

## Laser Monitoring System

- Monitoring of inaccessible rooms
- Invisible laser light for monitoring
- non-detectable by RF-scanners
- combined transmitter/receiver unit
- easy handling
- long range observation



# Laser Microphone RA79107CH

# The manual guide.

**WARNING: The sale of laser microphones is restricted to Law Enforcement and Government agencies and their authorized suppliers – no exceptions. Laser microphones destined for export require an Export License from the United States Department of Commerce. Contact Argo-A Security for the required license application forms and assistance.**

The RA79107CH Laser Microphone is a professional piece of equipment allowing the operator to carry out undetected surveillance from outside a building. We can state emphatically that we offer the best laser listening devices in the world. These professional long distance laser audio listening instruments are the most reliable tools that law enforcement and government agencies can deploy in a matter of minutes for achieving the tactical advantage in a critical situation.

Thanks to its unparalleled features, the Laser Microphone is able to pick up room audio from a distance without entering the target room: by demodulating the transmitter IR laser beam bouncing from the target window, this equipment can receive and subsequently convert into electronic signals the slight window pane vibrations caused by acoustic waves in the room (voice speech).

The laser beam bouncing off the target window is then converted into electronic signals, then filtered, amplified and fed into a dedicated recording unit connected to its own amplifier with speaker/headphones; real time audio monitoring and recording are possible at the very same time.

The whole system operates according to Snell's law, which requires sharp alignment and correct aiming of both the transmitted and received laser beams; to simplify both set up and alignment procedures as well as ordinary operation of the

system, we have provided the device with sturdy tripods and a special searchtone device which proves to be outstandingly valuable and absolutely necessary owing to the fact that emitted the laser beam is totally invisible to the naked eye.

Advanced versions feature additional accessories specifically developed to ensure system security and ease of use.

This model of Laser Microphone is the only newly-designed laser microphone in the world to offer both active and passive operation. When used in active mode, simplified alignment and outstanding listening quality for the device will be possible without entering the target premises regardless if there are target windows available.

When no target windows are available and the use of passive listening mode is not possible, it is sufficient for the SWAT team to plant a very tiny device on the outer walls of the target room or building and remote room audio monitoring from up to 800 meters away (maximum operating range at night under ideal conditions) is just a few minutes away.

We offer four models of this Laser Microphone which vary depending upon the components you desire. The advanced versions are truly professional ones, including everything that is needed for operator security and improved alignment procedures. Please note all models, Basic and Advanced, are complete with nothing extra to purchase.

Here are the system components for each version:

## **BASIC Laser Microphone - Model RA79107CH**

- 1 Laser transmitter optical system
- 1 Laser receiver optical system
- 1 Laser transmitter portable control deck
- 1 Decoding and recording unit
- 1 Digital voice recording unit
- 1 3-axis micrometric base
- 1 Portable radio receiver
- 1 Optical beacon
- 1 Rapid battery charger
- 2 Adjustable tripods
- 1 Set of wireless headphones
- 2 MIL-STD carrying cases

## **BASIC PLUS Laser Microphone - Model RA79107CH**

- 1 Laser transmitter optical system
- 1 Laser receiver optical system
- 1 Laser transmitter portable control deck
- 1 Decoding and recording unit with active and passive mode
- 1 Digital voice recording unit
- 1 3-axis micrometric base
- 1 Active laser transponder
- 1 Plastic putty to support active laser transponder installation
- 1 Portable radio receiver
- 1 Optical beacon
- 1 Rapid battery charger
- 2 Adjustable tripods
- 1 Set of wireless headphones
- 2 MIL-STD carrying cases

## **ADVANCED Laser Microphone - Model RA79107CH**

- 1 Laser transmitter optical system
- 1 Laser receiver optical system
- 1 Laser transmitter portable control deck
- 1 Decoding and recording unit
- 1 Digital voice recording unit
- 1 3-axis micrometric base
- 1 Portable radio receiver
- 1 Optical beacon
- 1 Rapid battery charger
- 2 Adjustable tripods
- 1 Set of wireless headphones
- 1 Laser-proof mask (goggles)
- 1 Digital infrared viewer
- 3 MIL-STD carrying cases

## **ADVANCED PLUS Laser Microphone - Model RA79107CH-3**

- 1 Laser transmitter optical system
- 1 Laser receiver optical system
- 1 Laser transmitter portable control deck
- 1 Decoding and recording unit with active and passive mode
- 1 Digital voice recording unit
- 1 3-axis micrometric base
- 1 Active laser transponder
- 1 Plastic putty to support active laser transponder installation
- 1 Portable radio receiver
- 1 Optical beacon
- 1 Rapid battery charger
- 2 Adjustable tripods

- 1 Set of wireless headphones
- 1 Laser-proof mask (goggles)
- 1 Digital infrared viewer
- 3 MIL-STD carrying cases

*We strongly suggest our clients purchase training along with their respective system to insure that operator proficiency is maximized. Training can be arranged for an additional fee at our location or at the client's location. A product performance demo is also available, for an additional fee, prior to purchase.*

### **Specifications:**

- **Laser Transmitter (TX)**
- Wavelength: infrared (invisible to naked eye)
- Output power: modulated high-power laser
- Power feeding: external AC + internal rechargeable battery pack
- Focusing range: 135 mm
- Aiming: through lens
- Enclosure: metal body
- Transmitter parts are contained in a MIL-STD IP67 carrying case
- Operating time: depending on power source
- Additional feature: optical beacon for simplified alignment
- Additional feature: multiple-frequency searchtone detector (50Hz-20KHz)
- Additional feature: modulated searchtone for easier homing-in on actual voice spots
- Additional feature: white noise generation countermeasure on transmitted laser carrier
- Overall case dimensions: 590 x 525 x 225 mm
- Weight: 1.2 kg approx.

- **Laser Receiver (RX)**
- Receiving unit: “black diamond” sensor
- Operating wavelength: infrared (invisible to the naked eye)
- Power feeding: external AC + external rechargeable battery pack
- Focusing range: 500 mm
- Embedded digital noise reduction filter
- Embedded audio amplifier and frequency optimizer with high-voltage generator
- Detachable digital voice recording with backlit display, USB/PC download and direct power feeding from main receiver
- Real-time recording gain circuit with dedicated control knob
- Separated audio signal outputs (PLS: processed laser signal or OLS: original laser signal)
- Main laser receiver signal gain and volume control with dedicated control knob
- Additional feature: 9-band parametric equalizer with 75 Hz low-pass cut circuit + audio analyzer
- Additional feature: embedded UHF RF link with detachable antenna + dedicated receiver
- Additional feature: encryption circuit for RF link with on/off control switch
- Additional feature: separated speaker/phones audio output with dedicated control switch
- Additional feature: fully embedded in a MIL-STD IP67 carrying case
- Overall case dimensions: 450 x 365 x 190 mm