

Double Eagle Aviation Academy





Aircraft Viewing























Skylane

















Introduction





CHAPTER
179
Albuquerque, NM

PHONIC
ALPHABET

STORAL
GUARD









8





8



Levi
Brandon

QMI

Harlow
Morgan



Alyssa
Morgan

Tanner
Morgan



Ground Rules

- Get involved, ask questions!
- Get to know each other
- Teamwork - help each other learn
- Start and end on time
- Stand and stretch as needed
- Take restroom breaks as needed, facilities limited
- Stay with class - sign out if you leave building
- No cell phones, no texting in class
- Please respect others

Have Fun! Learn a lot!



Harlow

Preflight













N990P

BladeCell











































Small text above name tag:
Small text above name tag:
Daniel
Kishine
Small logo at bottom right of tag





Aerodynamics

Session Objectives



You'll be able to:

- List the four forces of flight
- Describe mass and density
- Explain Newton's Laws
- Describe dynamic pressure
- Describe how lift is produced
- List the three axes of control
- Know the control surfaces of an aircraft
- Explain why wing stall occurs
- Calculate wing lift



RESTRI
AR
NO
TRESPAS
DE PRO



4 Forces of Flight



Session Objectives

- You'll be able to:
- List the four forces of flight
- Describe mass and density
- Explain Newton's Laws
- Describe dynamic pressure
- Describe how lift is produced
- List the three types of control
- Know the components of an aircraft
- Explain why wing stall occurs
- Calculate wing lift



Calculate the Stall Speed

$$\text{Lift} = \frac{1}{2} \rho V^2 C_L S$$

But here we know the Lift required, what we want is
we must rearrange the equation to solve for V.

Feather Rock

TAL



6 7 8 9 10

EAA 171

EAA 171

Commercial Pilot














Compass Headings

How did the Runway numbers get their number?

Runway numbers are determined by rounding the compass bearing of the runway and to the nearest 10 degrees and dropping the last digit, meaning runways are numbered from 1-36.

Compass Rose: Runway Orientation Cues







Session Objectives



- You'll be able to:
- Identify cardinal and inter-cardinal compass headings
 - Determine a heading for a crosscountry flight
 - Identify runway headings
 - Describe true and magnetic north
 - Identify magnetic variation on a sectional chart
 - Identify latitude and longitude on a map



Weather Rack





Stephan
James

Stephan
James



Xavier
M...

Dominic

Dominic

Auggie
Turner

Declar

NASHVILLE





2023
OS-11027
2023

656
Name

656
Carlos
Riker

656
Riker
Riker



Aviation Weather





6 7 8 9 10

EAA 179

Winds affect travel time

Which flight path (A, B, C, D) moves over the ground fastest?

Wind Arrows show wind direction
Tail feathers show wind speed



PHONETIC ALPHABET

A	ALFA
B	BRAVO
C	CHARLIE
D	DELTA
E	ECHO
F	FOXTROT
G	GOLF
H	HOTEL
I	INDIA
J	JOKE
K	KILO
L	LEADER
M	MICHAEL
N	NOVEMBER
O	OSCAR
P	PAPA
Q	QUEBEC
R	ROMEO
S	SIGMA
T	TANGO
U	ULTRA
V	VERMONT
W	WHISKEY
X	XRAY
Y	YANKEE
Z	ZULU



EAA CHAMPIONSHIP
17
Albuquerque



Convective Lift

Thermals

Created by uneven heating of ground by solar radiation

- Heated ground warms air near the ground
- The heated air expands, becoming less dense and rises

Bumpy summer afternoon ride?
or
Free ride!

Thanks to Convective Lift in the next several slides!



AC 00-64 Aviation Weather
Federal Aviation Administration
2015


EAA
THE SPIRIT OF AVIATION®



Aircraft Viewing





N179Q







Double Eagle
Aviation
Academy





Bozette Eagle Academy
**Levi
Brenden**

Eagle 2

Bozette Eagle Academy





















nicht!!





Flight Testing









Instruments







PHONETIC ALPHABET

Weather Book

AIRCRAFT INSTRUMENTS
Will Taylor

EAA
THE SPIRIT OF AVIATION

EAA CHAPTER 179
Albuquerque, NM

ATC Careers



ATC Career Path
1. Pilot
2. ATIS
3. Tower
4. Unicom
5. Ground
6. Ramp
7. Gate
8. Baggage
9. Fuel
10. Air Traffic Control









Communications

Typical Conversation

- Pilot - Initial call (who, where)
- ATC - Acknowledges (call sign and position)
- Pilot - Make request (taxi, take off, land, taxi)
- ATC - Acknowledges, provides instructions or clearance
- Pilot - READBACK
 - Repeat instructions and clearances
 - OR Confirm receiving information
- Note: include call sign at the end of all transmissions

GENETIC LABEL

Weather Rock



Typical Conversation

- Pilot – Initial call (who, where)
- ATC – Acknowledges (call sign and position)
- Pilot – Make request (taxi, take off, land, taxi)
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 - OR Confirm receiving information
- Note: include call sign at the end of all transmissions





