



SKEETIR TRAINING

This Brief is Classified UNCLASSIFIED//FOR OFFICIAL USE ONLY



SKEETIR

C4ISR - SPAWAR - AUSGAR

- Enabling Learning Objectives
- Terminal Learning Objectives
- What is the SKEETIR
- How to use the SKEETIR
- How to employ the SKEETIR
- Care and cleaning of the SKEETIR





SKEETIR

C4ISR - SPAWAR - AUSGAR

Enabling Learning Objectives:

Upon completion of this period of instruction, the Warfighter will be familiar with the following:

- A. Specifications
- B. Basic functions
- C. Manipulation of the lasers
- D. Manipulation of the Menu Options
- E. Maintenance, Care and Cleaning

Terminal Learning Objective:

Upon completion of this period of instruction, you the Warfighter, will have a better understanding on how to operate the SKEETIR optic.





SKEETIR Specifications

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Size

Weight 6.5 oz (.4lbs)

Dimensions 3.5"L x 1.5"H x 2.25"W

Imaging Sensor

Format 320 x 240 Focal Plane Array

Uncooled VOx Micro-bolometer

Refresh Rate 60 Hz

Spectral Response 8–15 μ m Micron LWIR

Zoom .5 Digital / 1 x Digital / 2x Digital

Minimum Focus Range 18"

Still Photo and video output capable

Startup <4 seconds



Eyepiece

Diopter -4 to +2

Eye Relief 1" (up to 8" standoff)

Power usage

Disposable Battery 1 x CR123A / 3 Hours

External connections

Video RS-170 NTSC, USB video and still image capture

Wilcox shoe mount for weapon / helmet

Laser

Dual band IR (pointing)

Environmentals

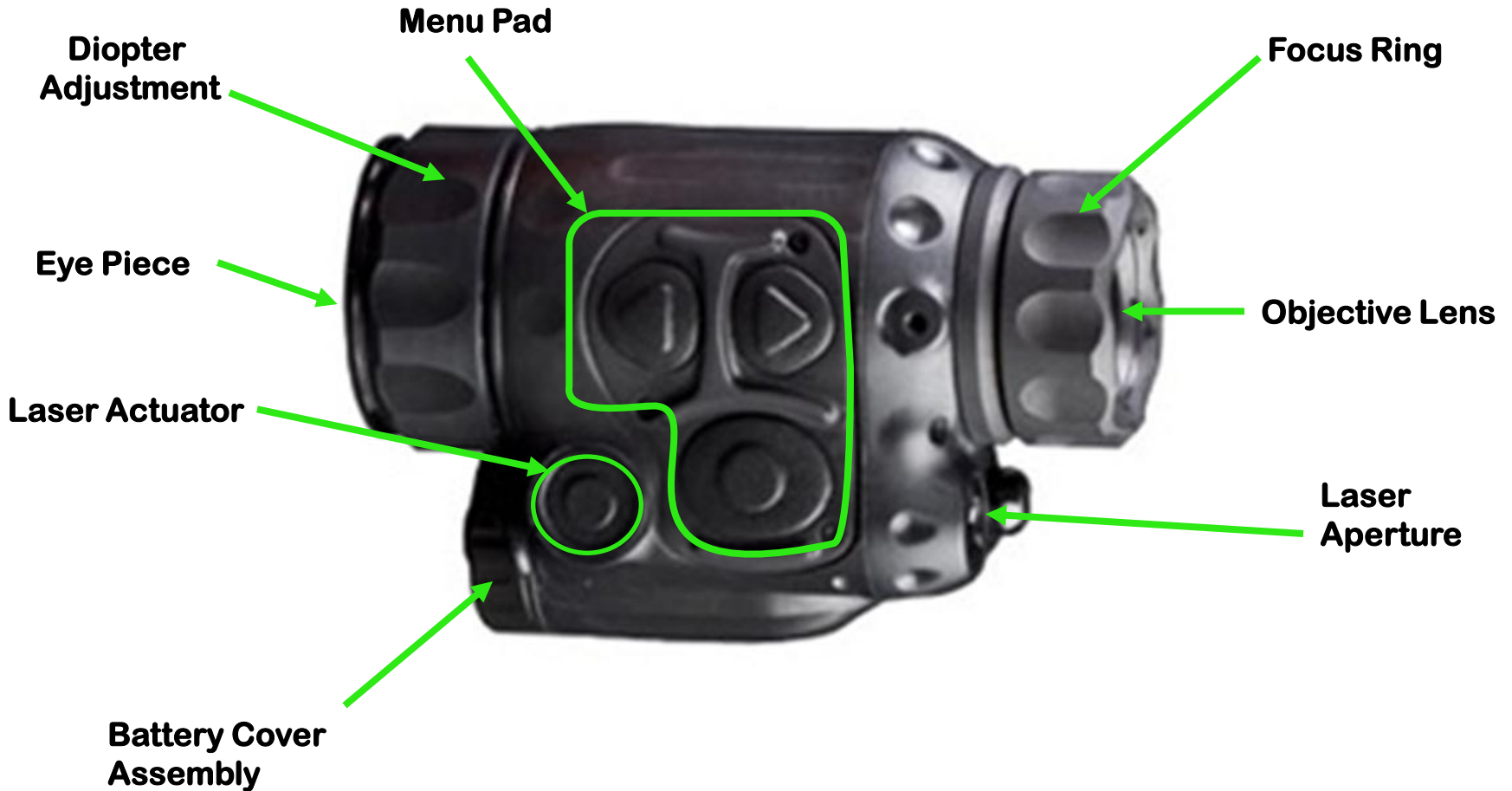
Temperature Range Operating -38°F to 140°F

Waterproof 66" (Total Immersion, 30 min)



SKEETIR Nomenclature (Top)

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SKEETIR Battery Change

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To OPEN:

Unscrew the battery cap by rotating the battery cap knob counter-clockwise.

Place 1 x CR123A (+) side up in the battery box.



To CLOSE:

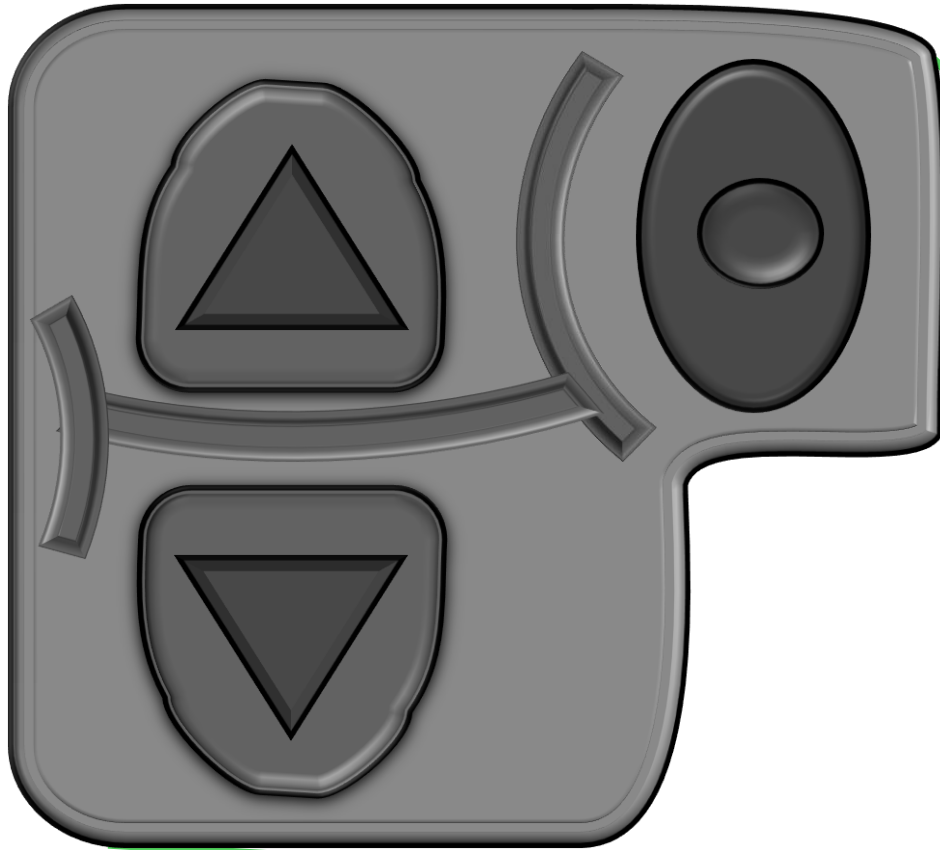
Remove used battery and insert new battery into the battery box. Close the battery cap by rotating the battery door knob clockwise until finger tight.





SKEETIR Menu Pad

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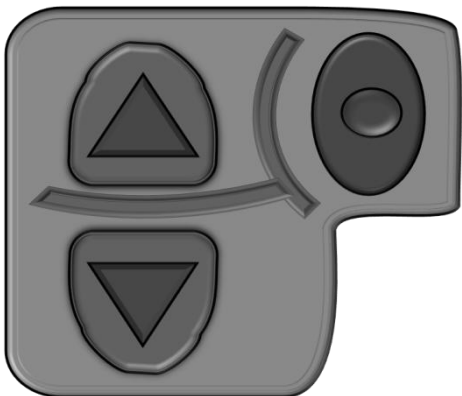




Powering on the SKEETIR

C4ISR - SPAWAR - AUSGAR

To power on the SKEETIR, depress both the top and bottom buttons at the same time for approximately 4 seconds.



