

ASD PRIVACY SYSTEM PRO 100

Flexible Sound Masking System
for Any Space or Setup



ASD

ADVANCED SOUND DESIGN

THE OFFICE OF TODAY AND TOMORROW



Open-plan offices are the new **normal!**

Over 70% of offices are now open office environments and this trend is set to continue.¹

In tandem with technological development, office landscapes have changed dramatically over recent years. Incidental noise, such as that from loud keyboards and fans inside computers, has practically vanished, while printers have been banished to side rooms. The old whirr of background noise is gone, and speech can be clearly understood.



THE QUIETNESS HAS BECOME A PROBLEM!

¹ International Facility Management Association, „Space and Project Management Benchmarks, Research Report #34“

WHY IS QUIETNESS IN THE WORKPLACE A PROBLEM?



Lack of acoustic privacy has a negative impact on **productivity!**

When other people's conversations are easily overheard, this becomes very distracting. Unwanted eavesdropping disrupts our internal monologue and makes it very hard to concentrate.

21.5 minutes
are lost every day due
to unwanted acoustic distraction.²

HERE'S AN EXAMPLE:



This drop in productivity leads to considerable financial losses for businesses. 21.5 minutes a day correspond to approximately 4.5% of the average working day per employee (based on an eight-hour day). This means that a company with 40 employees and average salary costs of 50,000 euros per person loses up to 90,000 euros each year.

Studies show that employees get interrupted every 11 minutes and that it takes up

23 minutes,

before they are able to return to their work.³

² Haapakangas, Helenius, Keskinen, Hongisto, 9th International Congress of Noise as a Public Health Problem 2017

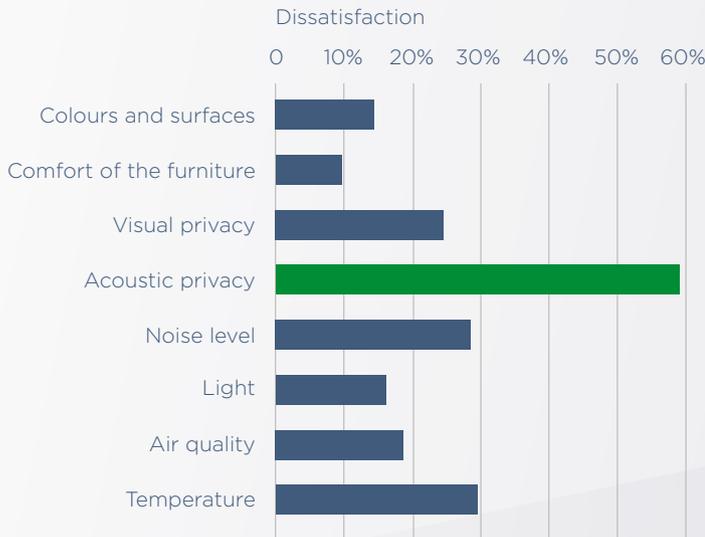
³ Gloria Mark „The Cost of Interrupted Work: More Speed and Stress“ University of California 2005

LACK OF PRIVACY HAS A NEGATIVE EFFECT!!



Health and comfort

Over half of employees working in cubicle-based and open-plan offices are dissatisfied with the level of acoustic privacy in their workplace.



Unwanted eavesdropping impairs office co-workers' ability to concentrate

A study into this issue⁵ was conducted in 21 open-plan offices (875 people). 82% of respondents rated intelligible speech from co-workers as the biggest disruptive factor. The study corroborated the use of masking for establishing good working conditions in open-plan offices.

