ASRS Database Report Set

NMAC Incidents

Report Set Description.................................A sampling of reports that reference near midair collision events.

Update Number.............................................14

Date of Update............................................August 31, 2018

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

Number of New Records in Report Set...............48

Type of Records in Report Set............................For each update, new records received at ASRS will displace a like number of the oldest records in the Report Set, with the objective of providing the fifty most recent relevant ASRS Database records. Records within this Report Set have been screened to assure their relevance to the topic.
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.

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: 1557035 (1 of 50)

Synopsis
Cirrus SR-20 pilot reported a NMAC during level flight at 4500 feet, which required evasive action.

ACN: 1552272 (2 of 50)

Synopsis
B737 captain reported sighting a drone close by the left side of his aircraft while on approach to runway 25L at LAX.

ACN: 1551992 (3 of 50)

Synopsis
Embraer Jet flight crew reported a NMAC with two hang gliders.

ACN: 1551804 (4 of 50)

Synopsis
Instructor reported a NMAC with another plane in the landing pattern.

ACN: 1551802 (5 of 50)

Synopsis
BE-33 pilot reported he took evasive action to avoid a NMAC with an aircraft taking off from the opposite direction of his approach path.

ACN: 1551689 (6 of 50)

Synopsis
A Piper PA-44 pilot instructor reported that during a practice missed approach the student pilot took evasive action to avoid a collision with a helicopter.

ACN: 1551480 (7 of 50)

Synopsis
B737 Captain reported NMAC responding to TCAS RA for overflying traffic.

ACN: 1551450 (8 of 50)

Synopsis
A pilot reported a NMAC.

ACN: 1549919 (9 of 50)
<table>
<thead>
<tr>
<th>ACN: 1549645 (10 of 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>Small aircraft pilot reported an NMAC in the vicinity of OME airport.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>ACN: 1549472 (11 of 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>Helicopter pilot reported a NMAC with a quadcopter drone at approximately 650 feet MSL while inbound for landing.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>ACN: 1548816 (12 of 50)</th>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>EMB-505 Captain of a business jet reported a near miss while landing.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACN: 1548690 (13 of 50)</th>
</tr>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>A319 First Officer reported descending during an RA response for traffic avoidance following a NMAC with a small aircraft while departing DCA.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACN: 1548559 (14 of 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>C172 Instructor pilot reported a NMAC with a CE750 in the pattern at TTN airport.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>ACN: 1548500 (15 of 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>B737-800 First Officer reported a NMAC with a drone while flying the ILS Runway 18R approach into DFW, at approximately 8,000 feet and 25 NM north of DFW.</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>ACN: 1548477 (16 of 50)</th>
</tr>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>Air taxi pilot reported a NMAC during final approach to BET airport.</td>
</tr>
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<table>
<thead>
<tr>
<th>ACN: 1548353 (17 of 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>B757 Captain reported a NMAC with a drone while flying the SID, at approximately 13,500 feet and 50 NM East of the SFO airport.</td>
</tr>
</tbody>
</table>
C172 pilot reported a NMAC on takeoff caused by an apparent inoperative radio.

**ACN: 1548190 (18 of 50)**

**Synopsis**

B737 First Officer reported a NMAC with a drone during an instrument departure from EWR.

**ACN: 1548058 (19 of 50)**

**Synopsis**

DA40 instructor pilot reported a NMAC in cruise flight in the vicinity of MLD VOR.

**ACN: 1547761 (20 of 50)**

**Synopsis**

PA24 pilot reported a NMAC with another light aircraft in the vicinity of 1V6 airport.

**ACN: 1547742 (21 of 50)**

**Synopsis**

Pilot reported having a NMAC with a drone and subsequently being distracted during the entry to traffic pattern at WV1.

**ACN: 1547729 (22 of 50)**

**Synopsis**

Cessna 210 pilot reported a NMAC with a C182 during landing.

**ACN: 1547416 (23 of 50)**

**Synopsis**

A CRJ-700 Captain reported a NMAC with a Beechcraft on descent into ATL.

**ACN: 1547231 (24 of 50)**

**Synopsis**

Air Carrier flight crew reported receiving an RA during descent due to a small aircraft performing aerobatics in a Class B airspace.

**ACN: 1547125 (25 of 50)**

**Synopsis**

Burbank Local Controller reported C172 departed WHP not talking to ATC and had a NMAC with a CRJ9 arrival.
<table>
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<tr>
<th>ACN: 1547060 (26 of 50)</th>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>General Aviation instructor pilot reported a NMAC event with a small aircraft during departure from ORL airport. The instructor cited reduced visibility as a contributing factor.</td>
</tr>
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<tr>
<th>ACN: 1546797 (27 of 50)</th>
</tr>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>GA pilot reported a NMAC with a crop dusting aircraft during approach to a non-towered airport. Reporter stated the crop dusting pilot had not been making any radio calls.</td>
</tr>
</tbody>
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<tr>
<th>ACN: 1546483 (28 of 50)</th>
</tr>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>CRJ-900 First Officer reported a NMAC with a drone about 200 feet while on approach to EWR airport.</td>
</tr>
</tbody>
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<tr>
<th>ACN: 1546221 (29 of 50)</th>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>P80 Controller reported an aircraft departing HIO, on initial contact, was in conflict with non-participating VFR traffic. The Controller reported this as a frequent issue.</td>
</tr>
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<tr>
<th>ACN: 1546211 (30 of 50)</th>
</tr>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>FAT Controllers reported a NMAC due to incorrect strip marking.</td>
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<tr>
<th>ACN: 1546174 (31 of 50)</th>
</tr>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>GA pilot reported a NMAC while on approach to a busy BVU non-towered airport.</td>
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<tr>
<th>ACN: 1546150 (32 of 50)</th>
</tr>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>Helicopter pilot and Check Airman reported a NMAC with fixed wing traffic operating on an unannounced approach.</td>
</tr>
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<tr>
<th>ACN: 1546136 (33 of 50)</th>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>GA flight instructor reported a NMAC with an aircraft performing maneuvers over the Initial Approach Fix.</td>
</tr>
<tr>
<td>ACN: 1546092 (34 of 50)</td>
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<tr>
<td>--------------------------</td>
</tr>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>C177 pilot reported a NMAC with a Learjet on final approach to a non-towered airport.</td>
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<tr>
<th>ACN: 1545656 (35 of 50)</th>
</tr>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>Air carrier Captain reported noticing a helicopter hovering about half way down the runway they were landing on. That could have posed a safety hazard had a go-around been necessary.</td>
</tr>
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<tr>
<th>ACN: 1545456 (36 of 50)</th>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>Air traffic controller reported a B737 pilot indicated a NMAC had occurred with an unidentified VFR aircraft.</td>
</tr>
</tbody>
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<tr>
<th>ACN: 1545443 (37 of 50)</th>
</tr>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>RVS Tower Controller reported being advised by a GA pilot of a NMAC between two departure aircraft.</td>
</tr>
</tbody>
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<tr>
<th>ACN: 1545417 (38 of 50)</th>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>DA40 safety observer pilot reported a NMAC while pilot flying was setting up for a practice instrument approach.</td>
</tr>
</tbody>
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<tr>
<th>ACN: 1545119 (39 of 50)</th>
</tr>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>GA pilot reported a NMAC with a drone just outside the FAF while flying the RNAV15 approach to Indianapolis Metro Airport.</td>
</tr>
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<tr>
<th>ACN: 1545097 (40 of 50)</th>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>C172 Pilot reported a NMAC in the vicinity of BCV airport.</td>
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<tr>
<th>ACN: 1544041 (41 of 50)</th>
</tr>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>GA pilot reported a NMAC while flying in the vicinity of a non-towered airport.</td>
</tr>
</tbody>
</table>
ACN: 1543478 (42 of 50)

Synopsis
SAT Tower Controllers reported a NMAC between a General Aviation aircraft experiencing difficulties and an air carrier.

ACN: 1543409 (43 of 50)

Synopsis
DA40 pilot reported a NMAC during take off from a non-towered airport.

ACN: 1543175 (44 of 50)

Synopsis
BE-58 pilot reported that during rotation a single engine Cessna was on approach 100 feet above him coming in the opposite direction.

ACN: 1543051 (45 of 50)

Synopsis
PC-12 Captain reported an NMAC with a Unmanned Aerial Vehicle (UAV) while on final approach to TEB airport.

ACN: 1542529 (46 of 50)

Synopsis
GFK Controller reported a NMAC situation caused by RDR Approach.

ACN: 1542499 (47 of 50)

Synopsis
DA20 flight crew reported a near miss during takeoff with a Robinson helicopter that was crossing the runway without communicating.

ACN: 1542491 (48 of 50)

Synopsis
Flight instructor reported a NMAC with a drone as they were turning base leg.

ACN: 1509624 (49 of 50)

Synopsis
A CL60 flight crew reported a NMAC situation with a flight of 4 F16’s. Pilot reported ATC's lack of advisories to them, and failure to provide separation. ATC reported following local SOP, and in compliance with FAA orders and directives.
Synopsis
A320 First Officer reported an NMAC on arrival into EWR with a light aircraft that was not in contact with ATC.
Report Narratives
Time / Day
Date: 201806
Local Time Of Day: 1201-1800

Place
Locale Reference
ATC Facility: SBN.TRACON
State Reference: IN
Altitude.MSL.Single Value: 4500

Environment
Weather Elements / Visibility
Visibility: 10
Weather Elements / Visibility.Other
Light: Daylight
Ceiling.Single Value: 10000

Aircraft: 1
Reference: X
ATC / Advisory.TRACON: SBN
Aircraft Operator: Personal
Make Model Name: SR20
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: VFR
Mission: Training
Flight Phase: Cruise
Route In Use: Direct
Airspace.Class E: SBN

Aircraft: 2
Reference: Y
Make Model Name: UAV - Unpiloted Aerial Vehicle
Operating Under FAR Part.Other
Flight Phase: Cruise
Airspace.Class E: SBN

Person
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Personal
Function.Flight Crew: Pilot Flying
Function.Flight Crew: Single Pilot
Qualification.Flight Crew: Private
Experience.Flight Crew.Total: 89
Experience.Flight Crew.Last 90 Days: 40
Experience.Flight Crew.Type: 89
ASRS Report Number: Accession Number: 1557035
Human Factors: Situational Awareness

Events
Anomaly.Conflict: NMAC
Anomaly.Deviation - Procedural: FAR
Detector.Person: Flight Crew
When Detected: In-flight
Result.Flight Crew: Took Evasive Action

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

Narrative: 1
Cruising at 4500 feet to Lafayette, I encountered what appeared to be a drone at the last minute and had to take last second action in order to miss the object. It appeared to be black and red and was roughly 1 by 1. The object seemed to be hovering without any movement where I ended up making a right 30-degree bank in order to remain safe. I contacted South Bend Approach asking if there was any drone NOTAMS, or drone activity in the area. I then received a response telling me there shouldn't be. Approach then asked me about the incident, and what the object appeared like, [so] to advise other aircraft in the area.

Synopsis
Cirrus SR-20 pilot reported a NMAC during level flight at 4500 feet, which required evasive action.
ACN: 1552272 (2 of 50)

Time / Day
Date: 201806
Local Time Of Day: 0601-1200

Place
Locale Reference.Airport: LAX.Airport
State Reference: CA
Altitude.AGL.Single Value: 1200

Environment
Flight Conditions: VMC
Light: Daylight

Aircraft
Reference: X
ATC / Advisory.Tower: LAX
Aircraft Operator: Air Carrier
Make Model Name: B737 Undifferentiated or Other Model
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Nav In Use: FMS Or FMC
Flight Phase: Final Approach
Route In Use: Visual Approach
Airspace.Class B: LAX

Person
Reference: 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: Air Transport Pilot (ATP)
Qualification.Flight Crew: Multiengine
Qualification.Flight Crew: Instrument
Experience.Flight Crew.Total: 15000
Experience.Flight Crew.Type: 8900
ASRS Report Number.Accession Number: 1552272

Events
Anomaly.Conflict: NMAC
Detector.Person: Flight Crew
Miss Distance.Horizontal: 50
When Detected: In-flight
Result General: None Reported / Taken

Assessments
Primary Problem: Ambiguous

**Narrative: 1**

At five DME inbound on visual approach to runway 25L; I saw a white 4-engine drone pass off the left side of the aircraft by approximately 50 feet. His altitude was approximately 1200 feet AGL. I reported the drone, and the aircraft following us reported after we touched down.

**Synopsis**

B737 captain reported sighting a drone close by the left side of his aircraft while on approach to runway 25L at LAX.
**ACN: 1551992 (3 of 50)**

**Time / Day**
- Date: 201806
- Local Time Of Day: 1201-1800

**Place**
- Locale Reference.Airport: RIC.Airport
- State Reference: VA
- Altitude.MSL.Single Value: 2300

**Environment**
- Flight Conditions: VMC
- Light: Daylight

**Aircraft**
- Reference: X
- ATC / Advisory.TRACON: RIC
- Aircraft Operator: Air Carrier
- Make Model Name: Embraer Undifferentiated or Other Model
- Crew Size.Number Of Crew: 2
- Operating Under FAR Part: Part 121
- Flight Plan: IFR
- Mission: Passenger
- Flight Phase: Initial Approach
- Route In Use: Visual Approach
- Airspace.Class E: RIC

**Person : 1**
- Reference: 1
- Location Of Person.Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Air Carrier
- Function.Flight Crew: Pilot Flying
- Function.Flight Crew: Captain
- Qualification.Flight Crew: Air Transport Pilot (ATP)
- Qualification.Flight Crew: Instrument
- Qualification.Flight Crew: Multiengine
- Experience.Flight Crew.Type: 2600
- ASRS Report Number.Accession Number: 1551992
- Human Factors: Situational Awareness

**Person : 2**
- Reference: 2
- Location Of Person.Aircraft: X
- Location In Aircraft: Flight Deck
- 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: 1552332
Human Factors: Situational Awareness

Events

Anomaly. Conflict: NMAC
Detector. Person: Flight Crew
When Detected: In-flight
Result. Flight Crew: Took Evasive Action

Assessments

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

Narrative: 1

While on a Visual Approach for approximately 10-15 miles northeast of the airport we experienced a near mid-air collision with two hang gliders at approximately 2,300 feet. The First Officer spotted the hang gliders and I then saw one at our altitude black and orange in color. As we turned I saw a second glider green and yellow at a higher altitude. The entire event took place over a few seconds and we did not see them until moments prior to the reaction.

The First Officer had spotted the hang gliders and recognized their direction of travel and said to turn left. I disconnected the autopilot, initiated a left turn, and confirmed his assessment. It was a fairly aggressive turn to avoid a potential collision. I believe we came within a few hundred feet of the glider. I understand these hang gliders were outside the airport's airspace, however, they should use better judgement flying so close to an approach corridor into a fairly busy airport.

Narrative: 2

[Report narrative contained no additional information.]

Synopsis

Embraer Jet flight crew reported a NMAC with two hang gliders.
ACN: 1551804

Time / Day
Date: 201806
Local Time Of Day: 0601-1200

Place
Locale Reference.Airport: UES.Airport
State Reference: WI
Relative Position.Angle.Radial: 090
Relative Position.Distance.Nautical Miles: 2
Altitude.MSL.Single Value: 1900

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

Aircraft : 1
Reference: X
Aircraft Operator: FBO
Make Model Name: Small Aircraft, High Wing, 1 Eng, Fixed Gear
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: None
Mission: Training
Flight Phase: Initial Approach

Aircraft : 2
Reference: Y
Aircraft Operator: Air Taxi
Make Model Name: Light Transport
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 135
Flight Plan: IFR
Mission: Passenger
Flight Phase: Final Approach

Person
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: FBO
Qualification.Flight Crew: Flight Instructor
Qualification.Flight Crew: Commercial
Qualification.Flight Crew: Multiengine
Qualification.Flight Crew: Instrument
Experience.Flight Crew.Total: 399
Experience.Flight Crew.Last 90 Days: 96
Experience.Flight Crew.Type: 62
ASRS Report Number.Accession Number: 1551804
Narrative: 1

While operating on a training flight into UES from the northwest, we were instructed to enter right downwind for Runway 28. Once established on downwind, we were advised by Waukesha Tower that Aircraft Y is on a 10 mile final for Runway 28 into UES. We were also instructed by Waukesha Tower to extend our downwind to follow that traffic, and to advise when we had visual contact. We responded in compliance with the downwind extension instructions and that we were looking for the traffic. Shortly thereafter, about 1.5-2 NM east of the field, we made visual contact with the traffic, who was approximately 1 mile east/southeast of us and about 500 ft. above us, descending towards Runway 28 at UES. We contacted Waukesha Tower acknowledging visual contact with the traffic, and were instructed to maintain visual separation with the traffic, and follow it for landing. We responded in compliance with those instructions. As the traffic descended to approximately 100 ft. above our altitude, they were approximately [at] our 2 o’clock position, well clear of being a factor. While observing the traffic, we witnessed it aggressively pitch up and initiate a missed approach. Aircraft Y then attempted to make a radio call, but a TCAS alert could be heard in the background. When prompted by Waukesha Tower to repeat the last transmission, Aircraft Y’s First Officer responded that they were executing a missed approach due to a TCAS alert. The Captain then followed up with a transmission regarding "150 ft." of clearance indicated. As we continued our downwind, [the] tower contacted us to inquire about our position. We replied that we were continuing downwind and that Aircraft Y was not a factor at any time. We were then instructed by Waukesha Tower to begin our base leg and then our clearance to land, to which we replied in compliance to the turn, and read back the landing clearance. The landing and subsequent taxi to parking were uneventful. After a brief discussion on the ground with the Captain of Aircraft Y following the event, he later informed me as to the berth requirements for their TCAS system onboard (I believe he stated ½ nm lateral separation, 500 ft. vertical separation). Although the crew of Aircraft Y did not report us in sight to [the] tower while in flight, the Captain later stated that he saw the top of our wing as he initiated his missed approach, which corroborates with him being at a slightly higher altitude then us. However, we never began turning on a right base leg, as we had visual contact with Aircraft Y and were maintaining visual separation with him throughout the sequence of events.

Synopsis

Instructor reported a NMAC with another plane in the landing pattern.
ACN: 1551802 (5 of 50)

Time / Day
Date: 201806
Local Time Of Day: 0601-1200

Place
Locale Reference.Airport: ZZZ.Airport
State Reference: US
Altitude.MSL.Single Value: 1000

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

Aircraft
Reference: X
ATC / Advisory.CTAF: ZZZ
Aircraft Operator: Personal
Make Model Name: Bonanza 33
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: VFR
Mission: Personal
Flight Phase: Final Approach
Route In Use: Visual Approach

Person
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Personal
Function.Flight Crew: Single Pilot
Qualification.Flight Crew: Instrument
Qualification.Flight Crew: Air Transport Pilot (ATP)
Qualification.Flight Crew: Flight Instructor
Qualification.Flight Crew: Multiengine
Experience.Flight Crew.Total: 6000
Experience.Flight Crew.Last 90 Days: 100
Experience.Flight Crew.Type: 400
ASRS Report Number.Accession Number: 1551802
Human Factors: Communication Breakdown
Human Factors: Situational Awareness
Communication Breakdown.Party1: Flight Crew
Communication Breakdown.Party2: Flight Crew

Events
Anomaly.Conflict: NMAC
Anomaly.Deviation - Procedural: Published Material / Policy
Detector.Automation: Aircraft TA
Detector.Person : Flight Crew
Miss Distance.Horizontal : 500
Miss Distance.Vertical : 500
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

**Assessments**

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

**Narrative: 1**

On final approach to land on runway 26 (wind favored runway) I received a traffic alert from my ADSB. I was on CTAF and made a downwind, base and final call on this frequency of my positions. There was no other traffic on frequency.