SKEETIR MENU PAD





SKEETIR View Screen

C4ISR - SPAWAR - AUSGAR

NORTH-SEEKING ARROW

IR OR VISIBLE LASER ON / OFF

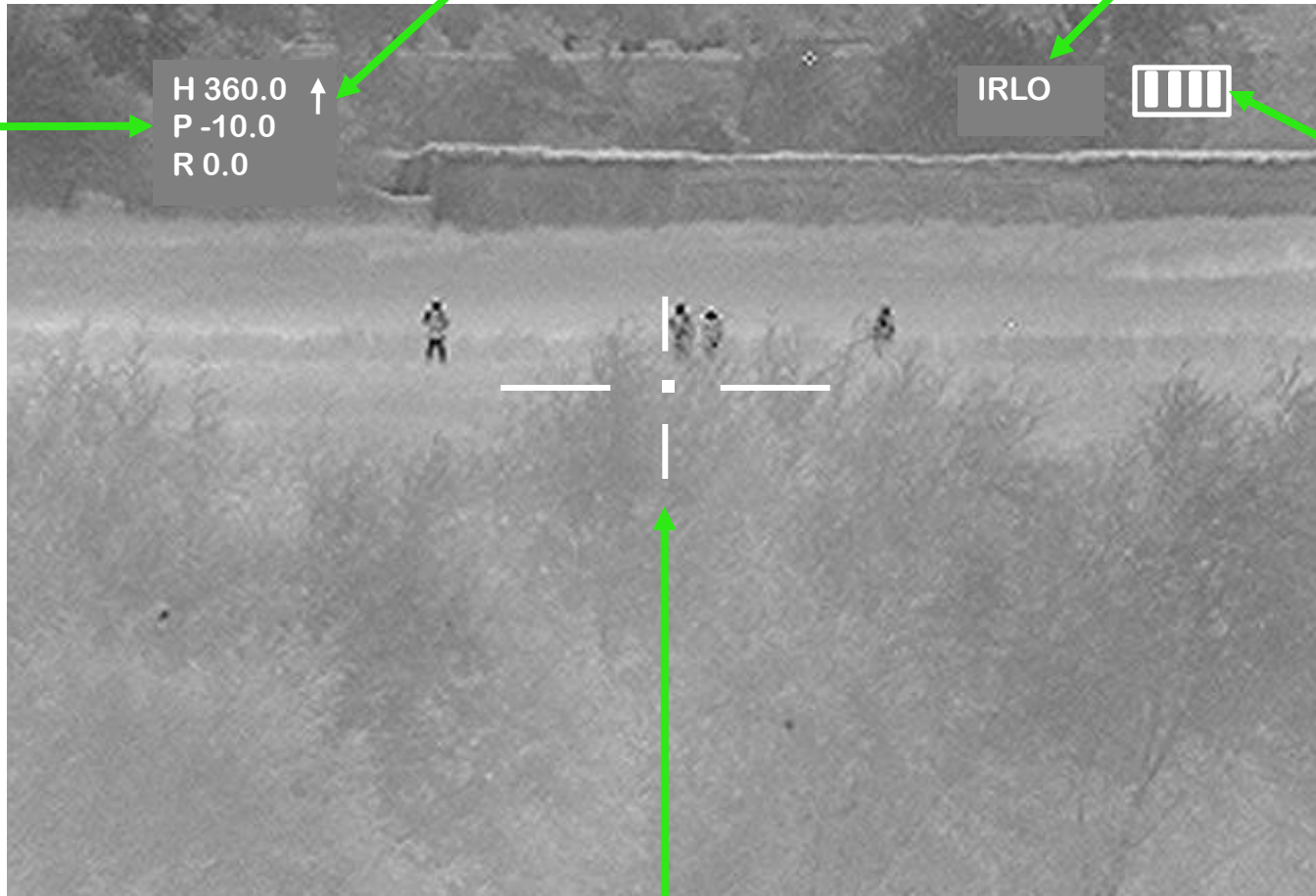
HEADING
PITCH
ROLL

H 360.0 ↑
P -10.0
R 0.0

IRLO



BATTERY
LIFE



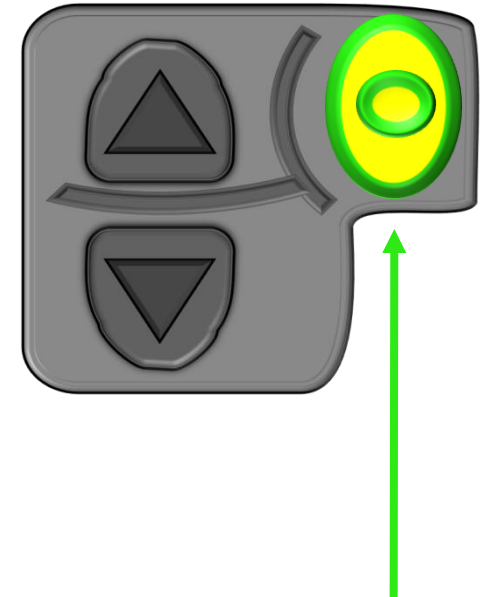
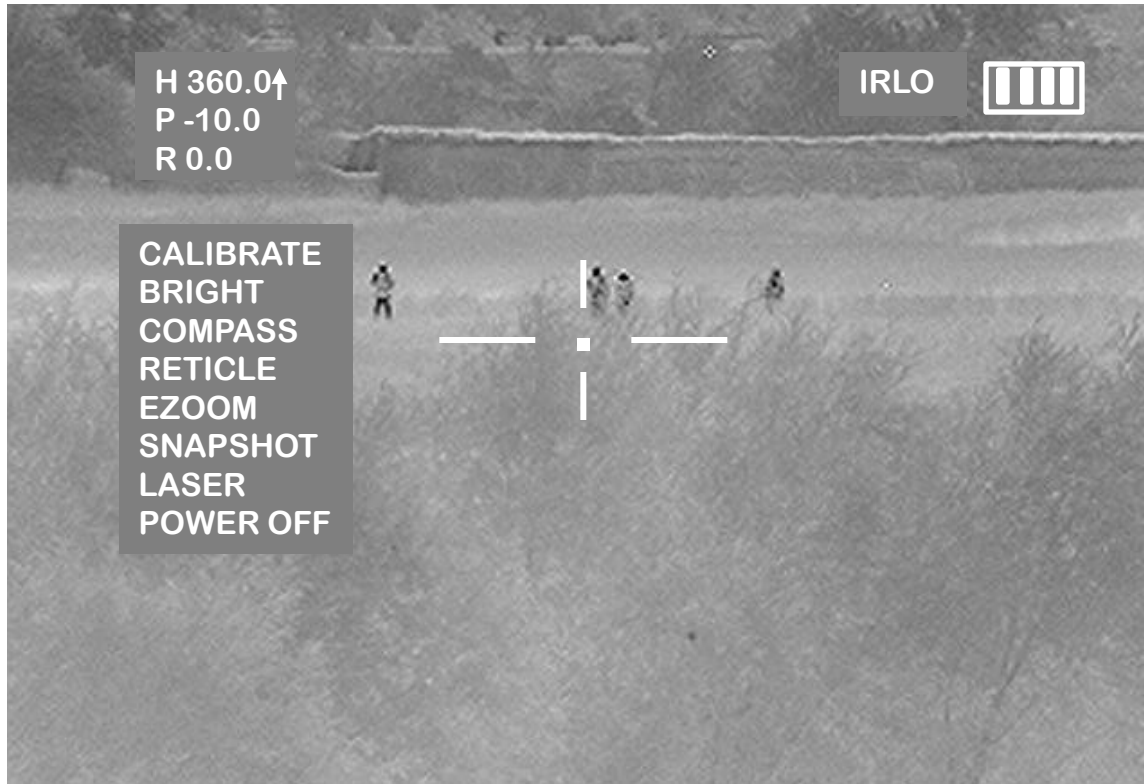
RETICLE





SKEETIR View Screen Menu

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**PUSH ONCE TO ACTIVATE
THE SKEETIR MENU FUNCTION**

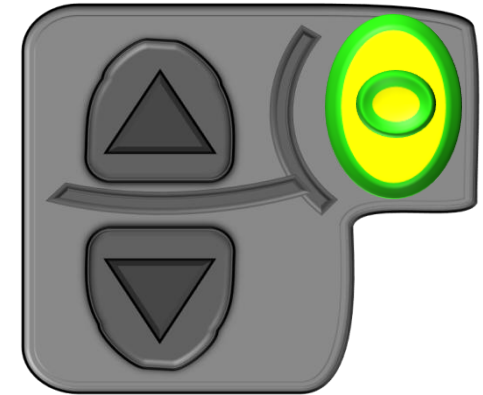
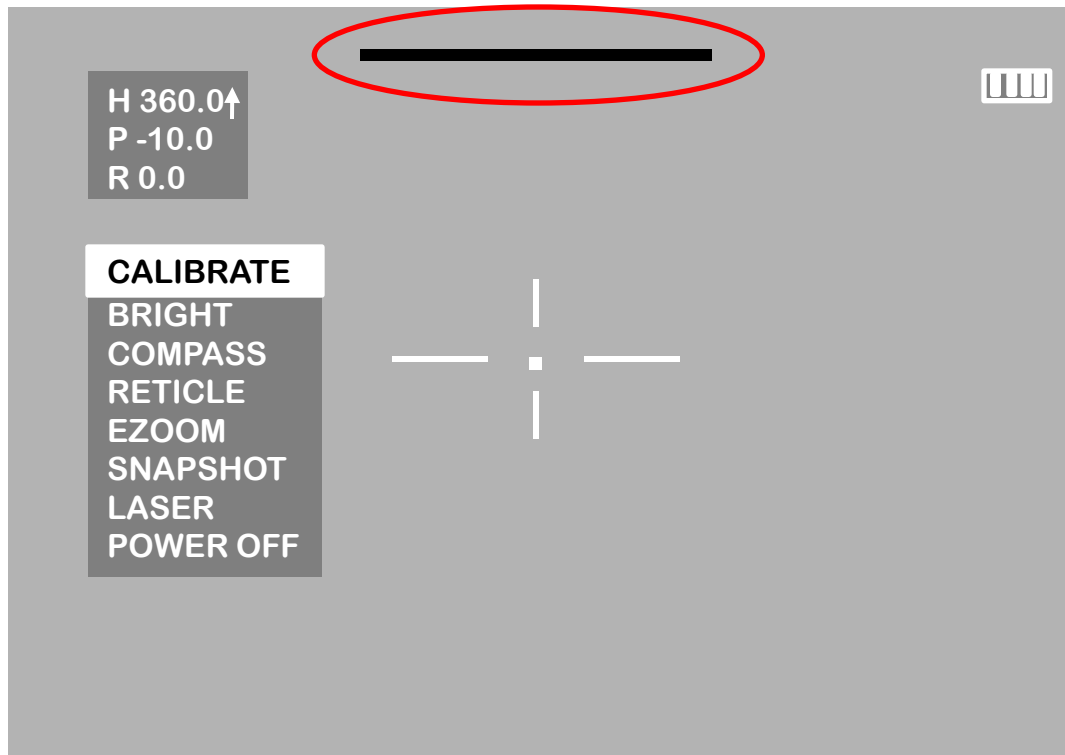
- **WHEN THE RIGHT BUTTON IS PUSHED, THE SKEETIR VIEW SCREEN MENU WILL APPEAR ON THE LEFT SIDE OF THE VIEW SCREEN.**
- **THE BATTERY LIFE INDICATOR WILL APPEAR IN THE UPPER RIGHT HAND CORNER OF THE VIEW SCREEN ONLY WHEN THE MENU FUNCTION IS IN USE.**





SKEETIR IR Sensor Calibration

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NOTE:
ALWAYS COVER THE
LENS WITH THE LENS
CAP OR WITH AN
OPAQUE SURFACE WHEN
CALIBRATING

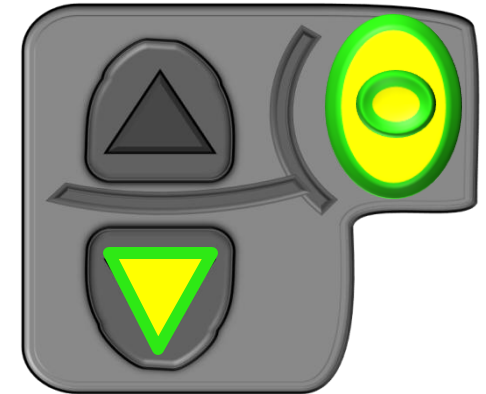
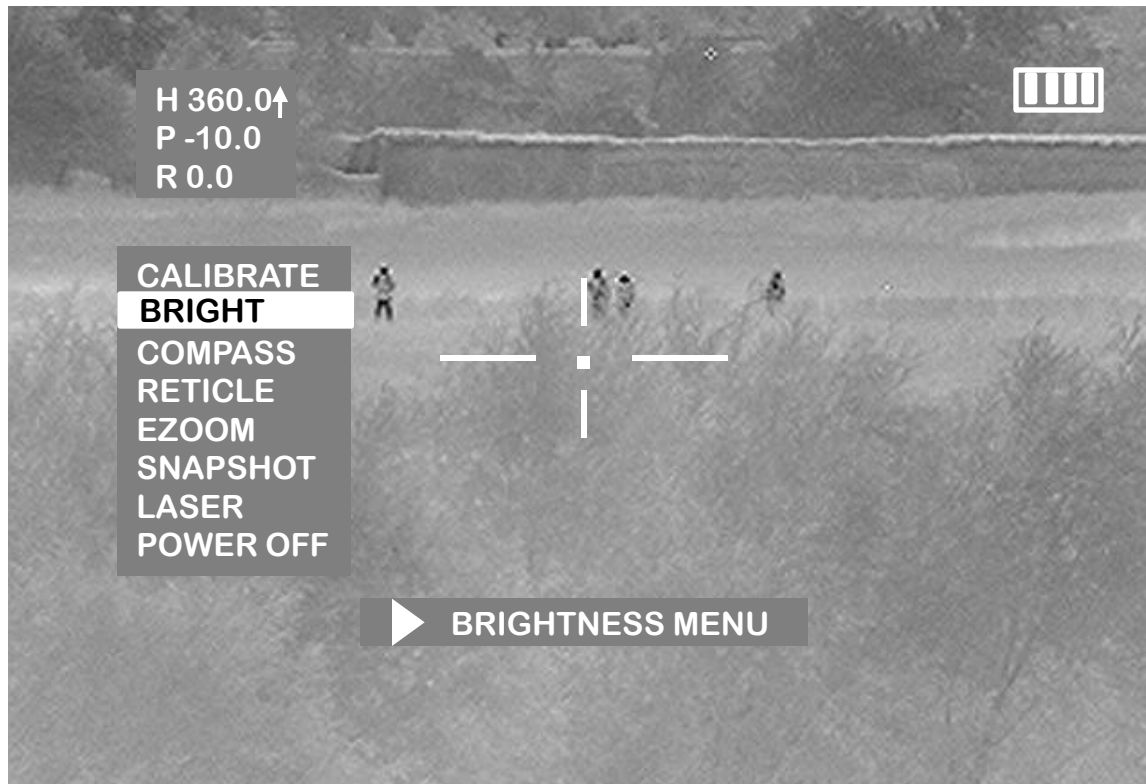
- ENSURE THAT THE LENS CAP IS ON BEFORE CALIBRATION
- PUSH THE RIGHT KEY ONE TIME AND HIGHLIGHT "CALIBRATE".
- PUSH AND HOLD THE RIGHT KEY TO CALIBRATE THE SKEETIR.
- A BLACK LINE WILL APPEAR AT THE TOP OF THE UTM VIEWSCREEN MOVING FROM LEFT TO RIGHT.