Tower Visit







Traffic Pattern







REGENERATIVE AIR SYSTEMS
TYMCO
WACO, TEXAS





Radio Practice











Do

Aviation
Acad

Double Eagle Aviation Academy
Matthew
Croshaw

EAA



Test

123.45



KAE6
Two 120.15
One 121.63
ATIS 119.03
Approach 127.4
123.45

Double
Addition
Academy





KAEG Twr 120.15
Gnd 121.63
ATIS 119.03
Approch 127.4

Test 123.45



KAEG Twr 120.15
Gnd 121.63
ATIS 119.03
Approch 127.4

Test 123.45







Approach 127.4

Test

123.45



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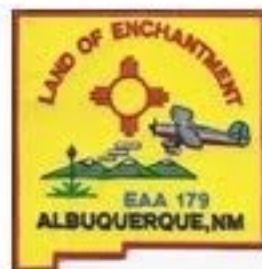
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Aircraft Viewing









N3311











N364TB

318

N33

















Drones



PHONETIC ALPHABET

A	ALFA
B	BRAVO
C	CHARLIE
D	DELTA
E	ECHO
F	FOXTROT
G	GOLF
H	HOTEL
I	INDIA
J	JULIETT
K	KILO
L	LIMA
M	MIKE
N	NOVEMBER
O	OSCAR
P	PAPA
Q	QUEBEC
R	ROMEO
S	SIGMA
T	TANGO
U	UNIFORM
V	VERMONT
W	WHISKEY
X	XRAY
Y	YANKEE
Z	ZULU

Careers in sUAS

John Thomas



D



Types of Industries

<ul style="list-style-type: none">• Law Enforcement (Police)• Emergency Medical Services• Disaster Relief and Recovery• Search and Rescue• Emergency / Disaster• Rehabilitation• Geology / GIS• Aviation• Construction	<ul style="list-style-type: none">• Military• Criminal Justice• Forensic• Law Enforcement• Atmospheric/Oceanographic• Energy Production• Aviation and Space Operations Management• Mining
--	--







Mark "Hawk" Thoman

BS Education – History & Government
Retired Marine Aviator – CH-46 and KC-130
MV-22 Simulator Instructor – MCAS New River
Member EAA and AOPA
Restored and fly a Champion Citabria

EAA



• Weights & Balance

Mark "Hawk" Thoman



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Aiden

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RESTRICTED
AREA
NO FLIGHT

Xavier

Vincent

EAA 179

Training Objectives



- Understand how WEIGHT and BALANCE effect an airplane.
- Understand the basic principles of CENTER OF GRAVITY.
- Calculate the GROSS WEIGHT and CENTER OF GRAVITY for your flight.

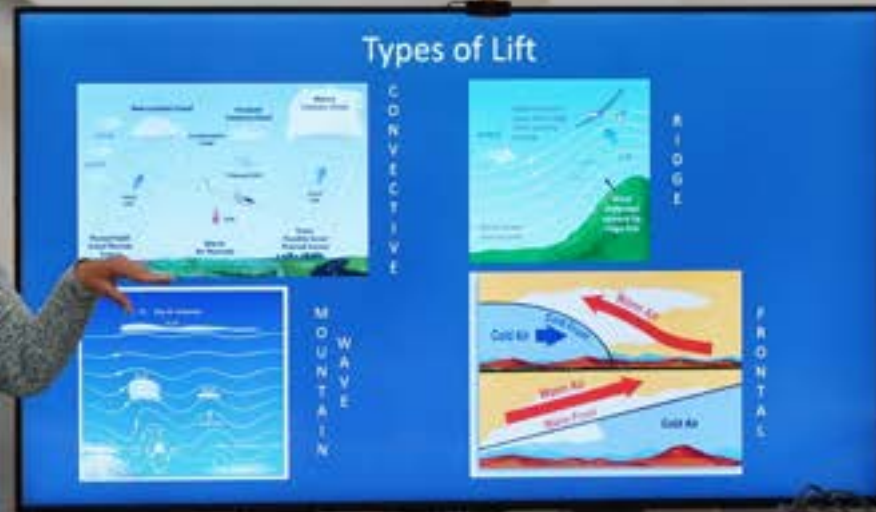


PHONETIC ALPHABET

Weather Book



Gliders



PHONETIC ALPHABET

ALPHA	.....	.....
BRAVO	.....	.....
CHARLIE	.....	.....
DELTA	.....	.....
ECHO	.....	.....
FIST BOY	.....	.....
GOLF	.....	.....
HOTEL	.....	.....
INDIA	.....	.....
JULIET	.....	.....
KILO	.....	.....
LIMA	.....	.....
MIKE	.....	.....
NOVEMBER	.....	.....
OSCAR	.....	.....
PAPA	.....	.....
QUEBEC
ROMEO
SIXTIN
TANGO
UNIT DEM
VIC TOR
WHISKEY
XRAY
YVES
ZULU

Weather Rock






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Albuquerque, NM

PHONETIC ALPHABET

A	ALFA
B	BRAVO
C	CHARLIE
D	DELTA
E	ECHO
F	FOXTROT
G	GOLF
H	HOTEL
I	INDIA
J	JULIETT
K	KILO
L	LIMA
M	MIKE
N	NOVEMBER
O	OSCAR
P	PAPA
Q	QUEBEC
R	ROMEO
S	SIGMA
T	TANGO
U	ULTRA
V	VERMONT
W	WHISKEY
X	XRAY
Y	YANKEE
Z	ZULU

Navigation

Communication Frequencies:
Who 'Ya gonna' call?