On final, about 600 feet above the ground, made visual contact with a Cessna 172 or 182 departing runway 8. Both me and the departing aircraft made evasive maneuvers to the right. I landed without incident. The Cessna aircraft departed the area.

This airport has on-going frequency confusion. It is possible that the departing aircraft was communicating on UNICOM rather than CTAF.

**Synopsis**

BE-33 pilot reported he took evasive action to avoid a NMAC with an aircraft taking off from the opposite direction of his approach path.
**Time / Day**
Date: 201806
Local Time Of Day: 0601-1200

**Place**
Locale Reference.Airport: ZZZ.Airport
State Reference: US
Altitude.MSL.Single Value: 400

**Environment**
Flight Conditions: VMC
Weather Elements / Visibility: Visibility: 10
Light: Daylight

**Aircraft : 1**
Reference: X
ATC / Advisory.Tower: ZZZ
Aircraft Operator: FBO
Make Model Name: PA-44 Seminole/Turbo Seminole
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 91
Flight Plan: None
Mission: Training
Flight Phase: Climb
Route In Use: Visual Approach
Airspace.Class D: ZZZ

**Aircraft : 2**
Reference: Y
ATC / Advisory.Tower: ZZZ
Make Model Name: Robinson R22
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Phase: Takeoff
Route In Use: Visual Approach
Airspace.Class D: ZZZ

**Person**
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: FBO
Function.Flight Crew: Instructor
Qualification.Flight Crew: Instrument
Qualification.Flight Crew: Commercial
Qualification.Flight Crew: Flight Instructor
Qualification.Flight Crew: Multiengine
Experience.Flight Crew.Total: 1380
Experience.Flight Crew.Last 90 Days: 300
Experience. Flight Crew. Type : 194
ASRS Report Number. Accession Number : 1551689

Events
Anomaly. Conflict : NMAC
Anomaly. Deviation - Procedural : Clearance
Detector. Person : Flight Crew
Miss Distance. Horizontal : 50
Miss Distance. Vertical : 0
When Detected : In-flight
Result. Flight Crew : Took Evasive Action
Result. Flight Crew : Executed Go Around / Missed Approach

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

Narrative: 1
A crew of 2, instructor and student, were conducting practice single-engine instrument approaches using the ILS Runway 24. During the first approach, we were cleared for the option Runway 24 and conducted the approach to the minimum DA (Decision Altitude) of 320 feet MSL. We were not given any traffic advisory from the Tower during our approach. The missed approach was initiated while maintaining a partial power simulated single-engine configuration, which resulted in a shallower-than-normal climb, and very marginal performance and maneuverability. Immediately after initiating the missed approach, the student pilot in left seat on the controls noticed the helicopter traffic at our 11 o’clock position moving slowly from left to right, directly over the runway. We banked the aircraft sharply to the right, and the helicopter also pitched up and banked right in order to avoid a collision.

The Tower told the helicopter to remain south of runway, however after the incident was reported by the crew of the multi-engine, the helicopter said that he did not hear the restriction given by the Tower to remain south of Runway 24 at all times.

In order to avoid such situation, a better stress on complying with read-back instructions would be helpful.

Synopsis
A Piper PA-44 pilot instructor reported that during a practice missed approach the student pilot took evasive action to avoid a collision with a helicopter.
ACN: 1551480

Time / Day
Date: 201806

Place
Locale Reference. ATC Facility: N90.TRACON
State Reference: NY
Altitude.MSL.Single Value: 12000

Aircraft: 1
Reference: X
ATC / Advisory. TRACON: N90
Aircraft Operator: Air Carrier
Make Model Name: B737 Undifferentiated or Other Model
Crew Size. Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Flight Phase: Climb
Route In Use: Vectors
Airspace.Class E: N90

Aircraft: 2
Reference: Y
Flight Phase: Cruise
Airspace.Class E: N90

Person
Reference: 1
Location Of Person. Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function. Flight Crew: Pilot Flying
Function. Flight Crew: Captain
Qualification. Flight Crew: Air Transport Pilot (ATP)
Experience. Flight Crew. Last 90 Days: 235
Experience. Flight Crew. Type: 2404
ASRS Report Number. Accession Number: 1551480

Events
Anomaly. Conflict: NMAC
Anomaly. Deviation - Procedural: Clearance
Detector. Automation: Aircraft TA
Detector. Automation: Aircraft RA
Detector. Person: Flight Crew
Miss Distance. Horizontal: 0
Miss Distance. Vertical: 300
When Detected: In-flight
Result. Flight Crew: FLC complied w / Automation / Advisory
Result. Flight Crew: Took Evasive Action
Result. Air Traffic Control: Issued New Clearance

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

Narrative: 1
While flying as Captain with autopilot on and complying with heading assigned 320 and climb to 16,000, we received TCAS traffic warning passing through 12,000 [feet]. We started to look for traffic at about 10 o'clock and quickly received TCAS RA LEVELOFF. We complied, leveling off at 12,500 feet. Was unable to visually acquire traffic, but noted TCAS symbol showed they passed over us within 300 feet. Notified ATC, who issued a new heading, and commented the traffic was transitioning area without communications. Dispatch/[Operations] were notified.

Synopsis
B737 Captain reported NMAC responding to TCAS RA for overflying traffic.
Time / Day
   Date: 201806
   Local Time Of Day: 1201-1800

Place
   Locale Reference.ATC Facility: D21.TRACON
   State Reference: MI

Environment
   Flight Conditions: VMC
   Light: Daylight

Aircraft
   Reference: X
   ATC / Advisory.TRACON: D21
   Make Model Name: Super King Air 200
   Crew Size.Number Of Crew: 2
   Operating Under FAR Part: Part 91
   Flight Plan: IFR
   Flight Phase: Descent
   Airspace.Class E: D21

Person
   Reference: 1
   Location Of Person.Aircraft: X
   Location In Aircraft: Flight Deck
   Function.Flight Crew: Pilot Flying
   Function.Flight Crew: Captain
   Qualification.Flight Crew: Air Transport Pilot (ATP)
   ASRS Report Number.Accession Number: 1551450
   Human Factors: Situational Awareness

Events
   Anomaly.Conflict: NMAC
   Detector.Person: Flight Crew
   When Detected: In-flight
   Result.Flight Crew: Took Evasive Action

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

Narrative: 1
   Near midair collision. Keep your eyes open.

Synopsis
   A pilot reported a NMAC.
**Time / Day**

Date: 201806
Local Time Of Day: 0001-0600

**Place**

Locale Reference.Airport: OME.Airport
State Reference: AK

**Aircraft : 1**

Reference: X
ATC / Advisory.CTAF: OME
Aircraft Operator: Air Taxi
Make Model Name: Small Aircraft
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 135
Flight Plan: IFR
Flight Phase: Landing
Airspace.Class G: OME

**Aircraft : 2**

Reference: Y
Make Model Name: Any Unknown or Unlisted Aircraft Manufacturer
Airspace.Class G: OME

**Person**

Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Taxi
Function.Flight Crew: Pilot Flying
Function.Flight Crew: Single Pilot
Qualification.Flight Crew: Commercial
ASRS Report Number.Accession Number: 1549919
Human Factors: Situational Awareness

**Events**

Anomaly.Conflict: NMAC
Anomaly.Deviation - Procedural: Published Material / Policy
Detector.Person: Flight Crew
When Detected: In-flight
Result.Flight Crew: Took Evasive Action

**Assessments**

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

**Narrative: 1**
I was on a base leg approach to Runway 21 OME when I noticed an airplane coming off of Runway 3 at City Field. I pulled up and told City Field traffic to go low. The other aircraft nosed over and I passed over it at about 200 feet. There was no communication from the other aircraft on 123.6.

**Synopsis**

Small aircraft pilot reported an NMAC in the vicinity of OME airport.
Time / Day
Date: 201806
Local Time Of Day: 1201-1800

Place
Locale Reference.Airport: HIO.Airport
State Reference: OR
Relative Position.Angle.Radial: 068
Relative Position.Distance.Nautical Miles: 4
Altitude.MSL.Single Value: 650

Environment
Flight Conditions: VMC
Weather Elements / Visibility: Haze / Smoke
Weather Elements / Visibility.Visibility: 10
Light: Daylight
Ceiling.Single Value: 5000

Aircraft: 1
Reference: X
ATC / Advisory.Tower: HIO
Aircraft Operator: Personal
Make Model Name: Helicopter
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: None
Mission: Passenger
Flight Phase: Initial Approach
Route In Use: Direct
Airspace.Class D: HIO

Aircraft: 2
Reference: Y
Make Model Name: UAV - Unpiloted Aerial Vehicle
Flight Phase: Cruise
Airspace.Class D: HIO

Person
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Personal
Function.Flight Crew: Pilot Flying
Function.Flight Crew: Single Pilot
Qualification.Flight Crew: Instrument
Qualification.Flight Crew: Commercial
Qualification.Flight Crew: Flight Instructor
Experience.Flight Crew.Total: 2219
Experience.Flight Crew.Last 90 Days: 131
Experience: Flight Crew. Type: 255
ASRS Report Number. Accession Number: 1549645

Events

Anomaly. Conflict: NMAC
Anomaly. Inflight Event / Encounter: Other / Unknown
Detector. Person: Flight Crew
Miss Distance. Horizontal: 100
Miss Distance. Vertical: 50
When Detected: In-flight
Result. Flight Crew: Took Evasive Action

Assessments

Contributing Factors / Situations: Airspace Structure
Contributing Factors / Situations: Procedure
Primary Problem: Ambiguous

Narrative: 1

After being cleared into Class Delta airspace for landing at HIO, and instructed to descend below 700 feet MSL, I had a near miss with a drone over highway 26, 4nm ENE of HIO. I was at approximately 650 feet MSL and the drone was above me, just to the right of my 12 o'clock. I turned left upon seeing it and got a good look at it. It appeared to be grey in color and possibly of the DJI Phantom type of quadcopter. I have seen plenty of these and it looked to be that style. I immediately reported to the Tower that I had a near miss at the edge of their airspace and gave them approximate location, altitude, and description of the UAV. I was traveling approximately 120 KTS IAS, with light winds and good visibility other than light smoke in the area from prescribed burns. I had two passengers on board, one in the front with me and one directly behind that passenger.

Synopsis

Helicopter pilot reported a NMAC with a quadcopter drone at approximately 650 feet MSL while inbound for landing.
ACN: 1549472

Time / Day
Date: 201806
Local Time Of Day: 0601-1200

Place
Locale Reference.Airport: ZZZ.Airport
State Reference: US

Environment
Flight Conditions: VMC
Light: Daylight

Aircraft: 1
Reference: X
ATC / Advisory.Tower: ZZZ
Aircraft Operator: Air Taxi
Make Model Name: EMB-505 / Phenom 300
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 135
Flight Plan: IFR
Mission: Passenger
Nav In Use: FMS Or FMC
Flight Phase: Landing
Flight Phase: Final Approach
Route In Use: Visual Approach
Airspace.Class D: ZZZ

Aircraft: 2
Reference: Y
ATC / Advisory.Tower: ZZZ
Make Model Name: PA-28 Cherokee/Archer/Dakota/Pillan/Warrior
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Phase: Initial Approach
Airspace.Class D: ZZZ

Person
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Taxi
Function.Flight Crew: Pilot Not Flying
Function.Flight Crew: Captain
Qualification.Flight Crew: Air Transport Pilot (ATP)
Qualification.Flight Crew: Instrument
Qualification.Flight Crew: Multiengine
ASRS Report Number.Accession Number: 1549472

Events

Assessments

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

Narrative: 1

We were cleared for the visual to Runway 16 and was on short final. A Cherokee was entering downwind for Runway 11 and as we were low it should have worked out but the Cherokee started an early descent so he was a lot closer to us vertically than he should have been. We did not get a TCAS RA due to our low altitude and the TCAS switching to TA only in this phase of flight. We landed uneventful but now rolling out on Runway 16 another plane landing on Runway 11 was told to go-around and he replied "no we can land." Tower told him to go-around immediately and he passed right over us as we rolled through the intersection of Runway 16 and Runway 11.

Synopsis

EMB-505 Captain of a business jet reported a near miss while landing.
ACN: 1548816 (12 of 50)

**Time / Day**
- Date: 201806
- Local Time Of Day: 1201-1800

**Place**
- Locale Reference: Airport: DCA.Airport
- State Reference: DC
- Altitude: MSL. Single Value: 1500

**Environment**
- Flight Conditions: VMC

**Aircraft : 1**
- Reference: X
- ATC / Advisory: Tower: DCA
- Aircraft Operator: Air Carrier
- Make Model Name: A319
- Crew Size: Number Of Crew: 2
- Operating Under FAR Part: Part 121
- Flight Plan: IFR
- Mission: Passenger
- Nav In Use: FMS Or FMC
- Flight Phase: Takeoff
- Airspace: Class B: DCA

**Aircraft : 2**
- Reference: Y
- Make Model Name: Small Aircraft
- Crew Size: Number Of Crew: 1
- Operating Under FAR Part: Part 91
- Airspace: Class B: DCA

**Person**
- Reference: 1
- Location Of Person: Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Air Carrier
- Function: Flight Crew: Pilot Not Flying
- Function: Flight Crew: First Officer
- Qualification: Flight Crew: Instrument
- Qualification: Flight Crew: Air Transport Pilot (ATP)
- Qualification: Flight Crew: Multiengine
- Experience: Flight Crew: Last 90 Days: 240
- Experience: Flight Crew: Type: 1370
- ASRS Report Number: Accession Number: 1548816
- Human Factors: Situational Awareness

**Events**
Anomaly.Conflict: NMAC
Anomaly.Inflight Event / Encounter: CFTT / CFIT
Detector.Automation: Aircraft RA
Detector.Person: Flight Crew
When Detected: In-flight
Result.Flight Crew: Took Evasive Action
Result.Air Traffic Control: Issued Advisory / Alert
Result.Air Traffic Control: Issued New Clearance

Assessments

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

Narrative: 1

Departed Runway 01 normally. At 1,500 feet, received TA and noted PFD (Primary Flight Display) traffic at +600 feet, on the nose in close proximity. When I looked out I saw a Cessna 182/206 type aircraft 800 feet in front of us slightly right and 200 feet above us traveling north/northwest. I was looking at its left quarter. I told the PF (pilot flying) “traffic visual straight ahead, turn left.” By then we received a descending RA. The PF immediately complied with both. I then notified ATC of traffic and RA descent. As soon as I said it, the Cessna began to turn into us (left turn). It passed behind us and notified the PF. He continued to follow the RA until it stopped. ATC responded with "he was supposed to remain north...turn heading 240, climb maintain 17,000 feet". We complied and continued normal climb out. Our momentum carried us to within my estimate of 300 feet laterally to the Cessna at about 1,800 feet MSL. Our TCAS RA descent rate up to 1,200 ft/min down to about 800 feet MSL before recovery and climbout.

Synopsis

A319 First Officer reported descending during an RA response for traffic avoidance following a NMAC with a small aircraft while departing DCA.
**ACN: 1548690 (13 of 50)**

**Time / Day**
- Date: 201806
- Local Time Of Day: 0001-0600

**Place**
- Locale Reference.Airport: TTN.Airport
- State Reference: NJ
- Relative Position.Distance.Nautical Miles: 4
- Altitude.MSL.Single Value: 2000

**Environment**
- Flight Conditions: VMC
- Weather Elements / Visibility.Visibility: 10
- Light: Night

**Aircraft : 1**
- Reference: X
- ATC / Advisory.CTAF: TTN
- Aircraft Operator: FBO
- Make Model Name: Skyhawk 172/Cutlass 172
- Crew Size.Number Of Crew: 2
- Operating Under FAR Part: Part 91
- Flight Plan: None
- Mission: Training
- Flight Phase: Final Approach
- Route In Use: Visual Approach
- Route In Use: Direct
- Airspace.Class E: TTN

**Aircraft : 2**
- Reference: Y
- ATC / Advisory.CTAF: TTN
- Aircraft Operator: Fractional
- Make Model Name: Citation X (C750)
- Crew Size.Number Of Crew: 2
- Operating Under FAR Part: Part 91
- Flight Plan: IFR
- Mission: Passenger
- Flight Phase: Final Approach
- Airspace.Class E: TTN

**Person**
- Reference: 1
- Location Of Person.Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: FBO
- Function.Flight Crew: Check Pilot
- Function.Flight Crew: Pilot Not Flying
- Qualification.Flight Crew: Commercial
Qualification. Flight Crew: Flight Instructor
Experience. Flight Crew. Total: 3456
Experience. Flight Crew. Last 90 Days: 163
Experience. Flight Crew. Type: 645
ASRS Report Number. Accession Number: 1548690
Human Factors: Situational Awareness
Human Factors: Communication Breakdown
Communication Breakdown. Party1: Flight Crew
Communication Breakdown. Party2: Flight Crew

Events
Anomaly. Conflict: NMAC
Anomaly. Deviation - Procedural: Published Material / Policy
Detector. Person: Flight Crew
Miss Distance. Horizontal: 50
Miss Distance. Vertical: 50
When Detected: In-flight
Result. General: None Reported / Taken

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

Narrative: 1

While on a VFR flight to TTN (10.2 NM) we experienced a near miss incident with [a CE750] while attempting to execute a straight in visual approach to Runway 24 at TTN. While executing the visual approach, the student made several radio calls advising his intentions at 9, 5 and 4 NM from the field. We were also communicating with [another] 172 aircraft also in the pattern at TTN entering on a left downwind. After our 4 NM final transmission, [the CE750] checked in on CTAF and called "TTN traffic - Visual 24, 4 mile final." The call was quick so I confirmed whether the call was [the other 172] who was on the left downwind. They stated "NO, [we are] on the left downwind."

I was confused by the call because we had been on CTAF for several minutes and were communicating with the [other 172] aircraft and there were no other radio calls yet on the frequency. After [the CE750] made their call, and my communication to [the other 172], [the CE750] flew over our right wing. By my estimation the separation was within 50'-100'. It was close enough to hear the engines and smell the exhaust.

We had been on the CTAF frequency for about 5 minutes prior to this incident and announcing our intentions as soon as we departed and at no time was [the CE750] on the frequency.

