ASRS Database Report Set

Unmanned Aircraft Systems (UAS) Reports

Report Set Description.....Reports involving Unmanned Aircraft Systems (UAS) events reported by operators of manned or unmanned aircraft.

Update Number.....16

Date of Update.....February 14, 2023

Number of Records in Report Set.....50

Records within this Report Set have been screened to assure their relevance to the topic.

National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, CA 94035-1000

TH: 262-7

MEMORANDUM FOR: Recipients of Aviation Safety Reporting System Data

SUBJECT: Data Derived from ASRS Reports

The attached material is furnished pursuant to a request for data from the NASA Aviation Safety Reporting System (ASRS). Recipients of this material are reminded when evaluating these data of the following points.

ASRS reports are submitted voluntarily. The existence in the ASRS database of reports concerning a specific topic cannot, therefore, be used to infer the prevalence of that problem within the National Airspace System.

Information contained in reports submitted to ASRS may be amplified by further contact with the individual who submitted them, but the information provided by the reporter is not investigated further. Such information represents the perspective of the specific individual who is describing their experience and perception of a safety related event.

After preliminary processing, all ASRS reports are de-identified and the identity of the individual who submitted the report is permanently eliminated. All ASRS report processing systems are designed to protect identifying information submitted by reporters; including names, company affiliations, and specific times of incident occurrence. After a report has been de-identified, any verification of information submitted to ASRS would be limited.

The National Aeronautics and Space Administration and its ASRS current contractor, Booz Allen Hamilton, specifically disclaim any responsibility for any interpretation which may be made by others of any material or data furnished by NASA in response to queries of the ASRS database and related materials.

B Hooey

Becky L. Hooey, Director
NASA Aviation Safety Reporting System

CAVEAT REGARDING USE OF ASRS DATA

Certain caveats apply to the use of ASRS data. All ASRS reports are voluntarily submitted, and thus cannot be considered a measured random sample of the full population of like events. For example, we receive several thousand altitude deviation reports each year. This number may comprise over half of all the altitude deviations that occur, or it may be just a small fraction of total occurrences.

Moreover, not all pilots, controllers, mechanics, flight attendants, dispatchers or other participants in the aviation system are equally aware of the ASRS or may be equally willing to report. Thus, the data can reflect **reporting biases**. These biases, which are not fully known or measurable, may influence ASRS information. A safety problem such as near midair collisions (NMACs) may appear to be more highly concentrated in area "A" than area "B" simply because the airmen who operate in area "A" are more aware of the ASRS program and more inclined to report should an NMAC occur. Any type of subjective, voluntary reporting will have these limitations related to quantitative statistical analysis.

One thing that can be known from ASRS data is that the number of reports received concerning specific event types represents the **lower measure** of the true number of such events that are occurring. For example, if ASRS receives 881 reports of track deviations in 2010 (this number is purely hypothetical), then it can be known with some certainty that at least 881 such events have occurred in 2010. With these statistical limitations in mind, we believe that the **real power** of ASRS data is the **qualitative information** contained in **report narratives**. The pilots, controllers, and others who report tell us about aviation safety incidents and situations in detail – explaining what happened, and more importantly, **why** it happened. Using report narratives effectively requires an extra measure of study, but the knowledge derived is well worth the added effort.

Report Synopses

ACN: 1948928 *(1 of 50)*

Synopsis

UAS crew reported transmitter issues due to possible radio antenna interference.

Synopsis

Recreational/hobby UAS pilot reported flying at night without an anti collision beacon.

Synopsis

Part 107 UAS pilot reported the UAS hit a power line during a pre-programmed flight.

Synopsis

Air carrier Captain reported flying under a UAS on final approach. ATC was notified and the plane landed without incident.

Synopsis

Captain reported seeing a drone flying near the aircraft on initial departure.

Synopsis

Part 107 UAS pilot reported flying in controlled airspace without authorization.

Synopsis

Recreational/Hobby UAS pilot reported flying a UAS with expired registration.

Synopsis

Recreational/hobby UAS pilot reported flying during an active Temporary Flight Restriction (TFR). Once they learned of the TFR the pilot exited the airspace by landing.

Synopsis

Part 107 UAS crew was operating with a Certificate of Authorization (COA). There was a short moment during the cruise portion of the flight when the UAS was operating outside the parameters of the COA.

Synopsis

Part 107 UAS pilot was conducting a demo flight when a lost link occured. After the lost link the UAS flew into a building.

Synopsis

Part 107 UAS pilot reported a lost link during flight. During the flyaway the UAS struck a tree and crashed.

Synopsis

Part 107 UAS pilot reported flying during windy conditions when a lost link occurred and the UAS flew away.

Synopsis

First Officer reported seeing a UAS pass by their aircraft while descending through 6,100 feet. The incident was reported to ATC and flight continued normally.

Synopsis

First Officer reported spotting a UAS fly near the aircraft shortly after departure. No evasive action was taken and ATC was notified.

Synopsis

Part 107 UAS pilot reported learning after a post flight review they flew in controlled airspace without authorization.

Synopsis

Recreational/Hobby UAS pilot reported they flew during an active Temporary Flight Restriction (TFR) without authorization.

Synopsis

Part 107 UAS pilot reported landing as a precaution after realizing they were flying in controlled airspace without authorization.

Synopsis

Air carrier flight crew reported seeing a UAS pass within 100 ft. of the aircraft while climbing at 15,000 ft. and reported it to ATC.

Synopsis

Hobby UAS pilot learned after flying they had inadvertently flown without proper LAANC authorization.

Synopsis

A sightseeing tour operator reported UAS operations taking place within 100 yards from their base of operations which delayed the landing of a helicopter.

Synopsis

Part 107 UAS pilot reported they conducted a photo mission near a building and were approached by a public official. The pilot learned of nearby non-charted UAS prohibited areas they may possibly have entered.

Synopsis

A helicopter pilot reported a UAS approached their aircraft requiring the pilot to maneuver to avoid a collision. The UAS approached the helicopter again requiring further evasive action. After the second event the UAS landed.

Synopsis

Flight Instructor reported observing a UAS pass near their aircraft at 2,000 ft. and took evasive action to avoid collision. The instructor believes they might have accidentally entered Class C airspace while maneuvering.

Synopsis

A First Officer reported a UAS passing within 10 ft of their aircraft while leveling off for cruise and reported the incident to ATC. No evasive action was taken and the aircraft continued normally.

ACN: 1936399 *(25 of 50)*

Synopsis

Part 107 pilot learned after a flight they inadvertently flew in an active TFR.

Synopsis

A general aviation pilot reported that their passenger saw a UAS pass near by their aircraft at 4,000 ft. The reporting pilot advised ATC and they attempted to provide assistance.

Synopsis

Part 107 pilot reported flying over persons with a UAS that was not in the correct size category for the type of operation. UAS pilot learned during the post flight of their error.

Synopsis

Part 107 UAS pilot reported flying after their company's COA (Certificate of Authorization) had expired.

Synopsis

Air Carrier pilot reported seeing a drone at 3,000 ft. while on approach. ATC was informed and the flight landed uneventfully.

Synopsis

Air Traffic Controller reported incorrect lost communication procedures being utilized by UAS in Class A airspace. This led to the target dropping off the scope and caused confusion and safety issues for ATC.

ACN: 1934190 *(31 of 50)*

Synopsis

Part 107 UAS pilot reported an NMAC with a helicopter while operating with clearance near a towered airport.

Synopsis

Air carrier pilot reported seeing a UAS pass 500 ft. below the aircraft while approaching to land.

Synopsis

CMH TRACON Controller reported a staffing issue which reportedly affected safety of operations for the crew that was working. Controller also reported a UAS had entered the TFR but was delayed in relaying the information.

Synopsis

Part 107 UAS pilot reported a malfunction with the transmitter. During the post flight the reporter learned they may have flown over 400 ft. AGL.

Synopsis

Air carrier flight crew reported during post flight inspection finding aircraft damage caused by a possible collision with a UAS. The damage was evaluated by flight crew and maintenance was notified.

Synopsis

ZAB Controller reported a spill-out of a drone which was an airborne conflict with a commercial aircraft, and also reported about the complexities of the airspace.

Synopsis

A pilot reported observing a UAS pass by their aircraft while descending through 5,900ft and reported the incident to ATC.

Synopsis

Air Carrier Captain reported flying two separate missed approaches because of UAS activity near the destination airport.

Synopsis

General aviation pilot reported that their safety pilot saw a UAS pass near by their aircraft at 2,500 ft MSL. The incident was reported to the TRACON Controller.

Synopsis

First Officer reported a UAS passing within 50 ft. of their aircraft while approaching to land. No evasive action was taken.

Synopsis

Airline Captain reported observing a UAS pass by their aircraft while climbing out on a departure procedure. The incident was reported to the TRACON controller, then the flight continued as planned.

Synopsis

Air carrier Captain reported they were put in a hold with no EFC due to UAS activity around their destination airport. In considering alternatives, they discovered the listed alternate airport could not accept them due to their size. Flight crew landed at destination airport when UAS activity stopped.

Synopsis

UAS pilot reported losing sight of their drone between two trees and attempted to maneuver away from them but collided with one.

Synopsis

Sport Pilot reported observing a UAS pass 10 ft. above their aircraft shortly after takeoff. The pilot tried to coordinate with the UAS crew prior to flight, but a miscommunication occurred leading to an NMAC.

Synopsis

Part 107 UAS pilot reported a lost link and a fly away of the UAS. Pilot stated the UAS app indicated "strong radio interference."

Synopsis

Part 107 UAS pilot reported discovering upon review of the flight log that they flew in controlled airspace without authorization.

Synopsis

Part 107 UAS Pilot reported learning of an airspace violation during a post flight meeting with their company's operations management.

ACN: 1921018 *(48 of 50)*

Synopsis

Part 107 UAS pilot reported the UAS crew was approached by airport staff during a flight near an airport. The UAS crew chose to end the flight.

Synopsis

Air traffic controller reported lost communications with a UAS pilot operating in and around restricted airspace. Pilot experienced a lost link and it was difficult for ATC to communicate with them.

Synopsis

Private Pilot reported observing a UAS pass near their aircraft while flying at 5,500 ft. The pilot stated evasive action was not needed but UAS came within 500 ft. of aircraft.

Report Narratives

ACN: 1948928 *(1 of 50)*

Time / Day

Date : 202205
Local Time Of Day : 0601-1200

Place

Altitude.AGL.Single Value : 60

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 6
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Commercial Operator (UAS)
Make Model Name : Skydio X2E
Crew Size.Number Of Crew : 3
Operating Under FAR Part.Other
Mission : Utility / Infrastructure
Flight Phase : Hovering (UAS)
Airspace.Class G : ZZZ
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Control Mode (UAS) : Autonomous / Fully Automated
Flying In / Near / Over (UAS) : Critical Infrastructure
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Component

Aircraft Component : Transmitter (UAS)
Manufacturer : Skydio
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Commercial Operator (UAS)
Function.Flight Crew : Remote PIC (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Other
Experience.Flight Crew.Total : 560
Experience.Flight Crew.Total (UAS) : 500
Experience.Flight Crew.Last 90 Days (UAS) : 40
Experience.Flight Crew.Type (UAS) : 20
ASRS Report Number.Accession Number : 1948928
Human Factors : Troubleshooting
Analyst Callback : Attempted

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Detector.Person : UAS Crew
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Software and Automation
Primary Problem : Ambiguous

Narrative: 1

I was flying the Skydio X2E for a cell tower inspection and the hand controller froze near that antennas at the tower summit. We had to close the hand controller multiple time since the return home failed. We document the event with a IPhone. This situation also happened on multiple telecom site inspection. We asked the drone manufacturer (Skydio) to take back the drones for further investigations since we have two of these units we are concerned about flight safety using these units around cell tower. We deem these units not safe and would like to prevent any future accidents.

Synopsis

UAS crew reported transmitter issues due to possible radio antenna interference.

ACN: 1948340 *(2 of 50)*

Time / Day

Date : 202211
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 1.5
Altitude.AGL.Single Value : 243

Environment

Flight Conditions : VMC
Light : Night
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Recreational / Hobbyist (UAS)
Make Model Name : Autel Robotics Evo II
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 107
Mission : Recreational / Hobbyist (UAS)
Flight Phase : Takeoff / Launch
Airspace.Class G : ZZZ
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : N
Control Mode (UAS) : Manual Control
Flying In / Near / Over (UAS) : Private Property
Flying In / Near / Over (UAS) : Open Space / Field
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Recreational / Hobbyist (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Remote Pilot (UAS)
Experience.Flight Crew.Total : 3
Experience.Flight Crew.Total (UAS) : 7
Experience.Flight Crew.Last 90 Days (UAS) : 7
Experience.Flight Crew.Type (UAS) : 1
ASRS Report Number.Accession Number : 1948340
Human Factors : Troubleshooting
Human Factors : Situational Awareness
Analyst Callback : Completed

Events

Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : UAS Crew
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

Night flight requires collision avoidance beacon. That was properly installed and operational; pre-flighted OK. Activation was via remote control panel. This was a new drone for me, so flight sequence was repeatedly: lift-off, try a feature set of the remote control, then land, shut down, look at the instructions, change settings (e.g. beginner mode, km/h or mph, etc) take off and try another feature set. Familiarization flights. The issue was when I was flying at about 243 ft. and a helicopter flew past ZZZ. We had safe separation (vertical and horizontal), but I decided to bring the bird down and noticed when it was landing that the anti-collision light was not turned on. This was my first day flying the aircraft and the feature familiarization affected situational awareness (SA), creating a violation. My guess is that I had changed batteries and forgotten to restart the light. Once airborne at about 30 ft., the only indication to pilot (or crew, if we had one) of whether this light was working was an icon on the remote control. The bird was easy to follow visually from the standard lighting on its sides (especially at the small distance from me). From the ground it was not possible to see the flashing anti-collision light mounted atop the drone and I doubt the side lighting is visible at 3 SM. The system carries a camera that seems to operate continuously. If the software in this system could alert the operator to check for avoidance collision lighting when detected luminance falls below some threshold value (even if that were a selectable safety feature), that may reduce the likelihood of pilot error and improve flight safety.

