Service Bulletin SB-0065

Epic Aircraft, LLC ◆ 22590 Nelson Road ◆ Bend OR 97701
Phone: 541-318-8849 ◆ Fax: 541-382-5125 ◆ Web: www.epicaircraft.com

Subject: Garmin System 4.8 Update for GX, Classic

ATA-Code: 39-10

Labor: 2 hours

Effectivity: K003 – K055, except K014, with SB-0035, K056-K085

Affected Model(s): E1000, E1000 GX

Due: Upon Condition

Compliance: Mandatory

Recurrence: No

1 BACKGROUND AND PURPOSE:

Epic Aircraft is requiring GX and Classic owners with the FIKI retrofit to update their Garmin software at the next service interval. This includes annual inspections and 100 hour inspections. This service bulletin provides instructions on how to upload the baseline software and required options from the new Loader Card for GX and Classic models.

2 REFERENCES:

Garmin G1000 NXi Integrated Avionics System Line Maintenance Manual.
Epic E1000 Aircraft Maintenance Manual, PN SK05000000.

3 WARRANTY:

For aircraft under warranty, parts and labor will be covered by Epic Aircraft, LLC if the work is performed within the compliance period and at an Authorized E1000 Service Center.

4 APPROVAL:

The engineering aspects of this service document have been shown to comply with the applicable Federal Aviation Regulations and are FAA approved.

5 REVISION:

A:

- Added Step 6: Enablement Card Options

6 TOOLS:

No.	Description	Qty	Epic Aircraft Supplied	Customer Supplied
1.	N/A		☐	☐

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7 PARTS/MATERIALS:

No.	Part Number	Description	Qty	Epic Aircraft Supplied	Customer Supplied
1.	006-B3342-06	Software Loader Card	1	☒	☐
2.	190-02290-04 Rev A	Garmin Epic E1000 Cockpit Reference Guide	1	☒	☐

8 INSTRUCTIONS

Note:
For aircraft that have already complied with SB-0062 GX Weather Radar Retrofit, this service bulletin (SB-0065) is not needed.

1. Create Loader Card:
   - **a.** Navigate to the correct software file provided by Epic Customer Support.
   - **b.** Insert a blank (empty) 4GB – 16GB SD card in the card reader.

Note:
The loader card program will delete all files on the SD card before loading the G1000 system software files on it if the card is not blank.

   - **c.** Double-click the 006-B3342-06_0A.exe (Found in step 1).
   - **d.** Select the SD card reader drive and click “Next>”.
   - **e.** The program will make the SD loader card and prompt you when it’s done.
   - **f.** Once successfully completed, click “Finish” to close the program. The SD card can then be removed from the computer and is ready for use in the aircraft.
   - **g.** Label the SD card with the full software part number.
2. GDU to GDU Software Loading:
   - **a.** Remove any SD cards from the top and bottom slots of the MFD.
   - **b.** With aircraft On, open the PFD1 circuit breaker.
   - **c.** Insert the software loader card into the top card slot of the PFD1.
   - **d.** While pressing the ENT key when “INITIALIZING SYSTEM” is displayed in the upper left-hand corner of PFD1:
   - **e.** Press the YES softkey at the bottom of PFD1. “UPDATING SYSTEM FILES, PLEASE WAIT” message is displayed.
   - **f.** The system indicates a successful update.

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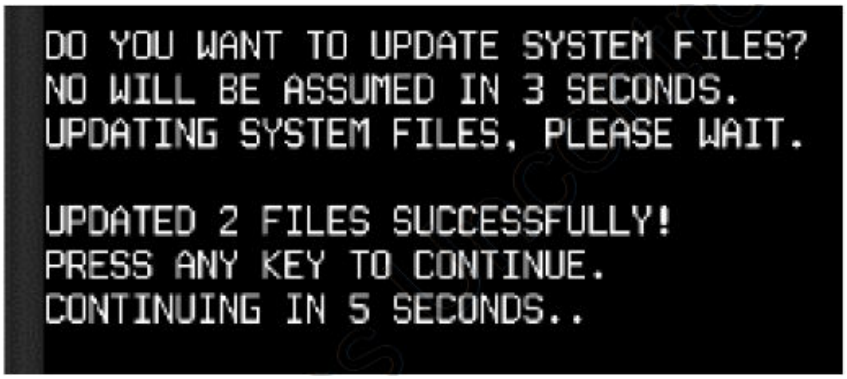


g. Press any key to continue. The message “NEW SOFTWARE HAS BEEN LOADED. RESTARTING UNIT” in amber is displayed.

