ROGA Instruments INTELLIGENT TESTING EQUIPMENT
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ES12
Electronic Stethoscope

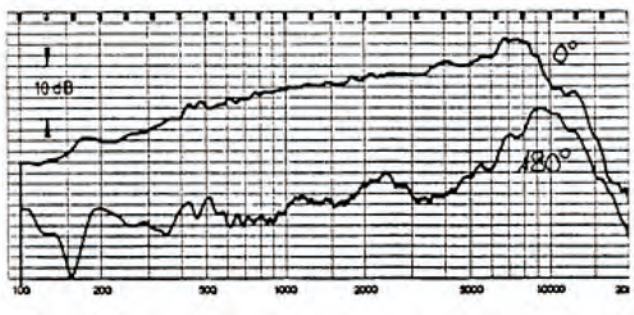
Electronic Stethoscope ES12 for locating sound sources.

The system contains a directional microphone MI10, a monitor amplifier AV14, dynamic headphones, an accelerometer and a carrying case.

Use
- Acoustic and Vibration Measurements
- Source Location
- Machine Diagnosis

Scope of delivery
- 1-Channel Monitor Amplifier and Charge Amplifier AV14
- AC Adapter, 100-240 VAC / 12 VDC
- 1/4" Directional Microphone MI10
- Accelerometer
- Headphone KH10
- Carrying Case
- Manual

MI10 Directional Microphone
Features
- Shapely matt black plastic housing and swan neck
- Built-in windscreen
- Background noise elimination
- Functional small and handy design



TECHNICAL DATA MI10	
Acoustic mode of operation:	Pressure gradient receiver
Directional characteristic:	Cardioids
Backward noise elimination:	20 dB
Frequency range:	see Diagram
Open circuit sensitivity at 1000Hz und 5V	7,2 mV/PA ±3 dB
Impedance:	1000 Ω ±40 %
Distortion at 28 Pa, (123dB) SPL:	< 3 %
Operating supply voltage:	0,8 – 15 V
Current consumption:	< 0,2 mA
Storage:	min. –25 °C, max. +60 °C
Operation mode:	min. –20 °C, max. +55 °C
Humidity range:	20°C / 99%, 60°C / 95%
Swan neck thread:	M10x1
Length:	455 mm
Weight:	approx. 130 g
Cable:	2 m, Ø 2,7 mm

ROGA-Instruments, Im Hasenacker 56, D-56412 Nentershausen
Phone: +49 (0) 6485–881 58 03, E-Mail: info@roga-instruments.com

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AV14 Monitor Amplifier

The 1-channel charge amplifier AV 14 has been constructed mainly to monitor acoustic and vibration signals. It has a measuring channel for an electret condenser microphone or a piezoelectric accelerometer. The switching over from the accelerometer to the microphone comes automatically, when the microphone mini-jack is plugged in At the output socket you get a voltage proportional to the acceleration or sound pressure independent of the amplification of the headphone amplifier. So the instrument can be used as a front end for analyzers or similar instruments.

Features

- electret condenser microphone Inpu
- Piezoelectric accelerometer input
- Adjustable Headphones output
- Preamplifier Function (additional output)

TECHNICAL DATA AV14	
Piezoelectric accelerometer input:	Microdot
Microphone input:	LEMO Serie 00
Frequency response hp-amp.:	–3 dB between 30 Hz – 20 kHz
Max. Output voltage hp-amp.:	4 Vss*) at 150 Ω
Distortion factor:	< 1 % bei 1 kHz and 4 Vss
Output socket headphone:	3.5 mm stereo jack
Output socket measuring ampl.:	BNC (on rear panel)
Max. output voltage:	5 Vss
Output Impedance:	50 Ω in series with 10 µF
Max. Impedance:	> 10 kΩ, < 10 nF
Frequency response:	–3 dB between 1 Hz – 30 kHz
Microphone power supply voltage:	5,6 V via 8,2 kΩ
Sensitivity (Piezoelectric accelerometer):	1 mV/pC or 10 mV/pC, ±2 %
LED "Supply Voltage":	green
LED "Charging" (rear):	red
Supply rechargeable battery:	9 V
Supply extern:	9–15 V DC
Battery Charge:	12–14 V, approx. 14 h
Current Consumption:	5 to 15 mA
Battery operating time:	ca. 10–30 h
Operating temperature range:	+/- 0°C to +50°C
Cabinet material:	Aluminium
Dimensions (W × H × D):	55 × 25 × 100 mm
Weight with batteries:	ca. 250 g
Safety standards:	IEC61010, EMC EN55103-1, EN55103-2

KH10 Dynamic Headphone

KH10 is a closed dynamic headphone and it is designed for critical music and sound monitoring in an open environment. The headphone features a frequency response of 5 Hz to 30 kHz and is equalized to the diffuse sound field.
The single-sided 3 m connecting cable is equipped with an in-line volume control for optimum set-up. It is fitted with a gold-plated mini stereo plug (3.5 mm) with a 1/4" (6.35 mm) adapter and is therefore suitable for use with almost all headphone amplifiers.
The rugged headband construction has been strengthened to give the headphone a very secure fit, matched with mechanical reliability. Soft ear pads that are easy to clean and adjustable, sliding earpieces ensure listening comfort during extended periods of use.

Features

- Closed diffuse field headphone
- Excellent ambient noise attenuation (≥ 35 dB A)
- Superb audio quality with high sound pressure level (105 dB)
- Robust spring steel headband
- Single sided cable (straight cable, 3 m long) with in-line volume control
- Gold plated jack plug (3.5 mm) and adapter (6.35 mm)

TECHNICAL DATA KH10	
Transducer type:	Dynamic
Operating principle:	Closed
Nominal frequency response:	5 - 30.000 Hz
Nominal impedance:	80 Ω per cartridge
Nominal SPL:	105 dB
Nominal T.H.D.:	< 0,2%
Power handling capacity:	100 mW
Sound coupling to ear:	Circumaural
Ambient noise isolation:	≥ 35 dBA
Nominal headband pressure:	approx. 6,5 N
Weight (without cable):	300 g
Length and type of cable:	3 m / straight cable
Connection:	Gold plated stereo jack plug (3.5 mm) and 1/4" adapter (6.35 mm)

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