MFD PC-12-45/EFIS

Introducing Precision Flight Controls (AKA PFC) **PC12-45/EFIS**. The **PC12-45 /EFIS** is a High-Fidelity **Type Specific** FAA-Approved Advanced Aviation Training Device engineered specifically for advanced training, instrument proficiency, and crew coordination.

Flight Deck Realism

The PC-12/45/EFIS cockpit delivers true operational realism by accurately replicating the look, feel, and configuration of the actual aircraft flight deck. Carefully designed panels, authentic control layouts, and aircraft-quality components create a highly immersive training environment that mirrors real-world cockpit operation.

This level of fidelity helps pilots build confidence, procedural accuracy, and muscle memory, improving training effectiveness and skill transfer from the simulator to the aircraft.

PC-12/45 EFIS Key Features

The MFD PC-12/45 EFIS is a **Type-Specific** Advanced Aviation Training Device (AATD) meticulously designed to replicate the Pilatus PC-12 EFIS flight deck. This high-fidelity simulator offers a comprehensive suite of features to enhance pilot training:

- **3-Axis Control Loading**: Provides realistic feedback on pitch, roll, and yaw axes, simulating authentic flight control forces.
- **Optional 3-4 DOF or 6 DOF:** Motion delivers dynamic motion cues to replicate various flight maneuvers and environmental conditions.
- **Backlit Panels:** Ensures clear visibility of instruments and controls under all lighting conditions.
- **Ergonomic Seating:** Offers adjustable seating to maintain pilot comfort during extended training sessions.
- **Integrated PFC GTN Xi750 and 650 Avionics**: Features advanced avionics systems for comprehensive navigation and communication training.
- **EFIS Instruments:** Includes Electronic Flight Instrument System displays for accurate flight data representation.
- **Full Autopilot integration and functionality.**
- **Overhead and Circuit Breaker Panels:** Provides functional panels for realistic cockpit management and emergency procedures.
- **Full-Featured Center Console:** Houses essential controls and systems for comprehensive flight operations.
- **Flight Deck Lighting and Ventilation System:** Ensures a comfortable and realistic cockpit environment.
- **High-Performance Visual and Computer Systems**: Delivers immersive visuals and responsive system performance for effective training.
- Annunciator Panel: Alerts pilots to system statuses and warnings, enhancing situational awareness.
- **PC12 Control Yokes:** Provides authentic control interfaces specific to the Pilatus PC-12/45.
- **Pressurization System:** Simulates cabin pressurization for high-altitude flight training scenarios.
- **5.1 Surround Sound System:** Enhances auditory immersion by replicating realistic cockpit sounds.

These features collectively create a comprehensive training environment, enabling pilots to develop and refine their skills in a setting that closely mirrors the actual Pilatus PC-12/45 EFIS Flight Deck.

Key Benefits
FAA-Approved AATD – Maximizes loggable training time under Parts 61,141 and 142

- True Turbo-Prop – Accurate Flight Model Performance
- All-Metal Cockpit Structure – Commercial-grade durability
- Low Cost of Ownership – Minimal maintenance and high dispatch reliability
- Extremely Accurate Simulator,(many features only found in much higher-level devices)
- 3- Axis Control Loading
- 3-4 DOF Motion System (optional)
- Small Footprint
- **Offsets Training Costs** – Allows many training tasks that would normally be conducted in the aircraft to be completed in the simulator, saving **aircraft operating time, reducing wear and tear, lowering fuel costs, and improving overall training efficiency**. **Train Anytime on Your Schedule** – Conduct training when it's most convenient!

Optional: 3–4 DOF Motion System:
Provides realistic pitch, roll, heave, and yaw effects utilizing advanced washout algorithms to deliver smooth, natural motion cueing while maintaining simulator envelope limits.

Optional: 6 DOF Motion System:
Adds full-axis motion capability, providing pitch, roll, heave, yaw, surge, and sway for maximum realism and enhanced vestibular cueing during complex flight maneuvers, turbulence, and runway operations.

Motion and Cueing Effects Include:
Stall buffet, parasitic drag response, flap deployment cues, landing gear extension effects, turbulence modeling, runway surface texture feedback, engine vibration simulation, and realistic acceleration and deceleration forces and more……

Note: *Insurance companies often prefer simulators equipped with motion systems because they can provide more realistic training cues, which can improve pilot proficiency and reduce accident risk. From an underwriting standpoint, anything that improves training quality and reduces operational risk can lead to fewer claims.*

3-4 DOF

6DOF

Integrated High-Resolution Visual System

Integrated High-Resolution visual system, including multi-channel and wide field-of-view (220 x 45 degree) configuration optimized for smooth performance and realistic visual cues. World-Wide Visuals and Navigation Aids are included. The **PC12-45** uses the X-Plane 12 Professional visual system, delivering advanced flight dynamics and improved atmospheric modeling. Custom scenery is available!

