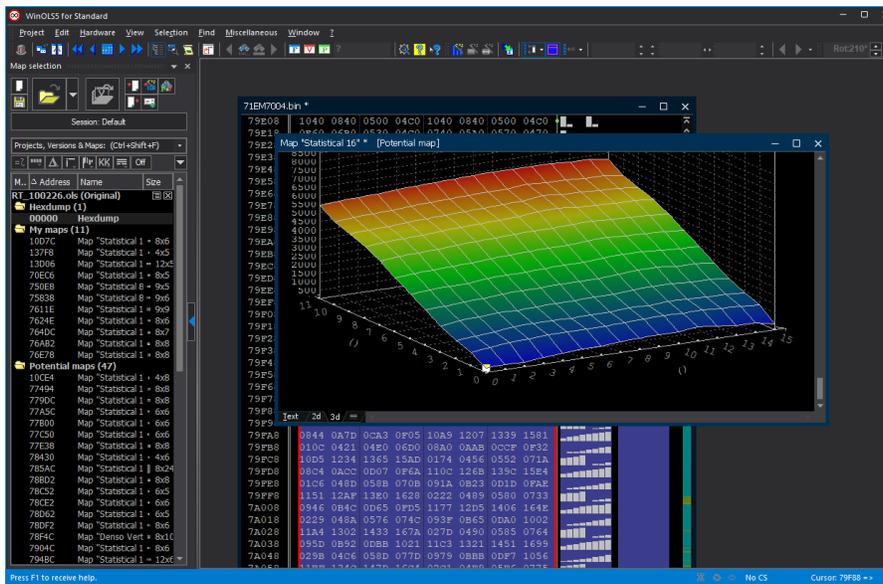




Manual

WinOLS 5.74



WinOLS 5.74

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Printed: Februar 2025

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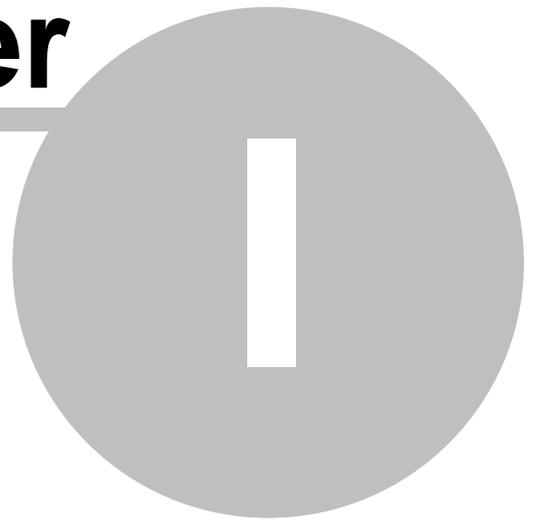
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Chapter



1 Quick introduction

1.1 Installation

When starting the setup program WinOLS.EXE the installation assistant asks for acknowledgement of the license agreement. Of course this is required in order to continue the installation process.

After this you'll be asked for confirmation of the default install path, which is "C:\Program files\EVC\WinOLS". This one should also be used when carrying out a network installation. The car data can be saved to a directory on the server later on.

The next three queries may also be confirmed by pressing "Next".

The software will work in demo mode until registered. Simulator or EPROM hardware are not supported yet. In addition you are not able to save any data.

Attention: if you want to use legacy devices like the OLS16 simulator or the MP2440P eprommer, the you have to enable the respective checkboxes during the installation.

1.2 Registering WinOLS

To activate WinOLS, use the menu item "Other > Updates + Activation".

If you have not yet purchased WinOLS or would like to license additional workstations, you can do this online.

1.3 Language

When using the German or English version of Windows the language will be set automatically. All other versions will not be recognized. The language settings can be found at "Miscellaneous > Configuration > Miscellaneous > Language" ("Sonstiges > Konfiguration > Sonstiges > Sprache"). When this setting is modified WinOLS has to be restarted for the change to take effect.

1.4 Checksums

WinOLS can be expanded with checksum modules. These module can be purchased directly from EVC or online on evc.de. After the purchase simply use the WinOLS update function to automatically install the modules.

You can check the state of the currently installed modules in the dialog "? > Info about plugins".

2. Search field for "projects, versions and maps". Enter a text to reduce the view to matching entries
3. Dropdown button for previous searches
4. Options for the map list and the search
5. Button project properties and fast switching (black triangle) between elements
6. Unimportant program areas (empty ranges and program code) are shown pale (More color info)
7. Switching of the preference of hexdump or bar when the window is too small
8. Color-coded overview of the project. The scrollbar has 3 buttons at top and bottom: Scroll to top/bottom; Scroll fast; Scroll normally
9. Automatically found, potential map
10. Map registered by you (Also visible at "My maps")
11. Switching of the view mode between Text, 2d, 3d and Slices
12. Checksum status: Checksums, Patches, Sync-Blocks, Text description
13. Hardware status (of OLS16 or OLS300 modules)
14. Several filters for the list "Projects, Versions and Maps"
15. Show/hide sidebar

1.7 Projects

All eprom data will be administered in so-called projects by WinOLS, which consist of an original file and as many modified ones (versions) as are needed. They will be saved to one single file together with the vehicle data as well as possible comments.

Please note:

It is not possible to edit external file formats directly. Since WinOLS stores lots of additional information you have to import it into a WinOLS project first (for example by drag+drop) and export (or burn or write) it later again.

1.7.1 Creating a project

The creation of a new project starts off by selecting "Project > New". Data out of an eprom or from a file can now be read into this empty project.

1.7.2 From a file

Data from a file is being read in by selecting "Project > Ex- & Import > Import File". First you have to choose a file type, then the file name has to be chosen.

You can drag files or Outlook e-mail attachments directly into the WinOLS window. If you drop the file over an existing project window, it will be imported as version. If you drop over the WinOLS frame window or on an empty workspace background, it will be imported as new project.

1.7.3 From an eprom

To read out an eprom, you have to choose its type first at "Hardware > Producer". Then you can start the reading process by selecting "Hardware > Eprom > Read".

Please note:

Eprom operations are only supported if the project type was set to "Eprom" in the Project properties or if the project is empty.

1.7.4 From an ECU (via BDM100)

Certain ECUs (you'll find a list on the EVC Website) can be read with the additional hardware BDM100. This not only reads the eprom, but all available memories (e.g. the CPU-internal memory). To store this data WinOLS creates multiple "Elements" within the project. (Elements are explained in the chapter "Special aspects".)

To read a ECU via BDM100 please refer to the BDM100 documentation on the EVC website. To initiate the read process in WinOLS select the menu item "Hardware > BDM > Read".

Please note:

BDM operations are only supported if the project type was set to "BdmToGo" in the Project properties or if the project is empty.

1.7.5 The original

The first read-in data record will automatically be saved as "Original" while any further ones will be named "Version". Different names can be assigned later on, though. Some checksums require the file saved as "Original" to contain the unmodified data from the ECU.

After reading in the original a dialog window will appear which asks for typing in the vehicle data for the project to be identifiable later.

1.7.6 The version

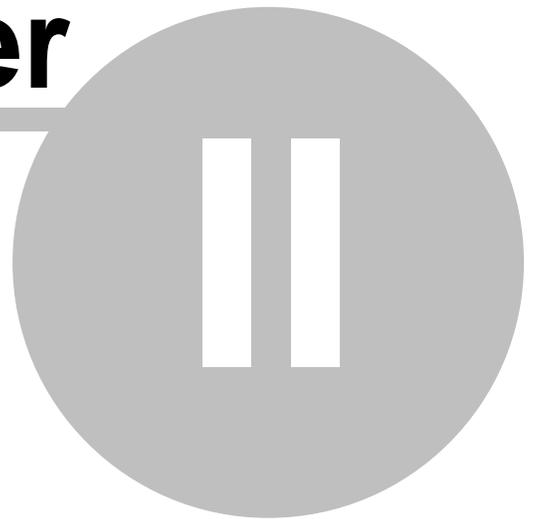
When a version has been imported another dialog window will appear where a name and the vehicle information may be entered. You can also read in a file that was modified by another software just for the checksum to be balanced.

Version folders:

By default versions are simply listed, but you can also use version folders to organize them. This has no influence on the program behavior, but only affects the display of the version list.

Any version can serve as folder to another version. Furthermore you can use abstract folders (which are just folders, but not a version) which can also contain other versions. To change the version folders, simply drag a version to another place in the open version dialog or edit the version properties and change the parent folders. To get a version back to the top level, simply drag it far to the left.

Chapter



2 Typical tasks

2.1 Creating a new project

Choose the menu item “Project > New”.

Now you have an empty project and you need data (Original data is always best). Either from a file or from an eeprom. To import a file you have several possibilities:

1. You drag the file with “Drag und Drop” into the empty project window.
2. You import the file with the menu item “Project > Ex- & Import > Import file” or

you activate the import with the keyword shortcut Ctrl+I or the icon  “. Choose your file format, click on “Ok” and choose the file.

Now you have imported the original. All versions that you create or import later will automatically be compared with the original and the differences will be marked with colors on the screen. If you want to import a version, just repeat the steps shown above.

2.2 Automatically find maps

 Video

If you have created a new project, WinOLS will automatically start to search for maps after a few seconds. You can see this in the status bar at the lower end of the window. You can influence the background map search with the menu items in the “Search” menu.

After the map search has finished, you have several possibilities to review its results:

- There is a new subfolder labeled “potential maps” in the project and map list at the left border of the window. It contains all maps that were found during the search. Open the folder clicking it with the left mouse button. Click on a map in this folder to view it in the hexdump. If the Preview Window is open (Hotkey “P”), you’ll directly see a 3d preview of the potential map.
- Use the function “View > Recognize map” (Hotkey “F”) to jump to the next (or “Shift+F” for previous) map and to select it.
- Every map that was automatically recognized has a small tag with its name. Click on the tag to display the map optimally. Double-click it to convert the potential map in a normal map (which can be edited easier). Right-click the tag to get more options.

2.3 Manually find maps (Text mode)

It is not easy and requires a lot of skill to manually find maps. First you should start with the view mode that you like best. For this click on the tabs “Text > 2d > 3d” on

the lower border of the screen or use the hotkey “T” and “Shift+T”.

This section describes the manual search for maps in text mode. A corresponding description for the 2d mode is in the following section.

Now choose the view parameters. Make a doubleclick on the window and choose the “Values” (8 Bit, 16 Bit, ...). New ECU’s often use 16-Bit Data. Motorola Processors use “HiLo” Notation and Intel Processors use “LoHi”. (WinOLS automatically recognizes the processor manufacturer. You can see it the in the project properties. Choose “Project > Properties: Project“.)

Now scroll through the file. Use the mouse (mouse wheel or scroll bar) or the keys. A few tips:

- If the numbers are pale, then this area was recognized as program code by WinOLS. You should ignore this area. Normally you won’t find maps here and changes might easily result a crash in the car’s software. Empty areas are also displayed and are equally uninteresting.
- Use the overview window (Menu item “Window > Overview”) to get a rough outline of the project. You can move and resize this window, just like the preview window. You can also tell this window to “roll up” when it is not active by clicking the button left of X button.

If you’ve found something that could be a map, the first thing you should do is to adapt the view settings for this map. You can do this in all view modes, but it is easiest the text mode. Start with the number of columns. The maps often have “jumps” which represent a new line in the map. Change the number of columns in such a way, that all jumps are in the same columns. You can change the number of columns with the hotkey “M” and “W”. In the viewmode “Text” you can also change it by clicking and on the single vertical line and dragging it.

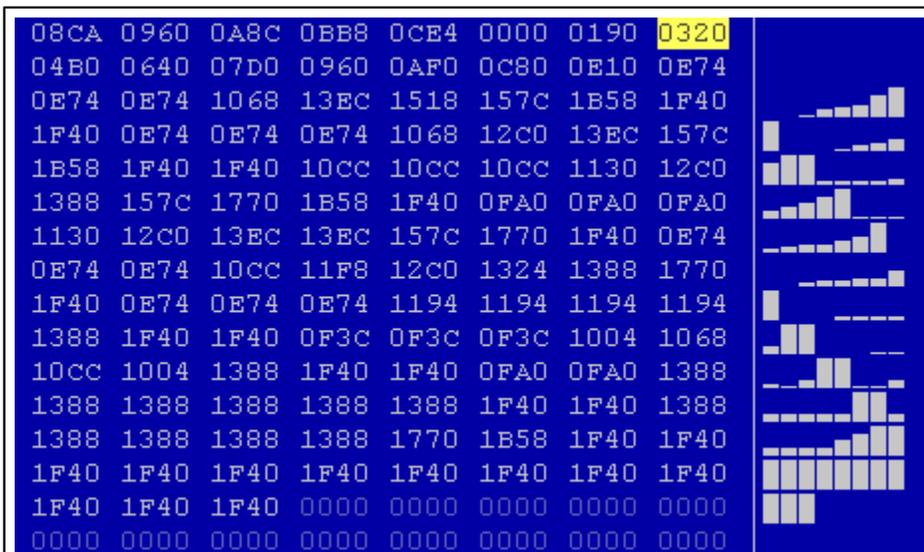


Image: Map before changing number of columns

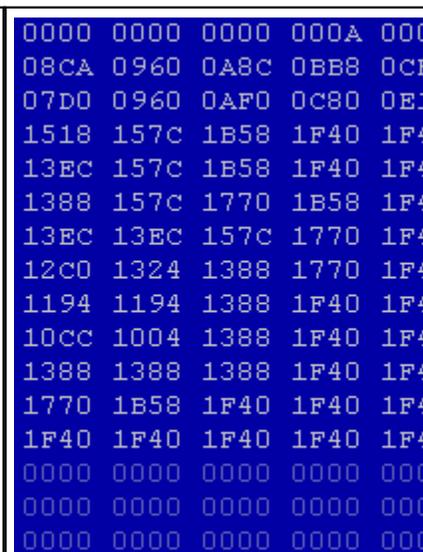
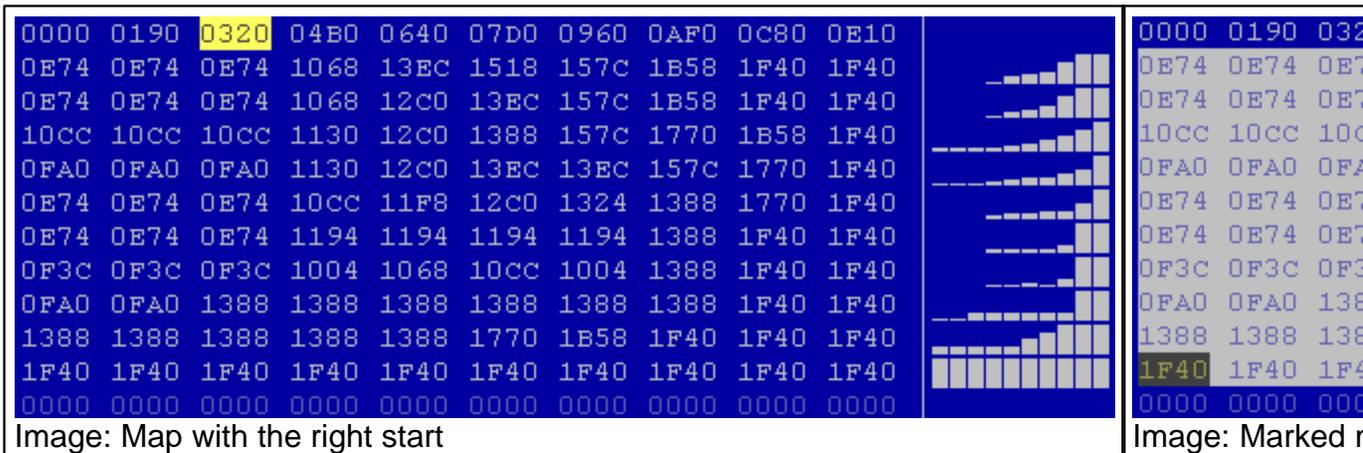


Image: Map after changing number of columns

Now you can probably recognize a bit of the maps. The next thing that you should do is to move the start address of the map so that it will start on the left of the hexdump. For this use the menu item “View > Move origin left” And “View > Move origin right”. (Hotkeys Ctrl + Cursor left or right.) If you’re finished with this, select the map.

(Tip: If the bar display doesn’t contain anything useful, you should optimize the value range for your data. If you’ve selected the map, choose “View > Optimize value range” or press Ctrl+B. WinOLS will automatically be configured in such a way that the data used in the selection optimally uses the heights available for the bars.)



If you’ve activated the preview window, you can now see a 3d preview of your selection. Use the menu item “Selection > Selection -> Map” (Hotkey “K”) to create a map from your selection. A new window will open and you can edit your map.

But first, a few alternatives for entering maps:

- The assistant “Support map selection” can help you. Activate it with the menu item “View > Support map selection“. At the beginning nothing will happen (except if you already had a selection active while doing this. In this case the assistant will be applied without activating it permanently). If you now create a selection with your mouse, the assistant will try to optimize it. It will perform the steps that we described above (Number of columns, Start, ...) automatically. But you should always be careful not to select any data that does not belong to the map.
- The assistant works perfectly together with the “Map Selection“. You may need to activate this by selecting the menu item “View > Symbol bars > Frame: Map Selection“. Whenever you now create a rectangular selection, you can change it with the new symbol bar afterwards. You can change the beginning in X or Y direction or change the number rows or columns.

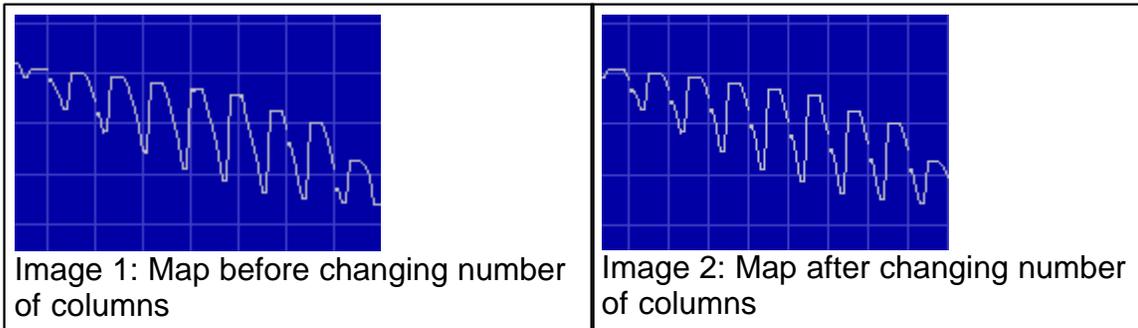
2.4 Manually find maps (2d mode)

Finding maps in 2d mode is similar to finding them in text mode. Start the same way as above by configuring the view parameters (8 Bit, 16 Bit, ... / HiLo, LoHi) and then

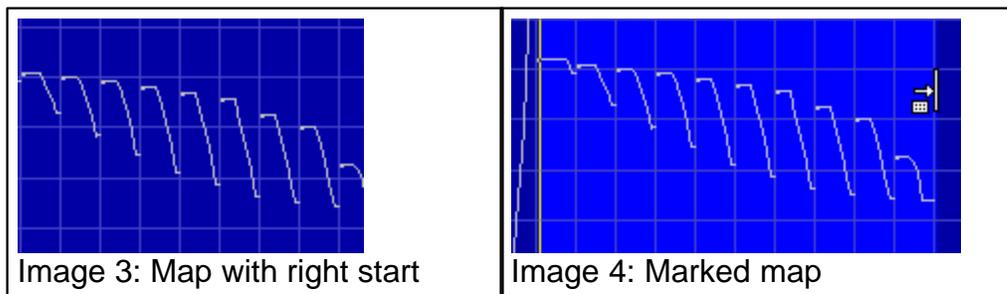
scroll through the file until you find a possible map. (Remember that you can change the X and Y zoom factors with the menu bar “Frame: View” or Ctrl+Mousewheel.)

If you found a possible map, you should start by setting the right number of columns. In 2d-Mode the “line breaks” will be symbolized by vertical lines, but you can configure this in the configuration (page View, in the 2d-Range).

Change the number of columns so that the vertical lines are always parallel to “jumps” in the map. Use the hotkeys “M” and “W” to add or remove columns.

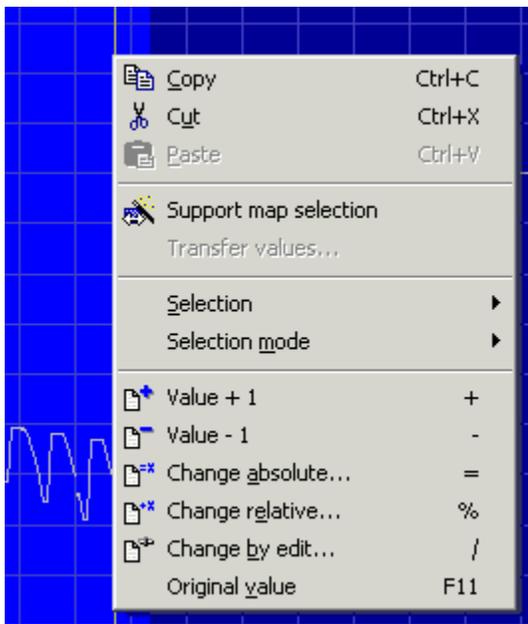


In 2d mode you also have to move the beginning of the map (“View > Move origin left” and “View > Move origin right” or with the hotkeys Ctrl + Cursor left or right). It can now become clear that the number of columns isn't right, yet. In this case go back to the steps shown above.



Now you have to select the map, which isn't easy in 2d mode because the pixels are quite close to another. Start by marking the map only rough. Now move the mouse cursor over left end of the selection. The cursor will change to an arrow pointing to a line (see image 4). Click here and drag to the left or right to change the selection. This will only change a selection that was already made. WinOLS will automatically make sure that the selection starts on a line break. Repeat this for the right end of the selection.

Again, it is easier with the assistant “View > Support map selection”. If you don't want to activate it permanently, you can also apply it on demand. Just right-click a selection and select this function from the context menu: (Of course this will also work in text mode)



2.5 Manually find maps (Typing)

You can also create maps by typing the data manually. Simply press "K" (or "Selection > Selection->Map") anywhere in the hexdump. This will create a map at this address and open the dialog "Properties: Window". Now you can enter parameters like name or size.

Tip: The map window in the background is automatically updated to give you feedback.

Tip: Special info for Vertical-maps

2.6 Manually find maps (Vertical map)

This is a special map format where the axis data is not (as usual) separated from the map data, but interwoven. Each row of map data starts with the corresponding value of the y-axis.

Manually:

To represent this with the WinOLS map settings you need to:

- adjust the rows/columns of the map to the size of the map data (without axis) in cells
- set the start address of the map to the first cell of the map data
- set the line skip bytes for the map to "2" (for WORD maps; or "1" for BYTE)
- set the byte skip to the y-axis to "2*columns" (for WORD maps; or "1*columns" for BYTE)

Using selections:

Use a rectangular selection to select the map data, but not the axis and press "K".

WinOLS will now create a map.

Using potential maps:

Make sure the car ECU manufacturer is set to "Denso" and start the potential map search.

2.7 Create many maps

If you want to create many similar maps, there are several possibilities:

- Create a selection and generate the first map (K). If you have activated the option "F12 > Miscellaneous > Edit > After map create select the area behind" (and if necessary "Open newly created maps directly" deactivated), then the next map is selected directly and you can simply press K again.
- Create a selection that does not result in a map and press K. If you have activated the option "F12 > Miscellaneous > Edit > Create Map Wizard", then you can now enter not only the map size, but also the number.
- You can also (via the project menu) export the selected maps as CSV, edit them with Excel (and add new entries) and then import them again.
- If the maps have already been identified as potential maps, you can select them in the KF list and simply move them to the normal map area.
- Create the first map and edit the properties as desired. Use the function Copy map properties and activate the option "Apply automatically". Now create new maps by pressing K in the hexdump (without selection). (If necessary, deactivate "F12 > Miscellaneous > Edit > Open newly created maps directly").
- Create the first map manually. Now hold Ctrl+Alt and click in the hexdump on the first cell of the map and drag it to a new position to create a copy.

See also:

- Importing data from older projects
- Edit many maps

2.8 Edit many maps

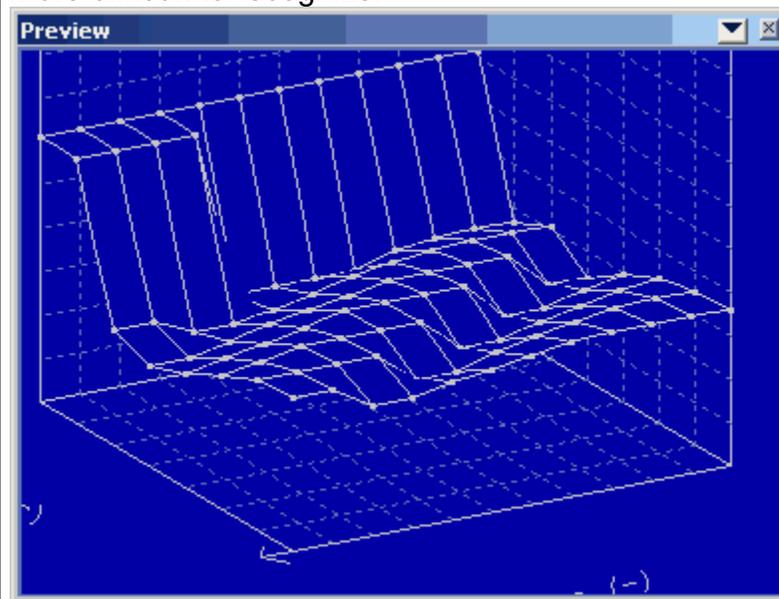
To change several maps simultaneously in a similar way, you can use the following functions:

- Copy source data with map properties and paste it into a map with Ctrl+V.
- You can also select several maps in the map list and press Ctrl+V there.
- If you right-click a selection in the map list, you will find the menu item "Edit multiple maps" for numerous standard functions.
- Via the project menu you can export the map list as CSV, edit it in Excel and then apply it to the project again. This allows them to process conditions via Excel formulas, such as maximum values.
- With the LUA plugin you can write scripts to edit the maps.

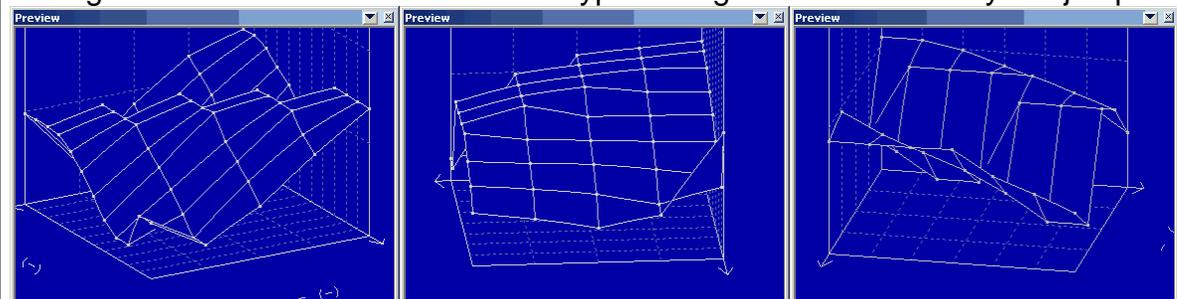
2.9 Preview

If you've activated the preview window, it will automatically open if you have a rectangular selection that is not wider than 32 columns. This is very helpful for configuring your maps, but you must learn how to "read" the window. Here are few typical views to help you:

Too much selected. The high area looks different and doesn't belong to the map. Because it is much "higher" than the rest, the rest is displayed smaller and thus is more difficult to recognize:

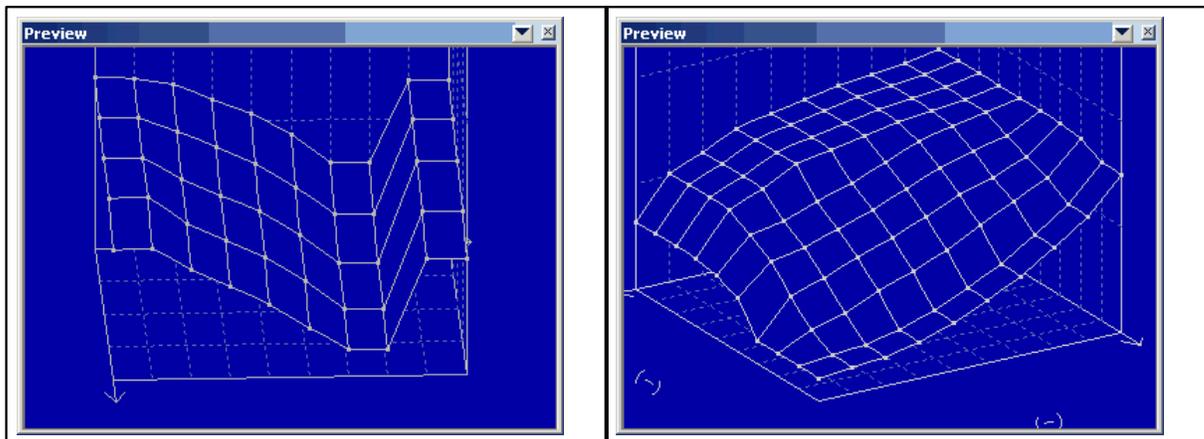


Wrong number of columns. Look at the typical diagonal line formed by the jumps.



Right number of columns, but a wrong start. There is a "jump" within the map.

Everything right:



2.10 Changing maps

Why use maps? You could edit data directly in the hexdump, but editing in a map has many advantages:

- It brings structure in a project and makes it easier to find the maps again, later on.
- You can open multiple windows at the same time.
- The correct axis values are displayed, even if they are done by additive calculation.
- You cannot change data outside of the map by chance.

You've created a map with the methods described above and now want to change it. The simplest possibility is to use the keys "+" and "-" to increase or decrease the value at the current cursor position. Keep the key pressed to make the change go faster and faster. If you want to return to the original value then use the menu item "Edit > Original value" (Hotkey F11). If you've created a selection this will apply to the entire selection.

Note:

You can also change the way that selections are created. Normally a selection is kept until you delete it ("Selection > Select nothing" or the key „Del“). But you can also configure WinOLS, so that a mouse click will always remove the previous selection ("Miscellaneous > Configuration > Miscellaneous > Edit“).

If you right-click a selection, you'll see a menu with several more tools to change the selected values. Finally you can also press Enter key to directly enter a new value and again press the Enter key to confirm it.

2.11 Correcting checksums

Correcting checksums is very easy because this is done by additional plug-ins. They must be purchased separately but for this they do all the work needed automatically.

Start the checksum dialog with the menu item "Edit > Checksum" (Hotkey F2). Click

on “Search”. If you own the right checksum module, it will automatically be applied and the checksum will be calculated and (if you want that) always be corrected.

If you do not have the matching module, you can have your project checked online (free and without any commitments). Click on “Search checksum online”. The project will be compressed and uploaded to the EVC server (Internet connection required). A few seconds later you will receive an answer, telling you which checksum module will work for your data.

Important:

Some checksum modules require an unmodified original version. That means, that you must have loaded the original data from the car as original version into the WinOLS project. Otherwise the checksum may not be recognized or not calculated correctly.

2.12 Importing data from older projects



If you have a new project that is similar to an old one, there is no reason to reinvent the wheel. WinOLS has many features to import the data. This applies both to structure information like maps and to concrete changes.

WinOLS offers the following options

	Data source	Comparison criteria	Offsets	Tolerance?	What can be transferred?		
					Map structure	Map values	Hexdump values
Import: Similar project	.ols	n/a	none (except: Data areas)	n/a	yes	yes	yes
Import changes	.ols	Content	per map/block	yes	yes	yes	yes ¹⁾
Reference version + Connect windows	.ols	Manually/Offset/Content/Map-Id	manually/individually	yes	yes	yes	yes
Import maps	.ols	Offset	1 per file	no	yes	yes	no
Map packs	.kp	Offset	1 per file	no	yes	yes	no

Scripts	.winolsskript	Content	per map/block	yes	yes	yes	yes ¹⁾
AutoUpdate	same project	n/a	no	no	no	yes	no
AutoImport	.ols	Content	per map/block	yes	yes	yes	no

¹⁾ Increased risk of mistakes

In detail:

Import changes

This is the simplest option to import data from another (already opened) project into the current project. Choose the menu item "Project > Ex- and Import > Import changes" (Hotkey Ctrl+Alt+I). In the automatic mode WinOLS will automatically recognize the maps and search them in the current project. The manual mode prepares two windows with Reference and Connection.

Reference version + Connect windows

These modes allows you to manually import data. This makes it very powerful, but also more difficult to use, than the assistant described above. You can activate these modes manually with the menu items of the "View" menu or let WinOLS configure them for you as described above. Afterwards you'll have both projects next to another. If you scroll one project, the other will be scrolled, too. To make comparison easier, the other window will always be the "reference version", meaning that its data will be used as original version for the current window (only temporary, don't worry). With a right click on a selection or a map in the hexdump you can transfer the data (Menu item "Transfer values" or "Transfer maps")

Import maps

If you're sure that all maps are still at the same address, you can use this menu item to import map information from another project. This will only transfer structure information (address, size, ...). The data within the maps will not be imported.

Map packs

Similar to the point above, map packs can transfer map data. But you must begin by exporting maps from the old project into a map pack file to import them afterwards into the new project. This has several advantages. These files are much smaller than project files because they contain only structure information, no map values. This makes it easier to transfer them. Furthermore you can enter an offset when importing them.

Scripts

This option was build into WinOLS for power users. With scripts ("Search > Scripts" or Hotkey F8) you can export structure and / or values of maps in special script files.

These files automatically recognize if they can be applied and at which position the map, that should be modified, is located. Changes can be done absolute, as difference or percentual. Use scripts if you have to do the same similar changes for many files.

AutoUpdate + AutoImport

These are options for advanced users who want to manage a large number of versions automatically. AutoUpdate combines several versions within a project to a new version. AutoImport imports the versions from another project.

2.13 AutoUpdate + AutoImport

This function requires WinOLS 5.21 + FeatureUpdate

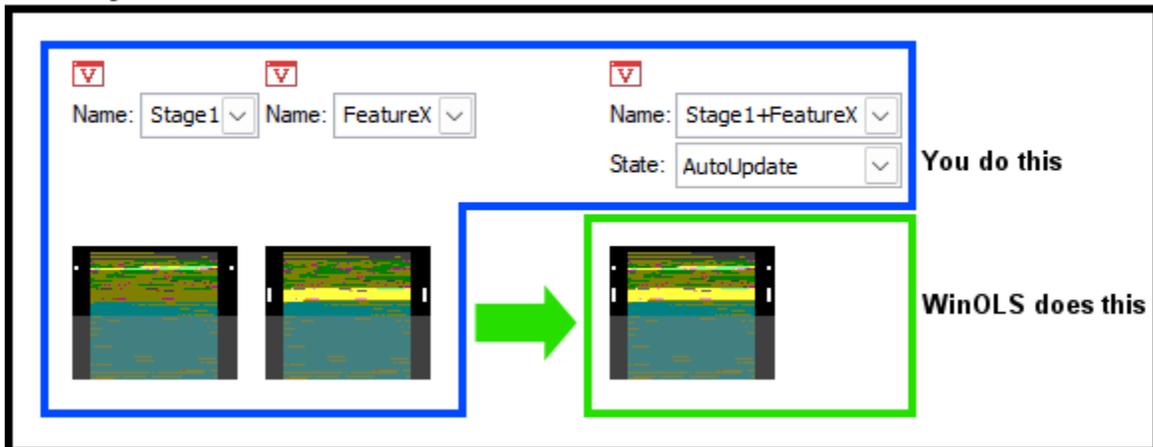
AutoUpdate and AutoImport are mechanisms to automatically import/combine/update data from other versions/projects.

AutoUpdate

Here a version receives the map values of one or more other versions of the same project. Both the source version(s) and the target version must be created by the user beforehand. You can combine several source versions. You can have multiple versions calculated by AutoUpdate. Offset is not supported.

A project can contain multiple target versions that combine source versions in different ways. If a source version is changed, then the target version is automatically updated when it is opened.

One Project



Procedure:

- Give all source versions unique, meaningful, and short names.
- Mark the target version with the version status "AutoUpdate" or "AutoUpdateAndExport" (see below).
- The version name of the target version must consist of the names of the source

versions, connected by plus signs. Example:
Stage1+FeatureX+OptionAlpha

Tips:

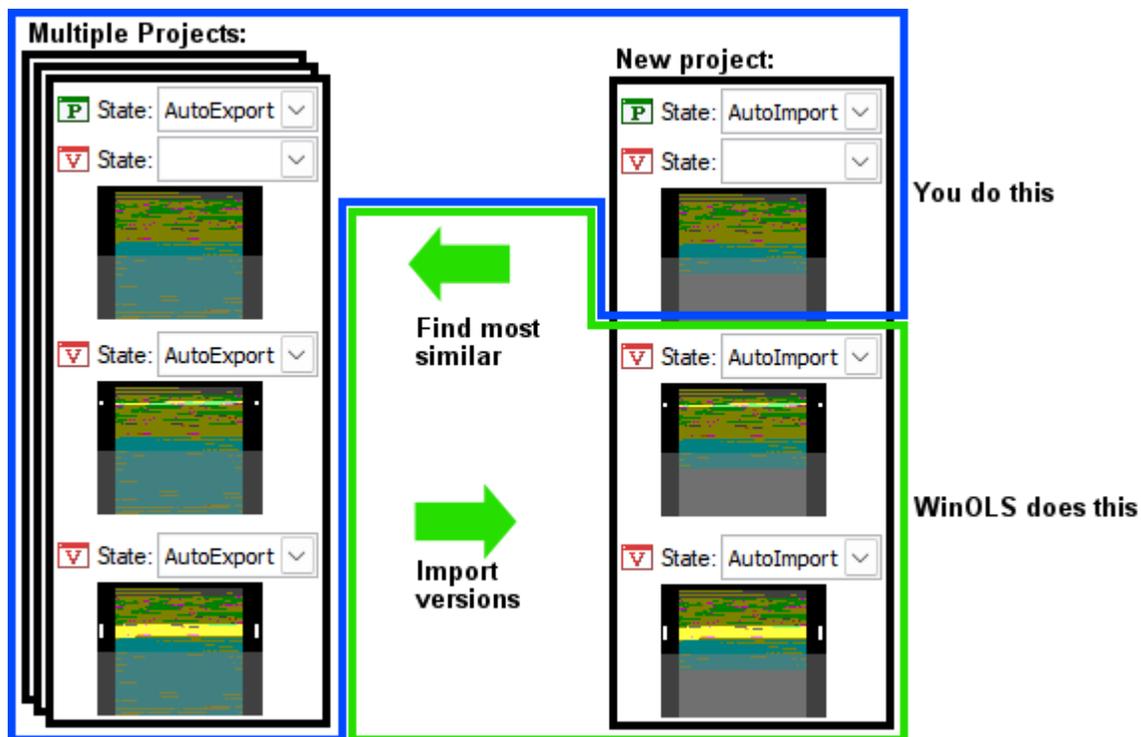
- Maps that contain changes in a source version always overwrite the complete map in the target version.
- Changes in the rest of the project are also deleted by default. You can disable this by putting a plus in front of the first version name. Example:
+Stage1+FeatureX+OptionAlpha
- Changes outside of maps are not transferred. If necessary, create a map for this purpose.
- If you do not want to change the version name, you can alternatively enter the info in the version comment like this:
`@auto source Stage1+FeatureX+OptionAlpha`

AutoImport

Similar source projects are searched automatically and their source versions are imported by Import changes. The user has to create the source projects and the original of the target project. The further versions are created and filled automatically. By default, only changes within maps are transferred.

Procedure:

- Mark the source projects and the desired source versions with the project/version property "AutoExport" (or "AutoUpdateAndExport").
- Target projects must have the project status "AutoImport".



Notes:

- WinOLS creates versions here and marks them with "AutoImport". You should not edit AutoImport versions manually, because WinOLS can delete and recreate the version (which would cause your changes to be lost).
- The versions are always imported 1:1, there is no combination (like with AutoUpdate). However, you can take over versions previously calculated by AutoUpdate into AutoImport.
- When transferring the changes, the offset is determined automatically. This always includes the possibility of errors.

Parameters:

You can define additional conditions in the project comment of the source project to prevent error transfers and increase performance.

- Minimum similarity: (default value: 70%)
`@auto min_similarity 90%`
- Project properties that must match: (default value: empty)
`@auto check_property ECU.ECUProd, ECU.ECUSTg`

WinOLS always chooses the most similar version that meets all your conditions.

If the data is transferred, then you can configure stuff in the project or version comment of the source project:

- Whether tolerance should be used when matching the maps: (default value: 0%)
`@auto transfer_tolerance 10%`
- Whether the map structure should be transferred: (default value: yes)
`@auto transfer_maps no`

- With which mode the changes should be transferred: (default value: relative)
`@auto transfer_mode absolute`
- Whether also maps without changes in the source project should be transferred: (default value: yes)
`@auto transfer_unchanged no`
- Whether changes in the source project should outside of maps should be transferred: (default value: no)
`@auto transfer_outsidemaps yes`

Warning: You should definitely combine this with "transfer_mode absolute". This is because if WinOLS does not know the bit width, relative/percentage can result in incorrect values.

AutoUpdate + AutoImport:

You can combine both features by marking the versions as "AutoUpdateAndExport". Then, on the one hand, they are assembled from other versions of your own project and, on the other hand, they serve as a template for other (AutoImport) projects.

Performance:

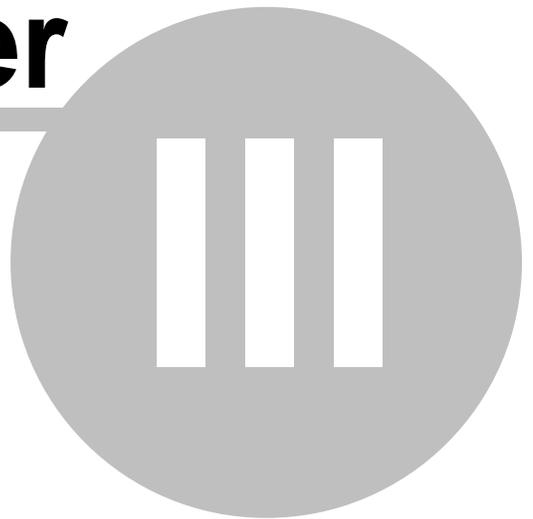
The mentioned functions manage considerable amounts of data and can slow down WinOLS noticeably. To minimize the effort you can:

- AutoImport: Define as strict conditions (parameters) as possible.
- AutoImport: Keep the number of source projects low
- Disable the encryption of versions (F12 > Miscellaneous)

See also:

- The command AutoUpdate + AutoImport (Menu Project)

Chapter



3 Special Aspects

3.1 Keyboard Shortcuts

WinOLS support keyboard shortcuts for many functions. Most of them are documented directly next to the function in the pulldown menu and in the tooltip of its icon. For various abbreviations that contain 'Ctrl' and display a dialog, the dialog can be skipped by additionally pressing 'Shift'.

Note:

If a hotkey does not work, please check if other applications claim this hotkey system wide. Test on F12>Debug.

(Click on column headers to sort)

Program functions:

Area	Keys	Description
Project	Ctrl+N	New project
Project	Ctrl+O	Open project
Project	Ctrl+S	Save project
Project	Ctrl+Shift+S	Save all projects
Project	Shift+P	Properties: Projekt
Project	Shift+Alt+Enter	Properties: Version
Project	Ctrl+Alt+O	Similar projects
Project	Ctrl+P	Print
Project	Ctrl+E	Export
Project	Shift+Alt+E	Export map pack
Project	Ctrl+I	Import
Project	Shift+Alt+I	Import map pack
Project	Ctrl+M	Send as mail
Project	Ctrl+Shift+I	Import maps
Project	Ctrl+Alt+I	Import changes
Project	Ctrl+D	Import damos
Edit	Ctrl+Z	Undo
Edit	Ctrl+Y	Redo
Edit	Ctrl+C	Copy

Edit	Ctrl+X	Cut
Edit	Ctrl+V	Paste
Edit	Ctrl+Shift+C	Copy address
Edit	Ctrl+Alt+H	Active hexdump window
Edit	Ctrl+Alt+K	New hexdump window
Edit	Shift+K	Open map
Edit	Ctrl+Del	Delete map
Edit	Ctrl+Shift+T	Edit as text
Edit	Enter	Inplace edit
Edit	Shift+Q	QuickFix
Edit	+	Value + 1
Edit	Ctrl + "+"	Value + 100 (Configurable)
Edit	-	Value - 1
Edit	Ctrl + "-"	Value - 100 (Configurable)
Edit	=	Change absolute
Edit	%	Change relative
Edit	Ctrl+Shift+A	Change relative (Addition activated)
Edit	Ctrl+Shift+P	Change relative (Percentage activated)
Edit	/	Change by edit
Edit	Ctrl+Alt+R	Round/limit values
Edit	F11	Original value
Edit	I	Interpolate
Edit	Ctrl+Alt+Shift+Del	Remove row / column
Edit	F9	Repeat
Edit	F2 / C	Checksum
Edit	Shift+C	Checksum ranges
Edit	Alt+Enter	Properties: Window
Edit	Ctrl+Shift+F4	Close all map windows
Hardware	Ctrl+Shift+H	Producer
View	Ctrl+CursorLeft	Hexdump: Move origin left Map: Display previous parallel map

View	Ctrl+CursorRight	Hexdump: Move origin right Map: Display next parallel map
View	Ctrl+J	Cursor position as origin
View	M	More columns
View	W	Less columns
View	Z	Default view
View	Shift+R	Percent
View	Shift+D	Delta
View	Shift+1	Ignore factor/offset
View	Shift+O	Original values
View	Ctrl+Shift+Alt+O	Original original values
View	U	Differences
View	E	First difference
View	V	Previous difference
View	N	Next difference
View	L	Last difference
View	Ctrl+2	Connect windows
View	Ctrl+B	Optimize value range
View	F	Detect map
View	Shift+F	Detect previous map
Selection	Ins	Select cell
Selection	Ctrl+A	Select screen
Selection	Alt+Shift+D	Select changes (Repeatedly: Only +/-)
Selection	Ctrl+Alt+Shift+D	Select changes adding to the current selection (Repeatedly: Only +/-)
Selection	Ctrl+Alt+L	Create selection
Selection	Ctrl+Alt+Shift+L	Create selection (Without dialog)
Selection	Ctrl+Shift+Ins	Selection from clipboard
Selection	Ctrl+L	Selection from live-search
Selection	Del	Select nothing

Selection	K	Selection -> map
Selection	Ctrl+R	Load selection
Selection	Ctrl+W	Save selection
Selection	Ctrl+Shift+M	Change selection mode
Selection	Ctrl+Shift+B	Selection beginning
Selection	Ctrl+Shift+K	Selection end
Selection	Ctrl+Alt+"+"	Deselect > Positive changed
Selection	Ctrl+Alt+"-"	Deselect > Negative changed
Selection	Ctrl+Alt+"0"	Deselect > Unchanged
Find	Ctrl+F	Find byte sequence / Text
Find	Ctrl+Alt+F	Find selection
Find	Alt+F3	Start search
Find	F3	Continue search
Find	Shift+F3	Search backwards
Find	Alt+Shift+P	Map axis profiles
Find	Ctrl+Alt+P	Parallel maps
Find	A	Go to address
Find	Ctrl+G	Go to address
Find	J	Jump to address from hexdump
Find	Ctrl+Shift+V	Previous map
Find	Ctrl+Shift+N	Next map
Find	Shift+V	Previous comment
Find	Shift+N	Next comment
Find	Shift+Enter	Insert / edit map
Find	Shift+F5	Previous marker
Find	F5	Next marker
Find	Ctrl+F5	Insert / delete marker
Find	F7	Solutions
Find	F8	Scripts
Miscellaneous	F12	Configuration
Window	Ctrl+K	Map selection

Window	U	Differences
Window	O	Overview
Window	P	Preview
Window	Tab	Toggle floating windows
Window	Ctrl+0	Window list
Window	Ctrl+1	Maximize
Window	Ctrl+3	Cascade
Window	Ctrl+4	Tile vertically
Window	Ctrl+5	Tile horizontally
Window	Ctrl+9	Optimize window size
Context menu	Ctrl+Shift+Del	Delete potential map
Context menu	Ctrl+Alt+Win+C	Copy both axes
Context menu	Ctrl+Q	Map icon menu. (Map list, map, hexdump selection)
Context menu	Ctrl+ShiftQ	Map icon (no menu)
Context menu	Ctrl+F11	Set map to original
Connect bar	Ctrl+Alt+W	Transfer values
Connect bar	Ctrl+Alt+Shift+W	Transfer values (no dialog)
Connect bar	Ctrl+Alt+T	Transfer map(s)
Connect bar	Ctrl+Alt+Shift+T	Transfer map(s) (no dialog)
Connect bar	Pause	Pause the reference version
Connect bar	B	Transfer map(s) / value(s) (no dialog)
Configuration > Hexdump	Ctrl+Alt+Win+P	Toggle display of pot. maps in the hexdump
Configuration > 2d	Alt+.	Toggle display of connect lines on new line
Map	Ctrl+T	Swap axis+map
Map sidebar	Ctrl+Shift+F	Focus search line
-	Shift+F12	Open folder with configuration files
-	Shift+Ctrl+F12	Open mail with WinOLS logfile

-	Shift+Ctrl+Alt+F12	Reset symbol bars
-	Ctrl+H	Client menu
-	Ctrl+Alt+S	Sessions menu

Cursor + Navigation:

Keys	Description
Scroll Lock	Toggle the Scroll Mode. In this mode you can easily scroll through hexdumps with the left mouse button.
Ctrl+Up	Scrolls the visible area up
Ctrl+Down	Scrolls the visible area down
Ctrl+Top	Moves the cursor to the beginning of the window
Ctrl+End	Moves the cursor to the end of the window
Shift+Cursorkeys	Moves the cursor and creates a selection while moving
Ctrl+Cursor l/r	Hexdump: Moves the starting address of a hexdump Map: For parallel maps, switches to the next/previous map in the parallel group
Ctrl+Shift+Cursor l/r	Rotates the view (3d mode only)
Ctrl+Shift+Cursor u/d	Changes the view perspective (3d mode only)
T	Next view mode (Text->2d; 2d->3d; 3d->Slices)
Shift+T	Previous view mode (Slices->3d; 3d->2d; 2d->Text)
Ctrl+PageUp	Page up (with configurable jump size) (With shift = Select area)
Ctrl+PageDown	Page down (with configurable jump size) (With shift = Select area)
Win+PageUp	Previous Element
Win+PageDown	Next Element

Special cases with Alt, Shift, Ctrl:

Keys	Description
-------------	--------------------

Shift while starting OLS	WinOLS starts without loading the previously opened windows.
Ctrl while starting OLS	The simulator status display is not initialized / used
Shift while clicking another project's titlebar	Connect projects
Shift while creating a map	The automatic map detection is suppressed
Alt+ClickDrag Hexdump	Scrolling
Alt+ClickDrag Map	Move map
Ctrl+Alt+ClickDrag Map	Duplicate + move map

Mouse functions:

Keys	Description
Left: Click	Sets the cursor position
Left: Click+Drag	Selects an area
Left: Click+Drag+Ctrl	Extends the current selection with another area
Left: Doubleclick	Opens the menu 'Properties: Window'
Left: Doubleclick on address column in text hexdump	Opens the menu 'Go to address'
Right: Click	Opens the context menu
Middle+Ctrl	Set line break here Within 5s at a second spot: Set columns

Mouse wheel:

Keys	Description
Mousewheel+Shift	Scrolls by pages instead of lines
Mousewheel+Ctrl	Set zoomfactor / fontsize
Mousewheel+Ctrl+Shift	The cursor is moved over the changes cells
Mousewheel+Alt+Shift	Rotate 3d view
Mousewheel+Ctrl+Win	Change number of columns
Mousewheel+Alt+Win	Change number of Rows
Mousewheel+Middle-Click	Changes the selection depending the cursor position in the selection

Mousewheel+Middle-Click+Shift As above, but stronger

3.2 Drag and Drop

WinOLS supports drag and drop. You can simply drag a file into the WinOLS program window and drop it there. You can drag either a file from the Windows explorer or an attachment from an e-mail stored in Outlook.

Normally you can only drag one file at a time into WinOLS.

The following file types are supported:

- Binary files
- OLS and WinOLS files (*.dat / *.ols)
- Map-Pack-Files (*.kp)
- Selection files (*.blk)
- Intel hex files (often *.hex)
- Motorola hex files (often *.s19)
- Key files (*.scr)
- SPI key files (*.spikey)
- Ifo files (*.ifo) / Ini files (*.ini) / EcuX files (*.EcuX)
- vSpire files (*.vSpire)

The following file types are supported by plugins:

- Vadis VBF files (*.vbf; Vadis VBF Import/Export plugin required)
- Lua skript files (*.lua; External control plugin required)
- ASAP2 files (often *.a2l; Damos plugin required)
- Damos files (often *.dam; Damos plugin required)

All these file formats can be imported while by compressed (as *.zip or *.rar file). Simply drag the archive file into WinOLS. 7-Zip files (*.7z) can be unpacked if 7-Zip is installed.

You can integrate third-party command-line conversion software, too.

Tricks:

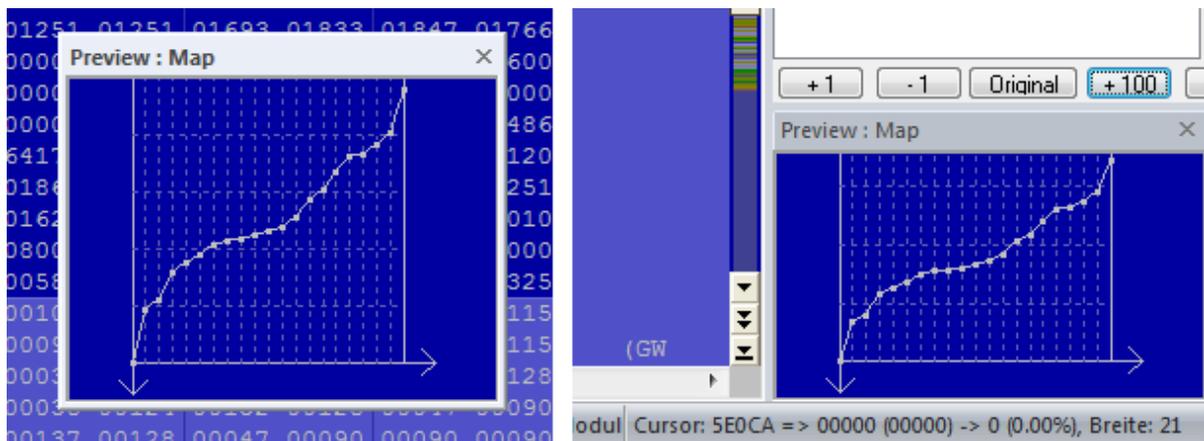
- Drag the file into an existing project window to create a new version for an existing project.
- Drag the file into the program itself (for example into the menu bar area) to create a new project for this file.
- If you're dragging an Intel or Motorola hex file into an existing project you may press the CTRL key while releasing the file. This will cause WinOLS not to create a new version, but write the data over the current version.
- You can drag and drop two files at once when importing '16 bit in two files'. WinOLS will automatically try to find out which is high and which is low.

- ASAP2/Damos files may only be dragged into existing projects. If you drag ASAP2/Damos file and a binary/hex/... file at the SAME time into the WinOLS frame, then binary/hex/... file will be imported and the ASAP2/Damos file then applied to it.
- Dragging a key file into the workspace changes the configuration, dragging it into the project changes the project.
- If (during the drag and drop process) the target window (WinOLS) is hidden, simply move the cursor (while keeping the mouse button pressed) over the WinOLS entry in the task bar (lower border of the screen) and wait without releasing the mouse button. This will bring the WinOLS window into the foreground.
- You can drag+drop BSL key files into the BSL info dialog (a subdialog of the project properties).

Drag+Drop in the map list:

- You can drag a folder into another folder to create a subfolder
- You can drag a project directly into a windows explorer folder or Outlook e-mail to export it.
- You can drag a project onto another project to connect them.

3.3 Floating / dockable dialogs



left: floating dialog; right: docked dialog

Floating dialogs:

WinOLS supports several (so-called) "floating" dialogs. These are dialog windows that are shown above the normal workspace without blocking it. This means that you can work with WinOLS normally even though the window is open and (as it looks like it) lies above the workspace. This allows you for example to work while the search window is open and shows its results.

You may toggle these dialogs separately (with their respective hotkey, icons and menu items). Or you may use the tab key (left of the Q-key) to toggle all windows that can currently be seen.

You can recognize a floating dialog by its smaller title bar (the blue bar where the name of the window is shown), compared to normal windows.

All floating windows are "magnetic". This means, if you move the window and get close to another window or the screen border, then it will jump exactly there to support a "nice" positioning.

The following windows float:

- Overview
- Differences *
- Map Selection *
- Preview *
- Search for Byte sequence / Text
- Checksum ranges
- Project comment

* Only 'floating' if it's not docked

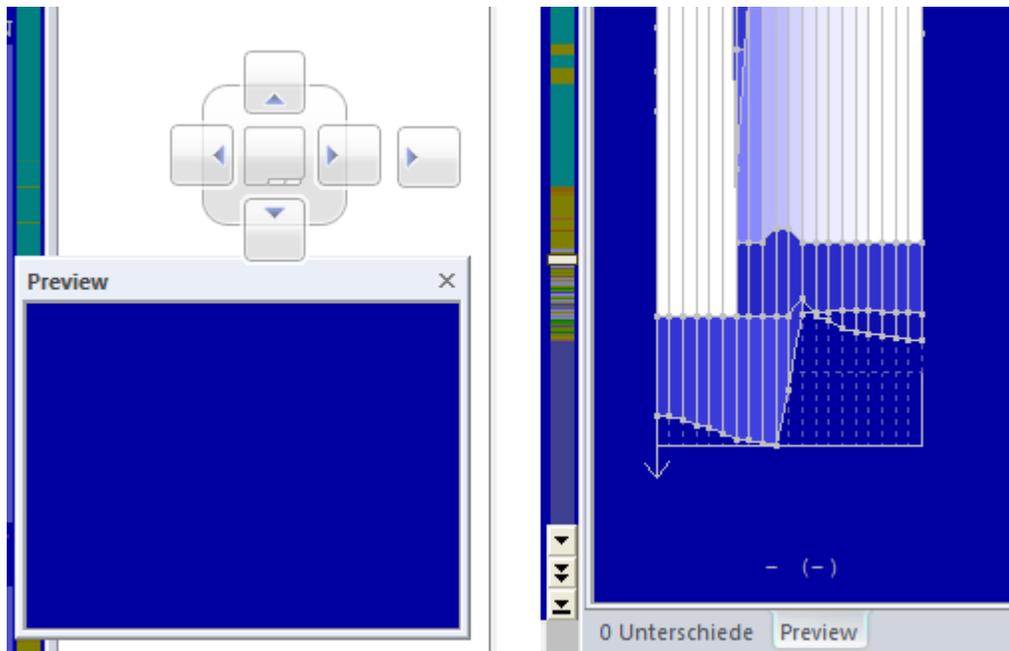
Dockable dialogs:

Three windows are special, because they can have two states. They can be docked to the window border (left or right) and then aren't floating windows any more. You may toggle between the two states (docked / floating) by double-clicking its headline. This works with the following windows:

- Differences
- Map Selection
- Preview

Advanced docking:

By clicking and dragging the window title you can dock the window at the desired location. This markers can help you:



left: helping markers; right: Two dialogs as "tabs"

Move the mouse cursor on one of the arrow markers and release the mouse button to dock the window to this border. Use the middle field (without arrow) to combine two dockable windows. The windows will be placed in the same location and can be switched with tabs at the bottom. To end the "tabbed" state, start the drag+drop not at the window title, but on the respective tab.

3.4 Mouse cursor

WinOLS uses the mouse cursor to display information about what can currently be done with a click of the left mouse button.

The following mouse cursors are used (apart from the default cursor).

Viewmode 'Text':

↕ This cursor appears when you move the mouse over the double line of a hexdump (right of the address column). Click and drag to move the visible area vertically.

⊞ This cursor appears when you move the mouse over the single line of a hexdump (between the hexdump and the bars). Click and drag to change the number of columns.

Viewmode '2d':

↔ This cursor appears when you move the mouse over the lower scale. Click and drag to move the visible area horizontally.

-  This cursor appears when you move the mouse over the right scale. Click and drag to move the visible area vertically.
-  This cursor appears when you move the mouse over the left end of a selection. Click and drag to move the beginning of a selection.
-  This cursor appears when you move the mouse over the right end of a selection. Click and drag to move the end of a selection.
-  This cursor appears when you move the mouse over a rowmarker within a selection. Click and drag to change the number of columns.
-  This cursor appears when you move the mouse outside a rowmarker within a selection. Click and drag to move the start address (and thus the rowmarkers).
-  This cursor appears when you move the mouse cursor directly over a 2d value that is either currently selected by the editing cursor or that is part of a selection. Click and drag to change the value / all selected values. You can disable this function in the configuration under "2d".

Viewmode'3d':

-  This cursor appears when you move the mouse over the left or right edge of the floor grid. Click and drag to change the strength of the perspective.
-  This cursor appears when you move the mouse over the lower edge of the floor grid. Click and drag to rotate the view.
-  This cursor appears either when you move the mouse cursor directly over a 3d value that is currently selected by the editing cursor or when you move the mouse cursor over a selection. Click and drag to change the value / all selected values. You can disable this function in the configuration under "3d".

3.5 Scrolling

There are many ways in WinOLS to get to the right place:

Scrollbars:

The WinOLS scrollbars have 3 buttons. From inner to outer they stand for:

- jump to the end of the file
- scroll fast
- scroll slow

A click on the scrollbar (outside of the current position) can either (F12 > Hexdump) scroll into that direction or directly jump to that position.

Hotkeys:

Ctrl+up / Ctrl+Down:	Scroll one line
PageUp / PageDown:	Scroll one page
Ctrl+PageUp / Ctrl+PageDown:	Scroll 0x8000
Ctrl+Pos1 / Ctrl+End:	Jump to the beginning / end of the project

Mouse:

When you're moving the mouse cursor over the double-line (or in 2d mode the horizontal scale) the mouse cursor turns into a double-arrow. By clicking and dragging you can now scroll.

Use the "ScrollLock" key (right of F12) to (de)activate a mode where this applies to the entire window. Or press and hold Ctrl+Shift to achieve the same effect.

Use the mouse wheel to scroll by line. Hold the shift-key at the same time to scroll by page.

3.6 Context menus

Context menus are all menus which appear when you click with the **right** mouse button somewhere in the window. These menus contain functions which relate to the current context (meaning where you click).

All entries in context menus show help texts in the status bar (lower edge of the screen), when you move the mouse cursor over the respective entry.

The following context menus are used by WinOLS.

All view modes:

Click in the data: A context menu appears with functions for editing and navigation.

Click in selected data: A context menu appears with functions for changing a selection and editing the context.

Click in the ASCII or bar data: A context menu appears with functions for changing the view mode of the right side.

View mode 'Text' and '2d':

Click on the headline of a potential map: A context menu appears with functions for working with potential maps.

View mode 'Text':

Click on the single vertical line: A context menu appears with functions for changing the number of columns.

Map only: Click in the axis description or the upper left corner of the map to quickly change the unit (factor, offset, description, etc.) of the axis or the map data.

View mode '2d':

Click on the vertical or horizontal scale: A context menu appears with functions for changing the zoom factor.

Window 'Map selection':

Click on a project or map: A context menu appears with functions for opening, closing, coping and deleting of windows.

3.7 Selections

Basics:

If you want to change multiple data fields at once you must *select* them first. That works just like in any other Windows application: Click somewhere (with the left mouse button), hold the button pressed and move the mouse. You've got selection.

Selection modes:

WinOLS can select with 4 different styles: Consecutive, Rectangle, Rows or Columns. Just try them out. You can see the currently selected mode in the menu "Selection > Selection mode", in the default context menu and perhaps in the toolbars if you have the 'Selection' bar activated. WinOLS stores the selection mode separately for 2d/non2d and for hexdump/maps.

Trick: You can change a selection later if you chose the wrong mode. In order to do this, just finish the selection as usual and change the selection mode immediately afterwards. The selection will change into the new mode.

Trick: In text mode you may select rows by clicking on the address column.

Configuration:

WinOLS supports two different selection modes. The currently selection method can be seen in the Configuration dialog ("Miscellaneous > Configuration > Miscellaneous > Edit") under 'Delete selection when moving the cursor'.

If this checkbox is activated, selections immediately disappear if you change the cursor position. That's the way it is done in many Windows applications. But this makes so-called multiple selections a bit more difficult. If you want to add another block to the current selection you must hold the 'Ctrl' key pressed.

If the checkbox is not activated you can simply select again to extend the current selection. If you want to unselect everything, use the 'Delete' key.

Specials:

There are some special items in the 'Selection' menu. They allow you to select all currently visible cells or to invert the selection.

Clipboard:

As usual, you may copy the current selection and insert it somewhere different. Small selections may even be pasted into the search window as search text. You can also copy values from / to Microsoft Excel

Load and Save:

You can save selections on your harddisk and load them later on again. This creates 'blk' files. You will find the necessary commands in the menu 'Selection'. If you want to load a selection, you may also drag and drop its file into WinOLS.

3.8 Elements

Basics:

Nowadays one ECU can contain data in multiple eproms, processor, eeprom, etc. That's why WinOLS can administrate these different data ranges, too. In WinOLS they're called "Elements".

One project can contain many elements (but at least one). Each element contains the data from one hardware, e.g. from the eprom.

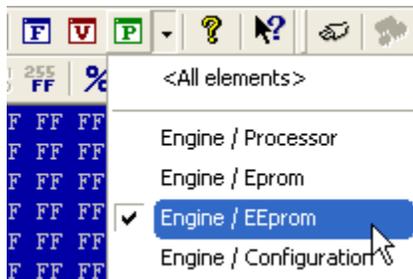
Seeing the elements:

By default WinOLS will show you the eprom element. You can recognize that from the title of the WinOLS window: "WinOLS - 1134.ols (Original) as Engine / Eprom". If you have an element active, the map list will contain only the maps (and potential maps), which are in this element. Other functions like the "Differences" window or the search function ignore the data outside the current element, too. Just like export functions that only support one element (e.g. the binary export) and thus only export the current element.

Please note: By default all elements begin with the address 0. Thus, you can have a map in the eprom element at the address 0 and a map in the CPU element at address 0. Nevertheless these are different maps with different content.

Changing the current element:

You'll see a small black triangle next to the button "Properties: Project" (a green P on the symbol bar "Navigation"). If you click on it, a small menu will open, displaying all the elements that the project contains. Click on the desired element to activate it.



Instead you may also (if the project contains multiple elements) change the "ECU usage" in the Dialog "project properties" to get the same effect.

Hardware elements & virtual elements:

Some of the checksums (and the free plugin OLS550) define virtual elements within the "normal" hardware elements. These can be seen as subitems of the hardware elements in the selection list and can help to limit the view to the essentials. Virtual elements are very often "data" elements and are then also used as help for the similarity search.

<All elements>:

The list with the elements also contains an entry "<All elements>". It shows all elements at the same time in one, long hexdump. This can be useful if you want to define the elements or if you're unsure which element contains the maps that you're looking for.

Editing & defining elements:

WinOLS automatically creates the elements when reading an ECU or importing from a BdmToGo file. Many EVC checksums also automatically create the elements for you. If you want to change this definition, open the project properties and click the button "..." next to the ECU usage. The help for this dialog "Multiple elements in the project" (a subdialog of the "project properties") explains the details.

Elements vs. Versions:

One project can contain several elements and any number of versions. For all versions of one project the element definitions (Number, size, area) are identical. So, for example, an eprom element in the original cannot have a different size from the eprom element in version 1. If you change the current version, this change always applies to all elements of the project.

3.9 Data areas

Data areas are virtual elements that are marked as "data". They are usually determined automatically by the free plugin OLS550.

The similarity search automatically takes data areas into account and can therefore also suggest projects that have a completely different size, as long as only the data area is similar enough. These projects cannot be used directly as a basis, but you can import their maps / changes.



▶ Video

3.10 Clients

Basics:

Clients allow you to quickly switch between eprom file data paths. This influences the project open function, searching for similar projects and creating new projects. Clients make it easier for you to sort your projects. This way you can create folders, e.g. for:

- Major customers
- Old projects
- Employees
- Finished / Unfinished projects

Creating clients:

You can configure the clients in the configuration ("Miscellaneous > Configuration > Paths > Clients"). You can also assign names to your customers to make it easier to administrate them.

Changing the current client:

You can find the client icon (a hat) in the "Navigation" toolbar and in the dialog "Open project" which allows you to switch between the pre-configured clients.

Consequences:

Projects that do not belong to the current client (and reside in his folder) are invisible for the WinOLS file functions. They do not appear in the project list and are not taken into account for functions like "Search similar projects" or "Update projects".

Projects that are already open when the client is changed remain with their old client and will continue to be saved to his data path. But they also refer to current data path (and not to their own) for file functions like "Search similar projects". To move an existing project to a different client, right-click it in the "Open project" dialog.

If you create a new project (through the "New" menu item or by drag and drop), then this project will always be created for the current client.

Shortcuts

Symbol bar: 
Keyboard: Ctrl+H

3.11 Reseller

Basics:

Reseller are a method to let WinOLS-users transfer or sell projects to other users. To publish projects, you have to be registered at EVC as reseller. To receive data from resellers, you only have to be accepted as customer by a registered reseller (and then use the WinOLS update function). You will then have the option to use the

"Open project" dialog to access the reseller's data as if it was stored as a client (hat-icon).

Credits:

The base for the billing between reseller and customer are credits. Each project costs 10 credits by default, but the reseller may use the project properties dialog to enter a different value (including 0). A separate account is maintained for each reseller/customer combination. The real value can be negotiated between reseller and customer.

Version credits:

You can also offer individual versions (or the original) for sale separately. The customer then receives the original and, if applicable, the corresponding version, as well as all other project data such as maps, comments, etc. when purchasing. To use this feature, you must enter a credits price in the version properties and fulfill the following conditions:

- The version name must be unique within the project and between 3 and 50 characters long
- The version name must not contain any special characters (e.g. \ " ')
- The credits must be >0 and <project credits
- The project must not contain more than 50 versions
- The original is a normal version and can also be offered for sale. It is supplied with the maps.
- You can offer original-only projects (without maps) at a flat rate via the corresponding option in your evc.de account.

Reseller registration:

If you want to become reseller, you have to purchase the product Res-Start once. After the registration you will be configured as reseller when you start the update function the next time. A special client (with a corresponding folder in the file system) will be created. WinOLS will store all projects that you keep here on the EVC server.

Online:

- List of all available projects and resellers
- Detail information
- FAQ: Reseller

3.12 Command line

WinOLS understand command line instructions. This allows you to:

- Pass WinOLS files for opening them (e.g. by dragging the onto the WinOLS icon)
- Export BxxToGo files by putting the parameter /ConvertBdmToBinaries in front of the files. WinOLS will export the individual elements as binary files.

The following commands are also supported:

- /Service
Required parameter if WinOLS is started as NT service.

- /Console
Starts the service console to configure the NT service. WinOLS must be started as administrator to communicate with the service.
- /StartService
Only in combination with /Console: Starts the NT service if it is not already running.

Clarification:

This page is about parameter for starting the program. There's also a window named "Command-line".

3.13 Language

Basics:

Starting with version 2.42 WinOLS support multiple languages for map properties. This mean that for example the property "map name" can contain multiple values, but only one is shown at a time. You can switch to another language any time using the project properties dialog or the map list menu. In the map tooltip of the map list window, you can also see the values of the other languages.

Tip:

You can use the WinOLS plugin OLS540 to perform a machine translation from German to English.

3.14 Sessions

WinOLS saves automatically which projects / windows are currently open and restores this during the next start. You can keep up to 10 of these saved states as "sessions".

Changing the active Session

Click on the session button in the dialog Map selection and choose the desired session. The projects of the current session will be be closed. If there are any unsaved changes, you will be asked if you want to save them. Then WinOLS will open the projects / windows of the selected session.

Shift: Renaming a session

Keep the shift key pressed while selecting a session to rename it.

Ctrl: Copy session

Hold the control key pressed while selecting a session to copy the list of opened projects to the selected entry. (Note: This copies the list of projects. Not the actual projects.)

Shift+Ctrl: Swap sessions

Hold the shift and control key pressed while selecting a session to swap the current and the selected session. This swaps both the name and the list of opened projects.

Shortcuts

Symbol bar:
Keyboard: Ctrl+Alt+S

3.15 WinOLS as service

You can run WinOLS as service to perform automated tasks in the background. **This option is suitable only for people with experience in software development, administration of NT services and administration of batch systems.**

Software Requirements:

- A windows PC with WinOLS license
- OLS530 (LUA for WinOLS)

Skill Requirements:

- Experience in handling services and the traps of Windows user accounts
- Software development with LUA
- Software development with batch systems

Steps for the installation: (WinOLS4/5)

1. Install WinOLS normally
Register + install plugins
Check if everything is registered + the registration password stored
2. Create a new Windows "Shortcut" to the WinOLS icon. Edit it and add the parameter "/console" and set it the "Run as administrator". (Both changes **must** be done on the page "shortcut".)
3. Start WinOLS with that shortcut. It should open in service console mode.
4. Uninstall the old service, if needed
5. Install the service and select the LUA file to run.
6. Start the WinOLS service.
7. Register the WinOLS service
8. Stop+restart the WinOLS service

Notes:

- After the successful start of the service it can still take time until the plugins are loaded and LUA is started.
- Do not start the normal WinOLS if the WinOLS service is already running. This will cause file access conflicts.

3.16 Protections

WinOLS knows several mechanisms to protect your data.

OLSX-Password

Where: In OLSX file format
How: While exporting as OLSX
Function: Import only possible for selected EVC customer number and/or password.

Self-lock-out: Yes, if foreign EVC customer number required or password lost.
Disadvantages: Works only until file was imported. No protection after that point.

Bdm2Go/Bsl2Go reimport protection

Where: In Bdm2Go/Bsl2Go file format
How: While exporting as Bdm2Go/Bsl2Go
Function: Disallows the import into WinOLS (import into Bdm2Go / Bsl2Go is still allowed)
Self-lock-out: No
Disadvantages: Works only until file was programmed. No protection after that point.

