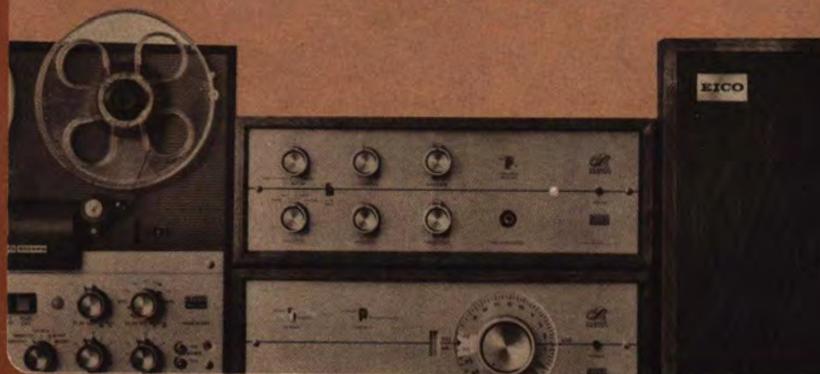


STEREO/HI FIDELITY AMPLIFIERS, TUNERS,
RECEIVERS, TAPE RECORDERS & SPEAKERS

Wise Radio & T. V. Supply, Inc.
— Wholesale Distributors —
1001 Towson Avenue—SUNset 3-8926
Fort Smith, Arkansas



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EICO *kits and factory wired*

TEST, AMATEUR, EDUCATIONAL, CITIZENS
BAND EQUIPMENT



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How will you have your high fidelity?

Factory wired...

With Eico you can be sure you're getting the best sound for your money. It's in the way we make design decisions. For example: Choosing between redundant controls that may look more impressive, and an additional tube stage for better performance that you cannot see, we will invariably choose the additional tube stage.

There it is. And that's the way it's been since we put our first hi-fi component on the market. In the very beginning, in fact, Eico components earned their excellent reputation on performance — rather than their appearance which was plain and simple.

Well, we've moved beyond that point. Today we want our components to *look* good, too—but never at the expense of the sound. This is well illustrated by our beautiful new Classic Series with its quietly elegant pale-gold-and-silver panels. We're pleased with those panels. But we're even *more* pleased with what goes on behind them: performance which, we feel, matches or surpasses components selling for up to double their prices. How did we achieve this? Simply by following our own standards, by working for better sound, by eliminating all frills, by keeping our circuitry as simple and basic as possible. What's more, these units are hand wired. No printed circuits except where engineering design requires their use.

Don't take our word for this. After you have examined the specifications of the components in which you are interested, have them demonstrated by your Eico dealer. And . . . if you wish, reprints of reports by leading independent testing organizations are available upon request.

or build-it-yourself...

Building an electronic kit is a fascinating — and rewarding — experience. Kit builders have been known to miss meals and forget to go to bed. They also find — after their component is complete — that their enjoyment in it is more than doubled. (And, of course, building the kit is one way of saving an additional 40% or more on fine high fidelity components!) All this is particularly true with Eico kits. Because Eico kits are *made to be built*. The circuitry has been specifically designed and laid out so that people who've never held a soldering iron in their hands will be able to build it with the minimum of difficulty. All critical circuits have been prewired and prealigned at the factory. The instruction books have been written to carry you along, step-by-step, with clear, vivid instructions and simple, graphic diagrams. Every word in the text refers to an adjacent illustration, so that you can always watch text and picture at the same time.

Every piece of hardware that might possibly be unfamiliar is completely identified. Soldering techniques are explained. In short, nothing is left to chance. Every Eico instruction book is fully tested both by electronics experts and by beginners. And no instruction book is published until the beginners can put the kit together without a hitch. Further, you work with the finest parts subjected to the most stringent quality control in the industry. Every Eico kit embodies the know-how of the most experienced kit manufacturer.

The Classic Series Kit Package

With the new Classic Series, Eico carries its kit philosophy to its logical conclusion. Everything that can be done to enhance the creative enjoyment of kit building has been done. Notably . . .

- All jacks, sockets, terminal boards, and transformers have been mounted on the chassis at the factory.
- There are three spiral-bound manuals:
 1. Construction Figures Manual, printed in two colors for clarity. Chassis and already-mounted components in blue; wiring steps for the particular figure in black.
 2. Construction Steps Manual.
 3. Operating Manual.
- Folding easels are provided for the Construc-

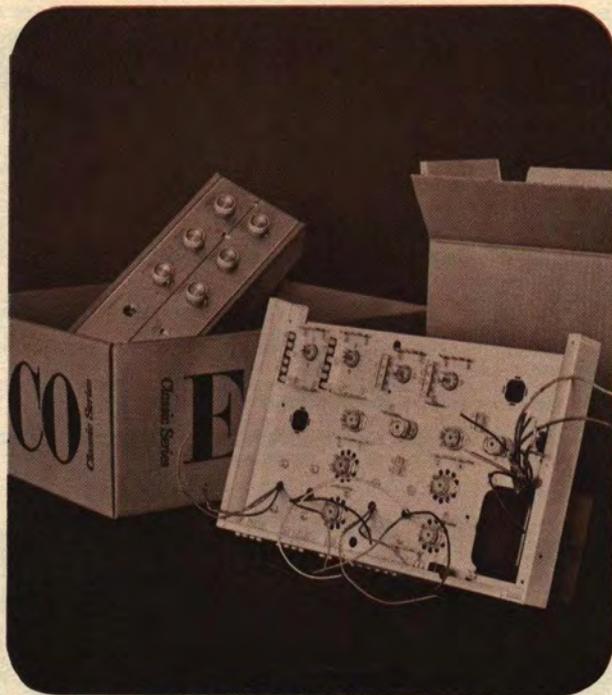
tion Figures and Construction Steps Manuals for easy viewing during construction.

- All parts for a particular wiring figure are packed in a separate, marked container. No more than 20 components are wired in any one figure, and all the components required by any figure are listed across the top of the page, from left to right, together with the step number and identifying information. Each component can be inserted in the easel above its step number before the work begins.
- The kit is designed so that building can be interrupted easily, and the partially built unit returned to the package for storage. Any unused parts from the figure being worked on are returned to their own container, so there are no loose parts to go astray. And it's just as easy to set the kit up for work again.

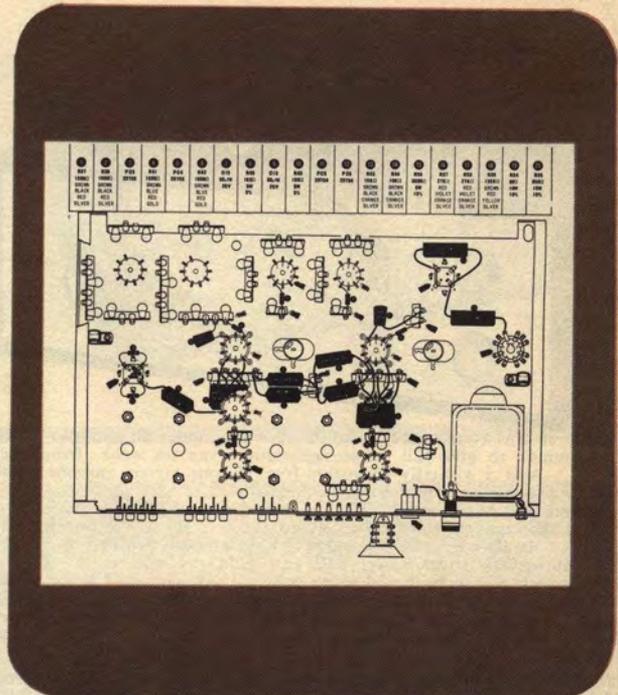
Prices and specifications subject to change without notice



Features of New **EICO** Classic Series Kit Pack



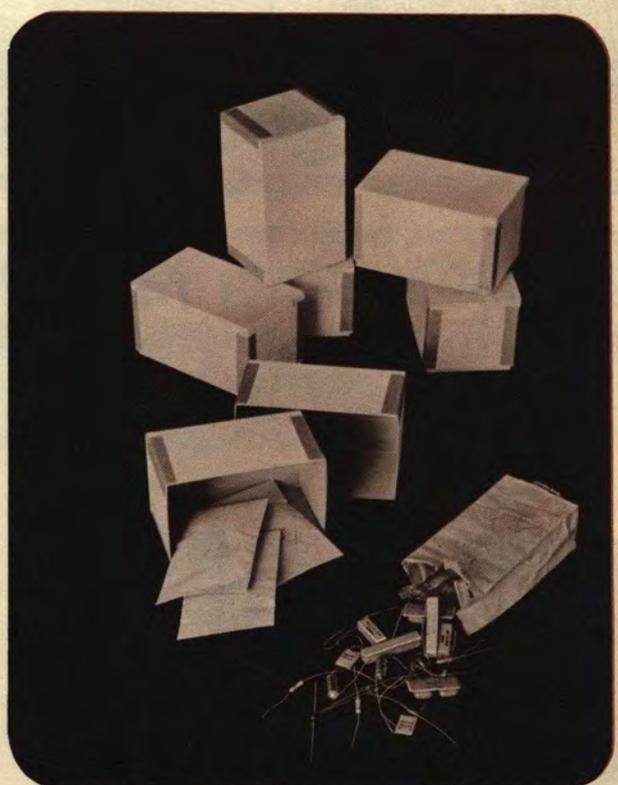
Chassis has all jacks, sockets terminal boards, transformers pre-mounted.



Two-color construction figures: the chassis in blue, wiring steps in black.



A folding easel holds Construction Figures Manual at a convenient angle.



All parts for every construction figure packed in separate marked container.

EICO 2536 fm multiplex stereo receiver



Take a superb FM stereo tuner, guaranteed stable under all conditions, and sensitive enough to give full stereo separation even on weak, fringe-area signals . . . Add a virtually distortion-free 36-watt stereo amplifier with remarkable overload and transient characteristics . . .

And there you have the EICO 2536, star of our new Classic Series — a component that makes every other stereo receiver seem overpriced. And that goes for its styling (quietly elegant, with a smooth brushed aluminum panel — upper half silver, lower half pale gold) as well as for its performance, which has to be heard to be believed. As with all Classic Series components, all parts are operated well within ratings and strictly quality-controlled for long life and outstanding dependability. The shielded control panel eliminates interference and exposed voltage points when operated without cover.

TUNER FEATURES: In the kit, the two most critical sections — the front end and the IF strip — are supplied prewired and pre-aligned, and a high quality circuit board and pre-aligned coils are provided for the stereo demodulator circuit. The front end, an ultrasensitive, low-noise unit of wide-band design is enclosed in plated steel for protection and shielding. Precise temperature compensation prevents drift without AFC, and indirect gear drive eliminates backlash and possible resulting microphony. The IF strip has 4 amplifier-limiter stages and an ultra-wide-band ratio detector for perfect limiting and flat frequency response to the limit of the composite stereo signal frequency spectrum. Another feature is the sensitive bar-type electron-ray tuning indicator which permits you to easily tune for lowest distortion and also doubles as stereo program indicator. The stereo decoder is of the envelope detection type, with a very low distortion composite signal amplifier to prevent spurious signal generation. Both 67 kc storecasting sub-carrier and 38 kc re-inserted stereo sub-carrier are effectively filtered out and no special filters are required for interference-free stereo tape recording. The 2536 also features a velvet-smooth rotary tuning dial with illuminated readout.

AMPLIFIER FEATURES: Pre-amplifier features low-noise dual triode in each channel, with RIAA phono equalization provided in a feedback loop around both stages for lowest distortion and full protection against input overloading. Separate hum balance potentiometer for each channel for optimum hum suppression in each channel.

Bass & Treble Tone Controls are of high quality, Baxandall type. Low-noise dual triode in each channel providing a driver stage and a true variable crossover feedback tone control stage. Variable crossover permits boost or cut at extremes of range without affecting mid-range. Bass and treble controls do not interact or affect the loudness. The contour obtained at full bass boost closely approximates the bass compensation required at low listening levels for equal audibility of all tones according to the Robinson-Dodson data (1956), a later determination than Fletcher-Munson. Concentric bass and concentric treble controls permit individual tonal adjustments in each channel.

Balance control is infinitely variable, permitting compensation for any degree of unbalance and complete fade of one channel or the other at the extreme positions.

Blend Control: Provides variable cross-feeding desirable when stereo headphones are used. Also provides full blend for vertical rumble cancellation in mono disc play. Blend circuit switched out entirely at the extreme counter clock-wise position, designated maximum stereo.

Tape Monitor Switch: With tape recorders having separate record and playback heads (e.g., the Eico RP-100) permits off-the-tape monitoring while recording, regardless of the recording source chosen with the input selector switch.

TUNER SPECIFICATIONS

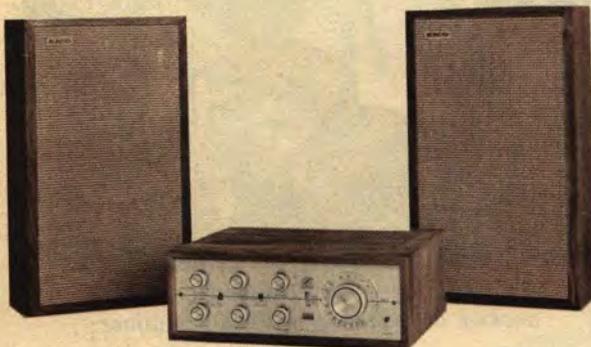
Antenna input: 300 ohms balanced. IHFM usable sensitivity: $3\mu\text{v}$ (30 db quieting), $1.5\mu\text{v}$ for 20 db quieting. Sensitivity for phase locking (synchronization) in stereo: $3\mu\text{v}$. Full limiting sensitivity: $10\mu\text{v}$. IF Bandwidth: 280 kc at 6 db points. Ratio detector bandwidth: 1 mc peak-to-peak separation. Audio bandwidth at FM detector: Flat to 53 kc. IHFM signal-to-noise ratio: 55 db. IHFM harmonic distortion: 0.6% Stereo harmonic distortion: Less than 1.5%. IHFM capture ratio: 3 db. Channel separation: 30 db. Audio output: 1.5 volts. Output impedance: Plate followers, 5K ohms.

AMPLIFIER SPECIFICATIONS

Power: 36 watts IHFM music, 28 watts continuous (total). IM distortion (each channel): 2% at 14 watts, 0.7% at 5 watts, 0.2% at 1 watt. Harmonic distortion (each channel): 0.6% at 10 watts, 40 cps — 10 kc; 0.2% at 1 watt, 30 cps — 20 kc. IHFM power bandwidth at rated continuous power, 1% harmonic distortion: 30 cps — 20 kc. Frequency response: ± 1 db, 15 cps — 40 kc. Speaker output: 8, 16 ohms Inputs: magnetic phono or adapted ceramic phono, tuner, tape auxiliary. Sensitivity: 2.3 mv phono, 250 mv others. Noise: 65 db down on phono, 80 db down on others. Tubes: 1-ECC85, 5-6AU6, 1-6AL5, 2-6EU7, 5-12DW7, 4-6BQ5/EL84, 1-5AR4/GZ34. Power requirements: 115 VAC, 60 cps, 160 watts. Size (HWD): $5\frac{1}{2}'' \times 15\frac{1}{2}'' \times 13\frac{1}{2}''$. Wt: 25 lbs.

Kit \$154.95. Wired \$209.95. F.E.T. INCL.

EICO 2536-W8 fm-mx stereo receiver system



The 2536 FM Stereo Receiver, supplied with two Eico Model HFS-8 Speaker Systems. This is a quality-matched-system that offers a significant saving over the very same components purchased separately.

TUNER SPECIFICATIONS (TUNER FEATURES SAME AS ABOVE)

Antenna input: 300 ohms balanced. IHFM usable sensitivity: $3\mu\text{v}$ (30 db quieting), $1.5\mu\text{v}$ for 20 db quieting. Sensitivity for phase locking (synchronization) in stereo: $3\mu\text{v}$. Full limiting sensitivity: $10\mu\text{v}$. IF Bandwidth: 280 kc at 6 db points. Ratio detector bandwidth: 1 mc peak-to-peak separation. Audio bandwidth at FM detector: Flat to 53 kc. IHFM signal-to-noise ratio: 55 db. IHFM harmonic distortion: 0.6% Stereo harmonic distortion: Less than 1.5%. IHFM capture ratio: 3 db. Channel separation: 30 db. Audio output: 1.5 volts. Output impedance: Plate followers, 5K ohms.

AMPLIFIER SPECIFICATIONS (AMPLIFIER FEATURES SAME AS ABOVE)

Power: 36 watts IHFM music, 28 watts continuous (total). IM distortion (each channel): 2% at 14 watts, 0.7% at 5 watts, 0.2% at 1 watt. Harmonic distortion (each channel): 0.6% at 10 watts, 40 cps — 10 kc; 0.2% at 1 watt, 30 cps — 20 kc. IHFM power bandwidth at rated continuous power, 1% harmonic distortion: 30 cps — 20 kc. Frequency response: ± 1 db, 15 cps — 40 kc. Speaker output: 8, 16 ohms Inputs: magnetic phono or adapted ceramic phono, tuner, tape auxiliary. Sensitivity: 2.3 mv phono, 250 mv others. Noise: 65 db down on phono, 80 db down on others. Tubes: 1-ECC85, 5-6AU6, 1-6AL5, 2-6EU7, 5-12DW7, 4-6BQ5/EL84, 1-5AR4/GZ34. Power requirements: 115 VAC, 60 cps, 160 watts. Size (HWD): $5\frac{1}{2}'' \times 15\frac{1}{2}'' \times 13\frac{1}{2}''$. Wt: 25 lbs.

Kit, \$229.95. Wired, \$289.95. F.E.T. INCL.

EICO 2036 36-watt* stereo amplifier

36 Watts IHFM music power and 28 watts continuous power, total of both channels. Excellent overload, transient, and regulation characteristics. Completely stable with any speaker system. In addition to the amplifier circuits and controls described for the 2536 receiver, the 2036 provides selection between two pairs of speaker systems, and a stereo headphone jack. Spacious, uncluttered layout makes it a joy to build, even for the complete novice. Panel is smooth brushed aluminum—upper half silver, lower half gold.

SPECIFICATIONS

Power: 36 watts IHFM music, 28 watts continuous (total). *IM distortion (each channel):* 2% at 14 watts, 0.7% at 5 watts, 0.2% at 1 watt. *Harmonic Distortion (each channel):* 0.6% at 10 watts, 40 cps — 10 kc; 0.2% at 1 watt, 30 cps — 20 kc. *IHFM Power bandwidth at rated continuous power, 1% harmonic distortion:* 30 cps — 20 kc. *Frequency Response:* ±1 db 15 cps — 40 kc. *Speaker Output:* 8 & 16 ohms. *Inputs:* Magnetic phono or adapted ceramic phono, tuner, tape auxiliary. *Sensitivity:* 2.3 mv phono, 250 mv others. *Noise:* 65 db down on phono, 80 db down on others. *Tube Complement:* 2-6EU7, 4-7247/12DW7, 4-6BQ5/EL84, 1-5AR4/GZ34. *Size (HWD):* 5½" x 15½" x 11½". *Weight:* 21 lbs. *Power Reg.:* 115 VAC, 60 cps, 130 watts.

Kit \$79.95. Wired \$109.95.

*IHFM music power



✓

EICO 2050 50-watt* stereo amplifier

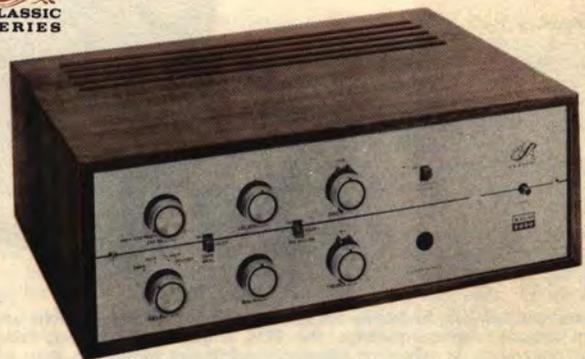
No finer amplifier is available in this power class. 50 watts IHFM music power and 44 watts continuous power (total of both channels). Excellent overload and regulation characteristics. Completely stable with any speaker system. In addition to the amplifier circuits and controls described for the 2536 receiver, the 2050 provides a 12 db per octave high frequency filter (switched), a switch that permits selection between two pairs of speaker systems and a headphone jack. Panel is smooth brushed aluminum — upper half silver, lower half pale gold. Spacious, uncluttered layout makes it a joy to build even for the complete novice.

SPECIFICATIONS

Power: 50 watts IHFM music, 44 watts continuous (total). *IM distortion (each channel):* 2% at 22 watts, 1% at 17 watts, 0.2% at 5 watts, 0.1% at 2 watts. *Harmonic Distortion (each channel):* 0.5% at 17 watts, 40 cps — 20 kc; 0.3% at 5 watts, 30 cps — 20 kc. *IHFM power bandwidth at rated continuous power, 0.8% harmonic distortion:* 30 cps — 20 kc. *Frequency Response:* ±1 db 10 cps — 40 kc. *Speaker Outputs:* 8 & 16 ohms. *Inputs:* Magnetic phono or adapted ceramic phono, tuner, tape, auxiliary. *Sensitivity:* 1.7 mv phono, 190 mv others. *Noise:* 65 db down on phono, 80 db down on others. *Tube Complement:* 2-6EU7, 4-7247/12DW7, 4-7591, 1-5AR4/GZ34. *Size (HWD):* 5½" x 15½" x 11½". *Weight:* 25 lbs. *Power Requirements:* 115 VAC, 60 cps, 165 watts

Kit \$92.50. Wired \$129.95.

*IHFM music power



EICO 2080 80-watt* stereo amplifier

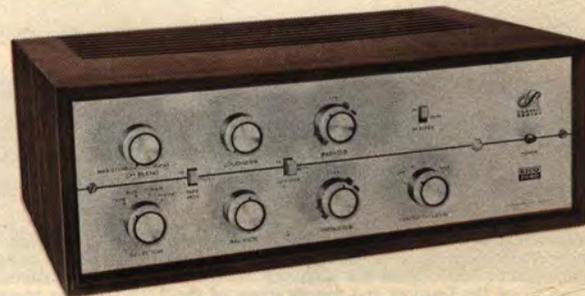
An absolutely superb 80 watt amplifier, worthy of the finest systems. In addition to the amplifier control facilities of the 2536 Receiver, the 2080 provides 12 db per octave hi and lo filters (switched), and direct center speaker drive with a panel CENTER LEVEL Control (Max, Hi, Med, Lo, & Off). Panel is smooth brushed aluminum — upper half silver, lower half pale gold. Because fixed bias is used in the output stages, the kit builder will need a dc voltmeter to set the bias correctly. (Any VOM or VTVM will be satisfactory).

SPECIFICATIONS

Power: 80 watts IHFM, 70 watts continuous (total). *IM distortion (each channel):* 1.1% at 40 watts, 0.8% at 35 watts, declines continuously to 0.1% at low levels. *Harmonic Distortion (each channel):* 0.5% at 35 watts, 30 cps — 20 kc; 0.2% at 5 watts, 30 cps — 20 kc. *IHFM Power Bandwidth at rated continuous power, 1% harmonic distortion:* 20 cps—20 kc. *Frequency Response:* ±1 db 10 cps—80 kc. *Speaker Outputs:* 4, 8, and 16 ohms. *Inputs:* Magnetic phono or adapted ceramic phono, tuner, tape, auxiliary. *Sensitivity:* 2.5 mv phono, 250 mv others. *Noise:* 65 db down on phono. 80 db down on others. *Tube Complement:* 2-6EU7; 2-12DW7, 1-ECC83, 2-6FJ7, 4-7591, 1-GZ34. *Size (HWD):* 5½" x 15½" x 13½". *Wgt:* 22 lbs. *Power Requirements:* 115 VAC, 60 cps, 150 watts drain.

Kit \$112.50. Wired \$159.95.

*IHFM music power



EICO 2200 fm-multiplex stereo tuner

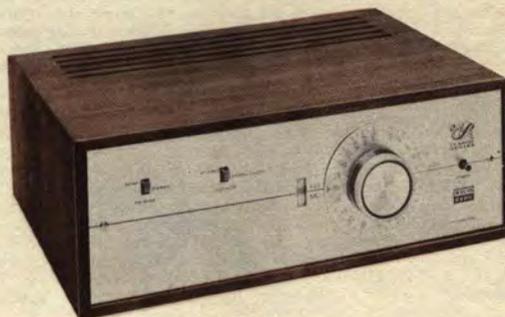
The easiest-to-build, FM stereo tuner kit on the market, with superb performance guaranteed by the factory-wired and pre-aligned RF and IF sections, plus pre-aligned stereo decoder coils and high quality stereo decoder circuit board. As described in tuner section of the 2536 receiver, including: low-noise, shielded & temperature compensated front-end for drift-free performance; 4 amplifier-limiter stages; ultra-wide band ratio detector; envelope detection stereo decoder with low distortion composite signal amplifier to prevent spurious signal generation.

Smooth brushed aluminum panel — upper half silver, lower half pale gold. Wide-open layout and ready-to-use assemblies provided make it remarkably easy to build, even for the complete novice.

SPECIFICATIONS

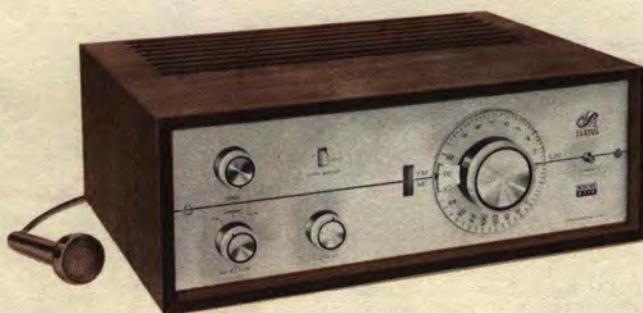
Antenna Input: 300 ohms balanced. **IHF M Usable Sensitivity:** 3 μ v (30 db quieting), 1.5 μ v for 20 db quieting. **Sensitivity For Phase Locking (Synchronization) in Stereo:** 3 μ v. **Full Limiting Sensitivity:** 10 μ v. **IF Bandwidth:** 280 kc at 6 db points. **Ratio Detector Bandwidth:** 1 mc peak-to-peak separation. **Audio Bandwidth at FM Detector:** Flat to 53 kc. **IHF M Signal-to-Noise Ratio:** 55 db. **IHF M Harmonic Distortion:** 0.6%. **IHF M Capture Ratio:** 3 db. **Channel Separation:** 30 db. **Audio Output:** 1.5 volts. **Output Impedance:** Plate followers, 5 K ohms. **Tubes:** 1-ECC85, 5-6AU6, 1-6AL5, 1-12DW7, 1-12AU7, 1-EM84, 1-EZ80. **Power Requirements:** 115 VAC, 60 cps. 55 watts. **Size (HDW):** 5 $\frac{1}{2}$ " x 15 $\frac{1}{2}$ " x 11 $\frac{1}{8}$ ". **Weight:** 12 lbs.

