

**Document Number:** 601-00083-050

**Title:** R9 Release Upgrade to Release 9.4.3

**Revision:** 00

**Date:** 29 Aug 2025

## 1. Planning Information

### 1.1 Distribution/Eligibility

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

Group	Distribution?
Avidyne internal & Field Support Personnel	✓
Avidyne-authorized Service Facility	✓
Avidyne Web/FTP Post	
Avidyne-authorized Installer	✓
Avidyne OEM customers	✓
End-use customers, owners and operators	

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

### 1.2 Effectivity/Compatibility

This Service Bulletin applies to Avidyne 700-00083-() Integrated Flight Display with the Release 9.3, 9.3.1, 9.3.2, 9.3.3, 9.4, 9.4.1 or 9.4.2 software installed. To determine what version of software is installed, press the "SYS" page key and navigate to the "Setup" tab. The software version is displayed at the top of the "Main" page.

NOTE: If the system to be updated is *not* running one of the versions listed above, the ACR and GPS blades will need to be returned to Avidyne to be updated prior to completing this update.

### 1.3 Concurrent Requirements

None.

### 1.4 Reason

This service bulletin is required to upgrade the R9 systems, p/n 700-00083-(), to Release 9.4.3 software.

### 1.5 Description

This service bulletin provides the material and instructions for loading any of the following software pieces that are not already at version 9.4.3.

The table below displays which components will be updated as part of this FLS.

Component	9.3 System	9.3.1 System	9.3.2 System	9.3.3 System	9.4 System	9.4.1 System	9.4.2 System
	65 Min	65Min	50 Min	50 Min	25 Min	25 Min	15Min
ACR Flight mode code.	✓	✓	✓	✓	✓	✓	✓
ACR Maintenance mode code.	✓	✓	✓	✓	✓	✓	
ACR 9s12 Bootloader							
ACR 9s12 Application code							
ACR Bootloader	✓	✓	✓	✓			
VHF DSP Processor.	✓	✓	✓	✓			
VHF 9s12 Application code	✓	✓	✓	✓			
GPS Bootloader	✓	✓					
GPS Application code	✓	✓					
GPS FPGA	✓	✓					
MPIO 9s12 Bootloader							
MPIO 9s12 Application code	✓	✓	✓	✓	✓	✓	✓
FPSM 9s12 Application code							

### **1.6 Compliance**

This Service Bulletin is optional but recommended for systems (700-00083-()) that are already at release 9.3, 9.3.1, 9.3.2, 9.3.3, 9.4, 9.4.1 or 9.4.2. Systems currently running a version prior to 9.3 will need to first apply Service Bulletin 601-00083-044.

### **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**

See table in section 1.5

### **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**

The following documents are applicable to the 9.4.3 release.

600-00190-000 700-00083-() INTEGRATED FLIGHT DISPLAY PILOT'S GUIDE - Rev 06 or later

600-00160-000 700-00083-() INTEGRATED FLIGHT DISPLAY INSTALLATION MANUAL - Rev 20 or later

600-00712-002 FAA Approved Airplane Flight Manual Supplement For Cirrus Design Corporation Model SR20/SR22 and SR22, Rev 02 or later

600-00263-002 FAA Approved Airplane Flight Manual Supplement For Piper PA-46R-350T Matrix, Rev 01 or later

600-00289-001 FAA Approved Airplane Flight Manual Supplement For Piper PA-32-301, PA-32R-301FT, PA-32R-301SP and PA-32R-301HP, Rev 01 or later

Please contact Avidyne Sales to order the appropriate documents if necessary.

## **2. Material – Cost and Availability**

Cost: There is a fee of \$150.00 for a USB drive with the software preloaded. Contact Avidyne Sales at 888-723-7593 to order kit part number 850-00073-513. Please note that the labor to

apply the software is not covered by Avidyne Warranty. The labor charge for this update is the responsibility of the aircraft owner.

### 2.1 Required Materials

1. Kit 850-00073-513 supplied by Avidyne which will consist of a formatted 8 GB USB flash device containing:
  - 500-00185-001 GoldMaster.dsf Rev 04- *Database and Configuration Update Utility*
  - 500-00132-005 CONFORMITY CHECKER.dsf Rev 03 - *Conformity Check Utility*
  - 500-00254-000 RUNONCE Rev 02 - *Automatic load command script.*
  - 500-00127-006 FULL UPDATE.dsf Rev 04 - *Code load utility.*
2. Windows XP or later PC with an available USB port.

