

FP120 Sound Source

Omni-Directional Loudspeaker Noise Generator/Amplifier AP600

Applications

- Measurement of sound insulation in buildings and of building elements ISO 140
- Measurement of the reverberation time of rooms ISO 3382
- Measurement of sound absorption in a reverberation room ISO 354

Main characteristics

- Complete omni-directional radiation diagram
- 123 dB sound power level
- White, Pink and Pink filtered (1/3 octave band 100 – 5 kHz) noise generator
- Forced ventilation cooling system with automatic fan turn off: Ideal for background noise measurements
- Remote control through cable or wireless (Bluetooth™)



The **FP120** Sound Source has two well defined parts: the Omni-directional Loudspeaker **BP012** and the Noise Generator / Amplifier **AP600**.

The **FP120** has been designed to satisfy the needs of professionals dedicated to building and room acoustics. The **FP120** allows you to measure airborne sound insulation, reverberation time and sound absorption according to the standards: ISO 3382, ISO 354 and ISO 140.

The **BP012** has 12 loudspeaker mounted on a dodecahedral housing. This ensures a complete omni-directional radiation diagram; that is to say, sound is radiated in a spherical distribution, as it is demanded in the ISO 140 and ISO 3382 standards.

The **BP012** handles an electrical power of 600 W RMS developing 123 dB of sound power level in the third octave bands with centre frequency between 100 and 5,000 Hz. The loudspeaker has been designed to supply the maximum power during an hour.

To achieve a user-friendly equipment the **BP012** includes 5 rubber feet to leave it on the floor, 1 hoisting eye for suspending and 2 grips for ergonomic handling. The **BP012** is internally reinforced with an aluminium core that brings robustness and allows adapting it to the TR012 tripod.

The **AP600** is a unit formed by a White and Pink noise generator and a power amplifier. The **AP600** has been specially designed to generate the signal that has to be reproduced by the **BP012**.



Thanks to its internal noise output and its external noise input, the **AP600** can be used as a noise generator + amplifier, just as a noise generator or just as an amplifier. Also allows you to insert between the noise generator and the amplifier supplementary signal processing equipments as equalizers or compressors.

The **AP600** has an anticlip and thermal protection. The **AP600** can be operated directly from the keyboard or by a PC with the included software. This communication with the PC can be done through cable or through Bluetooth™, wireless.

The forced ventilation cooling system of the **AP600** turns off the fan during one minute after the signal reproduction is stopped. This is efficient for the background noise measurements

FP120 Sound Source

Technical specifications

Omni-directional loudspeaker BP012

Standards

According to the following standards:

ISO 140

ISO 354

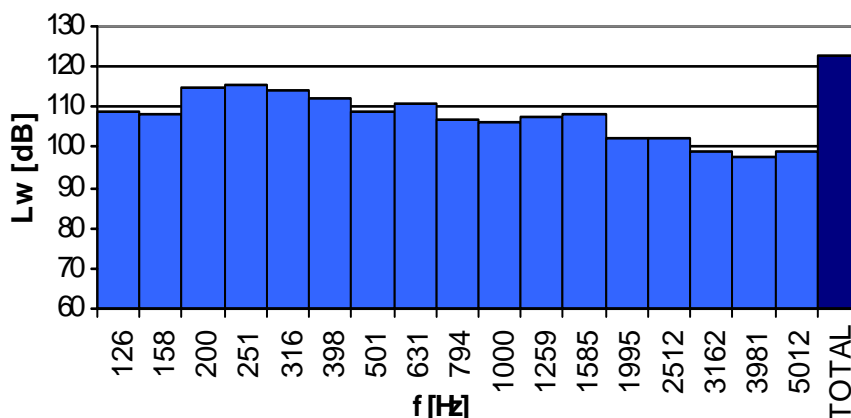
ISO 3382

Sound power level

123 dB PWL (with pink noise, 1/3 octave band with central frequencies between 100 – 5000 Hz) when fed by the AP600 amplifier. To know the spectral distribution see the diagram.



Transport of the AP600



Frequency distribution of the BP012 sound power level

Omni-directional

The directivity of the BP012 fullfills the directivity criteria required by the ISO 140 and ISO 3382. See diagrams in the following page.

Operative frequency range

1/3 octave band with central frequencies between 100 – 5000 Hz.

