



HEATH

January

FLYER

There was no December FLYER. New HEATHKITS--we want to provide the kits you want and to help us we ask that you list any new kit you personally would like to see on the side of the order blank in the space provided. There are seven new HEATHKITS nearly ready to announce, a T.V. kit you can all afford--a tube checker--a battery eliminator--and several others. One new HEATHKIT, an F.M. tuner is announced this month (see inside). A number of you have inquired about model changes. The policy of the Heath Company is to change the design and model of any instrument whenever an improvement can be made--there are no yearly models--we feel that the sooner an improvement is made the better. To illustrate this, we

developed a simple battery tray holding two flashlight cells for the VTVM ohmmeter section. This eliminated the special battery and effected a saving sufficient to purchase two additional precision resistors allowing us to add a sixth range to the VTVM, a 10 Volt AC and DC range and RX10 range, giving a total of 24 ranges. At the same time, our meter manufacturer agreed to provide a 200 microampere meter movement instead of 500 ua if we would purchase them in sufficient quantity. This was done and the instrument was redesigned to take advantage of the finer meter. This new VTVM is announced below.

AN IMPROVED Heathkit VACUUM TUBE VOLTMETER KIT

A new model of our famous HEATHKIT VTVM. Complete coverage of ranges--full scale ranges of 0-3V, 10V, 30V, 100V, 300V and 1,000V. A new accessory high voltage Prod available extra extends these ranges to 3,000 and 10,000V. Entirely adequate for any TV testing.

A new 200 microampere meter gives greater sensitivity and accuracy. All these improvements and still the unbelievable price of only \$24.50, hardly more than the price of the meter alone and think of the other features--balanced push pull electronic voltmeter on both AC and DC. Burnout proof meter circuit gives automatic protection. Isolated DC test prod for dynamic testing. An accurate ohmmeter measuring resistance between the extreme ranges of 1/10 ohm to one billion ohms all with internal battery. This HEATHKIT is complete--cabinet, tubes, 110V power transformer, test leads and instruction manual covering assembly and use. Shipping wt. 8 lbs.

VTVM ACCESSORIES

10,000 Volt H.V. Test Prod Kit

Complete kit to assemble test probe which extends the range of any HEATHKIT VTVM to 3,000 and 10,000 Volts. No. 310. Shipping wt. 1 lb. \$4.50

R.F. Crystal Test Probe Kit

Crystal diode probe kit fits any HEATHKIT VTVM and extends RF range to above 100 Megacycles. Complete with crystal and all other parts. No. 309. Shipping Wt. 1 lb. \$6.50



NEW CABINET *Beautifies*



Heathkit 3 TUBE ... ALL WAVE RADIO KIT

This attractive mahogany cabinet gives the finishing touches to the excellent little receiver hundreds of boys received during the holidays.

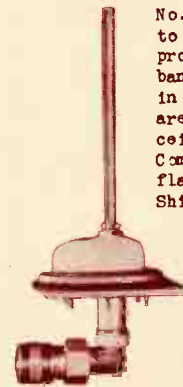
Two new coils are available to extend the ranges. A long wave coil 200-500 Kc. covering aircraft and coastguard stations and a short wave coil covering 6,000-21,000 Kc.

The Radio Kit is a favorite for training purposes, boys just learning radio, etc. It is 110V 60 cycle transformer operated--comes complete with 3 tubes, all parts and complete instructions for assembly. It operates a loud speaker (extra) and is supplied with coils covering 550 Kc. to 6,000 Kc. which includes broadcast, police, aircraft, marine, foreign and amateur stations.

Shipping Wt. 3 lbs.

ARMY BC 645 ANTENNA

No. 311 This antenna is matched to the BC 645 Transceiver and is proper length for use in citizens band. It is ideal for mounting in the roof of car or boat. Two are required per unit, one for receiving, one for transmitter. Comes complete with mounting flange and coaxial connector. Shipping Wt. 1 lb.



