

Special Products for Special People

Anti Piracy & Military Maritime Products



SurCom International BV is an independent supplier of advanced C4ISR products and systems for defense and security applications. Our clients include NATO agencies, armed forces, civil government agencies and turn-key contractors.

Our mission is to provide our customers with effective and affordable smart solutions for their special communication and surveillance needs.

Our partners are

Communication systems and products

- **General Dynamics C4 Systems** (C4I Systems, V/UHF Radio, CSAR Radio)
- **L-3 Com Services Inc. Linkabit Div.** (Mobile and Manpack SIGINT/DF, UHF-DAMA Satcom)
- **L-3 Microwave Group** (Satellite Communications Solutions)
- **Datron World Communications Inc.** (HF/SSB and VHF Combat Net Radio)
- **Raytheon - JPS Communications Inc.** (Intelligent Switch Matrices, Network Radio Interfaces)
- **Mobat Communications Ltd.** (HF/SSB Mobile and Fixed Site Radio Communications)
- **ViaSat Inc.** (MIDS Link-16 Tactical Data Link, Selected Satcom Products)
- **Roda GmbH** (Rugged and Military Personal Computers and PDA-s)
- **Aqeri AB** (MIL-spec Rack-mount Computers, Switches and Flat Panel Displays)
- **Trivec Avant Corporation** (Manpack, Mobile, Airborne and Shipboard UHF TACSAT Antennas)
- **Nacre** (Active noise Reduction Headsets)

Military radio batteries and power adapters, military enclosures

- **Mathews Associates Inc. & MILPower Ltd.** (LiSO₂, LiMnO₂, Li-Ion, SLA, NiCad, Alkaline)
- **Ultralife Batteries Inc.** (LiMnO₂, Li-Ion)
- **McDowell Research Corporation** (Military Power Adapters, Battery Chargers, BB PA-s)

Night vision and thermal imaging systems

- **ITL Optronics Ltd.** (Night Vision, LRF, Aiming Sights, Pointing Devices, FCS, C4ISR Soldier Systems)
- **FLIR Systems Inc.** (Thermal Imaging Cameras, Stabilized Platforms, Thermal Weapon Sights)

Other systems

- **Alliant TechSystems** (Munitions All Calibers Fuzing, PGK, Missile and Gun Systems)
- **American Technology Corporation** (LRAD - Long Range Acoustic Devices)

LRAD = FORCE PROTECTION

LRAD:

- High-intensity
- Directional Acoustic Array
- Long Range
- Crystal Clear
- Hailing
- Notification
- Unmistakable Warning
- Deterrent Tone

Used to:

- Communicate,
- Establish intent
- Change behavior

Typical Scenario:

Tone/LightWarn 1 Warn2..... Tone..... Other Force



Sound Intensity

- 20 dB Leaves rustling
- 60 dB Normal conversation
- 70 dB Busy street traffic
- 80 dB Vacuum cleaner
- 100 dB Large orchestra
- 105 dB Lawn Mower
- 110 dB Front row of rock concert
- 115 dB limit of sound permitted in industry
- 120-130 dB threshold of pain; deafening
- 140 dB Military jet takeoff (@ 50 meters)
- 146 dB LRAD 500X (@ 1 M @ 2.5kHz)
- 152 dB LRAD 1000X (@ 1 M @ 2.5kHz)
- 160 dB Permanent hearing damage



USS Cole (Oct 2000)

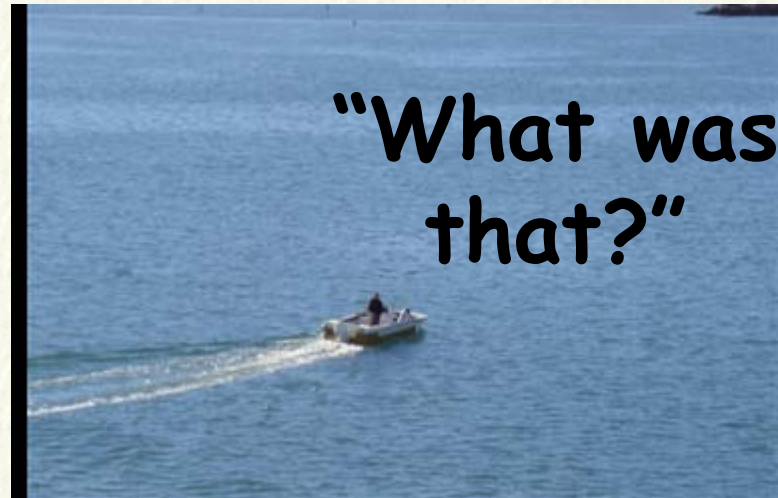
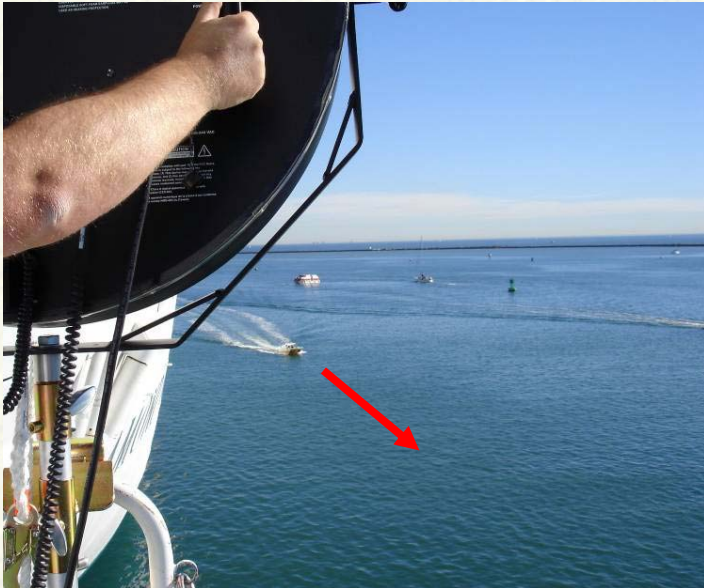
Crew:

- Had lethal force
- Needed to determine intent
- ROE slowed response
- Dramatic result

LRAD enabled a change in Rules Of Engagement.

