

**WESTON INTRODUCES NEW LINE OF INSTRUMENTS THAT SIMPLIFY
AND SPEED-UP SERVICING AND ALIGNMENT OF ALL TV RECEIVERS
INCLUDING COLOR. PRECISION BUILT-- DESIGNED TO DEFEAT
OBSOLESCENCE -- PRICED RIGHT FOR SERVICEMEN**

WESTON 980 LINE TV TEST EQUIPMENT

The 980 Line provides servicemen not only with new, up-to-the-minute instruments, but also with a new, greatly simplified and highly accurate method of TV receiver alignment.

All instruments in the line are of typically sound WESTON design . . . instruments that will remain up-to-the-minute for years to come.

The new method of alignment which they provide, fully described inside, saves many hours over the conventional method of receiver test hook-up.

Thus 980 Line instruments put money in your pocket on both counts . . . you don't have to continually buy new instruments as changes in receivers occur, and you save hours in servicing time and can insure more satisfactory work as well.



SPECIFICATIONS

Frequency Range (with Variable Frequency Oscillator): 4-110 megacycles in 7 bands. 170-260 megacycles in 3 bands. Use of second harmonic is suitable for UHF—340-520 megacycles in 3 bands

Output Attenuator Range: 100% to 1%

Crystal Marker Accuracy: 1.5 mc position $\pm 0.01\%$; 4.5 mc position $\pm 0.01\%$

Internal Modulation Frequencies: 400 cps, 300 KC, 4.5 mc

Heterodyne Input Sensitivity: 500 microvolts (VFO)

Linearity Adjustment: Horizontal—400 cycles, Vertical—300 KC

Dual Markers: video and sound . . . available for either Z-axis intensity modulation of scope or conventional marker pip display.

Tube Complement: 6BA7, 12AT7, 6CL6, 6AL5, 6X4, 6T4

Power Supply: 105/125 volts, 50/60 cps

Scale Length: 8 1/4 ft.

Case: Grey hammertone finished steel

Panel: Aluminum finish with etched black markings

Size: 13.5" x 10" x 6.75" **Approx. Weight:** 18 lbs., 12 ozs. (8.51 kgs.)
(342.9 x 254 x 171.4mm) **Model 985, Net Price \$199.50**

WESTON MODEL 980 ANALYZER

The Weston Model 980 Volt-Ohm-Milliammeter is a highly sensitive, accurate and rugged instrument with a combination of functional ranges which provide a wide range of test measurement applications in the electronic field. The instrument has a d-c sensitivity of 20,000 ohms/volt, and an a-c sensitivity of 1000 ohms/volt. Accuracy is 2% d-c, 3% a-c.

Range and functional switching is greatly simplified by use of a single dial for all ranges and functions.

SPECIFICATIONS

Accuracy: 2%, d-c; 3%, a-c

Scale Length: 4.63"

Ranges: D-C Volts: 1.6, 8, 40, 160, 400, 1600 at 20,000 Ohms/Volt
A-C Volts: 1.6, 8, 40, 160, 400, 1600 at 1,000 Ohms/Volt
DB Range: -15 db to +54 db (in six ranges)
D-C Milliamperes: 8, 80, 800
D-C Microamperes: 80
D-C Amperes: 8

Ohms Range	Center Scale	Full Scale
R x 1	25	1,000
R x 10	250	10,000
R x 100	2,500	100,000
R x 1,000	25,000	1 megohm
R x 10,000	250,000	10 megohms

WESTON MODEL 985 CALIBRATOR

The Weston Model 985 Calibrator is a highly functional instrument for TV shop, engineering, laboratory, and industrial alignment applications. Markers are provided for wave-form patterns, local tuner oscillator frequencies, and trap circuit alignment. The instrument is extremely useful for making linearity adjustments, calibrating signal generators, and determining signals of unknown frequencies.

FEATURES

SCALE CALIBRATION: The frequency calibration of each frequency setting can be checked and adjusted with crystal accuracy. Crystal calibrating points are available at 1.5 and 4.5 megacycles throughout the entire scale. A scale shift knob is provided to align properly the scale with the crystal calibrating dots. A neon bulb indicates visibly the crystal frequency points.