SKEETIR Brightness Adjustment

C4ISR - SPAWAR - AUSGAR



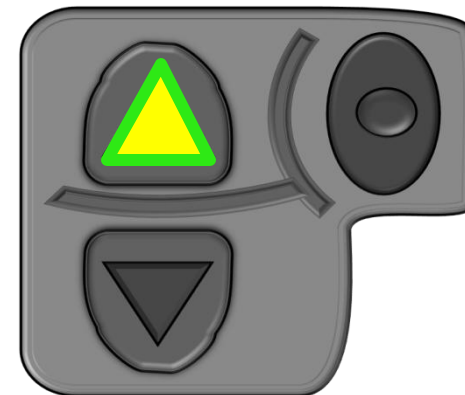
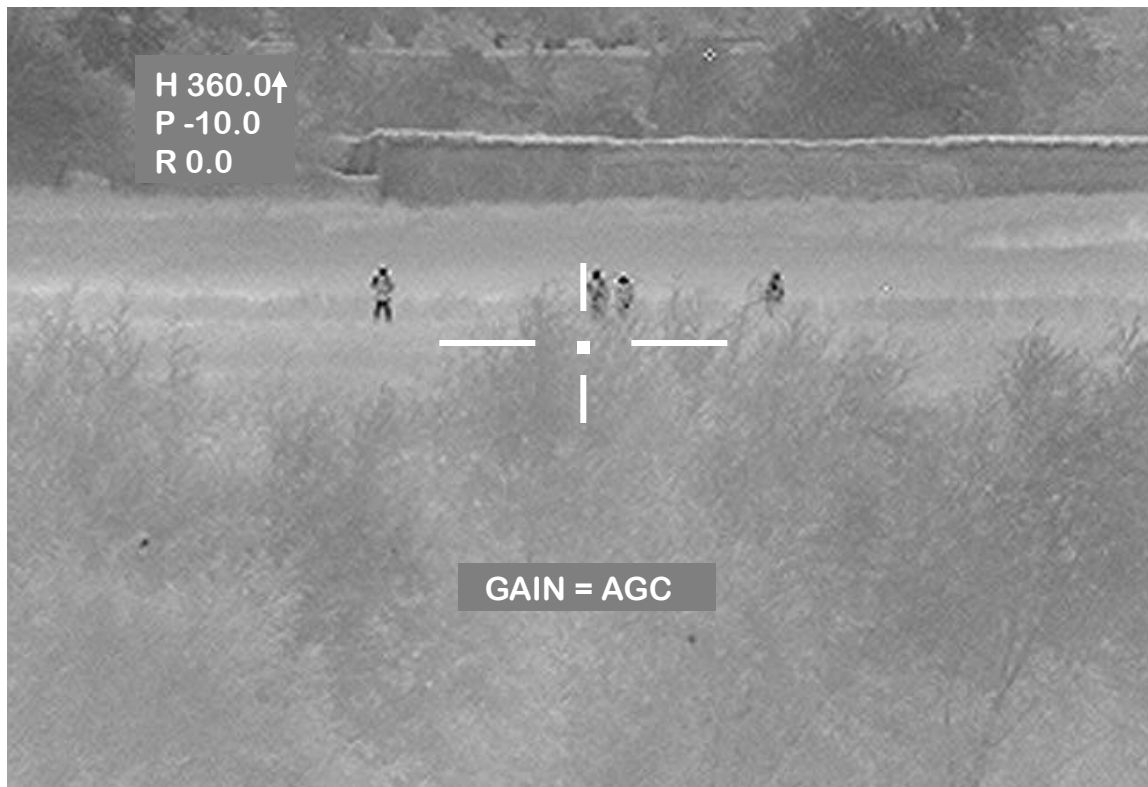
- PUSH THE RIGHT BUTTON ONE TIME TO BRING UP THE MENU FUNCTION.
- PUSH THE DOWN ARROW AND HIGHLIGHT "BRIGHT" – PUSH RIGHT BUTTON TO ENTER "BRIGHTNESS" MENU.
-  TO ADJ BRIGHT = 30 PUSH UP AND DOWN KEYS TO ADJUST BRIGHTNESS VALUE FROM 1 TO 32.





SKEETIR Gain Adjustment

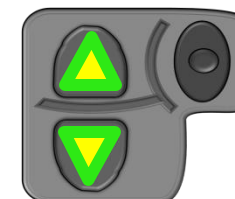
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• WHEN THE MAIN MENU IS NOT VISIBLE, PRESS THE FRONT ARROW KEY TO BRING UP THE GAIN ADJUSTMENT

• CHANGE THE GAIN VALUE BY PUSHING THE FRONT AND BACK ARROW KEYS

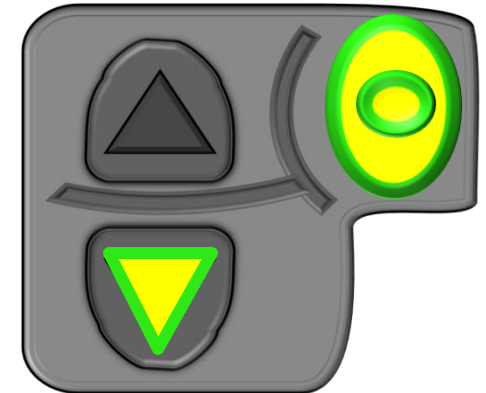
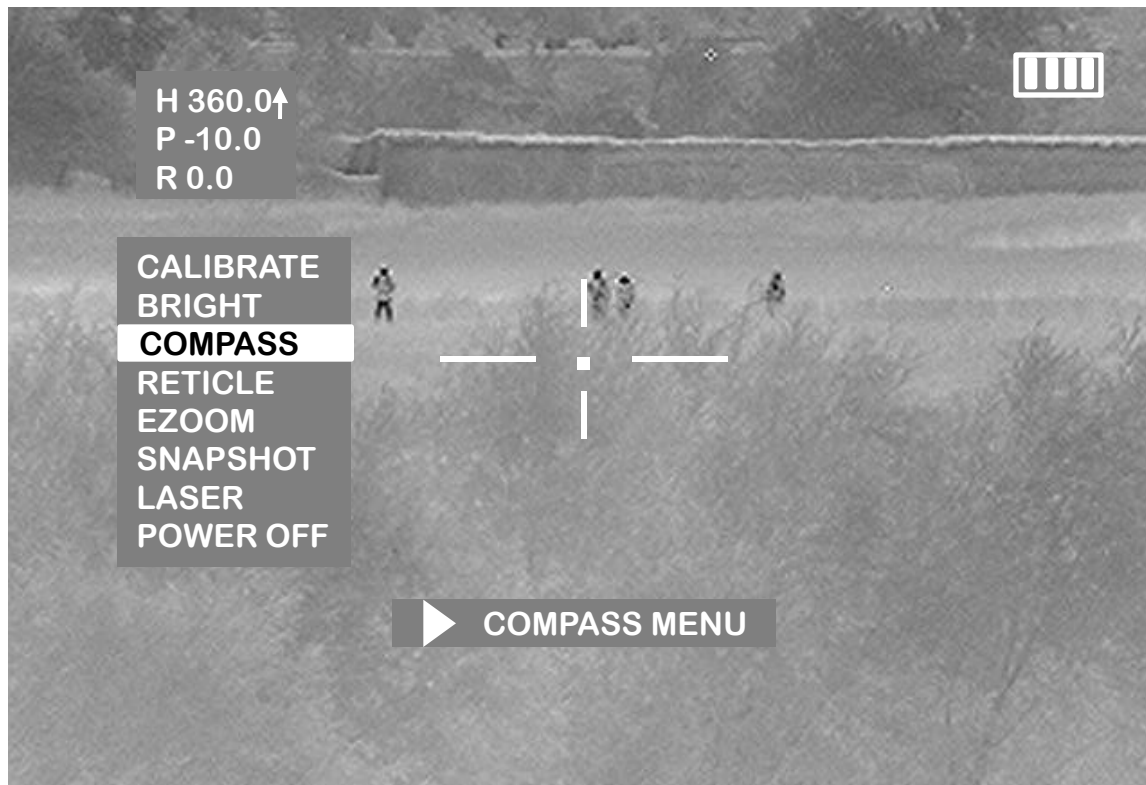
• GAIN VALUES RANGE FROM 1 TO 10, AND "AGC" (AUTOMATIC GAIN CONTROL)





SKEETIR Compass and Calibration

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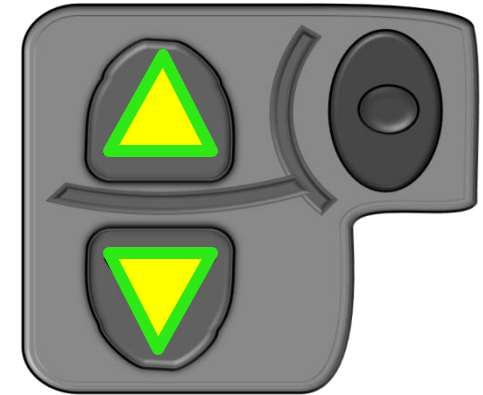
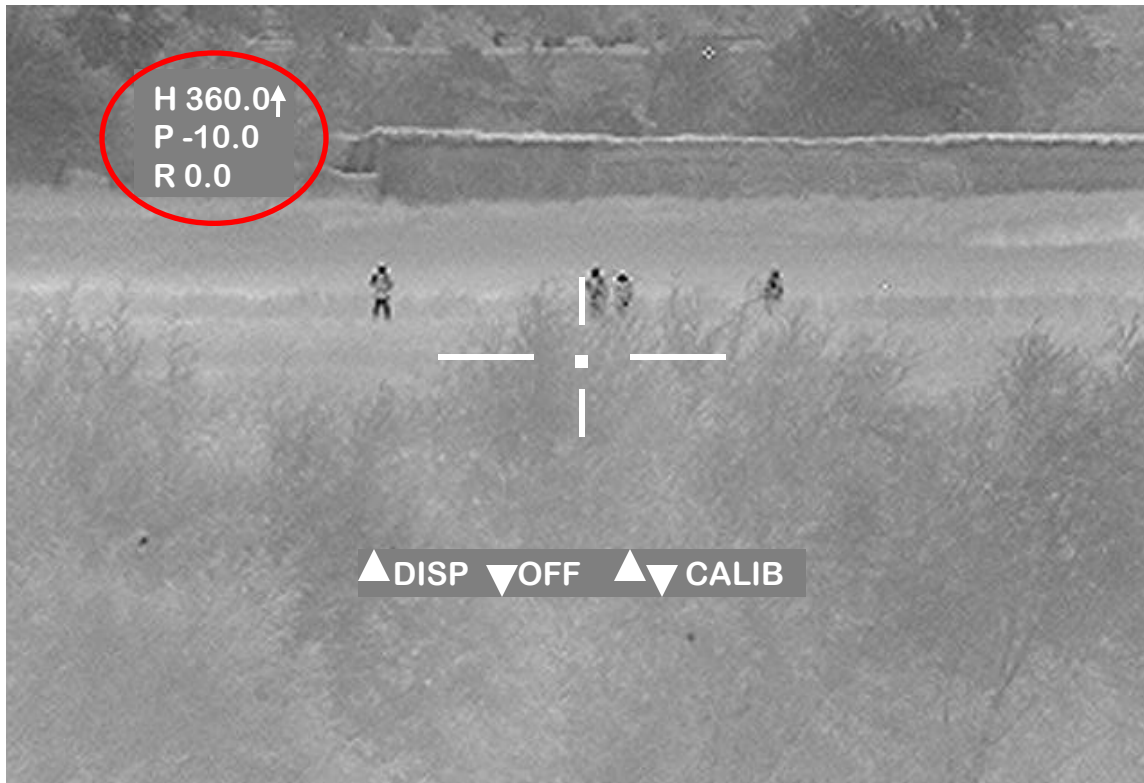
- **PUSH THE RIGHT BUTTON ONE TIME TO BRING UP THE MENU FUNCTION.**
- **PUSH THE DOWN ARROW AND HIGHLIGHT “COMPASS”.**
- **PUSH AND HOLD THE RIGHT BUTTON TO BRING UP THE “COMPASS MENU”.**





SKEETIR Compass Menu

C4ISR - SPAWAR - AUSGAR



▲ DISP ▼ OFF ▲ ▼ CALIB

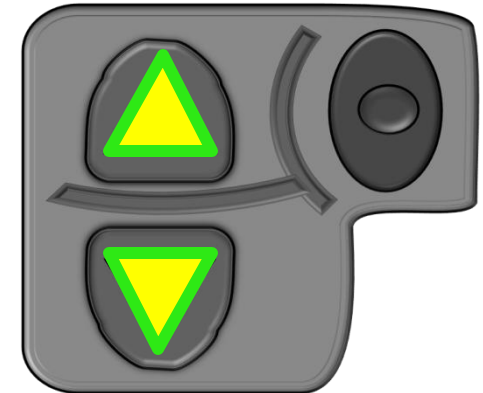
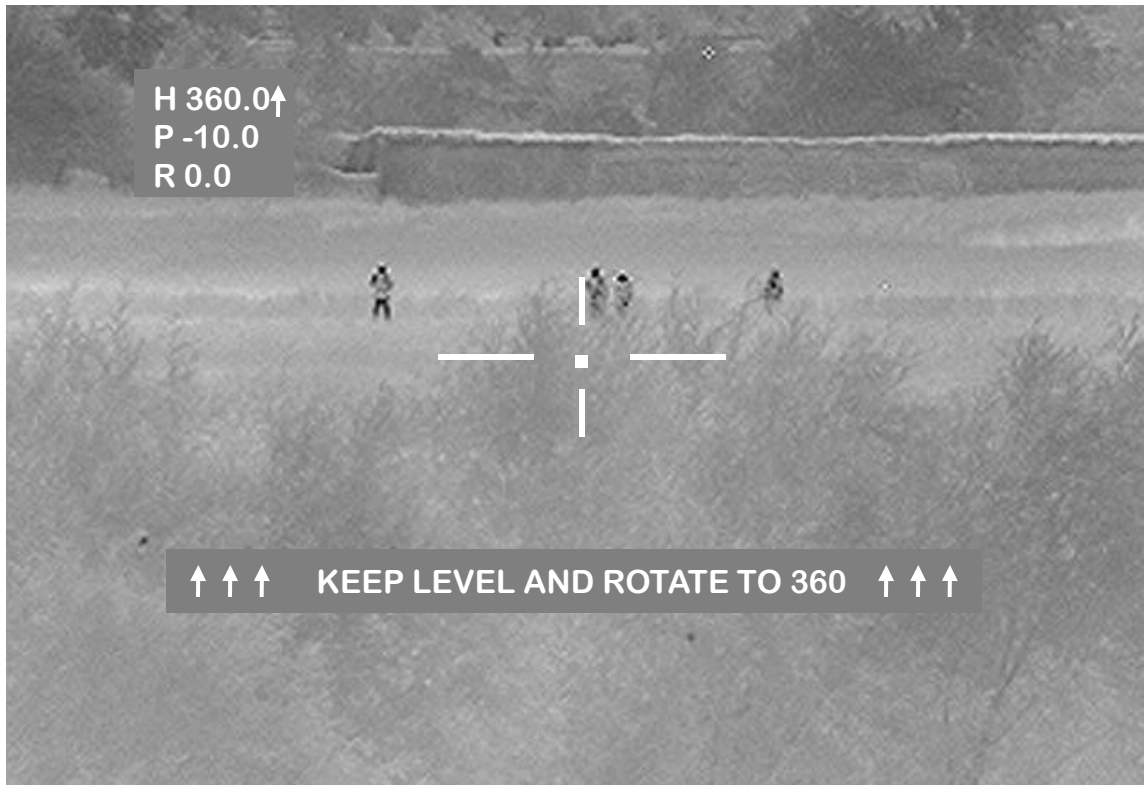
- PUSH UP ARROW TO CYCLE THROUGH THE HEADING, PITCH, AND ROLL, KEEPING HEADING ONLY OR ALL THREE ON THE VIEW SCREEN.
- PUSH THE DOWN ARROW TO TURN OFF THE HEADING, PITCH, AND ROLL.
- PUSH THE UP AND DOWN ARROW KEYS TOGETHER TO CALIBRATE THE SKEETIR COMPASS





