Supplement No. 010

Garmin GTX 335 XPDR

with ADS-B Out and GPS

Aircraft Serial Number:

Aircraft Registration Number:

Date of Issue **12. 06. 2020**

This Supplement must be attached to the POH when the Garmin GTX 335 XPDR is installed in accordance with the manufacturer's approved documentation.

Information in this Supplement completes or replaces information in the basic POH for the below mentioned parts only. Limitations, procedures and information not mentioned in this Supplement and included in the basic POH stay valid.

This Supplement completes information necessary for the aircraft operation with equipment installed on the aircraft. This Supplement is a permanent part of this POH and must remain in this POH at all times when the GTX 335 XPDR is installed.

This supplement is EASA approved under

Approval No.: 10075449

Approval Date: 22. 01. 2021

RECORD OF REVISIONS

Revision	Date	Approved By	Note
Initial issue	12. 06. 2020	EASA, 10075449	-

Chapter 1 GENERAL INFORMATION

The aircraft is equipped with Garmin GTX 335 transponder that is installed in accordance with the approved aircraft manufacturer documentation. The system Garmin GTX 335 transponder consists of transponder unit, antenna (transponder and ADS-B) and altitude encoder. The GTX 335 receives signals from ground radars and replies to the interrogations the identification code and flight altitude.

Garmin GTX 335 is TSO-C112e (Level 2ens, Class 1) compliant mode S transponder with TSO-C166b compliant ADS-B Out 1090 MHz Extended Squitter functionality compliant with the requirements in CS-ACNS for ADS-B and ELS.

Chapter 2 LIMITATIONS

The Garmin GTX 335 Mode S transponder Pilot's Guide, P/N 190-01499-00 (revision F or later) must be available to the flight.

The Garmin GTX 335 must have the following system interfaces fully functional in order to be compliant with CS ACNS, Issue 2:

- Uncorrected pressure altitude source
- GPS SBAS position source

Chapter 3 EMERGENCY PROCEDURES

To transmit an emergency signal:

a.	**ALT** key	Press
b.	Numeric keys 0 - 7	Select 7700 operating code

To transmit a signal representing loss of all communication (when in controlled airspace):

a.	**ALT** key	Press
b.	Numeric keys 0 - 7	Select 7600 operating code

Chapter 4 NORMAL PROCEDURES

NOTE

Refer to the Garmin GTX 335 Mode S transponder Pilot's Guide, P/N 190-01499-00 (revision F or later) for complete operating procedures.

Engine Starting

NOTE

If the **ON** key is pressed the transponder replies to interrogations. Replies do not include pressure altitude.

Before Takeoff

NOTE

If the **ALT** key is pressed the transponder replies to identification and altitude interrogations.

In addition:

	XPDR	
a.	1090ES TX CTL indicat.	Verify ON (on display)
	NO 1090ES TX indicat.	Verify extinguished (on display)

After Landing

NOTE

If the **SBY** key is pressed the transponder will not reply to any interrogations or transmit ADS-B Out.

Chapter 5 PERFORMANCE

No change.

Chapter 6 WEIGHT AND BALANCE AND EQUIPMENT LIST

Upon removal or installation of the GTX 335 transponder the change of basic empty weight and corresponding center of gravity of the aircraft must be recorded according to Chapter 6 of the POH.

Chapter 7 DESCRIPTION OF AIRCRAFT AND SYSTEMS

The Garmin GTX 335 panel mounted Mode S transponder is a radio transmitter and receiver that operates on radar frequencies, receiving ground radar or TCAS interrogations at 1030 MHz and transmitting a coded response of pulses to ground based radar on a frequency of 1090 MHz. The GTX 335 is equipped with IDENT capability that activates the Special Position Identification (SPI) pulse for 18 seconds. Mode S transmit/receive capability also requires 1090 MHz transmitting and 1030 MHz receiving for Mode S functions.

The transponder also features the 1090 MHz ADS-B "Out" transmission capability (using precise GPS-referenced positioning information), which enables the device to automatically output more accurate and more useful traffic surveillance to ATC – including aircraft flight ID, position, altitude, velocity, climb/descent and heading information.

In addition to displaying the code, reply symbol and mode of operation, the GTX 335 screen will display pressure altitude, and timer functions. The unit also features an altitude monitor, and flight timers. A voice or tone audio output announces altitude deviation, and count down timer expiration.

The GTX 335 transponder is powered on by pressing the SBY, ALT or ON keys. After power on a start-up page will be displayed while the unit performs a self-test.

Refer to the Garmin GTX 335 Mode S transponder Pilot's Guide, P/N 190-01499-00 (revision F or later) for complete descriptions of the Garmin GTX 335 transponder.

