TOPLIS

TopSky plugin for Portugal vACC

User Manual Version 2.0

October 2022

Contents

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Introduction

1.1 Disclaimer

Although - as its name suggests - the plugin is based on TOPLIS and the TopSky ATM system, it is in no way affiliated with or endorsed by Thales Group or NAV Portugal. Similarities between plugin features and the real system are not entirely coincidental, but the plugin can not be used as a real world training aid. [1]

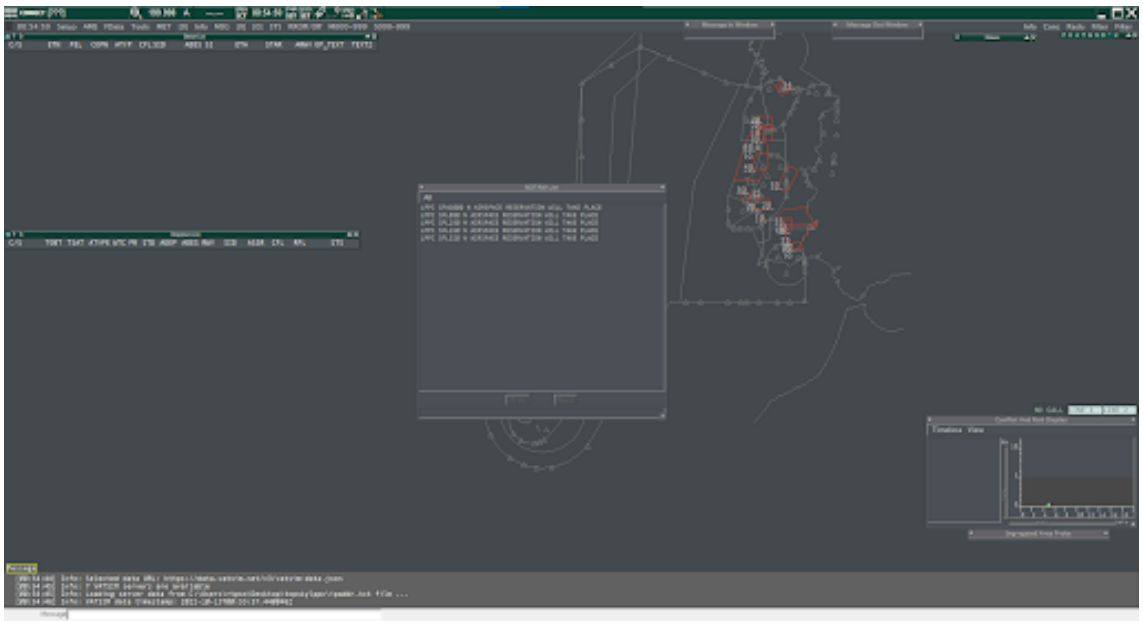
1.2 Foreword

EuroScope, a controller client developed by Gergely Csernák for the VATSIM network, was first released for public use in September 2007. One of the biggest changes in version 3.1 was the possibility for the user community to customize the program to an even higher degree than was possible before by writing their own plugins that can be used to alter the way information is presented and even create completely new functionality into the program. This allowed creating very detailed simulations of all kinds of ATC systems without making the main program overly complex. Version 3.2 expands on these possibilities, making it possible to create even better plugins. The TopSky plugin (a.k.a. The Plugin Formerly Known As “EUROCAT 2000 E”) started out as a very small project to create a couple of customized aircraft tag items, but as more information about the real system and the possibilities with the plugin development became available, it slowly grew to include an almost complete set of tag items, tag menus, graphical elements on the radar display and some additional functionality.

2

System Description

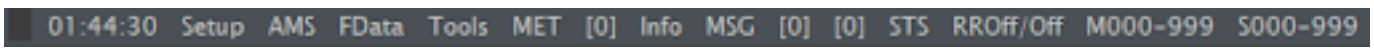
2.1 Main Window



Euroscope should load with some preplaced windows similar to the above configuration

Screen resolutions other than 1920x1080 will yield different results. Larger resolutions will bring preplaced windows towards the left and middle, while smaller resolutions may potentially place windows outside the screen. It is recommended for users experiencing difficulties related to their screen size to experiment and create custom settings in the TopSkySettingsLocal file containing revised window placements adjusted for their own screen. Refer to `TopSky_Developer_Guide_Settings.xlsx` for available settings

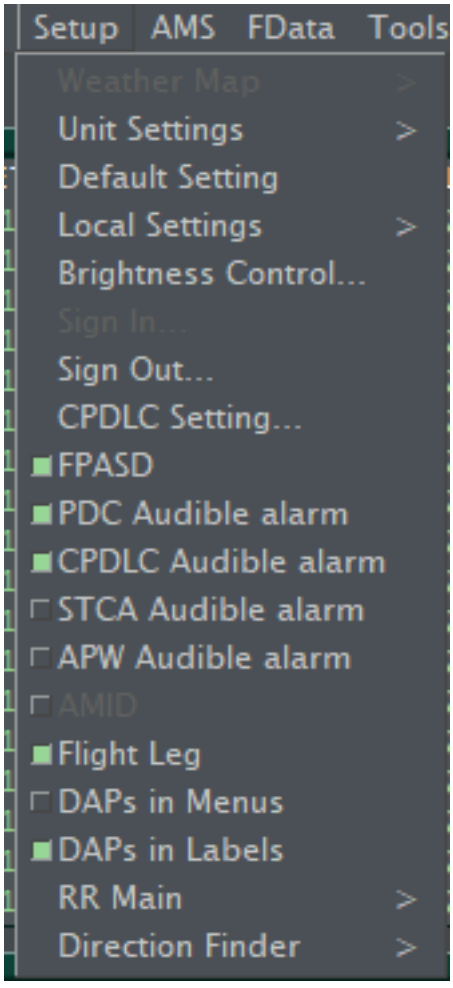
2.2 Global Menu



The Global Menu is located on the top edge of the radar screen. It displays the current

UTC time and contains a number of submenus which are explained below.

