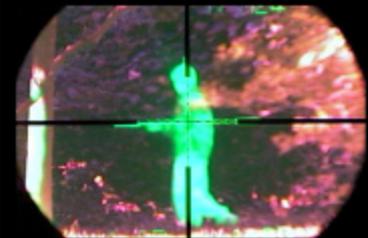


SNIPIR: HIGH PERFORMANCE COOLED THERMAL IMAGING WEAPON SIGHT

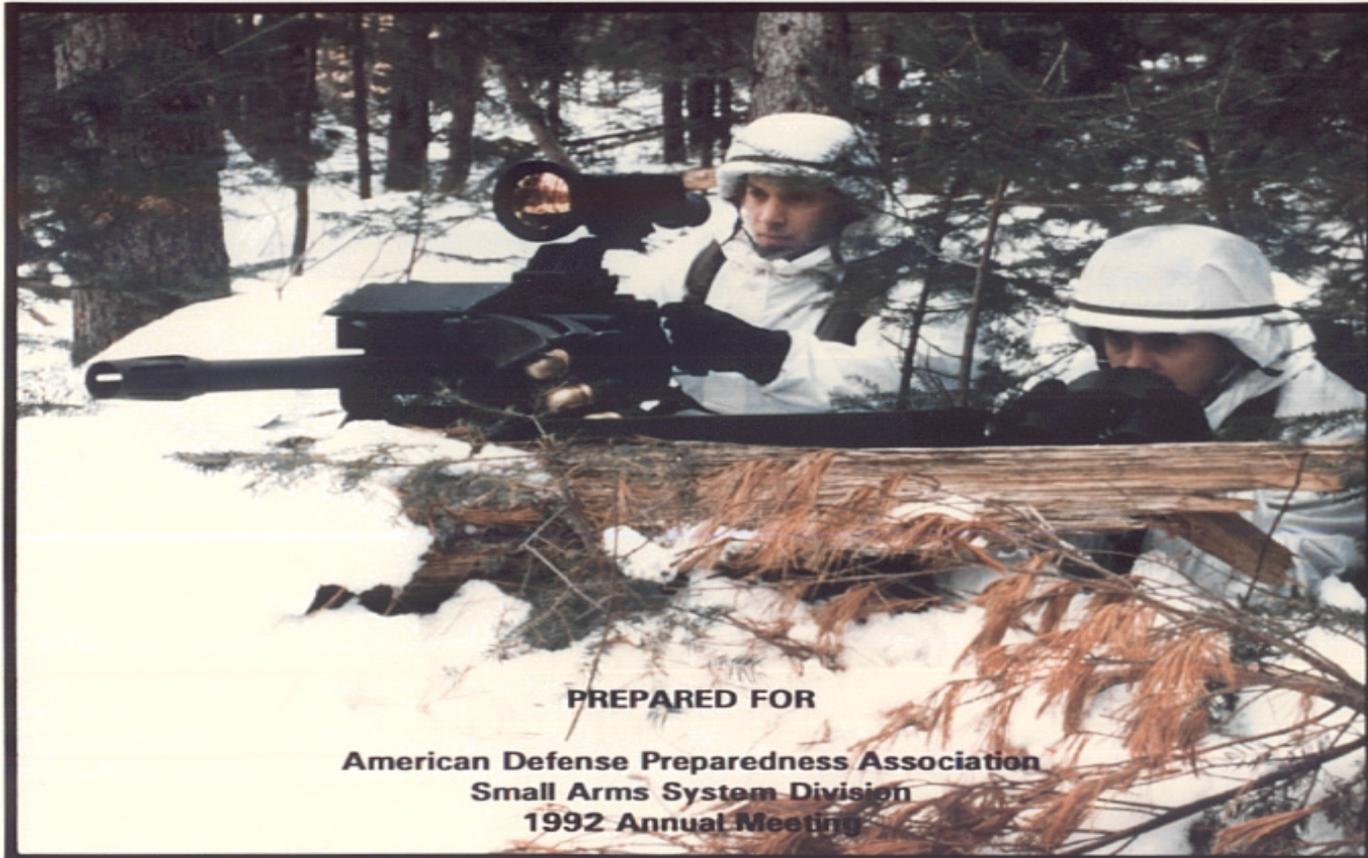
NDIA Small Arms Symposium FLIR Systems, Inc.