NOREAD (external programs)

Where: Text in Hexdump
How: Entry in external program
Function: Disallows import / reading; Works in many, but not all programs.
Self-lock-out: Yes
Disadvantages: Can be removed with hex editor.

NOREAD / BDM2GO (WinOLS)

Where: Text in Hexdump
How: Project properties (Globally in Miscellaneous > Configuration > Read protection)
Function: Disallows import / reading; Works in many, but not all programs.
Self-lock-out: No
Disadvantages: Can be removed with hex editor.
Comment: Requires EVC checksum or manual Tag-Patchblock (Edit > Checksum > Add).

NOREAD (WinOLS Signature)

Where: Invisible signature in hexdump
How: Edit > Sign Hexdump
Function: Disallows import / reading; Works only in WinOLS.
Self-lock-out: No
Disadvantages: Works only in WinOLS.
Comment: Requires semi-manual inserting in user-selected maps.

Encrypted versions

Where: In .ols files
How: Edit > Miscellaneous
Function: If you encrypt them with your customer number then your .ols projects cannot be opened in case of unauthorized sharing of the files.
Self-lock-out: No
Disadvantages: Doesn't protect against exports
Comment: The encryption happens only when the version is saved (again).

3.17 Shadow data

Some of the export plugins require additional data (beyond the hexdump data) for the export. This is the "shadow data", as it is usually barely noticed. WinOLS automatically saves it in the project file. (per project, not per version.)

If a project contains shadow data, you can see this in the project properties (in the project size field).

They are also relevant for similar projects. WinOLS warns you if you choose an action which causes the loss of the shadow data.

As a consequence, these plugins cannot export without this data, so this option may not be offered at all. You can only export the projects you have imported with the same plugin.

3.18 View mode

WinOLS can display maps / hexdumps in different ways. You can change this type at any time with a click on the tab at the bottom left of the window. Your choice will be saved per map in the project.

You can define the default value for new maps under F12 > Hexdump. You can change the value later with Edit multiple maps for many maps at the same time.

Text mode:

Allows an exact view of the values. Bars and/or ASCII characters can be displayed to the right of the values.

2d:

Facilitates the visual recognition of maps in the hexdump. The View toolbar can be used to scale the display.

3d:

Good visual representation for maps. With the toolbar view the display can be rotated+scaled.

Slices:

Alternative visual representation for maps where all lines are at the same height, which facilitates comparison. With the toolbar view the display can be rotated+scaled.

Twin windows:



You can use several view modes at the same time for hex dumps and maps. To do this, hold down the Ctrl key when clicking on the tab.

Note: Layers and twin windows were added later and are part of the WinOLS feature updates, i.e. they may need to be unlocked by paying a fee.

Shortcuts:

Symbol Bar: -

Keyboard: T / Shift+T

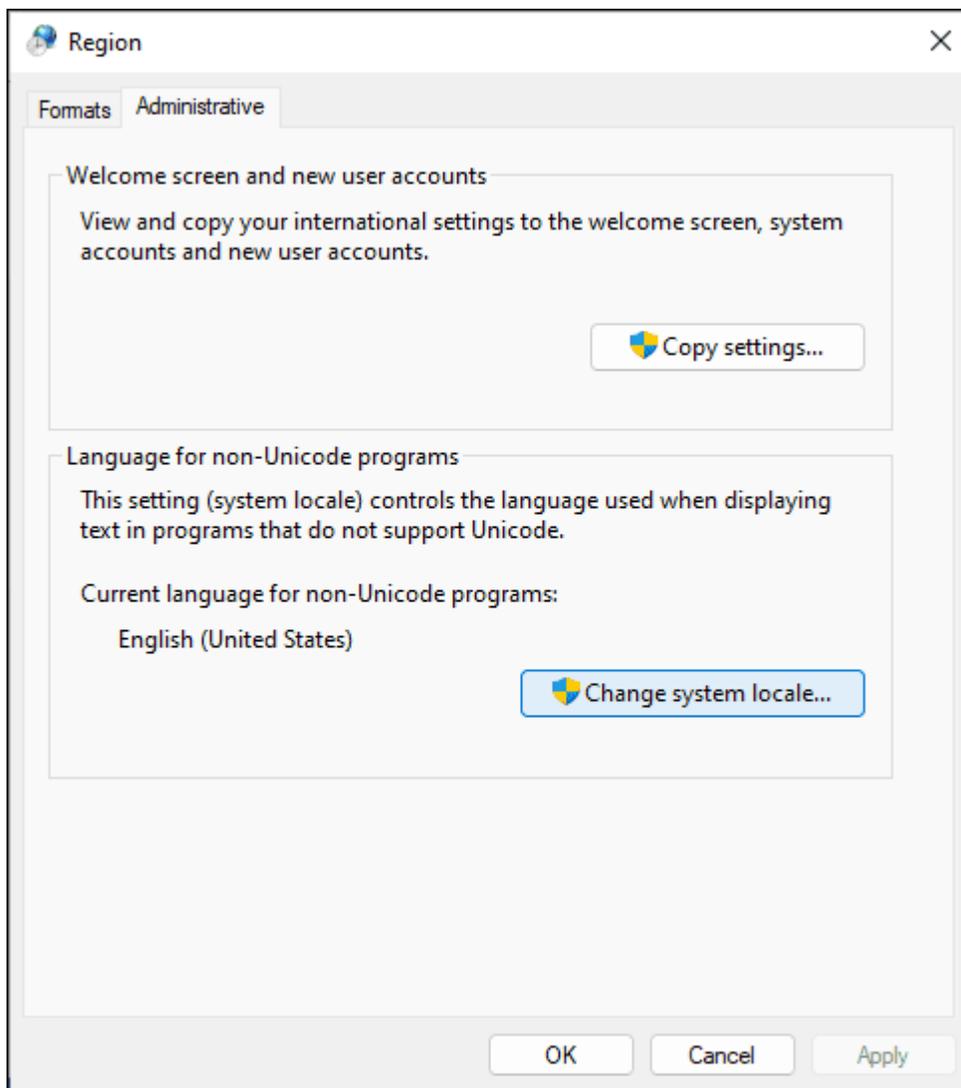
3.19 International characters

WinOLS supports various languages. You can select the current language under F12 > Language.

1. Wrong characters in menus and dialogs:

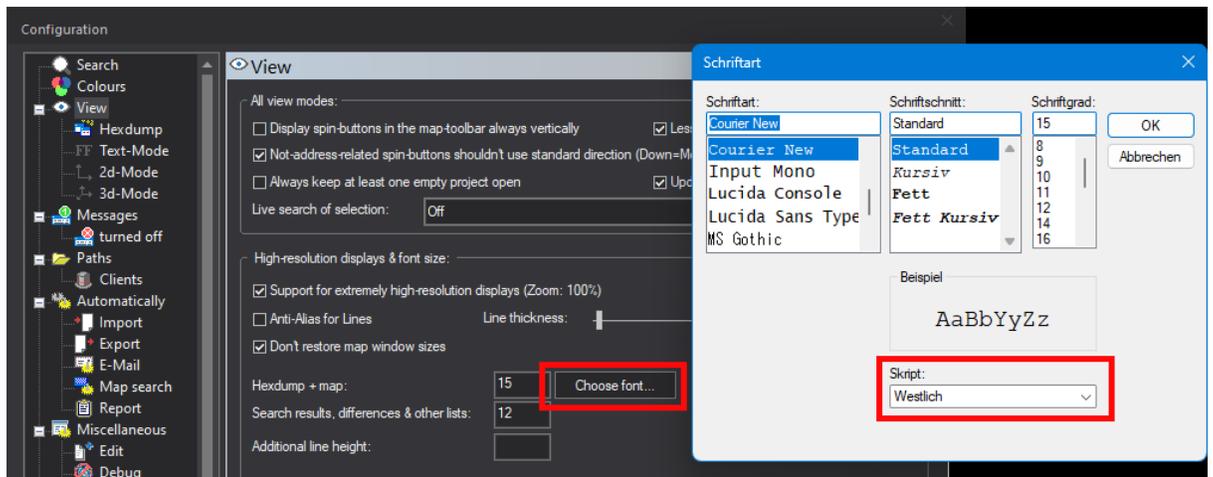
Please check in Windows if the "Language for Unicode incompatible programs" is set correctly:

Windows Settings > Language and Region > Administrative Language Options > Administration



2. Wrong characters in hexdump and map list:

Please check if the "Script" of the font is correctly selected in WinOLS under:
F12 > View > Select font



3. Ini-Files and Combo-Box-Templates:

Save the file in "Ansi" or "UTF-8 with BOM" format.

Chapter



IV

4 Commands of the menu Project

The menu Project contains the following commands:

New	Creates a new empty project
Open	Opens an existing project
Open version	Opens a different version from the current project
Close	Closes an open document
Save	Saves an open project under its filename
Save all	Saves all open projects under its filenames
Properties: Project	Shows the properties of the current project
Properties: Version	Shows the properties of the current version of the project
Find similar project	Searches all projects of the current client for similar hexdump data
Find duplicate objects	Searches all files for versions which exist twice.
Update all projects	Updates information in all projects
Ex - & Import	See below
Print	Prints a document
Print preview	Previews a document as it would look like when printing
Configure printer	Selects a printer and a printer connection
Exit	Exits WinOLS

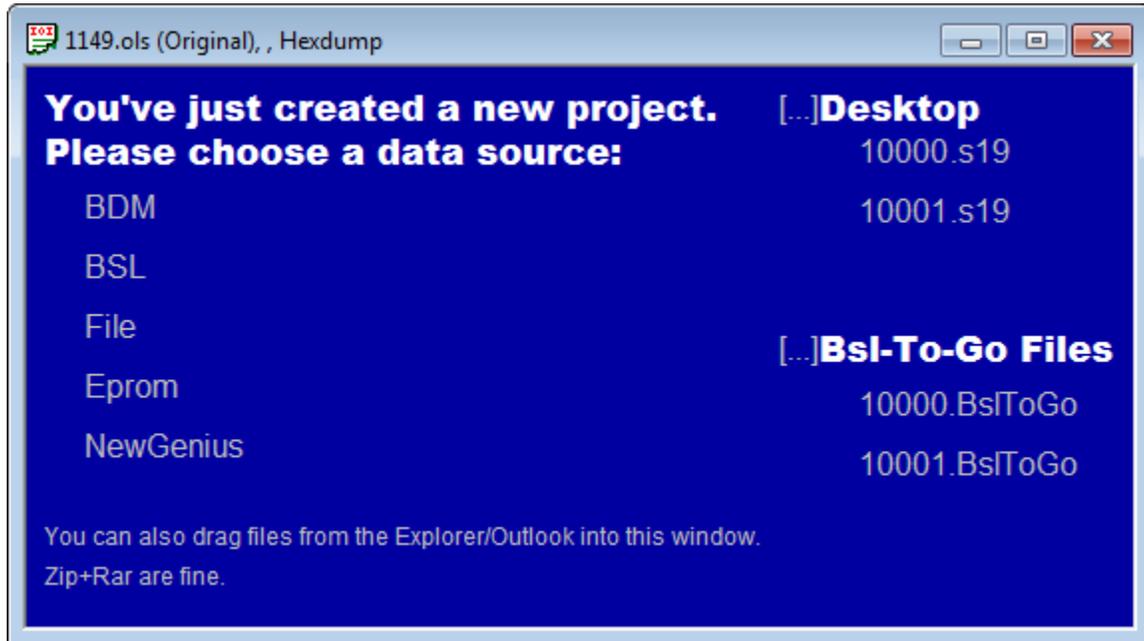
The Submenu Ex- and Import contains the following items:

Import File	Creates a new version from a raw-file.
Export File	Creates a new raw-file from a version.

Send project as Mail	Creates a new E-Mail and appends the current project as attachment.
----------------------	---

Import directory	Imports entire directories into the WinOLS directory
AutoUpdate + AutoImport	Trigger + Configure AutoUpdate and AutoImport
Export CSV map list	Creates a (with Excel readable) CSV file containing a list of all maps
Update map list on basis of CSV file	Updates the map in the project with the changes in the CSV file.
Export map pack	Exports a list of all map into a KP file, for a later import
Import map pack	Imports a previously exported KP file
Import maps	Imports all maps from one file into the current project
Import changes	Imports maps from another project, even if they were moved to another address.
Import Damos & ASAP2	Allows you to import maps from DAM or A2L files. This function requires the Damos-Plugin
-	
Export project properties	Exports the project properties as ini file.
Import project properties	Imports the project properties from an ini file.
Translate map texts	Translates the map, axis and folder description into another language.

4.1 The command New (Menu Project)



Use this command to create new projects in WinOLS from an existing binary file, eprom or ECU. The empty project will display the options as shown above.

By clicking on [...] you can choose the paths from where the files are displayed in this dialog. (WinOLS automatically hides file that probably aren't useful here, like *.jpg.)

Tip:

If you keep the shift key pressed, while clicking the icon in the symbol bar, the file-import dialog will be opened after the new project windows was opened.

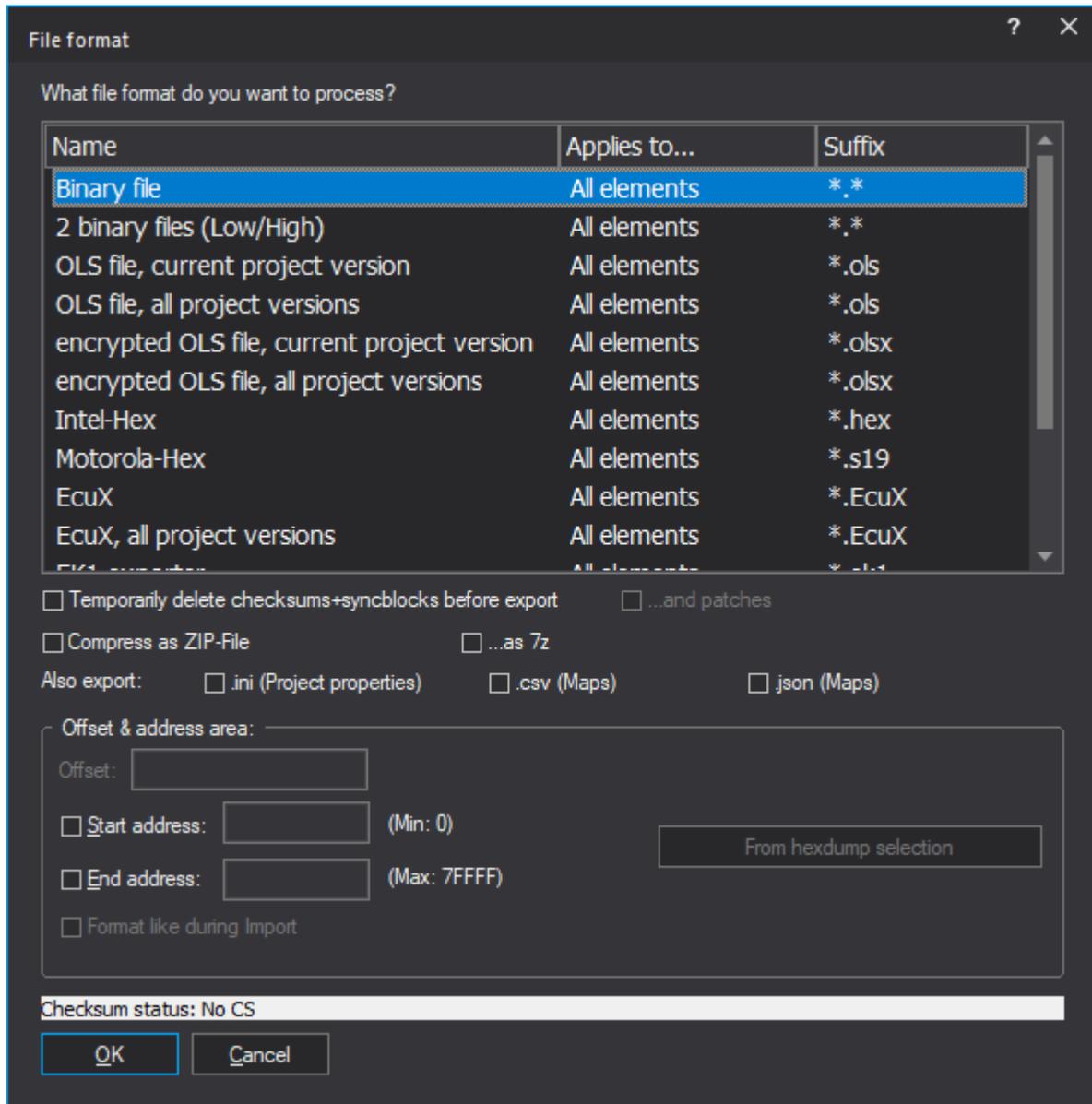
Note:

Use the Open command instead if you want to open an existing WinOLS project.

Shortcuts

Symbol bar: 
 Keyboard: CTRL+N

4.1.1 The dialog File format



This dialog is shown during import and export. You can configure the type of file(s) you want to import/export. At the top you can choose file format. Several formats are available. Some of them are only visible depending on the project type selected in the project properties or if the respective plugin is installed. (Export: Plugins may not appear due to shadow data restrictions.)

All of the following options are only visible if they are supported by the selected format:

Individual checkboxes:

- Temporarily delete checksums + sync blocks before export [Only export]

Removes the mentioned properties and restores the original values (only while exporting)

- Compress as Zip-File [Only export and when the file format isn't already compressed]
- Create new version [Only import]
Creates a new project version when importing (instead of overwriting the current)
- This file may not be reimported into WinOLS [Only export BxxToGo]
The created file can only be used in BdmToGo / BslToGO. Not in WinOLS. (This option does not modify the programmed data and thus does not offer any protection against re-reading the data from the ECU. To get that kind of protection, activate the option "BDM read protection" in the dialog "Properties: Project". It will place a marker into the data and thus the re-read project can only be imported into a WinOLS that is registered to your customer number.)
- Export only active element [Only binary / Intel Hex / Motorola Hex export]
By default WinOLS exports always the entire projects. For some file formats you can limit the export to individual elements (if there are several).
- File version [Only export ols]
For compatibility reasons you can export an older version of the ols file format.

Code data & swap lines: [Only binary / Intel Hex / Motorola Hex if encryption / swapping is configured in the project]

It is possible to encrypt data and lines just like it would be done with the integrated eprommer. In order to activate this option you must enable encryption in the producer dialog and select a key file.

Optionally swapping of data lines can be activated, which is done just like it would be done when you are using the integrated eprommer. In order to activate this option you must select a producer and activate the swapping of data lines.

Offset & address area: [Only binary / Intel Hex / Motorola Hex]

Here an offset can be configured for Intel-Hex / Motorola-Hex files for the addresses in these files. Furthermore an address range can be configured if you want to handle only a part of the project. When importing this option is only available if the project already contains a version. It is always available when exporting.

For Intel-Hex / Motorola-Hex files you can tell WinOLS to mimic the file format of the imported file. This is only available when the file was imported from the same file format. It helps you communicate with other programs that require the file to have a certain format (within the standard).

Project rights: [Only olsx export]

Allows you to configure the project rights when exporting to limit the rights when the file is reimported.

Password and customer number: [Only olsx export]

You can make sure that the file can only be imported if you know the password and / or use a WinOLS with the right customer number.

Security areas: [Only BdmToGo/BsiToGo export]

You can choose up to 3 areas, which should be compared with the ECU before programming. This was introduced to protect the user from using the wrong ECU and it is also a copy protection for your work. Simply include the VIN into the checked areas and the file can only be programmed into the desired vehicle (and not into all other similar vehicles). It is recommended to mark the areas by comments. If you use the comment names "BDM1", "BDM2" or "BDM3", WinOLS will recognize the comments and automatically enter the marked areas into this dialog.

Which elements should be exported? [Only BdmToGo/BsiToGo export]

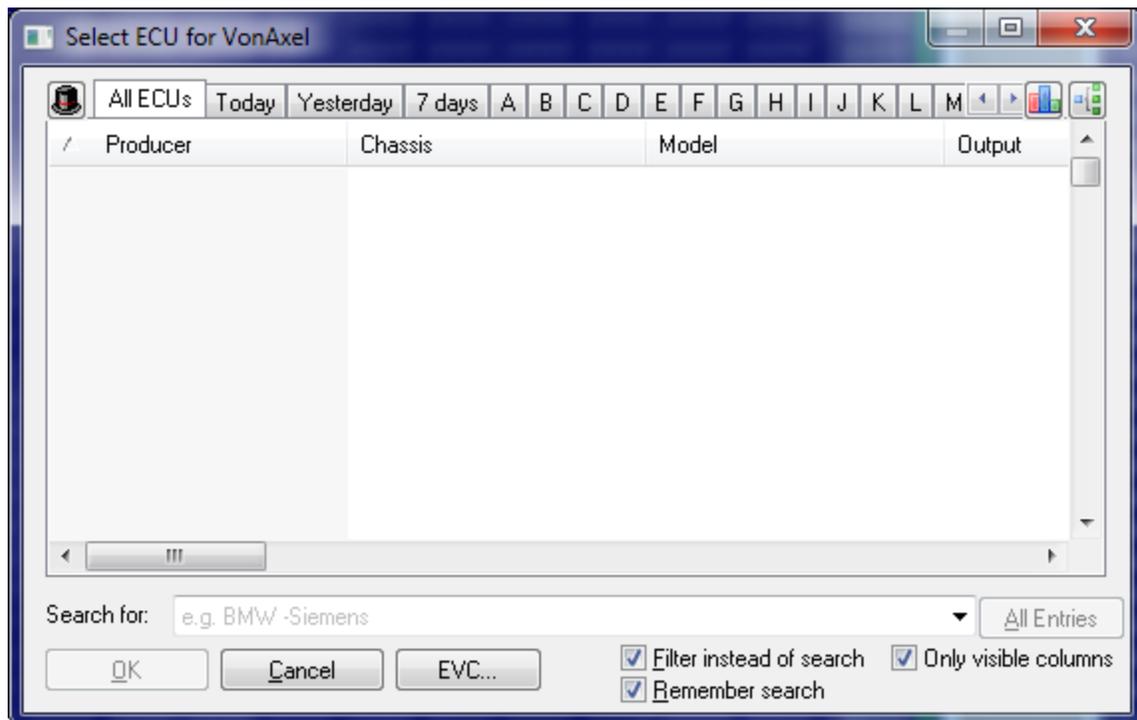
Here you can select which elements should be programmed later on. Elements that contain differences between original and version are printed in bold.

Shortcuts

Symbol bar: -

Keyboard: -

4.2 The dialog Open (Menu Project)



This dialog allows you to search, manage and open projects. It lists all files in the current project folder.

Clients:

You may use the hat icon in the upper left corner to change the current client and

thus folder. Furthermore you may choose to display the data from all local clients at the same time.

The client menu also allows you to view the data from resellers. You can see and purchase their projects directly from this dialog. This function requires an internet-connection.

To the right of hat icon, a button displays the last reseller used.

Column sets:

Right next to it, WinOLS can display a selection for the currently selected columns. (This feature must first be activated in the options: Cog icon in this dialog). This allows you to switch between different column configurations. Just like in the Sessions menu, you can manage the menu items with: Shift=rename, Ctrl=Save current configuration there, Shift+Ctrl: Swap.

Filter tabs:

Use the tabs on the top of the dialog to choose if they want to see all projects, projects that were changed today or projects where the producer begins with a certain letter. You may also activate the letters with the hotkey Ctrl+A to Ctrl+Z. To select which tabs you want, click on the tabs using the right mouse button.

Tab 'Purchased / Limited':

This tab only displays projects that you have purchased from resellers or for which the rights have been limited. For technical reasons, the 'Purchased' state can only be saved in ols files since Q2/2018. Therefore, it is determined at the same time whether the rights for the project are limited (which is often the case with purchased projects) also taken into account.

Colors / formats:

The following colors are used (per line) in the list:

- **Blue:** This project file is currently locked (might be in use in WinOLS on another computer)
- **Red:** This project is currently opened on this computer.
- **Green:** You already purchased this reseller project. (For reseller lists and own projects purchased from Q2/2018 onwards.)
- **Cyan:** The rights of these projects are limited.
- **Bold:** When using the function "Search similar projects", the columns "ECU-Nr. ECU" and "Software" are printed bold if they match the current project.
- **grey:** When using the view "All Resellers", this color indicates that you're currently not a customer of this reseller.

Sidebars:

Using the 3 icons at the top right corner of the dialog you can:

- Statistics about during which time period how many projects were created/modified. This data refers to the current selection or (if there is none) to all projects

of the active client.

- View statistics about the files in the current view. If you select 2 or more projects, then the statistics will be calculated about the selection. You can use searching and sorting in combination with this feature.
- View the versions in the selected project to make it easier to choose the right project. If you double-click a version, WinOLS will open it directly (without displaying the Open Version dialog).

Search function:

 Video

You may also simply type into the list to just to the next entry which begins with the letters that you enter. The letters that you enter will appear in the combobox at the bottom. If you activate "filter instead of search", the project list will show only projects that match your search string.

- -Negative: Type a minus sign in front of a word to exclude all projects that contain this word from the results.
- "exact words": Put words in quotation marks to search for projects that contain these words in exactly this order (and not just the individual words).
- "one, ortheother": Separating words with a slash (or the word "or") means that it's okay if only one item in this group is found.

Context menus:

The tabs and calendar headers have their own context menu that can be accessed by right-clicking them to change configuration settings. By right-clicking one or multiple projects you can access another context menu. Here you have options to edit, move, or send by e-mail, to export the list as text or perform a mass export of the files.

Copy / Move projects:

You can right-click selected projects in the list and copy / move them to other clients (or any folder). Directly in front of the list of clients there is the "and update" option. If it is switched on, the function "Update projects" with the currently saved settings is also applied directly to the projects when copying / moving. Irrespective of this, the menu option "Copy to Reseller Upload..." is available when copying. Here the destination folder is already preset, but in the following dialog (which can also be skipped with the shift key) you get further options especially for resellers.

Excel export: (This function requires WinOLS 5.25 + FeatureUpdate)

You can have a selection exported as an Excel file and then edit it in Excel.

Important: If you want to import the changes later into WinOLS, then the column "File name" must be exported.

Excel import: (This function requires WinOLS 5.25 + FeatureUpdate)

You can apply the changes made in Excel to the WinOLS projects. Either by right

clicking in the list or by dragging the Excel file into the list.

Search for this: (This function requires WinOLS 5.25 + FeatureUpdate)

This transfers the value of the clicked cells into the search line of the dialog. Instead of the context menu function you can also use Alt+mouse click. Additionally press Ctrl and add the cell text to the search rows. If you press Shift additionally, the text will be preceded by a minus sign, so that you exclude this text from the search.

When all / some projects are missing:

Help

Shortcuts:

Symbol bar: 

Keyboard: Ctrl+O

Within the dialog:

All clients Ctrl+Alt+A

My resellers Ctrl+Alt+R

All resellers Ctrl+Win+Alt+R

Letter-Tab Ctrl+A to Ctrl+Z

4.2.1 When all / some projects are missing

Don't panic

WinOLS does not delete projects (unless you explicitly command it).

If you have deleted projects unintentionally yourself

WinOLS deletes projects into a separate trash folder and keeps them for 30 days.

You can reach this folder by clicking on the hat icon in the Open project dialog. Move the project to the desired folder by right-clicking on it.

Defective / foreign projects

Projects that caused crashes are automatically moved to the CorruptFiles folder.

Projects that were purchased with another user account and therefore cannot be opened are moved to the ForeignFiles folder. Both are subfolders of the respective client folder.

Is a search function active?

Please check whether you are currently using a search function:

- Tab at the top
- Search line at the bottom
- P-Icon below (red = active)
- Special search (Black triangle next to P icon at the bottom)
- Non-developer mode

Non-developer mode

It's possible that only some of your files are displayed and the title bar of the window

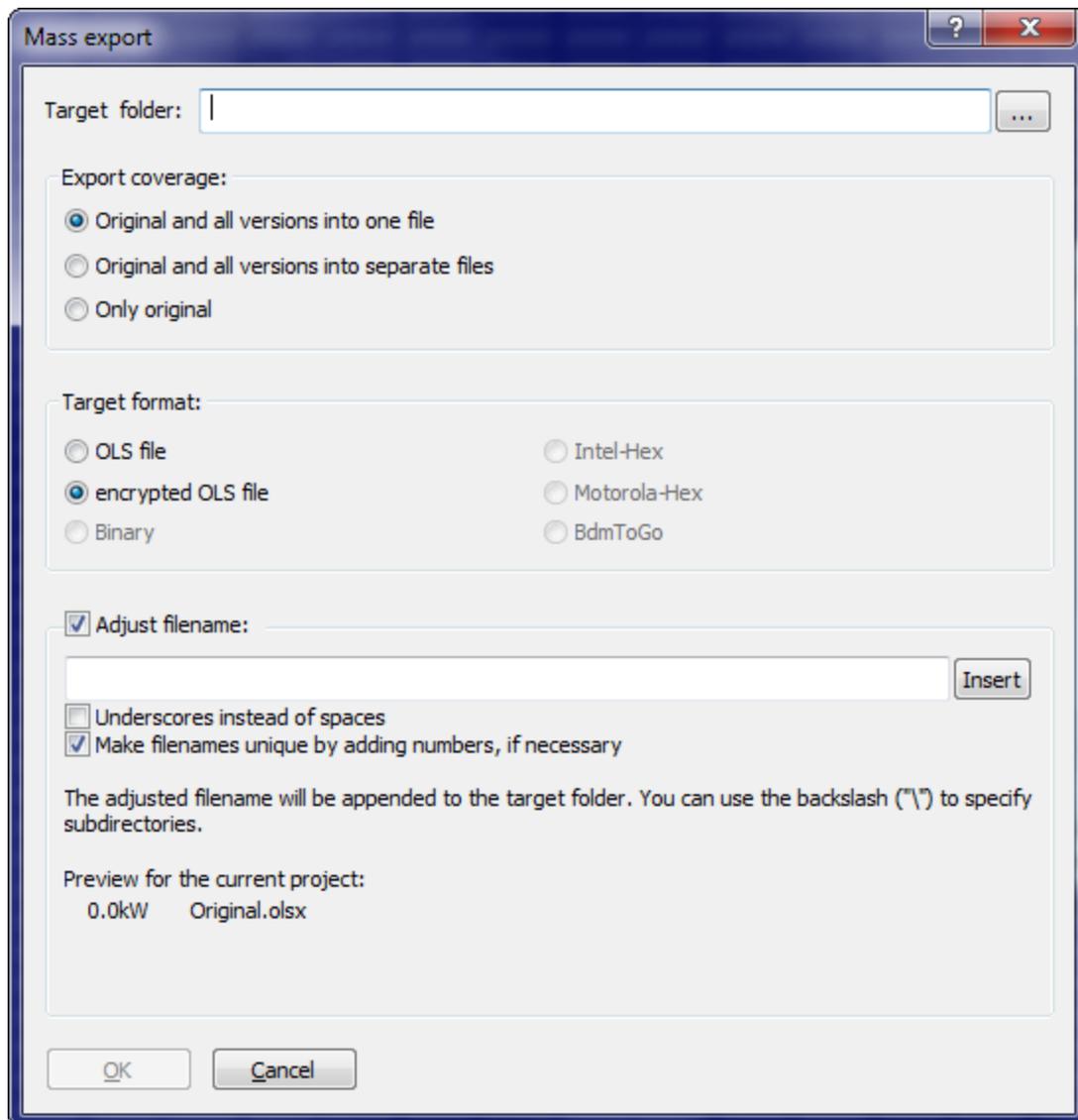
contains the text 'Only finished projects'. If this is the case, then you've activated the non-developer-mode. As a consequence you can only see / open finished projects and you cannot change them. To reactivate the developer mode, open the configuration menu, go to the page 'Miscellaneous' and uncheck the 'Non-Developer Mode'.

If all projects are missing

You are probably just looking at the wrong folder.

- Change the client by clicking on the hat icon
- In the configuration dialog select the correct folders with their .ols files as clients. If you do not know where your projects are stored, click [...] in the mentioned dialog and let WinOLS search for them.

4.2.2 The dialog Mass export (contxt menu)



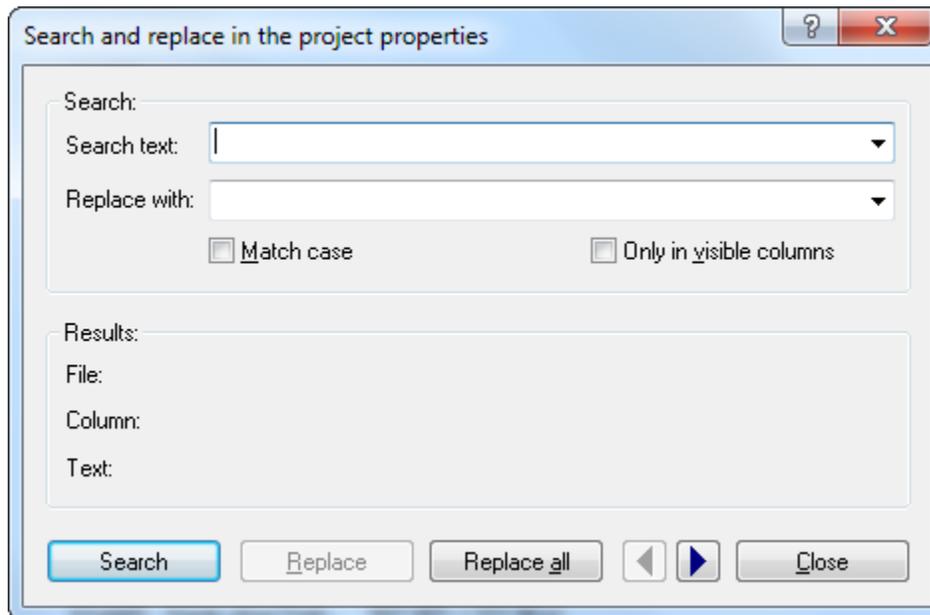
The dialog mass export is a subdialog of the dialog 'Open project' where it can be reached through the context menu. It allows the export of all previously marked projects. Here you can choose which version shall be exported and in which format this should be done.

You can enter your own template for the file name. Use the Insert button to access all available text blocks. The template can contain a backslash ("\") to create your own structure of subfolders.

Examples for "Adjust file names"

- %ECU.Producer%\%File.Filetitle%
(Depending on the Ecu-Producer into a folder. All versions in one file.)
- %Vehicle.Producer%\%Vehicle.Series%\%File.Filetitle%_%More.Versionname%
(Folder structure by vehicle. Each version in a separate file)

4.2.3 The dialog Search and replace in projects (context menu)



This dialog allows you to search and replace texts in the properties of all selected projects. Changes will only be performed if you use the button 'Replace' or 'Replace all'. This will change the project file in such a way that the search text will be replaced.

Note:

The button 'Replace all' performs the replacement operation for all projects in question directly, without asking. Use it with care, because the changes cannot be undone..

Note:

This Dialog can only be reached via the context menu of the dialog 'Open (Menu

Search for all projects that contain "AA BB CC" in the hexdump.

Search for all project versions that contain a map with the name part "Abc*", which contains changes.

Search for all project versions that contain the name part "*Stage*" and a code field with the name part "Abc*", which contains the decimal value "1000".

Tip:

Because the projects have to be opened for the search, this function is relatively slow. In the 'Open (Menu Project)' dialog, only select the projects where the search makes sense beforehand.

Note:

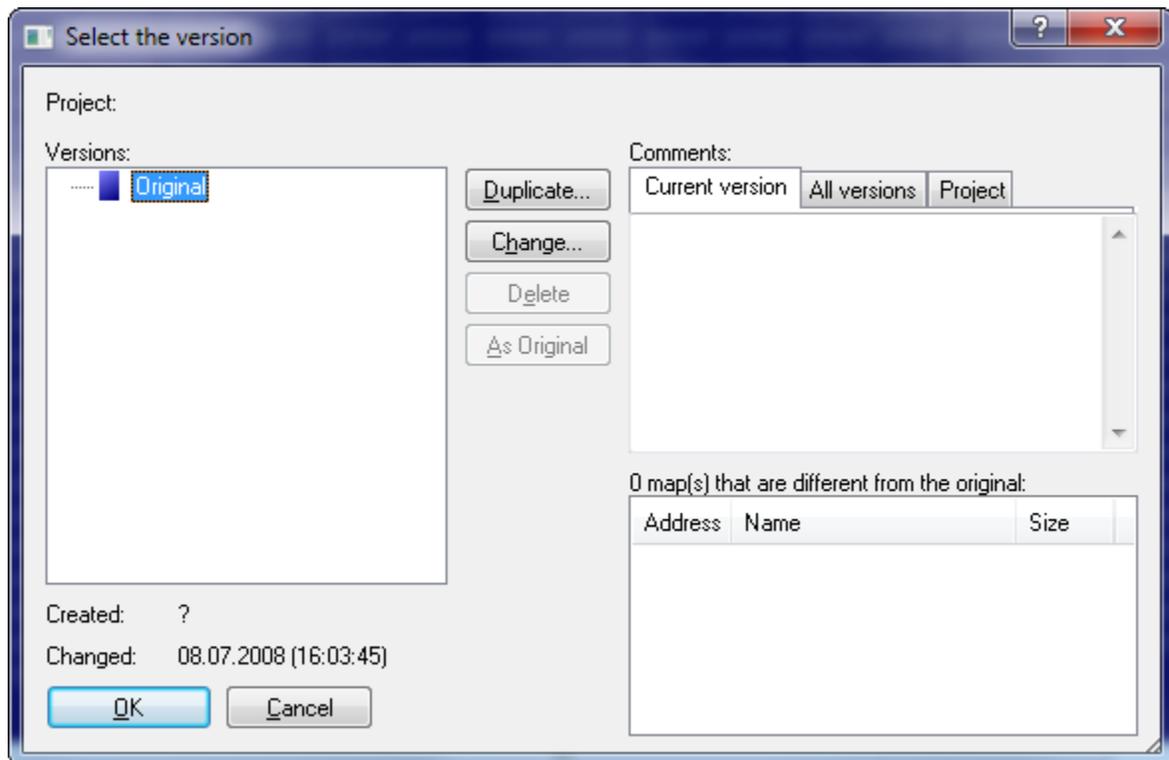
This dialog can only be accessed via the context menu in the 'Open (Menu Project)' dialog.

Shortcuts

Symbol bar: -

Keyboard: -

4.3 The dialog Open version (Menu Project)



This dialog allows you to select and manage the versions of a project. With the buttons of the same name you may duplicate version, change their descriptions or delete them. You can drag+drop versions in the tree to change the version folders.

Versions that are already open are printed **in bold**.

Use the button 'As original' to convert the selected version into the original version. As a consequence all future comparisons will use this version. The former original version will not be deleted; it will be stored in place of the currently selected version. This function swaps the hexdump data, but not the additional version information.

The button 'Swap' can be clicked if two versions are selected (for example by ctrl+mouseclick). Use it to swap the selected versions. This function swaps both the hexdump data and all additional version information.

Furthermore you may view and edit comments for all versions and for the project itself on the upper right corner of the dialog. Use the tabs to select the comment that is currently displayed. You may also view (but not edit) a summary of all comments

In the lower right corner a list is displayed. It contains all maps which are changed in this version from the original version. It will automatically be generated and cannot be edited.

Version folders:

By default versions are simply listed, but you can also use version folders to organize them. This has no influence on the program behavior, but only affects the display of the version list.

Any version can serve as folder to another version. Furthermore you can use abstract folders (which are just folders, but not a version) which can also contain other versions. To change the version folders, simply drag a version to another place in the open version dialog or edit the version properties and change the parent folders. To get a version back to the top level, simply drag it far to the left.

You can sort the version tree using the tabs. If you hold down the Ctrl key while clicking, the tree is not flattened into a list.

Shortcuts:

Symbol bar: 
Keyboard: Ctrl+Shift+O

Note:

If the hotkey doesn't work, a graphic card software is reserving it. Test it on F12>Debug.

4.4 The command Close (Menu Project)

Use this command to close all windows concerning the active project. WinOLS will ask to save any changes before closing the project. If you're closing the project

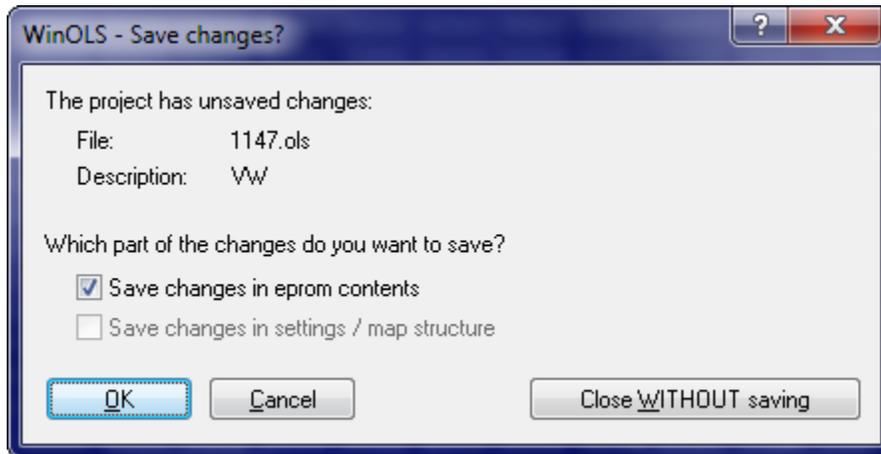
without saving, all changes since the last save will be lost.

Shortcuts

Symbol bar: -

Keyboard: -

4.4.1 The dialog Save changes (Menu Project)



This dialog will be shown when you close a project and still have unsaved changes.

Use the two checkboxes to configure which part of the changes to want to save. You can save changes in the eeprom data independently from the changes in the map structure. The checkboxes only take effect if you confirm the dialog with 'Ok'.

If you leave the dialog with 'Cancel' nothing will be saved, but the project won't be closed either. No data will be lost.

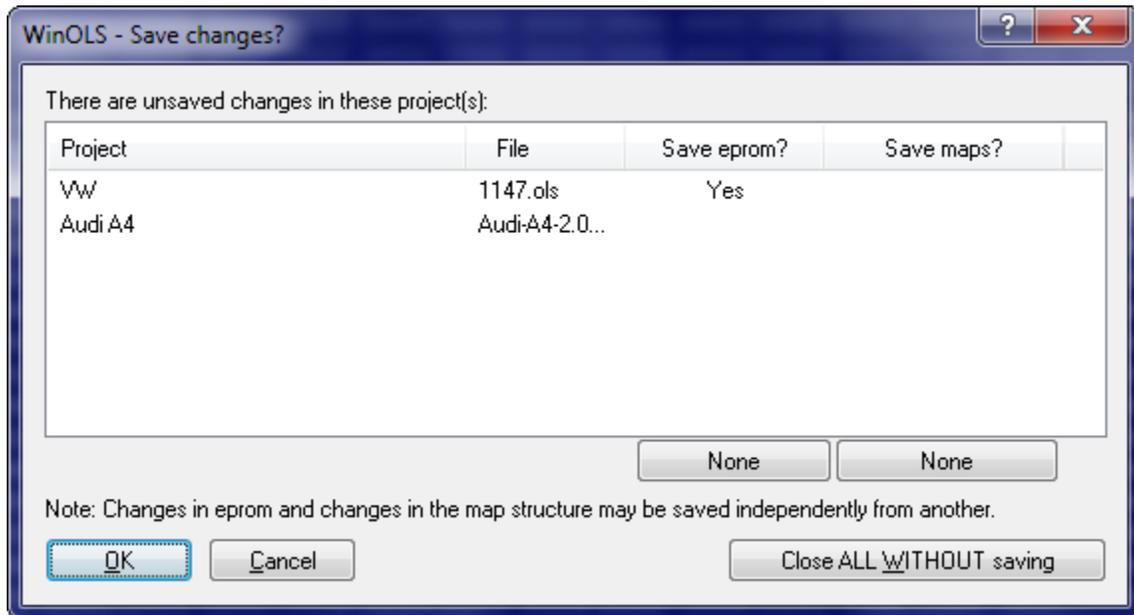
With the button 'Close WITHOUT saving' you will (no matter whether checkboxes are checked or not) leave the project and discard any changes.

Shortcuts

Symbol bar: -

Keyboard: -

4.4.2 The dialog Save changes (Table style) (Menu Project)



This dialog will be shown when you close WinOLS and still have unsaved changes in at least one project.

Use the table to configure which part of the changes to want to save. You can save changes in the eeprom data independently from the changes in the map structure. The configuration done in the table does only take effect if you confirm the dialog with 'Ok'. To change the table, either click on the button 'all' or 'none' below the columns or click directly on the word 'yes' or 'no'.

If you leave the dialog with 'Cancel' nothing will be saved, but the project won't be closed either. No data will be lost. WinOLS will not be closed.

With the button 'Close ALL WITHOUT saving' you will (no matter how the table is configured) leave all projects and discard any changes. There will be no further questions.

Shortcuts

Symbol bar: -

Keyboard: -

4.5 The command Save (Menu Project)

Use this command to save the active version of the current project under its current name and directory.

Often you'll have several windows for the current version opened. Not the window, but the version is saved, so this command affects all windows of this version.

Shortcuts

Symbol bar: 
 Keyboard: Ctrl+S

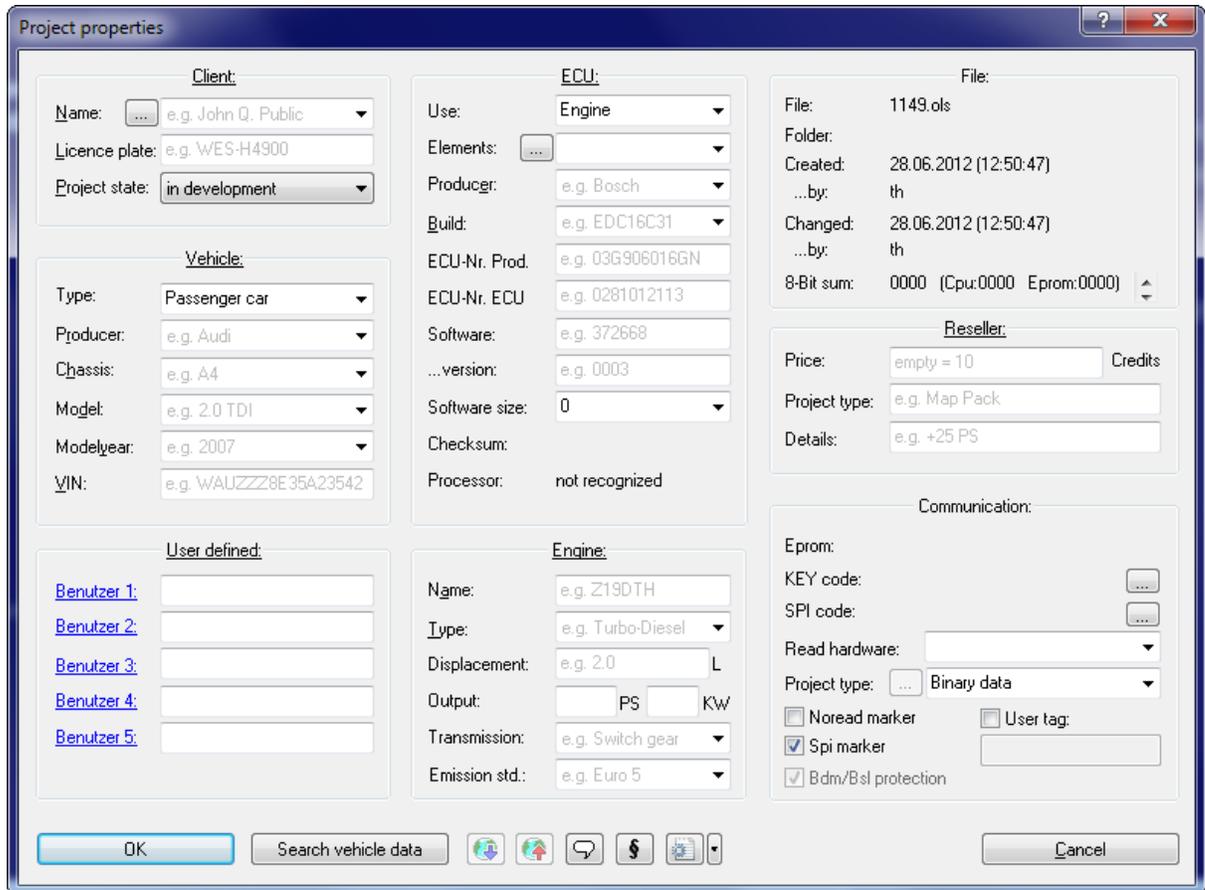
4.6 The command Save all (Menu Project)

Use this command to save all opened project versions.

Shortcuts

Symbol bar: -
 Keyboard: Ctrl+Shift+S

4.7 The Dialog Properties: Project (Menu Project)



The 'Project properties' dialog box contains the following sections and fields:

- Client:** Name (e.g. John Q. Public), Licence plate (e.g. WES-H4900), Project state (in development).
- Vehicle:** Type (Passenger car), Producer (e.g. Audi), Chassis (e.g. A4), Model (e.g. 2.0 TDI), Model year (e.g. 2007), VIN (e.g. WAUZZZ8E35A23542).
- User defined:** Benutzer 1 through Benutzer 5 (empty text boxes).
- ECU:** Use (Engine), Elements (...), Producer (e.g. Bosch), Build (e.g. EDC16C31), ECU-Nr. Prod. (e.g. 03G906016GN), ECU-Nr. ECU (e.g. 0281012113), Software (e.g. 372668), ...version (e.g. 0003), Software size (0), Checksum, Processor (not recognized).
- Engine:** Name (e.g. Z19DTH), Type (e.g. Turbo-Diesel), Displacement (e.g. 2.0 L), Output (PS, KW), Transmission (e.g. Switch gear), Emission std. (e.g. Euro 5).
- File:** File (1149.ols), Folder, Created (28.06.2012 (12:50:47)), ...by: th, Changed (28.06.2012 (12:50:47)), ...by: th, 8-Bit sum (0000 (Cpu:0000 Eprom:0000)).
- Reseller:** Price (empty = 10 Credits), Project type (e.g. Map Pack), Details (e.g. +25 PS).
- Communication:** Eprom, KEY code (...), SPI code (...), Read hardware (...), Project type (... Binary data), Noread marker, User tag, Spi marker, Bdm/Bsl protection.

Buttons at the bottom: OK, Search vehicle data,       Cancel.

The properties of the active project may be edited with this dialog. If the project contains several versions the data displayed in this dialog applies to all versions. To

make browsing your projects easier it is recommendable to fill in this dialog and use consistent values. To help you WinOLS automatically corrects many common wrong notations. You can configure this under "Miscellaneous > Configuration > Automatically".

A click on the hyperlink 'Client', 'Vehicle', etc. shows the properties of the other currently open projects as a menu. Click on a menu line if you want to use these values.

Client:

Enter the customer details here for your reference. The customer details can be used in reports. Use the button [...] to reach the customer list dialog. If you use the project state "in development" then the profile is hidden from WinOLS users that have the "non-developer" mode active. If you mark the project as "master" then it will be displayed with higher relevance in the "Import similar" dialog.

Vehicle:

The fields 'Producer', 'Chassis' and 'Model' can easily be filled in with the mouse. Just click (in the uppermost field) on the arrow to get a list. Immediately after you made your choice, the further drop-down lists will be filled with the matching data for the selected producer (or producer and chassis).

User defined:

In the lower left corner you can see 5 fields that you can use for your purposes. You can edit the field name by clicking on the blue underlined text. (The 5 field names are the same for all projects.)

ECU:

The field 'Elements' allows you to select the currently active element. Use the button '...' next to it to get to a subdialog which allows you to configure the elements in the project.

The field 'producer' is important for the automatic map search. An incorrect or empty value can decrease the number of found maps because WinOLS uses producer-specific algorithms.

With the field 'Software size' you may not only view the current size, but also change it. Please note that this will affect all versions of the current project and that the change cannot be undone. If you choose a software size smaller than it currently is, data will be lost permanently.

Communication:

Use the 'Read hardware' to set the hardware of the project. This has an influence on what export and hardware functions are available for the project. If you choose a BDM, BSL or Eprom project type, you can use the button '...' to view details.

The field 'Project type' allows you to remember the type of contents. Some details

about the available options:

- Complete binary file => The dump contains all data from the hardware.
- Partial (map data) => The dump contains only the maps. The rest is cut off.
- Partial (full length) => The dump contains only the maps. The rest is cut empty (usually FF or 00).

Using the 4 checkboxes you can insert up to 4 'tags' into the project hexdump data. This requires that either a checksum is used or that you manually add a patch tag block in the checksum dialog (extended mode). Noread is a general tag that is also supported by other programs and protects you against the reading of the programmed data by your competitors (encrypted variation). The checkbox 'Bdm/Bsl protection' works similar, but still allows you to read the data with a WinOLS with your customer number.

Buttons (from left to right):

- OK
- Search vehicle data: You can let WinOLS recognize several technical information about the project. You can configure WinOLS at "Miscellaneous > Configuration > Automatically" to do this automatically for new projects. The button is red if a click will yield new data.
- Search online: You can save a lot of time when you're filling the in the form. To achieve this, several characteristics from the project will be transferred to an internet database. Within seconds you'll receive a resulting list with matching models. With a single mouse click you may transfer the results into the form.
- Store online: Sometimes it may happen that a model is not yet in the database, so you still have to enter the data manually. With the option you may store the model in the internet database. If you get similar models in future, they will automatically be recognized, too.
- Project comment: Allows you to enter a comment for this project and connect files to the project.
- Rights: Here you can disable rights for the project. This is useful for resellers.
- ini-files: Exports an ini-file containing the project properties. You can drag that file into any WinOLS project to copy the data. Use the dropdown button to import the data from an ini/ifo file or to copy the project properties from another, open project.
- Cancel

Red fields:

If you are a Reseller and the project is in your Reseller Upload folder, some fields in the dialog may be **highlighted in red**. These are mandatory fields that must be filled in for an upload. In this case they will be marked red if they are empty.

Write protection:

Projects can be protected against changes. Then you will see the text "Read only" in the window frame. The following conditions can lead to this:

- Non-developer mode (Configuration > Miscellaneous).
- Project status Finished, Finished+Master or Ready for reseller

- Project icon "Padlock"
- Unregistered WinOLS

Note:

The functions 'Search online' and 'Store online' only transfer a few characters of the projects to the internet database. The project itself and the changes you made will not be transferred and continue to exist only on your harddisk.

Note:

You can also fill the property fields of a project with values by dragging a Byteshooter ifo file or a WinOLS ini file into the project window. This is done automatically if such a file exists in the same folder and with the same filename (except for the suffix).

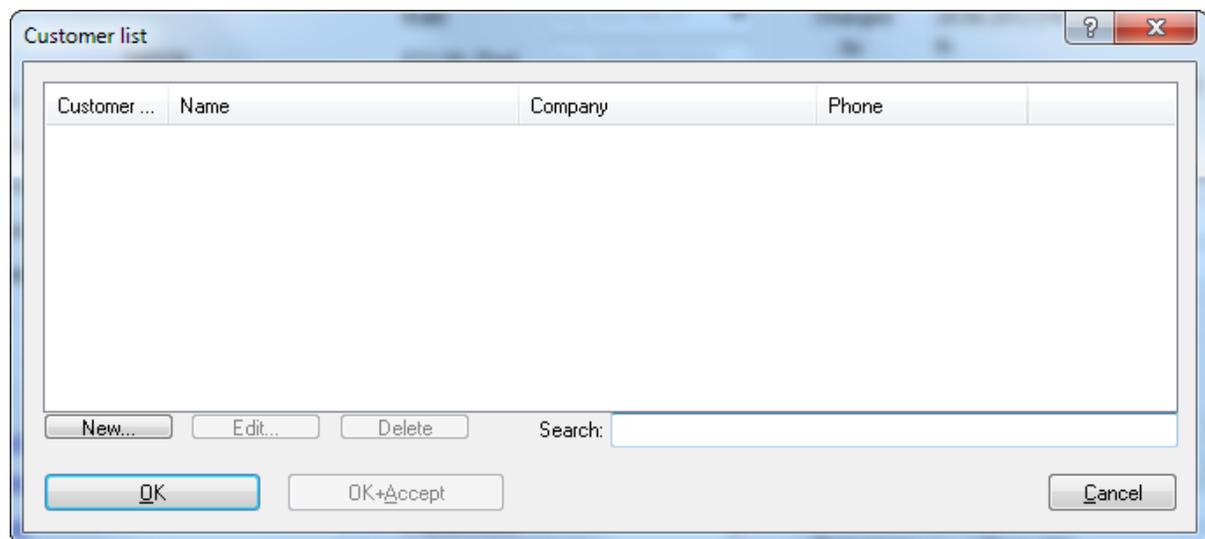
See also:

- Shadow data

Shortcuts:

Symbol bar: 
Keyboard: Ctrl+Alt+Enter

4.7.1 The dialog customer list



You can reach this dialog from the dialog "Properties: Project". This dialog allows you to administrate a list of all customers and to reach the matching entry via the entry from the previous entry.

You can create, edit or delete the customers separately. The list is stored independently from the current project. Use the button "OK+Accept" to copy the currently selected entry into the dialog "Properties: Project".

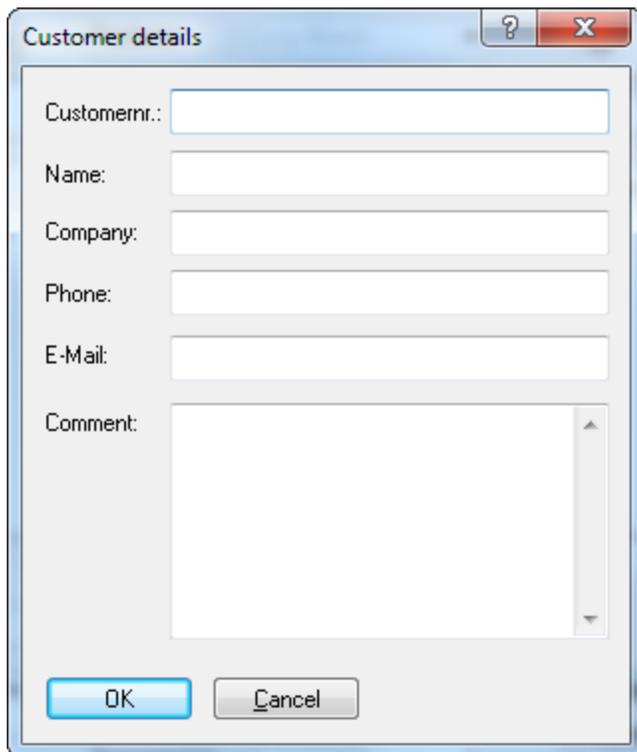
By default WinOLS stores the data from this list inside the WinOLS configuration file. You can change this behavior at "Miscellaneous > Configuration > Path". There you can specify a CSV file which WinOLS can use to store this file. The CSV file can be stored on a network drive and shared by multiple WinOLS clients.

Shortcuts

Symbol bar: -

Keyboard: -

4.7.2 The dialog customer details



The image shows a standard Windows-style dialog box titled "Customer details". It features a title bar with a help icon (question mark) and a close icon (X). The main area contains six input fields: "Customernr.", "Name", "Company", "Phone", "E-Mail", and "Comment". The "Comment" field is a larger text area with a vertical scrollbar. At the bottom of the dialog, there are two buttons: "OK" and "Cancel".

You can reach this dialog from the dialog "Customer list". This dialog allows you to view and edit each customer's data.

Shortcuts

Symbol bar: -

Keyboard: -

4.7.3 WinOLS ini files

You can use ini files to store descriptions of WinOLS project properties. Drag such a file into a WinOLS project to apply the texts to the project. You can easily create ini files with ini4WinOLS.

WinOLS ini files are normal text files with a file name that ends on ".ini" and this content:

```
[WinOLS]
ClientName           = ...
ClientNumber        = ...
ClientLicenceplace  = ...
Userdef1            = ...
Userdef2            = ...
Userdef3            = ...
Userdef4            = ...
Userdef5            = ...
VehicleType         = ...
VehicleProducer     = ...
VehicleSeries       = ...
VehicleBuild        = ...
VehicleModel        = ...
VehicleCharacteristic = ...
VehicleModelyear    = ...
VehicleVIN          = ...
EcuUse              = ...
EcuProducer         = ...
EcuBuild            = ...
EcuProdNr           = ...
EcuStgNr            = ...
EcuSoftwareversion = ...
EcuSoftwareversionVersion = ...
EngineName          = ...
EngineProducer      = ...
EngineType          = ...
EngineDisplacement  = ...
EngineTransmission  = ...
EngineEmmisionStandard = ...
EngineMaxTorque     = ...
OutputPS            = ...
OutputKW            = ...
ResellerProjectDetails = ...
ResellerProjectType = ...
ResellerCredits     = ...
ReadingHardware     = ...
ProjectType         = ...
Comment1            = ...
Comment2            = ...
...

// Change version properties:
VersionComment      = ...
VersionResellerCredits = ...

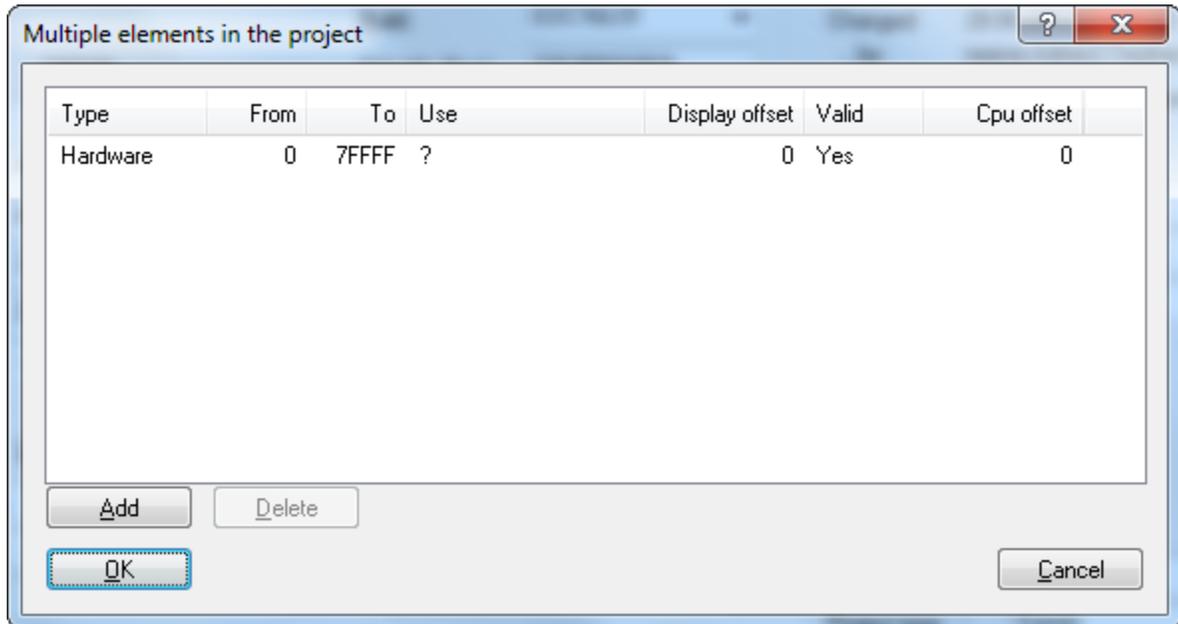
// Only when importing together with a file: Setting the target client folder
Client              = ...
```

Umlauts and international characters: Save the file in "Ansi" or "UTF-8 with BOM" format.

All lines, except the [WinOLS] line are optional. Instead of the "..." in the text above simply use the text that you want to import.

The field "VehicleSeries" was previously named "VehicleChassis". The old name can still be used.

4.7.4 The dialog Multiple elements in the project



This dialog allows you to define the elements within the project. Internally WinOLS stores all elements in one big data block (visible as '<All elements>'). Here you can define for the elements where they are located within the big data block.

Hardware/Virtual:

Hardware elements represent physical memory modules. Each project must have at least one hardware element. Virtual elements are generated by the OLS1xxx importers and/or checksums and define areas within hardware elements.

Addresses:

For each element you need to define the start and end address (hexadecimal). For the "Use" you have several pre-defined texts, so that WinOLS can handle the element correctly. The "Display offset" is the address that is used to display the first value of the element's hexdump. This value can be bigger than the project size.

Further columns:

The columns "Type" and "Valid" are used by the checksums only.

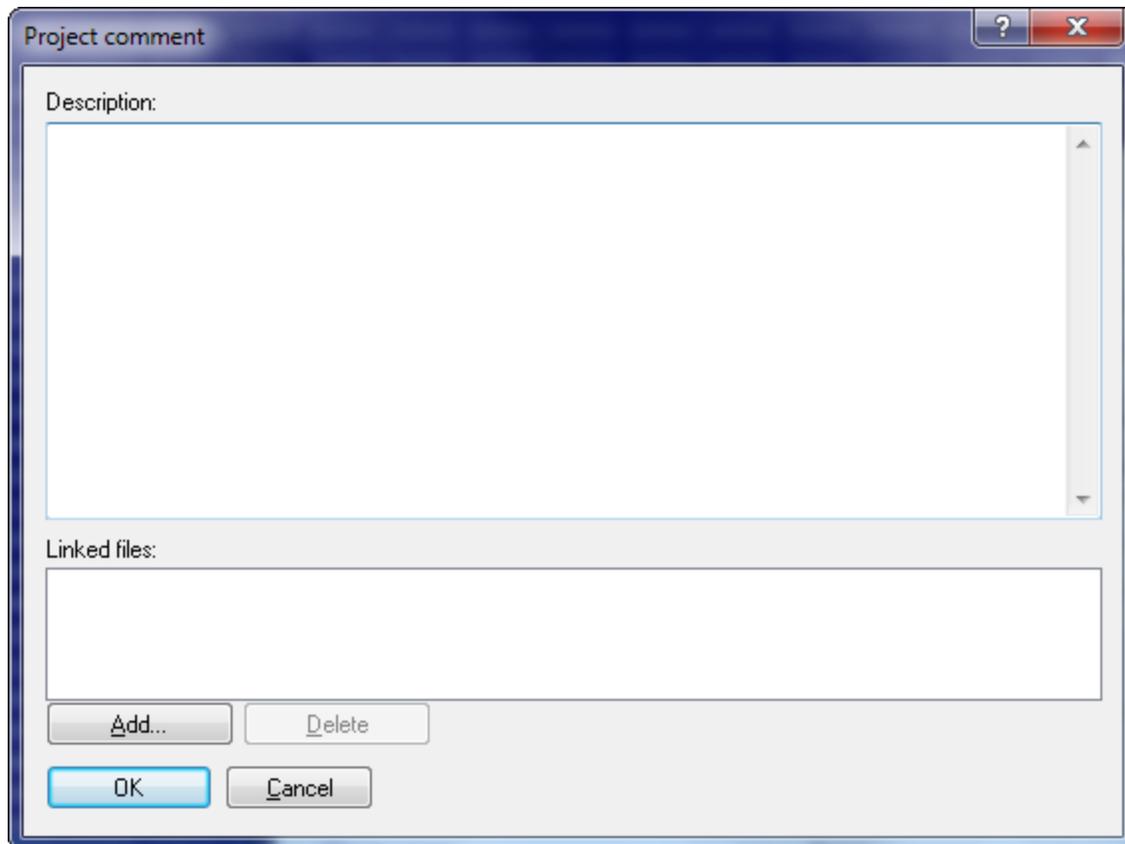
See also:

Overview Elements

Shortcuts

Symbol bar: -

Keyboard: -

4.7.5 The dialog Project comment

In this dialog you can enter a comment for the current project. WinOLS automatically adds information here when you import something.

This field "Linked files" can store a list of files that are related to the project. The files are not used by WinOLS, but the list is stored here for your reference only. The project version stores link to the files only (and not their contents). To add files, use the "Add" button or drag+drop the files into the field. Double-click a list entry to open the file. If you rather want to store the link for the current versions use the dialog "Properties: Version".

Files can be detected automatically in the autodiscover path. These files cannot be deleted.

If you open this dialog from the dialog 'Properties: project' it will be a modal dialog. If

you open it from the Window menu, it is not modal, meaning that windows lying behind the window may still be used. Then this dialog is a "floating" dialog. All floating dialogs can be toggled with the tab key.

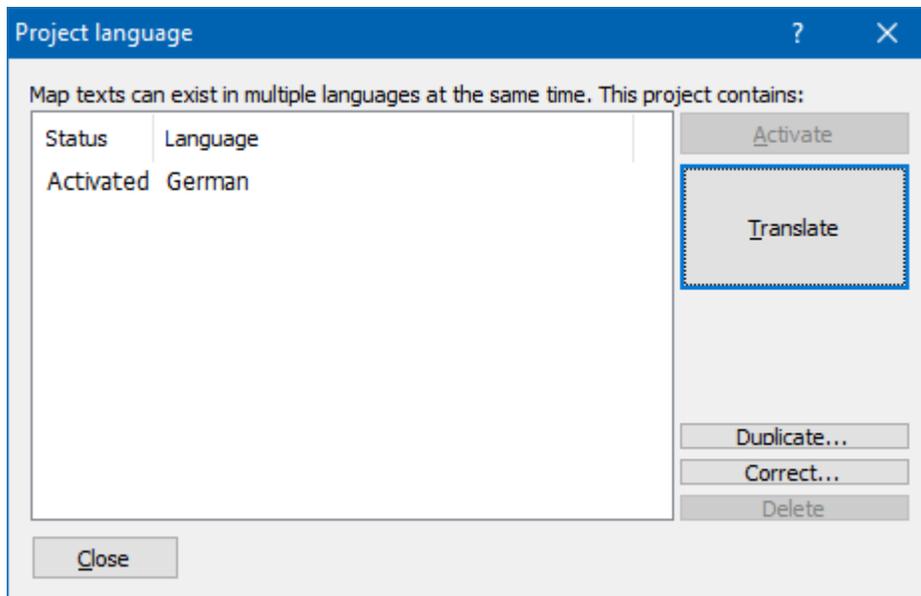
Shortcuts

Symbol bar: -

Keyboard: -

4.7.6 The dialog Project language

▶ Video



Maps have various description fields in WinOLS. Their texts can be stored not only in one language, but in several. Only one language is active at any time and thus visible in dialogs.

You can manage the languages in this subdialog of the project properties. If the current texts are marked with a wrong language, you can *correct* this here. If you manually add a new language (by *duplicating*), it starts by default as a copy of the previously active language. Now you can change texts in the map properties as normal. And change the active language afterwards. You can do this in the project properties and also in the sidebar menu. The tooltip of the map always shows all languages.

If you have licensed the plugin OLS540, you can have all texts *translated* automatically from German to English or define your own translation tables for other languages..

Shortcuts

Symbol bar: -

Keyboard: -

4.8 The dialog Properties: Version (Menu Project)

Use this dialog to edit the properties of the current version of the project.

Name	A title which is also displayed in the selection list when opening the project. Open the combo-box to see the names of other open projects or to select a files with a list of names. This name list is a text file that you create, with one name per line. It can contain the usual placeholders such as %Client.Licenceplate%.
Folder	The project is organized in this version folder. (Can be empty)
State	A descriptive state for the versions. Only the AutoImport/AutoExport/AutoUpdate states are considered by WinOLS.

Price For resellers only: If you would like to sell this version individually, you can enter a price here. More about this under Reseller.

Description A user-defined description of the version.

Linked files This field can store a list of files that are related to the current version. The files are not used by WinOLS, but the list is stored here for your reference only. The project version stores link to the files only (and not their contents). To add files, use the "Add" button or drag+drop the files into the field. Double-click a list entry to open the file. If you rather want to store the link for all versions use the "Comment" button in the project properties. Files can also be detected automatically in the autodiscover path. These files cannot be deleted.

Signature If this project version was signed (with the sign hexdump function) the signature text will be displayed here.

8 bit sum The 8 bit sum of the original and the current version is displayed here

Shortcuts

Symbol bar: 

Keyboard: Shift+Alt+Enter

4.9 The command Find similar projects (Menu Project)

Use this command to search projects on your harddisk which contain data similar to the active project. The result is displayed in the known 'Open' dialog.

The list shows all projects that:

- are very similar on the whole. (The limit for this can be set with the combo box at the top right.)
- have the same values for software, ECU-Nr Prod or ECU-Nr ECU. (This are then shown in bold)
- only one hardware element or the data area are very similar. (You can then transfer the maps/changes from this projects)

Note 1:

The results will only include data from the currently active client.

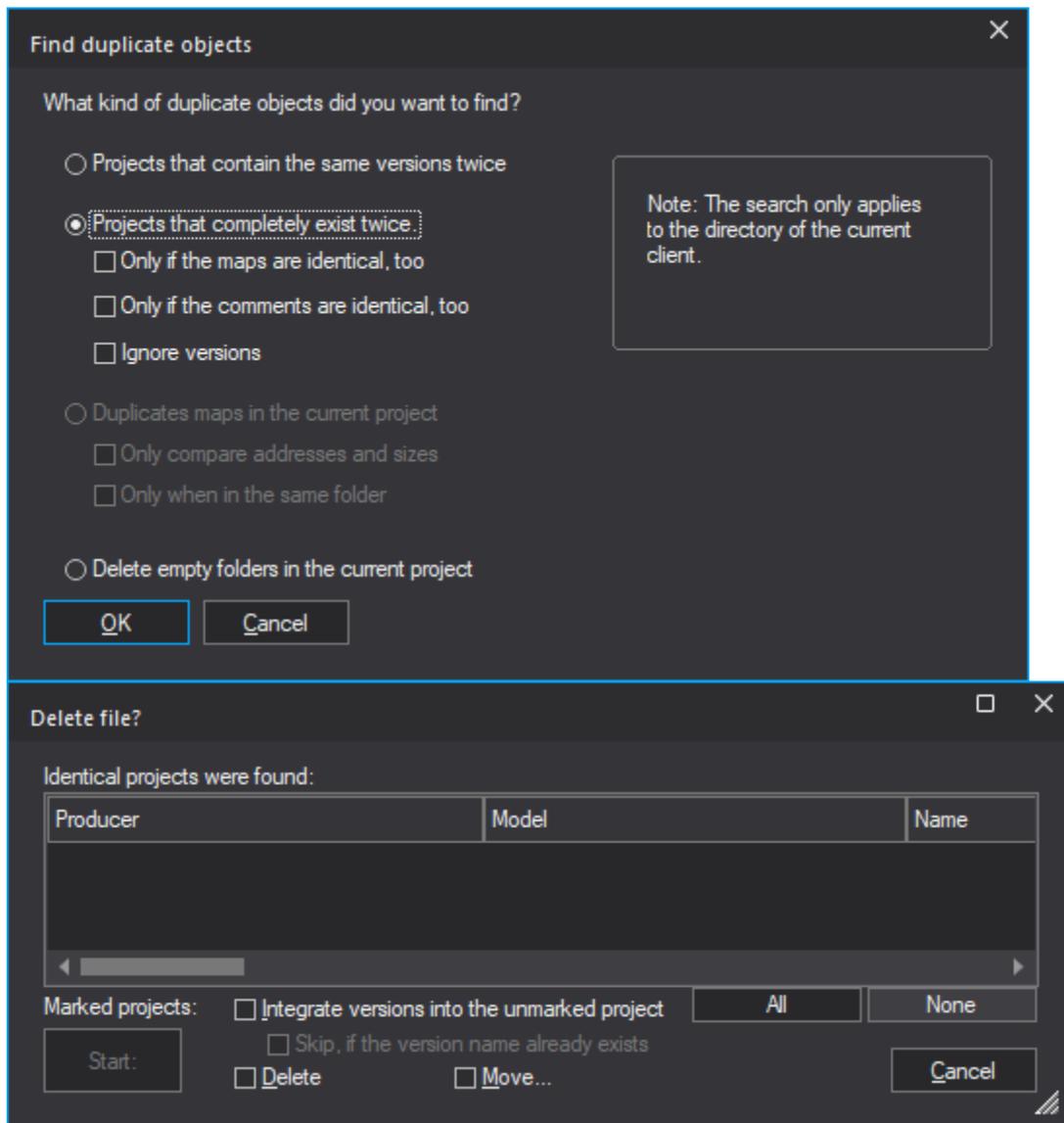
Note 2:

As usual, you can also activate resellers here.

