

OPERATION CROWDED SKIES XV  
INTERNATIONAL SPECIAL OPERATIONS EVENT  
7 DECEMBER 2019



EVENT MASTER PLAN  
&  
BRIEFING INFORMATION

EDITION 25NOV19-2

IVAO HQ Special Operations Department  
<http://sod.ivao.aero>

## Introduction and location

HQ Special Operations Department invites IVAO SO community to the annual Operation Crowded Skies event, a part of network-wide Crowded Skies event, on the 7<sup>th</sup> of December 2019, Saturday, starting from 18:00 UTC

This year Operation Crowded Skies SO event will take place in Germany, overhead Ramstein military airbase. Ramstein is located in the western part of Germany, this area is known to be the busiest airspace during peak time of annual IVAO Crowded Skies events. *Therefore, it is literally crowded skies for us this year!*

## Scenario, aim, objective, participants' roles

As the aim of the IVAO Crowded Skies event is to achieve as many IVAO users connected at the same time as possible within a specific time period, this year Operation Crowded Skies SO event will also focus on this principle.

In order to provide for possibility of multiple aircraft staying airborne during peak time of Crowded Skies event (18:40 – 19:20 UTC), special routes were developed.

The objective for participants of this SO event is to level fly one of the prescribed VFR routes, either as single aircraft or in formation. Formation flights are especially welcomed.

This event does not involve other kinds of manoeuvres (operations).

## Timeline and sequence of operations

Most aircraft are expected to be airborne and to navigate assigned routes at least between 18:40 UTC and 19:20 UTC.

All registered participants will be assigned specific departure slots and routes. Slots and routes will be assigned by HQ-SOD on the basis on the number of total registered participants, their specific airframes, and other details. Slots and routes will be assigned and provided 2 days prior to the event date, by email specified during registration on the HQ-SOD website.

In general, prior to a specific slot being assigned, prospective participants should tentatively plan for departure time to be around 18:10 UTC. However, actual departures will be spread out across half an hour, tentatively starting from 18:10 UTC.

## Kinds of airframes expected

Being SO event, it is expected that mostly military or special-use airframes will be used by participants. All kinds of airframes are welcomed – from light helicopters to fighter jets and heavy tactical transport aircraft.

Specific route and departure slot will be assigned to each participant on the basis of indicated aircraft type and it's capabilities during initial participant's registration.

## Event-specific rules

1. Participants' registration on the HQ-SOD website is required to participate.

2. Adherence to assigned departure slot and route is required.

Orderly sequencing of departures is important in order to avoid subsequent arrival congestion and hazardous situations. Registered participants will be provided with departure slots and routes by HQ-SOD, by email.

3. Compliance with briefing information is required.

Participants shall comply with briefing information provided in this document and any subsequent instructions issued by HQ-SOD.

## Basis of procedures

Event procedures are based on relevant regulations prescribed German authorities, refer to German Military AIP available at <https://www.milais.org> and German civil AIP available at <https://www.ead.eurocontrol.int/cms-eadbasic/opencms/en/login/ead-basic> (prior registration required).

## Resources to be used

FSX, P3D, X-PLANE 11 – use default representation of Ramstein airfield.

Alternatively:

FSX

<https://flyawaysimulation.com/downloads/files/7338/fsx-ramstein-airbase-scenery>

