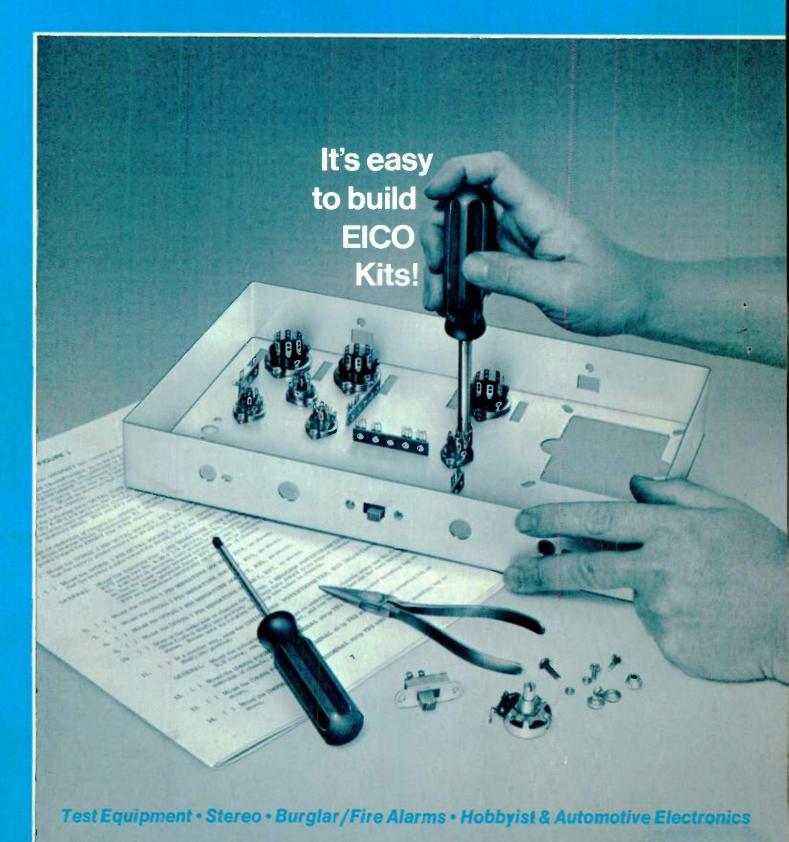


since 1945

Leadership in Creative Electronics

EICO CATALOG

The Newest and Best Values in Do-it-Yourself Kits and Factory Assembled Electronic Equipment.



World Radio History

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#### (1) The EICO Plant.

Manufacturing, warehousing, engineering, and office facilities are now consolidated in a new one-level, 100,000-sq. ft. completely air-conditioned plant.

(2) "WIRED" Assembly Lines. For mechanical assembly, automatic printed circuit board assembly, hand-wiring and final-testing of EICO's "factory-wired" products. In the foreground is President Harry R. Ashley.

(3) "KIT" Packaging Dept. Automated kit packaging production lines are capable of turning out over 3,000 kits a day.

(4) Raw Material Stores Dept. High 24-foot ceilings provide storage-efficiency and fast access.

(5) Engineering/Research & **Development Laboratories.** All engineering groups (audio, test, hobby, etc.) share latest modern facilities.

(6) Quality Control/ Standards Dept. EICO's 25-year reputation for professionalism and value is part due to this department's adherence to strict Quality Control and standardization procedures.

(7) Electronic Data Processing Dept. A 1440 IBM computer is utilized for inventory control, production scheduling and general accounting procedures. Copyright 1974 EICO

# EICO For over 25 years, EICO has been designing and manufacturing **LEADER** electronic products and is now the world's largest producer of electronic kits and factory wired equipment marketed IN KIT DESIGN. exclusively through dealers and distributors throughout the world.

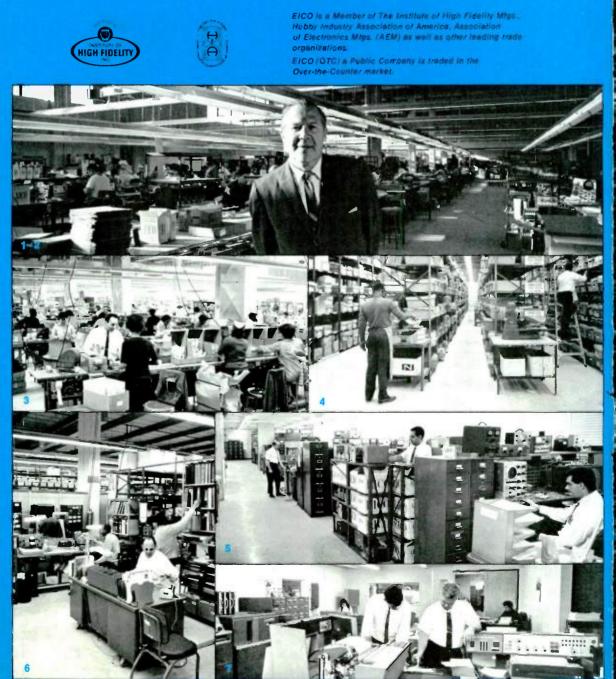
Whatever your electronics interest, there's a wide range of versatile, professional EICO products for you to choose from, and each designed to provide you with the most pleasure and quality performance for your money.

The fact that more than 3 million EICO products are in use throughout the world attests to their quality and performance. EICO kits are so popular because they represent the best value and are available for inspection and immediate over-thecounter delivery at more than 2000 EICO dealers and distributors.

To build an EICO kit, you need only follow the simple and clearly presented step-by-step assembly and wiring procedures furnished with every EICO kit.

EICO uses only the best available components. All EICO kits, before being offered for sale, are beginner-tested to insure that construction procedures are clear, and easily performed.

We invite you to look through these pages and then come to your local EICO dealer to look over your selection before you buy.



# **3 MILLION EICO PRODUCTS NOW IN USE...** Built by People from every Walk of Life... from Novice to experienced Electronic Engineers.

## **Creative Pleasure...** and Savings of 50% or more.

Responsive to consumer-researched demand a dedicated team of Eico engineers creates precision electronic design then you as you build the kit, bring the design to life with your own hands. There is just no substitute for the rare delight and Inspiring sense of self-achievement in this experience. And . . . you save money tool Elco engineering give you products worth 2 to 3 times the kit price. So that, building Elco kits is like earning money for enjoying yourself!

### **Uncompromising Engineering**

Since 1945, Elco engineers have specialized in filling the creative .... needs of kit-builders everywhere They ploneared the concept of integrating advanced electronic design with "buildability-by-thenovice." So respected for quality and economy had Elco become that people who had no time for kit-building asked Elco to make the kits available as ready-tooperate. That's why most Eico products are in both kit form and factoryassembled form

# **Beginner-Tested** Step-by-Step Assembly & Operating Manuals

Even if you never held a soldering iron in your hand, you can build any Elco kit. Large "blow-up" diagrams and detailed parts list make identification easy; clear non-technical language leads you one step at a time to a perfect assembly. Nothing is left to chance.

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5]

# The Famous Eico Warranty-One of the Strongest in the industry

Because the quality of the design, parts and instructions of Elco products are high, Elco unhesitatingly guarantees all parts for 90 days; guarantees that all kits built to instructions (and all factory-assembled units) will meet or exceed published specifications; and guarantees service of every Elco product, If it is ever needed, for the lifetime of the unit, at the nominal charge stated in our service policy



#### AT YOUR SERVICE: 2500 EICO ELECTRONIC CENTERS COAST-TO-COAST

The local Electronics Dealer in your neighborhood offers you a host of benefits. He's nearby. He stocks the complete Eico line so that you enjoy instant off-the-shelf availability of your choice, actual demonstration of the product, fast personal attention, and experienced technical guidance. You can browse, you can ask questions, you can compare actually before you buy. Furthermore — all these advantages are yours at *no extra cost*. You pay your dealer only the nationally advertised price. Liberal credit terms, too, if you want them.

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#### AT YOUR SERVICE: FREE FACTORY CONSULTATION

Should you have any questions about the selection or applications

AT YOUR SERVICE: EICO WORLD WIDE - Wherever you are in the free world, Elco equipment and service are available nearby. For name of the appropriate dealer write: EICO 283 Malta St. B'klyn, N.Y. 11207 Cable Address "Elcokits" N.Y. Telex: 127412

CANADA EICO Canada Limited 20 Millwick Drive Weston, Ontario, Canada Telex: 062-17557

of any EICO product, you may at any time consult by mail with our technical correspondence staff. There's no charge for this service.

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#### AT YOUR SERVICE: 200 AUTHORIZED SERVICE **CENTERS COAST-TO-COAST**

For your added convenience - Eico has set up a network of 200 service stations to make available to you on a local neighborhood basis the same high-quality technical service competence and replacement parts you get from our factory, should you ever need them. Your local Eico Dealer will give you a list of these stations, or you may write to the Eico Service Manager for it - it's free.

EXPORT DIVISION Roburn Agencies, Inc. 349 W. 14th Street New York, N.Y. 10014 Military Personnel Overseas Duty free Eico gquipment is available at U.S. catalog prices (plus nominal surcharge for freight and handling.) Most equipment is available for 115/230 V.A.C. 50-60 Hz operation. EICO Military Sales Division 283 Meits Street 283 Malta Street Brooklyn, New York 11207

# MAIL ORDER CUSTOMERS - USE HANDY ORDER FORM

# *Easy to build* **ECOCRAFT solid-state**

**EICOCRAFT** is a new exclusive original concept and product line designed and manufactured by EICO expressly for the purpose of introducing people of all ages to the exciting world of electronic kits.

If you — or a relative or friend — ever thought that kit building was expensive, or difficult, or a pleasurable activity reserved only for the experts — now for as little as \$2.50 for an EICOCRAFT MODEL EC-1000 can change your mind.

If you can follow simple step-by-step instructions, you can enter into the fascinating, rewarding world of electronic kit building.

You need no technical knowledge or experience to enjoy all the creative fun of building with your own hands a wide variety of fine professional electronic devices.

# **EICOCRAFT** are true electronic kits

They are every bit as professional in quality, performance and opportunity for participation by the builder as the 20-year famous EICO line of kits for stereo, hi-fi, CB, ham gear and test instruments. Only the complexity has been reduced to make kit-building faster, easier and less expensive. You don't miss out on any ingredient of the self-expressive fun of building electronic kits.

For the educator: Easy, fast, educational, useful – and low-cost. For the sophisticate: Convenient relaxing projects that are both "jiffy" and 100% professional. Many projects are "expandable" by adding kits together – your imagination is the only limitation.

Easy comprehensive step-by-step instructions

The finest professional quality parts

### **ONLY EICOCRAFT" KITS HAVE ALL THESE FEATURES:**

- Modern professional all solid-state circuitry
- Pre-drilled copper-plated etched printed circuit boards

# You can build 54 exciting new EICOCRAFT



# Aircraft Converter

The EC-2600 is an all-transistor battery operated RF converter operating in the 108-136 MHz band. No interconnecting wires needed. Just place the EC-2800 near your AM radio (home or car) inductive coupling to your radio makes it possible to tune in the exciting two-way broadcasts from local alreraft communications.

Model EC-2800



# **Electronic Bongos**

Battery-operated 3-transistor bongos circuit electrically produces the exciting percussive sounds of high-pltched and low-pitched bongos, tomtoma, bass drum, marimba, gongs and claves, when used in conjunction with an amplifier and speaker. An ideal accessory for use with electric guitars or other electronic musical instruments. May be mounted directly on or near the instrument itself. Model EC-1600



Battery-operated beat-frequency metal locator can be used to locate both ferrous metals (iron, steel, etc.) and non-ferrous metals (gold, sliver, copper, etc.) consists of two RF oscillators and a search loop. This distinctive audio signal pitch goes up when the EC-1900 locates buried ferrous metals, and the pitch goes down when it locates non-ferrous metal.

Model EC-1900



# Wireless' Sound / Lite Translator

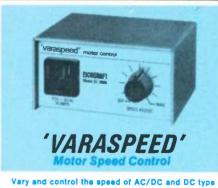
To the EC-4400, just plug in up to 300 watts of colored lamps. Its built-in omni-directional super-sensitive transducer, pick-up will make any audio in the room modulate the lamps-so sound will be translated into simultaneous corresponding colors of light. The sensitivity control gives you adjustability of the color intensity.

4



Remember the "moving" lights on the theatre marquee?...or surrounding some of the booths at the local carnival?

With the EC-4600 you can produce, in any custom serial arrangement of any color lamps, a similar sequence of "on-off" states that create the appearance of light "running around" in that configuration. (Max. 150 watts per channel). Model EC-4600  $\mathcal{P}\mathcal{V}$  Wired.



vary and control the speed of AC/DC and DC type motors in a smooth continuous manner while maintaining maximum torque capability at all times. Solid State circuit produces unusually low, smooth, operating speeds and wide speed-range variations of 50:1 to 100:1. Supplied complete with a vinyl clad steel case and heavy duty line cord with a grounded male plug. Handles up to 10 amps. Model EC-3600

# electronic project kits! building electronic kits.

Exciting new projects Introduced monthly!

#### Excellent for . . .

- ä Science Fair Projects
- Merit Badge Awards
- Introductions to Electronics and Science
- Home and Hobby Projects Relaxation "Jiffy" Tasks



**EICOCRAFT** 

ronic VOX

No technical knowledge or experience necessary

# Solid-State Kits in 11/2-2 hours each.



Size: 8" x 8" x 41/4".

Watch red, blue and green color dance to your favorite music beat. An entertaining display multi-color three dimensional patterns vary to the amplitude of the sound source. The power circuits speaker system(s) of your sound source (radio, recorder, hifi) are protected with an isola-tion transformer. Custom molded plastic cabinet.

Model EC-3800



With the EC-4300, you command 3 independent bands of audio frequencies to modulate 3 discrete strings or groupings of any color lamps. Just connect your hi-fi speaker, power amplifler, radio, recorder, phono, etc. to the EC-4300; and then plug each string of color lamps into its Independent channel (up to 300 watts per channel)

Model EC-4300



Convert your 2 Channel Stereo System to 4-Dimensional Sound with the EC-4700. Enjoy 4-Channel sound from your regular stereo records, tapes, and FM broadcasts using your existing stereo amplifier or receiver. Just add the "Sound 4" Adaptor and 2 speaker systems. You do not need an additional stereo amplifier,

Model EC-4700

# **EICOCRAFT KITS available include:**

EC-100 Electronic Siren EC-101 Electronic Burglar Alarm EC-102 Electronic Fire Alarm EC-200 Electronic Intercom EC-300 Audio Power Amplifier EC-400 Electronic Metronome EC-500 Tremolo EC-600 Electronic Light Flasher EC-700 "Do Nothing" Mystifler EC-800 Photo Cell Nite Lite EC-900 Power Supply EC-1000 Code Oscillator EC-1200 AM Wireless Mike EC-1300 Electronic VOX EC-1400 Solid-State FM Radio EC-1500 Solid-State AM Radio EC-1700 HAM CB-VOX EC-1800 Electronic "TOX" EC-2000 Electronic Organ EC-2100 "Magic Switch EC-2200 Electronic "Eve EC-2300 Preamp EC-2400 "Builhorn

EC-2500 "Fuzzbox EC-2600 "Super Snoop" EC-2700 Police Converter (Lo) EC-2800 Aircraft Converter EC-2900 Police Converter (HI) EC-3000 8 Ohm Speaker EC-3100 2 Station Intercom EC-3200 Printed Circuit Kit EC-3300 Automotive "Light Guard" EC-3400 "Vari-Volt" Power Supply EC-3500 Mood Lite Control EC-3700 "Lightshow" Translator EC-3801 "Lightworks" Light Display EC-3802 "Oplite" Moire 95 EC-3803 "Geometric Fantasy" EC-3804 Strobe Lite EC-3805 Celestial Lites EC-3806 "Wireless Electric Fiesta" EC-3900 "Super Mood Lite Control EC-4000 "Electroplater EC-4100 Stereo Headphones EC-4500 Door/Intercom

**World Radio History** 

**BUILD YOUR OWN CUSTOM-DESIGNED** CABINET IN MINUTES WITH FLEXI-CAB



Ideal for electronic projects, prototypes, etc. Fast, easy, push-together assembly

Decor styled, vinyl clad steel cabinets.

Enclose your project in a beautiful, professionally styled cabinet that you build In minutes.

FLEXI-CAB is the new way to make a custom cabinet using flat panels joined together with "links" of plastic with pre-cut mitered corners. All kits have a package of pressure sensitive identification and decorative labels, as well as a decorative strip for the front panel.

AVAILABLE IN 3 SIZES: MODEL F-44 3" x 4" x 4" MODEL F-46 3" x 4" x 6" MODEL F-69 3" x 6" x 9" A versatile instrument for adventure and utility!

# EICO TH-30 "Treasure Hunter" Solid State Metal Detector

Electronically detects ferrous and non-ferrous metals.
 Locate Plumbing Beams and Studs in the walls of your home.
 Find coins and souvenirs at beaches, parks, fields, caves, etc.
 Designed for the professional treasure hunter, hobbyist, home repairman.

Pays for itself many times over! Helps locate plumbing inside walls. Find buried pipes, conduit, property markers. Search for jewelry, coins, relics, souvenirs on beaches, fields, etc. So easy to use, absence of meters or dials leaves your eyes free to scrutinize terrain.

The TH-30 is a highly reliable all-transistor instrument. It uses five high gain transistors to provide you with enough sensitivity so

that you can locate metal objects some distance below the ground. The signals are reproduced by an extremely efficient 21/2" permanent magnet speaker. The entire unit is ruggedized to prevent damage from shock and weather. The super-sensitive detection coil is shock mounted and is not affected by variations in temperature. The entire TH-30 weighs only 21/2 pounds. You can take it with you anywhere when you go on vacation.

# The TH-30 comes complete with a detachable handle for easy storage

NEW

handle for easy storage and includes a 9 volt transistor battery. Overall length: 40". Handle Length 36". Detector housing 9" Diameter x 1½" Deep.

> TH-30 KIT WIRED

# **EICO AMATEUR ACCESSORY GEAR**



# EICO 717 Electronic Keyer

Kit Wired

An always-welcome accessory for the CW ham-the fully automatic 717 Electronic Keyer provides self-completing clean-cut dots, dashes and spaces accurately timed and proportioned from 3 to 75 WPM in four overlapping switch-selected ranges, with vernier control of all speeds within each range.

■ Automatically makes dashes equal in time to 3 dots and sets the correct one dot spacing in a series of dots or dashes. ■ Automatically self-completes: once a dot or dash is begun, it becomes impossible to "break" the character. ■ Aural and front panel lamp monitoring. ■ Dot/Space Ratio - 1:1 electronically timed to within 2 milliseconds at all speeds. ■ Dash/Dot Ratio - 3:1 electronically timed to within 2 milliseconds at all speeds.

#### SPECIFICATIONS

6

5 tubes, 2 silicon rectifiers; 100-130 VAC, 50-60Hz, 40 watts. SIZE (HWD): 51/3" x 8" x 81/4". WGT.: 9 lbs.



# EICO 706 Code Practice Oscillator

Wired only

#### Includes Battery, Key and Earphone.

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): " x 3%" x 2". WEIGHT: 2 lbs.

 Flick of a Switch for instant return to Standard Ignition!

p & Trouble moot

ar or Boat!

# EICO 888 Solid State Universal Engine Analyzer

### Kit 70 Wired 100

Keep your car or boat engine in tip-top shape with this completely portable, self-contained, self-powered universal engine analyzer.

Now you can electronically tune up and trouble-shoot engine performance exactly as the professionals do. Useful for \_ 6- or 12-volt; 4, 6, or 8 cylinder engines; negative or positive ground. Performs over 30 engine and wiring tests. Includes a comprehensive tune-up and trouble-shooting manual. Large 6'' D'Arsonval wide-view 2-color meter with 10 large, clear, easy-to-read scales: (Volts, Engine RPM, Dwell Angle, Amperes, Ohms, Spark Output, Diode/Leakage). Self-powered: you can take it into car or boat for actual car-running, boat-running tests.

The 888 comprises the latest solid state circuitry and conveniences. The RPM circuit employs 3 transistors with a Schmitt trigger pulse counter. Meter is recessed for full protection. Sturdy metal cabinet; handle for easy portability. Complete with "how-to-use" manuals with both test and calibration leads.

SIZE (HWD): 5%'' x 11 %'' x 5''. WEIGHT: 6 lbs. Supplied less batteries (4  $^{\prime\prime}\text{D}''$  cells required).

# EICO 889 Solid State Capacitive Discharge Ignition System

CAPACITIVE DISCHARGE

### Kit 35 Wired 45

Now discover for yourself the dramatic improvement in performance of your car, camper, jeep, truck, boat—any vehicle! EICO's new electronic achievement saves on gas, promotes better acceleration, gives your car that zip you've always wanted.

- Gas mileage is increased up to 25%
- Points and spark plugs last up to 5 times longer
- You go up to 5 times longer between tune-ups

EICO Model 889 Capacitive Discharge Ignition System makes possible complete fuel combustion which means greater acceleration, higher top speed, increased spark plug life (up to 100,000 miles), instant cold weather starting and a mileage increase of as much as 15%. The EICO Model 889 is compatible with all domestic and foreign cars and trucks with 12 volt, negative ground systems. In Kit form, the unit is easy to assemble—no special skills or tools required. The unit is moisture proof and not affected by underhood temperatures. All needed wiring, connectors and fasteners are supplied—you use your present coil and spark plug wires. Size: (HWD)  $4\%^{\circ}$  x  $4\%^{\circ}$  x 6% Weight: 4 lbs.