Common
Traffic
Advisory
Frequency
(CTAF)
122.8
Non-towered

The slide displays an aeronautical chart with several communication frequency circles. A red circle highlights a specific area on the chart. To the right of the chart, there is a blue box containing text about Common Traffic Advisory Frequency (CTAF) and a small icon of an airplane.



Weather Rock

ENTAL
T
TION

Communication Frequencies: Who 'Ya gonna' call?



Common
Traffic
Advisory
Frequency
(CTAF)
122.8
Non-towered
airport





Domacio
Salazar

Vincent





Aegis
Bartkus

Isabella

Carlos









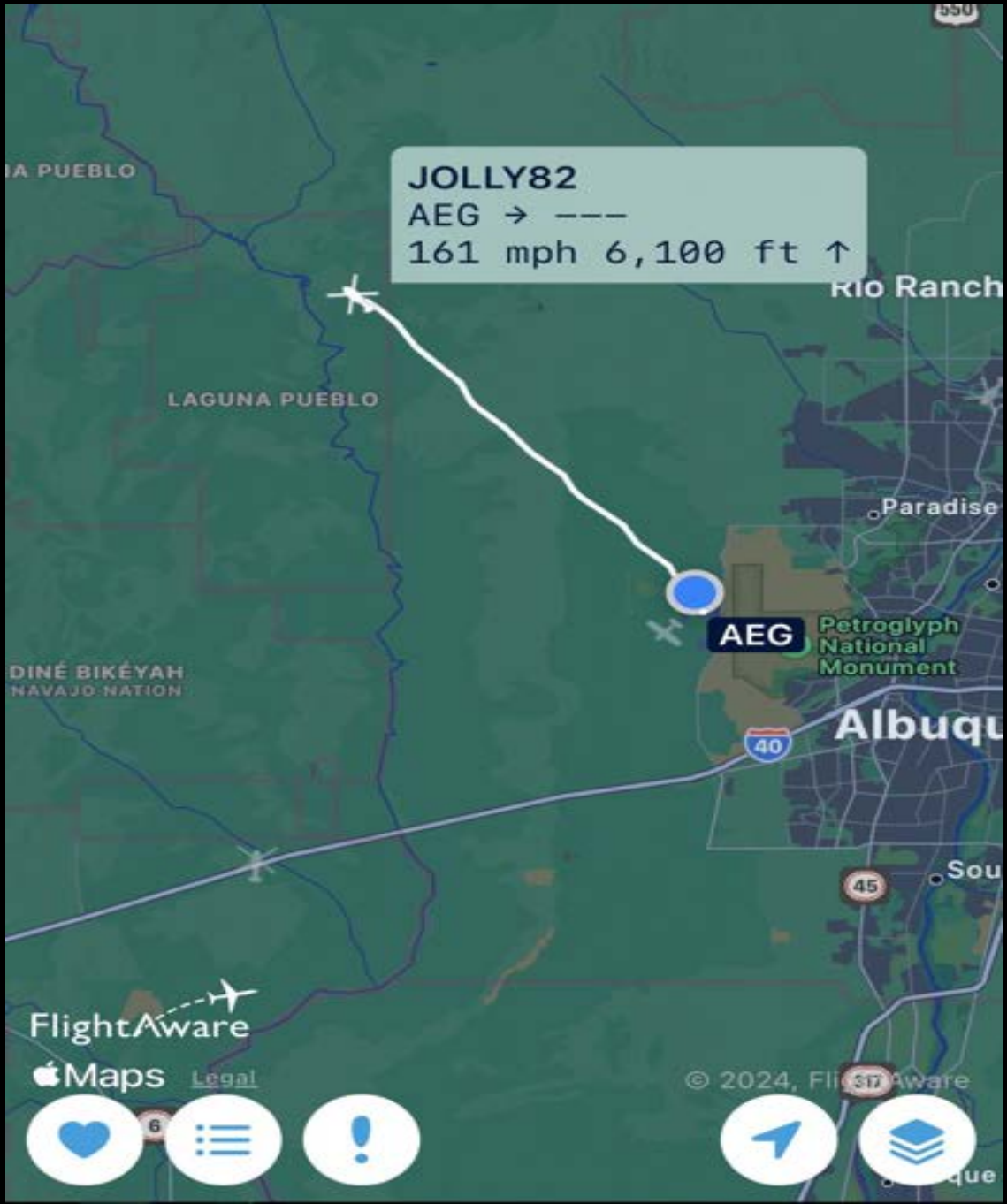
Isabella

Carlos
Zamora





• Air Force







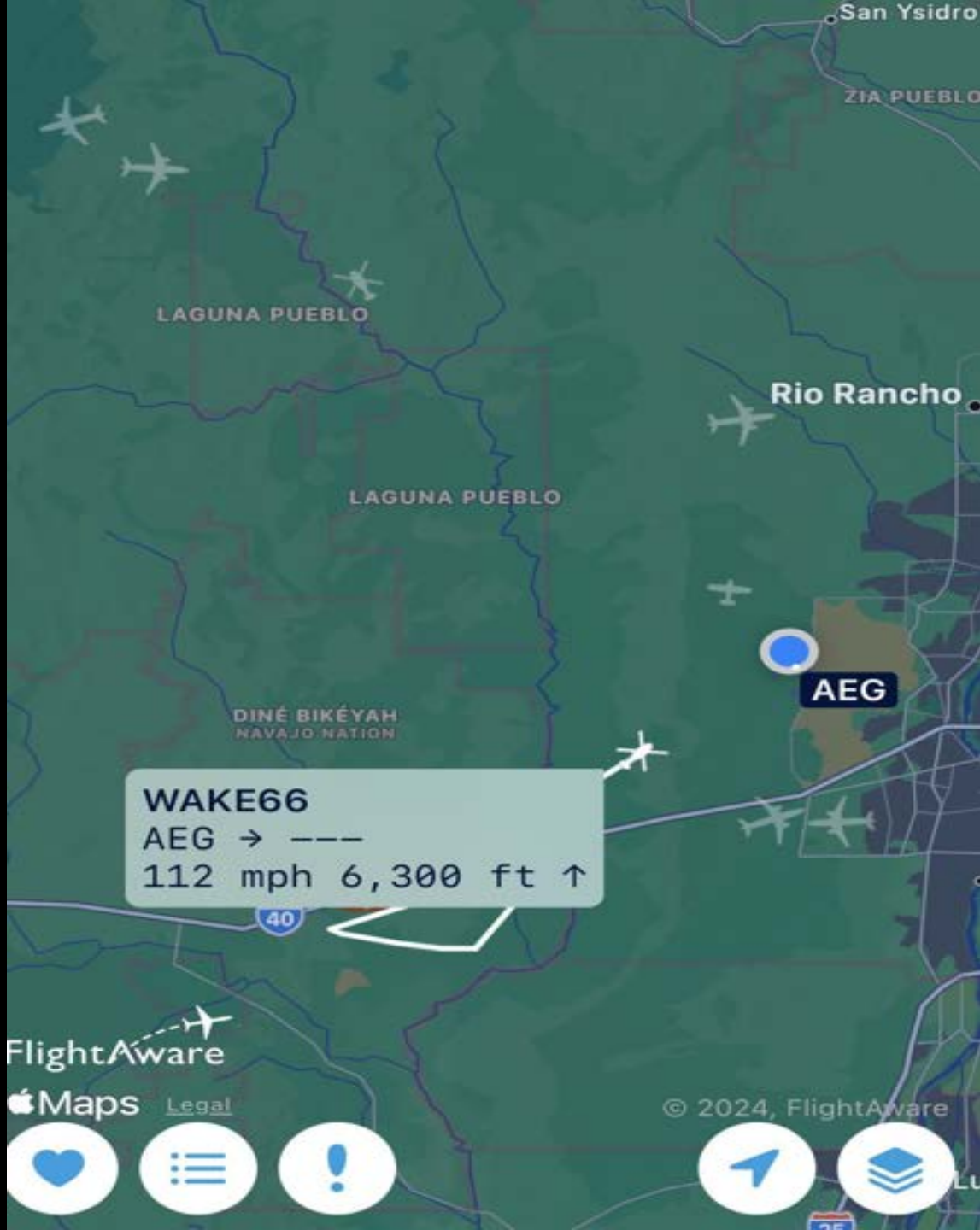


CREW CHIEF:
MR. J. SWANSON

NO STEP
CALL ON







WAKE66
AEG → ---
112 mph 6,300 ft ↑

FlightAware

Apple Maps [Legal](#)

