

GARMIN GTS 825 TRAFFIC ADVISORY SYSTEM - TROUBLESHOOTING

1. General

- A. This section gives the troubleshooting procedures for the Garmin GTS 825 Traffic Advisory System (TAS). For a general overview of the Garmin GTS 825 Traffic Advisory System refer to Garmin GTS 825 Traffic Advisory System - Description and Operation.

2. Garmin GTS 825 Traffic Advisory System Troubleshooting

- A. Tools and Equipment

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

- (1) Tools and Equipment

- Multimeter.

- (2) Special Consumables

- None.

- (3) Reference Material

- Garmin GTS 825 TAS Processor - Removal/Installation
- Garmin GA 58 TAS Antenna - Removal/Installation
- Garmin GTS 825 Traffic Advisory System - Description and Operation
- Garmin G1000 Integrated Avionics System - Adjustment/Test
- Model 208 Wiring Diagram Manual.

- B. Do the Garmin GTS 825 Traffic Advisory System Troubleshooting.

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

- (a) Adjust the ground power unit (GPU) to 28Vdc, +0.5 or -0.5 Vdc.

- (2) Make sure that the circuit breaker given in Table 101 is engaged.

Table 101. Circuit Breaker

| Component | Circuit Breaker Name | Circuit Breaker Location |
|-------------|----------------------|--------------------------------|
| GTS 825 TAS | TAS | Avionics Circuit Breaker Panel |

- (3) Put the switches in the position(s) that follow:

- (a) Connect external electrical power to the airplane.
(b) Set the EXTERNAL POWER switch to the BUS position.
(c) Set the BATTERY switch to the ON position.
(d) Set the AVIONICS 1 and AVIONICS 2 switches to the ON position.

- (4) Do a G1000 architecture check and make sure that the GTS 825 TAS and all related systems are serviceable. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test.

- (a) Make sure that the correct software and configuration has been installed.

- (5) Make sure the TAS has check mark (green) next to its nomenclature on the list.

- (a) This indicates the line replaceable unit (LRU) is serviceable.

- (6) If a serial number or a version number is dashed, carefully examine the electrical wiring. Refer to the Model 208 Wiring Diagram Manual, Chapter 20, Wiring - Maintenance Practices.

- (a) Do a visual check of the electrical connectors and airplane electrical connectors for bent pins and pushed back pins.

1 If necessary, repair the damage.

- (b) Make sure that electrical power and ground signals are present.

- (c) Make sure that data bus lines are correctly terminated and secure.

CAUTION: Do not touch bus wiring to each other or to shield grounds. Damage to equipment or circuits can result.

- (d) Remove electrical power from the airplane.
- (e) Use a multimeter to do a continuity check of the bus wires.
 - 1 Make sure that there is continuity only from each wires related pin end to end and to no other wires, airplanes grounds, or shields.
- (f) Do a visual check of the wiring components and make sure that all applicable strapping is correct and any necessary G1000 system strapping is correct.
- (g) Do a visual check of the wiring bundles for damage.
 - 1 If necessary, repair or replace the wiring bundles. Refer to the Model 208 Wiring Diagram Manual, Chapter 20, Wiring - Maintenance Practices.
- (h) Do a check of the applicable system wiring for continuity, ground faults, or other unserviceable conditions.
 - 1 If necessary, repair or replace the wiring bundles. Refer to the Model 208 Wiring Diagram Manual, Chapter 20, Wiring - Maintenance Practices.
- (i) Do a visual check of the coaxial cable connections to the GA 58 TAS antenna.
 - 1 Tighten loose coaxial cable connectors as necessary.
 - 2 Repair or replace unserviceable coaxial cable as necessary.
- (7) If the GTS 825 TAS transponder system wiring is serviceable replace the components that follow:
 - (a) Replace the GTS 825 TAS transponder. Refer to Garmin GTS 825 Processor - Removal/Installation.
 - 1 Do an operational check of the GTS 825 TAS system again. Refer to Garmin GTS 825 Traffic Advisory System - Adjustment/Test.
 - (b) Replace the GA 58 TAS antenna. Refer to Garmin GA 58 TAS Antenna - Removal/Installation.
 - 1 Do an operational check of the GTS 825 TAS system again. Refer to Garmin GTS 825 Traffic Advisory System - Adjustment/Test.

C. GTS 825 System Message Troubleshooting.

- (1) For CAS messages related to other Garmin LRU's, refer to the applicable LRU section for CAS message troubleshooting.
- (2) Check the multifunction display traffic map screen for messages to aid in troubleshooting the anomaly.
 - (a) For GTS 825 Alert message troubleshooting refer to Table 102

Table 102. GTS 825 CAS Alert Messages

| Traffic Map Page Annunciation | Cause | Corrective Action |
|-------------------------------|---|---|
| No Data. | Data is not being received from the TAS unit. | 1. Do a continuity check of the Ethernet wiring between the GTS 825 TAS Processor electrical connector (PT702) and PFD2 electrical connector (P402). Refer to the Model 208 Wiring Diagram manual. 2. Load the GTS 825 TAS option software. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 3. Replace the GTS 825 TAS. Refer to Garmin GTS 825 TAS Processor - Removal/Installation. 4. Replace the master configuration module. Refer to Garmin G1000 Master Configuration Module - Adjustment/Test. |
| Data Failed. | Data is being received from the TAS unit, but the unit is self-reporting a failure. | 1. Replace the GTS 825 TAS. Refer to Garmin GTS 825 TAS Processor - Removal/Installation. |

| | | |
|---------|---|---|
| Failed. | Incorrect data format received from the TAS unit. | 1. Load the GTS 825 TAS option software. Refer to Garmin G1000 Integrated Avionics System - Adjustment/Test. 2. Replace the GTS 825 TAS. Refer to Garmin GTS 825 TAS Processor - Removal/Installation. |
|---------|---|---|

If the master configuration module is replaced the unlock cards for optional systems (TAWS, Jeppesen Aviation Database, Terrain database cards ect.) must be replaced.
Software uploads should be verified and performed by qualified technicians.

- D. Put the Airplane Back to its Initial Condition.
 - (1) Disconnect the external electrical power from the airplane.