

#### IAOPA World Assembly Beijing

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To consider some of the global trends in General Aviation and Aerial Work operations.

## **General Aviation**

The term General Aviation is the ICAO generic term used to describe flying activities which are <u>not</u> Commercial Air Transport (CAT) or Military (Mil) Aviation.

Ariel Work Operations (AWO) are a subgroup, which for the purpose of this presentation is included in the term General Aviation (GA).

# **General Aviation**

Also includes:

- Sports flying
- Recreational flying
- Flight Training
- Personal Air Transport (self-fly business/ touring)
- Business Aviation (Corporate Aviation) 98% of these flights take place outside of controlled airspace.

## **General Aviation Aircraft**









#### More General Aviation Aircraft





























# 1<sup>st</sup> February 1990

This was the year I joined AOPA in the United Kingdom.

General Aviation was a little different back then but I do remember the association's concerns were about Mode S Transponders and 8.33 kHz radios. But what else was different?



#### Mobile Phones









## How about Televisions





#### **Computers and Laptops**



# What was I flying then?



## And what am I flying now?

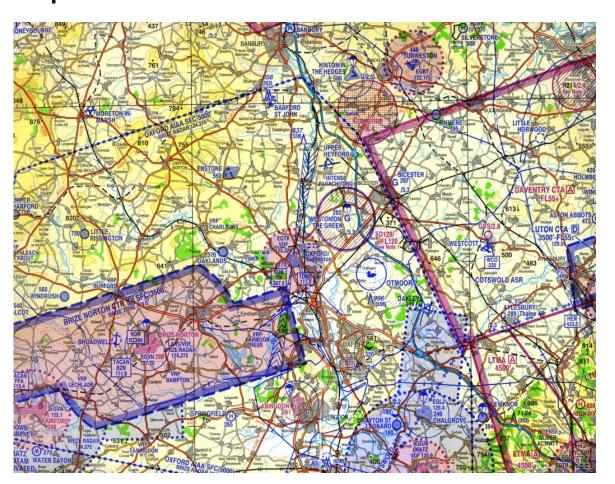


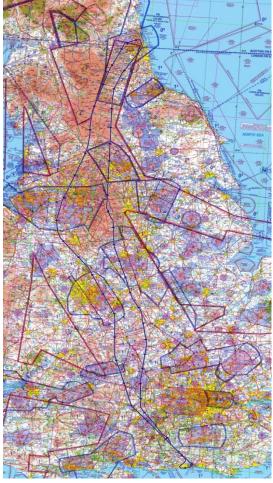
## But the cockpit !





#### Charts of the UK airspace





# Use of Tablets – weather and NOTAMS



#### Jeppesen Mobile TC

Mobile Electronic IFR / VFR Flight Charts for Your iPad!

LEARN MORE >

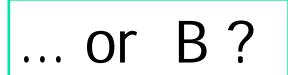


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#### What does your cockpit look like?



A ?