SCALE PRESENTATION: Slide rule type in which one scale is visible at a time. Ten scale range bands available . . . total scale length of 8 1/4 ft.

DUAL MARKERS: 4.5 mc side band markers permit simultaneous observation of video and sound carrier.

INTERNAL MARKERS: Special circuitry provides an internal marker of either a positive or negative pulse suitable for Z-axis intensity modulation of the scope pattern. This eliminates the necessity of feeding an RF calibrator signal directly into the TV receiver which can cause overload and oscillation in the TV set. The marker is visible even at the sound trap frequencies.

HETERODYNE DETECTION: With an input sensitivity of 500 microvolts, the local TV receiver-tuner channel oscillator frequency can be determined without tuner disassembly.

BAR PATTERN GENERATOR: Amplitude modulated signals of the band oscillator at 400 cycles for the horizontal linearity check and 300 KC for the vertical linearity check can be readily fed to TV antenna terminals to produce horizontal and vertical bars.



Case: Black molded bakelite

Panel: Black molded bakelite with engraved white markings

Size: 6.25" x 7.50" x 3.25" **Approx. Weight:** 2 lbs., 11 ozs. (1.25 kgs.)
(158.8 x 190.5 x 82.6mm)

Model 980, Net Price \$52.50

WESTON MODEL 984 SWEEP GENERATOR

The Weston Model 984 is a top performance instrument precision built for effective trouble shooting of sound and video IF circuits, associated trap circuits, TV tuners, video amplifiers and all-purpose visual alignment. It has a high flat output voltage.

FEATURES

BLANKING: Special circuitry produces a zero output reference base which is essential for relative gain measurements.

RF OUTPUT: Frequency modulated signal, TV channels 2 to 13 inclusive, complete FM coverage available by means of two preset selector positions. *FREQUENCIES ARE FUNDAMENTALS OF THE OSCILLATOR FREQUENCY.*

IF/VIDEO OUTPUT: Frequency modulated signals ranging to 50 megacycles, continuous tuning, signals free from harmonics.

SWEEP WIDTH: Full 10 megacycles on all channels.

Z-AXIS TERMINAL: For use with the Model 985 Calibrator.

SPECIFICATIONS

Sweep Width: 0-10 Megacycles (continuously variable for both IF and RF)

Output Voltage (RMS): 0.1 Volt . . . sweep is linear

RF Output: TV channels 2 to 13 preset. Complete FM coverage available by means of two additional preset selector positions

IF/Video Output: 50 Megacycles (continuous tuning)



Horizontal Sweep for Oscilloscope: Phase adjustment range . . . 165°
Frequency . . . Power Line 60 cycles per second

Cable Termination: RF output 300 ohms balanced. IF output 100 ohms

Power: 105/125 volts, 60 cycles

Tube Complement: 6J6, 6U8, 12AT7, 6X4

Case: Grey hammertone finished steel **Panel:** Etched aluminum satin finish

Size: 13.50" x 10" x 6.75" **Approx. Weight:** 14 lbs., 4 ozs. (6.47 kgs.)

(342.9 x 254 x 171.4mm) **Model 984, Net Price \$199.50**

WESTON MODEL 983 OSCILLOSCOPE

The Weston Model 983 is a high gain, wide band oscilloscope designed for the TV technician. The band width of 4.5 megacycles allows accurate display of video frequencies, including pulse wave forms and color synchronizing bursts. High sensitivity of 15 millivolts per inch makes this oscilloscope ideal for setting resonant traps, as a general null indicator, and for signal tracing in low level stages, as well as for sweep frequency visual alignment of TV receivers. The unit has provisions for internal calibration, internal phased sine wave, and Z-axis intensity modulation. Reversal

of polarity of both horizontal and vertical signals is easily accomplished by means of toggle switching.

A fast, retrace, linear sweep circuit with cathode follower output prevents pattern distortion. Preset sweep rates of 30 and 7875 cycles are available. In addition, it provides continuous coverage from 10 cps to 500,000 cps. Both vertical and horizontal frequency amplifiers have compensated step attenuators and cathode follower input. A-C or D-C coupling can be made without affecting sensitivity or band width.