Kit \$92.50. Wired \$119.95. F.E.T. INCL.




CLASSIC
SERIES

EICO 2716 fm mono 18-watt receiver with paging facility



An excellent, low-cost hi fidelity background music system and public address system complete in one package, the 2716 is perfect for offices, factories, stores, restaurants or wherever pleasant, unobtrusive music can help people relax, and where the music must occasionally be interrupted for announcements.

FM programming has made available an endless supply and variety of fine music. The 2716 makes it available as a convenient source of background music. The unit includes a high quality, sensitive, stable FM tuner; and a low-distortion amplifier, with microphone stage and relay for paging and other public address uses.

The FM front end, an ultrasensitive, low-noise unit of wideband design, is enclosed in plated steel for protection and shielding. Precise temperature compensation prevents drift without AFC. Indirect gear drive eliminates backlash and microphony. The IF strip has 4 amplifier-limiter stages and a wide-band ratio detector for perfect limiting and flat frequency response. Pin-point tuning is facilitated by a precision rotary tuning dial with illuminated readout and a bar-type electron-ray tuning indicator.

The amplifier delivers 18 watts IHFM music power and 14 watts continuous power (enough to drive 30 speakers). Outputs are 8 and 16 ohms plus 25 volt line (45 ohms). A treble tone control and a low level bass compensation switch provide the response adjustments needed in background music applications. The amplifier in the 2716 also includes a mike stage.

Inputs for tape and ceramic phono cartridge, together with three-position

input selector are on front panel. Tape output at rear for recording FM programs. Standard microphone connector, relay control socket, and mike level setting control all at rear of unit. Remote relay control switch at microphone permits silencing music for making announcements.

SPECIFICATIONS

TUNER: **Antenna input:** 300 ohms balanced. **IHF M Usable Sensitivity:** 3 μ v (30 db quieting), 1.5 μ v for 20 db quieting. **Full Limiting Sensitivity:** 10 μ v. **IF Bandwidth:** 280 kc at 6 db points. **Ratio Detector Bandwidth:** 1 mc, peak-to-peak separation. **IHF M Signal-to-Noise Ratio:** 55 db. **IHF M Harmonic Distortion:** 0.6% **IHF M Capture Ratio:** 3 db. **Audio Response:** \pm 1 db 20 cps to 15 kc.

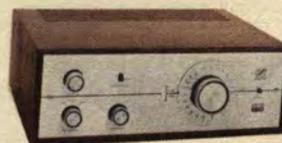
AMPLIFIER: **Power:** 18 watts IHFM music; 14 watts continuous. **IM Distortion:** 2% at 14 watts. **Harmonic Distortion:** 0.6% at 10 watts, 40 cps to 10 kc; 0.2% at 1 watt, 30 cps to 20 kc. **IHF M Power Bandwidth at Rated Continuous Power, 1% Harmonic Distortion:** 30 cps to 20 kc. **Frequency Response:** \pm 1 db 15 cps to 40 kc. **Inputs:** Phono (ceramic), tape, mic. **Outputs:** 8 ohms, 16 ohms, and 25 volt line (45 ohms). **Sensitivity:** 240 mv on phono, tape; 4 mv on mic. **Tubes:** 1-ECC85, 4-6AU6, 1-6AL5, 1-6AV6, 1-7199, 2-6BQ5/EL84, 1-5AR4/GZ34. **Size (HWD):** 5 $\frac{1}{2}$ " x 15 $\frac{1}{2}$ " x 11 $\frac{1}{8}$ ". **Weight:** 17 lbs. **Power Requirements:** 115 VAC, 60 cps. 100 watts

Factory-wired \$149.95. F.E.T. incl.

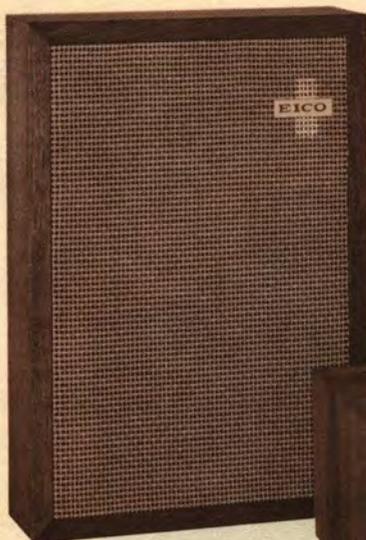
EICO 2715 fm mono 18 watt receiver

An outstanding high fidelity FM receiver which, together with an Eico high fidelity speaker system such as the HFS-10 (illustrated), comprises a complete FM monophonic radio. Ideal for home as well as industrial applications, the 2715 has all of the features and specifications of the 2716 with the exception of paging.

(HFS-10 \$29.95 Wired Only) 2715 Factory wired \$129.95 F.E.T. incl.

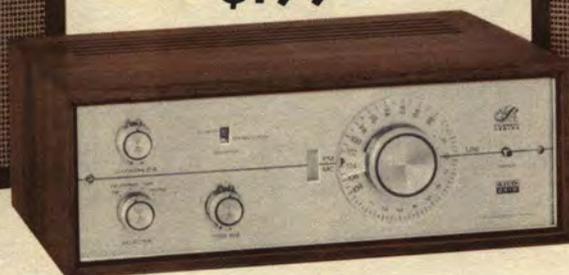


EICO 2510 fm stereo tuner-amplifier-speaker system



COMPLETE SYSTEM
ONLY

\$199⁹⁵



A complete hi-fi FM stereo center — including a tuner-amplifier with inputs for stereo phono (ceramic/crystal cartridge), inputs and outputs for stereo (or mono) tape recorder, and a matched pair of high fidelity 2-way speaker systems in oiled walnut cabinets. Tuner-amplifier panel is smooth brushed aluminum — upper half silver, lower half pale gold.

The FM stereo tuner section is identical to that in the 2536 receiver including: low-noise, shielded & temperature-compensated front end for drift-free performance; 4 amplifier-limiter stages; ultra-wide band ratio detector; envelope detection stereo decoder with low-distortion composite signal amplifier to prevent spurious signal generation, storecasting filter, and filters to eliminate interference in stereo tape recording; electron-ray tuning and stereo program indicator; velvet-smooth rotary tuning with illuminated readout, and stereo defeat switch.

The amplifiers provide 10-watts IHFM music power and 8-watts continuous power with a power bandwidth of 50-15,000 cps at 1% distortion. Husky, grain-oriented steel output transformers and 30 db of feedback result in extremely low-distortion and high damping factor. The two speaker systems are rigidly constructed, slim compact types, ideal for narrow shelf placement or convenient wall mounting. Extremely powerful magnets provide excellent woofer damping, which, together with high amplifier damping, results in remarkably clear and full bass, balanced by full and clean mid-range. The small diameter tweeters provide the wide angle dispersion of the high frequencies so important to stereo.

SPECIFICATIONS

TUNER: Antenna Input: 300 ohms balanced. *IHF*M Usable Sensitivity: 3 μ v (30 db quieting), 1.5 μ v for 20 db quieting. Sensitivity for Phase Locking (Synchronization) in Stereo: 3 μ v. Full Limiting Sensitivity: 10 μ v. *IF* Bandwidth: 280 kc at 6 db points. Ratio Detector Bandwidth: 1 mc peak-to-peak separation. Audio Bandwidth at FM Detector: Flat to 53 kc *IHF*M Signal-to-Noise Ratio: 55 db. *IHF*M Harmonic Distortion: 0.6%. *IHF*M Capture Ratio: 3 db. Channel Separation: 30 db.

AMPLIFIER: Power: 10 watts *IHF*M music, 8 watts continuous (total). *IHF*M Power Bandwidth at rated continuous power, 1% harmonic distortion: 50 cps — 15 kc. *IM* Distortion (each channel), 60 cps & 7 kc at 4:1: 0.3% at 1/4 watt, 0.7% at 1/2 watt, 0.9% at 1 watt, 2% at 2 watts. Harmonic Distortion (each channel): 0.3% at 1/2 watts, 50 cps — 20 kc; 0.5% at 1 watt, 50 cps — 20 kc; 0.7% at 2 watts, 60 cps — 15 kc; 0.7% at 3 watts, 100 cps — 10 kc; 0.8% at 4 watts, 200 cps — 5 kc. Frequency Response: \pm 1 db 20 cps — 40 kc. Speaker Outputs: 8 ohms. Damping Factor: 20. Inputs: Ceramic/crystal phono, tape, auxiliary. Sensitivity: 400 mv ceramic/crystal phono 180 mv tape and auxiliary. Noise: 80 db down. Tube complement: 1-ECC85, 5-6AU6, 1-6AL5, 3-12DW7, 2-6BQ5/EL84, 1-EM84, 1-5AR4/GZ34. Size (tuner-amplifier, HWD): 5 5/8" x 15 1/2" x 12". Weight: 42 lbs. Power Requirements: 115 VAC, 60 cps, 100 watts.

SPEAKERS: 6 1/2" woofer-midrange with a 5 oz. slug magnet, 11,000 gauss flux density, 2" cone tweeter. Crossover point: Approx. 4000 cps. Frequency Response: \pm 6 db, 60 to 15,000 cps. Rated Impedance: 8 ohms. Enclosure: Genuine Walnut, hand-rubbed oiled finished. Size (HWD): 12" x 18" x 5 1/4". Weight (each): 11 lbs. Factory-wired **\$199.95**. F.E.T. incl.

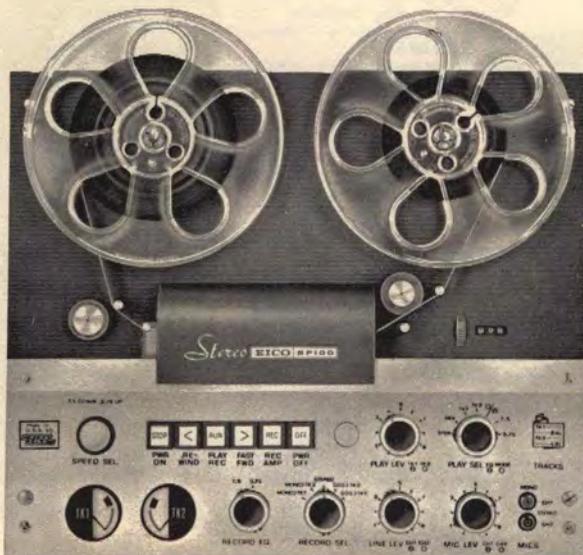
EICO 2510-XS fm-multiplex stereo receiver (less speakers)

A superb, modestly priced FM receiver including a tuner and amplifier (same as 2510) on a single compact chassis. Does *not* include speakers. Factory-wired **\$159.95**. F.E.T. incl.

EICO Optional cabinets & covers for Classic Series:

For 2036, 2200, 2050, 2510, 2716, 2715—Model WE-72 oil finish walnut cabinet, **\$19.95**; Metal cover for same units, Model E-11, **\$7.50**.
For 2536 & 2080 — Model WE-73 oil finish walnut cabinet, **\$19.95**; Metal cover for same units, Model E-12, **\$7.50**.

EICO RP100 transistor stereo/mono 4-track tape recorder



A recorder with professional capability, built for strenuous use. That is the total design objective for the EICO RP-100. Specifically, rigorous design objectives were established in three areas: 1) Performance; 2) Ruggedness; 3) Versatility.

Objective 1: Performance. Specifications show that professional standards are attained. Moreover, these specifications have been verified in reports by independent testing laboratories.

Objective 2: Ruggedness. A heavy-gauge plated steel chassis absorbs prolonged operating stress without deformation; maintains vital tolerances in transport mechanism through years of use.

Three-motor tape transport permits optimized design of moving parts, assuring exceptional ease of tape handling: Smooth, silent tape flow, starting without tape stress, precision stops, rapid rewind and forward speeds—controlled by the instant action of heavy-duty solenoids.

Transistor electronics provide high circuit stability, low aging factor, assurance against hum and microphonics.

Objective 3: Versatility. The EICO RP-100 places at the command of the serious home recordist a variety of functions previously attainable only in multi-channel studio installations. Its flexibility of controls is unparalleled in home recording equipment.

- 4-track stereo or mono recording and playback; facilities for separate recording, playing, and erasing of each track; also plays 2-track mono tapes.
- Direct off-the-tape monitoring made possible by separation of record and playback electronics and use of 3 heads.
- Mixing recording level controls for microphone and high level inputs.
- Record amplifiers can be activated without tape motion for presetting recording levels and eliminating recording "pop".
- Precision cueing on any note or syllable because playback amplifiers remain active in STOP position.
- Immediate sound-on-sound recording—switch-selected, no external cross connections.
- Single-glance check of stereo balance, due to arrangement of dual recording level meters.
- Equally good horizontal or vertical operation.

VERSATILITY

- 3-motor drive to optimize all transport functions.
- Individual, heavy duty reel motors give rewind and fast forward speeds 2 to 3 times faster than single motor decks; permit accurate and constant differential DC braking in all operating modes that permanently safeguard against tape spillage.
- Take-up reel motor gets added power surge at each tape start through a special relay. Quick take-up prevents tape slack, jerk, and bounce, provides perfect "stop" and "go" operation.
- Instant control of tape motion through heavy-duty pushbutton-activated electrical circuits and solenoid-operated mechanical systems. Safety-interlock of push-button controls positively prevents any possible condition leading to tape stretching or breakage.
- Automatic tape lifters remove tape from heads during fast winding.
- Sweep-line tape path makes threading fast and simple, provides angular wrap of tape around heads for optimum tape-to-head contact without troublesome pressure pads.
- Automatic tape-end stop, with by pass provision for professional tape editing.

TAPE HANDLING

- 3 high-performance heads: Erase head may be used for individual erasure of any single track. Narrow-gap (100 micro-inches) play-back head for widest frequency response. Wide-gap (500 micro-inches) record head for non-critical bias setting. Hyperbolic-ground heads for improved high-frequency response. All three heads are adjustable in all planes.
- Record and playback heads equipped with laminated mu-metal cores, mu-metal inter-channel shields and outer shields. Gaps are lapped to optical standards.
- Tape guides, precision machined of non-magnetic chromium stainless steel to a tolerance of $\pm .001$ inch, reduce vertical tape weaving to a negligible minimum.
- Professional transistor electronics eliminate hum and microphonics.
- Push-pull 70 kc bias-erase oscillator.
- Hysteresis-synchronous capstan motor with 24 stator slots for constant torque has vibrationless bearing system for ultra-smooth rotation. Turning speed—hence timing and pitch accuracy—remains unaffected by normal line voltage variations and does not depend on warm-up.
- Capstan flywheel is axially bored to concentrate mass at outer rim, thereby attaining optimum movement of inertia-to-weight ratio. Result: very low flutter without excessive mechanical strain on the deck structure.
- All bearings are permanently lubricated.
- Manufactured in U.S.A.

SPECIFICATIONS

WOW & FLUTTER:

under 0.15% RMS at $7\frac{1}{2}$ ips,
under 0.2% RMS at $3\frac{3}{4}$ ips

SPEED & TIMING ACCURACY:

$\pm 0.3\%$ (± 5.4 sec. in 30 minutes)

FREQUENCY RESPONSE:

± 2 db, 30 to 15,000 cps at $7\frac{1}{2}$ ips, 55 db S/N ratio;
 ± 2 db, 30 to 10,000 cps at $3\frac{3}{4}$ ips, 50 db S/N ratio.

REWIND & FAST FORWARD TIME:

1200 ft. in 45 sec.

PLAYBACK/MONITOR OUTPUTS:

Approx. 1.0V; impedance 5K ohms.

MICROPHONE INPUTS:

0.5 mv sensitivity; suitable for dynamic microphones.

LINE INPUTS:

100 mv sensitivity.

DIMENSIONS:

$15\frac{1}{8}$ " wide x $13\frac{1}{8}$ " deep; clearance above mounting board
 $1\text{-}3/16$ ", below $7\frac{1}{4}$ "; $1\frac{3}{4}$ " rear clearance for 7" tape reel
overhang.

POWER REQUIREMENTS:

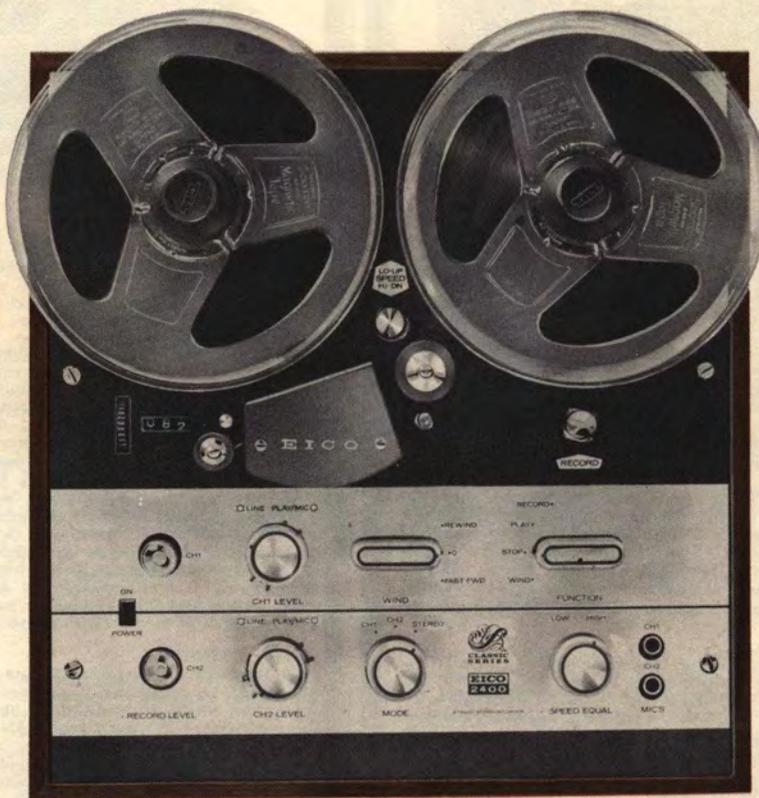
117 VAC, 60 cps; 140 W.

Luggage-type carrying case with detachable cover. Permits horizontal or vertical operation. Model CC-2—\$29.95. Genuine oiled walnut base, Model WE-74—\$29.95. Rack mount, cut out to receive deck Model RM-1—\$9.95. Kit \$299.95; Wired \$450.

EICO 2400 stereo/mono 4-track tape recorder



CLASSIC
SERIES



The Eico 2400 offers performance on par with tape recorders selling at more than twice the price and rivals the best in durability. Three motor design enables each motor to perform its particular function at maximum efficiency. Together, they keep tight reins on tape motion: smooth starts without tape slack, jerk or bounce—fast stops precisely controlled by DC brakes that never let tape sag or spill, never need adjustment.

Very low and constant tape tension from beginning to end of a reel. In rewind or fast forward, an entire 1200 foot reel is handled in 30 seconds (single-motor units take from 1½ to 2½ minutes). A heavy, dynamically balanced flywheel keeps flutter and wow inaudible—below 0.15% at 7½ ips, below 0.2% at 3¾ ips. Three motors eliminate force. The Eico 2400 will not be subject to the usual mechanical troubles encountered in other makes, despite prolonged use.

VERSATILITY

- 4-track stereo or mono recording and playback; facilities for separate recording, playing and erasing of each track; also plays back 2-track mono tapes.
- Mixing recording level controls for mic and high level inputs in each channel.
- Dual magic-eye level indicators for stereo recording.
- Record and playback equalization for both 7½ and 3¾ ips speeds.
- Precise cueing on any note or syllable because playback amplifiers remain active in STOP/CUE position.
- Horizontal or vertical operation.

TAPE HANDLING

- Jam-proof speed shift.
- Sweep-line tape path around combination playback/record head, plus accurately controlled tape tension, eliminate need for pressure pads.
- Four-position function switch.
- Momentary starting power boost to take-up reel motor eliminates tape slack and bounce.

- Record interlock prevents accidental erasure. Standby operation between all transport modes prevents tape spillage.
- Automatic tape-end stop, with bypass provision for professional tape editing.
- Digital turn counter for easy tape indexing.

QUALITY

- Three heavy-duty 4-pole shaded-pole motors. Capstan motor has enclosed fan to stabilize winding temperature and torque.
- Hardened stainless steel capstan shaft, machined to ±.00015 inch tolerance, drives tape on uncoated side to eliminate wear.
- Capstan flywheel is axially bored to concentrate mass at outer rim, thereby attaining optimum moment of inertia-to-weight ratio. Result: very low flutter without excessive mechanical strain on the deck structure.
- All bearings are permanently lubricated.
- Smooth DC brakes provide fast stops without tape spillage.
- Professional 4-point head mount permits adjustment in all planes.
- Push-pull 80-kc bias-erase oscillator eliminates beat frequencies in upper audio range.
- This unit is manufactured in U.S.A.
- oiled finish walnut base included with both kit and wired unit.

SPECIFICATIONS

Wow and Flutter: Under 0.15% at 7½ ips; 0.2% at 3¾ ips. *Speed accuracy:* Within 1%. *Frequency response:* ±3 db 30 to 15,000 cps at 7½ ips, ±3 db 30 to 12,500 cps at 3¾ ips; 45 db S/N ratio. *Rewind and fast forward time:* 1200 ft. in about 30 seconds. *Microphone Inputs:* 2μv, suitable for dynamic or ceramic microphones. *Line Inputs:* 100 μv. *Output:* 0.7V at average recording level; impedance 8K ohms. *Dimensions:* 12¾" w & 13¾" d. *Power Required:* 117 VAC, 60 cps, 75 w. *shipping weight:* 33¾ lbs.

Semi-Kit \$199.95. Wired \$269.95.

EICO ST97 fm-multiplex stereo tuner



A tuner designed with painstaking care to meet high fidelity standards even with inexperienced kit builders, through prefabrication and prealignment of critical component assemblies—the front end and the 4 IF's through to the ratio detector—and through severe quality control applied to all parts.

The Front End: Wideband printed circuit. Rugged plated steel housing for protection and shielding. Precise temperature-compensation for freedom from drift even with AFC defeated.

The IF Strip: Four IF amplifier-limiter stages and an ultra-wide-band detector for perfect limiting and flat frequency response and flat output.

The Stereo Demodulator: Ten stage zero phase-shift, filterless detection circuit, eliminates loss of separation due to phase-shift in the stereo sub-channel before recovery. Self-limiting 19 kc amplifier stage provides outstanding sensitivity on weak signals but prevents overloading on strong signals. Slide-rule dial features famous Eico "eye-tronic" traveling tuning-eye. Automatic stereo indicator lamp.

Full limiting is achieved at 10 μ v input signal, meaning that low distortion and noise specifications apply to all but the most distant and difficult-to-receive stations. The sharp selectivity you need in such a sensitive tuner is here also. While signal levels as low as 2.5 μ v will produce phase-locking for full separation, strong local signals will produce no higher output from the detector than a 10 μ v signal and will not overload the stereo demodulator. Storecasting filter, and sharp cut-off 15 kc low pass filter in each channel.

SPECIFICATIONS

Antenna Input: 300 ohms balanced. **IHF M Usable Sensitivity:** 3 μ v (30 db quieting), 1.5 μ v for 20 db quieting. **Sensitivity for Phase-Locking (Synchronization) in Stereo:** 2.5 μ v. **Full Limiting Sensitivity:** 10 μ v. **IF Bandwidth:** 280 kc at 6 db points. **Ratio Detector Bandwidth:** 1 mc peak-to-peak separation.

Audio Bandwidth at FM Detector: Flat to 53 kc. **IHF M Signal-to-Noise Ratio:** -55 db. **IHF M Harmonic Distortion:** 0.6%. **IHF M IM Distortion:** 0.1%. **Output Audio Frequency Response:** \pm 1 db 20 cps-15 kc. **IHF M Capture Ratio:** 3 db. **Channel Separation:** 30 db. **Audio Output:** 0.8V. **Output Impedance:** low impedance cathode followers. **Controls:** POWER, SEPARATION, FM TUNING, STER-MON, AFC-DEFEAT. **Tubes:** 1-ECC85, 5-6AU6, 1-6AL5, 1-12AT7, 2-12AU7, 1-6D10 (triple triode), 1-DM70 (tuning eye), 1-EZ80 rectifier. 6 signal diodes, 1 neon lamp. **Power:** 117V, 60 cps; 60 watts; extractor fuse post **Size (HWD):** 5 $\frac{1}{8}$ " x 15 $\frac{1}{8}$ " x 11 $\frac{3}{8}$ ". **Wt.:** 17 lbs.

Kit \$99.95. Wired \$149.95. Includes metal cover and FET

EICO ST96 fm-am stereo tuner



Superb, separate AM and FM tuners, mounted on one compact chassis. **Both Tuners Feature:** • Prewired, prealigned RF and IF sections • Precision, prewired "eye-tronic" travelling tuning indicators. Slide-rule dials • Smooth, precise flywheel tuning • Low interstation noise.

FM Tuner Features: • Switched AFC • AGC • Stabilized low limiting threshold assuring excellent performance from weaker signals • Broadband ratio detector for improved capture ratio and easier tuning • Output for connection to EICO MX99 FM MULTIPLEX AUTODAPTOR.

AM Tuner Features: • Switched "wide" and "narrow" band-pass; "narrow" (to 7 kc) essential for picking up weak or distant stations with minimum of interference; "wide" (to 14 kc) for the best available on AM • 3-gang tuning capacitor • Built-in ferrite loop antenna and tuned RF stage. • High Q filter eliminates 10 kc whistle.

Panel Controls Include: Separate AM, FM tuning and level controls; FM AFC switch and AM bandwidth switch; Selector switch choose FM, AM, FM & AM, FM stereo (with adaptor connected).

