

TA01NSN 4X32 ACOG SCOPE

1. DESCRIPTION

a. The TA01NSN ACOG is designed to provide enhanced target identification and hit probability for the M4A1 carbine out to 600 meters (approximately 654 yd). Although it is designed primarily for use during the day, it has a tritium illuminated reticle for night and low-light use. The ACOG scope is topped with a set of iron sights for close range engagements. The ACOG scope is a lightweight rugged, fast and accurate 4-power optic scope. The body is machined from aluminum forgings; both the material and finish are identical to the M4A1. It is internally adjustable to allow the shock of rough handling to be carried by the scope body and not the adjustment mechanism.

b. The center area of the scope's crosshair pattern is illuminated at low light or complete darkness. It glows amber at night from the power of a tritium lamp that lasts for 10 years before replacement is needed. This amber illumination is compatible with night vision devices. The amber glow is beyond the infrared wavelengths at which night vision devices are hypersensitive.

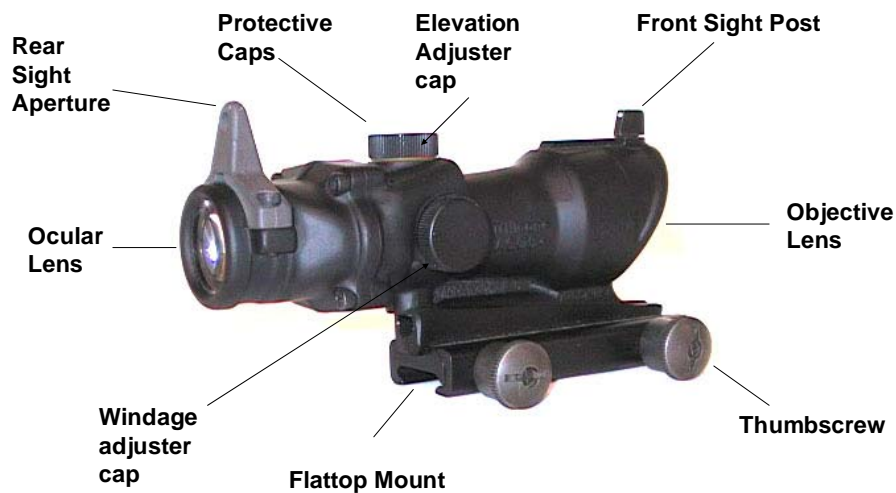


TA01NSN 4x32 ACOG SCOPE

2. CHARACTERISTICS

Objective Lens	32 mm
Magnification	4 power
Eye Relief	1.5 in
Exit Pupil	8 mm
Field of View	36.8 ft @ 100 meters
Length	5.8 in
Weight	9.9 oz
Waterproof	66 ft

NOMENCLATURE

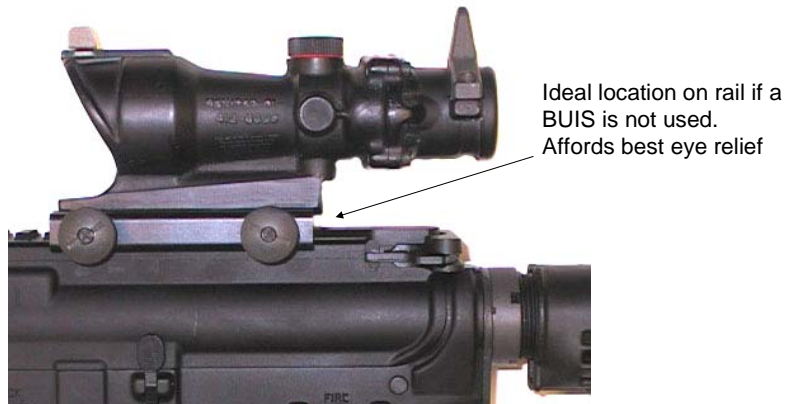


3. INSTALLATION OF THE ACOG SCOPE

a. Before attaching the ACOG scope to the M4A1 inspect the unit for external damage that may have occurred during shipment. Also check the tritium lamps for failure. This can be checked by taking the scope into a darkened room and observing to see if the tritium illuminated the reticle.

b. The ACOG scope can be attached to the M4A1 carbine easily using the adapter that comes from the factory.

