GARMIN

GPS 175/GNX 375/GNC 355 Part 23 AML STC Maintenance Manual

with Instructions for Continued Airworthiness for STC SA02636SE

Aircraft make, model, registration number, and serial number, along with the applicable STC configuration information, must be completed in Appendix A and saved with aircraft permanent records.

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RECORD OF REVISIONS

Revision	Revision Date	Description
1	3/22/2019	Initial release.
2	7/25/2019	Added GNC 355/355A.
3	3/1/2023	Updated software to version to 3.20.

CURRENT REVISION DESCRIPTION

Section	Change Description
Page ii	Updated software license agreement.
2.1.1	Updated Figure 2-1 GPS 175 System Diagram to include interface to Fuel/Air Data computers.
2.1.2	Updated Figure 2-2 GNX 375 System Diagram to include interface to Fuel/Air Data computers.
2.1.3	Updated Figure 2-3 GNC 355 System Diagram to include interface to Fuel/Air Data computers.
3.4	Updated Figure 3-4 Configuration Mode Home Page to include differences between GNX 375 and GPS 175/GNC 355.
3.4.3.1.2	Corrected descriptions of serial ports.
3.4.3.1.3	Added Section 3.4.3.1.3 ADS-B Source (GPS 175 and GNC 355 Only).
3.4.3.1.5	Added Section 3.4.3.1.5 GI 275.
3.4.3.1.6	Added Section 3.4.3.1.6 Cross-Side Navigator.
3.4.3.3	Added Altitude Source Input.
3.4.5	Added Section 3.4.5 Feature Enablement.
5.2	Added two new failure annunciations to Figure 5-2 GPS 175/GNX 375/GNC 355 System Alert Troubleshooting, Sheet 2.
	Added new failure annunciation to Figure 5-8 Database Alert Troubleshooting.
5.3.1	Updated Figure 5-12 J1751 Connector (Looking at Unit) to match orientation on unit.
5.5.1	Updated Figure 5-15 J3551 Connector (Looking at Unit) to match orientation on unit.
6	Added instructions to verify software compatibility when replacing LRUs.
Appendix A	Added entries for RS-232 ports 4 and 5 (GNX 375).
	Added entries for GI 275 and Cross-Side Navigator.
	Added entry for ALT SRC Input.
	Added COM section.

DEFINITIONS

WARNING
*A **Warning** means injury of death is possible.*

CAUTION
*A **Caution** means that damage to the equipment is possible.*

NOTE
*A **Note** provides additional information.*

WARNING
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WARNING
Perchlorate Material – special handling may apply.
Refer to www.dtsc.ca.gov/ hazardouswaste/perchlorate.

CAUTION
To avoid damage to the units, take precautions to prevent Electrostatic Discharge (ESD) when handling the unit, connectors, and associated wiring. ESD damage can be prevented by touching an object of the same electrical potential as the unit before handling the unit itself.

CAUTION
The units have a special anti-reflective coated display that is sensitive to skin oils, waxes, and abrasive cleaners. Cleaners containing ammonia will harm the anti-reflective coating. Clean the display with a clean, lint-free cloth and a cleaner that is safe for anti-reflective coatings.

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1 INTRODUCTION

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1.1 Content, Scope, and Purpose

This document provides Instructions for Continued Airworthiness (ICA) and Maintenance Manual (MM) for the GPS 175, GNX 375, and GNC 355 as installed under STC SA02636SE. The installation of the GPS 175, GNX 375, GNC 355, and associated wiring is performed in accordance with their respective installation manual listed in Table 1-1. This document satisfies the requirements for continued airworthiness as defined by 14 CFR Part 23.1529 and Appendix G. Information in this document is required to maintain the continued airworthiness of the GPS 175, GNX 375, and GNC 355.

References made to "GNC 355" will equally apply to the GNC 355 and GNC 355A.

1.2 Organization

The following outline briefly describes the organization of this manual:

Section 2: System Description

Provides a description of the GPS 175/GNX 375/GNC 355 system equipment installed by this STC.

Section 3: Control and Operation

Provides basic control and operation information specifically tailored to maintenance practices.

Section 4: Instructions for Continued Airworthiness

Provides Instructions for Continued Airworthiness of the GPS 175/GNX 375/GNC 355 system LRUs.

Section 5: Troubleshooting

Provides troubleshooting information, including connector information and pinouts to aid in diagnosing and resolving problems with GPS 175/GNX 375/GNC 355 system equipment.

Section 6: Equipment Removal and Re-Installation

Provides instructions for the removal and replacement of GPS 175, GNX 375, and GNC 355 units.

Section 7: Software

Provides instructions for loading software on GPS 175, GNX 375, and GNC 355 units.

Section 8: System Configuration and Checkout

Provides system configuration information and checkout procedures for the GPS 175/GNX 375/GNC 355.

Section 9: Return-to-Service Procedure

Specifies return-to-service procedures to be performed upon completion of maintenance to GPS 175/ GNX 375/GNC 355 system equipment.

APPENDIX A: Aircraft & Installation Specific Information

Contains the documentation required for recording the aircraft and configuration information.

1.3 Applicability

This document applies to all aircraft with either the GPS 175, GNX 375, or the GNC 355 installed in accordance with STC SA02636SE. Modification of an aircraft by this STC obligates the aircraft operator to include the maintenance information provided by this document in the operator's Aircraft Maintenance Manual and the operator's Aircraft Scheduled Maintenance Program.

1.4 Publications

In addition to this manual, the following documents are recommended to perform maintenance based on the installed and interfaced equipment. It is the responsibility of the owner/operator to ensure the latest applicable versions of these documents are used during operation, servicing, or maintenance of the airplane.

Table 1-1 Reference Documentation

Part Number	Document
190-02207-A1	*GPS 175 Part 23 AML STC Installation Manual*
005-01206-A2	*GPS 175/GNX 375/GNC 355 Part 23 AML STC Equipment List*
005-01206-A1	*GPS 175/GNX 375/GNC 355 Part 23 AML STC Master Drawing List*
190-02207-A3	*Airplane Flight Manual Supplement or Supplemental Airplane Flight Manual for Garmin GPS 175/GNX 375/GNC 355 GPS/XPDR/COM Navigation System*
190-02207-A4	*GNX 375 Part 23 AML STC Installation Manual*
190-02207-A5	*GNC 355 Part 23 AML STC Installation Manual*

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This document is required for maintaining the continued airworthiness of the aircraft. Garmin Dealers may obtain the latest revision of this document at the Garmin Dealer Resource Center.

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1.6 Reference

1.6.1 Terminology

ADS-B or ADS-B Out refers to version 2 ADS-B Out only.

ADS-B In refers to TIS-B traffic and FIS-B weather received from ground stations over UAT as well as ADS-B and ADS-R traffic targets received directly over 1090 MHz or UAT.

Throughout this document references will be made to metallic aircraft. For the purposes of this manual, metallic aircraft will be those with an aluminum skin. Nonmetallic aircraft refers to all other aircraft (e.g., wooden aircraft, aircraft with composite skin, or aircraft with tube and fabric construction).

Unless otherwise stated, all units of measure are US standard units.

The term squitter refers to a burst or broadcast of aircraft-tracking data that is transmitted periodically by a Mode S transponder without interrogation from a controller's radar.

1.6.2 Acronyms

ADS-B:	Automatic Dependent Surveillance - Broadcast	**LOC:**	Localizer
AHRS:	Attitude and Heading Reference System	**LOI:**	Loss of Integrity
AML:	Approved Model List	**LPV:**	Localizer Performance with Vertical Guidance [Approach]
ARINC:	Aeronautical Radio, Incorporated	**LRU:**	Line Replaceable Unit
ATC:	Air Traffic Control	**OAT:**	Outside Air Temperature
BIT:	Built-In Test	**OBS:**	Omni-Bearing Selector
CDI:	Course Deviation Indicator	**ODA:**	Organization Designation Authorization
CFR:	Code of Federal Regulations	**PED:**	Personal Electronic Device
FAA:	Federal Aviation Administration	**RF:**	Radio Frequency
GAE:	Garmin Altitude Encoder	**RS:**	Radiated Susceptibility
GDL:	Garmin Datalink LRU	**SBAS:**	Satellite Based Augmentation System
GDU:	Garmin Display Unit	**SD:**	SanDisk Memory
GNC:	Garmin 2” Navigator/COM	**SDA:**	System Design Assurance
GNX:	Garmin 2” Navigator/Transponder	**SDI:**	Source/Destination Identifiers
GPS:	Global Positioning System	**STC:**	Supplemental Type Certificate
GTR:	Garmin Transmitter/Receiver	**SVT:**	Synthetic Vision Technology
GTX:	Garmin Transponder	**SW:**	Software
HSDB:	High-Speed Data Bus	**UAT:**	Universal Access Technology
HSI:	Horizontal Situation Indicator	**UTC:**	Coordinated Universal Time
ICA:	Instructions for Continued Airworthiness	**VCDI:**	Vertical Course Deviation Indicator
ID:	Identifier	**WAAS:**	Wide Area Augmentation System
IFR:	Instrument Flight Rules	**XM:**	XM Satellite Radio
LED:	Light Emitting Diode	**XPRD:**	Transponder

2 SYSTEM DESCRIPTION

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2.1 Equipment Descriptions

2.1.1 GPS 175

The GPS 175 is a panel-mounted 2-inch GPS navigator. The GPS 175 features a capacitive touch-screen, full-color moving map display, **Power/Home** button, dual concentric rotary knob with push entry, SD card slot, and photocell. The internal AHRS sensor cannot be used to drive anything other than the display of attitude on a non-certified PED. The built-in Bluetooth allows for flight plan I/O and GPS position interface with a PED (Database Concierge only available through Flight Stream 510). The GPS 175 is capable of providing TSO-C146e compliant GPS/WAAS navigation for en route, terminal, non-precision and precision capabilities (LPV) when interfaced with a CDI. The GPS 175 is also a certified ADS-B Out position source. The bezel of the GPS 175 is 2 inches x 6.25 inches and is designed to fit in the same location as older 2-inch avionics, such as GNC 255 or GTR 225.

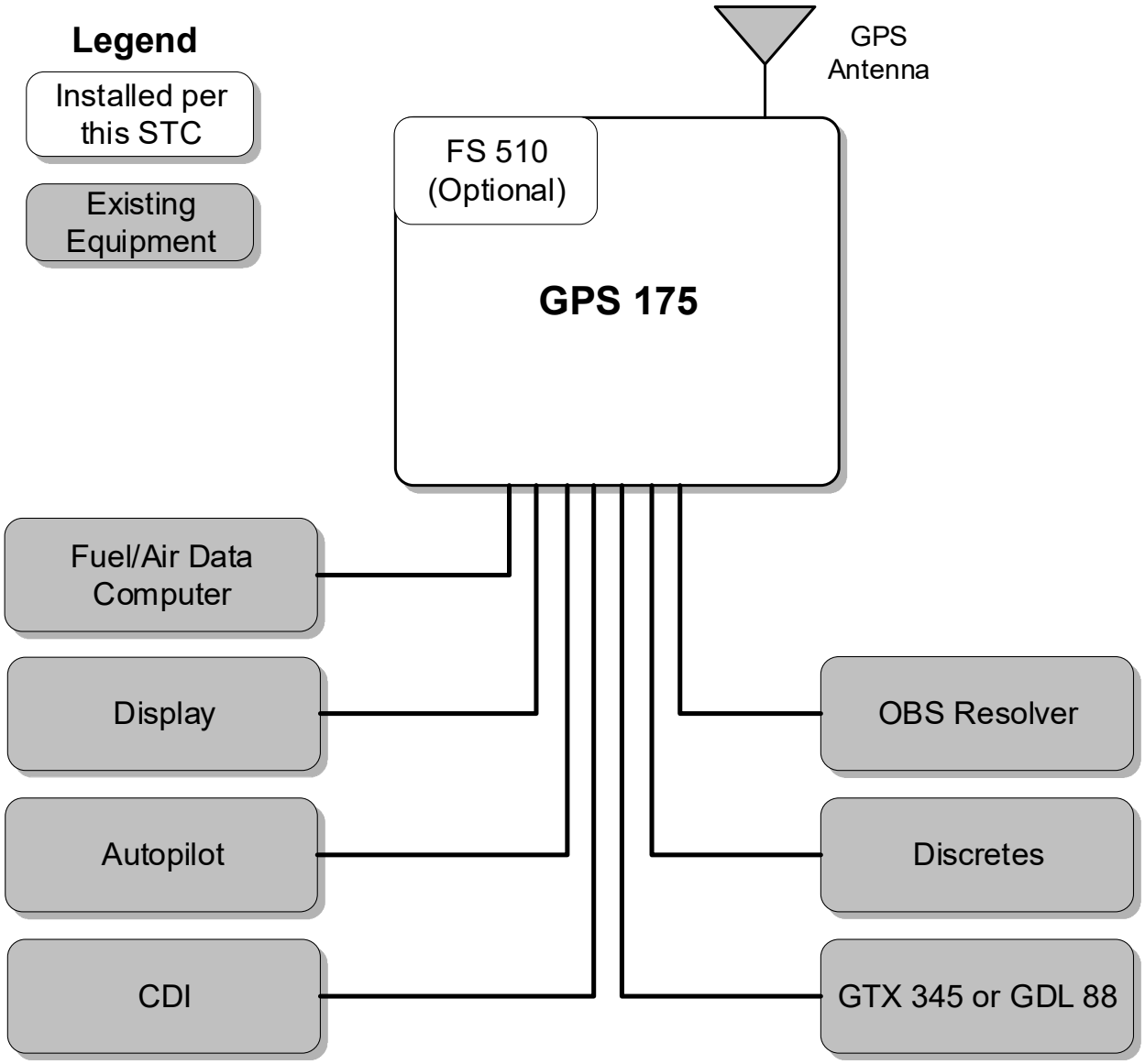

Figure 2-1 GPS 175 System Diagram

2.1.2 GNX 375

The GNX 375 is a panel-mounted 2-inch GPS navigator and transponder. The GNX 375 features a capacitive touch-screen, full-color moving map display, **Power/home** button, dual concentric rotary knob with push entry, SD card slot, and photocell. The GNX 375 has the same capabilities as the GPS 175, plus a Mode S transponder and ADS-B receiver. The internal AHRS sensor cannot be used to drive anything other than the display of attitude on a non-certified PED. The built-in Bluetooth will allow flight plan I/O, GPS position, and ADS-B Weather/Traffic interface with a PED but will not allow software or database loading. The GPS navigation function is capable of providing TSO-C146e compliant GPS/WAAS navigation for en route, terminal, non-precision and precision capabilities (LPV) when interfaced with a CDI. The bezel of the GNX 375 is 2 inches x 6.25 inches and is designed to fit in the same location as older 2-inch avionics, such as GTX 327.

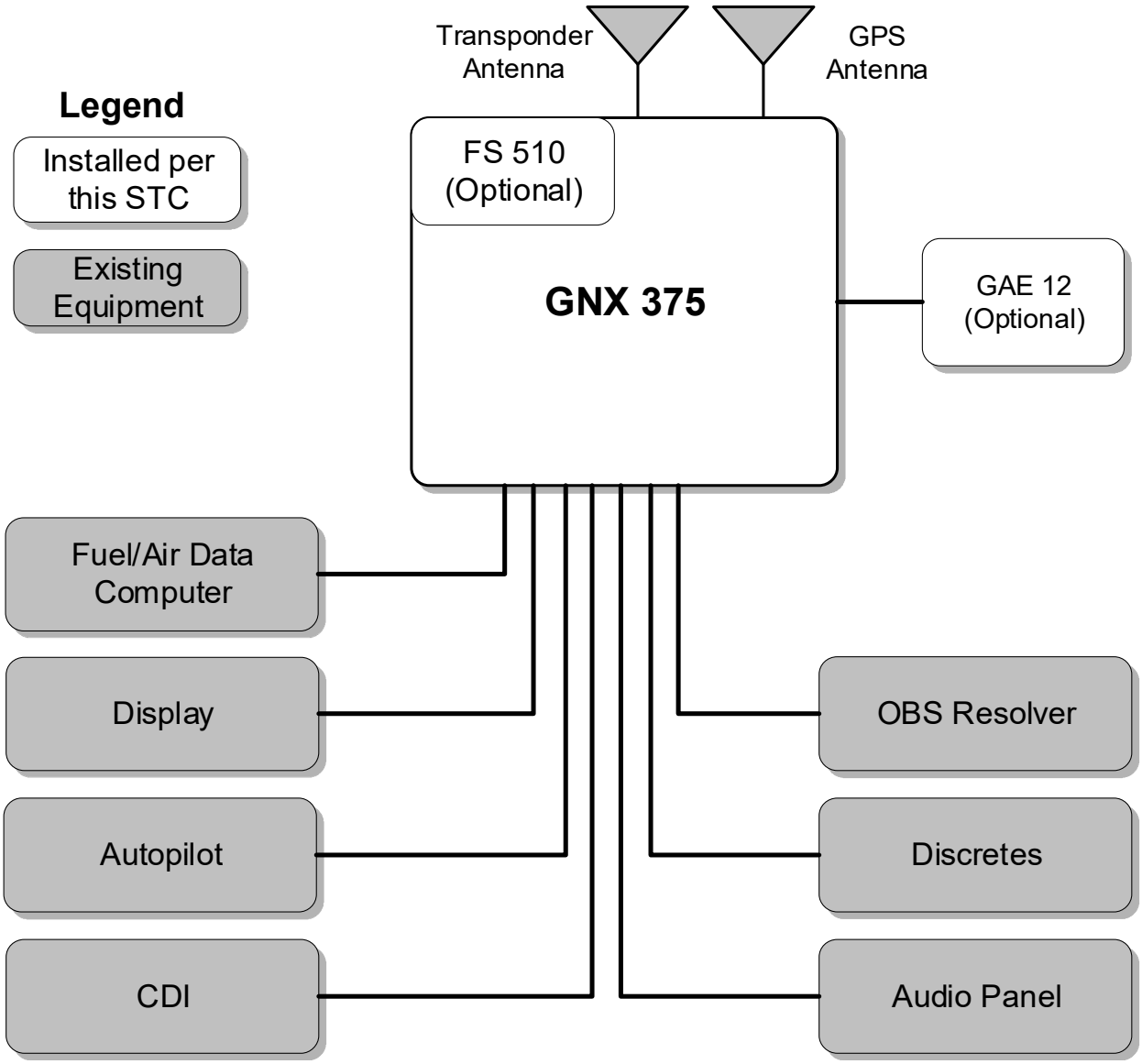

Figure 2-2 GNX 375 System Diagram

2.1.3 GNC 355

The GNC 355 is a panel-mounted 2-inch GPS navigator and COM radio. The GNC 355 features a capacitive touch-screen, full-color moving map display, **Power/home** button, dual concentric rotary knob with push entry, SD card slot, and photocell. The GNC 355 has the same capabilities as the GPS 175, plus a VHF COM radio. The GNC 355 has a 25 kHz spacing radio and the GNC 355A has a 8.33 kHz spacing radio. The internal AHRS sensor cannot be used to drive anything other than the display of attitude on a non-certified PED. The built-in Bluetooth will allow flight plan I/O, GPS position, and ADS-B Weather/ Traffic interface with a PED but will not allow software or database loading. The GPS navigation function is capable of providing TSO-C146e compliant GPS/WAAS navigation for en route, terminal, non-precision and precision capabilities (LPV) when interfaced with a CDI. The bezel of the GNC 355 is 2 inches x 6.25 inches and is designed to fit in the same location as older 2-inch avionics, such as GNC 255 or GTR 225.

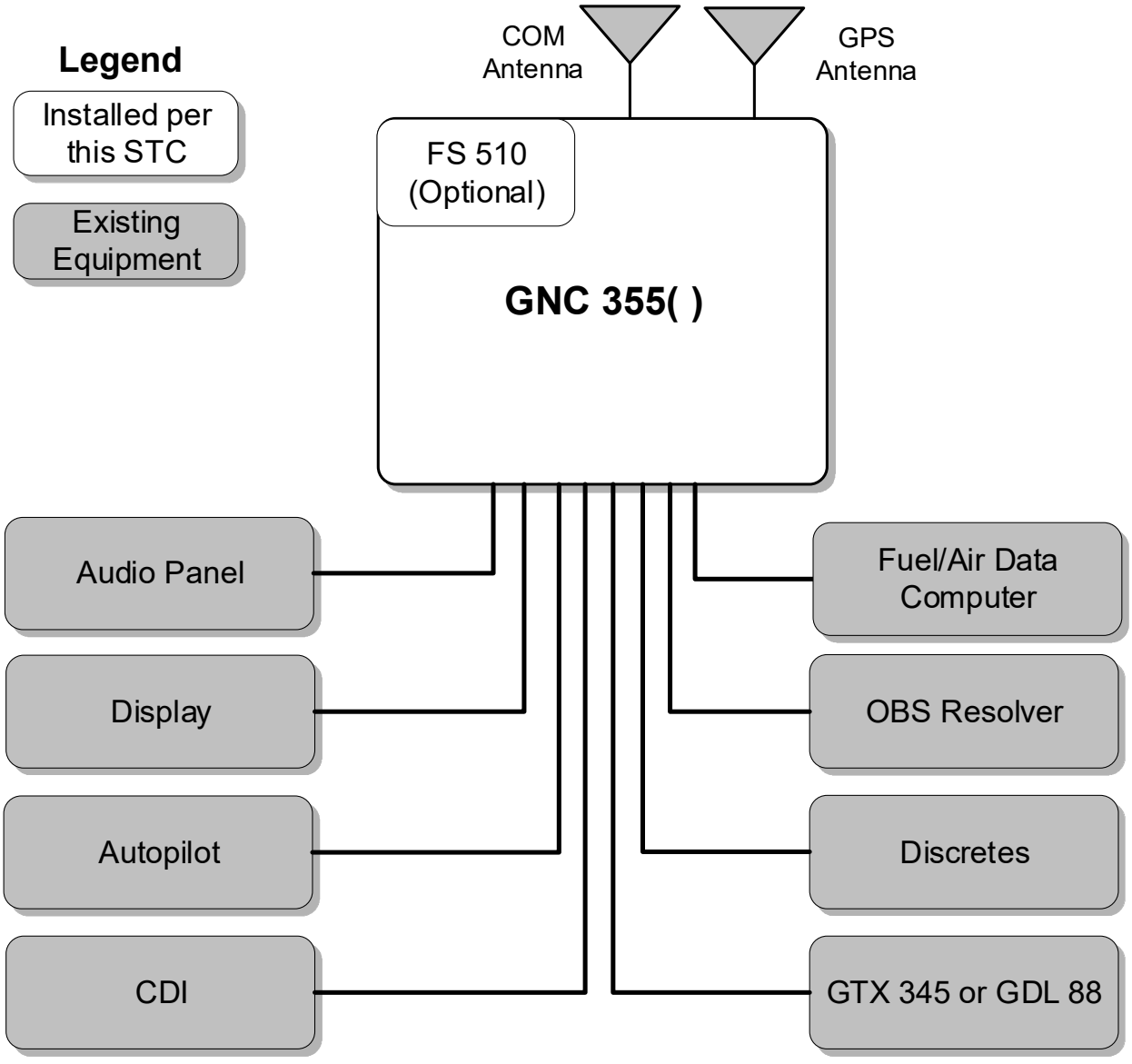

Figure 2-3 GNC 355 System Diagram

2.1.4 Flight Stream 510

NOTE

The Flight Stream 510 is a wireless-enabled data card that is inserted into the SD card slot.

The Flight Stream 510 interfaces to the GPS 175/GNX 375/GNC 355 by replacing the front-loaded data card to allow wireless database transfer with PEDs over WiFi.

Figure 2-4 Flight Stream 510

2.1.5 GAE 12

The GNX 375 allows for the use of an optional GAE 12 module as a transponder pressure altitude input. The GAE 12 module directly attaches to the GNX 375 backplate and connects to the aircraft static pressure system. The GAE 12 module replaces and functions the same as the configuration module.

