As aviation pioneers we are used to going beyond the expected and have taken flight training to the next level. Only Diamond Aircraft offers a complete line-up of type-specific flight training simulators. Operators and students alike benefit from economical practice time, including honing skills for emergency situations that can be scheduled irrespective of weather conditions. Built with real avionics, high-end visuals and sophisticated instructor operating stations, our simulators increase safety, efficiency and effectiveness and offer a cleaner, greener way to train.

**Minimum FSTD room dimensions:**
6 m x 5,5 m x 3 m
19,68 ft x 18,04 ft x 9,84 ft

**FSTD Cockpit dimensions:**
2 m x 1,20 m x 1,65 m
6,54 ft x 3,93 ft x 5,41 ft

The FSTD can be used for basic and advanced pilot training including instrument, navigation and procedures training. Due to the aircraft specific cockpit and high fidelity software the Diamond FSTD can also be utilised for aircraft type specific training, such as cockpit familiarisation, Garmin G1000 NXi training and flight instructor training. It thus provides a distinctive added business value in comparison to more generic procedures trainers.

**FROM INSIDE THE COCKPIT, COULD YOU TELL THE DIFFERENCE?**

The Diamond FSTD has been precisely modelled after the DA40 and the DA42 aircraft. The instrument panel is fitted with the Garmin G1000 NXi avionics suite and standby instruments. It is built with original aircraft parts to achieve the most realistic cockpit environment, including aircraft specific cockpit switches, primary flight controls, throttle quadrant and flight crew seats.

The FSTD features accurate aerodynamics, comprehensive systems replication, realistic aircraft instruments simulation, as well as sophisticated environmental and visual effects.

The flight dynamic model is validated with aircraft reference data from our flight test department. Nobody knows it better than the manufacturer!

The Diamond FSTD is the only training device for the DA40/DA42 fleet available on the market that is based on an officially approved Diamond data package.

The Diamond FSTD guarantees an optimal transfer of training and behaviour between simulator and aircraft.

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THE FLIGHT INSTRUCTOR WORKPLACE
The instructor operating station (IOS) has been designed with the goal to provide a pleasant and efficient work environment for the instructor.

IOS CABIN
The IOS cabin is enclosed on all sides with a sliding door at the rear end. It includes a desk and bookshelves and dimmable ceiling lights.

FLIGHT INSTRUCTOR WORKSTATION
The flight instructor workstation (FIWS) brings the instructor inside the cabin while having full control over the training session. The FIWS is equipped with touch screen monitors on swivel arms and a retractable keyboard.

IOS SOFTWARE
The comprehensive IOS software provides flight instructors with the same capabilities as they are used to find in a full flight simulator — no more small icons and buttons to click on with the mouse, but a self-explanatory touch-screen with logical system pages that can be operated intuitively.

We decided to purchase the training device from Diamond Simulation as this FNPT is reliable and economical to operate. The prime reason was that the simulator is type specific with the same hardware and software as the actual airplane. The outstanding visuals allow for visual flight training and is logical and simple to operate for instructors.

Corporate Communications, Swiss AviationTraining, Zurich-Airport
The Diamond FSTD comes with the GLOBAL CANVAS image generator (IG). This IG has been developed by Diamond specifically to match the typical usage profile of the Diamond FSTD.

The IG features two-cloud levels and realistic cumulus clouds. It also includes weather phenomena, such as wind movement of windsocks, rain, snowfall, and lightning. The standard database includes worldwide satellite image coverage (15m resolution) and worldwide generic representation for airports with "hard" runways.

The image generator contains generic models of all airports with published IFR approaches (Jeppesen ARINC 424 database) and areas of higher satellite imagery resolution up to 5cm per pixel. Custom airport models can be created on request.

The resolution of the satellite pictures is 15m per pixel. The image generator can render terrain textures with a resolution of up to 5cm per pixel.