SPECIFICATIONS

Wide Band Frequency Response: Flat within 1.5db from 0-3.58 mc and within -3db to 4.5 mc on both vertical and horizontal amplifiers. Transient response: overshoot 2 to 5%. Rise time: 0.1 microsecond.

High Deflection Sensitivity: 15.0 millivolts per inch, RMS, on both vertical and horizontal amplifiers.

Phase Shift: Between Horizontal-Vertical Amplifiers, 0 to 100 kc—0°; to 1 mc within 2°; by internal adjustment with gain controls at max. 0° phase shift possible on any specific frequency to 6 mc.

Calibrating Voltages: 500 millivolts, 5 volts, 50 volts, 500 volts, peak to peak.

Z-Axis Modulation: Input terminal mounted on front panel.

Sweep Frequencies: 10-500,000 cps, variable. Preset TV/V Position—30 cps. Preset TV/H Position—7875 cps. Retrace Time—better than 2% to 100 kc; at 500 kc less than 10%.

Internally Phased Sine Wave

Vertical and Horizontal Polarity: Reversible

Input Impedance: Vertical Amplifier (without Shielded Cable), 1 meg shunted by 60μf. Vertical Amplifier (with Shielded Cable), 1 meg shunted by 120μf. Vertical Amplifier (with Low Capacitance Probe), 10 meg shunted by 12μf. Horizontal Amplifier (without Shielded Cable), 1 meg shunted by 60μf.

Power Supply: 105/125 volts, 50/60 cycles

Tube Complement: (1)-1V2, (1)-5U4-GA, (6)-6BQ7A, (4)-12BY7A, (4)-6AH6, (1)-6U8, (1)-5UP1, (1)-OD3

