

# Theorieabend zum GliderCup 2014

10. April 2014

Thema:

**LX9000 / SGL Profil / LX Styler**

Armin Müller

# Agenda

- **Vorbereitung**
  - Download der LXSim
  - SGL-Profil laden
  - Wegpunkte und Aufgaben laden
- **Vorstellen LXSim**
- **Vorstellen SGL Profil**
- **Eigenes Profile erstellen**



# Was ist ein LX Sim – Simulator?



# Was machte ein LX Styler – Profil Editor?



The screenshot displays the LX Styler software interface, titled "LX Styler [sgl2013.lxprofile]". The interface is divided into several vertical panels, each with a different mode selected:

- Airport mode:** Shows a 3D terrain map with a flight path starting from an airport. Data at the bottom: 318°/21, 33m, 27.2km.
- Waypoint mode:** Shows a 3D terrain map with a flight path connecting waypoints. Data at the bottom: 318°/21, 33m, 27.2km.
- Task mode:** Shows a 3D terrain map with a flight path for a task. Data at the bottom: 318°/21, 33m, 27.2km.
- Statistics mode:** Displays a logbook table and a statistics panel. The logbook table is as follows:

No.	Date	Time	Start	End
1	13.04.09	11:22	15:14	03:51
2	08.04.09	11:45	15:59	04:13
3	13.06.06	06:03	16:20	08:17
4	23.04.06	09:23	13:14	03:51
5	21.04.06	06:52	14:57	06:04

The statistics panel shows: Avg. vario: 2.0%, Avg. speed: 0.0%, XC speed: ---, Dis. flow: 0.00m, Circling: 29%, Duration: 0:00:28.
- Setup mode:** A menu for configuring the software, including options like "QNH and RES", "Flight Recorder", "Vario Parameters", "Display", "Files and Transfer", "Graphics", "Sounds", "Observation Zones", "Optimization", "Warnings", "Units", "Hardware", "Polar and Glider", "Profiles and Pilots", and "Language".
- Info mode:** Displays flight information such as "GPS: 3D/5", "06:13:05 - 02.07.10", "Altitude: 213m 698ft", "FLLevel: 213m FL007", and "Height: ---m ---ft". It also shows a "No report point" message and a 2D map.
- Near mode:** Lists nearby airports with their coordinates and altitudes. The list includes:

Name	Lat	Lon	Alt
CELJE	46.143°	13.68°	182m
Marina Grader LJ	46.133°	13.671°	400m
Prebold Kaplja	46.108°	13.651°	467m
Zagorje Ob Sava	46.194°	13.232°	736m
Kalobje	46.154°	13.155°	736m
Konjice Senozet	46.220°	13.728°	758m
Loce Ad	46.220°	13.728°	759m
Velenje Lajse	46.207°	13.211°	818m
Kostrivnica	46.285°	13.898°	897m
Senjanz LJ X	46.267°	13.844°	924m
Imero	46.331°	13.133°	946m
Gresnjavec LJ	46.327°	13.678°	1003m
Zg Kostrivaro LJ	46.263°	13.868°	1009m
Belinc Kozje	46.319°	13.258°	1017m
Slovenj Gradec	46.258°	13.444°	1070m
Mali Kamen Topol	46.335°	13.368°	1072m
Pilistan LJ	46.314°	13.248°	1107m

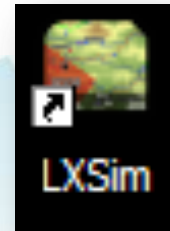


# Vorbereitung – download und installieren

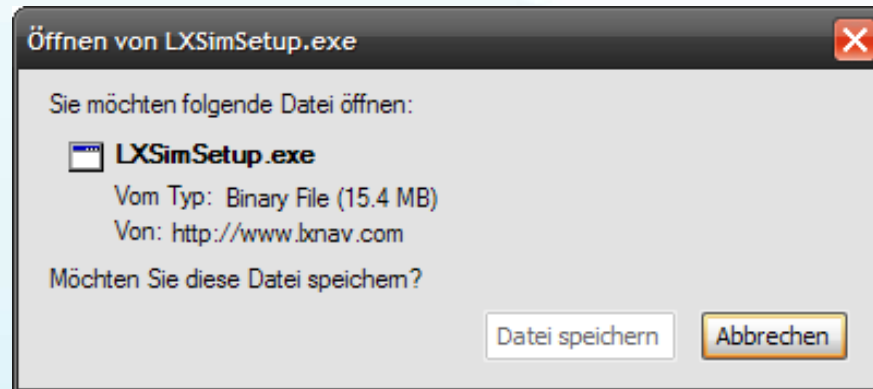


<i>LX 9000 Downloads</i>
<ul style="list-style-type: none"><li>• English manual Ver.: 2.70</li><li>• German manual Ver.: 2.60</li><li>• French manual Ver.: 2.70</li></ul>
<ul style="list-style-type: none"><li>• Latest firmware: 3.03</li></ul>
<ul style="list-style-type: none"><li>• Database December 2013 rev 1</li></ul>
<ul style="list-style-type: none"><li>• Software IGC validation</li><li>• Software LX Asapt Editor (Beta)</li><li>• <b>Software LX Sim</b></li><li>• <b>Software LX Styler</b></li></ul>
<i>LX 9000 Media</i>
<ul style="list-style-type: none"><li>• Brochure German</li><li>• Brochure English</li><li>• Images LX 9000</li><li>• Images LX 9000</li></ul>

[www.lxnav.com](http://www.lxnav.com)



## Vorführung LXSim

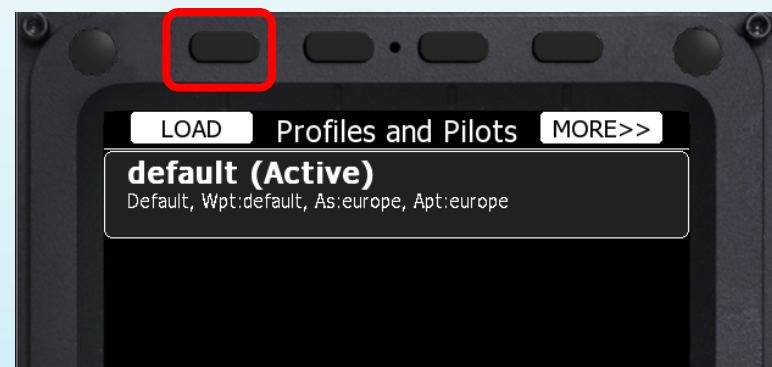
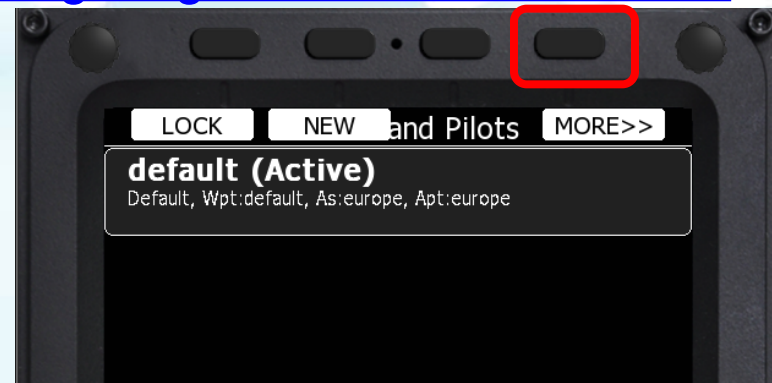