Shortcuts

Symbol bar: -
Keyboard: Ctrl+Alt+O

4.10 The command Find duplicate objects (Menu Project)



This command (lower screenshot) will search all projects of the current client and detect whether any project contains the same version twice / any project exists twice. If such a project is found, WinOLS will ask if it should delete one of the two versions / projects.

Note: This process may take several minutes.

Projects that exist completely 2x:

You can define the comparison conditions here. If you choose to ignore the versions, only the original is compared. You can then use the function to integrate the versions from several projects into one main project. WinOLS automatically avoids integrating versions that already exist. Optionally, you can restrict the recognition to the version name (instead of version name+hexdump) to prevent there being several versions with the same name in the (unmarked) target project.

Shortcuts

Symbol bar: -

Keyboard: -

4.11 The dialog Update all projects (Menu Project)

Update all projects

With this function you can update projects. Current target:

All projects in: Standard

Update:

- Search vehicle data (referring to dialog "project properties")
 - Only if there isn't any data yet
- Normalize vehicle data
(Volkswagen => VW, 200CDI => 200 CDI, ...)
- Checksums
 - Only if there isn't any data yet or the data is obsolete
 - Quicktest (no questions)
- Check script'ability (slow)
 - Only if there isn't any data yet
- Indexing for similar-project-search
- Filename (if it's not already in the namespace)
Reseller-Folder: Caution, customers will be unable to re-download projects, because the identification is done by the name.

Delete / Overwrite:

- Delete data
 - Name (Client)
 - VIN
 - Licence plate
 - Created / changed by (person)
 - Created / changed on (date)
 - Project comment
 - Version descriptions
 - All maps in the 'My maps' folder
 - All maps+folders
 - Linked URLs
 - Linked files
 - Attached files
- Overwrite rights with: [Rights...](#)
- Delete all checksum blocks and restore original values *)
WARNING: This applies to ALL versions.

Alle Optionen außer *) werden gespeichert und können automatisch beim Kopieren in den Reseller-Ordner angewendet werden.

[Start](#) Note: This process may take several minutes. [Open logfile](#) [Save + Close](#) [Cancel](#)

Use this dialog to update several aspects in all projects. In order to achieve this all projects (of a client) are loaded, updated and saved (if necessary). Use this feature when WinOLS offers new features (e.g. 8 Bit sum of the original version) or you've licensed a new checksum. Without this dialog the new fields in the project open dialog would stay empty at first.

Vehicle data are multiple fields from the project properties dialog, which you could also fill manually with the button 'Search vehicle data'.

Normalize vehicle data fixes typical minor problems in the vehicle properties such as missing capitalization, PS/KW in the wrong field and standardizes spaces and spelling for certain vehicle manufacturers. This option affects the project properties in the 'Vehicle' section and output.

Checksums apply the checksum search to the project. If you're choosing 'Quicktest', the projects are only tested roughly. In this case no blocks will be entered and WinOLS will not ask any questions. But in may happen that checksums are found, where there aren't any.

Check script'ability means that WinOLS checks which of your scripts are applicable to the project. This allows you to classify projects automatically. The result is displayed in the project list and can be searched.

Versions:

Here you can edit versions with different actions. This always affects all versions of the selected projects, but each project is only considered on its own (i.e. no projects are mixed). The configuration takes place via files with rules. WinOLS automatically explains the format for the rules in the files:

- **Rename:** Correct spelling mistakes and enforce standardized version names.
- **Sort:** Change the order of versions to a standardized order
- **Combine:** Create combinations of multiple versions
- **Credits:** Set a standard price for versions (for resellers)

Tip:

You can right-click a selection in the Open Project dialog and apply this dialog to selected projects.

Note:

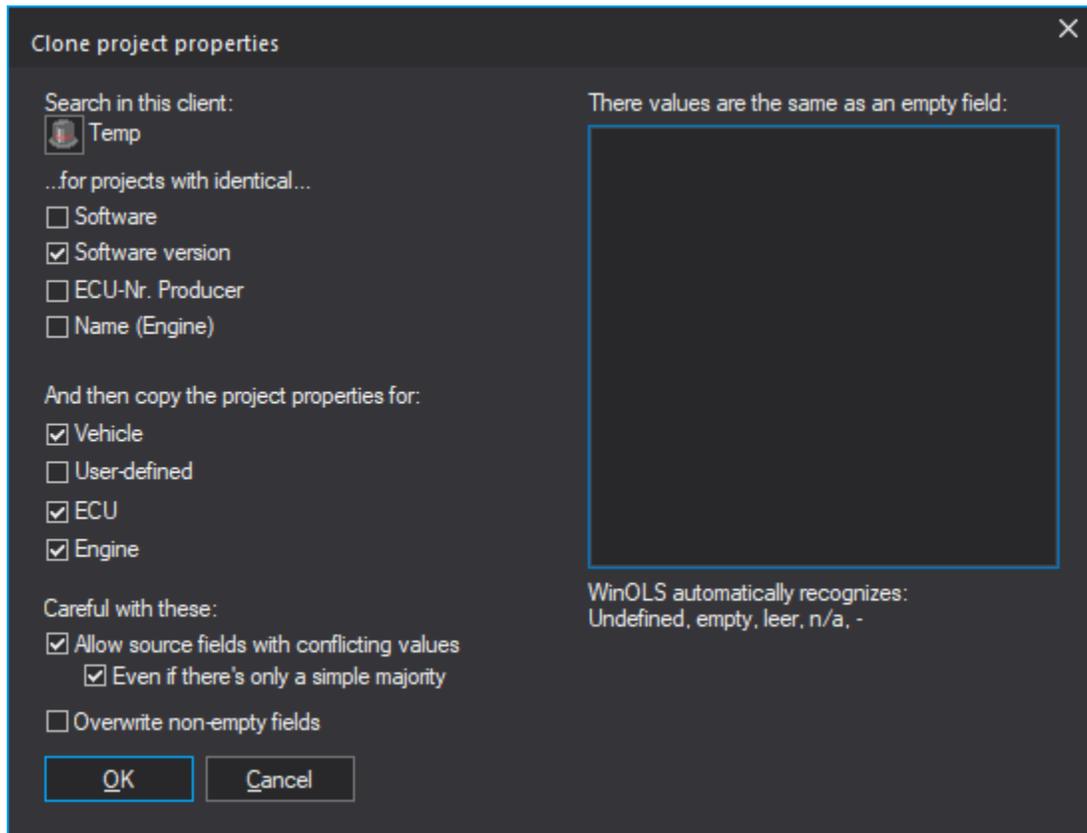
This process may take several minutes. WinOLS may ask questions. Projects that are currently open, are not processed. The 8-Bit checksum of the original version is recalculated automatically.

Shortcuts

Symbol bar: -

Keyboard: -

4.11.1 The command Clone project properties (Menu Project)



This dialog is a sub-dialog of 'Update projects'.

This command searches all projects in the selected client for projects in which the selected properties are identical to the current project. In the projects found, all properties that are uniform there (optional: have a majority) are searched for and these are then transferred to the currently updated project.

This function is only executed if at least one comparison condition is selected and its value in the currently updated project is non-empty and non-trivial (<4 characters, "empty" or similar).

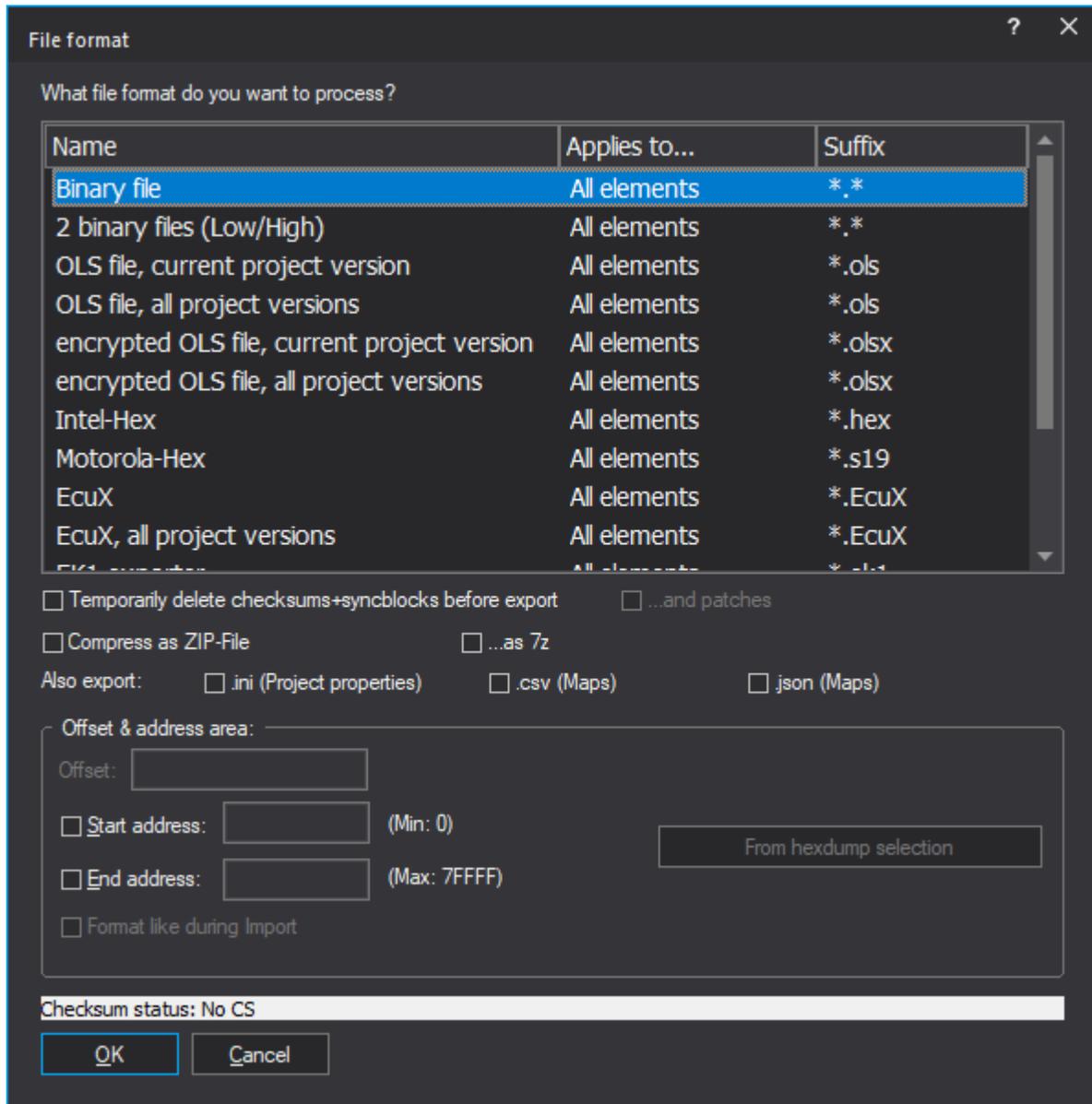
Shortcuts

Symbol bar: -
Keyboard: -

4.12 Ex - & Import

Please choose a subtopic.

4.12.1 The dialog Import file



The dialog will be displayed in different situations: When importing a version you can configure the data source you want to use. When exporting a version you can configure the kind of data file you want to create.

Area "File format":

First you can choose the file format you want to process. Binary files contain the pure eeprom data without any control information. WinOLS may also read from two files (one byte from each file alternating). Furthermore you may read OLS files and read or write WinOLS files. You can recognise OLS files at the file suffix '.dat' and WinOLS files at the file suffix '.ols'. If you export ols-files you can also create older versions. (The WinOLS file format has been changed several times due to the

numerous improvements, which have been made. If you want to create a WinOLS file that can be read by an older version, you can configure it here.)

Furthermore you may read and write Intel-Hex files. These files often carry the files suffix '.hex' sometimes also '.paf' or '.daf'. And you may read and write Motorola-Hex files. These files often carry the suffix '.s19'.

The list of supported file formats can be extended by plugins or third-party command-line software.

Area "Code data & swap lines":

Furthermore it is possible to encrypt data and lines just like it would be done with the integrated eprommer. In order to activate this option you must enable encryption in the producer dialog and select a key file.

Optionally swapping of data lines can be activated, which is done just like it would be done when you are using the integrated eprommer. In order to activate this option you must select a producer and activate the swapping of data lines.

Area "Offset & address area":

Here an offset can be configured for Intel-Hex / Motorola-Hex files for the addresses in these files. Furthermore an address range can be configured if you want to handle only a part of the project. When importing this option is only available if the project already contains a version. It is always available when exporting.

For Intel-Hex / Motorola-Hex files you can tell WinOLS to mimic the file format of the imported file. This is only available when the file was imported from the same file format. It helps you communicate with other programs that require the file to have a certain format (within the standard).

Area at the bottom of the dialog:

When exporting you may 'zip' the results. This will create a compressed (=smaller) files, which is great for sending it by e-mail. In order to unpack it you'll need programs like WinZip (www.winzip.com). If 7-Zip is installed on your computer, you can also use this file format.

When importing into a project which already has a version you may decide not to create a new version but to overwrite the current one. This is especially useful when you want to combine multiple Intel or Motorola files.

Notes about file formats:

BdmToGo-files can only be exported if the project is marked as BDM project in the dialog "project properties". BslToGo-files work respectively.

Notes about exporting elements:

If the file format doesn't support elements, only the data from the currently active element will be exported. If you want to export all elements, select <All elements>

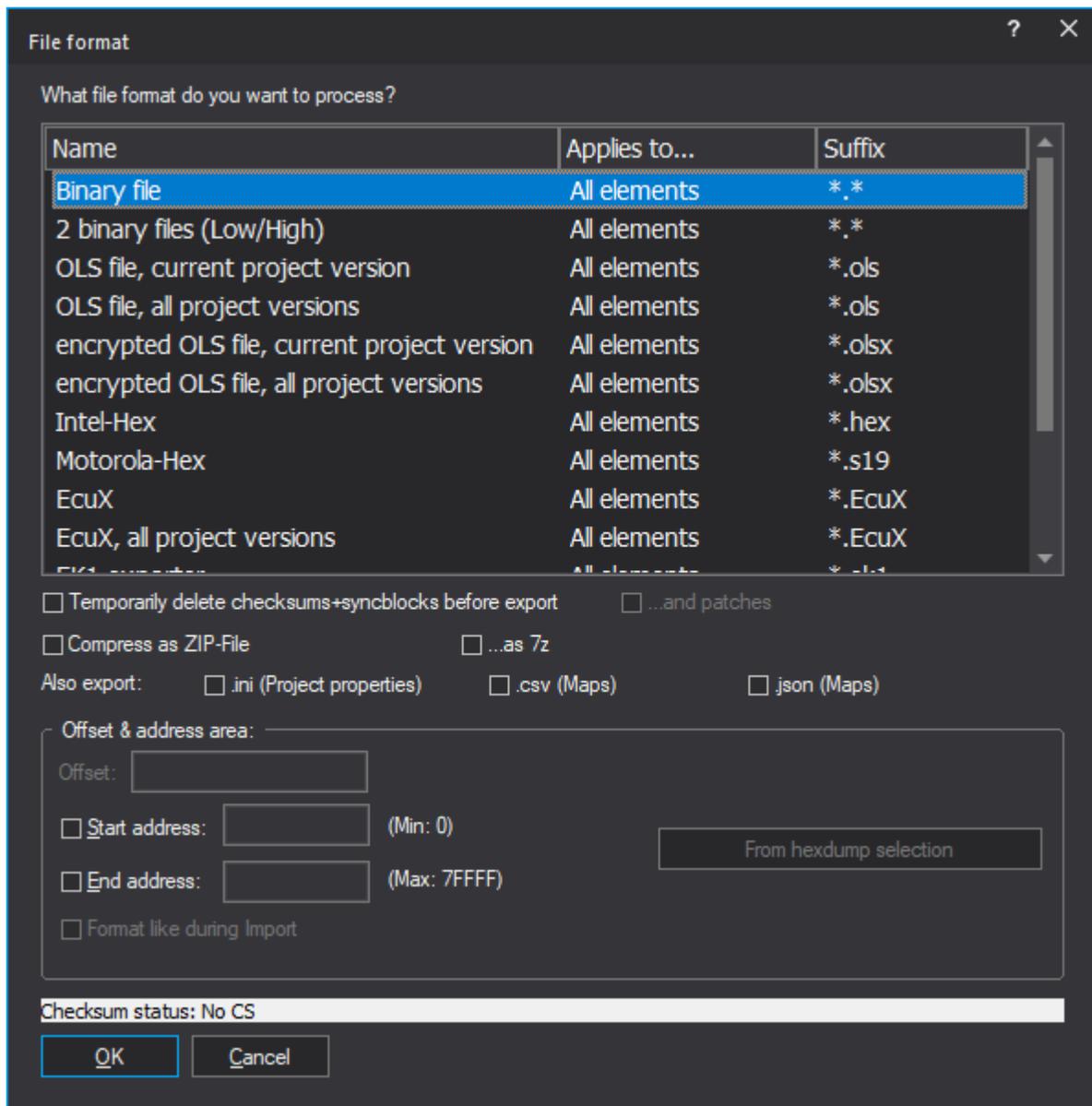
before exporting. If the file format supports elements (only OLS and BdmToGo files do this), all elements will be exported, regardless of the element that is currently active.

Shortcuts

Symbol bar: -

Keyboard: -

4.12.2 The dialog Export file



The dialog will be displayed in different situations: When importing a version you can configure the data source you want to use. When exporting a version you can

configure the kind of data file you want to create.

Area "File format":

First you can choose the file format you want to process. Binary files contain the pure eprom data without any control information. WinOLS may also read from two files (one byte from each file alternating). Furthermore you may read OLS files and read or write WinOLS files. You can recognise OLS files at the file suffix '.dat' and WinOLS files at the file suffix '.ols'. If you export ols-files you can also create older versions. (The WinOLS file format has been changed several times due to the numerous improvements, which have been made. If you want to create a WinOLS file that can be read by an older version, you can configure it here.)

Furthermore you may read and write Intel-Hex files. These files often carry the files suffix '.hex' sometimes also '.paf' or '.daf'. And your may read and write Motorola-Hex files. These files often carry the suffix '.s19'.

The list of supported file formats can be extended by plugins.

Area "Code data & swap lines":

Furthermore it is possible to encrypt data and lines just like it would be done with the integrated eprommer. In order to activate this option you must enable encryption in the producer dialog and select a key file.

Optionally swapping of data lines can be activated, which is done just like it would be done when you are using the integrated eprommer. In order to activate this option you must select a producer and activate the swapping of data lines.

Area "Offset & address area":

Here an offset can be configured for Intel-Hex / Motorola-Hex files for the addresses in these files. Furthermore an address range can be configured if you want to handle only a part of the project. When importing this option is only available if the project already contains a version. It is always available when exporting.

For Intel-Hex / Motorola-Hex files you can tell WinOLS to mimic the file format of the imported file. This is only available when the file was imported from the same file format. It helps you communicate with other programs that require the file to have a certain format (within the standard).

Area at the bottom of the dialog:

When exporting you may 'zip' the results. This will create a compressed (=smaller) files, which is great for sending it by e-mail. In order to unpack it you'll need programs like WinZip (www.winzip.com).

When importing into a project which already has a version you may decide not to create a new version but to overwrite the current one. This is especially useful when you want to combine multiple Intel or Motorola files.

Notes about file formats:

BdmToGo-files can only be exported if the project is marked as BDM project in the dialog "project properties". BslToGo-files work respectively.

Notes about exporting elements:

If the file format doesn't support elements, only the data from the currently active element will be exported. If you want to export all elements, select <All elements> before exporting. If the file format supports elements (only OLS and BdmToGo files do this), all elements will be exported, regardless of the element that is currently active.

See also:

Mass export

Shortcuts

Symbol bar: -

Keyboard: -

4.12.2.1 The dialog BdmToGo-Properties (Menu project)

Bdm-To-Go Properties

Security areas: (optional)

You can protect your customers from accidentally using the file in the wrong ECU. For this enter up to 3 areas (e.g. the VIN position) where this file must match the current ECU data.

The file can only be programmed if all defined areas match.

In element From To

In element From To

In element From To

Trick: If you define areas as comments in the project and use the comment texts "BDM1", "BDM2" or "BDM3" then these areas will be entered here.

Which elements should be exported?

Processor Eprom 2

Eprom EEprom

The file may not be reimported into WinOLS.

This dialog is shown if you choose BdmToGo as file format when exporting. BdmToGo files are compact and can be programmed into ECUs using BDM100 devices. Depending on the settings they may also be used to send somewhere and re-import them into WinOLS without programming them

You can choose up to 3 areas, which should be compared with the ECU before programming. This was introduced to protect the user from using the wrong ECU and it is also a copy protection for your work. Simply include the VIN into the checked areas and the file can only be programmed into the desired vehicle (and not into all other similar vehicles). It is recommended to mark the areas by comments. If you use the comment names "BDM1", "BDM2" or "BDM3", WinOLS will recognize the comments and automatically enter the marked areas into this dialog.

The address ranges have to be entered as hexadecimal.

Notes about elements: Elements that contain differences between original and version are printed in bold.

Notes about the protection mechanisms: Activate the checkbox "This file may not..." to disallow WinOLS (the WinOLS on other machines AND your WinOLS) to re-import the file, because then the user might edit the areas mentioned above. This option does not modify the programmed data and thus does not offer any protection against re-reading the data from the ECU. To get that kind of protection, activate the option "BDM read protection" in the dialog "Properties: Project". It will place a marker into the data and thus the re-read project can only be imported into a WinOLS that is registered to your customer number.

Shortcuts

Symbol bar: -
Keyboard: -

4.12.3 The command Send project as Mail

Use this command to send the current project by e-mail. You may choose the format that is used for the transfer (binary, Intel, WinOLS, etc.) encoding. The actual sending will be performed by your default mail application.

Use the dialog 'Miscellaneous > Configuration > Automatically > E-Mail' to enter standard texts.

Shortcuts

Symbol bar: -
Keyboard: Ctrl+M

4.12.4 The command Import directory (Menu Project)

With this command you can import all files of a directory into the WinOLS project directory (of the current client). All file formats are supported, which can also be imported with the main program as a project. (Additional files like IFO or A2L are not supported.)

Source folder:

Select the folder (if necessary incl. subfolder) in which your projects are currently located.

Move:

You can move the source files in case of success/error. This is helpful to find out which files have created problems during import and which ones have already been imported.

Filter:

Here you select which files should be imported and which files should be ignored. (Technically, these are a positive and a negative list.) At this point, there is no distinction between the original and the version. If you want to import all files from the source folder without exception, you can simply uncheck both checkboxes in this area.

Version detection:

If you have separate version files in addition to the original, these can be imported directly into the same WinOLS project as a version. Specify a filter (e. g. *. org) with which WinOLS can recognize the original files within the files. Anything that is not the original application file is considered a version.

Optional fallback strategy: If the original is not recognized, WinOLS can simply consider the oldest file as the original.

Requirements:

1. The file must be in a format that can be imported as a version. (e. g. bin or hex; but not ols)
2. The relationship between the original and the version must be recognizable. (see below)

To allow WinOLS match a version to the correct original, there are 2 checkboxes / strategies:

- The original and its versions are in a subdirectory alone (without any other original/versions).
- The only difference between the original and its versions is the suffix. (Example: abc. org and abc. version1) In this case, the suffix of the version is automatically saved as version name in the project.

Versions that cannot be assigned to an original are ignored.

Wildcards:

The 3 input fields in the lower part can handle standard Windows wildcards like '*.bin'. Even more complex wildcards like '*.version*' are possible. (The asterisk always stands for an arbitrary sequence of characters.)

Tip:

For this function, use a client that does not yet have any projects. This way you can easily delete and restart everything in case of problems.

Shortcuts

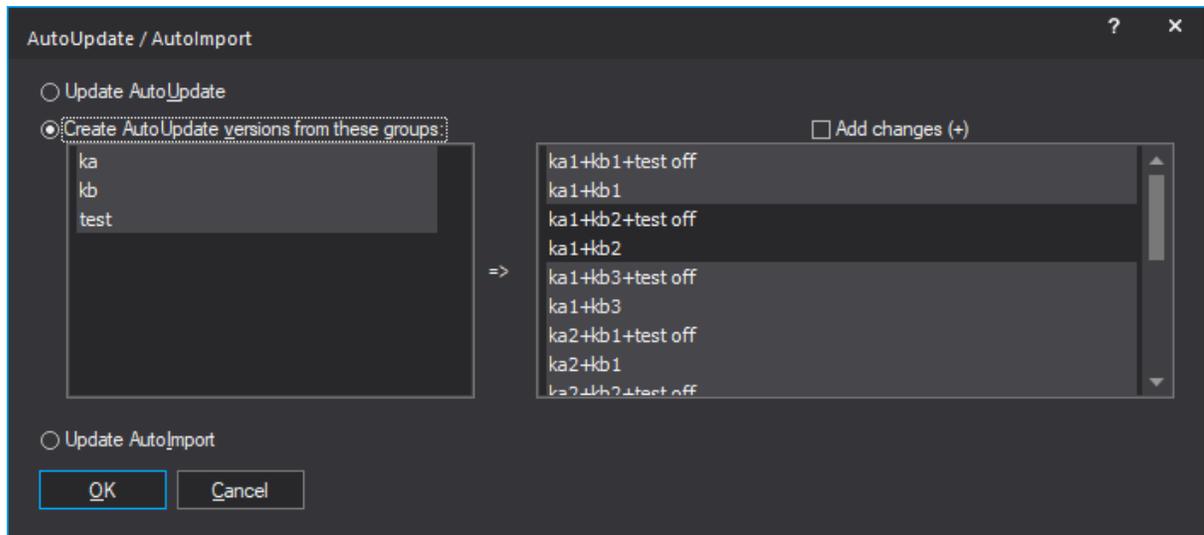
Symbol bar: -

Keyboard: -

4.12.5 The command AutoUpdate + AutoImport (Menu Project)

This function requires WinOLS 5.21 + FeatureUpdate

With this dialog you can trigger AutoUpdate and AutoImport manually and create the versions for AutoUpdate.

**AutoUpdate Versions:**

When creating the versions, WinOLS calculates groups from all versions that are not already marked with AutoUpdate. Only versions ending with a number or "on" / "off" are considered.

In the screenshot the groups ka, kb and test were created from the versions ka1, ka2, ka3, kb1, kb2, kb3 and "test off". All possible combinations are then calculated from all selected groups. All selected combinations are then created as a version

when you click OK.

Add changes:

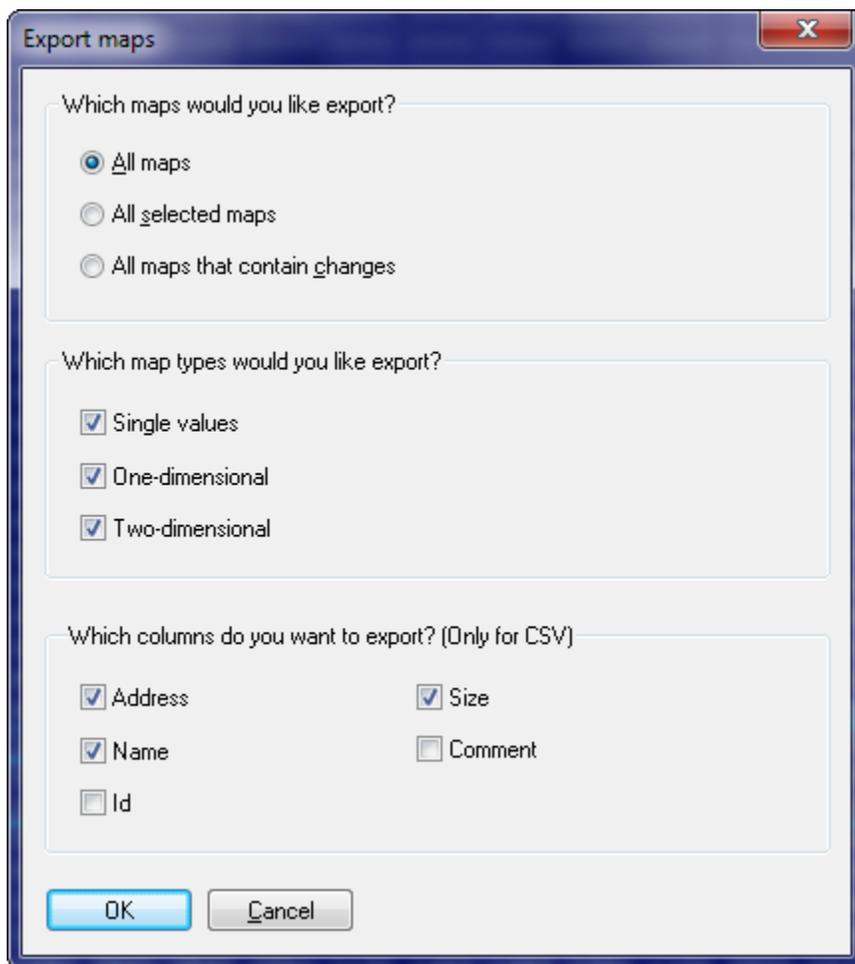
If activated, the created version names start with a plus sign. This allows you to make changes outside of the source identifier fields that will not be overwritten by AutoUpdate.

Shortcuts:

Toolbar: -

Keyboard: -

4.12.6 The command Export CSV/JSON map list (Menu Project)



This command allows you to export all information about the maps of the current project into a CSV or JSON file. You can open CSV files with the usual spreadsheet applications, like Microsoft Excel. You can specify the file format (CSV/JSON) in the file dialog that is displayed after this dialog.

You can apply the (modified) file later with the command Update map list on basis of CSV/JSON file.

You can reach this command with the menu 'Project' as well as with the special menu of the map list. You can reach the latter by clicking on the small black triangle within the map list window.

Note:

All addresses in CSV files are relative to the project start (like in the view "All elements" and not with their element addresses) and are stored as decimal values.

Shortcuts

Symbol bar: -

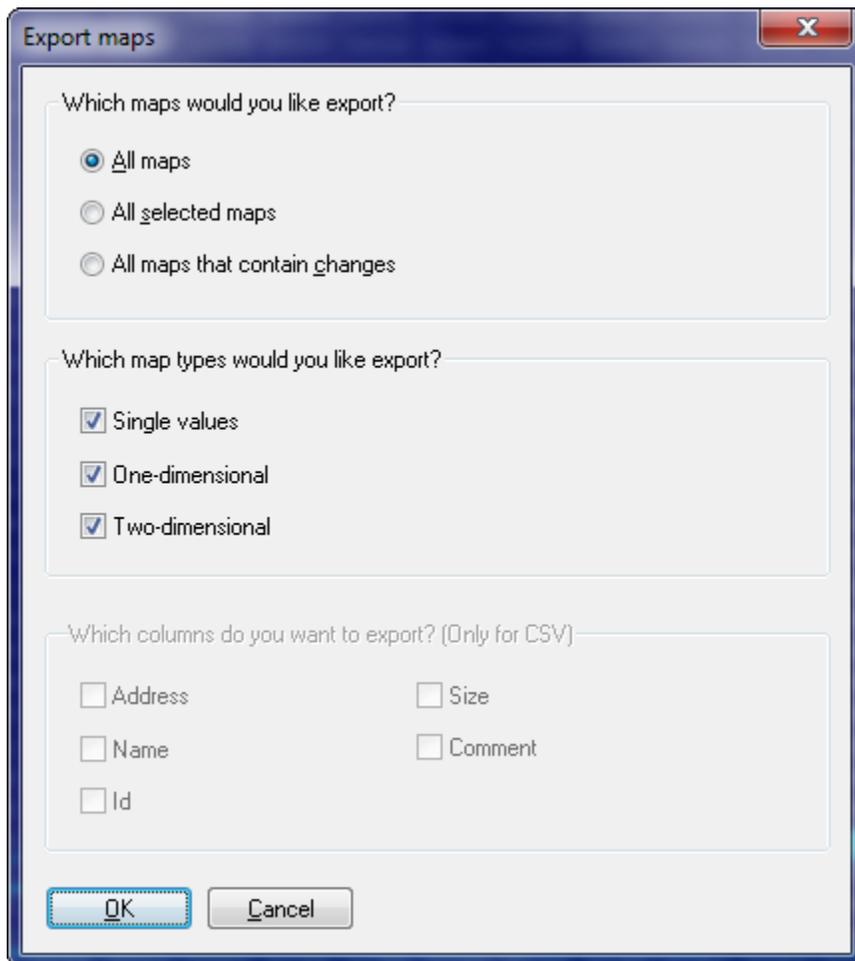
Keyboard: -

4.12.7 The command Update map list on basis of CSV/JSON file (Menu Project)

You can apply a previously exported and modified CSV/JSON file to a WinOLS project. WinOLS matches the maps from the file with the maps in the project by their address or id and then applies the changes values on the maps in the project.

If you exported *all* columns then the importer will also create maps that are currently missing.

4.12.8 The command export map pack (Menu Project)



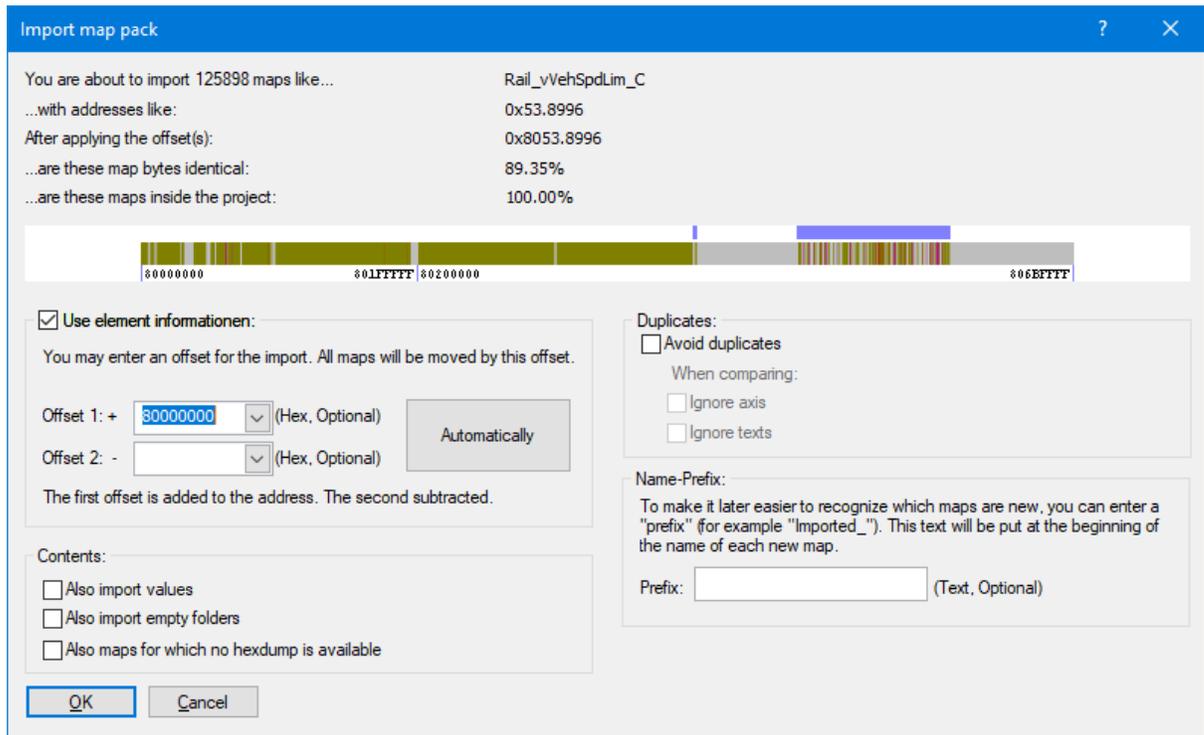
This command will export all maps (but not the data inside the maps) into an external file. This file can be transported as any other file and be imported into other projects.

Shortcuts

Symbol bar: -

Keyboard: -

4.12.9 The command import map pack (Menu Project)



This command will import all maps (but not the data inside the maps) from a (previously created by an export process) map pack file.

At the top you can see some sample addresses from the imported file next to the number of maps. Directly below you can see how your offset changes the addresses and how plausible the result is. The bitmap shows an overview of the target project, including element addresses. The blue markers show where the maps will end up.

2 offsets:

You can enter up to 2 offsets. Both will be offset against the address during import. This makes it easier to subtract an offset and add a new offset if the situation requires it. For example, to move a map from 0x7000 to 0x400000 enter "0x7000" as offset 2 and "0x400000" for offset 1.

Find out the offset:

- Use the "Automatically" button
- Look at the addresses of the maps (second line) and compare them with the element addresses in the image. This will give you a hint in which range the offset must be.
- Click with the left or right mouse button in the image to try different offsets. (You can also hold the mouse button pressed.)
- Sometimes there is no offset that fits all. In this case use the function Import changes.

This is just one of several options to import data from other projects.

Shortcuts

Symbol bar: -

Keyboard: -

4.12.10 The command import maps (Menu Project)

Use this command to import all maps (but not the hexdumps) from another WinOLS File into the current project. The eeprom contents will not be changed, only map definitions are imported.

The source project is selected in the usual way. It will not be modified by this command.

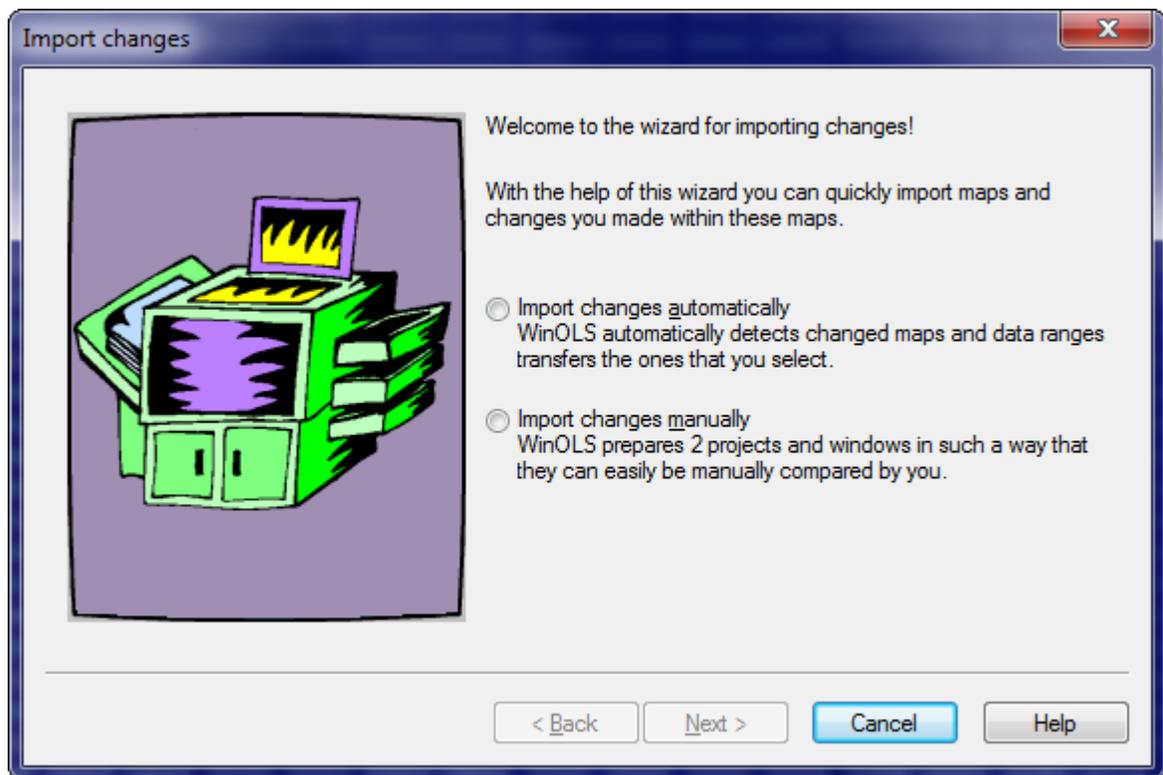
This is just one of several options to import data from other projects.

Shortcuts

Symbol bar: -

Keyboard: Ctrl+Shift+I

4.12.11 The command Import Changes (Menu Project)

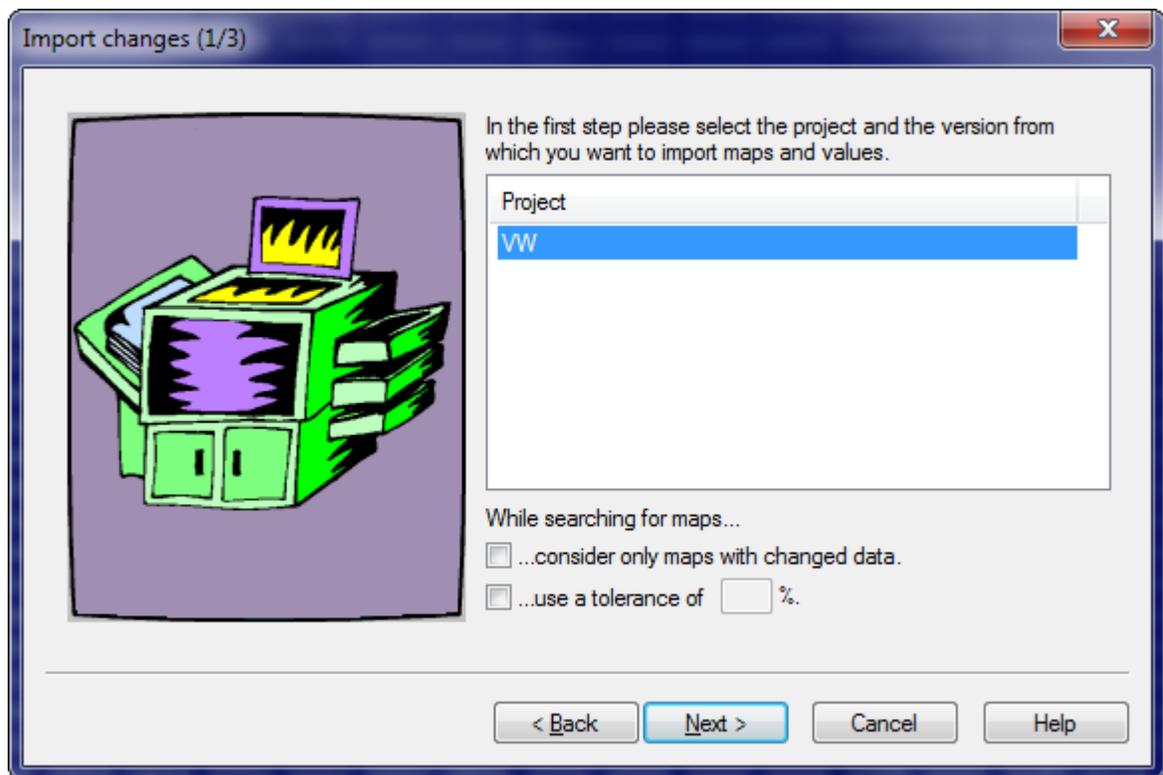


With this assistant you may import maps from another project. This function is much more flexible than the function import maps. It is no problem for this command if the maps were moved to another address or has even changed data.

In the automatic mode (the 3 following images) WinOLS recognizes maps and changed data ranges and tries to map these to new projects. You just have to select to them.

In the manual mode (the last image in this series) WinOLS prepares windows from the old and new project in such a way, that you can optimally compare them. The old project is displayed normally. The new project receives the old project as original.

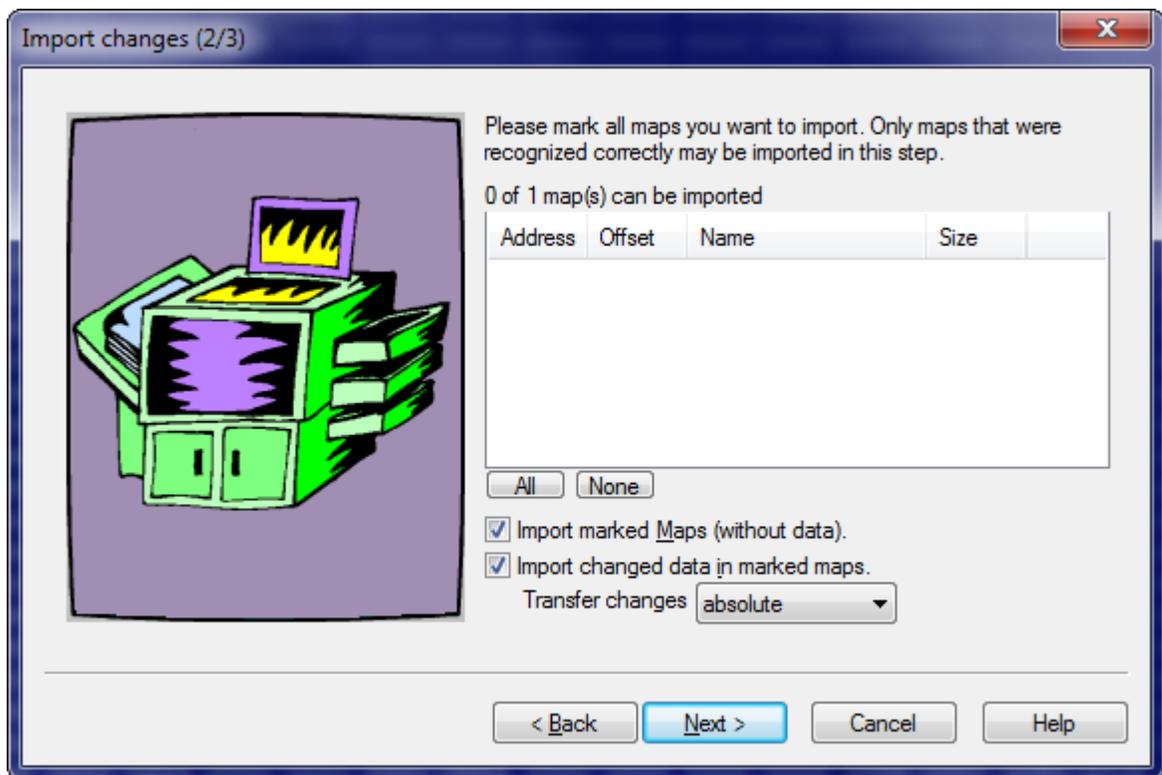
AUTOMATIC MODE:



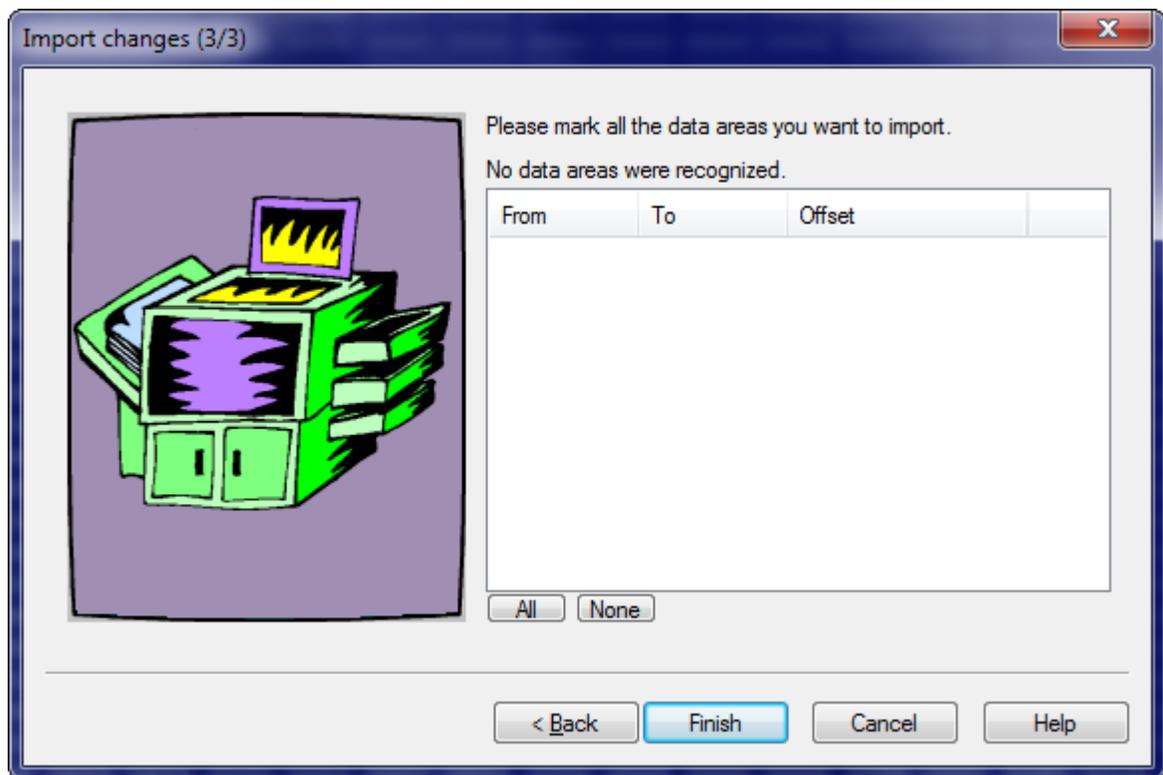
In the first step you must select the project from which you want to import maps from. (The current project is always used as target project.) Only projects which are currently opened can be selected.

If the source project has many maps, it can make sense to reduce the selection (and speed the import process up) by only showing maps which were changed in the source project.

Furthermore you may enter a tolerance for the map recognition. This will tell the assistant to accept small differences while searching the maps within the target project. However, this slows the search down.



In the second step you can select maps which you want to import into the current project. You may select whether you want to import the maps and / or the changed data in the map. Changes in maps are normally transferred as difference, meaning that the difference between original and version will be transferred. You may also decide to transfer the data absolute.

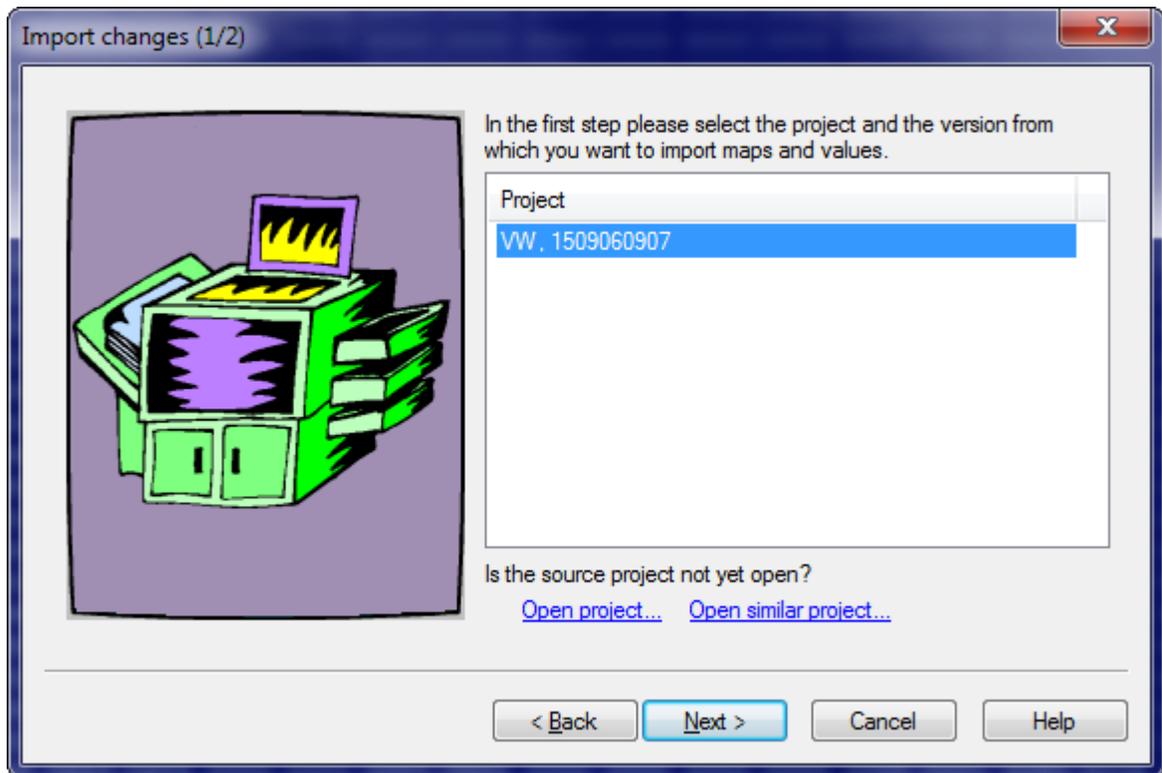


In the last step you may import changes outside of maps. These are bytes which were changed in the source project but are not within a map. These areas can be recognised in the target project and imported, too.

Important 1: This is only the second best method. Changes in maps are safer because the areas and data organization are known.

Important 2: Changes to checksums and patch blocks cannot be accepted. They are automatically skipped and as of WinOLS 5.72.37 are no longer reported as "not importable".

MANUAL MODE:



In the first step you must select the project from which you want to import maps from. (The current project is always used as target project.) Only projects which are currently opened can be selected.

This is just one of several options to import data from other projects.

Shortcuts

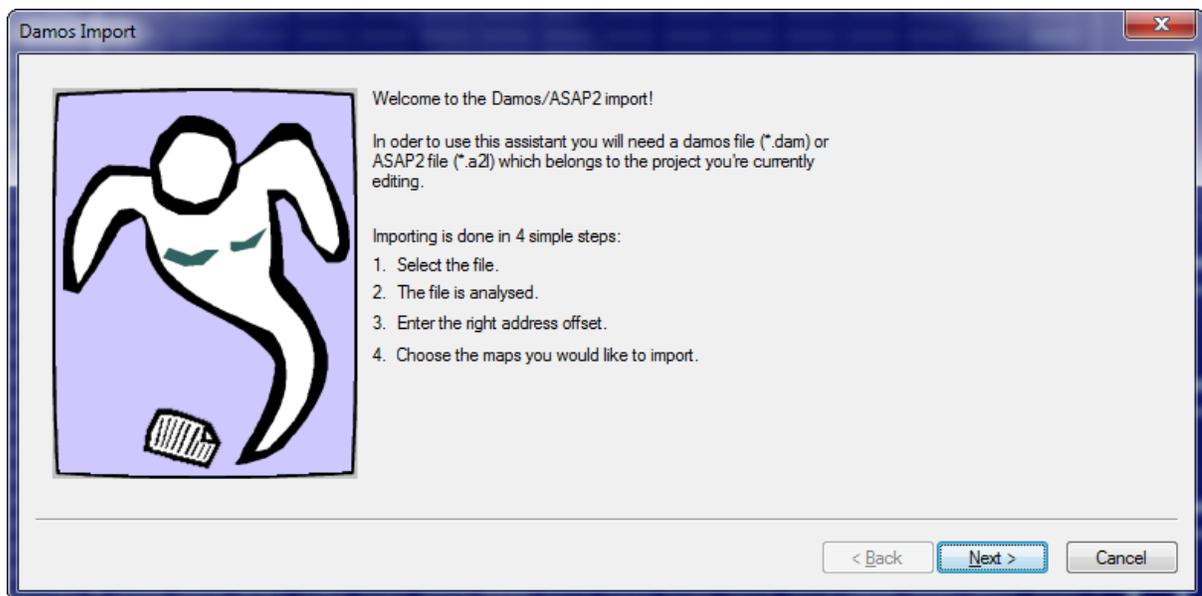
Symbol bar: -

Keyboard: -

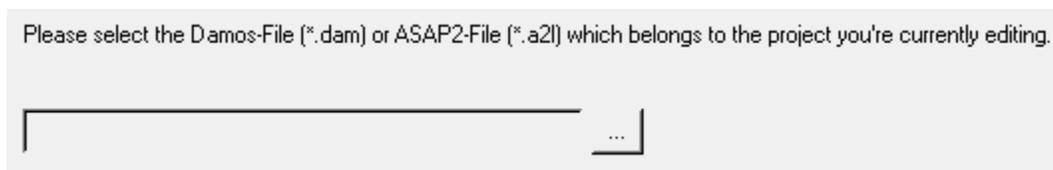
4.12.12 The command Damos & A2L Import (Menu Project)

Note: This command is not part of the WinOLS main program. It is an additional module and must be licensed separately.

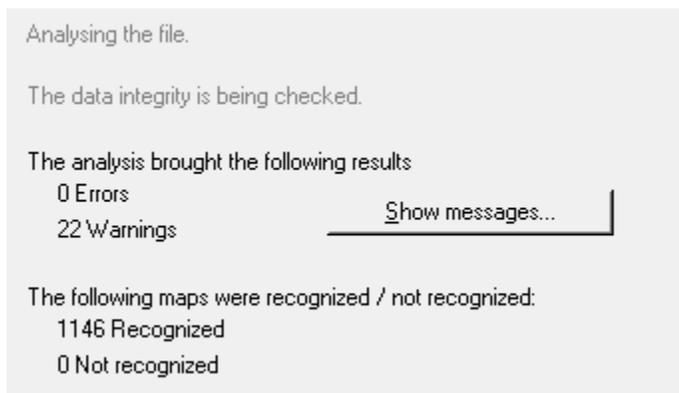
You may also start this assistant by dragging a Damos or ASAP2 file into a project window. In this case the first two dialogs will be skipped.



This assistant will guide you through the import of Damos or ASAP2 files. Before starting it you should open a matching project file or create a project by importing the matching files, because this assistant always relates to the currently active project. The project data must match exactly the Damos or ASAP2 file, since the import may otherwise be incomplete or erroneous. If you want to use the maps in a different project, you should first import them into the matching project and then transfer them with the function 'Import changes' into your desired project.



In the first step you must select the Damos or A2L file that you want to import.



In the second step the file is analysed. The data will be read and stored into an internal format. Since the file formats are different and not all elements are properly documented, warnings and errors may be displayed. They won't necessarily disturb the import and should be ignored if they're small in numbers.

Will the Damos/Asap2 data be imported in the matching project or into a similar project?

The data will be imported into a project that EXACTLY belongs to it. (Recommended)

Please enter the offset for this file. The offset is displayed when performing a hex import. It can also be calculated automatically. (The offset may not be recognised for some ASAP2-Formats.)

Offset (hex): Automatically

Note: In order to import all found maps, it is necessary for the offset to be within the range -120AA..B1EC.

The data will be imported into a SIMILAR project. (Status: Beta-Version)

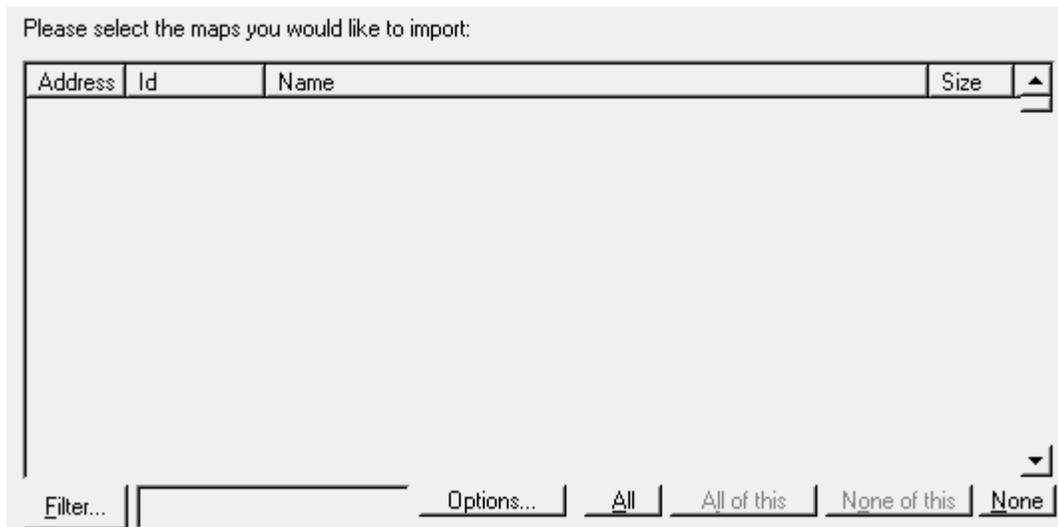
Note: In this mode only 1d and 2d maps stored with a certain internal structure can be imported. Due to the heuristical algorithm the result is not 100% safe.

In the third step you must tell WinOLS whether you're using the project that "belongs" to the Damos or ASAP2 File or not. For every Damos or ASAP2 file a project exists that "belongs" to it. Only if you're using these two together an exact import is possible. Only since recently the Damos plugin allows it to import the data files into other projects. However, if you have access to the project that belongs to the file it is always best to import the maps into this project and transfer them with the "Import changes" function into the other project

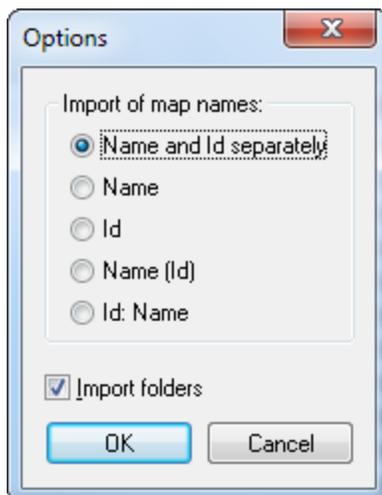
If you want to (as recommended) use the project that belongs to the Damos or ASAP2 file you must enter the offset which should be used for the import. Within Damos or ASAP2 files different addresses are used as in WinOLS files. The offset is calculated as the difference between the two address formats. If the current project was imported from an Intel or Motorola file, the offset was stored (and additionally shown to you) and this field is already filled in. If this isn't the case, you should try if the automatic offset detection can calculate it. It depends on the file structure whether this is possible. As a last possibility you can estimate the number (often a hexadecimal round address). As a help you can the address range in which the offset must be. It is calculated by the analysis of the file.

If you don't have to project belonging to the data file, you can try to import the maps into another project. For this, choose the lower option. Please note that several restrictions apply, when using this import mode:

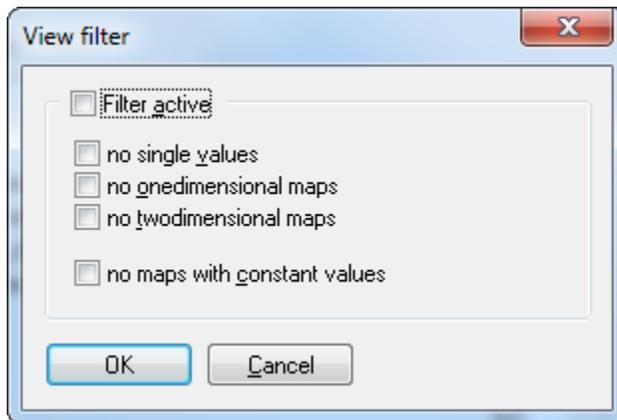
1. The project must be similar to the one that belongs to the data file.
2. In general only 1d and 2d maps can be imported.
3. The maps must be stored in a certain internal format within the Damos or ASAP2 file. Therefore it can happen that only a part or (in rare case) no maps at all are found.
4. It is more likely to find maps with ASAP2 files than in Damos.
5. In some cases the import uses heuristics, so the result isn't 100% safe. Please check it before using it.



As a last step you only have to select the maps you want to import. Since there may be a large number of files in a file, you may reduce the current view by using the button 'filter '. Then only files matching the defined criteria (see below) will be shown. Furthermore you may enter a search text. In this case only maps that contain the text will be shown. With the buttons 'all' and 'none' you may either select all maps or remove the entire selection. The buttons 'all of this' and 'none of this' do basically the same, but only influence maps that are currently visible. Maps that are hidden by the current filters are not influenced. Before finishing the import and transferring the maps into the main program you can use the 'options' button (see below) to configure details for the import.



With the options you may configure which data parts should be imported. Normally all maps have a descriptive name and a unique id. You may choose to import one of them, both combined or (since recently) both separately into the respective fields of WinOLS. Furthermore you may import the maps together with their folders in which they are organised into WinOLS.



With these filter options you can determine which maps should be shown in the view and which should be hidden. You can select maps you their dimension and by the fact if they consist of constant values only or not.

Shortcuts

Symbol bar: -

Keyboard: Ctrl+D

4.12.13 The command Export project properties (Menu Project)

The WinOLS project properties can be stores in an ini-file. Use this command to export such a file (and allow a import later on).

Shortcuts

Symbol bar: -

Keyboard: -

4.12.14 The command Import project properties (Menu Project)

The WinOLS project properties can be stores in an ini-file. Use this command to import such a file (previously created with an export).

Shortcuts

Symbol bar: -

Keyboard: -

4.12.15 The command Translate map texts (Menu Project)

The map information is often in German. WinOLS can use a plugin to translate the map, axis and folder descriptions from German into English.

Note:

This command requires the WinOLS plugin OLS540.

Disclaimer:

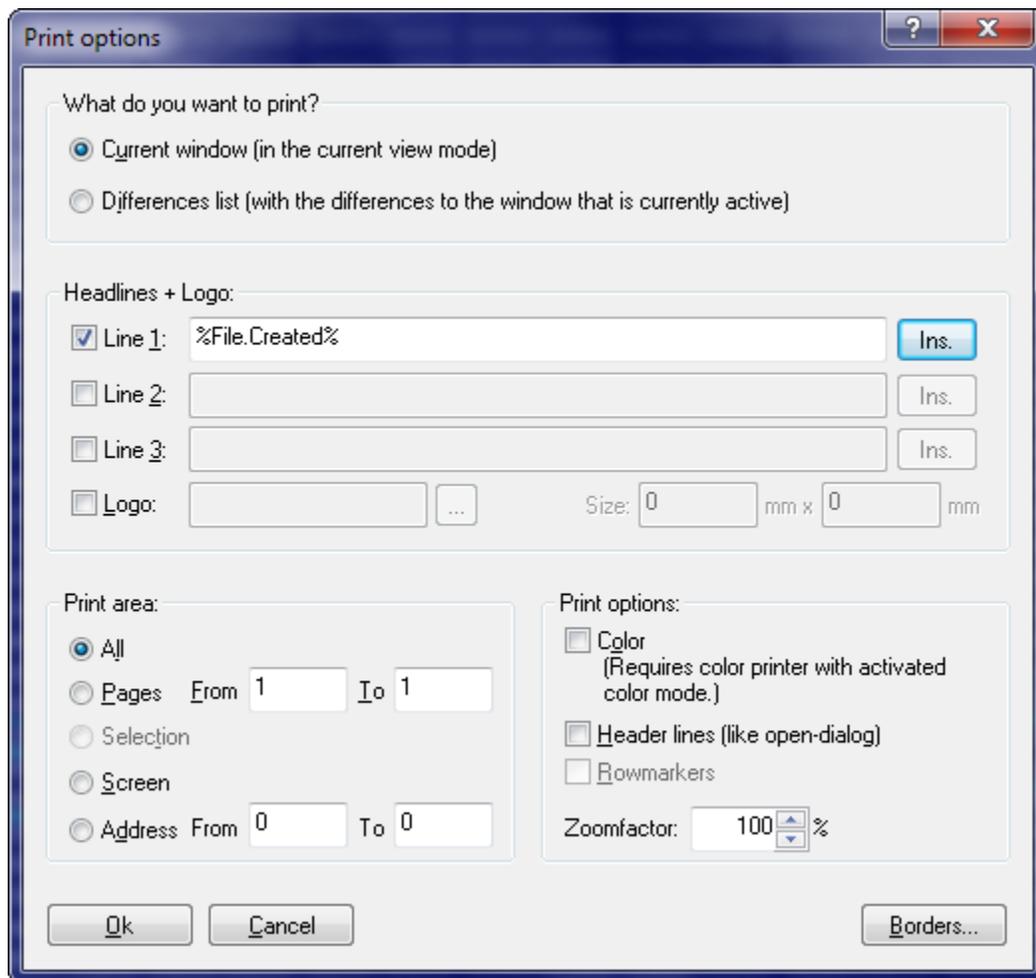
This is a machine translation. It's neither 100% complete nor 100% correct. We cannot accept any guarantees for it.

Shortcuts

Symbol bar: -

Keyboard: -

4.13 The command Printing (Menu Project)



Use this command to print a document. The dialog shown above will appear where you can configure several things.

In the topmost area you may configure what you want to see from the currently active window (printing always refers to the currently active window). Either the data like it can currently be seen (for example 3d) or only the differences like they can be seen in the differences window.

In the part below the first you may configure the headlines that should appear on this page. This can be a static text (for example the company name) or a project property that can be inserted by a placeholder with the "Ins." button, just like in the Export

dialog. Furthermore you may select a logo (a BMP-file) which will appear in the top right corner. You always need to enter the printing size (in mm) manually since this information is not included in the file.

The area in the lower left is only active if you print the current window normally (and not as Differences-List). Here you can configure which part of the document you want to print. There are several possibilities which are self-explaining. With the print options you can decide whether you want to print in colour, whether you want to include headlines (in addition to the ones you already configured above) with details about the current project and whether you want to print the row markers (2d-Mode only).

Shortcuts:

Symbol bar: 
Keyboard: Ctrl+P

4.13.1 The dialog Configure printing (Menu Project)

Use this dialog to choose the printer and printer connection.

4.14 The command Exit (Menu Project)

Use this command to end your session in WinOLS. You may also select Close from the system menu of the application. WinOLS will ask you to save unsaved projects.

Shortcuts

Mouse: Doubleclick the applications system menu
Keyboard: ALT+F4

4.15 The commands 1, 2, 3, 4 (Menu Project)

Use the number and filenames listed at the bottom of the menu to open one of the last 4 closed projects.

Chapter



V

5 Commands of the menu Edit

The menu **Edit** contains the following commands:

Undo	Makes the last operation undone.
Redo	Repeats the last undone operation.
Copy	Copies the selection into the clipboard
Copy advanced	
- Copy address	Copies the current cursor address
- Copy map	Copies the current map
- Copy map properties	Copies selected properties of the current map and allows you to apply them to other maps
- Copy both axes	Copies both axes of the current map
- Copy both axes (Text only)	Copies both axes of the current map as text (for pasting in a text editor)
- Copy X axis	Copies the X axis of the current map
- Copy X axis (Text only)	Copies the X axis of the current map (for pasting in a text editor)
- Copy Y axis	Copies the Y axis of the current map
- Copy Y axis (Text only)	Copies the Y axis of the current map (for pasting in a text editor)
- Copy as C array	Copies the currently selected values as text in the format of an array in the programming language C.
- Copy as text	Copies the currently selected values as text (for pasting in a text editor)
- Copy block	Copies large data ranges within the project or into other projects.
Cut	Cuts the selection into the clipboard
Paste	Pastes the clipboard at the cursor location
Insert / Delete window	
- Insert new Hexdump	Inserts a new hexdump window
- Insert new Map	Inserts a new map window
- Delete Window	Closes and deletes the current window

- Open map	Opens the map window, that is at the current cursor location
- Delete map	Closes and deletes the map window, that is at the current cursor location
As text	Edits the current selection / cursor position as plain text.
Inplace Edit	Allows you to enter a new value for the current position
Sign Hexdump	Protect your project by entering hidden text that cannot be removed by others
QuickFix	Define/apply small groups of changes
Value +1	Increases all selected cells by 1
Value - 1	Decreases all selected cells by 1
Change absolute	Sets all selected cells to a definable value
Change relative	Changes all selected cells relatively to their current value
Change by edit	Changes all selected cells using slider controls
Round/limit values	Rounds the selected values or limits them to a minimum/maximum value.
Original value	Sets all selected cells to their original value
Interpolate	Replaces the selected cells with an interpolation of their neighbors.
Remove row / column	Helps you remove a row or column in a map to make room for a new one at the side
Again	Repeats the last operation
Checksums	Shows the checksum dialog
Apply checksum	Applies the checksums for the block at the cursor position
Search checksum online	Searches online for a matching checksum module
Checksum Ranges	Calculates typical checksums for a user-defined range
Properties: Window	Shows the properties of the current map- / hexdump-window

5.1 The command Undo (Menu Edit)

Use this command to undo the last edit operation if this is possible.

Shortcuts

Symbol bar: -

Keyboard: Ctrl+Z

5.2 The command Redo (Menu Edit)

Use this command to redo the last operation undone if this is possible.

Shortcuts

Symbol bar: -

Keyboard: Ctrl+Y

5.3 The command Copy (Menu Edit)

Use this command to copy all selected cells into the clipboard. If there is no selection, the current cell will be copied.

You may also copy entire maps. To do so, just select the map you want to copy within the map selection window before copying. You may also use the map selection window's context menu.

Copying data will delete any old data in the clipboard.

Excel

You may copy selections and paste them into Microsoft Excel in Order to transfer the values. If you copy entire maps from the map selection window, then the headlines and axis descriptions will be copied, too.