After the incident, I stated on the CTAF: "Wow, that was close, let's try to be safe out here."
[The CE750] replied stating we should not be doing straight in approaches to an airport like TTN with IFR traffic. He also continued to state that regulation 91.126 clearly states that this is illegal.

The exchange continued a few minutes at which point I told the pilot I would meet him on the ramp. We discussed the situation for several minutes and the pilot was very angry and upset. I continued to explain that we were making our radio calls and we did not break
any FAR or procedure for TTN and that he should have given way to us as we were in front of him and at a lower altitude with no idea he was ever there.

After listening to tapes, our target was clearly called out to [the CE750] by PHL Approach as an aircraft that appeared to be on final approach to Runway 24 at TTN.

**Synopsis**

C172 Instructor pilot reported a NMAC with a CE750 in the pattern at TTN airport.
**Time / Day**

Date: 201806  
Local Time Of Day: 0601-1200

**Place**

Locale Reference.Airport: DFW.Airport  
State Reference: TX  
Relative Position.Angle.Radial: 360  
Relative Position.Distance.Nautical Miles: 25  
Altitude.MSL.Single Value: 8000

**Environment**

Light: Daylight

**Aircraft: 1**

Reference: X  
ATC / Advisory.TRACON: D10  
Aircraft Operator: Air Carrier  
Make Model Name: B737-800  
Crew Size.Number Of Crew: 2  
Operating Under FAR Part: Part 121  
Flight Plan: IFR  
Mission: Passenger  
Nav In Use: GPS  
Nav In Use: FMS Or FMC  
Nav In Use.Localizer/Glideslope/ILS: Runway 18R  
Flight Phase: Initial Approach  
Flight Phase: Descent  
Route In Use.STAR: VKTRY 2 RNAV  
Airspace.Class B: DFW

**Aircraft: 2**

Reference: Y  
Make Model Name: UAV - Unpiloted Aerial Vehicle  
Operating Under FAR Part.Other  
Flight Phase: Cruise  
Airspace.Class B: DFW

**Person**

Reference: 1  
Location Of Person.Aircraft: X  
Location In Aircraft: Flight Deck  
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: Instrument  
Qualification.Flight Crew: Multiflengine  
ASRS Report Number.Accession Number: 1548559
Events

Anomaly.Conflict : NMAC
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Other / Unknown
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

Visual conditions on VKTRY2 RNAV arrival. We were cleared direct to YOHAN for ILS 18R and then cleared direct to LEGRE (estimating 15NM from LEGRE and 230 knots), still descending to 3,000 feet. Once established direct LEGRE and descending through 8,000-8,200 feet captain saw a quad copter drone. We made report immediately with Approach Control as it happened. Was asked if we were submitting a "Near Midair Report" prior to switching tower and captain replied yes.

Synopsis

B737-800 First Officer reported a NMAC with a drone while flying the ILS Runway 18R approach into DFW, at approximately 8,000 feet and 25 NM north of DFW.
ACN: 1548500 (15 of 50)

**Time / Day**
- Date: 201806
- Local Time Of Day: 1201-1800

**Place**
- Locale Reference: ATC Facility: BET.Tower
- State Reference: AK

**Environment**
- Flight Conditions: VMC
- Weather Elements / Visibility: Turbulence
- Light: Daylight

**Aircraft : 1**
- Reference: X
- ATC / Advisory.Tower: BET
- Aircraft Operator: Air Taxi
- Make Model Name: Small Aircraft
- Crew Size.Number Of Crew: 1
- Operating Under FAR Part: Part 135
- Flight Phase: Final Approach
- Airspace.Class D: BET

**Aircraft : 2**
- Reference: Y
- Make Model Name: Small Aircraft
- Flight Phase: Final Approach
- Airspace.Class D: BET

**Person**
- Reference: 1
- Location Of Person.Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Air Taxi
- Function.Flight Crew: Captain
- Function.Flight Crew: Pilot Flying
- Qualification.Flight Crew: Commercial
- ASRS Report Number.Accession Number: 1548500
- Human Factors: Communication Breakdown
- Human Factors: Confusion
- Human Factors: Situational Awareness
- Communication Breakdown.Party1: Flight Crew
- Communication Breakdown.Party2: ATC

**Events**
- Anomaly.ATC Issue: All Types
- Anomaly.Conflict: NMAC
- Detector.Person: Flight Crew
Miss Distance.Vertical : 200
When Detected : In-flight
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Flight Crew : Took Evasive Action
Result.Air Traffic Control : Issued New Clearance
Result.Air Traffic Control : Provided Assistance

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

Narrative: 1

10 miles out from Bethel Airport control zone, we called with our call sign, the information, and our position (10 miles NE from the field). We were cleared for a right downwind 01L and instructed to report midfield. While proceeding to enter the right downwind for 01L, we could hear [another aircraft] doing a VOR 01L practice approach. We reported the right downwind 01L, at that time the Tower Controller cleared us to land 01L. We turned base and started descending from pattern altitude. As we were about to turn final 01L, we encountered a near midair collision. The other aircraft was 100 to 200 feet below us for a straight in final 01L. We added power, leveled off and extended base. At that time the frequency was occupied by other communication. When the frequency became available, we asked Tower and demanded clarification on our position to land. Tower instructed us that we are now number 2 to land and cleared us to land 01L. We acknowledge the clearance. As we were about to land, the controller asked us to go-around. We acknowledge the go-around and initiated the climb. Few seconds later, the controller cleared us to land on runway 01L. We acknowledge the clearance and landed without any incident. After exiting the runway, the controller cleared us to taxi to our ramp and apologized for the confusion.

Synopsis
Air taxi pilot reported a NMAC during final approach to BET airport.
ACN: 1548477

Time / Day
- Date: 201806
- Local Time Of Day: 0601-1200

Place
- Locale Reference.Airport: SFO.Airport
- State Reference: CA
- Altitude.MSL.Single Value: 13500

Environment
- Flight Conditions: VMC
- Light: Daylight

Aircraft: 1
- Reference: X
- ATC / Advisory.TRACON: NCT
- Aircraft Operator: Air Carrier
- Make Model Name: B757 Undifferentiated or Other Model
- Crew Size.Number Of Crew: 2
- Operating Under FAR Part: Part 121
- Flight Plan: IFR
- Nav In Use: GPS
- Nav In Use: FMS Or FMC
- Flight Phase: Climb
- Route In Use.SID: SNTNA 2
- Airspace.Class E: NCT

Aircraft: 2
- Reference: Y
- Make Model Name: UAV - Unpiloted Aerial Vehicle
- Flight Phase: Cruise
- Airspace.Class E: NCT

Person
- Reference: 1
- Location Of Person.Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Air Carrier
- Function.Flight Crew: Pilot Flying
- Function.Flight Crew: Captain
- Qualification.Flight Crew: Air Transport Pilot (ATP)
- Qualification.Flight Crew: Instrument
- Qualification.Flight Crew: Multiengine
- Experience.Flight Crew.Type: 1158
- ASRS Report Number.Accession Number: 1548477

Events
Anomaly.Conflict : NMAC
Anomaly.Inflight Event / Encounter : Other / Unknown
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : None Reported / Taken

Assessments
Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1
During climbout, on the SNTNA 2 departure, at approximately 13,500 feet, a drone passed down the right side of the aircraft. The coordinates of the encounter were N3754.0/W12207.9. We reported the encounter to ATC. Only the first officer saw the drone. Though difficult to judge the exact distance, he estimated that we came within 200 feet of the drone. We were close enough to it that he was able to clearly see that it was red.

Synopsis
B757 Captain reported a NMAC with a drone while flying the SID, at approximately 13,500 feet and 50 NM East of the SFO airport.
**Time / Day**

Date: 201805

**Place**

Locale Reference: Airport: ZZZ.Airport  
State Reference: US  
Relative Position: Distance: Nautical Miles: 1  
Altitude: AGL: Single Value: 500

**Environment**

Flight Conditions: VMC  
Light: Daylight

**Aircraft : 1**

Reference: X  
ATC / Advisory: CTAF: ZZZ  
Aircraft Operator: Personal  
Make Model Name: Skyhawk 172/Cutlass 172  
Crew Size. Number Of Crew: 2  
Operating Under FAR Part: Part 91  
Mission: Training  
Flight Phase: Initial Climb  
Airspace. Class G: ZZZ

**Aircraft : 2**

Reference: Y  
ATC / Advisory: CTAF: ZZZ  
Aircraft Operator: Personal  
Make Model Name: Cirrus Aircraft Undifferentiated  
Operating Under FAR Part: Part 91  
Mission: Personal  
Nav In Use: GPS  
Flight Phase: Final Approach  
Route In Use. Other  
Airspace. Class G: ZZZ

**Component**

Aircraft Component: Air/Ground Communication  
Aircraft Reference: X  
Problem: Malfunctioning

**Person**

Reference: 1  
Location Of Person. Aircraft: X  
Location In Aircraft: Flight Deck  
Reporter Organization: Personal  
Function. Flight Crew: Pilot Flying
Qualification. Flight Crew: Private
Experience. Flight Crew. Total: 55
Experience. Flight Crew. Last 90 Days: 4
Experience. Flight Crew. Type: 60
ASRS Report Number. Accession Number: 1548353
Human Factors: Communication Breakdown
Human Factors: Training / Qualification
Human Factors: Situational Awareness
Communication Breakdown. Party1: Flight Crew
Communication Breakdown. Party2: Flight Crew

Events
Anomaly. Conflict: NMAC
Anomaly. Deviation - Procedural: Published Material / Policy
Detector. Person: Flight Crew
Miss Distance. Horizontal: 200
Miss Distance. Vertical: 0
When Detected: In-flight
Result. Flight Crew: Took Evasive Action
Result. Flight Crew: Overcame Equipment Problem

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

Narrative: 1
Training with instructor in C172. Training aircraft had inoperative landing light, but DAY VMC. On departure, as Pilot Flying, I looked to the left, and exclaimed to my instructor: "Look at this maniac!" as a Cirrus to our port was breaking right (starboard) and climbing slightly, approximately 200 feet away, and opposite direction (we were climbing out of Runway 32, Cirrus was landing Runway 14. Instructor fiddled with radio knob, (but did not change frequency) and transmitted: "Low Wing at ZZZ, were you making any calls?" as we had not heard any radio calls. "I made at least 6, inbound, on the RNAV14" was the reply. We explained the we had not heard any calls, nor had he heard any of our pattern-work calls, and that one of us must have had a bad radio. In retrospect, I think it was our radio, and that the instructor "jiggling" the radio switch brought it back to life. We had done a landing at ZZZ 1 and self-announced, prior to this incident, but again, nobody was in the pattern, so if we were not transmitting, we had no way to know. Returning to ZZZ, we picked up the latest ATIS; however, this was on radio 2, we were xmit/receive on radio 1. This was only my second time flying at ZZZ, but thinking back again, I had heard "bleed" on the same frequency from [another nearby airport] previously, but did not hear any this day. With utterly no other traffic, we had no way to know our radio was not transmitting. I saw the Cirrus head-on, and did not observe that his landing light was illuminated; had it been, I think I would have spotted the Cirrus much sooner. It was silver, and blended in with the green leafy background. The poorly-maintained trainer I was in (the landing light had been inop on a previous flight the week before, and was still not repaired. The artificial horizon also had been inop on previous flight, and was also not fixed) was also a factor. Had our landing light been illuminated, the Cirrus may have seen us sooner. With
no (apparently) radio, and no landing light illuminated on either aircraft, the last hole in the swiss cheese was see-and-avoid, which, luckily for us, held.

Synopsis

C172 pilot reported a NMAC on takeoff caused by an apparent inoperative radio.
**ACN: 1548190 (18 of 50)**

**Time / Day**
- Date: 201806

**Place**
- Locale Reference: Airport: EWR.Airport
- State Reference: NJ
- Altitude.MSL.Single Value: 3000

**Environment**
- Flight Conditions: VMC

**Aircraft : 1**
- Reference: X
- ATC / Advisory: TRACON: N90
- Aircraft Operator: Air Carrier
- Make Model Name: B737 Undifferentiated or Other Model
- Crew Size.Number Of Crew: 2
- Operating Under FAR Part: Part 121
- Flight Plan: IFR
- Mission: Passenger
- Nav In Use: FMS Or FMC
- Nav In Use: GPS
- Flight Phase: Climb
- Route In Use.SID: NEWARK TWO
- Airspace.Class B: EWR

**Aircraft : 2**
- Reference: Y
- Make Model Name: UAV - Unpiloted Aerial Vehicle
- Flight Phase: Cruise
- Airspace.Class B: EWR

**Person**
- Reference: 1
- 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: Air Transport Pilot (ATP)
- Qualification.Flight Crew: Multiengine
- Qualification.Flight Crew: Instrument
- Experience.Flight Crew.Type: 3059
- ASRS Report Number.Accession Number: 1548190
- Human Factors: Situational Awareness

**Events**
Anomaly.Conflict : NMAC
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

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

Narrative: 1

We passed what appeared to be a white and red/orange drone on climbout departing runway 4L out of EWR. The departure was the EWR 2 and I sighted the object passing 3,000-3,500 feet ahead and to the right of the aircraft. The object that I believe to be a drone passed close off our right and just above or above and slightly off our right wing.

Synopsis

B737 First Officer reported a NMAC with a drone during an instrument departure from EWR.
ACN: 1548058 (19 of 50)

Time / Day
Date: 201806
Local Time Of Day: 1201-1800

Place
Locale Reference.ATC Facility: ZLC.ARTCC
State Reference: UT
Altitude.MSL.Single Value: 10000

Environment
Flight Conditions: VMC
Weather Elements / Visibility.Visibility: 50
Light: Daylight
Ceiling: CLR

Aircraft
Reference: X
ATC / Advisory.Center: ZLC
Aircraft Operator: Personal
Make Model Name: DA40 Diamond Star
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 91
Flight Plan: IFR
Mission: Training
Nav In Use.VOR / VORTAC: mld
Flight Phase: Cruise
Airspace.Class E: ZLC

Person
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Personal
Function.Flight Crew: Instructor
Function.Flight Crew: Pilot Not Flying
Qualification.Air Traffic Control: Fully Certified
Qualification.Flight Crew: Flight Instructor
Qualification.Flight Crew: Commercial
Qualification.Flight Crew: Multiengine
Qualification.Flight Crew: Instrument
Experience.Air Traffic Control.Radar: 4
Experience.Flight Crew.Total: 670
Experience.Flight Crew.Last 90 Days: 200
Experience.Flight Crew.Type: 570
ASRS Report Number.Accession Number: 1548058
Human Factors: Situational Awareness

Events
Anomaly.Conflict : NMAC
Detector.Person : Flight Crew
Miss Distance.Horizontal : 100
Miss Distance.Vertical : 0
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

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

Narrative: 1
We were on an IFR flight plan to Boise (BOI). As we were crossing the MLD VOR Center came on and advised us that there was traffic about 5 miles away and low. I came back and said that I had them in sight. Initially it looked like the traffic was flying away from us [so] I said that they won't be a factor. Right after I said that the traffic turned and started coming straight for us. Center advised that they were coming for us at the same altitude. I advised Center that we were going to maneuver away from the oncoming traffic and they passed right off of our right side same altitude. After they passed by Center asked if we can return on course. We advised that we could and said that it was a small aircraft that passed by us.

Synopsis
DA40 instructor pilot reported a NMAC in cruise flight in the vicinity of MLD VOR.
**Time / Day**

Date: 201805  
Local Time Of Day: 0601-1200

**Place**

Locale Reference.Airport: 1V6.Airport  
State Reference: CO  
Relative Position.Angle.Radial: 290  
Relative Position.Distance.Nautical Miles: 6  
Altitude.AGL.Single Value: 150

**Environment**

Flight Conditions: VMC  
Light: Daylight

**Aircraft : 1**

Reference: X  
ATC / Advisory.CTAF: 1V6  
Aircraft Operator: Personal  
Make Model Name: PA-24 Comanche  
Crew Size.Number Of Crew: 1  
Operating Under FAR Part: Part 91  
Flight Plan: None  
Mission: Personal  
Flight Phase: Descent  
Route In Use: Visual Approach  
Airspace.Class G: 1V6

**Aircraft : 2**

Reference: Y  
ATC / Advisory.CTAF: 1V6  
Make Model Name: Any Unknown or Unlisted Aircraft Manufacturer  
Crew Size.Number Of Crew: 1  
Operating Under FAR Part: Part 91  
Mission: Skydiving  
Route In Use: None  
Airspace.Class G: 1V6

**Person**

Reference: 1  
Location Of Person.Aircraft: X  
Location In Aircraft: Flight Deck  
Reporter Organization: Personal  
Function.Flight Crew: Pilot Flying  
Function.Flight Crew: Single Pilot  
Qualification.Flight Crew: Instrument  
Qualification.Flight Crew: Private  
Experience.Flight Crew.Total: 480  
Experience.Flight Crew.Last 90 Days: 37
Experience.Flight Crew.Type : 188
ASRS Report Number.Accession Number : 1547761
Human Factors : Situational Awareness

Events
Anomaly.Conflict : NMAC
Anomaly.Deviation - Procedural : Published Material / Policy
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

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

Narrative: 1
I was flying into 1V6 from the northwest. I was flying my Piper Comanche VFR. Skies were clear and it was a fairly smooth day. I was not on flight plan and did not have flight following due to lack of radar coverage. I made an announcement on CTAF when I was approximately 21 miles out stating my position, altitude and intentions of landing at 1V6. I then started descending. There was a fair amount of radio traffic including a jump plane that had dropped a jumper and was circling around for another drop. There was no one in the traffic pattern that I could hear. I continued to descend and made another position, altitude and intentions [callout] at approximately 12 miles. There was other radio traffic including two tanker planes. I also heard the jump plane make a position and altitude report. I think he referenced a landmark that I was unfamiliar [with]. I continued to descend. A short time later I saw what looked like the jump plane coming from my left to right at what appeared to be less than 100 feet above me. It happened quick and it was a surprise so it may be been a larger distance. I immediately reacted by reducing throttle and applying forward pressure on the yoke. I descended and watched the other plane fly above me and what looked to be too close.

I think there were a couple of contributing factors:

1. I chose a long straight in visual approach rather than entering the traffic pattern. I chose the straight in approach due to the tanker traffic to the south of the field since I would have needed to go south to cross mid field to enter the left downwind due to restricted area and terrain to the north. I also knew there was a jumper in the air and one was going to be dropped soon and I didn’t want to overfly the field (which is stated in the AWOS).

2. The jump plane used landmarks during the position reports which I was unfamiliar. I’m not certain the other plane was the jump plane but I think it probably was.

