



AV-30-E

Service Bulletin

Software Upgrade to 3.0.1



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uAvionix Corporation
Bigfork, MT

www.uavionix.com
support@uavionix.com

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Patent uavionix.com/patents

1 Revision History

Revision	Date	Comments
A	1/8/2025	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.

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4 Planning Information

4.1 Applicability

This Service Bulletin applies to uAvionix AV-30-E UAV-1004035-001, UAV-1004035-002, and 1004035-003 with operating software release 3.0.0 or earlier.

All AV-30 (AI, DG, MFD, or CDI) must be connected to pitot static if not already connected. Use Table 4-1 to determine applicability of the software update.

Hardware P/N Marking	Applicability
UAV-1004035-001	Verify by procedure
UAV-1004035-002	Verify by procedure
UAV-1004035-003	Verify by procedure

Table 4-1 Applicability

Parts identified above as “Verify by procedure” may have software release 3.0.0 or previous installed. To determine what version of software is installed:

1. Push and hold center rotary knob while powering up unit until the uAvionix startup screen appears.



2. Push and release the left button under the MENU until the “INSTALL / ROT TO SEL” appears.
3. Rotate knob until you see “SW VERSION”

4. If the version displayed is 3.0.0 or earlier proceed with this Service Bulletin.

4.2 Description

This Service Bulletin provides instructions for loading uAvionix AV-30-E UAV-1004035-001, UAV-1004035-002 and UAV-1004035-003 with updated software release 3.0.1.

This software release (3.0.1) includes the following changes:

- Added transponder IDENT button to non-reversionary pages
- Improved attitude stability. Note: gyro Cal required; see section 9.8
- Fixed bug that could cause configuration to reset to defaults
- Swapped position of brightness adjust menu buttons for UI consistency
- Changed HDG BUG push-set menu label to TRK BUG when referenced to GPS track
- Fixed bug when performing multipoint airspeed trim in MPH or KPH
- Improved rounding of transponder pressure altitude display
- Improved error handling of improperly configured serial ports

4.3 Time Required

For software only update in the field, up to 90 minutes is required to perform this update procedure. Additional time may be required if pitot and static connections are not installed.

4.4 Weight and Balance

No change

4.5 Electrical Load Data

No change

4.6 Applicable Publications

The following documents are applicable to the software release 3.0.1.

Title	Part Number	Revision
Service Bulletin UAV-1005757-010	Rev A	8

AV-30-E Installation Manual	UAV-1004234-001	K
AV-30-E Pilot's Guide	UAV-1004233-001	L

5 Required Items

There are two methods available to perform the update. The first involves a Windows PC and serial port, the second uses the optional AV-Link-E device over Wi-Fi.

Both methods require you to download the software update file below.

Filename	Version	SW Part Number	Checksum	SHA1 Hash
UAV-1004037-013-av30e-3_0_1-75cd8fd.bin	3.0.1	UAV-1004037-013	6B1EAA66	06ecc12dd7c47a650eed9b0615bf00c508ea47c2

Table 5-1 Software Update Files

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

<https://uavionix.com/articles/av-30-e-service-bulletin-software-upgrade-3-0-1/>

Click on the link in the section **AV-30-E v3.0.1 Firmware** and save it to your PC or mobile device.

Ensure the software and any necessary update tools have been downloaded prior to visiting the aircraft. An internet connection is required to download the software and application. An internet connection is not required to perform the update.

5.1 Windows PC with Serial Port

The following items are required to perform the update when using a Windows PC with serial cable:

Quantity	Description
1	Windows PC running Windows 7 or later
1	Available serial port or appropriate USB to RS-232 converter Examples: FTDI, Parallax 28030, Sabrent CB-DB9P or similar (See https://uavionix.com/support/av-30-e-support/ for the recommended USB to Serial Cable)
1	Female DB-9 with solder or crimp terminals
2	Female terminals suitable for the installed DB-15
4'	22-24 AWG wire

1	uAvionix AV Update Tool: UAV-1005199-001 (Windows application) version 2.0.1 or newer
1	AV-30-E Software as shown in Table 5-1 Software Update Files

The uAvionix AV Update Tool is available to download alongside the 3.0.1 Firmware, or is available to download directly at https://uavionix.com/downloads/AV-30-C/UAV-1005199-001-AvUpdate-2_0_1-signed.exe. Download it to your PC.

5.2 AV-Link-E

The following items are required to perform the update when using AV-Link-E over Wi-Fi:

Quantity	Description
1	PC or mobile device
1	uAvionix AV-Link-E (UAV-1004413-001 or UAV-1004414-001) running software version 0.3.5 or later.
1	AV-30-E Software as shown in Table 5-1 Software Update Files

AV-Link-E software version 0.3.5 or later is required. The uAvionix software update files are available for download from the uAvionix Support website at no charge, at:

<https://uavionix.com/articles/av-link-e-service-bulletin-software-upgrade-0-3-5/>

Follow the instructions in AV-Link-E Service Bulletin Upgrade to 0.3.5 UAV-1006731-006 Rev A.pdf to update the AV-Link-E to version 0.3.5.

