

GARMIN G1000 INTEGRATED AVIONICS SYSTEM - TROUBLESHOOTING

1. General

- A. This section gives the troubleshooting procedures for the Garmin G1000 Integrated Avionics System standard installation. For a general description of the G1000 system refer to Garmin G1000 Integrated Avionics System - Description and Operation. For more a detailed overview of the Crew Alert System (CAS) data, refer to the Garmin G1000 Line Maintenance Manual, (Cessna Caravan) P/N 190-00869-00, Section 2.0, found in the Supplier Publication List.
- B. The G1000 Integrated Avionics System has five 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, refer to 34-60-00, 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 System Software configuration (v.2499.03), (v.2499.08), and (v.2499.10) unless otherwise noted in this document.
- C. The troubleshooting procedures given in this section include:
 - (1) Garmin G1000 Integrated Avionics System Preliminary Troubleshooting.
 - (2) Data Bus and Electrical Wiring Troubleshooting.
 - (3) CAS Error Message Troubleshooting Procedures.
 - (4) Data Path Troubleshooting Procedures.
 - (5) Flight Stream 510 Troubleshooting Procedures
- D. These procedures are intended as a general guide for the core Garmin G1000 system troubleshooting, specifically as related to the Garmin Display Units and the Garmin Integrated Avionics Units (GIA 63W/GIA 64W). Refer to the specific Garmin system line replaceable unit (LRU) troubleshooting section in this manual for troubleshooting procedures to isolate a LRU unserviceable condition.
 - (1) The Garmin Display Units pilot PFD 1 (left), and copilot PFD 2, (right) are the primary controllers of the Garmin G1000 Integrated Avionics System. For a general description of the Garmin Display Units refer to Garmin G1000 Integrated Avionics System - Description and Operation.
 - (2) The Garmin 63W Integrated Avionics Units has a main processor that communicates with all the core and optional G1000 system LRU's. For a general description of the Garmin 63W Integrated Avionics Units refer to Garmin G1000 Integrated Avionics System - Description and Operation.
- E. When troubleshooting the G1000 system use the system fault symptoms, CAS messages, CAS error messages, G1000 initiated manual test results, and the Model 208 Wiring Diagram Manual to analyze the system fault and make a decision as to the best procedures to follow to correct the system problem. For more troubleshooting recommended procedures refer to the latest revision of the Garmin G1000 Line Maintenance Manual, (Cessna Caravan) P/N 190-00869-00 or the G1000 NXi Avionics System Line Maintenance Manual P/N 190-02135-00.

2. Reference Material

- Chapter 22 Garmin Roll Servo Unit - Removal/Installation
- Chapter 22 Garmin Pitch Servo Unit - Removal/Installation
- Chapter 22 Garmin Yaw Servo Unit - Removal/Installation
- Chapter 22 Garmin Pitch Trim Servo Unit - Removal/Installation
- Chapter 23 Garmin GMA 1347/1360D Audio System - Removal/Installation
- Chapter 34 Garmin G1000 Air Data Computer - Removal/Installation
- Chapter 34 Garmin G1000 Attitude Heading Reference System - Removal/Installation
- Chapter 34 Garmin GTX-Series Transponder - Removal/Installation
- Chapter 34 Garmin G1000 Integrated Avionics System - Adjustment/Test
- Chapter 34 Garmin Display Unit- Removal/Installation
- Chapter 34 Garmin G1000 Integrated Avionics Unit - Removal/Installation
- Chapter 77 Garmin GEA 71/71B Engine/Airframe Unit - Maintenance Practices
- Model 208 Wiring Diagram Manual
- Garmin G1000 Line Maintenance Manual, (Cessna Caravan) P/N 190-00869-00.
- G1000 NXi Avionics System Line Maintenance Manual P/N 190-02135-00.
- Garmin GWX Processor Installation Manual P/N 190-02009-00.

- Garmin GMU 44B Installation Manual P/N 190-02129-00.

3. Garmin G1000 Integrated Avionics System Preliminary Troubleshooting

- A. Do the preliminary troubleshooting steps that follow to prepare for the Garmin G1000 Integrated Avionics System fault isolation procedures.
- (1) On the primary flight display (PFD) look for a Crew Alerting System (CAS) message alert.
NOTE: During the time the G1000 is powering up, certain windows remain invalid as the equipment begins to initialize. All windows should be operational within one minute of power-up. If any window continues to be flagged, begin troubleshooting. On the PFD, the AHRS begins to initialize and shows "AHRS ALIGN: Keep Wings Level". The AHRS should usually show valid attitude and heading fields within one minute of power-up. The AHRS can align itself both while taxiing and during level flight.
 - (2) When the G1000 is powered up the PFD can show CAS messages in the CAS window and System Alerts in the System Alerts window.
 - (3) If there is an CAS message and/or System Alert do the steps that follow:
 - (a) Make sure that the system line replaceable unit (LRU) circuit breaker is engaged.
 - (b) If the fault is not corrected, push the MSG softkey to acknowledge the message and to show the Messages page.
 - (c) Record the active messages (white text).
 - (d) If a subscription service is necessary for the system function that has the fault, make sure that the subscription is current.
 - 1 If the subscription is not current contact subscriber company to get the necessary service.
 - (4) If a satellite is used for the system to transmit/receive, make sure that the antenna location on the airplane has an unobstructed view of the satellite.
 - (5) Do the G1000 Architecture Verification Check, refer to Garmin G1000 Integrated Avionics System - Adjustment/Test.
 - (6) 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. Serial Numbers for GTX1 and GTX2 are reported for with Garmin NXi Software Configurations.
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.
 - Status column shows check (green)
 - The LRU serial number
 - The LRU version number.
 - (7) If the LRU status box shows a X (red) there could be a problem with the wiring connections that follow:
 - (a) Data bus connection.
 - (b) 28Vdc connection.
 - (c) Ground connection.
 - (8) If the serial number or version number is dashed there can be a problem with:
 - (a) The data bus.
 - (b) The software load.

