



DEPARTMENT OF DEFENSE  
OFFICE OF THE DOD AREA FREQUENCY COORDINATOR  
WHITE SANDS MISSILE RANGE, NEW MEXICO 88002-5526

22 May 2012

DoD-AFC

MEMORANDUM FOR 746th TSS/XP, HOLLOMAN AFB, NM, ATTN: (b) (6)

SUBJECT: Temporary Radio Frequency Authorization (RFA) WS12017 for AEROSTAR Operations by New Mexico State University Physical Sciences Lab (NMSU-PSL) as Sponsored by the 746th TSS/XP.

1. Reference e-mail from Dennis Zaklan, dated Fri 5/11/2012 4:25 PM, subject FW: UAS COA CASE 2012-CSA-40-COA has been Released
2. The following Temporary RFA, **WS12017**, is hereby issued and is authorized through **22 June 2013**. This RFA supersedes all previous versions of WS11006. When scheduling Aerostar operations, please be sure to specify which part or parts is applicable to the mission.

| Line | CLASS | (b) (4) | Expiration Date | Emission Designator | Power | Authorization Number            | Location            | System or Program                     | NOTES      |
|------|-------|---------|-----------------|---------------------|-------|---------------------------------|---------------------|---------------------------------------|------------|
| 1.   | UE    | (b)     | 20130622        | 20M0F8D             | W25   | AR 734302, See Appendix A, Pt 1 | Las Cruces IAP      | Aerostar Command & Control (C&C) Link | a, b, d    |
| 2.   | UE    | (b)     | 20130622        | 20M0F8D             | W25   | AR 734302, See Appendix A, Pt 2 | Las Cruces IAP      | Aerostar Telemetry Datalink           | a, b, d    |
| 3.   | UE    | (b) (4) | 20130622        | 329KF8D             | W10   | AR 106844, See Appendix A, Pt 3 | Las Cruces IAP      | Aerostar Backup (C&C) Link            | a, c, d    |
| 4.   | UE    | (b) (4) | 20130622        | 329KF8D             | W10   | AR 106844, See Appendix A, Pt 3 | Las Cruces IAP      | Aerostar Backup (C&C) Link            | a, c, d    |
| 5.   | UE    | (b)     | 20130622        | 20M0F8D             | W25   | AR 734302, See Appendix A, Pt 1 | WSMR                | Aerostar Command & Control (C&C) Link | e, f       |
| 6.   | UE    | (b)     | 20130622        | 20M0F8D             | W25   | AR 734302, See Appendix A, Pt 2 | WSMR                | Aerostar Telemetry Datalink           | e, f       |
| 7.   | UE    | (b) (4) | 20130622        | 329KF8D             | W10   | AR 102064, See Appendix A, Pt 3 | WSMR                | Aerostar Backup (C&C) Link            | e, g       |
| 8.   | UE    | (b) (4) | 20130622        | 329KF8D             | W10   | AR 102064, See Appendix A, Pt 3 | WSMR                | Aerostar Backup (C&C) Link            | e, g       |
| 9.   | UE    | (b)     | 20130622        | 20M0F8D             | W25   | AR 683216, See Appendix A, Pt 1 | Fort Bliss/McGregor | Aerostar Command & Control (C&C) Link | h, i       |
| 10.  | UE    | (b)     | 20130622        | 20M0F8D             | W25   | AR 683216, See Appendix A, Pt 2 | Fort Bliss/McGregor | Aerostar Telemetry Datalink           | h, i       |
| 11.  | UE    | (b) (4) | 20130622        | 329KF8D             | W10   | AR 106844, See Appendix A, Pt 3 | Fort Bliss/McGregor | Aerostar Backup (C&C) Link            | h, j       |
| 12.  | UE    | (b) (4) | 20130622        | 329KF8D             | W10   | AR 106844, See Appendix A, Pt 3 | Fort Bliss/McGregor | Aerostar Backup (C&C) Link            | h, j       |
| 13.  | UE    | (b)     | 20130622        | 20M0F8D             | W25   | AR 734302, See Appendix A, Pt 1 | Playas Airstrip     | Aerostar Command & Control (C&C) Link | a, b, d, k |
| 14.  | UE    | (b)     | 20130622        | 20M0F8D             | W25   | AR 734302, See Appendix A, Pt 2 | Playas Airstrip     | Aerostar Telemetry Datalink           | a, b, d, k |

