STEGOS

Digital Wireless Boundary Microphone Set

Stegos receiver (RS) - front view

Stegos receiver (RS) - rear view

Stegos boundary microphone (TB)

Features

- For use with standard video conference systems
- Wireless transmission in the approved frequency range of 2.4 GHz
- Immune against radiation of mobile communication devices due to the patented Scudio™ technology
- High noise immunity and safe against unauthorised listening due to Spread-Spectrum and 128-bit encryption key
- eco-friendly due to:
  – Rechargeable NiMH batteries, automatic switch-off
  – Low energy consuming receiver
  – Eco friendly production in Germany
  – Eco friendly disposal, especially of the rechargeable battery cells
  – Compliant with RoHS and WEEE

Receiver

- Power on / Status LEDs for a maximum of four microphone channels
- Flush switch for RF band switching with LED
- Standby button to turn off the microphones
- Headphone connector with volume control to listen to individual microphone channels or the mix signal
- USB connector and RS 232 interface for external operation/monitoring via PC
- Open protocol for the connection of standard media control systems (e.g. AMX®, Crestron®)
- Connection to video conference system via 3-pin Phoenix terminal strip, mini jack (3.5 mm) or 3-pin XLR
- Selector switch for line/microphone level
- Phoenix terminal strip to pickup individual microphone signals e.g. for the use of external DSP devices
- Two antenna connections for antenna diversity (one Rx and one Tx/Rx antenna)

Microphone

- Semi-cardioid polar pattern
- Illuminated multifunction button
- Manual or Push-To-Mute operating mode
- Power on LED / Charging LED
- Operating time of max. 14 hours
- DC connector for power supply operation and charging

Applications

The wireless Stegos system consists of receiver and boundary microphone and has been specially developed for the use with video conference systems. In neighbouring rooms a maximum of three Stegos systems can simultaneously be operated independing from each other.
The receiver provides three different connections for video conference systems: 3-pin Phoenix terminal strip, mini jack (3.5 mm) and 3-pin XLR. The individual microphone signals can be picked up via a multipin Phoenix terminal strip. An RS 232 interface and USB connector are provided for the data exchange with media control systems or PC. The channels LEDs indicate which channel is occupied (red) and which channel is available (green).
With a PC connected to the receiver the volume of the individual microphones and the operating modes On/Off or Push-To-Mute can be selected with the supplied, user-friendly Stegos software.
For internal agreements the function "Global Mute" allows muting all microphones simultaneously by pressing the button of just one microphone. The battery status of the microphones is also displayed. The individual channel settings are stored when the receiver is turned off.
A maximum of four boundary microphones can be operated with one receiver. The boundary microphone provides a semi-cardioid polar pattern with a high gain before feedback. The microphone is powered via integrated rechargeable NiMH batteries. The operating time is not less than 14 hours. The microphone can be recharged or permanently operated via a power supply unit connected to the DC connector. The maximum charging time is 2 hours. An LED on the rear of the microphone indicates the battery and charging status.

Accessories

- Angled rod antennae (2 supplied with each receiver)
- Remote antennae (optional)
- Antenna cables and accessories (optional)
- AC adapter and charger (supplied with the microphone)

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Technical Specifications

General

Frequency range	2400 – 2483.5 MHz (ISM Band)
Bandwidth	22MHz
Modulation	Direct Sequence Spread Spectrum DSSS
Transmission protocol	Digital signal processing acc. to own standard, 128 bit encryption
Max. number of audio channels	4 usable channels per system
Signal-to-noise ratio	80 dB (digital transmission network)
Transmitter power	max. 20 dBm
Range between TB and RS	> 100 m (328 ft) at line of sight
Approval	world-wide

Acoustical boundary microphone (TB)

Transducer type	Condenser (back electret)
Operating principle	Pressure gradient
Polar pattern	Semi-cardioid
Frequency response	20 Hz – 12 kHz
Dynamic range	68 dB (A-weighted)
Open circuit voltage	300 mV/Pa
Max. SPL at 1 kHz	100 dB SPL
RFI proof	Scudio™ technology
Power consumption	approx. 100 mA (microphone open)
Power supply	4.8 VDC via integrated NiMH rechargeable batteries (4 cells, each with 2100 mAh)
Operating time	14 hours at least; DC powered permanent operation possible with CA 2458 charging power supply unit
Charging time with power supply unit (15 VDC, 1.6 A)	max. 2 hours
Temperature range (at < 90% humidity)	+10 °C – +40 °C (+50 °F – +104 °F)
Storage temperature (at < 90% humidity)	-20 °C – +55 °C (-4 °F – +133 °F)
Dimensions (L x W x H)	approx. 138 x 76 x 38 mm (5.4 x 3 x 1.5 in)
Weight	approx. 410 g (0.9 lbs)

Receiver (RS)

