tailBeacon

STC Service Bulletin

Software Upgrade to ADS-B 1.5.1

STC Service Bulletin
UAV-1003174-002 Rev A

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Patent uavionix.com/patents

1 Revision History

Revision	Date	Comments
A	8/12/2020	Initial release

2 Warnings / Disclaimers

uAvionix is not liable for damages arising from the use or misuse of this product.

This equipment is classified by the United States Department of Commerce's Bureau of Industry and Security (BIS) as Export Control Classification Number (ECCN) 7A994.

These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. government or as otherwise authorized by U.S. law and regulations.

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4 Planning Information

4.1 Distribution / Eligibility

The Accomplishment Instructions contained in Section 8 may only be performed by appropriately authorized personnel.

4.2 Applicability

This Service Bulletin applies to AML STC SA04427CH for the uAvionix tailBeacon UAV-1002183-001 with ADS-B software release 1.4.0 or previous installed. Use Table 4-1 Applicability to determine applicability of the software update.

P/N Marking	Applicability
UAV-1002183-001 MOD 0	Verify by procedure
UAV-1002183-001 MOD 1	Verify by procedure
UAV-1002183-001 MOD 2 or greater	Does not apply

Table 4-1 Applicability

Parts identified above as “Verify by procedure” may have ADS-B software release 1.4.0 or previous installed. To determine what version of software is installed, either:

- Use the “skyBeacon Installer Application” on iOS or Android, and navigate to the “Monitor” tab. For details reference “tailBeacon TSO User and Installation Guide” UAV-1002185-001.
- Use the “Beacon Firmware Update Tool” on Windows. For details reference Section 7.1 of this document, Steps 1 through 7.

Parts identified above as “Does not apply” do not need to perform the procedures described in this Service Bulletin.

4.3 Description

This Service Bulletin provides instructions for loading uAvionix tailBeacon UAV-1002183-001 with updated ADS-B software release 1.5.1.

4.4 Compliance

This Service Bulletin is mandatory at the next scheduled service interval. It improves perceived ADS-B performance in fringe and non-radar environments. For a detailed list of changes, please reference “TSO Service Bulletin tailBeacon Upgrade to ADS-B 1.5.1” UAV-1004407-002.

4.5 Approval

The software update described in this Service Bulletin is FAA approved.

4.6 Time Required

Up to 30 minutes is required to perform this update procedure.

4.7 Weight and Balance

No change.

4.8 Electrical Load Data

No change.

4.9 Software Accomplishment

No change.

4.10 Applicable Publications

The following documents are applicable to the ADS-B software release 1.5.1.

Title	Part Number	Revision
tailBeacon TSO User and Installation Guide	UAV-1002185-001	E
tailBeacon Instructions for Continued Airworthiness and Maintenance Manual	UAV-1002513-001	B
tailBeacon STC Installation Manual	UAV-1002514-001	C
tailBeacon Flight Manual Supplement	UAV-1002512-001	B

5 Required Items

The following items are required to perform the update:

1. A Windows PC (Windows 7 or higher) with Wi-Fi networking
2. uAvionix “Beacon Firmware Update Tool” UAV-1002767-001 application for Windows, version 1.1.0 or higher
3. The following firmware update file(s):

Item	Filename	SHA1 Hash
ADS-B	UAV-1001759-007-skyBeaconCertified-1_5_1-646aaab.uav	acdcf9da b0e63517 b64dd6bc c3312ff1 59e92481

Table 5-1 Firmware Update Files

uAvionix software and firmware update files are available for download from the uAvionix Support website at no charge, at:

https://uavionix.com/support/tailbeacon/

6 Update Notes

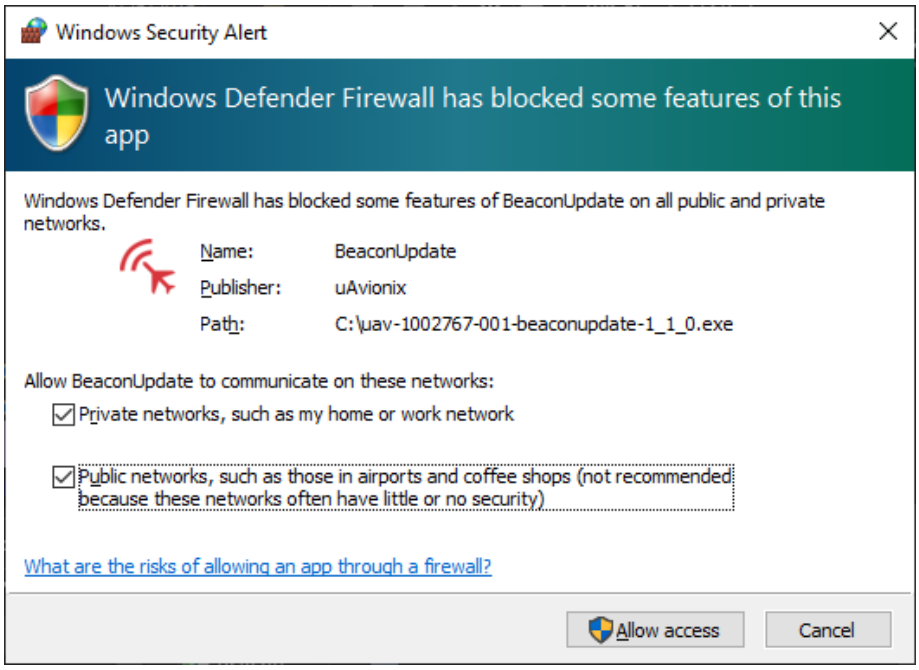
All tailBeacon configuration settings will be preserved during this update procedure.

7 Update Procedure

Ensure you are running a previous version of ADS-B software. Specifically, your tailBeacon should currently be running ADS-B version 1.4.0 or previous.

7.1 Execute the Update Procedure

1. Run the uAvionix “Beacon Firmware Update Tool” v1.1.0 or higher (e.g. BeaconUpdate-v1.1.0.exe) on the Windows PC.
2. When first run, Windows may ask for permission to communicate on the network. You must allow the tool to communicate. Check the boxes for both “Private networks” and “Public networks” as shown below, and select “Allow access”.



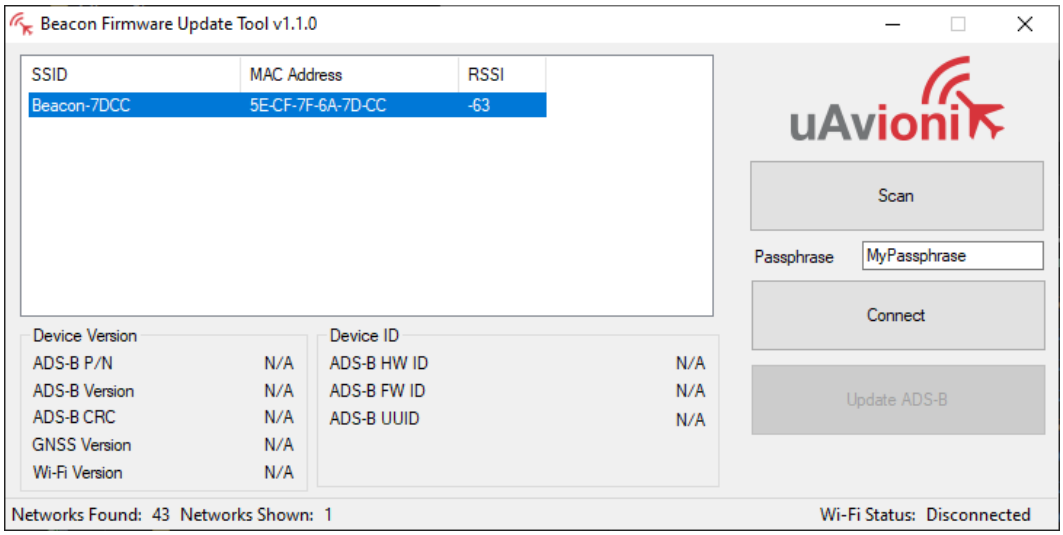
3. tailBeacon does NOT need to be removed from the aircraft, if installed. Apply aircraft, ground, or bench power to the tailBeacon, as appropriate. When installed in an aircraft, this will require turning on power to the position light. Ensure the tailBeacon is receiving power by verifying the tailBeacon’s white position light is illuminated.

CAUTION: Do NOT turn off power to the tailBeacon during the update process.

4. tailBeacon must be located near the Windows PC to ensure proper wireless connectivity.