h. The message “INITIALIZING SYSTEM CREW PROFILE DATA CLEARED” is displayed. The SYSTEM UPLOAD page is displayed.

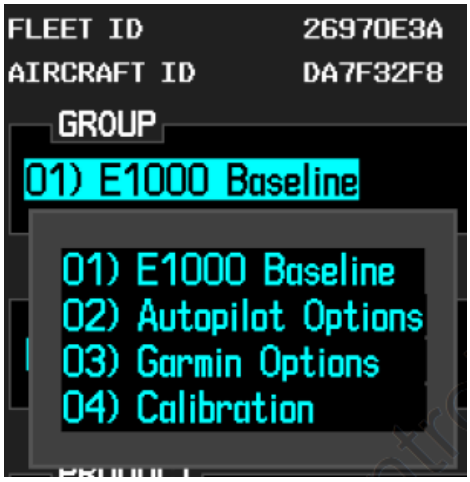
3. With new Loader Card, Load Baseline Software and Configuration:

Note:
This procedure assumes that all circuit breakers are in and the system is able to power on.

a. Ensure the System is in configuration mode on the SYSTEM UPLOAD Page.

b. Press the FMS knob on PFD1. “E1000 Baseline” is highlighted in a small window.

c. Rotate the small FMS knob to highlight “E1000 Baseline” in the small window.



d. Press ENT to confirm the selection of E1000 Baseline.

e. Epic E1000 is highlighted in the ITEM window.

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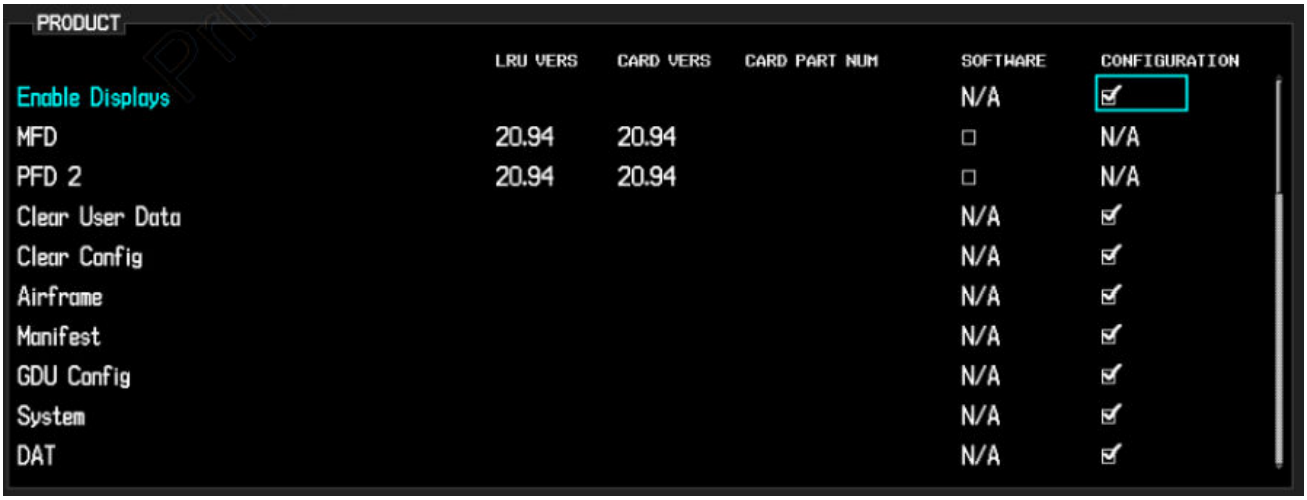
f. Rotate the small FMS knob to highlight Epic E1000.



