

# HEATH

# March

# FLYER



Shown on the right is a photo of the Heathkit laboratory. Since we feel that no piece of test equipment is better than the standards to which it was designed and calibrated, the Heath Company laboratory is of importance to every Heath customer. It is truly the heart of our business and represents an original investment of nearly 30,000 dollars. In it, you will find the best of General Radio, Hewlett Packard and Measurements Corporation laboratory equipment. Our standards of frequency, voltage, resistance and capacity are the most accurate available and new equipment is constantly being added. Thus, Heathkits have built up a world-wide reputation for accuracy. A Canadian engineer working in the frozen north beyond the Arctic Circle writes that after a year in the north his VIVM was within 1% accuracy when tested in the government laboratories at Toronto. Hundreds of other letters monthly tell of similar experiences. When you purchase a Heathkit, whether for accurate technical work or for hobby experimenting, you do so with the confidence of maximum accuracy.



*Read what Builders say about this T.V. Kit*

*Only 450 LEFT...*

BUY ONLY WHAT YOU NEED

Beautiful **FACTORY QUALITY T.V. KIT**

January 24, 1950

I am greatly pleased with the performance of the Belmont TV Kit which I recently purchased. Everyone who has seen it was enthusiastic over the sharpness and steadiness of the picture. Many thanks for bringing this set to my attention in your advertising. The pictorials were invaluable in showing placement of parts.....

R. O. B. Rochester, N. Y.

January 16, 1950

I have completed the construction and alignment of one of the "Belmont" TV Receivers purchased from you (in kit form) and wish to report that it surpasses anything in it's class for performance as far as I'm concerned, judging from my experience with this type of TV receiver.

I am getting almost perfect reception at a distance of almost 60 miles from the transmitter and with a very inexpensive antenna installation. .... E. L. S. Indiana, Penna.



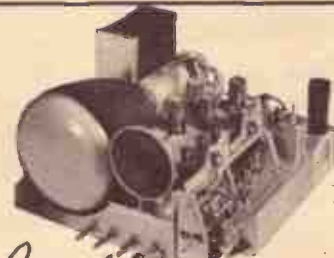
Complete 7" Television Receiver Kit (less tubes and cabinet).....\$34.50  
Shipping Wt. 23 lbs.

Complete set of tubes as outlined above with RCA 7JP4 picture tube (18 tubes for less than price of picture tube)..... 20.00  
Shipping Wt. 6 lbs.

Think of it. A beautiful factory engineered 18 tube television receiver with all parts (less tubes and cabinet) for the cost of the tuner alone, \$34.50. Now you can afford to learn the fascinating secret of this new industry by actually assembling a high quality receiver. This TV receiver kit has everything, 12 channel Defiance tuner using 6BH6 RF stage and 6J6 as oscillator and mixer, all assembled and adjusted. Completely assembled 5000 Volt high voltage power supply ready to operate. A circuit incorporating the latest developments. The panel controls are station selector, volume, vertical and horizontal hold and contrast. At the rear are brightness, vertical and horizontal size, focus, vertical and horizontal centering. The circuit uses three stages of high gain I.F. with 6AG5 tubes, 12AU6 limiter, 6AL5 second detector, 12AU6 syn. separator, 12AU6 video amplifier, 12SN7 horizontal multivibrator, 50L6 horizontal output, 12SN7 vertical multivibrator, 12SN7 vertical output, 50L6 high voltage oscillator, 1B3 high voltage rectifier, 19T8 as FM detector and audio amplifier, 25L6 audio output.

Beautiful piano finish mahogany cabinet for above TV set..... \$20.00  
Shipping Wt. 18 lbs.

Buy all at one time and save. Complete Receiver Kit with tubes and cabinet..... 69.50  
Shipping Wt. 46 lbs.



