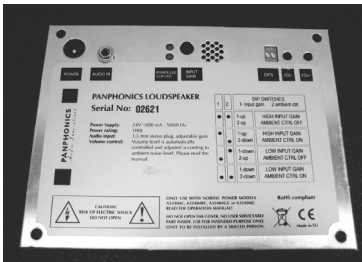


Installation

Panphonics recommends that the Sound Sign is installed utilizing a VESA 100 compatible bracket. The Sound Sign is equipped with M4 threads in the VESA 100 pattern on the rear cover.

Always fix the loudspeaker securely so that it can not fall on anyone. Installation should be carried out by a skilled person. Not suitable for in-wall mounting.



Using the Sound Sign

Rear plate items, left to right:

- Power in (24VAC / 400mA)
- Audio in, 3,5mm stereo jack, unbalanced
- Power led (green)
- Clip led (red)
- Input gain adjustment
- Microphone
- Dip switches for low/high input gain and ambient control on/off
- Volume down
- Volume up

Connect your audio source to the Sound Sign with a stereo audio cable that has 3,5mm plug at one end to fit the Sound Sign.

Dip switches

The two dip switches are used to choose between low and high input gain and ambient volume control on or off.

DIP SWITCHES		1 input gain	2 ambient ctrl
●	●	1-up 2-up	HIGH INPUT GAIN AMBIENT CTRL OFF
●	●	1-up 2-down	HIGH INPUT GAIN AMBIENT CTRL ON
●	●	1-down 2-up	LOW INPUT GAIN AMBIENT CTRL OFF
●	●	1-down 2-down	LOW INPUT GAIN AMBIENT CTRL ON

Adjusting input gain

To get the maximum level out of the Sound Sign without overdriving it or causing distortion to the sound, follow this procedure to set the input sensitivity of the Sound Sign to an optimum level. This is only done when the loudspeaker is set up for the first time or if the driving device is changed to another model.

- Adjust the volume of the driving device (pre amplifier, mixing console, CD-player etc.) to its maximum setting. If it is known that some lower volume setting will be the maximum used, adjust the source to this volume setting.
- Adjust the volume on the Sound Sign to the maximum by pressing the volume up button repeatedly until the volume level does not increase anymore. One press of a volume button will adjust volume by approximately 0,75dB.
- Adjust the input gain of the Sound Sign so that the clip led flashes only randomly during playback. If the clip led flashes continuously or is lit, adjust gain to a lower value. To increase gain turn the adjustment screw clockwise. Do not use excessive force.
- If the sound is clipping and distorted even with very low gain setting, switch the input sensitivity dip to the low gain position. The Sound Sign has two input sensitivity levels that are chosen with the left dip switch.

When gain is correctly set the Panphonics Sound Sign will not clip even when driven with maximum volume setting of the driving device. Correct gain setting will give out maximum SPL without distortion.

In daily use it is not necessary to adjust gain on the Sound Sign. Volume level is adjusted either by the audio source or with the volume adjustment on the Sound Sign. Adjusting volume level at the source will affect all the Sound Signs driven with that source. Adjusting volume locally with the volume level buttons on the Sound Sign will only affect that particular loudspeaker.

The Sound Sign is turned off by disconnecting mains power by removing the power supply unit from the mains socket. Notice that disconnecting the power plug from the loudspeaker does not disconnect mains power from the power supply unit.

Setting desired volume level

Set the Sound Sign to a desired volume level by pressing the volume up and down buttons. The buttons have to be pressed repeatedly, holding the button down will only change the volume by one step. Use the same media that will be played after set-up.

When setting the volume level it is important to remember that sound reflects from all hard surfaces. To avoid unnecessary reflections that spread the sound adjust the volume level so that the media is easily heard and understood in the desired area.

Automatic volume adjustment

The volume level may be automatically adjusted to compensate for ambient noise level changes. The automatic ambient noise level monitoring enables keeping the perceived volume at a desired level. This option may be enabled or disabled by using the right hand dip switch on the Sound Sign. When enabled, the Sound Sign will monitor the ambient volume level and adjust the volume level automatically to compensate.

After the desired volume level is set with the volume level buttons on the Sound Sign, the Sound Sign will measure the ambient noise level during the next pause in the media and use these values as reference. The ambient noise reference will be measured during a 12s period, best results are obtained when the ambient noise is static during the reference measurement period. The ambient noise reference level will be measured every time after the volume level is adjusted. After the reference ambient noise level has been measured the volume level will be automatically adjusted if the ambient noise level changes. The ambient noise level is only measured when there is no media played. This is to avoid mixing the audio signal with the ambient noise.

If the used media has no pauses (a few second silences), it is advisable to stop the media for a while after setting the volume level in order for the loudspeaker to be able to measure the reference ambient noise level.

