# Deployable JointMrsimulationFires Trainer (DJFT)

MVRsimulation® Deployable Joint Fires Trainer (DJFT) is a mixed-reality simulator designed to provide a deployable capability for Joint Terminal Attack Controllers (JTACs) and Forward Observers (FOs) to train alongside fixed-wing, rotarywing and RPAS aircrew within a fully immersive, joint training environment. The DJFT is fully accredited by the Joint Fire Support Executive Steering Committee (JFS ESC) for Type, 1, 2, and 3 Terminal Attack Control (TAC), Bomb on Coordinate (BOC), Fixed-Wing (FW), Rotary-Wing (RW), Remote Observer (RO), Video Down-Link (VDL), Suppression of Enemy Air Defenses (SEAD), Urban, Forward Air Controller (Airborne) (FAC (A)), Night, IR, and Laser controls.

The internally designed modular plug-and-play DJFT is comprised of three or more stations fully contained within two-man portable welded aluminum cases. Integrated with a TAA-compliant Varjo Secure Edition mixed-reality headset with offline license, the DJFT contains all the hardware and software required to run dynamic, full-spectrum JTAC/Joint Fires training scenarios, including all computers, MVRsimulation's round-earth terrain server, emulated physical Laser Target Designator (LTD) and IZLID, simulated GPS receiver and radio devices. Scenarios run on Battlespace Simulations' Modern Air Combat Environment (MACE®) and MVRsimulation's Virtual Reality Scene Generator® (VRSG®).



A JTAC's end user device with an overlay of the VRSG sensor video feed (shown inside the red box) on the ATAK map from Google satellite imagery.

## **DACAS** capable

The DJFT supports Digitally Aided Close Air Support (DACAS) as described in JFIRE Appendix E using real world datalink messages to execute both the Link16/SADL message flow and the VMF message flow. Using MACE's built in JREAP-C server or the raw VMF gateway, the DJFT can be integrated with live training scenarios. VRSG's video datalink contains KLV metadata compliant with the STANAG 4609 or MISB 0601 standard, enabling embedded sensor-points-of-interest and host platform track data within the video stream. Integration of DACAS is the responsibility of the end user.



The JTAC's view inside the Varjo mixed-reality headset showing passthrough of the real-world Observer Station and MVRsimulation's VRSG 3D virtual geospecific terrain of densely populated Hajin, Syria.

### Modular, reconfigurable, and transportable

- Self-contained in two-person portable welded aluminum cases. Dimensions: 21" x 21.5" x 33.75" Weight: ~100 lbs.
- Point of need training: anywhere from a classroom, to forward operating bases or a hotel conference room at short notice
- Swappable hard drives for use in different classification zones
- Windows 10-based high-end gaming systems with NVIDIA RTX6000 Ada graphics cards that are designed to be upgraded with technology advancements
- · Single-source power control for simple start-up
- Can be run on 100-240 volt and 50-60 hz. power outlets. The power cord can be quickly updated for geospecific outlets
- Stations are networked via dual internal 10-Gigabit Ethernet switches. External network connections are also provided.
- Requires no Wi-Fi or Bluetooth; for use in secure environments
- Air Freight Transportable

## Fully accredited JTAC simulator

- Meets the Joint Fires Support Executive Steering Committee (JFS ESC) Memorandum of Agreement (MOA) accreditation for Type 1, 2, 3, day, night, and laser controls
- 360° FOV throughout the entire mission including during the terminal phase of the control to assess the attack geometry
- Form-fit-function laser target designator for laser accreditation
- Environmental sound and headset radios for communications
- Observer can read and write without needing to remove HMD
- Communicate via multi-channel PTT emulated radios
- · Same software currently in-use in Programs of Record
- ATAK/WinTak integration ready for DACAS

# **Observer Station**

- Integrated Varjo mixed-reality head mounted display allows the user to be fully immersed in the virtual world while interacting with the emulated physical LTD and IZLID in the real world
- VRSG tracks the observer's head position and pupil location. Eye-track is exported via DIS and can be seen in real-time or saved to a PDU log for after action review (AAR)
- Form-fit-function emulated equipment:
  - Type 163 or PEQ-1B SOFLAM
  - IZLID 1000P
  - Other emulated equipment available upon request
- Notional simulated equipment:
  - MIL tape HUD in the HMD, can be configured to degrees - PRC-117G or PRC-152 radio
  - Advanced GPS Receiver (C-EAGR)
  - Binocular function with discrete levels of magnification
- Samsung S23 Tactical Edition end user device, ready for ATAK integration for Link 16 and VMF DACAS
- MVRsimulation's Portable Joint Fires Trainer (PJFT) JTAC Backpack can join scenarios as fully-networked additional Observers (available separately)

## **Instructor Operator Station**

- Provides full dynamic control of the scenario including semiautomated constructive platforms
- Has controls for UAS pod, 9 Lines, 5 Lines and Call For Fire
- Includes a whole-earth terrain server that holds MVRsimulation's round-earth VRSG terrain
- Control surface-to-surface fires, fixed- and rotary-wing assets
- Record current scenario to play back for after-action review
- · Internal DISA-approved networking for interoperability
- · Supports LVC training and connections to existing systems

## **Role Player Station**

- Dedicated to controlling fixed-wing, rotary-wing, and RPAS assets in the mission
- Trainee is immersed via the Thrustmaster HOTAS
- Control assets with the HOTAS or by using 9 Lines and 5 Lines
- Control targeting pod, enabling video downlink for student to conduct sensor pod talk-ons
- Fully interoperable with US Air Force MALET-JSIL Aircrew Trainer (MJAT)
- MVRsimulation's fixed-wing Part Task Mission Trainer (PTMT) can join the scenario as an additional aircrew role player (available separately)

### Low-cost commercial system

- Inclusive of all costs: US \$485,000
  Delivered with Observer, Instructor Operator, and Role Player stations (one each) with all software licenses
  Shipping charges, on-site setup, and two days of training by an MVRsimulation engineer is quoted separately
- DJFT configurations to meet your unit's specific needs can be built by purchasing individual stations at the rates below:
   Observer Station: US \$180,000
  - Role Player Station: US \$130,000
  - Instructor Operator Station: US \$200,000
- Part Task Mission Trainer (optional role player): US \$185,000
  mvrsimulation.com/products/fixed-wing-ptmt.html
- Portable Joint Fires Trainer (optional stations): US \$190,000
   mvrsimulation.com/products/portable-joint-fires-trainer.html



Observer Station with emulated Type 163 and IZLID 1000P.



Instructor Operator Station.



Role Player Station.



Full DJFT system: Role Player, Instructor, and Observer Stations.

For more information, visit www.mvrsimulation.com, contact sales@mvrsimulation.com, or scan the QR code.



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