Complete RECEIVER LESS TUBES & CABINET

**\$34.50**

Supplied with 4 GIANT PICTORIALS FOR EASY ASSEMBLY

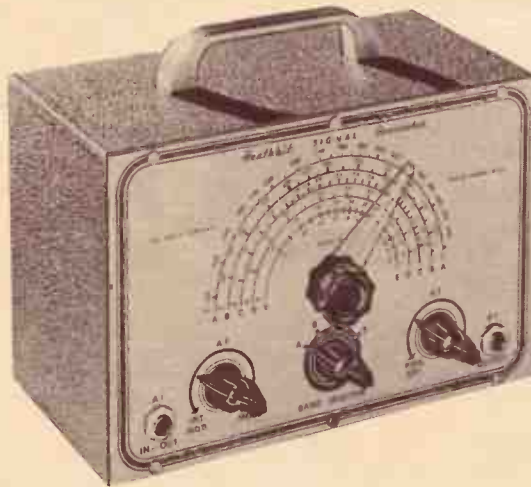
*The essential Instrument of Service work*

Only **\$19.50**

6 to 1 MICROMETER TYPE VERNIER DRIVE FOR HAIRLINE ACCURACY

CATHODE FOLLOWER OUTPUT FOR STABILITY

# Heathkit R.F. SIGNAL GENERATOR KIT



STABLE OSCILLATOR COVERS 150 KC to 34 MC WITH FUNDAMENTALS AND HAS STRONG CALIBRATED HARMONICS TO OVER 100 MC.

400 CYCLE AUDIO MODULATION-PROVISION FOR EXTERNAL MODULATION . . . . .

The most popular signal generator kit has been vastly improved--the experience of thousands combined to give you the best. Check the features in this fine generator and consider the low price of \$19.50. A best buy for any shop, yet inexpensive enough for hobbyists. Everyone can have an accurate controlled source of R.F. signal voltage.

The new features double the value--think of being able to make fidelity checks on receivers by inserting a variable audio signal. Internal 400 cycle saw-tooth audio oscillator modulates R.F. signal and is available externally for audio testing. The new 5 to 1 ratio vernier drive gives hairline tuning for maximum accuracy in scale settings. The coils are already precision wound

and calibrated. Uses turret type coil and switch assembly for ease of construction. The generator is 110V. 60 cycle transformer operated and comes complete in every detail--cabinet--tubes--coils--beautiful two color calibrated panel and all small parts--new step-by-step pictorial diagrams and complete instruction manual make assembly a cinch even for novices. Why try to get along without a signal generator when you can have the best for less than a twenty dollar bill. Better order it now. Shipping Wt. 7 lbs. Model G-5.

*A Quality GENERATOR FOR LESS THAN A \$20. Bill*

## Why GUESS ABOUT CONDENSERS THE NEW Heathkit CONDENSER CHECKER KIT

*will . . . . ANSWER YOUR NEEDS*

**\$19.50**



### FEATURES

- \*Power factor scale.
- \*Measures resistance.
- \*Measures leakage.
- \*Checks paper-mica-electrolytics.
- \*Bridge type circuit.
- \*Magic eye indicator.
- \*110V. transformer operated.
- \*All scales on panel.

*Nothing ELSE TO BUY*

Checks all types of condensers 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. 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 tube, cabinet, calibrated panel, test leads and all other parts. Clear detailed instructions for assembly and use. Model C-2. Shipping Wt. 7 lbs.

## A PRECISION VOLT-OHM-MILLIAMMETER Heathkit HANDITESTER KIT

### FEATURES

- \*Beautiful streamline Bakelite case.
- \*AC and DC ranges to 5,000 Volts.
- \*1½ Precision ceramic resistors.
- \*Convenient thumb type adjust control.
- \*400 Microampere meter movement.
- \*Quality Bradley AC rectifier.
- \*Multiplying type ohms ranges.
- \*All the convenient ranges 10-30-300-1,000-5,000 Volts.
- \*Large quality 3" built-in meter.

The instrument for all--the ranges you need--assemble it in a matter of minutes--an instrument for everyone. Small enough to put in your pocket, yet a full 3" meter. Easy pictorial wiring diagrams eliminate all assembly problems. Uses only 1½ precision ceramic divider resistors and wire wound shunts. Twelve different ranges. AC and DC ranges of 10-30-300-1,000-5,000 Volts. Ohms ranges of 0-3,000 ohms and 0-300,000 ohms. Milliampere ranges of 10 MA and 100 MA. Hearing aid type ohms adjust control fits conveniently under thumb for one hand adjustment. Banana type jacks for positive low resistance connections. Quality test leads included. The high quality Bradley instrument rectifier was especially chosen for linear scales on AC. The 400 microampere meter movement comes already mounted in the case protected from dust during assembly. An ideal classroom assembly instrument useful for a lifetime. Perfect for radio service calls, electricians, garage mechanics, students, amateurs and beginners in radio. The only quality volt-ohmmeter under \$20.00. An hour of assembly saves you one-half the cost and quality parts give you a better instrument. Order today. Model M-1. Shipping Wt. 2 lbs.



