

(3) Should not contact Boston Center to reactivate surrounding SUA/ATCAA airspace when reentering from R5201/R5202A/B in previously surrounding active SUA/ACTAA.

(4) Shall advise either Wheeler Sack ARAC or Range 48 when exiting R5201/R5202B VFR.

**8. AUTONOMOUS PROCEDURES:** In this agreement Autonomous Operations and Fighter Control are synonymous, and describe missions where aircrews are responsible for airspace integrity. Autonomous operations are authorized in SUA/ATCAA. Military Radar Units (MRU) may operate as Tactical Monitors.

a. Aircrews:

(1) Shall monitor Boston Center assigned frequency while operating within SUA/ATCAA or 243.0 MHZ if cleared off Boston Center frequency.

(2) Shall notify Boston Center five (5) minutes prior to exiting SUA/ATCAA. Formation flights shall advise at this time if their intention is to breakup and return as separate elements.

(3) The last aircrew to exit the SUA/ATCAA (VFR or IFR) shall cancel the SUA/ATCAA with the appropriate ATC facility.

b. Boston Center shall:

(1) Clear aircraft into the SUA/ATCAA for the duration of the delay.

(2) After receiving a five (5) minute notification from the aircrew, issue ATC clearance instructions to the aircrew.

(3) For aircraft traversing the airspace, amend the altitude block of the SUA/ATCAA until the traversal aircraft is clear of the SUA/ATCAA.

**NOTE:** If required, ensure the appropriate altitude adjustment factor is applied in accordance with paragraph 11.d. of this LOA.

c. Tactical Monitor (TM) may provide service during Autonomous Operations (normally transparent to ATC) IAW JO 7610.4.

**9. MRU PROCEDURES:**

a. The MRU:

(1) Shall monitor SUA/ATCAA use and advise the Boston Center MC of delays and periods of non-use. For periods of 30 minutes or more, airspace shall be released to Boston Center for ATC use.

(2) May coordinate for Mode 3 Codes prior to activation of the airspace.

(3) Shall notify Boston Center five (5) minutes prior to the aircraft exiting SUA/ATCAA and provide the Boston Center Sector Controller with the following information:

- Aircraft identification/flight lead
- Flight breakup
- Special handling requirements
- Requested altitude

(4) Shall, after receiving clearance instructions from ATC, issue the clearance verbatim to the exiting aircraft.

(5) Shall cancel the SUA/ATCAA with the Boston Center MC after the last aircraft has exited the airspace.

(6) Shall immediately notify Boston Center when radio contact is lost/not established with aircraft under their control and provide Boston Center with the following information:

- Call sign, number/type aircraft, and beacon code.
- Position, altitude, and heading.
- Flight conditions if known.

(7) Shall immediately notify Boston Center when there is a loss of MRU radar control capability and:

(a) Direct aircraft to remain within the approved SUA/ATCAA. Tanker aircraft operating in an SUA/ATCAA where a published anchor track exists shall maintain that air refueling pattern at last assigned altitude.

(b) Inform Boston Center of the situation and estimate when control will be restored; advise Boston Center of the aircrew intentions (return to base or remain autonomous).

b. Boston Center:

(1) Shall clear aircraft into the SUA/ATCAA for the duration of the delay.

(2) Shall advise the MRU if the Airspace Activation Clearance differs from the scheduled airspace or previously coordinated airspace.

(3) Shall advise if BECKS Procedures are in effect for VIPER Airspace, and shall advise when BECKS Procedures are cancelled. The BECKS Procedure amends the Base Altitudes as follows.

Tupper Central	–	8,000 ft. MSL
Tupper South	–	8,000 ft. MSL

**NOTE:** BECKS Procedures may be implemented from November 1<sup>st</sup> through April 30<sup>th</sup>.

(4) Shall at the time of the five (5) minute notification, issue an appropriate ATC clearance for aircraft exiting SUA/ATCAA.

**NOTE:** When a clearance is issued to the MRU and that clearance takes the aircraft into another sector's/facility's airspace, the sector issuing the clearance is responsible for the coordination.

c. For Traversals, Boston Center shall:

(1) Coordinate with the MRU for approval at least five (5) minutes prior to the Traversal Aircraft entering SUA/ATCAA.