Figure 2-5 GAE 12

3 CONTROL AND OPERATION

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Control and operation of the GPS 175, GNX 375, and GNC 355 occurs through the use of the touch display, dual rotary knob, and the **Home/Power** key. The home page, shown in Figure 3-1, Figure 3-2, and Figure 3-3, is the first page displayed after the startup prompts. All functions of the GPS 175/GNX 375/ GNC 355 can be accessed through the home page. At any time, the **Home/Power** key can be pressed to return to the home page.

3.1 GPS 175

The GPS 175 home page is shown in Figure 3-1, which contains labels identifying key aspects of the GPS 175 features and controls. These features and controls are as follows:

- **Function Keys** - Touch the function keys to access the features or pages described on the key.
- **Direct-To Key** - This key is used to initiate and activate navigation to a waypoint.
- **Annunciations** - The area of the screen displays annunciations to the pilot.
- **Photocell** - The photocell may be configured to be used by the display to automatically adjust the display backlighting with no further prompt.
- **Data Card Slot** - A card slot in the unit that accepts standard SD cards, loader cards, and Flight Stream 510.
- **Home/Power Key** - This key can be pressed once to return to the home page at any time, or can be held down to power off the unit.
- **Large and Small Knobs** - Control knobs that can be used to scroll through selections or various options on the display. Pressing the inner knob acts as an enter or selection of the currently highlighted information.
- **Dual Rotary Knob Function Hints** - This area of the screen provides more detailed information on the operation of the dual concentric knobs for the given page.

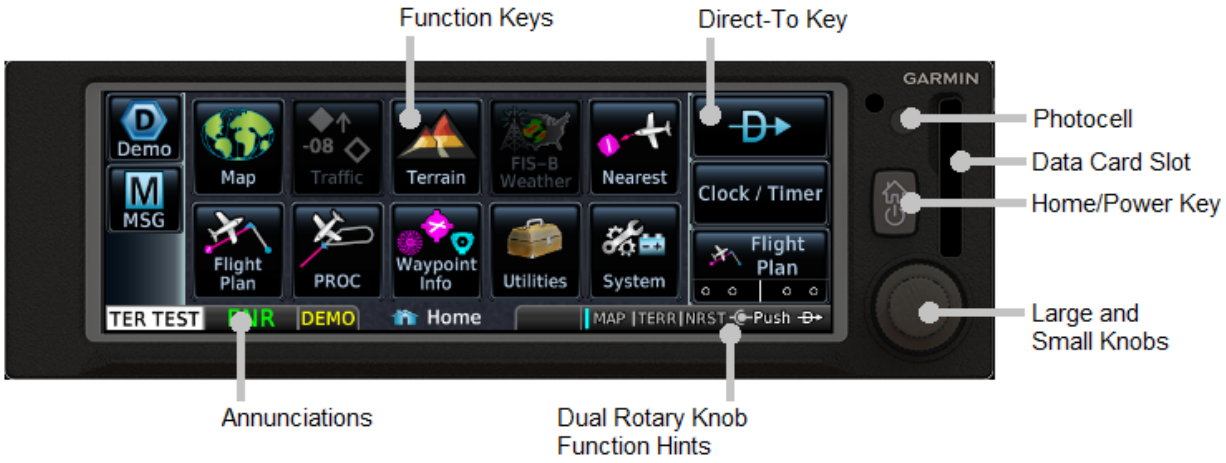

Figure 3-1 GPS 175 Home Page

3.2 GNX 375

The GNX 375 home page is shown in Figure 3-2, which contains labels identifying key aspects of the GNX 375 features and controls. These features and controls are as follows:

- **Function Keys** - Touch the function keys to access the features or pages described on the key.
- **Direct-To Key** - This key is used to initiate and activate navigation to a waypoint.
- **XPDR Panel Controls** - This key is used to access transponder functions and modes.
- **Annunciations** - The area of the screen displays annunciations to the pilot.
- **Photocell** - The photocell may be configured to be used by the display to automatically adjust the display backlighting with no further prompt.
- **Data Card Slot** - A card slot in the unit that accepts standard SD cards, loader cards, and Flight Stream 510.
- **Home/Power Key** - This key can be pressed once to return to the home page at any time or can be held down to power off the unit.
- **Large and Small Knobs** - Control knobs that can be used to scroll through selections or various options on the display. Pressing the inner knob acts as an enter or selection of the currently highlighted information.
- **Dual Rotary Knob Function Hints** - This area of the screen provides more detailed information on the operation of the dual concentric knobs for the given page.

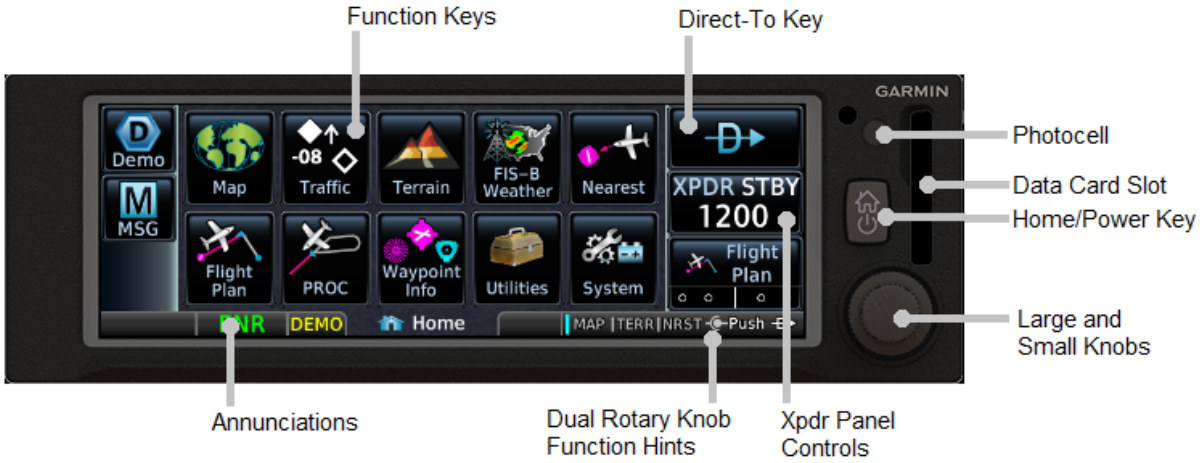

Figure 3-2 GNX 375 Home Page

3.3 GNC 355

The GNC 355 home page is shown in Figure 3-3, which contains labels identifying key aspects of the GNC 355 features and controls. These features and controls are as follows:

- **Function Keys** - Touch the function keys to access the features or pages described on the key.
- **Direct-To Key** - This key is used to initiate and activate navigation to a waypoint.
- **COM Panel Controls** - This key is used to access the COM radio frequencies and functions.
- **Annunciations** - The area of the screen displays annunciations to the pilot.
- **Photocell** - The photocell may be configured to be used by the display to automatically adjust the display backlighting with no further prompt.
- **Data Card Slot** - A card slot in the unit that accepts standard SD cards, Loader cards, and Flight Stream 510.
- **Home/Power Key** - This key can be pressed once to return to the home page at any time or can be held down to power off the unit.
- **Large and Small Knobs** - Control knobs that can be used to scroll through selections or various options on the display. Pressing the inner knob acts as an enter or selection of the currently highlighted information.
- **Dual Rotary Knob Function Hints** - This area of the screen provides more detailed information on the operation of the dual concentric knobs for the given page.

Figure 3-3 GNC 355 Home Page

3.4 Configuration Mode Overview

Configuration mode is used to configure the GPS 175/GNX 375/GNC 355 settings for each specific installation. To access Configuration mode, hold down the inner knob and press the **Power/Home** button. When the Configuration mode home page appears, as shown in Figure 3-4, release the knob.

The Configuration mode home page is the first page that is displayed in this mode. For detailed information on configuring the GPS 175, refer to *GPS 175 Part 23 AML STC Installation Manual* (P/N 190-02207-A1). For detailed information on configuring the GNX 375, refer to *GNX 375 Part 23 AML STC Installation Manual* (P/N 190-02207-A4). For detailed information on configuring the GNC 355, refer to *GNC 355 Part 23 AML STC Installation Manual*.

While in Configuration mode, different pages can be selected by touching the desired key on the display. Some pages may require scrolling to view all of the information an keys. Scrolling pages are indicated by a series of dots along the bottom of the page, and scrolling is done by touching the screen and dragging the page in the desired direction.

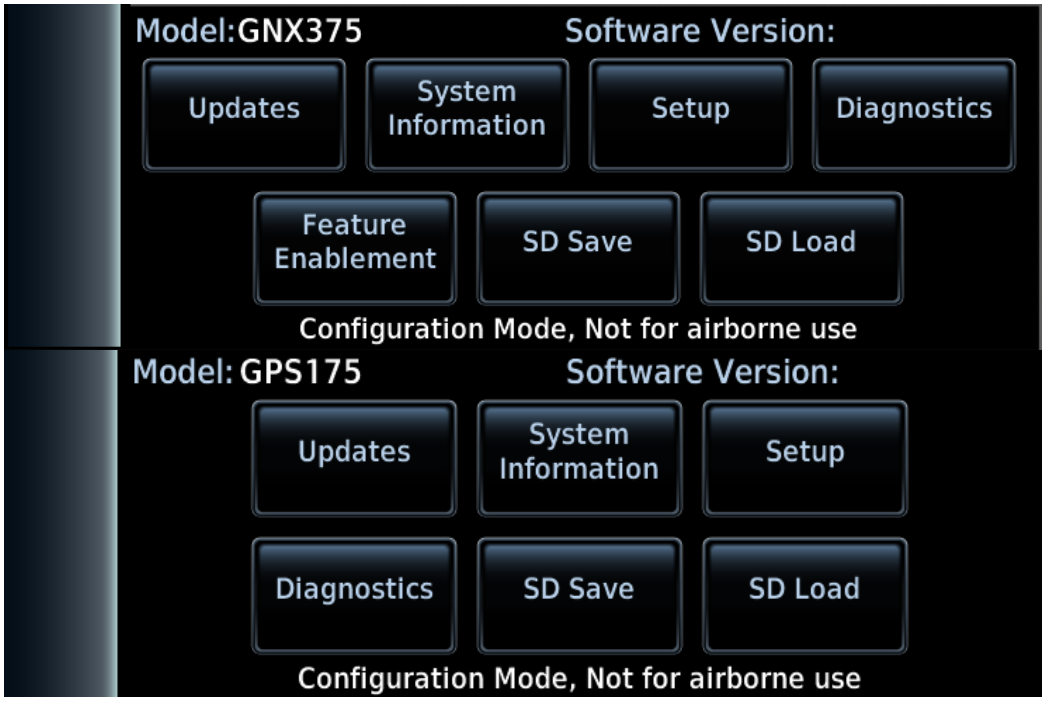

Figure 3-4 Configuration Mode Home Page

3.4.1 Updates

The ***Software Updates*** page allows the user to update the GPS 175/GNX 375/GNC 355 software versions. For more information on software updates and instructions, refer to Section 7.2.

3.4.2 System Information

The ***System Information*** page displays general and board specific information for the GPS 175/GNX 375/ GNC 355. This page is used when checking for software versions as described in Section 7.1.

3.4.3 Setup

This section provides a brief overview of the pages that are accessed from the ***Setup*** page. To access the ***Setup*** page, touch the **Setup** key from the Configuration mode home page.

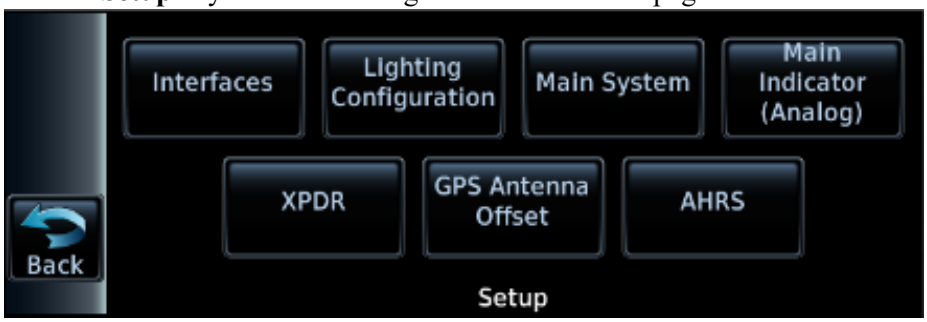

Figure 3-5 Setup Page
(GNX 375 shown, GPS 175 and GNC 355 similar)

3.4.3.1 Interfaces

The ***Interfaced Equipment*** page allows for the configuration of the various input and outputs that support interfaces to the GPS 175/GNX 375/GNC 355.

3.4.3.1.1 ARINC 429

The ***Interfaced Equipment - ARINC 429*** page allows the configuration of data formats and speeds of ARINC 429 inputs and outputs.

3.4.3.1.2 RS-232 (RS-422)

The ***Interfaced Equipment - RS-232 / RS-422*** page allows the configuration of data formats for serial ports.

- Port 1 is capable of operating as an RS-232 port (or an RS-422 port on GNX 375).
- Ports 2 and 3 are capable of operating as an RS-232 port.
- Ports 4 and 5 are only capable of operating as an RS-232 port and are only available on GNX 375.

3.4.3.1.3 ADS-B Source (GPS 175 and GNC 355 Only)

The **ADS-B SRC** button allows the selection of an ADS-B source.

3.4.3.1.4 GDU

The **GDU** toggle button indicates whether or not a GDU is *Present* or *Not Present* in the installation.

3.4.3.1.5 GI 275

The **GI 275** toggle button indicates whether or not a GI 275 is *Present* or *Not Present* in the installation.

3.4.3.1.6 Cross-Side Navigator

The **Cross-Side Navigator** button allows the selection of a cross-side navigator.

3.4.3.2 Lighting Configuration

The ***Lighting Configuration*** page allows the user to configure the backlight and key lighting brightness display parameters. This page also allows the configuration of the photocell and the lighting bus settings.

3.4.3.3 Main System

The ***Main System*** allows the user to configure system related settings for the GPS 175/GNX 375/ GNC 355. Page settings include the following:

- Air/Ground Threshold
- Fuel Type
- GPS Select
- System ID
- RF Procedure Legs
- Ownship Icon
- Terrain Alerts
- Graphical Edit
- Composite CDI
- Bluetooth
- ADS-B Logging (GNX 375 Only)
- External FPL
- Altitude Source Input (GPS 175 and GNC 355 Only)

3.4.3.4 Main Indicator (Analog)

The ***Main Indicator (Analog)*** page allows the user to calibrate the OBS resolver and configure the selected course behavior.

3.4.3.5 XPDR (GNX 375 Only)

The ***XPDR Configuration*** page allows the user to configure the transponder related settings for the GNX 375. Page settings include the following:

- Sensors
- Options
- Test
- Airframe
- Flight ID
- Clear XPDR Settings

3.4.3.6 GPS Antenna Offset

The ***GPS Antenna Offset*** page allows the configuration of GPS antenna height, lateral offset, and longitudinal offset.

3.4.3.7 AHRS

The ***AHRS*** page allows the user to set the display orientation, yaw offset, and calibrate the internal AHRS. The Display Orientation must be set and the aircraft must be level before calibrating the internal AHRS.

3.4.3.8 COM (GNC 355 Only)

The ***COM*** page allows the user to select and configure squelch mode, configure carrier squelch, configure MIC gain, select sidetone source, and configure the volume.

3.4.4 Diagnostics

The ***Diagnostics*** page provides access to pages that are helpful for unit maintenance and troubleshooting. Ground checks are performed using the tools on this page. The following pages are accessible within the ***Diagnostics*** page:

- ARINC Inputs
- Serial Inputs
- Discrete Inputs
- Discrete Outputs
- HSDB Ethernet
- XPDR (GNX 375 Only)
- Main Indicator (Analog)
- Composite Indicator
- Analog Inputs
- Gillham Encoder (GNX 375 Only)
- Power Stats
- WAAS
- Temps
- Logs
- Main Data Inputs
- XPDR Main Data (GNX 375 Only)
- Clear Config Settings

3.4.4.1 ARINC Inputs

The ***ARINC Inputs*** page displays the ARINC 429 data that is being received over each ARINC 429 port. Each port is chosen for display by touching the **ARINC 429 Port** button to toggle between the input ports. Select a port to display. The GPS 175/GNX 375/GNC 355 will then display the label, SSM, Data, and SDI for each ARINC 429 packet received by the selected port. This is useful for determining if the expected labels are being received and for troubleshooting incorrect or swapped wiring to the input ports. The data log can be paused/resumed by touching the **Pause** button. The displayed data log can be cleared by touching the **Clear Log** button.

3.4.4.2 Serial Inputs

The ***Serial Inputs*** page displays the status of each serial data port. For each serial port, the status will say either *Not Configured*, *Receiving*, or *Not Receiving*. This data is useful for determining if the serial data ports are configured and operating as intended.

3.4.4.3 Discrete Inputs

The ***Discrete Inputs*** page displays the state of each of the discrete input pins on the GPS 175/GNX 375/ GNC 355. For each discrete input, the pin number, pin function, and pin active state are shown. This page is useful for diagnosing and troubleshooting discrete wiring issues.

3.4.4.4 Discrete Outputs

The ***Discrete Outputs*** page displays the state of each of the discrete outputs on the GPS 175/GNX 375/ GNC 355. This page also allows for the discrete outputs to be toggled between the Active and Inactive states. This is useful for ensuring that these signals output are properly connected to annunciator lights or other LRUs and that they are receiving the signal.

3.4.4.5 HSDB Ethernet

The ***HSDB Ethernet*** page displays the status of the HSDB Ethernet port and the status of any LRUs that are interfaced to the GPS 175/GNX 375/GNC 355 via HSDB. The Ethernet port will display either *Not Configured*, *Receiving*, or *Not Receiving*. For each LRU (GDU/GDL 88/GTX 345), the page will display either *Online* or *Offline*.

3.4.4.6 XPDR (GNX 375 Only)

The GNX 375 monitors internal systems to verify functionality. Errors are displayed as Pilot Alerts, Failures, Faults, and Warnings. Failures are the most severe, followed by Faults, Warnings, and then pilot alerts. The ***XPDR*** page allows the user to view the status of all failure conditions, active faults, active warnings, and associated pilot alerts. For troubleshooting of these errors, refer to the XPDR Alert Troubleshooting flowcharts beginning with Figure 5-6.

3.4.4.7 Main Indicator (Analog)

The ***Main Indicator (Analog)*** page displays the status of the analog deviation and flag outputs to the CDI. These can be changed and the output viewed on the CDI for the purpose of performing ground checks on the analog CDI interface.

3.4.4.8 Composite Indicator

The ***Composite Indicator*** page displays the status of the composite deviation and vertical/lateral flag outputs to the CDI. These can be changed and the output viewed on the CDI for the purpose of performing ground checks on the composite CDI interface.

3.4.4.9 Analog Inputs

The ***Analog Inputs*** page displays the lighting bus voltages for Bus Setting and Input Voltage.

3.4.4.10 Gillham Encoder (GNX 375 Only)

The ***Gillham Diagnostics*** page displays the status and discrete pin settings for the Gillham altitude input.

3.4.4.11 Power Stats

The ***Power Stats*** page displays the number of times the GPS 175/GNX 375/GNC 355 has powered up and the total elapsed operating hours for the GPS 175/GNX 375/GNC 355.

3.4.4.12 WAAS

The ***WAAS Diagnostics*** page displays the WAAS engine status, including UTC date/time, current latitude/longitude, and navigation status. This page also allows the GPS/WAAS engine to be reset.

3.4.4.13 Temps

The ***Temps*** page displays the current, minimum, maximum, and average temperatures for the processor, display, and LED boards.

3.4.4.14 Logs

The ***Logs*** page allows for the export and clearing of the error log, maintenance log, ADS-B data log (GNX 375 only), and WAAS data log. The **Clear Log** button removes all messages from the selected log and the **Save to SD Card** button saves the selected information to the SD card.

3.4.4.15 Main Data Inputs

The ***Main Data Inputs*** page displays ARINC 429, RS-232, and other electrical inputs information. Data not received is dashed out. The page aids in verifying electrical interfaces during installation and troubleshooting.

3.4.4.16 XPDR Main Data (GNX 375 Only)

The ***XPDR Main Data*** page provides the user access to the ***GPS Data Diagnostics*** and ***Air Data Diagnostics*** pages.

3.4.4.17 Clear Config Settings

To reset the unit to the original factory configuration values, tap the **Clear Config Settings** button and then the **OK** button. Restart the unit.

3.4.5 Feature Enablement

The XPDR Mode AC Lock feature is limited to installation by federal, state, and local government agencies that have received an exception under 14 CFR 91.225(f). Installation of this feature requires a feature unlock card. Contact your Garmin Dealer for more information.

Refer to *Mode A/C Lock Enablement Guide* (P/N 190-01499-21, Rev. C or later) for more information.

3.4.6 SD Save

SD Save exports the configuration to an SD card. This allows specific airframe configuration information to be loaded to a difference unit. Use the following instructions to save the configuration information to an SD card:

1. Insert an SD card into the card slot.
2. Power on the unit in Configuration mode.
3. Touch the **SD Save** button.
4. Touch the **OK** button to acknowledge a successful export.

3.4.7 SD Load

SD Load allows a previously saved configuration to be loaded from an SD card. The System ID and software version must match the unit saved to the card. Before configuring, determine if a previously saved configuration is available. Use the following instructions to load the saved configuration information to a unit:

1. Power the unit on in Configuration mode.
2. Insert SD card into the card slot.
3. Touch the **SD Load** button.
4. Select a file to load.
5. Restart the unit.
6. Verify settings on ***Interface Settings*** page are correct.

4 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

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4.1 Airworthiness Limitations

There are no new (or additional) airworthiness limitations associated with this equipment and/or installation.

The Airworthiness Limitations section is FAA approved and specifies maintenance required under §§ 43.16 and 91.403 of Title 14 of the Code of Federal Regulations unless an alternative program has been FAA approved.

FAA APPROVED

JR Brownell
ODA STC Unit Administrator
ODA-240087-CE

3/1/2023
Date

4.2 Servicing Information

The GPS 175, GNX 375, and GNC 355 do not require servicing. In the event of system failure, troubleshoot the GPS 175/GNX 375 in accordance with Section 5.

4.2.1 Periodic Maintenance

The GPS 175/GNX 375/GNC 355 are designed to detect internal failures. A thorough self-test is executed automatically upon application of power to the units. The built-in tests (BIT) are continuously executed. Detected errors are indicated as failure annunciations, system messages, or a combination of the two.

Antenna installations are not covered under this STC. Inspect and maintain all antennas in accordance with the data provided for that specific antenna installation.

4.2.2 Special Tools

A milliohm meter with an accuracy of ±0.1 mΩ (or better) is required to measure the electrical bonding between the GPS 175/GNX 375/GNC 355 system components and aircraft ground.

4.3 Maintenance Intervals

Table 4-1 below shows the systems and components installed by this STC that must undergo tests or checks at specific intervals. The inspections based on calendar elapsed time have specifically stated intervals.

Table 4-1 Periodic Maintenance

Item	Description/Procedure	Interval
Equipment Removal and Replacement	Removal and reinstallation of the GPS 175/GNX 375/ GNC 355 LRUs.	On Condition
Cleaning	The GPS 175,GNX 375 and GNC 355 display and bezel may be cleaned periodically. The front bezel and display should be cleaned with a soft cotton cloth dampened with clean water. **DO NOT** use any chemical cleaning agents. Avoid scratching the surface of the display.	On Condition
Electrical Bonding Test	An electrical bonding test must be performed on equipment installed by this STC.	10 years or 2000 flight hours
Testing	The GPS 175/GNX 375/GNC 355 must be tested and shown to comply with Title 14 CFR Part 91.277.	Replacement of GPS Position source(s).
Visual Inspection	A visual inspection of the equipment installed by this STC must be performed.	12 Calendar Months

4.4 Visual Inspection

Conduct a visual inspection of the GPS 175/GNX 375/GNC 355 unit(s), switches, Flight Stream 510, and their wiring harnesses to ensure that they continue to comply with the STC SA02636SE.

