

SENCORE

THE ALL AMERICAN LINE
OF HIGH PERFORMANCE
TEST EQUIPMENT

there's gold in those hills...
SENCORE with built-in quality



PRICE \$1.00

INSTRUMENT INDEX ON BACK COVER



YANKEE

KNOW

HOW

FEATURES



YANKEE KNOW-HOW TOUGHNESS

Rugged steel casing with aluminum paneling used throughout on all large testers.

Unbreakable acrylic cases used on small portable testers where weight could be a problem. You won't have to worry about a broken case ever on a Sencore tester.



YANKEE KNOW-HOW DESIGN

Sencore is all American. All design and manufacturing is done in one large modern factory in Sioux Falls, South Dakota. Constant communication with other American manufacturers, and importers as well, means that only Sencore sees all types of TV, radio sets, etc. that are serviced in this country. Importers do not see them all. These communications always result in a better designed product. As one customer recently put it, "You buy Sencore and you buy competition. They tell you they are the same but you get them home and you find that the Sencore tester has those extra features and uses that makes you wish all your testers were Sencore."



YANKEE KNOW-HOW PRICES

Dare compare and surprise yourself. The all American line is really no higher in price than foreign imports . . . sometimes less. You know that you can get a replacement part, a new instrument if necessary, charts, literature and even the Sencore News to tell you all about it. Why buy the unknown for the same money?



YANKEE KNOW-HOW RELIABILITY

Overdesign, 24 hour heat runs, 100 percent recheck and constant field checks provide you with the best in the West. Twenty-two years experience of making over a half million instruments is packaged with every product. Why settle for less?



YANKEE KNOW-HOW SIMPLICITY OF OPERATION

Every Sencore instrument is designed as though it were going into our own shop. Every American is aware of time. Time is money and lost time is lost money. Sencore pushes a button where others need a pencil and paper to calculate. Sencore instruments are built for technicians in a hurry and for engineers who aren't paid by the hour.

NOTE: All specification percentages shown in this Catalog are plus and minus unless otherwise stated.

here is your checklist of why our customers buy the Sencore
FE23 LITTLE HENRY FIELD EFFECT MULTIMETER



- ☑ It's the toughest little meter in the whole wide world; it'll go with you anywhere under all conditions . . . even in the dark with an illuminated meter.
- ☑ Easy to operate with push button ease. Even shuts itself off when lead compartment door is closed.
- ☑ No draggy leads or meters to break, as Little Henry jumps back into the tube caddy for his next ride. Everything is tucked away neatly and the whole meter is only the size of two 5U4 tubes.

*the toughest
 little
 meter in
 the whole
 wide
 world
 with 1.5%
 FET Accuracy*



\$85.00

DC Volts: 0-3, 30, 300, 1KV and 6KV full scale. Input resistance: 15 megohms shunted by 27 pf at jack. Accuracy: 1.5 percent. AC rejection: 30DB minimum.

AC Volts: 0-3, 30, 300 and 1KV full scale. Input resistance: 950K shunted by 27 pf at jack. Accuracy: 3 percent.

Ohmmeter: 0-1K, 100K, 10 Meg and 1000 Meg full scale, 10 ohms center scale. Accuracy: 2 degrees arc.

DC Current: 0 to 1 ampere full scale. Uses separate jack. Accuracy: 3 percent. Internal voltage drop: 300 millivolts.

Protection: to 500 times overload.

Meter: 3½ inch, 100 microamp, 2 percent, diode

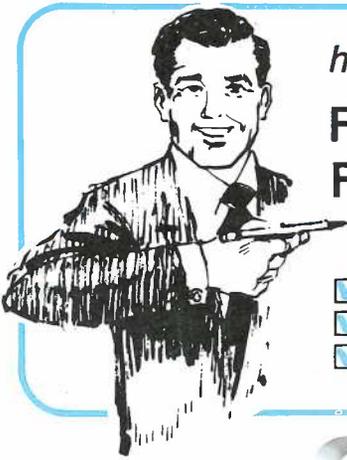
protected. Shockproof mounted with sliding door to protect face during transit or when not in use. Meter illuminates when turned on by switch in lead compartment.

Batteries: 9 volt Eveready #222 or equivalent (not supplied) for power supply. Three AA 1.5 volt batteries (not supplied) for ohms and meter light. Operate independently so ohmmeter will still function if scale illumination battery is run down. Unit automatically turns all batteries off when lead compartment is closed.

Mechanical Description: Unbreakable acrylic and vinyl-clad steel case with aluminum handle. 6½" x 4½" x 2¼", 2.5 pounds.

High Voltage Probe: 39A30, extends 300 volt range to 30 KV. (not supplied)**\$12.00**

SPECIFICATIONS



here is your checklist of why our customers buy the Sencore
**FE16 HIGH ACCURACY FIELD EFFECT METER AND
 FE21 FIELD EFFECT MULTIMETER**

- Obsoletes old fashioned, slow warm up VTVM's and high circuit loading VOM's.
- Instant 1.5 percent accuracy with no messy line cords.
- Protected to 1000 times overload. They're tough and they check current too.

*They're
standards
in
meters*



\$95

**FE16 HIGH
 ACCURACY
 FIELD EFFECT
 METER**

DC Volts: 0 to 1, 3, 10, 30, 100, 300, 1000 full scale. .5, 1.5, 5, 15, 50, 150 and 500 zero center scale. Input resistance: 15 megohms shunted by 14pf. Accuracy: 1.5 percent. AC rejection: 30db minimum.

AC Volts: RMS: 0 to 1, 3, 10, 30, 100, 300 and 1000 full scale. Peak to Peak: 0 to 2.8, 8.4, 28, 84, 280, 840 and 2800 full scale, frequency compensated. Input Impedance: 10 megohms shunted by 29pf. Frequency Response: 10Hz to 10MHz at 3DB points. Accuracy: 3 percent.

Ohms: 0 to 1000, 10K, 100K, 10 megohms and 1000 megohms full scale, 10 ohms center scale. Accuracy: 2 degrees arc.

DC Current: 0 to 100 microamps, 1 ma, 10 ma, 100 ma, 1 ampere. Accuracy: 3 percent.

Meter: 4 1/2", 100 microamp, D'Arsonval, 2 percent, diode protected and isolated from input.

Protection: 1000 times overload.

Shielding: Input leads shielded to prevent stray pickup.



\$115

Batteries: Eveready E222 or equivalent (not supplied) for meter amplifier. 1.5 volt "C" cell (not supplied) for ohms function.

Mechanical Description: Rugged, black vinyl-clad steel case with steel panel. 5" x 7 1/2" x 3 1/16", four pounds.

