What’s New at Raymarine?

2011 NMEA International Marine Electronics Conference and Expo
NEW!

e7 7” Network MFD

New Product Introduction
e7 Network MFD

The new e7 is a feature rich MFD that sets a new benchmark for ease of use, performance, and connectivity.
e7 Network MFD

The first incarnation of Raymarine’s new “helm friendly” industrial design DNA, the e7 is a stylish, yet unobtrusive navigation display that offers maximum display size in small footprint.
New Raymarine Design DNA
New Raymarine Design DNA

• Handsome and rugged front fascia complements any helm station
• Sleek “buttonless” buttons and chart door
• Low profile bezel offers a clean and unobtrusive appearance
• Hidden, dual micro-SD card readers under lower right
• Maximum screen to bezel ratio lets e7 fit in tight spaces
e7 Model Line Up

• e7
  – 7” Network MFD
  – Built in GPS sensor

• e7D
  – 7” Network MFD
  – Built in GPS sensor
  – Built in HD Digital Sonar
e7 Core Functions

- GPS Chartplotter
- Sonar
- Radar
- Thermal Camera
- Video Repeater
- Instruments
- Multimedia
- Weather
e7 System Capabilities

HD Digital Radar

Multiple Network Displays

Thermal camera or video

SIRIUS Weather

Media players and remote

Streaming to Apple iOS devices

SeaTalk<sup>ng</sup>, NMEA 2000 and NMEA 0183 Devices

HD Digital Sonar

Raymarine
A FLIR Company

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Wireless Streaming

- Transform Apple iOS devices into a e7 repeater using built in WiFi
- Free Raymarine Viewer app available in the iTunes App Store.
Navionics Plotter Sync

- Share waypoints and routes instantly between e7 and Navionics Mobile Apps
- No 3rd party router required
- Navionics Mobile Lakes and Marine for Apple, Android and Nokia
Bluetooth Media Control

- Remote audio control of Bluetooth equipped MP3 Players and Smartphones
- Bluetooth AVRCP (Audio Video Remote Control Profile)
- Play, Pause and skip tracks in your MP3 library
- Safely hide away your Smartphone or MP3 player and control remotely from the e7
New Raymarine LightHouse UI

• All new Raymarine MFD User Interface
  – Advanced MFD user interface with an intuitive menu structure for logical access to features and functions
LightHouse UI: Cross Platform Consistency

e7 Multifunction Display

i70 Instrument Display
New UniController

• Ergonomic UniController offers refined control of joystick cursor, rotary adjustments, and menu navigation
RCU-3 Steering Wheel Remote

- Bluetooth connectivity to e7
- 3 Button control of frequently used functions
  - Mark Waypoints
  - Range In/Out
  - Home and App Selection
  - Media Player
  - Play Pause
  - Acknowledge alarms
  - Use configurable
- Long battery life
  - Estimated 10 hours continuous use
  - 6 months standby time
RCU-3 Remote: Wearable Option

• Lanyard kit included with RCU-3
• Floats if dropped overboard
Faster Performance

• Extremely Fast – Times Three
  – Dual Core Main Processor
  – Dedicated Graphics Processor
• Stunning 3D graphics and instantaneous chart redraws
• Multitasker
  – No compromise performance when running simultaneous apps like 3D charts, sonar, radar or thermal imaging
Bright and Beautiful

- Super bright sunlight viewable display
- LED backlighting
- Up to 40% less power draw than prior generation products
- Superior thermal management means no LCD black-outs from overheating
- Bonded LCD minimizes reflections, boosts contrast
- Viewable through polarized sunglasses
Superior Viewing Angle
E7 Connectivity
Well Connected

• **Multiple Display Networking**
  – Connect up to 5 e7 displays
  – Connect to E-Series Widescreen
  – Connect to G-Series v4

• **WiFi Video Streaming**
  – Transform Apple iOS devices into a e7 repeater using built in WiFi
  – Sync with Navionics Mobile Apps

• **Bluetooth**
  – Remote audio control of Bluetooth equipped MP3 Players and Smartphones. Dial in your favorite MP3 tracks direct from the e7 display
  – Control with the RCU-3 remote
Well Connected

• SeaTalk\textsuperscript{ng} and NMEA2000 connectivity
  – User selectable support for multiple SeaTalk\textsuperscript{ng} and NMEA 2000 data sources

• NMEA 0183 Input and Output
Connections Overview

1. Sonar transducer
   – (“D” models only)
2. SeaTalk$^{ng}$
3. Ethernet
4. Power, data and composite video input.
NMEA 2000 Configuration

