

## GARMIN G1000 INTEGRATED AVIONICS SYSTEM - ADJUSTMENT/TEST

### 1. General

- A. This section gives software and configuration load instructions for the Garmin G1000 Integrated Avionics System. This software load is necessary for many of the line replaceable units (LRU)s in the Garmin G1000 system. The G1000 Integrated Avionics System has four principle software configurations, depending on your Aircraft Serial Number and/or Service Bulletins installed on your Aircraft. Become familiar with the installed software configuration. Each software configuration uses variants of Garmin LRU's which are NOT interchangeable between software configurations. Refer to Chapter 34, Garmin G1000 Integrated Avionics System - Description and Operation, Figure 1. For a general description of each individual LRU in the G1000 system, refer to the applicable component section in this chapter. LRU software configurations are typical for the G1000 v.767.XX Family and the G1000 NXi software configuration unless otherwise noted in this document.
- B. Additional software/configuration procedural data can be found in the latest revision of the Garmin G1000 Line Maintenance Manual (Cessna Caravan). Refer to the Introduction, Supplier Publication List.

### 2. Software and Configuration Overview

- A. Different airplane serials, depending on optional installed equipment and/or systems can have different software/configuration load procedures. Make sure you use the procedures applicable to your airplane.
- B. The two GIA 63W units, GMA 1347 (second GMA 1347 optional), and the three GDU's all have position-specific configuration that must be loaded again if the units change sides in the airplane (pilot's to copilot's, or copilot's to pilot's). The software does not have to be loaded again, only the configuration.
- C. Make sure that you load currently installed options after the main configuration file is loaded in order to re-enable the optional equipment. You can view the currently installed options in the 'Airframe' window on the Airframe Configuration Page in the GDU configuration group of pages.
- D. Here is a listing of the procedures for the G1000 Software Configuration in the order of appearance in this section:

**NOTE:** Some procedures are software version specific, make sure to follow each title with care for desired configuration.

- (1) G1000 Baseline Software/Configuration Load.
- (2) G1000 Architecture Verification Check.
- (3) G1000 Option Software Load.

**NOTE:** The G1000 Option Software Load procedure can be used to load other options not included in this list.

- (4) GTX-33 Transponder Configuration (Software v.767.XX).
- (5) GTX-33ES Transponder Configuration (Software v.767.23 only).
- (6) GTX-33ES ADS-B OUT Enable Configuration (Software v.767.23 only).
- (7) GTS 825 TAS Configuration.
- (8) Dual GMA 1347 Configuration Load.
- (9) G1000 TAWS Enable Configuration.
- (10) G1000 Chartview Database Load and Enable Configuration.
- (11) G1000 Search and Rescue (SAR) Enable Configuration.
- (12) G1000 Synthetic Vision Technology (SVT) Enable Configuration.
- (13) G1000 NXi LRU Replacement Procedure.

**NOTE:** This feature will not function if more than one LRU is replaced at a time.

- (14) G1000 NXi GTX-3X5R Transponder Configuration.

### 3. G1000 Baseline Software/Configuration Load

- A. Tools and Equipment

**NOTE:** For the supplier publication part number and manufacturer data, refer to the Introduction - Supplier Publication List.

- (1) Tools and Equipment

**NOTE:** The Unlock Cards are not required for G1000 NXi Options Software from the baseline loader

**card .**

- ADS-B OUT Unlock Card (p/n 3910328-28)
- Baseline SD Loader Card (supplied with Airplane)

**NOTE: The Baseline SD Loader Card contains the G1000 Software that was originally delivered with the Airplane.**

- TAWS Unlock Card (p/n 3910328-16)
- SAR Unlock Card (p/n 3910328-27)
- Chartview Unlock Card (p/n 3910328-18)
- SVT Unlock Card (p/n 3910328-20)
- PC Laptop Computer with a SD card reader slot.
- Surface Watch Enable Card (p/n 010-00330-KA).
- Turbulence Detection (TD) and Ground Clutter suppression (GCS) Enable Card (p/n 010-00330-D1).

(2) Special Consumables

- None.

(3) Reference Material

- Chapter 28, Fuel Quantity (Can Bus) - Adjustment/Test
- Garmin G1000 Integrated Avionics System - Description and Operation.

B. Prepare the Airplane

- (1) Put the EXTERNAL POWER switch to the OFF position.
- (2) Put the BATTERY switch to the OFF position.
- (3) Put the AVIONICS switches to the the OFF position.
- (4) For G1000 Software Version v.767.XX only, remove the SD database cards from the lower slots from each of the two primary flight displays (PFD) and the multifunction display (MFD).
  - (a) For each SD card, record the GDU position from which it was removed.
- (5) Disengage the PFD 1 and MFD circuit breakers, found on the avionics circuit breaker panel.

C. Do the Baseline Software Load (Refer to Figure 501).

**NOTE: When new system software and configuration files are loaded onto a PFD/MFD, all optional systems must be unlocked again for that PFD/MFD.**

**NOTE: When the airframe configuration file is loaded onto the Garmin G1000 system, all optional systems for the PFD and MFD must be unlocked again.**

**NOTE: For FMS knob operation: Turn the outer knob to select fields and move between page groups. Use the inner knob to change characters and move between pages. Push the knob to activate cursor.**

- (1) Make sure that the pilot's and copilot's pitot probes and static ports do not have covers on them.
- (2) Insert the G1000 software baseline SD loader card into top slot of PFD 2.
- (3) Connect external electrical power to the airplane.
  - (a) Adjust the ground power unit (GPU) to 28Vdc, +0.5 or -0.5 Vdc.
- (4) Put the EXTERNAL POWER switch to the BUS position.
- (5) Put the BATTERY switch to the ON position.
- (6) Put the AVIONICS switches to the ON position.
- (7) Push and hold the ENT button down on the PFD 2 while the G1000 powers on.
  - (a) Release the ENT button when INITIALIZING SYSTEM shows on the PFD.
  - (b) Select YES to UPDATE USER SETTINGS? and observe update loading process.
- (8) After loading is completed, remove the SD card from the PFD 2 and insert it in the top slot of the MFD.
- (9) Push and hold the number ENT button down on the MFD while engaging the MFD circuit breaker.
  - (a) Release the button when INITIALIZING SYSTEM shows on the MFD.
  - (b) Select YES to UPDATE USER SETTINGS? and observe update loading process.

- (10) After loading is completed, remove the so card from the MFD and insert it in the top slot of the PFD 1.
- (11) Push and hold the ENT button down on the PFD 1 while engaging the PFD 1 circuit breaker.
  - (a) Release the button when INITIALIZING SYSTEM shows on the PFD.
  - (b) Select YES to UPDATE USER SETTINGS? and observe update loading process.
- (12) For Airplanes 20800500 thru 20800564 and Airplanes 208B2000 thru 208B04999 do the step that follows:
  - (a) With the G1000 SD loader card in PFD 1, use the FMS knob and ENT button, scroll to the SYSTEM UPLOAD PAGE.
  - (b) Select the applicable Airframe and Baseline Configuration file to load. Refer to Table 501.

**Table 501. Airframe Files (Airplanes 20800500 thru 20800564 and Airplanes 208B2000 thru 208B04999 not incorporating CAB-34-03)**

AIRFRAME	FILE
208	Cessna 208 - Baseline Configuration
208B	Cessna 208B - Baseline Configuration

- (13) For Airplanes 20800565 and On and Airplanes 208B5000 and On do the step that follows:
  - (a) With the G1000 SD loader card in PFD 1, use the FMS knob and ENT button, scroll to the SYSTEM UPLOAD PAGE on the GROUP field select CARAVAN BASELINE LOADS.
  - (b) Select the applicable Baseline Configuration file to load. Refer to Table 502.

**Table 502. Airframe Files ((Airplanes 20800500 thru 20800564 and Airplanes 208B2000 thru 208B04999 incorporating CAB-34-03, Airplanes 20800565 and On and Airplanes 208B5000 and On)**

AIRFRAME	FILE
Cessna 208 PT6A-114A	Cessna 208 - Baseline Configuration
Cessna 208B PT6A-114A	Cessna 208B - Baseline Configuration (See NOTE 1)
Cessna 208B PT6A-140	Cessna 208B - Baseline Configuration

**NOTE 1: Airplanes 208-0601 and On and Airplanes 208B-005401 and On will not see this option.**

- (14) Push the LOAD softkey and observe the upload process until complete.
  - (a) Push the ENT button to acknowledge the completion of the installation.
- (15) If not already previously loaded, do the 'FUEL CALIBRATION CONFIG LOAD before you complete the configuration load. Refer to Chapter 28 Fuel Quantity (Can Bus) - Adjustment/Test, Fuel Calibration Configuration Load.

**NOTE: Do not do the calibration configuration load unless the master configuration module is replaced and the fuel calibration configuration load file cannot be loaded from the PFD 1. If you do the calibration configuration load it is necessary to drain the airplane of fuel and do the Fuel Quantity System Calibration.**

- (a) It is necessary when you do the FUEL CALIBRATION CONFIG LOAD procedures to do the fuel system calibration. Refer to Chapter 28 Fuel Quantity (Can Bus) - Adjustment/Test, Fuel Quantity System Calibration (Airplanes with CAN Bus type fuel level sensors).
- (16) Push the UPDT CFG softkey and ENT button to update the PFD 1 configuration module.
  - (a) Observe the update process and push the ENT button to acknowledge when it is complete.
- (17) For G1000 Software Version v.767.XX, do the GTX-33 Transponder Configuration (v.767.XX) or the GTX-33ES Transponder Configuration (v.767.23 only), as applicable.

**NOTE: GTX configuration is only required when installing a new transponder. This step is not required for typical Baseline Software Loading.**

- (18) For G1000 NXi Software, do the GTX-3X5R Transponder Configuration.

**NOTE: GTX configuration is only required when installing a new transponder. This step is not required for**

### typical Baseline Software Loading.

- (19) Load the airplanes options before you power down G1000 system. To load the options refer to the Do the G1000 Option Software/Configuration Load.
- NOTE:** You can view the currently installed options in the Airframe window on the Airframe Configuration Page in the GDU configuration group of pages.
- NOTE:** For G1000 NXi Software, the transaction log page will show options installed.
- NOTE:** For G1000 NXi Software, once the baseline software has been installed, the information is stored in the internal memory of the GDU using the card copy feature of NXi . This includes any options installed, unlock cards, LRU Software and LRU configurations.
- NOTE:** The G1000 NXi System can store up to 32 cards on the GDU internal memory.
- (20) Put the EXTERNAL POWER switch to the OFF position.
- (21) Put the BATTERY switch to the OFF position.
- (22) Put the AVIONICS switches to the OFF position.
- (23) Remove the G1000 SD loader card from PFD 1.
- (24) For G1000 Software Version v.767.XX only, install the SD database cards in the lower slots in each of the two PFD's and the MFD.
- (a) Make sure that you install each SD card in the GDU from which you recorded earlier.
- (25) Put the EXTERNAL POWER switch to the BUS position.
- (26) Put the BATTERY switch, found on the circuit breaker switch panel to the ON position.
- (27) Put the AVIONICS switches found on the circuit breaker switch panel to the ON position.
- (28) When the GDU's have initialized in Normal mode, disengage the PFD 1, PFD 2 and MFD circuit breakers found on the Avionics circuit breaker panel.
- (29) Push and hold the CLR button on the PFD 2 display while engaging the PFD 2 circuit breaker.
- (a) Release the button when INITIALIZING SYSTEM shows on the PFD.
- (b) Select YES to clear the user settings.
- (30) Push and hold the CLR button on the MFD display while engaging the MFD circuit breaker.
- (a) Release the button when INITIALIZING SYSTEM shows on the PFD.
- (b) Select YES to clear the user settings.
- (31) Push and hold the CLR button on the PFD 1 display while engaging the PFD 1 circuit breaker.
- (a) Release the button when INITIALIZING SYSTEM shows on the PFD.
- (b) Select YES to clear the user settings.
- (32) With each of the displays in normal mode, navigate to the AUX > SYSTEM SETUP on the MFD.
- (33) Use the FMS knobs and ENT button to change the date/time format to UTC.
- (34) The baseline software load is complete.
- (35) Use the Optional Feature Unlock cards and do the applicable procedures to unlock optional features as follows:
- (a) GTX-33ES ADS-B OUT Enable Configuration (v.767.23 only)
- (b) G1000 TAWS Enable Configuration.
- (c) G1000 Chartview Database Load and Enable Configuration.
- (d) G1000 Search and Rescue (SAR) Enable Configuration.
- (e) G1000 Synthetic Vision Technology (SVT) Enable Configuration.
- (f) Surface Watch Enable Configuration.
- (g) Turbulence Detection (TD) and Ground Clutter Suppression (GCS) Enable configuration.
- (36) Load the Jeppesen Aviation Database. Refer to G1000 Chartview Database Load.
- (37) Do a check of the system status. Refer to G1000 Architecture Verification Check.

