ELEVATING SAFETY:

PROTECTING THE SKIES IN THE DRONE ERA

Brendan Schulman

VP of Policy & Legal Affairs, DJI

Twitter: @DroneLaws

ICAO Drone Enable 3

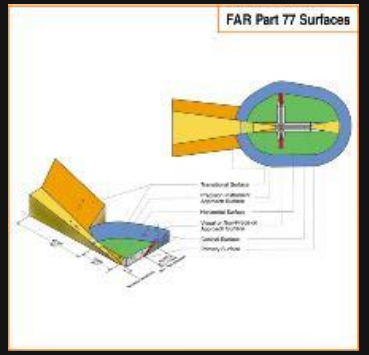
November 13, 2019

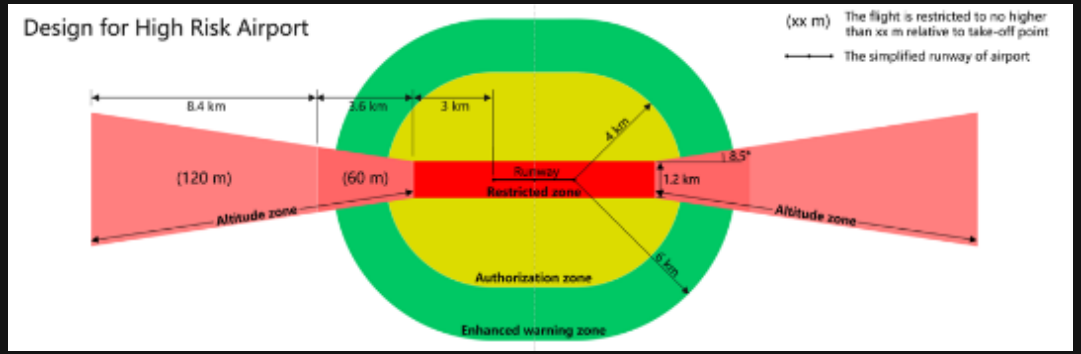
MILLIONS OF DRONES ARE OPERATED SAFELY

CONSUMER TECHNOLOGY ASSOCIATION:
3.4 million drones forecast to be sold in 2019 in the United States