1. E7 MFD
2. STNG to Device Net adapter
3. NMEA 2000 backbone
4. Network to other NMEA 2000 devices

LEN: 1
NMEA 0183 Capabilities

• Port 1
  – Input only.
  – 4800, 9600 or 38400 bps

• Port 2
  – Input and output
  – 4800 or 9600 bps
  – Same baud rate in/out
Video Input Connection

Signal type: Composite
Format: PAL or NTSC
Connector Type: BNC

Example Sources:
• T-Series Thermal Camera
• CAM100 or CAM50 Marine Camera
• Satellite TV Receiver
• DVD or Digital Video Player
• Smartphone Video (via dock with video out.)
Thermal and Video

- Composite video input
- Connect marine cameras or other video sources
- Full T-Series thermal camera display and control
Internal GPS Receiver

- Ultra-high sensitivity
- < 1 second hot start time
- Ultra low power draw
e7 Cartography

- Dual micro-SD card slots
- Kits available with ready-to-navigate charts on micro-SD
  - Full navigation aids
  - Depths and contours to 30’
  - No tides and currents
  - Upgradeable to Gold via Navionics.com online store
- e7 is compatible with:
  - Navionics Silver, Gold, Gold+, Platinum, Platinum+, Fish ‘N Chip or Hotmaps
New Chart Features

• User generated content layer
  – from Navionics.com
• 2D Chart Shading
• Easy View mode
  – Enlarges text and icons for improved readability
New Chart Features (2)

- New worldwide basemap
  - Highly detailed
  - Boundaries, major highways, names,
  - Major contours, depth shading

- 12 Gold+ Demo areas:
  - Boston, MA
  - Miami, FL**
  - Chesapeake Bay, MD
  - Seattle, WA
  - San Diego, CA
  - The Solent, UK**
  - Hamburg, Germany
  - Cannes, France
  - Genova, Italy
  - Copenhagen, Denmark
  - Gothenburg, Sweden
  - Helsinki, Finland

**Radar Overlay Simulator
Built-In HD Digital Sonar (e7D)

- Dual-frequency (50/200 kHz)
  - Also 83 kHz for Minn Kota
- 3,000 foot range
- HyperPing high speed mode

- Transducer compatibility:
  - A-Series transducers
    - Direct fit. No adapter req’d.
  - DSM30/300 transducers
    - Using E66066 adapter
  - Minn Kota Universal Sonar 2
    - Using new A62363 adapter
e7 Radar

- Compatible with Digital or HD Digital Radome scanners.
- Supports all advanced radar features
  - MARPA
  - Radar Overlay*
  - Dual Range**
  - Bird Mode**
  - High Speed Mode**

*heading sensor or autopilot required for radar overlay.
**HD Digital Radome required.
Other New Features

- System backlight controls
  - Dim MFD’s and instruments simultaneously.
- Multiple Data Source Selection
  - Choose your source when multiple options exist for GPS, speed, wind etc.
E7 Product Dimensions

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>233 mm (9.17 in.)</td>
</tr>
<tr>
<td>B</td>
<td>145 mm (5.71 in.)</td>
</tr>
<tr>
<td>C</td>
<td>64 mm (2.52 in.)</td>
</tr>
<tr>
<td>D</td>
<td>150 mm (5.9 in.)</td>
</tr>
<tr>
<td>E</td>
<td>180 mm (7.09 in.)</td>
</tr>
</tbody>
</table>
What’s in the Box?

1. Sun cover
2. Front bezel
3. Multifunction display
4. Rear bezel
5. Gasket
6. Screw Pack
   - 4x rear bezel fixing screws
   - 4x flush mounting screws
   - 4x trunnion mount screws
7. Documentation pack
   - Multilingual CD-ROM
   - Installation Guide
   - Quick Reference Guide
   - Mounting template
8. 1.5M (4.9 ft) power/data cable
9. Trunnion bracket and thumbscrews
New e7 Rubberized Suncover

- Raised logo area (silver printed)
- Integrated pull tabs with surface pattern
# Optional Cable Accessories

