



# MH60S/R Helicopter Multi-Platform & Web-Based Crew Trainer with FLIR

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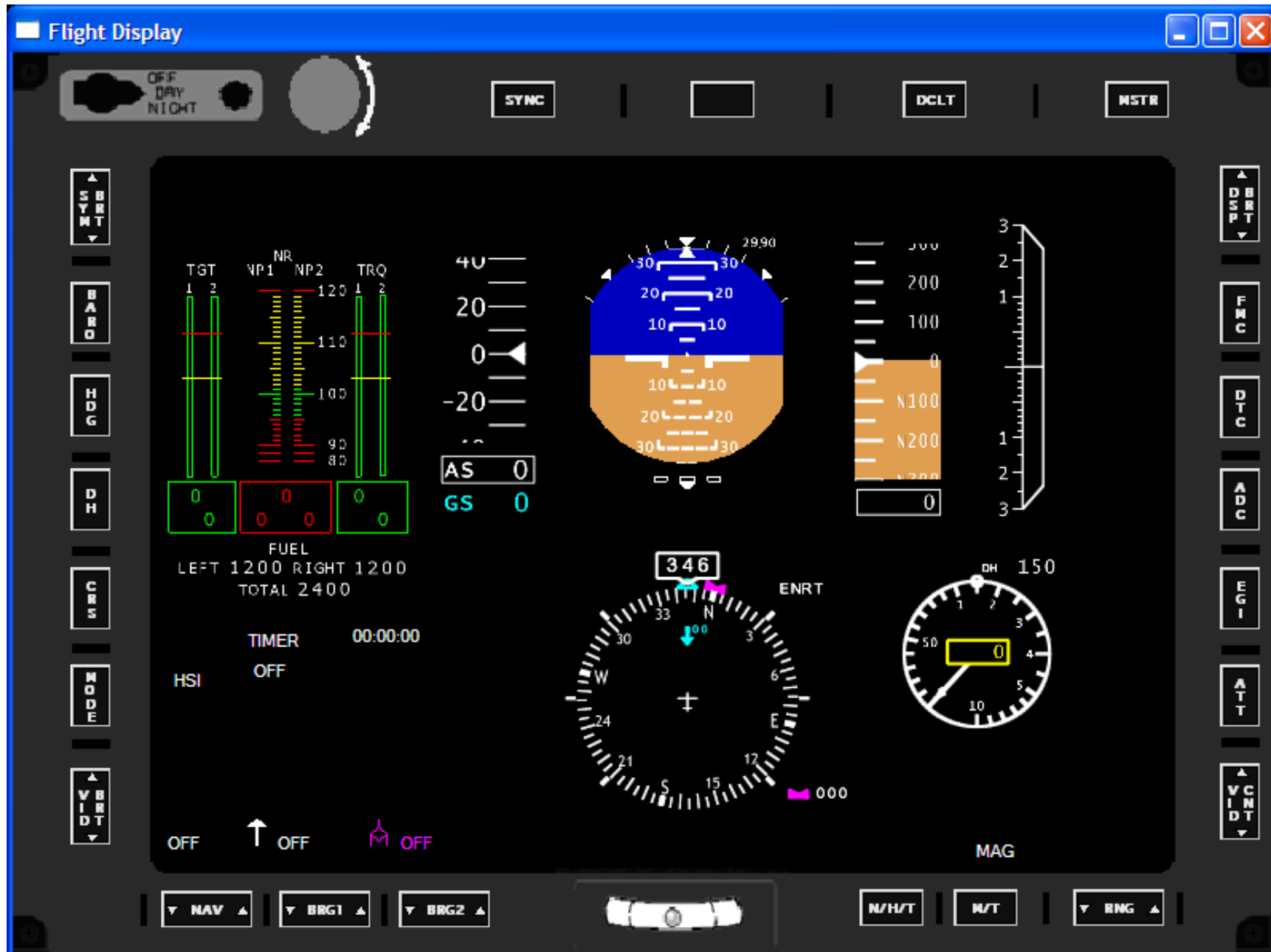
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# MH-60S and MH-60R Displays





