





America's Most Popular **Tube Testers** 





High Performance **Broad Band Scopes** 



FM Multiplex Servicing Simplified



Industry Standard in Color TV Analyzers

Tops in TV-FM Field Strength Measurements

professional quality-that's the difference



# TUBE CHECKERS FROM SENCORE

Fill every need . . . house calls, bench service or customer self service!

When it comes to tube checking, professional servicemen rely on the famous Sencore "Mighty Mite," America's most popular tube tester. Tests more than 3000 tubes - including Nuvistors, Compactrons, 10-pins, Novars, Magnovals and all foreign tubes - with a big, easy-reading, burn-out and stick-proof meter. Easy to read, speedy set-up booklet makes every test fast and sure. Uses 100-megohm grid leakage sensitivity to find the "tricky" tubes other testers miss; tests for all inter-element shorts; makes cathode emission tests under full operating levels. Fast, accurate, thorough - that's the Mighty Mite; it will never let you down!



TC131

SEE YOUR SENCORE DISTRIBUTOR FOR \$30.00 TRADE-IN DEAL ON TC131.



TC136 Mighty Mite IV Tube Checker — The latest, most improved version of the famous Mighty Mite, the leader among tube checkers because it has the versatility and durability professional servicemen demand! Checks them all, including Compactrons, Novars, Nuvistors, Frame grid tubes, and now the latest 10 pin tubes by Amperex and Mullard such as the 6U9, 6Y9, 6W9, and others now being used in the newest color TV sets. Picks out the trouble makers other checkers miss. Tests Nuvistors and Frame grid tubes at lower potentials to prevent damage to the tube. Unique shorts test checks each and every element. Costly VTVM circuit and moving coil meter check for grid contamination and gas at sensitivities of over 100 megohms. New third hand set-up book holder cuts set-up time and speeds tube testing. All steel construction with new detachable hinged cover and taut band meter for extreme durability. The Mighty Mite is positively your "Best Buy" in tube checkers.

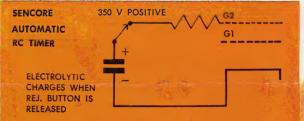
 $10'' \times 9'' \times 3\frac{1}{2}''$ , 9 lbs.

TC131 Semi-Automatic Tube Checker - The "Counter/Bench" version of the famous Mighty Mite Tester above, designed for two-way use - as a professional shop tester and customer self-service unit. Semi-automatic; simply turn function control to any test and watch lighted arrow on big, 6-inch meter stop on right scale — user can't go wrong, no neon lights or guesswork - everything is read on meter. Only 3 set-up controls. A money-making trafficbuilder. Fits standard 24-inch counter. 21"x22"x4½", 20 pounds

### **CRT CHECKERS & REJUVENATORS**



Test Any Color or B&W TV Picture Tube with a Sencore CRT Checker — Still the top income-producer for the serviceman. Sencore offers two models with all the latest features and sockets for fast, sure testing of conventional B & W, new low drive B & W, round Color and new rectangular Color tubes. Each Sencore instrument checks CRT emission, inter-element shorts, control grid cut-off capabilities, gas, and expected life.



Applies exclusive automatically controlled (ACR) voltage as required by individual tube condition (precisely timed to prevent over-rejuvenation or tube damage). This is most useful for color tube current equalization to insure proper tracking.

CR133 CRT Checker & Rejuvenator — The compact, lightweight CR133 checks all present picture tubes and is ready for future tubes, too! Has exclusive variable G2 Voltage from 25 to 325 Volts to protect against obsolescence. Two replaceable plug-in cables, one for Color and one for B & W, have all sockets required — no messy adaptors. AC Line Voltage Adjustment guarantees most accurate CRT tests possible; recommended for Color CRT checks. Color guns are individually tested as recommended by manufacturers. Uses well-filtered DC for all checks to avoid damage and reading errors. Hand-wired and steel-encased for protection of meter and panel in truck or shop. The advanced-design CR133 is only, 10"x9"x31/5", 10 pounds

CR128A CRT Checker & Rejuvenator — The new improved version of the famous CR128. Now has a variable G2 control of 25 to 325 VDC to insure more accurate checks on the latest picture tubes. Similar to CR133 except does not have line adjust or plug in cables. 10''x9''x3'/2'', 10 lbs.