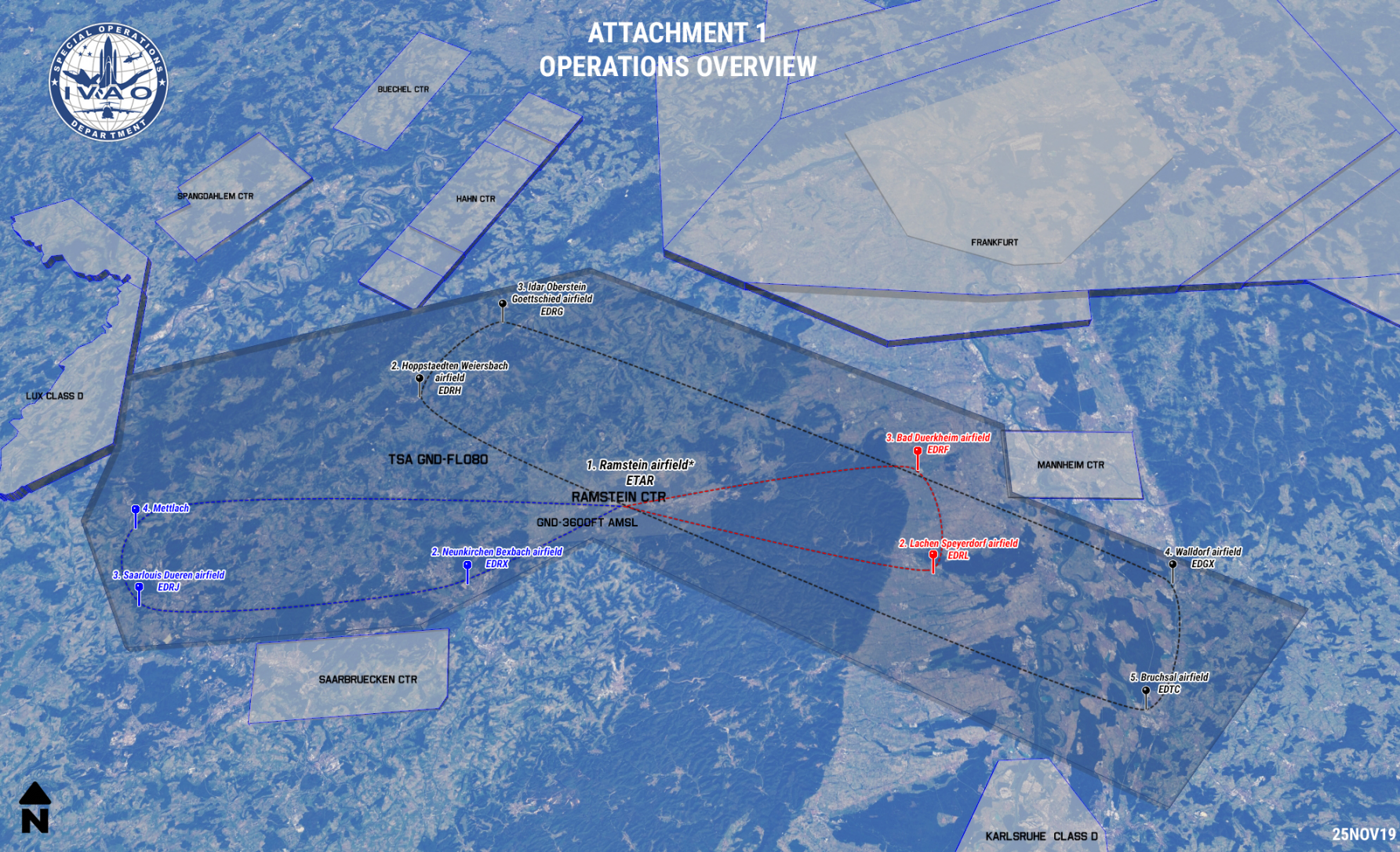
X-PLANE 11 [https://forums.x-](https://forums.x-plane.org/index.php?/files/file/24371-etar-ramstein-airbase)

[plane.org/index.php?/files/file/24371-etar-ramstein-airbase](https://forums.x-plane.org/index.php?/files/file/24371-etar-ramstein-airbase)





# ATTACHMENT 1 OPERATIONS OVERVIEW



## MAP LEGEND

for Operation Crowded Skies XV SO event

**Objective:** to get the most SO aircraft airborne at a peak time of Crowded Skies XV (2019)

**Departure and arrival airfield:** Ramstein ETAR

**VFR routes** are pre-determined and comprise local airfields or other VRPs

**Temporary Segregated Area** established (GND-FL080, dark polygon), participating traffic to remain inside

**Airspace outline:** controlled Ramstein CTR class D (GND-3600 FT AMSL), volumes of controlled class E, not depicted on this map (clearance for entering E is not required)

**Black route:** for fixed wing high performance and/or military fighter jets and transports, 5000 FT AMSL, 240 KIAS, track distance 139 NM

**Blue route:** for fixed wing light aircraft types, 4000 FT AMSL, 180 KIAS, track distance 87 NM

**Red route:** for rotary wing, 4000 FT AMSL, 110 KIAS, track distance 57 NM

All routes to be flown under daylight, VFR and VMC; formation flights allowed & encouraged

Airborne time for all routes at least 30 minutes, routes may be repeated

\*Pattern procedures for Ramstein are not depicted on this map

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# ATTACHMENT 2 AREA OVERVIEW

TSA GND-FL080

RAMSTEIN CTR  
GND-3600FT AMSL

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## **Briefing Information**

All the briefing information necessary for participants is provided in this Event Master Plan, below, any corrections and additional information may be provided by HQ–SOD, by email specified during participant’s registration. No verbal briefing will take place.

