

HEATH

August FLYER



There was no July FLYER. In this issue are two new Heathkits--the most important ones we have announced for many months. The Heathkit Electronic Switch represents several years of experimental development. It brings to the service shop and hobbyist an instrument available previously to laboratories. It multiplies the usefulness of any oscilloscope many times. The F.M. and Television Sweep Generator Kit is the essential instrument for work in these fields and nearly all of us will be experimenting with television

this winter. The Heathkit Sweep Generator is one of the most complete units we have seen. It incorporates a selector switch allowing the use of pure RF or FM over its range of 2 megacycles to 226 megacycles. A phasing control is incorporated. Construction articles have been omitted in this FLYER to allow a maximum of space for the Impedance Bridge article--we feel this is one of the most important tools anyone can have today--with it the inductance of most RF chokes, coils, filter chokes and transformers can be determined in a matter of seconds and with millions of war surplus parts being sold this instrument is invaluable.



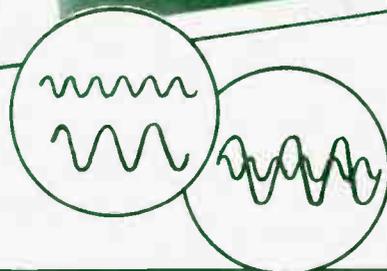
Heathkit ELECTRONIC SWITCH KIT

An electronic switch used with any oscilloscope provides two separately controllable traces on the screen. Each trace is controlled independently and the position of the traces may be varied. It is an amazing and fascinating instrument. The input and output traces of an amplifier may be observed one beside the other or one directly over the other illustrating perfectly any change occurring in the amplifier. Distortion--phase shift and other defects show up instantly.

In service work, one trace may be left on a suspected intermittent while the other trace is used for visual signal tracing, etc.--the traces may be used on separate instruments.

Anyone using an Electronic Switch would never part with it. The switch is also an excellent source of square waves over a limited range. The unit is 110 Volt 60 Cycle transformer operated. Uses 5 tubes (1 - 6X5, 2 - 6SN7's, 2 - 6SJ7's). Has individual gain controls, positioning control, and coarse and fine sweeping rate controls. The cabinet and panel match all other Heathkits. Every part supplied including detailed instructions for assembly and use. Shipping Weight 11 lbs.

Note: Deliveries begin about September 1. Get your order in early.



Nothing ELSE TO BUY

\$34.50

Improved HEATHKIT PUSH-PULL High FIDELITY AMPLIFIER KIT



Nothing ELSE TO BUY

\$14.95

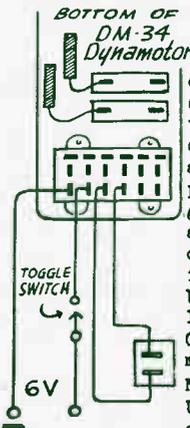
Shipping Wt. 20 LBS.

This is an improved version of the popular Heathkit Amplifier announced last winter. (See note under tips and comments.) The hum level is extremely low, and the gain has been tripled. Maximum output with .3 Volt input 17 Watts. The quality of reproduction is excellent within \pm 1 db. between 35 cy and 13,000 cycles. The circuit uses one preamplifier stage, one phase inverter stage, into push pull 1619 (military type 2 1/2 Volt 6L6's). A high fidelity cased output transformer made by Chicago Transformer with 3 and 8 ohm voice coil windings is supplied. The power transformer and choke are cased heavy duty types. Every part is supplied and new photoprint type instructions make assembly easy.

Accessories Available

12" high quality FM speaker matches the amplifier.....\$6.95
Mahogany speaker cabinet size 14 1/2" x 14 1/2" x 8"--for above speaker....\$8.75

Operating 110 V. DC. ELECTRIC RAZOR FROM 6VOLT CAR OR BOAT BATTERY



Electric razors of the AC-DC type (Shick, etc.) operate perfectly from 6 Volt storage batteries through the DM-34 dynamotor. This dynamotor is normally rated at 12 Volt input 250V output, however, 6 Volts input gives 120V output. Connect as shown. Radio service men can realize a good profit installing these in pleasure boats and the cars of traveling salesmen. The Heath Co. can supply the dynamotors either new or used. New DM-34 Dynamotors...\$2.95 Used DM-34 Dynamotors...\$1.50 Shipping Weight 6 lbs.

New!

