

“Maintenance Blended Reconfigurable Aviation Trainer (MBRAT) for UH-60M and CH-47F Platforms”

The Maintenance Blended Reconfigurable Aviation Maintenance Trainer (MBRAT) is a full-task trainer that invokes a virtual immersive environment and spatial physical awareness coupled with proven simulation software for the UH-60M and CH-47F platforms.



MBRAT is offered as a Stand-alone device for a CH-47F configuration or as a stand-alone device for the UH-60M configuration. For those needing to train on both platforms, Kratos offers a convertible platform that can be converted to either CH-47F or UH-60M configuration.

This device trains equipped Maintenance Operational Checks (MOCs), cockpit fault identification and selective fault isolation tasks for both platforms. MBRAT uses a cost effective blend of simulation based modeling and replicated physical controls to create a highly realistic training environment. It can be used in stand-alone mode, as an Instructor-Led Training platform or to offload initial MOC and Fault Isolation tasks to training media allocations. Additionally, it can be configured into multiple units controlled by a single Instructor/Operator Station. The device is Information Assurance Compliant and designed to fit through a standard 36 inch door frame. The MBRAT can easily be enhanced to perform all required steps in fault isolation and completion of remove/install tasks. This additional capability also allows students to use all required tools, test equipment and test sets in the virtual world with Commercial Off-The-Shelf (COTS) touch-screen technology.

UH-60M

The UH-60M MBRAT can be modeled to support 26 UH-60M Avionics Systems along with 160 Faults using the same software packages as installed on the UH-60M Blackhawk Avionics Trainer (BHAT). Typical Training tasks include troubleshooting, isolation of faults, and restoration of functionality of avionics systems. The System can be configured to support the following systems:

- **60M Flight Management System**
- **Avionics Relay Panel**
- **Ethernet Switching Hub**
- **Flight Director Set**
- **Improved Heads Up Display AN/AVS-7 AVUM Level**
- **Flight/Mission Display System**
- **Radio Retransmission**
- **Radio AN/ARC-201D**
- **Air Data Computer (ADC)**
- **Common Missile Warning System (CMWS)**
- **VOR / ILS / MB**
- **ADF**
- **Data Transfer System (DTS)**
- **Digital Intercommunications System (DICS)**
- **Electronic Standby Instrument Panel (ESIS)**
- **EGI**
- **Improved Data Modem (IDM)**
- **Radar Altimeter System**
- **Radio AN/ARC-231**
- **AN/APR-39 Radar Warning System (RWS),**
- **WX-500 Stormscope**
- **TACAN**
- **Multifunction Display (MFD)**
- **IFF**
- **Laser Detecting Set AN/AVR-2**
- **Blue Force Tracker (BFT)**



Realistic cockpit interactions enable immersive avionics System simulation. MBRAT provides student training through simulation of both cockpits on multiple touch- screen monitors.

CH-47F

The CH-47F MBRAT can be modeled to support 31 UH-60M Avionics Systems along with 213 Faults using the same software packages as installed on the CH-47F Chinook Avionics Trainer (CAT). Typical Training tasks include troubleshooting, isolation of faults, and restoration of functionality of avionics systems. The System can be configured to support the following systems:

- **47F Control Display Unit 7000**
- **CVR / FDR**
- **Data Concentrator Units (DCU)**
- **Digital Advanced Flight Computer (DAFCS)**
- **Digital Map System (DMS)**
- **Emergency/Auxiliary Control Panel**
- **General Purpose Processor Unit (GPPU)**
- **Heads-Up Display System (HUD)**
- **Multi-Function Control Unit**
- **Pitot-Static System**
- **AN/ARC-220 (V) High Frequency Radio**
- **Radio AN/ARC-201D**
- **Air Data Computer (ADC)**
- **Common Missile Warning System (CMWS)**
- **VOR / ILS / MB**
- **ADF**
- **Data Transfer System (DTS)**
- **Digital Intercommunications System (DICS)**
- **Electronic Standby Instrument Panel (ESIS)**
- **EGI**
- **Improved Data Modem (IDM)**
- **Radar Altimeter System**
- **Radio AN/ARC-231**
- **AN/APR-39 Radar Warning System (RWS),**
- **WX-500 Stormscope**
- **TACAN**
- **Multifunction Display (MFD)**
- **IFF**
- **Laser Detecting Set AN/AVR-2**



Virtual test set to troubleshoot and diagnose faults. Modeled after tactical test set, MBRAT enables students and instructors to perform Remove and Replace Tasks, component troubleshooting, along with the use of simulated virtual aircraft test sets.

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