# OMIA Flight Display



# OMIA Mission Display

The screenshot shows the OMIA Mission Display interface. At the top, there is a window title bar labeled "Mission Display" with standard window controls. Below the title bar, a "DAY/NIGHT" selector is set to "DAY". The main display area is divided into several sections:

- Top Left:** A vertical stack of control buttons: SB Y R T (up/down), L 1, L 2, L 3, R P T O, O V L Y, and V B I R D T (up/down).
- Top Center:** Mission identifier "HEL0 USW" with a green up/down arrow, and the time "12:18:20".
- Top Right:** A vertical stack of control buttons: D B S R P T (up/down), H S E T L B O, Z O O M, P G (up/down), P G (down), A C K, and V C I N D T (up/down).
- Main Display Area:**
  - Left Column:** HNAV, WOW, GUID N/A, CRS N/A, HEL0, LT 32 45.55 N, LG 117 24.6 W, GT/GS 0° / OKT, W C/S 0° / OKT, RAD ALT 0, GROUND STAB, R/I/E/A 1, INTG 3 C, SHOW 0 R 00:00:00.
  - Center:** A large black area with a green outline, containing a small green icon of a helicopter.
  - Bottom Row:** 00 314.400INIT, 00 314.400INIT, M3 1200, STBY, PLAN LOAD\_CTRL, 32.
- Bottom:** A horizontal row of function buttons: TACT, B2, RDR, INTG, ESM, ACST, FLIR, MAP, B9, PLAN, DIAG, WCA.

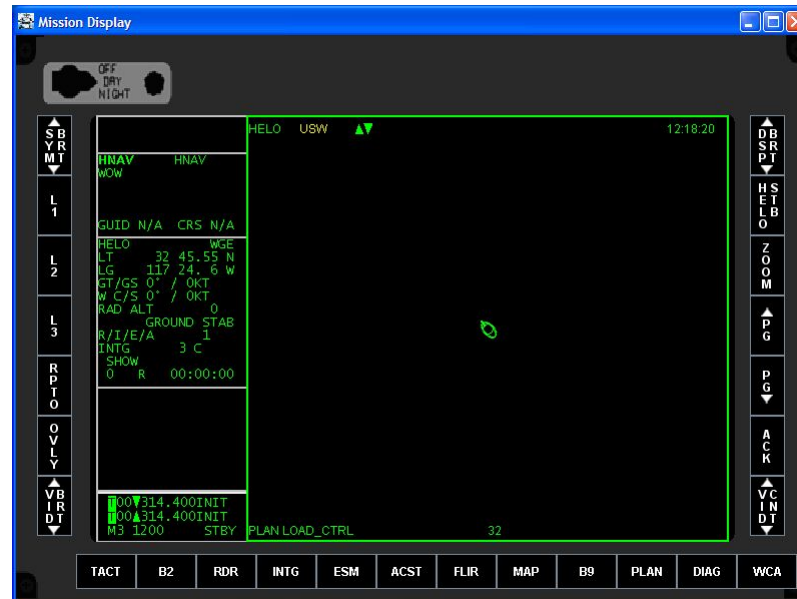
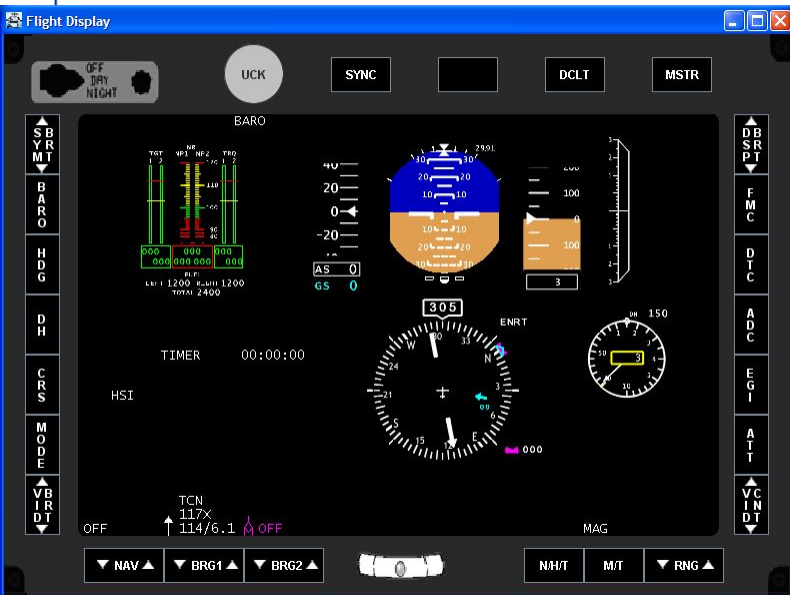
# Mission Display with Menu Displayed