Connections (on the rear)	
Balanced, per channel (+6 dBu)	Phoenix terminals (4x3)
Balanced, Mix Signal (+6 dBu/-10dB switchable)	Phoenix terminals / XLR (male) / mini jack (3.5 mm)
Monitor headphone output	1/4" jack (6.35 mm)
Media control / Service	RS 232, 57.6 kbps, 8-N-1
Media control / PC	USB, type B (on the front)
Tx/Rx and Rx antennae	2 N(HF)-connectors (socket)
Power connection	IEC power connection, incl. power cable 1.5 m (4,9 ft)
Power supply unit	
Voltage supply	100 – 240 VAC, 50/60 Hz
Fuse	0.5 A, slow-blow
Power consumption	typ. 3 W, max. 5 W
Indicators (on the front)	
Power	LED (green)
Channel (active/occupied)	4x LED (green/red))
Frequency range	3x LED (green)
Monitor selection (Channel / Mix)	5x LED (green)
Controls (on the front)	
Standby microphones	Push button
Selection RF band	Flush button
Volume control monitor-headphone with monitor channel selection	Rotary potentiometer with push button
General	
Temperature range (at < 90% humidity)	+10 °C – +50 °C (+50 °F – +122 °F)
Storage temperature (at < 90% humidity)	-20 °C – +55 °C (-4 °F – +131 °F)
Dimensions (L x W x H)	19", 1 U (238 x 450 x 44mm / 9.4 x 17.7 x 1.7 in)
Weight	2.5 kg (5.5 lbs)

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Architect's Specifications

The wireless digital acoustical boundary microphone with semi-cardioid polar pattern shall operate with the 4-channel Stegos RS receiver in the world-wide approved 2.4 GHz ISM band. 128-bit encrypted, bi-directional data transmission for remote management via the Stegos software or media control system and status request in the inteference- and bug-proof Direct Sequence Spread Spectrum (DSSS) shall be provided. The transceiver antennae (antenna diversity) shall be integrated in a high-quality plastic housing with black Softtouch® finish and the microphone grille shall be champagne-coloured. The device shall provide 100% immunitiy against interference from mobile devices such as mobile phones, PDAs or MDAs (Radio Frequency Interference RFI)due to the patented Scudio™ technology. The button shall illuminate with encoding for microphone open / muted and with insufficient connection to the Stegos RS receiver. Depending on the system setup the button shall allow the toggle or Push-to-Mute operation of the microphone. The Global Mute function shall allow to mute and reactivate decentrally all microphones connected to the receiver from each microphone and power on / power off of the micro-phone in the toggle-mute operation. The DC socket on the rear shall be used for processor-controlled charging of the integrated NiMH rechargeable battery pack within 2 hours at maximum without memory effect or alternatively for permanent operation with a charging power supply unit. Neighbouring two-colour LEDs with endcoding shall indicate Stegos TB is turned on (permanent green) with a minimun operating time of 14 hours, a status message (flashing green) when the minimum charge is too low, switched off in normal charging operation (flashing slowly) or fully charged (permanent red) or error when the charging electronics is initialised (flashing fast). It shall be indicated when an active charging power supply unit is connected in the battery operation of the microphone and switched over to charging operation (normal charging or trickle charging). On the rear a flush button shall be provided for Power off in the Push-To-Mute operation and when putting the microphone into the Stegos CB charger (not yet available). The microphone shall be supplied with a single charging power supply unit. The microphone shall be turned off manually via the Power off button, centrally via the Stegos software / media control system or automatically after three minutes when the connection to the Stegos RS receiver is not recognised. The frequency range of the microphone shall be 20Hz - 12kHz, the dynamic range shall be 68dB (A-weighted) and the max. sound pressure level at 1kHz shall be 100dB SPL. The dimensions (L x W x H) shall be approximately 138 x 76 x 38 mm (5.4 x 3 x 1.5 in). The weight shall be approxi-mately 410 g (0.9 lbs).

Manufacturer: beyerdynamic GmbH & Co.KG
Type: Stegos TB

The receiver shall be available for a maximum of 4 wireless digital Stegos TB acoustical boundary microphones with 128bit encrypted, bi-directional data transmission in the Direct Sequence Spread Spectrum (DSSS) in the world-wide approved 2.4GHz ISM band. Support shall be provided for Remote Management (status request, turn on or mute individually or all microphones with Global Mute) of the connected microphones via the supplied Stegos software or a serial connected media control system. The supplied audio cable shall allow Plug & Play operation with all standard video conferencing system with Mix Signal via Phoenix terminals, male XLR connector or mini jack socket (3.5 mm). The Phoenix terminal shall allow picking off the individual audio signals per channel for processing them e.g. with echo cancellation with permanent assignment of microphones to the appropriate output per session. The device shall provide 2x N(HF) sockets to connect a Rx and a Rx/Tx antenna directly or remote with diversity for high operation and transmission reliability with different RF requirements e.g. different room sizes with a range of 100m (328 ft) between Stegos RS and Stegos TB. A serial RS 232 interface shall be provided for servicing or the connection of Crestron®, AMX® or other media control systems and remote management via the free protocol with individual settings for all system parameters. An IEC socket with replaceable connecting cable shall be provided for world-wide use with different power outlets with 100 – 240VAC, 50/60Hz. The device shall provide settings and indication of the system parameters on/off, channel availability and status, allocation of the RF frequency band low, mid or high (WLAN channel 1.6 or 11) and audio channel monitoring per channel or mix signal with volume control in advance or during the operation. A standard USB socket of type B shall be provided for a fast and simple plug & play connection to a PC with Windows® operating system (Windows® 2000 or higher) for easy setup of all system parameters, for control and status request of the connected microphones. The stand-alone operation of the receiver shall be possible permanently. Important settings such as Global Mute, the decentral simultaneous release / mute of all microphone unit via the button of any microphone or channel or mix level shall be stored when the device is turned off. The dimensions shall be 19", 1 U (Lx W x H: 238 x 450 x 44 mm / 9.4 x 17.7 x 1.7 in). Weight: 2.5 kg (5.5 lbs).