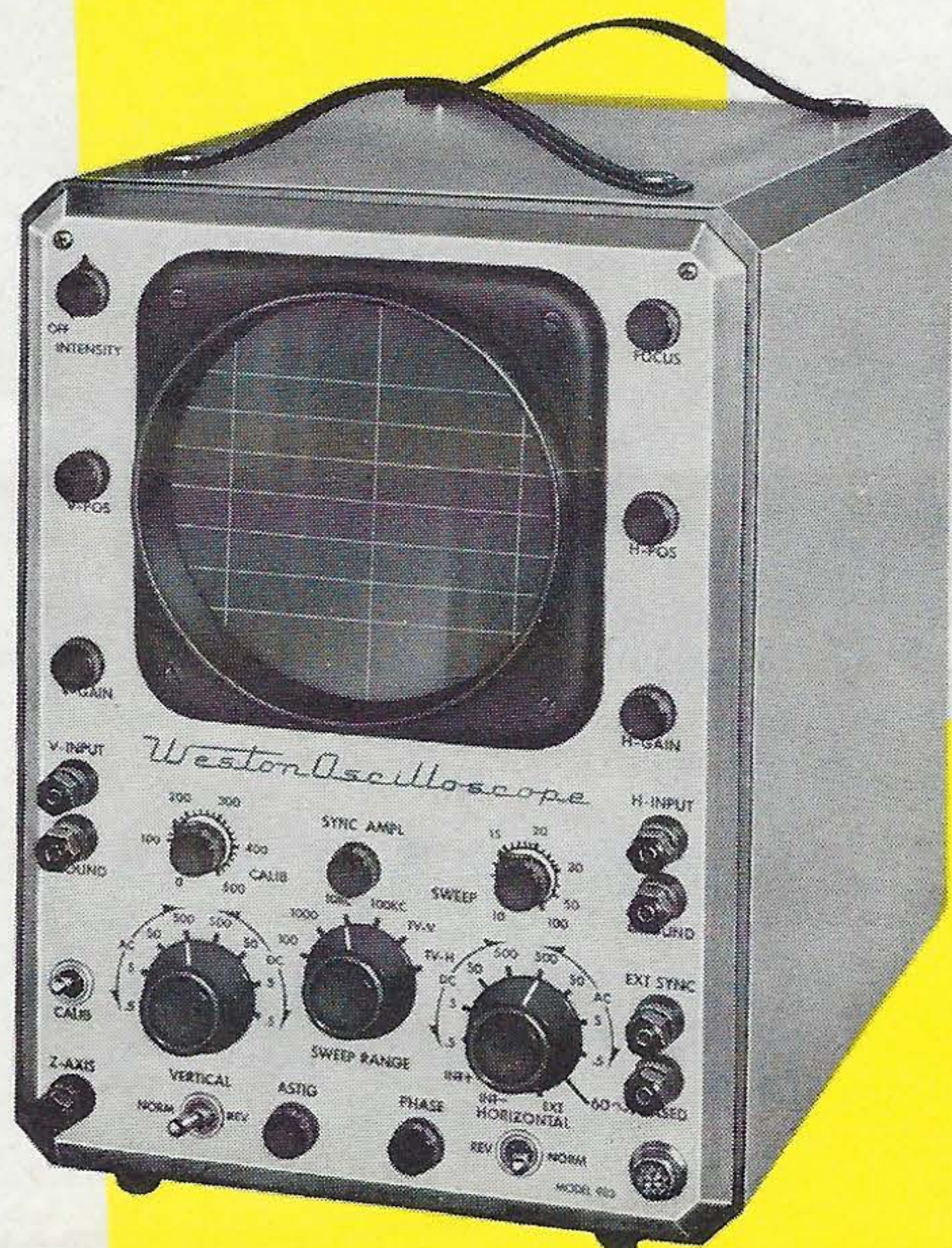
Case: Grey hammertone finished steel

Panel: Aluminum finish with etched, black markings

Size: 10" x 13.5" x 18"

(254 x 342.9 x 457.2mm)

Approx. Weight: 40 lbs. (18.2 kgs.)



Model 983, Net Price \$329.50 (Input Cable, Net Price \$5.95)

WESTON MODEL 981 (TYPE 3) TUBE CHECKER

FEATURES



SPECIFICATIONS

Filament Voltages: .65, 1.1, 1.5, 2, 2.5, 3.3, 5, 6.3, 7.5, 10, 13, 20, 27.5, 35, 47, 70, 85, 115
Plate Voltages: 90, 130, 220 volts d-c; 22, 44, 160 volts a-c
Grid Bias: 0-5 volts, 0-20 volts d-c
Signal Voltages: 5.2, 2.6, 1.3, 0.65 volts peak-to-peak
G_m Range: Up to 30,000 micromhos
Power Requirements: 100 to 125 volts, 60 cycles single-phase a-c, 30 watts
Case: Grey hammerton finished steel **Size:** 17.50" x 13.25" x 6.00"
Approximate Weight: 23½ lbs. (10.7 kgs.) (444.5 x 336.6 x 152.4mm)
Model 981 Type 3, Net Price \$199.50

G_m MEASUREMENTS: G_m measurements are made more accurately by using filtered d-c plate, screen grid and control grid potentials. A precision voltage divider network and selector switch allows a proportionate value of signal voltage to be chosen for testing tubes having transconductances up to 30,000 micromhos. Signal voltages of 5.2, 2.6, 1.3, and 0.65 volts peak-to-peak having a frequency of 5000 cycles are provided.

METER MEASUREMENT OF HIGH LEAKAGE RESISTANCE: Provides an accurate meter measurement of leakage resistance as high as 5 megohms between tube elements, thus being particularly useful for TV servicing and TV line production assembly.

MULTIPLE SWITCHING FACILITIES: Protection against obsolescence is assured through the use of nine single circuit, twelve position, selector switches. These multiple switching facilities make possible many more combinations of tube connections.

TWIN SECTION TUBES: Three toggle switches make it possible to rapidly check and compare the respective sections of twin section tubes at only one setting of the selector switches.

SINGLE SOCKET FOR EACH TUBE BASE REGARDLESS OF TUBE CONNECTION: Eliminates the possibility of plugging a tube into the wrong socket. Sockets are provided for conventional type tube bases as well as acorn, and 7 and 8 pin subminiatures.