SPECIFICATIONS

FM Tuner: **Sensitivity:** 1.5 μ v for 20 db quieting. **Selectivity:** 250 kc IF bandwidth (6 db down). **Frequency Response:** 20-15,000 cps \pm 1 db. **Image Rejection:** 40 db. **Hum Level:** 60 db down. **Drift:** less than 2 parts in 10,000 from cold start. **Output Level:** 2.5V for 100% mod. **AM Tuner:** **Sensitivity:** 3 μ v for 1.0V average output at 20 db S/N ratio. **Selectivity:** overall IF bandwidth of 18 kc at "wide bandwidth" 9 kc at "narrow bandwidth", 6 db down. **Frequency Response:** 20-9,000 cps on "wide," 20-4,500 cps on "narrow". **Image Rejection:** 60 db. **Hum Level:** 60 db down. **Output Level:** 1.0V average. **Size (HWD):** 5 $\frac{1}{8}$ " x 15 $\frac{1}{8}$ " x 13 $\frac{1}{8}$ ". **Tubes:** FM: 1-ECC85, 3-6AU6, 1-6AL5, 1-12AU7, 1-DM70 tuning indicator. AM: 2-6BA6, 1-6BE6, 1-12AU7, 1 crystal diode det. 1-DM70. EZ80 rectifier. **Power Requirements:** 117V, 60 cps; 45 watts, **Weight:** 24 lbs.

Kit \$89.95. Wired \$129.95. Includes metal cover and FET

EICO MX99 fm-multiplex autodaptor



Incorporating the best features of matrixing and sampling techniques, the MX99 automatically delivers stereo or mono from the appropriate signal without being touched. An indicator lamp turns on when the station selected is broadcasting multiplex stereo.

Without phase-distorting filters in either the main or sub-channel paths, the unit provides suppression of all spurious signals including SCA (67KC) background music carrier, reinserted 38KC subcarrier, 19KC pilot carrier and all harmonics thereof.

The MX99 is self-powered, and includes low impedance cathode follower outputs. Controls include a multiplex defeat switch and a separation control. A separation of 35 db between channels is typical and overall gain of unity is provided from input to output on both stereo and mono. The MX99 is designed for all EICO equipment (HF90A, HFT92, ST96), and all other component quality, wide band FM tuners provided with a multiplex output. **Tubes:** 2-12AU7, 1-12AT7, 1-6AU6, 1-6D10, 1-6X4 and 6 diodes. **Size (HWD):** 3 $\frac{1}{16}$ " x 6 $\frac{1}{16}$ " x 9 $\frac{1}{4}$ ". **Weight:** 7 lbs. **Power Requirements:** 117V, 60 cps; 37 watts drain.

Optional cover \$2.95. Kit \$39.95. Wired \$64.95. Incl. FET.

EICO ST70 80-watt* stereo amplifier

ST SERIES



Quality-first, completely flexible stereo high-fidelity at moderate cost. Has separate pairs of inputs for preamplified tape, tape head, two magnetic cartridges, tuner and auxiliary. Controls include selector switch for choosing stereo inputs; tape speed equalizer and tape monitor switches; separate level and balance controls; balance check switch; scratch and rumble filters; speaker-phase reversal switch; loudness compensation switch; individual feedback-type bass and treble tone controls for each channel. Direct center-channel speaker connection. Each audio power amplifier of the ST70, conservatively rated at 35 watts, employs the thoroughly proven cathode-coupled phase inverter circuitry, preceded by a direct-coupled voltage amplifier. Fixed-biased push-pull 7591's are used in the output stage and provision is made for both bias and dc balance adjustment. The preamplifier-control section of each channel includes a dual-triode preamplifier with equalization in a loop around both stages for minimum distortion, and a dual-triode in a variable inflection type tone control circuit for best control action and lowest distortion due to feedback. In addition, the ST70 is characterized by those hallmarks of quality which are expected of all EICO products: Clean, wide spacing of components, with particular attention paid to keeping heat-sensitive components a sufficient distance from power tubes; straightforward point-to-point wiring simplifying kit-building; highest quality output transformers; filter electrolytics and rectifiers operating well below maximum ratings to insure long life.

SPECIFICATIONS

Output Power: 70 watts (two 35-watt channels) continuous; 140 watts peak. **IM Distortion:** 1% at 70 watts. **Harmonic Distortion:** less than 1% from 25 to 20,000 cps within 1 db of 70 watts. **Frequency Response** (2 watts—1 watt each channel): $\pm 1/2$ db 10-50,000 cps. **Inverse Feedback:** 17 db. **Stability Margin:** 10 db. **Damping Factor:** above 6. **Sensitivity (input for 35 watts):** mag. phono—4 mv; tape head—2 mv; tuners, auxiliaries—0.5v. **Hum and Noise Level (below 35 watts):** mag. phono—63 db; tape head—54 db; tuners, auxiliaries—78 db. **Tone Control Range:** ± 15 db at 50 cps and 10 kc. **Speaker Connection:** 4, 8, and 16 ohms. **Tubes:** 3-12AX7, 2-12DW7, 2-6SN7GTB, 4-7591, 1-GZ34 rectifier. **Power Source:** 117 v. 60 cps. **Power Consumption:** 150 watts. **Size (HWD):** 5 1/8" x 15 3/8" x 15". **Weight:** 44 lbs. **Kit \$99.95. Wired \$149.95. Includes metal cover**

*IHFM music power

EICO ST40 50-watt* stereo amplifier

ST SERIES



The ST40 will accept, control and amplify signals from any stereo source. Separate pairs of inputs are provided for: Preamplified tape, tape head, two magnetic cartridges, and 2 pairs of tuner/auxiliary inputs. For each stereo source there is a separate pair of inputs and a separate position on the selector switch. Other controls include tape monitor switch; separate level and balance controls; balance check switch; scratch and rumble filters; loudness compensation switch; individual feedback-type bass and treble tone controls for each channel, Direct center channel speaker connection.

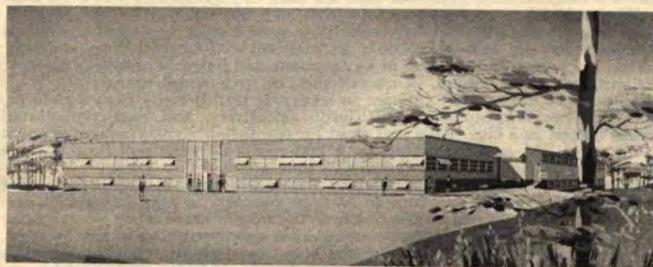
The ST40 contains two audio power amplifiers, each conservatively rated at 20 watts, and employing a voltage amplifier, a split-load phase inverter, and a pair of self-biased 7591 output tubes. The preamplifier-control section of each channel includes a dual-triode preamplifier with equalization in a loop around both stages for minimum distortion, and a dual-triode in a variable inflection type tone control circuit for best control action and lowest distortion due to feedback.

Other important design features (characteristic of all Eico products) include: rugged, generous chassis, allowing maximum separation of power tubes from each other and from heat-sensitive components; trouble-free point-to-point wiring; high quality audio output transformer with grain-oriented steel, extensively interleaved windings. Heavy duty power transformer, filter electrolytics and rectifier tube operate well below maximum ratings to insure long life.

SPECIFICATIONS

Output Power: 40 watts (two 20-watt channels) continuous; 80 watts peak. **IM Distortion:** 1% at 40 watts. **Harmonic Distortion:** Less than 1% 40-20,000 cps within 1 db of 40 watts. **Frequency Response** (2 watts—1 watt each channel): ± 1 db 12-25,000 cps. **Inverse Feedback:** 18 db. **Stability Margin:** 11 db. **Damping Factor:** 11. **Sensitivity (input for 20 watts):** mag. phono—3 mv; tape head—1.75 mv; FM, AM, Multiplex, Tape—360 mv. **Hum and Noise Level:** (below 20 watts): mag. phono—63 db; tape head—54 db; tuners auxiliaries—78 db. **Tone Control Range:** ± 15 db at 50 cps and 10 kc. **Speaker Connections:** 4-, 8-, 16 ohms. **Tubes:** 2-12AX7, 4-12DW7, 4-7591, 1-GZ34 rectifier. **Power Source:** 117V, 60 cps. **Power Consumption:** 165 watts. **Size (HWD):** 5 1/8" x 15 3/8" x 13 1/8". **Weight:** 35 lbs. **Kit \$79.95. Wired \$129.95. Includes metal cover**

*IHFM music power



EICO Electronic Instrument Co., 131-01 39th Ave., Flushing, N.Y. 11352

EICO executive, engineering,
production and shipping facilities
are now located in a
modern 100,000 square foot
plant on the waterfront
near the World's Fair site

Handwritten signatures and scribbles at the bottom of the advertisement.

EICO ST84 stereophonic dual preamplifier

ST SERIES



Delivers the ultimate in both audio quality and system flexibility. For all functions of the preamp, all types of distortion are down to 0.05% at all levels. No preamp at any price can offer audibly lower distortion even at peak input levels and when tone controls are set at extreme positions.

FACILITIES

Input Selector: Tape/Aux, MX/Aux, FM/AM, Tape Head, Phono A, Phono B, Mic. **Mode Selector:** Sum signal to left speaker only, and sum signal to right speaker only (for stereo balancing); stereo, stereo reverse; for mono tuner and tape, channel 1 signal to both speakers, and channel 2 signal to both speakers; for mono disc, sum signal to both speakers. **Balance Control:** Constant-volume type provides adjustment without significantly affecting volume. **Level Control. Tone Controls:** Concentric bass and concentric treble. Variable crossover control action permits boost or cut at extremes of range without affecting mid-range. **High Frequency Filter Switch:** Permits roll-off above 7 kc to suppress hiss and noise. **Low Frequency Filter Switch:** Permits low frequency roll-off to suppress rumble or other low-frequency disturbance. **Tape Equalization Switch:** Selects 7½ or 3¾ ips equalizations at Tape Head position. **Tape Monitor Switch:** For direct comparison of tape recording with source signal while recording is being made. **Loudness Switch:** Conveniently provides fixed bass compensation at low level listening. **Tape Outputs (For Recording):** Not affected by controls.

SPECIFICATIONS

Frequency Response: ±0.3 db 5-25,000 cps. **Harmonic Distortion (20-20,000 cps):** 0.06% at 2V out. **IM Distortion (60 and 7000 cps at 4:1):** 0.04% at 2V out. **Hum and Noise:** Mag. Phono A, Mag. Phono B, Tape Head: -65 db at 10 mv in; Tuner Tape, Aux.: -75 db at 0.5V in. **Sensitivity:** (minimum input for 1V out at 1 kc): Mag Phono A, Mag Phono B: 1.6mv; Tape Head: 1 mv; Microphone: 2.8 mv; high level inputs (tuner, tape, aux.): 0.17V. **Tone Controls:** ±15 db at 50 cps; ±15 db at 10 kc. **Tubes:** 5-12AX7/ECC83, 1-6X4. **Size (HWD):** 5½" x 15¾" x 8¾". **Shipping Weight:** 9 lbs. **Power Requirements:** 117V, 60 cps; 25 watts.

Kit \$59.95. Wired \$89.95. Includes metal cover

EICO HF85 stereophonic dual preamplifier

STANDARD SERIES



A stereophonic preamplifier designed for virtually no distortion, very high gain, and superb tone control action. All essential switching and control facilities for stereo or mono listening are provided. Capable of selecting amplifying and accurate controlling any stereophonic source—tape, disc, or broadcast—the HF85 features:

- Separate low level inputs in each channel for magnetic phono, tape head, and microphone. Provides the high gain without hum and noise required by tape heads, and low output magnetic cartridges. Front panel switch permits choice of proper NARTB tape head equalization for either 7½ and 15 ips, or 3¾ ips . . . High level inputs for stereo tuner, and several auxiliary inputs for other sources.
- Independent level, bass, and treble controls in each channel which may be operated separately or together with built-in clutch.
- Distortionless, 3-stage, independent bass and treble tone control circuits in each channel. Each tone control circuit consists of a feedback amplifier pair (30 db of feedback) driving a true variable crossover, feedback tone control stage. Bass and treble controls do not interact.

SPECIFICATIONS FOR BOTH CHANNELS

Frequency Response: ±0.3 db 5-200,000 cps at any level up to 3V RMS out. (Measured from high level inputs with level controls set at maximum and tone controls electrically flat). **Sensitivity (input for 2V RMS output at 1000 cps):** Mag Phono—1 mv; Microphone—1 mv; Tape-Head—0.5 mv; High Level Inputs—0.17V. **Hum and Noise:** Mag. Phono—60 db; Microphone—60 db; Tape Head—50 db; High Level inputs—75 db. **Harmonic Distortion (20-2000 cps):** 0.1% at 3V RMS out; 0.15% at 5V RMS out. **IM Distortion (60 and 7000 cps at 4:1):** 0.02% for 0.5V out, 0.03% for 1.0V out, 0.4% for 2.0V out, 0.07% for 3.0V out, 0.11% for 4.0V out, 0.17% for 5.0V out. **Tone Control Range:** At 10 kc: 15 db boost, 15 db cut. At 50 cps: 15 db boost, 15 db cut. **Equalization:** Phono-RIAA; Tape Head-NARTB for 15 ips, 7½ ips, and 3¾ ips. **Output to Tape Recorder Impedance:** 1,400 ohms. **Output to Main Amplifier Impedance:** 8,000 ohms. **Tubes:** 5-12AX7/ECC83, 1-6X4. **Size:** 3¾" h., 12" w., 8¼" d. **Power:** 117 VAC, 60 cps. **Weight:** 10 lbs.

Kit \$39.95. Wired \$64.95. Includes metal cover.

EICO RA6 transistor portable radio

Kit \$29.95
Includes FET



"This new portable . . . is among the finest we have seen to date"
—ELECTRONICS WORLD LAB TESTED

Compact Size: 8½" long, 4½" high, 2½" deep
Shipping Weight: 3 lbs.

Requires battery (not supplied) of N.E.D.A. type 1602 (type number for Ray-O-Vac, Burgess, Mallory) equivalent to RCA VS305, Eveready 246, mercury type Mallory TR246R.

Civil Defense and emergency rescue authorities recommend a battery-operated radio in every home. Every EICO Transistor Portable shows the two CONELRAD frequencies as 2 gold arrows on the tuning dial.

Even a novice can build this modern American all-transistor superheterodyne portable receiver and be sure of a handsome professional assembly, and outstanding performance. The utilization of transistor circuitry and finest quality parts throughout assures you that your set will not only perform magnificently, but will take the kind of punishment that a portable radio should take.

Here is a portable that gives you a lifetime of big-set radio entertainment wherever you go, indoors or out: on picnics, boating, bicycling, strolling hiking, horseback riding. Plug in an earphone and listen in complete privacy, without disturbing others, in dormitories, or in hospital rooms.

Developed in EICO's laboratories to meet our traditionally high standards, the RA6 provides unusual sensitivity, selectivity, and high undistorted sound output in a size that's just right for comfortably carrying. An efficient 4" x 6" oval PM speaker driven by a 250 milliwatt push-pull output stage supplies satisfying big-set volume and tone quality.

Operating features include planetary vernier tuning (7:1 reduction) that makes it easy to find and tune in stations properly; a high impedance earphone jack that eliminates the drain of the output stage when an earphone is in use; and a built-in rod-type antenna for good reception in any location. Kit construction features include: the latest type plug-in transistor sockets that prevent overheating the transistors during soldering and provide easy replacement should it ever become necessary; and prealigned IF transformers permit top performance to be achieved by a slight touch-up alignment using a radio station broadcast as a reference. The RA6 is housed in a handsome tan simulated leather carrying case with a retractable handle.

EICO HF89A 110-watt* stereo dual power amplifier

In producing the HF89A, the finest techniques of the audio art were applied to the creation of an instrument that meets or exceeds every professional criterion for a power amplifier of this power rating. Each power amplifier of the HF89A, conservatively rated at 50 watts, employs the thoroughly proven cathode-coupled phase-inverter-driven circuit, preceded by a direct-coupled voltage amplifier. Fixed-biased, push-pull EL34's are used in the output stage and provision is made for both bias and dc balance adjustments. The very low impedance characteristic of silicon diode rectifiers gives the common power supply for the two amplifiers very good regulation, so that signal conditions in one amplifier have negligible effect on operating conditions in the other. To ensure long life for the silicon diode rectifiers, electrolytics, and tubes, a surgistor is included to limit the starting surge currents. The intrinsic quality of the driving circuit, the output tubes, and the output transformers in the HF89A is unsurpassed. Furthermore, the high circuit and component quality result in less feedback required to achieve the very low distortion figures, so that the HF89A has an excellent stability margin.

SPECIFICATIONS

Output Power: 100 watts (two 50-watt amplifiers) continuous, 200 watts peak. **IM Distortion** (60 and 7000 cps at 4:1): 0.5% at 100 watts. **Harmonic Distortion:** Less than .025% from 30 to 15,000 cps and less than 1% from 20 to 20,000 cps within 1 db of 100 watts. **Frequency Response:** ± 0.5 db 5 cps—100 kc. **Rise Time:** 2.5 μ sec. **Square-Wave Response:** Essentially undistorted to 20,000 cps. **Inverse Feedback:** 18 db. **Stability Margin:** 13 db. **Damping Factor:** above 12, 20 cps to 20 kc. **Channel Separation:** 60 db. **Sensitivity:** 0.55V for full output. **Hum:** Better than 90 db below full output. **Controls:** Level Ch. 1, Level Ch. 2, "Service Selector" switch, ON-OFF switch. **Speaker Connections:** 4, 8, and 16 ohms. **Tubes:** 1-ECC83/12AX7, 2-6SN7GTB, 4-EL34, 2 silicon diode rectifiers (power), 1 selenium rectifier (bias); surgistor-protected for long life. **Power Source:** 117V, 60 cps. **Power Consumption:** 215 watts at no signal, 270 watts at 100 watts out. **Size (HWD):** 6" x 15" x 11". **Weight:** 40 lbs.

Kit **\$99.50**. Wired **\$139.50**.
Matching Enclosure E-8: **\$4.50**.

*IHFM music power



**STANDARD
SERIES**

EICO HF87A 80-watt* stereo dual power amplifier

Quality-designed and quality-engineered, the HF87A is similar (except for self-bias operation of the output stages and power ratings of output transformers) in circuitry design and characteristics to Eico's outstanding HF89A stereo dual power amplifier; and, like it, features excellent regulation of its common power supply, a surgistor to limit the starting surge currents; and a high margin of stability. A service selector switch on the chassis enables the HF87A to act as a stereo dual 35-watt amplifier or a monophonic 70-watt amplifier. The Eico HF-87, a sensibly priced instrument delivers 80 watts of IHFM music power (total of both channels). It is at home in the finest music systems—stereo or mono.

SPECIFICATIONS

Output Power: 70 watts (two 35-watt amplifiers) continuous, 140 watts peak. **IM Distortion** (60 and 7000 cps at 4:1): 1% at 70 watts. **Harmonic Distortion:** Less than 1% from 20 to 20,000 cps within 1 db of 70 watts. **Frequency Response:** ± 0.5 db 5 cps—100 kc. **Rise-time:** 3 microseconds. **Square-wave Response:** Essentially undistorted to 20,000 cps. **Inverse Feedback:** 17 db. **Damping Factor:** above 11, 20 cps to 20 kc. **Tubes:** 1-ECC83/12AX7, 2-6SN7GTB, 4-EL34, 2 silicon diode rectifiers protected by surgistor. **Channel Separation:** 55 db. **Sensitivity:** 0.38V for full output. **Power Source:** 117V., 60 cps. **Hum:** Better than 90 db below full output. **Power Consumption:** 215 watts; 5 amp. fuse. **Controls:** Level Ch. 1, Level Ch. 2, "Service Selector" switch, ON-OFF switch. **Size (HWD):** 6" x 15" x 11". **Weight:** 32 lbs.

Kit **\$74.95**. Wired **\$114.95**.
Matching Enclosure E-8: **\$4.50**.

*IHFM music power



**STANDARD
SERIES**

EICO HF12A 18-watt* mono amplifier

The HF12 is a true high fidelity 14-watt integrated amplifier. It provides complete "front end" facilities and true high fidelity performance of such excellence that we recommend it unreservedly for any medium-power high fidelity application. Inputs for mag. phono, tape head, tuner, tape recorder.

SPECIFICATIONS

Rated Output: 14 watts continuous, 25 watts peak. **IM Distortion (60 and 6000 cps at 4:1):** 2% at 14W; 0.55% at 6W; 0.3% at 4W. **Frequency Response:** 1W: ± 0.5 db 12 cps—75 kc; 12W: ± 0.5 db 25 cps—20 kc. **Harmonic Distortion:** 20 cps: 2% at 4.2W; $\frac{1}{2}$ % at 2.5W; 30 cps: 2% at 11W; $\frac{1}{2}$ % at 6.3W; 40 cps: 1% at 12W; $\frac{1}{2}$ % at 9.3W; 2000 cps: $\frac{1}{2}$ % at 12W; 10 kc; 1% at 10W; $\frac{1}{2}$ % at 6W. **Hum and Noise Level (below 12W):** mag. phono—60 db; tape head—50 db; tuner, auxiliary—75 db. **Tubes:** 3-ECC83/12AX7, 2-EL84, 1-EZ81. **Power Requirements:** 117V, 60 cps; 70 watts drain. **Size (HWD):** 3 $\frac{3}{8}$ " x 12" x 8 $\frac{1}{4}$ " **Weight:** 15 lbs.

Kit \$39.95. Wired \$59.95. Includes metal cover.

*IHFH music power



STANDARD SERIES

EICO HF20 25-watt* mono amplifier

The HF20 employs an output transformer capable of handling far in excess of its 20 watts rated power, a full Williamson power amplifier circuit, and the finest preamplifier-control facilities. It has become established as the outstanding value in amplifiers of this power class.

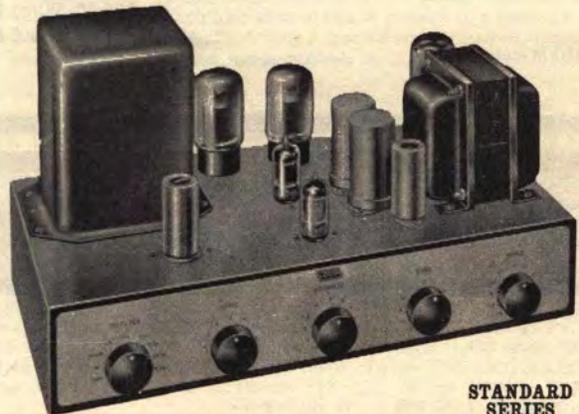
SPECIFICATIONS

Rated Output: 20 watts (34 watts peak). **IM Distortion: (60 and 6,000 cps at 4:1):** 1.3% at 20W. **Harmonic Distortion:** below 1% 20-20,000 cps within 1 db of 20W. **Frequency Response:** ± 0.5 db 15-30,000 cps at any level from 1 mw to 20W. **Hum and Noise Level:** Mag. Phono: 60 db below 20W (RIAA, max-gain, and tone controls at "flat" positions); Tuner, etc.: 75 db below 20W (max-gain, and tone controls at "flat" positions). **Tone Control Range:** ± 15 db at 50 cps; and ± 15 db at 10 kc. **Power Consumption:** 110-120 volts, 60 cps, 100 watts; 2 amp fuse. **Tube Complement:** 2-12AX7/ECC83; 2-12AU7/ECC82; 2-6L6GB; 1-5U4GB. **Size (HWD):** 8 $\frac{1}{2}$ ", 15", 10". **Weight:** 24 lbs.

Kit \$49.95.

*IHFH music power

Matching enclosure E-1 \$4.50.



STANDARD SERIES

EICO AF4 10-watt* stereo amplifier



STANDARD SERIES

Two highly fed-back, 4-watt amplifiers preceded by all the control facilities required for complete flexibility in stereo/mono operation. Provides hi-fi quality at power levels adequate to drive high efficiency loudspeakers to concert volume (EICO HFS10 is particularly recommended). A moderate single tone control is used and the available gain thus released is converted into distortion-reducing negative feedback. With a great deal of painstaking work to ensure both excellent frequency response and adequate margin, a feedback level of 27 db around each power amplifier has been achieved, resulting in harmonic and IM distortion characteristics within hi-fi standards at average listening levels. No control devices are employed in the feedback

loops which can affect distortion or stability, nor are the distortion figures dependent on matching components or making adjustments.

SPECIFICATIONS (total of both channels):

Harmonic Distortion:

1/2W: 0.3% 100-20,000 cps; 0.6% at 50 cps; 1.3% at 30 cps.

4W: 1% 100-10,000 cps; 2.8% at 50 cps.

8W: 3% 200-5,000 cps.

IM Distortion (200 and 7000 cps at 4:1): 5% at 8W; 2.2% at 4W; 1.4% at 2W; 0.6% at 1/2 W. **Frequency Response (2W):** ± 0.5 db, 30-20,000 cps undistorted within high fidelity standards. **Feedback:** 27 db. **Stability Margin:** 5 db. **Damping Factor:** 9. **Tone Control Range:** Up to 9 db treble cut (10 kc) and 8 db bass cut (50 cps). **Sensitivity (input for 4W output per channel):** Ceramic cartridge phono input—0.26V; Crystal cartridge phono input, FM tuner, AM tuner input, FM stereo input, tape inputs—0.1V. **Input Impedance:** Ceramic cartridge phono input—2 megohms; all other input—1 megohm. **Hum and Noise (below full output):**—74 db. **Speaker Connections:** 4, 8, 16 and 32 ohms. **Tube Complement:** 2-12DW7, 2-EL84, 1-EZ81. **Power Requirements:** 117 VAC, 60 cps, 70 watts power consumption. **Size:** 3 $\frac{3}{8}$ " high, 12" wide, 8 $\frac{1}{4}$ " deep. **Weight:** 13 lbs.

Kit \$38.95. Wired \$64.95. Includes metal cover.

*IHFH music power

EICO HFT90A fm tuner system

The most popular FM tuner kit ever made! Features include a prewired, prealigned RF section, prealigned IF transformers, slide-rule dial with effortless flywheel tuning, and travelling tuning eye indicator (eye-tronic® tuning). Also important are stabilized low limiting threshold for excellent performance from weaker signals, and broadband ratio detector for easier tuning. Output for connection to Eico MX99FM MULTIPLEX AUTODAPTOR.