4. General Procedures for Garmin Data Bus and Electrical Wiring Troubleshooting

- A. Do the General Procedures for Garmin Data Bus and Electrical Wiring Troubleshooting. Refer to the Model 208 Wiring Diagram Manual,
- (1) Do a Visual check of the applicable LRU electrical connector(s) and airplane electrical connectors for the unserviceable conditions that follow:
 - Bent pins

- Broken pins
- Pushed back pins
- Repair found damage.

- (2) At the suspect LRU connector make sure that electrical power and ground signals are present.
- (3) Make sure that data bus lines are properly terminated and secure. Use an ohm meter to do a continuity check of the bus wires. Check each wire end to end.

NOTE: Do not ground out bus wiring to each other or shield grounds. Check the HSDB and ARINC 429 bus wiring.

- (4) If applicable, refer to the Model 208 Wiring Diagram Manual and do a visual check of the wiring components that follow and make sure that :
 - The LRU's location strapping is correct
 - Other necessary G1000 system strapping is correct.
- (5) Do a visual check of the wiring bundles for damage.
 - (a) If necessary, repair or replace the wiring bundles.
- (6) Do a check of the applicable system wiring for continuity, ground faults or other unserviceable conditions. Refer to the Model 208 Wiring Diagram Manual.
 - (a) If necessary, repair or replace the wiring bundles.
- (7) For the VHF, Data Link and GPS systems, do a visual check of the coaxial cable connections to the applicable LRU and antenna(s) and if necessary:
 - (a) Tighten loose coaxial cable connectors.
 - (b) Repair or replace unserviceable coaxial cable.
 - (c) Make sure system antennas have a view of satellites for correct system operation.
- (8) If there are two identical LRUs installed, interchange the LRU positions and check system operation again.

NOTE: When the GIA 63W/64W units are interchanged they must be configured again but software does not have to be loaded. If the three GDUs are interchanged they do not have to be configured or software loaded. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test.

- (a) If the problem follows the LRU, replace the LRU and check system operation again.
- (b) If the problem does not follow the LRU, there is a wiring bundle, coaxial, antenna or configuration/software fault. Continue troubleshooting the system fault. If necessary, contact Cessna Customer Service at phone: (316) 517-5800, Fax: (316) 517-7271.

5. GIA 63W/GIA 64W and GDU CAS Alert Message Troubleshooting

- A. Do the GIA 63W/64W and GDU CAS Alert message troubleshooting.

NOTE: For other Garmin system LRU troubleshooting, refer to the specific LRU troubleshooting section in this maintenance manual.

- (1) Use the Model 208 Wiring Diagram manual to assist with the error message and LRU communication troubleshooting.
- (2) Do the Alert message troubleshooting procedures. For LRU/System CAS messages refer to Table 101.

Table 101. LRU/System CAS Alert Messages







LRU/System CAS Alert Messages	CAS Message Troubleshooting Tables
GDU	Refer to Table 102.
GIA Cooling	Refer to Table 103.
GIA	Refer to Table 104.







- (a) For GDU CAS Alert messages refer to Table 102.

Table 102. GDU CAS Messages

GDU CAS Alert Messages	Cause	Corrective Action
------------------------	-------	-------------------

MFD1 DB ERR ♦ MFD1 aviation database error exists.	The MFD has encountered an error in the Jeppesen database.	1. Reload Jeppesen database. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test 2. Replace MFD. Refer to Garmin Display Unit - Removal/Installation.
PFD1 DB ERR ♦ PFD1 aviation database error exists.	The PFD 1 has encountered an error in the Jeppesen database.	1. Reload Jeppesen database. Garmin G1000 Integrated Avionics System - Adjustment/Test 2. Replace PFD 1. Refer to Garmin Display Unit - Removal/Installation.
PFD2 DB ERR ♦ PFD2 aviation database error exists.	The PFD 2 has encountered an error in the Jeppesen database.	1. Reload the Jeppesen database. 2. Replace PFD 2. Refer to Garmin Display Unit - Removal/Installation
MFD1 DB ERR ♦ MFD1 basemap database error exists.	The MFD has encountered an error in the base map database.	1. Replace MFD. Refer to Garmin Display Unit - Removal/Installation.
PFD1 DB ERR ♦ PFD1 basemap database error exists.	The PFD 1 has encountered an error in the base map database.	1. Replace PFD 1. Refer to Garmin Display Unit - Removal/Installation.
PFD2 DB ERR ♦ PFD2 basemap database error exists.	The PFD 2 has encountered an error in the base map database.	1. Replace PFD 2. Refer to Garmin Display Unit - Removal/Installation.
MFD1 DB ERR ♦ MFD1 terrain database error exists.	The MFD has encountered an error in the terrain database.	1. G1000 Software Version (v 767.XX), make sure that the terrain card is correctly inserted in display unit . 2. G1000 Software Version (v 767.XX), replace terrain card. 3. Replace the MFD. Refer to Garmin Display Unit-Removal/Installation.
PFD1 DB ERR ♦ PFD1 terrain database error exists.	The PFD 1 has encountered an error in the terrain database.	1. G1000 Software Version (v 767.XX), make sure that the terrain card is correctly inserted in display unit . 2. G1000 Software Version (v 767.XX), replace terrain card. 3. Replace the PFD 1. Refer to Garmin Display Unit - Removal/Installation.
PFD2 DB ERR ♦ PFD2 terrain database error exists	The PFD 2 has encountered an error in the terrain database.	1. G1000 Software Version (v 767.XX), make sure that the terrain card is correctly inserted in display unit . 2. G1000 Software Version (v 767.XX), replace terrain card. 3. Replace the PFD 2. Refer to Garmin Display Unit-Removal/Installation.