Maximum input power

600 W rms

Nominal impedance

6 W

Connector

4 pins Speakon © de (+1, -1)

Dimensions and weight

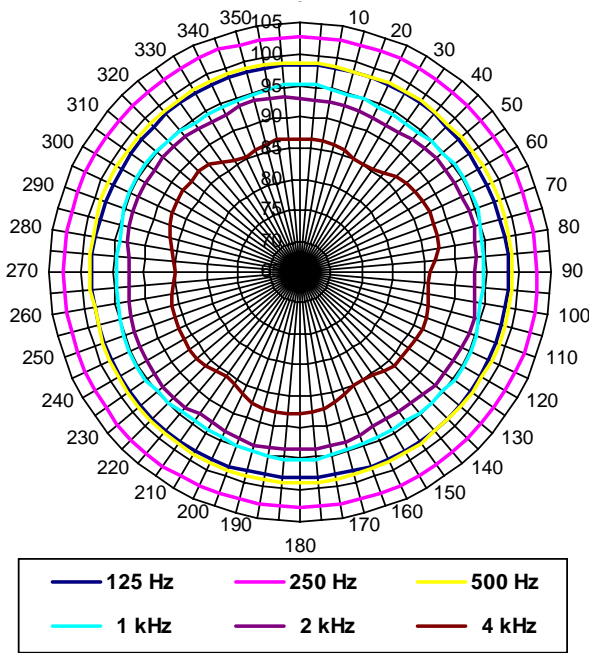
Diameter: 40 cm

Weight: 19,7 kg

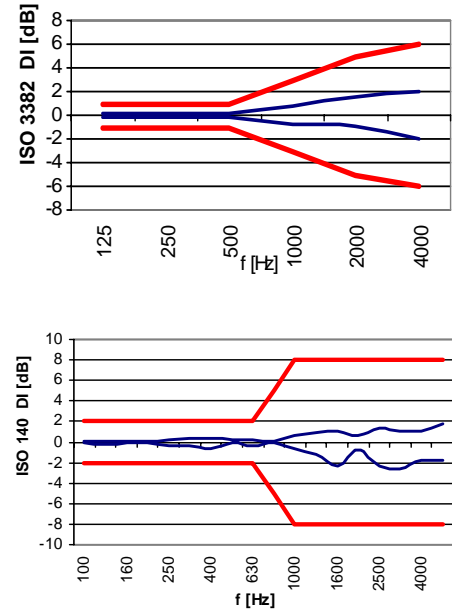


Flighcase FL012

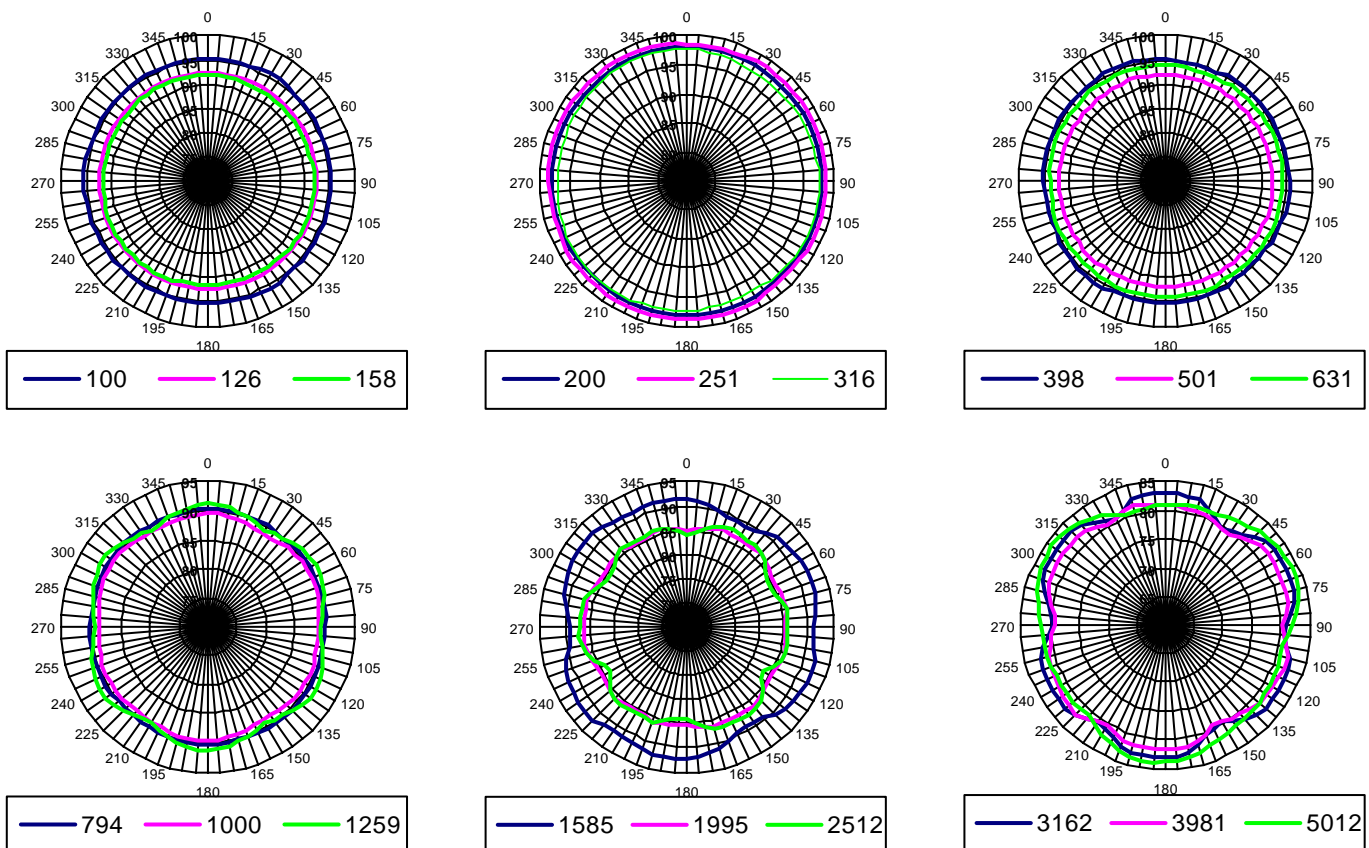
Directivity diagrams for the octave bands centred in 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz and 4 kHz:



Directivity (D) of BP012 according to ISO 140 and ISO 3382 standards:



Directivity diagrams for the third octave bands centred in 100 Hz, 125 Hz, 160 Hz, 200 Hz, 250 Hz, 315 Hz, 400 Hz, 500 Hz, 630 Hz, 800 Hz, 1000 Hz, 1250 Hz, 1600 Hz, 2000 Hz, 2500 Hz, 3150 Hz, 4000 Hz and 5000 Hz:



FP120 Sound Source

Technical specifications Noise Generator AP600



FP120 Set



AP600 Noise Generator

Output power

4 W :	940	W
6 W :	680	W
8 W :	550	W

Frequency response

6 – 90000	Hz
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Total harmonic distortion

to 1kHz. and mean power < 0,07	%
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Signal to noise ratio

> 85	dB
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Damping Factor

to 1 kHz and 8W >	300
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Slew rate

± 80	Vms
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Consumption

1560	VA
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Inputs and outputs: connectors

- Loudspeaker Signal Output: 4 pin Speakon® (+1, -1)
- Line Signal Output: Male XLR: pin 1 → ground, pin2 → hot, pin3 → free.
- Line signal Input: Female XLR: pin 1 → ground, pin2 → hot, pin3 → free.
- Output connector: Jack of 5 mm Ø ext, 2.1 mm Ø int, 9.5 mm
- RS-232 port: 9 pin female SubD
- Line signal output: USB type B

Indicators

CLIP: Clipping Indicator

TH: Thermal protection Indicator

PROT: Protection indicator

Dimensions and Weight

Dimensions:	585 x 455 x 215	cm
Weight:	25	kg



Tripod for the BP012



CN012 Cable

Tripod TR012: Tripod to support the BP012, can have different heights: from 1.0 m to 2.5 m

Flightcase FL012: Carrying case in rack format to transport the BP012. The FL012 has been designed as a trolley to make ease its mobility.

Cable CN012: 10 m loudspeaker cable with 4 pin speakon connector in the side connected to the BP012. The other connector is also a 4 pin speakon. Optionally different cables to the standard can be supplied.

Carrying bag BM012: Bag of cloth to transport the BP012.

Software SF600: Software for the remote control of the AP600

Cable USB CN2US: USB cable for the communication of the AP600 with a computer.

Bluetooth™ Device BT001: Bluetooth device for the wireless communications of the AP600.

Supplied Accessories

FL012	Flightcase
CN012	Loudspeaker cable
CN2US	USB cable

Optional Accessories

TR012	Tripod
BM012	Carrying bag
BT001	Bluetooth™ device for the Sound Source
BT002	Bluetooth™ device for the PC

The characteristics, technical specifications and accessories may vary without prior notice