

AM57A

AUDIO INSTRUMENTS

AUDIO COMBINATION ANALYZER



General

The AM57A is a multi-function audio measuring instrument designed for use in automatic measuring systems. It measures such items as signal level, relative level, distortion, harmonic distortion, frequency, SINAD, and DC. A built-in signal switch allows 2 channels to be measured. Up to 4 channels can be measured by adding optional measurement inputs. This option also allows simultaneous level measurement of 2 signals. A signal generator for up to 2 channels can be built in as another option.

Features

- An optimum automatic measuring system can be built by selecting options, such as measurement input channels, built-in oscillator, and control panel, as required by the customer for their particular automatic measuring system.
- Total harmonic distortion (THD) measurements are possible.
- A variety of measurement filters is provided as standard equipment; other filters can be added as options.
- Includes GO/NG judgment function.
- Up to 100 panel settings can be stored in memory.
- Sequential measurements are also possible using stored settings.
- Equipped with RS-232C and GP-IB interfaces as standard.

Specifications

● Measurement Items

Level (2 channels selectable)
 S/N ratio (Relative measurement)
 SINAD
 Relative level
 Ratio (A1 input level / A2 input level)
 Distortion (including THD)
 Frequency
 DC voltage

● Measuring Filters

400 Hz HPF	18 dB/oct
30 kHz LPF	18 dB/oct
80 kHz LPF	18 dB/oct
JIS A filter	Conformance with JIS-C 1502A
CCIR/ARM	Dolby
DIN Audio	Conformance with DIN45405 (Audio) 1978
20 kHz LPF	0.5 dB ripple, 9th degree simultaneous chebyshev characteristics
Option 1	Added with option board
Option 2	Added with option board

● Number of inputs 2

● Input impedance

- Balanced 200 k Ω / 600 Ω , $\pm 5\%$ selectable
- Unbalanced 100 k Ω / 600 Ω , $\pm 5\%$ selectable

● Level measurement

- Frequency range 10 Hz to 100 kHz, ± 0.5 dB
- Measuring range 100 μ V to 100 V (-80 to +40 dB)
100 μ V to 100 V, ± 5 dB

• Response

Effective value detection
 RMS

Mean value detection converted to effective value
 AVG

- Measurement units μ V, mV, V, dB, dBm (600 Ω)

● S/N ratio measurement (input level converted)

- Frequency range 10 Hz to 100 kHz
- Measuring range -80 to +40 dB (both of S and N factor)
- Measurement units dB

● SINAD measurements

- Fundamental frequency range 10 Hz to 100 kHz
- Input level range 10 mV to 100 V
- Measurement range 80 to 10 dB

• Accuracy (at 1 kHz)

70 to 10 dB; ± 0.5 dB
 80 to 70 dB; ± 1 dB

• Response

Effective value detection; RMS

• Fundamental frequency harmonize

Auto-harmonize by counter results

• Measurement unit dB

Specifications

- Relative level measurement
 - Frequency range 10 Hz to 100 kHz
 - Measuring range -80 to +40 dB, with input conversion.
The level when RELATIV LEVEL is pressed during level measurement is taken as the 0 dB reference value; subsequent measurements produce relative level.
 - Measurement unit dB
- Distortion measurement
 - Fundamental frequency range 10 Hz to 100 kHz
 - Input level range 10 mV to 100 V
 - Measuring range 0.01% to 30% (-80 to -10 dB)
When analysis is used: Harmonic distortion ratio 0.003% to 30% (-90 to -10 dB)
 - Response Effective value detection: RMS
 - Fundamental frequency harmonize Auto-harmonize by frequency counter results.
 - Harmonic distortion (Analysis)
 - THD Measures harmonic distortion up to 2nd to 10th harmonic
 - Measurements unit dB, %

At Input Level ; 0dB	THD + N	Harmonic distortion (Analysis)
10 Hz to 1 kHz	-80dB	-90dB
1 to 10 kHz	-80dB	-90dB
10 to 50 kHz	-70dB	-75dB
50 to 100 kHz	-65dB	-65dB

Table 1 Measurement accuracy

- Frequency measurement
 - Measuring range 10 Hz to 100 kHz
 - Digits displayed 4
 - Accuracy $\pm 1\%$, ± 1 digit (during 10 mV to 100 V)
 - Measuring method FFT calculation of input signal
- DC voltage measurement
 - Measuring range 200.0, 20.00, 2.000 V, 200.0 mV
 - Digits displayed 4, including decimal point
 - Accuracy $\pm (0.3\% \text{ of full scale} + 0.75\% \text{ of measured value})$,
 - Input channels Shared with input connectors on front panel
- Memory function
 - Up to 100 panel settings can be stored in the built-in memory. Last Memory function saves panel settings that were in effect when power was turned off.

- Sequential measurement function
 - Parallel interface for sequential measurement control is provided as standard.
 - Sequential measurement using series of conditions stored in memory is possible.
 - Sequence feeding during sequential measurement automatically stops in event of NG judgment.

●Interface GP-IB and RS232C

●Option

- Panel controller option (AM57A001)
- Built-in oscillator option (AM57A002 or AM57A004)
- Measurement inputs option (AM57A003)

●General Specifications

Power supply AC 100, 120, 220, 240 V $\pm 10\%$, 50/60 Hz

Power consumption Max. 100 VA

Operating temperature range 0°C to 40°C

Relative humidity 10% to 90% RH (non-dewing)

Dimensions 426 (W) x 99 (H) x 450 (D) mm

Weight Approx. 9 kg

Accessories Power cord x 1
3P-2P conversion adapter x 1
User's manual x 1

Note: Please specify required power voltage when ordering.