Heathkit FM & TELEVISION SWEEP GENERATOR KIT

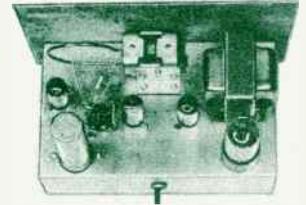
The BASIC FM & TELEVISION SERVICE INSTRUMENT

Features



Enjoy the PROFITS NOW OF THIS NEW FIELD!

- ★ 5 Tube Circuit.
- ★ Covers 2 Mc. to 226 Mc.
- ★ 110 V 60 cy transformer operated.
- ★ Supplies either RF or FM.
- ★ Variable sweep width 0 to app. 10 Mc.
- ★ Large calibrated dial.
- ★ Variable phasing control.
- ★ Sweep output for scope.
- ★ No band switching necessary.
- ★ Uses new miniature HF tubes.



Nothing ELSE TO BUY

\$24.50

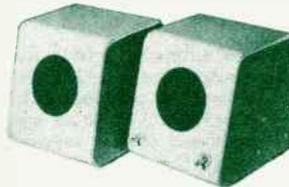
At the lowest cost possible, anyone can now service FM and television receivers. The Heathkit sweep generator kit operates with oscilloscope and covers all necessary frequencies. A few pleasant hours assembling this kit puts any organization in position to share the profits of the FM and TV boom.

Every part supplied--grey crackle cabinet, two color calibrated panel, all metal parts punched, formed and plated. 5 tubes, complete detailed instructions for assembly and use. Shipping weight 6 lbs. Deliveries start approximately September 1. Get your order in early.

Heath INTERPHONE 2-WAY CALL SYSTEM KIT

No need to stay home for lack of a baby sitter. This Heath call system will watch the baby electronically. This unit will save miles of running between house and barn, shop, tenant houses, etc.

A complete 110V 60 cycle transformer operated call system kit. Supplied with all parts for one master station and one remote unit. Requires two wires between units--will operate up to 1/5 of a mile. Three tube circuit, steel cabinet, 4" FM speakers. Detailed instructions and pictorial diagram make assembly easy. Simple changes allow more than one remote to be used. Add postage for 5 lbs.



\$14.50

Heathkit 3 TUBE ALL-WAVE RADIO KIT

A 3 tube 110V 60 cycle AC transformer operated radio using plug in coil to cover 550 Kc. to 6,000 Kc. Covers broadcast, police, aircraft, amateur, marine and foreign broadcasts. An excellent start in radio for boys or adults. Has been constructed successfully by 10 year old boys.

An excellent way to keep the family radio for adult programs. Boys will enjoy this for years and gain practical knowledge using it. Every part supplied except speaker or headphones which are extra. Add postage for 3 lbs. Headphones (extra).....\$1.00 2 1/2" FM Loudspeaker (extra)...\$1.95

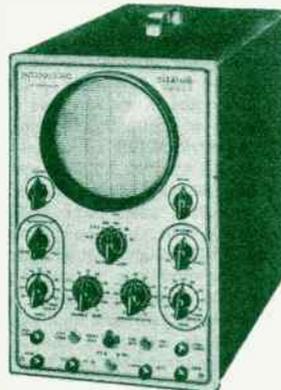


\$8.75
Nothing ELSE TO BUY

Heathkit 5" OSCILLOSCOPE KIT

The best buy in test equipment today. All new parts by the best of manufacturers. Every part supplied including 5BPL and 5 other tubes. 110V 60 cycle power transformer supplies over 1100 Volts for 5BPL and 350V for amplifiers and sweep generator. Vertical and horizontal amplifiers using 6SJ7 tubes and a sweep generator covering 15 to 30,000 cycles using an 884 gas triode. Oil filled condensers for long life. Grey crackle cabinet, size 8 1/2" x 13" high x 17" deep. Beautiful 2 color panel. Order now and discover an entire new world of visual electronics. An oscilloscope provides almost endless sources of experimentation in radio, electronics, medicine and scientific research. Order one now while surplus tubes make this extremely low price possible. Detailed instructions and photographic layout diagrams make assembly easy. Shipping Weight 33 lbs. Express only.

\$39.50
Nothing ELSE TO BUY



TIPS & COMMENTS

This FLYER is being sent many thousands of amateurs as a sample copy--if you wish to be placed on the mailing list to receive it regularly let us know.

Heathkit Amplifier Owners--If you wish the new improved amplifier circuit, we will be happy to send it. Please enclose stamped self-addressed envelope.

Heathkit Signal Generator Owners--A new panel has been developed with more detailed calibrations and harmonic calibration to over 100 megacycles--we will exchange panel at no charge if desired--please pack your panel so as to avoid bending--we can also supply a new instruction manual with actual photographs of the assembly on request.

