

Document Number: 601-00190-002
Title: SkyTrax 200 Release 1.0.1
Revision: 00
Date: September 08, 2021

1. Planning Information

1.1 Distribution/Eligibility

This Service Bulletin may be distributed only to those groups indicated below with a check mark:

<i>Group</i>	<i>Distribution?</i>
Avidyne internal & Field Support Personnel	✓
Avidyne-authorized Service Facility	✓
Avidyne Web/FTP Post	✓
Avidyne-authorized Installer	✓
Avidyne OEM customers	✓

The Accomplishment Instructions contained in Section 3 may only be performed by appropriately authorized personnel.

1.2 Effectivity/Compatibility

This Service Bulletin applies to the following:

- SkyTrax systems, part number 700-00190-100 Rev 00 with MOD 1 and flight software part number 510-00350-000 Rev 00 installed.
- SkyTrax systems, part number 700-00190-100 Rev 01, with flight software part number 510-00350-000 Rev 00 installed.

Follow the instructions of section 3.4 of this document to determine applicability.

1.3 Concurrent Requirements

After upgrading the SkyTrax 200 software, the installation configuration must be checked to confirm that no unexpected changes have occurred.

1.4 Reason

This service bulletin describes the installation of SkyTrax 200 Release 1.0.1 software. This software release corrects a problem in the software that may result in the display of false targets when the 1090MHz receiver is enabled.

1.5 Description

This service bulletin provides the instructions for installing an update of the SkyTrax 200 field-loadable components and will result in the following changes to the SkyTrax configuration:

Table 1: Part Number and Revision Changes.

Description	Current Part # & Revision	New Part # & Revision
SkyTrax System	700-00190-100 Rev 01	700-00190-100 Rev 01
SkyTrax Field-Loadable Items	530-00247-000 Rev 00	530-00247-000 Rev 01
Bootloader	510-00284-000 Rev 03	510-00284-000 Rev 03
SkyTrax Flight Software	510-00350-000 Rev 00	510-00350-000 Rev 01
FPGA Flight Image	052-00197-000 Rev 01	052-00197-000 Rev 01

1.6 Compliance

This Service Bulletin applies to SkyTrax 200 units with flight software, part number 510-00350-000 Rev 00, installed. This service bulletin is required.

1.7 Approval

The engineering data underlying the accomplishment instructions contained in Section 3 are FAA-approved. No other portion of this service bulletin is FAA-approved.

1.8 Time Required

Complying with this Service Bulletin should take one person approximately 1.0 hours.

1.9 Weight and Balance

No change.

1.10 Electrical Load Data

No change.

1.11 Software Accomplishment

None.

1.12 Reference

None.

1.13 Publications affected

None.

2. Material – Cost and Availability

Cost: There is no charge for these instructions, the software update, or the software field-update utility; however, there are additional required materials that are not provided.

Availability: The updated SkyTrax software and firmware, and the SkyTrax field update utility required to perform this Service Bulletin are available electronically via the Avidyne Dealer Network.

3. Accomplishment Instructions

3.1 Required Materials

1. This Service Bulletin, Avidyne part number 601-00190-002, Rev 00 or later.
2. The SkyTrax 200 upgrade files as follows:

Description	Part Number	File Name
SkyTrax 200 Flight Software	510-00350-000 Rev 01	avads-510-00350-000-01.bin
SkyTrax Field Update Utility	510-00322-000 Rev 05	avads-updater-510-00322-000-05.bin

3. A blank μ SD card formatted as FAT16 or FAT32.
4. An electronic or printed copy of the SkyTrax Series Installation Manual, document number 600-00335-000 Rev 02 or later.
5. Optional: if performing the service bulletin on a bench, then a SkyTrax bench power harness will be required.

3.2 Obtaining the Update Files

This service bulletin, and all files required for this update can be obtained from the Avidyne Dealer site at:

<http://dealers.avidyne.com/downloads/downloads.asp>

3.3 Preparing the SkyTrax 200

This update may be installed while the SkyTrax unit is installed in the aircraft, or with the SkyTrax unit on a bench. The μ SD card slot may be difficult to reach while the SkyTrax unit is installed. If performing this service bulletin while the unit is installed in an aircraft, it may be necessary to disconnect cables from the SkyTrax or remove the SkyTrax unit completely in order to insert/remove the μ SD card.