<http://www.lxnav.com/products/lx9000.html>

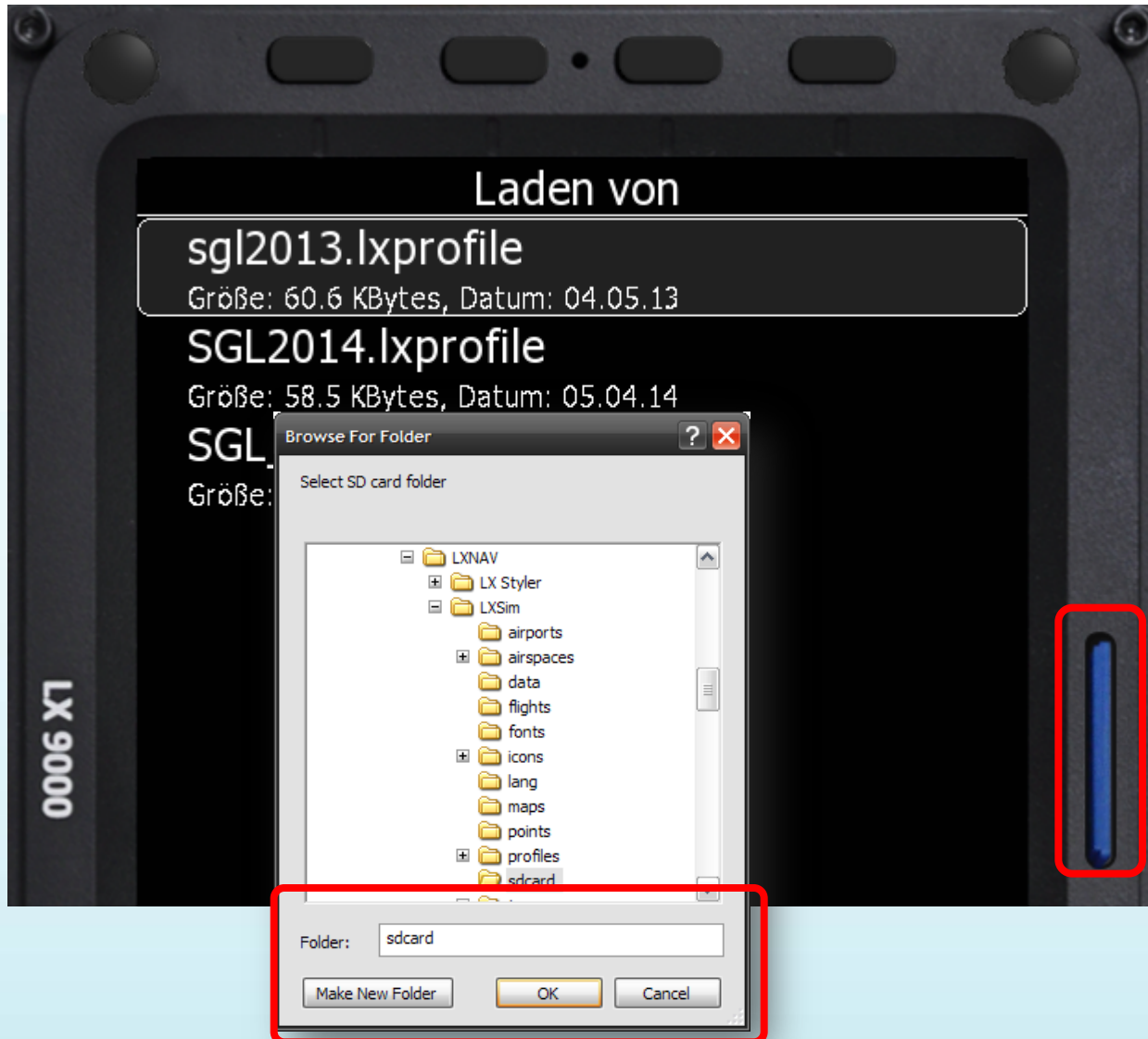
# Piloten und Profile laden

- SGL Profil laden

<http://www.schaenis-soaring.ch/flugzeuge/instrumente/lx-9000/>



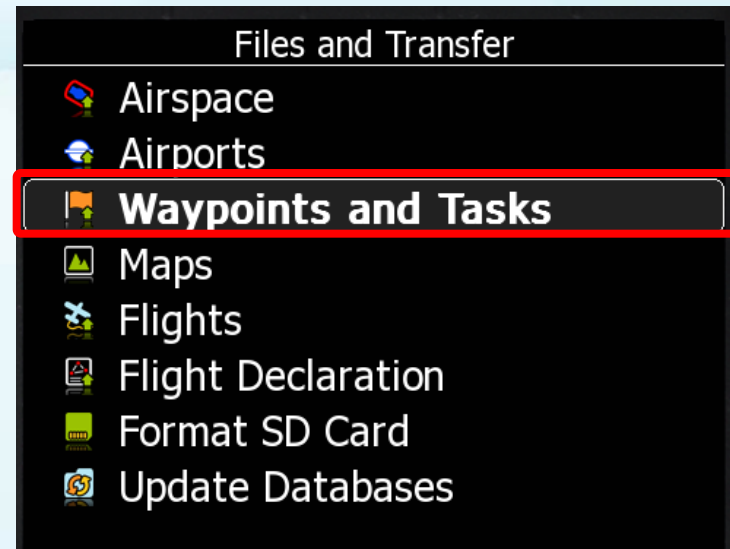
# Lade von der SD-Card



# Vorbereitung

- Wegpunkte und Aufgaben laden

<http://www.schaenis-soaring.ch/c-buero/wettbewerbe/glidercup-2014/aufgabenkatalog/>



Die Wegpunkte der SGL:

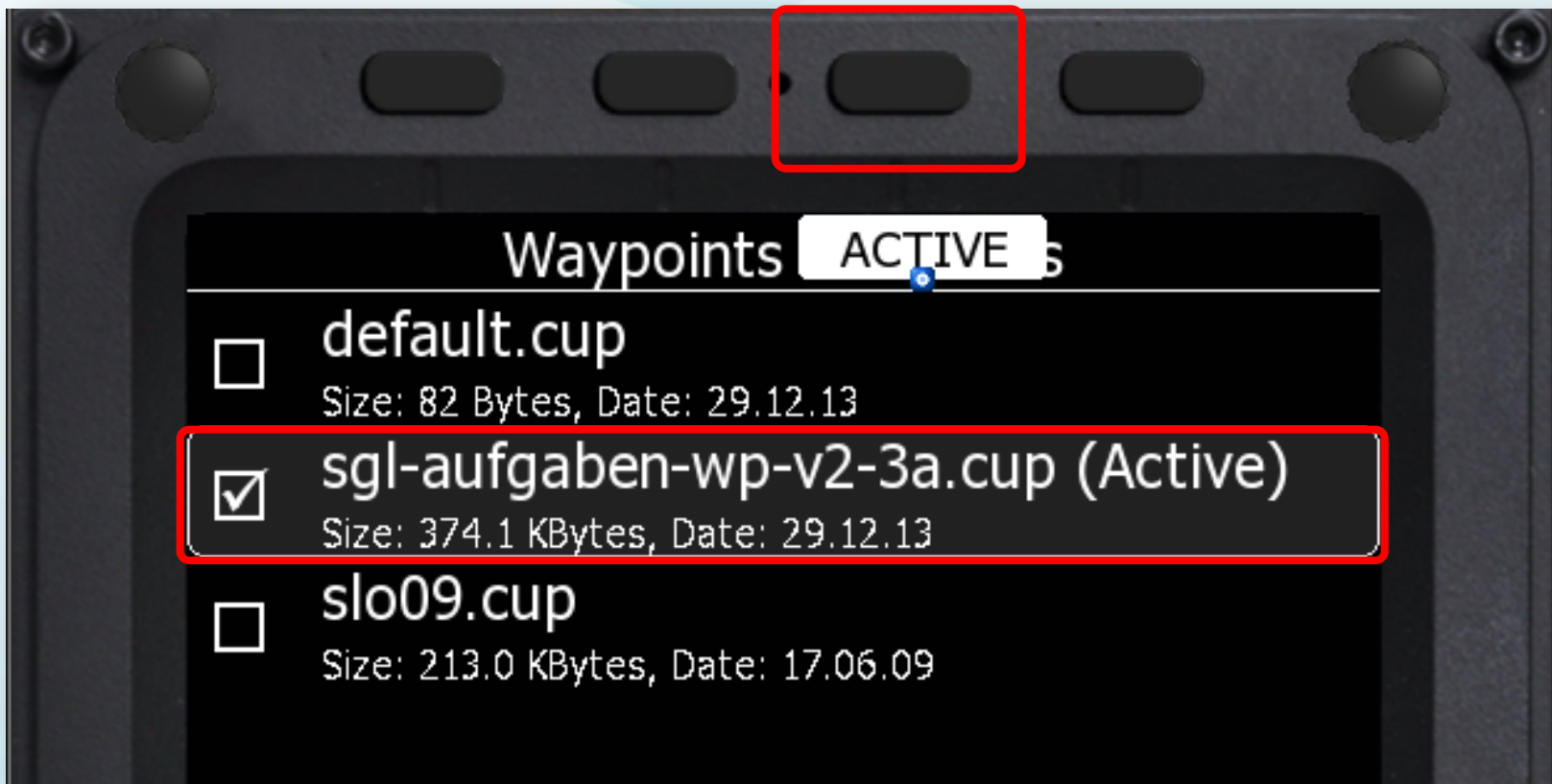
 [SGL-Aufgaben-WP-V2-3a.cup](#)  
374 K

[SGL-Aufgaben-WP-V2-3a.cup](#)

# Wegpunkte und Aufgaben aktivieren



- Die importierte Datei (cup) muss **aktiviert** werden!





# Wegpunkte und Aufgaben sind geladen



**Wegpunkte und Aufgaben** sind die Basis um eine GliderCup – Aufgabe fliegen zu können.

The screenshot shows a flight computer screen with a black background and white text. The screen displays a list of waypoints and tasks. The list is organized into columns: Name, Dis. (Distance), Brg (Bearing), and Arr (Arrival). The waypoints are listed in descending order of distance from the starting point. The screen also features a "VIEW" button at the top, a "SORT" button at the bottom left, and a "GOTO" button at the bottom right. The model number "LX 9000" is visible on the left side of the device.

Name	Dis.	Brg	Arr
SCHAENIS	0.25 <sub>km</sub>	262°	-211 <sub>m</sub>
MOLLIS(MIL)	10.8 <sub>km</sub>	172°	-463 <sub>m</sub>
MOLLIS	10.8 <sub>km</sub>	172°	-463 <sub>m</sub>
WANGEN-LACHEN	13.6 <sub>km</sub>	285°	-491 <sub>m</sub>
HASENSTRICK	17.1 <sub>km</sub>	313°	-777 <sub>m</sub>
SPECK-FEHRALTOR	31.7 <sub>km</sub>	317°	-1013 <sub>m</sub>
DUEBENDORF(MIL)	38.9 <sub>km</sub>	309°	-1076 <sub>m</sub>
DUEBENDORF(MIL)	39.0 <sub>km</sub>	309°	-1077 <sub>m</sub>
BAD RAGAZ	37.6 <sub>km</sub>	118°	-1099 <sub>m</sub>
LOMMIS	39.6 <sub>km</sub>	355°	-1117 <sub>m</sub>
AMLIKON	45.1 <sub>km</sub>	0°	-1184 <sub>m</sub>
SITTERDORF	41.3 <sub>km</sub>	24°	-1191 <sub>m</sub>
WINTERTHUR	43.5 <sub>km</sub>	332°	-1192 <sub>m</sub>
HAUSEN AM ALBIS	40.9 <sub>km</sub>	280°	-1264 <sub>m</sub>
ZURICH	49.1 <sub>km</sub>	310°	-1287 <sub>m</sub>
ST.GALLEN-ALTEN	52.8 <sub>km</sub>	48°	-1333 <sub>m</sub>
ST.GALLEN-ALTENR	52.8 <sub>km</sub>	48°	-1334 <sub>m</sub>

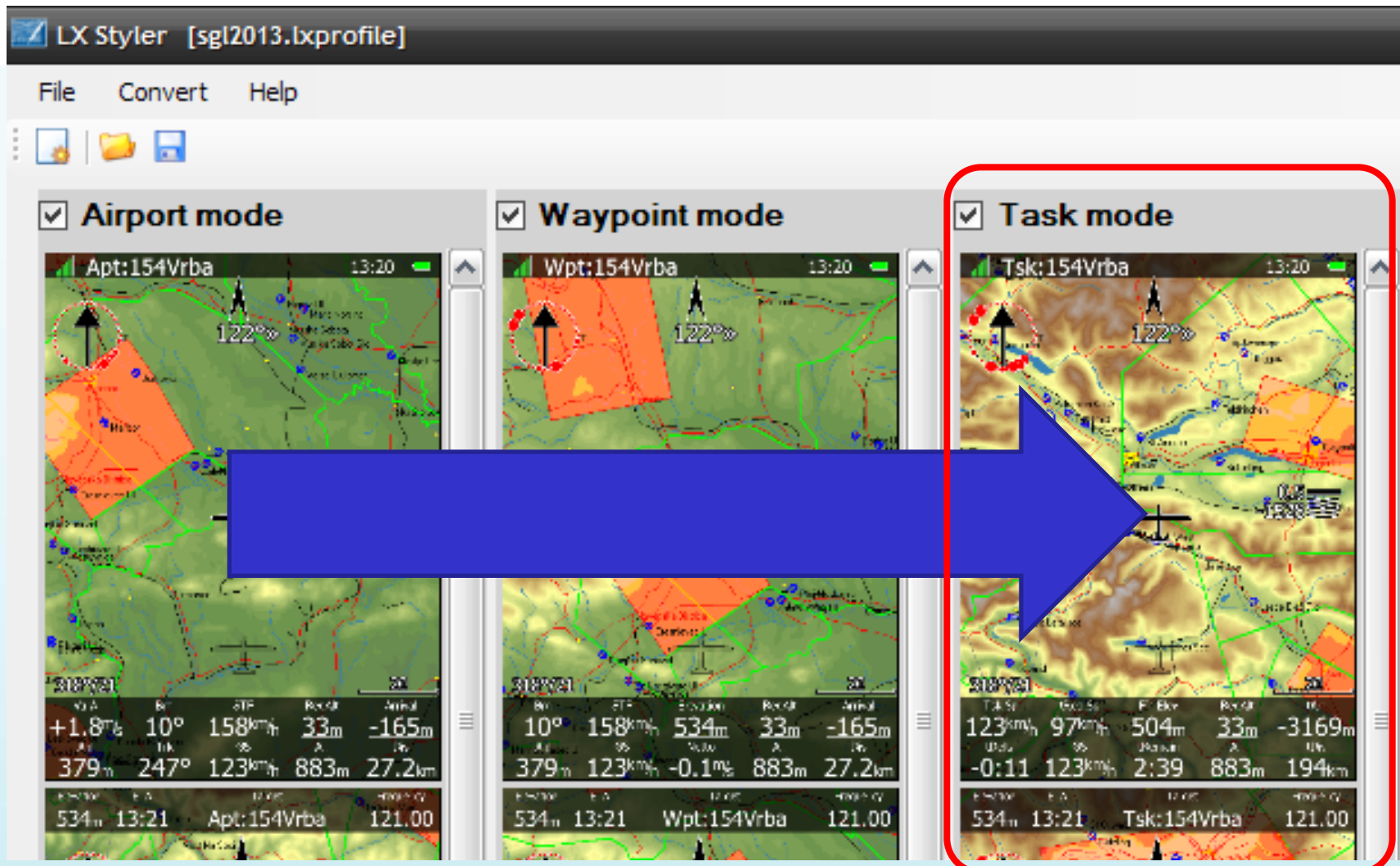
# Laden einer GliderCup Aufgabe nur im 'Task mode' möglich