1. Inspect the GPS 175/GNX 375/GNC 355 unit for security of attachment, including visual inspection of mounting racks and other supporting structure attaching the racks to aircraft instrument panel.
   - **GPS 175/GNX 375/GNC 355** - Verify the countersunk fastener heads are in full contact with the unit mounting rack holes. Re-torque the mounting screws 8.0 ± 1.0 in-lb, if required.
   - **Flight Stream 510** - Ensure the data card is properly oriented (label facing left), fully inserted, and locked into position in the card slot on the front right side of the unit.
2. Inspect for corrosion.
3. Inspect switches, knobs, and buttons for damage.
4. Inspect condition of wiring, shield terminations, routing, and attachment/clamping.
5. Check the fan intake/outlet slots on the GPS/GNX/GNC unit's bezel for dust, dirt, or obstructions. Clean as needed.
6. Conduct a visual check of the GPS/SBAS antenna cable overbraid (if installed).
7. Conduct a visual check of and bonding strap or conductive tape used for electrical bonding.
8. Replace any damaged or torn straps. Refer to Section 6.8 for details.
9. Replace any torn bonding tape using a heavy duty aluminum foil tape, such as 3M P/N 436 or 438 or another foil with aluminum that is 7.2 mils thick or greater. If strap termination hardware is loose, tighten and re-test bonding. Refer to Section 6.8 for details.

4.5 Electrical Bonding Test

4.5.1 GPS 175/GNX 375/GNC 355 Bonding Check (Metallic or Tube-and-Fabric Aircraft)

NOTE

A bonding test failure may occur if a fastener is not torqued to the specified torque value. For installations that use screws in lieu of rivets to secure the rack to surrounding structure, verify that the screws are torqued to the appropriate value before proceeding to remove the rack. Refer to Section 4.4 for torque values.

Perform an electrical bonding check as follows:

1. Remove the GPS 175/GNX 375/GNC 355 from the mounting rack.
2. Remove the backplate assembly from the rack.
3. Measure the resistance between the mounting rack and nearby exposed portion of aircraft metallic structure and verify it is less than or equal to 5 mΩ.

In the event of bonding test failure, remove the GPS 175/GNX 375/GNC 355 rack, clean the attachment points with a bonding brush at both the rack and the aircraft, and re-attach the rack to the rails in the panel. Measure the resistance between the mounting rack and nearby exposed portion of aircraft metallic structure and ensure that the resistance is less than or equal to 2.5 mΩ.

4. Re-install the backplate assembly and re-install the GPS 175/GNX 375/GNC 355 in the mounting rack.

4.5.2 GPS 175/GNX 375/GNC 355 Bonding Check (Composite Aircraft)

NOTE

A bonding test failure may occur if a fastener is not torqued to the specified torque value. For installations that use screws in lieu of rivets to secure the rack to surrounding structure, verify that the screws are torqued to the appropriate value before proceeding to remove the rack. Refer to Section 4.4 for torque values.

Perform an electrical bonding check as follows:

1. Remove the GPS 175/GNX 375/GNC 355 from the mounting rack.
2. Remove the backplate assembly from the rack.
3. Measure the resistance between the mounting rack and the instrument panel and verify it is less than or equal to 10 mΩ.

In the event of bonding test failure, remove the GPS 175/GNX 375/GNC 355 rack, clean the attachment points with a bonding brush at both the rack and the aircraft, and re-attach the rack to the rails in the panel. Measure the resistance between the mounting rack and the instrument panel and ensure that the resistance is less than or equal to 5 mΩ.

4. Re-install the backplate assembly and re-install the GPS 175/GNX 375/GNC 355 in the mounting rack.

4.6 Overhaul Period

The system does not require overhaul at a specific time period. Power on self-test and BIT will monitor the health of the GPS 175/GNX 375/GNC 355 system. If any LRU indicates an internal failure, the unit may be removed and replaced. Refer to Section 5 of this document for fault corrective actions.

4.7 Additional Instructions

None.

5 TROUBLESHOOTING

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5.1 General Troubleshooting

This section provides information to assist troubleshooting if problems occur after completing the maintenance. Refer to the GPS 175/GNX 375/GNC 355 System Configuration Log retained in the aircraft permanent records for system configuration data. When troubleshooting the GPS 175, GNX 375, or GNC 355 system, refer to the wire routing drawings and interconnect wiring diagrams that are retained in the aircraft permanent records.

Table 5-1 GPS 175 General Troubleshooting Guide

Symptom	Possible Cause	Corrective Action
The GPS 175 does not power on.	The unit is not getting power to the main connector P1751.	Check circuit breakers and main avionics switch. Ensure power is connected to the main 62-pin connector P1751, pins 21 and 42, and ground to P1751, pins 20 and 41.
The GPS 175 does not compute position.	Not receiving adequate GPS signals.	Check the GPS antenna connections. Make sure the aircraft is clear of obstructions (hangars, buildings, trees, etc.).
GPS signal level drops when avionics are turned on.	Noise interference from other avionics.	Turn off all other avionics, then turn on each piece of avionics one at a time to locate the source of the interference. Route the GPS cable and locate the GPS antenna away from the unit that is causing the interference.
GPS signal levels are very low.	Improper antenna installation or routing.	Check GPS antenna installation, connections, and cable routing. The GPS antenna must be mounted on the top of the aircraft.
	Antenna shaded from satellites.	Make sure the aircraft is clear of obstructions (hangars, buildings, trees, etc.).
OBS resolver wont calibrate	Incompatible resolver or improper connection.	Check the resolver specifications and wiring.
OBS indication on GPS 175 does not agree with OBS setting.	OBS resolver input not calibrated or calibrated incorrectly.	Check wiring and calibration.
GPS 175 is not receiving heading from compass system (ARINC 429 heading input).	Incorrect ARINC 429 input speed setting.	Check ARINC 429 input port speed setting for the port that the device is connected to and verify that the speed is correct for that device.
	Wiring connections are incorrect.	The raw data being received by the GPS 175 can be monitored on the *ARINC Inputs* page found on the *Diagnostics* page. Refer to Section 3.4.4.1. Check wiring connections.

Table 5-2 GNX 375 General Troubleshooting Guide

Symptom	Possible Cause	Corrective Action
The GNX 375 does not power on.	The unit is not getting power to the main connector P3751.	Check circuit breakers and main avionics switch. Ensure power is connected to the main 62-pin connector P3751, pins 21 and 42, and ground to P3751, pins 20 and 41.
The GNX 375 does not compute position.	Not receiving adequate GPS signals.	Check the GPS antenna connections. Make sure the aircraft is clear of obstructions (hangars, buildings, trees, etc.).
GPS signal level drops when avionics are turned on.	Noise interference from other avionics.	Turn off all other avionics, then turn on each piece of avionics one at a time to locate the source of the interference. Route the GPS cable and locate the GPS antenna away from the unit that is causing the interference.
OBS resolver wont calibrate	Incompatible resolver or improper connection.	Check the resolver specifications and wiring.
OBS indication on GNX 375 does not agree with OBS setting.	OBS resolver input not calibrated or calibrated incorrectly.	Check wiring and calibration.
GNX 375 is not receiving heading from compass system (ARINC 429 heading input).	Incorrect ARINC 429 input speed setting.	Check ARINC 429 input port speed setting for the port that the device is connected to and verify that the speed is correct for that device.
	Wiring connections are incorrect.	The raw data being received by the GNX 375 can be monitored on the *ARINC Inputs* page found on the *Diagnostics* page. Refer to Section 3.4.4.1. Check wiring connections.
Poor transponder performance. Weak or intermittent radar contact reported by ATC.	Improper transponder antenna installation or routing.	Check transponder antenna installation, connections, cable routing, ground planes, and coaxial cable.
Loss of, or incorrect altitude reporting by the transponder.	Improper altitude source installation or configuration.	Check the altitude source configuration and verify that the primary and secondary sources are properly configured.
Incorrect Mode S aircraft data transmitted.	Incorrect Flight ID configuration.	Check the ***Flight ID Configuration*** page and verify the settings are configured correctly.

Table 5-3 GNC 355 General Troubleshooting Guide

Symptom	Possible Cause	Corrective Action
The GNC 355 does not power on.	The unit is not getting power to the main connector P3551.	Check circuit breakers and main avionics switch. Ensure power is connected to the main 62-pin connector P3551, pins 21 and 42, and ground to P3551, pins 20 and 41.
The GNC 355 does not compute position.	Not receiving adequate GPS signals.	Check the GPS antenna connections. Make sure the aircraft is clear of obstructions (hangars, buildings, trees, etc.).
GPS signal level drops when avionics are turned on.	Noise interference from other avionics.	Turn off all other avionics, then turn on each piece of avionics one at a time to locate the source of the interference. Route the GPS cable and locate the GPS antenna away from the unit that is causing the interference.
GPS signal levels are very low.	Improper antenna installation or routing.	Check GPS antenna installation, connections, and cable routing. The GPS antenna must be mounted on the top of the aircraft.
	Antenna shaded from satellites.	Make sure the aircraft is clear of obstructions (hangars, buildings, trees, etc.).
	RF interference at 1575.42 MHz from VHF COM.	Add a 1575.42 MHz notch filter in COM coaxial. Fix or replace the COM. Disconnect the ELT antenna coaxial to check for possible re-radiation. Move GPS antenna further from the COM antenna.
OBS resolver wont calibrate	Incompatible resolver or improper connection.	Check the resolver specifications and wiring.
OBS indication on GNC 355 does not agree with OBS setting.	OBS resolver input not calibrated or calibrated incorrectly.	Check wiring and calibration.
GNC 355 is not receiving heading from compass system (ARINC 429 heading input).	Incorrect ARINC 429 input speed setting.	Check ARINC 429 input port speed setting for the port that the device is connected to and verify that the speed is correct for that device.
	Wiring connections are incorrect.	The raw data being received by the GNC 355 can be monitored on the *ARINC Inputs* page found on the *Diagnostics* page. Refer to Section 3.4.4.1. Check wiring connections.

The GNC 355 COM does not transmit.	The PTT input is not being pulled low.	Check that the MIC 1 Transmit (P3552-11) input is pulled low for transmit. The state of this discrete input can be monitored on the ***Discrete Inputs*** page found on the ***GNC Diagnostics*** page.
	No transmit power to COM	Make sure power input is connected to the COM 44-pin connector P3552—30, -43, and -44, and ground to P3552-37, -38, and -40.
	The input voltage is too low.	Increase input supply voltage to >11VDC.
The COM sidetone level is too low or too high.	Wrong type of headsets or sidetone level needs adjustment.	If necessary, adjust the sidetone level. Sidetone adjustment is found on the ***COM Setup Config Mode*** page.

5.2 Failure Annunciations

If data fields become invalid, the GPS 175/GNX 375/GNC 355 typically annunciates the failures with a large red “X”, as shown in Figure 5-1.

