T15™ USER'S MANUAL

T15™/T15-C™

KIT CONTENTS

T15™ Thermal Imager	Quick release rail mount*	Allen wrenches*: .050" and 1/8"
CR123 batteries (2)	¼-20" rail mount fastener (2)*	USB cable
¼-20" hand grip	Lanyard	Lens Cleaning Cloth

Rail mount and rail mount accessories included in the T15 thermal imager kit only

UNIT SPECIFICATIONS

	T15-C	T15
Size	110 x 44 x 71 mm (4.33 x 1.73 x 2.80")	110 x 63 x 71 mm (4.33 x 2.48 x 2.80")
Weight w/o battery	225g	310g w/ mount
Zoom	3-8x Continuous optical zoom with auto focus adjustment	
Field-of-View	from 18.7° to 7°	
Minimum Focus Distance	2 meters	
Range Performance	Human Detection Range: 162m @ 3x – 436m @8x Human Recognition Range: 81m @ 3x - 218m @ 8x Human Identification Range: 40m @ 3x - 109m @ 8x	
Focus	Focus free	
Spectral Range	8-14 micron	
Power	2 CR123, 3V – 8+ hours of operation	
Resolution	160x120 pixels FLIR Lepton 3	
Display	1.5" OLED	
Operating Temperature	-10° to +45° C	
Frame Rate/Shutter	9Hz with Shutter	
Accessories	Optional 2x afocal adapter; Optional Clip-On adapter	

INSTALLING CR123 BATTERIES

The T15 uses a 3 volt CR123 batteries. Quality photo lithium batteries are recommended for optimal unit performance.

1. Unscrew the threaded battery cap and install the batteries according to the unit markings.
2. Reattach the battery cap and and tighten until snug.

POWER ON T15

Remove the dust cover from the T15 lens. Press the power button for 1second to power the T15 on. A splash screen will appear followed by the thermal display. Press the power button again for 1 second to power the T15 off. Replace the T15 lens dust cover when not in use.

The display provides battery status

Power Button

NON-UNIFORMITY CORRECTION (NUC)

The NUC calibration optimizes the T15 thermal sensor. Perform a NUC calibration as needed to maintain a uniform appearance on the display.

Quickly press the power button while the T15 is powered on. The calibration takes about a second.

Note: A light ring may appear in the center of the display when no thermal return is on screen. This is normal.

Power Button Short Press

OPTICAL ZOOM CONTROL

The T15 has 3-8x optical zoom control. Turn the lens clockwise to reduce image zoom and counter-clockwise to increase image zoom.

COLOR MODE SELECTION

The T15 has 4 color modes. Quickly depress the mode button to cycle through the color modes until the desired mode is displayed.

MODE 1: Grayscale – white-hot

MODE 2: Grayscale – black-hot

MODE 3: Green only

MODE 4: Color

The T15 restarts in the last set mode when powered on.

Mode Button Short Press

SCREENSHOTS

Camera Button

The T15 captures screenshots when the Camera Button is quickly depressed. The T15 can store up to 100 images.

Review the captured images on screen by depressing the Camera Button for three seconds. The T15 will enter an image review mode. Quickly depress the Mode Button or Camera Button to step back or forward through the numerically stored images.

Depress the Power Button for three to four seconds while viewing an image to delete the image. Quickly depress the Power Button to exit image review mode.

TOGGLE DISPLAY RETICLE

Depress the mode button for 1.25 seconds to toggle the on-screen reticle on or off.

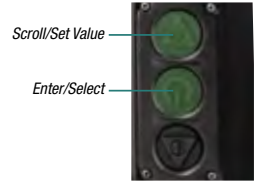*Mode Button 1.25 sec Press*

MENU MODE

Depress the mode button for 5 seconds to select T15 options, including: **Display** settings, **Reticle** adjustments, **Sleep** power settings, unit **Version**, and factory **Reset** options.

Mode Button Long Press

MAIN
Display ►
Reticle ►
Sleep ►
Version ►
Reset ►

Exit

MENU NAVIGATION

Depressing the middle button enters sub-menus and menu option selections. Depressing the top button scrolls down menu options and changes menu option values.

Scroll/Set Value

Enter/Select

DISPLAY MENU

Display brightness **(Bright)** can be optimized for different conditions. Brightness can be adjusted between 5 settings, ranging from 20% (darkest) to 100% (brightest).

Sharp toggles the image sharpness filter On/Off. **Squelch** minimizes display noise when no thermal return is present.

DISPLAY
Bright 100%
Sharp on
Squelch on

Back

RETICLE MENU

The T15 reticle can be enabled or disabled. There are six reticle types. The reticle can be sighted using horizontal (Hor) and vertical (Ver) offsets between +/-9 pixels.

