

Displaying ADL Weather in SkyDemon All ADL Devices and ADLConnect App

Version 2.00

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1 Version History

Version 1.00 published 01.11.2019 Version 2.00 published 12.04.2022

2 Page Index

This manual contains numbered pages 1 to 11.

3 Emergency procedures

If you suspect any malfunction of the ADL device 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 ADL device by pulling / deactivating the aircraft circuit breaker for the device or pulling the cigarette lighter plug whichever is applicable.

4 AHRS Warning

Some ADL devices come with a non-certified experimental AHRS. THIS AHRS IS NOT DESIGNED OR SUITABLE TO CONDUCT ANY IFR/IMC FLIGHT. IT IS DESIGNED FOR ENTERTAINMENT PURPOSES ONLY, DRIVING SYNTHETIC VISION IN SUITABLE iPad APPS AND SIMILAR.

DO NEVER FLY THE AIRCRAFT BASED ON THE ADL DEVICE AHRS! USE ONLY CERTIFIED INSTRUMENTS FOR THIS TASK.

5 ADS-B Traffic Warning

Some ADL devices come with a non-certified 1090 MHz ADS-B receiver. Not all aircraft are broadcasting 1090 MHz ABS-B and the non-certified nature of the ADL devices means that, due to antenna installation etc., it could miss signals from aircraft broadcasting ADS-B. THEREFORE, NEVER RELY ON THE ADL DEVICE FOR COLLISION AVOIDANCE!

6 Weather Warning

While we do everything we can to ensure quality of the ADL devices, they might not work at any time. In addition the system may display false information. **NEVER PENETRATE WEATHER BASED ON THE INFORMATION PROVIDED BY THE ADL DEVICE.** 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. **THE ADL DEVICES ARE NOT SUITABLE AS A MEANS OF PRIMARY NAVIGATION**. Especially the build in database is not updated in a regular aviation cycle. It is not maintained to the standards of certified aviation databases

7 General Description

It is possible to display weather data downloaded using the ADL system in SkyDemon. Please make sure you are running the latest version of the ADLConnect app (currently version 9.00) and also the ADL device firmware (currently version 9.00) if applicable.

It is important to understand there are actually two different mechanisms used to send the weather data to SkyDemon. First the ADLConnect App Broadcasts the weather data and second the ADL device broadcasts the weather and traffic data.

7.1 ADLConnect App Broadcasts Weather Data

The ADLConnect iOS app will send the weather data to SkyDemon directly. Currently this feature is not yet available on Android. This mechanism will be used in the following cases:

- Operating a legacy ADL110B, ADL120 or ADL130 device
- Using the ADLConnect for Iridium GO! feature
- Using the ADLConnect app stand alone with Internet based weather downloads

Before using this feature make sure the configuration is correct. In the iOS settings for ADLConnect make sure all authorizations are set as shown below. Pay special attention the location authorization is set to "Always".

4:10 Tue 12 Apr	Settings			ADLConnect	√ 100% ⊑
ADLCor	nnect	ALLO	DW ADLCONNECT TO ACCESS		
AirPort	Utility	1	Location		Always >
🌍 app2dri	ve	۲	Contacts		
Apple S	tore		Local Network		
Clips			Siri & Search		>
😻 Dropbo:	x		Notifications Banners, Sounds, Badges		>
ForeFlig	ht	((T))	Mobile Data		
🥳 Garagel	Band		Document Storage		iCloud Drive >
GoodRe	ader				
GoPro G	Quik				
iMovie					
Gen Iridium (GO!				
🖄 Iridium I	Mail				
🚹 Keynote	2				
📥 myWorl	d				
• • • • • • • • • • • • • • • • • • •				5 <i>a</i> • <i>a</i>	

Figure 1

ADLConnect iOS authorizations

Then regarding SkyDemon also check the authorizations according to the screenshot shown below. Pay special attention to the Local Network authorization.