SPECIFICATIONS

Sensitivity: 1.5 μ v for 20 db quieting. **Frequency Response:** 20 to 20,000 cps \pm 1 db. **Selectivity:** 260 kc IF bandwidth (60 db down). **Output:** Two provided: cathode follower and multiplex. Cathode follower permits use of up to 200 ft. of connecting cable. For 10 μ v input with 75 kc deviation, an audio output of 1.0 volt is obtained. **Hum:** 60 db below 1 volt. **Controls:** Tuning, level/Power ON-OFF. **Tubes:** 1-ECC85/6AQ8 grounded grid r-f amplifier and reflex converter; 2-6AU6 IF amplifiers; 1-6AU6 IF amplifier/limiter; 1-6AL5 dual diode detector; 1-DM70 tuning indicator; 1-6C4 cathode follower output; 1-6X4 full-wave rectifier. **Power:** 110-125 VAC, 60 cps; 40 watts drain. **Size (HWD):** 3 $\frac{3}{8}$ " x 12" x 8 $\frac{1}{4}$ ". **Weight:** 10 lbs.

Metal Cover E3A: **\$3.95**. Kit **\$44.95**. Wired **\$69.95**. Includes FET.



STANDARD SERIES

EICO HFT92 fm/am tuner system

The HFT92 FM/AM Tuner combines, on one chassis, the renowned HFT90 High Fidelity FM Tuner with excellent AM tuning facilities. Output for connection to Eico MX99 FM-MULTIPLEX AUTODAPTOR.

SPECIFICATIONS (AM only. FM specifications same as HF90A):

Sensitivity: 20 μ v for 0.8v output with 15 db S/N. **Selectivity (IF Bandwidth):** 8 kc at 6 db. **Antenna Input:** Ferrite Rod; terminals for external antenna provided. **Frequency Response:** 20-5000 cps \pm 3 db. **Hum:** 60 db below 1 volt. **Output:** Min. output of 0.8 volt with 20 μ v input, 30% modulation. **Image Rejection:** 40 db. **Total Harmonic Distortion:** Below 2% up to 70% modulation. **Controls:** Tuning, Volume/Power On-Off, FM-AM Selector.

Kit **\$59.95**. Wired **\$94.95**. Includes Metal cover and FET.



STANDARD SERIES

EICO HFT94 am tuner system

Features a choice of wide (to 14 kc) or narrow (to 7 kc) bandpass, the former for the highest fidelity available on AM, the latter for pulling in weaker or more distant stations. The tuned RF stage and built-in ferrite loop antenna help provide sufficiently high selectivity and sensitivity so that very little signal is required to achieve acceptable signal-to-noise ratio. Noise and distortion are remarkably low. A high Q filter eliminates 10 kc whistle while reducing response by no more than 3 db at 9 kc.

SPECIFICATIONS

Typical Sensitivity: 3 μ v at 30% mod. for 1.0v output, 20 db S/N. **Overall Selectivity:** 14 kc at -6 db, (Narrow) 7 kc at -6 db. **Frequency Response:** (Wide) 20-9000 cps at -3 db, (Narrow) 20-5000 cps at -3 db. **Image Rejection:** 58 db. **Hum Level:** 60 db below output with 3 μ v input 30% modulation (1.0 Volt). **Distortion:** Less than 1% harmonic distortion at 100% modulation. **Output:** Low impedance plate follower (8000 ohms). Extra recording output. **Controls:** Bandwidth Selector, Level/Power On-Off, Tuning. **Tubes:** 2-6BA6, 1-6BE6, 1-12AU7/ECC82, 1-DM70 tuning eye, 1-6X4, 1-CK885 diode. **Power:** 117V, 60 cps; 40 watts. **Size (HWD):** 3 $\frac{3}{8}$ " x 12" x 8 $\frac{1}{4}$ ". **Wt.:** 12 lbs. Kit **\$39.95**. Wired **\$65.95**. Incl. metal cover, FET.



STANDARD SERIES

EICO MX99 fm-multiplex autodaptor

Incorporating the best features of matrixing and sampling techniques, the MX99 automatically delivers stereo or mono from the appropriate signal without being touched. An indicator lamp turns on when the station selected is broadcasting multiplex stereo.

Without phase-distorting filters in either the main or sub-channel paths, the unit provides suppression of all spurious signals including SCA (67KC) background music carrier, reinserted 38KC subcarrier, 19KC pilot carrier and all harmonics thereof.

The MX99 is self-powered, and includes low impedance cathode follower outputs. Controls include a multiplex defeat switch and a separation control. A separation of 35 db between channels is typical and overall gain of unity is provided from input to output on both stereo and mono. The MX99 is designed for all EICO equipment (HF90A, HFT92, ST96), and all other component quality, wide band FM tuners provided with a multiplex output. **Tubes:** 2-12AU7, 1-12AT7, 1-6AU6, 1-6D10, 1-6X4 and 6 diodes. **Size (HWD):** 3 $\frac{3}{8}$ " x 6 $\frac{1}{8}$ " x 9 $\frac{1}{4}$ ". **Weight:** 7 lbs. **Power Requirements:** 117V, 60 cps; 37 watts drain.

Optional cover **\$2.95**. Kit **\$39.95**. Wired **\$64.95**. Incl. FET.

Optional walnut cabinet for Standard Series:

For Eico models AF-4, HFT92 & HFT94

Model W-70 walnut cabinet, **\$12.50**.



STANDARD SERIES

EICO HFS-10 2-way speaker system



Two speakers: a 6½" low resonance, high-gap energy woofer-midrange transducer (5 oz. slug-magnet, 11,000 gauss flux density), and a matched 2" tweeter. Excellent woofer damping and rigid cabinet construction provide full bass without boom. Midrange reproduction is clean and with remarkably smooth transition into high frequencies. Because of high efficiency, excellent results are obtainable with amplifiers providing only 5-watts music power per channel (e.g., TV sets and radios). Amplifiers having up to 18-watts music power per channel may be used, if adjusted to reasonable volume levels. Its 5¼" depth makes it ideal for narrow shelf placement or wall mounting. Handsome oil-finish walnut cabinet.

SPECIFICATIONS

Frequency Response: ±6 db 60 to 15,000 cps. Crossover Region: 4000 cycles. Impedance: 8 ohms. Size (HWD): 12" x 18" x 5¼". Weight: 11 lbs. Wired only, \$29.95.

EICO HFS-8 2-way speaker system



The two speakers are: an 8" cloth bellows suspension, high-gap energy woofer-midrange transducer, and a matched 2" tweeter. The impregnated cloth bellows woofer suspension significantly reduces both harmonic and intermodulation distortion because of improved linearity of the force-displacement ratio. The long axial excursion (½" max. double peak) provides undistorted power handling and the very high ratio of magnet energy to cone weight insures precise control of the cone movement so essential to faithful reproduction. The bass reflex cabinet has an internal duct behind the port to tune the enclosure to the low 55 cps resonance of the woofer and thereby further reduce distortion in the octave from 50 to 100 cps. Midrange reproduction is clean and very smooth, with unmarred crossover to the high frequency range covered by the tweeter. The 2" tweeter also has high ratio of magnet energy to cone weight and provides remarkably smooth coverage with excellent "spread" of the high frequencies so important to stereo. High efficiency permits use with low power amplifiers, but amplifiers of any power may be used if adjusted to reasonable volume levels. Handsome oil-finish walnut cabinet.

SPECIFICATIONS

2 Speakers: 8" woofer with 8.1 oz. slug magnet, 10,500 gauss flux density; 2" tweeter with 1 oz. slug magnet, 10,000 gauss flux density. Power Handling Capacity: 25 watts on peaks of music or speech (per channel stereo). Crossover: Approximately 4000 cycles. Rated Impedance: 8 ohms. Frequency Response: ±5 db 50 to 15,000 cycles. Size (HWD): 13" x 22½" x 6½". Weight: 17 lbs. Kit \$44.95.

EICO HFS-6 3-way speaker system



Only 5¾ inches deep, 13½ inches high and 23½ inches wide, the new HFS-6 is at home on a bookshelf or table, or on a wall.

But, the HFS-6 delivers real big-system performance. And it takes only modest power to drive it. Bass tones are reproduced with big-speaker 'punch' and fullness by a 10" woofer with ¾ lb. ceramic magnet and 30 cycle free air resonance. An 8" mid-range speaker with high internal damping cone, and appropriate crossover and balancing eliminates mid-range accentuation and colorations to produce the neutral sound favored by experienced listeners. The extraordinary range (to 20,000 cps) and quality of the dome-type ultra-tweeter means full reproduction of the extreme highs that give sparkle and life to music. Handsome oil finish walnut cabinet.

SPECIFICATIONS

Power Handling Capacity: 25 watts (Music handling capacity to 40 watts). Crossovers: L/C mid-range network at 600 cycles and bridging tweeter capacitor at 4000 cycles. Rated Impedance: 8 ohms. Frequency Response: 50 to 20,000 cycles. Ducted Tuned Port: flattens impedance peak at fundamental resonance. Variable H-F Control: for adjusting brilliance to room acoustics. Size (HWD): 13½" x 23¼" x 5¾". Weight: 25 lbs. Kit with completely constructed cabinet \$59.95. Wired \$89.95.

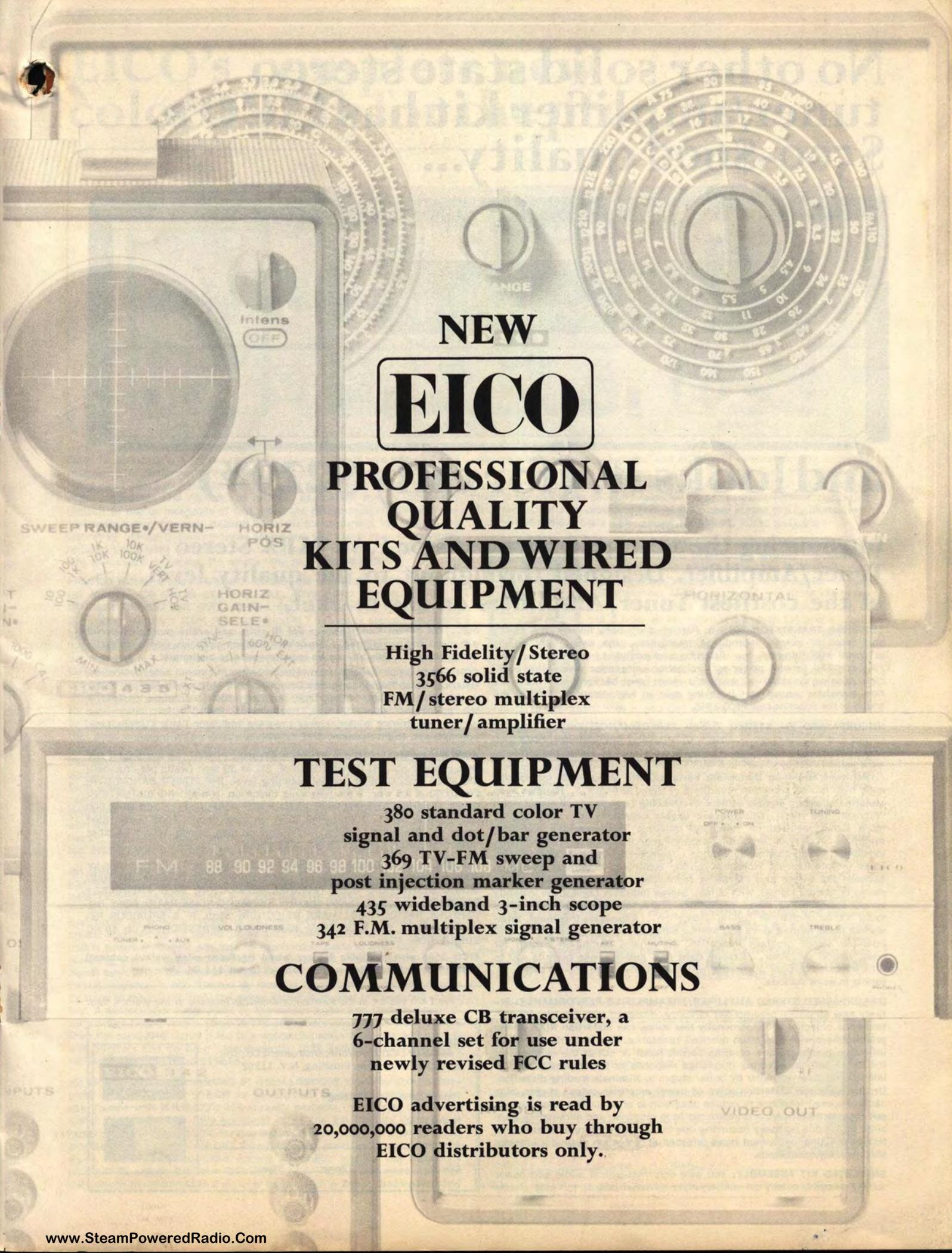
EICO HFS-1 horn tweeter speaker system



Extremely popular, high efficiency book-shelf speaker system kit supplied with fully assembled bass reflex cabinet ready for speaker mounting. All exposed surfaces smooth-sanded clear birch to permit easy and attractive finishing. 8" woofer has powerful ½ lb. slug magnet. Compression driver tweeter loaded by cast aluminum horn. Response engineered for smooth crossover at about 2000 cps. Bridging capacitor crossover with tweeter level control.

SPECIFICATIONS:

Power Handling Capacity: 25 watts; crossover 2000 cps. Woofer Response: ±4 db 80 cps to crossover; Tweeter Response: ±2 db crossover to 10,000 cps. Rated Impedance: 8 ohms. Size (HWD): 11" x 23" x 9". Weight: 25 lbs. Kit \$39.95. Wired \$47.95.



NEW

EICO

**PROFESSIONAL
QUALITY
KITS AND WIRED
EQUIPMENT**

High Fidelity/Stereo
3566 solid state
FM/stereo multiplex
tuner/amplifier

TEST EQUIPMENT

380 standard color TV
signal and dot/bar generator
369 TV-FM sweep and
post injection marker generator
435 wideband 3-inch scope
342 F.M. multiplex signal generator

COMMUNICATIONS

777 deluxe CB transceiver, a
6-channel set for use under
newly revised FCC rules

EICO advertising is read by
20,000,000 readers who buy through
EICO distributors only.

No other solid state stereo tuner/amplifier kit has EICO's \$500-\$600 quality...



and looks it. (for only \$229⁹⁵)

Introducing the new 3566 all transistor F.M. MPX Stereo Tuner/Amplifier. Designed throughout to the quality level of the costliest Tuner/Amplifiers on the market.

SUPERIOR TRANSISTOR SOUND: Perfect deep bass fidelity, the clarity and detail of exactly reproduced transients... the sweet, airy quality achieved with extremely low distortion and extended frequency response. Plus plentiful reserve power for orchestral crescendos (even with inefficient speaker systems)—all against a velvet quiet background: This is the new **transistor sound** that is taking over in high fidelity... This is the sound of the superior new EICO 3566.

UNSURPASSED FM STEREO TUNER PERFORMANCE: Entirely new FM "Front End" and 4-Stage IF Strip with wideband ratio detector, developed only after the practical requirements of optimum FM Stereo performance were established by experience with earlier transistor designs in the field... Achieves **Minimum Bandwidth Variation with signal level** for consistently high quality reception regardless of signal strength... **Handles even abnormally strong signals without overloading** (a strong local signal won't "blanket" the dial)... **Unsurpassed usable sensitivity** with only slightly more signal required for full 40db quieting. **Time-switching** transistor multiplex circuitry, incorporating separation and balance adjust, achieves outstanding 38db channel separation... completely effective filtering of all types of interference. Noiseless, purely electronic **Automatic Switching** between FM Stereo and FM Mono (controlled by the pilot frequency in stereo broadcast signal), with defeat. **Stereo Indicator Light** gives instantly visible indication of stereo broadcasts... **D'Arsonval tuning meter** gives exact center-of-channel tuning indication... **Adjustable-threshold interstation noise muting** gives you silence between stations while tuning, and infallible stereo program indication. Convenient Muting-Off Switch for weak station reception... **Exactly right AFC pull-in range** permits you to tune in stereo stations accurately with ease. Convenient AFC-Off switch for tuning in weak stations.

UNSURPASSED STEREO AMPLIFIER/PREAMPLIFIER PERFORMANCE: Entirely new amplifier/preamplifier circuitry, designed with the highest performance objectives. **Phenomenally low noise, low distortion RIAA phono preamplifiers** with maximum overload resistance. **Low distortion, variable inflection feedback tone controls** permit boost or cut at the extremes of the range without affecting mid-range response or the volume level. Isolated from power amplifier by buffer stages to eliminate loading distortion. **Unique, very low distortion drive of power amplifier output stages**, plus 36db of overall feedback to reduce distortion to an inaudible level. **No output transformers**—giving unrestricted bass response and eliminating transient distortions normally occurring due to output transformer characteristics. **Fast-acting instrument fuses** provide full protection against accidental shorting of speaker leads.

SIMPLIFIED KIT ASSEMBLY: You wire only non-critical audio and power supply circuits, mostly on military-style terminal boards for easy check-

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Then It Was Stolen From...

out... **FM "Front End," 4-stage FM IF strip, and entire multiplex circuit pre-wired and pre-aligned...** Transistor Sockets eliminate risk of transistor heat damage... **This kit can be recommended to beginners!**

CONTROLS: Input Selector, Mode (incorporates FM stereo defeat), Volume, Balance, Bass, Treble, Loudness Compensation, Muting-off, AFC-off, Power on-off. **INPUTS:** Mag. Phono, tape, auxiliary, 300 Ω antenna. **OUTPUTS:** left and right speakers, tape, headphones. **INDICATORS:** Illuminated tuning dial, tuning meter, stereo program indicator light. **FUSES:** Line, Left Speaker, Right Speaker, SIZE (HWD): 5 x 16½ x 13¼ inches.

AMPLIFIER/PREAMPLIFIER SPECIFICATIONS: POWER: 66 watts total IHF music power output. IM DISTORTION: 2% at 30 wpc (watts per channel); 1% at 25 wpc; 0.3% at normal listening level. IHF POWER BANDWIDTH: 20-20,000 at 25 wpc, 0.5% harmonic distortion. HARMONIC DISTORTION: 0.16% at normal listening level. FREQUENCY RESPONSE: ± 1db 10-60,000 cps. HUM & NOISE: 70db below 10mV on mag. phono; 70db below rated power on other inputs. SENSITIVITY: 3mV on mag. phono, 180mV on other inputs. **SPEAKER CONNECTIONS:** 8-16 ohms.

FM MPX STEREO TUNER SPECIFICATIONS: SENSITIVITY: 2 microvolts for 30db quieting (IHF Standard), 2.7 microvolts for 40db quieting. IHF HARMONIC DISTORTION: 0.5%. CHANNEL SEPARATION: 38db. FREQUENCY RESPONSE: ± 1db 20-15,000 cps. IHF SIGNAL-TO-NOISE RATIO: 60db. IHF CAPTURE RATIO: 4.5db. IMAGE REJECTION: 50db. IF & SPURIOUS REJECTION: 80db. SCA REJECTION: 40db. 38 KC SUPPRESSION: 55 db. 19 KC SUPPRESSION: 45db.

EICO 3566 also available factory wired (includes oiled walnut cabinet) \$349.95... optional oiled walnut cabinet for kit \$14.95.

Visit the EICO exhibit in the Pavilion of American Interiors at the World's Fair.

EICO EICO Electronic Instrument Co., Inc.
131-01 39th Avenue, Flushing, N.Y. 11352

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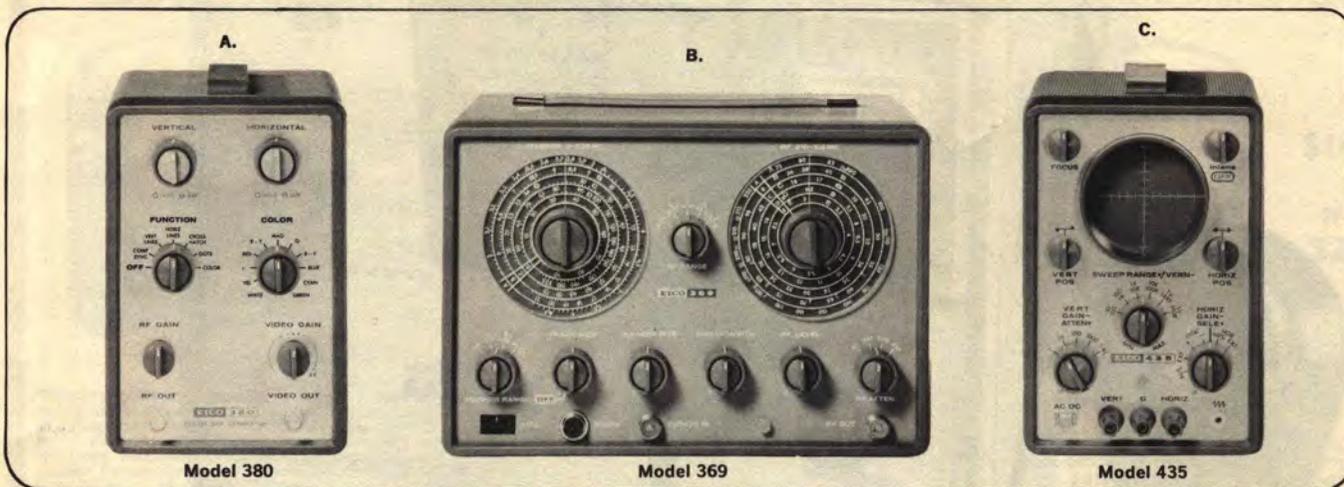
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EICO's complete new color TV lab for the pro



Color TV servicing is a job for professionals—and EICO's new color TV test equipment is designed to their requirements. Professional service engineers can't afford to waste time on apparent set troubles caused by make-shift, inaccurate test signals, or on test equipment that is inherently difficult to use or incapable of fast, accurate determinations. Critical professionals know they can depend on EICO for accuracy, reliability, and laboratory standard performance. Moreover, EICO has now successfully reduced equipment size while improving performance, to permit convenient on-location servicing. No wonder the pros choose EICO!

PROFESSIONAL PERFORMANCE IN COLOR TV TEST INSTRUMENTS/ (A) MODEL 380 SOLID STATE N.T.S.C. STANDARD COLOR SIGNAL & DOT-BAR GENERATOR (PAT. PEND.) Entirely unique in both providing completely standard 100% fully saturated N.T.S.C. color signals, including both chrominance and luminance signals exactly as specified, and in being completely transistorized. Color burst is precisely gated and delayed according to N.T.S.C. standards, and phase angles are permanently established by taps on a linearly distributed delay line, so that no adjustments are ever required. Use of saturated transistors for switching and delay provides square "clean" waveforms without significant overshoots or ringing for excellent signal definition. The design of the 380 is an absolute protection against obsolescence, and assures the professional service engineer that apparent set trouble is not caused by a non-standard test signal. In addition to generating 11 different color signals, one at a time, for hue and demodulator adjustments, the Model 380 generates dots, crosshatch, horizontal lines, and vertical lines for convergence and linearity adjustments. Both video and RF outputs are provided, with gain controls. Three crystal-controlled oscillators are employed for color burst and color information, convergence and sync signals, and RF output on TV channel 3 (exchangeable for TV channel 4). Entirely stable and inherently rugged by solid state design, the Model 380 is also outstandingly compact and weighs only 4 lbs. SIZE (HWD): 8½ x 5¼ x 6¾ inches. Kit \$129.95. Wired \$169.95.

(B) MODEL 369 TV-FM SWEEP & POST-INJECTION MARKER GENERATOR (CRYSTAL-CALIBRATED) For easiest, fastest visual alignment of color or B&W TV, and FM receiver RF & IF circuits. Five sweep ranges from 3-220 mc and four marker ranges from 2-225 mc, plus a crystal marker oscillator that turns on when a crystal is plugged into the panel socket (4.5 mc crystal supplied for TV sound alignment). Controllable inductor sweep circuit is purely electronic and has no mechanical parts to wear out. Retrace blanking, and a 3-stage AGC circuit that keeps the amplitude of the sweep signal even when the widest sweep width of 20 mc is used. With the 369, circuit response is not affected by markers and markers are not affected by traps in the circuit. Only the sweep signal is applied to the circuit under test. A demodulator cable picks up the output signal and feeds the demodulated signal to a mixer stage in the 369 where the markers are added. Then the combined signal is fed to a 'scope. Separate trace size and marker size controls can be used independently. SIZE (HWD): 8½ x 12½ x 7½ inches. Kit \$89.95. Wired \$139.95.

(C) MODEL 435 DC WIDEBAND 3" OSCILLOSCOPE You'll be able to complete many more color or B&W TV service calls on location if you can take your 'scope with you. EICO's 435 is really portable (½ the size of conventional 5" scopes) and fully equipped to do the job. Quality equal to or better than the finest 5" TV service scopes is achieved with a far sharper, brighter trace on a flat-face CRT. Direct-coupled, push-pull V amplifier, with 4-pos. frequency-compensated decade attenuator has no low frequency phase shift, and is flat from DC-4.5mc (+1, -3db). Far more accurate p-p voltage measurements than ever before with a Zener diode-controlled

square wave calibrating voltage, and an edge-lit calibration grid. Easier to use for TV servicing with pre-set TV-V and TV-H positions in addition to 4 sweep ranges, automatic sync limiter and amplifier, and full retrace blanking. Amazingly easy to build because of professional interior packaging that has eliminated crowding and permits easy access to any component. SIZE (HWD): 8½ x 5¼ x 12½ inches. Kit \$99.95. Wired \$149.95.