WE HAVE BEEN LEADING ON SAFETY FOR YEARS

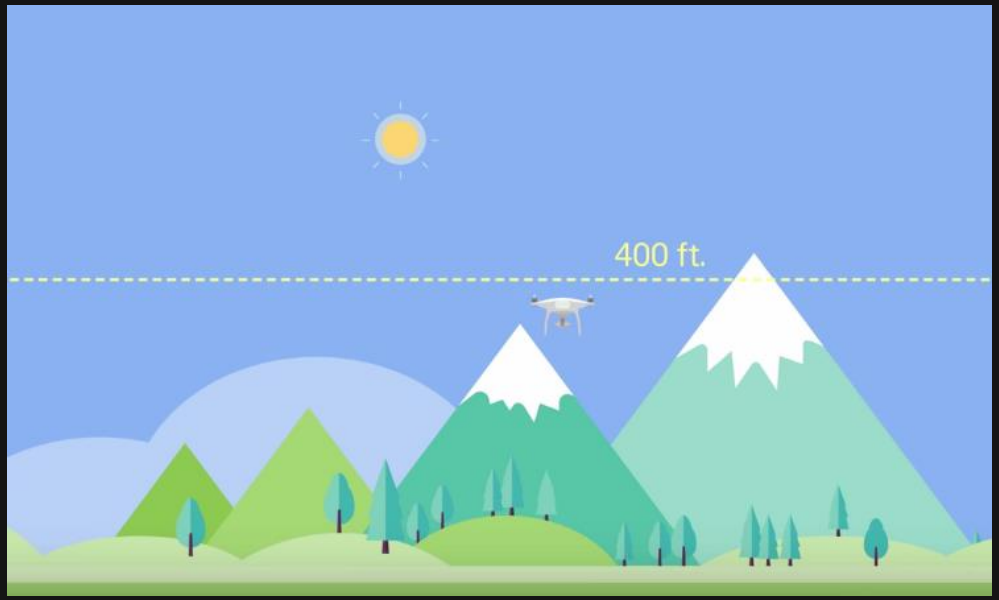
Geofencing





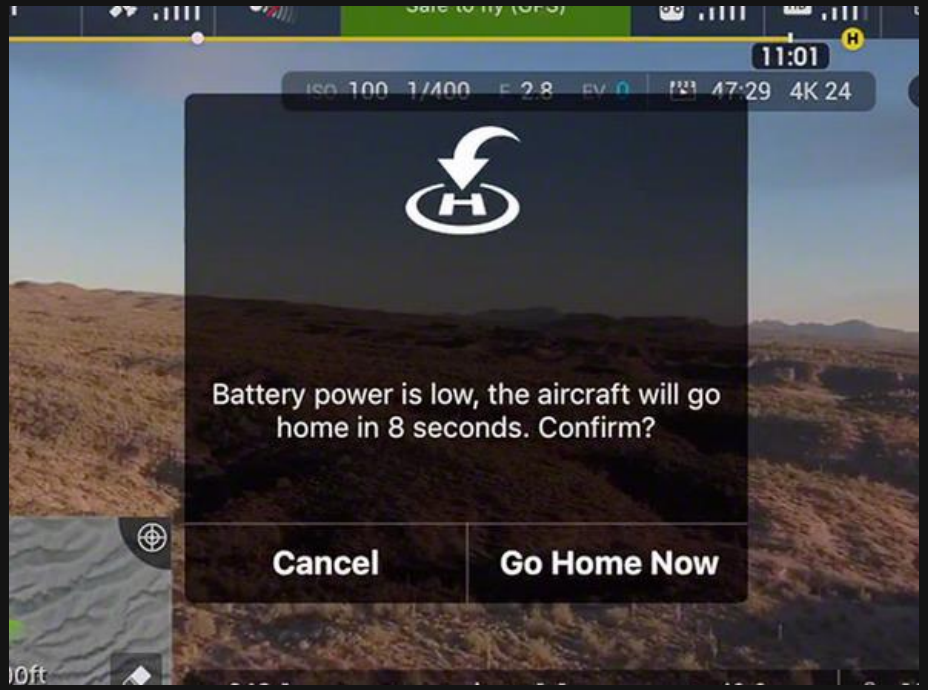
WE HAVE BEEN LEADING ON SAFETY FOR YEARS

Geofencing
Altitude limitation



WE HAVE BEEN LEADING ON SAFETY FOR YEARS

Geofencing
Altitude limitation
Return to home

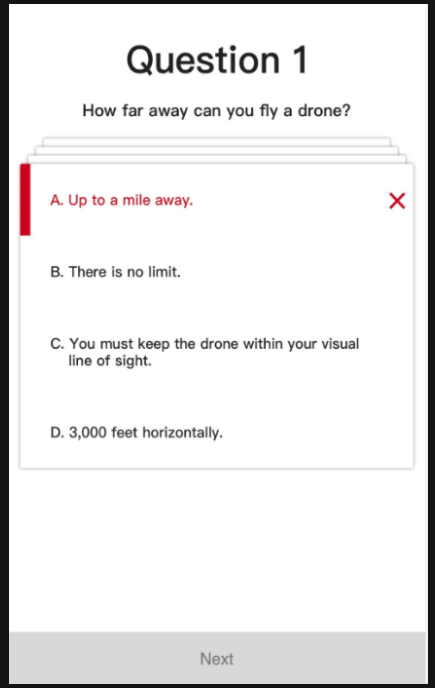


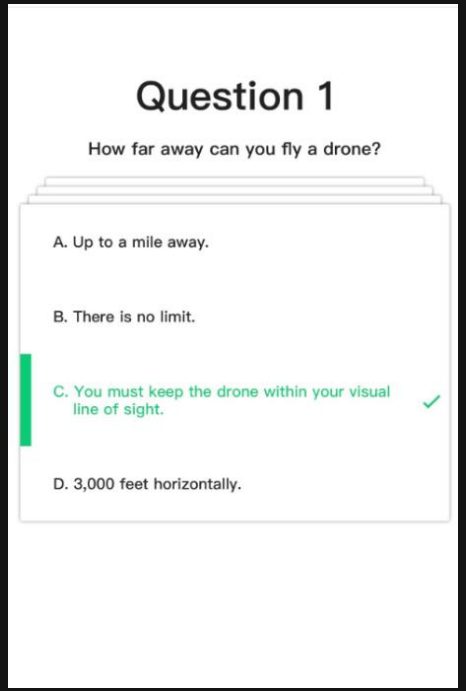
WE HAVE BEEN LEADING ON SAFETY FOR YEARS