Callback: 1

The reporter indicated the distance between the UAS and the helicopter was more than half of a mile. While there was no conflict they decided the safest course of action would be to land the UAS.

Synopsis

Recreational/hobby UAS pilot reported flying at night without an anti collision beacon.

ACN: 1947658 *(3 of 50)*

Time / Day

Date : 202211
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.Tower
State Reference : US
Relative Position.Distance.Nautical Miles : 3
Altitude.AGL.Single Value : 100

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Commercial Operator (UAS)
Make Model Name : DJI Mavic 2 Pro
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 107
Mission : Utility / Infrastructure
Flight Phase : Cruise
Airspace.Class D : ZZZ
Airspace Authorization Provider (UAS) : Authorized Third Party
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : N
Control Mode (UAS) : Waypoint Flying
Flying In / Near / Over (UAS) : Critical Infrastructure
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Commercial Operator (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Remote Pilot (UAS)
Experience.Flight Crew.Total : 0
Experience.Flight Crew.Total (UAS) : 75
Experience.Flight Crew.Last 90 Days (UAS) : 10
Experience.Flight Crew.Type (UAS) : 40
ASRS Report Number.Accession Number : 1947658
Human Factors : Training / Qualification

Human Factors : Situational Awareness
Analyst Callback : Attempted

Events

Anomaly.Inflight Event / Encounter : Object
Detector.Person : UAS Crew
When Detected : In-flight
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Human Factors
Primary Problem : Ambiguous

Narrative: 1

At about XA:00 on Day 0, I had controlled flight into a guide-wire at an electrical substation at Location A. This controlled flight was performed through a way-point on the DJI flight application. There was no personal injuries to anyone involved and there was no damage caused to the substation or anything on the ground as a result of the crash. The drone fell straight down after impact to the guide-wire and landed in the stone parking area. There were several workers at the substation. I honked my car horn to get their attention. The substation is surrounded by a tall fence. One worker approached the gate. I explained the situation, indicated where the drone had crashed, asked if he could retrieve the drone for me since I was unauthorized to physically enter the substation. He easily located the drone and returned it to me. Another gentleman took a picture of my car license plate. I presented them with my UAS License and the contract paperwork with contact information from the company that hired me. This company advised me that they have the property authority from the critical infrastructure owner or representative for this inspection. I was hired by Company A to perform a substation inspection consisting of pictures and video. Company A were hired by the operator or otherwise authorized individual to perform this inspection over critical infrastructure. I obtained LAANC authorization for this due to the proximity to ZZZ. What caused this controlled flight into the guide-wire was a miscalculation in altitude in my way-point program. I flew over the guide-wire, recorded the needed altitude to clear the obstruction and programmed this altitude into the way-point program. I initiated the way-point program the drone was flying to the starting point when it collided into the guide-wire. Had I hand flown the drone this accident would not have occurred. This was a way-point altitude miscalculation. I was well rested/ the sky was sunny / the wind was calm. The drone was inspected before the flight for any obvious issues. The drone was flying and performing properly. This was simply a way-point altitude issue.

Synopsis

Part 107 UAS pilot reported the UAS hit a power line during a pre-programmed flight.

ACN: 1947331 *(4 of 50)*

Time / Day

Date : 202211

Place

Locale Reference.ATC Facility : LAX.Tower
State Reference : CA
Altitude.MSL.Single Value : 2400

Aircraft : 1

Reference : X
ATC / Advisory.Tower : LAX
Aircraft Operator : Air Carrier
Make Model Name : Large Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Final Approach
Airspace.Class B : LAX

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Airspace.Class B : LAX
Flying In / Near / Over (UAS) : Aircraft / UAS
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1947331

Events

Anomaly.Airspace Violation : All Types
Anomaly.Conflict : Airborne Conflict
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Flight Crew
Miss Distance.Vertical : 600
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

Aircraft X on final approach to Runway 25L at approximately 2,400 ft. we passed under what appeared to be a stationary drone hovering at approximately 3,000 ft. The drone appeared to be grey in color and in the shape of a 5 point star and was situated directly on centerline. We immediately advised tower and landed without incident.

Synopsis

Air carrier Captain reported flying under a UAS on final approach. ATC was notified and the plane landed without incident.

ACN: 1947202 *(5 of 50)*

Time / Day

Date : 202211
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : TPA.Tower
State Reference : FL
Altitude.MSL.Single Value : 1500

Environment

Light : Daylight

Aircraft : 1

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Large Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Climb
Airspace.Class B : TPA

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Flight Phase : Cruise
Airspace.Class B : TPA
Flying In / Near / Over (UAS) : Aircraft / UAS
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Last 90 Days : 248
Experience.Flight Crew.Type : 228
ASRS Report Number.Accession Number : 1947202

Events

Anomaly.Airspace Violation : All Types
Anomaly.Conflict : NMAC

Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

On initial departure passing through approximately 1,500 ft., I noticed that we were overtaking an object. I immediately believed it to be a single bird, but it was not maneuvering as birds normally do. Rather, it tracked down the left side of the aircraft in a straight line, exactly in speed and direction of our departure travel. Confident that the object would remain clear, I did not need to maneuver the aircraft, but the object did appear to be well within 500 ft. off the left side and just below our flight path. As we passed abeam, I determined that the object was definitely not a bird. It was dark in appearance, and it had a flat and circular shape. It appeared to be hovering, and it looked very much like a drone. I do not feel that we did anything wrong, or that we could have mitigated the threat any more than we did. This report is just a Safety concern.

Synopsis

Captain reported seeing a drone flying near the aircraft on initial departure.

ACN: 1947181 *(6 of 50)*

Time / Day

Date : 202209
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : SPA.Airport
State Reference : SC
Relative Position.Distance.Nautical Miles : 7.0
Altitude.AGL.Single Value : 115

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Commercial Operator (UAS)
Make Model Name : Small UAS, Multi Rotor
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 107
Flight Plan : None
Mission : Utility / Infrastructure
Flight Phase : Takeoff / Launch
Airspace.Class E : SPA
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : N
Control Mode (UAS) : Manual Control
Flying In / Near / Over (UAS) : Private Property
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Commercial Operator (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Remote Pilot (UAS)
Experience.Flight Crew.Total (UAS) : 28
Experience.Flight Crew.Last 90 Days (UAS) : 1
Experience.Flight Crew.Type (UAS) : 28
ASRS Report Number.Accession Number : 1947181
Human Factors : Situational Awareness
Human Factors : Training / Qualification
Analyst Callback : Attempted

Events

Anomaly.Airspace Violation : All Types
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Other Person
When Detected.Other
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

Went to location to perform a structural inspection. I mistakenly thought I was outside of controlled airspace and didn't check. The error was detected at months end when management was conducting their controlled airspace reviews/checks. This was an oversight and no flights will be conducted without verification pre-flight to ensure this does not happen again.

Synopsis

Part 107 UAS pilot reported flying in controlled airspace without authorization.

ACN: 1946586 *(7 of 50)*

Time / Day

Date : 202210
Local Time Of Day : 1201-1800

Place

Altitude.AGL.Single Value : 0

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Recreational / Hobbyist (UAS)
Make Model Name : Micro UAS, Multirotor
Crew Size.Number Of Crew : 1
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Micro
Configuration (UAS) : Multi-Rotor
Control Mode (UAS) : Manual Control
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Recreational / Hobbyist (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Experience.Flight Crew.Total (UAS) : 25
Experience.Flight Crew.Last 90 Days (UAS) : .5
Experience.Flight Crew.Type (UAS) : 25
ASRS Report Number.Accession Number : 1946586
Analyst Callback : Completed

Events

Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

I realized today that my drone registration had expired while I flew it yesterday Day 0. I renewed it immediately after this came to my attention.

Callback: 1

The reporter had no additional details to share.

Synopsis

Recreational/Hobby UAS pilot reported flying a UAS with expired registration.

ACN: 1946585 *(8 of 50)*

Time / Day

Date : 202210
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 20
Altitude.AGL.Single Value : 75

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Recreational / Hobbyist (UAS)
Make Model Name : DJI Spark
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 107
Mission : Recreational / Hobbyist (UAS)
Flight Phase : Hovering (UAS)
Airspace.TFR : ZZZ
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Small
Control Mode (UAS) : Manual Control
Flying In / Near / Over (UAS).Other
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Recreational / Hobbyist (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Commercial
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Remote Pilot (UAS)
Qualification.Flight Crew : Flight Instructor
Experience.Flight Crew.Total : 25000
Experience.Flight Crew.Total (UAS) : 25
Experience.Flight Crew.Last 90 Days (UAS) : 0.5
Experience.Flight Crew.Type (UAS) : 50
ASRS Report Number.Accession Number : 1946585
Human Factors : Situational Awareness
Human Factors : Training / Qualification

Human Factors : Confusion
Analyst Callback : Completed

Events

Anomaly.Airspace Violation : All Types
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : UAS Crew
When Detected.Other
Result.Flight Crew : Landed As Precaution

Assessments

Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Human Factors
Primary Problem : Ambiguous

Narrative: 1

I was flying drone within 3 miles of the sporting event at XA:10, the game started at XB:00, I had lost track of time and didn't realize I had violated the time restriction. I was flying near my location and was not trying to fly near stadium. This was a total unintentional violation of the airspace and I will be more diligent in the future of any event going on within the proximity of an event of the stadium. I am adding this report in addition to one filed to add information that I forgot to include. I was flying my drone near my residence in ZZZ which is within a mile proximity of the stadium. I was not flying with intent of going near the stadium, I was, however, within the restricted area when it went hot. I lost track of time and didn't realize that I was within the 1 hour of game time. The time was XA:10 and the game started at XB:00. I can say that this was an absolute learning event regarding the fact that I had not made myself acutely aware of the time of the restricted airspace being activated while I was flying my drone. I was also surprised that my drone software didn't give me an alert to the airspace issue. I thought that the DJI drones were programmed to alert the user if it was near restricted airspace. I have had the drone for quite a while but am not a very active user of it. I am sorry for the incident and can say it will not occur again.

Callback: 1

The reporter had no additional details to share.

Synopsis

Recreational/hobby UAS pilot reported flying during an active Temporary Flight Restriction (TFR). Once they learned of the TFR the pilot exited the airspace by landing.

ACN: 1944465 *(9 of 50)*

Time / Day

Date : 202210
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : SAN.Airport
State Reference : CA
Relative Position.Distance.Nautical Miles : .5
Altitude.AGL.Single Value : 50

Environment

Flight Conditions : VMC
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Commercial Operator (UAS)
Make Model Name : Small UAS, Multi Rotor
Crew Size.Number Of Crew : 3
Operating Under FAR Part : Part 107
Mission : Photo Shoot / Video
Flight Phase : Cruise
Airspace.Class B : SAN
Operating Under Waivers / Exemptions / Authorizations (UAS) : Y
Waivers / Exemptions / Authorizations (UAS) : Blanket COA
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : Y
Control Mode (UAS) : Manual Control
Flying In / Near / Over (UAS) : Private Property
Flying In / Near / Over (UAS) : People / Populated Areas
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport
Flying In / Near / Over (UAS) : No Drone Zone
Flying In / Near / Over (UAS) : Moving Vehicles
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Commercial Operator (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Function.Flight Crew : Remote PIC (UAS)
Qualification.Flight Crew : Remote Pilot (UAS)
Experience.Flight Crew.Total : 0
Experience.Flight Crew.Total (UAS) : 1222
Experience.Flight Crew.Last 90 Days (UAS) : 18
Experience.Flight Crew.Type (UAS) : 830

ASRS Report Number.Accession Number : 1944465
Human Factors : Situational Awareness
Analyst Callback : Completed

Events

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Person : UAS Crew
When Detected : In-flight
Result.Flight Crew : Exited Penetrated Airspace

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

RPIC strayed 10 meters over the water while executing a maneuver and immediately pulled back over land. Drone was following two vehicles in a car shoot and executed a maneuver to go diagonally between the two vehicles toward the water. To execute the maneuver the RPIC accelerated toward the gap and accidentally overshot the demarcation of water/land by 30 ft. Authorization required "DUE TO BAY HELICOPTER TRAFFIC, ALL UAS OPERATIONS MUST REMAIN OVER LAND." No traditional aircraft were in the area and no hazard was created.

Callback: 1

The reporter indicated the restriction over not flying over the water was placed in the COA. There were no airspace violations.

Synopsis

Part 107 UAS crew was operating with a Certificate of Authorization (COA). There was a short moment during the cruise portion of the flight when the UAS was operating outside the parameters of the COA.

ACN: 1944464 *(10 of 50)*

Time / Day

Date : 202210
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 7.11
Altitude.AGL.Single Value : 20

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Work Environment Factor : Excessive Wind (UAS)
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Commercial Operator (UAS)
Make Model Name : Teal Golden Eagle
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 107
Mission : Test Flight / Demonstration
Flight Phase : Hovering (UAS)
Airspace.Class G : ZZZ
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Airworthiness Certification (UAS) : Standard
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : Y
Control Mode (UAS) : Transitioning Between Modes
Flying In / Near / Over (UAS) : Private Property
Flying In / Near / Over (UAS) : Open Space / Field
Flying In / Near / Over (UAS) : Moving Vehicles
Number of UAS Being Controlled (UAS).Number of UAS : 1

Component

Aircraft Component : Transmitter (UAS)
Manufacturer : Teal Drones
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Commercial Operator (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Remote Pilot (UAS)

Experience.Flight Crew.Total : 25
Experience.Flight Crew.Total (UAS) : 4500
Experience.Flight Crew.Last 90 Days (UAS) : 100
Experience.Flight Crew.Type (UAS) : 300
ASRS Report Number.Accession Number : 1944464
Human Factors : Troubleshooting
Analyst Callback : Completed

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Inflight Event / Encounter : Fly Away (UAS)
Anomaly.Inflight Event / Encounter : Object
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Person : UAS Crew
When Detected : In-flight
Result.Aircraft : Lost Link (UAS)

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Software and Automation
Primary Problem : Ambiguous

Narrative: 1

Testing a Teal Golden Eagle drone system for a demo, and I selected one of the drones to test manual controls. I pushed on the right joystick to give the drone a right roll, when I did that it lost link. When it lost link it kept the command in for 3 seconds and it didn't stop until it hit the building. I think some interference happened during the flight that caused it to lose link, and keep that command in, it couldn't correct the command before the crash. It was a different software than normal, that was being tested. I have been trained by the manufacturer, but it did show an issue of the link cycling when the drone did the fly away

Callback: 1

The reporter indicated they were testing new software for the UAS and they believe the software was the root cause for the lost link.

