

Be Sure to
See the NEW
AUDIO GENERATOR

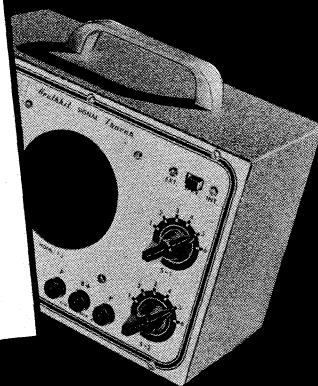


HEATH February FLYER

DELIVERIES

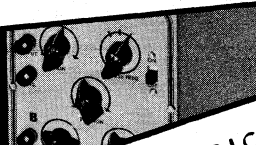
Critical shortages of electronic parts have developed during the past few months.

Our suppliers are, in most cases, refusing to give us definite delivery dates thereby making it nearly impossible for us to plan deliveries intelligently. In ordering, please indicate your willingness to accept a delay in filling the order in case we should find it absolutely impossible to ship immediately. All orders are shipped in the exact order received, and if delivery cannot be made at once, you will be advised. At this writing (January 22), we have every reason to believe that we will continue delivering kits indefinitely except in case of war. Speakers, which use cobalt in the magnets are an exception. Cobalt has been almost completely cut off for civilian use. We suggest you attempt to obtain speaker requirements from your local supply house who receives an allotment.



PRICES

Heathkit prices have never been raised. In many cases, substantial reductions have been made (Electronic Switch from \$34.50 to \$19.50). However, due to extreme increases in our material costs we must advise that all prices shown are subject to change without notice.

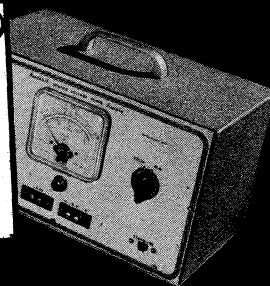


FLYERS

Normally our engineering department prepares a flyer each month, but this policy has been temporarily discontinued due to urgent engineering work.

TESTIMONIAL LETTERS

Hundreds of you have written letters of praise for Heathkits. A folder consisting of the best of these is under consideration. In writing, please give permission to publish your letter, and we will appreciate receiving interesting letters.



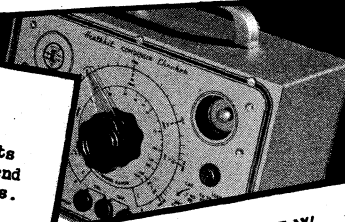
FLYER ARTICLES

Interesting applications or improvements for Heathkits are constantly being discovered. If you have one, send it in, and we will pass it on to other Heathkit owners. Send it to the attention of the flyer editor.

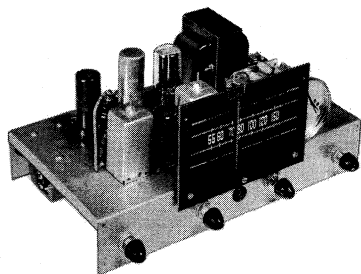


SUGGESTIONS FOR NEW HEATHKITS

Our engineering department welcomes suggestions for new Heathkit instruments. Naturally the instrument must have wide application as our policy is to make test equipment so reasonably that everyone can have necessary equipment - to do this, we must procure in quite large quantities. If you have an instrument in mind, write and tell us of it and its possible uses and applications - thanks.

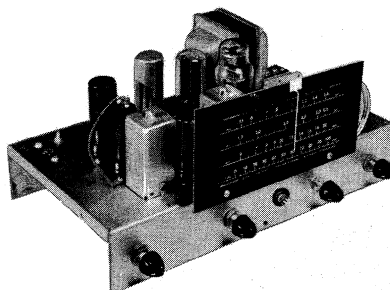


H QUALITY *Heathkit* SUPERHETERODYNE Receiver Kits



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
from 550 Kc. to over
20 Mc.
Shipping Wt. 10 lbs.

\$23.50

These two receivers give you three important advantages - EXCELLENT RECEPTION - EASY CONSTRUCTION - AND, LOW COST.

Both are power transformer operated and thus the line cord is isolated from the chassis thereby eliminating the hazard of chassis shocks. The transformer itself is of truly high quality, rugged, and metal cased.

The AR-1 "All-Wave Receiver" covers three bands - broadcast, police, and short wave - coverage is from 550 Kc to 20 Mc. Tube lineup is as follows: 1626 (or 12J5) oscillator, 12SH7 mixer, 12SH7 IF amplifier, 12C8 second detector and audio amplifier, 12A6 audio output, and a 5Y3 rectifier.

The BR-1 "Broadcast Receiver" covers the broadcast band (550-1600 Kc). It utilizes a 12K8 mixer oscillator and the same IF amplifier, detector and amplifier, audio output, and rectifier stages as does the AR-1.

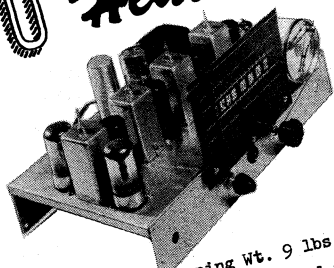
Both receivers have full AVC action fed to two stages, and inverse feedback to the audio output stage for improved frequency response. Tuning is easy with the dial drum tuning assembly and the 6 inch calibrated slide rule dial provides easy reading.

The receivers have two IF transformers, output transformer, complete provisions for phono operation (including phono motor outlet), completely punched and formed chassis, all tubes, and all parts (less cabinet and speaker). The instruction manual makes construction procedure simple and clear.

Get your receiver kit today and enjoy the thrill of building your own - plus, making a big saving over ready built receivers.

