



ADL150

User and Installation Manual

Version 1.00

15.02.2017

1 Version History

Version 1.00 published 15.02.2017

2 Page Index

This manual contains numbered pages 1 to 12.

3 General Description

The ADL150 is a satellite weather receiver for permanent installation with separate antenna.

4 Emergency procedures

If you suspect any malfunction of the ADL150 or interference with other aircraft systems, deactivate the device by pulling / deactivating the aircraft circuit breaker for the device or pulling the cigarette lighter plug whichever is applicable. Do not reactivate the device until the problem has been investigated and resolved on the ground.

In case of a generator failure or similar situation requiring electric load shedding, deactivate the ADL150 by pulling / deactivating the aircraft circuit breaker for the device or pulling the cigarette lighter plug whichever is applicable.

5 Certification ADL150

The ADL150 can be installed permanently in certified aircraft if a suitable minor change is used. The device itself does not come with any certification. Please consult the minor change documentation for details.

6 Disclaimer

The ADL150 is provided as a non certified component. The only basis on which it can be installed is an appropriate minor change. It is the sole responsibility of the user and installer that is installed and used in a legal way. The device may stop working at any time. Do not undertake flights you would not undertake without the ADL150.

7 Warning!

While we do everything we can to ensure quality the ADL150 devices might not work at any time. In addition they may display false information. **Never penetrate weather based on the information provided by the ADL150.** This information is for situational awareness only. The device features a GPS moving map system. This system is designed to display the aircraft position in relation to the weather data. It is not designed as a means of primary navigation. Especially the build in database is not updated in a regular aviation cycle. It is also not maintained to the standards of certified aviation databases.

8 The Iridium satellite service

Before you can use the ADL150 you have to subscribe to one of our Iridium satellite service plans. Please login to the ADL customer portal to order the different service plans:

<https://www.ing-golze.de/login.jsp>

If you have no login yet please contact us by email at adl@ing-golze.de.

PLEASE NOTE: The ADL150 will show satellite signal even without an active satellite service plan and will be able to transmit data. But this data will not be processed and the device will receive no answer.

