

WIN

A HOUSEFUL OF HEATHKITS

WIN

50

\$8,100

50

WINNERS

IN KITS
OF YOUR CHOICE

WINNERS

Limited Contest: Open only to recipients of this flyer

DOUBLE YOUR PRIZE WITH A HEATHKIT ORDER!

GRAND PRIZE

\$1,250 IN KITS

(or \$1000 cash)

Double Prize

\$2,500 IN KITS

(or \$2000 cash) (entry accompanied by order)

LOOK

... what \$2500 in kits of your choice could mean!

For Your Living Room! A deluxe 21" Color TV with deluxe walnut cabinet . . . deluxe Heathkit/Thomas "Coronado" transistor organ . . . a deluxe stereo system with a pair of "Legato Compact" speakers plus deluxe equipment center, automatic turntable, and deluxe transistor stereo components. For Your Rec Room! A 2nd stereo system with AR-13A stereo receiver, stereo furniture with speakers, record changer . . . Heathkit/Thomas "Artiste" transistor organ . . . 23" B&W TV set . . . shortwave radio. Plus, a radio and intercom for every room in your house . . . garage door opener with transmitters for every car . . . all Heathkit auto accessories . . . Kits for your favorite hobby such as a complete "ham" station or CB set-up, all marine electronics for your boat, full line of test equipment for your workbench.

2nd PRIZE

\$500 in kits of your choice (or \$400 cash)
Double Prize: (entry accompanied by order)
\$1,000 in kits of your choice (or \$800 cash)

THREE 3rd PRIZES

\$250 in kits of your choice (or \$200 cash)
Double Prize: (entry accompanied by order)
\$500 in kits of your choice (or \$400 cash)

FIVE 4th PRIZES

\$150 in kits of your choice (or \$120 cash)
Double Prize: (entry accompanied by order)
\$300 in kits of your choice (or \$240 cash)

TEN 5th PRIZES

\$50 in kits of your choice (or \$40 cash)
Double Prize: (entry accompanied by order)
\$100 in kits of your choice (or \$80 cash)

THIRTY 6th PRIZES

\$10 Heathkit Gift Certificates
Double Prize: (entry accompanied by order)
\$20 Heathkit Gift Certificates

Official Entry Blank

& Rules Inside

Center of Flyer



HEATH COMPANY
BENTON HARBOR, MICH. 49023
Plant Location: St. Joseph, Mich.
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CATALOG SUPPLEMENT 800/55

NEW LOWER PRICES... EXCISE TAXES REMOVED

See President's Letter, page 2

NEWS AND VIEWS OF HEATHKIT®

WONDERING ABOUT THE EXCISE TAX CUT?

Then be sure to read the president's letter on this page.

DRIVING IN FOR FACTORY SERVICE?

If you have a Heathkit that needs servicing, and you would personally like to drop it off at our plant, our Service Department is open Monday thru Friday from 8 A.M. to 4:15 P.M. E.S.T.

If you can't make it during the week, you may leave it with our Sales Representative on Saturdays at our plant Kit Sales Room, which is open from 9 A.M. to 3:30 P.M. We suggest that a written description of the problem be attached to the unit—be sure to include date kit was purchased. Repaired equipment & replacement parts can also be picked up at the Kit Sales Room on Saturdays, only if prior arrangements are made with the Service Department. Be sure that all arrangements are clearly understood.

HINTS ON AUTOMATIC ANSWERING SERVICE

Since we introduced our phone ordering service in May, a few night calls have been lost on our Electronic Secretary due to low voice levels. To make sure we get all the correct information, we recommend you (1) Speak slowly & clearly at an above-average voice level. (2) Spell out your name, street & city to insure correctness. (3) If a tone sounds, voice level is too low. If tone is allowed to continue for 7 seconds you will be disconnected. During the day (8 a.m.—4:30 p.m. EST) call area 616, 983-3961 for personal service. At night (4:30 p.m.—8 a.m. EST) call 983-3921. Be sure also to give the kit model

no. & price; indicate shipping method & give your phone no. After 8 p.m. call Heath from anywhere in the U.S. for \$1 or less. All phone orders shipped C.O.D.



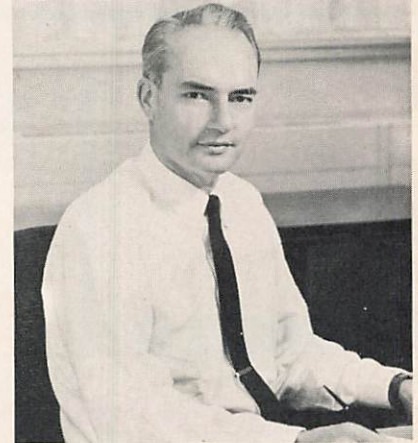
TOO OLD TO BUILD A HEATHKIT?

Not Mr. Le Verne Ryder (above) of Rockford, Ill. He writes: "At the age of 79, I am daily enjoying the opportunity afforded to be a friend and helper to those who are interested in your products" ... "Over the years, I have worked on more than fifty Heathkits." Mr. Ryder also included some inside-chassis photos of his work which is very neat and beautifully done. We receive many letters from senior citizens, who like Mr. Ryder, find building kits an interesting and worthwhile way to enjoy their retirement.

ATTENTION DETROIT RESIDENTS!

A modern new Heathkit Electronic Center opened for business in June at 18645 W. 8-Mile Rd. The store stocks the complete Heathkit line, and has full service & replacement part facilities. Store hours are from 9:30 to 6, Tues., Wed., Thurs., & Sat., and from 12 to 9 Mon. & Fri. Stop in soon & get acquainted with Manager George Pecar & his competent staff.

LETTER FROM THE PRESIDENT



Dear Friends:

While this letter is being written late in May in order to meet our printing deadline, you will read it in July which is about the time that the details of the new excise tax bill are scheduled for release. Obviously, we don't know now what changes the ultimate legislation will contain, nor whether these changes will be retroactive. The best we can do at this time is to state our policy with respect to these taxes.

As in all businesses, success depends on providing value. Our definition of value is quality at low price which is extremely difficult to achieve. In this case, since the excise tax is an element of cost, its elimination by the government would permit us to reduce prices without affecting quality. Since this is our basic objective, we have decided to assume favorable action in Congress.

The prices shown in this flyer have been reduced to reflect the anticipated elimination of the taxes we have been paying. If any change is declared retroactive we will pass on the refund from the Government to our customers, so keep your invoice showing the date of your purchase.

Sincerely,

C. M. Kirkland, President

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HEATHKIT ELECTRONIC CENTERS

Chicago, Illinois 3462-66 W. Devon Ave. Phone: 583-3920	Los Angeles, California 2309 S. Flower Street Phone: RI-9-0261
Denver, Colorado 2901 Sheridan Blvd. Phone: 238-2348	Detroit, Michigan 18645 West 8 Mile Rd. Phone: 535-6480
San Diego, California 1300 Market Street Phone: 234-0293	

HEATHKIT AUTHORIZED SERVICE CENTERS

United Sound & Television Co. (two locations) 5036 Venice Blvd. Los Angeles, California & 2010 W. Lincoln Ave. Anaheim, California	Southern Authorized Factory Service 62 N. 27th Ave. Miami, Florida Expert Electronics 7201 S. Western Ave. Chicago, Illinois
Radio Electronics 374 Brannan Street San Francisco, California	Park Armature Company 1218-30 Columbus Ave. Boston, Mass.
Photo Electronics 1300 Market Street San Diego, Calif. 1027 University Avenue San Diego, California	Electronic Servicenter of N.Y. 65-37 Queens Blvd. Woodside, New York Scientific Radio-TV/HI-FI (two locations) 4122 E. Madison St. Seattle, Washington & 5418 1/2 Sand Point Way NE Seattle, Washington
Mystic Cove Marine Radio 13505 Ball Way Marina Del Rey Venice, California	

All Heathkit Electronic Centers & Authorized Service Centers are units of Daystrom Products Corporation.

Heath Company, Benton Harbor, Michigan—Plant Location: St. Joseph, Michigan

Affiliated Companies: Daystrom Ltd., Cooksville (Toronto) Canada • Daystrom Ltd., Gloucester, England • Heathkit Gerate GmbH, Spremlingen Bei Frankfurt/Main, Germany
• Daystrom S.A., Geneva, Switzerland • Daystrom S.A., Zurich, Switzerland • Daystrom Overseas GmbH, Vienna, Austria

Now Heathkit® TV Costs Less!

New Lower Price On Deluxe 21" Hi-Fi Color TV—Now Only \$375.00!

- Exclusive Built-In Service Center . . . Includes degaussing coil & built-in dot generator to demagnetize, adjust & maintain set • 26-tube, 8-diode circuit
- Deluxe Standard-Kollsman VHF tuner with push-to-tune fine tuning for individual channels • New transistor UHF tuner • High definition 70° 21" "rare earth" color tube for "brighter reds" plus anti-glare bonded safety glass
- Tubes alone list at over \$260 • 24,000 volt regulated picture power • Automatic color control & gated automatic gain control for peak performance
- Tuners, I.F. and high voltage assemblies factory-built, aligned and tested . . . just simple circuit boards to wire . . . goes from parts to picture in about 25 hours • Circuit breaker protected • Line Thermistor for longer tube life
- Transformer operated • Two hi-fi outputs plus tone control • Chassis and tubes mount on sturdy one-piece metal support for easy set-up and servicing
- Can be custom-mounted in wall or cabinet or installed in optional Heathkit walnut or hardboard cabinets • 1-year warranty on picture tube, 90 days on all other parts

An Unbeatable Combination For You! That's the GR-53A. Combines the finest color TV circuitry for the cleanest, clearest, pictures in color TV history; a built-in "service center" to adjust & maintain color sharpness and purity; and flexibility of installation . . . mount in a wall, custom or assembled Heath cabinet. A winning combination for top performance . . . the best you can buy at any price!

You Build It In Just 25 Hours! Quickly. Easily. Takes no special skills or knowledge. GR-53A owner, Mrs. Joseph Gesswein, Bethesda, Md. wrote: "If a housewife with 3 children under 4 years old can successfully build it in her few spare moments, it has to be good." And since you build it, you can maintain it . . . no costly color TV service calls or contracts. As another GR-53A owner put it: "the manual is worth a lifetime in warranties on ordinary sets." You become an expert! Hubert Luckett aptly describes the GR-53A manual in *Popular Science*: "The manual provided with the kit is a masterpiece. It is nearly a half-inch thick and lavishly illustrated with drawings, photographs, X-ray views of circuit boards, and even 32 plates in full color. Only 28 pages of the 138-page manual are devoted to the usual step-by-step procedure. The rest covers the theory of operation, detailed descriptions of each circuit, trouble-shooting, service information, adjustments and operation."

And It's Easy To Own, Too! By taking advantage of the convenient Heath Time-Pay Plan! Only 10% down and the rest in easy monthly installments. See the order blank for details.

Kit GR-53A, all parts including chassis, tubes, mask, UHF & VHF tuners, mounting kit and specially shielded, extended range 6" x 9" speaker. 127 lbs. . . \$38 dn., as low as \$23 per mo. . . . \$375.00
 Assembled GRA-53-7, walnut wood cabinet, 83 lbs. \$11 dn., \$10 mo. \$108.00
 Assembled GRA-53-6, walnut-finished hardboard cabinet, 52 lbs. . . \$5 dn., \$5 mo. . . . \$46.50



GR-53A
 (less cabinet)
 Now Only
\$375⁰⁰

Deluxe Walnut Cabinet! (above) Finest TV furniture . . . matches Heath contemporary hi-fi cabinets (pg. 17). Fits within 3" of wall (most cabinets leave a 7" gap). Crafted of 3/4" walnut solids & veneers w/hand-rubbed finish. Deluxe 6" x 9" speaker with 6.8 oz. magnet adds a second speaker for top performance when GR-53A chassis is installed. Size 44" W x 32 3/8" H x 23 5/8" D. (26 1/2" D. including tube rear cover).

GRA-53-7, 83 lbs. . . \$11 dn., \$10 mo. . . . \$108.00

GR-53A SPECIFICATIONS — Picture size: 21" round, approx. 265 sq. in. Deflection: Magnetic 70°. Focus: Electro-static. Convergence: Magnetic. Antenna input impedance: 300 ohm balanced. Picture IF carrier frequency: 45.75 mc. Sound IF carrier frequency: 41.25 mc. Color sub-carrier: 42.17 mc. Sound IF frequency: 4.5 mc. Tuning range: VHF TV Channels 2-13, UHF 14-83. Sound cathode follower: Output impedance, 3K. Frequency response: ±1 db, 50-15,000 cps. Harmonic distortion: less than 1%. Output voltage: 2 V. Audio output: Output impedance: 8 ohms. Output power: 2 watts. Frequency response: ±2 db, 50-15,000 cps. Harmonic distortion: Less than 3%. Power requirements: 110 V to 130 V, 60 cycle AC, 300 watts. Wall mounting space required: 23 1/4" D x 22 1/4" H x 28" W.

Economy Cabinet . . . Now Only \$46.50!

Attractive, low cost. Constructed of walnut-finished wood & hardboard; tapered wood legs with brass finish ferrules & glides. GR-54A's speaker mounts behind grille cloth on left of cabinet. Cabinet size: 37 3/4" W x 33 1/4" H x 26 1/4" D.
 GRA-53-6, 52 lbs. . . \$5 dn., \$5 mo. . . \$46.50

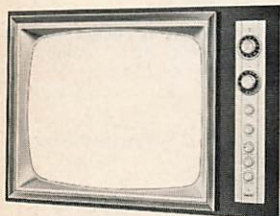


Heathkit All-Channel 23" Hi-Fi Black & White TV . . . Now Only \$169!

- All-channel (2-83) reception • 16 tube, 5 diode circuit gives 30 tube performance • High definition 90° 23" tube with anti-glare bonded safety glass
- Spark-gap socket for picture tube protection • Deluxe Nuvistor VHF tuner • Transistorized UHF tuner • 20,000 volt picture power • Transformer power supply • Line Circuit Breaker, filament & B+ protection • Line thermistor for long tube life • Gated Automatic Gain Control & Noise Canceller for peak reception • Wide-band circuitry with 5 interference traps • DC restorer • Hi-Fi cathode follower output for hi-fi system • Hi-Fi sound power output for speaker • Tubes alone list over \$135 • Easy circuit board construction—pre-built tuner, IF strip and hi-voltage sections • 1-year warranty on picture tube, 90 days on all other parts

Save \$11 On This Famous Set! Save on maintenance costs, too. Make adjustments & repairs yourself by using "Servicing Hints" section in manual. The chassis & tubes fit in custom wall mask (GRA-22-5 below) for mounting in a wall or in custom Heathkit walnut cabinet. Required dimensions: just 19" H x 29 1/8" W x 17" D.

Kit GR-22A, chassis & tubes, 81 lbs. \$17 dn., \$15 mo. . . . \$169.00



Custom TV Wall Mount Mask

Unfinished, ready for the finish of your choice. Includes 3/4" chassis mounting board. Cut & drilled to accept chassis & tube. Size: 20 3/8" H. x 30 5/8" W. x 1-11/16" D. Required mounting space dimensions: 19" H. x 17 1/2" D. x 28 1/8" W.

GRA-22-5, TV wall mount, 13 lbs. . . . \$23.50

GR-62B, TV set & wall mount, 94 lbs., Save \$5.95.

. . . \$19 dn., \$16 mo. . . . \$185.00

Deluxe Heathkit TV Cabinet

(Illus. right). Rich walnut finish matches modern Heathkit Hi-Fi cabinets, pg. 17. Includes mask, chassis mount, board, & 6" x 9" speaker . . . ready for chassis installation. Measures 36" W. x 32 3/8" H. x 20 1/2" D.

GRA-22-1, Walnut TV cabinet, 65 lbs. . . \$9 dn., \$8 mo. . . . \$84.95

GR-52A, TV set & walnut cabinet, 146 lbs. . . \$25 dn., \$21 mo. . . . \$245.00



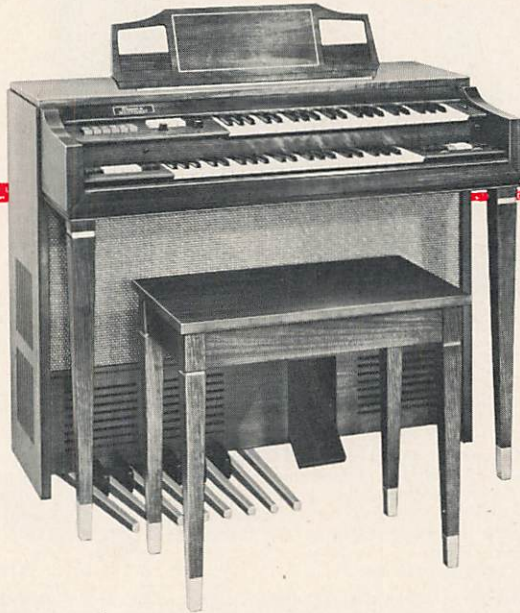
GR-22A
 (less cabinet & mask)
 Now Only
\$169⁰⁰

GR-22A SPECIFICATIONS—Picture size: 23" overall diagonal, approximately 282 sq. in. Deflection: Magnetic, 90°. Focus: Electrostatic. Antenna input impedance: 300 ohm balanced. Tuning range: VHF TV Channels 2-13 & UHF Channels 14-83. Picture IF carrier frequency: 45.75 mc. Sound IF carrier frequency: 41.25 mc. Sound IF: 4.5 mc. Video response: ±1 db 50-15,000 cps. Harmonic distortion, less than 1%. Output Voltage 2V. Audio output: Output impedance, 8 ohms. Output Power, 2 watts. Frequency response ±2 db 50-15,000 cps. Harmonic distortion, less than 3%. Power requirements: 105 V to 125 V, 60 cycles AC, 210 watts. Size required for mounting: 19" H x 29 1/8" W x 17" D.

Win A Houseful of
HEATHKITS
see center of flyer

Music Makers! Dollar-Savers!

Deluxe Heathkit®/Thomas "Coronado" Transistor Organ Now Costs Less!



GD-983
Now Only
\$806⁰⁰

Self-Teacher Recorded Lessons... Save \$30!

Can't play a note? Learn quickly & easily at your leisure with this complete 48-lesson course on four 12" LP records. Includes music book with many old-time favorites. Provides firm basis of musical knowledge. Manufacturer's list price \$50. GDA-232-2, recorded lessons, 5 lbs.\$19.95

5-Year Warranty!

The transistorized plug-in tone generator boards, the heart of the organ, are warranted for five years. You buy with confidence when you buy a Heathkit version of the Thomas Organ. Replacement upon prepaid return of undamaged board to the Heath Company.

Hear It Perform Yourself!

Send for your 7", 33 1/3 rpm Deluxe Organ Demonstration Record. Prove to yourself that the GD-983 has everything you've dreamed of in an organ. Use order blank in center of flyer & enclose 50c to cover handling & postage. GDA-983-2, demonstration record.50c

- All genuine Thomas factory-fabricated components • 17 beautiful, rich organ voices • Two full-size 44-note keyboards • A built-in 2-speed Leslie plus 2-unit Main speaker system • 28 notes of melodious chimes . . . hundreds of chime variations • 13-note heel & toe pedalboard, range C thru C • Reverb for concert hall realism • Sustain on keyboards & pedals for a variety of special effects • Vibrato for warmth & beauty • New Stereo Chorus Control to create exciting "stereo" effects • Color-tone Attack & Repeat Percussion to produce additional voice effects • Treble Accent for added brilliance • Manual Balance to adjust relative volume of the two keyboards • Pedal Volume to adjust bass pedal loudness • Headset outlet to play without disturbing others • A full 5-year warranty on transistor tone generator boards . . . the heart of the organ • Luxurious full-bodied walnut finished cabinet . . . hand-crafted, hand-rubbed, completely assembled

Just Touch A Tab! And create any one of 17 different and beautiful organ voices. Saxophone 8'. French Horn 8'. Violin 8'. English Horn 8'. Oboe 8'. Flute 8'. Cello 8'. Bass Clarinet 16'. Trumpet 16'. Bourdon 16'. Flute D'Amour 4'. Quint 5 1/4'. Diapason 16' & 8'. And you'll learn combinations to produce additional voices . . . hawaiian guitar, vibraharp, harpsichord, zither, calliope, bagpipes, etc. . . . many different musical moods . . . classical, popular, religious . . . all at your fingertips. The 28 notes of chimes—worth \$500 to \$2000 as an extra on other organs—offer hundreds of variations. And with the 2-speed rotating Leslie speaker system you create the beauty of a full "theatre" organ or a rich, random liturgical sound. As *High Fidelity* magazine put it in their April issue: "—this 'kit organ' is no toy or halfway-to-heaven gadget. It is rather a full-fledged, deep throated, authentic sounding organ that should interest the serious musician as well as the hobbyist and amateur."

No Extras, Nothing More To Buy! There are no speakers, amplifiers, or other "hidden necessities" to add as with other organ kits. Even includes a pre-tuned tone generator to tune it . . . no special "ear" needed. And what about kit assembly? *Popular Science* says: "You don't have to be an expert or know anything about electronics to complete the project." You can pay as you play, too. Only \$125 down, as little as \$27 a month.

Kit GD-983, Organ & matching walnut bench, 242 lbs. . . . \$806.00
\$125 dn., as low as \$27 mo.\$806.00
Export model available for 115/230 VAC, 50-60 cps; write for prices.

-
1. Sustain Tab
 2. Reverb
 3. Swell Key
 4. On-Off And Pedal Volume
 5. Pedal Tab
 6. Pedal Sustain Tab
 7. Great Keyboard Voices
 8. Vibrato Tab
 9. Treble Accent Tab
 10. Headphone Jack
 11. Leslie Speaker
 12. Pedalboard
 13. Manual Balance
 14. Pilot Light
 15. Chimes
 16. Swell Keyboard
 17. Great Keyboard
 18. Leslie Rotor Switch
 19. Leslie-Main Speaker Tab
 20. Stereo Chorus
 21. Color-Tone Percussion Tabs
 22. Percussion Repeat Tab
 23. Percussion Delay Tabs
 24. Repeat Percussion Tab
 25. Main Speakers
 26. Expression Pedal

Heathkit®/Thomas "Artiste" Transistor Organ! New Lower Price!



- Ten true organ voices • Variable repeat percussion . . . produces banjo, mandolin, balalaika effects • 13-note heel & toe bass pedals • 2 overhanging 37-note keyboards • 50-watt EIA peak music power amplifier & speaker • Transistorized plug-in tone generators . . . warranted for 5 years • Hand-crafted walnut cabinet

GD-232B
Now Only
\$332⁰⁰

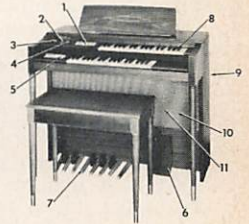
Make Your Own Fun! It's easy when you own the GD-232B. And every one in the family can join in. Great for livening up parties, or relaxing after a tough day. Includes Thomas's Musical Fun book to start you playing many favorites fast! Ideal too, for teaching youngsters & grownups a knowledge and appreciation of music.

And It's As Easy To Build As It Is To Play! Complete with simple step-by-step instructions . . . diagrammed, easy-to-wire circuit boards . . . genuine Thomas factory-fabricated components . . . factory assembled, hand-rubbed walnut cabinet (measures only 41 1/4" H x 39 3/4" W x 21 1/2" D) that's ready for the subassemblies as you finish them. You even tune the organ with the pre-tuned tone generator . . . no "musical ear" needed. The whole job takes only about 50 hours. And you save up to 50% over comparable organs! Makes a good summertime spare time project.

Kit GD-232B, Organ, 154 lbs. . . \$34 dn., as low as \$20 mo.\$332.00
GDA-232-1, matching walnut bench, 19 lbs., \$3 dn., \$5 mo.\$24.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

Compare These Professional Features!

1. 10 True organ voices; trombone, reed, flute, oboe, cornet, violin, saxophone, horn, viola, diapason 2. Variable Repeat Percussion; produces banjo, marimba, mandolin, and balalaika effects 3. Variable Bass Pedal Volume Control 4. Manual Balance Control, adjusts volume of keyboards in any degree for solo work 5. Variable Vibrato 6. Standard Expression Pedal; adjusts volume from soft to full 7. 13-note Heel & Toe Bass Pedals 8. Overhanging Keyboards; each with 37 notes, range C thru C 9. Beautiful Walnut Cabinet; modern styling, hand-rubbed, hand-crafted 10. All-Transistor Amplifier 11. 12" Speaker • Transistorized for longer life, better tone, trouble-free operation.

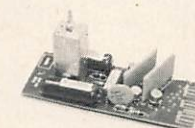


Complete Self-Teacher Recorded Lessons... Only \$19.95!

Can't play a note? Learn quickly & easily at your leisure with this complete 48 lesson course on four 12" LP records. Includes music book with many old-time favorites. Provides a firm basis of musical knowledge. Save \$30.05! GDA-232-2, lessons 5 lbs., Mfrs. list \$50.\$19.95

Like To Hear It Perform?

Then send 50c to cover postage & handling and ask for the 7"—33 1/3 rpm demo record no. GDA-232-5. You'll convince yourself!



5-Year Warranty

The transistorized plug-in tone generator boards, the heart of the organ, are warranted for five years. You buy with confidence when you buy a Heathkit version of the Thomas Organ. Replacement upon prepaid return of undamaged board to the Heath Company.

World Travelers!



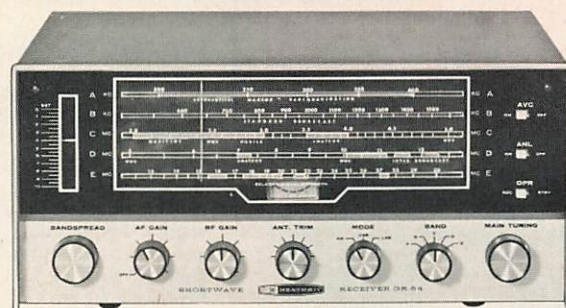
NEW! Heathkit Deluxe Shortwave Listener's Radio . . .

Compares To Sets Costing \$140 & More! Sells For Just \$84.95

- 5 bands . . . three shortwave bands for 2 mc to 30 mc coverage, plus the 550 kc to 1620 kc AM band, and 200 kc to 400 kc aeronautical & radio navigation band • Tuned RF stage for greater sensitivity • Half lattice crystal filter provides improved selectivity • Separate product detector for improved SSB & CW listening • Switchable USB or LSB mode position
- Built-in relative signal strength indicator & electrical bandspread tuning
- Built-in code practice monitor plus code key jack • Automatic noise limiter, automatic volume control, & antenna trimmer control • "Velvet-touch" 16 revolution main tuning
- Built-in 4" x 6" PM speaker, plus AM antenna • Standard jack accepts headphones or external speaker • Safe transformer-operated power supply • Sleek low-boy styling



GR-54
\$84⁹⁵



You Can't Buy A Shortwave Receiver—Kit Or Assembled—With The Same Features And Performance At Anywhere Near The New GR-54's Low Price! Prove it to yourself by comparing the GR-54 to other models. Let's Start With The Deluxe Features! First, there's a tuned RF stage that gives you added amplification and image rejection. For truly sharp selectivity, we incorporated a half-lattice crystal filter. You won't find this feature on any unit selling for under \$150. If you're a seasoned SWL, you'll appreciate the diode detector for AM, plus a separate product detector for more efficient SSB & CW listening. You'll also like the convenience of the switchable BFO control. Simply switch to the USB or LSB positions, and adjust the bandspread tuning control . . . eliminates "trial & error" SSB tuning. And for exciting listening, try the aeronautical weather broadcasts on the extra 200 kc to 400 kc band.

If you have any ambitions towards ham radio, you can develop your keying proficiency with the code practice monitor. Just connect your key to the terminals on the back, tune in a weak AM station, turn on the BFO, any you're ready for practice.

Complete Controls Put You In Full Command! There are separate level controls for audio volume & R.F. amplifier gain, an antenna trimmer for peak reception, band selector switch, bandspread tuning, mode selector, main tuning, an automatic noise limiter, and an automatic volume control to eliminate blasting or fading while tuning.

How Can We Offer This Superb Unit At An Unmatched Low Price? Typical Heath Engi-nuity, of course. But we've gone a step further to add extra savings. With the GR-54, you build and align the front-end tuner . . . without instruments . . . and get factory-aligned results. Thanks

FREE!

GRA-72 Short Wave Antenna Included!

(Described below)

to a unique printed circuit bandswitch assembly, you simply align the coils with the alignment tool provided, and use the signal strength meter for readings during adjustment. The GR-54 goes together easily, too. Takes around 12 to 15 hours. And the gray metal cabinet with midnight black front panel makes an attractive addition to your den or living room.

Kit GR-54, 24 lbs. . . \$9 dn., \$8 mo. \$84.95

GR-54 SPECIFICATIONS—Frequency Coverage: Band A 180 kc to 420 kc; Band B 550 kc to 1550 kc; Band C 2 mc to 5 mc; Band D 5 mc to 12.5 mc; Band E 12.5 mc to 30 mc. **Selectivity:** Half lattice crystal filter; 3 kc minimum at -6 db; 8 kc maximum at -20 db. **Intermediate Frequency:** 1682 kc. **Antenna Input Impedance:** 50 ohms nominal—phono connector. **Power requirements:** 120 volts. 50/60 cps AC, 45 watts. **Tube & Diode Complement:** 6BH6 RF amplifier; 6EA8 oscillator and mixer; (2) 6BA6 IF amplifier; 12A7 BFO and product detector; 6HF8 audio preamplifier and power amplifier; 2 diodes—AVC rectifier; 2 diodes—AM detector; 2 diodes—ANL; 2 diodes—power supply rectifiers. **Controls:** Bandspread, AF Gain/off-on switch; RF Gain; Ant. trim; Mode switch; Band switch; Main tuning; AVC switch; ANL switch; OPR switch; Meter adjust. **Audio Output Impedance:** 8 ohms nominal. **Meter:** Indicates relative signal strength. **Dimensions:** 14 1/2" W x 6-5/16" H x 10-15/16" D.

Enjoy The Variety Of Shortwave Listening At New Lower Cost!

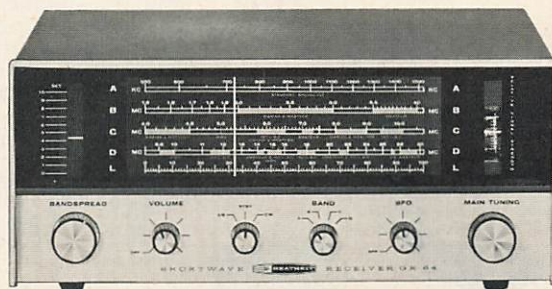
- Covers 550 kc to 30 mc—includes broadcast plus 3 short wave bands
- New 5" round speaker • New easier-to-read & lighted bandspread tuning dial
- New relative signal strength indicator • New "low-boy" cabinet styling
- Illuminated 7" slide-rule dial • 4-tube superhet circuit plus two rectifiers • Simple circuit board construction • Built-in broadcast antenna

Widen Your Listening Horizons! Hear live broadcasts from dozens of foreign countries . . . pick up the Voice of America, Radio Moscow, government stations . . . tune in hams, ship-to-shore radio, weather & popular AM stations . . . all on this versatile low-cost receiver!

Advanced Features For Better Reception, More Convenience! A high voltage, transformer-operated power supply insures peak efficiency; a BFO control "unscrambles" code & SSB transmissions; a "velvet touch" 16 revolution tuning knob makes dialing smooth & simple; an electrical bandspread provides maximum station separation. There's even a headphone jack for private listening & serious "DX-chasing". Includes attractive gray metal cabinet with black front panel. Order yours now.

Kit GR-64, 14 lbs. . . \$4 dn., \$5 mo. \$37.95

GR-64 SPECIFICATIONS—Frequency range: 550 kc to 30 mc in four bands. **Controls:** General coverage tuning, Bandspread tuning, Bandswitch, Noise Limiter—ON/OFF, Phone-Standby-CW switch, BFO control, Audio Gain, AC-ON/OFF, Headphone jack, Q-multiplier input. **Power requirements:** 105-125 V 50/60 cycles AC, 30 watts. **Dimensions:** 13 1/2" W x 6" H x 9" D.

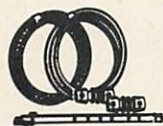


GR-64
Now Only
\$37⁹⁵

Short Wave Antenna Kit

Consists of 75 ft. long-wire antenna, 30 ft. lead-in wire, porcelain insulators and grounding hardware with complete instructions. Ideal for use with Heathkit GR-64 & GR-54 Shortwave receivers!