Figure 5-1 Failure Screen

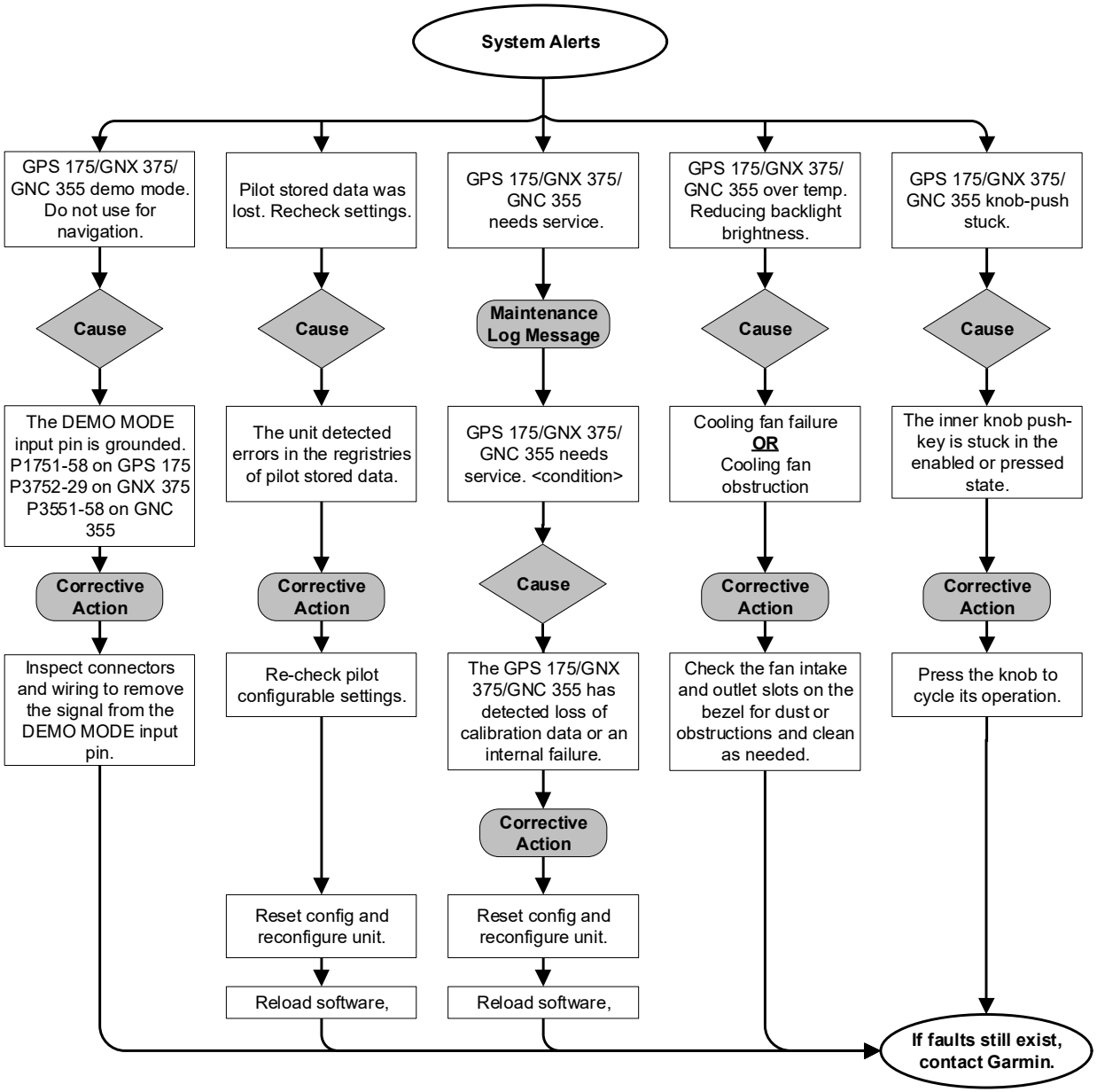

Figure 5-2 GPS 175/GNX 375/GNC 355 System Alert Troubleshooting
Sheet 1 of 2

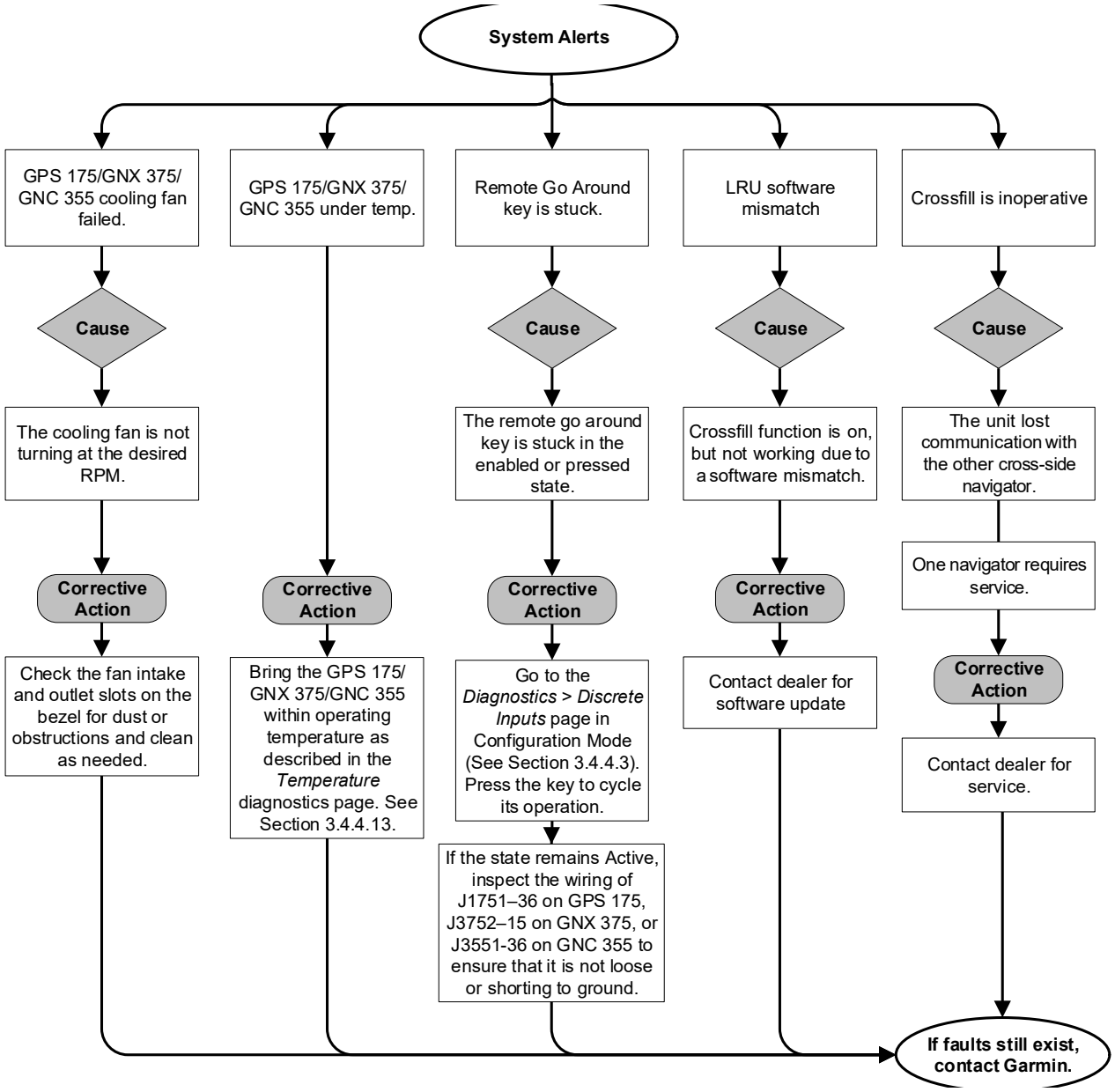

Figure 5-2 GPS 175/GNX 375/GNC 355 System Alert Troubleshooting
Sheet 2 of 2

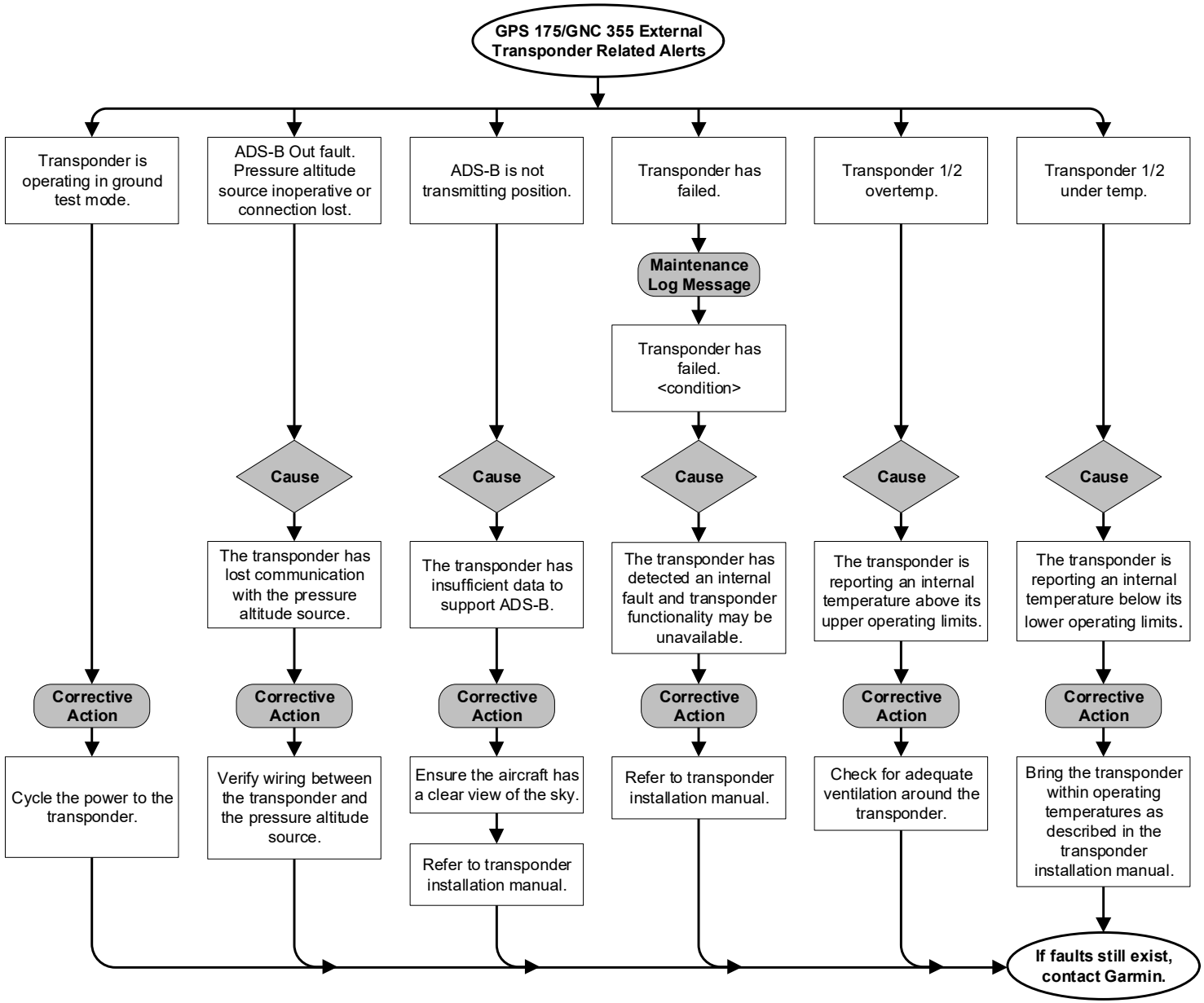

Figure 5-3 GPS 175/GNC 355 External Transponder Alert Troubleshooting

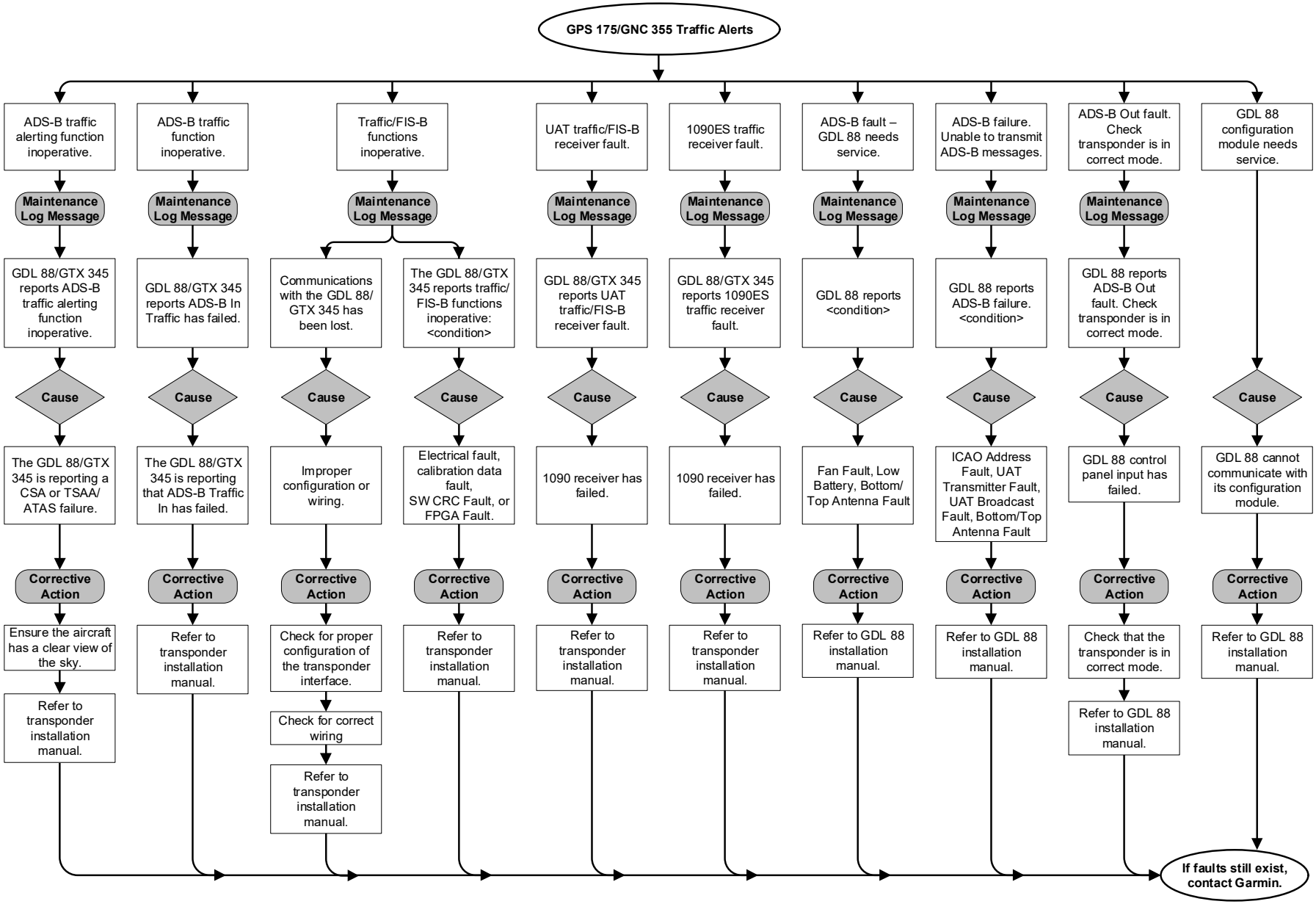

Figure 5-4 GPS 175/GNC 355 Traffic Alert Troubleshooting

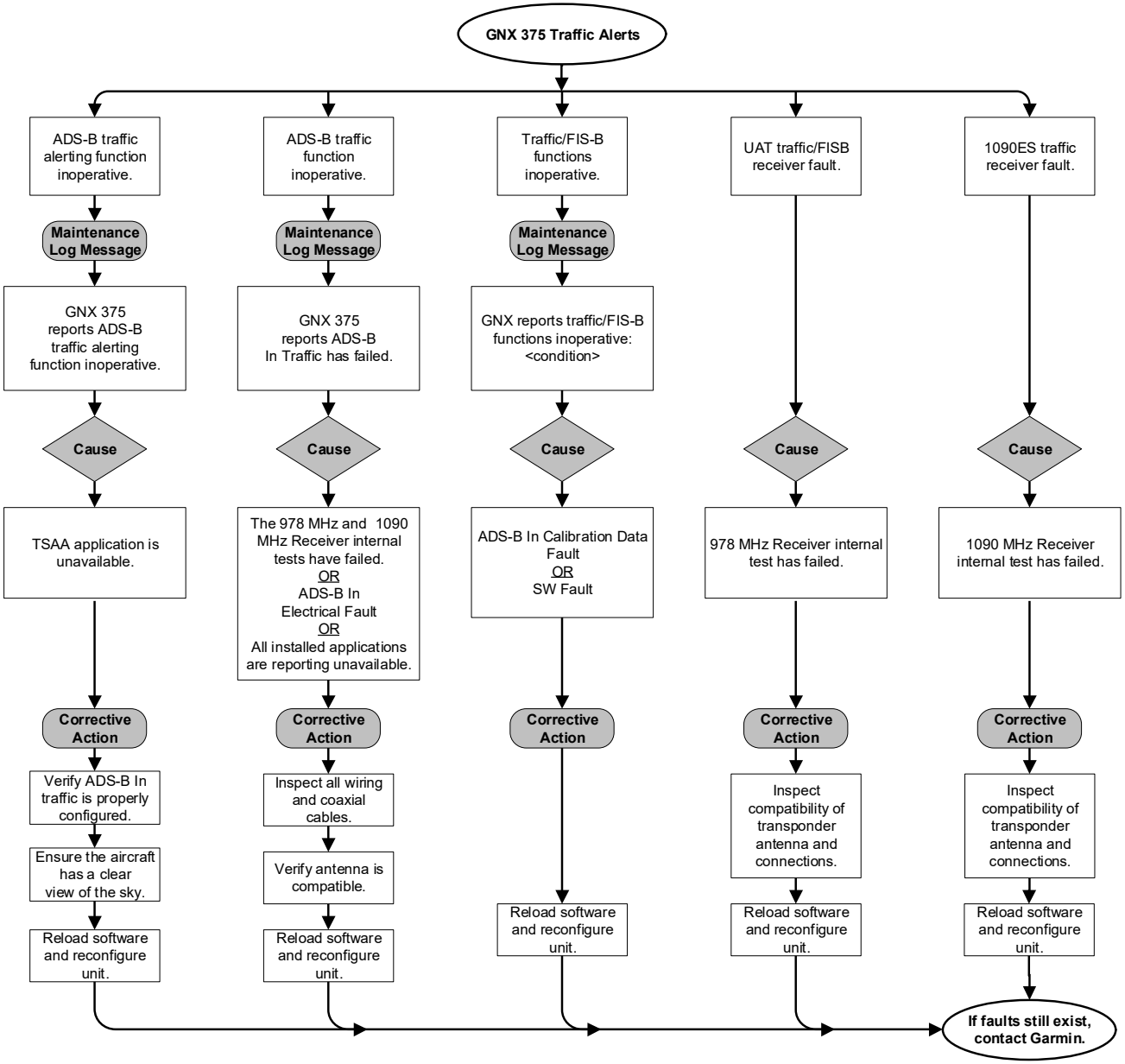

Figure 5-5 GNX 375 Traffic Alert Troubleshooting

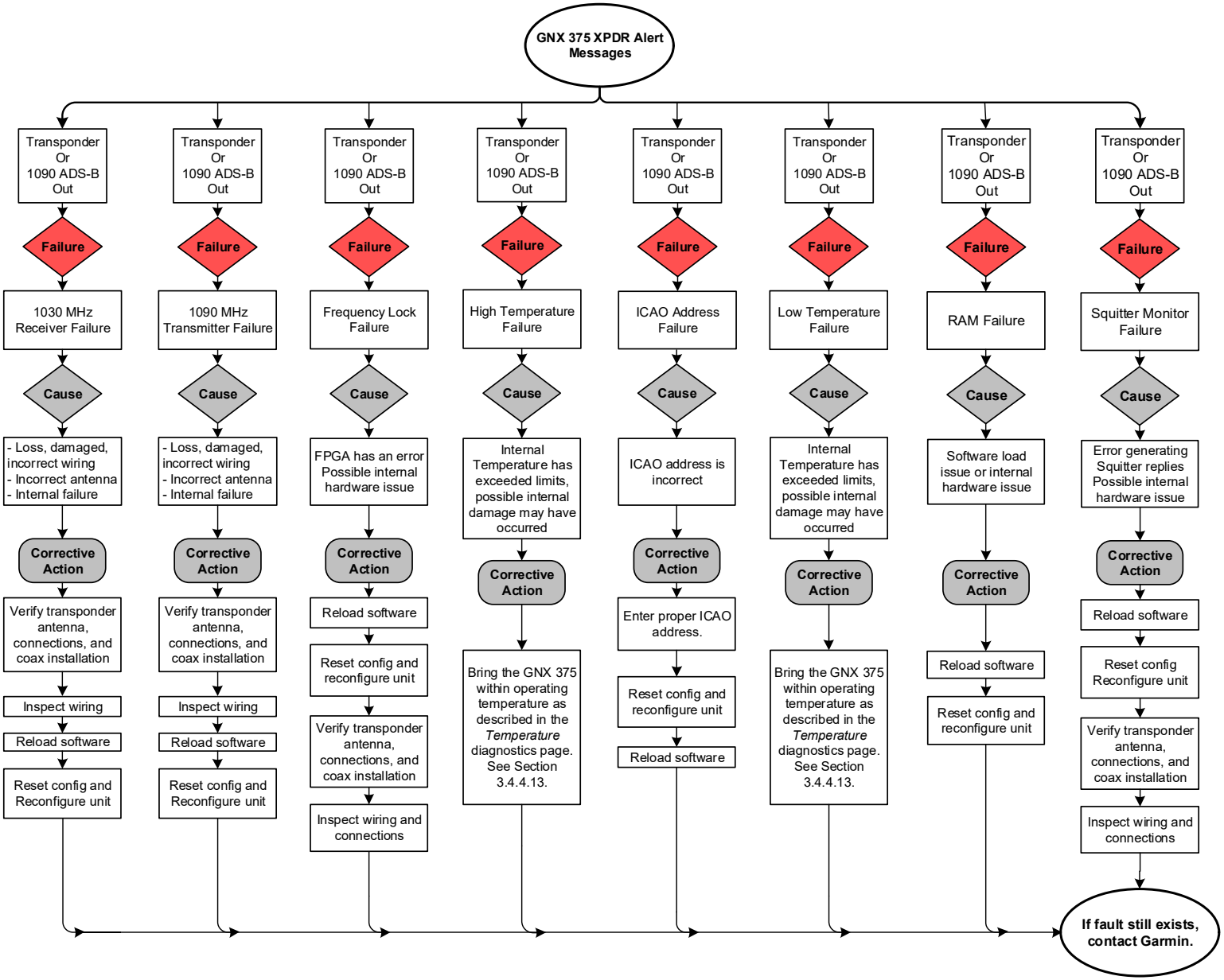

Figure 5-6 XPDR Alert Troubleshooting
Sheet 1 of 5

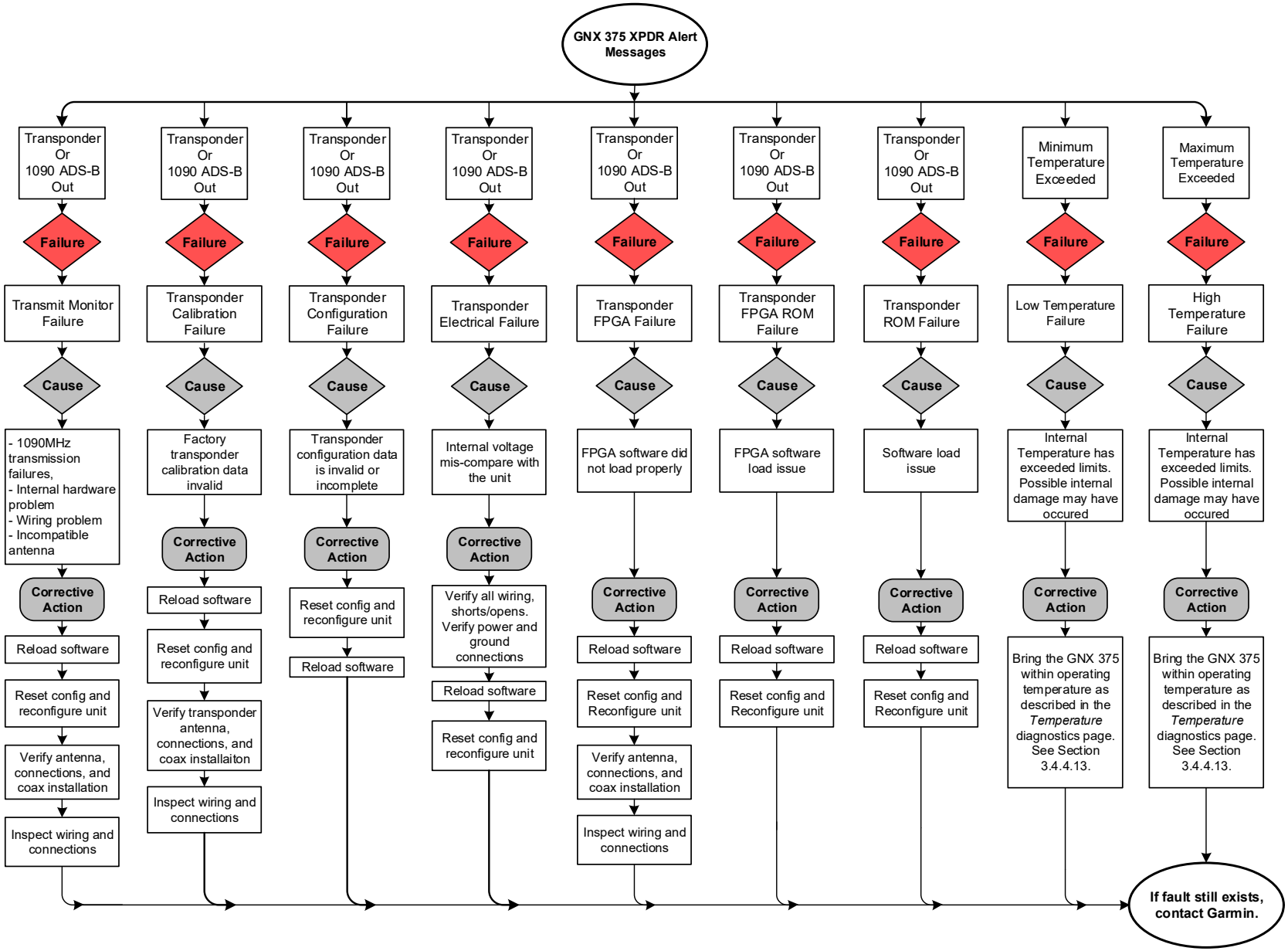

Figure 5-6 XPDR Alert Troubleshooting
Sheet 2 of 5

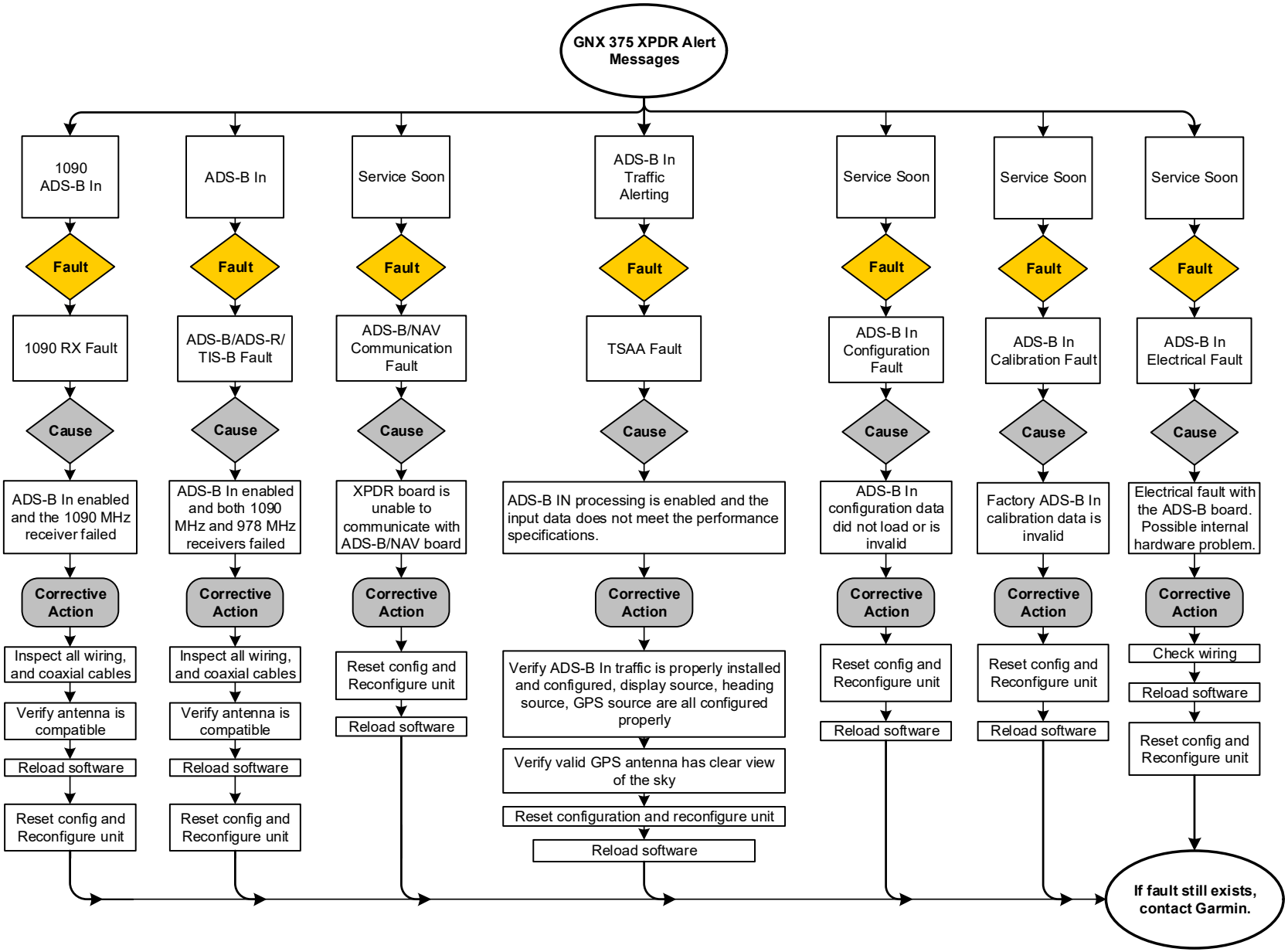

Figure 5-6 XPDR Alert Troubleshooting
Sheet 3 of 5

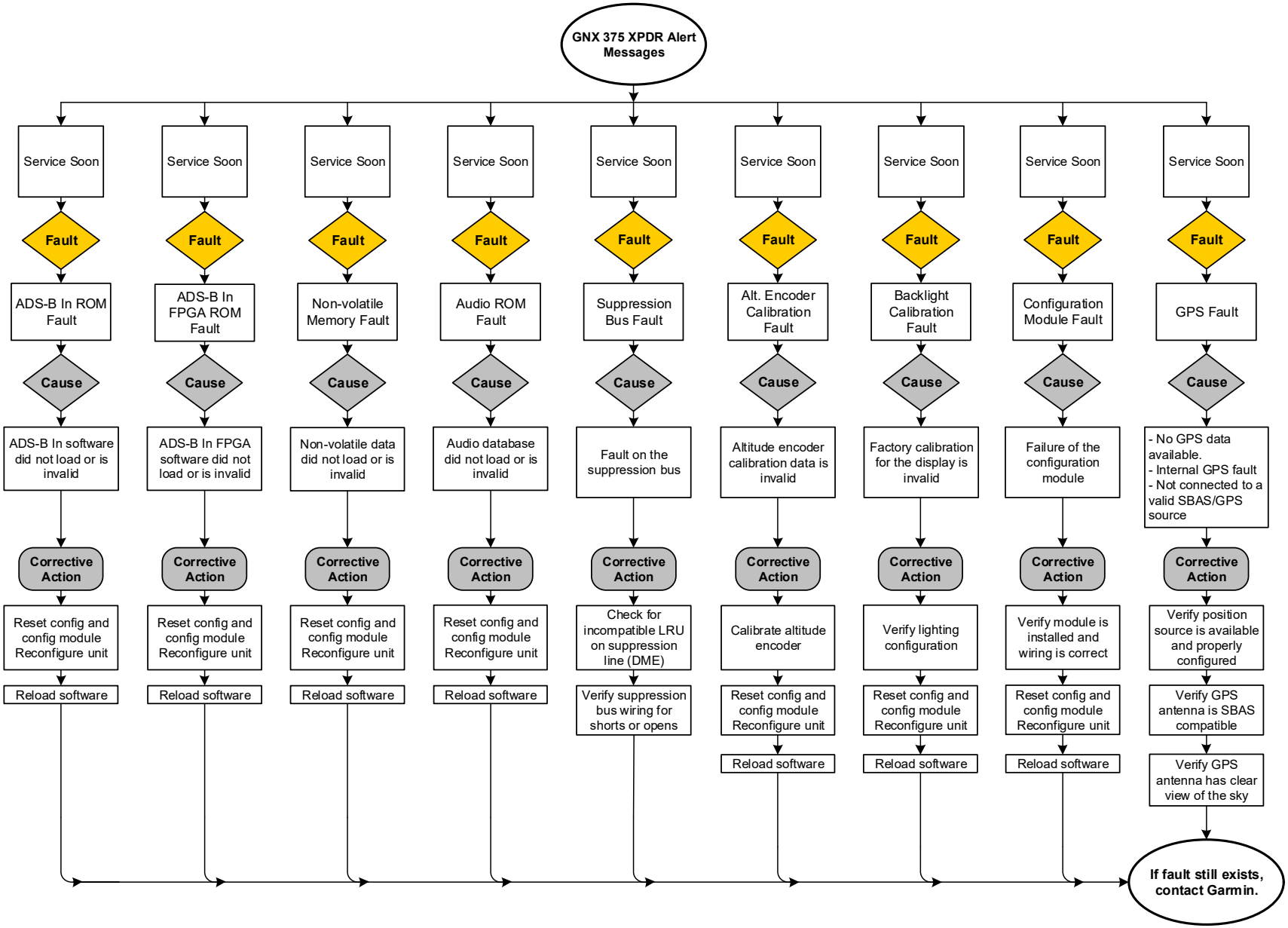

Figure 5-6 XPDR Alert Troubleshooting
Sheet 4 of 5

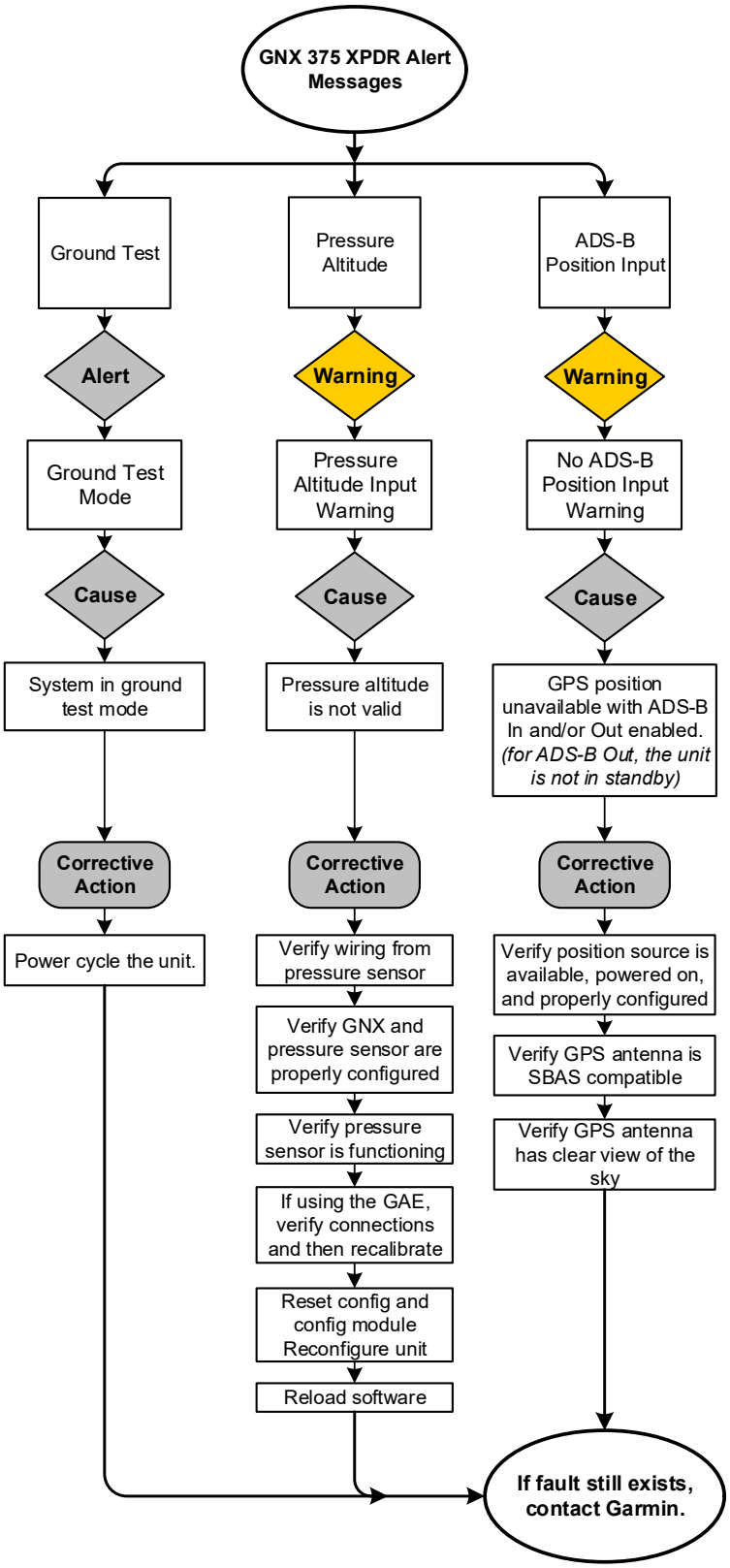

Figure 5-6 XPDR Alert Troubleshooting
Sheet 5 of 5

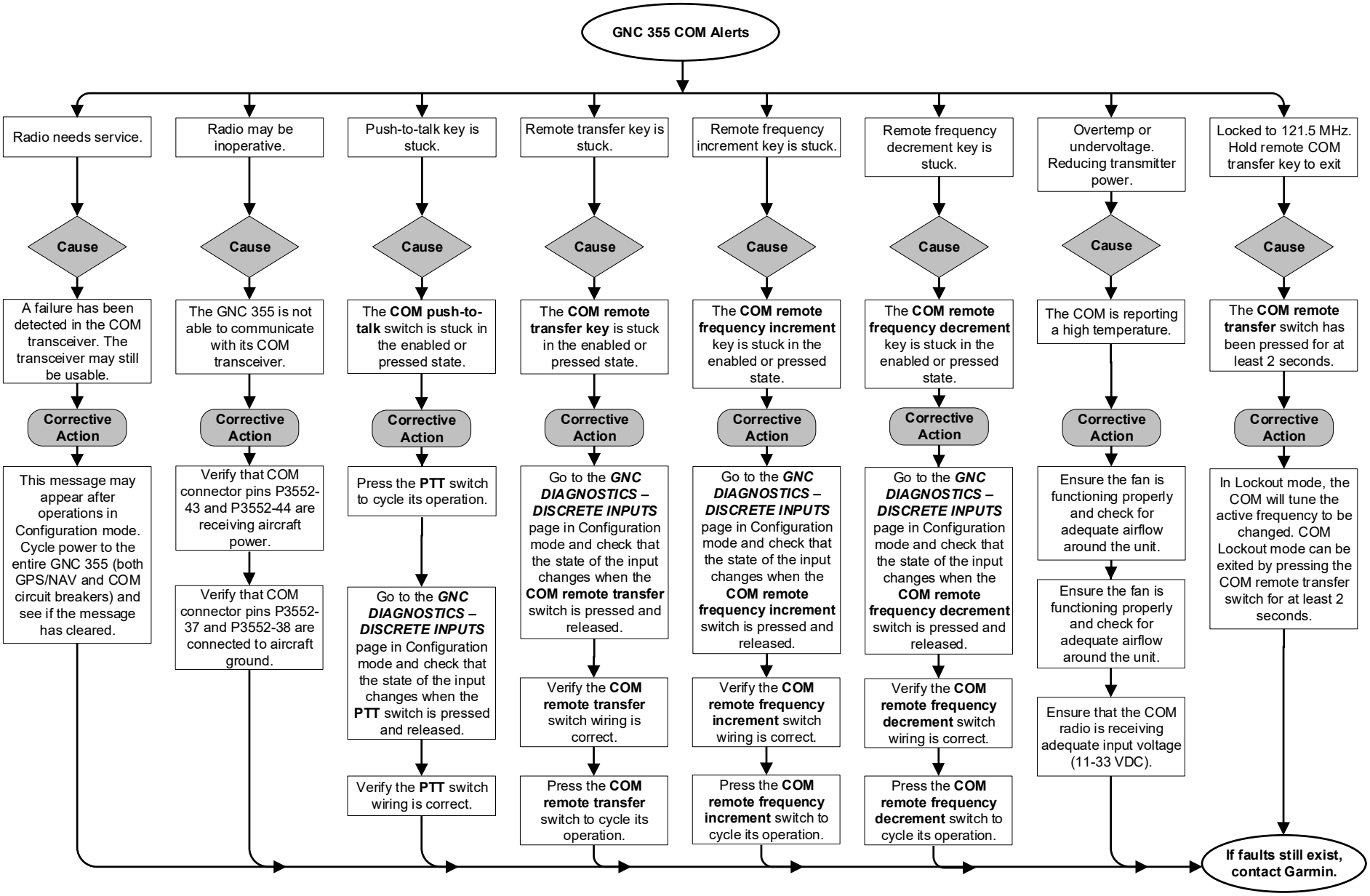

Figure 5-7 GNC 355 COM Alert Troubleshooting

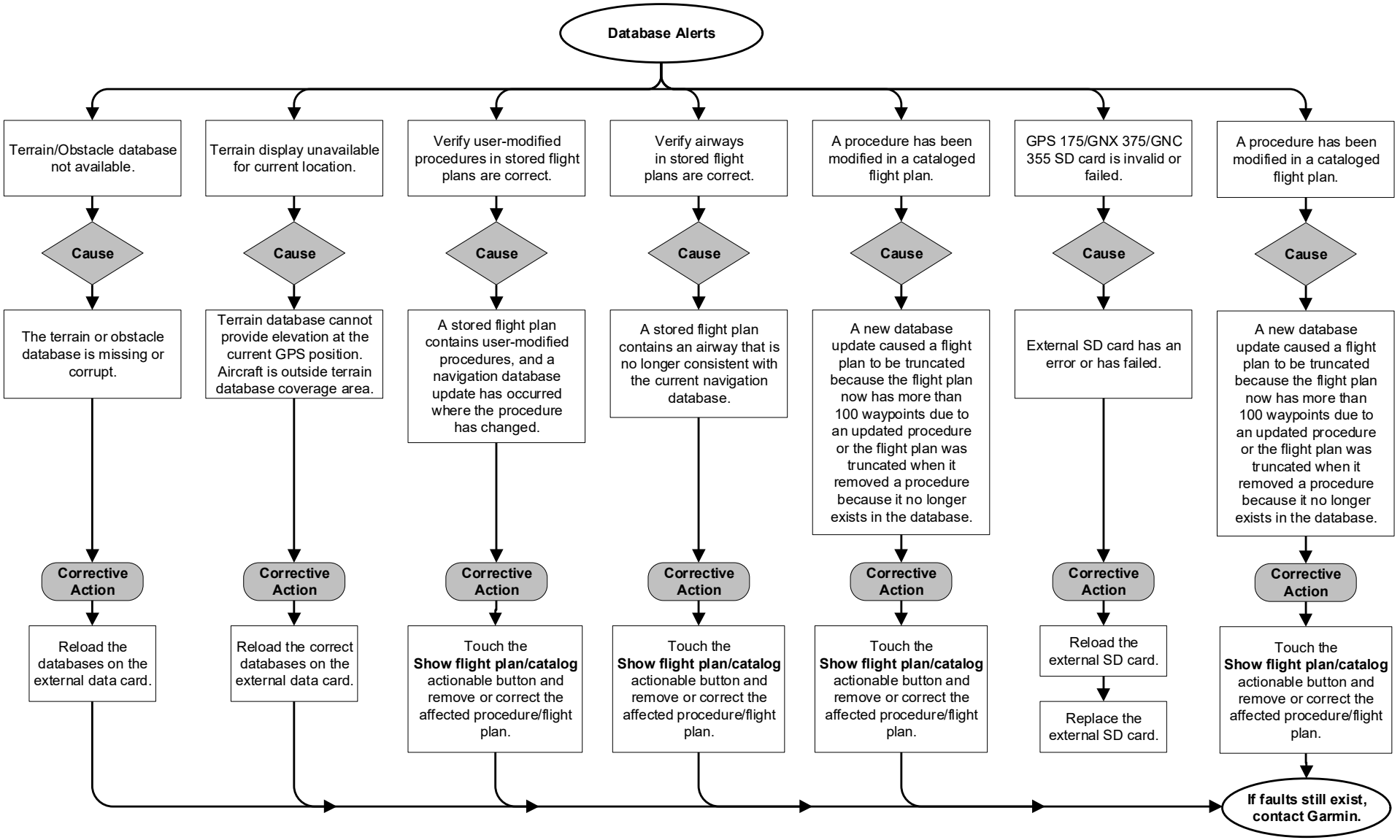

Figure 5-8 Database Alert Troubleshooting

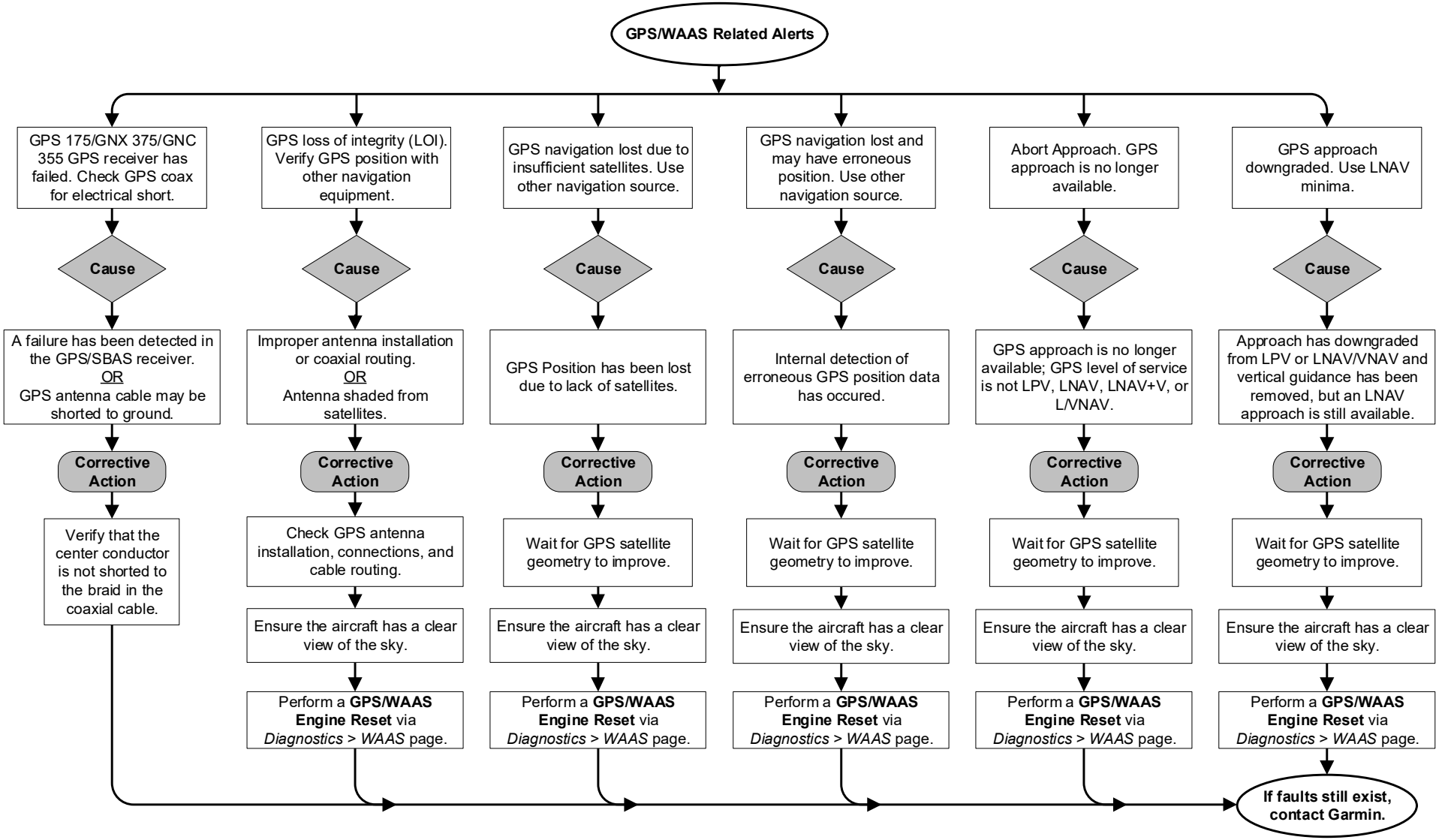

Figure 5-9 GPS/WAAS Alert Troubleshooting
Sheet 1 of 2

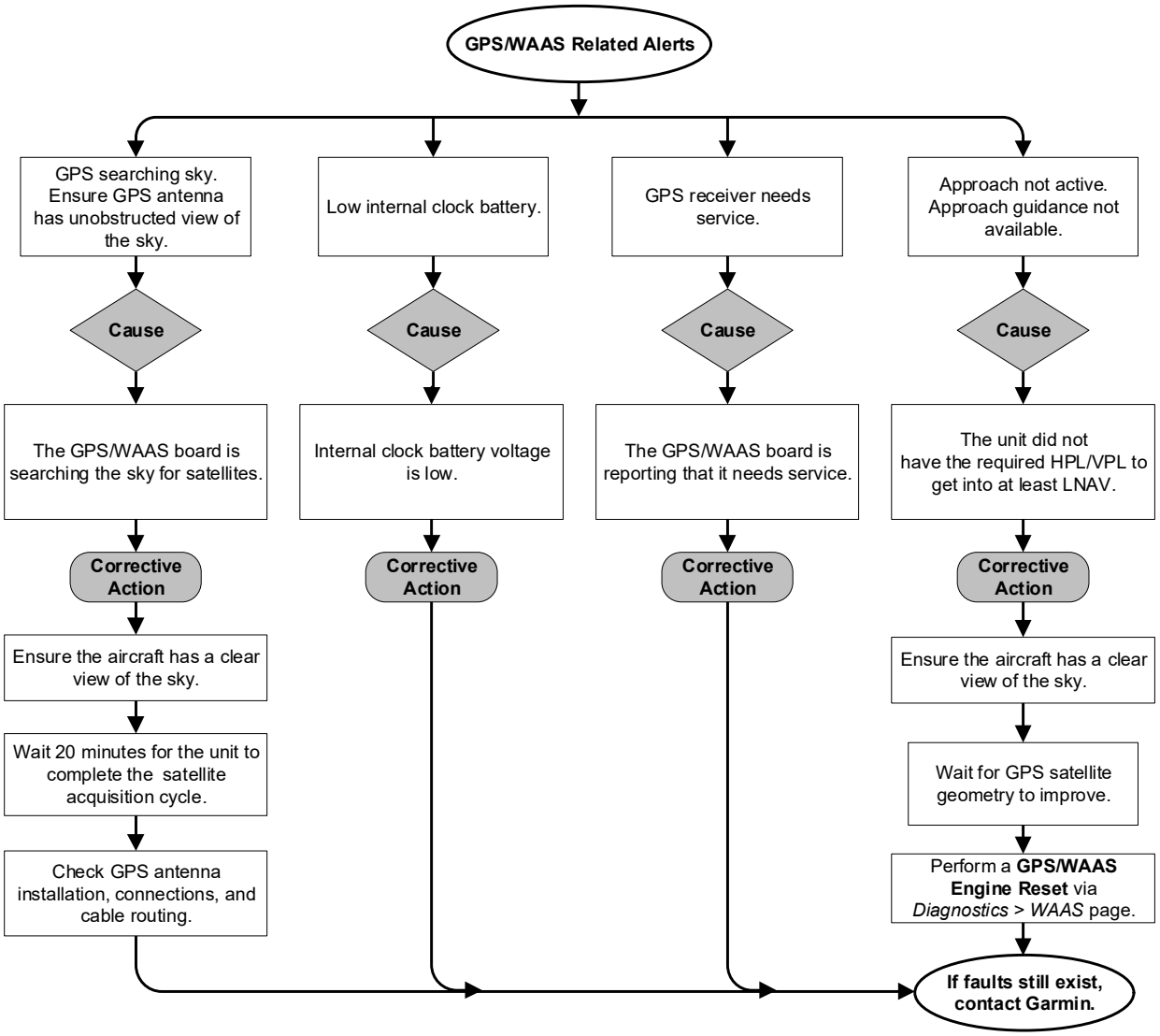

Figure 5-9 GPS/WAAS Alert Troubleshooting
Sheet 2 of 2

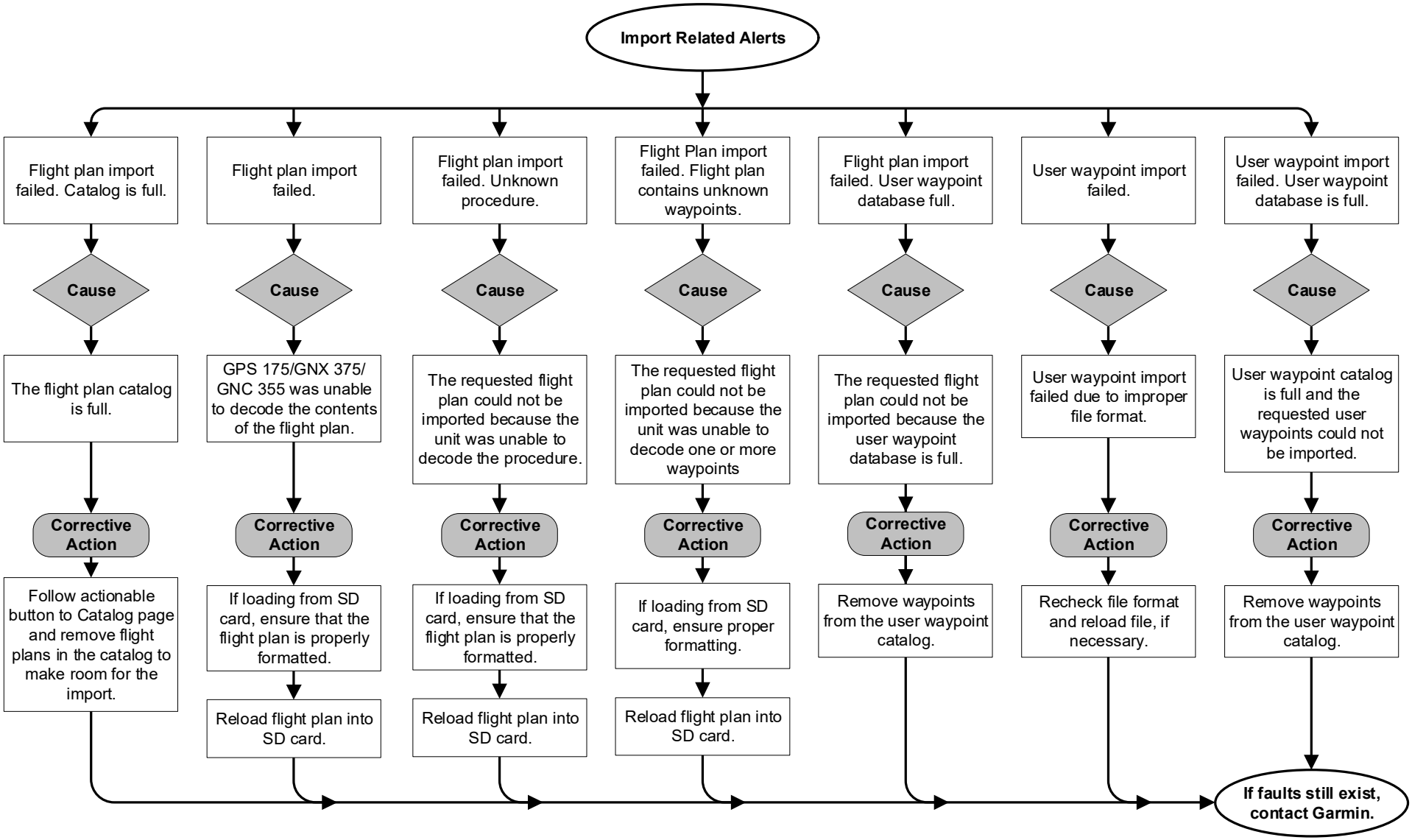

Figure 5-10 Import Alert Troubleshooting

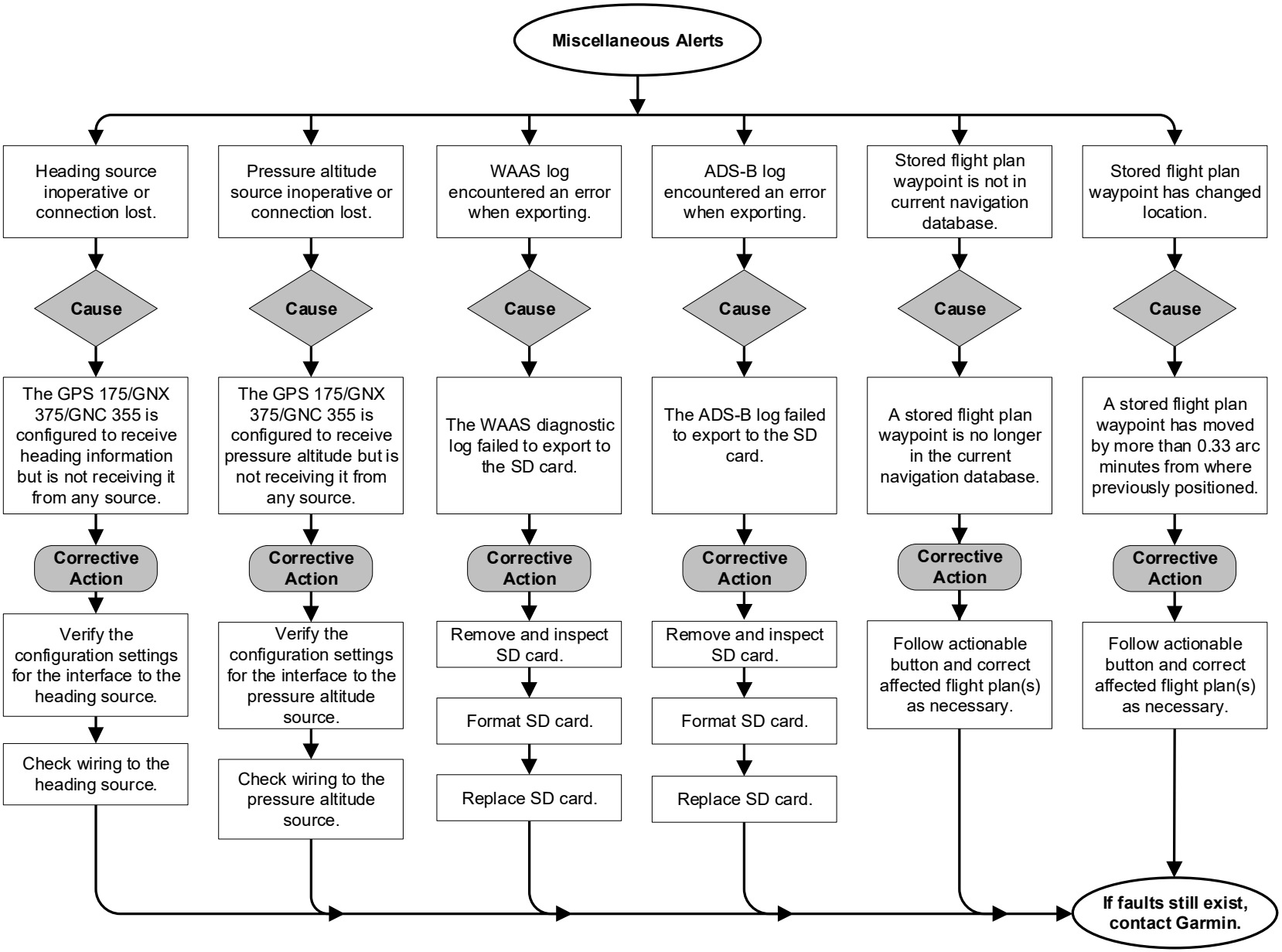

Figure 5-11 Miscellaneous Alert Troubleshooting

5.3 GPS 175 Connector Pinout Information

5.3.1 J1751 62-Pin HD-DSub

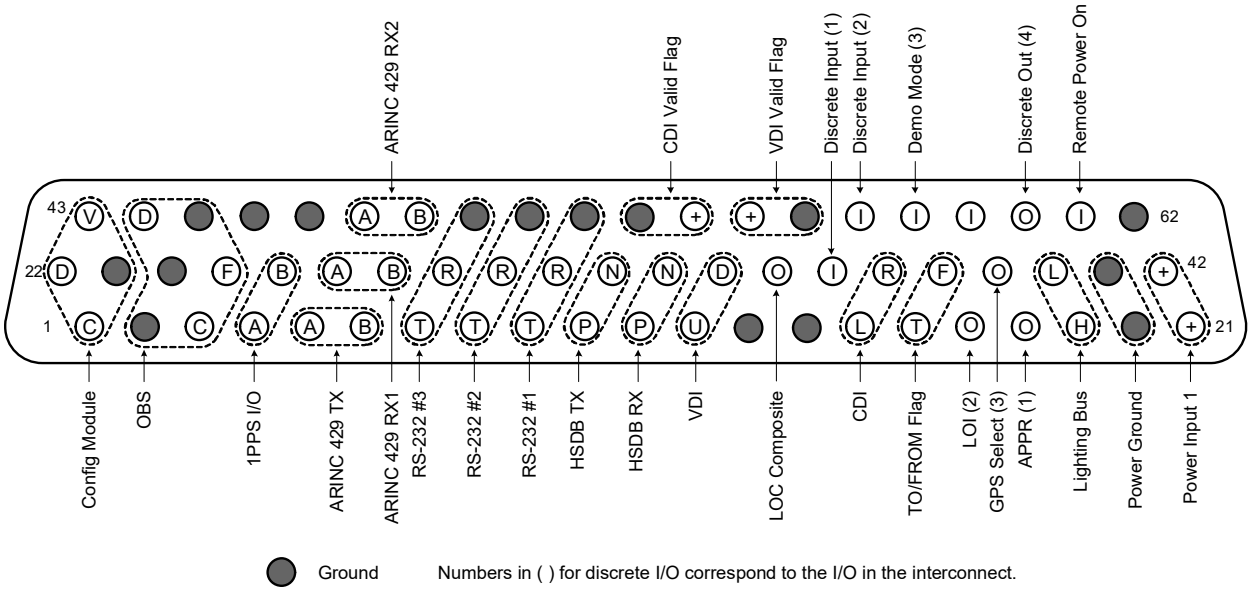

Figure 5-12 J1751 Connector (Looking at Unit)

Table 5-4 J1751 Connector Pinout

Pin	Pin Name	I/O
1	CONFIG MODULE (C)	OUT
2	OBS ROTOR H (GND)	OUT
3	OBS ROTOR C	OUT
4	TIME MARK A	OUT
5	ARINC 429 OUT 1 A	OUT
6	ARINC 429 OUT 1 B	OUT
7	RS-232 #3(T)	OUT
8	RS-232 #2(T)	OUT
9	RS-232 #1(T)	OUT
10	ETHERNET OUT(P)	OUT
11	ETHERNET IN(P)	IN
12	VERTICAL +UP OUT	OUT
13	GND	--
14	GND	--
15	LATERAL +LEFT OUT	OUT
16	TO FLAG	--
17	LOI (DISCRETE OUT 2)	OUT
18	APPR (DISCRETE OUT 1)	OUT
19	LIGHTING BUS(H)	IN
20	POWER GND	--
21	POWER INPUT 1	IN
22	CONFIG MODULE (D)	I/O
23	CONFIG MODULE (GND)	OUT
24	OBS STATOR G (GND)	--
25	OBS STATOR F	--
26	TIME MARK B	OUT
27	ARINC 429 IN 1 A	IN
28	ARINC 429 IN 1 B	IN
29	RS-232 #3(R)	IN
30	RS-232 #2(R)	IN
31	RS-232 #1(R)	IN

Pin	Pin Name	I/O
32	ETHERNET OUT(N)	OUT
33	ETHERNET IN(N)	IN
34	VERTICAL +DOWN OUT	OUT
35	LOC COMPOSITE	OUT
36	REMOTE GO AROUND	--
37	LATERAL +RIGHT OUT	OUT
38	FROM FLAG	--
39	GPS SELECT (DISCRETE OUT 3)	--
40	LIGHTING BUS(L)	IN
41	POWER GND	--
42	POWER INPUT 1	IN
43	CONFIG MODULE (V)	OUT
44	OBS STATOR D	--
45	OBS STATOR E (GND)	--
46	GND	--
47	GND	--
48	ARINC 429 IN 2 A	IN
49	ARINC 429 IN 2 B	IN
50	RS-232 #3 (GND)	--
51	RS-232 #2 (GND)	--
52	RS-232 #1 (GND)	--
53	LATERAL FLAG GND	--
54	LATERAL FLAG OUT	OUT
55	VERTICAL FLAG OUT	OUT
56	VERTICAL FLAG GND	--
57	DISCRETE IN 2	IN
58	DEMO MODE	IN
59	TEST MODE	IN
60	DISCRETE OUT 4	OUT
61	REMOTE POWER ON	IN
