Laser Dazzler Overview

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Agenda

- Background
- AF Efforts
- Joint Efforts
- Issues
The Joint Non-lethal Weapons Directorate (JNLWD) uses the term Optical Distractor

Definition:
- Visible laser devices that have reversible optical effects on human targets
- Provide a spectrum of capabilities
  - Unequivocal, non-verbal warning
  - Temporarily overwhelm an adversary’s visual sense
- Provides an opportunity for target to clarify intent at a significant range
  - Anecdotal evidence of a 5x decrease in engagement of non-combatants
XADS PD/G-105
Class: 3b
NOHD (10s): 140m
(?)

BE Meyers GBD-IIIc
Class: 3b
NOHD (10s): 114m

BE Meyers Glare
MOUT
Class: 3b
NOHD (10s): 28m

Note: The Joint Non-Lethal Weapons Directorate (JNLWD) has fielded a number of other devices, all with the Army.
In Jan/Feb 07, CENTAF received 40 Xtreme Alternative Defense Systems (XADS) PD/G-105s in theater
- No training, documentation, labeling, CONOPS

In May 07, AF Laser System Safety Review Board (LSSRB) disapproved use of XADS PD/G-105
- No safety controls, no labeling, inconsistency in laser parameters

In June 07, LSSRB granted interim approval (Mar 09) to BE Meyers GBD-IIIc
- Navy granted same interim approval for Marine use
- Device has some safety controls
- Contractor investigating adding range finder on device
- Worked with AF Security Forces Center to develop training/CONOP
In Sep 07, AF Security Forces Center came back and asked the LSSRB to look at the BE Meyers GLARE Military Operations in Urban Terrain (MOUT)

- Very similar to GBD-lllc with smaller laser
- Granted same interim approval until Mar 09
Joint Efforts

- Nominal Ocular Hazard Distance (NOHD) for dazzlers
  - Normally assume .25s exposure for visible lasers (accidental)
  - Not appropriate since we are purposefully hitting a target in the eyes
  - DoD Laser System Safety Working Group (LSSWG) decided to apply 10s exposure standard—increases NOHD
    - Some discussion on combat vs training exposure limits
- Dazzler ranging capability
  - Navy, AF pushing development of capability
  - BE Meyers has an initial design for a Safety Control Module
- JNLWD Efforts
  - Requirements: USMC led requirements definition effort
  - Effectiveness Testing: A number of experiments done and planned to look at laser effectiveness for different missions
Issues

- Need a better grasp of system requirements and effectiveness
  - These results will drive safety issues
- What happens when Mar 09 interim approval for GBD-Illic and GLARE expire?
  - Some rumblings that the ranging device may not be ready and/or procured by next Mar
  - Topic of discussion for Sep LSSWG meeting
- Combat vs training exposure limits
- Laser “fratricide” incidents
Conclusion

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