### 2.2 Update Notes

#### 2.2.1 Copying of the 850-00073-513 kit

The 850-00073-513 kit obtained from Avidyne should not be copied to another USB device. **The files contained on the supplied USB drive will not run if they are copied to a different USB device.**

#### 2.2.2 Record System Settings

- Some user settings may be reset to default values. It is important that you **note any and all settings that may be important to the aircraft owner/operator prior to performing this update. Similarly, it will be necessary to reload the airplane configuration "dsf" file following this update. Note you will need version Rev 02 of config tool 570-00117-006**
- Specific items that will reset to default values include all pages on the "Setup" tab including:
  - Display Settings
  - FMS Settings
  - Map Settings
  - Datablocks

**NOTE:** See 600-00190-000 Rev 06 or greater for instructions on how to set the Flight Mode accessible settings.

#### 2.2.3 Upgrading Multiple IFDs

- These utilities must be loaded on all IFDs in the airplane. **\*\*Critical\*\***
  - **Update only one IFD at a time.**
  - **Make sure that the IFD not being upgraded is powered off at all times during the upgrade to the other IFD.**
- **Note: If using the same USB drive to update more than one IFD you must reload the RUNONCE automatic load command script file 500-00254-000 Rev02 prior to loading each subsequent IFD.**
- It is recommended that after receipt of the USB drive in kit 850-00073-513 you copy and paste the RUNONCE file to your computer in order to easily reload the RUNONCE file on to the USB drive after completing each update.

### 2.3 Obtaining Software Update Utilities

Contact Avidyne Sales to order a preloaded USB flash device part number 850-00073-513. There is a fee of \$150.00 for the preloaded USB flash device.

### 2.4 Updating the IFD

**Note:** If the system reports any error(s) other than errors listed in the steps below, contact Avidyne Technical support at +1-888-723-7592.

1. **\*\* Critical \*\***
  - a. Ensure that you currently have one of the releases shown in the table under section 1.5 of this document.

**2.5** *If the IFD is not currently at one of the indicated software releases, do not proceed.*



### ***Running the Update Utilities***

The next steps will cover the running of the upgrade utilities.

#### ***2.5.1 Before You Start***

##### **NOTES:**

- The following steps will require about 60 minutes of time to complete.
- The update is, for the most part, automated and requires very little human intervention.
- At times the IFD will reboot and resume operation. This is normal. Take no action.
- At times the IFD will appear to have powered off. This is normal. Take no action.
- At times, the progress bar may report that a particular step is 100% complete yet the system will not immediately advance to the next step. This is normal. Take no action.
- **Do not turn off power to the IFD while the update is in progress unless the on-screen prompts instruct you to do so. Aircraft battery supply may not be sufficient. Avidyne suggests that an external power supply (note a battery tender is not sufficient) be used or that the aircraft be running with the alternator supplying voltage for the duration of the update. If electrical power is lost during the update the IFD may have to return to Avidyne for repair incurring a charge of \$6000.00.**

### 2.5.2 Executing the Update Procedure

1. \_\_\_\_\_ Make sure the IFD is powered *OFF*.
2. \_\_\_\_\_ Insert the USB flash device, containing the Release 9.4.2 utilities listed in Section 2.1, into USB port of the IFD.
3. \_\_\_\_\_ Power up the IFD.
  - a. If the IFD does NOT boot to Maintenance Mode:
    - i. From flight mode, on the IFD press the "SYS" key.
    - ii. Press the right-side of the "SYS" key until the "SETUP" tab is selected.
    - iii. Press the LSK labeled "Update Databases".
    - iv. Press the LSK labeled "Confirm" and wait until the Maintenance mode is displayed.
    - v. If necessary, press the left-side of the "SYS" key until the "Update" tab is displayed.
4. \_\_\_\_\_ Verify that the IFD has automatically begun the update process.  
*NOTE: If the IFD has not auto started the Update process:*
  - Make sure Maintenance mode is on the "Update" tab
    - (a) Press the left side of the SYS key until the "Update" tab is selected.
  - If the update still fails to auto start, press the bezel key to "Un-Select All". Then use the right knob to highlight (twist) and select (push):
    - (a) **\*\*Critical\*\*Select only the item identified as "Load 9.4.3".**
    - (b) Verify a green check mark appears after "Load 9.4.3".
    - (c) Press Proceed.
5. \_\_\_\_\_ When complete, the system should display "All items completed with no error" at the top of the screen, and "OK" adjacent to "*Start 9.4.3 conformity checker*".
  - a. If this step fails, contact Avidyne Technical Support at +1-888-723-7592. Please have a picture of any failure notices shown on the screen when contacting Avidyne Technical Support.
6. \_\_\_\_\_ Press the "Done" soft key to reboot the box into flight mode.
7. \_\_\_\_\_ **\*\*Critical\*\***Once the IFD is back in flight mode power cycle the IFD and proceed to Section 3 for post accomplishment checkout.

