

Navigieren mit Tablet

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Birrfeld - Berlin Schönefeld ILA 1992



Geschichtliches

Gesetzliche Grundlagen

Systeme



Anwendung

Unterlagen auf

Kniebrett-Fliegerblog



Veröffentlicht am **21. Januar 2019** von **Guido Pellicoli**

[← Vorherige](#)

[Bearbeiten](#)

Fliegen mit Tablet

Fliegen mit Tablet war das Thema am 23. Januar im Theoriesaal der Fliegerschule Birrfeld, gehalten von Guido Pellicoli.

eines Lebens (Schweizer Kurzfilm, Swissair, DC-3, 1939)









LA CHAUX-DE-FONDS, 1:75 000

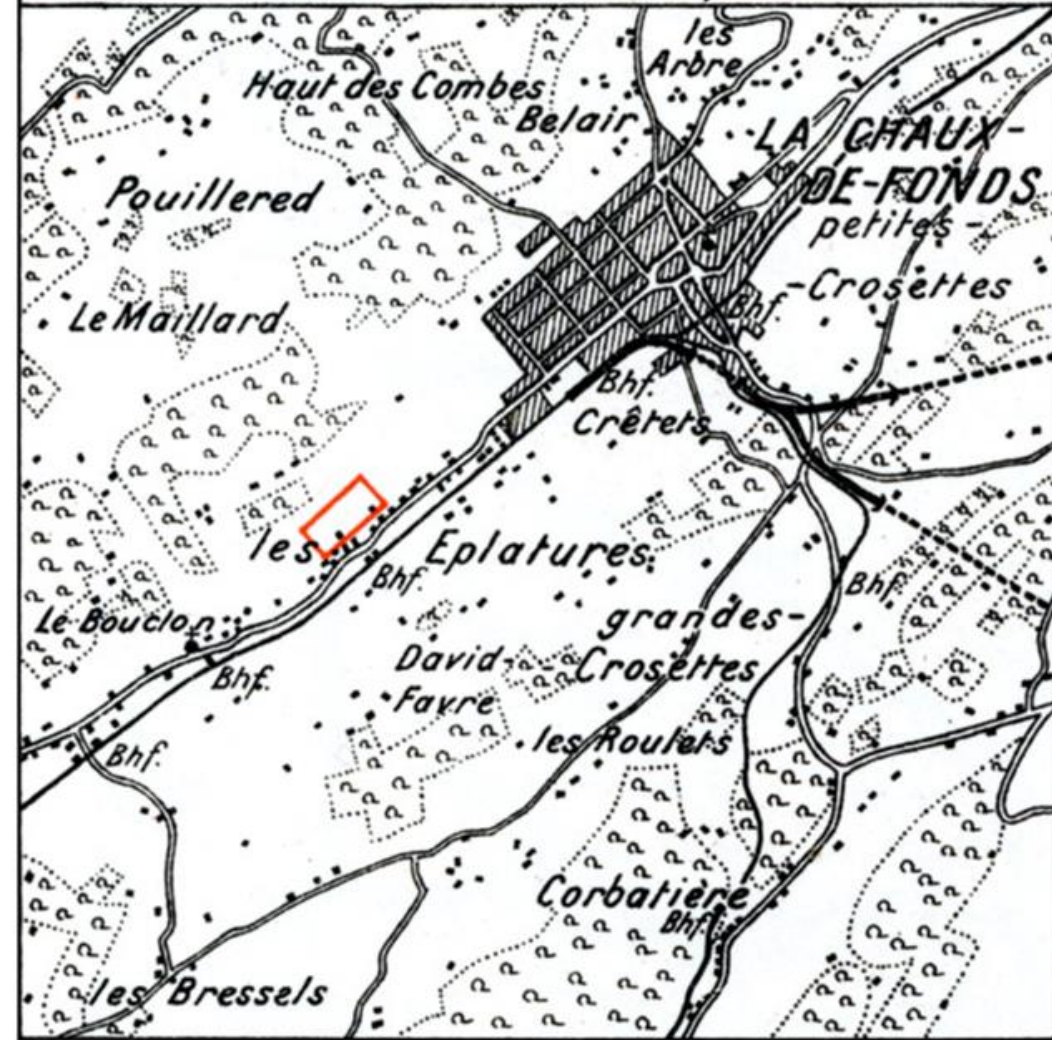


Abbildung: Lageskizze bzw. Flugplatzkarte von La Chaux-de-Fonds



Das wichtigste Instrument in einem Flugzeug



VFR

Visual Flight Rule



Use Luege



Flugvorbereitung

GPS und Tablets sind Navigationshilfsmittel

**Für jeden Flug ob mit oder ohne GPS und Tablet
Unterstützung ist eine seriöse Flugvorbereitung
wichtig**

GPS und Tablets sind Navigationshilfsmittel wie eine Papier Karte

**Die Bedienung und Anwendung muss gelernt
und geübt werden**

Gesetzliche Grundlagen

Luftfahrtskarten

Auch nach den bisher geltenden Vorschriften gibt es keine Vorschrift, die explizit Papier als Kartenmaterial verlangt.

Mit den neuen EU-Regeln werden nun auch digitale Karten ausdrücklich – siehe GM1 NCO.GEN.135 – erlaubt.

GM1 NCO.GEN.135 Documents, manuals and information to be carried

GENERAL

- (a) In case of loss or theft of documents specified in NCO.GEN.135, the operation may continue until the flight reaches the base or a place where a replacement document can be provided.
- (b) The documents, manuals and information may be available in a form other than on printed paper. An electronic storage medium is acceptable if accessibility, usability and reliability can be assured.

Die Grundlage bildet NCO.GEN.105, wonach dem Piloten die Entscheidungshoheit über die Sicherheit obliegt

und somit auch die Entscheidung ob eine digitale Karte den Anforderungen von NCO.GEN.135 entspricht, d.h. aktuell und zweckdienlich ist.

Sichergestellt sein muss die Zugänglichkeit, Benutzbarkeit und Zuverlässigkeit elektronischer Karten.

Ein Backup – in welcher Form auch immer – wird nicht konkret verlangt.

Im Umkehrschluss trägt der Pilot aber auch die volle Verantwortung für seine Entscheidung, sofern es zu Problemen kommt.

Im AMC1 NCO.GEN.135 (a) (10) wird zudem ausgeführt, dass Karten dem aktuellen AIRAC-Zyklus (alle 28 Tage aktualisierte Luftfahrtdaten) entsprechen sollen.

FOCA GM/INFO

Guidance Material / Information

EASA Part-NCO: Changes for Pilots and Aircraft Holders

Non Commercial other than Complex Aircraft Operations



Scope	Non Commercial other than Complex Aircraft Operations in Switzerland
Applies to	Owners and operators of other than complex motor-powered aircraft (aeroplane and helicopter) operating non-commercially
Valid from	01 December 2017
Purpose	Guidance / Information

Process No	-
Document Reference	COO.2207.111.3.3345976
Registration No	033.1-00001/00017/00013/00009
Prepared by	SBFL, SBFF
Released by	SL SBFF 11 August 2016
Distribution	Internal / External

Electronic devices (iPad; iPhone; Tablet; GPS; etc.) are generally allowed and are accepted

as electronic replacement of the respective documents, as long as it is not a document which must be carried as original.

Electronic devices must not compromise (*gefährden*) the aircraft or equipment

and the accessibility and usability of the data must be ensured. As back-up, the carrying of an ICAO chart is recommended.

2.1.2 NCO.GEN.135 «Documents, manuals and information to be carried»

Was muss an Bord mitgeführt werden

According to NCO.GEN.135 the following documents in **original form (if listed as such)** or copies are to be carried:

1. Aircraft Flight Manual (AFM) or equivalent document(s);
2. **The original** of the Certificate Of Registration;
3. **The original** of the Certificate Of Airworthiness;
4. The Noise Certificate, if applicable;
5. The list of special permits, if applicable;
6. The Radio Operator Licence, if applicable;
7. The Third Party Liability certificate;
8. The Log Book or an equivalent document for the aircraft;
9. Details of the flight plan filed with the Air Traffic Services (ATS flight plan), if applicable;

10.

Current and appropriate aeronautical charts for the intended flight route and all routes where it is reasonable to expect that the flight might be deviated to DE L 227/48 Official Journal of the European Union 24.8.2013;

11. Information about procedures and visual signals to be used in case of intercepting and intercepted aircraft;
12. The MEL or CDL, if applicable, and;

13. Other documents appertaining to the flight, such as additional flight plans, Mass and Balance etc. as far as the circumstances make them seem reasonable and appropriate. For simple conditions (short, navigational easy flight, simple loading, circuits) the paper form may be replaced by providing conclusive explanations of the flight preparation performed and deliberations conducted.

Furthermore, for all flights, the valid licences and the medical certificate must be carried.

Briefing gespeichert auf Tablet als PDF oder OneNote

Preflight Information Bulletin

METEO

Period (UTC): 2019JAN13 1911 to: 2019JAN13 2359
 Printed at (UTC): 2019JAN13 1911
 Datasource: MeteoSwiss

METAR

METAR LSZH 131850Z 24016G27KT 8000 -RA FEW010 BKN017 06/04 Q1009
 TEMPO 4000 RA BKN013=

SPECI

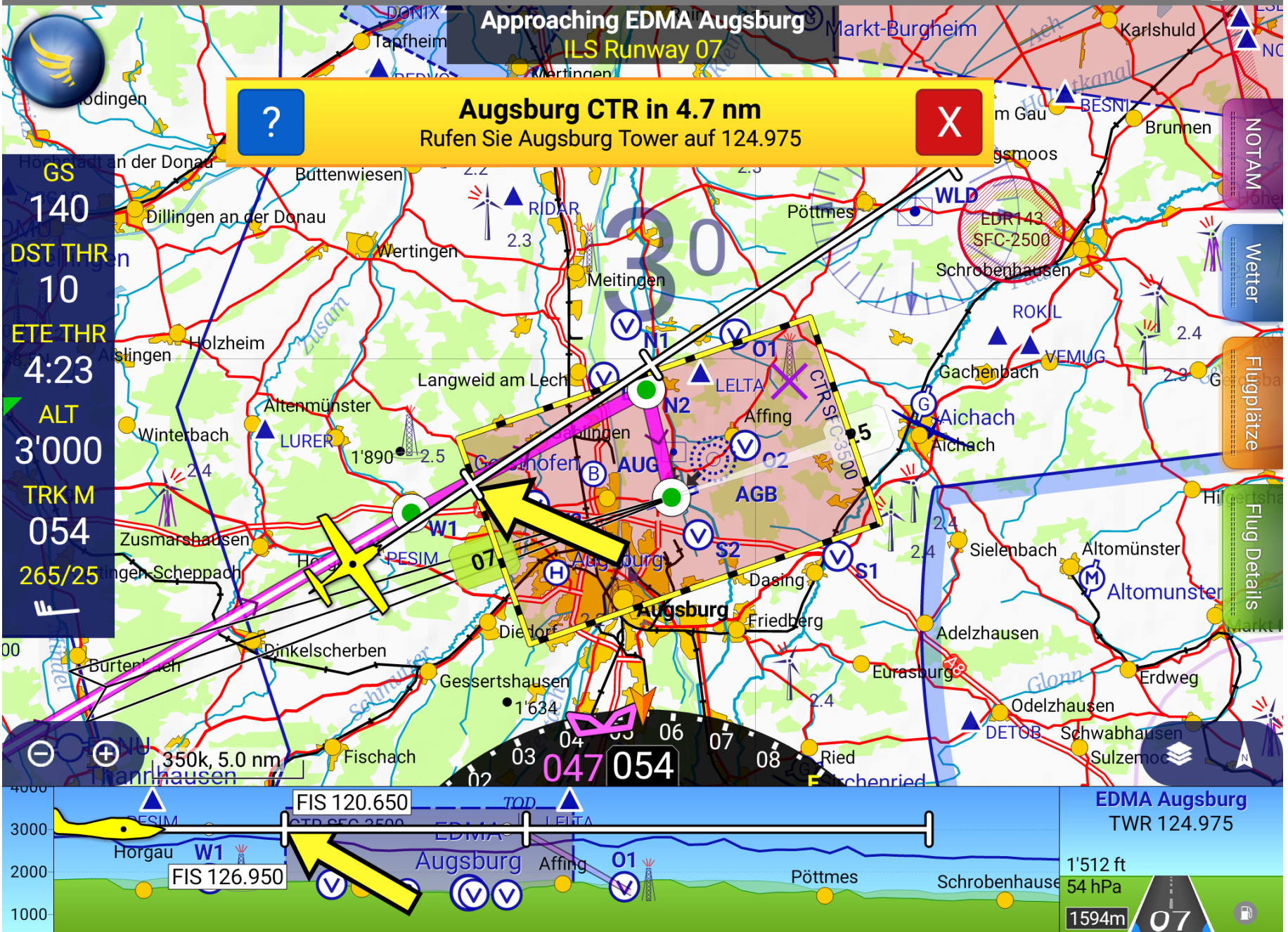
LSZH no data available

TAF

LSZH 131725Z 1318/1424 23015KT 8000 -RA SCT010 BKN025 TX05/1414Z TN03/1407Z
 TEMPO 1318/1406 4500 RA BKN013
 TEMPO 1318/1401 26018G35KT
 BECMG 1403/1406 29007KT
 PROB40 TEMPO 1406/1424 4500 SHRA BKN014
 PROB30 TEMPO 1406/1415 4500 SHRASN BKN012=

LSZH - Zurich

- /19 B) 2019JAN09 0000 C) 2019JAN26 1330
 E) RESTRICTION EFFECTIVE FROM 2019 JAN 20 0500: MAX 2HR GND TIME FOR
 ALTN LDG OF GA DUE TO WORLD ECONOMIC FORUM (WEF).
- /19 B) 2019JAN09 0000 C) 2019JAN26 1330
 E) RESTRICTION EFFECTIVE FROM 2019 JAN 20 0500:
 EARLIEST NON-SKED LDG FOR WIDEBODY ACFT WO PRKG PERMISSION 1300 UTC
 DUE TO WORLD ECONOMIC FORUM (WEF).
- /19 B) 2019JAN09 0000 C) 2019JAN26 1330
 E) RESTRICTION EFFECTIVE FROM 2019 JAN 21 0500:
 FPL WITH INDIVIDUAL CS REQUIRED FOR EACH HEL FLT BTN LSZH (ZURICH)
 AND LSMV (DAVOS) AND VICE VERSA DUE TO WORLD ECONOMIC FORUM (WEF).
 USE OF IMMATRICULATION APPROVED FOR ONE SINGLE FLT PER DAY ONLY.
- /19 B) 2019JAN09 0000 C) 2019JAN26 1330
 E) RESTRICTION EFFECTIVE FROM 2019 JAN 21 0500: NO CAT A IFR TRG FLT.
- /19 B) 2019JAN09 0000 C) 2019JAN26 1330
 E) RESTRICTION EFFECTIVE FROM 2019 JAN 21 0500:
 NO VFR TFC, EXC HEL DUE TO WORLD ECONOMIC FORUM (WEF).
- /18 B) 2018DEC17 1119 C) PERM
 E) REF VFR MANUAL (VFRM) AMDT 12/18:
 ZURICH ATIS (VFR) FREQ SHOULD READ 129.005 INSTEAD OF 129.905.
- /18 B) 2018DEC06 0500 C) 2019MAY29 2359 EST
 E) NON-AIRAC AIP SUP 011/2018 AND
 NON-AIRAC VFR MANUAL (VFRM) SUP 011/18 ACT.
- /18 B) 2018NOV20 1257 C) 2019MAY29 2359 EST
 E) MOBILE CRANE 0.3KM 1201188 GEO ARP LSZH, MARKED, 472724N0083304E,
 14.0M / 46.0FT HGT, 437.1M / 1434.1FT AMSL.
- /18 B) 2018NOV09 1504 C) 2019MAY29 2359 EST



Approaching EDMA Augsburg
 ILS Runway 07

Augsburg CTR in 4.7 nm
 Rufen Sie Augsburg Tower auf 124.975

GS
 140
 DST THR
 10
 ETE THR
 4:23
 ALT
 3'000
 TRK M
 054
 265/25

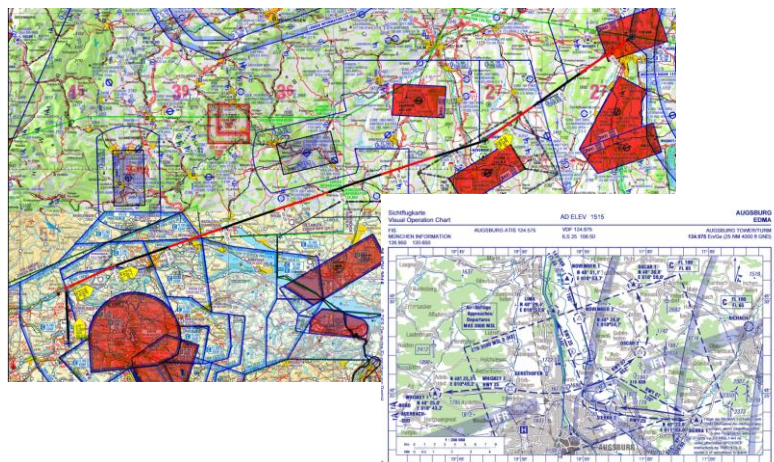


HERE COMES
LUNCH - ON A VFR
FLIGHT PLAN.