# EICO SS-200 TIME DELAY BURGLAR ALARM SYSTEM

### Wired only

- Complete ready-to-install
  "Time Delay" eliminates need for
- on/off entrance Key Switch Extra Bonus—EICO A-95
- Security Handbook

The ideal self-contained closed circuit alarm system for apartments,

stores, professional offices. The system is activated only after you leave your apartment and close the exit door. There is no need to rush out for fear the alarm will ring before you can get out. There is also a 20 second "TIME DELAY" allowing you sufficient time to shut the alarm off upon entering. "TIME DELAY" features eliminates the need to drill holes in apartment doors for shunt locks. Opening any protected door or window, cutting of the alarm wires or tampering with the cabinet will cause the alarm to sound.

EICO SS-200 System includes: Tamperproof, steel cabinet with 8" bell; front and rear tamper switches, switch lock with 2 keys, 3 window contacts (C.C.), 1 exit door contact (O.C.), interior ON/OFF switch, panic/battery test button, 4 warning decals, 100' hook-up wire, security handbook, operates on standard 12 volt lantern battery (not supplied).



- Permits "hands free" conversation
- All Solid State design for stability and reliability

Use the Eico Telephone Amplifier for convenience you've never known before. The TA-12 amplifies the sound from your telephone to normal room listening level without any electrical connection to the phone. In the home you can carry on a phone conversation "hands free" while doing your tasks around the room. The entire family can listen to calls from friends and relatives. In the office, the Eico TA-12 allows you to take notes, file, type—while talking on the phone. Supplied complete with attractively styled custom molded plastic cabinet, extension speaker and battery (9-volt). SIZE (HWD): 3" x 10" x 4". WEIGHT: 1¼ lbs.

# SUPERB IN SOUND ...

# New QUATRASONIC plus CORTINA gives you four

#### **CONVERT YOUR PRESENT STEREO** SYSTEM TO 4 CHANNEL SOUND WITH QUATRASONICTM by EICO

cortina

**STEREO COMPONENTS** 

#### **New EICO QA-4 4-Channel Stereo** Adaptor

- Enjoy 4-dimensional sound hidden in standard stereo records, tapes and FM broadcasts.
- Just add the EICO QA-4 Adaptor and two speaker systems - No additional amplifiers required.

VIRED

The "hidden depths" of most modern stereo recordings or FM broadcasts are revealed when you use the EICO adaptor along with your stereo system. Sounds that are hidden in most stereo recordings are separated from the normal stereo information by the QA-4. These hidden sounds represent the original "concert hall ambience" of classical performances, as well as the full, rich realism inherent in popular music.

Through the QA-4, almost any stereo system can be used to revive the original concert hall ambience hidden in stereo recordings, and to uncover the front-to-back directionality normally imbedded in standard 2-channel stereo sources



The two "rear" channels come to life through the use of two speakers connected to the EICO QA-4 and placed behind the listener. The two existing speakers normally used for stereo reproduction are also attached to the EICO QA-4, and are placed in the conventional positions. The full channel separation at the speakers so necessary for proper two and four channel stereo sound reproduction Is preserved.

The EICO QA-4 can be used with any standard stereo amplifier or receiver with 4, 8 or 16 ohm speaker output terminals. No additional amplifiers are needed. Two controls are provided. The 4-position switch permits you to select 4-channel operation, front speakers only, rear speakers only, as well as providing facility to balance the gain of the stereo channels. Flexibility is enhanced by the effective rear speaker level control on the front panel. Supplied complete with 100 feet of hook-up wire. SIZE (HWD): 31/8" x 63/4" x 63/4". WEIGHT: 2 lbs

#### **CORTINA 3780 All-Silicon Solid State** FET 50 Watt-AM-FM Stereo Receiver.

- Advanced RF design using Field Effect Transistors (FET).
- All-silicon circuitry for excellent temperature stability.
- New fast and reliable "Fun-to-Build" Kit assembly techniques. All critical circuits are pre-assembled and pre-aligned.
- Reliable Transformer power supply. Sleek, graceful "Low Silhouette" styling with

KIT

- "Black Magic" back-lit panel.
- Includes handsome Brazilian Rosewood vinyl-clad metal cabinet with custom molded end-caps.

#### **TUNER SPECIFICATIONS:**

FM SECTION: TUNING RANGE: 88 MHz-108 MHz. USABLE SENSITIVITY (IHF): 3.5 uv for 30 db quiet-ing. CAPTURE RATIO: less than 4. SIGNAL TO ING. CAPTORE RATIO: less than 4. SIGNAL TO NOISE RATIO: 60 db. IMAGE REJECTION: 50 db. IF REJECTION: 70 db. SPURIOUS RESPONSE REJECTION: 70 db. SELECTIVITY ALTERNATIVE CHANNEL: 20 db. FULL LIMITING: 100 uv. AM SUPPRESSION: 40 db.

MPX SECTION: STEREO SEPARATION: 33 db. at 1 KHz. 19 KHz. SUPPRESSION: 35 db. 38 KHz. SUP-PRESSION: 35 db.

AM SECTION: TUNING RANGE: 535 KHz.-1640 KHz. USABLE SENSITIVITY (IHF): 200 uv/m. SIGNAL TO NOISE RATIO: 45 db. SELECTIVITY: 30 db. IMAGE REJECTION: 40 db. IF REJECTION: 40 db.

#### AMPLIFIER/PREAMPLIFIER SPECIFICATIONS:

AUDIO SECTION: POWER (4 ohms): 50 watts (± 1db.) 32 watts (IHF) FREQUENCY RESPONSE: 20 Hz-20 KHz. HARMONIC DISTORTION: .75% at 1 KHz at 8 W. out, .4% at 1 KHz at 4 W. out. IM DIS-TORTION: 1.7% at 5 W. HUM AND NOISE: 70 db below rated output. CHANNEL SEPARATION: 45 db. INPUT SENSITIVITY: 2.8 mv magnetic phono input, 200 mv at all other inputs. INPUT IMPEDANCE: magnetic phono 47 K, all other imputs 100K ohms: DAMPING FACTOR: minimum 30 with 8 ohm load. RISE TIME: 4.5 u Sec. TONE CONTROL RANGE: treble  $\pm$  11 db.: bass  $\pm$  11 db. RIAA EQUALIZA-TION:  $\pm$  2 db. 50 Hz-15 KHz. TOTAL CONTINUOUS OUTPUT POWER (RMS): 22 W Into 8 ohms. OUT-PUT: stereo speaker systems with impedance of 4-16 ohms; tape recorder output (not affected by control settings) stereo headphone jack on front panel for all low impedance headphones. INPUTS: magnetic phonograph, auxillary, tape. AC RECEP-TACLE: one switched. POWER REQUIREMENTS: 105-130 VAC. 50/60 Hz. SIZE (HWD) 4" x 161/2" x 91/8" WT: 10 lbs.

World Radio History

88 90 92 94 95 98 **100 1**3 14 10

1 55 BD 16 D

80 90 00 100 100

128

# COMPACT IN SIZE, MODEST IN PRICE

# dimensional sound at budget prices!

# CORTINA 3080 All-Silicon Solid State 50 Watt Stereo Amplifier.

- Full-capability controls for every program source.
- Includes Brazilian Rosewood vinyl-clad metal cabinet with custom molded end-caps.
- Perfect match to CORTINA 3300 AM-FM Stereo Tuner.

Here EICO has packaged the stereo amplifier section of the quality Cortina 3780 Raceiver as a separate component. The kit features modular printed circuit board construction for quick error-free assembly and long-life performance. The extremely attractive low silhouette styling of the 3780 are retained here along with the handsome Brazilian cabinet and custom molded end caps.

#### **KIT**

#### SPECIFICATIONS:

All amplifier electronic specifications are identical to those of the amplifier/preamplifier section of the 3780 Receiver. Size (HWD) 31/8" x 123/4" x 63/4". WT, 7 lbs.

#### CORTINA 3300 Afl-Silicon Solid-State FET AM-FM Stereo Tuner

- Perfect matching companion to Cortina 3080 Stereo Amplifier.
- Exceptional stereo reception.
- Includes Brazilian Rosewood vinyl-clad cablnet with custom molded end caps.

The complete AM and FM Stereo Tuner of the Cortina 3780 Receiver — here available as a separate component.

FIELD EFFECT Solid State AM and FM Stereo Tuner section is extremely compact and stable - and is supplied pre-assembled and prealigned. You build the power supply and assemble the mechanical elements.

#### KIT

#### SPECIFICATIONS:

All its electronic specifications are identical to the tuner section of the 3780 Receiver. Size: (HWD)  $3\%'' \times 1244'' \times 644''$  Wt. 6 lbs.



#### World Radio History

# **New 8 Track Tape Deck**

#### EICO TD-8 Solid State 8 Track Stereo Tape Deck

Update your home stereo system to play 8 track stereo tape cartridges. Easily connects to your stereo amplifier or receiver tape output • Built-in solid state preamplifiers • push button track selector • individual illuminated track indicator lights tell you which track is playing at any given time • Response 30-12,000 Hz. 117 VAC, 60 Hz. Wt. 8 Ibs. TD-8 wired only



#### CORTINA 3070 All Silicon Solid State 80 Watt Stereo Amplifier

A medium power total-capability stereo amplifier of outstanding value. Specifications include 80 Watts + db into ohms; 50 watts into 8 ohms (IHF). Harmonic Distortion less than 0.75%. Size (HWD) 31% "x10" x734". Wt. 712. Ibs. KIT Includes cablet.



#### CORTINA 3770 All Solid State 80 Watt AM-FM Stereo Receiver

All on one chassis: The full capability 3070 Sterec Amplifier plus a precision AM-FM Stereo Tuner (whose RF Multiplex and IF sections are already pre-assembled and pre-aligned). Size (HWD) 4%° x 16" x 9". Wt. 14 lbs. KIT WIRED Includes cabinet.

CORTINA 3570 All Solid State 80 Watt FM Stereo Receiver (same as 3770 less AM) KIT WIRED Includes cabinet.



#### EICO Speaker Systems

These high-efficiency bookshelf-size 2-way speaker systems employ the proven acoustic suspension design for very wide frequency response and clean natural sound. Model HFS-8

13" x 22" x 6½", 17 lbs. Model HFS-10 12" x 18" x 5¼", 11 lbs.



# 2-IT-YOURSELF' TOTRY PROTECTION SYSTEM The Professional Home Protection everyone can Install and Afford. . BELL IN BELL BOX WITH TAMPER SWITCH

# EICO FG-100 SECURITY CONTROL CENTER

- Start your custom Burglar/Hold-up/Fire Alarm System with the FC-100. Add on Sensors, Alarms and Accessories to suit your own needs.
- "Do-it-Yourself" Installers Handbook included.
- AC Operated-Automatic Transfer to Battery Operation in the event of Power failure
- No technical knowledge needed-No soldering.

Ideal for Apartment, Home and certain Commercial Installations. in 100% Professional in Design, Reliability, Performance.

The first professional Alarm Control Center designed for easy "Do-it-Yourself" installation. The FC-100 is the "heart" of the EICO home protection system.



It contains all circuits required for monitoring the burglar and fire detectors and sounding the alarm. It includes two indicator lights; a white "circuit test" light which automatically checks the status of the burglar alarm sensors in the system, and a red "alarm on" light, which indicates that the system has been activated. A built-in 117 VAC power supply supplies 6 volts DC for operating the system. In the event of power failure, the FC-100 automatically switches over to battery operation. The power supply also trickle charges the lantern battery when it is not in use. A meter and battery test switch allows you to check the condition of the battery. Each circuit in the FC-100 has its own set of screw terminals that allow easy installation.

Includes A-95 Security Handbook and A-105 warning decals.

Model FC-100 80

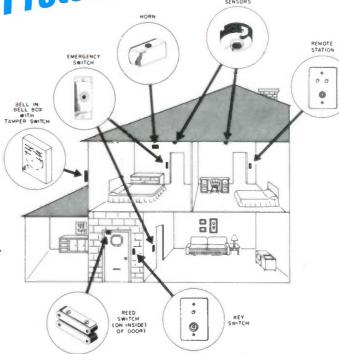
# **EICO** SS-500 BURGLAR/HOLD-UP/FIRE ALARM SYSTEM

- Systems "HEART" is the EICO FC-100 Security Control Center. Additional Sensors, Alarms, Accessories may be added any time to meet future needs.
- "Do-it-Yourself" Installers Handbook included.

The EICO SS-500 Security System offers you the kind of professional protection you have been looking for, at a price you can afford. The System has been designed on the EICO exclusive "Expandability Concept" that enables you to "add-on" protection to meet your own special requirements. Virtually any professional security sensing device can be easily added to the EICO SS-500. The system is supplied with the following: FC-100 Security Control Center; SA-25 8"

Alarm Bell: A-45 Entrance Key-Switch with "system-on" signal light: A-65 remote station control with signal lights; SD-20 Fire Sensors; SD-10 Door/Window Contact Switches; SD-50 Tamper Switches; SD-40 Door Cords; A-35 Emergency Buttons; A-95 Installers Handbook; A-105 6 Warning Decals; A-135 (2) Alarm Circuit Hook-Up Wire and A-137 Alarm Bell Hook-Up Wire.

Model SS-500



TYPICAL ALARM INSTALLATION

#### "Do-it Yourself" HOME SECURITY HANDBOOK

comprehensive 40-page Homeowners Handbook which includes a wealth of information on professional home security as well as comprehensive installation procedures in clear non-technical language

A-95 Handbook

# EICO A-95 HOME SECURITY HANDBOOK

Save hundreds of dollars in alarm installation and monthly service charges. The EICO A-95 Home Security Handbook is a comprehensive 40 page booklet which can be easily understood by anyone. Written in clear non-technical language, it contains complete instructions not only on how a home protection system functions and how to install all EICO security devices, but also how to expand your EICO system. Before you purchase any security system for your home, we suggest you read the A-95 handbook and see how easy EICO makes it to "Do-it-Yourself."

### Acclaimed by Editors and Consumers!

"The EICO SS-500 Home Protection system works as well as, if not better, than many so-called "professional" or industrial systems-at a lot less cost. Fact is, the system has more features than much "professional" equipment. And it certainly works a lot better than many do-it-yourself systems presently on the market that are supposedly intended for the average home owner." (Test Report Summary E/E Magazine Aug. 1972)

"Wiring the Elco system is a breeze" (Electronics Illustrated August 1972)

BOOK MAKES

POSSIBLE

"We found that installing the security system is easy, and the only tools we needed were a screwdriver and a knife. We picked an arrangement from the manual, suitable to our needs, and went to work. In a matter of hours, the job was completed." (Popular Electronics Sept. 1972)

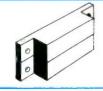
# Protection against burglary • fire • smoke • freezing • flood!

# Here's what you 00 when you buy the EICO SS-500 Burglar/Hold up/Fire Alarm System.



#### FC-100 SECURITY CONTROL CENTER

The "heart" of the EICO home protection system conand fire detectors and sounding the alarm. It also in-cludes two indicator lights; a white CIRCUIT TEST light which is used to check the status of the devices in the system, and a red ALARM ON light, which indi-cates that the system has been activated. A meter and battery test switch allows you periodically to check the\* condition of the 6-volt Lantern Battery (not supplied). FC-100



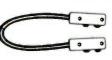
# SD-10 DOOR/WINDOW MAGNETIC CONTACT REED

SWITCHES (4 pairs) C.C. These are the basic burglar/intruder sensors for doors and windows. They are two-piece units consisting of a normally-open reed switch encased in a plastic housing, and a bar magnet in a similar plastic housing. **SD-10** 



### SD-20 HEAT/FIRE SENSORS (3) O.C.

The heat sensors are of the open circuit type. When a temperature of 135°F is reached they will set off the alarm. They can be used anywhere except normally warmer areas, such as attics and furnace rooms. For those locations use Model SD-24. SD-20



# SD-40 DOOR CORDS 12", TWO WIRE (2)

These are to be used wherever movement of one part of the circuit is required, e.g. doors and windows. They are designed to withstand many years of flexing without damage. **SD**-40



#### SD-50 TAMPER SWITCHES (2)

Tamper switches are particularly valuable for protecting the alarm bell and the Security Control Center, preventing an intruder from deactivating the alarm system. SD-50



#### SA-25 INDOOR/OUTDOOR 8" BELL 6-12VDC This is an extra-loud alarm bell that can be used for both the burglar and fire alarm circuits, and can be mounted either inside or outside the house (See SA-27 Steel Bell Box) **SA-25**



#### A-135 PROTECTIVE CIRCUIT HOOK-UP WIRE-**100 FEET**

Two parallel running clear plastic covered 22 gauge conductors are insulated from each other. One lead is silver colored and the other copper for easy identification. Used for burglar and fire alarm protective circuits. A-135 (SS-500 includes two 2A-135's)

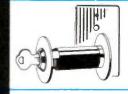


#### A-65 REMOTE STATION CONTROL WITH INDICATOR LIGHTS

Consists of a wall mounting plate, momentary switch, a white "CIRCUIT TEST" light, and a red "ALARM ON" light. The momentary switch turns the burglar alarm ON and OFF. The white light indicates that all intruder-detecting devices are operative (closed). The red light indicates that the surface in the red of the defense. red light indicates that the system is "armed" and any intrusion will activate the alarm bell. If both lights are out, it indicates that at least one device in the system is not working (closing) properly, and all sensors (door, window, etc.) should be checked. A-65



A-35 EMERGENCY BUTTONS (2) Also known as a "panic button," this allows you to sound the alarm from any location if you need help. This emergency button overrides all other sensing devices, and can only be turned off by pushing the same button a second time. A-35



#### A-45 MOMENTARY ENTRANCE KEY SWITCH WITH SIGNAL LIGHT

This switch enables you to get into your own home with-out setting off the alarm. A red light with mounting plate is associated with the key switch, both to assure you that your system is activated, and to warn intruders. that the house is protected. A-45 14



#### A-75 POWER SUPPLY

Supplies 6 volts DC for operating the system. In the event of electrical power failure, a 6-volt Lantern Bat-tery (not supplied) will automatically supply the power to keep the alarm system activated. The A-75 also trickle charges the Lantern Battery when it is not in use. Assembled with FC-100. 25



#### A-95 INSTALLERS HANDBOOK

Gives complete instructions not only on how a home protection system functions and how to install all "fail-Safe" components, but also how to expand your SS-500 system with additional components. A-95





The mere knowledge that a home protection system is in operation is frequently enough to deter an in-truder; these decals, should therefore be displayed prominently in several places. A-105



#### A-137 ALARM BELL WIRE-50 FEET

Two parallel running insulated 18 gauge conductors are insulated from each other. Ideal for alarm bell wiring. Lies flat for gluing to surfaces too hard for stapling. A-137

### Additional security components can be added any time, at your own pace, to suit your own needs.

- SD-12 Leaf Contact Switches C.C. (2/pkg.)
- SD-14 Multi-Purpose Foil Contacts (2/pkg.)
- SD-16 Vibration Contact C.C. SD-18 Door Jamb Contacts C.C. (2/pkg.)
- SD-28 "Flash Fire" Heat Detector O.C. 135°
- SD-30 Window Foll Connectors (6/pkg.)
- SD-32 Window Foil (1 lb. roll)
- SD-40 Door Cords (12") (2/pkg.)
- SD-42 Disconnecting Door Cord (2 wire)
- SD-52 Electric Trip Cord SD-54 Floor Switch Mat (30" x 30") N.O.
- SD-56 "Pilferage Sentinel" C.C.
- SD-58 Window Sill Alarm Switch 24" O.C.
- SD-60 Smoke/Power Failure Detector
- SD-62 Freeze Detector O.C.
- SD-64 Water/Flood Detector
- SA-15 Indoor Horn Alarm (Twin Klaxon)
- SA-17 Electronic Siren (6-12 VDC)
  - **World Radio History**

A-85 "Open"-to-"Closed" Circuit Coupler A-125 Foil Protector/Adhesive A-145 "By-Pass" Switches (2 pkg.) A-155 Automatic Emergency Dialer

SA-27 Steel Bell Cabinet (For 8" Bell)

- A-165 Alarm Circuit Multitester
- A-175 Electronic Strobe Alert
- A-177 Automatic Light Alert
- A-185 Bell Timer/Automatic Cut-Off

# EICO INDUSTRIAL PRODUCTS

EICO industrial instruments are found in universities, technical schools, manufacturing facilities, laboratories, servicing organizations, utility companies and numerous other organizations throughout the world.

EICO's quality and dependability are well known and appreciated by industrial users evernwhere.



- High quality tuning capacitor provides easy frequency setting
- Less than 0.7 volt input required for measurements

Wired only



- bridge supply voltage permits testing of all types of capacitors
- · Measures diode reverse and transistor quiescent current
- . Measures insulation resistance and leakage currents

Wired only



#### EICO 902 IM/HARMONIC DISTORTION METER & AC VTVM

The EfCO 902 is a unique audio test instrument combining IM and Harmonic Distortion Meters and a sensitive AC VTVM and db meter in one compact package. It offers the stability and accuracy needed for critical measurements in audio research, design, and development. Yet, its ease and speed of operation make it ideal for production testing, quality control and servicing.

For harmonic distortion measurement, the 902 incorporates a continuously variable 20-20,000 cps Wien Bridge rejection filter (in three ranges).

For IM distortion measurement, the 902 incorporates a 7 kc oscillator for the high frequency source and a filtered line-frequency signal for the low frequency source. External low frequency sources up to 400 cycles and high frequency sources down to 2 kc may be fed to the mixing bridge through panel jacks.

Used as an AC VTVM, the 902 provides a highest range of 300 V and a lowest range of 10 mV with uniformly excellent response at all levels. The AC VTVM section is employed in all instrument functions, and the linear 0-1, and 0-3 meter scales are used for all measurements. A decibel scale (-20 to +2) is also provided, based on 0 db = 1 mw in 600 ohms and permitting power measurements in dbm.