No. 320 5" Speaker, Shipping Wt. 2 lbs.....\$2.75

Heathkit F.M. TUNER KIT
\$22.50



Model FM-2 Shipping Wt. 9 lbs.
6X5 rectifier - and t
AC-DC receiver

\$22.00

Do you have an AM receiver or an amplifier and wish that you could enjoy FM reception? You can!!! The Heathkit FM tuner will provide the answer.

Utilizes eight tubes: A7E5/120A5, 6X4, 6X5, 6X6, 6X7, 6X8, 6X9, 6X10, 6X11, 6X12, 6X13, 6X14, 6X15, 6X16, 6X17, 6X18, 6X19, 6X20, 6X21, 6X22, 6X23, 6X24, 6X25, 6X26, 6X27, 6X28, 6X29, 6X30, 6X31, 6X32, 6X33, 6X34, 6X35, 6X36, 6X37, 6X38, 6X39, 6X40, 6X41, 6X42, 6X43, 6X44, 6X45, 6X46, 6X47, 6X48, 6X49, 6X50, 6X51, 6X52, 6X53, 6X54, 6X55, 6X56, 6X57, 6X58, 6X59, 6X60, 6X61, 6X62, 6X63, 6X64, 6X65, 6X66, 6X67, 6X68, 6X69, 6X70, 6X71, 6X72, 6X73, 6X74, 6X75, 6X76, 6X77, 6X78, 6X79, 6X80, 6X81, 6X82, 6X83, 6X84, 6X85, 6X86, 6X87, 6X88, 6X89, 6X90, 6X91, 6X92, 6X93, 6X94, 6X95, 6X96, 6X97, 6X98, 6X99, 6X100, 6X101, 6X102, 6X103, 6X104, 6X105, 6X106, 6X107, 6X108, 6X109, 6X110, 6X111, 6X112, 6X113, 6X114, 6X115, 6X116, 6X117, 6X118, 6X119, 6X120, 6X121, 6X122, 6X123, 6X124, 6X125, 6X126, 6X127, 6X128, 6X129, 6X130, 6X131, 6X132, 6X133, 6X134, 6X135, 6X136, 6X137, 6X138, 6X139, 6X140, 6X141, 6X142, 6X143, 6X144, 6X145, 6X146, 6X147, 6X148, 6X149, 6X150, 6X151, 6X152, 6X153, 6X154, 6X155, 6X156, 6X157, 6X158, 6X159, 6X160, 6X161, 6X162, 6X163, 6X164, 6X165, 6X166, 6X167, 6X168, 6X169, 6X170, 6X171, 6X172, 6X173, 6X174, 6X175, 6X176, 6X177, 6X178, 6X179, 6X180, 6X181, 6X182, 6X183, 6X184, 6X185, 6X186, 6X187, 6X188, 6X189, 6X190, 6X191, 6X192, 6X193, 6X194, 6X195, 6X196, 6X197, 6X198, 6X199, 6X200, 6X201, 6X202, 6X203, 6X204, 6X205, 6X206, 6X207, 6X208, 6X209, 6X210, 6X211, 6X212, 6X213, 6X214, 6X215, 6X216, 6X217, 6X218, 6X219, 6X220, 6X221, 6X222, 6X223, 6X224, 6X225, 6X226, 6X227, 6X228, 6X229, 6X230, 6X231, 6X232, 6X233, 6X234, 6X235, 6X236, 6X237, 6X238, 6X239, 6X240, 6X241, 6X242, 6X243, 6X244, 6X245, 6X246, 6X247, 6X248, 6X249, 6X250, 6X251, 6X252, 6X253, 6X254, 6X255, 6X256, 6X257, 6X258, 6X259, 6X260, 6X261, 6X262, 6X263, 6X264, 6X265, 6X266, 6X267, 6X268, 6X269, 6X270, 6X271, 6X272, 6X273, 6X274, 6X275, 6X276, 6X277, 6X278, 6X279, 6X280, 6X281, 6X282, 6X283, 6X284, 6X285, 6X286, 6X287, 6X288, 6X289, 6X290, 6X291, 6X292, 6X293, 6X294, 6X295, 6X296, 6X297, 6X298, 6X299, 6X300, 6X301, 6X302, 6X303, 6X304, 6X305, 6X306, 6X307, 6X308, 6X309, 6X310, 6X311, 6X312, 6X313, 6X314, 6X315, 6X316, 6X317, 6X318, 6X319, 6X320, 6X321, 6X322, 6X323, 6X324, 6X325, 6X326, 6X327, 6X328, 6X329, 6X330, 6X331, 6X332, 6X333, 6X334, 6X335, 6X336, 6X337, 6X338, 6X339, 6X340, 6X341, 6X342, 6X343, 6X344, 6X345, 6X346, 6X347, 6X348, 6X349, 6X350, 6X351, 6X352, 6X353, 6X354, 6X355, 6X356, 6X357, 6X358, 6X359, 6X360, 6X361, 6X362, 6X363, 6X364, 6X365, 6X366, 6X367, 6X368, 6X369, 6X370, 6X371, 6X372, 6X373, 6X374, 6X375, 6X376, 6X377, 6X378, 6X379, 6X380, 6X381, 6X382, 6X383, 6X384, 6X385, 6X386, 6X387, 6X388, 6X389, 6X390, 6X391, 6X392, 6X393, 6X394, 6X395, 6X396, 6X397, 6X398, 6X399, 6X400, 6X401, 6X402, 6X403, 6X404, 6X405, 6X406, 6X407, 6X408, 6X409, 6X410, 6X411, 6X412, 6X413, 6X414, 6X415, 6X416, 6X417, 6X418, 6X419, 6X420, 6X421, 6X422, 6X423, 6X424, 6X425, 6X426, 6X427, 6X428, 6X429, 6X430, 6X431, 6X432, 6X433, 6X434, 6X435, 6X436, 6X437, 6X438, 6X439, 6X440, 6X441, 6X442, 6X443, 6X444, 6X445, 6X446, 6X447, 6X448, 6X449, 6X450, 6X451, 6X452, 6X453, 6X454, 6X455, 6X456, 6X457, 6X458, 6X459, 6X460, 6X461, 6X462, 6X463, 6X464, 6X465, 6X466, 6X467, 6X468, 6X469, 6X470, 6X471, 6X472, 6X473, 6X474, 6X475, 6X476, 6X477, 6X478, 6X479, 6X480, 6X481, 6X482, 6X483, 6X484, 6X485, 6X486, 6X487, 6X488, 6X489, 6X490, 6X491, 6X492, 6X493, 6X494, 6X495, 6X496, 6X497, 6X498, 6X499, 6X500, 6X501, 6X502, 6X503, 6X504, 6X505, 6X506, 6X507, 6X508, 6X509, 6X510, 6X511, 6X512, 6X513, 6X514, 6X515, 6X516, 6X517, 6X518, 6X519, 6X520, 6X521, 6X522, 6X523, 6X524, 6X525, 6X526, 6X527, 6X528, 6X529, 6X530, 6X531, 6X532, 6X533, 6X534, 6X535, 6X536, 6X537, 6X538, 6X539, 6X540, 6X541, 6X542, 6X543, 6X544, 6X545, 6X546, 6X547, 6X548, 6X549, 6X550, 6X551, 6X552, 6X553, 6X554, 6X555, 6X556, 6X557, 6X558, 6X559, 6X560, 6X561, 6X562, 6X563, 6X564, 6X565, 6X566, 6X567, 6X568, 6X569, 6X570, 6X571, 6X572, 6X573, 6X574, 6X575, 6X576, 6X577, 6X578, 6X579, 6X580, 6X581, 6X582, 6X583, 6X584, 6X585, 6X586, 6X587, 6X588, 6X589, 6X590, 6X591, 6X592, 6X593,