#### 4. G1000 Architecture Verification Check

**NOTE:** For FMS knob operation: Turn the outer knob to select fields and move between page groups. Use the inner knob to change characters and move between pages. Push the knob to activate cursor.

- A. Do the G1000 Architecture Verification Check (Refer to Figure 502).
- (1) Connect external electrical power to the airplane.
  - (2) Put the EXTERNAL POWER switch to the BUS position.
  - (3) Put the BATTERY switch, found on the circuit breaker switch panel to the ON position.
  - (4) Put the AVIONICS switches found on the circuit breaker switch panel to the ON position.
  - (5) Push the ENT button.
  - (6) Turn the large FMS Knob to select the AUX Page group on the MFD.
  - (7) Turn the small FMS Knob to select the AUX - System Status Page.
  - (8) Push the LRU softkey to select the LRU window.
  - (9) Use the inner FMS knob to scroll up and down the list.
  - (10) Make sure that the correct software version and part number are shown.
  - (11) On the system status list monitor the data that follows:
 

**NOTE:** Serial number is not reported for the following equipment: COM1, COM2, GS1, GS2, GTX1, GTX 2 (OPT), NAV1, NAV2, AND WX500.

**NOTE:** The components that follow are not listed on the System Status List page: KR 87 ADF, KN 63 DME, KTA 870 TAS, KRA 405B, KHF 1050 HR Radio System, ME406 ELT, and the C406-N ELT.

    - (a) The line replaceable unit (LRU) status is acceptable when the data that follows is shown:
      - Status column shows check (green).
      - The LRU serial number.
      - The LRU version number.
  - (12) Put the BATTERY switch to the OFF position.
  - (13) Put the AVIONICS switches to the OFF position.
  - (14) Put the EXTERNAL POWER switch to the OFF position.

## 5. G1000 Option Software Load

**NOTE:** The G1000 Option Software Load procedure can be used to load other optional procedures not listed in this chapter.

- A. Prepare for the G1000 option software/configuration load.
- NOTE:** For FMS knob operation: Turn the outer knob to select fields and move between page groups. Use the inner knob to change characters and move between pages. Push the knob to activate cursor.
- (1) Put the EXTERNAL POWER switch to the OFF position.
  - (2) Put the BATTERY switch to the OFF position.
  - (3) Put the AVIONICS switches to the OFF position.
  - (4) For G1000 Software Version v.767.XX, remove the SD database cards from the lower slots from each of the two Primary Flight Displays (PFD)'s and the Multi Function Display (MFD).
    - (a) For each SD card, record the GDU position from which it was removed.
  - (5) Disengage the PFD 1 and MFD circuit breakers on the Avionics circuit breaker panel.
  - (6) Connect external electrical power to the airplane.
  - (7) Put the EXTERNAL POWER switch to the BUS position.
  - (8) Put the BATTERY switch to the ON position.
  - (9) Put the AVIONICS switches to the ON position.
  - (10) Push and hold the ENT button down on the PFD 2 while the G1000 powers on.
    - (a) Release the ENT button when initializing system shows on the PFD.
  - (11) Push and hold the number ENT button down on the MFD while you engage the MFD circuit breaker.
    - (a) Release when INITIALIZING SYSTEM shows on the MFD.

- (12) Insert the SD loader card in the top slot of the PFD 1.
- (13) Push and hold the ENT button down on the PFD 1 while you engage the PFD 1 circuit breaker.
  - (a) Release the button when INITIALIZING SYSTEM shows on the PFD.
  - (b) Select NO to update user settings and observe update loading process.

**B. Do the G1000 Option Software Load (Refer to Figure 503).**

**NOTE: For FMS knob operation: Turn the outer knob to select fields and move between page groups. Use the inner knob to change characters and move between pages. Push the knob to activate cursor.**

- (1) With the SD loader card in PFD 1, use the FMS knob and ENT button scroll to the SYSTEM UPLOAD page.
- (2) Use the FMS knob and ENT button to scroll to select INSTALLATION OPTIONS in the AIRFRAME field.
 

**NOTE: With some loader cards, the text INSTALLATION OPTIONS can show as INSTALLATIONS OPTIONS - GENERAL.**
- (3) Use the FMS knob to scroll on the OPTION LIST in the ITEM field and select Cessna Caravan - (option to be loaded ) Installation Options or Configuration Option as applicable.
  - (a) For the FDR/CVR option do as follows: If the FDR/CVR option is not found in the INSTALLATIONS OPTIONS - GENERAL group, select the PT6A-114A ONLY group.
 

**NOTE: The FDR/CVR option in the PT6A-114A group is also valid for the PT6A-140 engine.**
- (4) Push the LOAD softkey and monitor the the load process until it is complete.
  - (a) Push the ENT button to acknowledge the completion of the installation.
- (5) If there are more options to load, do the above steps again until all options are loaded.
- (6) Push the UPDT CFG and ENT buttons to update the PFD 1 configuration module.
  - (a) Push the ENT button to acknowledge the completion of the installation.
- (7) Put the EXTERNAL POWER switch to the OFF position.
- (8) Put the BATTERY switch to the OFF position.
- (9) Put the AVIONICS switches to the OFF position.
- (10) Remove the SD data loader card from the PFD 1.
 

**NOTE: Keep the SD data loader card with the Pilot's Operating Handbook.**
- (11) For G1000 Software Version v.767.XX, install the SD database cards in the lower slots of each of the two PFD's and the MFD.
  - (a) Make sure that you install each SD card in the GDU from which it was removed as recorded earlier.
- (12) Put the EXTERNAL POWER switch in the BUS position.
- (13) Put the BATTERY switch to the ON position.
- (14) Put the AVIONICS switches to the ON position.
- (15) Make sure that the GDU's start in normal mode.
- (16) The G1000 Garmin options software/configuration load is complete.

**6. GTX-33 Transponder Configuration v.767.XX Family**

**A. Do the GTX-33 Transponder 1 Configuration (Refer to Figure 504).**

**NOTE: For FMS knob operation: Turn the outer knob to select fields and move between page groups. Use the inner knob to change characters and move between pages. Push the knob to activate cursor.**

- (1) If the configuration procedures that follow are not done after loading baseline software or other options, prepare for the configuration load. Refer to Prepare for the G1000 option software/configuration load.
- (2) Use the inner and outer FMS knobs on the PFD 1 navigate to the TRANSPONDER CONFIGURATION page in the GTX GROUP pages.
- (3) Use the FMS knobs and the ENT button to select XPDR1 or XPDR 2 in the SELECT TRANSPONDER field.
  - (a) Configure the SET column values in the CONFIGURATION field.
- (4) Push the ENT button to acknowledge the completion of the transponder configuration when you have entered all the values.

- (5) If there are more options to load return to the applicable page and select the options to load.
- (6) If no more options are to be loaded, remove the G1000 SD loader card from PFD 1.
- (7) Insert each database card in the GDU it was removed from.
- (8) Put the EXTERNAL POWER switch to the BUS position.
- (9) Put the BATTERY switch to the ON position.
- (10) Put the AVIONICS switches to the ON position.
- (11) Option load is complete.

## 7. GTX-33ES Transponder Configuration (v.767.23 only)

- A. Do the GTX-33ES Transponder 1 and 2 Configuration (Refer to Figure 505).

**NOTE: For FMS knob operation: Turn the outer knob to select fields and move between page groups. Use the inner knob to change characters and move between pages. Push the knob to activate cursor.**

- (1) If the configuration procedures that follow are not done after loading baseline software or other options, prepare for the configuration load. Refer to Prepare for the G1000 option software/configuration load.
- (2) Use the inner and outer FMS knobs on the PFD 1 to navigate to the SYSTEM GROUP pages then to the AIRCRAFT CONFIGURATION page.
- (3) Use the inner and outer FMS knobs on the PFD 1 to configure the AIRCRAFT REGISTRATION number in the AIRCRAFT CONFIGURATION field.
- (4) Use the inner and outer FMS knobs on the PFD 1 to configure the ICAO ADDRESS in the AIRCRAFT CONFIGURATION field, if not automatically populated.
- (5) Push the SET GTX1 softkey after final value is entered.
  - (a) Select OK.
  - (b) Make sure that the the box next to GTX1 now has a check mark (green).
- (6) If you are configuring a dual GTX installation push the SET GTX 2 softkey.
  - (a) Select OK.
  - (b) Make sure that the the box next to GTX2 now has a check mark (green).
- (7) Use the inner and outer FMS knobs on the PFD 1 to navigate to the TRANSPONDER CONFIGURATION page in the GTX GROUP pages.
- (8) Use the FMS knobs and the ENT button to select XPDR1 or XPDR 2 in the SELECT TRANSPONDER field.
  - (a) Configure the SET column values in the AIRCRAFT CONFIGURATION field.
- (9) Push the ENT button to acknowledge the completion of the transponder configuration when you have entered all the values.
- (10) If there are more options to load return to the applicable page and select the options to load.
- (11) If no more options are to be loaded, remove the G1000 SD loader card from PFD 1.
- (12) Insert each database card in the GDU it was removed from.
- (13) Put the EXTERNAL POWER switch to the BUS position.
- (14) Put the BATTERY switch to the ON position.
- (15) Put the AVIONICS switches to the ON position.
- (16) Option load is complete.

## 8. GTX-33ES ADS-B OUT Enable Configuration (v.767.23 only)

- A. Do the GTX-33ES ADS-B OUT Enable Configuration (Refer to Figure 505).

**NOTE: For FMS knob operation: Turn the outer knob to select fields and move between page groups. Use the inner knob to change characters and move between pages. Push the knob to activate cursor.**

- (1) Put the EXTERNAL POWER switch to the OFF position.
- (2) Put the BATTERY switch to the OFF position.
- (3) Put the AVIONICS switches to the OFF position.
- (4) Remove the SD database cards from the lower slots from each of the two primary flight displays (PFD)'s and the

multifunction display (MFD).

- (a) For each SD card, record the GDU position from which it was removed.
- (5) Disengage the PFD 1 and MFD circuit breakers on the Avionics circuit breaker panel.
- (6) Connect external electrical power to the airplane.
- (7) Put the EXTERNAL POWER switch to the BUS position.
- (8) Put the BATTERY switch to the ON position.
- (9) Put the AVIONICS switches to the ON position.
- (10) Push and hold the ENT button down on the PFD 2 while the G1000 powers on.
  - (a) Release the ENT button when initializing system shows on the PFD.
- (11) Push and hold the number ENT button down on the MFD while you engage the MFD circuit breaker.
  - (a) Release when INITIALIZING SYSTEM shows on the MFD.
- (12) Insert the ADS-B unlock card in the top slot of the PFD 1.
- (13) Push and hold the ENT button down on the PFD 1 while you engage the PFD 1 circuit breaker.
  - (a) Release the button when INITIALIZING SYSTEM shows on the PFD.
- (14) Use the FMS knob and the ENT button to navigate to the SYSTEM UPLOAD page.
- (15) Use the FMS knob and the ENT button to ADS-B in the GROUP field.
- (16) Use the FMS knob and the ENT button to select from the OPTION LIST in the ITEM field, the Enable ADS-B OUT option.
- (17) Push the LOAD softkey and monitor until the upload is complete.
  - (a) Push the ENT button to acknowledge the upload completion.
- (18) Put the EXTERNAL POWER switch to the OFF position.
- (19) Put the BATTERY switch to the OFF position.
- (20) Put the AVIONICS switches to the OFF position.
- (21) Remove the ADS-B OUT unlock card from PFD 1.
 