39G14 Variable G2 conversion kit for CR125 and CR128 CRT checkers

RC121 Component Substitutor — Substitutes 81 individually isolated component values for test purposes. Substitution range: Carbon Resistors (12-1 watt 10 to 5600 ohms, 12-½ W 10 K to 5.6 megohms); Capacitors (10-600 volt 100 MMFD to .5 MFD); Electrolytics (10 dual 2 MFD to 250 MFD at 450 V DC, used singly or paralleled to form up to 25 separate values) with exclusive surge protector circuit to prevent arc, spark or healing of condenser in set; Power Resistors (20 wire wound, 20 watts from 2.5 to 15,000 ohms), and Rectifiers (Universal Selenium .5 amps, 800 PIV; Universal Silicon, .5 amps, 800 PIV). 6"x10"x3½", with 4 test leads, 5 pounds

H36 The "Handy 36" — Provides the 36 most often needed resistors and capacitors for experimenting, substituting and testing — 24 Resistors from 10 ohms to 5.6 megohms, 10 Capacitors from 100 MMFD to .5 MFD, 2 Electrolytics 10 MFD and 40 MFD at 450 Volts. 4"x5"x2", 2 lbs.

**ES132 Electrosub** — Substitutes electrolytics in a jiffy with full protection for you and the circuit. Provides 10 dual electrolytics from 2 MFD to 250 MFD at 450 VDC or up to 25 single values when paralleled. Surge protector prevents arcing, sparking or accidentally healing capacitors.  $3\frac{1}{2}$ "x5 $\frac{1}{2}$ "x3", 2 lbs.





ES132

# STANDARD RCA TYPE COLOR TV PATTERNS AT YOUR FINGERT

NEW All **Transistorized** 

HERE ARE THE PATTERNS PRODUCED BY THESE EASY TO USE GENERATORS.

14 thin horizontal lines for vertical dynamic convergence.
(Only 6 are generated on some generators).



Stabilized crosshatch pattern for simplifying convergence



CG126



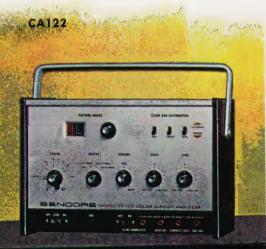
Stable white dots with exclusive dot size adjustment.

Here are three generators that will help you cash in on the booming color TV business. Sencore offers you a choice; a standard color generator, a deluxe solid state generator and analyzer or a complete TV analyzer for color or B&W. Choose now from one of these three industry leaders . . . they are recommended by every color TV manufacturer.\*



Ten standard keyed color bars (RCA type) as shown on all Color TV schematics.

10 thin white vertical lines for horizontal dynamic convergence adjustments.



CG126 Standard Color Generator — Produces all the patterns that you need for installing color TV, converging or trouble shooting. Merely connect to antenna terminals and tune receiver to channel 4. CG126 can be retuned to channel 3 or 5 if desired. Then, dial any of the patterns shown above and watch them pop on the screen. Reserve output of up to 200 percent of normal available on color output control to force signal through defective circuits. Adjustable dot size on rear panel and counting circuits that can be retimed right on the TV set are exclusive Sencore features. Wt. 10 lbs. Measures only 9"x11"x6".

All New! CG135 Deluxe Transistorized Color Generator and Analyzer - The ultimate in portability, stability and versatility. All solid state, insuring instant signals with no warm up time. Six jump out proof "Unijunction" counters guarantee solid patterns at all times . . . below zero and up to 140° F. Patterns and operation are same as CG126 (tube model). Unmodulated video (2 V PP plus or minus) for color circuit isolation and sync pulses (for the Zenith receivers) are a real analyzing plus. Quality mirror in removable cover for CRT Convergence. Color gun interruptors with switches on the front panel are guaranteed not to load the circuit. Uses 115 V AC — no messy batteries. 10"x9"x3½". Weighs 8 pounds.

