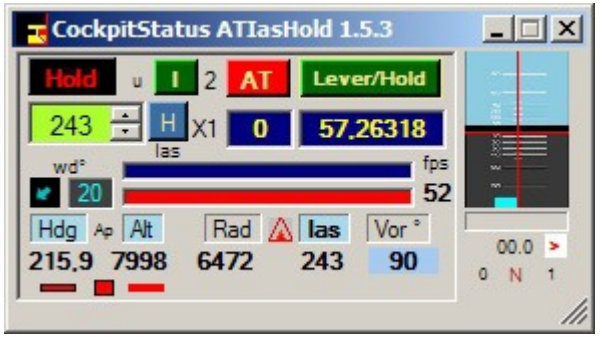
 Raimund Forstmeier - Padova / Italy

ATIasHold 2.0.1 2023 the new Edition Jan/2023

Introduction

The Intrasystem ATIasHold Forum

You never get Lost



AtlasHold is creating in automatic a:

- Waypoint for any Rwy, real or virtual.
  At 20 nm in front of the Rwy at 180 °.
  You can Fly to the Wpt and approach the Rwy.

- A Virtual Runway at any World position Lat/Lon.
  Just click on the [V] button. Fly and return.
  A classic example is the “V” on the Sea.

The name of this application comes from the original idea of creating an "IAS HOLD" feature for any Airplane.

- This system is not using any V/S or invisible flaps.
- You can use it with any Airplane. NO NEED of a Autopilot.
- The ATIasHold is only based on Engine Pressure.
- A unique feature.

  All other functions were added later.
- ATIasHold is working with FSX, MSFS and X-Plane using FSUIPC, FSUIPC7, XPUIPC.

  ATIasHold is in use since 2011. Updated in 2021.

Credits to:
- Pete Dowson the author of the MakeRunways utility and FSUIPC / FSUIPC7.
- Paul Henty (Author of the FSUipcClient.dll)
- Ed Williams and his Aviation Page: https://edwilliams.org/avform147.htm

ATlasHold 2.0.0 Nov/2022

New Keyboard connection, Glide Path Slope Editor, Virtual Runway Editor

Install ATlasHold

With one click create a Virtual Runway on Air, Ground, Carrier and return to.

Read New Features +Troubleshooting

- When you install this version as update pls. Read: **Joystick + Keyboard Editor**
- **Create a NEW FOLDER (example: 'ATlasHld')**
- **Unzip the ATlasHld.zip into the new Folder**
- **Create a Desktop Connection x (ATlasHld.exe).**
- **VIDEO + PROGRAM COLOR APPEARANCE**

  You should *USE THE WINDOWS CLASSIC* Desktop appearance for Windows 7.

  Open the Program with 'Administrator privilege'.

  Open AtlasHold when your Airplane is sitting on a Runway or on the Air !

  Pay attention to the Tooltips + [H]elp. Mouse Hover over all Labels + Fields.

  Pls. Note that the text of larger messages can be enlarged. Ctrl + Mouse-Wheel.

NOTE:
When you open the program you have to select the Joystick File suitable for the simulator in use.
Included are 3 files. (Saitek PRO) For FSX, MSFS 2020 + X-Plane.
You need to adjust the data for your joystick, Keyboard and Simulator in use.
Or, create a new file with the name you need. (depending on the Simulator)

***Remember and consider*: FSX, MSFS, XPlane are setting some Joystick values on different buttons and Keyboard. (Saitek Yoke Pro)**

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New Features

click

Troubleshooting

The Virtual Runway Selection View. Save + Select.

Joystick + Keyboard Editor

Glide Path Slope Editor

Free Flight

ATlasHold BackGround View (4 colors)

Flight Route with Rwy Take Off and Landing View.

Test Flights FSX, X-Plane, MSFS

Altitude in Feet + Meters. las/Knots / Groundspeed / Kilometer
Set the Autopilot AP Speed using the MouseWheel

The TURN Angle selection. Xwpt > Rwy

How start ATlasHold

The new Joystick + Keyboard Mouse click connections

Readme_183.txt Readme_184.txt Readme_185.txt Q/A

ATlasHold – 2.0.0 Nov/2022 Start ATlasHold

Open ATlasHold with Admin privileges.
Open ATlasHold when you are sitting on a Rwy or on Air.
ATlasHold is only opening after selecting a Apt + a Rwy!

Yet do not activate the Keyboard connection.

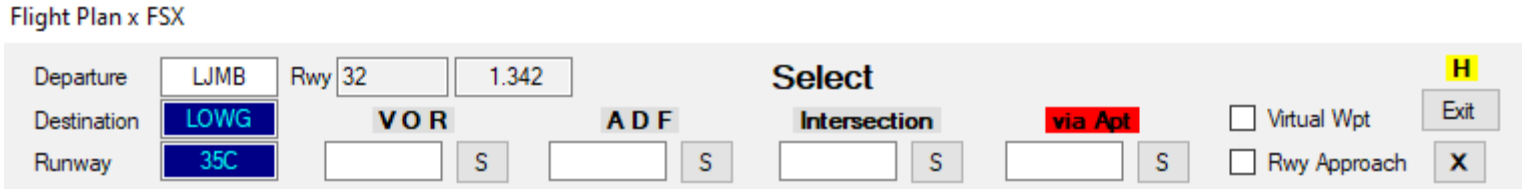
- **Confirm your Simulator *.ini File**
- **The Main View is opening. Click on the triangle and open the Flight PANEL**
- **The Cursor is in the ICAO Field. Input a destination Airport and click on [Apt's]**
  using the Kbd use: Icao Field > Tab > Spacebar or Enter
- **Now click on the ICAO List Item and open the Rwy-Selection**
- **Select a Runway > follow the messages and confirm yes or no.**
- **Terminated. Now you can open the Keyboard connection with "Ctrl + F12" (^F12)**
- **Open the Flight Plan View and open the BackGround View (click into the small circle).**
- **Important: Open the big Radar then the Flight Panel > the [APLF] View. This is the main connection between ATlasHold and the Simulator. You see what is "ON" and should be closed.**
- **Now you created a Free Flight Plan, not a saved Flight Plan.**
- **Select your Approach Altitude ! Read about here >Set the V/S distance**
  Only the Flight Panel > [wpt] (virtual) and the [rwy] selection are possible. Read the Tooltips.
  Fly around and if you want approch the airport select [wpt] and then [rwy] after arriving at the Wpt.
  The Descentometer is now active. With the "Diamond" centered start the [V/S Rwy] approach.
  You could select your departure apt as destination apt flying to the wpt and returning for landing.
- **If you want this basic Flight Plan as a saved Flight Plan then you must add the Wpt + Rwy and save.**
- **Open the Flight Plan View and select a saved Flight Plan.** **Wpt + Rwy**

Any other detail is explained with this Help File. Select your Shortcuts with the Joystick Editor.

Don't forget that some Kbd-Connections could interfere with the Simulator or viceversa.
You can use Kbd Keys or Mouse clicks with or without the Ctrl Key. This aspect is important.
A example: The Joystick "Shift" button could interfere with the Number Pad zero "NumPad0" Key. (FSX)
Test it before with your simulator.

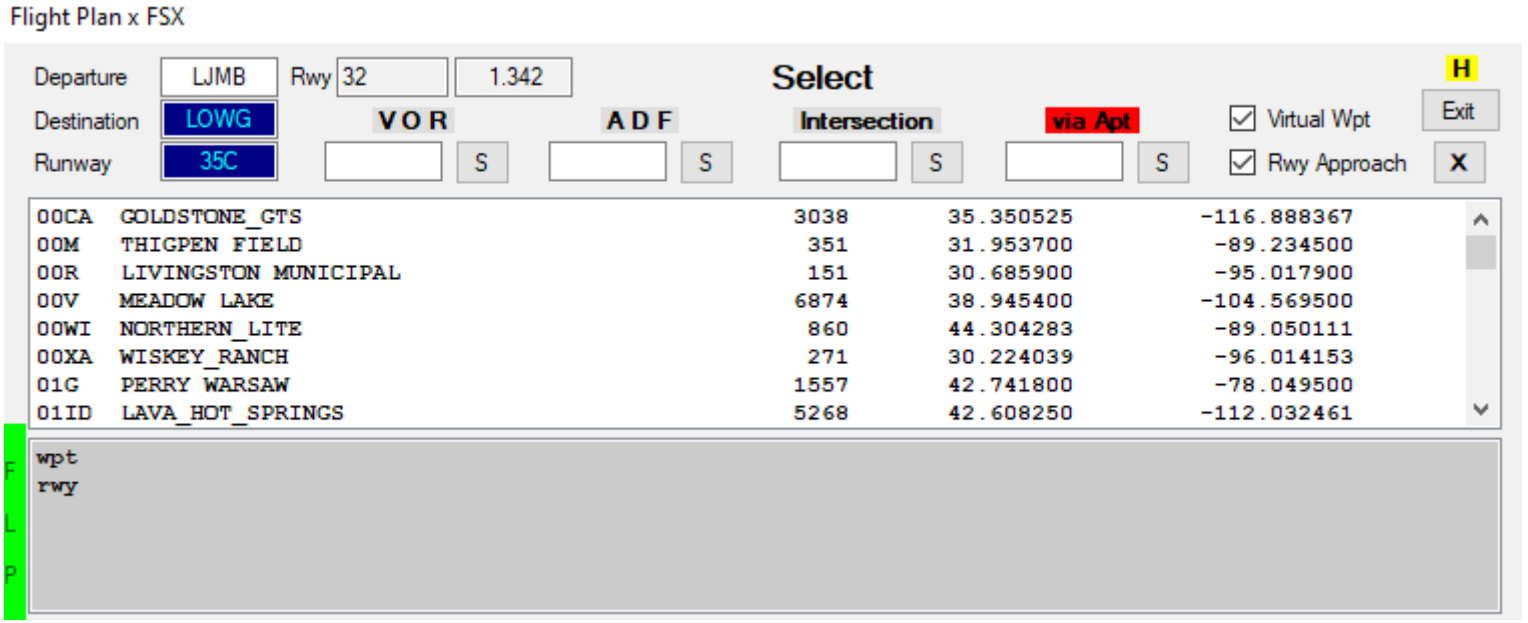
ATlasHold – 2.0.0 NOV/2022 Free Flight

- **ATlasHold is only opening after a Airport and Runway selection. This does not mean that you have to use a Flight Plan or the like.**
  After a Destination Apt + Rwy selection this data is saved as Free Flight and the virtual waypoint is created.
  If you want fly to " LOWG " you must use "only" the Flight PANEL [wpt] + [rwy] buttons. "Manual selection"
  At the xwpt you select "rwy" (not automatic). Now the descentometer is activated. [V/S rwy] automatic GlidePath approach is possible.



On Radar: From > To. No Rwy.
Rwy data not visible.

If you save this basic Flight Plan the "virtual wpt" (wpt) and the "Rwy Approach" (rwy) must be added. Always as last Flpl data!



After saving, the Radar is evidencing Apt's + Rwy name

You could start from "LJMB" and fly To "LJMB".
Fly to the virtual Wpt "xwpt" and return for landing.
Or
from destination fly back to the xwpt, return and land again.

- **A Free Flight is possible during a Flight Plan execution but the Flight Plan must be interrupted. Can be re-activated from where you left.**
  When you interrupt a flight plan the plane is continuing and therefore when you return to the flight plan you have to consider whether the plane is in front of or behind the waypoint before the interruption. You can select any different WPT Item from the List.

Radar > Fly to VOR or ADF > 

See > Radar 1/9

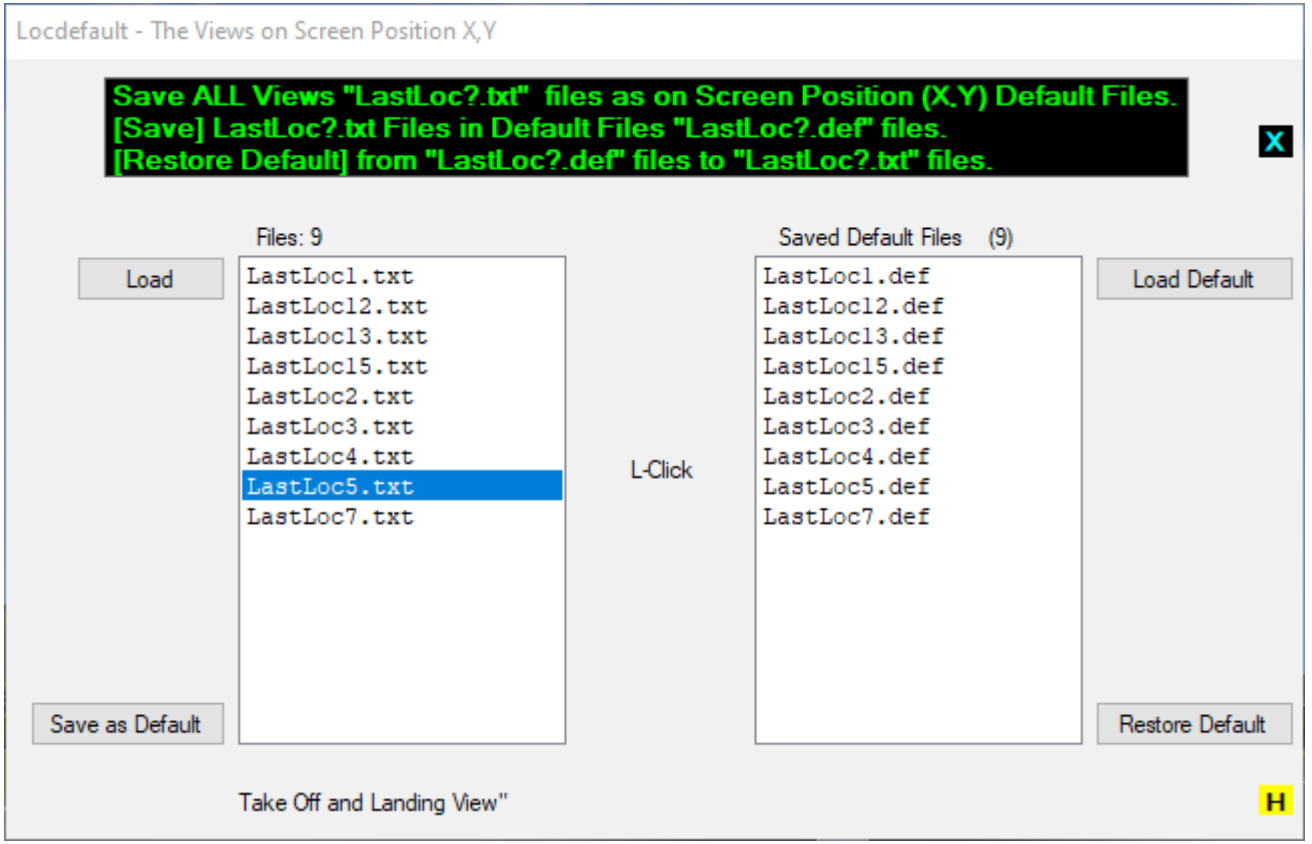
See > Flight Plan interruption

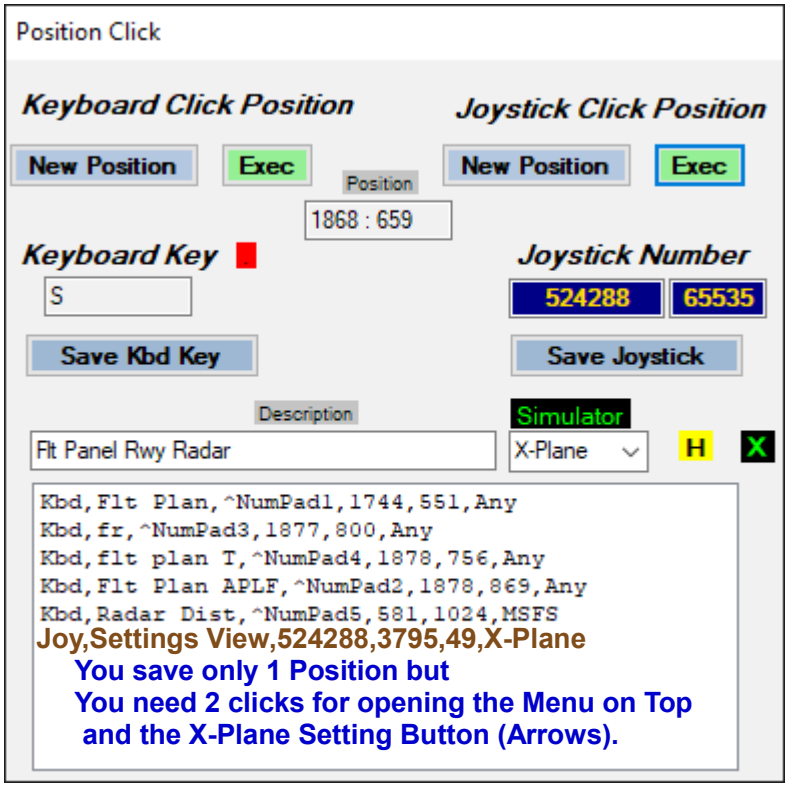
The Intrasystem ATlasHold Forum

ATlasHold – 2.0.0 Nov/2022

Joystick + Keyboard > Mouse click connections

Read the Readme File > Positionclick





Using Number PAD 0 to 9 or Kbd numbers D0 to D9 or Alfa A..Z/a..z or Joystick Btn number.

ATlasHold includes the Keyboard-Hook System and the MouseClick-Hook system.

The aim is to significantly increase the connection possibilities between ATlasHold and any other View such as an Airplane Cockpit or the Simulator AND the various views of ATlasHold.
(This feature is similar to the enclosed software "MouseClicks" but only for single "clicks")

In other words, this function performs a "click" instead of the mouse. Example: Open Views, click on a View Button or Field, Apl cockpit ecc...
This extra feature is giving you exactly what many user are searching for. You are free of any restrictions.

This can be done with the keyboard or the Joystick independently of Joystick or Keyboard connections already registered with the "Joystick" Editor.

The "Joystick" Editor already includes 2 types of connection for the same use but restricted to 16 Joystick connections + 12 Joystick-Keyboard connections. Namely "joystick" + "keyboard". Example: X-Plane B747 is not accepting a "external" MouseClick but only the real Mouse-Hover click

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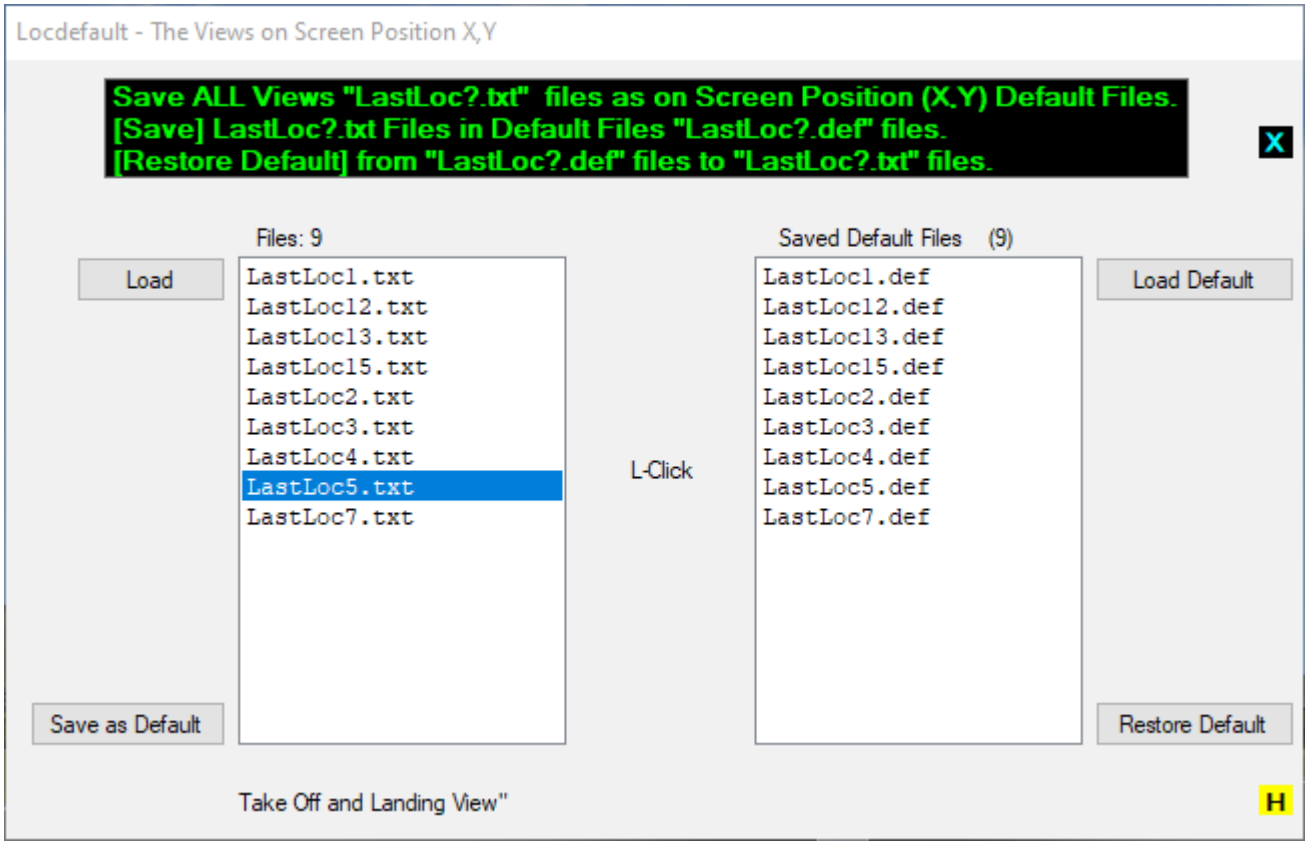
Views Screen Location xy

Read the Readme File > Positionclick



ATlasHold 2.0.0 Nov/2022

Troubleshooting - To date, no bugs.

- (1) Open ATlasHold when your Airplane is on Ground.

- (2) MSFS and X-Plane do not respond to the AP> Altitude (ALT) command like FSX.

  AP / ALT must be "cleared" before using the automatic procedures: [V / S Dist.] and [V / S Rwy]
  - click the ALT button 1 or 2 times > Main View > ALT or via Joystick or Keyboard.
  - Open > Close > Re-Open the 2 commands. (the X-Plane simulator is Plane specific)

  Solution ? for MSFS > Set FREEZE Altitude – Enable the Simconnect Client to control the Altitude (ATlasHold Simconnect)
  MSFS - Select [OPTIONS]
  - Controls Options
  - Select > [Keyboard]
  - Select > [Instruments and Systems]
  - Expand > Select > [Flight Instruments]
  - Select > [Set Freeze Altitude]
  - Example: Input " F9 " and validate

  - Observe the ALT. Any step should change the ALT feet by about 10 feet + (Near the set Altitude 'less')

  Never use "Full Speed" with V/S activated. Engine pressure about 60/70 % only. V/S would not stop.

  Free the Ailerons when approaching + using the automatic Approach-System!
  If your Autopilot is locking the Ailerons just open + re-close the [ALT] Button! Same procedure with Heading!
  This is not depending on ATlasHold!

- (3) [V / S Dist.] Ascending or Descending – Don't fly with Full speed.

  Set your engine pressure between 60 and 70 % before you reach the selected Altitude!

  If you miss this the Simulator and the APL "VS" would not stop at the desired Altitude. (logic)

- (4) On Ground the AP, AP-Heading and AP-ALT should be closed before Take Off.

  The AP-ALT could be ON if set by the specific Airplane or Simulator.
  After Landing ATlasHold is closing the Autopilot, Hdg + Alt.

ATlasHold 2.0.0 Nov/2022

Troubleshooting - To date, no bugs.

- **(5) FSX + other Simulators**

  Don't use the "Y" fast forward with FSX or other Simulators when a FlightPlan is running.

  This is not supported for quite simple reasons.

- **(6) Flight Plan View**

  Before you start open the [APLF]Panel and the [FR]Panel. Check Lights, Fuel, Frequencies.

- **(7) The Take off and Landing View is a very important instrument. Get a immediate Data overview.**

- **(8) If you change data On Air the Runway graphic does not change / refresh. Click on the Destination Rwy-Name "[35C]" button. The normal procedure, selecting Apt + Rwy is doing it in automatic.**

- **(9) The "ToolTips" and "[H]elp" Buttons are the best way to understand what it is for.**

If it is true that everything works well with one Apl and not with another, it is equally true that one of the 2 suffers from errors.

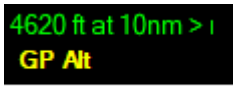
What's a nice APL worth with an AP and coding errors ?

- **(10) Runway / Landing Approach Angle - Approach Slope**

  A) We must decide at which Altitude the aircraft should start the Descending Glide Path Slope.

  B) ATlasHold is calculating the Altitude, based on the Rwy-Alt, and the Approach Slope angle in automatic.

  We decide the Altitude below the calculated ALT at 10 + 20 nm Rwy-Distance.



  Lower the Altitude nearer to the Rwy the approach Slope is starting.

  C) We must take into consideration eventual obstacles like hills.

  Carefully study your Airport / Runway approach.

  Adjust your Altitude.