Participants shall operate under VFR, assuming full responsibility for avoidance and own separation from other aircraft, terrain, and obstacles. Participants are required to adhere to assigned VFR routes, altitudes and air speeds, deviation is permissible only for safety reasons. Provided route altitudes are based on Minimum Safety Altitudes, they are also set in such a manner so that to de–conflict adjacent routes. Fixed air speeds (by reference to knots indicated air speed, KIAS) are prescribed to ensure orderly flow of air traffic.

### **Routes**

Routes are assigned by HQ–SOD to each participant. Routes are visually depicted in attachments 1 and 2.

Prospective participants are kindly asked to familiarise themselves with routes so that to avoid any confusion during event. This is especially important for leaders of formation flights.

If technically foreseeable with available GNSS navigation devices, pre–program routes to supplement VFR navigation with GNSS navigation.

NAVAID references for each VFR waypoint are also provided for added navigational awareness.

Each of 3 developed routes described below are designed to provide for around 30 minutes of airborne time. This may not be sufficient for some aircraft that will depart early, to stay airborne within peak time window (18:40 – 19:20 UTC). Routes are circular, therefore participants may perform second (third, etc.) route loop without landing at Ramstein; aircraft should remain outside Ramstein CTR class D airspace when transiting between the last and the first waypoint of their prescribed route.

*Route "BLACK"*

Intended for: fixed wing high performance and/or military fighter jets and transport aircraft, etc.

Altitude: 5000 FT AMSL.

Air speed: 240 knots indicated air speed (KIAS).

Total distance: 139 NM, excluding ETAR circuit manoeuvring (+).

Waypoint	Distance (NM)	Magnetic track	Time (minutes)	NAVAID reference (radial/NM)
Ramstein airfield ETAR	n/a	n/a	n/a	n/a
Hoppstaedten– Weiersbach airfield EDRH	19+	301	4+	ZWN 336/25
Idar– Oberstein/Goettschied airfield EDRG	9.4	037	2	ZWN 352/30
Walldorf airfield EDGX	58	114	13	ZWN 082/49
Bruchsal airfield EDTC	11	198	3	ZWN 095/45
Ramstein airfield ETAR	42+	293	10+	n/a

*Route "BLUE"*

Intended for: fixed wing light aircraft types.

Altitude: 4000 FT AMSL.

Air speed: 180 knots indicated air speed (KIAS).

Total distance: 87 NM, excluding ETAR circuit manoeuvring (+).

Waypoint	Distance (NM)	Magnetic track	Time (minutes)	NAVAID reference (radial/NM)
Ramstein airfield ETAR	n/a	n/a	n/a	n/a
Neunkirchen–Bexbach airfield EDRX	14+	243	4+	ZWN 315/8.7
Saarlouis–Dueren airfield EDRJ	23	264	7	ZWN 277/30
Mettlach town	11	343	3	ZWN 294/36
Ramstein airfield ETAR	39+	093	12+	n/a

*Route “RED”*

Intended for: rotary wing aircraft types (helicopters).

Altitude: 4000 FT AMSL.

Air speed: 110 knots indicated air speed (KIAS).

Total distance: 57 NM, excluding ETAR circuit manoeuvring (+).

Waypoint	Distance (NM)	Magnetic track	Time (minutes)	NAVAID reference (radial/NM)
Ramstein airfield ETAR	n/a	n/a	n/a	n/a
Lachen–Speyerdorf airfield EDRL	25+	103	13+	ZWN 077/31
Bad Duerkheim airfield EDRF	8.6	355	4	ZWN 062/34
Ramstein airfield ETAR	23	262	12+	n/a

*Note 1. Indicated leg times are based on prescribed KIAS converted to KTAS for prescribed altitude, ISA, and no–wind conditions.*

*Note 2. NAVAID used for referencing waypoints is VOR–DME Zweibruecken ZWN 113.8 --.. .-- -.*

Airfield information

For description of Ramstein airfield refer to chapter 1 (page 10) of RAMSTEIN AIR BASE AIRFIELD OPERATIONS USAF publication.

For airfield diagrams refer to attachments 2, 3, 5, 6, and 7 of the aforementioned publication.

Aforementioned publication is available at

<https://www.pref.okinawa.jp/site/chijiko/kichitai/sofa/documents/germany10.pdf>



### Airspace restrictions

As the area of operations is located in highly congested and complex airspace and event traffic may pose hazard for non-participating aircraft, a Temporary Segregated Area (TSA) will be established on the 7<sup>th</sup> of December 2019 between 18:00 UTC and 21:00 UTC. Non-participating traffic will not be able to enter TSA and participating traffic (SO event participants) shall at all times remain within lateral and vertical limits (boundaries) of TSA, except when deviation is required for safety reasons. Participants shall carefully familiarise themselves with TSA boundaries in order to reduce possibility of unintentionally leaving it. TSA is depicted on a map in attachments 1 and 2, associated NOTAM for establishment and activation of TSA is provided below.