(2) Obtain a release of altitudes/flight levels, as appropriate, throughout the entire SUA/ATCAA for separation purposes.

(3) Provide a Point-Out of the Traversal Aircraft to the MRU.

**NOTE:** If required, ensure the appropriate altitude adjustment factor is applied, in accordance with paragraph 11.d. of this LOA.

d. Visiting MRUs may operate under the terms of this agreement provided:

(1) They have coordinated with the EADS Scheduling Unit.

(2) EADS has briefed the visiting MRU on the procedures contained in this agreement and provided a copy to them.

(3) The commander of each visiting MRU returns a completed copy of Appendix B to Boston Center and EADS.

**10. TRANSFER OF FLIGHT INFORMATION:** The procedure is not defined in JO 7110.65 or JO 7610.4, however for the purpose of this agreement transfer of flight information is the passage of flight information and NOT the transfer of radar identification (i.e. this is not a radar handoff).

a. Boston Center shall:

- (1) Conduct a Transfer of Flight Information for aircraft entering SUA/ATCAA prior to the aircraft entering SUA/ATCAA.
- (2) Pass the following information:
  - Call Sign
  - Altitude
  - General Position (e.g. East side of VIPER All)
  - Beacon Code (If not previously coordinated)
  - ATC Airspace Activation (Airspace and Altitudes)
  - Pertinent Remarks (If any)
- (3) After receiving Transfer of Flight Information, controllers shall re-identify the aircraft.
- (4) NOT change the aircraft's flight path/altitude until the aircraft is established in airspace under their control.

b. The MRU shall:

- (1) NOT change the aircraft's flight path/altitude until the aircraft is established in airspace under their control.
- (2) Conduct a Transfer of Flight Information with ATC prior to aircraft exiting SUA/ATCAA.
- (3) Pass the following information:
  - Call Sign
  - Altitude
  - General Position (e.g. East side of VIPER All)
  - Beacon Code (If not previously coordinated)
  - Pertinent Remarks (If any)

## **11. AERIAL COMBAT TACTICS (ACT):**

a. ACT operations conducted in the following combined MOA/ATCAA combinations shall operate on station altimeter setting derived as indicated below:

- VIPER Airspace Groups use GTB altimeter (if unavailable use ART).
- YANKEE 1/LASER use LEB altimeter (if unavailable use EEN).
- CONDOR/SCOTY use AUG altimeter (if unavailable use 8B0).
- MOT Areas use FMH altimeter (if unavailable use ACK).

**NOTE:** For MOT Areas operations at or above FL180 only use 29.92.

b. Boston Center shall ensure aircraft operating under Autonomous Control conducting ACT in a combined MOA/ATCAA are issued the appropriate altimeter setting.

c. MRU shall ensure aircraft conducting ACT in a combined MOA/ATCAA are issued the appropriate altimeter setting.

**NOTE:** Aircraft transitioning from a combined high/low operation to a high only operation, at and above FL180, shall be advised to reset their altimeter to 29.92.

d. Boston Center shall apply the appropriate altitude adjustment factor to determine the lowest usable flight level to provide vertical separation from ATCAA airspace.

## **12. AERIAL REFUELING (AR):**

a. Anchor Aerial Refueling in an SUA/ATCAA with an MRU.

(1) MRU shall:

(a) Advise aircrews when there is adjacent SUA/ATCAA activity and whether it is autonomous or MRU control.

(b) Ensure aircrews are familiar with the MARSA procedures contained in paragraph 4.b.(3) of this agreement.

(2) Aircrews shall:

(a) Ensure their IFR flight plan contains the computer code name of the SUA/ATCAA (see Attachment No. 8) and the anticipated delay.

(b) Ensure the Tanker is aware of the appropriate SUA/ACTAA.

b. Anchor Aerial Refueling in an SUA/ATCAA without an MRU (Autonomous).

(1) EADS shall:

(a) Advise aircrews when there is adjacent SUA/ATCAA activity and whether it is autonomous or MRU control.