62	GND	--

5.4 GNX 375 Connector Pinout Information

5.4.1 J3751 62-Pin HD-DSub

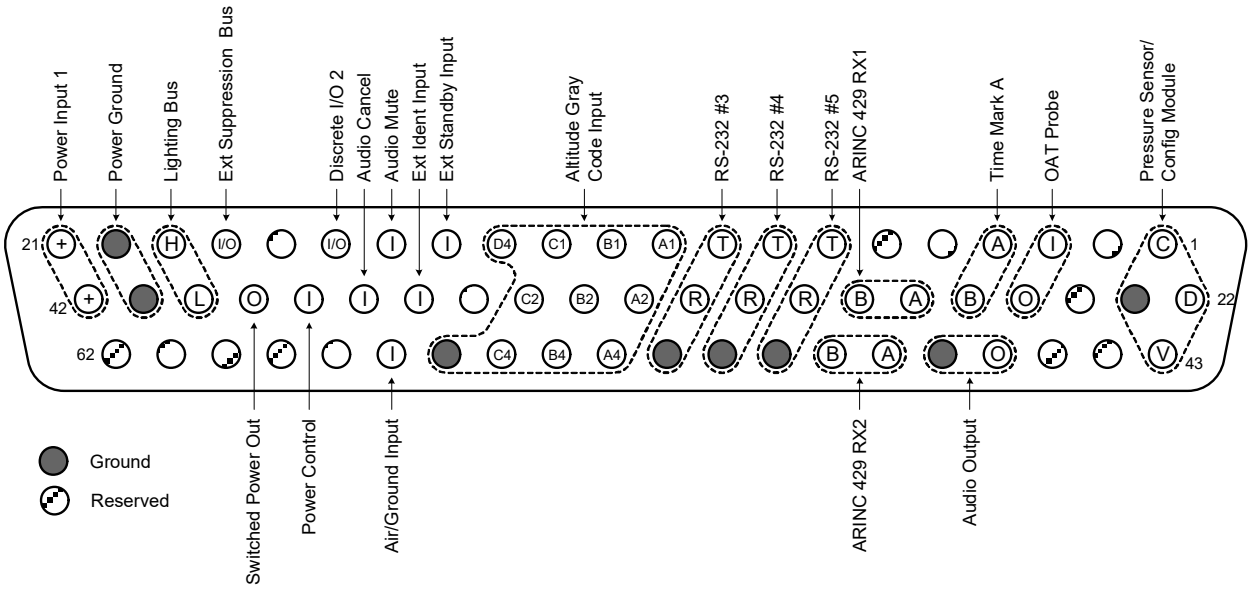

Figure 5-13 J3751 Connector (Looking at Unit)

Table 5-5 J3751 Connector Pinout

Pin	Pin Name	I/O	Pin	Pin Name	I/O
1	PRESSURE SENSOR/CONFIG MODULE(C)	--	32	ALTITUDE GRAY CODE INPUT(A2)	IN
2	RESERVED	--	33	ALTITUDE GRAY CODE INPUT(B2)	IN
3	OAT TEMP PROBE(I)	--	34	ALTITUDE GRAY CODE INPUT(C2)	IN
4	TIME MARK A	OUT	35	RESERVED	--
5	RESERVED	--	36	EXT IDENT (DISCRETE IN 7)	IN
6	RESERVED	--	37	AUDIO MUTE (DISCRETE IN 9)	OUT
7	RS-232 #5 (T)	OUT	38	POWER CONTROL	--
8	RS-232 #4 (T)	OUT	39	SWITCHED POWER OUT	--
9	RS-232 #3 (T)	OUT	40	LIGHTING BUS(L)	IN
10	ALTITUDE GRAY CODE INPUT (A1)	IN	41	POWER GND	--
11	ALTITUDE GRAY CODE INPUT (B1)	IN	42	POWER INPUT 1	IN
12	ALTITUDE GRAY CODE INPUT (C1)	IN	43	PRESSURE SENSOR/CONFIG MODULE(V)	OUT
13	ALTITUDE GRAY CODE INPUT (D4)	IN	44	RESERVED	--
14	EXT STANDBY (DISCRETE IN 6)	IN	45	RESERVED	--
15	DISCRETE I/O 1	I/O	46	AUDIO OUT	OUT
16	DISCRETE I/O 2	--	47	AUDIO GND	--
17	RESERVED	OUT	48	ARINC 429 IN 2 A	IN
18	EXT SUPPRESSION BUS	OUT	49	ARINC 429 IN 2 B	IN
19	LIGHTING BUS(H)	IN	50	RS-232 #5 (GND)	--
20	POWER GND	--	51	RS-232 #4 (GND)	--
21	POWER INPUT 1	IN	52	RS-232 #3 (GND)	--
22	PRESSURE SENSOR/CONFIG MODULE(D)	I/O	53	ALTITUDE GRAY CODE INPUT(A4)	IN
23	PRESSURE SENSOR/CONFIG MODULE(GND)	OUT	54	ALTITUDE GRAY CODE INPUT(B4)	IN
24	RESERVED	--	55	ALTITUDE GRAY CODE INPUT(C4)	IN
25	OAT TEMP PROBE(O)	--	56	ALTITUDE GRAY CODE INPUT(GND)	IN
26	TIME MARK B	OUT	57	AIR/GROUND (DISCRETE IN 8)	IN
27	ARINC 429 IN 1 A	IN	58	RESERVED	IN
28	ARINC 429 IN 1 B	IN	59	RESERVED	IN
29	RS-232 #5 (R)	IN	60	RESERVED	OUT
30	RS-232 #4 (R)	IN	61	POWER INPUT 2	IN
31	RS-232 #3 (R)	IN	62	POWER INPUT 2	--

5.4.2 J3752 44-Pin HD-DSub

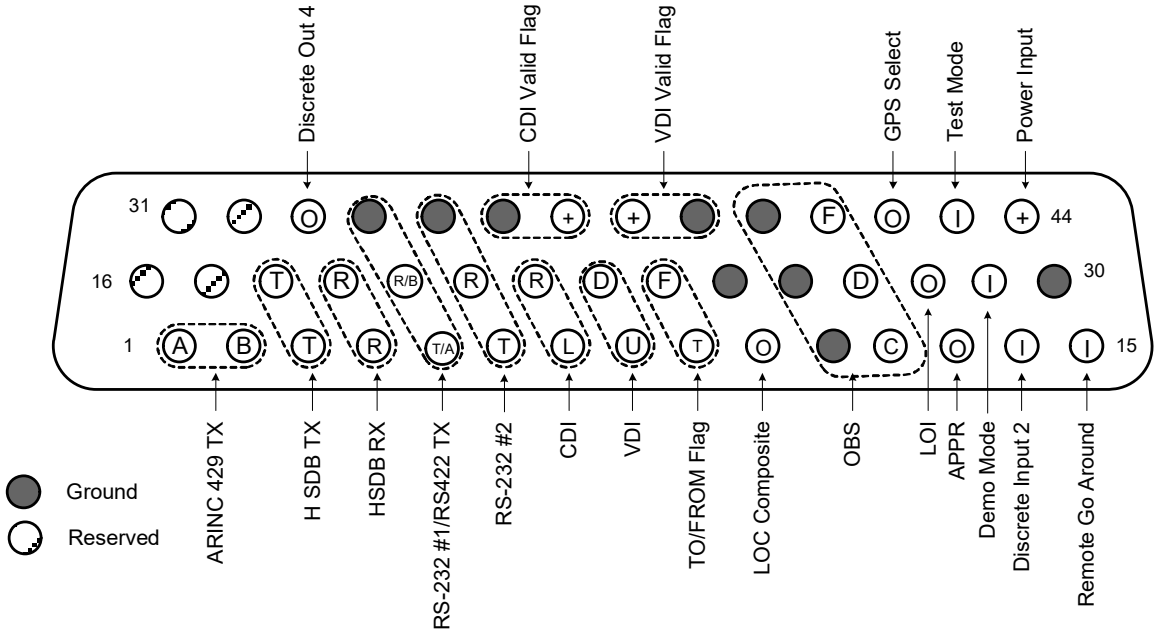

Figure 5-14 J3752 Connector (Looking at Unit)

Table 5-6 J3752 Connector Pinout

Pin	Pin Name	I/O
1	ARINC 429 OUT 1 A	OUT
2	ARINC 429 OUT 1 B	OUT
3	ETHERNET OUT(P)	OUT
4	ETHERNET IN(P)	IN
5	RS-232 #1(T) / RS-422 A	OUT
6	RS-232 #2(T)	OUT
7	LATERAL +LEFT OUT	OUT
8	VERTICAL +UP OUT	OUT
9	TO FLAG	--
10	LOC COMPOSITE	OUT
11	OBS ROTOR H (GND)	OUT
12	OBS ROTOR C	OUT
13	APPROACH ANNUNCIATE	OUT
14	DISCRETE IN 2	IN
15	REMOTE GO AROUND	--
16	RESERVED	--
17	RESERVED	--
18	ETHERNET OUT(N)	OUT
19	ETHERNET IN(N)	IN
20	RS-232 #1(R) / RS-422(B)	IN
21	RS-232 #2(R)	IN
22	LATERAL +RIGHT OUT	OUT

Pin	Pin Name	I/O
23	VERTICAL +DOWN OUT	OUT
24	FROM FLAG	--
25	GND	--
26	OBS STATOR E (GND)	--
27	OBS STATOR D	--
28	LOI ANNUNCIATE	--
29	DEMO MODE	IN
30	GND	--
31	RESERVED	--
32	RESERVED	--
33	DISCRETE OUT 4	OUT
34	GND	--
35	GND	--
36	LATERAL GND	--
37	LATERAL FLAG OUT	OUT
38	VERTICAL FLAG OUT	OUT
39	VERTICAL GND	--
40	OBS STATOR G (GND)	--
41	OBS STATOR F	--
42	GPS SELECT	--
43	TEST MODE	IN
44	POWER INPUT	IN

5.5 GNC 355 Connector Pinout Information

5.5.1 J3551 62-Pin HD-DSub

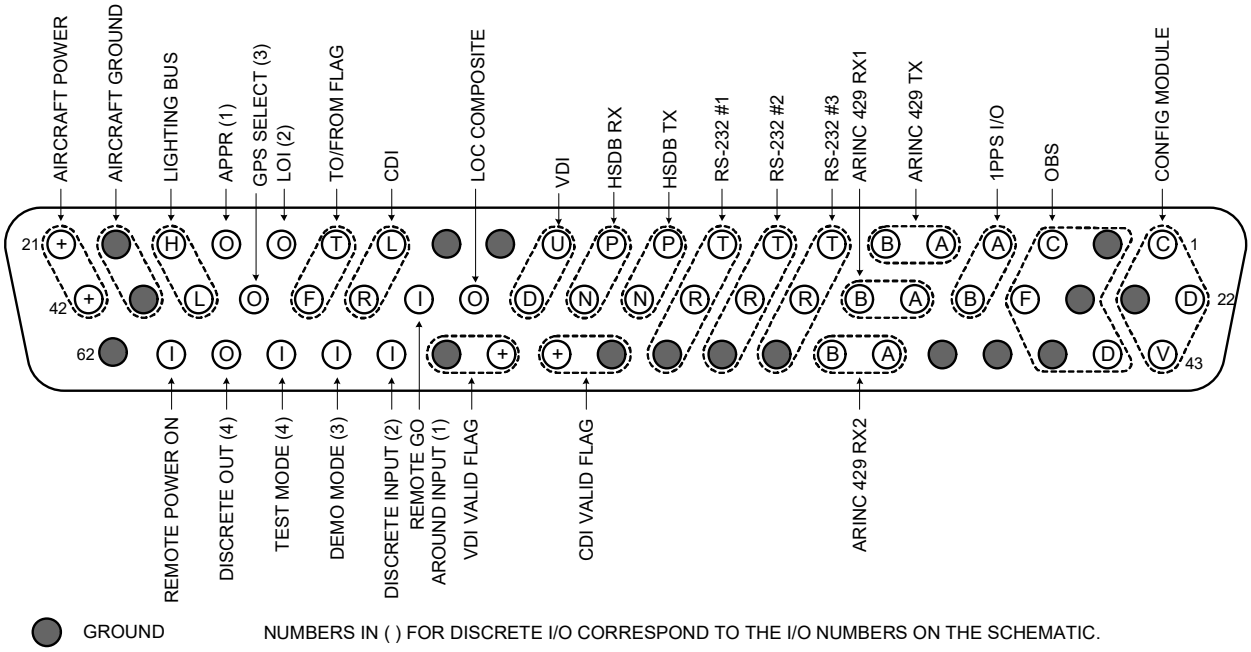

Figure 5-15 J3551 Connector (Looking at Unit)

Table 5-7 J3551 Connector Pinout

Pin	Pin Name	I/O	Pin	Pin Name	I/O
1	CONFIG MODULE CLOCK	OUT	32	ETHERNET OUT 1B	OUT
