

TRMS

635/660/675
660H/675H

CLIP-ON THERMAL WEAPON SIGHT



USER AND OPERATING MANUAL

Read the instructions and warnings in this manual carefully before using this product. Do not discard this manual.

OM30010-EN

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The contents of this document are subject to change without notice. AC-TinBlack Europe S.à r.l. reserves the right to make changes in the technical specifications and the appearance of the device written in this manual without prior notice.

Take care to protect the environment. Please check with the authorized bodies for wastes and recycling of your device.

WELCOME

Read this manual to learn how to use your device and to specialize in all functions and usage methods. In order to achieve the best results in use, please use your device with its original accessories.

You can access the most current version of this manual at **www.actinblack.com**.

SAFETY SUMMARY

The general security measures listed below are not available in any other part of this manual as they are not specifically related to any operation. These are the measures recommended to be understood by the personnel and used during operation and maintenance.

SAFETY NOTES

In order to draw the attention of the reader to certain points, wordings like “ATTENTION”, “WARNING”, “NOTE”, “SHORTCUT” are included in the text.



ATTENTION

Indicates possible damage to equipment.



WARNING

Indicates hazards to personnel. (In terms of labor safety and health)



NOTE

Indicates the parts of the text that need to be reviewed carefully.



SHORTCUT

Indicates the shortcuts that are in use of the device.

WARNINGS AND CONSIDERATIONS

Follow the steps of each procedure for personnel safety and to prevent any damage to the device. The sequence of the procedure steps and the contents of the procedure shall not be changed.

The following warnings and considerations are general; they apply to all pages.

Please read all the topics carefully, as each section in this manual is complementary to each other.

Remove the batteries from the device when not in use. Batteries can cause serious damage to the equipment.

Do not dispose of batteries in a fire. Do not short-circuit. If the battery compartment becomes hot, switch off the appliance. Allow the batteries to cool before removing them. If you hear a gas smell or gas exit, return the batteries to the appropriate personnel for disposal.

Use original battery.



Using the device other than the specified operating temperature may cause permanent damages, and with this, the warranty term is voided.

Do not leave the device on an appliance that vibrates continuously or on the moving parts of heavy machinery.

Instruction is essential for safe use. Therefore, fully comply with the contents of these operating instructions. This manual should be kept at a place that is always accessible.



The device may only be used with the accessories specified in these operating instructions. Other accessories may be used if tested and accepted as safe by ACTinBlack.

Changes and repairs should only be performed by manufacturers or authorized persons. The manufacturer is not responsible for any unauthorized changes or repairs to the device. Otherwise, all warranty terms are voided.



WARNING

The accident prevention rules should be examined in accordance with the legal regulations. Only the trained and qualified personnel with the knowledge of applicable safety rules should be allowed to operate the device. The proper training and briefing of the operating personnel is under the responsibility of the user of the equipment.

The device must be tested under appropriate conditions before being put into use.



ATTENTION

The operating methods must be strictly followed in order to prevent any damage to or breakdown of the equipment.



WARNING

Remove the device before checking, cleaning or doing any maintenance on the weapon.



ATTENTION

Do not leave any batteries in the device for a storage period of one week or longer.



WARNING

The product and its accessories contain natural rubber latex which may cause allergic reactions.



WARNING

Do not point your device towards any high density particles which you are not supposed to look directly at with naked eyes, such as the sun or Argon, gas metal arc welding, submerged arc welding. Otherwise, the device may sustain damage.



WARNING

Do not carry the batteries in the same pocket that contains any metal objects such as coins, keychains etc. These metal objects may cause overheating or short circuits in batteries. This may result in the explosion of lithium-ion batteries.



WARNING

Do not look at the sun with the device.

ICONS

The icons and their meanings in this booklet are as follows;



The connection is provided by Wi-fi.



The connection is provided by Bluetooth.



Suitable for recycling.

LIST OF ABBREVIATIONS

FFP	First Focal Plane
SFP	Second Focal Plane
μm	micrometer
C	centigrade
CC	constant current
CV	constant voltage
cm	centimeter
min.	minute
g	gram
HMD	External Display Unit
kg	kilogram
Li-ion	lithium-ion
m	meter
mAh	milliampere-hour
mm	millimeter
MOA	Minute of Angle
mRad	milliradian
min.	minimum
mW	milliwatt
Ni-mH	nickel-metal hydride
Ni-Cd	nickel-cadmium
nm	nanometer
NSN	Nato Stock Number
NTSC	National Television Standards Committee
PAL	Phase Alternating Lines
PN	Part Number
sec.	second
V	Voltage

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GENERAL DESCRIPTION

1.1 INTRODUCTION

1.1.1 Objective

This manual has been prepared to ensure that the authorized personnel understands and that user level maintenance is comprehended.

1.1.2 Recommendations for Improvement of the Device

Any suggestions from you, as users, for the improvement of the device are very valuable for us. Please write your suggestions to the address below.



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Phone: +352 20 30 10 30

Web: www.actinblack.com | E-mail: info@actinblack.com

1.1.3 Warranty Information

The device is under warranty for 2 years from the date of production against defects arising from the design, production, material and workmanship. Defects arising from user misuse and improper use are not covered by the warranty.

1.1.4 Storage

The device must be stored in the transport bag after the preventive maintenance and checks have been completed. This method will ensure that the device is always ready for any use as long as it is stored.



ACTinBlack reserves the right to change all technical specifications and the image without prior notice.

TECHNICAL SPECIFICATIONS

Mechanical Specifications

Model	635	660	675	660H	675H
Body Material	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
Color	Black	Black	Black	Black	Black
Weight	590 g	730 g	875 g	730 g	875 g
Dimensions (WxLxH) (mm)	90x190x95	90x225x95	90x230x95	90x225x95	90x230x95

Optical Data

Model	635	660	675	660H	675H
Objective Lens (MF)	35 mm	60 mm	75 mm	60 mm	75 mm
FoV [HxV]	17.7° x 13.3°	10.2° x 7.7°	8.3° x 6.6°	10.2° x 7.7°	8.3° x 6.6°
Min. Focus Distance	3 m	3 m	9 m	3 m	9 m
Human Detection	1020 m	1760 m	2200 m	1760 m	2200 m
Vehicle Detection	3160 m	5400 m	6750 m	5400 m	6750 m

NOTE: Detection Range (Human)
Width: 0.75 m = 1.5 pixels

Detection Range (Vehicle)
Width: 2.30 m = 1.5 pixels

MF: Manual Focus

NOTE: Detection distance may vary depending on atmospheric conditions.

General Data

Sensor Technology	: Uncooled Microbolometer
Sensor Resolution	: 640 x 480 pixels
Spectral Range	: LWIR; 8 µm to 12 µm
Sensor Pitch	: 17 µm
Frame Rate	: 30 Hz [Optional 60 Hz]
Sensor Sensivity	: <50 mK @f/1.0
Display Type	: Color OLED
Eye Relief	: ∞
E-Zoom*	: 2x, 3x, 4x
Start-up Time	: <5 sec.
Calibration	: Auto, Semi-Auto, Manual
Working Mode	: Direct Use/Clip-on Use

* E-Zoom cannot be used in clip-on mode.

Advanced Features

Integrated Wi-Fi	: Yes
Integrated Bluetooth	: Yes
Laser Range Finder**	: Yes
Video Recording	: Yes <i>[Format: MP4 Capacity: 120 min.]</i>
Image Capturing	: Yes <i>[Format: JPEG Kapasite: 10000 photos]</i>
2-Axis Angle Indicator	: Yes
Stadiametric Range Finder	: Yes
Continuous E-Zoom	: +0.05x (1.00, 1.05, 1.10...)
Reticle	: Multiple Reticle Patterns
Reticle Color	: Blue, Red, Green, Yellow, White, Black, Auto
Reticle Zeroing	: Manual, One Shot, Auto
Zeroing Profile	: 10 Profiles
Brightness Adjustment	: Yes (Manual)
Contrast Adjustment	: Yes (Manual)
Focus Adjustment	: Yes (Manual)
Gain Mode	: Yes (Low, High, Auto)
Polarity	: White-Hot, Black-Hot, multiple colors
Outline Mode	: Yes
Zoom Assist (PiP Mode)	: Yes
Video Output	: Yes (Digital, USB & Analog)

Electronical Data

Battery	: 2 x 18650 Rechargeable Li-Ion
★ Battery Life	: 6+ hours
EMC	: MIL-STD 461E compatible

Environmental Data

Operating Temperature Range	: -35°C to +55°C
Storage Temperature Range	: -40°C to +65°C
Immersion	: 1 m / 30 mins
Recommended Recoil Resistance	: Compatible with 5.56, 7.62, 8.59*** & 12.7*** mm NATO

** Optional

*** TRMS 660H & Pars 675H are compatible with 8.59 and 12.7 mm NATO

* Battery life may vary depending on environmental and atmospheric conditions.

MIL-STD-810



TRMS 635 STANDART KIT PICTURES

01



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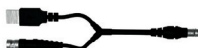
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PARS 635 Standart Kit & NSN Numbers

SN	DEFINITION	PIECE	PART NO	NSN
1	TRMS 635	1	30010-10-35	5855-27-067-3115
2	TRMS, Tactical Soft Bag	1	30010-80	5855-27-067-3170
3	User and Operating Manual	1	OM30010-EN	-
4	Lens Cleaning Cloth	1	550024	6640-27-047-8404
5	Lens Cleaning Brush	1	550046	6640-27-058-4025
6	3500 mAh Lithium-Ion Battery	4	18650-3500	6140-27-066-1638
7	Battery Charge	1	30000-40	6130-27-060-2459
8	Car Charge Kit	1	30000-41	5995-27-060-2461
9	0.8m BNC & USB Cable	1	30000-68	5995-27-066-1649
10	TRMS, Transportation Case	1	30010-81	5855-27-067-3132
11	35 mm Objective Protection Cover	1	30002-50	5855-27-067-3135
12	4X Interface Bellows	1	30010-34	6650-27-067-3249
13	Weapon Mount	1	30010-17	6650-27-067-3253

There may be differences in the standard equipment content.

TRMS 660 STANDART KIT PICTURES

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PARS 660 Standart Kit & NSN Numbers

SN	DEFINITION	PIECE	PART NO	NSN
1	TRMS 660	1	30010-10-60	5855-27-067-3119
2	TRMS, Tactical Soft Bag	1	30010-80	5855-27-067-3170
3	User and Operating Manual	1	OM30010-EN	-
4	Lens Cleaning Cloth	1	550024	6640-27-047-8404
5	Lens Cleaning Brush	1	550046	6640-27-058-4025
6	3500 mAh Lithium-Ion Battery	4	18650-3500	6140-27-066-1638
7	Battery Charger	1	30000-40	6130-27-060-2459
8	Car Charge Kit	1	30000-41	5995-27-060-2461
9	0,8m BNC & USB Cable	1	30000-68	5995-27-066-1649
10	TRMS, Transportation Case	1	30010-81	5855-27-067-3132
11	60 mm Objective Protection Cover	1	30002-53	5855-27-067-3133
12	12X Interface Bellows	1	30010-35	6650-27-067-3246
13	Weapon Mount	1	30010-17	6650-27-067-3253

There may be differences in the standard equipment content.

