LXNAVIGATION

iris EFIS

User manual

iris EFIS
[57 & 80]

Device manual

- LX navigation -

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Document information

0.1 Abstract

This document represents the user manual for the LX iris EFIS. The installation manual, dataport and additional info can be found on **downloads.lxnavigation.com/device/iris-efis**.

0.2 List of applicable products

Device	Part number	HW Version
iris EFIS 57	LX02000010	V1.0 - V1.7
iris EFIS Pro 57	LX02000020	V1.0 - V1.7
iris EFIS 80	LX02000040	V1.0 - V1.7
iris EFIS Pro 80	LX02000050	V1.0 - V1.7

0.3 Revision history

Document name	Document revision	SW version	Build	Date	Revised by	Approved by	Notes
LX_HUM	R1	1.0		13.5.2020	L.A.	N.S.	Manual written
	R2	1.0	389	13.2.2023	A.S.	N.S.	Added traffic page
	R3	2.3	1934	15.6.2025	B.D.	N.S.	Updated to SW version 2.3

Contents

Important notices

1.1 Using this manual

This manual has been created in LaTeX, giving us the possibility of linking up everything we nd linkable. You will nd references to other parts of the manual, to other manuals, webpages, etc. throughout the manual.

Linkable content will be **bold and underlined**, i.e. you can nd additional info on how to take care of your iris EFIS in the **Taking care of your iris EFIS** section of this manual (click on the underlined text).

> NOTE
> The most recent version of this manual will always be available at
> https://downloads.lxnavigation.com/device/iris-e s

1.2 Device operating limits

This instrument may be used under VFR (Visual ight rules) only! Any navigational information is provided for reference only. The pilot takes all responsibility and risk associated with the use of this device.

Have a nice ight.

1.3 Limited warranty

This device is warranted to be free from defects in materials or workmanship for two years from the date of purchase. Within this period, LX navigation will, at its sole discretion, repair or replace any components that fail in normal use. Such repairs or replacements will be made at no charge to the customer for parts and labour, the customer shall be responsible for any transportation cost. This warranty does not cover failures due to abuse, misuse, accident, or unauthorized alterations or repairs.

THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED OR STATUTORY, INCLUDING ANY LIABILITY ARISING UNDER ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, WHICH MAY VARY FROM COUNTRY TO COUNTRY.

IN NO EVENT SHALL LX NAVIGATION BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM THE USE, MISUSE, OR INABILITY TO USE THIS PRODUCT OR FROM DEFECTS IN THE PRODUCT.

Some countries do not allow the exclusion of incidental or consequential damages, so the above limitations may not apply to you. LX navigation retains the exclusive right to repair or replace the unit or software, or to offer a full refund of the purchase price, at its sole discretion. SUCH REMEDY SHALL BE YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY BREACH OF WARRANTY. To obtain warranty service, contact your local LX navigation dealer or contact LX navigation directly.

The manufacturer does not take the responsibility for possible mistakes or misprints in this text and gives no guarantee for accuracy of this manual. This manual has been written with the greatest care and we have done our best to avoid any mistakes but with all respect please check any doubtful statement and let us know. We would be very grateful and we thank you in advance for any comment.

1.4 Sunburned display

Damages to the device, especially the display part, are not covered by the warranty and will be considered as misuse of the device. To learn how to take care of your display and device in whole, check the Taking care of your iris EFIS section of this manual.

1.5 Disclaimer/EULA

Device versions and options

2.1 Device versions

Device is available in two different con gurations:

- iris EFIS (Basic version)
- iris EFIS pro (Advanced version)

2.1.1 iris EFIS

Is the basic version with main - PFD page and Setup page. Pilot can upgrade the device to iris E s Pro anytime.

2.1.2 iris EFIS Pro

Is the extended version with PFD page and Setup page and additional navigation pages - APT page (Airport navigation), RTE page (Route navigation), Traf c page, G-Force page, Info page, Logbook page and Airspace page.

2.1.3 Upgrade iris E s to iris E s Pro

For upgrading to Pro version, the license le can be bought on LX navigation webshop or through LX navigation representatives.

License le (E sPro.lic) is generated for your speci c device based on device serial number (often referred to as "SN").

License le should be copied to the root of manufacturer provided SD card, without changing it's name (E sPro.lic). If the name is changed, iris E s will not recoginze the le.

Pilot should go to Setup page, "System" section, select "Service" and select menu "Load license".

Once the le is successfully loaded, one should leave the Setup page. Additional pages and functions should appear.