SKEETIR Compass Calibration

C4ISR - SPAWAR - AUSGAR



▲ DISP ▼ OFF ▲ CALIB ▼

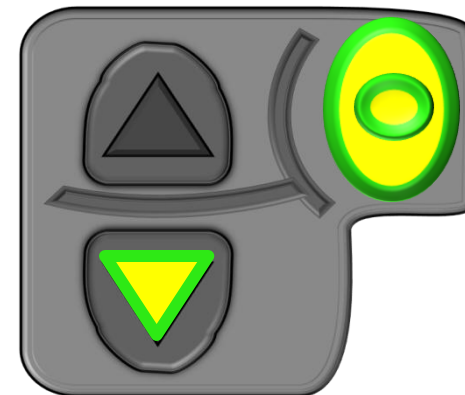
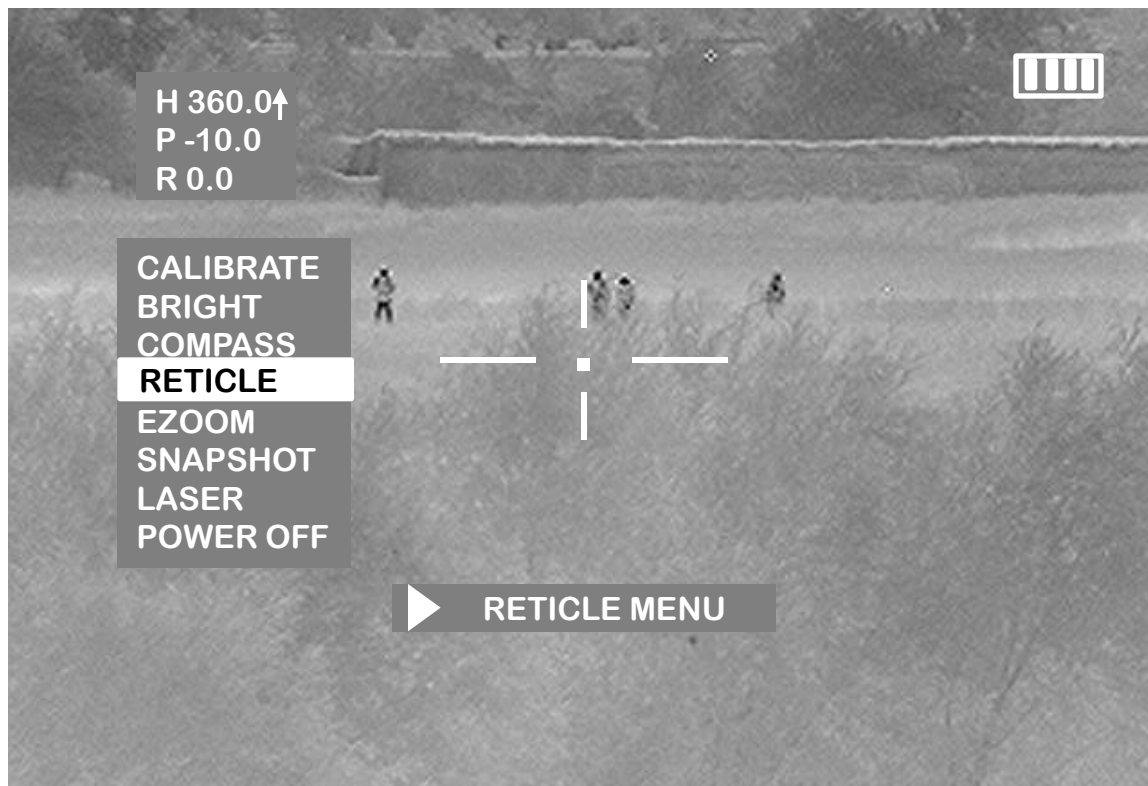
- PUSH THE UP AND DOWN ARROW KEYS AT THE SAME TIME.
- HOLD THE SKEETIR LEVEL AND ROTATE 360 DEGREES.
- THE 6 ARROWS WILL CHANGE, GIVING A VISUAL CUE.





SKEETIR Reticle Menu

C4ISR - SPAWAR - AUSGAR



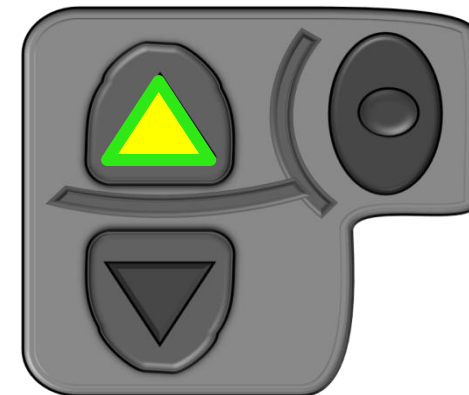
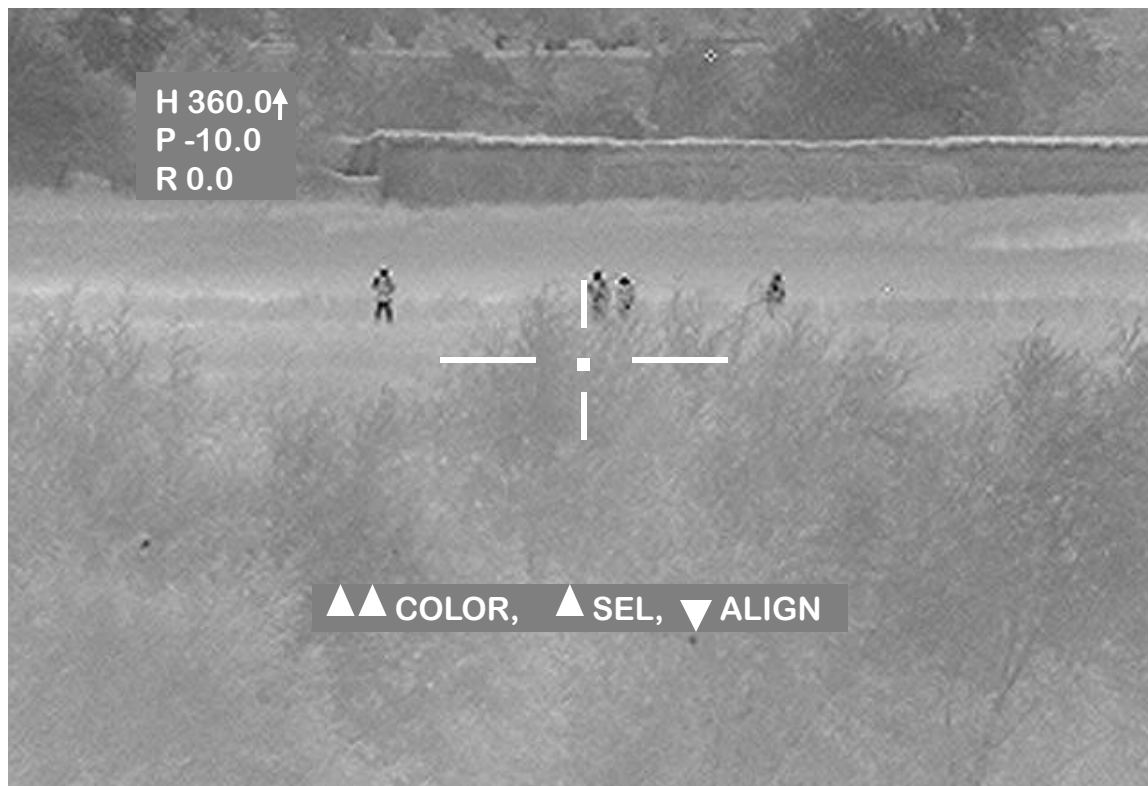
- PUSH THE RIGHT BUTTON ONE TIME TO BRING UP THE MENU FUNCTION.
- PUSH THE DOWN ARROW AND HIGHLIGHT "RETICLE".
- PUSH THE RIGHT BUTTON TO BRING UP THE "RETICLE MENU".





SKEETIR Reticle Color

C4ISR - SPAWAR - AUSGAR

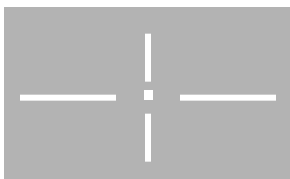


▲▲ COLOR, ▲ SEL, ▼ ALIGN

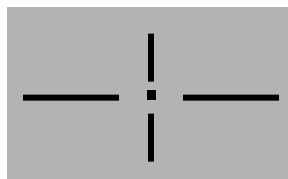
▲▲ COLOR, ▲ SEL, ▼ ALIGN

- PUSH THE UP ARROW KEY AND HOLD TO CHANGE THE RETICLE COLOR.

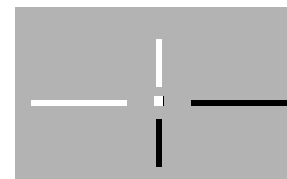
“WHITE”



“BLACK”



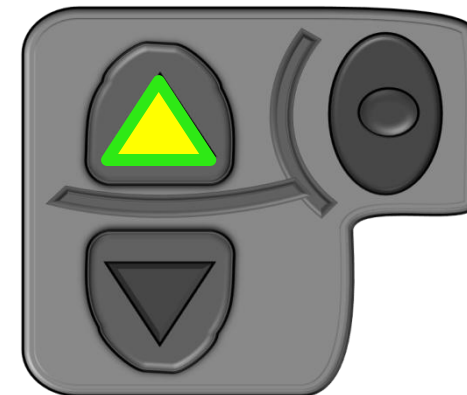
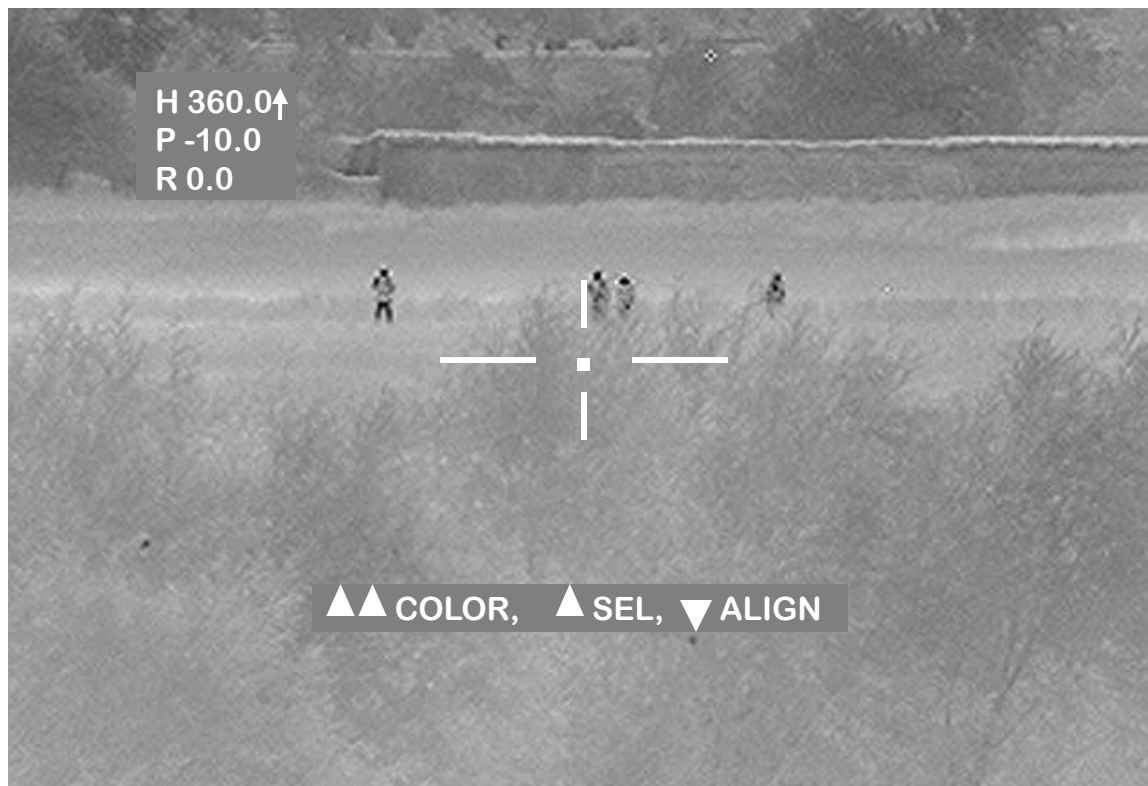
“ADAPTIVE”





SKEETIR Reticle Select

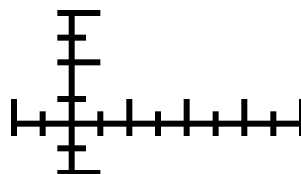
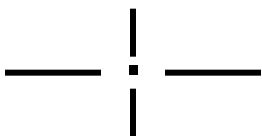
C4ISR - SPAWAR - AUSGAR