Presented By:
JOHN G. LOOBY
15 May 2002



BEEN HERE BEFORE

MAG-600 MULTIPURPOSE THERMAL SIGHT



PREPARED FOR

American Defense Preparedness Association
Small Arms System Division
1992 Annual Meeting

By: John G. Looby
Manager, Business Development, Advanced Programs
Magnavox Electronic System Company
Electro-Optical Systems Division
46 Industrial Avenue, Mahwah, New Jersey 07430 (201)529-1700

PRESENTATION OUTLINE

- Company Overview
- User Needs
- Program History
- System Description
- Development
- Qual Test Results
- Production Status
- Future Growth

BROAD SPECTRUM

AIRBORNE



GROUND



MARITIME



THERMOGRAPHY



FIRE



GROUND

FLIR has a solution for virtually every critical ground based application including force protection, surveillance, border patrol, perimeter security and special operations.



SNIPIR

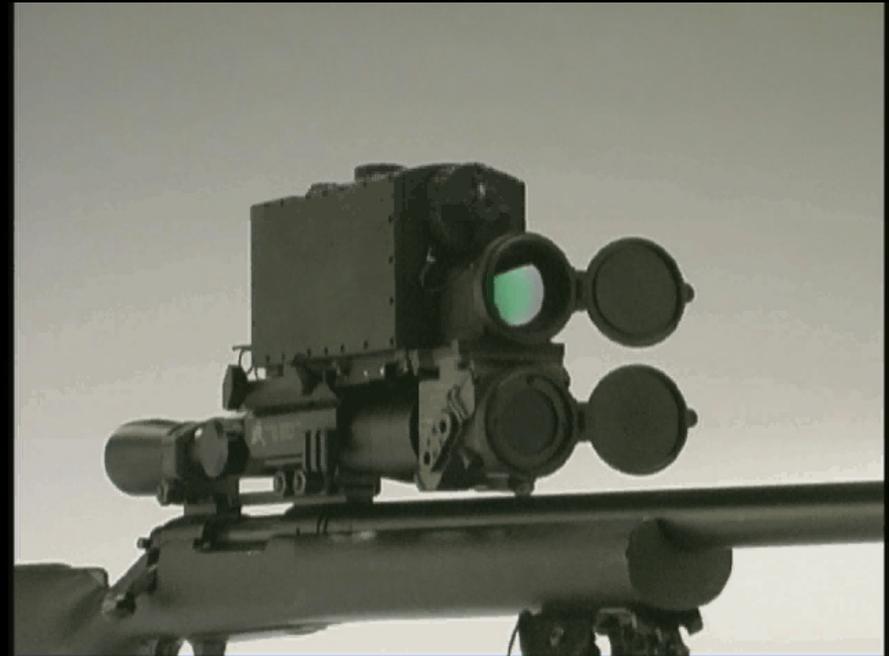
NEED

- Long Range Targeting Visual Augmentation System That:
DOES NOT TOUCH MY SCOPE!
- Clip-On Device

TECHNOLOGY

- High Sensitivity IR Imager Folded Into a
- Visible Light Day Scope
- Resulting In **Image Fusion**
- Low Power Cooler/OTS Battery

CDMQ



PROGRAM HISTORY

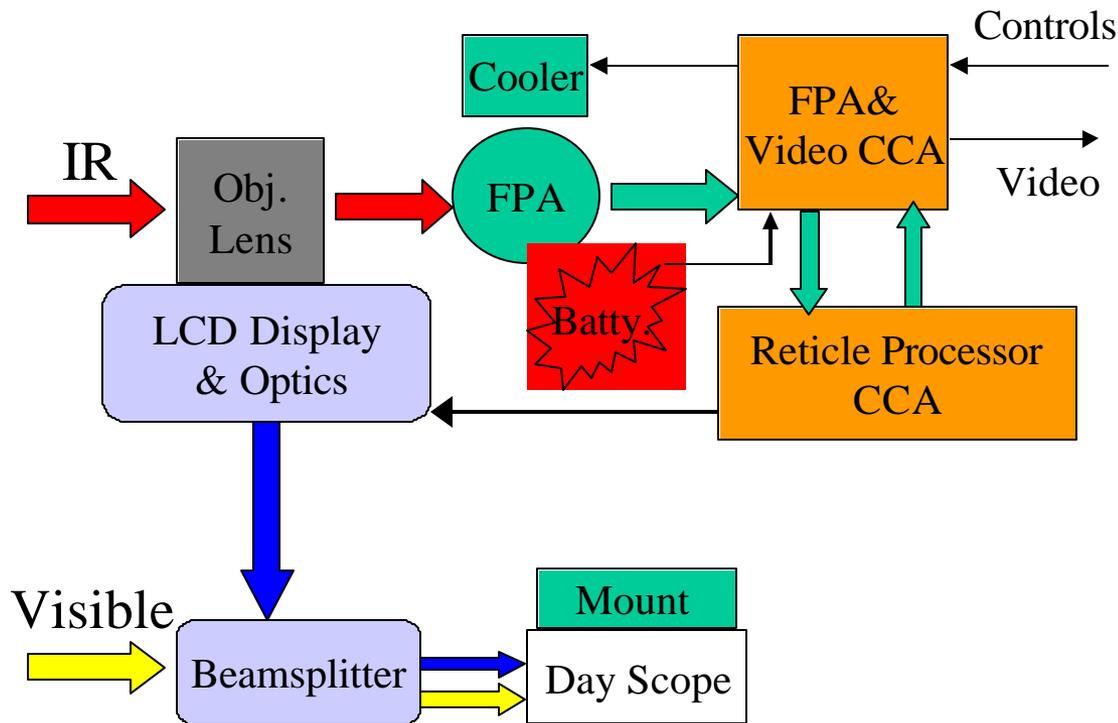
- Development Program Start: Oct "98"
- 3 Qual Units Shipped: Jan "00"
- Qual Tests: Mar "00"
- User Tests: thru Sept "00"
- Optic Upgrade: Oct "00"
- Re-Qual Optic: Nov "00"
- Production Award: May "01"
- Production Deliveries: Ongoing