2.2 Device size

Device is available in two different standard sizes:

- 57mm (2,25inch)
- 80mm (3,15inch)

Basic operation

3.1 Push-rotary knobs and buttons

3.1.1 Overview

Bezel overview of the device.

Figure 1. Device overview

- M4X6 black mounting screw (1)
- Display (2)
- Left-hand button (3)
- Micro SD card slot (4)
- Left-hand push-rotary knob (5)
- M4X6 black mounting screw (6)
- Right button (7)
- Right-hand push-rotary knob (8)

3.2 Switching the unit on

The unit turns on automatically as soon as power supply is connected.

3.3 Switching the unit off

The unit turns off automatically as soon as power supply is disconnected. Please note that the device will turn off only when it is not in ight mode. Read more about ight mode in the Battery section.

If for any reason the device doesn't turn off after disconnecting the power, it can always be turned off by pressing left-hand push-rotary knob for 15 seconds.

3.4 Alphanumeric inputs

When alphanumeric input is required, a scroll widget will appear on the left side of the display, displaying the available lettering and/or symbols.

Use the right push-rotary knob to scroll through the list and press the right push-rotary to con rm the symbol and continue typing the next symbol. Once nished, nd the 'Enter' icon to con rm your input.

Figure 2. Keyboard for alphanumeric input

3.5 Software update procedure

To update your device, copy the SW version to the root of provided Micro SD card. Insert it into the slot on the front panel.

Use left or right button to move through pages. Go to setup page. In the section "System" go into "Service" menu. Use right-hand push-rotary knob to select "Software update".

Once the "Select update" is opened, select the version from the list.

3.6 File transfer

To transfer files to your device, copy the file(s) to the root of provided Micro SD card. Insert it into the slot on the front panel.

Use left or right button to move through pages. Go to setup page. In the section "System" go to "Transfer" menu. Use right-hand push-rotary knob to select "Turnpoints", "Airports", "Airspace", "Load route" or "Flarm NET".

Once the pilot selects which type of file to upload a new menu appears. Select "Load" to download the selected file from the list. This will load the file from the SD card to the device.

To activate the loaded file, go to "Select" and select the file from the list.

Learn more about file transfer in section Transfer.

User interface

4.1 Pages

To move through the pages, use left or right button, as described in the section 4.1.1. The movement though pages is circular, so it doesn't matter in which direction pilot moves.

4.1.1 Pages overview

The primary pages represent a row of pages in the graphical user interface, which allow the user to access different information screens and ight parameters.

The user will go through the following pages, in their respective order, if he swipes to the right via right button.

Page position	Page name	Short description
1	PFD page	Attitude indicator with Airspeed and Altitude tape
2	APT navigation page	Navigational page to a pilot selected airport
3	RTE navigation page	Navigational page to a pilot de ned route
4	Traf c page	G-force page with minimal, maximal and actual G load
5	G-force page	G-force page with minimal, maximal and actual G load
6	GPS info page	Info page with GPS, time, date and battery status
7	Logbook page*	Pilots digital logbook with ight details and download
7	Statistics page*	Flight statistics page will appear in ight after take-off
8	Airspace page	Manage all active airspace
9	Setup page	All settings and setup can be done here

*Logbook page is displayed while device is not in ight mode. Once device is in ight mode, Statistics page will appear instead of Logbook.

PFD page

Figure 3. PFD page with all available widgets

- Roll scale zero (1)
- Roll pointer (2)
- Ground speed (3)
- Sky representation (4)
- Airspeed tape (5)
- Ground representation (6)
- Heading / track bug setting (7)
- 90 degree left turn (8)
- Heading / track bug (9)
- Standard turn indicator (10)
- Slip / skid indicator (11)
- Vertical speed indicator (12)
- Pitch scale (13)
- Horizon line (14)
- Altitude tape (15)
- Aircraft symbol (16)
- Barometric setting (17)
- 90 degree right turn (18)
- Current heading / track (19)

5.1 Attitude indicator

Figure 4. Attitude indicator on PFD page

5.1.1 Attitude and horizon line

Attitude is displayed as blue sky and brown ground. The border between the two is separated with a white line representing the horizon.

5.1.2 Attitude indicator

The Attitude Indicator displays the pitch (indicated by the yellow symbolic aircraft on the pitch scale), roll, and slip/skid information.

5.1.3 Pitch

The horizon line is part of the pitch scale.