Excel-Bug #1

If the numbers with comma are split into 2 cells when pasting into Excel, select "Data > Text in columns > Delimited" in Excel and select only "Tab".

Excel-Bug #2

If thousands separators are interpreted incorrectly (1.234567 then becomes 1.234.567), then change "Options > Advanced > Separator characters" in Excel so that a misinterpretation no longer possible.

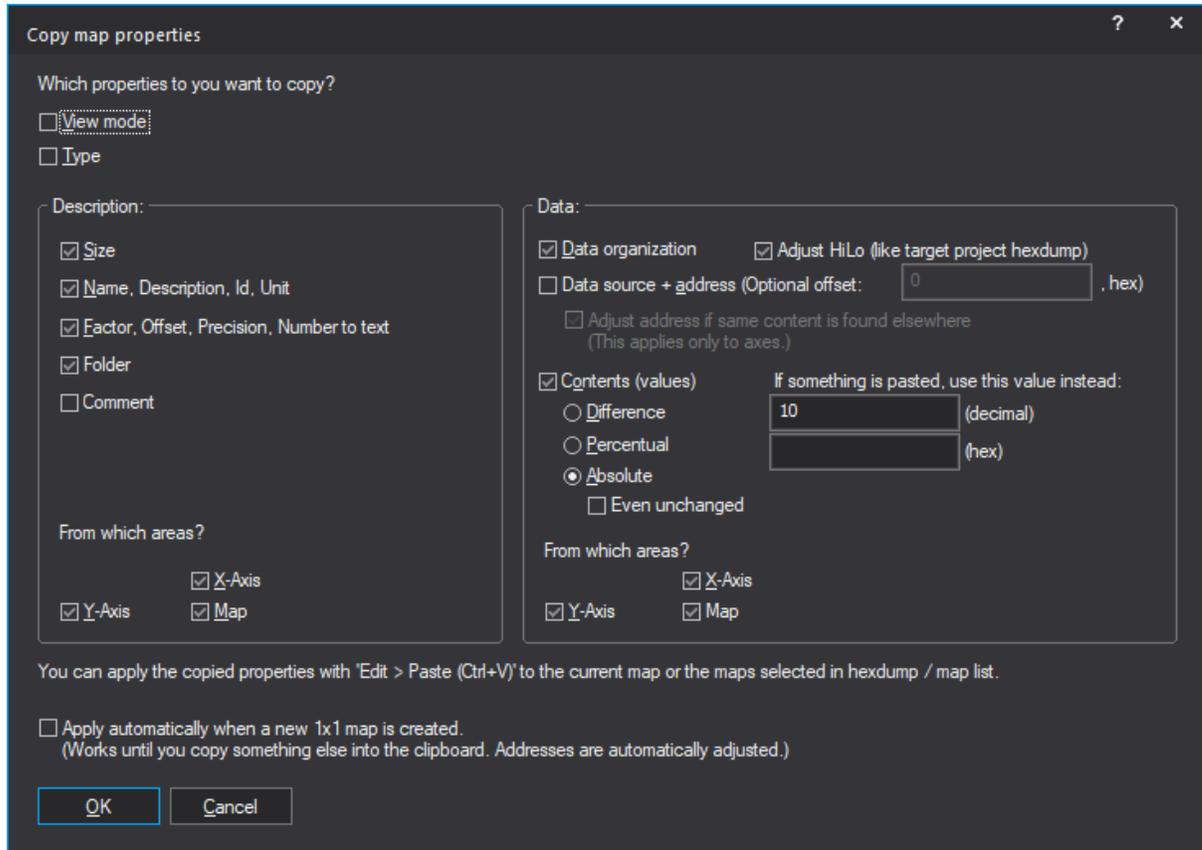
Shortcuts

Symbol bar: 

Keyboard: CTRL+C

5.3.1 The command Copy map properties (Menu Edit)

▶ Video



Use this command to copy selected properties of the current map into the clipboard. You can later apply them with Ctrl+V to:

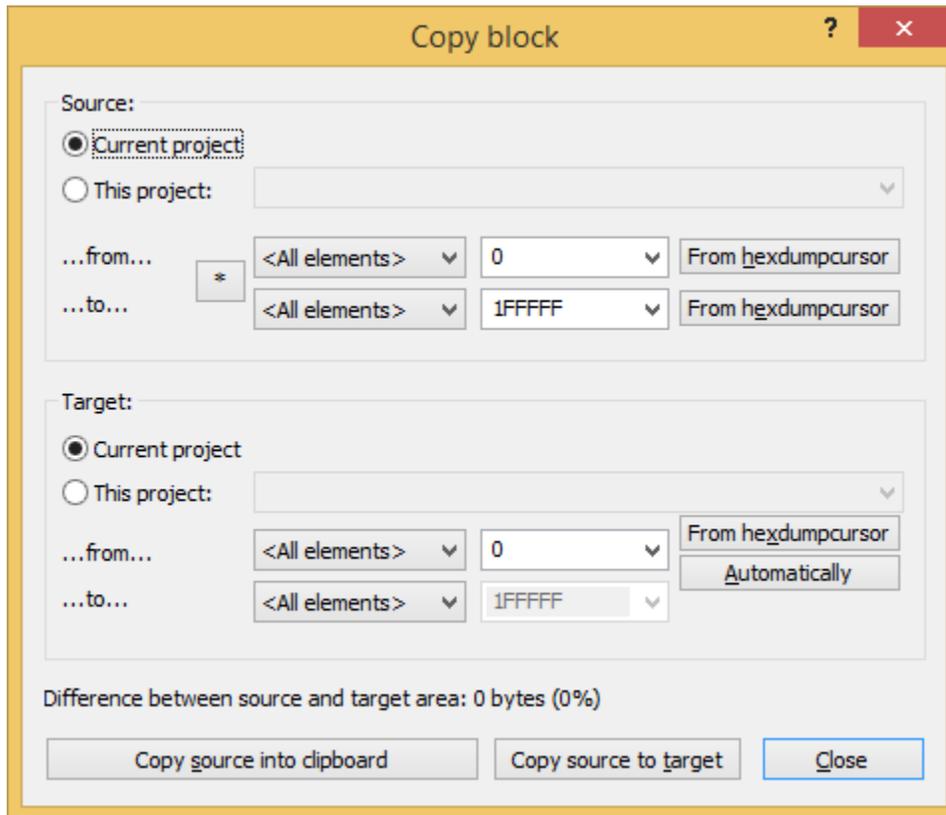
- the currently opened map
- the maps currently selected in the map selection window
- the maps currently selected in the hexdump

Shortcuts

Symbol bar: -

Keyboard: CTRL+Alt+C

5.3.2 The command Copy memory range (Menu Edit)



Use this command to copy a large block binary to the same / a different project or into the clipboard. You can choose if you want to enter the addresses relative to a certain element.

*-Button:

Opens a menu with typical ranges that you might want to select. Ranges marked with 'Core' have been cut off leading / trailing 00/FF areas.

Automatically:

Automatically finds the offset with the least differences.

Shortcuts

Symbol bar: -

Keyboard: -

5.4 The command Cut (Menu Edit)

Use this command to transfer the selected cells into the clipboard and remove them from the document. This command can only be used if cells are selected.

Cutting data will delete any old data in the clipboard.

Shortcuts

Symbol bar: 

Keyboard: -

5.5 The command Paste (Menu Edit)

Use this command to paste a copy from the clipboard to the place you're currently editing. This command is only available if the clipboard contains cell data.

You may also use this command to paste a map you previously copied.

Shortcuts

Symbol bar: 

Keyboard: CTRL+V

5.6 Insert / Delete window

Please choose a subtopic.

5.6.1 The command Insert new hexdump (Menu Edit)

Inserts a new hexdump-window. This command is used seldom.

Shortcuts

Symbol bar: -

Keyboard: -

5.6.2 The command Insert new Map (Menu Edit)

Inserts a new map-window. This command is used seldom, because it's easier to convert a selection into a map.

Shortcuts

Symbol bar: -

Keyboard: -

5.6.3 The command Delete Window (Menu Edit)

Closes and deletes the current window.

Shortcuts

Symbol bar: -

Keyboard: -

5.6.4 The command Open map (Menu Edit)

Opens the map, the cursor is currently within (in a hexdump window).

This command is only available, if the cursor is in a previously found map window. These areas are highlighted in the hexdump view.

Shortcuts

Symbol bar: -

Keyboard: -

5.6.5 The command Delete Map (Menu Edit)

Closes and deletes the map, the cursor is currently within (in a hexdump window).

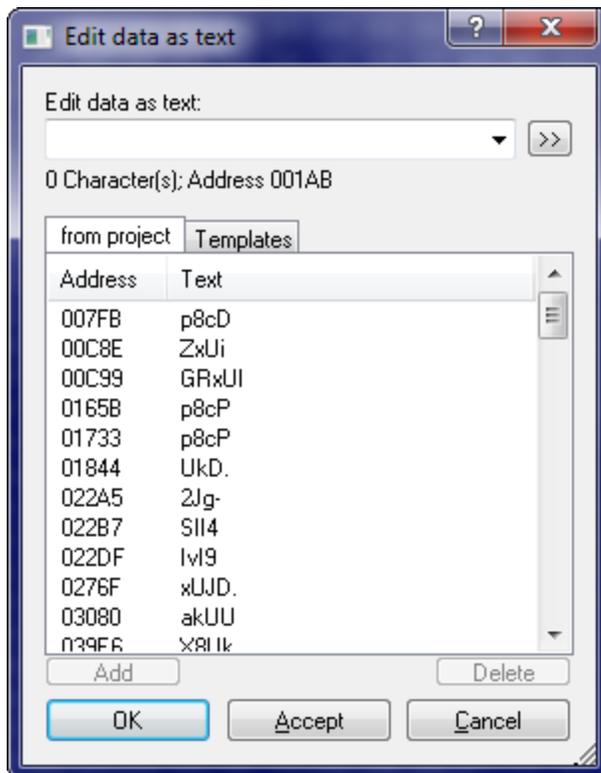
This command is only available, if the cursor is in a previously found map window. These areas are highlighted in the hexdump view.

Shortcuts

Symbol bar: -

Keyboard: -

5.7 The Dialog as Text (Menu Edit)



Use this dialog to edit the eprom contents as a normal text, for example to mark something.

Create a selection without gaps before starting this dialog to edit an existing text or place the text cursor on the beginning of the text to use the automatic text recognition.

In the lower half of the window, you can see a list (automatically generated) with possible texts within this project. It may take several seconds until the list is complete. Click on an entry to edit the project at this position.

Use the tabulator bar above the list to switch to a list of predefined default texts. This list is empty when you install WinOLS. Use the Button "Add" to include the text currently entered into the list. The list will be stored project-independently on your hard disk.

If you want to have a bigger edit field, click on the button ">>".

Shortcuts

Symbol bar: -

Keyboard: Ctrl+Shift+T

5.8 The command Inplace edit (Menu Edit)

This command will open a small edit window at the cursor position. Here you may enter a new value for the current cell. This works mostly as in 'Change absolute'.

If you're using Factor / Offset: Always enter the value you later on want to see and not the one that should be stored in the eeprom. WinOLS will convert it for you.

Option:

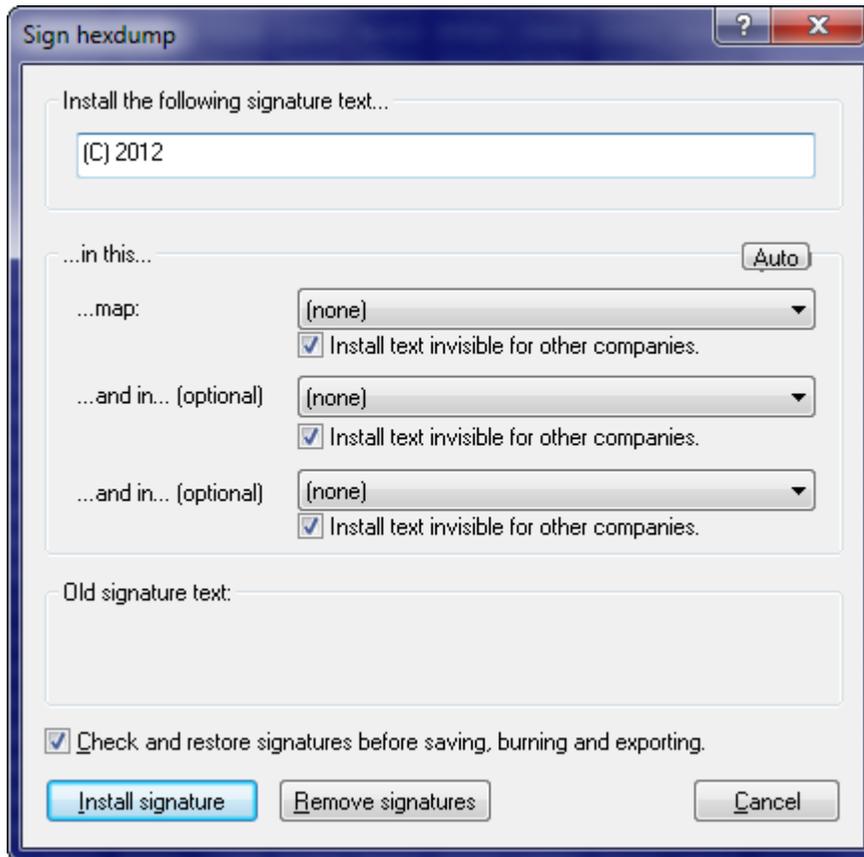
You can start this mode by pressing any of the number keys (see "Miscellaneous > Configuration > Miscellaneous > Edit").

Shortcuts

Symbol bar: -

Keyboard: Enter

5.9 The Dialog Sign Hexdump (Menu Edit)



Use this dialog to install texts into a project file in such a way, that it is normally not visible. This may be useful for example, to brand all your files 'invisibly' with your company name.

WinOLS will make very small changes to the project. These changes are normally too small to be relevant for the functionality, but large enough to code text into it.

In order to work these function needs to know what map or maps it may change. The larger the map and the more bytes per cell it has (for example 2 bytes for a 16 Bit value), the more data can be stored. For best performance use large maps. Otherwise you can only install small texts.

You may hide the texts from other companies. That way, other people (not in you company) working with WinOLS will not see any message at all. On the other hand you may decide to not to hide the texts. That way, other people can see the text in the dialog, but they do not know where the text is stored within the file. That makes it difficult (but not impossible) to remove. The best way is perhaps a combination. You can install one visible text and two more invisible.

Since signatures may be disturbed when you're editing the project, it is

recommended to let WinOLS check and restore them before the project is saved, exported or written into an eeprom.

Some more notes:

- To create an import protection that is difficult to remove, activate the NOREAD checkbox. Since signatures always contain the WinOLS customer number, you will still be able to reimport the file.
- Don't use maps with very small changes in the data, because the changes done by WinOLS could make a relevant difference when the data is used.
- You can install the same text several times for more security. If one change is disturbed, there are still others left.
- You can only remove signatures performed by your company. You cannot remove signatures from others.
- Use the 'Auto' function with care. It may select maps that are not fit for changes in your opinion.
- Check any maps that are changed afterwards to see if the changes are not too big.
- The function 'Remove Signatures' overwrites the signatures, but it does not restore the original values. If you want to get the original values, please use the undo command as usual.
- The signature can be seen in the install signature and in the version dialog.

Unsuitable for this function are:

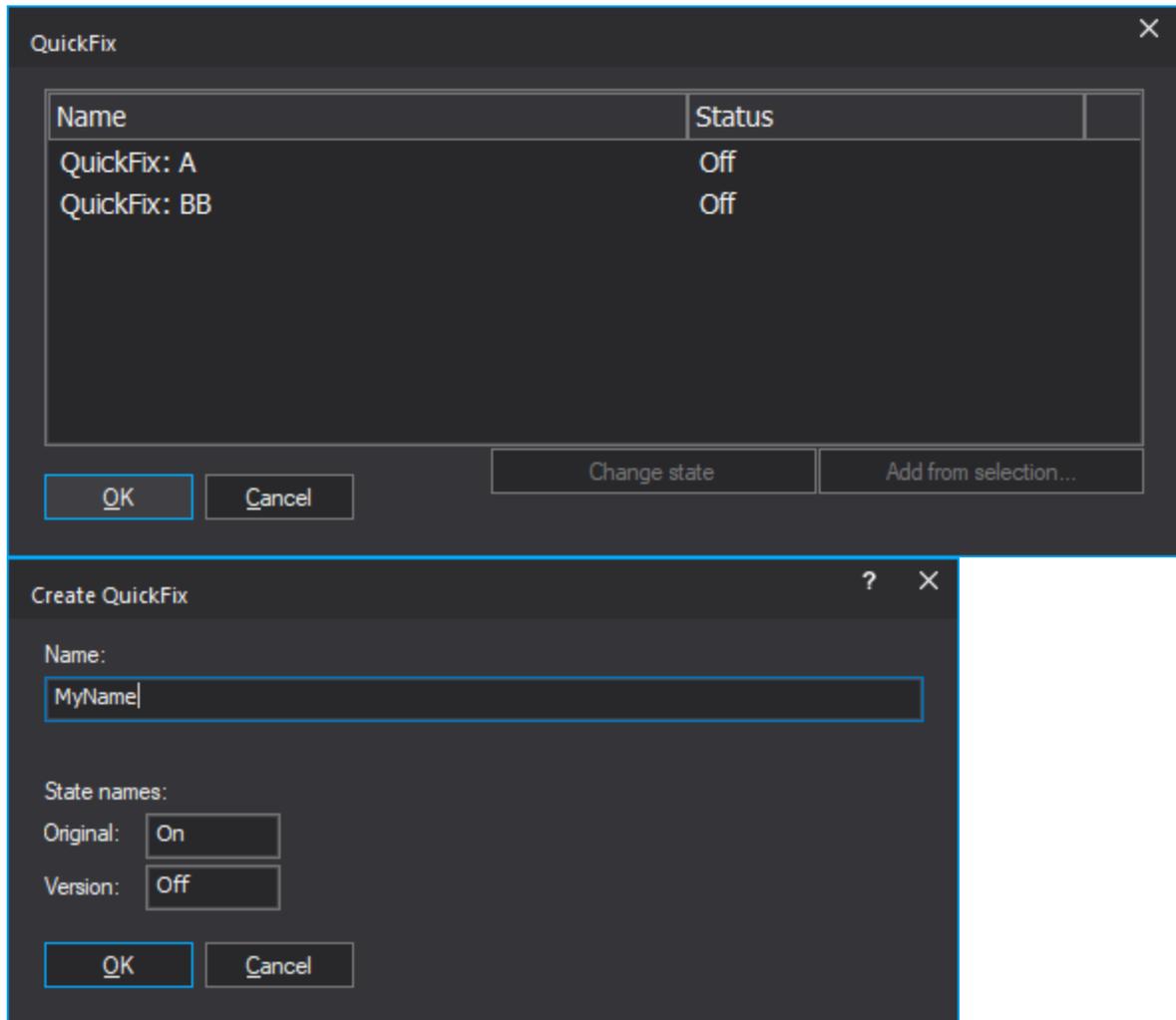
- small maps
- maps with skip bytes
- maps with float values

Shortcuts

Symbol bar: 

Keyboard: -

5.10 The Dialog QuickFix (Menu Edit)



QuickFixes define smaller groups of status changes independently of the version. The states (usually: on/off) are saved in the maps (number-to-text) and are therefore available in all versions and can be quickly activated or deactivated.

Apply:

Click on the line in the dialog and then on 'Change status' to achieve the desired status. Close the dialog with OK to change the hexdump as desired.

Create (manually):

You can create a QuickFix manually:

- Create a new folder in the map tree. The name must start with "QuickFix:"
- Define maps in this folder that cover exactly the memory locations you want to change. All maps must contain number-to-text definitions with the same texts (state names). However, they can refer to different values.

Create (from selection):

(This is a WinOLS Feature-Update.)

You need a version where some values have been changed.

- Select these (max 200 cells). Unchanged cells must not be selected.
- Use the Add button in the QuickFix dialog.
- Enter a name for the QuickFix and for the states of Original and Version.

XDF-Import (OLS526)

When importing an XDF file, XDFPATCH blocks are imported as QuickFixes.

Reseller:

QuickFixes are technically maps + map folders. They are therefore included both when purchasing a project and when purchasing a version. They are only not included in an original-only purchase because it does not contain any maps.

Shortcuts:

Toolbar: -

Keyboard: Shift+Q

5.11 The command Value + 1 (Menu Edit)

Increases the values of all selected cells / the cell at the cursor position by 1.

Hold the key pressed to repeat this command (with increasing speed).

If you press the Ctrl-Key and the Plus Key (from the Decimalblock), this command works 100x stronger.

Shortcuts

Symbol bar: 

Keyboard: Plus / Colon

5.12 The command Value - 1 (Menu Edit)

Decreases the values of all selected cells / the cell at the cursor position by 1.

Hold the key pressed to repeat this command (with increasing speed).

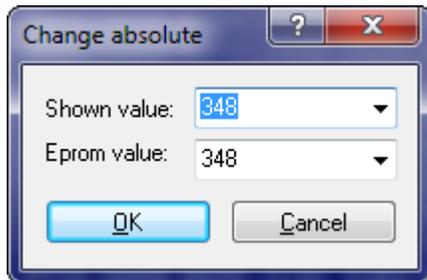
If you press the Ctrl-Key and the Minus Key (from the Decimalblock), this command works 100x stronger.

Shortcuts

Symbol bar: 

Keyboard: Minus

5.13 The dialog Change absolute (Menu Edit)



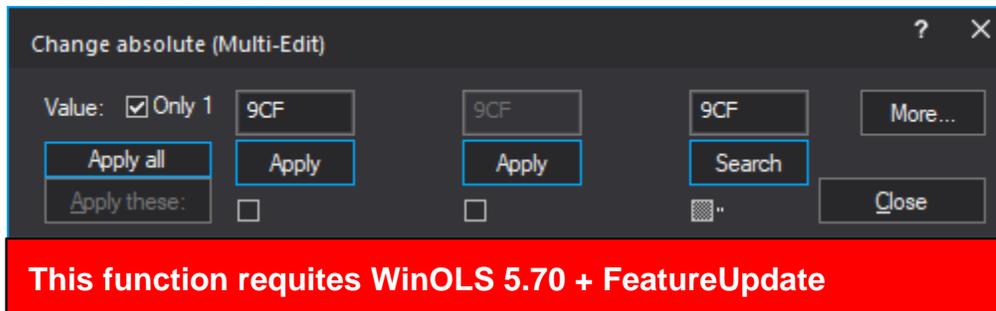
Modus: Standard

Use this command to set the current cell / all selected cells to a certain value.

WinOLS stores the data internally always in the same format that is used the eprom later on. But the values shown on the screen may differ, because of factor and offset in order to improve the display.

That's why this dialog shows two values. The upper one is the same you'll see in the current map or hexdump. All influences (like number system, factor and offset) are the same. The lower value is always in hex and the same value that is stored in the eprom later on. The two fields are connected and are updated automatically.

Modus: Multi-Edit



If you have connected (narrow) maps, this window appears. Here you can enter values per column and either apply them individually or apply all the selected values together. You can use the More button to generate replace commands for the search dialog from the current settings.

Individual vs. all:

You can use the individual Apply buttons to apply this column. The "Apply these" button applies all checkmarked columns. With "Apply all", all columns (except search columns) are applied.

If you activate the "Only 1" checkbox, only the first input field is activated and all others are synchronized with it. (Except for search columns).

Use the "Enter" key to apply the Apply/Search button that matches the EditText in which the cursor is currently located. The "Ctrl+Enter" keys correspond to the "Apply all" button.

Tri-State Checkboxes:

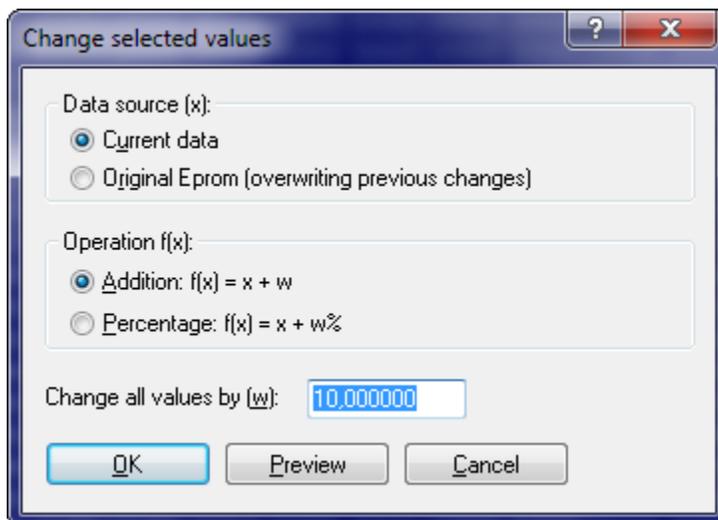
The checkboxes have 3 states. In the third state (half-gray), the Apply button below the field becomes a search for this column. Not all features of the search dialog are supported here, but you can at least enter alternative values (41/42/43).

You can switch back to standard mode via "More".

Shortcuts

Symbol bar: 

Keyboard: =

5.14 The dialog Change relative (Menu Edit)

Use this command to change the current cell or the selected cells with mathematical operations.

Using the data source (upper part of the dialog) you can select the source where OLS gets the input data for the operations. Note: The option 'Original Eprom' means that version currently selected as original will provide the source data.

In the middle part of the dialog you can choose the mathematic operation which you want to apply for the cells.

In the lower part of the dialog you can enter the parameter you want to use for the selected operation.

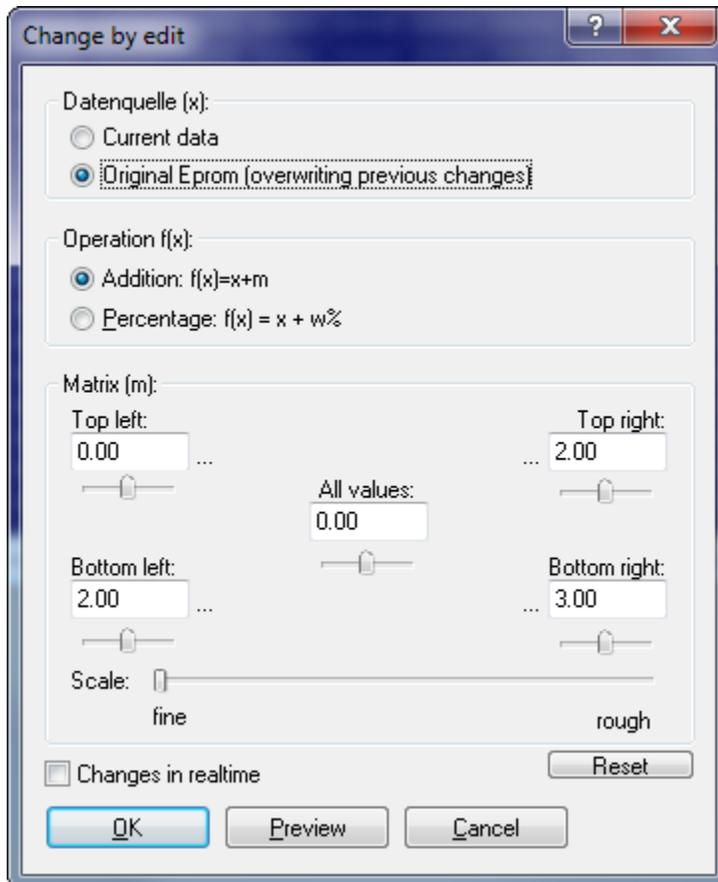
For example enter 'Addition' and '1000' to increase all values by 1000 or 'percentage' and '-10' to decrease all values by 10%.

Shortcuts

Symbol bar: 

Keyboard: %, Ctrl+Shift+A (Addition activated), Ctrl+Shift+P (Percentage activated)

5.15 The dialog Change by edit (Menu Edit)



Use this command to change all selected cells with mathematical operations. The two upper areas work just like the dialog Change relative.

In contrast to the dialog Change relative there are 5 parameters for mathematical operations instead of just one. The parameter in the middle of the dialog influences all cells the same way. The other 4 parameters work depending on their position relative to the selection. For example the cells in the upper left of the selection are influenced most by the parameter in the upper left.

All parameters can also be entered using sliders. The sensitivity of the sliders can be changed with the scale slider.

If the checkbox 'Changes in real-time' is activated, all changes are applied to the

map or hexdump window immediately. It is recommended to use this function with care, to avoid damages in the vehicle.

This command is only available when an area is selected.

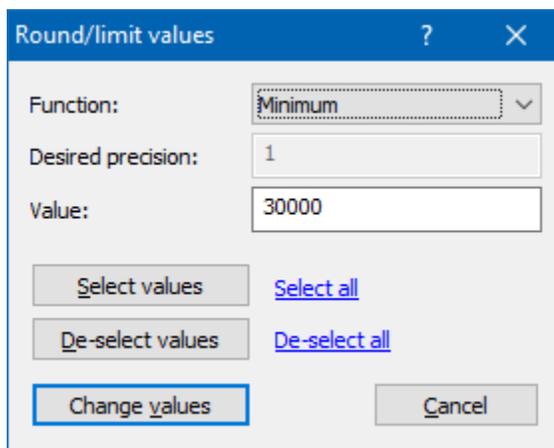
Shortcuts

Symbol bar: 
Keyboard: %

5.16 The dialog round/limit values (Menu Edit)

With this dialog the selected values:

- can be rounded (e.g. 1,2345 => 1,2300)
- limited to a minimum / maximum value
- can be (de-)deselected



Tip:

You can apply this function to several maps in one go. Right-click a selection in the Map-Sidebar and choose "Edit multiple maps".

Shortcuts

Symbol bar: -
Keyboard: Ctrl+Alt+R
Keyboard: Ctrl+Alt+Shift+R (Skips the dialog)

5.17 The command Original value (Menu Edit)

This command resets all marked cells to their original value.

Shortcuts

Symbol bar: -
Keyboard: F11

5.18 The Dialog Interpolate (Menu Edit)

Use this command to replace the selected cells with an interpolation calculation of their neighbors. For this the selection needs to be rectangular (or one-dimensional) and there must be a border on each side that is not part of the selection, in order to have a base for the calculation. For cubic interpolation 2 unselected cells must exist on each side, but it creates "rounder" values and is better at continuing trends.

This function can also be used on axis data.

Extrapolation:

If a selection extends to the edge on one side, interpolation (except via the corner values) is not possible. However, if there are at least 2 cells outside the selection on the other side, WinOLS can (if you activate the option of the same name) extrapolate the values based on the 2 cells. (Interpolate=between the reference values; Extrapolate=outside the reference values)

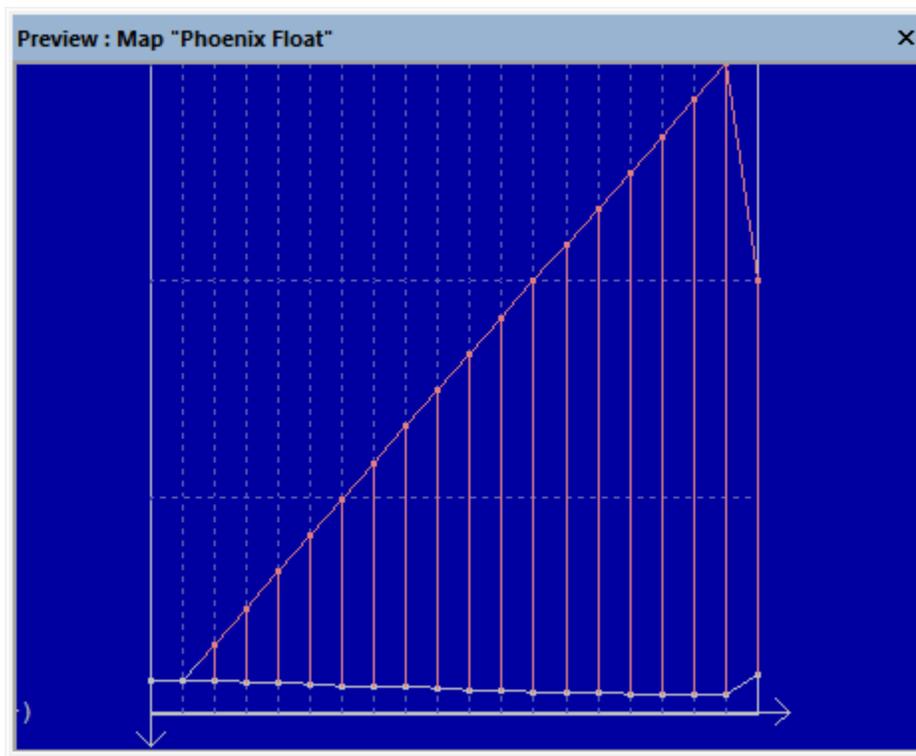
Fallback strategy:

It can happen that the selected options (cubic or all 4 sides) are not possible with the current selection. WinOLS then automatically reduces the options so that interpolation/extrapolation is possible. A corresponding text in the dialog then indicates this.

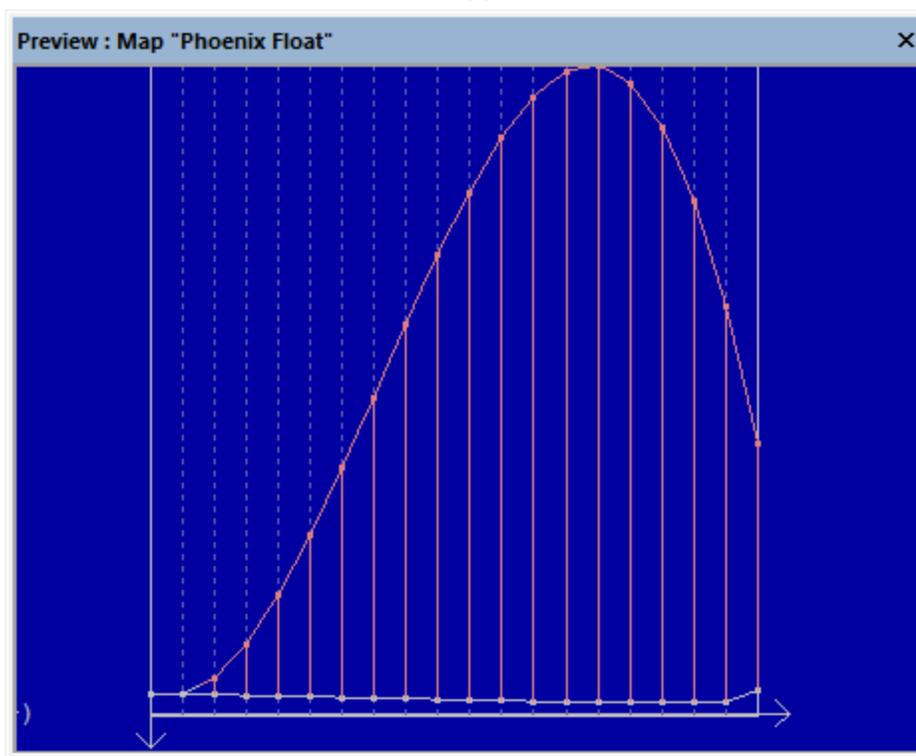
If you have explicitly activated "only left/right" / "only top/bottom", this may mean that no calculation is possible because the selection is too close to the edge. Activate the checkbox "If necessary: All sides" to automatically switch to the other sides, if necessary.

Example:

In both images the outer 2 values on each side were left unchanged (they're the same in both images, the scale is different). All other values are interpolated.



linear



cubic

Shortcuts
Symbol bar:

Keyboard: I
 Keyboard: Shift+I (Dialog will be skipped)

5.19 The Dialog Remove row / column (Menu Edit)

 Video

Sometimes the range covered by the axis values isn't large enough. Modifying the outmost axis value would solve this problem, but it would also cause large-scale changes. This dialog helps you instead to identify and remove an 'unimportant' row or column.

Remove row / column

Mode:

Remove row
 Remove column

Statistics:

Column	Axis: Value	Axis: Distance	Map: Ø error	Map: Max. error
2	20,0195	19,9951 <==	0,031379 <==	0,068761 <==
3	30,0049	19,9951 <==	0,053764	0,117651
4	40,0146	20,0195	0,189877	0,284576
5	50,0244	19,9951 <==	0,069177	0,108188
6	60,0098	29,9561	0,122515	0,209554
7	79,9805	39,9902	0,111280	0,428397

Movement direction:

Up / left (Empty area is created at bottom / right)
 Down / right (Empty area is created at top / left)

New axis value:

Requirements:

- This dialog requires a map.

- It can only be used the corresponding axis values come directly (without adding up) from the hexdump.

Mode:

Choose whether you want to remove a row or column.

Statistics:

This table show for all rows/columns (except for the outmost ones), what would happen if you would remove it (so that these values would be calculated by linear interpolation instead). This table shows:

- The number of the row/column
- The axis value at this position
- The distance between the neighbor values
- The average error¹ that this would cause
- The maximum error that would be caused in one cell

¹ The 'Error' is the difference between the current cell values and the value that would be calculated by linear interpolation if this row/column didn't exist.

This smallest value in each column is marked with '<=='. WinOLS automatically selects the row where the sum of the last 2 column is smallest.

Move direction:

Choose the direction in which you want to move the values after the row/column was removed. Enter a new axis values here. WinOLS will use it to extrapolate the map values from the neighbor values.

Note:

Keep in mind that the axis that you're modifying here, might also be referenced by other maps.

Shortcuts

Symbol bar:

Keyboard: Ctrl+Shift+Alt+Del

5.20 The command Again (Menu Edit)

This command repeats the last operation for the current selection. Operation parameters (e.g. multipliers) are also repeated.

Shortcuts

Symbol bar: -

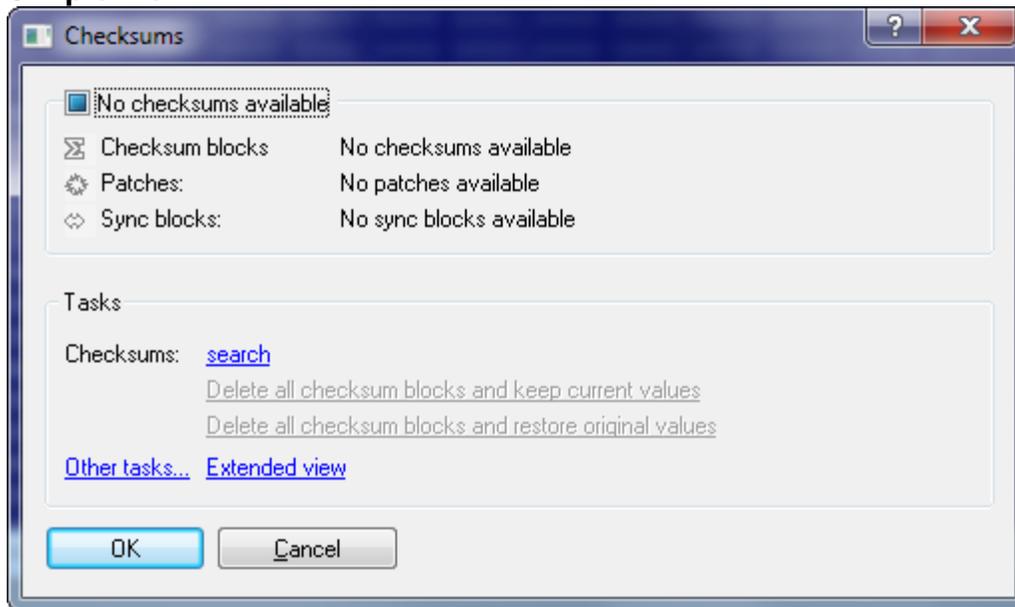
Keyboard: F9

5.21 The dialog Checksums (Menu Edit)

Use this dialog to manage the checksums which were found for this project. A checksum always consists of an area which is checked, an address where the checksum is stored and parameters which determine how the checksums calculates its results. A project can contain any number of checksums. For many cars there are checksum modules available which automatically recognize and correct the checksums.

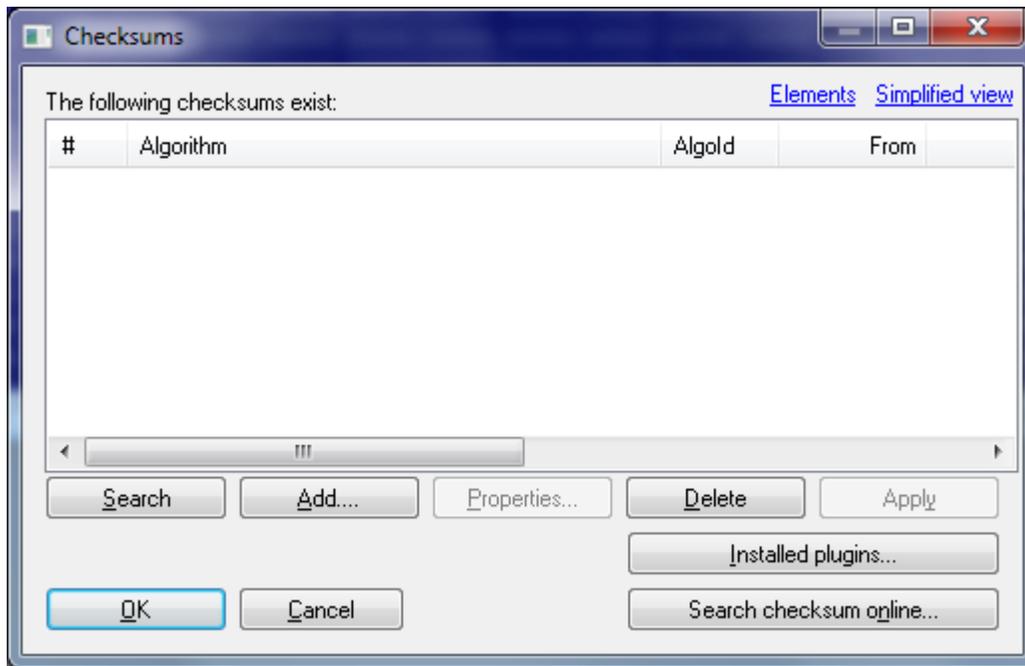
For this dialog a simple and an extended view is available.

Simple view:



This dialog shows the current checksum status. Use the hyperlink "Search" to search for a checksum for your current project. All checksum plugins automatically recognize whether they can handle the current file.

Extended view:



Use the button 'Search' to search automatically for all kinds of known checksums. Additional modules are available for WinOLS which complement the main program. If you click on 'Search checksum online' WinOLS will check online if there is a checksum module available for your current project.

Using the button 'description' you can edit the parameters of the selected checksum. Use the button 'apply' to apply the selected checksum immediately.

Automatic checksums:

Several checksum modules are available for WinOLS to correct the typical cars. In order to have them work properly it is absolutely necessary to use the unmodified original of the car as a project original. If this isn't the case, the checksum blocks won't always be calculated correctly or won't be found at all

Manual checksums:

Pros may not only use automatically recognized checksums, but also add (Button add) or change (Button edit) checksums manually. For details about manual checksums please refer to the respective dialog.

Sync Blocks:

Click on the small black triangle next "Add" to add a Sync Block. It allows you to keep two identical data range identical. If one of the two ranges is changed, the other one will be changed, too.

Patches:

Some automatic checksums insert patches to correct the ECU. If you don't have an automatic checksum, you can manually add a manual patch-tagblock at an empty

area to define the place where WinOLS can store the tag information (see dialog " Properties: Project").

Note:

You can get an overview of the modules you have installed / licensed with a click on the button 'Installed Plugins' (or with the function '? > Info about plug-ins')

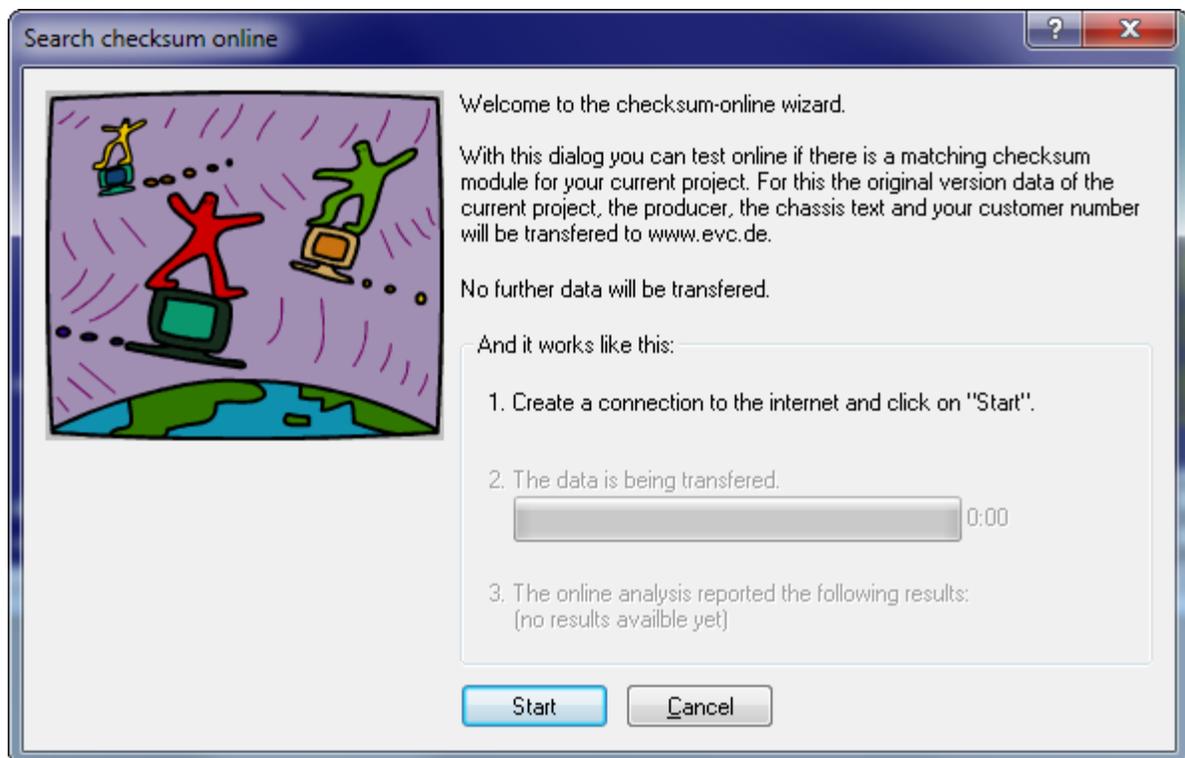
Note about addresses:

The addresses in this dialog do not refer to the current element, but to the addresses like they are visible in the view <All elements>. This makes actions possible which apply to the data of multiple elements at once.

Shortcuts:

Symbol bar: 
 Keyboard: F2 / c

5.21.1 The Dialog Search checksum online (Menu Edit)



Use this dialog to search the EVC website for checksum modules matching your ECU.

To do so, just go online and click on 'start'. This assistant will do everything else.

Note:

An internet connection is needed for this dialog.

Note:

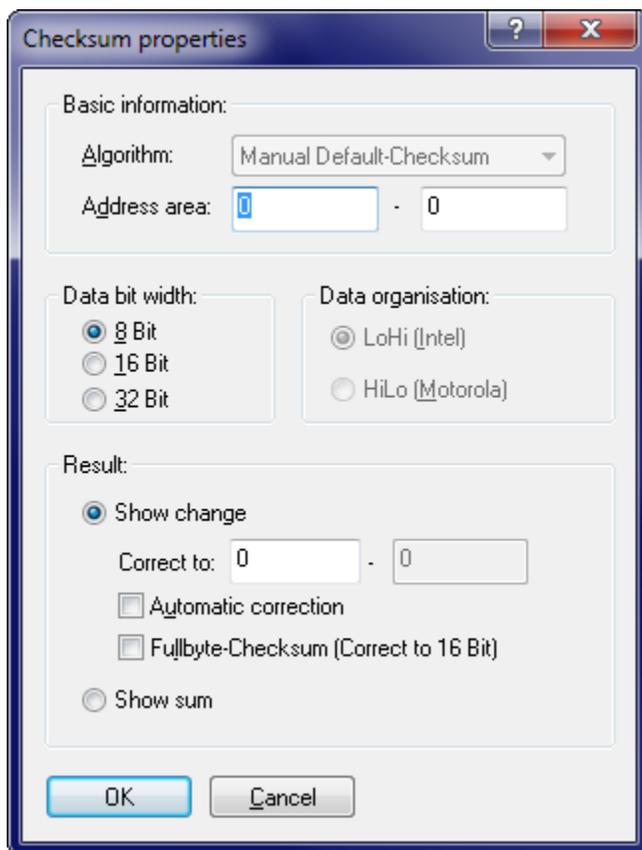
In rare cases you may need to specify a proxy server. You can do this at "Miscellaneous > Configuration > Miscellaneous > Internet".

Shortcuts

Symbol bar: -

Keyboard: -

5.21.2 The dialog Checksum properties



Use this menu to edit the parameters for the selected checksum. For automatically found checksums most parameters are controlled by the program. In case of a manual configuration you can edit several parameters.

- | | |
|----------------|---|
| Algorithm | The selected algorithm |
| Address area | The checksum is calculated from this area in the project. |
| Data bit width | Specifies whether 8 or 16 bit data will be taken from the project |
| Data | Describes how the data is organised, if 16 bit data is |

organisation	used.
Correct to	The checksum is written to this target address. For so-called "Fullbyte" Checksums (see below for details) (possibly large) data ranges will be modified to keep the checksum correct.
Automatic correction	If this checkbox is activated any changes in the address area will result in a correction of the checksum.
Fullbyte Checksum	Activates the so-called "Fullbyte" Checksums (see below for details)

With this dialog you may view the individual checksums that have been automatically recognised or you may add and edit your own manual checksums.

The manual default-checksum is a so-called additive checksum. It is calculated by simply adding all values in the address range. As a consequence it is possible to correct changes without knowing the further details, like the exact position of the checksum.

To achieve this, you simply must enter an address range that includes all your changes and at the same time is smaller than the checksum range defined by the manufacturer. (As you see, it's better to define this range smaller than larger.) For the correct-to address just choose the next address after the address area you've entered. If you now make changes, the values at the correct-to address are changed in such a way that the total sum stays constant. You may also choose to only display the sum and keep this value constant yourself. In this case you don't need to enter the target address (and some other things).

Fullbyte Checksums:

This is a variant of the normal checksum where the width of the register is wider than the data. So, if you're working with 8-Bit data, then the actual addition is performed in a 16-bit register (for 16-bit data a 32-bit register). The difference lies in the calculation of the carry which is performed much later for fullbyte checksum. If you increase the data of a normal 8-bit checksum by 300, you only have to decrease the data by 44 (300-256) at another point. For fullbyte checksums you must subtract the entire 300 at a difference place. That is the reason why you must specify an address range as target.

Fullbyte Checksums in the daily work:

For this type, enter a target range instead of a target address. If you increase the value of data, data in the target range will be decreased and vice versa. The required size of the target range depends on how much you modify and how far the current values in the target range can be modified.

Important:

the target address / the target range may not be within the address range that is

checked, but must necessarily be within the range that is used by the ECU calculation software.

Note about addresses:

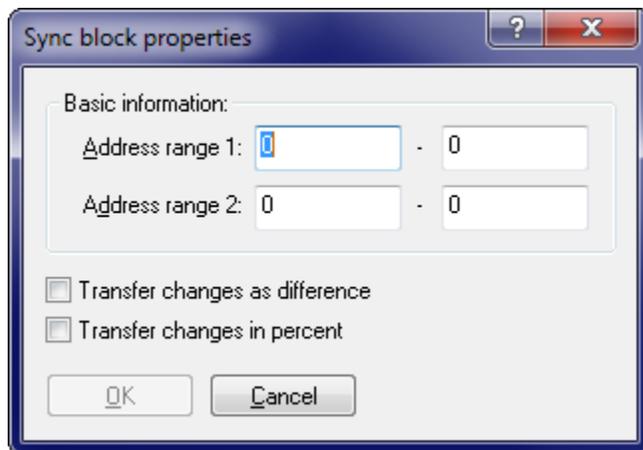
The addresses in this dialog do not refer to the current element, but to the addresses like they are visible in the view <All elements>. This makes actions possible which apply to the data of multiple elements at once.

Shortcuts

Symbol bar: -

Keyboard: -

5.21.3 The dialog Sync block Properties



This dialog allows you to add or modify a sync block. A sync block is a method to make sure that a memory ranges which are currently identical will stay identical. If a modification is done in one memory range, the same modification will be performed in the other range, too.

You can reach this dialog, by clicking the small black triangle next to "Add" in the checksum dialog.

Note about addresses: The addresses in this dialog do not refer to the current element, but to the addresses like they are visible in the view <All elements>. This makes actions possible which apply to the data of multiple elements at once.

Shortcuts

Symbol bar: -

Keyboard: -

5.22 The Command Apply Checksum (Menu Edit)

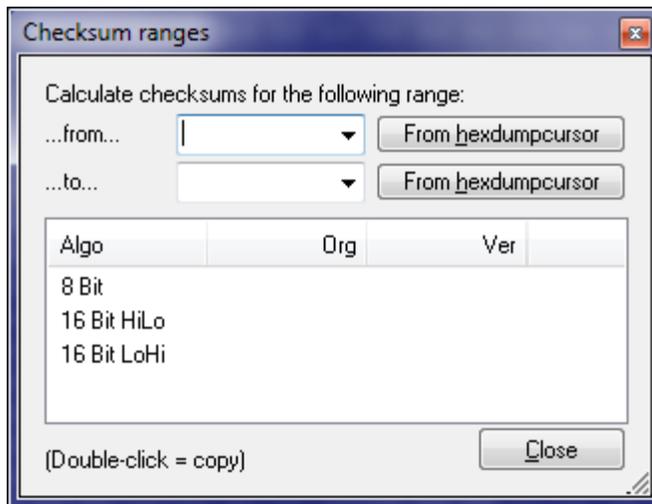
Use this command to let WinOLS recalculate a single checksum block. If the automatic checksum calculation is enabled, you won't need this command.

This command is only available if the cursor is within a checksum block and the corresponding plugin is installed and registered.

Shortcuts

Symbol bar: 
Keyboard: Alt+F2

5.23 The dialog checksum ranges (Menu Edit)



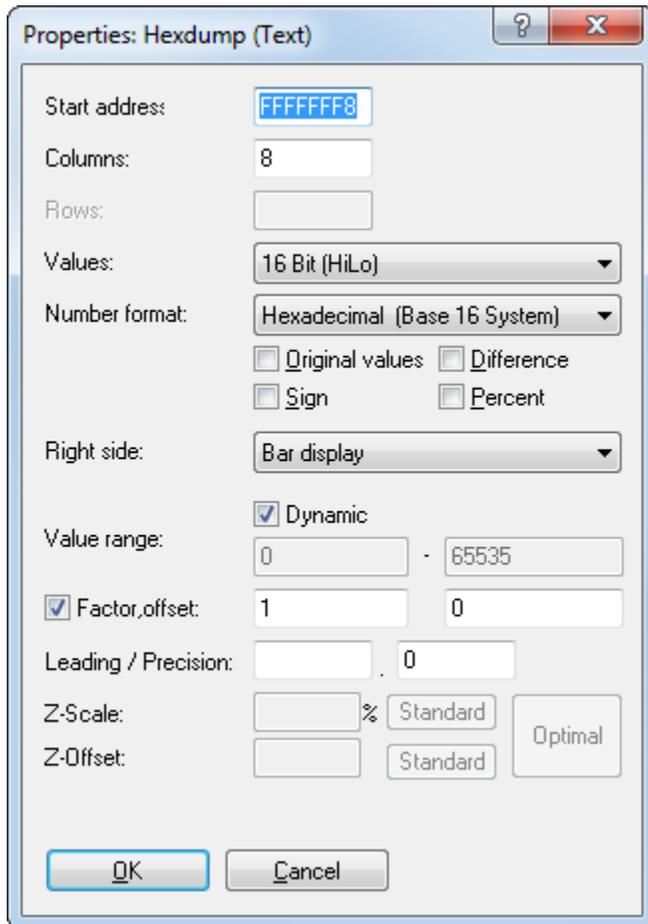
This dialog shows the different checksums for a user-defined range.

This dialog is a "floating" dialog. All floating dialogs can be toggled with the tab key.

Shortcuts

Symbol bar: -
Keyboard: -

5.24 The dialog properties: Window: Hexdump (Menu Edit)



- Start Address:** The (virtual) address of the first upper-left cell. This can be a negative number if you shift the Hexdump to the left / right.
- Columns** Enter the number of columns in this field.
- Values** Here the number of bytes per cell and the byte organisation (LoHi/HiLo) can be edited. This also displays the value range.
- Number format** You may choose between a binary, decimal and a hexadecimal display.
- Original** Display the original values instead of the current version
- Sign** Interpret the data as signed values
- Difference** Instead of displaying the absolute value you may use this option to show the difference between the cell value and the original value.
- Percent** Instead of displaying the cell value this option can display the relative difference between the cell value and the original value.
- Right side** Optionally you may display the values as ASCII-Characters or bars.
- Value range** If a bar display is chosen you may use these edit fields to enter the number range displayed in bar. If only the number 1-10 are used in

the data you could optimize the display for this value range.

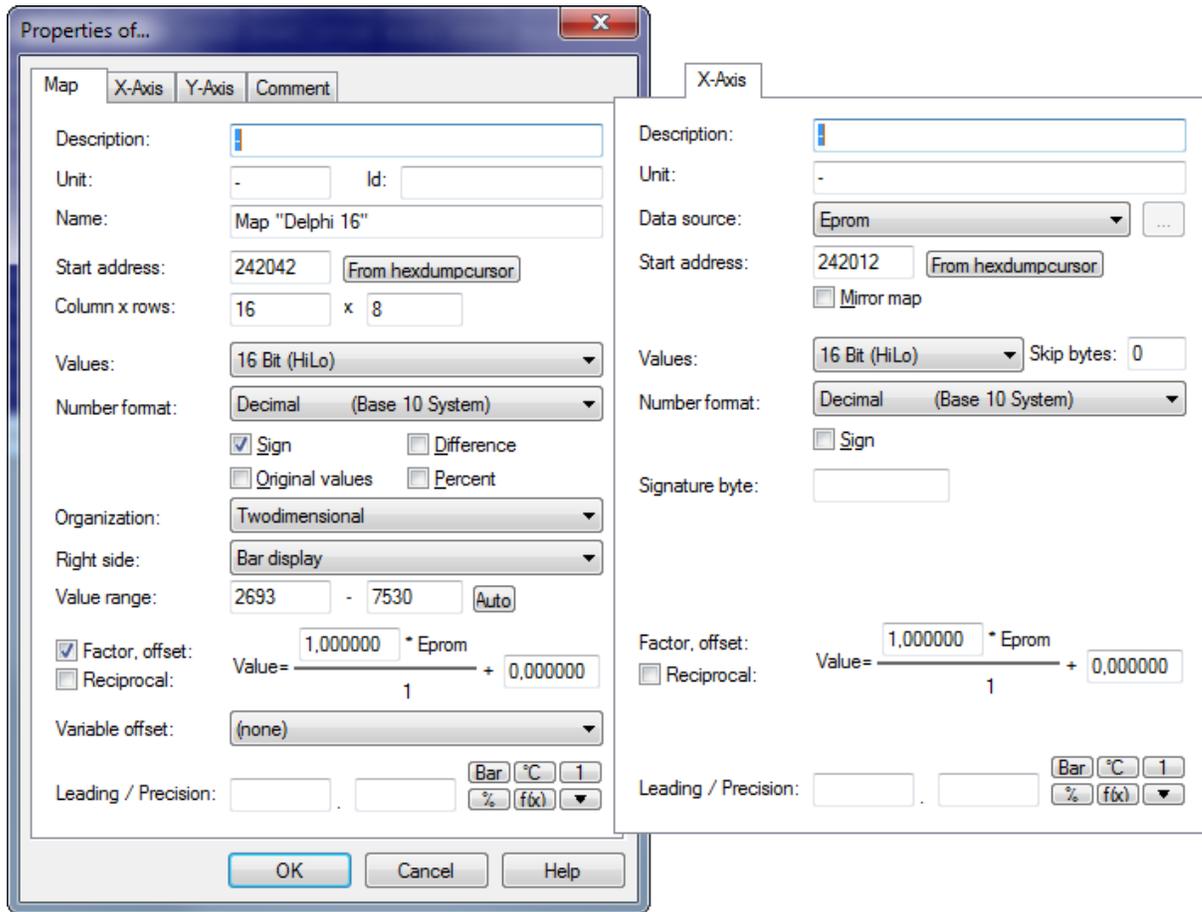
If you activate the Option "Dynamic", then WinOLS will automatically determine the best scale for any bar data. This will allow you to recognize more maps, especially in 16 and 32 bit mode, but it may cause two rows in a one map to have a different scale. Once a map is registered or recognized as potential map, WinOLS will automatically use the value range of the map for displaying its data in the hexdump.

Factor & Offset	Factor and offset help to display physical values by applying multiplication and addition before displaying them. The value is calculated by the following formula: $\text{DisplayedValue} = \text{Value} * \text{Factor} + \text{Offset}$
Leading	Number of visible digits before the dot. This can be useful for 32 values which can have lots of digits in theory and often don't use so many. Leave empty for automatic configuration.
Precision	The number of visible digits after the dot.

Shortcuts

Symbol bar: 
Keyboard: Alt+Enter

5.25 The dialog properties: Window: Map (Menu Edit)



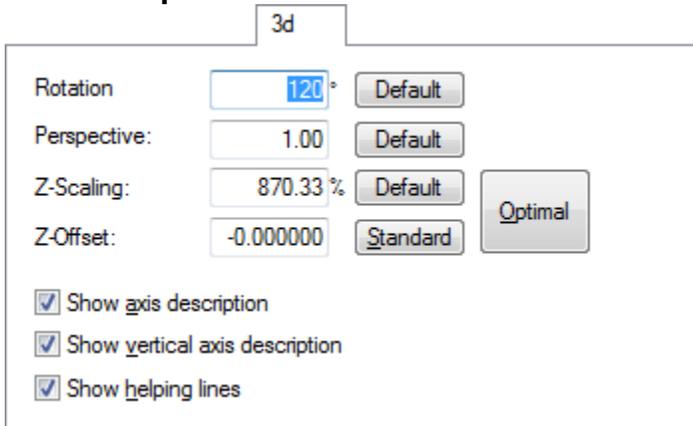
The following information is stored in the first sheet of the window.

- Description, Unit, Id, Name** User-defined descriptions. The name should describe the entire map, while description and unit should refer the to map content (without axis). The id is normally used only by A2L imports.
- Data source** Defines the source, where the axis data is taken from. You may choose the automatic enumeration or values from the eprom (which may also be calculated with additions or subtractions or indexed with alternating index and value). Moreover you may decide to enter your own values, which are not stored within the eprom, but externally.
- Start address** This address defines the beginning of the map
- Rows & Columns =>Axis-Addr.** The map size
This button only appears if you have changed the dimensions of the map and the axes are located directly in front of the map. Then you can correct the axis addresses accordingly with this button.
- Mirror map** Use this checkbox to display the map (map and axis) in reverse

	(in direction of the axis) order.
Values	Here the number of bytes per cell and the byte organisation (LoHi/HiLo) can be edited. This also displays the value range.
Skip bytes	For some ECUs not all bytes are used for the axis but only every second, for example. Enter the number of bytes that should be skipped between 2 values / lines. (Tips for Vertical maps)
Number format	You may choose between a binary, decimal and a hexadecimal display.
Sign	Displays the values as signed values.
Original values	Instead of displaying the modified version, WinOLS will show the unmodified original values.
Difference	Instead of displaying the absolute value you may use this option to show the difference between the cell value and the original value.
Percent	Instead of displaying the cell value this option can display the relative difference between the cell value and the original value.
Signature id	An internal id found by the potential map search. The map axis profiles use this in their signature.
Organization	The type of the map (point, 1d, 2d, 2d mirrored)
Right side	Optionally you may display the values as ASCII-Characters or bars.
Value range	If a bar display is chosen you may use these edit fields to enter the number range displayed in bar. If only the number 1-10 are used in the data you could optimize the display for this value range.
	If you activate the option "Dynamic", WinOLS will automatically determine the best scaling for the bars. This makes it easier to recognize maps, especially in 16 and 32 bit mode, but it can lead to two lines of the same map having different scaling. Once a map is detected or registered as potential, WinOLS uses its value range to display it in the hex dump.
	The value range can also be used (with the lock symbol) to limit the values to a minimum/maximum when editing.
Auto	Use this button to optimize the value range for the current map data.
Factor & Offset	Factor and offset help to display physical values by applying multiplication and addition before displaying them. The value is calculated by the following formula: $DisplayedValue = Value * Factor + Offset$
Reciprocal	Displays the data as the reciprocal of their original value.
Leading	Number of visible digits before the dot. This can be useful for 32 values which can have lots of digits in theory and often don't use

	so many. Leave empty for automatic configuration.
Precision	The number of visible digits after the dot.
Bar / °C / 1	Loads stored values for fields factor, offset, unit and precision.
%	Adjusts factor / offset in such a way that the value at the map cursor is scaled to 100%
f(x)	Starts a formula wizard to help you calculate factor / offset from more difficult formulas or from sample values.
Triangle	With the arrow button and the menu that is opened by this button you may store your own preferences. To do so, just enter them into the mentioned fields. To store them into one of the ten entries, keep the shift key pressed while selecting an entry from the menu. You can recall the values anytime simply by selecting the entry again (without shift).
Offset map	For trim maps, you can add (or multiply) another map as offset to the current map. Simply select the other map from list. (The list contains all maps with identical axis addresses.) For the view WinOLS adds the values of the other map (but not the axes) like an offset to the current map (or multiply with the current factor).

For 3d-map-windows:



The fourth sheet contains information about the three-dimensional view. It is only visible when the map is in view mode 3d.

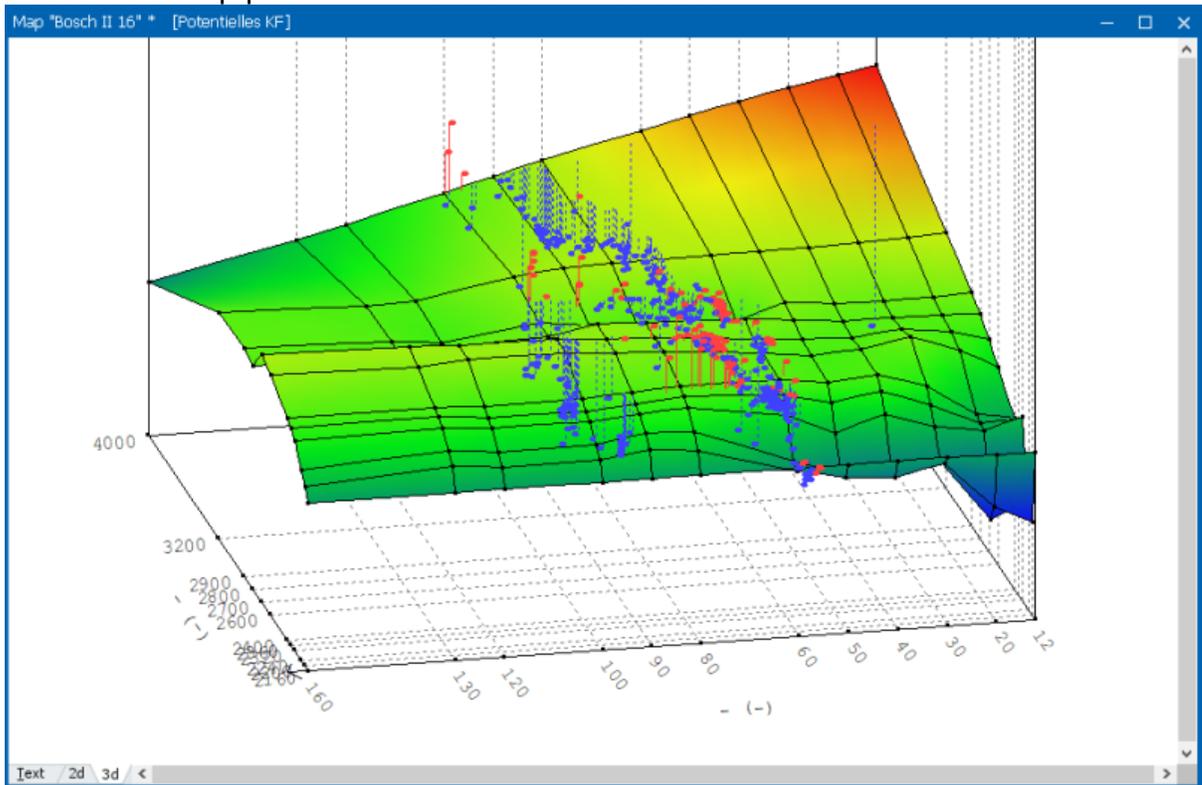
Rotation	This determines the rotation of the view around the vertical axis.
Perspective	The value shows the influence of the perspective on the view.
Z-Scaling	The Z-Scaling determines how much the map is stretched or compacted vertically for the view.
Z-Offset	The Z-Offset is a vertical offset which can be used to make negative values displayable.
Show axis description	Self-explaining
Show vertical axis	Self-explaining

description

Show helping lines Self-explaining
lines

Measured values:

If you have a table with measured values to which you want to approximate a map, you can have WinOLS display these values in the 3d mode of the map. To do this, select a CSV table with 3 columns (X, Y and value) on the 3d page. If the table is very large, you can let WinOLS thin out the data. Then only the measured value closest to a map point in X+Y direction will be used.



Templates for map names:

With the button ">" you can store / use a tree structure with map names. The text file with the names must have the following format:

Name of the group1

-Name1.1

-Name1.2

Name of the group2

-Name2.1

...

Shortcuts

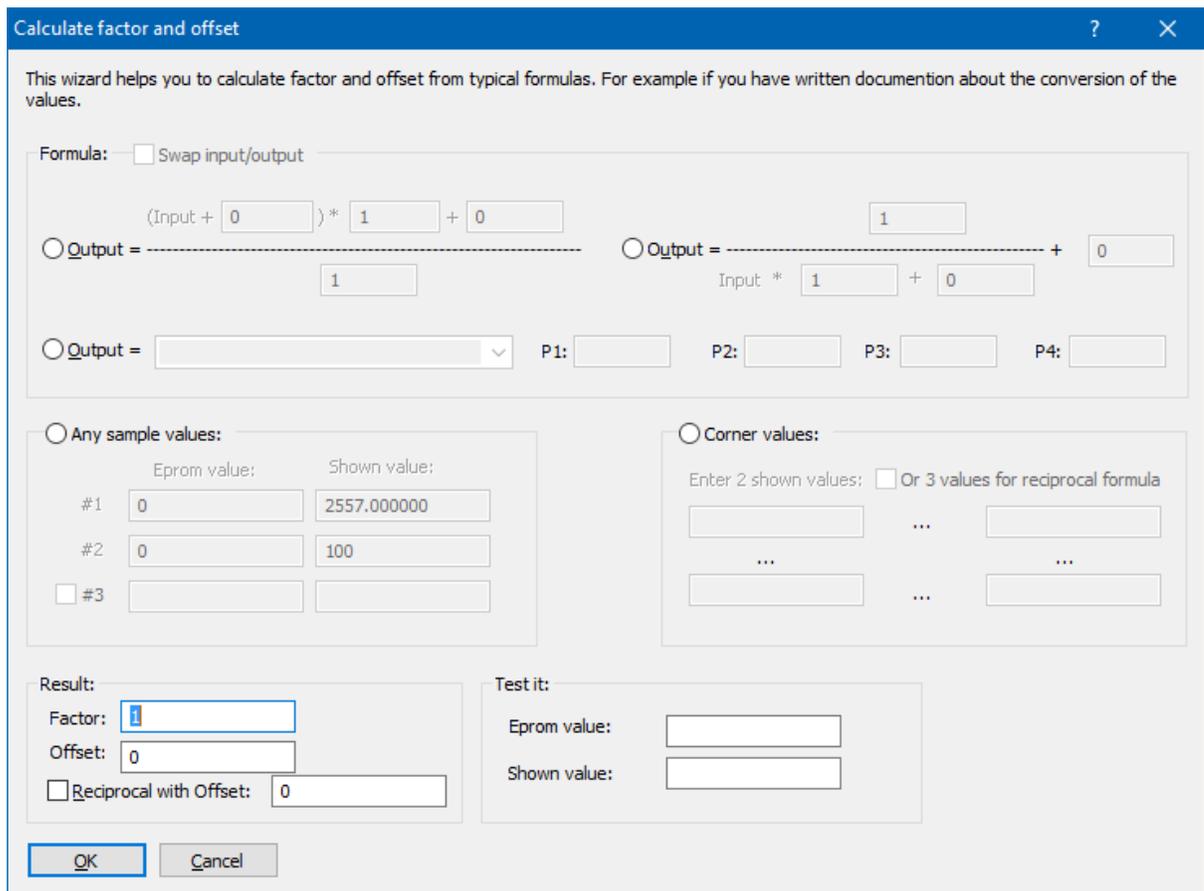
Symbol bar: 

Keyboard: Alt+Enter

5.25.1 Calculate factor and offset

 **Video**

This wizard helps you to determine the factor and offset based on various source data. This is useful if you have information about the conversion of the eeprom values which cannot be entered directly in WinOLS (as factor and offset) due to their format. You can access this dialog via the f(x) button in the map properties window.



Calculate factor and offset

This wizard helps you to calculate factor and offset from typical formulas. For example if you have written documentation about the conversion of the values.

Formula: Swap input/output

Output = $\frac{(\text{Input} + 0) * 1 + 0}{1}$
 Output = $\frac{1}{\text{Input} * 1 + 0} + 0$

Output = P1: P2: P3: P4:

Any sample values:

	Eeprom value:	Shown value:
#1	<input type="text" value="0"/>	<input type="text" value="2557.000000"/>
#2	<input type="text" value="0"/>	<input type="text" value="100"/>
<input type="checkbox"/> #3	<input type="text"/>	<input type="text"/>

Corner values:

Enter 2 shown values: Or 3 values for reciprocal formula

 ...

... ...

 ...

Result:

Factor:

Offset:

 Reciprocal with Offset:

Test it:

Eeprom value:

Shown value:

OK Cancel

Regardless of which of the 5 variants you choose, the wizard immediately calculates the factor and offset and displays them in the bottom left corner and applies them to the map in the background for testing purposes. This happens only if this is mathematically possible (e. g. no division by 0). In addition, you have the option of having individual values converted on the basis of the determined data for testing purposes.

