1. General

This STC allows the installation of a not ETSO approved “LXNAV ADI2” Instrument to substitute Airspeed Indicator and/or Altimeter and/or OAT Indicator mandated by the Flight- and/or Maintenance manual of the Airplane.

2. Description of the System

The LXNAV ADI2 is an Instrument capable of measuring the Pitot- and Static pressure digitally using calibrated sensors. (Airspeed sensor: Airspeed sensor: 12 bit, 0 to 75 hPa, 370 km/h with resolution less than 0.1 km/h (optional) - Barometric sensor: 24 bit, 10 hPA - 1200 hPa, 10 cm resolution. The values are displayed on a sunlight readable display, the display can be configured using a password protected installation menu. It shall be configured with the applicable coloured Arcs as per AFM. OAT ist measured by electronic pickup of a (wired) temperature sensor. The Compass module uses 3 axis magnetic sensor and complete inertial platform (3axis accelerometer and 3 axis gyroscopes).
On ground, a pilot can change the layout of the device, e.g. to change the additional figures displayed (OAT, TAS, Flight Level) as required for the anticipated flight.
When flight condition is detected by the device (by Airspeed), this menu will no longer be available, the only setting possible in flight is QNH setting, in order to make sure that Airspeed indicator and altimeter are allways available and visible to the pilot.
The Airspeed indicator with the Arcs, the Altitude and the QNH setting will always be displayed and remain fixed.

3. Limitations

- All airplane limitations apply
- Aircraft operation is limited to VFR / Day operation
- The Operation of the Aircraft is not permitted, if either the LXNAV ADI2 or the Backup instrument is not Operative

4. Installation

4.1. Parts effected

4.1.1. Parts removed

Part describtion	Technical Standard Order	Remark
Airspeed indicator	ETSO-C46a or equivalent	Removal as per operators discretion
Altimeter	ETSO-C10b or equivalent	
OAT Sensor/Indicator	None	
Magnetic compass	ETSO-C7b or equivalent	Removal allowed as per operators discretion, if LXNAV Magnetic Compass is installed.

4.1.2. Parts installed

Part describtion	Software release	Remark
ADI2	FW 1.0	Software not field loadable (non FLS)
ADI2	FW 2.0	Software not field loadable (non FLS) **This version is required for MHI Feature**
OAT Sensor	--	LXNAV OAT Probe
Installation material	---	Tube, cables and connectors as required
LXNAV Magnetic Compass	App_MAGC_3.03 or later release	Field loadable Software (FLS) Installation optional as per operators discretion
circuit breaker rated 1A	---	Texas Instruments / Klixon 7277 Series Circuit Breaker or similar

4.2. Prerequisites:

- LXNAV ADI² needs to be configured to show any airspeed limitation required by the Airplane flight manual (AFM, usually section 2) and to the units consistent with other cockpit phylosophy (Metric, Imperial, SM).
  Note: Airspeed indicator layout for Arcs and Markings according to CS 22 can be found in AMC 22.1545 or in the appendix of this instruction.
- An additional electronic Flight display (e.g. electronic variometer, navigation computer or final glide calculator) needs to be installed and configured to be able to show indicated Airspeed (IAS) and barometric Altitude simultaneously on one page. To reduce the probability of failure of both systems at the same time, this additional System shall not be an LXNAV ADI², as well.
  Note: Recommend devices for additional flight display are following: LX90xx or LX80xx series and S-vario series. This list is not complete, installer needs to check each system installed on the aircraft for the suitability
- The instructions in the Maintenance Manual concerning the electrical system must be regarded. The electrical system must be able to cope with the additional load. This regards the capacity of the batteries, the cross sections of the wires and the fuses. In powered sailplanes with battery ignition system, the capacity of the batteries and generators must be large enough to meet the simultaneous demands of the engine ignition system and the greatest demands of any other electrical system components that draw from the same source.
- Maintenance Manual instructions concerning the pneumatic lines and ports must be regarded. After work on the pneumatic installation, the system must be checked for tightness.
- The equipment must securely be attached in the sailplane, must neither endanger the pilot, nor hinder bailing out, nor weaken the structure.