Synopsis
PA24 pilot reported a NMAC with another light aircraft in the vicinity of 1V6 airport.
ACN: 1547742 (21 of 50)

Time / Day

Date: 201805
Local Time Of Day: 1201-1800

Place

Locale Reference.Airport: WVI.Airport
State Reference: CA
Relative Position.Distance.Nautical Miles: 10
Altitude.MSL.Single Value: 4500

Environment

Flight Conditions: VMC
Weather Elements / Visibility. Visibility: 20
Light: Daylight
Ceiling.Single Value: 12000

Aircraft: 1

Reference: X
ATC / Advisory.TRACON: NCT
Aircraft Operator: Personal
Make Model Name: Small Aircraft
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: None
Mission: Personal
Flight Phase: Descent
Route In Use: Direct
Airspace.Class E: NCT

Aircraft: 2

Reference: Y
Make Model Name: UAV - Unpiloted Aerial Vehicle
Operating Under FAR Part: Other
Flight Phase: Cruise
Airspace.Class E: NCT

Person

Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Personal
Function.Flight Crew: Pilot Flying
Function.Flight Crew: Single Pilot
Qualification.Flight Crew: Instrument
Qualification.Flight Crew: Commercial
Experience.Flight Crew.Total: 2500
Experience.Flight Crew.Last 90 Days: 25
Events
Anomaly.Conflict : NMAC
Detector.Person : Flight Crew
Miss Distance.Horizontal : 50
Miss Distance.Vertical : 100
When Detected : In-flight
Result.General : None Reported / Taken

Assessments
Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1
While flying to WVI and still talking to NorCal after exiting SFO Class B, a silver drone passed about 50 feet left of my plane and about 100 feet below. I was at 4,500 feet on a heading of about 140. I reported the incident to the NorCal Controller who then asked a series of questions with lots of interruptions to talk to other traffic. He was still getting information from me when I entered the pattern at WVI. There was considerable traffic at WVI including parachute jumpers and a Meridian with minimum fuel. I didn't switch to the WVI UNICOM until after I had entered a right downwind for Runway 20 because I was still providing drone information to the controller. I mistakenly entered a right downwind instead of a standard left downwind pattern. It didn't create any conflicts, but was not correct. I should have stayed at cruising altitude and completed my involvement with the controller before entering the pattern. I allowed myself to be very distracted and was way behind the plane. The illegal drone and near miss was the primary contributing factor. There has to be a way to control the drone operators.

Synopsis
Pilot reported having a NMAC with a drone and subsequently being distracted during the entry to traffic pattern at WVI.
ACN: 1547729 (22 of 50)

Time / Day

Date: 201806
Local Time Of Day: 0601-1200

Place

Locale Reference.Airport: ZZZ.Airport
State Reference: US
Altitude.MSL.Single Value: 6100

Environment

Flight Conditions: VMC
Light: Daylight

Aircraft: 1

Reference: X
ATC / Advisory.Tower: ZZZ
Aircraft Operator: Personal
Make Model Name: Cessna 210 Centurion / Turbo Centurion 210C, 210D
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: IFR
Mission: Personal
Flight Phase: Final Approach
Route In Use: Visual Approach
Airspace.Class C: ZZZ

Aircraft: 2

Reference: Y
ATC / Advisory.Tower: ZZZ
Aircraft Operator: Personal
Make Model Name: Skylane 182/RG Turbo Skylane/RG
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Phase: Landing
Airspace.Class C: ZZZ

Person

Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Personal
Function.Flight Crew: Single Pilot
Qualification.Flight Crew: Instrument
Qualification.Flight Crew: Commercial
Qualification.Flight Crew: Multiengine
Qualification.Flight Crew: Sea
Experience.Flight Crew.Total: 1650
Experience.Flight Crew.Last 90 Days: 15
Experience.Flight Crew.Type: 1000
Events
Anomaly.ATC Issue: All Types
Anomaly.Conflict: NMAC
Anomaly.Deviation - Track / Heading: All Types
Anomaly.Deviation - Procedural: Clearance
Detector.Person: Flight Crew
Miss Distance.Horizontal: 250
Miss Distance.Vertical: 200
When Detected: In-flight
Result.Flight Crew: Executed Go Around / Missed Approach
Result.Flight Crew: Took Evasive Action

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

Narrative: 1
Aircraft X cleared to land second in sequence behind Aircraft Y. Aircraft Y very slow to land. I initiated a go around in Aircraft X immediately after query to ATC about developing situation. I offset to right to allow visual contact with Aircraft Y which I was overtaking despite efforts to reduce speed to minimum safe speed. ATC then demanded I offset to left. As I began turn to offset left, Aircraft Y executed a go-around which I could see immediately below and to my left. To avoid collision I maintained a right offset despite ATC admonishment to offset left. I followed further ATC instructions to enter right downwind to parallel runway and landed safely.

Synopsis
Cessna 210 pilot reported a NMAC with a C182 during landing.
Time / Day
Date: 201806
Local Time Of Day: 0601-1200

Place
Locale Reference.Airport: ATL.Airport
State Reference: GA
Altitude.MSL.Single Value: 3500

Environment
Flight Conditions: IMC
Light: Daylight

Aircraft: 1
Reference: X
ATC / Advisory.TRACON: A80
Aircraft Operator: Air Carrier
Make Model Name: Regional Jet 700 ER/LR (CRJ700)
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Nav In Use: FMS Or FMC
Flight Phase: Descent
Route In Use.STAR: HOBTT2
Airspace.Class B: ATL

Aircraft: 2
Reference: Y
Make Model Name: Beechcraft / Beech Aircraft Corp Undifferentiated or Other Model
Airspace.Class B: ATL

Person
Reference: 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: Instrument
Qualification.Flight Crew: Multiflame
Qualification.Flight Crew: Air Transport Pilot (ATP)
ASRS Report Number.Accession Number: 1547416
Human Factors: Situational Awareness

Events
Anomaly.ATC Issue: All Types
Anomaly.Conflict: NMAC
Assessments

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

Narrative: 1

We were flying the downwind leg of the HOBTT2 arrival, Runway 27L transition, between FOGER and HITTT intersections, descending from 7,000 feet to 3,000 feet.

At approximately 3,800 feet, TRACON amended our assigned altitude to 3,500 feet. I acknowledged the clearance and warned TRACON that we would likely dip slightly below the new assigned altitude in the process of capturing 3,500 feet. TRACON responded "that's fine," and advised us of VFR traffic to the northeast of us at 3,000 feet. (I do not recall the distance to the traffic at the initial call.) We briefly descended to 3,300 feet but quickly recovered to 3,500 feet.

A few seconds later, a TCAS target appeared at our 11 o'clock position, 5 miles distance, 300 feet below us and climbing. PF (Pilot Flying) sighted the aircraft a few seconds before I did, and a moment later we received a "CLIMB!" 1,500 ft-per-minute TCAS RA. PF complied with the RA immediately. At this point I got a good look at the target, rolling into a right bank. According to the TCAS the Beechcraft flew 100 feet below us with no lateral separation.

After receiving "CLEAR OF CONFLICT" from TCAS, TRACON cleared us to descend to 3,000 feet, and we continued the arrival and approach.

We were "between layers" at the time of this event. It did not appear that the TRACON Controller "working" us at the time was communicating with the Beechcraft--we never heard any radio traffic to or from that aircraft. I can't imagine how the operator of the Beechcraft thought VFR flight through the ATL Class B in marginal conditions was a good idea.

Synopsis

A CRJ-700 Captain reported a NMAC with a Beechcraft on descent into ATL.
ACN: 1547231 (24 of 50)

Time / Day
Date : 201806
Local Time Of Day : 0601-1200

Place
Locale Reference.Airport : ZZZ.Airport
State Reference : US
Altitude.MSL.Single Value : 7000

Environment
Flight Conditions : VMC

Aircraft : 1
Reference : X
ATC / Advisory.TRACON : ZZZ
Aircraft Operator : Air Carrier
Make Model Name : Medium 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
Airspace.Class B : ZZZ

Aircraft : 2
Reference : Y
Make Model Name : Small Aircraft
Crew Size.Number Of Crew : 1
Mission : Aerobatics
Airspace.Class B : ZZZ

Person : 1
Reference : 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 : Air Transport Pilot (ATP)
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Instrument
ASRS Report Number.Accession Number : 1547231
Human Factors : Situational Awareness

Person : 2
Reference : 2
Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
While being vectored from the arrival for landing in ZZZ, [our aircraft], Aircraft X, received an aircraft TCAS Resolution Advisory (RA) which resulted in a potential near mid-air collision from another aircraft ("Aircraft Y") who was performing skydive operations as identified by the Air Traffic Controller as "[Aircraft Y]."

At the time of the incident, Aircraft X was level at 7,000 feet MSL with the autopilot engaged in heading hold mode, and indicating 250 knots airspeed as per clearance from ATC.

While in level flight, the Captain (pilot not-flying) overheard ATC warn and instruct an aircraft not to descend because of traffic below and to the left of their position. As a precaution, the Captain began scanning the area and identified an aircraft to be close in proximity to the Aircraft X. Coincidentally after visual contact, ATC instructed Aircraft X to turn 20 degrees left and provided a traffic advisory. The Captain notified ATC that he had visual contact of Aircraft Y.

Aircraft Y rapidly descended and leveled off a couple hundred feet above the Aircraft X (2 o'clock position), in a very close proximity, and was directed to make an immediate right turn to the East. The flight crew of Aircraft X observed Aircraft Y perform at least a 90-degree bank angle and nose over downward. The crew also observed each wing tip vertical in flight indicating that the aircraft was at or exceeding a 90-degree bank angle. Aircraft Y rapidly turned 180 degrees towards the East but rolled out on a heading of South. After a few moments, the aircraft then proceeded into, what appeared to be, another 90-degree bank angle to the right, towards the West and Aircraft X. At this point, Aircraft Y was at
the 3 o'clock position and facing Aircraft X and moving aft of the flight crew's field of
vision. Because of this abrupt maneuver and the aircraft position trend, the Aircraft X's
TCAS system generated an RA which required the crew to apply maximum thrust and
climb at least 1,000 ft per minute. At this point, Aircraft Y was no longer in visual contact
with Aircraft X.

The First Officer (pilot flying) immediately responded to the advisory and complied with
the TCAS. Aircraft X departed from its assigned altitude of 7,000 ft MSL and climbed to
8,000 ft MSL to avoid a collision. The Captain notified ATC of the situation. After the
conflict was resolved, Aircraft X descended back to the assigned altitude and landed with
no further issue.

Aircraft Y performing aerobatic maneuvers while inside ZZZ Class B airspace. There are
standard criteria in regards to maneuvers in a controlled ATC environment, and exceeding
them (aerobatics) would require authorization due to separation standards. Aircraft Y was
performing aerobatics (bank angle about 90 degrees). Captain suspects they did not
request authorization from ATC, have an aircraft certified for aerobatics, have the required
equipment on board, and finally, have FAA authorization to perform aerobatics while
performing a commercial operation under their operating certificate.

Narrative: 2

While being vectored for the approach, Aircraft X overheard ATC advise an aircraft, Aircraft
Y, that there was traffic in close proximity. Aircraft Y was instructed to turn east away
from Aircraft X. As a precaution, the flight crew of Aircraft X was scanning the area for the
traffic. Visual contact was then made by Aircraft X. Aircraft X was instructed to turn 20
degrees left which was complied with. At that time it was observed by the flight crew of
Aircraft X that the aircraft appeared to be in a very steep descending turn. After the
aircraft passed out of Aircraft X's field of vision, the aircraft turned west toward Aircraft X.
Due to Aircraft Y direction, abrupt maneuvering and closure rate, a TCAS RA was triggered
for Aircraft X which required the crew to apply max thrust and climb at 1000 ft/min.
Aircraft X complied with the RA and climbed approximately 1000 ft. After the RA was
complied with and the conflict resolved, the captain notified ATC of the situation. Aircraft X
returned to the assigned altitude and landed in ZZZ without further issue.

Synopsis

Air Carrier flight crew reported receiving an RA during descent due to a small aircraft
performing aerobatics in a Class B airspace.
**Time / Day**

Date: 201806
Local Time Of Day: 1801-2400

**Place**

Locale Reference. ATC Facility: BUR.Tower
State Reference: CA
Altitude. MSL. Single Value: 1800

**Aircraft : 1**

Reference: X
ATC / Advisory. Tower: BUR
Aircraft Operator: Air Carrier
Make Model Name: Regional Jet CL65, Undifferentiated or Other Model
Crew Size. Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Nav In Use: FMS Or FMC
Flight Phase: Final Approach
Route In Use: Visual Approach
Airspace. Class C: BUR

**Aircraft : 2**

Reference: Y
Make Model Name: Skyhawk 172/Cutlass 172
Crew Size. Number Of Crew: 1
Flight Plan: VFR
Flight Phase: Climb
Route In Use: None
Airspace. Class C: BUR

**Person**

Reference: 1
Location Of Person. Facility: BUR.Tower
Reporter Organization: Government
Function. Air Traffic Control: Local
Qualification. Air Traffic Control: Fully Certified
ASRS Report Number. Accession Number: 1547125
Human Factors: Communication Breakdown
Communication Breakdown. Party1: ATC
Communication Breakdown. Party2: Flight Crew

**Events**

Anomaly. Airspace Violation: All Types
Anomaly. Conflict: NMAC
Anomaly. Deviation - Procedural: FAR
Anomaly. Deviation - Procedural: Published Material / Policy
Detector. Person: Flight Crew
I was just sitting down at Local Assist. [The] Local Controller (LC) was moderately busy. Aircraft X was on a Visual Approach to RWY 15. Aircraft Y departed from WHP RWY 12 on a southeast heading, so she was in conflict with Aircraft X the moment her wheels lifted from the ground at WHP. As I was sitting down, LC was trying to coordinate with WHP to turn Aircraft Y south to get her out of the way of Aircraft X. WHP advised LC that she was not responding to him on frequency. We reached out for her and she wasn't on our frequency. I called back to WHP to tell them to get Aircraft Y out of the way, but WHP did not have her on frequency and she continued climbing toward Aircraft X (now on about a 3-mile final to RWY 15). LC and I discussed telling Aircraft X to pull up and go around, but there was additional traffic over the numbers of RWY 15 going northwest to WHP that we were keeping high (2,200) so that the arriving Aircraft X could land. Additionally, Aircraft Y was showing 100 ft. above Aircraft X on the radar. LC issued a traffic alert to Aircraft X, and Aircraft X reported the Cessna in sight. The targets merged at either the same altitude or 100 feet apart. It was close. Aircraft Y continued to fly through our airspace without talking to us and finally checked on about 4 miles later. WHP airspace is right next to BUR [airspace], so more often than not VFR planes departing southeast off WHP are a few miles into our airspace before they check in. This situation is not new and I've had problems with it before, but this is by far the closest call I've had with it. This will likely be treated as an NMAC. Our culture at BUR over the years has evolved into being lackadaisical about allowing WHP departures to violate our airspace to the north since it is something that is so astoundingly common. Since WHP departures only have something like 2 miles from the runway to the edge of BUR airspace, we've traditionally been lax about planes checking on when they're already a few miles into our airspace. This is something that's driven me crazy for a long time and I've complained to management about numerous times.

Synopsis
Burbank Local Controller reported C172 departed WHP not talking to ATC and had a NMAC with a CRJ9 arrival.
ACN: 1547060 (26 of 50)

Time / Day
Date: 201805
Local Time Of Day: 1201-1800

Place
Locale Reference.Airport: ORL.Airport
State Reference: FL
Altitude.MSL.Single Value: 800

Environment
Flight Conditions: VMC
Weather Elements / Visibility: Thunderstorm
Weather Elements / Visibility.Visibility: 10
Light: Daylight
Ceiling.Single Value: 2500

Aircraft: 1
Reference: X
ATC / Advisory.Tower: ORL
Aircraft Operator: Personal
Make Model Name: Small Aircraft
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 91
Flight Plan: None
Mission: Training
Flight Phase: Initial Climb
Airspace.Class D: ORL

Aircraft: 2
Reference: Y
ATC / Advisory.Tower: ORL
Aircraft Operator: Personal
Make Model Name: Small Aircraft
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Phase: Final Approach
Airspace.Class D: ORL

Person
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
 Reporter Organization: Personal
Function.Flight Crew: Instructor
Function.Flight Crew: Pilot Not Flying
Qualification.Flight Crew: Instrument
Qualification.Flight Crew: Commercial
Qualification.Flight Crew: Flight Instructor
Qualification.Flight Crew: Multiengine
Experience.Flight Crew.Total : 1285
Experience.Flight Crew.Type : 1075
ASRS Report Number.Accession Number : 1547060

Events
Anomaly.ATC Issue : All Types
Anomaly.Conflict : NMAC
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Detector.Person : Flight Crew
Miss Distance.Horizontal : 300
Miss Distance.Vertical : 0
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

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

Narrative: 1
Flying departure leg, turning right crosswind Runway 25 ORL had near mid air collision with Aircraft Y. Aircraft Y was returning from the northwest, through a line of thunderstorms while making transmissions of reduced visibility and entered the traffic pattern for a left base Runway 7 at Orlando Executive Airport when Runway 25 was in use. Evasive action was taken to prevent a head-on collision. [We] did have the traffic in sight. The control tower did not address the issue on frequency.

Synopsis
General Aviation instructor pilot reported a NMAC event with a small aircraft during departure from ORL airport. The instructor cited reduced visibility as a contributing factor.
**Time / Day**
- Date: 201805
- Local Time Of Day: 0601-1200

**Place**
- Locale Reference: Airport: ZZZ.Airport
- State Reference: US
- Altitude: AGL. Single Value: 350

**Environment**
- Flight Conditions: VMC
- Weather Elements / Visibility: Visibility: 100
- Light: Daylight
- Ceiling: CLR

**Aircraft : 1**
- Reference: X
- ATC / Advisory: CTAF: ZZZ
- Aircraft Operator: Personal
- Make Model Name: PA-24 Comanche
- Crew Size. Number Of Crew: 2
- Operating Under FAR Part: Part 91
- Flight Plan: VFR
- Mission: Training
- Nav In Use. Localizer/Glideslope/ILS: Runway 15
- Flight Phase: Final Approach
- Airspace. Class G: ZZZ

**Aircraft : 2**
- Reference: Y
- Mission: Agriculture
- Flight Phase: Landing
- Airspace. Class G: ZZZ

**Person**
- Reference: 1
- Location Of Person. Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Personal
- Function. Flight Crew: Pilot Flying
- Function. Flight Crew: Trainee
- Qualification. Flight Crew: Private
- ASRS Report Number. Accession Number: 1546797
- Human Factors: Communication Breakdown
- Communication Breakdown. Party1: Flight Crew

**Events**
Anomaly.Conflict : NMAC
Anomaly.Deviation - Procedural : Published Material / Policy
Detector.Person : Flight Crew
Miss Distance.Horizontal : 350
Miss Distance.Vertical : 50
When Detected : In-flight
Result.Flight Crew : Took Evasive Action
Result.Flight Crew : Executed Go Around / Missed Approach

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

Narrative: 1
Flying the ILS approach at ZZZ under hood with instructor safety pilot in copilot position. Aircraft position announcements were made on CTAF at multiple points while flying on the simulated ILS. The CTAF frequency was being monitored during the approach for potential conflicts.