1) and 2) given formulas

If you have the source formula, you can simply select the appropriate formula here and enter the values. For example, you might have the following conversion formula:

$$\text{VAL} = 100 / (0.00001 * N)$$

First select the type of formula. The input size in the example is below the fraction line, so it is the right formula. Enter the values. The number 100 above the fraction line. The number 0.00001 below the fraction line as a factor. In our example, no further value is added. So just leave the additive variable under the fraction line at 0.

3) Flexible formula

In this input field you can enter a formula (such as "(input+3)*10") or select a predefined formula and insert its (up to 4) parameter values on the right.

For all formula formats, you can activate the checkbox "Swap Input/Output". Use this if your source formula is formulated backwards, i. e. converts displayed values to eprom values.

4) Example values

If you have sample values for the displayed value and the corresponding eprom value, you can enter them here. Normally, two pairs of values are sufficient to determine the data. Only when using reciprocal values 3 values are required. It is important that the values for #1 and #2 (and possibly #3) are not identical.

5) Corner values

This is a variation of the example values in which the system automatically determines the eprom values from the project. You then only need to enter the displayed values. Pick 2 or 3 corners from the map with different values and enter their display values. If there are not enough different basic values in the map, this method cannot be used.

Swap input/output

If your source formula defines how to calculate the eprom values from the displayed values, then input and output are reversed. This checkbox causes WinOLS to calculate the corresponding inverse formula.

Reciprocal?

If you do not have the formula, it is difficult to see if a reciprocal value (1/x) is used only on the basis of the values. Therefore, it is best to try it first without, using 2 values. These 2 will probably be converted correctly (you can see this in the background in hexdump). If other values are still wrong, activate the reciprocal (= the third input value) at 3) or 4).

Impossible?

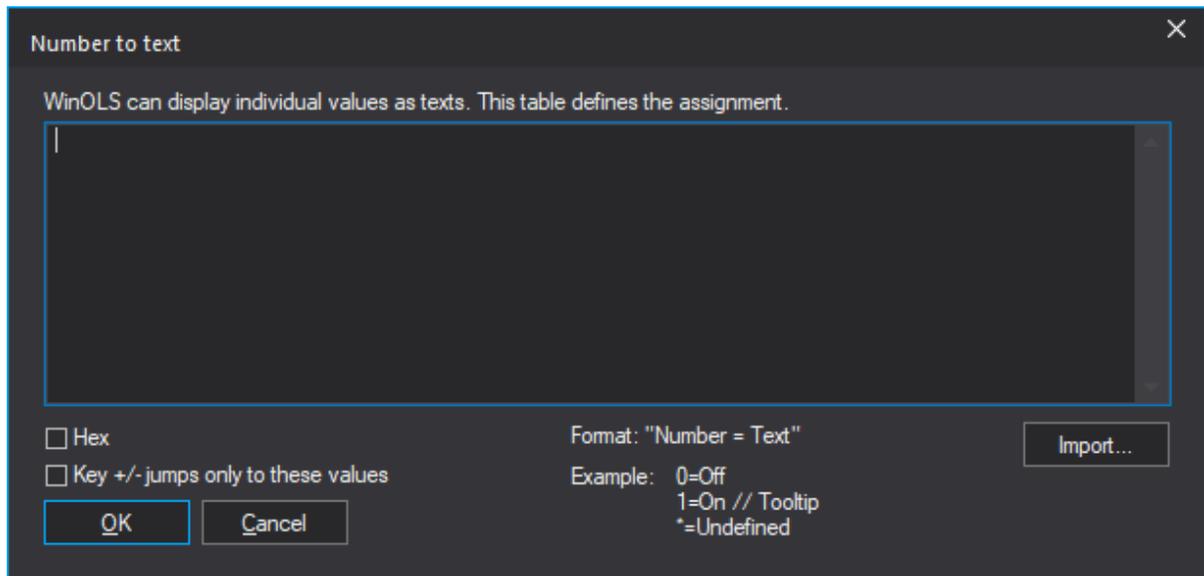
Not every formula can be translated in the scheme of WinOLS. For some this is unfortunately mathematically impossible. WinOLS then displays a corresponding info text. This even includes some of the given formulas of 2), depending on how P1..P4 are filled out.

Shortcuts

Symbol bar: -
Keyboard: -

5.25.2 Number to Text

You can use this dialog to display individual values as text. You can access this dialog via the "Text" button in the map properties.



Sometimes numbers have certain textual meanings. WinOLS can use this dialog to display the text instead of the number in text mode. You can specify ranges by separating 2 numbers with "..". Optionally (with *), all values that are not assigned can be translated to a standard text. All texts should be short, but you can use "/" to define comments that are displayed in the mouse tooltip.

Example:

```
0=Off  
1=On // Tooltip  
10..19=Range // With Colors #ff0000 #0000ff  
*=Undefined
```

You can edit cells via Inplace Edit and enter the text there.

To transfer the content of text files into this dialog, you can drag the file into this dialog or use the import button. Hex values should have the prefix "0x" in the files. You can also drag (multiple) files directly onto the "Text" button in the map properties dialog. Or hold Shift while clicking the "Text" button to go directly to the file dialog. If you want to add the file (instead of replacing the content), hold down Ctrl while you drag in the file / click on "Import".

The tooltip can contain colors in CSS format (RGB or RGBA) for the value in the map. First the text color, then the background color. Or with double # only the

background color. Examples:

100 = xy // red text #ff0000

101 = xy // red background ##ff0000

102 = xy // white text on red background (semi-transparent) #ffffff #ff000080

Shortcuts

Symbol bar: -

Keyboard: -

Chapter



VI

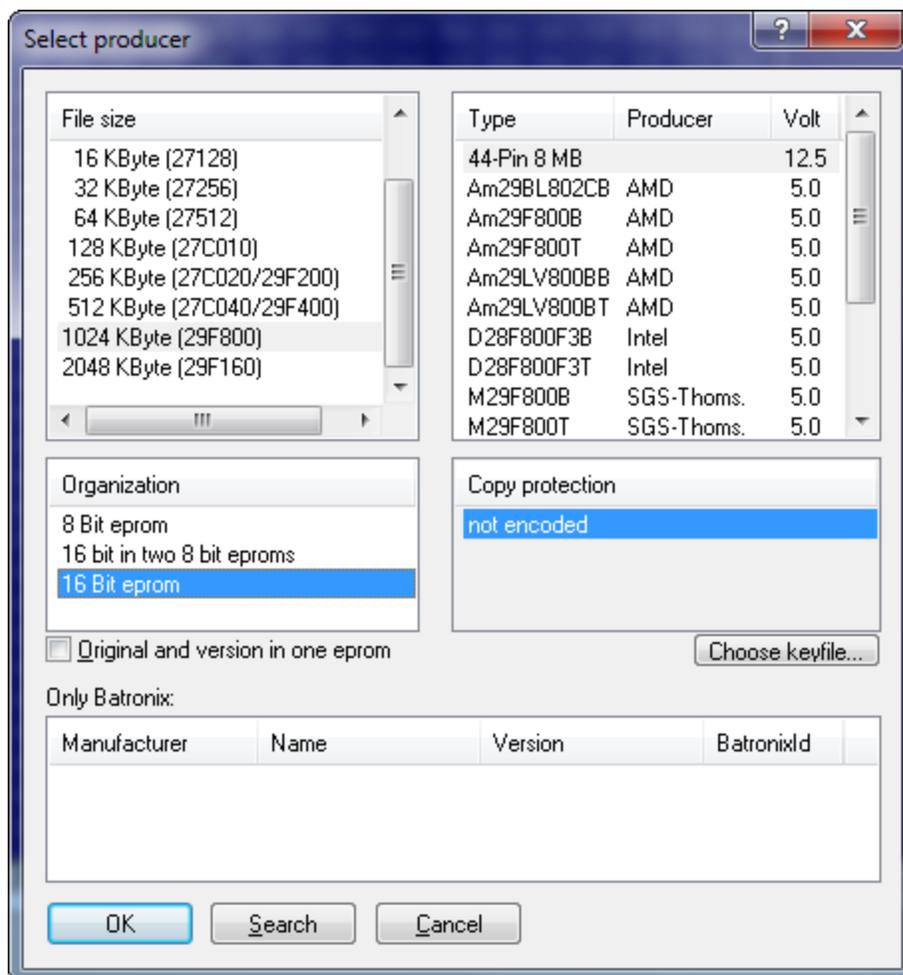
6 Commands of the menu Hardware

The menu Hardware contains command to configure and use eprommer and simulator:

Producer	Displays the dialog for editing the eprom producer parameters
Swap lines	Shows the dialog to swap lines
BDM / Compare	Compares the current project with the values in the BDM/ECU
BDM / Program	Programs the current project into the BDM/ECU
BDM / Testempty/Delete	Checks if the current BDM/ECU is empty and/or deletes it
BDM / Read	Reads the values from the BDM/ECU into the project
BDM / Info	Open the BDM page in the WinOLS configuration. For information about the BDM serial number in the project please use the dialog "Properties: project".
BSL / Compare	Compares the current project with the values in the BSL100/ECU
BSL / Program	Programs the current project into the BSL100/ECU
BSL / Read	Reads the values from the BSL100/ECU into the project
BSL / Info	Open the BSL page in the WinOLS configuration. For information about the BSL serial number in the project please use the dialog "Properties: project".
Eprom / Compare	Compares the current project with the values in the eprom
Eprom / Program	Programs the current project into the eprom
Eprom / Testempty/Delete	Checks if the current eprom is empty and/or deletes it
Eprom / Read	Reads the values from the eprom into the

	project
Eprom / Parameter	Allows to edit address ranges for the eprom-access
Eprom / Options	Allows to edit special options for eprom types
Simulator / Load	Loads the current configuration into the simulator
Simulator / Properties	Shows the simulator properties
Simulator / Check map accesses	Checks for all maps whether they are used and shows the results in the map window.
Simulator / Delete map access info	Deletes the markers in the map window

6.1 The dialog Producer (Menu Hardware)



Since a project normally has a fixed eeprom size, you can normally use the Producer dialog only to switch between different types, like CMOS or NMOS and the different programming algorithms.

The organisation selection offers one option to merge the contents of two 8-bit eeproms, which are read consecutively into one 16-bit eeprom.

With the choice of the eeprom type, the configuration of the simulator module is automatically made, too. This is especially important for 28F512, which has a different pin configuration (32 Pins) as 27C512 (28 Pins).

The option 'Original an version in one eeprom' works together with an extern switching adapter (e.g. KEY520). This option is not for use with the simulator with automatic switching. To use the simulator switching, choose the option 'Switch original / version' from the simulator properties.

If you're using Batronix hardware, you also need to select the right chip in the list box at the bottom, because Batronix sometimes uses different ids. You can use the Search button for this, too.

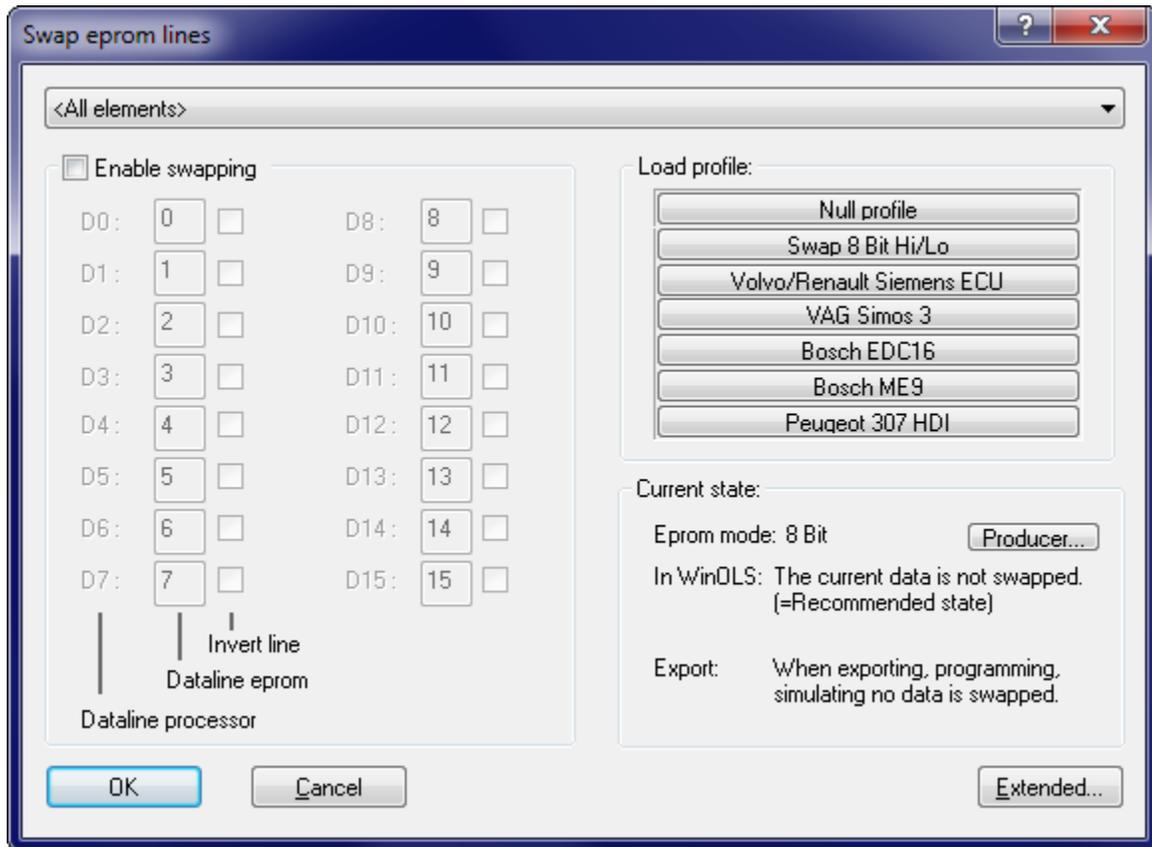
Shortcuts

Symbol bar:



Keyboard: Ctrl+Shift+H

6.2 The dialog Swap Lines (Menu Hardware)



Use this dialog to swap or invert lines when reading or writing eproms or when im- or exporting data. Normally you'll work with "readable" data, so that texts can be read and checksums can be calculated. The swapping is done on-the-fly when the data is exported. If the project currently doesn't contain "readable" data (this is displayed in the right part of the dialog) you may use the button "Extended" to actively apply a swapping.

You may use several predefined typical profiles. If your project contains multiple elements, you may swap each element individually.

Note:

Which values you may edit (8 or 16 Bit) depend on your current eprom. You may change the current eprom directly from this dialog.

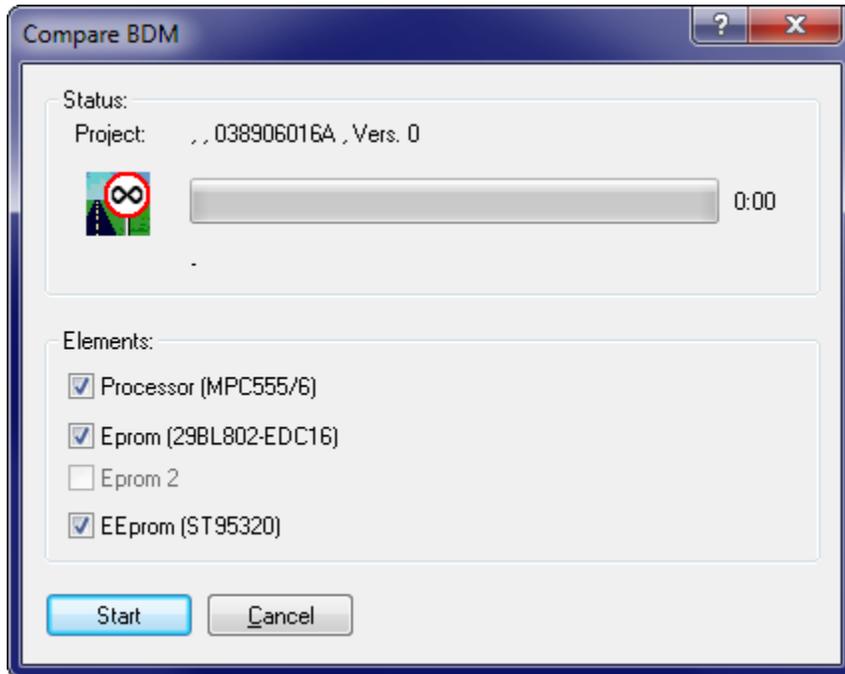
Shortcuts

- Symbol bar: -
- Keyboard: -

6.3 BDM

Please choose a subtopic.

6.3.1 The dialog BDM / Compare (Menu Hardware)



Shows differences between the BDM/ECU and the project. You can choose which elements to compare.

Elements are printed bold, if they contain differences between original and version (in the PC memory – not differences between ECU and PC).

Note:

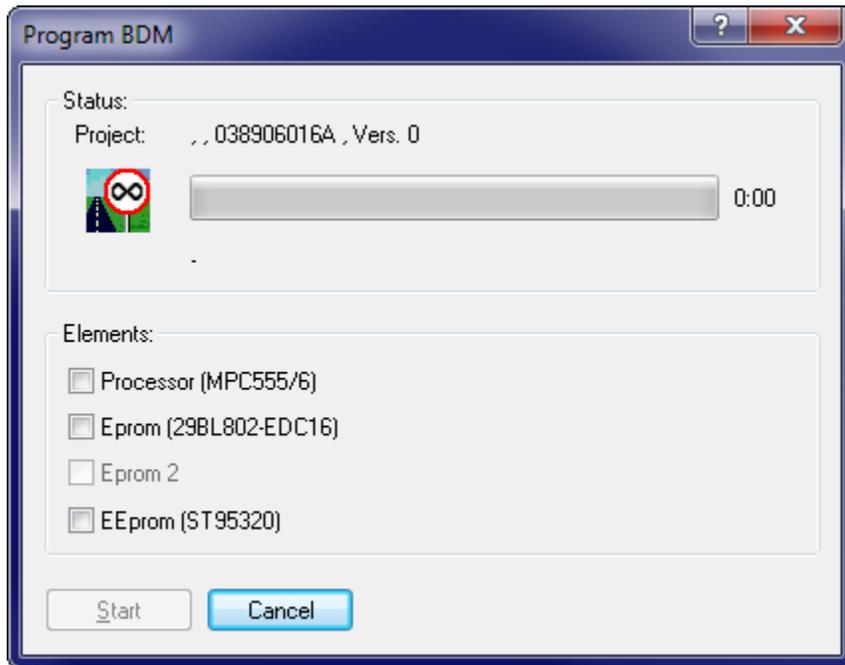
BDM operations are only supported if the project type was set to "BdmToGo" in the Project properties or if the project is empty.

Shortcuts

Symbol bar: -

Keyboard: -

6.3.2 The dialog BDM / Program (Menu Hardware)



Programs the contents of the current project into the BDM/ECU interface. Non-empty areas are automatically detected and deleted. You can choose which elements to program.

If you want to protect your project from being read with WinOLS by competitors, please activate the "Bdm/Bsl read protection" in the Project properties before programming.

Elements are printed bold, if they contain differences between original and version (in the PC memory – not differences between ECU and PC).

Note:

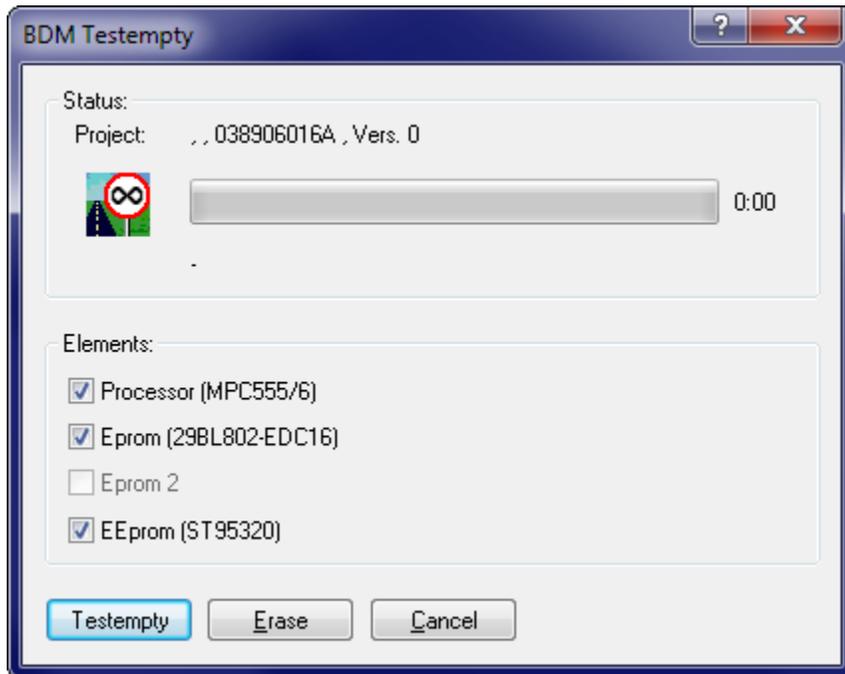
BDM operations are only supported if the project type was set to "BdmToGo" in the Project properties or if the project is empty.

Shortcuts

Symbol bar: -

Keyboard: -

6.3.3 The dialog BDM / Testempty (Menu Hardware)



Allows to test you if the BDM/ECU is empty and to delete it.

Elements are printed bold, if they contain differences between original and version (in the PC memory – not differences between ECU and PC).

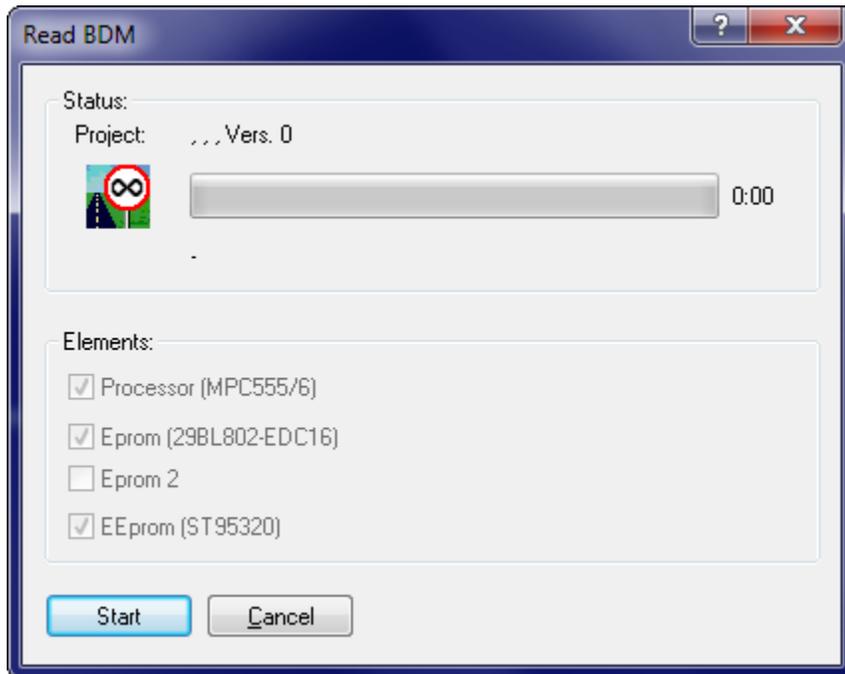
Note:

BDM operations are only supported if the project type was set to "BdmToGo" in the Project properties or if the project is empty.

Shortcuts

Symbol bar: -
Keyboard: -

6.3.4 The dialog BDM / Read (Menu Hardware)



Allows you to read the current BDM/ECU contents as a new project or a new version. By default all elements from the ECU are read, but for versions you may disable some if you're sure that you don't need them. When reading the original, you must read all elements.

Elements are printed bold, if they contain differences between original and version (in the PC memory – not differences between ECU and PC).

Note:

BDM operations are only supported if the project type was set to "BdmToGo" in the Project properties or if the project is empty.

Shortcuts

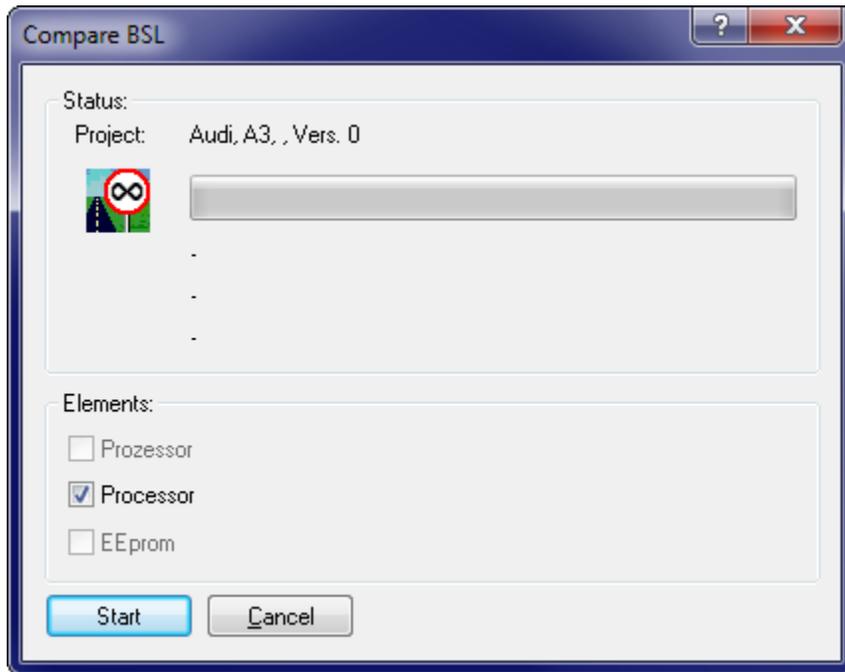
Symbol bar: -

Keyboard: -

6.4 BSL

Please choose a subtopic.

6.4.1 The dialog BSL / Compare (Menu Hardware)



Shows differences between the BSL100/ECU and the project. You can choose which elements to compare.

Elements are printed bold, if they contain differences between original and version (in the PC memory – not differences between ECU and PC).

Help:

The EVC website provides information and images to find the right connections. You can use the link "Online" to reach it. To have this information available without internet connection you can use the "Update" link to store it locally / update it and use the "Offline" link to access it.

Note:

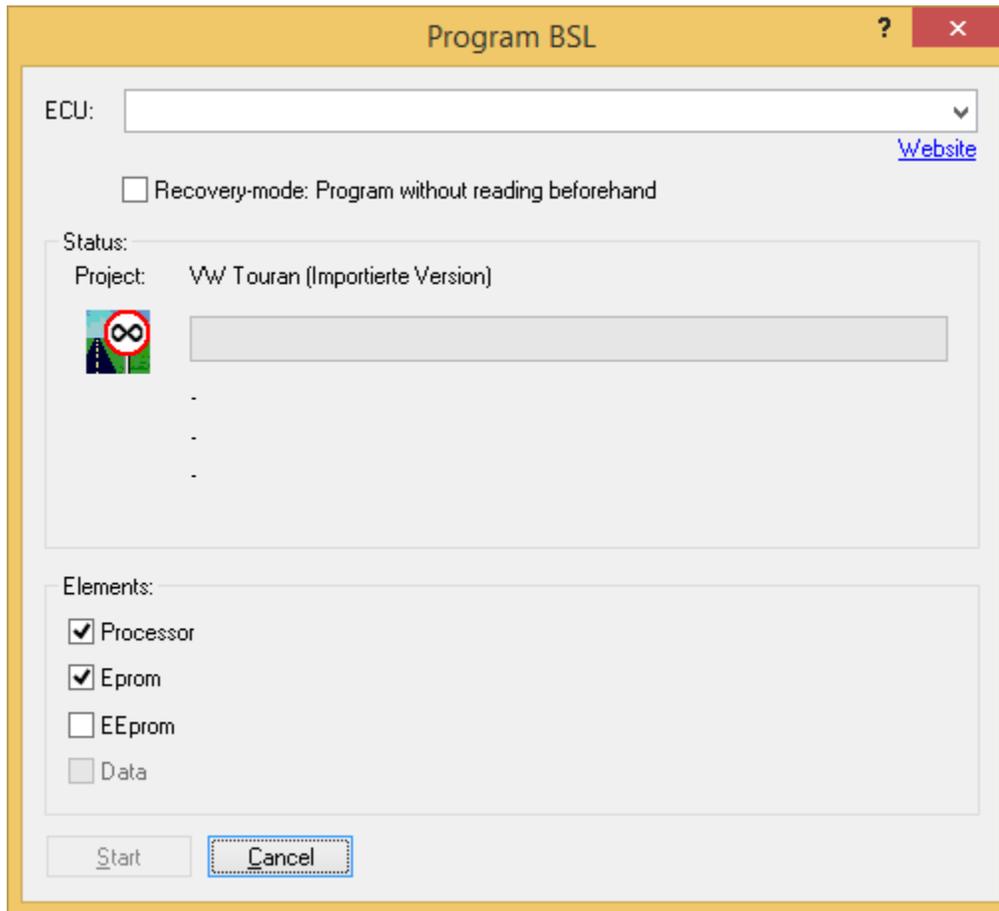
BSL operations are only supported if the project type was set to "BslToGo" in the Project properties or if the project is empty.

Shortcuts

Symbol bar: -

Keyboard: -

6.4.2 The dialog BSL / Program (Menu Hardware)



Programs the contents of the current project into the BSL100/ECU interface. Non-empty areas are automatically detected and deleted. You can choose which elements to program.

If you want to protect your project from being read with WinOLS by competitors, please activate the "Bdm/Bsl read protection" in the Project properties before programming.

Elements are printed bold, if they contain differences between original and version (in the PC memory – not differences between ECU and PC).

Note:

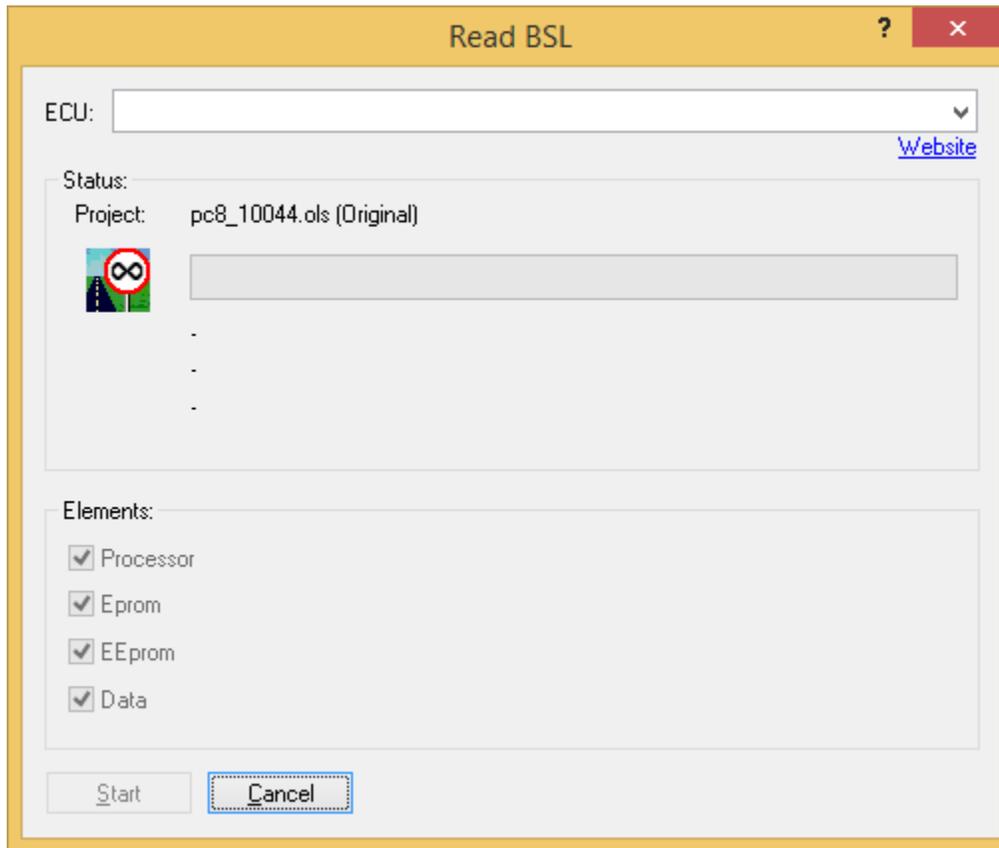
BSL operations are only supported if the project type was set to "BslToGo" in the Project properties or if the project is empty.

Shortcuts

Symbol bar: -

Keyboard: -

6.4.3 The dialog BSL / Read (Menu Hardware)



Allows you to read the current BSL100/ECU contents as a new project or a new version. By default all elements from the ECU are read, but for versions you may disable some if you're sure that you don't need them. When reading the original, you must read all elements.

Elements are printed bold, if they contain differences between original and version (in the PC memory – not differences between ECU and PC).

Note:

BSL operations are only supported if the project type was set to "BslToGo" in the Project properties or if the project is empty.

Shortcuts

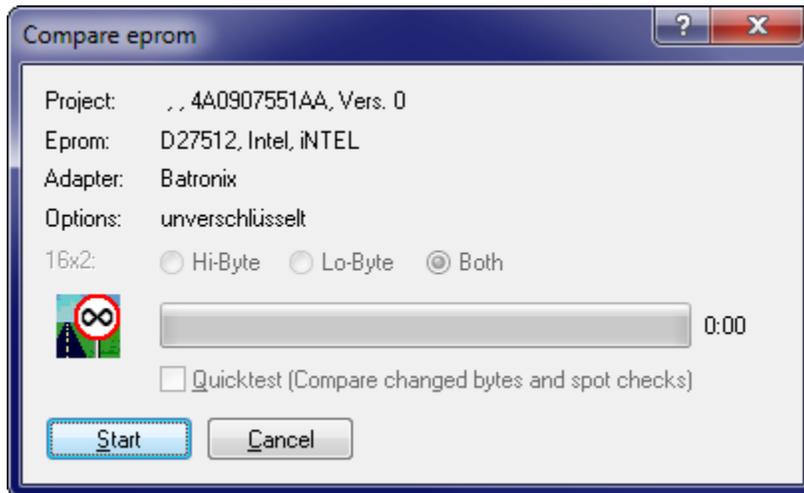
Symbol bar: -

Keyboard: -

6.5 Eprom

Please choose a subtopic.

6.5.1 The dialog Eprom / Compare (Menu Hardware)



Shows possible differences between the eprom and the current memory contents. Use the encryption option to compare eproms for EVC-KEY modules.

You may activate a quicktest. If you do so, WinOLS will not compare the entire eprom, but only bytes where the current version differs from the original and a few additional bytes as spot checks.

Note:

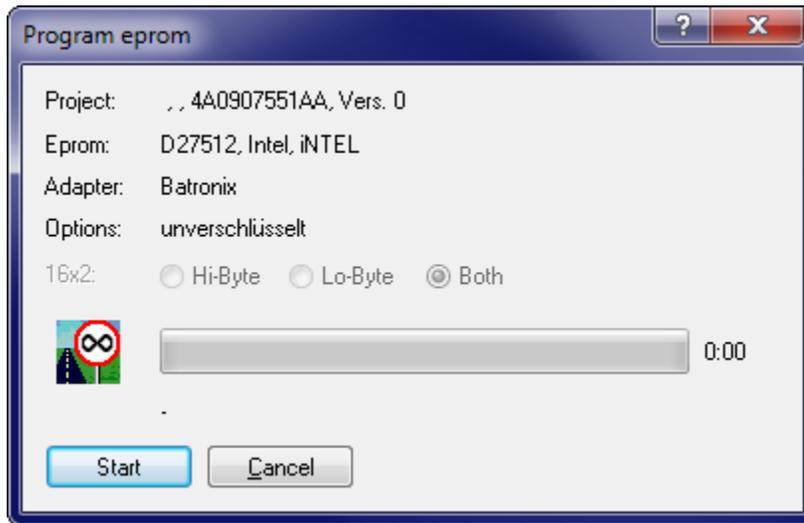
Eprom operations are only supported if the project type was set to "Eprom" in the Project properties or if the project is empty.

Shortcuts

Symbol bar: 

Keyboard: -

6.5.2 The dialog Eprom / Program (Menu Hardware)



Next to shown information about the project and eprom the configured adapter is show. If a keyfile for EVC-KEY eprom copy protection modules is used, the option encryption will be displayed.

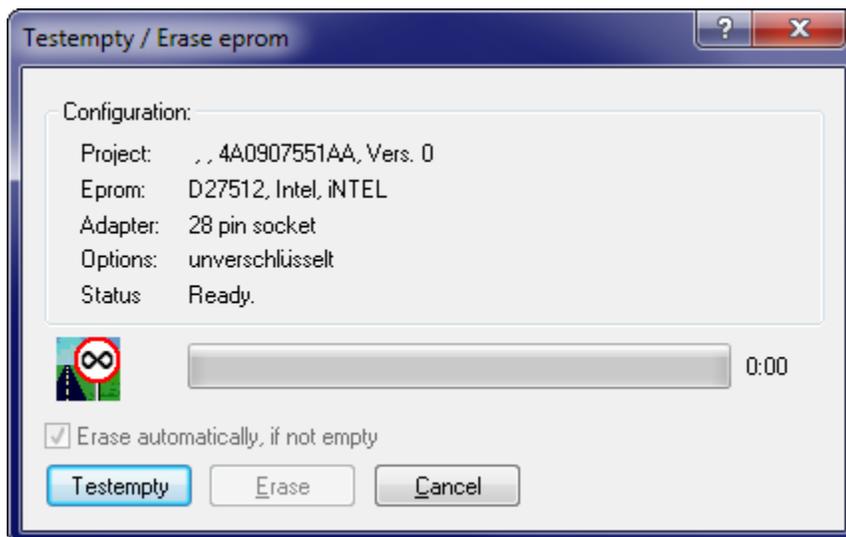
Note:

Eprom operations are only supported if the project type was set to "Eprom" in the Project properties or if the project is empty.

Shortcuts

Symbol bar: 
 Keyboard: -

6.5.3 The dialog Eprom / Testempty/Delete (Menu Hardware)



Compares the eprom contents with hex FF for eproms with 8-bit bus and with hex FFFF for eproms with 16-bit bus. If any differences occur, the test can be stopped and the eprom can be deleted.

Note:

Eprom operations are only supported if the project type was set to "Eprom" in the Project properties or if the project is empty.

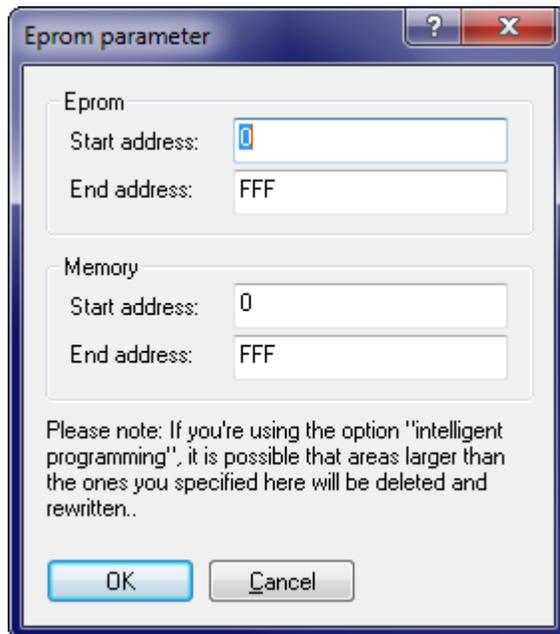
Note:

This operation is only support for the Große-Wilde eprommer.

Shortcuts

Symbol bar: 
Keyboard: -

6.5.4 The dialog Eprom / Parameters (Menu Hardware)



This option is not needed normally. It allows you to program parts of an eprom.

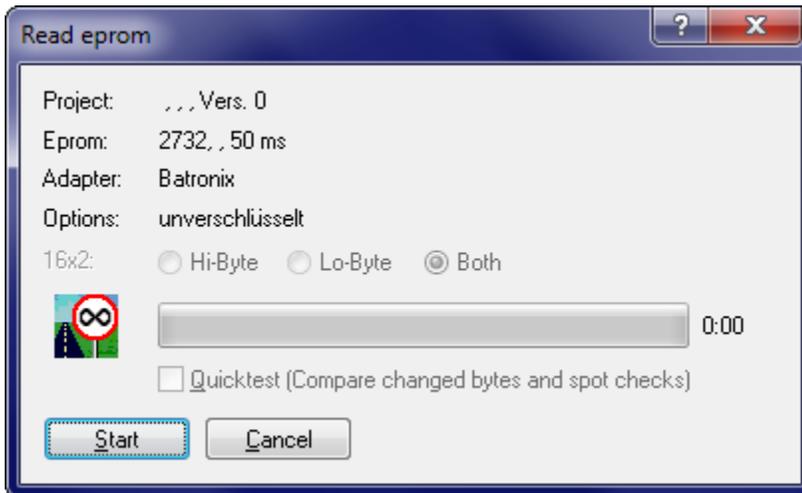
Note:

Eprom operations are only supported if the project type was set to "Eprom" in the Project properties or if the project is empty.

Shortcuts

Symbol bar: 
Keyboard: -

6.5.5 The dialog Eprom / Read (Menu Hardware)



An eprom can be read as original or version. An open project is necessary, but the project doesn't have to contain data.

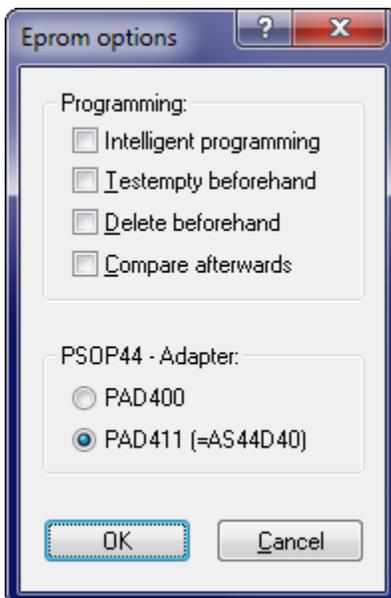
Note:

Eprom operations are only supported if the project type was set to "Eprom" in the Project properties or if the project is empty.

Shortcuts

Symbol bar: 
Keyboard: -

6.5.6 The dialog Eprom / Options (Menu Hardware)



Here you can switch different adapters, which might be used alternatively and cannot be recognised automatically.

Furthermore you may select whether the eprom should be tested or deleted before writing and whether it should be compared afterwards.

The option "intelligent programming" allows a very fast programming. It is only available for eproms which allows the deleting of areas. If it is activated, the eprom will be compared the memory and only the areas which were changed will be deleted and reprogrammed.

Note:

Eprom operations are only supported if the project type was set to "Eprom" in the Project properties or if the project is empty.

Shortcuts

Symbol bar: -

Keyboard: -

6.6 Genius

Enter topic text here.

6.6.1 The dialog Genius / Import (Menu Hardware)

Allows you to import the data from the NewGenius hardware into WinOLS.

Requirements for NewGenius actions:

1. Plugin OLS1003 needs to be installed and registered.
2. Dimsport's current NewGenius driver need to be installed.
3. Dimsport's NewGenius hardware needs to be connected.

Shortcuts

Symbol bar: -

Keyboard: -

6.6.2 The dialog Genius / Export (Menu Hardware)

Allows you to export the data from WinOLS into the NewGenius hardware.

Requirements for NewGenius actions:

1. Plugin OLS1003 needs to be installed and registered.
2. Dimsport's current NewGenius driver need to be installed.
3. Dimsport's NewGenius hardware needs to be connected.

Shortcuts

Symbol bar: -

Keyboard: -

6.6.3 The dialog Genius / Explorer (Menu Hardware)

Allows you to view the current contents of the NewGenius hardware.

Requirements for NewGenius actions:

1. Plugin OLS1003 needs to be installed and registered.
2. Dimsport's current NewGenius driver need to be installed.
3. Dimsport's NewGenius hardware needs to be connected.

Shortcuts

Symbol bar: -

Keyboard: -

6.7 Simulator

Please choose a subtopic.

6.7.1 The command Load Simulator (Menu Hardware)



This command will write all eprom data into the simulator.

Import:

You must turn the ignition off before using this command!

Note:

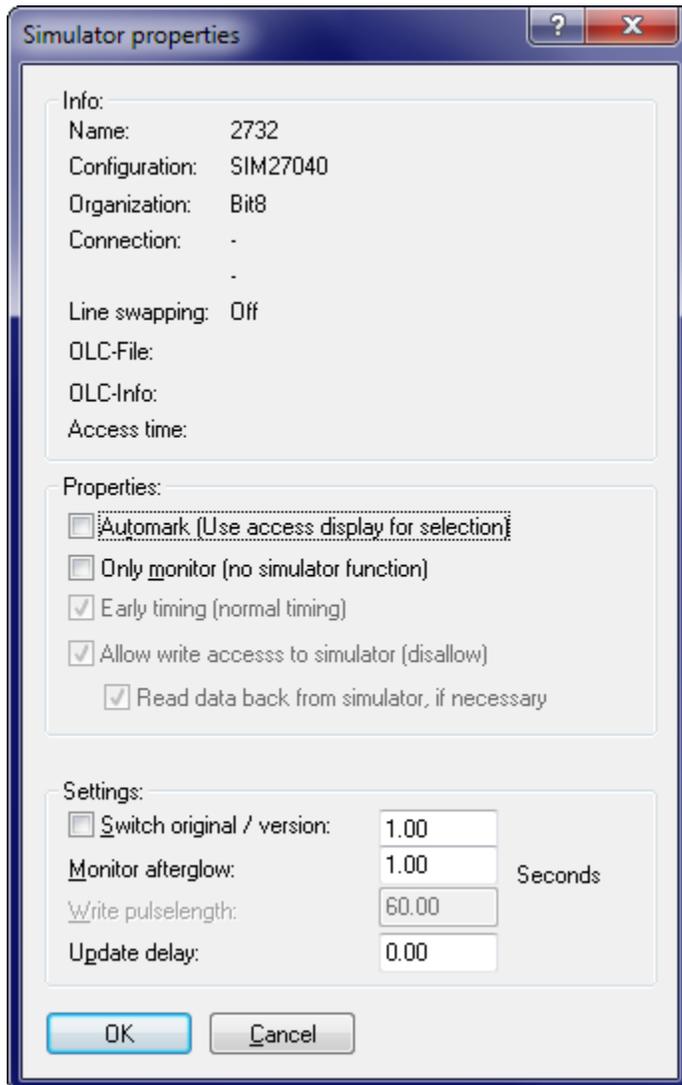
Eprom operations are only supported if the project type was set to "Eprom" in the Project properties.

Shortcuts

Symbol bar: -

Keyboard: -

6.7.2 The dialog Simulator / Properties (Menu Hardware)



The upper block contains information about the currently selected producer hardware.

If the checkbox 'Automark' is activated and the engine is running, then any accessed cells are automatically used as a selection for any operation (for example for + and -).

The checkbox 'Only monitor' disables the simulator and lets WinOLS only monitor the engine.

To make the development of vehicles which perform checksum tests at startup time easier, you may select the option 'Switch original / version' which automatically switches from the original to the changed version after a defined time. This option must not be confused with the option 'Original and version in one eprom' in the

producer dialog, which needs an eprom of twice the normal size and a switching module like the KEY520.

While monitoring every memory access is marked on the screen (by default in red). Use the afterglow field to configure the number of seconds the marking shall last.

Use 'Write pulselength' to configure the simulator timing. If the value is too small, the data might not reach the simulator memory. If the value is too large, the simulator might crash when performing online-changes of the eprom contents.

The 'Update delay' is the time WinOLS will wait after any changes until the changes are written to the simulator memory.

Note:

Since program version 1.030 it is no longer necessary to enter the connection code. It will be automatically be recognised now.

Shortcuts

Symbol bar: -

Keyboard: -

6.7.3 The command Simulator / Check map accesses (Menu Hardware)

A project may contain many maps but not all are necessarily used right now. With this command you can instruct WinOLS to check all maps to see whether it is used (=accessed by the hardware) or not.

All maps that are used will be marked red (the usual simulator colour) in the map selection window. This information is not automatically updated. If you want to get the latest information, you must use this command again.

This command is only available if the current project is online with the simulator.

Note: This command may take some time (depending on the number of maps).

Shortcuts

Symbol bar: -

Keyboard: -

6.7.4 The command Simulator / Delete map access info (Menu Hardware)

If you used the command 'Simulator / Check map accesses' you will have several maps marked in red in the map selection window. This command will delete all marking information for that window. Neither the maps nor the hexdump data will be changed in any way.

This command is only available if the current project is online with the simulator.

Shortcuts

Symbol bar: -
Keyboard: -

Chapter



VII

7 Commands of the menu View

The menu View contains the following commands:

Symbol bars	Toggles the different symbol bars
Status bar	Toggle the status bar
Move origin left	Shifts the start address of the current 1 to the left
Move origin right	Shifts the start address of the current 1 to the right
The command Cursor position as origin	Shifts the current cursor position to make it the leftmost cell. (Double: Mark cells)
More columns	Increases the number of columns by 1
Less columns	Decreases the number of columns by 1
Percent & Co.	Changes the way the differences are displayed, if factor and offset are used and if the version values are used
Right side	Allows you to change the view mode of the right side and whether the right side should be fixed or not.
Zoom	Enlarges the display
Scale 100%	Resets the display to its standard value (2d only)
Unzoom	Makes the display smaller
Connect dots / Fill surfaces	Connects the separate dots with lines (2d only) Fill the surfaces with colour (3d only)
Show Rowmarkers	Visualises the (imaginary) rows by lines (2d only)
Differences	Shows the differences of the current map as a list
- first	Moves to the first difference in the current map
- previous	Moves to the previous difference in the current

	map
- next	Moves to the next difference in the current map
- last	Moves to the last difference in the current map
Choose reference version	Allows the user to change the version which will be used as original
Connect windows	Activates the connection between the current window and another window. (Shift to skip the dialog.)
Optimize value range	Calculate the optional value range for the bar display
Detect Map	Calculate the optional value range for the bar display
Support map selection	Supports the selection of maps by improving selections you made.

7.1 The command **Symbol bar (Menu View)**

Use this command to toggle the symbol bars.

7.2 The command **Status bar (Menu View)**

Use this command to toggle the status bar. The bar (at the bottom of the WinOLS windows) contains information about the selected menu item, about the simulator hardware state and the cursor position.

You can find more information in the status bar page.

7.3 The command **Move origin left (Menu view)**

Use this command to move the beginning of the shown area of window. This might be necessary to mark maps correctly.

Note:

This command is only available for hexdumps.

Shortcuts

Symbol bar: -

Keyboard: Ctrl+Left

7.4 The command Move origin right (Menu view)

Use this command to move the beginning of the shown area of window. This might be necessary to mark maps correctly.

Note:

This command is only available for hexdumps.

Shortcuts

Symbol bar: -

Keyboard: Ctrl+Right

7.5 The command Cursor position as origin

Use this command to move the current cursor position to the beginning of the shown area of window. This might be necessary to mark maps correctly.

Tip:

Double-tap the hotkey to move the origin and then skip n cells and then select n cells (where n is the value in the current cursor position). This is helpful for creating 1d maps in the format "NumberOfCells AxisCells MapCells".

Shortcuts

Symbol bar: -

Keyboard: Ctrl+J

7.6 The command More columns (Menu View)

Use this command to increase the number of visible columns by 1.

Note:

This command is only available for hexdumps.

Tip:

You can change the number of columns also with the separator line between hexdump and bars. Either by "Click and drag" or with a right-click.

Shortcuts

Symbol bar: -

Keyboard: M

7.7 The command Less columns (Menu View)

Use this command to increase the number of visible columns by 1.

Note:

This command is only available for hexdumps.

Tip:

You can change the number of columns also with the separator line between hexdump and bars. Either by "Click and drag" or with a right-click.

Shortcuts

Symbol bar: -

Keyboard: W

7.8 The command Zoom (Menu View)

Use this command to enlarge the display.

If you're in text mode, a larger font will be used to display data. In 2d mode the graphical display will be enlarged horizontally. Keep the Shift Key pressed to enlarge the display vertically.

Shortcuts

Symbol bar: 

Keyboard: -

Mouse: Ctrl + Mousewheel

7.9 The command Scale 100% (Menu View)

Use this command to reset the graphical display horizontally to 100%. This command is only available in 2d mode.

Keep the Shift Key pressed to reset the vertical display.

Shortcuts

Symbol bar: -

Keyboard: -

7.10 The command Unzoom (Menu View)

Use this command to make the display smaller.

If you're in text mode, a smaller font will be used to display the data. In 2d mode the graphical display will be displayed horizontally smaller. Keep the Shift Key pressed to make the display vertically smaller.

Shortcuts

Symbol bar: 
Keyboard: -
Mouse: Ctrl + Mousewheel

7.11 The command Connect Dots (Menu View)

2d mode:

This command toggles the display of connecting lines for the separate dots.

3d mode:

This command toggles the filling of surfaces with colours.

The command is only available in 2d and 3d mode.

Shortcuts

Symbol bar:  / 
Keyboard: -

7.12 The command Show Rowmarkers (Menu View)

Even though in 2d mode the data is displayed as a 'flat' sequence of values, WinOLS manages the data in rows and columns internally. (You may switch to text mode any time to see the rows and columns.) The columns are important for certain types of selections and thus also for the modification of values and the creation of maps.

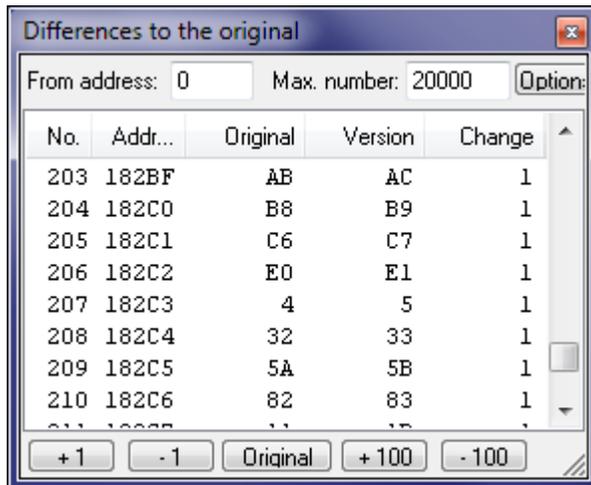
Use this command to toggle the display of line breaks with helping lines.

This command is only available in 2d mode.

Shortcuts

Symbol bar: 
Keyboard: -

7.13 The command Differences (Menu View)



This dialog shows all differences (up to 2000) from the original to the current version of this window. The different buttons in this dialog allow you to edit the values in the list.

WinOLS tries to keep this window in sync with the hexdump or map window. If you change the cursor position in the hexdump or map window, the differences window will show the respective entry. If you change the position or select entries in the differences window, WinOLS will change cursor position and / or selection in the hexdump or map window.

The size of the dialog may be configured.

This dialog is not modal, meaning that windows lying behind the window may still be used. This dialog is a "floating" dialog. All floating dialogs can be toggled with the tab key.

Shortcuts

Symbol bar: 
 Keyboard: Ctrl+U

7.14 The command Differences / first (Menu View)

Use this command to move the cursor to the first difference between the original and the current version within the current window.

Shortcuts

Symbol bar: 
 Keyboard: E

7.15 The command Differences / previous (Menu View)

Use this command to move the cursor to the previous difference between the original and the current version within the current window.

So that larger files can be searched efficiently, there are 2 special rules:

- If several differences are directly behind each other, then the function only stops at the first difference.
- If the cursor is in the hexdump and several differences are within the same map, the function only stops at the first difference of the map.

Shortcuts

Symbol bar: 
Keyboard: V

7.16 The command Differences / next (Menu View)

Use this command to move the cursor to the next difference between the original and the current version within the current window.

So that larger files can be searched efficiently, there are 2 special rules:

- If several differences are directly behind each other, then the function only stops at the first difference.
- If the cursor is in the hexdump and several differences are within the same map, the function only stops at the first difference of the map.

Shortcuts

Symbol bar: 
Keyboard: N

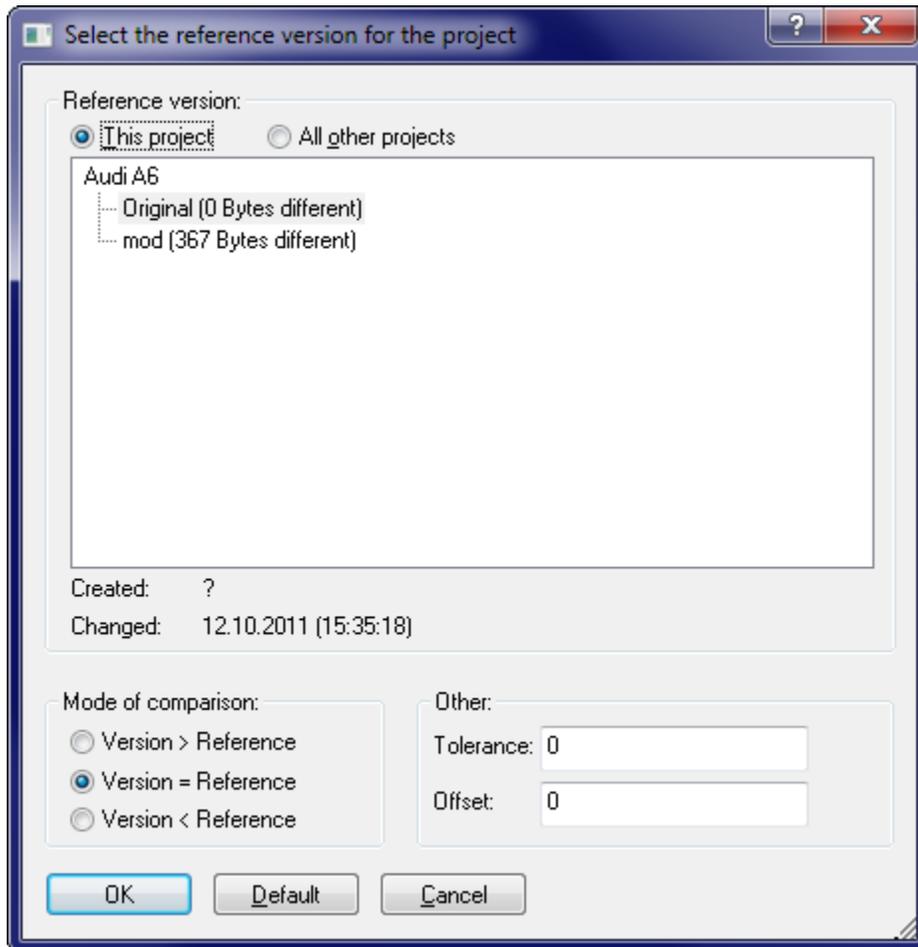
7.17 The command Differences / last (Menu View)

Use this command to move the cursor to the last difference between the original and the current version within the current window.

Shortcuts

Symbol bar: 
Keyboard: L

7.18 The dialog Select reference Version (Menu View)



Several functions in WinOLS use a 'Original version' as a reference. By default this is the version read from the eeprom. But you may choose any other version of the current of another project.

Apart from the selection of the reference project you can also selection the kind of comparison for the visual display of the differences. For example a minimum difference from the original may be required to mark the cell as changed.

Furthermore an offset may be entered. This is useful when the data in one project is moved (compared to the other one).

This is just one of several options to import data from other projects.

Shortcuts

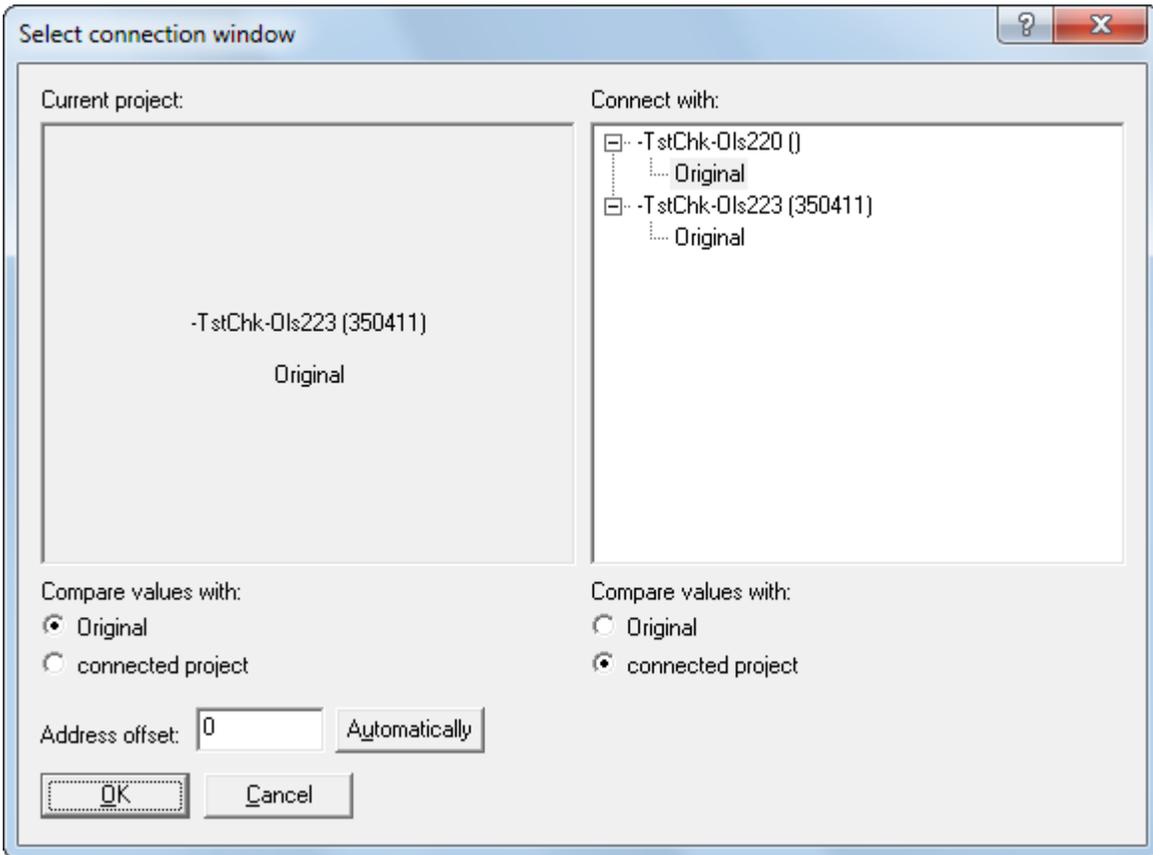
Symbol bar: 
 Keyboard: -

7.19 The dialog Select the connection window (hexdump) (Menu View)



Important:

This page explaining connecting Hexdumps. Here's the page about connecting maps.



Right Dialog:

It is possible to connect window. If two windows are connected, any changes to the visible area will happen to both windows in sync. If one window is scrolled, the other one is scrolled in the same way.

If the connection is activated, this dialog is displayed to select the connection window. If you want to skip this dialog and use the window you also used last time, keep the Shift-Key pressed while selecting this option (works with pulldown menu and icon bar). Alternatively, you can click on another project in the WinOLS workspace while holding down the Shift key.

Address offset: This field contains the offset that will be used when keeping the dialogs in sync. With the 4 buttons next to it you can define how the field should be initialized now, and in the future when the dialog is skipped. With the button 'Automatic' WinOLS can search for an area in the other project which is similar to the area at the current cursor position in the current project. If such an area is

found, the offset is used. The 'Cursor' button takes the current text cursor positions as the basis for the offset. The 'Scrollbar' button takes the current scroll position in the form of the first currently visible address.

Left Dialog:

When you're working with connected windows, a small window will appear between the projects.

Section Connect:

You have several possibilities to change the offsets (the address difference between the windows) between the windows:

- You may manually enter a number.
- Use one of the search options.
- With the buttons +/- you may change the address offset by one unit (depending on the current bit width). Hold Shift or Ctrl+Shift to make this faster.
- You may click on the checkbox 'Offset' to deactivate the connection. In this mode you can move one window and re-establish the connection when you found the right offset or use the button "At cursor" to calculate the offset from the 2 cursor positions.
- Hold Shift while clicking into the other (inactive) hexdump. The old/new cursor positions determine the offset.

Section Search:

If the checkbox is activated, WinOLS automatically uses 7 different search modes, each in 2 directions (which can cost noticeable performance in large projects). The program searches the project that the arrow points to and search for the data of the project that the arrow points away from. A **red background** means that search results are available. If the **background is orange**, then the current offset is one of the search results. And **blue background** means that this is only the case for the original (and not the version).

The 7 search modes are (from top to bottom):

1. Search for the data around the current cursor position
 2. Search for the data around the current cursor position, but only inside the maps
 3. Search for the selected data (only the first 500 selected cells are compared for performance reasons)
 4. Search for the selected data, but only inside the maps
 5. Search for the map that the cursor currently is on
 6. Search for the map with identical ID as the one that the cursor currently is on
 7. Search for the map with identical Name as the one that the cursor currently is on
- Note: The search feature can slow down WinOLS noticeably. You can use the checkbox to turn it off.

WinOLS5:

The icons in the middle between the arrows are clickable. If activated and there is (in the respective line) only exactly 1 result, then it will be applied automatically.

Section Tolerance:

Here you can enter the desired search tolerance.

Section Result:

This section shows the result of the most recent search. The text shows the number of the current result, following by the total number of result (max. 200). You can use the "Slider" to screen through the results, which will adjust the offset. After the search function is used the slider is automatically set to the search result that is closest to the original offset. If you want to go to the results individually, click on the slider once and then use the cursor keys.

Section Copy:

[x] Checkbox: Activate the checkbox before "Copy" to automatically trigger copy whenever you've created a selection using the mouse. WinOLS will copy the maps if you selected any, and otherwise the cells. WinOLS will automatically use the last settings of the respective dialog.

Use these buttons to manually copy data to the respective other side:

1. The currently selected cells.
2. The map under the cursor (or the currently selected maps, if multiple maps are selected).
3. The text infos from the current map on the source side to the current map on the target side. (Text infos are: Name, Id, Unit, Factor, Offset, Precision) If you press Ctrl, the following fields will be transferred additionally: Type, Sign
4. The selected comments / the comment at the cursor position.

Section Differences:

This section is identical with the functions from the view menu. It contains buttons to move the cursor in either window to the first/previous/next/last difference. The buttons on the outer sides use the data of their side. The buttons in the middle find differences in both projects at the same time.

Section Reference Version:

Use these button to select what data should be compared to the version on either side (its own original or the original or a version from the connected project). Use the pause button to temporarily compare each side to its own original.

Tip:

You can also connect windows if you:

- drag one project in the project/map list and drop it onto another project
- or hold shift while you click on a different hexdump window

This is just one of several options to import data from other projects.

Shortcuts

Symbol bar:



Keyboard:

Ctrl+2 to display the dialog

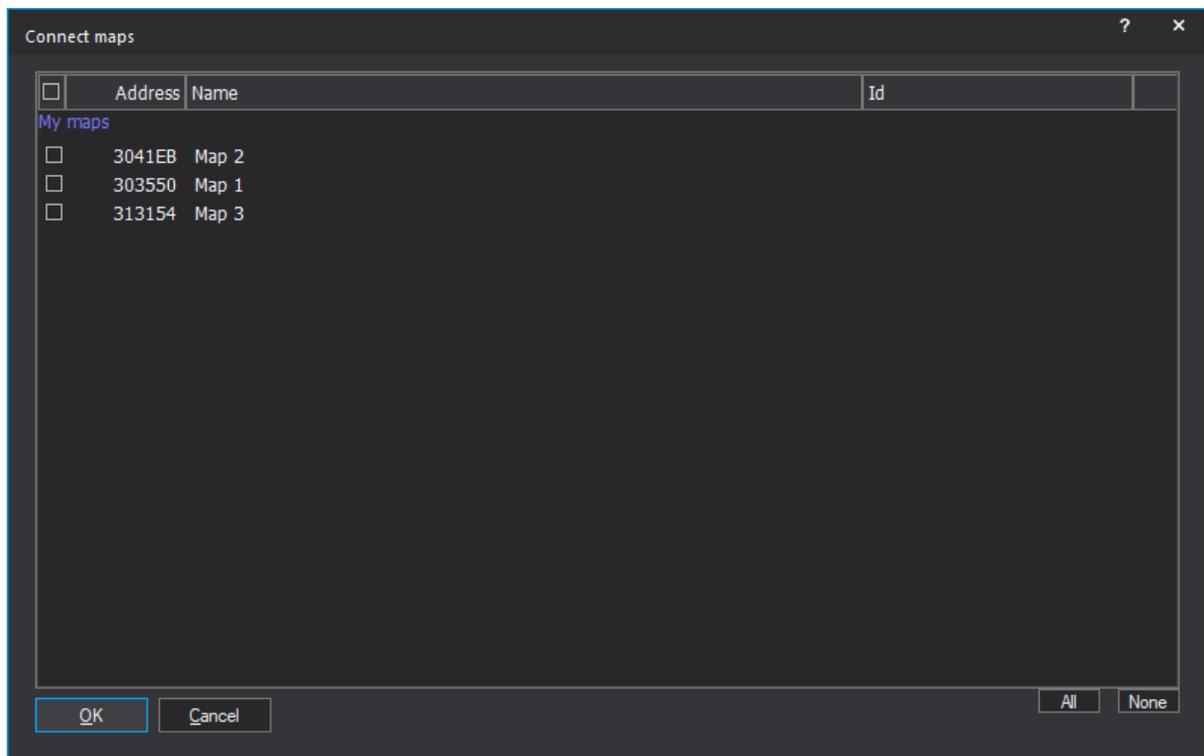
Ctrl+Shift+2 to immediately connect (requires that exactly 2 projects are currently open)

Shift+2 to toggle the active-connection-checkbox (left dialog, top-left-corner)

7.20 The dialog Select the connection window (map) (Menu View)

Important:

This page explaining connecting Hexdumps. Here's the page about **connecting hexdumps**.



You can connect 2+ maps. They will be displayed next to another and the scrolling will be synchronized. Furthermore the cursor keys left/right can be used to switch to the neighbor-window.

The maps must have the same number rows. Columns and bit width can be different.

Tips:

- You can double-click the buttons all/none.
- You can also connect windows if you hold shift while you click on a different map window

- If you move maps to their own folder, you can open them connected by double-clicking the folder name in the map list.

Shortcuts

Symbol bar: 

Keyboard: Ctrl+2 to display the dialog
Ctrl+Shift+2 to immediately connect (requires that 2+ maps of the same height are currently open)

7.21 The command Optimize value range (Menu View)

Values from maps or hexdumps may be displayed as bar diagrams. A special scale can be used to improve visual display. The optimal settings for this can be automatically calculated with this function.

This command is only available if a bar displayed is activated for the current dialog.

Trick:

Use this command 2x quickly in a row to reverse the optimization and show the entire possible value range.

Shortcuts

Symbol bar: 

Keyboard: Ctrl+B

7.22 The command Detect map (Menu View)

Use this command to detect a map at the current cursor position in a hexdump window. Only certain map types are recognized (see below). This function only works in hexdumps.

If no map is found or a recognised map is already marked, the search will continue along the file. Hold the shift-key pressed to search backwards.

This function bases on the function "background map search". This means, it uses the maps that are listed as "potential maps" in the map selection list. Therefore it has the same limitations as the "background map search". For example, if you deactivate the "Statistical map recognition" there, these maps won't be found here either. Furthermore you may limit the search by the bit width of the map. For this, click on the small black triangle in the map selection window. A menu pops open, where you may select a filter for the bit width (8/16/32 Bit). This filter also works for this function.

Shortcuts

Symbol bar: 

Keyboard: f

7.23 The command Support map selection (Menu View)

Use this command to toggle the support for a selection of maps. If it is activated, the user will be supported when creation a selection containing a map. In order to use this feature, you'll just need to create a selection without gaps (for example with the selection mode 'consecutive').

WinOLS will analyse the selected area for the supposed number of columns and the start address and change these respectively. Then the beginning and end of a selection will be extended, so that a rectangular are is selected.

When in doubt, it's better to select to few values than too many. Otherwise you might affect the analysis method with false data.

The created selection may be changed later in 2d-mode. (Press shift, move the cursor in 2d mode over the beginning / end of the selection, click and drag.)

If you don't want to have this command permanently activated, you can also just use it when you need it. Simply create a selection like described above. And when this selection exists, just activate this command (via the menu or icon bars). Now it will only be executed once and not be activated permanently.

Shortcuts

Symbol bar: 

Keyboard: -

Chapter

VIII

8 Commands of the menu Selection

The menu **Selection** contains commands to work with selections:

Select cell	Selects the current cell.
Select row	Selects the current row
Select column	Selects the current column
Select all	Selects the entire element / map
Select screen	Selects the visible area
Invert screen selection	Inverts the selection in the visible area
Select changes	Selects cells with changes
Create selection	Creates a selection from values you have to enter
Select nothing	Removes the selection
Restore last selection	Restores the last selection
Original	Sets all selected cells to their original value
Selection -> Map	Creates a map windows from the selected rectangle
Load	Loads a saved selection into the clipboard
Save	Saves the current selection into a file
Selections mode	Allows the choice between four different selection modes
Selection beginning	Marks the beginning of a selection
Selection end	Marks the end of a selection

8.1 The command Select cell (Menu Selection)

Selects the cell the cursor is currently in.

Hold the Ctrl-Key pressed while clicking to extend the current selection instead of replacing it.

Shortcuts

Symbol bar: -
Keyboard: Insert

8.2 The command **Select row (Menu Selection)**

Selects the row the cursor is currently in.

Hold the Ctrl-Key pressed while clicking to extend the current selection instead of replacing it.

Shortcuts

Symbol bar: -
Keyboard: -

8.3 The command **Select column (Menu Selection)**

Selects the column the cursor is currently in. By default this selects only the visible part of the column. This can be changed in the configuration menu.

Hold the Ctrl-Key pressed while clicking to extend the current selection instead of replacing it.

Shortcuts

Symbol bar: -
Keyboard: -

8.4 The command **Select all (Menu Selection)**

Selects the all cells in the current element / map.

Shortcuts

Symbol bar: -
Keyboard: Ctrl+A

8.5 The command **Select screen (Menu Selection)**

Selects the all currently visible cells.

Hold the Ctrl-Key pressed while clicking to extend the current selection instead of replacing it.

Shortcuts

Symbol bar: -
Keyboard: -

8.6 The command Invert screen selection (Menu Selection)

Inverts the selection for all visible cells. Selected cells are deselected and vice versa.

Shortcuts

Symbol bar: -

Keyboard: -

8.7 The command Select changes (Menu Selection)

Selects all changed cells. (If necessary, only visible ones, see F12 > Edit).

