GTX 320/320A
Transponder Installation Manual

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RECORD OF REVISIONS

Revision	Revision Date	Description	ECO #
A	02/10/97	Initial Rel	---
B	05/30/97	Clarify Antenna Requirements	7096
C	07/08/97	Lengthens Mount Screws, Add Notes	7344
D	08/21/97	Depth Behind Panel	7539
E	09/18/97	Wiring Diagram Corrections	7673
F	01/23/98	Add Spring Washer	8310
G	06/05/98	Correct reference to 50 ohm match bushing	8808
H	05/14/99	Updates and Corrections	10985
J	09/25/00	Redraw	14199
K	11/05/01	Updates and Clarifications	16878
L	06/06/02	Updated unit and accessory part numbers	18314
M	07/14/06	Corrected date on front cover and misc updates	40373

3 POST INSTALLATION CONFIGURATION & CHECKOUT PROCEDURE

3.1 Aircraft Station Licensing Requirements

The Telecommunications Act of 1996, effective February 8, 1996, provides the FCC discretion to eliminate radio station license requirements for aircraft and ships. At the present time, you do not need an individual license to operate the GTX 320/320A aboard your private aircraft in many circumstances. To find out the specific details on whether you are exempt from licensing, please see FCC Fact Sheet PR 5000 or contact the FCC at (800)-322-1117.

If an aircraft license is required or desired, contact the FCC at (800)-322-1117 to request form 404, Application for Aircraft Radio Station License. The FCC also has a fax-on-demand service to provide forms by fax at (202)-418-0177.

The GTX 320/320A owner accepts all responsibility for obtaining the proper licensing before using the transponder.

3.2 Operation

NOTE

The coverage you can expect from the GTX 320/320A is limited to "line of sight". Low altitude or aircraft antenna shielding by the aircraft itself may result in reduced range. Range can be improved by climbing to a higher altitude. It may be possible to minimize antenna shielding by locating the antenna where dead spots are only noticed during abnormal flight attitudes.

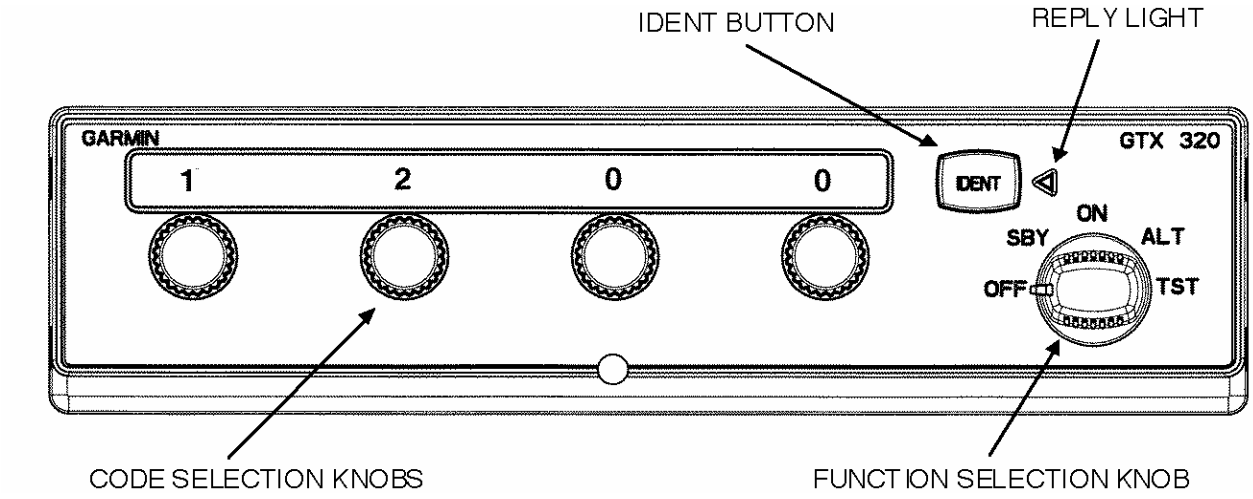

Figure 3-1. Transponder Front Panel (GTX 320 Shown)

NOTE

The Transponder should be turned off before starting aircraft engine(s).

3.2.1 Function Selection Switches

The function selector switch is a five position rotary switch. The five positions are:

- OFF — Turns off all power to the GTX 320/320A.
- SBY — Turns the transponder on, but when in SBY the transponder will not reply to any interrogations from the ground radar system.
- ON — Places the transponder in Mode A, the identification mode. In addition to the aircraft's identification code, the transponder will also reply to altitude interrogations (mode C) with signals that do not contain altitude information.
- ALT — Places the transponder in Mode A and Mode C, the identification and altitude reporting modes to respond to ATC aircraft identification interrogations and altitude interrogations with standard pressure altitude (29.92 inches Hg.) received from an external altitude digital encoder. The ALT position may be used in aircraft that are not equipped with the optional altitude encoder, however, the only response will be discreet signals that do not contain altitude information.

NOTE

Any time the function switch is in the ON or ALT position the transponder becomes an active part of the beacon system. Select ON or ALT as late as practical prior to takeoff and to OFF or SBY as soon as practical after completing landing roll unless the change to SBY has been accomplished previously at the request of ATC.

- TST — Turning the switch to the TST position tests the reply indicator. The TST position is spring loaded and must be held momentarily. When released, it will automatically return to the ALT position.

3.2.2 Code Selection

The code selector consists of four, eight position switches that provide 4,096 active identification codes.

NOTE

When making routine code changes, you should avoid inadvertent selection of codes 7500, 7600, or 7700 thereby causing momentary false alarms at automated ground facilities. For example when switching from code 2700 to code 7200, switch first to 2200 then 7200, NOT to 7700 and then 7200.

This procedure applies to nondiscrete code 7500 and all discrete codes in the 7600 and 7700 series (i.e., 7600-7677, 7700-7777) which trigger special indicators in automated facilities. Only nondiscrete code 7500 will be decoded as the hijack code. An aircraft's transponder code (when available) is utilized to enhance the tracking capabilities of the ATC facility, therefore you should not turn the transponder to SBY when making routine code changes.

See the Aeronautical Information Manual (AIM) for a detailed explanation of the identification codes.

3.2.3 IDENT Button

On occasion, the controller will request “SQUAWK IDENT”. Respond by momentarily pressing and releasing the IDENT button. Pressing the IDENT button activates the Special Position Identification Pulse (SPI) for approximately 20 seconds identifying your transponder return from other aircraft on the controller’s scope.

3.2.4 Reply Light

The reply light will blink each time the transponder replies to ground interrogation. The reply light also remains lit during the IDENT time interval.