<table>
<thead>
<tr>
<th>Part #</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>A62361</td>
<td>1M MFD to Seatalk&lt;sup&gt;hs&lt;/sup&gt; cable (RJ45 female)</td>
</tr>
<tr>
<td>A62360</td>
<td>1M MFD to SeaTalk&lt;sup&gt;hs&lt;/sup&gt; cable (RJ45 male)</td>
</tr>
<tr>
<td>A62362</td>
<td>10M Marine Ethernet patch cable</td>
</tr>
<tr>
<td>A62363</td>
<td>Minn Kota Transducer Adapter Cable</td>
</tr>
</tbody>
</table>
## MSRP Pricing

<table>
<thead>
<tr>
<th>Part #</th>
<th>Description</th>
<th>MSRP</th>
</tr>
</thead>
<tbody>
<tr>
<td>E62354</td>
<td>e7 MFD (no charts)</td>
<td>$1,749.00</td>
</tr>
<tr>
<td>T70000</td>
<td>e7 MFD (US charts)</td>
<td>$1,839.00</td>
</tr>
<tr>
<td>T70002</td>
<td>e7 MFD (ROW Charts)</td>
<td>$1,839.00</td>
</tr>
<tr>
<td>T70003</td>
<td>e7 MFD (US Inland Charts)</td>
<td>$1,839.00</td>
</tr>
<tr>
<td>E62355</td>
<td>e7D MFD w/Sonar (no charts)</td>
<td>$1,949.00</td>
</tr>
<tr>
<td>T70005</td>
<td>e7D MFD w/Sonar (US charts)</td>
<td>$2,056.00</td>
</tr>
<tr>
<td>T70007</td>
<td>e7D MFD w/Sonar (ROW charts)</td>
<td>$2,056.00</td>
</tr>
<tr>
<td>T70008</td>
<td>e7D MFD w/Sonar (US Inland charts)</td>
<td>$2,056.00</td>
</tr>
<tr>
<td>E62351</td>
<td>RCU-3 Remote Control Unit</td>
<td>$149.00</td>
</tr>
</tbody>
</table>
Multifunction Color Instrument
i70 Key Display Features

- 4” oversized, sunlight viewable
- 30% larger than previous generation and competitive displays
- Ultra bright sunlight viewable color
- LED Backlighting
- 160 degree horizontal and vertical viewing angle
- Best in class, extra large full screen characters 1.7” (43mm) tall
- Very low power consumption
  - 150mA / 1.6W typical
- Consumes 27% less power than previous generation color instruments

I70 MSRP $595
Replacing ST70
i70 AIS Repeater Display

- Works with STNG or NMEA 2000 AIS receivers and transceivers
- Basic and detailed target information
- AIS alarms and safety-related messages
- Supports AIS650 silent mode
i70-p70 LightHouse User Interface

- Exclusive, easy-to-use, Raymarine LightHouse UI
- Intuitive menu structure puts frequently used functions at your fingertips
- Simple Start Up Wizard ensures proper calibration and setup
i70 Additional Key features

- Easy system and group dimming / illumination
- Multiple Data Source (MDS) support
- Diagnostics
- Comprehensive language support
- SeaTalk\textsuperscript{ng}/ NMEA 2000 and first generation SeaTalk support
- Use with Raymarine’s SeaTalk\textsuperscript{ng} transducer pods or SeaTalk\textsuperscript{ng} Smart Transducers
- Simple install: Front mounted, circular cut-out
p70 / p70R

Autopilot Control Heads
Key Selling Points

• Ultra bright 3.5” sunlight viewable Color LCD

• LightHouse User Interface

• 160° horizontal and vertical viewing angle

• SeaTalkng and SeaTalk autopilot support

• Low power consumption: 150mA / 1.6W typical

  p70: MSRP $595  
  p70R: MSRP $645

Replacing ST70 Pilot, ST7002, ST8002

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Supported Pilot Modes

• Auto
• Standby
• Pattern
• Track
• Wind Vane
• Power Steer (Rotary only)
Supported Pilot Views

- Graphical
- Large
- Standard
- Multiple
- 2D
i70 and p70 Installation Notes
Multiple Data Source (MDS)

• Supports multiple SeaTalk\textsuperscript{ng} or NMEA 2000 data sources
• Enables selection of preferred data source
SeaTalk\textsuperscript{ng} and NMEA 2000 Support

1. 12 V supply into backbone.
2. SeaTalk\textsuperscript{ng} backbone.
3. SeaTalk\textsuperscript{ng} to DeviceNet adaptor cable.
4. NMEA2000 equipment.