**NOTE: Keep the ADS-B OUT unlock card with the Pilot's Operating Handbook.**
- (22) Insert each database card in the GDU it was originally removed from.
- (23) Put the EXTERNAL POWER switch to the BUS position.
- (24) Put the BATTERY switch to the ON position.
- (25) Put the AVIONICS switches to the ON position.
- (26) Option load is complete.

## 9. GTS 825 TAS Configuration

- A. Do the GTS 825 TAS Configuration (Refer to Figure 506).

**NOTE: For FMS knob operation: Turn the outer knob to select fields and move between page groups. Use the inner knob to change characters and move between pages. Push the knob to activate cursor.**

- (1) If the configuration procedures that follow are not done after loading baseline software or other options, prepare for the configuration load. Refer to Prepare for the G1000 option software/configuration load.
- (2) Use the FMS knobs on the PFD 1 to navigate to the SYSTEM GROUP pages then to the AIRCRAFT CONFIGURATION page.
- (3) Push the SET GTS softkey and then select OK.
  - (a) Make sure that the box next to GTS now has a check (green).
- (4) Use the FMS knobs on the PFD 1 to navigate to the SYSTEM UPLOAD page.
  - (a) Push the UPDT CFG softkey.
  - (b) Push the ENT button.
- (5) Put the EXTERNAL POWER switch to the OFF position.
- (6) Put the BATTERY switch to the OFF position.

- (7) Put the AVIONICS switches to the OFF position.
- (8) If there are more options to load return to the applicable page and select the options to load.
- (9) If no more options are to be loaded, remove the G1000 SD loader card from PFD 1.

**NOTE:** Keep the G1000 SD loader card with the Pilot's Operating Handbook.

- (10) For G1000 Software Version v.767.XX, insert each database card in the GDU it was removed from.
- (11) Put the EXTERNAL POWER switch to the BUS position.
- (12) Put the BATTERY switch to the ON position.
- (13) Put the AVIONICS switches to the ON position.
- (14) Option load is complete.

## 10. Dual GMA 1347 Configuration Load

**NOTE:** For FMS knob operation: Turn the outer knob to select fields and move between page groups. Use the inner knob to change characters and move between pages. Push the knob to activate cursor.

A. Do the Dual GMA 1347 Software and Configuration Load (Refer to Figure 507).

- (1) If the configuration procedures that follow are not done after loading baseline software or other options, prepare for the configuration load. Refer to Prepare for the G1000 option software/configuration load.
- (2) Use the FMS knob and ENT button to scroll to select INSTALLATION OPTIONS in the AIRFRAME field.

**NOTE:** With some loader cards, the text INSTALLATION OPTIONS can show as INSTALLATIONS OPTIONS - GENERAL.

- (3) Use the FMS knob and ENT button to scroll to select Cessna Caravan - Dual GMA 1347 Audio Installation Option.
- (4) Push the LOAD softkey and monitor the the load process until it is complete.
  - (a) Push the ENT button to acknowledge the completion of the installation.
- (5) If the following are installed, select them in the Airframe field and do the load procedures again:
  - (a) CESSNA CARAVAN - KR87 ADF W/2ND AUDIO INSTALLATION OPTION.
  - (b) CESSNA CARAVAN - COM3 W/2ND AUDIO INSTALLATION OPTION.
- (6) Push the UPDT CFG and ENT buttons to update the PFD 1 configuration module.
  - (a) Push the ENT button to acknowledge the completion of the installation.
- (7) Put the EXTERNAL POWER switch to the OFF position.
- (8) Put the BATTERY switch to the OFF position.
- (9) Put the AVIONICS switches to the OFF position.
- (10) Remove the SD data loader card from the PFD 1.

**NOTE:** Keep the SD data loader card with the Pilot's Operating Handbook.

- (11) For G1000 Software Version v.767.XX, install the SD database cards in the lower slots of each of the two PFD's and the MFD.
  - (a) Make sure that you install each SD card in the GDU from which it was removed earlier.
- (12) Put the EXTERNAL POWER switch to the BUS position.
- (13) Put the BATTERY switch to the ON position.
- (14) Put the AVIONICS switches to the ON position.
- (15) The GDU's start in normal mode.

## 11. G1000 TAWS Enable Configuration

**NOTE:** Do the TAWS enable configuration only when the baseline/configuration software has been loaded and the G1000 system power has been cycled at least 1 time.

**NOTE:** For FMS knob operation: Turn the outer knob to select fields and move between page groups. Use the inner knob to change characters and move between pages. Push the knob to activate cursor.

A. Do the TAWS Enable Configuration (Refer to Figure 508).

- (1) Put the BATTERY switch to the OFF position.

- (2) Put the AVIONICS switches to the OFF position.
- (3) Put the EXTERNAL POWER switch to the OFF position.
- (4) For G1000 Software Version v.767.XX only, remove the SD database cards from the lower slots from each of the two primary flight displays (PFD)'s and the multifunction display (MFD).
  - (a) For each SD database card, record the GDU position from which it was removed.
- (5) Disengage the PFD 1 and MFD circuit breakers, found on the Avionics circuit breaker panel.
- (6) Connect external electrical power to the airplane.
- (7) Put the EXTERNAL POWER switch to the BUS position.
- (8) Put the BATTERY switch to the ON position.
- (9) Put the AVIONICS switches to the ON position.
- (10) Push and hold the ENT button down on the PFD 2 while the G1000 powers on.
  - (a) Release the ENT button when initializing system shows on the PFD.
- (11) Push and hold the ENT button down on the MFD while you engage the MFD circuit breaker.
  - (a) Release the ENT button when initializing system shows on the PFD.
- (12) Insert the TAWS unlock card (p/n 3910328-16) in the top slot of PFD 1.
- (13) Push and hold the ENT button down on the PFD 1 while you engage the PFD 1 circuit breaker.
  - (a) Release the ENT button when initializing system shows on the PFD.
  - (b) When UPDATE USER SETTINGS shows, select NO.
- (14) Use the FMS knobs and the ENT button to scroll to the SYSTEM UPLOAD page.
- (15) Use the FMS knobs and the ENT button to select Configuration File in the Airframe field.
- (16) From the FILE field use the FMS knobs and the ENT button select Enable TAWS.
- (17) Push the LOAD softkey and monitor software load.
  - (a) The PASS message shows when the upload is complete.
  - (b) Push the ENT button to acknowledge the installation completion.
- (18) Push the UPDT CONFIG softkey and ENT button to update the master configuration module and monitor the upload.
  - (a) The PASS message shows when the upload is complete.
  - (b) Push the ENT button to acknowledge the installation completion.
- (19) Put the BATTERY switch to the OFF position.
- (20) Put the AVIONICS switches to the OFF position.
- (21) Put the EXTERNAL POWER switch to the OFF position.
- (22) Remove the TAWS unlock card from the PFD 1 top slot.
 

**NOTE: Keep the TAWS unlock card with the Pilot's Operating Handbook.**
- (23) For G1000 Software Version v.767.XX only, install the SD database cards in the lower slots of each of the two primary flight displays (PFD)'s and the multifunction display (MFD).
  - (a) Make sure that each SD database card, is installed in the GDU from which it was removed.
- (24) Put the EXTERNAL POWER switch to the BUS position.
- (25) Put the BATTERY switch to the ON position.
- (26) Put the AVIONICS switches to the ON position.
- (27) On the MFD navigate to the MAP-TAWS page and make sure that the MAP-TAWS page shows on the MFD display.
- (28) Put the BATTERY switch to the OFF position.
- (29) Put the AVIONICS switches to the OFF position.
- (30) Put the EXTERNAL POWER switch in the OFF position.

## 12. G1000 Chartview Database Load and Enable Configuration

**NOTE: For FMS knob operation: Turn the outer knob to select fields and move between page groups. Use the inner knob to change characters and move between pages. Push the knob to activate cursor.**

- A. Do the G1000 Chartview Database Load (Refer to Figure 509).
- (1) For G1000 Software Version v.767.XX only, remove the database card from the bottom slot of the MFD.
  - (2) Insert the SD card in the laptop SD card reader slot.
  - (3) Log on to Jeppesen Services Update Manager site.
  - (4) Select G1000 Electronic Chart from the list of services.
    - (a) Click Start.
    - (b) Monitor the the update procedure.

**NOTE: The initial download takes approximately 30 minutes. Subsequent downloads take approximately 10 minutes.**
  - (5) Insert the database back in the MFD bottom slot.
  - (6) The G1000 Chartview Database Load is complete.
  - (7) Do this procedure every 14 days to update the Chartview database.
- B. Do the G1000 Chartview Enable Configuration.
- (1) Put the BATTERY switch to the OFF position.
  - (2) Put the AVIONICS switches to the OFF position.
  - (3) Put the EXTERNAL POWER switch to the OFF position.
  - (4) Remove the SD database cards from the lower slots from each of the two primary flight displays (PFD)'s and the multifunction display (MFD).
    - (a) For each SD card, record the GDU position from which it was removed.
  - (5) Disengage the PFD 1 and MFD circuit breakers, found on the avionics circuit breaker panel.
  - (6) Connect external electrical power to the airplane.
  - (7) Put the EXTERNAL POWER switch to the BUS position.
  - (8) Put the BATTERY switch to the ON position.
  - (9) Put the AVIONICS switches to the ON position.
  - (10) Push and hold the ENT button down on the PFD 2 while the G1000 powers on.
    - (a) Release the ENT button when INITIALIZING SYSTEM shows on the PFD.
  - (11) Push and hold the ENT button down on the MFD while you engage the MFD circuit breaker.
    - (a) Release the ENT button when INITIALIZING SYSTEM shows on the PFD.
  - (12) Insert the Chartview unlock card (p/n 3910328-18) in the top slot of PFD 1.
  - (13) Push and hold the ENT button down on the PFD 1 while you engage the PFD 1 circuit breaker.
    - (a) Release the ENT button when INITIALIZING SYSTEM shows on the PFD.
    - (b) When UPDATE USER SETTINGS shows, select NO.
  - (14) Use the FMS knobs and the ENT button to scroll to the SYSTEM UPLOAD page.
  - (15) Use the FMS knobs and the ENT button to select Configuration File in the Airframe field.
  - (16) From the FILE field use the FMS knobs and the ENT button select Enable Chartview.
  - (17) Use the FMS knobs and the ENT button the FILE field select Enable Chartview.
  - (18) Push the LOAD softkey and monitor software load.
    - (a) The PASS message shows when the upload is complete.
    - (b) Push the ENT button to acknowledge the installation completion.
  - (19) Push the UPDT CONFIG softkey and ENT button to update the master configuration module and monitor the upload.
    - (a) The PASS message shows when the upload is complete.
    - (b) Push the ENT button to acknowledge the installation completion.
  - (20) Put the BATTERY switch to the OFF position.
  - (21) Put the AVIONICS switches to the OFF position.
  - (22) Put the EXTERNAL POWER switch to the OFF position.

- (23) Remove the Chartview unlock card from the PFD 1 top slot.  
**NOTE: Keep the Chartview unlock card with the Pilot's Operating Handbook.**
- (24) For G1000 Software Version v.767.XX only, install the SD database cards in the lower slots of each of the two primary flight displays (PFD)'s and the multifunction display (MFD) from which they were removed.
- (25) Put the EXTERNAL POWER switch to the BUS position.
- (26) Put the BATTERY switch to the ON position.
- (27) Put the AVIONICS switches to the ON position.
- (28) The G1000 powers on in normal mode.
- (29) On the MFD startup page make sure that the Chart Data expiration date is shown on the right side of the display.
- (30) Put the BATTERY switch found to the OFF position.
- (31) Put the AVIONICS switches to the OFF position.
- (32) Put the EXTERNAL POWER switch to the OFF position.