TEMPORARY SEGREGATED AREA ESTABLISHED WITHIN AREA BOUNDED BY  
STRAIGHT LINES JOINING SUCCESSIVELY: 491633N0071413E-  
491518N0064163E-492554N0063319E-493236N0063518E-493863N0063439E-  
494828N0073203E-493160N0082301E-492558N0082260E-491507N0085381E-  
490118N0083356E-492292N0073318E-491633N0071413E  
LOWER LIMIT: SFC  
UPPER LIMIT: FL080  
ACTIVATION: 07DEC19 1800 - 2100  
CONDITIONS OF USE: RESERVED AND DESIGNATED FOR EXCLUSIVE USE BY  
PARTICIPANTS OF OPERATION CROWDED SKIES XV SPECIAL OPERATIONS  
EVENT ONLY, NO OTHER AIR TRAFFIC SHALL ENTER RESTRICTED AREA

### Airspace composition

Aforementioned Temporary Segregated Area (TSA) established for the purpose of this event includes volumes of class E controlled airspace and Ramstein CTR of class D controlled airspace.

Participants are not required to seek clearance to enter class E airspace within TSA; for this reason volumes of class E airspace within TSA are not depicted in attachments 1 and 2.

Participants are **required** to seek clearance to (re-)enter Ramstein CTR from Ramstein Tower when completing assigned routes for landing at Ramstein. Visual depiction of Ramstein CTR lateral and vertical boundaries is provided in attachments 1 and 2.

### Air traffic control and event coordination

Ramstein Tower facility at 133.2 MHz will be operating and providing aerodrome control and responsible for Ramstein Control Zone (class D airspace).

Optionally, Ramstein Ground facility may also be operating at 121.77 MHz

Within event TSA and outside Ramstein CTR no ATC will be provided.

Ramstein Tower will be responsible for event coordination through sequencing of departures and arrivals.

All communications with ATC must be made in English language, using standard civil VFR phraseology.

### Weather

The following are weather minimums established for the purpose of the event.

Ramstein airfield: ceiling at or above 2800 FT AGL and visibility at or above 5000 M.

En-route: minimum distance from clouds horizontally 1500 M and vertically 1000 FT, minimum flight visibility 5000 M.

Participants must set flight simulator visibility and clouds conditions to CAVOK when any of the above values are not satisfied, prior to departure.

### Daylight conditions

Participants must set local flight simulator time in such a manner that daylight conditions are observed.

*Note. Actual departure time (18 UTC) falls after the end of civil evening twilight (daylight).*

### Fuel requirements

Participants must ensure that fuel endurance provides for at least 60 minutes airborne time at prescribed route altitude and air speed. Participants should account for fuel reserves as prescribed by relevant regulations.

### Flight plan filing

There are no specific requirements on flight plan filling, apply standard rules for completing FPL form for VFR flight.

*Note. There is no need to specify each waypoint of assigned VFR route in item 15.*

### Formation flights

Specific instructions for formation flights are provided below for each stage of flight, the following are general instructions applicable to all stages. All aircraft in a formation flight except for formation leader to switch OFF transponders; all radio communications with ATC to be conducted by formation leader only, ATC instructions and clearances are understood to apply to all aircraft within formation flight. Formation leader should add “flight” suffix to call sign (e.g. EAGLE 10 FLIGHT) when communicating with ATC. All aircraft to remain within 1 NM laterally and within 100 FT vertically of formation leader. Intra-flight communications within formation flight shall not be conducted on ATC frequencies (IVAO TS-2 voice servers), use other technical means for intra-flight communications. Splitting formation flight is permissible, advice ATC before splitting if within Ramstein CTR, switch transponder ON, each aircraft to establish separate two-way communications with ATC.

### Ground operations (applicable to all participants)

Use any available free parking. Formation flights: use adjacent parking.

Call Ramstein Ground or Tower for taxi with engines already running at assigned departure time slot, within +/- 2 minutes. Formation flights: formation leader to advice number of aircraft in formation as a part of taxi request.

Missed departure slots: Ramstein Ground or Tower will advise and integrate into departure flow.

Runway 27 or 09 will be used for departures, subject to prevailing weather conditions.

Ramstein Ground or Tower may hold aircraft for several minutes for sequencing, to create appropriate minimum intervals so that to avoid subsequent arrival congestion.

Formation flights: taxi in sequence, as a group. Formation flights may take off as a wing (formation takeoff) or with up to 10 seconds intervals of each other.