CA122 Color Circuit Analyzer. For Color or B&W — Produces the patterns shown above plus shading bars for setting TV color temperature controls. Comprehensive analyzing features on the CA122 places it in a class by itself. Variable RF output ch 2-6, for greater flexibility, 20MC to 50MC variable IF output . . . for tuner substitution or injection directly into any IF stage, quickly locates IF stage with low gain. Unmodulated Video, Chroma, and horizontal and vertical sync pulses (all 30 V PP variable positive and negative) isolate trouble in color circuits, video amplifiers, sync circuits or in the color tube circuit in a jiffy. 4.5 mc crystal output insures accurate fine tuning and is used to trouble shoot Audio IF circuits . . . 900 cycle audio for injection at any stage up to the speaker. Color gun interruptors, with special adaptor for new 25" RCA and rectangular Motorola tubes is the greatest time saver of them all. 10"x14"x8", 15 lbs.

Adaptor for all rectangular color CRTs (part #39G12)

\*525 line system only

# HIGH SENSITIVITY - WIDE BAND OSCILLOSCOPES



Exclusive Direct Reading Peak-to-Peak Voltage Measurements . . . No Confusing Band Switching!



Choose from two Sencore professional Wide-Band Oscilloscopes. Exclusive direct reading peak-to-peak volts and high sensitivity on wide band, places these scopes in a class by themselves. Portable, smartly-styled oscilloscopes equip you for every servicing job, and are ideal for field engineering and production line testing. Compare to other scopes costing much more for comparable features and performance.





out interaction. Provides all recom-

mended TV alignment biases. Well

filtered; effectively pure DC with less than 1/10th of 1% ripple—calibra-

tion accuracy better than equivalent

battery tolerance.

4"x2"x2", 1 pound

PS127 Deluxe 5-Inch-Wide Band Oscilloscope - Tops in performance, operational simplicity and appearance. Vertical amplifier frequency response flat within 1 DB from 10 CPS to 4.5 MC and only 3 DB down at 6.2 MC insures true waveform reproduction. Vertical amplifier sensitivity of .017 volts RMS for one-inch deflection on wide band (without band switching). High input impedance of 2.7 megohms shunted by 99 MMFD (or 27 megohms with 9 MMFD with built-in low capacity probe) insures minimum circuit loading. Now for the first time, view waveforms in TV horizontal and vertical output circuits with built-in low capacity probe up to 5000 volts peak-to-peak. Vertical amplifier attenuator controls calibrated in peak-to-peak volts. Merely set waveform to one inch height and read directly. Horizontal amplifier sweep range from 5 to 500 KC in five overlapping steps and horizontal frequency response from 10 CPS to 1 MC within 3 DB guarantee linear sweep and positive sync. External inputs for horizontal sweep and sync on front panel. Provisions for intensity modulation, and direct connection to deflection plates on rear. 12"x 9" x 151/2", 25 pounds

PS120 Professional 3-Inch Wide-Band Oscilloscope — New, simplified design — as portable and easy to use as a voltmeter. Vertical amplifier frequency response from 20 cycles to 4 MC flat; only 3 DB down at 7.5 MC and usable to 12 MC. Vertical amplifier sensitivity of .035 volts RMS for one inch deflection saves band switching and guessing. Horizontal sweep frequency range of 15 cycles to 150 KC and sync range from 15 cycles to 8 MC (usable to 12 MC) positively "locks" on all signals. Dual controls simplify tuning. Compartment conceals leads, secondary controls and jacks. With low capacity probe — lowest priced broad-band scope at 9"x7"x11", 15 pounds

