RD SOFT

Flight Help Panel

For Microsoft Flight Simulator

USER MANUAL

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DESCRIPTION AND OPTIONS

- Standalone universal 2D-panel with throttle and vertical trim controls.
- Indicators Panel: Throttle, vertical trim, flaps, vertical speed, Parking brake, Gear down, Landing light, Speed brake. Flight time timer with an indication of the time to the top of descent (TOD) (when the flight plan is activated).
- Screen of the Vertical profile active flight plan with the display of the aircraft position and the track in the vertical plane (when the flight plan is activated).
- Calculation of the time to the top of descent (TOD) (when the flight plan is activated), and the required vertical speed to maintain the optimal descent profile (with a visual marker display). Calculation of the distance to the end point of the route and the remaining time until arrival.
- A list of the nearest airports, sorted by distance from the plane, indicating the distance and direction to the airport. For the selected airport, information on all runways is available, including ILS and NDB (ADF) frequencies, heading, and runway length.
- Instant input frequency from the panel table directly to the active radio station (not everywhere).
- Time acceleration indications.
- TCAS screen for displaying AI-traffic (including aircraft is on the ground). Light indication in danger of traffic collision.
- Settings for brightness, opacity, panel texture (including the ability to add your own textures), hotkeys shortcuts for hiding/displaying the panel.

SYSTEM REQUIREMENTS

The FlightHelpPanel program is an add-on for Microsoft Flight Simulator and is not compatible with previous versions of simulators, as well as with Prepar3D. This is a 64-bit application that can only run on a 64-bit operating system, just like Microsoft Flight Simulator. To avoid possible problems, we recommend you install all Windows updates. **Attention! During the installation of the program, the Internet is required for online activation.**

STARTING THE PROGRAM

This add-on is a standalone program that runs separately from the Simulator using a shortcut on the desktop. If the simulator is not running yet, the program will wait for the simulator to be started and then automatically connect to it.

FLYING USING A FLIGHT PLAN

The most interesting and useful features of the **FlightHelpPanel** program become available only when the flight plan is activated (either imported or created in the native flight planner).

After creating a flight plan in the flight planner, when you get into the cockpit, the flight plan will automatically load into the **FlightHelpPanel** after a while. And on the screen in the "**VERT TRACKING**" tab, a graphical representation of the vertical flight profile will appear, as shown in the figure below.

If the current flight plan is not displayed on the screen in the "**VERT TRACKING**" tab, or if there have been changes to the flight plan, click the "**Update**" button (with a round arrow).

In flight, **FlightHelpPanel** will calculate and provide you with the following information:

- The position of the aircraft in the vertical profile relative to the flight plan trajectory with the flight path track;
- the time remaining in minutes until the top of descent (the shaded sector on the flight time timer, the TOD value (highlighted in the figure below));

- Estimated remaining time until arrival at the destination airport (**ETA**);
- Distance to the end point of the route (**DIS**) in nautical miles.

In Microsoft Flight Simulator, there is a convenient opportunity to add an arrival scheme (STAR) in the instrument flight rules (IFR) plan. If a STAR scheme is added to your active flight plan, the distance it occupies will also be taken into account when calculating and displaying all the data mentioned above.

GETTING INFORMATION ABOUT AIRPORTS

If a flight is made without a flight plan, then when you go to the "**VERT TRACKING**" tab, a list of the ten nearest airports will be displayed, sorted in order of distance from the plane, with the distance to the plane and the course displayed.

When you click on any airport, a table opens with detailed information about the selected airport's runways, such as ILS and NDB (ADF) frequencies, courses, and runways lengths.

If the flight plan is used, then to go to the list of the nearest airports, click the "**Nrst Apt**" button or click on the start or end point of the route to get a list of the selected airport's runways with the necessary information.

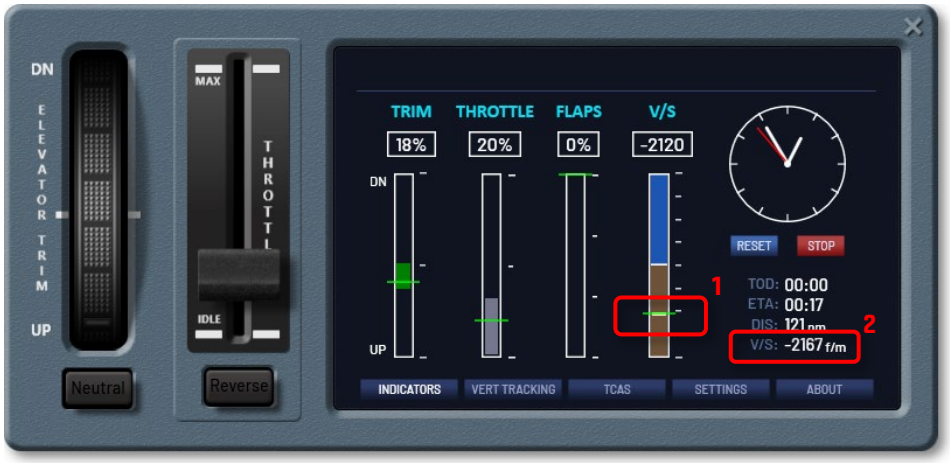
Click on the frequency value in the airport runways table to instantly enter the frequency into the active radio station.