GRA-72, 2 lbs. \$1.45



For Portable Shortwave Listening, Choose The "Mohican" At New Lower Price!



- Powerful 10-transistor, 6-diode circuit • Tunes 550 kc to 32 mc in five bands • Fixed-alignment ceramic IF "trans-filters" for best selectivity
- Completely self-contained for portability, yet can operate on 117 v. AC with XP-2 accessory @ \$9.95

GC-1A
Now Only
\$89⁵⁰

Boasts Deluxe Features For Top Performance! Receives standard AM and shortwave stations, has Zener diode voltage regulation, smooth fly-wheel tuning, lighted slide-rule dial & tuning meter, BFO for code & SSB reception, 50" telescopic antenna, external antenna input terminals, electrical bandspread for maximum separation, headphone jack, complete controls, handsome green metal cabinet. Less batteries. Requires RF generator for final alignment.

Kit GC-1A, 18 lbs. . . \$9 dn., \$9 mo. \$89.50

Kit XP-2 . . . 117 VAC plug-in power supply, 2 lbs. \$9.95

GC-1A SPECIFICATIONS—IF Frequency: 455 kc. **Frequency coverage:** 550 kc to 32 mc in 5 bands with calibrated bandspread scales (oscillator tuning) for 80, 40, 20, 15 and 10 meter amateur bands and 11 meter citizens band. **Selectivity:** 3 kc wide at 6 db down. **Sensitivity:** 10 uv broadcast band, 2 uv shortwave bands for 10 db signal-to-noise ratio. **Output:** 400 milliwatts max. **Battery life:** Up to 400 hours normal intermittent service using 8 standard size "C" cells. **Dimensions:** 6 1/2" H x 12" W x 10" D.

Win A Houseful of
HEATHKITS
see center of flyer

New Low Prices On CB Gear!

Low Cost "One-Channel" CB Transceiver!

- One channel crystal controlled transmitter & receiver
- Sensitive superhet circuit • Built-in squelch & noise limiter • Convenient PTT microphone • Easy to build

Ideal For H.E.L.P. Road Emergency Use, and mobile fleets where only one channel is desired . . . no missed calls or unnecessary usage! Features built-in AC power supply & provision for plug-in DC power supply. Includes 2-tone brown metal cabinet, PTT mike, crystals (specify channel no.) and FCC license forms. FCC license required . . . no exam.

Heathkit 5-Channel Transceiver

- 5 crystal-controlled transmit & receive channels • Superheterodyne receiver with RF stage • Built-in squelch and automatic noise limiter • Convenient push-to-talk crystal microphone • Available with or without selective-call circuitry • Ideal for business or personal communications

Optional Selective Call On GW-32 Models! Permits individual call of up to 4 different units on same channel . . . 92 possible combinations. Also eliminates unwanted CB conversations, and speaker hiss & noise during standby. All models include PTT microphone, power cable, crystals for 1 channel (specify no.), brown metal cabinet, & FCC license forms. FCC license required . . . no exam.

Save \$20 On This Deluxe Heathkit "Master Station" CB

- 5 crystal-controlled transmit & receive channels • Built-in 4 tone selective call circuitry • Built-in 3-way power supply • Adjustable squelch • Switchable automatic noise limiter • Simple to assemble • Receives all 23 channels • 1/2 uv receiver sensitivity • Slide-rule dial with planetary drive • Built-in tuning meter • Includes metal cabinet, PTT mike, AC & DC power cables, crystal for 1 channel (specify no.) & FCC license forms • FCC license required . . . no exam

Kit GW-42, 23 lbs. . . \$10 dn., \$9 mo. . .
(Was \$119.95) Now \$99.95

Deluxe 5-Channel Transceiver . . . 4 New CB Features!

- New front-panel crystal socket—allows quick, convenient changing of transmit crystal on one channel • New spotting switch—generates a signal to aid in tuning receiver to exact frequency of transmit crystal • New TVI filter—minimizes interference in TV receivers • New calibrated "S" meter • 5 crystal-controlled transmit-receive channels • All-channel receiver tuning • 3-way power supply—6 or 12 v. DC or 117 v. AC • R.F. stage for high performance reception • Styled in handsome Heathkit marine motif • Includes PTT mike, metal cabinet, AC & DC power cables, crystals for 1 channel (specify no.) & FCC license forms • FCC license required . . . no exam

1-Watt Walkie-Talkie . . . Buy A Pair & Save \$10!

- Includes \$20 rechargeable battery • Up to 3-mile inter-unit communications • 10-transistor, 2-diode circuit • Single crystal-controlled transmit & receive channel • Adjustable squelch & automatic noise limiter • Built-in 117 v. AC charger • Rustproof, all-metal case

Powerful & Portable! Operates 5 to 10 miles with external antenna or 5-watt rigs. Battery recharges from house current or car's 12 v. battery . . . built-in battery charge indicator . . . superhet receiver with RF stage. Includes aluminum case, shoulder & hand straps, battery, power cords, earphone, FCC license forms & crystals (specify). FCC license required . . . no exam.

Deluxe 9-Transistor Walkie-Talkie

- Up to 1 mile inter-unit operation • Anyone can use it . . . no license required • Crystal-controlled transmit, superhet receive • Built-in squelch & automatic noise limiter • Rust-resistant aluminum case • Includes antenna jack, earphone & crystals for 1 channel (specify)

Kit GW-21A, 3 lbs. . . \$4 dn., \$5 mo. \$39.95

4-Transistor Walkie-Talkie, Only \$35 A Pair!

- Operates 1/4 mile or more between similar units • Built-in battery power • No license, forms, tests or age limit • Crystal-controlled transmitter—super-regenerative receiver • Compact—fits easily in pocket, purse • Sturdy steel case • Includes crystals for 1 channel (specify no.)

Kit GW-31 . . . 2 lbs. \$19.95

Kit GW-12A (AC only), 10 lbs. . .
\$4 dn., \$5 mo. . . (was \$39.95) Now \$34.95
Kit GW-12D (AC & DC), 13 lbs. . .
\$4 dn., \$5 mo. . . (was \$44.95) Now \$39.95

GENERAL DESCRIPTION—RECEIVER sensitivity: 1 uv signal at antenna input produces 10 db signal to noise ratio. **Transmitter section:** Power input to final RF amplifier does not exceed 5 watts. **Nominal power requirements:** 117 v. AC operation, 50 watts; 6v. DC, 8 amps; 12 v. DC, 4 amps. **Dimensions:** 5 3/4" H x 8 3/4" W x 8" D.

Kit GW-22A (117 v. AC), 13 lbs. . .
\$5 dn., \$5 mo. . . (was \$59.95) Now \$47.95
Kit GW-22D (6 or 12 v. DC), 13 lbs. . .
\$5 dn., \$5 mo. . . (was \$64.95) Now \$49.95
Kit GW-32A (117 v. AC), 15 lbs. . .
\$7 dn., \$7 mo. . . (was \$84.95) Now \$69.95
Kit GW-32D (6 or 12 v. DC), 15 lbs. . .
\$8 dn., \$7 mo. . . (was \$89.95) Now \$74.95

GENERAL DESCRIPTION—RECEIVER: 5-tube superheterodyne with RF stage, crystal-controlled, on up to 5 of the 23 channels as determined by the particular crystal(s) installed. **Sensitivity:** 1/2 microvolt for a 10 db signal-to-noise ratio. **Transmitter:** Power input to final RF amplifier, nominal 5 watts. **Nominal power requirements:** GW-22A—117 volts, 50/60 cps AC, 50 watts; GW-22D—6 volts DC, 8.0 amperes; 12 volts DC, 4.5 amperes. GW-32A—117 volts, 50/60 cps AC, 50 watts; GW-32D—6 volts DC, 8.0 amperes; 12 volts DC, 4.5 amperes. **Dimensions:** 9 1/4" D x 6 1/4" H x 9 1/2" W.

GW-42 GENERAL DESCRIPTION—RECEIVER SECTION: 6 tube superheterodyne circuit with RF amplifier, squelch, noise limiter. **Intermediate frequency:** 455 kilocycles. **Sensitivity:** 1/2 microvolt or less for a 10 db signal to noise ratio. **Selectivity:** 40 db attenuation of adjacent channel. **TRANSMITTER SECTION:** **Nominal power input to final RF amplifier:** 5 watts. **Frequency control:** 3rd overtone crystal as selected by 5-position switch. **Modulation:** AM plate modulation, automatically limited to less than 100%. **Output impedance:** 50-70 ohm. **TONE SQUELCH SECTION:** **Frequency control:** Resonant reed relay; with reeds used for generation of calling tone and frequency selection during monitoring. **Power requirements:** AC at 105-125 volts, 60 cycles, 70 watts; 6 VDC at 9 amps; 12 VDC at 5 amps. **Dimensions:** 5 3/4" H x 17 1/2" W x 10 1/2" D.

Kit MW-34, 18 lbs. . . \$9 dn., \$8 mo. . .
(was \$89.95) Now \$84.95

MW-34 SPECIFICATIONS—RECEIVER: 5-tube superheterodyne circuit with RF stage, squelch & automatic noise limiter. **Intermediate frequency:** 455 kc. **Sensitivity:** 1/2 uv for 10 db signal-to-noise ratio. **Selectivity:** 5 kc @ 6 db down from peak response. **Input impedance:** 50 to 70 ohm. **TRANSMITTER SECTION:** **Nominal power input to final RF amplifier:** 5 watts. **Modulation:** AM plate modulation automatically limited to less than 100%. **Output impedance:** 50 to 70 ohm. **GENERAL SPECIFICATIONS:** **Power requirements:** 105-125 volts, 50/60 cps, AC 72 watts. 12 volts DC, 4.5 amperes; 6 volts, DC, 9 amperes. **Dimensions:** Overall; 4 3/4" H x 8 3/4" W x 11" D.

Kit GW-52, 4 lbs. . .
\$7 dn., \$7 mo., was \$74.95 now \$69.95
Kit GW-52-2 (pair), 8 lbs. . .
\$13 dn., \$11 mo., was \$139.95 now \$129.95

GW-52 SPECIFICATIONS—Receiver—Sensitivity: 1/2 microvolt for 10 db signal-to-noise ratio. **Selectivity:** 7 kc at 6 db. **Audio power output:** 250 milliwatts. **Transmitter: Input power to final stage:** 1 watt nominal. **Battery:** 12.5 V. (500 mah rechargeable nickel cadmium; 12 hrs. use per charge). **Battery life:** 1500 hrs. min. 5000 hrs. likely in normal usage. **Charging source:** 117 VAC or 12 VDC. **Antenna:** 35" whip type, completely collapsible into cabinet, or external. **Earphone jack:** Miniature-type (earphone supplied). **Cabinet dimensions:** 10 1/16" H x 3 3/8" W x 1 1/16" D.

Kit GW-21-2 (pair) 6 lbs. . . \$8 dn., \$7 mo. \$74.95
GWA-30, Battery Set (2), 1 lb. \$2.95

GW-21A SPECIFICATIONS—Receiver: Crystal-controlled superheterodyne. **Sensitivity:** 1 uv for 10 db s/n ratio. **Transmitter:** Crystal-controlled, any channel 2 to 23 in 11 meter citizens band (unlicensed). **RF input power:** 100 milliwatt. **Battery:** 9 volt. **Antenna:** 35" whip. **Circuit:** 9 transistor, 2 diode. **Dimensions:** 8" H x 3 3/8" W x 1 1/8" D.

Kit GW-31-2 (pair), 4 lbs., \$4 dn., \$5 mo. \$35.00
GWA-30: Battery Set. (2) . . . 1 lb. \$2.95

GW-31 SPECIFICATIONS—Receiver: Super-regenerative detector. **Sensitivity:** Usable with signals as low as 4 uv at antenna. **Transmitter:** Crystal-controlled, any channel 2 to 23 (unlicensed) in 11 meter citizens band. **RF input power:** 90 milliwatt. **Battery:** 9-volt. **Antenna:** 36" whip. **Circuit:** 4-transistor. **Dimensions:** 5 3/4" H x 3 3/4" W x 1 1/2" D.



GW-12A \$34.95
(was \$39.95)



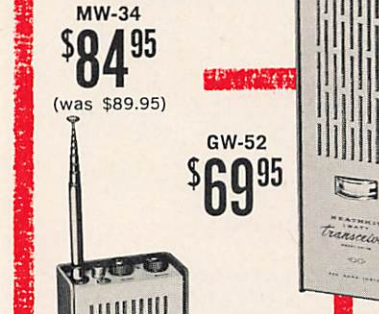
GW-22A \$47.95
(was \$59.95)



GW-42 \$99.95
(was \$119.95)



MW-34 \$84.95
(was \$89.95)



GW-52 \$69.95



GW-21A \$39.95



GW-31 \$19.95

Convenient Auto Accessories!



GDP-95
\$62⁹⁵



NELI Torque Fire® All-Silicon Electronic Ignition System . . . Installs In 5 Minutes!

- Provides fewer tune-ups, longer plug life, greater gas economy, instant starts in all-weather • Cannot be damaged by improper installation • Installs in 5 minutes • Transfer from car to car . . . present system is left intact • Operates on 6, 12 or 24 v. DC, pos. or neg. gnd. . . any car or truck Use On Auto, Marine Or Stationary Engines with battery ignition systems! Provides maximum horsepower. Fires plugs under *all* conditions. Clean points each time you start car. Zener regulated voltage protects coil. Requires no special test equipment to tune. No temperature limitations, can be mounted on firewall if desired. Takes only 5 minutes to install—not a kit! Built-in test light assures reliability. Guaranteed 50,000 miles or 3 years.

Model GDP-95, 3 lbs. . . \$7 dn., \$6 mo. \$62.50

GDP-134
\$34⁹⁵



Save Up To 50% On This Kit Form NELI "Trans-nition"® System!

- 4-transistor, zener-diode protected circuitry • Operates on 6 or 12 v. DC systems—installs easily on all cars, foreign & domestic • Built-in conversion plug for switching to conventional ignition system when necessary • Completely sealed against moisture, corrosion, etc. • Simple to assemble and install

Better Mileage, Easier Starting, & Longer Life To Engine and ignition system parts are the claims made by the leading automotive magazine editors for transistor ignition systems. The basic principle involved is replacing your present ignition coil with a special design coil & transistor circuit to produce a much "hotter" spark.

Easy To Install! Just mount & connect the color-coded leads & by-pass relay. Includes instructions, ballast resistor, all mounting hardware, wire, terminals & high output coil . . . nothing else to buy! A regular \$69.95 value . . . save \$35! Order yours now!

Kit GDP-134, 7 lbs. . . \$4 dn., \$5 mo. \$34.95

IO-20
\$89⁹⁵



Diagnose Ignition Troubles With This Heathkit Ignition Analyzer!

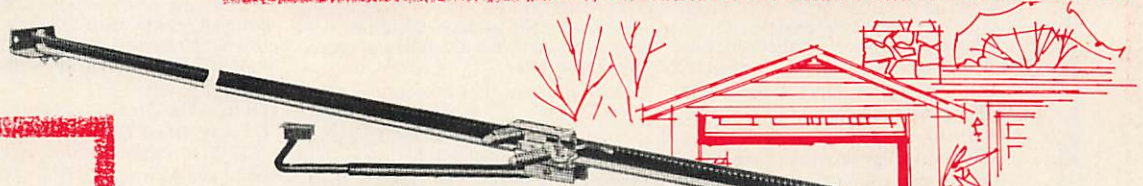
- Spots ignition troubles—shows results of corrective action • Just flip a switch to select any of 4 different patterns without switching leads • Expand any view horizontally or vertically for a "closer look" • Easy to use—detailed instruction provided for assembly and operation

Be An Ignition Expert! IO-20 shows shorted plugs, bad points, defective wiring, worn distributor parts, incorrect dwell time, etc. Manuals show what to look for on 4½" screen, how to isolate trouble. May be used with external DC or AC inverter. Corrosion-resistant aluminum cabinet. Compact . . . 8" H x 9½" W x 16" D.

Kit IO-20, 17 lbs. . . \$9 dn., \$9 mo. \$89.95

Export model available for 115/230 VAC, 50-60 cps; write for prices.

Kit ID-11, 3 lbs. . . Accessory timing light \$14.95



GD-20A
\$124⁹⁰

End Garage Door "Wrestling"

With This Heathkit Garage Opener Semi-Kit!

- New VHF portable "wireless" transmitter—so compact it fits in pocket & purse, or attaches to car's sun visor • No car battery drain • No permanent under-hood installation • New VHF receiver—installs in your garage in mere minutes • Operates at greater ranges—no CB interference • Easy one-man installation • Operates overhead track and most jamb & pivot doors up to 8' high • Foolproof safety device automatically disengages door when obstructed • Automatically turns on garage light when door is opened • Just assemble mechanism—transmitter & receiver are completely assembled, ready to use • No FCC license required—complies with FCC regulations • 2 year warranty on receiver & transmitter

Open Sesame! Just a touch of a button on the new "wireless" transmitter as you pull into your driveway, and your garage door opens & the light goes on. Another touch of the button once you're safely inside, and the door closes automatically, securely. A time delay on the mechanism-operated light allows plenty of time to enter the house or turn on the main lights.

New Factory Assembled VHF Electronics! Simply clip the pocket-size transmitter to sun visor, or store in glove compartment. And since it's wireless, there's no complicated mounting under the hood or dash . . . easy to move from car to car! A self-contained battery eliminates drain on car's battery. And the new superregenerative receiver with RF stage takes just a few minutes to install. System operates on 230 to 290 mc . . . won't interfere with similar neighborhood units. Mechanism assembles quickly, easily, and may be purchased separately for push-button operation from house or garage. Automatic light feature may be extended to control your driveway or patio lights.

Assembled Transmitter & Receiver

Kit Form Mechanism

KIT MECHANISM SPECIFICATIONS—125" long x 8¾" high x 13" wide. 100# max. operating force. Operates overhead track and most jamb & pivot doors up to 8' high. 117 V. AC. ¼ H.P. motor. Fused.

VHF TRANSMITTER SPECIFICATIONS—Powered by two Eveready #E-91 alkaline batteries. Uses one of six modulation frequencies approx. 16 kc, 18 kc, 20 kc, 22 kc, 24 kc, 26 kc. CK5676 RF osc. tube, 2N270 audio osc. transistor. 5½" H x 3" W x 1½" D.

VHF RECEIVER SPECIFICATIONS—117 VAC, 10 watts. 6AB4 RF amplifier, 12AT7 detector-amplifier, 12AT7 amplifier-rectifier, 5696 relay control. RF frequencies approx. 230 mc, 240 mc, 250 mc, 260 mc, 270 mc, 280 mc, 290 mc. 5¾" H x 6" W x 6½" D.

GD-20A, 69 lbs. . . mechanism, (1) transmitter, (1) receiver . . . \$13 dn., \$11 mo. \$124.90

GD-20B, 70 lbs. . . mechanism, (2) transmitters, (1) receiver . . . \$15 dn., \$12 mo. \$144.90

Kit GDA-20-3 Heathkit mechanism, 61 lbs. . . \$7 dn., \$7 mo. \$69.95

GDA-20-4, (1) Transmitter, (1) Receiver . . . 8 lbs. . . \$6 dn., \$5 mo. \$54.95

GDA-20-5, (2) Transmitters, (1) Receiver . . . 9 lbs. . . \$8 dn., \$7 mo. \$74.95

Win A Houseful of
HEATHKITS
see center of flyer

Heath Marine - High Performance

If You Can Find A 75-Watt Radiophone For Less Money—
It Must Be A Used One

- 75-watt power input • 6 crystal-controlled transmit & receive channels (2-5 mc) • AM broadcast band tuning • 15-watt deck hailing capability • Transistorized receiver • Assembled & tested • FCC type accepted

75 Watts, The Low Cost Way! The MWW-14 is unequalled in value, topnotch in quality. Conservatively rated components mean dependable power, long life, and crisp, clean solid communications over the maximum usable distance.

Owner's Manual Is Complete . . . gives all the information you need, plus hints on good operation. Includes instructions for installation by FCC licensed technician. Compare—you'll choose the MWW-14.

- Assembled MWW-14, 31 lbs. . . \$28 dn., \$24 mo. \$279.95
- MWA-14-1, Optional Handset (like MWW-15), 2 lbs. \$24.95
- Extra Transmit & Receive Crystals (specify), 1 lb. each \$2.95
- 18' Radiotelephone Antenna . . . with laydown swivel base & high impact side mount. 2-3 mc band.

MDP-13, \$5 dn., \$6 mo. . . (Antennas express or motor freight only) \$59.95

MWW-14 SPECIFICATIONS—RECEIVER: Frequency range: Marine, 2-5 mc. Broadcast, 540-1620 kc. Sensitivity: (providing 10 db S/N ratio or better) Marine channels, 2 microvolts; Broadcast, 10 microvolts. **TRANSMITTER:** Frequency range: 2-5 mc marine bands. Final power input: 75 watts. RF output: 40 watts. Power requirements: 12 volts DC. Receiver only, 0.6 amp. Standby, 2.9 amp. Transmit, 16 amps. Dimensions: 6½" H x 11¼" W x 17" D.

MWW-14
\$279⁹⁵



MWW-15
\$425⁰⁰



MWA-15-1
\$95⁰⁰



Your Best Buy in a 150-Watt Radiotelephone . . . Heathbuilt MWW-15

- 150-watt power input • 8 crystal-controlled transmit and receive channels (2-5 mc) • AM broadcast band tuning • 15-watt deck hailing capability • All solid-state receiver • Operates remotely with MWA-15-1 • Completely assembled & tested • FCC type accepted for party boat use

150 Watts of Input Power! . . . for maximum range. Reaches out to other ships, the Coast Guard, & telephone company . . . up to 150 miles away! And it comes to you at a market shattering price of only \$425! Complete With Installation/Operating/Service Manual . . . discusses in plain talk how to use your radiotelephone . . . includes all necessary information, FCC forms, regulations, & applications. Complete instructions including pictorial diagrams for installation by FCC-licensed technician. Choose the best buy—the MWW-15.

- Assembled MWW-15, 32 lbs. . . \$43 dn., as low as \$25 mo. \$425.00
- Assembled MWW-15R, (with Remote), 40 lbs. write for credit terms \$520.00
- MWA-15-2, Optional Microphone (like MWW-14), 2 lbs. \$9.95
- Extra transmit & receive crystals (specify), 1 lb. each \$2.95
- 24' Radiotelephone Antenna . . . with laydown swivel base & high impact side mount. Ready to install.
- MDP-74, 14 lbs. . . \$7 dn., \$7 mo. \$69.95
- Antennas express or motor freight only) \$69.95

MWW-15 SPECIFICATIONS — RECEIVER: Frequency range: Marine, 2-5 mc. Broadcast 540-1620 kc. Sensitivity: (providing 10 db S/N ratio or better) Marine channels, 2 microvolts; Broadcast, 10 microvolts. **TRANSMITTER:** Frequency range: 2-5 mc marine bands. Final power input. 150 watts. RF output: 80 watts. Power requirements: 12 volts DC. Receiver only, 0.6 amp. Standby, 2.9 amp. Transmit, 20 amps. Dimensions: 6½" H x 11¼" W x 17" D.

NEW! Full Remote Control At Low Cost For Your Heath-Built 150-Watt Radiotelephone

- * Full MWW-15 remote control — including power on/off, volume, squelch, mode switch, and channel selector • Telephone handset • Universal gimbal mounting • Completely factory assembled with detailed installation/operating manual included • Styled to match MWW-15

Here's The Smartest Remote Control To Complement The Bridge Of Any Boat! Sharp and able, it's in a class by itself. Provides all MWW-15 radiotelephone operating functions from a remote control point on your boat. The MWA-15-1 looks smart . . . its small size keeps your bridge or cockpit area clear while the radiotelephone is placed in a more convenient and practical location; for example, near your chart table. Easy to add to any current MWW-15 radiotelephone installation.

- Order model MWW-15R for MWW-15 with MWA-15-1 remote control factory installed and ready to go!
- Assembled MWA-15-1, 8 lbs. . . \$10 dn., \$9 mo. \$95.00
- Assembled MWW-15R, 40 lbs. . . write for credit terms. \$520.00

MWA-15-1 SPECIFICATIONS—Front panel controls include: Squelch, On/Off and Volume, Mode — internal speaker — external speaker-handset, Channel selector. Dimensions: 5" H x 9" W x 4¼" D.

The Famous Heath-Built MWW-13A Puts Radiophone Safety Within Every Boatowner's Budget

- Dependable 25-watt power • 4 crystal-controlled 2-3 mc marine channels • Broadcast band reception • FCC type accepted • Assembled and tested—ready to install • Available as complete owner-installed package or radiophone only

Heath recommended radiotelephone for outboard cruisers, cruising auxiliaries, and smaller inboard cruisers. Complete with owner installation manual and crystals for 2182 & 2683 kc. Assembled MWW-13AS, Complete system for do-it-yourself installation on outboard powered boats, include radiophone, antenna & instructions, 23 lbs. . . \$19 dn., \$17 mo. \$189.95

- Assembled MWW-13A, Radiophone for technician installation only, 17 lbs. \$17 dn., \$14 mo. \$164.95
- MDP-93, 13' Fiberglass Antenna only, 6 lbs. . . \$4 dn., \$5 mo. \$34.95 (express or motor frt. only) \$34.95
- MDP-103, Swivel lay-down base mt., 2 lbs. \$9.95
- Extra transmit & receive crystals (specify) 1 lb. each \$2.95



MWW-13AS
\$189⁹⁵

... Advanced Features ... Lowest Cost!

Heathkit Mariner 3-Band Radio Direction Finder!

- Covers Beacon/Consolan, AM, & Marine telephone bands • All-transistor circuitry assures long dependable life • Independent built-in power supply

Cruise Relaxed—Cruise With Safety—Navigate By Radio . . . Your Mariner will show you exactly where you are . . . provide you with weather bulletins . . . and double as a communications receiver in emergencies. Power is self-contained—dependent of boat's power plant for extra safety.

Kit MR-21A, 14 lbs. . . \$11 dn., \$10 mo. \$109.95
Assembled MRW-21A, 13 lbs. . . \$16 dn., \$14 mo. \$159.95

MR-21A SPECIFICATIONS—Beacon band: 188 to 410 kc. Broadcast band: 535 to 1620 kc. Marine band: 1650 to 3450 kc. Sensitivity for 6 DB signal-to-noise ratio: BC band, 40 uv/meter; Beacon band, 120 uv/meter; Marine band, 25 uv/meter. Normal bearing accuracy: $\pm 3^\circ$. BFO: 455 kc, switch-selected.



MR-21A
\$109⁹⁵

Heathkit MI-11A Depth Sounder

- 200 Foot Range • All solid-state circuit • Self-contained battery power or boat power • Simple construction • Power change-over switch on rear panel • A dependable, well-proven instrument

Compare These Features With Other, More Costly Units! An all transistor circuit puts your MI-11A in operation instantly . . . keeps it operating faithfully, accurately. Large black shaded dial with big white numerals reads easily. Attractive rustproof metal cabinet has nautical gray, white, black & blue color styling. A gimbal mounting bracket permits installation virtually anywhere!

Kit MI-11A, 8 lbs. . . \$7 dn., \$7 mo. \$69.95
Assembled MIW-11A, 8 lbs. . . \$10 dn., \$9 mo. \$99.95
Accessory transducer transom mount; Model MIA-11, 2 lbs. \$8.95

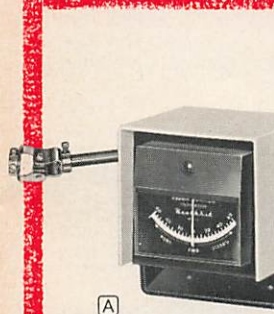
MI-11A SPECIFICATIONS—Dial: Two revolutions for 0-200 feet in one foot divisions. Range: 0-200 feet on hard bottoms, 0-100 feet on soft bottoms. Frequency: 200 kc. Accuracy: 5% of actual depth. Dimensions: 7 1/4" H x 5 1/4" W x 7 1/2" D.



MI-11A
\$69⁹⁵



MIA-11
\$8⁹⁵



MI-14
\$27⁵⁰



MI-41
\$39⁹⁵



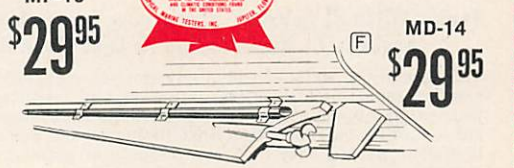
MDP-104
\$20²⁹



MP-10
\$29⁹⁵



MD-24
\$79⁹⁵



MD-14
\$29⁹⁵

A Heathkit Rudder Position Indicator

- Continuously monitors rudder position • Essential for close maneuvering and outdrives • Stops rudder drag from incorrect trim • Operates from 6 or 12V

Kit MI-14, 4 lbs. . . \$3 dn., \$5 mo. \$27.50

MI-14 SPECIFICATIONS—Accuracy: $\pm 3\%$ of full-scale meter deflection. Input voltage: 6 or 12 volts DC, Zener diode regulated. Current drain: (Nominal) 280 milliamperes. Dimensions: Overall (Meter Cabinet) 3 3/8" W x 3 3/4" D x 3 1/8" H. Finish: Marine white & black.

B Heathkit Fuel Vapor Detector

- Detects combustible gas fumes • Provides visual warning • May be connected to alarm or blower • May be connected to disable ignition • Built-in fail-safe

Kit MI-41, 4 lbs. . . \$4 dn., \$5 mo. \$39.95

MI-41 SPECIFICATIONS—Voltage: 12 V DC. Current: 1.0 amp. Panel size: 5" x 3 1/8". Depth: 3 3/8". Detector head size: 1 1/2" round x 2 1/2" long. Length of interconnecting cable supplied: 15'. Audible alarm capability: Yes. Meter indicator: Yes. Color: Marine White & Black. Material: Aluminum. Temp. range: -20°C to $+80^\circ\text{C}$.

C University Deck Speaker

- Weatherproof horn • Swivel "any angle" mounting • Nautical gray color Here's the Heath recommended horn projector for use as a deck hailer speaker with the MWW-14 & MWW-15 radiotelephones.

Model MDP-104, 5 lbs., mfrs list \$34.50. Net \$20.29

MDP-104 SPECIFICATIONS—Continuous power rating: 25 watts RMS. Impedance: 8 ohms. Frequency response: 200-13,000 cps. Dimensions: Horn maximum diameter, 10".

D Heathkit Power Converter

- Provides 117 v AC up to 175 watts from 6 or 12 battery power . . . for incandescent lamps, electric shavers, etc. Not recommended for TV, tape recorders, etc., requiring high starting current and/or standard sine wave current. Write for complete application info.

Kit MP-10 . . . 8 lbs., \$3 dn., \$5 mo. \$29.95
Assembled MPW-10 . . . 8 lbs., \$4 dn., \$5 mo. \$39.95

MP-10 SPECIFICATIONS—Power source: 6 or 12 volt storage battery. Power output: Nominal 117 volt, 60 cycle AC; 12 volt operation, 175 watts continuous, 240 watts max.; 6 volt operation, 120 watts continuous and max. Input current for continuous ratings: 6 volt operation, 25 amperes; 12 volt operation, 16.5 amperes.

E Heathkit Foghorn/Hailer/Boat Horn

- Foghorn to Deck Hailer to Boat Horn with a flip of the switch • Solid-state 30-watts peak circuit • Fused protection from overload

Use It As A Foghorn! . . . Use It As A Deck Hailer! . . . Use It As A Boat Horn! . . . powerful transistor circuitry assures dependable performance at all times. Runs cool with no component deterioration as with tube-type units.

