts output. Frequency response is ± 1 db from 6 cps to 150 kc at 1 watt. Harmonic distortion is only 1% at 21 watts. IM distortion at 20 watts only 1.3% at 60 and 3,000 cps. Output impedance is 4, 8, or 16 ohms. Hum and noise are 88 db below 20 watts. An extremely popular high fidelity unit, employing top-quality components throughout.

Heathkit Model W-4AM Single-Chassis High Fidelity Amplifier Kit—This is the original low-priced Williamson type amplifier that has amazed audio-wise people through-

HEATHKIT HIGH FIDELITY

This preamplifier meets or exceeds specifications for the finest high fidelity applications. Designed especially for use with Heathkit models W-3M, W-4AM, and W-5M and is used with other main amplifiers as well. Features five switch-selected inputs, three high level and two low level, and each with individual level controls. Employs 4-position LP, RIAA, AES, and early 78 equalization switch, and 4-position rolloff switch with 8, 12, 16, and 1 flat position. Separate tone controls provide 18 db boost and 12 db cut at 50 cps, and 15 db boost and 20 db cut at 50,000 cps. Derives its power from the main amplifier and power supply. Requires only 6.3 volts AC at 1 ampere and 300 volts DC at 10 ma. Features top quality components and design throughout. Special balance control insures absolute minimum hum level. Low-impedance cathode follower output for complete installation flexibility and stability. Ideally suited for remote

out the industry. It is difficult to believe that so much quality can be provided for such a low price. Employs 5881 output tubes and a Chicago output transformer. Its frequency response is ± 1 db from 10 cps to 100 kc at 1 watt. Harmonic distortion is only 1.5% at 20 watts. IM distortion is only 2.7%. Full 20 watts output at 4, 8, or 16 ohms. Hum and noise are 95 db below 20 watts.

Heathkit Model A-9B 20-Watt High Fidelity Amplifier Kit—The preamplifier, main amplifier and power supply are all built on one chassis in this high fidelity unit. It features full 20-watt output using push-pull 6L6 tubes. The preamplifier section provides four separate inputs, selected by panel-mounted selector switch. It has separate bass and treble tone controls, each offering 15 db boost and cut. The output transformer is tapped at 4, 8, 16, and 500 ohms. Designed primarily for home installations, but is also used extensively for public address applications. True high fidelity performance with frequency response of ± 1 db from 20 cps to 20,000 cps. Total harmonic distortion only 1% (at 3 db below rated output).

Heathkit Model A-7D 7-Watt Amplifier Kit—This fine little 7-watt amplifier qualifies for high fidelity even though it is more limited in power than other Heathkit amplifiers. It is a top dollar value, and exceeds the specifications for many so-called "high fidelity" phonograph amplifiers. Using a tapped-screen output transformer of new design, the Model A-7 features frequency response of $\pm 1\frac{1}{2}$ db from 20 to 20,000 cps. Sensitivity is good, with surprisingly low distortion. Transformer tapped at 4, 8, and 16 ohms. Employs push-pull output. Separate bass and treble controls.

Model A-7E: Similar to the A-7D, except that a 12SL7 tube has been added for preamplification. Two switch-selected inputs, RIAA compensation, and extra gain. Shipping weight 10 lbs. \$18.50

The Heath Time Payment Plan can bring High Fidelity to your living room. See complete details on order blank.

PREAMPLIFIER KIT



\$19⁷⁵ MODEL WA-P2
(with cabinet)
Shpg. Wt. 7 Lbs.

installations. The Model WA-P2 can be built at home by the beginner in electronics from complete step-by-step instructions and large pictorial diagrams. You can be sure of successful kit construction when working from the comprehensive manuals provided for Heathkits.

HEATHKIT MATCHED HIGH FIDELITY AUDIO GROUPS

For your convenience, three integrated high fidelity audio systems are now available as described below. Each system was selected to give the most in high quality sound for the price and all three are available through the Heath time payment plan. Look over the Harbert, the Fairplain, and the Shoreham, and select the system that best suits your high fidelity needs.

HEATHKIT HARBERT SYSTEM

The Harbert system is priced reasonably, and yet is capable of providing true high fidelity performance for less than \$100.00. This system can grow even larger with the addition of a tuner, or perhaps the SS-1B speaker system later on. Clean, clear, musical reproduction at a price you can afford!



