

LETTER OF AGREEMENT

Between

VACC ROMANIA
Bucharest FIR

and

VACC BULGARIA
Sofia FIR



Effective: **11.08.2022**

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|  _____ George Enciu, Deputy Director VACC Romania |  _____ Kristian Karagyozev, Director VACC Bulgaria |
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1. General

1.1. Purpose.

The purpose of this Letter of Agreement is to define the coordination procedures to be applied between VACC Romania and VACC Bulgaria when providing ATS to air traffic (IFR/VFR) on the VATSIM network.

All information and procedures described in this Letter of Agreement shall not be used for real world purposes.

1.2. Operational Status.

All operational significant information and procedures contained in this Letter of Agreement shall be distributed to all concerned controllers by appropriate means. This Letter of Agreement itself constitutes public information.

1.3. Validity.

This Letter of Agreement is signed on 24.07.2022 and becomes effective as of 11.08.2022 (AIRAC 2208).

2. Definitions & Abbreviations

2.1. Definitions

- 2.1.1. **General Air Traffic (GAT):** All movements of civil aircraft, as well as all movements of State aircraft (including military, customs and police aircraft) when these movements are carried out in conformity with the procedure of ICAO.
- 2.1.2. **Operational Air Traffic (OAT):** All flights which do not comply with the provisions stated for GAT and for which rules and procedures have been specified by appropriate national authorities.
- 2.1.3. **Release for Climb:** An authorization for the accepting unit to climb (a) specific aircraft before the transfer of control.
Note: The transferring unit remains responsible for separation within its Area of Responsibility unless otherwise agreed.
- 2.1.4. **Release for Descend:** An authorization for the accepting unit to descend (a) specific aircraft before the transfer of control.
Note: The transferring unit remains responsible for separation within its Area of Responsibility unless otherwise agreed.
- 2.1.5. **Release for Turn:** An authorization for the accepting unit to turn (a) specific aircraft away from the current flight path by not more than 45° before the transfer of control.
Note: The transferring unit remains responsible for separation within its Area of Responsibility unless otherwise agreed.
- 2.1.6. **Area of Responsibility (AoR):** An airspace of defined dimensions where a sole ATS unit has responsibility for providing air traffic services.

2.2. Abbreviations

- 2.2.1. **vACC:** Virtual Area Control Center
- 2.2.2. **RFL:** Requested Flight Level
- 2.2.3. **ATS:** Air Traffic Service
- 2.2.4. **LoA:** Letter of Agreement
- 2.2.5. **IFR:** Instrument Flight Rules
- 2.2.6. **VFR:** Visual Flight Rules
- 2.2.7. **SEL:** Sector Exit List
- 2.2.8. **SIL:** Sector Inbound List
- 2.2.9. **FIR:** Flight Information Region
- 2.2.10. **ACC:** Area Control Center
- 2.2.11. **GAT:** General Air Traffic
- 2.2.12. **OAT:** Operational Air Traffic
- 2.2.13. **AAR:** Air to Air Refueling
- 2.2.14. **UNL:** Unlimited
- 2.2.15. **SFC:** Surface
- 2.2.16. **AoR:** Area of Responsibility

3. Areas of Responsibility & Sectorization

3.1. Areas of Responsibility.

The lateral and vertical limits of the respective areas of responsibility areas follows:

- 3.1.1. Bucharest FIR. Lateral limits: Bucharest FIR as described in AIP Romania. Vertical limits: GND – FL660 as in section LR ENR 2-1.
- 3.1.2. Sofia FIR. Lateral limits: Sofia FIR as described in AIP Bulgaria. Vertical limits: GND – FL660 as in section LB ENR 2-1.
- 3.1.3. Cross Border Sectors within DANUBE FAB:
 - 3.1.3.1. DANUBE FAB1 (DF1) delegated to Sofia ACC between FL245 and FL660. (see Appendix A1 and A2)
 - 3.1.3.2. DANUBE FAB2 (DF2) delegated to Bucuresti ACC between FL245 and FL660. (see Appendix A1 and A2)

3.2. Sectorization

3.2.1. Bucharest FIR

3.2.1.1. Sector LRBB-LOMOS

Lateral limits: sector LOMOS (see Appendix A1)

Vertical limits: FL105 – FL660

Responsible ATS unit (in order of precedence):

1. LRBB_L_CTR (Bucharest Radar), 122.025
2. EURE_FSS (Eurocontrol East), 135.300 (above FL245)

Remark: EURE_FSS is an ATS unit of EuroCenter vACC.