Kit MD-24, Includes basic unit, plus PTT mike, & 10" deck speaker, 11 lbs. . . \$8 dn., \$7 mo. \$79.95

F Heathkit Marine Ground System

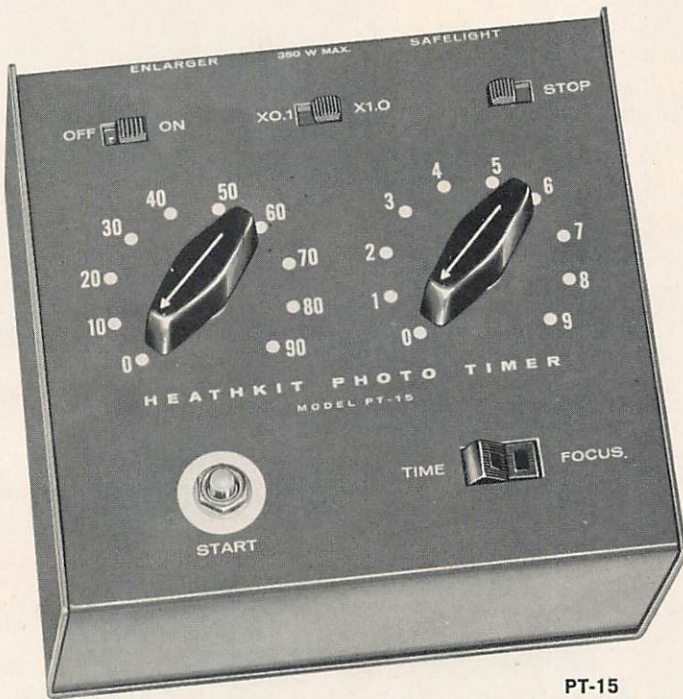
- Provides Radiotelephone Grounding Surface . . . More than adequate for most boat electrical systems. Two 8' heavy-gauge copper tubes require only bolting thru keel & 1 thru-hull fitting. All bronze hardware supplied.

Kit MD-14, 19 lbs. (Motor freight or Express only), \$3 dn., \$5 mo. \$29.95

Win A Houseful of
HEATHKITS
see center of flyer

Photo Aids for Better Prints!

Now Control Exposure in Tenths Of A Second With The NEW Heathkit Photo Timer!



PT-15

\$24⁹⁵



- Controls exposure time of all printing operations—contact or enlarging
- Two switch-selected ranges . . . up to 99 seconds in 1 second steps or 9.9 seconds in 0.1 second steps . . . permits accurate resetting of any interval
- Repeatability accurate to within 2% on ALL settings • Two AC outlets . . . enlarger & safelight • All-electronic circuitry . . . no gear drive mechanisms to wear out as with "clock-motor" devices • Enlarger may be turned on or off manually with Time-Focus rocker switch • Install on wall or place upright or face up on working surface • Styled to match Heath/Mitchell Fotoval Computer • Easy to assemble & use

Quickly Expose Many Prints With a 2% Accuracy On All Settings! Thanks to a special range switch on the new Heathkit Photo-Timer, you can now control exposure times in full seconds up to 99, or up to 9.9 in tenths of a second. And all settings will be accurate to within 2%. The range switch has two positions . . . a times 1.0 for one-second steps, and a times 0.1 for steps of 1/10th of a second. For example, with the two switch-selected controls set on 80 and 6, you get a full 86 second or 8.6 second interval depending on the range switch setting. And since the range controls are switch-selected, you can accurately reset any interval any time.

Quick & Simple To Use! Simply set the desired exposure time, and push the "start" button. That's all. The Heathkit Photo-Timer shuts off at the end of the pre-selected time interval, automatically turns enlarger off and safelight on. And to quickly produce more than one print, simply tap the "start" button to repeat the cycle . . . every exposure will be accurate to within 2%.

More Convenience Features . . . Easy To Assemble! The enlarger can be turned on or off manually with the Time-Focus rocker switch. There are two AC outlets . . . one each for enlarger & safelight. And a spring-return "Stop" switch has been incorporated to halt the exposure process, if you decide the time interval is incorrect. The PT-15 assembles quickly & easily, too. Takes no special skills or knowledge. And the low \$24.95 price makes it worth the few hours invested. Complete with combination dark & light blue cabinet . . . matches Heath/Mitchell Fotoval Computer! Compare the features above, then order yours now!

Kit PT-15, 4 lbs. . . \$3 dn., \$5 mo. \$24.95

PT-15 SPECIFICATIONS—Timed Cycle: X1.0 Range: 1 to 99 seconds in 1-second steps. X0.1 Range: 0.1 to 9.9 seconds in 0.1-second steps. **AC Outlets:** Enlarger and safelight; each outlet provides, 105-125 v. AC @ 350 watts maximum (3 amperes). **Accuracy:** Actual timed cycle will be within 5% of time selected. **Repeatability:** All timed cycles at any one selected setting within 2% of each other. **Switches:** 0-90 seconds, in 10-second steps; 0-9 seconds, in 1-second steps; start pushbutton; Time Focus; Stop; Range, X1.0 & X0.1; On-Off. **Controls:** X1.0 calibration; X0.1 calibration; sensitivity. **Regulation:** Interval circuits regulated at 150 volts DC by an OAD regulator tube. **Power Requirements:** 105-125 v. AC, 50/60 cps, 6 watts. **Dimensions:** 6 1/4" W x 6 1/2" D x 3 1/4" H overall.

Heath/Mitchell Fotoval® Darkroom Computer . . . Assures Uniform Prints In Less Time At Lower Cost!

- Accurately & scientifically indicates correct exposure times & photographic paper grades • Cuts darkroom time, reduces paper costs, speeds your enlarging • Quickly produce correctly exposed prints everytime • Gimballed mounting bracket allows installation in any position • Completely safe lighted to permit easy darkroom reading of meter indications • Simple to assemble and operate

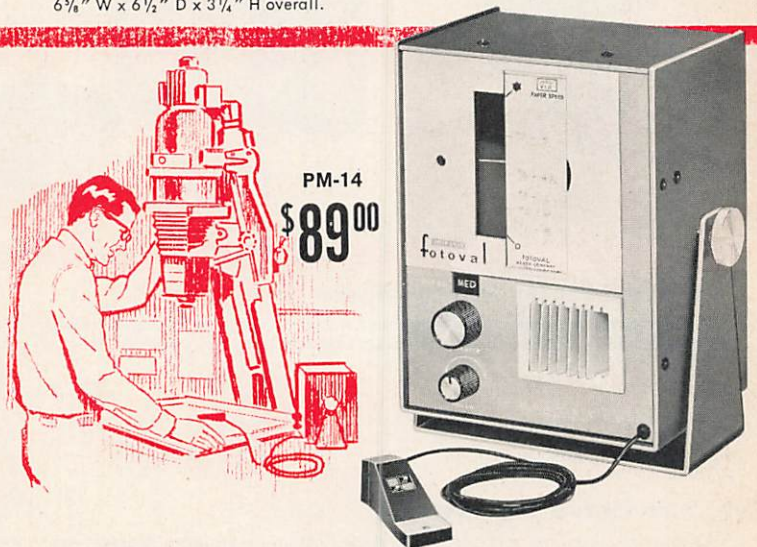
The First Print Is The Print! Unbelievable? Not with the revolutionary Heath/Mitchell Fotoval Computer System in your darkroom. Just one simple standardizing procedure, and you start producing any amount of beautiful black & white prints quickly, economically. No more wasting expensive paper . . . no more long, laborious hours in the darkroom . . . no more guessing which paper grade to use, or how long to expose each print. Imagine the savings in time, paper and money!

How Does It Work? With the unique 35 mm Test Negative, you quickly & simply determine accurate exposure times for each type & grade of paper or variable contrast filter. You then record this information on the computer scales provided. Next select the desired paper type & surface, and insert the corresponding computer scale into the Fotoval. Place the negative you wish to print in the enlarger. With the light-sensitive probe, positioned on the desired detailed black, adjust the meter to full scale using the enlarging lens diaphragm. Then meter the most desirable detailed highlight, and read the exposure time & paper grade (or filter) directly from the computer. Expose for the indicated time and develop. That's all there is to it. All prints will have uniform contrast & density.

Prints Can Be Developed Anytime By Anyone! Since all variables are held constant, you keep making prints while someone else, regardless of experience develops the prints you've already made! Even the novice will enjoy remarkable results.

Fast & Easy To Assemble! You'll find the Fotoval Computer as easy to build as it is to use . . . requires no special skills or knowledge. Order yours now!

Kit PM-14, 8 lbs. . . \$9 dn., \$9 mo. \$89.00



Fotoval Calibration Negative. Use only for initial system calibration. Determines correct exposure time for each contrast grade of paper. Allows you to determine the best choice for every negative. Once calculations are made & recorded on computer scale, they are used for all future printing as long as developing process remains the same.

Light-Sensitive Probe! Incorporates all important switching, no need to manipulate computer. Used for measuring extremely small areas of light when scanning negatives for desired shadow & highlight details. Shaped to fit and function easily in your hand . . . fits into corner of easel. Magnetized base for added handling ease!



Heath Scientific & Educational Instruments

New Berkeley Physics Laboratory By Heath Company

• Each unit a complete 2-student lab station • Available assembled or in kit form to fit budget requirements • Instruments may be purchased separately or as complete lab stations • Standard components provide replacement parts

Heath, Manufacturer Of Test Instruments & Materials As Used At Berkeley . . . now provides a modern and complete laboratory system for the Berkeley Physics Laboratory. Write for free brochure . . . includes full specifications.

Kit EP-100A . . . complete 2-student lab station	\$396.72
Assembled EPW-100A . . . complete 2-student lab station	\$545.26
Kit IO-12S, Laboratory 5" Oscilloscope	\$ 76.95
Assembled IOW-12S	\$126.95
Kit IG-102S, RF Signal Generator	\$ 30.00
Assembled IGW-102S	\$ 60.00
Kit IP-32, Regulated Power Supply	\$ 56.95
Assembled IPW-32	\$ 84.95
Kit IG-82, Sine-Square Wave Generator	\$ 51.95
Assembled EUW-27, Sine-Square Wave Generator	\$ 94.00
Kit IM-11, Vacuum Tube Voltmeter	\$ 24.95
Assembled IMW-11	\$ 39.95
Assembled EUW-17, Transistorized Power Supply	\$ 20.00
Assembled EPW-14, Test Chassis & Small Parts Set	\$ 60.00
Assembled EPW-24, Cathode Ray Tube & Deflection Coil Set	\$115.00
EP-10, Battery Set	\$ 5.00

2 Student Lab Station Kit \$396.72

Heathkit IMPScope Revolutionizes The Teaching Of Biology And Physiology

• Brings the most recent physiological instrumentation techniques to the student in the classroom • A complete teaching package consisting of a high-gain oscilloscope with built-in stimulator, laboratory sourcebook, and many accessories • Instruments and techniques developed under project IMPs, funded by the NSF and sponsored by the University of California, Berkeley • Not intended for medical diagnostic use

IMPscope Is An Inexpensive Instrument For The Study Of Physiology . . . clearly demonstrates human EKG, frog EKG, frog sciatic nerve impulse, plethysmographic pulse pressure display, and many more physiological phenomena. Write for complete descriptive brochure.

Kit EV-3, 27 lbs. . . \$16 dn., \$15 mo.	\$160.00
Assembled EVW-3, 28 lbs. . . \$25 dn., \$22 mo.	\$250.00
Export model available for 115/230 VAC, 50-60 cps; write for prices.	

EVA-3-1, Accessory Package: Includes nerve chamber, vector dolly, plethysmograph, frog electrodes & manual of instructions. 3 lbs. \$35.00
 EVW-3-1, Factory Assembled Accessories, 3 lbs. \$50.00

EV-3 SPECIFICATIONS—VERTICAL AMPLIFIER: Sensitivity: Switch selected; 200 microvolt, 1 millivolt, and 5 millivolts per centimeter. Variable from 200 microvolts to 5 millivolts per centimeter. **Bandwidth:** ± 3 db from 0.25 to 2500 cps. **Input:** Balanced. **HORIZONTAL: Sweep frequency (rate per centimeter):** Slow, 0.15 to 5 sec. Medium, 7.5 milliseconds to 0.2 sec. Fast, 0.5 to 1.0 milliseconds. **Stimulator:** Rate: 6 to 30 stimuli per second. Recurrent stimulus or single stimulus with pushbutton—indicator light on front panel. **Stimulus duration:** 0.25 to 6 milliseconds. May be increased with an external capacitor—jack provided. **Power requirements:** 70 watts, 105-125 volts, 50/60 cps AC. **Dimensions:** Overall, 11 1/2" W x 7 1/2" H x 19 1/2" D. **Net weight:** 17 1/2 lbs.

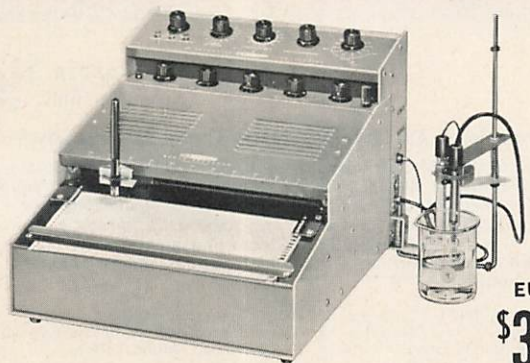


EV-3
\$160⁰⁰

Heath-Built pH Recording Electrometer

For Classroom Use Or Educational Research . . . here's the perfect recording pH meter. Full scale spans of 1, 2, 5, 10, and 14 pH units (e.g.; shows full scale span of pH 4 to 5, or any other one pH unit from 0 to 14). Readable to 0.1% full scale. Repeatable to 0.5% full scale. Excellent readout for pH Stat, or control for automatic burettes.

EUW-301, pH Recording Electrometer, 26 lbs. (pH electrodes not included) . . . \$30 dn., \$26 mo.	\$300.00
EUA-20-23 New Sargent Combination pH Electrode	\$38.00
EUA-20-11, pH Module only, 8 lbs. (converts Heath EUW-20A Servo-Recorder to pH Recording Electrometer) . . . \$13 dn., \$11 mo.	\$125.00
EUA-301-1, Parts Kit (chopper, three 5-prong plugs and back cover) to convert recorder in EUW-301 to standard EUW-20A chart recorder	\$20.00



EUW-301
\$300⁰⁰

Send For FREE Brochure!

A brochure describing the functions and applications of the EUW-301 pH Recording Electrometer in detail is yours FREE by simply dropping a note or card with your name & address to the Heath Company, Benton Harbor, Michigan 49023.

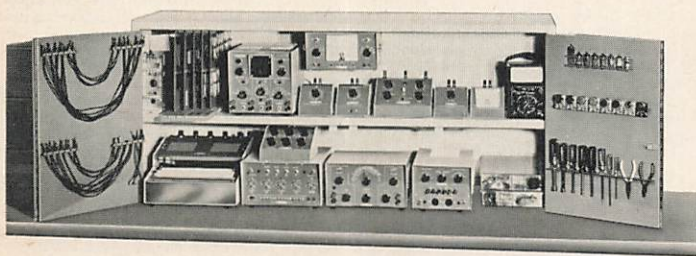
Heath Malmstadt/Enke Instrumentation Lab

Here's A Complete Electronics Lab For Scientists And Engineers. All equipment is factory wired & tested. Provides a complete electronics adjunct to chemistry research or biochem lab . . . provides a complete university-level classroom unit for teaching electronics and instrumentation. Complete text & lab manual included.

EU-100A, Complete Electronics Lab	\$1100.00
EUW-22A, All Steel Desk Top Cabinet	\$130.00

FREE FOLDER!

Gives full descriptions of entire Malmstadt-Enke Lab System and components. Complete with specifications and prices. Write for your free copy today.



"Complete Electronics Instrumentation \$1100"



Win A Houseful of
HEATHKITS
see center of flyer

Cool, Sleek & New Lower Prices,

**For Complete Stereo Listening, Build the Heathkit
All-Transistor Stereo Receiver . . . Now At New Lower Cost**

• 46-transistor, 17-diode circuitry for cool, instant, economical operation and the crisp, natural beauty of "transistor sound" • Compact, yet houses two 20-watt power amplifiers . . . two preamplifiers . . . and wide-band AM/FM Stereo tuner • Tuner automatically switches to stereo • Built-in stereo demodulator • Luxurious walnut cabinet styled in new Heathkit low-silhouette motif • Preassembled, prealigned "front-end" and AM-FM I.F. strip aid construction

How About Some Music? Maybe something soothing with the quiet natural beauty of FM/FM stereo? Or how about a "bouncy" pop tune on the AM band? Or a favorite tape or record from your prized collection? The AR-13A handles them all with ease. AM, FM & FM stereo are built-in along with 40 watts rms power that respond from 15 cps to 30 kc @ ±1 db. You'll notice a different sound. Full, rich and transparent as only transistors can make it. And if stereo comes in, you don't need to lift a finger! The built-in stereo adapter automatically switches in to take care of that. The tape recorder outputs are filtered too, so don't worry about undesirable beats when you want to tape a few favorites.

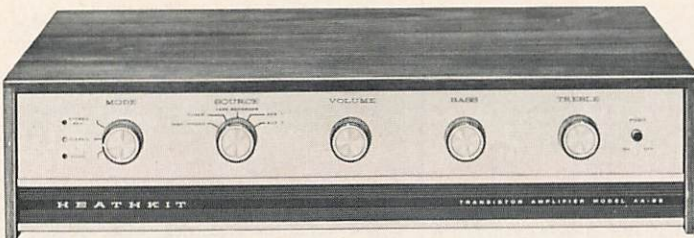
There's Plenty Of Deluxe Operating Conveniences, Too! Like a local-distance switch for optimum performance at all signal levels . . . a squelch control that hushes between-station noise when tuning . . . an automatic frequency control to "snap-in" stations . . . a big transformer power supply to assure full power at all frequencies . . . and a tuning meter, flywheels, plus lighted AM & FM slide-rule dials to "precision-tune" each station. And for appearances, the AR-13A is housed in a sleek walnut cabinet that's richly accented with an extruded gold-anodized aluminum panel. The hinged lower front panel protects the secondary controls . . . adds to the clean lines. Looks great, sounds great . . . especially in your living room!

Kit AR-13A, 35 lbs. . . \$19 dn., \$16 mo. \$184.00
Export model available for 115/230 VAC, 50-60 cps; write for prices.



AR-13A \$184⁰⁰
Now Only

AR-13A SPECIFICATIONS—Recommended system mates: Speaker systems: AS-10 or AS-51, pg. 19; separate speaker: AS-183, pg. 18; all changers, ppg. 16-17. **AMPLIFIER:** Power output per channel (Heath Rating): 20 watts/8 ohm load, 13.5 watts/16 ohm load, 9 watts/4 ohm load. (IHF Music Power Output): 33 watts/8 ohm load, 18 watts/16 ohm load, 12 watts/4 ohm load @ 0.7% THD, 1 kc. **Frequency response:** ±1 db from 15 cps to 30 kc @ rated output; ±3 db from 10 cps to 60 kc @ rated output. **Harmonic distortion (at rated output):** Less than 1% @ 20 cps; less than 0.3% @ 1 kc; less than 1% @ 20 kc. **Intermodulation distortion (at rated output):** Less than 1%, 60 & 6,000 cps signal mixed 4:1. **Hum & Noise:** Mag. phono, 50 db below rated output; Aux. inputs, 65 db below rated output. **Channel separation:** 40 db @ 20 kc, 60 db @ 1 kc, 40 db @ 20 cps. **Input sensitivity: (for 20 watts output per channel, 8 ohm load):** Mag. phono, 6 MV; Aux. 1, .25 v; Aux. 2, 25 v. **Input Impedance:** Mag. phono, 35 K ohm; Aux. 1, 100 K ohm; Aux. 2, 100 K ohm. **Outputs:** 4, 8, & 16 ohm and low impedance tape recorder outputs. **Controls:** 5-position Selector; 3-position Mode; Dual Tandem Volume; Bass & Treble Controls; Balance Control; Phase Switch; Input Level Controls (all inputs except Aux. 2); Push-Pull ON/OFF Switch. **FM: Tuning range:** 88 mc to 108 mc. **IF frequency:** 10.7 mc. **Frequency response:** ±3 db, 20 to 15,000 cps. **Capture ratio:** 3 db. **Antenna:** 300 ohm balanced (internal for local reception). **Quieting sensitivity:** 1½ uv for 20 db of quieting, 2 uv for 30 db of quieting. **Bandwidth:** 325 kc @ 6 db down with 1000 uv input. **Image rejection:** 35 db. **IF rejection:** 70 db. **AM suppression:** 35 db. **Harmonic distortion:** Less than 1%. **STEREO MULTIPLEX:** Bandpass: ±¼ db, 50 to 53,000 cps. **Channel separation:** (SCA Filter Off) 30 db, 50 to 2,000 cps, 25 db at 10 kc. **19 KC 38 KC Suppression:** 45 db down from rated output at 1 kc. **SCA Rejection:** 35 db down from rated output. **AM Tuning range:** 535 to 1620 kc. **IF frequency:** 455 kc. **Sensitivity:** 30 uv @ 600 kc; 9 uv @ 1000 kc. **Bandwidth:** 8 kc @ 6 db down. **Image rejection:** 40 db @ 600 kc. **IF rejection:** 55 db @ 1000 kc. **Harmonic distortion:** Less than 2% with 1000 uv input; 400 cps with 30% modulation. **Hum & noise:** 40 db. **Overall dimensions:** 17" L x 5½" H x 14¼" D. **Power requirements:** 105-125 volts, 50-60 cps AC, 30 watts idling, 110 watts max.



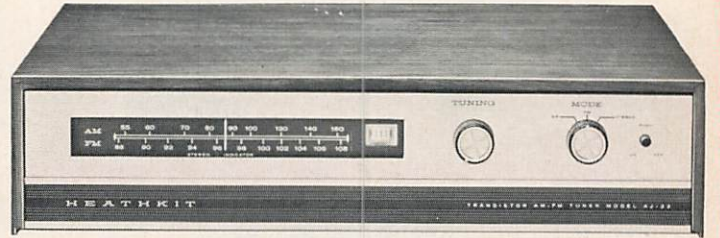
AA-22 \$99⁹⁵

Uncompromising "Transistor Power" At An Easy-On-The-Budget Price . . . All-Transistor 40-Watt Stereo Amplifier!

• 20-transistor, 10-diode circuit • Delivers full 66 watts IHF Music Power, 40 watts continuous at ±1 db from 15 to 30,000 cps • Less than 1% distortion • 5 stereo inputs for any program source • Secondary controls concealed & protected under hinged lower front panel • Handsome pre-assembled walnut cabinet . . . modern low-silhouette styling . . . matches Heathkit AJ-33A tuner

AA-22 SPECIFICATIONS—Recommended system mates: Speaker systems: AS-10 & AS-51, pg. 19; separate speaker: AS-183, pg. 18; all changers, ppg. 16-17; tuner: AJ-33A, right. **Simultaneous power output per channel:** (Heath Rating) 20 watts/8 ohm load, 13 watts/16 ohm load, 9 watts/4 ohm load. (IHF music power output) 33 watts/8 ohm load; 18 watts/16 ohm load, 16 watts/4 ohm load @ 0.7% THD, 1 kc. **Power response:** ±1 db from 15 cps to 30 kc @ rated output. ±3 db from 10 cps to 60 kc @ rated output. **Harmonic distortion:** (at rated output) less than 1% @ 20 cps, 0.3% at 1 kc, 1% @ 20 kc. **Intermodulation distortion:** (at rated output). Less than 1%, 60 and 6,000 cps signal mixed 4:1. **Hum and noise:** Mag phono, 50 db below rated output. Aux inputs 65 db below rated output. **Channel separation:** 40 db @ 20 cps, 60 db @ 1 kc; 40 db @ 20 kc. **Input sensitivity: (for 20 watts output per channel, 8-ohm load),** Mag phono, 6 mv; Tuner, 250 mv; Tape Recorder, 250 mv; Aux 1, 250 mv; Aux 2, 250 mv. **Input impedance:** Mag phono, 35 K ohm; Tuner, 100 K ohm; Tape Recorder, 100 K ohm; Aux 1, 100 K ohm; Aux 2, 100 K ohm. **Outputs:** 4, 8 and 16 ohm and tape recorder outputs. **Controls:** 5-position selector switch, 3-position mode switch, dual tandem volume, bass and treble controls, phase switch, input level controls, push-on push-off switch. **Semi-conductor complement:** 20 transistors, 10 diodes. **Power requirements:** 105-125 volts, 50-60 cycles AC, 25 watts idling, no signal; 105 watts, full power output @ 120 volts with no load on AC receptacles. **Power outlets:** 2 AC receptacles, 1 switched, 1 unswitched. **Dimensions:** 15¼" W x 3¾" H x 11¾" D (allow 1½" extra for rear projections).

Kit AA-22, 23 lbs. . . \$10 dn., \$9 mo. \$99.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.



AJ-33A \$94⁵⁰
Now Only

All-Transistor AM/FM/FM Stereo Tuner At New Lower Cost!

• 23-transistor, 8-diode circuitry • Built-in stereo demodulator • AFC for positive tuning • AGC for steady volume • Adjustable FM squelch control • Tuning meter, illuminated slide-rule dial, & flywheel tuning • Preassembled, prealigned FM "front-end" and AM-FM I.F. circuit • Stereo indicator light • Filtered stereo outputs • Stereo phase control for maximum separation, minimum distortion • Includes luxurious walnut cabinet . . . matches AA-22 amplifier

AJ-33A SPECIFICATIONS—FM SECTION: Tuning range: 88 to 108 mc. **Intermediate frequency:** 10.7 mc. **Antenna:** 300 ohm balanced or built-in line type. **Output impedance (Emitter follower):** Variable to 3000 ohms. **Output voltage:** 1.5 volts. **Quieting sensitivity:** 2 uv for 20 db; 3 uv for 30 db. **Audio frequency response:** 20-15,000 cycles ±3 db. **Harmonic distortion:** Less than 1%. **Image rejection:** 35 db. **Capture ratio:** 3 db. **AM suppression:** 35 db. **Hum & noise:** 50 db. **MULTIPLEX SECTION:** Converter bandpass: ±¼ db 50 to 53,000 cps. **Channel separation:** 30 db from 50 to 2 kc and 25 db at 10 kc. **AM SECTION:** Tuning range: 535 to 1620 kc. **Intermediate frequency:** 455 kc. **Usable sensitivity:** 8 uv @ 1000 kc. **Antenna:** Built-in rod with provision for external straight wire. **Output voltage:** 0.25 V. with 90% modulation. **Image rejection:** 40 db @ 600 kc. **Harmonic distortion:** Less than 2% (30% mod. @ 1 mv input). **Hum & noise:** 40 db. **GENERAL SPECIFICATIONS:** Tuning indicator: Meter. **Controls:** Tuning; Right Channel level; Left Channel level; FM squelch; Stereo converter—balance, separation and phase. **Switches:** Mode, AFC, Noise filter, SCA filter, local-distance. **Transistors & diodes:** 23 transistors, 8 diodes. **Power supply:** Transformer operated, full wave rectifier. **Power requirements:** 105-125 volts, 50/60 cycles, 7 watts. **Dimensions:** 15¾" W x 3¾" H x 11½" D.

Kit AJ-33A, 17 lbs. . . \$10 dn., \$9 mo. \$94.50

USE HEATH'S EASY TIME-PAY PLAN

Order the equipment you need now! . . . pay for it in easy monthly installments! Only 10% down on all orders from \$25 to \$500. Up to 18 months to pay on orders over \$300. Write for credit details on orders over \$500.

Heathkit® All-Transistor Stereo!



Deluxe 70-Watt All-Transistor Stereo Amplifier . . . New Walnut Cabinet Styling . . . Advanced Features . . . Unbeatable Value!

- New, richly warm walnut cabinet styling • 26 transistor, 10 diode circuitry for smooth, uncompromising power response . . . 13 to 25,000 cps ± 1 db at 35 watts per channel (50 watts IHF music power) • Concert hall realism, cool, instant operation, complete freedom from microphonics • Encapsulated, epoxy-covered circuit modules for fast, simple assembly • Matches AJ-43C tuner in styling, performance

Considering Transistor Stereo? Then take a close look at the newly styled Heathkit AA-21C amplifier! Examine its fresh, modern styling. Sleek, richly warm walnut cabinets. Clean, uncluttered charcoal gray upper front panels. Soft, refracted panel lighting. And hinged walnut-finished lower front panel that neatly conceals all secondary controls to avoid accidental system setting changes. Attractive enough to enrich the decor of any room!

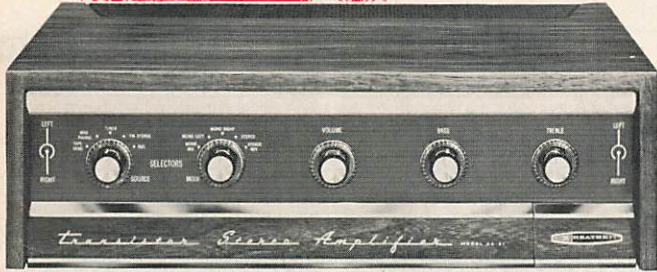
And The Sound? As modern and beautiful as its styling. Just push the unique "push-push" switch and listen! Notice the difference in sound. Clean and natural with instantaneous bursts of power as the music demands. 70 watts continuous, 100 watts IHF music power at ± 1 db from 13 to 25,000 cps! No compromising. Just pure, unmodified response that produces each note realistically. This is transistor sound with cool, instant operation; freedom from hum and microphonics, and lower power consumption. This is the Heathkit AA-21C amplifier . . . only \$149.95!

Fingertip Controls Offer Operating Convenience! All controls are front-panel mounted. Include a 5-position dual-concentric source switch, 5-position mode switch, and dual-concentric volume, bass & treble controls. There are a host of input & output connections to handle any program source, plus 4, 8 & 16 ohm speaker impedances. A transformerless output circuit & multiple feedback loops assure fine fidelity and low distortion levels. And circuit safety is guaranteed with 5 bi-metal circuit breakers . . . no fuses to replace!

Easy To Assemble! Preamplifier circuits are encapsulated in 6 epoxy-covered modules, completely wired & sealed, ready for installation. And with 5 stable circuit boards, and the simple Heath step-by-step instructions, your AA-21C goes together in a few evenings. Matches the AJ-43C tuner in styling & performance. Order now!

Kit AA-21C, 29 lbs. . . \$15 dn., \$13 mo. \$149.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

Attention AA-21 & AJ-43 owners! You can now purchase a walnut cabinet to match the new AJ-43C or AA-21C. Fits either AJ-43 or AA-21. Model AE-11, walnut cabinet, 8 lbs. \$12.95



AA-21C **\$149.95**

AA-21C SPECIFICATIONS—Recommended System Mates: Separate Speaker, AS-183, pg. 18; Speaker Systems, AS-2AU, AS-10, pg. 19; all changers & turntables, ppg. 16 & 17. **Power output per channel:** (Heath Rating) 35 watts/8 ohm load, 26 watts/16 ohm load, 18 watts/4 ohm load; (IHF music power output) 50 watts/8 ohm load, 34 watts/16 ohm load, 25 watts/4 ohm load @ 0.7% THD, 1 kc. **Frequency response:** ± 1 db from 13 cps to 25 kc @ rated output; ± 3 db from 8 cps to 40 kc @ rated output. **Harmonic distortion (At rated output):** Less than 1% @ 20 cps, 0.5% @ 1 kc, 2.0% @ 20 kc. **Intermodulation distortion (At rated output):** Less than 1%, 60 & 6,000 cps signal mixed 4:1. **Hum & noise:** Tapehead, 40 db below rated output; Mag. phono, 45 db below rated output; Aux. inputs, 60 db below rated output; Tape monitor, 70 db below rated output. **Channel separation:** 40 db min. @ 20 kc, 55 db min. @ 1 kc, 50 db min. @ 20 cps. **Input sensitivity:** (For 35 watts output per channel, 8 ohm load) Tapehead, 2 mv; Mag. phono, 3 mv; Tuner, 250 mv; FM Stereo, 250 mv; Aux., 250 mv; Tape Monitor, 0.6 V. **Input impedance:** Tapehead, 60 k ohm; Mag. phono, 30 k ohm; Tuner, 100 k ohm; FM Stereo, 100 k ohm; Aux., 100 k ohm; Tape monitor, 47 k ohm. **Outputs:** 4, 8, & 16 ohms and low impedance tape recorder outputs. **Controls:** 5-pos. Selector (dual-concentric), 5-pos. Mode switch, dual-concentric Volume, Bass & Treble controls, Tape monitor sw., Loudness sw., Phase sw., Input level controls (all inputs except Tape Head & Tape Monitor inputs), Push-Pull on/off switch. **Semiconductor complement:** 26 Transistors, 10 diodes. **Power requirements:** 105-125 volts, 50-60 cycles AC. 35 watts idling, no signal; 200 watts, full power out, @ 120 volts with no load on AC receptacles. **Power outlets:** 2 AC receptacles, 1 switched, 1 unswitched. **Dimensions:** 16" W x 5 1/2" H x 14" D.