### 13. G1000 Search and Rescue (SAR) Enable Configuration

**NOTE: For FMS knob operation: Turn the outer knob to select fields and move between page groups. Use the inner knob to change characters and move between pages. Push the knob to activate cursor.**

- A. Do the G1000 SAR Enable Configuration (Refer to Figure 510).
  - (1) Put the BATTERY switch to the OFF position.
  - (2) Put the AVIONICS switches to the OFF position.
  - (3) Put the EXTERNAL POWER switch to the OFF position.
  - (4) For G1000 Software Version v.767.XX only, remove the SD database cards from the lower slots from each of the two primary flight displays (PFD)'s and the multifunction display (MFD).
    - (a) For each SD card, record the GDU position from which it was removed.
  - (5) Disengage the PFD 1 and MFD circuit breakers, found on the Avionics circuit breaker panel.
  - (6) Connect external electrical power to the airplane.
  - (7) Put the EXTERNAL POWER switch to the BUS position.
  - (8) Put the BATTERY switch to the ON position.
  - (9) Put the AVIONICS switches to the ON position.
  - (10) Push and hold the ENT button down on the PFD 2 while the G1000 powers on.
    - (a) Release the ENT button when INITIALIZING SYSTEM shows on the PFD.
  - (11) Push and hold the ENT button down on the MFD while you engage the MFD circuit breaker.
    - (a) Release the ENT button when INITIALIZING SYSTEM shows on the PFD.
  - (12) Insert the SAR unlock card (p/n 3910328-27) in the top slot of PFD 1.
  - (13) Push and hold the ENT button down on the PFD 1 while you engage the PFD 1 circuit breaker.
    - (a) Release the ENT button when INITIALIZING SYSTEM shows on the PFD.
    - (b) When UPDATE USER SETTINGS shows, select NO.
  - (14) Use the FMS knobs and the ENT button to scroll to the SYSTEM UPLOAD page.
  - (15) Use the FMS knobs and the ENT button to select Enhanced SAR in the Group field.
  - (16) From the ITEM field use the FMS knobs and the ENT button select ENHANCED SEARCH AND RESCUE.
  - (17) Push the LOAD softkey and monitor software load.
    - (a) The PASS message shows when the upload is complete.
    - (b) Push the ENT button to acknowledge the installation completion.
  - (18) Push the UPDT CONFIG softkey and ENT button to update the master configuration module and monitor the upload.
    - (a) The PASS message shows when the upload is complete.
    - (b) Push the ENT button to acknowledge the installation completion.
  - (19) Put the BATTERY switch to the OFF position.

- (20) Put the AVIONICS switches to the OFF position.
- (21) Disconnect external electrical power from the airplane.
- (22) Remove the SAR unlock card from the PFD 1 top slot.  
**NOTE: Keep the SAR unlock card with the Pilot's Operating Handbook.**
- (23) For G1000 Software Version v.767.XX only, install the SD database cards in the lower slots of each of the two primary flight displays (PFD)'s and the multifunction display (MFD).  
(a) Make sure that each of the SD database card is installed in the GDU from which it was removed as recorded earlier.
- (24) Put the EXTERNAL POWER switch to the BUS position.
- (25) Put the BATTERY switch to the ON position.
- (26) Put the AVIONICS switches to the ON position.
- (27) The G1000 powers on in normal mode.
- (28) Push the FPL key to show the active flight plan menu on the MFD.
- (29) Push the Menu key to show the Page menu option.
- (30) Use the FMS knobs to scroll through the choices and make sure that the Search and Rescue option is shown.
- (31) Put the BATTERY switch to the OFF position.
- (32) Put the AVIONICS switches to the OFF position.
- (33) Put the EXTERNAL POWER switch to the OFF position.
- (34) Disconnect external electrical power from the airplane.

#### 14. G1000 Synthetic Vision Technology (SVT)

- A. Do the G1000 SVT Enable Configuration (Refer to Figure 511

**NOTE: For FMS knob operation: Turn the outer knob to select fields and move between page groups. Use the inner knob to change characters and move between pages. Push the knob to activate cursor.**

- (1) Put the BATTERY switch to the OFF position.
- (2) Put the AVIONICS switches to the OFF position.
- (3) Put the EXTERNAL POWER switch to the OFF position.
- (4) For G1000 Software Version v.767.XX only, remove the SD database cards from the lower slots from each of the two primary flight displays (PFD)'s and the multifunction display (MFD).  
(a) For each SD card, record the GDU position from which it was removed.
- (5) Disengage the PFD 1 and MFD circuit breakers, found on the Avionics circuit breaker panel.
- (6) Connect external electrical power to the airplane.
- (7) Put the EXTERNAL POWER switch to the BUS position.
- (8) Put the BATTERY switch to the ON position.
- (9) Put the AVIONICS switches to the ON position.
- (10) Push and hold the ENT button down on the PFD 2 while the G1000 powers on.  
(a) Release the ENT button when INITIALIZING SYSTEM shows on the PFD.
- (11) Push and hold the ENT button down on the MFD while you engage the MFD circuit breaker.  
(a) Release the ENT button when INITIALIZING SYSTEM shows on the PFD.
- (12) Insert the SVT unlock card (p/n 3910328-20) in the top slot of PFD 1.
- (13) Push and hold the ENT button down on the PFD 1 while you engage the PFD 1 circuit breaker.  
(a) Release the ENT button when INITIALIZING SYSTEM shows on the PFD.  
(b) When UPDATE USER SETTINGS shows, select NO.
- (14) Use the FMS knobs and the ENT button to scroll to the SYSTEM UPLOAD page.
- (15) Use the FMS knobs and the ENT button to select the Configuration Page in the Airframe field.
- (16) In the Field file use the FMS knobs and the ENT button to select Enable SVT.

- (17) Push the LOAD softkey and monitor software load.
  - (a) Push the ENT button to acknowledge the installation completion.
- (18) Push the UPDT CONFIG softkey and ENT button to update the master configuration module and monitor the upload.
  - (a) Push the ENT button to acknowledge the installation completion.
- (19) Put the BATTERY switch to the OFF position.
- (20) Put the AVIONICS switches to the OFF position.
- (21) Disconnect external electrical power from the airplane.
- (22) Remove the SAVT unlock card from the PFD 1 top slot.

**NOTE: Keep the SVT unlock card with the Pilot's Operating Handbook.**
- (23) For G1000 Software Version v.767.XX only, install the SD database cards in the lower slots of each of the two primary flight displays (PFD)'s and the multifunction display (MFD).
  - (a) Make sure that each of the SD database card is installed in the GDU from which it was removed as recorded earlier.
- (24) Put the EXTERNAL POWER switch to the BUS position.
- (25) Put the BATTERY switch to the ON position.
- (26) Put the AVIONICS switches to the ON position.
- (27) The G1000 powers on in normal mode.
- (28) Push the PFD softkey on the PFD 1 or PFD 2.
  - (a) Make sure that the SYN VIS softkey shows on the display you pushed the PFD softkey on.
- (29) Push the SYN VIS softkey and make sure the softkeys that follow are activated:
  - SYN TERR
  - HRZN HDG
  - APTSIGNS.
- (30) Push the Menu key to show the Page menu option.
- (31) Use the FMS knobs to highlight Map Setup then push the ENT key.
- (32) Use the FMS knobs to highlight Map group then push the ENT key.
- (33) Use the FMS knobs to scroll through the Aviation Group Options to the Field Of View Option.
- (34) Use the FMS knob to select the option ON to activate the Field Of View Option.
- (35) Push the FMS knob to return to the Navigation Map page on the MFD.
- (36) Put the BATTERY switch to the OFF position.
- (37) Put the AVIONICS switches to the OFF position.
- (38) Put the EXTERNAL POWER switch to the OFF position.
- (39) Disconnect external electrical power from the airplane.

## 15. Surface Watch Enable Configuration (G1000 NXi Only)

- A. Do the Surface Watch Enable Configuration as follows:

**NOTE: For FMS knob operation: Turn the outer knob to select fields and move between page groups. Use the inner knob to change characters and move between pages. Push the knob to activate cursor.**

- (1) Put the BATTERY switch to the OFF position.
- (2) Put the AVIONICS switches to the OFF position.
- (3) Put the EXTERNAL POWER switch to the OFF position.
- (4) Disengage the PFD 1 and MFD circuit breakers, found on the Avionics circuit breaker panel.
- (5) Connect external electrical power to the airplane.
- (6) Put the EXTERNAL POWER switch to the BUS position.
- (7) Put the BATTERY switch to the ON position.
- (8) Put the AVIONICS switches to the ON position.

- (9) Push and hold the ENT button down on the PFD 2 while the G1000 powers on.
  - (a) Release the ENT button when INITIALIZING SYSTEM shows on the PFD.
- (10) Push and hold the ENT button down on the MFD while you engage the MFD circuit breaker.
  - (a) Release the ENT button when INITIALIZING SYSTEM shows on the PFD.
- (11) Insert the Surface Watch Enable Card (p/n 010-00330-KA) in the top slot of PFD 1.
 

**NOTE: This step is only applicable if the option has not already been loaded in the Card Copy feature of the GDU internal memory.**
- (12) Push and hold the ENT button down on the PFD 1 while you engage the PFD 1 circuit breaker.
  - (a) Release the ENT button when INITIALIZING SYSTEM shows on the PFD.
  - (b) When UPDATE USER SETTINGS shows, select NO.
- (13) Use the FMS knobs and the ENT button to scroll to the SYSTEM UPLOAD page.
- (14) Use the FMS knobs and the ENT button to select "ENABLE SURFACE WATCH" in the group field.
- (15) In the Field file use the FMS knobs and the ENT button to select the "SurfaceWatch Feature Enable".
- (16) Push the LOAD softkey and monitor software load.
  - (a) Push the ENT button to acknowledge the installation completion.
- (17) Push the UPDT CONFIG softkey and ENT button to update the master configuration module and monitor the upload.
  - (a) Push the ENT button to acknowledge the installation completion.
- (18) Put the BATTERY switch to the OFF position.
- (19) Put the AVIONICS switches to the OFF position.
- (20) Disconnect external electrical power from the airplane.
- (21) Remove the SurfaceWatch Enable Card from the PFD 1 top slot.
 

**NOTE: This step is only applicable if the option was not loaded from the Card Copy feature of the GDU internal memory.**

**NOTE: Keep the Surface Watch Enable Card with the Pilot's Operating Handbook.**
- (22) Put the EXTERNAL POWER switch to the BUS position.
- (23) Put the BATTERY switch to the ON position.
- (24) Put the AVIONICS switches to the ON position.
- (25) The G1000 powers on in normal mode.
- (26) Push the PFD softkey on the PFD 1 or PFD 2.
  - (a) Make sure that the FPL-SurfaceWatch displays on the MFD in the FPL page group.
- (27) Put the BATTERY switch to the OFF position.
- (28) Put the AVIONICS switches to the OFF position.
- (29) Put the EXTERNAL POWER switch to the OFF position.
- (30) Disconnect external electrical power from the airplane.

## 16. Turbulence Detection (TD) and Ground Clutter Suppression (GCS) Enable configuration

- A. Do the Turbulence Detection (TD) and Ground Clutter suppression (GCS) Enable configuration as follows:

**NOTE: For FMS knob operation: Turn the outer knob to select fields and move between page groups. Use the inner knob to change characters and move between pages. Push the knob to activate cursor.**

- (1) Put the BATTERY switch to the OFF position.
- (2) Put the AVIONICS switches to the OFF position.
- (3) Put the EXTERNAL POWER switch to the OFF position.
- (4) Disengage the PFD 1 and MFD circuit breakers, found on the Avionics circuit breaker panel.
- (5) Connect external electrical power to the airplane.
- (6) Put the EXTERNAL POWER switch to the BUS position.
- (7) Put the BATTERY switch to the ON position.

- (8) Put the AVIONICS switches to the ON position.
- (9) Push and hold the ENT button down on the PFD 2 while the G1000 powers on.
  - (a) Release the ENT button when INITIALIZING SYSTEM shows on the PFD.
- (10) Push and hold the ENT button down on the MFD while you engage the MFD circuit breaker.
  - (a) Release the ENT button when INITIALIZING SYSTEM shows on the PFD.
- (11) Insert the TD GCS Enable Card (p/n 010-00330-D1) in the top slot of PFD 1.
 