© 2024, FlightAware























RESTAURANT

WELCOME



WELCOME





Chile Flight & Aircraft Viewing





















N72JH



N3NU

AEG





















U.S. AIR FORCE
AIRFORCE.COM



FLY
NAVY

BOO



Avionics





EAA 179









Simulator











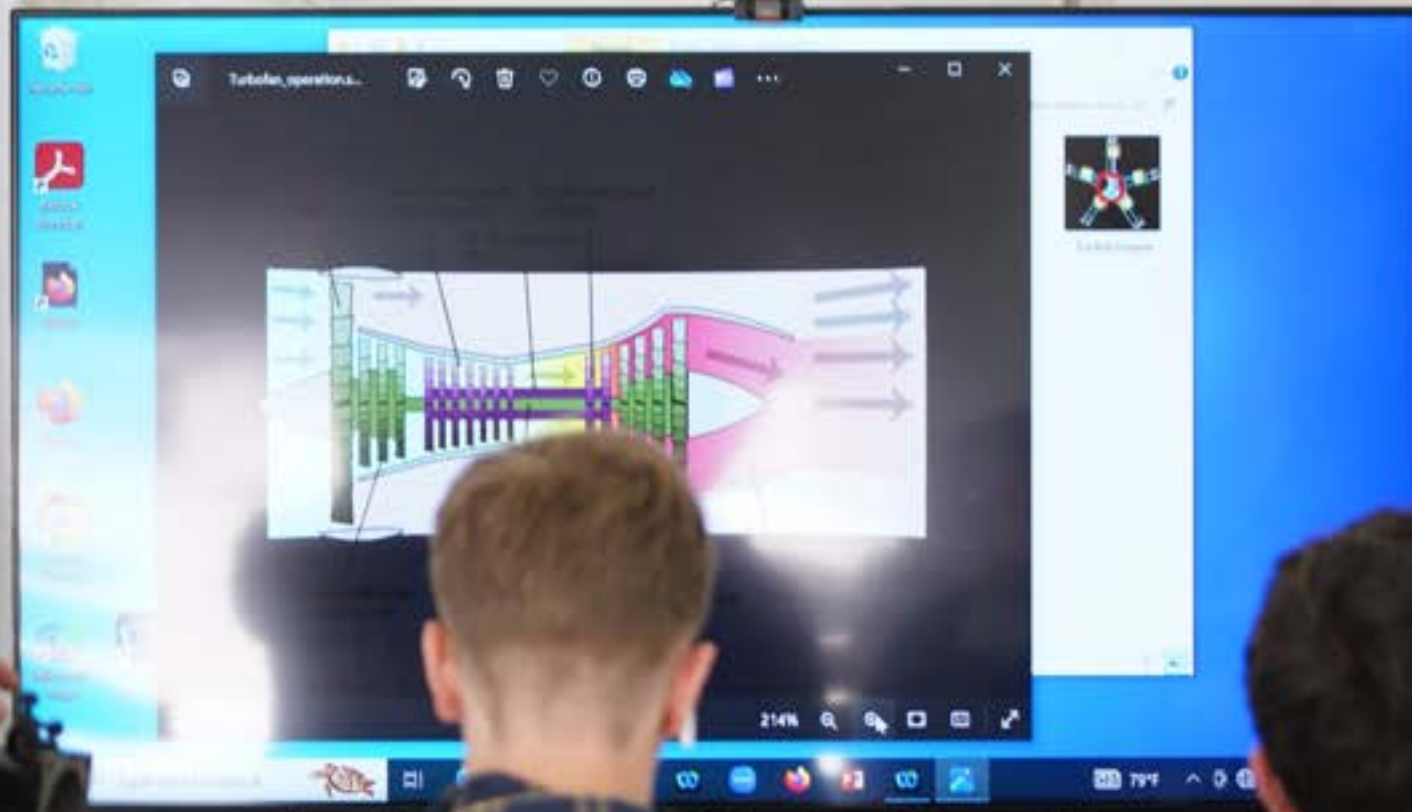








Engines













A Rolls-Royce Merlin

Flight Engineering
<https://www.pubs.eaa.org>

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Albuquerque, NM

EAA
THE SPIRIT OF AVIATION

EXPERIMENTAL
AIRCRAFT
ASSOCIATION

RESTRICTED
AREA
NO FLIGHT

Aggie
Foster





Aircraft Building



















STOGIE

Go Company!











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Aviation
Academy



Double Eagle
Aviation
Academy







Aircraft Viewing





EXPERIMENTAL

VELOCITY



EXPERIMENTAL







Navigation







Flight Planning Log

Date	Altitude	Time	Distance	Remarks

Weather and Winds





Dead Reckoning

Earliest form of Air Navigation -

Still used in the initial flight planning stages when YOU determine:
 Course, Heading, Speed, Distance, and Time for each leg of your flight.

It is enhanced by the use of Pilotage, Radio Navigation, and Global Positioning Systems



U.S. DEPARTMENT OF COMMERCE
 BUREAU OF AIR NAVIGATION
 WASHINGTON, D. C.