ONE MORE MATCHING INSTRUMENT EQUIPS YOU FOR FM STEREO SERVICING, MODEL 342 FM MULTIPLEX SIGNAL GENERATOR. The EICO Model 342 is a compact, efficient instrument essential for test or alignment of the multiplex circuits of FM Multiplex Stereo tuners, receivers, and radios. FM Stereo is a field as fast-growing as color TV, and a multiplex generator is an absolute must for getting a share of the increasingly important and profitable service business. The circuitry of the Model 342 is of the design lab quality needed for restoring original performance quality to the costliest equipment, but the controls have been simplified for fast, uncomplicated operation. With it, you can quickly measure and adjust channel separation and balance, or the input level needed for synchronization or switch-over to stereo operation. The Model 342 provides signals as perfect as those available from generators costing many hundreds of dollars. It provides both a controlled amplitude composite audio output for direct signal injection beyond the detector into a multiplex section, and the same signal modulating an FM RF carrier at about 100mc (adjustable) with controlled deviation ± 75kc (100% modulation) for connection directly to the antenna terminals. Either a built-in 1kc oscillator (below 0.3% distortion) or an external audio oscillator may be used to provide the left only, right only, difference, or sum signals. The 19kc pilot signal is crystal controlled and may be switched on or off independently of the composite signal. The signal may be obtained without audio information and only the 19kc pilot injected. An oscilloscope sync output is provided, with a choice of either 19kc sync or internal 1kc/external oscillator sync. In addition, an input is provided for connecting an external audio oscillator to provide an SCA signal when required. Another important and valuable feature of the Model 342 is dual inputs and amplifiers for a stereo source to permit FM MULTIPLEX STEREO demonstrations to customers when there are no stereo programs being broadcast. Modern compactron tubes are used to obtain a lightweight, compact package that is easily portable. SIZE (HWD): 8½ x 5¼ x 12½ inches. Kit \$99.95. Wired \$149.95.

Visit the EICO exhibit in the Pavilion of American Interiors at the World's Fair.

EICO EICO Electronic Instrument Co., Inc.
131-01 39th Avenue, Flushing, N.Y. 11352

Send new 1965 catalog featuring more than 230 EICO Products.

Name _____

Address _____

City _____ Zone _____ State _____



New Eico 777 deluxe CB transceiver dual conversion superhet, 6 crystal-controlled channels, 3-way power supply. Build it for \$99.95.

Compare it feature by feature with CB transceivers costing many dollars more!

Dual conversion superhet receiver (1750 kc 1st IF; 262 kc 2nd IF), with RF stage for razor sharp selectivity. 6 crystal-controlled transmit/receive channels, easily selected by illuminated front panel switch. Illuminated dial continuous vernier tuning of receiver for all 23 channels. Series type noise limiter circuit for quiet reception, plus adjustable squelch and AVC. Illuminated, direct-reading S-Meter indicates received signal strength. Spotting switch for exact receiver tuning. Full use of 5 watts input maximum legal power, and high intelligibility of transmission, with 3 watts clean audio modulating power. External controls for matching plate load of RF final amplifier to antenna for optimum power transfer. 3-way power supply — 6 or 12 VDC battery power or 117 VAC. Kit builders can put 777 on air without supervision of a person holding a commercial radio-telephone license. Transmitter oscillator circuit and RF final mounted, wired, tuned and sealed to comply with FCC regulations. Sturdy Posi-Lock® mounting bracket permits 180° rotation with positive lock every 30°. Kit \$99.95; wired \$149.95.

770 SERIES 5 WATT, 4 CHANNEL CB TRANSCEIVERS—AS LOW AS \$69.95 Your choice of 5 Watt transceivers for 117 VAC, 117 VAC/12 VDC or 117 VAC/6 VDC. 4-channel, crystal-controlled transmitter and superhet receiver with RF stage, 1mv sensitivity, noise limiter and adjustable squelch. Receiver tunes all 23 channels —can be crystal-controlled on 1 channel. **Model 770:** 117 VAC only. Kit \$69.95 wired \$99.95. **Model 771:** 117 VAC & 6 VDC. Kit \$69.95; wired \$99.95. **Model 772:** 117 VAC & 12 VDC. Kit \$69.95; wired \$99.95.



NOTE: 777 has rear socket for selective calling attachment.

EICO

EICO Electronic Instrument Co., Inc.
131-01 39th Avenue, Flushing, N.Y. 11352

Add 5% in West

Please send: New 1964 catalog Short Course for Novice License

Name _____

Address _____

City _____ Zone _____ State _____

EICO 565 v-o-m

20,000 ohms/volt



kit
\$24.95

wired
\$29.95

applications

Accurate TV, FM and AM radio servicing... high current range for complete appliance testing... wide-range DC voltage measurement at 20,000 ohms/volt sensitivity... wide-range AC and output voltage, decibel, and resistance measurement... testing commercial and amateur transmitters (since its accuracy is unaffected by RF fields)... checking automobile electrical wiring, generators, starters, batteries... movie, marine, aircraft and air conditioning equipment.

features

- 31 RANGES for maximum versatility
- DC Sensitivity of 20,000 ohms/volt—minimizes circuit loading
- Large 4½", 50 ua meter movement; 2-color scale—
- Beautiful, gleaming case, molded of high-impact black bakelite
- Factory-adjusted, wire-wound potentiometers compensate for individual rectifier characteristics to assure accurate measurement
- Output voltage ranges for measuring signal voltages in circuits where DC is present

specifications

DC Voltage: Ranges 0-2.5, 10, 50, 250, 1000, 5000 volts
Sensitivity 20,000 ohms/volt

AC/Output Voltage: Ranges.....0-2.5, 10, 50, 250, 1000, 5000 volts
Sensitivity 1000 ohms/volt

DC Current: 0-100 ua, 10 ma, 100 ma, 500 ma, 10 amp

Decibels: -12 to +55 db in 5 ranges

Resistance: Ranges: 0-2000 ohms, 0.2 megohms, 20 megohms (2 ohms to 20 megohms)

Meter: 4½" size, 50 ua movement

Size: (HWD): 6¾" x 5¼" x 3" Wt.: 3 lbs.

V-O-M #555 20,000 ohms/volt
kit \$29.95 wired \$34.95

Same as #565 above but with 1% precision resistors

EICO 536 v-o-m

1,000 ohms/volt



kit
\$14.95

wired
\$18.95

applications

Wide-range AC voltage and current, DC voltage and current, decibel and resistance measurements... servicing of portable, ac-dc, transformer-operated, or car radios... appliance servicing... continuity checking... electrical repairs in the home or car.

features

- 31 RANGES for maximum versatility
- 1000 ohms/volt sensitivity on both AC and DC
- Large 3" 400 ua meter with easily-read, 2-color scales
- New, high quality instrument rectifier in dual half-wave hook-up
- Both shunt and series rectifier compensation for uniform accuracy
- One set of precision divider resistors on both AC and DC minimizes switching
- Beautiful, gleaming, black case molded out of high-impact bakelite

specifications

AC/DC Voltage Ranges: 0-1, 5, 10, 50, 100, 500, 5000 volts

AC/DC Sensitivity: 1000 ohms/volt

AC/DC Current Ranges: 0-1 ma, 10 ma, 0.1 amp, 1 amp

Ohms Ranges: 0-5000 ohms, 100K ohms, 1 megohm

DB Ranges: -20 to +69 in 6 ranges

Meter: 3" size, 400 ua movement

Size: (HWD): 6½" x 3¾" x 2¾" Wt.: 2 lbs.

V-O-M #526 1,000 ohms/volt
kit \$15.95 wired \$19.95

Same as #536 above, but with 1% precision resistors

EICO 566 v-o-m

1,000 ohms/volt



kit
\$16.95

wired
\$22.95

applications

Wide-range AC voltage and current, DC voltage and current, decibel and resistance measurements... servicing of portable, ac-dc, transformer-operated or car radios... appliance servicing... continuity checking... electrical repairs in the home or car.

features

- 38 RANGES for maximum versatility
- 1000 ohms/volt sensitivity on both AC and DC
- Large 4½" 400 ua meter with easily-read, 2-color scales
- New high quality instrument rectifier in dual half-wave hook-up
- Both shunt and series rectifier compensation for uniform accuracy
- One set of precision divider resistors on both AC and DC minimizes switching
- Beautiful, gleaming black case molded out of high-impact bakelite

specifications

AC/DC/Output Ranges: 0-1, 5, 10, 50, 100, 500, 5000 volts

AC/DC Sensitivity: 1000 ohms/volt

AC/DC Current Ranges: 0-1 ma, 10 ma, 0.1 amp, 1 amp

Ohms Ranges: 0-5000 ohms, 100K ohms, 1 megohm

DB Ranges: -20 to +69 in 6 ranges

Meter: 4½" size, 400 ua movement

Size: (HWD): 6¾" x 5¼" x 3" Wt.: 3 lbs.

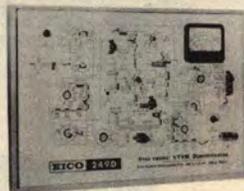
V-O-M #556 1,000 ohms/volt
kit \$18.95 wired \$25.95

Same as #566 above, but with 1% precision resistors

VISU-TRONIC AIDS FOR ELECTRONIC TEACHING

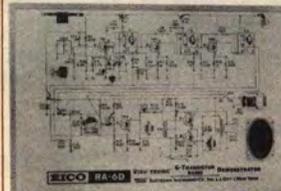
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- Components snap in and out quickly to allow easy substitution and trial troubleshooting.
- Circuits silk-screened on durable masonite, protected by transparent lacquer coating — enclosed in wood frame.
- Equipped with mounts for wall and legs for desk-top use.
- 27¾" H x 40¾" W x 3½" D.



VISU-TRONIC®
VTVM Demonstrator
#249D \$89.95

A complete schematic of EICO's Model 249 7½" meter VTVM. Complete with all necessary parts to build a working model of a VTVM, including UNI-PROBE®, in kit form.



VISU-TRONIC®
6-TRANSISTOR RADIO
DEMONSTRATOR
#RA6D \$79.95

Complete, working demonstrator of EICO's RA6 transistor radio. All necessary parts included.

DYNAMIC VTVM DEMONSTRATOR #221D \$15.00



Realistically reproduces the entire front panel of the famous EICO VTVM #221 — two-and-a-half times as big as life, for clear legibility and easy viewing, even from the back of the room. Function and range knobs click convincingly into place when turned. Dial may be set by turning Zero Adjust or Ohms Adjust knob, just as on an actual VTVM. SPECIFICATIONS: Punched holes for easy hanging • Rugged steel cabinet, brushed aluminum panel • 13" meter scale • 23" high, 14¾" wide 3¾" deep.

EICO 723 new 60-watt cw transmitter

Ideal for the novice as well as for the advanced ham requiring a low-power stand-by rig, the new Model 723 is a fine example of EICO's uncompromising engineering standards. Employing time-proven circuitry throughout, the new model is nevertheless up-to-the-minute in conception and design. The 6CL6 oscillator is an electron-coupled Colpitts type noted for low crystal heating and minimized effect of plate loading on frequency, and the full-wave, choke input, 500-volt power supply employs a high-efficiency GZ34 rectifier. The output pi network consists of a tapped coil and plate-tuning and antenna-loading air variables. Another air variable tunes the grid tank of the final (and the plate tank of the oscillator). The panel meter can be switched into either the grid or plate circuit of the final. Rear apron load switch inserts extra capacity for low Z loads on 80 and 40 meters. Modulator/accessory socket for modulator input, antenna relay, VFO power take-off and emergency power input. Features include:

- 60 watts input to a rugged 6DQ6-B neutralized final on CW
- External plate modulation, permitting use as AM phone transmitter of up to 50 watts input
- One-knob bandswitch covering 80, 40, 20, 15, and 10 meters
- One-knob Off-Standby-Tune-Transmit switch
- Oscillator keying for break-in operation
- Effective TVI suppression through filtering and bypassing, copper-plated chassis and solid die-cast bezel providing tight-fitting joint between panel and chassis
- Beautifully modern styling—attractive in living room or "shack"

"Compact; well-planned layout. Clean-sounding, absolutely hum-free carrier... stable." —ELECTRONICS WORLD



Kit \$59.95
Wired \$89.95

SPECIFICATIONS: Power Input: 60 watts CW; 50 watts AM-phone with external plate modulation. Output Load Impedance: 50-1,000 ohms. Band Coverage: 80, 40, 20, 15, 10 meters. Operation: Crystal, external VFO, external plate modulation. Tubes: 1-6DQ6-B final amplifier, 1-6CL6 oscillator, 1-GZ34 rectifier. Power Requirements: 117 volts, 60 cycles AC, 140 watts. Size (HWD): 6" x 8 1/2" x 11 1/4". Weight: 15 lbs.

EICO 720 90-watt cw transmitter †

"Ideal for veteran or novice"—ELECTRONIC KITS GUIDE
"Top quality"—POPULAR ELECTRONICS
"Well designed"—ELECTRONICS WORLD (LAB-TESTED)

This exceptionally conservative, stable, high efficiency instrument, housed in a modern "low-silhouette" cabinet to permit its use in normal living room space, is a very "clean" 90-watt CW, 80 through 10 meters bandswitching amateur transmitter. External plate modulation terminals permit use as an AM phone transmitter delivering up to 65 watts plate power input with the EICO Model 730 High Level Universal Modulator-Driver. A basic VFO unit is available, which can be plugged into the Model 720 without modification. Some important design features of the 720 are:

- One-knob band-switching—no coils to change
- One-knob power, tune, and operate switch
- Final amplifier grid drive control without detuning oscillator
- 6146 final amplifier for full 90 watts CW input
- Completely sealed cabinet and careful by-passing and choking of all input and output leads for effective TVI suppression
- Protection of final amplifier, provided by clamper tube circuit, when a loss of excitation exists
- No shock hazard at key terminals
- "Novice limit" calibration (75 watts) on the meter
- Matching antennas from 50 to 100 ohms

† U. S. PAT.



Kit \$89.95 Wired \$129.95

SPECIFICATIONS: Power Input: 90 watts CW (novice limit calibration on meter); 65 watts AM-phone with EXT plate modulation. Output Load Impedance: 50-1000 ohms. Band Coverage: 80, 40, 20, 15, 11, 10 meters. Operation: XTAL, EXT, VFO. Tubes: 1-6146 final amplifier, 1-6CL6 oscillator, 1-6AQ5 clamper, 1-6AQ5 buffer-multiplier, 1-GZ34 rectifier. Power Requirements: 117 volts, 60 cycle AC. Size: (HWD): 5" x 15" x 9". Shipping Weight: 30 lbs. Weight: 30 lbs.

EICO 722 self-powered variable frequency oscillator

A VFO that is truly capable of coping with the crowded conditions encountered today in the Ham Bands, the 722 provides full coverage of the five bands from 80 to 10 meters in six ranges (the 10-meter band being covered in two ranges). Output is high enough to drive any modern transmitter on all the bands. Near-crystal stability is achieved by carefully coordinated electrical, mechanical, and thermal design:

- Electron-coupled, series-tuned Colpitts (Clapp) type oscillator incorporates a 1 1/2" air-core coil and temperature-compensating capacitors
- High L to C ratio minimizes the circulating tank current, virtually eliminating drift due to internal heating of tank circuit
- Buffer-multiplier stage performs as a "straight-through" buffer amplifier on 80 meters, and a doubler on all higher bands, providing excellent isolation between output load and oscillator, as well as high output
- VR tube eliminates any effect due to line voltage variation
- Rigid mechanical construction and use of double bearing on main tuning capacitor avoids mechanical causes of frequency shift
- Enclosure of frequency-determining elements of oscillator in shielding compartment provides both heat isolation and shielding from outside mechanical movements and body capacity
- Low heat silicon diode doubler power supply

Other important design features include a very large and easy-reading slide rule dial and a velvet-smooth, extremely reliable drive. Remote control operation is possible with an external switch or relay that is energized by the transmitter. A lever type spotting switch is provided on the front panel.



Kit \$44.95
Wired \$59.95

SPECIFICATIONS: Output Frequencies: 3.5-4.0 mc, 7.0-7.3 mc, 7.25-7.64 mc. Calibrated Bands: 3.5-4.0 mc (80m), 7.0-7.3 mc (40m), 14.0-14.4 mc (20m), 21.0-21.45 mc (15m), 28.0-29.2 mc (10m), 29.0-29.7 mc (10m). RF Output: 10-20 V. Tube Complement: 6AU6 oscillator, 6CB6 buffer-multiplier, OA2 voltage regulator. Power Source: 117 V, 60 cps, AC. Controls: BAND PWR OFF switch, FUNCTION (SPOT, STANDBY, OPERATE) switch, TUNE control. Size (HWD): 6" x 8 1/2" x 9". Weight: 8 lbs.

EICO 710 grid-dip meter



Kit \$29.95 Wired \$49.95

Including complete set of coils for full band coverage

- An exceptionally versatile, stable, rugged, compact instrument for work in amateur radio and in electronic servicing
- Covers all broadcast, FM, "ham" and TV bands in 8 overlapping ranges
- Precision 500-microampere meter movement
- Accurately wound ($\pm 1\%$) plug-in coils

Basically a VFO with a microammeter in its grid circuit, the 710 determines frequency of other oscillators or tuned circuits; has a sensitivity control and phone jack to facilitate "zero beat" listening; and excels as an absorption wave meter. Ham uses: pretuning and neutralizing transmitters, power indication, locating parasitic oscillations, antenna adjustment, correcting TVI, general de-bugging with transmitter power off, determining C,L,Q. Electronic servicing uses: alignment of traps, filters, IF's, peaking compensation networks, and as signal or marker generator. Easy to hold and thumb-tune with one hand. Continuous coverage of broadcast, FM, ham and TV bands in 8 ranges. Brushed satin deep-etched aluminum panel; grey wrinkle steel case.

SPECIFICATIONS: Frequency Range: 400 kc-250 mc in 8 overlapping ranges. Meter Movement: 500 microamperes. Plug-in Coils: Accurately wound to $\pm 1\%$ accuracy, inside polystyrene forms. Labelled for easy identification. Circuit: Exceptional stability is obtained with improved grid current stability over tuning range. Tuning: Tuning condenser, equipped with planetary drive of 1:7 ratio. Tube: 6AF4(A) (Colpitts oscillator). Scale: Rotating drum. 340° rotation. All scales on the drum are the same length for all ranges. Scale is illuminated by pilot light, is approximately 3 3/4" long. Power Requirements: 117V, 60 cps; 10 watts. Power Supply: Transformer-operated selenium rectifier. Size: (HWD): 2 1/4" x 2 3/4" x 6 5/8". Net Weight: 3 lbs.

EICO 730 high-level universal modulator-driver



Kit \$59.95 Wired \$89.95

Cover E-5 \$4.50

SPECIFICATIONS: Power Output: 50 watts. Output Transformer Matching Impedances: 500 to 10,000 ohms. Inputs: Low level, high impedance—crystal or dynamic mikes. High level, low impedance—phone patch, etc. Tubes: 1-ECC83, 12AX7 speech amplifier, 1-6AL5 speech clipper, 1-6AN8 amplifier driver, 2-EL34/6CA7 power output, 1-EM84 over-modulation indicator, 1-GZ34 rectifier. Power Requirements: 117 volts, 60 cycles; 150 watts. Size: (HWD): 6"x14"x8". Weight: 21 lbs.

This superb, truly versatile, low cost modulator can deliver 50 watts of undistorted audio signal for phone operation—more than sufficient to modulate 100% the EICO Model 720 90-Watt CW Transmitter, EICO Model 723 60-Watt CW Transmitter or any transmitter whose RF amplifier has a plate input power of up to 100 watts.

The multi-match output transformer matches most loads between 500 to 10,000 ohms. Its unique over-modulation indicator permits easy, reliable monitoring, thus precluding any need for a plate meter. It provides low level speech clipping and filtering with peak speech frequency range circuitry. Its low distortion feedback audio circuitry employs premium quality audio power pentodes; the vacuum tube rectifier is the extra-rugged, slow warmup GZ34 which eliminates high starting voltages and lengthens electrolytic and tube life.

Balance and bias adjustment controls are also provided. Finest quality, conservatively rated parts are used throughout. The Model 730 is also an excellent low impedance driver for a class B high-power modulator.

EICO 706 code practice oscillator



Kit \$8.95 Wired \$12.95

Supplied with battery

Invaluable aid for learning Morse Code with outstanding conveniences not found in other units. Unusually efficient speaker provides a clean, loud signal. Includes pitch control to obtain subjectively pleasing tone, phone jack for private use, and choice of tone, flashing light, or both together. Employs battery-operated transistor oscillator to provide many years of trouble-free service.

SPECIFICATIONS: Tone Frequency Range: Approx. 500 to 2000 cps, continuously variable. Controls: PITCH, TONE, and/or LIGHT. Current Drain (Tone): 40 ma at 3VDC. Current Drain (Light): 300 ma at 3VDC. Current Drain (Tone and Light): 340 ma at 3VDC. Terminals: Key, Phones. Case: High-impact bakelite. Panel: Satin finish, deep-etched aluminum. Size: (HWD): 6 1/2" x 3 3/4" x 2 3/4". Shipping Weight: 2 lbs.

EICO 965 professional r-c bridge & r-c-l comparator



Kit \$99.95 Wired \$169.95

The model 965 is an extremely flexible RC bridge, capacitance analyzer usable also for diode reverse and transistor quiescent current measurements, and insulation testing. It incorporates a 6 range DC VTVM and 11-range DC Vacuum-tube Micro-ammeter and Milliammeter that are externally usable.

The bridge may be used for resistance and capacitance measurements, and also as a resistance-capacitance-inductance comparator with external standards connected to the binding posts provided. A very low AC bridge supply voltage at line frequency permits testing all types of capacitors without damage. The bridge may also be supplied from an external source of higher frequency and/or voltage for measurements in accordance with EIA standards. Furthermore, an external polarizing voltage may be applied to special capacitors above .05 μ F for which polarity reversal is not desirable or permitted. A sensitive detector amplifier permits a sharply-defined null to be observed on the output meter. Power factor measurement is provided for capacitors above .05 μ F on a calibrated control. A plug-in shield is supplied to be used while measuring small capacitors. A built-in variable DC supply is used for capacitor leakage analysis in conjunction with the DC VTVM and DC Micro-ammeter and Milliammeter. Leakage measurements may be made either to EIA standards, or for actual working conditions. Overload protection is provided for the power supply, with overload signalled by lighting up of the meter. The meter is overload protected as well. A unique "Instant Zero" pushbutton permits instantaneous zero adjustment of the VTVM without changing any settings or connections. A special "Discharge" switch position and a panel warning light assure safety in handling of components.

TECHNICAL SPECIFICATIONS: Capacitance Ranges: 5pF-10000pF, 500pF-1 μ F, .05 μ F-100 μ F, 50 μ F, 5000 μ F; Power Factor: 0-80% at 60cps.; Resistance Ranges: 0.5 Ω -1K Ω , 50 Ω -100K Ω , 5K Ω -10M Ω , 5M Ω -500M Ω ; Higher Resistances up to 200,000 M Ω can be measured with the metered variable DC supply. ; RCL Comparator Range: .025-50 (ratio); Bridge Supply Voltage: Below 0.5 VAC RMS at line frequency, except 10 VAC RMS on lowest capacitance and highest resistance ranges; Variable DC Supply Voltage Ranges: .4V-1.5V, 1.4V-5V, 4V-15V, 14V-50V, 40V-150V, 140V-500V; maximum output 10mA; DC VTVM Ranges: 0-1.5V, 5V, 15V, 50V, 150V, 500V. Input Z 10M Ω ; DC VTAM Ranges: 0-15 μ A, 5 μ A, 1.5 μ A, 5 μ A, 15 μ A, 50 μ A, .15mA, .5mA, 1.5mA, 5mA, 15mA. Voltage drop across terminals 75mV; Accuracy: \pm 5% throughout, except on power factor below 30%; Power Requirement: 115VAC, 60cps., 32-45 watts; Size (HWD): 8 $\frac{1}{2}$ x12 $\frac{1}{2}$ x9"; Weight: 15 lbs.

EICO 955 in-circuit bridge type capacitor tester

kit \$19.95 wired \$39.95



facilities

"In actual use, tests were simple, fast and clearly indicative. But for the capacitance-measuring function, nothing more than a simple switch need be operated. . . . Part of the manufacturer's new line of industrial equipment, the 955 is sturdily and attractively housed."—ELECTRONICS WORLD

The Model 955 is a truly advanced, highly dependable in-circuit and out-of-circuit capacitor tester. In addition to providing extraordinarily sensitive short and open tests, the Model 955 includes a Wien Bridge for capacity measurements, with a unique shunt resistance balancing provision* that permits in-circuit measurement even when the shunting resistance is comparatively low.

Indicator: Electron-ray tube EM84/6BG6. Bright bar pattern gives sharp, unmistakable indications.

Test Selector: Three-position switch—SHORT, CAPACITY, OPEN.

Test Leads: One coax-type for all tests; detachable, with mic connector coupling to unit.

Short Test: Out-of-circuit or in-circuit short check with shunt resistance as low as 1 ohm. Reliable up to 2000 μ f. Closed bars indicate short. 60 cps test frequency. Max. test voltage 6.3VAC (open leads), decreasing with decreasing impedance.

Open Test: Out-of-circuit or in-circuit open test of capacitors as small as 15 μ f with instrument adjusted normally. (With constant voltage supply, internal adjustment can be made for 5 μ f sensitivity). For in-circuit testing, shunt resistance may be as low as 35 ohms for capacitors above 250 μ f (7K ohm at 15 μ f). Closed bars indicate open. Test frequency approximately 19mc, very low voltage.

Capacity Measurement: From 0.1 to 50 μ f using Wien Bridge with unique shunt resistance balancing* permitting \pm 10% accuracy at any point on the capacity dial in out or in-circuit measurement. The capacity scale is screened on a 4" diameter, heavy-gauge lucite disc. The reading point is just above the center of the indicator bar-pattern. Operating frequency of the bridge is 60 cps.

The \pm 10% accuracy is achieved by a sharp null indication (closed bars) when shunt resistance is balanced by the RC BALANCE control, and the 1-50mfd CAPACITY dial is set at the correct capacitance value. The RC BALANCE control is calibrated in RC product (equivalent shunt resistance in kilohms multiplied by the capacitance in microfarads) in two ranges, 0.6 to 10.5 and 7 to infinity, selected by the RC RANGE switch. The very wide RC product range provided, with excellent spread permitting easy setting to any value, is the key to the accurate capacity measurement provided either in or out of circuit. For out-of-circuit measurements, the RC product value can be translated into dissipation or power factor by means of conversion charts in the manual.

Line Voltage: 105 to 130VAC, 60 cps; 8 watts. A LINE ADJUST control on the panel permits adjustment to maximum sensitivity regardless of line voltage variation within this range.