MOUNTING THE ACOG



c. Attach the ACOG scope and adapter to the M4A1 using the following procedure.

CAUTION

The knobs must be tightened using fingers only. The thumbscrews are designed to remain tight if installed firmly with fingers only. However, an additional 1/8 to 1/4 turn may be applied with a coin or screwdrivers if desired (do not tighten farther or use pliers). Do not apply thread locking compound to thumbscrews (attachment knobs) or permanent damage to the mount base and knob will result. ALWAYS INSTALL THE SCOPE THE EXACT SAME WAY TO ENSURE ZERO RETENTION (RETURN TO ZERO—SAME KNOB PRESSURE SUCH AS FINGER TIGHT PLUS 1/4 TURN.

(1) Loosen interface knobs and pull the interface clamp bar back against the knobs.

(2) Place the ACOG scope onto the M4A1 rail surface. Be sure to engage the interface studs into the grooves on the top mounting surface of the carbine. The ACOG scope can be placed in any of the slots on top of the weapon to allow for eye relief adjustments. If you need to retain the same zero, place the ACOG scope into the same slots on each installation.

(3) Tighten the knobs firmly using fingers only and then add another ¼ turn using a coin or a blade screwdriver. The slots on the knobs are only for removal ACOG scope from the weapon if the knobs are attached tightly for hand removal. If the slots are used to tighten the knobs, the ACOG scope will be difficult to remove.

4. OPERATION

ADJUSTMENT CAUTION

The ACOG scope contains internal adjustment mechanism to allow zeroing on the M4A1. Adjustment to the extreme ends of the range can result in damage to the internal prism assembly. Do not continue to adjust windage and elevation mechanisms if you encounter resistance.

a. The ACOG scope is internally adjustable. Adjustment is made using the adjuster mechanisms located inside the adjuster caps on the top and right-hand side of the scope. This adjustment can be made with a small screwdriver or with a bullet case. The caps are very tight to ensure a waterproof seal with the O-rings inside. The caps should only be off the scope when adjustments are being made.

b. The ACOG scope is shipped with a pre-centered setting. Normally this means that only small adjustments are necessary. Do not adjust the scope to the extremes. It is possible that over adjustment will damage the precise prism assembly inside the riflescope.

(1) If the windage and elevation adjustment increases, the limits of adjustment are being approached. Adjust further only with caution.

(2) As the limits of the windage and elevation adjustments are reached, the adjustment mechanism will become more and more difficult to adjust. If the adjustment mechanism is adjusted past its point it may break.

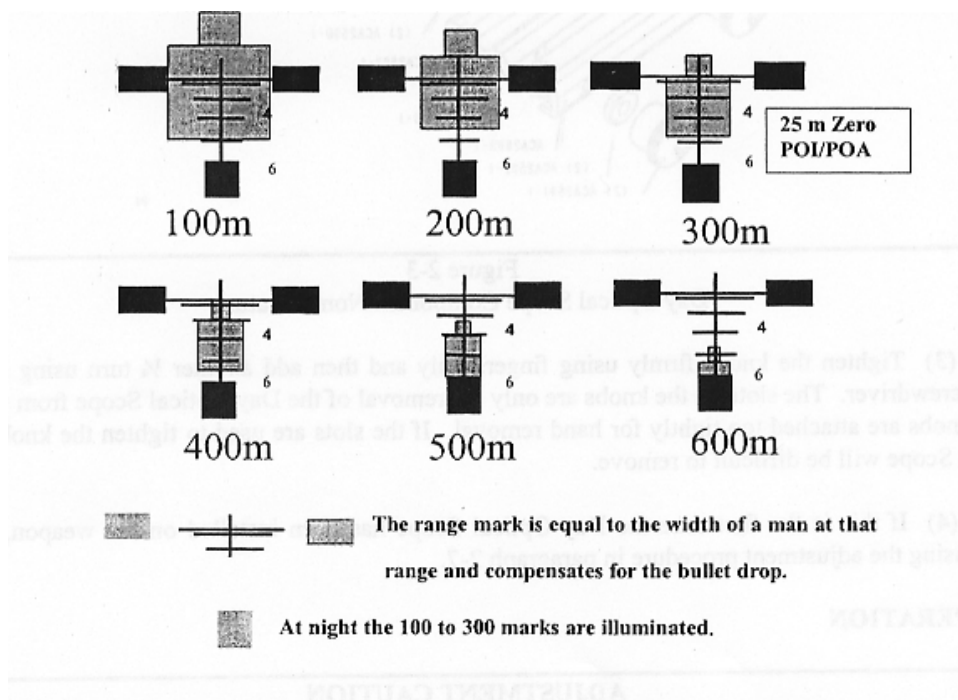
(3) Adjustment beyond the center of the windage and elevation adjustment range should not be necessary.

