Advanced Infantry Marksmanship Strategies and Standards

GTA 07-10-002 **Date: June 2002**

DEFINITION: AIMSS refers to the marksmanship training with lasers, sights and other aiming and optical systems currently fielded for use with small-arms and machine guns.

REFERENCES:

a. FM 3-22.9, Basic Rifle Marksmanship
b. FM 3-22.68, Crew-Served Machine Guns
c. Small-Arms Integration Book (SAIB), March 2002
d. STRAC allocations
e. AIM POI for basic training
f. Training support packets (TSPs) for all of the following equipment, distributed worldwide

AIMSS EMPLOYMENT EQUIPMENT:

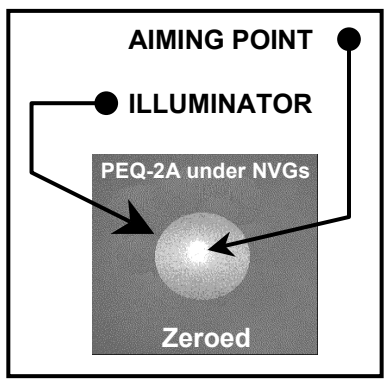
a. Adaptor rail system
b. Rail grabbers (Picatinny and Insight)
c. M68 close combat optic (CCO)
d. AN/PEQ-2A
e. AN/PAQ-4A/B/C
f. M145 straight telescope, machine gun optic (MGO)
g. Thermal weapons sights (TWS), light, medium and heavy
h. Backup iron sights (BIS); START purchase for units FY02
i. Rifle grenade entry munition (RGEM)
j. All issued night vision devices
k. Enhanced night vision goggles (ENVG) next generation NVG
l. Light weight ground mount (LWGM, XM 192) new tripod
m. M203 rail system, night aiming device for the M203
n. AN/PEM-1 laser borelight system (LBS)
o. Integrated laser/white light pointer (ILWLP), next generation PEQ-2A
p. AN/PVS-4

AIMSS SUPPORT EQUIPMENT:

a. Borelight (one per infantry squad)
b. Cradles (professional weapons vise, target box, rucksacks unit SOP)
c. 25M target offsets (available for all possible configurations, critical to live fire zeroing)
d. 10M target offsets (available for all possible configurations + miles, critical to bore sight)

INFANTRY PLATOON EQUIPMENT:

a. Platoon leader: M4 MWS, PEQ-2A, BIS, CCO, HTWS, PVS-14
b. RTO: M4 MWS, BIS, CCO, PVS-7
c. Platoon sergeant: M4 MWS, PEQ-2A, BIS, CCO, PVS-7
d. Squad leader: M4 MWS, PEQ-2A, BIS, CCO, HTWS, PVS-14
   (1) Team leader: M4 MWS, PAQ-4, BIS, CCO, PVS-7
   (2) Rifleman: M4 MWS, PEQ-2A, BIS, CCO, LTWS, PVS-14
   (3) Grenadier: M4/203A1 MWS, PAQ-4, BIS, CCO, PVS-7
   (4) Auto rifleman: M249 MWS, PEQ-2A, MTWS, PVS-14
e. Machine gunner: M240B/M9, PEQ-2A, PVS-14, MGO, MTWS
f. Ammo bearer: M4 MWS, PAQ-4, PVS-14, BIS, CCO
g. Assistant gunner: M4 MWS, PAQ-4, PVS-7, BIS, CCO



How are ITB units shooting at night?

Most meet 17 out of 40 hits; many are shooting in the mid 30's.

a. Factor 1: The ambient conditions, illumination and weather.
b. Factor 2: How well the cadre and drill sergeants are trained.

