

## AA-930

The AA-930 has been designed to facilitate the repair, tuning and analysis of audio frequency equipment in general, such as cassette recorders, record players, radio-cassettes, preamplifiers, low-frequency amplifiers, etc. That is why six measurement instruments that are indispensable in an audio service workshop have been combined in one piece of equipment.

The AA-930 is equipped with RCA 600 W and DIN 47 kW connectors for the inputs and outputs. In addition, two BNC connectors on the front panel and two RCA connectors on the rear panel allow the user to view all of the signals measured by the instruments.

SPECIFICATIONS	AA-930	Wow & Flutter	
<b>Milivoltmeter</b> Ranges  Pass-band Connector Max. input voltage	0 - 2 V 0 to 28 dB (0 dB = 0,707 V) 0 to 200 mV - 20 dB to 8 dB 20 Hz - 20 kHz (-1 dB) RCA (600 Ω), DIN (47 kΩ) 12 V	Ranges W & F measurement Connector Max. input voltage Reference signal Output level	W&F ± 0.2 % and ± 2 %, Drif ± 3 % Linear or DIN filter RCA (600 Ω), DIN (47 kΩ) 12 V 3.150 Hz (Quartz controlled) 0 - 0.707 mV (600 Ω)
<b>Low frequency generator</b> Frequencies Distortion Output level Connector Oscillator	315 Hz, 400 Hz, 1 kHz and 10 kHz ≤ 0.03 % (0.05 % to 10 kHz) 0 - 2 V adjustable RCA (600 Ω), DIN (47 kΩ) Internal or external	<b>Azimuth</b> Frequency Input voltage  Connector Max. input voltage	315 Hz 0 - 2 V 0 to 28 dB (0 dB = 0.707 V) 0 to 200 mV - 20 dB to 8 dB RCA (600 Ω), DIN (47 kΩ) 12 V
<b>Distortion meter</b> Ranges Tolerance Inputs Input voltage  Connector Max. input voltage	10 %, 1 % ± 5 % Left channel, right channel 66 - 200 mV and 0.66 - 2 V - 1.5 to 8.5 dB and 18.5 to 28.5 dB RCA (600 Ω), DIN (47 kΩ) 12 V	<b>Oscilloscope &amp; monitor outputs</b> Outputs Output level Pass-band Impedance	Left and right channels 1 V RMS f.s.d. 20 Hz to 20 kHz (-1 dB) 2 kΩ
<b>Vattmeter</b> Ranges Load impedance Pass-band Max. input voltage	20 W, 2 W 4 Ω ± 5 % 20 Hz to 20 kHz (-3 dB) 12 V	<b>Power supply</b> Mains voltage  Consumption	110-125-220-230-240 VAC ±10 % 50-60 Hz 10 W
		<b>Mechanical features</b> Dimensions Weight	W. 210 x H. 185 x D. 265 mm 4.3 kg

## AUDIO ANALYSER

### LF generator

This produces the most needed frequencies for the checking of sound equipment (315 Hz, 400 Hz, 1 kHz and 10 kHz).

### Stereo watt meter

With two sensitivities, 20 W and 2 W on an internal impedance of 4 W, it measures the output stages in car radios, cassette recorders and radio-cassettes.

## DA-523

- \* Automatic tuning and leveler
- \* Response in mean value or rms value
- \* Additional outputs: constant distortion and amplitude

The entire complicated measurement process of conventional distortion meters is automatized in the DA-523, since both the tuning and the leveler are automatic. The user only has to preselect the approximate level of the inputs signal and of the distortion ranges. The response can be given in mean or RMS value.

SPECIFICATIONS	DA-523	Filters	
Impedance  Level Maximum voltage Fundamental range Measurement ranges Digital display  Response  Accuracy 20 Hz to 20 kHz 10 Hz to 100 kHz	200 kΩ on differential mode 100 kΩ on normal mode Min. 60 mV, max. 200 V (7 steps) 300 Vp maximum 10 Hz to 100 kHz 100 %, 20 %, 2 %, 0.2 %, selectable 3 1/2 digits, 2000 reading points Overrange indication Selectable average or RMS value Crest factor ≤3 (THD ≤ 30 %, ≥ 4 % f.e.) ± 10 % (harmonics ≤ 100 kHz) ± 10 % - 30 % (harmonics ≤ 300 kHz)	400 Hz high pass 80 kHz low pass 30 kHz low pass	400 Hz ± 5 % (-3 dB) 80 kHz ± 5 % (-3dB) 30 kHz ± 5 % (-3 dB)
		<b>Auxiliary outputs</b> Input monitor (V <sub>i</sub> ≤ 50 mV) Output impedance Harmonic components	1 V <sub>rms</sub> ± 10 % constant 1 kΩ ± 5 % 1 V ± 3 % (1000 reading points)
		<b>Power supply</b> Mains voltage Consumption	125-230 V AC ± 10 % / 50 Hz 16 VA
		<b>Mechanical features</b> Dimensions Weight	W. 210 x H. 185 x D. 265 mm 4.5 kg