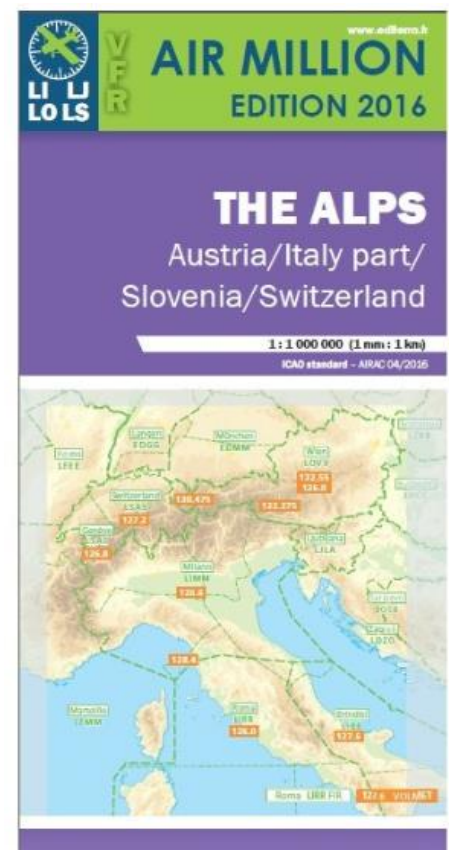


THANKS TO DEL CANADY
RIVERSIDE, CA.

Backup

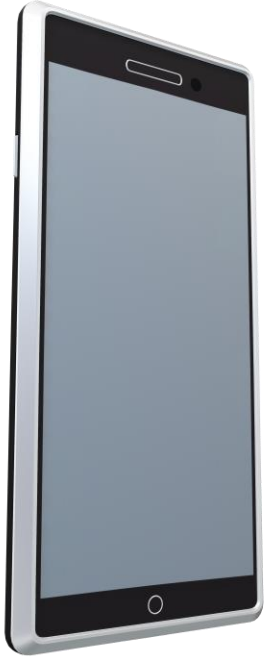


auf
Lager



VFR Manual Alpha: Tripkit

KNIEBRETT.CH



Systeme

Apple IOS



 **ForeFlight**

NEW



Android



Reine VFR Systeme oder VFR – IFR kombiniert

Systeme mit Vektorkarten

Systeme mit Basiskarten mit Einbindung von ICAO, Jeppesen oder anderen Karten sowie nationalen VAC Karten

Nicht alle Systeme garantieren die Richtigkeit der Daten



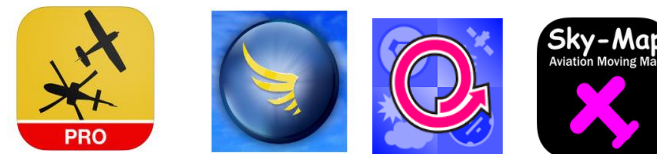
Jeppesen

**Einbindung von ICAO, Jeppesen
oder anderen Karten sowie nationalen VAC Karten**

Apple IOS



Android



Briefing Funktionen sehr unterschiedlich

Nicht alle Systeme bieten Druckfunktionen



Systeme

Apple IOS



Android



Trend zu Softwareabbos

All in One oder modulares Pricing

Traffic Darstellung mit Flarm oder ADSB



Traffic Darstellung mit Flarm oder ADSB



Verschiedene ADSB Empfänger auf dem Markt. Die meisten sind auf den Amerikanischen Markt ausgerichtet mit vielen Traffic und Wetter Infos. In Europa nur beschränkt benutzbar

Problem

Detektion von Flarm und Mode S Transponder ohne ADSB Out

Traffic Darstellung europäische Produkte



ADSB in ADSB out nur in England zugelassen

Detektion von Mode S Transponder

Drohnen Warn System!

Preis ca. 500 Euro

Traffic Darstellung europäische Produkte



PilotAware Rosetta

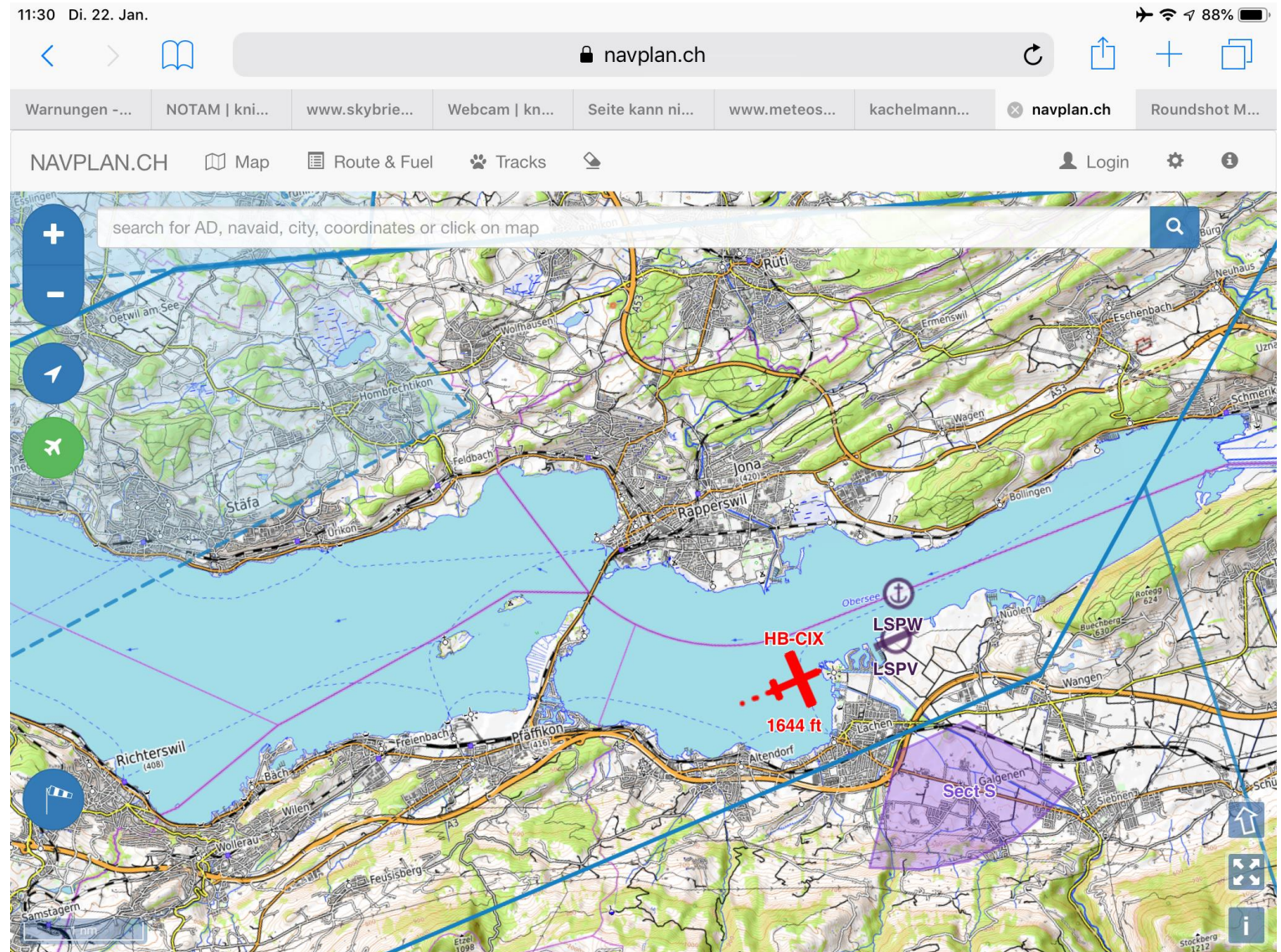
ADSB in ADSB out nur in England zugelassen