#### SPECIFICATIONS

SPECIFICATIONS IM DISTORTION: LF to HF ratios 4:1 and 1:1. TEST OUTPUT: 0.5 v. OUTPUT Z: 600Ω or external. INPUT Z: 500kΩ. MINIMUM INPUT: 0.7 v. DISTORTION RANGES: 0.3, 1, 3, 10, 30%. ACCURACY: ±5% of full scale. RESIDUAL DIS-TORTION: 0.05%. HARMONIC DISTORTION; FREQUENCY RANGES: 20-200, 200-2000, 2000-20,000 cps. INPUT Z: 500kΩ. MINIMUM INPUT: 0.7 v. DISTORTION RANGES: 0.3, 1, 3, 10, 30, 100%. ACCURACY: ±5% of full scale. INTERNAL DISTORTION: 0.1%. AC VTVM; RANGES: .01, .03, 01, 0.3, 10, 30, 100%. ACCURACY: ±5% of full scale. INTERNAL DISTORTION: 0.1%. AC VTVM; RANGES: .01, .03, 01, 0.3, 10, 30, 100, 300 volts RMS. Also db scale of -20 to +2. INPUT Z: 2MΩ. FREQUENCY RESPONSE: ±0 db 10 cps to 100 kc, -3 db at 300 kc. ACCURACY: ±4% of full scale. POWER SUPPLY: V-R tubs regulated. POWER REQUIREMENTS: 115 VAC, 60 cps, 60 watts. SIZE (HWD): 12½" x 8½" x 10%". WEIGHT: 22 lbs. EXPORT MODEL: 115 and 230 VAC. 60/50 cps. \* Export Model available

### EICO 965 FARADOHM BRIDGE/ANALYZER

The Model 965 is an extremely flexible analyzer. It incorporates an RC bridge, a 6-range DC VTVM, and 11-range DC vacuum-tube microammeter and milliameter and a built-in variable DC supply.

The bridge may be used for resistance and capacitance measurements, and also as a resistance-capacitance-inductance comparator with external standards.

A very low internal AC bridge supply voltage permits testing all types of capacitors without damage. The bridge may also be supplied from an external source. An external polarizing voltage may be applied to capacitors above .05. A sensitive detector amplifier gives sharply-defined null. Power factor measurement is provided for capacitors above 0.05uf on a calibrated control. A plug in shield is supplied to be used for small capacitors

Leakage current and insulation resistance measurements may be made either to EIA standards, or for actual working conditions.

Overload protection is provided for the meter and the power supply, with overload signalled, by lighting up the meter. 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.

#### SPECIFICATIONS

SPECIFICATIONS CAPACITANCE RANGES: 5 pF-10000 pF, 500 pF - 1  $\mu$ F, .05  $\mu$ F - 100  $\mu$ F, 50  $\mu$ F, 5000  $\mu$ F. POWER FACTOR: 0-80% at 60 cps. RESISTANCE RANGES: 0.5 $\Omega$ -1 $K_{\Omega}$ ,5 $\Omega_{\Omega}$ -100 $K_{\Omega}$ ,5 $K_{\Omega}$ -10 $M_{\Omega}$ ,5 $M_{\Omega}$ -500 $M_{\Omega}$ ; Higher Resistances up to 200,000 $M_{\Omega}$  can be measured with the metered variable DC supply. ; RCL COMPARATOR RANGE: .025-50 (ratio). BRIDGE SUPPLY VOLT-AGE: Below 0.5 VAC RMS at line frequency, except 10 VAC RMS on lowest capacitance and highest resistance ranges. VARIABLE DC SUPPLY VOLTAGE RANGES: .4 V-15 V, 1.4 V-55 V, 4 V-15 V, 14 V-50 V, 40 V-150 V, 140 V-500 V; max-imum output 10 mA. DC VTVM RANGES: 0-1.5 V, 5 V, 15 V, 50 V, 150 V, 100M\_{\Omega} DC VTAM Ranges: 0-.15  $\mu$ A, .5  $\mu$ A, 1.5  $\mu$ A, 5  $\mu$ A, 55  $\mu$ A, 50  $\mu$ A, 15 mA, .5 mA, 1.5 mA, 15 mA, 15 mA. Voltage drop across terminals 75 mV. ACCURACY:  $\pm$ 5% throughout, except on power factor below 30%. POWER REQUIREMENT: 115 VAC, 60 cps, 32-45 watts. SIZE (HWD): 8½" x 12½" x 9". WEIGHT: 18 lbs.

# EICO 250 AC VTVM & AMPLIFIER

· Cathode follower input circuit for greater stability

- Measures AC voltage from 100µV to 300 V
- Wired only

The EICO 250 is a high sensitivity, wide-band AC VTVM and amplifier of laboratory accuracy and quality. It measures AC voltage from 100 microvolts to 300 volts in 12 ranges. A function selector switch on the panel converts the instrument to a wide-band amplifier with a gain of 60 db on the 1 mv range, and a maximum output of 5 volts RMS.

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

#### SPECIFICATIONS

VOLTMETER 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 framegrid triode, 1-6X4 full-wave rectifier, 1-OA2 voltage regulator.

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): 81/2" x 51/4" x 7". WEIGHT: 10 lbs.

★ Export Model available World Radio History

# NEW! EICO TR-410 SOLID STATE TRIGGERED SWEEP 10 MHz OSCILLOSCOPE

100% Solid State Circuit Design
 Triggered Horizontal Sweep
 DC to 10MHz Bandwidth
 Use as Vectorscope for Color TV Servicing
 Flat faced CRT
 Sweep Synchronized Gate Output
 Z-Axis Input
 Edge Lit Calibrated Screen

TR-410 Wired only

INCLUDES EXCLUSIVE DUAL FROBE Convert quickly from direct to 10:1 low capacity operation

EICO introduces the first laboratory quality, high performance, wideband Triggered Sweep Oscilloscope, at a price you can afford. The EICO TR-410's advanced design features make it ideal for use in the TV service field, production testing in R&D labs and in schools. The fully automatic triggered sweep and wide 10 MHz bandwidth extend the scope's versatility. The sweep is automatically synchronized or "locked-in" with complex TV signals. The all solid state circuit includes a fully protected F.E.T. input stage. A unique dual probe enables you to convert quickly from direct to 10:1 low capacity operation. The dual probe is included at no additional charge (S19.95 value). Compare the EICO TR-410 with *any* similarly priced scope and see for yourself the extra performance features and value in the TR-410. Never before has no much been built into a low cost solid state triggered sweep scope.

#### FEATURES

■ Three calibration voltages (2, 5 and 10) ■ Quick Connect BNC connector at Vertical Input ■ Front panel adjustable Horizontal and Vertical DC balance controls ■ Vertical and Horizontal selection of AC or DC modes of amplification ■ Gate signal is available at a jack to enable user to synchronize other equipment to trace on scope ■ Flat faced CRT ■ Z Axis input ■ Rear panel astigmatism control ■ Removable cabinet sides, top and bottom ■ Operates on a standard 120 volt line, a low 100 volt line and a 220-230 volt line ■ Standard bezel and bushings for camera mounting ■ Single rotary probe for direct and 10:1 measurements

#### SPECIFICATIONS

TRIGGERED SWEEP

TR-40 MOLIO STA

VERTICAL AMPLIFIER: SENSITIVITY ...01V/cm to 20V/cm in 11 steps continuously variable within each step. FREQUENCY RESPONSE DC, DC to 10 MHz (-3 db) AC, 2 Hz to 10 MHz (-3 db). RISE TIME 35 nancseconds. OVERSHOOT: 3% or tess. INPUT IMPEDANCE: 1 meijohm, shunted by 35 p/. MAXIMUM INPUT VOLTAGE 600 vblts p.p., 300 volts (DC/AC peak).

HORIZONTAL SWEEP CIRCUITS: SWEEP MODES Triggered and free running sweeps. CALIBRATED SWEEP RATES 0.5 microsecond/cm to 0.5 second/cm in 19 steps. Continuously variable within each step. TVH Approx. 12.75 microsecond/cm. TVV Approximately 3.3 microsecond/cm. MAGNIFICATION: Sweep rates magnified 5 times

TRIGGERING: MODES Internal, line and external (2V (P-P) or higher input) SYNC POLARITY Positive or negative SYNC RANGE 20 Hz to 10 MHz with deflection of 10 mm or more on screen

HORIZONTAL AMPLIFIER: SENSITIVITY: 250 mV/cm, continuously variable. FRE-QUENCY RESPONSE DC to 1 MHz (-3 db) with sensitivity set to maximum. INPUT IMPEDANCE 100.000 ohms, shunted by 40 pf.

OTHER SPECIFICATIONS: CALIBRATION VOLTAGES 10V (p-p), 5V (p-p) and 2V (p-p) square wave at approximately 1 KHz. GATING OUTPUT Square wave synchronized to the sweep of 1V (p-p) or higher amplitude. INTENSITY CONTROL VOLTAGE 15V (p-p) or more. POWER REQUIREMENTS: 10C/120/230 VAC, 50/60 Hz, 20 YA. DIMENSIONS (HWD) 11"x8"x18", WT 17 Ibs.



# EICO 300C "CLAMP-ON" CURRENT TESTER Wired only

- Portable AC Voltmeter/AC Ammeter/Ohmmeter
- Current Measurements Without Breaking the Circuit
- Complete with Battery, Test Leads & Carrying Case

Compact, lightweight versatile instrument measures AC current without breaking the circuit. "Clamp-On" insulated jaws snap around single conductor. Meter instantly indicates correct reading. Test leads plug in Jor voltage and resistance checks. Rotary scale reveals only one range at a time. Pointer lock freezes readings; measure in dark, read in light. Accurary  $\pm 3\%$ . Dimensions:  $7\frac{12}{2}x2\frac{5}{2}x1\frac{12}{2}$ ". Wt. 2 lbs.

MEASUREMENT RANGES: AC Current: 0-6, 15, 60, 150, 300. AC VOLTAGE: 0-150, 300, 600. Resistance: 0-1000 (center scale: 30 ohms)

# EQUIP YOUR BENCH WITH PERFORMANCE



# EICO 465 OSCILLOSCOPE/VECTORSCOPE

- · DC- to 8 MHz (usable to 10 MHz)
- 5" flat-face CRT
- 12 mv rms/cm sensitivity
- An accurate Vectorscope



This truly professional 5" scope, with its preset TV-Vertical and TV-Horizontal sweep positions (30 and 7875 Hz), is ideal for all aspects of color and b/w TV servicing. Push-pull amplification and direct-coupling assure minimum distortion and excellent frequency response (+1, -5dB) from DC to 8 MHz. An accelerating potential of 1400 V and a mu-metal neck shield help provide a sharp, bright trace that is free of blooming and unaffected by external fields. A built-in Zener-diode calibration source provides a precise and stable square-wave calibration voltage for DC or AC voltage measurements. Drift-free vertical and horizontal positioning as well as distortionless vertical and horizontal trace expansion up to many items the screen diameter are provided. An automatic sync circuit, consisting of limiter and amplifier. insures a stable, steady display, even to 10 MHz, without sync voltage adjustments. Full retrace blanking eliminates confusing background trace. Illumination of the edge-lit calibration grid is variable by means of a potentiometer control. Four overlapping sweep ranges are provided from 10 Hz to 100 KHz, in addition to the preset TV-Vertical and TV-Horizontal positions. The EICO 465 is a complete precision vectorscope supplied with an accurately calibrated graticule and the required interconnecting cables. It can also be used most effectively as a curve tracer in conjunction with the new EICO Model 443 (see page 21).

SCOPE'S CABINET PANELS CAN BE EASILY REMOVED TO FACILITATE ALIGNMENT, SERVICING AND HEAT DISSIPATION.



#### SPECIFICATIONS:

VERTICAL AMPLIFIER: Frequency response from DC to 8 MHz +1. – 5dB (usable to 10 MHz); sensitivity 12 mv rms/cm (34 mv p-p/cm); input impedance 1 M(y)35pf; square-wave calibration voltage 200 mV p-p.  $\pm$ 1%. HORI ZONTAL AMPLIFIER: Frequency response from DC to 1 MHz, +1. – 3dB; sensitivity 17 mv rms/cm; input impedance 1 M(y)35pf. SWEEP RANGES: 10-100-1K. 1K-1 OK. 1 OK-100K Hz; plus TV-VERT position (30 Hz) and TV-HOR position (7875 Hz). Synchronization may be (+) or (-) internal, external, or line frequency. INTENSITY MODULATION IMPUT: 3V rms blanking; input impedance 2.2 MQ. VECTORSCOPE: Negligible horizontal and vertical phase shift. TUBE COMPLEMENT: 2-6AU8, 2-12BY7, 1-12AZ7, 3-6BL8, 2-silicon diodes, 1-Zener diode, 1 CRT-5DEP. POWER REOUREMENTS: 117 VAC, consumption approximately 140 watts. SIZE (HWD): 12¼" x 8½" x 17½".



### EICO 435 WIDEBAND DIRECT-COUPLED 3" SCOPE

- 18 mv rms/cm sensitivity
- Zener diode calibration
- DC-4.5mc flat response
- TV-V & TV-H sweeps



Complete many more color or B & W TV service calls on location! The Model 435 is really portable (1/2 the usual size of 5" scopes), yet provides outstanding facilities and fine performance. Push-pull amplification (3 stages) and direct-coupling throughout the vertical amplifier. With the Zener diode calibration facility and the 4-position frequency-compensated decade attenuator, either dc or peak-topeak ac (or combination) measurements may be made from 50 mv to 500 V. Clarity and detail equal to 5" scopes are obtained with a far sharper and brighter trace (1600 V accelerating potential) on a flatfaced CRT; and distortionless V & H trace expansion is provided with drift-free V & H positioning up to many screen diameters. A mu-metal neck shield on the CRT minimizes the effect of external fields, Intensity and focus controls, and sawtooth (sweep) output are provided on the front panel; intensity modulation input is provided at the rear. DC balance and astigmatism adjusts are accessible without cabinet removal. Sync is fully automatic on all ranges and modes, with automatic sync limiter and amplifier eliminating sync voltage adjustment. An added circuit refinement eliminates any undesired intensity modulation of the trace by the sync voltage. Full retrace blanking and edge-lit calibration grid are provided.

#### SPECIFICATIONS

VERTICAL AMPLIFIER: Frequency response from dc to 4.5 mc, +1, -3db (useful to 10 mc); sensitivity 18 mv rms/cm (50 mv p-p/cm); input impedance 1 MQ/35 pf. HORIZONTAL AMPLIFIER: Frequency response from 1 cps to 500 kc, +1, -3db; sensitivity 0.7 v rms/cm; input impedance 4 MQ/40pf. SWEEP RANGES: 10-100, 100-1K, 1K-10K, 10K-100K cps; plus TV-VERT position (30 cps) and TV-HOR position (7875 cps). Synchronization may be (+) or (-) internal, external, or line frequency. POWER REQUIREMENTS: 117 VAC, consumption approximately 110 watts. SIZE (HWD): 8½ x 5¼ x 12½ inches. WEIGHT: 18 lbs.

\* Export Model available

### EICO 488 ELECTRONIC SWITCH

Wired



Kit

World Radio History

#### \* Export Model available

Simultaneously observe 2 patterns on 1 scope Compare voltage and current amplitudes, waveforms, frequencies and phase relationships Continuously variable switching rates from less than 10 cps to over 2000 cps in 3 ranges. Useful as square wave generator.

Response dc to 30 kc (-2db), useful to 300kc Maximum gain of 10. Maximum input 400 v p-p. Input impedance 100K, output impedance 50KΩ Power Requirements 117 VAC Size 6" x 8" x 6". Weight 7 lbs

🖈 Export Nodel available



# **PROVEN TOP QUALITY EICO OSCILLOSCOPES**



### EICO 427 SENSITIVE DIRECT-COUPLED 5" SCOPE

• 3.5 mv rms/cm sensitivity • Zener diode calibration

Direct V plate connections
 Automatic sync



A very sensitive, general purpose oscilloscope with the facilities and quality required for service, production, or R & D of audio communications and industrial equipment. Push-pull amplification (3 stages) and direct-coupling throughout vertical amplifier. With Zener diode calibration and 4-position frequency-compensated decade attenuator, either dc or peak-to-peak ac (or combination) measurements may be made from 10 mv to 500 v. The trace is sharp and clean, and free of "blooming." A trace may be expanded to 30 cm vertically and 20 cm horizontally, with instantaneous drift-free positioning to permit centering any part of expanded trace. Intensity, focus, astigmatism, dc balance controls and sawtooth sweep output are provided on the front panel; intensity modulation input is provided at the rear. Sync is fully automatic on all ranges and modes, with automatic sync limiter and amplifier eliminating sync voltage adjustment. Full retrace blanking.

#### SPECIFICATIONS

VERTICAL AMPLIFIER: Frequency response from dc to 500kc,  $\pm 1$ , -3db (approximately -6db at 1 mc); sensitivity 3.5 mv rms/cm (10 mv p-p/cm) input impedance 1 MQ/30pf. HORIZONTAL AMPLIFIER: Frequency response from 2 cps to 450kc,  $\pm 1$ , -3db; sensitivity 0.18 V rms/cm; input impedance 10MQ/40 mmf. SWEEP RANGES: 10-100, 100-1K, 1K-10K, 10K-100K cps. Synchronization may be ( $\pm$ ) or (-) internal. external, or line frequency. POWER REQUIREMENTS: 117 VAC, approximately 55 watts. SIZE (HWD): 12½" x 8½" x 16‰". WEIGHT: 23 lbs.

\* Export Model available



#### EICO 460 WIDEBAND DIRECT-COUPLED 5" SCOPE

DC - 4.5mc flat response

• Automatic sync • TV-V and TV-H sweeps



Ideal for color and B&W, TV servicing and production line testing, and excellent for audio and industrial work as well. Push-pull amplification (3 stages) and direct-coupling throughout vertical amplifier. With internal calibration voltage and 4-position frequency-compensated decade attenuator, either dc or peak-to-peak ac (or combination) measurements may be made from 25mv to 500V. Instantaneous, drift-free positioning permits centering any part of an expanded trace. Intensity and focus controls, 60 cps output jack and phasing control, sawtooth (sweep) output jack, intensity modulation (Z axis) input jack, and external capacitor jack for very low frequency sweeps are all on the front panel. DC balance and astigmatism adjustments are accessible without cabinet removal. Sync is fully automatic on all ranges and modes, with automatic sync limiter and amplifier eliminating sync voltage adjustment. Full retrace blanking. Edge-lit calibration grid.

#### SPECIFICATIONS

VERTICAL AMPLIFIER: Frequency response from dc to 4.5 mc, +1, -3db luseful to 10 mc); sensitivity 12 mv rms/cm; input impedance 3 MΩ/35pf HORIZONTAL AMPLIFIER: Frequency response from 1 cps to 400 kc, +1, -3db; sensitivity .55 v rms/cm; input impedance 5 MΩ/35pf. SWEEP RANGES: 10-100, 100-1K, 1K-10K, 10K-100K cps; plus EXT CAP position for very low frequency sweeps with external capacitor, TV-V position (30 cps) and TV-H position (7875 cps). Synchronization may be (+) or (-) internal, external, or line frequency. POWER REQUIREMENTS: 117VAC, approximately 95 watts. SIZE (HWD): 13 x 8½ x 16 inches. WEIGHT: 25 lbs. ★ Export Model available

#### **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 Wired

For signal tracing and checking of TV/radic RF and IF stages. Permits 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.



# OSCILLOSCOPE DIRECT PROBE PD

Kit Wirea

Direct test probe for use in low-frequency or low-impedance circuits. Eliminates stray pick-up and signal re-radiation.

#### World Radio History

# 

# OSCILLOSCOPE LOW CAPACITY PROBE PLC

### Kit Wired

For TV sync signal tricing 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 (as in TV), without distortion from cverleading or frequency discrimination.

# SAVE 50% OR MORE WITH EICO VTVM'S



Designed with the stringent requirements of today's electronic technicians, engineers and experimenters in mind, the new Model 235 is not only excellent for servicing all FM, AM, mono/color TV, and precision electronic equipment; it is especially qualified for the exacting measurements encountered in solid-state circuitry - where even a difference as small as a few millivolts may distinguish between the proper or improper operation of a transistor circuit. Accurate measurements down to as little as 0.01 volts are quick and certain on the large, easy-to-read 6" meter on its 1/2-volt scale!

Unique ease and speed of operation and versatility are offered by the exclusive two-color coding and coordination of the positions of the function and range switches with the arcs of the meter scale. The dual purpose AC/DC Uni-Probe, another EICO exclusive, adds its famous versatility to the package. Both peak-to-peak and RMS AC voltages are read on separate scales in 7 overlapping ranges, up to 4.2KV. With its frequency response of 30Hz to 3MHz (and up to 250MHz with optional probe), the EICO 235 is ideal for all high frequency measurements.

Its very high input impedance (11 megohms) assures negligible circuit loading in precision DC voltage measurements from 0.01 volt to 1.5KV (in 8 overlapping ranges); and to 30KV with optional high-voltage probe. (EICO Model HVP-2).

Additional professional features of the 235 include: ceramic switches to assure non-arcing at all inputs within the capability of the unit; 1% tolerance precision resistors for greatest accuracy; seven overlapping resistance ranges covering 0.2 $\Omega$  to 1000M $\Omega$  for precise resistance measurement; zero-center for TV-FM sound detector alignment; one zero center adjustment for all functions and ranges; and a transformer-powered supply for line isolation and removal of shock hazard. The outstanding balanced-bridge circuit is engineered for years of exceptional stability and accuracy.