\$19.50
2 for \$35.00

*Cabinet
EXTRA*

\$8.75

ACCESSORIES FOR RADIO KIT

Mahogany Cabinet.....\$2.95
Long Wave Coil 200-500 Kc..... .90
Short Wave Coil 6,000-21,000 Kc. .90
2 1/2" PM Speaker..... 1.95
Headphones..... 1.00

Heathkit 5" OSCILLOSCOPE KIT

An oscilloscope is a necessity in today's radio work--visual alignment is the only satisfactory method for stagger tuned TV sets, FM, etc.; cases of parasitic oscillation and harmonic distortion show up immediately. The HEATHKIT Oscilloscope fulfills all requirements--convenient to operate--all controls on front panel--instant switching direct to the plates without changing binding posts--electrostatically shielded specially designed 110V 60 cy power transformer--deflection of one inch trace from $\frac{1}{2}$ Volt input--internal sweep generator covering 15 cycles to 30,000 cycles--all parts--aluminum cabinet--tubes--complete instruction manual--better build it these long winter evenings--you'll enjoy it for years. Shipping Wt. 24 lbs. Express shipment only.

Nothing ELSE TO BUY

\$39.50

OSCILLOSCOPE Requirements for TV Servicing

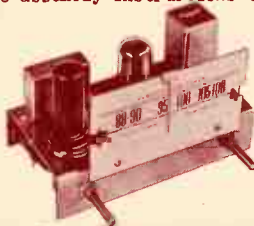
The fact that TV sets require a wide band (3MC or over) I.F. system has given the false impression that a scope must be capable of that band width also. Actually, the response trace is viewed after detection, which indicates the voltage developed with a frequency or repetition rate of 120 cycles per second. Assuming that this approaches a square wave in shape, the maximum frequency to be viewed would still be only 1200 cycles. The synchronizing pulses are at rates of 60 cycles for vertical and 15,750 cycles for horizontal sweep.

From this it is evident that any good oscilloscope is capable of handling TV servicing.

Heathkit FM TUNER KIT

This is truly a tuner kit which can be built by anyone. All adjustments and all coils are wound and set by us--simply wire it up and turn it on.

The newest type rigid single turn high Q coils are already attached to the tuning condenser, the condenser aligned and trimmers set. The IF coil is likewise preadjusted. The kit uses the super regenerative type circuit with 110V 60 cycle power transformer, rectifier tube, and 14F8 dual triode as oscillator and IF stage--tunes the entire FM Band 88-108 Megacycles. Beautiful calibrated slide rule type dial. Tuner can be connected to any type radio or amplifier for reproduction of FM. High grade mahogany and maple cabinet available extra makes the FM tuner an attractive piece of furniture. Furnished with both schematic and pictorial and complete assembly instructions to enable beginners to build this useful kit.



TIPS & COMMENTS

Sweep Generator Owners--A .001 mica condenser should be connected between pin 7 of the 6X5 socket and ground solder lug nearby. 120 cycle noise has been feeding into the RF oscillator through the filament leads and this corrects it.

Deliveries--As this goes to press, deliveries on all kits is less than one week--the Christmas rush, however, really pushed us--our airplane (4 place Stinson) made daily trips to Zanesville, Ohio, hauling power transformers in order that all of you might receive your HEATHKITS--incidentally, thanks for all the nice letters.

VIVM Owners--Don't fail to notice the new accessory test prods for HEATHKIT VIVM's on Page 1. One extends the range to 10,000 Volts and the other an RF prod extends the frequency range to 100 Megacycles. In ordering, please mention whether your kit uses a PL55 or PL68 DC phone plug.

New



\$14.75

Cabinet EXTRA \$3.75

FEATURES

1. Prewound and aligned coils--no adjustment necessary.
2. 110V 60 cycle power transformer operated.
3. Large calibrated slide rule dial.
4. Covers entire FM Band 88-108 Mc.
5. Pictorial diagrams for easy assembly by beginners.

TOOL KIT for Heathkit Assemblers

So many requests have come to us for a recommended set of tools that we have arranged to sell a tool kit. This consists of all the tools necessary to satisfactorily assemble any HEATHKIT.

The tools chosen were considered the best values for the price keeping in mind that the kit is needed mostly for beginners with limited budgets.

No. 312 ...THE KIT CONSISTS OF:

- A Pair diagonal cutting pliers
- B Pair of pointed nosed assembly pliers.
- C One 60 Watt soldering iron.
- D One plastic insulated screw driver.
- E One length high grade radio solder.

Add postage for 2 lbs.

Heathkit ELECTRONIC SWITCH KIT

An electronic switch doubles the usefulness of any oscilloscope.

Think of viewing two separate controllable traces on one scope at one time--make comparisons of input and output traces--use each trace on a separate project--place the traces over each other for comparison--the uses of this fascinating instrument are endless. This HEATHKIT has a husky 110V 60 cy power transformer--5 tubes--grey crackle cabinet--beautiful 2 color panel--individual gain and positioning controls--an internal square wave switching generator which may be used separately for amplifier testing--complete instruction manual included. Shipping Wt. 11 lbs.

