

Mobile Minefield: How To Kill Modern Tanks Without Tanks

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NDIA White Paper Series, Future
Force Capabilities Conference 2021

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- 5. Modern Tank Passive, Reactive And Active Armor
- 13. Low Cost Mobile Minefield Concept
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Introduction:

Questions?

How Can You Destroy, Not Just Disable, Modern Tanks With Advanced Protection
When You Have No Tanks Of Your Own?

What Weakness Do All These Tanks With Advanced Protection Possess?

Introduction:

Answer?

Proposed Is The Use Of “Bottom Attack” Techniques

And

Rapid Integration Of Commercial Products Into A Weapon

Modern Tank Passive, Reactive And Active Armor:



Israeli Trophy System

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Modern Tank Passive, Reactive And Active Armor:

Composite, Spaced, And/Or Explosive Armor Plus Radar Guided Interceptors?



Clockwise From Above Left: Daily Mail UK Russian Armata, Wikipedia Chinese Tanks, Russian Tanks, Weapons & Warfare Photo Close Up Tank Turret

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Modern Tank Passive, Reactive And Active Armor:

Armor Combinations Infantry HEAT Rounds Have Difficulty Getting Through?



Above Left To Right: Military Today M60 Reactive Armor, Quora Reactive Armor Hit Kontakt 5 or Arat

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Modern Tank Passive, Reactive And Active Armor:

Plus Plows, Blades And Roller Systems To Defeat Buried And Surface Laid Mines?

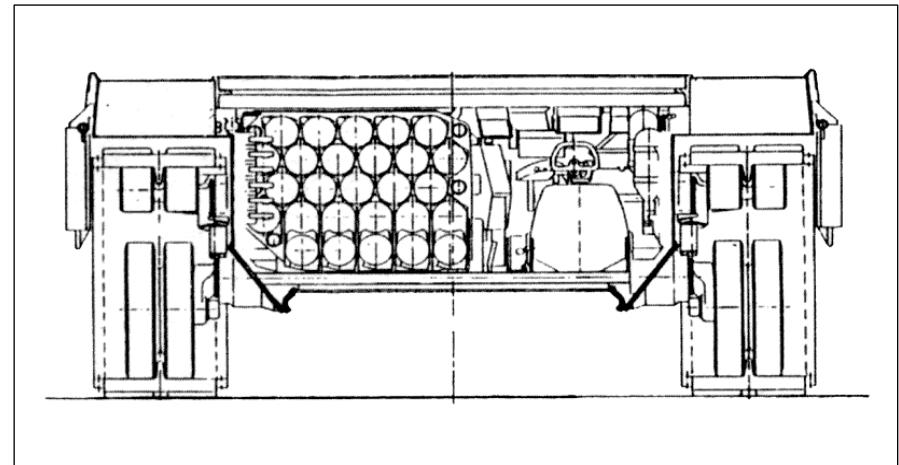


Above Left To Right: Pinterest Mine Roller Abrams, Mike's Research Plow Abrams, Army Technology Leopard 1 Dozer Blade

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Modern Tank Passive, Reactive And Active Armor:

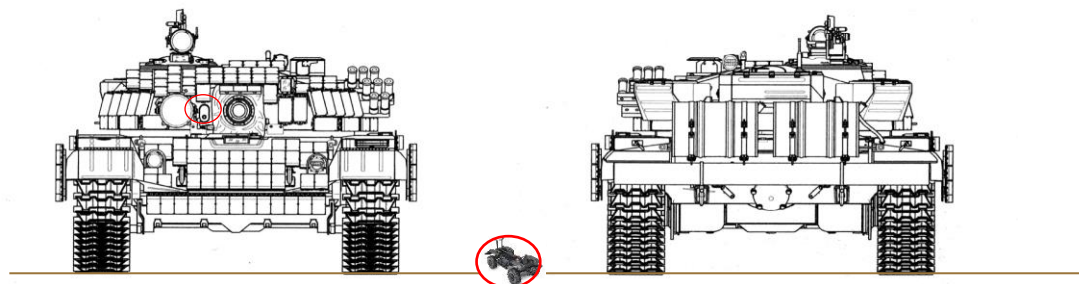
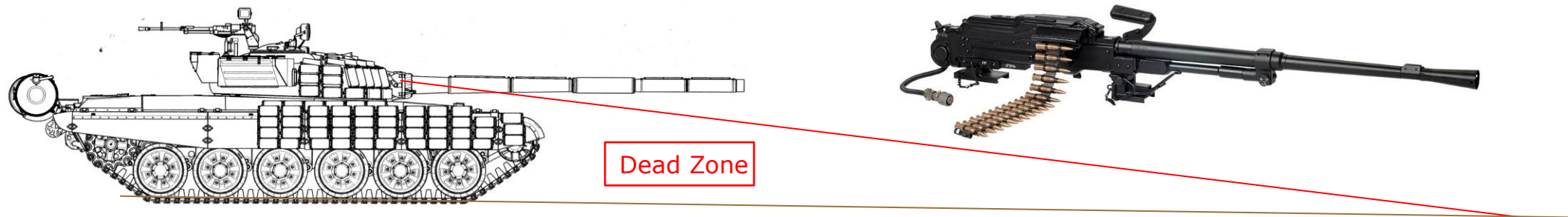
But Belly Armor Elements Of Most Battle Tanks Are Comparatively Thin...



Above Left To Right: T-72 Belly Armor 20mm, Leopard 2 Belly Armor 19mm

Modern Tank Passive, Reactive And Active Armor:

And The Tank Coaxial Weapon Has A Minimum Engagement Range Even If Manned...



Vehicle Speed Up To 70 Feet Per Second



Above Left To Right: FAS.org T-90, ROE.ru Photo PKT Machine Gun, TRAXXAS Vehicles, Hunting Titan Energetics Shaped Charge

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Modern Tank Passive, Reactive And Active Armor:

Plus Even Small Tanks Have Plenty Of Ground Clearance For Bottom Attack Methods...



Clockwise From Top: Sturgeon's House Tank Comparison, Chinese Norinco Tank, National Interest Chinese Tank, The Global Times Chinese Light Tank, Weapons And Warfare Russian T Series Tank.

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Modern Tank Passive, Reactive And Active Armor:

If You Can Defeat Tanks, Fixed Targets Or Other Less Well Armored Vehicles With Lighter Armor Are Vulnerable To UGV Munitions



Blast Weapon: Not Even With Penetrating Shaped Charge Jet



Above Left To Right: VOA Car Landmine Photo, DSIAC JLTV Underbody Explosion Study, US Army Photo Destroyed Transport Vehicle

Low Cost Mobile Mine System:

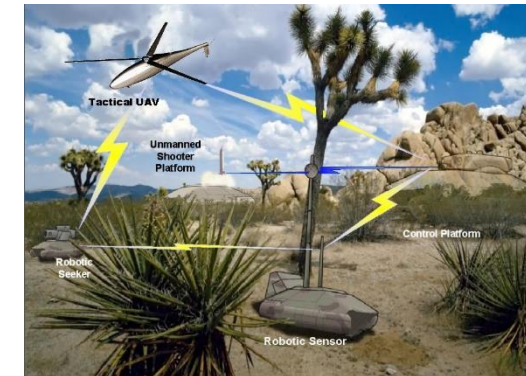


UK MOD Robotic Carrier Concept

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Low Cost Mobile Mine System:

The Future Is Ground Drone Munitions Deployed From Larger Robotic Platforms:



Smaller Robots May Be Deployed Manually, Or By “Carrier UGV Systems” To Enable Covert Reconnaissance And High-Risk Strikes Against Asymmetrical Targets...