5. Operation of Ranging Reticle

a. The reticle pattern in the ACOG scope has been carefully designed to provide many features while retaining simplicity of operation. The user does not need to make any manual adjustment between shots at different ranges. Ranging capability is built into the reticle pattern.

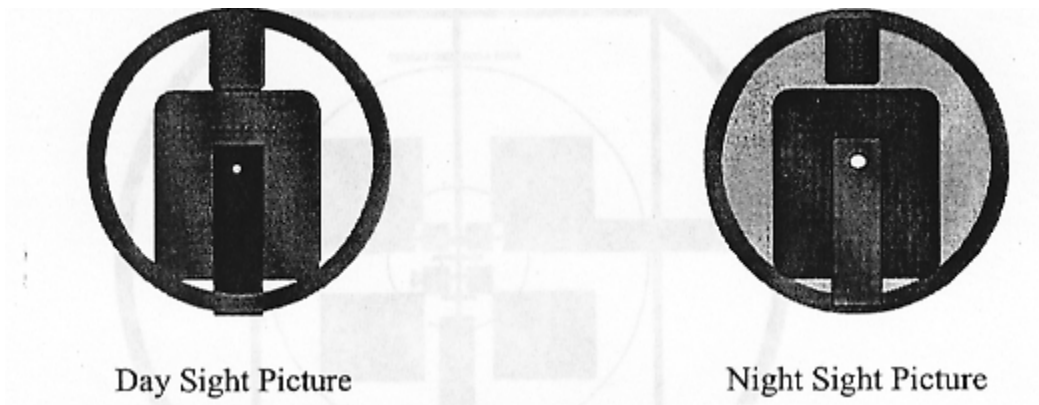
b. The widths of the horizontal hash marks correspond to the width of a 19 inch silhouette (average width of a man's shoulders) at that range. The crosshair lines for the 100 to 300 meter (109 to 327 yds.) ranges are illuminated at night.

c. The illustrations in Figure 2 show the proper aim for a silhouette target at ranges from 100 to 600 meters.

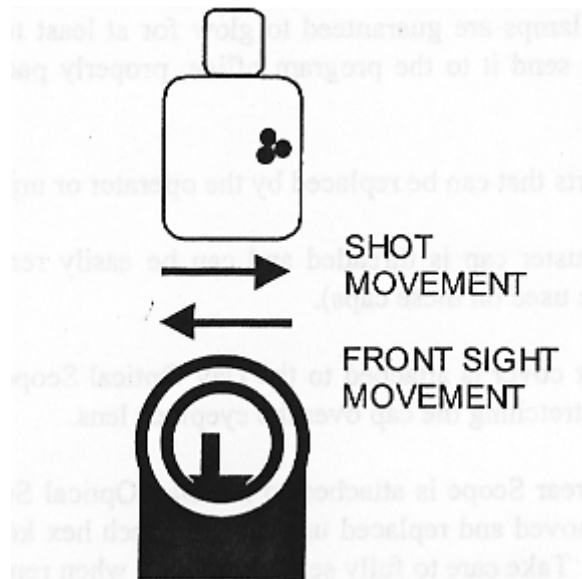


6. Operation of Close Range Engagement Sights

a. The ACOG's Back-up Iron Sights work in daylight or dark. In daylight, the backup sight is used by aligning the top of the front sight on the target in the center of the rear sight ring. In darkness align the green dot just below the center of the target which should be center in the rear sight.