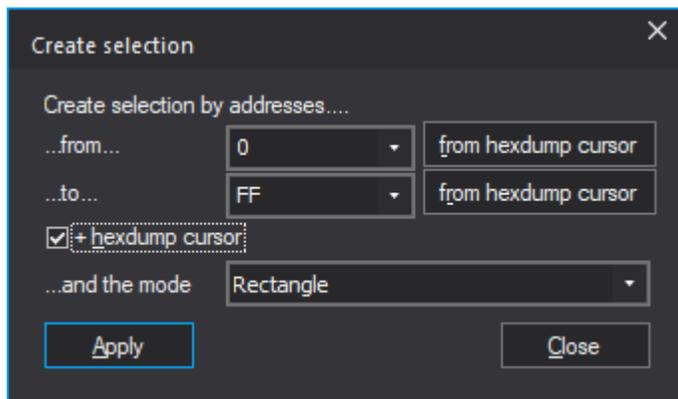
Repeatedly use for "only increased" / "only decreased" cells. Additionally press Ctrl to add to the current selection.

Shortcuts

Symbol bar: -

Keyboard: Shift+Alt+D / Ctrl+Shift+Alt+D

8.8 The dialog Create selection (Menu Selection)



This dialog allows you to create a selection by entering the start and the end address. Furthermore you may specify the used selection mode. The resulting selection is the same you would get if you created a selection with specified parameters manually.

You can use the buttons to transfer the current cursor position to the respective ComboBox. If you want to create many similar selections, you can also activate the checkbox instead and only enter the offsets that WinOLS should add in the address fields.

This dialog is not modal, meaning that windows lying behind the window may still be used. This dialog is a "floating" dialog. All floating dialogs can be toggled with the tab key.

You can skip this dialog and apply the current values immediately if you hold down the Shift key when selection the menu function.

Shortcuts

Symbol bar: -

Keyboard: Ctrl+Alt+L
Ctrl+Alt+Shift+L (Ohne Dialog)

8.9 The command Select nothing (Menu Selection)

Removes the current selection.

Shortcuts

Symbol bar: -

Keyboard: -

8.10 The command Restore last selection (Menu Selection)

Restores the last selection.

Shortcuts

Symbol bar: -

Keyboard: -

8.11 The command Selection -> Map (Menu Selection)

Use this command to create map from a rectangular selection in a hexdump. The size of the selection should match the optimal size of the later map.

This command is only available when a consecutive, rectangular selection was made.

Tip:

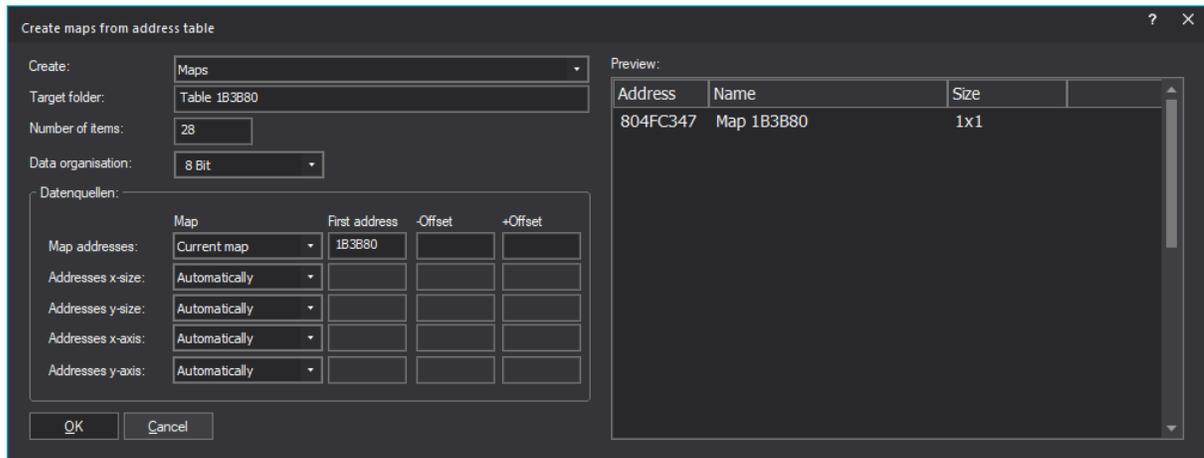
If you have a 1x1 map selected or if no selection is present, a new map will be created and the dialog "map properties" will be opened to allow you to enter the properties manually. Except if you just copied map properties. Then these will be applied instead.

Shortcuts

Symbol bar: -

Keyboard: K

8.12 The command Selection (Table) -> Maps (Menu Selection)



You can use this dialog to generate the maps (or alternatively comments or markers) from a table with map addresses (in the hexdump).

This command is only available if a continuous, rectangular area is selected. Each address should be on a separate line, then the address is automatically filled in for you. If the rectangular marker is 3 or 5 columns wide, then the additional data for size and axis will be used.

If the addresses in the hex dump use a different offset (such as 0x80000000) than your project, then you can correct the offset with the corresponding fields.

Example:

- For the screenshot, a selection was created that starts at 0x1B3B80, is 1 column wide and 28 rows high. This information was then automatically transferred to the dialog.
- WinOLS now looks in the current map (hexdump) at the address 0x1B3B80 and finds the value 0x804FC347 there. This is used as the address for the map data.
- Depending on the project, this may be outside your hex dump, so it may make sense to use an "-Offset" of (here) 0x803F0000.
- For the next map (here: not in the preview), WinOLS looks at the same place in the hexdump, but one line lower.

Shortcuts:

Toolbar: -

Keyboard: -

8.13 The command Selection / Load (Menu Selection)

This command loads a previously saved selection into the clipboard. Use the command Paste (Ctrl+V) for further processing.

Shortcuts

Symbol bar: -

Keyboard: Ctrl+R

8.14 The command Selection / Save (Menu Selection)

This command saves the currently selected cells on harddisk.

Shortcuts

Symbol bar: -

Keyboard: Ctrl+W

8.15 The command Selection mode (Menu Selection)

This command offers a choice of 4 different selection modes:

- 1) Selection of a consecutive area
- 2) Selection of a rectangular area
- 3) Selection of columns
- 4) Selection of rows

Tip:

If you just created a selection and then use this command to change the mode, then this change will also be applied to the created selection.

ShortcutsSymbol bar: 

Keyboard: Ctrl+Shift+M (only consecutive/rectangular)

Note:

If the hotkey doesn't work, Radeon graphics card driver tool is reserving it. Test it on F12>Debug.

8.16 The command Selection beginning (Menu Selection)

This command sets the beginning for a selection. If an end for the selection was already defined, a selection with the currently selected mode will be made.

ShortcutsSymbol bar: 

Keyboard: Ctrl+Shift+B

8.17 The command Selection end (Menu Selection)

This command sets the end for a selection. If a beginning for the selection was already defined, a selection with the currently selected mode will be made.

ShortcutsSymbol bar: 

Keyboard: Ctrl+Shift+K

Chapter



IX

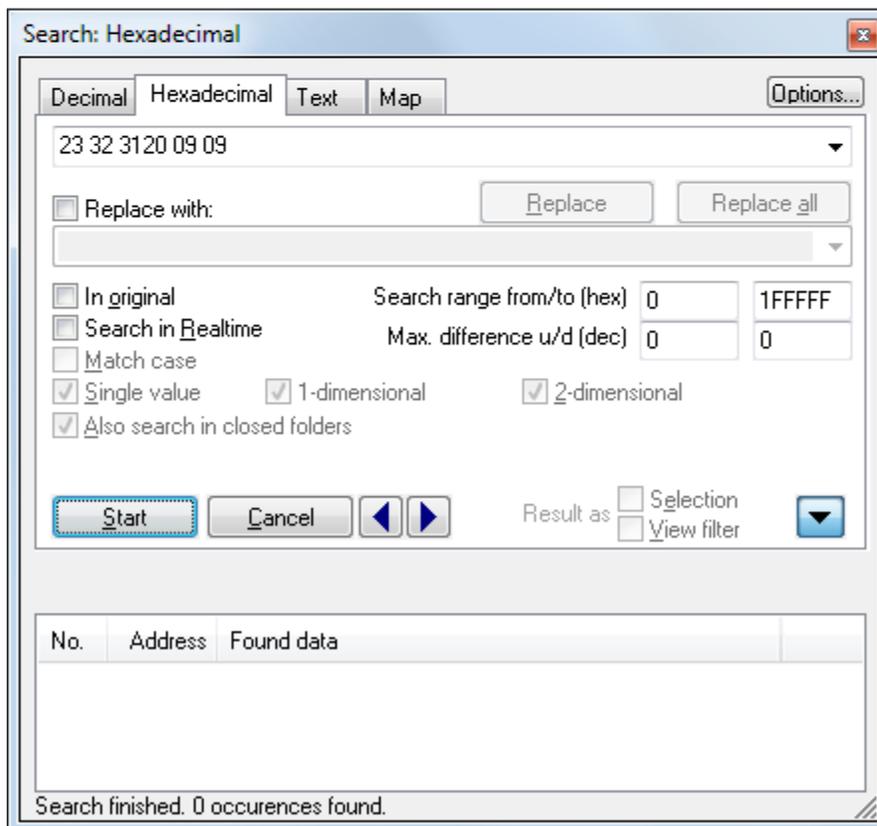
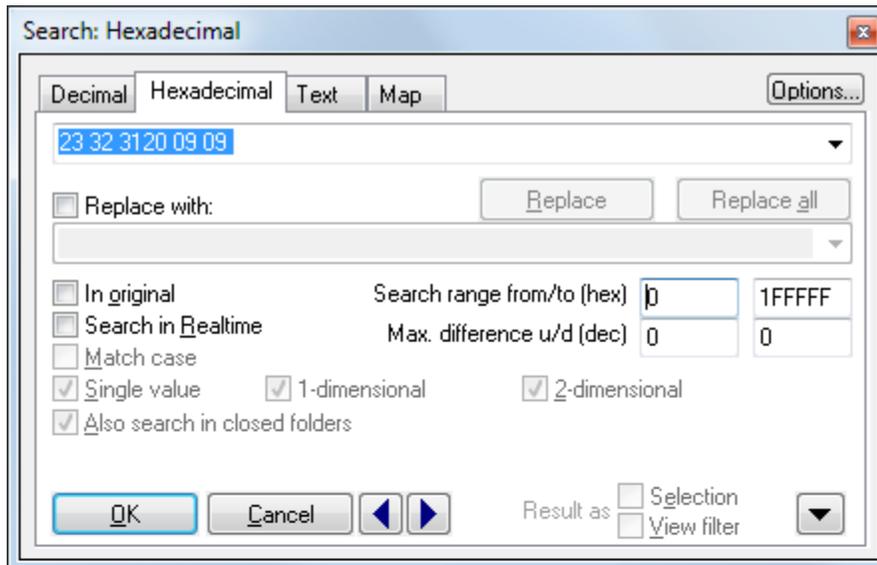
9 Commands of the menu Find

The menu Find contains commands to search for different criteria:

Bytesequence / Text	Searches a text or a sequence of hex- or decimal values
Selection	Searches an area which resembles the current selection
Start search	Starts the search again.
Continue search	Continue the search forwards
Search backwards	Continue the search backwards
Restart background map search	Allows you to start, cancel or restart the automatic search for maps in the background
Axis description profile	Administration of the automatically or manually collected axis descriptions
Parallel maps	Helps you search and sync maps that are similar to the current one.
Find similar maps	Searches maps which are similar to the current map
Go to Address	Moves the cursor to the given address
Jump to address from hexdump	Moves the cursor to the address from the hexdump values
Previous comment	Moves the cursor to the previous comment text
Next comment	Moves the cursor to the next comment text
Insert / Edit comment	Insert a new comment at the cursor position or allows you to edit an existing one
Delete comment	Deletes the comment at the current cursor position
Previous marker	Moves the cursor to the previous marker
Next marker	Moves the cursor to the next marker

Insert/delete marker	Creates a marker at the current cursor position or the current selection or deletes a marker if it already exists
Scripts	Create, administrate and run scripts.

9.1 The dialog Search for byte sequences (Menu Find)



Use this dialog to search for (and optionally replace) byte sequences / texts in the project data or for texts in the map list.

You can select something in the WinOLS editor, copy it and paste it in this dialog.

Use the blue left/right arrow buttons to jump to the next or previous occurrence of the search text. Use the black down arrow to get a list of all occurrences (max. 200000). Click on 'Start' to initiate a search and fill the list with data. If the list is open and you start a new search by clicking on one of the blue arrow buttons, only addresses before or after the current cursor position will be searched. Hold the shift key while clicking the blue arrow buttons to force WinOLS to use this feature even though you didn't change the search.

Limiting results:

You may enter the search range. Only occurrences within this range will be shown as results. Use the maximal difference to configure how far each cell may differ from your search string in order to be considered as occurrence. You may configure the difference to up and down separately. Use the options button for more options to limit the results.

Format + wildcards + alternative values + greater/smaller:

- When searching for byte sequences use spaces to separate the different bytes. The choice of searching for decimal or hexadecimal may be overridden for single bytes by prefixing them with '0x' for hexadecimal interpretation.
- Wildcards: You can use a question mark as a symbol for an unknown value. For example with 'longw?rd' or 'ff ff aa ?? ab' you can search for these text / byte sequence. The '?' / '??' will match any byte.
When searching in hexadecimal mode you can also use the question mark for an unknown half-byte (nibble), for example: ff ?f.
In decimal mode, you can use the question for an unknown cipher, for example 123, 4?6.)(Please note that using the question mark in decimal mode will slow down the search significantly.)
- Alternative values: If you want more than one value to match in one place, you can separate them by slashes (but without spaces). Example: 'ff 11/22 ff' finds both 'ff 11 ff' and 'ff 22 ff'.
- Greater/Smaller: You can specify that a value should be greater/smaller than a certain number. Example: "77 >110".
If you use both operators without spaces, then they refer to the same cell, effectively specifying a range. Example: "77 >110<120"

Checkboxes:

- Search in realtime: The search will start while you're typing.
- In original: The search text will be searched in the original version instead of the version you're currently editing.
- Match case: When searching for texts, the case of the letters will be observed.
- Single value / 1-dimensional / 2-dimensional: Only maps with the specified dimensions will be searched. (Only for map search mode)
- Strictly monotonic values: Only sequences are found where each value is greater than the previous one (or each value is less than the previous one). This is useful to search for axes and usually needs to be combined with wildcards or tolerance.

A click on the button 'Options' shows more options:

- Address: Only data starting at the address of the right offset will be searched. If 'Automatic' is used WinOLS automatically uses the bit width of the current window.
- Programm code: Only within / outside of program code is searched. You can recognize program code by the 'faded' values in the hexdump. (See also overview .)
- Search in... : Only within / outside maps will be searched.
- For maps... : When searching in (or: for) maps, only modified / unmodified / open maps will be searched. Important: WinOLS continues to search in the current window (e.g. Hexdump) and uses its data organization. Not that of the map.
- Values end on: When searching for data only values will match that end (in decimal mode) on the chosen numbers. This options is useful when using wildcards.

Templates:

Click on ">" next to the search line to display previous searches or to select a template file whose content is to be displayed here in the list. This is a simple text file. Each line is one entry. Each line can contain a comment in the format "Search value // Comment". The search dialog then displays the comment in the drop-down list, but uses the search value for the search.

Example:

```
11 22 33
22 33 44 // You will see this text in the drop-down **)
// Treebranch
33 44 // -sub item 1
55 66 // -sub item 2
// Another Treebranch
// -Subbranch
// --Subsubbranch
33 44 //sub item 1 *)
55 66 //sub item 2
```

*) **Note:** For simplicity, you can skip the minus characters for lines that contain search text. WinOLS will assume that it's a child of the most recent branch.

) **Note: You MUST use a space character before the comment: "x // good" (not: "x// bad"). This is necessary because "/" can occur in some ECU strings for text search mode.

Triggers in templates:

You can link the current selection of search/replace with triggers. If a comment in a template contains the text "->XY", the trigger "XY" is triggered. This selects an item containing "<-XY" in the comment in the other field.

Example:

Search-Template.txt:

AA BB // Click here ->MyTriggerName
 Replace-Template.txt:
 CC DD // This will be selected automatically <-MyTriggerName

Extended replace:

This function requires WinOLS 5.58 + FeatureUpdate

If the replace text begins with "do ", commands can be entered there. The window and/or a part of the coordinate can be adjusted.

Examples:

do *2; +1	2 combined commands: The cells are doubled and 1 is added.
do yaxis=1	The value in the Y-axis is set to 1
do map0.col1=4	The value in the connected map 0 (counted from the left) in column 1 is set to 4.
do myid.yaxis=4	The value in the connected map with the Id myid in the Y-axis is set to 4
do map[xy].col[zz]=4	The value in the connected map field with xy in the name in the column with zz in the text name is set to 4
do col[+1]=4	The value in characteristic field 1 to the right of the search value is set to 4
do map0.col1=4; map0.col2=5	2 instructions

Attention: All indexes start at 0!

Context menu:

You can right-click a selection in the list to directly modify the found cells.

Create from the list:

You can right-click a selection in the list to create markers, comments or maps. For maps you can use the following placeholders:

%Num Number of the result
 %
 % Number of the result in the list
 Num2%
 % Found values
 Results
 %
 % Searched value
 Search
 %
 % Address of the result
 Address
 %
 %Size% Size of the map at the position
 %Id% Id of the map at the position

% Details column

Details

%

% From the found values the 3rd

Result3

%

% From the found values the 3rd as decimal value

Result3.

dec%

% From the found values the 3rd as hexadecimal value

Result3.

hex%

Note:

This dialog is a "floating" dialog. All floating dialogs can be toggled with the tab key.

Note:

The hotkey Ctrl+F will start this dialog only if a project window has the focus. If the map list has the focus (= the cursor is blinking there), a search dialog for the map list will be started.

Shortcuts

Symbol bar:



Keyboard: Ctrl+F

9.2 The command Search / Selection (Menu Find)

This command starts a search for an area similar to the one currently selected. The grade of similarity is configured in the following dialog.

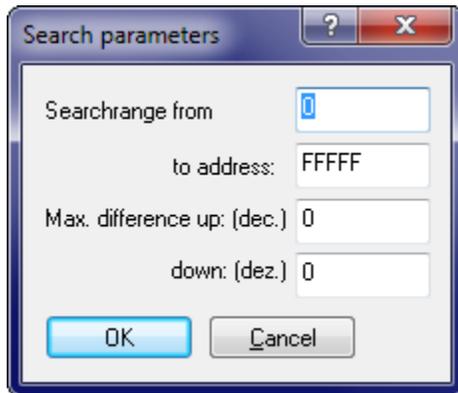
Shortcuts

Symbol bar:



Keyboard: Ctrl+Alt+F3

9.3 The dialog Search parameters (Menu Find)



This dialog allows you to edit global search parameters. You may configure an area to search and the maximum difference a cell may have from the searched value.

Shortcuts

Symbol bar: -

Keyboard: Alt+F3

9.4 The command Continue search (Menu Find)

This command continues are search that was started previously.

Shortcuts

Symbol bar: 

Keyboard: F3

9.5 The command Search backwards (Menu Find)

This command continues are search that was started previously, but backwards.

Shortcuts

Symbol bar: 

Keyboard: Shift+F3

9.6 The command Restart background map search

WinOLS can search for maps while you work normally. This command allows you to control this behaviour.

Depending on the situation this command is displayed under different labels and this performs different functions.

If not map search was executed this command allows you to start one. If a search is

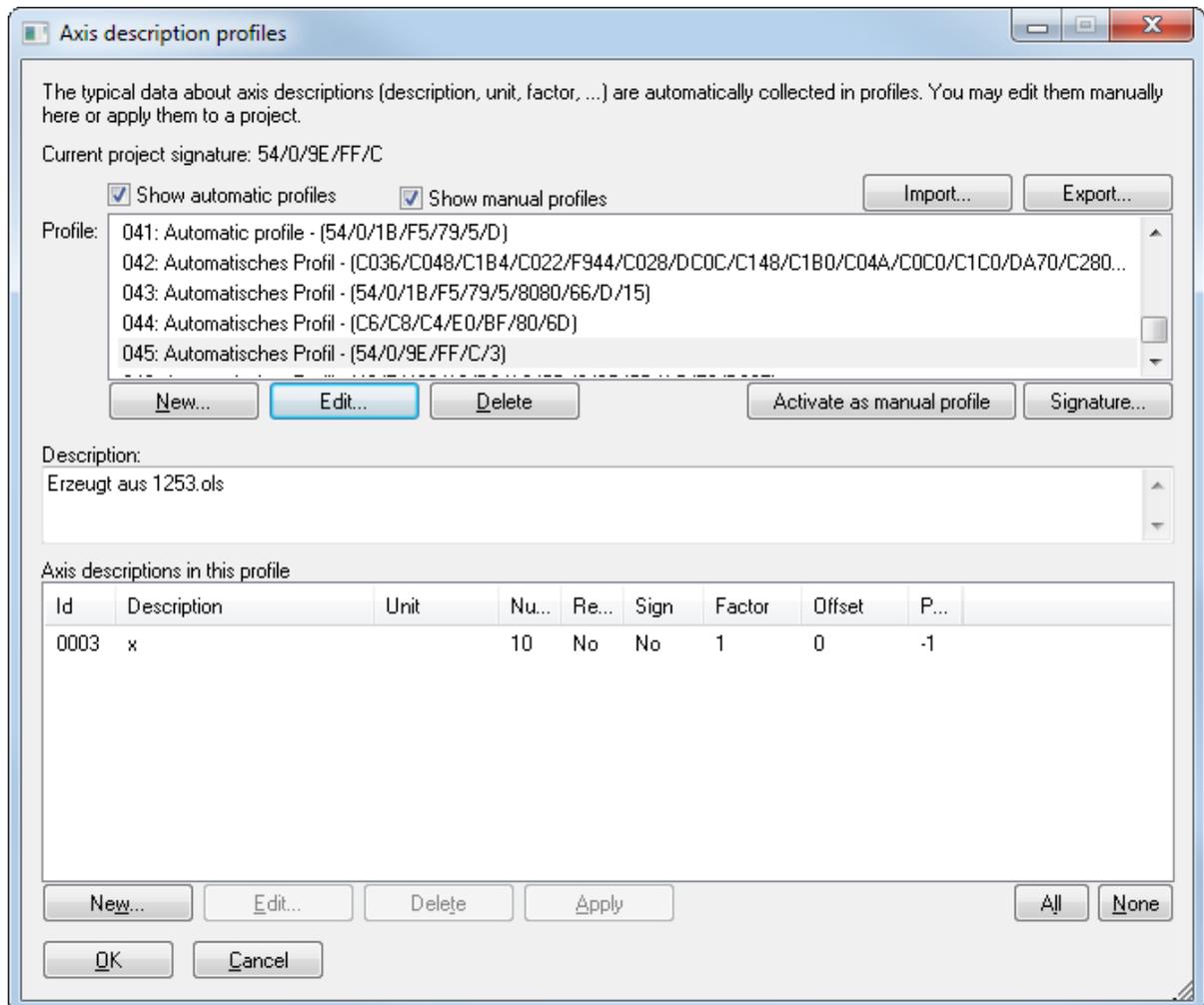
running, you can stop it with this command. If a search is already finished, you can restart it with this command.

Shortcuts

Symbol bar: -

Keyboard: -

9.7 The dialog Axis description profile (Menu Find)



Axis description profiles are collections of axis descriptions (Name, unit, sign, factor, etc). They're automatically created from projects by WinOLS, and can automatically or manually be applied to new maps to set the description information.

Automatically:

WinOLS automatically collects axis description profiles in the background (unless you have disabled it in the configuration dialog under 'automatically'). An axis description profile contains a signature which enables WinOLS to recognize the

source project and similar projects. This signature is automatically generated from maps that are searched in the background. If you now configure axis descriptions or import this information from a Damos file, then information about the description, unit, factor, offset, etc. is collected in the profile.

If you later insert maps into a different project, then WinOLS will automatically fill in the axis description information, if the axis is recognized.

Note: A signature cannot be generated for every project. Only projects with Bosch maps contain a signature. Bosch II maps are not enough, unless the project contains 'normal' Bosch maps, too.

In this dialog you may view and select (combo box at the top) the different profiles and even rename them. In the lower part of the screen you can see the different axis descriptions that were recognized for the current profiles. You may edit, delete or apply them. Normally you won't need to do all this manually, since WinOLS does everything automatically in the background.

Manually:

For the manual mode there is always an active axis description profile. With the respective button you can tell WinOLS which profile should be active. The active profile collects the axis descriptions that are available to you in the dialog "Map properties" as menu when you click on the small black triangle. By switching the active profiles you can administrate different collections, for example for different car types.

Groups:

You can create groups to define data for map+X-axis+Y-axis and then apply them together. Only the group entry is then displayed in the menu. However, all other entries in the group are applied. The members of a group must have the same signature ID - with the exception of the last digit. This must be:

F: Group name

0: Map data

1: X-axis data

2: Y-axis data

Export + Import:

Use the button "Export" to write all selected profiles into a file. You can then use the "Import" button to append the profiles from the file to the ones in the list.

You can also backup this data manually. The data of the axis description profiles are store in the file "ols_sp.cfg". The current manual profile is part of the global configuration file "ols.cfg". Both files are stored in the WinOLS Configuration directory. You can copy these files any time, but should only replace them while WinOLS is closed.

Shortcuts

Often the same map exists several times (with minor variations) in the same ECU. In WinOLS these are called "Parallel maps". You may create all of them in one go and transfer the changes automatically to the other (parallel) maps. Use the following procedure:

1. Search the map in the hexdump window and register it as map within WinOLS.
2. Enter axis descriptions if you want.
3. Click with the right mouse button into the map and select "Parallel maps".

The dialog shown above will appear. Depending on the tolerance that is entered, a different number of maps will probably be found. (The default tolerance value is calculated in such a way that a least one similar maps is found, but never over 100%.)

Use the options to configure which things you want to transfer (this applies only to the map and axis names) or which you want to synchronize (this applies only to map values). If you transfer changes as difference, not the absolute values, but the difference between original and version will be transferred.

It is recommended to create a folder for every group of parallel maps and store the maps there. This makes it easier to understand which maps get synchronized. Or you can make all maps except the current one invisible. (Right-click the map list sidebar to make all visible.)

Synchronization notes:

This function creates "Sync-Blocks", which you may view in the checksum dialog (Key F2). For these blocks WinOLS always tries to keep each two data blocks identical. If you change anything in one block, the changes will be performed in the other one, too (With a confirmation request for the first time).

Tips:

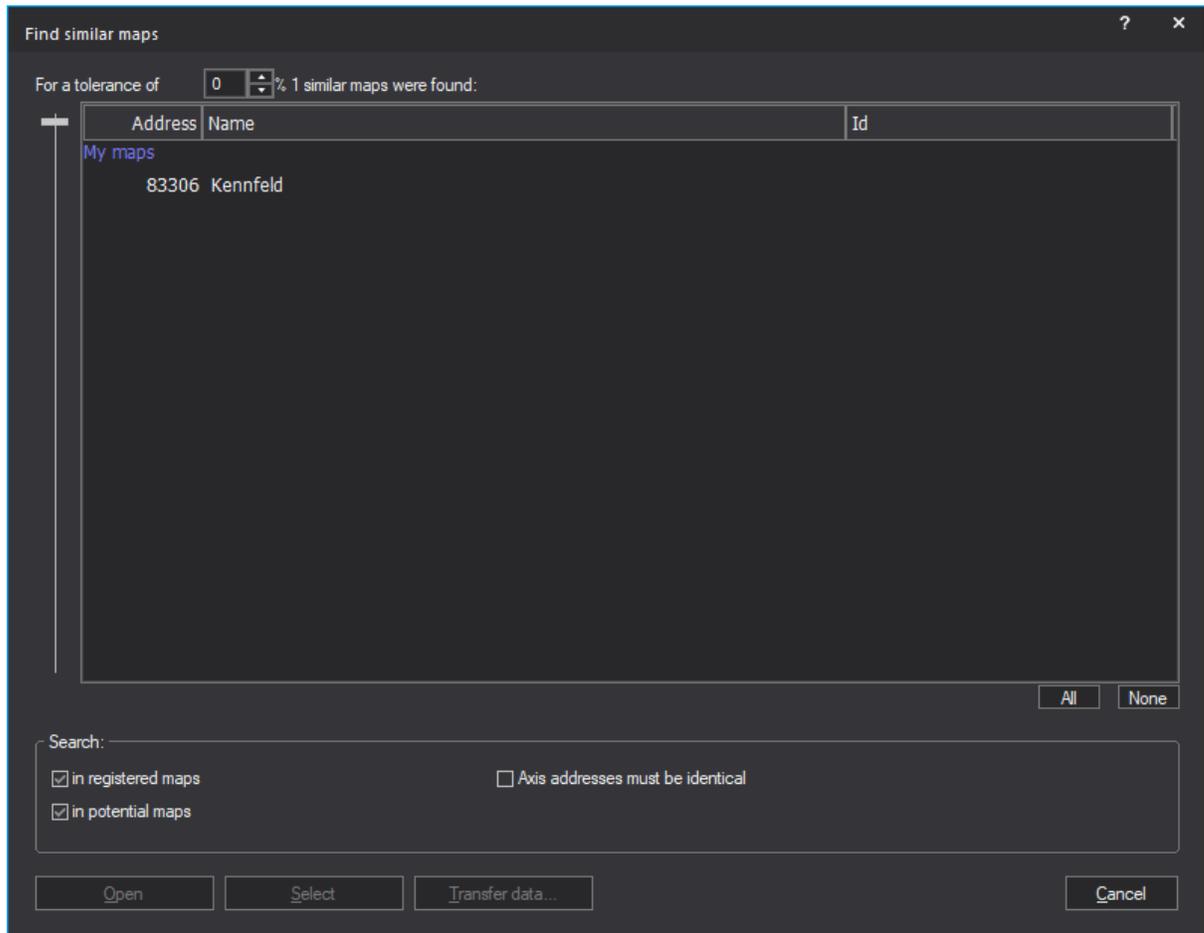
- In the map list sidebar, you can activate a column that shows the number of the sync group (right click on the table header). This column has its own context menu. For example, you can select some maps and add them to a group or create a new group.
- In the map list sidebar, you can search for the group id. E.g.: #2
- In the open map window you can use the hotkey Ctrl+Left / Ctrl+Right to switch between the maps of this group.

Shortcuts

Symbol bar: -

Keyboard: Ctrl+Alt+P

9.9 The dialog Find similar maps



Often the same map exists several times (with minor variations) in the same ECU. With this dialog you can search these maps, open them, select them in the map window or transfer data from the current map to the variations.

Tip:

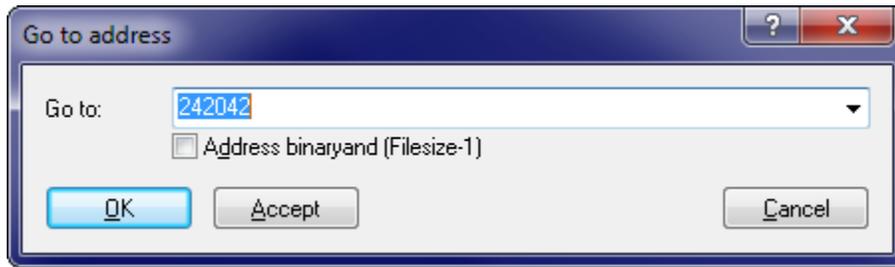
You can automate the transfer of data with the dialog parallel maps.

Shortcuts

Symbol bar: -

Keyboard: Ctrl+Alt+K

9.10 The dialog Go to address (Menu Find)



Use this command to set the cursor to a certain place. By default the current position is show. Furthermore you may recall the last 16 positions. If the project contains comments, they will appear in the list, too, together with their address.

Activate 'Address binaryand...' to calculate a binary and for the address you're entering and the file size -1. This is useful if you have addresses that are without the WinOLS address range. For example, if you've got the address 1E02E8 and a file size of 7FFFF, then effectively the address 602E8 is used.

Tip:

- To move the cursor relative to the current position, write a '+' or '-' in front of the value.
- You may also enter the name or id of a map or value of a comment.

Shortcuts

Symbol bar:



Keyboard: Ctrl+G

Ctrl+Shift+G (Skips the dialog and uses the clipboard instead)

9.11 The dialog Jump to address from hexdump (Menu Find)

Interprets the 4 bytes at the cursor position as address for the new cursor position. If necessary, WinOLS will automatically switch to the Hexdump window.

If you have previously selected several DWORDs with addresses, WinOLS will select the corresponding cells.

Shortcuts

Symbol bar:

Keyboard: J

9.12 The command Previous comment (Menu Find)

This command moves the cursor to the previous comment within the current project.

Shortcuts

Symbol bar: -
Keyboard: Shift+V

9.13 The command Next comment (Menu Find)

This command moves the cursor to the next comment within the current project.

Shortcuts

Symbol bar: -
Keyboard: Shift+N

9.14 The command Insert / Edit comment (Menu Find)

This command allows you to insert a comment at the current cursor position or consecutive selection or edit it if there already is one. Comments always stick to the current address but count for all versions of the project.

Comments are also shown as tooltips, if you hold the mouse cursor for some time over a cell with a comment. Furthermore they're listed in the dialog 'Go to address'.

To delete a comment, simply remove the text

Note:

Starting with WinOLS 3.57, comments may also be created from non-linear selections. In this mode, the comment frame is not supported and you can't edit the addresses manually.

Shortcuts

Symbol bar: -
Keyboard: Shift+Enter

9.15 The command Delete comment (Menu Find)

With this command you can delete the comment at the current cursor position, if there is one.

Shortcuts

Symbol bar: -
Keyboard: -

9.16 The command Previous marker (Menu Find)

This command moves the cursor to the previous marker within the current project.

Shortcuts

Symbol bar: -
Keyboard: Shift+F5

9.17 The command Next marker (Menu Find)

This command moves the cursor to the next marker within the current project.

Shortcuts

Symbol bar: -
Keyboard: F5

9.18 The command Insert / Delete marker (Menu Find)

This command allows you to insert a marker at the current cursor position or consecutive selection or removes it if there already is one. Markers always stick to the current address but count for all versions of the project. In contrast to comments, markers cannot contain text.

Shortcuts

Symbol bar: -
Keyboard: Ctrl+F5

9.19 The command Solutions

With this dialog you can apply ready-made solutions to your current project. They can do a multitude of things like adding maps or modifying your hexdump data. Solutions are provided by resellers and know automatically whether they can be applied or not. Thus you will only see solutions in the list that can be applied to your current project.

To use a solution, open the dialog 'Solutions' and choose the desired reseller (icon upper left corner). Solutions are billed via reseller credits.

Classic solutions

This variant has been implemented in WinOLS for some time and is currently only offered by B&C.

Online solutions

For this new variant, data is transferred to the reseller's server, which can then generate the corresponding version / maps as a response.

Privacy

We transfer as little data as possible. The reseller receives some ECU properties and hashes (e.g. SHA) from the hexdump.

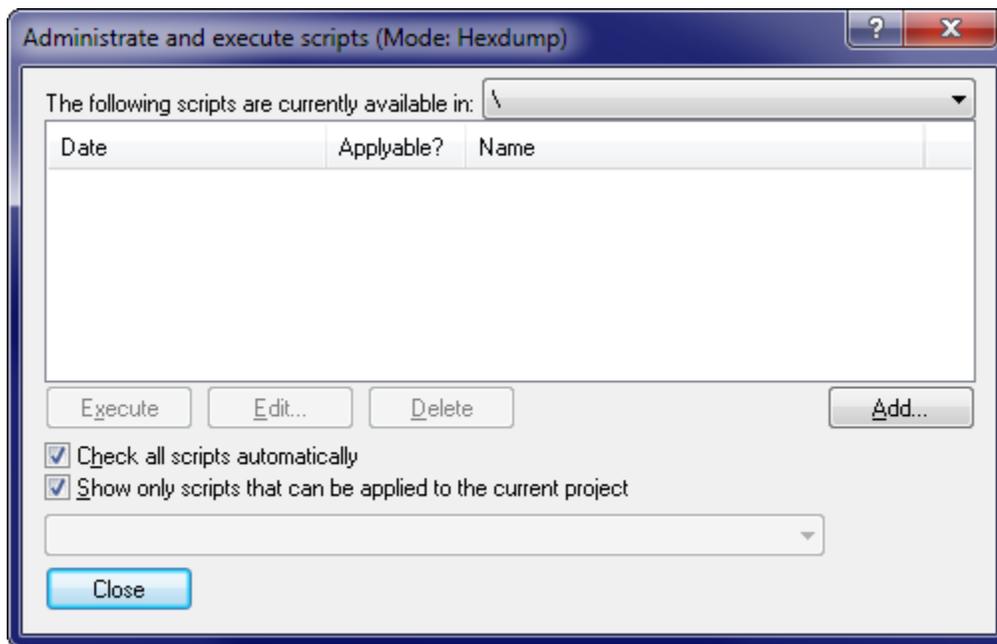
If you confirm the upload (or allow an automatic upload) he also gets the entire

hexdump and your EVC license account number.

Shortcuts

Mouse: -
Keyboard: F7

9.20 The command Scripts (Menu Find)



If you're doing certain changes again and again because you always get similar ECUs, it can make sense to create a script. This will summarize all changes into a universal format so they can be applied quickly. Furthermore every script recognises whether it can be applied to the current project or not. (If you have many scripts you may delay the recognition to speed this dialog up. Simply turn off the option 'Check automatically'.)

This dialog allows you to execute, edit (a text editor will be started) or delete scripts. Furthermore you may use a subdialog to create new scripts. The combobox in the upper right corner allows you to restrict the search for the right script to a certain subfolder of the script folder.

You may configure the WinOLS options (in the page 'Automatic') in such a way that WinOLS checks after every project import whether a script can be applied to the new project or not.

When the scripts were created a preferred mode (absolute / difference / percent) was defined for transferring the data. Depending on the kind of script you may choose to override this mode when executing the script.

You can find more information about scripts in the respective chapter.

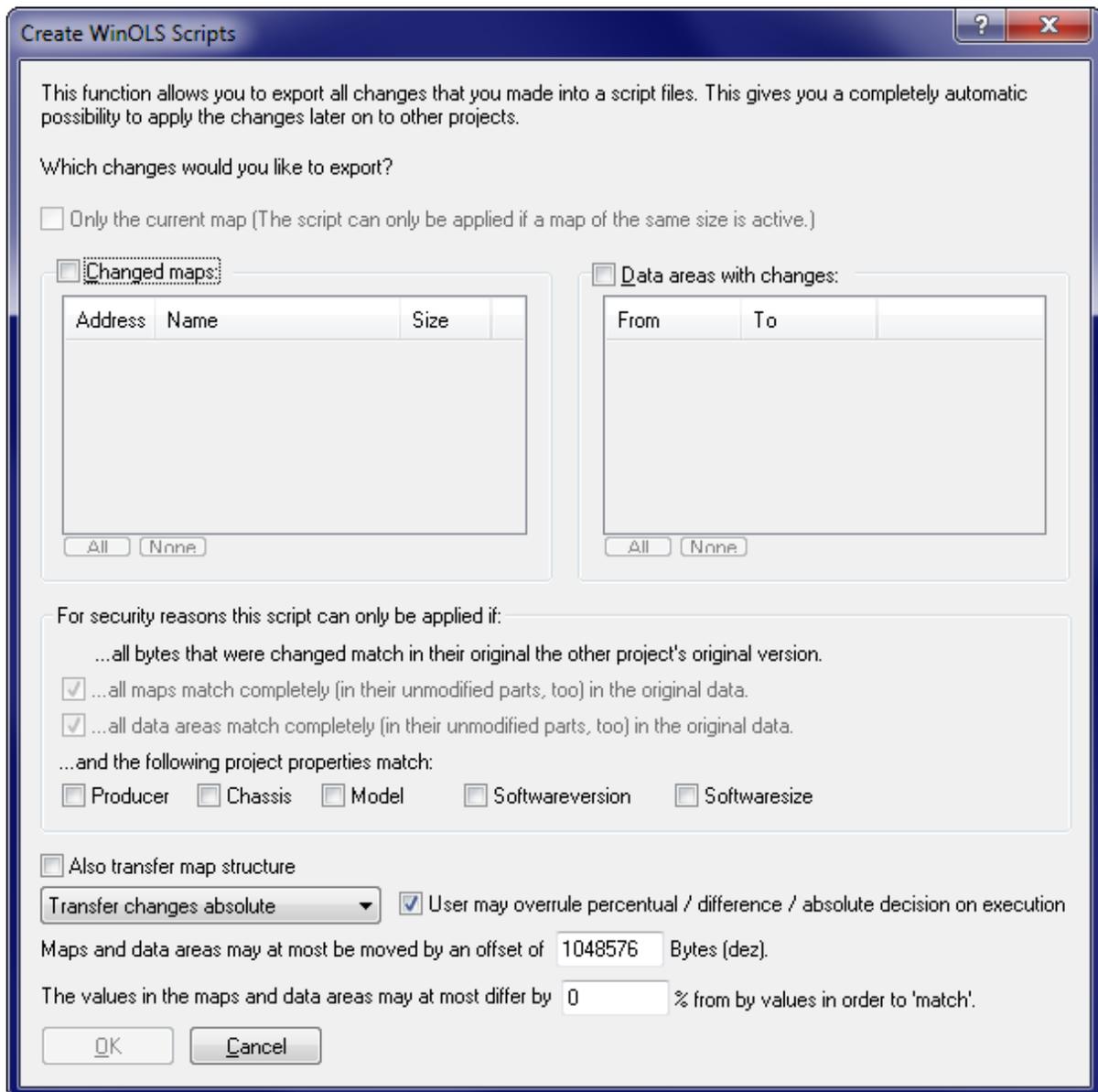
This is just one of several options to import data from other projects.

Tip:

If you use LUA (OLS540), you can use projectImport to apply a script to a project.

Shortcuts

Mouse: -
Keyboard: F8

9.20.1 The dialog Create scripts (Menu Find)

This dialog is the recommended way to create new scripts. The bases are always

the changes in the current project. All you need to do is to select which changes you would like to export. Simply select the maps or data areas containing the changes. Data areas are less secure than maps because WinOLS has less information. **So, if possible, register maps that cover data areas.**

Data areas that do not contain at least 2 different byte values in the original version, are not listed for security reasons. You can use the "make larger" checkbox to work around this. WinOLS will then increase the size of the data areas until a safe identification is possible.

For maps you have the option to use the map id instead of the values to identify the map. This requires that the map has the id field filled in and that it already exists (with the same id) in the target project.

If possible you should always restrict the script's applicability as much as possible to avoid misuse and increase comfort. This is done by requiring entire blocks / maps to be recognized. Furthermore you may require certain project properties.

In addition you may define how far addresses can be moved from their origin and how much the values may differ.

When saving, you should always choose a long, descriptive filename since this name will later appear in the script list. Furthermore you should always store scripts in the WinOLS script directory, because they won't appear in the script list otherwise.

You can find more information about scripts in the respective chapter.

Shortcuts

- Mouse: -
- Keyboard: -

Chapter

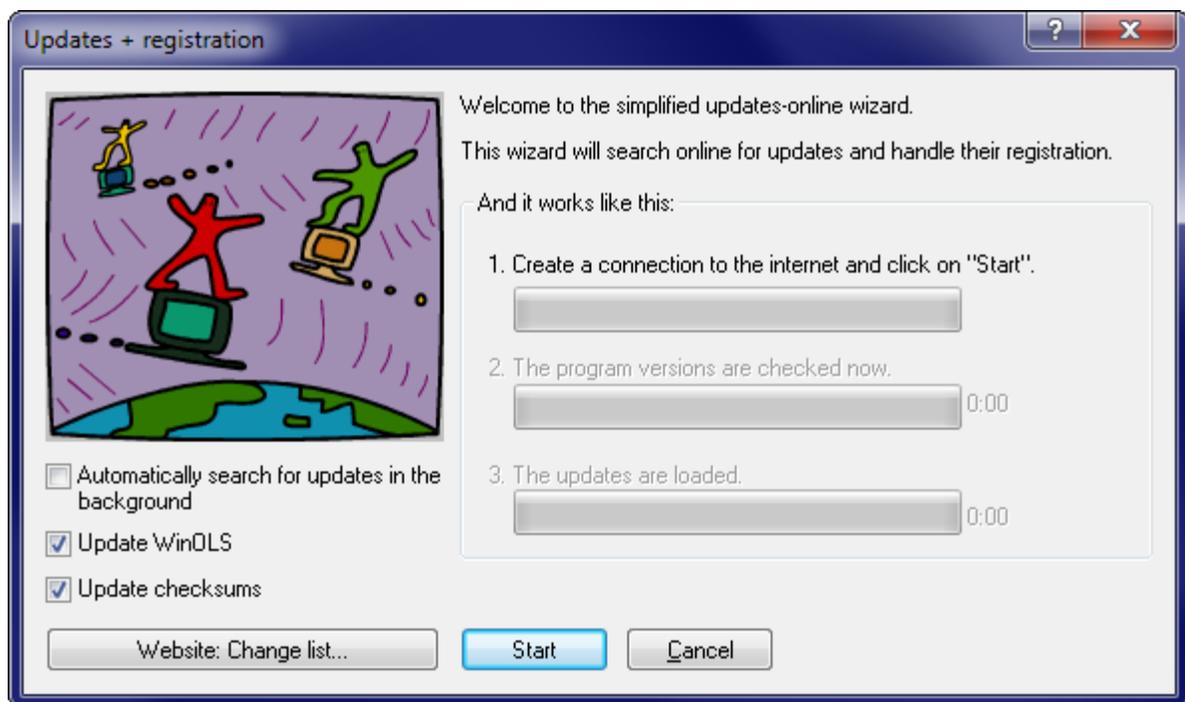


10 Commands of the menu Miscellaneous

The menu Miscellaneous offers the following commands:

Updates + Registration	Allows you to use the professional features of WinOLS.
Rescue project	Tries to rescue data from a corrupt ols project file.
Configuration	Starts the configuration menu for global options
Calculator	Starts the windows calculator

10.1 The dialog Updates+Registration (Menu Miscellaneous)



This dialog allows you to register WinOLS, to check for updates for WinOLS and its plugins and to download and install these updates.

You may use WinOLS (depending on the purchased packet) on multiple computers. Each must be registered separately. You may do that yourself easily over the internet.

Simply click on "Start" and follow the assistant's instructions.

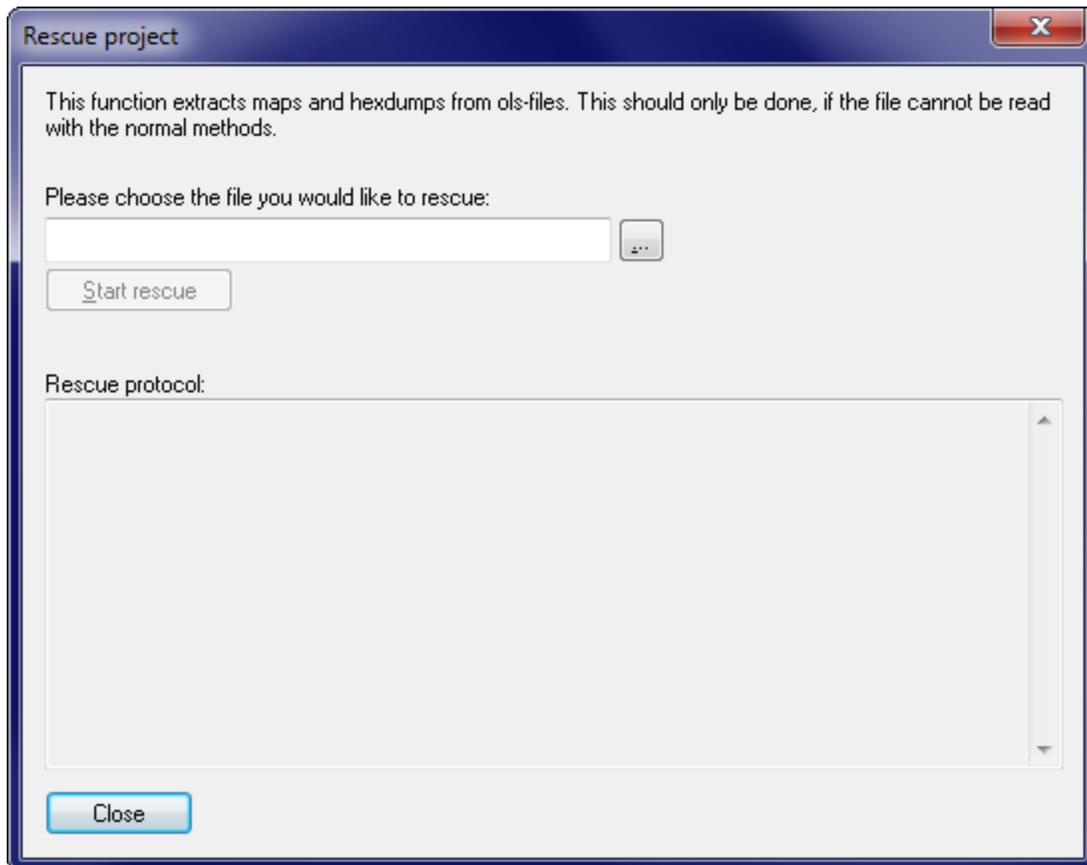
If WinOLS has a problem with connecting to the internet, please be sure to check your local firewall. Furthermore you can use the test function in the configuration dialog.

Shortcuts

Symbol bar: -

Keyboard: Alt+F1

10.2 The dialog Rescue project (Menu Miscellaneous)



This dialog helps you rescue data from a corrupted WinOLS project file (*.ols). The rescue process might not be able to extract all data and the extracted data might be incorrect.

Note:

Please save all unsaved changes to other projects before using this menu item. Please check any rescued data carefully before actually using it.

Shortcuts

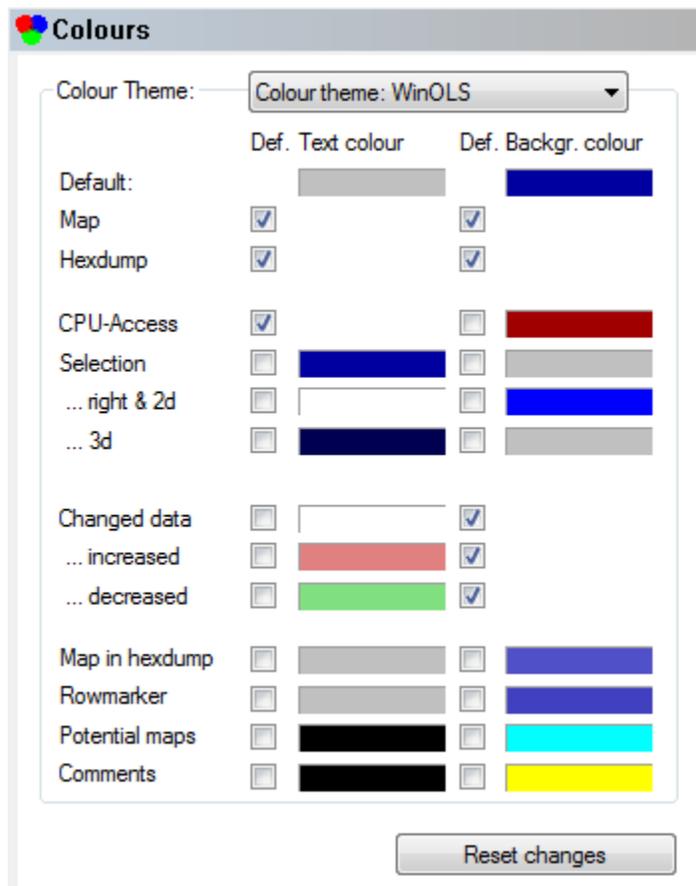
Symbol bar: -

Keyboard: -

10.3 The dialog Configuration (Menu Miscellaneous)

The configuration dialog contains many pages that are explained on the following pages.

10.3.1 The dialog Configuration / Colours (Menu Miscellaneous)



The first sheet of the window allows you to configure the colours WinOLS uses. You may choose one of three predefined colour themes or choose your own user-defined colours. If the checkbox 'Def.' is checked, then the colour defined at 'Default' (topmost colour) will be used in this place.

You may edit a predefined colour theme. Use the button 'Reset changes' to return to the default values for this colour theme. However, the recommended method is to edit only the 'User defined' theme. If you activate this theme the button 'Reset changes' will change to 'Copy theme from...' and allow you to copy the colour theme from a predefined theme.

Shortcuts

Symbol bar: 

Keyboard: F12

10.3.2 The dialog Configuration / View (Menu Miscellaneous)

Area 'All view modes':

At the top you may choose the font and font size for hexdump and map windows. Please note, that some fonts cannot be used as Axis description in 3d mode in spite of the official documentation. If you have any problems with this, please choose a different font.

Finally you change change the font size and additional line height. This applies to the dialogs Differences und Search.

Area 'Title':

WinOLS automatically generates useful titles:

- The title of the hexdump window
- The title of the map windows
- The project name in the Map Sidebar

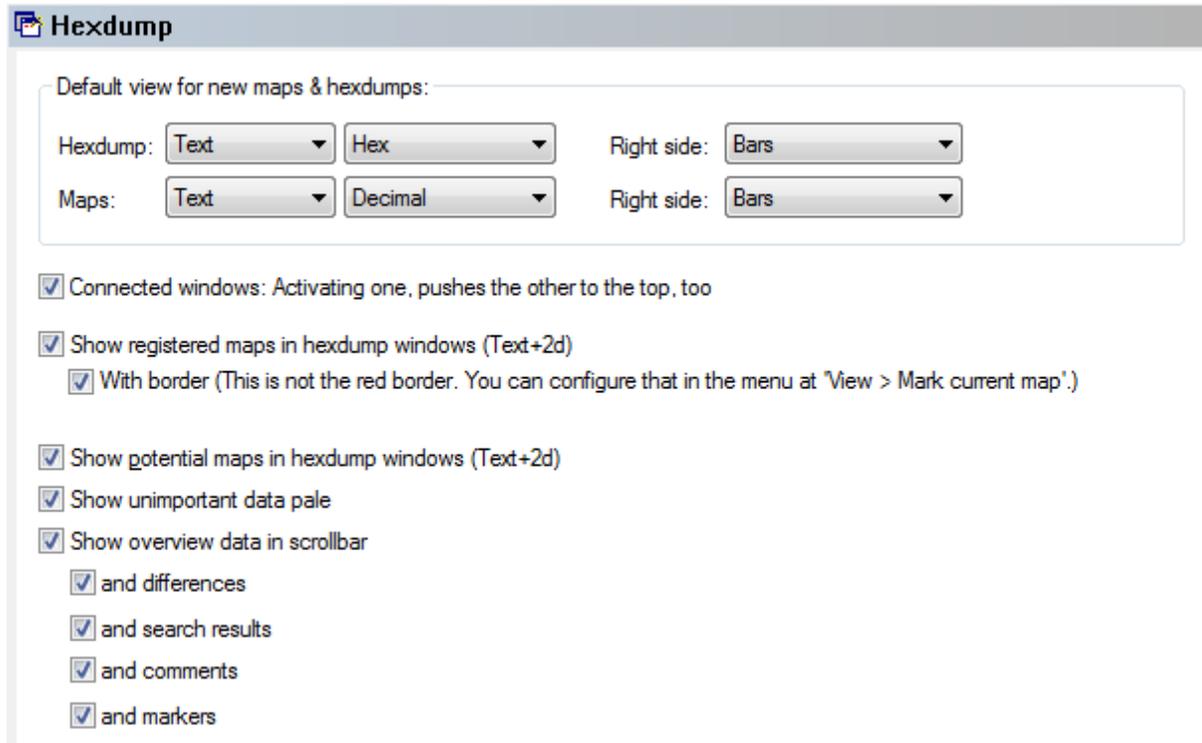
You can here configure which information you want to have displayed instead of the default values. Use the button on the right to choose from templates.

Shortcuts

Symbol bar: 

Keyboard: F12

10.3.2.1 The dialog Configuration / View / Hexdump (Menu Miscellaneous)



Default view:

Here you may define in which way new maps and hexdumps are displayed by default. You may choose the view mode (Text, 2d, 3d), the numeric system (10, 16) and the configuration for the right side (Empty, Bars, ASCII).

More options:

Here you can configure the activation behavior for connected windows.

Then you may toggle the display of registered maps with in hexdumps. Registered maps are marked with a colored background and optional a border.

Next you may toggle the display of potential maps with in hexdumps. Potential maps are marked with a border and a tag on the top. If you want to toggle the searching of these maps, please refer to the page named 'Automatically' / 'Background'.

Furthermore you can let WinOLS display unimportant data pale. Data is considered unimportant if it is recognised as program code or as empty areas. The data from the overview function is used for the display. That's why the pale display only works when overview data was generated.

Then you can configure WinOLS to display the overview data in the (vertical or horizontal, depending of the view mode) scrollbar. This option requires that overview information was generated. Either in the background or manually by opening the overview dialog. For a reference of the colors, see the overview dialog. Furthermore

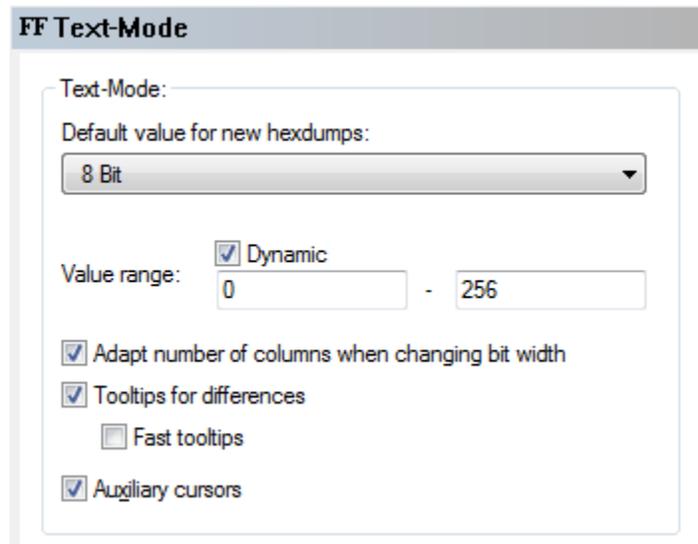
you can configure if additional info is displayed here:

- White points at the left => Difference between original and version
- Yellow triangle right => Position of a search engine
- Yellow, dotted line right => Marker
- Solid line right => Comment (In the comment's border color)

Shortcuts

Symbol bar: 
Keyboard: F12

10.3.2.2 The dialog Configuration / View / Text (Menu Miscellaneous)



On this page you can select the default bit width and style for new hexdumps when a new project is created by importing a file or reading an eprom. You may also define the value range that is used for the bar display.

Furthermore you may configure how WinOLS should behave when if change the bit width (8/16/32) while using the text mode. By default this won't change the number of columns. But you can tell WinOLS to adapt the number of columns in such a way that the total width displayed stays roughly constant.

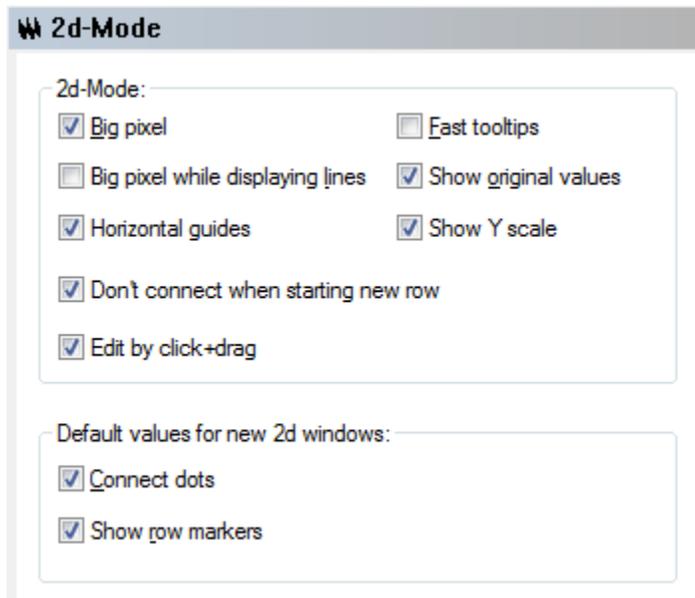
Then you can configure if you want to see a tooltip when moving the mouse cursor over a changed byte.

Finally you can select if you want to see markers for the line and column where the cursor is currently located.

Shortcuts

Symbol bar: 
Keyboard: F12

10.3.2.3 The dialog Configuration / View / 2d (Menu Miscellaneous)



Area '2d-mode':

The option 'Big Pixels' tells WinOLS to use larger pixels when displaying dots in 2d mode to increase readability.

If the checkbox 'Fast Tooltips' is activated, the tooltips (the little yellow windows) will appear faster if the cursor is above a value.

Use 'Big Pixels while displaying lines' to make WinOLS display large dots even when the values are connected with lines.

The option 'Show original values' tells WinOLS also to display the original values in 2d mode if they differ from the current value.

Use the option 'Horizontal guides' to toggle the horizontal guides that are visible in the window's background.

The option 'Show Y scale' causes WinOLS to display a vertical scale on the right side of the window.

If the checkbox 'Don't connect when starting new row' is activated, then WinOLS will not connect the pixels when a new line (vertical guide) starts in the data.

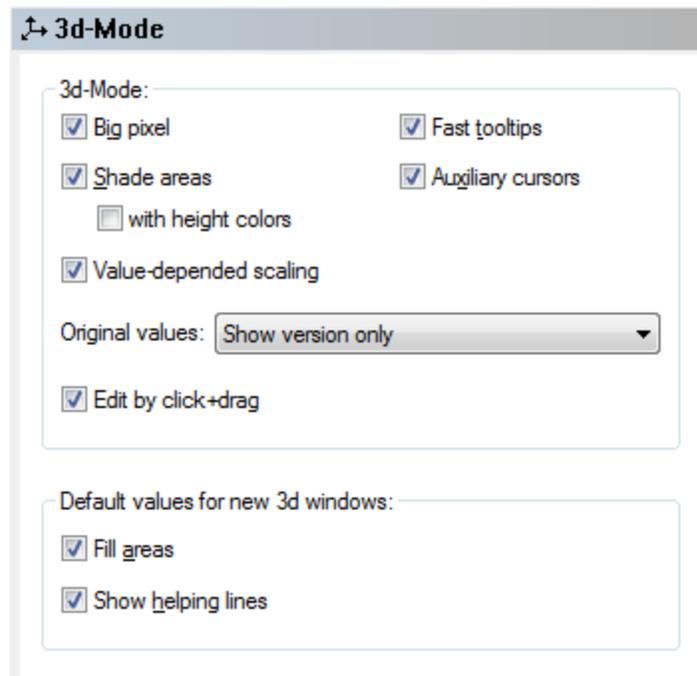
By activating the checkbox 'edit by click+drag' you can change value simply with the mouse. A special cursor appears when you move the mouse cursor directly over a 2d value that is either currently selected by the editing cursor or that is part of a selection. Click and drag to change the value / all selected values. You can disable this function in the configuration under "2d".

Area 'Default values for new 2d windows':

Here you can set the default value for new 2d windows. Use the option 'Connect dots' to toggle the default state for the connection of dots for new windows. You can configure the default for row markers, too.

Shortcuts

Symbol bar: 
 Keyboard: F12

10.3.2.4 The dialog Configuration / View / 3d (Menu Miscellaneous)**Area '2d-mode':**

The option 'Big Pixel' tells WinOLS to display pixels at the line crossings of the wire mesh to increase readability.

If the checkbox 'Fast Tooltips' is activated, the tooltips (the little yellow windows) will appear faster if the cursor is above a value.

Enable 'Shade areas' to fill areas with a colour that represents its angle to the viewer. With 'Height colors' WinOLS can display the values in the shading colour. Both options improve the view but consume a lot of computing power.

If the checkbox 'Auxiliary cursors' is checked, 4 additional cursors will mark the current values on the axis and mark the value on the map.

Value-dependent scaling: The points on the scales are not draw in equal distance, but depending on their values.

Use the 'Original values' combo box to choose the method that is used to display both the original and version values at the same time.

By activating the checkbox 'edit by click+drag' you can change value simply with the mouse. A special cursor appears either when you move the mouse cursor directly over a 3d value that is currently selected by the editing cursor or when you move the mouse cursor over a selection. Click and drag to change the value / all selected values. You can disable this function in the configuration under "3d".

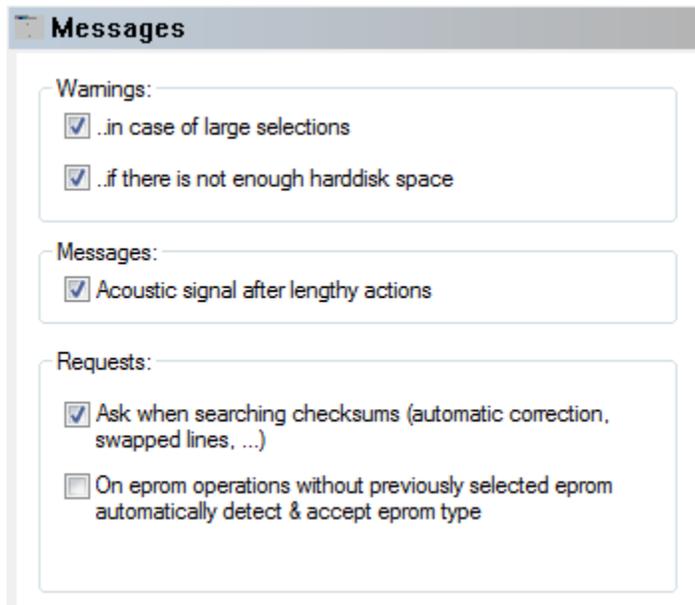
Area 'Default values for new 2d windows':

Here you can set the default value for new 3d windows. Check 'Fill areas' to create new 3d-Views by default with filled surfaces instead of a wire mesh view. You can configure the same for the helping lines.

Shortcuts

Symbol bar: 
Keyboard: F12

10.3.3 The dialog Configuration / Messages (Menu Miscellaneous)



Use this page to toggle the different warnings WinOLS supports. With the first checkbox you may toggle a warning if a selection gets to large, it may take very long to create. Secondly you may configure a check for harddisk space before every disk operation.

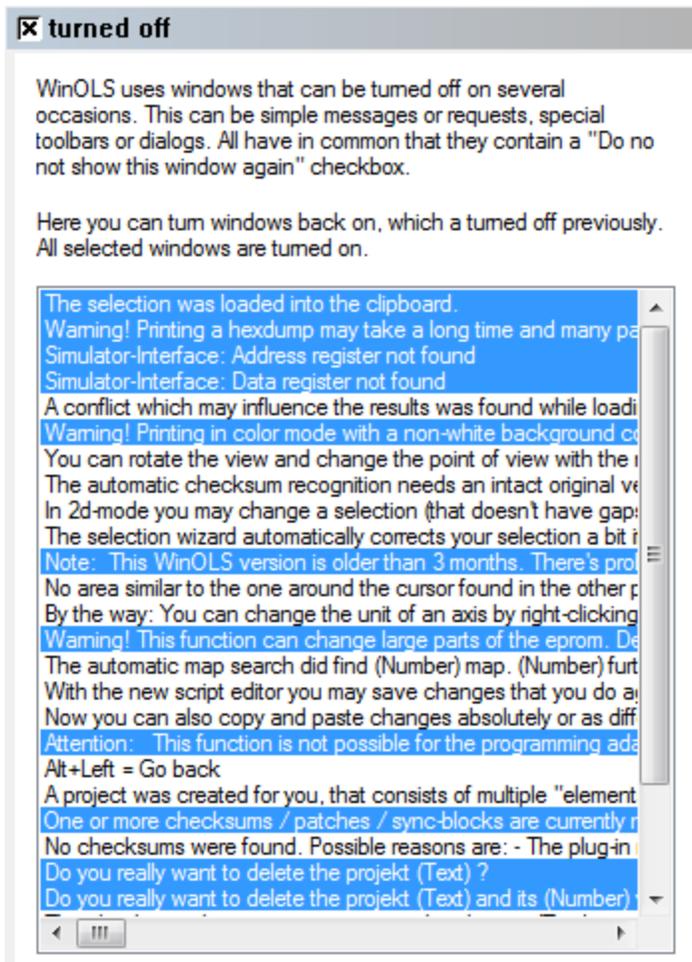
Furthermore you may tell WinOLS not to display any request dialogs when searching for checksums. This applies to the message asking whether the found checksums

should be corrected automatically and to the message asking whether a forgotten line swapping should be applied now. (Note: If one of the two messages appears even though you've unchecked this features, you must get an update for the checksum module from the EVC website.)

Shortcuts

Symbol bar: 
Keyboard: F12

10.3.3.1 The dialog Configuration / Messages / turned off (Menu Miscellaneous)



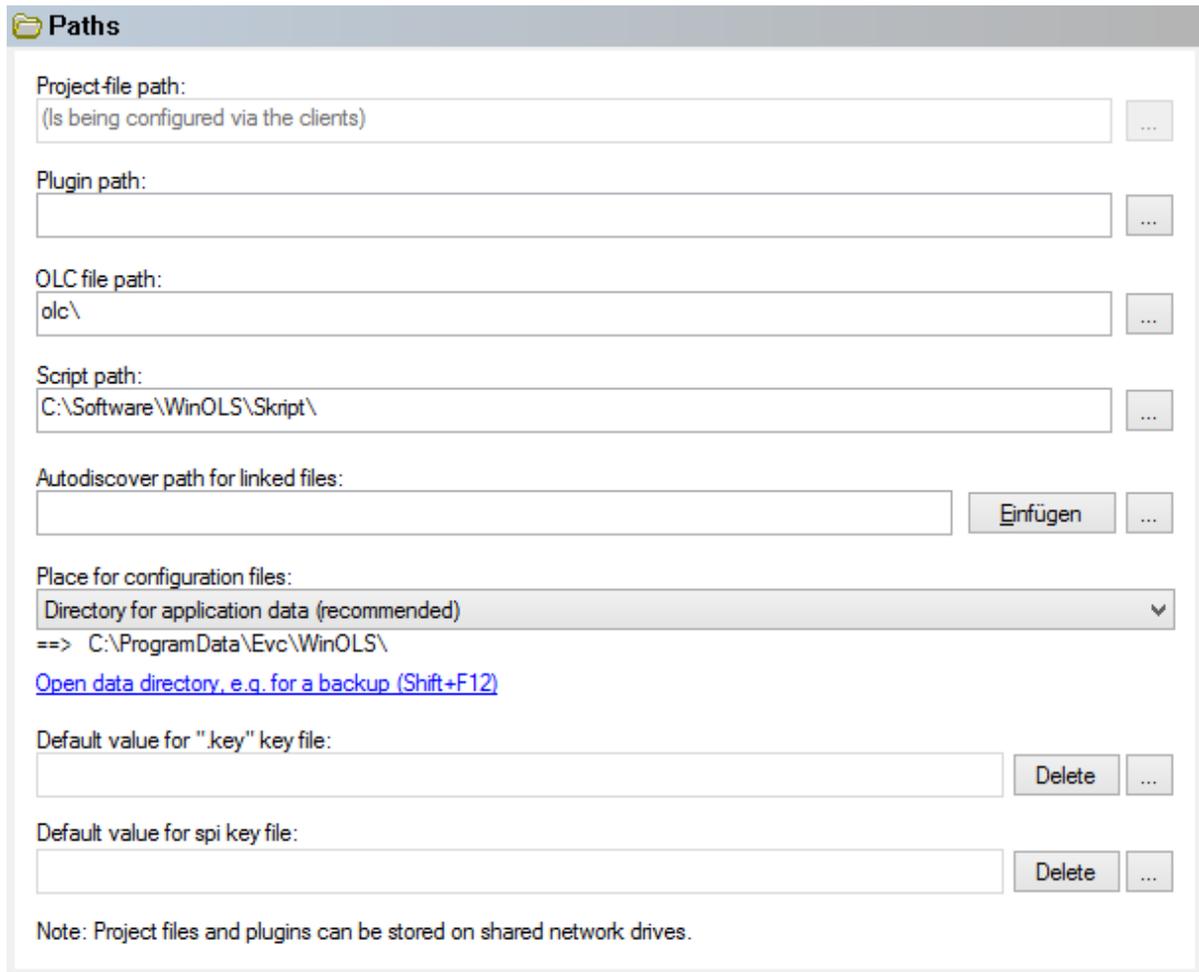
Some messages in WinOLS can be turned off. Use this page to turn them back on.

Selected messages will be displayed.

Shortcuts

Symbol bar: 
Keyboard: F12

10.3.4 The dialog Configuration / Paths (Menu Miscellaneous)



Paths

Project-file path:
(Is being configured via the clients) ...

Plugin path: ...

OLC file path:
olc\ ...

Script path:
C:\Software\WinOLS\Skript\ ...

Autodiscover path for linked files: Einfügen ...

Place for configuration files:
Directory for application data (recommended) ▾
==> C:\ProgramData\Evc\WinOLS\
[Open data directory, e.g. for a backup \(Shift+F12\)](#)

Default value for ".key" key file: Delete ...

Default value for spi key file: Delete ...

Note: Project files and plugins can be stored on shared network drives.

The different paths for the different kinds of files may be configured in the third page of the dialog. Project files and plugins may be stored on shared network drivers. You can also select the key file in this dialog which is used for eprom encryption.

Configuration files:

The WinOLS configuration files can be stored in two different places. If you're using Windows 95, 98 or ME it is a good idea to store these files in the WinOLS directory. However for all newer windows versions this is not recommended. In this case you should store the configuration files into the central folder for application data. Use the hyperlink to open an Explorer window with the path or the hotkey Shift+F12 (while all dialogs are closed).

WinOLS uses the following files:

ols. The entire WinOLS-configuration

cfg:

ols. The entire WinOLS-configuration of an older WinOLS version. Useful if your v###. using multiple WinOLS versions parallel.

cfg:
ols2. A backup of some parts of the WinOLS configuration
cfg:
ols_s The data from the Axis description profiles
p.cfg:
ols_tb The toolbars positions
.cfg:
ols_w The list of currently opened projects and windows (Workspace)
sp.
cfg:

You can copy these files any time, but should only replace them while WinOLS is closed. To transfer the configuration data to another PC, use the online-function.