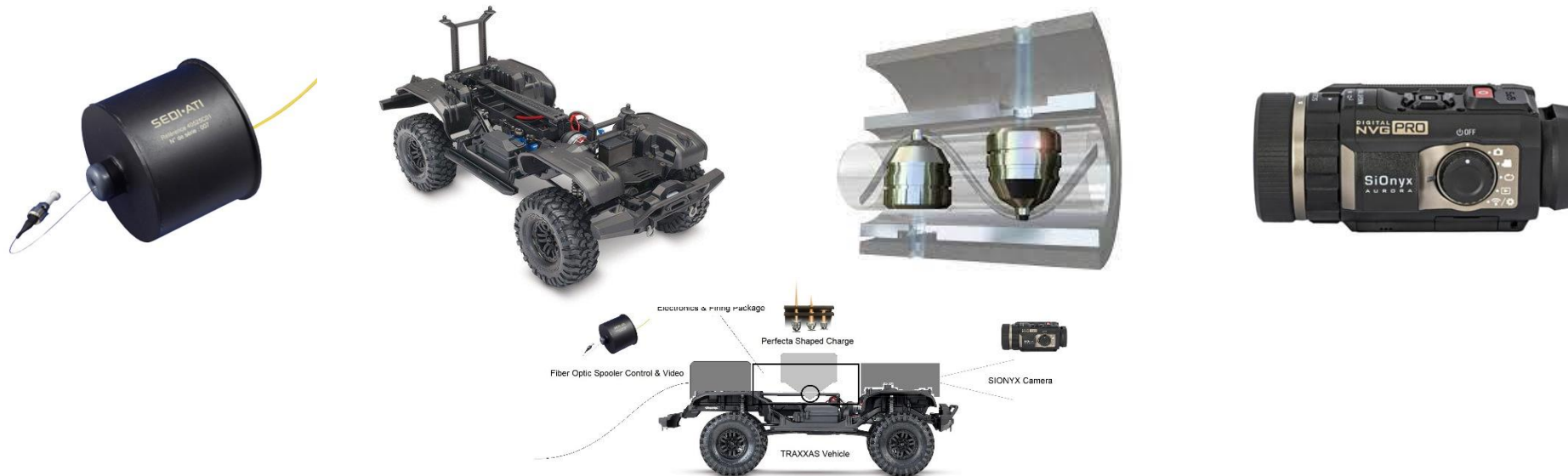
Above Left To Right: BBC Textron Ripsaw Photo Carrier Vehicle, ADS Groundcraft Carrier, FAS Networked Forward Deployed Robotics.

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Low Cost Mobile Mine System:

Example: Modified **TRAXXAS** 4x4 Off Road RC Vehicle As Basis Of Munition...

- Unjammable **SEDI-ATI** Fiber Optic Spool Control And High Resolution Day/Night **SIONYX** Video
- Highly Capable Off Road Racing Vehicle Chassis With Camouflageable Ballistic UDHDPE Body
- Two (2) **Hunting Titan 2" OD** Tungsten Lined Shaped Charges With Blast Fragmentation Rings
- Over 5' Penetration In Concrete, 12" Penetration Of Steel, **Over 5** Million Commercial Charges/Year



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Low Cost Mobile Mine System

What **TRAXXAS** 4x4 Off Road RC Vehicles Are Capable Of:
Fast, Powerful, Not A Child's Toy And Coincidentally Made On Taiwan...

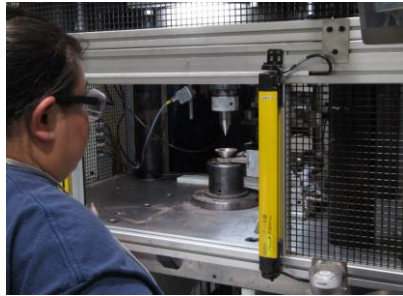


Above: TRAXXAS Photos

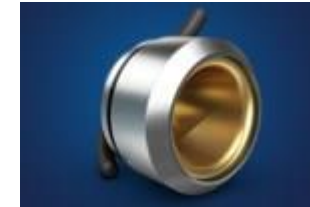
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Low Cost Mobile Mine System

The Key To Effectiveness And Affordability Is **Hunting Titan's Energetics Group**