High Voltage Probe: 39A30, extends 300 volt range to 30 KV. (not supplied)\$12.00

FE21 FIELD EFFECT MULTIMETER

Same specifications as FE16 except for the following:

3000 volt jack added for use without high voltage probe.

Three high voltage ranges of 3KV, 10KV and 30KV. .1 volt full scale for transistor service. .08 volts Lo ohms feature for measuring resistors in circuit in solid state devices without "firing" transistor.

SPECIFICATIONS

here is your checklist of why our customers buy the Sencore

FE20 PORTABLE FIELD EFFECT MULTIMETER

- ✓ Everything that a serviceman wants in a multimeter in one protected portable unit.
- ✓ High voltage probe in the cover for quick checks of color TV picture tube voltage in home. Only the FE20 has it.
- ✓ Fully protected to 1000 times overload. Multiplier resistors further protected by fuse to save trip back to factory for repair when he forgets and measures voltage on ohms range.
- ✓ Low ohms range with only .08 volts to prevent transistor from conducting, allowing resistance measurements in circuit.
- ✓ .1 volt DC range for transistor voltage measurements.



*it's a
serviceman's
dream*

\$150



DC Volts: Full Scale: 0 to .1, .3, 1, 3, 10, 30, 100, 300, 1000, 3,000, 10,000 and 30,000. Zero Center: .05, .15, .5, 1.5, 5, 15, 50, 150, 500, 1500, 5,000 and 15,000. Input resistance: 15 megohms with 120K switchable isolation resistor in series with 90 pf. Accuracy: 1.5 percent. AC Rejection: 30 db minimum.

AC Volts: RMS: 0 to .1, .3, 1, 3, 10, 30, 100, 300, 1000. Peak to Peak: 0 to .28, .84, 2.8, 8.4, 28, 84, 280, 840, 2800. Input Impedance: 12 megohms shunted by 90 pf. Frequency Response: 10 Hz to 150KHz, within 1 db. 5 Hz to 500 KHz within 3 db. Accuracy: 3 percent.

Resistance: Ranges (both Hi and Lo Ohms): 1K, 10K, 100K, 1 Megohm, 10 Meg, 100 Meg and 1000 Megohms full scale. Center Scale: 12 Ohms. Accuracy: 2 degrees of arc.

DC Current: Full Scale: 0 to 100 microamps, 300 microamps, 1ma, 3ma, 10ma, 30ma, 100ma, 300ma and 1 amp. Accuracy: 3 percent full scale. Internal voltage drop: 80mv on 100 microamp to 850mv on 1 amp range.

Meter: 6 inch, 200 microamp, D'Arsonval, 2 percent diode protected and isolated from input.

Batteries: Seven 1.5 volt "C" cells.

Mechanical Description: Rugged black vinyl-clad steel case with aluminum panel. 9½" x 7¾" x 3¾", 8 pounds without batteries.

Fuse: 3AG, .6 amp to protect multiplier resistors from accidentally burning out.

High voltage probe: included in cover and in price.

SPECIFICATIONS



here is your checklist of why our customers buy the Sencore
FE160 SENIOR FIELD EFFECT METER

- ☑ 112 Ranges; more ranges for more work than any other multimeter on the market.
- ☑ Simplified push button ease of operation.
- ☑ Lo Ohms scale to check resistance in circuit without firing transistors.
- ☑ .1 volt full scale for solid state work.

it's the market's most complete multimeter - 112 ranges in all



\$195

DC Volts: 10 Positive and 10 Negative Ranges: 0-0.1, 0.3, 1, 3, 10, 30, 100, 300, 1000 and 3000. 10 Zero Center Ranges: -0.05 to 0.05, -0.15 to 0.15, -0.5 to 0.5, -1.5 to 1.5, -5 to 5, -15 to 15, -50 to 50, -150 to 150, -500 to 500, and -1500 to 1500. Input resistance: 15 megohm, shunted by 90pf in probe (NORM,) 10 pf in 100K (ISOLATION.) Accuracy: 1.5 percent. AC rejection: 30 db minimum.

AC Volts: 9 RMS ranges: 0 - 0.1, 0.3, 1, 3, 10, 30, 100, 300 and 1000. 9 PP ranges: 0 - 0.28, 0.84, 2.8, 8.4, 28, 84, 280, 840 and 2800, frequency compensated. Input resistance: 12 megohm shunted by 90pf. Frequency response: 1 db 10Hz - 150KHz, 3 db 5Hz - 500 KHz. Accuracy: 2.5%.

DC Current: 10 positive and 10 negative ranges: 0 - 30uA, 100, 300, 1mA, 3, 10, 30, 100, 300 and 3A. 10 zero center ranges: -15 to 15uA, -50 to 50uA, -150 to 150uA, -500 to 500uA, -1.5 to 1.5mA, -5 to 5mA, -15 to 15mA, -50 to 50mA, -150 to 150mA and -1.5 to 1.5A. Internal voltage drop: 0.1V. Accuracy: 2 percent.

AC Current: 10 RMS ranges 0 - 30, 100, 300uA, 1, 3, 10, 30, 100, 300mA and 3A. Internal voltage drop: 0.1V RMS. Accuracy: 3 percent.

Protection: 1,000 times overload on volts. Fuse and diode protected on ohms.

Ohmmeter: 8 high power ranges (1.5V) 0 - 600 ohms, 6K, 60K, 600K, 6M, 60M, 600M and 6000M. 7 low power ranges (0.08V) 0 - 600 ohms, 6K, 60K, 600K, 6M, 60M and 600M. Accuracy: 2 degrees arc.

Decibel (db): 9 ranges -20, -10, 0, 10, 20, 30, 40, 50, 60db. Reference: 1mV into 600 ohm.

Meter: 7", 500 microamp, D'Arsonal, diode protected.

Ohms Supply: Fully electronic with no battery requirement.

Mechanical Description: Rugged black vinyl clad steel with aluminum panel 9" x 7 1/2" x 6", 6 pounds.

Power: 105 - 130 volts, 50-60Hz AC, convertible to 220VAC.

High Voltage Probe: 39A 30, extends 300 volt range to 30 KV. (not supplied)\$12.00

SPECIFICATIONS



SS137 SWEEP CIRCUIT ANALYZER FS134 FIELD STRENGTH METER

Special testers

\$99.50

\$250



SS137 SWEEP CIRCUIT ANALYZER

Here is a special tester that will pay for itself many times over. Every time that you run into a tough dog TV receiver, you suspicion sweep troubles. The SS137 will isolate your trouble in a hurry. Here is what it does.