Manufacturer: beyerdynamic GmbH & Co.KG
Type: Stegos RS

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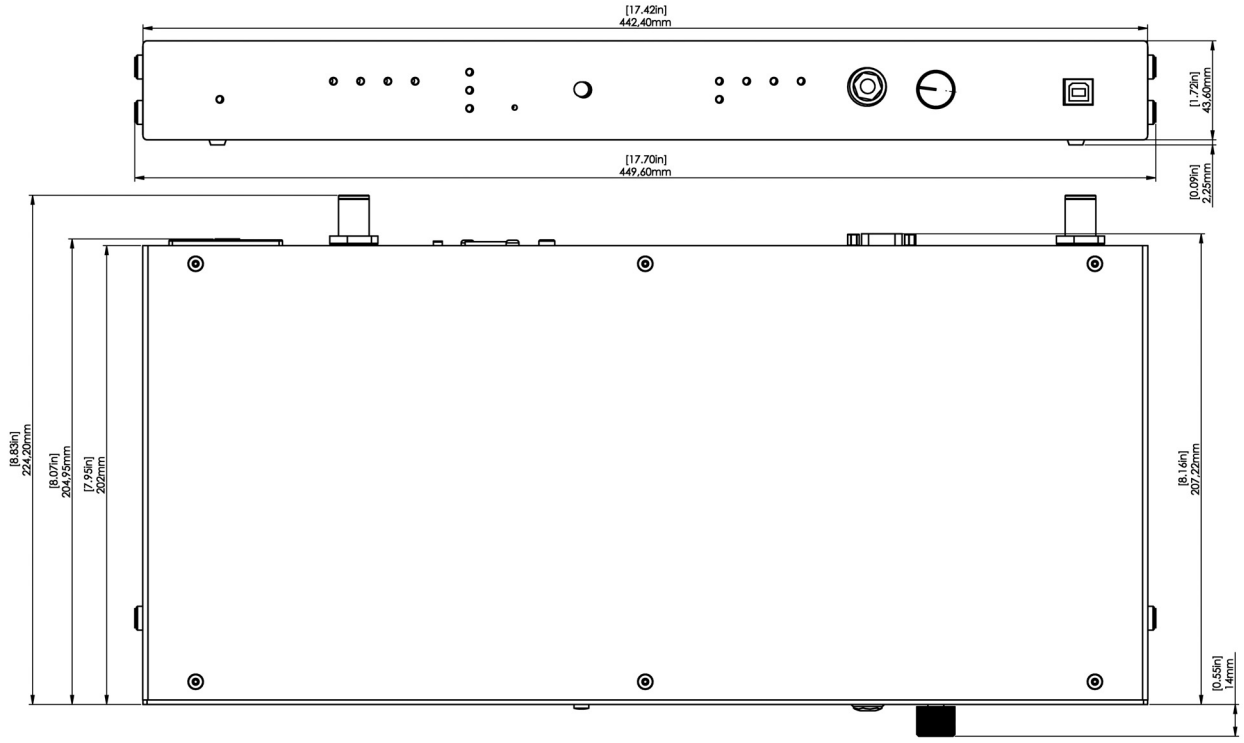
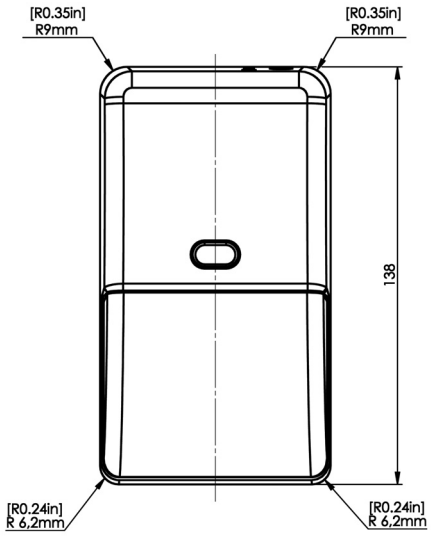
Stegos

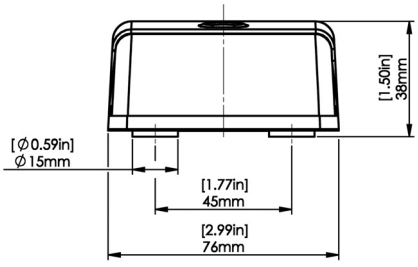
Dimensions

Stegos RS receiver



Stegos TB boundary microphone





All dimensions in mm and [inch]

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