TRMS 660H STANDART KIT PICTURES

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PARS 660H Standart Kit & NSN Numbers

SN	DEFINITION	PIECE	PART NO	NSN
1	TRMS 660H	1	30010-10-60H	5855-27-067-3122
2	TRMS, Tactical Soft Bag	1	30010-80	5855-27-067-3170
3	User and Operating Manual	1	OM30010-EN	-
4	Lens Cleaning Cloth	1	550024	6640-27-047-8404
5	Lens Cleaning Brush	1	550046	6640-27-058-4025
6	3500 mAh Lithium-Ion Battery	1	18650-3500	6140-27-066-1638
7	Battery Charger	4	30000-40	6130-27-060-2459
8	Car Charge Kit	1	30000-41	5995-27-060-2461
9	0,8m BNC & USB Cable	1	30000-68	5995-27-066-1649
10	TRMS, Transportation Case	1	30010-81	5855-27-067-3132
11	60 mm Objective Protection Cover	1	30002-53	5855-27-067-3133
12	12X Interface Bellows	1	30010-35	6650-27-067-3246
13	Weapon Mount	1	30010-17	6650-27-067-3253

There may be differences in the standard equipment content.

TRMS 675 STANDART KIT PICTURES

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PARS 675 Standart Kit & NSN Pictures

SN	DEFINITION	PIECE	PART NO	NSN
1	TRMS 675	1	30010-10-75	5855-27-067-3126
2	TRMS, Tactical Soft Bag	1	30010-80	5855-27-067-3170
3	User and Operating Manual	1	OM30010-EN	-
4	Lens Cleaning Cloth	1	550024	6640-27-047-8404
5	Lens Cleaning Brush	1	550046	6640-27-058-4025
6	3500 mAh Lithium-Ion Battery	4	18650-3500	6140-27-066-1638
7	Battery Charge	1	30000-40	6130-27-060-2459
8	Car Charge Kit	1	30000-41	5995-27-060-2461
9	0,8m BNC & USB Cable	1	30000-68	5995-27-066-1649
10	TRMS, Transportation Case	1	30010-81	5855-27-067-3132
11	75 mm Objective Protection Cover	1	30002-52	5855-27-066-1646
12	12X Interface Bellows	1	30010-35	6650-27-067-3246
13	Weapon Mount	1	30010-17	6650-27-067-3253

There may be differences in the standard equipment content.

TRMS 675H STANDART KIT PICTURES

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PARS 675H Standart Kit & NSN Numbers

SN	DEFINITION	PIECE	PART NO	NSN
1	TRMS 675H	1	30010-10-75H	5855-27-067-3129
2	TRMS, Tactical Soft Bag	1	30010-80	5855-27-067-3170
3	User and Operating Manual	1	OM30010-EN	-
4	Lens Cleaning Cloth	1	550024	6640-27-047-8404
5	Lens Cleaning Brush	1	550046	6640-27-058-4025
6	3500 mAh Lithium-Ion Battery	4	18650-3500	6140-27-066-1638
7	Battery Charge	1	30000-40	6130-27-060-2459
8	Car Charge Kit	1	30000-41	5995-27-060-2461
9	0,8m BNC & USB Cable	1	30000-68	5995-27-066-1649
10	TRMS, Transportation Case	1	30010-81	5855-27-067-3132
11	75 mm Objective Protection Cover	1	30002-52	5855-27-066-1646
12	12X Interface Bellows	1	30010-35	6650-27-067-3246
13	Weapon Mount	1	30010-17	6650-27-067-3253

There may be differences in the standard equipment content.

**COMPATIBLE WITH TRMS 635, 660, 675, 660H, 675H
MODELS OPTIONAL EQUIPMENT PICTURES**

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COMPATIBLE WITH TRMS 635, 660, 675, 660H, 675H MODELS OPTIONAL EQUIPMENT PART & NSN NUMBERS

Optional Equipment Part & NSN Numbers				
SN	DEFINITION	PIECE	PART NO	NSN
1	Diopter Filter -0.5	1	30003-80	1240-27-067-3221
2	Diopter Filter -0.75	1	30003-81	1240-27-067-3219
3	Diopter Filter -1	1	30003-82	1240-27-067-3175
4	Light Reducer Filter	1	30003-83	1240-27-067-3223
5	KS Weapon Mount	1	30010-18	6650-27-067-3252
6	10m BNC & USB Cable	1	30010-23	5995-27-067-3316
7	Eyecup	1	30010-36	5855-27-067-3167
8	Neck Strap	1	30010-225	5855-27-067-3230
9	BRC, Wireless Remote Control	1	80001-10	5855-27-066-1642



* Image: TRMS 635

SETTINGS

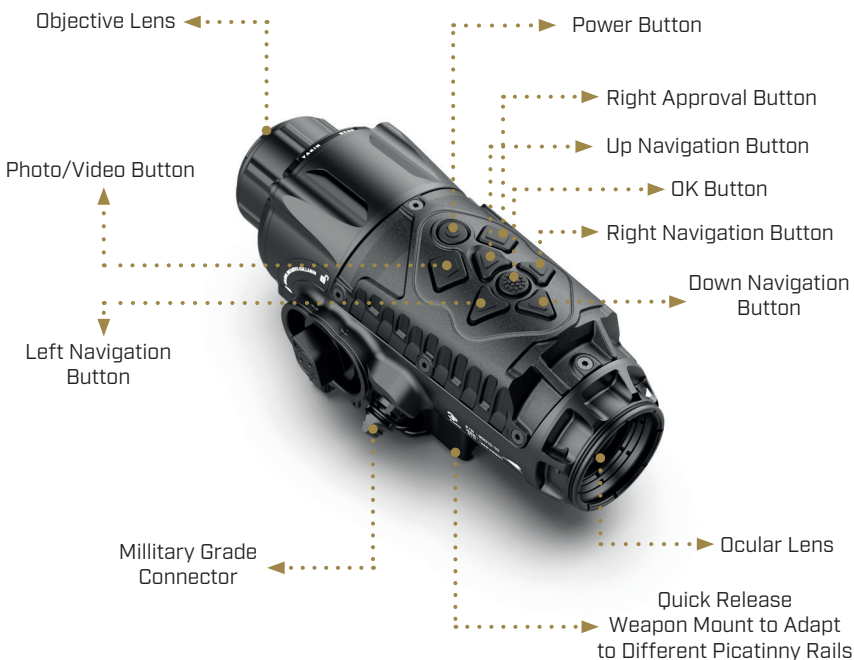
2.1 OPERATING THE DEVICE

1. Turn on the device by pressing down the Power Button.



2. When the device is turned on, first the calibration will be processed. The calibration balances the background temperature level of the microlometer and eliminates any visual flaws. The calibration options are as follows: Manual, Semi-Auto and Auto. The calibration of choice can be selected by following these steps: Menu>Image>**Calibration**

2.2 COMPONENTS AND CONTROLS



NOTE: The visuals were prepared using TRMS 635. Other TRMS models have the same software features except optical and mechanical properties.



NORMAL MODE	FUNCTION (Short Press)	FUNCTION (Long Press for 5 sec)	Menu Function	
			(Short Press)	(Long Press)
ON/OFF	-	The device is turned On/Off	-	The device is turned Off
PHOTO/VIDEO BUTTON	1. Takes a Photo 2. Stops Recording the Video 3. Continues Recording the Video	1. Records a Video 2. Completes Recording the Video	Closes the Menu	-
RIGHT NAVIGATION BUTTON	Changes the Polarity	Opens the Color Modes	Directing towards Right	-
LEFT NAVIGATION BUTTON	1. SRF On/Off 2. Lining On/Off 3. Freezing the Image On/Off	SRF/Lining or Freezing the Image	Directing towards Left	-
UP NAVIGATION BUTTON	E-Zoom Changes ★★	1. The Assistant E-Zoom is opened 2. Detail Magnification setting is opened	Directing towards Up	-
DOWN NAVIGATION BUTTON	Calibration	Modes Change (Clip-on->Normal)	Directing towards Down	-
OK CONFIRMATION BUTTON	Menu	-	Selection/ Confirmation	Selection/ Confirmation

★ This button does not have any function on the models which do not have laser feature.

★★ Short pressing this button while it is on Clip-on mode changes it to the Surveillance Mode

2.3 FOCUSING SETTING

- First, make sure that you have opened the protective cover of the lens.
- In order to focus on the desired range, the focus is adjusted by turning the focus ring on the lens until the image becomes clear.
- The Focus Ring is turned in line with the “Near-Far” directions indicated on the body and the appropriate focus for the desired range is obtained.



FOCUS SET



FOCUS NOT SET

MENU AND USAGE

MENU ICONS

NORMAL MODE MENU ICONS

Not Selected

Selected



EXIT

EXIT



DISPLAY

DISPLAY



GALLERY

GALLERY



RETICLE

RETICLE



SENSOR

SENSOR



GENERAL

GENERAL

CLIP-ON MODE MENU ICONS

Not Selected

Selected

MENU

MENU

EXIT

EXIT

DISPLAY

DISPLAY

SENSOR

SENSOR

GENERAL

GENERAL

3.1 TURNING THE DEVICE ON/OFF

There is a keypad on the device for adjusting various settings during use. The button which is indicated red is the power button. The device is turned on/off when this button is pressed down for 5 sec.



3.2 QUICK FUNCTIONS

When the device is turned on, each button on the keypad has a different function[s].



3.3 MAIN MENU

When you press OK Confirmation button on the device keypad, the Main Menu pops up.



To exit the Main Menu, select Exit and press the OK Confirmation button. Additionally, you may also use the Left Confirmation button to exit the Main Menu.

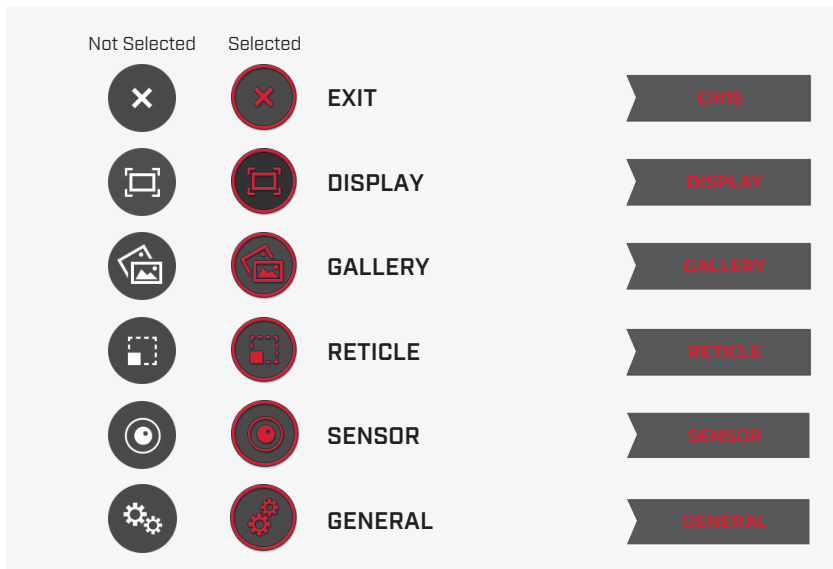
3.4 NAVIGATING ON THE MAIN MENU

To navigate on the Main Menu, use the Right Direction and Left Direction buttons. To enter the desired Submenu, press the OK Confirmation button.



3.5 SUB-MENUS

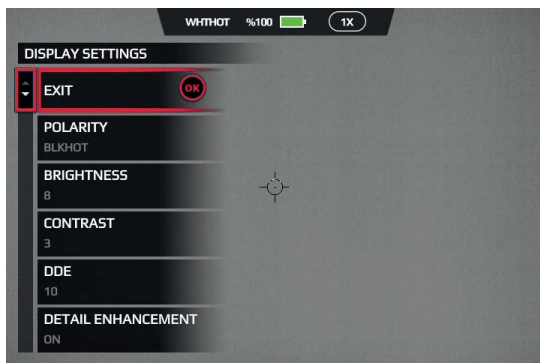
There are 5 sub-menus in the Main Menu. These are: Image, Gallery, Reticle, Sensor, General and Exit.



3.5.1 SUB-MENU: DISPLAY



In the DISPLAY submenu, you can adjust the image settings.