9 Dimensions and mounting details

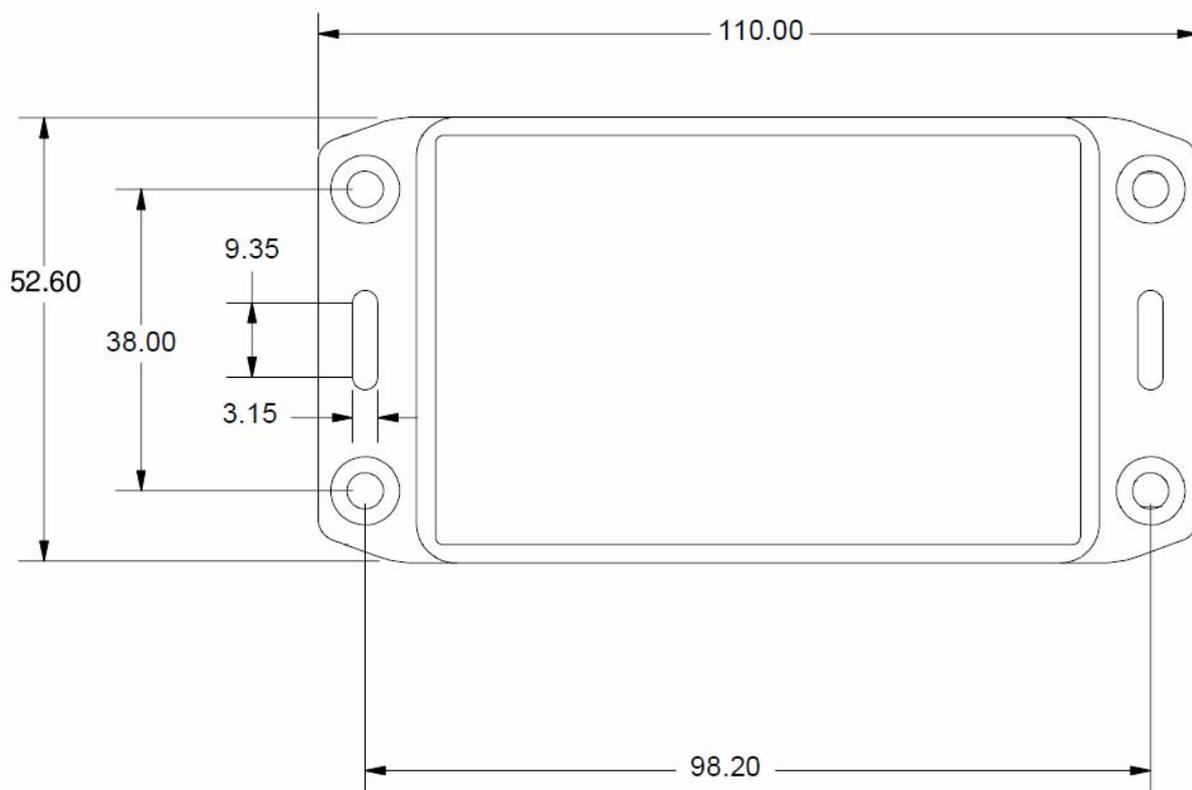


Figure 1 ADL150 footprint (all measurements are given millimeters)

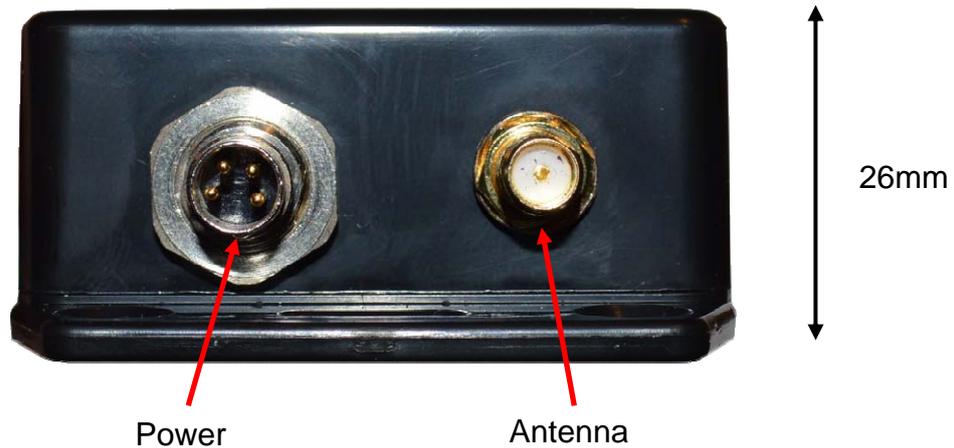


Figure 2 ADL150 side view

Attach the ADL150 with four M4 screws or similar imperial mounting hardware. Provide enough clearance so the Micro USB port can be reached for later firmware updates. Pay attention not to interfere with any other aircraft systems like steering, wiring etc. Make sure the device is sufficiently attached so it can not become lose in flight.

10 Power connector

The USB micro socket on the side of the ADL150 will not power up the device. It is used for firmware updates only. Connecting a device through the USB port will deactivate the ADL150 WiFi and it will enter the update mode.

The ADL150 requires two connections. First the device has to be connected to a continuous power source. It will accept 7-36 Volt and consumes about 1 Watt. The ADL150 has got an internal emergency fuse but it should be protected externally typically by a 1 Amp circuit breaker. This circuit breaker should also be accessible in flight so the crew can deactivate the ADL150 if any malfunction is suspected.

As an alternative a portable cigarette lighter power cable is available. Those power cables are identical to ADL140 power cables.

The green LED on the side of the ADL150 enclosure will illuminate if power is supplied.

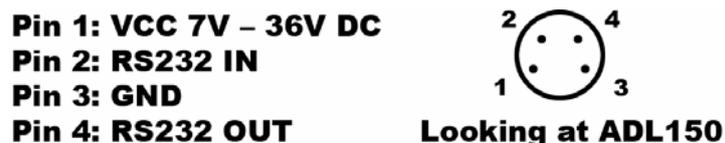


Figure 3 ADL150 power connector pins

As an option the ADL150 can be supplied with RS232 Aviation data or NMEA data from an on board navigation system. If "FPL IN" is activated in the ADLConnect app the

ADL150 will read the current flight plan from the RS232 source. The NEMA signal should be 9600 8N1. There is also a RS232 output for future use but the current firmware does not output any data.

The connector on the ADL150 is called "RSMHL 4" and a matching connector for installation purposes would be "RKMCK 4" from Belden or an equivalent from another vendor.

11 Antenna connector

The ADL150 requires a separate Iridium antenna. The antenna is connected through a SMA female socket on the ADL150.

The ADL150 will work with a wide choice of antennas. Usually you will be supplied with an indoor Iridium antenna which is typically placed directly below the aircraft front window with good view to the sky. In most installations this will result in good reception. But the use of antennas mounted on the external fuselage of the aircraft is also possible.