Practical Air Navigation

SEP 1940



GPS: Global Positioning System

- Satellite based (24)
- Makes it easy to:
 - Fly DIRECT →
 - Get DISTANCE and BEARING (desired heading)
 - Get ground speed
 - Find NEAREST airport

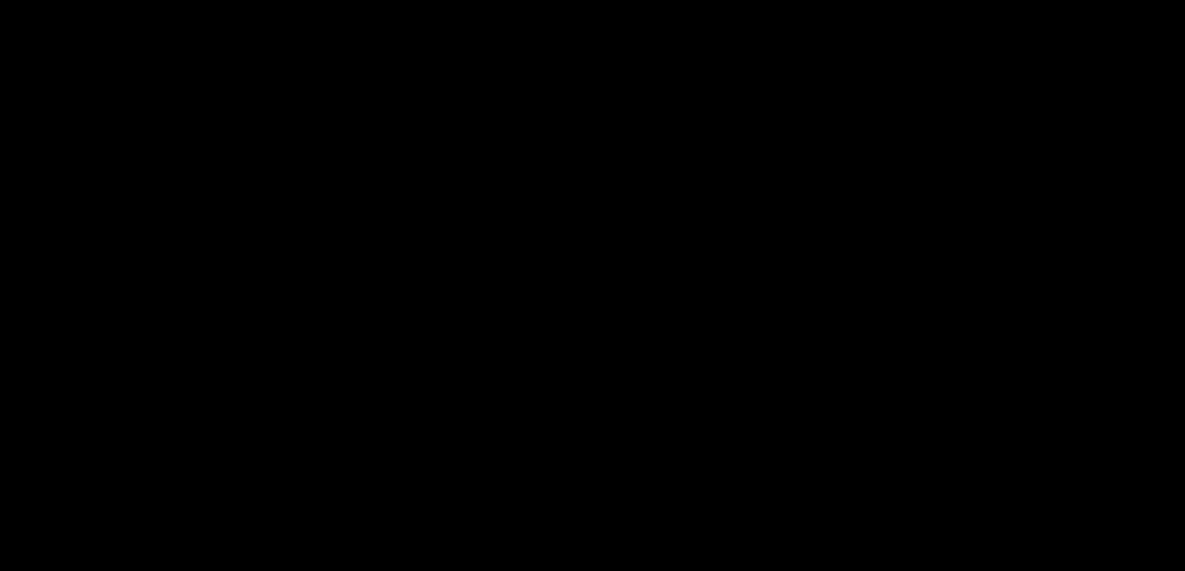




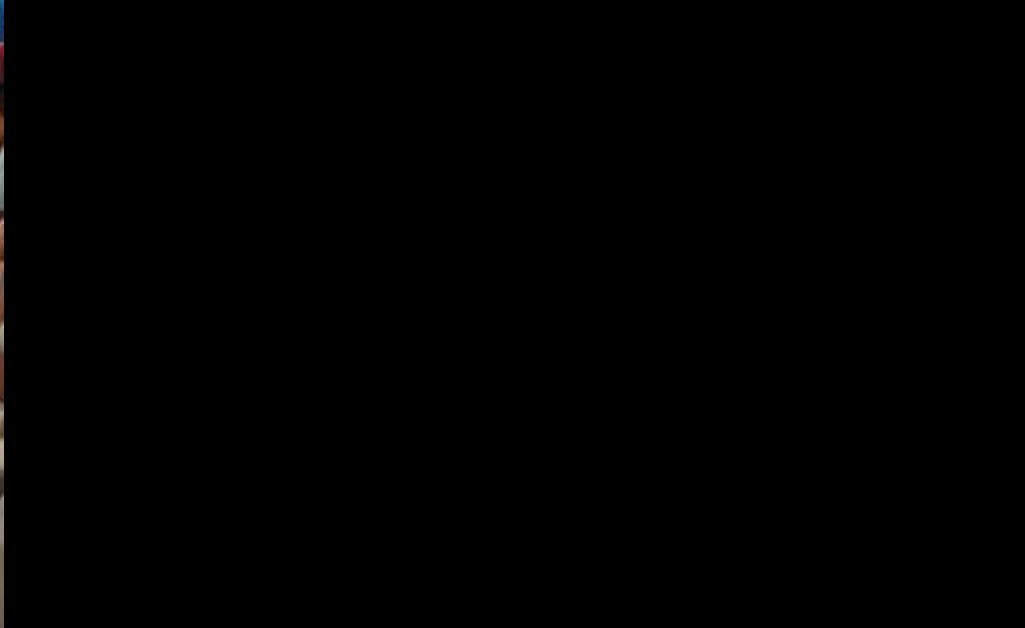
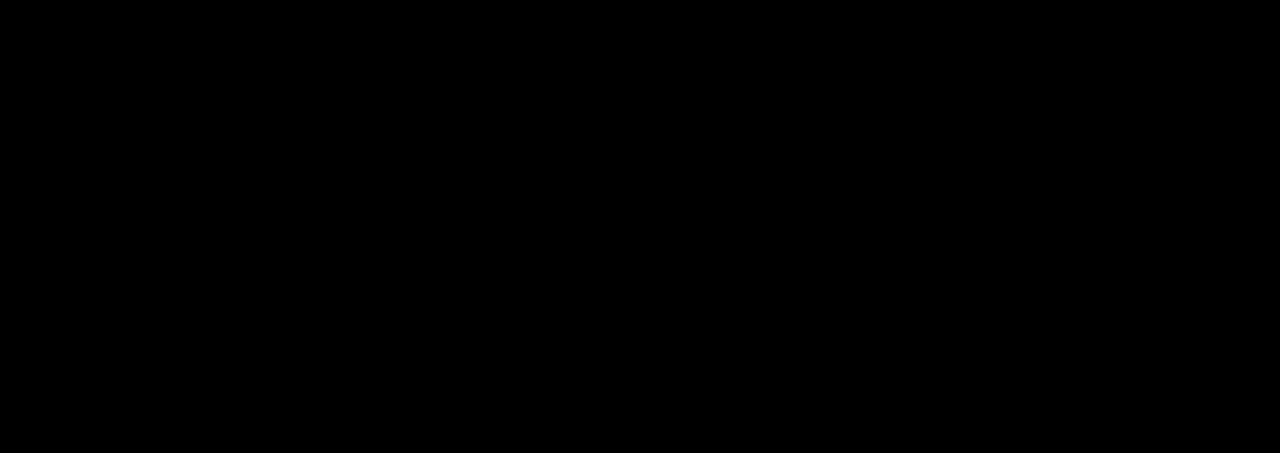
Vincent