Matching Deluxe AM/FM/FM Stereo Tuner . . . All-Around Listening, All-Transistor Sound! Now At New Lower Price!

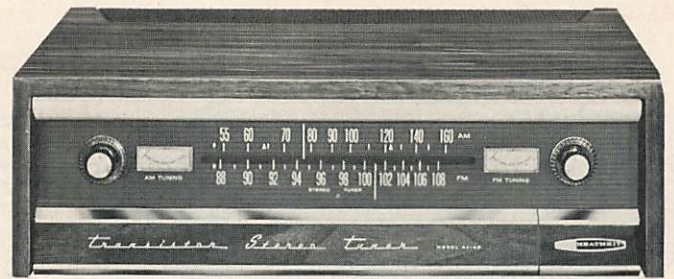
- New modern walnut cabinet styling enhances any decor • 25 transistor, 9 diode circuitry for clean, pure "transistor sound," heat & hum free operation
- AM/FM/FM stereo tuning • Automatically switches to stereo • Automatic stereo indicator light • Filtered left & right channel outputs for beat-free stereo recording • Stereo phase control for maximum separation, minimum distortion • Concealed, convenient-to-reach secondary controls • Style mate of the AA-21C amplifier

The Beauty Of "Transistor Sound" . . . A New Dimension In Listening! Whatever your listening pleasure, AM, FM or FM stereo, you hear each instrument, each voice, each note like you never heard it before. The sound is cleaner, truer, more robust, thanks to the AJ-43C's 25-transistor, 9 diode circuit. Notice the freedom from distortion & hum . . . the crisp, natural reproduction that only transistors can achieve . . . the cool, instant operation! Notice the host of deluxe operating features . . . the luxurious new walnut cabinet styling! Notice the price tag . . . a low \$121.95—far below comparable models!

Advanced Features Assure Greater Operating Convenience! Like the solid-state switch circuit that automatically routes the signal through the built-in adapter whenever stereo is received. And the stereo indicator lights automatically. You don't lift a finger! All secondary controls are protected, yet convenient to reach, under the hinged lower front panel. You simply touch the unique "push-push" switch to turn the AJ-43C on and off.

More Advanced Features For Versatility, Highest Performance! Automatic Gain Control keeps volume constant . . . Automatic Frequency Control assures positive tuning . . . a Stereo Phase Control assures maximum station separation with minimum distortion. Both channels are filtered for direct, beat-free stereo recording. The emitter-follower output stages eliminate high frequency cable losses. Individual AM & FM tuning meters, lighted slide-rule dial, and flywheels assure easy tuning. The transformer-operated power supply uses silicon diode rectifiers for long life, dependability, and freedom from heat.

Simple To Build! Assembly proceeds swiftly with the factory-built and aligned front-end FM tuner and 4-stage FM I.F. circuit board. And with famous Heath step-by-step instructions, no special skills, tools or knowledge are needed. Move up to transistor sound . . . move up to the AJ-43C now! Kit AJ-43C, 19 lbs. . . \$13 dn., \$11 mo. \$121.95



Now Only **\$121.95**

AJ-43C SPECIFICATIONS—FM SECTION (Monaural Only): Tuning range: 88 to 108 mc. Intermediate frequency: 10.7 mc. Antenna: 300 ohms balanced, internal line antenna provided. **Quieting sensitivity:** (400 cps, 100% mod.) 1.5 uv for 20 db of quieting; 2 uv for 30 db of quieting; 3 uv for full quieting, 40 db. **Image rejection:** 35 db. **IF rejection:** 75 db. **Capture ratio:** 3 db. **AM suppression:** 35 db. **Bandwidth (Complete Tuner):** 325 kc at 6 db down, 1000 uv input. **Detector bandwidth (Peak-to-Peak):** 600 kc. **Harmonic distortion:** Less than 1% (IHF). **Hum & noise:** (Complete tuner) 55 db below full quieting (IHF). **Output impedance:** (Emitter Follower) Variable to 3000 ohms. **Output voltage:** 1 V. @ 1000 uv, 400 cps 100% mod. **FM STEREO CONVERTER SECTION:** **Converter bandpass:** 50 cps to 53,000 cps, $\pm 1/4$ db. **Channel separation:** 40 db @ 50 cps to 2,000 cps; 30 db @ 10,000 cps; 20 db @ 15,000 cps. **19 KC suppression:** 50 db down. **38 KC suppression:** 45 db down. **SCA rejection:** 30 db min. 64 kc to 70 kc. **Hum & Noise:** 55 db down. **Output impedance:** (Emitter Follower) Variable to 3000 ohms each channel. **AM SECTION:** **Tuning range:** 535 to 1620 kc. **Intermediate frequency (IF):** 455 kc. **Sensitivity:** 600 kc, 7 uv for 10 db S/N; 1000 kc, 4 uv for 10 db S/N; 1400 kc, 3 uv for 10 db S/N. **Antenna:** Built-in rod with provisions for external straight wire. **Image rejection:** 50 db at 600 kc; 70 db at 1400 kc. **IF rejection:** 55 db at 600 kc; 65 db at 1400 kc. **10 KC rejection:** 40 db. **Harmonic distortion:** Less than 2%. **Hum & noise:** 30 db below 30% mod. **Output impedance:** (Normal) Variable to 3000 ohms; (Aux.) Variable to 4000 ohms. **Output voltage:** 1 volt nominal. **Dimensions:** 16" W x 5 1/2" H x 14 1/4" D.

Win A Houseful of
HEATHKITS
see center of flyer

Enjoy More Performance Per



AA-100
\$84⁹⁵

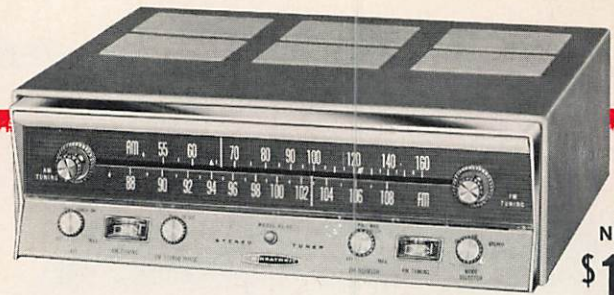
• Hi-Fi rated at 50 watts (25 watts per channel) • 5 stereo inputs • Versatile controls • Mixed channel center speaker output • Separate monophonic phono input • Easy circuit board assembly • Matches the AJ-41 tuner in styling and performance

Tube-Type Deluxe 50-Watt Stereo Amplifier . . . Puts You In Complete Command Of Every Stereo Function!

Complete Convenience & Versatility! Boasts 50 watts continuous, 60 watts IHF music power from 30 to 15,000 cps; 5 stereo inputs—mag. phono, tuner inputs for FM or AM, stereo tape, 2 auxiliary; outputs for 4, 8, & 16 ohm speaker impedances; "mixed-channel" speaker output for center "fill-in"; preamp input level controls; power amp input level controls; hum controls; mode selector; speaker-phase reversal switch; and balance & separation controls. Tape playback heads connect directly without external amplification or equalization. Easy to build with circuit board construction.

Kit AA-100, 35 lbs. . . \$9 dn., \$8 mo. \$84.95
Export model available for 115-230 v. AC, 50-60 cps; write for prices.

AA-100 SPECIFICATIONS—Recommended System Mates: Separate Speakers, AS-183, pg. 23; Speaker Systems, AS-10, AS-51, pg. 26; all changers & turntables, ppg. 24 & 25; Tuner, AJ-41 above. **Channels:** 2. **Power output:** 50 watts (25 w. per channel) Heath Hi-Fi Rating: 60 watts (30 w. per channel) IHF Music Power Output (0.7% THD, 1 kc). **Power response:** ±1 db from 30 cps to 15 kc at 25 watts output per channel. **Harmonic distortion:** Less than 0.5% at 25 watts, 1 kc. Less than 2% at 25 watts, 30-15,000 cps (each channel). **Intermodulation distortion:** Less than 1% at 25 watts, 60 and 6,000 cps signals mixed 4:1 (each channel). **Hum and noise:** Mag phono, 55 db below 25 watts output at 6 mv sensitivity. Tape Head, 35 db below 25 watts output. Tuner and aux. inputs 70 db below 25 watts output. **Channel separation:** 42 db min. at 1 kc. **Input sensitivity:** For 25 watts output per channel; mono mag. phono, 1.5 mv; stereo mag. phono, 1.5 mv; tape head, 1 mv; tuner, 0.2v.; aux. 1 & 2, 0.2v. **Outputs:** 4, 8 and 16 ohms; cathode follower tape recorder outputs. **Dimensions:** 5" H x 15 1/4" W x 13 1/2" D. (allow 1" for cables at rear).



AJ-41
Now Only
\$112⁵⁰

• Built-in FM multiplex adapter • Broad-band circuitry for full fidelity • Automatic FM Stereo indicator light • Adjustable Automatic Frequency Control for locked-in reception • Stereo phase control for maximum separation and lowest distortion • Adjustable FM squelch circuit for low noise between stations • Preamsembled tuning unit, prealigned coils

Tube-Type Deluxe AM/FM Stereo Tuner . . . Complete Listening, New Easy-On-The-Budget Price!

Advanced Features For "Concert-Hall" Performance! Compare! An automatic stereo indicator light signals when stereo is broadcast; an automatic frequency control stops "station-drift"; an adjustable stereo phase control assures maximum channel separation on any stereo signal; an FM squelch control obliterates between-station noise; individual AM & FM tuning meters, lighted slide-rule dial & flywheel tuning provide precise station selection; cathode follower outputs minimize hum & high frequency cable losses; a fidelity switch allows choice of normal or maximum AM response; a built-in antenna for local stations, plus external antenna connectors. **Deluxe Styling!** Boasts a handsome, tan vinyl-clad steel cabinet to enhance any surroundings.

Kit AJ-41, 27 lbs. . . \$12 dn., \$11 mo. \$112.50

AJ-41 SPECIFICATIONS—FM: Tuning range: 88 mc to 108 mc. **I. F. frequency:** 10.7 mc. **Frequency response:** ±2 db, 20 to 20,000 cps. **Antenna:** 300 ohm balanced (for internal or local reception). **Output voltage:** Nominal .5 volts (with 3 uv 30% modulation in). **Quieting sensitivity:** 2 uv for 20 db of quieting, 20 uv for full quieting (40 db). **Maximum deviation sensitivity:** 5 uv; (400 cycle 100% modulation). **Deviation sensitivity:** 20 kc (1100 uv in). **Harmonic distortion:** Less than 1% (1100 uv 400 cycle 100% modulation). **Image ratio:** 40 db. **AFC correction factor:** 12 db. **Amplitude modulation suppression:** 25 db. **Hum & Noise:** 40 db below 30% modulation (20 uv in). **SPECIFICATIONS MULTIPLEX—Audio frequency response:** ±2 db, 50 to 15,000 cps. **Sub-carrier bandpass:** ±3 db from 23,000 to 53,000 cps. **Channel separation:** 30 db. **Hum & Noise:** —55 db (relative to 1 volt rms output.) **Output impedance:** Cathode follower, variable to 4,000 ohms (each channel). **SPECIFICATIONS AM—Sensitivity, narrow bandwidth position:** 1400 kc, 3 uv; 1000 kc, 4 uv; 600 kc, 8 uv (standard IRE dummy antenna, 1 volt RMS reference output). **Sensitivity change, narrow to broad position:** —5 db. **I. F. bandwidth, narrow:** 14 kc, 6 db down. **Broad:** 20 kc, 6 db down. **Image ratio:** 1400 kc 50 db; 600 kc 75 db. **Harmonic distortion:** Less than 1%. **Hum & noise:** 35 db below 30% modulation (1000 kc unmodulated with 100 uv in). **I. F. rejection ratio:** 1400 kc 42 db; 600 kc 38 db. **Power Supply:** Transformer operated, 117 v., 50-60 cycle, 100 watts. **Dimensions:** 5 1/4" H x 15 1/4" W x 14 1/4" D.



AA-151
\$59⁹⁵

Audiophile Favorite . . . 28-Watt Stereo Amplifier!

• Two hi-fi rated 14-watt channels, preamps and power amps • Operates stereo or monophonic • Accepts four stereo music sources • Front panel controls • Patented Heath Ultra-Linear® circuit • Matches Heathkit AJ-12 & AJ-32 Tuners

Kit AA-151, 29 lbs. . . \$6 dn., \$6 mo. \$59.95
Export model available for 115-230 VAC, 50-60 cps; write for prices.

AA-151 SPECIFICATIONS — Recommended System Mates: Separate Speakers, AS-163, pg. 18; Speaker Systems, AS-51, AS-10, pg. 19; all changers & turntables, ppg. 16 & 17; Tuner, AJ-12 opposite. **Channels:** 2. **Power output:** 28 watts (14 w. per channel) Heath Hi-Fi Rating: 32 watts (16 w. per channel) IHF Music Power Output (0.7% THD, 1 kc). **Power response:** ±1 db from 20 cps to 20 kc at 14 watts output per channel. **Harmonic distortion:** Less than 2%, 30 cps to 15 kc at 14 watts output per channel. **Intermodulation distortion:** Less than 2% at 14 watts output per channel using 60 cps and 6 kc signal mixed 4:1. **Hum and noise:** Mag. phono input, 55 db below 14 watts; Tuner and crystal phono 65 db below 14 watts. **Channel separation:** Better than 45 db. **Input sensitivity:** For 14 watt output each channel (tone controls in "Flat" position); mag. phono, 0.004 volts at 1 kc; crystal phono, 0.2 volts; tuner and aux. 0.2 volts. **Outputs:** 4, 8 and 16 ohms. **Dimensions:** 15 1/4" W x 5 1/4" H x 11" D.



Now Only
\$65⁹⁵

AJ-12

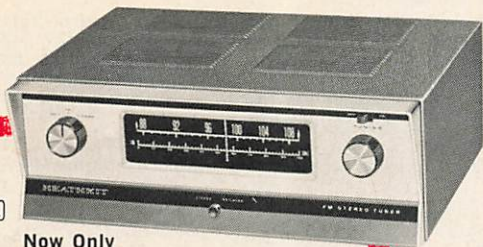
Matching FM/FM Stereo Tuner At New Lower Price

• Built-in FM stereo circuit • FM stereo indicator light • Stereo phase control for maximum separation, minimum distortion • Adjustable AFC for locked-in reception • Bar-type "Eye" tuning indicator • Filtered stereo tape recorder outputs • Easy circuit-board assembly

Kit AJ-12, FM Stereo Tuner, 20 lbs. . . \$7 dn., \$6 mo. \$65.95
Kit AJ-32, AM, FM Stereo Tuner, 23 lbs. . . \$9 dn., \$8 mo. \$84.95

AJ-12 SPECIFICATIONS—FM SECTION: Tuning range: 88 mc—108 mc. **Intermediate frequency:** 10.7 mc. **Antenna:** Balanced input for external 300 ohm antenna. **Internal line antenna.** **Image ratio (30 microvolts—30% mod.—98 mc):** —45 db. **Harmonic distortion (25 microvolts—100% mod.—98 mc):** Less than 1%. **IF rejection (98 mc):** —65 db. **FM audio response (20-20,000 cps):** ±1 db. **AFC correction factor (Full AFC):** 100 kc per volt. **AM suppression:** —27 db. **Hum & noise (25 microvolts, 30% mod):** —48 db. **Quieting sensitivity:** 20 db—2 1/2 microvolts; 30 db—3 1/2 microvolts. **FM STEREO CONVERTER SECTION:** **Audio frequency response:** ±2 db from 50 to 15,000 cps. **Sub-carrier bandpass:** ±3 db from 23,000 to 53,000 cps. **Channel separation:** 30 db or more at 1 kc; 25 db or more at 10 kc. **Size:** 5 1/4" H x 15 1/4" W x 10 1/2" D.

Dollar With Heathkit® Stereo/Hi-Fi!



A
Now Only
\$47⁰⁰

A Designer Styled FM/FM Stereo Tuner . . . Versatility At New Low Cost!

- Built-in FM stereo circuitry • FM stereo indicator light • Automatic Frequency Control • Pre-assembled, prealigned "front-end" & point-to-point wiring for fast, easy construction • New mocha brown, beige & black color styling . . . matches AA-32 Amplifier below • Filtered outputs for stereo tape recording • Lighted slide-rule dial, flywheel tuning

Kit AJ-13, 13 lbs. . . \$5 dn., \$5 mo. \$47.00
Export model available for 115/230 VAC, 50-60 cps; write for prices.

AJ-13 SPECIFICATIONS—Tuning range: 88 to 108 mc. Intermediate frequency: 10.7 mc. Quieting sensitivity: 2½ uv for 20 db of quieting; 3½ uv for 30 db of quieting. Audio frequency response: Mono—±1 db from 20 to 20,000 cps. Stereo—±2 db from 50 to 15,000 cps. Antenna: Balanced input for external 300 ohm antenna. Channel separation: 25 db or more at 1000 cps. Front panel controls: Tuning; selector switch, power off-FM-stereo; AFC switch, off-on. Dimensions: Overall: 13½" W x 4-11/16" H x 9½" D.



B
\$39⁹⁵

B Matching 16-Watt Stereo Amplifier . . . Use With Magnetic & Ceramic Cartridges!

- Four stereo inputs . . . magnetic & ceramic cartridges, tuner & auxiliary • Furnishes 16 watts of continuous stereo power—IHF Music power output of 20 watts • Refreshingly styled in mocha brown and beige with black trim accents • Full-range controls . . . found only on more expensive equipment • Easy to build . . . goes from parts to performance in just a few evenings • Two push-pull output stages plus two 4-stage preamps

Kit AA-32, 16 lbs. . . \$4 dn., \$5 mo. \$39.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

AA-32 SPECIFICATIONS—Recommended System Mates: Speaker, AS-133, pg. 18. Speaker systems; AS-22, AS-81, pg. 19. All changers & turntables, pgs. 16 & 17. Simultaneous power output per channel: 8 watts (16 watts total); IHF Music Power Output per channel: 10 watts (20 watts total). Frequency response: ±1 db from 30 cps to 30,000 cps at rated output. Harmonic distortion: (at rated output) 2% @ 30 cps, 0.7% @ 1000 cps, 2% @ 15,000 cps. Intermodulation distortion: (at rated output) Less than 3% using 60 and 6000 cps mixed 4:1. Dimensions: 13½" W x 4-11/16" H x 9½" D.



C
Now Only
\$37⁵⁰

C New Lower Priced FM Tuner . . . Converts To Stereo With Multiplex Adapter

- Broad-band circuitry, receives stereo with AC-11 Multiplex Converter (below) • Mocha brown & beige color styling with black trim • 5 tube circuit—9 tube function • Automatic Frequency Control for drift-free reception • Easy to build with factory assembled "front-end" tuner, prealigned IF transformers & encapsulated circuit module • Matches AA-13 & AA-23 Amplifiers

Kit AJ-63, 10 lbs. . . \$4 dn., \$5 mo. \$37.50
Export model available for 115/230 VAC, 50-60 cps; write for prices.

AJ-63 SPECIFICATIONS—Tuning range: 88 to 108 mc. Quieting sensitivity: 2.5 uv for 20 db of quieting; 3.5 uv for 30 db of quieting; 25 uv for maximum quieting (38 db). IF frequency: 10.7 mc. Image ratio: 40 db. AFC correction factor: 75 kc per volt. AM suppression: 25 db. Frequency response: ±2 db, 20-20,000 cps. Harmonic distortion: Less than 1.5%, 1100 uv, 400 cycles 100% modulation. Intermodulation distortion: Less than 1%, 60 cycles and 6 kc, mixed 4:1; 1100 uv, 30% modulation. Antenna: 300 ohms unbalanced. Output impedance: 600 ohms (cathode follower). Output voltage: Nominal .5 volt [with 30% modulation, 20 uv signal]. Power requirements: 105-125 volts, 50/60 cycles AC at 30 watts. Overall dimensions: 4-11/16" H x 13½" W x 7" D.



D
\$29⁹⁵

D Heathkit 14-Watt Monophonic Amplifier . . . Easy To Own!

- New mocha brown & beige color styling with black trim • Patented Heath Ultra-Linear® circuit • Hi-Fi rated 14-watt output • 30 to 15,000 cps response ±1 db at full rated output • Separate bass & treble controls • Three inputs for any program source • Matches AJ-53 & AJ-63 tuners

Kit AA-13, 17 lbs. . . \$3 dn., \$5 mo. \$29.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

AA-13 SPECIFICATIONS—Recommended System Mates: Speaker: AS-133, pg. 18; Speaker Systems: AS-22, AS-51, pg. 19; all changers & turntables ppg. 16 & 17. Power output: 14 watts Heath Hi-Fi Rating; 16 watts IHF Music Power Output (2% THD, 1 kc). Frequency response: ±1 db 30-15,000 cps, 14 watts output. Harmonic distortion: Less than 2%, 30 cps to 15 kc at 14 watts output. Intermodulation distortion: 2% or less at 14 watts output using 60 and 6000 cps signals, 4:1. Hum & noise: Mag. phono input, 50 db below 14 watts; Tuner and crystal phono, 60 db below 14 watts. Input sensitivity: For 14 watts output; mag phono, 0.004 v at 1 kc; crystal phono, 0.2 v; tuner 0.25 v with tone controls flat. Output: 4, 8 and 16 ohms. Damping factor: 10:1. Controls: 3-position function selector switch, bass and treble tone controls, volume control. Power requirements: 117 v, 50-60 cycles, 55 watts. Dimensions: 4-15/16" H x 13½" W x 10½" D.

E Heathkit 25-Watt Monophonic Amplifier . . . Versatile!

- Hi-Fi rated at 25 watts continuous power, 30 watts IHF music power rating • New mocha brown & beige color styling with black trim • Four front-panel selected inputs • ±1 db from 30 to 15,000 cps power response • Separate bass & treble controls • Bookshelf size for limited space installations • Easy to build • Matches AJ-63 & AJ-53 tuners

Kit AA-23, 20 lbs. . . \$5 dn., \$5 mo. \$42.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.



AC-11A
\$24⁹⁵



AA-23
\$42⁹⁵

AA-23 SPECIFICATIONS—Recommended System Mates: Speakers: AS-183, AS-163, pg. 18; Speaker Systems: AS-22, AS-51, pg. 19; all changers & turntables, ppg. 16 & 17. Power output: 25 watts Heath hi-fi rating; 30 watts IHF music power rating (0.7% THD @ 1 kc). Frequency response: ±1 db, 30 cps to 15 kc, at 25 watts output. Harmonic distortion: Less than 2%, 30 cps to 15 kc at 25 watts output, and less than 0.7% at 1 kc at 25 watts output. Intermodulation distortion: Less than 2% at 25 watts using 60 cps and 6000 cps signals 4:1. Hum & noise: Microphone, —60 db or better; Mag. Phono, —53 db or better; Xtal Phono, —55 db or better; Auxiliary, —60 db or better. Input sensitivity: For 25 watts output with tone controls flat; Microphone, 9 mv; Mag. phono, 5 mv (at 1 kc); Xtal Phono, 120 mv; Auxiliary, 200 mv. Outputs: 4, 8, and 16 ohms. Damping factor: 9. Controls: 4-position selector switch, volume control, bass control and treble control with on/off switch. Power requirements: 105-125 volts, 50-60 cps, 120-135 watts. Power outlets: 1 AC receptacle, unswitched. Indicator: Neon pilot light. Dimensions: 13¾" W x 4-15/16" H x 9½" D.

F New Lower Priced Heathkit Multiplex Adapters

- Use with any FM tuner having multiplex output • Compact . . . fits anywhere • Styled to match Heathkit tuners • Built-in power supply • Easy to build . . . easy to operate

Features Built-In Power Supply with silicon rectifier, 3 tubes, & prealigned coils. Balanced diode detector assures low distortion. Convert now . . . order yours today!

Kit AC-11A, black, 4 lbs. \$23.50
Kit AC-11B, tan, 5 lbs. \$23.50

AC-11 SPECIFICATIONS—Audio frequency response: ±2 db 50 to 15,000 cps. Sub-carrier bandpass: ±4 db 23,000 to 53,000 cps. Channel separation: 30 db. Hum and noise: —55 db (relative to 1 volt rms output). Input impedance: 470 K ohms. Output impedance: 3000 ohms each channel (cathode follower). Input: MULTIPLEX (from tuner). Input signal voltage: .4 volt minimum (from multiplex output of FM tuner). Outputs: LEFT CHANNEL; RIGHT CHANNEL. Switch and controls: OFF-ON switch; CHANNEL SEPARATION control; LEFT CHANNEL LEVEL control; RIGHT CHANNEL LEVEL control. Power requirements: 117 volts AC 50/60 cps, 12 watts. Size: 3¾" H x 3¼" W x 9¾" D.

Win A Houseful of
HEATHKITS
see center of flyer

Add These Famous Changers

New Garrard Type A70 Automatic Turntable!

• Exclusive pusher platform offers automatic play without compromise . . . safest automatic record principle ever developed • Completely new dynamically balanced tone arm for improved tracking capability & resistance to external shock • New adjustable stylus pressure & tracking force • Full-sized, heavy-balanced cast "sandwich" turntable • New adjustable bias compensator • New lightweight shell • New ultra-sensitive "frictionless" Delrin® trip assembly • Double-shielded 4-pole shaded motor • 4 speeds, automatic or manual

ADP-104, 23 lbs., turntable...\$9 dn., \$8 mo. \$84.50
ADP-104, 24 lbs., turntable with choice of 1c offer cartridge, below (specify by model no.)...
\$9 dn., \$8 mo. \$84.51
ADA-61-1, 1 lb. Garrard LRS3 45 rpm spindle. \$3.80
ADA-63-3, 4 lbs., walnut base, 16 $\frac{1}{2}$ " W x 13 $\frac{1}{2}$ " D x 3" H. \$5.50

ADP-104 SPECIFICATIONS—Speeds: 16 $\frac{2}{3}$, 33 $\frac{1}{3}$, 45 & 78 rpm. Motor: 4-pole shaded, double shielded. Tracking: Will track with "professional" model cartridges. Color: Iridescent charcoal gray and chrome. Wiring: Stereo, 4-pin/5-wire system w/separate ground connection for hum elimination. Cables furnished: Line cord and 2 audio. Power requirements: 100-130 volts, 60 cycles AC. Dimensions: Requires mounting space 16" W., 13 $\frac{1}{4}$ " D., 6" above and 2 $\frac{1}{8}$ " below top of motor board.

New Garrard AT60 Automatic Turntable!

• Tubular tone arm is counterweight-adjusted & dynamically balanced with a built-in stylus gauge • Automatic intermix record operation • New automatic bias compensator tracks lightest & most compliant cartridges accurately and without distortion • Heavy cast, oversize turntable . . . dynamically balanced and non-magnetic • Lightweight cut-away shell accepts all cartridges • 4 speeds, automatic or manual

ADP-114, 15 lbs., turntable...\$6 dn., \$6 mo. \$59.50
ADP-114, 16 lbs., turntable and choice of any 1c offer cartridge, below (specify by model no.)
\$6 dn., \$6 mo. \$59.51
ADA-114-1, 1 lb. . . . Garrard LRS10 45 rpm spindle. \$3.80
ADA-53W, 4 lbs. . . . walnut finished base. \$4.95

ADP-114 SPECIFICATIONS—Speeds: 16 $\frac{2}{3}$, 33 $\frac{1}{3}$, 45 & 78 rpm. Motor: 4-pole shaded, double shielded. Tracking: Will track all cartridges, including high compliance models. Color: Special iridescent charcoal gray. Wiring: Stereo, 4-pin/5-wire system w/separate ground connection for hum elimination. Cables furnished: Line cord, 2 audio cables. Power requirements: 100-130 volts, 60 cycles AC. Dimensions: Requires mounting space 15 $\frac{1}{2}$ " W x 13 $\frac{1}{2}$ " D x 4 $\frac{1}{2}$ " below top of motor board.

New Garrard Model 50 Automatic Turntable!

• Counter weighted tone arm automatically tracks high quality cartridges . . . a first in popular-priced turntables • New oversize turntable and handsome mat cover for better record support • Compact . . . fits any cabinet or component installation • Plays all 4 speeds automatically or manually • Automatically mixes records of different sizes & same speed • DuPont Delrin® "frictionless" trip mechanism • Completely assembled

ADP-124, changer, 13 lbs. . . \$5 dn., \$5 mo. \$44.50
ADP-124, with choice of any 1c cartridge, below (specify by model no.), 14 lbs. . .
\$5 dn., \$5 mo. \$44.51
ADA-114-1, 1 lb. . . . Garrard LRS10 45 rpm spindle. \$3.80
ADA-53W, Garrard matching base (walnut), 4 lbs. . . 4 $\frac{1}{2}$ " W x 12 $\frac{3}{4}$ " D x 3" H. \$4.95

ADP-124 SPECIFICATIONS—Speeds: 16 $\frac{2}{3}$, 33 $\frac{1}{3}$, 45 & 78 rpm. Motor: 4-pole, hum shielded. Tracking: Tracks per cartridge specifications. Color: Gray and silver. Wiring: Stereo, Amplok plug. Cables furnished: Line cord and 2 audio. Power requirements: 110-130 volts, 60 cycles AC. Dimensions: 14 $\frac{1}{4}$ " W x 12 $\frac{1}{2}$ " D x 4 $\frac{1}{4}$ " above and 2 $\frac{1}{8}$ " below top of motor board.

New Garrard Lab 80 Stereo Automatic Transcription Turntable!

• Dynamically balanced "Afrormosia wood" tone-arm with integral manual cueing device and adjustable tracking force • New adjustable bias compensator tracks the lightest & most compliant cartridges accurately & without distortion • New massive, non-magnetic 12" turntable with anti-static mat • New isolated motor suspension • Insures professional reproduction of 33 $\frac{1}{3}$ & 45 rpm records • Anti-skate protection • Delrin® "frictionless" trip mechanism • Completely assembled

ADP-94, 25 lbs., turntable only...\$10 dn., \$9 mo. \$99.50
ADP-94, 26 lbs., turntable and choice of any 1c offer cartridge opposite (specify by model no.)...
\$10 dn., \$9 mo. \$99.51
ADA-94-1, 1 lb., Garrard LRS9 45 rpm spindle. \$3.80
ADA-94W, 5 lbs., walnut finished base, 16 $\frac{1}{2}$ " W x 13 $\frac{3}{4}$ " D x 4 $\frac{1}{4}$ " H. \$6.50

ADP-94 SPECIFICATIONS—Speeds: 33 $\frac{1}{3}$ & 45 rpm. Motor: 4-pole shaded, completely isolated. Tracking: Tracks per cartridge specifications. Color: Special iridescent charcoal gray. Wiring: Stereo, 4-pin, 5-wire system with separate ground connection for hum elimination. Cables furnished: Line cord, 2 audio cables. Power requirements: 100-130 volts 60 cycles AC. Dimensions: 17" W x 14 $\frac{1}{4}$ " D x 5 $\frac{1}{2}$ " above and 3 $\frac{1}{2}$ " below motor board.



ADP-104
\$84⁵¹

(with 1c cartridge)



ADP-114
\$59⁵¹

(with 1c cartridge)



ADP-124
\$44⁵¹

(with 1c cartridge)



ADP-94
\$99⁵¹

(with 1c cartridge)

Special 1c Offer Cartridges With Changer Orders! Specify By Model No.

