Prospa release notes

**3 November 2021 (V3.96)**

**New UI options**

**New commands**

* assignlock
* class
* classinfo
* copydir
* copytoclipboard
* curcli
* cureditor
* dealias
* dec
* donothing
* findmacro
* findstructure
* findxvalue
* fixlist
* functextedit
* getargnames
* getparentpath
* getstructitem
* ignoredlls
* import
* index
* inheritclass
* isappopen
* isplotidle
* isproc
* isvalidfilename
* listto1d
* makelink
* mkparstruct
* printtostring
* replacesubexp
* rmcachedmacros
* rms
* searchdlls
* setuiskin
* showprocedures (removed)
* structappend
* structarray
* trimstr

**Modified commands**

sortlist

**New/modifed standard macros**

**To be Completed!**

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**19 March 2017 (V3.54)**

1. The fitting DLL now includes an option to fit multiple Lorenzians (*peakfit*).
2. The fitting DLL now includes the command *invertd* which performs a gauss-jordan inversion on double data.
3. Added & and | operators between numbers and matrices
4. The list of procedures (with arguments) in a macro name, typed into the editor, can be viewed using ctrl-M
5. Improved help viewer so commands are now automatically grouped by Prospa not by the viewer.
6. Caching has been improved. Can now list local caches
7. Fixed bug which caused a crash if lists had long strings (>200) embedded
8. Added code to make simple movies using 3D graphics.
9. Added option to reset spectrometer DSP remotely (*dspusbreset*).
10. SQLite support added via the DLL command *sqlite*.
11. Serial comms DLL improved.
12. Half fractional linewidths possible when drawing plot lines.
13. Improved line join style in plots which makes thick lines acceptable.
14. Plot lines are now have fractional pixel positions rather than integer positions.
15. Replaced dotted selection rectangle with translucent rectangle (as an option).
16. Pause command extended to allow finer and shorter timing steps.
17. Command added (*seteditrendermode*) to improved editor rendering speed on some computers.
18. SpinsolveExpert pulse programming DLL has extended shim command to allow 32 shims (for Ultra-Spinsolve support).

**1 May 2016 (V3.41)**

1. Nameable procedure arguments added.
2. Default procedure arguments added.
3. Procedure argument syntax help.
4. Structures inside structures now supported
5. Access to window variables via the window object now supported.

**1 April 2015 (V3.40)**

1. 2D string lists are now possible.
2. New preferences folder: (Preferences V3.4)
3. New commands marginspref to set the preferences for the plot margins.
4. Some bugs in scrollable panels fixed.
5. 2D plots support logarithmic data mapping.
6. Small script performance improvement.
7. Window icons can now be set.
8. Several bugs in the Serial DLL fixed.

To do: Documentation needs updating

**23 October 2014 (V3.39)**

1. New command 'iskeypressed' added.
2. Multiple data sets can now be dragged and dropped onto the 1D plot (hold the control key down while doing this).
3. Complex x-y data sets can now be imported and exported in ASCII format.
4. 'Go to procedure' option in the editor now works equally well for .pex and .mac files.
5. Fixed bug which sometimes prevented procedure calls from passing arguments if some of the arguments contained other procedure calls.
6. The control identifier returned when making a control is now a window variable by default.
7. Added file-search capabilities to the HTML viewer control by adding a javascript command.
8. New command sortmatrixrows added.
9. copy, paste and pasteinto option added to plot control class.
10. copytoclipboard command added to plotregion class.
11. ignorex(y)range option added to trace class. These traces will then be ignored when working out autoscaling parameters.
12. Movable dividers can no longer overlap.
13. Improved convergence in FISTA 2D inverse Laplace code.
14. Internal folder in documentation renamed Commands.
15. Functionality of the scrollwheel in 1D and 2D plots can now be set using the plotviewversion command.
16. Made the random number generator (rand) use a new seed before running experiments.
17. Corrected bug which was not resetting plot offsets when different plots are displayed.
18. The help interface has been updated to allow all help files to be searched.
19. The way the scroll-wheel zoom works in 3D plots has been inverted to match 2D plots.

