LOW COST
T&E AND TRAINING
TARGETS

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Outline

• Precision Target Signatures
  – Program Description
  – Purpose of the Program
  – History of Development
  – Scope
  – Technical Status
• Precision Scoring Ranges
• Summary
The Precision Target Signatures (PTS) project is an evolution of low cost decoys/surrogates created to develop a Full-Scale, 3-D decoy that emulates the visual and electromagnetic signatures of “Actual” Threat Vehicles (T-72M, BMP-2, BTR-80)
• PTS supports multiple T&E and Training programs
• Real threat vehicles are expensive
• Multiple targets are needed for IOT&E in FY 11
• Cannot afford multiple real threat vehicles
• Funding has limited actual threat vehicles to (3 each T-72, BMP-2, and BTR-80)
Minimal Logistical Footprint
Three PTS Full-Scale T-72s Ready for Shipment
T-72 Design

- 60 individual heaters total on five independently adjustable circuits.

PTS T-72 on Trailer with Thermal Kit

Target at RTTC Pre-Test

PTS T-72 Thermal Kit Top Level Drawing

Thermal Imagery

- 38 Hits

- 60 individual heaters total on five independently adjustable circuits.
BMP-2 Concept Design

• 3-D model of BMP-2 concept design is shown below.
• Geometry is based off of approved model, extensive measurements, and verified data.

PTS BMP-2 Concept Dimensions

| Dimension                  | PTS   | Model  | |Δ|
|----------------------------|-------|--------|---|
| Overall Width (m)          | 3.18  | 3.165  | 0.015 |
| Height to top of hull (m)  | 1.69  | 1.7    | 0.01 |
| Height to top of turret (m)| 2.08  | 2.077  | 0.03 |
| Overall Length (m)         | 6.69  | 6.72   | 0.03 |
BTR-80 Concept Design

- 3-D model of BTR-80 concept design is shown below.
- Geometry is based off of a VTC model, and verified with approved data.

### PTS BTR-80 Concept Dimensions

| Dimension                  | PTS   | Model  | |Δ|
|----------------------------|-------|--------|------|
| Overall Width (m)          | 2.82  | 2.95   | 0.13 |
| Height to top of hull (m)  | 1.94  | 1.94   | 0.0  |
| Height to top of turret (m)| 2.23  | 2.235  | 0.005|
| Overall Height (m)         | 2.38  | 2.41   | 0.03 |
| Overall Length (m)         | 7.58  | 7.65   | 0.07 |
• LRIP Targets
  – 15 T-72
  – 15 BMP-2
  – 15 BTR-80
• “Dial-A-Signature” IR Kit
  – 45 IR Signature Kits
• Reduce Cost of Targets
  – < $20K for Production
  – Potentially < $15K if high rate production
Known Distance (KD) and Field Fire ranges on Army installations are being modernized with Precision Scoring technology that provides more efficient marksmanship training time.

**Key advantages and features:**

- Immediate feedback on firing point display.
- Instructors can identify and correct trainee problems immediately.
- Printer score cards provide each shooter with a shot-by-shot performance record.
- Lanes can be operated by a central control computer or individually at the firing point.

- Currently Precision Scoring ranges are being used for basic rifle marksmanship tables BRM 06 thru BRM 14.

- Grouping and zeroing can be accessed at any time to allow individuals to adjust weapon sights.

- LOMAH technology has been applied to training for various weapon types using 5.56mm to 120mm ammunition.
Currently Precision ranges are being used for Rifle Grouping/Zeroing, Down Range Feedback, Field Fire, Qualification Firing, Auto Burst Firing, Protective Mask Firing, Night Fire, Suppressive Fire Training, Sniper Training, “Quick Kill” Training, and Moving Target Engagements, all in single shot slow, single shot rapid, and/or automatic fire burst modes.
• Providing the T&E and Training Communities with Low Cost Validated Target and Scoring Alternatives
• Meeting Required Schedules
• Ready to Meet Any Customer’s Needs

Low Cost T&E and Training Targets Ready!