Pilot can see following pitch scale markings:

- 0° pitch markings Known also as "Horizon line"
- 2.5° pitch markings Found at the interval between 0° and +-20°
- 5° pitch markings Found at the interval of +-50°
- 10° pitch markings Found at the interval between +-50° and +-90°

5.1.4 Roll and roll scale

The inverted white triangle indicates zero on the roll scale. Major tick marks at 30° and 60° and minor tick marks 10°, 20°, and 45° are shown to the left and right of the zero. Bank angle is indicated by the position of the yellow pointer on the roll scale.

5.2 Indicated airspeed tape

Figure 5. Indicated airspeed tape widget with Ground speed (GS) at the top, True airspeed (TAS) in the bottom and Airspeed indication in the middle.

Figure 6. "Show altitude" and "Show direction" are disabled, "Show airspeed" is enabled

True airspeed (TAS) below indicated airspeed tape is shown only when "Show direction" is disabled.

5.2.1 Overview

The indicated airspeed tape displays 30 km/h (30 kts / 30 mph) values at a time on a rolling number gauge using a moving tape. Numeric labels with white mark are shown at intervals of 10 km/h (10 kts / 10 mph). Minor airspeed marks (white lines) are shown at intervals of 5 km/h (5 kts / 5 mph). The current indicated airspeed is displayed in the black pointer box with a big value.

5.2.2 Red cross over Ground speed

If there is red cross over GS indication, GPS is not valid. There will be no GPS position, no time indication and no true track information.

Most common reasons for this issue are wrong antenna placement, external obstructions (testing inside the building) or damaged antenna cable.

Figure 7. No Ground speed (GS) means there is a problem with GPS

5.2.3 Disabling the indicated airspeed tape

In the setup page, go to "user" section, select "Display and Graphic" and select menu "PFD". Go to “Show airspeed”. Pilot can chose between “on” and “off”.

Figure 8. "Show airspeed", "Show altitude", "Show direction" options in setup page, Display and Graphic, PFD menu

Figure 9. "Show airspeed" and "Show altitude" are disabled and "Show direction" is set to "True Track"

5.3 Altitude tape

Figure 10. Altitude tape widget with BARO at the bottom, vertical speed indicator at the top and altitude indication in the middle

Figure 11. "Show airspeed" and "Show direction" are disabled, "Show altitude" is enabled

Altitude tape The altitude tape displays 1500 feet of barometric altitude values at a time on a rolling number gauge using a moving tape. Numeric labels and major altitude marks (white lines) are shown at intervals of 500 feet. Minor altitude marks (white lines) are shown at intervals of 250 feet. The current altitude is displayed in the black pointer box with a big value.

Disabling the altitude tape In the setup page, go to "user" section, select "Display and Graphic" and select menu "PFD". Go to “Show altitude”. Pilot can chose between “on” and “off”.

5.4 Barometric pressure setting (BARO)

The barometric pressure setting is displayed below the Altimeter and is marked with BARO. The pilot de ned units for BARO can be selected in the setup page (setup – system section – units – Pressure);

- inches of mercury (inhg)
- hectopascals (hPa)
- millibars (mbar)

Selecting the altimeter barometric pressure When on the PFD page, turn the right-hand push-rotary knob Selection Knob to change the barometric pressure. Turn it clockwise to set higher barometric pressure or counter clockwise to set lower barometric pressure.

Figure 12. BARO settings indicator

5.5 Slip indicator

The Iris EFIS includes a built-in slip indicator to help the pilot maintain coordinated ight. It displays real-time lateral acceleration and assists in correct rudder usage during turns.

Display Modes

The slip indicator is shown in one of two visual styles, depending on the selected display con guration:

- Ball at the bottom of the attitude indicator (classic presentation)
- Brick at the top of the attitude indicator

Both styles provide the same ight information and respond identically to aircraft movement.

Figure 13. Slip indicator widget - brick

Figure 14. Slip indicator widget - ball

Function

The slip indicator shows whether the aircraft is:

- Coordinated — the ball or brick is centered .
- Slipping — the ball or brick moves toward the inside of the turn (insuf cient rudder).
- Skidding — the ball or brick moves toward the outside of the turn (excessive rudder).

To maintain coordinated ight, apply rudder in the direction of the ball or brick:

> “Step on the ball” — or in this case, the ball or brick — to re-center it.

Importance

Flying in coordinated ight:

- Reduces drag and improves ef ciency.
- Increases passenger comfort.
- Enhances control, especially during low-speed ight and stall recovery.

Slip indicator settings

In the setup page, go to "user" section, select "Display and Graphic" and select menu "PFD". Go to “Slip indicator”.

