ThermX TRF1600

Thermal Rangefinder

Owner's Manual

CONGRATULATIONS ON YOUR PURCHASE OF THE NEW THERMX TRF1600 BY COVERT OPTICS.

This Thermal Range Finder is the first in its class to combine a thermal imager along with a laser range finder, all in a compact and lightweight handheld device that can also be bow-mounted. When attached to a bow, the TRF1600 features one-of-a-kind, fully adjustable digital pin sets that can be configured to exactly match your arrow's trajectory.

The TRF1600 features 4x6-32 threaded holes on each side to allow for the attachment of various mounting plates for use on a vertical bow or crossbow. Mounting plates are sold separately.

For best results, the TRF1600 display should be viewed no closer than 12 inches from the eye.

If you need product support, please contact **Covert Scouting Cameras Support** line at 270.743.1515 or visit www.feradyne.com/contact.

SAFE OPERATION

Do not point the unit's objective lens at intensive sources of light, such as devices that emit laser radiation or the sun. This may render the electronic components inoperative. Your product warranty does not cover damage caused by misuse or improper operation.

This product uses a lithium battery. To prevent the possibility of personal injury or product damage caused by battery exposure to extreme heat, store the device out of direct sunlight and away from other extreme heat sources. Properly dispose of battery and device.

Never look directly into the path of the visible or invisible laser beams.

WARNING: LASER RADIATION - AVOID DIRECT EYE EXPOSURE – INJURY OR BLINDNESS MAY RESULT. This device relies on laser radiation to [aid use].

- Aim the laser only at inanimate objects that do not contain persons or animals. Never aim the laser at a person or animal.
- Never view a laser beam through binoculars, microscope or, other optical instruments.
- Do not aim the laser at occupied vehicles or occupied aircraft.
- Do not aim the laser at a mirror or other reflective/shiny surface; a reflected beam is equally hazardous.
- Do not allow children to use this device unsupervised – injury to the eye may result.

SPECIFICATIONS

Magnification	8X
Field of View	7deg
Focus Distance	3yd to infinity
Sensor	Lepton 3.5
Sensor Resolution	160x128
Frame Rate	9hz
Display Resolution	160x128
Display Type	1.5" OLED Color
Size (in)	3.4 x 3.25 x 1.5
Weight (oz)	7
Waterproof Rating	IP66
Laser	905nm
Maximum Range	1,600yds
Battery	2xCR123
	2xRCR123
	1x18650

SP = Short press // **MP** = Medium press >1sec // **LP** = Long Press >2sec

QUICK STEPS

*DO NOT mix rechargeable and non-rechargeable batteries

INSTALLING BATTERIES

The TRF1600 can use three battery types:

- (2) CR123 (non-rechargeable)
- (2) RCR123 (rechargeable)
- (1) 18650 (rechargeable)

Battery type can be configured in the System Menu The default battery type is the CR123 packaged with the unit.

1. Remove the battery cap
2. Install batteries, positive terminal first as shown
3. Reinstall battery cap
4. Battery indicator rapidly flashing indicates 1min to power off with rechargeable battery.

POWER ON

Press (LP) the CENTER button for 2 seconds to power ON. Press (LP) the CENTER button again for 2 seconds to power off.

SET SCREEN BRIGHTNESS

Press (SP) REAR button to adjust display brightness.

COLOR MODE SELECTION

The display has 4 color modes. Press (SP) the FRONT button to cycle through the color modes: White-Hot, Black-Hot, Green and Color.

LASER RANGEFINDING

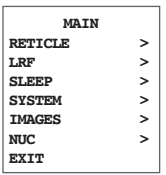
The laser rangefinder is activated by pressing and holding the REAR button for more than 1 second (MP). The image '---' will display until a valid range is measured. The LRF will continue to range while the REAR button is pressed. Distance units can be selected in System Menu.

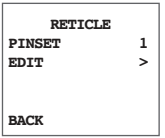
SCREENSHOTS

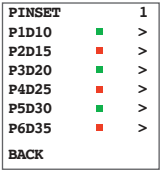
Capture screenshots by quickly pressing (SP) the CENTER button. The TRF1600 can store up to 100 screenshots. Older screenshots are overwritten when additional shots are taken. Images can be reviewed in the Images menu.

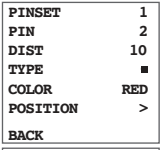
MENU MODE

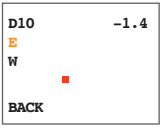
Press (LP) the FRONT button for 2 seconds to enter the menu mode. (SP) FRONT and REAR buttons will scroll through menu items. Press (SP) CENTER button to save the selection.











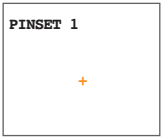
RETICLE MENU

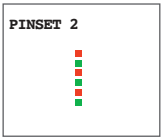
In the Reticle Menu, press (SP) CENTER button and then the FRONT/REAR buttons to scroll through Pinsets 1 through 4 or OFF. Then press (SP) CENTER button again to save the selection. Select Edit (SP) to make changes to the selected Pinset.