*Only \$13.50*

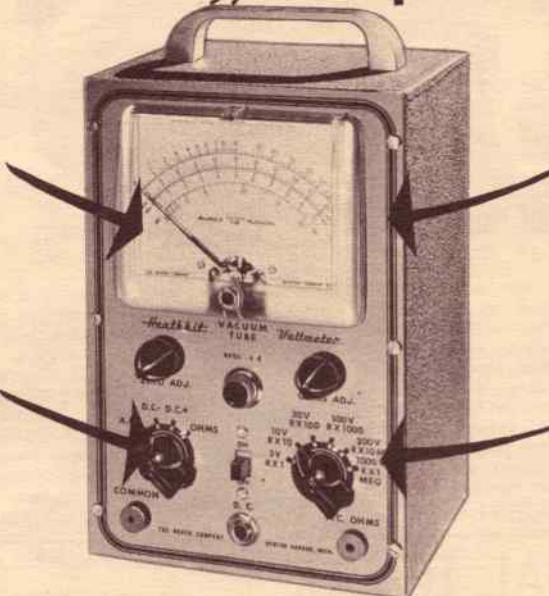


# Heathkit VTVM KITS ARE Better

STILL  
Only \$24.50

Full SCALE RANGE OF 3 VOLTS MEANS ONE VOLT COVERS 33 1/3 % OF SCALE INSTEAD OF ONLY 20% ON 5 VOLT TYPES . . . . . NEARLY TWICE SCALE LENGTH

Six RANGES FOR EACH FUNCTION • 3VOLTS 10V. -30V -100V-300V-1000V. COMPLETE COVERAGE 24 RANGES IN ALL . . . .



Only HEATHKIT VTVM HAS MODERN 200 MICROAMPERE METER ALLOWING OPERATION IN SMALL LINEAR PORTION OF TUBE CURVE. 5 TIMES AS SENSITIVE AS OTHERS • 5 TIMES AS ACCURATE . . . . .

New SIMPLIFIED SWITCHES ONLY 14 CONNECTIONS ON FUNCTION SWITCH INSTEAD OF 30 • SAVES 1/3 THE ASSEMBLY TIME . . . .

The new Heathkit Model V-4 Vacuum Tube Voltmeter has dozens of improvements. A new modern streamlined 200 microampere meter has Alnico V magnet for fast, accurate readings. The new electronic AC voltmeter circuit incorporates an entire new balance control which eliminates contact potential and provides greater accuracy. New simplified switches for quicker assembly. New snap-in battery mounting is on the chassis for easy replacement.

The Heathkit VTVM is the only kit giving all the ranges. Check them--DC and AC full scale linear ranges of 0-3V, 0-10V, 0-30V, 0-100V, 0-300V, 0-1000V and can be extended to 0-3000V and 0-10,000V DC with accessory probe at slight extra cost. Electronic ohmmeter has six ranges measuring resistance accurately from .1 ohm to one

billion ohms. Meter pointer can be offset to zero center for FM alignment.

The DC probe is isolated for dynamic measurements. Has db scale for making gain and other audio measurements.

The new instruction manual features pictorial diagrams and step-by-step instructions for easy assembly. The Heathkit VTVM is complete with every part--110V transformer operated with test leads, tubes, light aluminum cabinet for portability, giant 4 1/2" 200 microamp meter and complete instruction manual.

Order now and enjoy it this entire season. Shipping Wt. 8 lbs. Model V-4

## Heathkit R.F. PROBE KIT

No. 310 Converts any Heathkit (or other 11 meg input) VTVM into a kilovoltmeter. Highly insulated 1% accuracy multipliers. Reads 3,000V. on 300V. scale and 10,000V. on 1,000V. scale--a necessity for television. Shipping Wt. 1 lb.