2	OBS ROTOR H (GND)	--	33	ETHERNET IN 1A	IN
3	OBS ROTOR C	OUT	34	VERTICAL +DOWN OUT	OUT
4	TIME MARK A	OUT	35	LOC COMPOSITE	OUT
5	ARINC 429 OUT 1A	OUT	36	REMOTE GO AROUND	IN
6	ARINC 429 OUT 1B	OUT	37	LATERAL +RIGHT OUT	OUT
7	RS-232 OUT 3	OUT	38	+FROM OUT	OUT
8	RS-232 OUT 2	OUT	39	GPS SELECT	OUT
9	RS-232 OUT 1	OUT	40	LIGHTING BUS LO	OUT
10	ETHERNET OUT 1A	OUT	41	AIRCRAFT GND	--
11	ETHERNET IN 1A	IN	42	AIRCRAFT POWER	IN
12	VERTICAL +UP OUT	OUT	43	CONFIG MODULE POWER	OUT
13	GND	--	44	OBS STATOR D	IN
14	GND	--	45	OBS STATOR E (GND)	--
15	LATERAL +LEFT OUT	OUT	46	GND	--
16	+TO OUT	OUT	47	GND	--
17	LOI ANNUNCIATE	OUT	48	ARINC 429 IN 2A	IN
18	GPS APPROACH ANNUNCIATE	OUT	49	ARINC 429 IN 2B	IN
19	LIGHTING BUS HI	IN	50	RS-232 GND 3	--
20	AIRCRAFT GND	--	51	RS-232 GND 2	--
21	AIRCRAFT POWER	IN	52	RS-232 GND 1	--
22	CONFIG MODULE DATA	I/O	53	LATERAL -FLAG OUT	--
23	CONFIG MODULE GND	--	54	LATERAL +FLAG OUT	OUT
24	OBS STATOR G (GND)	--	55	VERTICAL +FLAG OUT	OUT
25	OBS STATOR F	IN	56	VERTICAL -FLAG GND	----
26	TIME MARK B	OUT	57	DISCRETE IN 2	IN
27	ARINC 429 IN 1A	IN	58	DEMO MODE	IN
28	ARINC 429 IN 1B	IN	59	RESERVED	IN
29	RS-232 IN 3	IN	60	DISCRETE OUT 4	OUT
30	RS-232 IN 2	IN	61	REMOTE POWER ON	IN
31	RS-232 IN 1	IN	62	GND	--

5.5.2 J3552 44-Pin HD-DSub

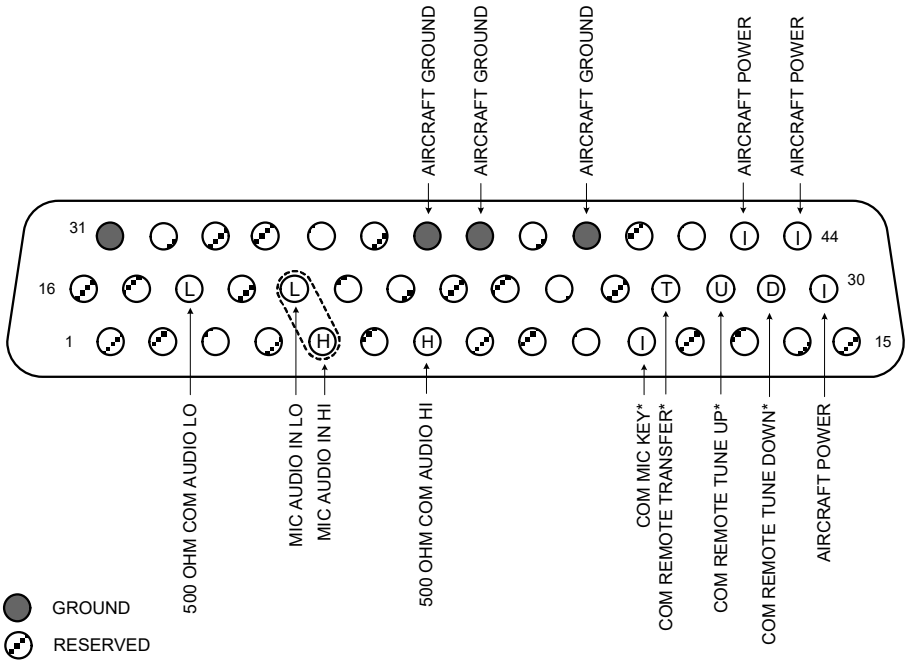

Figure 5-16 J3552 Connector (Looking at Unit)

Table 5-8 J3552 Connector Pinout

Pin	Pin Name	I/O	Pin	Pin Name	I/O
1	RESERVED	--	23	RESERVED	--
2	RESERVED	--	24	RESERVED	--
3	RESERVED	--	25	RESERVED	--
4	RESERVED	--	26	RESERVED	--
5	MIC AUDIO IN HI	IN	27	COM REMOTE TRANSFER*	IN
6	RESERVED	--	28	COM REMOTE TUNE UP*	IN
7	500 OHM COM AUDIO HI	OUT	29	COM REMOTE TUNE DOWN*	IN
8	RESERVED	--	30	AIRCRAFT POWER	IN
9	RESERVED	--	31	GND	--
10	RESERVED	--	32	RESERVED	--
11	COM MIC KEY*	IN	33	RESERVED	--
12	RESERVED	--	34	RESERVED	--
13	RESERVED	--	35	RESERVED	--
14	RESERVED	--	36	RESERVED	--
15	RESERVED	--	37	AIRCRAFT GND	--
16	RESERVED	--	38	AIRCRAFT GND	--
17	RESERVED	--	39	RESERVED	--
18	500 OHM COM AUDIO LO	IN	40	AIRCRAFT GND	--
19	RESERVED	--	41	RESERVED	--
20	MIC AUDIO IN LO	IN	42	RESERVED	--
21	RESERVED	--	43	AIRCRAFT POWER	IN
22	RESERVED	--	44	AIRCRAFT POWER	IN

6 EQUIPMENT REMOVAL AND RE-INSTALLATION

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Whenever an LRU is replaced, it is important to verify that the software versions are compatible. To verify replacement LRU software compatibility:

1. Find the Main Software Version in Appendix A or use the ***System Information*** page in Configuration mode.
2. Using the Dealer Resource Center website, select **Support → Service & Installation Bulletins → Search by Keyword**. Search for the Main Software Version number (e.g., 3.20). Open the TSO Software Service Bulletin for the Main Software Version that is installed. The acceptable LRU software versions are listed in the Loader Card Table.
3. If the software version of the LRU being installed does not match the version in the TSO Software Service Bulletin, download and create a loader card. Backload the matching LRU software version per Section 7.2.