The FM tuner utilizes eight tubes: A 7E5/1201 oscillator, a 6GS7 mixer, two 6SW7 IF amplifiers, a 6GS7 limiter, two 7C4/1203A discriminator units and a 6X4/1203A detector. The detector unit is transformer operated thereby making Three 11 other quality IF transformers.

Model FM-2 Shipping Wt. 9 lbs. A complete kit for making connections is included with the entire unit is furnished as well as all other parts and accessories required for operation. Three 6X5 rectifier tubes, 6AR5 pentode, and 6AV6 discriminator transformer are furnished with the kit for making connections. It is safe to use with AC-DC receivers and amplifiers. A 110V socket right on the tuner and a discriminator transformer are furnished as well as all other parts and accessories required for operation. The unit complete.

Jack, and a length of shielded cable come with the kit for making connections. The audio equipment, and a 110V socket right on the tuner and a discriminator transformer are furnished as well as all other parts and accessories required for operation. The unit complete.

and the power to the associated equipment. and for added convenience the tuner will tell you exactly how to build

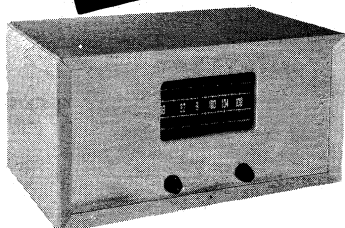
The parts layout on the chassis makes wiring easy, and for added convenience the tuning assembly comes ready wired -- the construction manual tells you exactly how to build the kit. A terrific buy at only \$22.50.

[illegible]

The parts layout on the chassis assembly comes ready wired -- the construction of the kit. A terrific buy at only \$22.50.

Heathkit

RECEIVER & TUNER CABINETS



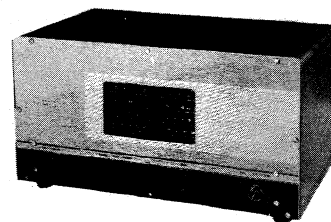
\$49.5

A completely assembled and finished blonde birch cabinet with all control holes drilled. Has plastic cover for dial face. Specify No. 350 for an FM Tuner. Shipping Wt. 5 lbs.

Specify No. 345 for the Heathkit Receiver. Shipping Wt. 5 lbs.

Modern communications type, table model metal cabinet for Heathkit receivers only. Has mounting for 5" speaker. Painted deep blue to match receiver panel included with receiver. Size 8" deep, 14" long, 7" high. (Panel or speaker not included with cabinet).

Specify No. 335 Shipping Wt. 6 lbs.



\$450

THE NEW MODEL O-6 . . PUSH - PULL HEATHKIT Oscilloscope Kit

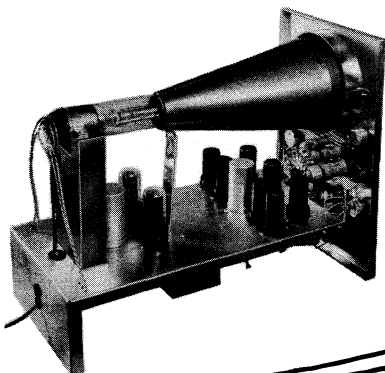


You will find this is a truly wonderful scope - for it has:

- A total of 10 tubes, including 5" CR tube
- Push-pull deflection to both horizontal and vertical deflection plates
- Synchronization which locks in on either positive or negative peaks of the input signal
- DC amplifier arrangement
- Step-attenuated frequency-compensated vertical input
- Z axis modulation
- Allegheny Ludlum CR tube shield
- Multivibrator sweep generator with coverage from 15 cps to over 100,000 cps
- Tremendous sensitivity of .04V RMS per inch horizontal, .09V RMS per inch vertical
- New specially designed power transformer with greatly reduced magnetic field, and electrostatic shield with external ground connection
- Non frequency discriminating input control

This is truly an unbeatable value - you get the complete scope, all tubes, tube shield calibrated grid screen, cabinet, punched and formed chassis and all other parts for only \$39.50.