ROLL INDEX CHART: Provides comprehensive, up-to-date test data on commonly encountered tubes as well as those infrequently used.

GRID BIAS, SCREEN GRID AND PLATE VOLTAGE: Filtered d-c potentials of 90, 130, and 220 volts are available for plate and screen potentials. A variable filtered d-c voltage in two ranges of 0-5 and 0-20 volts are used to obtain better resolution of Grid Bias settings. Far greater accuracy is obtainable with filtered d-c potentials than previously possible in portable tubecheckers.

SUBMINIATURE TYPE TUBES: A 45 volt potential source facilitates testing of subminiature tubes.

VOLTAGE REGULATOR TUBES: A selenium rectifier supply furnishes 200 volts d-c for testing of voltage regulator tubes.

WESTON MODEL 982 VACUUM TUBE VOLTMETER

The Weston Model 982 is a self-contained, battery operated Vacuum Tube Voltmeter. It is adaptable to the Radio-TV servicing industry where the requirements of peak to peak measurements of a-c voltages exclude the use of conventional meters. It makes possible quantitative measurement of all complex wave form voltages utilized in video, sync and deflection circuits with no a-c line interference in critical measurements.

FEATURES

UNIT IS BATTERY OPERATED: Unit affords complete isolation from spurious response due to stray a-c fields and circulating ground currents. Extremely low drain for long battery life. Power Consumption: Less than 25 milliwatts.

NO SWITCHING OF LEADS IS REQUIRED: One shielded lead is used for all measurements, a-c, d-c, ohms and peak to peak.

RANGE FUNCTION SWITCH: Makes negative and positive d-c potentials measurable DIRECTLY.

HIGH INPUT IMPEDANCE: 10 megohms on d-c for accurate measurements — 2.8 megohms a-c RMS — 1 megohm a-c, peak to peak.

NO ZERO SCALE DRIFT: Instrument can be used immediately without waiting for warm up . . . resetting of zero corrector when switching from range to range is entirely eliminated.

D-C ISOLATION ADAPTOR: Makes d-c measurements possible in the presence of a-c voltages.

FREQUENCY RESPONSE: Suitable for measurement of TV wave forms, such as sync pulses, saw tooth, drive voltages, and other complex wave form voltages.

DISCRIMINATOR ALIGNMENT: Zero corrector knob has sufficient latitude to center scale.

RF PROBE: Is available as an accessory.

LOW CAPACITANCE ADAPTOR: Makes peak-to-peak measurements possible with an input impedance of 10 megohms shunted by only 15 micromicrofarads. Prevents circuit loading.

SPECIFICATIONS

Accuracy: ±3% d-c, ±5% a-c RMS, sinusoidal wave form.
Impedance: 10 megohms d-c; 2.8 megs a-c RMS; 1 meg a-c, peak to peak.

Ranges:								
D-C Volts	1.6	8	40	160	400	800	1600	
A-C Volts	1.6	8	40	160	400	800	1200	
Peak to Peak Volts	1.6	8	40	160	400	800	1600	
Low-C Peak to Peak Volts	16	80	400	1600				
Ohms	X1Meg	X100K	X10K	X1K	X100	X10	X1 (10 ohms center)	

Battery Life: Battery A*—Approx. 90 days—is easily replaceable (Standard 1.5 Volt, Size D Cell). Battery B*—Shelf Life Approx. 1 year.