MFD1 DB ERR  MFD1 obstacle database error exists.	The MFD has encountered an error in the obstacle database.	1.G1000 Software Version (v 767.XX), make sure that the terrain card is correctly inserted in display unit . 2. G1000 Software Version (v 767.XX), replace terrain card. 3. Replace the MFD. Refer to, Garmin Display Unit-Removal/Installation.
PFD1 DB ERR  PFD1 obstacle database error exists.	The PFD 1 has encountered an error in the obstacle database.	1.G1000 Software Version (v 767.XX), make sure that the terrain card is correctly inserted in display unit . 2. G1000 Software Version (v 767.XX), replace terrain card. 3. Replace the PFD 1. Refer to Garmin Display Unit - Removal/Installation.
PFD2 DB ERR  PFD2 obstacle database error exists.	The PFD 2 has encountered an error in the obstacle database.	1.G1000 Software Version (v 767.XX), make sure that the terrain card is correctly inserted in display unit . 2. G1000 Software Version (v 767.XX), replace terrain card. 3. Replace the PFD 2. Refer to Garmin Display Unit - Removal/Installation.
MFD1 DB ERR  MFD1 airport terrain database error exists.	The MFD has encountered an error in the airport terrain database.	1. Make sure that the terrain card is correctly inserted in display unit . 2. Replace terrain card. 3. Replace the MFD. Refer to Garmin Display Unit - Removal/Installation.
PFD1 DB ERR  PFD1 airport terrain database error exists.	The PFD 1 has encountered an error in the airport terrain database.	1.G1000 Software Version (v 767.XX), make sure that the terrain card is correctly inserted in display unit . 2. G1000 Software Version (v 767.XX), replace terrain card. 3. Replace the PFD 1. Refer to Garmin Display Unit - Removal/Installation.
PFD2 DB ERR  PFD2 airport terrain database error exists.	The PFD 2 has encountered an error in the airport terrain database.	1.G1000 Software Version (v 767.XX), make sure that the terrain card is correctly inserted in display unit . 2. G1000 Software Version (v 767.XX), replace terrain card. 3. Replace the PFD 2. Refer to Garmin Display Unit - Removal/Installation.

MFD1 DB ERR  MFD1 SafeTaxi database error exists.	The MFD has encountered an error in the Safe Taxi database	1.G1000 Software Version (v 767.XX), make sure that the terrain card is correctly inserted in display unit . 2. G1000 Software Version (v 767.XX), replace terrain card. 3. Replace the MFD. Refer to Garmin Display Unit - Removal/Installation.
PFD1 DB ERR  PFD1 SafeTaxi database error exists.	The PFD 1 has encountered an error in the Safe Taxi database.	1.G1000 Software Version (v 767.XX), make sure that the terrain card is correctly inserted in display unit . 2. G1000 Software Version (v 767.XX), replace terrain card. 3. Replace the PFD 1. Refer to Garmin Display Unit-Removal/Installation.
PFD2 DB ERR  PFD2 SafeTaxi database error exists.	The PFD 2 has encountered an error in the Safe Taxi database.	1.G1000 Software Version (v 767.XX), make sure that the terrain card is correctly inserted in display unit . 2. G1000 Software Version (v 767.XX), replace terrain card. 3. Replace the PFD 2. Refer to Garmin Display Unit - Removal/Installation.
MFD1 DB ERR  MFD1 Chartview database error exists.	The MFD has encountered an error in the Chartview database	1.G1000 Software Version (v 767.XX), make sure that the terrain card is correctly inserted in display unit . 2. G1000 Software Version (v 767.XX), replace terrain card. 3. Replace the MFD. Refer to Garmin Display Unit - Removal/Installation.
MFD1 DB ERR  MFD1 Terminal Procs database error exists.	The MFD has encountered an error in the Terminal Procedures database.	1.G1000 Software Version (v 767.XX), make sure that the terrain card is correctly inserted in display unit . 2. G1000 Software Version (v 767.XX), replace terrain card. 3. Replace the MFD. Refer to Garmin Display Unit - Removal/Installation.
DB MISMATCH  Aviation database version mismatch. Xtalk is off.	The PFD's and/or MFD have different aviation database versions installed. Cross-fill between displays is off. Some data from other displays will not be used by the current display.	1. Install correct aviation database version in all displays units.

DB MISMATCH ♦ Aviation database type mismatch. Xtalk is off.	The PFD's and/or MFD have different aviation database types installed (Americas, European, etc.). Cross-fill between displays is off. Some data from other displays will not be used by the current display.	1. Install correct aviation database version in all display units.
DB MISMATCH ♦ Basemap database version mismatch. Xtalk is off.	The PFDs and/or MFD have different basemap database versions installed. Cross-fill between displays is off. Some data from other displays will not be used by the current display.	1. Attempt to reload base map to the display unit. 2. Replace applicable PFD 1, PFD 2, or MFD Refer to Garmin Display Unit- Removal/Installation.
DB MISMATCH ♦ Terrain database version mismatch. Xtalk is off.	The PFD's and/or MFD have different terrain database versions installed. Cross-fill between displays is off. Some data from other displays will not be used by the current display.	1. Install correct terrain database version in all display units.
DB MISMATCH ♦ Terrain database type mismatch. Xtalk is off.	The PFD's and/or MFD have different terrain database types installed. Cross-fill between displays is off. Some data from other displays will not be used by the current display.	1. Install correct terrain database type in all display units.
DB MISMATCH ♦ Obstacle database version mismatch. Xtalk is off.	The PFD's and/or MFD have different obstacle versions installed. Cross-fill between displays is off. Some data from other displays will not be used by the current display.	1. Install correct obstacle database version in all display units.
DB MISMATCH ♦ Airport Terrain database version mismatch. Xtalk is off.	The PFD's and/or MFD have different airport terrain database versions installed. Cross-fill between displays is off. Some data from other displays will not be used by the current display.	1. Install correct airport terrain database version in all display units.
XTALK ERROR ♦ A flight display crosstalk error has occurred.	An error has occurred in data transfer between any two displays.	1. Make sure that data bus wiring is serviceable. Refer to the Model 208 Wiring Diagram Manual. 2. Replace the affected PFD. Refer to Garmin Display Unit - Removal/Installation.
SIMULATOR ♦ Sim mode is active. Do not use for navigation.	The GDU is in simulator	1. Check wiring and make that sure pins 54 of P401 P402, and P403 are not connected to ground.
DATA LOST ♦ Pilot stored data was lost. Recheck settings.	Flight crew stored data has been lost.	1. Recycle airplane power. 2. Replace affected GDU. Refer to Garmin Display Unit- Removal/Installation.