PS120K (Kit) without low capacity probe 39G2 LOW CAPACITY PROBE for PS120K



# FM STEREO SERVICE AND CIRCUIT ANALYZERS

Just like having your own FM Stereo Transmitter in your shop

MX 129 FM Stereo Multiplex Generator and Analyzer — A completely transistorized FM Stereo generator that provides all signals generated from the FM transmitter. Here is a lightweight portable unit for your shop or home service that stabilizes in less than a second and is all crystal controlled to maintain stability. It's an analyzer too; operating controls offer the user full control over the left and right signals, pilot signal and modulating signals. Stereo signals are formed from internal 1000 or 60 cycles or from external generator, mike or phono pickup. Exclusive built-in meter, calibrated in DB and PP volts, is used to balance the left and right signals to insure the utmost in signal balance; also used as an external meter to connect across the speakers for channel separation checks. Channel separation and adjustment (if necessary) can be made without pulling chassis by injecting FM signal at antenna terminals. RF is pre-set at 100 mc at factory but can be adjusted to any point on the FM band from front of unit. Unmodulated stereo available at composite output jack for injection at the stereo adaptor for trouble shooting or as a check on RF and IF alignment. 67 KC subscription signal provided on carrier or unmodulated for trap alignment. DB separation of left and right channels exceeds highest quality FM stereo receiver on the market. 10"x9"x31/2", 9 pounds





ssingle shooting in Color or B & W. Uses positive, tried and proven signal injection and component substitution to find the tough sweep circuit problems. All tests dynamic, in circuit, with the TV set on. Checks all sweep circuits: Horizontal oscillator, output, flyback, deflection yoke, 2nd anode and focus voltages and sync circuits; Vertical oscillator, output and deflection yoke. External checks: DC volts, AC volts peak to peak (eliminates using a VTVM at the same time), and 2nd anode voltages of 10 and 30 KV with special built-in probe. With mirror in detachable hinged cover in all steel case. 10"x9"x3\frac{1}{2}", 10 lbs.

SM112A New Improved Service Master-Before the SM112, you had to cope with using both a VTVM and a VOM. Now, in one instrument, you get a conventional VTVM operating from 115 volts AC for bench or lab work, then, flip the switch to VOM and two batteries power the unit as a 5,000 ohms per volt meter. Make voltage, resistance and current measurements anywhere, anytime. VTVM scales automatically indicated by lighted arrows. Technical data conveniently shown in cover. Single permanent probe for all tests VTVM or VOM. High voltage probe attaches for measuring up to 30,000 volts DC. Input impedance: 11 megohms VTVM • 6 AC and DC voltage ranges 0 to 1000 volts VTVM or VOM 6 resistance ranges 0 to 1000 megohms VTVM, 2 ranges VOM. 0-1000 MA on VOM. Two percent, six-inch meter covers all measurements. Zero center scale and peak to peak measurements 8"x8"x3½", 7 pounds High Voltage probe, HP118

#### TRANSISTOR TESTING DEVICES









TR115 Transistor-Diode Checker — Tests transistors for leakage, gain, opens and shorts — good, bad or directly in beta; checks diodes for forward to reverse ratio. Tests them all, smallest hearing aid transistors to auto radio power types. Lists Japanese equivalents. Simply operated, proven checker can be used with or without set-up chart for service, experiment or lab work. 5"x4\frac{1}{2}"x 2\frac{1}{2}", 2 lbs.

BE124 Battery Eliminator — Power supply replaces batteries during transistor radio repair. Tapped voltages at 1.5 volt DC intervals from 0 to 12 volts on front panel, connects simply for center tap and bias voltage as required. Function switch converts meter to trouble-shooting 0 to 50 Ma current reading device to monitor transistor radio current drain. Charges nickel-cadmium batteries. Guaranteed accurate.  $5''x4^{1}/2''x$   $2^{1}/2'', 3$  lbs.

HG104 Harmonic Generator — Finds defective transistor radio stage in seconds — just touch output leads to inputs and outputs of transistors from speaker to antenna and a clear 1000 cycle note from speaker indiciates if stage is good. Two leads and calibrated output (not found on pencils) provided to prevent RF spray on front-end checks. Complete with batteries. 3½"x4½"x2" 1 pound

TR110(A) — New Improved Transi-Master! An out-of-circuit transistor tester just like TR115, a harmonic generator like HG104, that switches into an audio generator, plus a power oscillator type in-circuit transistor checker. This is the famous TR110 transistor radio analyzer that is as effective for locating trouble in new all-transistorized TV sets. Meter also used for voltage and current checks with special leads to prevent breaking circuit.