Quick Return
to Main Menu

The user adjustable settings in the DISPLAY submenu are as follows:

- **POLARITY:**

- WHTHOT
- BLKHOT
- ICEFRE
- RED
- GREEN
- FUSION
- SEPIA color modes can be selected.

WTHOT



WTHOT: In this conventional warm white filter, which is often preferred in the military field, the strongest heat sources are displayed as the brightest [white]. In other words, humans and animals can be easily identified in normal conditions. However, identification can be difficult if there is a stronger heat source in the background such as a big fire.

BLKHOT



BLKHOT: In contrast with the warm white filter, this filter displays heat sources in black. That is why the thermal image looks more natural. A much bigger portion of the image is displayed as bright.

ICEFRE



ICEFRE: It is based on warm white filter. Additionally, the coldest heat source in this filter is displayed as blue while the warmest is displayed as red. This provides a better orientation.

RED



RED: This filter has almost the same features as the warm white; however, the color red is preferred for the brightest heat source. It acts as a tactical filter for night use.

GREEN



GREEN: This filter has almost the same features as the warm white; however, the color green is preferred for the brightest heat source. It acts as a tactical filter for night use.

FUSION



SEPIA



SHORTCUT

If you press and hold the right direction button for at least 3 sec. while you are on the main screen, you can choose COLORED POLARITY.

- **BRIGHTNESS:** The level of screen brightness can be selected between 0-10.

BRIGHTNESS 0



BRIGHTNESS 10



ATTENTION

Higher brightness levels drain down the battery life.



WARNING

Looking at the screen for a long period of time on a high level brightness may harm your eyes.

- **CONTRAST:** The level of screen contrast can be selected between 0-10.

CONTRAST 0



CONTRAST 10



- **DDE:** The level of screen DDE can be selected between -20 and 100.

SHARPNESS -20



SHARPNESS 100



- **OUTLINE:** In the Outline mode, the outer lines of the displayed objects are displayed.

OUTLINE ACTIVATED



Background rate: 0

OUTLINE ACTIVATED



Background rate: 10



NOTE

Outline mode can be used in all polarity colors.

- **EYE COMFORT:** Activates the Eye Comfort mode. Original, Purple, Turquoise and Green colors are selectable. These user friendly colors are chosen since they put less strain on the eyes.

ORIGINAL



PURPLE



TURQUOISE



GREEN



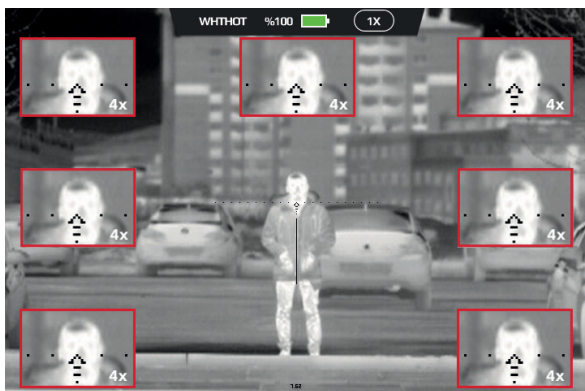
- **GAIN MODE:** The device supports low gain mode. This mode provides a high dynamic range but lowers the precision. If it is left on Auto mode, the dynamic range will be automatically adjusted based on gain key values.

- **E-ZOOM:** The E-Zoom mode is set. You may select either stable or continuous magnification. In the Stable magnification, you can change between the magnification levels of 1X, 2X, 3X and 4X. In Continuous magnification, you can set the steps of magnification as +0.05, +0.10 or +0.20.
- **NORMALIZATION:** The normalization mode is set. You can select between Manual, Semi-Auto and Auto options. If you choose the Manual option, you can do the normalization by pressing on the down direction button while on the main screen. In this mode, the device will not do automatic normalization (except when it is first turned on).

If you choose the Semi-Auto option, you can both do the normalization manually and allow the device to do the normalization if necessary.

If you choose the Automatic option, the device will not let you do normalization manually. In that case, the down direction button will be non-functional. The device does the normalization automatically only when it is necessary.

- **ZOOM ASIST:** Activates the Zoom Asist mode. The purpose of this mode is to zoom in to your target without losing your field of vision. The main image is displayed as 1X on the main field of vision while the pop-up window electronically magnifies the view by up to 8X.



Zoom Asist can be used in 7 different areas of the screen.



SHORTCUT

If you press and hold down the up direction button for at least 3 sec. while on the main screen, ZOOM ASIST will show up. If you press down for 3 sec. once again, then it will close.

3.5.2 SUB-MENU: GALLERY



In the GALLERY submenu, you can adjust the gallery settings.



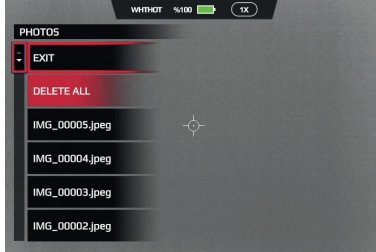
Quick Return
to Main Menu

The user adjustable settings in the GALLERY submenu are as follows:

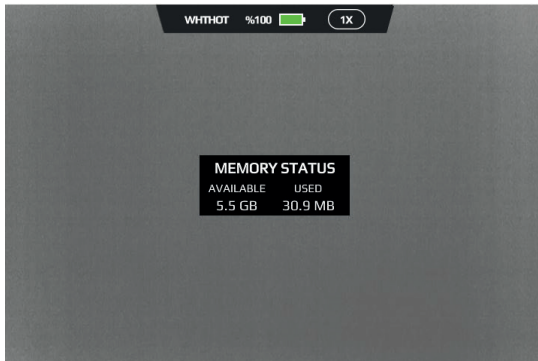
- **VIDEOS:** Recorded videos can be watched or deleted.



- **PHOTOS:** Taken photos can be viewed or deleted.



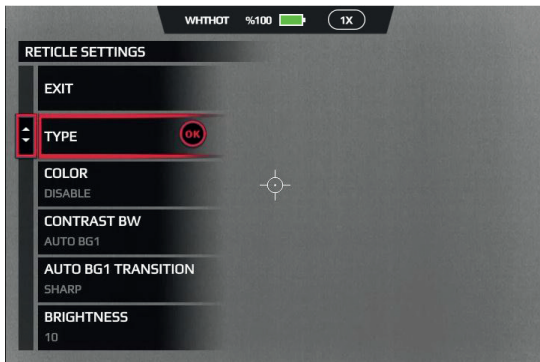
- **SETTINGS:** In the Settings area, you can change Photograph Mode, Number of Burst Photos, Video Recording Limit or format the memory.
- **MEMORY STATUS:** Shows the used and available storage space on the device.



3.5.3 SUB-MENU: RETICLE



In the RETICLE submenu, you can adjust the reticle settings.



Quick Return to Main Menu

The user adjustable settings in the RETICLE submenu are as follows:

- **TYPE:** Changes the type of the reticle.

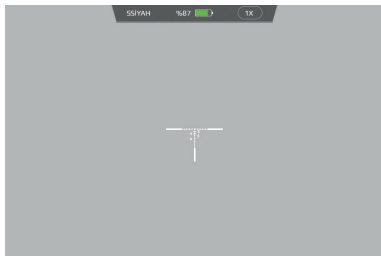
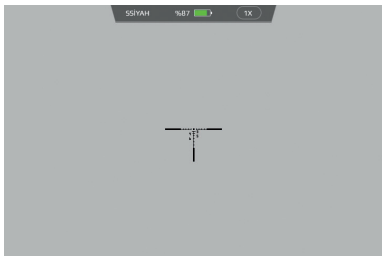


- The user can design their own reticle and save it on the device. To create a reticle, visit our partners website **reticlecreator.3eeps**.



The user can choose from the conveniently uploaded weapon and cartridge type ballistic reticles.

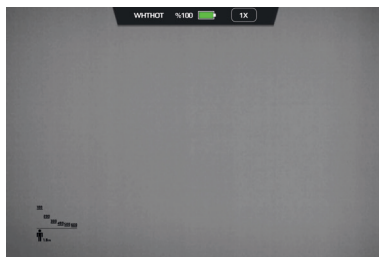
- **COLOR:** Changes the color of the reticle.



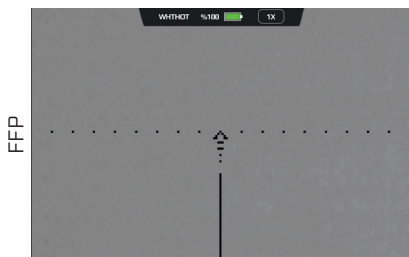
- **CONTRAST-BW:** The color of the reticle is set in black & white tones or changing colors depending on the background.
- **BRIGHTNESS:** The brightness level of the reticle is set.



- **RETICLE STADIA:** Used for estimating the range.



- **RETICLE FP:** Transition between FFP (First Focal Plane) and SFP (Second Focal Plane).



The reticle becomes larger at the same rate as the increase in magnification.



The reticle becomes larger but remains stable.

- **MANUAL RETICLE ZEROING:** The reticle is reset manually.

WH/HTOT %100 1X

X: +000 Y: +000

@100m: X: 000.00cm - Y: 000.00cm

@25m : X: 000.00cm - Y: 000.00cm

Reticle shot lines depending on the range

Reticle shot lines depending on the range

CLICK INFO : 4.50cm @ 100m - 1.12cm @ 25m

Click Information shows how many centimeters of change the reticle makes on the target.

X: Shows the click change on a horizontal plane.

Y: Shows the click change on a vertical plane.

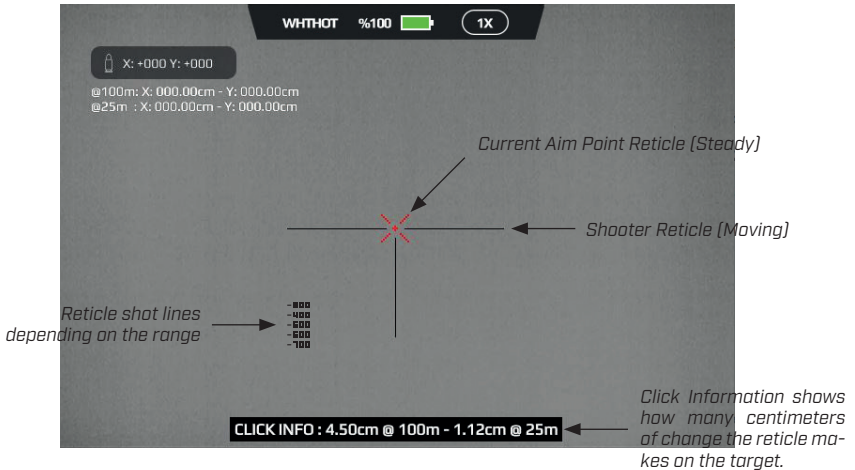
It shows how much X and Y change on a target of 100-25m. (Click Movement Scale)

****** The click information varies from device to device. The values in the picture are given as references.

MANUAL RETICLE ZEROING

1. The reticle is selected based on the weapon and ammunition that is used.
2. It is balanced so that the hit shall be 7 cm below the aim from a 25 m distance.
3. 3 shots are made [the interval between the 3 shots should not exceed the standards of the weapon and the bullet] and the middle point of the shot is marked.
4. The marked spot is reset in accordance with the aiming spot by correcting the X and Y axes.
5. **X=** Allows taking the shot towards right or left horizontally. To take the shot towards right, reduce the X value [the left button]; to take the shot towards left, increase the X value [the right button].
6. **Y=** Allows taking the shot towards up or down vertically. To take the shot towards up, reduce the Y value [the left button]; to take the shot towards down, increase the Y value [the right button].
7. Follow how many cm you have moved your shots on target from the click movement scale on the upper left.
8. After you reset the reticle on the target you wish to hit, press the **OK** button to go back to the menu.
9. After you confirm **SAVE AND EXIT** by pressing **OK**, the device will be set based on the weapon and ammunition.
10. If you do not want to save the changes you have made, choose **GO BACK TO THE ORIGINAL[X:0, Y:0], GO BACK or EXIT**.