LX Styler [sgl2013.lxprofile]

File Convert Help

☑ **Airport mode**      ☑ **Waypoint mode**      ☑ **Task mode**

**Apt:154Vrba** 13:20      **Wpt:154Vrba** 13:20      **Tsk:154Vrba** 13:20



**Task mode data:**

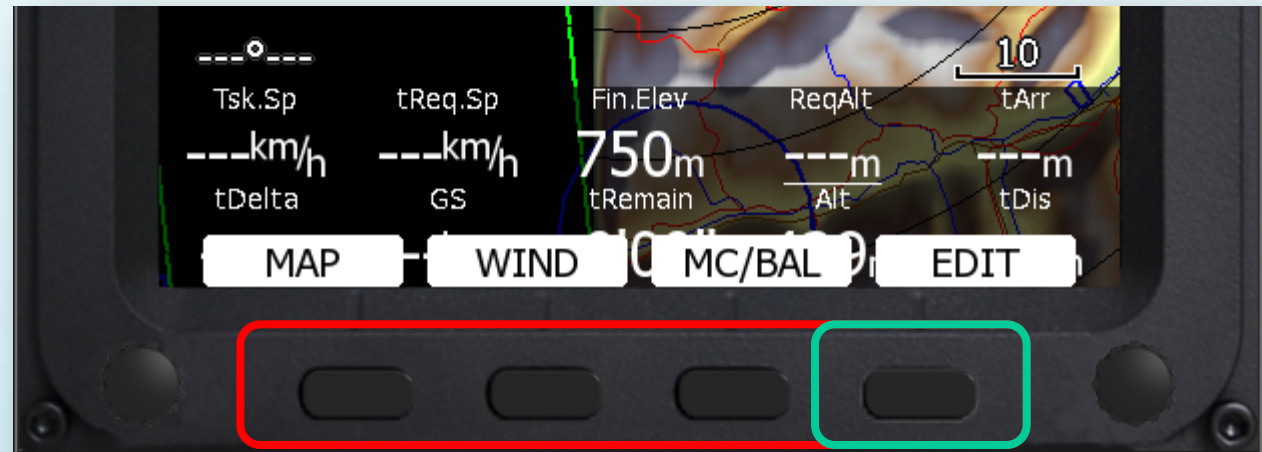
TA	TS	F. Elev	Revol	Alt
123km	97km	504m	33m	-3169m
Wind	Dir	Phase	A	Lib
-0:11	123km	2:39	883m	194km

534m 13:21 Tsk:154Vrba 121.00

# Laden einer GliderCup-Aufgabe (1)



- Drehen bis 'Task mode' erscheint
- Irgendeine Taste drücken
- EDIT



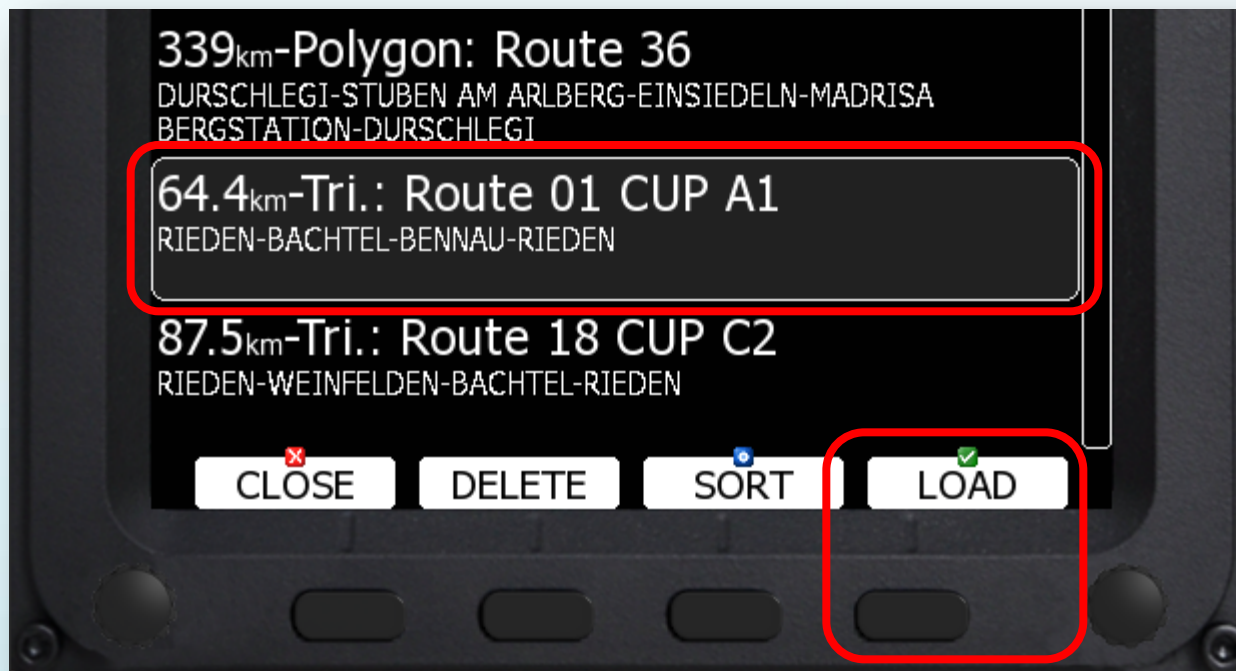
# Laden einer GliderCup-Aufgabe (2)





# Laden einer GliderCup-Aufgabe (3)

- Mit **Drehknopf** (oben rechts) Aufgabe auswählen und mit **LOAD** laden.

