

# SIMHELP

Solvers Outside. Engineers Inside.



**DA40/42**

## DA40/42

Developed to meet EASA CS-FSTD (A) requirements for FNPT II and FAA FTD level 5/6 certification. The cabin of FNPT/FTD simulator is the exact replica of Diamond DA42/Diamond DA40 airplane cabin. Dimension of cabin, sizes of instrument panel, seats and yokes match the real aircraft. It has two pilot seats with dual control and the instructor's station behind the cabin. The simulator shows the ground services, departure processes, flight manoeuvres, changeable meteorological conditions, possible failures and flaws that might occur on the motor(s), instrument flights and landings in normal conditions albeit in limited amounts.

The Simulator System allows its further development in terms of wider information structure. It allows modification of the infrastructure of airports and other field objects, creation of new and modification of existing aircraft in terms of aerodynamics and on-board instruments. Up to 5 Customer Airports/airfields are constantly updated.

The simulator allows carrying out actions and cooperating within the framework of an international network of VATSIM (Virtual Air Traffic Simulation). By the date of delivery, the simulator will be newly produced. All the documents regarding the simulator which are issued until the delivery date will meet the requirements of the EASA CS-FSTD(A) FNPTII/FAA FTD LEVEL 5/6 (valid edition on the day for Initial certification).

The software of the simulator is suitable for industry standards and compatible with simulation software. The computer system of the simulator and Instructor station runs under Microsoft Windows Operation System with simulation core based on Lockheed Martin Prepar3D Software.



## KEY FEATURES IN SHORT

- EASA, FAA, ICAO Certification
- SEP and MEP generic configurations compliant with EASA CS-FSTD(A) FNPT II requirements
- Full set of documents, including Master QTGs
- More training at the lower costs of FSTD and its Maintenance
- Enclosed cockpit
- Cabin size, buttons, exact copy of aircraft or origin cabin from aircraft
- Origin cabin, yokes, pedals and interior parts
- Analogue or glass cockpit configurations
- Manageable Circuit Breakers (failure simulation)
- ATC communication simulation
- More than 24.900 airports worldwide + from 5 Customer's airports constantly updated
- Control Loading System
- Instructor's Station to set up, control and record a flight
- Digital video projection to a wide curved screen (from 180°x45° Field of View)
- Delivery and Installation at Customer's site
- Master QTG preparation at Customer's site
- Training of Customer's personnel for Simulator Maintenance and Operation
- 2 year warranty (parts and labour) + friendly after-warranty support



## TECHNICAL FEATURES

### Cockpit

The flight cabin is resistant to shocks and normal loads. Its structure is steady, firm and not affected by the moves of the staff. The control buttons, instruments, control sticks are in right places and resemble the inside of a real aircraft.

### Flight Cabinet's Control (customizable)

- Emergency stop button
- Sound system units control
- Standard atmosphere settings
- External power supply options for cockpit and load control
- Fuel calibration
- Stopping position and new position setting

### Visual System

- The Simulator Visual System consists of three-channel HD video projectors with a curved screen and provides 180° of Horizontal Field of View and 45° of Vertical Field of View.
- It meets visual flight requirements; the images are clear and do not make the pilot suffer from eye strain.
- The Visual system reflects the outside structure and landscape seen from a real aircraft window.



## Avionics

- Garmin G1000 IFDS
- PFD Garmin GDU-1040
- MFD Garmin GDU-1040
- ADF Bendix/King KR87
- Autopilot System
- Manageable Circuit Breakers
- Worldwide Airport Database

## Computer Systems and Peripherals

Computer hardware is compatible with industry standards and reflects the cutting-edge technology. The computer hard disk memory and random access memory (RAM) are able to meet system upgrades and are increasable, if necessary.

## Radio Navigation Simulation

Radio Navigation Simulation is included in the system and it is possible to modify the database of this system when required.

## Simulation of Aircraft Systems:

- Cockpit Avionics
- Power (Electric) System
- Motor System
- Fuel System
- Landing gear (RG), brakes and the nose wheel steering system



## TRAINING

### Control Loading System

Control Loading System (CLS) provides dynamic loads on the simulator's controls in accordance with the type of the aircraft, flight plan and weather conditions. The CLS gives the pilot a sense of reality with a reaction in the use of the elevators, ailerons and rudders.

### Visual Display and Navigation Database

All the active aerodromes in Clients area will be included in the visual display and navigation database. It provides 24.900 Worldwide Airports of Lockheed Martin Airport Database. At least 5 airports in the navigation database will include all the navigation conveniences specified in the AIP of Client Aviation Authority and/or in the European International Airports. At the same time update with regard to future changes is possible.

### Aerodynamics and Performance Features

- It provides a wind effect with the angle of  $0^{\circ}$ - $359^{\circ}$ .
- It provides the atmospheric features in various pressure, temperature, density and height.
- It is able to display input and output features of stalls.

### Additional features for instructors

- Initial position setting
- Access to meteorology pages (visibility, wind, air pressure, temperature, speed and direction settings)
- Access to control pages
- Visual control



- Access to mapping (routing) pages (position, direction, altitude, wind speed, transponder code, flight following etc.)
- Configuration settings (gas control lever, pitch lever, instrument indicators according to the aircraft types)
- Navigation settings

## USER TRAINING & SUPPORT

### Documents

- Maintenance and Operational Manuals
- Quality Test Guide (QTG)
- Conformity Certificate to EASA CS-FSTD (A) FNPT II/FAA FTD level 5/6 issued by SoftekSim

### User training

Simulator is provided with Operational Manual, which provides instructions for Operation along with descriptions of operational features of Simulator. SoftekSim engineers will provide training for Customer's personnel to operate Simulator. Training will be provided at Customer's site after commissioning the Simulator. After training completion Customer's personnel will receive the SoftekSim Simulator Operator Certificate.



### Full warranty

Full documentation for maintenance operations comes with Simulator. Client staff will be trained to do a required periodic maintenance works. A Hot Line for problems and maintenance support is available. Manufacturer Support team is able to connect to Simulator via Internet (Internet connection shall be provided by Client) for problem diagnostic and repair, and also for updates of Simulator Software.

### Simulation System servicing/maintenance

The standard simulator maintenance which needs to be periodically performed is as follows (with man-hour and personnel required):

- Software calibration; once per month – 0.5 man-hour, two person;
- Simulator parts lubrication; every 500 hours of operation, 0.25 men - hour, one person;
- Fastenings and bolt adjustments; every 500 hours of operation, 0.25 man-hour, one person.

### Extended warranty following initial warranty period

- Extended warranty may be provided at extra costs on annual basis
- Extended warranty includes remote support, replacement of any Simulator component, if required

### Simulator system spatial requirements

Simulator minimum space required (W x L x H) 5m x 4m x 2.5m