6 Update Notes

All AV-30-E configuration settings will be preserved during the update procedure. However, please take note of all settings before performing the update and verify settings are correct after the update has been applied.

Ensure you are running a previous version of AV-30-E software. Specifically, your AV-30-E should currently be running 3.0.0 or earlier. If updating from a version prior to 3.0.0 it is not necessary to apply all prior updates in sequence. This update can be used from any prior version.

There are two approved methods for update of the AV-30-E. The AV-30-E can be updated using either a traditional direct serial connection or the AV-Link-E can be used to update the AV-30-E via wireless interface. Either method is suitable, the choice is installer preference or equipment availability. The AV-Link-E can be removed after update.

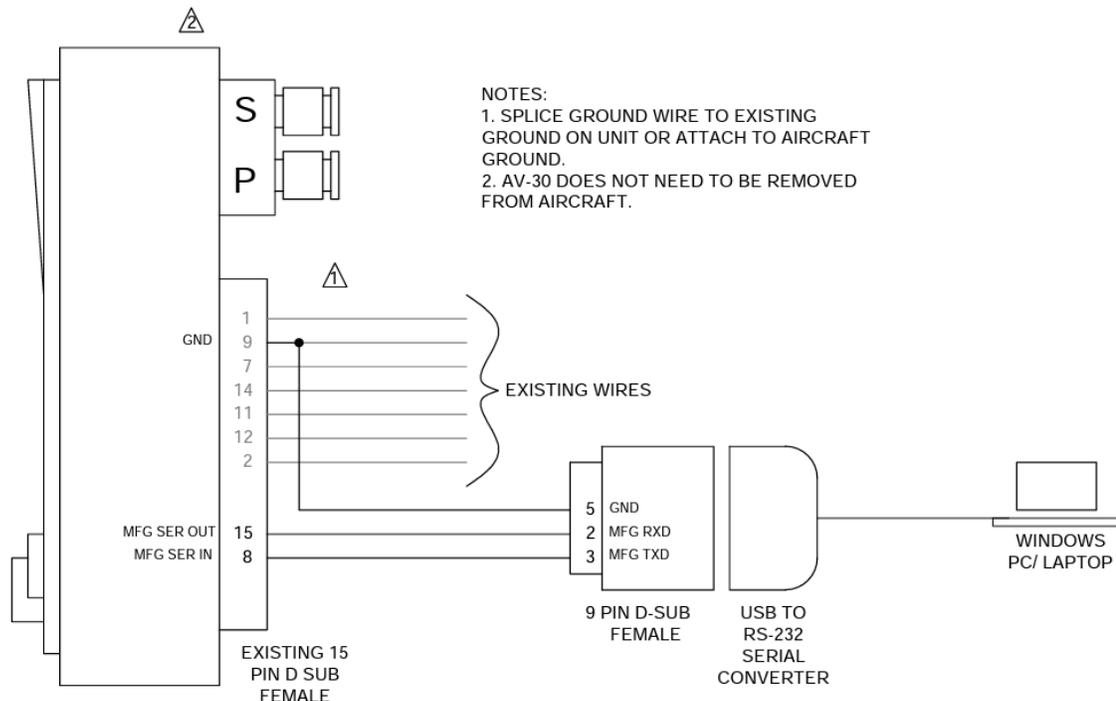
If performing the update using PC serial connection, proceed to Section 7.

If performing the update using the AV-Link-E, first verify that the AV-LINK-E is running software version 0.3.5 or later then proceed to Section 8. If the AV-Link-E is running version 0.3.4 or earlier, update the AV-Link-E to version 0.3.5 before proceeding. Refer to section 5.2 for links to AV-Link-E version 0.3.5 upgrade files.

7 PC Serial Update

7.1 Serial Update Preparation

1. Add wires to pins 8 and 15 to the AV-30-E harness if not already connected. Add an additional ground wire to either the existing ground from the AV-30-E harness or ground the new wire directly to aircraft ground.
2. Connect the new wires to the DB-9 connector as shown below. Upon completion of wiring, connect the new assembly to an available serial port or USB serial adapter.