OPTICS EVOLUTION

- Original Requirement Called for Interchangeable Thermal Optics:
 - 75 & 150 mm Lenses
- 10X Leupold, Through Beamsplitter Provides Thermal Image Magnification
- Redesign Imbedded LCD Display in IR Telescope
- Redesign: **Reduced 1 lb. in System Weight, and 1.25" in System Height**
- Prior to Production



SYSTEM DESCRIPTION



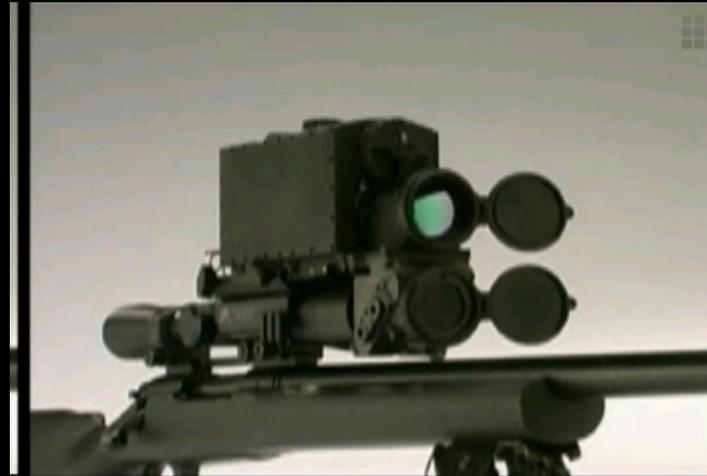
Components:

- TIPS Imager
- Objective Lens
- Beam Splitter
- Scope
- Mount

SYSTEM SPECS

- RANGE: Recognize a Man > 1500 meters
- TECHNOLOGY: Cooled InSb Focal Plane
- OPTICS: 150 mm, f/4.0 (0.20 mr)
- DISPLAY: Green LCD, Through Scope / Beamsplitter
- WEIGHT: 4.5 lbs, Including Battery
- POWER: Single 3.6VDC Li "D"- Cell Battery
- Environmental: Sealed, Diveable to 66 Feet
- IMAGE: Visible or Thermal or FUSED!

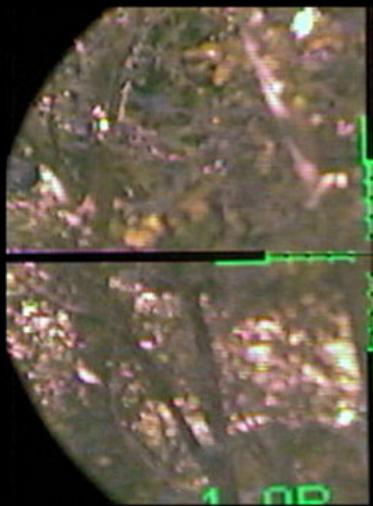
SYSTEM VIDEO



FUSION VIDEO



USER VIEWS



BORESIGHT PROCEDURE

- Zero In Day Scope (At a Desired Range)
 - Current Requirement 200 Meters
- Activate/Enable/ Turn on **SNIPIR**
 - Open Lens Cap
- Adjust Beam Splitter Mirror
 - Super Impose Visible and Thermal
- Re-Live Fire
 - Until Consistent Shot Groups

