Sound Sources A15

Specification for the KLIPPEL ANALYZER SYSTEM (Document Revision 1.0)

FEATURES

- Professional near-field monitors by GENELEC
- Testing of microphones, headsets, noise attenuation (ANC), …
- Self-powered, active crossovers or DSP controlled
- Wide-bandwidth, flat on-axis response
- Various sizes and accessories available
- Mouth simulators by G.R.A.S.

BENEFITS

- Reproducible sound pressure
- Flat on-axis response
- Controlled directivity
- No manual controls
- Self-powered, active/DSP crossover
- Balanced inputs

DESCRIPTION

Testing devices such as microphones, headsets and other telecommunication equipment or voice-controlled devices requires a well-defined and reproducible sound pressure stimulus. This also applies for testing sound attenuation of hearing protectors or active noise control (ANC) in wireless headphones.

To meet these requirements, KLIPPEL distributes a selection of professional loudspeakers by GENELEC for general purpose and QC applications and as well as mouth simulators by G.R.A.S. for tests that require a sound field similar to a human mouth. Other models or accessories are available on request.

CONTENT

1 GENELEC 8010A

1.1 Features

Item No. 2800-500

- Small form factor
- Cost-efficient (suitable for QC testing)
- Two-way design
- Active crossover, protection circuitry
- Rugged die-cast aluminum enclosure with protection grilles
- Reflex port
- Low distortion
- Iso-Pod™ Stand, versatile mounting options
- No manual controls (dip switch only)
- Package includes
  - mains cable (1.8 m)
  - user manual

1.2 Technical Specifications

Output

- Frequency Response
  74 Hz … 20 kHz (± 2.5 dB)
- Low cut-off (-6 dB) = 67 Hz
- Short term max SPL ≥ 96 dB
- Long term max SPL ≥ 91 dB
- Self-generated noise ≤ 5 dB (A)
- Harmonic distortion ≤ 1 %

Dimensions & Weight

- Height: 181 mm
- Width: 195 mm
- Depth: 115 mm
- Weight: 1.5 kg
- Bass driver ø 76 mm (3 in)
- Treble driver ø 19 mm (3/4 in)

Amplifier

- Amplifier 2 x 25 W
- Mains AC voltage: 100 … 240 V
  (@ 50/60 Hz)
- Power consumption max. 30 W

Signal Processing

- Signal Input: XLR female
- Crossover @ 3 kHz

2 GENELEC 8330A SAM

2.1 Features

Item No. 2800-501

- Versatile application range
- Two-way design
- DSP controlled, protection circuitry
- Supports GLM software for calibration/equalization
- Rugged die-cast aluminum enclosure with protection grilles
- Reflex port
- Low distortion
- Iso-Pod™ Stand, versatile mounting options
- No manual controls (dip switch only)
- Package includes
  - mains cable (1.8 m)
  - RJ45 cable (5 m)
  - user manual

2.2 Technical Specifications

Output

- Frequency Response 58 Hz … 20 kHz (± 1.5 dB)
- Low cut-off (-6 dB) = 45 Hz
- Short term max SPL ≥ 104 dB
- Long term max SPL ≥ 96 dB
- Self-generated noise ≤ 5 dB (A)
- Harmonic distortion ≤ 2 %

Dimensions & Weight

- Height: 285 mm
- Width: 299 mm
- Depth: 178 mm
- Weight: 5.5 kg
- Bass driver ø 130 mm (5 1/8 in)
- Treble driver ø 19 mm (3/4 in)

Amplifier

- Amplifier 2 x 50 W
- Mains AC voltage: 100 … 240 V (@ 50/60 Hz)
- Power consumption max. 50 W

Signal Processing

- Signal Input: XLR female
- Signal output: XLR male
- 2 x CAT5 (RJ45) GLM network connectors
- DSP controlled

3 GENELEC 8331A SAM

3.1 Features

Item No. 2800-502

- Versatile application range, suitable for microphone testing
- Three-way point source design
- Smooth directivity, wide coverage angle
- DSP controlled, protection circuitry
- Supports GLM software for calibration/equalization
- Rugged die-cast aluminum enclosure with protection grilles
- Reflex port
- Low distortion
- Iso-Pod™ Stand, versatile mounting options
- No manual controls (dip switch only)
- Package includes
  - mains cable (1.8 m)
  - RJ45 cable (5 m)
  - user manual

3.2 Technical Specifications

Output

- Frequency Response 58 Hz … 20 kHz (± 1.5 dB)
- Low cut-off (-6 dB): 45 Hz
- Short term max SPL ≥ 104 dB
- Long term max SPL ≥ 99 dB
- Self-generated noise ≤ 0 dB (A)
- Harmonic distortion ≤ 2 %