At approximately 350 feet AGL, the instructor safety pilot said something like 'I've got the airplane.' I looked up from under the hood and saw a yellow low-wing crop duster turning in front of us, landing! I added power, slowly retracted the flaps and declared on the CTAF that we were going around. At no point had the crop duster made a radio call on the CTAF frequency. Earlier in the day, as we were about to depart, I had seen one of the two crop duster aircraft land on the same runway without making a radio call. The crop dusters were landing approximately every 5 minutes or so and then taking off from mid-field after being filled with what is believed to be rice seed. They were refilling on field west of the runway using farm equipment that dumps into the aircraft. It appears that this is their standard method of operation. They were not flying a standard pattern and did not appear to be making any effort to 'blend in' with other aircraft operating in the standard pattern. Another pilot based at ZZZ stated something to the effect that, while on final approach, a crop duster landed in the opposite direction, again without making any radio calls.

Synopsis
GA pilot reported a NMAC with a crop dusting aircraft during approach to a non-towered airport. Reporter stated the crop dusting pilot had not been making any radio calls.
ACN: 1546483

Time / Day
Date: 201805
Local Time Of Day: 1201-1800

Place
Locale Reference.Airport: EWR.Airport
State Reference: NY
Altitude.MSL.Single Value: 5000

Environment
Flight Conditions: VMC
Light: Daylight

Aircraft: 1
Reference: X
ATC / Advisory.TRACON: N90
Aircraft Operator: Air Carrier
Make Model Name: Regional Jet 900 (CRJ900)
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Nav In Use: FMS Or FMC
Flight Phase: Descent
Route In Use: Vectors
Airspace.Class B: NYC

Aircraft: 2
Reference: Y
Make Model Name: UAV - Unpiloted Aerial Vehicle
Airspace.Class B: NYC

Person
Reference: 1
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: Air Transport Pilot (ATP)
Qualification.Flight Crew: Instrument
Qualification.Flight Crew: Multiengine
ASRS Report Number.Accession Number: 1546483

Events
Anomaly.Conflict: NMAC
Detector.Person: Flight Crew
Miss Distance.Vertical: 200
When Detected: In-flight
Result: Flight Crew: Requested ATC Assistance / Clarification
Result: Air Traffic Control: Provided Assistance

Assessments

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

Narrative: 1

While on vectors for arrival at EWR, we were at 5,000 feet. I was functioning as Pilot Flying (PF) at the time. I was dividing my attention between the instruments and outside and something caught my eye ahead, above and to the right of our course. Initially what I was seeing was confusing, but I put my hands on the control wheel and the autopilot disconnect. As we got closer, I realized I was seeing a DGI-style drone. It was charcoal, a quad-copter with the standard green and red lights. It was 100 to 200 feet above us, hovering, apparently stationary. That would have put it at an altitude of 5,100-5,200 feet. Immediately after passing the drone, I made a radio transmission asking New York Approach to mark our location, [and] that we had passed close to a drone approximately a mile behind us.

I could not find any documentation on what actions a crew should take after a drone sighting like this one. We should have some guidance in our documentation for crews who encounter a drone. I suggest that we have a way to report these to help the FAA collect data on these sightings. A recurring sighting in a location like this one, approaching EWR, might help prevent a disaster. In this event, a drone was only a couple hundred feet from a transport aircraft. It seems that it is only a matter of time before an impact with a windshield or engine inlet. Crews need to be prepared to take evasive action if the drone is on a collision path with the aircraft. This demonstrates the need for vigilance in visual scan when possible, and highlights the need to avoid being complacent and relying on TCAS.

Synopsis

CRJ-900 First Officer reported a NMAC with a drone about 200 feet while on approach to EWR airport.
ACN: 1546221 (29 of 50)

**Time / Day**
- Date: 201805
- Local Time Of Day: 1201-1800

**Place**
- Locale Reference. ATC Facility: P80.TRACON
- State Reference: OR
- Altitude. MSL. Single Value: 3100

**Aircraft : 1**
- Reference: X
- ATC / Advisory. TRACON: P80
- Make Model Name: Gulfstream G650
- Crew Size. Number Of Crew: 2
- Flight Plan: IFR
- Flight Phase: Climb
- Route In Use. SID: BERNI3
- Airspace. Class E: P80

**Aircraft : 2**
- Reference: Y
- Flight Phase: Cruise
- Airspace. Class E: P80

**Person**
- Reference: 1
- Location Of Person. Facility: P80.TRACON
- Reporter Organization: Government
- Function. Air Traffic Control: Approach
- Qualification. Air Traffic Control: Fully Certified
- ASRS Report Number. Accession Number: 1546221
- Human Factors: Other / Unknown

**Events**
- Anomaly. ATC Issue: All Types
- Anomaly. Conflict: NMAC
- Anomaly. Deviation - Procedural: Published Material / Policy
- Detector. Person: Air Traffic Control
- Miss Distance. Horizontal: 0
- Miss Distance. Vertical: 100
- When Detected: In-flight
- Result. Flight Crew: FLC complied w / Automation / Advisory
- Result. Air Traffic Control: Issued New Clearance
- Result. Air Traffic Control: Issued Advisory / Alert

**Assessments**
Contributing Factors / Situations: Airspace Structure
Contributing Factors / Situations: Procedure
Primary Problem: Airspace Structure

Narrative: 1

I think this happened towards earlier part of the session. Was training. Aircraft X was released on a BERNI RNAV departure. Prior to being airborne, a VFR started flying south of HIO westbound 3,100, Aircraft X climbing to 4,000. Aircraft X called at 1,600 non RADAR and we gave traffic but had very limited options being climbing fast and just getting ahold of them. Aircraft X got them inside maybe a mile or 2 prior to crossing over top of the VFR by maybe 100 feet. Was very close and very dangerous with the VFR deciding to fly over a hot spot area barely above HIO airspace. Very similar issue as we have with VFRs getting in the way on purpose through our arrivals and departures because people don't want to give us a modified Charlie airspace to protect our RNAV departures and arrivals. We were training, and this got very close.

I had another instance almost exactly like this that I stopped them at 3,000 for a primary, not in Tower's airspace, and was lucky they were at 3,500 when the departure got them in sight telling me it was a good call to stop them at 3,000 right away when they checked on. HIO called and distracted my trainee before calling traffic. All they were telling us is they did not give traffic on that 3,100 target. I told the trainee in debrief his very first call should have been maintain 2,500 then IDENT for radar and then answer HIO. I should have over keyed and done this myself, because they literally passed about 100 feet over top of this guy and felt we had almost no control over the situation other than watch an aircraft depart in an unprotected dangerous hotspot area well known for busy VFR traffic that are most [of] the time flying clueless wherever they want because it's easier than calling us for a safer flight, but maybe slightly sent off course so people don't die. Just like how we need the PDX Charlie to be up to 7,000 because our RNAVs depart to 7,000 and not guaranteed to call us to stop them in [the] event someone gets in the way. The HIO airport area needs some sort of protection as well, or the Charlie needs to be extended more than 10 miles to cover HIO.

Synopsis

P80 Controller reported an aircraft departing HIO, on initial contact, was in conflict with non-participating VFR traffic. The Controller reported this as a frequent issue.
ACN: **1546211** (30 of 50)

**Time / Day**
- Date: 201805
- Local Time Of Day: 1201-1800

**Place**
- Locale Reference.ATC Facility: FAT.Tower
- State Reference: CA
- Altitude.MSL.Single Value: 1400

**Aircraft : 1**
- Reference: X
- ATC / Advisory.Tower: FAT
- Make Model Name: Skyhawk 172/Cutlass 172
- Crew Size.Number Of Crew: 1
- Flight Plan: VFR
- Flight Phase: Initial Climb
- Route In Use: Vectors
- Airspace.Class C: FAT

**Aircraft : 2**
- Reference: Y
- ATC / Advisory.Tower: FAT
- Aircraft Operator: Air Carrier
- Make Model Name: Regional Jet 700 ER/LR (CRJ700)
- Crew Size.Number Of Crew: 2
- Operating Under FAR Part: Part 121
- Flight Plan: IFR
- Mission: Passenger
- Flight Phase: Initial Climb
- Route In Use: Vectors
- Airspace.Class C: FAT

**Person : 1**
- Reference: 1
- Location Of Person.Facility: FAT.Tower
- Reporter Organization: Government
- Function.Air Traffic Control: Local
- Function.Air Traffic Control: Ground
- Qualification.Air Traffic Control: Developmental
- ASRS Report Number.Accession Number: 1546211
- Human Factors: Communication Breakdown
- Human Factors: Confusion
- Human Factors: Training / Qualification
- Communication Breakdown.Party1: ATC

**Person : 2**
- Reference: 2
- Location Of Person.Facility: FAT.Tower
I was working Local Control and Ground Control was in training. Aircraft X was holding short of 29L, and I had a strip showing his destination as MPA (Madera Practice Area). Aircraft Y was holding short of 29R with a CFR time in about 1.5 minutes. I cleared Aircraft X for takeoff on 29L, gave him a 20 degree turn to the left, and advised him of the CRJ that would be departing the parallel runway flying runway heading. MPA is also runway heading, so when Aircraft X was about 1 to 2 miles south of the departure corridor, I gave him on course and shipped him to Departure.

I cleared Aircraft Y for takeoff on 29R. When they started to rotate is when I noticed Aircraft X had turned right heading directly north into the path of Aircraft Y. I gave a traffic call to Aircraft Y, but did not give him any control instructions. Aircraft Y advised me they had to level off in order to avoid the Skyhawk.

While I was given bad coordination in the destination on Aircraft X's strip, I feel I should have held onto Aircraft X and confirmed his on course heading before shipping him to
Departure. Furthermore, I should have given Aircraft Y a safety alert and control instruction in order to avoid a loss of separation. Overall, I don't know of any procedure changes that could be made other than a more distinct designation of practice areas to avoid confusion.

**Narrative: 2**

Training a developmental in CD/GC, Aircraft X requested VFR advisories to MAE (Madera Airport) via MLK (Millerton Practice Area). My trainee asked for clarification from the pilot, which we received. This was an opportunity to discuss how to divide flight plan intentions into segments for clarification purposes in the radar. In the VFR flight plan and on the strip, my trainee put MPA (Madera Practice Area), transposing the Madera destination with the Millerton Practice Area. While discussing how to communicate aircraft intentions to the radar with my trainee, I did not catch the mistake.

LC then cleared Aircraft X for takeoff 29L, with a left turnout, which would have been appropriate for MPA. LC then cleared Aircraft Y for takeoff 29R. LC advised Aircraft X on course approved, and switched him to Departure. Aircraft X turned right, intending to fly to MLK, and crossed 29R departure corridor. Aircraft Y was advised of traffic by LC. I saw the conflict and keyed [Departure] to advise of the conflict (Aircraft X should have been on [their] frequency), and [Departure] was mid-traffic call.

The mistake was clearly mine for not noticing my trainee's VFR flight plan and strip marking mistake. I should have been more vigilant in ensuring correct strip marking. However, the Millerton Practice Area has often been confused as MPA by new controllers, and in my opinion was a poor choice of designation in the first place. As a suggestion for clarity to avoid future confusion, Practice Areas should be denoted with a "P" followed by the name. For example, "PMA" - Practice Area Madera, "PMI" - Practice Area Millerton. I don't know if that would work for our STARS systems, but for in-house operations it would be much clearer in my opinion.

**Narrative: 3**

I received a rolling call for Aircraft Y south to LAX. During a relief briefing I observed Aircraft Y was climbing and a conflict alert was alarming. I stopped the relief briefing to handle the situation. Once the traffic had been resolved Aircraft Y came over to my frequency and informed me of the near collision that occurred with Aircraft X on departure.

After investigation, Clearance Delivery made the incorrect strip marking confusing the Madera Practice Area (MPA) with the Millerton Practice Area (MLK). Because Madera and Millerton are so similar the trainee could mistake them because they both start with the Letter "M". I recommend for strip marking that we change the Millerton Lake practice area to LKE to kind of spell or look like Lake. So not to make the confusion again. Or change the practice areas entirely to north south east west.

**Synopsis**

FAT Controllers reported a NMAC due to incorrect strip marking.
ACN: 1546174 (31 of 50)

Time / Day

Date: 201805
Local Time Of Day: 0601-1200

Place

Locale Reference.Airport: BVU.Airport
State Reference: NV
Altitude.MSL.Single Value: 3600

Environment

Flight Conditions: VMC
Light: Daylight

Aircraft: 1

Reference: X
ATC / Advisory.CTAF: BVU
Aircraft Operator: Personal
Make Model Name: Small Aircraft
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: None
Mission: Personal
Flight Phase: Initial Approach
Route In Use: Visual Approach
Airspace.Class E: BVU

Aircraft: 2

Reference: Y
ATC / Advisory.CTAF: BVU
Aircraft Operator: Air Taxi
Make Model Name: Commercial Fixed Wing
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 135
Flight Phase: Initial Approach
Airspace.Class E: BVU

Person

Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Personal
Function.Flight Crew: Pilot Flying
Function.Flight Crew: Single Pilot
Qualification.Flight Crew: Private
Experience.Flight Crew.Total: 1000
Experience.Flight Crew.Last 90 Days: 10
Experience.Flight Crew.Type: 700
ASRS Report Number.Accession Number: 1546174
Human Factors: Situational Awareness
Human Factors: Communication Breakdown
Communication Breakdown. Party 1: Flight Crew
Communication Breakdown. Party 2: Flight Crew

Events
Anomaly.Conflict: NMAC
Anomaly.Deviation - Procedural: Published Material / Policy
Detector.Person: Flight Crew
Miss Distance.Vertical: 500
When Detected: In-flight
Result.Flight Crew: Took Evasive Action

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

Narrative: 1
I was inbound on a published approach (Powerline Arrival). I started calling my position 11 miles out stating I would be on a Powerline Arrival. At about 4 miles out I again stated I was on the Powerline Arrival at 3,600 feet for runway 27. I heard an [air taxi operator] ask where I was and I said over the shooting range. He then said I must be below him. I looked up and out and saw him directly above me. I assume he was on a long straight in approach to 27 as well. I stated I would do a 360 and immediately descended into a right 360 turn to let him continue on approach. On my return to initial position on the Powerline Arrival I saw and heard another airplane in front of me and heard another [air taxi operator] say they were on a 2 mile final for Runway 27. I stated on the radio "Are you guys going to let me in?" The [air taxi operator] pilot stated "Are you trying to be a smart [aleck]?
"You cut us off twice" I responded "No Sir." I then decided to get in behind the [air taxi] and land.

Synopsis
GA pilot reported a NMAC while on approach to a busy BVU non-towered airport.
**Time / Day**

- **Date**: 201805
- **Local Time Of Day**: 1201-1800

**Place**

- **Locale Reference.Airport**: ZZZ.Airport
- **State Reference**: US
- **Altitude.AGL.Single Value**: 0

**Environment**

- **Flight Conditions**: VMC
- **Light**: Daylight

**Aircraft : 1**

- **Reference**: X
- **ATC / Advisory.CTAF**: ZZZ
- **Aircraft Operator**: Air Taxi
- **Make Model Name**: Bell Helicopter Textron Undifferentiated or Other Model
- **Crew Size.Number Of Crew**: 2
- **Operating Under FAR Part**: Part 91
- **Flight Plan**: None
- **Mission**: Training
- **Flight Phase**: Taxi
- **Airspace.Class G**: ZZZ

**Aircraft : 2**

- **Reference**: Y
- **ATC / Advisory.CTAF**: ZZZ
- **Aircraft Operator**: Personal
- **Make Model Name**: Amateur/Home Built/Experimental
- **Crew Size.Number Of Crew**: 1
- **Operating Under FAR Part**: Part 91
- **Mission**: Personal
- **Flight Phase**: Landing
- **Airspace.Class G**: ZZZ

**Person : 1**

- **Reference**: 1
- **Location Of Person.Aircraft**: X
- **Location In Aircraft**: Flight Deck
- **Reporter Organization**: Air Taxi
- **Function.Flight Crew**: Pilot Flying
- **Function.Flight Crew**: Single Pilot
- **Qualification.Flight Crew**: Commercial
- **Qualification.Flight Crew**: Flight Instructor
- **Experience.Flight Crew.Total**: 3000
- **Experience.Flight Crew.Type**: 150
- **ASRS Report Number.Accession Number**: 1546150
**Person : 2**

Reference : 2
Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Taxi
Function.Flight Crew : Pilot Not Flying
Function.Flight Crew : Check Pilot
Qualification.Flight Crew : Instrument
Qualification.Flight Crew : Multiengine
Qualification.Flight Crew : Rotorcraft
Qualification.Flight Crew : Air Transport Pilot (ATP)
Qualification.Flight Crew : Flight Instructor
Experience.Flight Crew.Total : 23000
Experience.Flight Crew.Last 90 Days : 25
Experience.Flight Crew.Type : 5000
ASRS Report Number.Accession Number : 1546809
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

**Events**

Anomaly.Conflict : NMAC
Anomaly.Deviation - Procedural : Published Material / Policy
Detector.Person : Flight Crew
Miss Distance.Horizontal : 100
When Detected : In-flight
Result.General : None Reported / Taken

**Assessments**

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

**Narrative: 1**

I was in a hover during my Part 135 check ride. The Check Airman was in the right seat and I was flying left seat. We were occupying the mowed grass approximately 100 feet off of runway 29/11. There were multiple aircraft in the pattern for runway 34 and during our flight and did not observe any traffic for 29/11. The "chatter" at the airport was heavy so the Check Airman and I both felt that our location would best fit the needs of the check ride and safely separate us from the other traffic.

I finished performing my hovering maneuvers (slopes, hover auto-rotations) and received directions to where the next maneuver would be. In order to complete the next assignment I would be crossing runway 29/11. Our aircraft had a heading of 110 so in order to clear myself of any traffic I would have to perform a right pedal turn. As the right turn was completed we quickly noticed a small experimental fixed wing landing runway 11 directly in front of us. The aircraft unexpectedly rocked its wings and in doing so slightly "scuffed" his left wing.

The experimental proceeded to takeoff again and during his next pattern made a number of unprofessional radio calls in regards to our operation on the runway. During his calls there were multiple radio calls made by other traffic at the airport "mocking" the
experimental for using a runway opposite of what the winds and traffic favored. My Check Airman and I remained off the radio until the fixed wing was on the ground and asked were we would like to park and talk.

The Check Airman decided to talk with the experimental pilot and try to understand what events led to his situation. I noticed the Check Airman was being very professional in making sure the experimental pilot calmed down and that they were able to have a positive discussion.

The experimental pilot confessed that he did not see us hovering until he was approximately a quarter mile from landing. He admitted that it would have been a better idea to just do a go around. The pilot was not sure what our intentions were and having preformed his landing in the closest relation to us not the best procedure.

In the end the helicopters location was in a safe location and I was preforming the necessary "clearing" turn before crossing a runway. It's unknown if the experimental pilot over corrected from not fully knowing what the nature of our operation was or if there was any possible rotor wash that had extended its way to the runway.