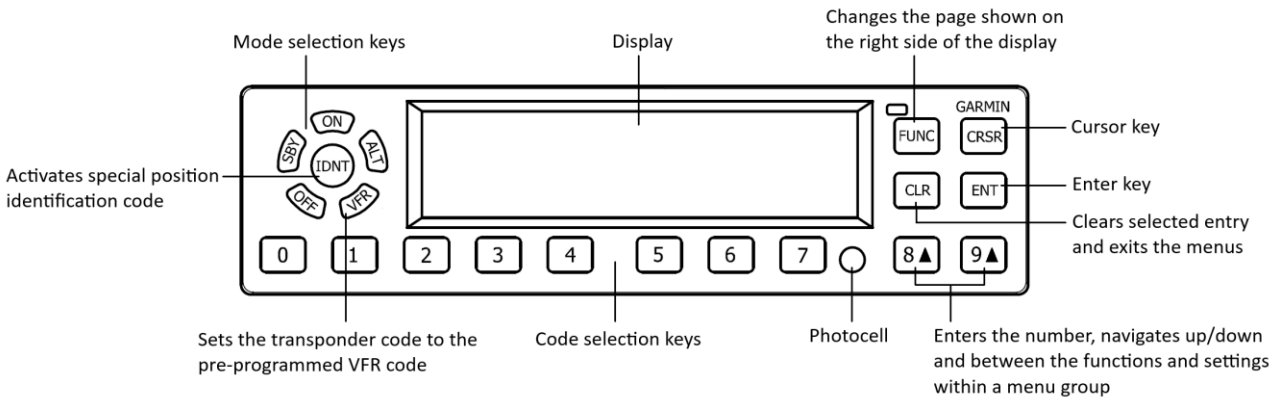

Fig. 7 - 1 Garmin GTX 335 Transponder

GTX 335 Controls

Mode Selection Keys

Mode selection keys are located on the left next to the display. Selected mode is indicated by letters on left side of the display.

OFF key

Switches OFF the transponder. Transponder must be switched off during engine start.

SBY key

Selects the standby mode. The transponder will not reply to any interrogations or transmit ADS-B Out. This is a standard mode during aircraft taxiing.

ON key

Selects the on mode. In this mode the transponder replies to interrogations. Replies do not include altitude information. The reply symbol (R) on the display indicates the transponder is responding.

ALT key

Always use alt mode while in the air and on the ground, unless otherwise requested by ATC. All aircraft air/ground state transmissions are handled via the GTX 335 transponder and require no pilot action. The transponder replies to identification and altitude interrogations. The reply symbol (R) on the display indicates the transponder is responding.

Squawk Code Keys

Code selection is done with eight keys (0-7). Pressing one of the squawk code entry keys begins the code selection sequence. Digits that are not yet entered appear as underscored blanks. When the fourth digit is entered the new code is activated.

ENTERING THE NEW CODE

a. Press the **CLR** key to move the cursor back to the previous digit.
b. Press and hold the **CLR** key to move the cursor back to the first digit.
c. Pressing the **CLR** key when the cursor is on the first digit removes the cursor and cancels the code entry, retaining the last code entered.
d. Pressing the **CRSR** key when entering the code removes the cursor and cancels the code entry. The last code entered is retained.

Important Codes:

NOTE

During regular operation, avoid an accidental selection of the codes intended for emergency: 7500, 7600 and 7700.

- 1200 – the VFR code for any altitude in the U.S.A.
- 7000 – the VFR code commonly used in Europe (refer to ICAO standards)
- 7500 – hijack code (aircraft is subject to unlawful interference)
- 7600 – loss of communications (“LOST COMM” displays under the squawk field)
- 7700 – emergency (“EMERGENCY” displays under the squawk field)

Reply Code

The transponder’s reply to interrogations is indicated by illumination of „R“ symbol located on the display.

IDENT Key

The **IDENT** key activates the IDENT function for 18 seconds. This sets the transponder apart from others on the air traffic controller’s screen. During this time the word “IDENT” will appear in the upper left corner of the display.

VFR Key

Sets the transponder code to the pre-programmed VFR code selected in Configuration Mode (this is case set to 7000 at the factory). Pressing the **VFR** key again restores the previous identification code.

FUNC Key

Pressing the **FUNC** key changes the page shown on the right side of the display. To navigate up/down and between the function pages, press the **8**▲ and **9**▼ keys. Functions include the following:

Transponder (XPDR)

- FLIGHT ID – displays the active Flight ID
- 1090ES TX CTRL – displays the current ON/OFF state of the 1090ES ADS-B Out function

Timers (TMR)

- UP COUNTER – displays a stopwatch style counter
- DOWN COUNTER – displays a count down style counter
- FLIGHT TIMER – displays a flight timer, which measures the elapsed time since the last ground-to-airborne transition
- TRIP TIMER – displays a flight timer, which measures the elapsed time since the last reset of the timer

Altitude (ALT)

- PRESSURE ALT – displays the current pressure altitude
- ALT MONITOR – displays the current altitude deviation from the chosen altitude
- SAT/DALT – displays the current static air temperature (SAT) and density altitude (DALT), when available

System (SYS)

- BACKLIGHT – displays the current backlight level and backlight level offset
- CONTRAST – displays the current contrast level and contrast level offset
- MESSAGES – displays the number of active system messages
- GPS STATUS – displays the status of all configured GPS sources

Chapter 8 HANDLING AND SERVICING

No change.

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