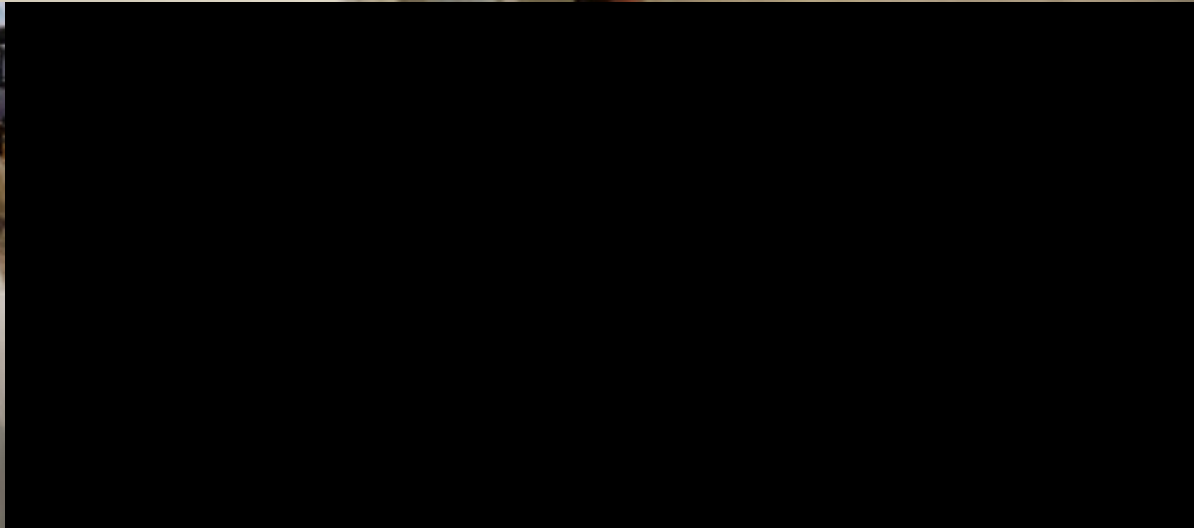
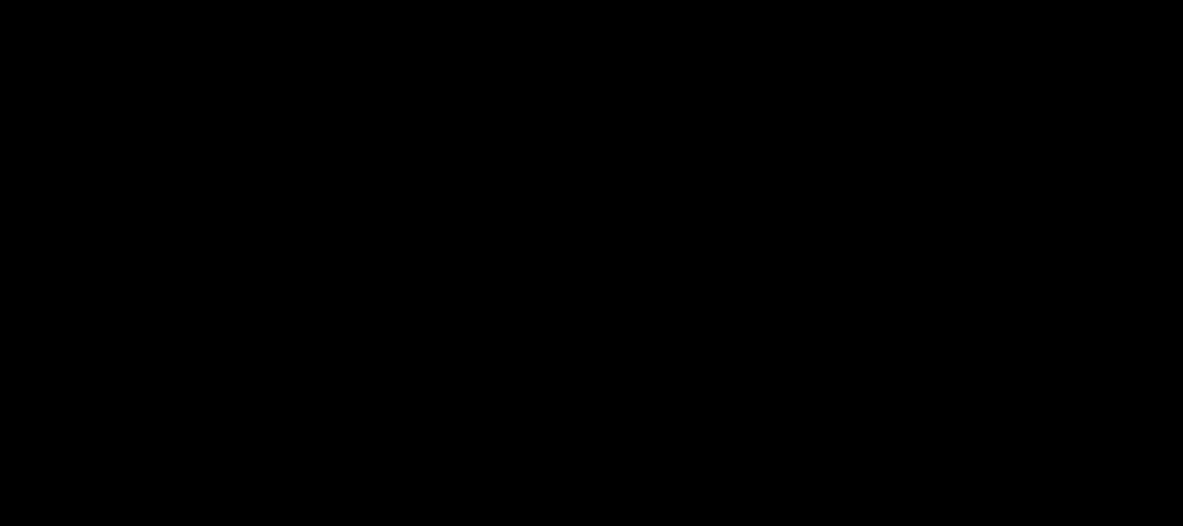
Reception







