uAvionix

Electronic Conspicuity Device (ECD)

SkyEcho

Overview

SkyEcho is the world's first portable ADS-B transceiver. At just 200 grams, it implements 'See, BE SEEN, and Avoid' for aircraft in the UK national airspace. ADS-B Out on 1090ES and ADS-B In on 978MHz UAT and 1090MHz. It exceeds the minimum capability required for a UK CAA CAP 1391 Intermediate ECD. When coupled with an Electronic Flightbag (EFB) Application it provides the pilot with a comprehensive view of surrounding ADS-B equipped traffic.

SkyEcho receives Flight Information Services (FIS) and Traffic Information Services (TIS) over 978MHz UAT where available.

Specifications

- Reports aircraft threats within a 100-statute mile radius in real time.
- Receives FIS and TIS over UAT where available.
- Transmits ADS-B on 1090MHz. Meets MOPS DO-260B Class A0.
- Integrated GNSS SBAS Navigation. Utilizes TSO Certified uAvionix FYX GPS. Meets TSO-C199 Class B.
- SMA Antenna Connector.
- Barometer for Pressure Altitude.
- GDL90 traffic reports over WiFi.

Regulatory

- CAP 1391 Intermediate ECD.
- AMC 1931-4.3 Spurious Emission Radiation.
- Geofence prevents transmission within North America

Specification	Value
Input Power	5V USB 500mW
Size	45x80x135mm
Weight	200grams
SIL/SDA	0/0
Operating Temp	-45 to 80°C
Transmitter	
Frequency	1090MHz ±1MHz
Transmit Power	20W Nominal
Spectral Performance	DO-260B
Receiver	
MTL 1090MHz	-88dBm
1090 Dynamic Range	-87 to 0dBm
MTL 978MHz	-99dBm
978 Dynamic Range	-99 to 10dBm
WAAS GPS	
Augmentation	SBAS
Sensitivity	-167dBm
Altimeter	
Range	-1000 to 60,000ft
Interfaces	
WIFI	
Control	GDL 90
Configuration	GDL 90
Ownship	GDL 90
Battery	
Internal 1200mAHr 5 hour operating life	

ECCN 7A994

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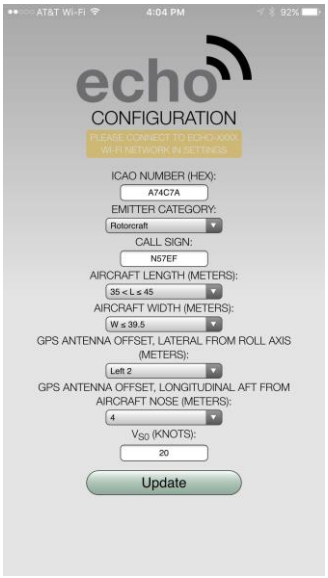
SkyEcho works with GDL 90 Compliant Electronic Flight Bag (EFB) Apps

IOS/Android Configuration App



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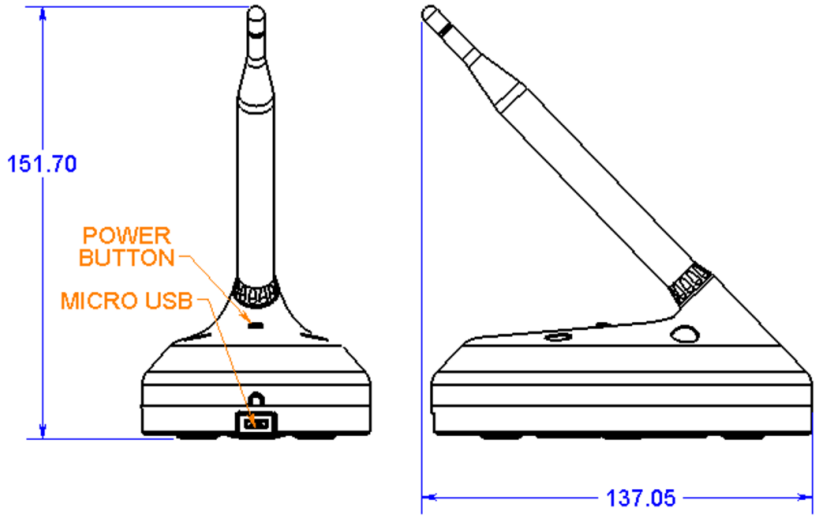
Mechanical Specification



ny antenna certified to TSO-C66, TSO-C74, TSO-C112 with a peak gain of 4 dBi or less, a omni-directional radiation pattern, and a VSWR of 1.8 or less at 978MHz is approved for use 20gr25with this device and will ensure conformance to all applicable standards for RF emissions. Ensure that the polarization of the antenna is as near vertical as possible.

Modifications and use outside of intended scope

This device has been design and tested to conform to all applicable standards in the original form and when configured with the components shipped with the device. It's not permissible to modify the device, use the device for any use outside of the intended scope, or use the device with any antenna other than the one shipped with the device.

Important Pilot Advisory Note Regarding Safety of Radio Frequency Energy

Safe use of this device requires care as to the placement of the antenna. Place the antenna at least 4cm away from any part of your body or that of other cabin occupants. To stop all RF emissions, remove power from the equipment. Only handle the antenna when power is disconnected. Advise your passenger(s) to avoid contact with the antenna while power is applied to the equipment. Retain these instructions with your maintenance logs/files and for future reference.

FCC RF Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits (Table 1 of 47Pt1 (i) 1.1310) set forth for a Public/Uncontrolled environment.

Mode-S or ATCRBS

If the aircraft has an operating Mode-S transponder or ATCRBS beacon, the Transceiver must be deactivated.

Proximity to other equipment

Mount the Transceiver so that is does not compromise the operation of any other proximate communication or navigation antenna or system.

Altimeter Cross Check

The reported altitude must be cross-checked against the aircraft's altimeter during pre-flight.

Harmful Interference

It is the responsibility of the pilot to ensure that the Transceiver causes no harmful interference to other on-board equipment and systems.

Configurable Options

Accessing or altering configurable options not intended to operated may cause pilot distraction.

See and Avoid

This Transceiver is intended to be an aid to 'see and avoid'. Maneuvers to regain adequate separation should not be based on alerts issued by this device alone.

Approvals

Approvals do not cover adaptations to the aircraft necessary to accommodate ancillary equipment such as power provisions, mounting devices or external antennas, such items must still be approved under existing minor modification/change processes applicable to the aircraft.

Warning: This transceiver is to be used to improve pilot situational awareness only and as a navigational aid. It is not intended for use in IFR flight conditions. uAvionix is not responsible for the transceiver's end use and will not be held liable for any events occurring from its use.