**NOTE:** This step is only applicable if the option has not already been loaded in the Card Copy feature of the GDU internal memory.
- (12) Push and hold the ENT button down on the PFD 1 while you engage the PFD 1 circuit breaker.
  - (a) Release the ENT button when INITIALIZING SYSTEM shows on the PFD.
  - (b) When UPDATE USER SETTINGS shows, select NO.
- (13) Use the FMS knobs and the ENT button to scroll to the SYSTEM UPLOAD page.
- (14) Use the FMS knobs and the ENT button to select "ENABLE TD GCS" in the group field.
- (15) In the Field file use the FMS knobs and the ENT button to select the "Doppler, TD, GCS Enablement".
- (16) Push the LOAD softkey and monitor software load.
  - (a) Push the ENT button to acknowledge the installation completion.
- (17) Push the UPDT CONFIG softkey and ENT button to update the master configuration module and monitor the upload.
  - (a) Push the ENT button to acknowledge the installation completion.
- (18) Put the BATTERY switch to the OFF position.
- (19) Put the AVIONICS switches to the OFF position.
- (20) Disconnect external electrical power from the airplane.
- (21) Remove the TD GCS Enable Card from the PFD 1 top slot.
 

**NOTE:** This step is only applicable if the option was not loaded from the Card Copy feature of the GDU internal memory.

**NOTE:** Keep the TD GCS Enable with the Pilot's Operating Handbook.
- (22) Put the EXTERNAL POWER switch to the BUS position.
- (23) Put the BATTERY switch to the ON position.
- (24) Put the AVIONICS switches to the ON position.
- (25) The G1000 powers on in normal mode.
- (26) Push the PFD softkey on the PFD 1 or PFD 2.
  - (a) Access the MFD Radar Map press the mode soft key, make sure the Turb and GCS softkey shows on the display.
- (27) Put the BATTERY switch to the OFF position.
- (28) Put the AVIONICS switches to the OFF position.
- (29) Put the EXTERNAL POWER switch to the OFF position.
- (30) Disconnect external electrical power from the airplane.

## 17. G1000 NXi LRU Replacement Procedure

- A. Do the LRU Replacement Procedure (Refer to Figure 512).

**NOTE:** The following replacement procedures are not required if swapping LRU positions, the configuration is saved within the GDU.

**NOTE:** The card copy feature keeps track of all enable cards. If using the LRU Replacement Procedure, the enable cards will automatically update the LRU from the memory of the GDU, except for TAWS, Chartview, SVT and SAR.

**NOTE:** NXi LRU replacement will only work if replacing one LRU at a time. If multiple LRU's are changed, the baseline software load is required.

- (1) Connect external electrical power to the airplane.

- (2) Put the EXTERNAL POWER switch to the BUS position.
- (3) Put the BATTERY switch to the ON position.
- (4) Put the AVIONICS switches to the ON position.
- (5) Use the FMS knobs and the ENT button to scroll to the SYSTEM UPLOAD page.
- (6) Use the FMS knobs and the ENT button to select the Configuration Page in the Airframe field.
 

**NOTE:** Figure 512 Sheet 1 shows the Alerts display when the system is Booted in Normal Mode.
- (7) Select the LRU REPLACEMENT page.
- (8) Select the LRU that is highlighted by the system Refer to Figure 512 Sheet 3.
 

**NOTE:** If the system has not highlighted the LRU replaced, do the baseline software configuration.

**NOTE:** The system will provide a "LRU REPLACEMENT DETECTED" message based off of stored serial number information. LRU's without serial numbers will not allow the system to display the message but are still available for the LRU replacement procedure.
- (9) Follow the prompt to initiate the software and configuration of the LRU.
 

**NOTE:** The LRU REPLACEMENT page will report status similar to the SYSTEM UPLOAD page.
- (10) After the software/configuration update is complete, make sure the information displays correctly. Refer to Figure 512 Sheet 3.
- (11) Make sure the LRU shows "Synchronized" on the Configuration Manager page. Refer to Figure 512 Sheet 2
- (12) As necessary, do the correct return to service steps associated with the LRU being replaced as referenced in the removal/installation sections.

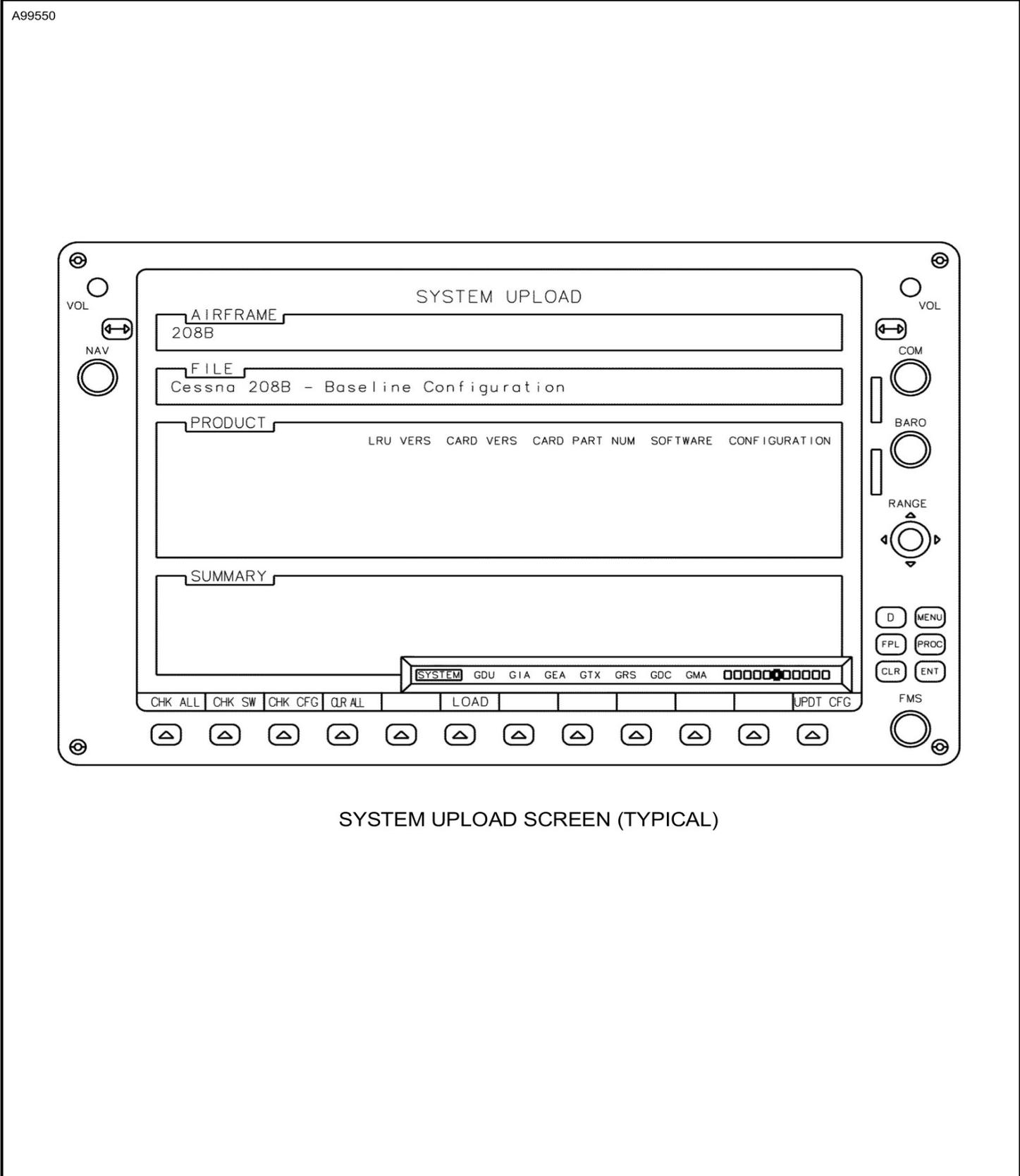
## 18. G1000 NXi GTX-335/GTX-345R Transponder Configuration

- A. Do the GTX-3X5R Transponder Configuration (Refer to Figure 513).

**NOTE:** If installing dual transponders, configuration is typical.

- (1) If the configuration procedures that follow are not done after loading baseline software or other options, prepare for the configuration load. Refer to Prepare for the G1000 option software/configuration load.
- (2) Use the inner and outer FMS knobs on the PFD 1 navigate to the TRANSPONDER CONFIGURATION page in the GTX GROUP pages.
- (3) Use the FMS knobs and the ENT button to select XPDR1 or XPDR 2 in the SELECT TRANSPONDER field.
  - (a) Configure the SET column values in the CONFIGURATION field.
  - (b) For the GTX-345R Transponder, make sure the 1090ES IN Capable "ALWAYS ENABLED" Fields have a checkmark.
- (4) Push the ENT button to acknowledge the completion of the transponder configuration when you have entered all the values.
- (5) If there are more options to load return to the applicable page and select the options to load.
- (6) Put the EXTERNAL POWER switch to the BUS position.
- (7) Put the BATTERY switch to the ON position.
- (8) Put the AVIONICS switches to the ON position.
- (9) Option load is complete.

Figure 501 : Sheet 1 : Baseline Software Load Page



SYSTEM UPLOAD SCREEN (TYPICAL)

Figure 502 : Sheet 1 : System Status Page

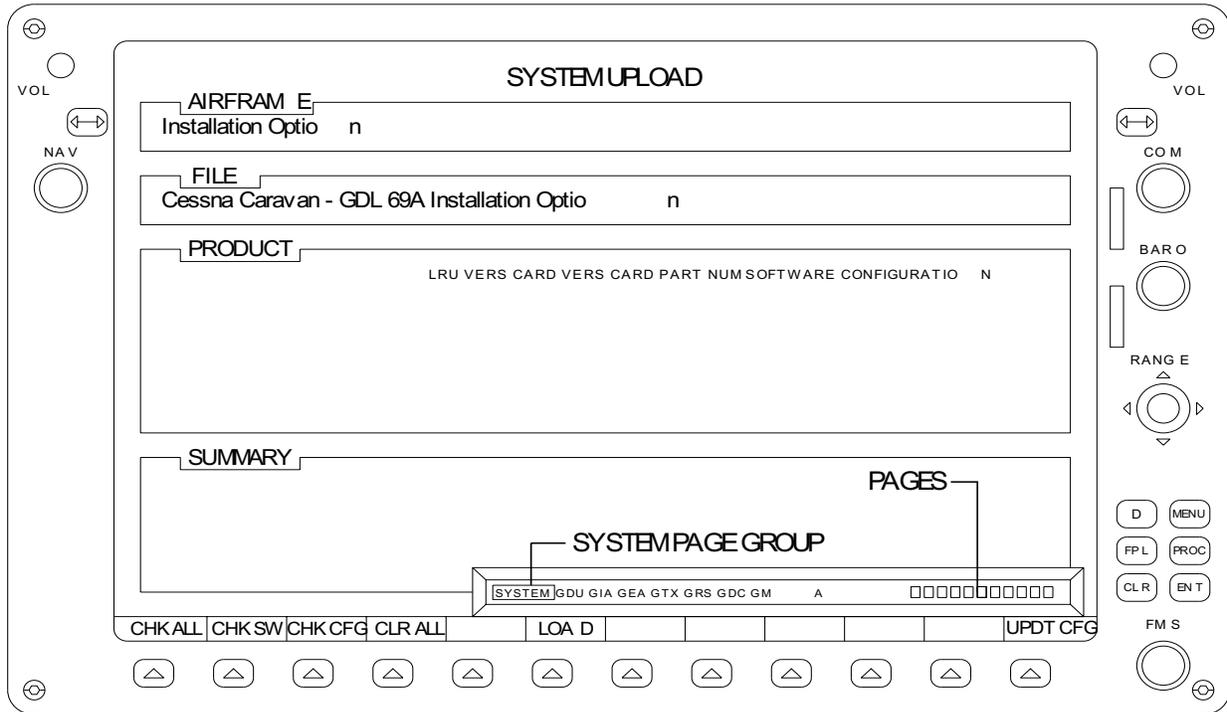
A100373

LRU INFO	STATUS	SERIAL NUMBER	VERSION
COM1	✓		10.00
COM2	✓		10.00
GDC1	✓	20608019	3.08
GDC2	✓	20608027	3.08
GDL69	✓	47763084	4.01.00
GEA1	✓	46711542	2.07
GIA1	✓	1H0000468	6.40
GIA2	✓	1H0000465	6.40
GMA1	✓	47111698	4.04
GMC	✓	22005607	3.00
GMU1	✓	1CM005877	2.05
GMU2	✓	1CM005865	2.05
GPS1	✓	0322088145	3.2
GPS2	✓	0322088108	3.2
GRS1	✓	42013554	3.02
GRS2	✓	42013338	3.02
GS1	✓		6.01
GS2	✓		6.01
GSA PTCH CTL	✓	1A1006804	3.11
GSA PTCH MON	✓	1A1006804	3.11
GSA PTCH TRM C	✓	1A1006800	3.11
GSA PTCH TRM H	✓	1A1006800	3.11
GSA ROLL CTL	✓	192005959	3.11
GSA ROLL MON	✓	192005959	3.11
GSA YAW CTL	✓	192005957	3.11
GSA YAW MON	✓	192005957	3.11
GTX1	✓		6.11
GTX2	✓		6.11
GWX	✓	47203195	2.11
MFD1	✓	86805505	12.12
NAV1	✓		6.01
NAV2	✓		6.01
PFD1	✓	86805579	12.12
PFD2	✓	86805508	12.12