Apt Information

Connect to a real Airport Information Center.
L-Click > connect to " flightaware " world apt information

R-Click > connect to " SkyVector.com". World Apt's + Charts.

  The Glide Slope Diamond is centered when you reach the altitude set based on the Rwy-Distance!

  The [V/S rwy] is starting when you decide it. Automatic Alt adjusting as per Rwy distance.

  With a Cessna no problem. A Liner is quite different. Do not repeat the real world Pilot errors.

- **(11) Departure + Destination Runway Coordinates Latitude + Longitude – Important is the destination Rwy**

  It is useless to claim for incorrect Rwy coordinates. As explained any Simulator is using slightly different Coordinates. But you are landing. ATlasHold is using the FSX Default coordinates. You should use the included 2 programs:

  RwyLength **(Modify and create new Rwy's with different names for any single Simulator – FSX, MSFS, X-Plane) > RwyLength**

  AddAirports **(Modify and create new Apt's + Rwy's) > AddAirports**

  This programs are in use since more than 10 years and Bug-Free.

Glide Path Slope Editor

- **(12) Runway Landing**

  The automatic [V/S Rwy] Glidepath / Approach is requesting a correct Aircraft asset.
  Speed + Flaps **Don't forget to set the Throttle to Minimums before Landing.**

Read
Page 7/7

  Don't change the Altitude "Y" near the Rwy. You alter the ALT and Asset.

  The only possible small correction is the "X-Axis" left/right heading just before touch down.

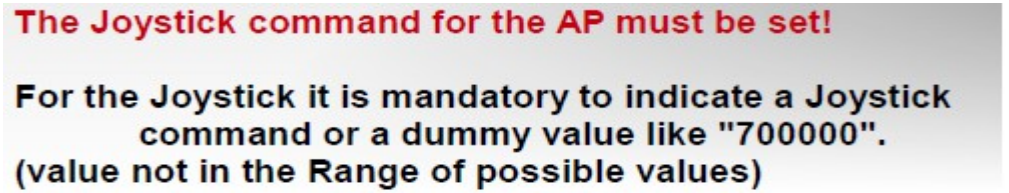
  Don't extend the Flaps to Max too early!

  Wind ? You can set the Wind correction heading with ATlasHold.

Wind - Heading

- **(13) The correct Joystick Autopilot AP command.**

  ATlasHold is correcting it in automatic after a save + reopening.



Joystick Connections

Readme_183.txt Readme_184.txt Readme_185.txt Q/A

Troubleshooting - To date, no bugs.

- **(14) Keyboard Hook system – Kbd Connection blocking**

  A simulator uses the Keyboard Hook system like ATlasHold.

  Delete FSX Keyboard Connections in FSX. They are useless. In any case make a test.

  In particular the FSX function keys F1..F12 and the Number Pad keys 0 to 9.

Important Check – Close the Kbd-Connection before ^12 (Ctrl + F12)

A) Open the Joystick View and select the actual Joystick ".ini " File.
B) Select 1 Joystick Button in use with one of the Joystick Items.
C) If the returned value is different (much higher) then there is a Flight Yoke connection problem.
Your USB-Saitek connection Driver is not connecting properly.

- **Close ATlasHold**
- **Restart your Saitek Installation program that is including the Driver.**

Joystick Connections

If you discover a interference and the key causing it, please let me know.

Readme_183.txt Readme_184.txt Readme_185.txt Q/A

- **(15) Add/Modify Airports + Runways – Add Runways + Runway Length**

When you Add or Modify Airports data with the "AddAirports" program you should consider:

A) the new created file "New_apts.txt file" must be renominated into "rwy.txt" file and copied into your actual program Folder.

B) If Runways are added or changed you have to update the "rwylength.txt" data for runways you have added, changed or deleted using the "RwyLength" program.

RwyLength

C) If you only change the Runway Length data with the "RwyLength" program just copy the new "rwylength.txt" file into you actual program Folder.

D) If you Add a Runway with "RwyLength" you must also update the "rwy.txt" file using the "AddAirports" program.

A possible Add Runway example could be: FSX is the Default.
- **Rwy coordinates between FSX, MSFS, X-Plane are slightly different but you are landing.**
- **Rwy 14 at LJMB - Add a additional Rwy 14 for MSFS > Save as Rwy "14M"**
- **Rwy 35C at LOWG – Add a additional Rwy 35C for X-Plane > Save as Rwy "35X"**
- **AddAirports is connecting with your Simulator. Heading + Coordinates are copied directly.**

The Intrasystem ATlasHold Forum

AddAirports **RwyLength**

Readme_183.txt **Readme_184.txt** **Readme_185.txt** **Q/A**

Troubleshooting - To date, no bugs.

- **(16) Joystick Editor – Added 2 additional Keyboard Autopilot connections.**

Mainly used with bigger Aircrafts like the Boeing 747.

- A/T – AutoThrottle FSX + MSFS

- Speed (SPD) Hold FSX

Important is the A/T connection.

X-Plane depending on Aircraft

X-Plane Menu Keyboard > select " sim/autopilot/Autothrottle_toggle “
Example: Kbd Key “ a “. This is the “speed” SPD Button.

This is for the B747. Different Apl might request a different setting.
In this example set the A/T Autothrottle to On/Off.

The Flight Panel > [APLF] is including the “A/T” las selection.

Update your Joystick Files manually: Folder > Joystick Files > *.ini files
Only if you use your own modified Joystick Files saved before installing ATlasHold.

Add this 4 lines to your Joystick Files. Copy and Paste. Instead of F7 + F8 you can chose a different Kbd-Connection.
Without updating you get a Joystick File Read-Error: “Items should be 30 not 28”.

```
[Kbd-A/T Arm]
F7
[Kbd-las Speed]
F8
```

Don't forget to set the Throttle to Minimums before Landing

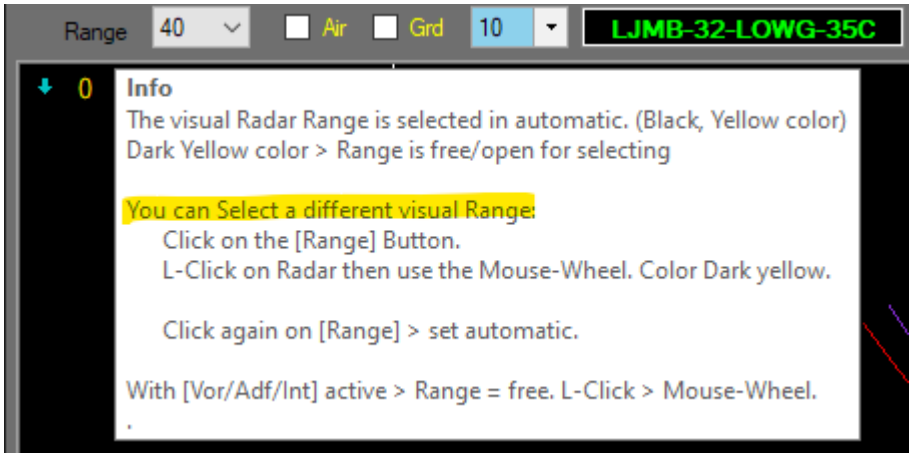
The Intrasystem ATlasHold Forum

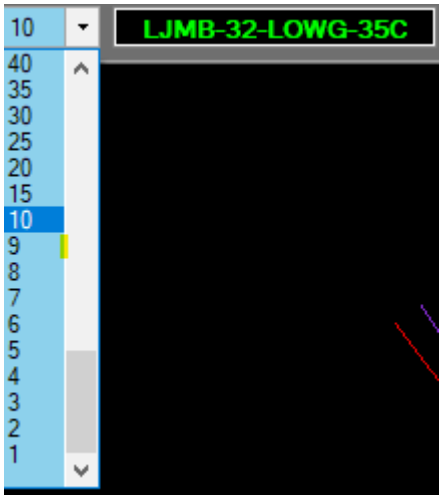
Joystick Editor

Readme_183.txt Readme_184.txt Readme_185.txt Q/A

Troubleshooting - To date, no bugs.

- **(17) RADAR Range** **+** **Blue circle**





The automatic Range selection is the distance to the destination Airport

The Range selection is depending on the “Range"-Button color:
- Color “ Yellow ” on startup – Fix Range to destination Apt.
- Color “ Yellow ” Range selection is free. From 1 to 3000 nm. Mouse-Wheel.
- Color “ Black “ Automatic Fix Range to destination Apt.
- Color “ Yellow ” Range selection is free. From 1 to 3000 nm. Mouse-Wheel.
- Color “ Black “ Automatic Fix Range to destination Apt.

This additional feature is quite important.
The airplane is in the center of the circle.
There are 3 main uses.

1) As explained here: Big Radar 8/9

2) Adjust the V/S ascending/descending value.
   - the basic distance to reach the Altitude is calculated in automatic.
   - If you increase the distance the V/S value decreases and therefore the data transmitted to the autopilot will be smoother and safer. Speed is crucial!

3) Altitude Autopilot errors are avoided.

Read > Troubleshooting V/S

One thing must be said very clearly.
While the simulators become more and more sophisticated the Airplanes increase only the graphic (default or not) without taking care of the technical part such as the autopilot.
The same airplane from different companies has a different autopilot that does not respond correctly to various interfaces like "FSUIPC, FSUIPC7, XPUIPC). Even the interconnection between the AP A/T and the speed (spd) is wrong.

Readme_183.txt Readme_184.txt Readme_185.txt Q/A

The Intrasystem ATlasHold Forum

ATlasHold – 2.0.0 Nov/2022

First thing to do 1/4

When you open ATlasHld the first time the request for registering is appearing.
The FSUIPC / FSUIPC7 / XPUIPC LOG-File Folder Path must be registered and saved.

Example:
"C:\Program Files (x86)\Microsoft Games\Microsoft Flight Simulator X\Modules\FSUIPC4.log"
"C:\FSUIPC7\FSUIPC7.log"

The File flppath.txt is created. (1 textline)
flppath.txt File - no empty line in between - observe the quotation marks

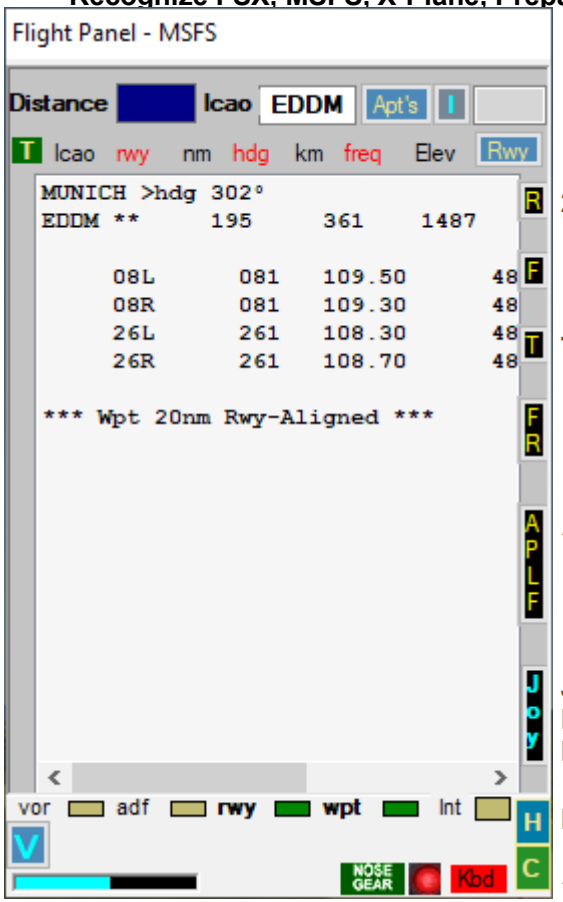
If this file should be corrupted delete this file and Re-Start the program.

The Icao Airport Selection Filter

The Icao + ' * ' is indicating ILS

Dist nm Icao	Distance from Aircraft Position
[ ]	[ ] Apt's within range 50 nm Default
[100]	[ ] Apt's in Range of 100 nm
[ ]	[KJFK] Only KJFK is shown/selected
[100]	[KJFK] Apt's in a range of 100nm from KJFK.

Recognize FSX, MSFS, X-Plane, Prepar3D (Simconnect)



Sel. Distance

Stay on (T)op

Distance, Icao, Airports, (I)ntersections, Distance to dest. Rwy

[Rwy] Approach Radar

2 Radar – L/R click

Flight Plans + (FSX)

TCAS FSX, MSFS

Frequencies + Mem

AP
Light
Fuel

Joystick
Keyboard
Edit Joystick

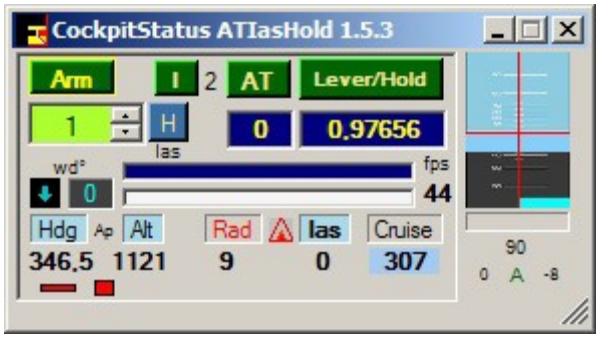
Fly to Buttons
Virtual Runway

Help + H- Interface.

Connect to:
"Flightaware"
"SkyVector"
World Apt's + Charts

Arm AT

Opens the Flight Panel



First select a destination + a Runway. Then you can open then Keyboard connection. (^F12)

Any Kbd Key could interfere with your Simulator.

Read the Keyboard Page

The ATlasHold Lever PRESSURE is always working with:
FSX, X-Plane + MSFS
Big Radar > [Runway] or ShortCut (Joystick or Kbd) >
Take off and Landing View > Engine Pressure

Help Notice

The help is very extensive and updated from 2011 to today.
Mouse Hover over each Label, Fields + Buttons.

ATlasHold – 2.0.0 Nov/2022

First thing to do 2/4

Using different Flight Simulators

Microsoft Flight Simulator FSX

ATlasHold is using the FSX environment as Default.

- **FSUIPC**
- **Microsoft.FlightSimulator.SimConnect.dll (FSX)**
- **FSUIPCClient.dll**

X-Plane

If you are using X-Plane download and install the XPUIPC interface.
In the ini-file write your IP Address (Server Address)

- **[XPUIPC SETTINGS]**
- **Tune value = 00**
- **Server Address = 192.168.1.64**

The AP and Elevator Trim value (important for a Landing approach) is not evidenced for any Airplane (Trim Field) with ATlasHold but X-Plane is setting the Saitek Pro Joystick for this use in automatic. (other Joysticks ?)
Example: the Citation CJ4 v 1.07 – ATlasHold is reading the TrimValue on the Runway TakeOff Display. (XPUIPC)
The X-Plane AP + Elevator Trim is very smooth.

Microsoft Flight Simulator MSFS 2020

ATlasHold is running with MSFS using the FSUIPC7 program/interface by Pete + John Dowson.
Just install the FSUIPC7.

There are some "logical" Autopilot coding differences which FSX + X-Plane do not have.

The Big Radar Selection [V/S Dist] and [V/S Rwy] has been adapted in order to overcome this inconvenient. Same with X-Plane.

(check the AP + ALT > read about in the new Troubleshooting page)

Adjust your Apl asset, flaps + speed.

Keep in mind that some Airplanes (all Simulators) both of Default or Add-Ons have different Autopilot coding errors. (AP not sending or AP not receiving)

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First thing to do 3/4

Unzip the included programs related to ATlasHold.

The programs are here:

Your programs Folder...\Subfolder

...\AddAirports "AddAirport.zip"

...\FullSize (is installed - no Unzip)
FullSize is also listing all actually open programs.

...\MouseClicks "MouseClicks.rar"

...\RwyLength "RwyLength.rar"

- **1) UNZIP only into the same Folder.**
- **2) Program *.exe file: Make a direct connection to your Desktop.**

ATlasHold – 2.0.0 Nov/2022

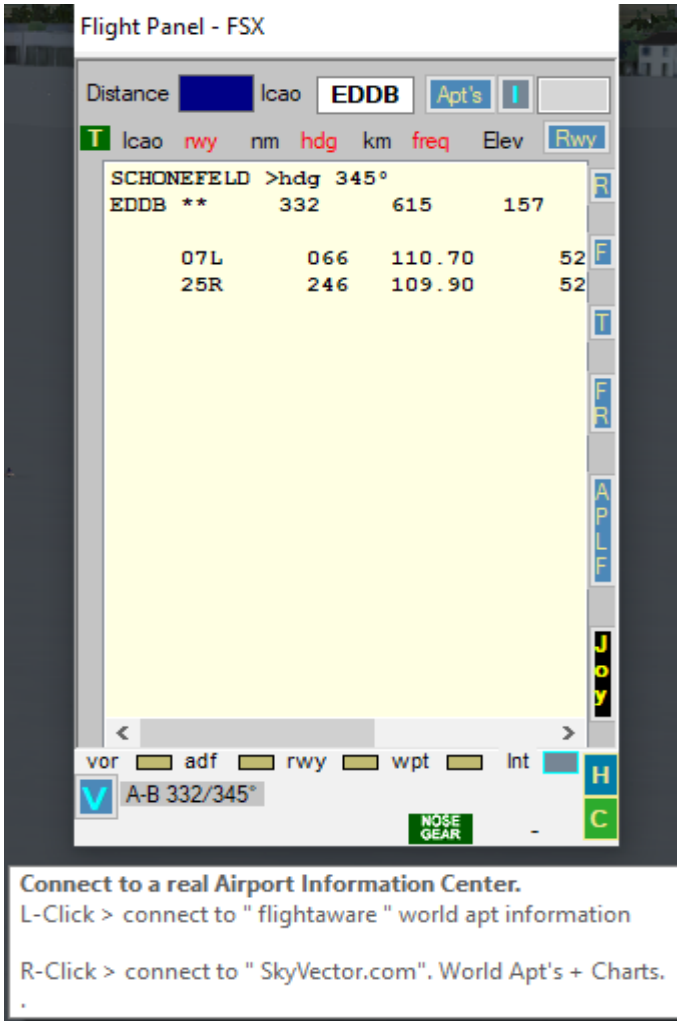
First thing to do 4/4

You are the Pilot. Do not forget.

Use the Flight Plan or the big Radar [Apt's] (L)isting and change Fly-To.

A example Flight Plan could be:
>>> Flight Plan

The new Flight Panel.



The Glide Path Slope ENTRY-ALT is very important.
Read about the new Glide Path Slope View.

Consider the Flight Plan Test Examples > Flight Plan

Since the virtual wpt is located at 20 nm from the Rwy a 20nm-Entry-ALT does not guarantee an ideal Glide Slope Descend start if you approach the Wpt with a wrong angle.
You avoid this by selecting a lower Approach Glide Path Entry ALT.
The best way is to use a Vor, Adf or intersection behind the virtual Wpt. Align!

The less the ALT closer to the Rwy the descending begins.

Crossing the virtual Wpt at 20nm Rwy distance aligned with the Rwy
The Airplane ALT should be at the same ALT as the [GB Alt] you select as reference. (or less)

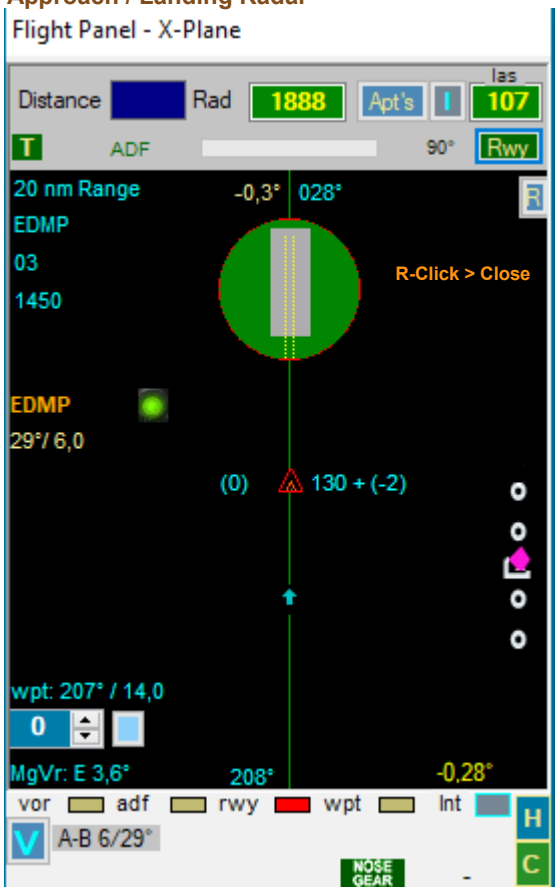
Remember the correct use of the Glide Slope Descentometer.
Never react fast during a final approach.
Wait and see. The Airplane is not a Ferrari.

ATlasHold – 2.0.0 2022

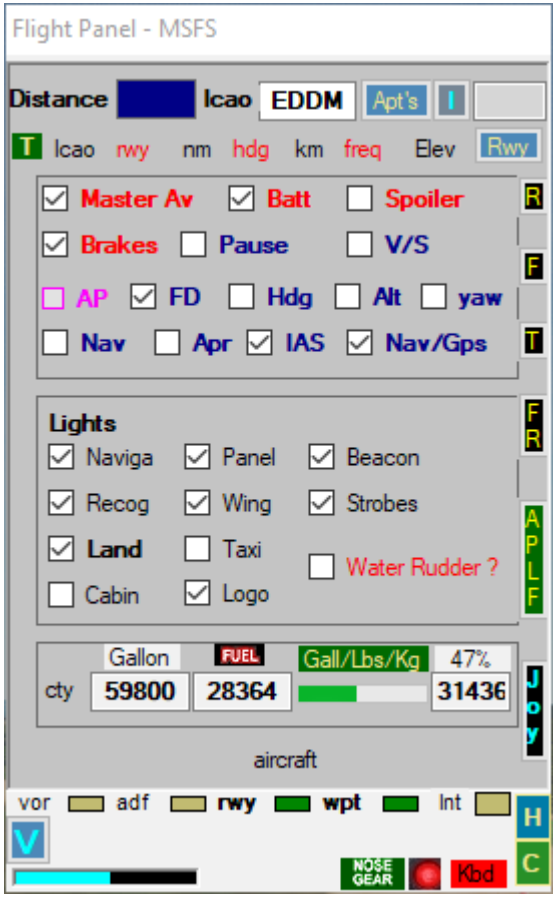
The Flight Panel [APLF] View

After any Aircraft or Destination change open this View.
This is the main connection between ATlasHold + your Simulator.

Approach / Landing Radar



Remember:
The Distance Field is used x different settings.



Open from Main-View > Triangle

Open with a Joystick Mouse connection.

Open with Keyboard connection.

Open with a Mouse Click connection.

Keyboard + Joystick connections

Keyboard > Mouse Click connections

Fly to Buttons
(V)irtual Runway
Flaps extension

>>> Free Flight

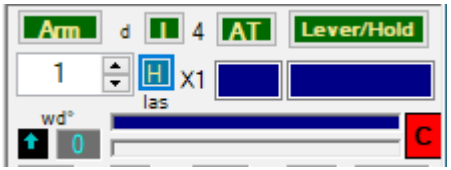
Gear down, Brakes On, Keyboard connected.

The VOR, ADF + Int(Intersections) are only used by the Flight Plan system and Radar View.
You can use the Wpt (never get lost) + Rwy selection for any Free flight.
[Rwy] is leading you to the Rwy-Course.
Instead a Landing Rwy-Approach must be selected with the big Radar [V/S rwy]

ATlasHold – 2.0.0 Nov/2022

Using the Approach System

The AT-las-Hold Feature is not using any Autopilot just the engine pressure for stabilizing the speed.



- Your aircraft must have a Autopilot with Hold(ALT) and Heading Gauge (Hdg).
- The FSX aircraft.cfg file must include the following AP parameter section:

```
[ autopilot ]
autopilot_available=1
flight_director_available=1
```

- You can use the Default Cessna 172 autopilot – in Panel.cfg file add:
  //On Top under [Window Titles] write

```
Window??= AP

[Window??]                    //in place of ?? use your own Window sequential Nr.
Background color=2.2.2
size_mm=156,48
window_size_ratio=1.000
position=8
visible=0
ident=RADIO_STACK_PANEL
zorder=3
gauge00=Bendix_King_Radio!Bendix-King Radio AP, 0,0,156,48
```

Free the Ailerons when approaching + using the automatic Approach-System!

If your Autopilot is locking the Ailerons just open + re-close the [ALT] Button! Same procedure with Heading!
This is not depending on ATlasHold!

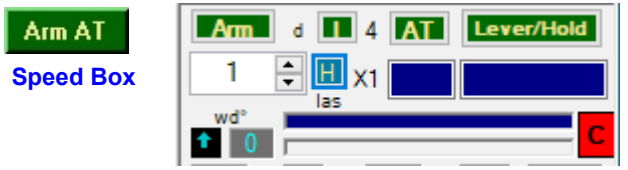
- Using ATlasHold with Add-On airplanes
  - Some add-ons are using a own AP-System. In that case you must verify if ATlasHold can open the AP-Functions via Joystick or the CheckBox-Panel [APLF] + or you should use the Cockpit-AP-Switches first.