# The Model 235 also features the EICO-exclusive professional look-that has been welcomed by both serviceman and industrial users.

#### SPECIFICATIONS

8 DC Ranges: 0.0.5+1.5-5-15-50-150-500-1500 (to 30,000 volts with optional high voltage probe). 7 AC Peak-to-Peak Ranges: 0.4-14-42-140-1400-4200. 7 AC RMS Ranges: 0-1.5-5-15-50-150-500-1500. 7 Resistance Ranges covering: 0.2 $\Omega$  to 1000M $\Omega$ . Frequency Response: 30 cps to 3Mc ±1db (up to 250Mc with optional PRF probe) Input Resistance: DC 11M $\Omega$ ; AC 1M shunted by 60mmf. Power Requirements: 117 VAC, 50 or 60 cps; 6 watts. 1% precision multiplier resistors. 3% accuracy on AC and DC scales. Employs 1 silicon rectifier, 1-12AU7A tube and 1-6AL5 tube. Dimensions (HWD): 8½" x 7½" x 5". Weight: 9 lbs, Supplied less battery - 1 "D" cell required.



#### EICO 249 DELUXE VTVM Complete with batteries and leads Kit Wired

For those who want a quality VTVM with the ease and convenience of reading a large 7° meter, the EICO 249 meets the challenge. Incorporating all the outstanding and exclusive features of the EICO 232 VTVM including the Uni-Probe. The 249 is a solid impressive piece of test equipment for bench or field use. Size: (HWD) 5% × 13° × 5° Wh. 9 lbs. ★ Expert Model available The 232 is the established leader in VTVMs, and is well suited to color or monochrone TV servicing. You could spend two or three times more money for a VTVM and not get all the advanced engineering features of this precision instrument. By far the best professional VTVM value in electronics, the 232 features up-to-minute circuitry, design, functional simplicity and modern styling. The unit also boasts high sensitivity and precision, wide ranges and versatility – and day-in day-out dependability.

Use the 232 for all your TV/FM/AM/electronic servicing with the highest accuracy, getting true peak-to-peak measurements of complex voltage waveforms (necessary in TV servicing) and both peak-to-peak and rms measurement of sine wave AC voltages on separate scales. Use the 232 for resistance measurements, precision dynamic DC voltage measurements with negligible circuit loading, frequency response measurement, output meter and servicing electrical equipment.

A new balance bridge circuit yields exceptional stability and accuracy and the high impedance input results in negligible circuit loading. As an important safety feature, the large  $4^{1/2}$ " meter can't burn out – thanks to a built-in protective circuit. There are seven non-skip ranges on all four functions.

Other features that make the 232 a valuable addition to the service bench are: zero center for TV-FM discriminator alignment, one zero adjustment for all functions and ranges, 1 per cent precision ceramic multiplier resistors, uniform 3 to 1 range ratio for extreme wide range accuracy and a transformer for isolation and safety.

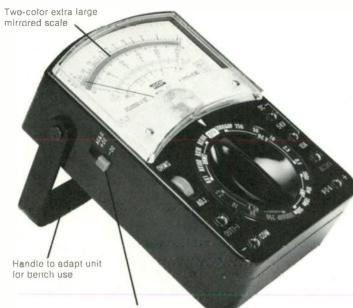
The 232 has smart professional styling – satin finish, etched aluminum panel and grey wrinkle steel case. Nobody but EICO brings you such outstanding instrument performance for so low a price.

#### 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 megs in 7 ranges. TUBE COMPLEMENT: 12AU7, 6AL5, selenium rectifier. BATTERY: 1.5 v. WEIGHT: 5 lbs. POWER REQUIREMENTS: 117 VAC, 60 cps; 5 watts SIZE (HWD); 8/° x 5° x 5°. INPUT IMPEDANCE: 11 megohms. ★ Export Model available



Complete working model of EICD 249 vacuum tube voltmeter, including UNI-PROBE\*, furnished in easy to assemble kit form. Provides dramatic classicom demonstration of principles of electronic instrumentation on 5 celor Demo Board. SIZE (HWD): 24" x 39" x 312". Weight: 7 lbs.



**Reverse Polarity Switch** 

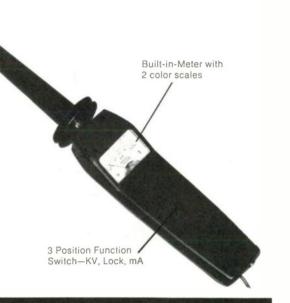
# EICO 570 Deluxe **Multitester**

The EICO 570 with its low voltage, low current scales is ideal for testing and servicing the latest transistor and integrated circuitry. Seven ranges of DC voltage with polarity reversal capability at 20.000 ohm/volt and 6 ranges of AC voltage (both to a max of 5000 V) provide more than sufficient ranges and scaling to service a wide variety of equipment. Dual silicon diode overload protection safeguards the meter movement. 5 DC current ranges to 10 Amps, 6 db ranges for audio measurements and 4 resistance ranges

to 50 meg ohms round out the 570's versatility. Supplied complete with **4995** batteries and test leads. Wired only.

# New and Improved! **EICO HVP-5** High Voltage Probe

A self-contained, direct reading, high voltage and current measuring probe providing for the safe measurement of voltage up to 40,000 Volts DC, and for separate current measurements up to 200 mA DC. It enables you to accurately measure the high anode voltage of a color picture tube and with a flick of the switch, monitor the cathode current drawn by the horizontal output tube or the output stage. The two circuits are completely separate. Only the meter is switched. The EICO HVP-5 can not be damaged by placing the function switch in a mA position while measuring high voltage. This feature allows the technician to switch from the mA position to the HV position without disrupting the operation of **2995** the HV position without disrupting the operation of the set under test. Wired only,





# **EICO 1040 Solid State DC Power** Supply

Quietly converts 115 Volts AC to 12 Volts DC. Handles 4 amps continuous and 6 amps maximum. Enables you to enjoy your car stereo tape player or CB rig at home. Also can be used to power a household burglar alarm or trickle-charge 12 volt car batteries. Automatically shuts off in case of an accidental

overload. Wired only.



A NEW CONVENIENCE IN TELEPHONE COMMUNICATION.

fore a unique line of telephone related products designed to add a new measure of convenience and versatility to your phone communications. Foneaids are self-contained and completely FA-40 "CALL MONITOR" Automatic Phone Recording Switch portable. They will operate with most telephones and their handsome design harmonizes with any home or office decor Now you can keep an accurate record of your telephone conversations.\*

#### FA-10 "CALL VALET" Automatic Phone Answering Adaptor

Your very own answering service! A reliable low cost telephone record/ answering device for taking those important calls when no one is at home. The "Call Valet" can be used as an "announce only" device utilizing one cassette recorder (for applications where recording the caller's message is unnecessary) or as a complete message recording system using 2 cassette recorders. Kit 29.95, Wired 39.95

#### FA-20 "CALL TIME LIMITER" Automatic Call Time Reminder

Now you can limit long (and expensive) phone conversations at home or office! The FA-20's solid state electronic circuit starts timing automatically when the phone (or its extension) is lifted. A beep tone will periodically be heard on the phone line after a predetermined amount of time has elapsed

FA-60 "TRANSFER CALL" Phone Call Diverter and 3-Way Conference The "reminder" time tones can be pre-set from 3 minutes to approximately Call Connector\* \*Requires phone with two separate phone numbers. 10 minutes, Automatically resets for the next call. Kit 19.95, Wired 29.95 Now your important phone calls can reach you in seconds...outside your FA-30 "CALL SILENCER" Phone Call Annunciator home or office! The FA-60 enables your secretary (or anyone in your office Don't be disturbed by a ringing phone. The "Call Silencer" will announce or home) to transfer your calls to another phone wherever you may be. Also an incoming call by a blinking red light and/or a pleasing beep tone. A useful as a 3-way conference call connector to talk to two outside parties convenient switch selects normal ring or silent call. The party calling still simultaneously. Wired 19.95







The "Call Monitor" provides a convenient permanent means of automatically recording both incoming and outgoing calls. A cassette recorder starts when the phone (or its extension) is lifted and stops automatically as soon as the call is completed. An "On/Off" switch permits playback without unhooking the FA-40 from your phone line or recorder. Wired 24.95 \*Federal law requires that only one party in the conversation be informed that the call is being monitored.

FA-50 "CALL GUARD" Electronic Combination Phone Lock

A handy item for your business, home or anywhere calls must be controlled. This unique electronic telephone combination lock prevents unauthorized outgoing calls while not interfering with incoming calls. Only persons with the exact combination can call out. Can be remote operated. Wired 19.95

# Introducing **W EICOCRAFT C PROJECT KITS**

- Educational, fun-to-build
- Drilled and etched PC Boards
- Comprehensive step-by-step instructions
- Complete with "Panel Mounts" for professional appearance

# The New IC Technology



Circuit Kits are the result of a fantastic technological advance in the

electronic sciences providing new standards in accuracy and dependability. Eicocraft IC projects provide hours of enjoyment for electronics enthusiasts, hobbyists and students. Each kit includes an IC which is a space-age device containing many transistors, diodes, and resistors, all assembled on a tiny piece of material referred to as a "chip."

# EC-5000 SCA Adaptor

Listen to the official FCC licensed background music service (SCA) on your FM radio or FM receiver. The EC-5000 is a decoder adaptor which makes it possible to hear uninterrupted commercial free programs offered by many FM broadcast stations. This adaptor is intended for personal use only. It is illegal for commercial establishments who are not SCA subscribers to use it. EC-5000 \$12.95

# EC-5100 ESP Tester

Now you can test your friends, relatives, co-workers or classmates power of extra sensory perception. The EC-5100 is an electronic device consisting of 4 lights (LED's), which light in a random sequence. By pushing a "stop button" you try to "guess" which LED will light up. Great for parties, science projects, etc. EC-5100 \$10.95

# EC-5200 "Decision Maker'

Eicocraft Integrated An invaluable aid for the busy executive who can use help in making those everyday important "yes" or "no" decisions. It's fun, foolproof, honest (no way to tamper with the circuit) and interesting. When operating, only one of the two random flashing lights (LED's) will remain lit indicating a "yes" or "no" decision. EC-5200 \$9.95

# EC-5400 Stereo Power Amplifier

A versatile power amplifier that delivers 2 Watts per channel of continuous power! Operates over a supply voltage of 9 to 26 volts DC (Battery or D.C. supply). The EC-5400 accepts a wide variety of high level sources such as microphone, phono cartridge, tape recorder etc. Drives 8 ohm speaker systems. Interconnects with the EC-5500 stereo preamp to form a high quality stereo amplifier. EC-5400 \$10.95

# EC-5500 Stereo Pre-Amp

A Preamplifier that offers outstanding value and specifications! Features NAB & RIAA equalization, 60 db channel separation, high input impedance and low output noise. The EC-5500 accepts a wide range of inputs: stereo tape player/recorder, phono, tape head. FM stereo receiver, microphone. The EC-5500 may be interconnected with the EC-5400 stereo power amplifier to form a high quality stereo amplifier. EC-5500 \$9.95

# EC-5600 Electronic Lock

More than a fascinating toy, the EC-5600 is a unique, workable, digital (MOS) electronic combination lock. Ideal for use in automobile and home alarm systems as well as garage door openers, etc. The user must push 3 out of 5 buttons, in the proper sequence, within a 10 second interval. This corresponds to 1 chance opening out of 125. EC-5600 \$11.95

# EC-5700 Universal Power Amplifier

A high-quality solid state battery operated general purpose 2-watt audio amplifier. The EC-5700 accepts a wide variety of input sources, such as a microphone, phono cartridge, tape recorder, radio, etc. Two EC-5700's can be operated as a stereo system when supplied with left and right channel signals from a tape recorder, stereo phono cartridge or any other 2 channel source. Use with any 8 ohm loudspeaker. EC-5700 \$8.95

# Electronic Tool Kit

Ideal Tools for Kit Builders and Experimenters!

All you need for almost any electronic kit. Eight piece set includes the most popular tools. 30-watt pencil type soldering iron, diagonal plier, long nose plier, 2 screwdrivers (standard and Phillips), calibrated wire stripper, solder and a solder aid tool. Model TK-5 \$10.95

Eico Electronic Instrument Co., Inc. 283 Malta Street, Brooklyn, N.Y. 11207

# **EICO PRICE SCHEDULE**

**JUNE 1, 1974** 

Model No.	Kit	Wired	Model No.	Kit	Wired	Model No.	Kit Only	Model No.	Wired	Model No.	Kit	Wired
	TEQUIP	MENT		EQUIPMI	ENT	EICOCRAF	T KITS		PRODUCTS		RITY SY	STEMS
147	59.95	79.95	955	49.95	69.95	(New"Panel Mou EC-100	6.95	SD-10	9.95	SS-200	-	89.95
150	69.95	99.95	1030	104.95	139.95	EC-300	6.95	SD-11	9.95	SS-220	-	114.95
232	44.95	69.95	1032	59.95	79.95	EC-400	5.95	SD-12	5.95	SS-400	-	89.95
235	74.95	99.95	1060	<b>69.95</b>	89.95	EC-600	4.95	SD-14	6.95	SS-500	-	149.95
239	49.95	79.95	1064	79.95	99.95	EC-700	5.95	SD-16	7.95	SS-501	-	179.95
240	79.95	99.95	1078	109.95	139.95	EC-900	8.95	SD-18	4.95	ASA-301	-	49.95
242	89.95	129.95	1040	-	19.95	EC-1000	5.95	SD-20	9.95	A24-201	_	49.90
249	59.95	89.95	1070	39.95	49.95	EC-1300	8.95	SD-24	6.95		ELECTR	
250	-	150.00	1075	44.95	54.95	EC-1400	9.95	SD-28	10.95	TK-5	-	10.95
324	59.95	79.95	1080	54.95	69.95	EC-1500	8.95	SD-30	4.95	TH-30	29.95	37.50
330	79.95	119.95	1100 1120	14.95 13.95	22.95 19.95	EC-1600 EC-1700	7.95	SD-32 SD-40	4.95 4.95	TA-12 PCE-10	-	17.95
342	- 159.95	250.00 219.95	1140	24.95	34.95	EC-1900	10.95	SD-40	4.95	A-115	_	34.95 4.95
369 C5	-	11.95	1171	34.95	49.95	EC-2000	10.95	SD-50	4.95	BW-300	34.95	59.95
C4.5	_	7.95	1180	29.95	39.95	EC-2300	8.95	SD-52	5.95		СОМРО	NENTS
377	69.95	89.95	249D	109.95	-	EC-2600	8.95	SD-54	19.95			
- 378	89.95	129.95	B-500	450.00	615.00	EC-2700	7.95	SD-56	4.95	3070	99.95	_
379	89.95	129.95	TRUVO		IMETED	EC-2800	7.95	SD-58	12.95	3080 3780	74.95 124.95	_
380-A	- 1	250.00				EC-2900	7.95	SD-60	39.95	TD-8	124.90	- 49.95
385	89.95	129.95	1-A-1		9.95	EC-3000	1.95	SD-62	10.95	QA-4	17.95	29.95
TR-4	10 -	439.95	4-A-3	-	21.95	DELUXE P	ROJECTS	SD-64	19.95	4700	9.95	19.95
427	129.95	189.95	20-A-3	_	26.95	EC-3600	13.95	SD-72	29.95	HFS-8	-	*49.95
435	159.95	219.95	20-A-4 30-A-3	_	29.95 31.95	EC-3700	12.95	SD-74	29.95	HFS-10	-	29.95
443	99.95	159.95	30-A-3 30-A-4	_	37.95	EC-3800	14.95	SA-15	9.95			
460	139.95	189.95	100-C-3	_	44.95	EC-4300	16.95	SA-15 SA-17	39.95			•
465	219.95	299.95	100-A-4	_	54.95	EC-4400	14.95	SA-19	14.95	1	RONMEN	
488	49.95	69.95	100-T-6	_	69.95	EC-4600	21.95	SA-25	16.95	3420	-	39.95
540	21.95	29.95	300-C	-	54.95	EC-4700	9.95	SA-27	13.95	3430	-	49.95
536	24.95	34.95 54.95	SLC-1	-	5.95	NEW EICOCR	AFTICKIIS			3449	_	69.95
555	39.95	54.95 49.95	SLC-2	-	2.95	EC-5000	12.95	A-35	3.95	3460	24.95	39.95
570 565	- 34.95	49.95	SLC-3	-	2.95	EC-5100	10.95	A-45	13.95	3465	49.95	69.95
565	26.95	43.33	ACCESS	ORY PRC	BES	EC-5200	9.95	A-65	4.95	3470	-	44.95
567	39.95	49.95				EC-5400	10.95	A-67	12.95	3475	39.95	-
584	9.95	12.95	PSD	5.95	7.95	EC-5500	9.95	A-75	24.95	3477	-	29.95
610A		18.95	PD PLC	4.95	6.95	EC-5600	11.95	A-85	6.95	BLS-10	29.95	39.95
CRU		24.95	PRF-11	5.95 5.95	7.95 7.95	EC-5700	8.95	A-95	2.95	FT-5	_	5.95
615	-	19.95	HVP-2	-	10.95	EICOCRAFT		A-105 A-125	1.95 2.45	UV-5	-	6.95
633	119.95	159.95	HVP-5	_	29.95	EC-101	6.95	A-125	4.95	"COLO	R IMAG	ES"
635	69.95	99.95	UP	6.95	8.95	EC-102	6.95	A-137	5.95	EC-3801	8.95	14.95
667	129.95	189.95	PSI	6.54	10.95	EC-200	5.95 9.95	A-139	6.95	EC-3802	16.95	24.95
680	59.95	74.95	PST-2	19.95	29.95	EC-500 EC-800	4.95	A-145	4.95	EC-3803	11.95	24.95
685	119.95	169.95	DLP-6	19.95	29.95	EC-1800	8.95	A-155	269.95	EC-3804	19.95	29.95
688	14.95	22.95				EC-2100	9.95	A-165	14.95	EC-3805	16.95	24.95
706	- 59.95	14.95 79.95				EC-2200	9.95	A-177	19.95	EC-3806		29.95
710	- 29.95	79.95 59.95				EC-2400	8.95	A-185	23.95	FLI	EXI-CAB	S
715 888	- 69.95	99.95				EC-2500	8.95	F0 100	30.05	F-44	-	3.49
889	34.95	44.95				EC-3200	5.95	FC-100	79.95	F-46	-	3.99
902	-	350.00				EC-3300	8.95	FC-90	69.95 50.05	F-69	-	4.69
944	49.95					EC-3400	11.95	FC-80	59.95			TO
950	49.95					EC-3500	7.95			PRICES		
1020	39.95	54.95				EC-3900	12.95			CHANGE		UI
1025	54.95					EC-4000	12.95			NOTICE.		
			ent Co., Ind	c., 283 M	lalta Street	, Brooklyn, N.Y	. 11207				ΓEI	COĽ

# **IT'S EASY TO ORDER EICO PRODUCTS BY MAIL.**

#### **GENERAL INFORMATION**

All shipments are made F.O.B. EICO-283 Malta Street, Brooklyn, N.Y. 11207. All shipments are carefully inspected and insured before shipment. If your order is lost or damaged, notify the transportation company and us at once. Do not return merchandise to us until authorized to do so, otherwise you may lose your right to file claims for loss or damage.