Horizontal Oscillator: Substitutes directly for any TV horizontal oscillator right up to the control grid of the output tube.

Vertical Oscillator: Direct substitute for any vertical oscillator.

Horizontal Yoke: Substitutes directly for any black and white or color receiver horizontal deflection yoke. Takes the mystery out of this component. Restoration of high voltage means the yoke was faulty.

Flyback dynamic test: Checks the power transfer of the output tube to the good yoke substituted to determine capability of horizontal output transformer. Calibrated in degrees of deflection of CRT.

Vertical output signal: Direct substitute.

High voltage and current tests: To determine capability of output tube and return of high voltage with normal load of CRT.

FS134 FIELD STRENGTH METER

Equip yourself for CATV, MATV and additional Antenna Work.

Covers all TV and FM: Covers all VHF, UHF channels and the FM band.

Calibrated accurately in microvolts: You can believe what you read as signal strength is calibrated

in actual microvolts. The FS134 is calibrated within 3 DB on VHF channels and within 6 DB on UHF channels.

Highly sensitive: The FS134 goes all the way down to 30 microvolt sensitivity on both VHF and UHF. Built-in attenuators of 0, 20 and 40 DB (X1, X10 and X100) enable you to measure signal strength from the amplifier to the last tap-off in the distribution system. Also helps you find line loss in a hurry.

Uses Jerrold zero DBJ as reference: The FS134 fits right into any job that you are doing, as it uses the same reference level as the manufacturers of distribution systems . . . even uses standard Jerrold coax connectors so that you can work right into existing systems.

Completely portable with three-way power: The FS134 uses long life "C" cells, but can be equipped with rechargeable batteries, or simply a power supply and battery charger combination at only \$9.95. It can be installed with only four connections as the "cheater cord" receptacle is already installed in your meter. Simply order from the factory service department.

Uses speaker to free your hands: You can be sure that you have tuned in the correct station when you listen to it . . . but headphones get in the way. The FS134 uses a self-contained sound system and speaker to "free you up."

Both 75 and 300 ohm match: Coaxial cable provides a 75 ohm match; built-in balun matches to 300 ohm line.
10" x 9" x 5" 9 lbs.

SPECIFICATIONS

here is your checklist of why our customers buy the Sencore

TC162 MIGHTY MITE TUBE TESTER

- Over 70,000 sold
- It checks them all large and small, domestic or foreign; over 3,000 tubes total.
- Finds tough dogs that others miss because of the 100 megohm grid leakage sensitivity.
- Stethoscopic shorts test that tests each element individually against the others.



*top money-maker
in the
service business*

\$115



Cathode emission: Tested at full rated cathode current of the tube under test.

Grid Leakage Sensitivity: 100 megohms or a half microamp.

Shorts Test: Individually made, one element against all other tube elements in the tube.

Tubes tested: Over 3000 in all.

Circuitry: All Solid State.

Pin Eliminator Switches: Added as extra test to eliminate tied-in connections in tubes so the tube can be tested. All returned to original position by one return switch.

Mechanical Description: Black vinyl-clad steel case with aluminum panel and trim. 10" x 9" x 4", 9 pounds.

Power: 105-130 volts, 50-60Hz AC, 32 watts.

SPECIFICATIONS

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MU150 MUTUAL CONDUCTANCE TUBE TESTER

- It checks all tubes, foreign and domestic, for true mutual conductance with an exclusive 5,000 hertz square wave test.
- Fast, too, as it becomes a rapid Mighty Mite tester if you use the first three switches only.
- The only complete mutual conductance tester on the market. There aren't any others. The MU150 has outlasted them all.



it's a complete tube analyzer

\$270



Mutual conductance test: 5,000 hertz square wave under actual amplifying conditions. The tube is harnessed up in the circuit, unlike other testers that are vanishing from the market that use the tube to do its own rectification.

Cathode emission check: Checks tubes under full rated current as indicated in tube manuals. A must for power tubes where emission is more important than amplification.

Leakage Sensitivity: 100 megohms or .5 micro-amp.

Shorts Test: Stethoscopic test. Each element is checked against every other element.

Life Test: Interrupted filament to determine intermittents and temperature sensitive failures.

Mechanical Description: Handsome vinyl-clad steel case with chrome panel and trim. 18" x 14" x 5", 18 pounds.

Power: 105-125 volts, 50-60Hz AC.

SPECIFICATIONS

here is your checklist of why our customers buy the Sencore

CR161 CATHODE RAY TUBE TESTER: THE AUTO TRACKER

CR 161

- ✓ Patented automatic tracking test for color CRT's; simply push the button and the computer memory circuit will do the rest.
- ✓ Plug-in adapters mean easier operation and replacement if they should become worn or lost. Also prevents obsolescence.
- ✓ Only CRT tester that tests Black and White, Tri-Color CRTs and the Japanese single gun Trinitron with the same simplified test. This is the patented feature.



*tests all CRTs
with one simple
automatic
patented readout*

\$150



Operation: Simplified by listing all tests in sequence around the function listing switch. Instructions are included but not really needed.

Filament Set: New feature enables the most accurate test, as low or high line voltage can give erroneous readings and cause you to reject a good CRT. Filament set controls mean that you are lab accurate.

Gun Balance: The guns are balanced according to industry standards, just like the G2 controls are set in the TV receiver. A must for proper tracking test.

Automatic Tracking: A patented feature that provides for charging up a memory bank during the emission test and comparing the charges to each other on an industry-accepted 1.5 to 1 ratio. If

there is more than 1.5 to 1 difference, the meter will read "bad tracking." No time-consuming logging of figures and making engineering comparisons.

Sockets: All plug-in and replaceable. New RCA 110 degree CRT socket (part #39A65) available from Sencore service departments for \$10.00. Trinitron 17" single gun socket (part #39A66) available for \$5.00. Package will include the new set-up book.

Mechanical Description: Rugged Black vinyl-clad steel case with aluminum divider and panel. 10" x 9" x 4", 11 pounds.

Meter: 3½ inch, 500 microamp, D'Arsonval.

Power: 105-130 volts, 50-60Hz AC.