\$6.50

## Heathkit H.V. PROBE KIT

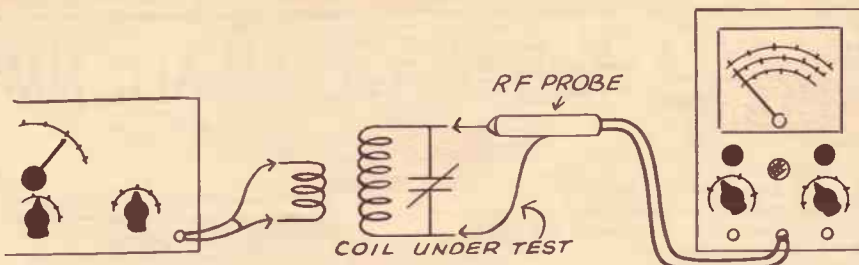


No. 309 R.F. Probe Kit uses 1N34 crystal to measure R.F. voltages with Heathkit VTVM. Will measure accurately to 100 Mc. and give good indication to 250 Mc. Reads on regular DC scales. Shipping Wt 1 lb.

\$4.50

### MEASURING "Q" WITH HEATHKIT VTVM

A simple setup will allow the measurement of Q using a VTVM with RF probe and a signal generator. When measuring RF chokes, couple the signal generator to the choke by several turns of wire around it. Measurement should be made at the resonant frequency of the coil.



After locating resonant frequency, adjust signal generator output to full scale reading on VTVM. Note signal generator frequency without changing any adjustment. Move signal generator tuning control downward in frequency until VTVM reads 70.7% of full scale. Note this frequency. Move signal generator tuning control upward from resonant frequency until VTVM reads 70.7% of full scale. Note this frequency. Determine the Q of the coil by the following formula.

$$Q = \frac{\text{Resonant frequency}}{\text{Frequency difference downward} + \text{frequency difference upward}}$$

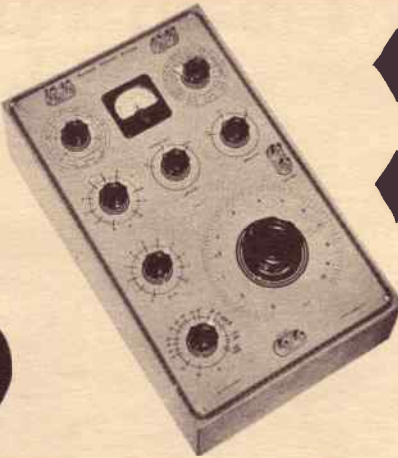
Example: Resonant frequency 455 Kc.  
70.7% frequency downward 430  
25 Kc.  
70.7% frequency upward 470  
- Resonant frequency 455  
15

$$Q = \frac{455}{25 + 15} = 11.37$$

*Hundreds of Laboratories use* **Heathkit IMPEDANCE BRIDGE** *as Standard*

MEASURES INDUCTANCE  
10 MICRO HENRIES TO  
100 HENRIES . . . . .

MEASURES RESISTANCE  
.01 OHMS to 10 MEG OHMS



MEASURES CAPACITANCE  
.00001 MFD to 100 MFD...

MEASURES 'Q' AND  
POWER FACTOR . . . . .

*Only* **\$6950**

*Actually*  
**4 BRIDGES  
IN ONE . . . . .**

Measures inductance from 10 microhenries to 100 henries, capacitance from .00001 MFD to 100 MFD. Resistance from .01 ohms to 10 megohms. Dissipation factor from .001 to 1. "Q" from 1 to 1,000. Ideal for schools, laboratories, service shops, serious experimenters. An impedance bridge for everyone--the most useful instrument of all, which heretofore has been out of the price range of serious experimenters and service shops. Now at the lowest price possible. All highest quality parts. General Radio main calibrated control. General Radio 1,000 cycle hummer. Mallory ceramic switches with 60 degree indexing--200 microamp zero center galvanometer-- $\frac{1}{2}$  of 1% ceramic non-inductive decade resistors. Professional type binding posts with standard  $\frac{3}{4}$ " centers. Beautiful birch cabinet. Directly

calibrated "Q" and dissipation factor scales. Ready calibrated capacity and inductance standards of Silver Mica, accurate to  $\frac{1}{2}$  of 1% and with dissipation factors of less than 30 parts in one million. Provisions on panel for external generator and detector. Measure all your unknowns the way laboratories do--with a bridge for accuracy and speed.

Internal 6 Volt battery for resistance and hummer operation. Circuit utilizes Wheatstone, Hay and Maxwell circuits for different measurements. Supplied complete with every quality part--all calibrations completed and instruction manual for assembly and use. Deliveries are limited. Model IB-1. Shipping Wt. 15 lbs.