The screenshot shows a 'Mission Display' window with a dark background and green text. At the top left, there is a 'OFF DRY NIGHT' indicator. The main display area shows a flight path with waypoints labeled 15 (MARMAR), 16 (MTGRY), and 17 (GLSPE). A 'REF PNT' (Reference Point) is highlighted in green. A menu is open for 'REF PNT TYPE', listing options: 1 NORMAL (selected), 2 NAV, 3 SAR, 4 BASE, 5 DATUM, and 6 ISAR. To the right of the menu, a 'LOCATION' table is displayed:

1	LOCATION
1	HOOK
2	LT 32 45.51 N
	LG 117 24.02 W
3	NO UPDATE
4	SYMBOL
5	AT AOU
6	DAFIF PT

Below the menu, there is a 'NOTE (0-12 CHARS)' field and a 'START TIME' field showing '15:48:19'. The bottom of the display features a 'PLAN' section with a '32' label and a row of buttons: TACT, B2, RDR, INTG, ESM, ACST, FLIR, MAP, B9, PLAN, DIAG, WCA. On the left side, there are vertical buttons: SB RMT, L1, L2, L3, RPT O, O VLY, and VBR DT. On the right side, there are vertical buttons: DB RPT, HST LBO, ZOOM, PG, PG, ACK, and VC INDY.

# Flight & Mission Displays with Center Console



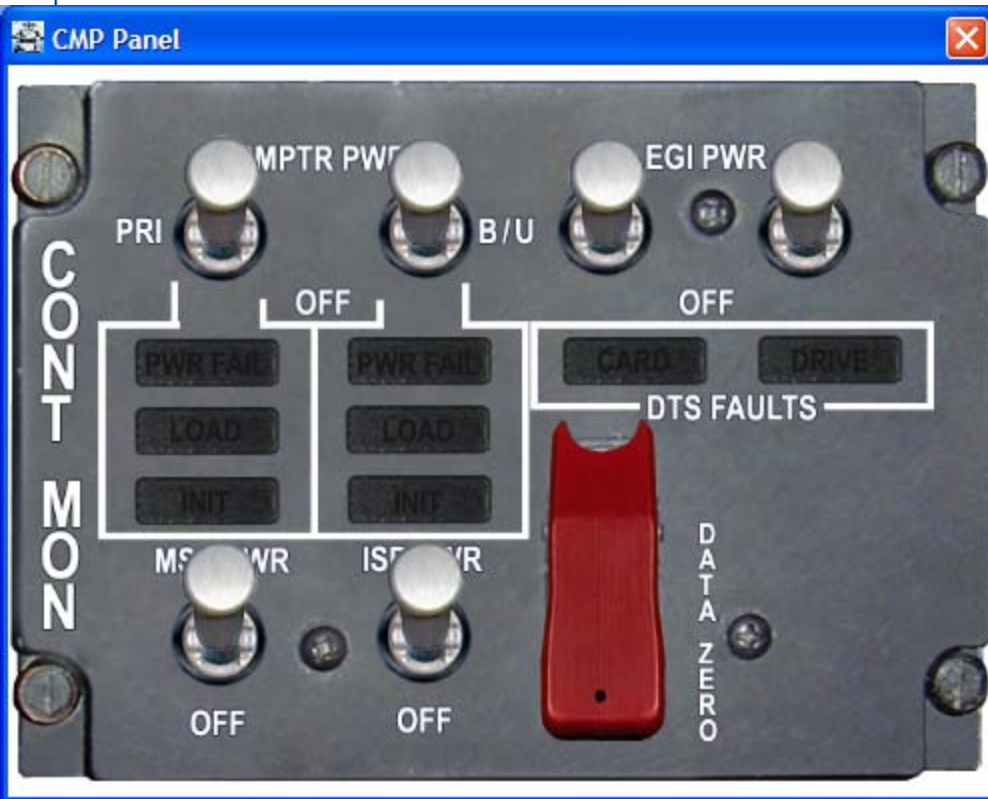
- Emulating subset of aircraft systems & avionics