2.2.1 Setup Menu



Setup Menu allows for various adjustments. Each position will load its defined settings based on the active Primary Frequency. Most used options are CPDLC Setting for CPDLC operations and Default Setting to reset options.

- Unit Settings >	Opens the Unit Settings submenu
- Default Setting	Resets all settings to their default values (keeps login callsign specific ones if they are active at the time). When clicked, a confirmation window will open, asking to confirm the reset.
- Local Settings >	Opens the Local Settings submenu
- Brightness Control >	Opens the Brightness Control Window
- Sign In...	Loads personal settings. The settings are specified in the `TopSkySettingsLocal.txt` data file. When clicked, a confirmation window will open, asking to confirm the settings change.
- Sign Out...	Clears any personal settings and resets all settings to their default values. When clicked, a confirmation window will open, asking to confirm the settings change.
- CPDLC Setting...	Opens the CPDLC Setting Window
- FPASD	Toggles on/off the display of flight plan tracks
- PDC Audible alarm	Toggles on/off playing a sound for received PDC messages
- CPDLC Audible alarm	Toggles on/off playing a sound for received CPDLC messages
- STCA Audible alarm	Toggles on/off playing a sound for STCA alerts
- APW Audible alarm	Toggles on/off playing a sound for APW alerts
- AMID	Not implemented
- Flight Leg	Toggles on/off the automatic display of the Flight Leg for a specified time when a track becomes assumed
- DAPs in Menus	Toggles on/off the display of DAPs in menus
- DAPs in Labels	Toggles on/off the display of DAPs in track labels
- RR Main >	Opens the RR Main submenu
- Direction Finder >	Opens the Direction Finder submenu

Unit Settings submenu

This submenu can be used to change the units used in the plugin. Any changes to the settings are session- specific only, so they will be lost when exiting EuroScope.

- Altitude	Selects the units used for altitudes and vertical rates - Nautical (feet, feet per minute) - Metric (meters, meters per second)
- Flight level	Selects the units for flight levels – only applicable with metric altitudes - Nautical (hundreds of feet) - Metric (meters)
- Distance	Selects the units used for distances - Nautical (nautical miles) - Metric (kilometers)
- Speed	Selects the units used for speeds - Nautical (knots) - Metric (kilometers per hour)

Local Settings submenu

This submenu allows changing some of the plugin's settings. Any changes to the settings are session- specific only, so they will be lost when exiting EuroScope.

- Vertical reference	Selects the pressure reference to be used at or below the transition altitude: • QNH Altitude above mean sea level • QFE Height above the aerodrome elevation (set/check it in the adjacent box)
- Used equipment codes	Selects whether to use or disregard the equipment codes found in the flight plans: • All Use all codes • ICAO Use all codes when specified in ICAO format • ICAO-alt As ICAO, but force transponder to report altitude • None Disregard all codes
- ASSR codes	Selects the transponder code source: • Plugin Plugin data file (reverts to ESE if no codes found) • ESE ESE file • Range Fixed code range
- Groundspeed	Selects whether to use pilot client reported ground speed or a plugin calculated value. Normally the reported value should be used as it is more accurate and stable, but some clients report wrong values. If that causes problems, you can try selecting the plugin calculated value instead
- Transfer confirmation	Selects when to display the Transfer Confirmation Window: • On Always when CFL is not equal to XFL • NotRFL When CFL is not equal to XFL unless XFL = RFL • Off Never, any CFL value is OK
- CFL menu default value	Selects the default value for the CFL menu when it is opened: • XFL FSS or CTR: RFL if not yet reached, otherwise as below Other: The XFL value, or current CFL value with no XFL • CFL The current CFL value • RFL The RFL value
- FPCP inhibit	FPCP calculations start when tracks are within this time from entering active sector
- STCA alert	Selects which aircraft display the STCA alert: • All All aircraft • Own+Co Only assumed and coordinated aircraft • Own Only assumed aircraft
- STCA alert sound	Selects which STCA alerts trigger the alert sound: • All All alerts • Own+Co Only alerts with assumed and/or coordinated aircraft involved • Own Only alerts with assumed aircraft involved
- APW alert	Selects which aircraft display the APW alert: • All All aircraft • Own+Co Only assumed and coordinated aircraft • Own Only assumed aircraft
- APW alert sound	Selects which STCA alerts trigger the alert sound: • All All alerts • Own+Co Only alerts for assumed or coordinated aircraft • Own Only alerts for assumed aircraft
- METAR source	Selects the METAR data source for the plugin windows that display METAR data

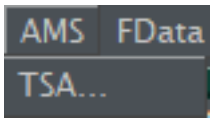
RR Main submenu

- [] Rings On/Off	Toggles the range rings on/off
- Point	Sets the rings centerpoint. Either click on the radar screen or enter the desired point in the text field. Fixes, VORs, NDBs and airports from the active sector file can be used as well as coordinates in the flight plan format (DD[N/S]DDD[E/W] or DDMM[N/S]DDDMM[E/W], e.g. 60N025E or 0811S00300W). Entering an empty text string resets the rings to be shown at the radar screen centerpoint.
- Separation	Sets the separation between adjacent rings
- Number	Sets the number of rings drawn
- [] Highlight	Toggles highlight (drawn with solid line) of specified rings
- Step	Sets interval of highlighted rings

Direction Finder submenu

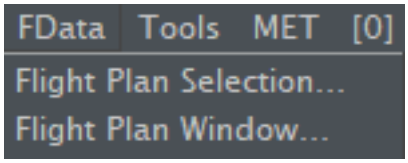
Not operational.

