



**SOFTWARE SERVICE BULLETIN**  
**NO.: 0918 Rev A**

**TO:** All Garmin Aviation Service Centers  
**DATE:** August 4, 2009  
**SUBJECT:** 400W / 500W Series Unit's Software Upgrade to Main Software Version 3.30

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**PURPOSE**

This Service Bulletin announces the availability of new 400W / 500W Series Unit's Software version 3.30.

The 400W / 500W Series Main Software version 3.30 adds a number of new capabilities and features. It contains the following changes:

- Corrected issue with automatic Direct-To sequencing in terminal procedures and Direct-To flight plan deletions (refer to Service Alert 0936)
- Support for Localizer Performance (LP) Approaches
- Support for a User Magnetic Variation mode selection, that allows the pilot to specify the value of magnetic variation
- Support for the display of XM Canadian weather RADAR
- Added display of character "©" for CTAF frequencies shown on WPT Airport Frequency Page
- The XM Information AUX Page no longer displays a "Detecting Activation" message when unable to identify an XM service class
- Corrected issue where "No Coverage" hash lines were inappropriately displayed on the NEXRAD Map Pages
- Corrected RS-232 communication issue with Ryan TCAD where TCAD Approach Mode would not toggle on/off when the airport elevation was automatically loaded for a destination airport. Also corrected issue with RS-232 communication loss with older TCAD units.

**DESCRIPTION**

This software service bulletin describes the process for upgrading the 400W / 500W Series Unit's Main Software to version 3.30.

**APPROVAL**

The 400W / 500W Series Main Software version 3.30 complies with applicable FAA regulations and is FAA approved under TSOA. Main Software version 3.30 has airworthiness approval when installed in accordance with fixed wing STC, SA01933LA-D. This software change is a minor TSO software change.

**AFMS AND PILOT'S GUIDE CONSIDERATIONS**

The AFMS has been revised for the fixed wing AML STC, SA 01933LA-D. The existing 400W Series Unit AFMS (Garmin P/N 190-00356-03) Revision A or 500W Series Unit AFMS (Garmin P/N 190-00357-03) Revision A, must be removed and replaced with Revision B. The required AFMS revision is available at [www.garmin.com](http://www.garmin.com), within the Dealer Resource section of the website.

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Information about changes made to the guides for Software version 3.30 can be found in the upgrade supplement document (Garmin P/N 190-00356-34) located at [www.garmin.com](http://www.garmin.com), within the Dealer Resource section of the website.

The Pilot's Guide and Garmin Displays Addendum have been revised for Software version 3.30. The following Pilot's Guides revisions are required with Software version 3.30, per the AFMS:

- GNS 400W/500W Series Pilot's Guide & Reference (Garmin P/N 190-00356-00 or 190-00357-00, respectively) Rev E or later
- GNS 400W/500W Series Garmin Optional Displays Addendum (Garmin P/N 190-00356-30) Rev F or later
- GNS 400W/500W Series Display Interfaces Addendum (Garmin P/N 190-00356-31) Rev B or later

**Note:** The combination of the following documents is equivalent to the required Pilot's Guide revisions listed above:

- GNS 400W/500W Series SW v3.30 Upgrade Supplement (Garmin P/N 190-0356-34)
- GNS 400W/500W Series SW v3.20 Upgrade Supplement (Garmin P/N 190-0356-33)
- GNS 400W/500W Series SW v3.00 Upgrade Supplement (Garmin P/N 190-0356-32)
- GNS 400W/500W Series Pilot's Guide & Reference (any Revision)
- GNS 400W/500W Series Garmin Optional Displays Addendum (any Revision)
- GNS 400W/500W Series Display Interfaces Addendum (any Revision)

## **COMPLIANCE**

### **Mandatory**

**GPS Software Version:** It is required that the GPS software version is at least 3.0. Refer to Service Bulletin SB 0740 "400W/500W Series Unit's software upgrade to Main Software 3.00 & GPS Software 3.0" for instructions on how to upgrade the GPS software to 3.0. It is recommended, but not required, that the GPS software version is 3.2 or later, for optimal performance. Refer to SB 0848 "400W/500W Series Unit's software upgrade to Main Software 3.20 & GPS Software 3.2" for instructions on how to upgrade the GPS software to 3.2.