g. Press ENT to confirm the selection of Epic E1000.

h. The PRODUCT window is filled with all Software and Config items that can be loaded.



i. Select the CHK ALL softkey.

j. Press the Load Softkey, the baseline software and configuration begin to load.

k. Acknowledge the load being complete by pressing the ENT button on PFD1.



l. View the SUMMARY field and ensure that all items are 'complete'. Verify that PASS appears in green at the check boxes.

m. Press the "UPDT CFT" softkey to update the configuration module.

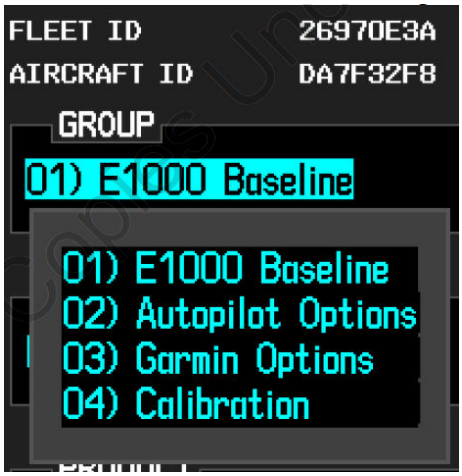
4. Load Autopilot Option:

Note:
Refer to figure 1 for autopilot options.

a. Ensure the system is in configuration mode on the SYSTEM UPLOAD Page.

b. Press the FMS knob on PFD 1. "E1000 Baseline" is highlighted. In the GROUP window.

c. Turn the large FMS knob on PFD1. "E1000 baseline" is highlighted in a small window.



d. Turn the small FMS knob. "Autopilot Options" is highlighted.

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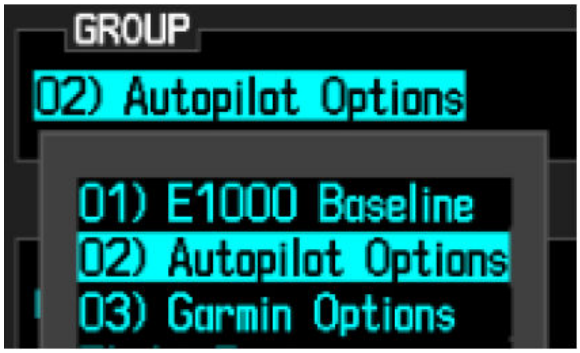


e. Press ENT. The first option is displayed in the ITEM window. Turn the small FMS knob. A small window is displayed showing the possible options.



f. Highlight the desired option and press the ENT key. The PRODUCT window fills with software and configuration.

g. Select the CHK ALL softkey.

h. Press “Load” at the bottom of PFD1. All software and configuration for the option starts loading. Acknowledge the load being complete by pressing the ENT key.



i. View the SUMMARY field and ensure that all items are 'complete'. Verify that PASS appears in green at the check boxes.

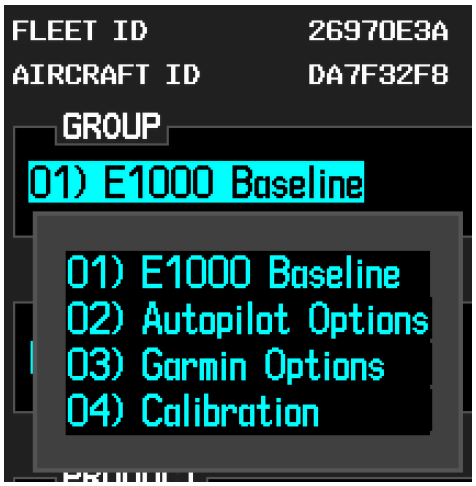
j. Press the "UPDT CFG" softkey to update the configuration module.

