ShibaSoku®

AH87B

AUDIO INSTRUMENTS

AUTOMATIC AUDIO ANALYZER

General

The AH87B automatic audio analyzer combines an extremely stable, low-distortion oscillator with an easy-to-use, accurate Total Harmonic Distortion (THD) meter, and a true RMS level and noise meter. The fundamental frequency Band Elimination Filter (BEF) is ganged to the oscillator output frequency. The input and meter range select and 100% calibration for distortion measurements are automatic.

Features

- Low-distortion oscillator: Sinewave output of 10 Hz to 109.9 kHz.
- Two oscillator outputs: 75Ω, unbalanced; and 600Ω, balanced.
- Isolated balanced output with floating ground.
- Distortion meter is a wideband fundamental BEF.
- THD measurement from 0.03% to 100%, full scale in 18 ranges.
- True RMS and average detection modes.
- Level/Noise measurement: Range from -70 dB to +40 dBm full-scale in 12 ranges.
- Eliminates hum and noise: Floating or chassis ground input, bandwidth control filters, optional weighting filter, true RMS or average detection mode selectable.

Specifications

- Oscillator section
  - Output impedance: 600 Ω balanced / 75 Ω unbalanced
  - Frequency range: 10 Hz to 109.9 kHz in 4 overlapping ranges with 3 digits resolution
  - Frequency accuracy: ±1%
  - Output level: -80 to +20 dBm, 10 dB/step and 10 dB vernier (0 dBm: 0.775 Vrms 600 Ω, 0.274 Vrms 75 Ω)
  - Frequency response: ±0.5 dB
  - Distortion
    - Balanced: 100 Hz to 109.9 kHz: ≤0.016%; 10 to 100 Hz: ≤0.05%
    - Unbalanced: 50 Hz to 20 kHz : ≤0.032%; 10 to 50 Hz: ≤0.01%; 20 to 109.9 kHz: ≤0.016%
- Distortion measurement
  - Input impedance: 600 Ω balanced; 10 kΩ balanced; 1 MΩ unbalanced
  - Fundamental frequency range: 20 Hz to 20 kHz balanced; 10 Hz to 109.9 kHz unbalanced
  - Harmonic response
    - Balanced: 2nd harmonic to 60 kHz; ±0.5 dB: 20 Hz to 10 kHz (fundamental frequency); ±1 dB: 10 to 20 kHz (fundamental frequency)
    - Unbalanced: 2nd harmonic to 330 kHz; ±0.5 dB: 10 Hz to 30 kHz (fundamental frequency); ±1 dB: 30 to 109.9 kHz (fundamental frequency)
  - Measuring range: 0.03, 0.1, 0.3, 1, 3, 10, 30, 100% full scale in 8 ranges
  - Input level range: 100 mV to 100 V automatic ranging (+30 dBm or 24.5 Vrms maximum in 600Ω balanced)
  - Accuracy: ±5% of full scale
  - Meter indication: True-rms (crest factor ≤3) or average detection, selectable
- Level measurement
  - Frequency range: 20 Hz to 60 kHz balanced; 10 Hz to 330 kHz unbalanced
  - Frequency response
    - Balanced: ±0.5 dB: 20 Hz to 20 kHz; ±1 dB: 20 to 60 kHz
    - Unbalanced: ±0.5 dB: 10 Hz to 330 kHz
  - Measuring range: -70 to +40 dBV (0.3 mVrms to 100 mVrms)
  - Measuring unit: dBV, dBm, Vrms

Specifications

- **Relative level measurement**
  Specifications are same as Level Measurement, and adjustable meter gain is ≥10 dB.
- **Measaring filters**

400 Hz HPF	18dB/oct-3 dB
30 kHz LPF	18dB/oct-3 dB
80 kHz LPF	18dB/oct-3 dB
Weighting filter	Option

- **General specifications**

Power supply	AC 100, 120, 220, 240 V ±10%, 50/60 Hz
Power consumption	Approx. 28 VA
Dimensions	426 (W) x 149 (H) x 350 (D) mm
Weight	Approx. 12 kg

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