

# SERVICE BULLETIN



**Service Bulletin No.:** D42L-34-02 Rev. 0

**Date Issued:** 26 September 2012

**Title:** Availability of the G1000 Synthetic Vision & Pathways Option

**Page:** 1 of 2

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- 1. ATA Code:** 3400
  - 2. Effectivity:** All DA42 aircraft with TCCA STC SA09-54 or FAA STC SA02725NY installed.
  - 3. General:**

This Service Bulletin gives the authority to install Garmin Service Bulletin No. 1039, Revision A.  
This Garmin Service Bulletin provides information required to activate Synthetic Vision & Pathways on G1000-equipped Diamond DA42 L360 aircraft with G1000 System Software Version 1054.01 and later.
  - 4. Compliance:** Compliance with this service bulletin is Optional.
  - 5. Approval:** Engineering data referenced or contained in this service bulletin is approved as part of the type design.
  - 6. Labour:**

Approximately 1 hour of labour will be required to install the Garmin Synthetic Vision & Pathways activation Service Bulletin, including testing and return-to-service.

*This estimate is for direct labour performed by a technician and it does not include setup, planning, familiarization, cure time, part fabrication or tool acquisition.*
  - 7. Material:** Software and concurrent documents can be obtained through your Garmin distributor.
  - 8. Special Tools:** Not Applicable
  - 9. References:** Garmin Service Bulletin No. 1039, Revision A - dated 30 November 2010. (Attached)

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## 10. Accomplishment Instructions:

Refer to and Install Garmin Service Bulletin No. 1039, Revision A.  
G1000 Synthetic Vision & Pathways Activation, Diamond DA42-L360

10.1 Insert Supplement S05 into the Airplane Flight Manual D42L-AFM-002.

10.2 Make a log book entry that this Service Bulletin has been incorporated.

**11. Weight and Balance:** This Service Bulletin has no impact to the weight and balance of the aircraft.

**12. Availability:** Software and concurrent documents can be obtained through your Garmin distributor.

**13. Electrical Load Data:** This Service Bulletin has no impact on the electrical load.

**14. Credit:** None.

To obtain satisfactory results, procedures specified in this service bulletin must be accomplished in accordance with accepted methods and current government regulations. Diamond Aircraft Industries Inc. cannot be responsible for the quality of work performed in accomplishing the requirements of this service bulletin. Diamond Aircraft reserves the right to void continued warranty coverage in the area affected by this service bulletin if it is not incorporated.

If you no longer own the aircraft to which this service bulletin applies, please forward it to the current owner and send the name of the current owner to Diamond Aircraft Industries Inc. at the address below.

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## SERVICE BULLETIN

NO.: 1039 Revision A

**TO:** Diamond Aircraft Industries, Inc

**DATE:** 30 November, 2010

**SUBJECT:** G1000 Synthetic Vision & Pathways Activation, Diamond DA42-L360

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### PURPOSE

This Service Bulletin announces the availability of the G1000 Synthetic Vision & Pathways option.

### DESCRIPTION

This Service Bulletin provides information required to activate Synthetic Vision & Pathways on G1000-equipped Diamond DA42-L360 with G1000 System Software Version 1054.01 and later.

<b>NOTE</b>
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The G1000 Synthetic Vision & Pathways feature is not available with G1000 System Software Versions prior to 1054.01. Refer to Garmin Service Bulletin 1038 for information on upgrading to G1000 System Software Version 1054.01.

### APPROVAL

The engineering data contained in this software service bulletin are FAA approved. This bulletin does not provide installation authorization.

For approved configurations refer to Diamond Aircraft Industries Inc. documentation.

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## **AFMS AND PILOT'S GUIDE CONSIDERATIONS**

Flight Manual documentation as required per Diamond Aircraft.

The following documents describe operation of the Garmin G1000:

<b>Garmin Part Number</b>	<b>Document Title</b>
190-01062-01	G1000 Cockpit Reference Guide for the Diamond DA42-L360
190-01061-01	G1000 Pilot's Guide for the Diamond DA42-L360

## **PRODUCT AFFECTED**

All G1000-equipped Diamond DA42-L360 aircraft with G1000 System Software Version 1054.01 or later.

### **NOTE**

The G1000 Synthetic Vision & Pathways feature is not available with G1000 System Software Versions prior to 1054.01. Refer to Garmin Service Bulletin 1038 for information on upgrading to G1000 System Software Version 1054.01.

## **COMPLIANCE**

Compliance with this service bulletin is optional.

