LX Styler

customization tool for LX80xx/LX90xx

Version 6.0

1 Introduction

1.1 What is LX Styler

LX Styler is customization tool for LX8000, LX8080, LX9000, LX9050 and LX9070. Using it, you will be able to modify existing navigational pages or add new navigational pages. It allows you to choose from more than 120 different data symbols to suit your needs. You can also change the shape and size of an airplane or remove unnecessary elements.
Within the manual following the symbols are shown.

Yellow triangle is shown for part of manual which should be read very carefully.

Bulb icon is shown when useful hint is given for reader.

1.2 System requirements

LX Styler is written for Windows operating system. Minimum requirements are simple:
- Pentium processor
- Windows XP or higher
- .NET Framework 2.0
- 15 MB of free disk space

1.3 Installing and uninstalling

Download installation program from our webpage www.lxnav.com then run it and follow on-screen instructions to complete the installation.
To uninstall a program navigate to uninstall icon in LX Styler group and run it. You can also open Control panel, select Add or Remove Programs, find LX Styler line and press Remove button.

1.4 Starting LX Styler

After successful installation a program group named LX Styler is created and an icon is placed on your desktop. Double click the icon to run.
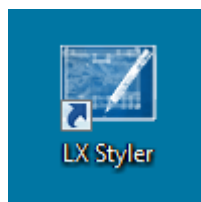
1.5 Get in contact with us

In case you have difficulties understanding or running LX Styler or you discovered a bug, please send us an email to info@lxnav.com or call us +386 592 33 400.
Visit our webpage regularly for free updates and new help files.

2   Getting Started

2.1   LX Styler windows

Once a program is started the main window will show the last configuration opened or it will be empty.
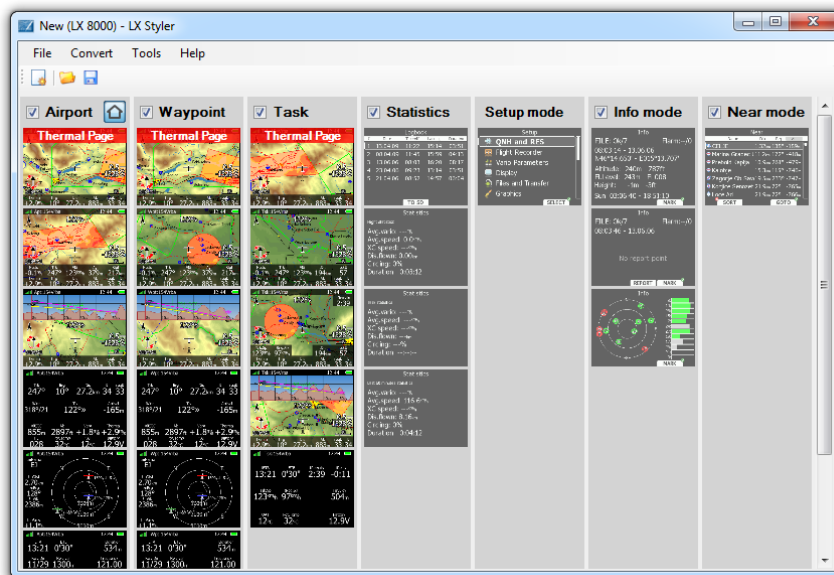
The main window consists of menu, toolbar and main view, where all seven navigational modes are shown, namely airport mode, waypoint mode, task mode, statistics mode, setup mode, info mode and near mode.

You will notice that the last four modes are in shaded with gray color which means that it is not possible to modify them.

In each mode relevant pages are shown. If you left click twice on any of navigational pages the Navigation Page editor will be opened. It is used to define all small details of the selected page.

More details about the Navigation Page Editor are given in chapter 2.4 and 3.2.

2.2 Managing configurations

The complete look and feel of the navigational pages is stored in a configuration file with .lxprofile extension. Configuration file can be newly created or it can be also downloaded from the device.

To download configuration file from device enter Setup mode and select Profile and Pilots menu item. Press MORE>> until you don't see TO SD button. Press it to copy selected profile to inserted SD card.
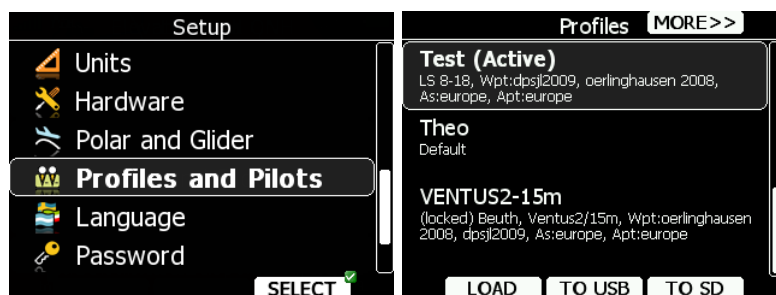

You can now load stored configuration file in LX Styler through File->Open or pressing open icon on toolbar.

