

MH-60R HELICOPTER DESKTOP
CREW TRAINER:
THE SOLUTION FOR AT-SEA
PROFICIENCY & AFFORDABLE
ANYWHERE/ANYTIME TRAINING

IT²EC 2025

International Training Technology Exhibition & Conference

Rob Richards, PhD

Stottler Henke Associates, Inc.

Stottler  **Henke**

DUALTECH

IT²EC

25 - 27 March 2025
Oslo, Norway

MH-60R HELICOPTER DESKTOP
CREW TRAINER:
THE SOLUTION FOR AT-SEA
PROFICIENCY & AFFORDABLE
ANYWHERE/ANYTIME TRAINING
(PLEASE SEE PPTX VERSION FOR VIDEO)

DUALTECH

Stottler  **Henke**

IT²EC

25 - 27 March 2025
Oslo, Norway



OVERVIEW MH-60R VIDEO

(PLEASE SEE PPTX VERSION FOR VIDEO)

MH-60R COMMON COCKPIT





SENSOR OPERATOR (SO) STATION



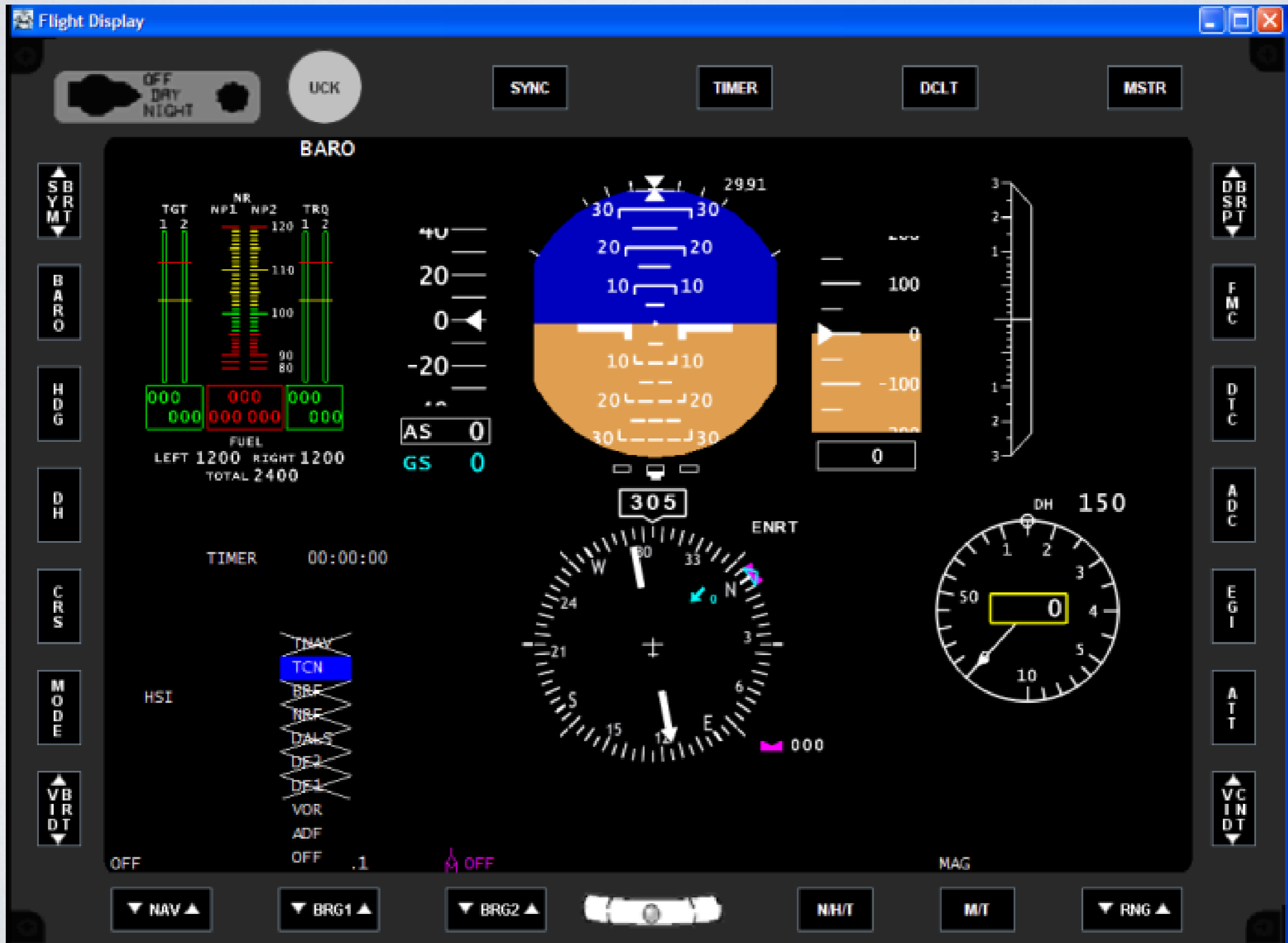
MH-60R VIDEO

(PLEASE SEE PPTX VERSION FOR VIDEO)

OMIA EMULATES MH-60R HELICOPTERS



OMIA FLIGHT DISPLAY



OMIA MISSION DISPLAY

The screenshot shows the OMIA Mission Display interface. At the top, there is a window title bar with the text "Mission Display" and standard window control icons. Below the title bar, there is a control panel with a "OFF" indicator and "DAY" and "NIGHT" options. The main display area is divided into several sections:

- Top Left:** A vertical stack of control buttons: SB Y R M T (with up and down arrows), L 1, L 2, L 3, R P T O, O V L Y, and V B I R D T (with up and down arrows).
- Top Right:** A vertical stack of control buttons: D B S R P T (with up and down arrows), H S E T L B O, Z O O M, P G (with up arrow), P G (with down arrow), A C K, and V C I N D T (with up and down arrows).
- Main Display Area:** A large central area with a green border. It contains the following text:
 - HELO USW (with a green triangle icon)
 - 12:18:20
 - HNAV HNAV
 - WOW
 - GUID N/A CRS N/A
 - HELO WGE
 - 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
 - 00 314.400 INIT
 - 00 314.400 INIT
 - M3 1200 STBY PLAN_LOAD_CTRL 32
- Bottom:** A horizontal row of buttons: TACT, B2, RDR, INTG, ESM, ACST, FLIR, MAP, B9, PLAN, DIAG, WCA.