When it comes to office design, the key acoustic requirement is to minimise the disruptive sound of employees talking... through adequate damping, absorption, screening and masking.⁶

Productivity losses of up to **54%** result when people do not feel happy or at ease in the workplace.⁴

Obstacles to good communication create a productivity loss of up to⁷

40%

⁴ Workspace satisfaction: The privacy-communication trade-off in open-plan offices - Jungsoo Kim, Richard de Dear - Journal of Environmental Psychology 36 (2013) 18-26

⁵ Studie des Finnischen Instituts für Arbeitsgesundheit und der Universität Turku Finnland im Auftrag der Acoustical Society of America (2017)

⁶ VDI 2569 Oktober 2019: Schallschutz und akustische Gestaltung im Büro, Verein Deutscher Ingenieure e.V. Düsseldorf

⁷ Fraunhofer Institut für Arbeitswirtschaft und Organisation (IAO) 2005

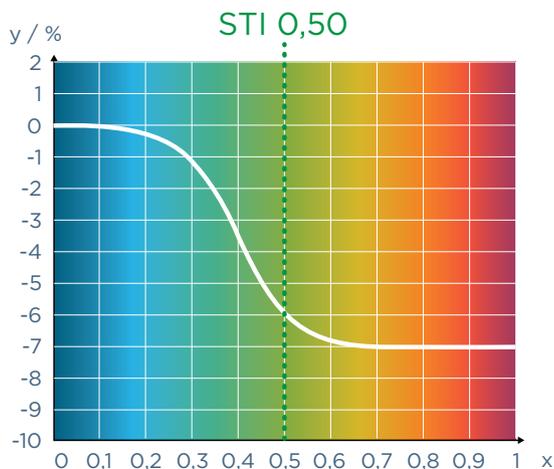
ACOUSTIC PRIVACY AND DATA PROTECTION



Concentration

According to DIN EN ISO 3382-3 (appendix B), talking is the most disruptive and loudest sound source in open-plan offices.

Where the intelligibility of background speech (vocal noise) is above 50% (STI > 0.5), the error rate increases by up to 40%, i.e. cognitive productivity in open-plan offices is significantly reduced.



Security and confidentiality

53% of employees admit that they have overheard confidential company information.⁸

Failure to protect confidential information during conversations can have legal consequences, e.g. if uninvolved third parties overhear client financial or health data.

Unwanted eavesdropping on confidential conversationse

53%

The General Data Protection Regulation (GDPR) requires that what are known as technical and organisational measures (TOMs) be taken to ensure the necessary data security. Technical precautions aimed at data security are a key aspect in relation to the protection of personal data and rights. This includes the selection of appropriate security tools for reducing the level of intelligibility between consultation areas and in multi-occupancy offices, for example.

⁸ National survey conducted by Harris Poll on behalf of CareerBuilder from November 4 to December 2, 2014.

THE SOLUTION: SOUND MASKING

Sound masking is an important tool
for increasing **privacy** in the workplace!

WHAT IS SOUND MASKING?

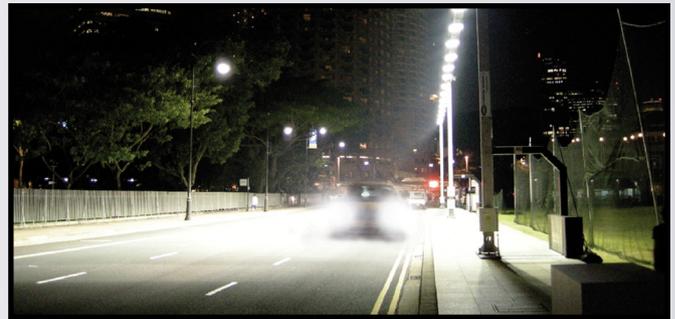
Sound masking is the process whereby a modest level of discreet background noise – SOUNDS OF NATURE in the case of the ASD PRIVACY SYSTEM – is added to an environment. This reduces the intelligibility of speech and creates a more pleasant acoustic environment.

HOW DOES SOUND MASKING WORK?

Let's take an example: we are dazzled by the headlights of a vehicle coming towards us on a dark street at night, but not in brighter environments, even though the light intensity is the same – because of the lower CONTRAST/DYNAMIC RANGE.