If performing this service bulletin at a bench, a suitable harness will need to be constructed to apply power to the SkyTrax unit. The information found in the SkyTrax Series Installation Manual may be used to prepare a bench power harness. Only power is required. All other pins may remain disconnected unless configuration is also to be performed while on the bench. If configuration is to be

done on a bench, then a USB A to USB C cable for connecting from a computer's USB port to the SkyTrax USB port will also need to be provided.

Be sure to record the configuration of the SkyTrax unit before applying this update so that it may be verified following the software update. Record the following information so that it can be restored after the upgrade:

- ICAO address (icaoaddr command)
- COM port configuration (comconf command)
- NACv setting (nacv command)

3.4 Verifying Applicability

This update is only applicable to SkyTrax 200 units with software 510-00350-000 Rev 00 installed. The following procedure may be used to determine what software and firmware versions are installed on the SkyTrax unit, and to verify applicability of this Service Bulletin.

 **i** μ SD cards are normally pre-formatted as FAT16 or FAT32, so there should be no need to format, or re-format, the card. If the SkyTrax is unable to read or write to the μ SD card, then it will be necessary to verify that the card is properly formatted; however, instructions for doing so are beyond the scope of this service bulletin.

1. Be sure to record the configuration of the SkyTrax unit before applying this update. Refer to section 3.3 above.
2. Insert a μ SD card into the μ SD card reader of a suitably equipped computer.
3. Confirm that there are no files stored on the μ SD card. Delete any files that are found on the μ SD card.
4. Copy the SkyTrax field update utility (avads-updater-510-00322-000-05.bin) to the root directory of the μ SD card.

 **!** Do not change the file name!

5. Safely remove the μ SD card from the card reader.
6. Turn off the SkyTrax unit and wait for the status indicator to turn off.
7. Insert the μ SD card into the μ SD card slot of the SkyTrax unit.

 **i** Be careful that the μ SD card properly engages the connector inside the card slot on the SkyTrax unit. If the μ SD is inserted improperly it may be possible for the card to be lost inside the SkyTrax unit. If the μ SD card is lost inside the SkyTrax the SkyTrax must be returned to Avidyne for service.

8. Turn on the SkyTrax unit.
9. Wait until the external status indicator turns GREEN

 **i** If the external status indicator turns RED, then an error has been encountered by the field update utility. Please contact Avidyne technical support for additional guidance.

10. Turn off the SkyTrax unit and wait for the status indicator to turn off.
11. Remove the μ SD card from the SkyTrax unit.
12. Insert the μ SD card into the μ SD card reader of a suitably equipped computer.
13. The software update utility creates a log file on the μ SD card. Open the log file in a text editor such as Windows Notepad. The log file will have a file name that ends with "flsmlog.txt" and begins with the unit serial number. For example, if the unit serial number is 12345 you will open the file named "12345-flsmlog.txt".
14. The log file will contain information about the software currently loaded on the SkyTrax unit. See the sample log file contents below:

```
Field Loadable Software Update Utility
  Part #: 510-00322-000
  Revision: 05
FLSM log for SkyTrax 200 S/N m200875013
Existing application files on internal card:
  avads-510-00350-000-00.bin
Existing bootloader on internal card:
  Part #: 510-00284-000
  Revision: 03
  Build #: 1
  Built: Nov 23 2020 @ 21:41:29
ARGOS FPGA:
  Part #: 052-00197-000
  Revision: 01
  Build #: 5
  Flight image is running
Flash audio file not installed.
Configuration file is read-write (unlocked and can be changed).

Updates completed successfully.
```

15. Verify that the model is "SkyTrax 200".
16. Verify that the file listed under "Existing application files on internal card:" is avads-510-00350-000-00.bin. If there is any other file name listed here, then this Service Bulletin is not applicable.

 It is safe to re-apply this Service Bulletin to a unit that has already had this Service Bulletin applied, so if the model is "SkyTrax 200" or the existing application file is "avads-510-00350-000-01.bin" this Service Bulletin may be applied even though it is not strictly applicable.

17. Close the text editor.
18. Safely remove the μ SD card from the card reader.

3.5 Preparing a μ SD Card

 μ SD cards are normally pre-formatted as FAT16 or FAT32, so there should be no need to format, or re-format, the card. If the SkyTrax is unable to read the software update from the μ SD card, then it will be necessary to verify that the card is properly formatted; however, instructions for doing so are beyond the scope of this service bulletin.

1. Insert the μ SD card into the μ SD card reader of a suitably equipped computer.
2. Confirm that there are no files stored on the μ SD card. Delete any files that are found on the μ SD card.
3. Copy the SkyTrax field update utility (avads-updater-510-00322-000-05.bin) onto the μ SD card.
4. Copy the SkyTrax flight software file (avads-510-00350-000-01.bin) onto the μ SD card.