The really complete construction manual has step-by-step assembly instructions, pictorial, a schematic diagram, parts identification photo, numerous sketches, and includes an explanation of the basic principles of operation, operation of the oscilloscope, testing the oscilloscope, circuit description, and oscilloscope applications.



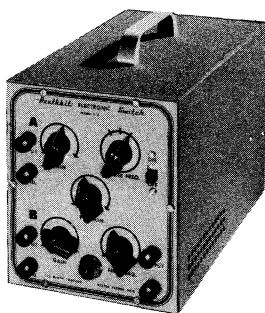
Compare it with all others, and you'll see that this fine scope at this terrifically low price just can't be beat.
Model O-6 Shipping Wt. 24 lbs.

\$39.50

NEW INEXPENSIVE . . MODEL S-2 ELECTRONIC SWITCH KIT

This new model Electronic Switch has really received generous praise since we first introduced it several months ago.

With it, two separate signal sources can be studied at the same time. One source goes to A input, one to B input, and the output shows the two signals on the scope as separate traces - these traces can be separated or superimposed as the operator desires (position control). The switching frequency covers from less than 10 cps to 2000 cps in three ranges (coarse frequency control), and is continuously variable (fine frequency control). Signals of different voltage levels can be brought to convenient size for comparison (by means of the individual channel A and channel B gain controls).



\$19.50

Actually SEE distortion - what takes place between the input and output of an amplifier - phase shift, clipping, etc. Use the instrument as a square wave generator over limited range.

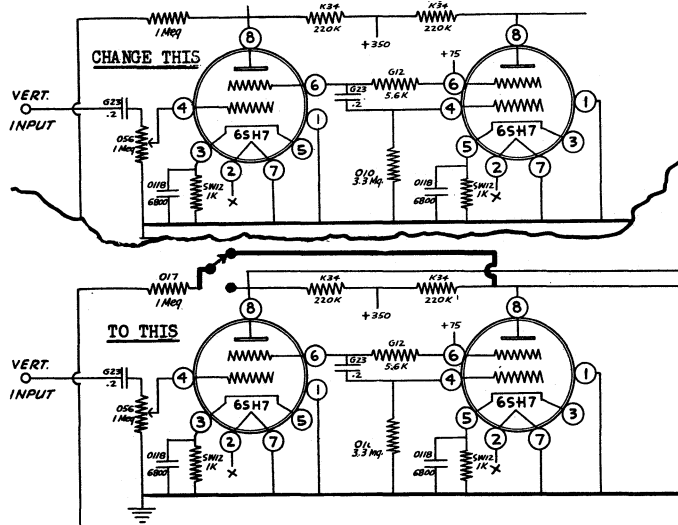
Get maximum and added use from your scope - get the new inexpensive electronic switch kit today!!!

Model S-2 Shipping Weight 11 lbs.

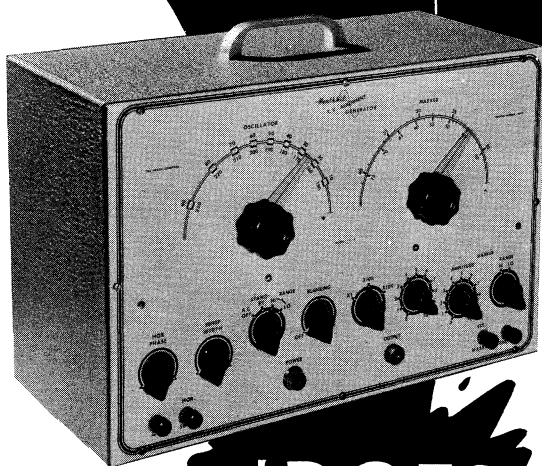
SYNCHRONIZING EITHER POSITIVE OR NEGATIVE PULSES ON YOUR O-5 SCOPE

A simple modification of the O-5 scope will permit synchronization on positive or negative pulses of the input signal. As the diagram below shows, all that is necessary is to open the connection between pin 8 of the vertical amplifier and the 1 megohm resistor. Next connect the 1 megohm resistor to the center lug of a SPDT switch. Then, connect one outside lug of the switch to pin 8 of one vertical amplifier and the other outside lug to pin 8 of the other vertical amplifier.

The switch can be mounted on the front panel and labeled with a+ and - The modification will affect the operation only on internal synchronization. On external synchronization, there will be no change.



NEW *Heathkit* T.V. ALIGNMENT Generator Kit



Your TV service work will require the proper equipment - and here is an excellent TV Alignment Generator designed to do the job quickly, easily, and properly. The Model TS-2 when used in conjunction with an oscilloscope provides a means of properly aligning every stage of a television receiver. The instrument provides a frequency modulated signal covering, in two bands, the range of 10 to 90 Mc. and 150 to 230 Mc. - thus, ALL ALLOCATED TV CHANNELS AS WELL AS IF FREQUENCIES ARE COVERED.

An absorption type frequency marker covers from 20 to 75 Mc. in two ranges - therefore, you have a simple, convenient means of frequency checking of IF's, independent of oscillator calibration.

Sweep width is controlled from the front panel and covers a sweep deviation of 0-12 Mc. - all the sweep you could want.

And still other excellent features are: Horizontal sweep voltage available at the front panel, and controlled with a phasing control - both step and continuously variable attenuation for setting the output signal to the desired level - a convenient instrument stand-by position - vernier drive of both oscillator and marker tuning condensers - and blanking for establishing a single trace with base reference level. Make your work easier, save time, and repair with confidence - order your Heathkit TV Alignment Generator now!!!!

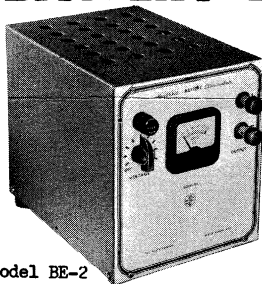
Model TS-2

Shipping Wt. 20 lbs.