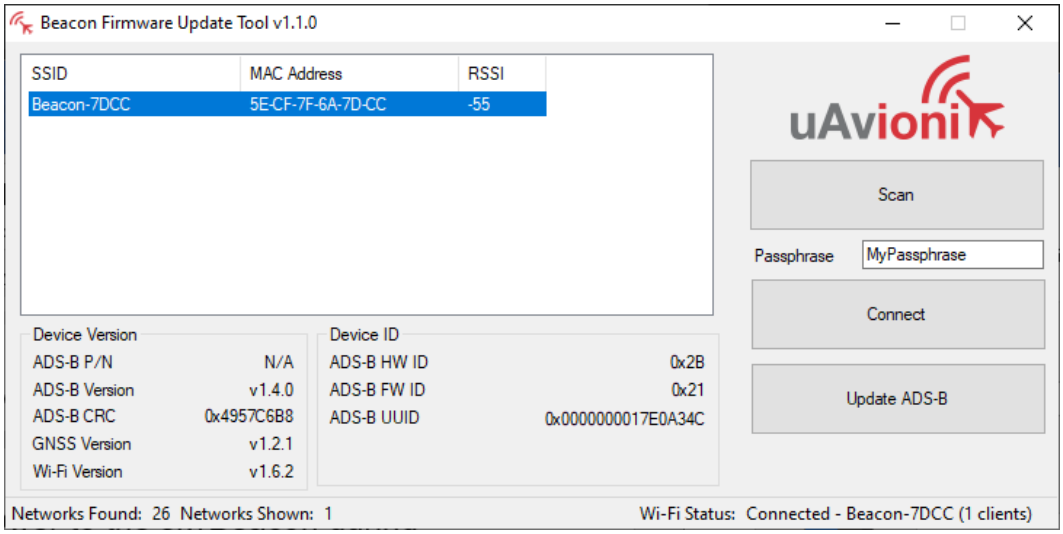
CAUTION: Direct line of sight and less than 20 feet of separation between PC and tailBeacon are recommended.

5. Press “Scan” in the tool. A list of uAvionix Beacon products will populate the list in the upper left. Select the appropriate tailBeacon based on the known SSID of the device, as noted on the card included with the box or your maintenance records.



6. Enter the Wi-Fi Passphrase noted on the card included with the box or your maintenance records.

7. Press “Connect”.



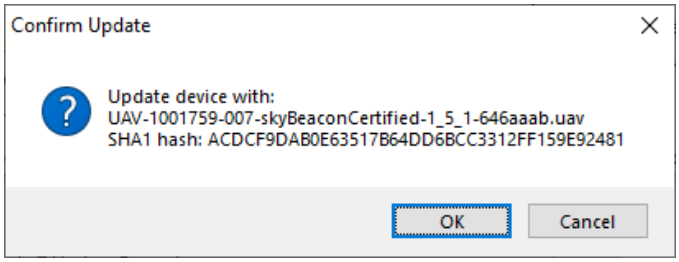
8. Observe the status bar on the bottom of the window. It should indicate that it is connected to the Beacon Wi-Fi network. Once connected, review the Device Version information. Ensure that the device is currently running ADS-B Version v1.4.0 or previous. The ADS-B P/N field will display N/A prior to updating. If already running v1.5.1, **do not continue** with these instructions.

9. Ensure all other Wi-Fi devices are disconnected from the tailBeacon. For example, disconnect any iOS or Android devices that may automatically connect. The status bar will indicate how many Wi-Fi clients (devices) are connected to the tailBeacon, and should indicate 1 client.

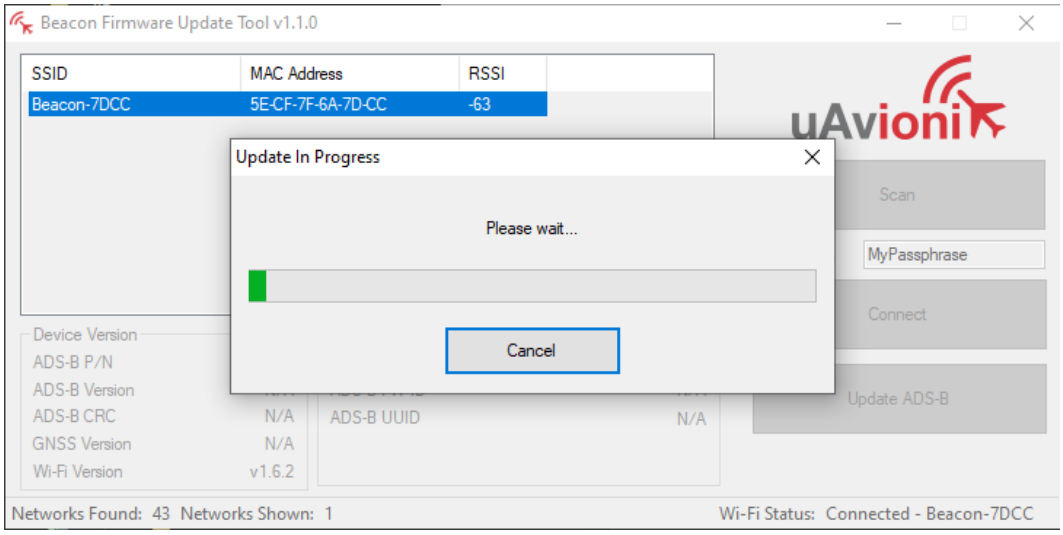
   CAUTION: Any additional Wi-Fi devices connected to the tailBeacon may cause the update to fail.