#### PARCEL POST

Parcel Post charges must be included in your remittance. Please include sufficient postage; all overpayments will be returned. Although some items may be less than 30 lbs. in weight, the size of the package may exceed the parcel post regulations (72 inches in combined length and girth). Then shipment will be made by "Railway

#### **HOW TO FIGURE PARCEL POST** CHARGES

Use the zone chart at right and first 3 numbers of your zip cod determine your zone. Then refe the Parcel Post rate chart belo For example, if your Zip Ci is 10036, use the first 3 numb

(100) and check the zona char your zone, which is 5. Parcel P charge for a kit weighing pounds is therefore \$1.88. Add surance and COD fees, if desir

260-261 262-276 279 280-283 284-285 286-293 294-295 296-297 296-299

300-303 304 ... 305-307 308-329 330-334 335-336 339 ... 350-352 354 ... 356-359 360-361 362 ... 363-369

Zip Code Pretixes Zom

478 479-489 490-491 492 493-495 496-499

500-516 520-524 525 526-528 530-534 530-534 540-540-540-540-549-550-566 567 570-572 573-588 590-597 590-597

823-826 827 828-832 833 834 835-838 840-847 850-864 865-884 890-898

900-921 922-928 930-934 935 936-960 936-960

961 952-876 977-879 950-967 968-994 995-999

Zone

_	23.33	
		Zip Code Prefixes
	•	006-009 .
ONMEN		070-089
HTING		100-108
	39.95	109 110-119
-	49.95	120-123 124-128
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24.95	39.95	130-152 153 154-160
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49.95	69.95	164-165 - 166-199 -
-	44.95	200-232 . 233-237 .
39.95	-	233-259
-	29.95	Zip Code Pretixes
29.95	39.95	370-386
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	413-422	
		424-426 . 427-432 .
8.95	14.95	433-436 . 437-457 .
16.95	24.95	458
11.95	24.95	483-464 . 465-466 . 487-469 .
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XI-CABS		Zip Code Pretixes
		600-609 610-619
	3.49	620-623 624-628
-	3.99	629-668 . 669-679 680-687
	4.69	688-693 700-722
	4.05	723-727
UBJECT	то	769
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WITHOU	11	793-799
		804-805
/		808-810

Ship. WL	2000	2000	Zene 4	Zane	Zune	2000	Zene
2 lbs. 3 lbs	\$0.72 .78 .84	\$0.75 _83 _90	\$0.83	\$0.92 1.04	\$1 82	\$1.12 1.32	\$1.2 1.4
4 10s		.90	1.01	1.16	1.10 1.33 1.49	1.51	1.6
6 lbs. 7 lbs.	.90 .96 1.02	.98 1.05 1.13	1.19	1.40	1.64	1.90	1.9 2.1 2.4
8 Ibs. 9 Ibs.	1.00	1.20 1.28 1.35	1.37	1.64	1.95	2.29 2.49	2.6
10 lbs.	1_20	1.35	1.55	1.86	2.26	2.50	3.1
11 lbs. 12 lbs. 13 lbs	1.28 1.32 1.38	1.43 1.50 1.58	1.54 1.73 1.82	2.00 2.12 2.24	2.42 2.57 2.73	2.68 3.07 3.27	3.3 3.6 3.8
14 lbs. 15 lbs.	1.44 1.50 1.56	1.85 1.73 1.80	1.91 2.00 2.09	2.36 2.48	2.88	3.46 3.66 3.85	4.0 4.3 4.5
16 Hbs.	1 62	1.80	2.09 2.18 2.27	2.60	3.19	3.85	4.8
18 Hbs. 19 Ibs.	1.64	1.86 1.95 2.83	2.36	2.72 2.84 2.94	3.35 3.50 3.66	4.95 4.24 4.44	5.0
20 lbs. 21 lbs.	1.80 1.86 1.92	2.18 2.18 2.25	2.45 2.54 2.63	3.00 3.20 3.32	3.81 3.97 4.12	4.83 4.83 5.62	5.5 5.7 6.0
22 lbs 23 lbs 24 lbs	1.92	2.33 2.40 2.40	2.03	3.44 3.96 3.68	4.28	\$ 72	6.7
25 lbs.	2.10	2.40	2.90	3.60	4.59	8.41 5.81	6.4
26 lbs 27 lbs 28 lbs	2.16 2.22 2.20	2.55 2.63 2.70	2.99 3.00 3.17	3.80 3.92 4.04	4.74 4.90 8.05	5.80 6.00 6.19	6.5 7.2 7.4
29 Ibs. 30 Ibs.	2.34 2.40 2.46	2.78 2.85 2.93	3.26 3.35 3.44	4.18 4.28 4.46	3.21	6.39 6.50 6.78	7.6
31 /bs. 32 /bs.	2.46 2.32 2.50	2.93	3.44	489	5.52 5.87	6.78 6.97	8.1
33 lbs. 34 lbs	2.64	3.00 3.00 3.15	3.53 3.62 3.71	4.54	5.83 5.98	6.97 7.17 7.36	8.6
35 lbs 36 lbs 37 lbs	2.78 2.76 2.82	3.23 3.30 3.38	3.88 3.89 3.98	4.88 5.80 5.12	6.14 6.29 6.45	7.56 7.75 7.95	9.1 9.3 9.5
							1 0.0
Ship. Wt.	2me 1 & 2	2000	Zene 4	Zone	Zane	<b>Zene</b> 7	Zane
38 lbs. 39 lbs. 40 lbs.	\$2.80 2.94 3.00	\$3.45 3.53	\$4.07 4.15 4.25	\$5.24 5.36 5.48	56.68 6.76 6.51	\$8.14 8,34 8.53	\$9.8 10.0 10.3
	3.00	3.60	4.25	5.48			10.3
41 lbs. 42 lbs. 43 lbs.	3.06 3.12 3.18	3.60 3.75 3.83	4.34 4.43 4.52	5.60 5.72 5.84	7.07 7.22 7.30	8.73 8.92 9.12	78.8 71.0
44 Ibs 45 Ibs	3.24 3.30 1.36	3.90 3.98 4.05	4.61 4.70	5.96 6.08 6.20	7.53	9.31 9.51 9.70	11.2
46 lbs	3.36	4.12	4.79	6.32	7.84	9.90	11.7
48 Ibs	1.42 1.48 1.54	4.20	4.97	6.44	8.00 8.15 8.31	5.50 10.09 10.29	12.0 12.2 12.4
50 ibs 51 ibs 52 ibs	3.60 3.66 3.72	4.35 4.43 4.50	5.15 5.24 5.33	6.68 6.80 6.92	8.46 8.62 8.77	10.48 10.68 10.87	12.7 12.9 13.2
53 lbs. 54 lbs.	1.78	4.58	5.42	7.84	8.93 9.00 9.24	10.87 11.07 11.26 11.46	13.4
55 lbs.	3.84	4.58 4.65 4.73	5.42 5.51 5.60	7.16	9.24	11.46	13.6
56 lbs. 57 lbs. 58 lbs	3.96 4.82 4.08	4.80 4.88 4.95	5.69 5.78 5.87	7.40 7.52 7.64	9.39 9.55 9.70	11.65 11.85 12.04	14.1 14.4 14.6
59 lbs	4.14	5.03	5.96	7.76 7.88 8.00	9.86 10.01 10.17	12.74	14.0
60 lbs. 61 lbs. 62 lbs.	4.20 4.28 4.32	5.10 5.18 5.25	6.14	8 12	10 12	12.43 12.63 12.02	15.1 15.3 15.6
63 lbs.	4.38	5.25 5.33 5.40	6.23 6.32 6.41	8.24	18.48	13.82	15.8 16.0
65 lbs. 66 lbs. 67 lbs.	4.50 4.56 4.62	5.48	6.90 6.99 6.68	8.48 8.50 8.72	10.79 10.94 11.10	13.41 13.60	16.3 16.5 16.8
67 lbs. 68 ibs. 69 lbs.	4.62 4.58 4.74	5.63	\$ 77	8.72	11.10	13.80	16.8
70 Mbs	4.80						17.0 17.2 17.5
70 lbs Note: Th 19	4.00 ese par 74 and D PARC	EL POS	6.95 rates v ject to r	to Pos	iffective without		
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<u>d Radio History</u>

Use this handy ORDER FORM if you are unable to obtain your requirements from your local EICO DEALER.

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SOLD TO:									
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SALES TAX. We are required by law to collect Sales Tax in certain counties and states. Please add Sales Tax if applicable where you live.

TYPOGRAPHICAL ERRORS. EICO is not responsible for

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Prices subject to change without notice.

EICO ELECTRONIC INSTRUMENT CO., INC. 283 Malta Street, Brooklyn, N.Y. 11207

TOTAL CASH PRICE

AMOUNT Money Order or Check

ENCLOSED



Alpha Brainwaves with this professional Biofeedback System.

# **BW-300 Alpha Brainwave** Monitor

EICO introduces a price breakthrough in the fantastic new field of brainwave biofeedback ... a completely safe, battery operated, biofeedback system that offers features and sensitivity comparable to professional models costing much more. The BW-300 will detect your Alpha Brainwaves (which occur when you are totally relaxed) and produce a tone varying in frequency according to your mental state. As you relax you will hear yourself producing "Alpha" Reliable all Solid State IC circuit design features an active filter that isolates Alpha Brainwaves and a high-gain low-noise amplifier providing 5-microvolt sensitivity for easy Alpha recognition. The EICO BW-300 is supplied complete with stethescopic earphone, electrode headband, **KIT 34**<sup>95</sup>

3 color coded

LED's clearly

state

define the logic

contact cream and complete instructions. Uses one 9 V transistor battery, (not included). WIRED 59.95

**EICO DLP-6 Digital Logic Probe** 

and

lan

In-or-out of

switch.

circuit selector

A must for every field serviceman for fast, accurate testing of logic levels in any DTL or TTL integrated circuit system such as numerical control systems, computers or telephone systems. The EICO Digital Logic Memory Probe provides detection capabilities for pulse durations as short as 50 nano-seconds and indicates the logic state of any DTL or TTL IC circuit. Readout consists of three light emitting diodes (LED's). Bottom LED lights green for logic 1. center LED lights red for logic 0, top LED lights yellow to indicate positive or negative going transition and remains in "ON" state for 200 ns regardless of pulse duration. Memory switch enables stretch LED to remain lighted after a positive or negative pulse occurs.

5-way binding

posts for easy interconnection

to oscilloscope.

Jacks for rapid

batch testing without probes **KIT 19**95 WIRED 29.95

Memory switch provides capture mode for transient pulses and power failures -

**EICO 688** Transistor/Diode **Quick Tester** 

Until now the only way to test semiconductors was to remove them from the circuit possibly damaging them with a hot soldering iron and then having to replace them, taking care to avoid heat damage again, if they tested good. Now all you need to do is connect the EICO 688 to your oscilloscope and touch the semiconductor with the probe. The waveform tells its condition at a glance! Switch selector for "in" or "out" of circuit testing, assures that the correct current is applied to the semiconductor under test. Checks all diodes and transistors **KIT 1495** (except MOS FETS). All test data is

included in a handy reference manual.



TEICOL



# EICO 242 SOLID STATE FET-TVOM

Big 61/2" meter movement for improved accuracy in reading Measures resistance even in semiconductor circuits

#### Kit Wired

The Model 242 solid-state FET-TVOM combines all of the capabilities of the Model 239 with numerous additional features. First, there is a big 61/2-inch meter for easier, more accurate readings. Second, there is the added versatility of seven non-skip milliampere ranges. Finally, the extremely low voltage ohmmeter adds convenience and versatility when testing semiconductor circuits.

The highly accurate milliameter section of the EICO 242 can be used for AC and DC measurements from 10 microamps to 1 Amp in seven convenient 10db steps. The precision meter responds to peak-to-peak, currents as well as voltages, on the seven AC ranges. However, the meter scale is calibrated in both peak-topeak and the equivalent sinusoidal RMS voltages and currents for easy interpretation

Like the Model 239, the Model 242 uses EICO's advanced-design FET input stage to give you high input impedance and eliminate circuit loading. Its low 1-Volt scale makes it ideal for semiconductor circuit work. The special low voltage ohmmeter circuit is extremely useful when troubleshooting transistorized equipment. In use, the semiconductors in a circuit under test will not affect resistance readings.

The Model 242 also incorporates the time-saving single all-purpose DC/ACohms-mA Uni-Probe (Multi-Probe) so that you use only one lead for all measurements

Use of a balanced transistor meter circuit, good power supply regulation, and 1% multiplier resistors all assure long lasting stability and accuracy. The FET stage is fully protected against damage by fast-acting semiconductor and capacitor circuits.

SPECIFICATIONS: As Model 239 except for the following: AC & DC Current ranges in MA same as voltage ranges on 242; OHM-METER: Low voltage type; METER MOVEMENT; 6½"; SIZE: (HWD) 7½" x 8½" x 5"; WEIGHT: 6 lbs.; POWER REQUIREMENTS: 105-132 volts AC 3 Neda #1604-9 volt batteries and 1-15 volt size D cell; 1.4 VA \* Export Model available

#### EICO 240 SOLID STATE FET-TVM

Same as EICO 242 electronically, except it has a 41/2" meter. Does not have milliameter ranges, SIZE (HWD): 8½" x 5%" x 5", WEIGHT: 6 lbs. Model 240 ★ Export Model available Kit. Wired.

# EICO 239 SOLID STATE FET-TVM

- Compact, portable, battery operated FET-TVM
- Measures peak-to-peak AC voltages

#### Kit Wired

Although designed primarily for semiconductor circuit testing, the Model 239 solid-state FET-TVM is more than capable of handling vacuum-tube circuitry. Many features will appeal especially to engineers or technicians working with semiconductor circuits.

The precision 1-Volt scale on the Model 239 lets you make accurate readings to as low as 0.05 Volt and can give good indications down to 0.01 Volt. Other high-accuracy scales give direct readings up to 1000 Volts. Using the EICO high-voltage probe (not supplied) this range can be extended up to 30 000 Volts

The large 4½-inch, 200µA meter responds to peak-to-peak voltages on the seven AC ranges. For added convenience the meter dial is calibrated in both peak-topeak and equivalent sine wave RMS voltages so that either one can be read.

The wide-range ohmmeter covers from 0.2 to 1000 megohms in seven steps. A low voltage is used in the seven ohmmeter ranges to insure against damaging any semiconductors in equipment under test. However, the voltage is still high enough to allow for accurate testing of diodes and transistors. Another convenient feature of the Model 239 is the time-saving single probe for all measurements and eliminates the tangle of wires usually associated with similar multimeters

The balanced transistor meter circuit and 1% resistors assure high stability and accuracy

The advanced-design FET input stage provides extremely high input impedance (11 megohms DC). The FET is fully protected against damage by fast-acting semiconductor and capacitor circuits.

SPECIFICATIONS: AC RMS SINE WAVE AND DC VOLTAGES RANGES 0-1 3, 10 30 100 300, 1000 volts, PEAK-TO-PEAK AC VOLTAGE RANGES 0-28, 35, 28, 85, 280, 850, 2800 volts, INPUT IMPEDANCE DC-11 megohms, AC-1 megohms, FREQUENCY RESPONSE 25 Hz to 2 MHz (up to 250 MHz with PRF probe not supplied). OHMMETER 0.2 ohms to 1000 megohms in 7 ranges, METER MOVEMENT 41, 200 µA movement. POWER REQUIREMENTS 3 Neda #1604-9 volt batteries and 1-1.5 volt size. D cell. SIZE (HWD) 8'," x 5', x 5", WEIGHT 6 lbs



structions supplied. Supplied less series isolatg resistor or connector. Use 1 megohim for all EICO VTVM's EICO VTVM's take MC1F connector.

with any 11 mergohini VTVM: Supplied less connector. Use PRF-11 for all EICD VTVM s.

# EICO TUBE TESTERS KNOWN FOR QUALITY ACCURACY



# EICO 667 DYNAMIC CONDUCTANCE TUBE & TRANSISTOR TESTER

Kit

Wired

Tests the new tube types

- Separate plate, screen and grid voltages
- Individual element settings by lever switches

TYPES TESTED: 5 & 7 pin Nuvistors; Novars; MAGNOVAL; compactrons; 7- and 9-pin miniatures; 9-pin + 1 center pin miniatures; 5-, 6-. & 7-pin sub-miniatures (in-line base); 8-pin sub-miniatures (circular base); Decal octals; loctals; and the special two-pin rectifiers. In addition to receiving types, both domestic and foreign, 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 transistors. Pilot lamps are tested in center of MAGNOVAL socket. Accessory Model CRU adaptor for testing color and black and white picture tubes.

**TRANSISTOR TEST:** Two-step test for both npn and pnp signal transistors using internal DC power supply.

DYNAMIC CONDUCTANCE TUBE TEST: Composite indication of mutual conductance, plate conductance, and peak emission capability. Readings are on both numerical and quality zone scales. Rectifiers tested near maximum rated current for extra accuracy.

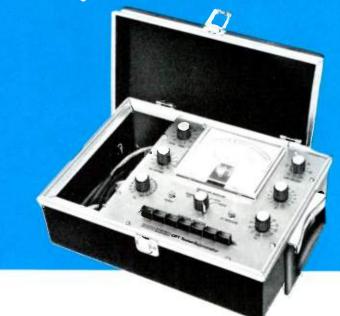
**LEAKAGE/SHORT TEST:** Direct-reading of inter-element leakage up to 20 MΩ. DC leakage test voltage is always applied in correct polarity to eliminate emission effects from readings. Accurate heater-cathode leakage achieved by isolation of heater and cathode from remaining tube elements during test. Push-button transfer switches (12) permit rapid insertion of tube elements in leakage test circuit.

**IMPORTANT FEATURES:** Each active tube element can be individually connected, by 12 six-position individual element lever switches to any of the following busses: plate voltage, screen voltage, grid voltage, filament voltage ground (cathode and filament return), no connection. Two additional lever switches are used to select from 4 combination of 3 plate 3 screen, and 3 ranges of control grid voltage (variable over each range with a 5% accurate wirewound control) and 5 ranges of meter sensitivity (1% shunts and 5% accurate wire-wound control). Multi-section tubes have each section individually tested by rapid selection from 12 push button transfer switches while all sections are simultaneously drawing full-rated current. Pentodes are tested as pentodes, with no lumping together of tube elements.

Line-adjust rheostat for testing independent of tube filament loading or line voltage variation.

Complete Tube Data Manual provided.

**18** Power: 105-135 volts AC. Provided with pilot lamp and fuse. Size (HWD): 12" x 15" x 4½". Weight: 22 lbs.



### **MODEL 633 CRT TESTER & REJUVENATOR**

 Continuity and leakage checked through transistorized VOM and read directly on meter.

Check gray scale tracking ability.



Use the Model 633 to test and rejuvenate the most expensive component in your television set – the picture tube. Its versatility makes this one test instrument applicable to black and white as well as to color CRT's. Each gun of the color tube is measured individually and numerically, providing you with required gray scale tracking information. The all solid state instrument is packaged in a small, lightweight carrying case for convenient portability.

The various tests and rejuvenating functions can be accomplished using the seven rotary controls and the seven push-button switches on the front panel of the Model 633. While one rotary control is used to compensate for variations in line voltage, a second one is used for calibrating the 100% meter reading. Three controls are used to supply the proper individual voltages to the filament, to the Grid 1 and to the Grid 2. The leakage switch allows you to measure continuity and the quantity of leakage between the various electrodes in the tube. Each of the three color guns is selected in turn by simply setting the Color Gun Selector switch to the required position.

The push button switches are used in the various rejuvenating and welding functions. They are also used for the life and emission tests as well as to measure the grid cutoff voltage.

Six different CRT tube sockets are supplied so that the EICO Model 633 can be conveniently connected to any known picture tube. A complete manual is provided indicating the settings on this instrument for all CRT's.

SPECIFICATIONS: METER SCALES: BAD-?-GOOD, % emission, 100K\Omega to 10M\Omega leakage; METER MOVEMENT: 200 microamperes  $\pm 2\%$ , 41/2° D'Arsonval; FILAMENT VOLTAGES: 1,2,3,4,5,6,7,8,9,10, 12; GRID 1 VOLTAGES: Variable 0 to -150; GRID 2 VOLTAGES: Variable 0 to +450; LIFE TEST VOLTAGE: Filament voltage minus 10%; BOOST VOLTAGE: Filament voltage plus 35%. WELD VOLT-AGE: Filament voltage plus 85%; HIGH VOLTAGE: 350 volts; POWER REQUIREMENTS: 120 VAC, 50/60 Hz; SIZE (HWD):  $5^{1/4}$ ° x  $12^{2}/4$ ° x 91/4°; WEIGHT: 9 lbs.

ATTENTION EICO TUBE TESTER OWNERS: NEW TUBE DATA AND SUBSCRIPTION PLAN NOW AVAILABLE FOR ALL MODELS. Write to: EICO Tube Data Division, 1744 Rockaway Ave., Hewlett, N.Y. 11557

# & DEPENDABILITY



# EICO 635 DELUXE PORTABLE ALL-PURPOSE TUBE TESTER

- "Take-it-anywhere" design expressed in a modern, rugged, scuff-proof, luggage case
- Compact (4"H, 12<sup>1</sup>/<sub>2</sub>"W, 9"D) and lightweight, 4<sup>1</sup>/<sub>2</sub> lbs.
- Thoroughly professional, full-range modern versatility. Tests all standard tubes and even the new decals, magnovals, 7-pin nuvistors, and popular TV picture tubes
- Quick, accurate, dependable and the price is modest indeed
- Complete with luggage case and Tube Manual

# Kit Wired

Now, no matter what the site – in the field or on the bench – and no matter what the tube, you can fast-check it with the new Model 635. Novars, nuvistors, compactrons, 10-pin types, battery-types, autoradio types, foreign, hi-fi, industrials, decals, magnovals, 7-pin nuvistors, TV picture tubes – you name it, the new 635 will quickly tell you what you need to know to pass or fail the tube.

Tests for dynamic cathode emission, grid leakage, gas and shorts. 3<sup>1</sup>/<sub>2</sub>" D'Arsonval meter – protected against accidental overload or burnout – in a meter bridge circuit for long-term precision. Neon lamp indicators for shorts, grid leak, and power. Extra-convenience features include long-lasting anti-corrosion phosphor bronze sockets, pin straighteners for all tube types, transformer isolation power supply. In sum, the new 635 has all the hallmarks of an EICO-engineered test instrument: 100% professionalism at lowest cost

# NEW MODEL 610A ADAPTER — Wired only TESTS ALL THE NEW TUBES

■ An eight socket unit that instantly modernizes your EICO Tube Tester for (Models 625, 666). Testing these new tube types: 10 Pin Min, 12 Pin Compactron, 5 and 7 Pin Nuvistor, 9 Pin Novar, 10 Pin Decal, 9 Pin Magnoval, 2 Pin Special Rectifier.

The handy flexible cable plug is simply inserted into the existing 9 pin socket of your EICO Tube Tester. Attach the testers grid cap to the adapter and the unit is ready to operate.

■ No switching is necessary. For Compactrons, simply rotate the tube as directed in the tube data manual.

# 615 TUBE TESTER ADAPTER -Wired only

Adapts EICO Models 628 and 667 tube testers for testing 4, 5, 6 or 7 pin tubes (older types), for which test sockets are not provided in those models.

# MODEL CRU-TV PICTURE TUBE ADAPTER Wired only

For testing color, black and white picture tubes with #667 and #628 tube testers. Includes 1-7 pin, 1-8 pin, 1-12 pin and 1-14 pin large CRT socket adaptors and cable.

# **NEW EICO 685 TRANSISTOR ANALYZER**

IN AND OUT OF CIRCUIT DYNAMIC SEMICONDUCTOR AND CIRCUIT AC ANALYZER



3 instruments in one! Nobody but Eico makes the troubleshooting of solid state equipment so quick, easy, versatile and precise for the professional electronics technician and engineer-and at such low cost!