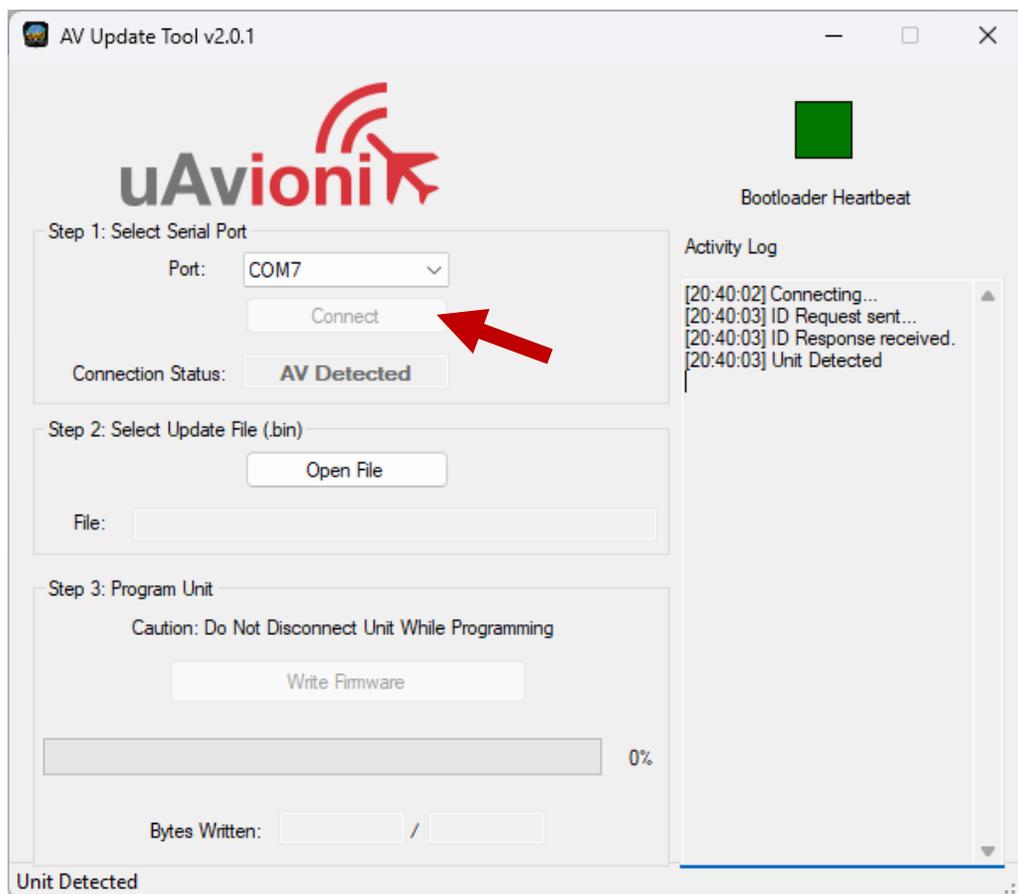


Note: AV-Link-E must not be installed if performing an update using the PC serial update procedure.

7.2 Serial Update Procedure

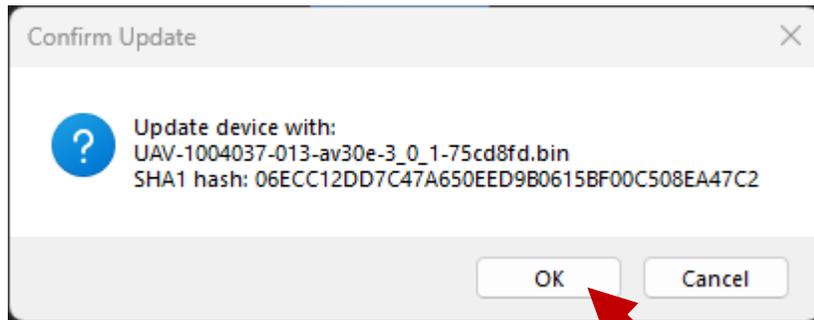
3. Connect the AV-30-E to the Windows PC through the DB-9 connection previously installed in Section 7.1.

4. Apply power to the AV-30-E. Do not interrupt power during the update process.
5. Launch the previously downloaded AV Updater application.
6. On the AV Updater tool, select the appropriate COM Port from the dropdown menu and click “Connect”.