Instructor Operator Station (IOS)

The integrated Instructor Operator Station (IOS) allows instructors to manage training sessions through aircraft repositioning, insertion of system failures, environmental and weather control, and real-time monitoring of aircraft state and pilot inputs.

Create The Environment You Wish to Fly In: Customizable Flight Simulation Settings

With modern flight simulation systems, you can tailor the flying environment to replicate real-world conditions or create unique scenarios that challenge your piloting skills. Here's how you can customize various environmental aspects in your flight simulation experience:

1. Time of Day:
Sunrise: Experience the transition from night to day with the horizon bathed in warm hues, offering limited visibility that gradually improves as the sun rises.
Daytime: Fly under the bright and clear sky, perfect for practicing navigation and visual flight rules (VFR).
Sunset: Fly as the sky turns golden and then shifts to a deep red, providing a beautiful yet challenging low-light setting.
Nighttime: Simulate flight after dark, complete with city lights, starry skies, and the glow of instrument panels, perfect for instrument flight rules (IFR) training.

2. Cloud Types:
Clear Skies: Simulate conditions with no clouds, ideal for VFR practice.
Scattered Clouds: Introduce a mix of clouds that adds complexity to navigation and changes in visibility.
Broken Clouds: Challenge yourself with patches of dense clouds that can obscure visibility and make instrument reliance essential.
Overcast Skies: Simulate flying under a dense cloud cover, useful for IFR practice and realistic weather training.
Cumulonimbus Clouds: Add towering storm clouds that simulate severe weather conditions, enhancing turbulence training.

3. Visibility: Unlimited Visibility: Simulate a clear day with full visibility, excellent for sightseeing flights.
Reduced Visibility: Introduce haze, fog, or smog to practice approach procedures in limited visual conditions.

4. Minimum Visibility: Use this setting for simulating dense fog or severe weather, perfect for precision approaches and decision-making training.

5. Precipitation: Rain: Simulate light drizzle or heavy rain showers to practice wet runway operations and in-flight adjustments for precipitation.

6. Thunderstorms: Incorporate heavy rain, thunder, and lightning for high-intensity training that challenges your handling skills and decision-making under pressure.

7. Weather Phenomena: Thunderstorms: Integrate strong winds, lightning, and turbulence to simulate challenging and dangerous weather scenarios.

8. Rain and Snow: Simulate seasonal weather conditions that affect visibility and aircraft handling.

9. Wind Shear and Crosswinds: Customize wind settings to practice advanced takeoff and landing techniques under challenging wind conditions.

10. Traffic: Air Traffic Density: Adjust the number of AI aircraft to simulate a busy airspace environment, ideal for practicing communication and situational awareness.

11. Real-Time Traffic: Integrate live air traffic for a highly realistic experience that matches current global flight conditions.
Ground Traffic: Include vehicles on the runway and taxiways to enhance realism during taxiing, takeoff, and landing.

Customizing these settings allows pilots to create training scenarios that closely mimic real-world challenges, helping build confidence and improve flight skills under any condition. Whether you're preparing for sunrise takeoffs, nighttime navigation, or stormy weather landings, these environment settings can be tailored to match your desired flying experience.

While some simulators cost less upfront, **we focus on long-term value:**

- Fewer repairs
- Longer service life
- Upgradeable platforms (avionics, visuals, software)

Over time, schools consistently see **lower costs per training hour**.

Real Support from Real Aviation Professionals

Precision Flight Controls does not outsource support to call centers.
You get:

- Knowledgeable technicians
- Direct access to engineers when needed
- Ongoing training and operational support

Accuracy Counts!

QUALITY SIMULATION = POSITIVE TRAINING RESULTS

While the competition offers aftermarket software and avionics, we offer Level D Fidelity by offering OEM Software and Hardware.

Avionics & Systems

Standard Nav/Comms, ALT- Pre-Selector, Flight Director, Advanced Avionics: include G600Txi , GTN750Xi, GTN650Xi, GFC™ 600 Autopilot, software and replica panels with aircraft quality reliability and feel.