9"x8"x2\(^1/4\)", 2 lbs.

#### THE SENCORE ACCESSORIES









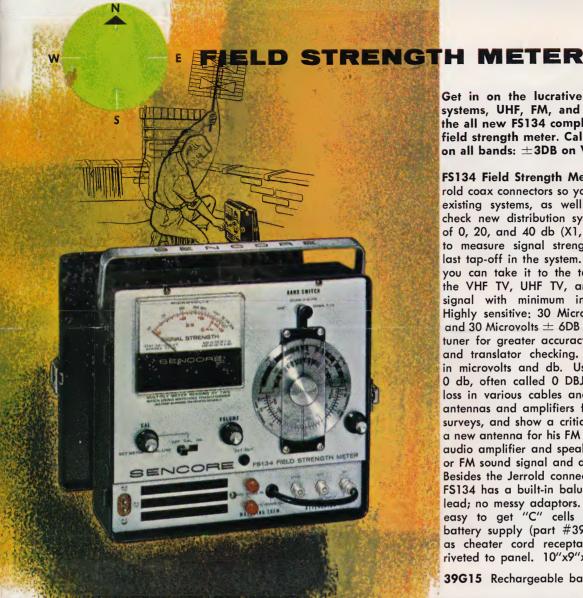
VB2 Vibra-dapter — Checks 3 and 4 prong Vibrators faster and easier. Plugs into any tube tester, like TC-130 or TC131 Mighty Mite Checkers. To check 6v vibrators set tube tester to test 6AX4 or 6SN7; for 12v vibrators set tester to 12AX4 or 12SN7. Two No. 51 lamps indicate need for vibrator replacement

TM116 Modernizing Tube Tester
Panel — Adapt your tube checker
to test the new tubes — Compactrons, Novars, Nuvistors, 10-pins
(except cardomatic types)—by pluging the TM116 into an octal socket
of your tester. Works on any tube
tester except card-o-matics. Tube setup chart included with
each modernizing
panel

FC123 Filament Checker — Check continuity of all tube filaments including the new Compactrons, Novars, 10-pins and Nuvistors. Test leads for CRT filament checking. Also, doubles as neon voltage indicator. TV cheater cord is used to power unit as a check on the cord to insure 115 volts AC on TV. 4"x3"x1".

HM119 "Handyman" — The "Handyman" is an all-in-one unit to save valuable service time — Cheater Cord with on-off switch, Dual Extension Cord, updated Filament Checker, Universal Fuse Checker, handy Trouble Light, Neon Voltage and Continuity Checker, Pin Straightener and Cord Wrapper — all in a single compact unit. Pays for itself in time saved on only a few service calls.

5"x3\(^2\)"x1", 1 pound

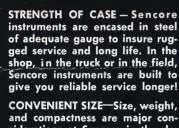


Get in on the lucrative business in distribution systems, UHF, FM, and VHF antenna jobs with the all new F\$134 completely solid state portable field strength meter. Calibrated in true microvolts on all bands:  $\pm$ 3DB on VHF-FM /  $\pm$ 6DB on UHF.

FS134 Field Strength Meter — The FS134 uses Jerrold coax connectors so you can correct problems on existing systems, as well as install, balance, and check new distribution systems. Built-in attenuators of 0, 20, and 40 db (X1, 10, and 100) enable you to measure signal strength from the amplifier to last tap-off in the system. The FS134 is portable so you can take it to the top of the tower to orient the VHF TV, UHF TV, and FM antennas for best signal with minimum interaction between them. Highly sensitive: 30 Microvolts ± 3DB on VHF-FM and 30 Microvolts ± 6DB UHF. Separate built-in UHF tuner for greater accuracy in critical antenna work and translator checking. 4" 2% meter calibrated in microvolts and db. Uses industrial standard for O db, often called O DBJ or DBM. Now check db loss in various cables and lines, compare different antennas and amplifiers for db gain, field intensity surveys, and show a critical customer why he needs a new antenna for his FM stereo or color TV set. The audio amplifier and speaker let you monitor the TV or FM sound signal and aid in tracking down noise. Besides the Jerrold connector for 75 ohm cable, the FS134 has a built-in balun to match 300 ohm twinlead; no messy adaptors. The FS134 is powered by easy to get "C" cells or optional rechargeable battery supply (part #39G15), installed in minutes as cheater cord receptacle is already riveted to panel. 10"x9"x5", 9 lbs.