To create a new configuration press File->New Configuration or select new configuration icon on toolbar.

> The configuration file also consists of other settings essential for the device. Variometer setting, pilot information, files in use and glider polar are also stored in the configuration file. Most of these settings can also be modified with LX Styler and others can only be changed on device itself.
> If you create a new profile all this settings will be set to default values and you will have to modify them on the device.

Once configuration that suits your needs has been created you can save it with File->Save or by clicking the save icon on a toolbar.

2.3 Managing navigational pages

Navigational pages can be easily moved, copied or removed using the mouse. A double left click on a selected navigation page will open Navigation Page Editor. Press right mouse button and a pop up menu will open.
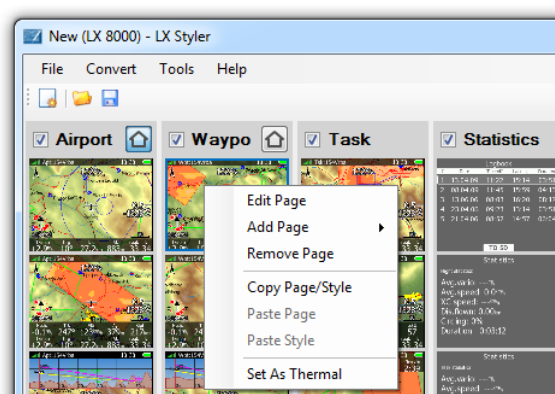
Select appropriate menu item to add, remove, copy or edit page. You can also drag page to another location – just press left mouse button and while holding it down, drag selected navigational page to desired location. A red line will indicate new position of page. Release mouse button to place page.

2.4 Navigation Page Editor

If you left click on any of navigational pages, or you selected Edit page on the popup menu, Navigation Page Editor will be opened. It is divided into four sections:

- **Toolbar** contains all symbols which can be put on a navigational page.
- **Global properties** that define global styles for symbols on it and **list of all symbols** on the page
- **Property editor** displays all the properties of selected symbols
- **Graphical representation** of the device and navigational page.

Select one or more items from a list or pick them on the device screen. They will be highlighted on the list and a blue rectangle will be drawn around them. Property editor will fill in the properties for the selected item. If more than one element is selected property editor will show only common properties.
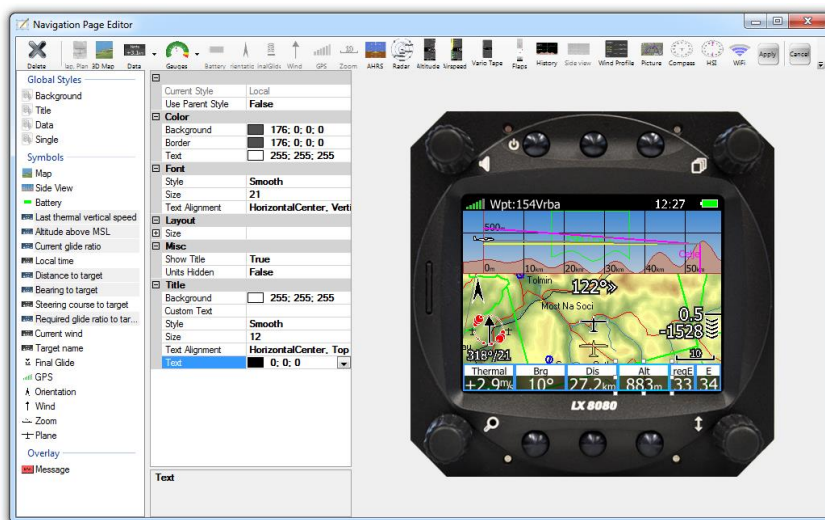
Once you have finished editing a page, press Apply button on the toolbar to accept changes and return back to main window. Press Cancel to abandon all changes and return back to main window.

2.4.1 Toolbar

Select a desired item from the toolbar to place it on page. Some of items will be grayed if they are already on the page or they are unavailable.

