

L-159 Simulator (PTT)

The L-159 simulator of the "Part Task Trainer (PTT)" category is designed to support individual training of the pilots of L-159 light combat aircraft. It is a flight simulator, that enables to train operating, handling and using of on-board systems of the aircraft. The simulator is a component of the comprehensive training solution for L-159 aircraft and is ready to operate in a tactics training mode using DIS or HLA protocol.

Training focus:

Training is focused on training and practicing of both standard and emergency procedures on the ground and in flight, including the practice of using the navigation, radio communication and weapon systems.

Training options:

Individual training

- basic and advance flying training

Tactics training

- mode of training in cooperation with other units (wing, flight, squadron) or a battle group

Developed skills:

- practising of flight procedures
- managing of the on-board systems
- practising of the navigation flights
- utilization of the weapon and navigation systems
- control of the electronic warfare systems

Key benefits

- Mobility - whole system can be moved easily
- Advanced tools for pre-flight briefing and after action review
- High detailed geo-specific terrain databases



Technical description

The simulator cockpit is an exact copy of the actual aircraft. The cockpit is based on a carriage unit and can be easily moved.

All cockpit equipment are either original or exact fully functional copies.

Contents

Pilot workplace (simulator cabin)

- the cockpit is an exact copy of the actual L-159 aircraft cockpit where all instruments, controls and displays are either original or fully functional copies

Instructor Operating Station (IOS)

- IOS manages the LS-159 simulator control, i.e. switch-on, switch-off, diagnostics and setting of the exercise parameters IOS enables to pause and restart simulation during a training task

Computing system

- The computing system of the L-159 simulator consist of standard PCs and other off-the-shelf hardware

Visual system

- projector
- projector bearing constructions
- screen 250 x 200 cm

Audio system (sounds and communication system simulation)

- Sound output of the simulator is realized by simulation audio system, that reproduces all sounds including radio communication in a digital form by means of DIS protocol.

- Software

- synthetic environment
- aerodynamic model
- propulsion model
- HUUD computer model
- aircraft systems model
- navigation system model
- radar model
- weapon systems model
- CGF model
- DIS/HLA interface

Workplaces equipment:

Pilot workplace (simulator cabin)

- cabin software
- cabin hardware
 - cabin skeleton including the pilot's seat
 - cockpit instruments and controls
 - aircraft control simulation system
 - cabin audio system

Instructor Operating Station (IOS)

IOS is equipped with tools supporting a training task preparation, monitoring and evaluation

- it contents:

- 2 touch-screens to display actual state of the simulation system and enabling the instructor to control the simulation
- control monitor - parameter set-up and task management
- simulation monitor - monitor the situation on the 2D map display
- printer

Technical parameters

Software

- platform: PC
- operating system: Microsoft Windows

Hardware

- power supply: 3 x 400, protection 3 x 16A class B

Standards support

- HLA (IEEE 1516) protocol
- DIS (IEEE 1278) protocol