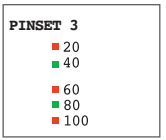
Edit screen displays the Pinset's pins and respective distance. To make changes to a particular pin, scroll down and press (SP) CENTER button to select and see the Pin's attributes. To remove a Pin, set the Distance number to 0.
Select the desired Pin number and scroll to the attribute to make changes. Press (SP) CENTER button and then **FRONT/REAR** buttons to change the following values:
DIST = Select distance in 5yd increments up to 100yds
TYPE = Small/large dot or crosshair pattern
COLOR = Red, Yellow, Blue, Green, or Dynamic (DYNA), which dynamically changes colors depending on target temperature and selected color mode

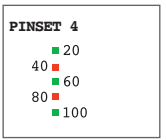
Select Position to adjust the Pin's elevation and windage setting.

Select E or W and press (SP) CENTER button. The Pin will flash. Adjust the Pin pixel position up/down (Elevation) or right/left (Windage) by pressing the FRONT/REAR buttons. The linear value of the pixel movement in inches, based on the pin distance, is displayed in the upper right-hand corner of the screen. Down/Left = negative value, UP/Right = positive value.









Note: When adjusting Pin 1, Pins 2-6 will automatically adjust by the same amount. This is helpful when establishing an initial zeroing distance.

RETICLE PRESETS

Pinset 1 = Single Pin – Pin 1 set to 10yds. Pins 2-6 are set to 0 distance.

Pinset 2 = Vertical Bow – Pins 1-6 are set to even spacing in 10yd increments. 5 pixel spacing between Pins.

Pinset 3 = Axe 405 crossbow – Pins 1-5 in 20yd increments out to 100yds. Based on 20 yds zero. Note distance numbers are for illustration only and will not appear in the actual device. Pinset will be offset due to the objective lens orientation when mounted to a crossbow.

Pinset 4 = Axe 440 crossbow – Pins 1-5 in 20yd increment out to 100yds. Based on 20 yds zero. Note distance numbers are for illustration only and will not appear in the actual device. Pinset will be offset due to the objective lens orientation when mounted to a crossbow.

LRF MENU

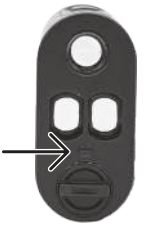
In the Laser Range Finder (LRF) menu, the reticle type (1-6) can be selected, and distance units changed (IMP = yards) / (SI = meters).

Distance indicates how the measured range is displayed. LOS = Line of Sight distance and HORZ = Horizontal equivalent distance based on angle to the target.

VLP (Visible Laser Pointer) can be turned ON to indicate where the LRF's invisible laser points while adjusting Pin position. REM setting causes the VLP to turn on only when range finding is in process. To expose the VLP, remove the small screw on the unit's front face.

Never look directly into the path of Red Laser or Invisible Laser beams.

LRF	
TYPE	2
UNITS	IMP
DIST	HORZ
VLP	REM
BACK	



SLEEP MENU

The SLEEP menu offers battery-saving options. The "Dim" and "Shutoff" timers can be individually set to Off, 1min, 5min, or 10min. The timer starts after the last button press. Pressing any button will bring the unit out of "Dim" mode.

SLEEP	
DIM	1M
SHUTOFF	5M
BACK	

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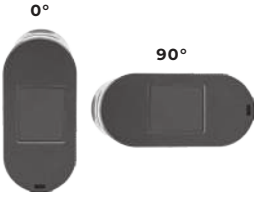
SYSTEM
BATTERY      CR123
ROLL             0

V4.3.5
RESET ALL
BACK
```



SYSTEM MENU
Battery type can be configured by pressing the Center button to highlight the current battery type. Then press (SP) FRONT/REAR buttons to change and (SP) CENTER button to save. The unit will automatically power down and will need to be powered on again.

Display orientation can be adjusted by selecting Roll and pressing the CENTER button and FRONT/REAR buttons to change the value in 90-degree increments. Press the CENTER button to save the change. The unit will automatically power cycle off then on again.

"V" indicates the currently installed firmware version. Selecting RESET ALL resets all settings (sleep, reticle, color, etc.) to factory settings.

IMAGES MENU
Screenshots can be reviewed by selecting IMAGES. Press the FRONT/REAR buttons to scroll through screenshots. Press and hold CENTER button for 4 seconds to delete a captured image. Press and hold the CENTER button for 10 seconds to delete all screenshots. Quickly press the CENTER button to return to the MAIN menu.

NON-UNIFORMITY CORRECTION (NUC)
The TRF1600 performs automatic NUC calibrations during operation every 5 minutes. However, the operator can manually perform a NUC by selecting the NUC option. The unit will perform a NUC and exit MENU mode.

LANYARD INSTALLATION

STEP 1
Separate loop from lanyard.

STEP 2
Thread loop into attachment point.

STEP 3
Feed buckle through loop and pull snugly.

STEP 4
Reconnect loop and lanyard.

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