▲▲ COLOR, ▲ SEL, ▼ ALIGN

▲▲ COLOR, ▲ SEL, ▼ ALIGN

- PUSH THE UP ARROW KEY ONE TIME TO BRING UP THE RETICLE SELECT FUNCTION.
- PUSH THE UP ARROW TO SELECT FROM THREE SETTINGS:
 - “CROSSHAIR”
 - “MIL SCALE”
 - “NONE”



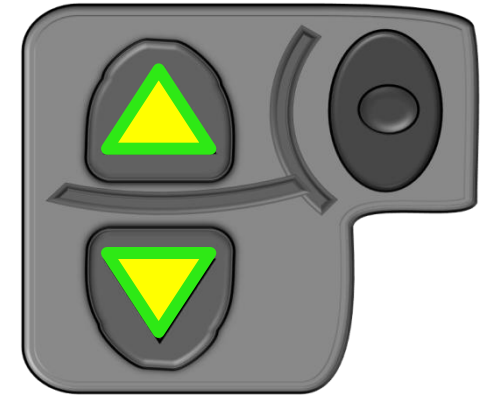
“NONE”





SKEETIR Reticle Alignment

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ADJUST ▲ HORIZ, ▼ VERT

ADJUST ▲ HORIZ, ▼ VERT

- FROM THE RETICLE MENU SELECT "ALIGN" BY PUSHING THE DOWN ARROW KEY

▲▲ COLOR, ▲ SEL, ▼ ALIGN

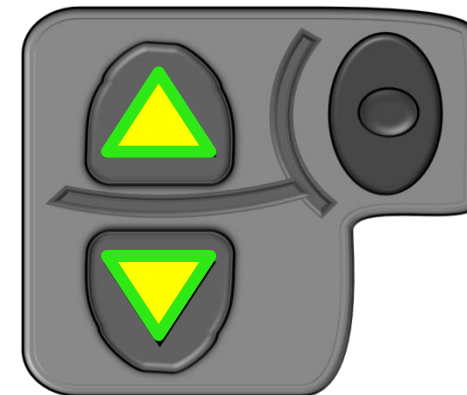
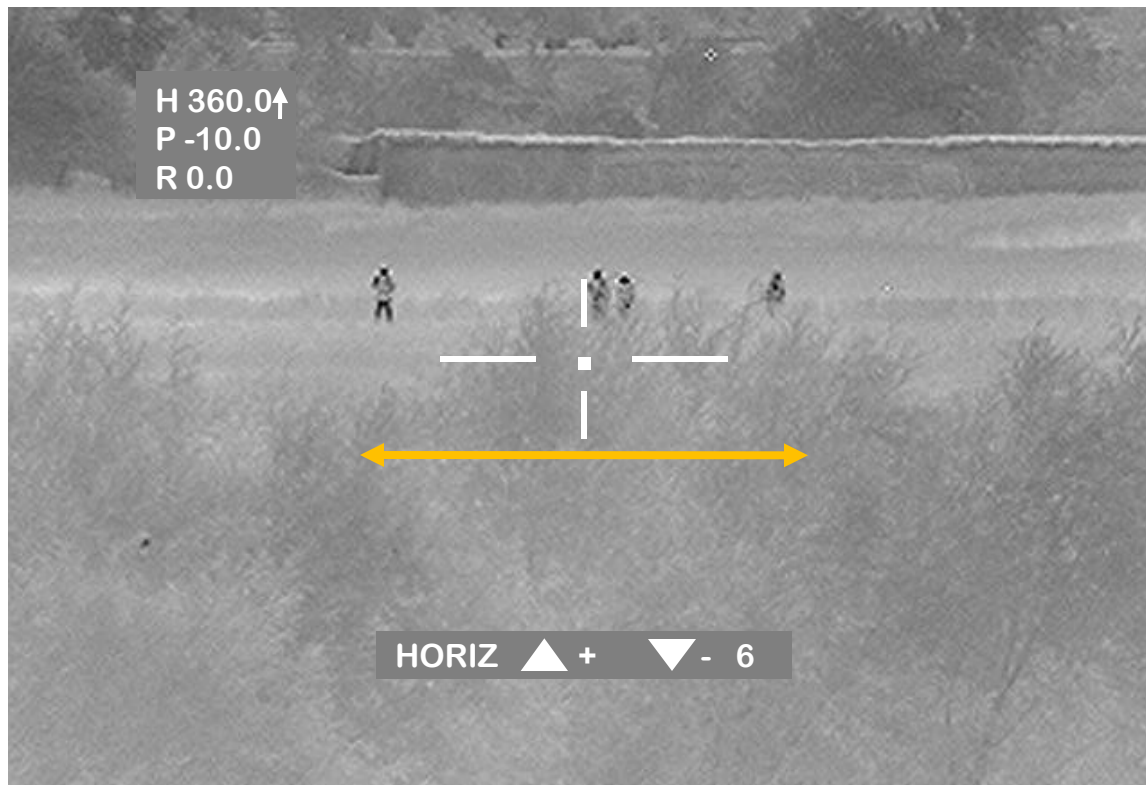
- SELECT EITHER THE HORIZONTAL OR VERTICAL RETICLE ADJUSTEMENT BY PRESSING THE UP OR DOWN ARROW KEYS





SKEETIR Horizontal Reticle Alignment

C4ISR - SPAWAR - AUSGAR



HORIZ ▲ + ▼ - 6

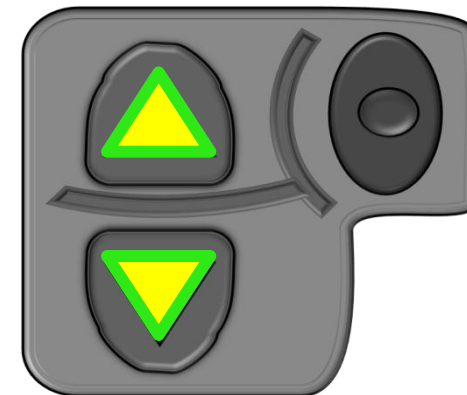
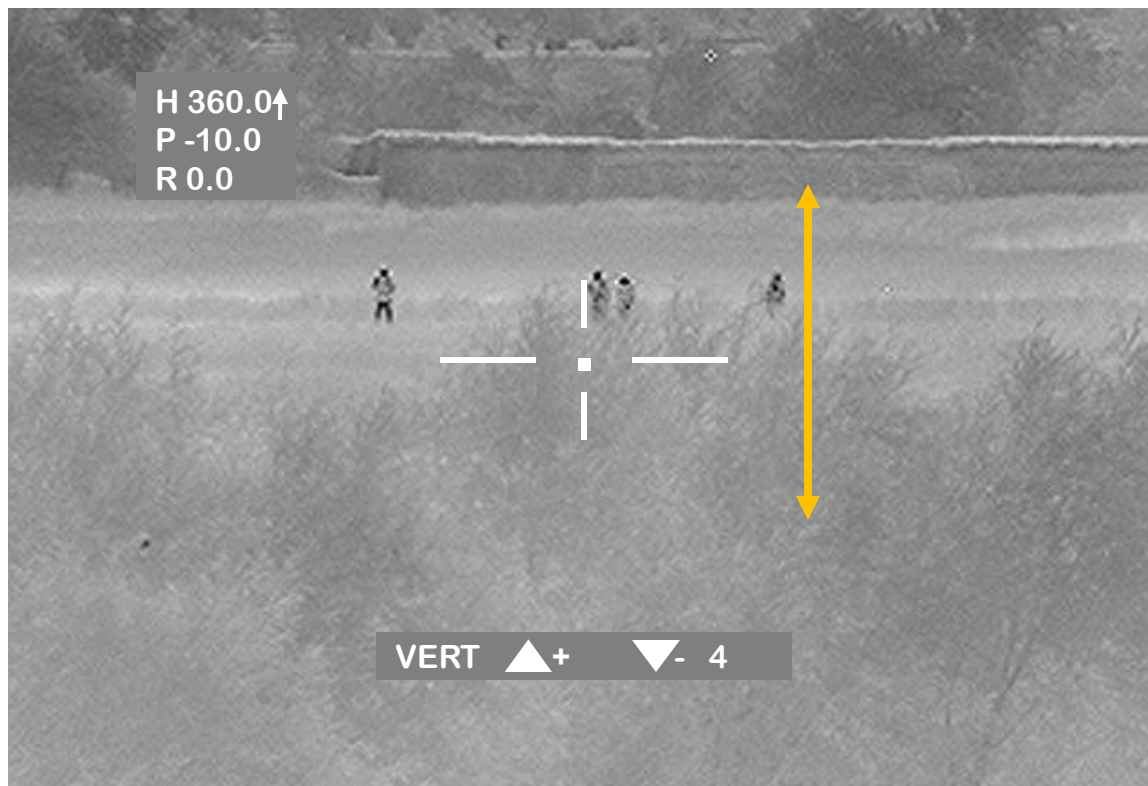
- WHEN HORIZONTAL ADJUSTMENT HAS BEEN SELECTED, CHANGE THE POSITION OF THE RETICLE USING THE UP AND DOWN ARROW KEYS. A NUMERIC VALUE WILL APPEAR THAT CORRESPONDS TO THE HORIZONTAL POSITION OF THE RETICLE.





SKEETIR Vertical Reticle Alignment

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VERT ▲ + ▼ - 4

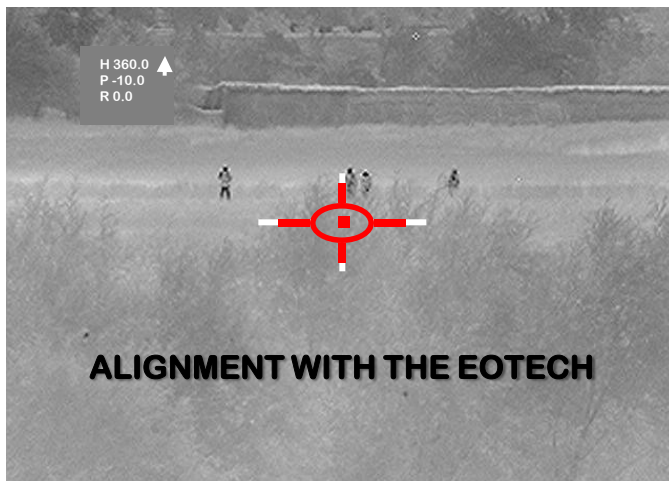
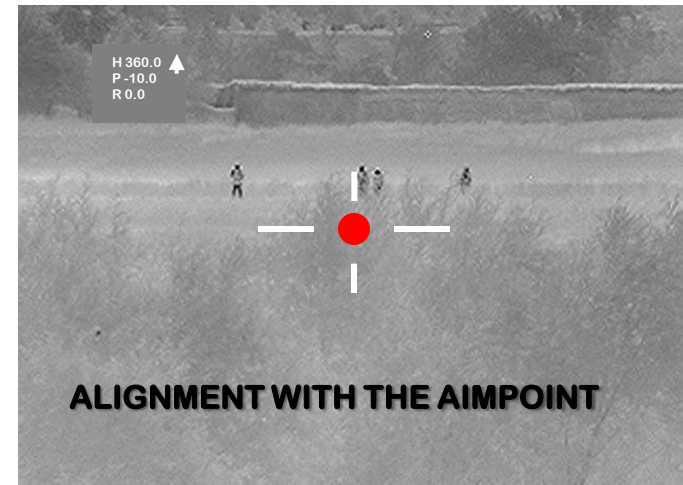
- WHEN VERTICAL ADJUSTMENT HAS BEEN SELECTED, CHANGE THE POSITION OF THE RETICLE USING THE UP AND DOWN ARROW KEYS. A NUMERIC VALUE WILL APPEAR THAT CORRESPONDS TO THE VERTICAL POSITION OF THE RETICLE.