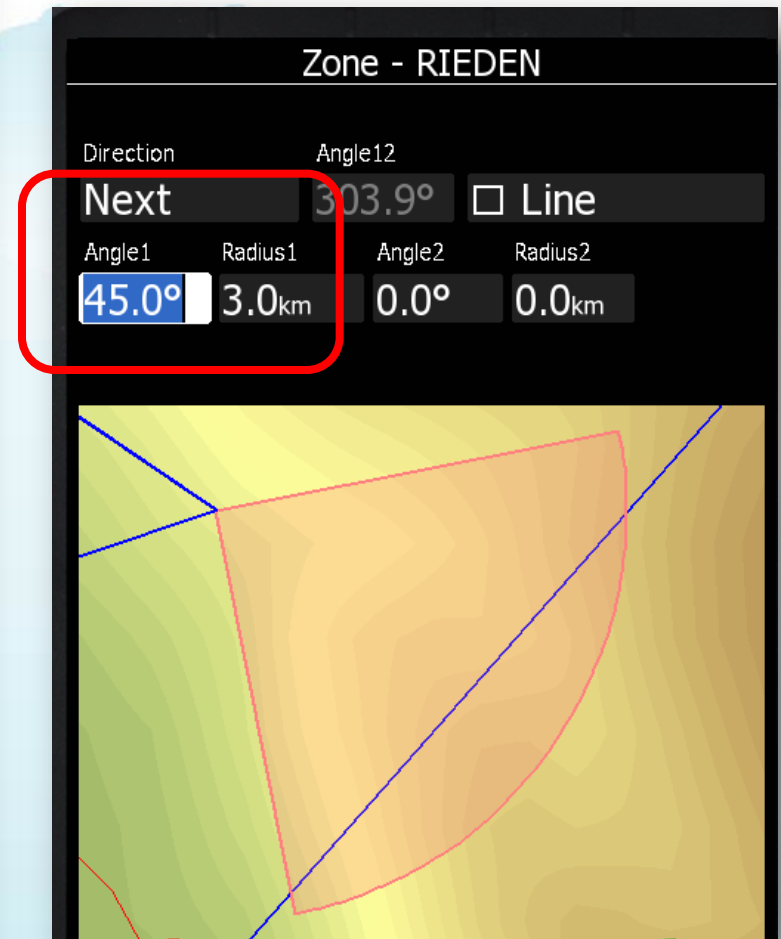




# Laden einer Aufgabe



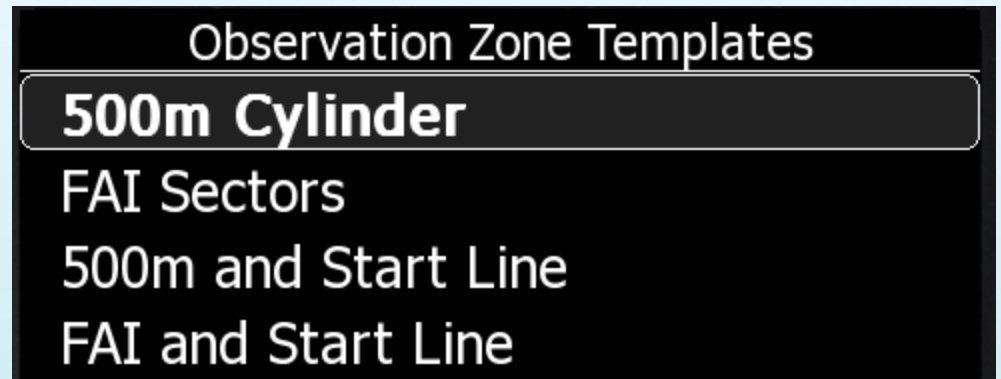
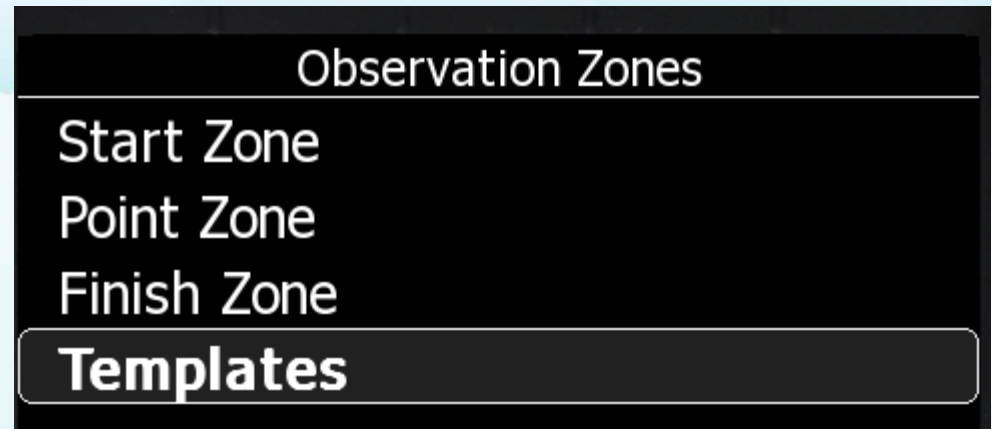
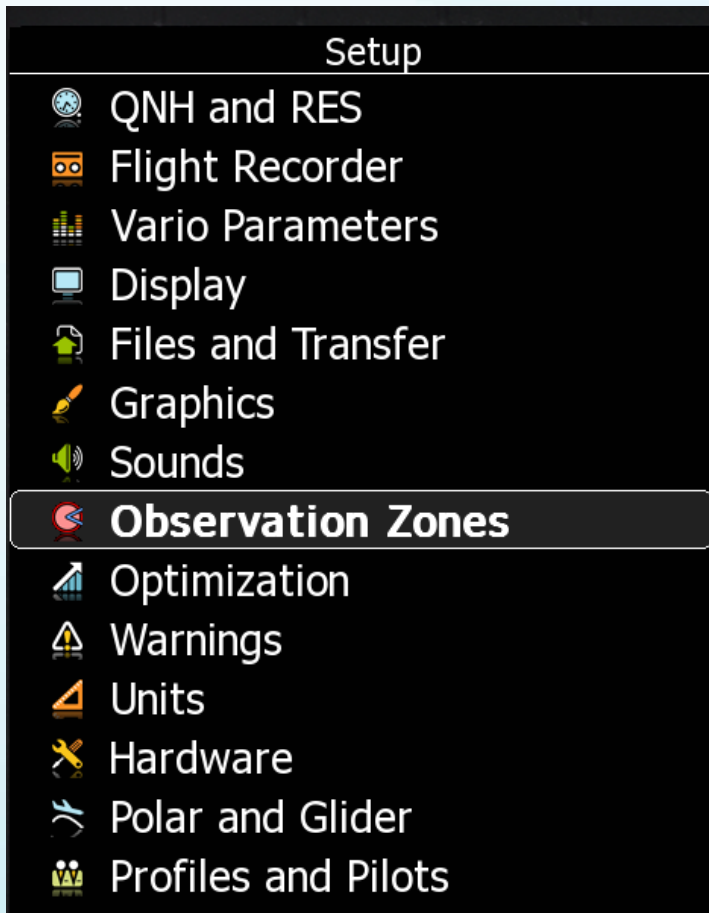
## 8-tung Zonen



# Zonen / Sektoren generell ändern



- Einfacher ist es die Zonen generell zu ändern



# GliderCup Sektoren

haben immer einen 500m Zylinder



### Zone - Start

Direction	Angle12		
Next	16.8°	<input type="checkbox"/> Line	
Angle1	Radius1	Angle2	Radius2
180.0°	0.5km	0.0°	0.0km

LXSim v3.0.0

### Zone - Point

Direction	Angle12		
Symmetric	165.8°	<input type="checkbox"/> Line	
Angle1	Radius1	Angle2	Radius2
180.0°	0.5km	0.0°	0.0km