CES-FT-AVN-6712

Figure 503 : Sheet 1 : System Upload Installation Option Page

A100202



**NOTE:** TYPICAL INSTALLATION OPTION PAGE.

3931T306

Figure 504 : Sheet 1 : GTX-33 Transponder Configuration Pages

A99549

TRANSPONDER CONF I G U R A T I O N

SELECT TRANSPONDER

XPDR1

CONF I G U R A T I O N

	SET	ACTIVE
VFR CODE	XXXX	XXXX
AIRCRAFT WEIGHT	< 15,500 LBS	< 15,500 LBS
MAX AIRSPEED	<= 300 KTS	<= 300 KTS
ADDRESS TYPE	HEX ID	HEX ID
ADDRESS	XXXXXX	XXXXXX
FLIGHT ID TYPE	PFD ENTRY	PFD ENTRY
FLIGHT ID	XXXXXX	XXXXXX

PAGES

SYSTEM GDU GIA GEA **GTX** GRS GDC GMA

SET>ACTV ACTV>SET

**GTX-33 TRANSPONDER CONFIGURATION PAGE**  
 AIRPLANES 20800500 THRU 20800564 AND AIRPLANES 208B2000 THRU 208B4999

TRANSPONDER CONF I G U R A T I O N

CONF I G U R A T I O N

	SET	XPDR 1 ACTIVE
VFR CODE	XXXX	XXXX
AIRCRAFT WEIGHT	< 15,500 LBS	< 15,500 LBS
MAX AIRSPEED	<= 300 KTS	<= 300 KTS
ADDRESS TYPE	HEX ID	HEX ID
ADDRESS	XXXXXX	XXXXXX
FLIGHT ID TYPE	PFD ENTRY	PFD ENTRY
FLIGHT ID	XXXXXX	XXXXXX
ENHANCED SURVEIL	ENABLED	ENABLED

SYSTEM GDU GIA GEA GTX GRS ADC GFC GMA GDL RMT GWX OTHER CAL

SET>ACTV ACTV>SET

**GTX-33 TRANSPONDER CONFIGURATION PAGE**  
 AIRPLANES 20800565 AND ON AND AIRPLANES 208B5000 AND ON

Figure 505 : Sheet 1 : GTX-33ES Transponder Configuration Pages

A100376

AIRCRAFT CONFIGURATION									
LRU CONFIGURATION STATUS									
GTX 1	<input checked="" type="checkbox"/>	GTX 2	<input checked="" type="checkbox"/>	GTS	<input checked="" type="checkbox"/>				
AIRCRAFT CONFIGURATION									
AIRCRAFT REGISTRATION					XXXXXX				
ICAO ADDRESS					XXXXXX				
IATA AIRLINE DESIGNATOR									
COUNTRY CODE									
VFR CODE					XXXXXX				
SYSTEM CDU GIA GEA GTX GRS ADC GFC GMA GDL RMT QWZ OTHER CAL									
SET GTX1	SET GTX2	SET GTS							

Aircraft Configuration Page (Typical)

TRANSPONDER CONFIGURATION									
SELECT UNIT									
XPDR 1									
CONFIGURATION									
LATERAL OFFSET FROM CENTER (M)		SET	UNKNOWN	ACTIVE	UNKNOWN				
LONGITUDINAL OFFSET FROM NOSE (M)			UNKNOWN		UNKNOWN				
AIRCRAFT CONFIGURATION									
VFR CODE	SET	XXXXXX	XPDR 1 ACTIVE	XXXXXX	XPDR 2 ACTIVE	XXXXXX			
AIRCRAFT WEIGHT		<15,500 LBS		<15,500 LBS		<15,500 LBS			
MAX AIRSPEED		<=300 KTS		<=300 KTS		<=300 KTS			
ADDRESS TYPE		HEX ID		HEX ID		HEX ID			
ICAO ADDRESS		XXXXXX		XXXXXX		XXXXXX			
FLIGHT ID TYPE		PFD ENTRY		PFD ENTRY		PFD ENTRY			
FLIGHT ID		XXXXXX		XXXXXX		XXXXXX			
ENHANCED SURVEIL		ENABLED		ENABLED		ENABLED			
1090 IN		DISABLED		DISABLED		DISABLED			
UAT IN		DISABLED		DISABLED		DISABLED			
ADS-B TRANSMIT		ENABLED		ENABLED		ENABLED			
AIRCRAFT WIDTH		<=23 MT		<=23 MT		<=23 MT			
AIRCRAFT LENGTH		<=15 MT		<=15 MT		<=15 MT			
SOURCE INTEGRITY		<1x10 <sup>-5</sup> ERR /HR FLT		<1x10 <sup>-5</sup> ERR /HR FLT		<1x10 <sup>-5</sup> ERR /HR FLT			
NOTE: The VFR Code and the ICAO Address must be updated through the Aircraft Configuration.									
SYSTEM CDU GIA GEA GTX GRS ADC GFC GMA GDL RMT QWZ OTHER CAL									
SETXACTV	ACTVXSET								

THESE ROWS ARE ONLY VISIBLE WHEN ADS-B FUNCTIONALITY HAS BEEN ENABLED.

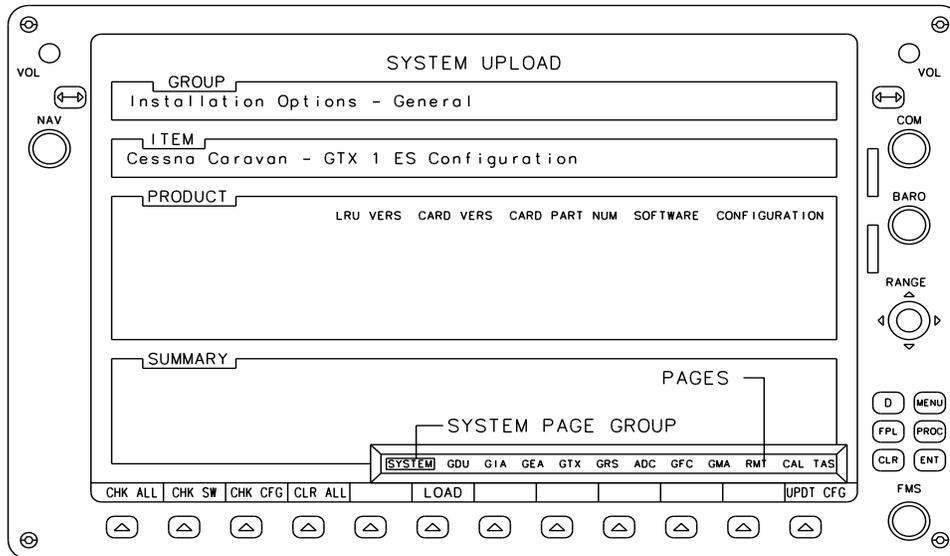
Transponder Configuration Page (Typical)

3931R300

Figure 505 : Sheet 2 : GTX-33ES Transponder Configuration Pages

A100390

G1000 PFD/MFD DIAGRAM (REFERENCE ONLY)



Enable ADS-B OUT Page

**Note:** Typical

Figure 506 : Sheet 1 : GTS 825 TAS Installation Option Page

A100377

Aircraft Configuration Page (Typical)

A I R C R A F T   C O N F I G U R A T I O N																									
L R U   C O N F I G U R A T I O N   S T A T U S																									
GTX 1	<input checked="" type="checkbox"/>	GTX 2	<input checked="" type="checkbox"/>	GTS	<input checked="" type="checkbox"/>																				
A I R C R A F T   C O N F I G U R A T I O N																									
A I R C R A F T   R E G I S T R A T I O N				X X X X X X																					
I C A O   A D D R E S S				X X X X X X																					
I A T A   A I R L I N E   D E S I G N A T O R																									
C O U N T R Y   C O D E																									
V F R   C O D E				X X X X X X																					
<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">S Y S T E M</td> <td style="padding: 2px;">G D U</td> <td style="padding: 2px;">G I A</td> <td style="padding: 2px;">G E A</td> <td style="padding: 2px;">G T X</td> <td style="padding: 2px;">G R S</td> <td style="padding: 2px;">A D C</td> <td style="padding: 2px;">G F C</td> <td style="padding: 2px;">G M A</td> <td style="padding: 2px;">G D L</td> <td style="padding: 2px;">R M T</td> <td style="padding: 2px;">G W X</td> <td style="padding: 2px;">O T H E R</td> <td style="padding: 2px;">C A L</td> </tr> </table>												S Y S T E M	G D U	G I A	G E A	G T X	G R S	A D C	G F C	G M A	G D L	R M T	G W X	O T H E R	C A L
S Y S T E M	G D U	G I A	G E A	G T X	G R S	A D C	G F C	G M A	G D L	R M T	G W X	O T H E R	C A L												
S E T   G T X 1	S E T   G T X 2	S E T   G T S																							