- HARBERT SYSTEM:**
- Model FM-3 FM Tuner Kit.....\$24.50
 - Model A-9B 20-watt High Fidelity Amplifier Kit.....35.50
 - Model SS-1 High Fidelity Speaker System Kit.....39.95
- \$99⁹⁵**

Shpg. Wt.
60 Lbs.



HEATHKIT FAIRPLAIN SYSTEM

The Fairplain will satisfy the desires of the critical listener and provide complete flexibility and frequency range. Six high fidelity units combine to form a well-balanced audio system with reserve power and reproduction capacity to handle the finest in sound. The special price of the Fairplain makes it even more attractive to purchase the units as a matched system. Simple to build from the complete instructions provided.

- FAIRPLAIN SYSTEM:**
- Model FM-3 FM Tuner Kit.....\$24.50
 - Model BC-1 AM Tuner Kit.....24.50
 - Model WA-P2 Preamplifier Kit.....19.75
 - Model W-5M Main Amplifier Kit.....59.75
 - Model SS-1 Speaker System Kit.....39.95
 - Model SS-1B Range Extending Speaker System Kit.....99.95
- Total Value \$268.40**

\$259⁹⁵
Shpg. Wt.
163 Lbs.

HEATHKIT SHOREHAM SYSTEM

The Shoreham system falls between the Harbert and the Fairplain. It provides full high fidelity coverage with both speaker systems, and with a Williamson type amplifier, but yet is priced below the Fairplain. The kind of a system that can bring you many pleasant hours of listening enjoyment.



- SHOREHAM SYSTEM:** Consists of FM-3 Tuner, WA-P2 Preamplifier, W-4AM Main Amplifier, SS-1 Speaker System and SS-1B Range Extending Speaker System. Total value \$223.90.

\$219⁹⁵
Shpg. Wt.
147 Lbs.



\$189⁵⁰

MODEL DX-100

Shpg. Wt. 107 Lbs.

Shipped motor freight unless otherwise specified. \$50.00 deposit required on c.o.d. orders.

PHONE AND
CW TRANSMITTER KIT



\$56⁹⁵

MODEL DX-35

Shpg. Wt. 24 Lbs.

PHONE AND
CW TRANSMITTER KIT



\$29⁵⁰

MODEL AT-1

Shpg. Wt. 15 Lbs.

CW AMATEUR
TRANSMITTER KIT



Heathkit TRANSMITTER KITS

These transmitter models are designed for the maximum in operating convenience and efficiency. Trouble-free, proven, designs insure many hours of "on the air" enjoyment. Simple to build, even for a beginner, with complete step-by-step instructions and large pictorial diagrams.

Heathkit Model DX-100 Phone and CW Transmitter Kit—

This transmitter contains outstanding and important features demanded by the critical radio amateur. It is TVI suppressed, is complete with VFO and modulator, and employs pi network output for matching various antenna impedances. It's a tried and proven rig that can be depended upon for a clean, strong signal on either phone or CW. The DX-100 is rapidly becoming the accepted standard transmitter in its power class.

RF output is 100 watts on phone and 120 watts on CW. Built-in VFO, or may be excited from crystals. Completely band-switching from 160 meters through 10 meters. It employs push-pull 1625 tubes modulating parallel 6146 tubes. Five-point TVI suppression includes pi network interstage coupling, pi network output coupling, extensive shielding, all incoming and outgoing circuits filtered, and interlocking cabinet seams. VFO dial and meter face are illuminated, and all high-quality components are used, including potted transformers, ceramic switch and variable capacitor insulation, silver-plated, or solid silver switch terminals, etc. Coils are pre-wound and cable is pre-harnessed. Kit includes all parts necessary for assembly.

Heathkit Model DX-35 Phone and CW Transmitter Kit—

The attractively styled model DX-35 employs a 6146 final amplifier to provide 65 watts plate power input on CW, with controlled-carrier modulation peaks up to 50 watts on phone. Modulator and power supplies built in. Covers 80, 40, 20, 15, 11, and 10 meters. Completely bandswitching, and pi network output coupling is provided for matching various antenna impedances. 12BY7 buffer stage provided ahead of 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-Standby-Phone", "final tuning," "antenna coupling," "drive level control," and "band change switch." Meter indicates final grid or plate current. Ideal both for the novice and for the more experienced operator. Truly a remarkable transmitter package for the price. Price includes tubes and all other components necessary for assembly. Comprehensive construction manual assures successful assembly.