Left click on item and it will automatically be placed in the top-left corner of the page. If you select Data Symbol a new dialog will open where you can then select the desired symbol.
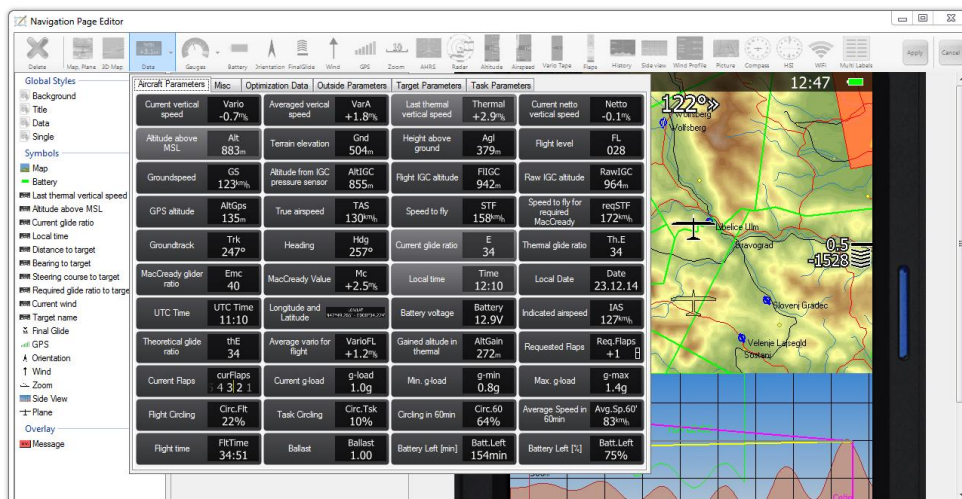
Data symbols are grouped in seven groups: aircraft parameters, outside parameters, target parameters, task parameters, optimization data, FES/JDU and misc tab. More details about data symbols on particular tab are given in chapter 3.2.2.

The toolbar also has a delete button which will delete the currently selected item. You can also delete an item by pressing delete key.

2.4.2 Global Styles and Symbols list

When you want to change color for all symbols on the page simultaneously, you should use global styles. There are four different items in this category:

- **Background color** defines background color of page. Default color is black
- **Title style** defines font, background color, border color and text color of data symbol title
- **Data style** defines font, background color, border color and text color of data value
- **Single line** symbol style defines font, background color, border color and text color of single line data symbols.

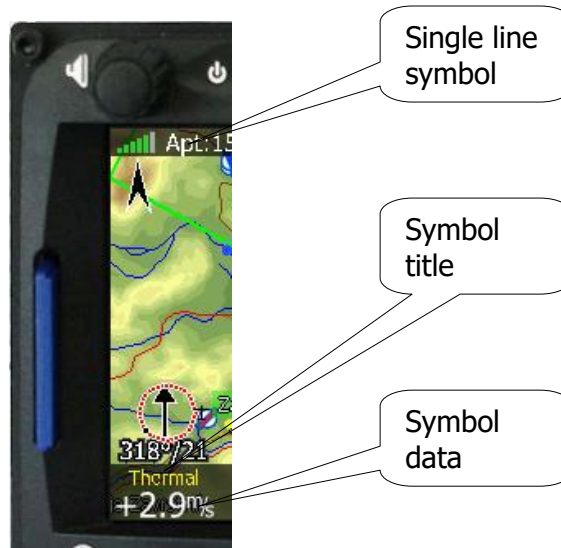If you change color or font of any of global styles, it will be applied only to the data symbols with property "Use Global Style" set to yes.

The symbol list shows all elements of a page. Left click on item to select it. It will highlight it and a blue rectangle will be drawn around it in graphical view and properties for selected item will be shown in property editor.

2.4.3 Property editor

Property editor shows all the properties of selected element that can be modified. Property editor is a table with two columns.

Left column displays property name and right column displays property value. Click on property value to modify it. Press down arrow on right side and additional dialog for selected property will be displayed.
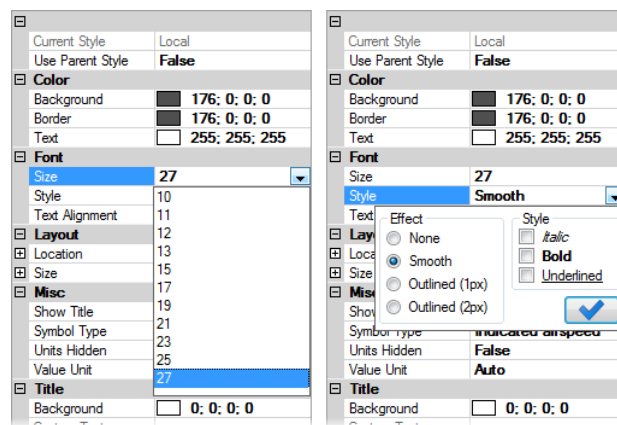
At the bottom of property editor more detailed description for selected item is shown.

2.4.4 Device Screen

Device screen is a graphical representation of navigational page.

Point to a symbol and select it with left mouse click. If you hold left mouse button on a symbol, you can drag it around and place it into the desired position. If you click, hold and move small white squares around selection you can resize the symbol.

