

# COT MT-1

## THERMAL IMAGING SYSTEMS



*u s e r ' s   g u i d e*



RCA Video/power adapter

## FEATURES

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- High resolution digital thermal imaging
- Compact, light weight and durable housing
- High Quality optics
- Video output
- Video/Image polarity selection
- Waterproof

## SPECIFICATION

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Magnification.....	1,8X
Objective Focal Length .....	25 mm
FOV .....	11° x 8°
Focus Range .....	from 1m to infinity
Focus Adjustment .....	Manual
Exit Pupil .....	14mm
Eye Relief .....	25mm
Detector Type .....	Uncooled Microbolometer
Spectral Response.....	7-14 $\mu$ m
Pixels.....	160 x 120
Pixel Size.....	30 x 30 $\mu$ m
Angular Resolution, mrad.....	1,2
Thermal Sensitivity.....	< 0,1°C
Range to Detect a Human .....	475 m
Output Format .....	Analog PAL / NTSC
Display.....	OLED matrix
Display Format .....	SVGA, 852 x 600 pxl
Color.....	Monochrome
Digital ZOOM.....	Fixed 2x (optional 5x)
Brightness Adjustment.....	Manual
Contrast Adjustment.....	Automatic
Available User Interfaces .....	From outside PC through USB interface
Power Supply .....	2 x 3V, 123A type
Start-Up Time .....	< 3 sec
Operating Time w/one battery pack .....	4 hrs
External Power Supply .....	DC 6V, 500 mA
Operating Temperature Range.....	from -20°C to +50°C
Waterproof.....	Yes, up to 10m submersion
Dimensions .....	118 x 78 x 54 mm
Weight (w/batteries).....	0,34 kg

## APPLICATION

The COT MT-1 sets the standard for affordable, small, lightweight thermal imaging camera. It is pocket-sized, rugged and durable. It is built around state-of-the-art uncooled thermal imaging technology. It offers superior performance, compact size, comfort of wear and cost efficiency that make it the perfect thermal imaging device. The monocular is ideal for Home

## OPERATION

Insert the two Lithium batteries (123A type) into the unit according to the polarity indications on the battery compartment. Press the ON/OFF button to turn the monocular on. Remove the lens cap.

Adjust the proper eyepiece diopter and objective lens focusing. The rotation of the Focusing Ring changes the position of the objective lens in respect of the receiver focal plane array. In this way the operator can adjust the unit in order to see the targets at various ranges with the same good contrast.

Cover protects the objective assembly from mechanical damage.

The operator can adjust the eyepiece diopter of the monocular for his/her own eyesight by rotating Eyepiece Diopter Adjustment Ring.

Eyecup provides for the comfortable eye position and for the prevention of flash reflections onto the operator's face which is critical in the field and tactical activities.

Select the desired operation mode by pressing the switchboard buttons.

With the «ZOOM» button you can activate a gradual adjustment of the digital zoom preset in the monocular adjustments.

The «POLARITY» button switches the direct display mode into the reverse one, i.e. from hot-white/cold-black into hot-black/cold-white mode.

Each short push of the buttons «BRIGHTNESS +» or «BRIGHTNESS -» raises or lowers the display brightness, correspondingly, in stepwise way.

To turn the monocular off press the ON/OFF button.



## VIDEO OUTPUT

The monocular incorporates a sealed Connector used for video transmission and to connect external power sources. The package of the thermal monocular includes external connection RCA Video/power adapter. This adapter attaches the monocular to the video facilities for video recording or video transmission to the external display, though at the same time it accepts the external power supply.

**IMPORTANT: When the unit is to be powered with external sources, first make sure the batteries have been taken out.**



## EXTERNAL POWER SOURCE

**IMPORTANT: When the unit is to be powered with external sources, first make sure the batteries have been taken out.**

To connect an external power source you can use any of the cables of the monocular package. As an external power source, a standard network controller with outer voltage of 6V and current of over 0.5A can be applied.

Remove the protective cover off the connector input and attach the cable. To connect an external source, we recommend you to use a 6mm standard double-pole socket in the way the positive contact is the central contact.

## **WARNINGS AND CAUTIONS**

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**IMPORTANT!**

**DO NOT DISASSEMBLE THE MONOCULAR.**

**KEEP YOUR OTIS-10 SAFE FROM OPERATIONAL AND TRANSPORTATION IMPACTS.**

**WAITING FOR ONE HOUR BEFORE YOU SWITCH THE MONOCULAR ON IS HIGHLY RECOMMENDABLE AFTER YOU BRING IT INTO THE WARM ROOM FROM THE COLDER OUTSIDE.**

**WHEN YOU DO NOT INTEND TO OPERATE YOUR MONOCULAR FOR 10 FOLLOWING DAYS WE ADVISE YOU TO TAKE THE BATTERY OUT OF THE BATTERY COMPARTMENT.**

**PROVIDE FOR TIMELY SERVICE MAINTENANCE OF THE UNIT.**

If you use the rubber eyecaps for a long period of time, you may suffer skin inflammation. If you develop any symptoms, consult a doctor immediately.

## **TROUBLESHOOTING**

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**Q:** The image is absent on the screen of goggles.

**S:** The batteries are discharged. Replace the batteries.

**Q:** The brightness of the image on the screen is low.

**S:** The batteries has a low voltage. Replace the batteries.

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