Miscellaneous: Exceptionally attractive, professional laboratory styling. Transformer-operated and protected by fuse in extractor-post mount.

Tubes: 1-6C4, 1-EM84/6FG6.

Size (HWD): 8 $\frac{1}{2}$ " x 5 $\frac{3}{4}$ " x 6".

Weight: 6 lbs.

*patent applied for

EICO 950B resistance-capacitance bridge & r-c-l comparator

kit \$23.95

wired \$29.95



4 separate Capacity ranges and 4 separate Resistance ranges! The only instrument of its kind with a Comparator Range for measurement of capacitance, resistance and inductance with a complementary component as a standard! You can depend on the EICO #950 for rapidity and precision in the measurement of unknown resistors and condensers. You make your readings directly on the calibrated front panel—without the need for complex and time-consuming computations. The transformer-operated power supply assures safety of operation.

Here's a precision professional instrument that should be standard equipment in every laboratory and service shop. With the extremely valuable COMPARATOR RANGE—exclusive with EICO at this outstanding low price—the #950 is one more "best buy" from the serviceman-minded electronics laboratories of EICO.

applications

Capacitance measurement of paper, mica, electrolytic and ceramic capacitors . . . resistance measurement . . . comparison measurement of resistance, capacitance and inductance with a complementary component as a standard . . . power factor measurement on electrolytics . . . finding leaky and shorted capacitors (built-in source of continuously variable polarizing voltage).

features

Direct reading scales for measurement of capacitance and resistance • Direct reading ratio scale for comparison measurement of capacitance, inductance and resistance • Extremely sensitive leakage indication directly on eye tube • Sensitive magic eye tube null indicator • Continuously variable polarizing leakage test voltage from 0 to 500 volts DC \pm 10%.

specifications

Capacity: 4 ranges, 10 μ f to 5000 μ f. Resistance: 4 ranges, 0.5 ohms to 500 megohms. Comparator: 1 range, ratio from .05 to 20 (400 to 1). DC polarizing voltage: 0 to 500 volts DC (continuously variable) \pm 10%. Tube Complement: 1-1629, 1-6X5. Power Requirements: 117 volts AC, 60 cps. Size (HWD): 8" x 10" x 4 $\frac{3}{4}$ ". Weight: 8 lbs. Smart professional styling—satin finish deep-etched aluminum panel, grey wrinkle steel case.

EICO

902 im/harmonic distortion meter & ac vtvm

complete audio engineering lab in one low-cost package



wired \$250

The New EICO 902 is a unique complete audio tool combining IM and Harmonic Distortion Meter, sensitive AC VTVM and db meter in one compact instrument. Important to broadcasters, it meets the requirements for FCC Proof-of-Performance testing.

specifications

IM DISTORTION: LF to HF ratios 4:1 and 1:1; **Test Output:** 0.5v; **Output Z:** 600Ω or external; **Input Z:** 500kΩ; **Minimum Input:** 0.7v; **Distortion Ranges:** 0.3, 1, 3, 10, 30%; **Accuracy:** ± 5% of full scale; **Residual Distortion:** 0.05%

HARMONIC DISTORTION: **Frequency Ranges:** 20-200, 200-2000, 2000-20,000cps; **Input Z:** 500kΩ; **Minimum Input:** 0.7v; **Distortion Ranges:** 0.3, 1, 3, 10, 30, 100%; **Accuracy:** ± 5% of full scale; **Internal Distortion:** 0.1%

AC VTVM: **Ranges:** .01, .03, 0.1, 0.3, 1, 3, 10, 30, 100, 300 volts RMS. Also db scale of -20 to +2; **Input Z:** 2MΩ; **Frequency Response:** ± 0db 10cps to 100kc, -3db at 300kc; **Accuracy:** ± 4% of full scale.

POWER SUPPLY: V-R tube regulated; **Power Requirements:** 115VAC, 60cps, 60 watts; **Size (HWD):** 12½" x 8½" x 10½"; **Weight:** 18 lbs.; **Export Model:** 115 and 230 VAC, 60/50cps.

EICO 250 ac vtvm & amplifier



kit \$49.95
wired \$79.95

"Meets most needs of critical audio specialists"—PF REPORTER

The Model 250 is a high sensitivity, wide-band AC VTVM & AMPLIFIER of laboratory accuracy and quality. A switch on the panel converts the instrument to a wide-band amplifier with a gain of 60 db on the 1mv range, and a maximum output of 5 volts RMS.

The instrument responds to the average value of the applied wave and reads in RMS value of a sine wave. The 0-1, 0-3 scales are linear. The decibel scale is based on 0 db = 1 mw in 600 ohms, with 10 db interval between ranges.

specifications

VOLTMETER: See Model 255

AMPLIFIER: **Max. Output Voltage:** 5 RMS volts. **Max. Gain (1 mv Range):** 60 db. **Frequency Response:** +0, -3 db 8 c to 800 kc. **Maximum Hum & Noise:** -40 db with signals above 2 millivolts. **Input Impedance:** 10 megohms shunted by 15 mmf. **Output Impedance:** 5K ohms. **Tube Complement:** 2-6EJ7/EF184 frame-grid pentodes, 1-6FY5/EC97 frame-grid triode, 1-6X4 full-wave rectifier, 1-OA2 voltage regulator. **Power Requirements:** 105-125 VAC, 60 cps; 15 watts. **Size (HWD):** 8½" x 5¾" x 7". **Weight:** 7 lbs.

EICO 255 ac vtvm



kit \$44.95
wired \$72.95

The Model 255 is a high sensitivity, wide-band AC VTVM of laboratory accuracy and quality. It employs a cathode follower input and a two-stage amplifier with full bridge meter circuit in the feedback loop. The Power Supply is voltage regulated.

The instrument responds to the average value of the applied wave and reads in RMS value of a sine wave. The 0-1, 0-3 scales are linear. The decibel scale is based on 0 db = 1 mw in 600 ohms, with 10 db interval between ranges.

specifications

Voltage Ranges: 1, 3, 10, 30, 100, 300 RMS millivolts. 1, 3, 10, 30, 100, 300 RMS volts. **Decibel Range:** -80 to +52 db in 12 ranges. **Frequency Response:** ±0 db 10 c to 600 kc. **Input Impedance:** 10 megohms shunted by 15 mmf. **Accuracy:** ±3% of full scale. **Tube Complement:** 2-6EJ7/EF184 frame grid pentodes, 1-6FY5/EC97 frame-grid triode, 1-6X4 full-wave rectifier, 1-OA2 voltage regulator. **Power Requirements:** 105-125 VAC, 60 cps; 15 watts. **Size (HWD):** 8½" x 5¾" x 7". **Weight:** 7 lbs.

EICO 261 ac volt-watt meter



kit \$49.95
wired \$79.95

applications

Use it to measure amplifier gain response, amplifier power output, network response, and output level... Use it for null indication, for "Q" measurement, and for comparison measurement of capacity, resistance, and inductance.

features

- 11 Voltage Ranges—7 Power Ranges
- Automatically compensates for any load selected, internal or external, to provide a single watt scale for all loads and ranges
- Voltage-regulated silicon diode power supply
- 1000-Volt range for power transformer checking

specifications

VOLTMETER: **Ranges:** .01, .03, .1, .3, 1, 3, 10, 30, 100, 300, 1000 RMS volts. **Frequency Response:** ±0 db 10 c to 150 kc, -3 db at 500 kc. **Input Impedance:** 2 megohm shunted by 15 mmf. **Accuracy:** ±4% of full scale.

WATTMETER: **Ranges:** .15 mw, 1.5 mw, 15 mw, 150 mw, 1.5W, 15W, 150W. **Frequency Response:** ±0 db 10 c to 100 kc. **Accuracy:** ±5%. **Internal Loads:** 4 ohms (40W), 8 ohms (80W), 16 ohms (40W), 600 ohms (40W). **External Loads:** 4 ohms, 8 ohms, 16 ohms, 600 ohms (all to 150W). **Tube Complement:** 6BL8/ECF80 pentode-triode, 12AT7 dual triode, OB2 voltage regulator. **Power Requirement:** 105-125 VAC, 60 cps; 15 watts drain. **Size (HWD):** 8½" x 5¾" x 7". **Weight:** 6 lbs.

EICO 232 vtvm

peak-to-peak

complete with UNI-PROBE® (U.S. Pat.)

kit \$29.95 wired \$49.95



for COLOR & MONOCHROME TV SERVICING

† Calibration without removing from cabinet

**Dual-purpose AC/DC UNI-PROBE — exclusive with EICO: Terrific timesaver! A half-turn of probe-tip selects DC or AC-Ohms

Established leader in professional peak-to-peak VTM's. Advanced circuitry, design, and functional simplicity make the 232 a most versatile and indispensable tool in all electronic servicing.

applications

For all TV/FM/AM/electronic servicing with highest accuracy... true peak-to-peak measurement of complex voltage waveforms (necessary in TV servicing) and both peak-to-peak and RMS measurement of sine wave AC voltages on separate scales, plus DC voltage and resistance measurements... precision dynamic voltage measurement with negligible circuit loading... frequency response measurement... output meter... alignment.

features

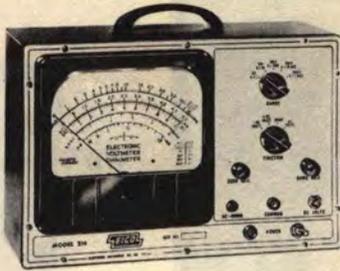
New balanced bridge circuit for exceptional stability and accuracy • High impedance input for negligible circuit loading • Large 4½" meter in can't-burn-out circuit • 7 non-skip ranges on every function • 4 functions: + DC Volts, — DC Volts, AC Volts, Ohms • Uniform 3 to 1 range ratio for extreme wide-range accuracy • Zero-center for TV-FM discriminator alignment • One zero-adjustment for all functions and ranges • 1% precision ceramic multiplier resistors • Smart professional styling — satin finish etched aluminum-panel, grey wrinkle steel case • Transformer-operated for isolation and safety.

specifications

Peak-to-Peak AC Ranges: 0-4, 14, 42, 140, 420, 1400, 4200 volts. RMS Sine Voltage Ranges: 0-1.5, 5, 15, 50, 150, 500, 1500 volts. DC Voltage Ranges: 0-1.5, 5, 15, 50, 150, 500, 1500 volts. Reads up to 30,000 volts with HVP probe* using 1090-megohms Multiplier Resistor. Frequency Response: 30 cps to 3 mc (up to 250 mc with PRF probe)*. Ohmmeter: 0.2 ohms to 1000 megohms in 7 ranges. Tube Complement: 12AU7, 6AL5, selenium rectifier. Battery: 1.5 v. Weight: 7 lbs. Power Requirements: 117 VAC, 60 cps; 5 watts. Size (HWD): 8½" x 5" x 5".

EICO 214 vtvm deluxe

kit \$34.95 wired \$54.95



All the versatility and performance-proven features of #221—Plus the extra convenience and legibility of its big 7½" meter.

Size: (HWD): 9" x 13¼" x 6". Weight: 11 lbs. Power Requirements: 105-125 volts AC, 50/60 cps, 10 watts. Lifetime deep-etched aluminum panel; rugged grey steel case.

EICO 249 vtvm deluxe

peak-to-peak

with 7½" Meter & exclusive Uni-Probe

kit \$39.95 wired \$59.95



for COLOR & MONOCHROME TV SERVICING

Dual-Purpose AC/DC Uni-Probe Terrific time-saver! Only 1 probe performs all functions — a half-turn of probe-tip selects DC or AC-OHMS!

ALL THE OUTSTANDING AND EXCLUSIVE FEATURES OF #232 — PLUS THE EXTRA CONVENIENCE AND READABILITY OF ITS BIG 7½" METER. AN IDEAL BENCH INSTRUMENT. Size: (HWD): 8½" x 13" x 5". Weight: 9 lbs. Power Requirements: 105-125 volts AC, 60 cps, 5 watts.

Smart professional styling — satin finish etched aluminum panel, grey wrinkle steel case

EICO 221 vtvm

kit \$25.95 wired \$39.95



All the modern advanced features you need for all-around efficiency of electronics servicing... versatility, rugged construction, life-time dependability—all at EICO's amazing low price.

applications

The famous EICO performance-proven Vacuum Tube Voltmeter—OVER 200,000 in use the world over—an excellent rugged instrument for field, shop, laboratory or production line use. Entirely electronic measurement of a-c voltage, d-c voltage, decibels and resistance... precision dynamic d-c voltage measurement with negligible circuit loading... all TV, radio and electronics servicing... frequency response measurement... output meter... checking continuity... servicing electrical equipment.

features

Improved, double triode, balanced bridge circuit for accuracy and stability • High impedance 25 megohm input for negligible circuit loading • 1% precision ceramic resistors • Large 4½" meter in CAN'T-BURN-OUT CIRCUIT • Center scale zero adjustment for TV & FM alignment • DB scale for gain measurement • Transformer-operated for isolation and safety • Accessory probe kits available*.

specifications

DC Voltmeter: Ranges: 0-5, 10, 100, 500, 1000 volts. To 30 kv with HVP probe* using 740-megohms multiplier resistor. Input Resistance: 25 megohms. Accuracy ±3%. AC Voltmeter: Ranges: 0-5, 10, 100, 500, 1000 volts. Input Resistance: 3 megohms. Accuracy ±5%. Frequency Response: 20-200,000 cps: up to 200 mc with PRF accessory probe*. Peak-to-peak with PTP accessory probe*. DB Ranges: 20 to +55 db in 5 ranges. Ohmmeter: Ranges: 0-1000 ohms, 10,000 ohms, 1 megohm, 10 megohms, 1000 megohms. Accuracy: ±3%. Multiplier Resistors: ±1% precision ceramic. Tubes: 1-6H6, 1-6SN7, 1-6X5. Batteries: 1½ V flashlight cell. Power Requirements: 117 VAC, 60 cps, 10 watts. Size (HWD): 9-7/16" x 6" x 5". Meter Size: 4½". Weight: 7 lbs. Lifetime deep-etched aluminum panel; rugged grey steel case.

EICO VTVM ACCESSORY PROBES



ptp-11 or ptp-25

kit \$4.95 wired \$6.95

For accurate reading of peak-to-peak voltages directly on the DC scales of your Vacuum Tube Voltmeter. Excellent for tracing complex AC waveforms through TV receiver deflection systems. Operate efficiently over the entire frequency range of 5 kc to 5 mc to cover all TV servicing requirements. Use with any 11 or 25 megohm VTVM.



rf vtvm probes model prf-11 or prf-25

kit \$3.95 wired \$4.95

For radio-frequency voltage measurements up to 250 mc. Very useful for measurements in all TV and radio RF and IF stages. Accuracy ±10%. Use with any 11 or 25 megohm VTVM.



high voltage probe # hvp-2 wired \$6.95

For safe measurement up to 30,000 volts dc with any VTVM or 20,000 ohms/volt VOM. Ideal for TV high voltage measurement. Light-weight, low-cost. Includes a choice of high quality multiplier resistor to match most popular instruments.



high voltage probe # hvp-1 wired \$7.95



kit \$4.95 EXCLUSIVE UNI-PROBE® wired \$6.95

It performs all functions — a half-turn of probe-tip selects DC or AC-OHMS! It adapts to your EICO #221 VTVM and other VTVMs in just 15 MINUTES. Complete instructions supplied.

U.S. PAT.

EICO 222 vacuum tube voltmeter

specifications



DC VOLTMETER: Ranges: 0-3, 15, 75, 300, 1500 volts (to 30 kv with HVP probe using 1090 megohms Multiplier Resistor). Input Impedance: 11 megohms. Accuracy: $\pm 3\%$.

AC VOLTMETER: Ranges: 0-3, 15, 75, 300, 1500 volts. Input Impedance: 1 megohm. Accuracy: $\pm 5\%$. Frequency Response: 30 cps to 3 mc (up to 250 mc with PRF probe; peak-to-peak readings directly on dc scale possible with PTP probe).

OHMMETER: 0.2 ohms to 1000 megohms in 5 ranges.

Tube Complement: 12AU7, 6AL5. **Battery:** 1.5 volts. **Size (HWD):** 8½" x 5¾" x 7". **Weight:** 5 lbs. **Power Requirements:** 117V, 60cps; 5 watts

kit \$27.95
wired \$42.95

Including exclusive Uni-Probe® (U.S. Pat.)

"Better-than-usual accuracy on lower ranges, low ohmmeter voltage, and the EICO Uniprobe."
"Ranges are chosen to provide for accurate low-voltage measurements in transistorized equipment, and to extend the high-voltage range to facilitate measurements in communications or industrial equipment."
"We noted very little 'needle shift' when switching from range to range or from function to function."
"Frequency response is compensated to be flat from 30 cps to 3 mc. In fact, the instrument we tested in the lab exceeded this specification."
—PF REPORTER

Provides entirely electronic, direct-reading measurement of ac and dc voltages (up to 1500 volts in five ranges) and resistance on a rugged, highly legible 4½" meter... Invaluable for signal tracing, for alignment, for voltage and resistance measurements in television, AM/FM radio, and hi-fi, for checking frequency response and continuity.

features

- Calibration without removing from cabinet
- Complete electronic overload protection (plus fuse)
- Input impedances of 11 megohms on dc and 1 megohm on ac to eliminate errors caused by circuit loading
- 1% precision ceramic resistors
- Transformer operation for isolation and safety
- On ohmmeter ranges, high sensitivity of dc amplifier allows resistance measurements up to 1000 megohms using only 1½-volt battery—thus eliminating danger to delicate apparatus
- Positive and negative dc positions on function switch eliminate need to reverse test leads when measuring negative dc voltage
- Single zero-adjustment for all functions and ranges
- Zero-center scale included on meter facilitates discriminator alignment in tv, fm, and afc circuits
- Dual-purpose AC/DC Uni-Probe® — exclusive with EICO: Terrific timesaver: a half-turn of probe-tip selects DC or AC-Ohms

EICO 1078 metered variable auto transformer ac bench supply



To check performance under varying line conditions—to check power consumption—to compensate for power line voltage variations—to expose intermittent components by inducing failure with over-voltage.

- 0-140 VAC adjustable output voltage from 120 VAC power line input
- Highly efficient variable auto-transformer of toroidal core design
- No waveform distortion or significant voltage drop from no load to full load
- Separate output ammeter and voltmeter

Frequency: 60 cycles. **Input Voltage:** 120 VAC. **Output Voltage:** 0-140 VAC (30-140 VAC voltmeter). **Output Current:** Two ranges: 0-2½, 0-7½ amperes. **Switching:** POWER switch, 2-pole type, disconnects unit from both sides of power line at OFF position. RANGE switch selects lower or higher current range for ammeter. Range may be switched under load. **Meter Accuracies:** $\pm 3\%$ of full scale. **Line Connection:** 3-wire output receptacle. **Fusing:** Auto-transformer—7½ ampere slo-blo. **Ammeter:** 2½-ampere fuse protects both current ranges. **Size (HWD):** 8½" x 5¾" x 7". **Shipping Weight:** 13 lbs.

kit \$42.95 wired \$54.95

Model 1073

(3-ampere current rating)

kit \$35.95 wired \$47.95

EICO 944 flyback transformer & yoke tester



kit \$23.95 wired \$34.95

Now one of the most difficult TV service jobs becomes quick and easy as A-B-C! Here's fast, positive testing of flybacks and yokes, in or out of the set... at lowest cost!

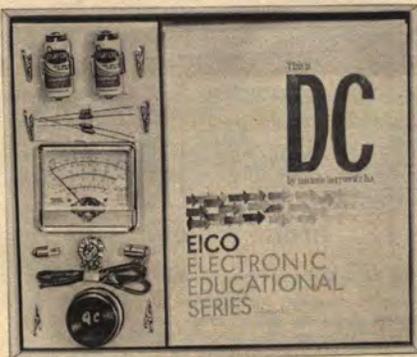
features

Positive check of all types of flybacks and yokes, in or out of set—in just seconds • Operates on the extremely sensitive grid-dip principle—shows up even 1 shorted turn! • Exclusive separate calibration for air-core and iron-core flybacks assures accuracy for testing all types • Large easy-to-read 4½" meter • 3 separate colored scales • New compact size for extra-easy portability • Smart professional styling—satin finish aluminum panel, grey wrinkle steel case.

specifications

Tube Complement:1-6K6
Size (HWD):7" x 5" x 4"
Weight:5 lbs.
Power Requirements: 105-125 VAC, 60 cps.

EICO E500K basic electricity course and vom kit



kit \$24.95

The E500K is a basic electricity course and VOM kit, written and designed for both adult and young beginners in electricity (from the Junior High School level up). With no previous technical knowledge, you gain a very respectable understanding and working skill in basic electrical circuits, and build a really useful Volt-Ohm-Milliammeter.

The comprehensive manual includes thorough explanations of electrical charge, current, resistance, voltage, Ohms Law, etc. Understanding and recognition of electrical parts starts with conductors and insulators, and proceeds to dry-cells, fixed and variable resistors, slide and rotary switches, meter movements, coils, relays, etc. Many sample numerical calculations using Ohms Law leave you with such technician-level skills as calculating current flow in series and parallel circuits, power dissipation in resistors, reading the color code, and understanding tolerances. Wiring and soldering techniques are thoroughly explained before step-by-step construction of the VOM is started. In the final section, the VOM is used and some common electrical appliances and radio parts are explained. The E500K offers many hours of pleasurable achievement to anyone who wants to get started in electronics, either as a career or a spare-time occupation.

technical specifications

1000 Ohms/Volt VOM Kit AC/DC Volts: 0-1, 5, 10, 50, 100, 500V
AC/DC Current: 0-1mA, 10mA, 0.1A **Resistance:** 0-500, 100K, 1MΩ
Meter: 3", 400 A

EICO 460 wide band 5" oscilloscope

For Color & Black & White TV Service & Lab use

applications

Ideal for COLOR and BLACK-AND-WHITE TV servicing; electronic and industrial research, development, maintenance and production line work; all audio testing and experimentation; reproduction of 3.58mc sync burst and 3.58mc oscillator signals in color TV sets; DC amplifiers give zero tilt on low frequency square waves.

Flat from DC to 4.5mc for reproduction of 3.58mc sync burst and oscillator signals in color TV sets • V amplifier direct-coupled, and push-pull throughout; with gradual roll-off beyond 4.5mc and useful response at 10mc achieved in part by cathode-follower coupling between stages • High vertical sensitivity; 25 millivolts per inch • Choice of direct coupling (DC) or capacitive coupling (AC) • Balanced or unbalanced inputs • 4-step frequency-compensated attenuator in both AC and DC positions • Calibrator position injects accurately adjusted reference voltage into V amplifier to permit direct peak-to-peak voltage measurement • Automatic sync limiter and amplifier—anything visible on screen is synchronized automatically; eliminates sync voltage adjustment and prevents oversync • Pre-set TV V and H sweep positions (30cps and 7875cps) • Edge-lit lucite graph screen with dimmer control; filter; standard bezel fits standard photographic equipment • Important adjustment controls accessible without cabinet removal • No difficult or super-critical adjustments; all wiring points easily accessible. Excellent mechanical construction and layout so that it can be built at home without special equipment or special knowledge.

An oscilloscope engineering achievement unmatched anywhere in the industry! Surpasses in conveniences, features and performance wired scopes selling for 2 and 3 times the kit price. A professional 5mc bandwidth scope, featuring DC amplifiers, that's EICO-designed for laboratory precision and EICO-priced for lowest cost. The acknowledged leader in professional 5mc oscilloscopes!

features

Vertical Amplifier —

Frequency response: flat from DC to 4.5mc, down approx. 10db at 10mc • Sensitivity: 25rms millivolts/inch • Rise time: 0.06 microseconds or less • Overshoot: 8% or less • Input coupling: Direct or capacitive • Attenuator (switch type): By factors of 1, 10, 100, and 1,000; frequency-compensated • Input Impedance: 3 megs shunted by 35mmf • Positioning: instantaneous, drift-free; permits centering any part of trace expanded to undistorted maximum.

Horizontal Amplifier —

Frequency response: flat 1cps to 400kc • Sensitivity: 0.6rms volt/inch • Input Impedance: approximately 5 megs shunted by 35mmf (at 1kc) • Attenuator: low impedance type in cathode follower output • Positioning: 2X full screen to permit examination of any part of trace even with full horizontal gain • All on front panel: intensity modulation, saw-tooth output, 60cps test signal, external sync, external capacitor jacks • Sweep frequencies: 10cps to 100kc; plus low frequency sweep with external capacitor • Filter screen: edge-lit plexiglass, with variable illumination • Bezel: designed to fit standard photographic equipment • Deep-etched satin aluminum panel; grey wrinkle steel cabinet • Tube complement: 5DEPI CRT, 2-6AU8, 2-6CB6, 1-12AU7A, 2-6J6, 1-6AX5, 1-1V2 • Size: (HWD): 13" x 8½" x 16" • Shipping Weight: 29 lbs. approx. • Power requirements: 117 VAC, 60cps, 95 Watts.



specifications

NOTE:

The #460 possesses a higher ratio of parts cost to final price than any comparable scope on the market today.

For example: Note the direct-coupled vertical amplifier which requires a considerably costlier power supply than conventional ac amplifiers. Note, too, that the DC vertical amplifier is push-pull throughout (instead of single-ended up to the output stage) and that the two stages of push-pull amplification are cathode follower coupled. This costs EICO more money but it assures you of exceptionally low amplitude distortion and minimized phase shift at both the low and high frequency extremes of the band. Note the professional convenience features of edge-lit lucite graph screen with dimmer control; glare-eliminating filter; and standard bezel designed to fit standard photographic equipment.