SPECIFICATIONS



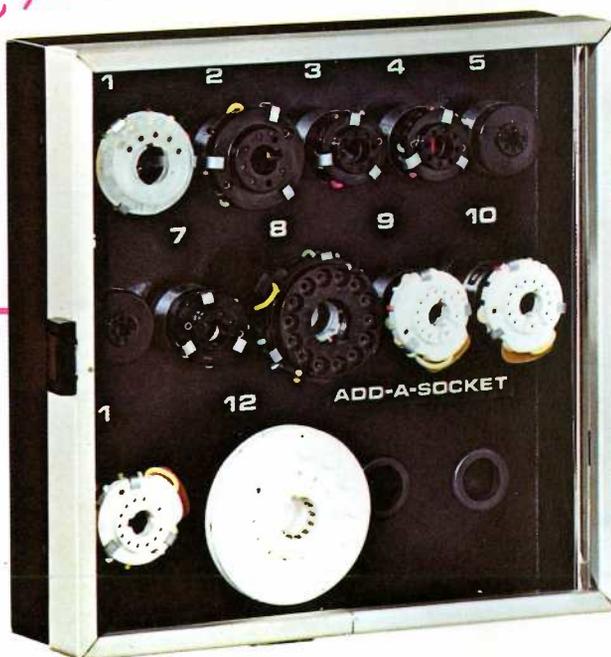
here is your checklist of why our customers buy the Sencore

CR168 BIG MACK AUTOMATIC CRT TESTER

- ✓ Now the only tester that tests them all including the newest RCA 110 Degree Color tube and 17" Japanese Trinitron.
- ✓ It's Automatic Tracking: You can't make a mistake in calculations and replace a good expensive color CRT.
- ✓ You can show your customer exactly what is wrong with the color CRT step by step with the function control. Every reading is on the large 7-inch meter. No more hard-to-read lights to confuse your customer. It's a tube salesman.

it's an automatic color TV picture tube salesman, too

\$195



Operation: Simplified. You don't even need an instruction book, just follow the function control. Big Mack will convince your customer that "she" needs a new color tube.

Filament Set: Insures against high or low line voltage giving false readings. Set on meter for greatest accuracy.

Shorts Test: Read on meter for the first time. You can show your customers heater to cathode or cathode to control grid shorts so they know the difference when an isolation transformer won't fix the trouble.

Gun Balance: TV set is simulated for most accurate test. G2 controls are set before any tests are made.

Automatic Tracking: You don't even have to push the button on Big Mack. Simply read tracking on the big meter after making emission tests. Only Sencore has this feature because it is patented.

The Big Mack even goes a step further; you don't have to go back and charge the memory bank on emission if you should get a phone call in the middle of the check, just push the button and the memory will recharge.

Sockets: All smaller, neater plug-ins that fit right in a special compartment in the cover. Really neat, and less costly for replacement as they cover only one CRT category on the Big Mack. Includes new RCA 110° socket, 17" Trinitron socket and two coupons for next two sockets free (if and when they are announced).

Meter: Large 7-inch, D'Arsonval meter that you or your customer can read at a distance.

Mechanical Description: Black vinyl on steel with aluminum panel and divider. Removable cover for ease of testing. Large storage compartment for those extras. 10" x 9" x 5", 12 pounds.

Power: 105-130 volts, 50-60Hz AC.

SPECIFICATIONS



here is your checklist of why our customers buy the Sencore
TF166 AUTOMATIC TRANSISTOR ANALYZER

- Automatic push-button operation. All you do is select the button and push it.
- Automatically reads good or bad, as well as beta gain.
- Now, checks over 20,000 transistors and FET's in circuit or out of circuit.
- No setup book required but included for reference if desired.

it's a solid state simplifier

\$190



Transistor tests: In or out of circuit for gain. Out of circuit for leakage tests only. Gain measured as good or bad or in Beta. Leakage (I_{cbo}) measured in microamps.

Field Effect Transistor Tests: In or out of circuit for gain. Out of circuit for leakage tests only. Gain measured as good or bad or in Gm (transconductance). Leakage (I_{gss}) measured in microamps.

Idss Zero Bias test: Measured in milliamps for industrial culling and power amplifier matching.

Damage proof: Guaranteed not to damage transistor, circuit, or tester at any time when used in

circuit on AC.

DC out of circuit test: Erratic tests, or transistors that have a built-in diode in them, should be checked out of circuit on DC only for greatest reliability. Simply double check a transistor before you replace it on DC out circuit and these will all be caught. These are only a few out of 20,000 and are generally in the RF circuits.

Meter: Large 7", 100 microamp, D'Arsonval.

Mechanical Description: Rugged black vinyl case with aluminum panel. 9 1/2" x 7 1/2" x 6". 8 1/2 pounds.

Power: 105-130 volts, 50-60Hz AC, 15 watts.

SPECIFICATIONS



here is your checklist of why our customers buy the Sencore

UPS164 UNIVERSAL POWER SUPPLY

- Provides all voltages needed to service every TV module and keep the repair business with the independent. A must for the future.
- One high quality, regulated, low ripple supply for every servicing need.
- Monitors voltage and current at all times to speed service or design.

*it's a
serviceman's
business
saver*

\$240



Voltage: 6 Volts to 20 amperes fixed. 12 Volts to 10 amperes fixed. 0 to 35 volts variable to 2 amperes.

Current Adjust: 0 to 2 amps adjustable to any in-between level by Maximum Current Set control. Protects supply and circuit under test.

Ripple: Less than .018 percent on 0 to 35 volt range. .2 volts peak to peak, no load, on high current ranges.

Degree of regulation: .15 volt per amp change.

Battery charger: Taper charger. Fully charged battery: 7.5 volts output on 6-volt battery; 15 volts output on 12-volt battery. Maximum charge cur-

rent: 20 amps on 6-volt position; 10 amps on 12-volt position.

Meters: Voltage: switched for either supply at 3 percent accuracy. Current: switched for either supply at 3 percent accuracy. Type: 3½" moving coil, D'Arsonval.

Protection: 100 percent current protected. A short can be placed on output terminals for an extended period of time at any setting and no harm can be done.

Mechanical Description: Rugged black vinyl-clad steel case with aluminum panel, 10"x 13½"x 9½", 23 pounds.

SPECIFICATIONS

here is your checklist of why our customers buy the Sencore
PS148 DUAL PURPOSE OSCILLOSCOPE/VECTORSCOPE

- ☑ Lowest priced broad band, general purpose color scope on the market today. Wide band but high sensitivity. You can see the output of a TV tuner directly.
- ☑ 7,000 volt input protection. Other scopes on the market have only 600 volts.
- ☑ It's a vectorscope, too, at no extra cost.



it's a workhorse

\$275



Vertical Input Sensitivity: 17 millivolts per inch deflection.

Vertical Amplifier Response: 10 Hertz to 5.2 Megahertz within 3 db.

Vertical Input breakdown: 7,000 volts with low cap probe. 600 volts without probe.

Horizontal Sweep Frequencies: 5 Hertz to 500 Kilohertz in five overlapping ranges.

Synchronization: Positive, semi-triggered.