- Bright headlights
 - Total darkness
 - High contrast = high dynamic range
- UNPLEASANT, DISHARMONIOUS SITUATION

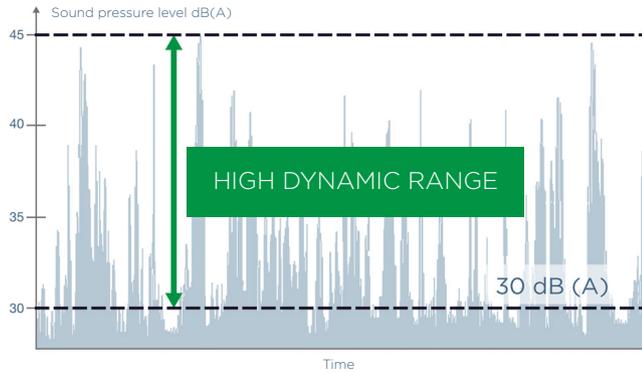


- Bright headlights
 - Street lighting
 - Low contrast = low dynamic range
- PLEASANT, HARMONIOUS SITUATION

WHAT IS THE EFFECT OF SOUND MASKING?

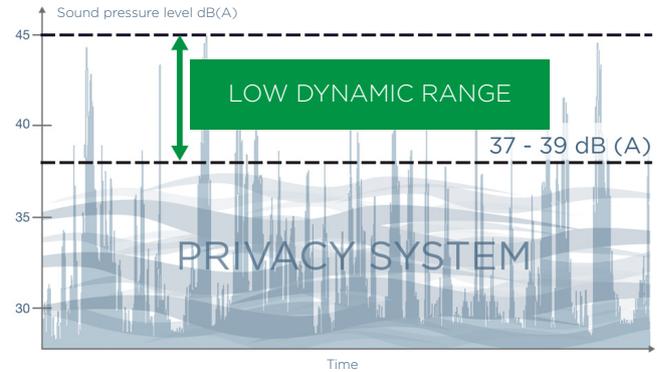
THIS PRINCIPLE ALSO APPLIES TO HUMAN SPEECH:

WITHOUT A PRIVACY SYSTEM



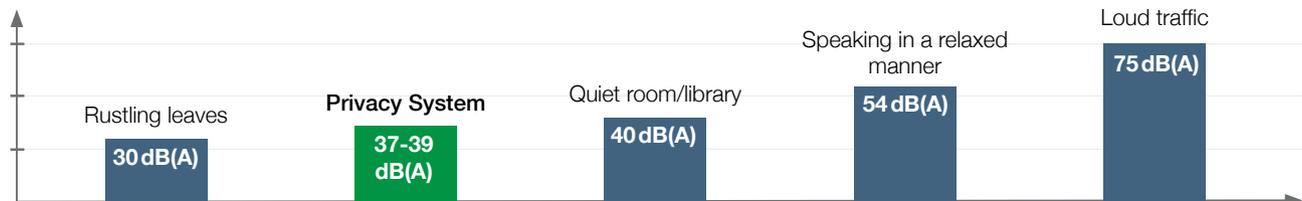
Typical differences in speech sound levels over a given time

WITH A PRIVACY SYSTEM



Playing calm background sound reduces the dynamic range appreciably.

The ASD Privacy System plays sounds of nature in the workplace at sound pressure levels of 37-39 dB(A), 75-84% below the permitted upper limit of 45 dB(A) as per ASR A3.7 (ASR = technical rules for workplaces in Germany).⁹



With harmonious sound masking, conversations of others in the same room are much less intelligible and, therefore, less likely to distract us. Sound masking tends to quieten the total noise volume in a room.

⁹ ASR A3.7 Lärm Ausgabe Mai 2018, Ausschuss für Arbeitsstätten (ASTA) - Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA)

ASD PRIVACY SYSTEM SOUND MASKING FOR THE FUTURE!