- **ONE SHOT ZEROING:** The reticle is reset by a single shot.



X: Shows the click change on a horizontal plane.

Y: Shows the click change on a vertical plane.

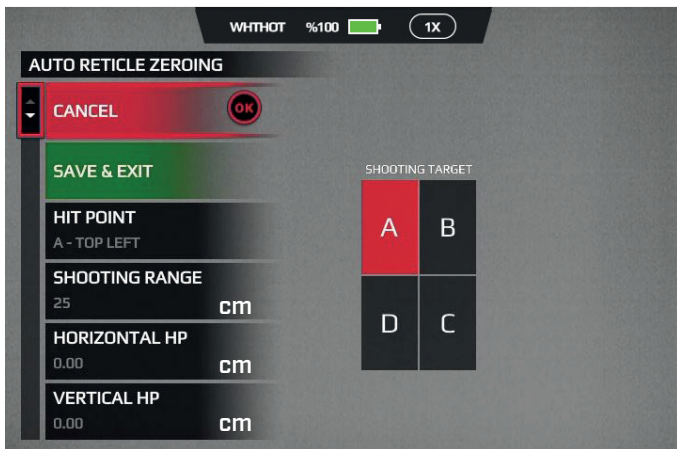
It shows how much X and Y change on a target of 100-25m. (Click Movement Scale)

**** The click information varies from device to device. The values in the picture are given as references.**

ONE SHOT ZEROING

1. The reticle is selected based on the weapon and ammunition that is used.
2. It is balanced so that the hit shall be 7 cm below the aim from a 25 m distance.
3. A single shot is made or 3 shots are made and the middle of these three is taken into account.
4. Open the page by following *MENU* → *RETICLE* → *ONE SHOT ZEROING*. After pressing the button for taking a photo once, go to the target with the device while the device is in the photo mode.
5. Shot point is balanced by moving the reticle depending on the hit point by using the *right-left, up-down* buttons.
6. The balanced reticle is confirmed by choosing **YES** with the **OK** button. This way, the device will be set based on the gun and ammunition.

- **AUTO RETICLE ZEROING:** The reticle is reset fast and automatically without any shots.



HP : Hit Point

Areas for hit point **[A,B,C,D]** are shown.

The shooting range for no-shot reset is determined.

The changes on horizontal and vertical planes are shown in cm.

AUTO RETICLE ZEROING

1. The barrel is aimed at the target by using a laser pointer or by looking through the barrel.
2. Shooting reticle is opened. The area is selected based on where the aim point of the reticle is located on hit point areas. **(A,B,C,D)**
3. The reset range is entered in meters (25-100m).
4. The difference between the reticle and laser in horizontal plane is entered in cm.
5. The difference between the reticle and laser in vertical plane is entered in cm.
6. Press **SAVE AND EXIT** to complete the reset.

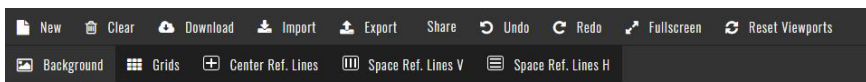
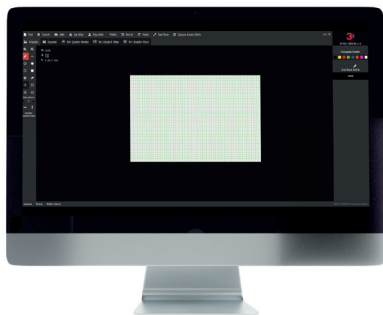


NOTE

“Auto Reticle Zeroing” is designed for urgent situations where one does not have the time or space to take a shot. Reset parameters have approximate values. This reset mode may not have the same accuracy as resets made by taking shots.

IN ORDER TO CREATE A PERSONAL RETICLE:

reticlecreator.3eeros.com



New: Opens a new page to start designing.

Clear: Clears the page.

Download: Downloads the designed reticle to the computer.

Import: Re-opens a previously designed reticle for editing.

Export: Downloads the designed reticle to the computer.

Share: Creates a link to share the designed reticle.

Undo: Undoes the last action.

Redo: Redoes the action.

Full Screen: Goes into full screen mode.

Reset the Work Space: Resets the work space.

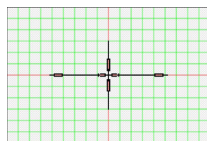
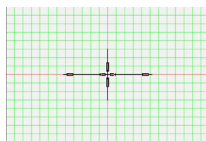
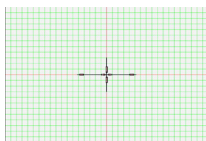
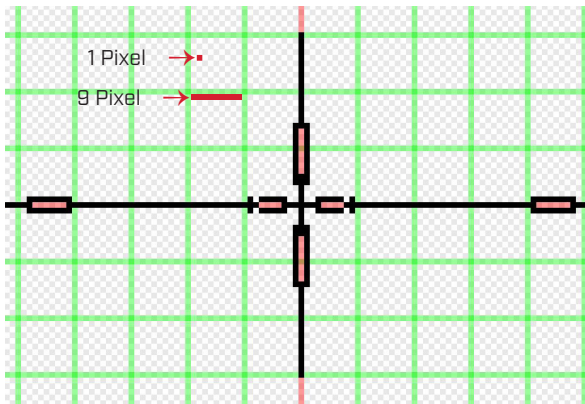
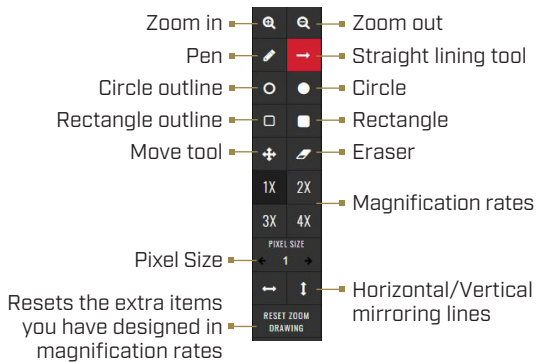
Background: Allows you to add an image in the background.

Grids: Turns on/off the grids.

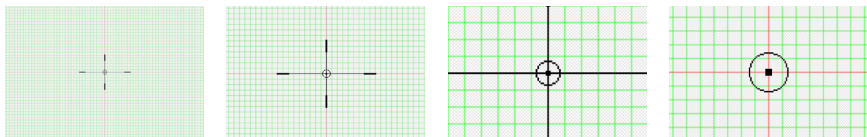
Ref.Lines-Central: Turns on/off the central reference lines.

Ref.Lines-Vertical: Turns on/off the vertical reference lines.

Ref.Lines-Horizontal: Turns on/off the horizontal reference lines.



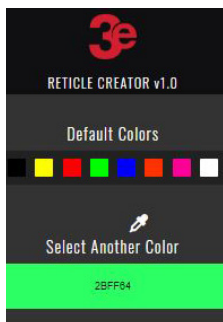
You can create your reticle designs in accordance with 1x, 2x, 3x and 4x magnification rates



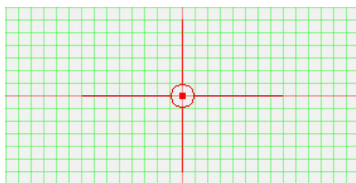
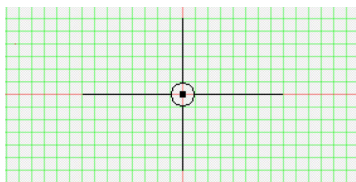
You can create a reticle for appropriate scales so that it does not take up too much space on the screen in various magnification rates.



The green and red lines on the reticle design page are given as references. They do not show up on the designed reticle. You can turn off these reference lines from the upper menu if you wish to do so.



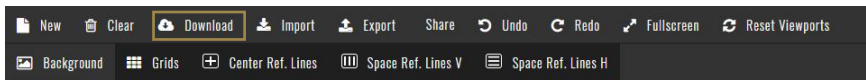
You can select the color of the reticle from the color palette.



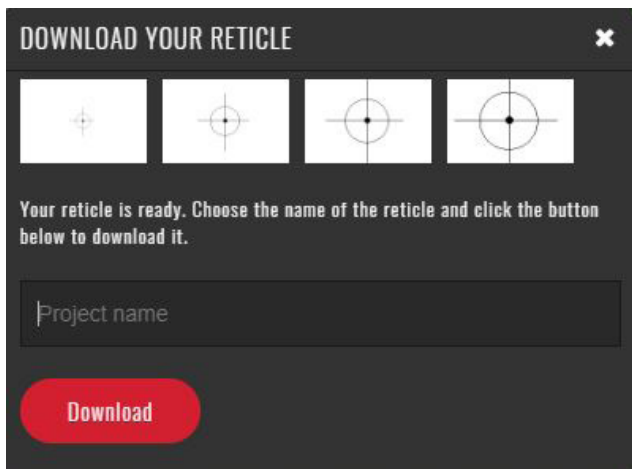
You can color your reticle designs with custom colors or with special color codes.

HOW TO UPLOAD THE RETICLE YOU HAVE DESIGNED TO YOUR DEVICE?

After you finish designing your reticle, click on the “Download” button from the upper menu:



On the first page, give a name to your reticle. After you name your reticle, click on the “Download” button.



After you click on the “Download” button, it will be downloaded to your computer as a RAR file “reticle-creator_****”. The name you have given will be there instead of “****”.

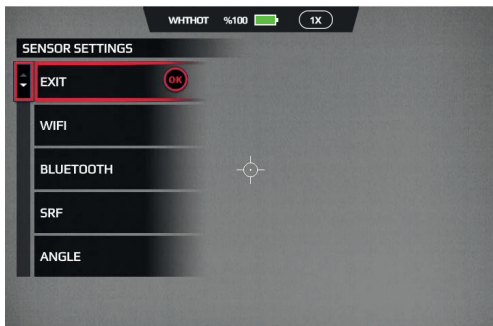
Inside the RAR file, you will see the “temp” folder. In this folder, there will be 4 images created for 4 different magnification rates in .png format. Move these files to your desktop on your computer.

Finally, go to MENU > GENERAL > USB MODE and select reticle on your device, then connect your device to the computer. When you connect your device to the computer, the folder containing reticle will pop up. Move the 4 files, which you have previously moved to your desktop, inside this folder.

Then safely remove your device and disconnect. Turn the device off and on again. Now you can select your new reticle from the RETICLE menu.

3.5.4 SUB-MENU: SENSOR

In the SENSOR submenu, you can adjust the Sensor settings.



Quick Return
to Main Menu

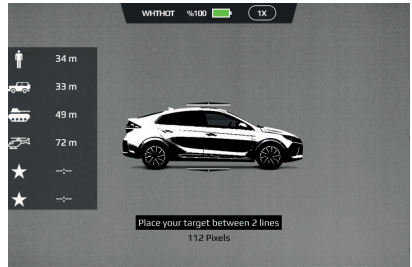
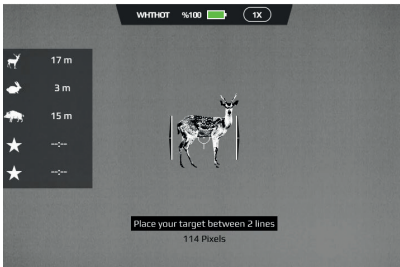
The user adjustable settings in the SENSOR submenu are as follows:

- **WIFI:** Processes regarding wireless image transmission. [See pp. 87]
- **BLUETOOTH:** Processes regarding wireless control. [See pp. 71]



Wi-Fi and bluetooth functions cannot be turned on at the same time. When you wish to turn on one of these functions, you need to turn off the other.