6.1 GPS 175

6.1.1 GPS 175 Removal

1. Locate and open the GPS 175 circuit breaker.
2. Locate the unit retention mechanism access hole at the top-right corner of the unit face.
3. Insert a 3/32” hex tool into the access hole and turn the fastener counterclockwise until the unit is forced out about 3/8” and the hex drive tool stops completely.
4. Slide the GPS 175 out of the rack.

6.1.2 GPS 175 Re-installation

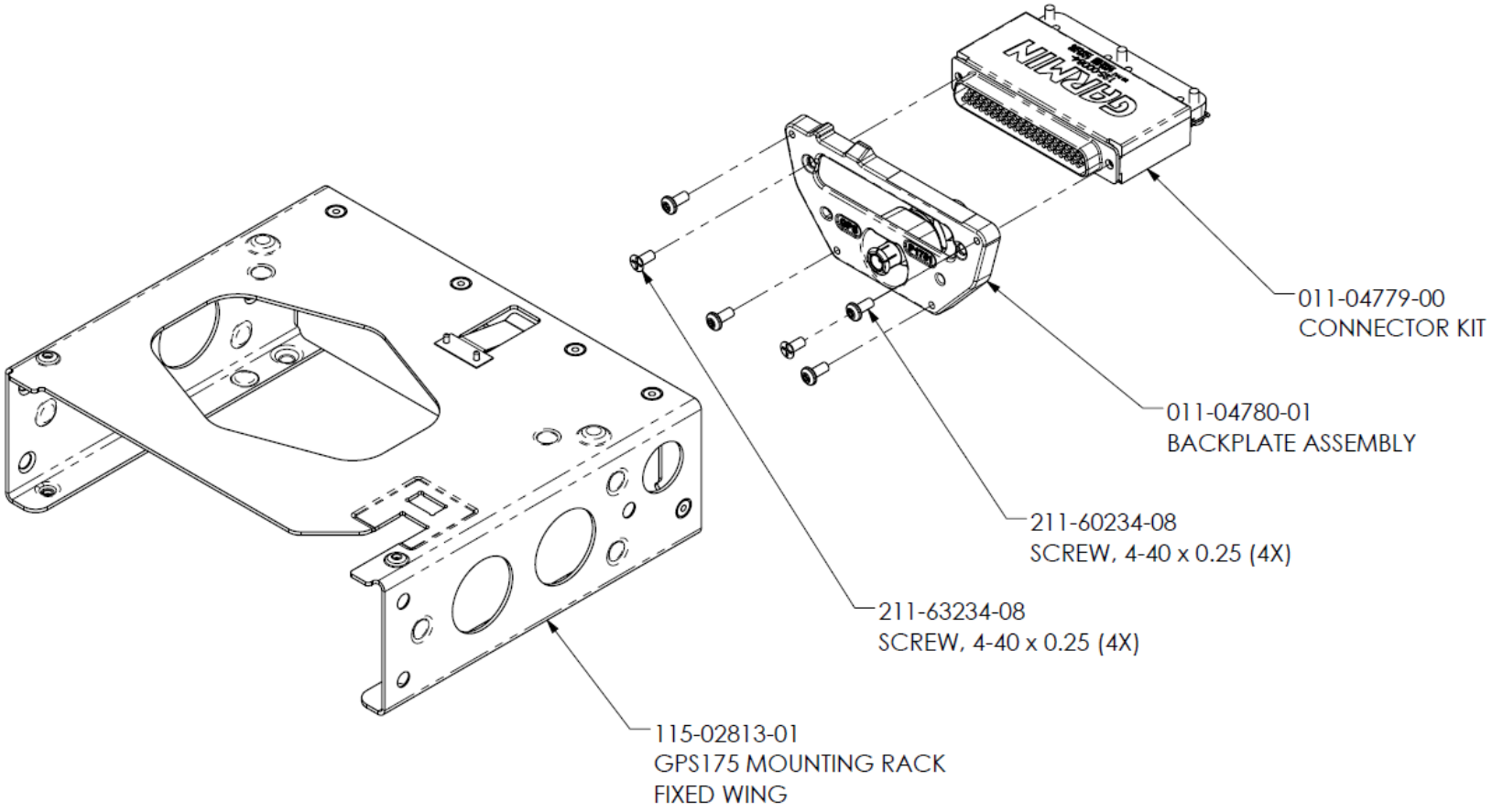
NOTE

It may be necessary to insert the hex drive tool into the access hole and turn the tool counterclockwise until it completely stops in order to ensure correct position of the retention mechanism prior to placing the unit in the rack. To ensure connectors mate properly, center the unit in the rack.

CAUTION

Be sure not to overtighten the unit into the rack. The application of hex drive tool torque exceeding 15 in-lbf can damage the locking mechanism.

1. Ensure that the GPS 175 circuit breaker is open.
2. Slide the GPS 175 straight back into the rack until it stops about 3/8” short of the fully seated position.
3. Insert a 3/32” hex drive into the unit retention mechanism access hole at the top right of the unit.
4. Turn the tool clockwise while pressing on the left side of the bezel until the unit is firmly seated in the rack.
5. Once the GPS 175 is re-installed, verify that the unit power-up self-test sequence is successfully complete and no failure messages or configuration error messages are annunciated. Section 6.4 outlines the power-up self-test sequence.



1. PART OF 011-04377-00 (GPS175) KITS.
2. REFERENCE 010-01822-01 (GPS175, STANDARD).
3. TORQUE TO 8±1 IN-LB.

Figure 6-1 GPS 175 Rack Installation

6.2 GNX 375

6.2.1 GNX 375 Removal

1. Locate and open the GNX 375 circuit breaker.
2. Locate the unit retention mechanism access hole at the top-right corner of the unit face.
3. Insert a 3/32” hex tool into the access hole and turn the fastener counterclockwise until the unit is forced out about 3/8” and the hex drive tool stops completely.
4. Slide the GNX 375 out of the rack.

6.2.2 GNX 375 Re-installation

NOTE

It may be necessary to insert the hex drive tool into the access hole and turn the cam mechanism 90° counterclockwise to ensure correct position prior to placing the unit in the rack.

CAUTION

Be sure not to overtighten the unit into the rack. The application of hex drive tool torque exceeding 15 in-lbf can damage the locking mechanism.

1. Ensure that the GNX 375 circuit breaker is open.
2. Slide the GNX 375 straight back into the rack until it stops about 1 inch short of the fully seated position.
3. Insert a 3/32” hex drive into the unit retention mechanism access hole at the top right of the unit.
4. Turn the tool clockwise while pressing on the left side of the bezel until the unit is firmly seated in the rack.
5. Once the GNX 375 is re-installed, verify that the unit power-up self-test sequence is successfully complete and no failure messages or configuration error messages are annunciated. Section 6.4 outlines the power-up self-test sequence.

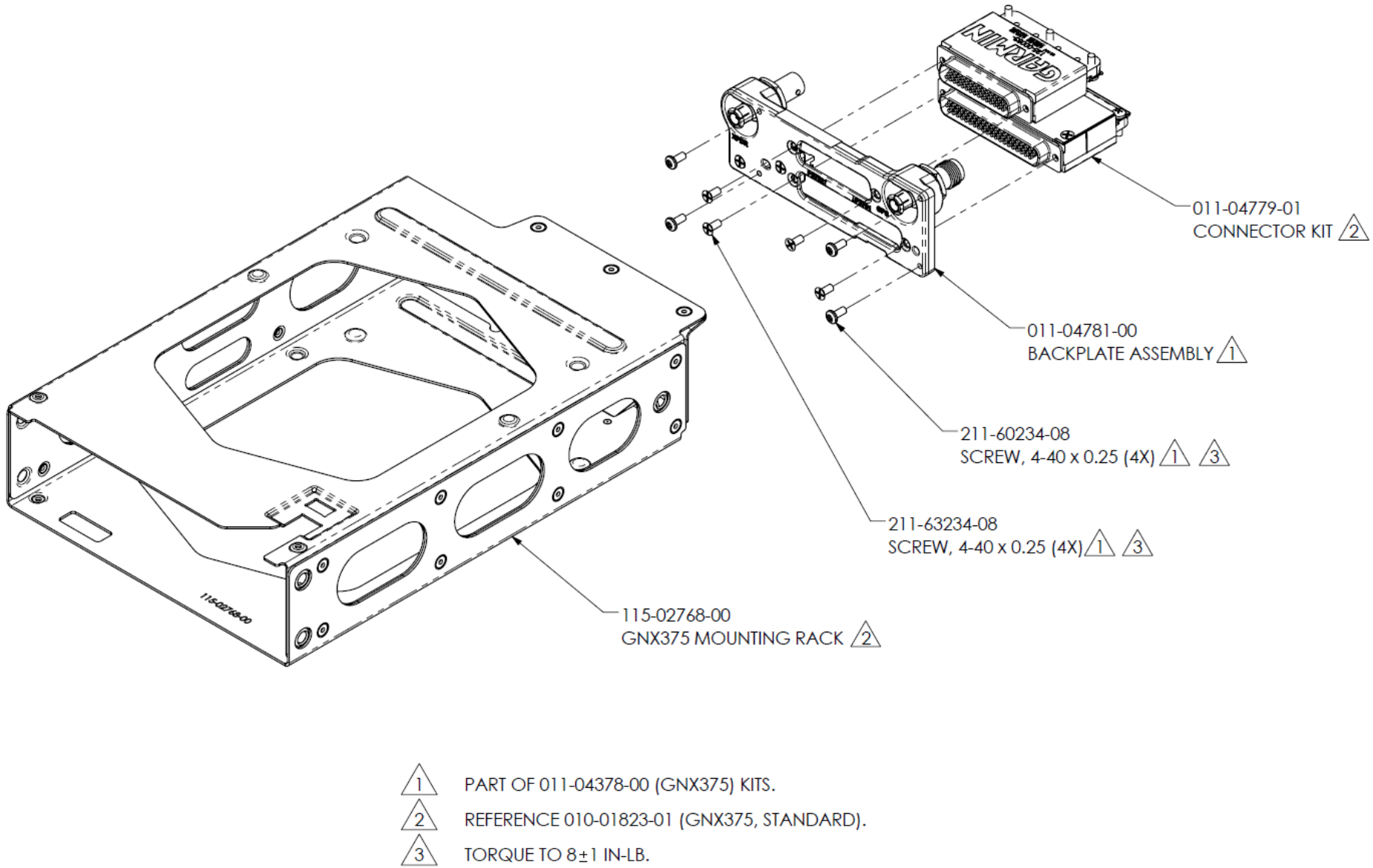


Figure 6-2 GNX 375 Rack Installation

6.3 GNC 355

6.3.1 GNC 355 Removal

1. Locate and open the GNC 355 circuit breaker.
2. Locate the unit retention mechanism access hole at the top-right corner of the unit face.
3. Insert a 3/32” hex tool into the access hole and turn the fastener counterclockwise until the unit is forced out about 3/8” and the hex drive tool stops completely.
4. Slide the GNC 355 out of the rack.

6.3.2 GNC 355 Re-installation

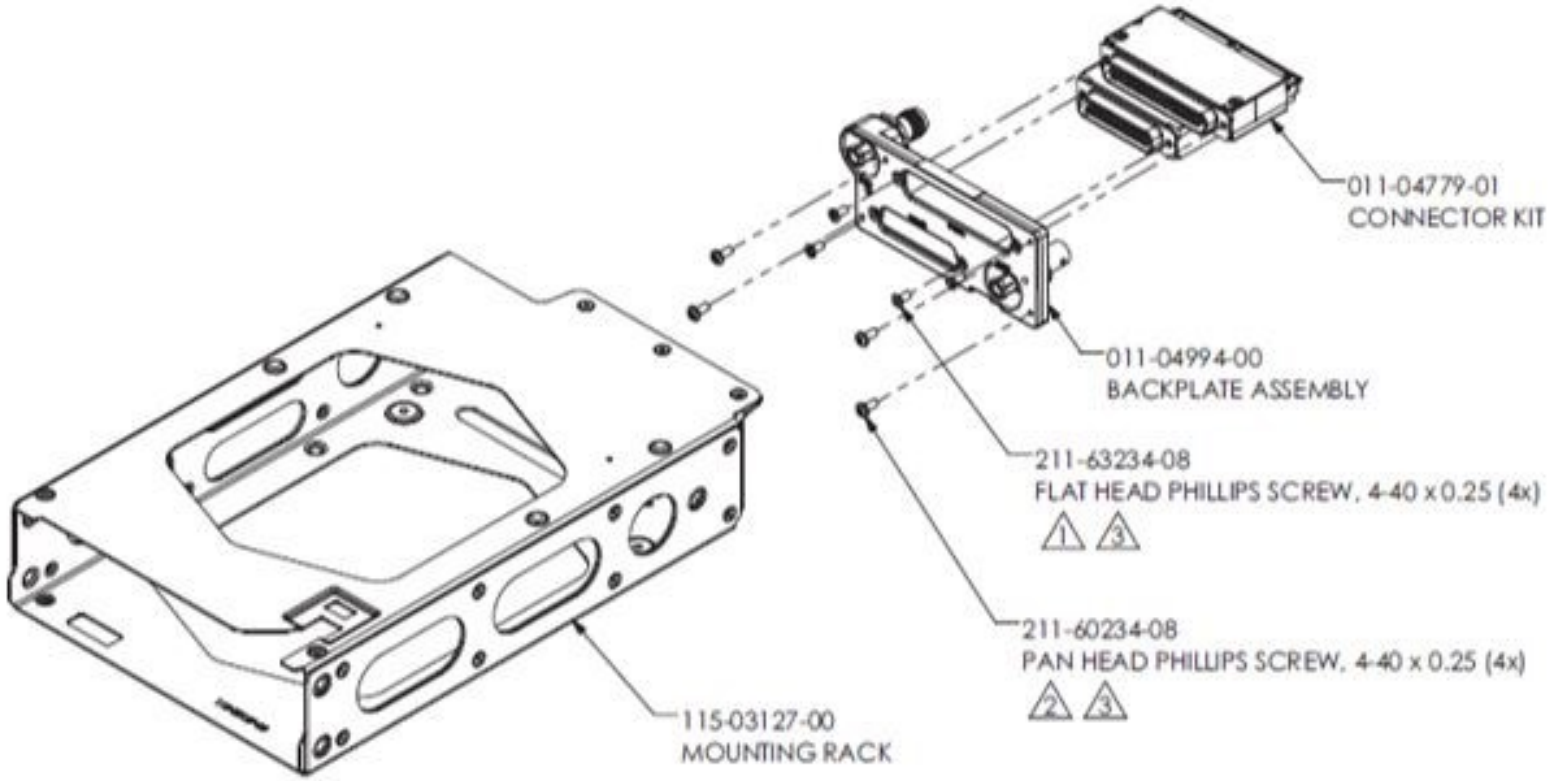
NOTE

It may be necessary to insert the hex drive tool into the access hole and turn the cam mechanism 90° counterclockwise to ensure correct position prior to placing the unit in the rack.

CAUTION

Be sure not to overtighten the unit into the rack. The application of hex drive tool torque exceeding 15 in-lbf can damage the locking mechanism.

1. Ensure that the GNC 355 circuit breaker is open.
2. Slide the GNC 355 straight back into the rack until it stops about 1/8” short of the fully seated position.
3. Insert a 3/32” hex drive into the unit retention mechanism access hole at the top right of the unit.
4. Turn the tool clockwise while pressing on the left side of the bezel until the unit is firmly seated in the rack.
5. Once the GNC 355 is re-installed, verify that the unit power-up self-test sequence is successfully complete and no failure messages or configuration error messages are annunciated. Section 6.4 outlines the power-up self-test sequence.



1 PART OF CONNECTOR KIT, P/N 011-04779-01.

2 PART OF BACKPLATE ASSEMBLY, P/N 011-04994-00.

3 TORQUE TO 8 +/-1 IN-BL.

Figure 6-3 GNC 355 Rack Installation

6.4 Display of Self-Test Data

During the normal power-up sequence, the splash screen is displayed, followed by the ***SW/Databases*** page, followed by the ***Instrument Test*** page. While on the ***SW/Databases*** page, touch the **Continue** button to advance to the ***Instrument Test*** page. During this time, electrical outputs are activated and set to the values listed in Table 6-1.

Table 6-1 Instrument Test Data

Parameter	Instrument Test Value
LCDI	Half Left
LFLG	Out of View
VCDI	Half Up
VFLG	Out of View
TO/FROM	N/A
OBS	The GNX displays the OBS value (149.5° if interfaced to an HSI with driven course pointer).
DTK	149.5° (Displayed as 150°)
Items below do not display on the *Instrument Test* page.	
Distance to Go	10.0 nautical miles
Time to Go	4 minutes
Active Waypoint	GARMIN
Groundspeed	150 knots
Present Position	N 39°04.05', W 94°53.86'
Waypoint Alert	Active
Phase of Flight	En Route
Message Alert	Active
Leg/OBS Mode	Leg Mode
GPS Integrity	Invalid
Roll Steering (if applicable)	Flight Director commands 0° bank (level flight) for 5 seconds, increasing right bank at 1°/second for 5 seconds, 5° right bank for 5 seconds, decreasing right bank at 1°/second for 5 seconds until 0° bank is reached. This cycle repeats continuously.

6.5 Configuration Module Replacement

To replace a GPS 175/GNX 375/GNC 355 configuration module, perform the following procedure:

NOTE

Ensure the current configuration is saved on to an SD card in accordance with the instructions contained in Section 3.4.6.

NOTE

All item numbers in this procedure reference Figure 6-4.

1. Remove the GPS 175/GNX 375/GNC 355 in accordance with Sections 6.1.1, 6.2.1, or 6.3.1.
2. Remove the backshell cover (**6**) by removing the two screws (**7**).
3. Lift the configuration module (**1**) out of the backshell (**5**) and disconnect the wiring harness (**2**) from the module.
4. Inspect the wiring harness (**2**) and connector pins (**3**) for damage, loose wiring, or corrosion. Replace all deficient components if any of these conditions are found.
5. Connect the harness to the new configuration module.
6. Install the new configuration module in the connector backshell (**5**) and re-install the cover (**6**).
7. Re-install the GPS 175/GNX 375/GNC 355 in accordance with Section 6.1.2, 6.2.2, or 6.3.2.

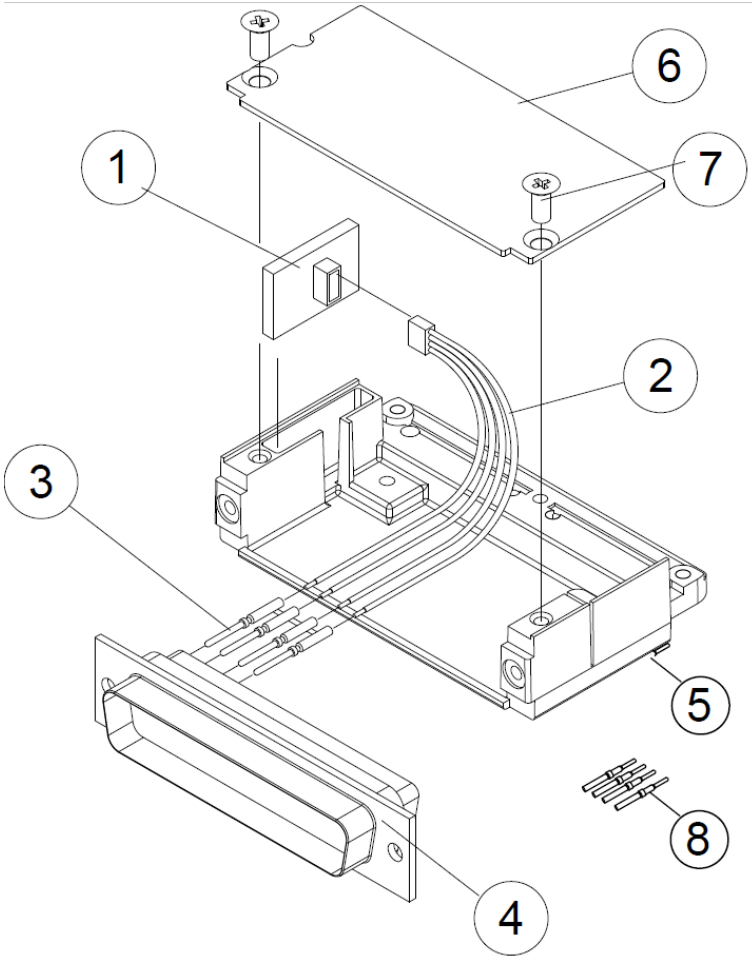


Figure 6-4 Configuration Module Assembly

6.6 Data Card/Flight Stream 510

6.6.1 Data Card/Flight Stream 510 Removal

1. Ensure the GPS 175/GNX 375/GNC 355 is powered off.
2. Remove the data card/Flight Stream 510 by pressing the card until it disengages and then pull the card to remove it from the unit.

6.6.2 Data Card/Flight Stream 510 Re-installation

1. Insert the new data card/Flight Stream 510, with the label facing left, into the data card slot on the front-right of the unit.
2. Push the card into the slot until it is fully inserted and locked into position.

6.7 GAE 12

6.7.1 GAE 12 Removal

1. Remove the GPS 175/GNX 375/GNC 355 in accordance with Section 6.1.1, 6.2.1, or 6.3.1.
2. Disconnect the four-conductor wire harness and the static pressure source tubing from the GAE.
3. Remove the two countersunk screws connecting the GAE to the backplate, as shown in Figure 6-5, and remove the unit.

6.7.2 GAE 12 Re-installation

1. Mount the GAE to the backplate using the two countersunk screws as shown in Figure 6-5.
2. Torque screws to 8 in-lbf.
3. Attach the aircraft static pressure source to the GAE 12.
4. Inspect the four-conductor wiring harness and connector pins for damage, loose wiring, or corrosion.
5. Plug the four-conductor wire harness into the connector on the GAE.
6. Verify that there are no sealants, fluids, or particles in the pneumatic lines or fittings. Also verify that there are no pneumatic leaks by performing a static leak check.