Figure 15. Slip indicator settings

5.6 Standard rate turn indicator

The Iris EFIS also includes a standard rate turn indicator, which helps the pilot maintain consistent and controlled turns at a de ned rate.

Figure 16. Standard rate turn indicator

5.6.1 Display and Function

Standard rate turn indicator is represented by two airplane silhouettes on roll indicator. The silhouettes are hidden when TAS is less than 36 km/h.

The pilot performs standard rate turn when roll indicator marker (yellow triangle) aligns with airplane silhouette.

Although the standard rate turn is traditionally de ned as 3°/s (a full 360° turn in two minutes), the Iris EFIS allows the pilot to choose between:

- 2-minute turn (standard rate)
- 1-minute turn (half-standard rate)
- Off (indicator hidden)

5.6.2 Standard rate turn indicator settings

To select "1 min", "2 min" or "Off" go to Setup page, "User" section and "Display and Graphic" menu. Select the "Std. rate turn" menu. Scroll and press in to select from the list.

Figure 17. Standard rate turn indicator settings

Figure 18. Standard rate turn indicator options

5.7 Bank pointer

Bank pointer is displayed as a yellow triangle and is always xed at its position. Underneath the yellow triangle we can nd Slip indicator (if it is set to "brick").

5.8 Direction tape with bug

> NOTE
> If heading data is not available, red cross will appear over the magnetic heading widget.

A direction tape is displayed at the bottom of the PFD page. The information is provided by advanced module with the raster of ± 0,5°.

Figure 19. Direction tape with Bug function

Major marks (taller white lines) are shown at intervals of every 10°. Minor marks (shorter white lines) are shown at intervals of every 5°. The current magnetic heading is displayed in the black pointer box with a big value.

In the left corner, pilot can see the white pointer and value which indicates 90° left turn and its magnetic heading value.

In the right corner pilot can see the white pointer and value which indicates 90° right turn and its magnetic heading value.

A blue heading bug can be set to indicate a desired heading. To set the heading bug use left-hand push-rotary knob.

> NOTE
> Heading is not true heading – the value is not corrected for shifts and variations in the Earth's magnetic eld.

White letter "M" in bottom right corner of black direction indicator box indicates that presented value (heading or track) is magnetic. If value is showing true track, no letter "M" is shown.

If the true track is shown instead of magnetic heading, the bug selection (bellow the indicated airspeed tape) will show "TRK" instead of "HDG".

True track is derived from GPS data and is therefore independent of the internal magnetometer.

> NOTE
> Magnetic interference from nearby instruments or electrical components may affect the accuracy of the magnetic heading. In such cases, it is advisable to use the true track (TRK) mode for improved reliability.

5.9 Bug - Direction tape

Direction tape with bug function is displayed at the bottom of PFD page.

Adjust the Direction tape bug to your desired heading with left-hand push-rotary knob while at PFD page.

Figure 20. Direction tape with Bug function

5.10 Direction tape bug options – show direction

Figure 21. Direction tape bug - Show direction options

In the setup menu, go to "User" section, select "Display and Graphic" and then "PFD". Scroll down to "Show direction" and press to select. Pilot can select between "Magnetic heading", "True track" and "Off".

If "Magnetic heading" option is selected, the bug will be set to pilot selected magnetic heading.

If "True track" option is selected, the bug will be set to pilot selected true track. The information is received by GPS module.

If "Off" option is selected, the Magnetic heading bar will be disabled.

The pilot can also switch between "Magnetic heading" and "True track" by pressing and holding the left-hand push-rotary knob while on PFD page.

5.11 Magnetic heading bug options – Sync HDG bug

In the setup menu, go to "User" section, select "Display and Graphic" and then "PFD". Scroll down to "Sync HDG bug" and press to select. Pilot can select between "Auto", "APT", "RTE" and "None".

Figure 22. Magnetic heading bug - Sync function options

If “auto” mode is selected, Iris EFIS will automatically select heading to the next TP (turnpoint) from the preadjusted RTE (route) navigation page, or selected APT (airport) at the APT navigation page whichever was changed/selected later.

If “APT” mode is selected, Iris EFIS will automatically select heading to the APT (airport) selected at the APT navigation page.

If “RTE” mode is selected, Iris EFIS will automatically select heading to the next point (APT or TP) selected at the RTE navigation page. Once TP is reached, iris E s will automatically select next TP in your route.

If the “None” mode is selected, bug can be adjusted only with left-hand push-rotary knob on the PFD page.

5.12 Quick settings menu

Access the quick setting menu by pressing a right-hand push-rotary knob while on PFD page. In the menu, pilot can adjust “Pitch attitude offset”, "QNH" and “Brightness”.