3.2.1.2. Sector LRBB-KOMAN

Lateral limits: sector KOMAN (see Appendix A1)

Vertical limits: FL105 – FL660

Responsible ATS unit (in order of precedence):

1. LRBB_L_CTR (Bucharest Radar), 122.025
2. EURE_FSS (Eurocontrol East), 135.300 (above FL245)

Remark: EURE_FSS is an ATS unit of EuroCenter vACC.

3.2.1.3. Sector LRBB-ARGES

Lateral limits: sector ARGES (see Appendix A1)

Vertical limits: FL105 – FL660

Responsible ATS unit (in order of precedence):

1. LRBB_A_CTR (Bucharest Radar), 121.175
2. LRBB_L_CTR (Bucharest Radar), 122.025
3. EURE_FSS (Eurocontrol East), 135.300 (above FL245)

Remark: EURE_FSS is an ATS unit of EuroCenter vACC.

3.2.1.4. Sector LRBB-DINSI

Lateral limits: sector DINSI (see Appendix A1)

Vertical limits: FL105 – FL660

Responsible ATS unit (in order of precedence):

1. LRBB_A_CTR (Bucharest Radar), 121.175
2. LRBB_L_CTR (Bucharest Radar), 122.025
3. EURE_FSS (Eurocontrol East), 135.300 (above FL245)

Remark: EURE_FSS is an ATS unit of EuroCenter vACC.

3.2.2. Sofia FIR

3.2.2.1. Sector LBSR-SA

Lateral limits: sector LBSR-SA (see Appendix A2)

Vertical limits: GND – FL660

Responsible ATS unit (in order of precedence):

1. LBSR_CTR (Sofia Control), 131.225
2. EURE_FSS (Eurocontrol East), 135.300 (above FL245)

Remark: EURE_FSS is an ATS unit of EuroCenter vACC.

3.2.2.2. Sector LBSR-SB

Lateral limits: sector LBSR-SB (see Appendix A2)

Vertical limits: GND – FL660

Responsible ATS unit (in order of precedence):

1. LBSR_E_CTR (Sofia Control), 129.100
2. LBSR_CTR (Sofia Control), 131.225
3. EURE_FSS (Eurocontrol East), 135.300 (above FL245)

Remark: EURE_FSS is an ATS unit of EuroCenter vACC.

3.2.2.3. Sector LBSR-VA

Lateral limits: sector LBSR-VA (see Appendix A2)

Vertical limits: GND – FL660

Responsible ATS unit (in order of precedence):

1. LBSR_V_CTR (Sofia Control), 134.700
2. LBSR_CTR (Sofia Control), 131.225
3. EURE_FSS (Eurocontrol East), 135.300 (above FL245)

Remark: EURE_FSS is an ATS unit of EuroCenter vACC.

3.2.2.4. Sector LBSR-VB

Lateral limits: sector LBSR-VB (see Appendix A2)

Vertical limits: GND – FL660

Responsible ATS unit (in order of precedence):

1. LBSR_B_CTR (Sofia Control), 132.950
2. LBSR_V_CTR (Sofia Control), 134.700
3. LBSR_CTR (Sofia Control), 131.225
4. EURE_FSS (Eurocontrol East), 135.300 (above FL245)

Remark: EURE_FSS is an ATS unit of EuroCenter vACC.

4. Procedures for Coordination

4.1. Definitions

A release is an authorization for the accepting ATS unit to climb, descend and/or turn (by no more than 45°) a specific aircraft before the transfer of control point. The transferring ATS unit remains responsible for separation within its Area of Responsibility unless otherwise agreed.

Wherever VATSIM callsigns are used to describe the terms of a certain procedure, this procedure is also applicable for all higher stations that take over the responsibilities of said station. E.g., procedures for an APP-stations are also applicable for the respective CTR station fulfilling the duties of said APP station.