In case the ambient noise level increases very quickly, the change is discarded by the Sound Sign. This is to prevent raising the volume level during announcements or other short events that suddenly raise the ambient noise level very high for a moment. If the ambient noise level stays at this higher level for over 30 seconds Sound Sign will interpret it as a non-temporary change and will adjust the volume accordingly.

To avoid pumping the volume level up and down, the volume level change is restricted to approximately 1,5dB at one measurement loop which corresponds to two adjustment steps (equivalent to two volume button presses).



Trouble shooting

- Green power led is not lit -> Check that the power unit is properly installed into a wall socket and the power plug is fully inserted into the amplifier power inlet
- No sound, power led on -> Make sure audio is playing and that the audio source is properly connected to the Sound Sign. Also check that the source is not on "mute"
- Very weak sound -> check the gain dip switch position, input sensitivity setting and volume setting (press volume up repeatedly)

Maintenance

The Panphonics Sound Sign does not need periodical maintenance. If needed, the cover canvas may be changed by gently pulling the canvas out and placing a new canvas in. The canvas is held in place by springs under the audio elements. If the canvas is moved during shipping it can be easily straightened out by pressing down gently with your hand holding fingers out and pulling the canvas towards the edges and back under the edge.



Sound Sign technical description

Physical dimensions and properties

Dimensions	204mm x 34mm (H x W), length 600mm or 995mm. (8 inches x 1.3 inches (H x W), length 23.6 inches or 39.4 inches)
Weight	1,2 kg (2,6 lbs) / 1,8 kg (4 lbs)
Colour	White, black or aluminium grey. Covering canvas changeable.
Installation	VESA 100, M4 threads.
Audio properties	Maximum output sound pressure level > 80dB
Operation principle	Bridged mono (internal stereo to mono conversion)
Frequency range	400Hz - 16 kHz (-6dB/oct.)
Audio footprint (Sound Sign 1000)	3 - 5 m wide by 15 - 25 m long (15 ft by 49 - 80 ft)
	Automatic volume control relative to changes in ambient noise level (can be disabled)

Electrical properties

External power supply	24V / 400mA AC power supply (US, UK or Europlug) Use only Nordic Power models A32404C, A32404BC, A32404GC or A32404JC. Output plug diameter 2,1mm / 5,5mm (center / out).
Input impedance (audio IN)	10kΩ
Input voltage (audio IN)	50mV - 2V, adjustable gain
Input (audio IN)	3,5mm stereo jack, unbalanced
	Adjustable input gain Power indicator led (green) Audio input overdrive indicator (clip) led (red)

IMPORTANT SAFETY INFORMATION

- The active Panphonics Sound Sign loudspeaker is designed to be used with supplied power source only. Power source models listed in technical description.
- Disconnect unit from mains voltage before making any connections.
- Read all documentation before operating your equipment.
- Follow all instructions.
- Do not remove the rear cover. No user serviceable parts inside.
- Make sure power outlets conform to the power requirements.
- Do not operate the unit on a surface or in the environment which may impede the normal flow of air around the unit.
- Do not use the unit near high heat producing devices.
- Do not drive the input with a signal level greater than that required to drive equipment to full output.
- Do not spill water or other liquids into or on the unit.
- EQUIPMENT SHOULD BE INSTALLED AND SERVICED BY A SKILLED PERSON ONLY.
- The product label is located on the loudspeaker rear plate.

For further information or any questions, please contact Panphonics service.

Panphonics Oy / +358 9 8193 8560
Olarinluoma 16/ info@panphonics.fi
02200 Espoo, Finland/ www.panphonics.fi

Terms of Warranty

Panphonics Oy warrants to the original purchaser that this Panphonics Oy's product (the "Product") will be free from defects in materials, design or workmanship, on the following terms and conditions:

- Panphonics Oy's Audio Elements have been tested at the place of manufacture in accordance with the quality control of Panphonics Oy. Each notice of defects in the Product will be compared to the quality control record of the said Product. The Limited Warranty does not include deviations in audio performance characteristics of the Product if the performance characteristics entered into the quality control record have been correct and the purchaser cannot provide positive proof to the contrary, for example, inadequate transportation procedures. Panphonics Oy's products are sensitive to mechanical and environmental damage.
- 1) The period of warranty will be twelve (12) months from the date the original purchaser took possession of the Product, or should have taken possession of the Product if the receipt of the Product was delayed due to a cause attributable to the purchaser. In case the original purchaser sells or otherwise assigns the Product to a new owner/user, the period of warranty will continue unaltered until the end of the original period of warranty.
- 2) During the period of warranty Panphonics Oy or its authorized maintenance services will either repair the defective Product or replace it with a new Product, at Panphonics Oy's option. Panphonics Oy will return the repaired Product or deliver a new Product to the purchaser in working order. All replaced parts and equipment will become the property of Panphonics Oy.
- 3) This Limited Warranty does include mechanical defects of the Product and significant deviations between technical data and performance characteristics of the Product.
- 4) The repaired or replaced Product will not be given extended or additional period of warranty.
- 5) This Limited Warranty does not include defects caused by normal wear and wear. In addition, this Limited Warranty will not be valid if:
- i) The defect was due to
 - a. The use of the Product either contrary to instructions or otherwise negligently;
 - b. The Product being exposed to moisture, steam, extreme temperature or environment, or rapid changes in such, or corrosion or oxidation;
 - c. The Product being altered, connected to another product, opened or repaired without authorization or the Product being repaired with spare parts not approved by Panphonics Oy;
 - d. The Product being misused or installed incorrectly, or
 - e. The Product having been in on an accident or been exposed to the elements or spilled over with food or liquid, or been affected by chemical substances or other events beyond the scope of influence of Panphonics Oy, including but without limitation to labor dispute and every other event Panphonics Oy cannot reasonably be expected to overcome, for example fire or other natural catastrophe, war, rebellion, seizure, monetary exchange control, mandatory legislation, orders

of authorities, refusal of export license, scarcity of transportation, general scarcity, restrictions in the use of power, and defects and delays of subcontractor's delivery caused by the above-mentioned causes unless the damage has been direct consequence of a defect in material or design or workmanship;

- ii) The purchaser has not informed Panphonics Oy or its authorized maintenance services about the defect within thirty (30) days from the occurrence of the defect during the period of warranty.
- iii) The Product has not been returned to Panphonics Oy or its authorized maintenance service within thirty (30) days from the occurrence of the defect during the period of warranty.
- iv) The serial number of the Product has been transferred, removed or damaged, or any number has been altered or is impossible to read.
- v) The defect was caused by the malfunction of an electronic appliance not provided by Panphonics Oy;
- vi) The defect was caused as a consequence of the Product being used with an accessory, which was not manufactured, approved or provided by Panphonics Oy, or the Product was connected to such accessory, or the Product was used for other purposes than instructed, or the Product has been connected to such electronic system, which does not operate customarily compared to the normal use of the Product.
- vi) The defect was caused as a consequence of an acoustic or electric overloading of the Audio Element.
- 6) In order to be able to invoke this Limited Warranty, the purchaser must provide either i) readable and unaltered original sales receipt/warranty card, which clearly sets out the name and address of the seller, the date and place of the purchase, the type of the Product and serial number, or alternatively ii) readable and unaltered original sales receipt, which brings out the same information if produced to the seller/supplier of the Product.
- 7) The purchaser's rights against Panphonics Oy based on defects or defective functions of the Product are limited to this Limited Warranty. This Limited Warranty will supersede all other oral, written, statutory (unless mandatory), contractual and other warranties and liabilities. In no event will Panphonics Oy be liable for unforeseen, incidental, consequential or indirect damages or expenses. Should the purchaser be a company or other legal person, Panphonics Oy will not be liable for direct damages or expenses. Unless contrary to mandatory provisions of law, the purchaser will be finally responsible for product liability.
- 8) Any amendment or supplement to the terms of this Limited Warranty is binding on Panphonics Oy only if Panphonics Oy has beforehand accepted in writing to the amendment or supplement.

The defective Product must be shipped to Panphonics Oy on the purchaser's expense.

Panphonics Oy
Teollisuustie 13
FIN-33330 Tampere
Finland

DECLARATION OF CONFORMITY

We, Panphonics Oy, affirm that the products manufactured by us fulfill the relevant EU directives: Low Voltage Directive (LVD) 73/23/EEC and the Directive of Electromagnetic Compatibility (EMC) 89/336/EEC.

Product names Sound Sign, Sound Shower®, Sound Attraction, Privacy Solution

Manufacturer Panphonics Oy, Olaninluoma 16, FI-02200 Espoo, Finland, Tel. +358 9 8193 8560

Espoo, Finland March 2007

Kimmo Kymnös, Director of Operations



Operation Manual v2.1

Product Description

The Panphonics Sound Sign is a mono loudspeaker equipped with a Panphonics AA-40a amplifier and Panphonics audio elements. The AA-40a is designed to produce the needed 40Vrms to drive Panphonics elements at SPL's over 80dB. It is optimized to handle the reactive load of the Panphonics audio elements. The Sound Sign can be connected directly to a program source, preamplifier or mixing systems.

Panphonics Sound Sign is designed to be used in applications where a narrow but long audio corridor is required. It is found especially suitable in different retail applications to be used e.g. together with a plasma or a LCD screen.

The Sound Sign is equipped with an ambient monitoring system which continuously monitors the ambient noise level and adjusts volume level if necessary. This feature may be turned off if wanted.

PANPHONICS OY

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