Reticle Alignment to Sights

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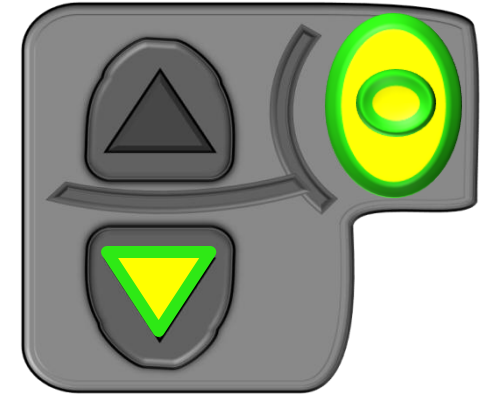
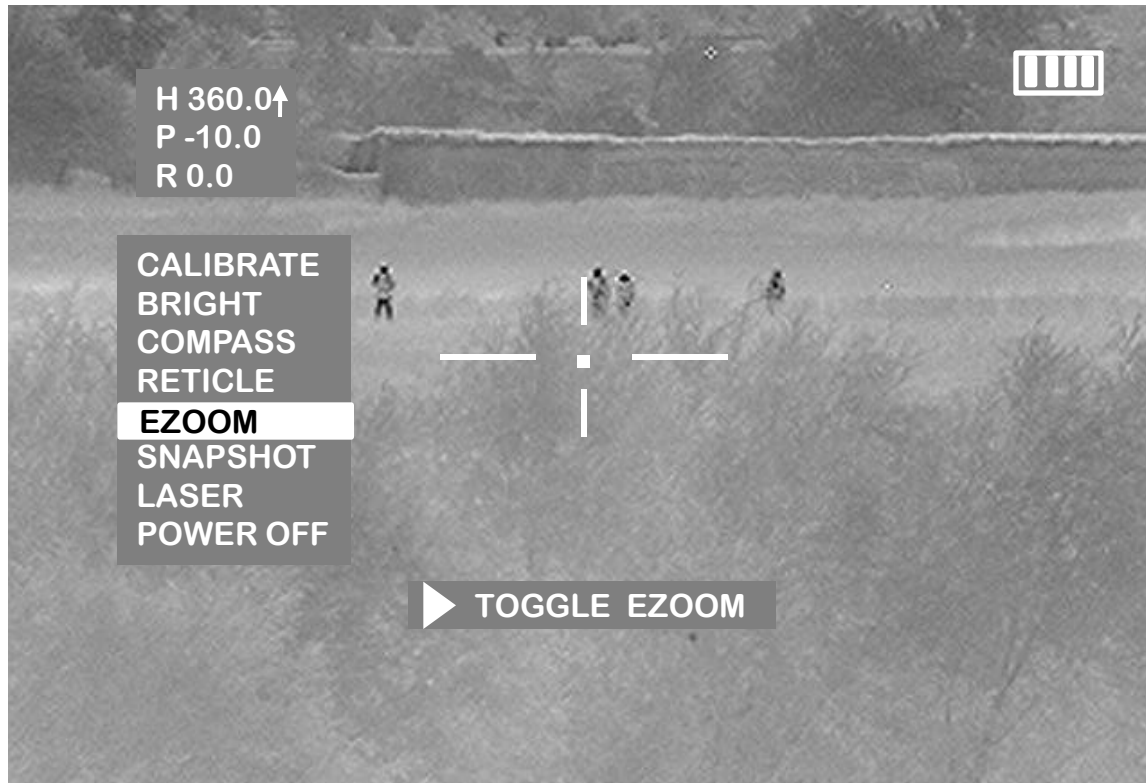
- **ALIGN THE SKEETIR RETICLE TO CORRESPOND TO THE TIP OF YOUR ACOG CHEVRON, THE CENTER OF YOUR AIMPOINT OR EOTECH CENTER DOT.**
- **AFTER ALIGNING THE SKEETIR RETICLE WITH YOUR SCOPE'S INTERNAL PATTERN, YOU CAN TURN THE SKEETIR RETICLE OFF.**





SKEETIR EZoom Menu

C4ISR - SPAWAR - AUSGAR



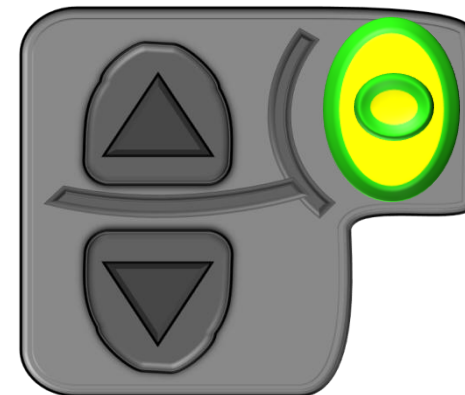
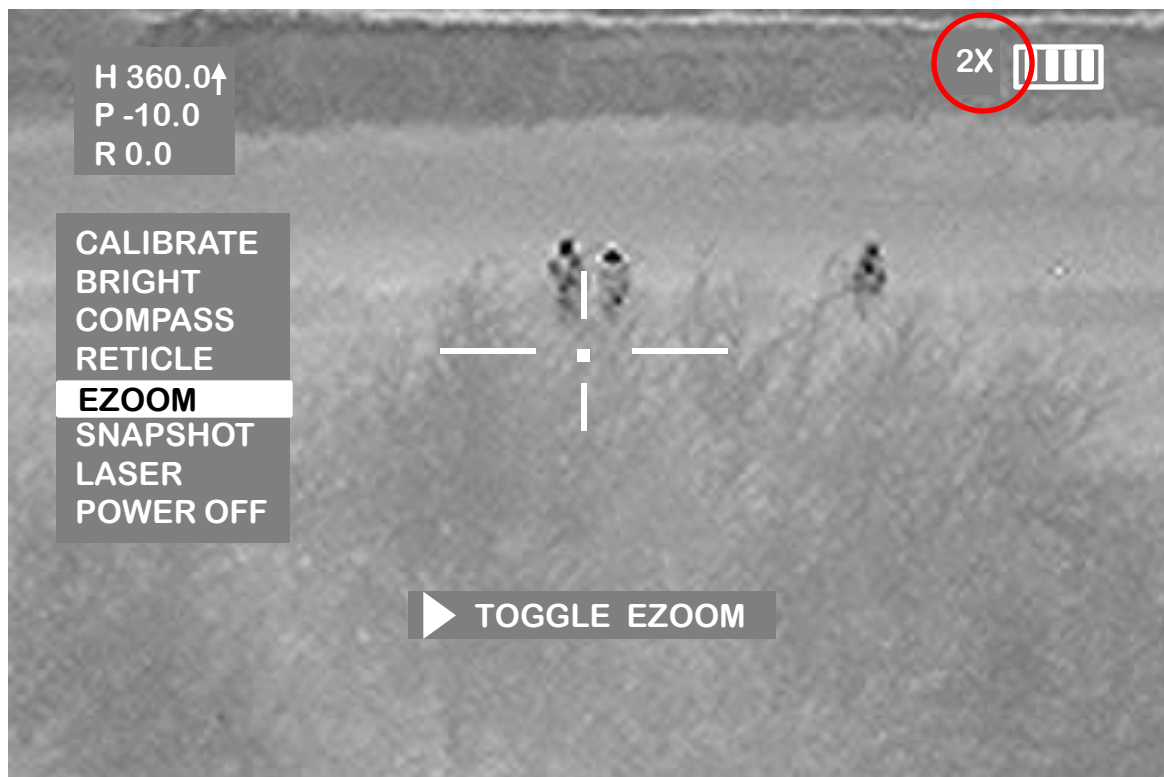
- PUSH THE RIGHT KEY ONE TIME TO BRING UP THE MENU FUNCTION.
- PUSH THE DOWN ARROW KEY TO HIGHLIGHT "EZOOM".





SKEETIR 2X / 0.5X / 1X Zoom Function

C4ISR - SPAWAR - AUSGAR



- PUSH THE RIGHT KEY TO TOGGLE THE 2X, 0.5X, OR 1X POWERED EZOOM FUNCTION.
- **2X** OR **0.5X** WILL APPEAR IN THE VIEW SCREEN IN THE UPPER RIGHT HAND CORNER AND WILL REMAIN VISIBLE ONCE THE MENU HAS TIMED OUT.
- REPEAT THE PROCESS TO SWITCH BACK TO 1X EZOOM. THERE IS NO SYMBOL ON THE DISPLAY WHEN THE SKEETIR IS IN 1X EZOOM.





SKEETIR 0.5X Zoom Function

C4ISR - SPAWAR - AUSGAR



• WHEN THE **0.5X** EZOOM IS SELECTED, THE THERMAL IMAGE WILL ONLY FILL ½ OF THE DISPLAY AREA.

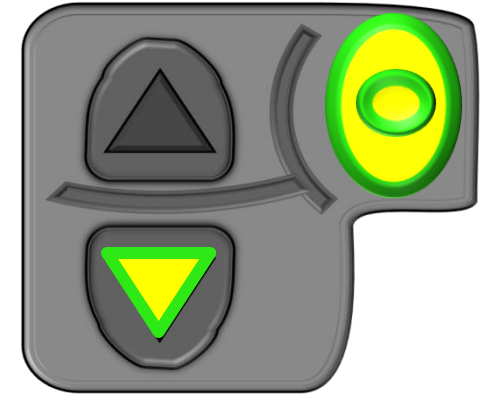
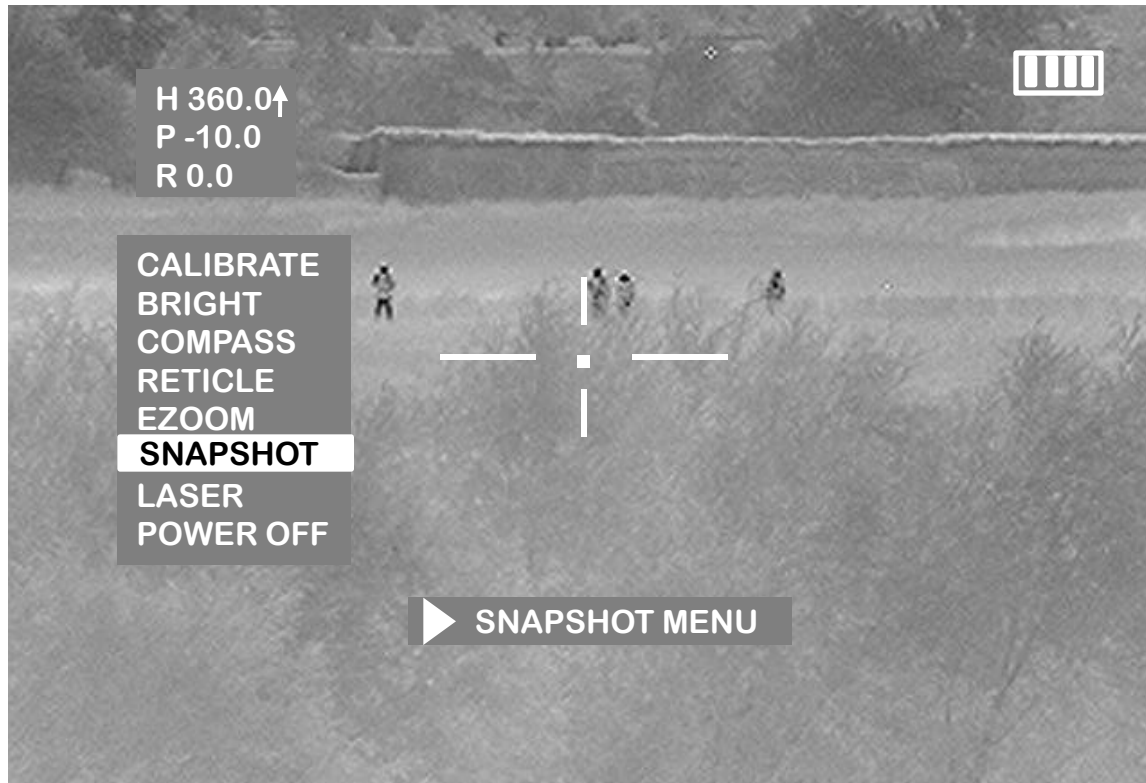
• WHEN PLACED IN FRONT OF A MAGNIFYING OPTIC (SUCH AS AN ACOG) THIS ALLOWS FOR MORE FIDELITY AND A LARGER FIELD OF VIEW THAN ON 1X OR 2X EZOOM.





SKEETIR Snapshot Menu

C4ISR - SPAWAR - AUSGAR



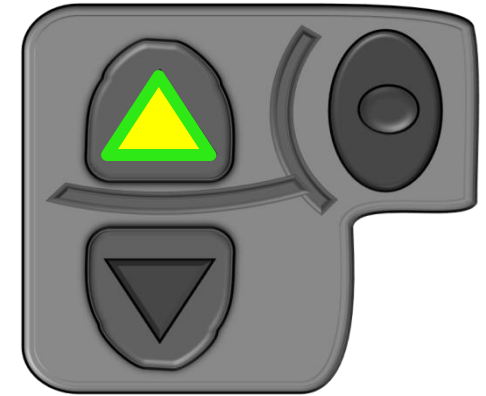
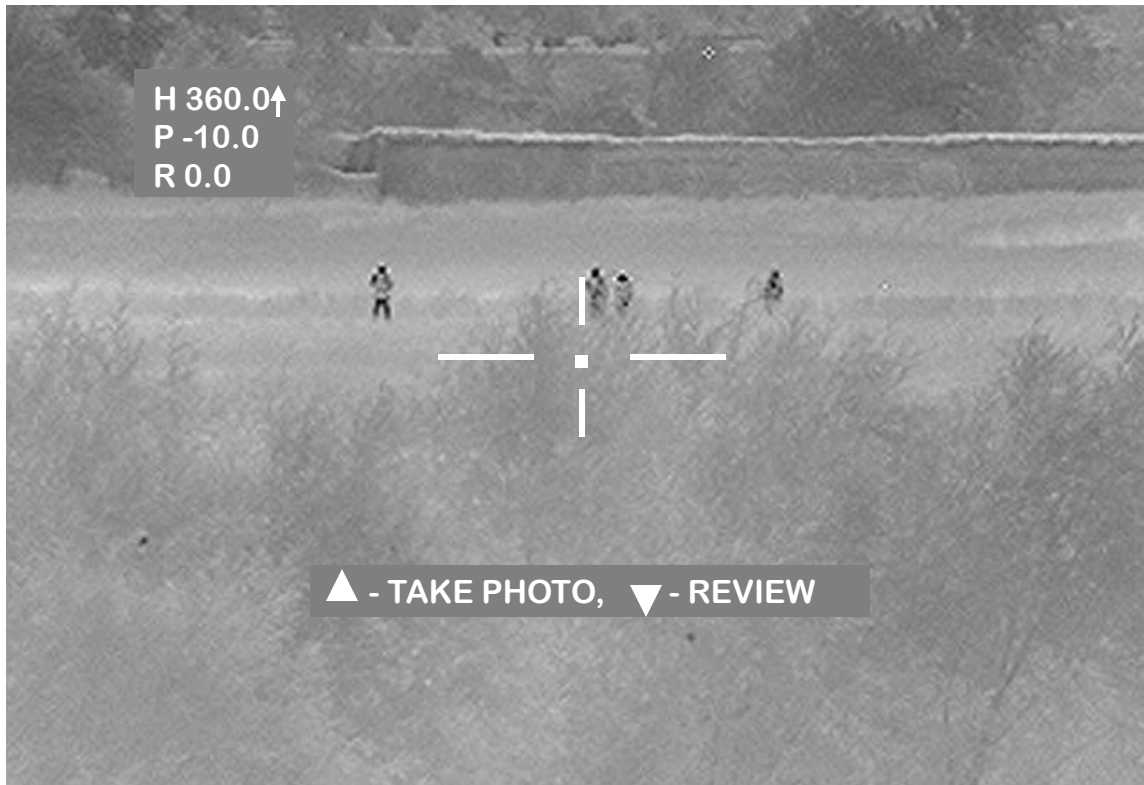
- PUSH THE RIGHT BUTTON ONE TIME TO BRING UP THE MENU FUNCTION.
- PUSH THE DOWN ARROW KEY AND HIGHLIGHT "SNAPSHOT".
- PRESS THE RIGHT BUTTON TO ENTER THE "SNAPSHOT" MENU.





