TopSky plugin for EuroScope

- version 1.3.0 -

Portugal

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1 Track presentation

The presentation of radar and flight plan tracks consists of the following elements:

- Aircraft position symbol
- History dots
- Prediction line
- Track label

1.1 Colors

Most of the track presentation coloring depends on the flight sector state. The states are as follows:

Sector state name	Color name	Condition
Unconcerned	“Unconcerned”	Track will not enter the active sector
Notified	“Concerned”	Track will enter the active sector (> 15 min)
Coordinated	“Coordination”	Track will enter the active sector (< 15 min)
Assumed	“Assumed”	Track is assumed
Transfer Initiated	“Assumed”	Track is being transferred to the next controller
Redundant	“Redundant”	Track has been transferred to the next controller but is still inside the active sector

1.2 Aircraft position symbol

The position symbol is drawn at the latest known position of the aircraft. The color of the symbol is the flight sector color for an unselected track and “Track Highlight” for a selected one. A number of different symbols are available. To begin with, there are five basic shapes that tell what kind of track is in question:


Flight plan track (position is not based on surveillance data but calculated by EuroScope)


Coasted track (no position updates in over 30 seconds, position no longer reliable)


Secondary correlated track


Secondary uncorrelated track

An indication of an SPI (transponder ident) can be added to either of the last two symbols. It draws a cross over the symbol and prints the text “SPI” above and to the right of the symbol.

1.3 History dots

The history dots show the previous positions of the track. The number of displayed dots can be changed via the Track Control Window. The color of the dots is the flight sector color for an unselected track and “Track Highlight” for a selected one. History dots are not displayed for flight plan tracks.

1.4 Prediction line

The prediction line draws the predicted ground track of the aircraft, based on its current track and ground speed. It is colored the same as the track, with every segment representing one minute of flying time. The length of the prediction line can be changed for all tracks via the Euroscope leader line menu on the topmost bar. The example below shows a selected track with 5 history dots and a 2-minute prediction line. Prediction lines are not displayed for flight plan tracks.

1.5 Track label

The following descriptions show the positions of the data fields in the different labels and the available mouse click areas.

An approximation of the 3 types of tag is depicted. The types are:

RDUC

NORM

XPND

RDUC displays lines 0 through 2, NORM 0 through 3 and XPND 0 through 4.
Double click on a RDUC tag changes that tag to NORM.
Double click on a NORM tag, changes that tag to RDUC.
Mouse hover on any tag, displays the XPND.
Line 0 is only displayed if it’s elements are triggered.

There are 2 tag families to choose from. To change them, go to OTHER SET -> Display Settings -> Tag family.

- PT vACC RDUC - Reduced. Defaults tags to RDUC. Useful for enroute;
- PT vACC NORM - Normal. Defaults tags to NORM. Useful for approach and below.

1.5.1 Mouse functions in track labels

Line 0:

Data Field	Use	Left-click action	Right-click action
Communication Type Indicator	Displays /t or /r in yellow for text only and receive only aircraft. Not displayed for voice aircraft	Open Communication Type Popup	
o Mark	Marking an aircraft with a green mark. Does not show to other controllers.		
RVSM indicator	Red W for non RVSM capable aircraft, yellow W for unknown RVSM status		
Emergency	“HI” for squawk 7500, “CF” for squawk 7600, “EM” for squawk 7700 Displayed in Red		
CPDLC Emergency	CPDLC emergency messages: “SQ7500”, “[MAYDAY]”, or “[PAN]”	Open CPDLC Emergency Acknowledgment Menu	
+Field 18 Indicator	Priority aircraft with STS/ALTRV,STS/ATFMX,STS/HUM,STS/FFR,STS/FLTCK,STS/HAZMAT,STS/HEAD,STS/HOSP,STS/MARSA,STS/MEDEVAC,STS/NONRVSM,STS/SAR or STS/STATE		
CPDLC Warning	“COMM FAIL” for network failure “COF ERR” for message failure	Open CPDLC Current Message Window	

	“COF NOT CDA” for NOT CURRENT DATA AUTHORITY response “COF UNA” for UNABLE response “COF P LATE” for timeout “COF SBY” for STANDBY response		
MTCD indicator			
COORD	“ROF” if a Request On Frequency message has been received from the next sector The last changed tactical coordination parameter value (AHDG)	Open Tactical Transfer Menu	
Release Indicator	“F” fully released “C” released for climb “D” released for descent “T” released for turns Incoming release disappears 3 min after track is assumed, outgoing when track is no longer redundant.		
Alert Message	“APW”, “CLAM”, “RAM” or “DUPE” (in this priority order)		

Line 1:

Data Field	**Use**	**Left-click action**	**Right-click action**
Callsign	If uncorrelated, transponded SSR If the flight is CPDLC connected, the	Open Callsign Menu	Open Communication Type Popup

	callsign is displayed in brackets. If more than one aircraft, suffixed by “+”. If correlated to a secondary track with no ASSR code and a non-discrete TSSR code, suffixed by “*”		
Next Waypoint	- Next point on the route - Assigned heading (“H” + 3 digits) - SID name if last point not yet overflown - STAR name if next route point belongs to the STAR For Flight Plan Tracks, heading functions not available	Open AHDG Menu For Flight Plan Tracks: Open Waypoint Menu	Open Waypoint Menu
Sector Indicator	Assumed track: Shown only within 5 minutes of the next sector. Next sector identifier or frequency. Displayed in brackets if a communications transfer is in progress via CPDLC, followed by “+” if the answer contains a reason (i.e. DUE TO something). The frequency display is forced on during a transfer via CPDLC. Other tracks:		

	Tracking controller identifier or frequency.		

Line 2:

Data Field	**Use**	**Left-click action**	**Right-click action**
AFL	FL's with 3 digits, altitudes "A"+ 3 digits. For surveillance tracks, displays "AFL" when no valid mode C altitude data is available for the track	Toggle Route Prediction Points Draw	Toggle Route Draw
Attitude indicator	Climbing: up arrow Descending: down arrow Level flight or unknown: blank		
CFL	"CA" if Clear for App flag set, "VA" if Visual App flag set, Blank if uncorrelated FL's with 3 digits, altitudes "A"+ 3 digits	Open CFL Menu	Open RFL Menu
Flight Type indicator	J - Super Aircraft H - Heavy Aircraft P - Partidas C - Chegadas S - Sobrevoos D - Domésticos		

Line 3:

Data Field	**Use**	**Left-click action**	**Right-click action**
Ground Speed	3 digits, in knots. For Flight Plan Tracks, displays FPL TAS		

Computed vertical rate	2 digits, in 100's of ft/min		
Exit Flight Level	"CA" if Clear for App set, "VA" if Visual App flag set, FL's with 3 digits, altitudes "A"+ 3 digits. Not shown if equal to CFL/PEL and no ongoing coordination.	Open COPX altitude coordination list	

Line 4:

Data Field	Use	Left-click action	Right-click action
Aircraft transponded mode 3/A code	4 digits	Open FPL Window	Open ASSR menu

2 Flight lists

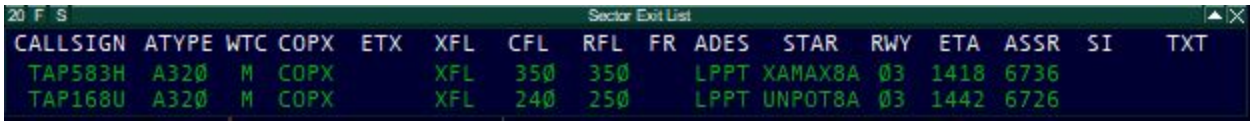
2.1 Sector Inbound List (SIL)

Size set to MAX 6 (scroll to see more). Sorting by ETN (earliest ETN at the top).

Data Field	Use	Left-click action	Right-click action
CALLSIGN		Open Callsign menu	Toggle Route Draw (with autohide)
ATYPE			
WTC			
COPN	Direct to coordination from previous sector	Open COPN coordination list	Open COPN coordination list
ETN	Estimate time of		

	entry into sector		
EFL	Planned entry level	Open COPN/COPX altitude coordination list	Open COPN/COPX altitude coordination list
FR	Flight rules. Shows ‘V’ for VFR		
ADEP		Open FPL Window	Toggle Route Draw (with autohide)
ADES		Open FPL Window	Toggle Route Draw (with autohide)
ETA			
COPX	Direct to coordination to next sector	Open COPX point coordination list	Open COPX point coordination list
STAR	Cleared STAR	Open STAR setup popup list	Open STAR setup popup list
RWY	Arrival runway	Open Runway setup popup list	Open Runway setup popup list
SI		Open next controller list popup	Toggle SI frequency display
ASSR		Open ASSR menu	Open ASSR menu
TXT	Free text. Value coordinated immediately		

2.2 Sector Exit List (SEL)



Size set to MAX 20 (scroll to see more). Sorting by RFL (highest RFL at the top).