AAT     Auto next

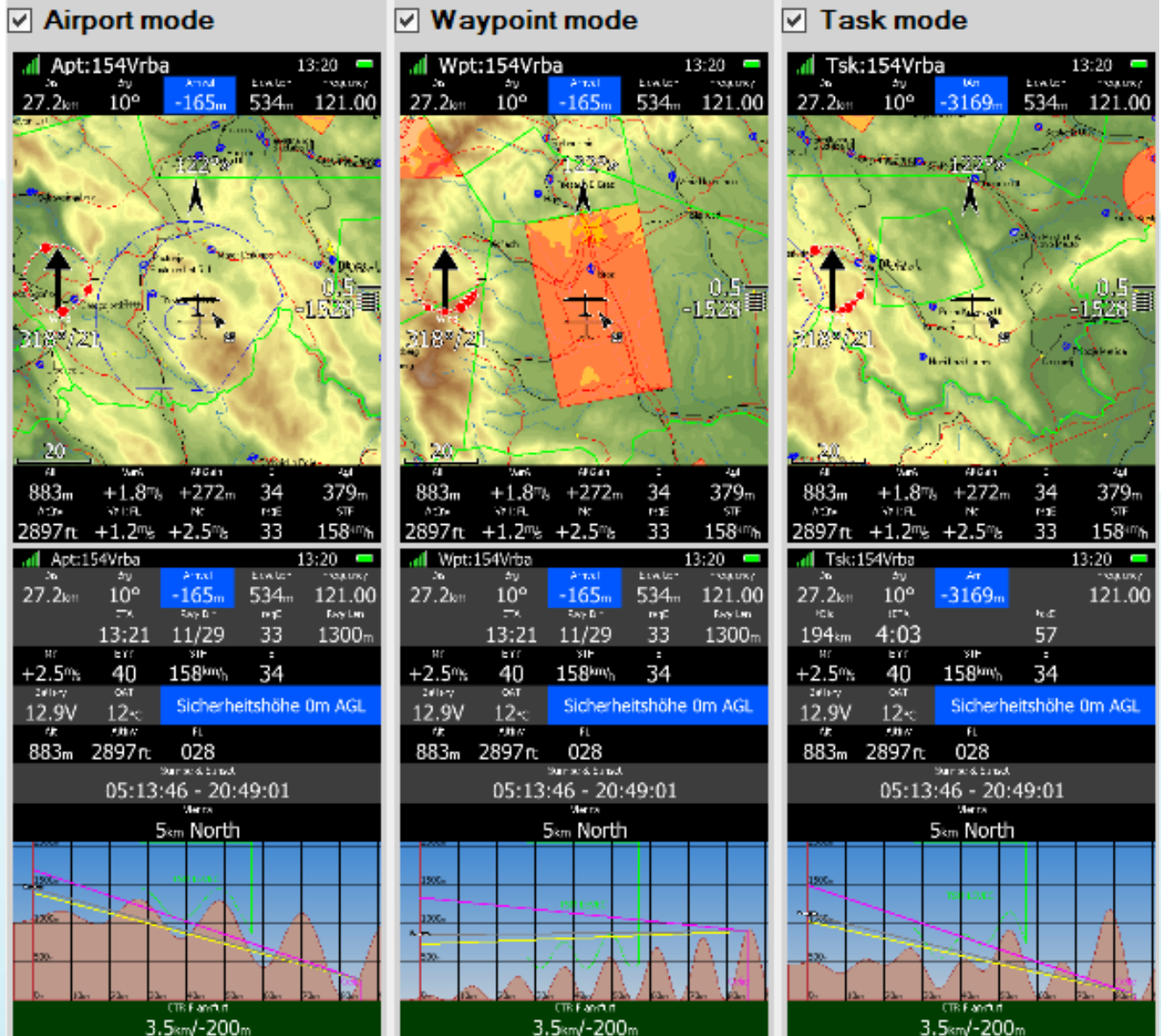
CLOSE    NEXT>>    EDIT

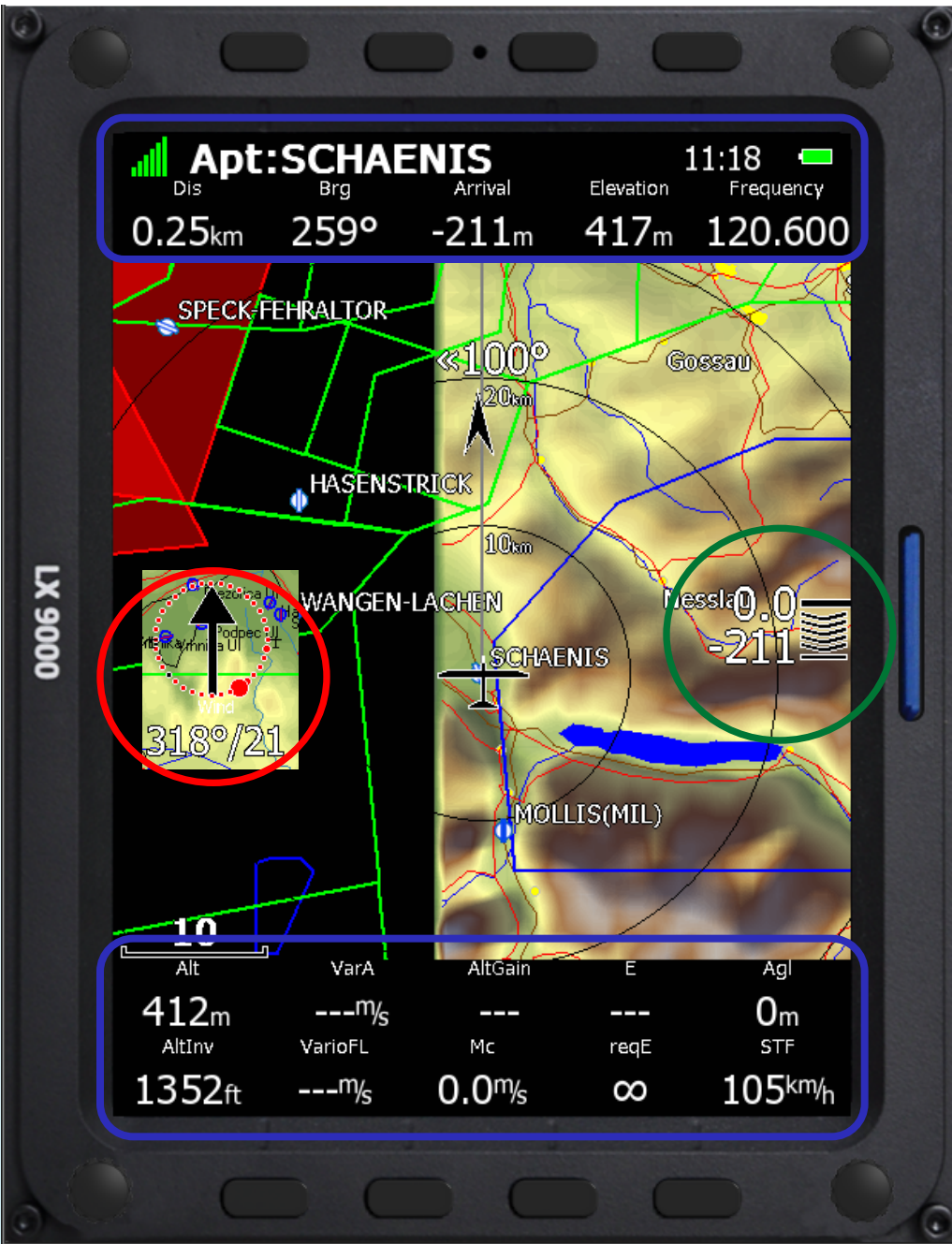
### Zone - Finish

Direction	Angle12			
Previous	314.8°	<input type="checkbox"/> Line		
Angle1	Radius1	Angle2	Radius2	Elevation
180.0°	0.5km	0.0°	0.0km	---m