Geofencing
Altitude limitation
Return to home
Obstacle sensing

WE HAVE BEEN LEADING ON SAFETY FOR YEARS

Geofencing
Altitude limitation
Return to home
Obstacle sensing
Knowledge Quiz





WE HAVE BEEN LEADING ON SAFETY FOR YEARS

Geofencing
Altitude limitation
Return to home
Obstacle sensing
Knowledge Quiz
AeroScope Remote ID

AT LEAST 30,000
HOURS
OF WORK ON
SAFETY FEATURES
SINCE 2017

FINANCIAL TIMES

myFT

Aviation accidents and safety

+ Add to myFT

Drone risk to aircraft is rising sharply, UK safety experts warn

Number of times a drone endangered safety in British airspace increased by third last year

Virgin Atlantic jet carrying 264 passengers 'came within SECONDS of crashing into two drones at 14,000ft as it approached to land at Heathrow'

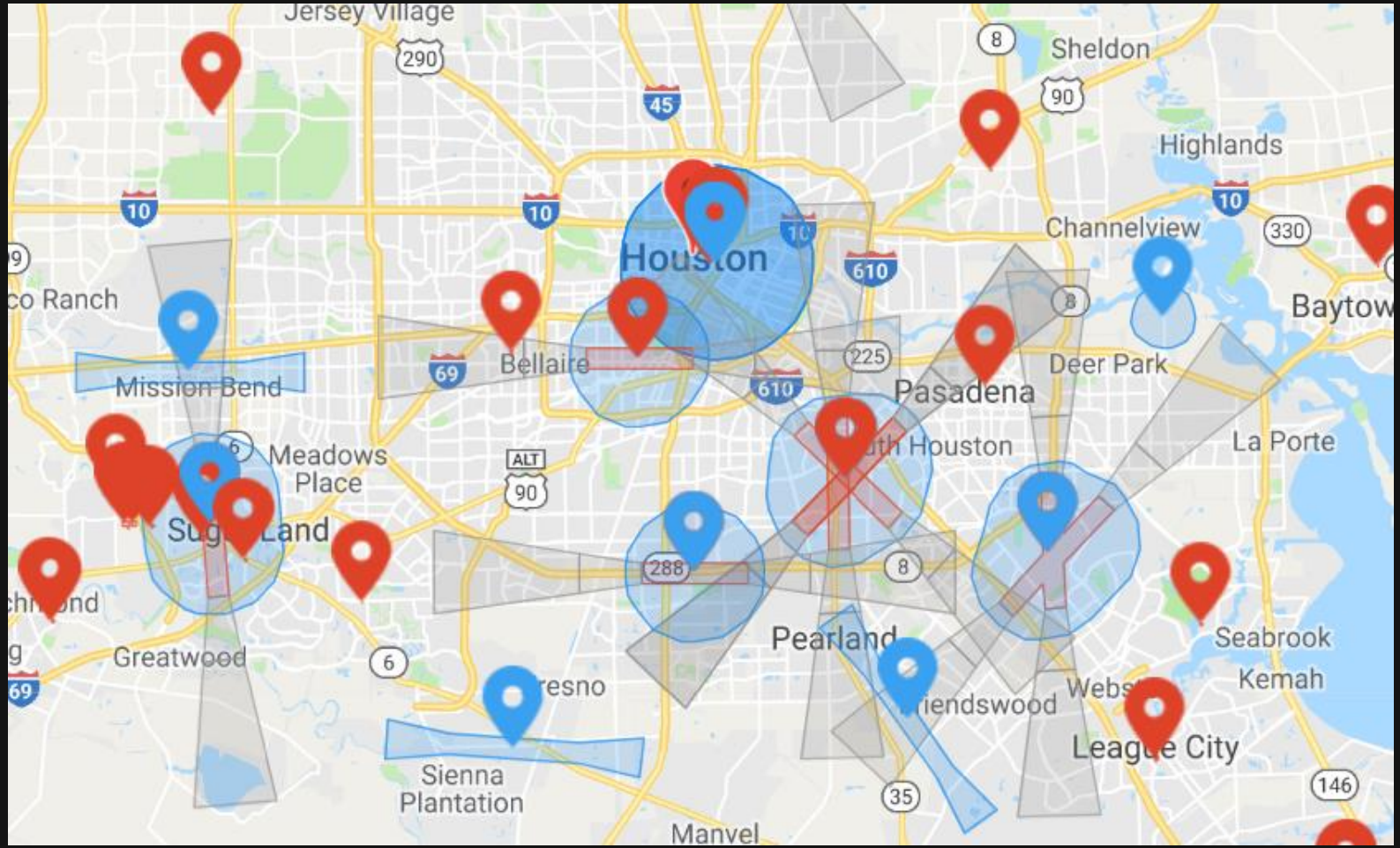
- Virgin Atlantic jet had a shocking near-miss with two drones flying over Essex
- A report says a drone appeared to veer away at the last second to avoid collision