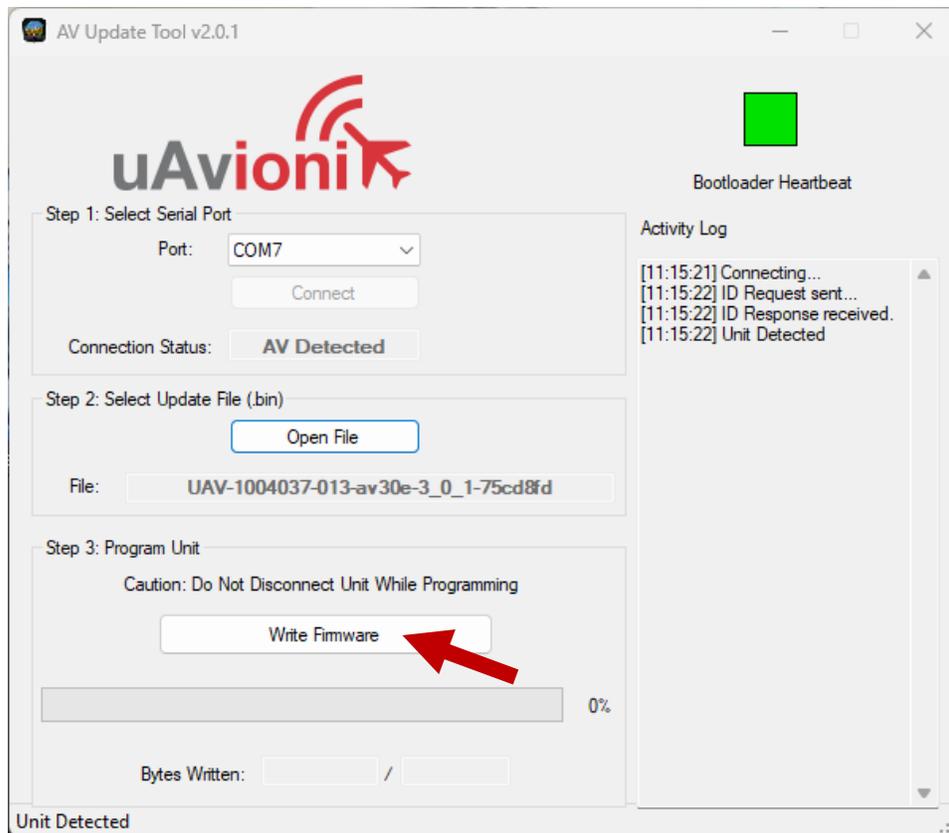


7. Proper connection has been made when the message “Unit Detected” has appeared on the bottom left corner of the AV Updater Tool. The screen on the AV-30-E will go black for the remainder of this procedure.
8. If “Unit Detected” does not appear, contact uAvionix Support for additional guidance.
9. Once proper connection has been made, select the firmware file to upload to the AV-30-E by clicking “Open File” and selecting the

previously downloaded firmware file as identified in Table 5-1 Software Update Files. A confirmation dialog will appear with the filename and a calculated SHA1 hash. To confirm integrity of the file, compare the displayed SHA1 hash to that in Table 5-1 Software Update Files. Note that the hash is not case sensitive.