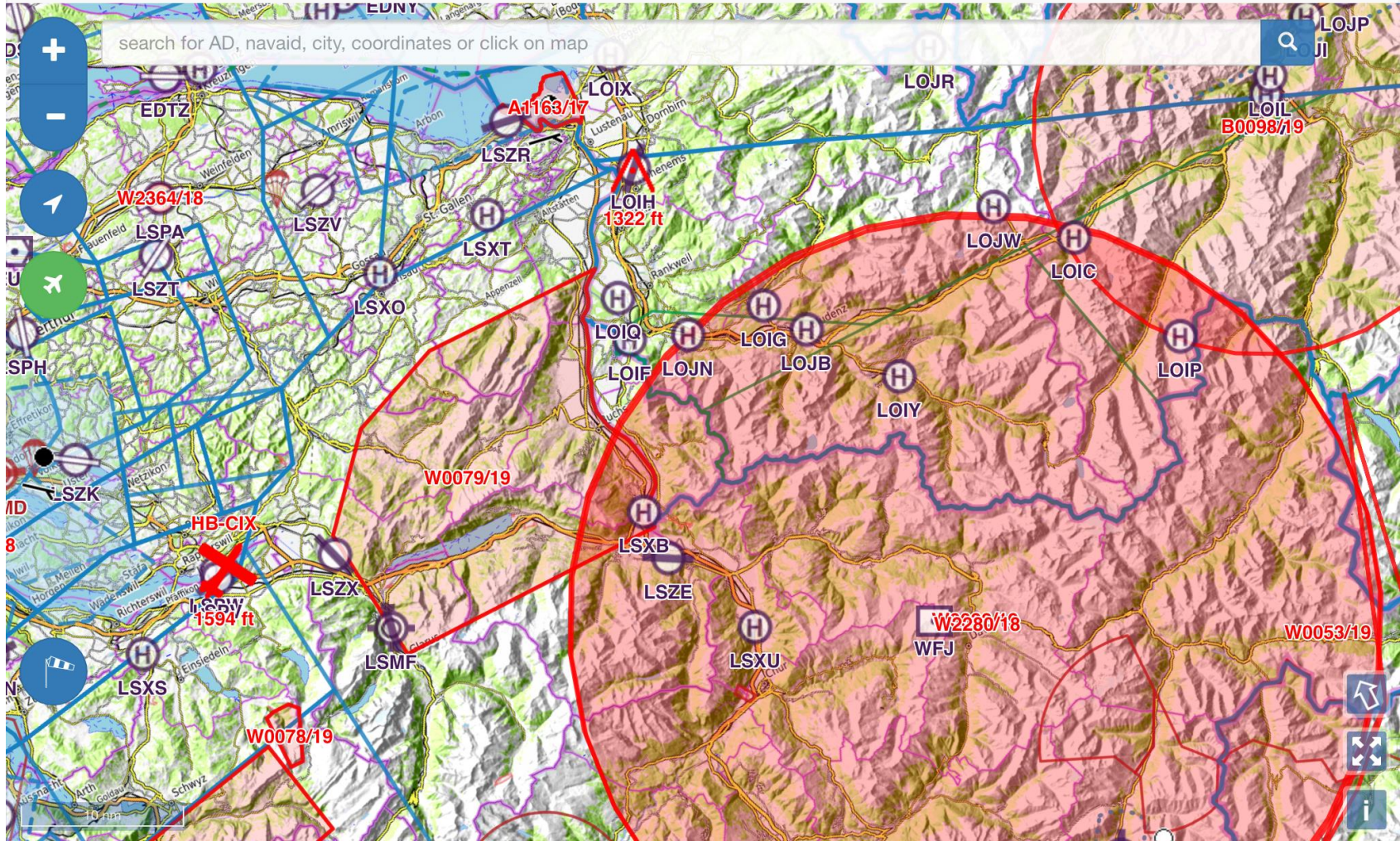
Detektion von Mode S Transponder

Preis ca. 250 Euro

Darstellung von Flarm und ADSB Transponder

Nur mit GSM Verbindung

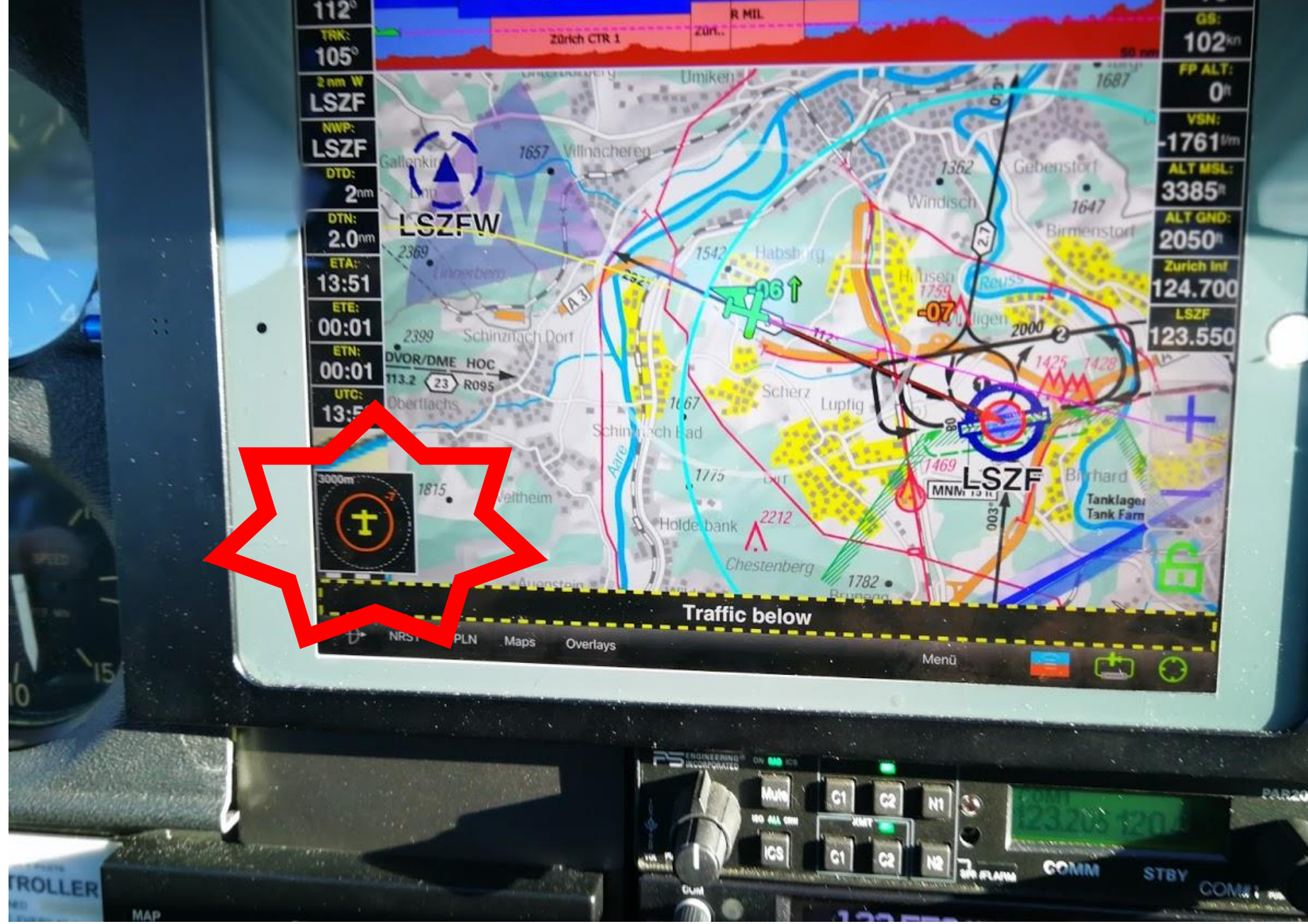




Flarmverbindung mit Airconnect



Anschluss an Flarm mit Kabel – Verbindung mit Tablet Wireless



Systemauswahl

Flüge hauptsächlich in der Schweiz



**Schweizer ICAO Karte
und VAC Karten**



VFR Flüge in Europa



Systemauswahl

VFR und IFR kombiniert



Druck von VAC Karten



Druck von Enroute Karten und VAC Karten



Airnavigation Pro

Schweizer Produkt von VFR Piloten gemacht einfach zum bedienen

Lokale ICAO Karten Segelflugkarte Hindernisskarte usw

Offenes System, anpassbar für Spezialanwendungen

AIP Anflugkarten als Option (können ausgedruckt werden)

Anwendung in Ländern ohne offizielle Karten



Route 40 NM DEP 22:00
ETA :-

LSZI Fricktal-Schupfart

DTG 12.0 NM BRG 287°
PLN 5'172 ft

WIL WILLISAU

DTG 32.0 NM MH 183°
PLN 5'172 ft

E LSZG

DTG 44.6 NM MH 277°
PLN 5'172 ft

E1 LSZG

WEGPUNKT

NEXT **LSZI** Fricktal-Schupfart

BRG 286° DIST 12.0 NM

ETE - ETA -

Zielflughöhe 5'172 ft

NAVIGATION

Geschw. über Grund 0 kt



BRG **287°** DIS **12.0 NM** WP **LSZI** TRK **358°** ALT(bar) **1'351 ft**
 Fricktal-Schupfar GS **0 kt** AGL **81 ft**
 QNH **1'013 hPa**

Jeppesen VFR FD



All in one

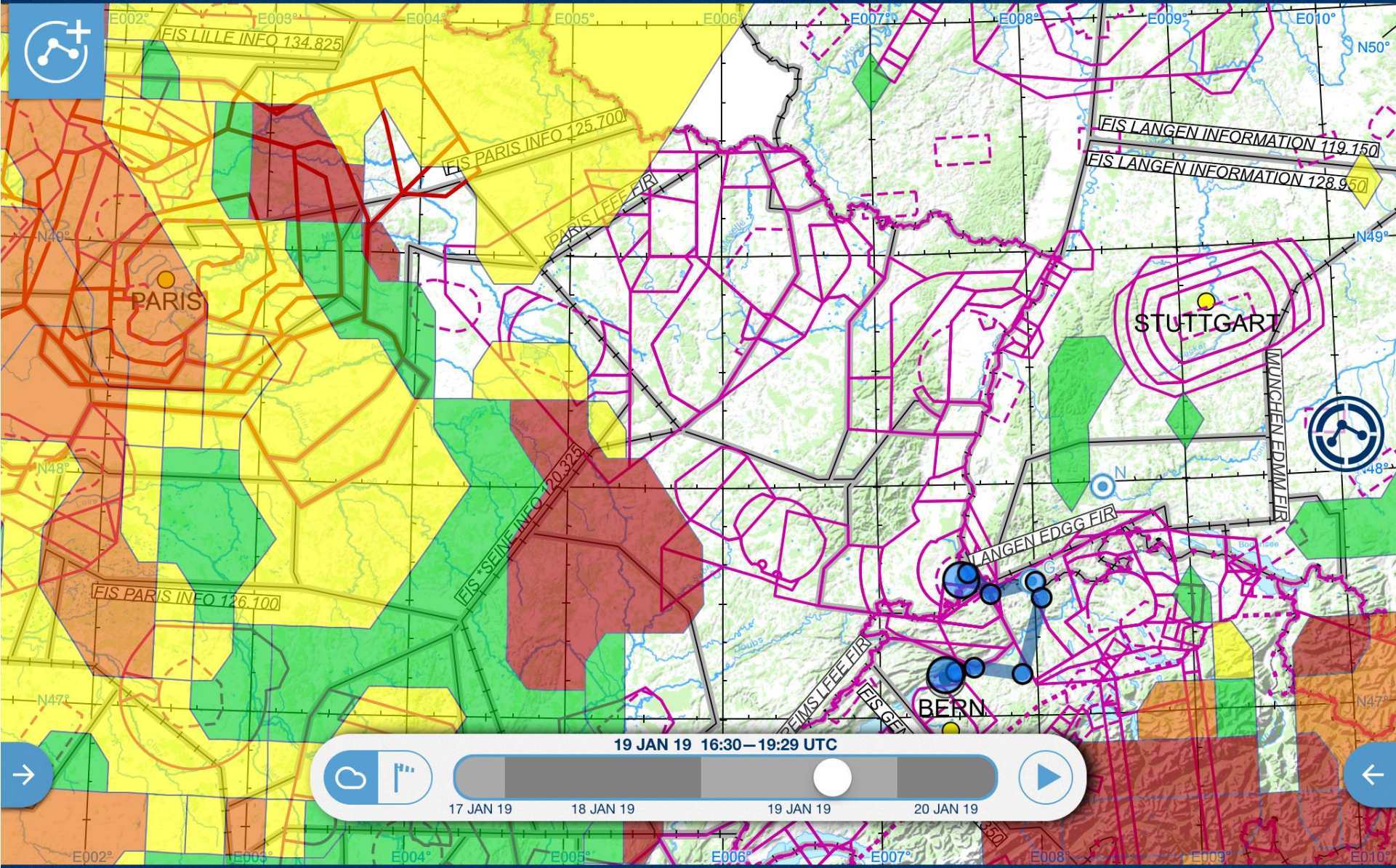
Alles inbegriffen ohne Zusatzmodule

Vektorkarten mit Zoomen kommen immer mehr Details nach vorne

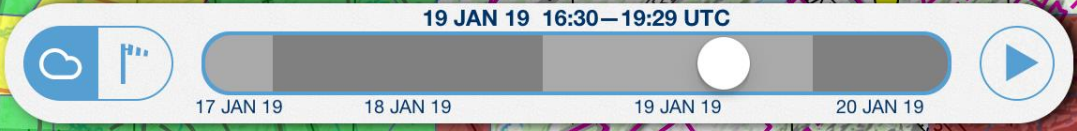
Hilfe beim Rollen am Boden ohne Umschalten

**In Ländern ohne Abdeckung keine Anzeige nur weiss
Keine Druckoption**





19 JAN 19 16:30 – 19:29 UTC



Flight Planner, Sky-Map

Flight Planner 



Deutsche Entwickler

deutsches Handbuch

Sehr umfassendes System

Druckfunktion

Tripkit komplette Flugvorbereitung kann ausgedruckt werden

**Einzigartige Wigth and Balance Funktion, Startstrecken
Berechnung**

Wetter und GAFOR Routen Einblendung

<https://www.flightplanner.de/Content.asp?Url=https://www.flightplanner.de/FP6/FP6.htm>

Flight Planner 4

Route Karte Flugweg GPS MovingMap Ansicht Extra Fenster Web ?

Route Karte Flugweg GPS MovingMap Ansicht Extra Fenster Web ?

Ansicht Suche

Kartenstil: SCAD LOWER TRM AD PRK PRK 3DRST

Letz	Suche	
Punkt	Typ	Name
Altenbach	Segelfluggplatz	Altenbach
Alfeld	Segelfluggplatz	Alfeld
Darmstadt B.	Helicopterlande	Darmstadt
Darmstadt Gr.	Landepplatz	Darmstadt
Darmstadt M.	Helicopterlande	Darmstadt
Frankfurt (H.)	Krankenhaus	Frankfurt
Frankfurt (H.)	Krankenhaus	Frankfurt
Langenselbold	Segelfluggplatz	Langense
Mainz Joh. G.	Helicopterlande	Mainz Joh
Oberrn	Segelfluggplatz	Oberrn
Reinheim	Segelfluggplatz	Reinheim
Zellhausen	Segelfluggplatz	Zellhause
ABUMD ABU	Intersection	ABUMD
ASKIK ASKIK	Intersection	ASKIK
BAMTO BAM	Intersection	BAMTO
BATGA BAT	Intersection	BATGA
BOMBI BOMBI	Intersection	BOMBI
OHA Ohafo	VOR	Charlie V
DETEV DET	Intersection	DETEV
EDOF Frank.	Flughafen	Frankfurt
EDOFL Lina	Pflichtmeldepunkt	Lina EDC
EDOFN Nov	Pflichtmeldepunkt	Novembe
EDOFR Ros	Pflichtmeldepunkt	Rosau 1
EDOFS Sae	Pflichtmeldepunkt	Siena ED
EDEF Baben	Sondelandepplatz	Babenhu
EDFA Aschal	Landepplatz	Aschaffe
EDFE Frank.	Landepplatz	Frankfurt
EDFED Delta	Pflichtmeldepunkt	Delta1 EI
EDFED2 Del	Pflichtmeldepunkt	Delta2 EI
EDFEE Echo	Pflichtmeldepunkt	Echo EDI
EDFEJ Juliet	Pflichtmeldepunkt	Juliet ED
EDFEK Kilo E	Pflichtmeldepunkt	Kilo EDFE
EDFET Tang	Pflichtmeldepunkt	Tango EI
EDFEY1 Yan	Pflichtmeldepunkt	Yankee 1
EDFEY2 Yan	Pflichtmeldepunkt	Yankee 2
EDGP Gelnh	Landepplatz	Gelnhaus
EDGP Oppen	Sondelandepplatz	Oppenhe
EGAKA EGA	Intersection	EGAKA
EH Egelbac	NDI	Egelbac
ESATI ESATI	Intersection	ESATI
ETID Harau	Militafluggplatz	Harau D
ETOLU ETO	Intersection	ETOLU
ETDU Wiesb	Militafluggplatz	Wiesbed
FFM Frankf	VOR/DME	Frankfurt
FR Frankfu	Localer	Frankfurt

Rechnungsv

ED-R134 Wäldchen
Restricted GND - 18.000 MSL

Position: 50.23.33, 09.45.45, 116 km

Altitude: 5.000 ft, MEF 3.800 ft

Info:

ED-R134 Wäldchen
Restricted GND - 18.000 MSL

FIS Langen
FIS GND - FL 245

Karte

50.09.41 09.09.29 WGS84 1.6E 44 km 060/240° 587 ft Cirrus F 172 M DG Warnung Fuel OK Dmb/Descend



Startstrecke
Eingaben

Daten aus Flughandbuch: **MTOW, MSL, 15°**
 Rollstrecke Startstrecke

Vorhandene Streckenlängen: **EDFE Frankfurt-Eggenstein**
 Runway

Rollstrecke Startstrecke

Druckhöhe Neigung Temperatur

Grasbahn Feuchtes Gras 10% aufgew. Untergrund 50% beschädigte Grasnarbe 10% hohes Gras 20% störender Belag Plüzen, Schneematsch 30% normale Schneehöhe bis ca. 5cm Höhe 50% Pulverschnee bis ca. 8cm Höhe 25%

Berechnung

Faktor	Rollstrecke	Startstrecke
Handbuch	230 m	424 m
Höhenzuschlag	7 m	13 m
Temperaturzuschlag	30 m	55 m
Neigungszuschlag	0 m	0 m
Grasbahnzuschlag	53 m	98 m
Oberflächenzuschlag	0 m	0 m
Tatsächliche Strecken	320 m	591 m
Reserve	130 m	79 m

Reserven: **29 %** **12 %**

Wetter: METAR EDFE - 29.06. 10:20 UTC
 Wind 230/13 km/h
 Sichtweite > 10 km
 Temp. 27°C Dewpt. 17°C Spread 10°C
 QNH 1015 hPa
 CAVOK

Wetterdaten aktualisieren

Landstrecke
Eingaben

Daten aus Flughandbuch: **MTOW, MSL, 15°**
 Rollstrecke Landstrecke

Vorhandene Streckenlängen: **EDVK Kassel-Calden**
 Runway

Rollstrecke Landstrecke

Druckhöhe Neigung Temperatur

Grasbahn störender Belag

Berechnung

Faktor	Rollstrecke	Landstrecke
Handbuch	148 m	370 m
Höhenzuschlag	4 m	11 m
Temperaturzuschlag	10 m	26 m
Tatsächliche Strecken	163 m	407 m
Reserve	837 m	1.093 m

Reserven: **84 %** **78 %**

Wetter: METAR EDVK - 29.06. 10:20 UTC
 Wind variabel/2 km/h
 Sichtweite > 10 km
 Temp. 27°C Dewpt. 12°C Spread 15°C
 QNH 1015 hPa
 CAVOK

Wetterdaten aktualisieren

Flight Planner 6 - EDFE Frankfurt EDVK

Route Karte Flugweg GPS Moving Map Ansicht Extra Fenster Web 2

Route Karte

Ansicht Suche

Cartographie ICAO LOWER TRM ADP-VFR PPK SCADT

Overlay Datenbank Anspace Tracks Gator Meteor Radar Wind Notizen Links

Fluchtplan

Masse **CG OK**

Cessna 172R

Pic 2. Reihe Gepäck A. Gepäck B

Max. 54 kg Max. 23 kg

85.0 kg 75.0 kg 65.0 kg 55.0 kg 45.0 kg 35.0 kg 25.0 kg 15.0 kg 5.0 kg

Schwerpunkte

	Masse	Grndg. vorn	Am	Grndg. hinten
Aktuell	0.0 kg	0.000 m	1.020 m	1.201 m
Start	879.6 kg	0.889 m	1.020 m	1.201 m
Landung	832.4 kg	0.889 m	1.020 m	1.201 m
locken	733.9 kg	0.889 m	1.002 m	1.201 m