MFD1 SERVICE ♦ MFD1 needs service. Return unit for repair.	The G1000 has determined MFD not operating correctly.	<ol style="list-style-type: none"> 1. Make sure that the data bus wiring is serviceable. Refer to the Model 208 Wiring Diagram Manual. 2. Replace the MFD. Refer to Garmin Display Unit - Removal/Installation.
PFD1 SERVICE ♦ PFD1 needs service. Return unit for repair.	The G1000 has determined PFD 1 not operating correctly.	<ol style="list-style-type: none"> 1. Make sure that the data bus wiring is serviceable. Refer to the Model 208 Wiring Diagram Manual. 2. Replace the PFD 1. Refer to Garmin Display Unit - Removal/Installation.
PFD2 SERVICE ♦ PFD2 needs service. Return unit for repair.	The G1000 has determined PFD 2 not operating correctly.	<ol style="list-style-type: none"> 1. Make sure that the data bus wiring is serviceable. Refer to the Model 208 Wiring Diagram Manual. 2. Replace the PFD 2. Refer to Garmin Display Unit - Removal/Installation.
PFD1 CONFIG ♦ PFD1 configuration error. Config service req♦d.	The G1000 has detected a PFD configuration mismatch.	<ol style="list-style-type: none"> 1. Cycle airplane power 2-3 times. 2. Load correct configuration into PFD 1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Replace the master configuration module. Refer to Garmin G1000 Master Configuration Module - Removal/Installation. 4. Replace PFD 1. Refer to, Garmin Display Unit-Removal/Installation.
PFD2 CONFIG ♦ PFD2 configuration error. Config service req♦d.	The G1000 has detected a PFD configuration mismatch.	<ol style="list-style-type: none"> 1. Cycle airplane power 2-3 times. 2. Load correct configuration into PFD 2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Replace PFD 2. Refer to Garmin Display Unit-Removal/Installation.
MFD CONFIG♦ MFD configuration error. Config service req♦d.	The G1000 has detected a MFD configuration mismatch.	<ol style="list-style-type: none"> 1. Cycle airplane power 2-3 times. 2. Load correct configuration into the MFD. Refer to, Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Replace MFD. Refer to Garmin Display Unit - Removal/Installation.

SW MISMATCH ♦ GDU software version mismatch. Xtalk is off.	The PFD's and/or MFD have different software versions installed. Cross-fill between displays is off. Some data from other displays will not be used by the current display.	1. Reload software for the affected GDU. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Replace affected GDU. Refer to, Garmin Display Unit - Removal/Installation.
MFD1 COOLING ♦ MFD1 has poor cooling. Reducing power usage.	The MFD is overheating. Power consumption is being reduced by dimming the display.	1. Troubleshoot the MFD cooling fan.
PFD1 COOLING ♦ PFD1 has poor cooling. Reducing power usage.	The PFD 1 is overheating. Power consumption is being reduced by dimming the display.	1. Troubleshoot the PFD 1 cooling fan.
PFD2 COOLING ♦ PFD1 has poor cooling. Reducing power usage.	The PFD 2 is overheating. Power consumption is being reduced by dimming the display.	1. Troubleshoot the PFD 2 cooling fan.
MFD1 ♦key♦ KEYSTK ♦ Key is stuck.	A key on the MFD bezel is stuck.	1. Attempt to free the stuck key by pressing it several times. 2. Replace the MFD. Refer to Garmin Display Unit - Removal/Installation.
PFD1 ♦key♦ KEYSTK ♦ Key is stuck.	A key on PFD 1 bezel is stuck.	1. Attempt to free the stuck key by pressing it several times. 2. Replace the PFD 1. Refer to Garmin Display Unit - Removal/Installation.
PFD2 ♦key♦ KEYSTK ♦ Key is stuck.	A key on PFD 2 bezel is stuck.	1. Attempt to free the stuck key by pressing it several times. 2. Replace the PFD 2. Refer to Garmin Display Unit-Removal/Installation.
CNFG MODULE ♦ PFD1 configuration module is inoperative. (NOTE:)	Communication with the PFD 1 configuration module has been lost.	1. Replace the master configuration module. Refer to Garmin G1000 Master Configuration Module-Removal/Installation.
MANIFEST ♦ PFD1 software mismatch. Communication Halted.	The system has detected an incorrect software version loaded in PFD 1.	1. Load correct the software. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test.
MANIFEST ♦ PFD2 software mismatch. Communication Halted.	The system has detected an incorrect software version loaded in PFD 2.	1. The system has an incorrect software version loaded in PFD 2. 2. Load correct the software. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test.

MANIFEST ♦ MFD software mismatch. Communication Halted.	The system has detected an incorrect software version loaded in the MFD.	1. The system has an incorrect software version loaded in PFD 2. 2. Load correct the software. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test.
FAILED PATH ♦ A data path has failed. Check configuration mode.	A path connected to the GDU's or GIA's has failed.	1. Do a check of the configuration pages for a failed bus. 2. Refer to the communication troubleshooting in this section for corrective action.

NOTE: Replace the unlock cards and terrain database cards if the Configuration Module is replaced.

- (b) For GIA cooling CAS Alert messages refer to Table 103.