- Performs the 4 basic tests on all types of FETs including pinch-off.
- Performs the 3 basic tests on all types of bipolar transistors.
- Tests for true transconductance and AC Beta, in and out of circuit. Tests all types of diodes and measures zener voltage.
- Tests an types of clodes and mean
  Tests SCRs, TRIACSs, and UJTs.
- Incorporates easy-to-use DC Voltmeter and Ohmmeter.
- 50 uA taut band meter movement.

Kit

Wired

Nothing is left to "chance" or "guess." The 685 helps you bring to light everything you need to know for the swift location and diagnosis of any faults, whether they are semiconductor, resistive or voltage in nature. And you can say goodbye to the old-fashioned clumsy, destructive tasks of unsoldering three or four transistor leads from the printed circuit board!

In and out of circuit, the 685's multiple tests on bipolar transistors include an AC beta test with accurate readings from 2 to 1,000 on power and small signal devices, and from 2 to 100 on RF transistors. I CBO and I CEO measurements are easily read on the accurate compressed scale. Besides the 0-50,000 micromhos AC transconductance readings, IDSS, I GSS and pinch-off voltage readings on FETs are quickly made. With equal ease and precision, you can check the new enhancement and depletion devices. On the front panel you can easily read zener diode breakdown voltage and SCR gate turn-on voltage.

The ohmmeter-voltmeter meter scale has been uniquely compressed so that low values of R and V are read over a longer length of scale than are higher values. This provides accuracy where it is most needed plus the convenience of a single scale reading for all values of R and V.

#### SPECIFICATIONS:

Bipolar transistor tests: AC Beta (in and out of circuit) 2-10// (readings to 1000) at |C=C2| ma for RF devices. 2-100 and 2-1000 (readings to 1000 and 10.000 respectively) at |C=2| ma for small signal devices. 2-100 and 2-1000 (readings to 1000 and 10.000 respectively) at |C=2| ma for small signal devices. 2-100 and 2-1000 (readings to 1000 and 10.000 respectively) at |C=2| ma for small signal devices. 2-100 and 2-1000 (readings to 1000 and 10.000 respectively) at |C=2| ma for small signal devices. 2-100 and 2-1000 (readings to 1000 and 10.000 respectively) at |C=20| ma for power devices: |CES|0-5| ma (30  $\mu$ A center scale). |EET| tests: AC trans-conductance (in and out of circuit)-0-5000 and 0-500.003 micromhos at VDS=5V| uDT: Determine condition of device SCR and Triodes: Turn-on voltage (can measure turn-on current using external resistor and meter). Determine condition of device Signal Diodes and Rectifiers: Determine condition of device from forward and :everse current tests. Zener Diode: 0-20 volts. Voltmeter: 0-500 volts (30 volts center scale). 1 Megohm resistance. Ohmmeter: 400!! to 10 M!! (140 K!! center scale). 1 Megohm resistance. Ohmmeter: 400!! to 10 M!! (140 K!! center scale). 1 Megohm resistance. Ohmmeter: 400!! to 10 M!! (140 K!! center scale). So ma certifiers. 1-6.6 volt zener. 1-9 1 volt zener. 1-24 volt zener. Meter Movement: 50  $\mu$ A. 2% Taut Band. Power Requirements: Domestic-120 VAC. 50/60 Hz. 10 watts: Export-115 VAC and 2:30 VAC. 50/60 Hz. 10 watts: Size (HWD): 12% x 8% weight: 10 lbs.



#### EICO 680 TRANSISTOR & CIRCUIT TESTER

- Measures transistor ICBO, ICEO, DC Beta
- \* 20 KΩ/V VOM for testing transistor circuits

\* Simple criteria for all tests in manual; no charts are needed

### Kit Wired

**IMPORTANT FEATURES:** ICBO (collector-base leakage current) and ICEO (collector-emitter leakage current) are measured accurately on microammeter ranges with sensitivity to 50  $\mu$ A full scale. 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 1mA collector current indexed on scale. DC beta for power transistors can be approximated by calculating ratio of ICBO to ICEO.

AC Beta for signal transistors determined by reading base current settings required to establish two standard collector cu.rent, 0.75mA and 1.25mA, indexed on the scale (500  $\mu$ A shift). AC beta is obtained by dividing 500 by the base current difference in  $\mu$ A, or referral to a chart in the manual which gives the result without calculation.

Quality of selenium rectifiers, germanium and silicon diodes determined by measurement of forward and reverse currents. Beta calibrate/zero ohms adjust also prolongs useful life of batteries.

#### SPECIFICATIONS

DC CURRENT ICBO/ICEO RANGES:  $50_{\mu}A$ ,  $500_{\mu}A$ , 5mA, 50mA, 500mA, DC VOLT RANGES: 5V, 50V. RESISTANCE RANGES: Rx1 (0 to  $2K_{\Omega}$ ,  $12_{\Omega}$  center scale), Rx100 (0-200K $_{\Omega}$ ,  $1200_{\Omega}$  center scale), Rx10K (0 to  $20M_{\Omega}$ ,  $120K_{\Omega}$  center scale). TRANSISTOR DC BETA RANGES: 2 to 30, 20 to 300. ACCURACY:  $\pm 3\%$  F.S.D. CONNECTORS: Three permanently connected clip-on test leads (C, B, E) or a panel socket for transistor connectors; two banana jacks for VOM test leads. CONTROLS: RANGE switch, MODE switch (NPN, PNP, VOM), TEST switch (ICBO, ICEO, PWR ICBO, PWR ICEO, B CAL, READ B), B CAL/O $_{\Omega}$  adjust control. BATTERIES: 4 size AA, 1 size C. SIZE (HWD): 6%" x 5%" x 3". WEIGHT: 3 lbs.Less VOM leads.

# Semiconductor Curve Tracer



### **EICO 443 TRANSISTOR-DIODE CURVE TRACER**

 Makes it possible for most general purpose oscilloscope to display direct readouts of the most meaningful data.

### Kit Wired

Diodes, rectifiers, signal and power transistor characteristics can be tested by the versatile Model 443 curve tracer. Circuit designers and service technicians will find it invaluable for determining the DC characteristics of a wide variety of silicon and germanium semiconductors. The output of the 443 can be displayed on most generalpurpose oscilloscopes. Diode and rectifier characteristics that can be tested include Forward voltage (V), Forward current (I), Reverse current (Ir), and Peak Inverse Voltage (PIV). The PIV test voltage is variable from 0 to 1400 V. Transistor tests include those for hFE, hOE, ICEO, VCE(sat), and BVCEO

#### Other significant features of the Model 443 are:

- All silicon solid state printed-circuit construction
- Dual transformers for isolation and safety
- Flashing light indicates high voltage at diode test terminals
- Matching switch for comparing and matching transistors
- Direct-reading beta controls on front panel
- Built-in oscilloscope voltage calibrators
- Terminals for connecting external test sockets

#### SPECIFICATIONS:

TRANSISTOR TESTS: Beta (hFE) displays family of 3 curves NPN/PNP: Signal Transistors (hFE) at VCE =10 volts Ic =12 MA.: Power Transistors (hFE) at VCE =10 volts Ic =1 amp.

DIODE/RECTIFIER TESTS: Peak Inverse Voltage (PIV) 5 Ranges – 1/10/50/100/200 Volts Per Division. Variable 0-1400 Volts Maximum. Reverse Current (Ir) – 3 Ranges – 1/10/100 microamps per division. Forward Current (Ir) – 2 Ranges – 10/100 milliamps per division – 1 amp maximum. POWER REQUIREMENTS: 117 VAC 6 Watts. SIZE (HWD): 3" x 11½" x 9½". WEIGHT: 10 Ibs. U.L. APPROVED 3 wire grounded line cord.

### EICO 944 FLYBACK TRANSFORMER & YOKE TESTER

### Kit



Now you can make one of the most difficult TV servicing jobs a breeze. Here's fast, positive testing of flybacks and yokes, in or out of the set at lowest cost!

Wired

The 944 Flyback Transformer & Yoke Tester gives you positive checks on flybacks and yokes in seconds. Operation is on the extremely sensitive griddip principle, which shows up even one shorted turn! Exclusive separate calibration for air-core and iron-core flyback and yokes

assures accuracy. The large easy-to-read 4½" meter has three separate colored scales. Continuity of coils, speakers, switches can also be checked. Size: 7" x 5" x 4" Weight: 5 lbs. ★ Export Model available



# New Solid State Signal Generators

# New Signal Tracer

#### EICO 379 Solid State Sine/Square Wave Generator

Here is a truly professional solid-state signal generator that provides simultaneous sine and square-wave outputs. Its wide frequency range makes it perfect for testing all types of high-fidelity as well as sonar equipment.

The wide-range Model 379 covers 20 Hz to 2 MHz in five bands. Its low-distortion Sulzer feedback circuit using and FET, provides clean signals over the entire frequency range for all types of testing. Since coverage is continuous, this generator is excellent for evaluating speaker systems.

The sinusoidal output voltage can be varied from zero to 7.5 Volts when driving a highimpedance load and up to 6.5 Volts when driving a 600-ohm load. Careful circuit design keeps variation in output level within  $\pm$  1 db on the four lowest bands and within  $\pm$  2 db on the high band. Although the distortion is specified as 0.25%, it is actually less than 0.1% over much of the audio spectrum. Simultaneously with the sine wave signals appearing at one pair of output terminals, excellent square waves of identical frequency appear at a second pair.

The square-wave output covers a range from 20 Hz to 200 kHz — only one decade less than the range covered by the sine-wave output. Output at the square-wave terminals can be varied from zero to 10 Volts peak-topeak. Square-wave rise time is better than 0.1 microsecond at 20 kHz. You'll find this rise time far more than adequate for professional square-wave testing of the finest high-fidelity systems.

SPECIFICATIONS: FREQUENCY RANGE: sine wave - 20 Hz to 2 MHz, square-wave - 20 Hz to 200 kHz; OUTPUT VOLTAGE: sine wave - 0-7.5 volts rms into high impedance output, 0-6.5 volts into 600 ohms; square-wave - 0-10 volts peak-to-peak into high impedance, positive direction with zero ground; CALIBRATION ACCURACY: - 3% except for 5% 20 Hz to 100 Hz and 1 MHz to 2 MHz; MAXIMUM DISTORTION ACROSS AUDIO RANGE: 0.25%; RISE TIME AT 20 KHz: less than 0.1 microseconds; POWER REQUIREMENTS: 105-132 volts; 50/60 Hz AC, 10 VA; SIZE: (HWD) 7½" x 8½" x 8½"; WEIGHT: 9 Ibs.★ Export Model available



KIT WIRED

#### EICO 330 Soliá State RF Signal Generator

This wide-range solid-state RF signal generator is an invaluable tool for aligning television sets, AM and FM radios and other types of communications equipment.

A precision vernier control allows you to set r-f frequencies accurately and easily. The range from 100 kHz to 54 MHz is covered in five fundamental bands. Coarse and fine level controls assure accurate setting of both the modulated and unmodulated RF output.

A low distortion 400 Hz is generated by a parallel "T" feedback circuit around a lownoise transistor. This signal is available at the front panel for testing audio equipment and the audio section of a radio or TV set. The audio signal is also used to modulate all RF frequencies generated by the Model 330. A modulation level control on the front panel lets you set the percentage modulation up to 100%. An input is also provided for modulation from an external source.

All functions are chosen with the Signal Selector switch. You can conveniently pick the required radio frequency signal by simply placing this switch in the applicable position.

The Model 330 signal generator provided exceptionally good waveforms for both modulated and unmodulated RF signals. You'll find the Model 330 an indispensible aid anywhere that you need a clean modulated or unmodulated RF signal.

SPECIFICATIONS: RF FUNDAMENTAL FRE-QUENCIES: 100 kHz to 54 MHz in 5 bands; OUTPUT: more than 300,000 microvolts into 50 ohm load; RF COARSE ATTENUATION: three steps; RF FINE ATTENUATION: 0 to 100%; INTERNAL MODULATION: approximately 400 Hz from 0 to 100%; POWER RE-QUIREMENTS: 105 to 132 volts, 50/60 Hz AC, 1.7 VA; SIZE: (HWD) 7½" x 8½" x 5"; WEIGHT: 5 lbs.★ Export Model available



World Radio History

KIT WIRED

EICO 150 Solid State Sign: | Tracer

Here is a real "every-day" professional aid to convenient and rapid trouble-shooting of both solid-state and vacuum tube equipment. This multipurpose RF and audio signal tracer provides everything you need to track down defects in AM, FM, and TV receivers as well as in high fidelity and public address systems. You can easily and rapidly locate the defective sections in any audio or RF equipment.

Two shielded probes are used for fast signal tracing of both RF and audio circuits. A high input impedance bootstrapped emitter follower amplifier makes loading on the equipment under test completely negligible. The amplifier is a high-gain, low noise, low distortion unit that delivers a clean 400 mW to a high-efficiency 8-ohm speaker.

Both speaker and meter output indicators are provided. Thus, you can judge the quality of the equipment under test audibly on the built-in speaker as well as visually on the meter. The meter can also be used to compare accurately several different signal levels. The output can also be checked using an external load and oscilloscope.

The Model 150 also provides a substitution output transformer and speaker. The output transformer can be substituted for a questionable one in any vacuum-tube or transistor amplifier. Similarly, the 8-ohm speaker, mounted on the front panel of the Model 150 may be used as a substitute for a suspected defective one in the equipment under test.

SPECIFICATIONS: OUTPUT: 400 mw; INPUT FOR RATED OUTPUT: RF - 1 mv, audio --63 mv; HUM: better than 60 db below 400 mv; METER: 200 microamp movement; POWER REQUIREMENTS: 105 -- 132 volts, AC, 50/60 Hz, 5 VA; SIZE: (HWD) 7½" x 8½" x 5"; WEIGHT: 6 lbs. ★ Export Model available





# **OUTSTANDING SIGNAL GENERATING INSTRUMENTS**



- High design standards maintained by costlier components
- R-C (Wien Bridge) oscillator circuit with 1% precision resistors
- Excellent calibration accuracy, stability and purity of waveform



- Switch selectable frequency output
- One cycle to 110kc
- Attenuated output in 8 steps
- Metered output voltage
- Excellent frequency resettability

# NEW! EICO PSI-1 Solid-State Signal Injector Probe



- Pen-size one-ounce, self-powered, self-contained signal generator covers 1,000 Hz with harmonics to 30 MHz.
   Perfect for on-the-spot signal tracing in the field.
- 22 \* Helps trouble-shoot audio, IF & RF circuitry in any electronic equipment, transistorized or vacuum tube.

# EICO 377 SINE & SQUARE WAVE GENERATOR Kit Wired

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! Among its outstanding features, the 377 includes choke filtering in the power supply to minimize the hum level and high power output over a wide range of loads, coupled with constant output over a wide frequency range. These and the many other features of the 377 allow it to be used for a multitude of applications including amplifier testing and design, determining radio receiver fidelity and loudspeaker response, square wave testing of TV receivers, development of filter or compensating circuits and frequency measurements in conjunction with an oscilloscope such as the EICO 435.

#### SPECIFICATIONS

FREQUENCY RANGE: Sine wave. 20-200,000 cps in 4 bands. Square wave, 60-30,000 cps. (5% tilt at 60 cps, 5% rounding at 30,000 cps.) CALIBRATION ACCURACY: ±3% or 1 cps, whichever is greater. OUTPUT VOLTAGE: 10 V across 1000 ohms rated (100 milliwatts); drops to 8 V across 500 ohms, rises to 14 V 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, 1-6SJ5, and 1-3S6 3-watt lamp. POWER REQUIREMENTS: 117 VAC. 60 cps, 50 watts. SIZE (HWD): 71/s" x 11/s" x 71/s". WEIGHT: 13 lbs.

\* Export Model available

# EICO 378 AUDIO GENERATOR Kit Wired

Especially designed for today's needs for more precision, versatility and reliability in audio signaling and testing.

Extreme versatility and positive error elimination are now yours for: testing audio amplifiers for gain and frequency response, as a signal source for various bridge measuring circuits, for modulation of RF signal generators, or any other application where a stable, accurate audio sine wave must be used. Based on a highly reliable circuit, the 378 produces a very low distortion sine wave signal over a very wide range of frequencies. Unlike most other audio generators that require interpretation of a dial setting with possible error, the frequency-determining elements of the 378 are not continuously variable; rather they are set by positive-setting detent switches that select combinations of 1% resistors and 2% capacitors which comprise the frequency-selecting network. This results in a precisely metered output controlled by 8-position decade and fine attenuators, fantastically low distortion and highly accurate, repeatable switch-selected frequencies from 1 cps to 110kc. The output level of this instrument can be set with great precision between 0 and 10 volts RMS (or between -70 and +22db) on a 41/2-inch, 2% fullscale accuracy meter. Below 1 volt RMS output, the instrument is provided with a switch-selected internal 600 ohm load that can be disconnected as desired. All this in a man-sized instrument with well-spaced controls and a big 41/2 inch meter easy-to-read at normal working distance - a bench workhorse that takes you speedily through all your audio work without waste motion and annoying uncertainty. A bargain – pays for itself in the first job! For a complete audio test lab, team it up with the EICO 902 IM/HARMONIC DISTORTION METER.

#### SPECIFICATIONS

Switch selectable frequency output from cycles to kilocycles: one cycle steps (1-110 cps); 10 cycles steps (10-1100 cps); 100 cycles steps (100 cps-1.1kc); 1kc steps (1kc to 110kc); FREQUENCY ACCURACY: ±5%. DISTORTION: Less than 0.1%, 20 cps-20kc. OUTPUT VOLTAGE RANGES: 0-3, 10V into hi-Z (10K min.); 0-003, .01, .03, .1, .3, 1V into ext. or internal 600Ω load. OUTPUT METER ACCURACY: ±5% of full scale. POWER REQUIREMENTS: 120V, 50:60 cps, 40 watts. SIZE (HWD): 8½" x 12½" x 9". WEIGHT: 16 lbs. ★ Export Model available

If you use the time-honored principles of signal tracing as a trouble-shooting technique, you'll appreciate how convenient and versatile the new EICO PSI-1 is. Now you can have a signal generator on your person wherever you go. No line cord, no bulk, no fumbling with probes. Just press a button — the PSI-1's transistor oscillator emits a strong harmonics-rich signal. You control the volume by varying the inductive coupling (distance) to the device under test; or you can inject directly by means of the pointed probe tip. Use it once — you'll never want to be without it!

#### SPECIFICATIONS

FREQUENCY: 1KHz approximately with harmonics to 30MHz. OUTPUT VOLTAGE: 50 volts peak-to-peak approximately, open circuit. OUTPUT IMPEDANCE: 10K ohm capacitive. INPUT DC VOLTAGE: 600 volts max. fom output tip to case ground. POWER SOURCE: Two 1.5V batteries (Burgess No. NE, Eveready No. 912 or equivalent). SIZE: 5<sup>1</sup>/<sub>8</sub>" long x <sup>1</sup>/<sub>2</sub>" O.D. WEIGHT: One ounce.

World Radio History

# FOR COLOR AND BLACK & WHITE TV SERVICING

# **EICO 324 RF SIGNAL GENERATOR**

# Kit Wired

Use it for color or B & W TV, AM/FM radio and communication gear alignment and signal tracing, or wherever a modulated or unmodulated RF signal from 150 kHz to 435 MHz is required.

The excellent waveform provided by the RF oscillator is properly plate-modulated by a cathode follower. Modulation may be internal or external. The internal 400 Hz modulating signal is available separately. In the external modulation function, a stage of audio amplification is provided for the modulating signal, permitting up to 30% modulation from a 3-volt audio source. Percentage modulation by either the internal or an external source, as well as the separate audio output, is adjustable by a single panel control. Coarse and fine RF attenuators provide smooth control of the RF output signal.

Six tuning bands are employed to cover the fundamental frequency range from 150 kHz to 145 MHz. Calibration of the third harmonic of the highest fundamental provides the seventh tuning band from 111 mc to 435 MHz. The 6 to 1 vernier tuning dial permits exact setting of the output frequency.

Important construction points include the use of turret mounted, slug-tuned coils for maximum accuracy, copperplated chassis for minimized interference, line filters, shielded RF output cable and jack-top binding posts for audio in out connections. Tubes: 12AU7, 12 AV7.

SPECIFICATIONS: RF OUTPUT FREQUENCY RANGE: 150 kHz to 145 MHz on fundamentals in 6 bands, 111 MHz to 435 MHz on calibrated harmonics. TUNING DIAL CALIBRATION ACCURACY: +1.5%. RF COARSE ATTENUATION: In two steps, each approximately 20 db. RF FINE ATTENUATION: Continuous 0 to max. INTERNAL AF MODULATING FREQUENCY: Approx. 400 Hz POWER REQUIREMENTS: 117, VAC, 60 Hz, 8 watts. SIZE (HWD): 8" x 10" x 4%". WEIGHT: 8 lbs.

\*Export Model available

### EICO 369 TV-FM SWEEP & MARKER GENERATOR

#### Kit Wired

The finest of all TV/FM Sweep Alignment Generators, the new EICO 369 has unequalled design features including controllable inductor sweep, variable and crystal marker oscillators, as well as a built-in post injection marker-adder. Provides the easiest, fastest visual alignment of color or black-and-white TV and FM receiver RF and IF circuits. Use it with a fine wide-band scope such as the EICO 435, 460, or 465.

The controllable inductor sweep circuit in the Model 369 is purely electronic and has no mechanical parts to wear and give trouble later. Five fundamental sweep ranges are provided from 3-220 MHz, with a 6:1 vernier dial for ease of operation. Retrace blanking and a 3-stage AGC circuit keep the amplitude of the swept signal constant.