To select multiple symbols at once you hold down Ctrl button on your keyboard and then click on next symbol you wish to select. Now you can move or resize them together. While holding Ctrl click again on selected item to deselect it.

When resizing or moving, the borders of selected symbol are snapped to borders of other symbols; this is indicated with orange line. If you wish to move or resize symbol freely hold down Shift key while moving the mouse.

You can also move selection by 1 screen pixel with keyboard's arrow keys. To move only top-left corner hold down Ctrl while pressing the arrow keys. To move only right-bottom corner hold down Shift while pressing the arrow keys.

2.5 Checklists

It is possible to open and create checklist pages with LX Styler. Checklists are saved in file with .checklists extension. You can activate them on device in Setup > Files and Transfer > Checklists.

When editing a checklists page, two additional buttons are present on toolbar. Check item button inserts one checklist item on page. These are special items that you can check, uncheck and scroll over them on the device.
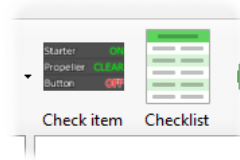
Button Checklist opens new dialog where you create multiple checklist items faster. You can also change style of individual rows. After selecting Create button, items are generated and added to page. Now you can reposition them on page or make additional changes.
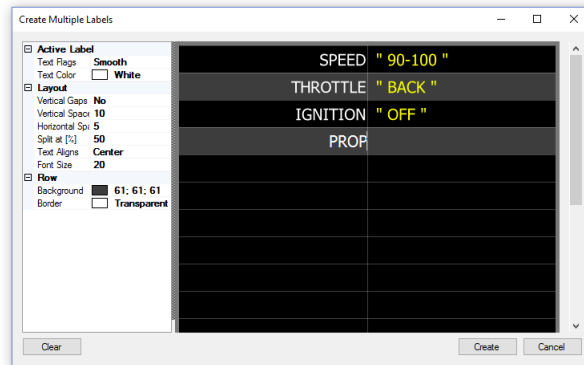
3 Commands

3.1 Main window

Main window commands are new configuration, new checklists, open, save, recent files, import and exit. Recent files are displayed only if any previous configurations were already opened.

In Convert menu there is a list of other devices that you can convert profile to.

Tools menu consists of other useful features for modifying profile. It is possible to edit settings and change order of remote action buttons.

In Help menu you can open PDF manual of see program version.

3.1.1 New configuration

When you select new configuration option a dialog for device selection opens. Here you can select device you want to create navigational pages for. For some devices you have two options, which are portrait and landscape. After selection, new configuration with default navigational pages and default settings is created.

> The configuration file consists also of other settings essential for the device. Variometer setting, pilot information, files in use and glider polar are also stored in the configuration file. Most of these settings can also be modified with LX Styler and others can only be changed on device itself.
> If you create a new profile all this settings will be set to default values and you will have to modify them on the device.

3.1.2 New checklists

When clicking New configuration command a device picker dialog opens. After selection, empty checklists editor will be displayed with pages on left side and familiar page editor in center.

3.1.3 Open

Open option opens existing configuration file or checklists. If you already used program for editing, you can open some of recently opened files from the list in File menu.

3.1.4 Save

Save command saves current configuration or checklists file.

3.1.5 Import

Imports pages from existing profile to currently opened one. You can manually select which modes and pages you want to import. If you wish to also import all setting saved in profile (such as map settings, opened waypoints, units settings, sound and graphics settings…) then check Import all settings option.
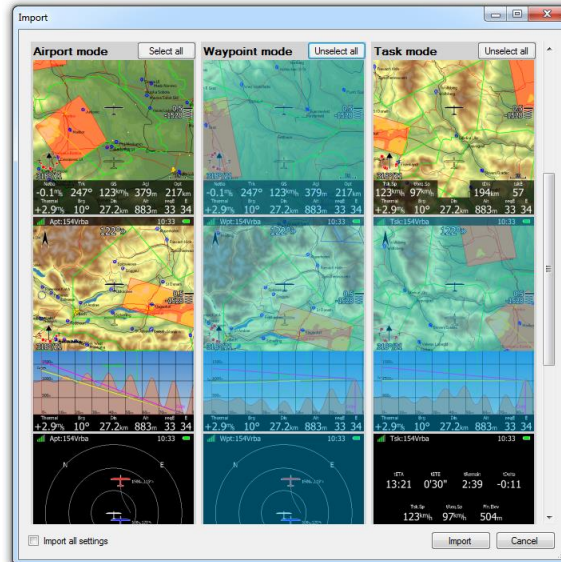
3.1.6 Exit

Exit will close LX Styler. Make sure you save your configuration before exiting program. You may also exit program pressing Alt+F4 key combination.