All systems are available as high-fidelity software implementations paired with replica panels, delivering aircraft-quality reliability, authentic tactile response, and long-term durability — while minimizing negative training transfer for more effective and realistic pilot training.

PC-12/45 EFIS Instrument Display System

The **PC-12/45 EFIS cockpit** features **high-resolution instrument displays** that provide exceptional clarity, fast system responsiveness, and **remote-control capability for instructor-driven training scenarios**. This architecture replicates the operational layout and workflow of the **Pilatus PC-12/45 EFIS flight deck**, allowing pilots to train in an environment that closely mirrors the actual aircraft.

The display system is **fully modular**, enabling seamless integration with **precision-machined, bezeled instrument panels** designed specifically for the **PC-12/45 EFIS configuration**. This design approach reinforces cockpit familiarity and minimizes **negative training transfer**, helping pilots build confidence and procedural accuracy.

All panels are constructed using **aviation-grade switches, encoders, and high-quality components** to ensure the proper tactile feel, durability, and long service life expected in professional training devices. **Backlit legends and annunciators** are standard, enabling effective **night, IFR, and low-visibility training operations** while maintaining excellent readability under all lighting conditions.

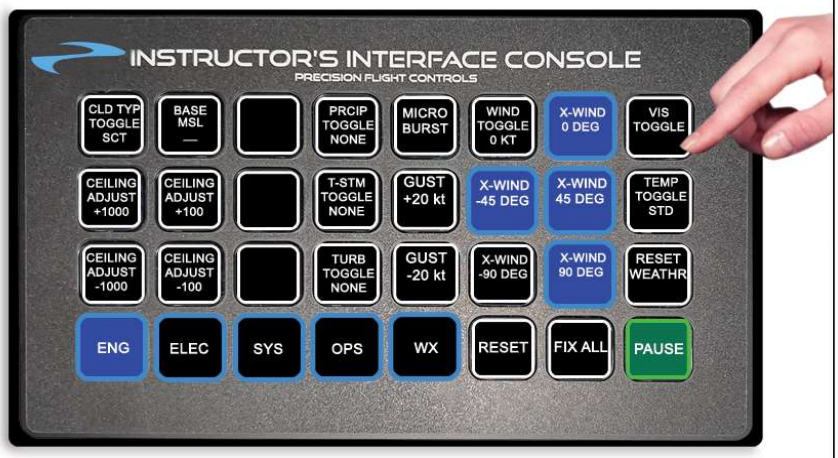
ForeFlight
Intelligent Apps for Pilots

JEPPESEN
A BOEING COMPANY

The system is ready for Geo Reference Connectivity to your moving map software!

ForeFlight provides access to a full library of current VFR, IFR, TAC, area, and gulf charts. All charts are elegantly projected onto a 3D representation of the world, and charts of the same type are interweaved into a seamless single map - no more fumbling with paper in the cockpit.

Touch Based IOS Interface



The Instructor's Interface Console is a pre-programmed graphic interface for the flight instructor. You can immediately or pre-set a system failure(s), reposition the airplane, pause the simulation and make weather changes on the fly.

Each tactile button changes color depending on the situation, for example: If you choose to set an engine fire push the Engine Fire Button, (defaulted to green meaning there are no failures selected) once depressed, the button will turn Red indicating an Engine Fire has been initiated). You can reset the failure by pushing the button again.

The Instructor's Interface Console is plug and play with a simple USB connection.

pilotedge

Stay Current and Maintain Proficiency

A complete training solution—from first solo to advanced proficiency.

Crafted with **precision engineering**, **real Garmin™ integration**, and a fully **FAA-compliant architecture**, our simulators deliver **uncompromising realism** and measurable **training value**.
Whether you are training a new pilot or refining advanced procedures, this is the platform professional's trust.

Built for Flight School Reality

Flight schools need equipment that works every day.

System Features:

- All-metal Cockpit Structure
- Commercial-Grade Components
- High Dispatch Reliability
- Low Maintenance Requirements
- 3 Axis Control Loading
- GTN 750TXi Software
- Optional 3-4 DOF or 6DOF Motion
- Many Options to fit your training

We understand flight school pressures because we collaborate with them.

You are not just buying a simulator, you are investing in reliability, credibility, and training outcomes!

Why purchase from Precision Flight Controls?

For over 30 years Precision Flight Controls helped flight schools train better pilots, reduce operating costs, increase utilization, and protect long-term investments.

Complete System

Pricing Starting as Low as:

$345,000

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FLIGHT CONTROLS

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