Dimensions & Weight

- Height: 285 mm
- Width: 189 mm
- Depth: 212 mm
- Weight: 6.7 kg
- 2 x bass driver (130 mm x 65 mm)
- Midrange driver ø 90 mm
- Treble driver ø 19 mm (3/4 in)

Amplifier

- Amplifier: 72 W + 2 x 36 W
- Mains AC voltage: 100 … 240 V (@ 50/60 Hz)
- Power consumption max. 60 W

Signal Processing

- Analog signal input: XLR female
- Digital signal input/output: XLR female/male
- Crossover @ 0.5/3 kHz
- 2 x CAT5 (RJ45) GLM network connectors
- DSP controlled

4 Accessories

4.1 GENELEC GLM Loudspeaker Manager User Kit (Item No. 2800-510)

Accessory for Genelec SAM speakers: GLM network adaptor and microphone for frequency response calibration and control.

4.2 GENELEC VESA Adapter

VESA mounting adapter plate (75/100 mm) for GENELEC speakers.

4.3 Further GENELEC Accessories

Further accessories are available on request. See the manufacturer's website for a full list.

4.4 Cables

All GENELEC speakers provide a balanced, analog signal input with XLR connector (female). In order to connect the speakers(s) to the KLIPPEL Analyzer's XLR output, one of the following cables is required for each speaker. Use the Y-Cable in case two speakers shall be connected to only one signal output for simultaneous playback.

- Cable; XLR male - XLR female, 2 m (Item No. 2300-118)
- Cable; XLR male - XLR female, 5 m (Item No. 2300-114)
- Cable; XLR male - XLR female, 10 m (Item No. 2300-117)
- Y-cable; XLR female - 2x XLR male, 0.3 m (Item No. 2300-402)

5 G.R.A.S 44AA Mouth Simulator (Powered)

5.1 Features

Item No. 2400-073

- Simulates the sound field close to the human mouth (recommended for R&D applications)
- Dedicated for testing telephone mouthpieces as well as microphones used in telecommunication devices
- Complies with standards
  - IEEE 269, 661
  - ITU-T Rec. P51
- Built-in amplifier - directly connected to KLIPPEL Analyzer output
- Set includes
  - Jigs RA0104, RA0105
  - G.R.A.S. AB0012 24 V PSU
  - BNC cable (5 m)
  - XLR female to BNC female adapter
- Requires defined and reproducible positioning of the DUT

5.2 Technical Specifications*

Output

- Maximum continuous output SPL at MRP
  110 dB @ 200 Hz … 6 kHz
  100 dB @ 100 Hz … 16 kHz
- Harmonic distortion ≤ 1.5 % (94 dB @ MRP)

Dimensions & Weight

- Weight: 1.3 kg
- Diameter: 104 mm
- Height: 114 mm
- Mouth opening: 20 mm
- Lip ring ø 48 mm, mouth distance: 10 mm

Loudspeaker

- Impedance: 8 Ω
- Maximum continuous power: 10 W
- Maximum power (pulsed): 50 W

Amplifier

- Gain: 10 dB
- Input impedance: 20 k Ω
- Max. RMS input voltage: 2 V
- Max. consumption: 24 V (DC), 1 A

6 G.R.A.S 44AB Mouth Simulator

6.1 Features

Item No. 2400-077

- Simulates the sound field close to the human mouth (recommended for R&D applications)
- Dedicated for testing telephone mouthpieces as well as microphones used in telecommunication devices
- Complies with standards
  - IEEE 269, 661
  - ITU-T Rec. P51
- Set includes
  - Jigs RA0104, RA0105
- Requires defined and reproducible positioning of the DUT
- Requires external amplifier or *KA3 Amplifier/QC Card*
- special input cables/adaptors may be required to adapt to BNC input connector

44AA type with built-in amplifier is recommended for simple integration

6.2 Technical Specifications

Output

- Maximum continuous output SPL
  110 dB @ 200 Hz … 6 kHz @ MRP
  100 dB @ 100 Hz … 16 kHz @ MRP
- Harmonic distortion ≤ 1.5 %
  (94 dB @ MRP)

Dimensions & Weight

- Weight: 0.93 kg
- Diameter: 104 mm
- Height: 114 mm
- Mouth opening: 20 mm
- Lip ring ø 48 mm, mouth distance: 10 mm

Loudspeaker

- Impedance: 8 Ω
- Maximum continuous power: 10 W
- Maximum power (pulsed): 50 W

Find more accessories for the KLIPPEL Analyzer System on www.klippel.de.
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