Xenia police use a drone to save a 90-year-old woman's life

by Danielle Malagarie
Friday, April 5th 2019

AA

POLICE
POLICE


Jersey Village
290
45
8
Sheldon
90
Highlands
10
10
10
Channelview
330
Houston
610
co Ranch
Baytow
8
Bellaire
225
Deer Park
Mission Bend
69
610
Pasadena
Meadows
Place
ALT
90
La Porte
288
8
Pearland
Seabrook
Greatwood
6
Kemah
69
Sienna
Plantation
35
146
Manvel

THE SEARCH FOR
MEANINGFUL
DATA TO INFORM
OUR NEXT
SAFETY EFFORTS

THE SEARCH FOR MEANINGFUL DATA

FAA Drone Sightings Data

EASA Database

UK Airprox Reports

THE SEARCH FOR MEANINGFUL DATA

Bat, not drone, blamed for light plane collision during landing at Parafield Airport

By Isabel Dayman

Updated 21 Jul 2017, 2:27am

A light plane most likely hit a bat when coming in to land at Adelaide's Parafield Airport and not a drone as first thought, the Australian Transport Safety Bureau (ATSB) has said.

Earlier this month, a pilot reported hitting what he thought was a drone when landing at the airport in Adelaide's northern suburbs.

"After landing, the instructor conducted an inspection of the aircraft and found minor damage to the right wing," the ATSB said in a statement on its website.

PHOTO: A pilot reported hitting when landing. (ABC News: Nat

NEW ZEALAND

Drone sighting that was actually a balloon delays Auckland air traffic

15 Apr, 2018 9:22pm

News

Drone believed to have hit British Airways flight 'may have been a plastic bag'

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TRANSPORT

Drone caused me to crash my plane, Rod Vaughan says

From **Checkpoint**, 5:09 pm on 29 March 2018

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Listen 5′ 27″

Playlist | Download

Newshub. AKL 17° 12°

Rod Vaughan's plane crash not caused by drone - CAA

01/04/2019

Dan Lake

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THE SEARCH FOR MEANINGFUL DATA

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DJI Drone Collided with US Army Black Hawk Chopper and Dented Its Rotor

JAN 02, 2018 MICHAEL ZHANG

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THE SEARCH FOR MEANINGFUL DATA