- **SRF:** Changes the stadiametric rangefinding settings.



You can change between horizontal and vertical measurements by pressing the middle menu button. You can change between “Tactical” and “Hunting” modes by pressing the right menu button.



SHORTCUT

If you press and hold down the left direction button for at least 3 sec. you can choose from SRF, OUTLINE and IMAGE FREEZING options.



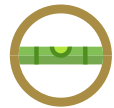
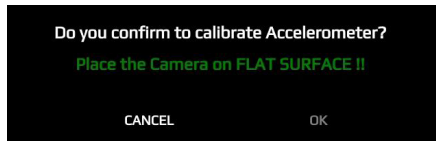
NOTE

The stars in Tactical and Hunting modes are allocated for user designated targets. You can make a designation from SR menu.

- **ANGLE:** Opens horizontal and vertical angles.



For calibration, reset angles by putting the device on a flat surface and following the instructions.



NOTE

Do the calibration process before using the device for the very first time.

3.5.5 SUB-MENU: GENERAL



Quick Return
to Main Menu

In the GENERAL submenu, you can adjust the General settings.

The user adjustable settings in the GENERAL submenu are as follows:

- **PROFILES:** You can create different profiles. To name the profiles you have created, follow these steps:



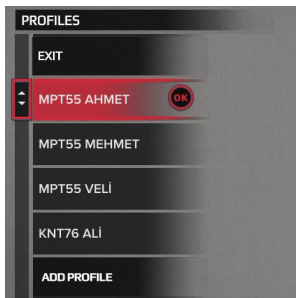
profile_name_list.txt

Create an empty text (.txt) file named **??**

- Write the name you want to give line by line. For example:

```
profile_name_list - Notepad
File Edit Format View Help
MPT55 AHMET
MPT55 MEHMET
MPT55 VELI
KNT76 ALI
```

- Save the file as “profile_name_list.txt”.
- Connect the device to the computer.
- Move the file you have created in the 3E media folder.
- Safely remove the device from the computer.
- Restart the device and you can start using your profile name.



- **ANALOG OUT:** The analog out is activated.
- **HMD VIDEO OUT:** Changes between HMD and OLED screens.



NOTE

When you change this mode, the screen will turn black. The display is transferred to an external screening unit. If you are still on the same submenu, you can bring back the image by pressing the right or left direction buttons. If the image does not come back, press and hold the on/off button for 5 sec. and turn off the device. When you turn it back on, the image will come back.

- **USB MODE:** You can set the USB mode as MEDIA, RETICLE or VIDEO.

MEDIA: Used for viewing the Photos and Images you have saved on the device. The device is set on media mode as default.

RETICLE: Used for editing the reticles in the device. Also use this mode to copy the reticles you have designed to the device.

VIDEO: Used for digitally transferring the display to an external unit. [For detailed information see pp. 83]

- **VIDEO QUALITY:** You can select the video quality. There are 3 levels: Low, Medium and High.



NOTE

If there is delay in transferring video in wireless mode, set the video quality as low or medium.



NOTE

Here, the video quality only refers to the video transferred to an external unit.

- **SLEEP MODE:** The screen will turn black when the device is not used for 30 sec. It will re-open with any move.

- **UNIT:** You can select the unit.
- **DATE/TIME:** You can set the date and time.
- **FONT STYLE:** You can select the font.
- **BATTERY PERCENTAGE:** Battery percentage is activated.
- **LOW BATTERY WARNING:** Low battery warning is activated. You can set the warning level as 10%, 20% or 30%. In these levels, you will get 10 min., 30 min. and 50 min. of battery life, respectively.



ATTENTION

When the battery is drained to the selected level, it will give you a warning.



WARNING

The battery life may change depending on environmental and atmospheric factors.

- **MENU AUTO CLOSE:** The menu is closed automatically with a time adjuster.
- **TOPBAR AUTO CLOSE:** The upper status bar is closed automatically with a time adjuster.
- **BOOTSCREENS:** Personalize your opening screen.
- **UI STYLE:** You can adjust the UI style settings.

- **FACTORY RESET:** The device is turned back to its factory settings.



This process may take a few minutes. The display of the device may turn off for a few times during this process. Please do not turn off the device or remove the batteries while this process is going on. Make sure that the battery level is at least 50%. Press the OK button several times to continue with the process.



Resetting the device does not change your reticle reset settings.

- **UPGRADE FIRMWARE:** Opens the software update page.



For more information on software updates, please contact us.

- **ABOUT:** Shows information about the device.
- **POWER OFF:** The device is power off through the menu.



The device will not turn back on with motion. In order to turn on the device, press and hold the on/off button.

USE AND INSTALLATION OF ACCESSORIES

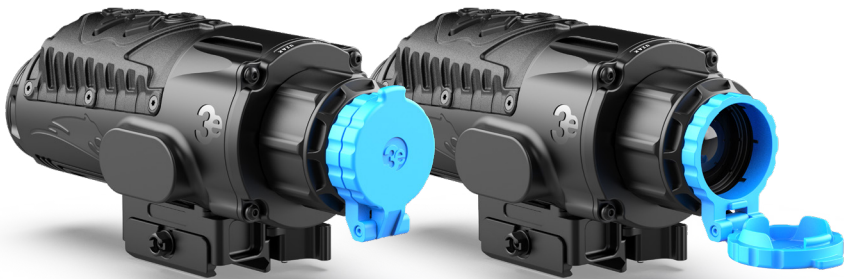
4.1 OBJECTIVE PROTECTION COVER

It is located in front of the lens in order to protect the lens from any damage.



NOTE

You can determine the opening direction by turning the cover on its axis.



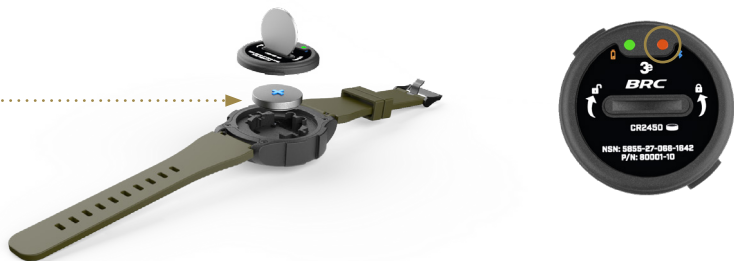
4.2 BRC WIRELESS REMOTE CONTROL

With a wireless remote control, you can wirelessly control your device.

How to Connect?

Firstly, set the remote control in pairing mode. For this:

- Open the battery cover on the back side of the remote control and then put a CR2450 3V Lithium battery inside. The amber colored LED light in the back should start blinking. This means that connection is not yet established.



- Press and hold the “OK” button on the remote control. This activates the pairing mode.

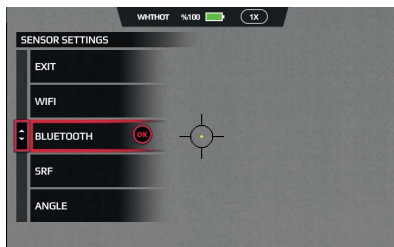


After following the steps mentioned on the previous page, turn on the device and;

- Open the main menu by pressing “OK” and go to the “SENSOR” submenu.



- In the “SENSOR” submenu, go to “BLUETOOTH” settings and turn on the Bluetooth.



NOTE

When the wireless display is activated, Bluetooth will be disactivated (passive). In order to activate your Bluetooth, first you need to deactivate “Wireless Display”.

- When you turn on Bluetooth, there will be a new line as “PAIR THE CLOCK”. Go on to this line and press the “OK” button. After you press the “OK” button, the line should be changed as “STOP PAIRING”. If you wish to cancel this process, press the “OK” button again; otherwise, the device will search for a suitable remote for pairing.



- When the device is searching, it automatically connects to the first remote control it finds and saves the MAC address for later use.

- When you turn on “BLUETOOTH” the next time, the device automatically searches for the MAC address of the remote control and connects to it. When the device is connected to the remote control, the amber LED light stops blinking and the remote control vibrates three times, indicating that it has connected to the device.



NOTE

You can pair the remote control with any device.



Open the battery cover by turning it clockwise with a coin or a similar metal object.

Insert the battery so that cathode (+) is pointing upwards (towards the battery cover).

After you install the battery, close and tighten the cover by turning it counterclockwise with a coin or a similar metal object.



4.3 INTERFACE BELLOWS

The interface bellows are used for connecting the device to the day sight and prevent any light to seep in.



NOTE

The interface bellows are suitable for using with lenses of different brands and diameters.

4.3.1 OPTICAL AXIS

The distance of optical axis between the ocular and the track is 39 mm.



4.4 EYECUP

The eyecup is used by attaching to the ocular area of the device. The eyecup not only prevents light to seep in when looked into the screen but also prevents the screen light to reflect on a person's face.



The use of eyecup is intended for using the device as a Thermal Weapon Sight. When the eyecup is in use, the device cannot be used as clip-on.



To attach the eyecup, push it firmly until you hear a click sound. If you have not heard the click sound, try re-attaching the eyecup in order not to drop it.

4.5 LIGHT REDUCER FILTER

The light reducer filter reduces the light that reflects in the device. This filter can be used both in Normal and Clip-on mode.



Light Reducer
Filter



NOTE

The Light Reducer Filter can be used when the interface-bellows are attached.

4.6 DIOPTER FILTER



WARNING

Click for diopters filters (both farther and nearer blurred) and myopia (farther here, nearer clearer). Do not use the filter if you are hypermetropic.



NOTE

Diopter filters do not fix the vision of users with eye prescriptions. Diopter filters are used since they provide users with eyesight problems a more convenient vision.



WARNING

The use of diopter is intended for using the device as a normal mode. When a diopter filter is in use, the device cannot be used as clip-on.

4.7 CONNECTOR INPUT

Open the connector cover by pulling it. Insert the connector cable to the connector input by adjusting the points.



When connecting the connector cable, make sure that the white point on the connector cable and the white point on the device is in line.



When you disconnect the connector cable from the device, pull it by holding its tip. Do not pull it on its cable.

4.8 VIDEO AND DATA TRANSFER CABLE BNC & USB CABLE

Use the Data output of the video/data transfer cable to transfer the photos and videos to an external unit.

In order to transfer the display on the device to an external unit, use the video output of the video/data transfer cable.

Video/data transfer cable is connected to the connector piece on the body of the device.



4.9 WIRED IMAGE TRANSFER

4.9.1 TV/MONITOR/PROJECTOR

This is used for transferring the images in the device to other displays such as TV/MONITOR/PROJECTOR.

1. Connect the **BNC** output of the BNC & USB cable to the screen on which you wish to transfer the display. [If your screen does not have a BNC output then follow the steps on Page 86 on how to use a VGA converter.]
2. After the connection with the cable is established, set the HMD video output as HMD by following Menu>General>HMD Video Output in the device menu. [See pp. 67]



In order to establish connection, align the white points in the device and the cable.




NOTE

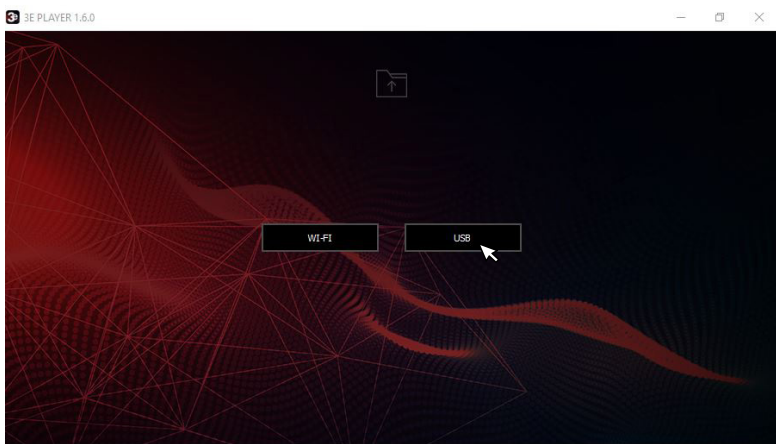
When you change this mode, the screen will turn black. The display is transferred to an external screening unit. If you are still on the same submenu, you can bring back the image by pressing the right or left navigation buttons. If the image does not come back, press and hold the on/off button for 5 sec. and turn off the device. When you turn it back on, the image will come back.

