

# HEATH

# February FLYER

## NEW Heathkits

New Heathkits! This month we are announcing four new Heathkits-- a Tube Checker--a new and complete Television Alignment Generator-- a battery operated model of the famous Heathkit VTVM--and a new model Signal Tracer which is now combined with a universal test speaker. The Heathkit Tube Checker has all the features you have requested--individual switching of each tube element--beautiful four color meter (nearly 4 inches square), high grade birch cabinet--spare socket and individual switching guarantee against obsolescence and the price is amazing--consider that it is a full sized 11"x14"x4" tube checker with brass gear driven roller chart.

New Television Alignment Generator--Television has advanced so rapidly that the small sweep generator we marketed last year has been replaced by a larger more complete unit.

Television is really big business and the volume of service justifies the best in equipment. The new Heathkit TV Alignment Generator is in our opinion the best obtainable regardless of price--it is really three instruments in one--a wide range calibrated

sweep generator--a high frequency AM generator--and a precision marker indicator all combined in one instrument.

The battery operated Heathkit VTVM fills a definite need in servicing auto, aircraft and boat radios where no 110 AC is available--the same highly efficient circuit push pull electronic voltmeter--200 ua meter 23 ranges. Completely portable and with the desirable feature of instant tube warmup--no waiting

Flyer Articles--Thanks for all the excellent suggestions--we had several good articles for this month's Flyer, but all except one was crowded out by new Heathkits--the one included, however, is in our opinion extremely important--T.V. I.F. alignment--looks like the Flyer will be eight pages in March.

Deliveries--Most Heathkits are being shipped promptly, however, the demand for the new Heathkits may cause delays--all are scheduled for production early in March but please get your orders in and give us a reasonable period to deliver. All orders will be acknowledged.

Thanks for the fine response to last month's questions.

## NEW Heathkit TUBE CHECKER KIT

Only \$29.50

### FEATURES

1. Measures each element individually.
2. Has gear driven roller chart.
3. Has lever switching for speed.
4. Complete range of filament voltages.
5. Checks every tube element.
6. Uses latest type lever switches.
7. Uses beautiful shatterproof full view meter.
8. Large size 11"x14"x4" complete.

Check the features and you will realize that this Heathkit has all the features you want. Speed--simplicity--beauty--protection against obsolescence. The most modern type of tester--measures each element--beautiful Bad-Good scale, high quality meter--the best of parts--rugged oversize 110V 60 cycle power transformer--finest of Mallory switches--Centralab controls--quality wood cabinet--complete set of sockets for all type tubes including blank spare for future types--fast action gear driven roller chart uses brass gears to quickly locate and set up any type tube. Simplified switching cuts necessary time to minimum and saves valuable service time. Short and open element check. No matter what arrangement of tube elements, the Heathkit flexible switching arrangement easily handles it. Order your Heathkit Tube Checker today. See for yourself that Heath again saves you 2/3 and yet retains all the quality--this tube checker will pay for itself in a few weeks--better build it now. Complete with detail instructions--all parts--cabinet--roller chart--ready to wire up and operate. Shipping Wt. 15 lbs.



Nothing ELSE TO BUY

## 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.

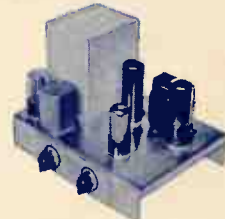


\$22.50

Nothing ELSE TO BUY

## Heathkit HIGH FIDELITY PUSH-PULL AMPLIFIER KIT

A really fine amplifier with tone quality equal to \$100.00 amplifiers. The price is made possible by the use of quality Army surplus parts. Push pull circuit with one preamp and one phase inverter stage. Push pull output using 1619 tubes (military 2½V 6L6) 110V 60 cy transformer operated complete with tubes and high grade output transformer. Shipping Wt. 20 lbs.