2.2.2 AMS menu



Opens the *Airspace Management Window*.

2.2.3 FData menu



Opens the **??** and **??**.

2.2.4 Tools menu

2.2.5 Tools menu

- Flight Plan Lists >	Opens the Flight Plan Lists submenu
- CARD. . .	Opens the **??**
- SAP. . .	Opens the **??**
- Vertical Aid Window. . .	Opens the **??**
- Message In. . .	Opens the **??**
- Message Out. . .	Opens the **??**
- CPDLC >	Opens the CPDLC submenu
- LAT/LONG. . .	Opens the **??**

Flight Plan Lists submenu

- [] List options bar	Toggles the display of list options on the Global Menu
- Sector List. . .	Opens the Sector List
- [] Informed	Toggles the display of informed aircraft
- [] Concerned	Toggles the display of concerned aircraft
- [] Redundant	Toggles the display of redundant aircraft
- Load Factor List. . .	Opens the **??**
- ETWR List. . .	Opens the **??**
- <adep>	ETWR List departure airports filter
- Uncont. List 1. . .	Opens the **??**
- <filter>	Uncontrolled 1 List state filter
- <units>	Uncontrolled 1 List units filter
- Uncont. List 2. . .	Opens the **??**
- <filter>	Uncontrolled 2 List state filter
- <units>	Uncontrolled 2 List units filter
- Lost List. . .	Opens the **??**
- Resectorisation List. . .	Opens the **??**
- <lfunc>	Resectorisation List LFUNC filter
- Traffic Mgmt. List 1. . .	Opens the **??**
- <state>	Traffic Management List 1 flight plan state filter
- <ades>	Traffic Management List 1 destination airports filter
- <via>	Traffic Management List 1 route points filter
- Traffic Mgmt. List 2. . .	Opens the **??**
- <state>	Traffic Management List 2 flight plan state filter
- <ades>	Traffic Management List 2 destination airports filter
- <via>	Traffic Management List 2 route points filter

When enabled, the list options bar displays “Info Conc Redu Filter Filter” on the right edge of the Global Menu. The first three toggle the respective settings for the Sector List and are colored with the appropriate color when enabled, and the last two are displayed in “VFR” color when the corresponding Uncontrolled list is somehow filtered. Clicking on them opens the Flight Plan Lists submenu to change the filtering options. Left-clicking <filter> cycles through “ALL” (no filtering), “ON-CONTACT” (only tracks on-contact with anyone), “ON-CONTACT-PPOS” (only tracks on-contact with you) and “FREE” (only tracks in the free state). Left-clicking <units> opens a text entry box to enter a comma-separated list of aerodrome ICAO codes to filter the list. When entered, the list will display a flight only if one of the entered codes is its departure or destination, or the code is found in its scratchpad (OP-TEXT2).

Left-clicking <lfunc>, <adep>, <ades> and <via> open text entry boxes to enter comma-separated lists for controlled ID’s, ICAO codes and point names respectively to filter the affected lists. Left-clicking <state> toggles between “ALL” (no filtering),

"SIMUL+TERM" (not started flight plans filtered), "NOTST+SIMUL" (terminated flight plans filtered) and "SIMUL" (not started and terminated flight plans filtered).

CPDLC submenu

- Microphone Check — Opens the **??**
- Current Messages... — Opens the **??**
- History Messages... — Opens the **??**

2.2.6 MET menu

- Messages... — Opens the **??**
- QNH/TL — Opens the **??**

2.2.7 (0)

Not implemented (always shows a zero value).

2.2.8 Info menu

- General Information... — Opens the **??**
- Document Viewer... — Opens the **??**
- NOTAM... — Opens the *NOTAM List*
- Aerodrome... — Opens the **??**
- LFUNC Frequency Plan... — Opens the **??**
- [] Airport labels — Toggles airport labels selection
- [] Fix labels — Toggles fix labels selection
- [] NDB labels — Toggles NDB labels selection
- [] VOR labels — Toggles VOR labels selection

When holding <ALT>, text labels will be displayed for airports, fixes, NDBs and VORs when the mouse cursor is placed over them. When one or more of the categories in the Info menu is selected, only those categories will display the labels. The "Label" buttons open submenus to select what information is shown on the corresponding labels. All the information is from the active sector file.

2.2.9 MSG menu

- Notepad... — Opens the **??**
- Personal Queue... — Opens the **??**
- ATC Messages... — Opens the **??**
- Prim Freq Messages... — Opens the **??**
- NAT Track Messages... — Opens the **??**
- Text notes > — Opens the Text notes submenu

It is possible to insert text notes on the radar screen to act as reminders. They will stay fixed at the geographical coordinates they are inserted to, the coordinates defining the center point of the note.

When creating a note, a text entry field opens to enter the note text. When the [Enter] key is pressed, the note will be created at the current mouse cursor position.

The notes can be deleted one by one or all of them at the same time. When deleting one by one, the notes are boxed to display their click areas. Clicking on one will delete the note. Pressing the [Esc] key or selecting the "Delete..." menu item again will abort the operation.

Text notes submenu

- Create...	Creates a new text note
- Delete...	Deletes a single text note
- Delete all	Deletes all text notes

2.2.10 (x)

Shows the number of high priority messages in the personal message queue. These are critical failures in the plugin code. Open the Personal Queue Window to view the messages. The number is limited to 99, and is shown on "Global Menu Highlight" background when the window is not open.