Figure 507 : Sheet 1 : Dual GMA 1347 Audio Installation Page

A100378

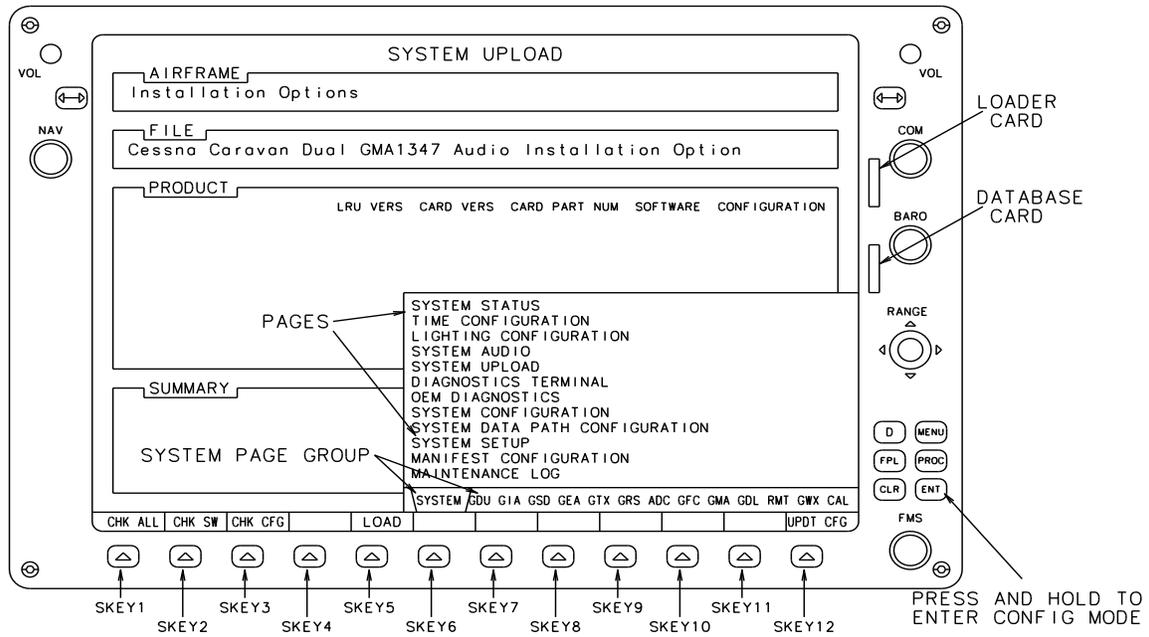
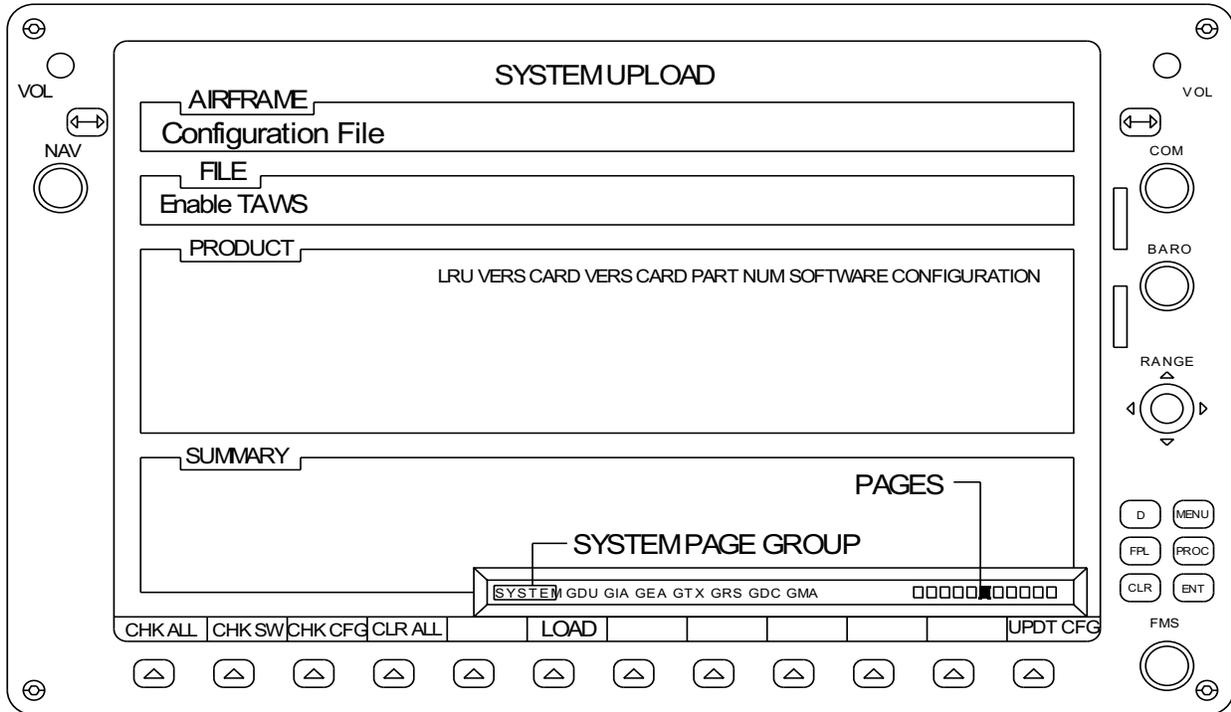


Figure 508 : Sheet 1 : Enable TAWS Page

A100379

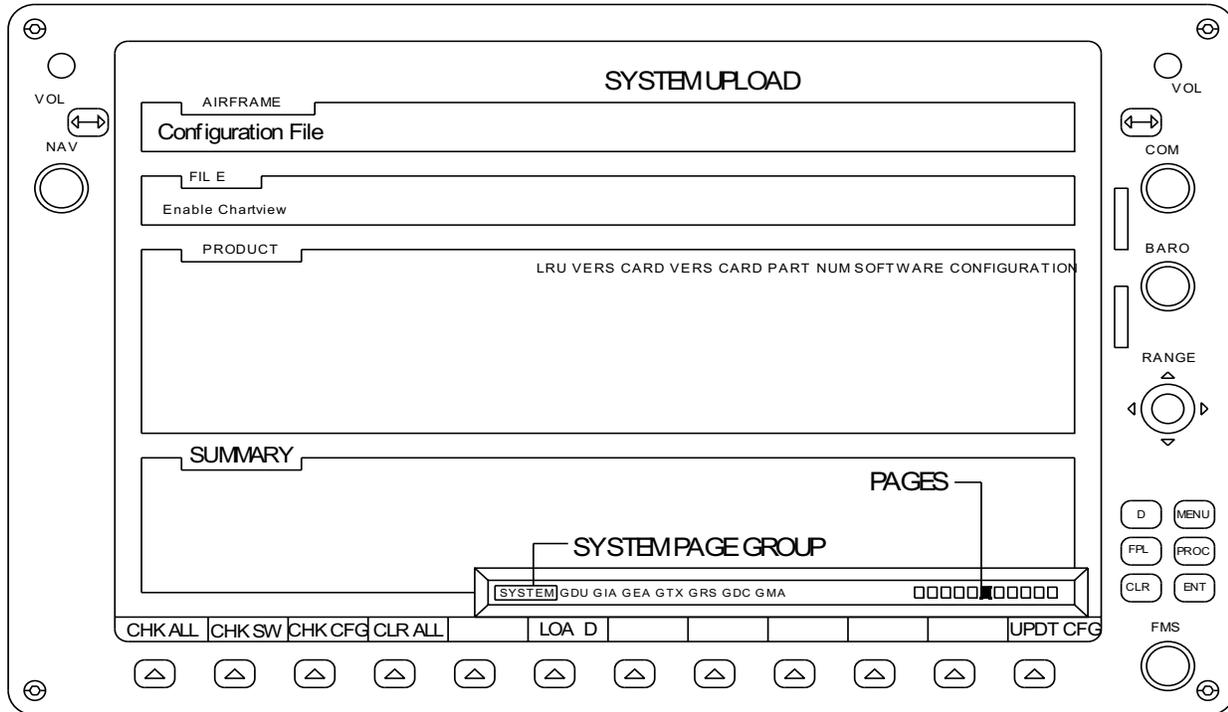


**NOTE:** Typical

3931T315

Figure 509 : Sheet 1 : Enable Chartview page

A100380

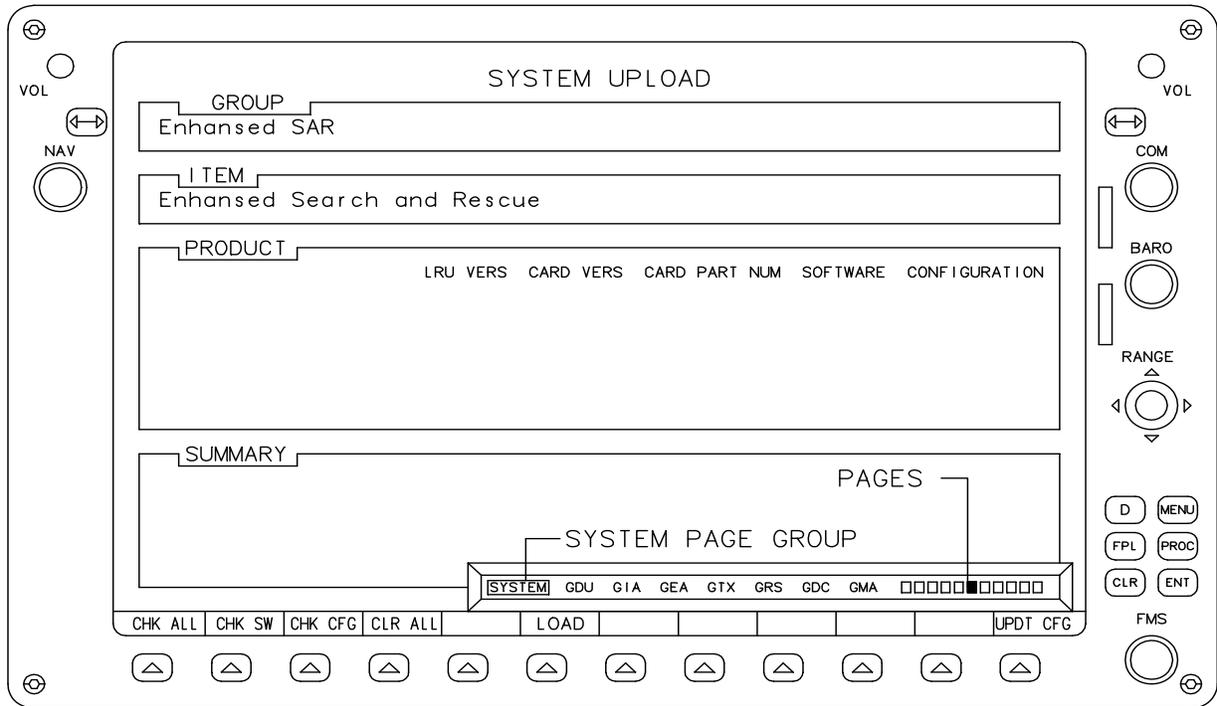


**NOTE:** Typical

393T1316

Figure 510 : Sheet 1 : Enhanced Search and Rescue Page

A100381



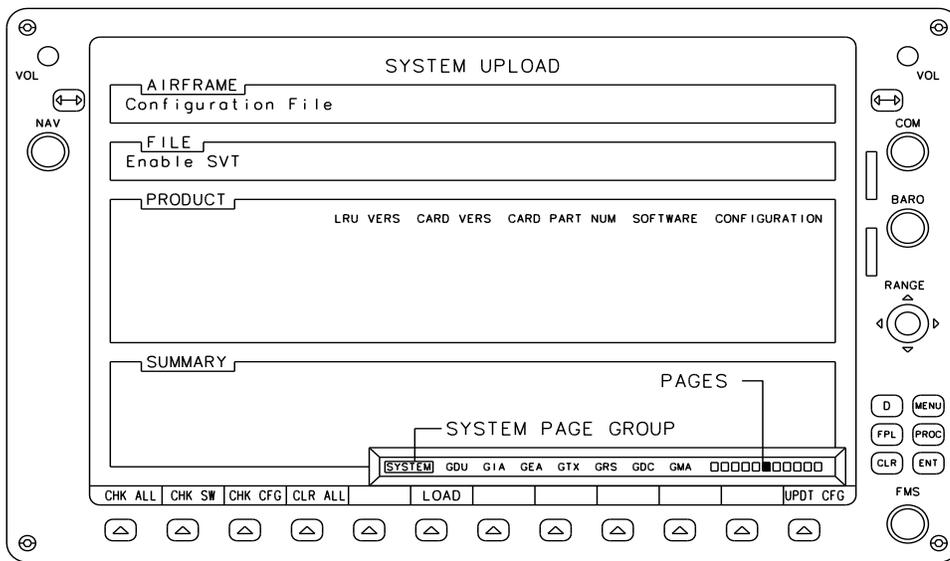
**NOTE:** Typical

393T1327

Figure 511 : Sheet 1 : Synthetic Vision Technology Page

A100382

G1000 PFD/MFD DIAGRAM (REFERENCE ONLY)