# MH-60S and MH-60R Displays





# OMIA Emulates MH-60S/MH-60R Panels (E.g., CMP & RCU)



# Exterior View of Sensor Operator Station: MH-60R



# Sensor Operator Station: MH-60R



# The Keypad Contains:



- A set of fixed function keys (FFK),
- A set of context-dependent programmable keys (PK),
- A small joystick known as the “hook”.

# Emulate Sensor Operator Station



# OMIA Overall Long-term Goals

- Reduce overall training costs
  - Reduce need for Simulator & Helicopter time
  - My goal: decrease training costs by 2 orders of magnitude
- Increase overall effectiveness
  - Anytime / anywhere training
- Priorities driven by where can Navy get the most return on investment

# Where OMIA fits

- Classroom
- CBT
- **OMIA / Part-task trainers**
- Simulators
- Helicopter

# OMIA User Versions

- Sierra Pilot
- Sierra Armed Helo Pilot
  
- Romeo Pilot
- Romeo Sensor Operator
  
- Supports multiple seats & multiple helicopters
  - Viewing 1 world



# Portable Implementation

- NMCI
- Microsoft Windows
  - XP
  - NMCI XP
  - Windows7
- Linux
  - Fedora
- WebStart / Internet / Cloud based
- Macintosh

# Java Benefits

- NMCI Compatibility
  - OMIA is written in Java that allows us to make it NMCI compatible
- Portable application – no installation, you have files you can run.
- Can run as a WEB application – just click and go.
- Portable across operating systems
  - Windows, Linux & Mac

# OMIA Software: One set of code

- Only one set of code to maintain for latest System Configuration
  - I.e., Previous SysConfigs that are still available are frozen after Navy verification
- On start-up OMIA checks for available hardware (e.g., FLIR HCU) and utilizes if available
- On start-up OMIA checks for MS Flight Simulator and utilizes if available
- Checks for acoustics engine and utilizes if available

# Integrations

- MAST Hardware
- MS Flight Simulator
  - Standalone or with MAST
- USB hardware
- Touch screens
- DiSTI GLStudio (part of core OMIA)
- *Cornerturn Acoustics*