The use of VATSIM callsigns in this document includes any variation of said callsign. E.g., any procedure applicable for LRBB_L_CTR may also be used by LRBB_A_CTR or and any procedure applicable for LBSR_CTR may also be used by LBSR_V_CTR.

4.2. General Conditions

Coordination of flights shall take place via the agreed coordination points (COP).

Coordinated flights shall be handed off via a valid COP. Any deviation shall be coordinated verbally, by text or by Euroscope inter-sector coordination.

Traffic shall be handed off at the levels, defined in the regulations below. If a specified level restriction cannot be met due to a lower RFL, traffic shall be handed off at RFL, if this does not cause a conflict with any other traffic.

Otherwise, traffic shall be coordinated.

If a traffic situation is not covered herein or closely matching a covered one, individual coordination between the concerned sectors shall be made.

After Transfer of Communications, traffic is NOT released for climb, descent or turns until Transfer of Control or otherwise specified in this Letter of Agreement.

↓FLxxx /↑ FLxxx means „descending / climbing to a specified FL“, without any further restriction. Any required crossing/speed restriction shall be added separately. At level means that the aircraft shall be in level flight on a published flight level and in accordance with east/ west odd/even policy.

4.3. IFR flights from Bucharest FIR to Sofia FIR

| ADEP | ADES | COP | CFL | Condition | Upstream | Downstream | Remark | |
|------|------|-------|-------|------------------------|------------|------------|----------|--|
| LROP | LBSF | TIMUR | 270 ↓ | at level | LRBB_L_CTR | LBSR_CTR | | |
| LRBS | | | | | | | | |
| - | LBSF | TIMUR | 290 ↓ | at level | | | | |
| | | OSTOV | | | | | | |
| - | LBGO | TIMUR | 290 ↓ | at level | | | | |
| | | OSTOV | | | | | | |
| - | LBPD | TIMUR | 290 ↓ | at level | | | | |
| | | OSTOV | | | | | | |
| LRCK | - | DINRO | 170 ↑ | climbing | LRCK_APP | LBSR_B_CTR | | |
| - | LBWN | RASUB | 310 ↓ | at level | LRBB_A_CTR | LBSR_B_CTR | | |
| | | DINRO | 190 ↓ | at level | | | | |
| | | LUGEB | | | | | | |
| - | LBBG | RASUB | 310 ↓ | at level | | | | |
| | | DINRO | 290 ↓ | at level | | | | |
| | | LUGEB | | | | | | |
| - | LTFM | DINRO | 350 ↓ | at level | | | | |
| | | LUGEB | | | | | | |
| - | LTBA | DINRO | 350 ↓ | at level | | | | |
| | | LUGEB | | | | | | |
| - | LTFJ | DINRO | 350 ↓ | at level | | | | |
| | | LUGEB | | | | | | |
| - | - | TIMUR | ODD | climbing descending | LRBB_L_CTR | LBSR_CTR | via N181 | |

4.4. IFR flights from Sofia FIR to Bucharest FIR

| ADEP | ADES | COP | CFL | Condition | Upstream | Downstream | Remark |
|------|------|-------|-------|-----------|------------|------------|-----------|
| - | LROP | ARGES | 160 ↓ | at level | LBSR_V_CTR | LRBB_L_CTR | via OSTAL |
| | | KOMAN | 160 ↓ | at level | | LRBB_A_CTR | via OBUGA |
| | | SOMOV | 240 ↓ | at level | LRBB_E_CTR | LRBB_L_CTR | via SORDU |
| - | LRBS | ARGES | 160 ↓ | at level | LBSR_V_CTR | LRBB_L_CTR | via OSTAL |
| | | KOMAN | 160 ↓ | at level | | LRBB_A_CTR | via OBUGA |
| | | SOMOV | 240 ↓ | at level | LRBB_E_CTR | LRBB_L_CTR | via SORDU |
| - | LRCK | REVDA | 160 ↓ | at level | LBSR_B_CTR | LRCK_APP | |
| - | LRCV | NAVOD | 130 | at level | LBSR_E_CTR | LRBB_L_CTR | via PANZU |

4.5. VFR flights from Bucharest FIR to Sofia FIR

For controlled VFR flights coordination, transfer of control and transfer of communication shall take place as for IFR flights, at least 5 **minutes** prior the established limit of jurisdiction, in order to obtain the required en route clearance for transit within the foreign airspace. Uncontrolled VFR flights shall be transferred to the appropriate sector if in radio contact. If online, LBSR_I_CTR (Sofia Information) 130.600, shall be the primary frequency for uncontrolled VFR flights.