THE SEARCH FOR MEANINGFUL DATA

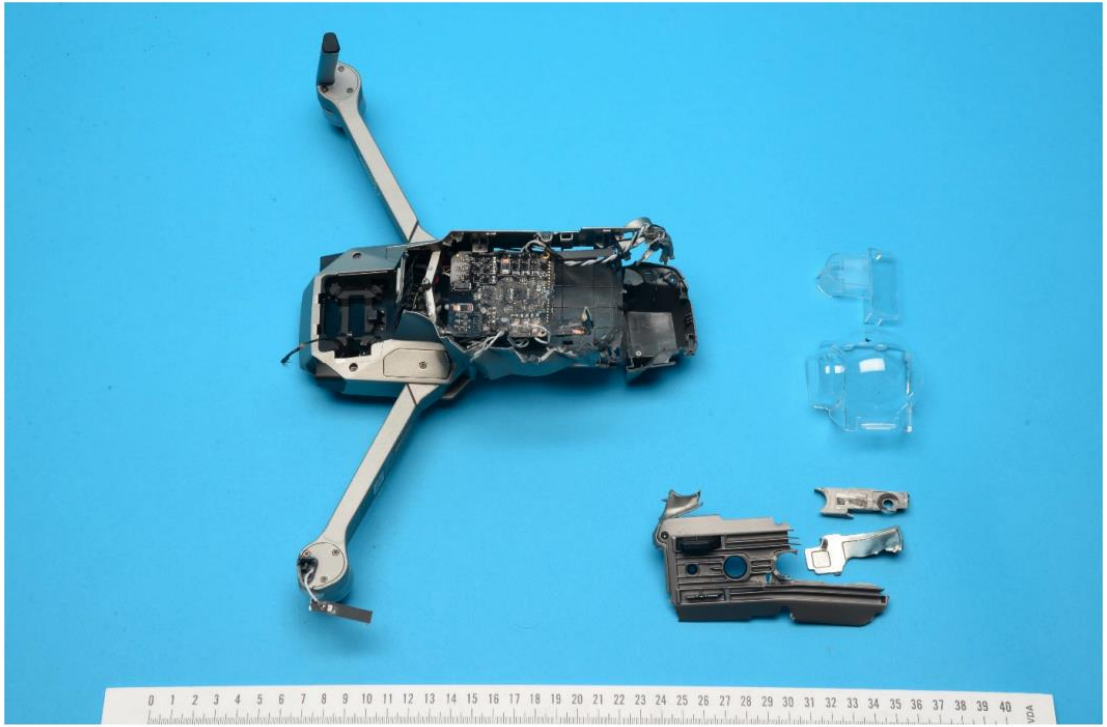
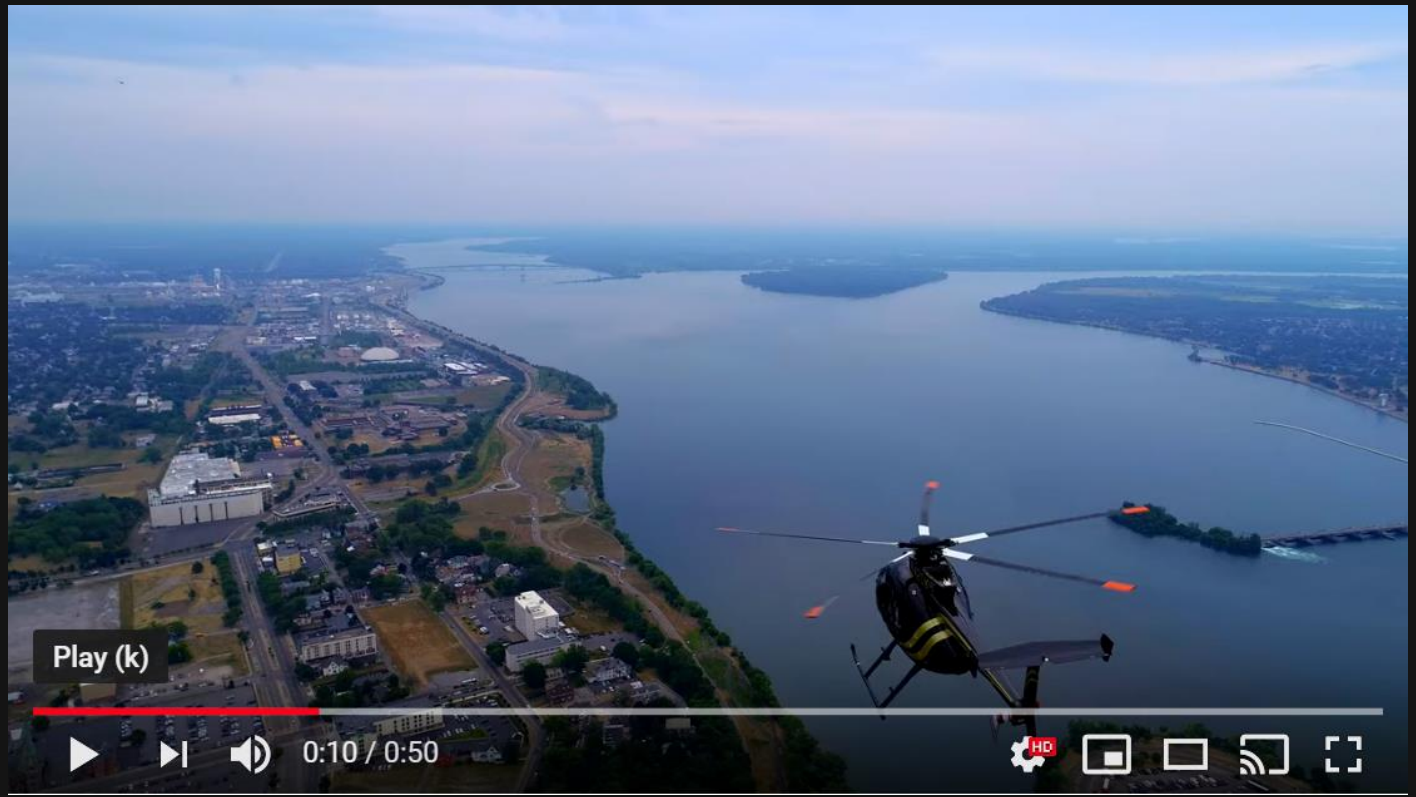