The following display solutions are available:

- Spherical Screen 220°x45°
- Cylindrical Screen 200°x35°

Display solutions available.
CONVERSION KIT

An additional DA40 instrument panel is delivered with the simulator.

The FSTD can be converted between a DA42 and a DA40 configuration by swapping the instrument panels.

The software is automatically switched to the correct aircraft type.

The converted DA40 FSTD can be qualified as EASA FNPT II or FAA FTD Level 5.

DE-ICING PANEL

The TKS anti-ice system of the DA42 is simulated. The original control panel from the aircraft is correctly located within the instrument panel of the FSTD. The amount of anti-ice fluid is displayed on the G1000 NXi and can be adjusted by the instructor via the IOS software. The effectiveness of the anti-ice system will depend on the severity of the icing scenario selected by the instructor.

MCC CONVERSION KIT FOR DA42

The DA42MCC is a tuned DA42 equipped with fictitious turbo prop engines that meet the CS-25 single-engine power reserves as required by the EASA regulations. Missing required systems, such as the pressurization system, are added for the MCC configuration.

UPC

The computer rack will include an uninterruptible power supply that provides enough power to safely shutdown the simulator after power failure.

CUSTOMIZED AIRPORTS (HIGH FIDELITY)

The custom airport models will provide higher detail compared to the generic models. The airport area is textured with a 0.5 m/pixel satellite image. Apron and buildings. The apron layout corresponds to the aviation chart. Representative apron markings are drawn for published parking positions according to the aviation chart. The apron surface is a generic asphalt or concrete texture. Generic 3D models of static vehicles and aircraft are placed on the apron.

DEBRIEFING SYSTEM

One server computer for recording sessions and storing up to 1,600 hours of session data.

HD camera for the cockpit interior and the external vision straight ahead as seen from a viewpoint between the pilot and the copilot seat.

Recorded flight training sessions can automatically be transferred onto customer-provided long-term storage and backup solution after the training session.

A session recording viewer for debriefing use is provided as installable software package for Microsoft Windows which can be used for guided debriefing, as well as individual self-debriefing. The software allows loading and playing back sessions recordings with standard videoplayer controls (play/pause, fast-forward, rewind, seek on timeline, jump to event) and presents a freely resizable four-panel view.

AVAILABLE OPTIONS AND OPTIONAL FEATURES

A moving map/approach panel showing a bird's-eye-view of the aircraft position and heading on a moving map or a paired vertical and horizontal profile of the approach path for a runway.

A EFIS panel showing a re-imagining of the G1000 NXi PFD contents with selectable CSE source and selectable engine instruments page.

A flight control panel showing the live position of the pitch, roll, and yaw controls, as well as the trim controls, power lever position(s), and the flap and gear controls.

Further on, for any point in the mission, the currently triggered malfunctions and disabled circuit breakers are shown.

AVAILABLE OPTIONS AND OPTIONAL FEATURES
QUALIFICATION

QUALIFY YOUR FSTD. WE SUPPORT YOU!
The FSTD is delivered with the Qualification Test Guide (QTG) containing all information required for qualification in accordance to the respective national requirements and regulations. The QTG contains several tests (objective, subjective and function tests) which describe the simulator’s functionalities and behaviour in detail and allow comparison of the simulator’s characteristics with the respective reference data.

The IOS features an automatic QTG recording tool which allows automatic creation of test reports in pdf format.

MQTG AND E-QTG
Our engineers will prepare the master qualification test guide including the statement of compliance section that you will submit to the national aviation authority. With the e-QTG you have access to a 1 hour self executing QTG, your recurrent is only a few clicks away.

QUALIFICATION SUPPORT
We support you straight away. During this important phase our Lead Engineer will answer technical questions concerning subjective and objective testing, provide explanations and rectify findings.

Diamond FSTDs comply with regulations from EASA, FAA and all major aviation authorities worldwide. Your simulator can be qualified as FTD Level 5 FAA 14 CFR Part 60 and as FNPT II according to EASA CS-FSTD(A).