4.6. VFR flights from Sofia FIR to Bucharest FIR

For controlled VFR flights coordination, transfer of control and transfer of communication shall take place as for IFR flights, at least 5 **minutes** prior the established limit of jurisdiction, in order to obtain the required en route clearance for transit within the foreign airspace. Uncontrolled VFR flights shall be transferred to the appropriate sector if in radio contact. If online, LRBB_I_CTR (Bucharest Information) 129.400, shall be the primary frequency for uncontrolled VFR flights.

5. Special Procedures

5.1. Non-standard arrivals

Any of non-standard arrivals such as NON-PRNAVs etc. should be coordinated manually.

5.2. Coordination Points

Change of Dynamic COPs during SEEFRA operations shall be verbally coordinated, only if the flying time in common AoR boundary is 13 minutes or less, except:

- departures and arrivals to/from airports within Bucharest FIR
- departures and arrivals to/from airports within Sofia FIR
- departures and arrivals at Istanbul airports – LTFM, LTBA, LTFJ

Direct routes affecting the airspace of third party units shall be avoided (e.g. DCTs affecting Beograd ATCC).

5.3. Flights from Sofia ACC to Bucuresti ACC

Traffic with destination LROP/LRBS shall be transferred by sector Sofia Bravo at FL240 or below, unless otherwise verbally coordinated.

Traffic with destination LROP/LRBS shall be planned to transfer by sector Varna Alfa at or above FL120 up to FL160, unless otherwise verbally coordinated.

The traffic on M987 above FL245 via ORTIP will be transferred 10 NM before ORTIP on EVEN levels, unless otherwise verbally coordinated with Bucuresti ACC.

During SEEFRA operations, all flights from Sofia CTA to Bucuresti CTA shall be transferred on EVEN levels regardless of magnetic track orientation, unless otherwise verbally coordinated.

5.4. Flights from Bucuresti ACC to Sofia ACC

The traffic with destination within Sofia FIR shall be transferred 10 NM before overfly RASUB at FL310 or below, unless otherwise verbally coordinated.

Traffic with destination Sofia FIR shall be transferred by Bucuresti ACC to sector in family sectors Sofia at FL290 or below, unless otherwise verbally coordinated.

The traffic with destination Sofia FIR shall overfly DINRO at FL190 if destination airport is LBWN and at FL290 or below in all other cases, unless otherwise verbally coordinated.

Traffic with destination Istanbul airport LTFM shall be transferred by DINSI sector to Varna sectors at FL330 or below (between 1 May – 31 Oct) and FL350 or below (1 Nov – 30 April), unless otherwise verbally coordinated.

During SEEFRA operations all flights from Bucuresti CTA to Sofia CTA shall be transferred on ODD level regardless of magnetic track orientation, unless otherwise verbally coordinated.

6. Transfer of Control and Transfer of Communications

6.1. Transfer of Control

Transfer of Control shall take place at the AoR boundary. If the downstream sector in EuroScope is set to **.break**, the procedure 6.4 is suspended and transfer of communication can only take place after the downstream sector has assumed the flight via the appropriate function of the radar client. If it becomes necessary to reduce or suspend transfers, a 5-minute prior notification is required. When transfers are suspended, the hand-off procedure (6.4) is suspended.

6.2. Silent transfer of control

Transfer of radar control from one elementary sector to another without the systematic use of bidirectional speech facilities may be affected provided the horizontal distance between the aircraft involved is not less than 10 NM within 5 minutes flying time after passing the transfer of control point unless vertical separation exists.

6.3. Transfer of Communications

Transfer of Communications shall be made at at least 15 NM prior the established limit of jurisdiction.

6.4. Hand-Off procedure

Unless otherwise agreed between stations online, the following hand-off procedure shall apply:

1. The upstream sector initiates a transfer via the appropriate function of the radar client.
2. If the downstream sector does not refuse the TAG transfer in maximum of 5 seconds, the upstream sector sends the aircraft to the frequency of the downstream sector by voice or text.
3. Upon initial call the downstream sector assumes the flight via the appropriate function of the radar client, to avoid additional workload in relation to the transfer of radar identification.