**18 August 2014 (V3.36)**

1. All button icons in the program replaced with png files to allow proper transparency.
2. Yes/No/Cancel option added to query command.
3. 'mergetitle' option added to window class.
4. 'current' option added to text editor class.
5. 'updatedittitle' command added.
6. 'valueID' and 'objectID' options added to findobj command
7. New commands 'isfloat', 'isinteger' and 'isdouble'.
8. New command 'setlistvalues'.
9. Can now call procedures in a pex file without appended extension.
10. Added 'uservar' option to all object classes.
11. 'isvar' command now supports structure members.
12. 'filename' and 'filepath' options add to plot region class.
13. Support for magnitude display option in 1D plot added to func1d command.
14. Textmenu dropdown list automatically adjusted to fit longest string.
15. A number of other minor bug fixes.

**20 June 2014 (V3.30)**

1. Improved matrix multiplication speed of large matrices.
2. Throw command option added try-catch-endtry block.
3. New command isobj to check for the existence of a control.
4. New command savewav to save a vector as a .wav file.
5. Class types can now use the vartype command.
6. 1D and 2D plot regions can now load and save data.
7. Prototype FISTA algorithm added to Analyse2DPlot macro.
8. New command adjustctrls added which repositions all controls in a window.
9. Added option to start Prospa running from the Windows command line.

**29 May 2014 (V3.28)**

1. Improvements to the panel control. (panelset option now working correctly and panels with active parameter can be scrolled)
2. getctrlvalue command now has a range option.
3. Tabbing from listboxes corrected. (tabbing corrected)
4. Improvements to progress control. (Faster drawing on Windows 7/8, value can be set using setctrlvalues and obtained using getpar)
5. Improvements to radiobutton control. (Correctly deleted with rmobj).
6. Can now take the trace of a double matrix.
7. Drag and drop files from servers now working.
8. New commands ceil and floor added.

**17 April 2014 (V3.24)**

1. Added a menu folder in Prospa preferences which can store predefined menu layouts. This can be accessed from the Prospa Preferences dialog using the load and save buttons.
2. The control *region* parameter is now store when saving window layouts in the designer.
3. Requesting a license on a non-English language computer should now identify the Desktop folder correctly.

**7 April 2014 (V3.23)**

1. Fixed a bug which sometimes causes topmost hidden Prospa windows to appear when a Windows folder is opened.
2. Fixed a bug which occurs when trying to copy and paste single plots from a multi-plot window. If pasting as a bitmap the unwanted plots would appear in black.
3. Improved license support for Laptops which use docking stations.
4. Fixed printing bug which could cause Prospa to freeze if accessing printer properties.
5. Fixed a crash which occurred when using the message command with embedded C formatting characters such as %s.

**30 January 2014 (V3.21)**

1. Improvements in the following macros: diffAnalysis, t1Analysis, t2Analysis (scrollable and increased number of points to 200)
2. New macro added to perform a real 1D Fourier transform (rft1d) .
3. Prospa remembers whether the main window has been maximised when it closes.
4. New Prospa commands added, sd (standard deviation), mean/avg, copyplot, pasteplot and rmfolder.
5. Improved commands: getdate
6. Several older 1D and 2D plot formats can now be saved.
7. Selecting a Prospa file will cause Prospa to be displayed if it is minimized (previously nothing happened).
8. More flexible axis display now possible. (See curplot()->axes->type())
9. Added a temporary license capability.
10. New text editor class commands added (wordwrap, showcontextualmenu, showsyntaxcoloring and showsyntaxdescription).
11. New picture class commands added (usebluescreen, resizetoframe, clearpicture).
12. New divider class command added (limits) which can be used to restrict divider movement.
13. Leading or trailing spaces are now removed when extracting information from text boxes.
14. Sending user defined messages does not force the current GUI to have window focus as previously happened.

**3 October 2013 (V3.20)**

1. Improvements to the 1D Lawson and Hanson inverse Laplace command (lhil1d). Help file included with examples.
2. License files now have a .lic extension to prevent problems with email transfer. Prospa license file now called prospaLicense.lic although the older license file license.txt is still recognised.

**12 September 2013 (V3.20)**

1. Prospa now requires a license. A license is also required for the Lexus 1D NNLS and the two 2D NNLS commands included with the software. License information is displayed in the Prospa About box.
2. New 1D and 2D NNLS macros included in the NNLS menu.
3. New array commands: linspace, logspace, pseudologvec, psuedologbin.
4. rand command extended to 2D.
5. shuffle command added.
6. Exclusive or command xor added.
7. getctrlvalues and checkctrlvalues (was checkcontrols) commands extended to work on a subset of controls.
8. Default Prospa color scheme changed so that plots have a white background.

