

# Introducing EASy II

Make the most out of your EASy flight deck

he first EASy-equipped Falcons flying in 2003 set a new industry standard in terms of intuitive flying and situational awareness. Since then, the EASy flight deck has won high marks for its revolutionary integrated man-machine interface, and praise from the more than 300 operators that now fly EASy Falcons everyday.

In our ongoing effort to provide operators with the most advanced technologies, Dassault Falcon, in partnership with Honeywell, has developed EASy II. Largely based on operator feedback, EASy II applies new features that represent a major advancement for Falcon operators. It will be available for both new production Falcons and in-service aircraft. The following pages present new EASy II features and capabilities which further enhance safety and simplicity while also dramatically improving Falcon aircraft efficiency.

Discover a smarter way to fly... with EASy II.

### **EASy II Benefits As Told By Our Pilots**

Jean-Louis Dumas - EASy II test pilot - Dassault Aviation Rich Iudice - Director, Flight Operations - Dassault Falcon Jet



#### Please give us your impressions of EASy II.

**Jean-Louis Dumas**: It is a major change compared to EASy with new functions introduced: mainly the improved display symbology to improve the situational awareness and features like WAAS LPV and RNP SAAAR which enable new approaches. Of course, there are also many features helping the pilots to make the flight easier, like CPDLC.

**Rich ludice**: EASy II takes advantage of the best technologies available, bringing the EASy cockpit up to the highest level of performance.

#### How will EASy II further improve flight safety?

**JLD**: The SmartView<sup>™</sup> - Synthetic Vision System (SVS) displays the terrain right in front of the pilots. SmartView<sup>™</sup> also displays the horizontal and vertical path indicated with the flight path symbol as in the Head Up Display (HUD). The HUD symbology combined with the 3-D terrain increases the crew situational awareness, increasing their understanding of the flight trajectory and ultimately improving flight safety.

**RI**: Improved pilot – controller communication through CPDLC and ADS-B OUT also results in decreased workload for both the pilot and controller. Consequently this capability enhances the flight safety.

ADS-B capability is the corner stone of the next generation ATM system.

In addition to this, improvements in INAV graphics, including the XM<sup>®</sup> Weather display, gives the pilots "look ahead" information about turbulence, or lightning to help them in the decision making process earlier in the flight.

**JLD**: Further, in case of failure of the pressurization system the autopilot takes care of the aircraft by automatically descending to a safe altitude through the Automatic Descent Mode (ADM) feature.

#### What will be the advantages for the passengers?

**JLD**: More destination airports will be accessible using WAAS LPV and RNP SAAAR approaches. Already close to 1900 LPV approaches in the United States.

**RI**: Passengers will enjoy a new way of flying thanks to EASy II: with more comfortable descents and approaches due to constant rate descents, shorter leg times due to increased ATM efficiencies with Next Gen (ADS-B capability) and increased comfort by avoiding areas of turbulence using XM<sup>®</sup> Weather.

#### How can EASy II further increase a Falcon aircraft efficiency?

**RI**: Lower minima will be available for more approaches, opening more airports to pilots under adverse weather conditions.

ADS-B OUT will give ATC the capability to provide more direct routing and continuous descents. WAAS LPV and RNP SAAAR approaches will provide constant descent approaches (CDA) to many more airports than in the past, eliminating step down descents and approaches to a large extent.

**JLD**: The TOGA mode can be used with AP engaged, it decreases the workload close to the ground just after take off.

Flight safety enhancements, pilot workload reduction and improvement of the situational awareness contribute to the global efficiency of the new Falcon EASy.

## EASy II BASELINE

### EASy II provides new functionality and many system improvements as standard

#### Improved display symbology

- Increases safety and situational awareness
- Full scale horizon line
- Increases crosswind awareness
- Additional HUD-like free floating flight path symbology



Note: Improved display symbology is presented here with SmartView™ SVS feature (See Options page for SVS presentation)

#### SmartRunway<sup>™</sup> - RAAS (Runway Awareness and Advisory System)

Addresses the number two NTSB initiative to improve runway safety

- Further helps reduce the risk of runway incursions and excursions with aural alerts

- Adds to existing functionality by enhancing pilot situational awareness on the ground and in the air in different situations



Example of two types of situations

#### FMS Flight Management System upgrade to 7.1

- **Temperature compensation:** allows the crew to avoid the temperature limitations for some approaches (e.g. GPS approaches, RNP SAAAR...)