2.2.11 (x)

Shows the number of low priority messages in the personal message queue. These are warnings about invalid data in the plugin data files. Open the Personal Queue Window to view the messages or see the Plugin Status submenu for more detailed information on the problem(s). The number is limited to 99, and is shown on "Global Menu Highlight" background when the window is not open.

2.2.12 STS menu

- Plugin Status >	Opens the Plugin Status submenu
- Safety Nets Status...	Opens the **??**
- Divergence Detection Status...	Opens the **??**
- MTCD Status...	Opens the **??**
- CPDLC Default Status [ON/OFF]	Toggles the CPDLC Default Status On/Off
- Runway In Use	Opens the **??**
- Supervisory >	Opens the Supervisory submenu
- RWY line display...	Opens the **??**

Plugin Status submenu

Shows the version of the plugin as well as some information on the loaded data files. Each data file reports its state with one of the following indicators:

- OK — File contains usable information and no faults
- NO DATA — File not found or contains no usable information
- BAD DATA — File contains invalid data (in "Warning" color)

Depending on the file, there are one to three of the following buttons available:

- Reload — Reloads the data file
- View — Displays the data in the file on the radar display
- Save (Areas) — Saves a snapshot of the current area activation data
- Save set (Maps & MapsL) — Saves a list of currently active radar screen specific maps
- Load set (Maps & MapsL) — Loads a saved list of active screen specific maps

Left-clicking the Save button will save the currently set manual activation periods as well as the information if an area with automatic schedules is set to manual mode. The information is saved to the "TopSkyAreasManualAct.txt" file in the same folder as the plugin dll. If the file already exists, the plugin will ask for confirmation as the save operation will overwrite any existing data. Depending on the maps data file setup, the display state of some or all of the maps may be specific to each radar screen. The Save set and Load set functions can be used to transfer the display state of these maps from one radar screen to another. Right-clicking the Reload button for Settings & SettingsL has a special purpose. It opens a text entry box to type in a callsign whose settings should be loaded instead of the real login callsign. When entered, the callsign will be displayed next to the "Reload" button, and whenever a VATSIM callsign change is detected, an information popup is displayed to remind that the plugin settings are still forced to the manually entered callsign. This feature can be used for example to use settings for different positions on different EuroScope instances when providing top-down services, or to use settings for a specific position when logged in with an observer/staff/supervisor callsign. Clearing the entered callsign reverts to using the settings based on the actual login callsign.

Supervisory submenu

- Operations Rate... — Opens the **??**
- Predicted Traffic... — Opens the **??**

2.2.13 RRxxx/Off

Opens the **??**. If the rings are selected on, "xxx" displays the distance between consecutive rings, otherwise "Off".

2.2.14 Mxxx-yyy

Displays the status of the filters. If any filter is enabled and Quick Look is not toggled on, the color of the text is “Global Menu Highlight”. Only the altitude filter status is shown. “xxx” displays the Lower filter value and “yyy” the Upper filter value, in hundreds of feet.

2.2.15 S000-999

Not implemented (shows static values).

2.3 Track Presentation

The presentation of tracks consists of the following elements:

- Aircraft position symbol
- History dots
- Prediction line
- Track label, joined to the position symbol with a leader line

2.3.1 Colors

Most of the track presentation coloring depends on the flight sector state.
For controlled flights (any IFR flight or a VFR flight in ASSUMED state), the colors are as follows:

State	**Color**	**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

An unconcerned track can be highlighted based on rules (a combination of departure airport, route and arrival airport) defined in plugin data files. In this case it is drawn with one of the three “Informed” colors.

Coordinated tracks that have not departed yet will be shown as notified instead.

For uncontrolled flights (VFR flights not in ASSUMED state), the colors are as follows:

State	Color	Condition
On Contact	“Assumed”	Track is on-contact (a plugin custom state) with you
Free	“VFR”	Track is not assumed or on-contact with anyone
Otherwise	“Unconcerned”	

2.3.2 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 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)


Primary radar track


Secondary or combined radar track (uncontrolled)


Secondary or combined radar track (controlled)

ADS-B only track

An indication of an SPI (transponder ident) can be added to the secondary radar and ADS-B symbols. It draws a cross over the symbol and prints the text “SPI” above and to the right of the symbol:

Secondary radar track without DAPs with Special Position Indication

For other than the flight plan and coasted track symbols, a divergence alert will be drawn in case of a RAM or CLAM alert. This is a circle drawn around the symbol (will not be drawn if SPI is active):

Secondary radar track without DAPs with divergence alert

2.3.3 History dots

The history dots show the previous positions of the track. The number of displayed dots can be changed via the **??**. 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.

2.3.4 Prediction Line

The prediction line draws the predicted ground track of the aircraft, based on its current track and ground speed. It is a two-color line, starting with “Track Default” at the position symbol and then alternating with “Track Highlight” with every segment representing one minute of flying time. The length of the prediction line can be changed for all tracks via the Track Control Window, or for a single track via the Prediction Line menu. The example below shows a selected track with 5 history dots and a 3-minute prediction line. Prediction lines are not displayed for flight plan tracks.

2.3.5 Track label

There are four types of track labels that can be displayed: Standard, Reduced, Extended and Uncorrelated. In addition, each label except the extended one has an unselected and a selected state, the selected state being shown when the mouse cursor is over the label. Basically, the Standard label is shown for aircraft that are in or will enter the active sector and the Reduced label for aircraft that will not enter the active sector. The Extended label can be opened from the Standard or Reduced label and stays open as long as the cursor is within the label area. The Uncorrelated label is shown for radar tracks that aren’t correlated with a flight plan. Refer to your setup specific documentation for detailed descriptions of the track labels.