3.1.7 Convert

Converts currently opened profile for use on other devices. If there are any settings in profile they are preserved. If screen sizes are not the same on current and target device the program tries to resize and move symbols on all pages to fit target screen size.

3.1.8 Profile editor

You can access Profile Setting Editor from Tools menu. There you can select one of many profile groups and then edit individual settings.
You can only edit setting that device already has saved to profile file. So if you just created new profile in LX Styler you cannot edit them because they don't exist yet.
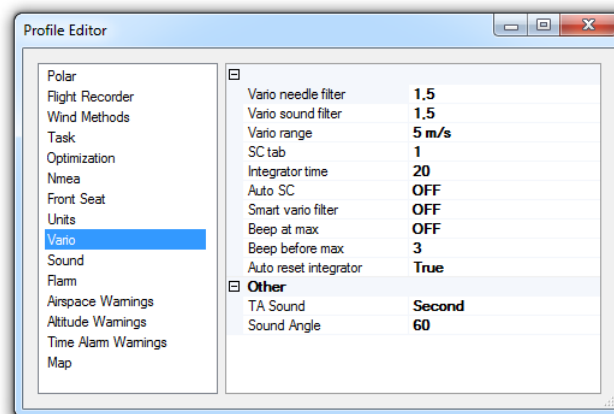
3.1.9 Remote actions editor

From Tools menu you can access editor with which you can reorder navigation buttons for remote stick. This customization is available for airport mode, waypoint mode and task mode. You can enable or disable custom order of buttons in mode with toggling corresponding checkbox. When enabled you can reorder buttons with clicking and dragging them up or down inside the list.

3.1.10 Edit page

When you right click on a page a popup menu will appear. Select Edit Page item and Navigation Page Editor will then open.

3.1.11 Add page

Select this option to add a blank page. Page can be added before selected page or after it.

3.1.12 Remove page

Select Remove page to delete a page.

3.1.13 Copy page

Page can be also copied. Select a page and copy it to a local clipboard. Once page is copied it can be pasted afterwards.

3.1.14 Paste page or style

This will create a copy of a page from the clipboard. It will be placed after selected navigation page. You can also paste global styles from copied page into selected page.

3.1.15 Set as thermal

This will set current selected page as thermal page. When this feature is enabled on device selected page will be shown when circling.

3.1.16 Enable/disable mode

If you do not need to use one or more navigation modes you can disable them with unchecking the checkbox on mode header.

3.1.17 Home mode

Click on home button on mode header bar to open on this mode first when you start the device.

3.2 Navigational Page Editor

Navigation Page Editor is divided into four major sections.
- **Toolbar** is containing all symbols which can be put on a navigational page.
- **Global properties** define global colors for page symbols; Bellow is a **list of all symbols** on the page
- **Property editor** for displaying properties of selected symbols
- **Graphical representation** of device and navigational page.

3.2.1 Toolbar

The toolbar contains the different symbols which can be placed on a navigational page. Most symbols can be placed only once on a page and will be disabled if they are already on a page.

Some of the symbols can be placed on a page only in combination with others and will be disabled if a particular symbol is missing. (e.g.: zoom symbol can be placed on a page only if map and aircraft symbols are already on the page.)

When you click on data symbol selector a dialog will open.
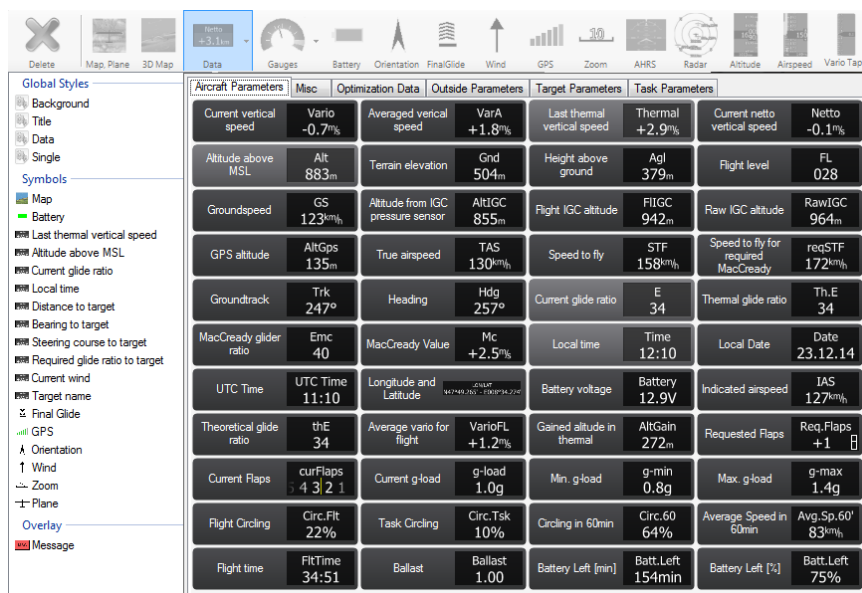
Data symbols are grouped in seven logical groups: aircraft parameters, outside parameters, target parameters, task parameters, optimization data, FES/JDU and misc tab. More details about specific symbols are given in next chapter.

