

Approved Model List (AML) For

**Automatic Dependent Surveillance - Broadcast (ADS-B) Out System
using the Garmin GTX 330ES Transponder and Qualified Position
Sources**

Peregrine

STC No. SR00851DE

FAA Approved: \\Todd Dixon\\

Todd Dixon, Manager
Denver Aircraft Certification Office

Original Issue: April 28, 2017

**FAA APPROVED MODEL LIST
For ADS-B Out Airworthiness Approval**

**Peregrine
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1 Revision Log

Revision	Pages	Description	FAA Approval	Date
IR	1-9	Initial Release	<u>\\Todd Dixon\\</u> Manager, Denver Aircraft Certification Office Federal Aviation Administration Transport Airplane Directorate Date: <u>4/28/2017</u>	Original Issue Apr 28, 2017

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2 Introduction

This document is the Federal Aviation Administration (FAA) Approved Model List (AML) for Supplemental Type Certificate (STC) Number SR00851DE, for installing the Automatic Dependent Surveillance - Broadcast (ADS-B) Out System using the Garmin GTX 330ES Transponder and a qualified Global Position System (GPS) with Wide Area Augmentation System (WAAS) into eligible rotorcraft. Qualified ADS-B Out equipment is listed in Section 4, and approved models are listed in Section 5.

This AML approves upgrading an existing Garmin GTX 330 to the GTX 330ES. If necessary, this AML also approves upgrading an existing Garmin GNS 400W/500W Series GPS/WAAS position source.

This AML is only applicable to the 14 CFR Part 29 civilian rotorcraft, listed in Section 5. Installations in 14 CFR Part 23, Part 25, Part 27 and unlisted Part 29 rotorcraft are not authorized under this AML.

Revisions to this AML must be coordinated between the STC holder and the responsible Aircraft Certification Office (ACO), and require FAA approval.

2.1 Prerequisites

This AML assumes the following equipment is already installed on each rotorcraft eligible for this proposed modification. The equipment must be previously installed and properly linked to meet the intended function for the system, as certified under this AML approval.

1. Transponder system, including
 - i. Garmin GTX 330 panel-mounted transponder, and,
 - ii. Technical Standard Order (TSO) Approved transponder antenna that meets TSO-C66 or TSO-C74.
2. A digital altitude encoder that outputs either Gillham code or RS-232 formatted data.
3. GNS 400W/500W Series GPS/WAAS and associated antenna.

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2.2 Limitations

The following limitations apply to this AML STC.

1. Installation of the following required equipment is outside the scope of this AML STC. This AML STC does **NOT** include installation approval of the following
 - i. an altitude encoder,
 - ii. a transponder antenna,
 - iii. a GPS/WAAS antenna.
2. Installation of the position sensors listed in Section 4 is outside the scope of this AML. This AML STC does **NOT** include installation approval of a GNS 400W/500W Series GPS/WAAS receiver and associated GPS antenna.
3. This AML STC approves software upgrades of the position sensors listed in Section 4. Approved software updates are limited to those specifically identified in Section 4 of this AML.
4. This AML STC includes instructions for upgrading an existing Garmin GTX 330 Transponder to a GTX 330ES Transponder. However, this AML STC does **NOT** allow or provide instructions for the installation of the Garmin GTX 330 Transponder.
5. This AML STC does **NOT** allow or provide instructions for installation on a rotorcraft equipped with the following systems:
 - i. Traffic Collision Avoidance System (TCAS) II, and
 - ii. Full Authority Digital Engine Controller (FADEC).

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3 Certification Basis

The certification basis for each qualified model is specified in the type certificate data sheet (TCDS) and modified by the amendment levels noted in Appendix A.

4 Approved ADS-B Out Equipage

This AML STC approves the Garmin GTX 330ES transponder, part number (p/n) 011-00455-60 and 011-00455-80 (software version 7.04 or later) to be paired with a Garmin GNS 400W/500W Series GPS/WAAS receiver listed in Table 1 below.