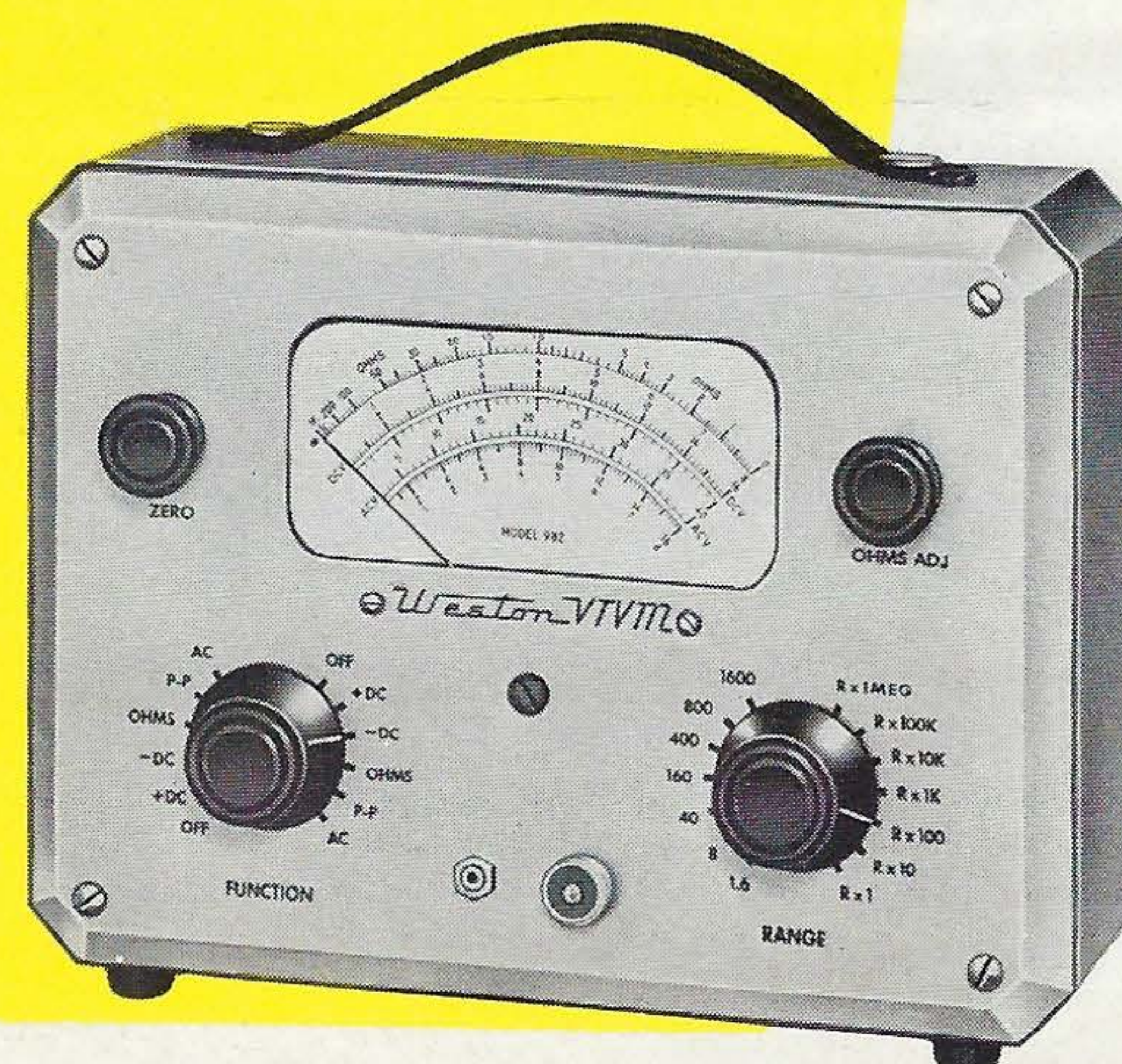
*Based on maximum use—8 hours per day.

Scale Length: 4.63" **Size:** 10" x 7.38" x 3.63"

Case: Gray hammertone finished steel (254 x 187.3 x 92.1mm)

Panel: Aluminum finish with markings etched in black

Weight: 6 lbs. (complete with batteries and accessories) (2.72 kgs.)