On the toolbar there is also a delete button for removing a symbol from page and buttons Apply and Cancel for exiting the editor.

3.2.2 Symbols

Map symbol

A map will be added to a page. By default it will be stretched to the whole screen. Select edge points to resize it or to move it around. Map symbol is always added together with aircraft symbol.

Aircraft symbol

The aircraft symbol shows the current position on the map. The aircraft symbol will automatically be added together with the map.

You will notice there are actually two aircraft symbols shown. The one drawn as a shadow is showing position of on airplane when Track Up, Goal Up or Heading Up map orientation is selected on the device (See device's manual for more details about map orientation). In property editor this position is referred as Track and the other position is referred as North. There are several types of aircraft available. Change style to select different aircraft symbol. You can also show a wind vector, which will rotate around the symbol.
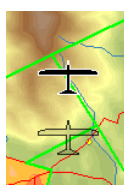
3D Map

Symbol shows map with 3D terrain. This feature is not available on some older LX8000 and LX9000 devices.

Battery

Battery will visually display current level of battery. Green indicates that battery is ok. It will turn yellow and later red, when battery is empty.

Orientation symbol

Orientation symbol points always towards true north. It can be placed on a page only when map symbol is already on a page.

Final glide symbol

Final glide symbol is very complex symbol and it is highly recommend having it on the page. It will display current MacCready value, arrival altitude at goal and many other features which are very important for task start procedure. Please refer to device manual for more details.

Wind symbol

Wind symbol shows wind direction. It is useful to combine it with wind data symbol in order also to get wind strength. Around wind symbol a thermal assistant can be shown during circling. Enable or disable this feature with "Has Thermal" property.

GPS symbol

GPS shows current status of GPS. Green color indicates GPS is acquiring 3D position and yellow color stands for 2D position fix. When red no position is calculated by GPS. Each bar represents two visible satellites.

Zoom symbol

Zoom symbol shows current map zoom. It can be used only when the map symbol is already on the page. Zoom can be presented in two ways; number on symbol indicates the length of the zoom symbol or number indicates length of whole screen. Use "Full" property to modify it.

Data symbol

There are a variety of data symbols available. A data symbol is a numerical representation of different parameters. A data symbol consists of title field, which stores name of data symbol and data field which is shown as the parameter. Title can be omitted if Show title property is set to No. When „Use Global Style" property is set to Yes, data symbol will follow global page style properties. Disabling „Use Global Style" property allows a full customization of selected data symbol.

AHRS symbol

This will display artificial horizon. You can also set it to see compass direction. It is available in 3 different display styles.

Radar symbol

Flarm radar symbol will display a radar screen showing Flarm targets at predefined zoom. If on device there is no map symbol on page you can also change visible range with ZOOM button wheel.

Altitude tape symbol

It shows altitude band with current altitude in the middle. You can customize it to see different information on top and bottom of symbol. This data are QNH, MSL, height above ground and flight level.

Airspeed tape symbol

Shows current indicated aircraft speed. Band colors can be fully customized to match your aircraft speeds. You can also set it to display true airspeed, groundspeed or outside temperature.

Flaps tape symbol

It displays current and required flaps position. You can center on any of these two positions or you can display full tape range. In this case all flap position ranges are spaced equally regardless of their values.

History view symbol

This shows past aircraft altitude and terrain elevation. Circling direction is also visible. You can specify how many minutes of flight should be shown with Shown Minutes property. By default value is zero which shows history of whole flight.

Side view symbol

Shows lateral view of your position toward selected goal or aircraft's bearing. It also displays airspaces on your way which you can customize on device inside Airspace graphics dialog in setup mode.

Wind profile symbol

Symbol displays wind profile information. It is very similar to tape in Wind dialog.

Picture symbol

This symbol displays photos tied to selected waypoint or airport.

Compass and HSI symbols

These two symbols are displaying magnetic rose. Compass is always attached to plane symbol while HSI symbol can be moved freely. Compass tape is another symbol with similar functionality that always centers on plane heading.

Wi-Fi symbol

This shows current status of your Wi-Fi connection. Note that Wi-Fi functionality does not work on some older LX8000 devices.