*New Heathkit* **SIGNAL TRACER & UNIVERSAL TEST SPEAKER KIT**

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 test microphones, pickups, PA systems--comes complete--cabinet, 110V. 60 cycle power transformer--tubes, test probe, all parts and detailed instructions for assembly and use.

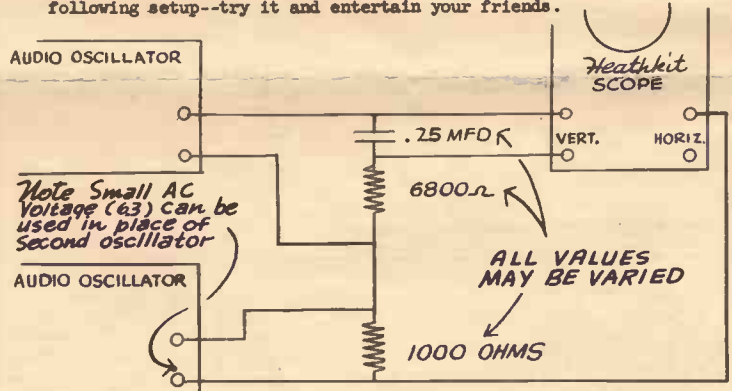


**\$1950**

Shipping Wt. 8 lbs.

OBTAINING CIRCULAR AND GEAR TYPE TRACES ON YOUR HEATHKIT SCOPE

Extremely interesting and beautiful traces can be obtained by the following setup--try it and entertain your friends.

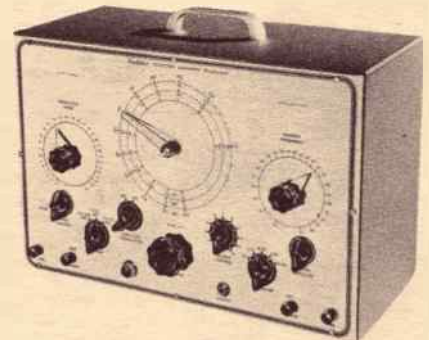


*3 T.V. Manufacturers use the* **Heathkit T.V. ALIGNMENT GENERATOR KIT**

FEATURES

- \*Calibrated sweep width 0-30 Mc.
- \*Calibrated absorption marker 19 to 42 Mc.
- \*Vernier driven master oscillator 17 $\frac{1}{2}$ -220 Mc.
- \*Over 45 inches of calibration.
- \*10,000 to 1 step type output attenuator.
- \*Mechanical driven inductive sweep.
- \*AM modulation over entire range.
- \*Variable phase control.
- \*All coils wound and calibrated.
- \*3 T.V. instruments in one.

Everything you want in a television alignment generator. A wide band sweep generator covering all TV frequencies 0 to 46--54 to 100--174 to 220 Megacycles, a marker indicator covering 19 to 42 Megacycles, 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 calibration--vernier driven calibrated indicator marker tuning. Large grey crackle cabinet 16  $\frac{1}{8}$ " x 10  $\frac{5}{8}$ " x 7  $\frac{3}{16}$ ". Phase control for single trace adjustment. Uses three 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. Model TS-1A. Shipping Wt. 20 lbs.

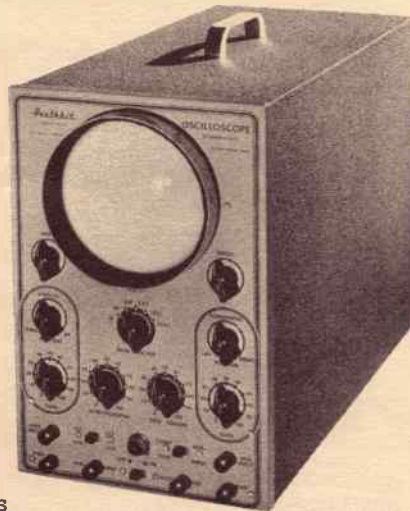


**\$3950**

# Only Heathkit 5" Push Pull OSCILLOSCOPE KIT

HAS DUAL PUSH PULL PENTODE AMPLIFIERS

- Only HEATHKIT HAS FULL MAGNETIC METAL C.R. TUBE SHIELD . . . . .
- DUAL POSITIONING CONTROLS FOR SMOOTH OPERATION..
- MULTIVIBRATOR TYPE SWEEP 15 CY. to WELL-OVER 70,000 CY.
- INTENSITY MODULATION CONNECTIONS ON REAR..