MISSION DISPLAY WITH MENU DISPLAYED

Mission Display

OFF DRY NIGHT

03:48:33

SBYRMT

L1

L2

L3

RPTO

OVLY

VBIRDT

HNAV HNAV
WOW

GUID WYPT DRCT TO

HELO WGE
LT 32 45.55 N
LG 117 24.6 W
GT/GS 318° / OKT
W C/S 000° / OKT
RAD ALT 0
GROUND STAB

15 MRMAR
16 MTGRY
17 GLSPE

REF POINT

REF PNT TYPE	LOCATION
1 M NORMAL	1 HOOK
2 NAV	2 LT 32 45.51 N
3 SAR	3 LG 117 24.02 W
4 BASE	3 NO UPDATE
5 DATUM	4 SYMBOL
6 ISAR	5 AT AOU
	6 DAFIF PT

NOTE (0-12 CHARS)

START TIME
HH:MM:SS
15:48:19

100▼314.400INIT
100▲314.400INIT
M3 1200 STBY

PLAN 32

TACT B2 RDR INTG ESM ACST FLIR MAP B9 PLAN DIAG WCA

DBSRPT

HSETLBO

ZOOM

PG

PG

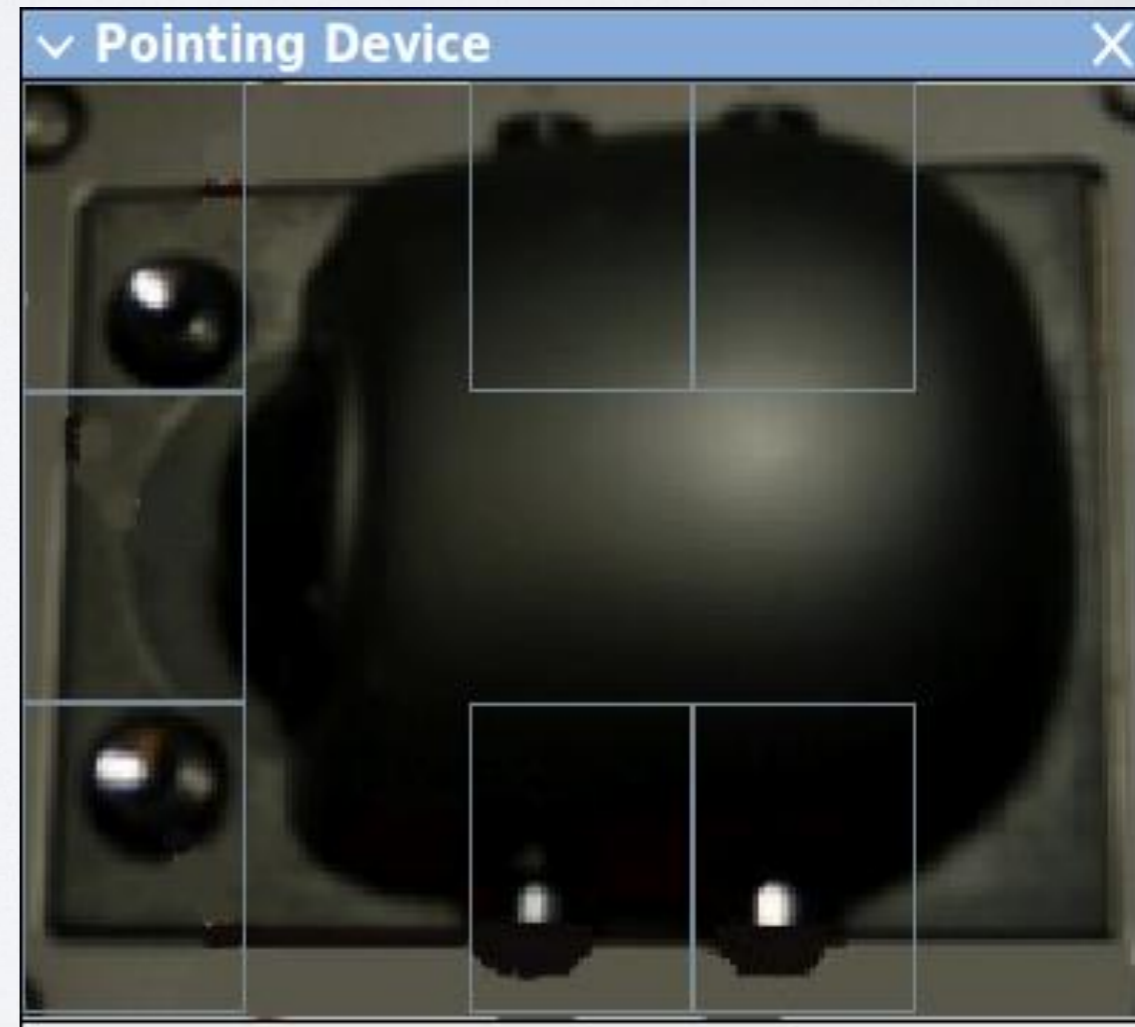
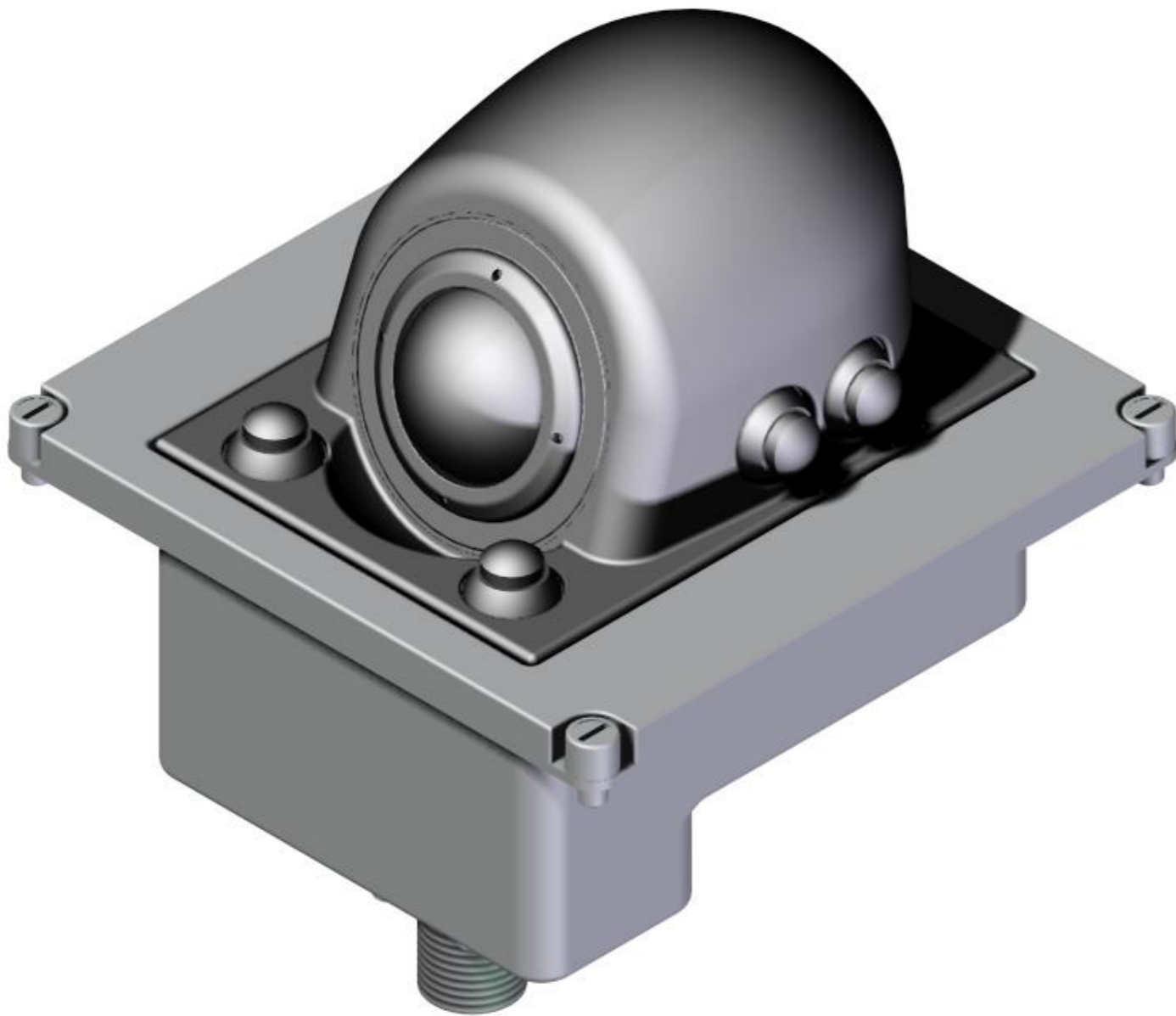
ACK