SOUNDS OF NATURE



The ASD PRIVACY SYSTEM uses especially effective masking sounds designed in a sound studio from sounds that occur in nature. They seem familiar to our ears and are screened out more quickly by our brain.

We no longer have a contextual reference point for identifying the sounds, such as rain, crackling fire or an evening breeze.

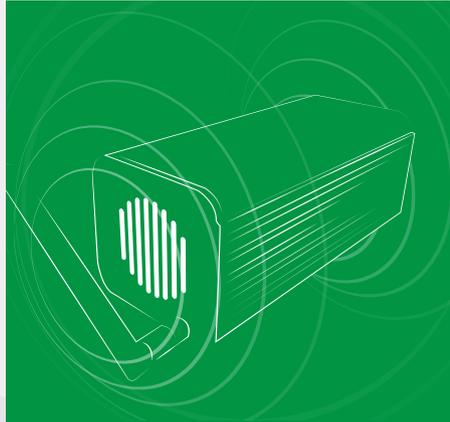
By using a mix of different sound elements to create a harmonious, floating, unobtrusive tapestry of sound, we ensure acoustic well-being and a clear reduction in the level of speech intelligibility in the room.



Conventional sound masking systems use purely synthetic masking noises, such as pink or white noise. Our approach makes the ASD PRIVACY SYSTEM unique in the marketplace.



ASD PRIVACY SYSTEM ACTIVITY BASED SOUNDS



Thanks to their very compact design and almost omnidirectional sound output, produced by arranging two loudspeakers back to back inside the one housing unit, the devices can be flexibly installed wherever the system should create its effect - normally right under a workstation desk.

The result is a pleasant, almost inaudible tapestry of sound.

When our ASD PRIVACY SYSTEM is installed directly at the workstation, its acoustics can be precisely adjusted to the users' needs. In addition, it is virtually impossible to localise the sound coming from the devices under the desks. This then creates a very harmonious, natural and even beat in the room, which in turn promotes well-being in the workplace.

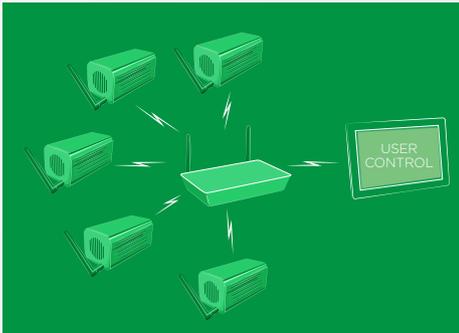


The ASD PRIVACY SYSTEM increases acoustic privacy and reduces the intelligibility of speech in modern working environments.

FLEXIBILITY NOW AND IN THE FUTURE

UPGRADABLE LINUX OPERATING SYSTEM

Reliable and future-proof: each device comes pre-installed with a fully functional and upgradable Linux operating system. Adjustments can then be made and further software modules with additional functionalities can be integrated into the system at any time.

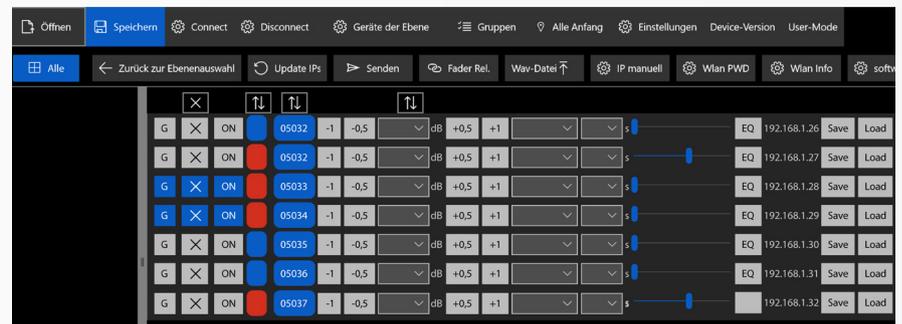


SET-UP VIA WI-FI

The ASD PRIVACY SYSTEM is controlled via a dedicated, closed and encrypted Wi-Fi network.