6:36 Tue 12 Apr		🗢 100% 💋
Settings	SkyDemon	
iMovie	ALLOW SKYDEMON TO ACCESS	
Iridium GO!		Always >
🚊 Iridium Mail	Local Network	
1 Keynote	Siri & Search	>
amyWorld	(1) Mobile Data	
Netflix		
Numbers		
Z Pages		
photoTAN		
ኛ Pilot		
Prime Video		
Recorder		
😽 Sky-Map		
SkyDemon		
VoiceRecorderLite		



Then open the ADLConnect app and verify the settings on the Config page of the app. Make sure the "App GDL90" setting is configured to "SkyDemon".

16:37 Tue 12 Apr	Internet mode	•••			1 🗢 100% 📢		
Expert Config		System Con	figuration		Load Sample Data		
Region	Europe Brazil	USA/CAN Pacific	Asia Australia				
Region selection assures th	e download all weather	data feature download	s the right data.				
Ann GDI 90	EgreElight SkyDe	mon Garmin S	kyMan Inactive				
Streams weather to other a	pps unless ADL140/150	(B)/160/170/180/190/20	00 are connected.				
Those devices will stream G	DL90 directly. Feature	requires iOS location a	ways authorization.				
SOS Contact							
SOS Text (0/60)							
	Send	SOS MSG					
SOS contact (mobile phone Press "Send SOS MSG", mo	SOS contact (mobile phone or email) and a text will only be used to pre fill an SOS message. Press "Send SOS MSG", modify the draft and then send manually.						
Iridium/Cellular	Hybrid	ADL200 Only	Iridium only				
Allows operating the ADL20	0 in cellular or Iridium o	only mode. Usually used	d only for testing				
Ownship (ADS-B)	Automatic (Del	ault)	Manual				
Callsign (ADS-B)		nship (ADS-B) Manual	y Only				
Show Traffic Above	Unlimited						
Show Traffic Relow	Unlimited	- +					
MOVING MAP	— " Met	AR/TAF		MSG			

Figure 3 ADLConnect App GDL90 Setting

Then download new weather in the ADLConnect app data using whatever technology you are using (Legacy devices ADL110B/120/130, Iridium GO! or Internet). When using the Internet mode, we recommend downloading only the flight plan corridor in order to limit the amount of weather data distributed to SkyDemon later on.

14:37	Tue 12 Apr	Internet mode		1 🗢 100% 🐲
			Weather Download	
Download All Weather		Weather		
E.D.	L Corridor	Position EDDB (79	NIRAL	
FP	L Cornaor	(FPL editing on right side of	(NIVI) f MOVING MAP page)	
Wi	nd / Temps	FL50	– FL260 – +	
MF	TAR + TAF (ICAO	Codes max 8)	Copy ICAO Codes from FPL	
E	JDP			
	Single Inter	net Download	Download completed	
	olingie interi			
Inte	ernet Download	Massagas	Ok	-
		wiessages		i de la companya de l
12:	37 WWW Starting Si 37 WWW Connecting	ngle Download g		
12:	37 WWW Reading W 37 WWW Decoding V	/eather (100%) Weather (100%)		
12:	37 WWW Download	completed (1P / 262B)		
	MOVING MAP	METAR	TAF VPDATE WX	
	1	0	l.	Q ^m

Figure 4 Downloading new Weather Data over the Internet

Once the latest weather data is visible in the ADLConnect app, switch over to SkyDemon. Then please follow the steps described below in chapter "Displaying Weather Data in SkyDemon".



Figure 5 ADLConnect Displaying the Latest Weather Data

7.2 ADL Device Broadcasts Weather Data

When using an ADL140, ADL150, ADL150B, ADL160, ADL170, ADL180, ADL190 or ADL200 device the weather data is broadcasted directly from the device. To avoid interference the ADLConnect app will shut down its own broadcast automatically.