Figure 2 : Débris du drone impliqué dans la collision

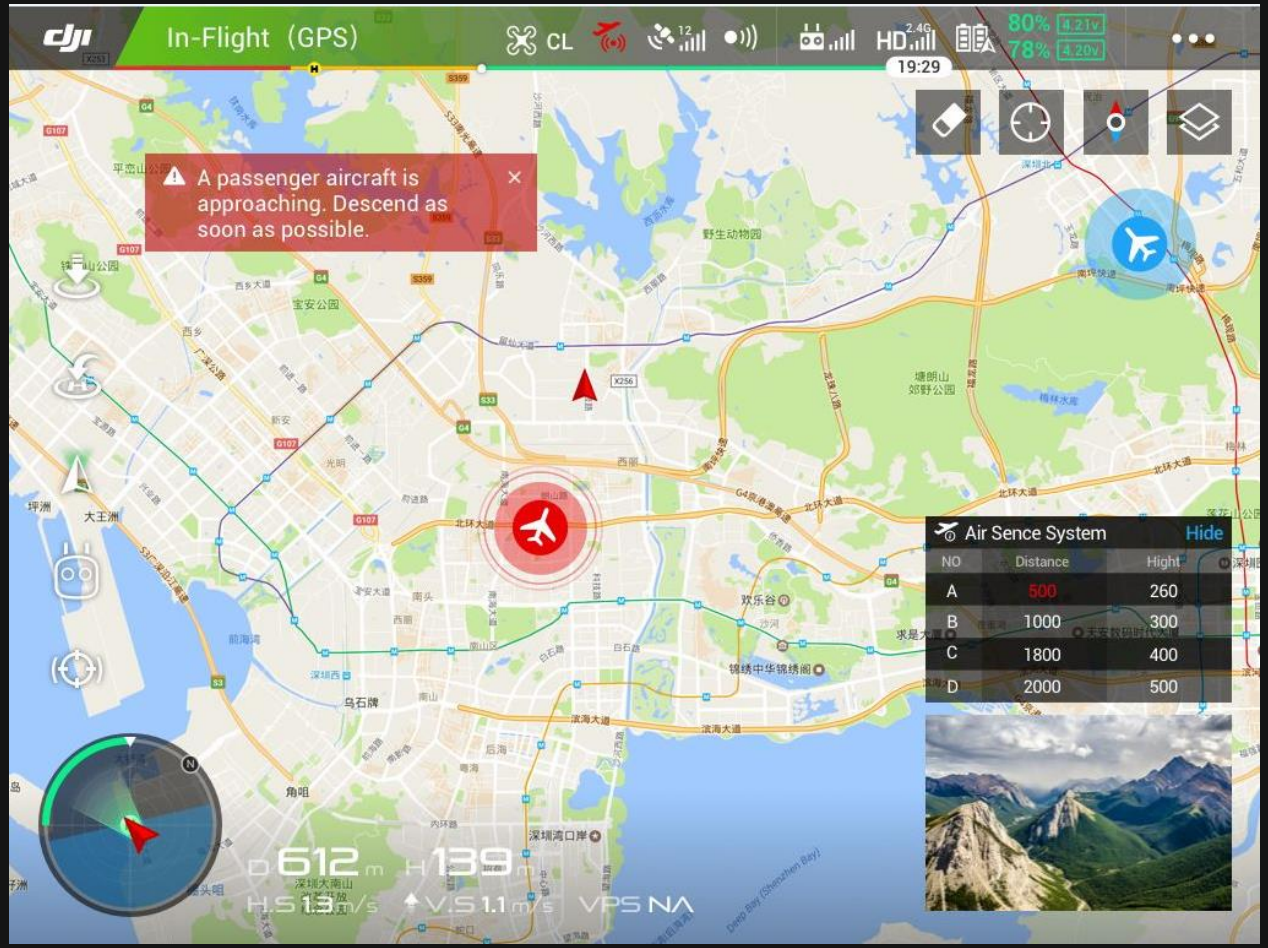
THE SEARCH FOR MEANINGFUL DATA

Helicopter Nearly Collides With Drone Off Hollywood

THE SEARCH FOR MEANINGFUL DATA



AIRSENSE

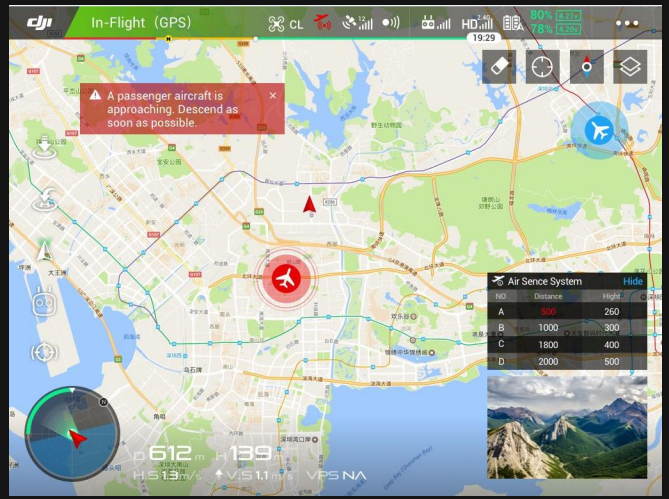

In-Flight（GPS）
CL
HD
19:29
80%
78%
A passenger aircraft is approaching. Descend as soon as possible.
Air Sence System
Hide
NO
Distance
Hight
A
500
260
B
1000
300
C
1800
400
D
2000
500
D 612 m
H 139 m
H.S 1.3 m/s
V.S 1.1 m/s
VPS NA

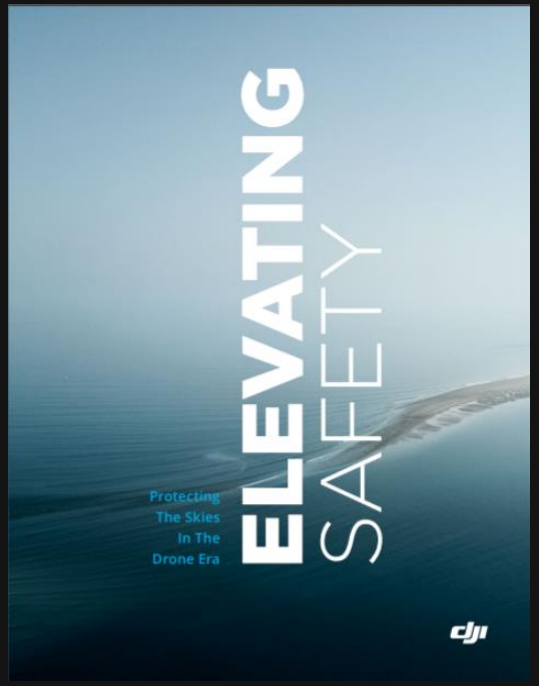
DJI WILL INSTALL ADS-B RECEIVERS

IN EVERY NEW DRONE MODEL

ABOVE 250 GRAMS

STARTING IN 2020





Download at:

dji.com/flysafe

1. DJI will install AirSense ADS-B receivers in all new drones above 250 grams
2. DJI will develop a new automatic warning for drone pilots flying at extended distances
3. DJI will establish an internal Safety Standards Group to meet regulatory and customer expectations
4. Aviation industry groups must develop standards for reporting drone incidents
5. All drone manufacturers should install geofencing and remote identification
6. Governments must require remote identification
7. Governments must require a user-friendly knowledge test for new drone pilots
8. Governments must clearly designate sensitive restriction areas
9. Local authorities must be allowed to respond to drone threats that are clear and serious