QUAL TESTS RESULTS

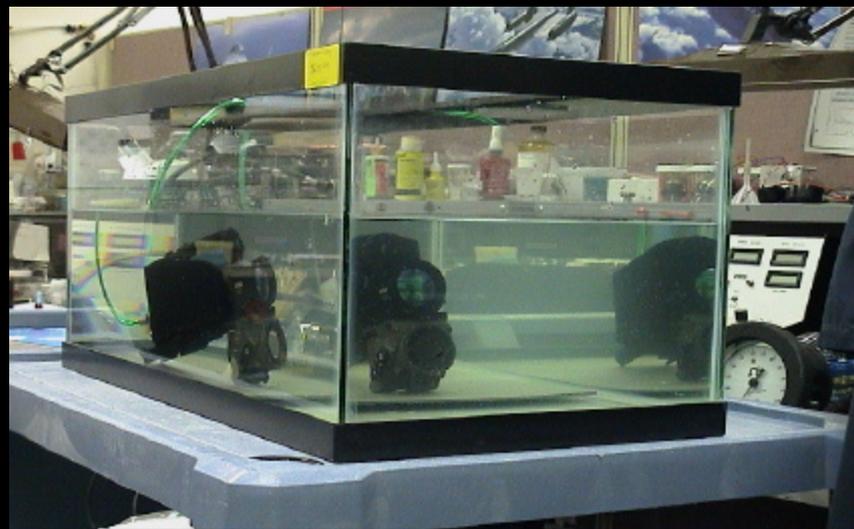
- Imager Significantly Out Performed Spec.
- Live Fire Qual: 300 Rounds-.300 Win Mag
- Shoot Groups: <6 in @ 600 yds (<1.0 MOA)

- Three Qual Systems have Several Thousand Rounds Fired to date:
(since Mar "00")
Without Failure!

PRODUCTION TEST



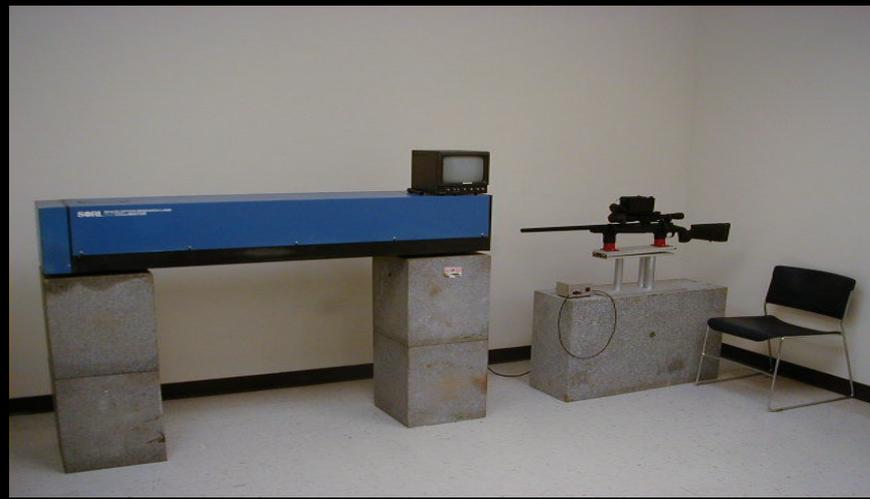
Monthly Production



Immersion Test



Bullet Trap



Collimator

ADDITIONAL APPLICATIONS

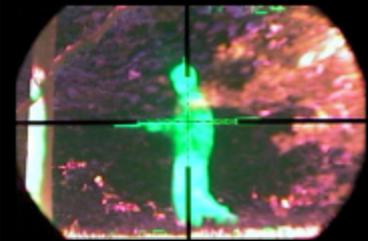
- **SNIPIR** Mods For Variable Scope
- **SNIPIR** Mods For Higher Power Scopes
- MIRV
 - Crew Served Weapons
 - STINGER Night Sight
 - MK 38 Deck Gun
- See Spot III
 - Forward Observer
 - Combat Air Controller



SUMMARY

- **SNIPIR** Is Fully Qualified
- **SNIPIR** Is In Production
- **SNIPIR** Has Proven Consistent Performance

- **SNIPIR** Is The Visual Augmentation Clip-On System of Choice



JUST A SHOT IN THE DARK



SNIPIR