VCINDT

CONTROL DISPLAY UNIT (CDU)



TRACKBALL POINTING DEVICE (PD)



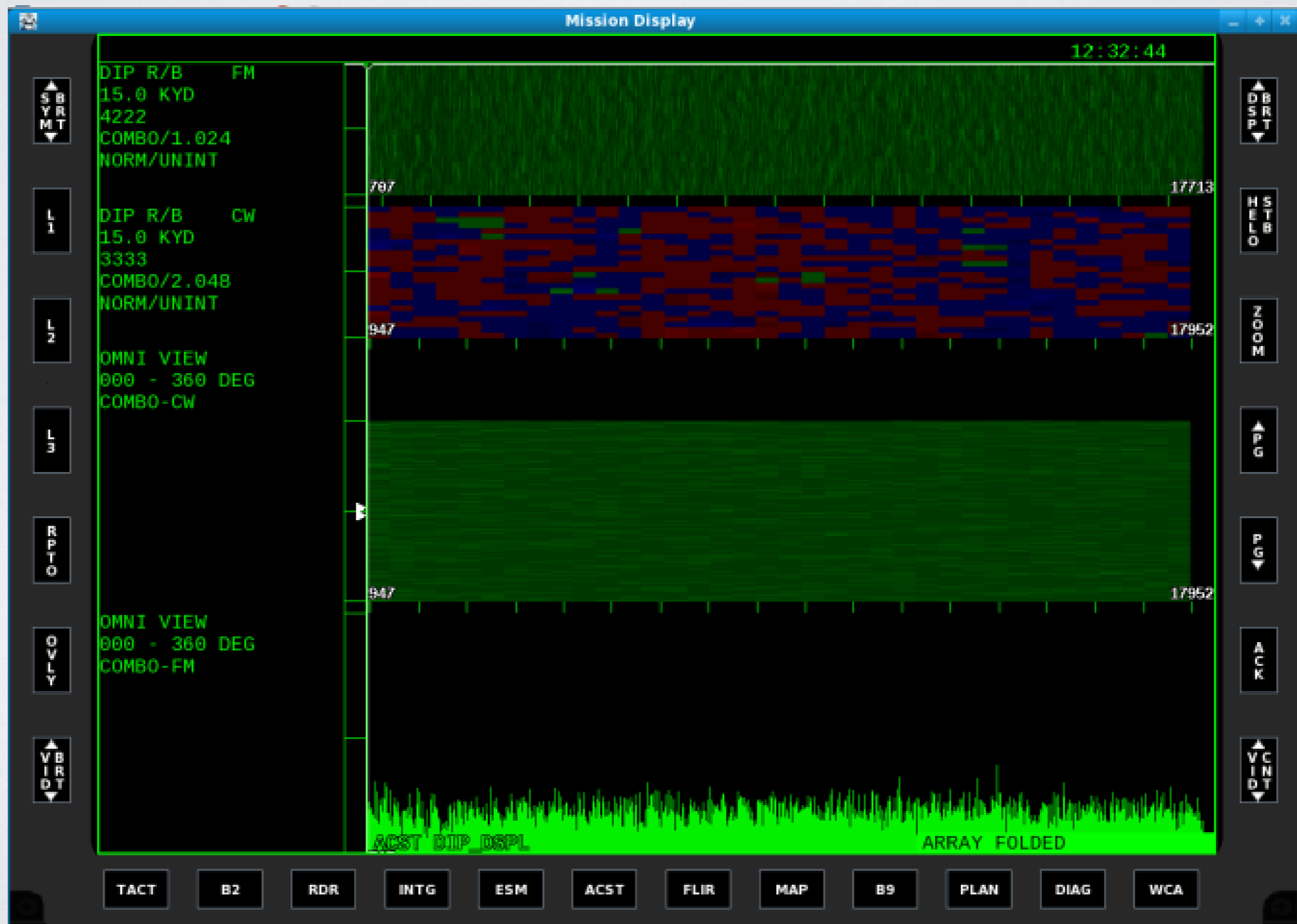
MH-60R COMMON COCKPIT



OMIA EMULATES MH-60R PANELS (E.G., CMP & RCU)



SENSOR OPERATOR (SO) STATION MH-60R



OMIA VIDEO

(PLEASE SEE PPTX VERSION FOR VIDEO)

SUCCESSSES

- Reduced overall training costs
 - Reduced need for Simulator & Helicopter time
 - Significant reduction in training costs
- Increased overall effectiveness
 - Anytime / anywhere training on land or at SEA
 - Leverage via laptop, or cloud, touchscreens, VR, attachable hardware, ...

WHERE OMIA FITS

- Classroom
- Computer Based Training (CBT)
- **OMIA**
- Simulators
- Helicopter

OMIA USER VERSIONS

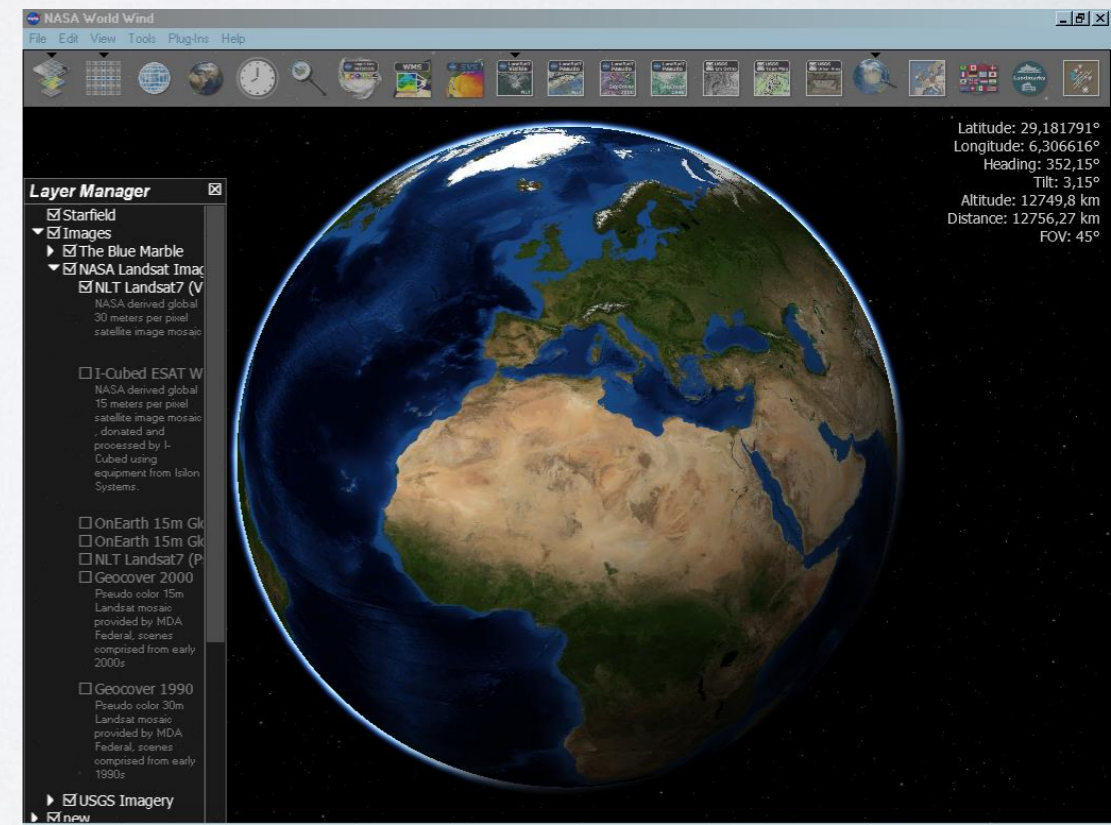
- Romeo Pilot / Co-Pilot
- Romeo Sensor Operator
- Crew trainer – train Pilot / Co-Pilot & Sensor Operator in same scenario
- MH-60S AMCM Winch Operator

FLEXIBLE DEPLOYMENT

- Microsoft Windows
- Linux
- Cloud
- Mac

INTEGRATIONS

- USB hardware
- Touch screens / VR headset
- Acoustics
- Flight Simulators
- NASA WorldWind for FLIR & Moving Map