5. Load Garmin Options:

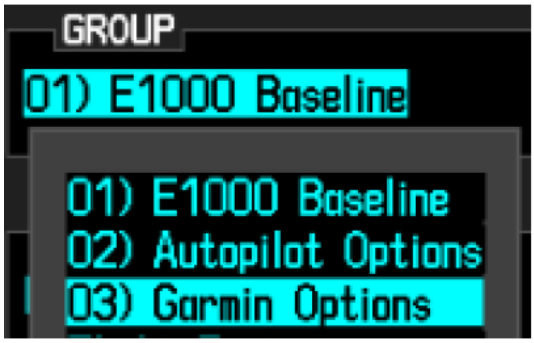
a. Ensure the system is in configuration mode on the SYSTEM UPLOAD Page.

b. Press the FMS knob on PFD 1. "E1000 baseline" is highlighted in the GROUP window.

c. Turn the large FMS knob on PFD1. "E1000 baseline" is highlighted in a small window.



d. Turn the small FMS knob. "Garmin Options" is highlighted.



e. Press ENT. The first option is displayed in the ITEM window. Turn the small FMS knob. A small window is displayed showing the possible options.

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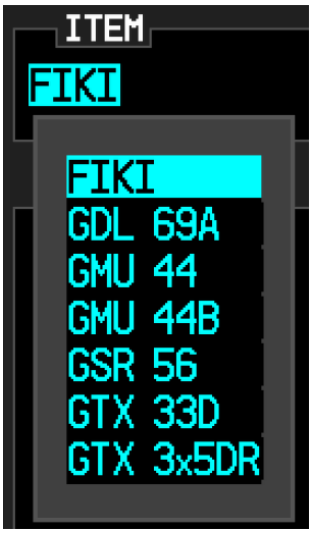

f. Highlight the desired option and press the ENT key. The PRODUCT window fills with software and configuration.

g. Refer to figure 1 to load the following options for corresponding serial numbers:

Note:
This SB is for FIKI aircraft only. For K003 – K055, if SB-0035 has not yet been performed, then this SB must be performed after or in concurrence with the SB-0035.

i. SN K004 – K010: Load “E1000 Classic” options.

ii. SN K013 – K085, except K014: Load “E1000 GX” options.

iii. SN K003, K011, and K012: Load “E1000 GX Retrofit” options.

iv. For all serial numbers, load software for any optional equipment specific to the aircraft, (GTX 33D, GSR 56).

h. Select the CHK ALL softkey.

i. Press “Load” at the bottom of PFD1. All software and configuration for the selected option will begin loading.

j. Acknowledge the load being complete by pressing the ENT key.

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k. View the SUMMARY field and ensure that all items are ‘complete’. Verify that PASS appears in green at the check boxes.

l. Press the “UPDT CFG” softkey to update the configuration module.

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6. Enablement Card Options (SD card supplied upon delivery of aircraft)

a. Load the following enablement cards:

E1000 Classic Standard Enablement Cards	
Part Number	Description
010-00330-55	SD Card, GDW 1xxx SVS Unlock, 2 PFDs
010-00474-50	SD Card, GIFD, Supp DBs, IFR/VFR Charts, Black

Table 1 E1000 Classic Standard Enablement Cards

E1000 GX Standard Enablement Cards	
Part Number	Description
010-00330-55	SD Card, GDW 1xxx SVS Unlock, 2 PFDs
010-00474-50	SD Card, GIFD, Supp DBs, IFR/VFR Charts, Black
010-00330-5A	SD Card, ESP Unlock
010-00330-5E	SD Card, Surface Watch Unlock

Table 1 E1000 Classic Standard Enablement Cards

The following cards are optional only:

Optional Enablement Cards	
Part Number	Description
010-00330-50	SD Card, GDU 10xxx Chart Unlock, Heavy AC
010-00330-51	SD Card, GDU 10xx TAWS Unlock
010-00330-A1	SD Card, GDU 1xxx TAS to TCAS I Enablement
010-11093-00	Integrated Avionics – NavData Starter Kit for Jepp Databases