  - ATlasHold has been tested with all major Add-on airplanes without problems.
  Example FSX: Stratocruiser B377 = OK, Dash8 Q400 from Majestic can use all CockpitStatus AP-Commands.
  Example FSX: For the CS B-52 do not forget to set the FD (flight Director) + the Mode Selector to “Tacan”.

ATIasHold 2.0.0 Nov/2022

AT-las-Hold System

The ATIasHold System.
A unique Feature x any Airplane.



Increasing speed to a disproportionate speed such as from 100 to 300. In this case it takes time to reach 300. Fly at 290, 300 or 310 and then engange the AT [Arm].

las-Hold is only based on a few known Aircraft-data details. This is important to know in order to use it properly.
las-Hold is using only the engine-pressure and does not know anything about your aircraft and engine type.
Do not confuse the AT-Control with a N1-Control!

- **The [I] Button. You Fix the Hold-Speed equal to the actual Speed or manually enter the speed.**
- **The [Lever/Hold] Button can interrupt/disengage the AT and, when closed again, engage the AT at the Actual Speed.**
- **You can select or type any speed manually using the speed box.**

- **When airborn and at cruise Altitude:**

- *Click on [Arm*]. (Button change color) – Disengage/Close AT-las, toggle this Button.

Move Back your Throttle Lever to the Default "Null" Position.

Engange/Click the [AT] Button.

The AT-las Hold procedure is starting.

- **MSFS, X-Plane Simulator:** No Engine Pressure ? Click on the A,N,I button (Adf, Vor, Ils) below the small PFD Instrument.

- If you change Altitude the speed will change accordingly as it is with any other Hold-Speed System.
- On Ground AT-lasHold is disengaged.

- The [**Lever/Hold**] **Button can be used in any moment, with or without AT engaged**. "Lever/Hold" is holding the actual engine-pressure in place of the Throttle-Lever.

- [**Lever/Hold**] can be enganged on Ground.
- For a real 100% pressure use the Cockpit Throttle or the FSX "F4" key as a Joystick does not keep 100% pressure normally.
- The [**las**]Bar is indicating the selected speed in relation to your aircraft-cruise-speed.
- The Bar below is indicating your actual speed + engine pressure. Background colors, yellow + white.
- The [Speed Box Field] is changing color to green when you reach the desired speed. (-/+ 1 Knot)
- **You must keep your hand OFF the throttle lever in order to see speed + pressure correctly.**

ATlasHold 2.0.0 Nov/2022

Wind Drift Correction
Fuel

When there are winds blowing to the right or left of the plane, the heading must be offset into the wind in order for the plane to still fly in the same direction.

Click on this Button ▢

(Button Color is red when engaged)

stay on course

On Ground the Wind Drift is closing.

Use the small arrows up/down

Wind Drift correction from -20° upto 20° - from left to 0 from 0 to 20° right correction.

When opening or closing, the Wind Drift Value is always 0 (default).

For a initial Drift Value use the general Wind Drift Correction rule with ATlasHold:
Wind speed Knots: 15 div 5 = 3 (if to left use -3 – to right use 3)
Wind speed Knots: 43 div 5 = 8 (could be between 8 and 10)

Use this feature mainly for a Runway Approach starting at a reasonable distance.

The Wind Drift Value and direction is visible on all Radars.

You center the Rwy !

Open the [APLF] Panel. **Fuel**

Click on [Fuel] Re-Fuel 50 % of Total Cpty.
Click on [Gallon/Lbs] change measure.
Input 60 into the Distance Field. Fuel 60%.

FSX
If your aircraft does not use the **Fuel-Dump** you can change the Aircraft.cfg file.

Under the [fuel] section add:
fuel_dump_rate = 0.00685

(the % of max Qty dump x sec)

***Initial** / actual fly to and distance*
Runway approach

- to LOWK fly 302° / 12,8 nm dist.
- to VOR fly 335° / 5,2 nm dist.
- to RWY fly 283° / 8,9 nm dist.
- to Virtual wpt fly 75° / 8,9 nm dist.
- Rwy deviation -12°
- Approach ALT -108 feet = too high
- Glide Slope Diamond “Apl too high”.
  High = too Low. Low = too high.

The Airplane Rad-AGL

The new Joystick and Keyboard connection Editor

Read the "Saitek Pro Joystick Defaults.txt" File.

[Joy Number]

Is reading the Joystick Button number/value

Is reading a Joystick number you input

[Joy Description]

Is evidencing the Joystick number description.

Same with [Description Help]

10 (12) Keyboard connections same as Joysticks replacing the previous Pmdg selection x Fsx. The KBD connections are evidenced with the prefax " Kbd- "

[Spoiler 40%] the description Field

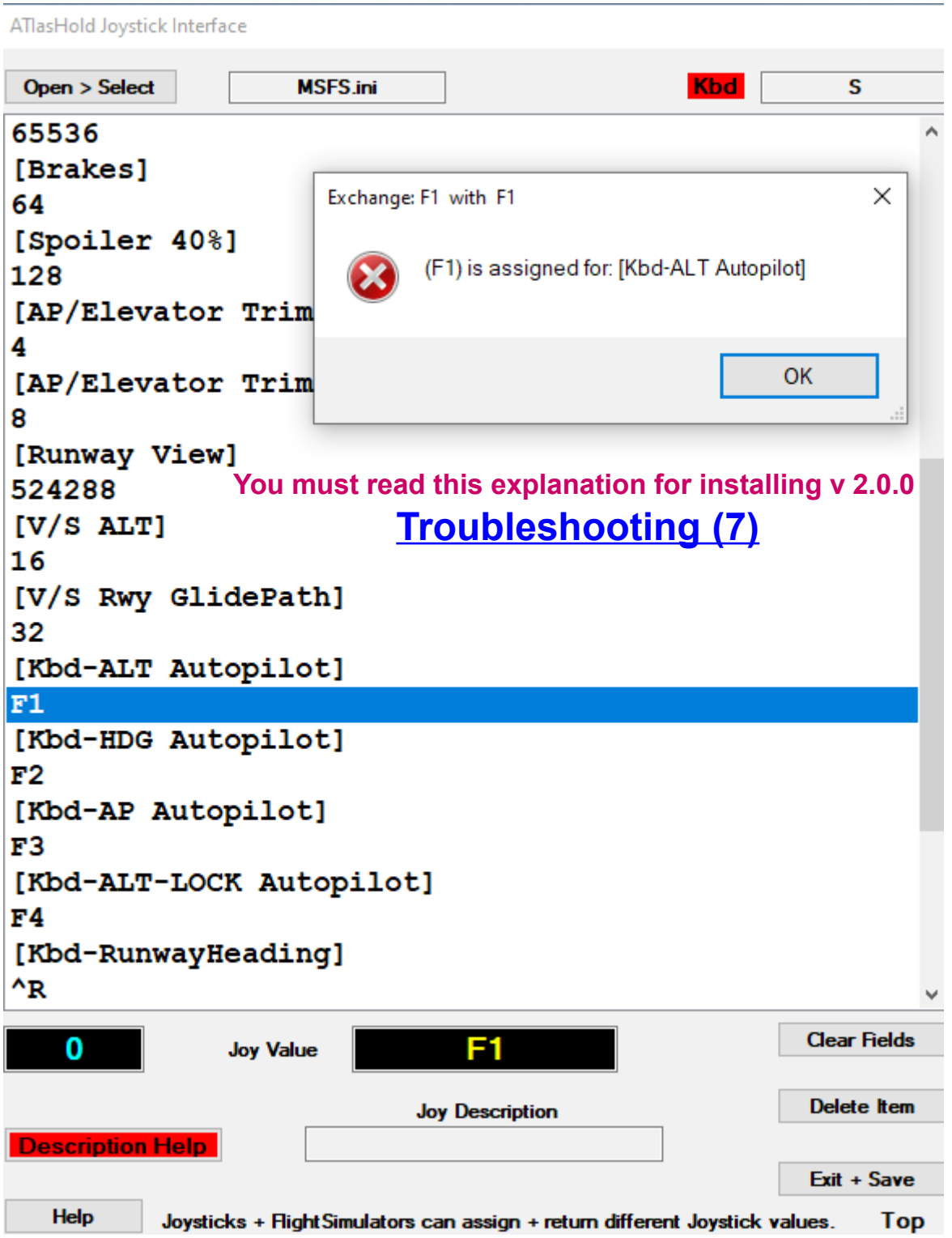
128 is the Joystick number value assigned. "0" = don't use it.

Read the [Help]

Switching between simulators can cause you to lose the original Joy data + ATlasHold may be reading incorrect numbers. In this case it is necessary to run the installation file (Flight_Yoke_System ..... exe) ex new for those who use the PRO Flight System Yoke. (or else)

see > Troubleshooting 5

Keyboard > Mouse Click connections



Flight Simulator / Joystick + Keyboard connections

Airplane should be on Ground !

Be aware that Simulators are assigning some joy values in automatic you must take into consideration.

- **Open the Joystick connection View. Click on the Flight Panel Button > [Joy] > Open the Kbd-Connection before.**
- **Select the FSX.ini, MSFS or X-Plane.ini file. You can create a new "ini" File with different names for MSFS ecc...**
- **Move the Mouse-Pointer on a Number Field (not the description field] and select.**
- **At the first message answer NO**
- **Select a Joystick button. The Value is visible. Click on the number Field selected and register the Value. "0" = don't use it.**
- **Multiple Joystick commands:**
  Release ALL buttons TOGETHER
  Number of buttons is indicated
  The command value is visible
  Click on the number Field selected and register the value

ATlasHold is correcting it after a save + reopening.

The Joystick command for the AP must be set!

For the Joystick it is mandatory to indicate a Joystick command or a dummy value like "700000". (value not in the Range of possible values)

The SHIFT Button Value

The shift button is important and the value is 1.
Shift + button-value 64 = 65

Keyboard > Mouse Click connections

Remember and consider: **MSFS, X-Plane is setting some Joystick values on different Buttons. (Saitek Yoke Pro)**

Error control

Any Data exchange is evidenced with the actual value and new value. Confirm or Not.
If a command value is already existing / assigned a message is advising you.

NOTE:

- **When you open the program you should select the Joystick File suitable for the simulator in use.**
  Included are 3 files. (Saitek PRO) For FSX (MSFS 2020) + X-Plane.
  You need to adjust the data for your joystick.
  Or, create a new file with the name you chose.

Flight Simulator / Joystick interface > Keyboard connections

Airplane should be on Ground or On Air !

Be aware that Simulators are assigning some Kbd Keys in automatic you must take into consideration.

The Keyboard connection is closed when you Open or Close ATlasHold

- **Before opening this Editor the Keyboard connection must be closed! > Ctrl + F12 (^F12)**

- The 12 Kbd items are including 10 out of the 16 Joystick connections. (new A/T + Speed)
- Instead of the Joystick value you use the Keyboard Key.

- Ctrl = RControlKey or LcontrolKey. The Ctrl Key sign = " ^ ".
- Read the keyboard characters
- Activate the Keyboard Hook System!
- Ctrl + F12 (^F12) - Reserved
- Interrupt Keyboard Key reading > Ctrl + F12 (^F12)
- You can use only 1 or 2 keyboard characters
- - the Left or right Ctrl Key + any Key
- - any single Key

Open Kbd-Reading ^F12

When you open and it does not start then press the F12 Key and then again Ctrl+F12 ^F12
This has to do with the Windows and Simulator Kbd interaction.

- How using the Ctrl Key + a second Key:
  It is suggested to NOT use the Ctrl-Key + Key together but single.
  --- In this case Ctrl-Key + Key is not interfering with Simulator actions that respond to Ctrl + Key together.

But also the contrary applies. FSX "P" = Pause, use "^P" and Pause is not activated.

4 Special Keyboard connections – Reserved – you can't use with the Editor.

- Open the Flight Panel
  Ctrl + Back (^Back)
- Open the Flight Plan
  Ctrl + RShiftKey (^RShiftKey)
- Start the Flight Plan > [flpl]-button on Big Radar. Start the Flight Plan.
  Ctrl + Return (^Return)
- Open in sequence the Flight Panel View buttons: APLF, FREQ, (T)CAS ... APLF...
  Ctrl + P (^P)

Read the [Help]

When you edit a Text Field like the ICAO Field in the Flight Panel you should close the Kbd connections. Avoid interference with your Simulator. Same applies with any other external View.

```
[Kbd-ALT Autopilot]
F1
[Kbd-HDG Autopilot]
F2
[Kbd-AP Autopilot]
F3
[Kbd-ALT-LOCK Autopilot
F4
[Kbd-RunwayHeading]
^R
[Kbd-Radar Big]
R
[Kbd-WaypointHeading]
^W
[Kbd-Runway View]
T
[Kbd-[V/S ALT]
F5
[Kbd-V/S Rwy GlidePath]
F6
```

The Kbd + Joystick Items:
Kbd-WaypointHeading
WaypointHeading
Kbd-RunwayHeading
RunwayHeading
are also used as Free Flight Selection Buttons > on the FlightPanel. [rwy] + [wpt]

The Waypoint is the virtual xWpt at 20 nm in front of the destination Rwy.

Flight Simulator / Joystick interface > Keyboard connections 4/4

Airplane should be on Ground !

Be aware that Simulators are assigning some joy values in automatic you must take into consideration.

Before opening this Editor the Keyboard connection must be closed! > Ctrl + F12 (^F12)

- Save your actual "Joystick Files" Folder if you update.
- Install ATlasHold
- Re-copy your saved Joystick Folder into your actual program folder.

• If your previous Joystick files include the original Joystick items for the PMDG planes/FSX.
This 10 PMDG items must be exchanged with the new 12 Keyboard items. (kbd-.....)

• Proceed:
The update is automatic. Exchange the Pmdg items with Kbd items.

- Open the Joystick Editor > Flight Panel > [Joy]
- Select 1 "*.ini" file.
- Press and select the [Exit + Save] Button
Follow the procedure + reopen the updated file.
Your previous Joystick data is save. The 10 Keyboard Items are added.
- Select other "*.ini" files and repeat.

• In your program folder there is a zip-file "Joystick Files Example.rar".
This zip-file is including 3 Joystick files i'm using for testing Joystick + Keyboard connections.

This files are including some Joystick and Keyboard connections for the same action.
You should avoid this.

And now the important point we must consider.

Any simulator is already assigning Joystick and Kbd-Keys.
Mainly the Kbd-Keys are often useless for a prepared user.
Eliminate all "Simulator" connections you want use in a different way.
Select a Joystick or Keyboard Key and check if the Simulator is using it.
Try with a single Kbd Key and with a Ctrl + Key combination.
FSX "P" = Pause, use "^P" and Pause is not activated.

This should be done "outside" of this Editor. Connect the Kbd-Connection ^F12.

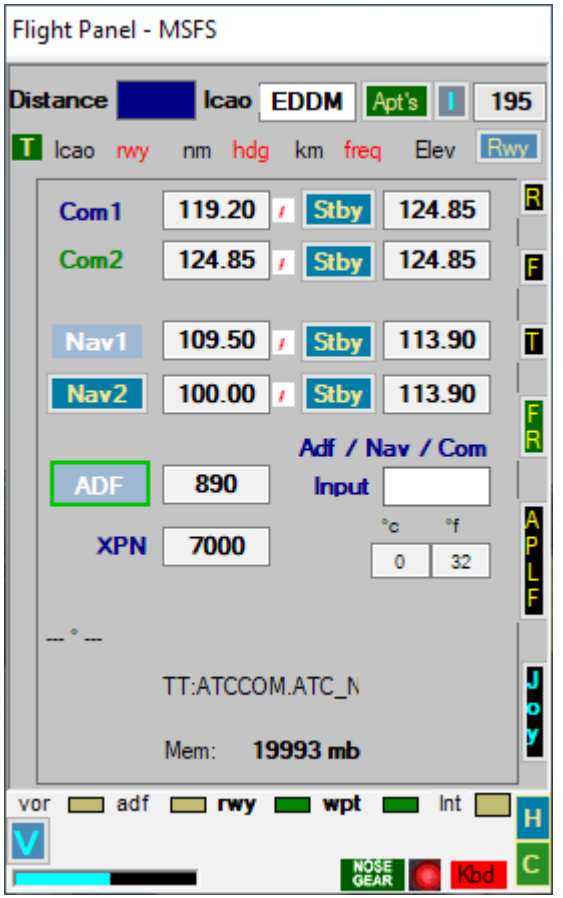
```
[Kbd-ALT Autopilot]
F1
[Kbd-HDG Autopilot]
F2
[Kbd-AP Autopilot]
F3
[Kbd-ALT-LOCK Autopilot
F4
[Kbd-RunwayHeading]
^R
[Kbd-Radar Big]
R
[Kbd-WaypointHeading]
^W
[Kbd-Runway View]
T
[Kbd-[V/S ALT]
F5
[Kbd-V/S Rwy GlidePath]
F6
```

The Kbd + Joystick Items:
Kbd-WaypointHeading
WaypointHeading
Kbd-RunwayHeading
RunwayHeading
are also used as Free Flight
Selection Buttons >
on the FlightPanel. [rwy] + [wpt]

The Waypoint is the virtual xWpt at
20 nm in front of the destination Rwy.

ATlasHold 2.0.0 Nov/2022

The Frequency Input View [FR]



- Button: Nav1 standby / Nav2 / Nav2 standby
- Button: ADF

- Click on the small red on white ' // ' Label, exchange frequencies.

- When you click any of the frequency buttons, that frequency will replace the NAV1 or ADF Frequency.

- The Frequency Input Field (only numbers allowed but not the leading '1')
  Example: Freq 110.90 - Input [1090]
  Example: Freq 115.00 - Input [1500]
  Example: Freq 117.25 - Input [1725]
  Example: Freq 108.00 - Input [0800]
  Example: Freq 109.25 - Input [0925]

- Adf Example: Adf-Freq 290 - Input [290] Adf-Freq 1350 - Input [1350]

- When you press any of the Frequency Buttons, that frequency will change to the Frequency INPUT VALUE.

- If the Input-Field is EMPTY and you press any of the NAV-Frequency buttons then this frequency will replace the NAV1 Frequency.
  This is meaning that you could prepare several frequencies for later use with NAV1.

- COM1 + COM2 Freq Input same as Nav-Freq.
  Freq into 'Stby' then you should use the 'exchange' switches.

- Make short clicks on the Freq-Button!

- Selecting Frequencies with the Flight Panel
  - Rwy-ILS Freq. are copied directly into NAV1
  - Vor + Nav2 Freq are copied directly into NAV2
  - Adf Freq are copied directly into ADF1

ATlasHold is never using Frequencies for any automatic approach or else.

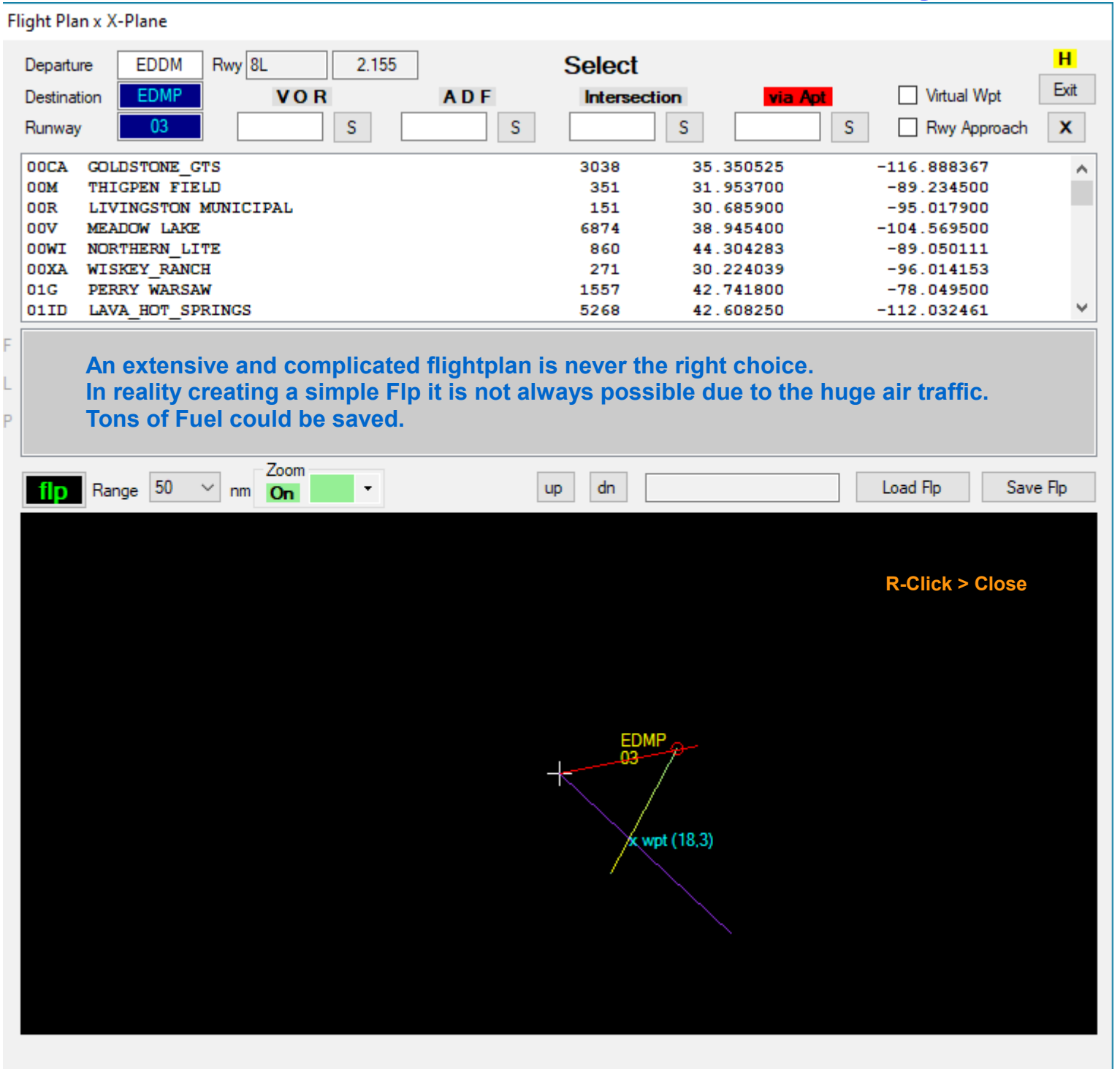
Selecting a IIS Freq you see the Ils Deviation on the Radar and HSI just for your reference.

Selecting a Wpt with a Freq that Freq is copied into the Cockpit-Instrument.

You can approach in automatic any Wpt: Rwy, Wpt, Vor, Adf without Frequency.
This is meaning that you could overwrite any Freq that is saved when you select a Wpt.

The whole system is only working with real world Coordinates + Mathe-Formulas by 'Ed Williams'.

ATlasHold 2.0.0 Nov/2022 – Flight Plan 1/8



Read the ToolTips.

Place your Aircraft on a Runway start. Departure Airport.

When selecting an Airport and a Runway Destination this data is copied into the Flight Plan only if there is no Flight Plan selected / loaded.

In this way a Flight Plan is initiated.

The next page ends the Flight Plan with 2 Waypoints:
[virtual Wpt] at 20 nm in front of the runway
[Rwy approach]

This is a simple Flight Plan.

When you select a Runway ATlashold knows where the Departure Airport is and asks for confirmation for the Apt + runway.

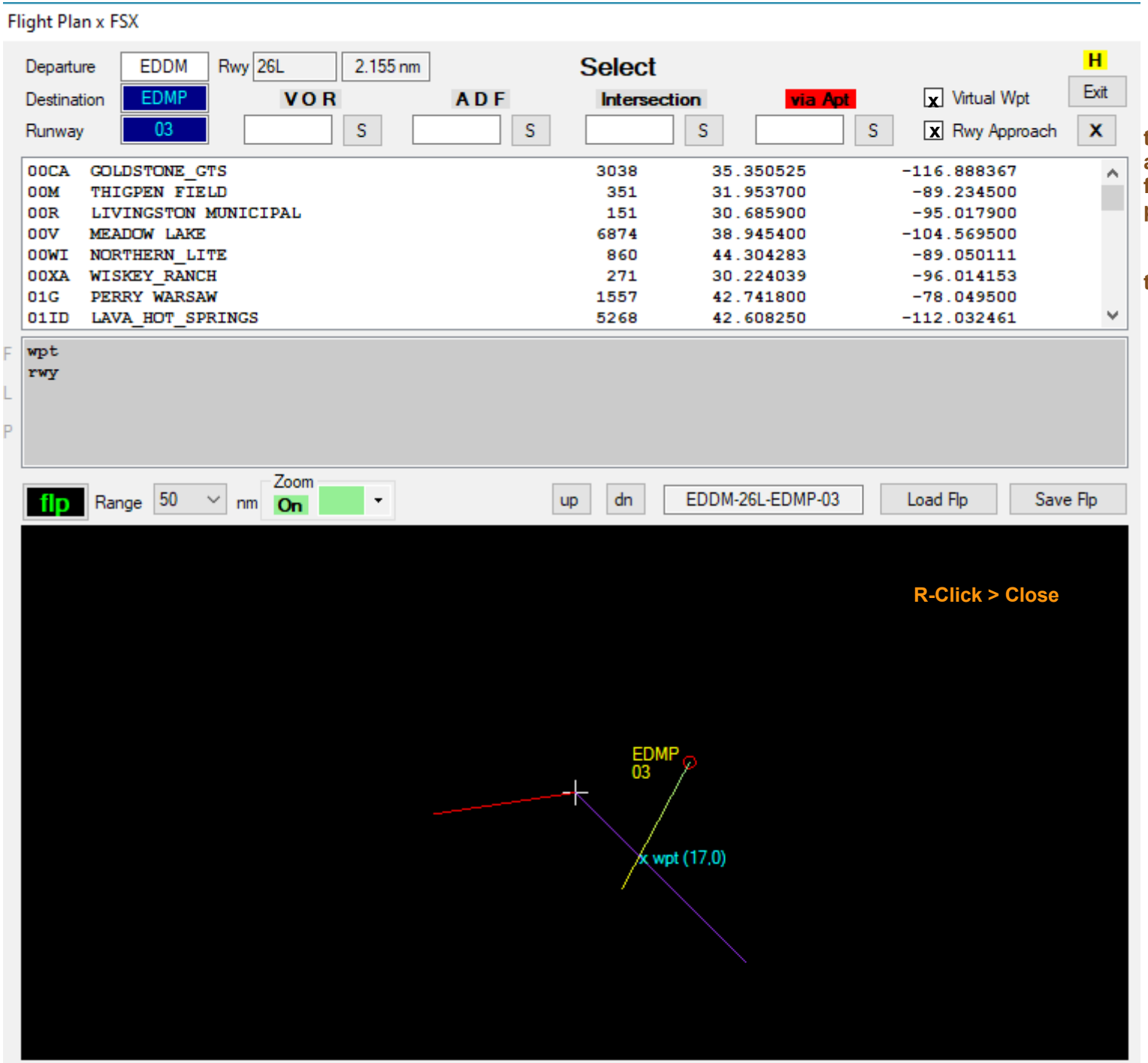
The Flight Plan Name is created in automatic when you save the FLP.