3. Connect the connection cable of the cable set to the connector piece on the device. This will enable the transfer of the display.

4.9.2.1 PC [WINDOWS TABLET] USB CONNECTION

You can use this to transfer the display to another device such as a PC [WINDOWS TABLET] by using the USB. In order to connect the device to a PC, download “**3E PLAYER**” app on **www.3eeos.com** website.


1. Connect the **BNC** output of the BNC & USB cable to the screen on which you wish to transfer the display. [If your screen does not have a BNC output then follow the steps on Page 86 on how to use a VGA converter.]
2. Set the USB mode as Video by following Menu>General>USB Mode in the device menu.
3. Connect the connection cable of the cable set to the connector piece on the device.
4. Open the app 3E Player and press  Then select USB



5. This will enable the transfer of the display.

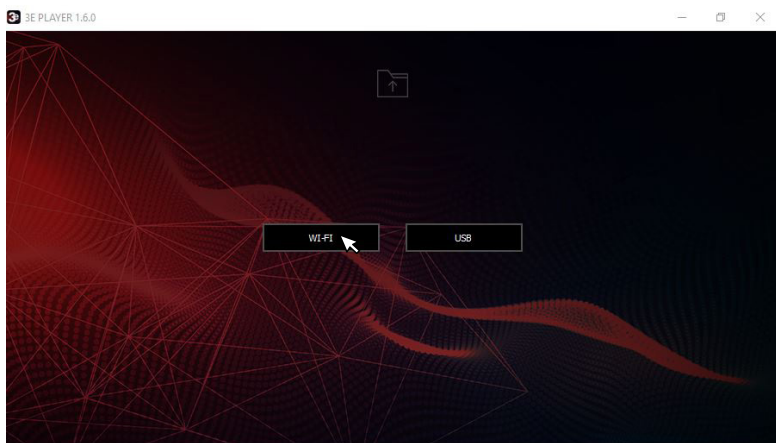
4.9.2.2 PC (WINDOWS TABLET) WI-FI CONNECTION

You can use this to transfer the display to another device such as a PC (WINDOWS TABLET) by using WI-FI. In order to connect the device to a PC, download “**3E PLAYER**” app on **www.3eeos.com** website.

1. Turn on the WI-FI feature of your PC (WINDOWS TABLET) and connect it to the device.
2. Enter the password (“12345678”) and press the “CONNECT” button.
3. Open the 3E Player app and press  Then press on the WI-FI option.



The default password for connection is set as “12345678”. If you wish, you can change the password in the menu settings.



4. The wireless display transfer will be executed.

4.9.3 USE OF VGA CONVERTER

This is used for transferring the display of the device to another projector or screen which has an **HDMI or VGA** input. For this process, you will need a VIDEO-VGA converter



VIDEO-VGA Converter



BNC & USB Cable
P/N: 30000-68



VGA Cable



Connect the other tip of the VGA Cable to a device such as a Monitor, TV or Projector which has a VGA output.



NOTE

You can buy the VGA set from an electronics market or an e-commerce website such as Gittigidiyor, n11 etc.

1. Connect the cable with the BNC output of the Cable Set the applicable input on the converter.
2. When the cable connection is established, set the HMD video output as HMD.
3. Connect the VGA (or HDMI) cable to the applicable input in the converter.
4. Connect the connection cable of the cable set to the connector piece on the device. This will enable the transfer of the display.

4.10 WIRELESS DISPLAY TRANSFER

IN ORDER TO INSTALL 3E CONNECT APP:



FOR ANDROID:



FOR IOS:



You can download the **3E CONNECT** app on your Android or IOS device by scanning the QR Code.

After you install the app, you can connect it to the device with Wi-Fi.

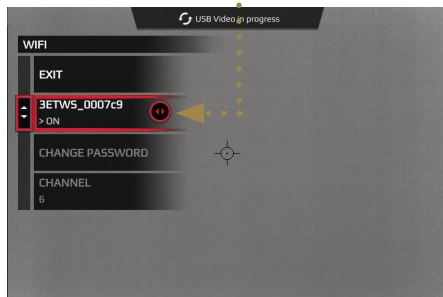
You can install the Windows XP/7/8/8.1/10 compatible **3E PLAYER** app on www.3eeos.com website.



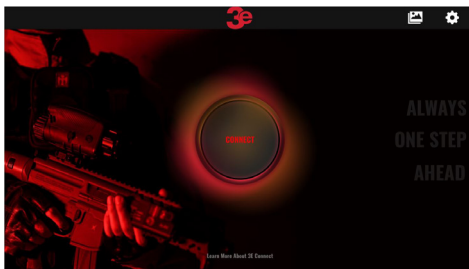
After installing the app, you can also connect it to the device by using the Video Data Transfer Cable or through Wi-Fi on computers with Wi-Fi feature.

HOW TO CONNECT ANDROID - 3E CONNECT?

1. After downloading the “3E CONNECT” app, go to SENSOR > WIRELESS DISPLAY > 3ETWS_XXXXX (code of the device) and turn it on. The Wi-Fi of the device will then be turned on.



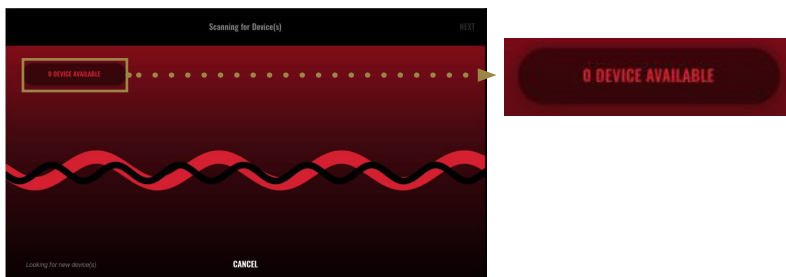
2. Turn on the Wi-Fi of your Android device and press the “CONNECT” button in the app.



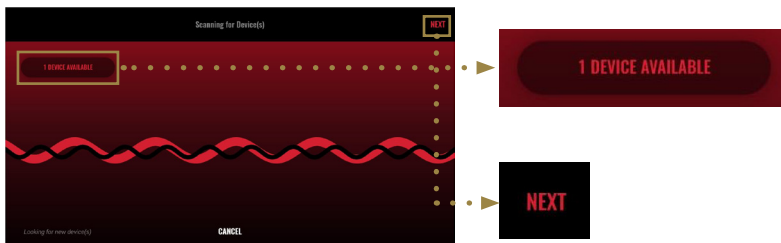


Before establishing the wireless connection, make sure that the mobile network of your device is switched off.

3. After you press the connect button, the app will search for the device as shown in the image below.



4. Wait for the writing “1 DEVICE FOUND” on the upper left corner to connect. After you see this writing, “CONTINUE” button on the upper right corner will be active. Press the continue button to go to the next step.



5. Enter the password [“12345678”] and press the “CONNECT” button. The wireless display transfer will be executed.



NOTE

The default password for connection is set as “12345678”. If you wish, you can change the password in the menu settings.

HOW TO CONNECT IOS - 3E CONNECT?

1. After downloading the “3E CONNECT” app, go to SENSOR > WIRELESS DISPLAY > 3ETWS_XXXXX (code of the device) and turn it on. The Wi-Fi of the device will then be turned on.



2. Turn on the Wi-Fi of your IOS device and connect to the device.

3. The password needed is “12345678”. This password applies to all devices. Do not forget to change the password after the initial use.

4. After entering the password, the devices will be paired and ready to be used. Open the app”3E CONNECT” and press the “Connect” button. The Wireless Display transfer will be executed.



Before establishing the wireless connection, make sure that the mobile network of your device is switched off.

4.11 NECK STRAP

The neck strap makes it easy to carry the device and use it during surveillance.



Do not hold and dangle the device from the neck strap before making sure that it is properly attached to the device.



Hanging the device on the neck for long periods of time may cause neck pain.

4.12 BATTERY CHARGER

Battery charging equipment; operates in compliance with Li-ion, Ni-MH and Ni-Cd rechargeable batteries and is suitable for CC, CV and Trickle charging mode.

Specifications;

- The integrated micro processor defines the battery types automatically and selects the appropriate voltage and current. It automatically detects the state of the and selects the appropriate charging mode.
- The green charge display lights indicate the charging process and the state of the battery.
- When charging is complete, it automatically stops.
- There is a protection and warning feature for when the batteries are inserted backwards or when a non-rechargeable battery is inserted.
- It has ideal heat distribution feature.
- It is RoHS, CE, FCC and CEC certified.

Input	: AC 100-240V 50/60Hz 0.25A (MAX), 8W DC 9-12V
Output Voltage	: 4.35V \pm % 1 / 4.2V \pm % 1 / 3.7V \pm % 1 / 1.48V \pm % 1
Output	: 500 mA x2 / 1000 mA x1
Current Size	: 132mm x 70mm x 35mm
Weight	: 104 g [excluding batteries and power cable]
Compatible Batteries	: Li-ion/IMR/LiFePO4: 10340, 10350, 10440, 10500, 12340, 12500, 12650, 13450, 13500, 13650, 14350, 14430, 14500, 14650, 16000, 16500, 16340(RCR123), 16650, 17350, 17500, 17650, 17670, 18350, 18490, 18500, 18650 , 18700, 20700, 21700, 22500, 22650, 25500, 26500, 26650



Safe operating temperature of the battery equipment is between -10°C and +40°C.



Power Indicator Lights

Indicates that the battery inserted to the battery equipment is charged 1/3.	
Indicates that the battery inserted to the battery equipment is charged 2/3.	
Indicates that the battery inserted to the battery equipment is fully charged.	
The battery equipment flashes when the battery is inserted backwards or when a non-rechargeable battery is inserted.	

OPERATING INSTRUCTIONS

1. Insert the power cable as shown below or if the charging process will take place in a vehicle, then insert the vehicle charging cable into the power inlet of the battery equipment.



AC : If charged over the range of 100-240V, 50/60Hz, the charging device/battery may sustain damages.

2. Plug in the power cable or the vehicle charging cable to a power outlet. After plugging in, all 3 green power indicator lights that display the charging process will flash one at a time, starting with the one below.

At this state, the battery equipment is ready to charge.



WARNING

DC : If charged over the range of 9-12V, the charging device/battery may sustain damages.

3. The battery equipment has two battery slots and it can charge batteries of different types and voltages simultaneously.



The battery equipment can only be used for 3.0V Li-ion or 1.2V Ni-MH / Ni-Cd rechargeable batteries.



When one or two batteries are being charged simultaneously, the maximum current for each of them is 0.5A. As the current of 0.5A is too high for 10440 & 15266 Li-ion batteries, it is recommended not to charge these types of batteries.



When two different types of batteries (for example: Li-ion 26650 and AAA) are being charged simultaneously, always check the contact points between the batteries and on the metal compartments of the battery equipment.



The charging equipment is only compatible with Li-ion, Ni-MH and Ni-Cd rechargeable batteries. Never use with other battery types. If they are used, it may cause the batteries to explode, crack or leak and therefore cause damages and/or personal injuries.