Autodiscover path for linked files:

If you have files for each project which are stored under a strict system, WinOLS can automatically show them in the list of linked files. To activate this insert the respective path with wildcards. The path can contain placeholders like %Client.VIN %. It must end on characters or wildcards (i.e. not with "\" at the end, but for example with *.*). You can use multiple paths (separated with "/") to search multiple folders / use multiple wildcards. If one of the parts contains only characters and wildcards and no path, the path from the previous part is used.

Example 1:

X:\Test*.*

Example 2:

X:\Documentation\%Benutzerdefiniert.Benutzer1%_*.jpg

Example 3:

X:\Test1*.jpg/*.png/X:\Test2*.*

Autodiscover path for A2L files:

Some projects contain Ids in the hexdump, which can be found in the A2L files. If you select "Project > Ex- & Import > Damos & A2L Import", WinOLS tries to find this id and searches all A2L files in / below this folder for it. If suitable files are found, they are displayed in a list.

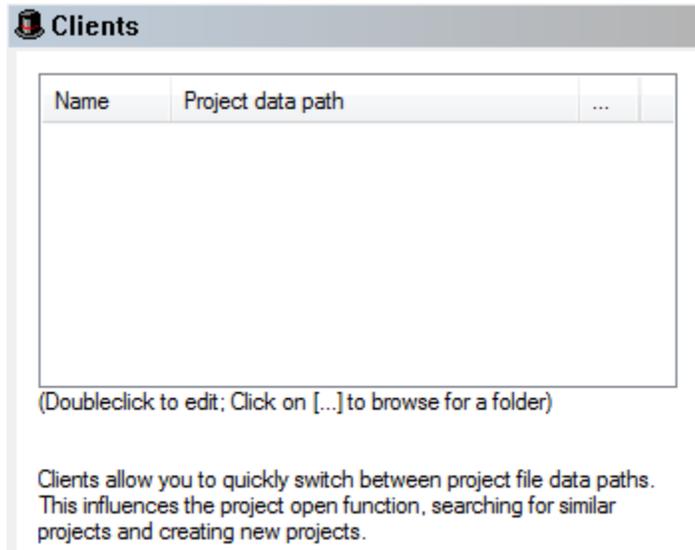
Shortcuts

Symbol bar:



Keyboard: F12

10.3.4.1 The dialog Configuration / Paths / Clients (Menu Miscellaneous)



This dialog allows you to create and edit a list of clients.

By default WinOLS stores all projects in one single folder. You can change this behaviour with "Clients". Each client represents a predefined path where WinOLS stores the projects. By choosing a client with the hat icon in the WinOLS main window or in the "Open project" dialog, you change the current project path.

Most file related functions (like searching similar projects or opening a project) will only use the current path. Open projects are not affected by a change of the project path, but will stay in their own directory. If you want to move a project to another client (and thus another path), close the project and right-click it in the "Open project" dialog.

Special clients:

Your standard client is displayed with a **yellow background**. This client is automatically determined from the shortest path of all clients and forms the basis for automatic subfolders for:

- Deleted Projects
- Corrupt files
- The Reseller Upload Folder
- The reseller download folders (for the cache.dir's of the resellers)

For resellers, the reseller client is **highlighted in green**. If you are registered with EVC as a reseller, you can find the required name on the Reseller page in the log.

Shortcuts

Symbol bar: 
 Keyboard: F12

10.3.5 The dialog Configuration / Automatically (Menu Miscellaneous)

Automatically

Automatically create internal filenames for project files:

Namespace: -

This filename is used to store the WinOLS project file whenever you save the project. It is independent from the WinOLS export filename.

In the background automatically:

Search potential maps

Generate overview information

Collect map axis description profiles

Apply map axis description profiles

Dialog project properties:

Auto-complete data

Vehicle / Model: Manage space characters (2.0 TDI!)

Space characters between number and TDI/FSI/...

Space characters between number and T/L

Load open projects on startup

Namespaces:

The 'namespaces' feature is of interest to you, if you're using WinOLS on multiple computers without using a central shared directory for all, e.g. because one of the computers is a notebook. In order to make the manual synchronisation easier, you may configure the way the files are named for each computer. Enter a from / to area to enumerate the filenames. These filenames may also contain letters.

Examples for correct namespaces are:

1000 - 9999
 1000 - 1999
 laptop1000 - laptop1999
 1000pc - 9999pc

Background:

Parameters for automatic behaviour can be configured in this section.

Search potential... If activated, WinOLS will search the project for potential maps and display them (if this is activated in the 'View' page). Potential maps will be searched only once. If you save the project and reopen it, they will not be searched again.

Generate If activated, WinOLS will automatically generate the overview

- overview... information, even if the overview window is not open. This is useful if you have the 'pale' data display activated (see 'View' page)
- Collect map... If activated, WinOLS will automatically generate for the different projects. These profiles store information about the way map axis descriptions are displayed (for example name, unit, factor, offset, ...). These profiles may be administrated in the drop-drop menu of the map selection window.
- Apply map... If activated, WinOLS will automatically try to find information to configure the map's axis descriptions better than the default values would do.
- Data areas With the help of the free plugin OLS526 can auto-detect data areas. This improves the detection of similar projects.

Dialog project properties:

- Auto-complete... If activated, WinOLS will try to complete anything you type in the project properties dialog (and in the open project dialog if you're using the inplace editing feature). For this WinOLS will use the data you entered in other projects and some predefined data.
- Manage space characters WinOLS can help you fill in the field "Vehicle / Model" in a consistent way. To achieve this, WinOLS (if you enable this option) corrects the space character between number (e.g. "2.0") and the following text (e.g. "TDI") according to your preferences.
- ...TDI If this option is active WinOLS corrects "2.0TDI" to "2.0 TDI".
If this option is inactive WinOLS corrects "2.0 TDI" to "2.0TDI".
- ...other text If this option is active WinOLS corrects "2.0L" to "2.0 L".
If this option is inactive WinOLS corrects "2.0 L" to "2.0L".

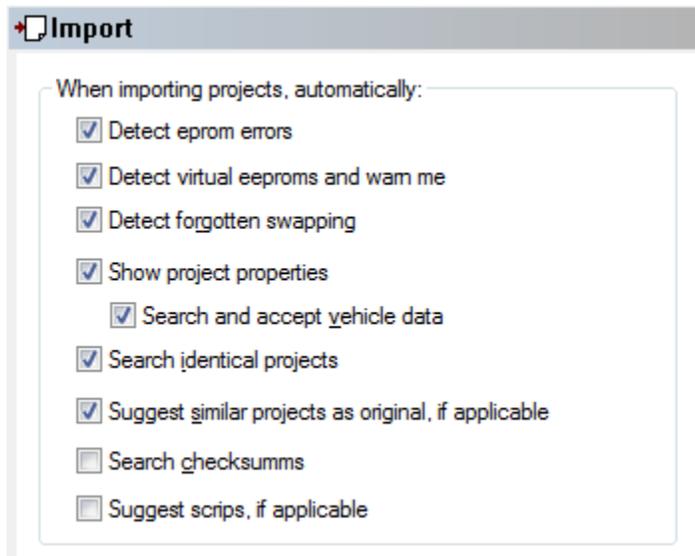
More options:

- Load projects... If activated, all projects with were opened when exiting WinOLS will be re-opened on the next start of WinOLS.

Shortcuts

Symbol bar: 
Keyboard: F12

10.3.5.1 The dialog Configuration / Automatically / Import (Menu Miscellaneous)



Parameters for automatic behaviour can be configured in this page. All options only apply for the import / eprom reading process.

Detect eprom...	If activated, WinOLS will search for typical eprom errors after a reading an eprom or importing a file. Some typical mistakes can be recognised this way, but not all. WinOLS will only display a message if an error was found.
Virtual eeproms	Details at http://www.evc.de/en/service/q1608.asp
Detect forgotten...	If activated, WinOLS will try typical line swapping configurations to see if you forgot to use one when importing. If a missing line swapping was detected you will be asked if you want to apply it now. Otherwise you won't receive any messages.
Show project...	Shows the dialog "project properties" when importing a file.
Search and...	If activated, WinOLS will search the eprom contents for vehicle information when the project properties dialog is displayed for the first time after an import from file or eprom. The data will be automatically entered into the dialog.
Search identical...	If activated, WinOLS will search for identical projects after an import.
Suggest similar...	If activated, WinOLS will search for similar projects that could be used as original for the current import and will offer a list with the possible candidates.
Search checksums...	If activated, WinOLS will search for checksums within the import. If there were already checksums found within the projects, these will be recalculated.
Suggest	If activated, WinOLS will display a list of scrips if there are any that

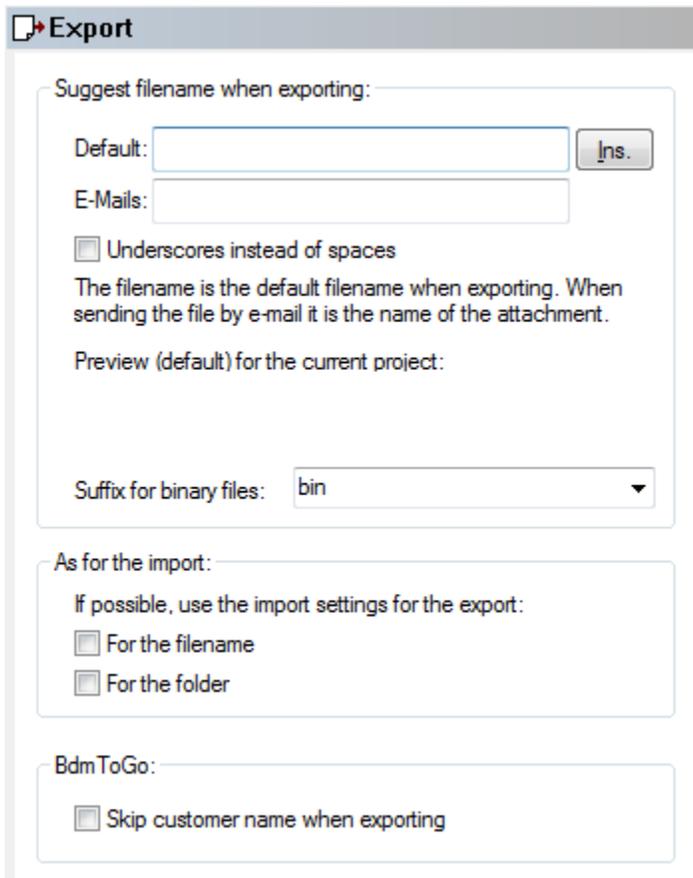
scripts... can be applied to the current project.

Shortcuts

Symbol bar: 

Keyboard: F12

10.3.5.2 The dialog Configuration / Automatically / Export (Menu Miscellaneous)



Export

Suggest filename when exporting:

Default:

E-Mails:

Underscores instead of spaces

The filename is the default filename when exporting. When sending the file by e-mail it is the name of the attachment.

Preview (default) for the current project:

Suffix for binary files:

As for the import:

If possible, use the import settings for the export:

For the filename

For the folder

Bdm ToGo:

Skip customer name when exporting

Placeholders:

When exporting WinOLS can use the project properties to generate a suggestion for the export filename. You can configure the format of this suggestion with texts and placeholders in this dialog. Use the button "Ins." to select the placeholder that you want to use. For the export of binary files you can furthermore configure the method that is used to generate the file suffix.

When importing a file, WinOLS remembers the import filename and the folder where the file was imported from. You can use this data as default when exporting the same file again. If you activate these options, it will override the template mentioned above whenever this data is available.

For the export of BxxToGo/ols files, you can configure WinOLS to remove the name/number of the customer and the license plate information from the file when

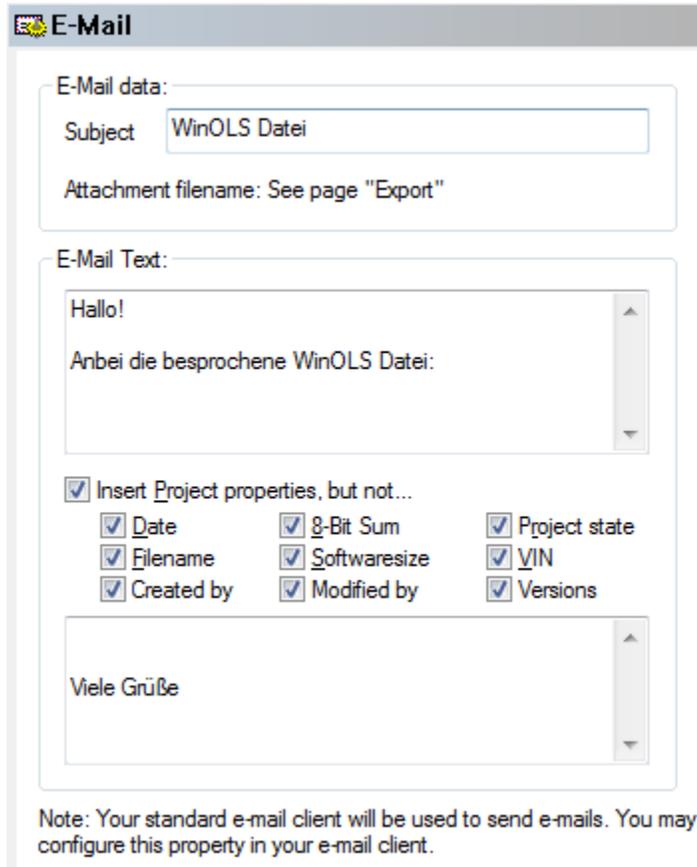
exporting.

The settings on this page are used for the export as file and e-mail attachment.

Shortcuts

Symbol bar: 
Keyboard: F12

10.3.5.3 The dialog Configuration / Automatically / E-Mail (Menu Miscellaneous)



With this dialog you can configure the standard contents of any mail you send when exporting WinOLS files by e-mail. The file is sent with your standard e-mail program, but that program will probably not append any standard footer you may have configured. (This behaviour may depend on your e-mail client.)

You can configure the default subject line, a starting text and an ending text. Furthermore you may have WinOLS add project information to the mail. These are all information you can display in the select 'Select ECU' dialog. (Only information fields that contain data will be added.) You can choose to ignore several information fields.

When sending a mail from WinOLS, your standard e-mail client will be used. You

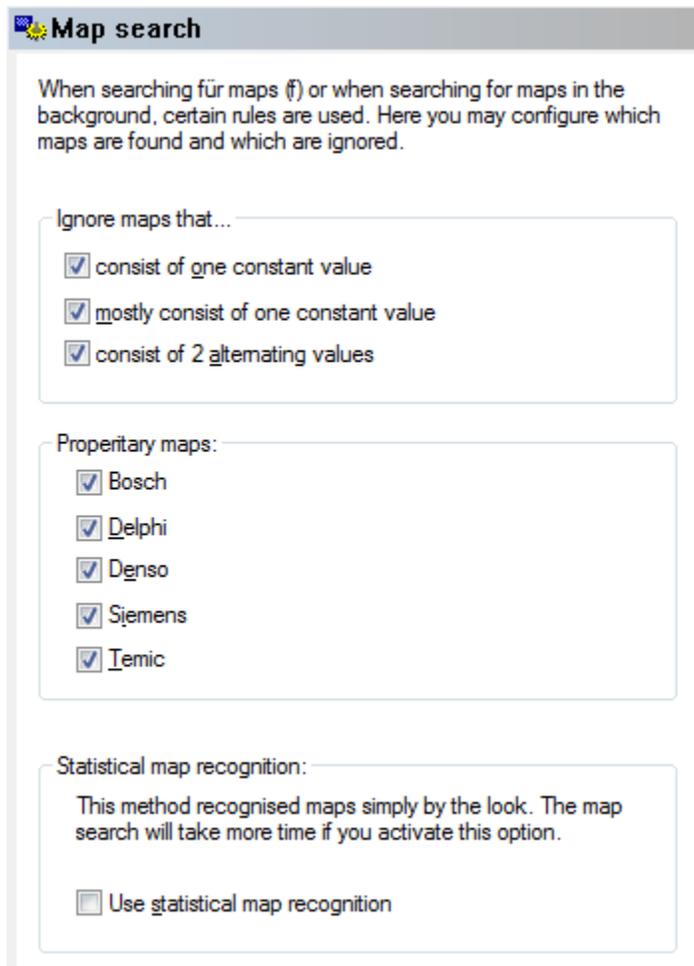
can configure this property in your e-mail client. The actions necessary to do this depend on the e-mail client.

Shortcuts

Symbol bar: 

Keyboard: F12

10.3.5.4 The Dialog Configuration / Automatically / Map search



With this dialog you can configure the way maps are searched. This applies both to the direct search (hotkey f) and the automatic search in the background.

In order to reduce misdetections, WinOLS ignores several map types by default. You may choose to change this and accept maps which consist only of one value, mostly of one value or of 2 alternating values.

Furthermore WinOLS can search for maps in the vendor specific formats, if this activated in this dialog.

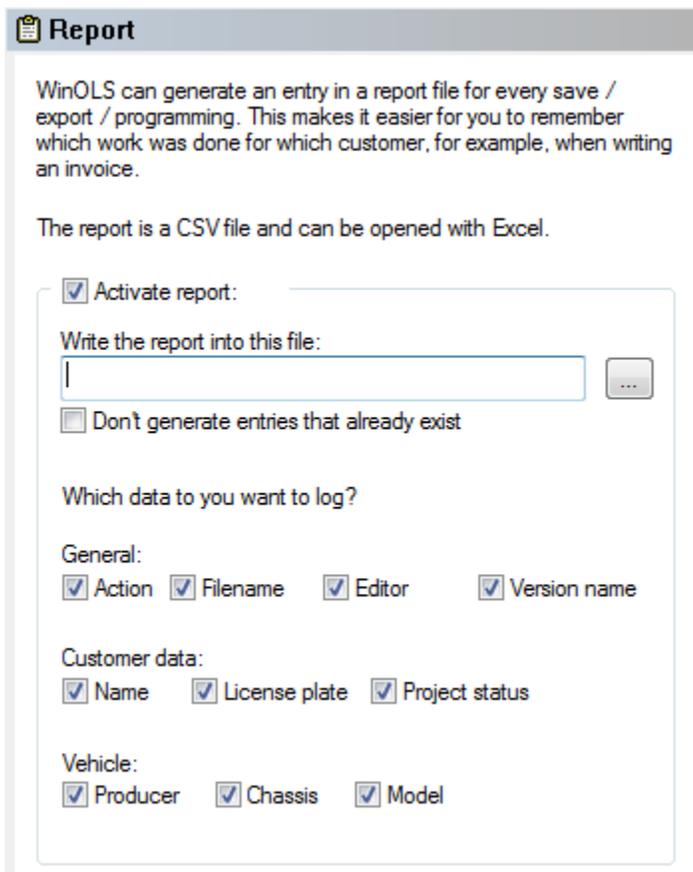
Another option is the 'Statistical map recognition' which is able to recognise maps that are not stored in a specific format. This method of recognition judges the data by its 'Look', just like a human would do it. As a result it is able to find maps without any special headers or structural data. As a drawback this recognition takes quite some time and map axis data is only rarely recognised.

Shortcuts

Symbol bar: 

Keyboard: F12

10.3.5.5 The Dialog Configuration / Automatically / Report



Report

WinOLS can generate an entry in a report file for every save / export / programming. This makes it easier for you to remember which work was done for which customer, for example, when writing an invoice.

The report is a CSV file and can be opened with Excel.

Activate report:

Write the report into this file:

Don't generate entries that already exist

Which data to you want to log?

General:

Action Filename Editor Version name

Customer data:

Name License plate Project status

Vehicle:

Producer Chassis Model

WinOLS can create report files in a logfile format. Everytime you save, export or program a project, WinOLS will write a line with information into this file. You can open the file later on with Excel to understand which work was done for which customer.

If you activate the report option, you must select a file in which the information will be stored. The file can be stored on a network drive and it can be used by several users at the same time (if they all use the same settings).

If you activate ‘Don't generate entries that already exist’, only one entry will be created if you save the same project 2 times. If the report file is big, this option can cause perceptible waiting times.

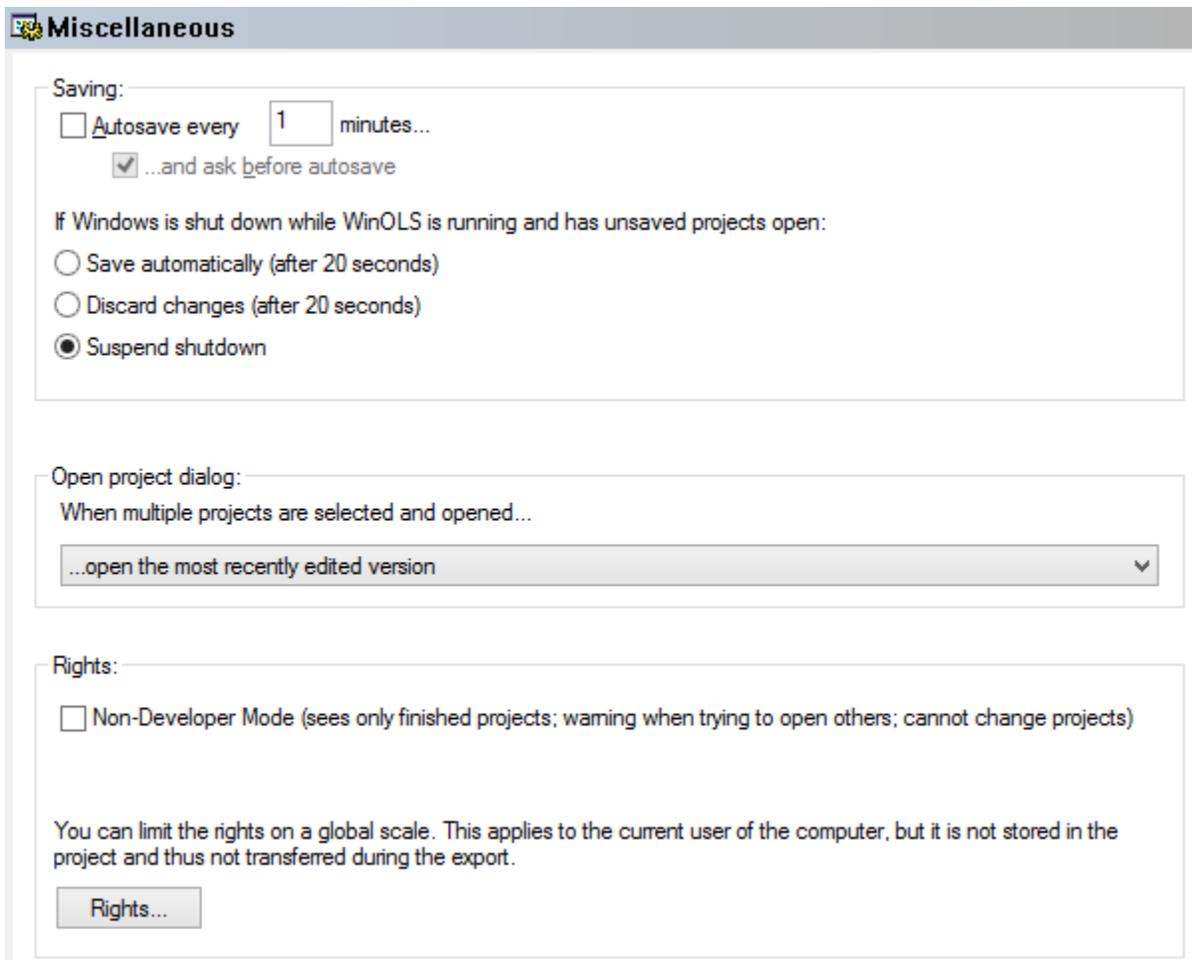
All further checkboxes refer to the information (and thus the columns of the table) that are stored. Choose the information that you want to store. The current date will always be stored.

Shortcuts

Symbol bar: 

Keyboard: F12

10.3.6 The dialog Configuration / Miscellaneous (Menu Miscellaneous)



Miscellaneous

Saving:

Autosave every minutes...

...and ask before autosave

If Windows is shut down while WinOLS is running and has unsaved projects open:

Save automatically (after 20 seconds)

Discard changes (after 20 seconds)

Suspend shutdown

Open project dialog:

When multiple projects are selected and opened...

...open the most recently edited version

Rights:

Non-Developer Mode (sees only finished projects; warning when trying to open others; cannot change projects)

You can limit the rights on a global scale. This applies to the current user of the computer, but it is not stored in the project and thus not transferred during the export.

Rights...

Saving:

- If you activate the Autosave option, projects with changes are automatically saved after a defined time.
- Furthermore you can choose how WinOLS should react if Windows is shut down while WinOLS is running and has unsaved changes.

Rights:

Here you may turn on the 'Non-developer mode'. In this mode, only projects which are marked as 'finished' are visible in the open projects dialog. Moreover you cannot make any changes on the projects.

With the button 'Rights' you can (just like in the dialog Project properties) limit the user rights. However, the limitations in this dialog apply not only to the current project, but to the entire WinOLS.

Encryption:

You can have the versions encrypted in .ols files. This happens automatically when saving the version. If the versions are encrypted with their customer number, then they can only be opened with an appropriately registered WinOLS. This protects you against unauthorized distribution of .ols files - but not against export.

The encryption/decryption is fully automatic. No password needs to be entered.

Shortcuts

Symbol bar: 
Keyboard: F12

10.3.6.1 The dialog Configuration / Miscellaneous / Edit (Menu Miscellaneous)

Edit

Selection & Clipboard:

- Select only visible parts of columns
- Delete selection when moving the cursor
- When pasting a single value onto a selection, fill the area
- Scale when inserting into a rectangular selection
- Wizard 'Create map' when no map was created from selection

Strength of...

...the function value +/- 1: 8 Bit: 16 Bit: 32 Bit: Ctrl: *

...Ctrl + PageUp / PageDown: Bytes (hex)

...the mouse wheel (1=default): Text: 2d: 3d:

Tastatur:

The hotkey # rotates between: 8 Bit 16 Bit 32 Bit 32 Bit float

- Number keys start in text mode the 'Inplace edit' mode
- CapsLock works like Shift (and can skip dialogs/reloads)

Editing operations work with shown values (Text+2d) Live-Preview map/hexdump properties

Double-click opens map/hexdump properties Line change from keys <- / ->

Hide duplicate maps in hexdump popup menus

Compare name, too

Selection & Clipboard:

- Select only... If activated, column selections work only in the visible area.
- Delete selection... If activated, any change in the cursor position, will remove the current selection unless you're currently changing the selection. This option is useful if you're working without a mouse.
- When pasting... If you copy a single cell, then select and paste a range, this function can fill the range with the value
- Scale when... If you copy a rectangular selection and then create a rectangular selection of a different size and paste , the values can be scaled to fit.
- Wizard... Displays a wizard if the "Generate map" function cannot derive a meaningful map variable from the selection.

Strength of...

- value... Every time you press the + or - key, the current value is changed.

Use these fields to configure how much the value should be changed. It can be configured for the different possible bit widths.

PageUp... You may use the keys Ctrl+PageUp and Ctrl+PageDown to jump a large block with the cursor. The size of this block (in bytes) may be configured here. This is for example useful if the interesting parts within a project are exact 8000 bytes apart.

Keyboard:

Determines which data organizations are switched through by the hotkey.

Number keys... If this option is active, you can edit values simply by hitting a number key (0-9) in text mode. If the option is not active you have to hit the 'Enter' key before you can enter a new value.

CapsLock You can skip numerous dialogs (or reload events) by pressing the Shift key. Both when clicking on menu/icon, and by adding the Shift key to the hotkey. This determines whether the CapsLock key also has this function.

Individual items:

Editing operations... When activated, the edit relative function will not work on the eprom data, but on the shown data (which may be different because of factor and offset). Furthermore the + and - function will not increase / decrease the eprom value by one, but try to increase the last digit. If that is not possible because the change would be too small, the eprom value will be changed by 1.

Double-click Double-clicking in an empty area can open the hexdump/map field properties.

Duplicates In some places in the hex dump there are several map (axes) on top of each other. You can filter out these duplicates in the context menu. You can specify whether only address+size or also the name is to be used for the duplicate detection.

Live Immediately applies changes in the hexdump/map dialog. For large projects this can cost noticeable performance.

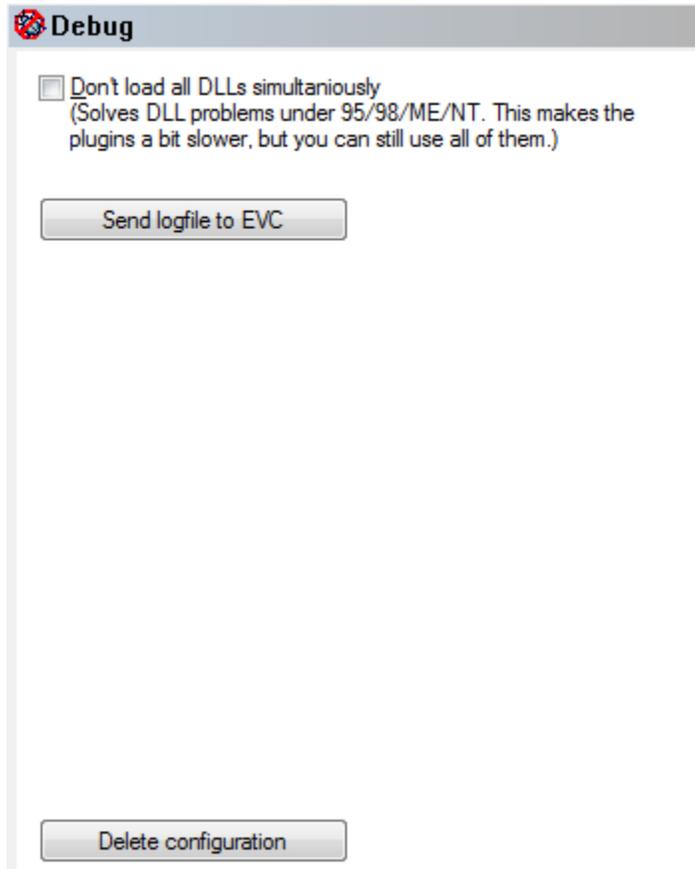
<- / -> Determines whether the cursor left/right keys at the beginning/end of the line should trigger a jump to the next line.

Shortcuts

Symbol bar: 

Keyboard: F12

10.3.6.2 The dialog Configuration / Miscellaneous / Debug (Menu Miscellaneous)



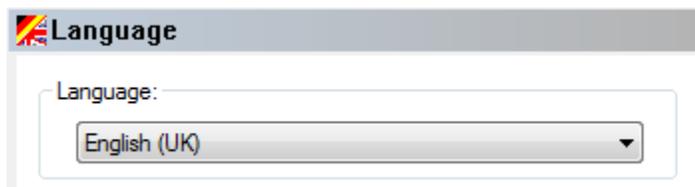
Don't load all...

Under 95/98/ME/NT the number of DLLs that can be loaded at the same time is limited. If you have licensed many plug-ins, it may happen that some of these plug-ins do not work. Normally this option is automatically activated in this case, but you may also activate it manually. You can still use all plug-ins, but they may be slightly slower.

Shortcuts

Symbol bar: 
Keyboard: F12

10.3.6.3 The dialog Configuration / Miscellaneous / Language (Menu Miscellaneous)

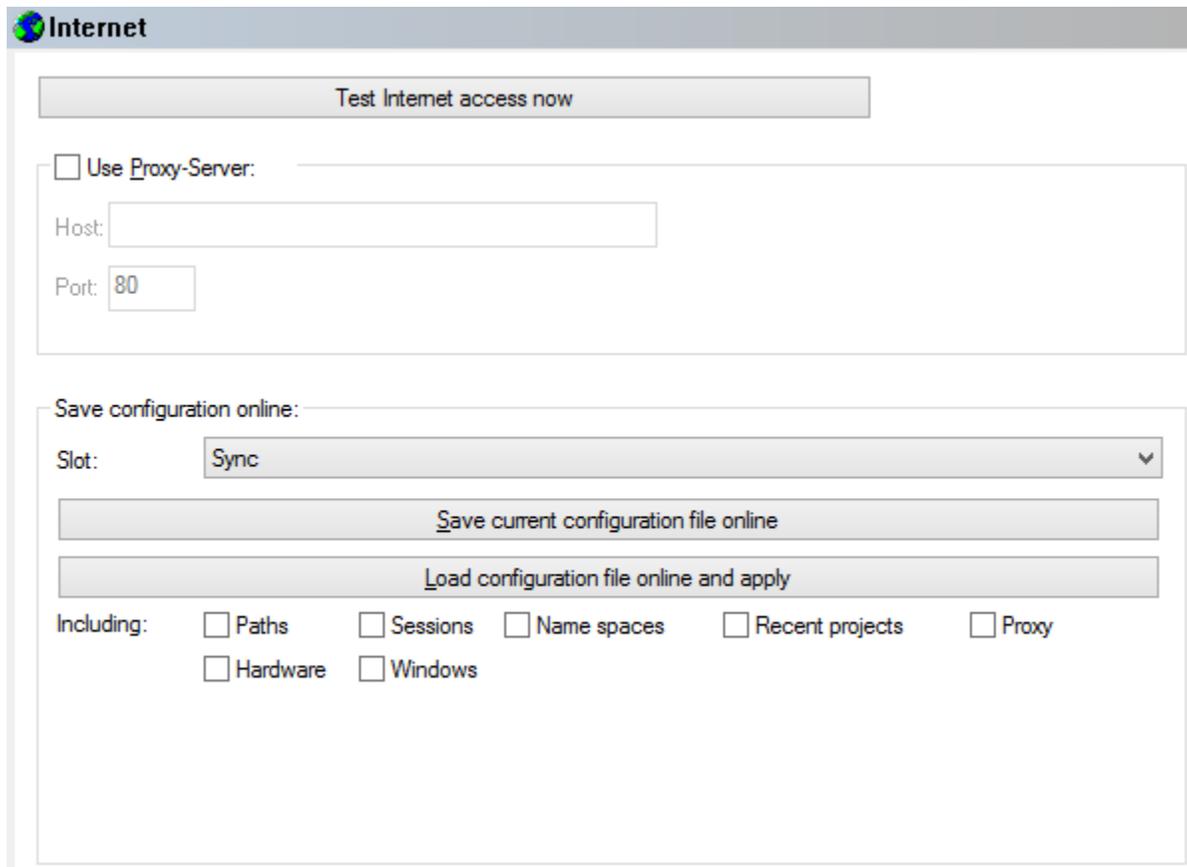


Different languages may be chosen for the user interface. Changing the language requires a restart and will reset the toolbar configuration.

Shortcuts

Symbol bar: 
Keyboard: F12

10.3.7 The dialog Configuration / Miscellaneous / Internet (Menu Miscellaneous)



Internet

Test Internet access now

Use Proxy-Server: _____

Host: _____

Port: 80

Save configuration online:

Slot: Sync

Save current configuration file online

Load configuration file online and apply

Including: Paths Sessions Name spaces Recent projects Proxy
 Hardware Windows

Test:

Several WinOLS functions can access the internet. Here you can check the access to the internet and the EVC website for various typical problems.

Proxy:

Furthermore you configure here whether WinOLS should use a proxy server to contact the internet. Please contact your network administrator for details.

If your proxy requires a login with username and password, please enter this as "host" in the format "username:password@proxy".

Save configuration online:

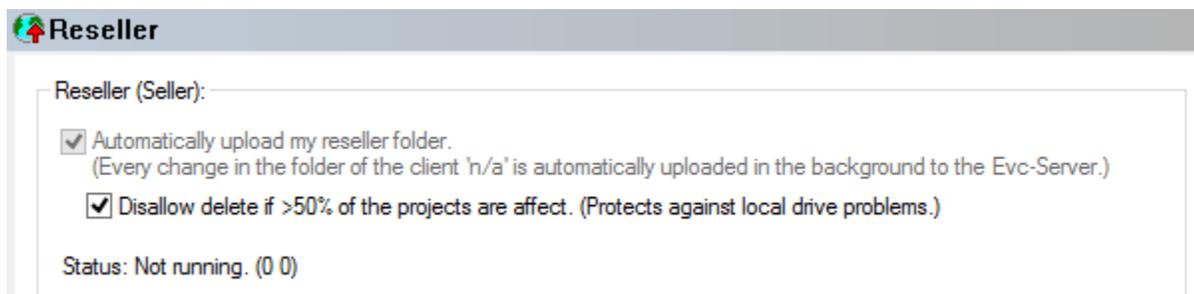
You can save your configuration file online on evc.de. For example to have a backup or to use the same configuration on multiple PCs. For this you can choose between multiple slots on the server.

Please note: This function uses the currently *saved* configuration. Changes that you just made, but didn't confirm with OK are ignored.

Shortcuts

Symbol bar: 
 Keyboard: F12

10.3.7.1 The dialog Configuration / Miscellaneous / Reseller (Menu Miscellaneous)



This page is only available to resellers (sellers).

You start the reseller sync here and see the current status and messages.

Disallow delete...:

By default, this option should be enabled. If your reseller folder is seen as 'empty' because of a hard disk or network error, the online versions are protected by this.

Automatically upload ...:

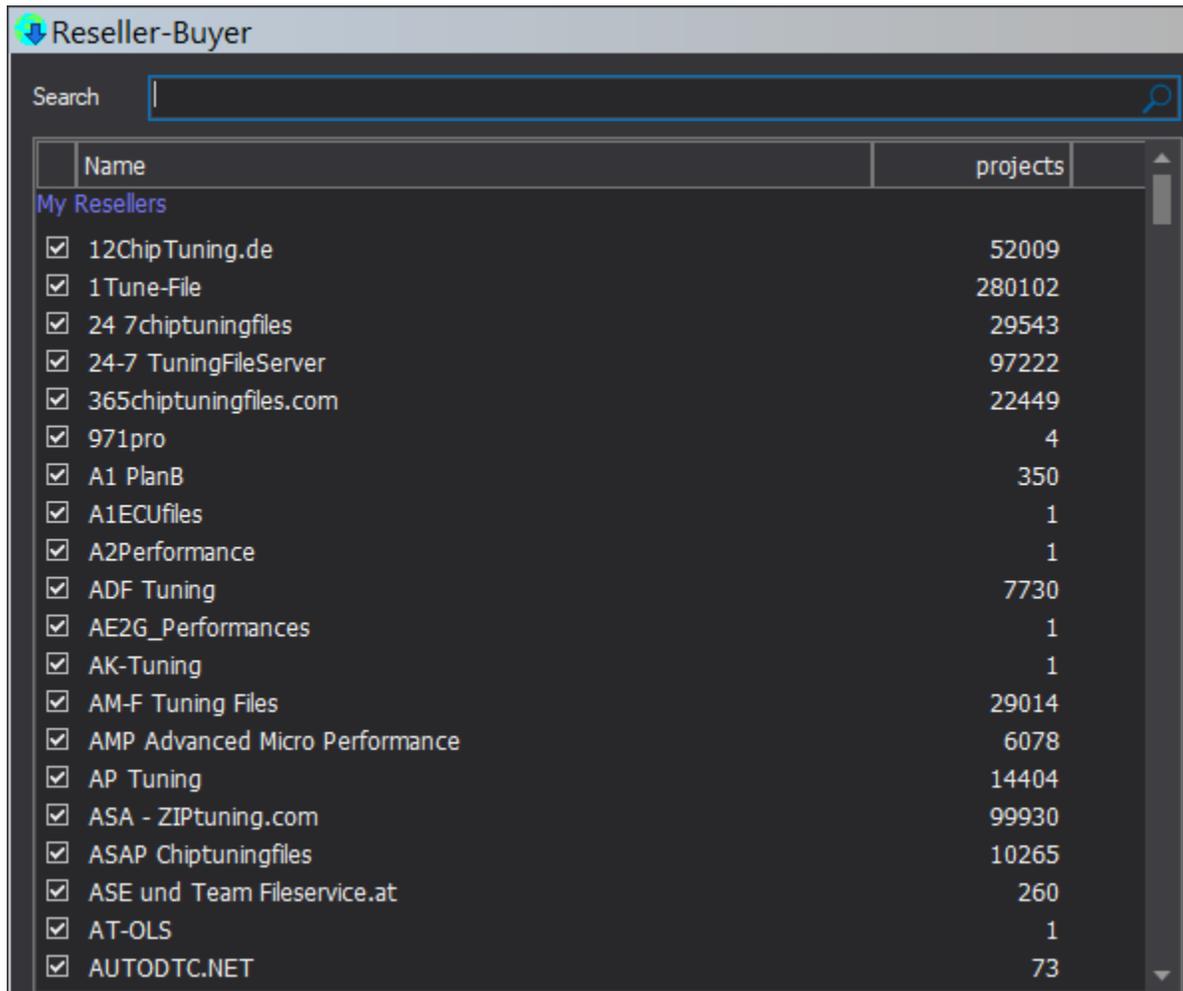
WinOLS can automatically create second versions of your projects, which do not contain any maps, nor versions, and offer them in addition to the regular project at another credits price. This happens virtually when uploading, so no files are created on your hard disk. The project type is automatically changed to 'originalfile', the filename gets the prefix 'autoorgver_'. If you fill in the price field in this dialog, the credits price is also changed accordingly. Projects from which you have already manually created a copy without versions / characteristic fields are not given a second version by this function.

Optionally, you can skip specific projects for this function. To do this, enter one or more (comma-separated) reseller project types. An asterisk replaces any string. Upper/lower case is ignored. Example: "Training project, *mappack, *test**"

Shortcuts

Symbol bar: 
 Keyboard: F12

10.3.7.2 The dialog Configuration / Miscellaneous / Reseller-Buyer (Menu Miscellaneous)



Here you can see a list of your resellers / available resellers.

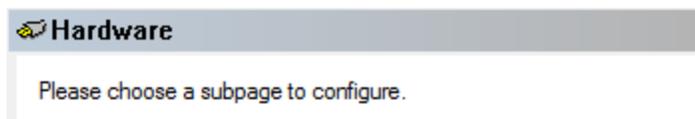
Double-click / right-click the list to become a customer of the reseller on the website / end the business relationship or view up the list of the reseller's projects.

If you uncheck the box in front of the reseller, the reseller will be skipped in the hat menus and under "All resellers".

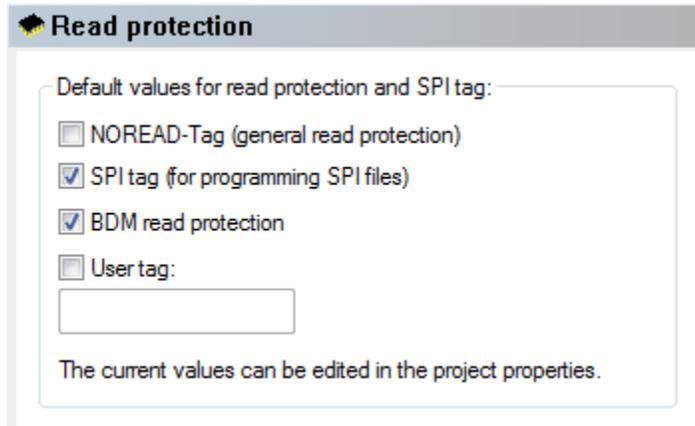
Shortcuts

Symbol bar: 
Keyboard: F12

10.3.8 The dialog Configuration / Hardware (Menu Miscellaneous)



10.3.8.1 The dialog Configuration / Hardware / Read protection (Menu Miscellaneous)

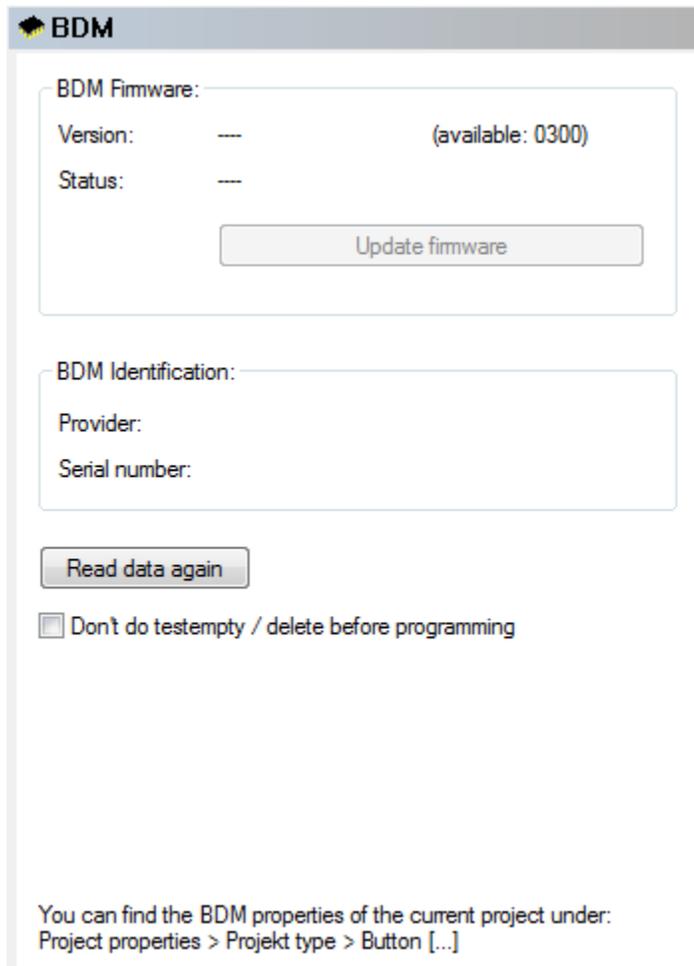


This dialog allows you to edit the default values for some protection settings. The values can later be edited in the dialog "Project properties" for each project individually.

Shortcuts

Symbol bar: 
Keyboard: F12

10.3.8.2 The dialog Configuration / Hardware / BDM (Menu Miscellaneous)



The screenshot shows a dialog box titled "BDM" with a yellow lightning bolt icon. It is divided into two main sections. The first section, "BDM Firmware:", contains two labels: "Version:" and "Status:", each followed by a dashed line indicating missing information. To the right of the "Version:" label, the text "(available: 0300)" is displayed. Below these labels is a button labeled "Update firmware". The second section, "BDM Identification:", contains two labels: "Provider:" and "Serial number:", each followed by a dashed line. Below these labels is a button labeled "Read data again". At the bottom of the dialog, there is a checkbox labeled "Don't do testempty / delete before programming" which is currently unchecked. At the very bottom, there is a note: "You can find the BDM properties of the current project under: Project properties > Projekt type > Button [...]"

This dialog displays data about the currently connected BDM module.

For information about the BDM serial number in the project please use the dialog "Properties: project".

Shortcuts

Symbol bar: 
Keyboard: F12

10.3.8.3 The dialog Configuration / Hardware / BSL (Menu Miscellaneous)

BSL

Local Driver:

Version: 0000

Chip Firmware:

Version: ? (available: 0000)

Status: 0001

Update chip firmware

BSL activation:

Status: ?

BSL Identification:

Provider: ? Set / delete...

Serial number: ?

Read data again

You can find the BSL properties of the current project under:
Project properties > Projekt type > Button [...]

This dialog displays data about the currently connected BSL module.

For information about the BSL serial number in the project please use the dialog "Properties: project".

Shortcuts

Symbol bar: 
Keyboard: F12

10.3.8.4 The dialog Configuration / Hardware / Eprom (Menu Miscellaneous)

Eprom

No Eprommer

Batronic:

USB
Found in: C:\Program Files (x86)\Batronic\Prog-Express\Pro

Große-Wilde:

Parallel port:

Port 378 Port 278 Port 3BC

Other Port:

ISA card:

Port 280 Port 298 Port 2B0
 Port 288 Port 2A0 Port 2B8
 Port 290 Port 2A8

Use exclusively (recommended for read/write errors under XP)

WinOLS can be used to communicate with a Große-Wilde MP2440P or Batronic eprommer. This dialog allows you to choose the kind of communication connection.

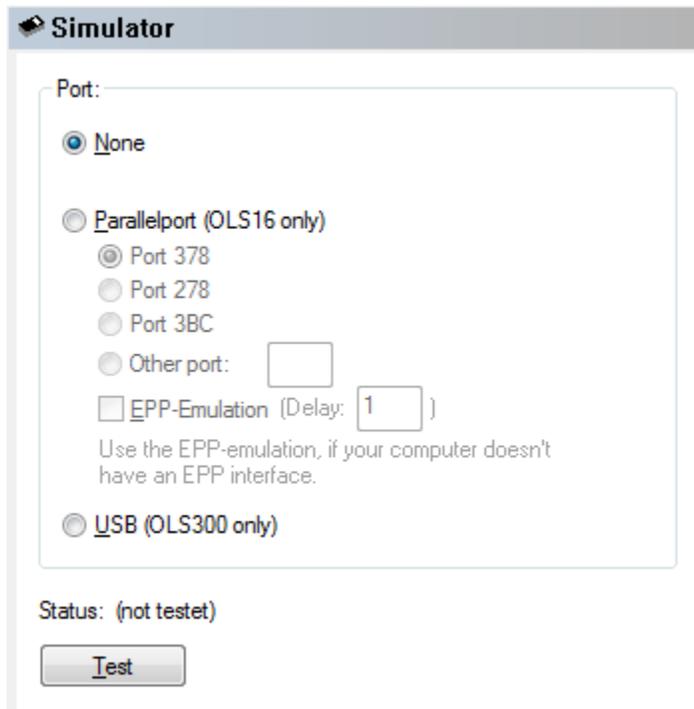
Note:

The MP2440P eprommer will only work, if you manually activated the support for this device during the installation of WinOLS!

Shortcuts

Symbol bar: 
Keyboard: F12

10.3.8.5 The dialog Configuration / Hardware / Simulator (Menu Miscellaneous)



WinOLS can be used to communicate with an OLS16 or OLS300 simulator. This dialog allows you to choose the kind of communication connection.

Note:

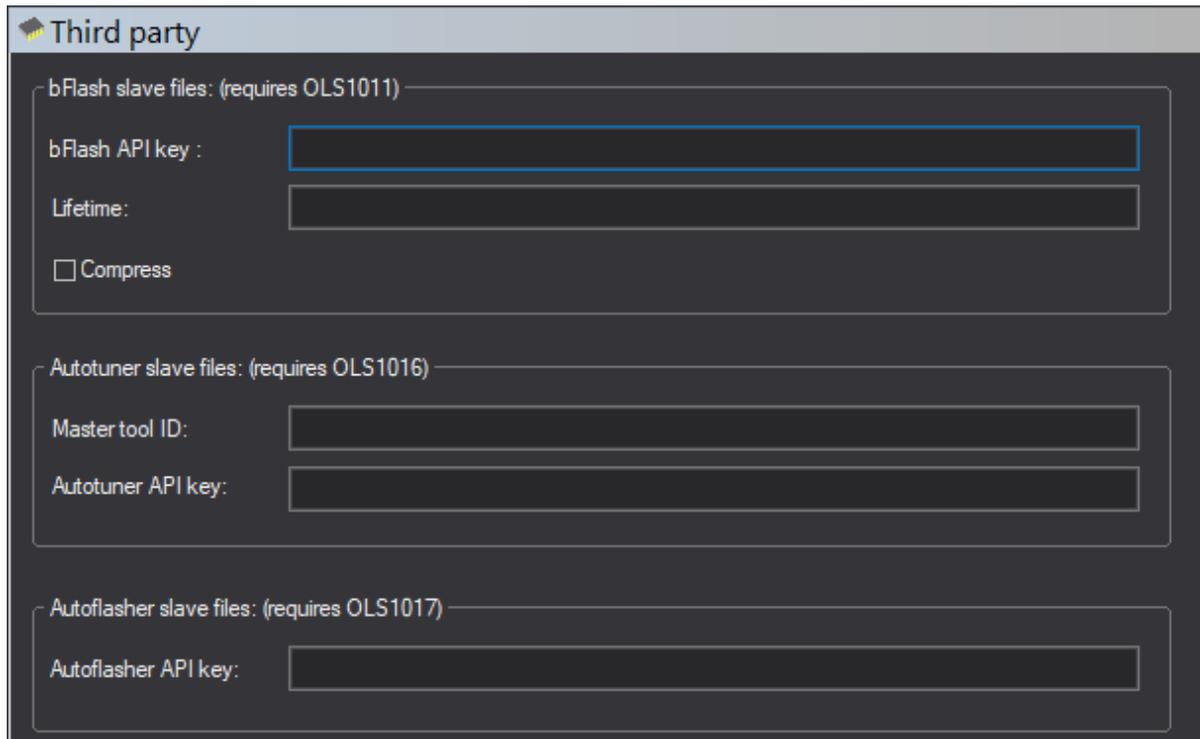
The OLS16 simulator will only work, if you manually activated the support for this device during the installation of WinOLS!

Shortcuts

Symbol bar: 

Keyboard: F12

10.3.8.6 The dialog Configuration / Hardware / Third Party (Menu Miscellaneous)



Third party

bFlash slave files: (requires OLS1011)

bFlash API key :

Lifetime:

Compress

Autotuner slave files: (requires OLS1016)

Master tool ID:

Autotuner API key:

Autoflasher slave files: (requires OLS1017)

Autoflasher API key:

For some plugins you need keys or other information from third parties. You can enter these here. For the specific values to be entered, please contact the respective third-party provider.

Shortcuts

Symbol bar: 
Keyboard: F12

10.4 The command Calculator (Menu Miscellaneous)

This command starts the Windows calculator, if it was installed.

Shortcuts

Symbol bar: -
Keyboard: -

Chapter

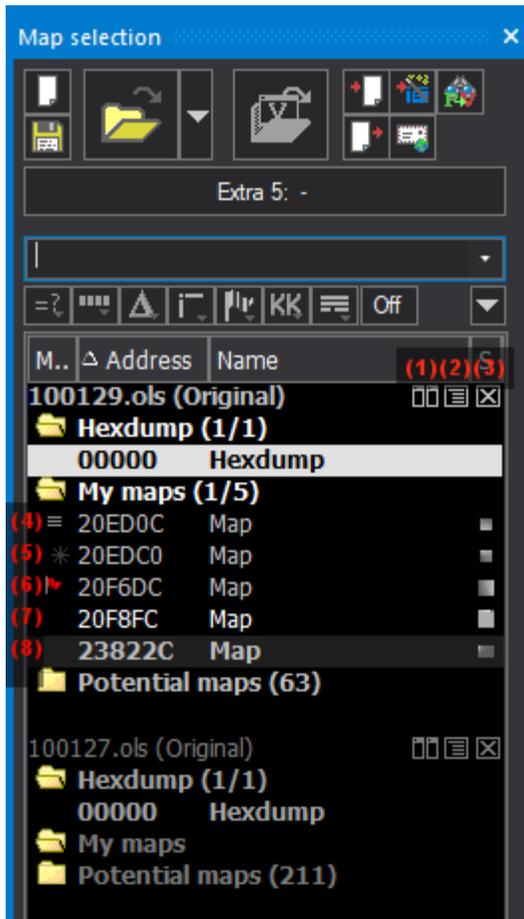
XI

11 Commands of the menu Window

The menu **Window** contains commands to manage the different windows:

Map selection	Shows an overview for all maps
Differences to the original	Shows the differences of the current map as a list
Overview	Shows an overview of the project.
Preview	Shows a 3d-preview for rectangular selections or selected maps.
Project comment	Displays the comment stored for the currently active project.
Lua	List, execute, debug and encrypt LUA script.
Toggle floating windows	Shows or hides all floating windows.
New window	Opens a new window for the current document
Cascade	Cascades all open windows
Tile horizontally	Tiles all windows horizontally
Tile vertically	Tiles all windows vertically
Window 1, 2, ...	Switches to the selection window

11.1 The dialog Map selection (Menu Window)



Symbol legend:

1. Project is connected.
2. Click to fold the project.
3. Click to close the project.
4. This map has a comment. You can see it in the tooltip or in the map properties.
5. This map has factor/offset
6. The flag (or other symbols) is only for your overview.
7. The map contains changed values.
8. Bold = This map/hexdump is currently open.

This dialog displays an overview of all open projects and their windows and allows you to duplicate and delete windows.

Button double-line:

The buttons in this line correlate with the items in the main menu. Each has a tooltip for explanation.

Session button:

The wide session button allows changing the active session.

Search line:



The search line filters the entries in the list (either for the current project or for all projects). Only maps with the text in the name or id are shown. Apart from a search text, you can also enter the following commands into the combo-box:

- Bit width: 8, 16, 32
- Dimension: 0dim, 1dim, 2dim

- Exact size or size range: 16x32, 16x20-32
- Map address: e.g. 0x800a
- Map groups ids: e.g. #2
- -Negative: Type a minus sign in front of a word to exclude all maps that contain this word from the results.
- "exact words": Putting words into quotation marks to search for projects that contain these words in exactly this way (and not just the individual words).
- "one/ortheother": Separating words with a slash (or the word "or") means that it's okay if only one item in this group is found.

Filter button line:

The filter-buttons left of the black triangle are shortcuts to the filter submenus.

A mouse-click on the black triangle will open a small menu with additional commands for this dialog:

- You can export the list into a CSV file. (Same function as in the Project / Export Menu)
- You may search the map list for a specific map
- You may show or hide a column. (Note: The column Id is useful if you're importing Damos or A2L maps.)
- You can show / hide maps according to their bit width. You may specify a certain bit width or you can tell WinOLS to show only the maps that have the same bit width that the hexdump window currently has.

List:

A line in bold type symbolizes an open window. The text color shows (just like inside a window) whether the window contains any changes compared to its original version. The windows inside the list can be opened, closed, deleted or duplicated with a context menu (right mouse button). Double-click a line to open / close the window.

If you click the icon near the project or with the context menu you may hide windows from the list. This is useful when you have a large number of windows. Hidden windows are normally not displayed in the list. If you right-click a project in this window you may configure whether the maps are displayed even though they are marked as hidden, for example if you want to un-hide them. Maps that appear in the list even though they are hidden can be recognized by their faded color. (You can configure the hiding strategy at Miscellaneous > Configuration > Miscellaneous > Edit.)

Special clicks in the list:

- Click in the first column in order to toggle a flag for marking purposes. The flag is for your reference only.
- Click in the project line on the fold icon to reduce the entire project to one line. Click on the X icon to close the project
- Click+Hold in the project line and drag it to an Explorer or Outlook window to export.

- Click+Hold in the project line and drag onto another project line to connect the projects.
- Right-click the list's headline to select the columns.

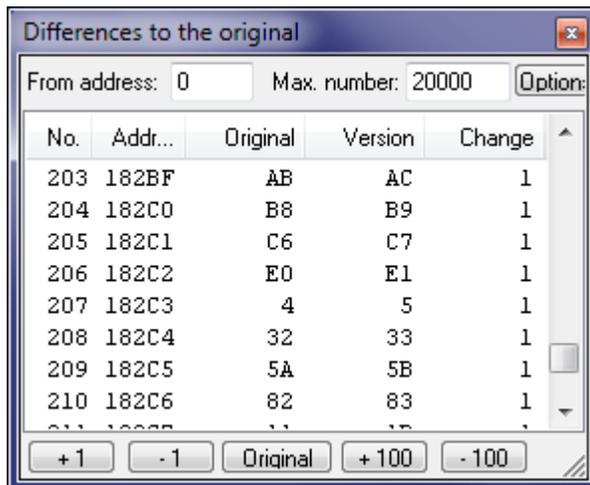
Modal + Docking:

This dialog is not modal, meaning that windows lying behind the window may still be used. The size of the dialog may be configured. The window may be (un-)docked by doubleclicking the headline / title. This dialog may be (depending on your configuration) a "floating" dialog. All floating dialogs can be toggled with the tab key.

Shortcuts

Symbol bar: 
 Keyboard: Ctrl+K

11.2 The dialog Differences to the Original (Menu Window)



This dialog shows the differences from the original to the current version of this window. The different buttons in this dialog allow you to edit the values in the list.

Synchronizing:

WinOLS tries to keep this window in sync with the hexdump or map window. If you change the cursor position in the hexdump or map window, the differences window will show the respective entry. If you change the position or select entries in the differences window, WinOLS will change cursor position and / or selection in the hexdump or map window.

Columns:

Right-click the table header to get an additional menu. Here you can turn off columns or add new special columns.

The size of the dialog may be configured. It can be docked to the sides of the main window. This dialog is not modal, meaning that windows lying behind the window

may still be used. This dialog is a "floating" dialog. All floating dialogs can be toggled with the tab key.

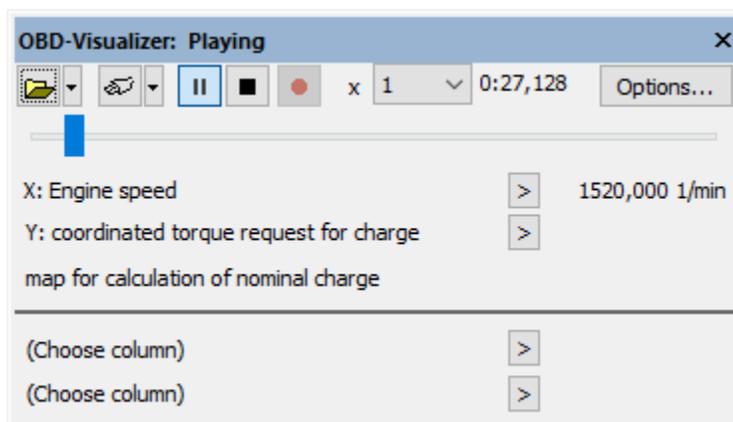
Trick:

You can scroll through the differences by clicking+dragging in the scrollbar in the hexdump while holding Shift.

Shortcuts:

Symbol bar: 
Keyboard: Ctrl+U

11.3 The dialog Visualizer (Menu Window)



The Visualizer displays OBD values in WinOLS. Either live or from a recorded session. In contrast to the simulator, these are not based on memory accesses, but on real values. The values can be displayed directly here in the window as numbers or graphically in the map window (requires mapping, see below). Unlike WinUCM, WinOLS cannot read the error memory.

Quick start:

1. Connect UCM100 to PC and vehicle.
2. Press the connection button (plug icon).
3. Open a map and use the upper two ">" buttons to map the correct OBD data sources to the axes.

Open-Buttons:

With the first two buttons you can open a previously created logfile. (These files can be created with WinOLS or WinUCM.) With the second button (small triangle) you can access files attached/linked in project/version. Alternatively, you can drag and drop files into this dialog.

Connection-Buttons:

With the next 2 buttons you can connect the Visualizer to UCM100 hardware. The first button does this automatically, the smaller triangle button allows you to select

the protocol used.

Play-Buttons:

With the next 3 buttons you can start/pause, stop, or record the recording (only if currently a connection is active).

Time elements:

In the last block you can (for recorded sessions) select the playback speed and see the current time. Use the slider to select the current position (for recorded sessions).

Options:

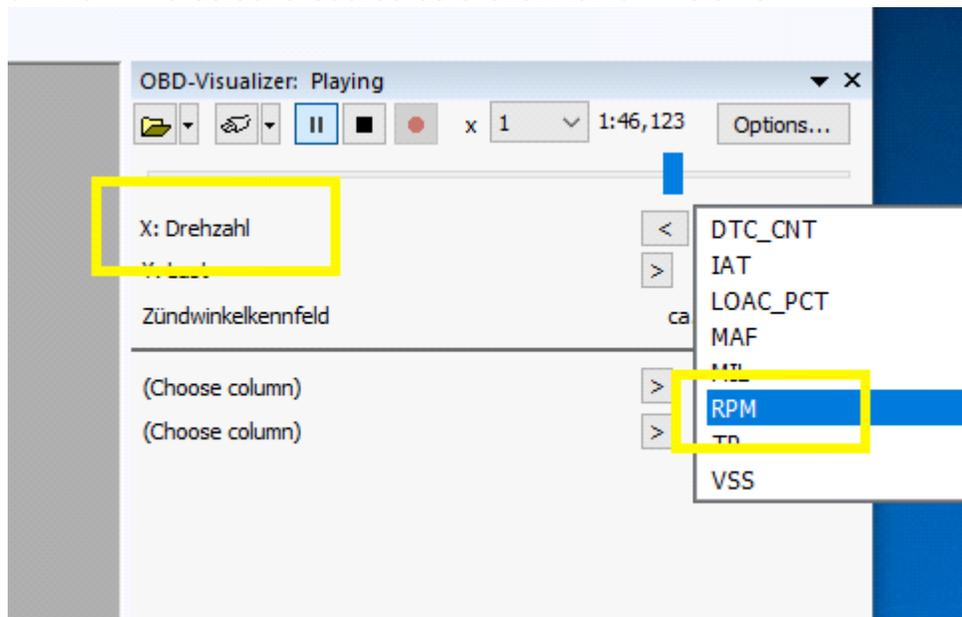
The cogwheel button can be used to access various options and special commands.

Data lines:

The following 2 rows show the current values for the axes of the current map. If values are available for both axes, an estimated value (linear interpolated) is displayed for the result in the third row. Below the line any 2 other parameters can be selected. These are independent from the current map.

Mapping: ">"

The source data channels need to be mapped to the correct axes for display. Click on the ">" to select a source data channel for this axis.



Graphs

Each mapping line starts with a graph button. It determines whether this data source is displayed in a graph below. With the options button you can determine if there are one or more graphs.

Note on the data quality of the recording:

For simplicity, the recording is in table format. This is only an approximation and

does not reflect the exact reality, since for performance reasons not all values can be queried constantly. Especially with slow protocols, with many values and with values that are not currently on the screen, the query is sometimes significantly delayed.

Trick:

You can resize the dialog (and e.g. reduce it to first 2 lines) and dock it below the map list.

Shortcuts

Symbol bar:

Keyboard:

11.3.1 Visualizer Logfiles

Instead of live data, you can also open and play previously recorded data in the Visualizer. Use the Open button in the Visualizer or drag the file into the Visualizer window.

The following file formats are supported:

- .ObdVisualizer
- .csv

If the files were not created by WinOLS / WinUCM, you need OLS1018 to open them.

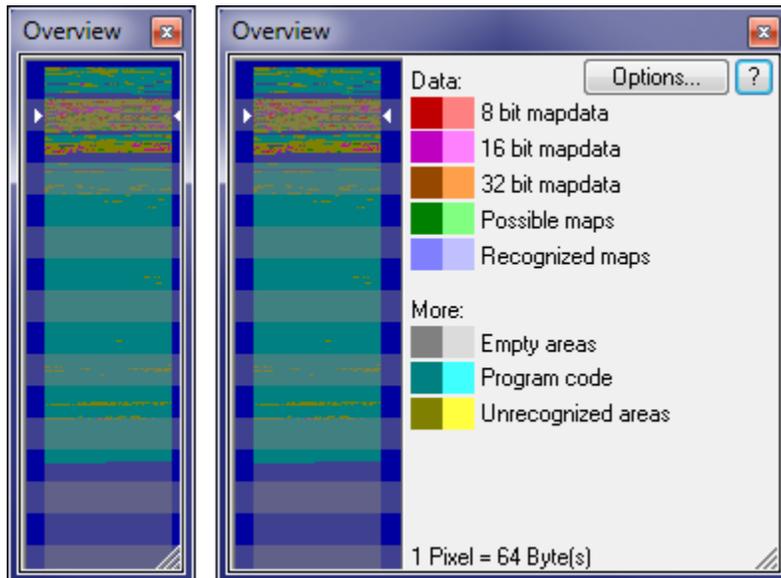
The files must meet the following requirements:

- The column names must be within the first 4 lines.
- Optional additional lines with longer description and/or units are supported.
- There must be a column named "Time"
- All values of all columns (including "Time") must be specified as int or float numbers (Not: "23:59:59")

Example for a CSV file:

```
Time;nmot_w;ps_w
0;1511;64.953
1;1510;6.503
2;1507.5;650
```

11.4 The dialog Overview (Menu Window)



This dialog shows an overview of the current project and classifies the areas according to their suspected function. The analysis needed for this may take a few seconds and is done in the background.

If the cursor is moved over the graphic, the current pixel will be marked in legend on the right side of the window. A click in the graphic moves the view of the current window. A doubleclick in the graphic area will force WinOLS to recreate the information displayed in the window.

You may choose whether you want to display the differences between original and version or the simulator access in a light colour. To choose which should be symbolised by light pixels, click on 'Extended'. (You may need to make the dialog wider for this.) If you have WinOLS display the simulator accesses, you must have loaded the simulator previously. Furthermore you need to generate the needed data for this once with the corresponding menu item from the 'Extended' menu.

The width of this dialog may be changed to save space on the screen. You may change the height to the double of the default to get a better view.

This dialog is a "floating" dialog. All floating dialogs can be toggled with the tab key.

In the scrollbar:

WinOLS shows by default the overview information also in the hexdump scrollbars. Here they can contain additional information:

- White points at the left => Difference between original and version
- Yellow triangle right => Position of a search engine
- Yellow, dotted line right => Marker
- Solid line right => Comment (In the comment's border color)

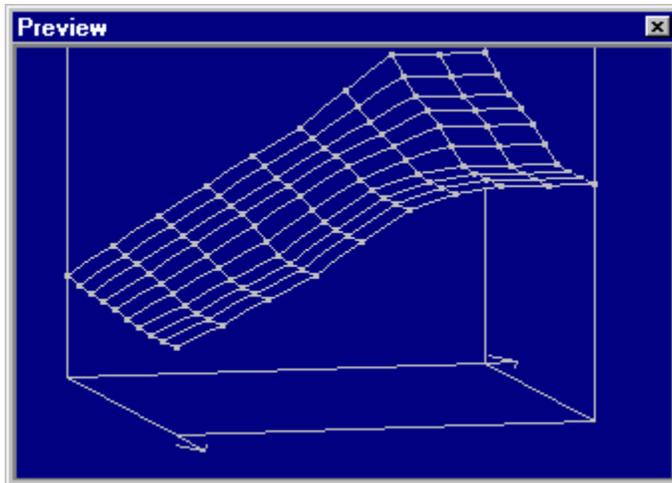
A click (or: click+drag) in the color area jumps to this address. If you hold Shift pressed, WinOLS jumps to the nearest change in this area.

Shortcuts

Symbol bar: 

Keyboard: o

11.5 The dialog Preview (Menu Window)



This dialog shows a 3d preview of the data you are currently working on. A preview is shown

- When you're creating a rectangular, consecutive selection
- When you're selecting a map in the map selection window
- When you're editing a map that is not shown in 3d mode

This dialog is not modal, meaning that windows lying behind the window may still be used.

The size of the dialog may be configured. You may use the mouse to change the perspective and angle of the preview by dragging the base corners of the cube.

The size of the dialog may be configured. It can be docked to the sides of the main window. This dialog is not modal, meaning that windows lying behind the window may still be used. This dialog is a "floating" dialog. All floating dialogs can be toggled with the tab key.

Shortcuts

Symbol bar: 

Keyboard: P

11.6 The dialog Map database - Basics

This function requires WinOLS 5.00

▶ Video: Map Database

The map database allows maps to be identified and labeled by their appearance. The rules are applied as soon as a map is automatically recognized or manually entered. You can switch this off at F12 > Debug.

Terms:

- Each map database corresponds to a *.mapdb file.
- Each map database contains 1 or more rule groups.
- Each rule group contains higher-level conditions (e.g. ECU manufacturer). If they apply, then the rules contained in them can be evaluated
- Each rule group contains 1 or more rules. Each rule is assigned to exactly one rule group.
- Each rule contains 1 or more conditions (Ifs) and exactly 1 result (Then)
- The conditions (Ifs) can be divided into numbered groups. For the rule to apply, at least one condition from each group must apply.
- If the rule applies, the result (Then) is applied to the map properties.

Live preview:

For debugging, the rules are tested live (but not applied). The result can be seen as color in several areas. Red = the rule does not apply.

If you activate a map window, the rules will be tested from now on. Also a click into the preview map list or on the text "Current map" in the preview window changes this test focus.

Normally, the preview window lists all maps to which the rule applies. But if you use the search line, all maps matching the search string will be listed and displayed in red/green.

Step-by-step example:

- Open a project and create the map. With name, factor, offset. If the map exists several times, please create all of them as a registered map.
- Window > Map database
- Add > Add rule group; If the map is to be searched only for certain ECUs, you can enter the search conditions here. OK.
- Click on the rule group
- Add > Rule
- Preview: Enter the name as search condition.

- **Preview:** Select all the maps in the list that should be used as a source.
- **Key values:** Click on the hyperlink "Create from preview selection". The search conditions will now be determined automatically. Name, factor and offset are also copied.

The rule is ready. It will be applied automatically during the map search from now on. You can use the buttons in the preview area to apply it retroactively.

Tricks:

- The individual areas of the (very wide) rule window can be collapsed. To do this, right-click in the window title over the desired area. In the same way they can be restored. (The red X can also be right-clicked).
- It is easier if the map you are looking for is already defined with the name in the project.
- Use the search function in the preview list to find out whether the rule applies to all the fields you are interested in.
- To find out why a rule does not apply, activate the affected map. Either in the preview list or by simply opening the map.
- You can share .mapdb files with other WinOLS users. Edit the MapDB properties to restrict the rights.

More info:

- Rule-List
- Rule-Details
- Preview
- Conditions
- Condition: Basic values
- Condition: Search text
- Then

11.6.1 Map database - Rule list

This function requires WinOLS 5.00

Area: Databases

In the ComboBox at the top you can select the database that is currently being processed. Here you can also create new databases, edit the properties (rights) of the active database or delete databases.

Databases must be located in the WinOLS configuration directory (or a subdirectory) for WinOLS to find them automatically.

Area: Rules

In the list you can see the rule groups and the rules they contain. The contained rules are only executed if the conditions of a rule group are fulfilled. (Otherwise, the list displays them pale).

More info:

- Basics

11.6.2 Map database - Rules

This function requires WinOLS 5.00

The rules dialog is very extensive and contains various areas.

The individual areas of the window can be collapsed. To do this, simply click on the button in the upper left corner (or simply on the heading).

Areas:

- Preview
- Conditions
- Condition: Basic values
- Condition: Search texts
- Result

More info:

- Basics

11.6.2.1 Map database - Preview

This function requires WinOLS 5.00

The preview dialog shows whether the current rule fits.

The top line shows whether it fits the current map window.

In the list below you can see all other maps:

- If no search term has been entered, all matching maps of the active project are displayed here.
- If a search term has been entered, you will see all maps (optionally all projects) that match the search term. They are displayed in red or green, depending on whether they meet the conditions of the rule.

You can choose if you want to see registered and/or potential maps and if the list should be updated automatically or manually.

Important:

For this dialog the complete current rule is evaluated. So not only the active condition.

Preview at other places:

Also the rule list and the list of conditions and the condition dialog show a colored preview. By default for the current map. However, if you click on the text 'current map' in the list (or on the text 'current map' at the top), the preview will refer to it in the other places from now on.