If external antennas are installed additional certification paperwork will be required.

Please note that normal SMA connectors are used and not SMA reverse connectors which are popular for other applications.

The antenna signal can be extended up to at least 4 meters total cable length. Probably longer cables will also work but 4m was the longest cable length which was tested.

12 Connecting your iPad/iPhone/Android device to the ADL150

After powering up the ADL device you have to connect your portable device to the WI-FI access point provided by the ADL device. Go to the setting screen of your device. We show this step for the Apple iPad but other devices will work in a similar way. Choose "Wi-Fi" on the left side. Then on the right side you will see the network "ADLConnect". Choose this network and make sure the iPad really connects to the ADLConnect wireless network.



Figure 4 iPad Wi-Fi settings

13 Installing the ADLConnect App

Before you can start to use the ADL devices with your mobile device, you have to install the ADLConnect iPad App. On Apple devices open the app store and search for “ADLConnect” and install the free app. On Android devices please open the Google play store and also search for “ADLConnect”.

14 Starting the ADLConnect app

Start the ADLConnect app. The top status bar will indicate if the app is connected to your ADL device. When connected the Iridium and GPS signal quality will be displayed in the top left corner.

If the app displays “Internet mode”, "WWW" or "Offline" in the top status bar it is not properly connected to the ADL150. Please check your WiFi settings.

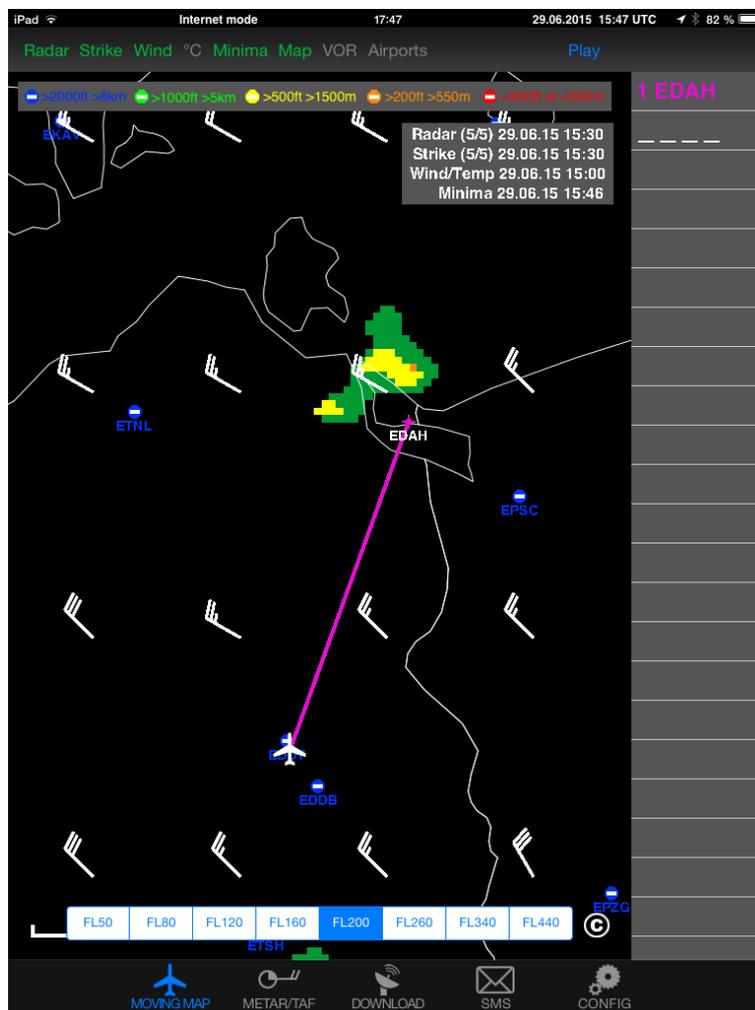


Figure 5 iPad ADLConnect user interface

15 Entering your login from Deutscher Wetterdienst

At the top part of the Config page you have to enter your login from Deutscher Wetterdienst. For details on how to get these please refer to the separate manual “DWD Subscription Guide” available on <http://www.ing-golze.de> in the “Support” section.