At the top of the display, pilot can see the GPS status icon, Battery status icon and WiFi icon or Bluetooth icon (except when "Wireless mode" is set to "off").

Figure 23. Quick settings menu

5.12.1 GPS status

At the top of Quick settings menu, pilot can see the GPS indication icon. GPS icon will be green if LX Iris EFIS has a valid GPS signal and red if LX horizon doesn't have a valid GPS signal.

Figure 24. GPS signal is not valid

Figure 25. GPS signal is valid

5.12.2 Battery status

At the top of Quick settings menu, pilot can see the Battery status indicator.

White battery outline indicates that the device is using aircraft's battery. A red battery outline indicates it is using its own built-in backup battery.

Battery capacity is indicated with 3 levels of autonomy:

Main battery indicator (Battery outline is white):

- 3 green bars (more than 12.0V)
- 2 yellow bars (more than 10.8V)
- 1 red bar (less than 10.8V)

Figure 26. 3 green bars (more than 12.0V)

Figure 27. 2 yellow bars (more than 10.8V)

Figure 28. 1 red bar (less than 10.8V)

Backup battery indicator (Battery outline is red):

- 3 green bars (81 - 100 % backup battery left)
- 2 yellow bars (21 - 80 % backup battery left)
- 1 red bar (less than 20 % backup battery left)

Figure 29. 3 green bars (81 - 100 % left)

Figure 30. 2 yellow bars (21 - 80 % left)

Figure 31. 1 red bar (less than 20 % left)

5.12.3 Network setting

If Wireless mode is not set to "Off" there is an icon which shows status of network settings. Find out more about network setting in Network section.

There can be two different icons:

- WiFi icon if Wireless mode is set to "WiFi Access point" or "WiFi Client"
- Bluetooth icon   if Wireless mode is set to "Bluetooth Server" or "Bluetooth Client"

Figure 32. WiFi icon

Figure 33. Bluetooth icon

> NOTE
> The Wi-Fi icon only shows the wireless mode in use and does not re ect the strength of the signal.

5.12.4 Pitch attitude offset

Figure 34. Pitch attitude offset

Pilot can adjust the pitch attitude offset to a desired value of ± 20° by pressing the right-hand push-rotary knob while on PFD page. Rotate the push-rotary knob to a desired value. Press to con rm. If not, in 5 seconds, the device will automatically exit the menu and the selected pitch attitude offset will be con rmed.

NOTE
The pitch attitude offset resets when the device is powered off. To apply a permanent pitch correction, use the "Cage AHRS" command in Service menu instead.

APT navigation page

From PFD page press right button to access APT (Airport) navigation page. Pilot can select which APT point to use as navigational point.

6.1 Overview

Figure 35. APT navigation page

6.2 Wind widget

Wind widget can be found in the lower left corner of the display. On the black background pilot can see:

- Wind direction relative to aircraft's heading (Black arrow in the green circle)
- Wind direction in degrees (with a wind socket icon)
- Wind speed with units (under Wind direction in degrees)

Wind calculation

Iris EFIS is able to measure wind using an iterative method that is based on indicated airspeed (IAS), ground speed (GS) and track (TRK) measurements.

6.3 Zoom level

While on navigation page (APT or RTE page), use left-hand push-rotary knob to Zoom in and out. By rotating the left-hand push-rotary knob pilot will move through prede ned Zoom levels.

6.3.1 Map scale bar

Iris EFIS will display a “Map scale bar” in the lower right corner of the display while on navigation page.

The length of the bar is equal to the distance on the map in pilot de ned units (kilometers (km), nautical miles (nm) or miles (ml)).

6.3.2 Zoom level marked with Map scale bar: 0.2 / 0.5 / 1 / 3 / 5 / 9

3D terrain map is displayed with airspace and airports marked with APT icon and name of airport. Edit graphic settings in setup page, user section, “Display and Graphic” and enter the “Map”.

Edit airspace appearance in setup page, user section, “Display and Graphic” and enter the “Airspace”.

6.3.3 Zoom level marked with Map scale bar: 12 / 25 / 50 / 125

3D terrain map is not displayed. Black background appears with airspace and airports marked with APT icon and name of airport. Edit graphic settings in setup page, user section, “Graphic” and enter the “Map”.

Edit airspace appearance in setup page, user section, “Graphic” and enter the “Airspace”.

6.4 Aircraft icon

Aircraft is displayed at the bottom of the page with icon. To change the aircraft icon, go to setup, system section and select “Aircraft”.