4. Place the batteries on their slots in accordance with the (+) positive and (-) negative poles displayed on the battery equipment. When the batteries are placed, if all or some of the 3 green power display lights start flashing, this means that the charging process has started.



WARNING

If the batteries are inserted backwards as shown below or if the inserted batteries are not rechargeable, all the charging display lights will start flashing quickly. In that case, insert the batteries correctly.



ATTENTION

If you are storing the device, do not leave the batteries inside. This can cause problems in batteries such as leaking or swelling. In that case, the device may be damaged.



USE ORIGINAL BATTERIES!



WARNING

If the outer surfaces of the batteries are peeled as shown above, do not use these batteries.



WARNING

Use the charging equipment only in closed environments or in the vehicle. Do not contact it with water and do not expose it to high humidity, low and high ambient temperature.



WARNING

Do not dismantle the charging equipment and do not make modifications on it.



WARNING

Do not leave the charging equipment under the sunlight, near fire and heaters and do not store it in high-temperature environments.



WARNING

For safe use and appropriate disposal of the batteries, read the manufacturer's conditions.



Do not dump the batteries into environmental waste, collect them with the special recyclable wastes.

4.12.1 USING THE BATTERY COVER

The battery cover is opened by turning it clockwise and closed by turning it counterclockwise.



OPEN



LOCKED



Insert the batteries so that [+]
pole touches the battery cover.



NOTE

Failure to use an original battery will void the warranty.



NOTE

If the battery cover o-ring tears, replace it immediately.

OPERATING INSTRUCTIONS

5

5.1 GENERAL

This section explains the necessary preparations to operate the device and its operating instructions.

5.2 USING THE DEVICE

The following instructions explain how to operate the device.



Since TRMS is an optical device, it should always be used with care.

5.2.1 REMOVING THE DEVICE FROM THE BAG

- A. Open the Carrier/Storage bag after taking precautions so that nothing drops when opened.
- B. Make sure that the device and all its accessories are in the carrier/storage bag.
- C. Remove the fabric carrier bag. Open the bag and remove the device.

5.2.2 INSTALLING THE BATTERY UNIT

A. Turn the cover of the battery compartment clockwise.



Since TRMS is an optical device, it should always be used with care.

B. Insert the battery, making sure that the positive poles face the battery cover.

C. Push the battery cover and lock it by turning it counterclockwise.



Make sure that the device is “OFF” before inserting, removing or replacing the battery.

USAGE IN BAD CONDITIONS

6.1 USAGE IN DUSTY AND SANDY ENVIRONMENTS

A. If the device must be used in dusty and sandy environments, always keep the carrier bag closed, except when using or changing the device.

B. Clean the lens regularly with the lens cleaning brush, paper or cloth.

C. After each task has been completed, clean the dust and sand on device and the carrier bag.

6.2 USAGE IN RAINY AND DAMP ENVIRONMENTS

A. Keep the device closed at all times in the carrier bag, except when removing or placing the device.

B. If you use the device in a rainy or damp environment, thoroughly clean and dry all units of the device after you have finished using it.



ATTENTION

Never put the device in the bag when it is wet or damp. Dry the damp or wet surfaces with a soft cloth, clean the lens.

TROUBLESHOOTING

7

7. TROUBLESHOOTING OPTIONS

The following procedures will help solve some of the main problems that may arise with the device. If the failure of the equipment is not listed or if the listed actions do not fix the problem, consult a higher stage or send a text to WhatsApp Support Line.

7.1 TROUBLESHOOTING TABLE

The Problem	Possible Cause	Fixing Process
1. The device is not working.	1a. The On/Off button is not pressed properly. 1b. Battery is drained. 1c. The battery is not inserted in the correct direction. 1d. The battery cover is loose. 1e. The threads of the battery cover have been damaged. 1f. The battery slot or springs are corroded and damaged. 1g. Battery drained. (Dead battery) 1h. There is a possible internal error.	1a. Turn it on by pressing and holding down the power button for 5 sec. (page 29) 1b. Charge the batteries. (page 94) 1c. Insert the batteries in accordance with the direction (+, -) shown on the battery section. (page 99) 1d. Check if the battery cover is closed properly and firmly. 1e/1f. Send it to a higher maintenance office. 1g. Replace the battery with a new one. 1h. Send it to a higher maintenance office.
2. The display is blurry, there are dark areas and noise (dots) in the background.	2a. It is not calibrated.	2a. Start the calibration process by pressing the down direction button. (If the device is set in auto calibration mode, then the device will do the calibration automatically.) (page 46)

The Problem	Possible Cause	Fixing Process
3. The display is too dark or bright.	3a. Brightness or Contrast levels are set too low (if it is dark) or too high (if it is bright).	3a. Set favourable Brightness and Contrast levels under Menu > Display. (page 43)
4. Reticle or menus are not clear.	4a. You are using prescription glasses between the range “ -/+ 4 ”.	4a. Use your glasses when you are looking through the ocular part. In cases where this is not possible, attach the correct diopter filter. (page 80)
5. The target is not clear.	5a. Lens focus is not adjusted correctly.	5a. Turn the focus until the target is clear. (page 32)
6. The hit point changes after the shot.	6a. The device is not properly attached on the weapon.	6a. Make sure that the device is attached correctly on the weapon.
7. I cannot see the target in the direction that I am looking at.	7a. You are looking behind the glass.	7a. Remove the glass from your field of view.
8. Viewing quality is poor, identification range got smaller.	8a. You have been subjected to bad weather conditions (snow, rain, fog etc.)	8a. -
9. The display is too dense.	9a. The setting under Menu-Display-Sharpness is too high.	9a. Set the sharpness level in accordance with normal viewing conditions.
10. The image is linear, details are too dense, the target does not seem clear.	10a. The setting under Menu-Display-Outline is not set at a correct rate .	10a. Turn off the outline or use it in correct values.
11. The image is upside down.	11a. Menu-Display-Normal viewing is turned off.	11a. Adjust to normal viewing in Display settings.

The Problem	Possible Cause	Fixing Process
12. Reticle is not visible.	12a. Color, Polarity, Contrast or a similar setting has been changed under Menu-Reticle settings.	12a. Choose the reticle settings which give you the optimum sight of the target.
13. There is no hit despite the reset.	13a. Reticle reset mode settings have not been saved.	13a. You need to choose Save/Exit after the reset.
14. The reticle does not suit the ranges while shooting.	14a. The proper reticle system has not been selected for the type of weapon and cartridge that is being used .	14a. Choose the correct reticle for the weapon and cartridge.
15. The reticle blocks the target as the magnification increases.	15a. As you magnify, the article expands or remains stable.	15a. Choose SFP mode from the reticle settings.
16. There is no shot at 100 m after the 25 m reset.	16a. When doing reset at 25 m, the distance between the aim point and the hit point should be appropriate.	16a. The reset should be done at 100 m or if it is done at 25 m, the distance between the aim point and the hit point should be appropriate.
17. Wireless display or Bluetooth is not working.	17a. Wireless display and Bluetooth does not work at the same time.	17a. Turn on the mode you want to use and turn off the other.
18. The scope is turned off and it turns off when it is moved.	18a. Menu-General-Sleep Mode is turned on.	18a. The sleep mode saves energy. If you do not use this feature, keep it turned off.

MAINTENANCE PROCEDURES

8

8.1 GENERAL

This section includes the cleaning and inspection instructions for device.

The safe use of the device depends to regular cleaning and control that will be carried out to prevent any malfunctions of the device.



NOTE

The user is responsible for keeping the device and accessories clean and ready for use at any time.

8.2 MAINTENANCE PROCEDURES

Implementation of the maintenance procedures given below is necessary for extending the lifetime, the correct and effective operation of device.

8.2.1 CLEANING MATERIALS

- Lens cleaning cloth
- Ethyl alcohol
- Cotton-tipped swab
- Lens cleaning brush

8.2.2 MAINTENANCE OF THE CONNECTOR INPUT

Inspect the connector input for any corrosion, dust or damages. Remove any major foreign particles slowly and clean the contact points with a cotton swab dipped into ethyl alcohol.



Ethyl alcohol is a flammable material. The flash point is about 13 degrees. Keep the alcohol away from fire and heat sources.



Do not use any abrasive chemicals such as acetone, thinner or solvent for cleaning.



Do not use hot water to clean the device. Do not clean the lenses by hand, use the cleaning accessories.

8.2.3 MAINTENANCE OF LENS SURFACES

Check the lens surfaces for any damages and cleanliness after each use. Clean the small residue on the lens first with a cleaning brush, then with optical cleaning cloth and ethyl alcohol. Replace optical cleaning cloths regularly. Clean the lens with an optical cleaning paper or a cotton-tipped swab with circular movements without applying too much pressure.

8.2.4 MAINTENANCE OF THE BATTERY SET

Check the battery compartment regularly for corrosion, leakage, cracking and breakage. Softly clean the electronic contact surface without too much pressure, using a pencil eraser or a cotton-tipped swab dampened with alcohol.

8.2.5 MAINTENANCE OF TRMS ACCESSORIES

Check TRMS accessories for any damages, cleaning and movement after each use. Replace the accessories if they are damaged. Clean the accessories using the cleaning kit.

8.3 CORRECTIVE MAINTENANCE

PARS does not have any integrated parts or kits that can be changed by an operator or personnel of organization level. Consult an upper level of maintenance for maintenance and/or repair operations beyond the ones described in this manual.

8.3.1 CHANGING THE BATTERY COMPARTMENT O-RING

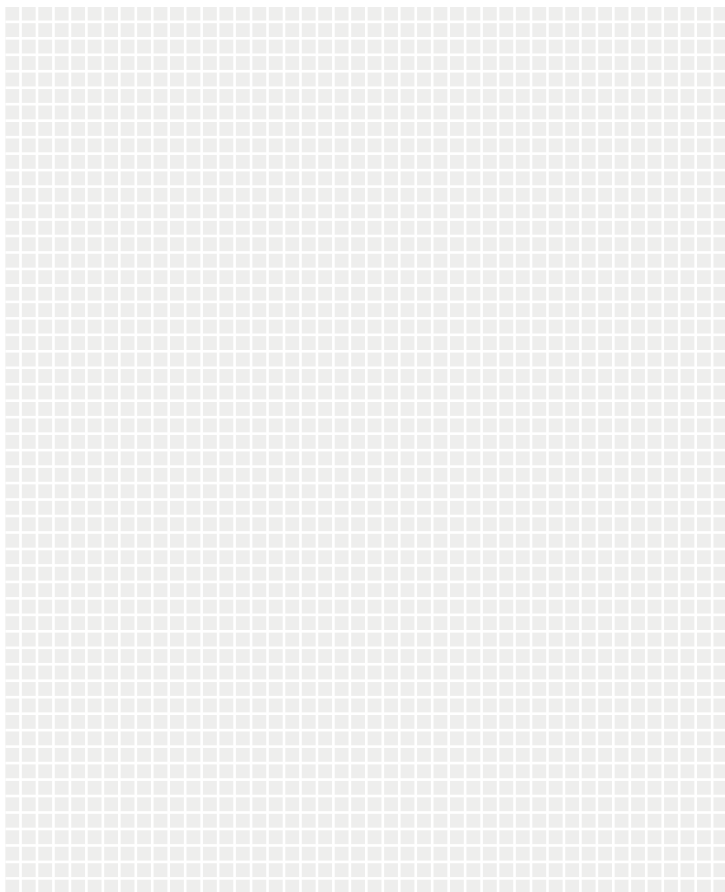
1. Switch on the locking latches of the battery cover.
2. Remove the battery cover.
3. Use your fingers to tighten the o-ring. Push towards outside while holding it on both edges. Grab the o-ring with the other hand and pull the battery compartment from its threads.
4. To clean any dirt, grease or debris, wipe the lining grooves with a cotton swab immersed into ethyl alcohol.
5. Apply a fine coat of fluorinated grease equally dispersed on the spare o-ring.
6. Insert the replaced o-ring on the battery compartment threads and slide it in to the fixing groove.
7. Re-attach and tighten the battery cover.