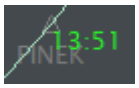
2.4 Flight Leg

The Flight Leg displays the aircraft’s planned track in one-minute steps. Each one-minute-long part of the path is colored according to the results of the MTCD and SAP

“Urgency FL”	MTCD and/or SAP confl
“Warning FL”	MTCD and/or SAP risk
“Potential FL”	MTCD potential conflict
“Information FL”	MTCD and/or SA processing available, conflicts or risks detecte
“Flight Leg”	No MTCD or SA processing availab for this part of the Flig Leg

processing. The following colors are possible:

If the aircraft has an assigned heading or is not following its route, the predictions only go up to 10 minutes and assume the aircraft continues on its present ground track. In this case the predicted track is shown as a dashed line when the flight leg is displayed. The Flight Leg is displayed by clicking on various track label and list items depending on the setup and is either automatically removed from display when the mouse cursor leaves the label area or must be manually toggled off, depending on the function that was used to display it. The label that’s shown on each route point includes the following predefined fields



Estimated Time Over the point

Top of Climb

Top of Descent

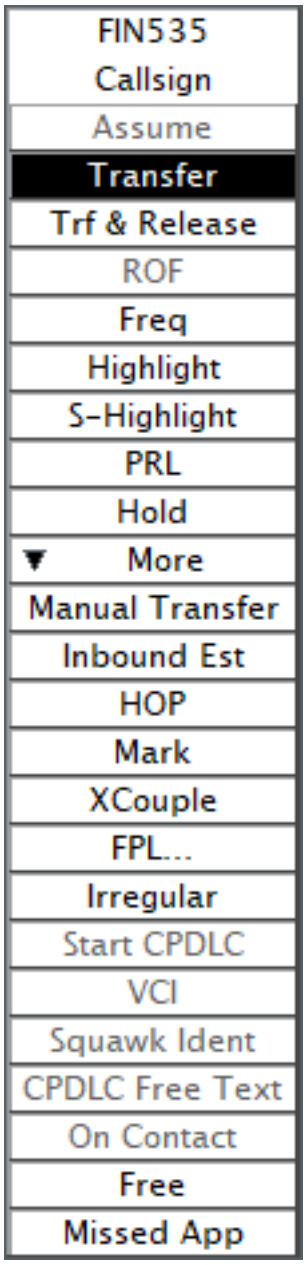
2.5 Track Label Menus

These menus are opened from track label fields or flight lists. Except for the confirmation windows, they are closed automatically when a menu option is chosen or the mouse cursor leaves the menu area. Menu items shown with (X) represent an item that has an activated and a deactivated state. With the item activated, the item name is shown prefixed with the letter “X”. The mouse wheel can be used to scroll the selection lists in the menus.

Many of the menus have a default item or value, displayed with inverse video. The menu usually opens so that the default value is located under the mouse cursor for easy selection. Some menus contain items that open folders within the menu. They show a filled triangle before the item name (upright if the folder is closed, inverted if the folder is open). The “More” folder is opened automatically when the mouse cursor is placed over it or if the default item is in the “More” folder, other folders must be left-clicked to open.

2.5.1 Callsign menu

Controlled Track



Assume	Assumes track
Refuse	Refuses the incoming transfer
Transfer	Initiates a transfer to the next sector
Trf & Release	Opens the **??**
ROF	Sends a **??**
(X)Freq	Toggles the Freq indicator
(X)Highlight	Toggles the Callsign highlight
(X)S-Highlight	Toggles the Callsign+AFL fields highlight
PRL	Opens the **??**
(X)Hold	"Hold" opens the *Hold Menu*, "XHold" cancels a given holding clearance
▼ More	Shows additional less frequently used options
Manual Transfer	Opens the **??**
(X)Inbound Est	Toggles the "Inbound Est" manual alert
HOP	Initiates a **??**
(X)Mark	Toggles the Mark indicator
(X)Couple	Uncorrelates/correlates the flight plan
FPL. . .	Opens the **??**
(X)Irregular	Toggles the "Irregular" manual alert
Start/End CPDLC	Starts/Ends CPDLC connection with the aircraft
VCI	Opens the *VCI Menu*
Squawk Ident	Sends a "SQUAWK IDENT" CPDLC message to the aircraft
CPDLC Free Text	Opens the *CPDLC Free Text Menu*

Besides the manual alerts, none of the selectable toggle options in this menu will be transmitted to other controllers, but the “Mark”, “Freq” and highlight selections will be seen in your other EuroScope instances. A holding clearance is transmitted to the next controller when transferring the track. To correlate a flight plan, first click on the “Correlate” item, and then click on the radar position symbol of the desired radar track.

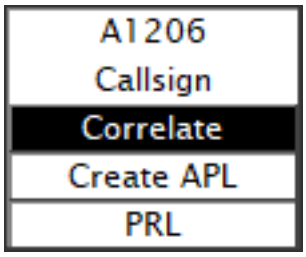
*Clicking “On Contact” for a track with “Y” or “Z” flight rules will also automatically change the flight rules in the VATSIM flight plan to VFR in order to make it uncontrolled. The displayed flight rules are not affected

Uncontrolled Track

On Contact	Sets track in On-Contact state (“Assumed” color, can’t be filtered, but still uncontrolled)
Free	Releases track
Assume	Assumes track*
(X)Highlight	Toggles the Callsign highlight
(X)S-Highlight	Toggles the Callsign+AFL fields highlight
(X)Couple	Uncorrelates/correlates the flight plan
(X)Hold	“Hold” opens the *Hold Menu*, “XHold” cancels a given holding clearance
FPL...	Opens the **??**
PRL	Opens the **??**

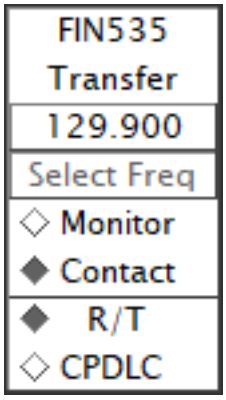
*Clicking “Assume” for a track with “Y” or “Z” flight rules will also automatically change the flight rules in the VATSIM flight plan to IFR in order to make it controlled. The displayed flight rules are not affected.

