

Laser-Audio Surveillance

Multi-use laser room monitoring system with infrared stethoscope bug option



Multi-use laser room-monitoring system



Micrometer platform with adjustable x/y axis

- Manfrotto with pan & tilt head is included

Laser Receiver (RX)

- Camera housing
- Wire-trigger
- Tele-lens 500 mm with reduce cover

Laser Transmitter (TX)

- Camera housing
- Wire-trigger
- Tele-lens 135 mm

Package includes redesigned features & special tools



Opening tool for battery pack

Keys for transport cases

Screwdriver tool

Reflection finder (spot flash light)

Lens cleaner

Headphone adapter

Laser finder (searchtone receiver)

Transport and amplifier unit



Amplifier with digital noise reduction (DNR) and equalizer built inside the case

Two-line output for digital recorder

Antenna for cordless headphone - 900 MHz

Aluminium carry case with foam inlet

Space for two-line digital rec with excellent uncompressed audio quality

Cordless headphones can be switched off if needless

Secure wired built-in headphone plug

Infrared stethoscope



By installing the stethoscope onto the surface of window frames or walls rooms can be monitored without entering them.

If the use of the laser system is not possible, for example an opposing operations room cannot be found, by using the IR System (stethoscope bug) the surveillance can be conducted.

It's nearly impossible to detect the IR stethoscope bug with standard and professional sweeping equipment, for example with Oscan 5000E by REI USA.

Infrared stethoscope



**Simple and fast deployment
within seconds**

Invisible transmission with
infrared beam

**Easy to remove without
residues**

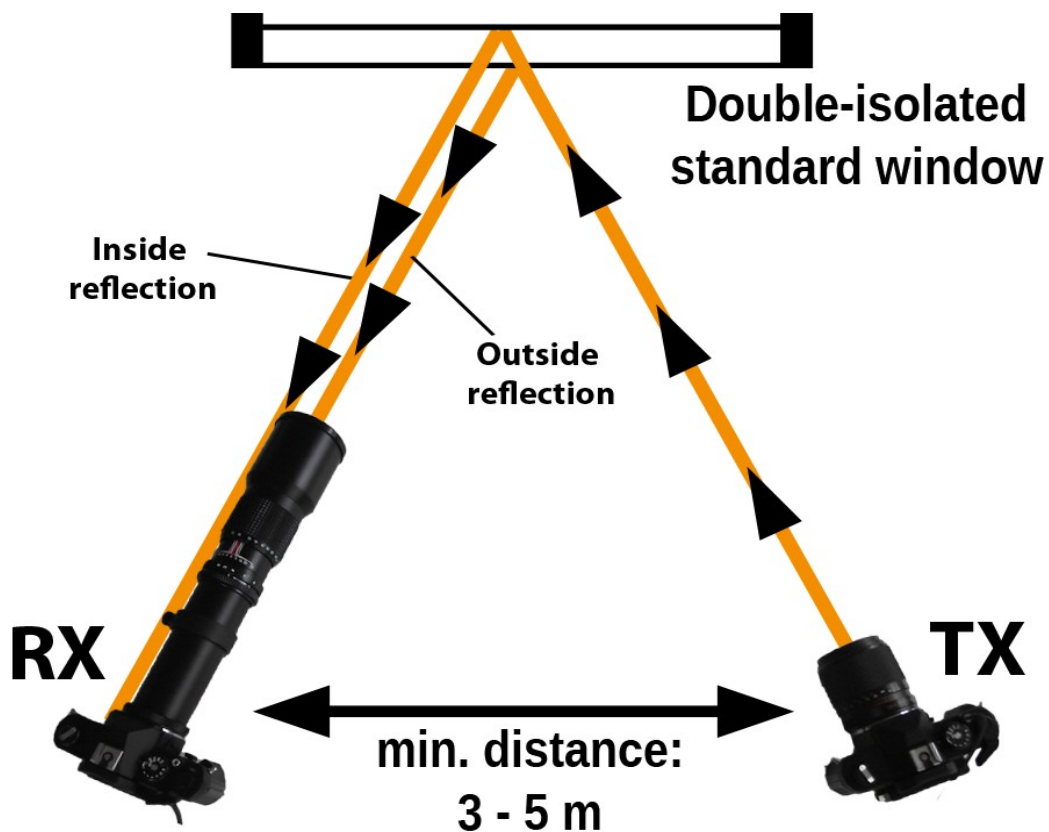
Listening through concrete
walls up to 60 cm

**Ultra wideband audio AM
transmission for perfect
performance**

Easy to pick up on account of
a huge emission angle

**To receive up to 300m by
daylight and up to 700m by
night (with our 500mm
standard lens)**

Reflection behavior on glass windows



This praxis can reduce disturbing outside noises like traffic sound or wind up to 30% . It's very simple and effective and only possible with our two-component system. To obtain this effect you only have to move the receiver parallel to the target from the transmitter unit.