(A) Shure M7/N21D "Dynetic"

AD-44B Manufacturer's Specifications: Frequency Response: 20-20,000 cps. Output: 8 mv/channel. Separation: 30 db. Load impedance: 47,000 ohms, channel stereo—22,000 ohms for monaural. Stylus: 0.7 mil diamond. Compliance: 9.0 x 10⁻⁶ cm/dyne in all directions. Tracking force: 2 grams optimum.
Model AD-44B, 1 lb. \$17.95

(B) Pickering V-15 "Magnetic"

AD-74J Manufacturer's Specifications—Frequency response: 20 to 20,000 cps. Output: 1.5 mv per cm/sec of recorded level. Load resistance: 47,000 ohms. Stylus: .7 mil diamond. Tracking force: 1 to 5 grams. Vertical tracking angle: 15° Certified for optimum performance with 15° RIAA Vertical Tracking Standard.
Model AD-74J, 1 lb. \$17.95

(C) Empire 880P "Magnetic"

AD-54G Manufacturer's Specifications: Frequency response: 6-30,000 cps. Output: 8 mv/channel. Separation: 30 db. Load impedance: 47,000 ohms. Stylus: 0.6 mil diamond. Compliance: 30 x 10⁻⁶ cm/dyne. Tracking force: 1/2-3 grams.
Model AD-54G, 1 lb. \$19.95

(D) New! Sonotone 8AFHC-SD "Ceramic"

AD-15K Manufacturer's Specifications—Frequency response: 20 to 20,000 cps. Output: .20 volt. Separation: 30 db. Load impedance: 1 to 5 megohms. Stylus: 0.7 mil diamond, 3 mil sapphire. Compliance: 15 x 10⁻⁶ cm/dyne. Tracking force: 1 1/2-3 grams for professional arms; 3-4 grams for changers.
Model AD-15K, 1 lb. \$7.26



AD-64H
\$50⁰⁰

Ortofon SPU/T "Magnetic"

Not Included in 1c Offer! High compliance and low inertia of the Ortofon stylus gives virtually undistorted reproduction with very small tracking force required—even at extreme frequencies! "Prime diamonds" are employed which will last indefinitely under normal use & minimize record wear. Choose yours now!
Model AD-64H, 1 lb. . . \$5 dn., \$5 mo. \$50.00

AD-64H MANUFACTURER'S SPECIFICATIONS—Frequency response: 20-20,000 cps. Output: 7 mv per channel at 1 kc/cm. Separation: 20-25 db. Load impedance: 50,000 ohms. Stylus: 0.7 mil diamond. Compliance: 10 x 10⁻⁶ cm/dyne. Tracking force: 1-2 grams.

WIN A HOUSEFUL OF WIN HEATHKITS

OFFICIAL CONTEST ENTRY BLANK

50 WINNERS \$8,100 IN KITS OF YOUR CHOICE

Limited Contest: Open only to recipients of this flyer

GRAND PRIZE

\$1,250 IN KITS

(or \$1000 cash)

Double Prize

\$2,500 IN KITS

(or \$2000 cash)

(entry accompanied by order)

SEE REVERSE SIDE FOR OFFICIAL CONTEST RULES!

2nd PRIZE

\$500 in kits of your choice (or \$400 cash)
DOUBLE PRIZE: (entry accompanied by order)
\$1,000 in kits of your choice (or \$800 cash)

THREE 3rd PRIZES

\$250 in kits of your choice (or \$200 cash)
DOUBLE PRIZE: (entry accompanied by order)
\$500 in kits of your choice (or \$400 cash)

FIVE 4th PRIZES

\$150 in kits of your choice (or \$120 cash)
DOUBLE PRIZE: (entry accompanied by order)
\$300 in kits of your choice (or \$240 cash)

TEN 5th PRIZES

\$50 in kits of your choice (or \$40 cash)
DOUBLE PRIZE: (entry accompanied by order)
\$100 in kits of your choice (or \$80 cash)

THIRTY 6th PRIZES

\$10 Heathkit Gift Certificates
DOUBLE PRIZE: (entry accompanied by order)
\$20 Heathkit Gift Certificates

Double Your Prize With A Heathkit Order



Complete This Statement In 25 Words Or Less!

I Like Heathkits Because

(Print or type your name, address & entry for best legibility)

- My entry is accompanied by a Heathkit order, thus qualifying me for a double prize.
- My entry is not accompanied by a Heathkit order.

Name _____

Address _____

City _____ State _____ Zip _____

(Entries Must Be Postmarked By Sept. 1, 1965, Received By Sept. 7, 1965)

OFFICIAL CONTEST RULES

1. This contest is open to residents of the United States except Heath Company employees and their families, its affiliated companies, dealers, agencies, and the Reuben H. Donnelly Corporation.
2. Winners whose entries are accompanied by an order for a Heathkit product will receive double the stated prize (example: the first prize winner would receive \$2500 in kits instead of \$1250). Orders for parts, accessories, or other brand-names in Heathkit catalog do not qualify. Accompanying kit orders must be submitted on the order blank in this Heathkit July catalog supplement to qualify for double prize (be sure entry & order are in same envelope). Winners may elect to receive cash instead of kits as stipulated in prize list. Winners will be required to pay any Federal or State taxes.
3. All contest entries must be submitted on the official entry printed in this Heathkit July catalog supplement (opposite side).
4. Complete the statement "I like Heathkit products because" in 25 words or less. Each entry must be the original work of the contestant. Entries will be judged on the basis of creativeness, believability, and aptness of thought by the Reuben H. Donnelly Corporation. Decision of the judges is final. Duplicate prizes awarded in case of ties. Entries become the property of the Heath Company and none can be returned. Entrance into the contest gives Heath Company the right to publish the winners' names and entries.
5. Contest entries must be postmarked by September 1, 1965 and received by September 7, 1965. Contest is subject to all Federal, State and local regulations; void where prohibited. Winners will be notified approximately 60 days after close of contest.

Open Your Heath Account - Liberal Terms

NOTICE TO BUYER:

Mail Order/Retail Installment Contract

Do not sign this contract before you read it. Under the law you have the following rights among others:

- A. To pay off in advance the full amount due.
- B. Under certain conditions to redeem the property, if repossessed for a default.

Time Payments are available to anyone in the U.S. or FPO and APO areas. Residents of Puerto Rico and other U. S. possessions. Write for details!

LIBERAL TERMS! 10% down on orders of \$25 to \$500 (larger down payments reduce monthly payments and carrying charges). Up to 18 months to pay on orders over \$300. Write for details on orders over \$500.

HERE'S ALL YOU DO . . .

- 1 Fill out order blank in the catalog.
 - 2 Sign your name in the Time Payment Agreement below, fill in the Credit Statement and the monthly payment (see chart).
 - 3 Send the above to the Heath Company, Benton Harbor, Michigan . . . we'll take care of the details.
- "ADD ON" Purchases—Once your credit is established and you have made at least three payments, you can "add-on" purchases of \$25.00 or more with no down payment. List the items you want on the reverse side, check (7) the "add on" box and give your account number. Be sure to sign the Time Payment Agreement, and send to us with your original Payment Book.

EASY PAYMENT CHART

Unpaid Balance	Carrying Charge	Up To 12 Monthly Payments*	Unpaid Balance	Carrying Charge	Up to 12 Monthly Payments*	*All monthly payments are for the amount shown; last payment is for the odd amount remaining due.
Up to \$20.00	\$ 2.00	\$ 5.00	\$250.01-260	\$26.00	\$24.00	
\$ 20.01-30	3.00	5.00	260.01-270	27.00	25.00	
30.01-40	4.00	5.00	270.01-280	28.00	26.00	
40.01-50	5.00	5.00	280.01-290	29.00	27.00	
50.01-60	6.00	6.00	290.01-300	30.00	28.00	
60.01-70	7.00	7.00	300.01-310	31.00	29.00	
70.01-80	8.00	8.00	310.01-320	32.00	30.00	
80.01-90	9.00	9.00	320.01-330	33.00	31.00	
90.01-100	10.00	10.00	330.01-340	34.00	32.00	
100.01-110	11.00	11.00	340.01-350	35.00	33.00	
110.01-120	12.00	11.00	350.01-360	36.00	34.00	
120.01-130	13.00	12.00	360.01-370	37.00	35.00	
130.01-140	14.00	13.00	370.01-380	38.00	36.00	
140.01-150	15.00	14.00	380.01-390	39.00	37.00	
150.01-160	16.00	15.00	390.01-400	40.00	38.00	
160.01-170	17.00	16.00	400.01-410	41.00	39.00	
170.01-180	18.00	17.00	410.01-420	42.00	40.00	
180.01-190	19.00	18.00	420.01-430	43.00	41.00	
190.01-200	20.00	19.00	430.01-440	44.00	42.00	
200.01-210	21.00	20.00	440.01-450	45.00	43.00	
210.01-220	22.00	21.00	450.01-460	46.00	44.00	
220.01-230	23.00	22.00	460.01-470	47.00	45.00	
230.01-240	24.00	22.00	470.01-480	48.00	46.00	
240.01-250	25.00	23.00	480.01-490	49.00	47.00	
			490.01-500	50.00	48.00	
					On orders over \$500, write for details.	

TIME PAYMENT AGREEMENT

NOTE: Time payment agreement cannot be accepted from persons under 21 years of age. If you are under 21, have this form filled out by a person of legal age, regularly employed or engaged in business. He can make the purchase for you, and will be responsible for payment.

TO: HEATH COMPANY BENTON HARBOR, MICHIGAN

Enclosed is a deposit of \$_____ on the Easy Payment cost of the equipment on the reverse side. I will pay \$_____ each month to you at the above address starting 30 days after shipment, until the total time payment price is paid.

Title to and right of possession of said equipment shall remain with you until all payments have been made. Upon default on any payment due on this contract, the full amount unpaid hereon, at your option, shall become immediately due and payable and you may either hold me liable for said amount or repossess the equipment. If you shall repossess, all payments made may be retained as rent for the use and depreciation of said equipment. The loss, injury or destruction of the equipment after I have received it shall not operate as payment or in any manner release me from any obligation hereunder.

If this order is not accepted, you shall refund the down payment with notice of non-acceptance. Acceptance shall be effected when the equipment designated on the reverse side hereof is shipped to me. I certify that all statements in the Credit Statement set forth below are true and complete and are made for the purpose of obtaining credit. This contract is to be governed by the laws of the State of Michigan.

Enter Date _____ Sign Here _____

CREDIT STATEMENT

(IMPORTANT: Please fill in completely. Omissions and errors cause delays.)

PRINT FULL NAME _____ Age _____ Military Serial No. _____ (if serviceman)

WIFE'S NAME _____ Names of Children and ages _____

Residence _____ City _____ State _____ How Long _____

Own or Buying Landlords Name _____ Rent _____ Live with Parents _____ No. of Rooms _____ Paid Monthly \$ _____ Phone No. _____

Street _____ City _____ State _____

Previous Address _____ City _____ State _____ How Long _____

Previous Landlord _____ Address _____

Employed by _____ Street _____ City _____ State _____

Position _____ How Long _____ Dept. or Badge No. _____ Salary \$ _____

Previous Employer _____ Street _____ City _____ State _____ How Long _____

Wife's Employer _____ Street _____ City & State _____

Position _____ How Long _____ Dept. or Badge No. _____ Salary \$ _____

Other Income—Give Details _____ Total Family Income \$ _____

Your Bank _____ Address _____ Type of Account _____

CREDIT REFERENCE (Give 2 Merchants, Firms or Finance Companies with whom you do or have done business.)

First Credit Reference _____ Address _____ Present Balance \$ _____ Monthly Payment \$ _____

Second Credit Reference _____ Address _____ Present Balance \$ _____ Monthly Payment \$ _____

Nearest Relative _____ Address _____ Relationship _____ (Do not list those with whom you are living)

HEATH COMPANY

Benton Harbor, Michigan 49023

ORDER FORM

PHONE • 616-983-3961

FAX—BENTON HARBOR, MICHIGAN

TWX—616-983-3897

1 PLEASE PRINT OR WRITE NAME AND ADDRESS PLAINLY

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PLEASE DO NOT WRITE IN THIS SPACE

2 SHIP TO ANOTHER ADDRESS? Give directions here.

4 IF YOU HAVE MOVED SINCE YOUR LAST ORDER— write your old address here:

STREET ADDRESS _____
 CITY _____ STATE _____ ZIP _____

3 CHECK HOW YOU WANT ORDER SHIPPED Parcel Post *Motor Freight Express
 (100 lb. min. chg.)

5 TO HELP US SERVE YOU BETTER, will you please answer the following questions?

What type of Heathkit interests you most? Hi Fi Instruments
 Amateur Radio Marine
 Other _____

ON EXPRESS ORDERS if station is in different town than your post office address, show name of town where shipment should be sent:

TOWN _____ STATE _____

What new Heathkits would you like us to make? _____

6 IS THIS YOUR FIRST ORDER? _____

SHD.	B. O.	QUAN.	MODEL	KIT DESCRIPTION	WT.	PRICE EA.	TOTAL
PLEASE DO NOT WRITE IN THIS SPACE	PLEASE DO NOT WRITE IN THIS SPACE						

IMPORTANT. Please use a separate sheet for all correspondence, to assure a prompt reply to your letter.

All prices quoted are net F.O.B. Benton Harbor, Michigan, and apply to the United States, F.P.O. and A.P.O. areas.

All prices and specifications subject to change without notice. Orders F.P.O. and A.P.O. must include sufficient postage.

C.O.D. ORDERS must be accompanied by 20% deposit. Delivering carrier will require cash or certified check in payment of C.O.D. amount.

PARCEL POST ORDERS should include postage for weight shown. **TIME PAYMENT ORDERS** except A.P.O.'s and F.P.O.'s will be shipped express or motor freight.

Transportation costs for all express or motor freight shipments will be collected at the time of delivery.

SEE REVERSE SIDE for time pay details on orders of \$25 or more.

***MOTOR FREIGHT CHARGES** will not be less than \$4.91, as you pay for 100 lbs. Since rates vary with localities, consult your local truck line.

PLEASE DO NOT WRITE IN THIS SPACE

7 TYPE OF ORDER (CHECK ONE)

CASH
Please use registered mail for currency.

C.O.D.
20% deposit required.

TIME PAY.
10% down payment required
(larger down payment reduces payments & charges)

ADD ON
If previous time pay customer, give current account number _____

8 MERCHANDISE ORDERED

FROM CAT. NO. _____

9 TOTAL AMOUNT OF ORDER.

Add sales tax on all deliveries in the State of Michigan.

Amount for parcel post. Do not remit for express charges.

Amount due Heath from previous order.

TOTAL AMOUNT

10% DOWN PAYMENT
 Ship. Bal. C.O.D. 20% deposit required

UNPAID BALANCE (total order less down payment)

800/55

& Heath Hi-Fi Furniture



New! Rek-O-Kut Professional Model B-126H Turntable & Model S-320 Micropoise® Tone Arm For The Dedicated Audiophile!

- 3 speeds . . . 33 $\frac{1}{3}$, 45 & 78 rpm rim-driven • Ideal for broadcasting studios, professional musicians and audiophiles • Precision-built hysteresis synchronous motor . . . lifetime lubricated • Includes famous Rek-O-Kut S-320 stereo tone-arm with exclusive Omni-Balance

Quality Features! A heavy-duty, hermetically oil-sealed hysteresis synchronous motor for locked-in rotational speed accuracy; unique ball bearing suspension of micro-finished turntable shaft; stereo tone arm has exclusive Omni-Balance for perfect static and dynamic balance with any cartridge; tubular aluminum arm with die-cast shell.

Model ADP-25, turntable & tonearm, 22 lbs. . . \$15 dn., \$12 mo. \$144.90
Model ADA-25W, walnut base, 10 lbs. \$18.95

TURNTABLE SPECIFICATIONS—Speeds: 33 $\frac{1}{3}$, 45 & 78 rpm. Flutter & wow: .09% rms. Motor type: Heavy-duty hysteresis synchronous, life-lubrication. Color: Decorator gray and 2-tone aluminum. Power requirements: 117 v. AC, 60 cycles AC. Dimensions: 17 $\frac{3}{4}$ " wide, 16" deep, height above deck 3", 4 $\frac{1}{4}$ " below. **TONELARM SPECIFICATIONS**—Tracking: 1 gram or less. Tracking Error: Less than 1°. Bearings: Horizontal & Vertical—chrome steel balls. Resonance: 9-12 cps. Cartridge shell: Plug-in, 4-wire type.



ADP-25
\$144⁹⁰

Dual 1009 Auto/Professional Turntable . . . Tracks at $\frac{1}{2}$ Gram, Trips at Zero!

- Automatic tone arm tracks below $\frac{1}{2}$ gram, yet trips at zero • Permits almost 90° tilt without spilling a note • Anti-skate record protection • Less than 2/10 gram stylus force increase from first to last record • 7 $\frac{1}{2}$ lb. dynamically-balanced platter • 4 speeds, automatic or manual • Can be started manually while record is rotating or at a standstill • Completely assembled

ADP-24 changer only, 22 lbs. . . \$10 dn., \$9 mo. \$99.50
ADP-24, changer & choice of any 1c offer cartridge p. 16 (specify by model no.), 22 lbs. . . \$10 dn., \$9 mo. \$99.51
ADA-24W, oiled solid walnut base, 3 lbs. \$11.95
ADA-24-1, 45 rpm spindle, 2 lbs. \$4.80

ADP-24 SPECIFICATIONS—Speeds: 16 $\frac{2}{3}$, 33 $\frac{1}{3}$, 45 and 78 rpm. Tracking force: $\frac{1}{2}$ gram. Turntable speed: All 4 speeds accurate within 0.1% with one to ten records. Motor type: 4-pole induction, shock & vibration shielded. Type of drive: Friction. Tracking force variations: Less than 0.2 grams from 1st to 10th record. Record capacity: Up to 10 records. Record sizes: 7", 10", 12". Control functions: Manual Speed Selector; Manual Record Size Selector; Stop/Start Manual/Automatic switch. Dimensions: 10 $\frac{3}{4}$ " x 12 $\frac{3}{4}$ ", 6" clearance above, 3" below. Power requirements: 117 VAC, 60 cps.



ADP-24
\$99⁵⁰

Deluxe Heathkit Stereo Furniture!



Modern Stereo/Hi-Fi Cabinetry . . .

Exclusively Styled For Heath!

- Custom designed for Heathkit Stereo/Hi-Fi components . . . accommodates most makes • Beautifully finished in modern walnut . . . or available for custom finishing • Factory assembled, ready to use • Speaker cabinet can be matched to any 12" or 15" speaker for best tone

Solidly Constructed Of Fine Woods! Accented with eye-arresting relief touches and slim, curved brass door handles to highlight the "sculptured" effect. Completely assembled & finished.

Model AE-20U (unfinished), 81 lbs. . . \$8 dn., \$8 mo. \$79.95
Model AE-20W (walnut), 82 lbs. . . \$10 dn., \$9 mo. \$99.50
Model AEA-12-3, unfin., uncut recorder drawer, 7" H x 16" W x 16 $\frac{1}{2}$ " D, wood $\frac{3}{4}$ " thick, 15 lbs. \$18.95
Model AEA-12-4, walnut, uncut recorder drawer, 7" H x 16" W x 16 $\frac{1}{2}$ " D, wood $\frac{3}{4}$ " thick, 15 lbs. \$19.95

Matching Speaker Cabinet!

Use with 12" or 15" speakers. Also has 3 $\frac{3}{8}$ " x 10 $\frac{1}{16}$ " slot for optional horn tweeter. Measures 18 $\frac{1}{2}$ " W x 19" D x 32 $\frac{3}{8}$ " H.

Model AE-40U (unfinished), 60 lbs. . . \$4 dn., \$5 mo. Each \$37.95
Model AE-40W (walnut), 58 lbs. . . \$5 dn., \$5 mo. Each \$44.95

AE-20 EQUIPMENT ACCOMMODATIONS AND SIZES—Cabinet, overall: 36" W x 32 $\frac{3}{8}$ " H x 19" D. Changer compartment: 17" W x 15 $\frac{3}{4}$ " D, mounting board is uncut and can be adjusted in height to accept all record changers sold by Heath, and also AD-22A tape equipment; lid has adjustable friction-loaded support. **Record-tape recorder compartment:** 14 $\frac{1}{2}$ " H x 17" W x 17" D, for record storage; space is convertible with accessory sliding drawers below to accommodate Heath AD-22A tape recorder. **Shelf compartment:** (2) each 17" W x 6" H x 17" D (inside shelf 14" deep); either shelf accepts any Heath Stereo or Mono tuner, Stereo or Mono preamplifier or stereo or mono combination amplifier. **Power amplifier compartments:** 8 $\frac{3}{4}$ " H x 17" W x 15 $\frac{1}{8}$ " D inside, accepts any Heathkit stereo or mono amplifier.



A Touch Of Tradition . . .

Heathkit Early American Stereo Center

- Beautifully finished in stunning salem-maple • Exclusively styled, a special Heathkit design • Custom-designed for Heathkit stereo components • Holds most hi-fi/stereo components • Factory assembled, ready to use
- Crafted Of Specially-Selected Woods! Maple veneers and solids all beautifully finished in popular Salem Maple! "Lancaster-Antique" solid-brass handles. Completely assembled & finished.

Model AE-13S, 77 lbs. . . \$12 dn., \$11 mo. \$115.00
Model AEA-13-1, Matching uncut recorder drawer (7" H x 16" W x 16 $\frac{1}{2}$ " D, wood $\frac{3}{4}$ " thick), 15 lbs. \$20.00

Matching Speaker Cabinet!

Use 12" or 15" speakers, has 3 $\frac{3}{8}$ " x 10 $\frac{1}{16}$ " slot for optional horn tweeter. Measures 18 $\frac{1}{4}$ " W x 18 $\frac{3}{4}$ " D x 28" H.

Model AE-23S, 55 lbs. . . \$6 dn., \$5 mo. Each \$55.00

AE-13S EQUIPMENT ACCOMMODATIONS AND SIZES: Cabinet, overall: 28" H x 36" W x 18 $\frac{1}{4}$ " D. Changer compartment: 17" W x 16" D x 5 $\frac{3}{4}$ " H. Mounting board is uncut and can be adjusted in height to accept all record changers sold by Heath and also AD-22A tape equipment; lid has adjustable friction-loaded support. **Record-tape recorder compartment:** 14 $\frac{3}{4}$ " H x 17" W x 17 $\frac{1}{4}$ " D for record storage; space is convertible with accessory sliding drawers to accommodate Heath AD-22A tape recorder. **Shelf compartment:** Top shelf, 6 $\frac{3}{4}$ " H x 17" W x 15 $\frac{3}{4}$ " D. Middle shelf, 6" H x 17" W x 15 $\frac{3}{4}$ " D. Bottom shelf, 9" H x 17" W x 17" D. Shelves accept any Heath stereo or mono tuner, stereo or mono preamplifier, or stereo or mono combination amplifier.

USE HEATH'S EASY TIME-PAY PLAN

Order the equipment you need now! . . . pay for it in easy monthly installments! Only 10% down on all orders from \$25 to \$500. Up to 18 months to pay on orders over \$300. Write for credit details on orders over \$500.

Win A Houseful of
HEATHKITS
see center of flyer

Sound Off!...With Heathkit®

SONY Stereorecorder "600" . . . 4-Track Stereo Tape Recorder!

• Plays & records 4-track stereo and mono tapes at 7½ & 3¼ ips • 3-head design provides multiple sound track recording • Tape & source monitor switch • Mag. phono & FM stereo inputs • Two VU meters • Automatically shuts off at end of reel • Separate level controls for mike & line mixing • Pause control & digital counter • Uses 7" reels • Includes carrying case & 2 Sony dynamic mikes

Professional Features To Satisfy The Discriminating! Like the Hysteresis-Synchronous drive motor that maintains absolute speed and timing accuracy; and dynamically balanced capstan-flywheel for smooth operation with no belts to stretch or wear out. The 3-head design provides sound-on-sound recording, tape and source monitoring, and exclusive direct stereo disc-to-tape copying through spe-

cial mag. phono inputs.

Operates in either horizontal or vertical positions, and the tape & source monitor switch provide immediate comparison of the recording with the incoming source. A special sensing mechanism automatically shuts off power at end of the large 7" reel.

GDP-164, 55 lbs. . . \$30 dn., \$25 mo. \$299.50

GDP-164 SPECIFICATIONS—Power requirements: 80 watts 110-117 V. AC, 60 cycles. **Tape speeds:** 7½ & 3¼ ips. **Frequency Response:** 30-18,000 cps, ±2 db 50-15,000 cps @ 7½ ips. **Signal-to-Noise Ratio:** Better than 50 db. **Flutter & Wow:** Less than 0.17% @ 7½ ips; less than 0.25% @ 3¼ ips. **Erase Bias Frequency:** 100 kc. **Inputs:** 2 high level line; 2 microphone or magnetic phono (switch-selected). **Outputs:** 2-0 db 600 ohm line, 600 ohm high level binaural monitor. **Dimensions:** 16¾" W x 18¼" H x 9" D.

GDP-164
\$299⁵⁰



A 12" 2-Way High Compliance Speaker . . . Our Finest!

Edge-damped woofer; low crossover frequency; reflexed-horn, high frequency unit; 1½" & 1" voice coils; die cast metal frame; level control; polarized binding posts; 1-year guarantee.

Model AS-183, 15 lbs. . . \$5 dn., \$5 mo. \$49.95
Model AS-183-2, 30 lbs. . . \$10 dn., \$9 mo. *Special pair price . . . \$95.00*

AS-183 SPECIFICATIONS—Size: 12". Impedance: 8 ohms. Power rating: 30 watts. Frequency response: 20-15,000 cps. Cone resonance: 25 cps. Magnet weights: 1¼ lbs., 4.65 oz.

B 12" Deluxe 3-Way High Compliance Speaker!

High compliance, edge-damped woofer for deep, rich bass; high frequency cone for mid-range realism; special tweeter for clear highs; 1¼ lb. annular-ring magnet; built-in crossover network; polarized binding posts; level control; 1-year guarantee.

Model AS-173, 14 lbs. . . \$4 dn., \$5 mo. \$39.95
Model AS-173-2, 28 lbs. . . \$8 dn., \$7 mo. *Special pair price . . . \$76.00*

AS-173 SPECIFICATIONS—Size: 12". Impedance: 8 ohms. Power rating: 25 watts. Frequency response: 35-15,000 cps. Cone resonance: 40 cps. Magnet weights: 1¼ lbs., 2½ oz.

C 12" 3-Way Coaxial Speaker!

3 radiating elements . . . woofer, tweeter, special horn tweeter; mechanical & electrical crossover networks; die-cast frame; ceramic annular-ring magnets; level control; 1-year guarantee.

Model AS-163, 12 lbs. . . \$3 dn., \$5 mo. \$29.95
Model AS-163-2, 24 lbs. . . \$6 dn., \$6 mo. *Special pair price . . . \$57.00*

AS-163 SPECIFICATIONS—Size: 12". Impedance: 8 ohms. Power rating: 20 watts. Frequency response: 40-15,000 cps. Cone resonance: 60 cps. Magnet weights: 13 oz., 1 oz. Voice coil sizes: 1½" and 1".

D 12" Two-Way Coaxial Hi-Fi Speaker . . . Top Value!

True coaxial design features separate woofer & tweeter, and built-in crossover network; level control; die-cast frame; polarized binding posts; 1-year guarantee.

Model AS-153, 10 lbs. \$19.95
Model AS-153-2, 20 lbs. . . \$4 dn., \$5 mo. *Special pair price . . . \$38.00*

AS-153 SPECIFICATIONS—Size: 12". Impedance: 8 ohms. Power rating: 15 watts. Frequency response: 50-15,000 cps. Magnet weights: 10 oz., 1.47 oz. Voice coil sizes: 1" and ¾".

E Low Cost 12" Hi-Fi Speaker . . . For The Budget-Minded!

Features dual cones driven by single voice coil; mechanical crossover network; polarized binding posts; annular-ring magnet; pressed steel frame; only 4½" depth; 1-year guarantee.

Model AS-143, 5 lbs. \$9.95

AS-143 SPECIFICATIONS—Size: 12". Impedance: 8 ohms. Power rating: 14 watts. Frequency response: 50-12,000 cps. Cone resonance: 60 cps. Magnet weight: 10 oz. Voice coil size: 1".

F 8" 2-Way Coaxial Speaker

Separate woofer & tweeter; built-in capacitive crossover network; level control; die-cast frame; only 3½" deep; polarized binding posts; 1-year guarantee.

Model AS-133, 6 lbs. \$14.95
Model AS-133-2, 12 lbs. . . \$3 dn., \$5 mo. *Special pair price . . . \$28.50*

AS-133 SPECIFICATIONS—Size: 8". Impedance: 8 ohms. Power rating: 12 watts. Frequency response: 50-14,000 cps. Cone resonance: 70 cps. Magnet weights: 10 oz., 0.68 oz. Voice coil sizes: 1" and ¾".

Enjoy Private Listening In The Comfort Of Your Armchair!

A Roanwell Stereo Headset!

Offers better bass response, thicker cushions for comfortable acoustic seal, less distortion, and 20' cord allow freedom of movement. Features driver units identical to those in manned space flights. 4-wire design eliminates amplifier phasing problems in stereo. Model ADP-102A, 3 lbs. \$4 dn., \$5 mo. \$37.50

ADP-102A SPECIFICATIONS — Drivers: Moving coil, dynamic. Sensitivity: 110 db, ref. .0002 dynes/cm² for 100 mw. Frequency response: 10-18,000 cycles. Distortion: less than 1% with 100 milliwatt input. Impedance: 20 ohms. Connectors: Spade terminals. Cord: 4-wire cable 20 ft. long.

B Telex ST-11 Stereo Headset

Relax and enjoy your favorite music anywhere in the room without destroying the "true" stereo effect! Soft, pliable foam rubber muffs shut out "unwanted" outside noise . . . help develop excellent bass response and wide frequency range! Comfortable, lightweight! Easy-to-clean stainless steel headband and yoke. Order yours now!

Model ADP-92, 2 lbs. \$23.92

ADP-92 SPECIFICATIONS—Driver element: Dynamic. Sensitivity: better than 95 db. Frequency response: 16 to 15,000 cps. Impedance: 8 ohms for use with 3 to 16 ohm sources. Power input: 15 milliwatts, 1 watt maximum. Cord: 4-wire 12 ft. long with spade terminals. Color: Tan & Brown.

C Stereo Headphone Control Box!

Simply switch from speaker to headphone listening *without* leaving your favorite chair! Connects to any amplifier regardless of power, & has standard jacks to accommodate any impedance stereo headset! Allows separate control of 2 headsets, plus individual adjustment for each ear! Includes 15' of cable & assembles easily in 1½ hours! Compact . . . 3" W x 6" D x 3¼" H . . . fits anywhere! Order yours now!

Kit AC-13, 3 lbs. \$9.95



Speakers & Speaker Systems



AS-10U \$59⁹⁵



AS-2U \$69⁹⁵

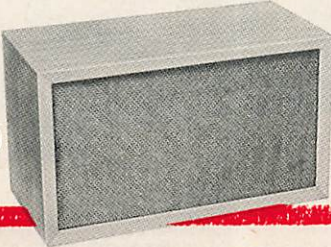


AS-51U \$39⁹⁵

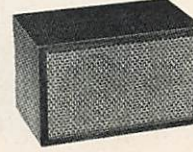
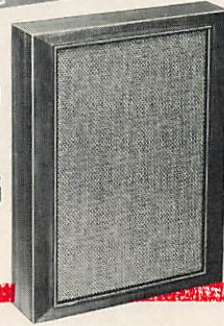


AS-193U \$22⁵⁰

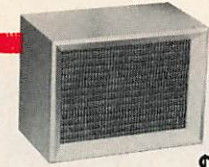
AS-2AU \$89⁹⁵



AS-22U \$49⁹⁵



AS-81U \$17⁵⁰



AS-41U \$10⁹⁵

A Economy Acoustic Suspension Speaker System!

- 10" acoustic suspension woofer, two 3 1/2" cone-type tweeters • Takes only 10 watts to drive, yet handles up to 40 watts • Preassembled cabinets in two finishes • Simple to assemble • Use vertically or horizontally

Kit AS-10U, unfinished 43 lbs...\$6 dn., \$6 mo.....\$59.95
 Kit AS-10W, walnut, 42 lbs...\$7 dn., \$6 mo.....\$64.95

AS-10 SPECIFICATIONS—Recommended Amplifiers: AA-23, pg. 15; AA-21C, pg. 13; AA-100, AA-151, pg. 14; AA-22, pg. 12; AR-13A, pg. 12. Frequency response: 30 to 15,000 cps. Impedance: 16 ohms. Recommended amplifier power: 10 to 40 watts. Enclosure: Infinite baffle, sealed. Speakers: Woofer, 10" Acoustic Suspension, 1.47 oz. Alnico 5 magnet; Tweeter, two 3 1/2" cone units in dispersed array, 1.47 oz. Alnico 5 magnets. Crossover: L-C network, 2250 cps. Control: High frequency level. Dispersion: 90° horizontal. Cabinet: Factory assembled 3/4" furniture-grade plywood. Dimensions: 13 1/2" H x 24" W x 11 1/2" D.

B Deluxe Acoustic Suspension System!