There are many more such examples in the #460. They all add up to one important thing for you . . . from concept to final product, the #460 brings you the highest possible quality at the lowest possible price.

kit \$89.95

wired \$129.50

EICO scope accessory probes

- fully shielded • rugged terminal board mounting of all parts • shock-mounted floating construction
- swivel action for ease of handling • color-coded for identification • easy accessibility of all parts



oscilloscope demodulator probe #psd

kit \$3.95 wired \$5.95

For signal tracing and checking of TV/radio RF and IF stages. Permits your scope to be used as a waveform tracer, gain analyzer and alignment indicator in all these stages. Demodulates amplitude-modulated carriers between 150 kc and 250 mc. Audio response practically flat from 20 cps to 6 kc, includes both high and low-frequency components of demodulated 60-cycle square wave—making this probe particularly good for observation of sweep curve response.



oscilloscope direct probe #pd

kit \$2.95 wired \$3.95

Direct test probe for use in low-frequency or low-impedance circuits where direct connection to the test point is required so as to utilize maximum scope sensitivity—and where the added input capacity contributed by the coaxial cable is not important. Eliminates stray pick-up and signal re-radiation.



oscilloscope low capacity probe #plc

kit \$3.95 wired \$5.95

Specially designed for TV sync signal tracing and general tests in video, sync and sweep circuits. High impedance—low capacity probe is extremely useful for tracing waveforms in high impedance, high frequency and wideband circuits (such as found in TV) without distortion from overloading or frequency discrimination. A built-in but externally accessible variable ceramic capacitor provides adjustable frequency compensation.

EICO 427 advanced general purpose 5" oscilloscope

SUPERIOR
CIRCUIT
TECHNIQUES

ALL THE
CONTROL
FACILITIES AND
PERFORMANCE
QUALITY OF
SCOPES
COSTING MANY
TIMES MORE



kit \$69.95

wired \$109.95

The Model 427 is a general purpose oscilloscope employing advanced, high-quality circuit techniques refined and cost-reduced through years of development work by EICO. While low-priced enough for beginners, the Model 427 has all the control facilities and performance quality demanded in general laboratory work, production testing, audio and ultra-sonic development and servicing, ham shacks, and advanced home workshops. Rugged, simple mechanical construction, plus clean, open circuit layout make this scope easy to build even by a novice.

features

Vertical amplifier direct-coupled for minimum phase distortion, and push-pull for maximum linearity throughout (6 stages in 3 push-pull pairs) • Choice of direct or capacitive input coupling • One internal bias adjust, and a dc balance adjust on the panel, for simple adjustment to optimum performance • Four-position (plus CAL) frequency compensated vertical input attenuator • Saw-tooth (sweep voltage) output jack on panel for connection to vertical input jack when adjusting the frequency compensation trimmers • INTENSITY, FOCUS, and ASTIGMATISM controls on the front panel • Sharp, clean trace, free of blooming • Instantaneous, drift-free positioning permits centering and part of a trace expanded to 30cm vertically or 20cm horizontally • Easy, direct connection to vertical deflection plates without need of removing and replacing shorting links or wires • Test leads are simply plugged into rear jacks, and switch turned from AMPLIFIER to DIRECT PLATES.

specifications

Vertical Amplifier: Flat from DC to 500kc, —6db at 1Mc; sensitivity 10mv p-p or 3.5mv rms per cm; direct or capacitive input coupling; fine attenuator, plus a four position, frequency compensated coarse attenuator providing sensitivities of 10mv p-p/cm, 100mv p-p/cm, 1V p-p/cm, 10V p-p/cm; one calibration voltage input position at which a 60cps 100mv p-p square wave is injected; input impedance 1M ohms shunted by 30mmf on all attenuation ranges; positioning range permits centering any part of trace expanded to three times CRT diameter. **Horizontal Amplifier:** Flat from 2cps to 450kc; sensitivity 0.5V p-p or 0.18V rms per cm; cathode follower input with fine attenuator in output; input impedance 10M ohms shunted by 40mmf. Positioning range permits centering any part of trace expanded to 2X CRT diameter. **Sweep Circuit:** Recurrent sweeps from 10cps to 100kc in four overlapping ranges; minimum ratio of forward sweep time to retrace time 15:1, synchronization may be internal pos., internal neg., 60cps, or external; synchronization is fully automatic on all ranges and modes; full retrace blanking. **Calibrator:** 60cps square wave, 100mv p-p. **Tubes:** 2-6BL8, 2-12AT7, 1-6C10, 1-12AU7, 5DEPI CRT (NE2 Neon Calibrator) **Power Supply:** 1-6X4 low-voltage rect.; 1-1V2 high voltage rect. **Power Requirements:** 117 volts, 60 cps; 55 watts. **Size (HWD):** 12½" x 8½" x 16¼". **Weight:** Approximately 28 lbs.

EICO 430 general-purpose 3" oscilloscope



kit \$69.95

wired \$99.95

The all new EICO 430 general-purpose 3-inch oscilloscope is designed with the user in mind. Its compact size and extremely light weight makes room for it on any bench and a cinch to take along on any job. Despite its small size and low price tag, the 430 does everything that many bigger, more expensive scopes do—and does it well. **Applications:** The 430 is an extremely versatile instrument. In industry it can be a low-cost monitor of circuit parameters, or a quick check production instrument. On the experimenters workbench it's truly an instrument with a thousand and one uses. Almost any experimental circuit can be checked with this scope for proper operation. As a modulation monitor for the active ham, it can't be beat. Once he knows what waveforms to look for, and what they mean, he can find out what's wrong with almost any ham transmitter or receiver. And of course, for general servicing, a portable 3-inch scope will always more than pay its way. •

specifications

Vertical Amplifier: flat from 2 cycles to 500 kc. 25-mv per cm sensitivity. Fine attenuator and frequency compensated 100:1 coarse attenuator. Input impedance 1 megohm shunted by 30 pf. Positioning range permits centering any part of trace expanded to three times CRT diameter. **Horizontal amplifier:** flat from 2 cycles to 300 kc. .25V per cm sensitivity. Input impedance 10 megohms shunted by 40 pf. positioning control permits centering any part of trace expanded to two times CRT diameter. • **Sweep circuit:** 10 cycles to 100 kc in four overlapping ranges. External or internal sync. Fully automatic sync on all ranges. Full retrace blanking. SWEEP RANGE switch also selects internal 600-cycle sine-wave sweep and input to HORIZ. INPUT terminals. **CRT circuit:** flat face 3 -inch CRT with mu metal neck shield. 1,500 volts accelerating potential. Intensity modulation input impedance 2 megohms, shunted by 25 pf; 3 V RMS for blanking. Intensity and focus controls on front panel, astigmatism adjustment without cabinet removal • VR-tube regulated power supply for stable, drift-free operation • Direct connections to vertical deflection plates for easy transmitter modulation monitoring. • **Tubes:** 3-12AU7, 1-6BL8, 1-6K11, 1-6X4, 1-OA2, 1-1V2 • **Power requirements:** 105-125 volts 60 cycles 60 watts • **Size (HWD):** 8½ x 5¼ x 11¼ inches • **Weight:** 11 pounds

EICO 488 electronic switch

Makes your 1 scope more useful than 2 in many cases! Simultaneously observe 2 patterns on 1 scope; compare voltage and current amplitudes, waveforms, freqs. and phase relationships. Continuously variable switching rates from less than 10 cps. to over 2000 cps. Very useful as square wave generator over same range.

kit \$23.95
wired \$39.95



Approximate Switching Rates (also Square Wave Generator Range): Low Range: less than 10cps to 100cps continuously variable; Middle Range: 50cps to 400cps continuously variable; High Range: 250cps to 2000cps continuously variable. **Signal Amplifiers:** (2). **Frequency Response (sinusoidal):** DC to 30,000 (—2db); useful to 300,000cps. **Maximum Gain:** 10 times (continuously variable gain control with negligible phase distortion to 25kc). **Input Impedance** 100,000 ohms. **Max. Input at Greatest Attenuation:** 400 volts peak-to-peak (142v rms). **Output Impedance:** 50,000 ohms. **Power Requirements:** 105-125 volts AC, 60 cps, 25 watts. **Size (HWD):** 6" x 8" x 6". **Weight:** 7 lbs. **Smart professional styling—satin finish deep-etched aluminum panel, grey wrinkle steel case.**

EICO 495 voltage calibrator



kit \$19.95
wired \$24.95

Multiplies oscilloscope usefulness—makes your scope a wide-range, accurate, peak-to-peak AC electronic voltmeter. Excellent for COLOR & MONOCHROME TV servicing. It generates virtually perfect square wave signals of known value to calibrate oscilloscope displays and to ascertain the value of unknown signals by the comparison method.

specifications

Output: Waveshape—semi-square (clipped sine wave); frequency—line; ranges—0-0.1, 0-1, 0-10, 0-100 volts peak-to-peak; dial reading accuracy—±5% of full scale on all ranges. **Tube Complement:** 1-0C3, 1-6AL5; selenium rectifier. **Power Requirements:** 117 volts AC, 60 cps, 5 watts. **Size (HWD):** 5" x 7¼" x 4". **Weight:** 4 lbs. **Lifetime deep-etched aluminum panel; rugged grey steel case.**

EICO 1060 battery eliminator and charger



kit \$39.95
wired \$49.95

specially designed for servicing **transistorized** equipment as well as vacuum-tube equipment

LOW RIPPLE 6-volt and 12-volt

The EICO #1060 is the most modern and versatile of battery eliminators. It incorporates an extra low-ripple filter circuit so that it can power both the newest all-transistor 6- and 12-volt equipment as well as the "hybrid" transistor-and-vacuum-tube or all-vacuum-tube equipment. In order to extend the many advantages of this highly filtered DC output to all applications of the #1060, its special filter circuit is comprised of a very heavy-duty iron choke and a dual 5000 mf-20v electrolytic filter capacitor — which are designed to take the full continuous as well as higher intermittent rated current output of the instrument.

More exclusive features, more versatility, more ruggedness — and yet, the lowest in price — these are the reasons why the EICO #1060 is without question the best value in modern professional battery eliminators.

specifications

DC Output Voltage Ranges: (Range selected by 6V-12V toggle switch) 0-8 volts, 0-16 volts. AC Ripple: 12V range — 0.3% @ 2 amps, 1% @ 6 amps, 1.5% @ 10 amps. 6V range — 1.5% @ 2 amps, 2% @ 6 amps, 4.5% @ 10 amps. Current Ratings: 0-8 volt range: 10 amps continuous, 20 amps intermittent. 0-16 volt range: 6 amps continuous, 10 amps intermittent. Meters: Voltmeter—0-20 volts. Ammeter—0-10, 0-20 amps. Power Requirements: 105-125 volts AC, 60 cps; 150 watts. Size: (HWD) 8¾" x 10½" x 7¾". Weight 17 lbs.

important features

1. Separate voltmeter and dual-range ammeter for more accurate current readings
2. Simultaneous monitoring of both voltage and current on both ranges
3. Exclusive automatic switching of appropriate ammeter range as you select either of the 2 voltage ranges
4. Built-in special filter circuit is safely rated to take the full continuous and intermittent rated current output on both voltage ranges — without danger of overloading or burn-out
5. Exclusive sloping front panel for wide-angle vision and easy-to-read meters
6. Exclusive all-around heavy-gauge steel case in gray crackle finish — for extra ruggedness and long life
7. Exclusive: optional wall-mounting feature in the durable well-ventilated steel case

additional outstanding features

1. Two DC voltage ranges: 0-8 volts and 0-16 volts
2. Continuous voltage adjustment with variable-type transformer
3. Extra heavy-duty selenium rectifiers
4. Fused transformer primary
5. Transformer secondary also protected by means of automatic re-set overload relay
6. All parts are finest quality

applications

Work bench voltage supply for operating 6-volt or 12-volt transistor, tube, or "hybrid" auto radios under repair... charging 6-volt or 12-volt storage batteries... operation or servicing of battery operated transmitters, amplifiers, marine, and aviation equipment... simulation of various battery operating voltages for detection of intermittents and shorts in radio equipment... DC substitution voltage... excellent DC supply for filament voltages in high gain audio circuit work... determination of starting point of vibrators... determination of voltage operating range of oscillator circuits... runs many small electric appliances such as shavers, trains, etc... for marine use, it operates boat lights, radio-phone, bilge pump and other electrical utility units, while at dockside; also, it completely eliminates the need for costly installation of 110 VAC secondary lighting system.

EICO 1020 power and bias supply for transistor equipment



kit \$23.95 wired \$29.95

"The output... is well filtered and therefore ideally suited for powering ripple-sensitive transistorized equipment."—PF REPORTER

"A fine investment!"—POPULAR ELECTRONICS
U.S. Patent #3,105,933

Specifications

Output Voltage Range: 0-30 VDC, continuously variable.

Max. Output Current Capacity (Continuous): 150 ma from 0-12 V., 200 ma from 12-24 V., 300 ma from 24-30 V.

Fuse: ½ amp. will blow in case of short circuit to protect unit. Pilot lamp will remain lit even when fuse is blown but voltmeter will read zero.

Ripple: (120 cps) 0.005% at full load.

Power Requirements: 117V, 60 cps.

Size (HWD): 5" x 4" x 5½".

Weight: 5 lbs.

Highly versatile, stable and reliable, the Model 1020 is a completely transistorized, very low ripple, portable DC power and bias supply providing continuously variable output voltage monitored by a dual range voltmeter (0-6, 0-30 VDC). It comprises a power transformer, full-wave silicon diode rectifier circuit, electrolytic capacitor input filter followed by a two-power transistor (2-2N256) cascaded filter circuit which provides extraordinary ripple rejection. The maximum permissible load current varies from 150 ma in the 0-12 V. range to 300 ma in the 24-30 V. range. The maximum ripple (120 cps) at full load is only 0.005%. The unit is housed in a rugged grey wrinkle steel case 5" x 4" x 5½" (HWD) and is fused for protection against short circuits.

Applications include: a universal power supply for operating transistor radios, hearing aids, preamplifiers, instruments, and other transistor devices under repair, development, or study; a variable bias supply to bias transistors or vacuum tubes in circuit development or study; in service work, to offset AVC and AGC voltages in the alignment of TV and radio receivers or to cut off the color burst amplifier in color TV adjustment; a dc filament supply or a filament bias source, to check the operating voltage or current of high resistance relays, to recharge small storage batteries, or to do light electro-plating.

EICO 1050 battery eliminator and charger



kit \$29.95
wired \$38.95

This modern battery eliminator fulfills all the needs for a dependable 6-volt and 12-volt DC supply source for servicing vacuum tube auto radios and all other battery-powered equipment where the AC ripple component is not an important consideration. It will do all that the #1060 above accomplishes, except that it is not recommended for transistor work.

features

- Two DC voltage ranges, 0-8 volts and 0-16 volts
- Continuous voltage adjustment with variable-type transformer
- Separate voltmeter and ammeter for simultaneous readings of both voltage and current
- Heavy duty selenium rectifiers
- Fused primary; automatic reset overload relay for secondary
- Rugged, well-ventilated steel cabinet; may be wall mounted

specifications

DC Output Voltage Ranges: (Range selected by 6V-12V toggle switch).....0-8 volts, 0-16 volts
Current Ratings: 0-8 volt range: 10 amps continuous, 20 amps intermittent. 0-16 volt range: 6 amps continuous, 12 amps intermittent
Meters: Voltmeter0-20 volts
Ammeter0-20 amps
Power Requirements:117 volts AC, 60 cps; 150 watts
Size:(HWD) 8¾" x 10½" x 7¾" deep
Weight:13 lbs.

EICO 1064 battery eliminator and charger

kit \$45.95

wired \$54.95



1064: "Our checks showed the instrument's residual ripple to be low enough to permit its use with any transistorized device from the pocket portable to automobile hybrid receivers." — ELECTRONICS ILLUSTRATED

Delivers the smooth, undistorted DC necessary for servicing transistorized equipment, or for any application where minimum ripple is mandatory. The extra-low-ripple output is achieved through the use of a special L-C filter circuit consisting of a very heavy-duty iron choke and a dual 5000 mf 20 Volt electrolytic filter capacitor. The ability of this circuit to handle the full continuous as well as the higher intermittent rated current output of the instrument, without danger of overloading or burnout—on both current ranges—ensures that the many advantages of its highly filtered DC output are available for all conceivable applications.

features

- Two DC voltage ranges: 0-8 volts and 0-16 volts
- Simultaneous monitoring of both voltage and current on both ranges
- Exclusive: Automatic switching of appropriate ammeter range as you select either of the 2 voltage ranges
- Separate voltmeter and dual-range ammeter for more accurate readings
- Continuous voltage adjustment with variable-type transformer
- Fused transformer primary
- Transformer secondary also protected by means of automatic re-set overload relay
- Extra heavy-duty selenium rectifiers
- All parts operated well below their stated ratings for voltage and current
- Compact, professional appearance

applications

Operating 6- or 12-volt transistor, tube, or "hybrid" auto or portable radios under repair

... Charging 6- or 12-volt storage batteries ... Simulating various battery operating voltages for detecting intermittents and shorts in radio equipment ... Supplying DC for filament voltages in high gain audio circuit work ... Determining starting point of vibrators ... Determining voltage operating range of oscillator circuits ... Running small electrical appliances (shavers, trains, etc.).

For marine use: Operating boat lights, radio-phones, amplifiers, transmitters, bilge pump and other electrical utility units while at dockside, eliminating the need for installing a costly secondary AC lighting system.

specifications

DC Output Voltage Ranges: (Range selected by 6V-12V toggle switch) 0-8 volts, 0-16 volts. Current Ratings: 0-8 volt range: 10 amps continuous, 20 amps intermittent; 0-16 volt range: 6 amps continuous, 10 amps intermittent. AC Ripple: 0-16 volts range: 0.3% @ 2 amps, 1% @ 6 amps, 1.5% @ 10 amps; 0-8 volt range: 1.5% @ 2 amps, 2% @ 6 amps, 4.5% @ 10 amps. Meters: Voltmeter—0-20 volts. Ammeter—0-10, 0-20 amps. Power Requirements: 117 volts AC, 60 cps; 150 watts. Size (HWD): 8 1/2" x 5 3/4" x 7 1/2". Weight: 14 lbs.

EICO 1180 decade condenser box



kit \$17.95
wired \$24.95

applications

General design and development work... useful in every laboratory as tuned circuit elements, bridge impedances, filter elements or components of any circuit where a wide-range variable capacitor is necessary.

specifications

Range: 100 MMF to .111 MF in increments of 100 MMF
Voltage Ratings: 350 VDC continuous, 500 VDC intermittent, 1000 VDC test
Dielectric: silvered mica
Accuracy of Incremental Capacity: $\pm 1\%$ (accuracy of capacitors used)
Zero Capacitance: approximately 7 MMF with all switches set at zero
Insulation Resistance of Capacitors Used: none under 50,000 megohms, most well over 250,000 megohms
Power Factor of Capacitors Used: better than .001
Switches: positive detent, ceramic wafer
Terminal Board: low loss lucite
Binding Posts: 5-way jack-type
Overall Dimensions: 9" long, 3 1/2" wide, 3 1/2" deep
Weight: 3 lbs.
Smart professional styling—satin finish deep-etched aluminum panel, grey wrinkle steel case

EICO 1171 decade resistance box



kit \$24.95
wired \$29.95

applications

General design and development work... known resistance in bridge circuits... ohmmeter calibration... determining exact values required for meter or instrument multiplier resistors... determination by actual substitution of resistance values required in electronic circuits... determine value of badly burned or otherwise illegible resistors by substitution.

features

- Extremely wide range of 0-99,999 ohms in 1-ohm steps with 5 decades
 - 1/2% accuracy at any setting
 - Comparator Position permits instant substitution of actual equivalent component of the resistance value indicated on the box
 - Rugged, trouble-free construction
- Smart professional styling—satin finish deep-etched aluminum panel, grey wrinkle steel case

specifications

Resistors used: 1/2% accuracy, 1 watt rated power dissipation
Overall dimensions: 12" long, 3 1/2" wide, 3" deep
Weight: 3 lbs.
Heavy-gauge, quality steel cabinet
Quality switches

EICO 1100 eia resistance substitution



kit \$7.95 wired \$12.95

Enables rapid substitution of wide range of EIA resistance values from 15 ohms to 10 megohms in decade multiples of 15, 22, 33, 47, 68, 100 ohms. Uses standard 1 watt, $\pm 10\%$ EIA resistors. Convenient 5-way, jack-top binding posts. Size 3 3/4" high x 6 1/2" wide x 3 1/2" deep. Weight: 2 lbs.

- Handsome satin aluminum front panel

EICO 1120 eia capacitance substitution



kit \$6.95
wired \$10.95

Enables rapid substitution of a wide range of EIA capacitance values from 0.0001 to 0.22 mfd in an operating circuit to determine value needed for optimum performance and to find value of badly damaged or illegible capacitors. Minimum accuracy $\pm 10\%$. Uses silver-mica and molded plastic (or impregnated and sealed in plastic) capacitors, most conservatively rated at 600 volts. Convenient 5-way jack-top binding posts. Size: 3 3/4" high x 6 1/2" wide x 3 1/2" deep. Weight: 2 lbs.

- Smart professional styling—satin finish aluminum panel

EICO 1140 series/parallel r-c combination box



kit \$14.95 wired \$19.95

A combination of Models 1100 and 1120 (see page 23) with switching facilities permitting selection of any R alone, any C alone, or 1350 combinations of same in series or parallel. Open and short circuit positions provided. Standard E.I.A. values, 10% accuracy. Convenient jack-top binding posts. Size: (HWD) 6 3/4" x 5 1/4" x 2 3/8". Weight: 3 lbs.

EICO 369 sweep generator & marker (tv-fm)



kit \$89.95 wired \$139.95

With the EICO 369, circuit response is not affected by markers and markers are not affected by traps in the circuit. The EICO 369 feeds only the required sweep signal to the input of the circuit being aligned or tested. At the output end of the circuit, a demodulator cable picks off the signal, and feeds the demodulated signal to a mixer stage inside the generator where the markers are added. Then this combined signal is fed to the oscilloscope.

The EICO 369 has a controllable inductor sweep circuit. This type of purely electronic sweep circuit has no mechanical parts to wear and give trouble later. The sweep generator is independent of the marker generator. It has five ranges: 3-7.5 mc; 6-16 mc; 16-42 mc; 36-95 mc and 75-220 mc. All five ranges are fundamentals simplified by a 6:1 vernier dial and a 330° scale. Output impedance is 50 ohms. Retrace blanking is obtained by both direct grid cut-off and indirect B+ cut-off (via the AGC chain) of the oscillator with a blanking tube that conducts during the negative excursion of the 60 cps sine sweep. A three stage AGC circuit keeps the level of the swept signal constant over its entire frequency range, even when the widest sweep

width of 20-mc is being used. A phasing control at the rear of the EICO 369 adjusts permanently the horizontal sweep signal fed to the scope.

The marker generator in the EICO 369 has 4 ranges covering 2-225 mc. The highest range, 60-225 mc, is the third harmonic of the next lower range. All other ranges are fundamentals. Frequency setting is simplified by a 6:1 vernier dial and a 330° scale. As a rapid check of marker generator alignment, a 4.5 mc crystal is supplied with each generator. When plugged into a front panel socket it automatically turns on a fixed frequency marker oscillator. The 4.5 mc signal produced by this oscillator is mixed with the variable frequency marker. The 4.5 mc crystal is used also for alignment of sound circuitry in TV Receivers.

The demodulated wave form with the post-injected marker is fed to the vertical input of the "scope," and the horizontal sweep to the horizontal input of the "scope" through one shielded two-conductor cable. Separate level controls for trace size and marker size on the front panel can be used independently.
POWER REQUIREMENTS: 105-125 VAC, 60 cps, 50 watts. **SIZE (HWD):** 8½" x 12½" x 7". **WEIGHT:** 16 lbs.

EICO 324 rf signal generator



kit \$28.95
wired \$39.95

one generator covers the whole range
of 150 kc to 435 mc

The latest generator achievement created by EICO's service-minded engineers—hailed as the best generator buy in the world. More features, more versatility, more range, more accuracy—from input to output, more instrument—than many generators at 3 to 4 times its cost.

applications

IF-RF alignment, signal tracing and trouble-shooting of TV, FM and AM sets, all on fundamentals; marker generator for alignment of new high-frequency as well as older low-frequency TV IF's; 400 cps sine wave audio testing; laboratory and experimental work.

features

- One generator covers the whole range of 150 kc to 435 mc.
- ±1.5% frequency accuracy
- 6:1 vernier tuning knob and excellent spread at most important alignment frequencies
- Etched tuning dial, plexiglass windows, edge-lit hairlines—for utmost accuracy, convenience and professional appearance
- Colpitts RF oscillator directly plate-modulated by cathode follower for improved modulation
- Variable depth of internal modulation 0 to 50% by 400 cps Colpitts oscillator
- Variable gain external modulation amplifier—only 3.0 volts needed for 30% modulation

*Turret-mounted, slug-tuned coils for maximum accuracy

*Fine and Coarse (3-step) RF attenuators; 50-ohm output impedance

specifications

- 6 fundamental bands: 150-400 kc, 400-1200 kc, 1.2-3.5 mc, 3.5-11 mc, 11-37 mc, 37-145 mc; one harmonic band, 111 mc-435 mc
- RF output 100,000 microvolts; AF output to 10 volts
- Tube complement: 12AU7, 12AV7, selenium rectifier; transformer-operated
- 5-way jack-top binding posts for AF in/out; coaxial connector and shielded cable for RF out
- Handsome satin aluminum front panel and grey wrinkle steel case
- Power Requirements: 117 VAC, 60 cps, 8 watts
- Size: (HWD): 8" x 10" x 4¾". Weight 8 lbs. Weight 8 lbs.

EICO 377 sine & square wave audio generator



kit \$37.95 wired \$54.95

The EICO #377 is expressly designed to fill the test instrument needs of the audio engineer, high-fidelity enthusiast and the radio-TV Serviceman. Its many modern features and its advanced circuitry and design make it particularly suitable for electro-acoustic experimentation, development work, as well as for TV service and wide-band amplifier work.

The #377 is another EICO exclusive instrument achievement. It is the equal in quality of separate professional sine and square wave generators each costing more than the #377 alone!

applications

Audio amplifier testing and design . . . determining radio receiver fidelity and loudspeaker response . . . square wave testing of TV receivers . . . development of filter or compensating circuits . . . frequency measurement in conjunction with an oscilloscope.

features

- High design standards met by costlier components and circuitry
- Resistance-capacitance (Wien Bridge) oscillator circuit with 1% precision resistors.
- Excellent calibration accuracy, stability, and purity of waveform
- Choke filtering in power supply for minimum hum level
- High power output over wide range of loads
- Constant output over wide frequency range

specifications

Frequency Range: Sine wave, 20-200,000 cps in 4 bands. Square wave, 60-50,000 cps. (5% tilt at 60 cps, 5% rounding at 50,000 cps).