Helicopter operations: in addition to the runway, Ramstein Tower may authorise helicopters to depart from any portion of the controlled movement area or from any active taxiway. Helicopters will not be authorised to takeoff directly from parking ramps.

Departure (applicable to all participants)

Takeoff runway 26/27, fixed-wing aircraft: climb straight ahead to RMS 2 DME, then turn towards first waypoint.

Takeoff runway 08/09, fixed-wing aircraft: climb straight ahead to RMS 3 DME, then turn towards first waypoint.

*Note. RMS Ramstein TACAN 113.4 .-. -- ...*

Proceed according to a prescribed route, climb to prescribed altitude and attain prescribed air speed. Report leaving Ramstein CTR to Ramstein Tower, then switch to Unicom as instructed.

En-route (applicable to all participants)

Proceed on prescribed route, at prescribed altitude and air speed for that route. Altitude tolerance +/- 200 FT, air speed tolerance +/- 10 KTs.

Execute route turns in a timely manner.

Do not deviate from prescribed altitude, except for safety reasons.

Maintain constant air speed, as prescribed for a specific route. Do not overtake aircraft ahead unless absolutely necessary.

Altimeter setting: use Ramstein QNH when within TSA at or when below 5000 FT AMSL, refer to Ramstein Tower ATIS for QNH value.

Formation flights: all aircraft to remain within 1 NM laterally and within 100 FT vertically of formation leader, transponder OFF.

Arrival (applicable to all participants)

Descent so that to cross Ramstein CTR at or below 3000 FT AMSL. Do not enter Ramstein CTR class D airspace without explicit clearance from Ramstein Tower. Contact Ramstein Tower 5 minutes prior to reaching Ramstein CTR boundary advising current location, altitude, QNH, Ramstein ETA time, and intentions. Formation flights: formation leader also to advise number of aircraft in formation.

Aircraft intending to perform military overhead pattern as opposed to a standard civil circuit shall inform Ramstein Tower of this intention as part of CTR entry request. Overhead pattern altitude is 2500 FT AMSL, initial point is overhead active runway threshold, right-hand break.

Stay outside (orbit) Ramstein CTR when clearance cannot be obtained for any reason, do not enter Ramstein CTR without clearance.

Proceed to Ramstein airfield when cleared and as instructed by Ramstein Tower.

Standard VFR circuit integration is to be expected depending on arrival direction; VFR circuit altitude is 2000 FT AMSL, circuits are right-hand.

Runway 26 or 08 will be used for arrivals, subject to prevailing weather conditions.

Please vacate runway in expeditious manner.

Formation flights may perform formation landing. Formation flights may also split prior to entering CTR or before entering circuit or military overhead pattern; advise Ramstein Tower before splitting, each aircraft to turn ON transponder and to establish separate two-way communications with Ramstein Tower.

Helicopter operations: circuit altitude is 1500 FT AMSL, helicopter circuits are left-hand, in addition to the runway, Ramstein Tower may authorise helicopters to arrive at any portion of the controlled movement area or any active taxiway. Helicopters will not be authorised to land directly on parking ramps.

Performing second route loop (applicable to all participants)

Participants who wish to stay airborne for a prolonged time may perform second (third, etc.) route loop without landing at Ramstein; aircraft should remain outside Ramstein CTR class D airspace when transiting between the last and the first waypoint of their prescribed route.

### Contingencies

Congestion at Ramstein airfield or low fuel state. Consider proceeding to Zweibruecken airfield EDRZ and state this intention on Unicom, N49 12.6 E007 24.0, IFR and VFR traffic, elevation 1133 FT AMSL, 8776 FT runway, 280 – 028 MAG, instrument VOR approaches available, airfield is located 16 NM to the south–south–west of Ramstein airfield bearing 207, VOR–DME ZWN 113.8 --.. .-- -.

*Note. Zweibruecken airfield is located outside event TSA, contact an appropriate ATC.*

En–route contingencies (aircraft system malfunction, handling difficulties, aircraft in formation losing sight of formation leader, etc.). Consider climbing to VFR flight levels FL065 or FL075 and state this intention on Unicom, set altimeter to 1013.2 hPa at transition altitude and continue on prescribed route (apply semi–circular west–east direction rules per German AIP ENR 1.7). These two flight levels are reserved for contingencies within event TSA. If leaving TSA is required, contact an appropriate ATC.

Encountering IMC or unable to continue with VFR. Contact an appropriate ATC. Change to IFR. Reference Emergency Safe Altitude for IFR purposes within 100 NM of Ramstein airfield is 7200 FT AMSL.