Synopsis

Part 107 UAS pilot was conducting a demo flight when a lost link occured. After the lost link the UAS flew into a building.

ACN: 1943813 *(11 of 50)*

Time / Day

Date : 202210
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 10
Altitude.AGL.Single Value : 150

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Government
Make Model Name : DJI Matrice 600 Pro
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 107
Mission : Agriculture
Flight Phase : Cruise
Airspace.Class G : ZZZ
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : N
Control Mode (UAS) : Waypoint Flying
Flying In / Near / Over (UAS) : Open Space / Field
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Component

Aircraft Component : GPS Module (UAS)
Manufacturer : DJI
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Government
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Remote Pilot (UAS)
Experience.Flight Crew.Total : 22
Experience.Flight Crew.Total (UAS) : 22
Experience.Flight Crew.Last 90 Days (UAS) : 5

Experience.Flight Crew.Type (UAS) : 7
ASRS Report Number.Accession Number : 1943813
Human Factors : Troubleshooting
Human Factors : Confusion
Analyst Callback : Attempted

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Ground Event / Encounter : Loss Of VLOS (UAS)
Anomaly.Inflight Event / Encounter : Fly Away (UAS)
Anomaly.Inflight Event / Encounter : Object
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Person : UAS Crew
When Detected : In-flight
Result.Aircraft : Aircraft Damaged
Result.Aircraft : Lost Link (UAS)

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Environment - Non Weather Related
Primary Problem : Ambiguous

Narrative: 1

On Day 0, my coworkers and I headed to Location A, to fly the research unit's drone to collect soybean maturity images. The drone model is the Matrice 600 pro with recently up to date firmware from DJI Assistant and attached is the Zenmuse Z30 camera run on firmware V01.00.07.10. It was a clear day with few clouds in the area, visibility was great, and the winds were low at 7 mph. I set up the drone following manual protocols, checked pre-flight take off list, and set up our flight map. We use the app Pix4D Capture to fly our missions by creating grid flight maps to capture large orthomosaics. The flight mission was supposed to take 10 minutes and 43 seconds, with an altitude set at 150 ft, and a grid dimension of 171ft. X 328ft. Once the drone turned on and connected to the controller and app, I set the home set point location. The drone passed all pre-flight checks in the Pix4D Capture app and took off to start its mission. At the very end of the flight the drone controller started to beep, due to the low battery warning set at 30% battery life. At this point, the drone then took off at a higher speed, 90 degrees from its intended path of flight. When I saw that the drone was acting abnormally from it's intended flight plan, I pressed the "Return to Home" button on the remote controller, however the drone did not respond. As I kept pressing the return to home button, the drone continued to fly farther away from us and the home set point, quickly losing sight due to the distance. I no longer could see the GPS location of the drone on the Pix4D Capture app. I then tried to manually take control of the drone, but it kept flying away even with manual input. We began to lose sight of the drone in the tree line and once that happened, we drove to its last visual location. After looking for the drone, we found it had hit a tree. There was no injury to anyone and no damage to property besides the drone itself. I have been flying this drone for almost two years, using the same Pix4D Capture app and have never had anything to this extreme happen before. After doing research online, I saw that this can occur and what had happened was a "flyaway". I looked further into flyaways and saw that most flyways happen when the link between the controller and the drone gets severed. This can be caused by electromagnetic interference, which can cause compass interference in the drone and controller connection loss. After researching further, I believe there was an

electromagnetic interference causing the drone to have compass issues, making the drone not know the location where it was and disconnecting the controller to the drone. So, when this disconnect happened and a fail-safe return to home happened, however the drone didn't know where the set return to home location was, taking off in the opposite direction to find the home point. This is my theory after doing some research and from what I experienced that day.

Synopsis

Part 107 UAS pilot reported a lost link during flight. During the flyaway the UAS struck a tree and crashed.

ACN: 1943552 *(12 of 50)*

Time / Day

Date : 202210
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 8.9
Altitude.AGL.Single Value : 174

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Work Environment Factor : Excessive Wind (UAS)
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Commercial Operator (UAS)
Make Model Name : DJI Phantom 4 Pro V2
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 107
Mission : Photo Shoot / Video
Flight Phase : Cruise
Airspace.Class G : ZZZ
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : N
Control Mode (UAS) : Manual Control
Flying In / Near / Over (UAS) : People / Populated Areas
Flying In / Near / Over (UAS) : Open Space / Field
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Component

Aircraft Component : GPS Module (UAS)
Manufacturer : DJI
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Commercial Operator (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Remote Pilot (UAS)
Experience.Flight Crew.Total (UAS) : 500

Experience.Flight Crew.Type (UAS) : 100
ASRS Report Number.Accession Number : 1943552
Human Factors : Troubleshooting
Human Factors : Situational Awareness
Analyst Callback : Completed

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Inflight Event / Encounter : Fly Away (UAS)
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Person : UAS Crew
When Detected : In-flight
Result.Aircraft : Lost Link (UAS)
Result.Aircraft : Lost / Unrecoverable (UAS)

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Software and Automation
Primary Problem : Ambiguous

Narrative: 1

Clear day, sunny, 45 degrees Fahrenheit, Wind from west approximately 15 MPH. Launched from a small city park in Location A. Hovered approximately 10 ft. until I got the Green GPS lock, then rose to 140 ft. rotated around to view possible obstacles. Ascended to approximately 170 ft. and began to fly a bit further west to get better view of my location and then lost GPS mode. Went into Attitude (ATTI) mode. Tried to find my ground location visually but wind had already pushed it so I didn't know which way it drifted. Then lost connection totally with the controller. Attempted to do a Return To Home but without GPS and lost connection was unable to bring it back. Wind was blowing east at approximately 15 MPH. I waited 30 minutes trying to establish contact, but post battery had run out if it hadn't landed or crashed by then. I had flown successfully last on Day 1 for 4 batteries and over 9,800 ft. total distance with no issues. Never had it totally lose connection like that.

Callback: 1

Reporter indicated they lost VLOS of the UAS and it was unrecoverable. Further research after the incident the reporter learned the UAS has a GPS mismatch error which they believe was the root cause of the flyaway.

Synopsis

Part 107 UAS pilot reported flying during windy conditions when a lost link occurred and the UAS flew away.

ACN: 1943037 *(13 of 50)*

Time / Day

Date : 202210
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : I90.TRACON
State Reference : TX
Altitude.MSL.Single Value : 6100

Environment

Flight Conditions : Mixed
Light : Daylight

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : I90
Aircraft Operator : Air Carrier
Make Model Name : Large Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Descent
Route In Use.STAR : WAPPL6
Airspace.Class B : HOU

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Airspace.Class B : HOU
Flying In / Near / Over (UAS) : Aircraft / UAS
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport

Person

Location Of Person.Aircraft : X
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1943037

Events

Anomaly.Airspace Violation : All Types
Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)

Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

Descending via the WAPPL 6 STAR into HOU, at 6,100 ft. MSL near MOLLR intersection, 250 KIAS, as we came out of a scattered layer, a large drone going opposite direction (north bound) suddenly appeared out of a cloud. Drone was within a few hundred feet of the First Officer's (FO) side. No evasive maneuvers were executed because it happened to quick too respond. By the time FO identified it, the event was over. We reported to ATC specific information, i.e.: altitude, time, location and direction it proceeded. Remainder of flight was uneventful. Drone was flying in arrival corridor unknown to any one.

Synopsis

First Officer reported seeing a UAS pass by their aircraft while descending through 6,100 feet. The incident was reported to ATC and flight continued normally.

ACN: 1942777 *(14 of 50)*

Time / Day

Date : 202210
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ORL.Tower
State Reference : FL

Aircraft : 1

Reference : X
ATC / Advisory.Tower : ORL
Aircraft Operator : Fractional
Make Model Name : Medium Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Passenger
Flight Phase : Climb
Airspace.Class E : ORL

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Airspace.Class E : ORL
Flying In / Near / Over (UAS) : Aircraft / UAS
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Fractional
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1942777

Events

Anomaly.Airspace Violation : All Types
Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Flight Crew
Miss Distance.Horizontal : 164
Miss Distance.Vertical : 100
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Provided Assistance

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

Upon departure from ORL Runway 7, I observed a drone pass within 50 meters of my right wing. It was 100 ft. below my flight path. Since we had started our turn on an assigned heading there was no evasive maneuvers required. Had we not been in a climbing turn, I believe we would have had a collision. I notified my Captain, who was the Pilot Flying (PF). I also notified ORL Departure, who then asked for further details.

Synopsis

First Officer reported spotting a UAS fly near the aircraft shortly after departure. No evasive action was taken and ATC was notified.

ACN: 1941676 *(15 of 50)*

Time / Day

Date : 202209
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 2.3
Altitude.AGL.Single Value : 106

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Commercial Operator (UAS)
Make Model Name : DJI Mavic 2 Zoom
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 107
Flight Plan : None
Mission : Utility / Infrastructure
Flight Phase : Takeoff / Launch
Airspace.Class D : ZZZ
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : N
Control Mode (UAS) : Manual Control
Flying In / Near / Over (UAS) : Private Property
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Commercial Operator (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Remote Pilot (UAS)
Experience.Flight Crew.Total : 0
Experience.Flight Crew.Total (UAS) : 19.82
Experience.Flight Crew.Last 90 Days (UAS) : 0.41
Experience.Flight Crew.Type (UAS) : 19.82
ASRS Report Number.Accession Number : 1941676
Human Factors : Training / Qualification
Human Factors : Confusion
Analyst Callback : Attempted

Events

Anomaly.Airspace Violation : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : FAR
When Detected.Other
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

Upon looking up the inspection address through Aloft, I saw I was in a "300" box. I misinterpreted the 300 as the floor of the overlying Class D airspace believing I was flying my drone in uncontrolled airspace (Class G) and did not file a LAANC flight plan. The incursion was discovered by my company's management. We have reviewed the misinterpretation and I now understand the boxes in the Aloft map indicate controlled airspace goes to the surface. I shall not fly in controlled airspace without prior authorization from the controlling agency.

Synopsis

Part 107 UAS pilot reported learning after a post flight review they flew in controlled airspace without authorization.

ACN: 1941675 *(16 of 50)*

Time / Day

Date : 202210
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 9.55
Altitude.AGL.Single Value : 200

Environment

Flight Conditions : VMC
Weather Elements / Visibility : Rain
Weather Elements / Visibility : Thunderstorm
Weather Elements / Visibility.Visibility : 10
Light : Dusk
Ceiling.Single Value : 5000

Aircraft

Reference : X
Aircraft Operator : Recreational / Hobbyist (UAS)
Make Model Name : DJI Mini 2
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 107
Mission : Photo Shoot / Video
Flight Phase : Hovering (UAS)
Airspace.TFR : ZZZ
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Micro
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : N
Control Mode (UAS) : Transitioning Between Modes
Flying In / Near / Over (UAS) : Open Space / Field
Flying In / Near / Over (UAS) : Aerial Show / Event
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Recreational / Hobbyist (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Experience.Flight Crew.Total (UAS) : 150
Experience.Flight Crew.Last 90 Days (UAS) : 20
Experience.Flight Crew.Type (UAS) : 80
ASRS Report Number.Accession Number : 1941675
Human Factors : Situational Awareness
Human Factors : Training / Qualification
Analyst Callback : Completed

Events

Anomaly.Airspace Violation : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Other Person
When Detected.Other

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

My name is Person A, I flew my drone within a 12 mile radius of the Event on Day 0. I flew the drone because I wanted to capture some footage of the fireworks and drone show that was happening that night. The announcer had announced that the event was canceled because of a developing thunderstorm nearby. I made a mistake of flying so close to the event. I am wrong and I will seek official part 107 UAS training from instructors, and I will start reading the FAR Part 107 and obtain a UAS license. I will never violate a no fly zone again.

Callback: 1

The reporter indicated they were flying in an area with approaching thunderstorms but they were able to maintain control of the UAS. After the flight the reporter learned from a local official they had flown during an active Temporary Flight Restriction (TFR).

Synopsis

Recreational/Hobby UAS pilot reported they flew during an active Temporary Flight Restriction (TFR) without authorization.

ACN: 1941461 *(17 of 50)*

Time / Day

Date : 202210
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : CHA.Airport
State Reference : TN
Relative Position.Distance.Nautical Miles : 2.76
Altitude.AGL.Single Value : 131

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 7
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Commercial Operator (UAS)
Make Model Name : Small UAS, Multi Rotor
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 107
Flight Plan : None
Mission : Photo Shoot / Video
Flight Phase : Takeoff / Launch
Airspace.Class C : CHA
Airspace Authorization Provider (UAS) : Authorized Third Party
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : N
Control Mode (UAS) : Manual Control
Flying In / Near / Over (UAS) : People / Populated Areas
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Commercial Operator (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Private
Qualification.Flight Crew : Remote Pilot (UAS)
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Commercial
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Total (UAS) : 15

Experience.Flight Crew.Last 90 Days (UAS) : 3
Experience.Flight Crew.Type (UAS) : 3
ASRS Report Number.Accession Number : 1941461
Human Factors : Human-Machine Interface
Human Factors : Situational Awareness
Human Factors : Confusion
Analyst Callback : Attempted

Events

Anomaly.Airspace Violation : All Types
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : UAS Crew
When Detected : In-flight
Result.Flight Crew : Landed As Precaution

Assessments

Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

Earlier in the day, I had been operating under an approved FAA authorization to fly within the LAANC approved area at <100 ft. AGL, north of CHA for the purpose of aerial photography. Later that day, I had repositioned west of CHA to continue photographing. I referenced the manufacturer's website which did not show I was in the restricted airspace of CHA. The drone software was still operating under the previous uploaded authorization which allowed me to takeoff off within the surface area Class C airspace. After receiving a notification that I was within the Class C airspace, I landed the aircraft. I confirmed that the class airspace extended over the area in which I was operating via VFR sectional and Aloft/LAANC app. After reviewing the flown flight path, I was able to see that I flew the UAS within an area that was outside of my previous LAANC authorization and that I flew above the 100 ft. AGL (31 ft. higher than the max for that LAANC zone) restriction as I was navigating around wires. The drone app was showing a different overlay of approved flight areas surrounding the CHA Class C. Discovered upon receiving drone notification. Corrected by landing and discontinuing flight in the area. Human factors: Lack of situational awareness. Not doing a thorough job of cross referencing UAS apps and navigational charts. Relying and trusting in equipment that was not fully aware of the situation given outdated information. Future actions: Confirming with sectionals, drone app, and LAANC prior to launching.