\$39.50

Heathkit

BATTERY ELIMINATOR KIT



Model BE-2

Shipping Wt. 19 lbs.

\$22.50

Don't struggle along by keeping a 6V storage battery on your work bench for making those car-radio repairs!! A Heathkit Battery Eliminator will relieve you of all such grief.

The unit will supply 10 amps. at 6V, and brief overloads up to 15 amps. will not damage the components. Besides acting as a 6V supply, it can also be used as a battery charger.

A tapped primary in the power transformer provides a means of adjusting output in convenient steps from 5 to 7½V when under load and the voltage output is METERED. Comes complete with extra-heavy duty selenium rectifier, 4000 MFD electrolytic condenser, power transformer, good filter choke, construction manual, etc.

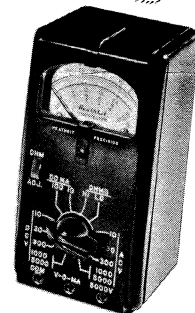
Heathkit Handitester Kit

Note the compactness of this fine little instrument -- And it has all the useful ranges too! Will read DC volts, AC volts, ohms, and milliamperes. Look over the specifications and you'll see that this is just the handitester you have been looking for. Contains the finest quality parts - has a two color meter scale for easy reading - an excellent 400 microamp meter - convenient thumb type ohms adjust control - ½% precision divider resistors - and the black streamline bakelite case really dresses up the instrument.

Range DC Volts
Range AC Volts
Range Ohmmeter

Full scale 10-30-300-1000-5000V
Full scale 10-30-300-1000-5000V
0-3000 Ohms, 30 Ohms Center
0-300,000 Ohms, 3000 Ohm Center
0-10 Ma 0-100 Ma
400 Microampere 3"

Range Milliamperes
Meter Movement



Model M-1 Shipping Wt. 3 lbs.

\$13.50

Heathkit

TUBE CHECKER KIT

The Tube Checker is a MUST for radio repair men. Often customers want to SEE tubes checked, and a checker like this builds customer confidence. In your repairing, you will have a multitude of tubes to check - quickly. The Heathkit tube checker will serve all these functions - it's good looking (with a polished birch cabinet and an attractive two color panel) - checks 4, 5, 6, 7 prong Octals, Loctals, 7 prong miniatures, 9 prong miniatures, pilot lights, and the Hytron 5 prong types. AND IT'S FAST TO OPERATE - the gear driven, free-running roll chart lists hundreds of tubes, and the smooth acting, simplified switching arrangement gives really rapid set-ups.

The testing arrangement is designed so that you will be able to test new tubes of the future - without even waiting for factory data - protection against obsolescence.

You can give tubes a thorough testing - checks for opens, shorts, each element individually, emission, and for filament continuity. A large BAD?-GOOD meter scale is in three colors for easy reading and also has a "line-set" mark. CHECK YOUR TUBES DYNAMICALLY !!! You'll find this tube checker kit a good investment - and it's only \$29.50.



Model TC-1

Shipping Wt. 12 lbs.

\$29.50

ANNOUNCING THE NEW *Heathkit* SINE & SQUARE WAVE Audio Generator Kit

HERE IT IS! The newest Heathkit!!!! The NEW MODEL SINE AND SQUARE WAVE AUDIO GENERATOR KIT.

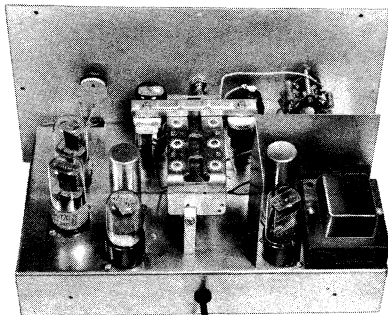
Designed for maximum versatility - dependable output waveshape - convenient operation - and minimum distortion - this new kit is really a blessing to audio experimenters who want a good audio generator at low cost.

Either sine or square wave output is easily selected by the convenient switch on the front panel, and frequency selection is extremely simple because of the three position range switch and the plainly calibrated frequency scale.

And it has a Hi-Lo impedance switch - on Hi to connect to a high impedance load, and on Lo to work into a low impedance transformer primary of negligible DC resistance. An output control sets the output to the desired level -- and a shielded power supply keeps hum pickup at a minimum.

Quality is maintained throughout - uses $\frac{1}{2}$ resistors in the frequency determining circuit, 4 gang condenser, metal cased filter condensers, 6 tubes, and has a sturdy metal cabinet with crackle finish and modern styled panel.

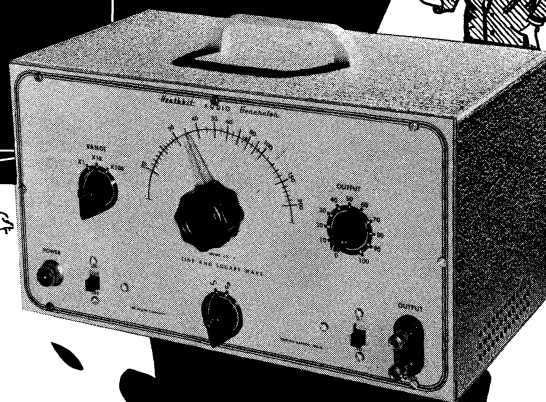
If you do any audio work at all, you'll want this fine NEW MODEL Audio Generator.



Model AG-7 Shipping Wt. 15 lbs.