- ALUMINUM CABINET FOR PORTABILITY...
- Only HEATHKIT HAS PUSH-PULL PENTODE AMPLIFIERS
- COMPLETE INSTRUMENT USES 8 TUBES . . . .
- TEST VOLTAGE POST ON FRONT PANEL..

FEATURES

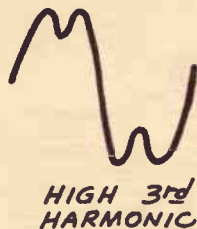
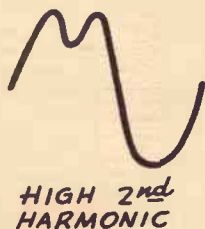
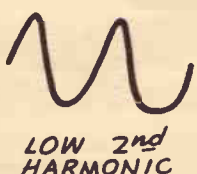
- \*The first truly television oscilloscope.
- \*Tremendous sensitivity .06 Volt RMS per inch deflection.
- \*Push-pull vertical and horizontal amplifiers.
- \*Useful frequency range to 2½ Megacycles.
- \*Extended sweep range 15 cycles to 70,000 cycles.
- \*New television type multivibrator sweep generator.
- \*New magnetic alloy shield included.
- \*Still the amazing price of \$39.50.

The new 1950 Push-Pull 5" Oscilloscope has features that seem impossible in a \$39.50 oscilloscope. Think of it--push pull vertical and horizontal amplifiers with tremendous sensitivity only six one hundredths of a volt required for full inch of deflection. The weak impulses of television can be boosted to full size on the five inch screen. Traces you couldn't see before. Amazing frequency range, clear useful response at 2½ Megacycles, made possible by improved push-pull amplifiers. Only Heathkit Oscilloscopes have the frequency range required for television. New type multivibrator sweep generator with more than twice the frequency range, 15 cycles to 70,000 cycles, will actually synchronize with 250,000 cycle signal. Dual positioning controls will move trace over any section of the screen for observation of any part. New magnetic alloy CR tube shield protects the instrument from the outside fields. All the same high quality parts, cased electrostatically shielded power transformer, aluminum cabinet, all tubes and parts. New instruction manual now has complete step-by-step pictorials for easiest assembly. Model O-5. Shipping Wt. 25 lbs. Express shipment only.

Only  
**\$39.50**

## Identifying HARMONIC DISTORTION with HEATHKIT SCOPE

The following patterns will serve as a guide in identifying harmonic distortion in amplifiers. All are based on sine wave input into amplifier.



## Increase YOUR SCOPE USEFULNESS with Heathkit ELECTRONIC SWITCH & SQUARE WAVE GEN. KIT



**\$34.50**

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. The input and out-

put traces of an amplifier may be observed one above 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, 110 Volt 60 cycle transformer operated. Uses five tubes (1 6X5, 2 6SN7's, 2 6SJ7's). Has individual gain controls, positioning control and coarse and fine switching rate controls. The cabinet and panel match all other Heathkits. Every part supplied including detailed instructions for assembly and use. Model 8-1. Shipping Wt. 11 lbs.

*Nothing ELSE TO BUY!*

*Beautiful* NEW BLONDE CABINET

NEW *Heathkit*  
DISCRIMINATOR TYPE  
**FM TUNER KIT**

A professional type FM Tuner for the best FM reproduction.

The Heathkit FM Tuner Model FM-2 was designed for best possible tonal reproduction. The circuit incorporates the most desirable FM features--true FM--ready wound and adjusted coils--3 stages of 10.7 Mc. I.F. (including limiter).

Tube lineup: 7E5 oscillator, 6SH7 mixer, two 6SH7 I.F. stages, 6SH7 limiter, two 7C4 diodes as discriminator, 6X5 rectifier.

The instrument is transformer operated making it safe for connection to any type receiver or amplifier. The new 20 watt Heathkit Amplifier is ideal for use with this tuner taking full advantage of the wide tonal range available from FM. The R.F. coils are ready wound--mounted on the tuning condenser and the condenser is adjusted--no R.F. coils to wind or adjust.