The graphic display

- **The Red Line is the actual Heading**
- **The purple Line is always pointing to the virtual waypoint at 20 nm in front of the Rwy. Here: x wpt, distance 18.3 nm.**

Using the virtual Runway and the virtual Waypoint you NEVER GET LOST !

ATlasHold 2.0.0 Nov/2022 – Flight Plan 2/8



Read the ToolTips.

The last Wpt is the [Rwy] Approach.

The [Rwy] approach is only leading you to the Runway but this is NOT the V/S Rwy approach that is approaching the runway following the GLIDE SLOPE descent procedure.

The [V/S Rwy] approach is selectable on the big Radar or Joystick or Keyboard.

Selecting Landing is your Pilot choice.

Example: Don't select any Flight Plan.
Place your Aircraft on Rwy 26L EDDM.

Flight Panel View: select Apt EDMP
Click on Rwy 03 and follow the messages.

Now your FlightPlan is copied into the Flight Plan View.
Now select [x] Virtual Wpt and [x] Rwy.

Select the V/S distance to 4000 feet in big Radar > near [Runway].

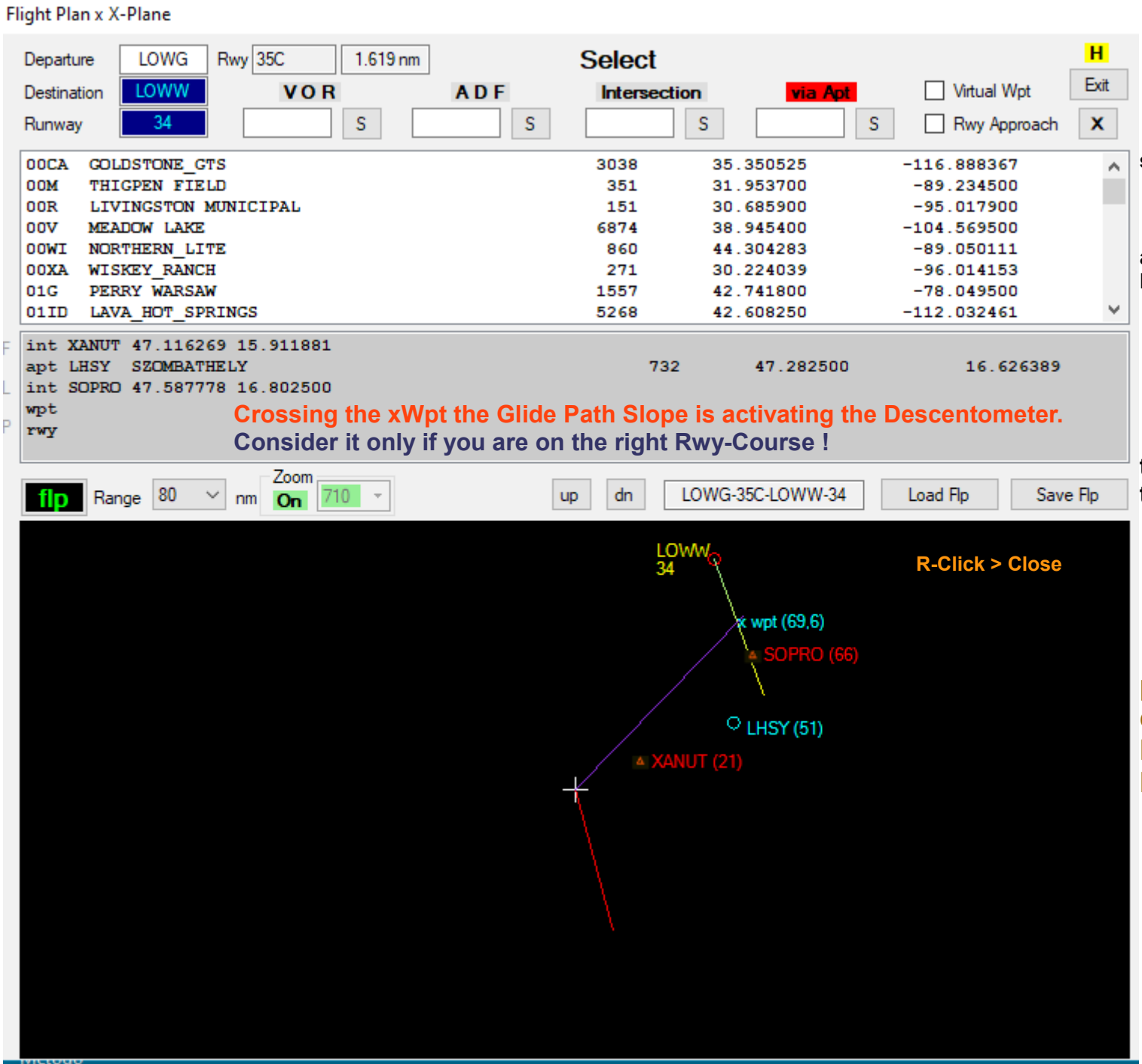
Take Off. (Gear, Flaps) then engange the [V/S Dist]
Start the Flight Plan. [flp]

Flight Plan > Free Flight:
(just use the Fly_to Buttons:
[wpt] then [rwy])

When the Glide Slope (Diamond) is centered engage [V/S Rwy]. DON'T miss that moment.

You do not have to Save this Flp.

ATlasHold 2.0.0 Nov/2022 – Flight Plan 3/8



Read the ToolTips.

This is only a Wpt-Test Flight.

For using a Search List first click on the specific Label. VOR, ADF, Intersection .....

The Runway Lenght for both, departure and arrival, is used for the Runway Take Off and Landing Panel.

[Load Flp]
several Test Flight Plans are included.

If you want create a new Flight with the Flight Plan you must first deselect the active Flight Plan.
This is done using the Button [X].
Then [Flight Panel] > [Apt's]

If by chance a wpt is not performed stop the [flp], mouse-click the next wpt and reopen the Flight Plan [flp]. Big Radar > Flight Plan List > See big Radar.

Remember the correct use of the Glide Slope Descentometer.
Never react fast during a final approach.

Wait and see.
The Airplane is not a Ferrari,

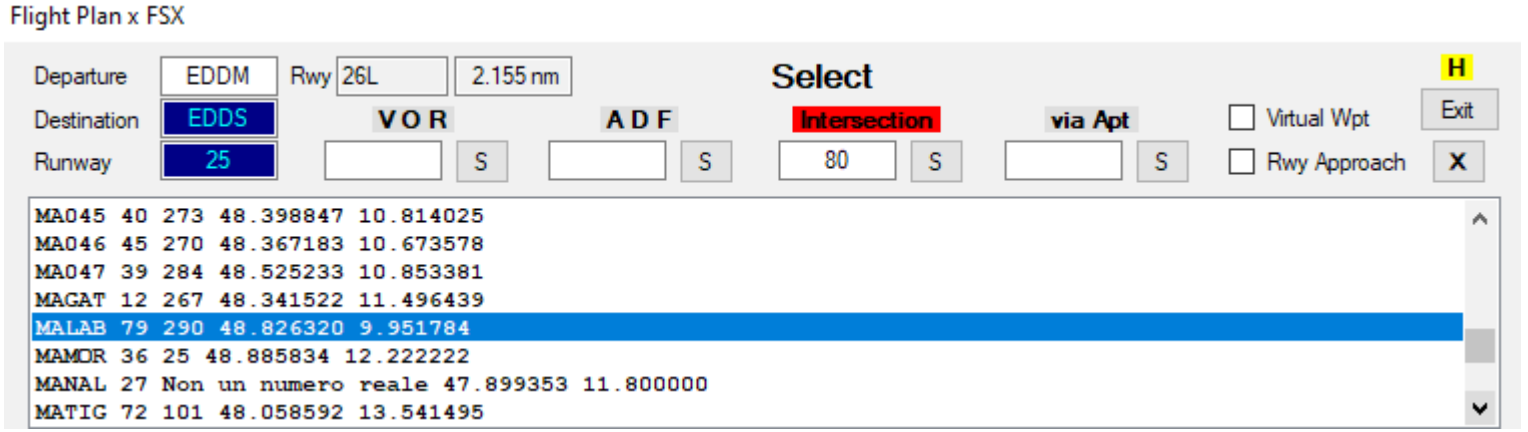
ATlasHold 2.0.0 Nov/2022 Flight Plan 4/8

Runway Approach - Alignment- Intersections

- You should select a Wpt that is aligned with the destination Rwy with a maximum of 5° Runway-Deviation. Intersection, VOR, ADF.....
  The Wpt selected should be some nm before the virtual Wpt or in any case 20 nm before the Rwy-Start.

First you must load the Intersections. Flight Panel > [I]. Click on a Item. Data is copied into the Flight Plan Field if no Flight Plan is loaded!

- Before Approaching the Rwy Alignment wpt select the requested Glide-Path Altitude. Radar > [GP Alt] x 10nm or 20nm Rwy distance.
  You can select any different, Lower Altitude > The Glide-Path descending would start nearer to the Rwy.
- Now select / input the Flight ALT using the Radar distance selection [0 ...50000] feet in steps of 500 feet. (near the Radar > [Runway] Button)



There is a difference between the 2 Intersection selections.

The Flight Plan Intersection (observe the Heading that could be useful)

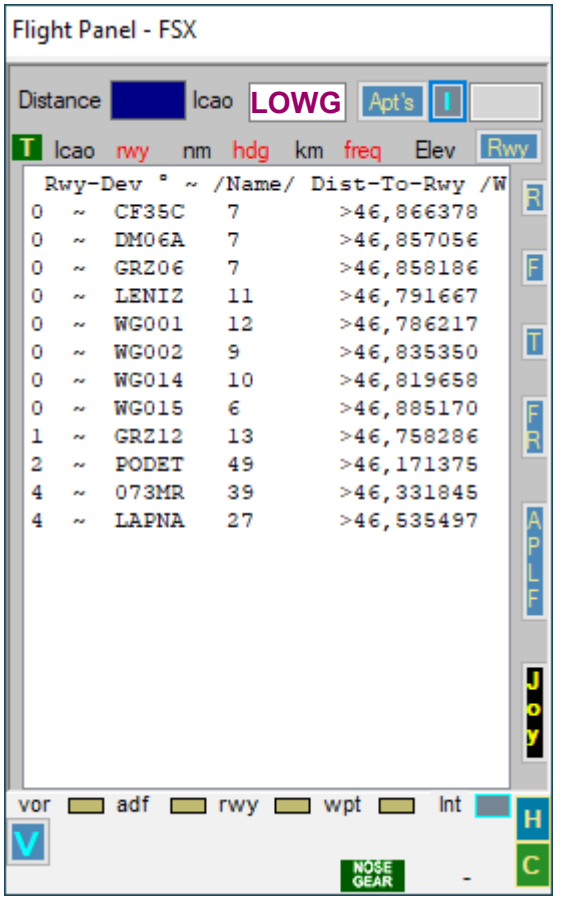
- Search by Name – Input a Name - Example “Abruk” or “Abr”
- Search by Distance. Input a Distance (80). Distance is related to the destination Rwy.

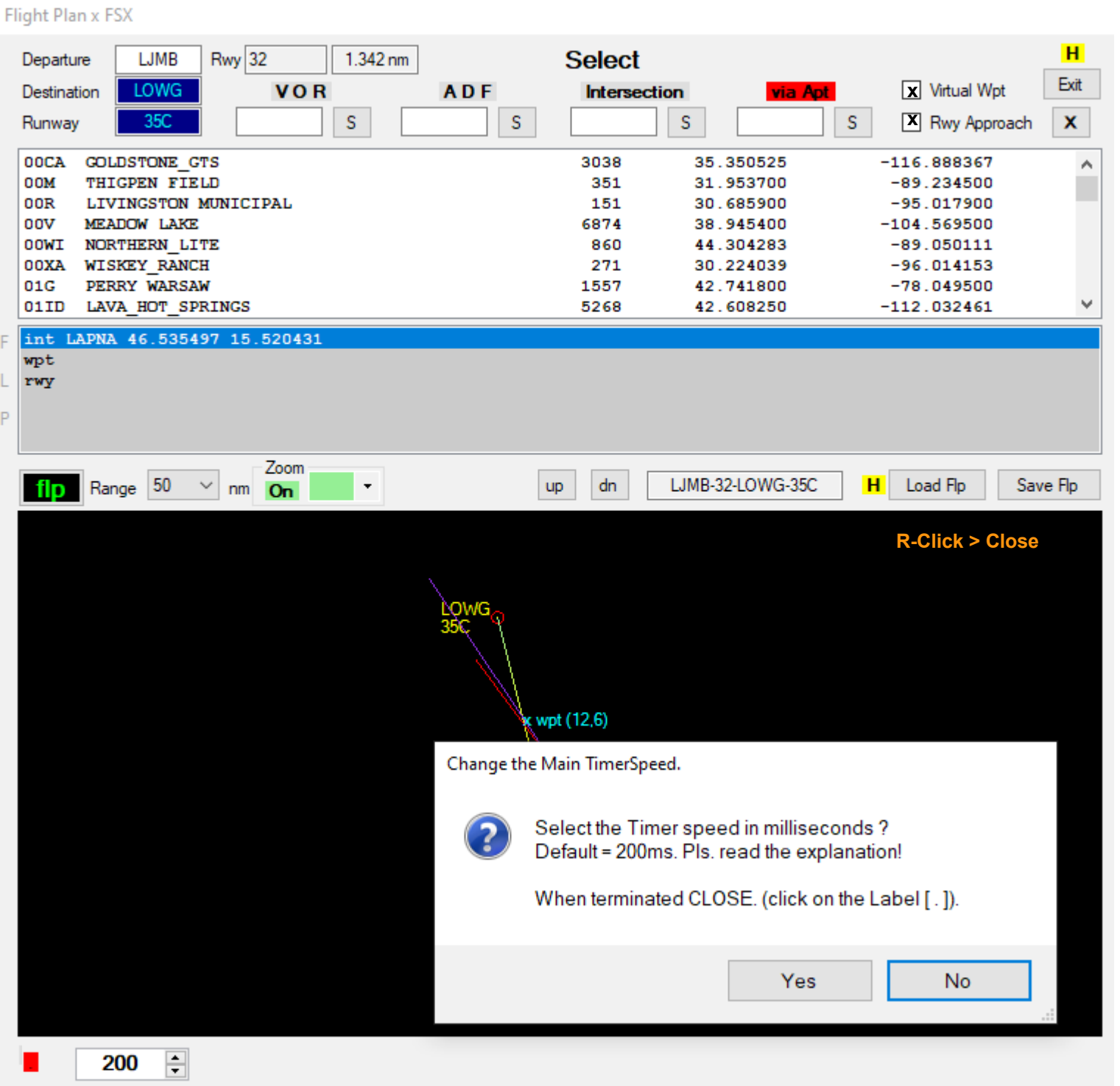
The Flight Panel Intersection [I] selection (maximum Rwy deviation = 5°)

- Search by Name
- Search by Distance. Input 30 into the Distance Field. Default = 50 nm.
- You select 073MR that is aligned (4° deviation) and behind the virtual Wpt (20nm) at 39nm.
  The selected 073MR Intersection Name is copied into the Flight Plan Intersection Field for your Flight Plan use. Here, each distance is relative to the Rwy!

- Or use the Radar [Vor/Adf/Int] Button. Read the Tooltip and select + copy into the FLPL Field.
  - L-Click on Radar, select the distance to the Rwy (MouseWheel). You get a better visual view.

Rwy deviation max 5° destination Rwy





The Timer Speed

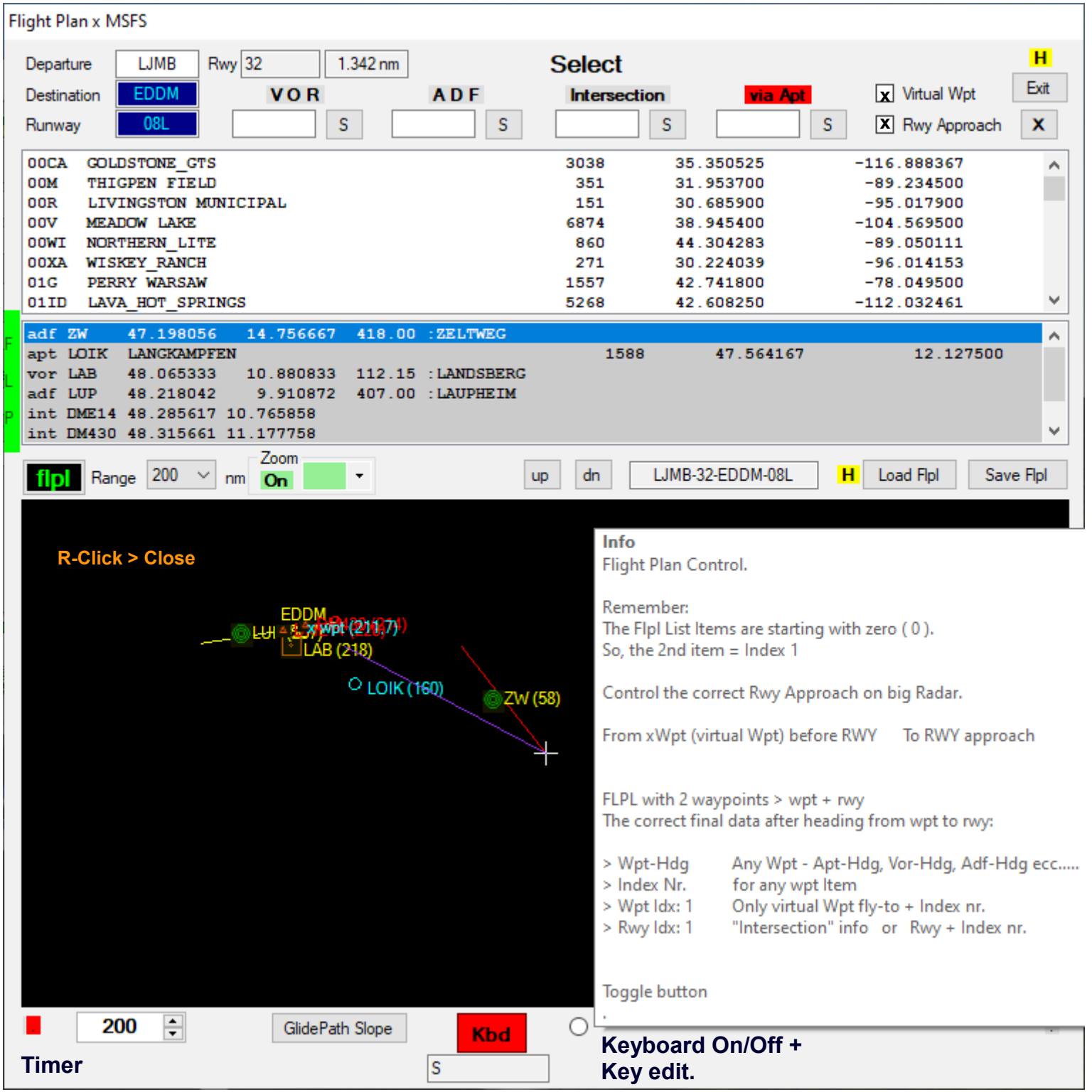
Bottom Left corner. There is a very small Label with a point [.]

The Timer speed affects both the program and the Joystick.

A value of 150 ms is acceptable.
Less than 150 ms is only depending on your System.

Below 150 ms the Joystick response is very fast.

Try it.



Flight Plan interruption.

- When you interrupt a flight plan the plane is continuing and therefore when you return to the flight plan you have to consider whether the plane is in front of or behind the waypoint before the interruption.
  Change the waypoint item.
  Chose (click) select a Waypoint (Flight Plan or Radar) Item and then close and re-activate the flight plan.

- You could also fly back and repeat a different section.

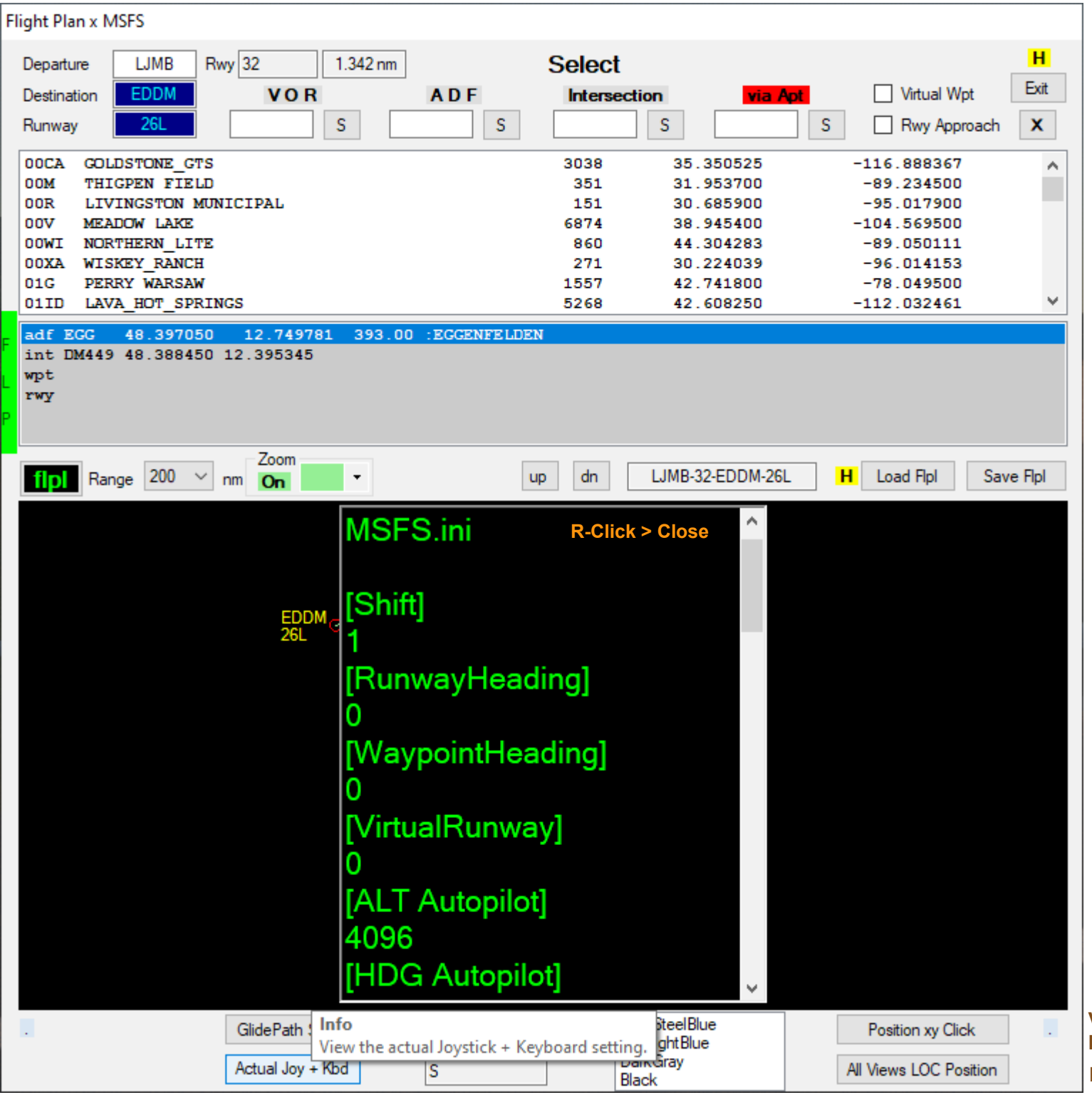
Flight Plan Control

Click the small button at the Bottom right corner.