Synopsis

Part 107 UAS pilot reported landing as a precaution after realizing they were flying in controlled airspace without authorization.

ACN: 1941155 *(18 of 50)*

Time / Day

Date : 202210
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : I90.TRACON
State Reference : TX
Altitude.MSL.Single Value : 15500

Environment

Flight Conditions : VMC

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : I90
Aircraft Operator : Air Carrier
Make Model Name : Large Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Mission : Passenger
Flight Phase : Climb

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Flight Phase : Cruise
Flying In / Near / Over (UAS) : Aircraft / UAS
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport

Person : 1

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Last 90 Days : 96.67
Experience.Flight Crew.Type : 5084.65
ASRS Report Number.Accession Number : 1941155
Human Factors : Situational Awareness

Person : 2

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier

Function.Flight Crew : Pilot Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Last 90 Days : 193.65
Experience.Flight Crew.Type : 834.38
ASRS Report Number.Accession Number : 1941159

Events

Anomaly.Airspace Violation : All Types
Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Flight Crew
Miss Distance.Horizontal : 100
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

Climbing out of IAH on the STYCK 8 departure, my First Officer (FO) witnessed a yellow drone traveling opposite direction to us come within approximately 100 ft. of our aircraft at about 15,500 ft. I was heads down at the time so I did not see it. I was the Pilot Monitoring (PM) but I had him report it to ATC so that he could give as much detail as possible. Later during cruise flight we took the time to look up whether a report needed to be filed or not. Report filed after flight.

Narrative: 2

Captain was Pilot Flying (PF). First Officer (FO) was Pilot Monitoring (PM). Climbing through 15,500 ft out of IAH flying north on the STYCK8.DOLEY SID, the FO called out a yellow spherical drone on a reciprocal heading co-altitude which passed to the left and just above the aircraft. Closest Point of Approach (CPA) was no more than 100 feet. Drone was not previously reported. Crew reported the incident to ATC immediately.

Synopsis

Air carrier flight crew reported seeing a UAS pass within 100 ft. of the aircraft while climbing at 15,000 ft. and reported it to ATC.

ACN: 1941110 *(19 of 50)*

Time / Day

Date : 202210
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 3.42
Altitude.AGL.Single Value : 200

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Recreational / Hobbyist (UAS)
Make Model Name : DJI Mini 3 Pro
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Recreational Operations / Section 44809 (UAS)
Mission : Recreational / Hobbyist (UAS)
Flight Phase : Takeoff / Launch
Airspace.Class D : ZZZ
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Micro
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : N
Control Mode (UAS) : Manual Control
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Recreational / Hobbyist (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Other
Experience.Flight Crew.Total : 18493
Experience.Flight Crew.Total (UAS) : 1
Experience.Flight Crew.Last 90 Days (UAS) : 1
Experience.Flight Crew.Type (UAS) : 1
ASRS Report Number.Accession Number : 1941110
Human Factors : Human-Machine Interface

Human Factors : Training / Qualification
Human Factors : Confusion
Analyst Callback : Attempted

Events

Anomaly.Airspace Violation : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : FAR
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

I activated a newly acquired DJI Mini 3 Pro (less than 250g) and the RC Controller map indicated no issues flying below 200 ft. AGL at my location. As a result, I undertook drone flights above my property on the afternoon of Day 0 and the morning of Day 1. While researching further drone resources online I discovered B4UFLY, UAV Coach, and ALOFT. I successfully completed The Recreational UAS Safety Test (TRUST) and subsequently requested LAANC approval for an additional flight (to test the system and my ability to access it) on the afternoon of Day 1 at XA:00. I realize now that my initial flights required approval. B4UFLY clearly indicates that fact on their map and DJI should incorporate the B4UFLY database, to avoid inadvertent violations by new owners. In retrospect, I should have done more research before flying but I was under the impression that micro drones (<250 g) could be flown anywhere <400 ft. AGL unless alerted by the DJI Fly App. I know better now and hope to educate other new drone pilots to that fact by submitting this voluntary report. Thank you for the opportunity.

Synopsis

Hobby UAS pilot learned after flying they had inadvertently flown without proper LAANC authorization.

ACN: 1939197 *(20 of 50)*

Time / Day

Date : 202210
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : ZZZ.Tower
State Reference : US
Altitude.AGL.Single Value : 50

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight

Aircraft : 1

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator.Other
Make Model Name : Robinson R44
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : None
Mission : Passenger
Mission.Other
Flight Phase : Initial Climb
Route In Use : None
Airspace.Class G : ZZZ

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Airspace.Class G : ZZZ
Flying In / Near / Over (UAS) : Aircraft / UAS
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport

Person

Location Of Person : Company
Reporter Organization : FBO
Function.Ground Personnel : Airport Personnel
Function.Other.Other
Qualification.Flight Crew : Commercial
Experience.Air Traffic Control.Supervisory : 4279
Experience.Flight Crew.Total : 5500
Experience.Flight Crew.Type : 5500
ASRS Report Number.Accession Number : 1939197

Events

Anomaly.Conflict : Airborne Conflict
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Ground Personnel
Miss Distance.Horizontal : 250
Miss Distance.Vertical : 0
When Detected : In-flight
Result.General : Flight Cancelled / Delayed

Assessments

Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

We operate helicopter sightseeing tours from a heliport in close proximity to Location A. A drone was being operated within 100 yards of our active heliport. Our helicopter departed to the north of the drone being operated and did not return until our ground crew witnessed the drone being stowed into the operators vehicle. Drone operators continue to be a major issue around our heliport and Location A.

Synopsis

A sightseeing tour operator reported UAS operations taking place within 100 yards from their base of operations which delayed the landing of a helicopter.

ACN: 1938287 *(21 of 50)*

Time / Day

Date : 202209
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ZZZ.Tower
State Reference : US
Relative Position.Distance.Nautical Miles : 6.7
Altitude.AGL.Single Value : 400

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Commercial Operator (UAS)
Make Model Name : DJI Mavic 3
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 107
Mission : Photo Shoot / Video
Flight Phase : Cruise
Airspace.Class B : ZZZ
Airspace Authorization Provider (UAS) : Authorized Third Party
Operating Under Waivers / Exemptions / Authorizations (UAS) : Y
Waivers / Exemptions / Authorizations (UAS) : Blanket COA
Airworthiness Certification (UAS) : Standard
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : N
Control Mode (UAS) : Manual Control
Flying In / Near / Over (UAS) : Private Property
Flying In / Near / Over (UAS).Other
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Commercial Operator (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Private
Qualification.Flight Crew : Commercial
Qualification.Flight Crew : Remote Pilot (UAS)
Experience.Flight Crew.Total : 366
Experience.Flight Crew.Total (UAS) : 410.8

Experience.Flight Crew.Last 90 Days (UAS) : 7.3
Experience.Flight Crew.Type (UAS) : 42.5
ASRS Report Number.Accession Number : 1938287
Human Factors : Confusion
Analyst Callback : Completed

Events

Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Other Person
When Detected : In-flight
Result.General : Police / Security Involved

Assessments

Contributing Factors / Situations : Chart Or Publication
Primary Problem : Chart Or Publication

Narrative: 1

This morning, I was flying my Mavic 3 to take photos of a facility [in] Location A. I have a currently valid Wide-Area Authorization for ZZZ that would have permitted the flight, but I also filed for and received LAANC approval through the Aloft app for flight in the vicinity up to 400 ft. The only warning I received from Aloft was about the ZZZ Class B airspace. I was not aware of any airspace limits as a result of flying above the neighboring building to get shots of the target building. The flight started at approximately XA:51 am and I took a sequence of stills of the target building at 400 ft. and 250 ft. All operations were VLOS. At approximately XB:02, a marked US vehicle drove up and the Public Official asked me to speak with him. I asked him to wait a moment for me to land the drone. He then instructed me to turn off the drone. He asked if I saw the No Trespassing sign. He pointed to a small sign bordering the target site and a neighboring parking lot. I told him that I had only been on the target site's parking lot. He said that my drone however had been over the neighboring property and it was illegal to fly over the property. He took my drivers license and did whatever kind of check they do with a driver's license. He began writing about the incident. He said they were only collecting the information in case I did it again and then they'd be concerned about a course of conduct. I encouraged him to review all the shots I had taken to that point which he ultimately did. He was not concerned about any of the content of the stills. I also encouraged him to get my Part 107 license number since that's likely to be what others might want as a record. After he "released" me, I resumed my flight at approximately XB:24 and there were no further encounters with the Public Official. When I completed the flight at approximately XB:49, I went back into the Aloft app to cancel the LAANC authorization. It appears that Aloft doesn't provide a process to cancel the authorization so it would have expired 3 hours after the flight started. I also noticed on the Aloft screen this time that there are 2 "U.S. Government NSUFR; Security Sensitive Airspace Restrictions that prohibits Drones from flying over designated national security sensitive facilities." One location was 1.6 miles from the target site and the other was 2.6 miles. There was no mention of any issue with the site immediately adjacent to the target property. As of now, I still don't know that the neighboring building's airspace is in any way restricted other than a small no trespassing sign near the parking lot and the Public Official's assertion that it was restricted. I believe I did all the pre-flight planning (including airspace awareness) necessary for the flight and at this point I don't know of any rules that I violated. However, I'm filing this so that the airspace maps can be updated if indeed that airspace is restricted or the US Public Official

can be advised that while I might not be permitted to walk onto their property, the airspace above the property is not restricted beyond being in Class B airspace. I would appreciate contact from NASA or the FAA to advice me if the space is restricted and how I might have known that based on current maps on Aloft and on FAA UAS Facility Maps. Thank you.

Callback: 1

UAS pilot reported they had done pre-flight planning for their flight. During the planning there were no charted areas that prohibited UAS flights. After the flight the UAS pilot learned from law enforcement of posted no trespassing signs for a government building which included the airspace above the building.

Synopsis

Part 107 UAS pilot reported they conducted a photo mission near a building and were approached by a public official. The pilot learned of nearby non-charted UAS prohibited areas they may possibly have entered.

ACN: 1937776 *(22 of 50)*

Time / Day

Date : 202209
Local Time Of Day : 0001-0600

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Angle.Radial : 300
Relative Position.Distance.Nautical Miles : 7
Altitude.MSL.Single Value : 3600

Environment

Weather Elements / Visibility.Visibility : 50
Weather Elements / Visibility.Other
Light : Night

Aircraft : 1

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Government
Make Model Name : Jet/Long Ranger/206
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : VFR
Mission.Other
Flight Phase.Other
Airspace.Class C : ZZZ

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Flight Phase : Cruise
Airspace.Class C : ZZZ
Flying In / Near / Over (UAS) : Aircraft / UAS
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Government
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Rotorcraft
Qualification.Flight Crew : Commercial
Experience.Air Traffic Control.Supervisory : 2885
Experience.Flight Crew.Total : 8500
Experience.Flight Crew.Last 90 Days : 100
Experience.Flight Crew.Type : 7800
ASRS Report Number.Accession Number : 1937776

Events

Anomaly.Airspace Violation : All Types
Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : FAR
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Detector.Person : Flight Crew
Miss Distance.Horizontal : 25
Miss Distance.Vertical : 0
When Detected : In-flight
Result.General : Police / Security Involved
Result.Flight Crew : Took Evasive Action
Result.Flight Crew : Requested ATC Assistance / Clarification

Assessments

Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

On the listed date I was working with Officer A as the crew of the flight. I was the pilot and Officer A was the Tactical Flight Officer. We were engaged with a priority call in the area of Location A, assisting patrol officers with a foot pursuit. At approximately XA:09 hrs I observed what appeared to be a set of aircraft position lights in front of the aircraft at the same altitude coming straight at us from the east. I could tell the lights indicated a small craft more likely a drone type. I had to abruptly maneuver our aircraft to avoid the drone colliding with the front of our aircraft. It narrowly missed us by 25 ft. I advised Officer A that a drone nearly collided with us and had to change our flight path to avoid. I advised him of its altitude and direction of travel that I last saw it traveling. We both began to scan the area to relocate the drone, causing us to depart the area and the priority call that we were assisting with. I climbed to an altitude of approximately 4,000 ft., and reacquired the drone to our south. The drone was again heading toward us and was at an altitude higher that ours, descending toward us. I again had to maneuver to avoid the drone colliding with us. I continued to fly the aircraft in a manner to maintain observation of the drone with the hope that it would land and or run out of energy, leading us back to its operator. I had Officer A advise patrol units of our in-air incident and requested them to respond to the area we were following the drone. I also advised Air Traffic Control of the near collision, so they could warn other aircraft in the area. The drone, after continually tracking/targeting our aircraft, began to descend in the area of Location B. It landed on a business rooftop and appeared to attempt to hide its location under a parapet wall. We maintained visual of the drone, and directed responding patrol officers to its location. We also requested the fire department respond with a ladder to enable officers to access the rooftop. The drone was secured, and the battery removed with the intent to prevent the owner/operator to erase any recordings ownership details from the unit. The drone was placed into evidence. Public Officials were notified of the incident for follow-up investigation

Synopsis

A helicopter pilot reported a UAS approached their aircraft requiring the pilot to maneuver to avoid a collision. The UAS approached the helicopter again requiring further evasive action. After the second event the UAS landed.