1   2   3   4   5   6

RETICLE
Disabled

Back

Reticle disabled

RETICLE
Enabled
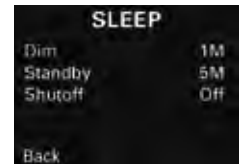Type 1
Hor 2
Ver -3
Back

Reticle enabled with adjustments

SLEEP MENU

The sleep menu offers battery saving options. Each sleep mode *(Dim, Standby, Shutoff)* can individually be set to 1, 5, or 10 minute timers.

Dim - Screen Dims; Off (never), 1, 5, 10 min..

Standby - System Standby; Off (never), 1, 5, 10 min.

Shutoff - Power Down; Off (never), 1, 5, 10 minutes

SLEEP
Dim 1M
Standby 5M
Shutoff Off

Back

SLEEP OPTIONS

The T15 will exit Dim and Standby modes after a slight unit movement. The unit fully powers down if a unit shutoff activates. The deeper sleep mode will have higher priority if two or more sleep modes are set to the same timer. Timer order of priority is (highest to lowest):

Shutoff > Standby > Dim

VERSION SCREEN

When selected from the main menu, the version screen provides T15 unit version information.

T15
Vx.x.xxxx-x
Xxxx-xxxx-xx
Allow update ►
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USB OPTIONS- T15 FIRMARE UPDATES / DOWNLOAD SCREENSHOTS

Power the T15 on and connect the supplied USB-C cable between the T15 and its host (MAC/PC). The T15 will detect the USB connection and a USB menu will appear:
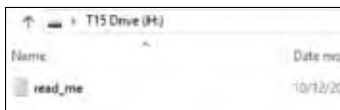

Get Images – Download saved screenshots
FW Update – Update system software

The T15 will power down when the host USB connection is disconnected; once the T15 transitions to USB power it does not resume battery power operation until it is restarted.

T15 SYSTEM UPDATE

Note the current T15 software version on the VERSION SCREEN, i.e. v1.4.2-1 or v2.0.0-3 and then visit DOWNLOADS at sectoroptics.com. Click the Support tab and download the firmware file by clicking the Latest Firmware icon. Note the firmware file name, i.e. T15_v2.0.0.bin. Proceed to update the T15 if the downloaded firmware version number is greater than the current version number.

Select FW Update option. The T15 will mount to the host (PC/MAC) in the same manner as a USB thumb drive. Copy the downloaded firmware file into the 'T15 Drive' directory. The T15 will indicate a 'Loading' message as the new firmware copies to the T15.

To PC / Mac

After the update file is loaded into the 'T15 Drive' directory, the T15 screen indicates the updated firmware version and an 'Update' option. Select 'Update' to begin.

The T15 will indicate 'In Progress' while updating. A 'Success' update status message appears when the firmware update completes. Select Shutdown and power the T15 back on to complete the update.
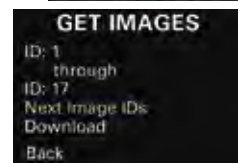

DOWNLOAD SCREENSHOTS

Select Get Images option on the USB menu above. The GET IMAGES submenu will open. The T15 is able to process and download 24 screenshots to its host (MAC/PC) thumb drive folder at a time.

The IMAGE ID number corresponds with the ID number located on the screenshot during the screenshot review (i.e. 15/100) as explained in in the SCREENSHOTS section. For example, the image to the right is ID:40

Select the image lot that contains the specific desired screenshot ID to download. Select NEXT IMAGE IDs to toggle through all of the saved images until the desired screenshot ID is in the ID range.

Click Download to download the selected image IDs. The T15 will mount to the host (MAC/PC) in the same manner as a USB thumb drive as 'T15 Drive' and the images can be copied to the host. The copied images will remain stored on the T15 until they are deleted from the T15 directly. After the images are copied from the T15, complete the process by selecting the SHUTDOWN option.

RESET MENU

The T15 settings can be restored to factory defaults if desired.
Select Reset All and T15 settings will be restored to factory defaults.

MOUNT OPTIONS

The T15 has a threaded ¼"-20 mounting base for using the T15 with hand grips, tripods and other standard mounts. Additionally, a Picatinny rail mount is supplied with the T15.

RAIL MOUNT INSTALLATION (T15 only)

Attach the quick release rail mount onto the T15 with the two supplied ¼"-20 fasteners and 1/8" Allen wrench. Tighten the fasteners until secure.

RAIL MOUNT ADJUSTMENT (T15 only)

The quick release mount can be adjusted for any rail.

If the mount does not firmly lock onto the rail or the unit wiggles on the rail after locked, an adjustment should be made.

Loosen the grub set screw on the bottom of the rail mount with the supplied .050 Allen wrench as shown.

After the grub screw is loose, use a flathead screwdriver to adjust rail preload. Adjust the screw clockwise to increase arm preload or counter-clockwise to reduce arm preload.

When the mount attaches to the rail correctly, retighten the grub set screw back down until snug.

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