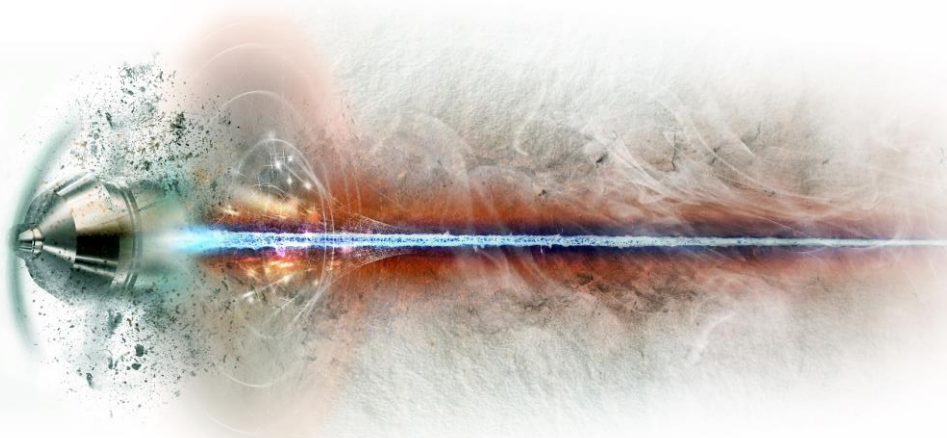
High Volume, Low Cost Manufacturing



Shaped Charges



Detonating Cord



ControlFire® Recon Switch

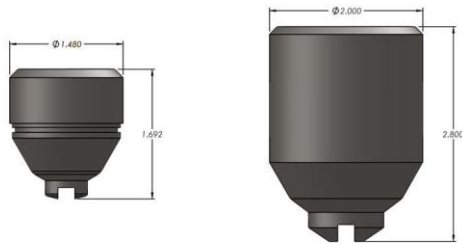
RF Safe Firing Switch
99.999% Reliability over 5 million runs

Hunting Titan Energetics Produces Millions Of EQUAfrac And Perfecta Charges Capable Of Penetrating Heavy Wall Well Casings And Up To 5 Feet Of Concrete-For Petroleum Recovery

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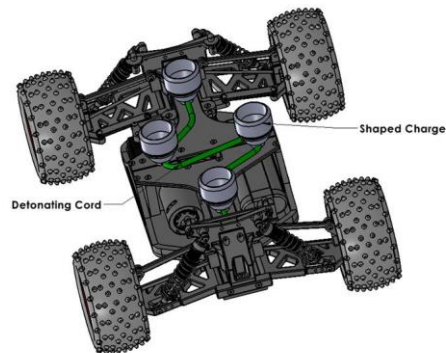
Low Cost Mobile Mine System

The Key To Effectiveness And Affordability Is **Hunting Titan's Energetics Group**



100-X2818

100-X4539



Hunting Titan Energetics Shaped Charge Performance On Steel And Concrete In Field Testing Under Actual Petroleum Recovery Conditions With Millions Produced.

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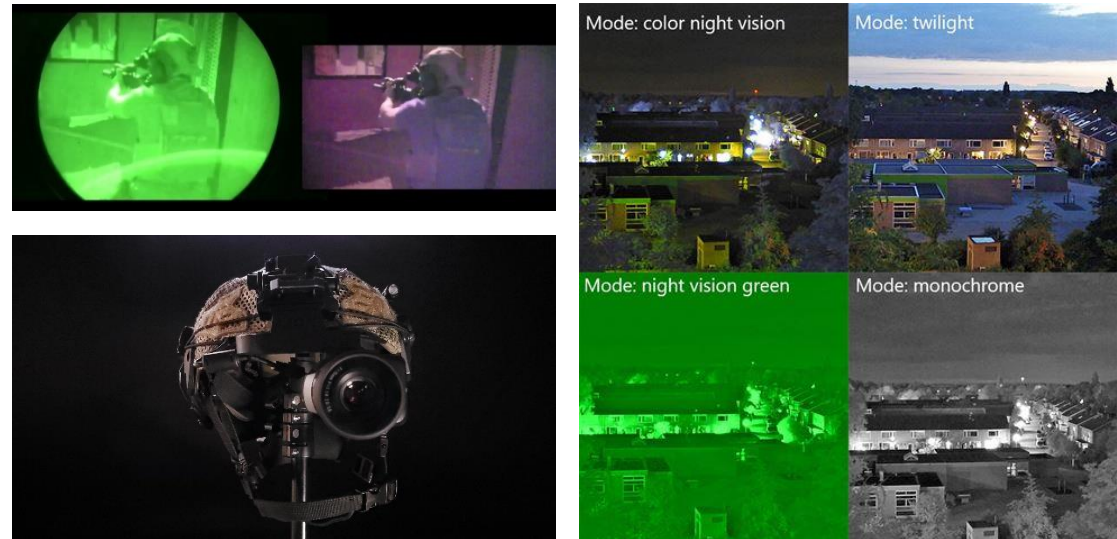
Low Cost Mobile Mine System