Nothing ELSE TO BUY



\$34.50

Heathkit SINE & SQUARE WAVE AUDIO GENERATOR KIT

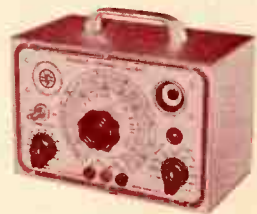


\$34.50

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 (± 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, cased 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.

Heathkit CONDENSER CHECKER KIT

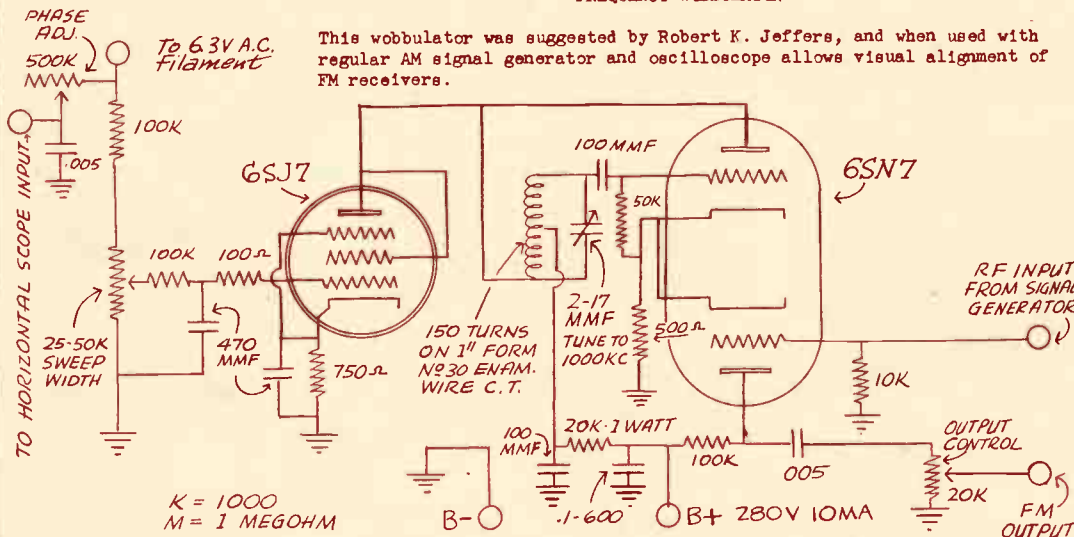
Checks all types of condensers, paper-mica-electrolytic-ceramic over a range of .00001 MFD to 1000 MFD. All on readable scales that are read direct from the panel. NO CHARTS OR MULTIPLIERS NECESSARY. A condenser checker anyone can read without a college education. A leakage test and polarizing voltage for 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.



\$19.50
Nothing ELSE TO BUY

FREQUENCY WOBBULATOR

This wobulator was suggested by Robert K. Jeffers, and when used with regular AM signal generator and oscilloscope allows visual alignment of FM receivers.



To use, feed output of signal generator into input jack. Set the signal generator to the sum or difference of desired frequency and 1,000 Kilocycles (i.e. if 465 Kc. is desired, set to 1,000 + 465 = 1,465 Kc. or 1,000 - 465 = 535 Kc.). Adjust sweep width to width desired, adjust phase adj. for single trace.

New Heathkit BATTERY ELIMINATOR KIT

Now a bench 6 Volt power supply kit for all auto radio testing. Supplies 5-7½ Volts at 10 Amperes continuous or 15 Amperes intermittent. A well filtered rugged power supply uses heavy duty selenium rectifier, choke input filter with 4,000 MFD of electrolytic filter. 0-15 Volt meter indicates output. Output variable in eight steps. Excellent for demonstrating auto radios. Ideal for servicing - can be lowered to find sticky vibrators or stepped up to equivalent of generator overload - easily constructed in less than two hours. Complete in every respect. Shipping Wt. 18 lbs.