Stromliste

Name	Gewicht	Am	Moment
Leer	726.0 kg	1.000 m	726.0 kgm
Pilot u Co	0.0 kg	0.940 m	0.0 kgm
H. Fluggäste	0.0 kg	1.854 m	0.0 kgm
Gepäck B. 1	0.0 kg	2.413 m	0.0 kgm
Gepäck B. 2	0.0 kg	3.124 m	0.0 kgm
Tank	152.6 kg	1.219 m	186.1 kgm
Σ	879.6 kg		922.1 kgm

Belastung Kraftstoffberechnung **CG OK**

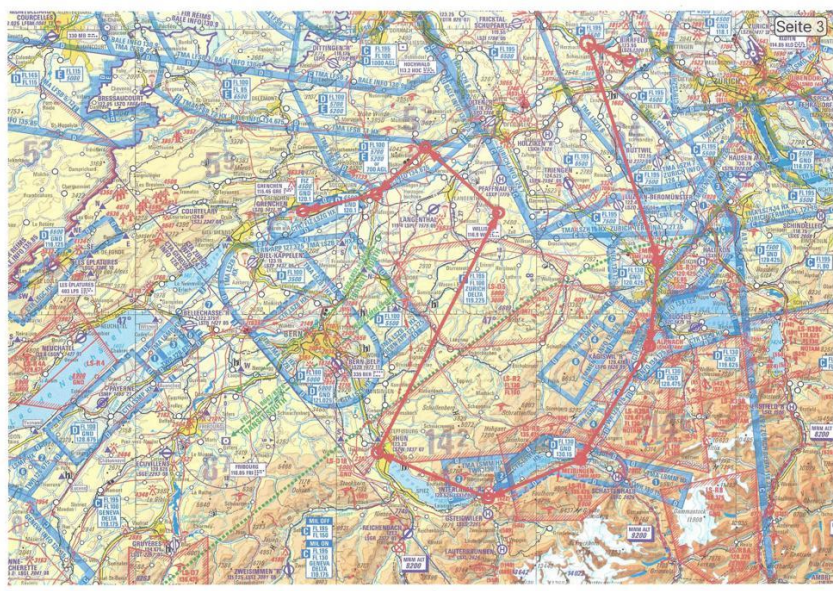
Verbrauch	Flugzeit	Kraftstoff	Gewicht
Reiseflug	39 min	48.3 l	34.8 kg
Anlassen/Rollen	min	4.2 l	3.0 kg
An- und Abflug	10 min	5.8 l	4.2 kg
Halting	10 min	5.8 l	4.2 kg
Reserve	30 min	17.5 l	12.6 kg

Druck von Briefing Unterlagen

Flugplanung Seite 1

Parameter:
Airspeed: 135 kts Pilot:
Fuelflow: 20 l/h Date (EOBT): 19.06.2018 08:23
Wind: 000 / 0 kts

Waypoint	Altitude [ft]	Dist. [nm]	Time [hh:mm]	ETO	Fuel [l]	TC [°]	WC:VA [°]	MC [°]	MH [°]
LSZF Birrfeld --- Mhz				08:23					
LSZFW WEST (Birrfeld) --- Mhz	3841	4.7	00:02	08:25	0.7	294	0 : 2	292	292
LSME Emmen (MIL) 120.425 Mhz	4600	24.1	00:10	08:35	3.6	163	0 : 2	161	161
LSMA Alpnach (MIL) 128.470 Mhz	8000	8.9	00:03	08:39	1.3	185	0 : 2	183	183
LSMM Meiringen (MIL) 130.150 Mhz	8000	13.9	00:06	08:45	2.1	211	0 : 2	209	209
LSMI Interlaken (MIL) WIL. --- Mhz	8000	10.4	00:04	08:50	1.5	247	0 : 2	245	245
Thun Allmend Flugplatz --- Mhz	8000	12.4	00:05	08:55	1.8	293	0 : 2	291	291
WIL Willisau 116.900 Mhz	8000	28.2	00:12	09:08	4.2	26	0 : 2	24	24
OENSINGEN (Grenchen) --- Mhz	3000	10.1	00:04	09:12	1.5	312	0 : 2	310	310
E (Grenchen) --- Mhz	3000	7.0	00:03	09:16	1.0	226	0 : 2	224	224
LSZG Grenchen Grenchen Tower 120.100	3000	7.7	00:03	09:19	1.1	257	0 : 2	255	255
Total		127	00:56		18.8				



SICHTANFLUGKARTE VISUAL APPROACH CHART AD 123.55 BIRRFELD LSZF

RTF Meldung bei Einflog Sektor WEST, NORD, SOD
RTF report approaching sector WEST, NORTH, SOUTH

ARRIVAL:
Bis vor letzte Anflugsektoren: WEST und NORTH
Preferential ARR Sectors: WEST und NORTH
MINNA 2000
Einflogsektor SOD: Nur wenn kein Segelfluggelände
Entry sector SOUTH: Nur wenn kein gl. NO ACT
MINNA 2000
Durchflug Segelfluggelände und Überflug der Pistendach:
Crossing glider sector and RWY axis:
MINNA 2000
Alle Einfüge via Einflogsektor NTHS RWY 08
All arrivals via entry code NTHS RWY 08
2000

DEPARTURE
WEST, NORD UND OST
WEST, NORTH and EAST
MAX: 2000

6 Für die Stafflung zum anfliegenden Verkehr ist die Downwindhöhe von 2000 m zu halten. Der weitere Steigflug darf erst nach dem Verlassen der Platzrunde begonnen werden.
Maintain 2000m on downwind for separation to inbound traffic. Further climbing may be commenced after leaving the Air circuit.

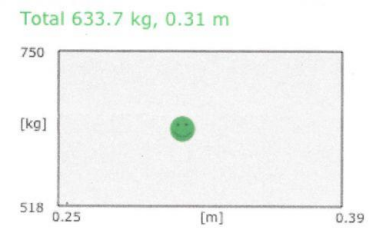
Lärmempfindliche Gebiete
Noise sensitive areas

7a Zu meidende Gebiete wegen heftigen Luftlärmbelastungen. OBST markiert mit Blitzlicht während Hubschrauberstarts (HGT: GND/1000)
Area to be avoided due to severe hot air turbulences. OBST marked with flashlights during hot air ignition (HGT: GND/1000)

CTNA: TMA, Zürich 1 meilen 2000 ft, 195
Avoidance TMA Zurich 1
Höhen über MSL in ft. Höhen über Ground in ft.
Altitudes in ft. Heights in ft.

Weight & Balance - Diamond DA-20 Katana

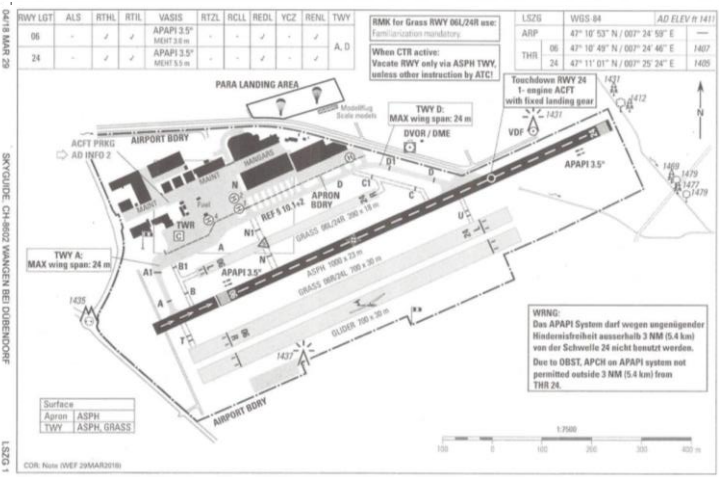
M001 Leer	518 kg
M002 PIC und Co	80 kg
M003 Gepäck	0 kg
M004 Tank	50 l
ENVELOPE	
Total 633.7 kg, 0.31 m	



PARAMETER	
Spec. Weight Fuel	0.710 kg/l

METARs for Route

- VFR LSZF Birrfeld**
LSZF Airfield
Metar LSZH (Dist: 22.6 km)
▶ 270° 4 kn QNH: 1016 hPa
Temp: -2.0 °C Dewp: -5.0 °C
Vis: 10.0 km Wx: ---
CAVOK
- VFR LSZFW WEST (Birrfeld)**
LSZFW Reportingpoint
Metar LSZH (Dist: 30.1 km)
▶ 270° 4 kn QNH: 1016 hPa
Temp: -2.0 °C Dewp: -5.0 °C
Vis: 10.0 km Wx: ---
CAVOK
- VFR LSME Emmen (MIL)**
LSME Airfield 120.425 Mhz
Metar LSME (Dist: 0.9 km)
▼ 0° 2 kn QNH: 1016 hPa
Temp: -2.0 °C Dewp: -4.0 °C
- VFR OENSINGEN (Grenchen)**
LSZGOE Reportingpoint
Metar LSZG (Dist: 26.5 km)
▶ 100° 1 kn QNH: 1016 hPa
Temp: -2.0 °C Dewp: -4.0 °C
Vis: 10.0 km Wx: ---
CAVOK
- VFR E (Grenchen)**
LSZGE Reportingpoint
Metar LSZG (Dist: 14.3 km)
▶ 100° 1 kn QNH: 1016 hPa
Temp: -2.0 °C Dewp: -4.0 °C
Vis: 10.0 km Wx: ---
CAVOK
- VFR Grenchen**
LSZG Airport 120.100 Mhz
Metar LSZG (Dist: 1.3 km)
▶ 100° 1 kn QNH: 1016 hPa
Temp: -2.0 °C Dewp: -4.0 °C



GS: 5000 ft

Bern TMA 1n

DTN:

Route Route berechnen Optionen

TAS[kts]: Fuel[l/h]:
 Wind[°]: Wind[kts]:
 Pilot: EOBT:

4.5 nm

ALT GND:

0 ft

0 nm W

LSZF

Zurich Inf

124.700

Waypoint	Altitude [ft]	Dist. [nm]	Time [hh:mm]	ETO	Fuel [l]	TC [°]	WC:VA [°]	MC [°]	MH [°]
LSZF Birrfeld ---,--- Mhz				08:23					
LSZFW WEST (Birrfeld) ---,--- Mhz	3841	4.7	00:02	08:25	0.7	294	0 : 2	292	292
LSME Emmen (MIL) 120.425 Mhz	4600	24.1	00:10	08:35	3.6	163	0 : 2	161	161
LSMA Alpnach (MIL) 128.470 Mhz	8000	8.9	00:03	08:39	1.3	185	0 : 2	183	183
LSMM Meiringen (MIL) 130.150 Mhz	8000	13.9	00:06	08:45	2.1	211	0 : 2	209	209
LSMI Interlaken (MIL) Wit.. ---,--- Mhz	8000	10.4	00:04	08:50	1.5	247	0 : 2	245	245
Thun Allmend Flugplatz ---,--- Mhz	8000	12.4	00:05	08:55	1.8	293	0 : 2	291	291
WIL Willisau 116.900 Mhz	8000	28.2	00:12	09:08	4.2	26	0 : 2	24	24
OENSINGEN (Grenchen) ---,--- Mhz	3000	10.1	00:04	09:12	1.5	312	0 : 2	310	310
E (Grenchen) ---,--- Mhz	3000	7.0	00:03	09:16	1.0	226	0 : 2	224	224



Skydemon



Sehr einfache und übersichtliche Funktionen

Sehr aktive Entwickler und Benutzergruppe

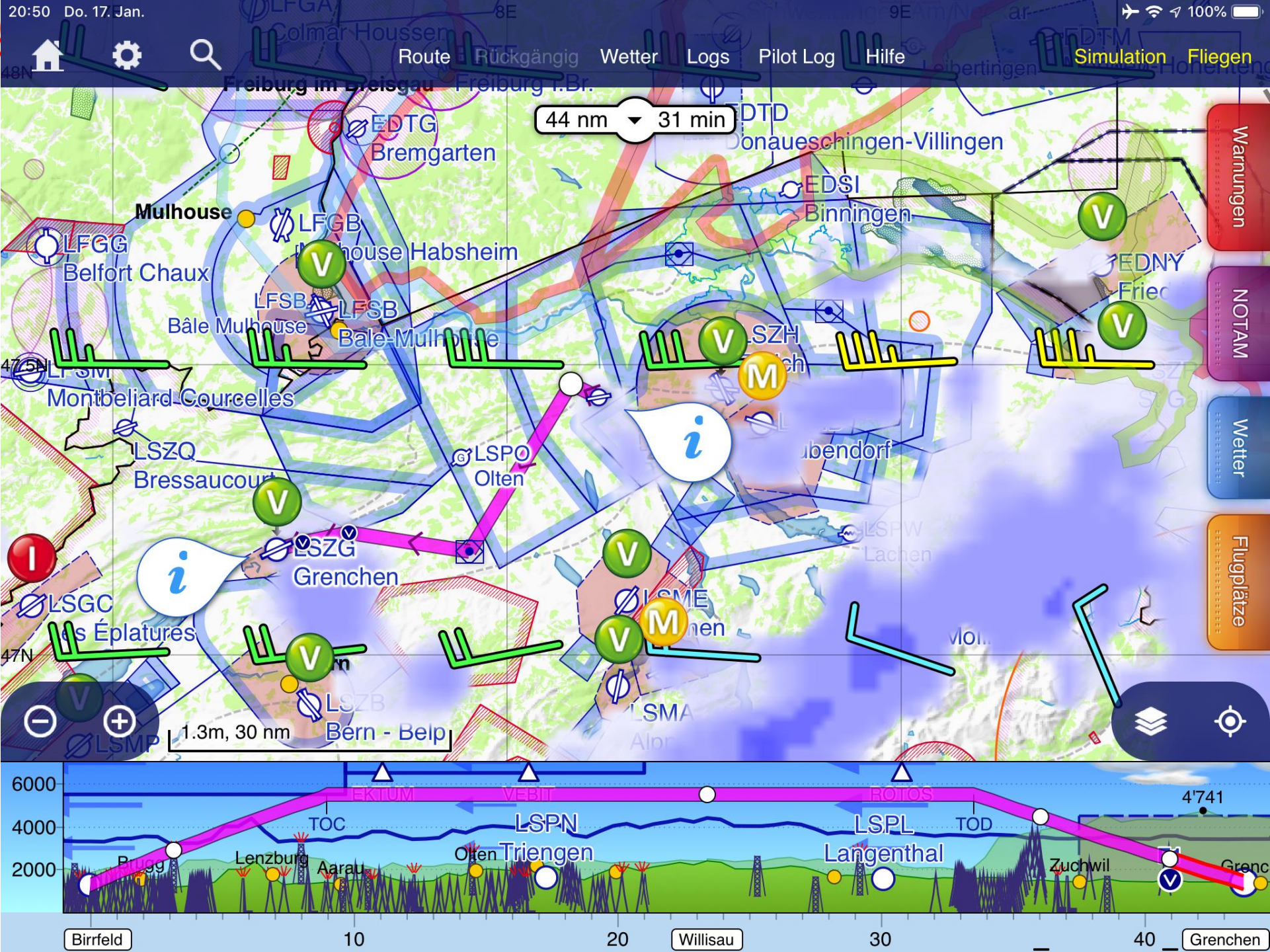
Vektorkarte mit weltweiter Abdeckung **keine ICAO Karten**