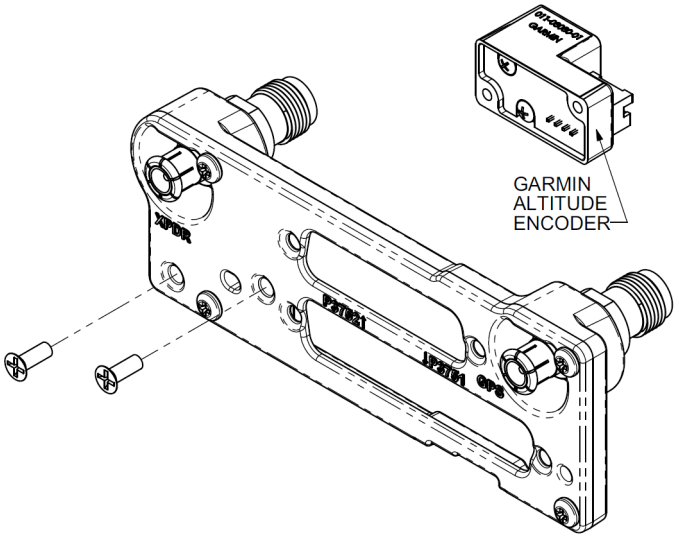


Figure 6-5 GAE Assembly

6.8 Bonding Strap

The following steps are provided as guidance for replacing a damaged bonding strap.

6.8.1 Bonding Strap Removal

The bonding strap is attached in two locations. The terminal lug is secured with a lock nut. To remove the strap, access both sides of the bonding strap and unbolt the hardware.

6.8.2 Bonding Strap Replacement

1. Construct a bonding strap in accordance with the guidance provided in Section 4.2 of *GPS 175 Part 23 AML STC Installation Manual* (P/N 190-02207-A1), *GNX 375 Part 23 AML STC Installation Manual* (P/N 190-02207-A4), or *GNC 355 Part 23 AML STC Installation Manual* (P/N 190-02207-A5).
2. If needed, clean the attachment locations with a bonding brush.
3. Secure each end of the bonding strap to the previously installed locations. Ensure that the strap does not loop back on itself and that the hardware is as described in the installation manual. The bonding strap hardware must seat fully against the aircraft metallic structure, without overhang or interference from other hardware.
4. Using a milliohm meter, verify that the resistance between the connected structure is less than 2.5 mΩ.

7 SOFTWARE

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7.2 Software Updates 7-2
7.2.1 Software Loader Card Instructions 7-2
7.2.2 Software Update Instructions 7-2

7.1 Software Check

To check the GPS 175/GNX 375/GNC 355 software version:

1. Power on the GPS 175/GNX 375/GNC 355 in Configuration mode by holding down the inner knob and pressing the **Power/Home** key.
2. Touch the **System Information** button.
3. Observe the installed software version and part number and verify that the version number and part number matches the approved version listed in the Equipment List.

7.2 Software Updates

Touch the **System Information** button to determine the current software loaded to the unit. Refer to the *GPS 175/GNX 375/GNC 355 Part 23 AML Equipment List* (P/N 005-01206-A2) for the current approved software for this STC. If the software needs to be updated, a software loader card will need to be created to update the software. An SD card, SD card reader, and a PC running Windows 2000, XP, Vista, Windows 7, Windows 8, or Windows 10 are necessary. There is no Mac support currently.

7.2.1 Software Loader Card Instructions

To create a software loader card, perform the following steps:

1. Log in to the Garmin Dealer Resource Center.
2. Download the appropriate system software to a PC.
3. Connect an SD card reader to the PC.
4. Insert the SD card into the card reader.
5. Run the *.exe file downloaded from the Dealer Resource Center.
6. Follow the screen prompts to create the loader card.
7. Click the **Finish** button.
8. Eject the loader card.

7.2.2 Software Update Instructions

To update the GPS 175/GNX 375/GNC 355 software, perform the following steps:

1. Power off the unit.
2. Remove the database card and insert the correct GPS 175/GNX 375/GNC 355 software loader card into the data card slot. Refer to Section 7.2.1 for creating a software loader card.
3. Power on the unit.
4. The GPS 175/GNX 375/GNC 355 will power on in Configuration mode. Touch the **Updates** button to display the available software updates.
5. Verify that the software version being loaded to the GPS 175/GNX 375/GNC 355 matches the software version listed in *GPS 175/GNX 375/GNC 355 Part 23 AML STC Equipment List*. The ***Updates*** page displays the software version that is currently installed on the unit and the software version on the loader card.
6. Touch the software versions or packages to select them for updating. To update the GPS 175/GNX 375/GNC 355 with all available software, touch the **Select All** button in the upper-right corner of the display.
7. To begin the software update, touch the **Update** button in the lower-right corner of the display.
8. When the updates are complete, power off the unit and re-insert the database card.

8 SYSTEM CONFIGURATION AND CHECKOUT

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8.2 System Checkout 8-2
8.3 GPS 175/GNX 375/GNC 355 Configuration 8-2
8.4 Regulatory Test (GNX 375) 8-2
8.5 ADS-B Out Test (GNX 375) 8-3

8.1 Overview

This section contains instructions for configuring the GPS 175/GNX 375/GNC 355, as well as checks to ensure the system is properly installed and functioning correctly. The steps that are not applicable to a particular installation may be skipped.

8.2 System Checkout

Original GPS 175/GNX 375/GNC 355 is Re-installed

If the removed GPS 175/GNX 375/GNC 355 is installed in its original position, no software loading or configuration setting changes are required. This does not include units that were returned for repair, as their software and configuration files are deleted during the repair testing process.

If the original GPS 175/GNX 375/GNC 355 is re-installed, configuration and software loading are not required. Refer to Section 6 of *GPS 175 Part 23 AML STC Installation Manual* (P/N 190-02207-A1), *GNX 375 Part 23 AML STC Installation Manual* (P/N 190-02207-A4), or *GNC 355 Part 23 AML STC Installation Manual* (P/N 190-02207-A5) (as applicable) for installation checkout procedures.

New, Repaired, or Exchanged GPS 175/GNX 375/GNC 355 is Installed

If a new, repaired, or exchanged GPS 175/GNX 375/GNC 355 is installed, the AML approved software and the configuration files from the Configuration Log in the aircraft permanent records must be loaded to the unit. After this is accomplished, refer to Section 6 of *GPS 175 Part 23 AML STC Installation Manual* (P/N 190-02207-A1), *GNX 375 Part 23 AML STC Installation Manual* (P/N 190-02207-A4), or *GNC 355 Part 23 AML STC Installation Manual* (P/N 190-02207-A5) (as applicable) for installation checkout procedures.

8.3 GPS 175/GNX 375/GNC 355 Configuration

Retrieve the Configuration Log from the aircraft permanent records. For the maintenance activities that repaired or replaced the previous GPS 175/GNX 375/GNC 355, configure the unit as defined by the data contained in the Configuration Log.

NOTE

Ensure the Configuration Log remains with the aircraft permanent records upon completion of any maintenance activities.

8.4 Regulatory Test (GNX 375)

The following regulatory tests are required to be performed per the 14 CFR sections referenced below. For the purpose of these tests, ensure the GNX 375 transponder is in Ground Test mode to simulate an airborne state. The Altitude Reporting Equipment Test is required to be performed for each altitude source interfaced to the transponder, including the GAE 12. These tests require the use of a Mode S transponder ramp tester, such as an Aeroflex IFR-6000 or TIC TR-220. For instructions on the operation of the ramp test equipment, refer to the manufacturer's documentation.

1. Altitude Reporting Equipment Tests in accordance with 14 CFR Part 91.411 and Part 43 Appendix E.
2. ATC Transponder Tests and Inspections in accordance with 14 CFR Part 91.413 and Part 43 Appendix F.

8.5 ADS-B Out Test (GNX 375)

This test procedure is used to verify that the ADS-B Out parameters meet the performance requirements as described in Title 14 Code of Federal Regulations (14 CFR) § 91.227. This test requires the use of a Mode S transponder ramp tester, such as an Aeroflex IFR-6000 or TIC TR-220. For instructions on the operation of the ramp test equipment, refer to the manufacturer's documentation.

1. Verify that the aircraft is in a location where a GPS signal is receivable (e.g. outdoors with a clear view of the sky).
2. Power on the aircraft/avionics.
3. With the GNX 375 operating in Normal mode, verify that the GNX 375 has acquired GPS position and has ADS-B Out enabled.
   a. GPS signal can be verified on the ***System → GPS Status*** page.
   b. ADS-B Out enablement can be verified by tapping the **XPDR** icon on the right side of the screen and then tapping the **Menu** button at the top-left of the screen.
4. Using the transponder test set, verify the following ADS-B Out parameters are being transmitted:
   a. Aircraft emitter category is Light Airplane < 15,500 pounds (On the TR-220 this is indicated as "A1").
   b. Aircraft Length documented in the aircraft Configuration Log.
   c. Aircraft Width documented in aircraft Configuration Log.
   d. 1090 ADS-B In Capability matches the configuration setting documented in the aircraft Configuration Log.
   e. UAT (978) ADS-B In Capability matches the configuration setting documented in the aircraft Configuration Log.
5. Place the GNX 375 transponder into Ground Test mode to simulate an airborne state.
6. On the GNX 375 ***XPDR*** page, set the mode to Altitude Reporting.
7. Using the transponders test set, verify the following ADS-B Out parameters are being transmitted:
   a. NACV > 1
   b. SDA > 2
   c. SIL > 3
   d. NACP > 8
   e. NIC > 7
8. Cycle the GNX 375 power to disable Ground Test mode.

9 RETURN-TO-SERVICE PROCEDURE

9.1 Maintenance Records

After conducting required return to service procedures in accordance with this document and updating aircraft records in accordance with this section and in compliance with 14 CFR 43.9 and 14 CFR 91.417, the aircraft may be returned to service.

Record the following information in the appropriate aircraft maintenance logs:

- Software versions loaded during maintenance.
- Part and serial numbers of any LRU replaced.
- Any other applicable information related to the maintenance work performed on the aircraft.

Verify that replacement LRUs' software versions match those in the Configuration Log from Appendix A in the aircraft records.

APPENDIX A AIRCRAFT & INSTALLATION SPECIFIC INFORMATION

This appendix contains the documentation required for recording the aircraft specific information, including aircraft make, model, registration number, and serial number information. This appendix also includes the GPS 175/GNX 375/GNC 355 Configuration Log containing installation specific configuration settings.

AIRCRAFT SPECIFIC INFORMATION

GENERAL INFORMATION

Date_____/_____/_____By:_____

AIRCRAFT

AIRCRAFT MAKE:_____

AIRCRAFT MODEL:_____

AIRCRAFT SERIAL #:_____

AIRCRAFT REG. #:_____

GPS 175/GNX 375/GNC 355

Unit P/N:_____Mod Level:_____

Unit Model:_____Serial #:_____

FLIGHT STREAM 510: ❑ [N/A]

Unit P/N:_____Mod Level:_____

Unit Model:_____Serial #:_____

GAE 12: ❑ [N/A]

Unit P/N:_____Mod Level:_____

Unit Model:_____Serial #:_____

GPS 175/GNX 375/GNC 355 PART 23 CONFIGURATION LOG

SYSTEM INFORMATION

SOFTWARE VERSIONS

Main Board

Software:_____ Boot Code: _____ FPGA: _____

Touch Controller Board

Software:_____ Boot Code: _____

GPS WAAS Board

Software:_____

Transponder Board: ❑ [N/A]

Software:_____Boot Code: _____FPGA: _____

Audio: _____Region List: _____Configuration: _____

COM Board: ❑ [N/A]

Software:_____Boot Code: _____FPGA: _____

SETUP MENU

INTERFACES - ARINC 429

RX Port 1: ❑ [N/A]

Format:_____ Speed: ❑ High ❑ Low

RX Port 2: ❑ [N/A]

Format:_____ Speed: ❑ High ❑ Low

TX Port 1

Format:_____ Speed: ❑ High ❑ Low

INTERFACES - RS-232 (RS-422)

GPS 175/GNC 355

RS-232 1 Format:_____

RS-232 2 Format:_____

RS-232 3 Format:_____

GNX 375

RS-232/RS-422 1 Format:_____

RS-232 2 Format:_____

RS-232 3 Input Format:_____

Output Format:_____

RS-232 4 Input Format:_____

Output Format:_____

RS-232 5 Input Format:_____

Output Format:_____

SETUP MENU - CONTINUED

INTERFACED EQUIPMENT

ADS-B SRC (GPS 175/GNC 355): ❑ [N/A] LRU:_____ **GDU:** ❑ Not Present ❑ Present

Cross-Side Navigator: ❑ [N/A] LRU:_____ **GI 275:** ❑ Not Present ❑ Present

LIGHTING CONFIGURATION

Display Source: ❑ Photocell ❑ Lighting Bus **Keys Source:** ❑ Photocell ❑ Lighting Bus

Display Minimum Level: _____% **Keys Minimum Level:** _____%

Configure Photocell

Response Time: _____sec **Slope:** _____ **Offset:** _____

Photocell Override

Key Backlight Cutoff: _____% **Photocell Transition:** _____%

Configure Lighting Bus

Response Time:_____ sec **Slope:**_____ **Offset:**_____

Lighting Bus: ❑ 14VDC ❑ 28VDC ❑ 5VDC ❑ 5VAC

GPS ANTENNA OFFSET

Antenna Height

Height above ground:_____ FT

Lateral Offset

Offset:_____ FT **Direction:** ❑ Right ❑ Left

Longitudinal Offset

Offset from nose:_____ FT

MAIN INDICATOR (ANALOG)

Selected course: ❑ Allowed ❑ Ignored

AHRS

Display Orientation: ❑ Unknown ❑ Aft ❑ Up

Yaw Offset:_____°

SETUP MENU - CONTINUED

MAIN SYSTEM

Air/Ground Threshold:_____ KT

System ID:_____

Fuel Type: ❑ AV Gas ❑ Jet A ❑ Jet B

GPS Select: ❑ Auto ❑ Prompt

RF PROC Legs: ❑ Enabled ❑ Disabled

Terrain Alerts: ❑ Enabled ❑ Disabled

Graphical Edit: ❑ Enabled ❑ Disabled

Composite CDI: ❑ Enabled ❑ Disabled

Bluetooth: ❑ Enabled ❑ Disabled

External FPL: ❑ Enabled ❑ Disabled

ADS-B Logging: ❑ [N/A] ❑ Enabled ❑ Disabled

ALT SRC Input: ❑ [N/A] ❑ Connected ❑ Not Connected

XPDR - SENSORS

Alt Sensor: ❑ None ❑ Gillham ❑ GAE

OAT Sensor: ❑ Enabled ❑ Disabled

Squat Installed: ❑ Enabled ❑ Disabled

Squat On Ground: ❑ [N/A] ❑ Open ❑ Ground (0V)

XPDR - AIRFRAME

Aircraft Category:_____

Aircraft Width: <=_____ Meters

Aircraft Length: <=_____ Meters

Max Airspeed: <=_____ KT

Stall Speed: _____ KT

XPDR - OPTIONS

1090 ES Out Control: ❑ Always Disable ❑ Always Enable ❑ Pilot Controlled

Automatic Moding: ❑ Enabled ❑ Disabled

XPDR - FLIGHT ID

Aircraft Registration:_____

ICAO Address:_____

Default Flight ID: ❑ [N/A] _____

VFR Squawk Code:_____

COM

RX SQ Mode: ❑ Basic

RX SQ Config:_____%

❑ Advanced **RX SQ Config:** Low:_____% Mid:_____% High:_____%

Carrier Sq:_____%

Mic Gain:_____dB

Sidetone Source: ❑ Internal ❑ External

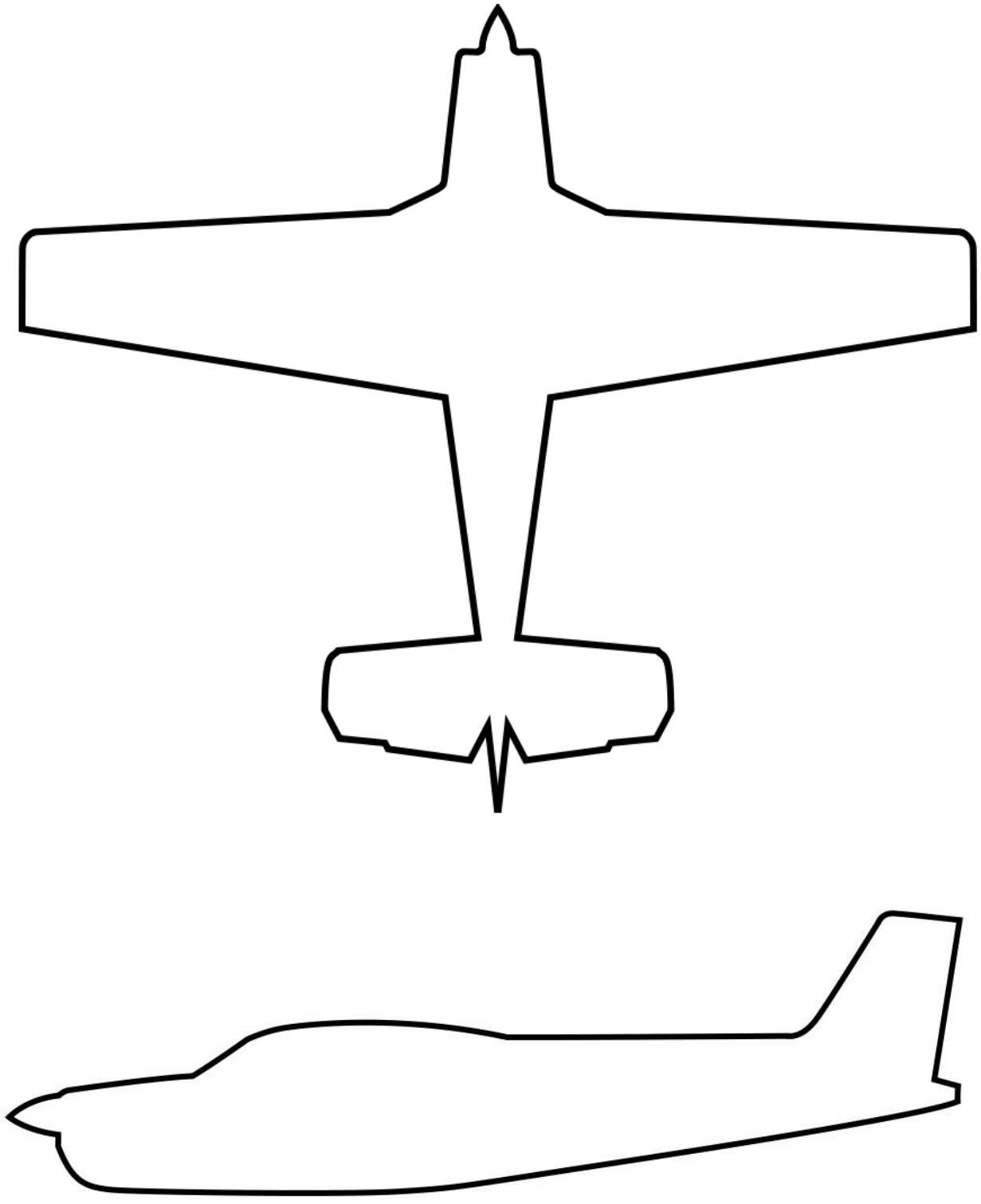
Sidetone Volume:_____dB

Pilot Controlled: ❑ Enabled ❑ Disabled

WIRE ROUTING

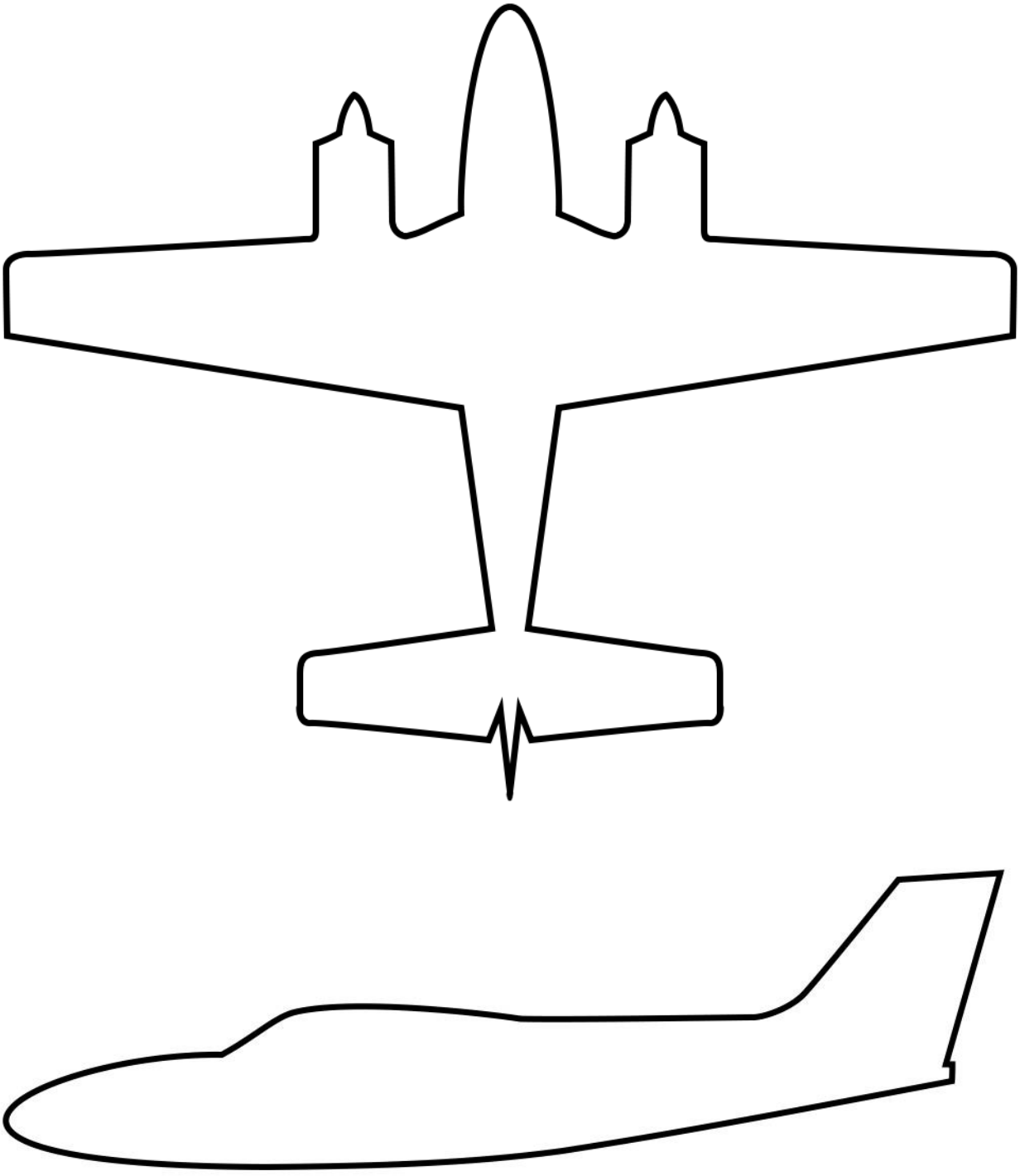
Single Engine

The following diagram depicts approximate location of all LRUs and antenna(s) along with the wire routing for the GPS 175/GNX 375/GNC 355 throughout the aircraft structure for a single-engine aircraft.



Twin Engine

The following diagram depicts approximate location of all LRUs and antenna(s) along with the wire routing for the GPS 175/GNX 375/GNC 355 throughout the aircraft structure for a twin-engine aircraft.



AIRCRAFT WIRING DIAGRAMS

Attach the aircraft wiring diagrams showing the equipment installed by this STC or a markup of the interconnect diagrams from the STC installation manual detailing which equipment was installed and how it was connected.

NOTE

Electrical loads for equipment installed by this STC are listed in the GPS 175 Part 23 AML STC Installation Manual, GNX 375 Part 23 AML STC Installation Manual, and GNC 355 Part 23 AML STC Installation Manual.

GARMIN