ACN: 1936981 *(23 of 50)*

Time / Day

Date : 202209
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : MIA.TRACON
State Reference : FL
Relative Position.Angle.Radial : 300
Relative Position.Distance.Nautical Miles : 15
Altitude.MSL.Single Value : 2000

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Reference : X
Aircraft Operator : Personal
Make Model Name : Aerobatic
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : None
Mission : Training
Flight Phase : Cruise
Route In Use : Direct
Airspace.Class C : FLL

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Flying In / Near / Over (UAS) : Aircraft / UAS
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Instructor
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Air Transport Pilot (ATP)
Experience.Flight Crew.Total : 4000
Experience.Flight Crew.Last 90 Days : 150
Experience.Flight Crew.Type : 70
ASRS Report Number.Accession Number : 1936981
Human Factors : Distraction
Human Factors : Situational Awareness
Human Factors : Confusion

Events

Anomaly.Airspace Violation : All Types
Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Flight Crew
Miss Distance.Horizontal : 500
Miss Distance.Vertical : 0
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

On Day at around XA:00 am local time, I was doing a flight from FXE to ZZZ repositioning the plane operating under Part 91. When I was established at 2,000 ft., 15 NM NW of FXE I encountered a big drone orbiting and maneuvering at 2,000 ft. Immediately I took a corrective action climbing and turning right to avoid further issues. After making sure I was cleared of the conflict I stayed between 2,500 and 3,000 ft. flying westbound. There is a high possibility that I entered in FLL [Class] C airspace for 1 to 2 minutes. Once the conflict was cleared, I descended to 1,000 ft and continue the flight with no issues to ZZZ. I couldn't identify the type of drone. I have seen several drones within the last 3 months around the same area.

Synopsis

Flight Instructor reported observing a UAS pass near their aircraft at 2,000 ft. and took evasive action to avoid collision. The instructor believes they might have accidentally entered Class C airspace while maneuvering.

ACN: 1936800 *(24 of 50)*

Time / Day

Date : 202209
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : A90.TRACON
State Reference : NH
Altitude.MSL.Single Value : 5000

Environment

Flight Conditions : VMC

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : A90
Aircraft Operator : Air Carrier
Make Model Name : Small Aircraft
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Cruise
Airspace.Class B : BOS

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Airspace.Class B : BOS
Flying In / Near / Over (UAS) : Aircraft / UAS
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1936800
Human Factors : Distraction
Human Factors : Confusion

Events

Anomaly.Airspace Violation : All Types
Anomaly.Conflict : NMAC

Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Flight Crew
Miss Distance.Horizontal : 0
Miss Distance.Vertical : 10
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Provided Assistance

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

While still in BOS Class B NE of BVY at 5,000 ft. I was getting the aircraft into a cruise configuration with the autopilot engaged. I looked up from what I was doing and happened to notice a blue drone like object out of my left periphery. It quickly passed inside of our wingtip and no more than 10 ft. over the top of the wing. I was unable to disengage the autopilot and take any meaningful action because there was very little time to react. Upon realizing that the drone passed and did not cause any damage to our aircraft, I immediately reported it to Boston Approach. I provided the controller with the same details and that it was a neon blue drone with LED lights. Once I was handed off to Portland Approach, Boston was talking to Portland over the landline for details regarding any evasive action I took and if I was planning to file a Near Miss Mid Air Collision report which I am in the process of completing. The flight continued without further incident and landed safely in ZZZ. Cause - The drone operator was flying a drone too high in airspace he or she should not have been in and ATC was not aware of the drone activity prior to the encounter.

Synopsis

A First Officer reported a UAS passing within 10 ft of their aircraft while leveling off for cruise and reported the incident to ATC. No evasive action was taken and the aircraft continued normally.

ACN: 1936399 *(25 of 50)*

Time / Day

Date : 202209
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 3.5
Altitude.AGL.Single Value : 99

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Commercial Operator (UAS)
Make Model Name : DJI Mavic 3
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 107
Mission : Photo Shoot / Video
Flight Phase : Takeoff / Launch
Airspace.Class B : ZZZ
Airspace.TFR : ZZZ
Airspace Authorization Provider (UAS) : Authorized Third Party
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : N
Control Mode (UAS) : Manual Control
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Commercial Operator (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Remote Pilot (UAS)
Experience.Flight Crew.Total (UAS) : 250
Experience.Flight Crew.Last 90 Days (UAS) : 50
ASRS Report Number.Accession Number : 1936399
Human Factors : Human-Machine Interface
Human Factors : Training / Qualification
Human Factors : Confusion
Analyst Callback : Attempted

Events

Anomaly.Airspace Violation : All Types
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : UAS Crew
When Detected.Other
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Human Factors
Primary Problem : Ambiguous

Narrative: 1

I apparently flew in a TFR yesterday in Location. I requested and received LAANC approval authorization. There was a TFR over ZZZ as a Public Official was in the area. When you I used B4UFLY, there were overlapping graphics for that area and it appeared to have the same colorization as always. When my LAANC was automatically and immediately approved I thought there was no issue. I was flying as a certified Part 107 by the way. After posting a few pics in a private group on social media, some folks started asking and I realized I may have been in the wrong. I went back and read the email (I usually just read the text message that says you're approved) and it does clearly state that pilots are responsible for adhering to TFRs. What will I do differently? First, I won't do this again. I will learn how to subscribe to TFRs and check during my pre-flight (which I did do but didn't realize I was wrong). I will also go back and educate everyone in the group with what happened. This morning I contacted the FAA and they called me. Basically they said don't beat yourself up over it, but to report it here, use it as a teaching moment and to improve from this. If I could encourage - maybe all TFRs should be a unique color so as to not be confused with regular airspace issues. But yes, 100% the pilot is responsible for following the rules. Thank you

Synopsis

Part 107 pilot learned after a flight they inadvertently flew in an active TFR.

ACN: 1936118 *(26 of 50)*

Time / Day

Date : 202209
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : PCT.TRACON
State Reference : VA
Relative Position.Angle.Radial : 10
Relative Position.Distance.Nautical Miles : 260
Altitude.MSL.Single Value : 4000

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : PCT
Aircraft Operator : Personal
Make Model Name : Small Aircraft, Low Wing, 1 Eng, Fixed Gear
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Climb
Route In Use.SID : ARSNL5

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Flight Phase : Cruise
Flying In / Near / Over (UAS) : Aircraft / UAS

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Commercial
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 3500
Experience.Flight Crew.Last 90 Days : 150
Experience.Flight Crew.Type : 550
ASRS Report Number.Accession Number : 1936118

Events

Anomaly.Airspace Violation : All Types
Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Passenger
Miss Distance.Horizontal : 50
Miss Distance.Vertical : 5
Were Passengers Involved In Event : Y
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Provided Assistance

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

On IFR departure from HEF to ZZZ via ARSNL 5 MOL transition. Cleared direct to destination with climb to 3000 ft. A large jet passed overhead at 5000 ft. Cleared to climb to 6000 ft. Passing 4000 ft my passenger saw what she thought was an airplane far away and low. After staring at it for a second, she realized she didn't know what it was. As it passed, she realized it was a drone and it was very close. Estimated within 50 feet and perhaps 4-8 feet below us. In this 2.5 seconds, she did not say anything. After it passed, she said "I think we almost hit a drone" and pointed it out to me. She estimated the drone was fairly large with a black bent pipe structure below it and a gray and white body. It was perhaps 2 to 3 feet across. She did not think it was a quad rotor, but she is not an expert in drones either. She thought it had a large single mast. I only caught a glance at the drone after we past it and did not maneuver. Needless to say, this could have been a fatal accident but for the "big sky theory." I notified Potomac Approach immediately and provided 5 "Ws". They asked me to call on landing. I did about XA:00 EDT. They informed me FAA had dispatched local authorities to the location, but no drone operators were found.

Synopsis

A general aviation pilot reported that their passenger saw a UAS pass near by their aircraft at 4,000 ft. The reporting pilot advised ATC and they attempted to provide assistance.

ACN: 1935141 *(27 of 50)*

Time / Day

Date : 202209
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 11.3
Altitude.MSL.Single Value : 8369

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Commercial Operator (UAS)
Make Model Name : DJI Mavic 2 Pro
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 107
Mission : Photo Shoot / Video
Flight Phase : Cruise
Airspace.Class G : ZZZ
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Airworthiness Certification (UAS) : Standard
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : N
Control Mode (UAS) : Manual Control
Flying In / Near / Over (UAS) : Crowds
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Commercial Operator (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Remote Pilot (UAS)
Experience.Flight Crew.Total : 0
Experience.Flight Crew.Total (UAS) : 18.45
Experience.Flight Crew.Last 90 Days (UAS) : 4.25
Experience.Flight Crew.Type (UAS) : 18.45
ASRS Report Number.Accession Number : 1935141
Human Factors : Training / Qualification
Human Factors : Time Pressure
Analyst Callback : Completed

Events

Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Other Person
When Detected.Other
Result.General : Police / Security Involved

Assessments

Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

Had a last minute hire to film a parade by the committee who put the parade together. Because there was no time to seek a waiver, I went over the new regulations for flying over people and believed I was Category 2 compliant. At the event I made sure to be careful and keep my drone mostly over either buildings or vehicles and not people, and maintained direct line of site the entire flight time. There were a few times were I had to transit over people, but due to the new regulations I believed I was within regulation as I wasn't maintaining sustained flight directly over people. After I was done I landed the drone and a Public Official approached me claiming I was not in regulation that I would need waivers from every single person there to fly my drone around the crowds. While I had my own doubts to his claim, I reached out to someone for help understanding the regulations. Even though I was correct that the Public Official was not correct about needing multiple waivers, I was informed that I was not within regulations and was explained what I misunderstood about the Operations Over People regulations. I now have a better understanding of the regulations, and will apply it to future flights.

Callback: 1

The reporter indicated they learned after the flight only Category 1 UAS are allowed to fly over crowds.

Synopsis

Part 107 pilot reported flying over persons with a UAS that was not in the correct size category for the type of operation. UAS pilot learned during the post flight of their error.

ACN: 1935136 *(28 of 50)*

Time / Day

Date : 202206
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 1
Altitude.AGL.Single Value : 200

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 5
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Commercial Operator (UAS)
Make Model Name : DJI Phantom 4 Pro V2
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 107
Mission : Photo Shoot / Video
Flight Phase : Takeoff / Launch
Airspace Authorization Provider (UAS) : FAA Authorization
Operating Under Waivers / Exemptions / Authorizations (UAS) : Y
Waivers / Exemptions / Authorizations (UAS) : Blanket COA
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Control Mode (UAS) : Waypoint Flying
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Commercial Operator (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Remote Pilot (UAS)
Experience.Flight Crew.Total (UAS) : 300
Experience.Flight Crew.Last 90 Days (UAS) : 25
Experience.Flight Crew.Type (UAS) : 200
ASRS Report Number.Accession Number : 1935136
Human Factors : Training / Qualification
Analyst Callback : Attempted

Events

Anomaly.Airspace Violation : All Types
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : UAS Crew
When Detected.Other
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

I was flying as a subcontractor for a drone provider service (DPS). The DPS had obtained a COA (Certificate of Authorization) that expired in Month. I flew for a month or so after the COA had expired without realizing it. I had always notified the nearby airport of my flights prior to flying. The COA has since been renewed.

Synopsis

Part 107 UAS pilot reported flying after their company's COA (Certificate of Authorization) had expired.

ACN: 1934319 *(29 of 50)*

Time / Day

Date : 202209
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : A90.TRACON
State Reference : NH
Altitude.MSL.Single Value : 3000

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : A90
Aircraft Operator : Air Carrier
Make Model Name : Large Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Route In Use : Vectors
Airspace.Class B : BOS

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Flight Phase : Cruise
Airspace.Class B : BOS
Flying In / Near / Over (UAS) : Aircraft / UAS
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport

Person

Location Of Person.Aircraft : X
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1934319

Events

Anomaly.Airspace Violation : All Types
Anomaly.Conflict : Airborne Conflict
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Miss Distance.Horizontal : 1000
Result.Flight Crew : Requested ATC Assistance / Clarification

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

Being vectored to final, on a dogleg at 3,000 ft., over Boston Harbor, a large drone passed within 1,000 ft. laterally and slightly above us on our port side. Noticed a large shipping vessel below that was perhaps the operator's launch/ landing facility. Informed ATC and continued the approach. Landed uneventfully. Cause - Drone operator's disregard for operation of drone around high density airport. Suggestions - Drone operators must be held accountable for operating their vehicle in a prohibited manner.

Synopsis

Air Carrier pilot reported seeing a drone at 3,000 ft. while on approach. ATC was informed and the flight landed uneventfully.

ACN: 1934193 *(30 of 50)*

Time / Day

Date : 202209
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZZZ.ARTCC
State Reference : US
Altitude.MSL.Single Value : 19000

Aircraft

Reference : X
ATC / Advisory.Center : ZZZ
Aircraft Operator : Military
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Flight Plan : IFR
Flight Phase : Cruise
Airspace.Class A : ZZZ
Airspace.Special Use : ZZZ
Configuration (UAS) : Fixed Wing
Flight Operated As (UAS) : BVLOS

Component

Aircraft Component : Radio (UAS)
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person.Facility : ZZZ.ARTCC
Reporter Organization : Government
Function.Air Traffic Control : Enroute
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 12
ASRS Report Number.Accession Number : 1934193
Human Factors : Confusion
Human Factors : Communication Breakdown
UAS Communication Breakdown.Party1 : Remote PIC
UAS Communication Breakdown.Party2 : ATC

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Airspace Violation : All Types
Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Automation : Air Traffic Control
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

Aircraft X is a drone that is supposed to transition from R-XXXX to Location with prior coordination. There is a specific procedure that is supposed to be followed when this happens. To start, the pilot did not file the flight plan correctly and it had to be entered by the controller working R-XY/XZ as we were taking the sector in order for the drone pilot to transition out of R-XXXX and to Location. About halfway through the sector, the drone pilot did several radio checks in the spot where he usually loses comms. He could not hear us on mains/standby or BUECS (Backup Emergency Communications Systems). He could temporarily hear us on the Guard frequency. He then lost comms entirely, but did not follow Lost Comm Procedures. Instead, he changed his squawk code, which cause the tag to go into coast track. This caused the tag to time out and drop completely [from] the scope while the drone was still in our airspace. We noticed and started a VFR tag for him, since he was now just a Mode-C intruder in Class A airspace. He seemed to change his mind, squawked his original code, then changed his mind again and went back, which again caused his datablock to go into coast track. This is incredibly dangerous, and had we not noticed we could have easily climbed or descended an aircraft through the drone. Recommendation - The drone pilot should consider reviewing Lost Comm Procedures. Had he squawked 7400 as he was supposed to, we would not have lost a tag on the drone.