The Key To Affordable HD Video In High And Low Light Conditions is **SIONYX**:

The Most Advanced Full Color Night Vision Technology: Light Weight, Self Contained, Mountable, Water Resistant, GPS, WiFi



Color Vision Will Aid Discrimination In Red vs. Blue Engagements, Cost Is Less Than 1/3 Of PVS-14 Systems, Superior Image Resolution.

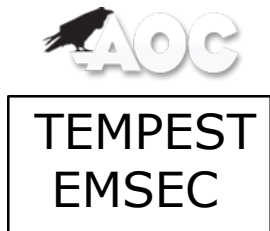


Above Left To Right: SIONYX PRO, USMCMCORPS Photo, SIONYX Photos Helmet Mounting For Scale, Four Modes Of Display For Varying Mission Descriptions, Low Light CMOS Technology.

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Low Cost Mobile Mine System

The Key To HD Video And Jam Proof Communication Is Fiber Optic Control:



SEDI-ATI
fibres optiques

OFS Optics USA



Above: SEDI-ATI Fiber Optic Reusable And Disposable Spoolers In 300m And 500m Lengths, OFS USA Fiber Optic Solutions Catalog Including Aramid Armored Micro Fiber

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Low Cost Mobile Mine System

The Key To Stealth And All-Weather Endurance Is **Kennon Covers**

Kennon Remote Munitions Cover



Light Weight, Easy On/Off, Integrated Survivability



1. Sand/dust protection
2. Water splash protection
3. DisapIR™ IR absorption or low reflectance
4. EMI absorption/protection w/metalized liner

5. Breathable
6. Acoustic absorption lining
7. Ballistic protection (optional)

Proprietary to Kennon Products, Inc.
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Effective Camouflage,
Protection From The
Elements & **DisapIR**
Non-Reflective Coating
For Multi-Mode Stealth

Protects **Sionyx**
Camera, **Hunting**
Titan Charges &
Firing Train, And
Vehicle Systems



TEMPEST
EMSEC

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Low Cost Mobile Mine System

The Key To Stealth And All-Weather Endurance Is **Kennon Covers**

Kennon Covers the Finest



Kennon is a multifaceted company that designs and manufactures products to protect *high value assets* for multiple industries.

Our ability to design custom products and excellent customer service, means Kennon can help you with your protection needs.



Custom protective solutions built to last



KennonProducts.com

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Conclusions:

- Even Well Protected Tanks Will Not Withstand Shaped Charge Bottom Attack...
- Tanks And Other Armored Vehicles Have Limited Defenses Against Fast UGVs...
- Small UGV Munitions Can Also Provide Covert Forward Reconnaissance...
- Due To Low Cost, Thousands Can Be Made For The Price Of A Single Tank...

Recommendations:

- Develop: COTs Or Militarized Commercial Vehicles And Accessories

If The UGV Is Only Going To Be Used Once...Make Sure You Can Afford Many

- Deploy: Hundreds Along Landing Beaches And Choke Points To Deter Invaders

Effectively Creating A Moving Minefield Which Does Not Merely Disable Vehicles:

It Kills Them...



"*Contra Hostis Humanii Generalis*"

Against The Enemies Of Humanity Everywhere...

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Credits:



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Hunting Titan Energetics

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Credits:

With Special Thanks To:



SIONYX Digital Night Vision

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ISO 9001:2008 CERTIFIED

KENNON Protective Covers
With
Transhield Technology

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Credits:

The Testing And Demonstration Facilities Of:

Mr. Joby Hawkins

LTC Steve Brown, USA-Ret.



Secure Confidential Research And Development Location
For Defense Applications In Laurens, South Carolina