b. The Back Up Iron Sights (BUIS) are factory zeroed for 50 meters and are on again at 250 meters. The BUIS close range zero can be shortened by putting shim washers under the rear sight. Windage is adjusted by drifting the front sight right or left. The bullet will move in the opposite direction as the movement of front sight.



7. ZEROING THE DAY OPTICAL SCOPE

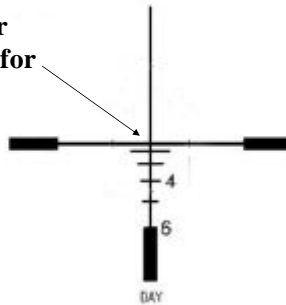
a. The method of adjustment with the ACOG Scope is slightly different from other scopes. Adjustment increments are 1/3 inch (1 cm per click at 100 meters (109 yd)). A click is defined as the sound or feel of the positive detent movement. This means that 3 clicks are required to move the bullet approximately one inch (3cm) on the target at 100 meters. At 25 meters 12 clicks moves the bullet approximately 1 inch. Turning the screw in the direction of the arrow moves the bullet impact in the direction marked R (up/right).

(1) To ensure a consistent zero, it is best to tap the scope with the palm of your hand to stabilize the adjust mechanism after an adjustment has been made and then return to fire three shot groups on the target.

b. **The reticle is designed to be zeroed at 100 meters with the top crosshair being the point of aim. This is the most accurate method of zeroing.**

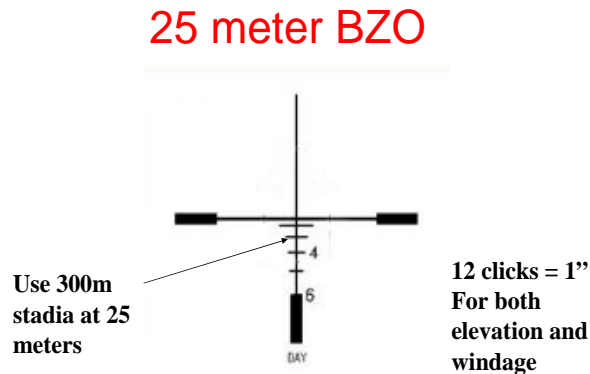
100 meter BZO

Use center
crosshair for
POA/POI



3 clicks = 1"
For both
elevation and
windage

c. If a 100 meter range is not available the TA01NSN ACOG may also be zeroed a 25 meters if the 300 meter mark is used as the POA/POI. A 25 meter zero is less precise than a 100 meter zero.



CAUTION

The ACOG scope is waterproof only when the adjuster caps are firmly screwed onto the scope. Take care not to apply undue pressure when installing the caps, as they may become difficult to remove if tightened excessively. Be sure originals are in place and undamaged.

6. MAINTENANCE OF THE ACOG SCOPE

a. Care and Cleaning.

(1) In cold weather, if the outside lens surfaces fog over, clean with a clean cloth.

(2) When operating in a dusty or sandy area, take the following precautions:

(a) Keep the dust cover on ACOG scope unless it is in actual use. This will prevent dust and sand from pitting or scratching the objective lens.

(b) Gently clean the eyepiece and objective lenses frequently with clean cloth fresh water if available.

(3) The ACOG scope requires very little maintenance. If the lenses become dirty, wash them using fresh water and a clean cloth. Be careful to wash the lenses fully before wiping them with a clean cloth. The lenses could be scratched if dirt is pulled along the lens by the cloth.

(4) If the BUIS front sight becomes dirty, wipe it off with water and a cloth. There is a protective sapphire lens over the lamp. It can be cleaned with a cloth with no damage to the lamp.