11.6.2.2 Map database - Conditions

This function requires WinOLS 5.00

A rule of the map database contains one or more conditions. These can be found in this list. If you click on an entry, the details of the condition appear to the right of it in the Basic Values or Search Text area.

Groups:

Conditions can be arranged in groups. In total, at least one rule from each group must apply. Within a group there is an "or" condition, the groups are linked by an "and" condition. So you can determine (by 2 rules in 1 group) that a map must be exactly 8x12 or 10x14.

Preview:

This area shows live if a condition is true. Normally the current map window is used for this. But if you click in the list in the preview area, the clicked map is used.

11.6.2.2.1 Map database - Basic values

This function requires WinOLS 5.00

In this dialog there are several numerical parameters that are requested for a map. All of them must be true for the rule to apply. Empty fields / checkboxes with black boxes are ignored.

Size:

Here you can set the minimum / maximum size.

Map values:

Here you can define the maximum size of the map.

Axis values:

Here you can define the maximum size of the first/last value of each axis.

Extreme values:

Here you can define at which position the largest/smallest value of the map may be. With the 9 checkboxes you can define if the value may (or may not) lie in one of the 4 corners, one of the 4 edges or in the inner area.

Create from:

You can have the values for this dialog filled in automatically. WinOLS then automatically searches for values which fit so straight. Either for the current map window, for the preview list or for the selection in the preview list. Furthermore you can extend all values.

Preview:

This area shows live whether a condition applies. Normally the current map window is used for this. However, if you click in the list in the preview area, the selected map is used.

Important:

Factor / offset the from the "Then" page are used in the calculation of the axis/ extreme values. Thus it's better to set them first.

11.6.2.2.2 Map database - Basic values - Create

This function requires WinOLS 5.00

Important:

This is a tool for advanced users, not an automatic wizard. It is not enough to click on "Create". You have to understand and check each rule.

The create links can create a rule that matches:

- the current map
- all maps in the preview window
- all selected maps in the preview window

In general:

The more maps you select, the more unspecific (=worse) the resulting rule will be.

What to do:

- Try finding maps that are very similar. Not only by name, but also by size + content. Selected them and use the create from selection link.
- If you have different clusters of maps (with the same name, description, etc.), use one entry per cluster in the condition list.
(Cluster means that some are very similar; And others are also very similar to themselves, but different from the first cluster)
- Test the rule: Use the preview dialog to test if your rule matches maps, that it shouldn't match.

11.6.2.2.3 Map database - Search text

This function requires WinOLS 5.00

This condition applies if all texts (or hex byte sequences) entered here were found in the hex dump. Empty fields are ignored.

Preview:

This area shows live whether a condition applies. Normally the current map window is used for this. However, if you click in the list in the preview area, the clicked map is used.

11.6.3 Map database - Then

This function requires WinOLS 5.00

If a rule applies, then it can be addressed. Here are the values.

11.7 The dialog Command line

This function requires WinOLS 5.00

With the command line you can do various things by text input.

The window offers several command lines which all have the same function. The lower lines can be locked against changes to keep frequently used commands at hand. If they are not needed, the dialog can be resized so that they are invisible.

Several statements can be linked using ";".

1. Apply arithmetic operations to the current selection (or cursor position):

+5
+10%
=20

2. Apply arithmetic operation moved / to other windows:

This function requires WinOLS 5.58 + FeatureUpdate

These operations take the x/y coordinate of the cursor, current selection or search result(s) and change the current window, the x or y portion before applying the calculation operation.

Examples:

*2; +1
yaxis=1
map0.col1=4

2 combined commands: The cells are doubled and 1 is added.
The value in the Y-axis is set to 1
The value in the connected map 0 (counted from the left) in column 1 is set to 4.

myid.yaxis=4

The value in the connected map with the Id myid in the Y-axis is set to 4

map[xy].col[zz]=4 The value in the connected map field with xy in the name in the column with zz in the text name is set to 4
col[+1]=4 The value in characteristic field 1 to the right of the search value is set to 4
map0.col1=4; 2 instructions
map0.col2=5

Attention: All indexes start at 0!

Attention: Unlike with the extended replacement in the search results, no "do" is required, because it is already clear that it is a command line instruction!

3. jump to an absolute or relative address:

:80000
:+1000

4. Select an address range:

100..1FF

5. search and open a map by its ID:

AFI_MULT_MN

6. Change map properties similar to set_map_property WinOLS-Script commands:

Spalten=10
Feldwerte.Faktor=2; Feldwerte.Offset=10

7. jump to a comment:

My Comment Text

8. open an ols project:

filename.ols
filename

9. import a file that is located in one of the two default folders (visible for new, empty projects):

filename.bin
filename.kp

10. LUA commands (requires OLS530)

lua:MessageBox("test");

11. absolute paths

c:\myfolder\test.ols
c:\myfolder\test.bin
c:\myfolder\test.lua

12. button names

By appending a C-style comment, you can make the button larger in locked mode (i. e. not in the top input line) and add the comment text.

```
+10% // MyName
```

The size of the dialog may be configured. It can be docked to the sides of the main window. This dialog is not modal, meaning that windows lying behind the window may still be used. This dialog is a "floating" dialog. All floating dialogs can be toggled with the tab key.

Shortcuts:

Toolbar: -

Keyboard: Ctrl+Enter

11.8 The dialog Lua (Menu Window)

This command displays a list of the LUA scripts available in the selected folder.

If you hold down the Shift key during execution or have not configured a path, the dialog will not appear and the last LUA script used will be executed.

You can start the script in the Lua debugger with the "Debug" button.

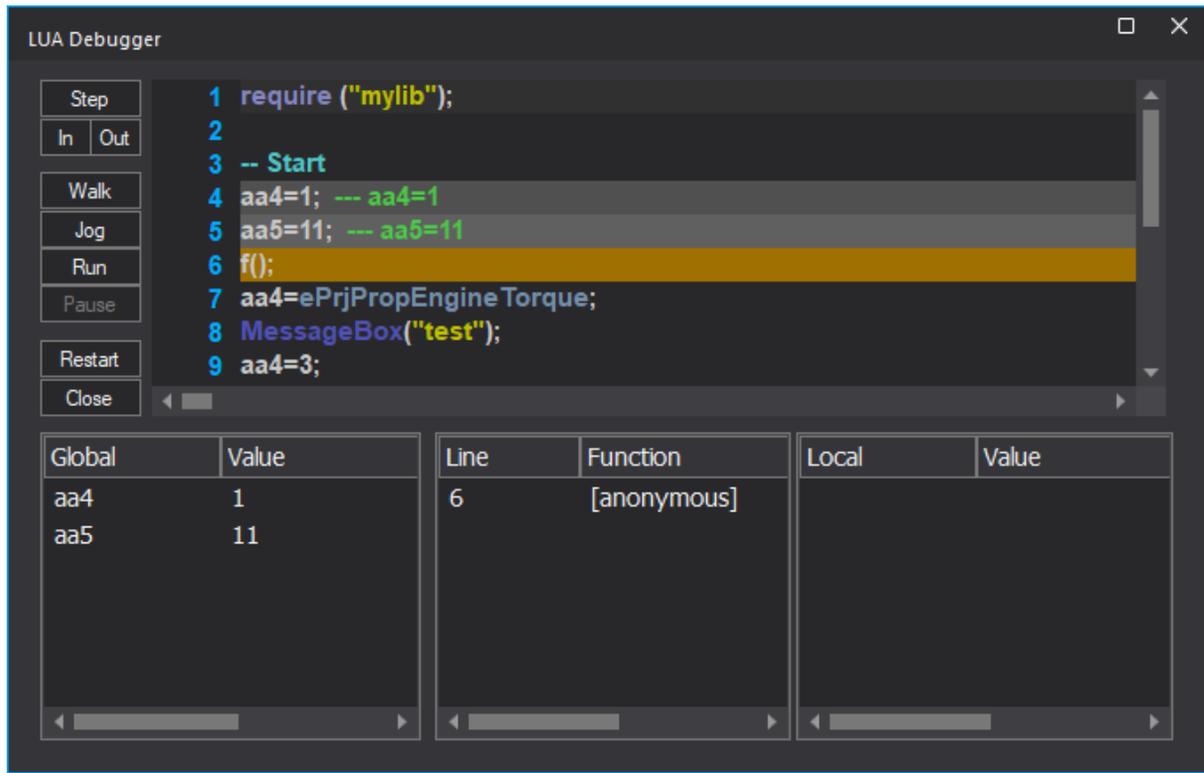
You can use the "Encrypt" button to create new, encrypted luax files of script files.

Shortcuts

Symbol bar: -

Keyboard: Ctrl+F9 / Ctrl+Shift+F9

11.8.1 The dialog Lua Debugger (Menu Window)



The Lua debugger allows you to execute Lua scripts step by step and view the contents of the variables. You can reach this function via the "Re-run last LUA script" dialog (requires a configured LUA path).

Step/In/Out:

Keyboard: F10/F11/Shift-F11

Executes a single program step. The 3 buttons differ in their behavior with LUA sub-functions. While "Step" executes the function completely and only stops again afterwards, StepIn also allows you to step through the sub-function individually. StepOut allows you to continue executing the code until the current function is terminated.

Walk/Jog:

These functions work as if you keep using StepIn (F11). While Walk always pauses for 500ms, Jog works as fast as it can. Both functions are ended by a breakpoint or by the Pause button.

Run:

Keyboard: F5

Runs the script without debugger interaction until a breakpoint is reached or Pause is clicked.

Pause:

Interrupts the current script, at the next LUA command

Restart:

Interrupts the current script, at the next LUA command and restarts it.

Close:

Closes the debugger

Line colors:

The yellow line is the current line. The previous lines are highlighted in gray.

Breakpoints:

You can set/delete breakpoints by clicking to the left of the line numbers. Breakpoints interrupt the Walk/Jog/Run functions.

Watches:

You can see global/local variables in the windows at the bottom left/right. You can also query variables using the mouse tooltip and view them in the virtual comments that appear on the line during execution.

Shortcuts

Symbol bar: -

Keyboard: -

11.8.2 The command Encrypt LUA script (Menu Window)

Creates an encrypted .luax file from an existing .lua file.

As with .olsx files, the encryption can be bound to a license account number and/or password. With the right authorization, the .luax file can be run, but it cannot be decrypted.

Shortcuts

Symbol bar: -

Keyboard: -

11.9 The command Toggle floating windows (Menu Window)

This command shows or hides all floating windows. Floating windows are windows which are always displayed above the normal windows. Like the differences dialog, the preview window and (depending on your configuration) also the map selection window.

Shortcuts

Symbol bar: -

Keyboard: Tab

11.10 The command New Window (Menu Window)

Use this command to create a new window with the same contents as the one currently open.

11.11 The command Cascade (Menu Window)

Use this command to display all opened windows in a cascading style.

11.12 The command Tile horizontally (Menu Window)

Use this command to display all opened windows next to each other.

11.13 The command Tile vertically (Menu Window)

Use this command to display all opened windows above each other.

11.14 The commands 1, 2, ... (Menu Window)

Switches to the window selected.

Chapter

XIII

12 Commands of the menu ? (Help)

The menu ? (Help) contains the following commands to access help information about the application:

Help topics	Lists all help topics
Help topics: Context menus	Explains the context menus of WinOLS
Help topics: Drag & Drop	Shows help about the drag & drop support of WinOLS
Help topics: Floating dialogs	Lists the floating dialogs and explains their use
Help topics: Keyboard	Lists all keyboard shortcuts
Help topics: Mouse cursor	Explains the different mouse cursors
Help topics: Selections	Explains how to use the WinOLS selection methods optimally
A small tip	Shows different tips for the current context
Tip of the day	Shows information about small but useful features
Homepage EVC	Starts your browser with EVC homepage
Info about Plug-Ins	Shows all installed plug-ins
Info about WinOLS	Shows program-information, version number and copyright

12.1 The command Help topics (Menu ? (Help))

Displays a list of all help topics.

Shortcuts

Symbol bar: -

Keyboard: F1

12.2 The command context help (Menu ? (Help))



Use this command to activate the help cursor. While this cursor is enabled, click on toolbar icons of menu items to get help for them.

Shortcuts

Keyboard: SHIFT+F1

12.3 The dialog A small tip (Menu ? (Help))

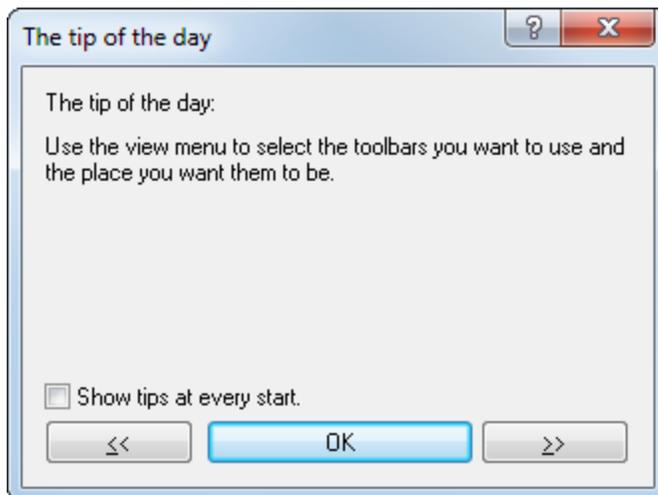
This dialog shows tips that refer to the current context or action. You may also view them by selecting them from the menu.

Shortcuts

Symbol bar: -

Keyboard: -

12.4 The dialog Tip of the day (Menu ? (Help))



This dialog shows hints and tricks for WinOLS at every program start. You may disable this dialog, if you prefer not to see it.

Shortcuts

Symbol bar: -

Keyboard: -

12.5 The command Homepage EVC (Menu ? (Help))

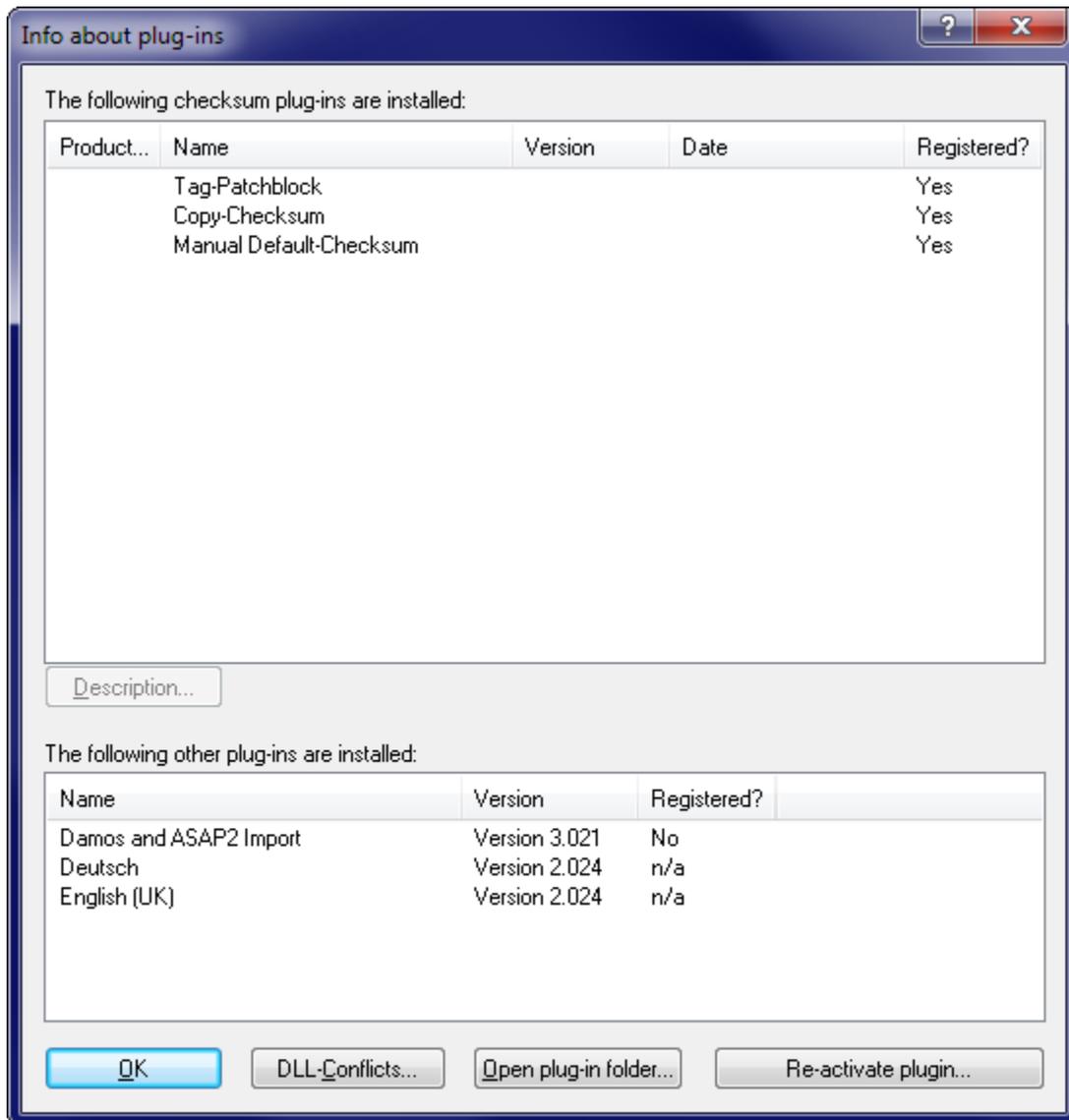
Starts your internet browser with the EVC homepage. A connection to the internet is needed for this command.

Shortcuts

Symbol bar: -

Keyboard: -

12.6 The dialog Info about plug-ins (Menu ? (Help))



This dialog shows a list of all installed plug-ins. If a plug-in is installed, but not registered its search function will work, but the checksum will not be calculated. Contact EVC to get the plug-ins.

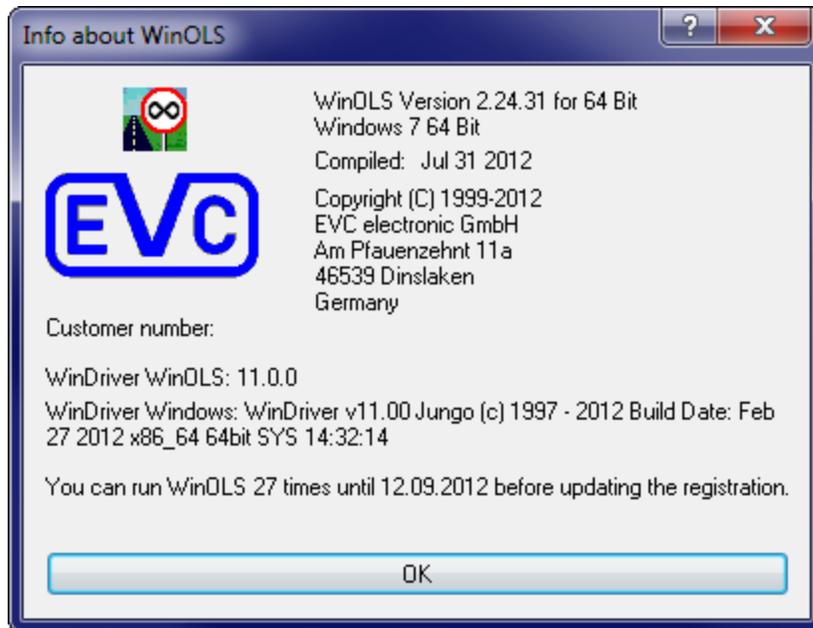
The button DLL conflicts is only available, if conflicts between two or more DLLs occurred during startup.

Shortcuts

Symbol bar: -

Keyboard: -

12.7 The dialog Info about WinOLS (Menu ? (Help))



This dialog shows version information.

Shortcuts

Symbol bar: -

Keyboard: -

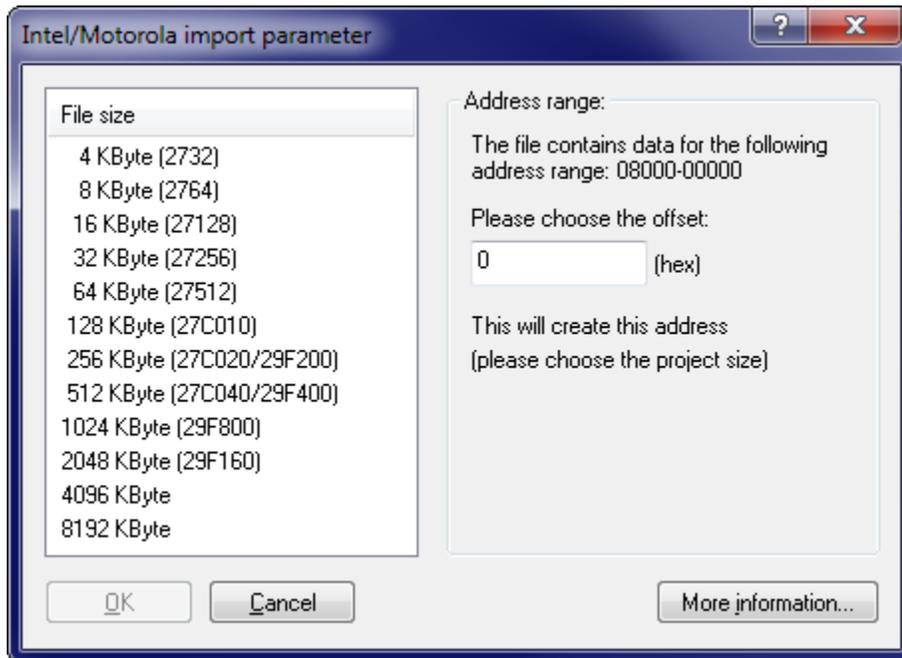
Chapter

XIII

13 Other Dialogs

Please choose a subtopic.

13.1 The dialog Intel/Motorola import parameter



When importing Intel or Motorola files, WinOLS may need additional information for a correct import. This is due to the fact that these file formats may contain multiple data blocks which are stored (according the file) at very different addresses. Normally it is recommended to import these different blocks as elements and not to use this dialog. (You may choose this in the question that appears before this dialog.)

If you don't want to use elements, you can use this dialog for force all data into one big data block. This isn't a real problem since these data blocks are mapped into one large block anyway. But you must decide which project size is the right one for this mapping. Optionally you may specify an offset, which results in a movement of the data to another address. Depending on the project size you chose, the 'Overlapping areas found!' may appear in the dialog. This happens, when multiple data blocks write into the same addresses due to the mapping (which is determined by the project size and the offset). Overlapping areas are a hint that the project size may be too small.

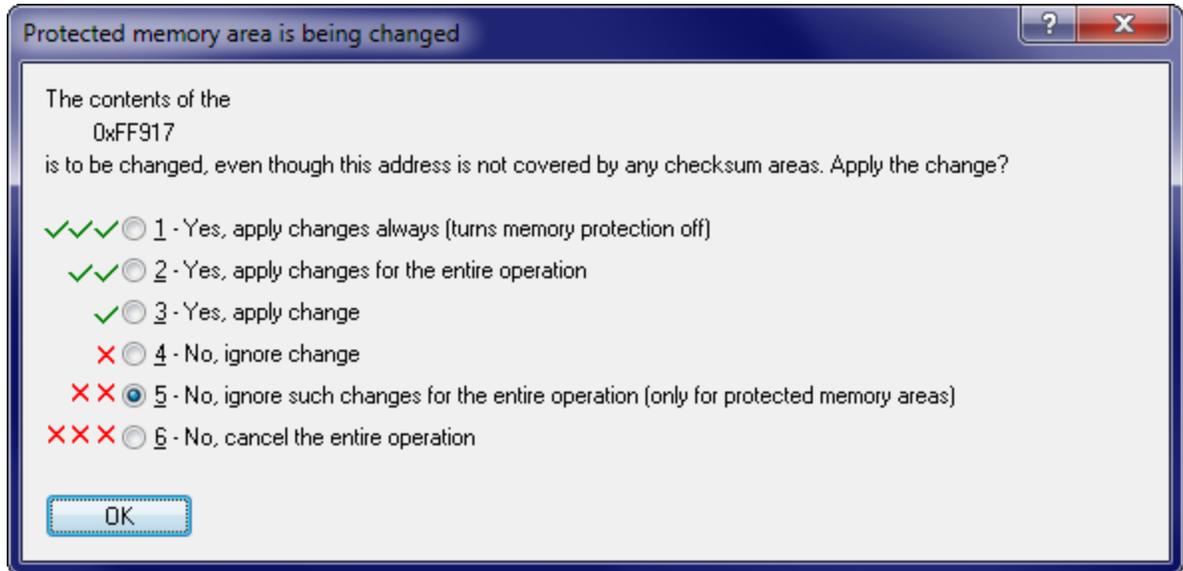
Press the button 'More information' to get a list of all data blocks which the current file contains.

Shortcuts

Symbol bar: -

Keyboard: -

13.2 The dialog Protected memory area is being changed



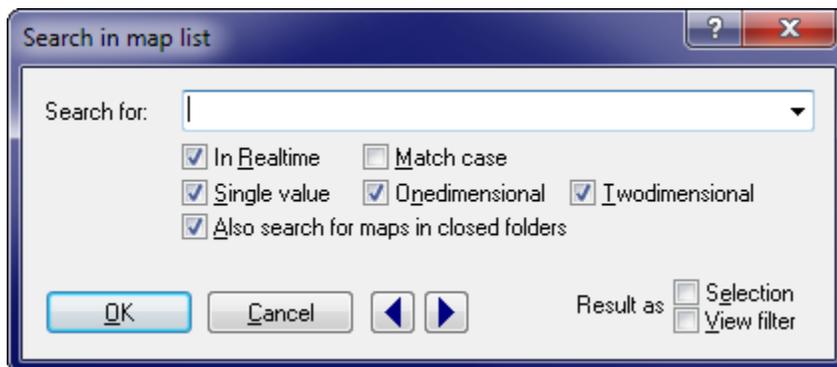
This dialog will be displayed if you're changing data that is not covered by a checksum while having the memory protection turned on. It allows you to decide what to do with this change and with further changes.

Shortcuts

Symbol bar: -

Keyboard: -

13.3 The dialog search in map list (Menu map list)



Use this dialog to search the map list for texts or map types.

If the option 'Search in realtime' is activated, the search will run while you're entering data.

If the option 'Also search for maps in closed folders' is activated, WinOLS will even find maps that are currently not in the list, because they are in a folder that is currently closed. WinOLS will open the map's folder to display it.

If the option 'Result as selection' is activated, all maps will be selected which match the search criteria. You may continue to work with this selection, for example by hiding or deleting them. Use the option 'Result as view filter' to hide all entries that do not match your search criteria.

Use the blue arrow buttons to jump to the next or previous occurrence of the search text.

Note:

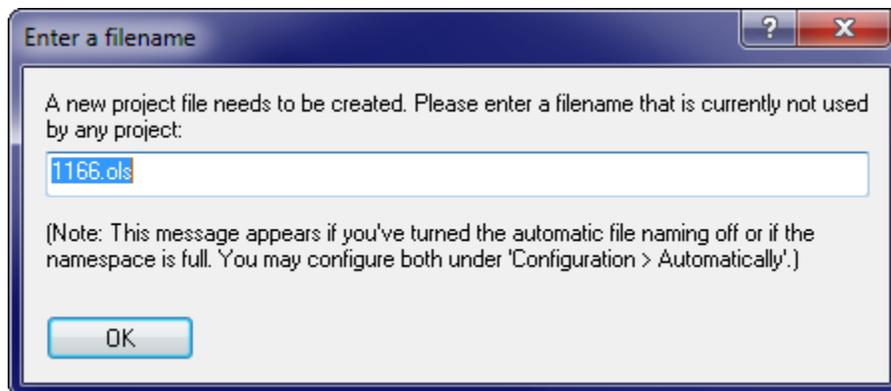
The hotkey Ctrl+F will start this dialog only if the map list has the focus. If a project window has the focus (= the cursor is blinking there), a search dialog for a byte sequence list will be started.

Shortcuts

Symbol bar: -

Keyboard: Ctrl+F

13.4 The dialog Enter a filename



This dialog asks you to enter a filename for a new project. Most of the time WinOLS can automatically create a new filename. This dialog appears only if you've turned the automatic naming off or if the given namespace is full (meaning all files that can be created with the namespace already exist).

Both issues can be configured in the dialog Miscellaneous > Configuration > Automatically. For more information about namespaces, please refer to the help page of that dialog.

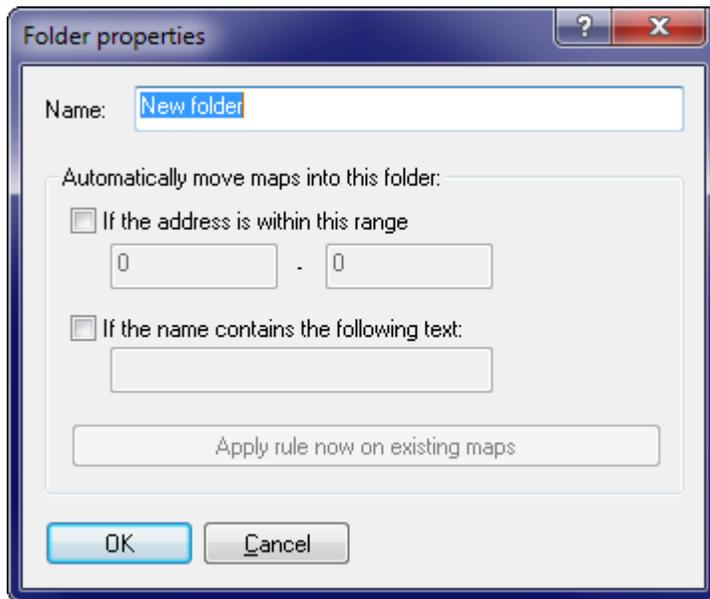
If you are unsure what to enter in this dialog either accept the default value or just enter a large random number.

Shortcuts

Symbol bar: -

Keyboard: -

13.5 The dialog Name folder



This dialog requests a name for a folder. It appears when you create a new folder or rename an existing folder. You should avoid using the same name twice.

WinOLS can move a map automatically in the right folder, if the address is within a certain range or the name contains a certain text. You can configure these properties here.

Templates for folder names:

With the button ">" you can store / use a tree structure with folder names. The text file with the names must have the following format:

Name of the group1

-Name1.1

-Name1.2

Name of the group2

-Name2.1

...

Shortcuts

Symbol bar: -

Keyboard: -

13.6 The dialog Move maps



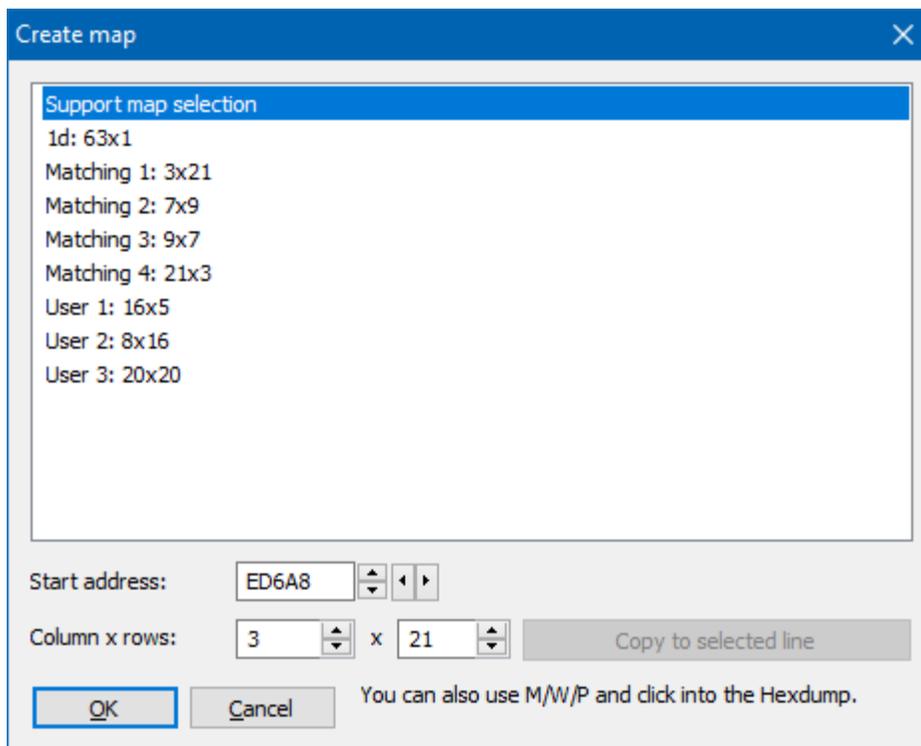
This dialog allows you to move one or more maps into another folder. For this just select a new (already existing) folder from the list.

Shortcuts

Symbol bar: -

Keyboard: -

13.7 The dialog Create map



This dialog appears when you try to create a map from a linear selection that can't be converted into a map, for example because it doesn't match the number of columns. You can use one of the listed strategies to fix the selection. You can also use the hotkeys M/W to change the number of columns or P to activate the preview dialog.

While the dialog is open, you can click into the hexdump to change the start/end of the selection. A left-click works changes by entire rows. A right-click (at the start) by individual cells.

Shortcuts

Symbol bar: -

Keyboard: -

13.8 The dialog Fix translation

You can use this dialog to correct text errors in the translation and report them to EVC. You can access this dialog via Configuration > Language.

Enter a search text to find the desired text.

Edit the text in the first column by double-clicking. Confirm the entry with the Enter key.

You can delete your own corrections by deleting the entire text when editing. Use the button at the bottom right to send the changes to EVC.

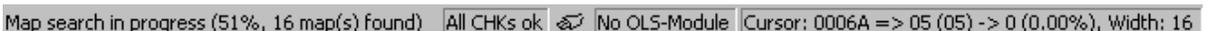
Changes to menu texts only become visible after a restart with menu reset (View > Toolbars).

Shortcuts

Symbol bar: -

Keyboard: -

13.9 Status bar



Map search in progress (51%, 16 map(s) found) | All CHKs ok | No OLS-Module | Cursor: 0006A => 05 (05) -> 0 (0.00%), Width: 16

The status bar is displayed at the lower end of the WinOLS screen. You may toggle the status bar in the "view" menu with the command "status bar".

While you're navigating through the menus, the status bar will display a help text for the choice you're currently selecting. If you're waiting with the mouse cursor over an icon, the status bar will display a help string for the icon, too.

When (like shown in the image above) the automatic background search is running, you'll see its state in the status bar.

The first following range shows the state of the checksum modules. Depending on cursor position and configuration, WinOLS may display information about the checksums in general or about the current (manual) checksum.

Right of the checksum one or more icon(s) may display the state of a possibly connected OLS16 or OLS300 simulator module. Wait with the mouse cursor above a symbol to get a tooltip with a description. Right of the symbols, a textual description of the simulator state will be displayed.

The last range displays information about the cursor position, the current field value at the cursor position (and the original value), the relative change in comparison to the original (also in percent) and finally the width of the current hexdump or map.

Note:

You may right-click any of the ranges to receive a matching context menu for the range that you clicked.

13.10 The command Right Side (Icon bar)



Use this command to change the contents of the right side of a hexdump or map window. You may choose between a bar display (the value range for the bars can be configured in the window's property dialog), an ASCII display or you may turn the right side off.

This command is only available for the text view mode.

Shortcuts

Symbol bar: See above

Keyboard: -

13.11 The command Data width (Icon bar)



Use this command to specify the number of bits per shown value. Possible values are 8, 16 or 32 bits or 32 bits floating-point. If you use a data width larger than 8 bit you can use the button Data organisation to specify the bytes' organisation.

Shortcuts

Symbol bar: See above

Keyboard: #

13.12 The command Data organisation (Icon bar)



Use this command to specify the way the data is organised. On the one hand, storage may behind with the least significant byte. On the other hand, the most

significant byte may be the first. These kinds of storage are also known as Intel or Motorola.

This command is not available for 8-Bit Data.

Shortcuts

Symbol bar: See above

Keyboard: -

13.13 The command number system (Icon bar)



With this button you may switch between the decimal system (10er system), the hexadecimal system (16er system) and binary system (2er system) for viewing.

If you're not familiar with the number systems, you should work with the decimal system. Click on 255 to activate it.

Shortcuts

Symbol bar: See above

Keyboard: -

13.14 The dialog Calculate factor and offset



This dialog is a subdialog of the dialog 'Properties: window'. You can reach it from these with the button "f(x)".

This dialog allows you to calculate the WinOLS fields factor and offset from different common formulas or sample values. This is useful if you have information about the conversion of the eprom values, which cannot be entered directly into WinOLS (as factor and offset) due to their given format.

For example you might have the following conversion formula:

$$\text{VAL} = 100 / (0,00001 * N)$$

First you must select the kind of formula. The input size is below the fraction stroke, so you must use the right formula. Enter the values. The number 100 above the fraction stroke, The number 0.00001 below the fraction stroke. In our sample no further value is added. So just leave the additive variable below the fraction stroke at 0.

As a result you can now see factor and offset in the lower left corner of the dialog. Furthermore the checkbox "Reciprocal" is activated. You can now hit the OK button to leave the dialog and accept the values. If you have sample values, you can use the lower right part of the dialog to test your results.

Shortcuts

Symbol bar: -
Keyboard: -

13.15 The command Factor, Offset, etc. (Icon bar)



Use these 4 Buttons to change the view mode for the data in comparison to it's original data.

- % The proportional difference between the original and the version will be displayed.
- Delta The absolute difference between the original and the version will be displayed.
- *1 The data of the version will be displayed ignoring factor and offset.
- Org The data of the original will be displayed instead of the version. If another version is selected as reference version, that will be displayed.
- OrgOrg The data of the original will be displayed instead of the version. The selected as reference version will be ignored and the original version of the current project will be displayed. This button is only available if a reference version is active.

You may activate each of this 5 modes for a short time just by moving the mouse cursor over the icon. If you now click on the icon, the mode will be activated permanently. If you move the mouse cursor away without clicking, the old state will be restored.

Shortcuts

Symbol bar: See above
Keyboard: -

13.16 The command Right Side / Fixate Ride Side (Menu View)

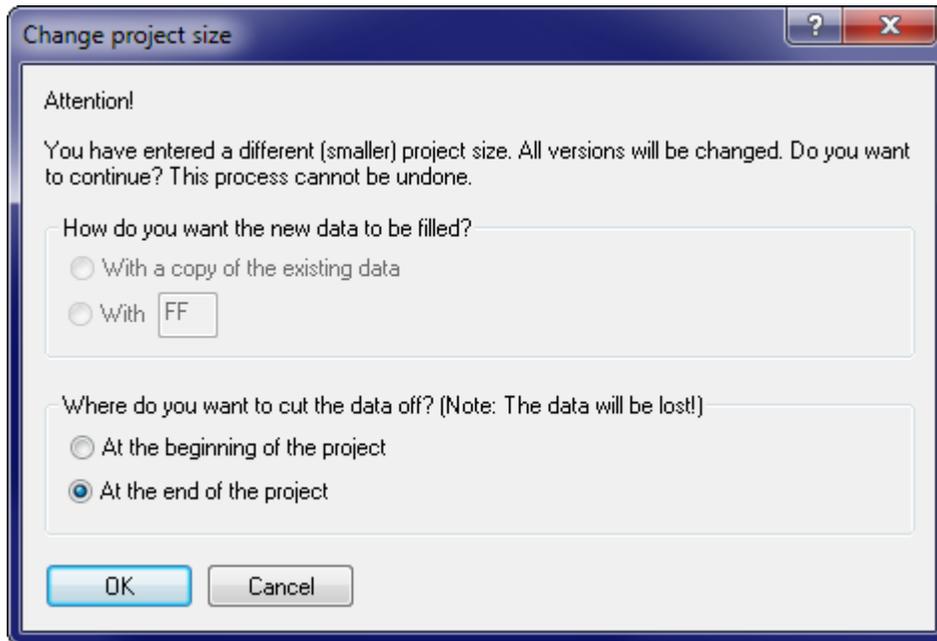
This command is useful if you're working in text mode with maps or hexdumps that have a large number of columns. Normally the Right Side (where characters or bars are) is hidden unless you scroll completely to the right. If you activate the mode 'Fixate Right Side', the Right Side will never be hidden, but stay always visible.

You may also toggle the mode by clicking on the small red or green dot on the dividing line between the data and the Right Side.

Shortcuts

Symbol bar: -
Keyboard: -

13.17 The dialog Change project size



This dialog appears when you change the project size in the project properties. Now you may choose whether the bytes should be added to / removed from the beginning or the end of the project. If you make the project bigger, you may also choose how the new bytes should be filled.

Important: The change of the project size always applies to all versions of the project and cannot be undone. If you cut bytes off, they cannot be recovered.

Shortcuts

Symbol bar: -

Keyboard: -

13.18 The dialog Edit Multiple Maps



You can start this dialog by right-clicking a selection of maps (all in the same project) in the map sidebar.

It allows you to perform various functions that you would normally do on each map individually, on all selected maps in one go.

The following actions are available:

- Set maps to their original values
- Set maps to a decimal or hexadecimal value

- Round the values or limit them to a minimum/maximum.
- Swap the maps (mirror them by a diagonal axis)
- Change the flag status (first column in the map sidebar)
- Set the view mode (Text/2d/3d)
- Set the Endian (HiLo or LoHi)
- Set Leading / Precision
If the fields are empty, the respective fields in the map will not be changed. If you want to change the fields to empty (=automatic mode), enter only a minus character ("-").
- Add an Offset
- Paste the current clipboard contents onto the map

Edit multiple maps

All map values in the selected maps:

- Set to original (or reference project) *)
- Set to this decimal value: *) 100
- Set to this hex value: *) FF
- Round/Limit: Minimum
- Desired precision: 0
- Value: 0,5

Allow more than 1 checkbox at the same time

*) Apply on: All (Map + X + Y)

All selected maps:

- Swap 2d maps: Type Complete axis X/Y size Only axis address
- Flag: set
- View: 3d
- Address: *) Set 888 (hex)
- Endian: *) HiLo
- Right side: Empty
- Number format: *) Hexadecimal (Base 16 System)
- Faktor/Offset: *) Convert hPa => inHg
- Leading / Precision: *) 1
- Copy/swap text fields: Name => Unit
- Paste clipboard

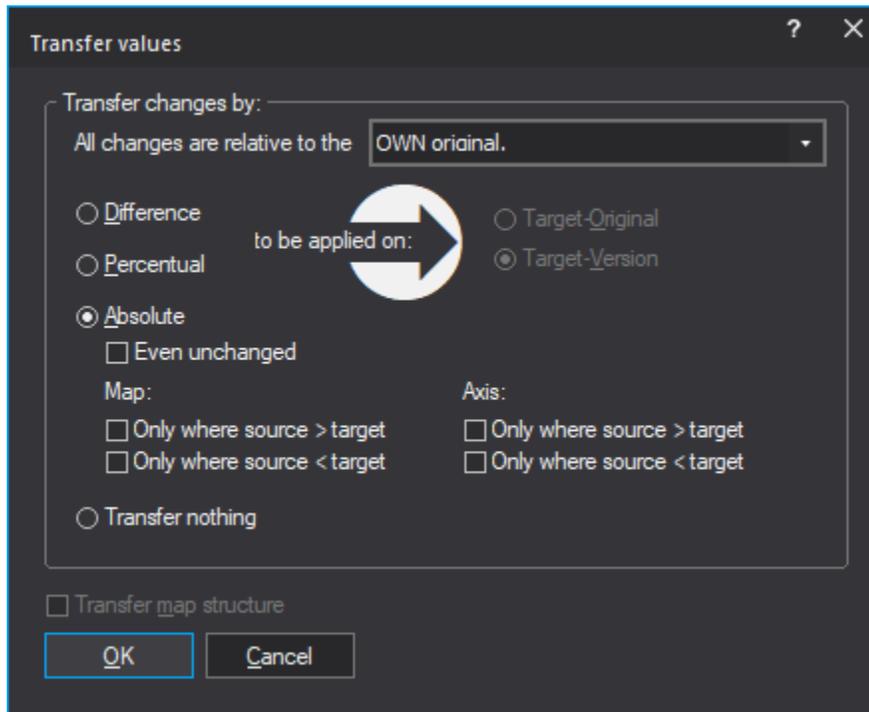
OK Cancel

Shortcuts

Symbol bar: -

Keyboard: -

13.19 The dialog Transfer changes



You can reach this dialog by connecting 2 projects and right-clicking a map or selection in a hexdump.

This dialog allows you to transfer the map you right-clicked into the other project. You can choose whether you want to transfer the contents (the map values) and / or the structure data (everything you see in the map properties). When transferring the map start address will be adjusted according to the current connection settings.

Basis of calculation:

This dialog is often used in combination with the function connect / reference version. For the consideration of what is 'changed' or the calculation of percentage / relative, however, always the OWN original of the respective source / target project is used. The reference version is ignored here.

Absolute/Difference/Percent:

If you choose the mode "Absolute", the values will be transferred directory. For the mode "Difference" the difference between original and version will be calculated using the source data and added to the target data. For the mode "Percent" the percentage difference between original and version will be calculated for the source data and added as percentage to the target data.

Rights:

Some functions in this dialog can be locked if the rights of the source project (§ in the Project properties) don't allow them.

Problems?

If nothing appears to be transferred, check the selected mode. Also turn off the reference version for both projects. This is the only way to see the basis of the calculation.

Tip:

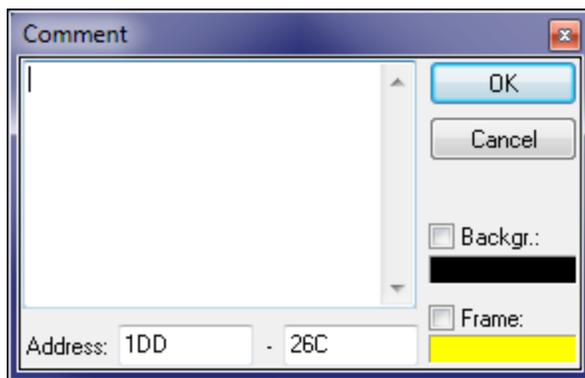
Hold the shift-key pressed to skip this dialog and perform the action immediately.

Shortcuts

Symbol bar: -

Tastatur: Ctrl+Alt+W / Ctrl+Alt+Shift+W (Transfer values)

Tastatur: Ctrl+Alt+T / Ctrl+Alt+Shift+T (Transfer maps)

13.20 The dialog Insert / edit comment

This dialog allows inserting or editing a comment. Comments offer a lot of possibilities:

- They mark places or areas.
- They store information which can be seen as tooltips.
- They allow fast access to the marked places with the next / previous functions.
- They appear in the "Go to" list.
- They can mark security areas for the BdmToGo export.

If you have a selection active when using this function, the comment will be created for the selected range. If you want, you may also edit the background and frame color for the marking.

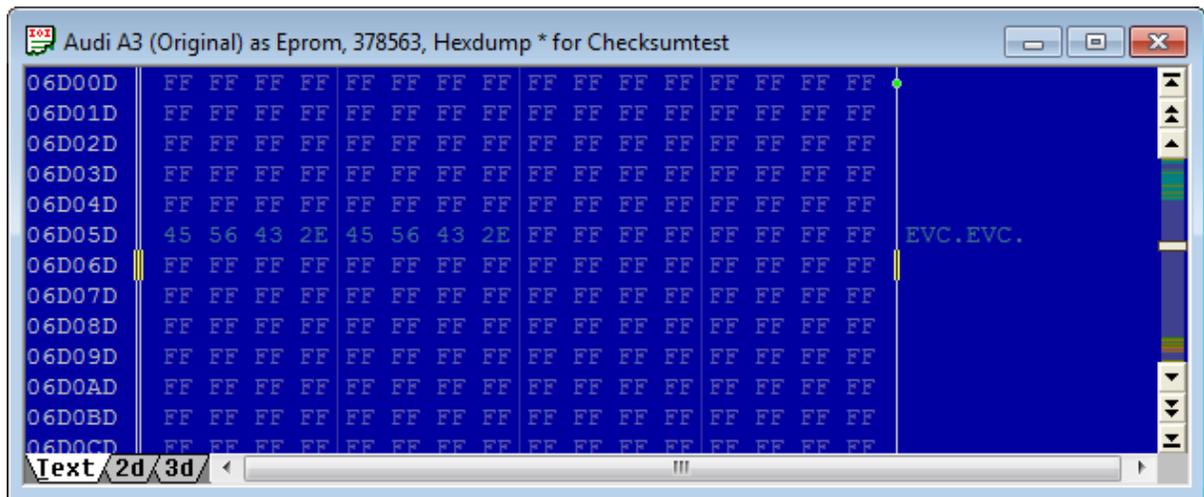
Shortcuts

Symbol bar: -

Keyboard: Shift+Enter

13.21 SPI-Signature

The SPI-Module must recognize a file as SPI file. That's why it must contain a so-called signature.



```
Audi A3 (Original) as Eprom, 378563, Hexdump * for Checksumtest
06D00D FF FF
06D01D FF FF
06D02D FF FF
06D03D FF FF
06D04D FF FF
06D05D 45 56 43 2E 45 56 43 2E FF FF FF FF FF FF FF FF
06D06D FF FF
06D07D FF FF
06D08D FF FF
06D09D FF FF
06D0AD FF FF
06D0BD FF FF
06D0CD FF FF
EVC.EVC.
```

It consists of 8 the ASCII characters "EVC.EVC" and should be near the end of the EPROM at an address xxxx0, an address where there lowest significant digit in hexadecimal is zero.

Chapter

XIV

14 Advanced topics

14.1 Scripts

Scripts are text files that contain instructions how to change a project file and under which circumstances the script file may be applied. Scripts can be used to store often needed map changes and quickly apply them into other projects.

14.1.1 Basics

Scripts are text files which are stored in the script directory (can be configured in the WinOLS options) and have the file ending '.Winolsskript'. Like in C++ you may start line comments with '//'. Most of the commands may only be used within predefined blocks. Only one command per line is allowed.

Basically the scripts describe the intersection of sets resulting from search commands and replacement operators for the sets. Furthermore maps may be defined.

Scripts are normally created by using the WinOLS Script dialog (button "Add"). But you could also create or modify the files in the script language manually.

14.1.2 Script language

The following text describes the internal structure of scripts. This is only relevant for very advanced users with programming experience. Normally scripts should be created with the "Add" subdialog of the "Script" dialog.

Groups:

A central concept of the WinOLS scripting language are groups. Thus you will find groups in several commands. A group is always represented by a symbolic name (e. g. "KF01") and describes a set of all matching search results.

For example, to search a map you would (strictly speaking) need three search commands. One for the map data and one for the data of each axis. The data should not be moved one beneath another (for example the distance between the map data and the data of the X-Axis should be the same in the source project and in the target project where the script is applied.)

Every search (details see below) has a defined start address. When WinOLS begins a search it will remember a list of all offsets relative to the start address and store it within the group. (If a search finds no results, the script cannot be applied.) So, if you search for the string "128 129 130" with the start address 0x1000, then the result could be that string will be found at the addresses 0x1000, 0x1100 and 0x1200. WinOLS will remember the values 0, 0x100 and 0x200 for the group.

If you now issue another search command for the same group, the search string will only be search for the known offsets. If the string cannot be found at one of the

known offsets, then this one will be removed from the group. So, if you search for "100 101" with 0x2000 as start address, then WinOLS will ONLY search at the addresses 0x2000, 0x2100 and 0x2200. All other places will be ignored. And if the string for example isn't found at 0x2100, then this offset (0x100) will be ignored in further searches, too.

Global commands:

`requires_winols "1.505"`

The script can only be executed if at least WinOLS version 1.505 is running. This helps avoiding incompatibilities, because the last additions to the scripting language were made in version 1.505.

`requires_hexdump`

This script can only be run if the currently active window shows a hexdump. It will be ignored for map windows.

`requires_map [X-Größe Y-Größe]`

This script can only be run if the currently active window shows a map. It will be ignored for hexdump windows. You can specify 2 optional parameters that are the number of columns and rows that the map is expected to have. If the currently active map does not match this data then the script cannot be applied.

`replace_mode Mode1 [Mode2] [Mode3]`

Defines, which replacement mode should be used. A script can specify multiple replace commands for the same data area, as long as they use a different mode. This command controls the selection in the script dialog. The first value (Mode1) is the default value in the dialog.

The following keywords may be used for the Mode parameter: percent absolute difference2 all

The keyword all is a special case. If it is used, then Mode2 and Mode3 may not be used. Instead all replace commands within the script, no matter what mode they use, are executed. This can be useful if you want to use the same script both for absolute and difference (or percentile) changes. A selection of the mode in the script dialog is not possible in this case. If the keyword all is used, you should set the value for `requires_winols` to 1.088, because this keyword is not supported in earlier versions.

Blocks:

`begin_requires`

`end_requires`

This surrounds a block that checks whether the script can be applied for the current project. Only if all search commands find something the script is regarded as applicable. Commands in this block can't change the project.

`begin_executable [tolerate_not_found]`

`end_executable`

Surrounds a block containing commands to execute the script and modify the

project. If the tag `tolerate_not_found` is set, then the script execution won't stop if a group can't be mapped. (This does not influence the `requires-block`.)

```
begin_insert_map group  
end_insert_map
```

This block may only be used within an EXECUTABLE block. It contains the definition for a map that is inserted when the script is executed. The group must be identical to one that was previously defined. If the group contains multiply positions only the best is used.

Non-Global commands:

search Group Dataorganisation Startaddress Deviation Tolerance "Searchstring"

This command performs a search for the search string. The string consists of several decimal numbers separated by spaces. A question mark may be used instead of a number, if any number is acceptable in this position. The data organisation (eByte, eLoHi, eHiLo, eLoHiLoHi, eHiLoHiLo) describes the data format in which the search string is expected in the project. The search will start at the start address and then expand to the left and right as far as the deviation allows it. The tolerance describes the maximal difference the search string values may have from the project.

Important: Prior to WinOLS 5.59.05, tolerance was not calculated correctly. For compatibility, WinOLS still uses the old method if `requires_winols` is less than "5.09".

search_by_mapid Group maporaxis Startaddress "mapid"

This command is an alternative to "search" and useful if the map already exists in the target project and the id field is filled in. Then this command can determine the address from the map id instead of the map values. The parameter *maporaxis* must be "map", "x" or "y" and shows which start address is used for the offset.

Respectively the parameter *Startaddress* should be set to the address or the map data or axis data. The *mapid* is always the id of the map (and never of the axis).

Usually its a good idea to use separate groups for "map", "x" and "y". Then the script can still be applied if the axis addresses have changed (seen relatively to address of the map data).

check_size_by_mapid sizex sizey "mapid"

Checks if the given map has the desired size.

search_by_mapname Group maporaxis Startaddress "mapname"

Just like `search_by_mapid`, but it searches for the map name, instead of the id.

replace Group Dataorganisation Startaddress mode1 mode2 "Replacestring"

This command replaces a search string with another string. Here you may use question marks, too. They represent a cell that should not be replaced with a different value. Mode1 defines whether only the best found position should be replaced ("Best") or each ("All"). Mode2 defines whether the data will be changed absolute ("Absolute") in percent ("Percent") or whether the changes will be transferred as difference ("Difference2")

Note: In WinOLS versions prior to 1.205 the automatic script generic could generate

wrong values for the difference values. Due to security reasons the old keyword "Difference" was deactivated, so that no bad data could be generated. If you've created scripts by hand simply use the new keyword "Difference2". Otherwise you should re-create the script or not use the difference method.

unique Group

The script will only continue if the group contains exactly one entry.

set_map_property "Property" "Value"

This command may only be issued with an INSERT_MAP block. It will define the difference properties of a map. A complete list with all possible properties can be seen in any script that transfers a map.

check_property "Property" "Value"

This command checks whether the current project has this value in its properties. If this is not the case, the script can't be executed. You may also enter a regular expression (like in perl or in good text editors). Regular expressions are marked by the prefix "RE:". An example for the recognition of a Mercedes in its usual variations would be: *check_property "producer" "re:(Mercedes|^MB\$)"*. If you would also like to accept an empty value for the producer: *check_property "producer" "re:(Mercedes|^MB\$|^\$)"*. Valid properties are: Producer, Chassis, Model, Softwareversion and Softwaresize.

Starting with WinOLS 5.34 you can use the same placeholders here (like "%Client.VIN%"), that are allowed at other places (e.g. F12>Export).

MessageBox "Test"

Displays the given text. This can be used for testing to check at which point the script execution stops. (Note: The testing phase is split in 2 parts. In part one all "check_property" commands are checked. The "search" commands are run in phase 2, together with MessageBox.)

comment Group nBytes "Text"

Creates a WinOLS comment with the given text and length in bytes at the start of each occurrence for this search group.

Performance:

The scripts are quite fast. In order to keep the check whether a script can be applied or not fast, only one simple rule must be obeyed: Simple conditions first.

Scripts are always processed in a linear way (starting at the top, and then going down). It is a good idea to use the SEARCH commands first that can be done quickly. This way the more complicated commands will be processed later and more rarely. SEARCH commands are simple / quick if they don't contain questions marks, no or little deviation and allow no or little tolerance. CHECK_PROPERTY commands are also simple at should stand at the beginning.

14.1.3 Map scripts

Scripts are normally applied to the entire project. As consequence they can only be used for projects that are very similar to the original project.

This problem can be avoided with map scripts. A map script only knows the current map and can only be a map to another map (which must have the same size as the source map). Furthermore such a script file can contain only the data of one map.

Creating:

To create a map script, open a map which contains differences between original and version and run the script function from the menu (or press the key F8). In the now appearing dialog use the button "Add".

Applying:

To apply a map script simply open a map and run the script function. Now it won't display the normal scripts, but only scripts made for maps of the current map's size.

14.1.4 Importing with scripts

Originally scripts were introduced to enable you to repeat often needed changes.

But since scripts are quite easy to create, advanced users with programming knowledge may use them as import interface for maps. This can be useful if you have extensive information about one or more projects in a format that cannot be imported into WinOLS.

In this case you can develop your own conversion software to create scripts that are used to import the known information. The created script can be dragged-dropped into the project window.

The created script should follow this structure:

```
//-----  
-----  
// This is a WinOLS Script * Please refer to the WinOLS documentation for details  
//-----  
-----  
requires_winols "1.505"  
  
replace_mode absolute  
  
begin_requires  
end_requires  
  
begin_executable  
  search KF00 eByte 0x00000 0 0% "?"  
  
  begin_insert_map KF00  
    set_map_property "Name" "Kennfeld"  
    set_map_property "IdName" ""  
    set_map_property "Typ" "eZweidim"  
    set_map_property "FolderName" "My maps"  
    set_map_property "ViewMode" "eViewText"
```

```

set_map_property "RWin" "eBars"
set_map_property "DataOrg" "eFloatLoHi"
set_map_property "bKehrwert" "0" // reciprocal
set_map_property "bVorzeichen" "0" // sign
set_map_property "bDelta" "0"
set_map_property "bProzent" "0" // percent
set_map_property "bOriginal" "0"
set_map_property "bOriginalWerte" "0" // original values
set_map_property "Spalten" "16" // columns
set_map_property "Zeilen" "3" // rows
set_map_property "Radix" "10"
set_map_property "Nachkommastellen" "0" // precision
set_map_property "Kommentar" "My comment" // comment
set_map_property "SkipBytes" "0"
set_map_property "LineSkipBytes" "0"
set_map_property "Feldwerte.Name" "-" // field values
set_map_property "Feldwerte.Einheit" "-" // ...unit
set_map_property "Feldwerte.Faktor" "1,000000" // ...factor
set_map_property "Feldwerte.Offset" "0,000000"
set_map_property "Feldwerte.PreOffset" "0,000000" // For reciprocal
set_map_property "Feldwerte.StartAddr" "7668"
set_map_property "StuetzX.Name" "-" // x-axis
set_map_property "StuetzX.Einheit" "-"
set_map_property "StuetzX.Faktor" "1,000000"
set_map_property "StuetzX.Offset" "0,000000"
set_map_property "StuetzX.PreOffset" "0,000000" // For reciprocal
set_map_property "StuetzX.DataSrc" "eRom"
set_map_property "StuetzX.DataHeader" "0"
set_map_property "StuetzX.DataAddr" "4096"
set_map_property "StuetzX.DataOrg" "eFloatLoHi"
set_map_property "StuetzX.Radix" "10"
set_map_property "StuetzX.bRueckwaerts" "0" // backwards
set_map_property "StuetzX.bKehrwert" "0"
set_map_property "StuetzX.bVorzeichen" "0"
set_map_property "StuetzX.Nachkommastellen" "0"
set_map_property "StuetzX.SignaturByte" "0xFFFFFFFF" // signature byte
set_map_property "StuetzX.SkipBytes" "0"
set_map_property "StuetzY.Name" "-"
set_map_property "StuetzY.Einheit" "-"
set_map_property "StuetzY.Faktor" "1,000000"
set_map_property "StuetzY.Offset" "0,000000"
set_map_property "StuetzY.PreOffset" "0,000000" // For reciprocal
set_map_property "StuetzY.DataSrc" "eRom"
set_map_property "StuetzY.DataHeader" "0"
set_map_property "StuetzY.DataAddr" "8192"
set_map_property "StuetzY.DataOrg" "eFloatLoHi"
set_map_property "StuetzY.Radix" "10"
set_map_property "StuetzY.bRueckwaerts" "0"
set_map_property "StuetzY.bKehrwert" "0"
set_map_property "StuetzY.bVorzeichen" "0"
set_map_property "StuetzY.Nachkommastellen" "0"
set_map_property "StuetzY.SignaturByte" "0xFFFFFFFF"
set_map_property "StuetzY.SkipBytes" "0"
end_insert_map
end_executable

```

The sample script creates a map. To create more than one map with a single script, simply repeat the text with the `begin_executable / end_executable` block and replace "KF00" each time with other, unique identifiers.

The script uses the command `set_map_property` to fill several properties of the map with values. The individual properties mirror the fields in the dialog "Properties: Map".

Checkboxes are filled with the numbers 0 (not checked) or 1 (checked). The individual field names have these meanings:

Name	The name of the map or axis
IdName	The internal identifier. Normally only Damos / ASAP2 use it.
Typ	The map type. Valid values are eEinzel (Single value), eEindim (Onedimensional map), eZweidim (Twodimensional map), eZweilnv (Twodimensional, inverted map)
FolderName	The name of the folder (requires WinOLS 2.08)
ViewMode	The view mode. Valid values are eViewText (Text mode), eView2d (2d-Mode), eView3d (3d-Mode)
RWin	The right area in text mode. Valid values are eRightWinNone (Nothing), eHex (Character view), eBars (Bar view), eHexBars (Both views)
DataOrg	The data organization (Endian and bit width). Valid values are eByte, eLoHi, eHiLo, eLoHiLoHi, eHiLoHiLo, eFloatLoHi, eFloatHiLo, eUserdef, eUserdefString
bKehrwert	1 for a reciprocal view (otherwise 0)
bVorzeichen	1 for a signed view (otherwise 0)
bDelta	1 for a view of the difference (otherwise 0)
bProzent	1 for a view with a percentual difference (otherwise 0)
bOriginal	1 to ignore factor and offset (otherwise 0)
bOriginalWerte	1 to view the not the version values, but the original values (otherwise 0)
Spalten	Number of columns in the map
Zeilen	Number of rows in the map
Radix	Number system. 16 for hexadecimal, 10 for decimal
Kommentar	A comment
Nachkommastelle	Number of positions after decimal point
n	
SignaturByte	The marker byte before the axis or 0xFFFFFFFF (requires WinOLS 2.08)
SkipBytes	The number of bytes the are skipped between two axis values (requires WinOLS 2.08)
Feldwerte (...)	This prefix means that the following properties applies to the actual values of the map.
StuetzX (...)	This prefix means that the following properties applies to the values of the X axis.
StuetzY (...)	This prefix means that the following properties applies to the values of the Y axis.
StuetzX.1	Sets the string axis value for the first position. Requires DataOrg=eUserdefString. Can be used for StuetzY and other numbers, too.
Einheit	A text field with the unit for the values.
Faktor	The multiplications factor for viewing the values

Offset	The addition values for viewing the values
StartAddr / DataAddr	The values start at this hexdump address. This address is not absolute, but shifts with the same offset that was found to fulfill the search condition(s).
DataSrc	The type of data source. Valid values are eDataSrcNone (no axis), eRom (Data from the hexdump), eRomAdd (Additive values from the hexdump), eRomSub (Subtractive values from the hexdump), eUserdef (Userdefined vallues), eRomBackwards (Values from the hexdump in inverted order)
DataHeader	Number of header bytes before the axis that is marked in the hexdump as well
bRueckwaerts	1 for mirroring the data (otherwise 0)

Here an excerpt from a script that imports a text axis:

```
(...)
begin_insert_map KF00
  (...)
  set_map_property "StuetzX.DataOrg" "eUserdefString"
  set_map_property "StuetzX.0" "First text"
  set_map_property "StuetzX.1" "Second text"
  set_map_property "StuetzX.2" "Third text"
  set_map_property "StuetzX.3" "Fourth text"
  set_map_property "StuetzX.4" "Last text"
end_insert_map
end_executable
```

14.1.5 Trickery with scripts

Technically speaking, each group is a list of offsets that are added to the address. Here, for example, all offsets (find address - 0x005A0) are stored in the group KF00: search KF00 eByte 0x005A0 0x100000 0% "247"

The offsets are added back to the address here:
replace KF00 eByte 0x005A0 all absolute "0"

The address can be changed. This can be useful if you are searching at location A but want to change it at location B. (Important: The offset is in bytes, not in cells. The data organization must therefore be the same). The absolute address is less important (due to the tolerance) than the difference between the addresses of the two instructions. (Whereby WinOLS prefers the smallest possible offset in "best" mode).

For example, you can use this to search for something in a map, but change it in the axis. This assumes that the map + axis have the same data organization and the map is 1*x (or x*1).

Here is an example script that you can drag into a 16x1 map. It searches for 247 in the map and writes 0 to the axis (which must be directly in front of the map).

```
requires_winols "2.08"  
requires_map 16 1  
  
replace_mode absolute  
  
begin_requires  
  search KF00 eByte 0x005A0 0x100000 0% "247"  
end_requires  
  
begin_executable  
  search KF00 eByte 0x005A0 0x100000 0% "247"  
  replace KF00 eByte 0x00590 all absolute "0"  
end_executable
```

14.2 Additional file formats

WinOLS can already import / export several file formats. You can extend this list with 2 methods:

a) Import / Export Plugins

Visit www.evc.de/en/product/ols/plugins.asp to find import/export plugins for several special file formats. You can buy / install them like checksums, then they will be available in WinOLS just like other file formats.

Search keywords:

.a2l .asap2 .dam .damos .bsw .0pa .0da .cff .cre .dcm .e2m .ecfg .ek1 .fls .fl2 .mm3 .nav.dec .nav.zenc .nav .odx .odx-f .frf .sgo .sgm .pdx .sox .prm .slave .smr-f .vbf .vds .xdf .xml

b) External Converters **[Requires programming knowledge]**

If you use other / your own file formats, you can integrate them into WinOLS. This will cause WinOLS to show them in the file dialogs. If the user selects such a file format, then WinOLS will import / export an uncompressed EcuX file and run a program provided by you to do the actual conversion from/to EcuX.

14.2.1 Basics

To integrate your own External Converter into WinOLS, you need an executable windows program which performs the conversion between your file format and an unpacked EcuX file in at least one direction. To indicate success the program must return the error code 0. If it returns any other value, WinOLS will display the program's STDOUT as error message.

To allow WinOLS to find your program, you need to create the following registry-entries (all of the type "string"). If you want to give your program to third parties, it's recommended to create an installer for this:

HKCU\Software\EVC\WName of the file format
inOLS\Importer\Company
yName
HKCU\Software\EVC\WDescription of the author / company, perhaps with URL
inOLS\Importer\Company
yAuthor
HKCU\Software\EVC\WA list of file suffixes (without star or dot, separated by
inOLS\Importer\Companycolons), which the converter can process. The first suffix in
ySuffix the list is the default-suffix during export.
HKCU\Software\EVC\WCommandline which is run during import.
inOLS\Importer\Company
y\Import
HKCU\Software\EVC\WCommandline which is run during export.
inOLS\Importer\Company
y\Export

Please replace *Company* with your company name. If your converter supports only one direction (e.g. only import), you can simply leave the registry key for the other direction empty.

A command line should include the placeholders %1 and %2. They will be replaced with source and target. Example:

```
"C:\Program Files (x86)\Acme\ExternalConvertSample\converter_export.bat" "%1" "%2"
```

Import:

%1 is the path+filename of the file the user wants to import into WinOLS..

%2 is a path (without trailing backslash) where WinOLS expects the files that would normally be compressed in an EcuX files. It's up to your converter program to create these files.

Export:

%1 is a path (without trailing backslash) where WinOLS stores the files that would normally be compressed in an EcuX files.

%2 is the path+filename of the file the user wants to have. It's up to your converter program to create this file.

EcuX:

Information about the EcuX file format can be found at ecux.evc.de. Normally EcuX files are zip files containing various other (contents.ini and binary file(s)). The zip compression is omitted in the External Converters and the files are expected / stored uncompressed in the above path.

14.2.2 Example

Here are the files that you need for a sample converter, including installer (Inno setup). This sample demonstrates only the integration. Effectively it does not convert anything, but only copies the eprom element and thus works only with projects that

have an eprom element.

File: contents.ini

; This is the Contents.ini file of an EcuX package. It's an open format, you're welcome to import/export it with your own tools. For the current version documentation check <http://ecux.evc.de/>

```
[global]
EcuX_version      = 0.3
AuthorTool        = ExternalConverterSample
```

```
[Description]
NumVersions       = 1
```

```
[File1]
Filename          = eprom.bin
```

File: converter_export.bat

```
@rem WinOLS external converter sample, http://www.evc.de
@rem
@rem Please note that we're using a bat file for simplicity. You'll probably want to
use an exe.
@rem
@rem Each converter receives 2 inputs. The export converter receives:
@rem %1 - the temporary path containing the files that would normally be inside an
EcuX file (http://ecux.evc.de/)
@rem %2 - path + filename of the file that the user expects as final output

@rem For sake simplicity this file simply copies the source file.
@rem Note: This exporter only works for file that have an element named "Eprom".
@copy "%~1\eprom1.bin" "%~2"

@rem returns any error from the last copy command to WinOLS:
@exit /b %ERRORLEVEL%
```

File: converter_import.bat

```
@rem WinOLS external converter sample, http://www.evc.de
@rem
@rem Please note that we're using a bat file for simplicity. You'll probably want to
use an exe.
@rem
@rem Each converter receives 2 inputs. The import converter receives:
@rem %1 - path + filename of the file that the user expects us to import
@rem %2 - the temporary path where we have to create everything that's normally
inside an EcuX file (http://ecux.evc.de/)

@rem %~dp0 is bat magic for "path of this bat file"
```

```
@copy "%~dp0\contents.ini" "%~2\contents.ini"
```

```
@rem For sake simplicity this file simply copies the source file.
```

```
@copy "%~1" "%~2\eprom.bin"
```

```
@rem returns any error from the last copy command to WinOLS:
```

```
@exit /b %ERRORLEVEL%
```

File: is_SampleConverter.iss

```
; Script generated by the Inno Setup Script Wizard.
```

```
; SEE THE DOCUMENTATION FOR DETAILS ON CREATING INNO SETUP  
SCRIPT FILES!
```

```
#define MyAppName "WinOLS ExternalConvertSample"
```

```
#define MyAppVerName "WinOLS ExternalConvertSample 1.00"
```

```
#define MyAppPublisher "Acme Corp"
```

```
#define MyAppURL "http://www.example.org/"
```

[Setup]

```
; NOTE: The value of AppId uniquely identifies this application.
```

```
; Do not use the same AppId value in installers for other applications.
```

```
; (To generate a new GUID, click Tools | Generate GUID inside the IDE.)
```

```
AppId={{cbbaf88b-60ae-42a1-b31c-5fbba95738bf}}
```

```
AppName={#MyAppName}
```

```
AppVerName={#MyAppVerName}
```

```
AppPublisher={#MyAppPublisher}
```

```
AppPublisherURL={#MyAppURL}
```

```
AppSupportURL={#MyAppURL}
```

```
AppUpdatesURL={#MyAppURL}
```

```
DefaultDirName={pf32}\Acme\ExternalConvertSample
```

```
DefaultGroupName={#MyAppName}
```

```
OutputBaseFilename=ExternalConvertSample
```

```
Compression=lzma
```

```
SolidCompression=true
```

```
ShowLanguageDialog=no
```

```
WindowResizable=false
```

```
WindowVisible=true
```

```
WizardImageFile=compiler:WizModernImage-IS.bmp
```

```
WizardSmallImageFile=compiler:WizModernSmallImage-IS.bmp
```

[Languages]

```
Name: english; MessagesFile: compiler:Default.isl
```

[Files]

```
Source: contents.ini; DestDir: {app}; Flags: ignoreversion
```

```
Source: converter_import.bat; DestDir: {app}; Flags: ignoreversion
```

```
Source: converter_export.bat; DestDir: {app}; Flags: ignoreversion
```

[Registry]

Root: HKCU; Subkey: "Software\EVC\WinOLS\Importer\Acme"; ValueType: string;
ValueName: "Name"; ValueData: "Sample"

Root: HKCU; Subkey: "Software\EVC\WinOLS\Importer\Acme"; ValueType: string;
ValueName: "Author"; ValueData: "SampleCompanyName, http://www.example.org/"

; We support multiple suffixes. The first one is the primary suffix that is appended by default when exporting

Root: HKCU; Subkey: "Software\EVC\WinOLS\Importer\Acme"; ValueType: string;
ValueName: "Suffix"; ValueData: "externalconvertersample,ecs"

; Links to the software that would provide the actual work. Our sample just copies, without any actual conversions.

; Notes: - {app} is replaced at install time by inno setup with you install target path

; - %1 and %2 are replaced by WinOLS with the source and target path/
filename. (Path without backslash at the end)

; - Don't forget the "" around the paths! The outer quotes are for inno setup. The inner double quotes are converted to single quotes by inno setup

Root: HKCU; Subkey: "Software\EVC\WinOLS\Importer\Acme"; ValueType: string;
ValueName: "Import"; ValueData: """"{app}\converter_import.bat"" ""%1"" ""%2""""

Root: HKCU; Subkey: "Software\EVC\WinOLS\Importer\Acme"; ValueType: string;
ValueName: "Export"; ValueData: """"{app}\converter_export.bat"" ""%1"" ""%2""""

Chapter



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