

Roadworx Sound Masking Solutions smartSMS-NET.

Sound
Masking



Networked Smart Sound Masking System

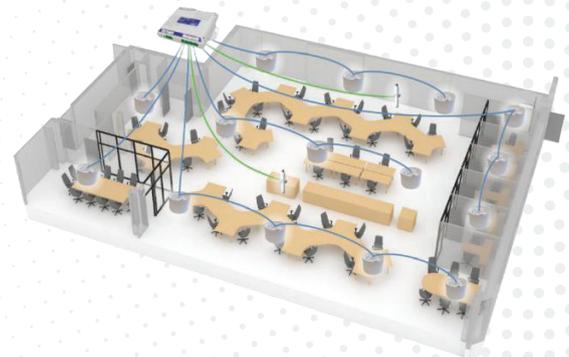


Flexibility, simplicity and unrivaled sound masking quality

The smartSMS-NET sound masking system allows for the implementation of advanced sound masking systems thanks to its network structure and a broad range of controllers. The systems flexibility makes it cost-efficient for small simple systems as well as large and advanced sound masking systems.

Each smartSMS-NET controller provides:

- Up to 8 output channels per controller
- Up to 12 speakers per output channel
- Independent equalizer for each output channel
 - 340 narrow bands automatic equalizer
 - 1/3rd octave bands automatic or manual equalizer
- High-power amplifier providing 92dBa at 1m
- Up to 8 inputs for active volume control sensors
- Up to 4 music and paging inputs with independent 1/3rd octave equalizers for each output channel
- 2 inputs for wall mounted volume control knobs



The smartSMS-NET sound masking system includes features that improve the quality of sound masking technology:

- Adaptive volume adjustment for optimal efficiency and comfort (US Patent 8116 461)
- Automatic equalization that guarantees the optimum sound masking spectra (US Patent 7460675)

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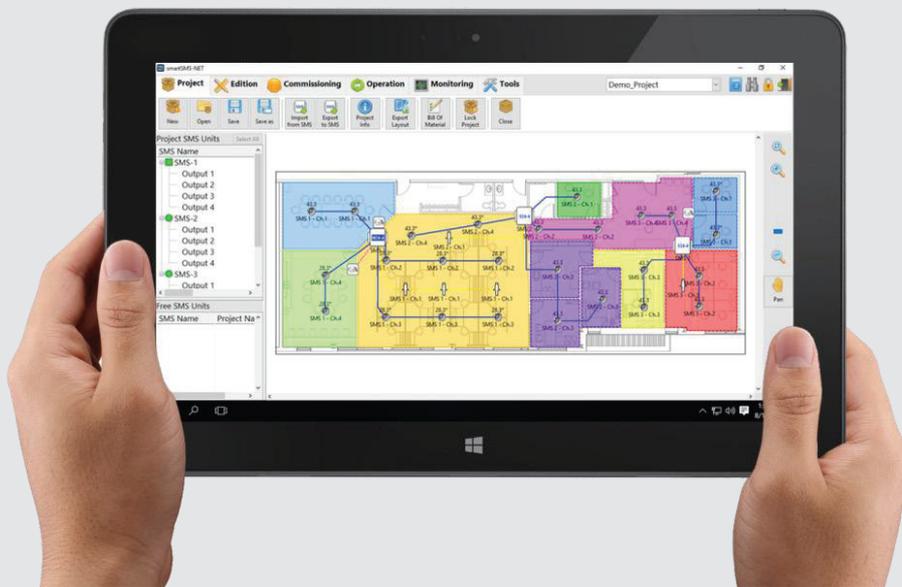


Project Manager Software

The Roadworx Project Manager Software allows the user to easily see, access, and control each loudspeaker or group of loudspeakers with a state of the art graphical user interface.

Designed with touch screen features in mind, the Roadworx Project Manager Software integrates the design, calibration and operation stages:

- Place controllers, speakers, zones and wiring schematic directly on the office layout
- Calibrate and setup the system
- Convert the Project manager software to a simple and intuitive end-user control panel



The smartSMS-NET Wifi networked system: A breakthrough in sound masking technology

Simple and highly versatile, without compromise on sound masking performance and quality.