Table 1 E1000 Classic Standard Enablement Cards

Note:
Enablement cards are locked to the system ID for that aircraft. The enablement cards must be retained for that aircraft, should there be a need to enable the feature again.

b. Insert the enablement card for the desired feature in the top slot of PFD1.

c. Power up the system in configuration mode. PFD1 displays the SYSTEM UPLOAD page.

d. Press the small FMS knob. “SD CARD” is highlighted in the CARD window.

e. Turn the small FMS knob. “SD CARD” is highlighted in the small window.

f. Press ENT. Turn the small FMS knob. The option to be enable is highlighted in the GROUP window.

g. Press the ENT key. The PRODUCT window populates with software and configuration.

h. Select the “Load” softkey.

Note:
Do not cancel a load in progress. If a failure occurs, wait until the fail message appears before proceeding.

i. Monitor the status of the load. When the load is finished, press ENT to acknowledge.

j. View the SUMMARY field to ensure that all items are ‘complete’. Verify the PASS appears in green at the check boxes.

k. Press the “UPDT CFG” softkey to update the configuration module.

7. Aircraft Registration Number Entry:

a. Insert the software loader card in the top slot of PFD1.

b. Power the system on in configuration mode.

c. Select NO to acknowledge the UPDATE prompt.

d. Select the AIRCRAFT CONFIGURATION page on PFD 1.

e. Pres the small FMS knob on PFD1 and activate the cursor on the “AIRCRAFT REGISTRATION” field. Enter the aircraft’s tail number.

f. Select the “ICAO ADDRESS” and enter the aircrafts 24-bit ICAO address.

g. If applicable select the “DOMAIN IDENTIFIER” field and enter the number. Otherwise, leave blank.

h. Select the “VFR CODE” field and enter the desired code that will become active when the VFR key on the PFD is pressed.

i. Press the “SET GTS” softkey and acknowledge the “Save Parameters” prompt by pressing ENT.

j. Acknowledge the GTS Config load completion prompt by pressing ENT.

k. Press the “SET GTX 1” softkey and acknowledge the “Save Parameters” prompt by pressing ENT.

l. Press the “SET GTX 2” softkey and acknowledge the “Save Parameters” prompt by pressing ENT.

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m. Acknowledge the GTX Config load completion prompt by pressing ENT.

n. Deactivate the cursor.

8. Verify Cable Loss:

a. Start this procedure with the system in Configuration Mode.

b. Use the FMS knob to select the GTS Configuration Page, which is located in the GTS page group.

c. Verify that the TOP ANT CBL LOSS field is set to 2.8dB.

d. Using the FMS knob select the TOP ANT CBL LOSS field and change it to 1.8dB.

9. Update the Configuration Module:

a. Select the System Upload Page on PFD1.

b. Press the UPDT CFG softkey at the bottom of the display.

c. “Update configuration Module?” is displayed

d. Press ENT to acknowledge the prompt.

e. The system updates the configuration module located in PFD 1 connector.