### ACCESSORIES AVAILABLE

12" high quality PM speaker matches the amplifier.....\$6.95  
Mahogany speaker cabinet size 14½"x14"x8" for above speaker.....\$8.75

\$14.95

Nothing ELSE TO BUY

# New

## Heathkit TELEVISION ALIGNMENT GENERATOR KIT



### FEATURES

- |   |  |
|---|--|
| 1 30 Megacycle Sweep Width Calibrated:    | 5 A.M. Modulation for RF Work!                   |
| 2 Calibrated Marker Indicator 20 to 40 Mc | 6 Mechanical Driven Inductive Sweep!             |
| 3 Step Type Output Attenuator!            | 7 Over 45" of Accurate Calibration:              |
| 4 Variable Phase Control!                 | 8 Plenty of Output for Stage by Stage Alignment! |

Everything you want in a television alignment generator. A wide band sweep generator covering all FM and TV frequencies--a marker indicator--AM modulation for RF alignment--variable calibrated sweep width 0-30 Mc.--mechanical driven inductive sweep. Husky 110V 60 cycle power transformer operated--step type output attenuator with 10,000 to 1 range--high output on all ranges--band switching for each range--vernier driven main calibrated dial with over 45 inches of calibrations--vernier driven calibrated indicator marker tuning. Large grey crackle cabinet 16-1/8" x 10-5/8" x 7-3/16". Phase control for single trace adjustment. Uses four high frequency triodes plus 5Y3 rectifier--split stator tuning condensers for greater efficiency and accuracy at high frequencies--this Heathkit is complete and adequate for every alignment need and is supplied with every part--cabinet--calibrated panel--all coils and condensers wound, calibrated and adjusted. Tubes, transformer, test leads--every part with instruction manual for assembly and use. Actually three instruments in one--TV sweep generator--TV AM generator and TV marker indicator. Also covers FM band. Deliveries start early in March. Order early.

### Notice to G-3 Sweep Generator Owners:

Those wishing to purchase the new Television Alignment Generator will be supplied free of charge a conversion kit changing the G-3 to a high frequency AM signal generator covering 37 Mc. to 230 Mc. A new panel and instruction manual are supplied thus converting the G-3 into an additional piece of useful equipment. Mention approximate date of G-3 purchase and order number if possible and request G-3 H.F. A.M. conversion kit.

Only **\$39.50**

## Television ALIGNMENT

To understand TV alignment with a sweep generator, first visualize a given frequency width (say 5 Megacycles) being swept back and forth at 120 cycles or times per second--if this frequency modulated wave is fed into a tuned circuit--resonant to a portion of the swept frequency this portion will pass through the tuned circuit in direct portion to the gain of the tuned circuit--if this frequency is then fed into a detector and the RF removed, the 120 cycle AC sweeping voltage will appear across the detector and can be viewed upon an oscilloscope showing the exact shape of the response curve of the tuned circuit.

In TV IF amplifiers, the gain is reduced and the band width increased by loading down the tubes with low value resistors between grid and ground. The various stages are stagger tuned (each stage amplifies a different portion of the total band width).

Marker indicator pip can be moved through trace to locate each stage.

Dotted lines indicate 3 stages of IF Tuned to 3 different frequencies to achieve overall Band Width.



A sweep generator allows the individual IF's to be aligned for maximum benefit of the entire band width and by having a marker indicator each stage can be quickly located and aligned. TV alignment is both simple and pleasant when understood and undertaken with proper equipment.

## Heathkit CONDENSER CHECKER KIT

Checks all types of condensers, paper-mica-electrolytic-ceramic over a range of .00001 MFD to 1,000 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. Shipping Wt. 7 lbs.



**\$19.50**  
Nothing ELSE TO BUY

## New Heathkit F M TUNER KIT

A truly fine FM Tuner with the coils ready wound, all alignment completed--all that is necessary is wiring and it's ready to play--uses super regenerative circuit--110V 60 cycle transformer operated--two gang tuning condenser--slide rule calibrated dial--two tubes--complete instructions including pictorial enable even beginners to build successfully. Shipping Wt. 5 lbs.