# Mission Avionics System Trainer (MAST)



# FLIR



# FLIR Hand Control Unit (HCU)





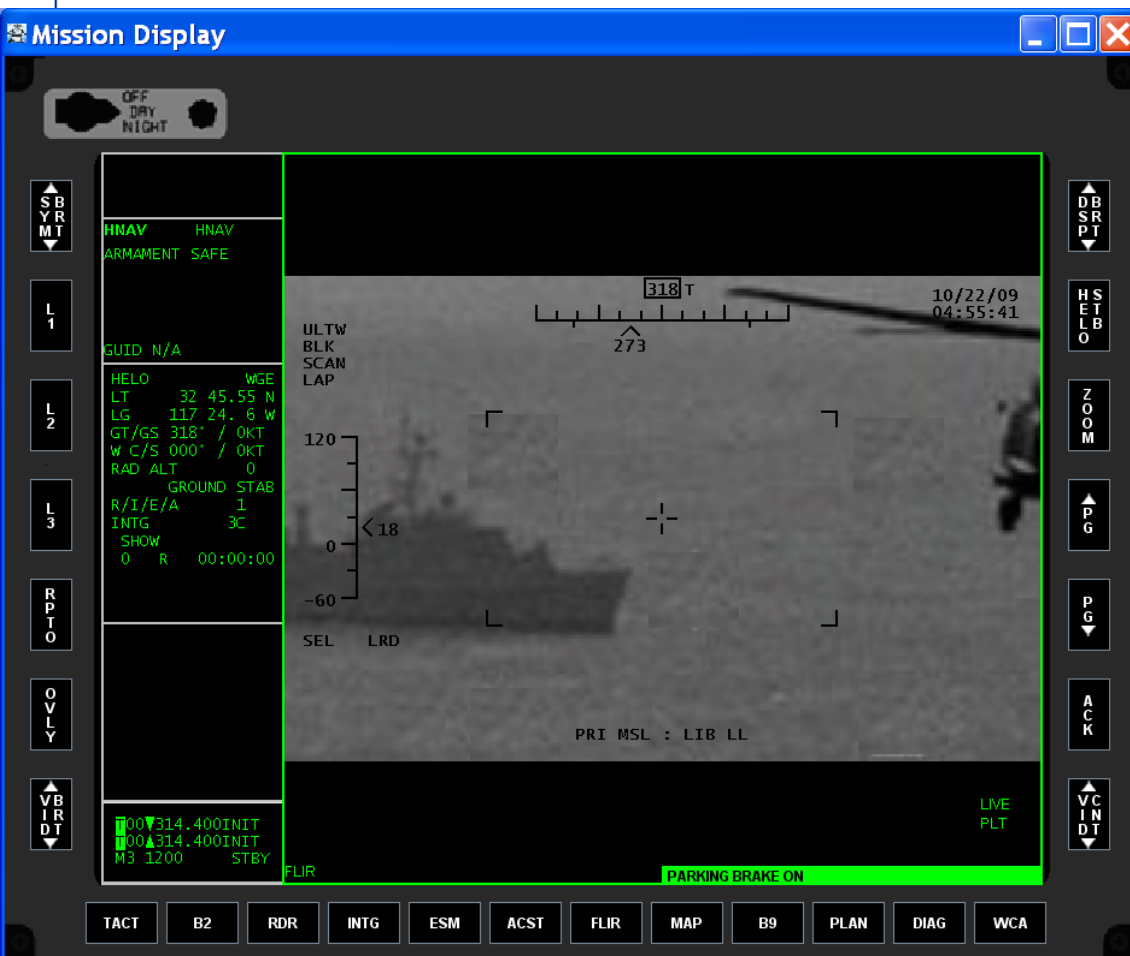
# FLIR HCU Software Emulation

- Always available, so hardware HCU is not mandatory



# FLIR & USB HCU

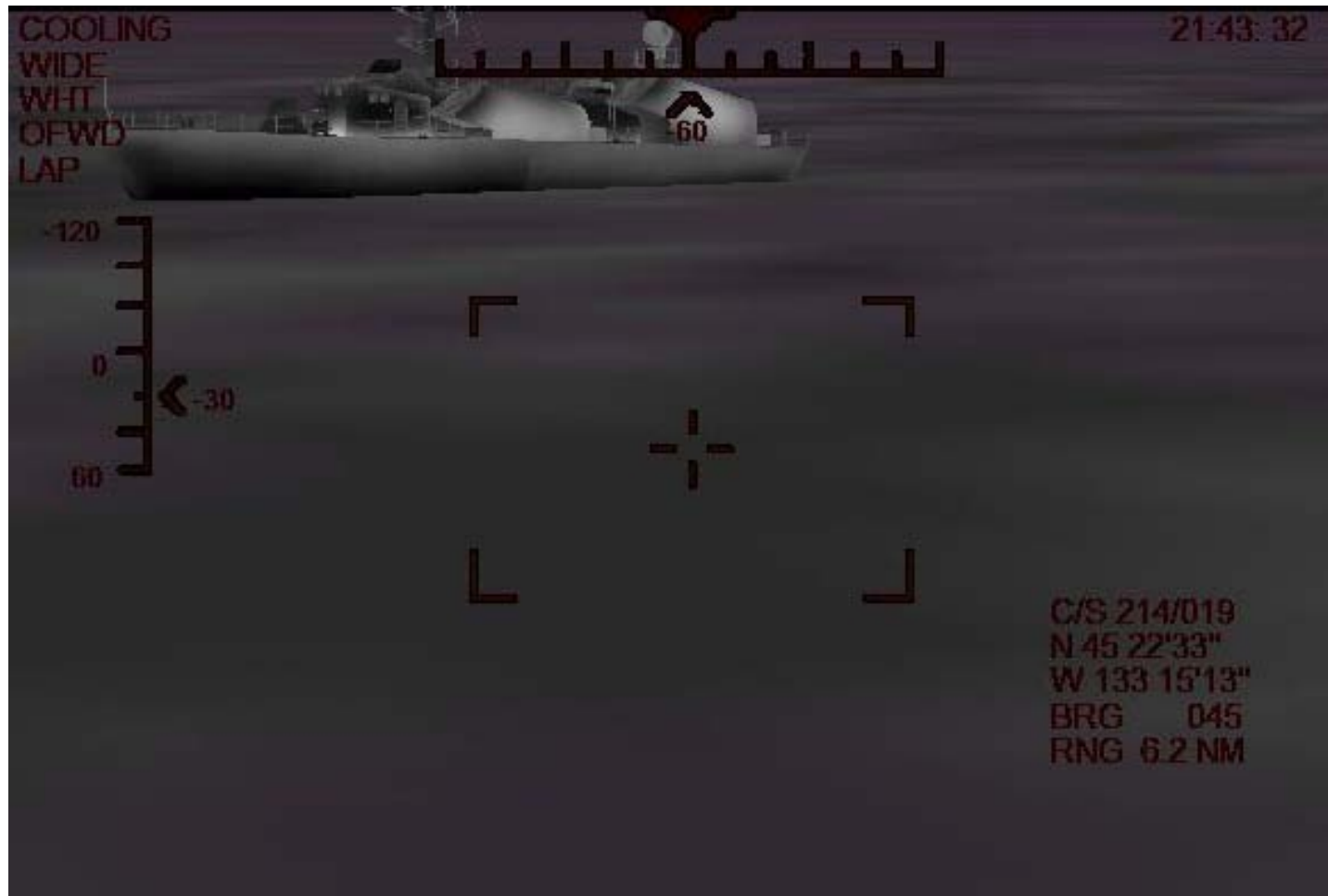
- Desktop HCU connects via USB



# FLIR Image



# Simulated FLIR Image



# Summary

- OMIA Provides
  - Training for the MH-60S/MH-60R Helicopters
  - Different Tiers available on different platforms
- Training Benefits of Java-Based Part Task Trainers
  - NMCI compatible
  - Portable Application
  - WEB application
  - Easier to convert to other OSs, e.g., Linux
- More information on OMIA is available at [www.StottlerHenke.com/OMIA](http://www.StottlerHenke.com/OMIA)