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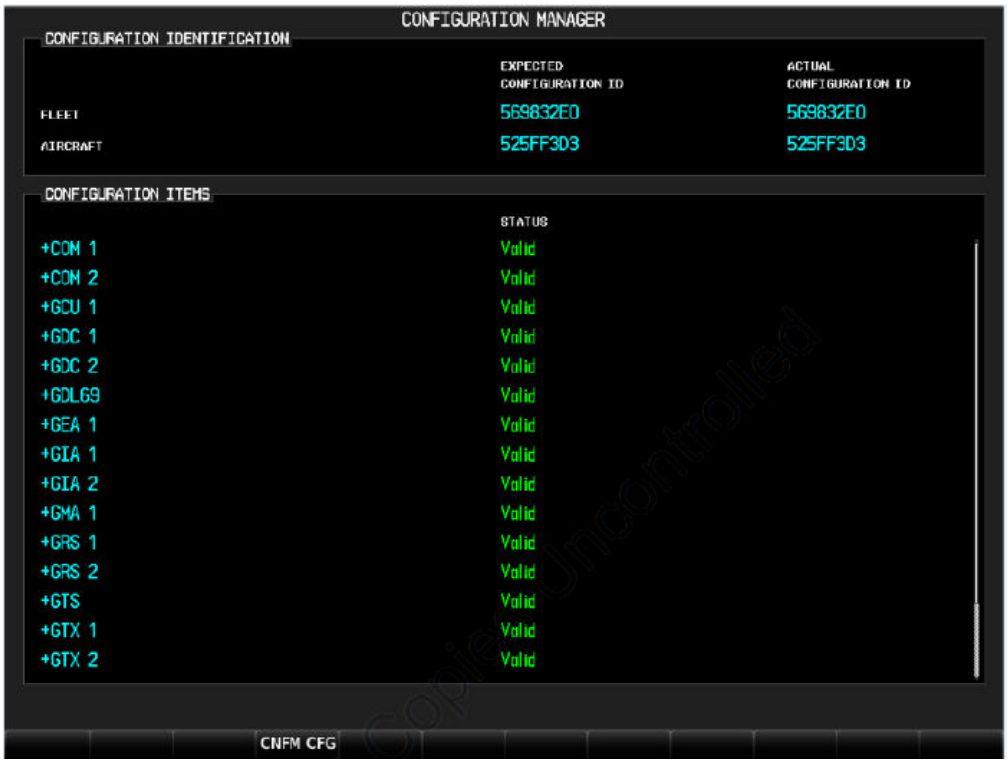
10. Confirm Configuration:

- **a.** Select the Configuration Manager page on PTD1.
- **b.** Press the CNFM CFG softkey at the bottom of the display.
- **c.** The prompt Confirm configuration as expected configuration appears with OK selected.
- **d.** Press ENT to confirm the configuration.



11. Replace the Garmin Cockpit Reference Guide with the updated version, Garmin Cockpit Reference Guide P/N 190-02290-04 Revision A, provided by Epic.

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9 TABLES AND FIGURES:

Autopilot Options			
	Configuration		
Option	E1000 Classic	E1000 *GX*	E1000 *GX* Retrofit
S-TEC 2100	X		
GFC 700		X	X
Garmin Options			
	Configuration		
Option	E1000 Classic	E1000 *GX*	E1000 *GX* Retrofit
FIKI	X	X	X
GDL 69	X	X	X
GMU 44	X		X[1]
GMU 44B		X	X[2]
GTX 33D	X		X[1]
GTX 3x5		X	X[2]
GSR 56		X[3]	X[3]
Calibration Options			
	Configuration		
Option	E1000 Classic	E1000 *GX*	E1000 *GX* Retrofit
DAT Calibration Init	X	X	X
Fuel Cal – Delete	X[4]	X[4]	X[4]

Figure 1: Garmin Autopilot and Configuration Load Options

Note 1: This option is only valid if FK34500000 was not incorporated with the E1000 *GX* retrofit.
Note 2: This option is only valid if FK34500000 was incorporated with the E1000 *GX* retrofit.
Note 3: This option is only valid if SB-0019 was incorporated.
Note 4: This option is only applicable if the Fuel Cal needs factory rest.

10 WEIGHT AND BALANCE:

N/A

11 PUBLICATIONS AFFECTED:

Garmin Cockpit Reference Guide P/N 190-02290-04 Revision A

12 RECORD COMPLIANCE:

Make appropriate entry in airplane maintenance records.

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Appendix A: Compliance Letter

Please complete and mail this form to Customersupport@epicaircraft.com

This is to certify that I have completed the work in accordance with the Epic Aircraft, LLC Service Bulletin.

Aircraft Owner Information:
Date: _____ Aircraft Serial Number: _____ Aircraft Reg. Number: _____ Owner's Name: _____
Maintenance Entity Information
Name of Shop Performing the work: _____ Name of Person(s) Performing inspection and/or work: _____ Phone Number: _____ Email: _____