# LX9000 SGL Profil





Informationen zum Ziel

Wind / Zentrierhilfe

Endanflug mit Ankuhfhöhe

Aktuelle  
Fluginformationen



# Airport- Wegpunkt- und Aufgaben-Mode



Höhe in Meter

Ø Steigen

Höhengewinn in letzter Thermik

Akt. Gleitzahl

Höhe über Grund

Alt	VarA	AltGain	E	Agl
883m	+1.8m/s	+272m	34	379m
AltInv	VarioFL	Mc	reqE	STF
2897ft	+1.2m/s	+2.5m/s	33	158km/h

Höhe in Fuss

Ø Steigen Gesamtflug

McCreeady Wert

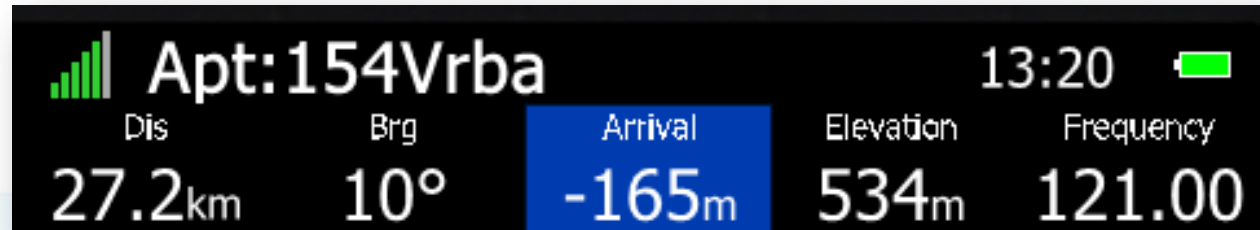
Benötigte Gleitzahl zum Ziel

Geschwindigkeit

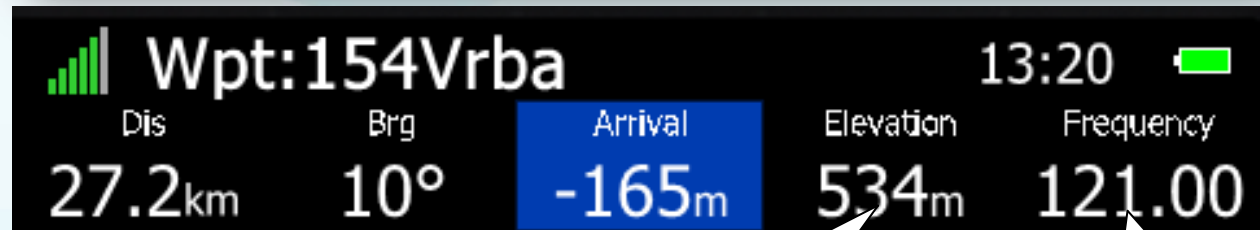
# Informationen zum Ziel



Airport-Mode



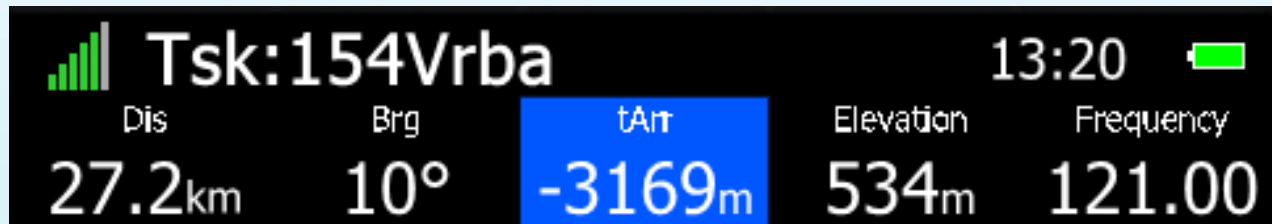
Waypoint-Mode



Höhe des Wegpunkt/Flugplatz

Platzfrequenz

Task-Mode



Ankunftshöhe ganze Aufgabe

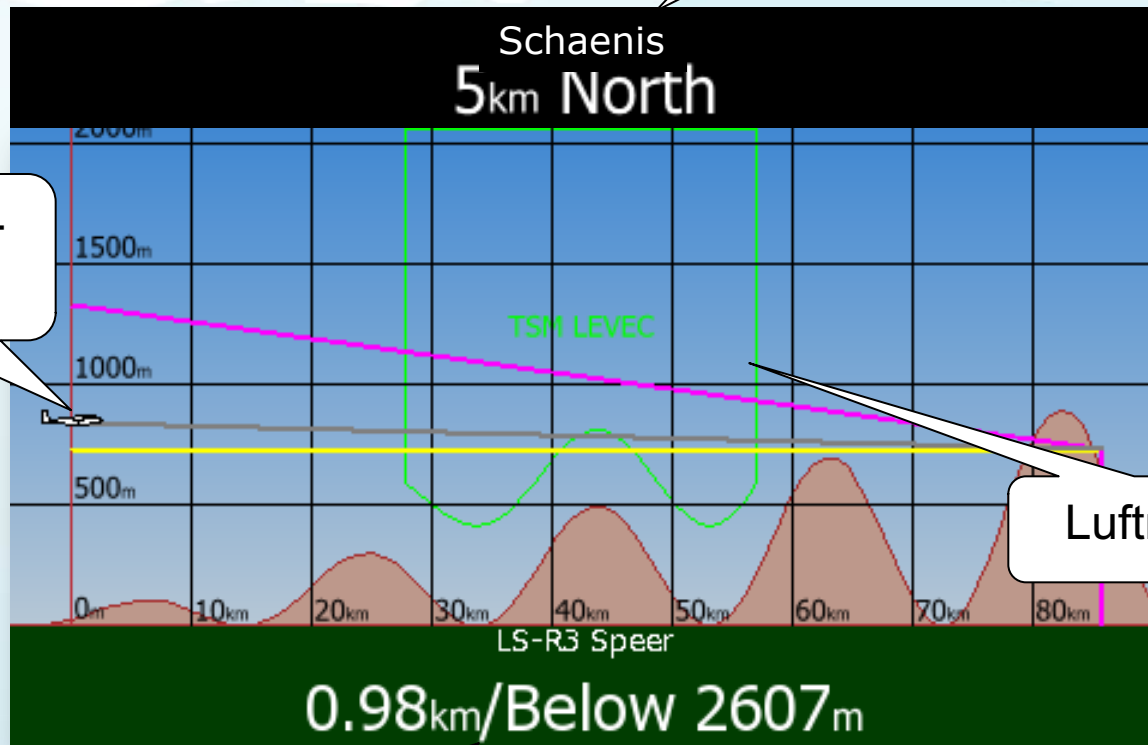
# Luftraumwarnungen

## Endanflug

### Wo bin ich?

Wo bin ich?