(b) Ensure aircrews are familiar with the MARSA procedures contained in paragraph 4.b.(3) of this agreement.

(2) Aircrews shall:

(a) Ensure their IFR flight plan contains the computer code name of the SUA/ATCAA (see Attachment No. 8) and the anticipated delay.

(b) Ensure the Tanker is aware of the appropriate SUA/ACTAA.

c. Anchor Aerial Refueling on a published AR Anchor NOT using the associated SUA/ATCAA.

(1) EADS schedulers shall:

(a) Ensure that aircrews are informed of adjacent non-associated SUA/ATCAA activity that is separated but adjacent to the AR Anchor lateral protected airspace.

(b) Ensure that visiting aircrews are familiar with aerial refueling procedures contained in this agreement.

(2) Aircrews shall:

(a) Ensure the IFR flight plan contains an entry fix (a delay if needed), name of AR Track and an exit fix.

(b) Ensure the Tanker is aware of the appropriate SUA/ACTAA.

(c) As soon as possible, advise the Tanker of end of AR request.

**NOTE:** When operating along an AR Anchor with adjacent SUA/ATCAA, aircrews require an ATC clearance to exit the AR Anchor and a separate ATC clearance to enter the SUA/ATCAA.

(3) Boston Center shall clear aerial refueling aircraft onto and off of the AR Track.

**13. AWACS OPERATIONS:** The AWACS orbit patterns are depicted in Attachment No. 7A – through Attachment No. 7E. A single flight level between FL270 - FL310 is required. Other orbits may be negotiated for individual missions and exercises. AWACS orbit patterns within Boston Center's airspace are not considered blocked or sterilized airspace. Standard ATC separation procedures apply.

a. AWACS:

(1) Shall conduct either an internal correlation check or a manual correlation check with Boston Center IAW JO 7610.4 prior to operating as an MRU (Correlation Fixes are located in Attachment No. 8 and Appendix A).

(2) Shall retain aircraft under its jurisdiction at least five (5) NM inside the perimeter of the SUA/ATCAA.

(3) Shall remain within the defined lateral and vertical confines of the assigned orbit area.

(4) Shall request through the Boston Center sector controller prior to changing the orbit flight track, circle/figure eights, etc.

b. Boston Center may assign different frequencies to the AWACS flight deck crew (front of the aircraft) and the MRU (rear of the aircraft). When Boston Center is using separate frequencies for the MRU and flight deck they will be specified prior to mission activation by the sector controller.

**14. NIGHT VISION DEVICES or GOGGLES (NVD/NVG) OPERATIONS:** In addition to the procedures listed below, it is the responsibility of the military units, signatory to this LOA, to comply with all current FAA Regulations and FAA Exemptions regarding military lights out training in Boston Center SUA/ATCAA.

a. NVD or NVG "Lights Out Operations" are approved for MOA's/ATCAA's listed in Attachments 1A – 1E, 3A – 3C, and 6A – 6I.

b. All military units that are signatory to this letter of agreement are eligible to conduct NVD/NVG operations.

c. EADS shall notify the Boston Center MC of airspace schedules involving NVD/NVG.

d. Aircrews shall notify Boston Center when "Lights Out Operations" begin and end.

e. Any of the following events shall terminate "Lights Out Operations":

(1) Conflicting Traffic

(2) Participating NVD/NVG aircraft "Spills Out"

(3) Loss Communications, Aircraft or ATC

(4) Loss of Radar due to Aircraft maneuvers or ATC equipment outage

#### **15. MISCELLANEOUS PROCEDURES:**

a. Interceptors may be scrambled to assist aircraft experiencing in-flight emergencies as determined by ATC. These interceptors shall be afforded the same priority normally associated with an active air defense mission.

b. Boston Center shall forward all Communications Instructions for Reporting Vital Intelligence Sightings (CIRVIS) reports received from any source as quickly as possible to the EADS SOCC MCC using the following telephone numbers:

(1) 587-6311/6312 DSN

(2) (315) 334-6311/6312

(3) Via Land-Line: IA 9269 or 9270, then dial 602 or 603 (HUNTRESS ID)

c. Electronic Counter Measures (ECM) Advisories.