SPECIFICATIONS

Output Frequency:	20-20,000 cycles
Square Wave Range:	60 cycles (5% tilt) to 6000 cycles (5% round-off)
Generator Impedance:	Hi: 15,000 ohms Lo: 700 ohms
Power Requirements:	105-125 50/60 cycle 30 watts
Dimensions:	7 $\frac{1}{2}$ " high x 13 $\frac{1}{4}$ " wide x 7 $\frac{1}{2}$ " deep



\$34.50



\$19.50

Model SG-6 Shipping Weight 7 lbs.

NEW 1951 *Heathkit* Signal Generator Kit

Just the ticket for RF work - Provides either unmodulated or 400 cycle sine wave modulated RF output - has coverage from 160 Kc to 50 Mc on fundamentals and up to 150 Mc on useful calibrated harmonics - and, is a source of 400 cycle sine wave output for audio testing.

The pre-calibrated and adjusted coils, tuning condenser, selector switch, and trimmer all mount on a special sub-chassis to greatly facilitate wiring and prevent damage to components---another Heathkit feature to add to the enjoyment in construction!!!

The instrument was designed with usefulness and versatility in mind. It has: cathode coupled output for stable output voltage with variation in load, vernier tuning of 6 to 1 ratio for easy frequency selection, both step attenuated and continuously variable RF output, miniature HF tubes for ease in handling high frequencies, provisions for external modulation, and a control to serve the two functions of adjusting the level of input when externally modulating, or to set the level of AF output when audio testing.

All parts are furnished, 2 tubes, punched and formed chassis, calibrated panel, test lead, complete construction manual, etc.

Get in on the fun of building your own, save money, and have an excellent signal generator that you can depend on.

Heathkit Impedance Bridge Kit

As indicated in the specifications, the Heathkit Impedance Bridge Kit is designed for accurately measuring resistance, capacitance, inductance, dissipation factor (D), and storage factor (Q). Setting the controls for the various measurements automatically sets up the proper bridge circuits for making the measurements. Either Maxwell, Hay, Wheatstone, or capacitance comparison bridge circuits are employed, and the 1000 cycle hummer with the furnished battery make the instrument self-powered and no external generator is required. The kit has provisions for connecting to an external generator if desired. Comes complete with truly high quality components - General Radio 1000 cycle hummer, 200 ua zero-center galvanometer, General Radio main control, $\frac{1}{2}$ of 1% precision resistors, laboratory type binding posts, etc. Has a completely calibrated panel, and comes in a beautiful birch cabinet. (Headphones not included)

RANGES

Resistance:..... 10 milliohms to 10 megohms
Capacitance:..... 10 micromicrofarads to 100 microfarads
Inductance:..... 10 microhenries to 100 henries
Dissipation Factor:..... .002 to 1
Storage Factor:..... 1 to 1,000

Accuracy: $\frac{1}{2}$ of 1% decade resistors are used, but the accuracy is limited to a greater extent by the interpretation of the scales and workmanship of assembly. The following is considered normal:

Resistance - 3%
Capacitance - 3%

Dissipation Factor - 20%
Storage Factor - 20%

The accuracy will fall off at the extreme outer limits.

WE HIGHLY
RECOMMEND
THIS BRIDGE
to those in
ELECTRICAL
MEASUREMENTS
WORK...!!

Model IB-1B

Shipping Weight 15 lbs.

\$69.50

HEATHKIT RESISTANCE DECADE KIT

Model RD-1
Shipping Wt.
4 lbs.

\$19.50

Another excellent laboratory instrument is this Resistance Decade Kit. To maintain maximum accuracy, $\frac{1}{2}$ precision ceramic-body type resistors as well as special type switches are used. The ceramic switches have a positive detent action for conveniently setting up the resistance desired without continuously watching the dials. Note the tremendous range - 1 ohm to 99,999 ohms - in one ohm steps. The polished birch cabinet and beautiful panel are styled to match the Impedance Bridge Kit. For those MANY USES requiring a resistance decade, you will certainly want one, or several of these kits.

CURRENT MAXIMUM
Units 500 MA
Tens 150 MA
Hundreds 50 MA
Thousands 15 MA
Ten Thousands 5 MA

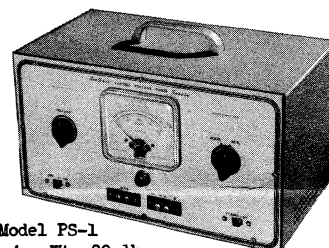
Heathkit LABORATORY POWER SUPPLY KIT

To fill the need for a good inexpensive source of voltage for electronic setups of all kinds, (experimental hookups, running characteristics curves, etc.) the Heathkit Laboratory Power Supply Kit has been developed.

The unit is power transformer operated and incorporates a 5Y3 rectifier and two 1619 control tubes. All components come with the kit including a meter with direct reading scales covering from 0-500 V DC and 0-200 Ma DC.

A convenient V-Ma switch provides selection of metering desired. Voltage output is adjusted by means of a voltage control on the front panel.

Every lab needs a power supply, and at this low price - can have one.



Model PS-1
Shipping Wt. 20 lbs.

\$29.50

Limits of operation are as follows:

No Load	Variable 150 to 400 V DC
25 Ma.	Variable 30 to 310 V DC
50 Ma.	Variable 25 to 250 V DC
Higher Loads	Voltage drops proportionately

Heathkit HIGH FIDELITY 20 WATT AMPLIFIER KIT

This Heathkit 20 Watt amplifier has really a fine tube complement - uses a 6SJ7 voltage amplifier, 6J5 phase splitter, two 616 power output tubes working in push-pull, and a 5Y3 in a full wave rectifier circuit. Both excellent circuit design and high quality components make this amplifier a real pleasure to listen to - you get good faithful reproduction, and frequency response is ± 3 db from 20-20,000 cycles - The amplifier has two tone controls, a bass tone control of the bass-boost type working on the inverse feedback principle, and a treble tone control of the high-cut type to reduce record scratch on worn records. Also has volume control.