AIP und Anflugkarten Schweiz Deutschland Oestreich verfügbar (Option)

Desktop System inbegriffen

Tripkitassitent **Tripkit inkl. Karten kann ausgedruckt werden**

Debriefing Tool



Birrfeld - Grenchen PLOG

MINDEST-KRAFTSTOFFBEDARF 32.4 ltr	Startup	Brakes Off
KRAFTSTOFF-VORRAT 79.0 ltr REICHWEITE: 4 hr 46 m	Takeoff	Landing
	Brakes On	Shutdown

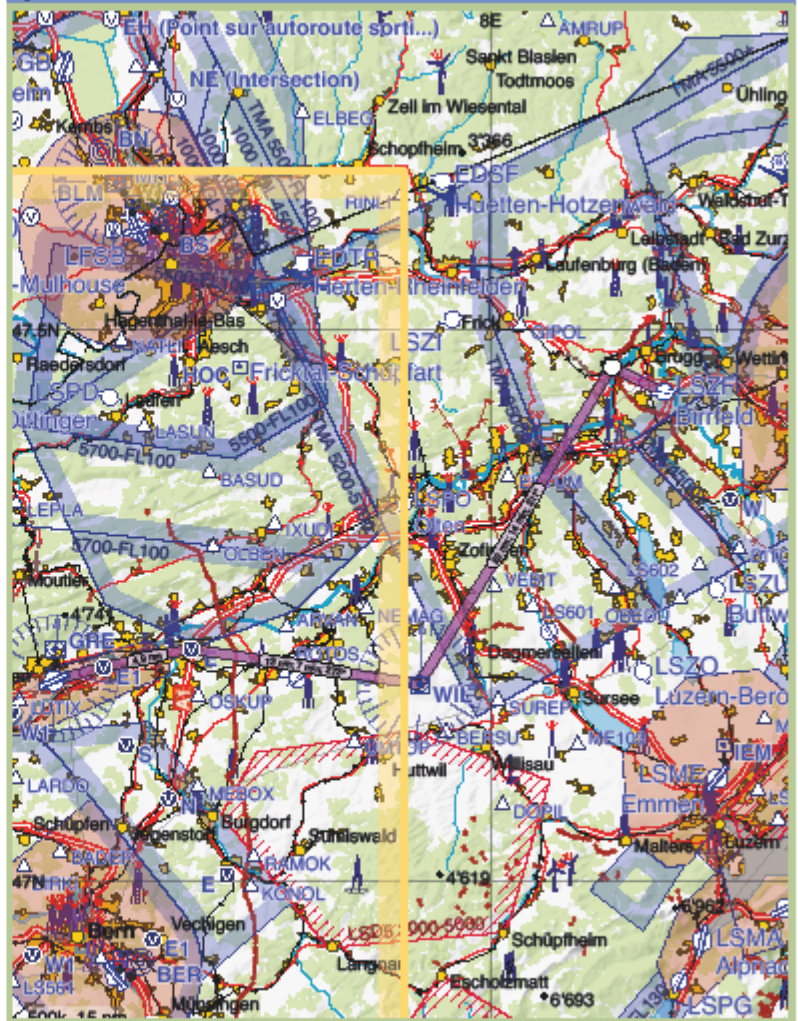
Höhe 1300 ft (47 hPa) MSA Level TAS TrkT Wind HdGM GS Dist Time
SR 07:07 Z, MCT 08:33 Z

LSZF Birrfeld	MSA Level	TAS	TrkT	Wind	HdGM	GS	Dist	Time
N472758 E0080949	3800	5500	111	296 099/02	294	77	3.2	2
<input checked="" type="checkbox"/> WIL Willisau	4200	5500	111	211 228/14	211	87	20	14
WIL Willisau <input checked="" type="checkbox"/> E (LSZG)	5000	5500	111	279 241/11	273	106	13	7
E (LSZG) <input checked="" type="checkbox"/> E1 (LSZG)	5400	5500	111	258 303/02	257	118	4.9	2
E1 (LSZG) <input checked="" type="checkbox"/> LSZG Grenchen	5600	5500	111	254 303/02	253	117	2.8	1

Höhe 1411 ft (51 hPa) SS 16:12 Z, ECT 16:46 Z 44 27

LSZF Birrfeld	LSZG Grenchen
Birrfeld 123.550	Grenchen Tower 120.100
Birrfeld Gliding 119.825	ATIS 121.100
Flight Information Service	Grenchen Ground 121.800
Zurich Information 124.700	
<input checked="" type="checkbox"/> WIL (Willisau) --- --- --- 116.900	<input checked="" type="checkbox"/> GRE (Grenchen) --- --- --- 115.450

Birrfeld - Grenchen Streckenkarte (1/2)



Garmin Pilot



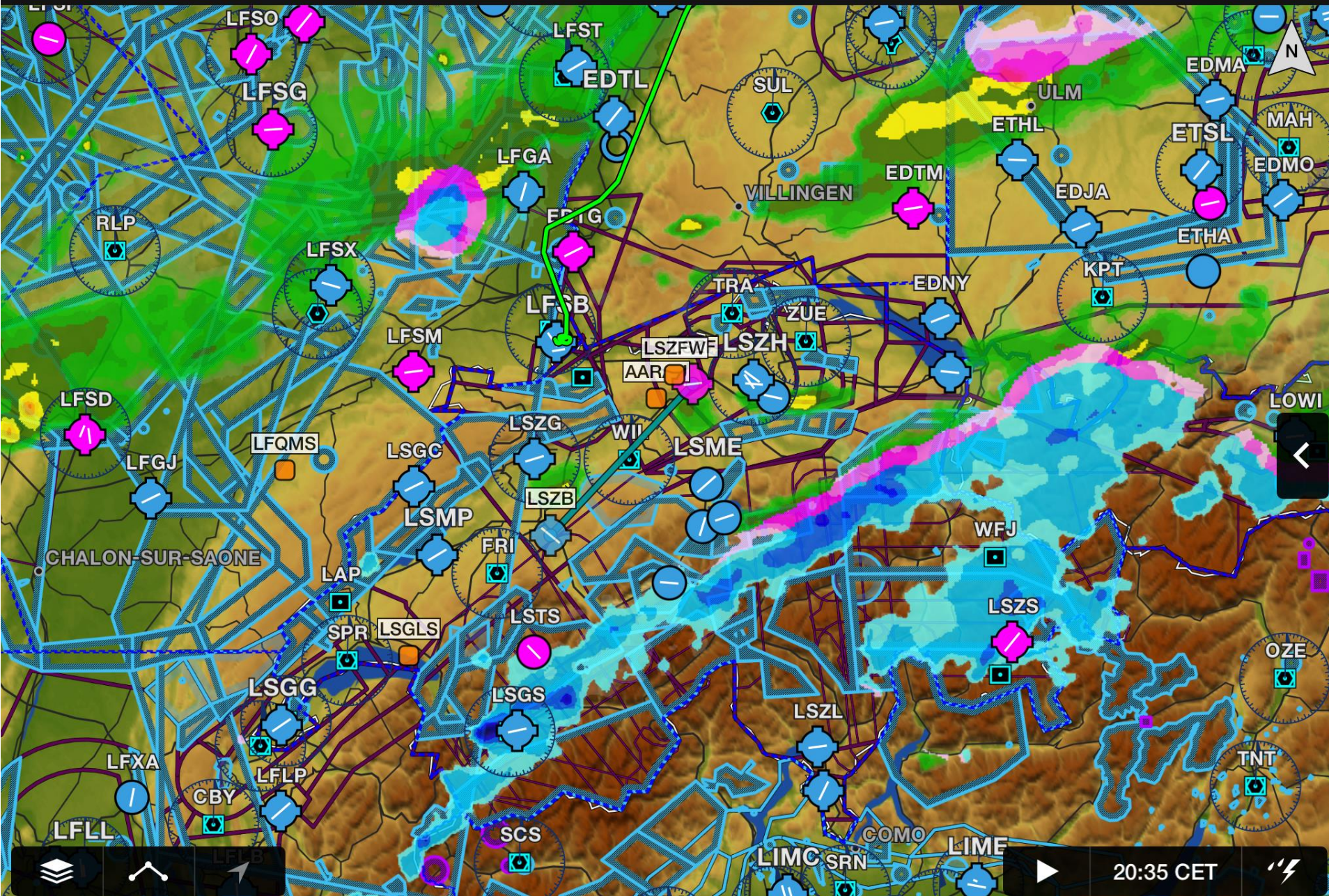
Für VFR und IFR geeignet

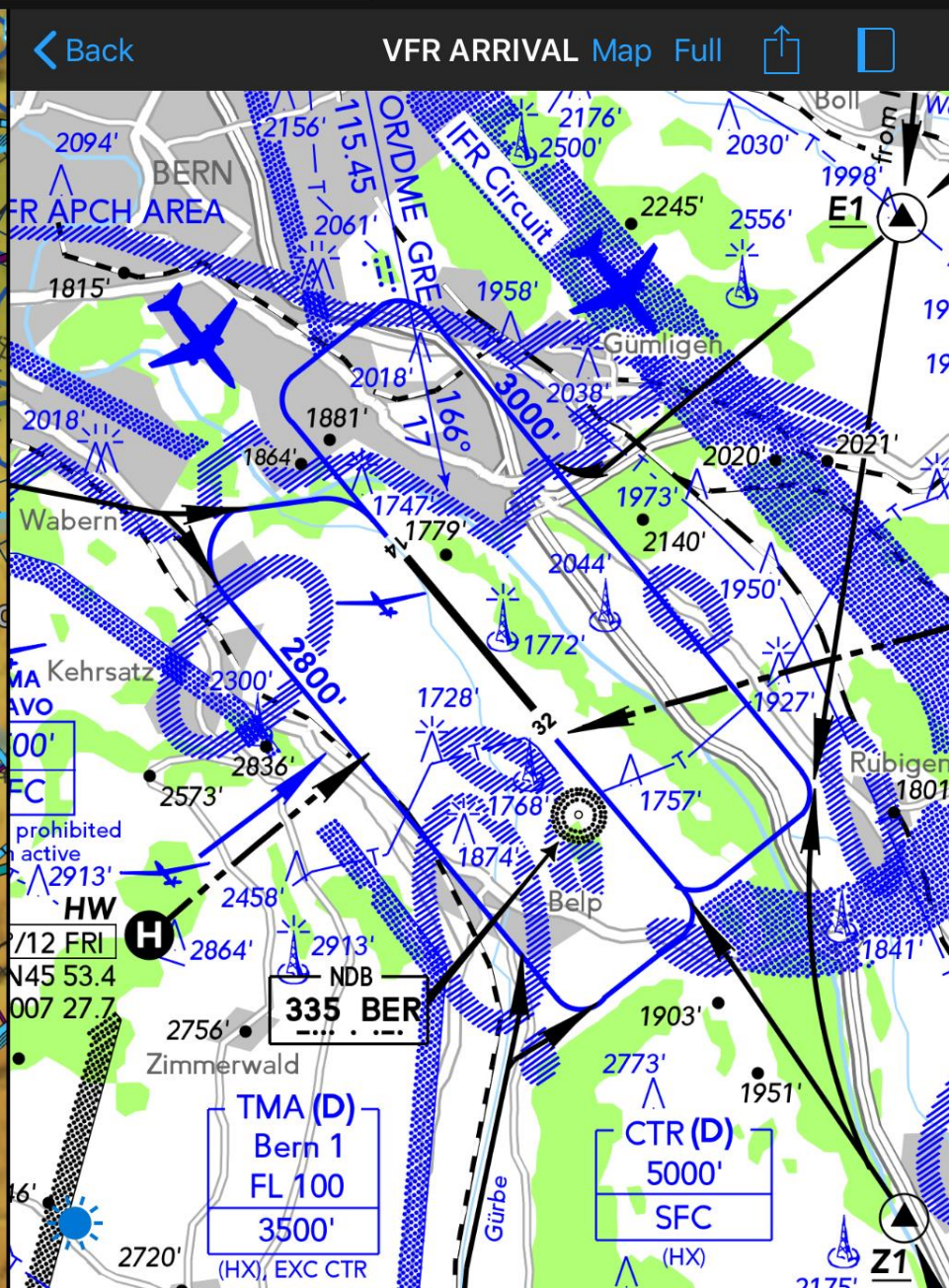
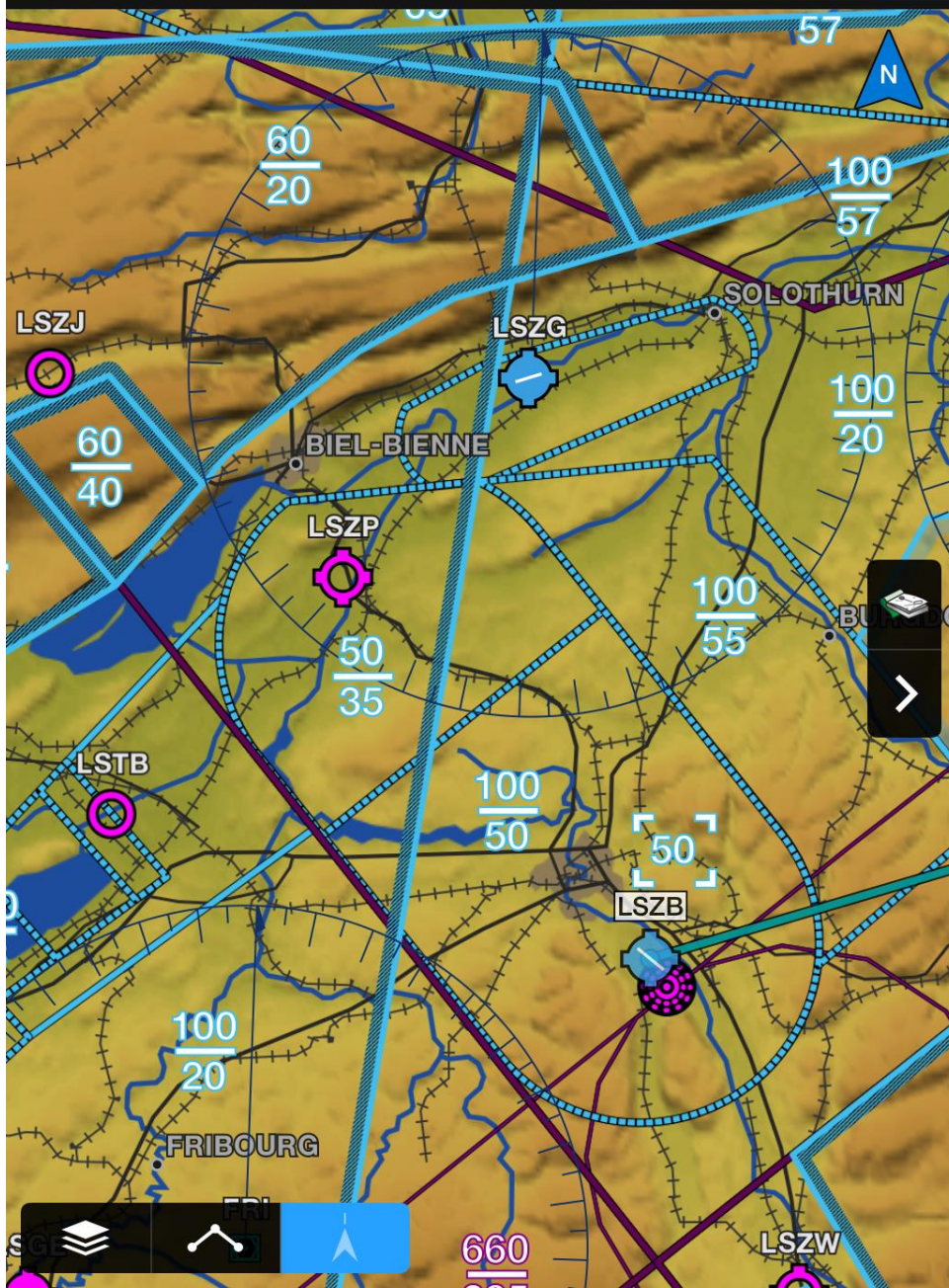
Datenaustausch mit Panel Avionik von Garmin möglich