Go to “Category” and select from the list:

- Airplane -
- Glider -
- Motor glider -
- Rotorcraft -
- Gyrocopter -
- Airship -
- Jet -
- Fighter -

6.5 Navigation lines

Figure 36. Navigation lines

Navigation lines are displayed to help the pilot visualize the ight. The blue line represents aircraft Track line. The red line represents “Destination line”. Both are user de ned in the setup menu, "User" section, "Display and graphic", "Map" and select “Destination line” or “Track line color”.

Figure 37. Track line color select

Figure 38. Track line transparency setting

Circular color menu will appear. Rotate the right-hand push-rotary knob to select the color and con rm by pressing in. After con rming, the transparency setting will appear with same circular menu. Rotate the right-hand push-rotary knob to select the color and con rm.

6.6 NavBox line

“NavBox” line is assembled of 4 “NavBoxes”. A row of “NavBoxes” assembles a “NavBox line” which is marked with an indicator number in the top right corner of the “NavBox line”.

Figure 39. Navbox line

6.6.1 NavBox

“NavBox” is the single information that is displayed by LX device as title and value with unit.

Figure 40. One "NavBox" item

6.6.2 “Navbox line” setup

To move through “NavBox lines” use right-hand push-rotary knob and rotate it. As pilot moves through “NavBox lines”, one can see that the indicator number number on the right changes. The movement through “NavBox lines” is circular.

LX Iris EFIS supports 3 “NavBox lines” and additional “disabled mode” which hides the “NavBox line” and extends the map.

6.6.3 Edit “NavBox”

NavBoxes will appear on the APT and RTE navigation pages. All “NavBoxes” are pilot de ned. To change the “NavBox” press and hold right-hand push-rotary knob. The selected “NavBox” will appear on the red background. Rotate the right-hand push-rotary knob to move through each “NavBox” and press in to select which one to edit.

Figure 41. Press and hold the right-hand push-rotary knob to edit NavBox

Once pilot has selected the “NavBox” to edit, a drop-down menu will appear with all available “NavBox” information:

- UTC time
- Local time
- Flight time
- Leg time
- Total distance
- Remaining distance
- ETE (Estimated Time Enroute)
- ETA (UTC)
- ETA (local time)
- Leg distance
- Leg ETE
- Leg ETA (UTC)
- Leg ETA (local)
- Altitude
- Flight level
- Density altitude
- GPS altitude
- Height AGL
- Elevation
- Vertical speed
- TAS (true airspeed)
- IAS (indicated airspeed)
- Ground speed
- True track
- Magnetic heading
- Bearing
- OAT
- G-force
- Flap position
- Phase of ight
- No of landings
- Last landing time

Figure 42. "Navbox select" menu

Rotate the right-hand push-rotary knob to move through each “NavBox” information available. Press the push-rotary knob to select the “NavBox” information.

6.7 Select APT

Figure 43. Select Navbox menu

On the APT page, pilot can navigate to selected airport. To select an airport, press the right-hand push-rotary knob while at APT page. A “Select airport” menu will appear. In the rst row there are search parameters.

6.8 Sort by

Figure 44. Select airport menu, Sort by function

Press the right-hand push-rotary knob to de ne the “Sort by” parameter. Default value is “ICAO”. Pilot can choose:

- “ICAO” , which will sort the results based on ICAO code in the alphabetical order.
- “Distance” , which will sort the results based on the distance. From the closest to the furthest airport.
- “Name” , which will sort the results based on the name in the alphabetical order.

Once pilot has selected the desired “Sort by” parameter by pressing the right-hand push-rotary knob, one can can apply next parameter, which is “Filter”.

On the left side of the display a circular motion keyboard will appear. Use right-hand push-rotary knob to rotate and search for each letter.

Once the letter is selected press right-hand push-rotary knob to select it. Use it to add 0-12 signs to use as “Filter” parameter.

Figure 45. Adding "Filter" parameter with alphanumerical value

Once pilot has selected the desired “Filter” parameter by pressing the right-hand push-rotary knob, one can apply next parameter, which is “Country”.

Default value is "All" which will search all available countries.

Use right-hand push-rotary knob to rotate and move through circular list of countries, sorted by alphabetical order. To move through the list faster, by 10 lines at the rotate, press in right-hand push-rotary knob and rotate while pressed.

Figure 46. Adding "Country" parameter with rotating right-hand push-rotary knob

Each of the parameters applied will affect the search results below the search parameters.
If sorted by distance, no “Filter” can be applied and is disabled (grey text).