Calibration Accuracy: ±3% or 1 cps, whichever is greater

Frequency Response: ±1.5 db, 60-150,000 cps
Output Voltage: 10V across 1000 ohms rated load (100 milliwatts); drops to 8V across 500 ohms, rises to 14V across 10,000 ohms or higher

Distortion: Less than 1%

Hum: Less than 0.4% of rated output

Tube Complement: 2-6K6, 1-6SN7, 1-6SJ7, 1-6X5, and 1-3S6 3-watt lamp

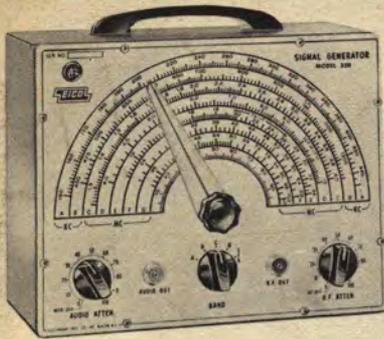
Power Requirements: 117 VAC, 60 cps, 50 watts

Size: (HWD): 7½" x 11½" x 7½"

Weight: 13 lbs.

Smart professional styling—satin finish deep-etched aluminum panel, grey wrinkle steel case.

EICO 320 rf signal generator



kit \$24.95 / wired \$33.95

Designed primarily for general service requirements where an easily controllable source of modulated or unmodulated variable frequency is needed. Precision-wound and calibrated RF oscillator coils assure maximum accuracy and simplified calibration. Since the coils, band switch and tuning condenser mount as a turret assembly, short wiring leads and easy mounting of parts are the advantageous results. Continuously variable attenuators for both RF and audio are on the front panel.

The #320 has long been popular with beginners and professionals alike—thousands are in use. The reason is simple: The #320 delivers the most professional generator performance at the industry's lowest price!

applications

Radio servicing... AM and FM IF stage alignment... checking RF stages... marker generator for TV alignment... 400 cps sine wave audio testing... laboratory and experimental work.

features

- Fundamental frequency range of 150 kc to 34 mc plus powerful calibrated harmonics to 102 mc
- RF output attenuator
- 6 to 1 vernier dial ratio for more accurate, easier settings
- Turret-mounted coil sub-assembly
- Precision wound coils
- Hartley RF oscillator circuit
- Colpitts oscillator 400 cps sine wave output
- Modulated or unmodulated RF output
- Power supply with full-wave rectification for greater stability

specifications

Frequency Range:

Fundamentals—Band A: 150 kc to 450 kc
Band B: 450 kc to 1250 kc
Band C: 1.25 mc to 4 mc
Band D: 4 mc to 12 mc
Band E: 11 mc to 34 mc
Calibrated Harmonics—Band F: 22 mc to 68 mc
Band G: 33 mc to 102 mc

RF Output: Over 100,000 microvolts
Audio Modulation Frequency: Approximately 400 cps
Audio Output: 1/2 to 2 volts
Tube Complement: 1-6SN7, 1-6X5
Power Requirements: 117 VAC, 60 cps
Size: (HWD): 8" x 10" x 4 3/4"
Weight: 8 lbs.
Lifetime deep-etched aluminum panel; rugged grey steel case.

EICO 315 deluxe rf signal generator



kit \$49.95
wired \$69.95

applications

Deluxe in every professional feature and detail, yet rock-bottom in cost—one more EICO champion instrument value!

Radio servicing... laboratory precision AM and FM IF stage alignment... checking RF stages... highly accurate marker generator for TV alignment... 400 cps sine wave audio testing... excellent calibration accuracy for laboratory and experimental work.

features

- Accuracy of frequency dial reading better than 1% on all 7 ranges
- Bandspread vernier tuning for precise adjustment of frequency
- Illuminated dial and gear-driven, anti-backlash, hair-line pointer protected by glass
- VR tube regulated power supply for unflinching accuracy and stability
- Fully shielded copper-plated chassis, attenuation controls and line filter for extremely low leakage output
- Internal 400 cps sine wave audio generator with attenuator for RF modulation and external audio testing

specifications

Frequency Range: Fundamentals 75 kc to 50 mc in 5 ranges. Calibrated Harmonics 13 mc to 150 mc in 2 ranges.

RF Output: over 100,000 microvolts.

Audio Modulation Frequency: 400 cps

Provision for external modulation

Tube Complement: 1-6C4, 1-6X5, 1-7F7, 1-VR150.

Power Supply: 117 VAC, 60 cps

Size: (HWD): 13" x 12" x 7" deep.

Weight: 18 lbs.

Lifetime deep-etched aluminum panel; rugged grey steel case.

EICO 360 tv-fm sweep generator



kit \$39.95
wired \$59.95

applications

Complete, accurate alignment of VHF-UHF TV and FM receivers... video IF alignment and response curve adjustment... sound IF and sound detector alignment.

features

Every advanced feature you need for quick, easy, and correct professional alignment of TV and FM receivers... all at lowest cost in the industry—only from EICO!

- Complete coverage of all VHF TV and FM channels on fundamentals... as well as all IF frequencies.
- 30 mc maximum sweep width obtained with mechanical inductive sweep.
- Continuous sweep width control from 0-30 mc.
- Continuously variable shielded output attenuator.
- 6 to 1 vernier dial ratio.
- Crystal marker oscillator with variable amplitude control.
- Precision 5 mc and 4.5 mc crystals available, each \$3.95 (see below).
- Variable phase, 60 cps output available at panel jack to allow single trace adjustment.
- Provision for connection of external marker generator.

specifications

Frequency Range: 500 kc to 228 mc
Sweep Width Range: 0 to 30 mc
Crystal Marker Oscillator: marker frequencies depend upon fundamental frequency of crystal used; 5.0 and 4.5 mc crystals available
Tube Complement: 1-2C22/7193, 1-6C4, 2-6J5, 1-6X5
Power Requirements: 117 VAC, 60 cps
Size: (HWD): 8" x 10" x 6 3/4"
Weight: 11 lbs.
Lifetime deep-etched aluminum panel; rugged grey steel case.

EICO 322 rf signal generator

kit \$27.95 wired \$38.95

In addition to all the outstanding laboratory precision qualities of the famous EICO Model 320 (see above), this improved RF-AF signal generator features the individual calibration of each of its 5 bands.



EICO crystals
C-5 / 5MC C-4.5 / 4.5MC

(not kits)
ea. only \$3.95

Highest quality precision crystals; fit standard socket on all instruments requiring their use, including the EICO #360 TV-FM Sweep Generator.

EICO 352 bar generator



kit \$19.95
wired \$29.95

applications

Easily portable, light-weight, simple to operate—a really handy time-saver that is practically a necessity to servicemen now that station-transmitted test patterns are harder to find.

features

Produces a series of vertical or horizontal bars on the TV screen when connected to the antenna terminals of any TV set. Since these bars will be equally spaced on a correctly adjusted set, a quick indication is obtained of the picture linearity in the set under test. Also gives indication of overall picture size and vertical and horizontal sync circuit stability.

specifications

Operates on TV channels 2-6. 16-23 vertical bars to check horizontal linearity. 13-22 horizontal bars to check vertical linearity. Panel switch provides "stand-by" position, "Vertical Bars" or "Horizontal Bars." Output Voltage: 400,000 microvolts. Tube Complement: 1-12AU7, 1-6C4; selenium rectifier. Power Supply: Transformer operated—half-wave selenium rectifier circuit; 117 VAC, 60 cps, 5 watts. Weight 4 lbs. Size: 7 1/2" x 5" x 4 1/2". Smart professional styling—satin finish deep-etched aluminum panel, grey wrinkle steel case.

EICO 667 dynamic conductance tube and transistor tester



Complete with rugged steel carrying case, matching steel cover, and carrying handle for easy portability. New 1964 design tests all new tube types.

TYPES TESTED: 587-pin nuvistor, 7-pin miniature, 7-pin sub-miniature (in line base), 8-pin sub-miniature, octal, loctal, combination 9 and 10-pin miniature, combination novar and pilot light, compactron (12-pin). In addition to receiving types, many small transmitting and special purpose tubes, voltage regulators, cold cathode rectifiers, electron-ray indicators and ballast tubes are tested. Tests n-p-n and p-n-p signal transistors. Pilot lamps are tested in the center of the novar socket.

TRANSISTOR TEST: Two-step test for both n-p-n and p-n-p signal transistors using internal DC power supply.

DYNAMIC CONDUCTANCE TUBE TEST: Composite indication of mutual conductance (GM), plate conductance (GP), and peak emission capability. Readings are on both Numerical and Replace-?-Good scales. Test accuracy is assured by the following: Multi-circuit lever switch for speedy simultaneous selection of any one of 4 combinations of 3 plate, 3 screen and 3 ranges of control grid voltages; Grid voltage variable over each range with a 5% accurate wire-wound potentiometer; 5 ranges of meter sensitivity using 1% carbon-deposited shunts and 5% accurate wire-wound meter range potentiometer; 200 ua meter provides unusual sensitivity for checking tubes with low cathode current; Rectifiers tested near maximum rated current for extra accuracy.

important features

Each active tube element can be individually connected to any of the following busses: plate voltage, screen voltage, grid voltage, filament voltage, ground (cathode and filament return), no connection. **Multi-section tubes** have each section individually tested by rapid push-button selection—while all sections are simultaneously drawing full-rated current . . . Pentodes are tested as pentodes with no "lumping together" of tube elements.

Power: operates from 105-130 volts AC line, 60cps. Provided with pilot lamp and fused for safety.

kit \$79.95 wired \$129.95



EICO 680 new transistor & circuit tester

kit \$25.95 wired \$39.95

The Model 680 Transistor and Circuit Tester provides accurate measurement of basic transistor and diode characteristics required for quality testing, plus the VOM facilities normally required for testing and trouble-shooting transistor circuits. Transistor measurements include ICBO and ICEO, with separate test positions for signal and power transistors, DC Beta, and simulated AC Beta. Simple criteria for all measurements are included in the instruction manual and no charts are used or needed. The VOM facilities include five DC current ranges down to 50µA full scale, two DC volt ranges at 20,000 ohm/volt, and three resistance ranges. The tester is self-powered by five inexpensive standard batteries, and is housed in a sturdy bakelite case and brushed aluminum panel.

features

- 50µA, 3½" face D'Arsonval meter movement of 2% accuracy • 1% meter multiplier and shunt resistors • ICBO and ICEO are measured accurately on the microammeter ranges with sensitivity to 50 microamps full scale • ICBO and ICEO measurements can be made on all types of transistors. Separate test positions are provided for signal and power transistors • DC Beta for signal transistors given directly by reading base current on a reciprocal scale (multiplied by appropriate range factor) to establish standard 1 ma collector current indexed on scale • AC Beta for signal transistors determined by reading base current settings required to establish two standard collector currents 0.75 and 1.25 ma indexed on the scale (500µA shift), and dividing 500 by the base current difference in µA, or referral to a chart in the manual which gives the result without calculation • DC Beta for power transistors can be approximated by calculating ratio of ICBO to ICEO • Quality of selenium rectifiers, germanium and silicon diodes determined by measurement of forward and reverse currents • DC volts ranges are 20,000 ohms per volt, minimizing loading of the circuits under test • Convenient MODE switch sets up instrument for PNP transistors, NPN transistors, or VOM use

specifications

DC Current: 50µA, 500µA, 5ma, 50ma, 500ma • **DC Voltage Ranges:** 5V, 50V
Resistance Ranges: R x 1 (0 to 2KΩ, 12Ω center scale), R x 100 (0 to 200KΩ, 1200Ω center scale), R x 10K (0 to 20 Megohm, 120KΩ center scale) • **Transistor Measurements:** ICBO, ICEO for signal transistors; ICBO, ICEO for power transistors; DCβ, directly, in 2 ranges: 2 to 30, 20 to 300; ACβ, indirectly • **Accuracy:** 1% resistors and 2% meter for overall accuracy of 3% • **Connectors:** Three permanently connected clip-on test leads (C, B, E) or a panel socket for transistor connections; two banana jacks for VOM use • **Controls:** RANGE switch (ranges above), MODE switch (NPN, PNP, VOM), TEST switch (ICBO, ICEO, PWR ICBO, PWR ICEO, βCAL READβ), βCAL/OΩ adjust control • **Batteries:** 4 Size AA, 1 Size C Meter: 50µA movement, 3½" face (clear plastic case) • **Panel:** Brushed aluminum, two-color deep-etched nomenclature • **Case:** Highly polished black bakelite • **Size (HWD):** 6¾ x 5¼ x 3 inches • **Shipping Weight:** 3 lbs.

Tests All New
Tube Types
New 1964 Design

EICO 628 tube tester



kit \$44.95
wired \$59.95

Operation: Speedy, single test set-up for checking emission, shorted elements, open elements and continuity. Line voltage adjustment is made by a power rheostat in the transformer primary, with the meter as the indicator. A protective overload bulb shows transformer overload due to a heavy short, and warns you to remove the tube immediately. 7 and 9 pin miniature pin straighteners are available on the panel. **TYPES TESTED:** 5-pin nuvistor, 7-pin nuvistor, 7-pin miniature, octal, loctal, combination 9 and 10 pin miniature, combination novar and pilot light, compactron (12-pin).

ACCESSORIES: L-1 Lid for regular carrying case. TTC-1 Counter display case.

Tube Merit Test: Proportional reading of cathode conductance (emission) on 4½" D'Arsonval meter with Numerical and Replace-?-Good scale.

Individual Element Tests: Inter-element short and continuity with neon lamp indicator, open element with meter indicator. **Power requirements:** 105-135 volts AC, 60 cps, 6 watts. **Size:** (HWD) 9½" x 12½" x 4¼". **Weight:** 11 lbs.



EICO 610 tube tester adaptor

kit \$5.95
wired \$11.95

Adapts EICO Models 625 or 666 tube testers for testing the following new construction tube types: Nuvistor, 5 pin; Nuvistor, 7 pin; Novar; 10 pin miniature; Compactron, 12 pin.

The adaptor cable plugs into the 9-pin socket of the tube tester; a tenth connection is provided by a cap terminal on the adaptor for connecting a grid cap lead from the tube tester. Included with the #610 are roll-chart supplements for both the 625 and 666 tube testers covering tubes of the types listed above. The adaptor is housed in a rugged grey wrinkle steel case and a deep-etched brushed aluminum panel. **Size (HWD):** 1¼" x 2½" x 6".



EICO tv picture tube test adaptors

CRA: WIRED \$4.50

For testing 110" picture tubes with #625 and #666 tube testers.

CRA - 110: WIRED \$3.95

For testing 70" and 90" picture tubes with #625 and #666 tube testers.

CRU: WIRED \$9.95

For testing all color, black and white picture tubes with #667 tube tester.

Add 5% in the West. Slightly higher in Canada.

EICO 632 crt tester & rejuvenator

Designed For Testing
Color TV Tubes



kit \$54.95 wired \$79.95

Portable CRT tester & rejuvenator in carrying case, containing line cord and a universal multi-socket cable that accommodates any CRT, black-and-white or color.

The model 632 incorporates a transformer-operated 1000 volt d-c supply for repairing CRT defects, a 150-volt negative d-c supply for the variable grid cut-off voltage to indicate the contrast range of the CRT, plus a rheostat providing precisely controlled filament voltage over three ranges 0-5, 5-10, 10-15 volts. Grid-cut-off, filament voltage, and beam current are read on a 4 1/2" meter. A neon-lamp circuit is used for short-open testing. Push-buttons are used for short-open, beam current, gas, and life testing to enable instantaneous measurement. A panel switch selects the red, green, and blue guns of color CRT's for individual testing. A spring return repair push-button is used to apply the 1000 vdc for rejuvenate-welding procedures, or for removing inter-element shorts.

Power Requirements: 105-130 volts AC, 60 cps
Size (HWD): 9 3/4" x 12" x 5"
Weight: 8 lbs.

EICO 630 cathode ray tube checker



kit \$19.95 wired \$27.95

Engineered for fast, easy, dependable testing of all sizes TV picture & oscilloscope type CR tubes, right in the set or carton. Bridge measurement of peak beam current (proportional to screen brightness) using neon lamp as sensitive balance indicator. Balancing control calibrated directly in terms of tube condition. Overall size: 9 1/2" high, 6 1/2" wide, 3" deep. Weight: 5 lbs. **Power Requirements:** 117V, 60cps.

EICO 612 tube & crt filament tester



kit \$4.95 wired \$6.95

including batteries

Permits FAST filament checking of TV and radio tubes in an inoperative series string. Merely remove each tube from set, plug into appropriate tester socket while observing indicator lamp; then re-insert into set if O.K. No fiddling with controls or switches. Sockets are provided for 9-pin, octal, loctal, 7-pin

portable and line-operated receiver tubes. 7-pin and 9-pin miniature tube pin straighteners also provided. Adapter plug permits filament checking of 14-pin, 12-pin and 8-pin (110°) picture tubes. Also checks bayonet and screw-type base pilot lamps, and cartridge fuses. Self-powered by internal batteries for convenience and safety. Deep-etched brushed aluminum panel; hi-impact molded bakelite case. Compact: 6 1/4" H x 3 3/4" W x 2" D. Weight 2 lbs.

EICO 147A deluxe multi-signal tracer

kit \$29.95 wired \$44.95



A professional deluxe instrument crammed with unsurpassed facilities and conveniences for extra-easy, extra-fast profitable servicing of AM, FM and TV receivers. Here's one of the most useful and convenient instruments the serviceman can use in the servicing of TV, FM, AM, audio and electronic equipment. The #147 is a deluxe signal tracer brought up-to-date by EICO engineers in the light of servicemen's latest needs for this type of all-purpose instrument. Two separate input channels assure maximum adaptability for both RF and audio work; and RF gain is so high you can trace right up to the antenna terminals of the set under test. Now you can both see and hear the signal level in each stage—the eye tube and speaker give you both aural and visual monitoring. The valuable noise locator and calibrated wattmeter turn suppositions into certain answers—and fast! The #147 has everything you could ask for in a modern, up-to-date professional signal tracer, and then some more features no other tracer gives you. It's one more champion precision instrument, at lowest cost . . . from EICO.

features

Two input channels: high-gain RF and low-gain audio. RF channel gain more than adequate for tracing up to receiver input • Both visual and aural signal monitors (eye tube and speaker). Visual monitor permits estimation of signal strength and gain-per-stage • Shielded RF crystal demodulator and direct probes. Individual panel receptacles provide easy change-over from RF to audio tracing or vice versa • Valuable noise locator applies DC test voltage to suspected component and amplifies effect—ferrets out noisy controls, resistors, capacitors, coils, transformers, cold solder joints, etc. • Calibrated wattmeter reveals abnormal power consumption in set under test—valuable preliminary check. Detects B+ short, intermittent filament circuit, defective filter or bypass capacitors, etc. Fused for safety • May be connected as substitute speaker, amplifier, or output transformer • Output for VTVM or oscilloscope • Transformer-operated for isolation and safety.

specifications

Tube complement: 1-12AX7 as dual amplifier; 1-6AQ5 as beam power amplifier; 1-1629 electron-ray indicator; 1-6X4 as full-wave rectifier. **Power requirements:** 105-125 volts AC, 60 cps, 40 watts. **Cabinet:** Satin finish deep-etched aluminum panel and grey wrinkle steel case. **Size (HWD):** 8" x 10" x 4 3/4". **Shipping Weight:** 10 lbs.

EICO 145A low-cost multi-signal tracer

kit \$23.95 wired \$32.95



High gain RF and low gain audio input channels for signal tracing and trouble shooting RF, IF, and audio stages of AM, FM, and TV receivers. More than enough RF gain to trace up to receiver input; signal is heard through built-in 5" PM speaker. Shielded RF crystal demodulator and direct probes supplied. Individual panel receptacles make for easy change-over from RF to audio tracing or vice versa. Noise localizer circuit applies DC test voltage through probe to suspected component and simultaneously picks up and amplifies effect. May be connected as test speaker, amplifier or output transformer. Output for VTVM or scope. Also excellent as null detector, scope preamp, etc. Remarkably compact. Entire unit is transformer-operated for maximum isolation and safety.

specifications

Tube Complement: 1-12AX7 dual triode as voltage amplifier, 1-6AQ5 beam power amplifier, 1-6X4 full-wave rectifier • **Power Requirements:** 105-125 VAC, 60 cps, 40 watts • **Cabinet:** satin finish deep-etched aluminum panel and rugged grey wrinkle steel case • **Size (HWD):** 7-13/16" x 5-9/10" x 5-1/16" • **Weight:** 7 lbs.

EICO 540 readi-tester

kit \$12.95
wired \$15.95



Designed expressly for "do-it-yourself" home appliance & auto repair—easily finds defects in irons, fans, heaters, TV & radio tubes, batteries, ignition coils, etc. It is an all-in-one MULTIRANGE AC/DC voltmeter, ammeter, ohmmeter, wattmeter, leakage checker.

FEATURES

All voltage ranges (0-7.5, 15, 150, 300 volts) and current range (0-15 amps) are ac/dc.

Direct-reading ohms range 0-1000 ohms. Neon lamp ac leakage test circuit permits continuity check of resistors between 1000 and 2,000,000 ohms and capacitors above .0005 mfd; also filament continuity and leakage between elements in radio and TV tubes. Panel outlet permits metering current up to 15 amps drawn by any appliance, motor or other device. Switch permits checking effect on line voltage. Kilowatts scale permits direct reading Provides "GOOD-BAD" readings on 6V and 12V automobile storage batteries. **Weight:** 3 lbs. Size (3 3/4" x 6 1/2" x 3 1/4")

EICO 584 battery tester

kit \$9.95
wired \$12.95



For fast running check of battery stock, testing of batteries commonly in portable vacuum tube & transistor radios, hearing aids, flashlights, photo-flash equipment, etc.

FEATURES

• Accurately tests portable radio batteries and lantern batteries.

• Provides true dynamic tests as follows: Rotary switch selection of the exact voltage of the battery under test inserts the proper resistor in series and in shunt with the meter. Therefore the battery's internal resistance reduces its terminal voltage exactly as occurs under actual operating conditions.

SPECIFICATIONS

Test Positions (Volts): 1.5, 4.5, 6.0, 7.5, 9.0, 22.5, 45, 67.5, 75, 90, plus Spare Position. **Size:** 6 1/4" high x 3 3/4" wide x 2" deep. **Weight:** 2 lbs. Test leads provided.

EICO 777 dual conversion citizens band transceiver

Note: The Model 777 features a rear socket for plug-in of a selective call attachment

3-WAY POWER SUPPLY, 6 CRYSTAL-CONTROLLED CHANNELS.
The most feature-loaded, highest quality CB transceiver available today. A dual conversion superheterodyne receiver with RF stages provides razor-sharp selectivity. 6 crystal-controlled transmit and 6 crystal-controlled receive positions spell bulls-eye communication contact in any situation. There's also continuous 23-channel vernier tuning of the receiver made really useful by a spotting switch. And — for night operation — channel selector, tuning dial, and S meter are illuminated. Universal power supply permits installation anywhere and simplifies maintenance. Kit builders may put the 777 on the air without supervision of a commercial radio-telephone license holder, since transmitter oscillator circuit and RF final are mounted, wired, tuned and sealed in compliance with FCC regulations.

FEATURES: Full use of maximum legal power (5 watts to plate of final amplifier) and high intelligibility of transmission, with 3 watts undistorted audio for AM plate modulation • 3-way power supply for operation on 6 or 12 VDC battery or 117 VAC • Series type noise limiter circuit for quiet reception, plus adjustable squelch and AVC • Illuminated direct reading S meter indicates received signal strength • Spotting switch permits exact setting on the receiver continuous tuning dial to a particular channel when a transmitting crystal but no receiving crystal is used for a particular channel • Knob-controlled variable "pi" network, to match popular antennas, and antenna loading adjustment; metering jack to check power input • Rugged push-to-talk ceramic element microphone • Crystals easily installed and removed through snap-out trap door • Sturdy "POSI-LOCK®" mounting bracket permits 180° rotation with positive lock every 30° • Microphone may be mounted on either left or right side • Handsome brushed aluminum panel with chrome plated bezel.

SPECIFICATIONS. TRANSMITTER SECTION: Power Input to Final: 5 watts • Frequency Range: 26.965-27.255 MC • Frequency Control: 3rd overtone type quartz crystal operating within .005% of marked channel frequency between -32°F and +140°F • Modulation: AM Plate modulation automatically limited to less than 100% (FCC requirement) • Output Impedance: Variable "pi" network • Antenna Connector: PL-239, on rear apron.

RECEIVER SECTION: Receiver: First I. F. — 1750kc; Second I.F. — 262kc Selectivity: 5kc-6db, 8kc-20db • Tuning Range: 26.965 to 27.255 MC • Sensitivity: Better than 1 µv for 10db S/N ratio • Audio Output: 3 watts at 5% harmonic distortion • Speaker: 3½" PM type, heavy magnet.

POWER SUPPLY, 3-way for 6VDC, 12VDC, and 117VAC. Current drain is 8 amps at 6VDC; 4 amps at 12VDC • Tube Complement: 6GK5, 12BY7 in transmitter; 6DK6, 6KE8, 6BE6, 6AJ8 (ECH-81), 6AY11, 6GW8 (ECL86) in receiver • Size: (HWD): 6" x 8½" x 10" • Weight: 15 lbs. (including 1 transmitting crystal).

ACCESSORIES: Additional transmitting crystals \$3.95 each. Additional receiving crystals \$3.95 each. Available frequencies on request.



Kit \$99.95 Wired \$149.95

EICO 770 citizens band transceiver



	Kit	Wired
Model 770: 117 VAC only	\$69.95	\$99.95
Model 771: 117 VAC and 6 VDC*	69.95	99.95
Model 772: 117 VAC and 12 VDC*	69.95	99.95

CHOICE OF POWER SUPPLIES, 4 CRYSTAL CONTROLLED CHANNELS

EICO 740 walkie-talkie citizens band transceiver



Kit \$54.95

Wired \$79.95

COMPLETE WITH BATTERY AND CHARGER
Carrying Case With Shoulder Strap \$3.95

Operates 2500 hours on 1
rechargeable leakproof battery

U. S.-made . . . an original product of EICO research
No license or permit needed . . . No age limit . . .

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