LRAD fulfills the capability gap for vessels to **HAIL**, **Notify** and **Warn** approaching vessels at significant ranges with clear voice or prerecorded messages in any language.

LRAD Provides Deterrence



LRAD - Provides Deterrence and is a Critical Part of a Layered Defense



Target Vessel Communicates:

- Warning Tone
- Plain Voice

Pirates Will Consider:

- They have lost the element of surprise
- The vessel is prepared
- The vessel invested in security
- Coalition forces have been notified

Last Defense:

- Deterrent Tone (152 dB @ 1M)
- Flares
- Fires Hoses (or worse)



Model	RX	1000X	500X	300X	100x
Max dB	152 dB	152 dB	148 dB	142 dB	137 dB
Max Range	3000+ m	3000+ m	2000+ m	1500+ m	500+ m
Voice Range over 88dB	800m	800m	400m	300m	100m
Power Req	48 VDC	110-220 VAC	12-24 VDC	12-24 VDC	Bat or Veh

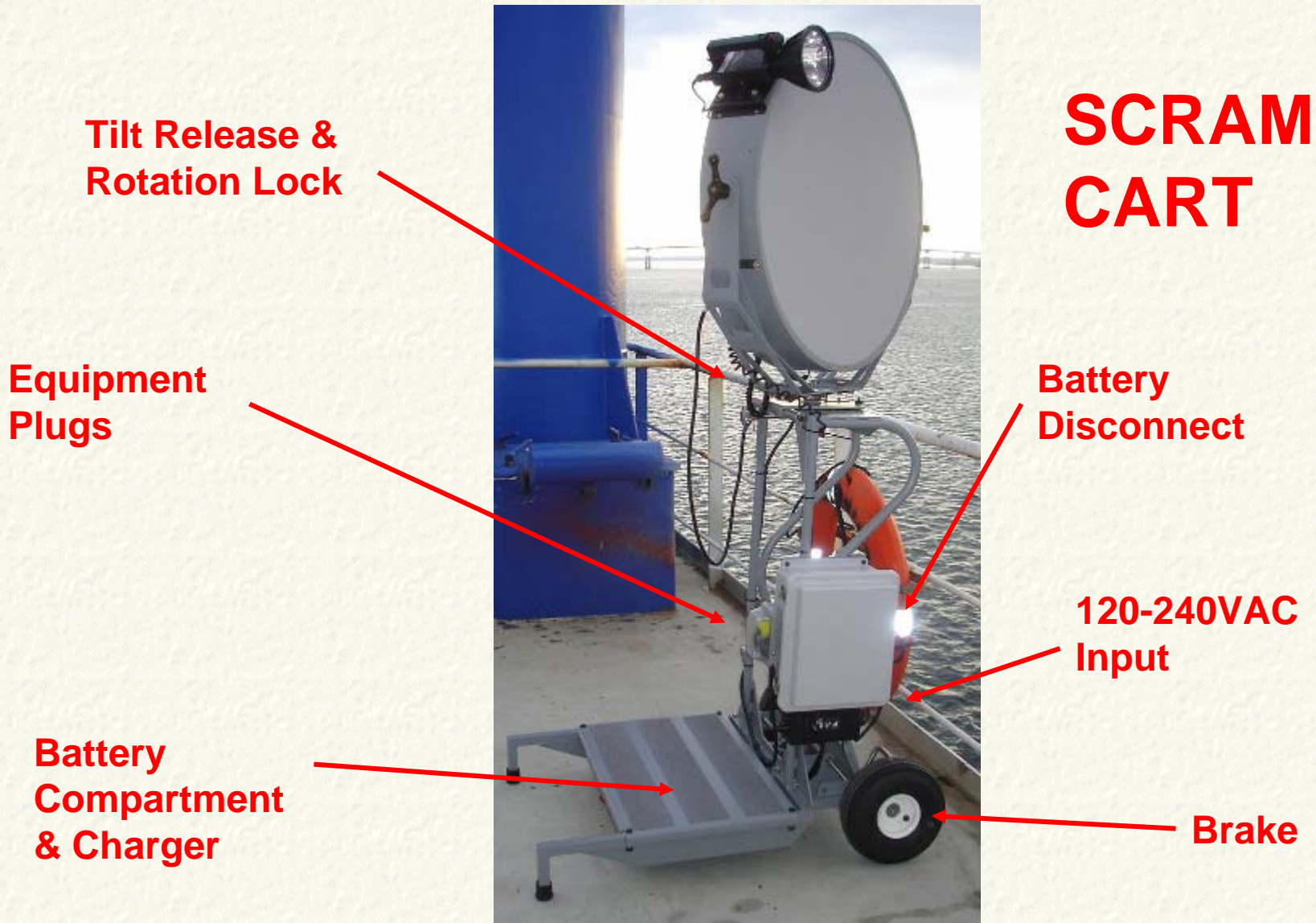
LRAD – Multi Spectrum Solution



- Local Language Warnings
- Intense Warning Tone
- High Powered White Light
- Green Laser Dazzler



Typical on board solution



SCRAM CART USE



1



2



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For question on **LRAD** or
other typical SurCom solutions
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