- Added super tweeter for extended high frequency response • Built-in crossover networks • High frequency level controls • 10" suspension woofer, two 5" cross-fired tweeters, plus 1 3/8" dome-type super-tweeter—all genuine Acoustic Research, Inc. manufactured units • Preassembled cabinets—unfinished or walnut

Kit AS-2AW (finished walnut), 51 lbs...\$10 dn., \$9 mo.....\$96.50
 Kit AS-2AU (unfinished, white hardwood), 51 lbs...\$9 dn., \$9 mo.....\$89.95

AS-2A SPECIFICATIONS—Recommended Amplifiers: AA-23, pg. 15; AA-21C, pg. 13; AA-100, pg. 14. Frequency response: 40 to 20,000 cps. Impedance: 8 ohms. Recommended amplifier power: 20 watts minimum. Enclosure: Infinite baffle, sealed. Speakers: Woofer, 10" Acoustic Suspension, 1.1 lb. Alnico 5 magnet; Mid-range, two 5" cone units, in dispersed array, 2.15 oz. Alnico 5 magnets; Super-tweeter, 1 3/8" dome-type construction. Crossover: L-C network, 2000 & 7500 cps. Controls: Individual levels for tweeter and mid-range speakers. Dispersion: 90° horizontal. Cabinet: Factory assembled 3/4" furniture-grade plywood. Dimensions: 13 1/2" H x 24" W x 11 1/4" D.

C Low Cost Acoustic Suspension Speaker System!

- 10" acoustic suspension woofer, two 5" cross-fired tweeters manufactured by Acoustic Research, Inc. • Wide-range sound with compact speaker versatility • Easy to build with preassembled cabinet

Kit AS-2U, unfinished, 45 lbs...was \$72.95...\$7 dn., \$7 mo.....Only \$69.95

AS-2U SPECIFICATIONS—Recommended Amplifiers: AA-21C, pg. 13; AA-100, pg. 14. Frequency response: 40 to 15,000 cps. Crossover frequency: 2,000 cps. Recommended amplifier power: 20 to 40 watts RMS. Nominal impedance: 8 ohms. Tweeter: Two 5" cone units, specially treated and equalized, in dispersed array, 2.15 oz. Alnico 5 magnet. Woofer: 10" Acoustic Suspension, 1.1 lb. Alnico 5 magnet. Resonant Frequency (mounted) 58 cps. Crossover: L-C network. Horizontal dispersion: 90°. Size: 24" W x 13 1/2" H x 11 1/2" D.

D "Profile" 3-Way Hi-Fi Speaker Systems!

- Three specially-designed speakers—10", 6", 3 1/2" • 5" slim... ideal for floor, shelf, or wall installation • Factory assembled, tube-tuned bass reflex cabinet • Big sound hi-fi performance

Kit AS-22U, unfinished, 35 lbs...\$5 dn., \$5 mo.....\$49.95
 Kit AS-22W, walnut, 35 lbs...\$6 dn., \$5 mo.....\$54.95

AS-22 SPECIFICATIONS—Recommended Amplifiers: AR-13A, pg. 12; AA-22, pg. 12; AA-151, pg. 14. Frequency response: 55 to 12,500 cps. Crossover frequency: 2250 cps. Recommended amplifier power: 10 to 25 watts. Nominal impedance: 8 ohms. Woofer: 10" special inverted design, 1.1 lb. Alnico V magnet. Mid-range: 6" closed back, 2.15 oz. Alnico V magnet. Tweeter: 3 1/2" closed back, 2.15 oz. Alnico V magnet. Cabinet: Bass reflex, tube-tuned, factory assembled of 3/4" furniture grade plywood. Dimensions: 19 1/2" W x 25 1/2" H x 5" D.

E 2-Way Hi-Fi Speaker System!

- Specially designed speakers... 8" woofer & compression-type tweeter with flared horn • Built-in crossover network • Tweeter level control • Factory assembled cabinets available unfinished or walnut finish

Kit AS-51U, unfinished, 28 lbs...\$4 dn., \$5 mo.....\$39.95
 Kit AS-51W, walnut, 28 lbs...\$5 dn., \$5 mo.....\$46.95

AS-51 SPECIFICATIONS—Recommended Amplifiers: AA-100, AA-151, pg. 14; AA-21C, pg. 13; AA-22, pg. 12. Frequency response: 50 to 12,000 cps. Crossover frequency: 1600 cps. Power rating: Program Material—25 watts. Single Frequency—15 watts. Nominal impedance: 16 ohms. Speakers: Low Frequency—8" Jensen (special design) 6.8 oz. Alnico 5; High Frequency—Jensen compression driver with exponential horn (special design), 4.7 oz. Alnico 5. L-PAD—level control for high frequency driver. Dimensions: 11 1/2" H x 23" W x 11 1/4" D.

F Low Cost Hi-Fi 2-Speaker System!

- 6" woofer & 3" tweeter • Quick, easy assembly • Factory assembled cabinets unfinished or in walnut

Kit AS-81U, unfinished, 10 lbs...\$17.50
 Kit AS-81W, walnut 10 lbs...\$19.95

AS-81 SPECIFICATIONS—Recommended Amplifiers: AA-32, AA-13, pg. 15. Frequency response: 70 to 14,000 cps. Crossover frequency: 4000 cps. Recommended amplifier power: 6 watts. Nominal impedance: 8 ohms. Cabinet: Type, infinite. Dimensions: 10 1/4" W x 6 1/2" H x 6 3/8" D; material, 1/2" veneer plywood. Speakers: Tweeter, 3" cone type, 8 ohms, .53 oz. Alnico 5 magnet; Woofer, 5 1/2" cone type, 8 ohms, 10 oz. Syntox #6 magnet. Crossover: Capacitor type.

G Extra-Thin 2-Way 3-Speaker System!

- 5 3/4" woofer and two 3" tweeters • Compact—ideal for wall, shelf or table installations • 65-14,000 cps frequency response • Factory assembled cabinets available unfinished or walnut finish

Kit AS-193U, unfinished, 12 lbs...\$22.50
 Kit AS-193W, walnut, 12 lbs...\$3 dn., \$5 mo.....\$24.95

AS-193 SPECIFICATIONS—Recommended Amplifiers: AA-32, pg. 15; AA-151, pg. 14. Impedance: May be used with amplifier having 4, 8, or 16 ohm output. Frequency response: 65-14,000 cps. Crossover frequency: 4,000 cps. Speaker power rating: 6 watts. Higher rated amplifiers, adjusted for reasonable listening levels, may be used. Adequate room sound with 1 watt to speaker. Nom. woofer size: 5 1/2" cone type. Dimensions: 12 3/4" H x 15 3/4" W x 2 1/4" D.

H Low Cost Hi-Fi Speaker System!

- 6" x 9" extended range dual-cone speaker • Compact, easy to assemble & install • 70-16,000 cps • Factory-assembled cabinets

Kit AS-41U (unfinished)... 8 lbs...\$10.95
 Kit AS-41W (walnut)... 8 lbs...\$12.95

AS-41 SPECIFICATIONS—Recommended Amplifiers: AA-32, pg. 15; AA-151, pg. 14. Frequency response: 70 to 16,000 cps. Impedance: 8 ohms. Capacity: 12 watts. Enclosure: Rear vented box. Speaker: 6" x 9" extended range dual cone, 6.8 oz. Alnico 5 magnet. Cabinet: Factory assembled, furniture-grade 1/2" plywood. Dimensions: 8" H x 11" W x 6 1/2" D.

Magnificent Combination Of Quality & Value... Heathkit "Legato Compact" Speaker System!

- Speakers cover 30-22,000 cps • 800 cps crossover network—completely assembled • Can be driven by as little as 3 watts, handles up to 30 watts • Preassembled cabinet in walnut finish, ready for speaker installations • Styling matches AE-20 center cabinet, p.17

Kit AS-21W, walnut, 142 lbs...\$24 dn., \$21 mo.....\$239.95
 Kit AS-31, everything except cabinet, 54 lbs...\$19 dn., \$16 mo.....\$184.95

AS-21 SPECIFICATIONS—Recommended Amplifiers: AR-13A, pg. 12; AA-21C, pg. 13; AA-22, pg. 12; AA-100, pg. 14. Frequency response: 30 to 22,000 cps. Impedance: 16 ohms. Capacity: 30 watts. Enclosure: Modified Infinite baffle. Speakers: Low frequency, two Altec Lansing 12" high compliance woofers, 1 1/2 lb. magnets; High frequency, one Altec Lansing 800 cycle exponential horn and driver, .53 lb. magnet. Crossover: 800 cycle constant K type, assembled. Control: high frequency shelving. Dispersion: 90° horizontal. Cabinet: Factory assembled furniture-grade 3/4" plywood. Dimensions: 32" W x 19" D x 32 1/2" H.



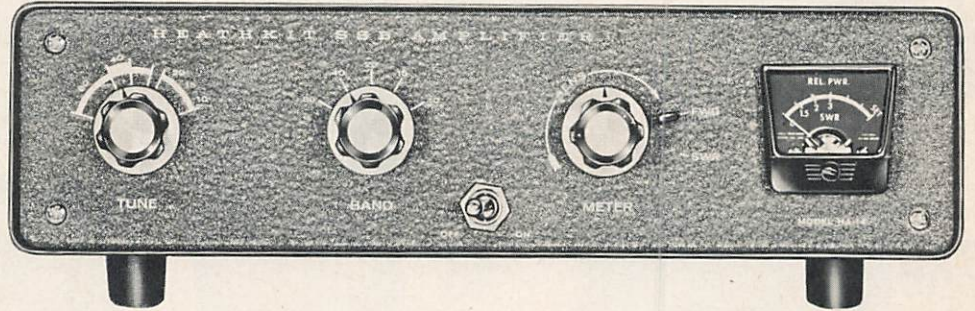
AS-21W \$239⁹⁵

Win A Houseful of
HEATHKITS
see center of flyer

Heathkit®—The Big Value Name

Heathkit KW Kompact . . . A Kilowatt In A Car And Room To Spare!

HA-14
\$99⁹⁵



• World's smallest SSB kilowatt linear amplifier • 1000 watts P.E.P. • Tunes 80 through 10 meters • ALC output to exciter • Built-in antenna change-over relay • Built-in SWR meter aids antenna adjustments on the road & monitors for maximum efficiency • Pretuned broad-band input circuit requires no tuning • Engineered with a pair of rugged tubes ideally suited to mobile operation (572-B's or T-160-L's) • Full provision for control of "remotely" located AC or DC power supply.

Heathkit Leadership In Amateur Radio Equipment . . . brings you a KW SSB linear final that sets new standards for size, styling, and price. Picture this rig nestled on your desk top, or under the dash of your car. Chances are, the new KW Kompact and the Heathkit exciter you choose will require less space than your present exciter alone! Drive it with a "Single Bander"—go fixed or mobile—you'll have the best, most compact combination on the air.

A Kilowatt In A Car Means Real "Sock" For Mobile And Emergency Communications . . . And Heathkit engineering has provided the KW Kompact with a panel-mounted SWR meter to facilitate on-the-spot antenna checks and adjustments to give you peak performance from your KW Kompact always.

Accessory Power Supplies Can Be Remotely Located . . . keeping your car and your desk uncluttered, yet offering maximum convenience. Both the "mobile" DC operated HP-14 and the "fixed" AC operated HP-24 power supplies are completely remote controlled from the front of the KW Kompact.

For The Ultimate In Mobile SSB Rigs . . . order your KW Kompact today!

Kit HA-14, 10 lbs. . . \$10 dn., \$9 mo. \$99.95

HA-14 SPECIFICATIONS—Band coverage: 80, 40, 20, 15, and 10 meters. Maximum power input: SSB, 1000 watts P.E.P. Driving power required: 100 watts P.E.P. Duty cycle: 50% (SSB voice modulation). Third order distortion: —30 db or better at 1000 watts P.E.P. Output impedance: Fixed 52 ohms unbalanced. SWR not to exceed 2:1. Input impedance: 52 ohms unbalanced; broad-band pretuned input circuit. Meter function: 0-6 relative power & 1:1 to 3:1 SWR. Front panel controls: Tuning, band switch, relative power sensitivity control, meter switch (FWD & SWR), power switch (off, on). Tube complement: Two 572-B (or two T-160-L) in parallel. Power requirements: 2000 VDC at 500 ma SSB peak, —110 VDC at 60 ma, and 12.6 VDC at 4 amperes. Cabinet size: 12-3/16" W x 3-3/16" H x 10" D. Net weight: 7 lbs.

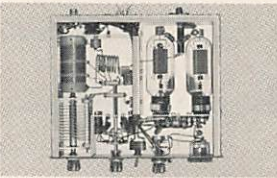
For fixed and mobile operation of KW Kompact, see HP-14 & HP-24, p. 21.



Picture a "KW Kompact" on your operating desk. Handsome design, small size. Ideal for portable operation, too!



A kilowatt in a car? The "KW Kompact" leaves room to spare.



Inside, a neat layout that makes assembly easy . . . quality components for dependable operation.

Heathkit Single-Bander SSB Transceivers Ideal For Use With The Heathkit "KW Kompact"



HW-12
\$119⁹⁵

- Kit HW-12: 80-meter, 15 lbs. . . \$12 dn., \$11 mo. \$119.95
- Kit HW-22: 40-meter, 16 lbs. . . \$12 dn., \$11 mo. \$119.95
- Kit HW-32: 20-meter, 15 lbs. . . \$12 dn., \$11 mo. \$119.95
- GH-12, Push-to-talk and VOX microphone . . . 2 lbs. \$6.95
- Kit HRA-10-1, Plug-in kc crystal calibrator . . . 1 lb. \$8.95

• Operate SSB in either 80, 40, or 20 meters • 200 watts P.E.P. input • LSB on 80 & 40, USB on 20 • Crystal filter SSB generation • Complete transceiver operation • ALC, AVC, and S-meter • Built-in VOX & push-to-talk circuitry • Stable low frequency VFO • 2 kc dial calibration—6" bandspread—vernier tuning

Corner Of The Living Room Or Compact Mobile . . . these single band units provide the perfect compact, uncluttered rig for a real show-piece amateur station. Full transceiver operation provides single-knob tuning, VOX or PTT control, with power requirements handled by Heathkit HP-13 or HP-23 power supplies.

Heathkit Engineering Cuts Corners In Size . . . HW-Series Transceivers are only 6 1/4" H x 12 1/4" W x 10" D—they stack perfectly with the KW Kompact giving you a full kilowatt SSB in the space required by most receivers.

But No Corners Are Cut When It Comes To Performance . . . Single-Bander features include a deluxe 14-tube circuit . . . superheterodyne receiver with 1 uv sensitivity, 2.7 kc selectivity, and "fast attack slow delay" AVC action . . . plus ALC . . . provision for simple plug-in of accessory HRA-10-1 100 kc crystal calibrator for accurate band-edge markings. 200 watts of P.E.P. input power cuts through QRM. Built-in VFO is in the 1.5-1.8 mc range, and is temperature compensated for high stability. Order your Single-Bander today!

HW-12 SPECIFICATIONS—RF input: 200 watts PEP. Sideband generation: Crystal lattice bandpass filter method. Stability: 200 cps per hour after warm-up. Carrier & unwanted sideband suppression: 45 db. Frequency coverage: HW-12, 3.8—4.0 mc; HW-22, 7.2—7.3 mc; HW-32, 14.2—14.35 mc. Receiver sensitivity: 1 uv for 15 db (S+N); N ratio. Receiver selectivity: 2.7 kc @ 6 db, 6.0 kc @ 50 db. Output: 50 ohm fixed (unbalanced). Operation: HW-12 & HW-22, LSB; HW-32, USB. Audio output: 1 watt @ 8 ohms. Mike input: Hi-Z. Panel controls: Frequency, final tune, function (OFF-PTT-VOX-TUNE), RF gain, AF gain (pull for crystal calibrator), VOX gain, meter. Front panel screw-driver adjust for S-meter and VOX delay. Rear panel controls: Mike gain, tune level, final bias. Tube complement: Fourteen tube heterodyne circuit; (3) 6EA8's mic. amp., VOX relay amp., IF amp., RF amp., Recvr. mixer; (5) 6AU6's, VFO, VOX amp., IF amps., Xmtr. mixer; (1) 6BE6, VFO isolator (HW-12), Het. osc. and mixer (HW-22 & HW-32); (1) 12BY7 Driver; (1) 12AT7 Xtal. osc., product det.; (1) 6EB8 Audio amp. and output; (2) 6G6S RF output. Power requirements: 800 VDC @ 250 MA peak, 250 VDC @ 100 MA, —130 VDC @ 5 MA, 12 VAC or VDC @ 3.75 amperes. Cabinet dimensions: 6 1/4" H x 12 1/4" W x 10" D.

In Amateur Radio Equipment



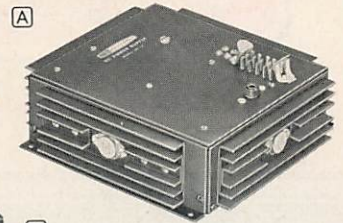
A Heathkit HP-14 Mobile Power Supply For KW Kompact

- All solid-state circuitry • Toroidal core transformer • 1500 cps switching frequency
- Circuit breaker protection • Includes all interconnecting cables • Remote control switching from KW Kompact front panel

Put A Kilowatt In Your Car! The HP-14 provides all necessary power for your mobile KW Kompact: 2300 VDC no load, 2000 VDC @ 500 ma peak; Bias, -130 VDC no load, -110 VDC @ 60 ma. Duty cycle, 50% SSB. Operation recommended only with 12 v. alternator equipped, negative ground cars.

Kit HP-14, 10 lbs. . . \$9 dn., \$9 mo. \$89.95

HP-14
\$89.95



B Heathkit HP-24 AC Power Supply For KW Kompact

- All solid-state circuitry • Remote switching from the KW Kompact front panel
 - All necessary operating voltages—HV, Bias, and Filament • Circuit breaker protection
- Remote Power Supply For Fixed Station Operation . . . Ripple is less than 1% at 500 ma (full peak power). Provides: HV, 2500 VDC no load, 2000 VDC @ 300 ma, 1900 VDC @ 500 ma; Bias, -180 VDC no load, -120 VDC @ 60 ma; Duty Cycle, 50% SSB. Filament voltage, 12.6 VAC @ 4 amperes. Cables included.

Kit HP-24, 21 lbs. . . \$5 dn., \$5 mo. \$49.95

HP-24
\$49.95



C Heathkit HP-13 Mobile Power Supply

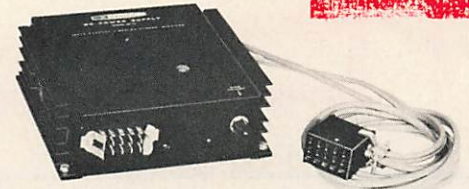
- Solid-state circuitry • High efficiency toroidal transformer • 1500 cps switching frequency • Circuit breaker protection

Input: 12 to 14.5 VDC (neg. grnd. only) 25 amps. max.

Output: 750 VDC @ 250 ma; 300 or 265 VDC @ 150 ma; -40 to -150 VDC @ 20 ma. max.

Kit HP-13 DC Power Supply. . . 7 lbs. . . \$6 dn., \$6 mo. \$59.95

HP-13
\$59.95



D Heathkit HP-23 AC Power Supply For Fixed Operation

- Excellent dynamic regulation • Low AC ripple • Long life silicon rectifiers • Provisions for remote switching

Output: 700 VDC @ 250 ma. ±10%; 300 VDC @ 150 ma. ±10% or 250 VDC @ 100 ma. ±10%; -100 VDC @ 20 ma. and -40 to -80 VDC @ 1 ma., 6.3 VAC @ 11 amps., 12-6 VAC @ 5.5 amps.

Kit HP-23 AC Power Supply, 19 lbs. . . \$4 dn., \$5 mo. \$39.95

Export model available for 115/230 VAC, 50-60 cps; write for prices.

HP-23
\$39.95

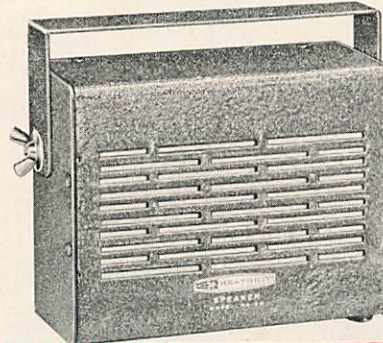


E Heathkit Mobile Speaker Kit

- Designed for use with all Heathkit mobile & fixed station equipment • 8 ohm, 4" x 6" oval speaker with 3.16 oz. magnet • Provides excellent tonal quality • Steel enclosure with green wrinkle finish • 6 7/32" W x 4 3/4" H x 2 1/2" D • Gimbals mounting bracket

Kit HS-24, 4 lbs. \$7.00

HS-24
\$7.00



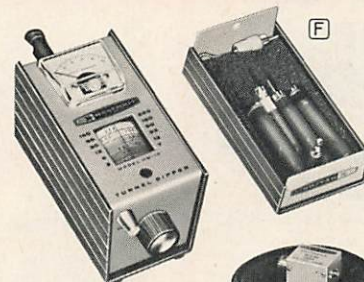
F Heathkit Solid-State Tunnel Dipper

- Tunnel diode oscillator • All solid-state circuit • 6 coils with color matched dial scales cover 3 to 260 mc. • Built-in storage space for coils • Easy to build

One Of The Handiest Tools For The Amateur Or Radio Experimenter . . . a notable achievement in electronic design, this unique instrument functions similarly to the usual grid-dip meter, but has the advantages of advanced solid-state circuitry. Features all-transistor circuit with a tunnel diode oscillator . . . 6 color matched coils & dial scales . . . vernier gear-drive tuning . . . durable epoxy-coated plug-in coils . . . protective cover with built-in storage space for coils. Covers 3 to 260 mc. Functions as sensitive RF detector (wavemeter). Ideal for checking resonant frequencies of tuned circuits, antennas, etc. . . identifying parasitics . . . tuning traps & filters and many more applications in amateur & service work. Easy to build. Less battery (one penlite cell).

Kit HM-10A, 3 lbs. . . \$4 dn., \$5 mo. \$34.95

HM-10A
\$34.95



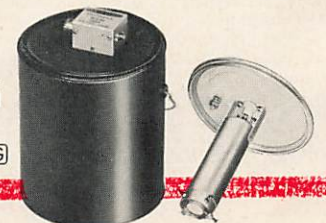
G Heathkit "Cantenna" Transmitter Dummy Load

- Handles up to 1 kilowatt of RF power • 50 ohm impedance • Provides less than 1.5 V.S.W.R. • Coax connector for RF input • Phono jack for relative power measurements with standard VOM or VTVM

Simplifies Servicing & Testing! With the Heathkit "Cantenna" you can forget about FCC violations, TV interference, and QRM while servicing or testing Amateur and Commercial transmitting equipment. Handles up to 1 kilowatt with minimal signal radiation. Features a special oil-cooled, temperature-stable resistive element. 50-ohm impedance only. One gallon capacity (oil not included).

Kit HN-31, 3 lbs. \$9.95

HN-31
\$9.95



Win A Houseful of
HEATHKITS
see center of flyer

World's Largest Selection Of

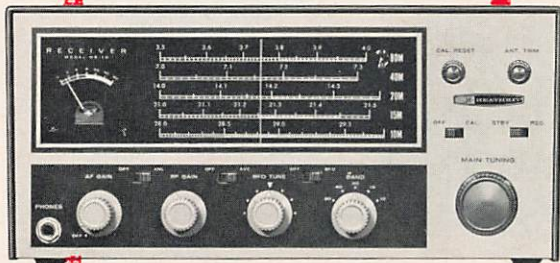
Heathkit HR-10 Amateur Band Receiver—Now It Costs Less!

- Amateur band coverage exclusively for maximum stability & accuracy • Tunes SSB, AM, & CW signals on 80 through 10 meter bands • Lattice-type crystal filter for high selectivity • Super-heterodyne receiver with RF stage for extra sensitivity • Provisions for plug-in crystal calibrator • Accurately ruled, easy-to-read dial calibrations

For Amateur Band Short-Wave Listening, Or As A Hard-Working Communications Receiver . . . the HR-10 provides you with the most receiver for your dollars spent. You'll discover the performance normally found only in "expensive" receivers . . . from the good stability you'll experience in listening to CW or tuning in SSB signals, to the sensitivity and selectivity you'll enjoy as you pull weak signals out of the "mud" . . . the HR-10 will prove itself a real performer whatever your test for receiver quality. Compare the specs. Talk to a ham who has one. You'll choose the HR-10.

- Kit HR-10, 20 lbs., \$8 dn., \$7 mo. \$75.00
 Kit HRA-10-1 Plug-in 100 kc crystal calibrator, 1 lb. \$8.95
 Kit HS-24, Speaker, 4 lbs. . . (Pg. 38) \$7.00
 Export model available for 115/230 VAC, 50-60 cps; write for prices.

HR-10 SPECIFICATIONS—Frequency coverage: 80 through 10 meters. IF frequency: 1681 kc. Sensitivity: 1 uv for 10 db signal-to-noise ratio. Image rejection: 40 db or better. Selectivity: 3 kc at 6 db, 9 kc at 40 db. Input impedance: 50 to 75 ohm, coaxial. Audio output impedance: 8 or 500 ohm. Tube complement: 6BZ6, (2) 6EAB, 6BA6, 6B17, 6EBB, 6X4. Power requirements: 117 volts AC, 50/60 cycles, 50 watts. Dimensions: 13 3/4" W x 11 1/2" D x 6 1/2" H.



HR-10
\$75.00
Now Only

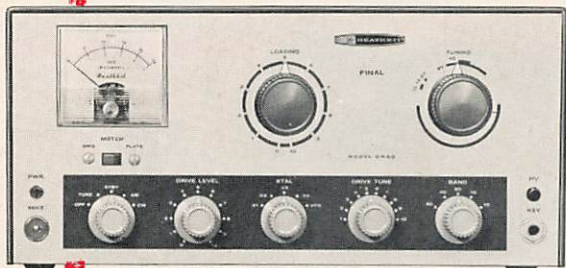
Heathkit Phone & CW Transmitter

- 90 watts phone or CW—80 through 10 meters • Neutralized 6146 final amplifier • Built-in low pass filter • Grid block keying—easy access to crystal sockets • May be run at reduced power for novice operation • Transmitter mate of the HR-10

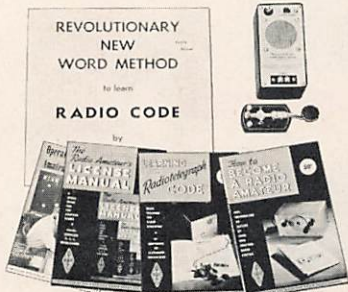
A Companion Piece To The HR-10 . . . A Value Leader In Its Class. The DX-60A will grow with you as you advance through the ranks of amateur radio. It provides the novice with a 75-watt CW transmitter, and then the general class operator with 90 watts of CW or 90 watts of AM phone. Crystal-control coverage is complete, 80 through 10 meters, with provision for VFO frequency control on all bands. (Use the HG-10 shown below.) The DX-60A features a low-pass filter to suppress harmonic interference, and pi-network tuning to facilitate easy tune-up. It assembles in just a few evenings . . . it's the perfect introduction to ham radio . . . order your DX-60A today.

- Kit DX-60A (crystals not included), 24 lbs. . . \$8 dn., \$8 mo. \$79.95
 Export model available for 115/230 VAC, 50-60 cps; write for prices.

DX-60A SPECIFICATIONS—Power input: 90 watts peak, controlled carrier phone or CW. Output impedance: 50-75 ohm (coaxial). Output coupling: Pi-network. Operation: CW or AM phone—crystal or VFO control. Band coverage: 80 through 10 meters. Power Requirements: 105-125 V., 50-60 cps, 225 watts. Dimensions: 13 3/4" W x 11 1/2" D x 6 1/2" H.



DX-60A
\$79.95



Complete Amateur Radio Course

Here's the way to become a radio "ham." A complete course, including 4 authentic ARRL handbooks, a code practice oscillator with key, and a set of 3 records that teach code by the revolutionary "word-method."

- HDP-22, Amateur Radio Starter Group, 6 lbs. Save \$3.00. \$15.95
 HDP-32, Code Records only. . . 2 lbs. \$9.50
 HDP-42, ARRL Books only (4). . . 2 lbs. \$2.00
 Kit CO-1, Oscillator plus Key only. \$2.00
 2 lbs. \$7.95

Heathkit HG-10 Variable Frequency Oscillator

- VFO 80 through 2 meters • Perfect VFO for the DX-60A transmitter • Will drive most other transmitters—provides 5 volts RMS output • Smooth vernier tuning has 28 to 1 ratio • Spot switch for "zero-beating" the frequency

Now! . . . Work VFO On All Bands! Get full performance . . . get the most from your "rock-bound" rig. You'll be able to QSY accurately anywhere within amateur bands 80 through 2 meters when you add the HG-10 to your rig.

- Kit HG-10, 11 lbs. . . \$4 dn., \$5 mo. \$34.95



HG-10
\$34.95

Low-Cost "Benton Harbor Lunch Boxes" For 6 & 2 Meters

- Perfect rigs for camping trips—complete transceivers with power supplies • Ideal for CAP, MARS, local net or emergency operations • Crystal-controlled transmitter—5 watt input • 2 meter model will operate on USCG Auxiliary frequency 143.28 mc.

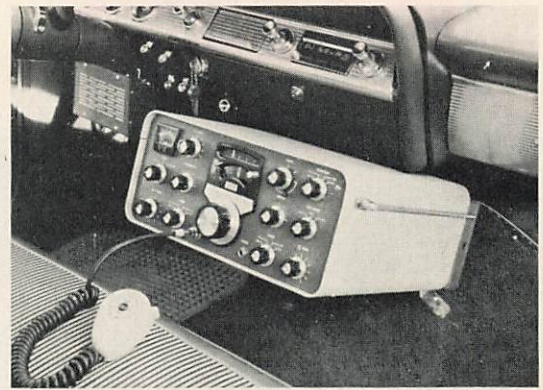
Take A Poor Man's DX-pedition . . . take a "Benton Harbor Lunch Box" on your next outing, and work 6 or 2 meters from that mountain top, picnic table, car or boat.

- Kit HW-29A (6 meter), 9 lbs. . . \$5 dn., \$5 mo. \$44.95
 Kit HW-30 (2 meter), 9 lbs. . . \$5 dn., \$5 mo. \$44.95



HW-29A
\$44.95

Amateur Radio Equipment



Now operate Mobile or Fixed on Six!

SB-110
\$320⁰⁰



The New High Performance SB-110 6-Meter SSB Transceiver

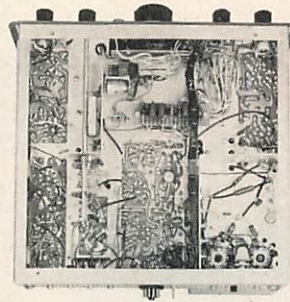
- Full SSB-CW transceive operation on six meters • 180 watts PEP SSB—150 watts CW • Switch select for Upper Sideband/Lower Sideband/CW operation • Operates PTT and VOX; VOX operated CW with built-in sidetone • Separate offset CW carrier crystal for clear, pure CW note • ALC and ANL • Built-in 100 kc calibrator and antenna switching • Heath SB Series LMO (Linear Master Oscillator)—provides truly linear tuning • Covers 50-52 mc with crystals supplied—total coverage 49.5-54 mc • One kc dial calibrations—band-spread equal to 10 feet per megacycle • Crystal filter SSB generator • Fixed station or mobile operation with the Heathkit HP-13 or HP-23 power supplies and SBA-100-1 mobile mount.

Now You Can Put A Truly High Performance SSB Rig On 6 Meters . . . assemble the new Heathkit SB-110! It provides full 6 meter transceiver operation with the same selectivity, stability, calibration, performance, and value already made famous by the Heathkit SB Series equipment for operation on 80-10 meters. Enjoy operating features that cannot be found in any other comparable transceiver on the market today! Discover the satisfaction of having a 6 meter signal with the real punch of SSB . . . of completing "solid-copy" QSO'S when band openings are minimal . . . of extending ground wave coverage . . . of owning and operating a high performance rig you have assembled yourself.