### 3. Post Accomplishment Checkout

#### 3.1 Verify the software load

1. Install the USB flash device into the USB connector on the bezel (if not already installed)
2. Power-on the IFD (if not already powered). The system should boot into Maintenance mode.
  - a. If the system comes up in flight mode, simply reboot the IFD one more time to get to Maintenance mode.
  - b. If the system still comes up in flight mode
    - i. Press the "SYS" key and navigate to the "Setup" tab.
    - ii. Press the bezel button next to "Update Databases"
    - iii. Press the bezel button to "Confirm".
3. Press the right side of the "SYS" key until the "System Status" tab is displayed.
4. Press the bezel button next to the "Info" until the "Software" is displayed.
5. Use the "System" soft key to select the correct IFD (#1 for the left box, #2 for the right box, #3 for the center box where applicable).
6. Wait until all checksums are populated on the screen.

**Note:** The lower right knob can be used to scroll the list up and down to view all the items.
7. Verify that the items listed in **Table 2** match those displayed on the IFD screen.
8. If using the USB drive to do another update copy and paste the RUNONCE file on to the USB drive.
9. Once all IFDs have been upgrades, display the SYS->Setup tab and restore any settings recorded in 2.2.2.

**NOTE:** Do not attempt to restore the ACM configuration to accomplish this step.



*Table 2: Software Components*

Component	Part Number	Revision	CRC
ACR 440 Flight	510-00335-000	03	E3E3363D
ACR 440 Mx	510-00336-000	02	104773A2
ACR 440 Boot	510-00799-005	02	9E2DC4B7
ACR 9S12 #1 App	510-00797-002	00	EE7587C8
ACR 9S12 #1 Boot	510-00240-001	02	9669D773
ACR 9S12 #2 App	510-00797-002	00	EE7587C8
ACR 9S12 #2 Boot	510-00240-001	02	9669D773
ACR FPGA	052-00155-001	00	00000050
FPSM 9S12 App	510-00796-001	00	A0B1A356
FPSM 9S12 Boot	510-00239-001	00	B0FD9B5E
MPIO 9S12 App	510-00800-002	01	D7F3A8E7
MPIO 9S12 Boot	510-00239-001	00	B0FD9B5E
MPIO FPGA	052-00157-000	01	0610
VHF 9S12 App	510-00775-001	07	9F713B35
VHF 9S12 Boot	510-00239-001	00	B0FD9B5E
VHF DSP App	510-00316-000	04	A1C0
VHF DSP Boot	510-00237-000	00	C3DF
VHF FPGA	052-00140-000	00	5317
GPS 9S12 App	510-00256-000	05	BC6AA051
GPS 9S12 Boot	510-00239-001	00	B0FD9B5E
GPS ARM App	510-00257-000	02	E9F5
GPS ARM Boot	510-00258-000	00	5901
GPS OEM	510-00259-000	01	FC05
ADAHRS MPU	n/a	n/a	11EE
ADAHRS IRU	n/a	n/a	BAC6
ADAHRS ADU	n/a	n/a	56AF

MAG	N/A*	N/A*	N/A*
KEYBOARD App	510-00803-001	00	004BBE5D
KEYBOARD Boot	510-00239-001	00	B0FD9B5E

**Note:** If any post accomplishment check fails, please contact:

**Avidyne Technical Support at: +1-888-723-7592.**

#### 4. System Checkout

Perform the post-installation checkout procedure as described in the 600-00160-000 700-00083-() INTEGRATED FLIGHT DISPLAY INSTALLATION MANUAL Rev 20 or later.

**Note:** If any post accomplishment check fails, please contact:

**Avidyne Technical Support at: +1-888-723-7592.**

#### 5. Maintenance Record

When the accomplishment instructions are successfully completed, make appropriate entries in Aircraft Maintenance Log Book.

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\* Will display existing PN, Revision and CRC.

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### ***Maintenance Record***

Service Bulletin 601-00083-050 Rev 00 upgrade 700-00083-() IFD Software Version 9.4.3 complied with.

**NOTE: This form *must* be faxed to +321-751-8435 or scan and email to techsupp@avidyne.com.**

On: \_\_\_\_\_ For IFD S/Ns: \_\_\_\_\_  
Date Serial number Serial number

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

Tail Number: \_\_\_\_\_  
Customer Tail Number

Aircraft Make/Model: \_\_\_\_\_ / \_\_\_\_\_  
Make Model

By: \_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Signature