The variable marker generator in the Model 369 has 4 ranges covering 2-225 MHz (to 75 MHz on fundamentals), with a 6:1 vernier dial to allow you to set the frequency accurately. A crystal marker oscillator is also provided that can be used to calibrate your variable marker dial. A 4.5 MHz crystal is supplied for TV sound alignment.

With the EICO 369, circuit response is not affected by markers, and markers are not affected by circuit response. Separate level controls for trace size and marker size on the front panel can be used independently. Tubes: 12AU7, 6BQ7A, 12AX7, 6DR7, 12AT7 and 6X4.

**SPECIFICATIONS:** SWEEP OSCILLATOR: Five fundamental sweep ranges 3-7.5 MHz, 6-16 MHz, 36-95 MHz and 75-220 MHz. Output levels controlled by four-step decade and continuous attenuators. Output impedance 50 ohms. SWEEP WIDTH: Continuous up to 20 MHz depending on range. PHASING: Narrow-range phasing control permits permanent adjustment of horizontal deflection signal for accurate alignment. MARKER OSCILLATOR: Fundamental ranges are 2-6 MHz, 6-20 MHz, 20-75 MHz, calibrated harmonic range 60-225 MHz. CRYSTAL MARKER OSCILLATOR. Uses 4.5 MHz crystal supplied. Crystal socket on panel permits higher or lower frequency crystals to be used. Automatically activated by insertion of crystal. Crystal marker is internally mixed with variable frequency marker. CABLES: RF output (50Ω termination), Demodulator Signal Cable (incorporating low-pass filter), Scope Cable (dual shielded cable carrying both vertical and horizontal scope input leads). POWER REQUIREMENTS: 117 VAC, 50 watts, 60 Hz. SIZE (HWD): 8½″ x 12½″ x 7″. WEIGHT: 17 ibs.

\*Export Model available

# EICO PST-2 SIGNAL TRACER PROBE

The EICO Model PST-2 is a versatile Signal Tracer built into a small flashlight-size probe.

The range can be extended to 200 MHz with the demodulator probe tip. Overload is avoided by use of two attenuator probe tips. A sensitive plug earphone at the output is used to compare different signal levels, determine the level of distortion, and observe the general quality of the equipment under test.

**SPECIFICATIONS:** Gain: approximately 3000 at 1 kHz; Useable bandwidth: 50 Hz to 200 MHz; Input Impedance: 3500 ohms to 350,000 ohms. Output: 0.3 peak-to-peak volts; Noise level: -45 db; Distortion: Better than 5%: Probe and Probe Tips Supplied: 0 db, -20 db, -40 db and crystal demodulator; Power: 1-Size AA battery, 6%" L. x %" D. Weight: 2.2 oz.



- 50 kHz-435 MHz in 7 bands with 1.5 scale accuracy
- Variable int. ext. modulation, coarse and fine RF attenuators



Both variable and crystal marker oscillators
 Post injection marker circuit • supplied with caples



# **GREAT VALUES IN COLOR AND B&W TV SERVICE GENERATORS**



Wired only

### **EICO 380 A SOLID STATE NTSC COLOR GENERATOR**

- Swing-out circuit boards for compactness & accessibility
- Rock-stable performance with 3 crystal oscillators

Compact inherently rugged solid-state color signal and dot-bar generator. The only transistorized model providing completely tandard, fully saturated NTSC color signals, including both chrominance and luminance content exactly as specified. Color burt is precisely gated and delayed to N.T.S.C. standards. Phase angles for all colors are perminently stablished according to N.T.S.C. standards.

#### SPECIFICATIONS

RF CUTPUT 0.50.000  $_{\rm B}V$  into 300g (62.25 Mc crystal controlled for TV Channel 1). VIDEO OUTPUT Both positive and negative polarities 0.10 d-d into 4.7 Kg. #ORIZONTAL LINES 13 (variable thickness) for vertical linearly and horizontal convergence adjustments. VERTICAL LINES 10 (variable thickness) for horizontal linearity and vertical convergence adjustments. CROSSHATCH 13 herizontal and portical convergence adjustments. CROSSHATCH 13 herizontal and portical convergence adjustments. DOTS: 130 (variable size) for state and dynamic convergence adjustments. POWER REOUREMENTS: 117VAC. 60 cps. SIZE (HWD): 81% x 51% \* 43% WEIGHT # lbs.



### **EICO 385 SOLID STATE COLOR BAR GENERATOR**

- · Completely portable, battery-operated solid state design
- Feeds directly to TV antenna terminals

The value leader – professionalism at lowest cost – only from EICO. Versatile "go-everywhere," 5-function solid state color generator in tote-easy, battery-portable/storage case. Advanced computer-type circuity provides serviceman-minded advantages. 3 temperature-compensated crystal oscillators on one double-sided pc board for drift-free stability, and easy accessibility. Versatile color-coded gun killers in unique socket adapter assembly (no more fumbling!), store right in the case. Clips directly to TV antenna terminals (fast and sure!). Generates standard offset carrier type stable 10-bar display plus precision dots, crosshatch, and individual series of V&H lines. Low-drain operation on 6 "C" cells (not supplied) or with optional AC adapter/tinckle charger 13 transistors, 6 diodes, 3 crystals. Unusually small 2%"H. 8%"W. 8%"D; and light 7 lbs. Everything you need to do a fast, reliable job – and you save money too.

Easy-to-assemble kit:

Wired



# EICO 342 FM MULTIPLEX SIGNAL GENERATOR

Wired only

The 342 is essential in the test and alignment of multiplex circuits of stereo tuners, receivers and radios. With it, you can measure and adjust channel separation and balance, and check for the input level need for switch-over to stereo operation. It provides a composite audio output for direct injection into the multiplex section, as well as a signal modulating an FM RF carries with controlled deviation up to 75 kHz, for connection directly to the antenna terminals. Amplifiers for a stereo source permit FM MULTIPLEX STEREO demonstrations to customers.

#### SPECIFICATIONS

SEPARATION: 40 db 200 Hz to 19 kHz; 30 db 50 Hz to 15 kHz. CARRIER SUP-PRESSION: 40 db. COMPOSITE SIGNAL OUTPUT: 0-8 V p-p, continuously variable; output impedance 1.5 $\Omega$ . INTERNAL MODULATION: 1 kc; THD: less than 0.3%. EXTERNAL MODULATION OSCILLATOR REQUIREMENTS: 1 V RMS input for maximum output; input impedance 10K $\Omega$ . STEREO SOURCE MODULA-TION REQUIREMENTS: 1 V RMS input each channel for maximum output; input impedance 1M $\Omega$ . FM pre-emphasis provided. FM MULTIPLEX RF OUTPUT: 200 mv; output impedance 50 $\Omega$ . DEVIATION CONTROL: to  $\pm$ 75 kHz. PILOT FRE-QUENCY: 19 kHz  $\pm$ 2 cps (crystal controlled); adjustable phase  $\pm$ 45° adjustable amplitude 0-15%. Pilot may be switched off. SIGNAL SELECTION: L+R, L-R, L only, R only, 19 kHz pilot only or stereo source FREQUENCY RESPONSE:  $\pm$ 1 db 40 Hz - 15 kHz. TOTAL HARMONIC DISTORTION: Under 1% OSCILLO-SCOPE SYNC SIGNALS: Switch select internal 1 kc or external oscillator or 19 kc pilot. POWER: 117 VAC, 50/60 cps. SIZE (HWD): 8½" x 5¼" x 12½".



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,O. 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 MOVE-MENT: 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 34″ tong. POWER REQUIREMENTS: 117V, 60 cps; 10 watts. POWER SUPPLY: Transformer-operated selentum rectifier. SIZE (HWD): 24″ x 2%″ x 6%″. WEIGHT: 3 lbs.

\* Export Model available

# **PORTABLE VOM'S TOPS IN ACCURACY & PERFORMANCE**



SLC-1 optional

case

#### · 20,000 ohms per voit sensitivity · 31 range, 50-uv movement



1,000 ohms per volt sensitivity Seven AC/DC voltage ranges

#### EICO 586 V-O-M Kit : Wired

Essentially a larger version of the 536, the 566 Volt-Ohm-Milliammeter possesses all the excellent circuitry and application advantages of the former, plus seven extra ranges. Added to this is the convenience of the large 41/2" meter with 2-color scales. The 566 also boasts the accurate 0-1 volt scale featured on the 536 meter and can list among its features both shunt and series rectifier compensation for uniform accuracy. Other features include one set of precision divider resistors on AC and DC to minimize switching, a high-quality instrument rectifier in dual half-wave hook-up and a high-impact bakelite case.

#### EICO 565 V-O-M Kit · Wired

The 565 volt-ohm meter is the famous performance-proven EICO multimeter design with world-wide recognition for excellence in laboratory and field work. Complete battery operation makes it ideal for portable applications, field work and remote locations. Measurements can be made of AC and DC voltage, DC current, resistance and decibels. Circuitry, ranges and physical layout have been carefully designed with the service man in mind for convenience, speed and ease of operation. Factory adjusted wire-wound notentiometers compensate for individual rectifier characteristics to assure accurate measurements. An output voltage range on

#### EICO 536 V-O-M Kit Wired

Considered the "tops" of its type, the EICO 536 gives you seven full-scale AC/DC ranges, to 5,000 volts. One unique feature of the 536 is that it is the only 1,000 ohm/volt meter with a 0-1 volt full scale range, making possible accurate low voltage readings. For example, on an instrument whose lowest fullscale range is ten, one-half volt will deflect the needle only 1/20th of the scale, but on the 536 the one-half volt will deflect the needle to mid-scale, for a highly precise reading

The 2-pound meter is packaged in a high-

There are seven AC/DC/Output ranges, four current ranges and three ohm scales. Six decibel ranges cover -20 to +69. You need only examine the 566 side-by-side with any comparable meter to agree that it is one more EICO "best buy" in professional service instruments

#### 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 ohins, 100K ohms, 1 megohm. DB RANGES: -20 to +69 in 6 ranges. METER  $4\frac{1}{4}$ " size,  $400 \ \mu$ a movement. SIZE (HWD):  $6\frac{3}{4}$ " x  $5\frac{1}{4}$ " x 3". WEIGHT: 3 lbs.

# EICO 556 V-O-M Rit

A precise 1000 ohms per volt V-O-M. Similar to EICO 566 except that it employs 1% precision resistors.

the 565 allows for measurement of 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/OUT-PUT VOLTAGE: Ranges 0-2.5, 10, 50, 250, 1000. 5000 volts. Sensitivity 1000 ohms/volt DC CUR-RENT: 0-100  $\mu$ a, 10 ma, 100 ma, 500 ma, 10 amp. DECIBELS! -12 to +55 db in 5 ranges. RESIST-ANCE: Ranges: 0-2000 ohms, 0.2 megohms, 20 megohms (.2 ohms to 20 megohms). METER: 41/2" size, 50  $\mu$ a movement. SIZE (HWD):  $6\frac{3}{4}$ " x  $5\frac{1}{4}$ " x 3". WEIGHT: 4 lbs.

#### EICO 555 V-O-M Wired Kit

Complete with leads A highly precise 20,000 ohms per volt volt-ohm meter. Similar to EICO 565 V-O-M except that it

employs 1% precision resistors

impact bakelite case, making it compact, sturdy and portable for any shop or field use. An advanced new AC rectifier circuit, employing a high quality rectifier in a half-wave hook-up, provides excellent linear characteristics. Every modern feature required in an instrument of this type is built-into the 536. Compare it with other units of similar design and see for yourself why EICO gives you the best - for less!

#### 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  $\mu$ a movement. SIZE (HWD): 6½" x 3¾" x 2¾". WEIGHT: 3 lbs.



### **EICO 715 HAM/CB TRANSCEIVER TEST SET** Wired Only

A modest investment that pays off in a lifetime of better communications performance. At last-here's an all-professional test set that's designed for complete checking of both ham and CB equipment...and doesn't put a dent in your bank account. Reliable, compact, portable, quick and easy to use, it enables you to obtain maximum results from your ham or CB transceiver or transmitter. At the flick of a switch it obtains constant visual and/or audio indications of transmitter performance. Self-powered, it's excellent for both professional and hobbyist, in the shack or field. Measure R.F. power output to 50 watts . Standing Wave Ratio (Fwd. & Ref. power) • Ideal for antenna adjustment • Modulation percentage • Direct Reading • Field Strength Meter • 50 Ohm built-in dummy load.

#### SPECIFICATIONS

100 micro-amp meter for sensitive, accurate readings. SWR: 1-30. True RF power ranges: 10 watts (5%); 50 watts (10%). Modulation percentage 0-100%. Modulation distortion: headphone jack output. Relative field strength 1-10. Size (HWD): 478" x 818" x 1/2". Weight 5 lbs.





# EQUIP YOUR LAB WITH DEPENDABLE EICO TEST



- Wien Bridge with unique shunt resistance balancing circuit
- Capacity accuracy of #10% at any point on the capacity dial
- · Bright bar pattern gives sharp, unmistakable indications for accurate readings
- Supplied with Test leads



### EICO 955 IN-CIRCUIT BRIDGE-TYPE CAPACITOR TESTER

A truly advanced, highly dependable in-circuit and out-of-circuit capacitor tester, the 955 provides exceptionally sensitive short and open tests.

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

A quick easy glance at the electron-ray tube lets you know the status of shorts (closed bars indicate a short). A 60 cps test frequency and a maximum test voltage of 6.3 VAC (open leads), cecreasing with decreasing impedance, are also featured. In normal situations open tests can be made on capacities as low as 15 pf, but with constant voltage supply, internal adjustment can be made as little as 5 pf sensitivity. For in-circuit testing, shunt resistance may be as low as 35 ohms for capacitors above 250 pf and 7 K ohm at 15 pf. The test frequency is approximately 19 mc and the voltage is very low.

For capacity measurement the scale is screened on a 4" diameter heavy-gauge lucite disc. The reading point is just above the center of the bar pattern, and operating frequency of the bridge is 60 cps.

The =10% accuracy is achieved by a sharp null indication (closed bars) when shunt resistance is balanced by the RC BALANCE control, and the .1-50 mfd CAPACITY dial is set at the correct capacitance value. The RC BALANCE control is calibrated in RC product requivalent 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 measu ement 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.

#### SPECIFICATIONS

NDICATOR Electron-ray tube EM84/6BG6 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 show connector coupling to unit. SHORT TEST: Out-of-circuit or in-circuit short check, with shunt resistance as tow as 1 ohm. Reliable up to 2000 uf. OPEN TEST: Out-of-circuit or in-circuit open test of capacitors as small as 15 pf with instrument adjusted normally. CAPACITY MEASUREMENT From 0.1 to 50  $\mu$  fusing Wien Bridge with unique shunt resist-ance balancing permitting 10° accuracy at any point on the capacity dial in out-of-circuit or in-circuit measurements. POWER REQUIREMENTS: 117 VAC, 60 cps. 8 watts. SIZE (FWD): 81 $\mu$ " x 51 $\mu$ " x 6". WEIGHT: 6 lb.

\* Export Model available

#### **EICO 1100 EIA RESISTANCE SUBSTITUTION**



Kit Wired

The EICO model 1100 EIA Resistance Substitution Box provides a means of rapidly substitu-ing a wide range of EIA resist-ance values in a circuit to determine the best resistance value for a desired result or the value of a badly charred or otherwise illegble resistor

#### SPECIFICATIONS

RESISTANCE RANGE 15 ohms to 10 megohms in decade multiples of 15 22 33 47 68 and 100 ohms RATED ACCURACY 10 at any setting RATED POWER DISSIPATION 1 watt at any setting CONTINUOUS DUTY VOLTAGE RATING 500 volts TERMI-NALS Five wight ack top binding posts SIZE (HWD) 3<sup>3</sup>4" x 6<sup>1</sup>2" x 3<sup>1</sup>2" WEIGHT 2 lbs Supplied less leads.



# Kit Wired

# EICO 950B R-C BRIDGE & R-C-L COMPARATOR

· Comparator range allows the use of complementary components as standards

· Continuously variable polarizing leakage test voltage from 0-500 VDC

Here's a professional instrument that should be standard equipment in every taboratory and service shop. With the extremely valuable Comparator range – exclusive with EICO at this outstanding low price - the 950B is one more "best buy" from the service-man minded electronics laboratories of FICO

Four separate capacity and an equal number of resistance ranges are featured in the 950B. The comparator range allows measurement of resistances, capacitances and inductances with a complementary component as a standard. You can depend upon the EICO 950B for rapidity and precision in the measurement of unknown resistors and condensers. Readings are taken directly from the calibrated front panel - without the need of complex and time consuming computations. Safe operation is assured by the transformer power supply.

#### SPECIFICATIONS

CAPACITY: 4 ranges, 10  $\mu\mu$ f to 5000  $\mu$ f. RESISTANCE: 4 ranges, 0.5 ohms to 500 megchms. COMPARATOR: 1 range, ratio from 05 to 20 (400 to 1) DC POLARIZING VOLTAGE 0 to 500 volts DC (continuously variable) ±10% TUBE COMPLEMENT: 1.162% I-SVER RE-QUIREMENTS 11° volts AC. 60 cps SIZE (HWD): 8" x 10" x 434". WEIGHT 8 lbs. Optional Test leads available. ★ Export Model available

#### EICO 1120 EIA CAPACITANCE SUBSTITUTION



Kit Wired

The EICO 1120 is an excellent and logical companion to the 1100 and t affords the same multiplicity of servicing, development and time-saving advantages for capacitors as the 1100 does for resistors. Here too, the price of the 1120 kit is less than the retail value of the c patitors alone:

#### SPECIFICATIONS

CAPACITORS (NED): .0001, .00022, CAPACITORS (MPD): 0001, 00022, 00047, 001,0015,0022,0033,0047, 0068,01,015,022,023,047,068, 1, 15,22,VOLTAGE RATINGS Ca-pactors.0001 mfd through 00047 mfd: 500 volts, capacitors 001 mfd through .1 mfd: 600 volts, capacitors off mid through 22 fd 400 volts TERMINALS Five-way, jacktop binding posts SIZE (HWD) what x 612" x 312" VEIGHT Ibs

Supplied less leads.



# **INSTRUMENTS AND SAVE**



# **EICO 147 DELUXE MULTI-SIGNAL TRACER**

• Employs both visual and aural signal monitors

· RF channel gain permits tracing up to receiver input

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 the serviceman'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 no se 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.

Two probes, shielded RF crystal demodulator and direct probe, are provided. Individual panel receptacles provided for easy change-over from RF to audio tracing or vice versa. An extremely valuable noise locator circuit ferrets out noisy controls, resistors, capacitors, coils, transformers and cold solder joints. Calibrated wattmeter affords a rapid preliminary check of power consumption in equipment under test, detects B+ shorts intermittent filament circuits, defective filters or bypass capacitors.

#### SPECIFICATIONS

TUBE & DIODE COMPLEMENT 1-12AX7 as dual voltage amplifier 1-6AQ5 as beam power amplifier, 1-1629 as electron-ray indicator. 1-6X4 as full-wave recti-fier, 1-1N48 (germanium diode) as wattmeter rectifier. POWER REQUIREMENTS 105-125 volts ac, 50/60 cycles. SIZE (HWD): 8" x 10" x 434". WEIGHT: 10 lbs. \* Export Model available Power consumption 40 watts.

### **EICO 1140 SERIES/PARALLEL R-C COMBINATION BOX**



U.S. Patent



The EICO model 1140 Series Parallel R-C Combination Box is an extrem ly valuable combination of the model 1100 Resistance Box ind the model 1120 Capacitance Box with additional switching facilities that permit selection of any resistance alone any capacitance alone, or any combination of resistance and capacitance in series or parallel (1350 combinations) Open and short circuit positions are provided.

#### SPECIFICATIONS

RESISTORS: See Model 1100, CAPAC-ITORS: See Model 1120, TERMINALS Five-way jack-top binding posts. SIZE (HWD): 634" x 534" x 234", WEIGHT 3

Supplied less leads







Kit Wired



Kit Wired



Kit Wired

#### EICO 1180 DECADE CONDENSER BOX

The EICO model 1180 Capacitance Decade Box consists of three decadecapacitor assemblies mounted in a metal cabinet which serves as a shield. Each decade has eleven positions, 0 to 10 inclusive so that the decades overlap. The added capacity per step is 0.01 mfd for the largest decade. .001 mfd for the next decade, and .0001 mfd (100 mmf) for the smallest decade. Each decade consists of a rotary switch and four capacitors whose values are 1 times, 2 times, and 4 times the added capacity per step for the particular decade.

Supplied less leads.

#### SPECIFICATIONS

VOLTAGE RATING: 500 volts DC continuous ACCURACY: ±1% SIZE (HWD): 9" x 312" x 312" WEIGHT. 3 lbs

#### **EICO 1171 DECADE RESISTANCE BOX**

The EICO model 1171 Resistance Decade Box is a rugged and simple to operate piece of test equipment. Design application permits this instrument to be used in the laboratories of both the radio serviceman and the engineer.

The 1171 decade box provides standard resistances within known accuracies, enabling the technician to make tests to readily pin-point troubles and design new devices

#### SPECIFICATIONS

RANGE 0-99.999 onms in 5 decades CUR-RENT RATINGS 350 ma (0-9 ohms) to 2.5 ma (10 Kg) to 100 Kg) CABINET Steel, baked enamel PANEL Aluminum deeply etched panel, SIZE (HWD) 312" x 12" x 3". WEIGHT 4 3 lbs Supplied less leads.

#### EICO 540 APPLIANCE/CAR TESTER

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 MULTI-RANGE AC/DC voltmeter, ammeter, chmmeter, wattmeter, leakage checker. Extremely versatile, dependable, low in cost.

Provides "GOOD-BAD" readings on 6 V and 12 V automobile storage batteries. and permits checking of individual cells.