Einbindung Jeppesen Karten und Anflugkarten (Option)

Splitbildschirm möglich (Anflugkarte)

Sehr umfangreiche Funktionen





335 BER
TMA (D)
Bern 1
FL 100
3500'
(HX), EXC CTR

CTR (D)
5000'
SFC
(HX)



Für VFR und IFR geeignet

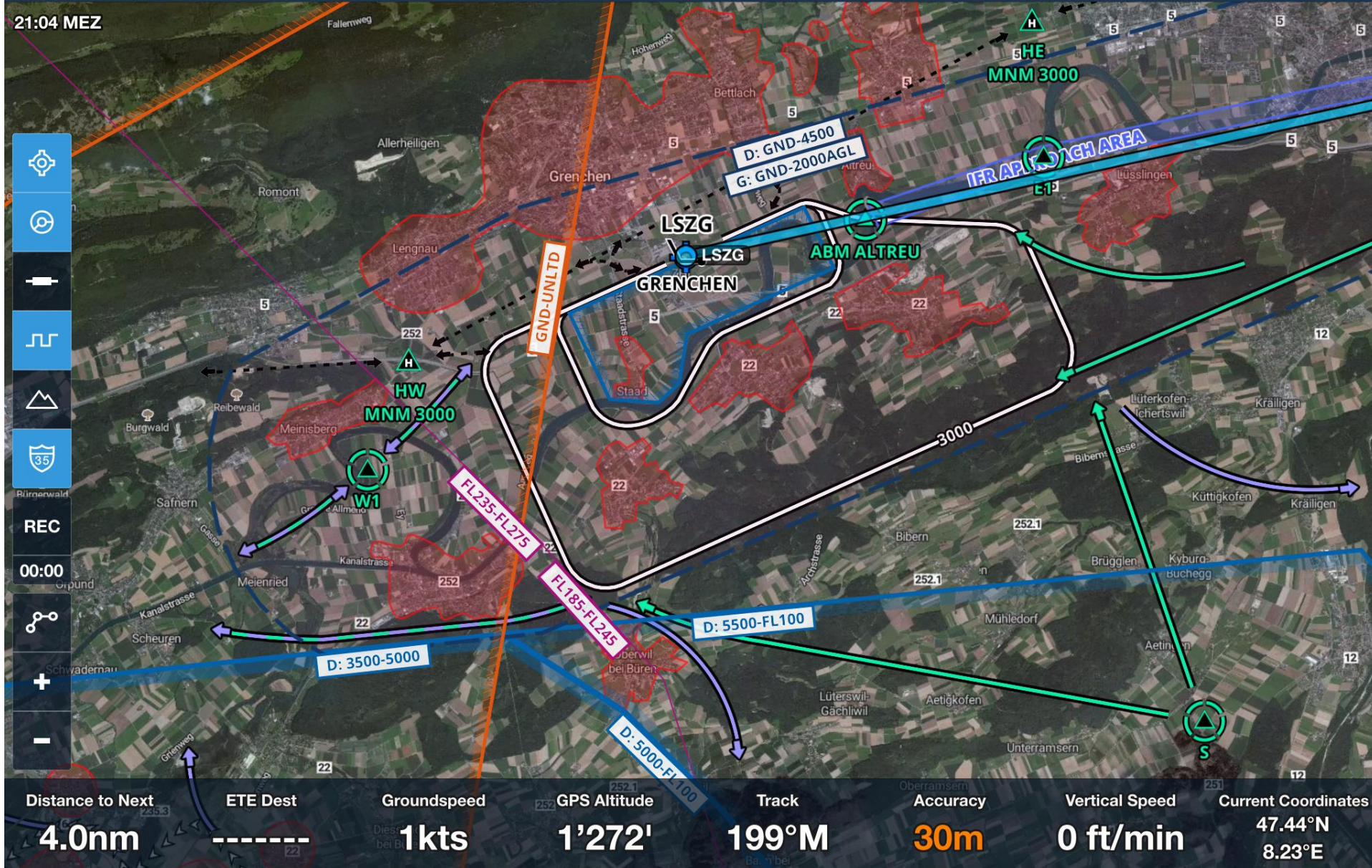
Datenaustausch mit Panel Avionik von Garmin möglich

Einbindung Jeppesen Karten und Anflugkarten (Option)

Kein Splitbildschirm möglich (Anflugkarte)

Anflugkarten werden nicht automatisch geladen

Sehr umfangreiche Funktionen, unübersichtliche Bedienung



- [Home]
- [Map]
- [Layers]
- [Profile]
- [Terrain]
- [Shield 35]
- [REC]
- [Timer 00:00]
- [Route]
- [+
- [-]

Distance to Next 4.0nm	ETE Dest -----	Groundspeed 1kts	GPS Altitude 1'272'	Track 199°M	Accuracy 30m	Vertical Speed 0 ft/min	Current Coordinates 47.44°N 8.23°E
----------------------------------	-------------------	----------------------------	-------------------------------	-----------------------	------------------------	-----------------------------------	--

VFR easy



Grosse Hardwareauswahl


**Umfangreiche Funktionen
gute Dokumentation**

Autorouting

Tripkit kann ausgedruckt werden




EasyCharts

 Use official approach charts which are georeferenced for your convenience

EasyAerodata

 VFR reporting points, glider- and MLA fields are displayed for an easy approach


EasyNOTAMs

 All active NOTAMs you need to know about are displayed on your map


EasyPrint

 Print all your paperwork anywhere, anytime using the EasyPrint feature


EasyFlightplanning

The automatic flightplanning tools avoids all uncomfortable airspaces and terrain 


EasyWeather

Current and forecast weather conditions are visualized on the moving map 

EasyTerrain

Easy planning and navigating through challenging terrain with 3D terrain data 

EasyReading

Configure the symbols, buttons and textsizes to your needs for best readability 



Show advanced filter settings

Briefing Type

Route

Single Location

Path width 10NM

NOTAMs issued in last 24 hours

NOT ON MAP

LSAS Exercises Will take place GND to FL100 from 16-JAN-2019 16:43 to 16-JAN-2019 21:00 (LSAS W/0064/19)

Less

MIL NGT FLT WITH HEL WI TRAINING AREA:

Display

WOLHUSEN SUSTEN SCHANGNAU
UPPER LIMIT: AIRSPACE CLASS E OR MAX ACCORDING TO ITEM G.
REF VFR MANUAL SWITZERLAND VFR RAC 4-0 APP 1 (MIL NGT FLT CHART)

NOTAMs issued more than 24 hours ago

NOT ON MAP

LSZH Automatic Terminal Information Service (ATIS) Operating frequency changed from 17-DEC-2018 11:19 to PERM (LS

Less

REF VFR MANUAL (VFRM) AMDT 12/18: -PAGE LSZH VFR DEP 18 AND LSZH HEL 18
ZURICH ATIS (VFR) FREQ SHOULD READ 129.005 INSTEAD OF 129.905.

Display

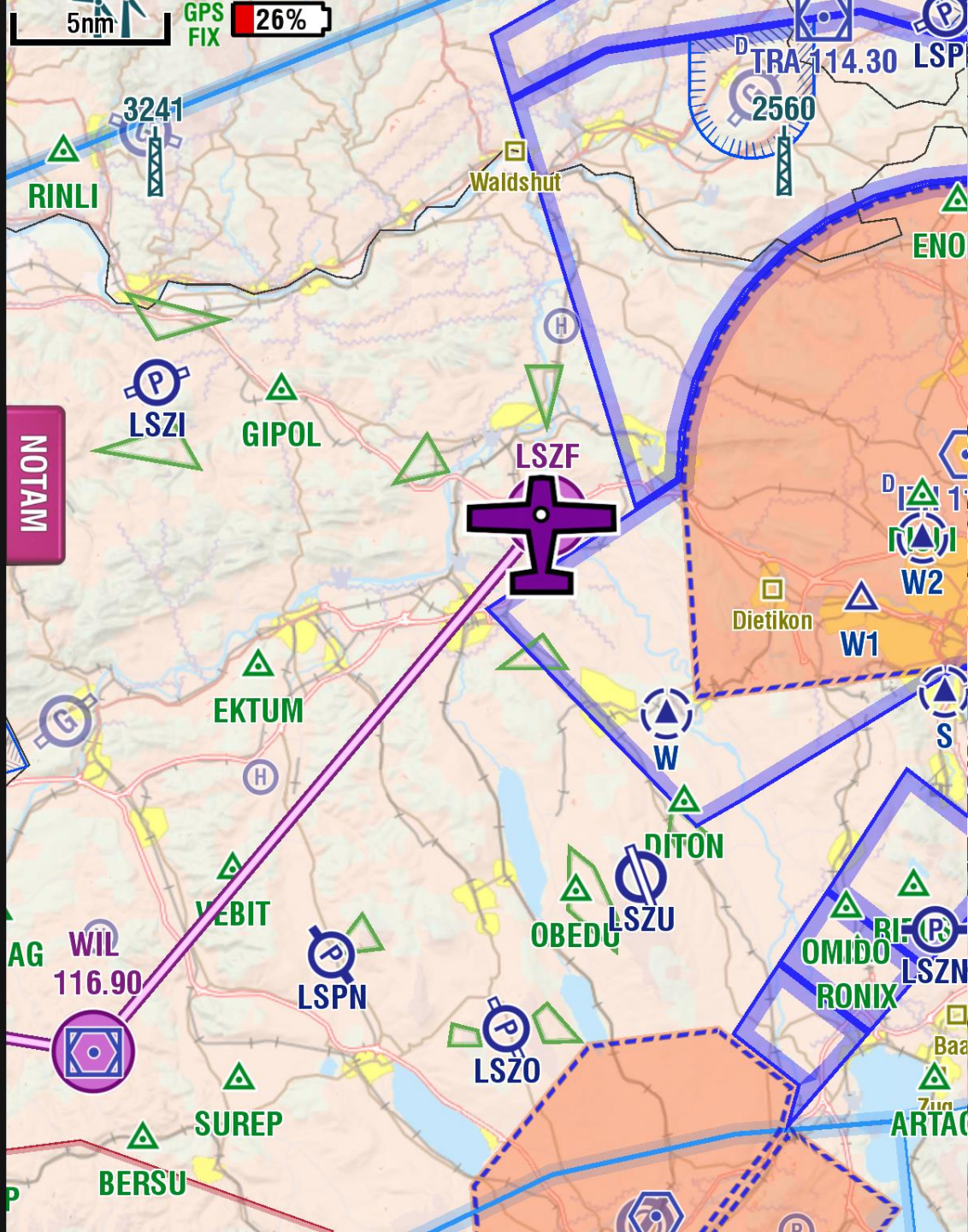
LSZG Runway Closed from 04-JAN-2019 06:00 to 31-MAR-2019 21:00 (LSZG B/0008/19)

Less

GRASS RWY 06R/24L, 06L/24R AND GRASS TWY U, T CLSD FOR FIXED WING ACFT.

Display

LSZG Aerodrome Available, prior





Anwendung

Flugvorbereitung

GPS und Tablets sind Navigationshilfsmittel

**Für jeden Flug ob mit oder ohne GPS und Tablet
Unterstützung ist eine seriöse Flugvorbereitung
wichtig**

GPS und Tablets sind Navigationshilfsmittel wie eine Papier Karte

**Die Bedienung und Anwendung muss gelernt
und geübt werden**

Positionierung im Flugzeug

Tabuzone Frontscheibe



Positionierung im Flugzeug



Positionierung im Flugzeug



??????



HB-CXA

ENGINE

The system is used for situational awareness under VFR conditions.



STALL SPEEDS	
GRAND WEIGHT	1300 kg
CONFIGURATION	FLAPS UP
FLAPS UP	85
FLAPS 10°	80
FLAPS 20°	75
FLAPS 30°	70
FLAPS 40°	65



120.425 COM LINE TWR
134.130 COM STRICKY

7600



Tabuzone Frontscheibe



STALL SPEEDS - MPH		ANGLE OF BANK	
GROSS WEIGHT	1500 kg	30°	45°
FLAPS UP	80	80	70
FLAPS 15°	60	60	50
FLAPS 30°	50	50	40
FLAPS 40°	45	45	35

GPS Empfang im Flugzeug

GPS Empfang nur mit GSM Ipads



GNS 2000 plus GPS GLONASS
Empfänger mit Schalter für
iPhone, iPad und Android



97.00 CHF *



Dual Electronics SkyPro GPS
- XGPS160



169.90 CHF *

Displaygrössen



7 `` Ipad Mini div. Android

10 `` Ipad div. Android

12 `` Ipad

Grosse Displays verleiten zum «töggelen»

Aber nicht vergessen.....

