



Civil Air Patrol

Aerospace Education



www.gocivilairpatrol.com



Introduction to Aircraft Recognition



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Agenda

- **Introduction to Aircraft Recognition**
 - **Techniques**
 - **Resources**
 - **Why Is This Important**
- **Next Month's AE Presentation / Competition**



The Basics

- **What Kind of Acft / What To Look For**
 - **Civilian / Military**
 - **Airplane / Helicopter / Airship - Balloon / Other**
 - **Color / Paint Scheme**
 - **Size**
 - **Number and Type of Engines**
 - **Prop / Turbo-prop / Jet / Rocket / Unpowered**
 - **High Wing / Low Wing / Rotary Wing**
 - **Windows / Landing Gear / Tail**



Civilian / Military



FlightAware.com

FlightAware.com





Civilian / Military



FlightAware.com

FlightAware.com



FlightAware



Type of Aircraft

Airliners.net

- **Airplane**



- **Rotary Wing / Helicopter**





Type of Aircraft

Airliners.net

- **Airship / Balloon**



- **Other**





Color / Paint Scheme





Size



Airliners.net



Type of Engine

- Prop (Piston)



- Turbo-prop





Type of Engine

Airliners.net

- Jet



- Rocket





Type of Engine

- Unpowered





Number of Engines

- **Single Engine**





Number of Engines

Airliners.net

- **Twin Engine**





Number of Engines

Airliners.net

- **Three Engine**



➤ B-727



Airliners.net



Number of Engines

- **Four Engine**
 - A380 or B747





Number of Engines

- > Four Engines



B-52



Other Features

- **Wing**
- **Windows**
- **Landing Gear**
- **Tail**



High Wing / Low Wing / Rotary

- High Wing



- Low Wing



- Rotary Wing





Windows

- Many → Passenger acft

B-737



B-787



Windows

- Few → Cargo, Bomber





Windows

- Few → Tanker, Special Use acft





Landing Gear

- **Tricycle**



- **Tail-Dragger**





Landing Gear

- Other



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AIRLINERS.NET



Landing Gear

- Fixed





Landing Gear

- Retractable



- Floats





Tail

- Conventional / “Straight”



- T-tail





Tail

- Other





Tail

- Other





Civilian Aircraft

- **General Aviation (GA)**
- **Business Acft (BizJets)**
- **Airliners**
 - **Regional**
 - **Majors**
 - **Domestic**
 - **International**



General Aviation (GA)



Cessna 172 & Piper Cub ↑ Piper Warrior ↓



Piper Seneca ↑ Cessna 310 ↓





Business Acft (BizJets)



Beechcraft Super King Air 200

Gulfstream III



Gulfstream II (late 1970's)



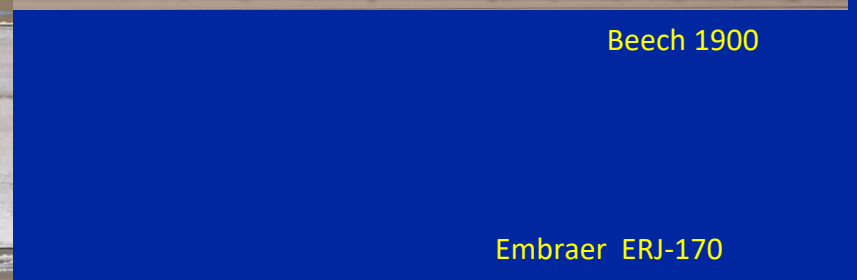
Airliners - Regional



Beech 1900



Beech 1900 & ERJ-145



Embraer ERJ-170





Airliners – Majors (Domestic)



Airbus A320

Boeing 737-700





Airliners – Majors (International)



Boeing 767-300F



Airbus A330



Airbus A350

Boeing 777



Military Aircraft

- **U.S. / Allied / Adversary**
- **Air Force / Army / Navy / Marines / Coast Guard**
 - **Bomber**
 - **Cargo**
 - **Fighter**
 - **Tanker**
 - **Trainer**
 - **Other**
 - **Rece (Spy) / Helicopter / UAV / ASW / ??**



Military Aircraft

Bomber / Cargo



B-52



C-17



Military Aircraft Fighter



F-35



F-16



Military Aircraft Tanker



B-2 & KC-135



KC-10



Military Aircraft Trainer



T-6A Texan II

T-38 Talon





Military Aircraft

Rece (Spy) / Helicopter / UAV / ASW / ??



E-3 AWACS



U-2 Dragon Lady



AH-64 Apache



MH-53 Pave Low



Military Aircraft

Rece (Spy) / Helicopter / UAV / ASW / ??



MQ-1B Predator



MV-22
Osprey

Lockheed P-3C Orion





Resources

- **AirLiners.net**
 - <https://www.airliners.net/>
- **Flight Aware**
 - <https://flightaware.com/photos/>



Why Is This Important

- You're a Fighter Pilot patrolling the skies over Syria.
- Friend -or- Foe
(Allied -or- Adversary)

Israeli F-15



Airliners.net



Syrian Mig-21

francona.blogspot.com



Why Is This Important

- You're a passenger flying to Seattle WA (SEA), leaving from gate F3 at PHX on Delta Air Lines flight # 1388,



FlightAware.com

- and you see this at your gate:



Airliners.net



Next Month's AE Presentation

- **Aircraft Recognition contest**
- **Cadets split into teams (2 or 3 per team)**
- **Aircraft pictures with multiple choice answers**

- **Military -or- Civilian aircraft**
 - **which do you want**





Black Sheep Sqdn 314



<https://scottsdale.cap.gov/>