1. i70 instrument display
2. SeaTalk\textsuperscript{ng} to DeviceNet adaptor cable.
3. DeviceNet backbone.
4. NMEA2000 equipment.
i70 Analog Transducer Connection

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Speed transducer</td>
</tr>
<tr>
<td>2.</td>
<td>Speed pod</td>
</tr>
<tr>
<td>3.</td>
<td>SeaTalk™ T-Piece connector</td>
</tr>
</tbody>
</table>
i70 and p70 Installation

- Front mount installation
- 90mm hole saw cut
- Pop-off bezel conceals screws
- Fits ST60, ST60+, ST70 (surface), ST6002 holes
What’s in the box?

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>i70 Instrument display</td>
</tr>
<tr>
<td>2</td>
<td>Bezel</td>
</tr>
<tr>
<td>3</td>
<td>Gasket</td>
</tr>
<tr>
<td>4</td>
<td>Suncover</td>
</tr>
<tr>
<td>5</td>
<td>4 x screws</td>
</tr>
<tr>
<td>6</td>
<td>Document pack, includes:</td>
</tr>
<tr>
<td></td>
<td>• Multilingual CD (including User Reference manual)</td>
</tr>
<tr>
<td></td>
<td>• Mounting template</td>
</tr>
<tr>
<td></td>
<td>• Installation and commissioning instructions</td>
</tr>
<tr>
<td></td>
<td>• Quick reference</td>
</tr>
<tr>
<td></td>
<td>• Warranty registration card</td>
</tr>
<tr>
<td>7</td>
<td>SeaTalk® Blanking plug</td>
</tr>
<tr>
<td>8</td>
<td>SeaTalk® Spur Cable</td>
</tr>
</tbody>
</table>
Automatic Identification System (AIS) Products

AIS650 Class B Transceiver
AIS350 Dual Channel Receiver

New Product Launch Presentation
October 1, 2011
New AIS Products for 2011

AIS650 Class B Transceiver
- Transmits vessel navigation status data
- Receives Class A and B transmissions
- AIS Targets on MFD chart and radar
- SeaTalk\textsuperscript{ng}, NMEA0183, USB connectivity
- Integral GPS receiver w/active antenna

MSRP: $999 USD / £695 / €799
E32158

AIS350 Receive-Only
- Receives Class A and B transmissions
- AIS Targets on MFD chart and radar
- SeaTalk\textsuperscript{ng}, NMEA0183, USB connectivity

MSRP: $549 USD / £349 / €429
E32157
What’s New in Raymarine AIS?

• New ultra-compact enclosures
  – Up to 50% smaller than AIS500 and AIS250

• Dual channel receiver design
  – Provides faster target acquisition and updating

• Superior connectivity options
  – SeaTalkng, NMEA0183 and USB connections

• New hardware and software controlled Silent Mode
  – Provides more security and privacy options for AIS650 users

• More affordable
  – Same quality and performance at a lower cost
Why Raymarine AIS for my boat?

• Guaranteed compatibility with Raymarine multifunction displays.
  – Works best with Raymarine, designed for Raymarine.
  – Simple installation using SeaTalk\(^\text{ng}\)

• 3-Year Product Warranty.
  – Best-in-class warranty protection
  – World wide service and dealer network
  – Raymarine RapidCare\(^\text{TM}\) warranty service minimizes down time in the unlikely event of a failure (US only)

• Superior Connectivity
  – SeaTalk\(^\text{ng}\), NMEA0183 and USB 2.0 connectivity.
  – NMEA2000 Compatible
  – Supports MFD’s, PC Navigation, 3\(^{rd}\) party products and more
Common Features and Improvements

• Ultra-compact enclosure:
  – 50% smaller than previous products
  – Water resistant enclosure for below deck mounting

• Easier installation and servicing.
  – Twist-lock waterproof connections
  – Simple key hole, 4-slot mounting.
  – Forward-facing multicolor LED status indicator
Connectivity Improvements

• **Superior Connectivity**
  – Standard NMEA0183, SeaTalkng, and USB interfaces
  – Simultaneous connections to all interfaces
  – NMEA2000 Network Compatible
    • with optional SeaTalkng to Device Net spur adapter

• **Built-in NMEA0183 Multiplexer:**
  – Easy connection to VHF radios, legacy MFD’s, 3rd Party products
  – 1 NMEA0183 4800 Baud Tx/Rx
  – 1 NMEA0183 38,400 Baud Tx/Rx

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Power/NMEA0183</td>
</tr>
<tr>
<td>2</td>
<td>SeaTalkng</td>
</tr>
<tr>
<td>3</td>
<td>VHF Antenna (PL259)</td>
</tr>
<tr>
<td>4</td>
<td>USB 2.0 (Mini-B)</td>
</tr>
</tbody>
</table>
USB Interface for PC Connectivity