- Wireless network simplifies design and reduces installation costs (no proprietary cables required)
- Adaptive volume control, an exclusive feature that provides unparalleled comfort and efficiency of the sound masking system
- State of the art graphical user interface that integrates the design, setup, and calibration stages directly on the office layout plan.
- 24/7 monitoring and diagnosis feature (optional)

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Specifications	
Sound Masking	
Output channels	Up to 8 per controller (See controller model specifications below)
Sound Masking Equalizer	23 1/3rd Octaves bands from 63Hz to 10kHz
Sound Masking Ref Spectrum	13 pre-set reference masking spectrums; unlimited user defined masking spectrums from 100 to 6,3kHz
Sound Masking Volume	30 to 92dBA in 0.1dB steps and mute
Sound Masking Volume Ramp-Up	User defined, up to 30 days
Active Volume Control	
Nb Sensor Inputs	Up to 8 per controller (See Controller Model Specifications Below)
Max Nb Sensors/Input	6
Control	Independent sound masking volume adjustment for each output channel
Masking Volume Change Rate	Adjustable down to 0.1dB steps, updates every 15s
Active Adjustment Range	User defined; maximum range: -7 to +3dB relative to reference masking level
Music and Paging	
Music and Paging Inputs	Up to 4 per controller (See Controller Model Specifications Below)
Music and Paging Mixer	Independent for each output channel
Music and Paging Volume	30 to 92dBA in 0.1dB steps and mute
Music and Paging Equalizer	20 1/3rd octave bands
Volume Control Knobs	
Volume Ctrl Knob Inputs	2 per controller
Volume Ctrl Knob Mixer	Independent for each output channel (Sound Masking and/or Paging and Music)
Volume Range	User defined
Schedule	
Schedule	24 hour periods per day, 7 days
Volume	0.1dB steps
Transition Ramp	Instant, 2m30, 5min, 10min, or 15min
Schedule Mixer	Independent for each output channel (Sound Masking and/or Paging and Music)
Daylight Saving Time	Automatic Adjustment depending on local time zone settings
Time source	On-Board Real-Time Clock

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Specifications

Monitoring

Monitoring

24/7 system diagnosis (requires computer running Project Manager Software)

LEED

Design Feature

Controller can be put in low-power mode according to daily schedule

Schedule

7 daily periods per week (user defined)

Connectivity

Connectivity

Ethernet, USB or WiFi

WiFi

WPA/WPA2 Personal or WEP, (WiFi module can be disabled if not required)

Project Manager Software

Software Requirements

Windows 7 and later, 1.2GHz CPU, 2GB RAM

Warranty

Warranty

5 years

Certifications – ETL Listed 3191772

UL 62368-1:2014 / CSA C22.2#62368-1:2014 – Audio/Video, Information And Communication Technology Equipment – Part 1: Safety

UL 2043) – Standard for Fire Test for Heat and Visible Smoke Release for Discrete Products and Their Accessories Installed in Air-Handling Spaces

FCC / EN 55103-1&2 – Electromagnetic compatibility-Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use – Part 1: Emissions, Part 2: Immunity

Related ASTM Standards

ASTM E1374-06 (11) – Standard Guide for Open Office Acoustics and Applicable ASTM St

ASTM E1573-09 – Standard Test Method for Evaluating Masking Sound in Open Office Using A-Weighted and One-Third Octave Band Sound Pressure Levels

ASTM E1130-08 – Standard Test Method for Objective Measurement of Speech Privacy in Open Offices Using Articulation Index

ASTM E2638 – Standard Test Method for Objective Measurement of Speech Privacy Provide by Closed Rooms

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Controllers Specifications

Controller Model	ML12-2ch	ML24-4ch	SL24-4ch	ML48-8ch
				
Output channel	2	4	4	8
Max Speakers/Channel	6	6	6	6
Max Spkrs./Controller	12	24	24	48
Active Vol. Ctrl. Inputs ¹	2	4 (4 shared)	4 (4 shared)	8 (4 shared)
Music/Paging Inputs ¹	2	4 (4 shared)	4 (4 shared)	4 (4 shared)
Vol. Ctrl Knob Inputs	2	2	2	2
Form Factor	Mini-Plenum	Mini-Plenum	Mini-Plenum	Mini-Plenum
Power	24V / 15W	24V / 25W	24V / 25W	24V / 50W
Can be a Project Master	YES	YES	NO	YES