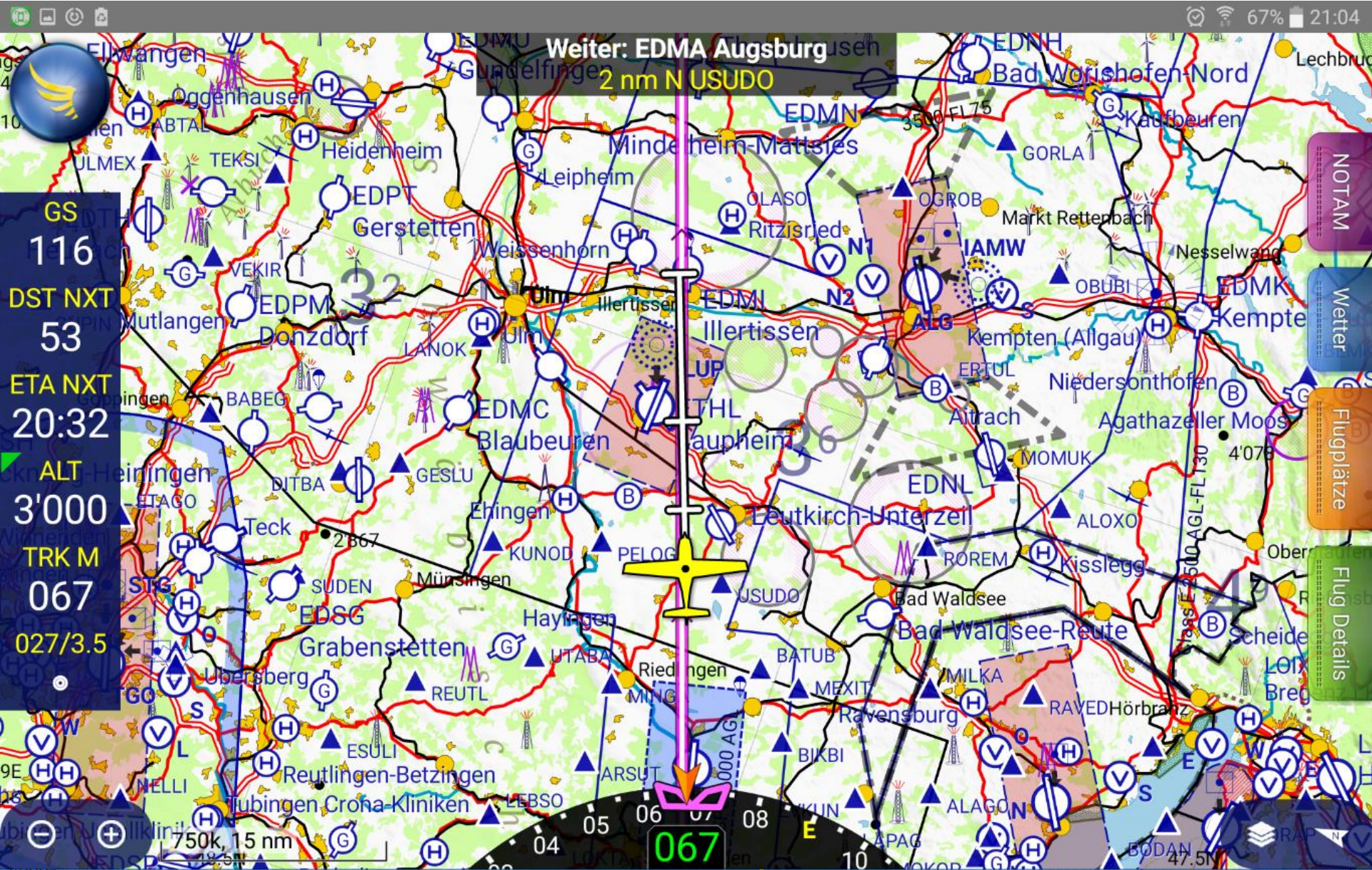
VFR **Visual Flight Rule**



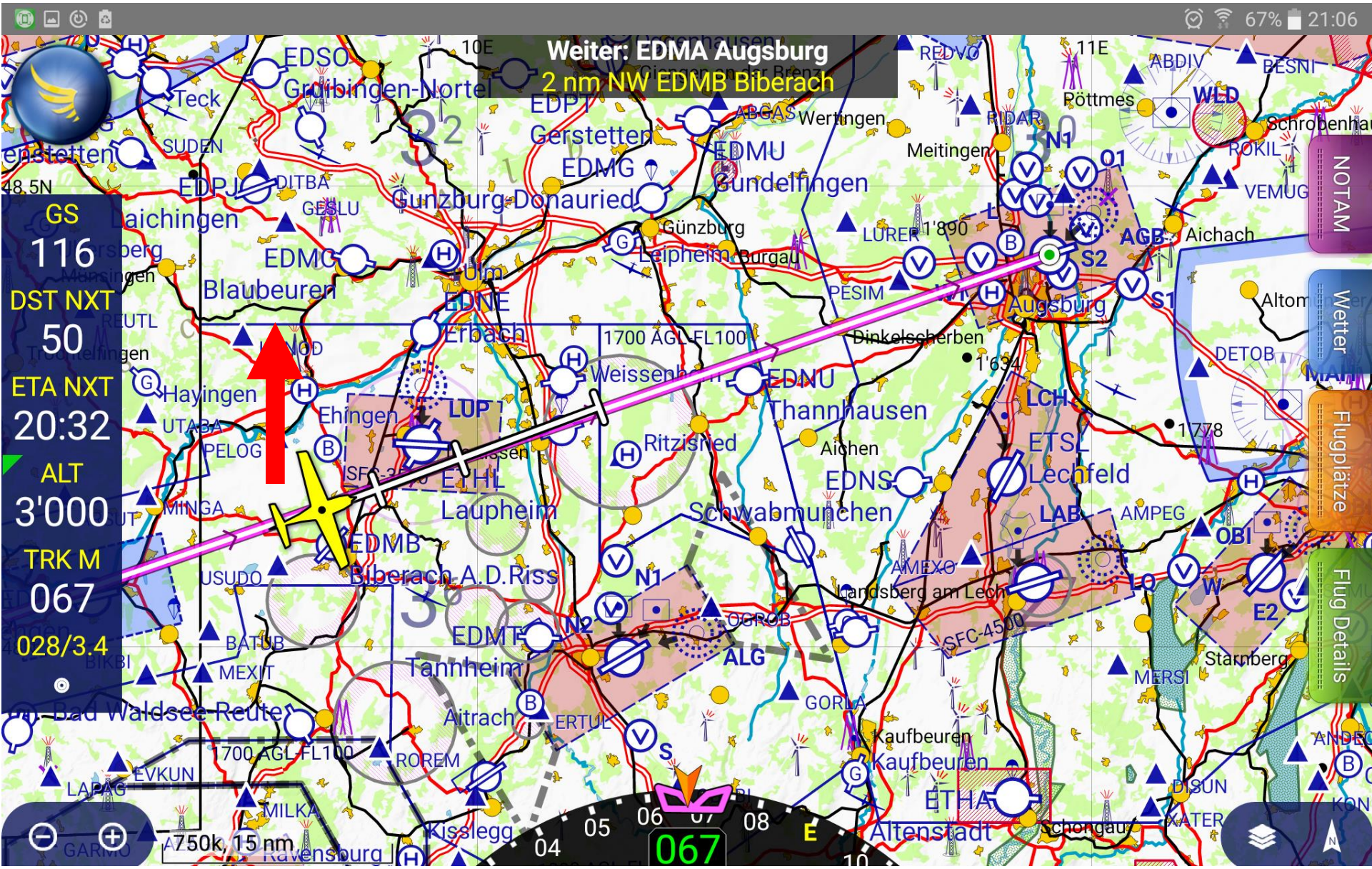
Use **Luege**

Scanning

Nord up – Track up



Nord up – Track up



Nord up – Track up



Fernrichtpunkt



Fernrichtpunkt - Scanning



DIAMOND KATANA DV20 (DA20) PAGE 4		DIAMOND KATANA DV20 (DA20) PAGE 1	
APPROACH CHECK		PREFLIGHT CHECK	
1 Abbrake	SET CRJ	1 Cruise check	COMPLETED
2 Landing gear	CRJ	2 Aircraft systems	CHECKED
3 Electric fuel pump	CRJ	3 Fuel Gauges & Fuel Tank Indicators	CHECKED
4 Fuel quantity	CRJ AS REQUIRED	4 Fuel Gauges	CHECKED
5 Carburetor heat	CRJ AS REQUIRED	5 Airspeed	CHECKED
APPROACH CHECK COMPLETED		6 Carburetor heat	CRJ AS REQUIRED
FINAL CHECK		7 Landing gear	CRJ AS REQUIRED
1 Flaps	SET FOR LANDING	8 Landing gear	CRJ AS REQUIRED
2 Propeller	CRJ	9 Landing gear	CRJ AS REQUIRED
3 Carburetor heat	CRJ AS REQUIRED	10 Carburetor heat	CRJ AS REQUIRED
FINAL CHECK COMPLETED		11 Carburetor heat	CRJ AS REQUIRED
AFTER LANDING CHECK		12 Carburetor heat	CRJ AS REQUIRED
1 Transponder	CRJ AS REQUIRED	13 Carburetor heat	CRJ AS REQUIRED
2 Landing gear	CRJ AS REQUIRED	14 Carburetor heat	CRJ AS REQUIRED
3 Brake lights	CRJ AS REQUIRED	15 Carburetor heat	CRJ AS REQUIRED
4 Electric fuel pump	CRJ AS REQUIRED	16 Carburetor heat	CRJ AS REQUIRED
5 Flaps	CRJ AS REQUIRED	17 Carburetor heat	CRJ AS REQUIRED
AFTER LANDING CHECK COMPLETED		18 Carburetor heat	CRJ AS REQUIRED
ENGINE SHUT DOWN AND PARKING		19 Carburetor heat	CRJ AS REQUIRED
1 Engine shutdown	SET	20 Carburetor heat	CRJ AS REQUIRED
2 Fuel quantity	CRJ AS REQUIRED	21 Carburetor heat	CRJ AS REQUIRED
3 Fuel quantity	CRJ AS REQUIRED	22 Carburetor heat	CRJ AS REQUIRED
4 Fuel quantity	CRJ AS REQUIRED	23 Carburetor heat	CRJ AS REQUIRED
5 Fuel quantity	CRJ AS REQUIRED	24 Carburetor heat	CRJ AS REQUIRED
6 Fuel quantity	CRJ AS REQUIRED	25 Carburetor heat	CRJ AS REQUIRED
7 Fuel quantity	CRJ AS REQUIRED	26 Carburetor heat	CRJ AS REQUIRED
8 Fuel quantity	CRJ AS REQUIRED	27 Carburetor heat	CRJ AS REQUIRED
9 Fuel quantity	CRJ AS REQUIRED	28 Carburetor heat	CRJ AS REQUIRED
10 Fuel quantity	CRJ AS REQUIRED	29 Carburetor heat	CRJ AS REQUIRED
11 Fuel quantity	CRJ AS REQUIRED	30 Carburetor heat	CRJ AS REQUIRED
12 Fuel quantity	CRJ AS REQUIRED	31 Carburetor heat	CRJ AS REQUIRED
13 Fuel quantity	CRJ AS REQUIRED	32 Carburetor heat	CRJ AS REQUIRED
14 Fuel quantity	CRJ AS REQUIRED	33 Carburetor heat	CRJ AS REQUIRED
15 Fuel quantity	CRJ AS REQUIRED	34 Carburetor heat	CRJ AS REQUIRED
16 Fuel quantity	CRJ AS REQUIRED	35 Carburetor heat	CRJ AS REQUIRED
17 Fuel quantity	CRJ AS REQUIRED	36 Carburetor heat	CRJ AS REQUIRED
18 Fuel quantity	CRJ AS REQUIRED	37 Carburetor heat	CRJ AS REQUIRED
19 Fuel quantity	CRJ AS REQUIRED	38 Carburetor heat	CRJ AS REQUIRED
20 Fuel quantity	CRJ AS REQUIRED	39 Carburetor heat	CRJ AS REQUIRED
21 Fuel quantity	CRJ AS REQUIRED	40 Carburetor heat	CRJ AS REQUIRED
22 Fuel quantity	CRJ AS REQUIRED	41 Carburetor heat	CRJ AS REQUIRED
23 Fuel quantity	CRJ AS REQUIRED	42 Carburetor heat	CRJ AS REQUIRED
24 Fuel quantity	CRJ AS REQUIRED	43 Carburetor heat	CRJ AS REQUIRED
25 Fuel quantity	CRJ AS REQUIRED	44 Carburetor heat	CRJ AS REQUIRED
26 Fuel quantity	CRJ AS REQUIRED	45 Carburetor heat	CRJ AS REQUIRED
27 Fuel quantity	CRJ AS REQUIRED	46 Carburetor heat	CRJ AS REQUIRED
28 Fuel quantity	CRJ AS REQUIRED	47 Carburetor heat	CRJ AS REQUIRED
29 Fuel quantity	CRJ AS REQUIRED	48 Carburetor heat	CRJ AS REQUIRED
30 Fuel quantity	CRJ AS REQUIRED	49 Carburetor heat	CRJ AS REQUIRED
31 Fuel quantity	CRJ AS REQUIRED	50 Carburetor heat	CRJ AS REQUIRED
32 Fuel quantity	CRJ AS REQUIRED	51 Carburetor heat	CRJ AS REQUIRED
33 Fuel quantity	CRJ AS REQUIRED	52 Carburetor heat	CRJ AS REQUIRED
34 Fuel quantity	CRJ AS REQUIRED	53 Carburetor heat	CRJ AS REQUIRED
35 Fuel quantity	CRJ AS REQUIRED	54 Carburetor heat	CRJ AS REQUIRED
36 Fuel quantity	CRJ AS REQUIRED	55 Carburetor heat	CRJ AS REQUIRED
37 Fuel quantity	CRJ AS REQUIRED	56 Carburetor heat	CRJ AS REQUIRED
38 Fuel quantity	CRJ AS REQUIRED	57 Carburetor heat	CRJ AS REQUIRED
39 Fuel quantity	CRJ AS REQUIRED	58 Carburetor heat	CRJ AS REQUIRED
40 Fuel quantity	CRJ AS REQUIRED	59 Carburetor heat	CRJ AS REQUIRED
41 Fuel quantity	CRJ AS REQUIRED	60 Carburetor heat	CRJ AS REQUIRED
42 Fuel quantity	CRJ AS REQUIRED	61 Carburetor heat	CRJ AS REQUIRED
43 Fuel quantity	CRJ AS REQUIRED	62 Carburetor heat	CRJ AS REQUIRED
44 Fuel quantity	CRJ AS REQUIRED	63 Carburetor heat	CRJ AS REQUIRED
45 Fuel quantity	CRJ AS REQUIRED	64 Carburetor heat	CRJ AS REQUIRED
46 Fuel quantity	CRJ AS REQUIRED	65 Carburetor heat	CRJ AS REQUIRED
47 Fuel quantity	CRJ AS REQUIRED	66 Carburetor heat	CRJ AS REQUIRED
48 Fuel quantity	CRJ AS REQUIRED	67 Carburetor heat	CRJ AS REQUIRED
49 Fuel quantity	CRJ AS REQUIRED	68 Carburetor heat	CRJ AS REQUIRED
50 Fuel quantity	CRJ AS REQUIRED	69 Carburetor heat	CRJ AS REQUIRED
51 Fuel quantity	CRJ AS REQUIRED	70 Carburetor heat	CRJ AS REQUIRED
52 Fuel quantity	CRJ AS REQUIRED	71 Carburetor heat	CRJ AS REQUIRED
53 Fuel quantity	CRJ AS REQUIRED	72 Carburetor heat	CRJ AS REQUIRED
54 Fuel quantity	CRJ AS REQUIRED	73 Carburetor heat	CRJ AS REQUIRED
55 Fuel quantity	CRJ AS REQUIRED	74 Carburetor heat	CRJ AS REQUIRED
56 Fuel quantity	CRJ AS REQUIRED	75 Carburetor heat	CRJ AS REQUIRED
57 Fuel quantity	CRJ AS REQUIRED	76 Carburetor heat	CRJ AS REQUIRED
58 Fuel quantity	CRJ AS REQUIRED	77 Carburetor heat	CRJ AS REQUIRED
59 Fuel quantity	CRJ AS REQUIRED	78 Carburetor heat	CRJ AS REQUIRED
60 Fuel quantity	CRJ AS REQUIRED	79 Carburetor heat	CRJ AS REQUIRED
61 Fuel quantity	CRJ AS REQUIRED	80 Carburetor heat	CRJ AS REQUIRED
62 Fuel quantity	CRJ AS REQUIRED	81 Carburetor heat	CRJ AS REQUIRED
63 Fuel quantity	CRJ AS REQUIRED	82 Carburetor heat	CRJ AS REQUIRED
64 Fuel quantity	CRJ AS REQUIRED	83 Carburetor heat	CRJ AS REQUIRED
65 Fuel quantity	CRJ AS REQUIRED	84 Carburetor heat	CRJ AS REQUIRED
66 Fuel quantity	CRJ AS REQUIRED	85 Carburetor heat	CRJ AS REQUIRED
67 Fuel quantity	CRJ AS REQUIRED	86 Carburetor heat	CRJ AS REQUIRED
68 Fuel quantity	CRJ AS REQUIRED	87 Carburetor heat	CRJ AS REQUIRED
69 Fuel quantity	CRJ AS REQUIRED	88 Carburetor heat	CRJ AS REQUIRED
70 Fuel quantity	CRJ AS REQUIRED	89 Carburetor heat	CRJ AS REQUIRED
71 Fuel quantity	CRJ AS REQUIRED	90 Carburetor heat	CRJ AS REQUIRED
72 Fuel quantity	CRJ AS REQUIRED	91 Carburetor heat	CRJ AS REQUIRED
73 Fuel quantity	CRJ AS REQUIRED	92 Carburetor heat	CRJ AS REQUIRED
74 Fuel quantity	CRJ AS REQUIRED	93 Carburetor heat	CRJ AS REQUIRED
75 Fuel quantity	CRJ AS REQUIRED	94 Carburetor heat	CRJ AS REQUIRED
76 Fuel quantity	CRJ AS REQUIRED	95 Carburetor heat	CRJ AS REQUIRED
77 Fuel quantity	CRJ AS REQUIRED	96 Carburetor heat	CRJ AS REQUIRED
78 Fuel quantity	CRJ AS REQUIRED	97 Carburetor heat	CRJ AS REQUIRED
79 Fuel quantity	CRJ AS REQUIRED	98 Carburetor heat	CRJ AS REQUIRED
80 Fuel quantity	CRJ AS REQUIRED	99 Carburetor heat	CRJ AS REQUIRED
81 Fuel quantity	CRJ AS REQUIRED	100 Carburetor heat	CRJ AS REQUIRED