FLYER Mailing List. The Heath FLYER is mailed free to each customer for a period of six months. At present, all names are being removed if we have not received a communication or order since January 1, 1948. Your name will again be placed for six months on receipt of an order or request.

Heathkit CONDENSER CHECKER KIT

Checks all types of condensers, paper-mica-electrolytic-ceramic over a range of .00001 MFD to 1000 MFD. All on readable scales that are read direct from the panel. NO CHARTS OR MULTIPLIERS NECESSARY. A condenser checker anyone can read without a college education. A leakage test and polarizing voltage of 20 to 500 Volts provided. Measures power factor of electrolytics between 0% and 50%.

110V 60 cycle transformer operated complete with rectifier and magic eye tubes, cabinet, calibrated panel, test leads and all other parts. Clear detailed instructions for assembly and use.

Why guess at the quality and capacity of a condenser when you can know for less than a twenty dollar bill. Add postage for 7 lbs.



*Nothing
ELSE TO BUY*

\$19.50

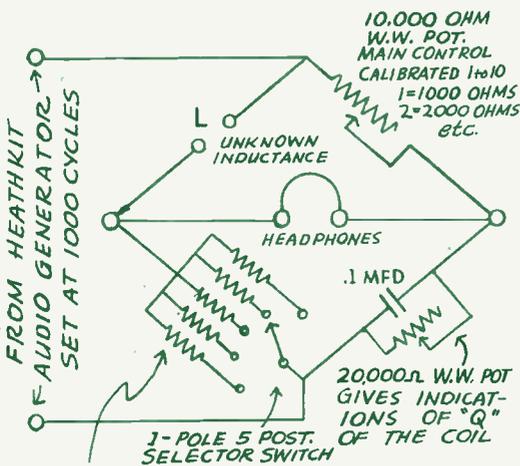
Heathkit SINE & SQUARE WAVE Audio GENERATOR KIT

Experimenters and servicemen working with a square wave for the first time invariably wonder why it was not introduced before. The characteristics of an amplifier can be determined in seconds compared to several hours of tedious plotting using older methods. Stage by stage amplifier testing is as easy as signal tracing. The low distortion (less than 1%) and linear output (\pm one db.) make this Heathkit equal or superior to factory built equipment selling for three or four times its price. The circuit is the popular RC tuning circuit using a four gang variable condenser. Three ranges 20-200, 200-2,000, 2,000-20,000 cycles are provided by selector switch. Either sine or square waves instantly available at toggle switch. All components are of highest quality, case 110V 60 cycle power transformer, Mallory F.P. filter condensers, 5 tubes, calibrated 2 color panel, grey crackle aluminum cabinet. The detailed instructions make assembly an interesting and instructive few hours, Shipping Weight 13 lbs.



\$34.50

Check YOUR OWN COILS · TRANSFORMERS & CHOKES SIMPLE INDUCTANCE CHECKER

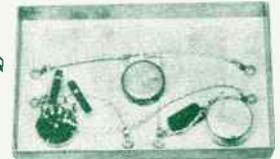
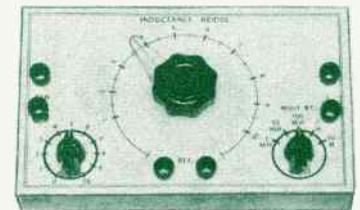


This simple checker which can be built by anyone in a few hours will check any coil, transformer or choke between 1 millihenry and 100 henries.

The parts can be obtained at any radio shop (we do not supply them) and may be assembled on a piece of metal, Masonite, plywood, etc.

The circuit is a Maxwell bridge circuit. The only calibration is to mark off the main control with an ohmmeter with a scale of 1 to 10. It may be as fine as desired. The tenths of the scale occur every 100 ohms. (i.e. 2.7 on scale is 2700 ohms.) The 20,000 ohm potentiometer is not calibrated but gives an indication of Q (most of the Q range is in one small portion of the scale).

To use, connect the unknown to the "L" (inductance) terminals, connect an audio generator to the generator terminals (set to 1,000 cycles) and a pair of headphones to the headphone terminals. Set selector switch to approximate rating if known. Adjust main control for null or point of least signal--adjust Q potentiometer for point of least signal--readjust main control and read inductance directly in henries or millihenries from main control (multiplying by factor of selector switch). If approximate rating is unknown, try each section of selector switch until null is located. Photos show suggested layout.