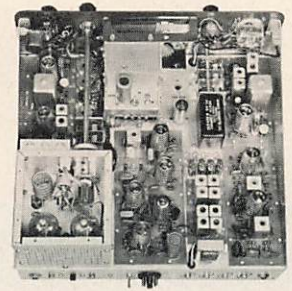
Take Advantage Of Full "SB Series" Operating Features . . . at your fingertips on six meters. Enjoy the pleasure of VOX operation, the ease of single knob tuning, the convenience of the SB-110's rapid tuning procedure—all these features in both fixed station and mobile operation. For the contest or DX operator, these features mean maximum contacts when the band opens. For the Mars or Net operator, the oscillator mode switch on the front panel permits selection of crystal control for the transmitted frequency with variable receiver tuning or full crystal controlled transceive operation. And for maintaining contact under the most adverse conditions, capability is also provided for CW transmit, USB receive, cross-mode operation. During CW operation, the carrier is offset 800 cps to eliminate retuning for a beat note. Improved Manual Techniques, Circuit Boards, and Wiring Harness Simplify Assembly! Kit is divided and packaged in two parts (circuit boards and chassis) and each page of the simple step-by-step instructions is complete with its own two-color pictorial diagram. A VTVM, dummy load, and an AM broadcast receiver are all that is needed for alignment.

Discover The New "Feeling" Of Tuning 6 Meters With The Famous Heathkit SB Series LMO. That feeling is from the smooth dial mechanism and oscillator stability solid enough to satisfy the rigorous requirements of both CW and SSB operation; plus, truly linear 1 kc dial calibration. The Heath LMO on 6 meters means a maximum drift of less than 100 cps per hour after a 20-minute warmup time; it means dial readings accurate within 400 cps after calibration. Let these performance figures and the specifications below be your guide to choosing the best 6-meter rig available today! Recommended for experienced kit builders.

Kit SB-110, 23 lbs. . . \$32 dn., \$28 mo. \$320.00
For fixed or mobile operation of SB-110, use HP-13 & HP-23 power supplies, p. 21.



Circuit board construction speeds assembly . . . provides clean layout . . . assures uniform circuit performance. New style assembly manual makes assembly steps easier to follow.



Sectionalized layout on circuit boards simplifies construction—makes components accessible and easy to locate.

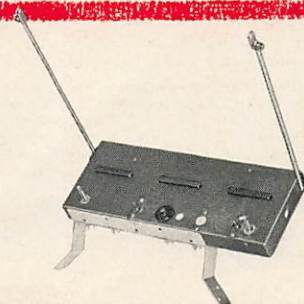
SB-110 SPECIFICATIONS: RECEIVER SECTION: NOISE FIGURE: 3 db or less. SENSITIVITY: 0.1 uv for 15 db signal plus noise-to-noise ratio. SELECTIVITY: 2.1 kc @ 6 db down, 5 kc max. @ 60 db down. IMAGE REJECTION: 50 db or better. IF REJECTION: 50 db or better. ANTENNA INPUT IMPEDANCE: 50 ohm nominal (unbalanced). AUDIO OUTPUT IMPEDANCE: Speaker, 8 ohms; Headphones, 600 ohms or higher. AUDIO OUTPUT POWER: 1 watt. AGC CHARACTERISTICS: Audio output level varies less than 10 db for 50 db change of input signal level (0.5 uv to 150 uv). TRANSMITTER SECTION: DC POWER INPUT: SSB, 180 watts PEP; CW, 150 watts PEP. RF POWER OUTPUT: SSB, 100 watts PEP; CW, 90 watts (50 ohm non-reactive load). OUTPUT IMPEDANCE: 50 ohm nominal with not more than 2:1 SWR. CARRIER SUPPRESSION: 55 db down from rated output. UNWANTED SIDEBAND SUPPRESSION: 55 db down from rated output at 1000 cps & higher. DISTORTION PRODUCTS: 30 db down from rated PEP output. HARMONIC RADIATION: 35 db below rated output. HUM & NOISE: 40 db or better below rated carrier. AUDIO INPUT: .007 v. minimum. For rated input. CW SIDETONE: Internally switched to speaker with transmitter in CW mode & key depressed. Approx. 1000 cps tone. KEYING CHARACTERISTICS: VOX operated from keyed tone, using grid-block keying. GENERAL: FREQUENCY COVERAGE: 49.5-54.0 mc in 500 kc segments (50.0-52.0 mc with crystals supplied). FREQUENCY SELECTION: Built-in LMO or crystal control. FREQUENCY STABILITY: Less than 100 cps drift per hour after 20 minutes warmup under normal ambient conditions. Less than 100 cps drift for ±10% supply voltage variations. MODES OF OPERATION: SSB, single sideband (suppressed carrier, with selectable upper or lower sideband). Tune, continuous wave, CW, keyed continuous wave (800 cps offset crystal for cross-mode operation between USB and CW). DIAL ACCURACY: Electrical, within 400 cps on all band segments, after calibration at nearest 100 kc point. Visual, within 200 cps. DIAL BACKLASH: No more than 50 cps. CALIBRATION: Every 100 kc. INTERMEDIATE FREQUENCIES: Receiver First IF & Transmitter Second IF, 8,395 to 8,895 mc passband. Receiver Second IF & Transmitter First IF, 3,395 mc center frequency. POWER REQUIREMENTS: High voltage, +700 v. DC @ 250 ma with 1% max. ripple. Low voltage, +250 v. DC @ 100 ma with .05% max. ripple. Bias voltage, -115 v. DC @ 10 ma with .5% max. ripple. Filament voltage, 12.6 v. AC/DC @ 4.355 amps. Dimensions: 14 1/4" W x 6 1/4" H x 13 1/4" D.

NEW! MOBILE UNIVERSAL MOUNTING BRACKET FOR SB-110

- Permits virtually any-angle mounting of SB-110
- Provides rugged support to handle stress and strain of mobile installation
- Includes all necessary electrical connectors and associated wiring for quick-disconnect & plug-in type transceiver mounting.

Go Six Meter SSB Mobile With The SB-110! SBA-100-1 permits easy installation of SB-110 on transmission hump or under dash. Allows quick plug-in of entire SB-110 in car for fuss-free change from fixed to mobile operation. Supporting rods are concealed behind mounting base when SB-110 is removed. Finish matches SB-110.

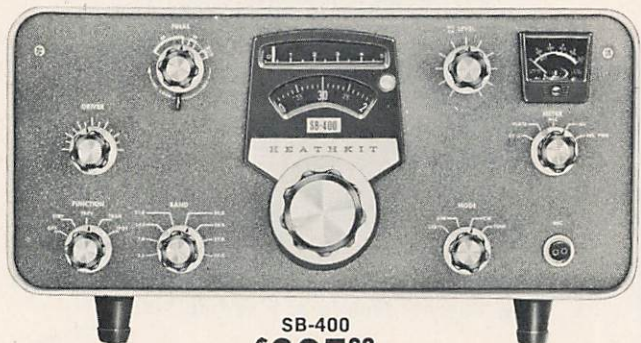
Kit SBA-100-1, 6 lbs. \$14.95



SBA-100-1
\$14⁹⁵

Win A Houseful of
HEATHKITS
see center of flyer

The Finest In Amateur Radio



SB-400
\$325⁰⁰



SB-200
\$200⁰⁰

Heathkit SB-400 SSB Transmitter

• A complete 180 watt SSB transmitter with built-in power supply and antenna change-over relay • Crystal filter type SSB generation • Operates upper or lower sideband • Automatic level control • VOX & PTT • Complete 80-10 meter coverage • Crystal controlled heterodyne oscillators • 1 kc linear dial calibration—100 kc per dial revolution • Dial bandspread equal to 10 feet per megacycle

Here's The Finest Desk-Top Transmitter Available Today! Convince yourself—compare the specifications. Or better yet, talk to a ham who has built one—there are hundreds on the air. You'll see right then, why the SB-400 is the best transmitter for you.

Kit SB-400, 34 lbs...\$33 dn., as low as \$22 mo.....\$325.00
Export model available for 115/230 V AC, 50-60 cps; write for prices.
HDP-21, Special SSB Mike, 4 lbs...\$3 dn., \$5 mo.....\$29.40

SB-400 SPECIFICATIONS—Emission: SSB (upper or lower sideband) and CW. Power input: 170 watts CW, 180 watts P.E.P. SSB. Power output: 100 watts (80-15 meters), 80 watts (10 meters). Output impedance: 50 to 75 ohm—less than 2:1 SWR. Frequency range: (mc) 3.5—4.0; 7.0—7.5; 14.0—14.5; 21.0—21.5; 28.0—28.5; 28.5—29.0; 29.0—29.5; 29.5—30.0. Frequency stability: Less than 100 cps per hr. after 20 min. warmup. Carrier suppression: 55 db below peak output. Unwanted sideband suppression: 55 db @ 1 kc. Intermodulation distortion: 30 db below peak output (two-tone test). Keying characteristics: Break-in CW provided by operating VOX from a keyed tone (Grid block keying). CW sidetone: 1000 cps. ALC characteristics: 10 db or greater @ 0.2 ma final grid current. Noise level: 40 db below rated carrier. Visual dial accuracy: Within 200 cps (all bands). Electrical dial accuracy: Within 400 cps after calibration at nearest 100 kc point (all bands). Backlash: Less than 50 cps. Oscillator feed-through mixer products: 55 db below rated output (except 3910 kc crossover which is 45 db). Harmonic radiation: 35 db below rated output. Audio input: High impedance microphone or phone patch. Audio frequency response: 350 to 2450 cps \pm 3 db. Power requirements: 80 watts STBY, 260 watts key down @ 120 V AC line. Dimensions: 14 7/8" W x 6 1/2" H x 13 3/4" D.

Heathkit SB-200 Kilowatt Linear Amplifier

• A complete SSB kilowatt linear amplifier matching the SB-400 • 1200 watts P.E.P. input SSB—1000 watts CW • 80 through 10 meter coverage • Built-in SWR meter—Antenna relay—Built-in solid-state power supply • Automatic level control • Circuit-breaker power supply protection • Variable output loading • Fan cooling

Here's A Clean 1200 Watts PEP SSB Final That Can Be Driven By Most SSB Transmitters. The SB-200 features two 572B, T-160-L final amplifier tubes chosen for their rugged, dependable qualities. Operating Class B, grounded grid, they provide stable operation through ten meters, and since the output tank is a variable pi-network, they load up well to nearly all antenna systems. (A built-in SWR meter is provided to check on reflected power.) Add this final to your transmitter line-up for a good, solid kw of SSB at low cost.

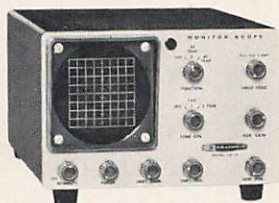
Kit SB-200, 41 lbs...\$20 dn., \$17 mo.....\$200.00

SB-200 SPECIFICATIONS—Band coverage: 80, 40, 20, 15 & 10 meters. Maximum power input: 1200 watts P.E.P. SSB, 1000 watts CW. Driving power required: 100 watts. Duty cycle: SSB, continuous voice modulation; CW, 50% (key down time not to exceed 5 min.). Third order distortion: 30 db or better at 1000 watts P.E.P. Output impedance: 50 to 75 ohm unbalanced; variable pi-output circuit. SWR not to exceed 2:1 Input impedance: 52 ohm unbalanced; broad-band pretuned input circuit requires no tuning. Meter functions: 0-100 ma grid current, 0-1000 ma plate current, 0-1000 relative power, 1:1 to 3:1 SWR, 1500 to 3000 volts high voltage. Front panel controls: Load; Tune; Band; Relative Power Sensitivity; Meter Switch. Grid-Plate-Rel. Power-SWR-HV; and Power Switch, on/off. Tube complement: Two 572B/T-160-L (in parallel). Power requirements: 120 volts AC @ 16 amperes (max.), 240 volts AC @ 8 amperes (max.). Cabinet size: 14 7/8" W x 6 1/2" H x 13 3/4" D. Net weight: 35 lbs.

HO-10 Signal Monitor

• Displays envelope, AF & RF trapezoid patterns • Handles power outputs from 5 watts to 1 kilowatt • Simple to connect in antenna system feed line • Shows quality of signals you transmit • Shows quality of signals you receive

HO-10
\$59⁹⁵



HO-10 Provides An Accurate Method Of Detecting Overmodulation . . . through display of your transmitted signal. Also reveals nonlinearity and audio distortion. Switch the HO-10 from transmitted to received signals and give a "complete" on-the-air signal report. (Receiver IF must be below 500 kc.) Assembly Manual Shows How To Interpret Signal Waveforms . . . so you can make a complete analysis of your transmitted signal.

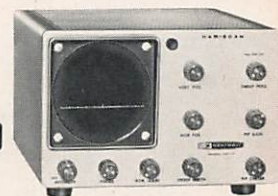
Kit HO-10, 13 lbs...\$6 dn., \$6 mo.....\$59.95
Export model available for 115/230 V AC, 50-60 cps; Write for prices.

HO-10 SPECIFICATIONS—Vertical response: \pm 3 db from 10 cps to 500 kc. Sensitivity: 500 mv per inch deflection. Input resistance: 50 k ohm. Horizontal response: \pm 3 db from 3 cps to 30 kc. Sensitivity: 800 mv per inch deflection. Input resistance: 1 megohm. Sweep generator: Recurrent type: 15 to 200 cps (variable). Tone oscillators: Approximately 1000 cps and 1700 cps. Output voltage, 15 mv (nominal). GENERAL: Frequency coverage: 160 through 6 meters (50-75 ohm coaxial input). Power limits: 5 watts to 1 kilowatt output. Front panel controls: Function Selector, Sweep Frequency, Tone Generator, Horizontal Gain, Horizontal Position, Vertical Position, Vertical Gain, Focus, Intensity/Off. Rear control: Xmr. Atten. Attenuates 0 to 24 db at approximately 6 db per step. Power supply: Transformer operated, fused 1/2 amp. Power requirements: 105-125 VAC, 50/60 cps. 35 watts. Dimensions: 5 1/4" H x 7 3/4" W x 11" D.

Heathkit "Ham-Scan" Spectrum Monitor

• Adds "sight" to "sound" when tuning the bands • Operates with all IF frequencies listed below • Monitors up to 50 kc on either side of the signal to which you are tuned

HO-13
\$79⁰⁰

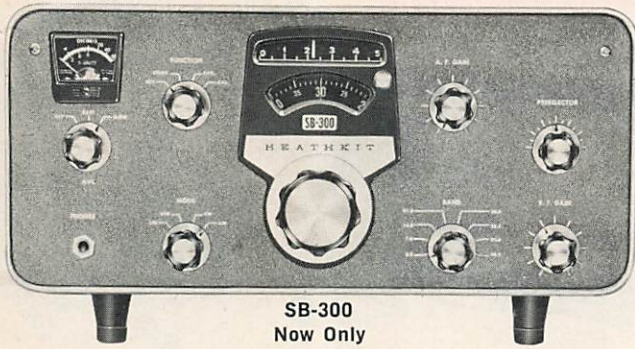


"Ham-Scan" Visually Shows All Signals Within Your Receiver Bandpass And Up To 50 kc Above And Below The Frequency To Which You Are Tuned! . . . Now you can spot band openings and signals without hunting. The display follows your receiver as you tune.

Kit HO-13, 13 lbs...\$8 dn., \$8 mo.....\$79.00
Export model available for 115/230 V AC, 50-60 cps; write for prices.

HO-13 SPECIFICATIONS—Receiver IF: 455, 1600, 1650, 1681, 2075, 2215, 2445, 3000, 3035, 3395 kc. RF Amplifier—Response: \pm 0.5 db at \pm 50 kc from receiver IF. IF—350 kc. Sensitivity: Approx. 50 uv input for 1" vertical deflection at full gain setting. Horizontal Deflection—Sweep Generator: Linear saw-tooth, recurrent-type (internal). Frequency: 10 to 50 cps, variable. Sweep width: 30 kc or less, to 100 kc \pm 20%, continuously variable. (Approx. 15 kc to 100 kc for 455 kc IF). Resolution: 2 kc (frequency difference between two 1" pips whose adjacent 3 db points coincide. Measured at slowest sweep speed and at 30 kc sweep width). Power supply: Transformer operated, fused at 1/2 ampere. Power requirements: 120 volts AC, 50/60 cps, 40 watts. Controls: On-Off/Intensity, Focus, Horizontal gain, Sweep width, Pip center, Horizontal position, Pip gain, Vertical position, Sweep frequency/AGC, astigmatism. Dimensions: 5 1/4" H x 7 3/4" W x 11" D.

—At Prices You Can Afford



SB-300
Now Only
\$250⁰⁰
(less speaker)

SB-300 SPECIFICATIONS—Frequency range (megacycles): 3.5 to 4.0, 7.0 to 7.5, 14.0 to 14.5, 21.0 to 21.5, 28.0 to 28.5, 28.5 to 29.0, 29.0 to 29.5, 29.5 to 30. **Intermediate frequency:** 3.395 megacycles. **Frequency stability:** Less than 100 cps per hour after 20 min. warmup under normal ambient conditions. Less than 100 cps for $\pm 10\%$ line voltage variation. **Visual dial accuracy:** Within 200 cps on all bands. **Electric dial accuracy:** Within 400 cps on all bands after calibration at nearest 100 kc point. **Backlash:** No more than 50 cps. **Sensitivity:** Less than 1 microvolt for 15 db signal-plus-noise/noise ratio for SSB operation. **Modes of operation:** Switch selected; LSB, USB, CW, AM. **Selectivity:** SSB: 2.1 kc at 6 db down, 5.0 kc at 60 db down (crystal filter supplied). AM: 3.75 kc at 6 db down, 10 kc at 60 db down (crystal filter available as accessory). CW: 400 cps at 6 db down, 2.5 kc at 60 db down (crystal filter available as accessory). **Spurious response:** Image and IF rejection better than 50 db. Internal spurious signals below equivalent antenna input of 1 microvolt. **Audio response:** SSB: 350 to 2450 cps nominal at 6 db. AM: 200 to 3500 cps nominal at 6 db. CW: 800 to 1200 cps nominal at

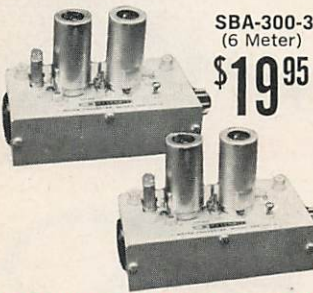
Heathkit SB-300 Amateur Band Receiver Now Costs Less!

• Complete coverage of 80 through 10 meter amateur bands with all crystals furnished, plus provision for VHF converters • Crystal-controlled front-end for same rate tuning on all bands • 1 kc dial calibrations—100 kc per dial revolution • Bandspread equal to 10 feet per megacycle • Tuning dial to knob ratio approx. 4-to-1 • Provision for transceive operation with matching SB-400 Transmitter • Professional styling & features at 60% savings

Chances Are, You're Already Well Acquainted With The Performance Of The SB-300 . . . it's been the talk of the amateur air waves since it was first introduced, and on-the-air comparisons of its pace-setting features are not uncommon. The key to this famous performance of the SB-300 is the Heath designed LMO (Linear Master Oscillator) . . . a design with linear tuning, 1 kc dial calibrations, and optimum stability to provide the features needed for proper operation in the crowded conditions of today's amateur bands. And the LMO is prebuilt and aligned to assure you that your SB-300 has professional factory assembled performance and the great savings of "do-it-yourself". An unbeatable combination.

Kit SB-300, less speaker, 22 lbs. . . \$25 dn., \$22 mo. \$250.00
SBA-300-1 Optional AM crystal filter (3.75 kc), 1 lb. \$19.95
SBA-300-2 Optional CW crystal filter (400 cps), 1 lb. \$19.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

6 db. **Audio output impedance:** Unbalanced nominal 8 ohm speaker and high impedance headphone. **Audio output power:** 1 watt with less than 8% distortion. **Antenna input impedance:** 50 ohms nominal. **Muting:** Open external ground at Mute socket. **Crystal calibrator:** 100 kc crystal. **Front panel controls:** Main tuning dial; function switch; mode switch; AGC switch; band switch; AF gain control; RF gain control; preselector; phone jack. **Rear apron connection:** Accessory power plug; HF antenna; VHF #1 antenna; VHF #2 antenna; mute; spare, anti-trip; 500 ohm; 8 ohm speaker; line cord socket; heterodyne oscillator output; LMO output; BFO output; VHF converter switch. **Tube complement:** (1) 6BZ6 RF amplifier; (1) 6AU6 Heterodyne mixer; (1) 6AB4 Heterodyne oscillator; (1) 6AU6 LM osc.; (1) 6AU6 LMO mixer; (2) 6BA6 IF amplifier; (1) 6AU6 Crystal calibrator; (1) 6HF8 1st audio, audio output; (1) 6AS11 Product Detector, BFO, BFO Amplifier. **Power supply:** Transformer operated with silicon diode rectifiers. **Power requirements:** 120 volts AC, 50/60 cps, 50 watts. **Dimensions:** 14 $\frac{1}{8}$ " W x 6 $\frac{1}{2}$ " H x 13 $\frac{3}{8}$ " D. **Net weight:** 17 lbs.



SBA-300-3
(6 Meter)
\$19⁹⁵

SBA-300-4
(2 Meter)
\$19⁹⁵

6 & 2 Meter Plug-In Converters For The SB-300

• Add 6 & 2 meter coverage to SB-300 • Crystals supplied for 50-52 mc for 6 meter converter & 144-146 for 2 meter converter • 6DJ8 cascode amplifier for low noise—high sensitivity • Converter output on 10 meters

For High-Performance Reception On 6 And 2 Meters . . . Get signal plus noise to noise ratios of 6 db for 0.1 uv signals on 6 meters, and 6 db for a 0.2 uv signal on 2 meters! Order 6 & 2 meter converters along with your SB-300 for complete 80-2 meter coverage!

Kit SBA-300-3 (6 meter), 2 lbs. \$19.95
Kit SBA-300-4 (2 meter), 2 lbs. \$19.95



A **HD-19**
\$29⁹⁵



B **HD-11**
\$14⁹⁵



C **HM-11**
\$15⁹⁵



D **HD-20**
\$14⁹⁵



E **HDP-293**
\$4⁰⁰



F **HDP-21**
\$29⁴⁰

A Heathkit Hybrid Phone Patch

Couple The Telephone To Your Rig Swiftly And Efficiently. Operates with virtually all transmitters and receivers. Works with VOX circuits. Use with 3 to 16 ohm speakers and Hi-Z microphone.
Kit HD-19, 4 lbs. . . \$3 dn., \$5 mo. \$29.95

B Heathkit "Q" Multiplier

Improves selectivity . . . Ideal for use with GR-64 SWL Receiver. Heathkit "Q" multiplier provides an effective "Q" of 4000 in IF circuits 450 to 460 kc. Includes built-in power supply.
Kit HD-11, 3 lbs. \$14.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

C Heathkit Reflected Power Meter

Indicates Standing Wave Ratio 160 Through 6 Meters. Shows forward and reflected power of 50 or 75 ohm lines to check antenna efficiency. Handles up to 1 kw.
Kit HM-11, 3 lbs. \$15.95

D Heathkit 100 kc Crystal Calibrator

For Calibrating And For Accurate Band-Edge Markings! . . . HD-20 produces harmonics every 100 kc to over 54 mc. Battery powered. NEDA type 1600 battery not included.
Kit HD-20, 1 lb. \$14.95

E 1965 Radio Amateur's Handbook

The Foremost Reference Book In Amateur Radio! From plain-talk discussions on basic electronics to complete designs for SSB rigs.
Kit HDP-293, 3 lbs. \$4.00

F High-Quality Amateur Station Microphone

Excellent Communications Mike . . . frequency response from 300 to 3,000 cps for maximum voice clarity.
Kit HDP-21, 4 lbs. . . \$3 dn., \$5 mo. \$29.40

Win A Houseful of
HEATHKITS
see center of flyer

Professional Test Equipment—

A Heathkit IM-11 . . . World's Most Popular VTVM

• Single test probe for all measurements • 7 AC, 7 DC, 7 Ohms ranges • Easy to read, $4\frac{1}{2}$ " 200 ua meter • 1% precision resistors • Frequency response ± 1 db from 25 cps to 1 mc • Easy, stable circuit board construction
Kit IM-11, 5 lbs. . . \$3 dn., \$5 mo. . . \$24.95
Assembled IMW-11, 5 lbs. . . \$4 dn., \$5 mo. . . \$39.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.
Kit EF-1-3, Comb. Offer with EF-1 Applications Course, pg. 31, 10 lbs. . . \$4 dn., \$5 mo. . . \$39.95

IM-11 SPECIFICATIONS—Meter scales: DC & AC (RMS): 0-1.5, 5, 15, 50, 150, 500, 1500 volts full scale. AC peak-to-peak: 0.4, 1.4, 4.0, 14.0, 40.0, 140.0, 400.0. Resistance: 10 ohm center scale x1, x10, x100, x1000, x10k, x100k, x1 meg. Measures 1 ohm to 1000 megohms with internal battery. Meter: $4\frac{1}{2}$ " 200 ua movement. Multipliers: 1% precision type. Input resistance DC: 11 megohms (1 megohm in probe) on all ranges. AC input impedance: 1 megohm shunted by 40 UUF (measured at input terminals). Circuit: Balanced bridge (push-pull) using twin triode. Accuracy: DC $\pm 3\%$, AC $\pm 5\%$ of full scale. Frequency response: ± 1 db 25 cps to 1 mc (600 ohm source). Tubes: 12AU7, 6AL5. Battery requirements: 1.5 volt, size "C" flashlight cell (not included). Power requirements: 105-125 volt 50/60 cycles AC, 10 watts. Dimensions: $7\frac{3}{8}$ " H x $4-11\frac{1}{16}$ " W x $4\frac{1}{4}$ " D.

B Heathkit "Service Bench" VTVM

• 7 AC volts, 7 DC volts, 7 resistance ranges • Separate 1.5 & 5 v. AC scales • Gimbal bracket for under-shelf, or bench-top mounting • 6" 200 ua meter • One test probe for all measurements • 1% precision resistors
Kit IM-13, 7 lbs. . . \$4 dn., \$5 mo. . . \$32.95
Assembled IMW-13, 7 lbs. . . \$5 dn., \$5 mo. . . \$49.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.
Kit EF-1-4, Comb. Offer with EF-1 Applications Course, pg. 31, 28 lbs. . . \$9 dn., \$8 mo. . . \$84.95

IM-13 SPECIFICATIONS—Same as IM-11 above, except with 6" meter. Dimensions: 5" H x $12\frac{1}{16}$ " W x $4\frac{3}{4}$ " D.

C Heathkit Laboratory Precision AC VTVM

• 10 ranges—0.01 to 300 volts RMS full scale • Extended frequency, ± 1 db, 10 cps—500 kc • 10 megohm input impedance • Calibrated db scale
Kit IM-21, 5 lbs. . . \$4 dn., \$5 mo. . . \$33.95
Assembled IMW-21, 5 lbs. . . \$6 dn., \$5 mo. . . \$52.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

IM-21 SPECIFICATIONS—Frequency response: ± 1 db 10 cps to 500 kc, ± 2 db 10 cps to 1 mc, all ranges. Ranges: Ten ranges from 0.01 to 300 volts RMS full scale. Decibels: ten switch selected ranges from -40 db to +50 db in 10 db steps. Total range -52 to +52 db, meter scale -12 to +2 db. (0 db = 1 mw in 600 ohms). Input impedance: 10 megohms shunted by 12 uuf on ranges 10 to 300 volts, 10 megohms shunted by 22 uuf on ranges .01 to 3 volts. Tube complement: (1) 6AW8, (1) 6EJ7/EF-184. Accuracy: Within 5% of full scale. Power requirements: 105-125 volts AC, 50-60 cycles, 10 watts. Dimensions: $7\frac{3}{8}$ " H x $4-11\frac{1}{16}$ " W x $4\frac{1}{4}$ " D.

D Heathkit Wide-Band 5" Laboratory Oscilloscope

• Full 5 mc bandwidth fulfilling requirements from university laboratories to color TV service shops • 10 cps to 500 kc sweep • Excellent lock-in characteristics • Positive trace positioning controls
Here's The Top Performing Oscilloscope In Its Class . . . Anywhere! IO-12's are put through their paces in multitudes of laboratories and service shops all over the world. With built-in peak-to-peak calibration reference, they are meant to "go it on their own" regardless of supporting equipment. Other features include Z-axis input and external sync amplitude control.

Kit IO-12, 24 lbs. . . \$8 dn., \$7 mo. . . \$76.95

Assembled IOW-12, 24 lbs. . . \$13 dn., \$11 mo. . . \$126.95

Export model available for 115/230 VAC, 50-60 cps; write for prices.

IO-12 SPECIFICATIONS—Vertical Sensitivity: 0.025 volts RMS per inch at 1 kc. Frequency response (referred to 1 kc level): ± 1 db 8 cps to 2.5 mc; +1.5 to -5 db, 3 cps to 5 mc; response at 3.58 mc, -2.2 db. Rise time: 0.08 microseconds or less. Input impedance: (AT 1 KC) 2.7 megohms at X1, 3.3 megohms at X10 and X100. Horizontal sensitivity: 0.3 volts RMS per inch at 1 kc. Frequency response: ± 1 db 1 cps to 200 kc; ± 3 db 1 cps to 400 kc. Input impedance: 4.9 megohms at 1 kc. Sweep generator: Range—10 cps to 500 kc in five steps, variable, plus any 2 switch-selected preset sweep frequencies in this range. Synchronizing: automatic lock-in circuit using self-limiting synchronizing cathode follower. Power requirements: 105-125 volts 50/60 cycles AC at 80 watts; fused. Dimensions: $14\frac{1}{4}$ " H x $8\frac{1}{2}$ " W x $16"$ D.

E 30,000 Volt DC High Voltage Probe Kit

Adds safety to high voltage measurements, plus provides 100 to 1 attenuation on DC ranges of any 11 megohm VTVM.

Kit 336, 1 lb. . . \$4.50

Assembled 336W, 1 lb. . . \$5.50

F Etched Circuit RF Probe Kit

Facilitates RF measurements up to 250 megacycles with any 11 megohm VTVM.

Kit 309-C, 1 lb. . . \$3.50

Assembled 309W-C, 1 lb. . . \$4.50

G Scope Demodulator Probe Kit

Observe modulation envelope of RF & IF signals on your scope. 30 VRMS, 500 VDC.

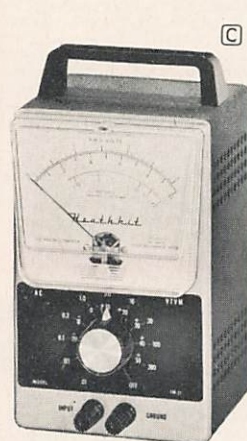
Kit 337-C, 1 lb. . . \$3.50

Assembled 337W-C, 1 lb. . . \$4.50

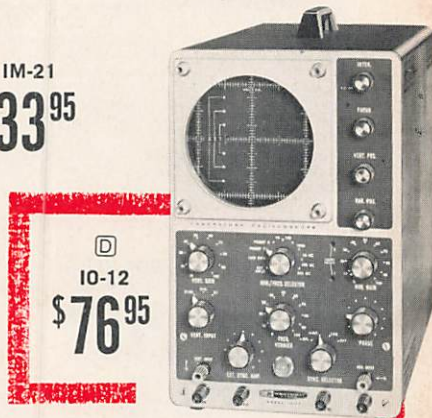


Kit IM-11
\$24⁹⁵
A

Kit IM-13
\$32⁹⁵
B



IM-21
\$33⁹⁵
C



IO-12
\$76⁹⁵
D



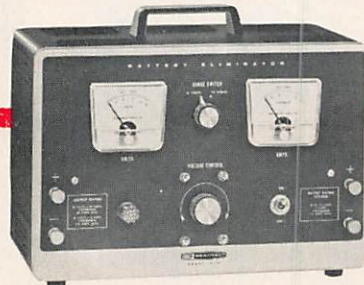
336 Probe
\$4⁵⁰
E



337-C Probe
\$3⁵⁰
G



309-C Probe
\$3⁵⁰
F



IP-12
\$47⁵⁰
H

H Heathkit "Low-Ripple" Battery Eliminator

• Convenient switch-selection of 6 or 12 volt DC power • Special ripple filter circuit holds AC ripple to less than .3% • Panel metered output voltage & current • Doubles as a convenient battery charger • Heavy-duty well-rated components throughout • Ideal for labs and service shops • Smooth DC for transistor and mobile radio servicing

Kit IP-12, 17 lbs. . . \$5 dn., \$5 mo. . . \$47.50

Assembled IPW-12, 17 lbs. . . \$6 dn., \$6 mo. . . \$59.95

Export model available for 115/230 VAC, 50-60 cps; write for prices.