Table 103. GIA Cooling CAS Messages

GIA Cooling CAS Alert Messages	Cause	Corrective Action
GIA1 COOLING ♦ GIA1 temperature too low.	GIA 1 Operating temperature is too low.	1. Allow unit to warm up.
GIA2 COOLING ♦ GIA2 temperature too low.	GIA 2 Operating temperature is too low.	1. Allow unit to warm up.
GIA1 COOLING ♦ GIA1 over temperature.	GIA 1 has exceeded it operating temperature range.	1. Make sure the cooling fan is serviceable. 2. Make cooling fan wiring is serviceable. Refer to the Model 208 Wiring diagram manual. 3. Replace the GIA 1. Refer to Garmin G1000 GIA 63W/64W Integrated Avionics Unit - Removal/Installation.
GIA2 COOLING ♦ GIA2 over temperature.	GIA 2 has exceeded it operating temperature range.	1. Make sure the cooling fan is serviceable. 2. Make cooling fan wiring is serviceable. Refer to the Model 208 Wiring diagram manual. 3. Replace GIA 2. Refer to Garmin G1000 GIA 63W/64W Integrated Avionics Unit - Removal/Installation.

- (c) For GIA CAS Alert messages refer to Table 104.

Table 104. GIA CAS Error Messages

GIA CAS ALert Messages	Cause	Corrective Action
GIA1 CONFIG ♦ GIA1 configuration error. Config service req♦d.	GIA 1 configuration settings do not match backup configuration memory	1. Load correct configuration in GIA 1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Replace the master configuration module. Refer to Garmin G1000 Master Configuration Module - Removal/Installation.

GIA2 CONFIG ♦ GIA2 configuration error. Config service req♦d.	GIA 2 configuration settings do not match backup configuration memory.	1. Load correct configuration in GIA 2. 2. Replace master configuration module. Refer to Garmin G1000 Master Configuration Module - Removal/Installation.
MANIFEST ♦ GIA1 software mismatch. Communication halted.	The system has detected an incorrect software version loaded in GIA 1.	1. Load correct configuration in GIA 1. 1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test.
MANIFEST ♦ GIA2 software mismatch. Communication halted.	The system has detected an incorrect software version loaded in GIA 2.	1. Load correct configuration in GIA 2. 2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test.
GIA1 CONFIG ♦ GIA1 audio config error. Config service req♦d.	GIA 1 audio configuration settings do not match backup configuration	1. Load correct configuration in GIA 1. 1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Replace master configuration module. Refer to Garmin G1000 Master Configuration Module-Removal/Installation.
GIA2 CONFIG ♦ GIA2 audio config error. Config service req♦d.	GIA 2 audio configuration settings do not match backup configuration.	1. Load correct configuration in GIA 2. 2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Replace the master configuration module. Refer to Garmin G1000 Master Configuration Module.
GIA1 SERVICE ♦ GIA1 needs service. Return unit for repair.	GIA 1 self-test has detected a problem in the unit.	1. Replace GIA 1. Refer to Garmin G1000 GIA 63W/64W Integrated Avionics Unit - Removal/Installation.
GIA2 SERVICE ♦ GIA2 needs service. Return unit for repair.	GIA 2 self-test has detected a problem in the unit.	2. Replace GIA 2. Refer to Garmin G1000 GIA 63W/64W Integrated Avionics Unit - Removal/Installation.

6. Data Path Troubleshooting Procedures

A. Do the data path troubleshooting procedures that follow:

- (1) If a X (red) shows next to a LRU on the SYSTEM DATA PATHS page there is a LRU communication problem.
- (2) Put the G1000 in configuration mode as follows:
 - (a) Disengage the PFD 1 circuit breaker found on the Avionics circuit breaker panel.
 - (b) On PFD 1 push the ENT key the same time you engage the PFD 1 circuit breaker.
 - 1 Release the ENT key when INITIALIZING SYSTEM shows on PFD 1.
 - (c) Disengage the PFD 2 circuit breaker found on the Avionics circuit breaker panel.
 - (d) On PFD 2 push the ENT key the same time you engage the PFD 2 circuit breaker.
 - 1 Release the ENT key when INITIALIZING SYSTEM shows on PFD 2.
 - (e) Disengage the MFD circuit breaker found on the Avionics circuit breaker panel.
 - (f) On the MFD push the ENT key the same time you engage the MFD circuit breaker.
 - 1 Release the ENT key when INITIALIZING SYSTEM shows on the MFD.
- (3) For troubleshooting communications problems use the inner and outer FMS knobs navigate to the applicable

configuration page and refer to tables that follow:

- (a) For GDU Page Group RS-232 / ARINC 429 CONFIG page refer to Table 105

Table 105. GDU Page Group RS-232 / ARINC 429 CONFIG Page




GDU Page Group RS-232 / ARINC 429 CONFIG Page			
Communication Problem	Channel	Cause	Possible Solution
PFD 1 - RS-232	CHNL 1	PFD 1/GMC 710 RS-232 data path not functioning correctly.	<ol style="list-style-type: none"> 1. Configure PFD 1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GMC 710. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Check PFD 1/ GMC 710 data bus connections. 4. Replace PFD 1. Refer to Garmin Display Unit- Removal/Installation. 5. Replace GMC 710.
PFD 1 - ARINC 429	IN 1	PFD 1/GRS 77/79 #1 ARINC 429 data path not functioning correctly.	<ol style="list-style-type: none"> 1. Configure PFD 1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GRS 77/79 #1. Refer to, Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Check PFD 1/ GRS 77/79 #1 data bus connections. 4. Replace PFD 1. Refer to Garmin Display Unit- Removal/Installation. 5. Replace GRS 77/79 #1. Refer to Garmin G1000 Attitude Heading Reference System - Removal/Installation.
PFD 1 - ARINC 429	IN 2	PFD 1/GDC ADC #1 ARINC 429 data path not functioning correctly .	<ol style="list-style-type: none"> 1. Configure PFD 1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GDC ADC #1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Check PFD 1/ GDC ADC #1 data bus connections. 4. Replace PFD 1. Refer to Garmin Display Unit- Removal/Installation. 5. Replace GDC ADC #1. Garmin G1000 Air Data Computer System - Removal/Installation.