The amplifier has a husky power transformer and an output transformer with taps of 4-8-16-60-500 ohms for best matching to various speakers.

You'll be amazed at the excellent fidelity of this amplifier - get yours today!!!!

Model A-5A. Same as above except that a preamplifier and compensation stage has been added - consists of a 6SC7 and associated components for use with magnetic pickup. Shipping Wt. 15 lbs.

\$23.50

12" 20 Watt Speaker, No. 326 Shipping Wt. 7 lbs...\$7.50

Heathkit ECONOMY 6 WATT AMPLIFIER KIT

A-4 Shipping Wt. 8 lbs.

\$12.50
No 304
12" Inch
Speaker \$6.95

A good amplifier at low cost - That's the Heathkit Amplifier Model A-4. With a 6 tube line-up, this amplifier has features usually found in only far more expensive amplifiers. Tube complement consists of a 1626 (or 12J5) first audio amplifier, a 1626 (or 12J5) second audio 12A6's in push-pull output, and a 5Y3 in a full wave rectifier circuit. It's power transformer operated (an excellent transformer in steel case) and comes complete with all parts including output transformer, volume control, tone control, completely punched chassis, construction manual, etc. A good buy at only \$12.50.

Heathkit MODEL V-4A Vacuum Tube Voltmeter Kit

Without doubt, this is the best VTVM in its price range on the market today -- Many instruments costing over three times as much can't compare with it!!! It's accurate - it has all the useful ranges - it's a good looking instrument - it's durable - and it is strictly high quality throughout.

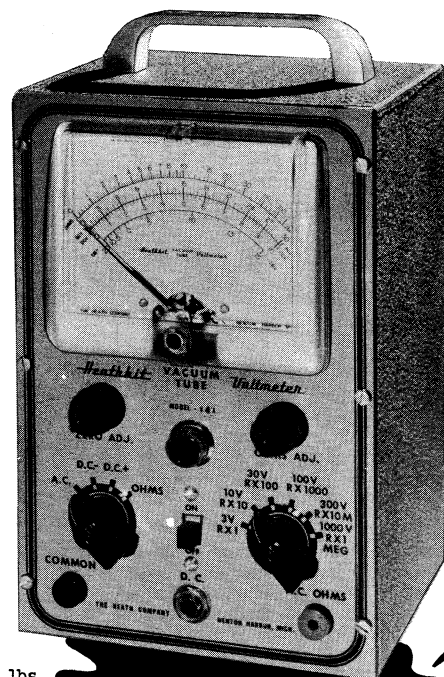
OVER THIRTY THOUSAND VTVM sales are PROOF OF THE POPULARITY of this instrument and have made it possible for us to offer it at the extremely low price of only \$23.50.

Note the tremendous range of readings you can make with this instrument - You can measure from $\frac{1}{2}$ V to 1000V on either AC or DC - has six different voltage ranges 0-3-10-30-100-300-1000V for more accurate and easier readings. And, you can measure from .1 to over 1 billion ohms in the six convenient ranges of RX1-X10-X100-X1000-X10M-X10Meg.

We point with pride to the meter itself - movement manufactured by Simpson - 200 Micro-ampere sensitivity - DB, AC volts, DC volts, and Ohms scale markings - plastic shatter-proof face - two color scale - streamline appearance - largest scale available on $\frac{1}{2}$ " meter - and the circuit it's in makes it burn-out proof!

Uses $\frac{1}{2}$ voltage divider resistors for greater accuracy, and specially simplified switches make wiring easy.

Everything is included - test leads, cabinet, meter, tubes, chassis, and all. A fine construction manual makes assembly fun and really easy - has step-by-step wiring instructions, pictorials, photoprint, circuit description, schematic, numerous sketches, etc.



Model V-4A Shipping Wt. 7 lbs.

FEATURES

- * Completely transformer operated, isolated from line for safety
- * Largest scale available on streamline $\frac{1}{2}$ inch meter
- * Burn-out proof meter circuit
- * Isolated probe for dynamic testing and negligible circuit loading
- * New simplified switches for easy assembly
- * Higher AC input impedance (greater than 1 megohm at 1000 cycles)
- * New AC voltmeter flat within ± 1 db from 20 cycles to 2 megacycles (600 ohm source)
- * New accessory probe (extra) extends DC range to 30,000 volts
- * New high quality Simpson 200 microampere meter
- * New $\frac{1}{2}$ voltage divider resistors (finest available)
- * 24 Complete ranges
- * Low voltage range 3 Volts full scale ($\frac{1}{3}$ of scale per volt)
- * Crystal probe (extra) extends RF range to 250 megacycles
- * Modern push-pull electronic voltmeter on both AC and DC

\$23.50

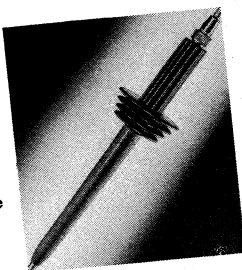
New 30,000 VOLT DC PROBE KIT

A new 30,000 V DC probe kit to handle high voltages with safety. Just the thing for TV service work and all other high voltage applications. Really a sleek looking probe - Two color molded plastic - red body and guard, and jet black handle. Comes with connector and cable as well as PL55 plug.

Designed to plug into Heathkit VTVM so that the 300V scale is conveniently multiplied by 100. Can be used with any standard 11 Megohm VTVM.

Specify No. 336
High Voltage Probe Kit
Shipping Wt. 2 lbs.

\$5.50

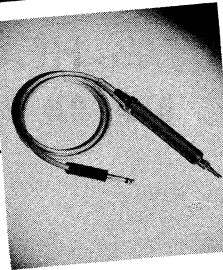


Heathkit RF PROBE KIT

The RF Probe Kit comes complete with probe housing, 1N34 crystal diode detector, connector, lead and plug and all other parts, plus clear assembly instructions. Extends range of Heathkit VTVM to 250 Mc. $\pm 10\%$. Works on any 11 megohm input VTVM.