Uncorrelated Track



Correlate	Correlates the radar track with the next clicked "Callsign" field
Create APL	Opens the **??**
PRL	Opens the **??**

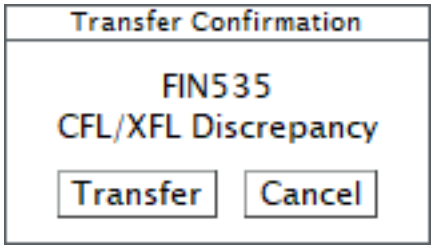
2.5.2 Transfer menu



For CPDLC connected aircraft, the menu contains options related to the transfer. Left- clicking on the frequency button initiates the transfer (and sends the CPDLC message if selected).

"Monitor" / "Contact" select which of the two CPDLC message types will be sent. "R/T" / "CPDLC" select whether the transfer instruction is given via radio or as a CPDLC message.

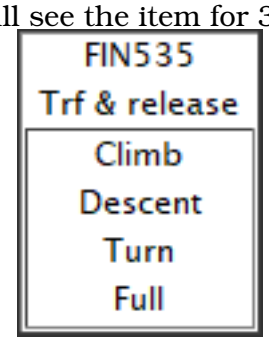
2.5.3 Transfer Confirmation Window



If an aircraft has a defined XFL value and hasn't been cleared to it (CFL is not equal to XFL), attempting to transfer the aircraft will open a Transfer Confirmation Window in the middle of the radar screen. While the window is open it will block all other attempts to click on items elsewhere on the radar screen. Either click on "Transfer" to transfer the aircraft regardless of the situation, or "Cancel" to cancel the transfer.

2.5.4 Transfer & Release menu

The Transfer & Release menu allows specifying a release condition for a track to be transferred. The transfer is initiated after selecting the desired condition (climb, descent, turn or full). The release will be shown on line 0 of the track label (C for climb, D for descent, T for turn and F for full). The transferring controller will see the label item until the track becomes unconcerned. The receiving controller will see the item for 3 minutes after the track is assumed.



For CPDLC connected aircraft, the menu contains options related to the transfer:

"Monitor" / "Contact" select which of the two CPDLC message types will be sent.

"R/T" / "CPDLC" select whether the transfer instruction is given via radio or as a CPDLC message.

Warning

The "Trf & Release" option will show the release condition on the downstream side only if the next controller is using this plugin, in other cases the transfer will be shown as a normal transfer.

2.5.5 Request On Frequency message

The ROF message can be used to send a request to the controller currently tracking an aircraft to transfer it to your frequency. For the message to succeed, you must be seen as the next controller for the tracking controller. When sent, the text "ROF" is displayed in the track label on the tracking controller's screen.

Warning

The "ROF" message is a feature specific to this plugin. It is an experimental feature and is not guaranteed to work all the time. When you send the message, check that it's sent properly.

1. A successfully sent message will be displayed in the **??**

2. If there is an error or the message fails to go through, a message will be put into the **??**

2.5.6 Hold Menu

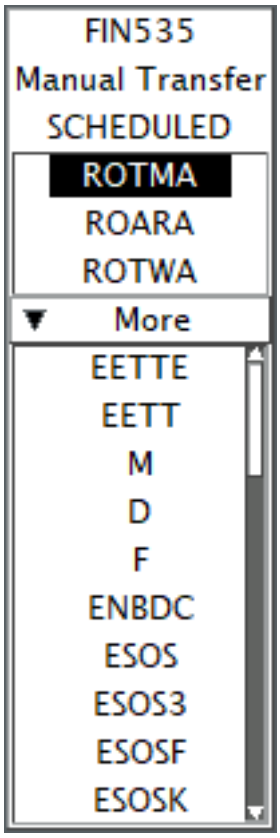
The Hold menu allows you to enter a holding clearance (add the aircraft to the holding list). It displays for selection the points in the aircraft's route that are ahead of its current position.

Left-clicking the empty box below the waypoint list opens a text entry box to enter any holding point name.

Left-clicking "Here" enters the present position coordinates as the holding point.

The holding point is automatically sent to your other EuroScope instances with a small delay and can be sent to other controllers by pushing the flight strip as the information is stored there.

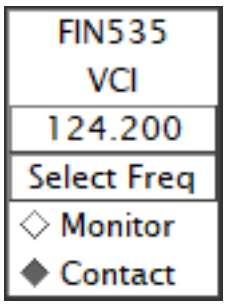
2.5.7 Manual Transfer Menu



The Manual Transfer menu allows transferring the aircraft to any controller. In the SCHEDULED list are the controllers that are in the current sector sequence sorted in the order the aircraft is planned to enter the controllers' sectors, with the next controller being the default item.

When opened, the "More" list displays all the other controllers for selection. Click on a controller ID to start the transfer. For CPDLC connected aircraft, clicking on a controller ID opens the *Transfer menu*

2.5.8 VCI Menu



Available only for CPDLC-connected aircraft and when more than one frequency has been set up by the controller, the VCI menu allows sending a CPDLC "contact" or "monitor" message without initiating a transfer.