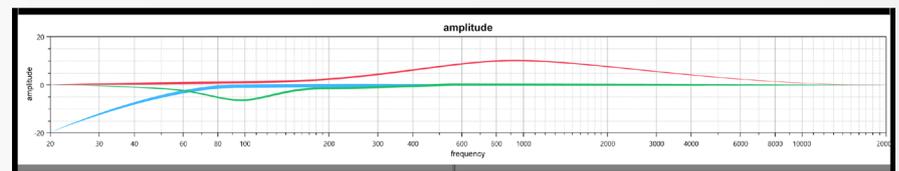
USER CONTROL

All devices can be simply and intuitively operated on a Microsoft Windows 10 compatible laptop or tablet via the easy-to-use user interface. You always have an overview of all devices and parameters thanks to the operating matrix developed specifically for the system.



ALL PARAMETERS ADJUSTABLE

Every parameter (volume, sound, etc.) of every device can be individually controlled. This improves the consistency of the tapestry of sound generated.



A fully parametric, individually adjustable equaliser can be assigned to each device. This enables even better adaptation of the sounds used in the devices to the spatial requirements.

FLEXIBILITY IN SPACE AND TIME



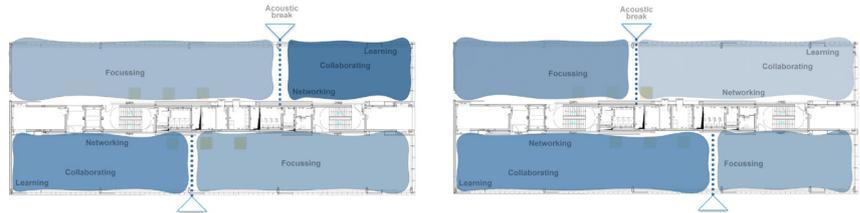
ZONING

Large office layouts can be divided into zones according to the activities involved (e.g. to create communications areas or confidentiality). Different sounds and volume levels can be chosen for each area, based on the acoustic requirements of the space..

SCENARIOS

Zoning schemes based on space, time or activity: the ASD Privacy System adapts to each and every requirement of your activity-based style of working.

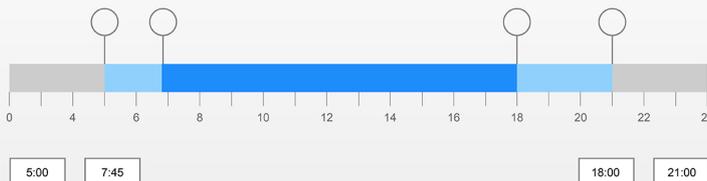
Here's an example:



USER-FRIENDLY TIME SETTING

Same schedule for Monday to Sunday
 Monday to Friday, Saturday, Sunday
 Individual schedule for each weekday

Mon	Tues	Wed	Thurs	Fri	Sat	Sun
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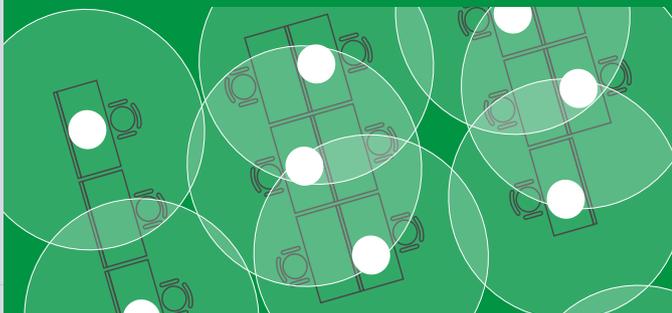


The system volume can thus be faded in or out slowly over a defined period (e.g. 30 minutes). Specific operating and working hours can also be set (for example: Mon-Thurs 0900-1800, Fri 0900-1600, off at the weekends) to ensure that the devices are only switched on and providing their effect while the offices are occupied.