FLIR



FLIR HAND CONTROL UNIT



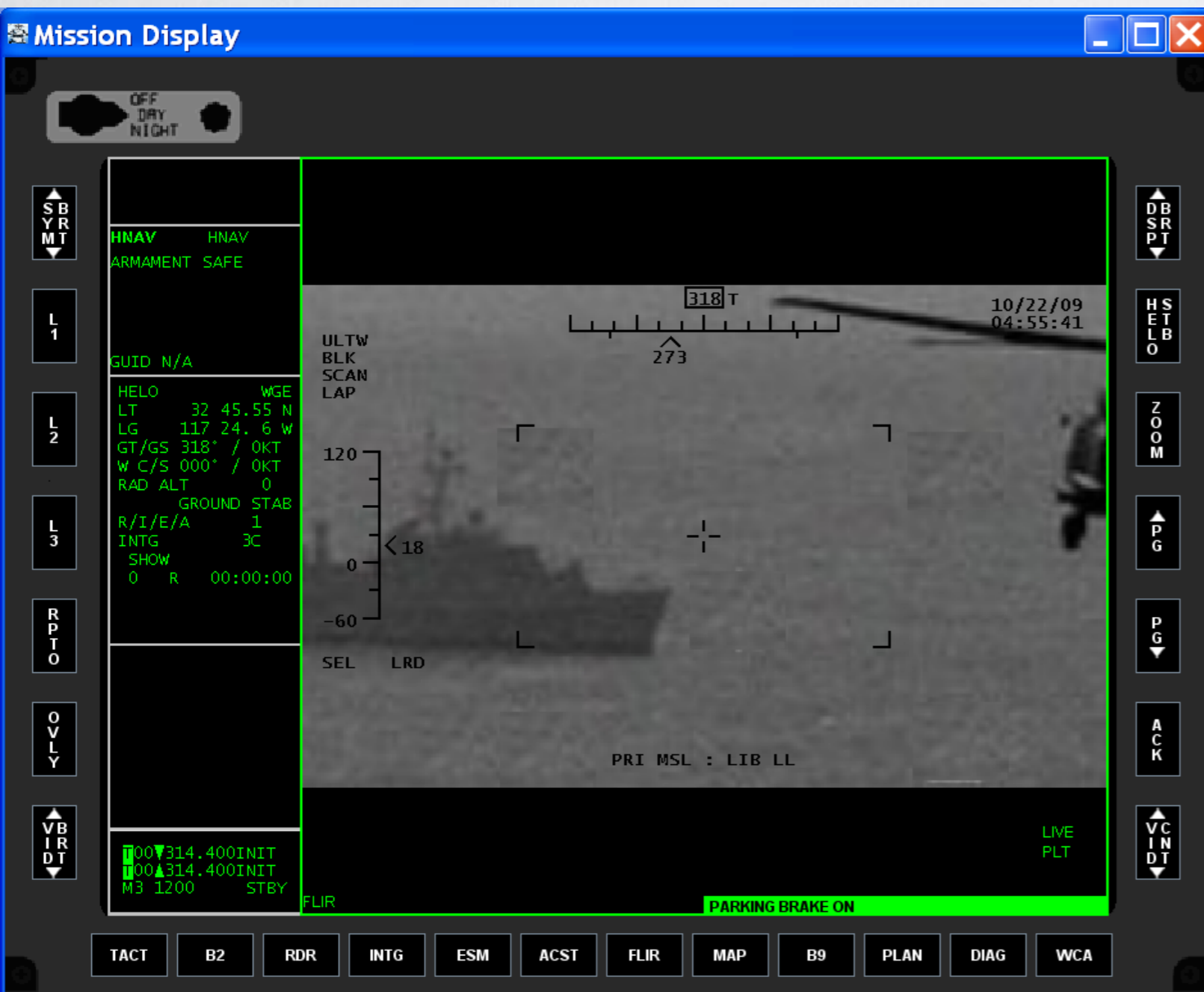
FLIR HCU SOFTWARE EMULATION

- Always available, so hardware HCU is not mandatory



FLIR & USB HCU

- Desktop HCU connects via USB

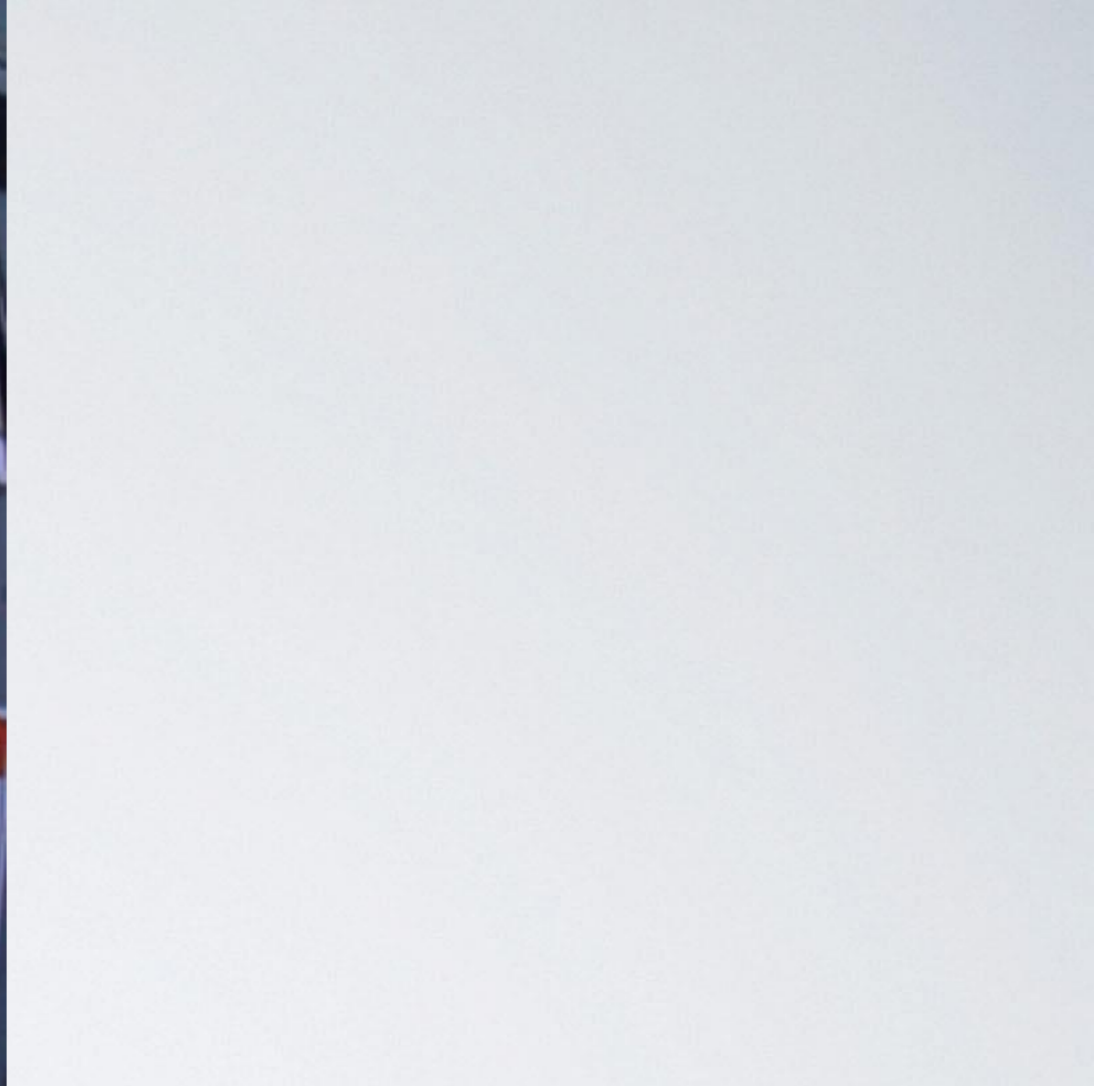


OMIA-ATS / ACOUSTICS

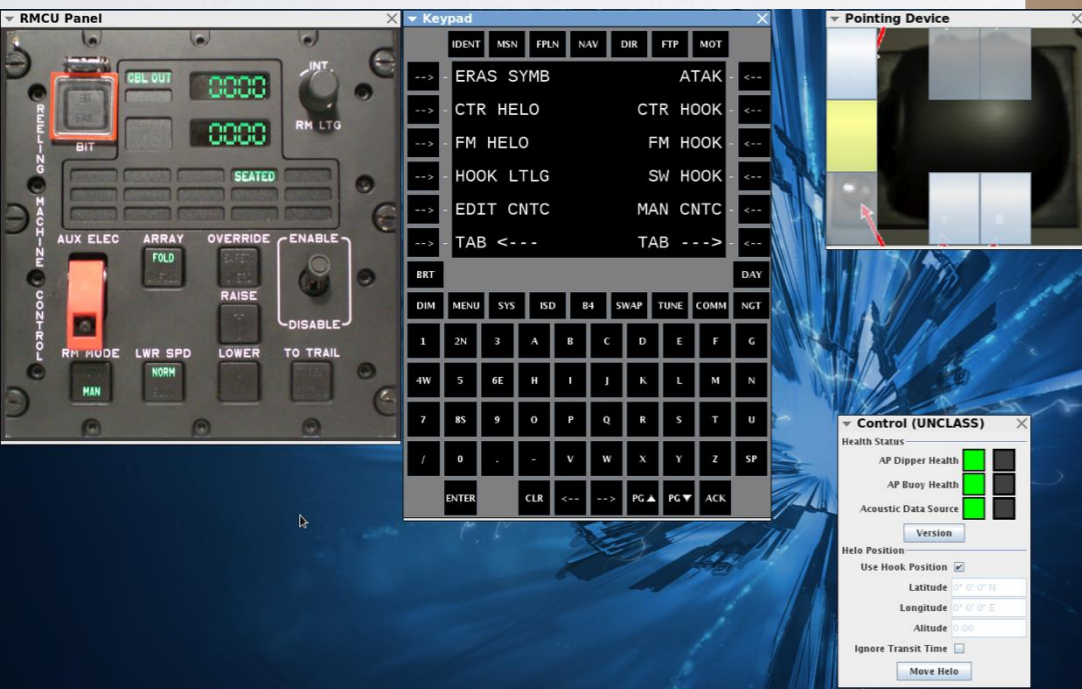
- OMIA was enhanced to include Buoy & Airborne Low Frequency (ALFS) Sensor Modeling and Simulation Training.
- Allows for pinging and viewing realistic acoustic returns
- Enhancement is part of a complete hardware/software solution, including fully configured laptops with touch screen and OMIA-ATS pre-installed.
- Leveraged for use on land and while deployed at sea.