Advantages over similar laser systems

Our laser system has two possibilities to observe voice from positions outside the target building:

INFRARED TX or LASER BEAM REFLECTION

For example, if the laser beam is disturbed by optical obstacles or physical restrictions, you have still a second option to continue the surveillance operation with the IR stethoscope bug and vice versa.

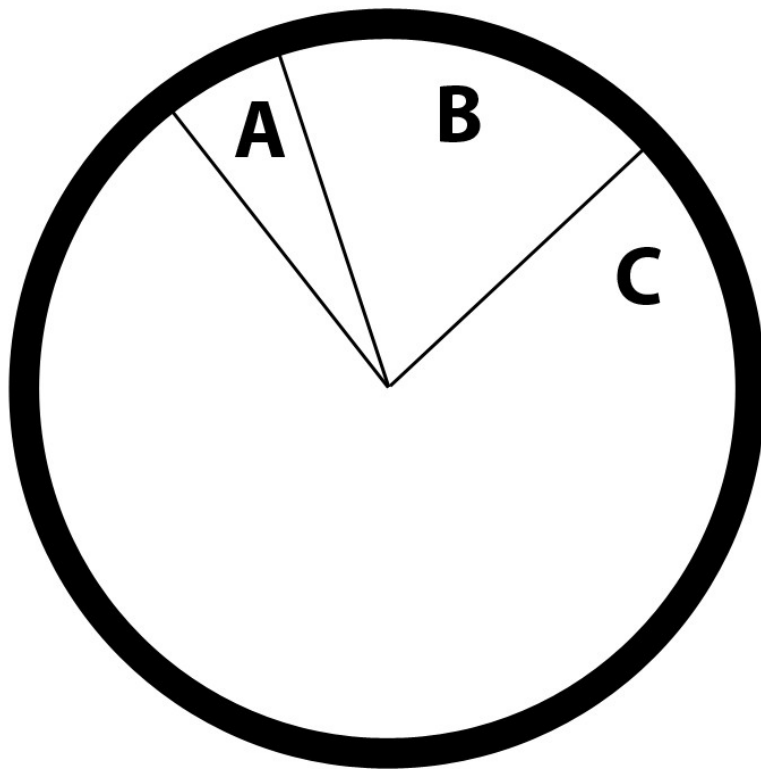
Opto-acoustical surveillance systems, like the SIM OAM 1000, cost much more and use just a laser beam to observe audio events.

Advantages over similar laser systems

Opto-acoustical laser microphones have following problems due to physical restrictions:

- shorter radius of observation distance (max. 120 m under optimal conditions)
- difficult to setup the target behind a window glass
- the highest quality of sound is similar to a telephone call
- restricted angle of incident for the receiving unit
- some products work with high-power and not eye-safe (approx. 15550 nm) laser beams
- the target must be a high-oscillating surface like a membrane, a thin paper or foil

Distances of laser monitoring operations



A – 5 %

More than 500m
are possible in
same topographic
high

B – 19 %

250m - 500m

C – 76 %

Up to 250m

Technical Data - Laser Receiver (RX)

Receiving unit	Noiseless single PIN-Diode
Wave length	InfraRed, 770 - 840 nm, supports receiving all of our IR transmitter modules
Power supply	12V, 8 x 1,5V UM2 (babycell-type battery)
Current consumption	50 – 300 mA (depends on adjusted values)
Lens	500 mm
Amplifier unit	Connected by cable with Laser Receiver (RX)
Connections	Headphones, Recorder, Speaker
Voice filter	Adjustable Equalizer & Digital Noise Reduction
Operating time (Amp)	40 – 60 hours (depends on adjusted values)
Main Unit Case	470 x 380 x 220 mm
Tripod Case	850 x 450 x 200 mm

Technical Data - Laser Transmitter (TX)

Laser Type	Semi-Conductor Laser
Animated Wave Length	InfraRed, 770 - 840 nm
Output Power	25mW, automatically controlled
Power Supply	8 x 1,5 V AA-type battery (Mignon Cells)
Current Consumption	Approx. 75 mA
Lens	135 mm
Target finder	Through camera lens or external B/W camera
Connections & Mounting	Power supply and tripod
Operating Time	Approx. 40 hours continuous transmission
Other Features	Switchable modulation for search tone

Laser-Audio Surveillance System