- Enables RNP SAAAR 0.3 capabilities - More than 200 RNP SAAAR approaches in the United States today

Improves safety by eliminating circling maneuvers and providing lateral and vertical guidance on a curved path to the runway: for instance Palm Springs RWY 13R
LNAV is automatically engaged on the missed approach procedure when go around is activated
Facilitates "Radius to fix" legs



Reproduced with permission of Jeppesen. NOT FOR NAVIGATIONAL USE © Jeppesen. 2008.

#### TOGA (Take Off

#### (Take Off and Go Around) - Provides flight director guidance during

take off and go around, with or without a single engine inoperative

- **Autothrottle (AT)** can be armed on ground. At 400 ft AGL the AT will be automatically engaged



1. In Baseline only for Falcon 900 and 2000 retrofit installation.

## **EASy II OPTIONS**

### EASy II helps you customize your flight deck with the following main optional enhancements

#### **Enhanced NAV Package**

- > WAAS LPV (Wide Area Augmentation System Localizer Performance with Vertical Guidance)
  - Increases the number of accessible airports in adverse weather conditions
  - ILS-like approaches based on GPS
  - GPS horizontal / vertical guidance down to 200 ft minimums (near ILS cat I minimums)
  - Already close to 1900 LPV approaches in the United States and increasing rapidly
- > RNP SAAAR 0.1 (Required Navigation Performance Special Aircraft Aircrew Authorisation Required)
  - Provides access with low minimums in challenging terrain environments



#### SmartView<sup>™</sup> SVS (Synthetic Vision System)

- **Improves flight crew situational awareness and aircraft operational safety** when flying mountainous terrain or to unfamiliar destinations
- Provides a synthetic and realistic image of the surrounding terrain in simulated daylight VFR conditions
- HUD symbology coupled with the most advanced 3-D terrain representation allows the crew to understand their flight path and the interaction with the surrounding terrain
- Provides visual cues on the airport surface to reduce the risk of runway incursions





#### ADM (Auto Descent Mode)

- Initiates an automatic descent to a safety altitude in case of depressurization that could affect crew consciousness
- Autopilot and Autothrottle guides aircraft to safe altitude
- Additional peace of mind for business jets operating at very high altitudes
- Reduces crew workload in the unlikely event of a critical depressurization situation

# XM<sup>®</sup> Graphical Weather integrated on the INAV map

- Receives XM<sup>®</sup> broadcast graphical weather for
- enhanced operational efficiency and smoother flight
   Provides the crew with the necessary weather information to optimize the route according to operational constraints in terms of comfort, safety, fuel consumption, arrival time



- Requires XM<sup>®</sup> graphical weather service subscription

#### CPDLC (Controller Pilot Data Link Communication) compliant with FANS 1A Std

- **Reduces communication traffic** on clogged ATC frequencies; enhances safety by avoiding language issues and miscomprehension
- Saves fuel with more efficient oceanic routing
- Operational at Santa Maria, Gander, Shanwick, Reykjavik and New York in the North Atlantic, over main areas of Pacific routes and in some areas in Asia

#### ADS-B Out (Automatic Dependent Surveillance - Broadcast)

- Fundamental to the future of Air Traffic Management - Allows better use of airspace, provides routing
- advantages for ADS-B equipped aircraft
  ADS-B infrastructure already installed in Southern Florida and will be deployed to 16 of the 20 en route centers
- beginning with Jacksonville, Boston and Seattle
- ADS-B infrastructure deploying in Western Europe as well





For information on EASy II, please contact your Falcon representative. www.dassaultfalcon.com



in partnership with