FLEXIBILITY IN INSTALLATION AND FITTING

POSITION ANYWHERE

Unlike other sound masking systems, the ASD PRIVACY SYSTEM is fitted where it can get the best results – right under a workstation desk. All that is needed is a power supply. This opens up many possibilities.

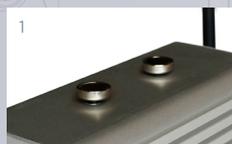


RELOCATION

The devices can be easily relocated and then adapted to a new space with potentially different uses.

MOVES

Your investment is safe, as you can take the system with you when moving out of rented premises.



HIGHLY VERSATILE FIXING SYSTEM

The versatile fixing system can be fitted in a number of ways, e.g. using Velcro tape or magnets.

- 1 Magnet fixing
- 2 Clip-on plastic bracket
- 3 Top hat rail for plastic bracket
- 4 Velcro tape



ASD PRIVACY SYSTEM TECHNICAL DATA



NAME	ASD PS PRO 100
MANUFACTURER	ASD Advanced Sound Design GmbH
CATEGORY	Dual, omnidirectional loudspeaker
DIMENSIONS (HxWxD)	66 x 71 x 153 millimetres
WEIGHT	692 grams
DEVICE COLOUR	Metallic silver
LAUNCHED	January 2019 (Generation 3)
OPERATING SYSTEM	Linux (internal)
USER INTERFACE	aOS 3.0 for Windows 10 compatible tablets Set-up via Wi-Fi
POWERSUPPLY	230 volts
MAINS ADAPTER	12V/1,0A (included)
POWER CONSUMPTION	< 1,5 watts per device



PATENTED
TECHNOLOGY
DE 10 2014 107 616 B4

DEVELOPED AND
MADE IN GERMANY

WHO BENEFITS FROM SOUND MASKING?



COMPANIES

Protect privacy and increase productivity by reducing disruptive noise.



EMPLOYEES

Take advantage of a more pleasant working environment with fewer distractions.



FACILITY MANAGERS

Increase employee satisfaction and reduce operating costs.



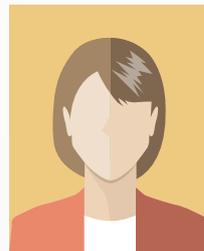
HUMAN RESOURCES, DATA PROTECTION AND COMPLIANCE OFFICERS

Maintain adherence to all data protection and confidentiality laws (GDPR).



ARCHITECTS

Improve the acoustic environment of new or refurbished premises.



PLANNERS

Enhance privacy in the workplace without unnecessarily adding any further sound blocking or absorbing materials.



CO-WORKING OPERATORS

Increase the value of your space through a balanced acoustic design.



GENERAL CONSULTANTS

Create a communicative working environment without compromising on the acoustics.

WHERE IS SOUND MASKING USED?

LARGE MULTI-OCCUPANCY OFFICES AND OFFICE ENVIRONMENTS



Workspaces
Communication and concentration areas
Co-working spaces

MODERN WORKING ENVIRONMENTS



Activity-based working
Desk sharing
Work cafés
Presentation areas

RECEPTION AREAS/ LOBBIES



Health insurance companies
Hospitals and clinics
Hotels
Banks

CUSTOMER CENTRES



Health insurance companies
Clinics
Hospitals
Offices and consultation areas
Banks and insurance companies

MEDICAL FACILITIES



Hospitals
Clinics
Care homes
Intensive care wards
Pharmacies

AREAS WITH INCREASED NEED FOR CONFIDENTIALITY AND DATA PROTECTION



Financial services
Customer service centres
Health insurance companies
Insurance companies
Co-working spaces

RESIDENTIAL AREAS



Where there is poor sound insulation and/or outside noise

SOUND INSTALLATIONS



Restaurants
Canteens
Foyers
Sales rooms
Events and trade fairs

ASD

ADVANCED SOUND DESIGN

www.advanced-sound-design.de