MFD - RS-232	CHNL 1	MFD/GMC 710 RS-232 data path not functioning correctly.	<ol style="list-style-type: none"> 1. Configure MFD. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GMC 710. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Check MFD/GMC 710 data bus connections. 4. Replace GMC 710. 5. Replace MFD. Refer to, Garmin Display Unit- Removal/Installation.
MFD - ARINC 429	IN 1	MFD/GRS 77/79 #1 ARINC 429 data path not functioning correctly.	<ol style="list-style-type: none"> 1. Configure MFD. Refer to, Garmin G1000 Integrated Avionics System - Adjustment/Test 2. Configure GRS 77/79. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Check MFD/GRS 77/79 data bus connections. 4. Replace MFD Refer to Garmin Display Unit- Removal/Installation. 5. Replace GRS 77/79. Refer to Garmin G1000 Attitude Heading Reference System - Removal/Installation.
MFD - ARINC 429	IN 2	MFD/GDC ADC #1 ARINC 429 data path not functioning correctly.	<ol style="list-style-type: none"> 1. Configure MFD Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GDC ADC. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Check MFD/GDC ADC data bus connections. 4. Replace MFD. Refer to Garmin Display Unit- Removal/Installation. 5. Replace GDC ADC. Garmin G1000 Air Data Computer System - Removal/Installation.
PFD 2 - ARINC 429	IN 1	PFD 2/GRS 77/79 #2 ARINC 429 data path not functioning correctly.	<ol style="list-style-type: none"> 1. Configure PFD 2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GRS 77/79 #2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Check PFD 2/ GRS 77/79 #2 data bus connections. 4. Replace PFD 2. Refer to Garmin Display Unit- Removal/Installation. 5. Replace GRS 77/79 #2. Refer to, Garmin G1000 Attitude Heading Reference System - Removal/Installation.

PFD 2 - ARINC 429	IN 2	PFD 2/GDC ADC #2 ARINC 429 data path not functioning correctly.	<ol style="list-style-type: none"> 1. Configure PFD 2. Refer to, Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GDC ADC #2. Refer to, Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Check PFD 2/ GDC ADC #2 data bus connections. 4. Replace PFD 2. Refer to, Garmin Display Unit- Removal/Installation. 5. Replace GDC ADC #2. Garmin G1000 Air Data Computer System - Removal/Installation.
-------------------	------	---	---

(b) For the GIA Page Group   RS-232/ARINC 429 CONFIG  page refer to Table 106.

Table 106. GIA Page Group   RS-232/ARINC 429 CONFIG  Page

GIA Page Group   RS-232/ARINC 429 CONFIG  Page			
Communication Problem	Channel		Possible Solution
GIA1 - RS-232	CHNL 1	GIA1/GDC ADC #1 RS-232 data path is not functioning correctly.	<ol style="list-style-type: none"> 1. Configure GIA 1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GDC ADC #1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Do check of GIA 1 and GDC ADC #1 interface wiring and make sure that it is serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace GIA 1. Refer to Garmin GIA 63W/64W Integrated Avionics Unit - Removal/Installation. 5. Replace GDC ADC #1. Garmin G1000 Air Data Computer System - Removal/Installation.
GIA1 - RS-232	CHNL 2	GIA1/GRS 77/79 #2 RS-232 data path is not functioning correctly.	<ol style="list-style-type: none"> 1. Configure GIA 1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GRS 77/79 #2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. <p>Refer to the Model 208 Wiring Diagram Manual.</p> <ol style="list-style-type: none"> 4. Replace GIA 1. Refer to Garmin GIA 63W/64W Integrated Avionics Unit - Removal/Installation. 5. Replace GRS 77/79 #2. Refer to Garmin G1000 Attitude Heading Reference System - Removal/Installation.

GIA1 - RS-232	CHNL 5	GIA1/GTX #1 RS-232 data path is not functioning correctly.	<ol style="list-style-type: none"> 1. Configure GIA 1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GTX XPDR #1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Do check of GIA 1 and GTX XPDR #1 interface wiring and make sure that it is serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace GIA 1. Refer to Garmin Integrated Avionics Unit - Removal/Installation. 5. Replace GTX XPDR #1. Garmin GTX Series Transponder System - Removal/Installation.
GIA1 - RS-232	CHNL 6	GIA1/GRS 77/79 #1 RS-232 data path is not functioning correctly.	<ol style="list-style-type: none"> 1. Configure GIA 1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test 2. Configure GRS 77/79 #1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Do check of GIA 1 and GRS 77/79 #1 interface wiring and make sure that it is serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace GIA 1. Refer to Garmin GIA 63W/64W Integrated Avionics Unit - Removal/Installation. 5. Replace GRS 77/79 #1. Refer to Garmin G1000 Attitude Heading Reference System - Removal/Installation.
GIA1 - RS-232	CHNL 7	GIA1/GMA 1347/1360D RS-232 data path is not functioning correctly.	<ol style="list-style-type: none"> 1. Configure GIA 1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GMA 1347/1360D. Refer to Garmin G1000 GIA 63W/64W Integrated Avionics System - Adjustment/Test. 3. Do check of GIA 1 and GMA interface wiring and make sure that it is serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace GIA 1. Refer to Garmin GIA Integrated Avionics Unit - Removal/Installation. 5. Replace GMA 1347/1360D. Refer to Chapter 23, Garmin GMA 1347/1360D Audio System - Maintenance Practices.