Vectorscope: Converts to vectorscope with switch

and input connections in rear.

External Inputs: Sync, sweep, Z axis and direct connections to deflection plates.

Power: 105-125 volts, 50-60Hz AC, 47 watts.

Mechanical Description: Five-inch reserve brightness, sharp focus tube, completely shielded. Black vinyl-clad steel case with brushed steel panel. 11" x 9" x 15½", 22 pounds.

Demodulator Probe: 39G3 ordered from factory service departments. (not supplied)\$5.75

SPECIFICATIONS

here is your checklist of why our customers buy the Sencore
**PS163 DUAL TRACE TRIGGERED ALL SOLID STATE
 OSCILLOSCOPE**

- ✓ Makes you the envy of your technical friends when they know you are equipped for every job with the best.
- ✓ It's a triggered scope with absolute positive sync.
- ✓ It's wide band with high sensitivity on both channels with 5,000 volt input protection.
- ✓ It's AC or DC coupled, depending on the job.



*it's a
 prestige
 builder*

\$650
 (INCLUDES
 BOTH LO-CAP
 PROBES)



Vertical Input (both amplifiers): sensitivity: .005 volt per centimeter of deflection. Accuracy: 2 percent.

Vertical amplifier frequency response (both amplifiers): DC to 8 Megahertz within 3 DB

Vertical amplifier breakdown voltage (both channels): 5,000 volts AC, 1000 volts DC with low cap probe.

Horizontal Sweep Speed: Triggered: .1 microsecond per cm to .1 second per cm in 19 overlapping ranges. Free Running: 1 Hertz to 1 Megahertz, overlapping. Accuracy: 2 percent.

Synchronization: Free Running, manual or automatic triggered. Synchronized to either input, line

or external.

Vertical input calibrator: Built in for both channels.

Display capability: Either channel, alternating between channels or chopped mode of switching between channels.

Vectorscope: High sensitivity, direct from front of scope.

Power: 105-130 volt, 50-60Hz AC, 60 watts. Solid State, regulated, instant-on.

Mechanical Description: Black vinyl case with aluminum panel and trim. Special molded probes with 5KV rating. 12" x 10" x 15", 30 pounds.

SPECIFICATIONS

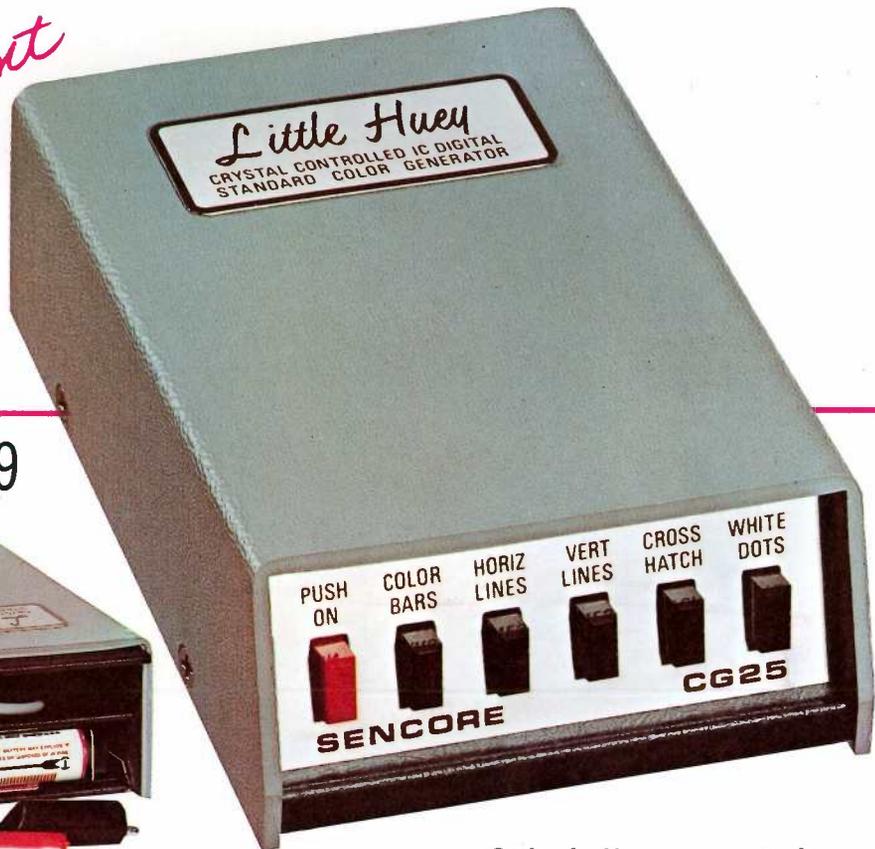


here is your checklist of why our customers buy the Sencore

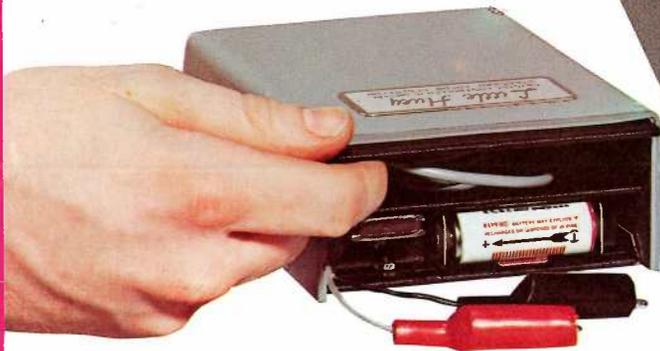
CG25 "LITTLE HUEY" DIGITAL COLOR BAR GENERATOR

- Positive digital locking insures stable patterns on every set.
- You can show your customer rock solid patterns, proper convergence and correct colors.
- Most complete small color bar generator on the market with channel tuning and color adjust level; just like the high priced spread.
- All digital IC chips means no timers and never any downtime. It's the latest thing going. Turns itself off with automatic timing if you should forget.

it's the world's smallest but performs like a giant



\$99



Space saving integrated circuits allow additional room for output cable and batteries in rear. Prevents that tangled mess in your tube caddy.

Only battery operated digital color generator on the market and with all big color generator controls.

Color Bars: RCA licensed 10 bars across entire color spectrum.

Horizontal bars: 14 bars, digital controlled.

Vertical bars: 10 vertical bars, digital controlled.

Crosshatch: 10 vertical and 14 horizontal, digital controlled.

Extremely low drain: Only generator using new CMOS IC's means shelf life for batteries.

Dots: 140 small adjustable dots. Also digital controlled.

RF Output: Adjustable, covers low VHF channels 2-6.

Mechanical Description: Grey acrylic unbreakable carrying case. 6" x 4 1/4" x 2 1/2", 2 pounds.