To make sure this feature works properly, please install the latest available ADL device firmware (currently version 9.00). Then connect to the ADL device WiFi and open the ADLConnect app "Config " page. WiFi GDL90 should be enabled and configured in the SkyDemon mode. Please do not forget to press save and reboot ADL below after making changes.

16:37 Tue 12 Apr	Iridium 湖 GPS 📶 4G all	•••		12.04.2022 14:37 UTC	🕇 100% 🛃
Expert Config		System Conf	iguration	Load Sam	ple Data
RS232 and WiFi Configuration					
RS232 GDL90 Active (Default)		Inactive	Custom		
	Avidyne Ga	armin GMX20	0 Other		
RS232 Baud Rate	9600 (D) 19200	38400 5	7600 115200		
WiFi GDL90	Active (Default)	Inactive	Custom		
	ForeFlight Skyl	Demon Garmin	i SkyMap		
WiFi Mode	Access Point (Default)	Client	Custom Access Point		
WiFi SSID					
WiFi Password		'iFi Mode Client Only			
WiFi Subnetmask					
WiFi Channel	Default Cus	tom Access Point or	ily 6		
	Save and Reboot	ADL Ca	ncel Changes		
		TAF	UPDATE WX		

Figure 6 WiFi GDL90 Configuration for Devices ADL140 and later

Now you can download some weather data using the ADL device. This point is important, the ADL device will only broadcast weather data it did download over the Iridium satellite or the integrated 4G link of the ADL200. Once the latest weather data is visible in the ADLconnect app, switch over to SkyDemon.



Figure 7 Downloading Weather Data Using an ADL200



Figure 8 ADLConnect Showing the Latest Weather Data and Traffic from ADL200

8 Displaying Weather Data in SkyDemon

Switch over to the SkyDemon app. If this is the first time displaying the ADL weather on SkyDemon ,please select the little wheel as shown below. Then select "Third-Party Devices"



In the following menu make sure the "GDL-90 Compatible Device" option is activated. This is a one time configuration only.



Figure 10 Activate "GDL-90 Compatible Devices" © SkyDemon

On every start of the SkyDemon app you can now press the "Go Flying" button. SkyDemon will offer you the "Use Location Services" and "Use GDL90 Compatible Device" options. The first will use your iPad internal GPS ad not display and ADL weather. The second option will use the ADL as the GPS position source and also pick up the traffic and weather from the ADL device if available.



Figure 11 Select "Use GDL90 Compatible Device" © SkyDemon

The following screenshot shows ADL traffic and ADL radar data displayed on the SkyDemon map. If you do not see and radar data make sure the Rainfall layer is activated. Therefore press the SkyDemon Logo, select "Weather" and make sure the Rainfall button is activated.

ADLConnect 😪 🎋	21:43 /4E / * 100	% 💼 +
Segeletz	On the Ground Berlin Charite Campus Virchow-Klinikum	7
SkyDemon		IOTAM
Pilot Log	V +7.9 Werneuchen	×
Scratchpad	Ewgozi	eather
Find Waypoint	Berlin +12.3 +36.9 -EUUS4EA	
Logging	totsdam	Airfields
Direct To >	Priege	
Route	Schoenhagen	Radio
Weather >		
Setup >	sLager 35 N 01 n2	
Stop Navigating	26, terrain and other features ahead of you. Berlin Charite Campus Virch	
Engine Time 0:00:00	Blocks Time 0:00:00 Elevation 170 ft	, n))
Log Engine Start	Log Off Blocks	/

Figure 12

Select "Weather" © SkyDemon



Figure 13 Select "Rainfall" © SkyDemon

The screenshots below shows the radar data displayed in SkyDemon. Please note that the red area is data without any current radar data downloaded. Also note the METAR and TAF information also transmitted by the ADL device displayed on the right side.



Figure 14 SkyDemon Displaying Radar and METAR/TAF © SkyDemon

9 Contact

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