GIA1 - ARINC 429	IN 1	GIA1/RAD ALT ARINC 429 data path is not functioning correctly.	<ol style="list-style-type: none"> 1. Configure GIA 1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Make sure that the RAD ALT Option is installed. 3. Do check of GIA 1 and RAD ALT interface wiring and make sure that it is serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace RAD ALT.
GIA1 - ARINC 429	IN 5	GIA1/GDC ADC #1 ARINC 429 data path is not functioning correctly.	<ol style="list-style-type: none"> 1. Configure GIA 1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GDC ADC #1. Refer to, Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Do check of GIA 1 and GDC ADC #1 interface wiring and make sure that it is serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace GIA1. Refer to Garmin GIA 63W/64W Integrated Avionics Unit - Removal/Installation. 5. Replace GDC ADC #1. Refer to Garmin G1000 Air Data Computer System - Removal/Installation.
GIA1 - ARINC 429	IN 6	GIA1/GRS 77/79 #1 ARINC 429 data path is not functioning correctly.	<ol style="list-style-type: none"> 1. Configure GIA 1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GRS 77/79 #1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 4. Do check of GIA 1 and GRS 77/79 #1 interface wiring and make sure that it is serviceable. Refer to the Model 208 Wiring Diagram Manual. 5. Replace GIA1. Refer to Garmin GIA 63W/64W Integrated Avionics Unit - Removal/Installation. 6. Replace GRS 77/79 #1. Refer to Garmin G1000 Attitude Heading Reference System - Removal/Installation
GIA1 - ARINC 429	OUT 1 (Low)	GIA1/C406-N ARINC 429 data path is not functioning correctly.	<ol style="list-style-type: none"> 1. If C406-N system is not installed, configure GIA1 to turn OUT 1 bus OFF. 2. If C406-N is installed, configure it. 3. Make sure wiring interfaces are serviceable. Refer to the Model 208 Wiring Diagram Manual.

GIA2 - RS-232	CHNL 1	GIA2/GDC ADC #2 RS-232 data path is not functioning correctly.	<ol style="list-style-type: none"> 1. Configure GIA2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GDC ADC #2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Make sure that the GIA2/GDC ADC #2 wiring interfaces are serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace GIA2. Refer to Garmin GIA 63W/64W Integrated Avionics Unit - Removal/Installation. 5. Replace GDC ADC #2. Refer to Garmin G1000 Air Data Computer System - Removal/Installation.
GIA2 - RS-232	CHNL 2	GIA2/GRS 77/79 #1 RS-232 data path is not functioning correctly.	<ol style="list-style-type: none"> 1. Configure GIA2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GRS 77/79 #1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Make sure that the GIA2/GRS 77/79 #1 wiring interfaces are serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace GIA2. Refer to, Garmin G1000 GIA 63W/64W Integrated Avionics Unit - Removal/Installation. <p>Replace GRS 77/79 #1. Refer to Garmin G1000 Attitude Heading Reference System - Removal/Installation.</p>
GIA2 - RS-232	CHNL 3	GIA2/WX 500 RS-232 data path is not functioning correctly.	<ol style="list-style-type: none"> 1. Configure GIA2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Make sure that the WX 500 option has been installed. 3. Make sure that the GIA2/WX 500 wiring interfaces are serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace WX 500.

GIA2 - RS-232	CHNL 4	GIA2/GTX XPDR #2 RS-232 data path is not functioning correctly.	<ol style="list-style-type: none"> 1. Configure GIA2. Refer to, Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GTX XPDR #2. Refer to, Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Make sure that the GIA2/GTX XPDR #2 wiring interfaces are serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace GIA2. Refer to Garmin G1000 GIA 63W/64W Integrated Avionics Unit - Removal/Installation. 5. Replace GTX XPDR #2. Garmin GTX Series Transponder System - Removal/Installation.
GIA2 - RS-232	CHNL 5	GIA2/GTX XPDR #1 RS-232 data path is not functioning correctly.	<ol style="list-style-type: none"> 1. Configure GIA2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GTX XPDR #1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Make sure that the GIA2/GTX XPDR #1 wiring interfaces are serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace GIA2. Refer to Garmin G1000 GIA 63W/64W Integrated Avionics Unit - Removal/Installation. 5. Replace GTX XPDR #1. Garmin GTX Series Transponder System - Removal/Installation.
GIA2 - RS-232	CHNL 6	GIA2/GRS 77/79 #2 RS-232 data path is not functioning correctly.	<ol style="list-style-type: none"> 1. Configure GIA2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GRS 77/79 #2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Make sure that the GIA2/GRS 77/79 #2 wiring interfaces are serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace GIA2. Refer to Garmin GIA 63W/64W Integrated Avionics Unit - Removal/Installation. 5. Replace GRS 77/79 #2. Refer to Garmin G1000 Attitude Heading Reference System - Removal/Installation.

GIA2 - RS-232	CHNL 7	GIA2/GMA 1347/1360D RS-232 data path is not functioning correctly.	<ol style="list-style-type: none"> 1. Configure GIA 2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GMA 1347/1360D. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Make sure that the GIA2/GMA 1347/1360D wiring interfaces are serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace GIA2. Refer to Garmin G1000 GIA 63W/64W Integrated Avionics Unit - Removal/Installation. 5. Replace GMA 1347/1360D. Refer to Chapter 23, Garmin GMA 1347/1360D Audio System - Removal/Installation.
GIA2 - RS-232	CHNL 8	GIA1/GSR 56 data path is not functioning correctly.	<ol style="list-style-type: none"> 1. Configure GIA 2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GSR 56. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Remove GIA 2 and replace with GIA 1. Put GIA 2 in the GIA 1 spot. Refer to Garmin G1000 GIA 63W/64W Integrated Avionics Unit - Removal/Installation. Configure GIAs to their new location. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 4. Check the GIA2/GSR 56 interconnect wiring for faults. 5. Replace the GSR 56. Refer to Garmin GSR 56 Iridium Satellite Radio - Removal/Installation.
GIA2 - ARINC 429	IN 4	GIA2/KTA 870 ARINC 429 data path is not functioning correctly.	<ol style="list-style-type: none"> 1. If KTA 870 system is not installed, configure GIA 2. to turn the IN 4 OFF. 2. If KTA 870 is installed, configuration it.
GIA2/GDC ADC #2 ARINC 429 data path is not functioning correctly.	IN 5		<ol style="list-style-type: none"> 1. Configure GIA 2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GDC ADC #2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Make sure that the GIA2/GDC ADC #2 wiring interfaces are serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace GIA2. Refer to Garmin G1000 GIA 63W/64W Integrated Avionics Unit - Removal/Installation. 5. Replace GDC ADC #2. Refer to Garmin G1000 GDC-74A Air Data Computer System - Removal/Installation.