Battery: Eveready E164 mercury or equivalent.

SPECIFICATIONS

here is your checklist of why our customers buy the Sencore
CG169 DELUXE COLOR KING COLOR BAR GENERATOR

- ☑ If you want the best, you'll want the 100 percent digital timed color king.
- ☑ It just can't bounce . . . no way . . . or your money quickly refunded.
- ☑ Perma-lock circuit produces solid patterns, dots and color bars.
- ☑ Only generator with temperature control and digital circuits. Prevents humidity build-up while in the trunk in Florida and RF drift or electrolytic freeze-up in the Klondike.
- ☑ Special convergence patterns: movable single dot and single cross makes convergence and centering a snap.



it's the industry's only all-channel all-weather color generator



\$180

Color Bars: RCA licensed 10 color bars across entire color spectrum.

Horizontal Bars: 14 horizontal bars, digital controlled.

Vertical Bars: 10 vertical bars, digital controlled.

Crosshatch: 10 vertical and 14 horizontal bars all digital controlled.

Dots: 140 small adjustable dots, digital controlled.

Single fixed dot: For centering and static convergence.

Single fixed cross: For centering and static convergence.

Movable dot: For dynamic convergence.

Movable Cross: For dynamic convergence.

Both UHF and VHF channels: Produces TV VHF and UHF channels for complete tuner testing.

Only color generator that covers them all. You won't send back a set that won't work on a channel that you haven't checked it on.

RF Attenuation: Simulates fringe conditions and checks color assurance in the shop for these areas. Especially checks color killer action for fringe reception. Only the Color King has it.

Power: 105-130 volts AC, 50 watts.

Mechanical Description: Black vinyl covered steel case with rich aluminum paneling. 10" x 9" x 4", 10 pounds.

SPECIFICATIONS

here is your checklist of why our customers buy the Sencore

SM158 SPEED ALIGNER SWEEP AND MARKER GENERATOR

- ✓ Fast hookup to prevent error; just two cables in and out.
- ✓ All crystal controlled markers. You just push the button. You can't make a mistake..
- ✓ 4 RF channels. Competition has only 2. You don't want to make a mistake if the incoming channel is overriding. You'll want a spare, both high and low channels.
- ✓ Lowest priced Sweep and Marker that you can buy through a distributor.

*the industry's
easiest-to-use
sweep and marker*

\$275



Sweep output: Chroma, IF or RF, with front panel fine tuning.

Sweep width: 15 Megahertz with base line.

Marker Amplitude: Unlimited. You can boost the markers right off the screen with no circuit upset. They are tiltable, too, if you are in a trap and wish to see them better.

Marker Frequencies: 39.75, 41.25, 41.67, 42.17, 42.67, 44.25, 45.75, 47.25 for IF alignment. 3.08, 3.58, 4.08 and 4.5MHz for chroma. Just push the button.

RF Channels: 3, 4, 10 and 11. Two reserve channels, one high, one low.

Marker Injection System: Post injection. You never upset the curve with marker height.

Power: 105-125 volts, 50-60Hz AC.

Mechanical Description: Black vinyl steel case with brushed steel panel. 7" x 11" x 6", 9 pounds.

Voltage Quadrupler Probe: For Zenith receivers to take the response of the first IF output. Special order from service department (for both SM158 and SM152). Part number 39G26. \$10.00.

SPECIFICATIONS

here is your checklist of why our customers buy the Sencore
SM152 DELUXE SWEEP AND MARKER GENERATOR

- Every signal that you will need for B & W, color or FM Alignment.
- Simple to operate with only four connecting cables and crystal controlled, push-button markers.
- Covers all VHF and UHF tuner channels and 20 Megahertz IF sweep. Only generator that does.



it's the industry's most complete

\$450



Sweep Width: Variable, 0 to 15 Megahertz with zero base line reference as recommended by all manufacturers. Sweep width is calibrated so you'll know where you are.

Markers: All push-button, unlimited amplitude.

Marker frequencies: 39.75, 41.25, 41.67, 42.17, 42.67, 44.25, 45.75 and 47.25 Megahertz for IF alignment. 3.08, 3.58, 4.08 and 4.5 MHz for chroma alignment. 10.6, 10.7, and 10.8 MHz for FM IF alignment. Video and sound carriers for channels 4, 5, 10 and 13 for VHF alignment.

Sweep frequencies: All UHF, VHF, 25 MHz and 45 MHz IFs, and 3.58 MHz chroma sweep. Special

spot align band without sweep for pre-alignment peaking. It's really complete.

Sweep Direction: Reversible so you can duplicate response curve shown in any manual.

Sweep Linearity: Virtually flat within 3 db over entire range. Right-on at most often used frequencies.

Mechanical Description: Black vinyl case with brushed steel panel. 14" x 10" x 6", 15 pounds. Includes scope detector and matching pad cables. Quadrupler as explained in SM158, purchased extra.

SPECIFICATIONS

RC24 RC SUBSTITUTOR "PARTS PAK"

- ✓ Cleans up those messy loose resistors and capacitors in your caddy and puts it all into one small, neat, hand-sized unit.
- ✓ Now updated for solid state service with 1000 mfd electrolytic.
- ✓ Full protection for parts, circuit and you with double surge protection circuit.

it's a tube caddy janitor



\$38



Resistors: 24 overlapping values from 10 ohms to 5.6 megohms. 1 watt to 10K, 1/2 watt over 10K.
Capacitors: 9 overlapping values from 100 pf to .5 mfd at 600 volts.
Electrolytics: Single 10 mfd, single 100 mfd at 450 volts and 1000 mfd at 75 volts.
Mechanical Description: Just the size of two 5U4 cartons. Acrylic non-breakable case. 1 pound.

SPECIFICATIONS

RC167 RC SUBSTITUTOR "THE SUBSTITUTOR"

- ✓ Exclusive parts in a drawer to help you save time and leg strain.
- ✓ Full range of resistors, power resistors, capacitors, electrolytics, and rectifiers at your finger tips.
- ✓ Now updated for solid state service with up to 2000 mfd electrolytics.
- ✓ Double protection for circuit, parts, and you with exclusive surge protector.

it's a leg saver



\$90



Resistors: 24 overlapping values from 10 ohms to 5.6 megohms. 1 watt up to 10K, 1/2 watt over 10K.
Capacitors: 10 overlapping capacitors from 100 pf to .5 mfd at 600 volts.
Electrolytics: 2 mfd, 5 mfd, 10 mfd, 20 mfd, 50 mfd, 100 mfd, 200 mfd at 450 volts. 500 mfd, 1000 mfd and 2000 mfd at 75 volts.