## **WARRANTY INFORMATION**

This modification is not warranty reimbursable.

## **MODIFICATION INSTRUCTIONS**

This section provides the requirements and instructions necessary to unlock the G1000 Synthetic Vision/Pathways feature.

### **Baseline Software:**

G1000 System Software Version 1054.01 is required to be installed prior to starting this procedure. Refer to Garmin Software Service Bulletin 1038 for information on upgrading to G1000 System Software Version 1054.01.

### **Database Cards:**

Each G1000 display must be equipped with a Terrain/Obstacle/SafeTaxi database card (010-00330-43) installed in the lower slot.

### **SVS/Pathways Unlock Card:**

A Synthetic Vision & Pathways unlock card (010-00330-54) is required to activate the SVS/Pathways feature for G1000/DA42-L360 installations.

#### **NOTE**

When the SVS/Pathways option is enabled for the first time, the G1000 writes its unique system ID to the physical card and locks the files to this unique ID. This prevents the SVS/Pathways unlock card from being used to activate the SVS/Pathway feature in other G1000 systems.

#### **NOTE**

The unlock card is tied to the specific aircraft in which it was used for the first time. This card **MUST** be kept with the aircraft for situations where SVS/Pathways must be re-activated.

### SVS Activation Procedure:

Activate the SVS/Pathways feature by performing the following steps:

1. Pull the MFD and PFD circuit breakers.
2. Remove and discard the 010-00330-41 or 010-00330-42 terrain cards from the bottom card slot of the PFD and MFD.
3. Turn on the ground power unit, if used.
4. Turn on the Electrical Master Switch.
5. Turn on the Avionics Master switch. At this moment, all G1000 equipment should be receiving power, except the PFD and MFD.
6. Insert the Synthetic Vision & Pathways unlock card (010-00330-54) in the upper slot of the PFD.
7. While holding the ENT key on the MFD, restore power by closing the MFD circuit breaker.
8. When the words **INITIALIZING SYSTEM** appear in the upper left corner of the MFD, release the ENT key.
9. Repeat Steps 7 and 8 for the PFD.
10. On the PFD, go to the System Upload page using the FMS knob.
11. Activate the cursor.
12. Use the small FMS knob to select "CONFIGURATION FILES" in the AIRFRAME field.
13. Press the ENT key.
14. Use the small FMS knob to select the "Enable SVS Single PFD" option in the FILE field.
15. Press the ENT key.
16. Once the option is selected the configuration files in the PRODUCT field will be displayed. All files should be checked. If not, press the CHK ALL softkey.
17. Press the LOAD softkey.
18. Monitor the status of the upload. When the upload is finished, press the ENT key to acknowledge the upload complete confirmation.
19. View the SUMMARY field and ensure that the item is 'COMPLETED'.
20. Power down the system and remove the SVS Unlock card from the PFD.
21. Insert the new 010-00330-43 terrain cards into the bottom card slot of the PFD and MFD.

## **TESTING PROCEDURE**

1. Apply power to the G1000 system. Allow the AHRS and magnetometer systems to stabilize and align. Verify that air data information becomes valid on the PFD.
2. Check the MFD AUX – GPS Status page to verify a 3D GPS signal acquisition.
3. Press the ALERTS softkey on the PFD and verify no database, manifest, or configuration errors exist.
4. Press the PFD softkey. Verify a SYN VIS softkey is shown in the lower left corner of the display.
5. Press the SYN VIS softkey, then press the SYN TERR softkey, to activate the Synthetic Vision terrain display feature. Verify that the traditional blue/brown attitude depiction is replaced with the Synthetic Vision rendering within 2-3 minutes of activation (with a 3D GPS signal acquisition).
6. Installation is complete. Be sure to keep the SVS/Pathways unlock card with the aircraft for future use.

## **MATERIAL INFORMATION**

QTY	Part Number	Description
1	010-00330-54	Synthetic Vision & Pathways Unlock, 1 PFD
2*	010-00330-43	SD Supplemental Data Cards
1	190-01062-01	G1000 Cockpit Reference Guide for the Diamond DA42-L360
1	190-01061-01	G1000 Pilot's Guide for the Diamond DA42-L360

\*Required if not already installed.

## **ADDITIONAL INFORMATION**

Garmin recommends that the installer and owner/operator review the service documents listed at [www.garmin.com](http://www.garmin.com) for applicable Service Alerts and Service Advisories relevant to the functions installed per this bulletin.