Vario symbols

Vario gauge is representation of variometer. You can change to what values needle is pointing to. Vario tape symbol shows vario value on vertical tape. There is also separate SC Vario indicator that displays current vario mode.

Thermal symbol

This is thermals graph from Statistics mode in symbol form.

G-meter symbol

Symbol shows gauge of current g-load value. It also shows smallest and biggest recorded value. You can set it to be visible only when it's over certain g-load.

Meteogram

Symbol shows weater information for selected target. Wi-Fi connection is required to download the image.

FLARM Indicator

Indicator shows direction and vertical position of other aircraft.

Values written in data symbols inside LX Styler are totally useless and are not correlated to each other. These values are only for demonstration purposes.

Data symbols

There are more than 120 different data symbols. They are grouped into seven groups.

Aircrafts parameters

Title	Description
Vario	Current vertical speed
VarA	Averaged vertical speed (average time can be set on device)
Thermal	Last thermal vertical speed
Netto	Current netto vertical speed
Alt	Altitude above MSL
AltIGC	Altitude from IGC pressure sensor
RawIGC	Raw IGC altitude
AltGps	GPS Altitude
Gnd	Terrain elevation
Agl	Height above ground
FL	Flight level
FlIGC	Flight IGC altitude
GS	Groundspeed
TAS	True airspeed
STF	Speed to fly
reqSTF	Speed to fly for required MacCready (used for Pirker final glide)
Trk	Groundtrack
Hdg	Heading
E	Current glide ratio
Th.E	Thermal glide ratio
Emc	MacCready glide ratio
Mc	Set MacCready value
Time	Local time
Date	Local date
UTC Time	Current UTC time
LON/LAT	Current longitude and latitude position
Battery	Battery voltage
IAS	Indicated airspeed
thE	Theoretical glide ratio
VarioFL	Average vario for flight
AltGain	Gained altitude in thermal
reqFlaps	Requested flaps position
curFlaps	Current flaps position
g-load	Current g-load
g-min	Minimum g-load
g-max	Maximum g-load
Circ.Flt	Flight circling
Circ.Tsk	Task circling
Circ.60	Circling in last 60 minutes
Sp.60'	Last 60 minutes speed
FltTime	Time of flight
Ballast	Current ballast
Radius	Circling radius

FES/JDU

Batt.Left	Remaining battery level (in minutes or percent)

Misc

Title	Description
Label	An arbitrary text label. You can type whatever text you like inside.
Airspace name	Distance to nearest airspace
Location name	Nearest location
Airport name	Nearest airport
Wpt.name	Nearest waypoint
tmDist	Team partner distance
tmBrg	Team partner bearing
tmVario	Team partner vario
tmAlt	Team partner altitude
tmName	Team partner name
tmRelAlt	Relative altitude of teammate
tmTo	Relative bearing of teammate
tmCode	Teamcode of my position
tmWptCode	Waypoint teamcode
Eng.TT	Engine total time
Eng.FF	Engine flight time
Flarm	Flarm RXTX
COM	Active Frequency
STBY	Passive Frequency
XPDR	XPDR Transponder
Rain Status	Rain data status
Rain Age	Age of displayed rain image
TkOff	Takeoff time

Optimization data

Title	Description
Opt	Optimized distance
OptHome	Optimized distance to home
Tri	Optimized FAI triangle distance
OLC.Sp.60'	OLC 60 minutes speed
Sp.150'	Last 150 minutes speed
Alt.150'	Altitude 150 minutes ago

Outside parameters

Title	Description
Wind	Current wind with direction and strength
cWind	Head/Tail wind component. There are two values displayed. First is calculation based on track and wind direction and second is difference between TAS and GS.
WindX	Side wind component. Displays strength and direction.
OAT	Outside temperature
Humidity	Relative humidity. (A special sensor must be attached to device)
Dew.Temp	Dewpoint temperature. (A special sensor must be attached to device)
Pot.Temp	Potential temperature

Target parameters

Title	Description
Dis	Distance to target
Arrival	Arrival altitude at target
ArrMc0	Arrival altitude at target with MacCready setting=0
ReqAlt	Required altitude to reach target
Brg	Bearing to target
Radial	Radial from target
To	Steering course to target
ETA	Estimated time of arrival
ETE	Established time en route
reqE	Required glide ratio to target
Target	Target name
Req.Mc	Required MacCready value to target, which takes into account also wind.
Elevation	Target elevation
Rwy.Dir	Target runway direction
Rwy.Len	Target runway length
Frequency	Target frequency
Sunrise & Sunset	Sunrise and sunset time at target location
Description	Additional description of target
METAR	Raw or parsed target METAR data
TAF	Raw or parsed target TAF data
toWind	Head/tail wind to target. There are two values displayed. First is calculation based on bearing and wind direction and second is difference between TAS and GS.
Code	Target code
VMG	Velocity made good