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| Line | CLASS | (b) (4), | Expiration Date | Emission Designator | Power | Authorization Number            | Location         | System or Program                     | NOTES      |
|------|-------|----------|-----------------|---------------------|-------|---------------------------------|------------------|---------------------------------------|------------|
| 15.  | UE    | (b) (4), | 20130622        | 329KF8D             | W10   | AR 106844, See Appendix A, Pt 3 | Playas Airstrip  | Aerostar Backup (C&C) Link            | a, c, d, k |
| 16.  | UE    | (b) (4), | 20130622        | 329KF8D             | W10   | AR 106844, See Appendix A, Pt 3 | Playas Airstrip  | Aerostar Backup (C&C) Link            | a, c, d, k |
| 17.  | UE    | (b)      | 20130622        | 20M0F8D             | W25   | AR 734302, See Appendix A, Pt 1 | Grant County A/P | Aerostar Command & Control (C&C) Link | a, b, d    |
| 18.  | UE    | (b)      | 20130622        | 20M0F8D             | W25   | AR 734302, See Appendix A, Pt 2 | Grant County A/P | Aerostar Telemetry Datalink           | a, b, d    |
| 19.  | UE    | (b) (4), | 20130622        | 329KF8D             | W10   | AR 106844, See Appendix A, Pt 3 | Grant County A/P | Aerostar Backup (C&C) Link            | a, c, d    |
| 20.  | UE    | (b) (4), | 20130622        | 329KF8D             | W10   | AR 106844, See Appendix A, Pt 3 | Grant County A/P | Aerostar Backup (C&C) Link            | a, c, d    |

3. NOTES:

- a. User must notify DoD-AFC WSMR, at least three work days prior to operation, via e-mail to [wsmrdodafc@conus.army.mil](mailto:wsmrdodafc@conus.army.mil), AND (b) (6). DoD-AFC will then deconflict operating frequencies with other test ranges in area. A Cease Emission POC must be identified and be available during operation.
- b. This assignment does not specifically represent the Aerostar C-Band sub-systems. This assignment is an (b) (2), (b) (4), band assignment for operations within 100 km of WSMR. However, the WSMR DoD-AFC office will allow operations at this frequency provided the scheduling requirements from Note 3.a, above, are followed. Furthermore, the WSMR DoD-AFC office will submit a new proposal to expand the operations of this band assignment, throughout the entire WSMR DoD-AFC Area of Responsibility (AOR); the State of New Mexico, the State of Texas west of 104W, and the States of Utah and Colorado between 108W and 111W.
- c. This assignment does not specifically represent the Aerostar backup Command and Control (C&C) links. This assignment is a USA-wide assignment for an Army Radar system. Since the maximum power allowed by the assignment is 100 Watts, and the maximum bandwidth allowed is (b) (4), (b), this office will allow operations at these two frequencies provided the scheduling requirements from note 3.a, above, are followed.
- d. Operations must be in compliance with the FAA Certificate of Authorization (COA).
- e. For operations within WSMR airspace, user must schedule airborne operations as part of a WSMR range mission. Ground checkouts may be coordinated by contacting WSMR Frequency Control, 575-678-1193, at least one workday prior to operation. A cease emission POC must be available during all operation including checkouts.
- f. This assignment does not specifically represent the Aerostar C-Band sub-systems. This assignment is an (b) (2), (b) (4), band assignment for operations at WSMR. However, the WSMR DoD-AFC office will allow operations at this frequency provided the scheduling requirements from Note 3.e, above, are followed.

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- g. This assignment does not specifically represent the Aerostar backup C&C links. However, since the maximum power allowed by the assignment is 100 Watts, and the maximum bandwidth allowed is (b) (2), (b) (7)(C), this office will allow operations at these two frequencies provided the scheduling requirements from note 3.e, above, are followed.
  - h. For operations at Fort Bliss/McGregor Range, User must schedule as part of a McGregor range scheduled mission or by contacting Fort Bliss Installation Spectrum Manager (ISM) at (915) 568-1138/4886, at least 72 hours prior to operation.
  - i. This assignment does not specifically represent the Aerostar C-Band sub-systems. This assignment is an (b) (2), (b) (4), band assignment for operations at Fort Bliss, McGregor Range. However, the WSMR DoD-AFC office will allow operations at this frequency provided the scheduling requirements from Note 3.h, above, are followed. A Cease Emission POC must be identified and be available during operation.
  - j. This assignment does not specifically represent the Aerostar backup C&C links. This assignment is a USA-wide assignment for an Army Radar system. Since the maximum power allowed by the assignment is 100 Watts, and the maximum bandwidth allowed is (b) (2), (b) (7)(C), this office will allow operations at these two frequencies provided the scheduling requirements from note 3.h, above, are followed.
  - k. In addition to the coordinating with the DoD-AFC (WSMR), as described in Note 3.a, above, the user must coordinate with Playas Training and Research Center (PTRC) operations personnel, Chris Robertson, (505) 924-7040 (O) or (505) 239-7759 (C), or Jim Kvamme (520) 678-0373 (C). A Cease Emission POC must be identified and be available during operation.
4. NMSU-PSL POC is UAS Operation Mgr, Mr. Tim Lower, (575) 646-9205 (O), or (717) 752-0092 (C). Alternate POC is Mr. Dennis Zaklan, 575-646-9417 (O), or 575-635-1030 (C).
  5. This temporary RFA supports the transitioning of the Aerostar UAS from a DoD asset to an NMSU-PSL asset, NMSU-PSL must submit a Special Temporary Authorization (STA) request or a full license request to the FCC in order to obtain use of this frequency, in a non-federal capacity. Please notify this office with any additions or deletions.
  6. POC for this assignment is the undersigned at (b) (6)

