

## Mil Mi-2 Helicopter Simulator (PTT)

The Mi-2 simulator of the "Part Task Trainer (PTT)" category is designed to support individual training of Mi-2 helicopter pilots. It is a flight simulator equipped with generic mathematic model, that enables to train operating, handling and using of on-board systems of the helicopter.

The simulator is ready to operate in a tactics training mode using DIS protocol or HLA.

### 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 and radio communication systems

### Training options:

#### Individual training

- training of one pilot

#### Developed skills:

- practising of flight procedures
- emergency procedures training
- managing of the on-board systems
- practising of the navigation flights

### Key benefits

- Cost-effective solution comparing to full mission simulators for individual training
- Simple upgrade using off-the-shelf hardware components
- Details - specific simulation of all helicopter systems
- Advanced tools for pre-flight briefing and after action review
- High resolution geo-specific terrain databases



## Technical description

The Mi-2 simulator is designed as a modular system and uses as much as possible off-the-shelf hardware.

### Contents

#### Pilot workplaces (simulator cabin)

- Mi-2 simulator is designed as a modular system and uses off-the-shelf hardware as much as possible. All controls and instruments are simulated by means of touch screens with the same ergonomics as in the actual helicopter. In addition, the cabin is equipped with fully functional replicas of cyclic and collective levers.

#### Instructor Operating Station (IOS)

- IOS manages the Mi-2 simulator control, i.e. switch-on, switch-off, diagnostics and setting of the exercise parameters. IOS enables to pause and restart simulation during a simulation task.

#### Computing system

- Standard personal computers and other off-the-shelf hardware

#### Visual system

- The visual system of the Mi-2 simulator consists of one-channel visual system ensuring realistic visualization of surrounding environment during all phases of the training tasks execution. The visual system consists of LCD display, located in a front part of a cockpit and a software image generator. The software image generator ensures visualization of surrounding terrain, atmospheric effects and simulation entities.

#### Software

- modular software consists of following main components:
  - synthetic environment
  - aerodynamic model
  - propulsion model
  - helicopter systems model
  - navigation system model
  - CGF model
- DIS/HLA interface



### Workplaces equipment

#### Pilot workplaces:

- welded steel construction of cabin deck
- four touch screens
- replicas of collective and cyclic control levers and pedals with spring control load mechanism
- pilot seat

#### Instructor Operating Station (IOS):

- configuration notebook for preparation, monitoring and evaluation of a training task

### Technical parameters

#### Dimensions (mm)

- length 900 x depth 1450 x height 1730

#### Weight

- 230 kg

#### Software

Platform: PC

- operating system Microsoft Windows

#### Standards support

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