Synopsis

Air Traffic Controller reported incorrect lost communication procedures being utilized by UAS in Class A airspace. This led to the target dropping off the scope and caused confusion and safety issues for ATC.

ACN: 1934190 *(31 of 50)*

Time / Day

Date : 202209
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ZZZ.Tower
State Reference : US
Relative Position.Distance.Nautical Miles : .5
Altitude.AGL.Single Value : 300

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling : CLR

Aircraft : 1

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Government
Make Model Name : DJI Inspire 2
Crew Size.Number Of Crew : 3
Operating Under FAR Part : Part 107
Mission : Photo Shoot / Video
Flight Phase : Hovering (UAS)
Airspace.Class D : ZZZ
Airspace Authorization Provider (UAS) : FAA Authorization
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Control Mode (UAS) : Manual Control
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport
Flying In / Near / Over (UAS) : Aircraft / UAS
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Aircraft : 2

Reference : Y
ATC / Advisory.Tower : ZZZ
Make Model Name : Helicopter
Crew Size.Number Of Crew : 1
Flight Phase : Takeoff / Launch
Airspace.Class D : ZZZ

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Commercial Operator (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)

Function.Flight Crew : Remote PIC (UAS)
Qualification.Flight Crew : Remote Pilot (UAS)
Qualification.Flight Crew : Private
Experience.Flight Crew.Total : 49.8
Experience.Flight Crew.Total (UAS) : 103.5
Experience.Flight Crew.Last 90 Days (UAS) : 15
Experience.Flight Crew.Type (UAS) : 85
ASRS Report Number.Accession Number : 1934190
Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Analyst Callback : Completed
UAS Communication Breakdown.Party1 : Remote PIC
UAS Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Person : UAS Crew
Miss Distance.Horizontal : 500
Miss Distance.Vertical : 250
Result.Flight Crew : Took Evasive Action

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

This is the information about the flight as submitted on the airspace authorization and forwarded to Airport Director/Tower Manager: A radius of 1 NM about the following coordinates at or below 400 ft. AGL: Latitude XX, Longitude YY. The Aviation Division has been tasked by the State's commission to collect video and photographs of the selected site. The Airport Director, Person A, has agreed to operations at or below 400 ft. AGL in the proximity of the above location. The requested five day window is Day 0 - Day 4. This window is to allow for optimal weather. The authorization system rejected submittal for multiple days. The following error appeared in the form: 'Date of Operation must be a single day for a LAANC enabled airport.' Operations will be conducted in the presence of the Airport Director and in coordination with the ATC Director. In order to maintain an appropriate level of safety, the remote pilot in command (RPIC) holds both a remote pilot certificate and a private pilot certificate. Two or more visual observers (VO) will be utilized to increase situational awareness and safety of operation. The operation will be conducted during visual meteorological conditions (VMC). The RPIC will give way to all manned aircraft. The operation will occur one day within the five day window and will last approximately three hours beginning at approximately XA:00 CDT. The incident occurred in Area C, a 0.2 NM circle centered on Latitude ZZ , Longitude AA as depicted on FAA Authorization XXXX-XXX-XXXX ZZZ Airport. As required by the authorization I notified tower by phone call that I would be taking off in ten minutes at Area C and that the flight would last 10-15 minutes. I activated the custom DJI Flysafe zone and was operating for about 10 minutes when tower cleared a helicopter to take off from taxiway A with the instructions to remain east of the field. My VO informed me to land the drone when the helicopter pointed directly east. I deconflicted by descending and maneuvering southwards towards the home point and when the drone had descended to about 300 ft. AGL the

helicopter banked sharply left to deconflict. I landed the drone after the encounter. The helicopter informed the tower afterwards that a drone was operating to the east of the field. It is of my opinion that the tower should have advised the helicopter that a UAS was operating prior to giving instructions to transit the authorized area in which I was operating. When we moved to Area A north of the field, the tower began advising pilots as he should have done prior to our incident in Area C. Also, I should have landed the drone more quickly rather than wait to make visual contact with the helicopter. I had immediately questioned the tower's reasoning behind clearing the helicopter without advising of our operation, however I expected that the helicopter to maintain a south heading east of the field and then transition to an east flight path as opposed to his immediate transition to an east flight path, and therefore did not land immediately.

Callback: 1

Reporter indicated they were in communication with the local air traffic control tower prior on the day of the UAS flight and prior to UAS liftoff. The UAS crew provided their area of operations to ATC. During the flight the UAS crew was monitoring ATC radio communications and was aware of the impending airborne conflict.

Synopsis

Part 107 UAS pilot reported an NMAC with a helicopter while operating with clearance near a towered airport.

ACN: 1931215 *(32 of 50)*

Time / Day

Date : 202209
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : CLT.TRACON
State Reference : NC

Aircraft : 1

Reference : X
ATC / Advisory.Tower : CLT
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Initial Approach
Airspace.Class B : CLT

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Airspace.Class B : CLT
Flying In / Near / Over (UAS) : Aircraft / UAS
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1931215
Human Factors : Distraction

Events

Anomaly.Airspace Violation : All Types
Anomaly.Conflict : Airborne Conflict
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Flight Crew
Miss Distance.Vertical : 500
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

During approach to [Runway] 36R in CLT, a drone was spotted. The drone passed approximately 500 ft. below our aircraft. ATC was notified. Cause [was a] drone flying in controlled airspace.

Synopsis

Air carrier pilot reported seeing a UAS pass 500 ft. below the aircraft while approaching to land.

ACN: 1930688 *(33 of 50)*

Time / Day

Date : 202209
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : CMH.TRACON
State Reference : OH

Aircraft

Reference : X
ATC / Advisory.TRACON : CMH
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Flight Phase : Cruise
Airspace.TFR : ZZZ
Flying In / Near / Over (UAS) : Crowds
Flying In / Near / Over (UAS) : Aerial Show / Event

Person

Reporter Organization : Government
Function.Air Traffic Control : Approach
Function.Air Traffic Control : Departure
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 21
ASRS Report Number.Accession Number : 1930688
Human Factors : Workload

Events

Anomaly.Airspace Violation : All Types
Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : FAR
Anomaly.No Specific Anomaly Occurred : Unwanted Situation
Detector.Person : Air Traffic Control
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Company Policy
Contributing Factors / Situations : Procedure
Primary Problem : Company Policy

Narrative: 1

I arrived to work at XA00 for a midnight shift and assigned both North Control and CIC (Controller in Charge). Middletown Sector was staffed with a Controller only, not CIC capable in the Tracon. Prior to me signing on, Management was informed that one of the 4 midnight Controllers would not be in until XC00L. No Controllers or Supervisors were required to be held over to help out with the extraordinary departing traffic or TFR for the

event. OSU, a Contract Federal Control Tower stayed open until XE00L, normally closes at XB00L, for the departing traffic. I also informed ZID Columbus sector that I had 35 departures proposed at XC00L and that it would be abnormal traffic for a typical [night]. They thanked me later that I informed them of the extra traffic as they help over extra Controllers to help them work the abnormal traffic. As a CIC, I had a report of a UAS in the TFR and was not able to relay the information to the DEN (Domestic Events Network) until 3 hours after the incident. Management should have been in the facility the entirety of the TFR to help with coordination. 3 Controllers for 3 positions as well as CIC is not a safe operation.

Synopsis

CMH TRACON Controller reported a staffing issue which reportedly affected safety of operations for the crew that was working. Controller also reported a UAS had entered the TFR but was delayed in relaying the information.

ACN: 1930095 *(34 of 50)*

Time / Day

Date : 202208
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 20
Altitude.AGL.Single Value : 400

Environment

Flight Conditions : VMC
Light : Night
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Commercial Operator (UAS)
Make Model Name : DJI Mavic 2 Enterprise
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 107
Mission : Search & Rescue
Flight Phase : Cruise
Airspace.Class G : ZZZ
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : Y
Control Mode (UAS) : Manual Control
Flying In / Near / Over (UAS) : Open Space / Field
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Component

Aircraft Component : Transmitter (UAS)
Manufacturer : DJI
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Commercial Operator (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Remote Pilot (UAS)
Qualification.Flight Crew : Flight Instructor
Experience.Flight Crew.Total (UAS) : 44.5

Experience.Flight Crew.Last 90 Days (UAS) : 0.7
Experience.Flight Crew.Type (UAS) : 5.1
ASRS Report Number.Accession Number : 1930095
Human Factors : Human-Machine Interface
Human Factors : Situational Awareness
Human Factors : Time Pressure
Human Factors : Confusion
Analyst Callback : Attempted

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : UAS Crew
When Detected.Other
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Human Factors
Primary Problem : Ambiguous

Narrative: 1

Searching for a lost dog at the request of a local animal rescue organization. The handheld controller changed to an unknown language (and possibly from feet to meters). There was also some confusion on my part about a setting to (apparently) limit altitude based on contour map data I had downloaded to the controller via 5G hotspot. I thought I had set the correct fields to the correct values and flew several flights intended to be under 400 ft. AGL. Later, upon uploading recorded flight data to an online logbook service, I saw unexpectedly high peak altitudes (e.g., 429.8 ft., 522.3 ft.). I had launched from low terrain and then flew over much higher terrain, so quite possibly no exceed of 400 ft. AGL occurred, but I intend to reproduce the controller language/units change indoors to determine how it occurred and prevent a recurrence. I also noted that working in total darkness (other than the light from the controller's screen after being somewhat blinded by the aircraft's dual and very bright anti-collision strobes) and under the pressure of trying to save a pet's life is difficult and requires much additional care. Note- I would have filed this report a few days sooner but I only recently examined the flight log reports.

Synopsis

Part 107 UAS pilot reported a malfunction with the transmitter. During the post flight the reporter learned they may have flown over 400 ft. AGL.

ACN: 1929897 *(35 of 50)*

Time / Day

Date : 202208
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : CHS.Airport
State Reference : SC

Aircraft : 1

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Parked

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Flying In / Near / Over (UAS) : Aircraft / UAS

Person : 1

Location Of Person : Gate / Ramp / Line
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 1929897

Person : 2

Location Of Person : Gate / Ramp / Line
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : First Officer
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 1929911

Events

Anomaly.Airspace Violation : All Types
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy

Anomaly.Deviation / Discrepancy - Procedural : FAR
Anomaly.Inflight Event / Encounter : Aircraft
Detector.Person : Flight Crew
When Detected : Routine Inspection
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

During post flight an area was discovered on right wing that appeared to have indicated we hit something airborne. The area does not look like we hit something organic, there is evidence of a heat signature and the fairing has exposed composite. We never saw anything however I am wondering if we grazed a drone. The aircraft static wicks are all intact and we never encountered any weather. I do not believe this to be a lightning strike.

Narrative: 2

While conducting a post-flight inspection of the aircraft. I noticed what appeared to be either a larger bird strike or a strike of an object possibly a drone, on the right wing outboard fairing bottom side. There was no organic matter on the area. I advised the Captain and it was written up in the aircraft AML (Aircraft Maintenance Logbook) as a bird strike.

Synopsis

Air carrier flight crew reported during post flight inspection finding aircraft damage caused by a possible collision with a UAS. The damage was evaluated by flight crew and maintenance was notified.

ACN: 1929778 *(36 of 50)*

Time / Day

Date : 202208
Local Time Of Day : 1201-1800

Place

Locale Reference.ATC Facility : ZAB.ARTCC
State Reference : NM
Altitude.MSL.Single Value : 30000

Aircraft : 1

Reference : X
ATC / Advisory.Center : ZAB
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Cruise
Airspace.Class A : ZAB
Airspace.Special Use : R-XXXX
Flying In / Near / Over (UAS) : Aircraft / UAS

Aircraft : 2

Reference : Y
ATC / Advisory.Center : ZAB
Aircraft Operator : Military
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Flight Phase : Cruise
Airspace.Class A : ZAB
Airspace.Special Use : R-XXXX
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Large

Person

Reporter Organization : Government
Function.Air Traffic Control : Enroute
Qualification.Air Traffic Control : Fully Certified
ASRS Report Number.Accession Number : 1929778
Human Factors : Confusion
Human Factors : Situational Awareness
Human Factors : Workload
Human Factors : Time Pressure

Events

Anomaly.Airspace Violation : All Types
Anomaly.ATC Issue : All Types
Anomaly.Conflict : Airborne Conflict

Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation / Discrepancy - Procedural : Clearance
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Air Traffic Control : Provided Assistance
Result.Air Traffic Control : Issued Advisory / Alert
Result.Air Traffic Control : Issued New Clearance

Assessments

Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Contributing Factors / Situations : Weather
Primary Problem : Airspace Structure

Narrative: 1

Weather exploded east of ELP, traffic quickly began to overwhelm the controller on Sector X who was working Aircraft X. Frequency congestion was a nightmare, the gigantic sector, the multiple transmitter sites, the planes all calling to deviate, and the bottleneck around ELP, Mexico, White Sands Missile Range (WSMR). The Controller was extremely busy, I was listening to him go down the tubes. I started out on the D-side on Sector Y and we were quickly in the same boat as the Controller on Sector X. Sector X Controller realized too late that Aircraft X was deviating north towards [Restricted Area] R-XXXX which was active FL300 and below. After taking the hand off, I realized the same thing, the Sector X Controller gave a hard vector south to a 190 heading and used the term immediately. I saw conflict alert go off with the Aircraft operating in R-XXXX, which we think was a military drone. The TCAS didn't go off on Aircraft X. The Pilot of Aircraft X checked on stating he turned south to miss a drone, not sure if that was an evasive maneuver or from the heading given from the Sector X Controller. We had to go into no notice holding as we got so busy, we couldn't insure separation of aircraft from each other or the White Sands Missile Range (WSMR). The weather quickly built and traffic quickly overwhelmed the SE specialty. Command Center / Traffic Management Unit (TMU) constantly neglect the complexity of us working traffic through this area. There is a lot of pressure for us to not hold, not lower the map numbers, not route planes north. I would recommend that we have a specific Pro-day for the SE and SW specialties to practice different routes and holding scenarios, and also have upper management encourage us to take this action sooner rather than waiting and trying just "make it work" or "just get through this shift". There is a pernicious attitude that pervades both the SE, management, Traffic Management Unit and ZAB as a whole to never do this, that we change this culture.