Endanflug-  
position



Luftraum

Abstand zum  
Luftraum

# Luftraum

LXSim v3.0.0  
File Device Type Play About

Luftraum Ansicht

**East A9**  
, Klasse C  
Dist: Innerhalb, V.dis: Unter 4162m  
FL195 5946m  
FL150 4574m

**MIL ON East A9**  
, Klasse C  
Dist: Innerhalb, V.dis: Unter 3553m  
FL150 4574m  
FL130 3965m

**LS-R3 Speer**  
(R),  
Dist: 0.98km, V.dis: Unter 2638m  
FL130 3965m  
FL100 3050m

**A9.1 Airway**  
, Klasse C  
Dist: 8.25km, V.dis: Unter 2334m  
FL195 5946m  
FL90 2746m

0006 XT

WATTWIL EBNET KAPPEL  
Nesslau  
SCHAENIS  
WEESEN  
MOLLIS  
WALENSTADT  
Vaduz  
Feldkirch

10km  
0.98km

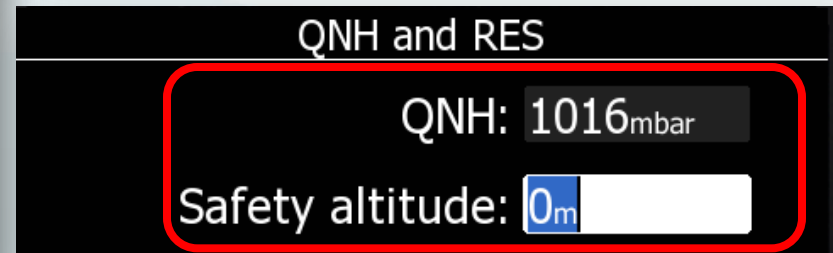
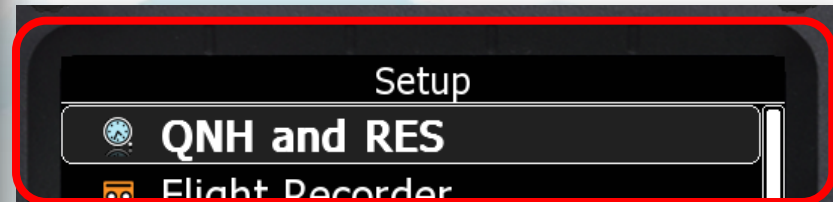
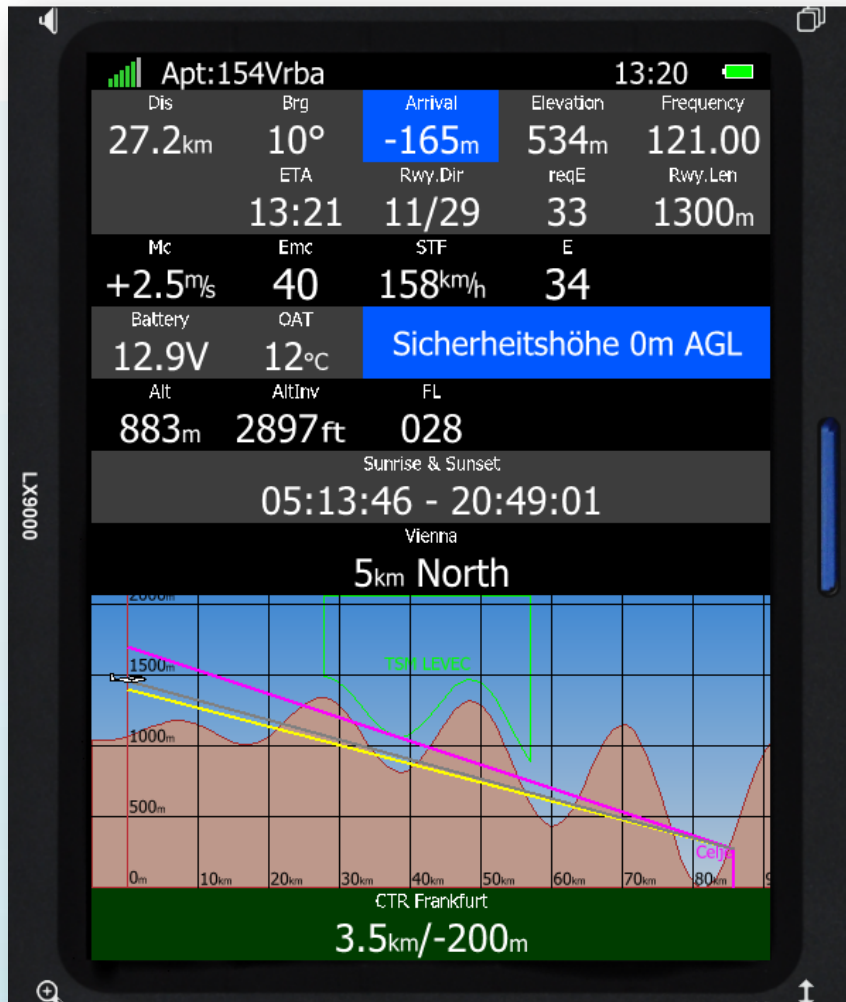
Schließen Status Edit

- Irgend eine Taste drücken
- mit Drehknopf auswählen
- Status ändern
  - AUS dauerhaft
  - AUS heute
  - AUS für eine ½h
  - Aktiv

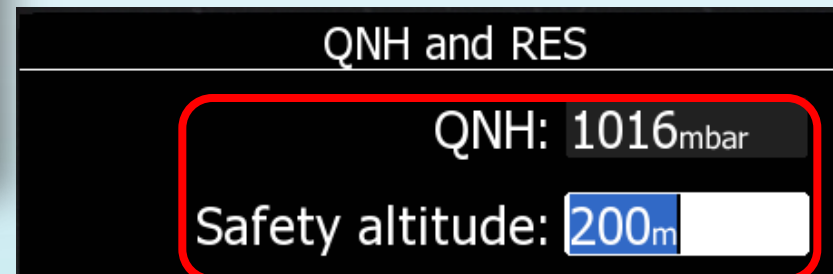
# LX9000 Sicherheitshöhe 0m



Sicherheitshöhe kontrollieren und einstellen unter: **Setup**



**Jeder Pilot entscheidet selber!**

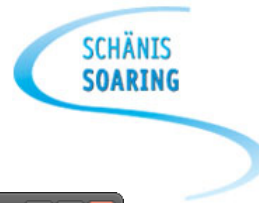




# LXSim Vorstellung



# LX Styler – Editor vorstellen



Navigation Page Editor

Buttons: Delete, Map, Plane, Data, Battery, Orientation, FinalGlide, Wind, GPS, Zoom, AHRs, Radar, Altitude, Airspeed, Picture, Side view, Apply, Cancel

**Global Styles**

- Background
- Title
- Data
- Single

**Symbols**

- Map
- Battery
- Altitude above MSL
- Groundspeed
- Local time
- Steering course to target
- Current wind
- Remaining task distance
- Arrival altitude for task
- Task delta time
- Task remaining time
- Task speed
- Target name
- Task required speed
- Required altitude to target
- Task finish elevation
- Final Glide
- GPS
- Orientation
- Wind
- Zoom
- Plane

Map Display:

Tsk: 154 Vrba 13:20

122°

0.5 -1528

318°/21

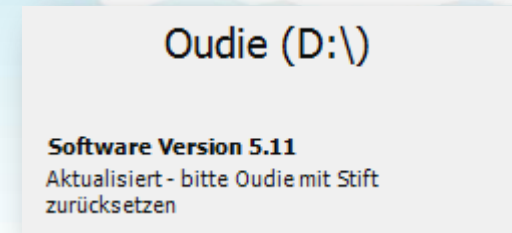
Tsk.Sp	tReq.Sp	Fin.Elev	ReqAlt	tArr
123km/h	97km/h	504m	33m	-3169m
tDelta	GS	tRemain	Alt	tDis
-0:11	123km/h	2:39	883m	194km

LX9000

# Neu: Oudie Updater



<http://www.naviter.com/de/2014/02/oudie-updater-2/>



**Reset** – Knopf auf der Rückseite drücken

Aktualisieren funktioniert nur im **Batteriebetrieb**  
d.h. USB-Kabel wegnehmen!

Software, Luftraum, Karten  
und Flarm aktualisieren

# GliderCup 2014



Wir wünschen Euch viel Erfolg und  
wunderschöne Flugerlebnisse