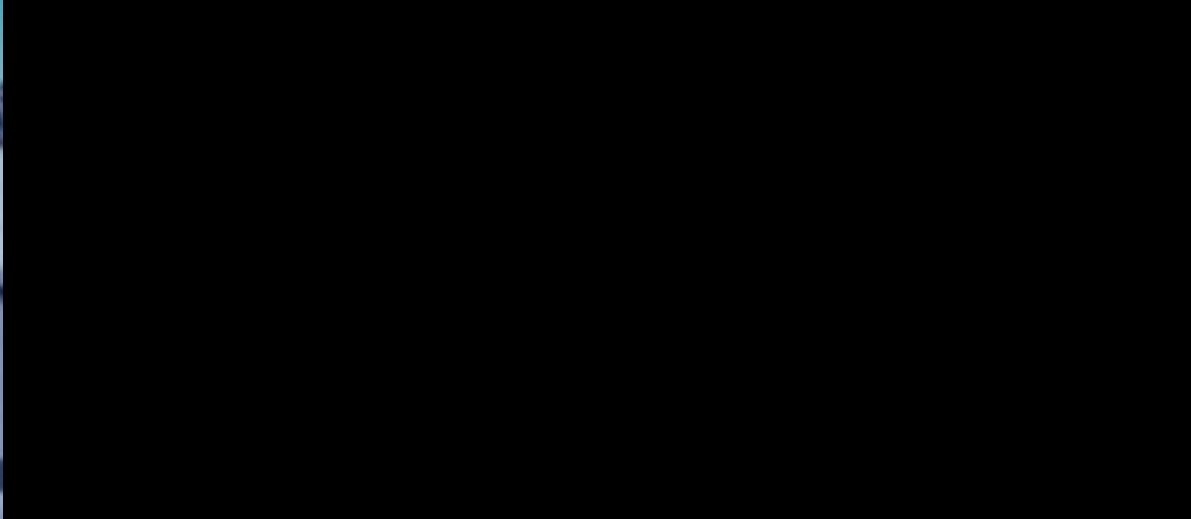
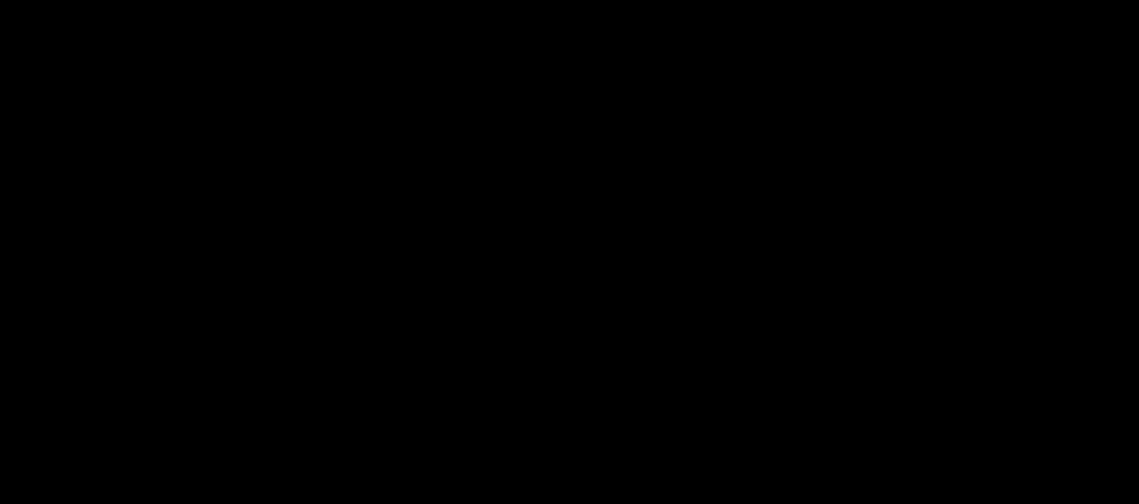




Presentation

























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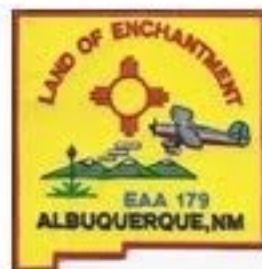
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- Jim Kessler
- Jon Nystrom
- Rowan Phlieger
- Mark Sturm
- Will Taylor
- Emilio Verastegui
- Mike Wirstrom
- Art Woods
- Joyce Woods
- George Young

- Eric Achen
- Angela Baldonado
- Isabella Baldonado
- Jude Baldonado
- Joel Bellevue
- Steve Booher
- Doreen Branch
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