10. When confirmed, press OK and the main dialog will re-appear.



11. Select "Write Firmware" and then "OK" to begin the upload.

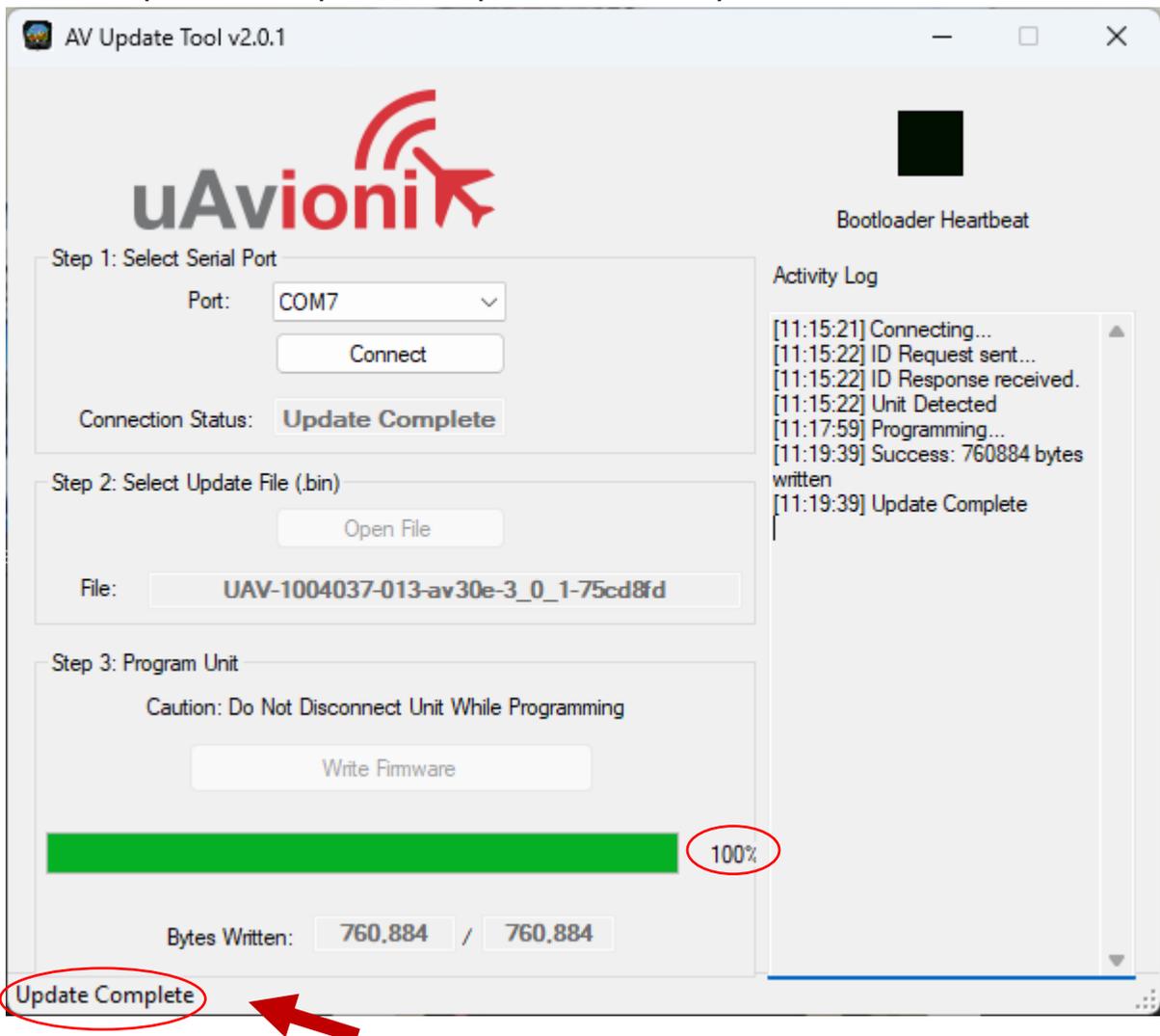


DO NOT POWER OFF THE AV-30-E OR CLOSE THE UPDATER TOOL UNTIL THE UPDATE IS COMPLETE.



THE SCREEN OF THE AV-30-E WILL GO BLACK DURING THE UPDATE. THIS BEHAVIOR IS NORMAL AND THE STARTUP SCREEN WILL APPEAR AFTER REBOOTING.

12. When the AV Update Tool displays “100%” and the lower status reads “Update Complete” the process is complete.



13. The unit will automatically restart. Upon restart of the unit, verify the startup screen indicates the updated software version.

14. If the unit was removed to perform the update it can now be reinstalled as per the installation manual.
15. Any new wiring added for the update process should be properly secured.
16. Following the completion of the update, follow Section 9 to perform required post-installation procedures.

8 Update via AV-Link-E

The AV-Link-E is a wireless bridge that extends the functionality of the AV-30-E. One of the functions AV-Link-E provides is the ability to update software on the AV-30-E through a web interface. AV-Link-E software version 0.3.5 is required for this update. Before proceeding, verify that the AV-Link-E is running software version 0.3.5 or later. If the AV-Link-E is running version 0.3.4 or earlier, do not proceed. Update the AV-Link-E to version 0.3.5 according to the instruction links in Section 5.2.

8.1 Preparation for Update via AV-Link-E

If AV-Link-E is already installed in the aircraft, proceed to Section 8.2.

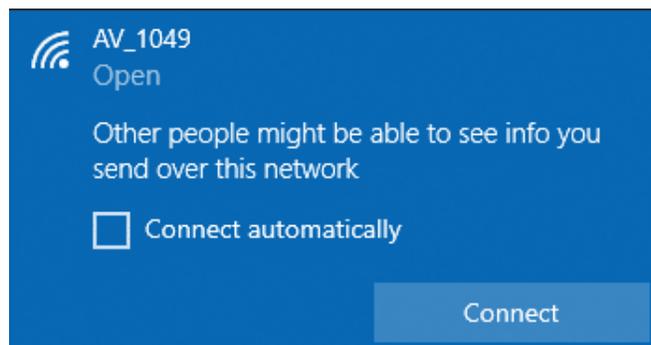
If AV-Link-E is available but not installed, follow the installation procedure as described in *AV-30-E Installation Manual UAV-1004234-001 Rev K* (or newer), Section 10.1.

8.2 Procedure for Update via AV-Link-E

After the AV-Link-E and AV-30-E have been installed, AV-30-E firmware updates can be performed using the AV-Link-E web interface. The web interface is accessible through any PC or mobile device. Ensure the PC or device has the AV-30-E software listed in Table 5-1 Software Update Files downloaded and available.

The following instructions show the update procedure when using a Windows PC. Apply the same procedures, modified as necessary, when using an alternate installation PC or device.

1. Apply power to the AV-30-E and AV-Link-E. Do not interrupt power during the update process.
2. If using an Apple iPhone or iPad, you must put the device into Airplane Mode, then turn on Wi-Fi only.
3. Connect a PC to the AV-Link-E Wi-Fi Network. This will be displayed as AV_#### where #### will be 4 random characters ranging from 0-8 and A-F.



4. In a Web Browser (such as Google Chrome) navigate to the AV-Link-E home page via the following URL:

192.168.5.1

A page similar to shown on the right should appear.