Flight Plan Control
Used only for checking
User behaviour.
Must be sent together with your issue in order to understand what you are doing wrong.

ATlasHold 2.0.0
Nov/2022

Flight Plan



A quick overview.

View your actual selected Joystick data.

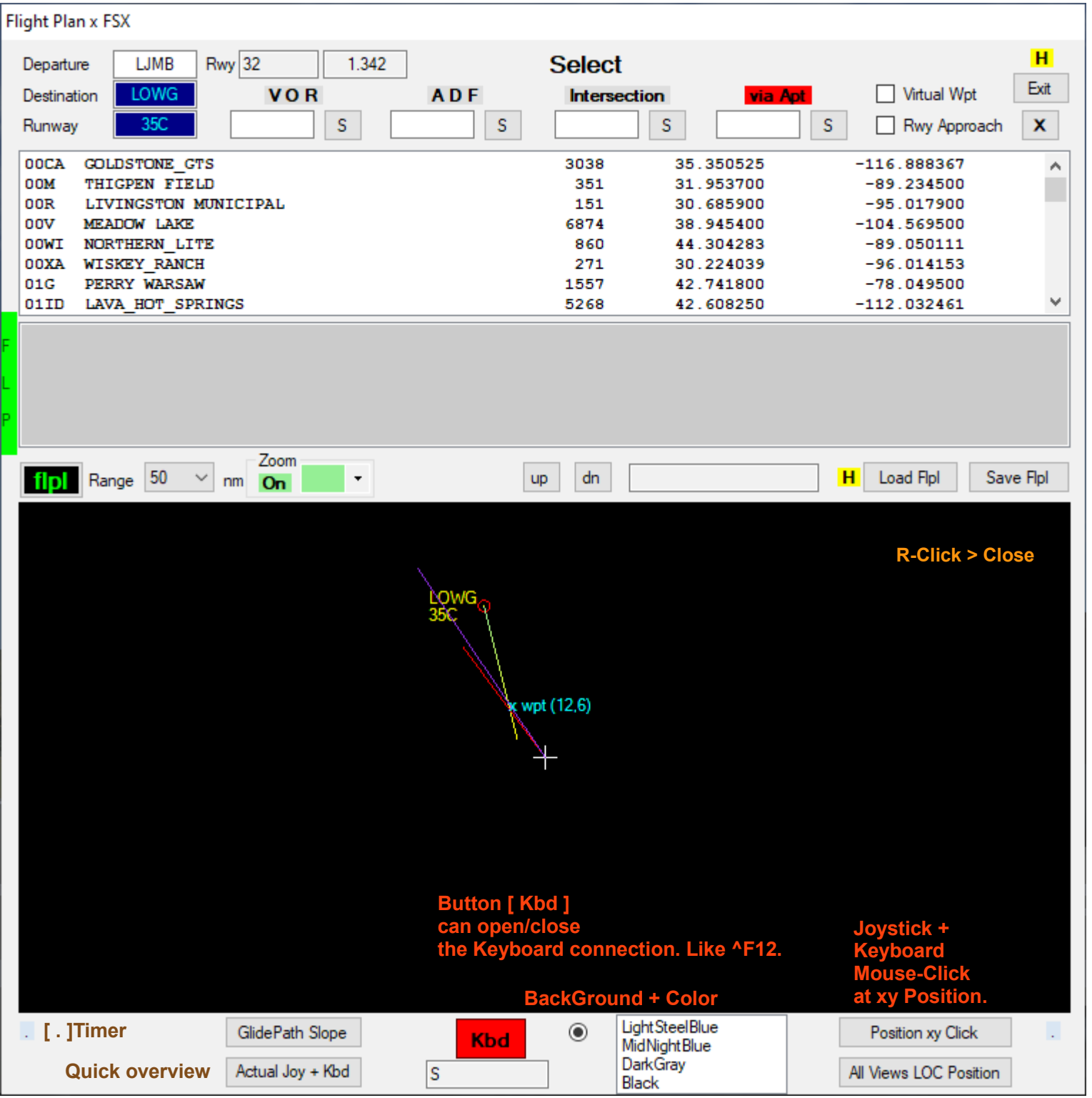
View your actual Joystick + Keyboard Mouse-Clicks.

Reset all Views to the Default Position.

ATlasHold 2.0.0
Nov/2022

Flight Plan

Menu overview.



[.] Flight Plan control data fields.

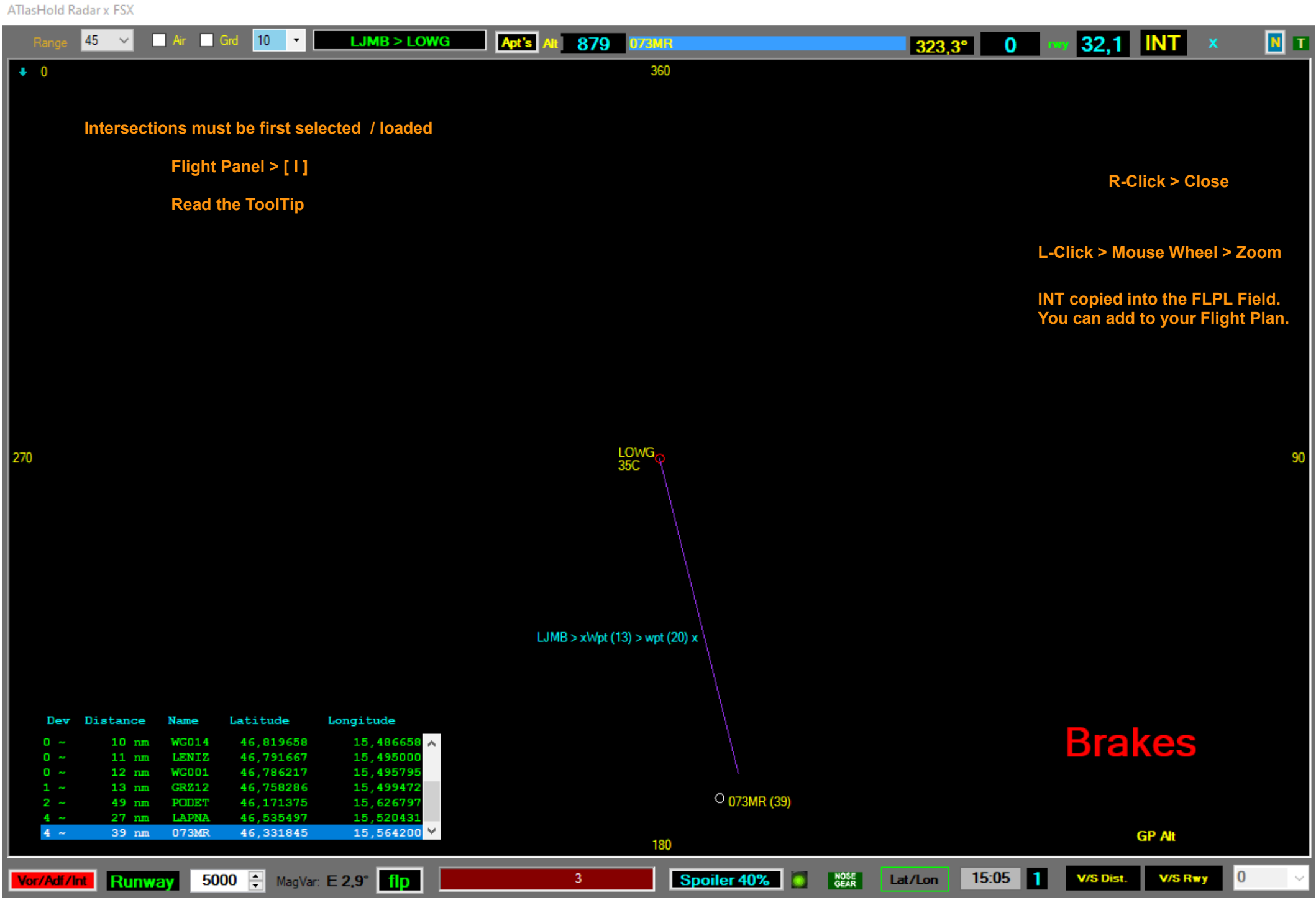
Reset all Views to the Default Position.

ATlasHold 2.0.0 Nov/2022 – Big Radar - 1/9

Prepare the Flight Plan

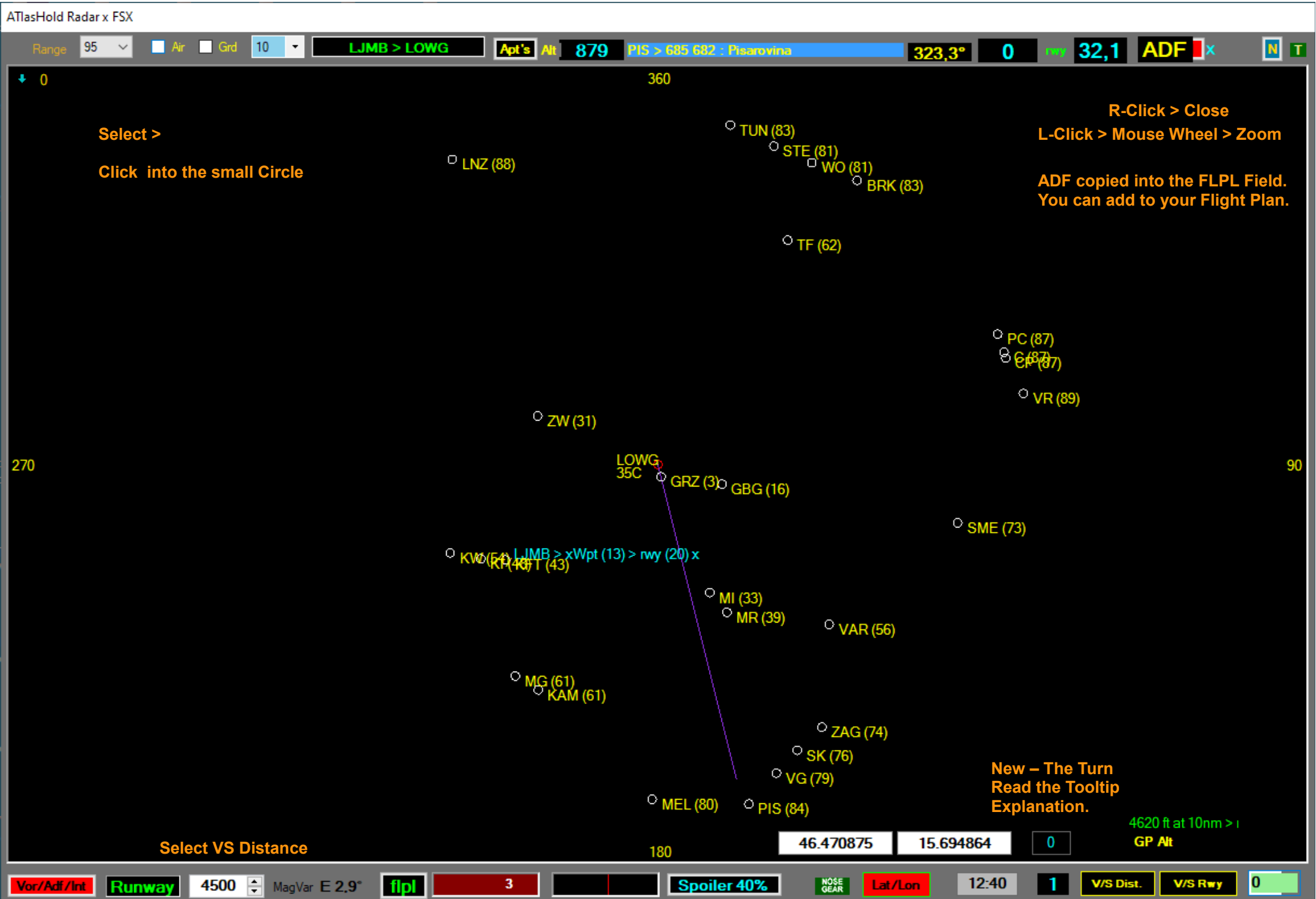
ATlasHold 2.0.0 Nov/2022 – Radar Intersection select 2/9

Prepare the Flight Plan



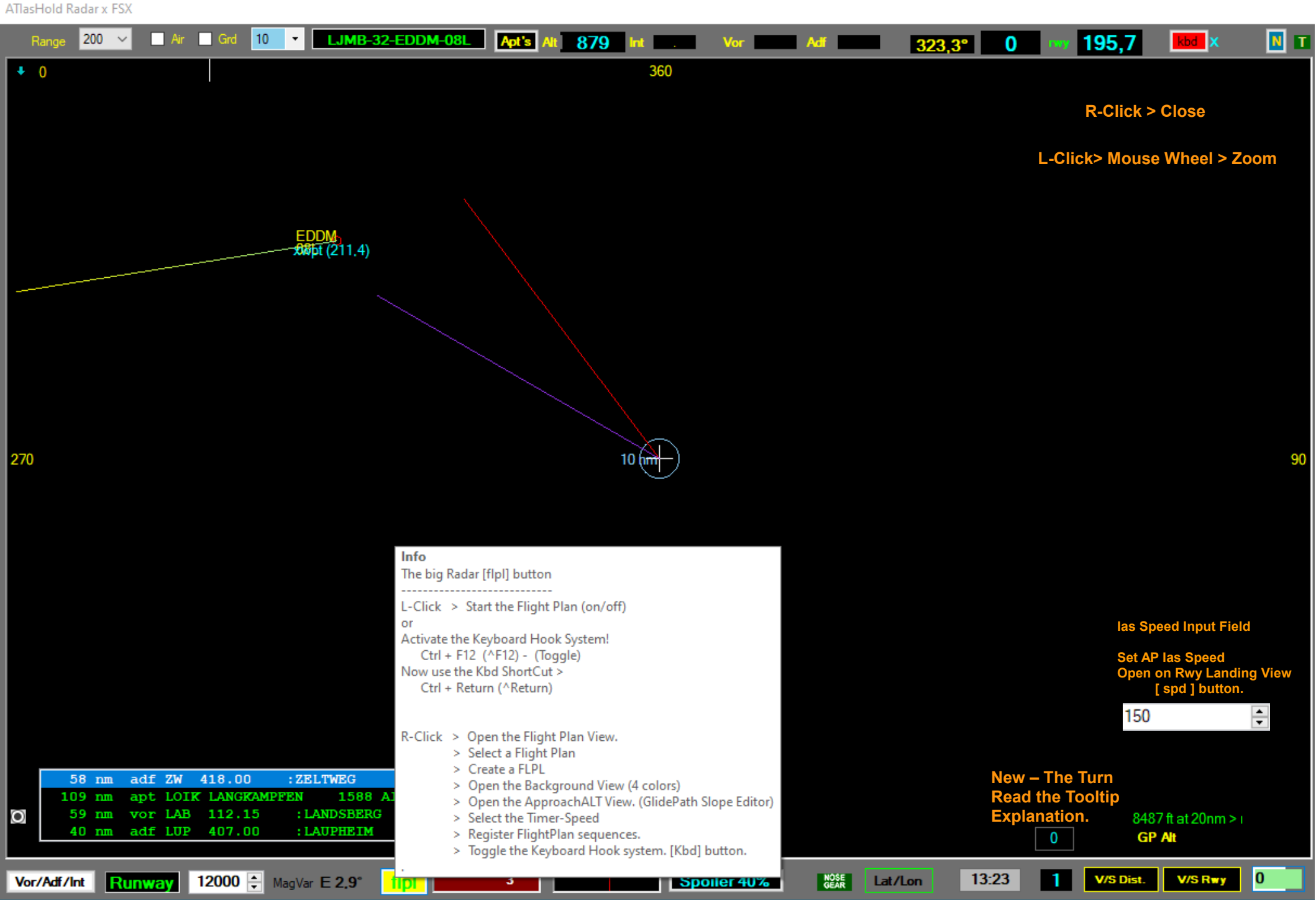
ATlasHold 2.0.0 Nov/2022 – Radar ADF select 3/9

Prepare the Flight Plan



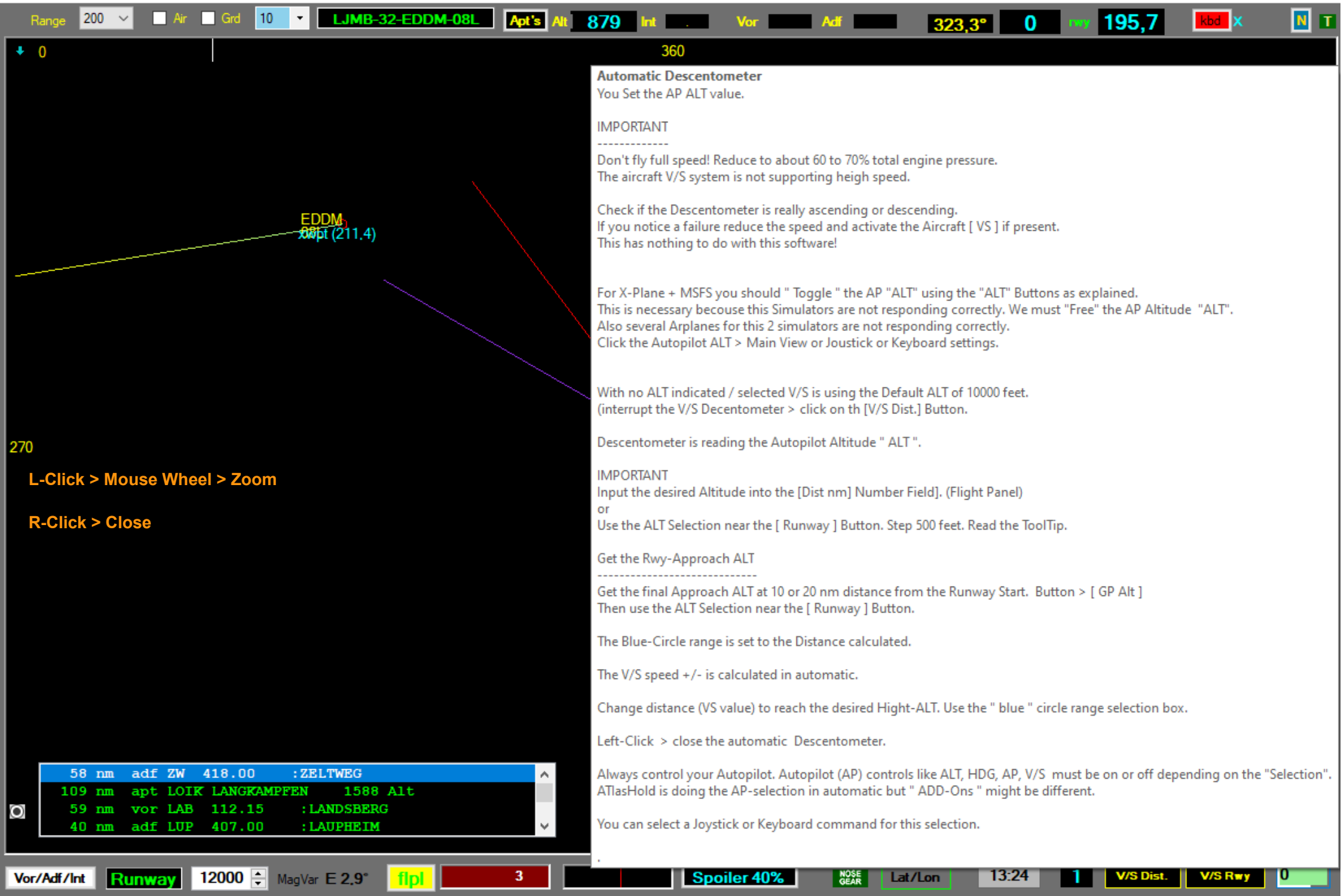
ATlasHold 2.0.0 Nov/2022 – Radar Fly FLPL 4/9

The Flight Plan View Options



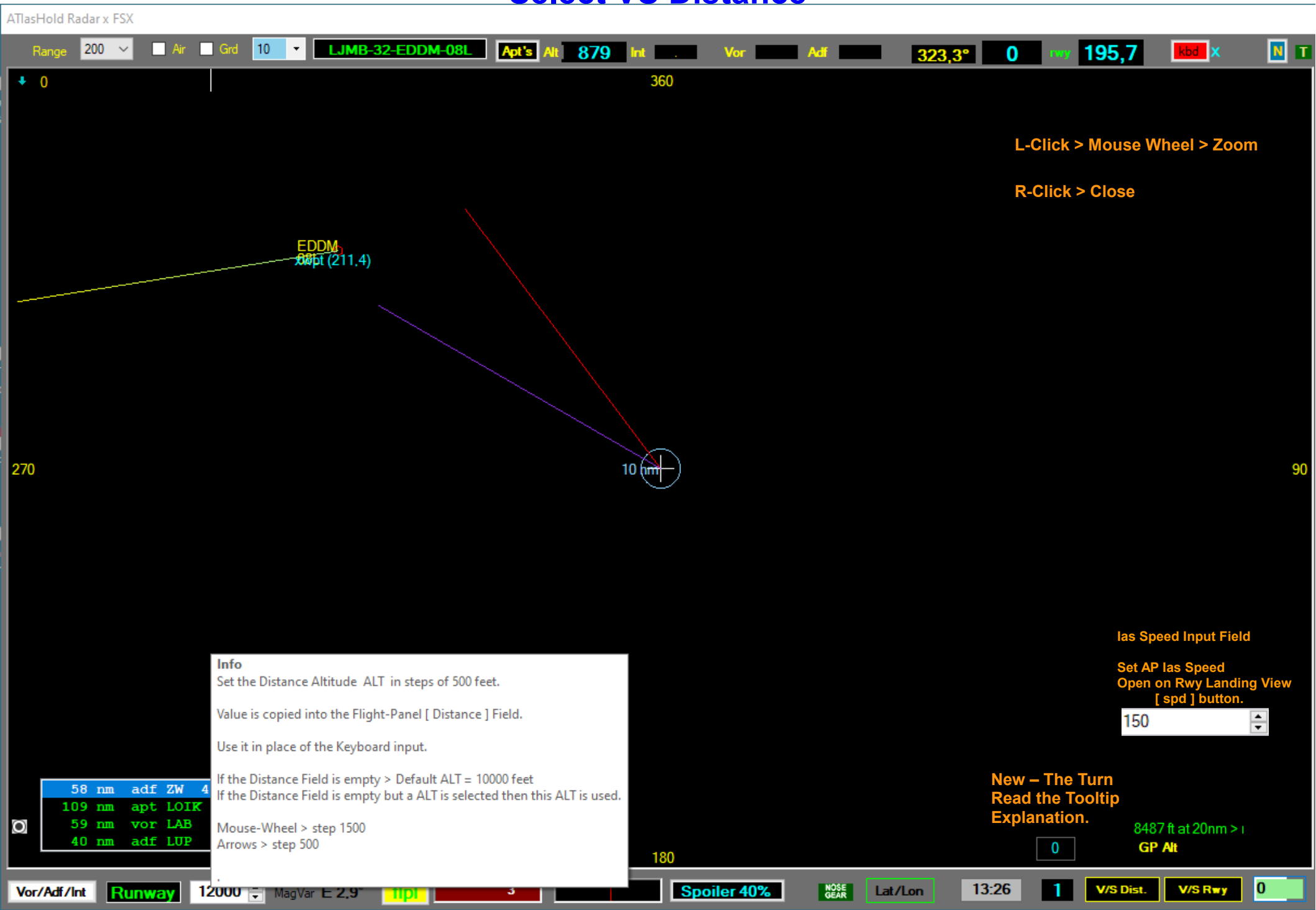
ATlasHold 2.0.0 Nov/2022 – Radar Fly FLPL 5/9