• **NEW!** USB 2.0 interface
  – Direct plug and play connection to PC based navigation systems
  – Standard Mini-B USB Connector

• Easy product software updates from PC

• Simple dealer programming of AIS650 Ship Static Data
  – USB powered for programming
  – No 12V DC connection required
AIS650 Class B Transceiver

- Dual channel receiver design
- Transmits Class B dynamic data and vessel static information
- Receives Class A and Class B AIS broadcasts
- NMEA0183, SeaTalkng and USB Interfaces
- SD card slot for static data configuration and data recording
- RAIM compatible GPS system included

AIS650 Class B Transceiver
E32158  MSRP: $999 USD / £695 / €799
AIS650 Exclusive Features

• **NEW!** SD Card Slot for AIS Data Recording
  - Continuous recording of AIS data
  - Records up to limit of card (2GB max) estimated to be >1 week in heavy AIS traffic areas like Singapore & Rotterdam
  - Useful for accident reconstruction or incident reporting
  - Only records when SD card is present

• **NEW!** Hardware Controlled Silent Mode
  - Turn off the AIS650’s transmitter for privacy or security
  - Leads provided for installer-supplied transmitter power switch
  - Network capable software silent mode enable/disable when connected to Raymarine MFD displays
AIS650 Dimensions

- Greater than 50% smaller than the AIS500
  - 6.6”w x 3.9”h x 2.0”d
  - 167 x 100 x 52mm
AIS650 Box Contents

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AIS650 transceiver</td>
</tr>
<tr>
<td>2</td>
<td>GPS Antenna w/ pole mounting kit – 10m cable</td>
</tr>
<tr>
<td>3</td>
<td>4X Fixing Screws</td>
</tr>
<tr>
<td>4</td>
<td>2X Mounting Studs</td>
</tr>
<tr>
<td>5</td>
<td>2X Thumb Nuts</td>
</tr>
<tr>
<td>6</td>
<td>Power/NMEA Cable – 2m</td>
</tr>
</tbody>
</table>
| 7    | Document Pack:  
|      | • Installation guide  
|      | • ProAIS Software CD-ROM  
|      | • Warranty Card |
| 8    | SeaTalk™ Dust Cap |
| 9    | SeaTalk™ Spur Cable – 1m |
AIS650 System Diagram

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>VHF Antenna</td>
</tr>
<tr>
<td>2.</td>
<td>VHF Radio</td>
</tr>
<tr>
<td>3.</td>
<td>VHF Splitter (Not supplied)</td>
</tr>
<tr>
<td>4.</td>
<td>AIS650 transceiver unit</td>
</tr>
<tr>
<td>5.</td>
<td>GPS antenna (supplied with AIS650 transceiver)</td>
</tr>
<tr>
<td>6.</td>
<td>Multifunction display</td>
</tr>
<tr>
<td>7.</td>
<td>Vessel’s existing GPS antenna</td>
</tr>
</tbody>
</table>

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AIS650 Dedicated GPS

- Internal 50-Channel GPS system with powered external antenna

- RAIM Compliant GPS System
  - Receiver Autonomous Integrity Monitoring
  - RAIM verifies the consistency of the fix by comparing data from ALL of the satellites in view, rather than just the ones “in use.”

- Does not transmit position by default on SeaTalk$^\text{ng}$ or NMEA0183 ports
  - Not meant to replace the normal Raystar 125 or internal MFD GPS receiver
AIS650 Silent Mode Switch

- *AIS Silent* leads provided on Power/NMEA cable
- Connect to installer-supplied switch
- Controls power to the AIS650 transmitter
- Software controlled silent mode available from Raymarine MFD products too

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Switch (not supplied)</td>
</tr>
<tr>
<td>2 (Orange)</td>
<td>AIS Silent (+)</td>
</tr>
<tr>
<td>3 (Green)</td>
<td>AIS Silent (-)</td>
</tr>
</tbody>
</table>
AIS650 Static Data Programming

• Your AIS650 comes with a copy of proAIS2 v1.0.13 PC software that can be used to program the units static data as well as monitor and log AIS messages and view GPS satellite signal strength.

Static Data (Configure via proAIS2 version 1.0.13)
• MMSI (Maritime Mobile Service Identity)
• Ship's name
• Type of ship
• Call sign
• Dimensions of ship and reference for position.