A calibrated six inch slide rule dial has vernier drive for easy tuning. An AC outlet is provided on the chassis for the amplifier thus controlling it from the tuner controls. The finest parts are provided--ceramic mounted tuning condenser--dual iron core I.F. coils--cased power transformer and all ceramic bypass condensers. The kit is complete with all tubes, punched and formed chassis, transformers, condensers and complete instruction manual. Shipping Wt. 10 lbs. Model FM-2.



The finest in Heathkit form at a reasonable price.

**\$22.50** **\$23.50**



**\$4.95**

BLONDE BIRCH CABINET  
FOR FM TUNER NO 350  
FOR RECEIVER NO 345



NO 335  
PROFESSIONAL TYPE  
COMMUNICATION CABINET  
FITS BOTH RECEIVERS **\$4.50**

5" PERMOFLUX SPEAKER  
for EITHER OF THE ABOVE **\$2.75**  
NO 320

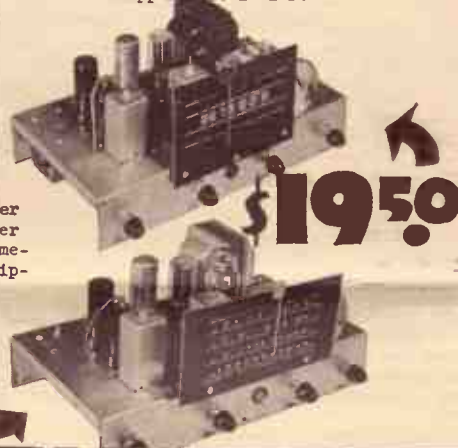
FOR *Heathkits*  
**2 Heathkit**  
SUPER HETERODYNE  
**RECEIVER KITS**

BROADCAST AND  
3 BAND MODELS AVAILABLE

Two new Heathkits. Ideal for schools, replacement of worn out receivers, amateurs and custom installations.

Both are transformer operated quality units. The best of materials are used throughout--six inch calibrated slide rule dial--quality power and output transformers--dual iron core shielded I.F. coils--metal filter condensers and all other parts. The chassis has phono input jack--110 Volt outlet for phono motor and there is phono-radio switch on panel. A large metal panel simplifying installation in used console cabinets is included. Comes complete with tubes and instruction manual incorporating pictorials and step-by-step instructions (less speaker and cabinet). The three band model has simple coil turret which is assembled separately for ease of assembly.

Model BR-1 Broadcast Model Kit covers 550 to 1600 Kc. Shipping Wt. 10 lbs.



**\$19.50**

Model AR-1 3 Band Receiver Kit covers 550 Kc. to over 20 Mc. continuous. Extremely high sensitivity. Shipping Wt. 10 lbs.

*New* AMPLIFIER KITS FOR *Finest* REPRODUCTION

*New* 20 WATT • PUSH-PULL • MODEL A-5  
**Heathkit** AMPLIFIER KIT

The purchase of a good amplifier provides years of pleasure. Both the new Heathkit Amplifiers listed below have just been developed and incorporate the latest in design. The Model A-4 is an inexpensive utility amplifier while the Model A-5 incorporates the best in circuit design and materials. It compares very favorably with the best in expensive amplifiers and has the same features. Better get one and enjoy a new thrill in musical reproduction. The General Electric reluctance pickup cartridge is considered the best commercial pickup and the Model A-5A has the proper preamplifier and compensation for it.

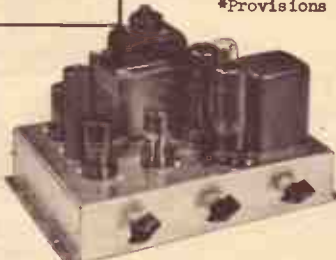
*New* 6 WATT • MODEL A-4 • PUSH-PULL  
12" Speaker,  
No. 304.....\$6.  
**AMPLIFIER  
KIT**



**\$12.50**

This new Heathkit Amplifier was designed to give quality reproduction at a very low price. Has two preamp stages, phase inverter stage and push-pull beam power output. Comes complete with six tubes, quality output transformer (to 3-4 ohm voice

coil), husky cased power transformer and all other parts. Has tone and volume controls. Instruction manual has pictorial for easy assembly. Six watt output with response flat  $\pm 1\frac{1}{2}$  db from 50 to 15,000 cycles. A quality amplifier kit at new low price. Better build one. Model A-4. Shipping Wt. 7 lbs.