Only **\$22.50**

I would like to see the following Heathkits developed

Articles I would like to see in the Flyer

DIRIDIERIBLANK

To HEATH Company
BENTON HARBOR,
MICHIGAN

From _____

Ship via
 Parcel Post
 Express
 Freight
 Best Way

(Please Print)

Quantity	Item	Price	Quantity	Item	Price
_____	Heathkit Voltmeter Kit	_____	_____	Heathkit Audio Generator Kit	_____
_____	Heathkit 3 Tube Radio Kit	_____	_____	Heathkit Condenser Checker Kit	_____
_____	EC 645 Antenna	_____	_____	Heathkit Battery Eliminator Kit	_____
_____	Heathkit Signal Generator Kit	_____	_____	Heathkit Sweep Gen. Kit	_____
_____	Heathkit Signal Tracer Kit	_____	_____	_____	_____
_____	Heathkit Amplifier Kit	_____	_____	_____	_____
_____	Heathkit Oscilloscope Kit	_____	_____	_____	_____
_____	Heathkit FM Tuner Kit	_____	_____	_____	_____
_____	No. 312 Tool Kit	_____	_____	_____	_____
_____	Heathkit Electronic Switch Kit	_____	_____	_____	_____

Enclosed find Check Money Order for _____

Please ship C.O.D. Postage enclosed for _____ pounds.

Heathkit R.F. SIGNAL GENERATOR KIT



\$19.50

A check of the features shows why thousands who could not afford a signal generator before are buying HEATHKIT R. F. Generators. For less than a twenty dollar bill, a generator many laboratories are ordering--accurate--compact--portable--turret type coil construction for minimum losses--calibration adjustment--husky 110V 60 cy power transformer operated--both sides 110 Volt line filtered to prevent feedback--ready calibrated two color panel--test leads--everything necessary including complete instruction manual for assembly and use--better get one now. Shipping Wt. 8 lbs.

Ready wound and calibrated precision coils.

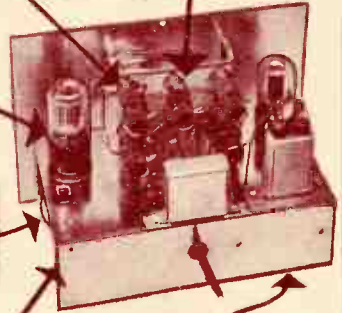
5 Bands supply fundamentals from 150 Kilocycles to 34 Megacycles with strong usable calibrated harmonics to over 100 Mc.....

Dual triode serves as two tubes, one as RF oscillator and other as audio amplifier for modulation.....

Relaxation type 400 cycle audio oscillator can be used for external audio testing.....

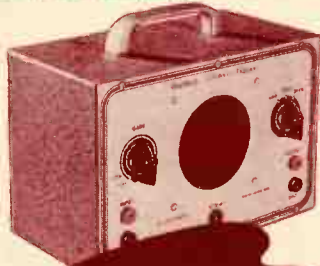
Open chassis construction for easy, quick assembly.

110V 60 cycle power transformer operated--safe for use on any type receiver.....



Heathkit SIGNAL TRACER KIT

Let a HEATHKIT Signal Tracer do the tedious watching of intermittents while you go on to other profitable jobs. Follow the signal from the antenna to the defective part in a matter of seconds. Triples the repairs per man in many shops. A HEATHKIT Signal Tracer pays for itself in a matter of days of operation. 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. Shipping Wt. 10 lbs.



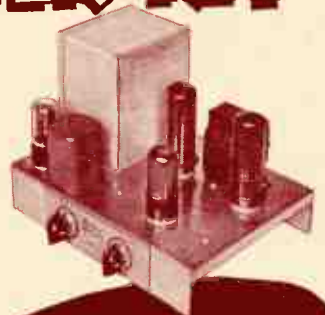
\$19.50

Nothing ELSE TO BUY

Heathkit HIGH FIDELITY PUSH-PULL AMPLIFIER KIT

Our supply of the surplus heavy duty RCA cased power transformer which makes this kit possible is down to less than 60 days supply and we urge any of you who contemplate the need of a really high quality amplifier to order now--we will never again be able to offer so much for \$14.95. The output is 14 Watts. Incorporated is a preamplifier stage, a phase inverter stage and push pull output using 1619 tubes (military 2 1/2 Volt 6L6's). A cased Chicago Transformer choke and quality output transformer are used. Shipping Wt. 20 lbs.

ACCESSORIES AVAILABLE
12" high quality FM speaker matches the amplifier.....\$6.95
Mahogany speaker cabinet size 14 1/2" x 14"x8" for above speaker.....\$8.75



\$14.95

Nothing ELSE TO BUY

The HEATH COMPANY
BENTON HARBOR, MICHIGAN

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