The Descentometer

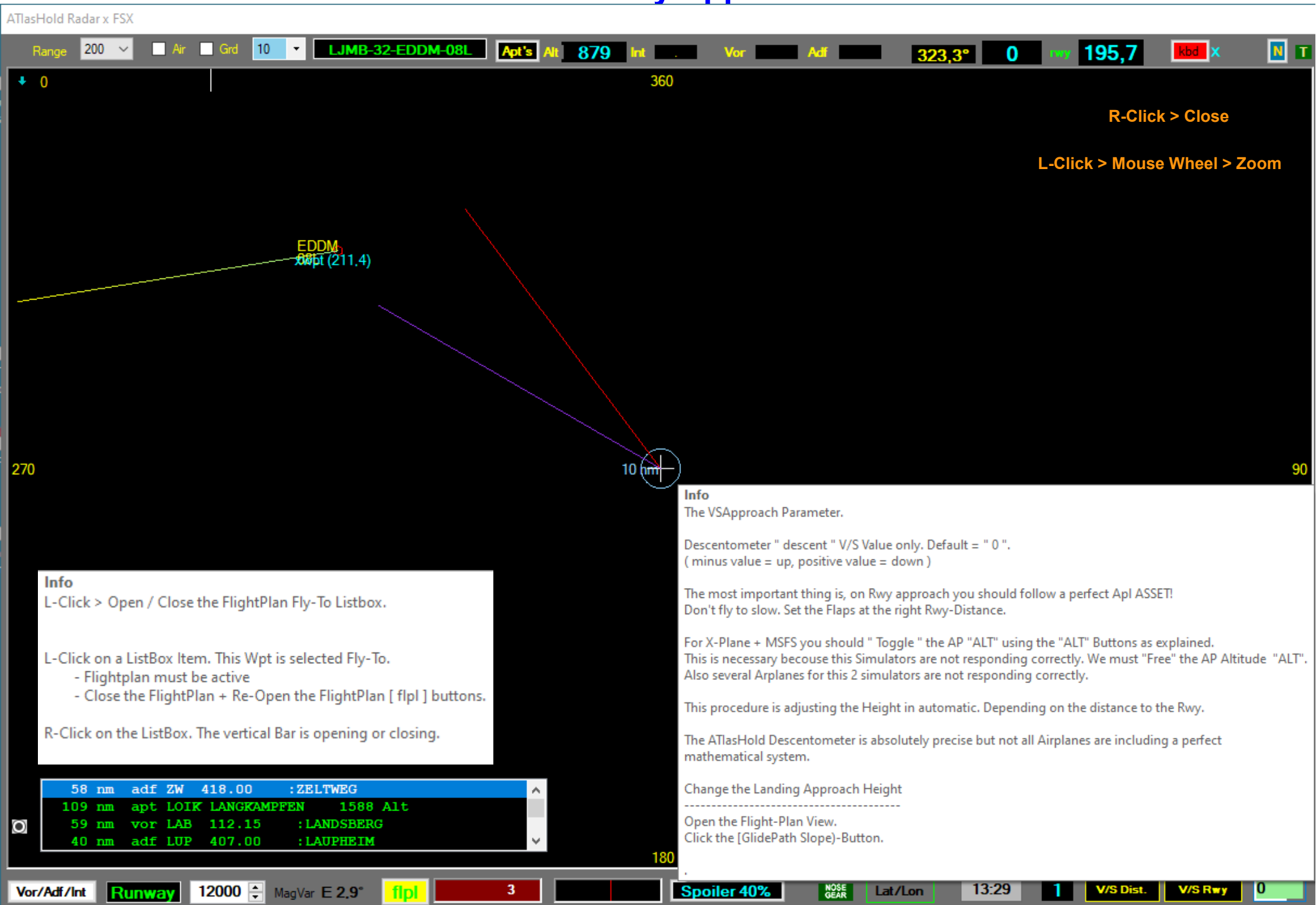


ATlasHold 2.0.0 Nov/2022 – Radar Fly FLPL 6/9

Select VS Distance

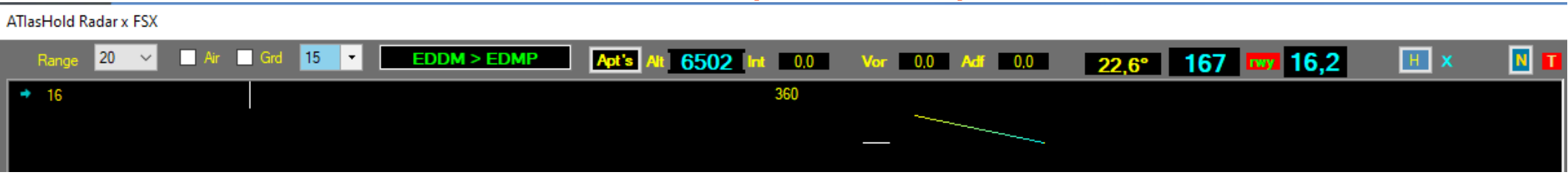


ATlasHold 2.0.0 Nov/2022 – Radar Fly FLPL 7/9
The VS Rwy Approach



ATlasHold 2.0.0 2022 – Big Radar - 8/9

Read the updated ToolTips



• **Range:** is selected in automatic based on the Dist To Destination (1 to 3000 nm).
- Can be selected only when the [Apt's] Listing is selected. L-Click then use the Mousewheel. See >Troubleshooting

• **[ ] Air + [ ] Grd:** in use with FSX, MSFS. Air + Ground traffic.

•**The Blue Circle Range:** [V/S Dist] Descentometer is calculating in automatic the Range (nm) based on a smooth V/S. 

You can select a shorter Distance ***but be careful***. If you exaggerate the ascending is changing into a Negative V/S (Engine Power limit).
During flight, on cruise, you can select a circle Range and using it as a visual distance reference. See > Troubleshooting

• **[Apt's] :** Airports and distance are visible within the selected [Range]. On the right side a [L] Label is opening.
The L-Label is opening the Airport List including all Airports within the Range selected.
Selecting 1 Item the ICAO is copied into the Flight Panel Icao Field for direct access.

• **Int, Vor, Adf:** When selected, FLP flying to, the distance is indicated. Also visible on the TakeOff + Landing Panel.

• **Rwy:** During a Runway Approach this Label is evidenced with a Red Background color. Indicating the direct distance in nm to the Rwy.

• **[Kb] :** Now there is a new Label. Keyboard connection on / off. (in place of the [H])

• **[N] :** Map oriented or North oriented.

• **[T] :** Stay on Top. With the red color stay on top = Off.

• **Below the Range-Label: > 16** is indicating the Wind-Direction and Value.

• **Below the 360 ° Label:** any course and Runway Center deviation is indicated with a Yellow or Red Color Strip. The width is the deviation value.

• **Right Side of the 360°** you see the Glide Path Slope that is opening at a 20 nm distance from the Runway.
It is important to read the Glide Slope correctly. Here the indication is “too Low” = go Up. But when we approach a Rwy you can't get Up while the Airpline is moving forward.You should wait until the ALT is moving the Glide Slope (Diamond) to the Center, then engage > [V/S Rwy] .
Only in a dangerous situation you must correct the ALT.

While otherwise the Glide Slope goes down we have to follow the indication and go down because we are too high.
It is never wrong to keep a slightly higher ALT for a free flight or use the >>>
automatic Glide Path approach [V/S rwy]

ATlasHold 2.0.0 2022 – Big Radar - 9/9

Read the updated ToolTips

• **[Vor/Adf/Int] :** Select/Show all Vor, Adf, Intersections display on Radar at a distance of [Range] related to the destination Runway only.
R-Click into the small circle. Data is copied into the Flight Plan Field by Name > [S]earch and select. Intersections must be loaded first!
See Radar page 2/9

• **Runway Display:** Open/close the Runway *TakeOff / Landing View* or use the ShortCut. Read the specific page [Runway Take Off and Landing View].

• **[10000]:** Select the Flight ALT. From 0 to 50000 feet, step 500 feet. Value is copied into the Flight Panel Distance Field. Used by [V/S dist].
Avoid the manual Input. Refer to [GP Alt] on this page that should be used only as reference. Your choice should be LESS !

• **[flp]:** This button is activating the Flight Plan L-Double Click. R-Click open the Flight Plan View. (color yellow = Flight Plan selected)

• **[2000 1000]:** Open / Mark the RAD distance only when the ground is less than 2000 feet below. Similar to the Aircraft RAD alarm at 1000 ft. It is gradual.
Ground Proximity Warning System is active.

• **[Spoiler 40%]** (60%) L-Click set Spoiler to 40%, R-Click retract Spoiler to " 0 ". 40% with smaller Apl is setting 60%.

• The small green light is a additional alert, the Brakes state = On

• **Nose Gear:** Visible with the Gear extended.

• **[Lat / Lon] Button:** Indicates the latitude and longitude of the precise position in which the airplane is located. The program ADDAirports is using it.
46,473908 – 15,691928 It is very important to verify any World location like Airports, Runways ecc... ATlasHold is only using real world Mathe formulas.
• When you set/modify/virtual rwy you can place your plane at any Rwy-Position. This is your touch down position.

• **[1]:** (0..5 nm) Default is 1 nm. At Any Waypoint, Vor, Adf, Int, Rwy, Apt ecc... The automatic fly ends with a acustic signal. The Turn is starting.
The type of aircraft and the speed must be taken into consideration for a reasonable choice.
As the plane proceeds the Turn begins. For example, if a Adf is close to the Mountain and the next Wpt is on the left, perhaps we will chose the distance of 5nm. Example: ADF " RTT " before the Rwy Alignment to LOWI. Depending from which direction you approach.
Read about the new "Turn" selection. "Radar Turn selector."

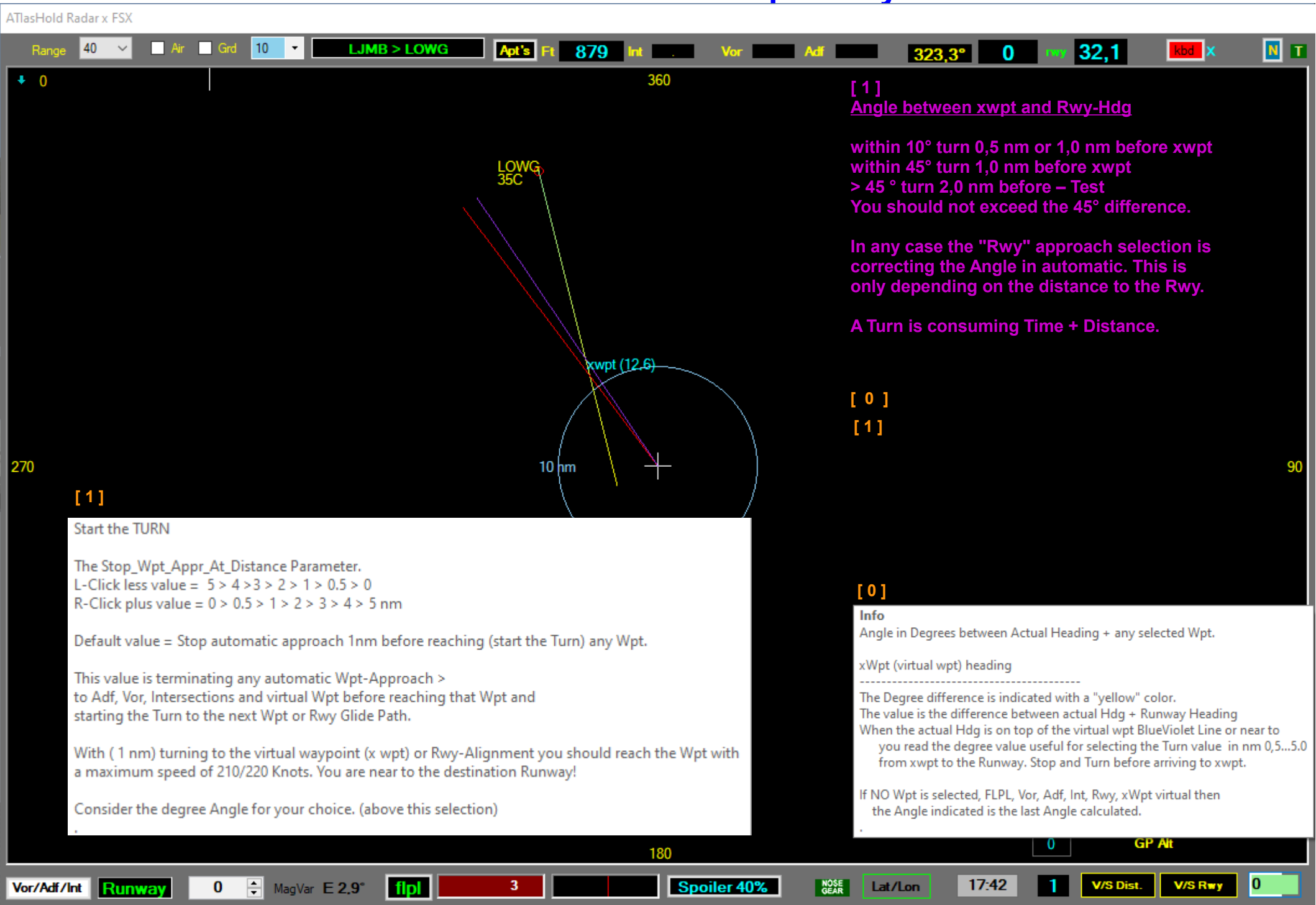
• **[V/S Dist.]:** Activate the Descentometer. First we have to indicate the height in the "Distance" field in the Flight Panel. (distance FIeld)
Before you engage the [V/S Dist] make sure the Airplane Asset is stable. Circa 10 to 15 ° Horizon. SLOWLY Release the Yoke.
(This is a most common Pilot Error) Make sure the Autopilot + ALT is ON. Read the TroubleShooting about this important argument !

• **[GP Alt]:** It is used to determine the precise ALT for a Runway Approach which is used for a gradual descent. (the green value)
L-Click is returning the ALT for a Rwy approach starting at 10 nm. R-Click is returning the ALT for a approach starting at 20 nm distance.

• **[V/S Rwy]:** Enters the gradual descent along the Glide Slope line. Start only with the Glide Slope (Diamond) centered. The Pilot is responsible for maintaining the required asset such as Speed, Gear, Flaps and Trim. The right Flap setting is important for any aircraft!
With the right asset as per instructions the plane lands without problem and without any Joy X / Y Axis intervention.

ATlasHold 2.0.0 Nov/2022

The Turn selection xWpt - Rwy

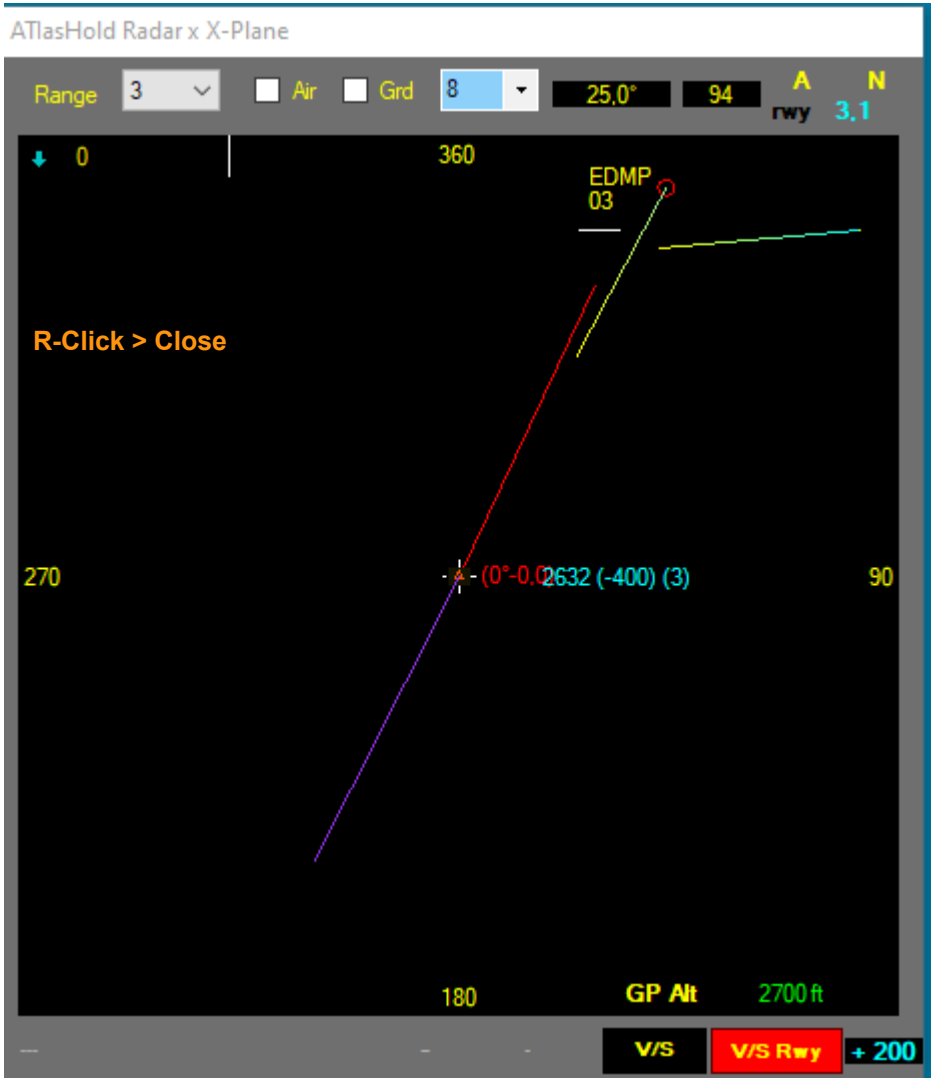


ATlasHold 2.0.0 Nov/2022

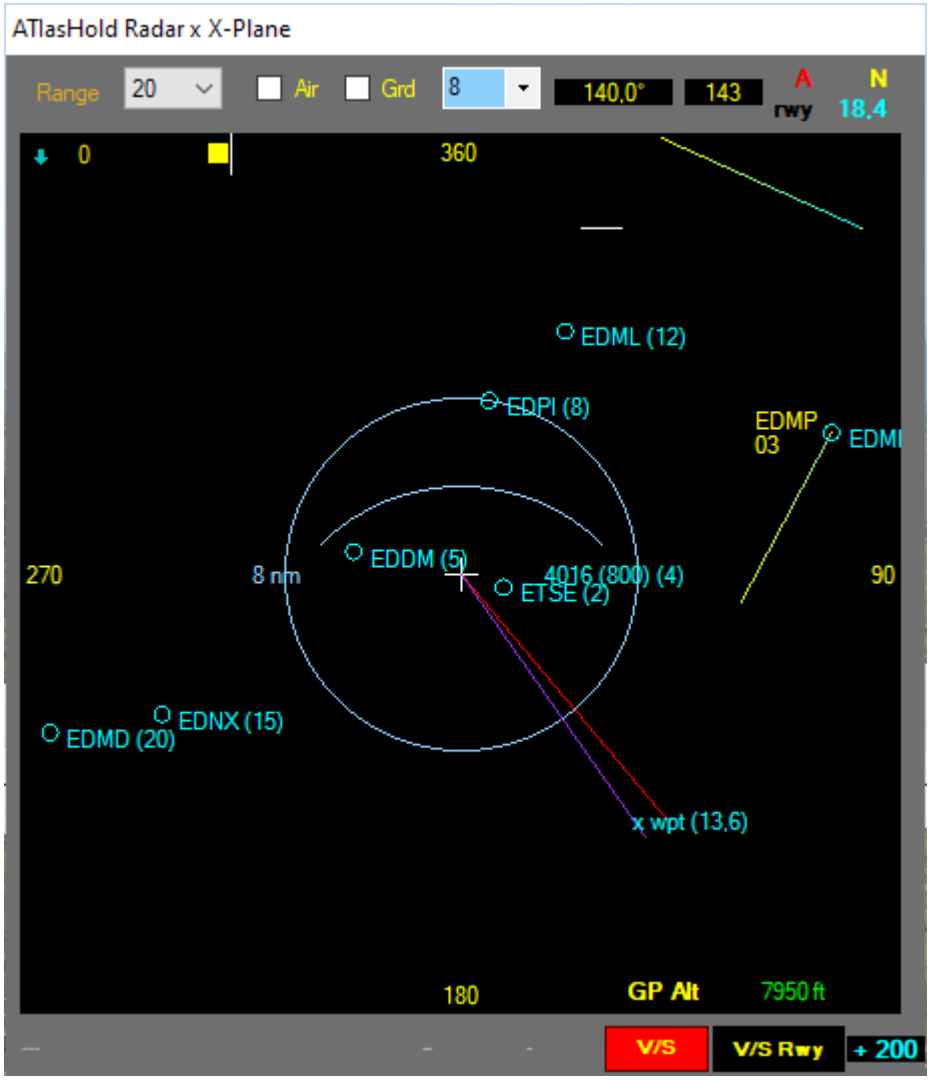
Read the ToolTips

Small Radar

[V/S Rwy] is selected.
Map is North oriented.
Glide Slope is requesting to decrease ALT.



[A] is opening the Airports View. Distance as per Range setting.
[V/S] is active.
Within the Blue circle the “half circle” is indicating the descentometer progress.

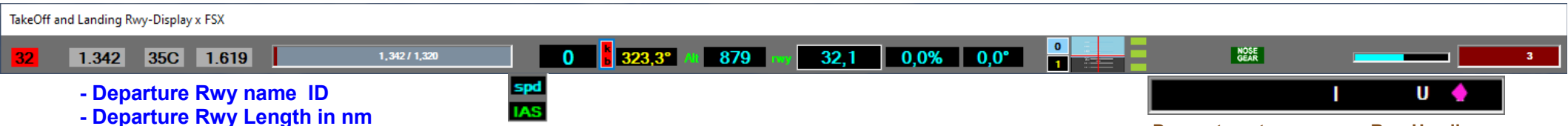


ATlasHold 2.0.0 Nov/2022

Runway Take Off + Landing View

Open using a ShortCut, Joy, Kbd or Click on the dedicated Button on the Big Radar. [Runway]
The Runway View is very useful during night. You see where you are on the Runway and the lateral deviation.
On the Air important Flight data is displayed.

On Ground and On Rwy touch down the Rwy graphic is opening.



Descentometer opens on Rwy Heading.

- Departure Rwy name ID
- Departure Rwy Length in nm
- Destination Rwy name ID
- Destination Rwy Length in nm
- Runway graphic with Aircraft position. On Rwy + Rwy touch down. Total length / Length left. Less 20% left > Red color warning.
  On the Air the actual Waypoint (Vor, Adf, Inters., Apt, Wpt ecc..) Distance is visible in place of the Rwy-graphic.
- [las] Aircraft speed in Knots / Groundspeed / Kilometer (Click)
- [spd] Click (on/off) > Set the Autopilot AP Speed using the MouseWheel. This View must have the Focus Or use the Input Field on the Radar.
- [Kb] Keyboard on/off sign.
- Actual aircraft heading. Click and open the Flight Plan List > "FlightRoute"
- Actual ALT > Feet / Meters (Click)
- rwy > DIRECT Distance to Destination Runway
- Engine Pressure (all engines). If not activated then click on the [A,N,I] selection below the PFD Instrument on ATlasHold Main-View.
- Trim position
- PFD Horizon Instrument. Indicating Bank + Rwy-Deviation + Rwy-ILS-Deviation
- The Autopilot buttons: AP, ALT + ALT-Lock, Heading
- Rwy approach Glide Slope + Diamond position U/D is opening when Rwy-Hdg.
  Read the new Glide Path Slope View > opens on "Flight Plan" >
- Flaps position (over 50% color red)
- Ground Proximity Warning System. Active below 2000 ft AGL.

Remember the correct use of the Glide Slope Descentometer.

1. The Glide Slope is opening at 20 nm Apt-Rwy distance.
2. If the aircraft does not follow the route runway the distance could be much less.
3. Consider the Glide Slope only if and when you take the runway course and the actual ALT is moving the "Diamond" into the center.
4. Simply approach the rwy at a reasonable distance or via the virtual xWPT.

FSX – Trim Value is evidenced + Joystick OK.

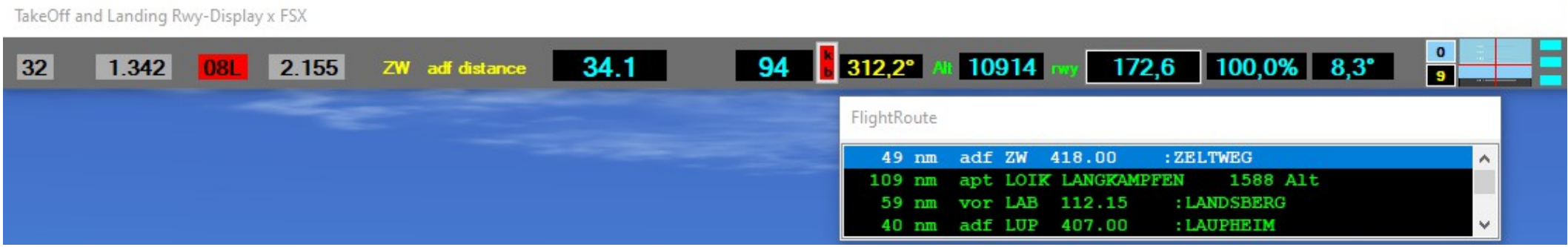
X-Plane – Trim Value is not visible BUT the Joystick Button Trim up/dn is working.
Some Apl like the Citation CJ4 v 1,07 is returning the Trim Value.
With [V/S dist] + [V/S Rwy] Toggle the AP ALT-Altitude before.

MSFS – Trim Value only visible on Ground with the Autopilot OFF. (is a MSFS Bug)
With [V/S dist] + [V/S Rwy] Toggle the AP ALT-Altitude before.

Nota: The Trim value is visible on the small ATlasHold Main View.
R-Click on the [ET / AT] Button. Now the Trim Mouse-Wheel is active. FSX only.

ATlasHold 2.0.0 Nov/2022

The Flight Route



Open the “Rwy Take Off and Landing View”.

L-Click on the “Heading” Field. (toggle on/off)

The Flight Plan List is opening. Same use as the Flpl List on the big Radar.

L-Click on a Item. You change the “Fly to” sequence. Close the Flight Plan + Re-Open.