Specify No. 309
RF Probe Kit.
Shipping Weight 1 lb.

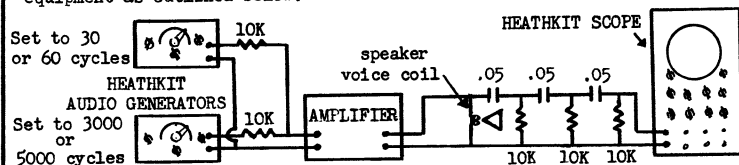
\$5.50



USE YOUR HEATHKIT SCOPE AND AUDIO

GENERATOR FOR INTERMODULATION TESTING

Intermodulation testing of amplifiers is today an important influence in the improvements being made in the reproduction of sound. To describe intermodulation briefly, one should consider the similarity to grid modulation in a radio transmitter. There, a low frequency (modulating frequency) and a high frequency (carrier) signal are applied to the grid of a tube. The output contains the high frequency carrier and the sidebands carrier frequency plus and minus the modulating frequency. The modulating signal is effectively shorted from the plate circuit to ground, and the side bands appear in the output because of NON-LINEAR operation of the circuit. In amplifiers, non-linear operation gives rise to similar effects, and such intermodulation distortion gives very unpleasant qualities to the sound because the frequencies resulting from such distortion are not harmonically related (are not multiples of) the original frequencies. Completely satisfactory tests for this can be conducted with Heathkit equipment as outlined below.



The output of the amplifier is connected to a filter which effectively blocks the passage of the low frequency component. The high frequency signal is observed on the scope screen, and any low frequency modulation is readily noticed if present.

Procedure: Adjust the output of the two audio generators to provide four volts low frequency output and one volt high frequency (can be varied, but maintain 4 to one ratio). If only 60 cycle low frequency is desired, one generator can be eliminated and the filament winding of a power transformer used. Adjust the input control of the amplifier to give a symmetrical pattern on scope (excessive input will distort scope pattern and will not represent the normal operation of the amplifier). The scope sweep generator should be set to a low sweeping rate to obtain a pattern similar to the one shown.

Measure the maximum and minimum heights of the pattern on the grid screen of the scope.



Use the following formula to determine the percentage of intermodulation

$$\frac{\text{Maximum} - \text{minimum}}{\text{Maximum} + \text{minimum}} \times 100 = \text{Intermodulation percentage}$$

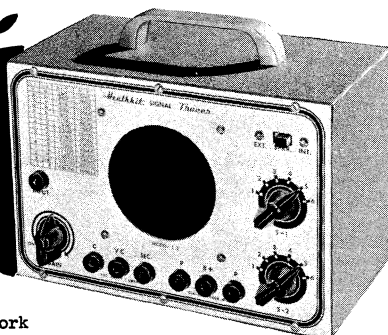
Example

Maximum height	10 Units
Minimum height	9 Units
$\frac{10 - 9}{10 + 9} = \frac{1}{19} \times 100 = 5.26\%$	

Heathkit Signal Tracer

& UNIVERSAL TEST SPEAKER KIT

\$1950



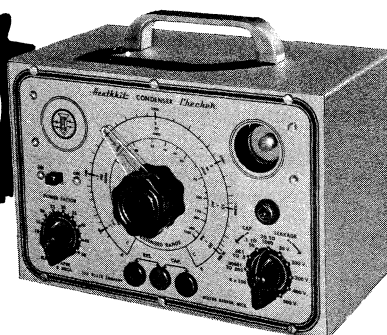
Speed up, and make repair work easier - that's what the Signal Tracer will do for you. The instrument will check receivers stage by stage all the way from the antenna clear through the speaker. It even checks units which don't have a speaker, as the tracer itself has a test speaker which will function from either single ended or push-pull stages. Moreover, THIRTY different impedance ratios for proper speaker matching are employed by means of a simplified switching arrangement adjustable right on the front panel. The test speaker can be used as a part of the tracer circuit while making checks, or it can be used as an external test speaker for amplifiers. Included in the kit is the test probe, crystal diode, three tubes (6X5, 6BE7, and 6K6), power transformer, speaker, manual and all parts to make the unit complete.

Simplify your repair work with a HEATHKIT SIGNAL TRACER!!!!!!

Model T-2 Shipping Wt. 7 lbs.

Heathkit Condenser Checker Kit

\$1950



Actually KNOW what value condensers are, and if they are leaky or not. It's easy, use a Heathkit Condenser Checker.

Model C-2 Shipping Wt. 6 lbs.

You'll like the way this instrument operates - the condenser range covered of .00001 MFD to 1000 MFD is DIRECT READING and the MAGIC EYE indicator gives fast and dependable results. You can read resistance from 100 ohms to 5 megohms - measure power factor of electrolytics between 0% and 50%. It has a leakage test for condensers with voltage ratings from 20 to 500 volts, and checks paper-mica-ceramic and electrolytic condensers!!!! Everything to make the kit complete is included - tubes, power transformer, switches, controls, detailed construction manual, etc.

Eliminate condenser guesswork - At this low price you won't want to be without this excellent piece of test equipment.

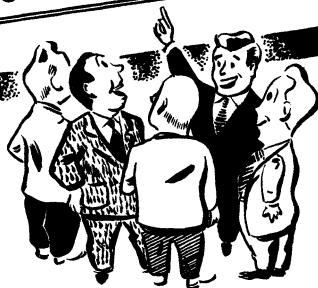
The HEATH COMPANY
BENTON HARBOR, MICHIGAN

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See the new Model AUDIO GENERATOR KIT
Article on INTERMODULATION TESTING
TIPS TO KIT OWNERS



RETURN POSTAGE GUARANTEED