10 OHM	RESISTOR	X 1 MH
100 "	"	X 10 MH
1,000 "	"	X 100 MH
10,000 "	"	X 1 HENRY
100,000 "	"	X 10 HENRY

(Order Form missing)

BC731 CONTROL BOX with WESTON MODEL 476 AC VOLTMETER

Excellent buy in motor control box. Size 8" x 10" x 5 1/2".

Contains Weston 0-150V AC 3 1/2" voltmeter, motor starting switch, 28 fuses all 30 Amp 110V. and 8 fuse holders.

Fuses and holders alone worth the price. *Shipping Wt. 18 LBS*



\$7.95

GE. 1000 VOLT · 350 MA DYNAMOTOR

An ideal dynamotor for mobile operation in taxis, police cars, sound systems and amateur stations. Supplies above voltage from 12 Volts or 500V. at 350 MA from 6 Volts. Complete with starting relay, and fuses. New. Our Dynamotor A. Shipping Weight 72 lbs.



\$5.95



The NEW

HEATHKIT VACUUM TUBE VOLT METER KIT

Nothing ELSE TO BUY

\$24.50

A vacuum tube voltmeter is truly the foundation instrument of any radio or electronic worker. Hundreds have written us of the pleasure experienced building and using the Heathkit VTVM. It makes an ideal gift. It is an electronic vacuum tube voltmeter on both AC and DC with input impedances of 11 megohms on DC and 6.5 megohms on AC. Both AC and DC have a complete set of ranges between 3 Volts and 1000 Volts on linear scales.

A 110V 60 cycle transformer power supply is used and the basic meter movement is 500 microamperes. The meter face is shatterproof plastic with simple easily adjusted zero set.

The voltage and ohms resistance decades are 1% ceramic resistors which require no aging.

The ohmmeter will measure any resistance between one tenth ohm and one billion ohms.

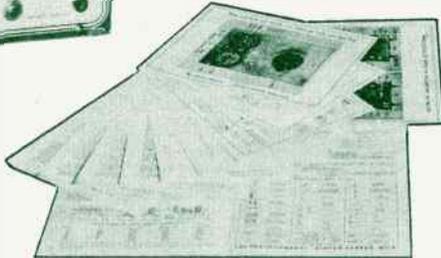
This meter circuit is a balanced bridge type using a 6SN7 twin triode. The highly efficient circuit eliminates variations due to line fluctuations. A 2% variation in line voltage results in less than 3% variation in meter reading.

Many large universities and laboratories are now buying Heathkit VTVM's in lots of a dozen or more.

The complete instructions use actual photos and pictorial diagrams to make the assembly both pleasant and easy.

The kit is complete with all parts, cabinet, panel, formed chassis, tubes, test leads, etc. Add postage for 8 lbs.

FINEST OF INSTRUCTION MANUALS. Complete instructions for assembly and use with schematics, pictorial diagrams and actual photographs make construction simple and pleasant.



Heathkit SIGNAL TRACER KIT



Reduces service time and greatly increases profits of any service shop. Uses crystal diode to follow signal from antenna to speaker. Locates faults immediately. Internal amplifier available for speaker testing and internal speaker available for amplifier testing. Connection for VTVM on panel allows visual tracing and gain measurements.

Also tests phonograph pickups, microphones, PA systems, etc. Frequency range to 200 Mc. Complete ready to assemble. 110V 60 cycle transformer operated. Supplied with 3 tubes, diode probe, 2 color panel, all other parts. Easy to assemble, detailed blueprints and instructions.

Nothing ELSE TO BUY

\$19.50

Shipping WT. 10 POUNDS

Heathkit SIGNAL GENERATOR KIT

Our customers continue to express amazement at being able to secure a quality RF signal generator kit with fundamentals from 150 Kc. to 34 Mc. and usable harmonics calibrated to above 100 megacycles for less than a twenty dollar bill.

It will align radio receivers with exactly the same efficiency as a unit costing \$150.00 or more.

The assembly is pleasant and the builder acquires a broader understanding of R.F. applications.

It is extremely popular with radio training schools. New pictorial and photoprint instructions have recently been developed for this kit making its assembly even simpler. Like all Heathkits, it is complete to the last solder lug.

The circuit is a most modern type of oscillator with cathode follower output for purity of wave form--400 cycle modulation is available.



Nothing ELSE TO BUY

\$19.50

Shipping Wt. 8 LBS.

The **HEATH CO**
BENTON HARBOR

(Order Form Missing)

POSTMASTER: If undeliverable any Reason, Notify sender St. reason, on Form 3547 for W. Return Postage is Guaranteed