VFR

Visual Flight Rule



Use Luege



Briefing mit Tablet

Briefing gespeichert auf Tablet als PDF oder OneNote

Preflight Information Bulletin

METEO

Period (UTC): 2019JAN13 1911 to: 2019JAN13 2359
 Printed at (UTC): 2019JAN13 1911
 Datasource: MeteoSwiss

METAR

METAR LSZH 131850Z 24016G27KT 8000 -RA FEW010 BKN017 06/04 Q1009
 TEMPO 4000 RA BKN013=

SPECI

LSZH no data available

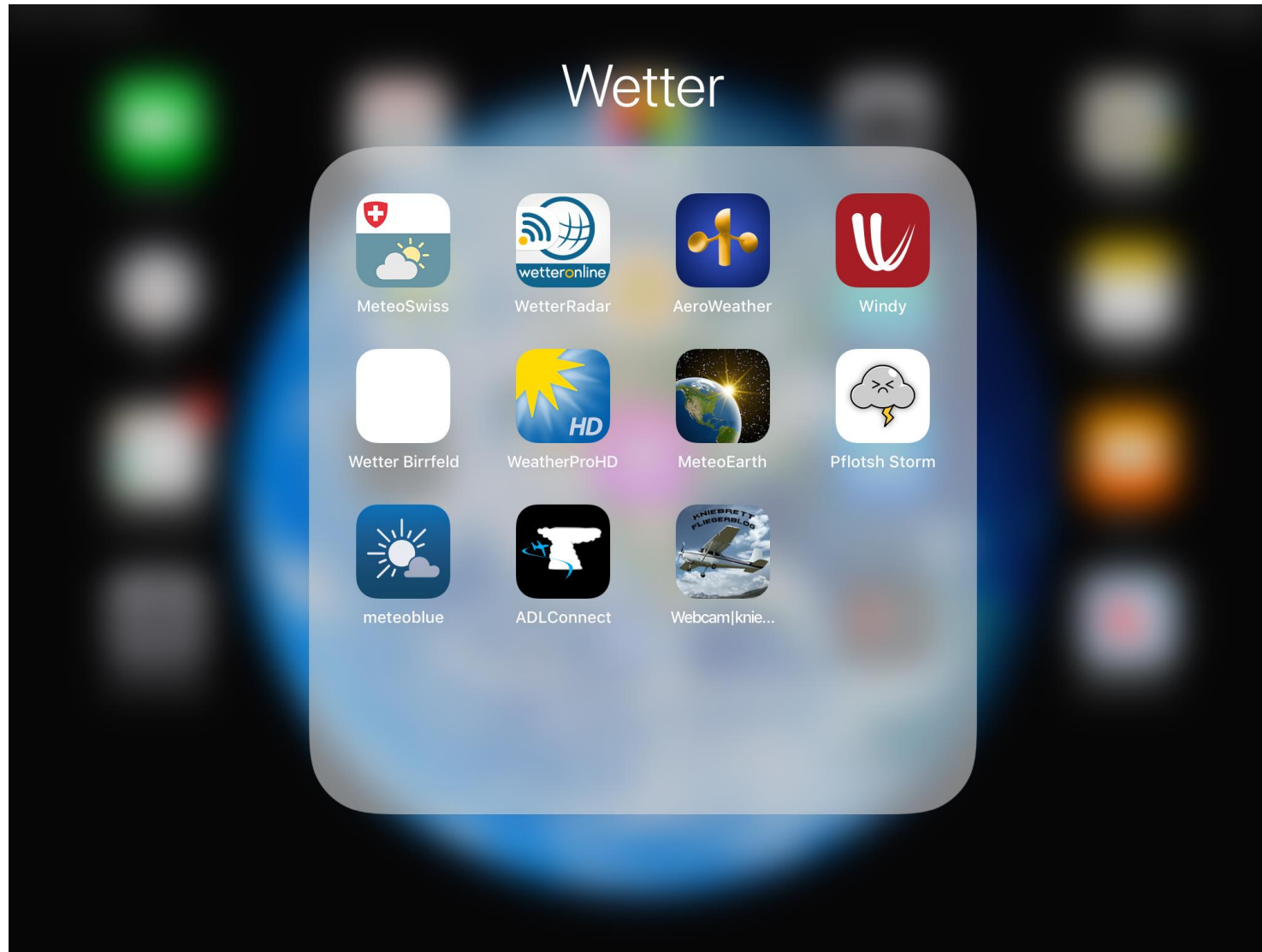
TAF

LSZH 131725Z 1318/1424 23015KT 8000 -RA SCT010 BKN025 TX05/1414Z TN03/1407Z
 TEMPO 1318/1406 4500 RA BKN013
 TEMPO 1318/1401 26018G35KT
 BECMG 1403/1406 29007KT
 PROB40 TEMPO 1406/1424 4500 SHRA BKN014
 PROB30 TEMPO 1406/1415 4500 SHRASN BKN012=

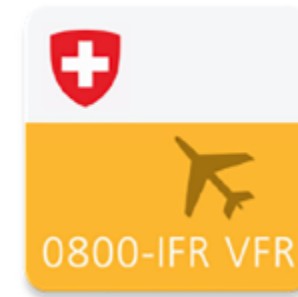
LSZH - Zurich

- /19 B) 2019JAN09 0000 C) 2019JAN26 1330
 E) RESTRICTION EFFECTIVE FROM 2019 JAN 20 0500: MAX 2HR GND TIME FOR
 ALTN LDG OF GA DUE TO WORLD ECONOMIC FORUM (WEF).
- /19 B) 2019JAN09 0000 C) 2019JAN26 1330
 E) RESTRICTION EFFECTIVE FROM 2019 JAN 20 0500:
 EARLIEST NON-SKED LDG FOR WIDEBODY ACFT WO PRKG PERMISSION 1300 UTC
 DUE TO WORLD ECONOMIC FORUM (WEF).
- /19 B) 2019JAN09 0000 C) 2019JAN26 1330
 E) RESTRICTION EFFECTIVE FROM 2019 JAN 21 0500:
 FPL WITH INDIVIDUAL CS REQUIRED FOR EACH HEL FLT BTN LSZH (ZURICH)
 AND LSMV (DAVOS) AND VICE VERSA DUE TO WORLD ECONOMIC FORUM (WEF).
 USE OF IMMATRICULATION APPROVED FOR ONE SINGLE FLT PER DAY ONLY.
- /19 B) 2019JAN09 0000 C) 2019JAN26 1330
 E) RESTRICTION EFFECTIVE FROM 2019 JAN 21 0500: NO CAT A IFR TRG FLT.
- /19 B) 2019JAN09 0000 C) 2019JAN26 1330
 E) RESTRICTION EFFECTIVE FROM 2019 JAN 21 0500:
 NO VFR TFC, EXC HEL DUE TO WORLD ECONOMIC FORUM (WEF).
- /18 B) 2018DEC17 1119 C) PERM
 E) REF VFR MANUAL (VFRM) AMDT 12/18:
 ZURICH ATIS (VFR) FREQ SHOULD READ 129.005 INSTEAD OF 129.905.
- /18 B) 2018DEC06 0500 C) 2019MAY29 2359 EST
 E) NON-AIRAC AIP SUP 011/2018 AND
 NON-AIRAC VFR MANUAL (VFRM) SUP 011/18 ACT.
- /18 B) 2018NOV20 1257 C) 2019MAY29 2359 EST
 E) MOBILE CRANE 0.3KM 1201188 GEO ARP LSZH, MARKED, 472724N0083304E,
 14.0M / 46.0FT HGT, 437.1M / 1434.1FT AMSL.
- /18 B) 2018NOV09 1504 C) 2019MAY29 2359 EST

Die besten Wetter Apps



ATC Flugplan



Systeme bieten automatisches Ausfüllen von ATC Flugplänen an

Keine Status Meldungen, keine Änderungen

**VFR ATC Flugpläne mit Skybriefing sind schnell zu machen
wenn man Vorlagen abspeichert**



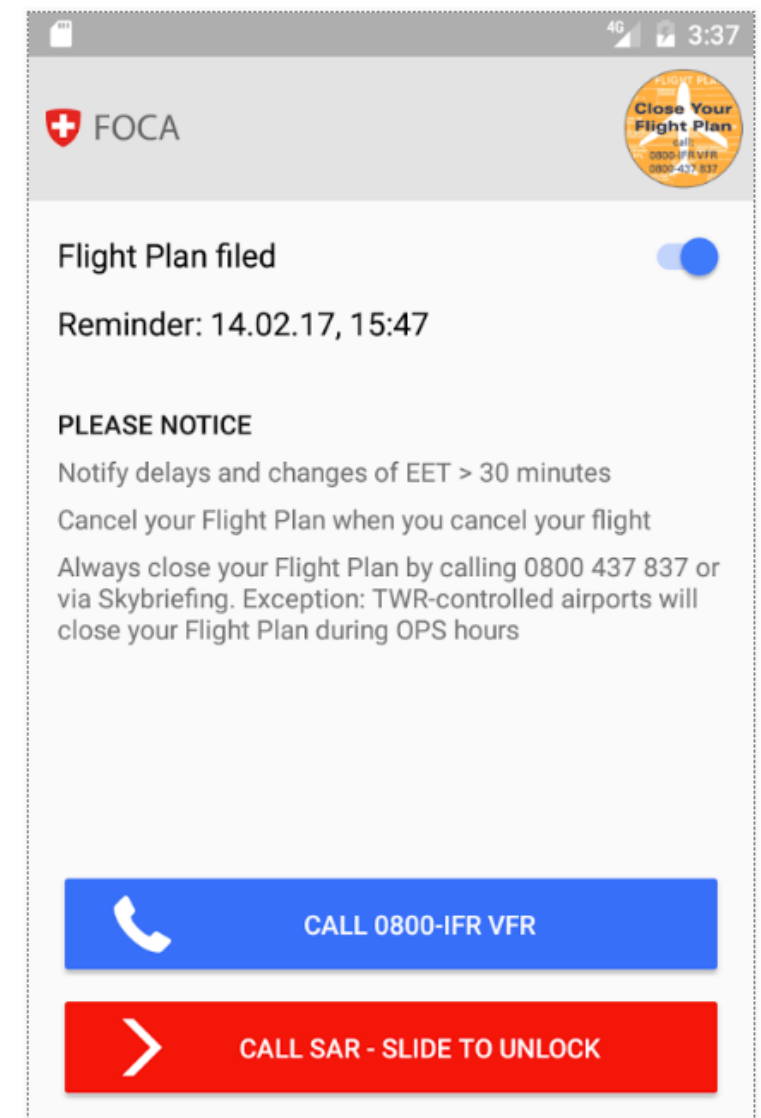
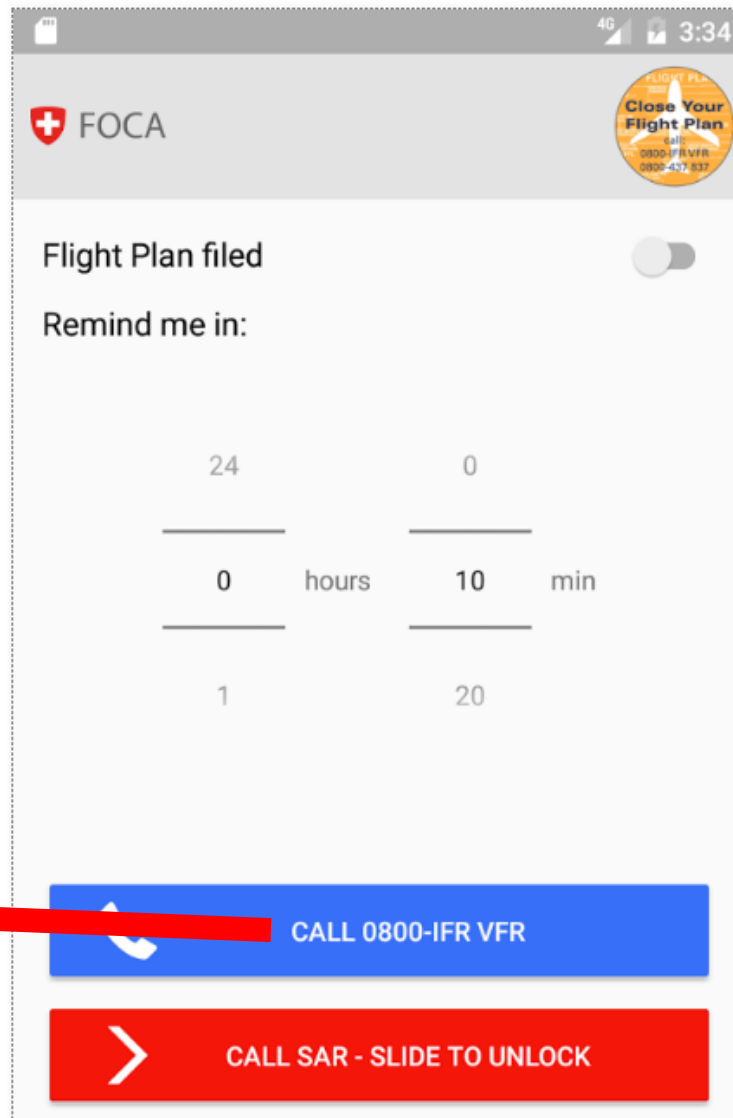
**Ändern und Schliessen schnell und einfach online
oder per Telefon**

Prevent Overdue



Für Flüge im Ausland

AIS Zürich
0041 43 931 62 03





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