10. Press “Update ADS-B”. A file dialog will appear. Select the file appropriate for the ADS-B item as detailed in Table 5-1 Firmware Update Files. In this case the file is “UAV-1001759-007-skyBeaconCertified-1_5_1-646aaab.uav”. Press “Open”.

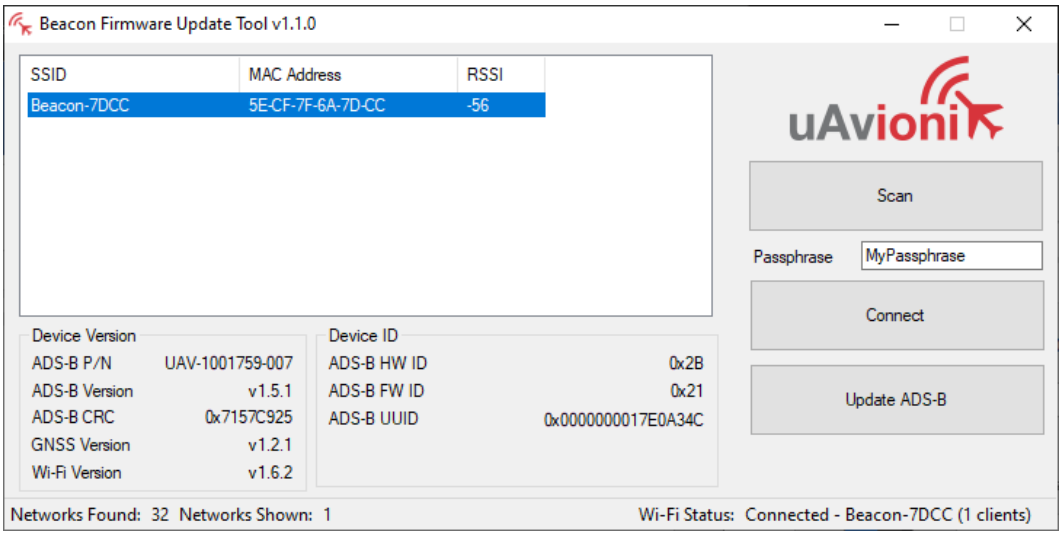
11. A dialog will appear to confirm the file name and integrity. Review the filename and SHA1 hash against the data in Table 5-1 Firmware Update Files. Press “OK” if correct.



12. The update will commence. Wait for the process to complete.



13. On completion, the progress dialog will close and the tool main screen will show the updated version and CRC information.



14. Complete the Post-Accomplishment Verification instructions in Section 8.

15. After verification, remove power from the tailBeacon.

8 Post-Accomplishment Verification

Verify the software load by performing the following procedure:

1. In the “Beacon Firmware Update Tool”, verify the part number, software version and CRC matches those shown in Table 8-1 Accomplishment Versions.

Item / Part	Version	CRC
ADS-B UAV-1001759-007	v1.5.1	0x7157C925

Table 8-1 Accomplishment Versions

If any post-accomplishment check fails, please contact uAvionix support, as guided in Section 10.

9 System Checkout

Perform the post-installation checks procedure as described in “tailBeacon TSO User and Installation Guide” UAV-1002185-001 Section 10.3.

10 Support

For additional questions or support please visit:

http://www.uavionix.com/support/

11 Maintenance Record

When post-accomplishment verification and system checkout is completed, make appropriate entries in the Aircraft Maintenance Log Book.

Maintenance Record

Service Bulletin UAV-1003174-002 Rev A for tailBeacon UAV-1002183-001, AML STC SA04427CH, has been complied with.

NOTE: A copy of this form must be sent to maintenance@uavionix.com.

Date:	By:
Aircraft Information	
Make:	Model:
Serial Number:	Registration Number:
tailBeacon Information	
Serial Number:	Wi-Fi SSID:
Customer Information	
Name:	
Email:	
Telephone:	
Address:	