Model AT-1 CW Amateur Transmitter Kit—

This is the original low-priced Heathkit CW transmitter. Its reliable performance has been proven time and time again on the CW bands. Designed for crystal control, the Model AT-1 covers 80, 40, 20, 15, 11, and 10 meters. May be excited from external VFO. Plate power input up to 30 watts. Power supply built in, and provides 425 volts at 100 ma. Panel meter indicates grid current or plate current for final amplifier stage. Incorporates pre-wound coils, copper plated chassis, built-in line filter, profuse shielding, and top-quality parts throughout. Time-proven circuits insure reliable, trouble-free operation. Crystal socket and key jack are on front panel. Has built-in key-click filter, and features single-knob bandswitching. RF output brought out through a 52-ohm coaxial connector. Uses 6AG7 oscillator-multiplier, 6L6 power amplifier-doubler, and 5U4G rectifier. Your biggest dollar-per-watt value.

Use the Heath Time Payment Plan to obtain the Ham Gear you need. Full details on Order Blank.

Heathkit VFO KIT



MODEL VF-1

\$19.50

Shpg. Wt. 7 Lbs.

You can go VFO for less than the cost of enough crystals to give reasonable coverage on the amateur bands. This VFO covers 160, 80, 40, 20, 15, 11, and 10 meters with three basic oscillator frequencies. Provides better than 10-volt average RF output on fundamentals. This is plenty of output to drive most modern transmitters. Ideal for use with the Heathkit DX-35 or AT-1. Requiring a power source of only 250 VDC at 15 to 20 ma, and 6.3 VAC at 0.45 a., the VF-1 incorporates an OA2 voltage regulator tube for stability. The smooth acting illuminated and precalibrated frequency dial reads frequency directly on the band being employed. Temperature-compensating capacitors used to offset coil heating and provide additional circuit stability.

Heathkit ANTENNA IMPEDANCE METER KIT

This instrument employs a 100 microampere meter and covers the impedance range of 0-600 ohms for RF tests. Functions up to 150 mc. Used in conjunction with signal source, the Model AM-1 will determine antenna resistance and resonance, match transmission lines for minimum SWR, determine receiver input impedance, etc. Will also double as a phone monitor.



MODEL AM-1

\$14.50

Shpg. Wt. 2 Lbs.

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 prewound coils. 500 microampere meter employed for indication. Use for locating parasitics, neutralizing, determining RF circuit resonant frequencies, etc.



MODEL GD-1B

\$19.50

Shpg. Wt. 4 Lbs.

Heathkit COMMUNICATIONS TYPE

ALL BAND RECEIVER KIT

- ▶ Slide-rule dial—electrical band-spread—ham bands marked.
- ▶ Slug-tuned coils—efficient circuit layout.
- ▶ Socket on rear chassis apron for Q multiplier or other accessories.

This receiver covers 550 kc to 30 mc in 4 bands and provides amazing performance for the price. Ideal for the shortwave listener or beginning amateur. A receptacle is provided on the back-chassis apron so that the Heathkit QF-1 Q multiplier may be used in conjunction with the AR-3 receiver. Excellent sensitivity and selectivity is combined with good image rejection for outstanding performance. The AR-3 features amateur bands clearly marked on the illuminated dial scale. It has a transformer type power supply—electrical bandspread, antenna trimmer—separate RF and AF gain controls—noise limiter—headphone jacks—and automatic gain control. Incorporates BFO circuit for CW reception. Employs 5½" PM speaker. Chassis layout designed for simplified construction and ease of adjustment.

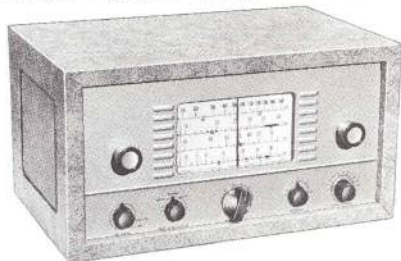
CABINET: Fabric covered cabinet with aluminum panel as shown. Part 91-15A. Shipping weight 5 pounds. \$4.50.

MODEL AR-3

\$27.95

(Less Cabinet)

Shpg. Wt. 12 Lbs.



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. 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 tremendous help on the crowded phone and CW bands. Provides an effective Q of approximately 4,000 for extremely sharp "peak" or "null." Tunes to any signal within the IF bandpass of the receiver, without changing the main receiver tuning dial. At this price you cannot afford to be without one.



MODEL QF-1

\$9.95

Shpg. Wt. 3 Lbs.

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.



MODEL AC-1

\$14.50

Shpg. Wt. 4 Lbs.

HEATH COMPANY

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DID YOU KNOW...