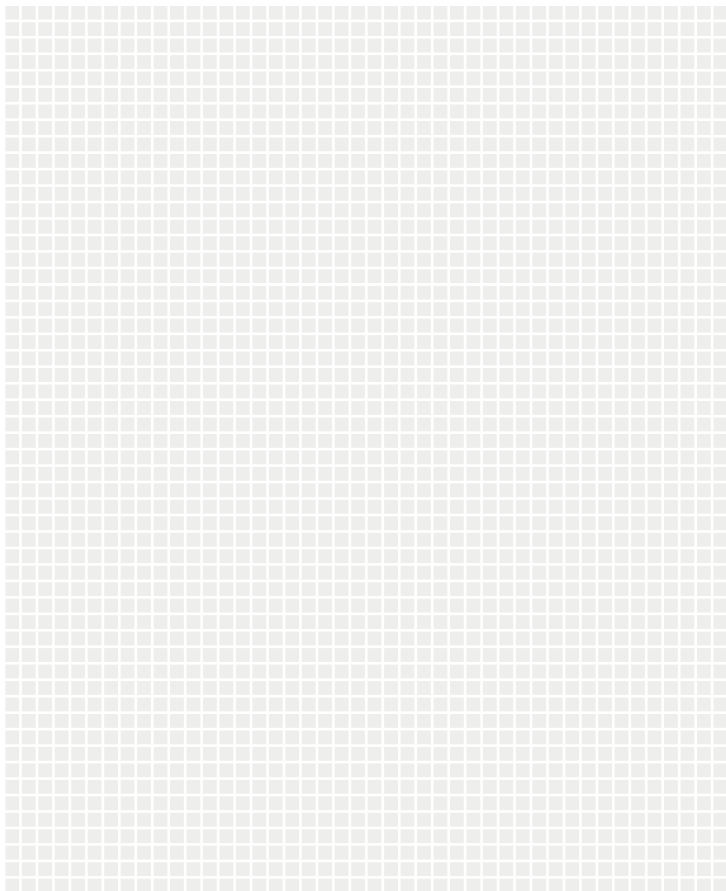
IMPORTANT WARNINGS

- With high caliber weapons (8.59 mm / .338 cal & 12.7 mm / 0.50 cal) TRMS 660H and TRMS 675H models should be used. Other TRMS models are only designed for the weapons using 5.56 and 7.62 mm bullets. If the device is used on the wrong type of weapon, it shall not be covered by the warranty.
- Any damages that may occur due to use of third party batteries shall be considered as user error. In that case, the device shall not be covered by the warranty.
- Make sure that all the covers on the device are completely closed [connector input, battery cover etc.]. It will pose a risk to waterproofing and durability of the device if these covers are opened. Any damages that may occur due to these case shall be considered as user error. In that case, the device shall not be covered by the warranty.

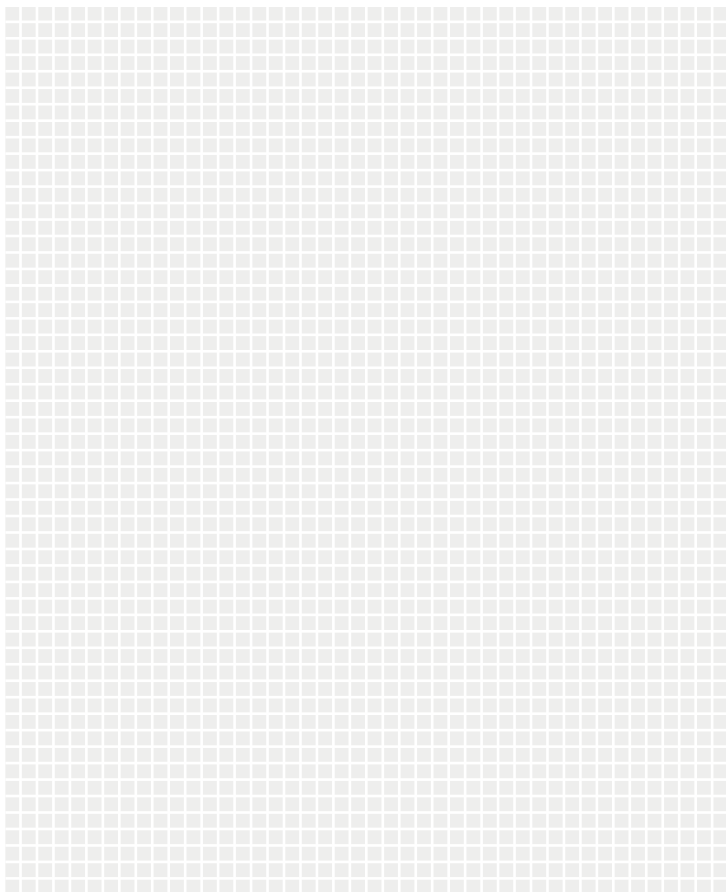
NOTE



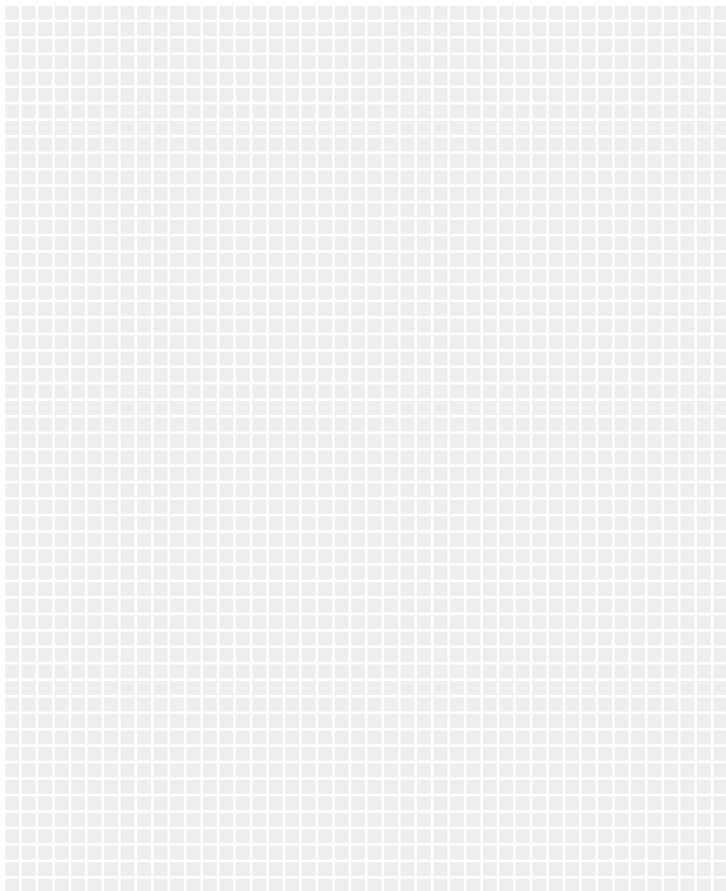
NOTE



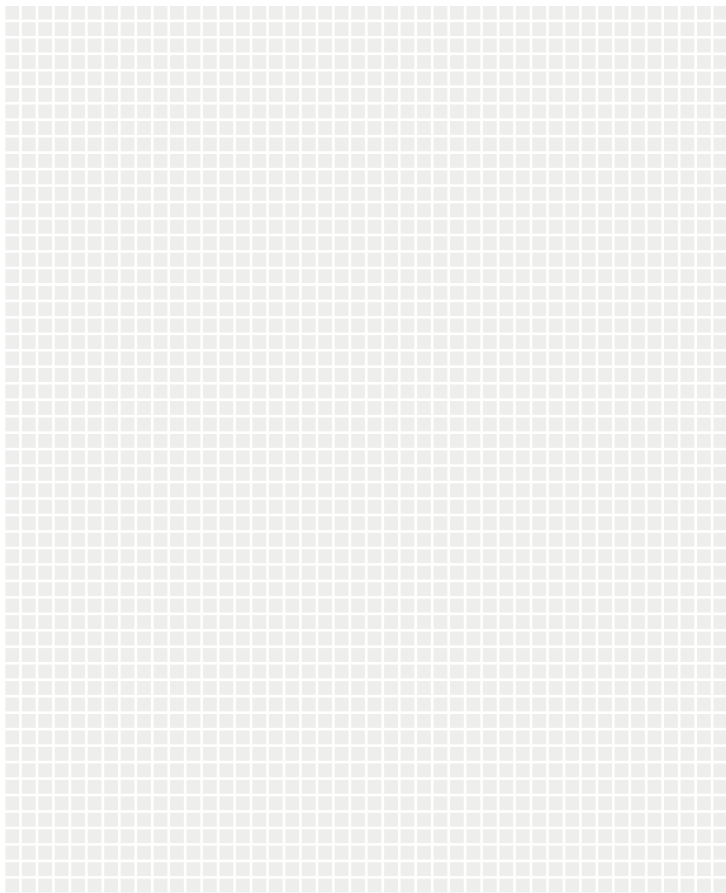
NOTE



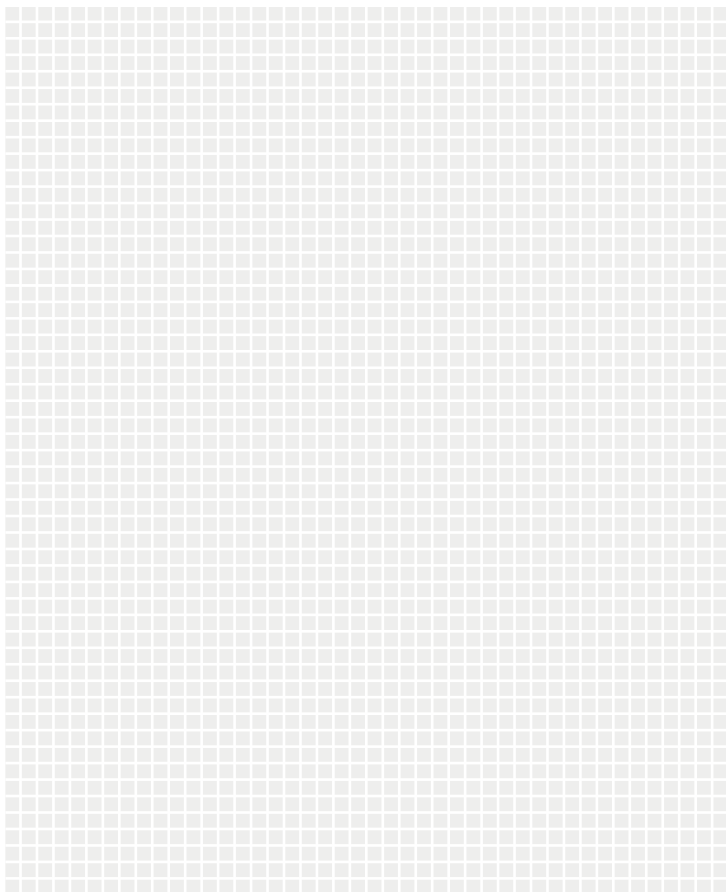
NOTE



NOTE



NOTE



This manual is for reference only. The actual product may vary, including, but not limited to, in terms of images and other technical features. All explanations, information, and recommendations in this manual do not constitute any kind of warranty, whether express or implied.

This manual is intended only to inform users, and our company cannot be held liable for incorrect or incomplete statements within the codified information.

Model : **TRMS** Clip-on Thermal Weapon Sight
Made in **LUXEMBOURG**.

Service & Support

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