MODEL A-5  
AMP. KIT **\$21.50**  
Complete

Model A-5A Amplifier with pre-amplifier for G.E. cartridges or microphone.....\$23.50

12" 20 Watt Speaker,  
No. 326..... 7.50

FEATURES

- \*Push-pull 6L6's.
- \*Full 20 Watts output.
- \*Fully enclosed chassis.
- \*Provisions for reluctance pickup compensation stage.
- \*Cased high fidelity output transformer.
- \*Treble and bass boost tone controls.
- \*Full range of output impedances 3.2 ohms to 500 ohms.

The finest amplifier kit we have ever offered--check the features. This inexpensive amplifier compares favorably with instruments costing five times as much. Nothing has been spared to provide the best reproduction--an ideal amplifier for the new Heathkit FM Tuner listed above.

Dual tone controls for control of both treble and bass. Bass control is of the boost type for maximum listening pleasure. Optional preamplifier stage for use with G.E. reluctance pickup or microphone. Uses inverse feedback to give excellent response over entire range. Tube lineup: 6SJ7 preamplifier stage, 6J5 phase splitter stage, two 6L6's in push-pull and 5U4 rectifier. (6SC7 as optional compensation stage.)

Uses highest quality Chicago Transformer Corporation cased output transformer with taps of 3.2, 8, 15, 60 and 500 ohms to match any speaker combination. Power transformer is conservatively rated for continuous operation in sound systems. Tone control gives maximum bass boost of 6 db at 70 cycles. Amplifier has maximum gain of 75 db. Response within 3 db 20 to 20,000 cycles. Shipping Wt. 17 lbs. Complete with all parts, tubes and instruction manual.

# Heathkit TUBE CHECKER KIT

DYNAMIC

SOCKETS FOR EVERY MODERN TUBE - BLANK FOR NEW TYPES *when* ANNOUNCED . . . . .

FASTEST METHOD OF TESTING TUBES - SAVES TIME MAKES MORE PROFITS

RUGGED COUNTER TYPE BIRCH CABINET . . .



GEAR DRIVEN ROLLER CHART - *Gives* INSTANT SET-UP FOR ALL TYPES

TESTS EACH ELEMENT SEPARATELY FOR OPEN OR SHORT & QUALITY

*Beautiful* 3 COLOR METER READS BAD-GOOD & HAS LINE SET POINT . . . .

Test your tubes the modern way--dynamically--the simplest, yet fastest and surest method--your Heathkit has a switch for each tube element and measures that element--no chance for open or shorted elements slipping by, all the advantages of the mutual conductance type without the slow cumbersome time consuming setups.

Your Heathkit Tube Checker has all the features--beautiful 3 color BAD-GOOD meter--complete selection of voltages--roller chart listing hundreds of tubes including the new 9 pin miniatures--finest quality Centralab lever switches for each element--high grade birch counter type cabinet--continuously variable line adjust control--every feature you need to sell tubes properly. The most modern type tube checker with complete protection against obsolescence. The best of parts--rugged oversize 110V. 60 cycle power transformer--finest of Mallory and Centralab switches and controls, complete set of sockets for all type tubes with blank spare for future types. Fast action brass gear driven roller chart quickly locates the settings for any type tube. Simplified switching cuts necessary testing time to minimum

and saves valuable service time. Short and open element check. Simple method allows instant setup of new tube types without waiting for factory data. No matter what the arrangements of tube elements, the Heathkit flexible switching arrangement easily handles it. Order your Heathkit Tube Checker Kit today. See for yourself that Heath again saves you two-thirds and yet retains all the quality--this tube checker will pay for itself in a few weeks--better assemble it now. Complete with instructions--pictorial diagrams--all parts--cabinet--ready to wire up and operate. Shipping Wt. 12 lbs.

*Only* \$29.50



\$34.50

## Heathkit SINE & SQUARE WAVE AUDIO GENERATOR KIT

### FEATURES

- \*Less than 1% distortion.
- \*Sine or square waves at flip of switch.
- \*Locked-in calibration, no adjusting or recalibrating.
- \*Covers 20 to 20,000 cycles.
- \*Uses stable RC bridge type circuit--no drift.
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