R-Click close

ATlasHold 2.0.0 2022

The Virtual ATlasHold Waypoint
You never get Lost

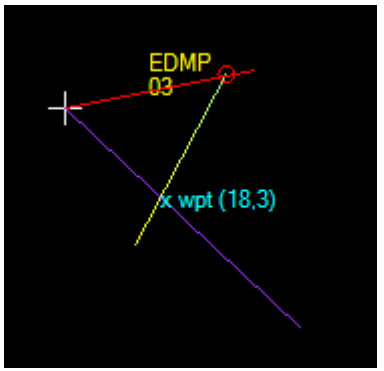
For any real Rwy, or Virtual, you select a virtual WayPoint is created at a distance of 20 nm in front of the Rwy you can fly to in automatic.

Distance in nm is indicated.

For any approach you can fly to this wpt in automatic; then turn to the Rwy.

Now decide for the final approach.

The correct wpt enter-angle should be max. 45 °.



ATlasHold 2.0.0 Nov/2022

The Virtual ATlasHold Runway

You never get Lost

With one click create a Virtual Runway on Air, Ground, Carrier and return to

Create a Virtual Runway on the Fly just with 1 Click. V-Button

You create a virtual Rwy exactly on the coordinates where the Airplane is.

For example on the Sea. Fly and return exactly to this virtual runway.

All functions are considering this Rwy like a real Rwy.

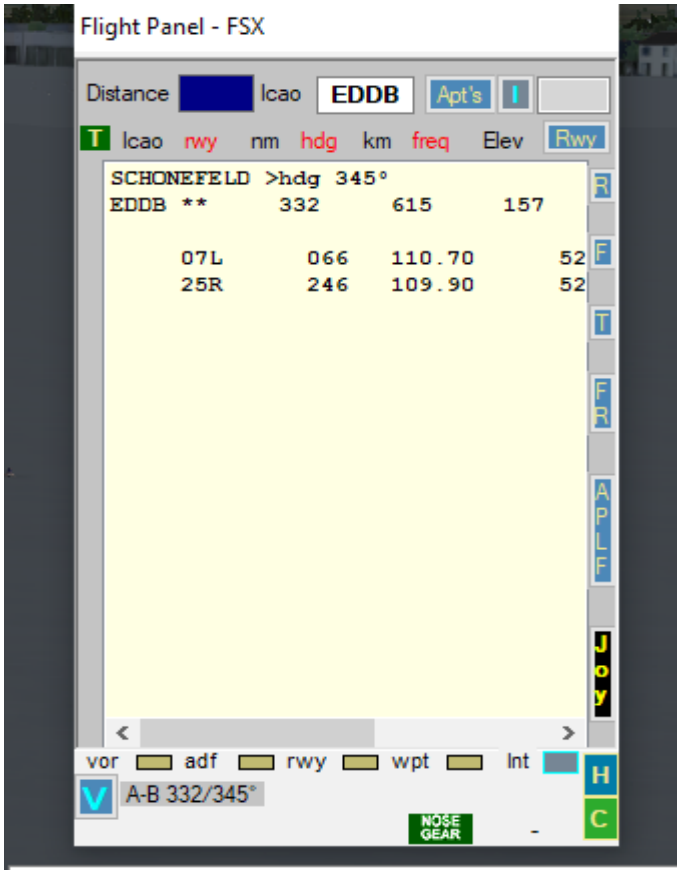
Fly to the virtual Waypoint at 20 nm and approach the Rwy.

The Rwy Elevation is exactly the difference between your actual ALT and AGL to the Ground.

Remember the correct use of the Glide Slope Descentometer.

1. **The Glide Slope is opening at 20 nm Apt distance.**
2. **If the aircraft does not follow the route runway the distance could be much less.**
3. **Consider the Glide Slope only if and when you take the runway course and the actual ALT is moving the "Diamond" into the center.**

4. **Simply approach the rwy at a reasonable distance or via the virtual WPT.**



ATIasHold 2.0.0 Nov/2022

Virtual Rwy View – Save / Select Virtual Runways

[V] L-Click or R-Click

ToolTip

(1)

L-Click > Create a Virtual Runway at this Position.
Virtual Wpt xwpt is set at 20 nm in front of the virtual Rwy.

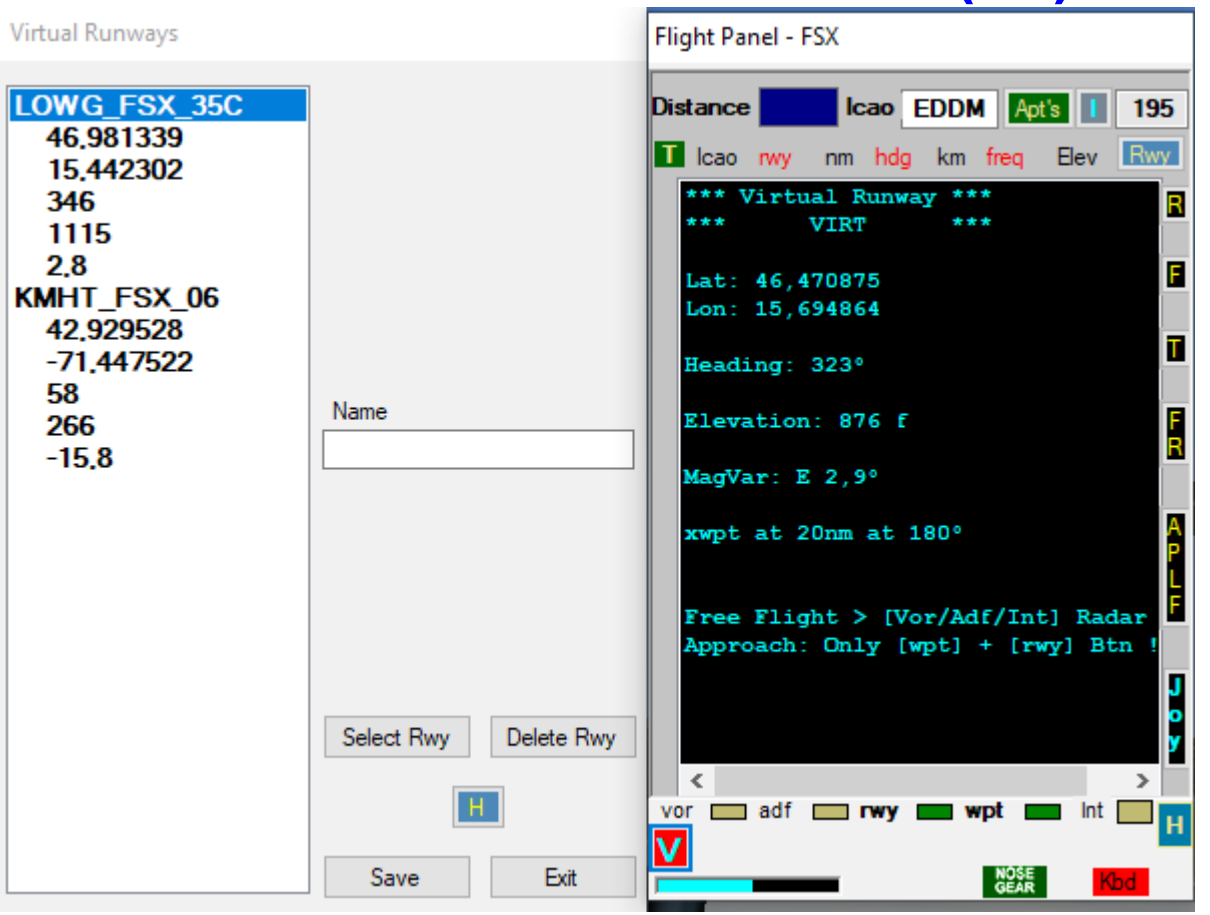
Fly and return to " xwpt " > " Rwy".
Use only the Flight Panel " wpt " and " rwy " FlyTo commands.

(2) at your choice

R-Click
Open only the Virtual Runway View and:
- Save this Position as Virtual Runway and then select
  or
- Select a different saved virtual Runway

NOTA:
=====
You can't select a saved Destination Rwy without passing the Step (1) !
.

[V] L-Click (1)



ATlasHold 2.0.0 Nov/2022 3/3

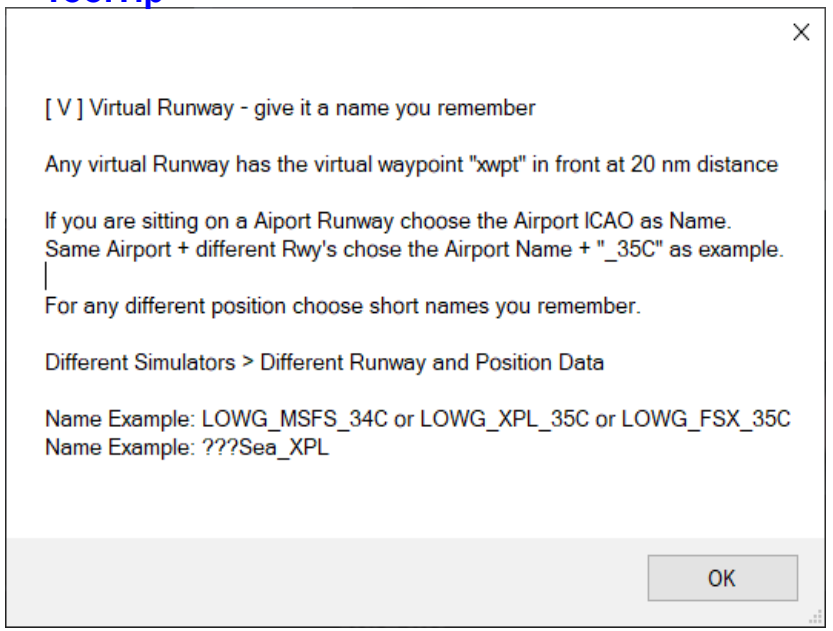
The Virtual ATlasHold Runway

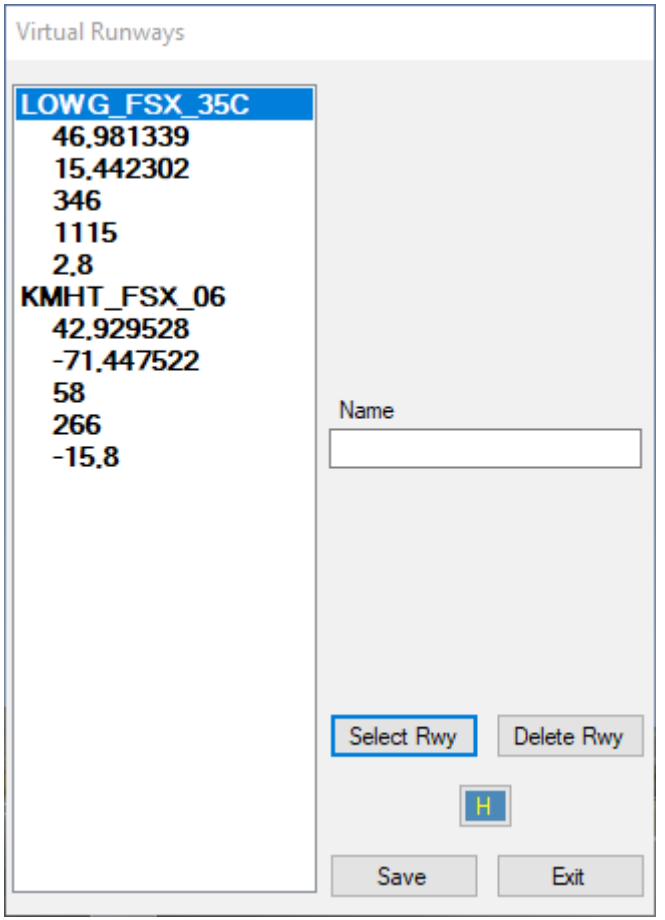
Virtual Rwy View – Save / Select

With one click create a Virtual Runway on Air, Ground, Carrier and return to

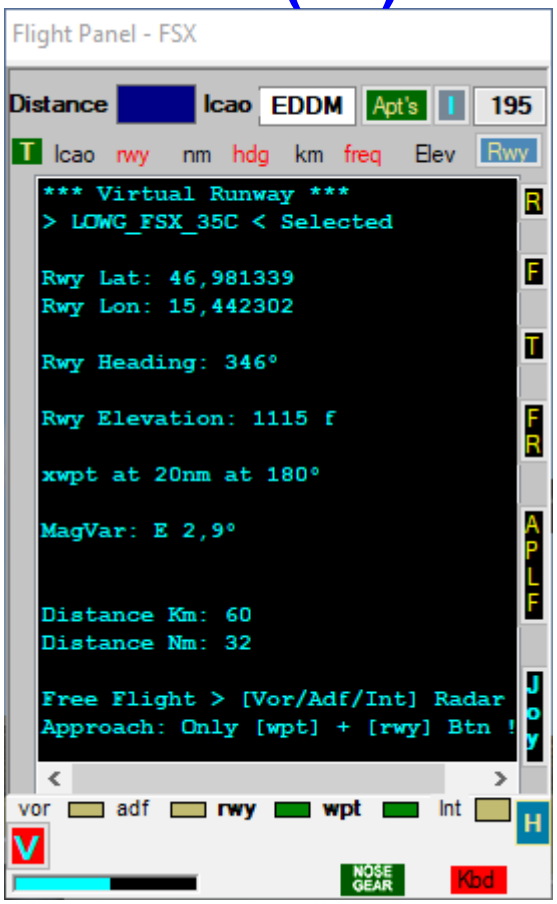
[V] L-Click or R-Click

ToolTip





Selected (2)



ATlasHold 2.0.0 2022

The Manual Fly to Selection

A Flight Plan selection is using the Waypoints in automatic.

>>> Free Flight

Without Flight Plan:

- Flying to the virtual Wpt is requesting the [rwy] selection after arrival at the Wpt and/or at a reasonable distance to the Rwy.

The virtual Waypoint is always a precise heading reference.

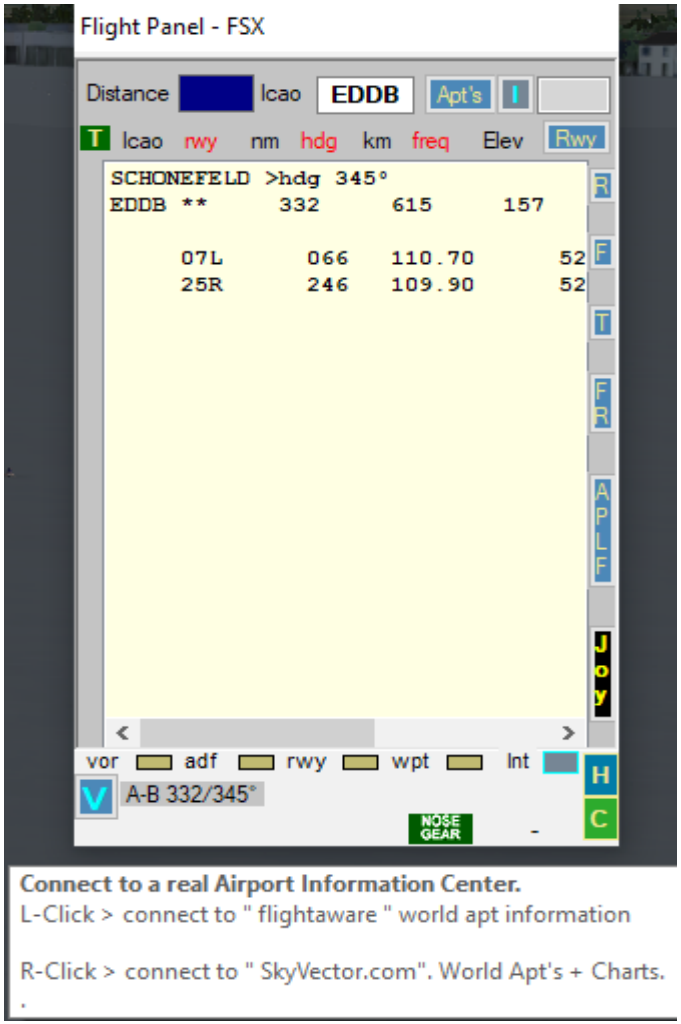
- The [V/S Rwy] Glide-Path Approach should be selected after the Rwy-selection. Adjust ALT before and start the procedure with the Glide Slope (Diamond) centered.

NOTA:
The Flight Plan is leading the Apl into the Runway-Path [rwy] BUT this is not like selecting the [V/S Rwy] automatic Landing Glide Slope descending.

Selecting Landing is your Pilot choice and duty.

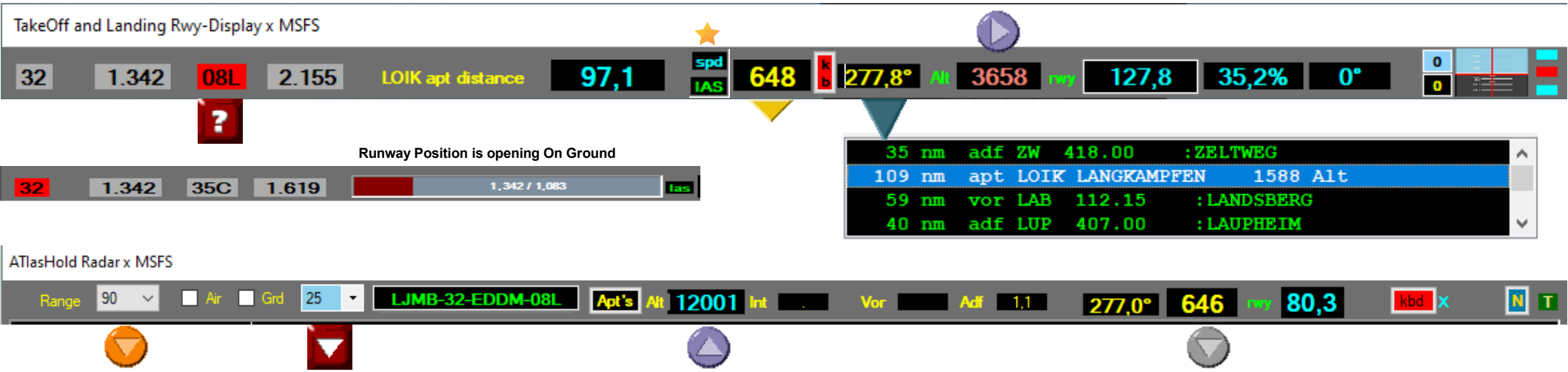
The VOR, ADF + Int(Intersections) are only used by the Flight Plan system.

Fly to >



Fly without any Wpt selection (Free Flight).
The Virtual Wpt is then your main heading orientation.
For landing just use the Glide Slope indication, Radar or the small Approach Radar on the Flight Panel [Rwy].

ATlasHold 2.0.0 Nov/2022
The Measure Data Selection
las, GS, Km, Feet, Meter
Autopilot speed ★



★ **Click – [spd] (on/off) > Set the Autopilot AP Speed using the MouseWheel. This View must have the Focus Or use the Input Field on Radar.**

Click – las datafield > Knots > GS > Kilometer. Yellow = Km, Cyan = Knots, Salmon = Ground Speed. Same on Main-View "las" click.

Click – Hdg datafield > Open/Close the FlightPlan View. Flpl-View > R-Click > Close. Use it like the Radar Flpl List.

Click – Alt datafield > "Ft" Feet > "M" Meter.

Click – Alt datafield > "Ft" Feet > "M" Meter. Here you could select "Ft" and on the Rwy-Landing View "M".

Speed. Yellow = Km, Cyan = Knots, Salmon = Ground Speed. No click. Select with the Runway View or the small Main-View (las).

Destination Rwy. If you *change* any flight plan data on Air *you must Re-initialize* the Rwy Data. Click > Close / Re-Open.

Select the Range for a better Radar View. Default is the Wpt or Dest-Apt Distance. L-Click on Radar > use the Scroll wheel or Range Field.

The blue Radar circle around the Airplane. Read the page: The Big Radar (8)

ATlasHold 2.0.0 Nov/2022

Glide Path Slope Editor

Flight Plan > [Glide Path Slope]

Increasing a Minus value (-300) means (+ ascending) and less descending.
The Default setting is leading you to the Rwy-Surface.

Enter only Minus values (-200). FULL 100 numbers.

Keep in mind the Slope Difference return value scale from " <10 to >60 ".
Only the Altitude Difference is considered. Too Low.

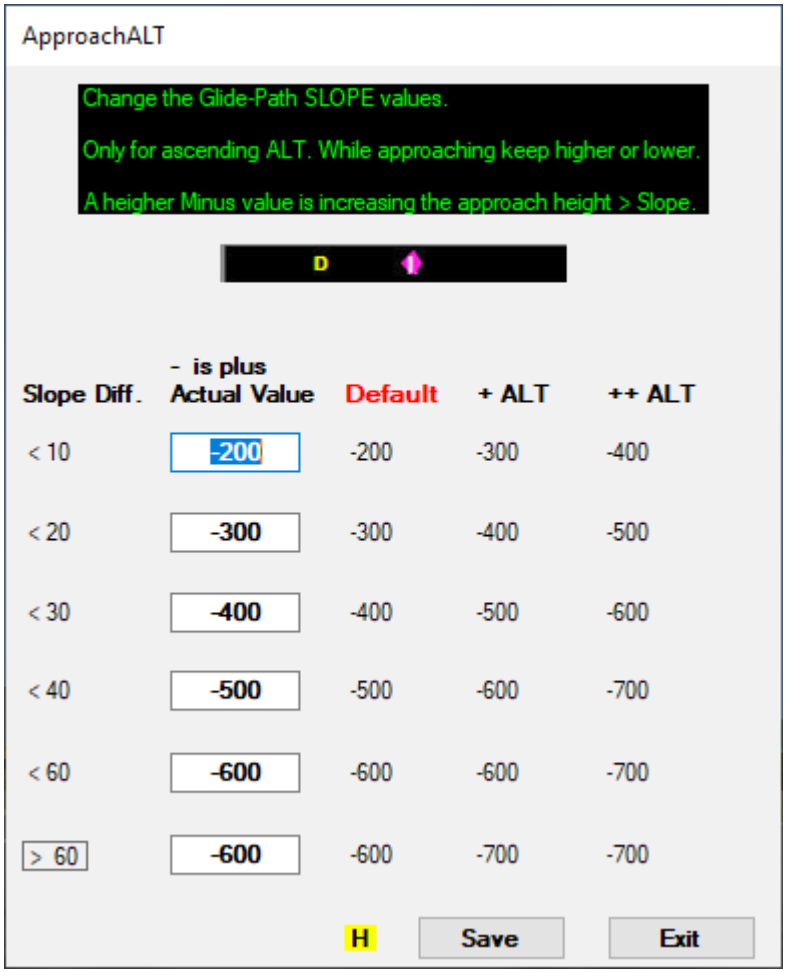
If you lower the values you increase the descent rate.

When you start the first time the Default values are loaded.
You can Input different values or select the suggested " + ALT / ++ ALT " .
[SAVE]

Input errors are trapped and the default values loaded.

Speed and Flaps-setting is important. Don't fly too slow. ALT-Height is depending on it.

OK



ATlasHold 2.0.0 Nov/2022

BackGround View – 4 Colors

The Intrasystem ATlasHold Forum

Light Steel Blue
Mid Night Blue
Dark Gray
Black

Background

Flight Plan View > “ O “

Select 4 Colors

Cover your Desktop behind the ATlasHold Views.

ATIasHold 2.0.0 Nov/2022

Test Flights

KJFK-13R-KMHT-06.FLP

```
adf BD    41.877383  -72.766206  388.00 :CHUPP
int KENAT 42.644197 -71.854542
wpt
rwy
```

KMHT-24-KJFK-22R.FLP

```
adf BD    41.877383  -72.766206  388.00 :CHUP
wpt
rwy
```

LJMB-32-EDDM-08L.flp

```
adf ZW    47.198056   14.756667  418.00 :ZELTWEG
apt LOIK  LANGKAMPFEN                          1588      47.564167          12.127500
vor LAB   48.065333   10.880833  112.15 :LANDSBERG
adf LUP   48.218042    9.910872  407.00 :LAUPHEIM
int DME14 48.285617 10.765858
int DM430 48.315661 11.177758
wpt
rwy
```

YSSY-34L-YWLM-30.flp

```
int ENTRA -33.583056 151.696945
wpt
rwy
```

ATIasHold 2.0.0 Nov/2022

Test Flights

LJMB-32-LOWG-35C.flp

```
int LAPNA 46.535497 15.520431
wpt
rwy
```

LOWG-17C-LJMB-14.flp

```
wpt
rwy
```

LOWG-35C-LOWW-34.flp

```
int XANUT 47.116269 15.911881
apt LHSY  SZOMBATHELY                    732      47.282500         16.626389
int SOPRO 47.587778 16.802500
wpt
rwy
```

LSZH-LOWW-29.flp

```
int DEGES 47.412500 9.201944
int XEBIX 47.400011 10.479875
int BADVI 47.731111 11.945381
int NEMAL 47.918056 13.498333
int NUBRA 47.866667 17.500000
wpt
rwy
```

ATlasHold 2.0.0 Nov/2022

Test Flights - Aircrafts

Read the Troubleshooting page

The LJMB-32-EDDM-08L.flp is including all Flight Plan wpt's + a long distance.
You have time to check all the features, Apt's, Vor, Adf >
Interrupt the FLPL > Free Flight > return to the Flight Plan.
Consider the transit Altitude and prepare your ALT before you reach the xWPT.
MSFS-Boeing 747-8 Intercontinental – Set the speed with the Cockpit AP A/T – Perfect Landing

FSX

- Beechcraft Baron 58 G1000 – No Autopilot problems

MSFS

- Textron Aviation Cessna Citation Longitude – only for long distances (too fast)
- Cessna 172 Skyhawk Textron Aviation
- Boeing 747-8 Intercontinental – Set the speed with the Cockpit AP A/T – Perfect Landing

X-Plane

- Lockheed L100-30 – Freeware – FSX native – and the B747 Default – Perfect Landing
- Cessna Skyhawk (G1000)

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Data Files

In your Program Folder

- **Adf.txt**
- **Vor.txt**
- **Apts.txt** **(for changes, Apt, Rwy use the AddAirports program)**
- **Intfix.txt** **(Intersections)**
- **Aptsradar.txt**
- **Rwylength.txt** **(calculation is made with the RwyLength program for new runways or changes)**

Should you add or change data manually you must observe the precise COLUMN and Space order.