10. Governments must increase enforcement of laws against unsafe drone operation

dji

DJI COMMITMENTS

1
AirSense ADS-B In All Drones Starting 2020

DJI COMMITMENTS

1

AirSense ADS-B In All Drones Starting 2020

2

Flight Distance Warning

Download At: DJI.com/flysafe

DJI COMMITMENTS

1
AirSense ADS-B In All Drones Starting 2020

2
Flight Distance Warning

3
Enhanced and Expanded Safety Standards Group

Download At: DJI.com/flysafe

4
Aviation Safety Groups Must Develop Standards for Reporting Drone Incidents

4

Aviation Safety Groups Must Develop Standards for Reporting Drone Incidents

5

All Manufacturers Should Install Geofencing and Remote ID

GOVERNMENT

6
Governments Must Require Remote ID

6

Governments Must Require Remote ID

7

Governments Must Require Knowledge Testing

6
Governments Must Require Remote ID

7
Governments Must Require Knowledge Testing

8
Governments Must Designate Sensitive Areas

9
Local Authorities Must Be Able to Respond to Serious Threats

9

Local Authorities Must Be Able to Respond to Serious Threats

10

Governments Must Increase Enforcement of Laws

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TELL US WHAT MORE WE CAN DO

OUR NEXT OPPORTUNITIES

Leverage existing ADS-B technologies on board traditional aircraft, which are more affordable and easier to install than ever before.