GIA2/GRS 77/79 #2 ARINC 429 data path is not functioning correctly.	IN 6		<ol style="list-style-type: none"> 1. Configure GIA 2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GRS 77/79 #2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Make sure that the GIA2/GRS 77/79 #2 wiring interfaces are serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace GIA2. Refer to Garmin G1000 IGIA 63W/64W Integrated Avionics Unit - Removal/Installation. 5. Replace GRS 77/79 #2. Refer to, Garmin G1000 Attitude Heading Reference System - Removal/Installation
GIA2/KTA 870 ARINC 429 data path is not functioning correctly.	OUT 1 (Low)		<ol style="list-style-type: none"> 1. If KTA 870 system is not installed, configure GIA 2. to turn the OUT 1 bus OFF. 2. If KTA 870 is installed, configure it.
GIA2/KTA 870 ARINC 429 data path is not functioning correctly.	OUT 3 (High)		<ol style="list-style-type: none"> 1. If KTA 870 system is not installed, configure GIA 2. to turn the OUT 2 bus OFF. 2. If KTA 870 is installed, configure it.







(c) For GIA Page Group   CAN / RS-485 CONFIGURATION  page refer to Table 107.

Table 107. GIA Page Group   CAN / RS-485 CONFIGURATION  Page

GIA Page Group   CAN / RS-485 CONFIGURATION  Page		
Communication Problem	Channel	Possible Solution
GIA1/GEA RS-485 data path is not functioning correctly.	CHNL 1	<ol style="list-style-type: none"> 1. Configure GIA 1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure the GEA. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Make sure that the GIA1 and GEA wiring interfaces are serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace GIA 1. Refer to Garmin G1000 GIA 63W/64W Integrated Avionics Unit - Removal/Installation. 5. Replace GEA. Refer to Chapter 77, Garmin GEA 71/71B Engine/Airframe Unit - Maintenance Practices
GIA1/GFC 700 RS-485 data path is not functioning correctly.	CHNL 4	<ol style="list-style-type: none"> 1. Configure GIA 1. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GFC 700. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Make sure that the GIA 1 and Servo wiring interfaces are serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace GIA 1. Refer to, Garmin G1000 GIA 63W/64W Integrated Avionics Unit - Removal/Installation. 5. Replace Servo Unit(s). Note 1.

GIA2/GEA RS-485 data path is not functioning correctly.	CHNL 1	<ol style="list-style-type: none"> 1. Configure GIA 2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GEA. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Make sure that the GIA2 and GEA wiring interfaces are serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace GIA 1. refer to, Garmin G1000 GIA 63W/64W Integrated Avionics Unit - Removal/Installation. 5. Replace GEA. Refer to Garmin G1000 GIA 63W/64W Integrated Avionics Unit - Removal/Installation.
GIA2/GFC 700 RS-485 data path is not functioning correctly.	CHNL 4	<ol style="list-style-type: none"> 1. Configure GIA 2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Configure GFC 700. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Make sure that the GIA 2 and Servo wiring interfaces are serviceable. Refer to the Model 208 Wiring Diagram Manual. 4. Replace GIA 2. Refer to Garmin G1000 GIA 63W/64W Integrated Avionics Unit - Removal/Installation. 5. Replace Servo Unit(s). Note 1.




NOTE 1:

Refer to the applicable maintenance manual section:

- Chapter 22 Garmin Roll Servo Unit - Removal/Installation
- Chapter 22 Garmin Pitch Servo Unit - Removal/Installation
- Chapter 22 Garmin Yaw Servo Unit - Removal/Installation
- Chapter 22 Garmin Pitch Trim Servo Unit - Removal/Installation.

- (d) For GIA Page Group   Clocked Data Interface Configuration  page refer to Table 108.

Table 108. GIA Page Group   Clocked Data Interface Configuration  Page

GIA Page Group   Clocked Data Interface Configuration  Page		
Communication Problem	Channel	Possible Solution
GIA2/DME 1 data path is not working correctly:	CHNL 1	<ol style="list-style-type: none"> 1. Configure GIA 2. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Do a check of the GIA2/DME interface. Refer to the Model 208 Wiring Diagram Manual. 3. Replace the KN 63 DME receiver. 3. Replace the KN 63 DME receiver. Refer to Bendix/King KN 63 DME Receiver - Removal/Installation. 4. Replace GIA 2. Refer to Garmin G1000 GIA 63W/64W Integrated Avionics Unit - Removal/Installation.

- (e) Flight Stream 510 (FS 510) System Messages, refer to Table 109, for G1000 NXi System Software versions (v.2499.08 and On).

Table 109. Flight Stream 510 System Messages

Message	Comments
MFD CARD2 ERR - MFD1 card 2 is invalid	The FS 510 is missing from the bottom slot of the MFD. Re-insert the card.
MFD CARD2 REM - MFD1 card 2 was removed	The FS 510 is missing from the bottom slot of the MFD. Re-insert card.
FS510 CARD ERROR - FS510 not detected in MFD bottom slot	The FS 510 is missing from the bottom slot of the MFD. Re-insert card.