Cabinet EXTRA

Beautiful mahogany cabinet for FM Tuner (shown above) extra.....\$3.75

**\$14.75**

# Heathkit SIGNAL TRACER AND UNIVERSAL TEST-SPEAKER-KIT

# New



The popular Heathkit Signal Tracer has now been combined with a universal test speaker at no increase in price. The same high quality tracer follows signal from antenna to speaker--locates intermittents--defective parts quicker--saves valuable service time--gives greater income per service hour. Works equally well on broadcast--FM or TV receivers. The test speaker has assortment of switching ranges to match push pull or single output impedance. Also tests microphones, pickups--PA systems--comes complete--cabinet--110V. 60 cycle power transformer--tubes, test probe, all parts and detailed instructions for assembly and use. Shipping Wt. 8 lbs.

## \$19.50

Nothing ELSE TO BUY

## ...TIPS AND COMMENTS

Sweep Generator Owners--A revision has been made in the Model G3 which improves it for TV use--data and parts will be sent on request--mention approximate date of purchase.

Scope Owners--A new inexpensive CR tube shield has been developed by us which really effects a marked improvement--protection from nearby transformers--from internal wiring, etc.--better focusing--finer trace. The price is only \$2.50 plus postage. We sincerely recommend it.

Geiger Counters--An article appears in the February POPULAR MECHANICS on the construction of one. The large mail order radio supply houses are now stocking the tubes--our miniature headphones (No. 216 price \$1.00 per set) are ideal for use with this instrument.

# New Heathkit BATTERY VACUUM TUBE VOLTMETER-KIT



The famous Heathkit VTM now in battery operated type. Use it anywhere--carry it out for work on auto radios--aircraft--boats--any place where 110V. house current is not available--instant warmup--turn the switch and it's ready to operate. Same quality features, six linear DC ranges 0-3V. -10V. -30V. -100V. -300V. -1000V. High voltage extended to 10,000 Volts with probe listed below. Large 200 microampere meter with shatterproof plastic face. Ohmmeter measures from 1/10 ohm to one billion ohms with internal battery. 11 megohm input resistance on DC. AC is copper oxide rectifier type with ranges as above except no 3 Volt range. Complete with all parts, cabinet, 2 color panel, tubes, batteries, test prods and detailed instruction manual. Shipping Wt. 12 lbs.

## \$34.50

# 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.

## \$34.50

# Heathkit 10,000V. H.V. TEST PROBE KIT

Complete kit to assemble test probe which extends the range of any Heathkit VTM to 3,000 and 10,000 Volts. No. 310  
Shipping Wt. 1 lb.



## \$4.50

# Heathkit CRYSTAL TEST PROBE KIT



Crystal diode probe kit fits any Heathkit VTM and extends RF range to above 100 Megacycles. Complete with crystal and all other parts.  
Shipping Wt. 1 lb. No. 309

## \$6.50

## ORDER BLANK

THE HEATH  
Company  
BENTON HARBOR,  
MICHIGAN

From \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(Please Print)

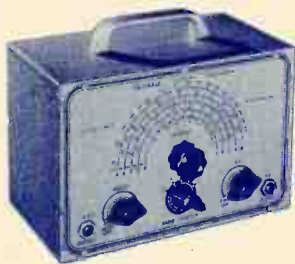
Ship via  
\_\_\_ Parcel Post  
\_\_\_ Express  
\_\_\_ Freight  
\_\_\_ Best Way

Quantity	Item	Price	Quantity	Item	Price
___	Heathkit Tube Checker Kit	___	___	Heathkit Signal Gen. Kit	___
___	Heathkit Battery Eliminator Kit	___	___	Heathkit Oscilloscope Kit	___
___	Heathkit Battery VTM Kit	___	___	Heathkit Audio Generator Kit	___
___	Heathkit VTM Kit	___	___		___
___	Heathkit Signal Tracer Kit	___	___		___
___	Heathkit Electronic Switch Kit	___	___		___
___	Heathkit FM Tuner Kit	___	___		___
___	Heathkit H.V. Test Probe Kit	___	___		___
___	Heathkit R.F. Crystal Test Probe Kit	___	___		___
___	Heathkit Tel. Alignment Gen. Kit	___	___		___
___	Heathkit Condenser Checker Kit	___	___		___
___	Heathkit Amplifier Kit	___	___		___

Enclosed find  Check  Money Order for \_\_\_\_\_

Please ship C.O.D.  Postage enclosed for \_\_\_\_\_ pounds.