AIMSS QUAL STANDARDS

(Ref FM 3-22.9, FM 3-22.68)

•M16/M4s	DAY:23/40	NIGHT:17/40
•M249/M240s	DAY:7/11	NIGHT:7/11
•TWS standards:	Day and night tables are the same for all weapons	

AIMSS Training Goals for the "School House"

a. **OSUT** - **PAQ-4C, M68 CCO, Borelight**, BIS, **Night Vision Goggles** (NVG); to proficiency.
Currently, the 2/29 conducts training during instructional periods AIMSS 1-5 for all OSUT soldiers.

b. **IOBC** - **PAQ-4C, PEQ-2A, M68 CCO**, M145 MGO; BIS, NVG, **Borelight;** to proficiency.

c. **ICCC** - PAQ-4C, PEQ-2A, M68 CCO, M145 MGO, Borelight, BIS, NVG; overview/familiarization.
Recommend additional instruction on training strategies for AIMSS and small-arms master gunnery.

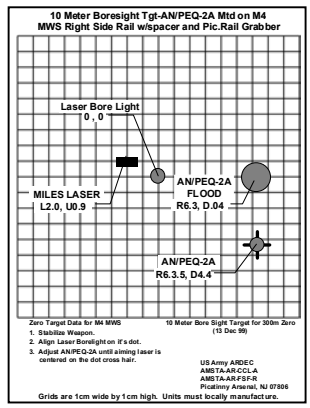
d. **OCS** - AIMSS Overview.

e. **BNCOC** - PAQ-4C, PEQ-2A, M68 CCO, M145 MGO, Borelight, BIS, NVG; to proficiency.

f. **ANCOC** - PAQ-4C, PEQ-2A, M68 CCO, M145 MGO, Borelight, BIS, NVG; overview/familiarization.
Recommend additional instruction on training strategies for AIMSS and small-arms master gunnery.

NOTE: Underlined items are already in place and training

Critical Factors in AIMSS Training



- **Boresighting the Optics and LASER Aiming Devices**
  - Borelight is key.
  - Stable platform for weapon w/ borelight is critical; you cannot hold the weapon steady enough to get a good zero.
  - Cheek-to-stock weld is key to CCO boresighting (CCO is parallex free beyond 50M).
  - Proper target offsets must be used.
  - Zero the borelight to each weapon.
- **NVG Use/Proficiency: Ensure proper NVG use.**
  - Ensure kevlar proper fitting: use snug fit/nape strap or parachutist retention straps.
  - Set interpupillary distance for individual eye width for proper field of view.
  - Set eye relief-defogging and noise & light discipline.
  - Adjust diopters-adjusts eye to focus on intensified image nearest to your eye.
  - Adjust objective focus ring-adjusts focus range farthest from your eye.
  - Adjust variable gain-to get the most detail move the wheel midway out on the tube.

  ← In this order
  - Refine adjustments.
  - As light and range factors change, adjust objective focus ring and variable gain.
  - Adjust eye cups to remedy lens fogging.
- **Offsets**
  - Consider standardized mounting configurations to reduce the number of different offset targets required for zeroing.
  - Use only USAIC-approved target offsets on the AIMSS CD.
- **Device Characteristics**: Reference FM 3-22.9, for system specifics.
- **Training Ranges**: Maintain a boresight/reboresight station at all ranges.

Common Problems To Avoid

-AN/PAQ-4Cs & AN/PEQ-2As: Insight and Picatinny rail grabbers being used without changing offsets.

-Tool Tightened: The insight rail grabber must be tool tightened in order to retain zero.

-Remote triggers: The insight rail grabber needs the remote trigger to activate. Remote triggers are breaking.

-Offsets: Not using the proper offset for the rail grabber being used; be specific and exact.

-Borelight: The borelight is not being zeroed to each weapon.

-**Borelight Kit**: Not using the 10M measuring line (in the borelight kit) or proper distance for boresighting.

-NVGs: Not knowing how to properly adjust all NVGs--"near knob– far knob – middle knob."

-**Weapons Racks**: Many weapons racks cannot accommodate the Army's small-arms weapons with AIMSS equipment mounted; To retain zero, track each optic/laser to each weapon; do not separate the device from the rail grabber, remount each optic/laser exactly where it was on the rail.

-**Modified Firing Position**: Required to establish a stable firing platform.

-**Not Having a Training Plan**: Marksmanship with lasers and advanced optics requires a plan and additional training to be effective and maximize the power of the technology for Army transformation.