... that individual schematics and specifications are available free for all Heathkit models! Advertising space limitations sometimes prohibit listing all characteristics of each and every kit in our line. However, complete data is available on request. Simply ask for a "Specification Sheet," by model number, for the particular kit in which you are interested. You will receive, free, a schematic and an outline of electrical and physical specifications. Another Heathkit "extra" for you.

ATTENTION OWNERS OF LP-1 AND TS-4 KITS!

LP-1 CONVERSION:

This conversion is in two parts: Adding provisions for external synchronization; and reducing the number of bars visible on the television receiver screen. Only the addition of a "sync input" is necessary since the number of bars displayed is a matter of personal preference.

ADDING EXTERNAL SYNCHRONIZATION:

- () Remove one screw holding the tuning capacitor to the chassis. This should be the screw closest to the panel.
- () Mount a single-lug terminal strip (ungrounded) under the screw just removed.
- () Connect a 10 uuf capacitor between V5-6 (S) and the terminal strip (NS).
- () Connect a 150 K ohm resistor between V3-1 (S) and K1 (NS).
- () Drill a hole in the panel between the knobs along the bottom. This hole should be between and below the two center knobs.
- () Mount an insulated binding post in this hole.
- () Connect a wire from the junction of the 10 uuf capacitor and the single-lug terminal strip just installed (S) to the binding post (NS).
- () Connect a wire between K1 (S) and the binding post (S).

This completes the external sync modification.

In use, a wire is attached to the "sync" binding post, and the other end of this (insulated) wire should be loosely wrapped or tied around the leads going to the yoke in the TV set. Operation will be simpler and more rapid when external sync is used, since the introduction of sync pulses into the LP-1 will tend to make the display "lock in" as observed on the television screen.

REDUCING THE NUMBER OF BARS DISPLAYED:

- () Remove the HORIZONTAL control L and replace it with a 100 K ohm linear taper control.
- () Remove the 220 K ohm resistor now between V5-6 and L1, and replace it with a 330K ohm resistor. Solder all connections.
- () Remove the VERTICAL control T and replace it with a 20 K ohm or 25 K ohm linear taper control.
- () Remove the 47 K ohm resistor now between V3-6 and T1, and replace it with a 100 K ohm resistor. Solder all connections.

W.C. UZZELL

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It has always been Heath Company policy to publish instructions for bringing older kit models up to date wherever this is practical. We continue this policy by presenting step-by-step instructions for the slight modifications necessary to convert the LP-1 to the LP-2, and the TS-4 to the TS-4A. It should be understood that this information is provided as a service to our customers, but that we do not supply the parts necessary for the conversion. No "modification kit" is available. The few components needed are readily available at your local wholesale parts house, or through one of the large mail-order parts distributors.

TS-4 CONVERSION:

Circuit differences between the TS-4 and TS-4A are minor and modification can be easily accomplished if desired. These changes are incorporated to improve the calibration accuracy of the sweep oscillator, and to reduce long time drift of the sweep section. After the modification is completed, the Controllable Inductor bias current will be increased slightly, raising the center frequency closer to correct calibration. Use of a heavier duty selenium rectifier on the bias circuit will tend to minimize rectifier voltage loss due to heat rise within the unit, stabilizing bias current and thus the sweep frequency over long operating periods on one frequency. If either or both of these tendencies have been encountered, the modification will be worthwhile. If the present instrument is accurate and drift is not a problem, modification is not recommended. The changes are accomplished as follows:

- () Remove the 18 K ohm 1 watt resistor connected from terminal L1 to L2.
- () Install a 15 K ohm 1 watt resistor from L1 (S) to L2 (S).
- () Disconnect the wires from selenium rectifier terminals G1 and G2, and remove the rectifier.
- () Install a standard type 65 ma (or larger) selenium rectifier at location G, mounting with the positive terminal up, farthest from the chassis, and with both terminals toward terminal strip L. The terminal nearest the chassis will be G1 and the positive terminal farthest from Chassis G2. Rectifier mounting can best be accomplished by using a long 6-32 bolt through opening G from the top of the chassis, the rectifier, a lockwasher and nut. Make sure none of the rectifier stacks or terminals touch the chassis or any part of the wiring.
- () Connect the wire from control Q5 to rectifier G1 (S) nearest the chassis.
- () Connect the wire from terminal strip L2 to rectifier positive terminal G2 (S).

This completes the conversion of your Heathkit TS-4 Television Alignment Generator.