SENSOR OPERATOR STATION: MH-60R



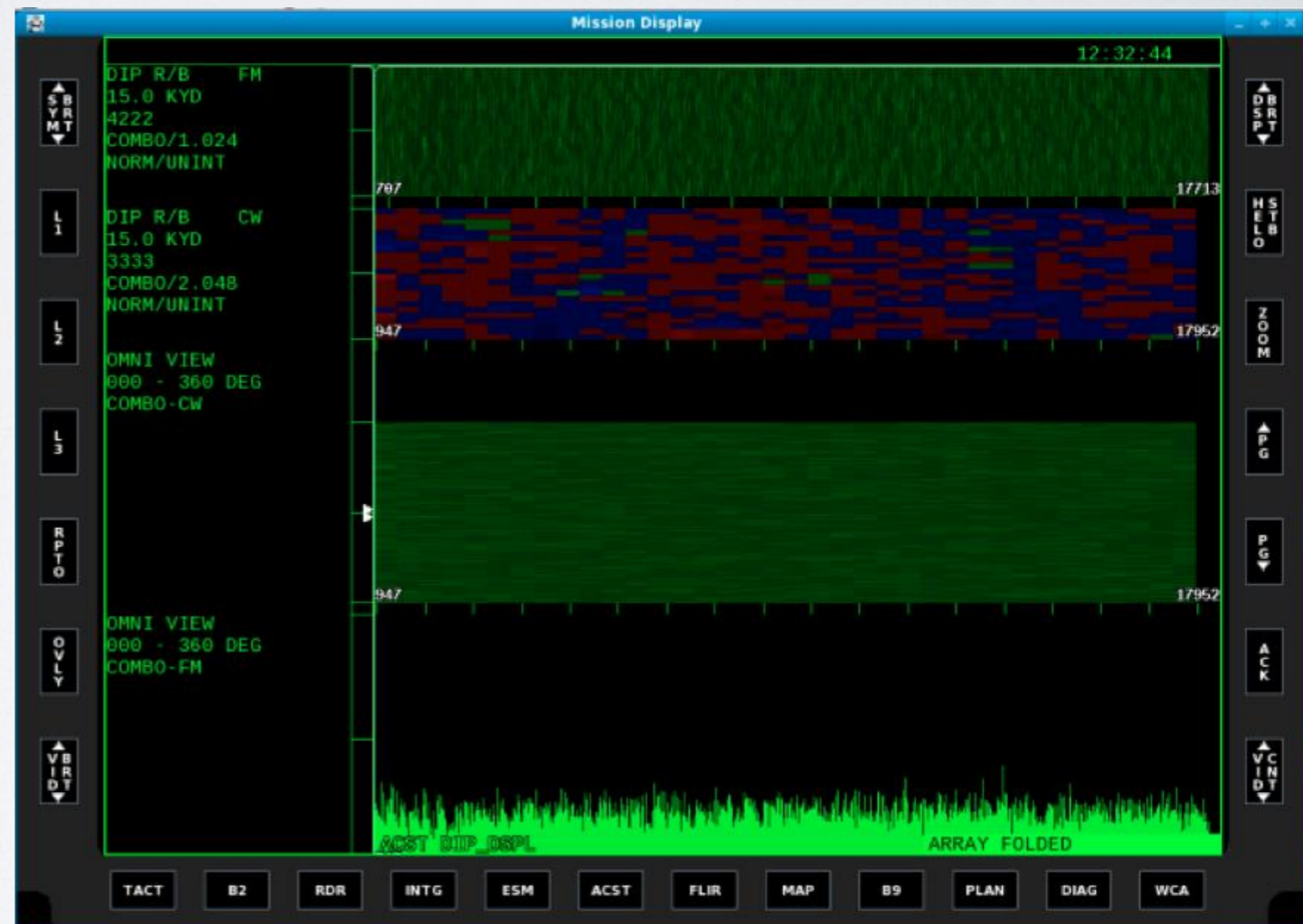


OMIA-ATS: SO STATION



OMIA-ATS: SO STATION

- 4 Modes of OMIA-ATS:
- Simulated Noise Mode
- Create Scenario Mode
- Play Scenario Mode
- Analyze Data Mode