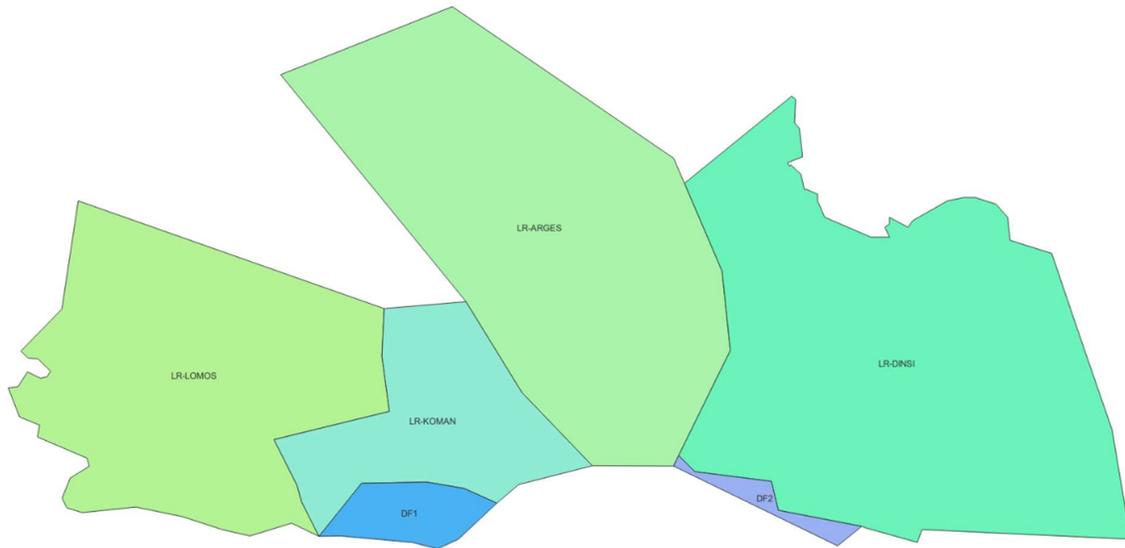
6.5. SSR Code Assignment

Both ATS units shall transfer flights on verified discrete SSR codes. Any change of SSR code by the accepting ATS unit may only take place after the transfer of control point.

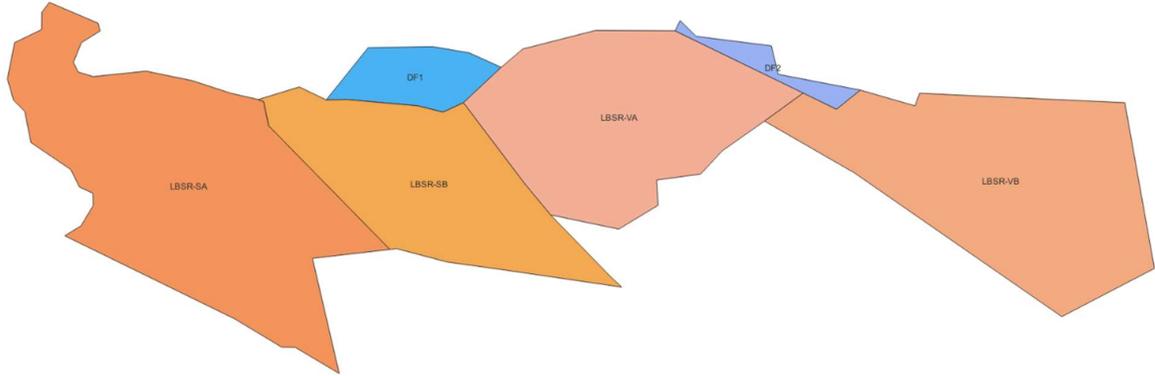
APPENDIX A

Sectorization

A1: LRBB



A2: LBSR



ANNEX A

Version Control

| Version | Date | Changes | Pages |
|----------------|-------------|--|--------------|
| 1.0 | 24.07.2022 | Initial document, pre-released version | all |
| | | | |