Figure 47. Scroll down and select the desired APT

For Each Airport the following information is shown:

- Rotating bearing icon to the selected airport (Relative bearing relative to track)
- Distance to the selected airport
- Bearing to the selected airport in degrees (Absolute bearing relative to true north)

The selected airport can be con rmed by press of the right-hand push-rotary knob.
Once the airport is selected, device will return to APT navigation page.

> NOTE
> Details about the selected airport are accessible by pressing the left-hand push-rotary knob at the APT page.

6.9 APT details page

To access APT details page, pilot must press the left-hand push-rotary knob at the APT page. Additional information about the selected airport will appear. If some data is not available “No data” text will appear under the title of information.

Figure 48. Selected APT details

The list of displayed data if available in the APT le:

- Rotating bearing icon to the selected airport (Relative bearing relative to track) and Bearing to the selected airport in degrees (Absolute bearing relative to true north)
- Distance to the selected airport
- Radio frequency of the selected airport
- Runway surface of the selected airport
- Elevation of the selected airport
- Runway heading of the selected airport

RTE navigation page

Figure 49. RTE navigation page

From APT navigation page press right button to access RTE (Route) navigation page. Pilot can create, select and edit the route.

7.1 Wind widget

Wind widget can be found in the lower left corner of the display. On the black background pilot can see:

- Wind direction relative to aircraft's heading (Black arrow in the green circle)
- Wind direction in degrees (with a wind socket icon)
- Wind speed with units (under Wind direction in degrees)

Wind calculation

Iris EFIS is able to measure wind using an iterative method that is based on indicated airspeed (IAS), ground speed (GS) and track (TRK) measurements.

7.2 Zoom level

While on navigation page (APT or RTE page), use left-hand push-rotary knob to Zoom in and out. By rotating the left-hand push-rotary knob pilot will move through prede ned Zoom levels.

7.2.1 Map scale bar

Iris EFIS will display a “Map scale bar” in the lower right corner of the display while on navigation page.

The length of the bar is equal to the distance on the map in pilot de ned units (kilometers (km), nautical miles (nm) or miles (ml)).

7.2.2 Zoom level marked with Map scale bar: 0.2 / 0.5 / 1 / 3 / 5 / 9

3D terrain map is displayed with airspace and airports marked with APT icon and name of airport. Edit graphic settings in setup page, user section, “Display and Graphic” and enter the “Map”.

Edit airspace appearance in setup page, user section, “Display and Graphic” and enter the “Airspace”.

7.2.3 Zoom level marked with Map scale bar: 12 / 25 / 50 / 125

3D terrain map is not displayed. Black background appears with airspace and airports marked with APT icon and name of airport. Edit graphic settings in setup page, user section, “Graphic” and enter the “Map”.

Edit airspace appearance in setup page, user section, “Graphic” and enter the “Airspace”.

7.3 Aircraft icon

Aircraft is displayed at the bottom of the page with icon. To change the aircraft icon, go to setup, system section and select “Aircraft”.

Go to “Category” and select from the list:

- Airplane -
- Glider -
- Motor glider -
- Rotorcraft -
- Gyrocopter -
- Airship -
- Jet -
- Fighter -

7.4 Navigation lines

Figure 50. Navigation lines

Navigation lines are displayed to help the pilot visualize the ight. The blue line represents aircraft Track line. The red line represents “Destination line”. Both are user de ned in the setup menu, "User" section, "Display and graphic", "Map" and select “Destination line” or “Track line color”.

Figure 51. Track line color select

Figure 52. Track line transparency setting

Circular color menu will appear. Rotate the right-hand push-rotary knob to select the color and con rm by pressing in. After con rming, the transparency setting will appear with same circular menu. Rotate the right-hand push-rotary knob to select the color and con rm.

7.5 NavBox line

“NavBox” line is assembled of 4 “NavBoxes”. A row of “NavBoxes” assembles a “NavBox line” which is marked with an indicator number in the top right corner of the “NavBox line”.

Figure 53. Navbox line

7.5.1 NavBox

“NavBox” is the single information that is displayed by LX device as title and value with unit.

Figure 54. One "NavBox" item

7.5.2 “Navbox line” setup

To move through “NavBox lines” use right-hand push-rotary knob and rotate it. As pilot moves through “NavBox lines”, one can see that the indicator number (on the right) changes. The movement through “NavBox lines” is circular.

Iris E s supports 3 “NavBox lines” and additional “disabled mode” which hides the “NavBox line” and extends the map.