Model 982, Net Price \$69.50

NEW *Simplified*

WESTON METHOD OF TV RECEIVER ALIGNMENT

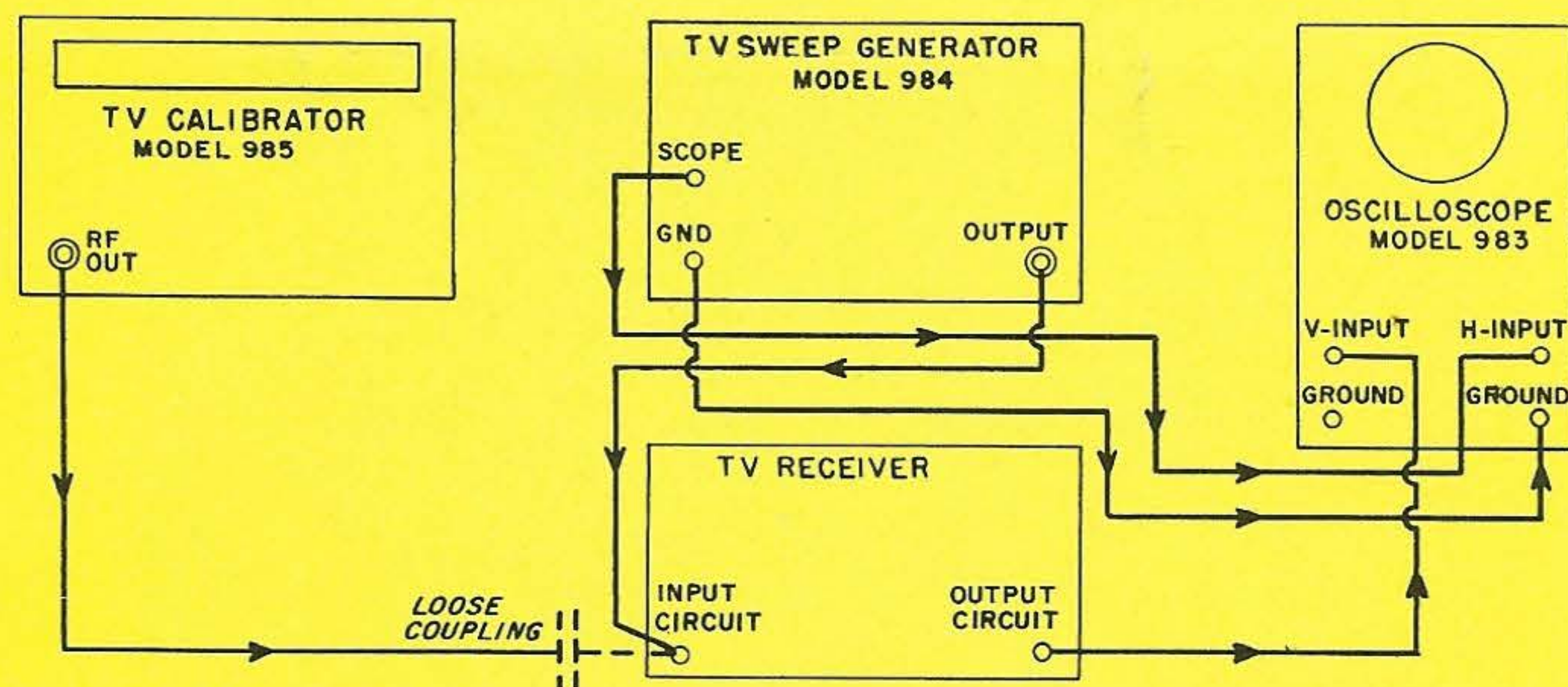
(Patents Pending)

In the 980 Line, Weston offers to the TV technician, the most simple, accurate, and rapid method of TV receiver alignment. If you have been annoyed with the disappearance of markers at trap resonant frequencies, disturbed with trimmer touch-up on trap circuits after a completed alignment procedure, troubled with receiver oscillations in your test hook-up or critical coupling in your test alignment hook-up, then this new approach to TV alignment is just what you've been looking for.