• The FCC requires static data to be programmed by a qualified marine electronics installer in the United States.

Note: Once static data is saved in the AIS650 in can only be erased by a Raymarine Dealer or Raymarine Service Center. See instructions on Raymarine.com dealer area.
AIS650 Approvals / Standards

• Product Validation Requirements:
  – Product Approvals
    • European R&TTE
    • US Coast Guard (USCG)
    • Federal Communications Commission (FCC)
    • Transport Canada (TC)
    • Industry Canada (IC)
  – ITU-R M.1371-4
    • IEC 62287-1 Class B Test Specification
  – IEC61162-1/-2 (NMEA0183)
  – NMEA2000 Standard
AIS350 Receiver

- **NEW!** Dual channel receiver design.
- Receives Class A and Class B broadcasts
- NMEA0183, SeaTalkng and USB Interfaces

AIS350 Receiver
E32157 MSRP: $549 USD / £349 / €429
AIS350 Dual Channel Receiver

• Significant improvement over AIS250
• Simultaneously monitors **both** AIS frequencies for target broadcasts
• Faster acquisition time of all nearby targets at power-on
• Improves update rate for Class B targets, particularly in congested areas
AIS350 Dimensions

• 50% smaller than the AIS250
  – 6.6”w x 3.9”h x 2.0”d
  – 167 x 100 x 52mm
## AIS350 Box Contents

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<td>AIS350 transceiver</td>
</tr>
<tr>
<td>2</td>
<td>4X Fixing Screws</td>
</tr>
<tr>
<td>3</td>
<td>Power/NMEA Cable – 2m</td>
</tr>
</tbody>
</table>
| 4    | Document Pack:  
|      | • Installation guide  
|      | • ProAIS Software CD-ROM  
|      | • Warranty Card |
| 5    | SeaTalk™ Dust Cap |
| 6    | SeaTalk™ Spur Cable – 1m |
AIS350 System Diagram

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</table>

NMEA0183 - 4800

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TH –Series Thermal Marine Scopes

New Product Introduction
The all new Raymarine Thermal Marine Scopes give every boater the power to see clearly in total darkness.

Both models use the same proven FLIR thermal imaging technology as Raymarine’s premium T-Series fixed mount thermal night vision systems, but they are smaller, portable, and more affordable.
TH Series Thermal Marine Scopes

• The Thermal Marine Scopes make pictures from heat, not light, to help you see clearly in all light conditions from daylight to complete darkness.

• Thermal night vision improves your ability to see rocks, buoys, floating debris, and even helps you find people in the water when just a few minutes can mean the difference between life and death.
TH Series Thermal Marine Scopes

*Ultra-Compact Lightweight Handheld Thermal Night Vision*

Features Common to Both Models

- Ultra-Compact, Easy-to-Use Design
- Lightweight – Only 12 ounces
- Rugged All-Weather Design
- IP-66
- Simple Three-Button Operation
- LED Flashlight
- Wrist Strap
- Standard Tripod Mount
- Soft Carrying Pouch
- Long Life Rechargeable Li-Ion Battery
- 3 Year Warranty
TH Series Thermal Marine Scopes

*Ultra-Compact Lightweight Handheld Thermal Night Vision*

**TH24**

**240 × 180 Thermal Detector**

**24° × 18° FOV**

**Freeze Frame**

**White Hot ~ Black Hot ~ Marine Red Palettes**

Detect MOB ~ Man Sized Target at 1,050’ (.2 mi ~350 yds)

Detect a Small Vessel ~ Larger Objects at 2,940’ (.55 mi ~ 600 yds)

Operating Temperature -4°F to 122°F

$1,999
TH Series Thermal Marine Scopes

*Ultra-Compact Lightweight Handheld Thermal Night Vision*

**TH32**

**320 x 240 Thermal Detector**

24° × 18° FOV

White Hot ~ Black Hot ~ Marine Red Palettes

Detect MOB ~ Man Sized Object at 1,500’ (.28 mi ~500 yds) 40% increase

Detect Small Vessel ~ Larger Object’s at 4,200’ (.80 mi ~ 1400 yds) 45% increase

2× E-Zoom

Operating Temperature -4°F to 122°F

$2,999
TH Series Thermal Marine Scopes

• Package Contents
  – Thermal Marine Scope
  – Wrist Strap
  – Lens cover
  – Soft Carrying pouch
  – USB charging cable
  – Quick Start Guide
  – Documentation CD ROM
End

Thank You!