Data Field	**Use**	**Left-click action**	**Right-click action**
CALLSIGN		Open callsign menu	Toggle Route Draw

			(with autohide)
ATYPE			
WTC			
COPX	Direct to coordination to next sector	Open waypoint menu	Open waypoint menu
ETX	Estimate time of exit from sector		
XFL	Exit Flight Level from sector	Open COPX altitude coordination list	Open COPX altitude coordination list
CFL	Cleared Flight Level.	Open CFL menu	Open CFL menu
RFL	Requested Flight Level.	Open RFL menu	Open RFL menu
FR	Flight rules. Shows ‘V’ for VFR		
ADES		Open FPL menu	Toggle route draw (with autohide)
STAR	Cleared STAR	Open STAR setup popup list	Open STAR setup popup list
RWY	Arrival runway	Open runway setup popup list	Open runway setup popup list
ETA			
ASSR		Open ASSR menu	Open ASSR menu
SI		Open next controller popup list	Toggle SI frequency display
TXT	Free text	Edit scratchpad. Value coordinated immediately	Edit scratchpad. Value coordinated immediately

2.3 Departure List

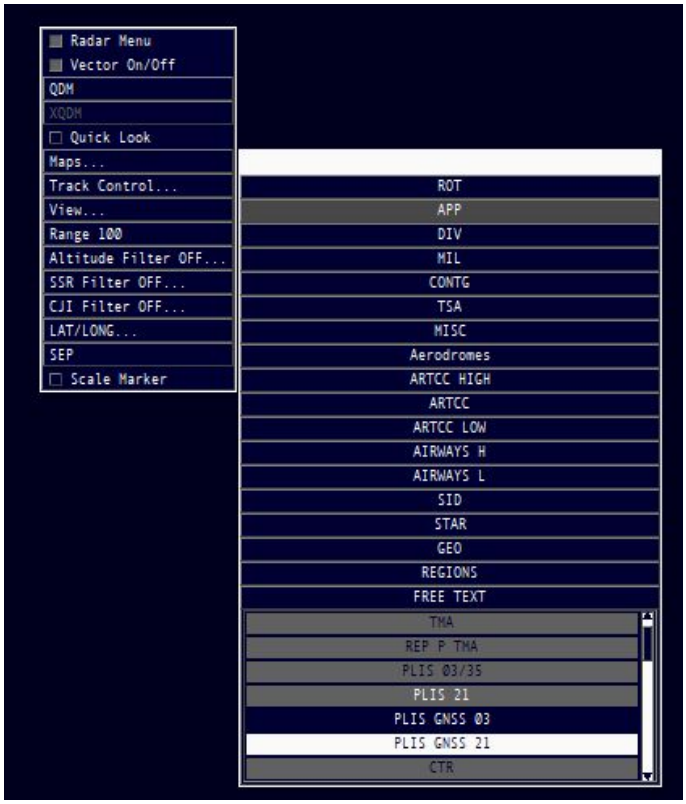
Size set to MAX 15 (scroll to see more). Sorting by TOBT (earliest TOBT at the top). CTOT, QNH and TXT field hidden by default. To activate it, press the “F” at the top left of the Departure List and activate accordingly from the dropdown.

Data Field	**Use**	**Left-click action**	**Right-click action**
SEQ	Departure sequence		
CALLSIGN		Open callsign menu	Toggle Route Draw (with autohide)
TOBT	Sequencing, update on ready. Defaults to current time on menu opening	Open time menu (EOBT)	Open time menu (EOBT)
CTOT	Calculated Take Off Time. Hidden by default. 0000 by default. Update with CTOT if available	Open time menu (SLOT)	Cancel CTOT
ATYPE			
WTC			
FR	Shows ‘V’ for VFR		
STD	Detected stand		
QNH	Hidden by default. Update with last given QNH. Update pilot and then field again if QNH changes	Edit scratchpad. Value coordinated on strip pushing	Edit scratchpad. Value coordinated on strip pushing
ADEP		Open FPL window	Toggle route draw (with autohide)
ADES		Open FPL window	Toggle route draw

			(with autohide)
RWY	Pressing Cancel on the PDC menu will keep the assigned values without setting clearance flag	Open PDC menu	Open PDC menu
SID		Open PDC menu	Open PDC menu
ASSR		Open ASSR menu	Open ASSR menu
CFL	Update with SID or assigned initial climb	Open CFL menu	Open CFL menu
RFL	Update with RFL if different	Open RFL menu	Open RFL menu
Clearance received flag	Set when clearance readback received and correct	Sets clearance received flag	
STS	Set to Ready when pilot reports ready. Set to Start Up or Push when cleared. Set to Taxi when cleared to taxi. Set to Taxi SP (Taxi Special) when a different from standard taxi is assigned such as intersection P or full length. Set to Line Up when cleared. Set to Take Off when cleared. Set blank to remove status.	Open ground status menu	Open ground status menu
TXT	Free text	Edit scratchpad. Value coordinated immediately	Edit scratchpad. Value coordinated immediately

3 Maps

Radar Menu -> Maps…



The Maps Window closes when the mouse cursor leaves the window area. If this is not desired, there is a hidden click spot in the top right corner of the menu (where the “close” button would be). Left-clicking in that area will disable the automatic closure of the menu and display the close button, which is then used to close the menu.