Controllers Specifications

Controller Model	SL48-8ch	SL24-8ch	RL96-8ch	RLCTL2-8ch
				
Output channel	8	8	8	8
Max Speakers/Channel	6	3	12	75 ²
Max Spkrs./Controller	48	24	96	600
Active Vol. Ctrl. Inputs ¹	8 (4 shared)	8 (4 shared)	8 (4 shared)	8 (4 shared)
Music/Paging Inputs ¹	4 (4 shared)	4 (4 shared)	4 (4 shared)	4 (4 shared)
Vol. Ctrl Knob Inputs	2	2	2	2
Form Factor	Mini-Plenum	Mini-Plenum	Rack-Mount	Rack-Mount
Power	24V / 50W	24V / 25W	24V / 150W	24V / 15W
Can be a Project Master	NO	NO	YES	YES

1: A shared input can be an active volume control sensor input OR a paging/music input.

2: The RLCTL-8ch does not include power amplifiers. An external audio amplifier must be used in conjunction with the RLCTL-8ch to drive loudspeakers.

A maximum of 75 loudspeakers is recommended to avoid large uneven zones.

3: Wifi Security : WPA/WPA2 Personal or WEP. Wifi module can be disabled if not required.

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Loudspeakers Specifications

Speaker Model	SMS-STR	SMS-FLAT	SMS-SURF4	SMS-VIBX	SMS-DIRECT	SMS-HDN
						
Power	10W	10W	10W	5W	10W	5W
Line Voltage	25V	25V	25V	Note 1	25V	25V
Sensitivity	92dB	85dB	87dB	Note 2	91dB	Note 2
Enclosure Material	Painted steel	Painted Steel	Fireproof ABS and Steel	Fireproof ABS	Fireproof ABS	Fireproof Lexan
Frequency Response	100Hz to 10kHz	100Hz to 10kHz	100Hz to 10kHz	100Hz to 10kHz	100Hz to 10kHz	100Hz to 10kHz
Connectors ⁴	Wire lead	Push-button	Spring Loaded	Screw Terminals	Screw Terminals	Screw-On
Driver	13cm full range	2.5 x 10cm full range	9.5cm full range	Vibration Exciter	12.5cm full range	Vibration Exciter
Color	White or Black	White or Black	White	White	White or Black	White
Mounting	Suspended	Bracket with screw holes	Rotating cams	Self-Adhesive ³	Bracket with screw holes	Self-Adhesive ⁵
Weight	1.9kg	1.13kg	1.2kg	0.14kg	1.6kg	0.47kg
Shipping Weight	2.3kg	1.21kg	1.6kg	0.25kg	1.8kg	0.55kg
Box Dimensions	26 x 26 x 15cm	23 x 29.5 x 9.5cm	17 x 17 x 18cm	14.5 x 14.5 x 3.5cm	14.5 x 14.5 x 3.5cm	21.5 x 17 x 8cm

1: 16 Ohm impedance. Maximum of 4 SMS-VIBX per output channel

2: Sensitivity dependant of surface to which it is mounted

3: Self-adhesive on a clean surface such as painted gypsum. Use construction adhesive on a rougher surface.

4: Recommended wiring is 18AWG / 2 conductor plenum rated cable

5: Construction adhesive; 3M spray can also be used on clean surface.

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Active Volume Control Sensor Specifications	
Active Volume Control Sensor	
	
Sensitivity	70 mV/Pa
Directivity	Omnidirectional
Frequency range	20Hz - 20kHz
Mounting	3/8" Hole in ceiling tile
Color	White
Connector	BNC, supplied with screw terminal adapter
Recommended Wiring	2 conductor shielded, min 22 AWG

Volume Control Knob Specifications		
Active Volume Control Knob	SMS-ZN-VC	SMS-SK-VC
		
Addressing Type	Zone	Speaker
Wall Plate	Decora, 1-gang	
Colors	White, Black, or Almond	
Connector	Screw-on	
Recommended Wiring	22AWG-2 Shielded Speaker	2 Core 14-18AWG