Rectifiers: Universal selenium and silicon rectifier substitutes, 1 ampere forward; 800 PIV.

Protection: Surge protector switch places resistance in series with electrolytics and then removes it when placed in circuit (automatically) so that the electrolytic cannot be heated and there will be no arc or spark. A warning light next to the switch will light in any 75 volts position if the applied voltage is over 75 volts so that you do not push the switch and apply the voltage.

Mechanical Description: Black vinyl with aluminum paneling. Gimble mounts allow for four way installation on bench. Parts drawer is reversible to fit any mounting. Compartments for resistors, capacitors, power resistors and rectifiers. 7 1/2" x 11" x 5", 7 pounds.

SPECIFICATIONS

Here are three top Sencore money making, time saving electronic tools.



money maker



\$75

PM157 POWER MONITOR

AC Voltmeter from 65 to 135 volts. Calibrated at 115 volts for more accuracy than VOM.

AC Ammeter up to 10 Amps. Check fuse and circuit breaker currents in a flash.

AC Wattmeter up to 1150 watts. A real trouble shooter.

DC Ammeter up to 10 Amps.

Fuse Resistor Checker with special scales for each resistor.

Make All Tests with interrupted line cord or test leads.

Fully Protected against shock hazard to appliance, instrument and operator.

Mechanical Description: Rugged vinyl-clad steel case with brushed steel panel, 6½" x 6" x 5", 5 pounds.

money maker



\$24.95

BE156 7-IN-1 DC BIAS SUPPLY

Now, align any TV set, black and white, color tube or solid state. The all new BE156 bias supply provides the bias that you need for any set in any stage, negative or positive, as specified by the TV manufacturers. Negative biases are normally specified for tube sets and positive biases for solid state TV. Three separate and independent 25 volt supplies offer a carefully calibrated output and a positive and negative polarity switch; the last supply on the right has an additional position on the switch that increases the output to a negative 75 volts for use on such sets as the RCA chroma amplifiers that specify 67.5 volts. 7" x 4" x 2", 2 lbs.

FC147 FILAMENT CHECKER

Check continuity of all tube filaments including the new Compactrons, Novars, 10-pins, Nuvisitors and the new Decals. 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" x 3" x 1", one pound.

money maker



\$7.95



here is your checklist of why our customers buy the Sencore

SG165 AM-FM STEREO ANALYZER

- The 12 signals that you need to completely service every stage of even the largest, highest priced stereo unit. It's a money maker.
- Checks every stage from antenna to speaker, including the speaker.
- Sweep and marker for alignment and IF band width check.
- Conventional stereo signal or new institute of high fidelity (IHF) modulation level. Virtually obsoletes every other stereo tester on the market.

*it's the only
complete
stereo
analyzer
on the
market*



\$400



FM RF coverage: 87 to 109 Megahertz; unmodulated, MPX or 400 Hz sine modulation.

AM RF coverage: 525 to 1625 Kilohertz; unmodulated or 400 Hz sine modulation.

FM IF coverage: 10.7 Megahertz crystal controlled CW, MPX or 400 Hz sine modulation.

AM IF coverage: 262 or 455 Kilohertz; unmodulated or 400 Hz sine modulation.

FM IF sweep: 10.7 MHz fixed with markers at 10.7, 10.6, and 10.8 MHz.

Marker Injection: Post injection method with two simple leads; from detector and to scope.

Multiplex Signal: FCC regular stereo or IHF (institute of high fidelity) modulation.

Subscription signal: 67 Kilohertz SCA signal for setting traps.

Audio Signals: 400 Hz square and sine for final amplifier distortion test.

Meters: 3½" D'Arsonval calibrated from 0 to —40 db, 0 to 10 watts, and 0 to 100 watts.

Outputs: RF, IF, Sweep and Audio . . . all one common cable.

Speaker Dummy Loads: Speaker direct, 4, 8, 16 and 32 ohms switchable for receiver being tested. Up to 100 watts for testing purposes.

Mechanical Description: Black vinyl-clad steel with high quality aluminum panel and trim. 10" x 13½" x 9½", 16 pounds.

SPECIFICATIONS

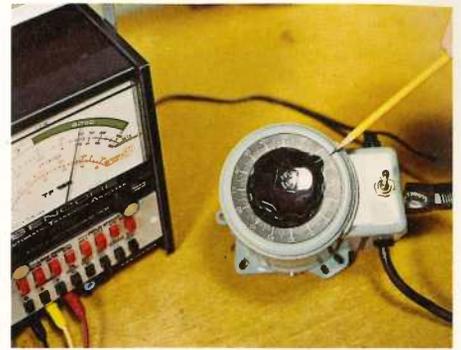
**BUILT-IN QUALITY
FOR YOU--THAT'S
WHAT WE CALL
QUALITY
PERSONIFIED**

Every Sencore instrument is thoroughly tested for all these tough conditions and then personally signed for by your personal field engineer. He also lists his office phone number on your warranty booklet so that you can call him if you should ever have trouble.

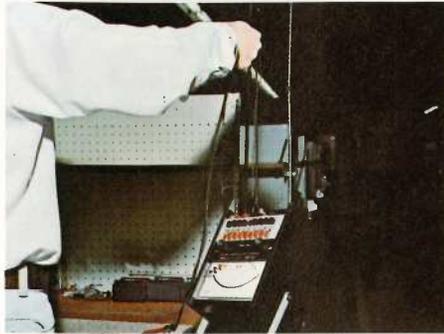
**SENCORE
INSTRUMENTS ARE
TOUGH--BUILT TO
TAKE IT**



ALL UNBREAKABLE CASES and panels. Really protects those sensitive meters and parts. Made for the man on the go. They are even "kid proof" when on a home service call. **TOUGH!**



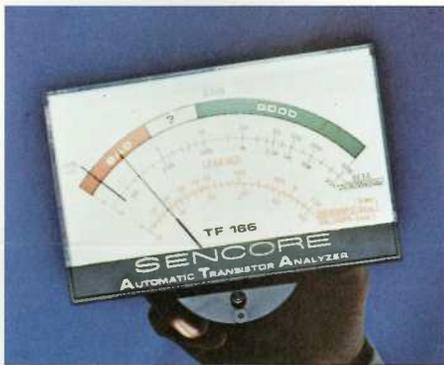
MULTI-POWER OPERATION: All Sencore instruments are designed to operate from 95 volts to 135 volts with no change in performance. Sencore instruments are ready when and where you are. **TOUGH!**