I feel the lesson learned was the experimental pilot having seen the helicopter should have extended his landing or aborted his landing until the proper radio communication could be established. As for the helicopter operation, myself and my employer will work to find the ideal training area that completely removes us from any airport traffic.

**Narrative: 2**

While serving as Company Check Airman (FAR Part 135) the pilot being evaluated was hovering the helicopter in the grass on the north side of the approach end of RW 11, approximately 100-150 ft from the edge of the runway. The helicopter had been in this location for more than 15 minutes, conducting the various maneuvers required for the annual FAR Part 135 recertification IAW 135.293(b). At the completion of these hover maneuvers the pilot was asked to plan on joining the traffic pattern for runway 29, whereby while hovering at a 3 foot skid height hover he initiated a stationary slow right pedal clearing turn. Just as the nose of the helicopter reached the perpendicular point of runway 11/29 a small, light homebuilt, experimental, single engine; low wing airplane came into view. The airplane was approximately 3 feet above the runway, on short final for touchdown on runway 11. The airplane appeared to be experiencing some control issues as noted by its rapid left and right roll maneuvers. On one of the left rolls it appeared the left wing tip may have made contact with the runway fairly close to the edge of the runway. The airplane completed the landing then initiated a takeoff and climb out, remaining in right closed traffic, completed the circuit back to RW 11 with a full stop landing.

This is a very busy, uncontrolled airport, located in Class G airspace. On this particular day, the pattern traffic was about as busy as it could be. At the time of the incident there were perhaps 4, maybe 6 airplanes in the pattern. Most all were in the closed left pattern for RW 34, with an occasional operation to RW 29. The wind at the time of the incident for sure favored RW 34 and 29. When the small airplane passed the helicopter, while landing on RW 11, it was landing with a left rear quartering crosswind, (wind from about 310 degrees) maybe 4-7 kts. The control issues I noted during the incident could have been from the tail wind, it looked very over controlled. The pilot of the airplane blamed the incident on the airplane encountering rotor down wash from the helicopter. I do not recall monitoring any radio calls from the small incident airplane, but this is not to say they were not made. The radio traffic during the period of the incident was extreme.
Synopsis

Helicopter pilot and Check Airman reported a NMAC with fixed wing traffic operating on an unannounced approach.
ACN: 1546136 (33 of 50)

**Time / Day**
- Date: 201805
- Local Time Of Day: 0601-1200

**Place**
- Locale Reference.Airport: ZZZ.Airport
- State Reference: US
- Relative Position.Distance.Nautical Miles: 10
- Altitude.MSL.Single Value: 2500

**Environment**
- Flight Conditions: VMC
- Weather Elements / Visibility.Visibility: 10
- Light: Daylight
- Ceiling.Single Value: 8000

**Aircraft : 1**
- Reference: X
- ATC / Advisory.CTAF: ZZZ
- Aircraft Operator: Personal
- Make Model Name: PA-28 Cherokee/Archer/Dakota/Pillan/Warrior
- Crew Size.Number Of Crew: 2
- Operating Under FAR Part: Part 91
- Flight Plan: VFR
- Mission: Training
- Flight Phase: Initial Approach
- Route In Use: Direct
- Route In Use: Visual Approach

**Aircraft : 2**
- Reference: Y
- Aircraft Operator: Personal
- Make Model Name: Cessna Aircraft Undifferentiated or Other Model
- Crew Size.Number Of Crew: 2
- Operating Under FAR Part: Part 91
- Flight Plan: VFR
- Mission: Training
- Flight Phase: Cruise
- Route In Use: None

**Person**
- Reference: 1
- Location Of Person.Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Personal
- Function.Flight Crew: Instructor
- Function.Flight Crew: Pilot Not Flying
- Qualification.Flight Crew: Commercial
- Qualification.Flight Crew: Flight Instructor
GA flight instructor reported a NMAC with an aircraft performing maneuvers over the Initial Approach Fix.
ACN: 1546092 (34 of 50)

Time / Day
Date: 201805
Local Time Of Day: 1201-1800

Place
Locale Reference.Airport: ZZZ.Airport
State Reference: US
Altitude.MSL.Single Value: 1200

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

Aircraft: 1
Reference: X
ATC / Advisory.CTAF: ZZZ
Aircraft Operator: Personal
Make Model Name: Cardinal 177/177RG
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Phase: Final Approach
Route In Use: Visual Approach
Airspace.Class E: ZZZ

Aircraft: 2
Reference: Y
Make Model Name: Learjet 35
Crew Size.Number Of Crew: 2
Flight Phase: Final Approach
Airspace.Class E: ZZZ

Person
Reference: 1
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.Last 90 Days: 5
Experience.Flight Crew.Type: 65
ASRS Report Number.Accession Number: 1546092
Human Factors: Communication Breakdown
Communication Breakdown.Party1: Flight Crew
Communication Breakdown.Party2: Flight Crew

Events
Anomaly.Conflict : NMAC
Anomaly.Deviation - Procedural : Published Material / Policy
Detector.Person : Flight Crew
Miss Distance.Horizontal : 0
Miss Distance.Vertical : 50
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments

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

Narrative: 1

On final approach I called 4 mile final for Runway XX. Less than a minute later, the second aircraft called a 7 mile final for the same runway. I continued my approach until he called a 2.5 mile final. I responded stating that I was also 2 miles out and asked where he was, during which he appeared less than 50 feet directly above me. I decided to execute an avoidance maneuver and advised that the runway was his to take. I added power and accomplished a standard rate 360 degree turn to the left for separation and wake avoidance. Both aircraft accomplished an uneventful landing. The Learjet never saw me and was not aware of any other traffic! If I had been a minute further on my approach, we would have collided!

Synopsis

C177 pilot reported a NMAC with a Learjet on final approach to a non-towered airport.
**ACN: 1545656 (35 of 50)**

**Time / Day**
- Date: 201805
- Local Time Of Day: 1801-2400

**Place**
- Locale Reference.Airport: SNA.Airport
- State Reference: CA
- Altitude.AGL.Single Value: 50

**Environment**
- Flight Conditions: VMC

**Aircraft: 1**
- Reference: X
- ATC / Advisory.Tower: SNA
- Aircraft Operator: Air Carrier
- Make Model Name: Widebody, Low Wing, 2 Turbojet Eng
- Crew Size.Number Of Crew: 2
- Operating Under FAR Part: Part 121
- Flight Plan: IFR
- Flight Phase: Landing
- Airspace.Class C: SNA

**Aircraft: 2**
- Reference: Y
- ATC / Advisory.Tower: SNA
- Make Model Name: Helicopter
- Flight Phase: Landing
- Airspace.Class C: SNA

**Person**
- Reference: 1
- Location Of Person.Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Air Carrier
- Function.Flight Crew: Captain
- Function.Flight Crew: Pilot Not Flying
- Qualification.Flight Crew: Air Transport Pilot (ATP)
- ASRS Report Number.Accession Number: 1545656
- Human Factors: Situational Awareness

**Events**
- Anomaly.ATC Issue: All Types
- Anomaly.Conflict: NMAC
- Detector.Person: Flight Crew
- Miss Distance.Vertical: 500
- When Detected: In-flight
- Result.General: None Reported / Taken
Assessments
Contributing Factors / Situations: Human Factors
Contributing Factors / Situations: Procedure
Primary Problem: Procedure

Narrative: 1
On about 2 mile final, Tower pointed out helicopter traffic at 500 AGL south of airport; I called in sight. As we came in to land, it appeared that the helicopter was going to remain just south of the runway. That was my assumption anyway. The last 50 feet until touchdown, the helicopter came over our landing runway and set up to land on ramp north of runway. I asked Tower on roll out how she had expected us to go around had we needed to. She said the helicopter would have had to take evasive action to avoid us. I told her would be hard because I was looking at tail rotor and really wondered how he would even have seen us. I guess clearance was simply 500 foot separation with risk assumption by helicopter.

[I suggest] not issuing that type of clearance and having only one aircraft on the runway at a time. By the time he crossed above runway, our safest course of action was to land. If we had gone around, we would have had to turn at least slightly and it would have been way too close for my comfort as he crossed about a third to half way down the runway. I'm not sure if it's a legal clearance, but it wasn't obvious to me what he was going to do until I didn't have many avoidance options. I didn't see a need for both to be that close. Helicopter could have hovered short of runway side and crossed centerline after we landed. [We are] not in a combat zone, [there is] plenty of time to land us separately.

Synopsis
Air carrier Captain reported noticing a helicopter hovering about half way down the runway they were landing on. That could have posed a safety hazard had a go-around been necessary.
**ACN: 1545456 (36 of 50)**

**Time / Day**
- Date: 201805
- Local Time Of Day: 0001-0600

**Place**
- Locale Reference: ATC Facility: D10.TRACON
- State Reference: TX
- Altitude MSL: Single Value: 6600

**Environment**
- Flight Conditions: VMC
- Light: Daylight

**Aircraft**
- Reference: X
- ATC / Advisory: TRACON: D10
- Aircraft Operator: Air Carrier
- Make Model Name: B737 Undifferentiated or Other Model
- Crew Size: Number Of Crew: 2
- Operating Under FAR Part: Part 121
- Flight Plan: IFR
- Mission: Passenger
- Flight Phase: Descent
- Route In Use: STAR: JFRYE
- Airspace: Class B: DFW

**Person**
- Reference: 1
- Location Of Person: Facility: D10.TRACON
- Reporter Organization: Government
- Function: Air Traffic Control: Approach
- Qualification: Air Traffic Control: Fully Certified
- ASRS Report Number: Accession Number: 1545456
- Human Factors: Situational Awareness
- Human Factors: Human-Machine Interface

**Events**
- Anomaly: ATC Issue: All Types
- Anomaly: Conflict: NMAC
- Detector: Person: Flight Crew
- When Detected: In-flight
- Result: General: None Reported / Taken

**Assessments**
- Contributing Factors / Situations: Airspace Structure
- Contributing Factors / Situations: Human Factors
- Contributing Factors / Situations: Procedure
- Primary Problem: Human Factors
Narrative: 1

At the reported time, Aircraft X was switched to my frequency descending via the RNAV STAR out of 7000 feet. I issued a further descent to 4000 feet and a turn from a later fix and queried about their runway preference. The pilot immediately came back and said they had a NMAC with a C210 at 6500 feet. The pilot was close enough to report the color, make, and markings of the aircraft. The other aircraft was outside of the Bravo airspace, running with no transponder or Mode C altitude readout. Aircraft X continued on with no further issues.

I have already adjusted my radar scope settings to better emphasize primary only targets to avoid missing them in the future. I will ensure that controllers resolve all conflicts before switching an aircraft frequency per the FAA[O] 7110.65 either [by] look[ing] into encompassing the STAR in the Class Bravo or extending the Class Bravo to encompass the existing arrival.

We should set altitude restrictions on the arrivals and publish them so that VFR aircraft that decide to fly outside the Bravo without services know where IFR arrivals will be flying and can plan accordingly.

Synopsis

Air traffic controller reported a B737 pilot indicated a NMAC had occurred with an unidentified VFR aircraft.
ACN: 1545443

Time / Day
Date: 201805
Local Time Of Day: 1201-1800

Place
Locale Reference.Airport: RVS.Airport
State Reference: OK
Altitude.AGL.Single Value: 1800

Environment
Flight Conditions: VMC

Aircraft: 1
Reference: X
ATC / Advisory.TRACON: TUL
Make Model Name: Small Aircraft
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: VFR
Flight Phase: Climb
Airspace.Class D: RVS

Aircraft: 2
Reference: Y
ATC / Advisory.Tower: RVS
Make Model Name: Small Aircraft
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: VFR
Flight Phase: Climb
Airspace.Class D: RVS

Person
Reference: 1
Location Of Person.Facility: RVS.Tower
Reporter Organization: Government
Function.Air Traffic Control: Local
Qualification.Air Traffic Control: Fully Certified
ASRS Report Number.Accession Number: 1545443
Human Factors: Communication Breakdown
Human Factors: Situational Awareness
Communication Breakdown.Party1: ATC
Communication Breakdown.Party2: ATC

Events
Anomaly.ATC Issue: All Types
Anomaly.Conflict: NMAC
Anomaly.Deviation - Procedural: Published Material / Policy
Aircraft X departed RWY 19R going to TUL. I issued runway heading, since TUL is north-northeast of RVS and I wasn't sure which way TUL approach would want to turn Aircraft X. Sometimes they will turn them eastbound, and sometimes westbound. Approximately a mile behind Aircraft X, I cleared Aircraft Y for takeoff RWY 19L. I issued Aircraft Y a 220 heading per the TUL/RVS LOA since his intended direction of flight was westbound. Aircraft Y was going to be faster than Aircraft X, so my plan was to get Aircraft Y turned as far westbound as I could and let TUL approach get him on course to the west, then Aircraft X could be turned to the west (if that is what TUL wanted) behind Aircraft Y and they would never be a factor for each other. However, after I switched Aircraft X to departure, TUL approach turned Aircraft X westbound at approximately 1,800 feet MSL 3 miles south of RVS (at the transfer of control point). Aircraft Y was tagged up on the radar and was flying a 220 heading a mile behind Aircraft X. Aircraft Y had a 20-30 knot overtake on Aircraft X and their targets merged approximately 4 miles south-southwest of RVS. There was approximately 100 feet vertical separation between the 2 aircraft. Aircraft X was at 1,800 feet MSL, Aircraft Y was indicating 1,700 feet MSL when the targets merged. It appeared that Aircraft Y took evasive action to avoid Aircraft X because Aircraft Y turned southbound as the targets merged. I had not issued traffic because I had separated the aircraft by 30 degrees and did not intend for them to be a factor. Thankfully, Aircraft Y saw Aircraft X and notified me that he saw the traffic just before the targets merged. I did not notice that Aircraft X was westbound until Aircraft Y reported the traffic in sight.

If this situation were to occur again, I feel that I have no choice but to hang on to the first aircraft beyond the transfer of control point, even if they are exiting the RVS Class D, to ensure that TUL does not turn them into someone else behind them. I think that the TUL/RVS LOA needs another review by the LOA CWG. I also think this was poor technique and poor service on the part of TUL, and could have easily resulted in an aircraft accident.

Synopsis

RVS Tower Controller reported being advised by a GA pilot of a NMAC between two departure aircraft.
ACN: 1545417 (38 of 50)

**Time / Day**

Date: 201805
Local Time Of Day: 1801-2400

**Place**

Locale Reference.Airport: FFT.Airport
State Reference: KY
Relative Position.Angle.Radial: 080
Relative Position.Distance.Nautical Miles: 5
Altitude.MSL.Single Value: 3000

**Environment**

Flight Conditions: VMC
Weather Elements / Visibility: Visibility: 50
Light: Daylight

**Aircraft : 1**

Reference: X
ATC / Advisory.CTAF: FFT
Aircraft Operator: Personal
Make Model Name: DA40 Diamond Star
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: None
Mission: Personal
Flight Phase: Cruise
Airspace.Class E: FFT

**Aircraft : 2**

Reference: Y
ATC / Advisory.CTAF: FFT
Make Model Name: Small Aircraft, High Wing, 1 Eng, Fixed Gear
Airspace.Class E: LEX

**Component**

Aircraft Component: Data Transmission and Automatic Calling
Aircraft Reference: X
Problem: Malfunctioning

**Person**

Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Personal
Function.Flight Crew: Pilot Not Flying
Qualification.Flight Crew: Private
Qualification.Flight Crew: Instrument
Experience.Flight Crew.Total: 640
Experience.Flight Crew.Last 90 Days : 5
Experience.Flight Crew.Type : 100
ASRS Report Number.Accession Number : 1545417
Human Factors : Communication Breakdown
Human Factors : Confusion
Human Factors : Situational Awareness
Human Factors : Time Pressure
Human Factors : Distraction
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.ATC Issue : All Types
Anomaly.Conflict : NMAC
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 : Aircraft
Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

We were in level flight outbound to setup for a practice instrument approach, using a Stratus portable ADS-B in receiver, but in a plane not equipped with ADS-B out (and not receiving any ADS-B traffic alerts at the time, due to no other ADS-B planes reporting), when a red alert suddenly flashed on the iPad showing traffic 200 feet below us at 12:00 and nearby (I did not see or remember the exact distance). The other pilot was flying, but I took control and immediately executed a climbing right turn, while the other pilot removed his foggles. Neither of us could see any traffic. A few seconds later we spotted a high wing plane, now nearby off to the left and climbing through our altitude. The plane had previously been obscured from view under our plane, and, as the other plane was a high wing approaching at a moderate quartering angle, we very well may have been out of sight of its pilots. We were monitoring the FFT airport frequency and actively reporting our position but never heard any position reports from the other plane. This all occurred from just a few miles west of the Lexington class C airspace and it appears the other plane may have been coming from the general direction of perhaps a flight from under the Lexington outer class C shelf. I believe without the warning there might have been a very high risk of a collision.

We were flying a plane owned by a Flying Club that has chosen not yet to equip its fleet with ADS-B out technology, while the technology matures, costs come down and or transponder maintenance needs make it prudent. The club is located at a Class C airport and will ultimately need to equip, assuming the regulation is not changed or delayed. I believe the FAA's current policy of only broadcasting traffic to participating ADS-B out
planes is unnecessarily risking lives and is doing very little to encourage voluntary participation on an issue that is ultimately going to take care of itself anyway when planes have to equip to fly in controlled airspace. At least 3 pilots and unknown other passengers and people on the ground could have been killed last night in a completely preventable accident as a result of this overreaching FAA policy.

I do not know how we received the one and only alert we did receive, as this plane was never visible ADS-B traffic to us before or after the one brief few second long warning. I don't know if there is something ATC (with whom we were not in contact) was perhaps able to spot and somehow cause something to happen to make our positions broadcast, divine providence or both. I thank God, however, that the warning occurred.

**Synopsis**

DA40 safety observer pilot reported a NMAC while pilot flying was setting up for a practice instrument approach.
ACN: 1545119 (39 of 50)

Time / Day

Date: 201805
Local Time Of Day: 0601-1200

Place

Locale Reference.Airport: UMP.Airport
State Reference: IN
Relative Position.Distance.Nautical Miles: 10
Altitude.MSL.Single Value: 2400

Environment

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

Aircraft: 1

Reference: X
ATC / Advisory.Center: ZID
Aircraft Operator: Personal
Make Model Name: Bonanza 35
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: IFR
Mission: Personal
Nav In Use: GPS
Flight Phase: Initial Approach
Route In Use: Visual Approach
Airspace.Class E: ZID

Aircraft: 2

Reference: Y
Make Model Name: UAV - Unpiloted Aerial Vehicle
Operating Under FAR Part: Other
Flight Phase: Cruise
Airspace.Class E: ZID

Person

Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Personal
Function.Flight Crew: Single Pilot
Qualification.Flight Crew: Instrument
Experience.Flight Crew.Total: 1267
Experience.Flight Crew.Last 90 Days: 10
Experience.Flight Crew.Type: 1000
ASRS Report Number.Accession Number: 1545119
Events

Anomaly.Conflict : NMAC
Anomaly.Inflight Event / Encounter : Other / Unknown
Detector.Person : Flight Crew
Miss Distance.Horizontal : 200
Miss Distance.Vertical : 0
When Detected : In-flight
Result.General : None Reported / Taken

Assessments

Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

We were on the RNAV 15 Approach to UMP coming up on AYUDA IAF and saw a flying object pass off our left wing tip at our altitude, 2400 feet MSL approximately 200 feet away.