(b) (6)

CF:

WSMR Frequency Manager  
WSMR Frequency Control  
Fort Bliss Frequency Manager  
Playas Operations (Mr. Robertson/Mr. Kvamme)  
GAFC (Mr. Higdon)

# APPENDIX A – DETAILS OF AEROSTAR SUB-SYSTEMS

## PART ONE - AEROSTAR UAV C&C GROUND SYSTEM.

005. UE  
010. N  
102A. AR 734302 – WSMR and New Mexico  
102B. AR 683216 – Fort Bliss/McGregor Only  
110. M4550  
113. FAD  
114. 20MOF8D  
115. W25  
130. 3  
**140. 20120623**  
**141. 20130622**  
144. U  
200. USAF  
203. WS  
207. 46TGPSL UAV  
209. WSMR  
300. NM  
300/2. NM  
300/3. NM  
300/4. NM  
300/5. NM  
301. LAS CRUCES IAP  
301/2. WHITESANDS MISSILE RANGE  
301/3. FORT BLISS – MCGREGOR RANGE  
301/4. PLAYAS AIRFIELD  
301/5. GRANT COUNTY A/P  
303. 321738N1065456W  
303/2. 330000N1063000W  
303/3. 321500N1060000W  
303/4. 315613N1083214W  
303/5. 323800N1080900W  
340. C,B50S4450D  
354. PARABOLIC  
357. 31  
359. 3  
362. T  
363. V  
400. NM  
400/2. NM  
400/3. NM  
400/4. NM  
400/5. NM  
401. LAS CRUCES IAP  
401/2. WHITESANDS MISSILE RANGE

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PART ONE (CONT)

401/3. FORT BLISS – MCGREGOR RANGE  
401/4. PLAYAS  
401/5. GRANT COUNTY A/P  
403. 321738N1065456W  
403/2. 330000N1063000W  
403/3. 321500N1060000W  
403/4. 315613N1083214W  
403/5. 323800N1080900W  
406. 100  
406/2. 100  
406/3. 65  
406/4. 45  
406/5. 50  
440. C,B50S5044D  
454. BLADE  
457. 2  
502. AEROSTAR UAV COMMAND AND CONTROL SYSTEM.  
503. SCHEDULING REQUIRED. NIB.  
520. REFERENCE NOTES 3a THROUGH 3g, ABOVE.

PART TWO – AEROSTAR TM DOWNLINK - SAME AS PART ONE EXCEPT:

005. UE  
110. M4900  
113. MOEA  
114. 20MOF8D  
115. W25  
306. 100  
306/2. 100  
306/3. 65  
306/4. 45  
306/5. 50  
340. C,B50S5044D  
354. BLADE  
357. 31  
362. ND  
363. V  
406. \$  
440. C,B50S4450D  
454. PARABOLIC  
457. 2  
502. AEROSTAR UAV TELEMETRY DATA LINK.  
504. FLL=000,FLT=175

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PART THREE - SAME AS PART ONE EXCEPT:

005. UE

102A. AR 102064 – WSMR Only

102B. AR 106844 – USA-Wide

110A. M434.525

110B. M434.680

113. FAD

114. 329KF8D

115. W10

340. C, BEREJIKAA00031-449

341. 1

354. ROD

357. 2

362. ND

363. V

440. C, BEREJIKAA00031-449

454. BLADE

457. 2

502. AEROSTAR BACKUP UAV COMMAND AND CONTROL SYSTEM.