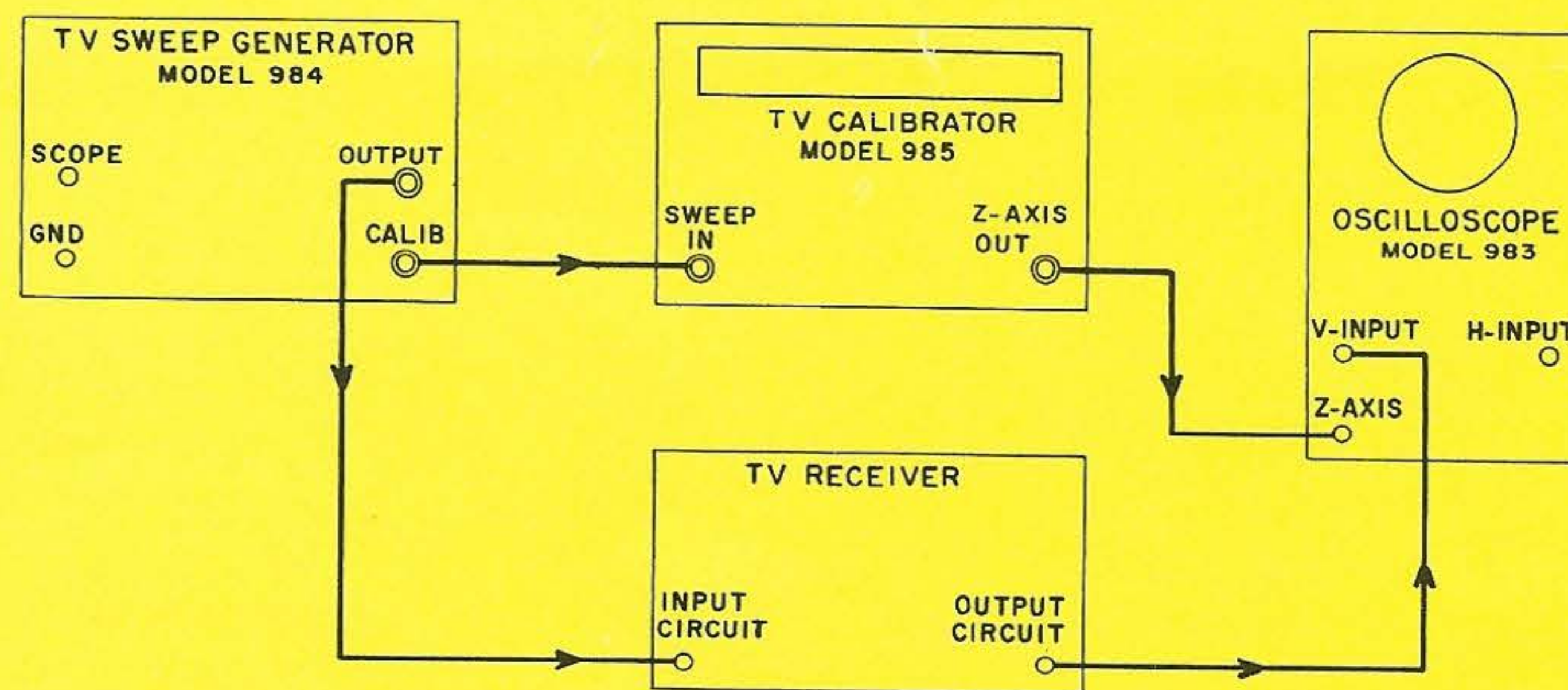
In the Weston method, it is unnecessary to connect the calibrator to the TV set, thus eliminating spurious markers which can be generated by intermodulation of the calibrator signal with that of TV receiver signals. Use of only two connections to the receiver prevents receiver oscillations encountered with the conventional method of multiple lead receiver test hook-up. Note block diagrams shown below.

Further, there is no disappearance of markers at trap resonant frequencies. Z-axis modulation of the scope provides accurate intensity markers on the response curve under conditions where beat note markers would disappear. Response curve is not disturbed. Annoying trimmer touch-up on trap circuits is minimized. This simplified and rapid method of alignment is only possible when the companion instruments—Weston Calibrator Model 985 and Sweep Generator Model 984—are used with a scope having provisions for Z-axis intensity modulation. However, individual instruments in the Model 980 Line can be used with available test equipment in the conventional method of alignment.

Conventional Method of TV Alignment



Weston Simplified Method of TV Alignment



NEW
THE WESTON 980 LINE!