**Note:** Typical

Figure 512 : Sheet 1 : G1000 NXi LRU Replacement Reference Screens

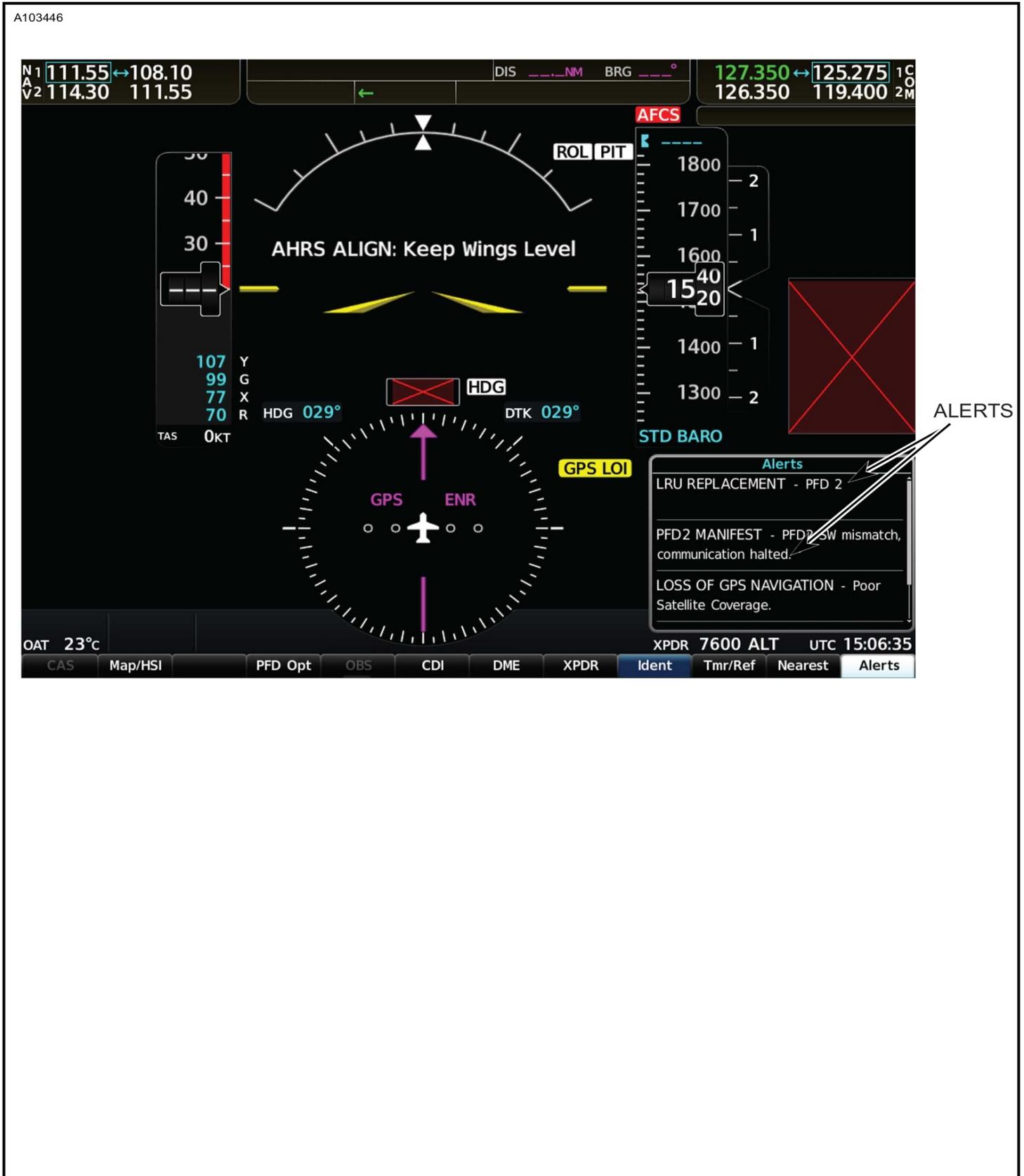


Figure 512 : Sheet 2 : G1000 NXi LRU Replacement Reference Screens

A103447

CONFIGURATION IDENTIFICATION		
	EXPECTED CONFIGURATION ID	ACTUAL CONFIGURATION ID
FLEET	76650A58	76650A58
AIRCRAFT	538697FF	538697FF

CONFIGURATION ITEMS		
	FLEET ID	AIRCRAFT ID
+COM2	Synchronized	Synchronized
+GDC1	Synchronized	Synchronized
+GDC2	Synchronized	Synchronized
+GEA1	Synchronized	Synchronized
+GIA1	Synchronized	Synchronized
+GIA2	Synchronized	Synchronized
+GMA1	Synchronized	Synchronized
+GMC 1	Synchronized	Synchronized
+GRS1	Synchronized	Synchronized
+GRS2	Synchronized	Synchronized
+GSD1	Synchronized	Synchronized
+GTX1	Synchronized	Synchronized
+MFD1	Synchronized	Synchronized
+PFD1	Synchronized	Synchronized
+PFD2	Not Synchronized	Synchronized

CNFM CFG

Figure 512 : Sheet 3 : G1000 NXi LRU Replacement Reference Screens

A103448

LRU DROPDOWN ALLOWS SELECTION OF ANY LRU INSTALLED ON THE G1000 NXI CONFIGURATION

INDICATES THE LRU IS FUNCTIONING CORRECTLY

LRU

PFD2

LRU INFO

PFD2

PFD2 FPGA

LRU REPLACEMENT

LRU DATA

PART NUMBER 006-B1177-54

VERSION 20.05

PRODUCT GDU1XXX 200

DESCRIPTION GDU1XXX System Software

COPYRIGHT (c) 2002-16 Garmin Ltd or subs

SERIAL NUMBER 494100005

MODEL NUMBER 2

FUNCTIONS PRESENT 134225984

STATUS OK

PRODUCT INFORMATION

006-B2499-01

Caravan Baseline Loads

Cessna 208 PT6A-114A - Baseline Configuration

	LRU VERS	CARD VERS	CARD PART NUM	SOFTWARE	CONFIGURATION
PFD 2	20.05	20.05		<input checked="" type="checkbox"/>	N/A
CONFIG				N/A	<input checked="" type="checkbox"/>
FINALIZE REPLACEMENT				N/A	<input checked="" type="checkbox"/>

CHK All

CHK SW

CHK CFG

CLR All

Load

Manage

SOFTWARE CARD NUMBER CURRENTLY STORED IN THE "CARD COPY MANAGEMENT" INTERNAL MEMORY OF THE GDU

LRU VERSION SHOULD MATCH THE CARD VERSION THAT WAS UPLOADED TO THE GDU

**NOTE:** CHANGING MORE THAN ONE NXI LRU WILL RESULT IN THE NXI BASELINE SOFTWARE LOAD PROCEDURES IN THIS CHAPTER.

Figure 513 : Sheet 1 : GTX-3X5R Transponder Reference Configuration

A103479

**AIRCRAFT CONFIGURATION PAGE (REFERENCE ONLY)**

AIRCRAFT CONFIGURATIO N																
LRU CONFIGURATION STATUS																
GTX 1	N/A	GTX 2	N/A													
		GTS	<input checked="" type="checkbox"/>													
AIRCRAFT CONFIGURATION																
AIRCRAFT REGISTRATION	XXXXXX		12													
ICAO ADDRESS	XXXXXX															
IATA AIRLINE DESIGNATOR																
COUNTRY CODE																
VFR CODE	XXXXXX		11													
<table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 10%;">SYSTEM</td> <td style="width: 5%;">GDU</td> <td style="width: 5%;">GIA</td> <td style="width: 5%;">GEA</td> <td style="width: 5%;">GTX</td> <td style="width: 5%;">GRS</td> <td style="width: 5%;">ADC</td> <td style="width: 5%;">GFC</td> <td style="width: 5%;">GMA</td> <td style="width: 5%;">GDL</td> <td style="width: 5%;">RMT</td> <td style="width: 5%;">GWX</td> <td style="width: 5%;">OTHER CAL</td> </tr> </table>				SYSTEM	GDU	GIA	GEA	GTX	GRS	ADC	GFC	GMA	GDL	RMT	GWX	OTHER CAL
SYSTEM	GDU	GIA	GEA	GTX	GRS	ADC	GFC	GMA	GDL	RMT	GWX	OTHER CAL				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">SET GST</td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table>				SET GST												
SET GST																

**AIRFRAME CONFIGURATION PAGE (REFERENCE ONLY)**

AIRFRAME CONFIGURATIO N						
LRU Configuration Status						
		GTX 345 - # 1	<input checked="" type="checkbox"/>			
		GTX 335 - # 2	<input checked="" type="checkbox"/>			
Aircraft Configuration						
ICAO Address	XXXXXX		XXXXXX			
Aircraft Registration	12	XXXXXX	XXXXXX			
VFR Squawk Code	11	XXXX	XXXX			
Airframe Configuration						
Aircraft Length	SET <=15 Meter s	XPDR 1 ACTIVE <=15 Meter s	XPDR 2 ACTIVE <=15 Meter s			
Aircraft Width	<=23 Meter s	<=23 Meter s	<=23 Meter s			
Aircraft Category	Light	Light	Light			
Max Airspeed	<=300 Knot s	<=300 Knot s	<=300 Knot s			
Operational Options						
1090 ES Out Control	Always Enabled	Always Enabled	Always Enabled			
1090 ES In Capable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
UAT In Capable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Flight ID Options						
Allow Flight ID Entry	PFD Entry	13	PFD Entry			
Default Flight ID			PFD Entry			
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; text-align: center;">Set&gt;Activate</td> <td style="width: 33%; text-align: center;">GTX1&gt;Set</td> <td style="width: 33%; text-align: center;">GTX2&gt;Set</td> </tr> </table>				Set>Activate	GTX1>Set	GTX2>Set
Set>Activate	GTX1>Set	GTX2>Set				

3931T300

Figure 1 : Sheet 1 : Garmin G1000 Software Interface

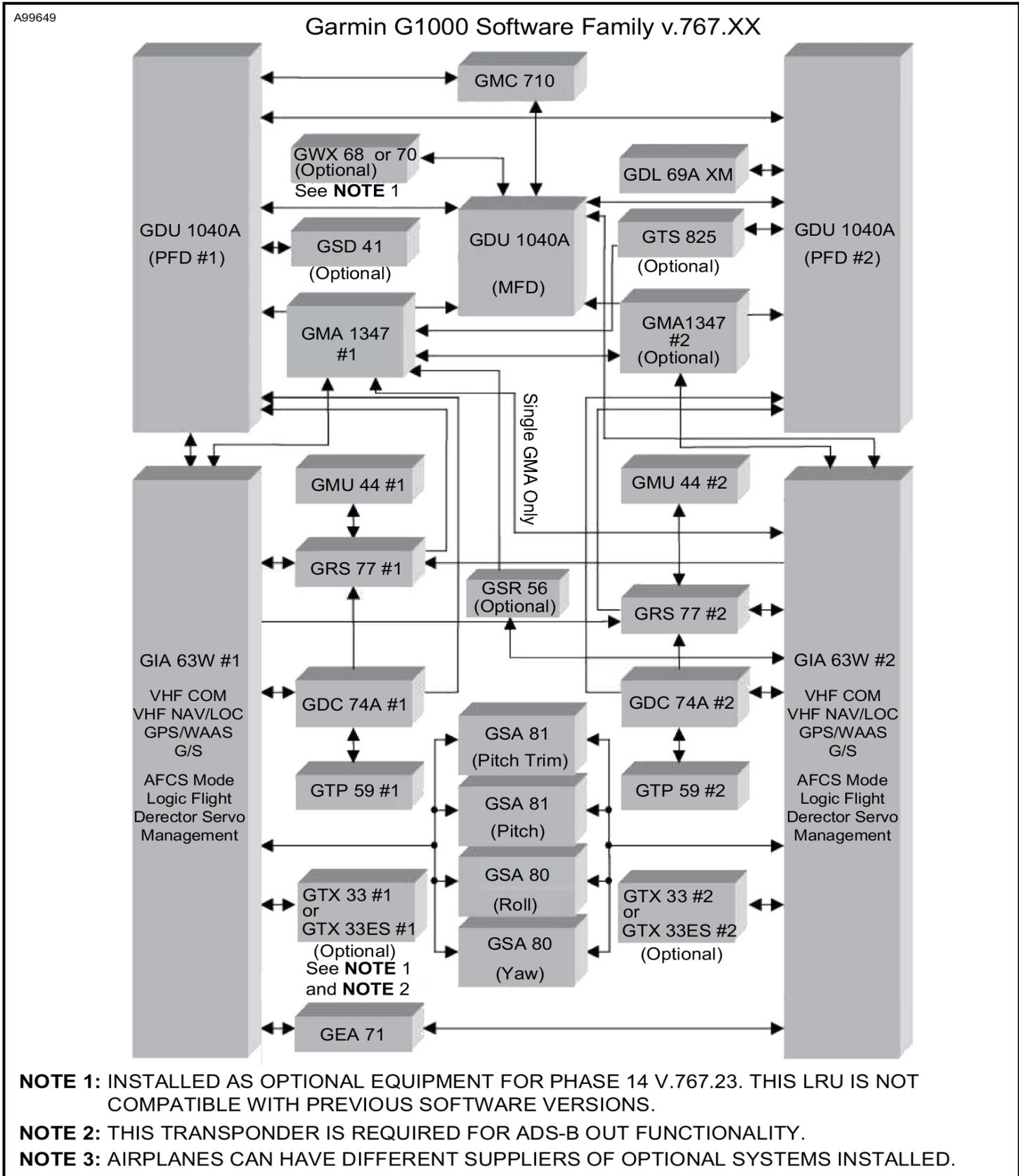


Figure 1 : Sheet 2 : Garmin G1000 Software Interface