7.5.3 Edit “NavBox”

NavBoxes will appear on the APT and RTE navigation pages. All “NavBoxes” are pilot de ned. To change the “NavBox” press and hold right-hand push-rotary knob. The selected “NavBox” will appear on the red background. Rotate the right-hand push-rotary knob to move through each “NavBox” and press in to select which one to edit.

Figure 55. Press and hold the right-hand push-rotary knob to edit NavBox

Once pilot has selected the “NavBox” to edit, a drop-down menu will appear with all available “NavBox” information:

- UTC time
- Local time
- Flight time
- Leg time
- Total distance
- Remaining distance
- ETE (Estimated Time Enroute)
- ETA (UTC) - (Estimated time of Arrival)
- ETA (local time)
- Leg distance
- Leg ETE
- Leg ETA (UTC)
- Leg ETA (local)
- Altitude
- Flight level
- Density altitude
- GPS altitude
- Height AGL
- Elevation
- Vertical speed
- TAS (true airspeed)
- IAS (indicated airspeed)
- Ground speed
- True track
- Magnetic heading
- Bearing
- OAT
- G-force
- Flap position
- Phase of ight
- No of landings
- Last landing time

Figure 56. "Navbox select" menu

Rotate the right-hand push-rotary knob to move through each “NavBox” information available. Press the push-rotary knob to select the “NavBox” information.

7.6 Edit route

On the RTE page, pilot can navigate to next turnpoint according to route. To create a route press the right-hand push-rotary knob while at RTE page. “Edit route” menu will appear.

Figure 57. By pressing the right-hand push-rotary knob pilot enters "Edit route" menu

7.6.1 Add point

To add a turnpoint or airport, pilot must press the right-hand push-rotary knob to select “Add”.

Figure 58. Selecting "Add" will take pilot to "Select action" menu

“Select action” menu will appear. At this point, pilot will have to decide whether to insert turnpoint or airport.

Figure 59. "Select turnpoint" menu

To start with turnpoint, rotate and press to select “Select turnpoint”. A menu “Select turnpoint” appears.

7.6.1.1 Select turnpoint

Press the right-hand push-rotary knob to de ne the “Sort by” parameter. Default value is “Distance”.

Pilot can choose:

- “Distance” , which will sort the results based on the distance. From the closest to the furthest airport.
- “Name” , which will sort the results based on the name in the alphabetical order.
- “Code” , which will sort the results based on ICAO code

Once the pilot has selected the desired “Sort by” parameter by pressing the right-hand push-rotary knob, one can can apply next parameter, which is “Filter”.

On the left side of the display a circular motion keyboard will appear. Use right-hand push-rotary knob to rotate and search for each letter. Once the letter is selected press right-hand push-rotary knob to select it. Use it to add 0-12 signs to use as “Filter” parameter.

Each of the parameters applied will affect the search results below the search parameters. If sorted by distance, no “Filter” can be applied and is disabled (grey text).

The list will be instantly refreshed according to applied parameters and will display results:

- “Name”
- “Rotating bearing icon to the selected airport”
- “Distance to the selected airport”
- “Bearing to the selected airport in degrees (°)”

The selected turnpoint can be con rmed by press of the right-hand push-rotary knob.

Once the turnpoint is selected, device will return to “Edit route” menu. Selected turnpoint will be displayed as a Start point.

7.6.1.2 Select airport

To start the route with an airport, rotate and press to select “Select airport” from the “Select action” menu.

Figure 60. Selecting airport will take pilot to "Select action" menu

A menu “Select airport” appears after con rming.

Figure 61. Select airport menu

Press the right-hand push-rotary knob to de ne the “Sort by” parameter. Default value is “Distance”.

Pilot can choose:

- “Distance” , which will sort the results based on the distance. From the closest to the furthest airport.
- “Name” , which will sort the results based on the name in the alphabetical order.
- “ICAO” , which will sort the results based on ICAO code

Once the desired “Sort by” parameter is selected using the right-hand push-rotary knob, the next parameter - “Filter” - can be applied.

On the left side of the display, a circular motion keyboard will appear. Use the right-hand push-rotary knob to rotate and search for each letter. Press the knob to con rm a letter. Up to 12 characters can be entered as the “Filter” parameter.

After con rming the “Filter” parameter by pressing the right-hand push-rotary knob, proceed to the next parameter - “Country”.

Use the right-hand push-rotary knob to scroll through a circular list of countries, sorted alphabetically. To move faster (by 10 items at a time), press and hold the knob while rotating it.

Each of the parameters applied will affect the search results below the search parameters.

Figure 62. Filtered results