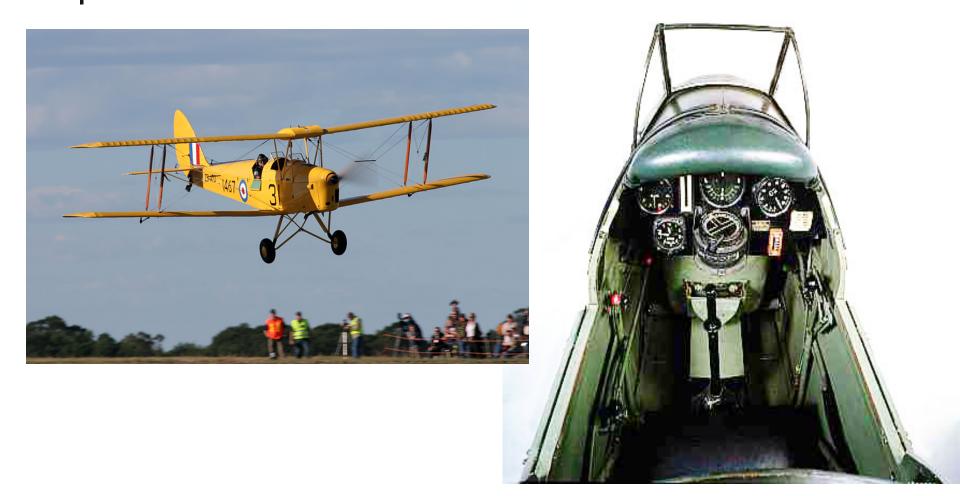


# **Todays Typical Cockpit**

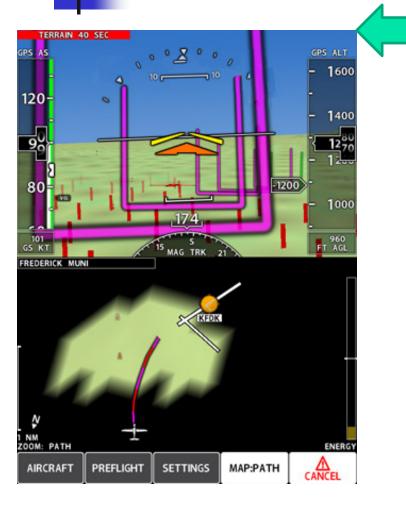




## 1930s Aircraft and Cockpit



#### Terrain information from your iPad



This iPad screen shot shows the desired flight path to the nearest runway. The airplane is flying at 99 KIAS, descending 1,200 fpm, and slightly low.



## Latest Cockpit Design











#### Both these aircraft are GA



One is VFR only, the other both VFR and IFR





In 1990 we had a total fleet of 7146 single and multi piston engine aircraft. The majority being single engine.

In 2013 that figure had grown to 8809 again single and multi piston.

Interestingly the numbers show that in the UK this represents about 55% of the total, when you include gliders, helicopters and ultra lights.

#### Single and Multi piston engine aircraft

#### 1990 in the USA

- S/E total 165,000
- M/E total 23,000

- 2012 in the USA
- S/E total 129,000
- M/E total 14,000

Average age 39 years

## **Pilot Certificates**

#### 1990 USA

- Private 300,000
- Total 700,000 (inc. CPL/ATPL)
- In 2013
- Private 180,000
- Total 600,000
- Student starts back to the 1990/91 level of 120,000

#### 1990 UK

- Private 25,000
- Total 50,000 (inc. CPL/ATPL)

#### In 2013

- Private 18000 (active)
- Total 60,000
- New license annual issues average down to 2500 from 3500

The economic value of GA in Europe is between €14 - €28 billion p.a.



- Maintenance and Production 20,000+Flight Schools 6,000+
- Airfields
- Jobs in GA

5,000+110,000+

Aircraft sales, Insurance, Fuel sales etc. all contribute to the economic value.

The economic value of GA in the UK is between £1.4 - £2.8 billion p.a.



Maintenance and Production 300+
Flight Schools 600+
Airfields 600+
Jobs in GA 11000+

Aircraft sales, Insurance, Fuel sales etc. all contribute to the economic value.

The economic value of GA in the USA is estimated at \$150 billion p.a.

- 1.2 million jobs
- \$150 billion going into the US economy annually.
- 14,000 airfields connecting local communities

Aircraft Sales, Flight Training, Insurance, Fuel Sales etc., all contribute to the economic value.

# Future

# Google glasses may be able to provide a 'heads up' display for GA



GA will continue to embrace new technology as it comes along

It's a well known fact that in 1975 the average life of a computer was 7 years, today its 2 years.



#### **General Aviation perspective for future growth**

- A 10% growth p.a. over 10 years equals a 250% growth in revenues and jobs.
- GA will not be a means of mass transportation, but it can occupy an important niche in personal travel.
- Very Light Jets will significantly expand the market.
- New fuels and engines will improve ecology.
- New avionics and ATM technologies will improve safety and efficiency.
- Regulatory impact should match the activity and be proportionate to the risk.