The Maps Window emulates the maps used IRL. Some maps will be automatically triggered based on certain conditions. The maps are arranged to folders. Clicking on a folder name shows the maps in that folder below the folder list.

The map names are displayed with the following colors

- Name Not displayed
- Name Automatic (not displayed)
- Name Automatic (displayed)
- Name Displayed

Left-clicking on a map name will change the state of a map one step:

not displayed --> automatic (if applicable) --> displayed

right-clicking in the other direction. Left or right double-clicking on any map name will change the states of all maps in that folder.

Only the ROT, APP, DIV, MIL and CONTG contain custom made maps. All other folders only have automatically generated content by TopSky and should not be used.

Item labels are toggled automatically based on zoom level. If you want to display a label, zoom in.
Here is the description of them:

3.1 ROT - Route

- LIM - AIC and 8/5NM separation line;
- N, C, S, E, W, D, V, M - Enroute sectors;
- SEC SPAIN - Sectors Spain;
- RVSM - RVSM Transition Area;
- ROT U - Upper Airways;
- ROT L - Lower Airways;
- CMAD U - Madeira Contingency Upper Airways;
- CMAD L - Madeira Contingency Lower Airways;
- R PT IN - Interior Reporting Points;
- R PT BDRY - Geographical Boundary Reporting Points;
- R PT OUT - Outer Reporting Points
- T ROUTES - Tango Airways.

3.2 APP - Approach

- URB - Area where low altitude VFR flight (above 1500ft) must be previously authorized and VFR exit/holding points for LPPT CTR (Mata de Queluz and Doca de Pedrouços);
- TMA - LPPR, LPPT, LPFR and LPMA TMAs;
- REP P TMA - TMA Boundary Reporting Points;
- PLIS 03/35 - Points for Lisboa RWY03/35;
- PLIS 21 - Points for Lisboa RWY21;
- PLIS GNSS 03 - Points for GNSS APP RWY 03 (LPPT);
- PLIS GNSS 21 - Points for GNSS APP RWY 21 (LPPT);
- CTR - LPPR, LPPT, LPCS, LPFR, LPPS and LPMA CTRs;
- ARC50 - 50NM arc at LPPT (3NM separation below FL245);
- RAD VEC - Minimum Radar Vectoring Area;
- RADVALT - Minimum Radar Vectoring Altitudes;
- RWY - RWYs, Centerlines and crosses (symbol for THR and other things, aerodrome dependant);
- HELI - Heliports;
- ROT VFR - VFR Routes;
- ROT H VFR - Helicopter VFR Routes;
- PHOLD - Waypoints with published holdings;

- PPOR 35 - Points for Porto RWY35;
- PPOR 17 - Points for Porto RWY17;
- PPOR GNSS 35 - Points for GNSS APP RWY 35 (LPPR);
- PFAR 10D - Points for Faro RWY10 Departures;
- PFAR GNSS 10 - Points for GNSS APP RWY 10 (LPFR);
- PFAR 10A - Points for Faro RWY10 Arrivals;
- PFAR 28D - Points for Faro RWY28 Departures;
- PFAR 28A - Points for Faro RWY28 Arrivals;
- PFUN 05/23 - Points for Madeira RWY05/23;
- PSNT 36/18 - Points for Porto Santo RWY05/23;
- RAD032 - Radial 032 from FUN. Used for COM FAIL;
- P CMAD - Points for Madeira Contingency;
- ILS28 - Points for ILS APP RWY 28 (LPFR);
- VORZ10 - Points for VOR Z APP RWY 10 (LPFR);
- VORZ28 - Points for VOR Z APP RWY 28 (LPFR);
- DELFUN - 75NM arc at Porto Santo. Used for Madeira Contingency;
- PCAS - Points and Centerline for Cascais;
- PVR - Points for Vila Real.

3.3 DIV - Diverse

- VOR NDB - VORs, DMEs, TACANs and NDBs;
- TOWN - Most used VFR towns;
- AEROD - Aerodromes;
- PROCIV - Civil Protection (Proteção Civil) Aerodromes and Heliports;
- DAM - Dams;
- ATZ - Aerodrome Traffic Zones.

3.4 MIL - Military

- AEROD M - Military Aerodromes;
- POVAR - Points for Ovar;
- PMOJ - Points for Montijo;
- PSTR - Points for Sintra;
- RAD VEC BEJ - Minimum Radar Vectoring Area for Beja;
- RADVALT BEJ - Minimum Radar Vectoring Altitudes for Beja;
- POINTS - Every VFR waypoint, except for Dams.

3.5 CONTG - Contingency

- MSSR - Location of Montejunto, Fóia and Porto Santo Secondary Radar Stations;
- xxxx FREQ - Used to automatically display the frequency of neighbour enroute sectors;
- xxxx FIR - Lateral limits of FIRs.