4.3. Installation Process:

- The ADI² must be installed according to LXNAV ADI² user's manual, Version 1.9, Amendment 10, June 2026 or later applicable issue.
- Installation shall be in instrument panel, consistant with existing cockpit layout. Any limitation from Maintenance instructions applies (e.g. Panel weight). As this instrument is the most important instrument for a (powered) glider, it should be placed in a very visible place, e.g. in the top of the panel.
- LXNAV ADI² needs to be wired directly to the Aircraft master switch ("always on") with a resettable circuit breaker rated 1A (e.g. Texas Instruments / Klixon 7277 Series Circuit Breaker or similar). This circuit breaker must not be connected to any other system required for safe flight, explicitly not connected to the electronic device used as backup system
- No alteration to pitot or static ports of the aircraft shall be made
- OAT probe shall be mounted on the measuring spot foreseen by the Airframe manufacturer
- For general purpose and structural considerations, use FAA Advisory Circular AC 43.13-1B + 2B
- "INSTALLATION OF BASIC FLIGHT INSTRUMENTS" Standard Change CS-SC401d can be used as approved data, if Maintenance Manual or similar approved data (Technical Notes TN) do not contain sufficient information

5. Post Installation Configuration, Checkout, and Documentation

- Check that Airspeed Markings / Arcs are in line with basic AFM and TCDS.
- Check Backup instrument is in working condition and configured to be able to display IAS and Altitude simultaneously
- Perform a Pitot-/Static test in accordance with AC43.13 App for LXNAV ADI² and backup instrument
- Perform aircraft weighing according to Flight or Maintenance manual. Update the AFM and placards accordingly
- Add Flight manual supplement "Electronic Airspeed indicator + Altimeter LXNAV ADI²" to AFM, Issue 2, 14.06.2026
- Add placard:

Compass is „Auto calibrate", no deviation table required

- Update Aircraft documentation (e.g. STC/Alteration list, equipment list, weighing report)
- Release aircraft to service according to applicable requirements. Note: This STC is not suitable for the release to service of the aircraft by the pilot-owner
- Note to certifying staff: According to Regulation (EU) 2021/699 and 21.A.307 (c)

(c) Parts and appliances listed in point (b) are eligible for installation in a type-certified product ***without being accompanied by an EASA Form 1****, provided that the installer holds a document issued by the person or organisation that manufactured the part or appliance, which declares the name of the part or appliance, the part number, and the conformity of the part or appliance with its design data, and which contains the issuance date.*

Therefore LXNAV ADI2 can be installed and released without beeing accompanied by an EASA Form 1

6. Instructions for continued Airworthiness (ICA):

On every Airworthiness review:

- Check that Airspeed Markings / Arc are in line with basic AFM and TCDS.
- Check that measuring range of Airspeed indcator is at least 1,05 times Vne
- Check Backup instrument is in working condition and configured to be able to display IAS and Altitude simultaneously
- Check that OAT probe is installed correctly on the measuring spot foreseen by the Airframe manufacturer

It is recommended to perform a Pitot-/Static test in accordance with FAR 43 App E every 12 month for LXNAV ADI2 and backup instrument. Airspeed indicator readings during this test shall be within the limits of ETSO-C46a Revison, 24.10.03, as shown in the table below.

Speed (IAS)			Impact/Pitot pressure		Tolerance		
Knots	mph	Km/h	InchHG	hpa	Knots	mph	Km/h
50	58	93	0,1198	4,06	4	4,6	7,4
60	69	111	0,1727	5,85	2	2,3	3,7
80	92	148	0,3075	10,41	2	2,3	3,7
100	115	185	0,4814	16,30	2	2,3	3,7
120	138	222	0,695	23,54	2	2,3	3,7
150	173	278	1,091	36,95	2,5	2,9	4,6

It is recommended to periodically send the unit to the Manufacturer or authorized representative for an inspection every 5 years to perform pressure calibration if needed.

- Check AFM is updated containing the Airplane flight manual supplement (AFMS) “Airplane Flight Manual supplement: Electronic Airspeed indicator + Altimeter LXNAV ADI2” Dated 14.06.2026 **(Revision: 19.10.2025 is permissible, if no compass feature is installed)**

Occurrence reporting: In case of issue with the LXNAV ADI2, please contact:

LXNAV d.o.o., Kidričeva ulica 24, SI- 3000 Celje via telephone +386 592 33 40 or with an email info@lxnav.com

Appendix: Example of the presentation of an air-speed indicator complying with this requirement (AMC 22.1545)