WE SUPPORT YOU ANYTIME AND GUIDE YOU THROUGH THE PROCESS!

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WE SUPPORT YOU ANYTIME AND GUIDE YOU THROUGH THE PROCESS!
OUR RANGE OF SERVICES:

IN PLANT ACCEPTANCE
When the hardware is assembled and the software is installed Diamond Aircraft will thoroughly test all components of the FSTD. After the internal test Diamond Aircraft invites the customer for the In Plant Acceptance (IPA) which will be performed at the Diamond Aircraft factory.

DELIVERY AND INSTALLATION
After customer acceptance the FSTD will be prepared and packed in special crates for safe shipment. With the installation and delivery service the device will be sent to the final destination.

RELOCATION
Disassembly, transportation and installation at new location. Full maintenance check and recurrent QTG check as well as support for requalification after relocation with the national aviation authority.

GLOBAL TECHNICAL SERVICES

MAINTENANCE TRAINING
With modern and effective teaching methods, our BASIC TRAINING enables your personnel to operate the FSTD under normal conditions and also teaches them to troubleshoot the most common failure modes. ADVANCED TRAINING provides deeper system knowledge and also covers methods to fix more unlikely and complex malfunctions. Both programs also make your personnel familiar with our extensive simulator maintenance manual, which is structured with the scheme of the aircraft maintenance manual in mind.

FLIGHT INSTRUCTOR TRAINING
We train you to set up your training session, selecting malfunctions, setting the weather and everything else. With our immediate troubleshooting training no session will be interrupted!

QTG TRAINING
Running the automatic QTG is easy but could you perform all tests manually? With our QTG training we provide the skills to run, evaluate and present the QTG recurrent check to the National Aviation Authority.

SERVICE AND SUPPORT
Via telephone, email or during our Field Service we identify your needs and address your issues.

SPARE PARTS
Our FSTDs are designed to last. The extensive use of commercial off-the-shelf items minimizes the downtime and simplifies the most common maintenance tasks. Our recommended spare part listing complies with ARINC 646 guidelines and provides you the information to define your stock of simulator parts.

MAINTENANCE CONTRACT
One year or more, with the maintenance contract you have access to our support range with discounted rates:
▪ Free remote support on demand
▪ Priority handling and direct access to second level support
▪ Free updates of the IOS software with additional features
▪ Free periodical inspection of FSTD
▪ Free remote support of recurrent qualifications of the FSTD, including DTG report
▪ Up to 50% discounted rates for our range of maintenance, instructors and DTG training
▪ Up to 50% discounted rates for field service

For more details check out our maintenance contract.

WARRANTY
Diamond Aircraft warrants all devices for 12 months. Warranty extensions are available to the subscribers of a maintenance contract.

Thank you, Diamond Simulation! We run a very busy schedule at CTC Training UK and both our FNPT II have performed impeccably, logging a total of 22,000 hrs of training details and delivered a 99% availability record since August 2008. To maintain this high level of usage would not be possible without the tremendous backing facility your service advisors deliver. Diamond Simulation was the correct choice for CTC training UK.

Drew Guyat, Simulator Manager, CTC Aviation, UK
BE THE NEXT

WORLDWIDE TRAINING ORGANIZATIONS USING DIAMOND SIMULATORS INCLUDE:

Australia
Austria
Belarus
Bulgaria
Canada
People’s Republic of China
United Arab Emirates
Eritrea
Ethiopia
Finland
France
Germany
Ghana
Great Britain
Hondury
India
Iceland
Italy
Jamaica
Japan
Malaysia

New Zealand
Nigeria
Qatar
Romania
Russia
Saudi Arabia
Singapore
Republic of South Korea
Spain
Sweden
Switzerland
Ukraine
USA

Countries marked in light blue on the map.