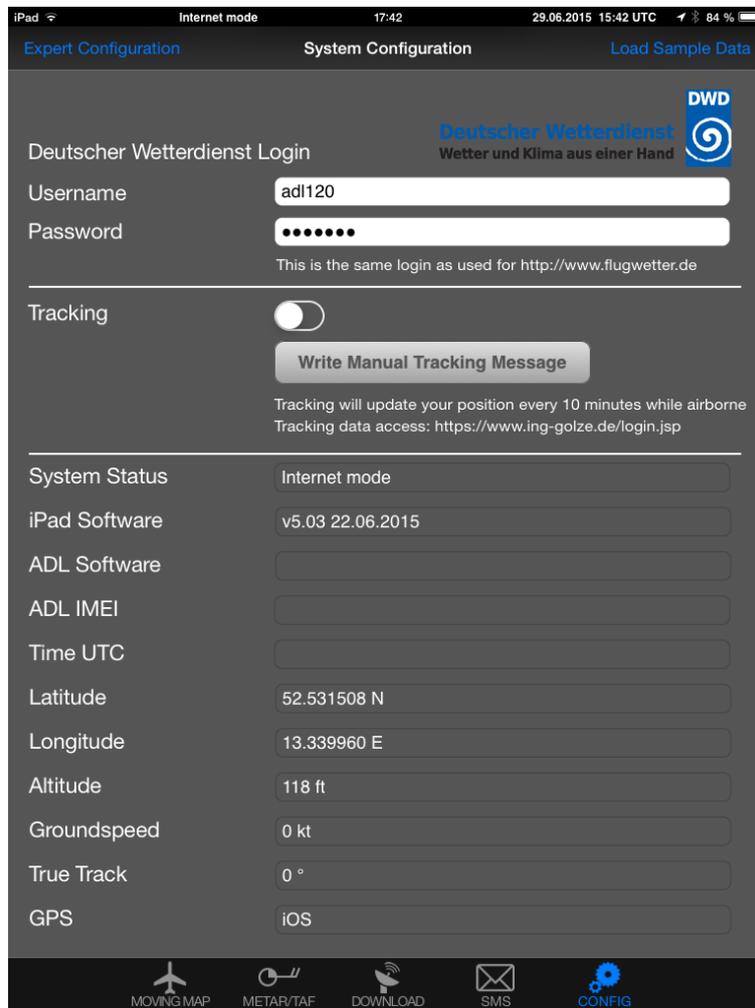


Figure 6 Entering the DWD login on the Config page of the iPad app

16 Your first weather download

Go to the Download page. Select Radar: FPL MQ, Strike: FPL, Wind/°C: FPL, Minima: FPL and enter the ICAO code of an international airport below (for example EDDB).