Synopsis

ZAB Controller reported a spill-out of a drone which was an airborne conflict with a commercial aircraft, and also reported about the complexities of the airspace.

ACN: 1929506 *(37 of 50)*

Time / Day

Date : 202208
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : SCT.TRACON
State Reference : CA
Altitude.MSL.Single Value : 5900

Environment

Flight Conditions : VMC

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : SCT
Aircraft Operator : Fractional
Make Model Name : Light Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Flight Phase : Descent
Airspace.Class E : BUR

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Flight Phase : Cruise
Airspace.Class E : BUR
Flying In / Near / Over (UAS) : Aircraft / UAS

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Fractional
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1929506
Human Factors : Distraction

Events

Anomaly.Airspace Violation : All Types
Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Flight Crew

Miss Distance.Horizontal : 0
Miss Distance.Vertical : 200
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

Drone encounter/near miss. Identification - While on vectors from the JANNY5 arrival to join the ILS 8 to BUR we were instructed to descend from 6,000 to 5,000 ft. At approximately 5,900 feet I saw a drone pass left and below us approximately 100-200 feet. It appeared from the brief glimpse to be fairly sizable. Cause - Drone operation in controlled airspace. Response - There was insufficient time to react. I reported the sighting to ATC along with my best guess at the altitude in case there was any traffic following behind us. Suggestions - Continued emphasis on vigilance and outside scan for operations below 10,000 ft.

Synopsis

A pilot reported observing a UAS pass by their aircraft while descending through 5,900ft and reported the incident to ATC.

ACN: 1928941 *(38 of 50)*

Time / Day

Date : 202208
Local Time Of Day : 0601-1200

Environment

Flight Conditions : VMC

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : B787 Dreamliner Undifferentiated or Other Model
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use.Localizer/Glideslope/ILS : ILS XX
Flight Phase : Final Approach

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 16453
Experience.Flight Crew.Last 90 Days : 192
Experience.Flight Crew.Type : 2771
ASRS Report Number.Accession Number : 1928941
Human Factors : Workload

Events

Anomaly.Airspace Violation : All Types
Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.General : Flight Cancelled / Delayed
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Human Factors

Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

ATC sent us and other aircraft around twice for drones on three mile short final switched runways.

Synopsis

Air Carrier Captain reported flying two separate missed approaches because of UAS activity near the destination airport.

ACN: 1927460 *(39 of 50)*

Time / Day

Date : 202208
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : AUS.TRACON
State Reference : TX
Relative Position.Angle.Radial : 100
Relative Position.Distance.Nautical Miles : 7
Altitude.MSL.Single Value : 2500

Environment

Weather Elements / Visibility : Cloudy
Weather Elements / Visibility.Visibility : 5
Light : Daylight
Ceiling.Single Value : 900

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : AUS
Aircraft Operator : Personal
Make Model Name : Small Aircraft, Low Wing, 1 Eng, Retractable Gear
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Initial Climb
Airspace.Class E : AUS

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Flight Phase : Cruise
Airspace.Class E : AUS
Configuration (UAS) : Multi-Rotor
Flying In / Near / Over (UAS) : Aircraft / UAS

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 15900
Experience.Flight Crew.Last 90 Days : 25

Experience.Flight Crew.Type : 2000
ASRS Report Number.Accession Number : 1927460

Events

Anomaly.Airspace Violation : All Types
Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Flight Crew
Miss Distance.Horizontal : 20
Miss Distance.Vertical : 0
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Provided Assistance

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

On climb out at 2,500 ft to 5,000 ft. out of GTU on an IFR flight plan a drone passed within 20 ft. of our left wing at our altitude opposite direction. We were between layers. It was observed by my safety pilot to be about 2 ft. in diameter but a square or diamond in shape. Austin Approach was notified immediately. They said they would file a report.

Synopsis

General aviation pilot reported that their safety pilot saw a UAS pass near by their aircraft at 2,500 ft MSL. The incident was reported to the TRACON Controller.

ACN: 1927307 *(40 of 50)*

Time / Day

Date : 202208
Local Time Of Day : 1801-2400

Place

Locale Reference.ATC Facility : JFK.Tower
State Reference : NY
Altitude.MSL.Single Value : 2000

Aircraft : 1

Reference : X
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Descent
Airspace.Class B : JFK

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Airspace.Class B : JFK
Configuration (UAS) : Multi-Rotor
Flying In / Near / Over (UAS) : Aircraft / UAS
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : First Officer
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1927307

Events

Anomaly.Airspace Violation : All Types
Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Flight Crew
Miss Distance.Horizontal : 0
Miss Distance.Vertical : 50

When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

2,000 feet on descent into JFK passed directly under orange quadcopter drone. 1/2 mile north east of ROSLY intersection doing 210 kts. Drone was no more than 50 ft. above aircraft. ATC notified.

Synopsis

First Officer reported a UAS passing within 50 ft. of their aircraft while approaching to land. No evasive action was taken.

ACN: 1927261 *(41 of 50)*

Time / Day

Date : 202208
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : PHL.TRACON
State Reference : PA
Altitude.MSL.Single Value : 7500

Aircraft : 1

Reference : X
ATC / Advisory.TRACON : PHL
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Flight Phase : Climb
Airspace.Class B : PHL

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Airspace.Class B : PHL
Flying In / Near / Over (UAS) : Aircraft / UAS
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Flying
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
ASRS Report Number.Accession Number : 1927261

Events

Anomaly.Airspace Violation : All Types
Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Flight Crew
When Detected : In-flight

Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Provided Assistance

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

On climb out from PHL at around 7,500 ft the First Officer (FO) (Pilot Monitoring (PM)) saw a drone on his side of the aircraft. He described it as metallic gray and about 2 ft. in diameter. He thought it was about 300 ft. below us and very close laterally. We reported it to PHL Departure. They gave us a number to call after the flight and the FO returned the call as the was the one that observed it. Cause - Allowing the general public to buy drones that can flown with no real limits or fencing on them. Suggestions - Limiting how drones are controlled.

Synopsis

Airline Captain reported observing a UAS pass by their aircraft while climbing out on a departure procedure. The incident was reported to the TRACON controller, then the flight continued as planned.

ACN: 1926914 *(42 of 50)*

Time / Day

Date : 202208
Local Time Of Day : 0001-0600

Place

Locale Reference.ATC Facility : RCAA.ARTCC
State Reference : FO
Altitude.AGL.Single Value : 10000

Environment

Flight Conditions : VMC

Aircraft

Reference : X
ATC / Advisory.Center : RCTP
Aircraft Operator : Air Carrier
Make Model Name : Commercial Fixed Wing
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Flight Phase : Descent

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : Captain
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Experience.Flight Crew.Total : 19000
Experience.Flight Crew.Last 90 Days : 188
Experience.Flight Crew.Type : 399
ASRS Report Number.Accession Number : 1926914
Human Factors : Workload
Human Factors : Confusion

Events

Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Fuel Issue
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : Flight Cancelled / Delayed
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Provided Assistance

Assessments

Contributing Factors / Situations : Airport
Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Company Policy
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

Upon our arrival into RCTP all aircraft were issued holding without any EFC. Apparently an unauthorized UAV was penetrating the Airport Traffic Area. On our flight plan ZZZZ was listed for alternate time XA:19, burn 5,494 [lbs of fuel]. Because no EFC was given, and we were looking at plan B, airports we could divert to. We inquired if ZZZZ was available for us. ATC stated, no. That this airport cannot handle Aircraft X. This airport is listed as a "A" for alternate for Aircraft X. The Chief Pilot confirmed that after we landed. We do not know why the airport was unsuitable for Aircraft X, if this is a temporary or permanent issue. The closest divert for us was ZZZZ1, on the southern end of Taiwan, it was 200 miles from our location, about XX minutes and a burn of about 9,000 [lbs of fuel]. The Flight Plan had it at XY minutes and 8,547 [lbs of fuel], but I am estimating because we were north of RCTP. As we initiated our divert, and were south of RCTP ATC opened up RCTP for arrivals, we were number 4 and landed without incident.

Synopsis

Air carrier Captain reported they were put in a hold with no EFC due to UAS activity around their destination airport. In considering alternatives, they discovered the listed alternate airport could not accept them due to their size. Flight crew landed at destination airport when UAS activity stopped.

ACN: 1923706 *(43 of 50)*

Time / Day

Date : 202208
Local Time Of Day : 1801-2400

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 2
Altitude.AGL.Single Value : 38

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 7
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Recreational / Hobbyist (UAS)
Make Model Name : DJI Mini 2
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Recreational Operations / Section 44809 (UAS)
Mission : Recreational / Hobbyist (UAS)
Flight Phase : Hovering (UAS)
Airspace.Class D : ZZZ
Airspace Authorization Provider (UAS) : Authorized Third Party
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Micro
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : N
Control Mode (UAS) : Manual Control
Flying In / Near / Over (UAS) : People / Populated Areas
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Recreational / Hobbyist (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Private
Qualification.Flight Crew : Remote Pilot (UAS)
Experience.Flight Crew.Total (UAS) : 5.4
Experience.Flight Crew.Last 90 Days (UAS) : 5.4
Experience.Flight Crew.Type (UAS) : 5.4
ASRS Report Number.Accession Number : 1923706
Human Factors : Training / Qualification
Human Factors : Situational Awareness

Human Factors : Confusion
Analyst Callback : Attempted

Events

Anomaly.Ground Event / Encounter : Loss Of VLOS (UAS)
Anomaly.Inflight Event / Encounter : Object
Anomaly.Inflight Event / Encounter : Loss Of Aircraft Control
Detector.Person : UAS Crew
When Detected : In-flight
Result.Aircraft : Aircraft Damaged

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Weather
Primary Problem : Ambiguous

Narrative: 1

Crash Report - Hull Loss - DJI Mini 2 - Impact with tree. No damage to property. Recreational flying - Licensed UAS Pilot - Class D Airspace 0 to 50 ft. with LAANC Authorization. Winds 10 knots with gusts to 20 knots. Mission- Acquire sunset pictures. Decision Error- Attempted to fly between two trees with 15-foot gap at a distance of 200 yards. (Adverse mental state - mission placed above safety, flying an unplanned maneuver.) Temporarily lost sight of drone and immediately went into hover. Operator attempted to reposition to regain sight of drone. Operator was unsuccessful. Operator decided to yaw UAS left 360 degrees to regain situational awareness. Approximately 90 degrees into pivot, discovered that drone was really close to a tree. (Adverse psychological state induced - surprise factor with adrenaline spike). Decision Error- Operator decided to back drone away from tree, prior to completing 360 degree situational awareness pivot. Skill based error (improper control input) Operator applies significant aft control input (still experiencing Adverse psychological state of adrenaline spike). Video image goes wacky followed by loss of signal from drone. Impact with other tree. Adverse physical state: blood drains from head, sick to stomach. Adverse psychological state- Operator remembers that he purchased DJI Care package with purchase of UAS. Operator chooses joy. Operator retrieves UAS and returns to Ready Room to tell other pilots not to do this. DON'T DO THIS!!

Synopsis

UAS pilot reported losing sight of their drone between two trees and attempted to maneuver away from them but collided with one.

ACN: 1922948 *(44 of 50)*

Time / Day

Date : 202208
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.AGL.Single Value : 100

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight

Aircraft : 1

Reference : X
ATC / Advisory.CTAF : ZZZ
Aircraft Operator : Personal
Make Model Name : RV-12
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : None
Mission : Personal
Flight Phase : Takeoff / Launch
Airspace.Class G : ZZZ

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 10
Flight Phase : Hovering (UAS)
Airspace.Class G : ZZZ
Configuration (UAS) : Multi-Rotor
Flying In / Near / Over (UAS) : Aircraft / UAS
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Single Pilot
Qualification.Flight Crew : Sport / Recreational
Experience.Flight Crew.Total : 209
Experience.Flight Crew.Last 90 Days : 40
Experience.Flight Crew.Type : 104
ASRS Report Number.Accession Number : 1922948
Human Factors : Confusion
Human Factors : Situational Awareness
Human Factors : Communication Breakdown

UAS Communication Breakdown.Party1 : Other
UAS Communication Breakdown.Party2 : Other

Events

Anomaly.Conflict : NMAC
Detector.Person : Flight Crew
Miss Distance.Horizontal : 10
Miss Distance.Vertical : 10
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

When I arrived at the airport about 2 hours earlier, the crew operating the UAS informed me on CTAF when I landed that they were operating and asked if I was going to do a touch & go or stay on the ground. I informed them that I was staying for a few hours to avoid flying through inclement weather on my route. I also noticed the crew of 10+ in high-visibility clothing near the end of the runway. I spent approximately 2 hours at the FBO, and informed 2 people wearing high-visibility clothing who confirmed that they were part of the UAS crew, that I would be departing soon. While loading my aircraft, I stood on top of the wing and used a handheld radio to broadcast on CTAF that I would be departing in 5-10 minutes. I started my plane which was located at the fuel pump, made a CTAF call that I was taxiing to Runway XX via Bravo, and proceeded the turnaround area at the end of Runway XX, making calls on CTAF when I was transiting the crossing runway. After my run up checks, I called on CTAF that I was taking off on Runway XX, departing straight out, and began my takeoff roll. At approximately 100 ft. AGL, at the intersection between Runway XX-YY and ZZ-AA, I noticed a hovering red quadcopter. I passed below it by approximately 10 ft. I called multiple times on CTAF to alert traffic in the area that there was a drone flying midfield. After approximately a minute, a person transmitted on the CTAF with a weak/static-y signal that there was drone activity NOTAM'd. I proceeded on my flight without further incident.

Synopsis

Sport Pilot reported observing a UAS pass 10 ft. above their aircraft shortly after takeoff. The pilot tried to coordinate with the UAS crew prior to flight, but a miscommunication occurred leading to an NMAC.