Task parameters

| Title	Description
tDis	Remaining task distance
Fin.Elev	Task finish elevation
tArr	Arrival altitude on task finish calculated through all remaining task points
tArrMc0	Arrival altitude on task finish calculated through all remaining task points with MacCready set to 0
tETA	Task estimated time of arrival
tETE	Task established time
tRemain	Task remaining time
tDelta	Task delta time. A difference between tETA and tRemain
tskE	Required task glide ratio
Tsk.Sp	Task speed so far
tReq.Sp	Task required speed calculated from tRemain and tDis
tSp.60'	Last 60 minutes task speed
tReq.Mc	Required MacCready value towards next task point, which takes into account also wind.
trqSTF	Required speed to fly calculated from required MacCready
T.Start Alt	Task start altitude
xTrk	Current leg cross track distance
tVario	Average vario for task
sDis	Distance to zone center

sBrg	Bearing to zone center
csDist	Cross distance to zone center
tunAlt	Task uncompensated arrival altitude

3.2.3 Message symbol

This is special symbol which represents notifications visible on your device. You can't change symbol for each page separately but only for every mode (airport, waypoint and task). It is displayed after you select it bellow list of symbols. Now it is possible to resize and move the symbol. If you want to hide message symbol you need to deselect it or select some other symbol from list on the left side.

3.2.4 Color editor

Color editor is used to define a color for a selected property. The color dialog will open if you click on down arrow in property value cell.
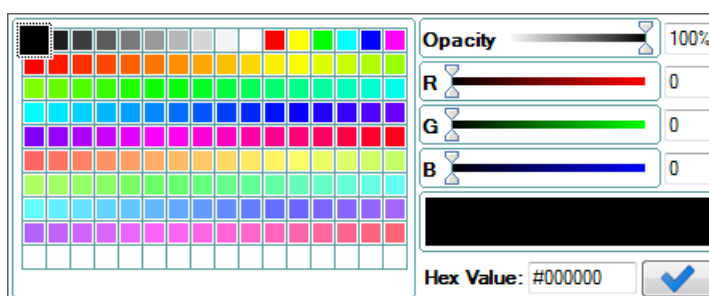

Color can be selected from a grid of predefined colors on the left side of dialog. Or you may change red, green and blue values with sliders or enter numerical values. Color can also be set with hexadecimal value.

It is also possible to define opacity for selected color. Slide opacity slider towards zero to make selected property transparent.

3.2.5 Font Style
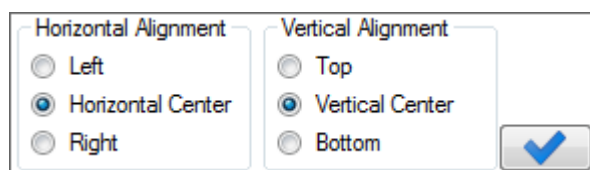
If you click on font style property a font style dialog will open.
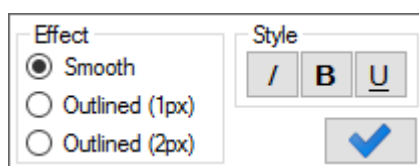
Different font styles can be selected there and also optional text outline.

3.2.6 Text Alignment

Text alignment popup dialog is used to define how text is aligned inside a symbol.

3.2.7 Ranges

Items like G-meter and Data symbol can use ranges for its display. With ranges editor you can modify their appearance when symbol value changes.

In center there are series of value and color controls. Edit value to constrain ranges and select color to change appearance of range. On some symbols text can start blinking when value enters specified range. Press on "⚠" button after color selector on ranges where you want blinking to occur. Preview of ranges is drawn on left side of list.
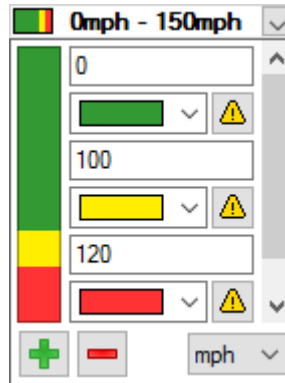
You can add new or remove range with + and − buttons on bottom left. After pressing the button, hover over tape on left side and click on range to remove it or split it in two. On bottom right side there is possible to select unit in which values are written in.

⚠ If ranges preview is drawn as diagonal lines while editing this means that written values are invalid or are not defined in ascending order.

4 Revision history

December 2009	Initial release of manual
May 2015	Described new symbols, dialogs and functionality
September 2016	New checklists file format and new symbols; Updates and typo fixes
January 2017	Updated range editor, described 2 new symbols