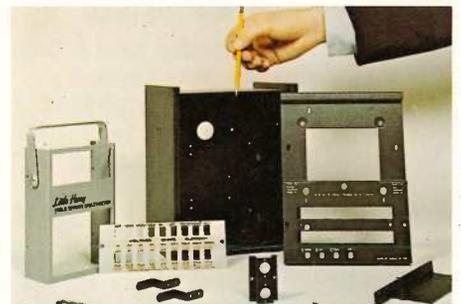
TUG PROOF CABLES AND LEADS: Constructed to last as long as your instrument even if you should accidentally drop the instrument and place the entire weight on the cables. That's how they are tested at the factory. **TOUGH!**



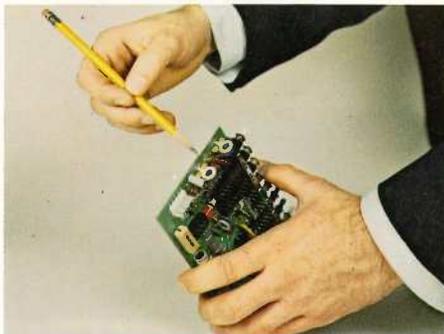
ALL TEMPERATURE DESIGNED AND TESTED: You can operate any Sencore instrument in the Klondike or the Sahara desert. Every Sencore instrument is checked through all operating temperatures to be sure they perform for you every single day of the year. **TOUGH!**



ALL DOMESTIC ANTI-HANGUP "PENNY PIVOT" METERS. Made in the rocky mountains where the going gets rough. They last and last. **TOUGH!**



GUARANTEED RUSTPROOF: Every Sencore instrument is made of rustproof or pre-coated material. Not a single piece is painted or plated after construction, thus eliminating any possible rust. Each instrument carries a five year rustproof guarantee. If a panel or case rusts in the first five years, you get a new case or panel absolutely free. **TOUGH!**



MOISTUREPROOF HIGH QUALITY MODULAR CONSTRUCTION. You'll never have to worry about humidity, salty air or any other air pollution affecting a Sencore Board. They are double sealed. **TOUGH!**



THEY ARE CARE PACKAGED: Each Sencore instrument is carefully inspected and then slipped into a dust proof plastic container. Next, it is placed between two removable protective styrofoam protectors. Last, it is inserted into a flip-top box. All, so that you can easily remove any Sencore instrument, try it and return it with no broken package, if you are not 100 percent satisfied. That's what we call "CARE PACKAGED."

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SENCORE IS DEDICATED TO SERVICE

FACTORY SERVICE CENTERS TO SERVE YOU BETTER

Each of our service centers is there to serve your every need. Each is fully equipped with parts, instruction books and other service data, is staffed with a field engineer on duty to help you with your technical problems, a service department to repair an instrument, (should it need it), and a customer service gal to be sure your requests are followed through. Each station is TWX connected to the main factory in Sioux Falls. Call when you need help or have a question. You will get the right answer.

Southeastern Sales & Service
2459 Roosevelt Hwy., Suite B9
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A/C 404-768-0606

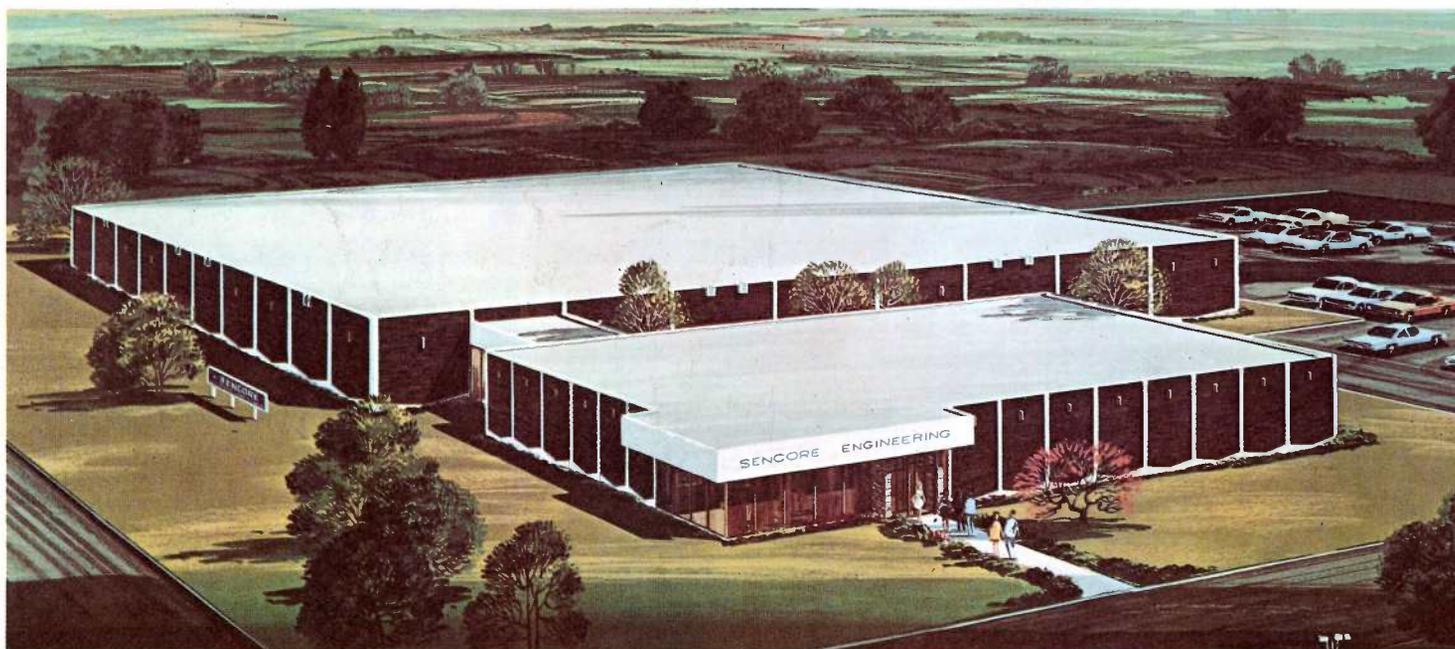
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TWX 710-832-0618

Central Sales & Service
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Downers Grove, IL 60515
A/C 312-852-6800
TWX 910-695-3226

Central West Sales & Service
3200 Sencore Drive
Sioux Falls, SD 57107
A/C 605-339-0100
TWX 910-660-0300

Western Sales & Service
833 Mahler Rd.
Burlingame, CA 94010
A/C 415-697-5854
TWX 910-375-3307

New York State
To be announced



NEW SENCORE ENGINEERING BUILDING IN SIOUX FALLS, SOUTH DAKOTA