Synopsis

GA pilot reported a NMAC with a drone just outside the FAF while flying the RNAV15 approach to Indianapolis Metro Airport.
Time / Day
Date : 201805
Local Time Of Day : 0601-1200

Place
Locale Reference.Airport : BCV.Airport
State Reference : AK
Relative Position.Angle.Radial : 180
Relative Position.Distance.Nautical Miles : 4
Altitude.MSL.Single Value : 2000

Environment
Weather Elements / Visibility.Visibility : 10
Light : Daylight
Ceiling.Single Value : 10000

Aircraft
Reference : X
ATC / Advisory.CTAF : BCV
Aircraft Operator : FBO
Make Model Name : Skyhawk 172/Cutlass 172
Crew Size.Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : VFR
Mission : Training
Flight Phase : Cruise
Route In Use : Direct

Person
Reference : 1
Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : FBO
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Single Pilot
Qualification.Flight Crew : Student
Experience.Flight Crew.Total : 55
Experience.Flight Crew.Last 90 Days : 30
Experience.Flight Crew.Type : 55
ASRS Report Number.Accession Number : 1545097
Human Factors : Situational Awareness

Events
Anomaly.Conflict : NMAC
Detector.Person : Flight Crew
Miss Distance.Horizontal : 450
Miss Distance.Vertical : 50
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

I was cruising at approximately 2,000 feet MSL between BCV and MRI via a pretty narrow corridor between 3,000-4,000 feet mountains to my left and restricted airspace to my right. I was still on the BCV CTAF because I previously had announced my intentions to overfly the airfield at 2,000 feet which is well above pattern altitude for that airfield. After reporting my position twice, once within approximately 9 NM northwest of the field and again over the field, I continued due south toward Anchorage and began adjusting my GPS to ensure I was staying well clear of the restricted airspace west of me. As I was doing so, I looked back outside while performing my visual scan and noticed a single engine high-wing plane similar to mine at my 10 or 11 o'clock position heading north, opposite my direction of travel with our courses offset by an estimated 300-500 feet. With our aircraft, by my estimate, within 500 feet of each other at the time I noticed the other aircraft, I immediately altered my course to the right and I noticed the other pilot had started to do the same by the time I noticed the plane and could react. I only had the other plane in sight for a few seconds before it passed by me on my left. I concluded my flight as planned a few minutes later with no further incidents.

I heard nothing from the aircraft on the CTAF frequency, possibly because the area is near a dividing line between CTAFs, and the close proximity to the various Class D and Class C airspace in the Anchorage area could have meant the pilot was on a different frequency. This area has unique dangers due to aircraft being required to fly within a narrow corridor just a few nautical miles wide, near very busy airspace with high volumes of GA, commercial, and military aircraft. I believe this event was caused partially because while I was adjusting my avionics, even for a short time, I had to look inside the plane, hindering my visual scan outside. This situation can be prevented in the future by pilots being careful about when and where they adjust radios/avionics and by being more intentional in their visual scans, especially in areas where many planes are crowded by terrain and airspace. Additionally, radio communication on the correct CTAF at appropriate distances can give pilots in the area an idea of where to look for traffic.

Synopsis

C172 Pilot reported a NMAC in the vicinity of BCV airport.
**ACN: 1544041 (41 of 50)**

**Time / Day**

Date: 201805  
Local Time Of Day: 0601-1200

**Place**

Locale Reference.Airport: SSI.Airport  
State Reference: GA  
Altitude.AGL.Single Value: 500

**Environment**

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

**Aircraft : 1**

Reference: X  
ATC / Advisory.CTAF: SSI  
Aircraft Operator: Personal  
Make Model Name: Small Aircraft  
Crew Size.Number Of Crew: 1  
Operating Under FAR Part: Part 91  
Flight Plan: None  
Mission: Training  
Flight Phase: Initial Approach  
Airspace.Class E: SSI

**Aircraft : 2**

Reference: Y  
ATC / Advisory.CTAF: SSI  
Make Model Name: Small Aircraft, Low Wing, 1 Eng, Retractable Gear  
Crew Size.Number Of Crew: 1  
Operating Under FAR Part: Part 91  
Flight Phase: Initial Approach  
Airspace.Class E: SSI

**Person**

Reference: 1  
Location Of Person.Aircraft: X  
Location In Aircraft: Flight Deck  
Reporter Organization: Personal  
Function.Flight Crew: Single Pilot  
Qualification.Flight Crew: Multiengine  
Qualification.Flight Crew: Commercial  
Qualification.Flight Crew: Flight Instructor  
Experience.Flight Crew.Total: 7000  
Experience.Flight Crew.Last 90 Days: 50  
Experience.Flight Crew.Type: 300  
ASRS Report Number.Accession Number: 1544041  
Human Factors: Situational Awareness
**Events**

Anomaly.Conflict : NMAC  
Detector.Person : Flight Crew  
Miss Distance.Horizontal : 50  
Miss Distance.Vertical : 300  
When Detected : In-flight  
Result.Flight Crew : Became Reoriented

**Assessments**

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

**Narrative: 1**

Flying south along the beach at 500 ft, passing the active runway 1/2 mile to the right when Aircraft Y passed on my left on the downwind about 300 ft above me. I intended to fly down the beach until clear of the airport pattern and climb to pattern altitude then turn on a 45 degree entry to the downwind for runway 22 at SSI. I felt I was further east of the downwind leg and had called my position 10 north and intentions on the CTAF frequency.

I heard Aircraft Y call his position, but felt I was lower and further east from the downwind leg and would not be a factor. I saw him just as he passed above us.

**Synopsis**

GA pilot reported a NMAC while flying in the vicinity of a non-towered airport.
Time / Day
Date: 201805
Local Time Of Day: 1801-2400

Place
Locale Reference: SAT.Tower
State Reference: TX
Altitude.MSL.Single Value: 2100

Environment
Flight Conditions: Marginal
Weather Elements / Visibility: Rain
Light: Daylight

Aircraft: 1
Reference: X
ATC / Advisory.Tower: SAT
Aircraft Operator: Personal
Make Model Name: Bonanza 33
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: VFR
Mission: Personal
Flight Phase: Final Approach
Route In Use: Visual Approach
Airspace.Class C: SAT

Aircraft: 2
Reference: Y
ATC / Advisory.Tower: SAT
Aircraft Operator: Air Carrier
Make Model Name: Regional Jet 700 ER/LR (CRJ700)
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Flight Phase: Final Approach
Route In Use.Other
Airspace.Class C: SAT

Person: 1
Reference: 1
Location Of Person.Facility: SAT.Tower
Reporter Organization: Government
Function.Air Traffic Control: Local
Qualification.Air Traffic Control: Fully Certified
ASRS Report Number.Accession Number: 1543478
Human Factors: Communication Breakdown
Human Factors: Situational Awareness
Human Factors : Distraction
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : Flight Crew

Person : 2

Reference : 2
Location Of Person.Facility : SAT.TOWER
Function.Air Traffic Control : Ground
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 2
ASRS Report Number.Accession Number : 1544120

Human Factors : Situational Awareness

Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.ATC Issue : All Types
Anomaly.Conflict : NMAC
Anomaly.Deviation - Track / Heading : All Types
Anomaly.Deviation - Procedural : Clearance
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.General : Flight Cancelled / Delayed
Result.Flight Crew : Executed Go Around / Missed Approach
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Flight Crew : Took Evasive Action
Result.Flight Crew : Landed in Emergency Condition
Result.Air Traffic Control : Issued Advisory / Alert
Result.Air Traffic Control : Issued New Clearance
Result.Air Traffic Control : Separated Traffic

Assessments

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

Narrative: 1

Aircraft X was on approach when I noticed that his gear appeared up. I told him this, got no response and told him to "go around gear appears up." I then told him to enter left traffic for and to recycle his gear so that we could see if it comes down. When he was in a midfield downwind, I noticed we lost his transponder and told him so and asked if he was having any trouble with his equipment. I thought he said that he was having some alarms and that his fuel gauge was off. I asked him if he wanted to continue to hold or if he wanted to try and land. He told me he wanted to continue to hold, so I told him to continue in the traffic pattern and make a low approach and we would let him know if we see his gear.

Meanwhile, I was giving a briefing and there were multiple arrivals. Aircraft Y was on about a 3 mile final when I noticed that Aircraft X was still in a base turn on a 90 degree intercept with Aircraft Y. I issued a traffic alert and broke Aircraft Y off of the approach. I did my best [to] vector the two aircraft away from each other and get Aircraft Y back to a safe altitude. It appeared that the targets merged with about 100 feet of separation on the
radar. It was very difficult to see Aircraft X out the window because of some precipitation that was cluttering up the window so I didn't notice at first that he did not turn final.

The pilot didn't do what he was told, but I should have issued the traffic to each pilot earlier than I did. I was giving a briefing at the time all of this happened as well so I was trying to scan through the checklist, equipment, etc., as well as monitor the traffic and was just a little late on noticing Aircraft X not doing what he was supposed to be doing.

**Narrative: 2**

I was on Ground Control during the incidents involving Aircraft X. These were incidents while he was airborne. The first one was when he was on short final with his gear up, and the Local Controller quickly observed the gear being up and took action to send the aircraft around. I was on Ground Control, and moderately busy scanning my own duties. There were thunderstorms throughout Texas, leading to delays, ground stops, and diversions. I noticed the Local Controller take outstanding action in correcting the Bonanza. As I was continuing my duties, I overheard the Local controller later take quick action to separate the Bonanza and the CRJ7, and heard him issue a traffic alert as the Collision Alert was sounding. Visibility from the tower was dampened by the windows being wet from light rain, but the Local Controller and Controller-In-Charge showed the utmost diligence and team effectiveness during the situation to keep the aircraft separated.

When the Bonanza finally landed and came to me on Ground Control, he sounded lost and flustered. It was a very tense situation to get him to do something as routine as taxi to the FBO. He could not follow simple instructions, and needed a close eye just taxiing. Eventually he came back to frequency at the FBO and I issued him a Brasher Warning. No recommendations at this time, just to encourage all controllers to stay vigilant at all times, as this Local Controller prevented the loss of life due to his constant vigilance.

**Synopsis**

SAT Tower Controllers reported a NMAC between a General Aviation aircraft experiencing difficulties and an air carrier.
Time / Day
Date: 201805
Local Time Of Day: 1201-1800

Place
Locale Reference: Airport: ZZZ.Airport
State Reference: US
Altitude: MSL. Single Value: 4457

Environment
Flight Conditions: VMC
Weather Elements / Visibility: Visibility: 10
Light: Daylight
Ceiling: Single Value: 10000

Aircraft: 1
Reference: X
ATC / Advisory: CTAF: ZZZ
Aircraft Operator: Personal
Make Model Name: DA40 Diamond Star
Crew Size: Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: VFR
Mission: Training
Flight Phase: Takeoff
Route In Use: None
Airspace: Class G: ZZZ

Aircraft: 2
Reference: Y
ATC / Advisory: CTAF: ZZZ
Aircraft Operator: Personal
Make Model Name: Robinson R22
Crew Size: Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: VFR
Mission: Training
Flight Phase: Landing
Route In Use: None
Airspace: Class G: ZZZ

Person
Reference: 1
Location Of Person: Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Personal
Function: Flight Crew: Pilot Flying
Function: Flight Crew: Single Pilot
Qualification: Flight Crew: Private
Experience.Flight Crew.Total : 61
Experience.Flight Crew.Last 90 Days : 5
Experience.Flight Crew.Type : 61
ASRS Report Number.Accession Number : 1543409
Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events
Anomaly.Conflict : NMAC
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : Weather / Turbulence
Detector.Person : Flight Crew
Miss Distance.Vertical : 10
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

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

Narrative: 1
While I was finishing up the run up, my instructor notified me that I should find another route because of a thunderstorm rolling into my original destination. While taxiing to the 360 check, I was feeling pretty stressed since there was a lot of things going on in my mind. I was thinking about how I should go to my new destination and after that I checked for any traffic while doing the 360. I did not see anything so I checked my ADS-B but I did not see anything. I must have missed the helicopter on the ADS-B. I went to the hold short for Runway 35 and I looked both ways and it looked like I was clear so I announced that I was taking the runway for take-off. As soon as I got onto the runway, all of my attention went into my plane but I heard a helicopter call and I thought they said parallel for Runway 35 since that is what they always did while I was in the pattern. It turned out they did a landing on 35 which I’ve never encountered. When I started to take off, it looked like they were doing a parallel which confirmed what I thought I heard, so I went with the take-off but when I checked again about 1000 feet off the ground, they were under me so I tried to climb as fast as I could.

Synopsis
DA40 pilot reported a NMAC during take off from a non-towered airport.
ACN: 1543175 (44 of 50)

**Time / Day**
Date: 201805
Local Time Of Day: 0001-0600

**Place**
Locale Reference.Airport: ZZZ.Airport
State Reference: US
Altitude.AGL.Single Value: 0

**Environment**
Flight Conditions: VMC
Light: Dawn

**Aircraft: 1**
Reference: X
Aircraft Operator: Personal
Make Model Name: Baron 58/58TC
Operating Under FAR Part: Part 91
Flight Plan: IFR
Mission: Personal
Nav In Use: GPS
Flight Phase: Takeoff
Airspace.Class G: ZZZ

**Aircraft: 2**
Make Model Name: Cessna Single Piston Undifferentiated or Other Model
Airspace.Class G: ZZZ

**Person**
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Personal
Function.Flight Crew: Pilot Flying
Function.Flight Crew: Single Pilot
Qualification.Flight Crew: Air Transport Pilot (ATP)
Experience.Flight Crew.Total: 6000
Experience.Flight Crew.Last 90 Days: 50
Experience.Flight Crew.Type: 5500
ASRS Report Number.Accession Number: 1543175
Human Factors: Communication Breakdown
Communication Breakdown.Party1: Flight Crew
Communication Breakdown.Party2: Flight Crew

**Events**
Anomaly.Conflict: Ground Conflict, Less Severe
Anomaly.Conflict: NMAC
Detector.Person: Flight Crew
When Detected: In-flight
When Detected: Taxi
Result. Flight Crew: Took Evasive Action

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

Narrative: 1
I taxied to RWY 03 for departure (IFR). The Tower was closed. I verified on ground [control] "Tower Closed". Someone in the Tower answered "Tower closed". I taxied to RWY 03 (calm wind RWY) for departure notifying Tower and CTAF. After setting up waypoints in the GPS arranging charts and RWYs I radioed "Beech XXXXX departing 03 - straight out". As I heard nothing from other traffic I commenced takeoff 2 minutes prior Tower opening. Just at the point of rotation, I saw a Cessna single coming the opposite direction at approximately 100 feet above me. I was not sure if I could abort safely. I flew about 20 feet off the runway until the Cessna was overhead. Then I continued about 20 feet above until the end of the runway. Then I began a slow climb. I then heard "aircraft over 21 at ZZZ 1 - are you on frequency?" At that point I switched to approach for my IFR clearance to ZZZ 2. My aircraft is TCAS equipped nothing came up on TCAS on runways or takeoff roll. If the Cessna had a XPDR in operation, my TCAS would have called traffic. P.S. When the Tower called "aircraft over 21 are you on frequency?" I felt it was for the other aircraft since I departed 03. Also they (Tower) knew I was on frequency.

Synopsis
BE-58 pilot reported that during rotation a single engine Cessna was on approach 100 feet above him coming in the opposite direction.
**ACN: 1543051 (45 of 50)**

**Time / Day**
- Date: 201805
- Local Time Of Day: 0601-1200

**Place**
- Locale Reference: Airport: TEB.Airport
- State Reference: NJ
- Relative Position: Angle: Radial: 190
- Relative Position: Distance: Nautical Miles: 2
- Altitude: AGL: Single Value: 900

**Environment**
- Flight Conditions: VMC
- Light: Daylight

**Aircraft : 1**
- Reference: X
- ATC / Advisory: Tower: TEB
- Aircraft Operator: Air Taxi
- Make Model Name: PC-12
- Crew Size: Number Of Crew: 2
- Operating Under FAR Part: Part 135
- Flight Plan: IFR
- Mission: Passenger
- Nav In Use: Localizer/Glideslope/ILS: Runway 19
- Flight Phase: Final Approach
- Airspace: Class D: TEB

**Aircraft : 2**
- Reference: Y
- Make Model Name: UAV - Unpiloted Aerial Vehicle
- Operating Under FAR Part: Other
- Flight Phase: Cruise
- Airspace: Class D: TEB

**Person**
- Reference: 1
- Location Of Person: Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Air Taxi
- Function: Flight Crew: Pilot Flying
- Function: Flight Crew: Captain
- Qualification: Flight Crew: Air Transport Pilot (ATP)
- Qualification: Flight Crew: Instrument
- ASRS Report Number: Accession Number: 1543051
- Human Factors: Distraction

**Events**
Anomaly.Conflict : NMAC
Anomaly.Deviation - Procedural : FAR
Anomaly.Inflight Event / Encounter : Other / Unknown
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : Police / Security Involved
Result.Flight Crew : Requested ATC Assistance / Clarification

Assessments

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

Narrative: 1

While on final approach to landing at Teterboro (TEB) on the ILS 19 at approximately the 1.5-2 DME and about 900 feet, we detected a drone like object flying directly underneath us. The drone was about 100-200 feet below us heading in the opposite direction of our flight path. No evasive action was taken, as it was not on a collision course.

We notified Tower while we were still on approach to landing. We called tower once we landed on cell phone to give them all the details they needed so law enforcement could begin their investigation.