IP-12 SPECIFICATIONS—Continuously variable output: 6 volt range: unfiltered, 10 amp continuous, 15 amp maximum; filtered, 5 amp continuous, less than .3% ripple. 12 volt range: unfiltered, 5 amp continuous, 7.5 amp maximum; filtered, 5 amp continuous, less than .3% ripple. Power requirements: 105-125 volts 50/60 cycles AC at 200 watts. Dimensions: $13"$ W x $8\frac{1}{2}"$ H x $7"$ D.

Now in Kit or Assembled Models



A
IP-20
\$72⁹⁵

B
IP-32
\$56⁹⁵

C
IG-72
\$41⁹⁵

D
IT-11
\$29⁹⁵

E
IG-102
\$27⁹⁵

E Heathkit RF Signal Generator

- Covers 100 kc to 110 mc (220 mc on harmonics) in 6 bands • Large, accurately calibrated dial scales • Rewired, prealigned coil/bandswitch assembly • Modulated or unmodulated RF output • 400 cps signal for audio tests

Excellent, Dependable, General Purpose RF Signal Generator . . . provides all essential generator functions for fast easy alignment of RF & IF circuits in AM tuners and receivers. Frequency accurate to 2% on all bands with RF output level controlled by fixed-step and variable attenuators. 400 cycle modulating signals has 10 volt output for audio tests. This test instrument has been chosen for literally thousands of test benches.

Kit IG-102, 6 lbs. . . \$3 dn., \$5 mo. \$27.95
Assembled IGW-102, 6 lbs. . . \$6 dn., \$5 mo. \$54.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

IG-102 SPECIFICATIONS—Frequency range: Band A, 100 to 320 kc; Band B, 310 kc to 1.1 mc; Band C, 1 to 3.2 mc; Band D, 3.1 to 11 mc; Band E, 10 to 32 mc; Band F, 32 to 110 mc. **Calibrated harmonics:** 110 to 220 mc. **Accuracy:** 2%. **Output:** Impedance, 50 ohms; Voltage, 100,000 uv max. **Modulation:** Internal, 400 cps, 30% depth; External, approx. 3 V across 50 k ohms for 30%. **Audio output:** Approx. 10 V open circuit. **Power requirements:** 105-125 V, 50/60 cycles AC, 15 watts. **Dimensions:** 6½" W x 9½" H x 5" D.

A Heathkit "Solid-State" Regulated DC Power Supply

- All-transistor solid-state circuitry • Relay protected against short circuit & overload • Four current ranges, 50 MA, 150 MA, 500 MA & 1.5 A. • Adjustable current limiter, 30 to 100% on each range • Series type voltage regulator, zener diode reference

Here Is A Perfect Laboratory Power Supply! . . . Completely protected against short and overload, and with load regulation better than ±15 millivolts.

Kit IP-20, 13 lbs. . . \$8 dn., \$7 mo. \$72.95
Assembled IPW-20, 16 lbs. . . \$12 dn., \$11 mo. \$114.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

IP-20 SPECIFICATIONS—Input: 105-125 volts 60 cps; 150 watts at full load (50V, 1.5A). **Output:** 0.5-50 volts DC; 1.5 amps max. DC. **Load regulation:** ±15 millivolts, can be adjusted for no change. **Line regulation:** (105 to 125 VAC): Less than .005% change. **Ripple & noise:** Less than 150 microvolts. **Transient response:** Less than 25 microseconds. **Output impedance:** Less than .1 ohm DC to 10 kc; Less than .5 ohms 10 kc & up. **Overload protection:** Current limiter & relay. **Meter:** 3½", 1 ma, 50 ohm. **Current ranges:** 50 ma, 150 ma, 500 ma, 1.5 amp. **Voltage ranges:** 5V, 15V, 50V. **Front panel controls:** On/Off, Coarse voltage switch, Fine voltage adjust, Current range switch, Current limit adjust, Meter slide switch, DC regulation, Reset Standby toggle switch. **Output terminals:** (3), plus (+), minus (-), chassis ground. **Dimensions:** 9½" H x 6½" W x 11" D.

B Heathkit Variable-Voltage DC Regulated Power Supply

- Furnishes B+, Bias, & Filament voltages • DC output variables from 0 to 400 volts • Separate panel meters monitor output voltage & current • Output terminals isolated for safety in AC/DC work

From The Laboratory To The Test Bench . . . this power supply has proven its value countless times. Provides excellent long-period regulation for laboratory set-ups. Separate high voltage switching permits circuit adjustment with filaments "on."

Kit IP-32, 17 lbs. . . \$6 dn., \$6 mo. \$56.95
Assembled IPW-32, 18 lbs. . . \$9 dn., \$8 mo. \$84.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

IP-32 SPECIFICATIONS—Output: 0-400 volts regulated DC at 0-100 ma cont., 125 ma intermittent, 0 to -100 volts DC at 1 ma variable bias voltage, 6.3 volts AC at 4 amps., filament voltage. **Regulation:** Output variation less than 1% from no load to full load. Output variation less than 1% for a ±10 v. change at 117 V. AC input. **Ripple:** Less than 10 millivolts RMS, ripple, jitter and noise. **Output impedance:** Less than 10 ohms, DC to 1 mc. **Meters:** Voltmeter 0-400 V or 0-150 V.; Milliammeter 0-150 ma. **Dimensions:** 13" W x 8½" H x 7" D.

C Precision Audio Frequency Signal Generator

- Near-perfect sine wave at switch selected output frequencies—10 cps to 100 kc • Less than 0.1% distortion—20 cycles to 200 kc • Panel meter on output calibrated in volts & db • Output level and frequency accurate within ±5%

Switch Select The Precise Audio Frequency . . . three rotary switches select two significant figures and the multiplier to determine output frequency. Clean sine wave signal provides a dependable reference for laboratory and hi-fi measurements.

Kit IG-72, 8 lbs. . . \$5 dn., \$5 mo. \$41.95
Assembled IGW-72, 9 lbs. . . \$7 dn., \$6 mo. \$64.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

IG-72 SPECIFICATIONS—Frequency: 10 cps to 100 kc, switch selected, 2 significant figures and multiplier. **Output:** 6 ranges; 0 to .003, .01, .03, .1, .3, 1 volts RMS into external 600 ohm load or with internal load into Hi-Z, 2 ranges; 0 to 3, 10 volts RMS into a minimum of 10,000 ohms, -60 db to +22 db in 8 steps -60 dbm to +2 dbm (0 dbm = 1 mw into 600 ohms). **Distortion:** Less than .1%, 20 to 20,000 cps. **Tubes:** (1) 6AU6, (1) 6CL6, (1) 6X4. **Power:** 105-125 volts AC, 50/60 cycles, 40 watts. **Dimensions:** 9½" W x 6½" H x 5" D.

D Heathkit Capacitor Checker

- Tests all capacitor types • Low bridge voltage for safe testing of miniature electrolytics • 16 leakage testing voltages • Direct reading scales—no involved calculations • Measures resistance from 5 ohm to 50 megohms • Measures capacitance from 10 uuf to 1,000 mfd • Comparator circuit—measures "L," "C," or "R" with external standard • Calibrated power factor control • "Eye" tube null & leakage indicator

Here's A Direct Reading Capacitance Bridge . . . indicates capacitor values accurately on direct reading scales. No involved calculations! Measures resistance, capacitance . . . tests for leakage and shorts. Test switch automatically discharges capacitors after test to eliminate shock hazard to the operator.

Kit IT-11, 7 lbs. . . \$3 dn., \$5 mo. \$29.95
Assembled ITW-11, 9 lbs. . . \$5 dn., \$5 mo. \$49.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

IT-11 SPECIFICATIONS—Test circuit: AC bridge, powered through special bridge transformer by an internal 60 cycle supply or by an external audio generator with 10 volts output. Upper frequency limit: 10 kc. **Capacitance, 4 ranges:** 10 uuf to .005 mfd; .001 mfd to .5 mfd; .1 mfd to 50 mfd; 20 mfd to 1000 mfd. **Capacitor leakage:** DC test voltages from 3 to 600 volts in 16 steps. **Resistance, 3 ranges:** 5 ohms to 5000 ohms; 500 ohms to 500 K ohms; 50 K ohms to 50 megohms. **Comparator circuit:** External standard R, L or C; Max. Ratio 25-1. **Power supply:** Transformer-operated, half-wave rectifier. **Power requirements:** 105-125 volts AC, 50/60 cycles, 30 watts. **Dimensions:** 9½" high x 6½" wide x 5" deep.

Win A Houseful of
HEATHKITS
see center of flyer

Outfit With Heathkit® Test



IO-21
\$54⁹⁵

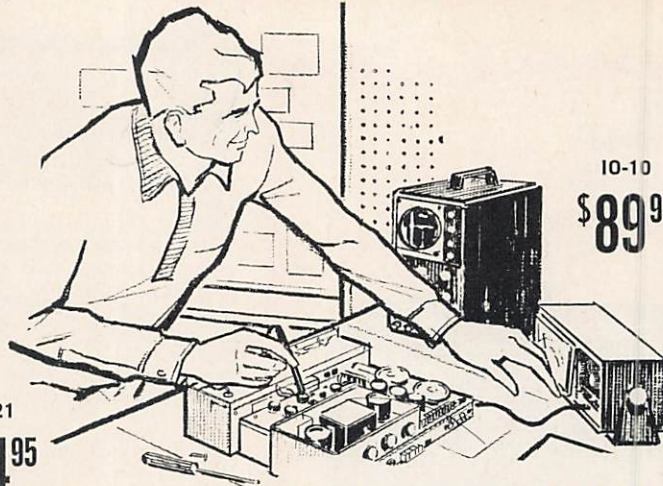
Heathkit "General Purpose" 3" Oscilloscope

- Push-pull vertical & horizontal amplifiers • Wide range sweep —20 to 100,000 cps • Automatic sync • Retrace blanking • Clean open circuit layout

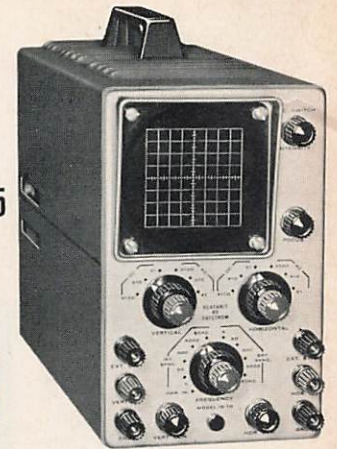
Ideal Scope For Beginners, School Shop, Service Shop, or "Home" Test Bench. Its frequency response satisfies nearly all requirements. Straight-forward panel controls mean an instrument easy to understand and use.

Kit IO-21...12 lbs...\$6 dn., \$5 mo.....\$54.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

IO-21 SPECIFICATIONS—(Vertical and horizontal amplifiers identical): Frequency response: ± 2 db, 2 cps to 200 kc. Sensitivity: .25 volts RMS/inch P-P deflection at 1 kc. Input impedance: 10 megohms shunted by 20 uuf. (Direct connection to vertical CRT plates on rear panel). Sweep generator: Range, 20-100,000 cps. Automatic sync, retrace blanking. Tube complement: (1) 3RP1 (CR tube), (4) 12AU7 (deflection amplifiers), (1) 12AX7 (sweep generator), (1) 6X4 (LV rectifier), (1) 1V2 (HV rectifier). Controls: Gain controls, Horizontal & Vertical; Centering controls, Horizontal & Vertical; Frequency Vernier; Horizontal Input-Sweep Range switch. (Focus and Astigmatism controls mounted on chassis). Power requirements: 105-125 volts AC, 50-60 cycle, 40 watts. Dimensions: 9½" H x 6½" W x 10" D.



IO-10
\$89⁹⁵



Heathkit "Space-Saver" 3" DC Oscilloscope

- Identical DC or AC coupled vertical & horizontal amplifiers • DC to 200 kc bandwidth • Recurrent sweep generator, 5 cps to 50 kc in four ranges • Small, compact, easy to carry

Excels As Basic Lab Scope Where Extremely Low Sweep Rates Are Desired . . . providing read-out from operational amplifiers, medical & biological instruments, circuits where normal AC response is required, and added capability of DC response.

Kit IO-10, 16 lbs...\$9 dn., \$9 mo.....\$89.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

IO-10 SPECIFICATIONS—(Vertical and horizontal channels identical): Bandwidth; DC to 200 kc. (2 db point). Sensitivity: 0.1 V (peak-to-peak) per ¼" (uncalibrated). Attenuator: 3-position, compensated type. Gain control: Continuously variable. Input impedance: 3.6 megohms shunted by 35 mmf. Coupling: Either AC or DC, switch-selected. Relative phase shift between channels: Less than 5°. Sweep generator (Recurrent type): Linear saw-tooth produced by multi-vibrator type generator covering 5 cps to 50 kc in four overlapping ranges. "External capacitance" binding post for lower sweep rates. Sync provision: Either internal or external, switch-selected. Power requirements: 105-125 V 50-60 cycle AC at 100 watts max. Dimensions: 7½" H x 4½" W x 11" D.



ID-22
\$23⁹⁵

Heathkit Electronic Switch Kit

- Provides dual-trace oscilloscope display • Circuit handles signals from DC to 100 kc @ ± 1 db response • Separate gain controls for each channel • Four switching rates provided • Sync output to control scope sweep

No Need To Buy High Priced Equipment In Order To Have A Dual Trace Oscilloscope! The Heathkit electronic switch kit provides dual trace capability for signals from DC to 100 kc, and at levels as low as 0.1 volts. Just connect signal sources to "A" and "B" inputs and connect output terminals to scope.

Kit ID-22...7 lbs.....\$23.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

Heathkit VOM—20,000 Ohms/Volt

- Measures voltage, current & resistance • 35 meter ranges on 2-color scale • Sensitive 50 microampere 4½" meter • 1% precision resistors for accuracy & stability • Polarity reversing switch—eliminates transferring test leads

Kit MM-1, 5 lbs...\$3 dn., \$5 mo.....\$29.95

MM-1 SPECIFICATIONS—Sensitivity: 20,000 ohms/volt DC, 5,000 ohms/volt AC. Range AC & DC volts: Full scale, 1.5, 5, 50, 150, 500, 5000. Direct current: 150 microamperes, 15, 150, 500 milliamperes, 15 amperes. Ohmmeter: 0.2 ohms to 20 megohms in three ranges. Decibels: —10 to +65 db. Resistors: 1% precision type. Accuracy: $\pm 3\%$ of full scale. Controls: Range switch, Output—AC—DC—reverse DC switch. Ohms adjust control. Batteries: 1 type "C" cell, 4 penlight cells. Dimensions: 7½" x 5½" x 4".

Heathkit Scope Demodulator Probe

Permits visual observation of the modulation envelope waveform when tracing RF and IF circuits. Functions as an AM detector. Voltage limits are 30 volts RMS, 500 volts DC.

Kit 337-C...1 lb.....\$3.50
Assembled 337W-C...1 lb.....\$4.50

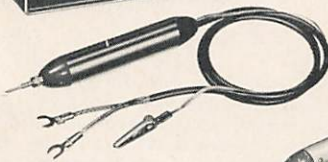
Heathkit Low-Capacitance Oscilloscope Probe

Matches scope input to high frequency circuits. Slide switch of probe body provides direct or X10 attenuated operation, and an adjustable trimmer capacitor allows proper match to scope input.

Kit PK-1...1 lb.....\$4.95



MM-1
\$29⁹⁵



337-C
\$3⁵⁰



PK-1
\$4⁹⁵

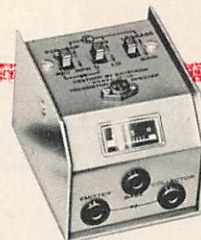
Equipment And Save Up To 50%



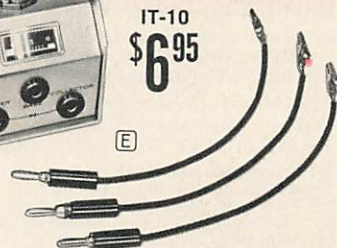
IG-52
\$67⁹⁵



IM-30
\$54⁸⁸



IT-10
\$6⁹⁵



IG-62
\$64⁹⁵



TT-1A
\$149⁹⁵



IT-21
\$44⁹⁵

A Heathkit TV Sweep Alignment Generator

- All the essential generator facilities for speedy alignment of FM & TV receivers • Stable, all-electronic sweep circuit • Complete FM & TV coverage —3.6 to 220 mc • Built-in crystal & variable marker oscillators

Kit IG-52, 14 lbs. . . \$7 dn., \$7 mo. \$67.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

IG-52 SPECIFICATIONS—Output impedance: 50 ohms terminated at both ends of cable. Sweep deviation: Continuously variable from 0.4 mc lowest max. deviation to 0.42 mc highest max. deviation (depending on base frequency). Crystal marker: 4.5 mc and multiples thereof. Variable marker: 19 mc to 60 mc on fundamentals, 57 mc to 180 mc on harmonics. External marker terminals: Provided on panel. Attenuators: Step-switch controls sweep and marker oscillators together, plus variable controls for each output. Blanking: Converts return trace into zero reference line, phasing control also provided. Cables: 3 supplied (output, scope horizontal, scope vertical). Power requirements: 105-125 VAC, 60 cycles, 50 watts. Dimensions: 13" W x 8½" H x 7" D.

B Heathkit Color Bar & Dot Generator

- Produces 6 different patterns for picture adjustment • 10 vertical color bars • Special shading bar pattern for screen & background adjustments • Crystal-controlled for accuracy & stability

Kit IG-62, 13 lbs. . . \$7 dn., \$6 mo. \$64.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

IG-62 SPECIFICATIONS—RF output frequency range: TV channels 2 through 6. Output voltage: Variable from 100 to 100,000 microvolts. Sound carrier: Crystal controlled, unmodulated, 4.5 mc away from picture carrier; off-on switch provided. Video output: Positive or negative output variable from 0-10 volts peak-to-peak open circuit. Modulation: White dot pattern, cross hatch pattern, horizontal bars, vertical bars, 10 vertical color bars, shading bar pattern. Power requirements: 117 VAC, 50/60 cycles, 70 watts. Dimensions: 13" W x 8½" H x 7" D.

C Heathkit Laboratory Transistor Tester

- Complete DC analysis of PNP and NPN transistors

Kit IM-30, 9 lbs. . . \$6 dn., \$5 mo. \$54.88

IM-30 SPECIFICATIONS—Checks: Transistors up to 15 amps and diodes up to 1.5 amps. Tests: Shorts, DC Gain (Beta 0-300) (Alpha 0-.9967), Leakage (Icbo, Iceo), Diode Forward and Reverse Current. Meter: Current Ranges: 15 ua, 150 ua, 1.5 ma, 15 ma, 150 ma, 1.5 A, 15 A; Voltage Ranges: 1.5 V, 5 V, 15 V, 50 V, 150 V (100 K ohm/volt). Power supply: Internal, seven 1.5 volt size D batteries provide 1.5, 3, 4.5, 6, 7.5, 9 volts collector supply for gain or leakage and 1.5 volts for bias; External, 0-50 volts for gain, 0-150 volts for leakage and 1.5 volts for bias. Bias control: Permits any collector current from 10 ua to 15 amps for gain tests. Gain control: 3% wire-wound potentiometer has calibrated scales to give DC Beta and DC alpha directly when meter is at null. Lever switch: Four spring return levers will individually select the following tests: Base Current, Gain, Collector Voltage, Collector Current, Leak Voltage, Short Test, Icbo and Iceo or diode currents. Two voltage selector switches: Gain and Leak Test Voltages can be individually preset at different voltage levels. Two current range switches: Collector and Leak currents can be individually preset on different ranges. Transistor and diode connections: Universal transistor socket and binding posts. External power supply connections: Binding Posts for Gain, Leak and Bias supplies.

D Heathkit Mutual-Conductance Tube Tester

- No finer tube tester in kit form anywhere! • Indicates Gm to 24,000 microhmhos • Ultra-sensitive grid current test • Direct reading ohmmeter leakage test • Constant current heater supplies • Built-in switch-operated calibration circuit for high accuracy • Built-in adapter for testing Compactron, Nuvistor, Novar & 10-pin miniature tube types

Kit TT-1A, 34 lbs. . . \$15 dn., \$13 mo. \$149.95

TT-1A SPECIFICATIONS—Power requirements: Voltage: 105-125, 60 cycle AC. Watts: 10-60 (dependent upon tube under test). Testing circuits: Gm: mutual conductance for amplifiers, 0-24,000 microhmhos. Emission: rectifiers and diodes. Leakage: direct reading ohmmeter. Grid current: ¼ microampere sensitivity. Voltage regulator: firing voltage and regulation tolerance. Low power thyatron: grid characteristics, conduction capabilities. Eye tubes: control grid characteristics. Line voltage adjustment: Continuously variable. Roll chart mechanism: Constant tension, free rolling, dual thumbwheel operated, illuminated. Dimensions: Cabinet (outside): 17¼" W x 13½" H x 8" D. Panel & chassis: 17" W x 12¾" H x 5½" D.

E Heathkit Transistor-Diode Checker

- Self-contained battery power—operates on two standard size "C" flashlight batteries • Tests low and high power transistors • Tests forward and reverse current of diodes • Easy to assemble, quick, easy to use

Here's the compact transistor checker you need for routing testing and servicing requirements. Tests include: short, leakage, open element, and current gain. Less batteries.

Kit IT-10, 2 lbs. \$6.95

IT-10 SPECIFICATIONS—Transistor test: leakage, short, open and current gain. Diode test: forward and reverse current. Also serves as a continuity checker. Switches: Forward-Reverse/PNP-NPN, Diode/Hi-Lo, Leakage-Gain. Power supply: self-contained, two 1.5 volt size "C" flashlight cells. Dimensions: 3½" H x 3¾" W x 3¼" D.

F Heathkit Tube Checker

- Provides all necessary emission-type test functions • Tests nearly all tube types including Compactron, Nuvistor, Novar, and 10-pin miniatures • Multi-colored "bad - ? - good" meter scale • Constant tension, free-rolling roll chart mechanism

Kit IT-21, 12 lbs. . . \$5 dn., \$5 mo. \$44.95

IT-21 SPECIFICATIONS—Tests: Emission, short, leakage, open element, filament continuity. Sockets: 4-pin, 5-pin, 6-pin, 7-pin combination and pilot light, 7-pin miniature, octal, loctal, 10-pin miniature, 9-pin novar, 12-pin compactron, 5-pin nuvistor, 7-pin novistor. Meter: 1 ma, BAD-?-GOOD scale, illuminated. Line voltage adjustment: Step type. Roll chart mechanism: Constant tension, free-rolling, thumbwheel operation, illuminated. Filament voltage: .63, 1.4, 2, 2.35, 2.5, 3.15, 4.2, 4.7, 5, 6.3, 7.5, 9.45, 12.6, 19.6, 25, 32, 50, 70, 110 V AC. Element test voltages: 30, 100, 250 V AC. Power requirements: 105-125 V AC, 50/60 cycles. Dimensions: 5½" x 8½" x 13"

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see center of flyer

Precision Test Instruments

A Heathkit Sine-Square Wave Generator

- Clean sine and square wave coverage from 20 cps to 1 mc in 5 bands—less than 0.25% sine wave distortion and less than 0.15 microsecond square wave rise time • Simultaneous sine and square wave output

Kit IG-82, 14 lbs. . . \$6 dn., \$5 mo. \$51.95
Assembled Model available as EUW-27, 14 lbs. . . \$10 dn., \$9 mo. . . . \$94.00
Export model available for 115/230 VAC, 50-60 cps; write for prices.

IG-82 SPECIFICATIONS—SINE WAVE: Frequency range: 20 cycles to 1 mc. Output volts (RMS): 0 to 10 volts, 0 to 1 volt, 0 to .1 volt, or 0 to .01 volt when working into a high impedance load. Source impedance: ($\pm 10\%$): 10 volt range, 0 to 3.5 k ohm; 1V, .1V and .01V range, 600 ohm. Distortion: Less than .25%, 20 to 20,000 cycles. Frequency response: ± 1.5 db 20 cycles to 1 megacycle. **SQUARE WAVE:** Frequency range: 20 cycles to 1 mc. Output volts: (P. to P.) $\pm 5\%$; 0 to 10 volt, 0 to 1 volt, 0 to .1 volt, into a high impedance load. Source impedance: ($\pm 10\%$): 10 volt range, 0 to 220 ohm; 1V and .1V ranges, 52 ohm. Rise time: less than .15 microsecond. **GENERAL:** Frequency accuracy: $\pm 5\%$. Power requirements: 105-125V AC, 50/60 cycles, 55 watts. Dimensions: 13" W x 8½" H x 7" D.

B Heathkit Audio Analyzer

- Combines functions of AC VTVM, Wattmeter & IM Analyzer

Kit IM-22, 13 lbs. . . \$6 dn., \$5 mo. \$56.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

IM-22 SPECIFICATIONS—Frequency response—AC VTVM: 10 cycles to 100 kc ± 1 db. **Wattmeter:** 10 cycles to 50 kc ± 1 db. **I.M. Analyzer high pass filter:** 2000 cps to 12,000 cps. **I.M. Analyzer low pass filter:** 10 cps to 600 cps. **Range AC VTVM:** .01, .03, .1, .3, 1, 3, 10, 30, 100, 300 volts RMS full scale. **DBM:** —40, —30, —20, —10, 0, +10, +20, +30, +40, +50. Reads from —65 to +52 dbm. **Wattmeter:** 0.15 mw, 1.5 mw, 15 mw, 150 mw, 1.5 w, 15 w, 150 w, full scale. Maximum continuous power 25 watts, intermittent power to 50 watts. **I.M. Analyzer:** 1%, 3%, 10%, 30%, 100% full scale. **Input impedance—AC VTVM:** 1 megohm or 4, 8, 16 or 600 ohm switch selected. **I.M. Analyzer:** 1 megohm or 4, 8, 16 or 600 ohm switch selected. **Wattmeter:** 4, 8, 16 or 600 ohm internal load, 10,000 ohm across external load. **Output impedance—low and high frequency output:** 3000 ohm (600 ohm when shunted with 750 ohm resistor). **Internal generator frequencies—low frequency:** 60 cycles; **high frequency:** Approximately 6 kc. **Accuracy—AC VTVM and wattmeter:** Within 5% of full scale. **I.M. Analyzer:** Within 10% of full scale. **Power requirements:** 105-125 volts 50/60 cycles 20 watts. **Dimensions:** 13" W x 8½" H x 7" D.

C Heathkit Laboratory RF Generator

- CW or 400 cycle modulated signal—100 kc to 30 mc • Metered output voltage and % of modulation • Provisions for external modulation • Double shielding on all oscillator circuits • Built-in step attenuator and fine attenuation control

Kit IG-42, 15 lbs. . . \$6 dn., \$6 mo. \$56.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

IG-42 SPECIFICATIONS—Frequency ranges: Band A, 100 to 290 kc; Band B, 280 to 1000 kc; Band C, 0.95 to 3.1 mc; Band D, 2.9 to 9.5 mc; Band E, 9 to 31 mc. **RF output:** Impedance, 50 ohms—voltage, 100,000 microvolts max. **Attenuator:** 10:1 per step, 5 steps—Fine, 10:1 continuous, indicated on meter. **Amplitude modulation:** CW, internal 400 cycles or external audio frequencies. **Modulation depth:** 0 to 50% variable, indicated on meter. **Tube complement:** 6AF4, 6AV5, 12AU7, 0B2. **Power requirements:** 105-125 V, 50/60 cycles. **Dimensions:** 13" W x 8½" H x 7" D.

D Heathkit FM Stereo Generator

- Provides virtually all signals required for trouble-shooting & alignment of multiplex adapters, FM tuners & receivers • Switch selection of 400 cps, 1000 cps, 5000 cps, 19 kc, 38 kc & 65 kc or 67 kc SCA signals • Built-in marker oscillator for I.F. and dial tracking checks

Kit IG-112, 11 lbs. . . \$10 dn., \$9 mo. \$99.00
Export model available for 115/230 VAC, 50-60 cps; write for prices.

IG-112 SPECIFICATIONS — RF Signal output: Center frequency: 100 mc adjustable by approx. ± 2 mc. **Pilot modulating frequency:** 19 kc ± 2 cps. **FM Modulation:** Left channel (stereo), right channel (stereo), Phase test (left plus right channel in phase), Monophonic FM. **Deviation:** Adjustable to 75 kc. **Sweep rate:** (use for RF and IF alignment) 60 cps. **Sweep width:** (use for RF and IF alignment) Adjustable to 750 kc. **RF Attenuator range:** 60 db in 20 db steps. **Crystal-controlled markers:** 10.7, 90.95, 96.30, 101.65 & 107 mc. **Composite signal output:** Left channel (stereo); Right channel (stereo). Phase test (left plus right channels in phase). **Audio output:** 400, 1000, & 5000 cps; 19 kc (± 2 cps), 38 kc; & SCA (65 or 67 kc). **Distortion:** (At 400, 1000 & 5000 cps) Less than 5%. **Front panel controls:** 19 kc pilot level control, deviation—sweep width—composite level—audio level control, function switch, frequency switch, & RF attenuator switches. **Rear panel adjustments:** Balance adjust, 38 kc sync, pilot level adjust, & SCA frequency switch. **Chassis adjustments:** Oscillator adjust, frequency adjust & modulation adjust. **Power requirements:** 105-125 volts AC, 50/60 cps, 35 watts. **Dimensions:** 10¼" H x 8" D x 13" W.

E Heathkit Harmonic Distortion Meter

- Measures harmonic distortion from 20 to 20,000 cps • Distortion is measured direct—meter scales calibrated in volts RMS, % distortion, & db • Minimum reading 0-1% full scale • Measures noise levels down to —60 dbm

Kit IM-12, 13 lbs. . . \$6 dn., \$5 mo. \$54.95
Export model available for 115/230 VAC, 50-60 cps; write for prices.

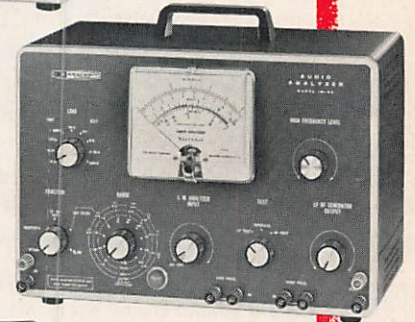
IM-12 SPECIFICATIONS—Frequency: 20 cps to 20,000 cps in three ranges. **Distortion:** 1, 3, 10, 30, 100% full scale. **Voltmeter:** 1, 3, 10, 30 volts full scale. **Input resistance:** 300 k ohm. **Minimum input voltage for distortion measurements:** 0.3 volts. **Output voltage for monitoring:** 2.5 volts at full scale meter reading. **Accuracy:** Voltmeter, $\pm 5\%$; Distortion, $\pm 5\%$ of full scale. **Tube complement:** OA2, 6X4, 5879, 12AT7, 12AX7, 12BY7. **Power requirements:** 105-125 V, 50/60 cycles AC, 30 watts. **Dimensions:** 13" W x 8½" H x 7" D.



Kit Form or
Factory Assembled



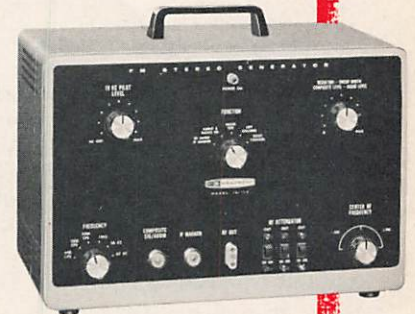
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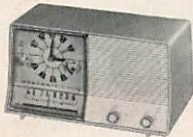
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AM Clock Radio Companion

Timer; sleep sw.; alarm; tan plastic.
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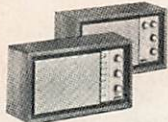
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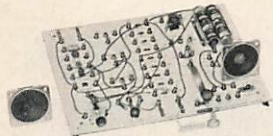
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Monitors RF power to 250 mc.
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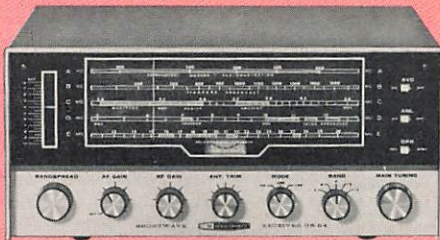
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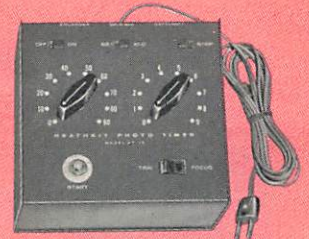
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