The first button displays the primary frequency, left-clicking it will send the message with that frequency.

Left-clicking the “Select Freq” button will open a text entry box to enter any other frequency. If a valid frequency (set up as XMT TXT in EuroScope’s Voice communication setup dialog) is entered, the message will be sent with that frequency.

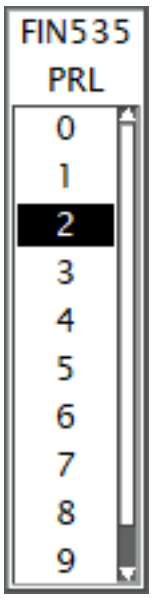
“Monitor” and “Contact” are used to select the type of message to be sent.

2.5.9 CPDLC Free Text Menu

The CPDLC Free Text menu is used to send a free text CPDLC message to the aircraft. The menu contains pre-defined messages from a data file. Left-clicking on a message sends it.

The menu closes when a message is sent or the cursor leaves the menu area.

2.5.10 Prediction Line Menu

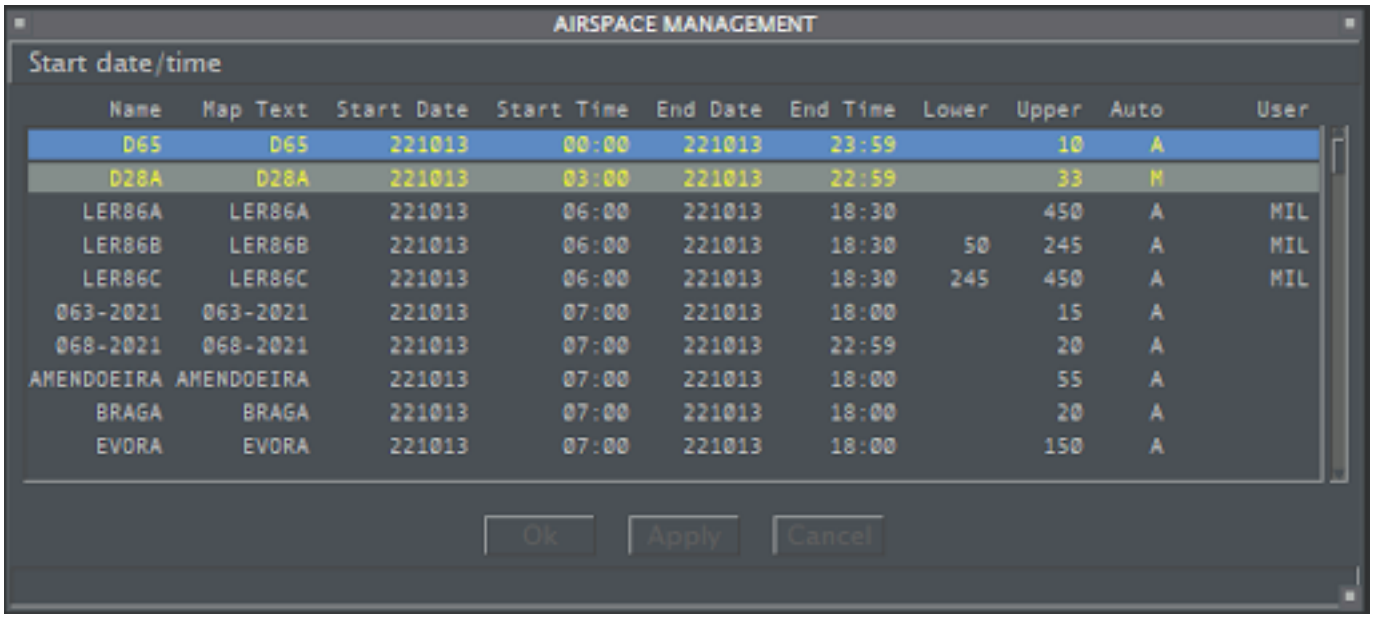


The Prediction Line menu allows displaying a PRL with a specific length for each aircraft even if the PRL selection is off in the Radar Menu.

The default value is the set PRL value if available, otherwise the PRL length value from the Track Control Window. Changing the PRL length value in the **??** or changing the PRL setting in the **??** will delete all manually set PRL lengths.

2.6 Windows

2.6.1 Airspace Management Window



This window is used for the activation and deactivation of the areas for the APW and SAP functionality. Each area can have a start time and/or an end time defined for its activation, or it can be activated without any time limits, making it active until deactivated manually. Additionally, lower and upper altitude limits are given. An area can have activation schedules defined in the area data file. Such areas will be automatically activated as long as their “Auto” option is selected (“A” in the “Auto” column). The “Auto” option cannot be selected for areas that don’t have an activation schedule defined in the area data file.

Dates will be shown in the format “yymmdd” and times in “hh:mm” and they must be entered in the same format. Entering an empty string for a date will clear it and the related time value and vice versa. When entering a time or date value to an empty field, the other value is automatically set to the current time/date value. Entering an empty string to the Map Text, Lower or Upper fields will reset the value to the default one from the data file.

Altitudes are shown in hundreds of feet if at or below the transition altitude, otherwise in flight levels. They must be entered in the same format.

An area’s activation status can be inactive, pre-active or active. A pre-active area is an area that will become active within 30 minutes and is shown in yellow text on a gray background. An active area is shown with yellow text on a blue background. The APW system will not alert for a pre-active area, but for the SAP system a pre-active area is considered as being active.