Table 1: Eligible GNS 400W/500W GPS WAAS Receiver¹

Model Number	Part Number	Description
GNC 420AW	011-01059-()	GPS/WAAS & VHF COM (16W)
GNS 430W	011-01060-()	GPS/WAAS, VHF COM (10W) & VHF NAV (VOR/LOC/GS)
GNS 430AW	011-01061-()	GPS/WAAS, VHF COM (16W) & VHF NAV (VOR/LOC/GS)
GPS 500W	011-01062-()	GPS/WAAS
GPS 500W TAWS	011-01063-()	GPS/WAAS with Terrain Awareness & Warning System
GNS 530W	011-01064-()	GPS/WAAS, VHF COM (10W) & VHF NAV (VOR/LOC/GS)
GNS 530W TAWS	011-01065-()	GPS/WAAS, VHF COM (10W) & VHF NAV (VOR/LOC/GS) with Terrain Awareness & Warning System
GNS 530AW	011-01066-()	GPS/WAAS, VHF COM (16W) & VHF NAV (VOR/LOC/GS)
GNS 530AW TAWS	011-01067-()	GPS/WAAS, VHF COM (16W) & VHF NAV (VOR/LOC/GS) with Terrain Awareness & Warning System

NOTE(S)

1. Garmin GNS 400W/500W Series GPS/WAAS Receiver using main software version 5.20 or later, and GPS software version 5.0 or later is approved for this STC.

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5 Approved Model List

Item	Aircraft Make	Aircraft Model	TCDS	Certification Basis	Master Drawing List / Date	AFM Supplement Number / Date	Instructions for Continued Airworthiness	Notes	Initial Approval / Amendment Date
1.	Airbus Helicopters Deutschland GmbH	MBB-BK 117 A-1, MBB-BK 117 A-3, MBB-BK 117 A-4, MBB-BK 117 B-1, MBB-BK 117 B-2, MBB-BK 117 C-1, MBB-BK 117 C-2	H13EU	14 CFR 29 per TCDS as amended by Appendix A	Peregrine Doc. No. E-AM-15-0022, Rev B, dated 04/28/17, or later FAA approved revision.	Peregrine Doc. No. E-AM-15-0029, Initial Release, dated April 24, 2017, or later FAA approved revision.	Peregrine Doc. No. E-AM-15-0028, Initial Release, dated 02/07/17, or later FAA approved revision.	(1)	Initial Approval Apr 28, 2017

NOTE(S):

- (1) Eligible serial numbers are those that have been examined, tested, and found to comply with German LBA TC # 3049 (or EASA TC # R.010) approved under the U.S TC#H13EU and found to be in a condition for safe operation.

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Appendix A: All Models

Based on 14 CFR §§ 21.115 and 21.101, and the FAA policy for significant changes in FAA Order 8110.48, the certification basis is as follows:

- a. As determined by the Type Certificate Data Sheet (TCDS) of the aircraft for parts **not changed or not affected** by this STC.
- b. Regulations at the amendment levels listed in Table 1 below for parts **changed or affected** by the STC since the reference date of STC application, November 16, 2015.

Table 2: Certification Basis Including Amendments.

Regulations	Amdt.
§ 29.151	29-24
§ 29.301	29-0
§ 29.303	29-0
§ 29.305	29-0
§ 29.307 (a)	29-30
§ 29.337	29-30
§ 29.341	29-0
§ 29.471	29-0
§ 29.561 (a)(b)(3)	29-38
§ 29.601	29-0
§ 29.603	29-17
§ 29.605	29-17
§ 29.607	29-5
§ 29.609	29-0
§ 29.610 (a)(b)(d)	29-53
§ 29.611	29-0
§ 29.613	29-30
§ 29.619	29-0
§ 29.625	29-37
§ 29.671 (a)	29-24
§ 29.771 (a)	29-24
§ 29.773 (a)(1)	29-3
§ 29.777	29-0

Regulations	Amdt.
§ 29.863	29-17
§ 29.1301 (a)(b)(c)(d)	29-0
§ 29.1309 (a)(b)(c)(d)(e)(f)(g)	29-53
§ 29.1316 (b)	29-53
§ 29.1317 (c)	29-49
§ 29.1321 (a)(g)	29-21
§ 29.1322	29-12
§ 29.1351 (a)(d)	29-42
§ 29.1353 (a)(b)	29-15
§ 29.1357 (a)(c)(d)(e)	29-24
§ 29.1359 (a)(c)	29-42
§ 29.1381	29-0
§ 29.1431	29-0
§ 29.1501	29-15
§ 29.1529	29-20
§ 29.1541	29-0
§ 29.1581	29-15
§ 29.1583 (c)(e)	29-24
§ 29.1585 (a)	29-24