SKEETIR Snapshot Photos

C4ISR - SPAWAR - AUSGAR



▲ - TAKE PHOTO, ▼ - REVIEW

- PUSH THE UP ARROW TO TAKE A SNAPSHOT PHOTO. THE NUMBER OF THE PHOTO WILL BE DISPLAYED:

STORING IMAGE 4 OF 100



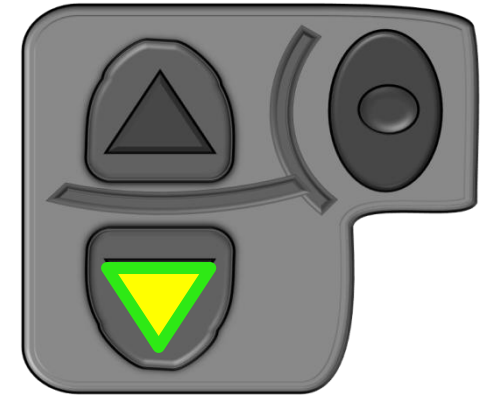


SKEETIR Snapshot Photos (cont.)

C4ISR - SPAWAR - AUSGAR



PHOTO 1 OF 100 ▲ NEXT ► DELETE



▲ - TAKE PHOTO, ▼ - REVIEW

- PUSH THE DOWN ARROW TO REVIEW ALL SNAPSHOT PHOTOS RECORDED ON THE INTERNAL MEMORY.
- PUSH THE UP ARROW TO REVIEW ALL SUBSEQUENT PICTURES STORED OIN THE INTERNAL MEMORY.

PHOTO 1 OF 100 ▲ NEXT ► DELETE

- PUSH AND HOLD THE LEFT ARROW BUTTON TO DELETE A CURRENTLY SELECTED SNAPSHOT PHOTO.

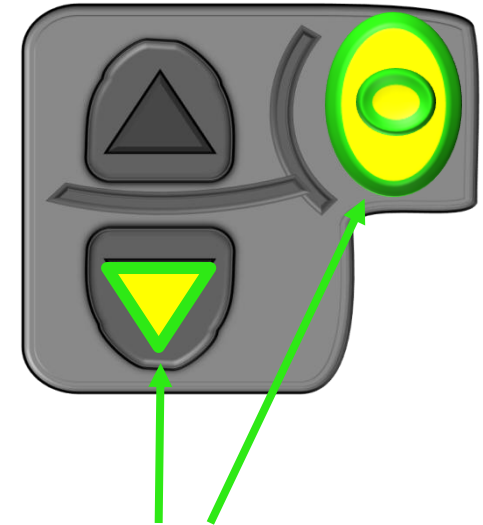
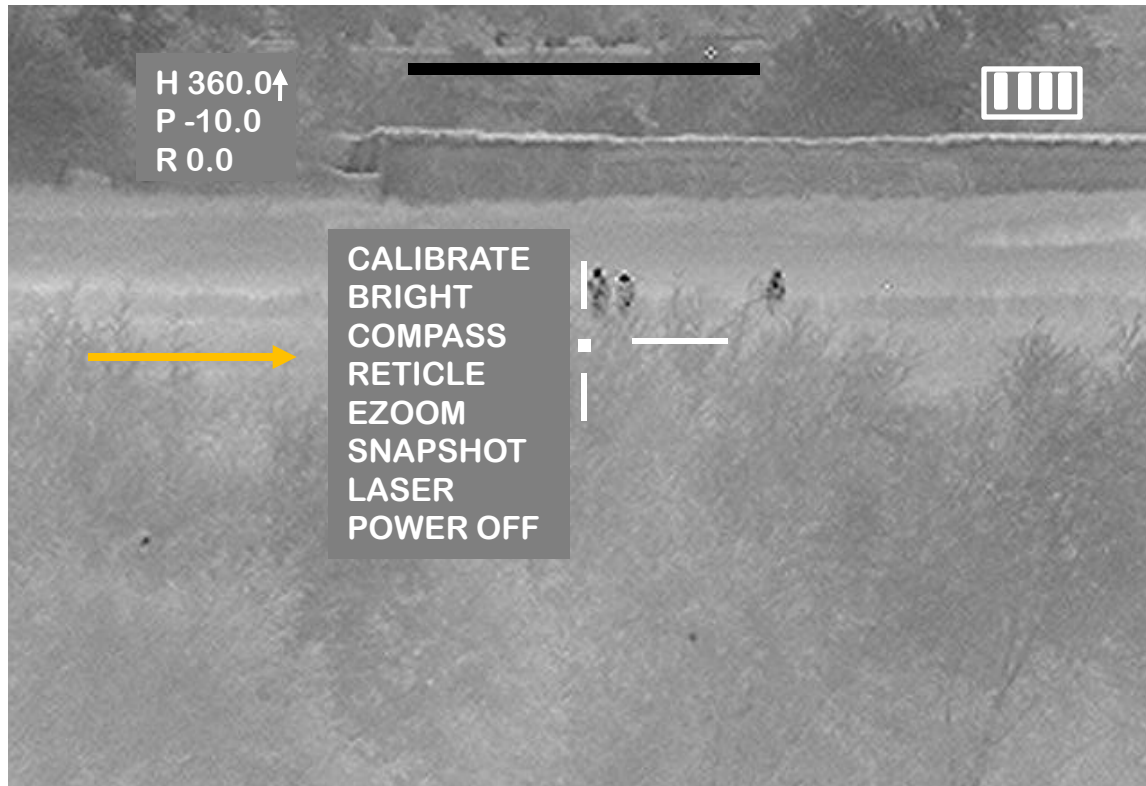
PHOTO 1 OF 100 ▲ NEXT ►► DELETE





SKEETIR Menu Position

C4ISR - SPAWAR - AUSGAR



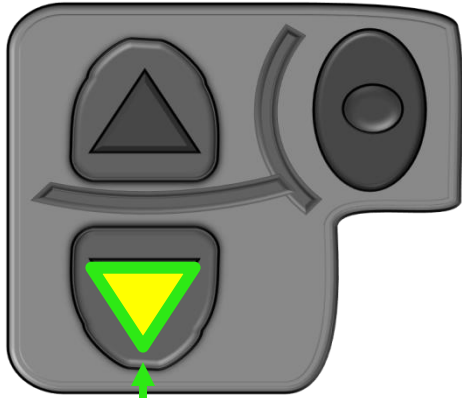
**PUSH AND HOLD BOTH
BUTTONS TO MOVE MENU**

- **PUSH BOTH THE RIGHT BUTTON AND REAR ARROW BUTTON AT THE SAME TIME AND HOLD TO MOVE THE MENU TOWARDS THE CENTER OF THE DISPLAY. THE SKEETIR WILL ALSO CALIBRATE WHEN THIS IS DONE.**
- **REPEAT TO MOVE THE MENU BACK TO THE LEFT OF THE DISPLAY.**



SKEETIR Polarity

C4ISR - SPAWAR - AUSGAR



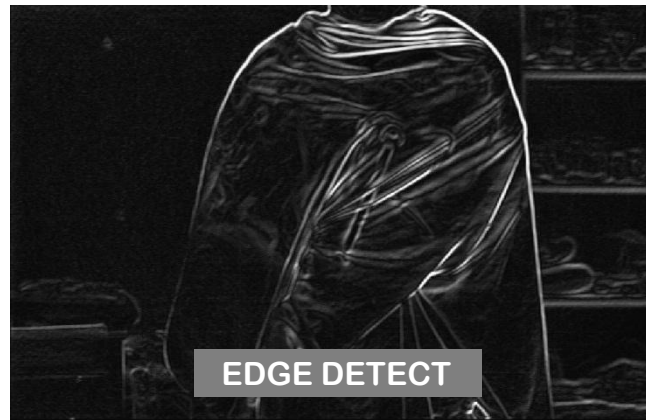
**PUSH TO CYCLE
THROUGH WHITE HOT,
BLACK HOT, AND EDGE
DETECT**



- **WARMER OBJECTS ARE WHITE**



- **WARMER OBJECTS ARE BLACK**



- **SHOWS THE HEAT HORIZON OR
"EDGE" WHERE TEMPERATURE
DIFFERENCES OCCUR**

**NOTE: THE SKEETIR CAN TAKE
SNAPSHOTS IN EITHER WHITE HOT
OR BLACK HOT MODES, BUT *NOT*
WHILE IN EDGE DETECT MODE**

**ALL THREE MODES ARE VISIBLE
WHEN USING VIDEO CAPTURE VIA
THE RS-170 INTERFACE CABLE**

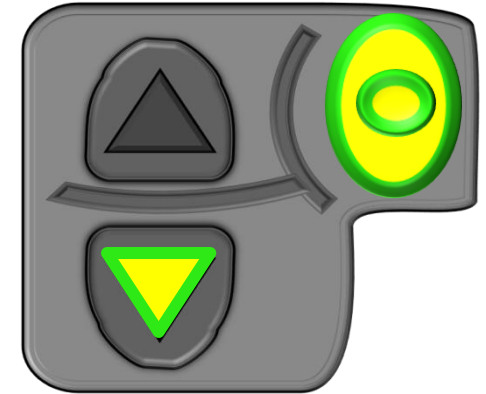
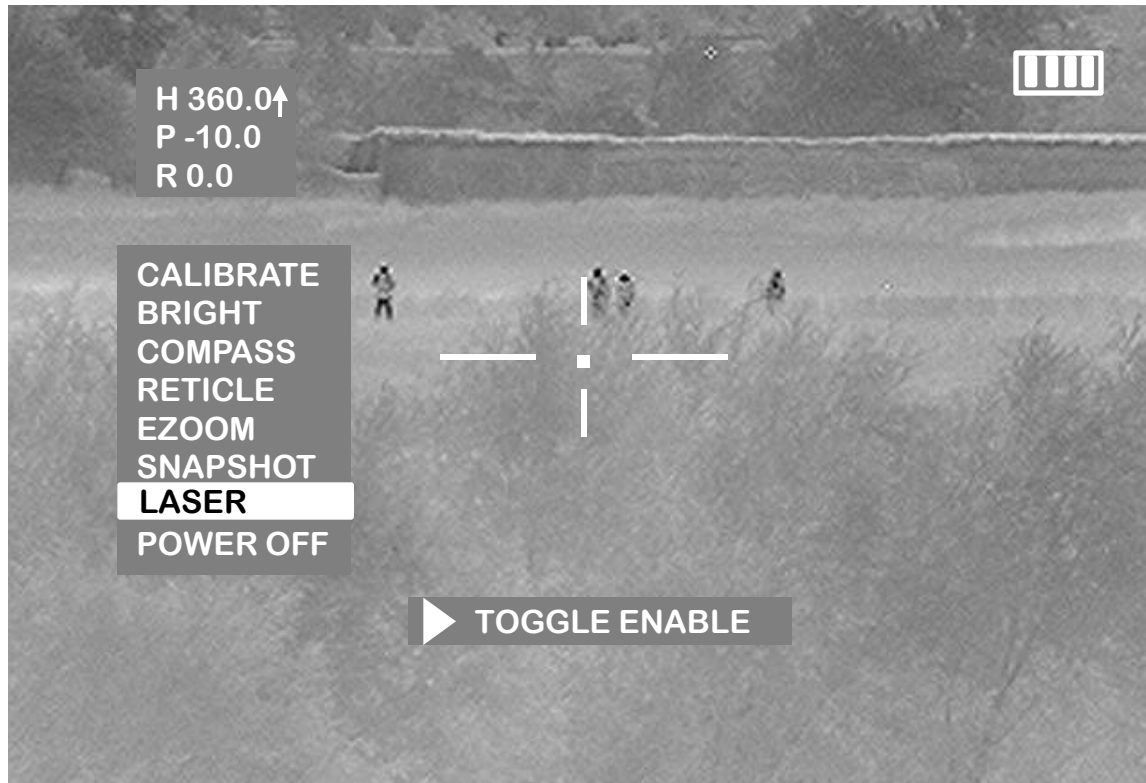
Thermal pictures are of a male with a rifle concealed under a tunic.