(1) Annual authorizations for ECM/Chaff drops are coordinated between FAA HQ ATC Spectrum Planning (AJW-64) and the Air Combat Command (ACC). ECM/Chaff drops shall be in compliance with annual authorization requirements. Aircrews shall issue ECM/Chaff advisories to ATC prior to conducting approved ECM, or dispensing of approved Chaff.

(2) If Boston Center or terminal radar systems are adversely affected by ECM/Chaff, Boston Center shall request suspension of ECM/Chaff to the aircraft using the terms "*STOP BUZZER*", "*STOP STREAM*", or "*STOP BURST*". If unable to contact the aircraft, ATC shall contact the EADS Air Surveillance Tech specifying the band and channel affected if known, and when feasible the expected duration of suspension.

d. Common Reference Points between Boston Center and EADS are all VORs, VORTACs, and TACANs in Boston Center's Airspace. The closest NAVAID should be used when using Common Reference Points.

## **16. AIR SOVEREIGNTY TESTS (AST) EADS:**

a. EADS:

(1) Airspace Management Branch shall coordinate all NORAD sponsored exercises at least 14 days in advance

(2) Airspace Management Branch shall coordinate all AST's with Boston Center at least five days in advance.

(3) Shall coordinate Transfer of Flight Information of the target aircraft with the appropriate Boston Center Sector.

(4) May control intercepts in SUA/ATCAA, or when intercepts occur outside the 12 NM limit of the United States.

b. Boston Center:

(1) Shall assign the appropriate beacon code to the target aircraft.



(2) May pass limited information (as defined in the Special Instructions (SPINS) regarding the exercise) on target aircraft listed as NOPAR to HUNTRESS Control.

(3) Conduct a Transfer of Flight Information and release target aircraft to ZOOM Control frequency prior to target Initial Point (IP).

**NOTE:** If coordination is NOT accomplished in accordance with 16.b.(3), Boston Center shall instruct the aircraft to contact ZOOM Control prior to the IP.

#### **17. ATTACHMENTS:**

No. 1A thru No. 1E	-	AAC SUA/ATCAA Maps with Coordinates
No. 2	-	Restricted Areas
No. 3A thru No. 3C	-	Additional AAC ATCAAs with Coordinates
No. 4A thru No. 4E	-	VIPER Airspace Group Maps
No. 5A thru No. 5C	-	RANGE Airspace Group Maps
No. 6A thru No. 6I	-	SUA/ATCAA Airspace with Coordinates
No. 7A thru No. 7E	-	AWACS Orbit Airspace
No. 8	-	SUA/ATCAA Computer Fixes & AWACS Correlation Fixes
Appendix A	-	AWACS Advanced Coordination Check-List
Appendix B	-	Visiting MRU Signature Page
Appendix C	-	Visiting Aircrew Signature Page

## **SIGNATURE PAGE**

Boston Center is the originator of this Letter of Agreement. Each command or facility shall have an original signature page to be retained on file. Boston Center shall retain each individual signature page, from each command or facility, and maintain them on file at Boston Center.

Future revisions to this Letter of Agreement will be coordinated in advance with the affected commands and facilities prior to issuance. Once coordination is accomplished and appropriate concurrence has been received, revisions will be distributed with a Boston Center signature only. Revision concurrence records will be retained at Boston Center.

**SIGNATURE ON FILE**

Air Traffic Manager, Boston ARTCC

**SIGNATURE ON FILE**

Deputy Commander, Operations  
Eastern Air Defense Sector

**SIGNATURE ON FILE**

Commander, 552<sup>nd</sup> Operations Group

**SIGNATURE ON FILE**

Commander, 513<sup>th</sup> Air Control Group

**SIGNATURE ON FILE**

Commander, 104<sup>th</sup> Fighter Wing

**SIGNATURE ON FILE**

Commander, 158<sup>th</sup> Operations Group

**SIGNATURE ON FILE**

Commander, 174<sup>th</sup> Operations Group

**SIGNATURE ON FILE**

Air Traffic Manager, Wheeler Sack ARAC

**SIGNATURE ON FILE**

Air Traffic Manager, Syracuse ATCT