# Heathkit R.F. SIGNAL GENERATOR KIT



This RF Signal Generator Kit is rapidly becoming our most popular kit. Calibrated from 150 Kc. to over 100 Megacycles with fundamentals to 34 Megacycles, it is adequate for every service need.

An exceptionally complete assembly and use manual makes it a lot of fun to build and no one needs to resort to slipshod methods of alignment when a quality Signal Generator Kit is available for less than a twenty dollar bill. The audio modulation is supplied by a relaxation type oscillator which also supplies a sawtooth

audio voltage for amplifier testing.

The coils used are precision wound and factory calibrated eliminating the need for adjusting each band. The kit is complete with large calibrated scales on two color panel, grey crackle cabinet, 110V. 60 cycle power transformer, precision coils, test leads, tubes and all other parts. Shipping Wt. 8 lbs.

**\$19.50**

# IMPROVED Heathkit VACUUM TUBE VOLTMETER KIT

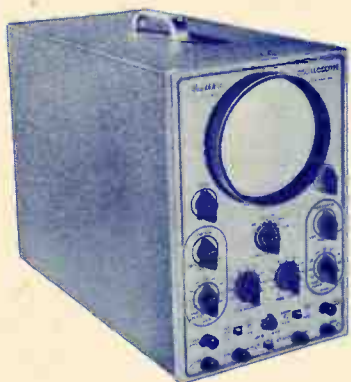


New 200 microampere meter six ranges for each function, 24 ranges in all--new ohmmeter battery tray uses dry cells--new stability and accuracy. All these new features plus the best features of last year's model add up to a "best buy" in VTVM--new H.V. accessory probe (extra) extends H.V. range to 10,000 Volts for T.V. work and makes a kilovolt meter of this Heathkit. Push pull electronic voltmeter circuit--burnout proof meter circuit--isolated DC probe, 6 ranges from 3 Volts to 1,000 Volts AC or DC--ohmmeter range .1 ohm to 1 billion ohms. Polarity reversing switch, db scale. All parts--cabinet, meter, tubes, test leads, instruction manual, better get one at the amazing price of ----- Shipping Wt. 8 lbs.

**\$24.50**

*Nothing ELSE TO BUY*

# 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 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 now--you'll enjoy it for years. Shipping Wt. 24 lbs. Express shipment only.

**\$39.50**

*Nothing ELSE TO BUY*

# Heathkit SINE & SQUARE WAVE AUDIO GENERATOR KIT



The ideal instrument for checking audio amplifiers, television response, distortion, etc. Supplies excellent sine wave 20 cycles to 20,000 cycles and in addition supplies square wave over same range. Extremely low distortion, less than 1%, large calibrated dial, beautiful 2 color panel, 1% precision calibrating resistors, 110V. 60 cycle power transformer, 5 tubes, detailed blueprints and instructions. R.C. type circuit with excellent stability. Shipping Wt. 15 lbs.

**\$34.50**

*Nothing ELSE TO BUY*

The HEATH COMPANY  
BENTON HARBOR, MICHIGAN

**Important  
NEW HEATHKITS**

- TUBE CHECKER . . . . .
- T.V. ALIGNMENT GENERATOR . . . . .
- NEW SIGNAL TRACER . . . . .
- NEW BATTERY VTVM . . . . .
- ARTICLE ON TV ALIGNMENT . . . . .

POSTMASTER: Please notify sender on Form 3547 if not delivered for any reason.....

Sec. 562, P. L. & R.  
U. S. POSTAGE  
**1¢ Paid**  
Benton Harbor, Mich.  
Permit No. 273