The mouse click areas of the Airspace Management Window:

- Sorting option text (e.g. “Start date/time”) Opens a pop-up menu to select a sorting option for the list

- Right-click to open an area pop-up menu
- Other fields Left-click to edit field (when edit function active)
- “Ok” button Applies the changes, closes the window
- “Apply” button Applies the changes
- “Cancel” button Cancels the changes

The sorting pop-up menu contains the following items:

- Start Date Sorts based on the Start Date/Time, earliest first
- Name Sorts alphabetically based on the Name field
- Map Text Sorts alphabetically based on the Map Text field

With the area pop-up menu opened, the area text row background changes to black. The menu contains the following items:

- ACTIVATE Clears any activation times and activates the area
- DEACTIVATE Clears any activation times and deactivates the area
- AUTO If an activation schedule is found in the area data file, sets the
- area to be activated automatically
- VALIDATE Not implemented
- EDIT Allows to change the area parameters
- COPY Not implemented
- DELETE Clears any activation times, returns label and altitude limits to their default values and deactivates the area

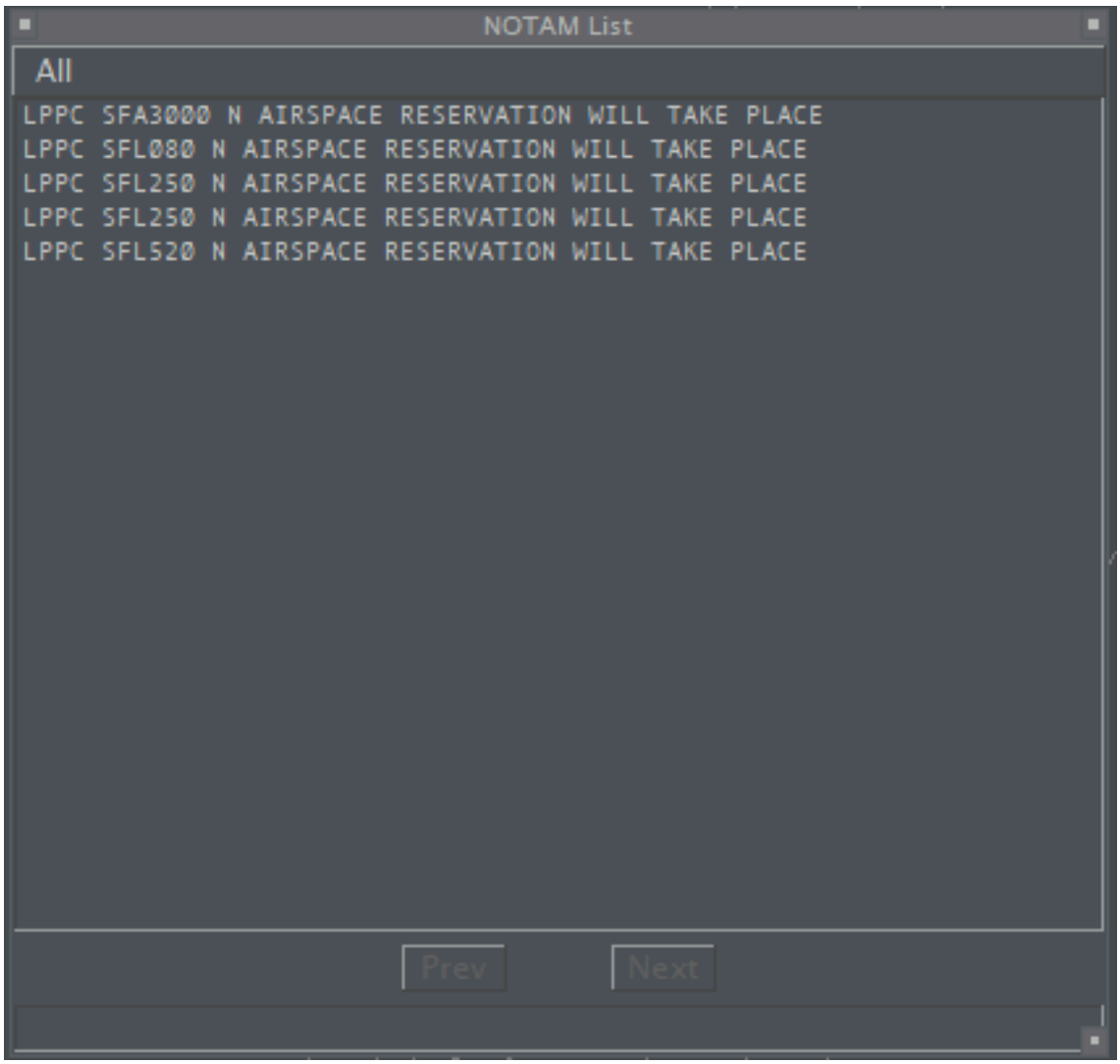
After any selection from the pop-up menu, “Ok”, “Apply” or “Cancel” must be selected to apply or cancel the selection.

Preactive and active areas are displayed on the radar screen. The area border is drawn using a predefined color and it may be filled as well. A predefined text label may also be displayed, showing information about the area. A very small “+” symbol will be drawn at that location. By holding the left mouse button down on that symbol, a full area label will be displayed, showing:

Name
Map text
Upper level limit
Start time ——— End time
Lower level limit
time in minutes until the area becomes active

2.7 Lists

2.7.1 NOTAM List



The NOTAM List is automatically displayed at startup in order to fetch the current FUA. It may be closed after loading.

2.8 Safety Nets

2.9 Monitoring Aids

2.10 Flight Plan Conflict Probe

A

Label field descriptions

B

Color Values

C

Keyboard Shortcuts

Bibliography

[1] TopSky plugin for Portugal vACC. https://github.com/pinatacolada/topskylppc#disclamer.