## **REFERENCES**

*Software Service Bulletin 0740* "400W / 500W Series Unit's Software Upgrade to Main Software Version 3.00 & GPS Software version 3.0"

*Software Service Bulletin 0848* "400W / 500W Series Unit's Software Upgrade to Main Software Version 3.20 & GPS Software version 3.2"

*Service Alert 0936* "Navigation error condition concerning terminal procedures with Direct-to-Fix legs"

*400W Series Installation Manual* (Garmin P/N 190-00356-02) Rev G

*500W Series Installation Manual* (Garmin P/N 190-00357-02) Rev G

*GNS 400W Series Pilot Guide* (Garmin P/N 190-00356-00) Rev E or later

*GNS 400W Series Quick Reference Guide* (Garmin P/N 190-00356-01) Rev E or later

*GNS 400W/500W Series Garmin Optional Display Addendum* (Garmin P/N 190-00356-30) Rev F or later

*GNS 400W/500W Series Display Interface Addendum* (Garmin P/N 190-00356-31) Rev D or later

*GNS 500W Series Pilot Guide* (Garmin P/N 190-00357-00) Rev E or later

*GNS 500W Series Quick Reference Guide* (Garmin P/N 190-00357-01) Rev E or later

*GNS 400W/500W Series SW v3.30 Upgrade Supplement* (Garmin P/N 190-0356-34) Rev B

The required STC documents are available from: [www.garmin.com](http://www.garmin.com), within the Dealer Resource section of the web site.

## **MANPOWER**

One hour (1) labor

## **WARRANTY INFORMATION**

This modification is warranty reimbursable for the manpower listed above, with a deadline of July 31, 2010, to complete the update. To ensure proper reimbursement, when completing the Garmin warranty claim include the unit's serial number, aircraft make, model, registration number and airframe serial number and indicate this service bulletin has been complied with.

## **MODIFICATION INSTRUCTIONS**

### **Part One: Main Software Upgrade Procedure**

- 1) Attach the aircraft to ground power before starting this procedure and take appropriate precautions to prevent inadvertent power disruption to the unit being updated during the software loading process.
- 2) Apply power to the unit and record configuration option settings.
- 3) Power down the unit.
- 4) With the unit powered off, remove the Database card from the right-hand card slot in the front of the unit.
- 5) Insert the Main Software Loader card (P/N 010-00446-06) in the right-hand card slot. Make sure that the Database card is firmly seated.
- 6) Turn on the unit. Instructions to press ENT will be displayed immediately. Press ENT and follow all on-screen prompts.
- 7) The update will take less than one minute to complete. After the update has completed, turn the unit off.
- 8) Remove the Software Loader card and insert the Database card removed in step "4". Make sure that the Database card is seated firmly.
- 9) Turn the unit on. After the unit has initialized, use the right knob to get to the AUX | UTILITY | SOFTWARE VERSIONS page. Verify that the following software versions are displayed:

Main SW= 3.30, IO FPGA = 2.3, Stage 1 = 2.01, and Stage 2 = 3.30

- 10) This completes the Main Software Upgrade Procedure. (Note: The Software Loader card can be used for multiple upgrades.) Update the aircraft maintenance records to indicate that Main SW v3.30 has been installed in accordance with this Service Bulletin.
- 11) Reconfigure option settings recorded in step 2.

### **Part Two: Documentation Update Procedure**

- 12) Make an entry in the aircraft maintenance records to indicate that Main SW v3.30 has been installed in accordance with this Service Bulletin.
- 13) Replace the existing AFMS with the updated AFMS. Refer to the AFMS and Pilot's Guide Considerations section of this bulletin.
- 14) Print out copies of the supplements listed in the AFMS and Pilot's Guide Considerations Section of this bulletin and insert the copies in the Pilot's Guide.

Note: The required documents are available at [www.garmin.com](http://www.garmin.com), within the Dealer Resource section of the web site.

## **MATERIAL INFORMATION**

A Main Software Loader card for Software version 3.30, Garmin P/N 010-00446-06 is required to complete the software upgrade. The software loader card carries a charge of \$50.00, which will be refunded upon return of the card to Garmin. Contact Garmin International to order a software loader card.