5. At the bottom of the page select *AV Display Software Update*

The screenshot shows a web browser window with the title 'AVLink Main Device Page' and the address bar displaying '192.168.5.1'. The page content is organized into several sections:

- Settings**: A table with the following data:

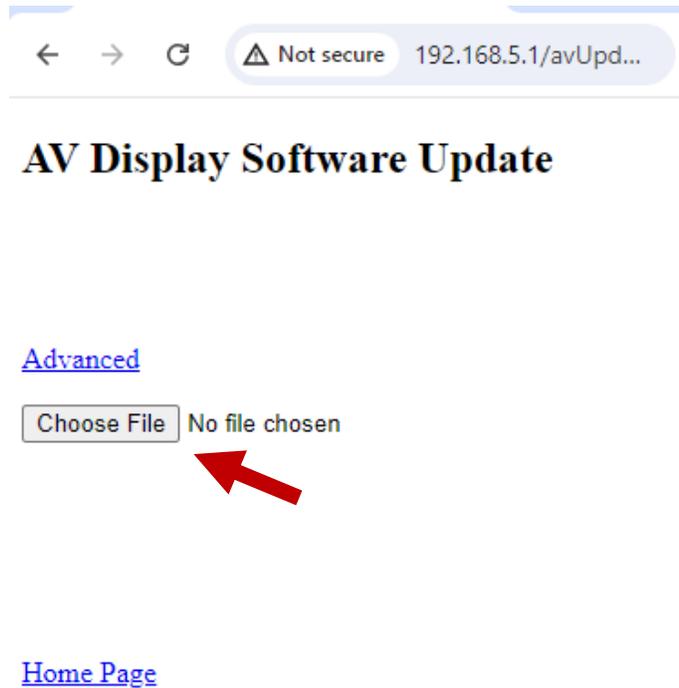
Software	UAV-1007753-001-0.3.5-AVLink
AV-Link SSID	AV_D7D5
Clients	1
ADS-B Receiver	Not assigned Disabled (More Info)
- Status**: A table with the following data:

ICAO Address	000000
Callsign	-----
GPS Fix	None
GPS Satellites	0
Position	---
Altitude (GNSS)	---
Altitude (Baro)	---
- Device Information**: A table with the following data:

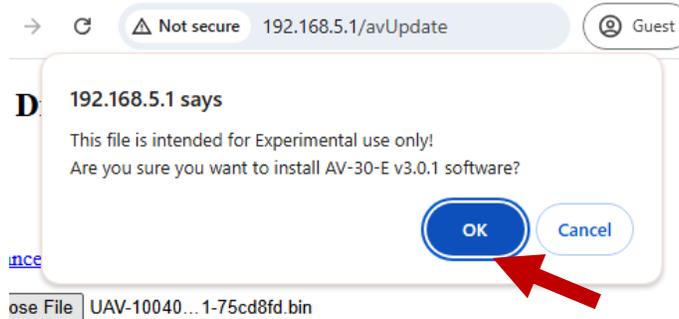
Hardware	Version	Serial Number
AV-Link	0.3.5	194279037130709

At the bottom of the page, there are four links: [Wi-Fi Settings](#), [Statistics](#), [AV Display Software Update](#), and [AV-HSI Update](#). A red arrow points to the [AV Display Software Update](#) link.

6. On the AV Display Software Update page select *Choose File* then select the previously downloaded AV-30 firmware.



7. Once the file has been selected you will be prompted with "Are you sure you want to install AV-30-E v3.0.1 software?" Press *OK* to proceed.



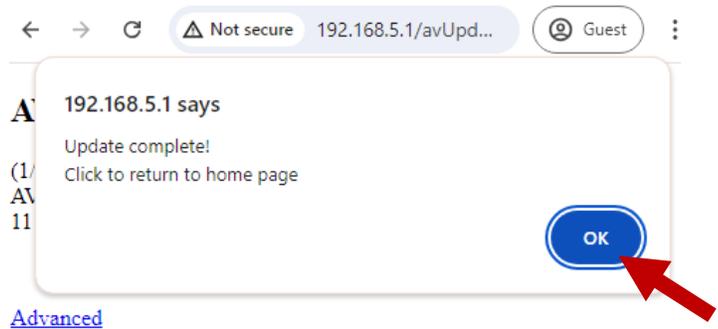
The screen on the AV-30-E will go black during the update.

Apple iPhones and iPads will show 100% on the status bar very quickly but the update is not complete until you see the “Update complete” message.

DO NOT power off the unit or close the web browser until the update is complete.

The AV-30-E will restart when complete and the AV-Link-E home page will be displayed in the web browser.

You should expect the update to take less than 5 minutes. If it takes longer, please call uAvionix technical support for assistance.



8. Power cycle the AV-30 and AV-Link. Reconnect to the AV-Link WI-FI, load 192.168.6.1, and then verify the startup screen indicates the updated software version.

The screenshot shows a web browser window titled "AVLink Main Device Page" with the address bar displaying "192.168.5.1". The page content is organized into three main sections:

- Settings:** A table with the following data:

Software	UAV-1005439-001-0.3.5-AVLink
AV-Link SSID	AV_715D
Clients	1
ADS-B Receiver	Not assigned Waiting to scan
- Status:** A table with the following data:

ICAO Address	000000
Callsign	-----
GPS Fix	None
GPS Satellites	0
Position	---
Altitude (GNSS)	---
Altitude (Baro)	---
- Device Information:** A table with the following data:

Hardware	Version	Serial Number
AV-Link	0.3.5	57829491175773
AV-30	3.0.1	3474897683187511862

At the bottom of the page, there are four navigation links: [Wi-Fi Settings](#), [Statistics](#), [AV Display Software Update](#), and [AV-HSI Update](#). A red arrow points to the "AV Display Software Update" link.