Your Program Folders

- **FlightPlan**
- **AddAirports**
- **FullSize**
- **Help Files**
- **Joystick Files**
- **MouseClicks**
- **RwyLenght**

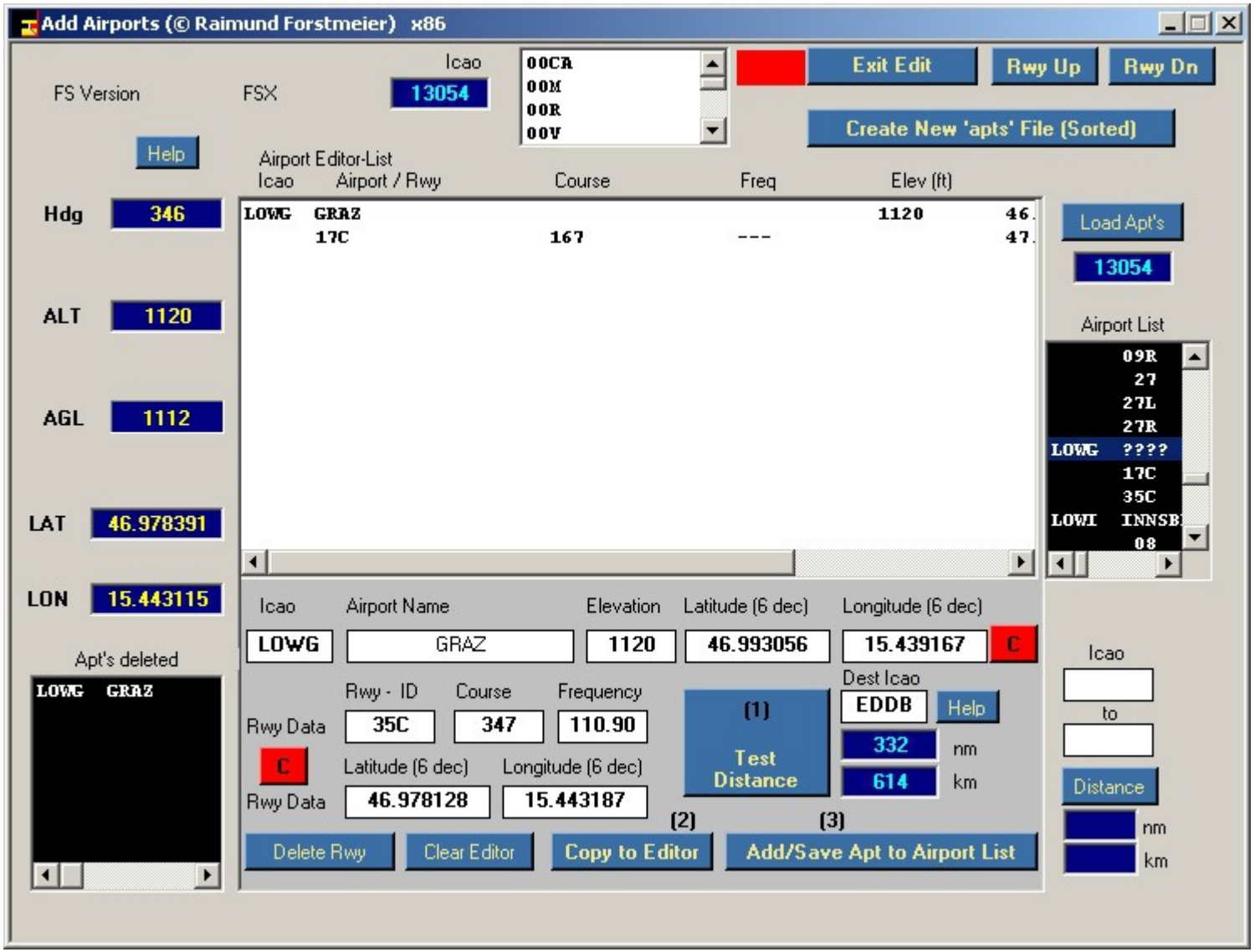
The Intrasystem ATlasHold Forum


Microsoft Flight Simulator X
CockpitStatus Approach System
Arm
1
4
AT
Lever/Hold
112
-2
83,49609
las
wd°
fps
0
25
Hdg
Alt
Rad
las
Cruise
112,7
1636
1068
112
180
90
0 A 0
Approach System / Airport Dist / FlightPlan
Heading
112,7
Rad
1068
Apt's
las
112
T
ADF
90
Rwy
10 nm Range
LOWW
11
600
0,3°
113°
UP
Align to Runway
LOWW
113°/ 3,2
TUN vor
294°/ 21,5
(0)
84 + (0)
TUN-11
114°/ 24,8
wpt: 292° / 12,9
TUN (Out of Range)
MgVr: E 3,1°
293°
Rwy Radial 0°

ATlasHold 1.7.0 2021

ADD Airports/change Data

Included with ATlasHold

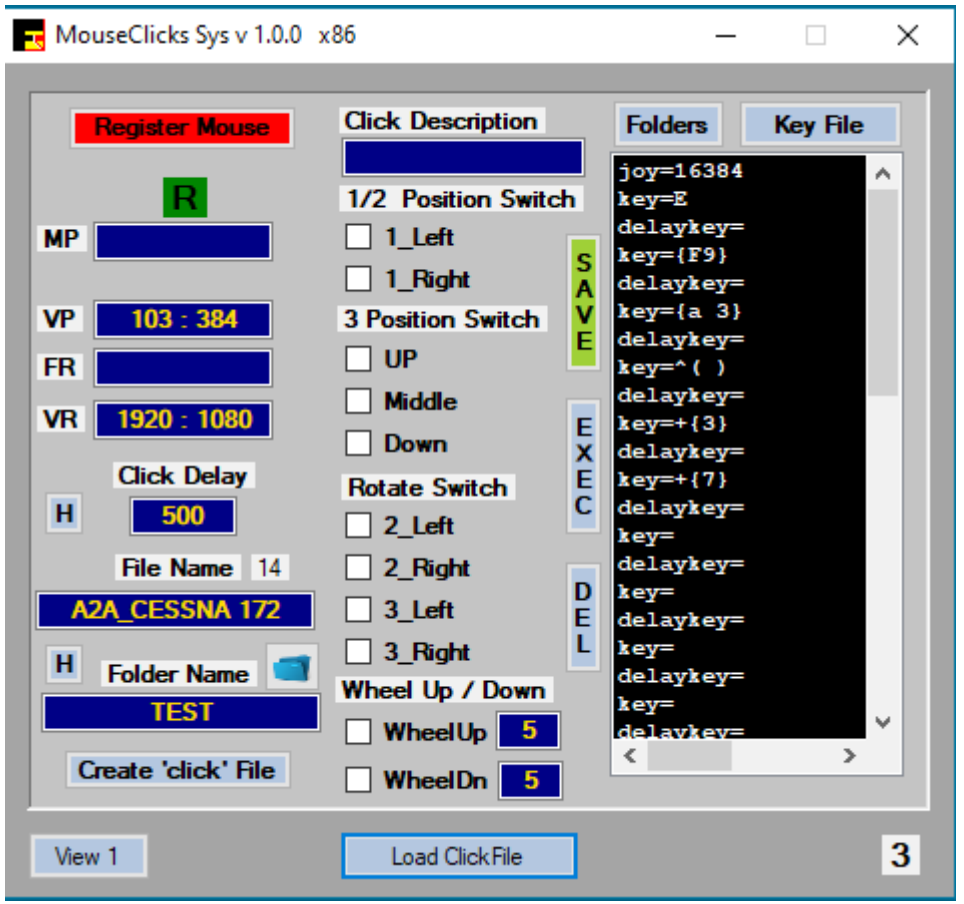


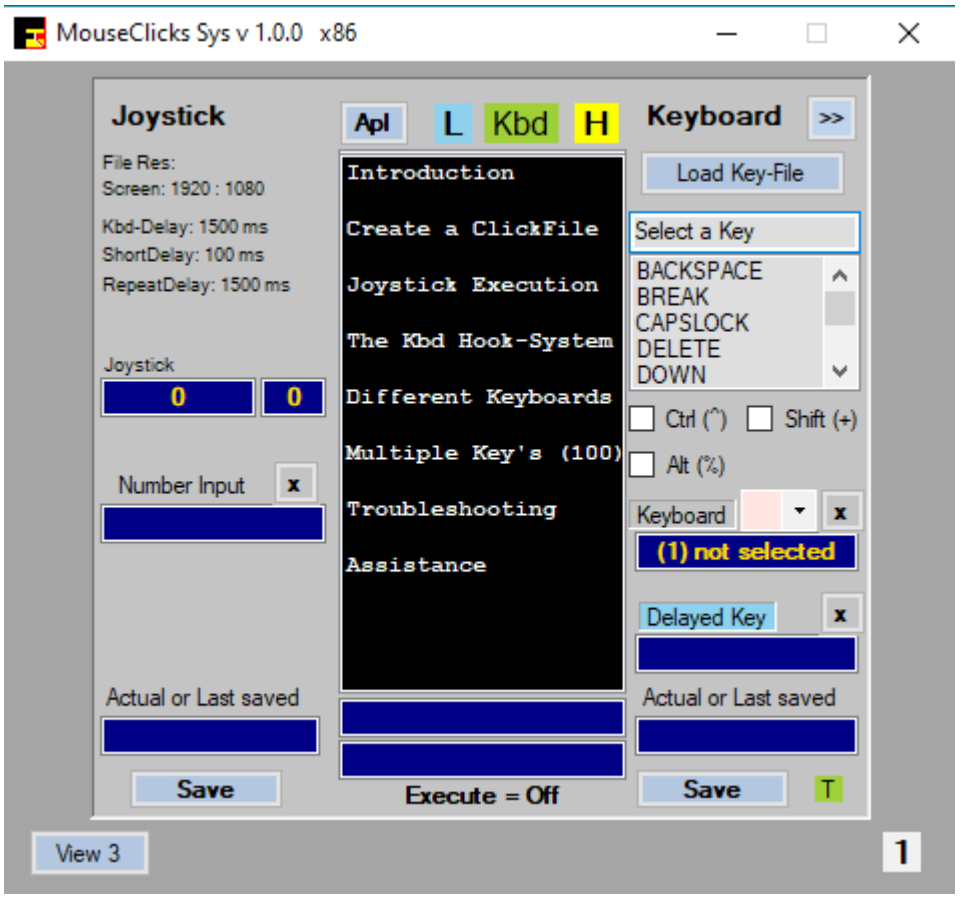
ATlasHold 1.7.0 2021

MouseClicks

Included with ATlasHold

MouseClicks performs the movements of a human. example: Start the engines.

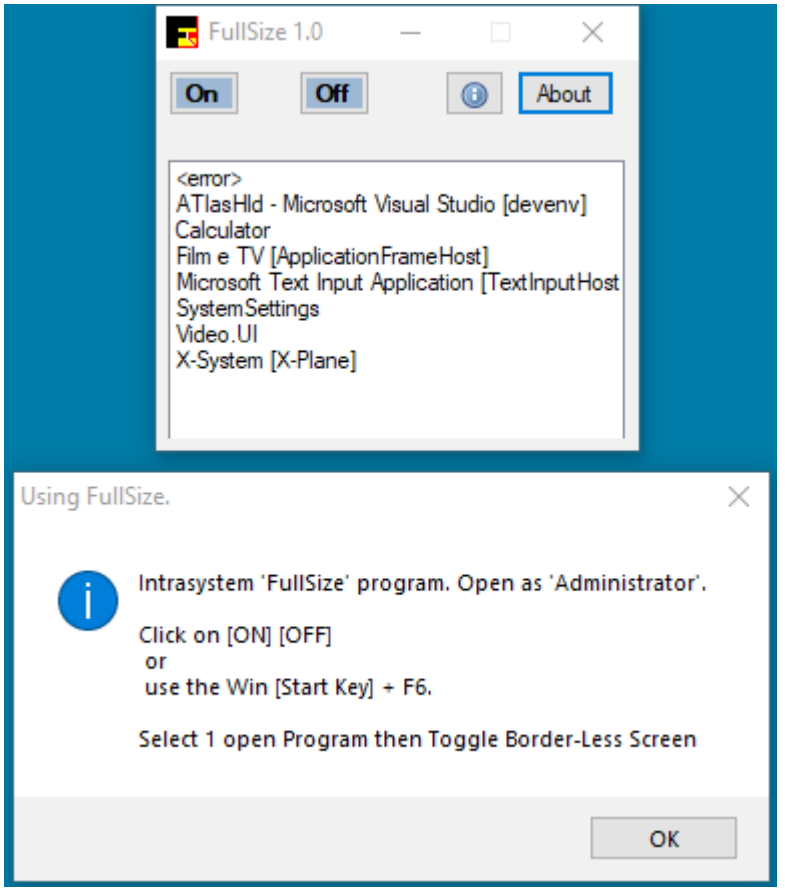




ATlasHold 1.7.0 2021

Full Video Size

Included with ATlasHold



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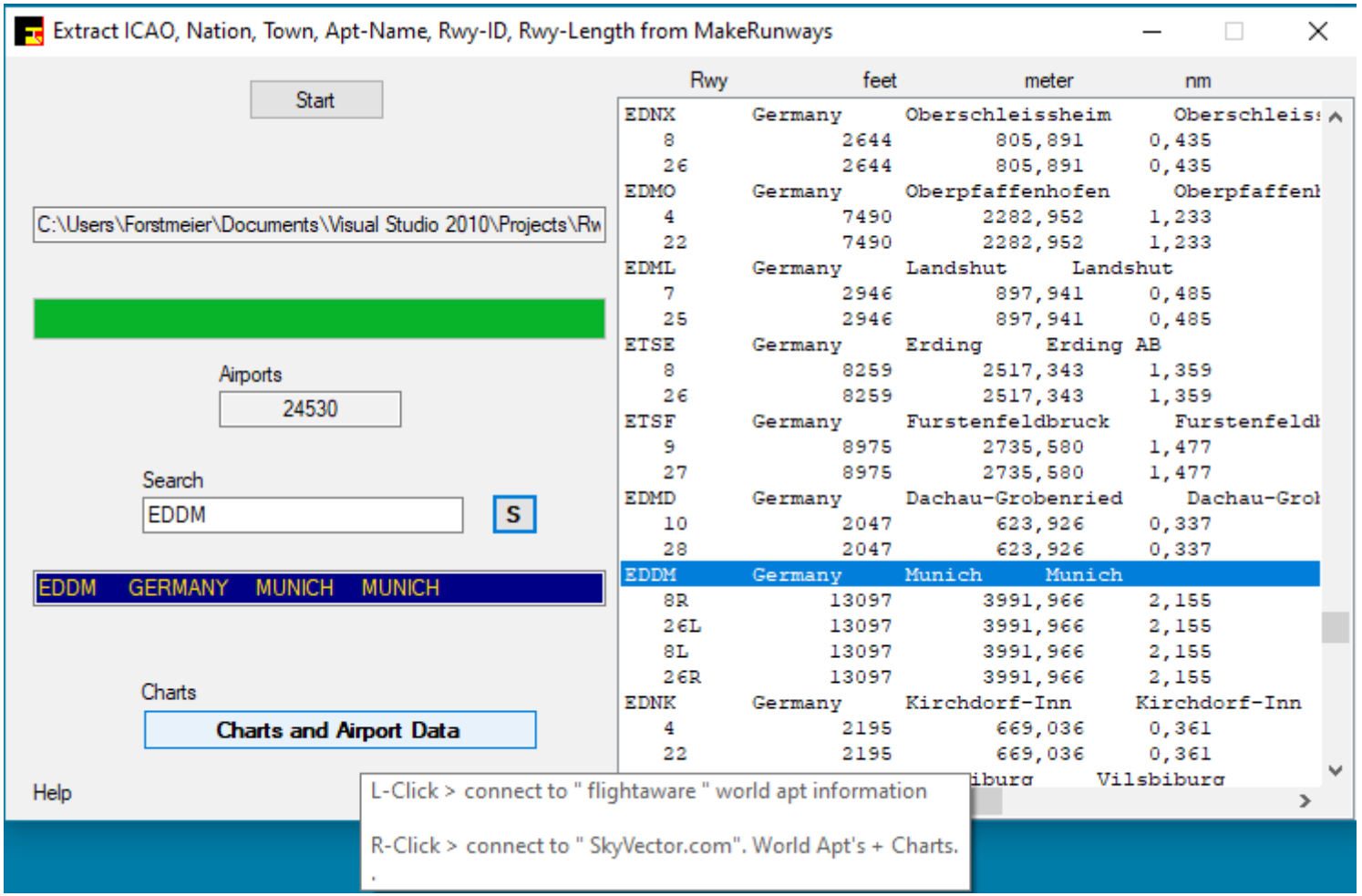
Runway Length

Included with ATlasHold

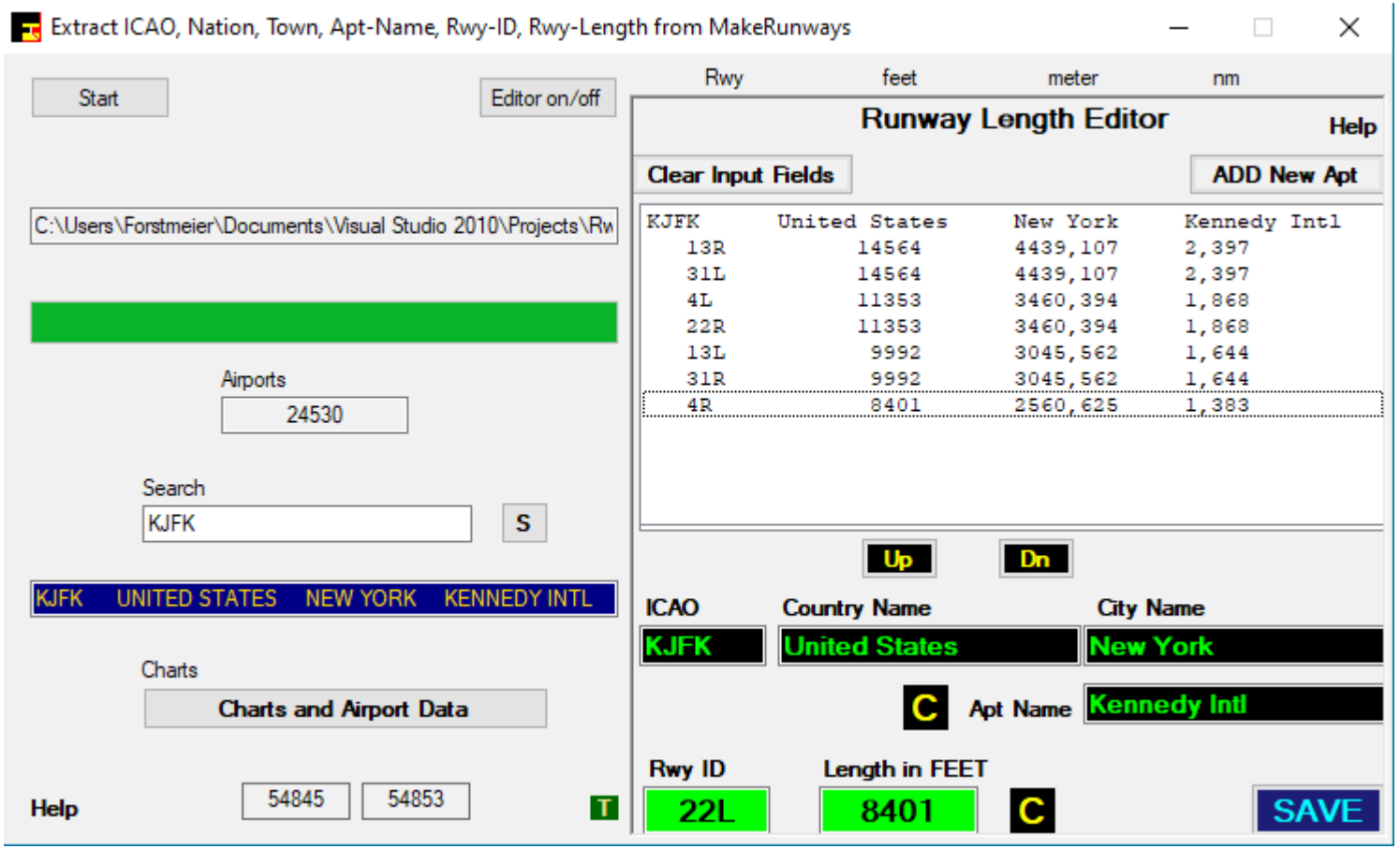


Credits to Pete Dowson the author of the MakeRunways utility.

ATlasHold 1.8.2 2022 2/2

Runway Length with Editor

Included with ATlasHold



Credits to Pete Dowson the author of the MakeRunways utility.

ATlasHold 2.0.0 Nov/2022 Text database Converter Included with ATlasHold

Transform Data Structure x86 - Copyright by Raimund Forstmeier, Padova/Italy

Hdr GRAZ LOWG17C09843167 47.002006 15.436614000.0016701115 74

Sub GRAZ LOWG35C09843347 46.977786 15.443281110.9034701086 74

0 GRAZ---------- LOWG 17C 09843167 -47.002006 --15.436614 000.00 167 01115 Header

0 xxxxxxxxxxxxxxxxxxxxxxxx xxxx xxx xxxxxxxx xxxxxxxxxx xxxxxxxxxxx xxxxxx xxx xxxxx SubRec

Record Field Data	<click >		Length	Copy x	L-Set	R-Set	Bind	Print Pos.		Header	Line LF	R-Align	Print Pos
GRAZ----------	1		24	Copy	30				1	Header	Line LF		1..30
LOWG	2		4	Copy			' '		2	Header	Line LF		1..5
17C	3		3	Copy			' '		3	Header	Line LF		6..9
09843167	4		8	Copy			' '		4	Header	Line LF		
-47.002006	5		10	Copy		12	' '		5	Header	Line LF		10..22
-15.436614	6		11	Copy		12	' '		6	Header	Line LF		23..35
000.00	7		6	Copy			' '		7	Header	Line LF		36..42
167	8		3	Copy			' '		8	Header	Line LF		43..46
01115	9		5	Copy					9	Header	Line LF		47..51
xxxxxxxxxxxxxxxxxxxxxxxx	10		24	Copy					1	Header	Line LF		
xxxx	11		4	Copy			' '		2	Header	Line LF		1..5
xxx	12		3	Copy			' '		3	Header	Line LF		6..9
xxxxxxxx	13		8	Copy			' '		4	Header	Line LF		
xxxxxxxxxx	14		10	Copy		12	' '						
xxxxxxxxxx	15		11	Copy		12	' '						
xxxxxx	16		6	Copy			' '						
xxx	17		3	Copy			' '						
xxxxx	18		5	Copy									
	19			Copy									
	20			Copy									
	21			Copy									
	22			Copy									
	23			Copy									
	24			Copy									
	25			Copy									
18 X		1. Page	X	X	X	X	X	X		X	X		

Clear All

Multi Record Lines

Search Data for dividing Header + SubRecords

1. Line = Header, next Lines = SubRec until Next Header

Search String - Empty Spaces or Header part

Search String - Multi Header only!

GRAZxxxxxxxxxxxxxxxxxxxx

Search String Length: 25

Start Reading on Digit Nr: 1

Search in SubRecord

Search in Header

H Search in MultiHeader

Multi Line

Close Panel

Multi Line

Page 2 >> H Print ("123") >

Delimiter 1 ' ' DeliSub ' ' Brackets " "

Header by Pos. SubRec by Pos All by Pos H

Position	(1)	(2)	(3)	(4)	(5)	1/1
	1	25	29	32	40	
Position	(6) 50	(7) 61	(8) 67	(9) 70	(10) /	X
Position	(11) 1	(12) 25	(13) 29	(14) 32	(15) 40	>>

H Select File Open with Editor

Data File Examples\MultiHdrToSubRec.txt E

Start Reading on Line Nr: 22576 1. Data Record

Start Reading on Line Nr: 22577 Sub Record

Load Records H

Extract Header (1) H Extract Sub Fields (2)

Create a Hdr-File H {Header} Brackets >

Start on Line Nr: 6 Translate dB

- H List Local Test

Translate ALL

Add empty Line

Top Text Print List

Load Session H Save Session

Filename:

Example > Explanation 13_MultiHdrToSubRec_2

Header ' PlaceHolder T

SubRec ' PlaceHolder