ACN: 1922708 *(45 of 50)*

Time / Day

Date : 202208
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : 1.7
Altitude.AGL.Single Value : 250

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Government
Make Model Name : DJI Phantom 4 Pro
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 107
Mission : Surveying / Mapping (UAS)
Flight Phase : Cruise
Airspace.Class G : ZZZ
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : Y
Control Mode (UAS) : Autonomous / Fully Automated
Flying In / Near / Over (UAS) : Open Space / Field
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Component

Aircraft Component : Transmitter (UAS)
Manufacturer : DJI
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Commercial Operator (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Remote Pilot (UAS)
Experience.Flight Crew.Total : 0
Experience.Flight Crew.Total (UAS) : 3
Experience.Flight Crew.Last 90 Days (UAS) : 2

Experience.Flight Crew.Type (UAS) : 2
ASRS Report Number.Accession Number : 1922708
Human Factors : Troubleshooting
Human Factors : Confusion
Analyst Callback : Completed

Events

Anomaly.Aircraft Equipment Problem : Critical
Anomaly.Inflight Event / Encounter : Fly Away (UAS)
Detector.Person : UAS Crew
When Detected : In-flight
Result.Aircraft : Lost Link (UAS)
Result.Aircraft : Lost / Unrecoverable (UAS)

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Environment - Non Weather Related
Primary Problem : Ambiguous

Narrative: 1

Around XA:15, my observer and I began surveying Phase 7 at Location X working from the north of the unit to the south. the mission was planned in Pix4D capture on an iPad. As the drone finished each transect, we walked to the start of the next so that we were always perpendicular to the flight path and the sun was always at our back. After the 7th transect, the drone's battery was changed and the mission resumed. It was around XB:00. As the drone approached the 8th transect, it lost connection with the controller. Both the observer and I lost sight of it at this point. My observer attempted to locate the drone using binoculars, but was unsuccessful. We waited 15 minutes for the drone to return as it was programmed to do but it did not. We traveled in our truck north on Location Y and then west on interceptor until we were perpendicular with the drone's last known coordinates and tried reconnecting. The DJI app said "strong radio interference" and would not reconnect to the drone, nor could we see it unaided or with binoculars. A coworker double checked the original launch site in case it had returned (it had not) while we continued driving around the unit trying to reconnect. Ultimately, we were unable to re-establish connection or to re-sight the drone. Given its trajectory, there was no risk to person or property and it likely either hovered in place until it fell or continued west over the property. I will survey the drone's last seen location via airboat in the morning. There has been significant radio interference in the area as of late, but even with that the drone should have returned "home" once its mission was complete. It did not. The distance between myself and the drone was close to a 1/5 mile, however it had already completed 7 transects without issue and within my line of sight.

Callback: 1

The reporter wanted to share about an issue with the same UAS while operating at the same location approximately one month prior to their report. During a previous flight the UAS had a lost link and the RTH did not work 100%. The reporter was able to regain a link with the UAS and land safely. The reporter can't confirm it but they believe there is some type of radio interference even though they are in a large nature preserve.

Synopsis

Part 107 UAS pilot reported a lost link and a fly away of the UAS. Pilot stated the UAS app indicated "strong radio interference."

ACN: 1921732 *(46 of 50)*

Time / Day

Date : 202207
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : RYM.Airport
State Reference : MN
Relative Position.Distance.Nautical Miles : 3.1
Altitude.AGL.Single Value : 95

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Commercial Operator (UAS)
Make Model Name : Small UAS, Multi Rotor
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 107
Mission : Utility / Infrastructure
Flight Phase : Takeoff / Launch
Airspace.Class D : RYM
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Control Mode (UAS) : Manual Control
Flying In / Near / Over (UAS) : Private Property
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Commercial Operator (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Remote Pilot (UAS)
Experience.Flight Crew.Total (UAS) : 7.06
Experience.Flight Crew.Last 90 Days (UAS) : 7.06
Experience.Flight Crew.Type (UAS) : 7.06
ASRS Report Number.Accession Number : 1921732
Human Factors : Situational Awareness
Human Factors : Troubleshooting
Analyst Callback : Completed

Events

Anomaly.Airspace Violation : All Types
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : UAS Crew
When Detected.Other
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

I pre-planned my flight mission using Airmap, and misinterpreted the new system accidentally confusing Class D airspace for Class G airspace. Prior flight planning occurred but information was misinterpreted. I discovered I accidentally flew into controlled airspace after reviewing my flight log and reviewing at the end of the month. I have reviewed with management and now know why and how I violated airspace conditions. Corrective actions have taken place to prevent any further violations.

Callback: 1

Reporter indicated because lack of cellular service the Airmap app was unable to load its map correctly. Due to the lack of connectivity the reporter was unable to see they were in an area of Class D airspace. This was learned during a post flight audit in an area with internet connectivity.

Synopsis

Part 107 UAS pilot reported discovering upon review of the flight log that they flew in controlled airspace without authorization.

ACN: 1921731 *(47 of 50)*

Time / Day

Date : 202207
Local Time Of Day : 0601-1200

Place

Locale Reference.Airport : RYM.Airport
State Reference : MN
Relative Position.Distance.Nautical Miles : 3.1
Altitude.AGL.Single Value : 94

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
Aircraft Operator : Commercial Operator (UAS)
Make Model Name : Small UAS, Multi Rotor
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 107
Flight Plan : None
Mission : Utility / Infrastructure
Flight Phase : Takeoff / Launch
Airspace.Class D : RYM
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : N
Control Mode (UAS) : Manual Control
Flying In / Near / Over (UAS) : Private Property
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Commercial Operator (UAS)
Function.Flight Crew : Person Manipulating Controls (UAS)
Qualification.Flight Crew : Remote Pilot (UAS)
Experience.Flight Crew.Total (UAS) : 6.6
Experience.Flight Crew.Last 90 Days (UAS) : 6.6
Experience.Flight Crew.Type (UAS) : 6.6
ASRS Report Number.Accession Number : 1921731
Human Factors : Situational Awareness
Human Factors : Troubleshooting
Analyst Callback : Completed

Events

Anomaly.Airspace Violation : All Types
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Other Person
When Detected.Other
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

Misinterpreted airspace conditions where flight took place. Prior to my flight I mission-planned on Airmap and mistook Class D airspace for Class G airspace. A few weeks post operations management informed me of airspace violation that took place at time of operations. Management reviewed airspace with me, the types of controlled airspace and how to better identify airspace prior to flight operations to prevent further incidents.

Callback: 1

Reported indicated because lack of cellular service the Airmap was unable to load its map correctly. Due to the lack of connectivity the reporter was unable to see they were in an area of Class D airspace.

Synopsis

Part 107 UAS Pilot reported learning of an airspace violation during a post flight meeting with their company's operations management.

ACN: 1921018 *(48 of 50)*

Time / Day

Date : 202207
Local Time Of Day : 1201-1800

Place

Locale Reference.Airport : ZZZ.Airport
State Reference : US
Relative Position.Distance.Nautical Miles : .5
Altitude.AGL.Single Value : 200

Environment

Flight Conditions : VMC
Weather Elements / Visibility.Visibility : 5
Light : Daylight
Ceiling : CLR

Aircraft

Reference : X
ATC / Advisory.Tower : ZZZ
Aircraft Operator : Commercial Operator (UAS)
Make Model Name : DJI Phantom 4 RTK
Crew Size.Number Of Crew : 3
Operating Under FAR Part : Part 107
Mission : Surveying / Mapping (UAS)
Flight Phase : Hovering (UAS)
Airspace.Class C : ZZZ
Airspace Authorization Provider (UAS) : FAA Authorization
Operating Under Waivers / Exemptions / Authorizations (UAS) : N
Weight Category (UAS) : Small
Configuration (UAS) : Multi-Rotor
Flight Operated As (UAS) : VLOS
Flight Operated with Visual Observer (UAS) : Y
Control Mode (UAS) : Autonomous / Fully Automated
Flying In / Near / Over (UAS) : Airport / Aerodrome / Heliport
Type (UAS) : Purchased
Number of UAS Being Controlled (UAS).Number of UAS : 1

Person

Location Of Person : Outdoor / Field Station (UAS)
Reporter Organization : Commercial Operator (UAS)
Function.Flight Crew : Remote PIC (UAS)
Qualification.Flight Crew : Remote Pilot (UAS)
ASRS Report Number.Accession Number : 1921018
Human Factors : Training / Qualification
Human Factors : Situational Awareness
Human Factors : Human-Machine Interface
Analyst Callback : Completed

Events

Anomaly.Airspace Violation : All Types
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Other Person
When Detected : In-flight
Result.Flight Crew : Landed As Precaution

Assessments

Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Human Factors
Primary Problem : Ambiguous

Narrative: 1

On Day, we were performing an aerial topography with our RTK drone near the ZZZ airport along the Road within the Park subdivision at roughly XA:00 PM. We were approached by an employee from the ZZZ airport and he proceeded to ask us questions regarding our drone operations. He asked for my name, FAA pilot license, company name and client information. He also took photos of my pilot license and our equipment. The Airport person when he approached did not present any credentials as to who was or his position. He mentioned he had received a complaint of a drone flying close to the airport and was there to investigate. He did not ask us to abort our drone operation, but we voluntarily did so. We provided all information requested and explained our difficulties with the Aloft app to get authorization to fly. The app would give us a cancellation notice within minutes of submitting the request or it would just freeze. With that happening, I figured that we didn't need authorization since the area that we needed to fly was not in the Red Restricted area shown on the map. We did have to request to fly so close to the ZZZ1 property or the drone would not leave the ground. We were trying to get all the proper authorizations to fly the drone legally.

Callback: 1

The reporter indicated while they were unable to complete the LAANC process they were in contact with the control tower. They received verbal authorization from the control tower who was aware of the UAS location and UAS operations.

Synopsis

Part 107 UAS pilot reported the UAS crew was approached by airport staff during a flight near an airport. The UAS crew chose to end the flight.

ACN: 1920339 *(49 of 50)*

Time / Day

Date : 202207
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ZZZ.ARTCC
State Reference : US
Altitude.MSL.Single Value : 20000

Aircraft

Reference : X
ATC / Advisory.Center : ZZZ
Aircraft Operator : Military
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Flight Plan : IFR
Flight Phase : Cruise
Airspace.Special Use : ZZZ
Weight Category (UAS) : Large
Flight Operated As (UAS) : BVLOS

Component

Aircraft Component : Com Link (C2) (UAS)
Aircraft Reference : X
Problem : Malfunctioning

Person

Location Of Person.Facility : ZZZ.ARTCC
Reporter Organization : Government
Function.Air Traffic Control : Enroute
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 12
ASRS Report Number.Accession Number : 1920339
Human Factors : Communication Breakdown
Human Factors : Confusion
Human Factors : Training / Qualification
UAS Communication Breakdown.Party1 : Remote PIC
UAS Communication Breakdown.Party2 : ATC

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.ATC Issue : All Types
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Detector.Person : UAS Crew
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Overcame Equipment Problem
Result.Air Traffic Control : Provided Assistance
Result.Aircraft : Lost Link (UAS)

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Software and Automation
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

Drone pilot was confused on procedures for operation. He asked me for a clearance out of restricted airspace (should have coordinated with his Operations), and his radio doesn't work near R-XXXX. I can only communicate with him via Guard (121.5), which ties up the emergency frequency. About 1/3 of the way to R-XXXY he started squawking Lost Link (LLNK). I tried him via radio and guard, but he was NORDO. He came back at some point, but was still unsure of the procedures and the next controller had to repeatedly prompt him to contact the range. Recommendation- This whole procedure was rushed and poorly planned. The drone pilot needs training if he doesn't understand IFR procedures or how to correctly activate his clearance. Also, this time he was able to maintain heading and altitude, but the last time I worked him (last week) his lost link procedures rendered the drone uncontrollable (according to ZZZ) and he was unable to maintain heading and altitude briefly.

Synopsis

Air traffic controller reported lost communications with a UAS pilot operating in and around restricted airspace. Pilot experienced a lost link and it was difficult for ATC to communicate with them.

ACN: 1919961 *(50 of 50)*

Time / Day

Date : 202207
Local Time Of Day : 0601-1200

Place

Locale Reference.ATC Facility : ZOA.ARTCC
State Reference : CA
Altitude.MSL.Single Value : 5500

Environment

Flight Conditions : VMC
Light : Daylight

Aircraft : 1

Reference : X
Aircraft Operator : Personal
Make Model Name : Small Aircraft, Low Wing, 1 Eng, Retractable Gear
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : VFR
Mission : Personal
Flight Phase : Cruise
Route In Use : Direct
Airspace.Class E : ZOA

Aircraft : 2

Reference : Y
Make Model Name : UAV: Unpiloted Aerial Vehicle
Crew Size.Number Of Crew : 1
Flight Phase : Hovering (UAS)
Airspace.Class E : ZOA
Configuration (UAS) : Multi-Rotor
Flying In / Near / Over (UAS) : Aircraft / UAS

Person

Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Single Pilot
Qualification.Flight Crew : Private
Experience.Flight Crew.Total : 162
Experience.Flight Crew.Last 90 Days : 64
Experience.Flight Crew.Type : 150
ASRS Report Number.Accession Number : 1919961
Human Factors : Communication Breakdown
UAS Communication Breakdown.Party1 : Other
UAS Communication Breakdown.Party2 : ATC

Events

Anomaly.Airspace Violation : All Types
Anomaly.Conflict : NMAC
Anomaly.Deviation / Discrepancy - Procedural : Unauthorized Flight Operations (UAS)
Anomaly.Deviation / Discrepancy - Procedural : Published Material / Policy
Anomaly.Deviation / Discrepancy - Procedural : FAR
Detector.Person : Flight Crew
Miss Distance.Horizontal : 500
Miss Distance.Vertical : 0
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

While cruising at 5,500 [ft.] from ZZZ direct to O22 and on VFR flight following, I spotted an aircraft that I believed to be much further away. However, as I passed it, I realized it was a drone hovering at exactly 5,500 ft. (my cruising altitude). It was orange and had I believe 4 rotors. ATC did not call it, and I did not report it to ATC when I spotted it. Upon further reflection, I probably should have made ATC aware. Since it was stationary I did not need to take evasive action. However, I did come very close to it, I believe within 500 ft. The drone did not show on my ADSB-In, and did not take evasive action. I do not recall the exact coordinates, but it was somewhere near Stockton, CA.

Synopsis

Private Pilot reported observing a UAS pass near their aircraft while flying at 5,500 ft. The pilot stated evasive action was not needed but UAS came within 500 ft. of aircraft.