9 Post-Accomplishment Verification and Actions

On restart, verify that the startup screen displays the correct version number. Access the Installation Menu to complete post-accomplishment verification steps.

1. To enable access to the Installation Menu, ensure the unit is completely turned off. Push and hold the main control knob in while power is applied.



2. Keep the knob pushed until the startup screen displays, and then release.
3. Ensure the unit is in AI or DG mode; select the mode by pushing and holding the center knob until the mode display changes.
4. In AI or DG mode, push and release the left button under the MENU until the "INSTALL / ROT TO SEL" appears.



5. Rotate the knob until you see “SW PART NUM”. Confirm part number matches that shown in Table 5-1 Software Update Files.
6. Rotate the knob until you see “SW VERSION”. Confirm version matches that shown in Table 5-1 Software Update Files.
7. Rotate the knob until you see “SW CHECKSUM”. Confirm checksum matches that shown in Table 5-1 Software Update Files. Note that the checksum is not case sensitive.

If all software fields match, continue with these instructions. Otherwise, contact uAvionix Support.

The following sections detail new Installation Menu options and should be reviewed and set appropriately for your aircraft. Access the Installation Menu and rotate the center knob to select these settings.

9.1 GPS NAV SRC

Follow the procedure in Section 9 to access the Installation Menu. Rotate the center knob until “GPS NAV SRC” is displayed. Set the value to “NONE” if no GPS is connected to the AV-30. Set the value to “SERIAL 2” if a tailBeaconX is the sole GPS source and is connected through pins 5 and 6. Otherwise select “SERIAL 1.”

9.2 SERIAL 2

Follow the procedure in Section 9 to access the Installation Menu. Rotate the center knob until “SERIAL 2” is displayed. If this value is changed to “AEROCRUZE”, “PRO PILOT”, or “AV-APA” the AV-30 will communicate with an autopilot. The SERIAL 2 setting is verified if the AUTOPILOT setting in the PUSH-SET rotary knob menu is visible. Push and release the center knob five times to see the AUTOPILOT setting. See the latest revision of *AV-30 Pilot’s Guide UAV-1004233-001 Rev L (or latest available)* for further details.

9.3 SERIAL 3

Follow the procedure in Section 9 to access the Installation Menu. Rotate the center knob until “SERIAL 3” is displayed. SERIAL 3 will be set to

“AVLINK” after update. This will enable the AV-Link-E MFD screen. If no AV-Link-E is installed, this setting should be set to NONE.

9.4 SERIAL 4

Follow the procedure in Section 9 to access the Installation Menu. Rotate the center knob until “SERIAL 4” is displayed. SERIAL 4 will be set to “NONE” after update. If you change the value to AVMAG, this will enable the AV-Mag external magnetometer and its associated installation menus. If no AV-Mag is installed, this setting should be set to NONE.

9.5 AID MODE

There are 4 options for the AID MODE. With the internal magnetometer installed (P/N UAV-1004035-002), you can choose from 3 of those options. Note that the internal magnetometer function AID MODE options are only available when the AV-Mag External Magnetometer is not installed.

- None = Magnetometer will not be referenced.
- MAG1 = Internal magnetometer provides correction data to DG
- MAG2 = Internal magnetometer provides correction data to DG and aiding to core AHRS algorithm
- AVMAG = Automatically selected when AV-Mag external magnetometer installed. Not available for use with internal magnetometer

Follow the procedure in Section 9 to access the Installation Menu. Rotate the center knob until “AID MODE” is displayed. If the hardware addition of the internal magnetometer is found then you will have a choice of NONE, MAG 1, and MAG 2. If the internal magnetometer is not automatically detected, only “NONE” will be displayed.



The factory setting for non-magnetometer equipped units is NONE, and the factory setting for magnetometer equipped units is MAG1. Leave the AID Mode set to the default, unless otherwise directed by uAvionix Support.

To change the AID MODE, push and release the center knob then rotate the knob to select your choice of magnetometer aiding. Push and release the center knob to confirm and save.

If the AV-Mag external magnetometer is installed, (P/N UAV-1006321-001), only one AID MODE option is allowed and cannot be changed:

- AVMAG = AV-Mag external magnetometer provides continuous aiding data to DG and aiding to core AHRS algorithm.

Follow the procedure in Section 9 to access the Installation Menu. Rotate the center knob until “SERIAL 4” is displayed. To change, push and release the center knob then rotate the knob to select “AVMAG”. Push and release the center knob to confirm and save your choice. Confirm that AID MODE is set to AVMAG by rotating to knob until “AID MODE” is displayed. Push and release the left button to exit the Installation Menu.