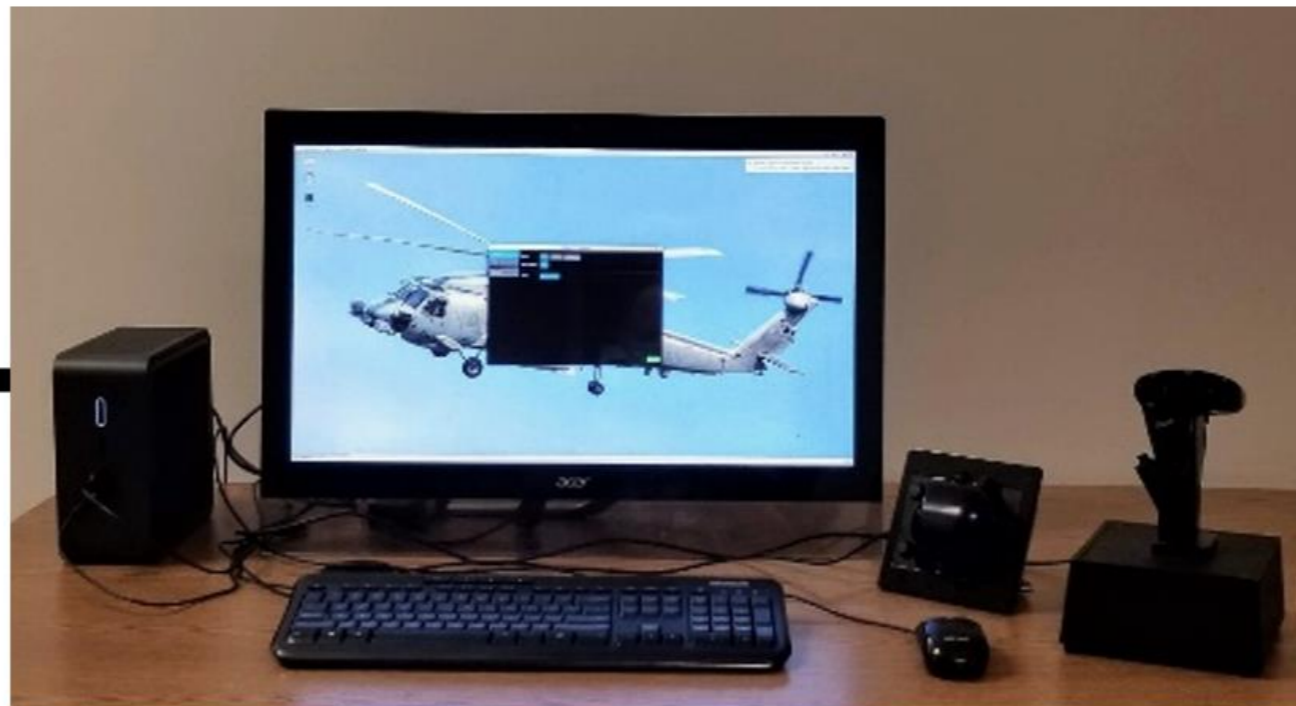
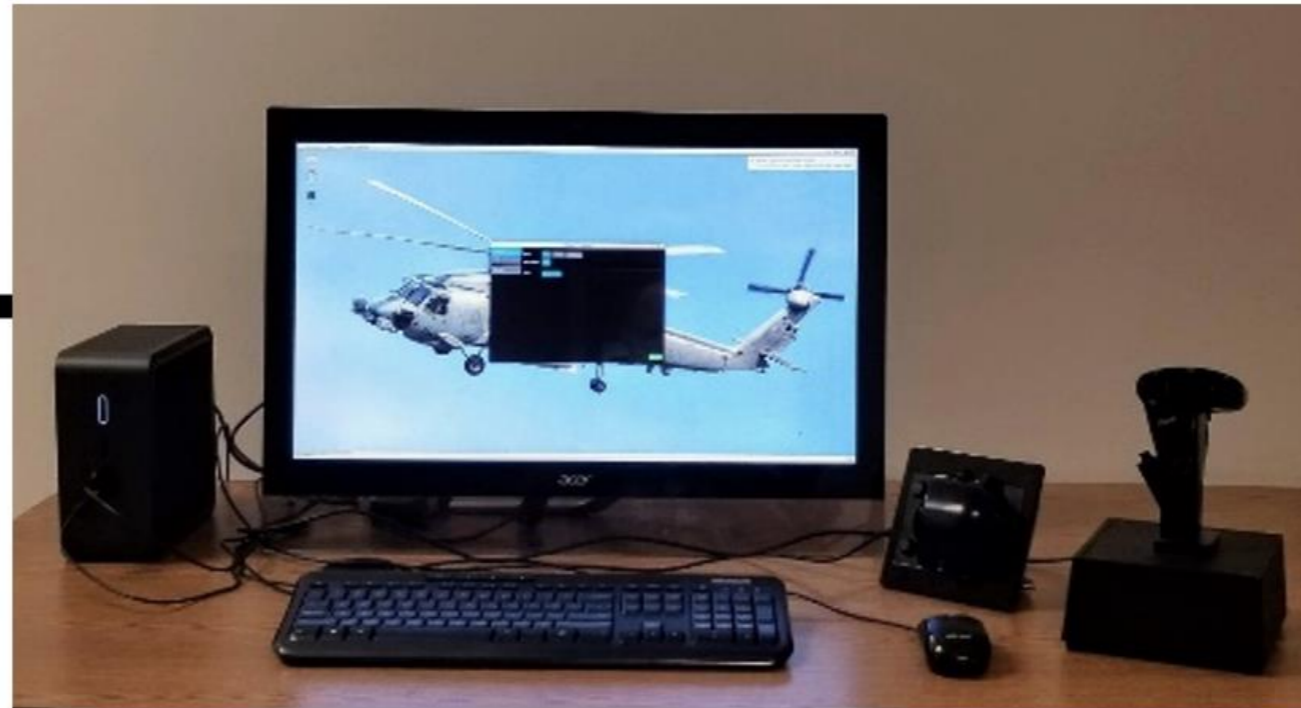


BENEFITS OF OMIA-ATS

- Prepare operator to take full advantage of TOFT training sessions
- Provide a platform for acoustic return recognition training
- Support independent skills review for deployed squadron personnel
- Support independent skills review in a Training facility environment

CREW TRAINER

**Ethernet
Cable**



BENEFITS OF CREW TRAINER

- Multi-seat training
- Sensor Operator (SO) works in conjunction with Airborne Tactics Offer (ATO)
- Each seat can see what the other seat sees
- Allows the front-seat ATO to work in coordination with the SO to prosecute a mission
- OMIA emulates how the helicopter interface changes based on the inputs of both operators

MH-60S AMCM WINCH OPERATIONS



MH-60S AMCM WINCH VIDEO

(PLEASE SEE PPTX VERSION FOR VIDEO)

MH-60S WINCH OPERATOR TRAINING

The screenshot displays the WinchOMIA software interface. On the left, a window titled "Levelwind Anti-Slack Assembly" shows a close-up of the winch mechanism with a yellow box highlighting a specific component. In the center, the "Winch Control Pendant" window shows a control panel with buttons for "E-STOP", "FAULT", "REEL OUT", "REEL IN", "G W D W N", "P U G W", "LW", "FWD", and "AFT". On the right, the "Tow Cable Shear" window shows controls for "TOW CABLE SHEAR", "ARM", "OFF", "MODE NORM", "TEST", "CAD1", and "CAD2 / TSAS". A "Winch Instructor Panel" window is also visible, showing "LHS Spin Angle: 0.0 degrees" and buttons for "Reset LHS Spins", "Aft Fault", "Fwd Fault", "Catastrophic Failure", "Raise Altitude", and "Lower Altitude".

The Winch Instructor Panel displays a simulation of a fault. The main display shows "547 LBS" and "39 FEET". To the right, it indicates "DISTANCE TO TS1" and "TS1 WINCH FAULT". A yellow box highlights the "WINCH FAULT" text. Below the main display, there are several status messages: "SHEAR SWITCH ARMED" (in a green box), "ADVISORY: OUT OF CARRIAGE", "CAUTION: LEVELWIND MISALIGNED FWD", and "ALERT BYPASS MODE ACTIVATED". The panel is surrounded by a grid of buttons labeled F1 through F12, with "NV" at the bottom.

INSTRUCTOR INITIATES FAULT

MH-60S WINCH OPERATOR TRAINING W/ TOUCHSCREENS



OMIA / OMIA-ATS

SUMMARY

- Powerful inexpensive anywhere / anytime training
- Capabilities maximized based on available hardware
- Cost savings vs simulator/flight time
- Training Benefits of Re-configurable Part-Task Trainer (PTT)
- Train independently or as a Crew
- More information on OMIA is available at www.StottlerHenke.com/OMIA

QUESTIONS ?