#### SPECIFICATIONS

VOLTAGE RANGES: 0-7.5, 15, 150, 300 volts (AC/DC), CURRENT RANGE: 0-15 amps RE-SISTANCE RANGE: 0-1000 ohms (direct read-ing), LEAKAGE TEST: Neon lamp circuit, WEIGHT: 3 lbs, SIZE (HWD), 6%; x 33/e" x 31/2", Includes leads

#### **EICO 585 BATTERY TESTER**

Use the EICO Model 585 Battery Tester to check batteries rapidly while they operate under typical load conditions. Provision is made for the convenient testing of less-frequently used batteries. For this application, a maximum of two resistors for each battery to be tested. are connected to terminals on the front panel of the tester.

SPECIFICATIONS: TESTS POSITIONS (Volts): 1.5 (=6 cell), 1.5 (C, D cells) 1.5 (AA Cell), 4.5, 6, 9, 12, 22.5 45, 67.5, spare. MAX. BATTERY VOLTAGE AND CURRENT TO BE TESTED IN SPARE POSITION: 250 volts, 500 milliamperes. METER: 15 ma, 90, Bad-Weak-Good scale. SIZE (HWD): 6 '\mathcal{N}'' x 33/4" x 2" WEIGHT: 2 lbs. Test leads provided. 27

# SIMPLIFY SERVICING & TESTING



- · Regulated B+ continuously variable 0-400 VDC
- · Regulated bias supply continuously variable 0 to -150 VDC
- Ripple less than
- **3 millivolts RMS**
- Both 6.3 and 12.6 VAC filament supplies



#### EICO 1030 REGULATED POWER SUPPLY

Now, at last, a low-priced reliable and versatile double power supply that can simultaneously deliver any regulated B+ or regulated bias voltage required for circuit design, production testing, workbench or school experiments.

The EICO Model 1030 delivers exactly the voltage needed to test any circuit, while simultaneously monitoring both voltage and current used by the circuit being tested.

The Model 1030 also delivers 6.3 VAC at 3 amperes, 6.3 VAC at 3 amperes centertapped (both filament supplies are independent of each other), or 12.6 VAC at 3 amperes.

As an added feature, a front-panel switch is provided to turn off the high voltage to the circuit under test without shutting of the filament power to the test circuit or the power supply. This provides an "instant turn-on" action that eliminates wasted time in bench work.

The regulated B+ supply (0-400 VDC) consists of a high-current rectifier and a pair of parallel-connected, high-current, series-pass tubes, and a sensitive control tube, connected in an electronic filter arrangement. The screen grids of the series-pass tubes are supplied from a separate power supply contained within the Model 1030. Regulation of the B+ power supply is such that with loads of 100 MA applied, the output voltage will vary less than 0.3% or 3 volts, and, if the power line voltage varies as much as ±10 volts, the output voltage will change as little as 0.5 volts. All this with a ripple of less than 3 mv RMS

The independent bias supply (0 to -150 VDC) consists of a rectifier, a pi-type RC filter, and gas tube regulation. Like the B+ power supply, if the power line voltage varies as much as ±10 volts, the bias voltage output will change as little as 0.5 volts. Ripple is less than 3 mv RMS.

#### SPECIFICATIONS

REGULATED B+: 0-400 VDC continuously variable; 0-100 MA continuous from 0-200 VDC, 0-125 MA intermittent from 0-200 VDC, 0-150 MA continuous from 200-400 VDC. LOAD REGULATION: Varies less than  $1/_{3}$ % or 0.3V (whichever is greater) from 0-100 MA. LINE REGULATION: varies less than 0.4% or 0.5V (whichever is greater) for a ±10V line varia-tion. RIPPLE: Less than 3 mv RMS. OUTPUT IMPEDANCE: Less than 10 ohms from DC to 1MC. REGULATED BIAS SUPPLY: 0 to 150 VDC continuously variable. CURRENT RANGE: 1.2 MA. LINE REGULATION: Varies less than 0.4% or 0.5% (whichever is greater) for  $\pm 10^{\circ}$  line variation. RIPPLE: Less than 3 mv RMS. AC FILAMENT SUPPLIES: 6.3 VAC at 3 amperes, and 6.3 VAC at 3 amperes center tapped; 12.6 VAC at 3 amperes by series connection of the two 6.3 VAC windings; and 6.3 VAC at 6 amperes by parallel connection of the two 6.3 VAC windings. METERING: Double-jewelled D'Arsonval Meters: voltmeter with switched ranges of 0.400 VDC (regulated B+) and 0.200 VDC (regulated bias supply); milliameter with 0-200 MA scale for monitoring the regulated B+ supply. POWER REQUIRE-MENTS: 120 VAC, 50/60 cps, approximately 160 watts. SIZE (HWD): 81/2" x 121/2" x 9" WEIGHT: 21 Ibs. \* Export Model available



### **EICO 1060S BATTERY ELIMINATOR & CHARGER**

• Specially designed for servicing all types of transistor equipment

Kit Wired

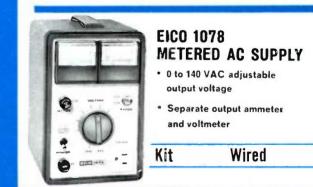
The EICO 1060 is a versatile battery eliminator incorporating an extra low-ripple filter circuit.

Important exclusive features include automatic switching of ammeter range as you select either of the two voltage ranges (0-8 and 0-16 volts), continuous voltage adjustment with a variac-type transformer, heavy-duty silicon rectifiers, a fused primary and a secondary and automatic re-set overload relay.

The 1060 is ideal for servicing and powering 6 or 12-volt mobile and marine equipment.

#### SPECIFICATIONS

DC OUTPUT VOLTAGE RANGES: 0-8 volts, 0-16 volts. AC RIPPLE: 12 V range-0.3% @ 2 amps, 1.5% @ 10 amps. 6 V range-1.5% @ 2 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 60 Hz, 150 watts. SIZE (HWD) 83/4" x 101/2" x 73/4". WEIGHT: 18 lbs.



Kit

### EICO 1032 REGULATED POWER SUPPLY





REGULATED AGAINST LINE AND LOAD VARIATIONS
 0-30 VOLTS CONTINUOUS OUTPUT WITH LOADS UP TO 500 MA.
 VOLTAGE AND CURRENT MONITORED BY METERS

The EICO Model 1032 regulated low ripple power supply provides the voltages and currents most commonly needed in the service shop as well as in the engineering laboratory. It may also be used in the laboratory as a fixed bias supply or for fulfilling any other regulates voltage requirement. The applications are unlimited

The adjustable 0-30 DC volts at the terminals of the instrument, is free of major variations with line Itage and load changes.

#### SPECIFICATIONS

Output voltage. 0 to 30 volts regulated. Gutput Current: 0 to 500 ma. Voltage regulation: 0.2 volts change from I to maximum load and 105-135 volt line. Rippler less than 2.5 mv peak-to-peak. Folarity: positive. DC Volt-neter: 0-10 volts. 0-50 volts. DC Milliameter: 0-500 ma. Power Requirements: 105-135 VAC, 50:00 Hz, 30 watte. SIZE (HWD): 3%" x 8" x 4%" WT: 5 Ibs

# WITH EICO POWER SUPPLIES



### EICO 1025 SOLID STATE POWER SUPPLY

- Variable output voltage
  Output voltage monitored
  und current measured by
  accurate milliameter
- by dual-range voltmeter

### Kit Wired

The model 1025 provides a stable, continuously variable output voltage from 0-30 V. Two D'Arsonval meters monitor the voltage (2 ranges) and current of this highly versatile, all transistor DC power and bias supply. Maximum continuous load current is 300 mA. Maximum ripple at full load is only 0.005%. Fused for protection against short circuits. Included among the numerous applications for the 1025 are servicing of transistor or vacuum tube devices, TV and radio alignment and adjustment, recharging of small batteries, and light electroplating.

#### SPECIFICATIONS

OUTPUT VOLTAGE RANGE: 0-30 VDC, continuously variable. MAX. OUTPUT CURRENT CAPACITY (CONTINUOUS): 300 mA. FUSE: ½ amp. METERS: Voltmeter-0.6 and 0-30; Milliammeter-0-500 mA. RIP-PLE: (120 Hz.): 0.005% at full load. POWER REQUIREMENTS: 117V, 60 Hz. SIZE (HWD): 334" x 8" x 434". WEIGHT: 5 lbs.

#### **★** Export Model available

The 1078 is a variable 0-140 AC power supply. The dual range ammeter and the voltmeter monitor the output. The supply is ideal for use in the laboratory, or on the production bench, in a quality control area and in the service shop. It is perfect for studying performance of equipment under varying load conditions as well as for exposing component failure by simulating high supply voltage conditions.

#### SPECIFICATIONS

FREQUENCY: 50/60 Hz. INPUT VOLTAGE: 120 AC OUTPUT VOLT-AGE: 0-140 VAC (30-140 VAC voltmeter). OUTPUT CURRENT: Two ranges 0-2.5, 0-7.5 amperes. METER ACCURACIES: ± 3% of full scale. POWER SWITCH: disconnects unit from both sides of line in off position. LINE CONNECTION: 3-wire cord and plug. LOAD CONNECTION: 3-wire outlet receptacle. SIZE (HWD): 81/2" x 53/4" x 7". WEIGHT: 16 lbs.



NEW IMPROVED DESIGN WITH RELIABLE SILICON RECTIFIERS

> Kit Wired

### EICO 1064S BATTERY ELIMINATOR & CHARGER

- · Automatic switching of ammeter range as voltage ranges are selected
- Two DC voltage ranges: 0-8 volts and 0-16 volts
- · Simultaneous monitoring of both voltage and current on both ranges

Of the EICO 1064 Battery Eliminator and Charger, ELECTRONICS ILLUSTRATED had this to say: "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."

This supply 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 rated intermittent current output of the instrument, without overloading or danger of burnout – on both current ranges – ensures that the applications.

Among the 1064's applications are 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 in vibrators, determining voltage operating range of oscillator circuits, running small electrical appliances (shavers, trains, etc.).

The 1064 also serves well for marine purposes, operating boat lights, radio-phone, amplifiers, transmitters, bilge pump and other electrical utility units while at dockside, eliminating the need for installing a costly secondary AC lighting system. A fused primary and a re-set overload relay on the secondary add to the durability and safety of the 1064.

#### 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 RE-QUIREMENTS: 117 volts AC, 60 cps; 150 watts. SIZE (HWD). 8½" x 5½" x 7½". WEIGHT: 16 fbs.

Kit



#### EICO 1020 POWER AND BIAS SUPPLY

Wired

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 veltmater (0-6, 0-30 VDC). It comprises a power transformer full-wave silicon rectifier circuit, electrolytic capacitor input filter followed by a silicon transistor circuit. The maximum permissible load current is 300 ma. The maximum ripple (120 ops) 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 servicing transistor devices, a variable bias supply to bias transistors or vacuum tubes, to offset AVC and AGC voltages in the alignment of TV and radio receivers or to cut off the color ourst amplifier in color TV adjustment; a dc filament supply or a filament bias source, to recharge small storage batteries, or to do light electroplating.

SPECIFICATIONS: OUTPUT VOLTAGE RANGE: 0-30 VDC, continuously variable. MAX. OUTPUT CURRENT, CAPACITY (CONTINUOUS) 300 ma. PUSE Volume, will blow in case of short circuit to protect unit. Pilot tamp will smain lit even when tuse is blown but voltmeter will read case. RIPPLE: (120 cps): 0.005% at full load. POWER REDUIREMENTS: 11TV, 80 cps. SIZE (HWO) 5" 4" x 515". WEIGHT: 5 lbs.

\* Export Model available

Provides household current anywhere. Converts 12 volt DC to 115 volt, 60 cycles AC.



EICO 1075 160 WATT INVERTER KIT WIRED

This model is identical to the Model 1070, but is capable of delivering 160 watts at 115 volts rms ac, to power appliances the smaller unit cannot handle. Leads from the two terminals on the front panel are to be connected directly to the storage battery. SIZE (HWD): 4" x 6" x 5%" WEIGHT: 6 lbs.



# EICO 1070 110 WATT INVERTER

**KIT** WIRED Change power delivered by the 12 volt dc storage battery on your car or boat into 115 volts rms ac. This lowest cost inverter will deliver 110 watts to power most small home appliances, electric shavers, etc. Plugs conveniently into a standard cigar lighter. Completely fused. SIZE (HWD) 4" x 6" x 534" WEIGHT 6 lbs.



# EICO 1080 220 WATT INVERTER/CHARGER

#### 55 KIT 70 WIRED

A solid 220 watts of power is available at 115 volts rms ac, when this unit is connected to the storage battery on your car, truck, boat, etc. With a "flip of the switch" the Model 1080 operates as a battery charger using the 117 volt ac supply available at home or boat dock. Install it permanently for use both as inverter and charger. Battery charger is rated 5 amps, automatically tapers current down to prevent overcharging.

SIZE (HWD): 4" x 6" x 5%" WEIGHT: 7 lbs.



# **EICO PCE-10 Photo-Electric Relay System**

Wired only. 35

- Solid state circuit
- · Variable sensitivity control
  - Effective range to 50 feet

Use the EICO PSD-10's invisible light beam as an intruder alarm, for counting people or objects, or as an announcing system. When beam is broken, the PCE-10 can sound a 110 VAC bell or buzzer, or provide a pulse to activate an electronic counter. Units can be separated by up to 50' in. darkened areas; up to 15' in brightly lit areas. Can be set for continuous duty (alarm remains on indefinitely when beam is broken) or intermittent duty (alarm resets automatically after circuit is tripped. 110 VAC, 60 Hz. Size (Each) HWD 31/2" x 4" x 3". 6 lbs.



Complete

with batteries

and test leads Taut band meter overload protected



Two complete test instruments in one cabinet. Combines an extremely sensitive 100,000  $\Omega/V$ VOM with an easy-to-operate direct reading tran-VOM with an easy-to-operate direct reading transistor tester (measures alpha, beta & leakage). Sensitive 7.5  $\mu$ A taut band meter movement protected by dual silicon diodes. VOM RANGES-DC MILLIVOLTS: 0-0.12, 0.6 V at 100,000 ohms per Volt. DC VOLTS: 0-3, 12, 30, 120, 600V at 100,000 ohms per Volt. AC VOLTS: 0-6, 30, 300, 600 V at 10,000 ohms per Volt. DC MILLIAMPERES: 0-12, 300 mA at 250 mV. DC MILLIAMPERES: 0-12, 300 mA at 250 mV. DC AMPERES: 0-12 A at 250 mV. DECIBELS: -20 to +58 dB. OHMS: Rx10, Rx1K, Rx0.1M. CAPACITANCE: 0-0.04, 0.2  $\mu$ f. Transistor Tester Functions (measured directly for most PNP and NPN transistors). Alpha: 0-0.9965. Beta: 0-285. and NPN transistors). Alpha: 0-0.9965. Beta: 0-285. ICO: (Collector-Base leakage Current) 0-12, 48  $_{\mu}$ A. SIZE: 678 "H x 5<sup>1</sup>% "W x 2½"D.

#### Meter overload protected MODEL 30A4



Laboratory precision and professional versatility. This laboratory-type, wide-range multimeter has a mirror-back scale,  $\pm 1\%$  temperature-stabilized resistors, and double-jewelled  $\pm 2\%$  D'Arsonval meter movement protected against accidental ovmeter movement protected against accidental ov-erload. For minimal circuit loading, has  $30,000\Omega/$  volt DC and  $10,000\Omega/$ volt AC characteristics. Sep-arate input for measuring AC voltages in presence of DC. DC VOLTAGE: 0.06, 3, 12, 60, 300, 600, 1200 volts. DC CUTAGE: 0-6, 30, 120, 600, 1200 volts. DC CURRENT: 0-30uA; 0-6, 60, 600 Mz. RESISTANCE: 0-10K, 1M, 10M, 100M. DECIBELS: -20 to +63 in 5 ranges. SENSITIVITY: 30,000 ohms/volt DC; 10,000 ohms/volt AC. SIZE: 576H v 3%W x 1%CD x 3%W x 1%D



 Designed and manufactured to EICO's stringent standards of engineering and production. Completely professional in quality, performance, appearance, and long-term reliability.

#### Meter overload protected **MODEL 100A4**

Complete with batteries and test leads Optional carrying

case SCL-1

Meter overload

MODEL 30A3

protected

Complete

with batteries

and test leads

Optional carrying

case SCL-2

**The best buy in a bench-size multimeter.** sensitivity of 100,000Ω/V & AC sensitivity of 12,500Ω/V, the 100A4 combines extremely mini-mal circuit loading with functional utility. Silicon diodes prevents accidental overload of meter movement. DC VOLTAGE: 0-500mV, 2.5, 10, 50, 250, 500 and 1000 volts. AC VOLTAGE: 0-2.5, 10, 50, 250 and 1000 volts. DC CURRENT: 0-10, 250uA; 2.5, 25, 250mA; 10 Amp. RESISTANCE: 0-20K; 200K; 2 meg; 20 meg. DECIBELS: -20 to +62 in 5 ranges. ACCURACY: 2% Meter movement. IN-PUT RESISTANCE: 100,000 ohms/volt DC; 12,500 ohms/volt AC. Size: 71<sup>2</sup>H x 51/4 W x 31/4 D.



# NEW! **MODEL 100C3**

Complete with batteries and test leads Taut band meter

overload protected



Laboratory type wide range instrument in a com-pact case. Features 100,000  $\Omega/V$  DC and 10,000  $\Omega/V$  AC sensitivity, 8.5  $\mu$ A taut band meter move-ment (overload protected) and a low 0.3 volt DC range for testing semiconductor circuits. Measure range for testing semiconductor circuits. Measure resistance to 200 megohms using built-in battery. DC VOLTAGE: 0-0.3, 1.2, 6, 30, 300 at 100K ohm/V; 0-600, 3000 at 20K ohm/V. AC VOLTAGES: 0-6, 30, 120, 300, 600 at 10,000 ohm/V. DC CURRENT: 0-12  $\mu$ A, 600 $\mu$ A, 12 ma, 300 ma. RESISTANCE: 0-2K, 20K, 200 Meg. CAPACITANCE: 0-0.01, 0.2  $\mu$ F. DECIBELS: -20 to +58 dB. SIZE 5¼"H x 3%"W x 1%"D.

# MODEL 20A4

Complete with batteries test leads



and carrying case Versatile instrument with lever type range selector switch. Read voltage, current and resistance ac-

switch. Read voltage, current and resistance ac-curately on each of the 18 precise ranges. Easy-to-read 3" meter. The  $20,000\Omega/volt$  dc meter and  $10,000\Omega/volt$  ac section can be used without dis-turbing most circuits. Read resistance accurately to 60 megohms. DC VOLTAGE: 0-5, 25, 100, 500, 1000 volts at  $20,000\Omega/volt$ . AC VOLTAGE: 0-5, 25, 100, 500, 1000 volts at  $10,000\Omega/volt$ . DC CUR-RENT: 0-50uA, 0-5, 50, 500 ma. RESISTANCE: 0-6 K $\Omega$ , 0-600 K $\Omega$ , 0-6 M $\Omega$ , 0-60 M $\Omega$ . DECIBEL: -20 to 4-64 db SIZE: 456H x 3W x 14/2D. -20 to +64 db. SIZE: 4% H x 3W x 11/4 D.



# **MODEL 20A3**

Complete with batteries and test leads Optional carrying ase SCL-2

Packs 16 ranges for measurements in custommolded high impact case. With 20,000.2/V DC & 10,00012/V AC characteristics, it's ideally practical for general and accurate service. Easy-totical for general and accurate service. Easy-to-read meter has a rugged double-jewelled D'Arson-val movement. DC VOLTAGE: 0-0.25, 2.5, 10, 50, 250 & 1000 volts. AC VOLTAGE: 0-10, 50, 500 and 1000 volts. DC CURRENT: 0-50uA; 25, 250mA. RESISTANCE: 0-7000 ohms, 700K $\Omega$ , & 7 megohms. DECIBELS: --10 to +-36 db. ACCURACY: DC  $\pm 3\%$ , AC  $\pm 4\%$  of full scale. SENSITIVITY: 20,000 $\Omega$ /V DC; 10,000 $\Omega$ /V AC. SIZE: 5% H x 3% W x 1% D. x 13 BD



# **MODEL 4A3**

Complete with batteries and test leads Optional carrying case SCL-2

This pocket portable is a versatile general utility instrument. Make readings easily on all 14 ranges Instrument, Make readings easily on all 14 ranges. Large meter face. High-impact plastic case. DC VOLTAGE: 0-10, 50, 250, 1000 volts. AC VOLT-AGE: 0-10, 50, 250, 500, 1009 volts. DC CURRENT: 0-250uA, 10mA, 250mA, RESISTANCE: 0-20K, 2Meg. DECIBELS: -20 to +52 db. ACCURACY: DC  $\pm 3\%$ , AC  $\pm 4\%$  of full scale. SENSITIVITY: 4000?/V DC; 2000?/V AC. SIZE: 434 H x 3%W x 1%D 1%D



# **MODEL 1A1**

Complete with batteries and test leads

# The go-everywhere shirt-pocket instrument for the busy technician/hobbyist.Rugged double-jewelled D'Arsonval meter & ±1% stabilized resistors are cushioned in high-impact plastic case. DC VOLT-AGE: 0-10, 50, 250, 1000 volts. AC VOLTAGE: 0-10, 50, 250, 1000 volts. DC CURRENT: 0-1, 100mA. RESISTANCE: 0-100,000 ohms. SENSI-TIVITY: 1,000Ω/V AC & DC. SIZE: 3½H x 2‰W x 11/8 D



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