TIME ACCELERATION DISPLAY

In Microsoft Flight Simulator, as well as in FSX and Prepar3D, time acceleration is supported (by default, the assigned hotkeys is: r, LeftCtrl + Num+ - for acceleration, r, LeftCtrl + Num- - for deceleration). It is very strange that in Microsoft Flight Simulator the fact of time acceleration and the acceleration value are not displayed yet. So this was implemented in **FlightHelpPanel** (highlight in the picture below).

DESCENT

After the **TOD** is passed, the marker on the variometer will move down, indicating clearly what vertical speed should be maintained in the descent (highlight 1 in the figure below). And this value will also be represented as a number (highlight 2 in the figure below) for easy input into the autopilot.



When the vertical speed indicator on the variometer is aligned with the marker (highlight 1 in the figure above), the aircraft will descend along the descent path of the active flight plan, as shown in the figure below.

DISPLAYING AI-TRAFFIC AND TCAS

The TCAS tab displays AI-traffic in a form that simulates TCAS, but with the addition of displaying aircraft on the ground and the ability to select a traffic object for more detailed information.

On the TCAS screen, there are buttons for changing the coverage range from 0.5 to 60 nautical miles, 4 display modes for selecting the amount of information displayed for each traffic object in the detection zone. Buttons for selecting a traffic object to get detailed information. You can also quickly select a traffic object by clicking on it.

The view of the traffic object on the display depends from the distance in the horizontal plane and on the height difference as follows.

White open diamond – *non-threat or other traffic*. Removed at a distance of more than 15 miles from the aircraft or with an altitude difference of more than 10,000 feet.

Solid white-filled diamond – *Proximate traffic*. Removed at a distance of between 10 and 15 miles with an altitude difference of 1,200 to 10,000 feet.

Solid yellow-filled circle – *traffic advisory* (**TA**). Signals the approaching possibility of a collision. Traffic is removed at a distance of between 5 and 10 miles with an altitude difference of 1,200 to 750 feet.

Solid red square – *resolution advisory* (**RA**). These AI-aircraft require a vertical flight maneuver (Up or Down) to avoid a collision. Removed at a distance of up to 5 miles with an altitude difference of less than 750 feet.

In this case, the TCAS tab will start flashing red to attract attention, even if you open another screen.

The arrow to the right of the traffic object indicates whether the object is descending or climbing. A numeric value below the object with a minus sign indicates that the object is lower relative to the plane. If the numeric value is placed above the object, it means that the object is above. A numeric value indicates the height difference in hundreds of feet (for example, -7 = -700 feet). If there is a pointer arrow to the left of the object, then the detailed information on the right side of the screen is displayed for this object.

REVERSE ON/OFF

When you click the «**Reverse**» button under the Throttle slider, will turn on the reverse to the maximum value. Clicking again sets the Throttle slider to zero. If there is no reverse on the plane, the «**Reverse**» button is not active.

APPEARANCE AND ADDING YOUR OWN TEXTURE TO THE PANEL

In order to make the most organic display of the 2D panel of the program in any cabin at any time of the day, the ability to scale, change the brightness and transparency settings of the panel, as well as the ability to select the panel texture that matches the textures of the cabin was implemented.

In addition to the textures that come with the program, you can add your own textures. All texture variants for the panel are stored in the **<program path>\TEXTURES** folder. When installing the program, the default path to the program is as follows: C:\Program Files\RD-soft\FlightHelpPanel. In this case, the path to the texture folder will look like this: **C:\Program Files\RD-soft\FlightHelpPanel\TEXTURES**. If you add your own image to this folder, then the next time you run the program, you can assign it as a texture for the panel via the «SETTINGS» tab. *.bmp, *.jpg, *.png images are supported. If the proportional dimensions of your image do not match the dimensions of the panel (for example, a square one), then the texture will be stretched across the entire width.

HIDING THE PANEL

A hotkeys is assigned to hide/show the Panel by default **LeftCtrl+x**.

To assign another hotkeys, click in the «**SETTINGS**» tab on the current hotkeys. After that, any simultaneous pressing of one or more keys will be perceived by the program as a new hotkeys. To save the new settings, click «**SAVE SETTINGS**».

SUPPORT AND UPDATE

Every time you run the program, if you have an internet connection, the program will check for updates. If updates are found, the program will offer to download them. After receiving the consent, the program will download and run the update. Install updates without removing the previous version, unless specifically stated in the update note.

You can download the current version of the program or the documentation, view the tutorial video, and ask a question or discuss the program on the program's home page http://rdart.ru/FlightHelpPanel.

If you have any questions about the program, please send them to the following email address info@rdart.ru. **When sending a question, specify the registration key used to activate the program**.