SKEETIR IR Laser Actuation

C4ISR - SPAWAR - AUSGAR



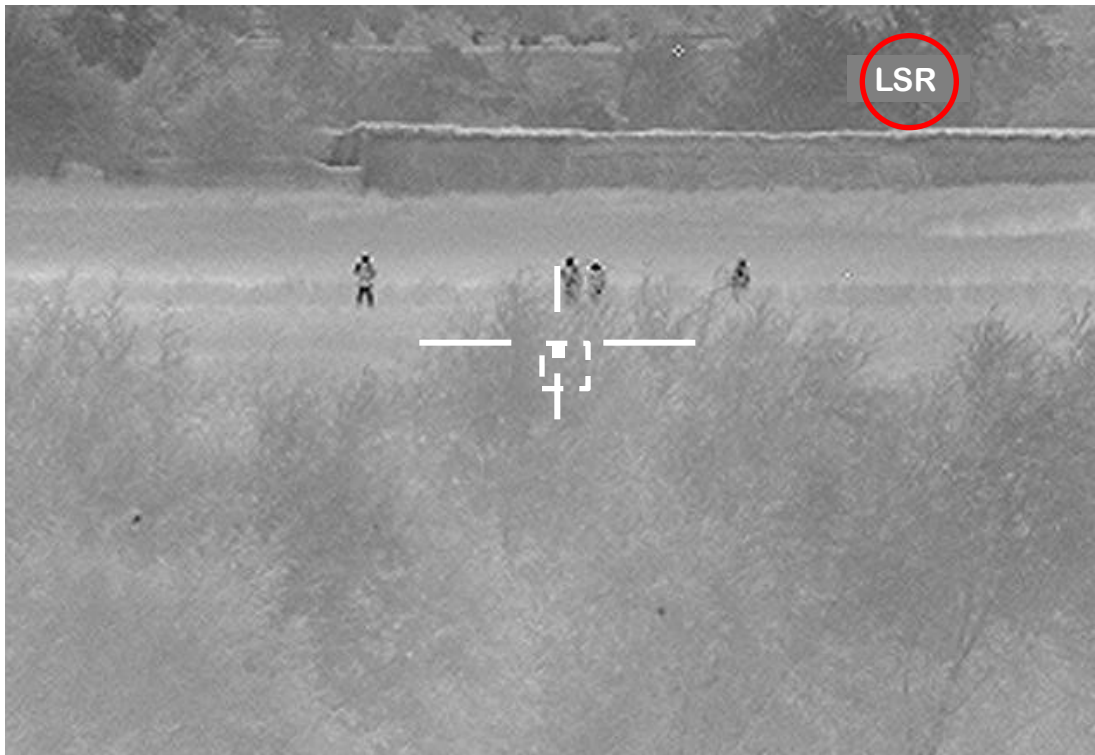
- PUSH THE RIGHT BUTTON ONE TIME TO BRING UP THE MENU FUNCTION.
- PUSH THE DOWN ARROW KEY AND HIGHLIGHT "LASER".
- PRESS THE RIGHT BUTTON TO ENABLE LASER. **LASER ENABLED** WILL APPEAR IN THE BOTTOM OF THE DISPLAY AND **LSR** WILL APPEAR IN THE UPPER RIGHT.





SKEETIR Laser Actuation

C4ISR - SPAWAR - AUSGAR



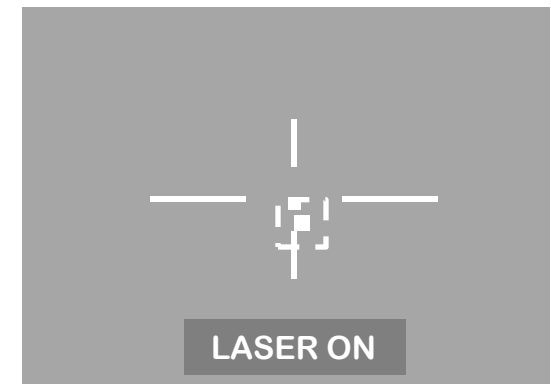
**PUSH ONCE TO ACTIVATE
LASER MOMENTARILY.**

**PUSH TWICE TO TURN LASER
ON CONTINUOUS**

**PUSH AND HOLD TO TURN
LASER OFF**

• ONCE THE MENU TIMES OUT, **LSR** WILL REMAIN IN THE UPPER RIGHT AND A DASHED SQUARE WILL APPEAR IN THE DISPLAY.

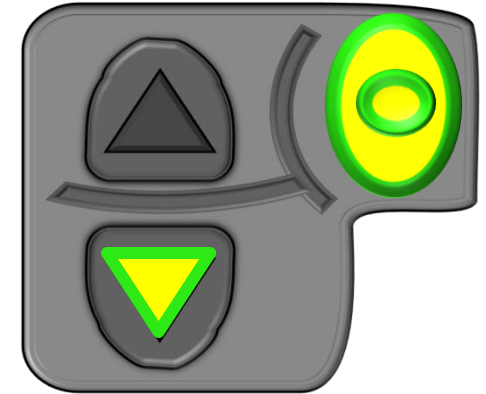
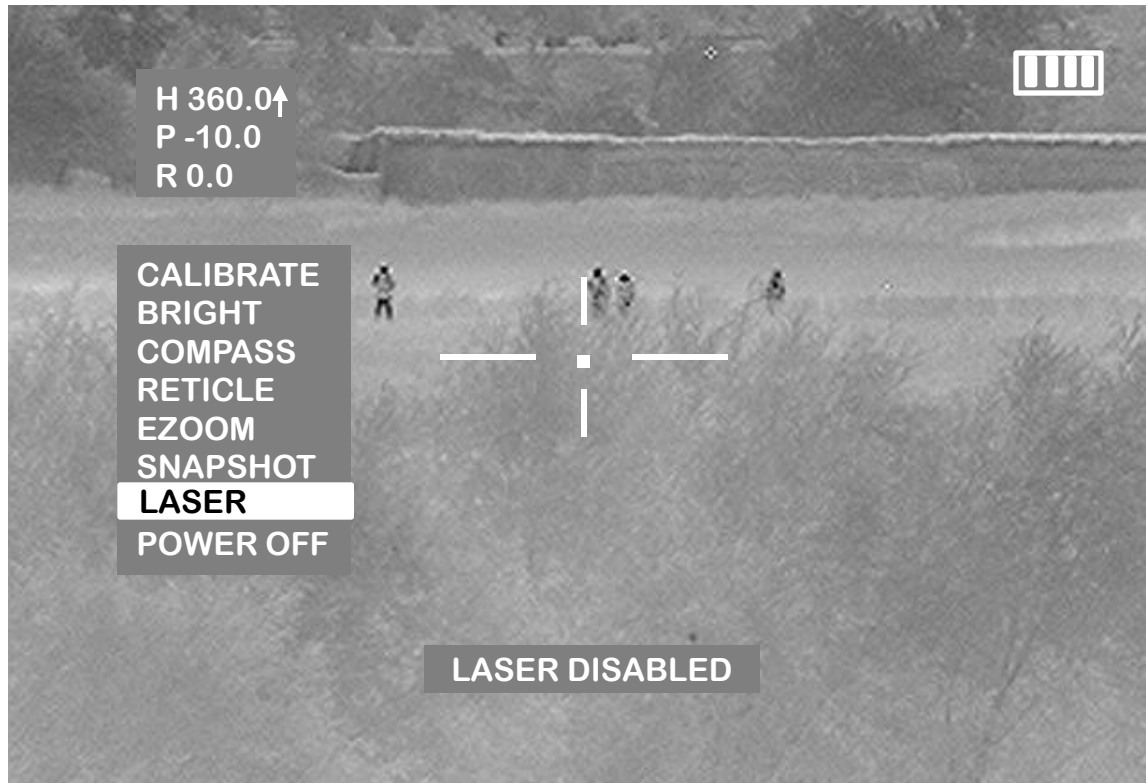
• WHEN THE LASER ACTUATION BUTTON IS ENGAGED, A DOT WILL APPEAR IN THE DASHED SQUARE AND **LASER ON** WILL APPEAR UNTIL THE LASER IS DISENGAGED.





SKEETIR IR Laser (cont'd)

C4ISR - SPAWAR - AUSGAR



•TO TURN THE LASER FUNCTION OFF, PRESS THE RIGHT BUTTON TO DISPLAY THE MENU AND THEN USE THE DOWN ARROW KEY TO HIGHLIGHT "LASER".

•PRESS THE RIGHT BUTTON AND **LASER DISABLED** WILL APPEAR BRIEFLY AND **LSR** WILL DISAPPEAR.





SKEETIR Laser Warning

C4ISR - SPAWAR - AUSGAR

- THE SKEETIR INCORPORATES A CLASS 1 “EYE SAFE” LASER.
- ALL LASERS SHOULD BE TREATED AS A WEAPON NO MATTER WHAT THEIR CLASSIFICATIONS ARE WHEN ACTUATING IR OR VISIBLE RED.
- THE LASER THAT IS MOUNTED INSIDE OF THE SKEETIR IS ENABLED THROUGH THE MAIN MENU AND TRIGGERED BY THE LASER ACTUATION BUTTON ON TOP OF THE SKEETIR.
- THE “LASER ON” IS INDICATED IN THE EYE PIECE AS A DASHED SQUARE WITH A DOT IN THE CENTER, AND BY “LASER ON” IN THE DISPLAY.
- REMEMBER WHEN YOU OPERATE THE IR LASER FOUND ON THE SKEETIR AND POINT IT AT A TARGET, THE LASER WORKS BOTH WAYS.

Think before you actuate!!!!





SKEETIR Weapons Mounting

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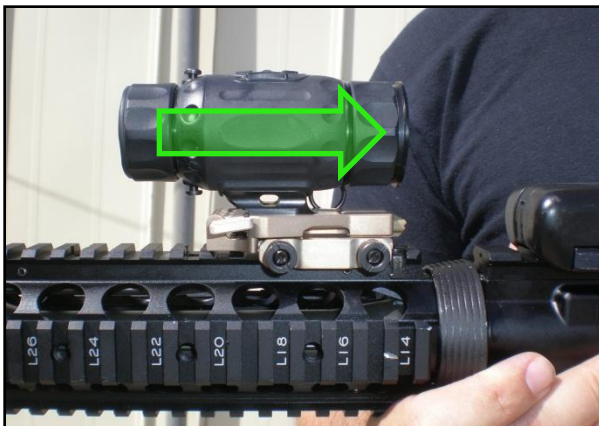
PLACE THE SKEETIR SHOE MOUNT SO THE EYEPIECE IS AT LEAST 1 INCH AND NO MORE THAN 8 INCHES FROM THE RIFLE'S DAY SIGHT. TIGHTEN THE SHOE MOUNT.





Using Day Optic Only

C4ISR - SPAWAR - AUSGAR



•PLACE THE SKEETIR INTO THE SHOE MOUNT AND PULL IT BACK UNTIL IT LOCKS INTO PLACE



•PUSH IN ON THE LOCK RELEASE BUTON WHILE PULLING THE SKEETIR TO THE RIGHT



•ROTATE THE SKEETIR OUT FROM IN FRONT OF THE DAY OPTIC



•ROTATE THE SKEETIR TO THE LEFT TO PUT IT BACK IN LINE WITH THE DAY OPTIC





SKEETIR Maintenance, Care and Cleaning

C4ISR - SPAWAR - AUSGAR

- **ENSURE WHEN YOU STORE THE SKEETIR, YOU REMOVE THE CR-123A BATTERY. REPLACE THE EYE COVER AND OBJECTIVE LENS COVERS WHEN YOU STORE THE SKEETIR IN ITS CASE.**
- **AFTER EACH OPERATION, TAKE A SOFT PENCIL ERASER AND RUB THE BATTERY CONTACTS TO CLEAN THE CONTACTS.**
- **WHEN STARTING A NEW OPERATION, ENSURE YOU USE A NEW BATTERY.**
- **YOUR SKEETIR IS WEATHER-PROOFED BUT DO NOT SUBMERGE IT IN WATER OR ANY OTHER LIQUID.**
- **AFTER EACH OPERATION, TAKE A CLEAN DAMP CLOTH TO WIPE DOWN THE OUTER CASING.**
- **ALWAYS (NEVER USE ANYTHING ELSE BUT) USE LENS CLEANING PAPER TO CLEAN THE EYE PIECE AND OBJECTIVE LENS.**





SKEETIR Equipment Repairs

C4ISR - SPAWAR - AUSGAR

- IF ANY ITEM IN YOUR KIT BECOMES INOPERABLE, PLEASE CONTACT THE FOLLOWING BY E-MAIL OR PHONE:
- ***SSC Pacific C4I Help Desk - 24/7/365***
ssc_pac_c4isrhd@navy.mil
(619/DSN) 524-3888
- IF ANY ITEM IN YOUR KIT BREAKS OR BECOMES DAMAGED (FOR ANY REASON), CONTACT THE ABOVE WEB ADDRESS TO CONFIRM SHIPPING INSTRUCTIONS. PLEASE BOX BROKEN OR DAMAGED GEAR AND SHIP TO:
- ***N69255 Receiving Officer***
Attn: Ron Brown Tel:(619) 524-3882
SPAWAR Systems Center Pacific (41420)
4297 Pacific Highway, Building 7
San Diego, CA. 92110
- ONCE CONFIRMATION OF SHIPPING OF DAMAGED EQUIPMENT TAKES PLACE, REPLACEMENT GEAR WILL BE SENT TO YOU. ENSURE YOU PUT YOUR UNIT'S RUC OR DODAAC NUMBERS AND UNIT'S ADDRESS AND A POINT OF CONTACT WITH EMAIL AND PHONE NUMBER.





QUESTIONS?