**39G15** Rechargeable battery supply (less battery).

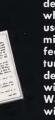
### QUALITY FEATURES OF YOUR SENCORE EQUIPMENT



and compactness are major considerations at Sencore in the design of every instrument. Along with famous Sencore quality, you are always assured of the maximum handling convenience attainable for each instrument by modern designing skill.

INSTRUCTION MANUALS—Clearly written, detailed operating instructions are included with every Sencore instrument, along with complete Circuit Schematics Trouble Shooting Charts and Parts List. Tube and transistor setup charts are automatically mailed to you from the factory by merely signing the warranty card.





QUALITY ASSURANCE — Assured Quality has made American-produced Sencore instruments the first choice of professional servicemen. At Sencore, every unit is twice inspected for overall quality, then subjected to an extreme, continuous 24-hour performance reliability test, followed by rigorous tests for stability and proper function in extremes of cold and heat.

GUARANTEE — Sencore products are guaranteed to be free from defects due to workmanship when purchased. Except for misuse, abuse, or damage through mishandling, any unit found defective within 90 days and returned to the factory service department will be repaired without charge, provided the Warranty Card has been returned within 10 days of purchase.

A modest service charge is made for parts and/or labor in all other cases.

Printed in U.S.A. Form No. 287



NO. 1 MANUFACTURER OF ELECTRONIC MAINTENANCE EQUIPMENT



# SENCORE

426 SOUTH WESTGATE DRIVE, ADDISON, ILLINOIS 60101

# Selling Cost of Sencore Units As Shown in Catalog #287

### Effective October 1, 1966

H36	Handy "36"	\$12.75
VB2	Vibradapter	2.75
HG 104	Harmonic Generator	9.95
TR 110A	Transimaster	59 <b>.</b> 50
SM112A	Servicemaster	79 <b>.</b> 95
BE 113	Dual Align-O-Pak	12 <b>.</b> 75
TR 115	Trans. Diode Chkr.	24.95
TR 115K	Trans . Diode Chkr . Kit	15.95
TM116	Modernizing Panel	24.95
HM119	Harmonic Generator	9.95
PS 120	3" Oscilloscope	124.50
PS 120K	3" Oscilloscope Kit	74 <b>.</b> 50
RC 12 1	Component Sub.	39.95
RC 12 1K	Component Sub. Kit	27 <b>.</b> 95
CA 122	Color Analyzer	187 <b>.</b> 50
FC 123	Filament Checker	3 <b>.</b> 95
BE 124	Battery Eliminator	24.95
CG 126	Color Bar Generator	`109 <b>.</b> 95
PS 127	5" Oscilloscope	199 <b>.</b> 50
CR 128A	Pic. Tube Tes. & Rej.	74.95
MX 129	FM Multiplex Gen. & Anal.	169.50
TC 131	Semi-Automatic Tube Chkr.	129.95
ES 132	Electro-Sub	15 <b>.</b> 95
CR 133	CRT Checker & Rejuvenator	89.95
FS 134	Solid State Field Strength Meter	199 .50
CG 135	Solid State Deluxe Color Gen.	149 <b>.</b> 50
TC 136	Mighty Mite IV	74 <b>.</b> 50
SS 137	Swp. Ckt. Analyzer	<i>7</i> 9 <b>.</b> 50
	Probes & Adaptors	

#### Probes & Adaptors

Lo capacity probe for PS 120	4.95
Demodulator probe for PS 120 & PS 127	5 <b>.</b> 75
Color Tube Adaptor for Rec. Tubes	4.95
Conversion kit for CR125 & CR128	9.95
FS 134 power supply	9.95
Hi voltage probe for SM112	7.95
	Demodulator probe for PS 120 & PS 127 Color Tube Adaptor for Rec. Tubes Conversion kit for CR 125 & CR 128 FS 134 power supply