Synopsis

PC-12 Captain reported an NMAC with a Unmanned Aerial Vehicle (UAV) while on final approach to TEB airport.
Time / Day
Date: 201805
Local Time Of Day: 1201-1800

Place
Locale Reference.Airport: GFK.Airport
State Reference: ND
Altitude.MSL.Single Value: 4400

Environment
Light: Daylight

Aircraft: 1
Reference: X
ATC / Advisory.Tower: GFK
Aircraft Operator: Air Carrier
Make Model Name: B737-400
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Nav In Use: FMS Or FMC
Flight Phase: Climb
Route In Use: Vectors
Airspace.Class D: GFK

Aircraft: 2
Reference: Y
ATC / Advisory.Tower: GFK
Aircraft Operator: Personal
Make Model Name: Skyhawk 172/Cutlass 172
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: VFR
Mission: Personal
Flight Phase: Cruise
Airspace.Class D: GFK

Person: 1
Reference: 1
Location Of Person.Facility: GFK.Tower
Reporter Organization: Government
Function.Air Traffic Control: Local
Qualification.Air Traffic Control: Fully Certified
ASRS Report Number.Accession Number: 1542529
Human Factors: Communication Breakdown
Communication Breakdown.Party1: ATC
Communication Breakdown.Party2: ATC

Person: 2
Reference: 2
Location Of Person.Facility: GFK.Tower
Reporter Organization: Government
Function.Air Traffic Control: Supervisor / CIC
Qualification.Air Traffic Control: Fully Certified
ASRS Report Number.Accession Number: 1542530

Events
Anomaly.ATC Issue: All Types
Anomaly.Conflict: NMAC
Anomaly.Deviation - Procedural: Published Material / Policy
Detector.Person: Air Traffic Control
Miss Distance.Horizontal: 0
Miss Distance.Vertical: 300
When Detected: In-flight
Result.Air Traffic Control: Issued Advisory / Alert

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

Narrative: 1
Aircraft Y departing VFR to the NW departed Runway 35L and I put him on a 300 degree heading until exiting class D airspace because I was putting Aircraft X going IFR to the SW on runway heading off the same runway. I ensured there was adequate separation between the 2 aircraft before I shipped either of them to RDR, our parent IFR facility.

I didn't have much going on so I was looking at my scope and I saw that Aircraft Y was going straight north level at 4,400 feet about 5 miles west of the runway and about 7 miles north or so. He was probably going to GAF, a little airport north of here that the university uses to practice landings or what not. I then saw that RDR was turning Aircraft X toward Aircraft Y when Aircraft X was around 4,000 feet and I got a collision alert on the STARS as Aircraft X continued to climb past 4,000 feet. I promptly called RDR to let them know what was going on when the aircraft were about 2 nm apart and was told that they were, "Okay."

I thought this was garbage separation. Aircraft X literally climbed and turned right at Aircraft Y leaving Aircraft Y with few options to avoid a collision. Aircraft X's pilot sounded annoyed that RDR did this to them as well. Military or not, this was a bet in slow traffic that could have resulted in something very bad. Aircraft X totally buzzed Aircraft Y so I'm sure the wake turbulence alone was a lot of fun.

It seemed that the RDR controller attempted to use visual separation very poorly. They did not take into account aircraft performance, or allow any room for anyone to escape a collision. There was no need to even turn and climb Aircraft X at the same time. There was nothing going on when this happened. There was a total disregard for the VFR aircraft which was much slower than the IFR one. The controller should be trained on proper visual separation and aircraft performance. They should also learn to communicate with the tower more to let me know what exact hair brained maneuver they are doing so I don't have to guess as to why my collision alert is going off. There was no need for this.

Narrative: 2
[Report narrative contained no additional information.]

**Synopsis**

GFK Controller reported a NMAC situation caused by RDR Approach.
Time / Day
Date: 201805
Local Time Of Day: 1201-1800

Place
Locale Reference.Airport: ZZZ.Airport
State Reference: US
Altitude.AGL.Single Value: 0

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: DA20-C1 Eclipse
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 91
Flight Plan: VFR
Mission: Training
Flight Phase: Takeoff
Route In Use: Direct
Airspace.Class G: ZZZ

Aircraft: 2
Reference: Y
ATC / Advisory.CTAF: ZZZ
Make Model Name: Robinson R22
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Phase: Landing
Airspace.Class G: ZZZ

Component
Aircraft Component: Air/Ground Communication
Aircraft Reference: Y
Problem: Malfunctioning

Person: 1
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Personal
Function.Flight Crew: Instructor
Function.Flight Crew: Pilot Not Flying
Qualification.Flight Crew : Flight Instructor
Qualification.Flight Crew : Commercial
Qualification.Flight Crew : Instrument
Experience.Flight Crew.Total : 750
Experience.Flight Crew.Last 90 Days : 110
Experience.Flight Crew.Type : 750
ASRS Report Number.Accession Number : 1542499
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Person : 2
Reference : 2
Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Personal
Function.Flight Crew : Pilot Flying
Function.Flight Crew : Trainee
Qualification.Flight Crew : Student
ASRS Report Number.Accession Number : 1542498
Human Factors : Situational Awareness
Human Factors : Communication Breakdown
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : Flight Crew

Events
Anomaly.Conflict : NMAC
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : FAR
Anomaly.Deviation - Procedural : Clearance
Detector.Person : Flight Crew
Miss Distance.Horizontal : 150
When Detected : In-flight
Result.Flight Crew : Took Evasive Action

Assessments
Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Airport
Contributing Factors / Situations : Environment - Non Weather Related
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Aircraft

Narrative: 1
During unfamiliar airport operations at ZZZ we had a helicopter almost hit us while we were on the take-off roll. During our pattern work, we heard a helicopter report 5 miles out from the south. We then made a call that we were short final for runway XX. My student landed the airplane and we had to taxi back for runway XX. As we were taxiing back, the helicopter called us to talk to us. I responded and told them to go ahead. They did not respond and then called us again saying they had us in sight. I responded again, and told them to go ahead. At this point we got to the run-up area where we pulled off to do a quick configuration change. The helicopter called us again and we responded a third
time with no response from the helicopter. We then had the helicopter in sight as they were in a low left down-wind for runway XX. They quickly left our field of view due to trees being on the left hand side of the runway. We suspected the helicopter was on left downwind (however they never said they were, just kept trying to talk to us). We called ready for departure and checked final which was clear and taxied out (after waiting for the helicopter to respond which never responded). We taxied out and did a short field procedure and were accelerating down the runway when we got clear of the trees on the left side, the helicopter was ground level attempting to cross runway XX at midfield left for the ramp. We were committed and could not stop, the helicopter did stop and was yelling over the radio about us not using radios and trying to read our N-number. I tried to call them again with no response (now airborne). When we were turning crosswind, traffic from other airports called us and said they have heard all of our radio position reports. The FBO at ZZZ even called us and said they heard everything we said. The helicopter (now on the ramp) continued to call us, and even went as far as to film us as we departed for the last time. The helicopter flew a non-standard pattern and almost hit us midfield and claimed to not be able to hear us. We heard every call that they made, and had several people confirm our radios worked. The helicopter never attempted to troubleshoot their radio, as it was quite clear the problem was on their end as we had no issues completing our flight back at [origin airport]'s controlled airspace. The judgement the helicopter pilot made to attempt to cross midfield low when they never made radio contact with us was extremely dangerous and caused a near miss, especially after reporting us insight.

**Narrative: 2**

My instructor and I were flying to ZZZ to practice short-field landings. We made one pass through the circuit, consistently making radio calls. A helicopter approached from the south they made their calls. We kept making consistent calls and responded to said helicopter's requests for us to contact them via radio. It seems as though the helicopter could not hear us as they kept calling for us to respond to them, at one point stating "Come on, put a radio in that thing!" remarking about our aircraft. We continued making calls and started our take-off roll. We had visual contact with them and looked like they were going to make left traffic for runway XX. As we came out from behind some trees on the first part of runway XX, the helicopter was hover-taxiing there to the ramp. He pulled back and continued making calls that we need to transmit, which both my instructor and myself had been doing throughout our entire visit to the airport.

An aircraft in the vicinity and aircraft at [a nearby] airport, the FBO [of a nearby field] and the ZZZ FBO heard our radio calls and acknowledged us. We do not believe we were in the wrong in the incident, particularly legally because we don't need radios at ZZZ in the first place, but made radio calls anyway.

**Synopsis**

DA20 flight crew reported a near miss during takeoff with a Robinson helicopter that was crossing the runway without communicating.
ACN: 1542491 (48 of 50)

**Time / Day**
- Date: 201805
- Local Time Of Day: 0601-1200

**Place**
- Locale Reference.Airport: CAK.Airport
- State Reference: OH
- Relative Position.Distance.Nautical Miles: 8
- Altitude.MSL.Single Value: 3000

**Environment**
- Flight Conditions: VMC
- Weather Elements / Visibility.Visibility: 10
- Light: Daylight
- Ceiling.Single Value: 12000

**Aircraft : 1**
- Reference: X
- ATC / Advisory.Tower: CAK
- Aircraft Operator: FBO
- Make Model Name: Skyhawk 172/Cutlass 172
- Crew Size.Number Of Crew: 1
- Operating Under FAR Part: Part 91
- Flight Plan: IFR
- Mission: Training
- Nav In Use.Localizer/Glideslope/ILS: Runway 01
- Flight Phase: Initial Approach
- Route In Use: Vectors
- Airspace.Class C: CAK

**Aircraft : 2**
- Reference: Y
- Make Model Name: UAV - Unpiloted Aerial Vehicle
- Operating Under FAR Part.Other
- Flight Phase: Cruise
- Airspace.Class C: CAK

**Person**
- Reference: 1
- Location Of Person.Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: FBO
- Function.Flight Crew: Instructor
- Function.Flight Crew: Pilot Not Flying
- Qualification.Flight Crew: Instrument
- Qualification.Flight Crew: Commercial
- Qualification.Flight Crew: Flight Instructor
- Qualification.Flight Crew: Multiengine
Experience.Flight Crew.Total : 530
Experience.Flight Crew.Last 90 Days : 50
Experience.Flight Crew.Type : 75
ASRS Report Number.Accession Number : 1542491
Human Factors : Distraction

Events

Anomaly.Conflict : NMAC
Anomaly.Inflight Event / Encounter : Other / Unknown
Detector.Automation : Air Traffic Control
Detector.Person : Flight Crew
Miss Distance.Horizontal : 500
Miss Distance.Vertical : 200
When Detected : In-flight
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Provided Assistance

Assessments

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

Narrative: 1

While on a base leg for the ILS 1 at CAK, I noticed a blue drone off the left side of my wing. We were at 3,000 MSL and the drone appeared to be at approximately 3,200 MSL. I notified ATC immediately and even they found it as a primary target on their radar. That being said, this drone was within Class C airspace. No damage or injuries. This is a one time event that may become a more frequent event with drone popularity increasing.

Synopsis

Flight instructor reported a NMAC with a drone as they were turning base leg.
ACN: 1509624 (49 of 50)

Time / Day

Date: 201801
Local Time Of Day: 0601-1200

Place

Locale Reference.Airport: TUS.Airport
State Reference: AZ
Altitude.MSL.Single Value: 1000

Environment

Flight Conditions: VMC
Weather Elements / Visibility. Visibility: 20
Light: Daylight
Ceiling. Single Value: 20000

Aircraft: 1

Reference: X
ATC / Advisory.Tower: TUS
Aircraft Operator: Corporate
Make Model Name: Challenger CL601
Crew Size. Number Of Crew: 2
Operating Under FAR Part: Part 91
Flight Plan: IFR
Mission: Passenger
Flight Phase: Initial Climb
Route In Use: Vectors
Airspace. Class C: TUS

Aircraft: 2

ATC / Advisory. Tower: TUS
Aircraft Operator: Military
Make Model Name: Fighting Falcon F16
Operating Under FAR Part: Part 91
Flight Phase: Initial Approach
Route In Use: Visual Approach
Airspace. Class C: TUS

Person: 1

Reference: 1
Location Of Person. Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Corporate
Function. Flight Crew: Captain
Function. Flight Crew: Pilot Flying
Qualification. Flight Crew: Instrument
Qualification. Flight Crew: Air Transport Pilot (ATP)
Qualification. Flight Crew: Multiengine
Experience. Flight Crew. Total: 21800
Experience. Flight Crew. Last 90 Days: 45
Experience.Flight Crew.Type : 4530  
ASRS Report Number.Accession Number : 1509624  
Human Factors : Communication Breakdown  
Communication Breakdown.Party1 : Flight Crew  
Communication Breakdown.Party2 : ATC

**Person : 2**

Reference : 2  
Location Of Person.Aircraft : X  
Location In Aircraft : Flight Deck  
Reporter Organization : Corporate  
Function.Flight Crew : Captain  
Function.Flight Crew : Pilot Not Flying  
Qualification.Flight Crew : Instrument  
Qualification.Flight Crew : Flight Instructor  
Qualification.Flight Crew : Multiengine  
Qualification.Flight Crew : Air Transport Pilot (ATP)  
Experience.Flight Crew.Total : 14250  
Experience.Flight Crew.Last 90 Days : 100  
Experience.Flight Crew.Type : 925  
ASRS Report Number.Accession Number : 1509625  
Human Factors : Communication Breakdown  
Communication Breakdown.Party1 : ATC  
Communication Breakdown.Party2 : Flight Crew

**Person : 3**

Reference : 3  
Location Of Person.Facility : TUS.TOWER  
Reporter Organization : Government  
Function.Air Traffic Control : Local  
Qualification.Air Traffic Control : Fully Certified  
ASRS Report Number.Accession Number : 1510833  
Human Factors : Workload  
Human Factors : Communication Breakdown  
Human Factors : Training / Qualification  
Communication Breakdown.Party1 : ATC  
Communication Breakdown.Party2 : Flight Crew

**Events**

Anomaly.ATC Issue : All Types  
Anomaly.Conflict : NMAC  
Anomaly.Deviation - Procedural : Published Material / Policy  
Detector.Person : Flight Crew  
Miss Distance.Horizontal : 25  
Miss Distance.Vertical : 75  
When Detected : In-flight  
Result.Flight Crew : Requested ATC Assistance / Clarification  
Result.Air Traffic Control : Separated Traffic

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

Narrative: 1

A near miss occurred when an F16 flew right over the top of our aircraft and then turned left into a downwind. The F16 approached our aircraft from the rear as we were on our initial climb out of TUS, I estimate that our aircraft was about 3,500 to 3,800 feet MSL (climbing about 1,800 feet per minute and speed at 185 knots) when the F16 pass right over top of our aircraft with no TCAS alerts (TA) or no advisement of the traffic by the tower. We, the crew, knew that there were Military aircraft in the area as we listen to the tower give the military information about other traffic in area, shortly after we were given takeoff clearance with no mention of traffic for our departure. The only communication with and from the tower was us advising the tower of a near miss, after arriving at destination we called the tower at TUS to talk with tower chief still waiting a call back.

Narrative: 2

[Report narrative contains no additional information.]

Narrative: 3

I was training another trainee during the daily F16 recovery. I was watching my trainee work when he did a nice job of realizing that his flight of four F16s were going to conflict with the challenger departures upwind no matter where he broke the F16s in the pattern. So he used a procedure at TUS that was specifically designed to deconflict with departures. He told the flight to offset left and issued traffic on the challenger. I watched the entire flight offset left and I watched the forth F16 well left and abeam the challenger and then he broke left. The challenger pilot then keyed up and said the F16 was really close. I told him that he was separated, and I apologized for not giving him a heads up there would be traffic of his left that could startle him. He then complained to departure control, called the tower multiple times and after a thorough explanation from the manager, who was on the desk that afternoon, the pilot still wanted to file an NMAC.

During [a review] the question was asked what separation was used between the two aircraft. The manager told them "tower applied visual." Well, though yes I did watch all four F16s offset to the north and the climbing challenger well off to their right, I did not even need tower applied visual. It was a VFR vs IFR Class C separation. The targets did not merge, therefore, I did not need 500 ft vertical, or visual separation. The F16s were on an approved and separated offset.

Personally, would I have given traffic to the challenger if I was working by myself. Just so he didn't get scared when the F16 was off his left. That is my technique. I try not to force technique on my trainees. I wrote it down, and I planned on discussing the positive impact of a traffic call in that scenario. The other school of thought some trainers use is adding calls that aren't necessary and to frequency congestion being that they are "procedurally separated" or "already sequenced by approach." I have heard those things 1000 times. That all being said the aircraft were no factor to each other. The pilot of the challenger received an apology on the frequency, and multiple explanations.

Synopsis

A CL60 flight crew reported a NMAC situation with a flight of 4 F16's. Pilot reported ATC's lack of advisories to them, and failure to provide separation. ATC reported following local SOP, and in compliance with FAA orders and directives.
Event Report

**ACN: 1509474 (50 of 50)**

**Time / Day**
- Date: 201801
- Local Time Of Day: 0601-1200

**Place**
- Locale Reference: Airport: EWR.Airport
- State Reference: NJ
- Altitude: MSL. Single Value: 5500

**Environment**
- Flight Conditions: VMC
- Light: Daylight

**Aircraft: 1**
- Reference: X
- ATC / Advisory: TRACON: N90
- Aircraft Operator: Air Carrier
- Make Model Name: A320
- Crew Size: Number Of Crew: 2
- Operating Under FAR Part: Part 121
- Flight Plan: IFR
- Mission: Passenger
- Flight Phase: Initial Approach
- Airspace: Class E: N90

**Aircraft: 2**
- Reference: Y
- Aircraft Operator: Personal
- Make Model Name: Small Aircraft
- Crew Size: Number Of Crew: 1
- Operating Under FAR Part: Part 91
- Mission: Personal
- Flight Phase: Cruise
- Airspace: Class E: N90

**Person**
- Reference: 1
- Location Of Person: Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Air Carrier
- Function: Flight Crew: First Officer
- Function: Flight Crew: Pilot Not Flying
- Qualification: Flight Crew: Air Transport Pilot (ATP)
- Experience: Flight Crew: Type: 1575
- ASRS Report Number: Accession Number: 1509474
- Human Factors: Situational Awareness
- Human Factors: Workload

**Events**
**Assessments**

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

**Narrative: 1**

While on the arrival to EWR, we were having a medical issue with a passenger. I was the pilot monitoring. Handling the coordination of paramedics/dispatch/medical personnel (onboard the aircraft) we were advised by the doctor/nurse on board that our passenger's medical situation was declining. At that time we requesting special/expedited handling. ATC NY approach did a great job prioritizing us. While the workload was high, the Captain included our pilot jump seater in assisting me as the pilot monitoring. All was safely accomplished. The medical situation was coordinated and being handled by flight attendants/medical personnel in the cabin and Dispatch had notified for paramedics to meet us upon arrival. The Captain and I were both doing our normal duties. He was flying. I was pilot monitoring. Communicating with the flight attendants and Dispatch had concluded.

While on the arrival receiving radar vectors we were at 5,500 descending. ATC notified us that we had VFR traffic that they were not in contact with 1000 below us. We saw him in the TCAS and watched him maneuver closer to us when we got a TCAS RA. I believe the Captain even saw the traffic visually. The autopilot was on at the time. I turned off the flight directors as per our procedure. The Captain clicked off the autopilot and followed the TCAS RA. It was a Climb RA, followed by a Monitor Vertical Speed, then a Clear of Conflict. We advised ATC of the TCAS RA to which they responded they watched us respond to it. We came within 400 ft of the traffic. The Captain once clear of conflict continued to hand fly the arrival and approach with autopilot and autothrottles off. We landed safely. Paramedics met the aircraft at the gate upon arrival and received medical attention.

The Captain and I along with the help of jump seaters and Dispatch as well as flight attendant and medical personnel on board handled the situation safely and although we had multiple threats we were able to navigate safely to a safe landing. All personnel handled it very professionally.

**Synopsis**

A320 First Officer reported an NMAC on arrival into EWR with a light aircraft that was not in contact with ATC.