**4 June 2013 (V3.13)**

1. Panel control now works for all controls except tab and statusbox.
2. Antialiasing now the default display method.
3. White background and orange foreground now the default 1D plot colors.
4. “Find macro error” in text editor will now display the error line in an existing text window if the correct file is already loaded.
5. Tooltip support for controls added.
6. Image file saving for 3D plots added.
7. Memory leak in image file saving fixed.
8. Missing color scale in 2D image files restored.
9. Added batch file movePref.bat to install folder. Double clicking on this file moves the existing Prospa preferences to a backup folder. This can be used if Prospa is not starting due to corrupt preferences.

**22 February 2013 (V3.12)**

1. Panel control scrollbar thumb now resizes as parent window resizes.
2. hex command now works with arrays.
3. The control fonts can now be displayed using the new setfont command.
4. Added command “getmainwindow” to get the main window number (the Prospa window).
5. Fixed a memory leak bug in the setpar command for the picture control (option “file”).

**23 January 2013 (V3.12)**

1. 2D plots with log axes now zoom correctly, allow correct cursor measurements and also correctly display rows and columns in the 1D plot.
2. Editor now has m by n region menu option.
3. Plots can now have their margins set individually (needs help).
4. Added histogram command (needs help).

**29-Nov 2012 (V3.12)**

1. Double precision matrices can now be combined with the join command.
2. Very large parameter sets may now be loaded into lists. Before the limit was 200 characters per line.
3. Command addprefix added (cf rmprefix) to add a prefix to a list.
4. Added getlistnames command to return all parameter names in a list.
5. Added command renamelistentry to change the parameter name
6. Added command splitpar which splits the parameter name from its value.
7. Added command rmfromlist to remove an entry from a parameter (or other) list.
8. Add panel command which makes a scrollable window into which other window controls may be displayed.
9. try-catch-endtry blocks can now be nested as long as they are in different procedures.
10. Folders can now be dragged and dropped onto the main menu bar to allow quick additions to the main menu.
11. Numerous bug fixes.

**14-May 2012 (V3.12)**

1. 2D macro integrate2DStrip extended to work with complex data.
2. A new designer version, designer (no window).mac, has been added which can be used to edit tab user interfaces more easily.
3. Bug fix: memory allocated when copying plot and images to the clipboard or a file was not being freed up.

**27-April 2012 (V3.12)**

1. controlInfo macro improved – it now displays checkbox, radiobutton, tab and texmenu options for these controls.
2. Scale factor option for copying plots or saving them as images now included in main Prospa preference dialog. This allows higher resolution versions of the screen plots to be copied and saved.
3. Bug in manualPhase1d macro fixed – it wasn’t reporting the correct phase value to the CLI.

**30-March 2012 (V3.12)**

1. Bug fix: moving a trace from one y axis to another caused a crash.
2. Bug fix: copying a trace from one plot to another did not updates the trace ID. This made it difficult to select the traces.
3. Reverse axes are now possible on 1D, 2D and 3D plots (suitable for ppm scales). Check box option available in the plot and image preferences dialogs to select the direction.
4. The plot axes linewidth can now be set.
5. 2D waterfall plot replaced with a 3D plot version. This allows the display of scales and provides faster rotation updating.
6. Antialiasing command aa3d added. This can be used to toggle implicit antialiasing in the 3D plot for those people without good graphics cards.
7. Documentation in pdf form added to install folder.

**15-March 2012 (V3.11)**

1. Added prototype version of the waterfall plot for the 2D window.
2. Bug fix: setting the title in a plot window from a macro could cause the program to freeze. plt->title(txt).
3. Major changes to the way plot files are loaded (to make it easier to handle file versioning). Should be transparent to end users.

**6-March 2012 (V3.11)**

1. Fix made to prevent the 2D displayed region from being invalid (via the plot parameters macro). The plot parameter macro will also show these limits.
2. Correction to plot x/ydirection choices – was reverse in one place and reversed in another. Should be reversed.

*Changes before 2 March 2012 not recorded.*