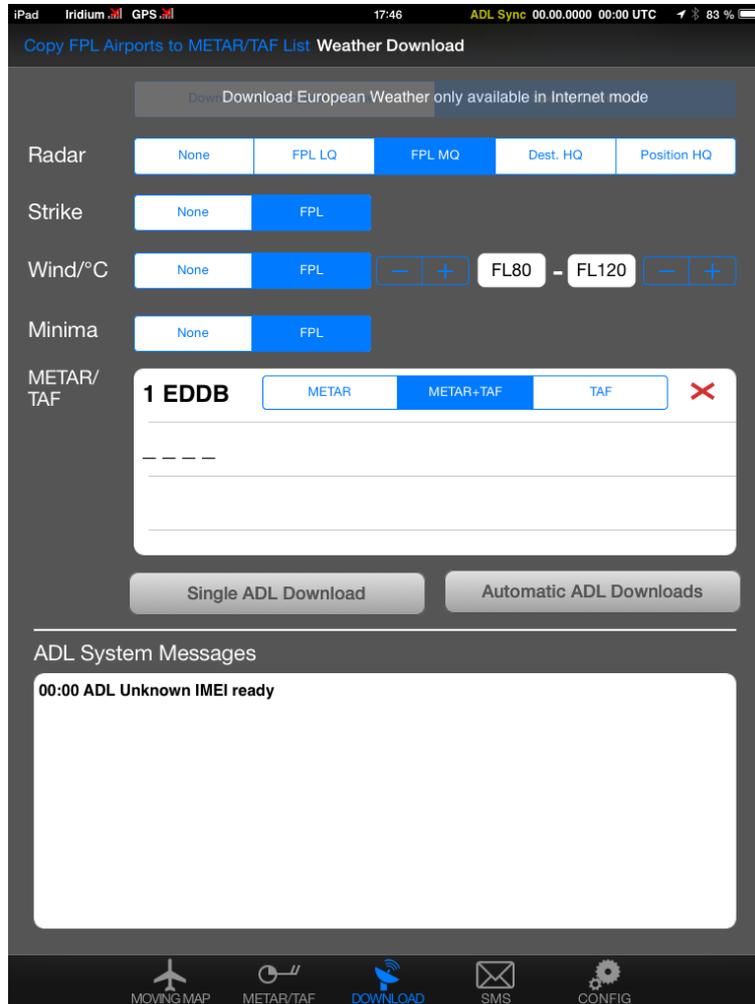


Figure 7 SAT Page

Below press the button "Start ADL Download" and confirm you want to start the download. You can see the status messages of the ADL device below. If you have good satellite reception and your DWD login is correct you will soon have downloaded the weather data. Finally go to the MOVING MAP and METAR/TAF page, where you will find your downloaded weather information.

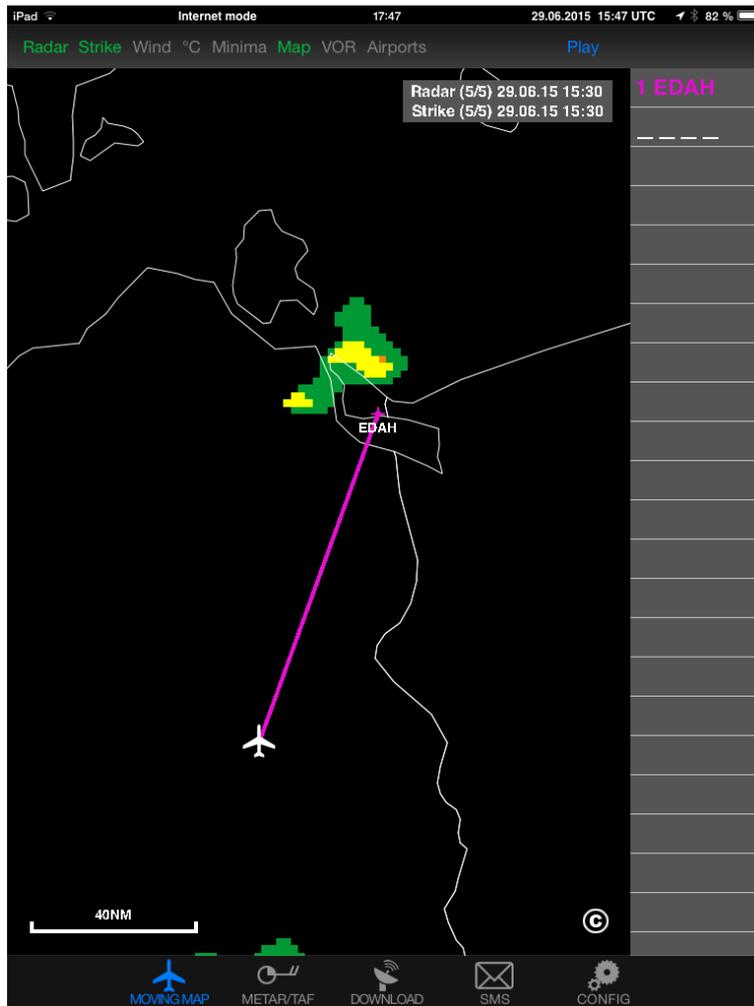


Figure 8 Latest radar information shown on the moving map.

For a more detailed description please consult our tutorial video showing how to use the ADLConnect which is available from the website <http://www.ing-golze.de>

17 ADL150 Technical data

- WiFi Interface for iPad/iPhone interconnect
- External Iridium antenna required
- No battery, external power supply (7-36V, 5W) required
- Dimensions: 110 x 53 x 26mm
- Mass: 140g

18 ADL150 Label

Below is a copy of the label printed on the top of every ADL150 device for reference

ADL150 - Satellite weather receiver

1 Pin assignment

- Pin 1: VCC 7V – 36V DC
- Pin 2: RS232 IN
- Pin 3: GND
- Pin 4: RS232 OUT



Looking at ADL150



Golze Engineering
In flight data link weather

2 Usage

- Install the ADLConnet iPad/iPhone app
- Connect the power supply and verify green LED is on
- Make sure Iridium antenna is connected and facing the sky
- Connect your iPad/iPhone with the WiFi "ADL Connect"
- Open the ADLConnect app to control the ADL150
- Satellite subscription required for weather downloads

3 Limitations

- Never use as a primary means of navigation or weather avoidance!
- Use USB Micro connector for firmware updates only
- Operating temperature range -20°C - 70°C

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Made in Germany

Figure 9 ADL150 Label

19 Contact

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