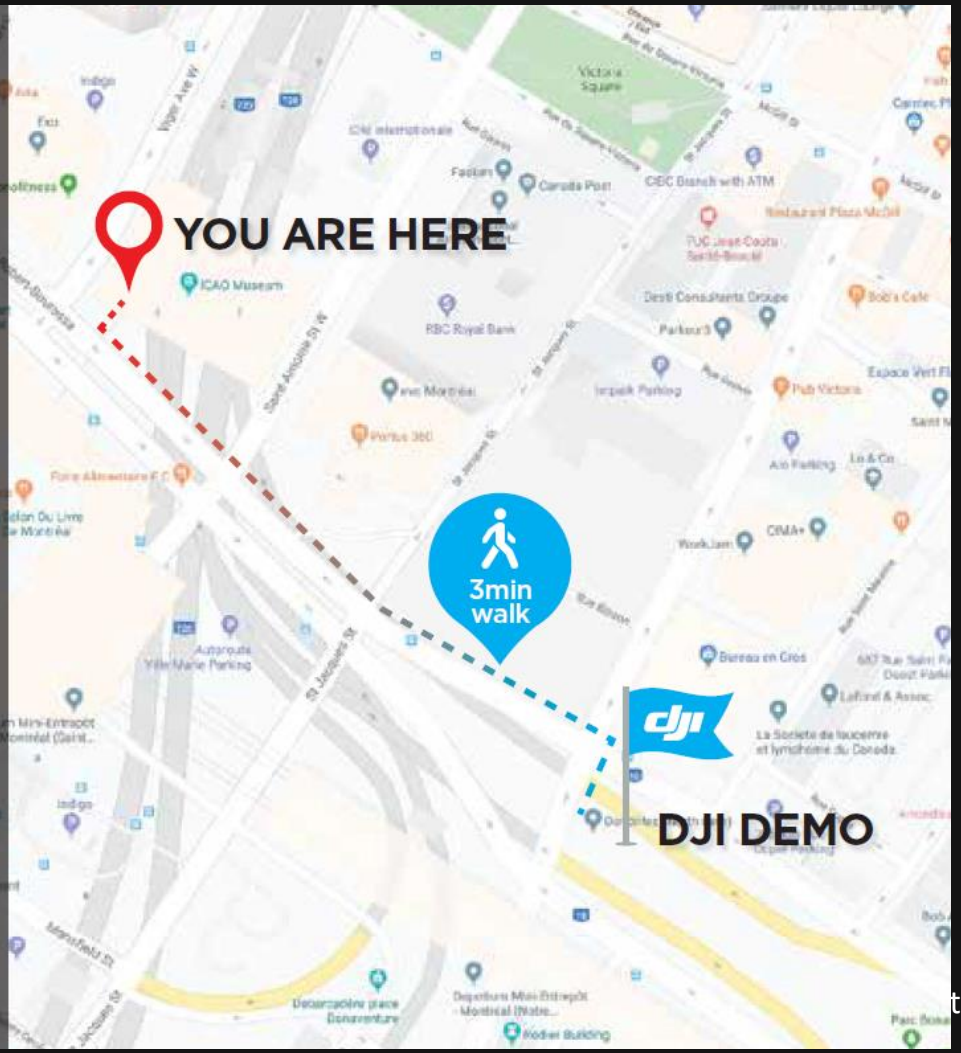
Join us at our Remote ID demo tomorrow morning at 8:00 am, at Parc Bonaventure, a three minute walk from here.

REMOTE ID STANDARD

Demo

8-8:30 am
Wednesday,
November 13

&

8-8:30 am
Thursday,
November 14

All Drone Enable 3 attendees are invited to the DJI demonstration at Bonaventure Park, a short three-minute walk from ICAO Headquarters.