9.6 Pitot-static Zeroize

Because 3.0.1 uses pitot-static data to assist the attitude algorithm, a pitot-static zeroize operation should be performed when upgrading to 3.0.1.

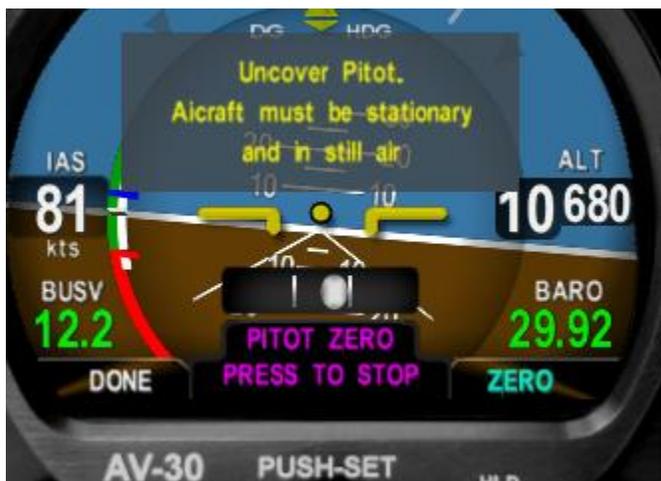
Running the Pitot Zeroize procedure is required to complete this Service Bulletin.

For more information on Pitot Zeroize, reference the procedure as described in *AV-30-E Installation Manual UAV-1004234-001 Rev K* (or latest available), Section 12.2.8.

 **To perform the procedure, the aircraft must be in completely still air with any pitot-static cover removed. It should be located in a hangar and must not be affected by wind.**

The Pitot-Static Zeroize feature can be accessed by selecting “PITOT ZERO” from the Installation Menu. Follow the procedure in Section 9 to access the Installation Menu.

1. Ensure the aircraft is stationary and in still air with any pitot static covers removed.
2. In the Installation Menu, rotate the center knob until “PITOT ZERO” is displayed. Push and release the center knob to enter zeroize mode. Press the right button to initiate the zeroize procedure. When the procedure is complete, press the left button to exit.



9.7 Airspeed and Altitude Calibration

If a calibrated air data test set is available, it is recommended to calibrate the airspeed and altitude using the altitude and airspeed trim procedures defined in 12.2.9 and 12.2.10, respectively, of *AV-30-E Installation Manual UAV-1004234-001 Rev K* (or latest available.) While recommended, this calibration is not required for this service bulletin.

9.8 GYRO CAL

Software version 3.0.1 updated the gyro control software in a way that requires the sensors to be recalibrated. **Running the Gyro Calibration procedure is required to complete this Service Bulletin.**

For more information on Gyro Calibration, reference the procedure as described in *AV-30-E Installation Manual UAV-1004234-001 Rev K* (or latest available), Section 12.2.2.



To perform the calibration, the aircraft must be completely motionless and on the ground. It should be located in a hangar and must not be affected by wind or other sources of aircraft movement. If unable to perform the procedure while standing outside the aircraft, do not leave the aircraft during the procedure.

The Gyro Calibration feature can be accessed by selecting “GYRO CAL” from the Installation Menu. At least 15 minutes of warmup is required before performing a Gyro Calibration. Follow the procedure in Section 9 to access the Installation Menu.

1. Ensure the aircraft is completely motionless and on the ground during the next several steps.
2. In the Installation Menu, rotate the center knob until “GYRO CAL” is displayed. Push and release the center knob to enter calibration mode. If sufficient warmup time has not elapsed, a “Not ready to calibrate” message and countdown will be indicated. Otherwise, initiate calibration by pushing the right button.



3. "Calibration in progress" will be displayed with a percentage complete.



AV-30-E will indicate "Calibration successfully completed Press DONE".

Push the left button under "DONE" and the calibration will be complete. If an error is shown, repeat the calibration process.

9.9 Charge Battery

Versions 2.4.1 and later changes the battery level reporting algorithm to report levels more conservatively across a variety of environmental conditions.

Upon completion of the 3.0.1 software upgrade, please allow your battery to charge to 100%. Note that charging a battery from 0% may take up to 60 minutes to register an initial charge.

10 System Checkout

Perform the System Checkout procedure as described in *AV-30-E Installation Manual UAV-1004234-001* Section 12.2 prior to returning to service.

11 Support

For additional questions or support please visit:

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

12 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-1005757-010 Rev A to install software v3.0.1 for AV-30-E UAV-1004035-(), has been complied with.



A copy of this form must be submitted by visiting:

<https://uavionix.com/logbook/>

Date:	By:
Aircraft Information	
Make:	Model:
Serial Number:	Registration Number:
AV-30-E Information	
Serial Number:	
Hardware Part Number:	UAV-1004035-_____
Customer Information	
Name:	
Email:	
Telephone:	