 Do not change the file names!

5. Safely remove the μ SD card from the card reader.

3.6 Loading the Software Update

1. Turn off the SkyTrax unit and wait for the status indicator to turn off.
2. Insert the μ SD card into the SkyTrax external μ SD card slot.

 Be careful that the μ SD card properly engages the connector inside the card slot on the SkyTrax unit. If the μ SD is inserted improperly it may be possible for the card to be lost inside the SkyTrax unit. If the μ SD card is lost inside the SkyTrax the SkyTrax must be returned to Avidyne for service.

3. Turn on the SkyTrax unit.
4. Wait until the external status indicator turns GREEN.

 If the external status indicator turns RED, then an error has been encountered by the field update utility. Please contact Avidyne technical support for additional guidance.

5. Turn off the SkyTrax unit and wait for the status indicator to turn off.
6. Remove the μ SD card from the SkyTrax unit.

4. Post Accomplishment Procedures

4.1 Upgrade Verification

1. Insert the μ SD card that was used to update the SkyTrax unit (from section 3.6) into the μ SD card reader of a suitably equipped computer.
2. The software update process creates an update log on the μ SD card. Open the file on the card with the name that ends with "flsmlog.txt" and begins with the unit serial number. For example, if the unit serial number is 12345 you will open the file named "12345-flsmlog.txt".

i The software update log files begin with the unit serial number so that a single μ SD card can be used to update multiple SkyTrax units without returning to a computer after each update to verify the results. The log files from previous updates are retained, so if three updates are completed in sequence, there will be three log files on the card to validate the results.

3. The log file will look something like the following (differences in the content of the log file are okay as long as the verification steps that follow are completed successfully):

```
Field Loadable Software Update Utility
  Part #: 510-00322-000
  Revision: 05
FLSM log for SkyTrax 200 S/N m200875013
Existing application files on internal card:
  avads-510-00350-000-00.bin
Existing bootloader on internal card:
  Part #: 510-00284-000
  Revision: 03
  Build #: 1
  Built: Nov 23 2020 @ 21:41:29
ARGOS FPGA:
  Part #: 052-00197-000
  Revision: 01
  Build #: 5
  Flight image is running
Flash audio file not installed.
Configuration file is read-write (unlocked and can be changed).
Processing application program file 0:\avads-510-00350-000-01.bin.
Part #: 510-00350-000
Version #: 01
Build: 1
Build date: Aug 20 2021 @ 13:09:24
Successfully deleted file 1:\avads-510-00350-000-00.bin.
SkyTrax successfully updated with 0:\avads-510-00350-000-01.bin.

Updates completed successfully.
```

4. Verify that there is a line that reads:
"SkyTrax successfully updated with 0:\avads-510-00350-000-01.bin."
5. Verify that there is a line that reads:
"Updates completed successfully."

4.2 System Configuration

Before returning the SkyTrax unit to service, the system configuration should be checked to confirm that it has not changed unexpectedly. If any of the installation configuration settings recorded in section 3.3 on page 3 have changed, then restore them to the pre-upgrade state. Refer to the SkyTrax Series Installation Manual for instructions regarding unit configuration.

4.3 System Checkout

Before returning the SkyTrax unit to service, the system configuration should be checked to confirm that it has not changed unexpectedly. Refer to the SkyTrax Series Installation Manual for instructions regarding unit configuration.

5. Maintenance Record

When the accomplishment instructions are successfully completed, make appropriate entries in the Aircraft Maintenance Log Book. **Complete the following maintenance record and return to Avidyne per the instructions provided on the form.**

Maintenance Record

Service Bulletin 601-00190-002 Rev 00; upgrade to SkyTrax 200 Release 1.0.1 has been complied with.

NOTE: This form must be faxed to +321-751-8435 or scanned and emailed to techsupp@avidyne.com. Warranty claims will not be paid without a completed Maintenance Record on file.

On: _____ For SkyTrax S/N: _____
Date Serial Number

SkyTrax Configuration: _____ / _____
Software Bootloader
N/A / _____
Audio File Firmware

Dealer Name/Location: _____ / _____
Dealer Name Dealer Location

Certificate #/Type: _____ / _____
Certificate Number Certificate Type

Customer Name: _____
Customer Name

Customer Email: _____
Customer Email Address

Customer Tel: _____
Customer Telephone Number

Aircraft: _____ / _____ / _____
Make Model Tail Number

By: _____
Printed Name

Signature