



**CARPENTERS' AND
ARCHITECTS'
TIMBERFRAMING SOFTWARE**

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1.0) Setting-up ABBUND ONE

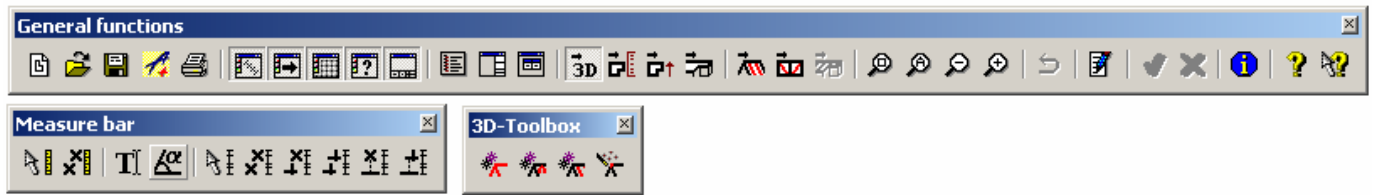
1.1) Windows screen resolution

After installing ABBUND ONE on your computer you should make sure that the resolution of your screen is at least 800x600 or - even better - 1024x768 pixels. A lower resolution should not be used since this could cut off parts of the input dialogues on your screen and make it impossible to work with ABBUND ONE. You can change the screen resolution by clicking on your desktop with your right mouse button and then selecting "Properties" in the context menu. Go on the dialogue page "Settings" to change the resolution under "Screen area".

1.2) Setting-up graphics and list printers

In order to being able to print in ABBUND ONE you need to set-up at least one printer on your Windows desktop. You can add a new printer to your system by opening the START-menu and going on "Settings / Printers / Add Printer". In ABBUND ONE you can select graphics and text printers via the menu item "File / Options/Settings / Printer / Printer setup...". Your graphics printer should be set to "Landscape" as its printout orientation to give you as much room as possible for printing out construction drawings. You can change the current printout orientation of a printer by selecting it in the printer settings and then clicking on "Set up" to access its settings. You might want to set your text printer orientation to "Portrait" for most efficient text list printout.

2.0) Description of the ABBUND ONE icon bars



General icons:



Create a new project.



Open an already existing project.



Save current project.



Take current screenshot and print it.



Switch status bar on/off.



Switch measuring bar on/off.



Switch tool bar on/off.



Switch floor selection on/off.



Switch to 3D-view and make all necessary computations.



Switch to ground plan input where you can create a ground plan that will be the basis for any roof computation.



Switch to series of joists where you can create a floor or series of joists on the current floor at any user defined height.



Switch to timber selection from where you can access any timber input dialogue such as purlins, rafters, double ties, hip and valley rafters, edge rafters, and shorings.



Switch to wall timber selection.



Switch to ceiling timber selection.



Zoom in by drawing a box to select a specific area of the current drawing.



Reset zoom.



Zoom out.



Zoom in.



Open your construction drawing settings.



Switch legend next to the right edge of the page on/off. This affects the size of your construction drawing.



Redraw current window contents.



Confirm an action similar to pressing the ENTER-key.



Cancel an action similar to pressing the ESC-key.



Start online help and open its index.



Turn your mouse pointer into a pointer with a question mark attached. This way you can get help on a specific menu item by clicking on it.

Measuring icons:



Take measure between two selected cursor positions.



Measure distance between two selected points.



Define and position text anywhere in your current drawing.



Measure angle between two selected edges.



Create measure between two cursor positions.



Create measure between two points.



Create measure between a point and an intersection.



Create measure between two intersections.



Create measure between a point and an edge.



Create measure between an intersection and an edge.

Toolbox icons:



Apply all values from "File / Options/Settings / Settings / General / Profile Macro" to all profiles. This will recompute your roof design including all its timber.



Start timber macros as defined under "File / Options/Settings / Settings / General / Timber Macro".



Modify your roof design parameters.



Shortcut to 3D-Cam.




Shortcut to "Change eaves" to modify roof planes.

3.0) Description of various settings

You can make changes to various settings in your ABBUND ONE.

3.1) Construction drawing settings



These settings affect general, roof, wall, and floor timber and can be different for various types of drawings. You can access your construction drawing settings in three different ways:

- Via the menu item "Graphics / Settings construction drawing".
- By clicking on the symbol 
- By opening the context menu with your right mouse button and then selecting "Settings construction drawing" with your left mouse button.

3.2) General settings

There are several general and project settings affecting your ABBUND ONE environment and the behavior of ABBUND ONE altogether when making computations and executing macros such as roof timber macros etc. As we proceed we will make changes to some of the settings as needed in order to obtain the desired results. All general settings can be accessed via the menu items "File / Options/Settings / Settings / General" and " File / Options/Settings / Settings / Project".

4.0) Finding your way around using mouse and keyboard

Your mouse plays an essential role when working with ABBUND ONE. By clicking on your left mouse button you select a specific function while a right mouse click opens up a context menu containing various general functions such as zooming, creating measures, etc. By holding CTRL you can select more than one object (such as timber, building sides, roof and wall planes etc.) and then continue by pressing the ENTER-key or clicking on . By holding SHIFT and using the cursor-keys you can navigate through objects and select them by pressing the SPACE-key. Again, you proceed by pressing ENTER or clicking on the  button.

4.1) Working with ABBUND ONE input dialogues

Each item in an ABBUND ONE input dialogue is connected to one of the three icons below:



A user input is expected.

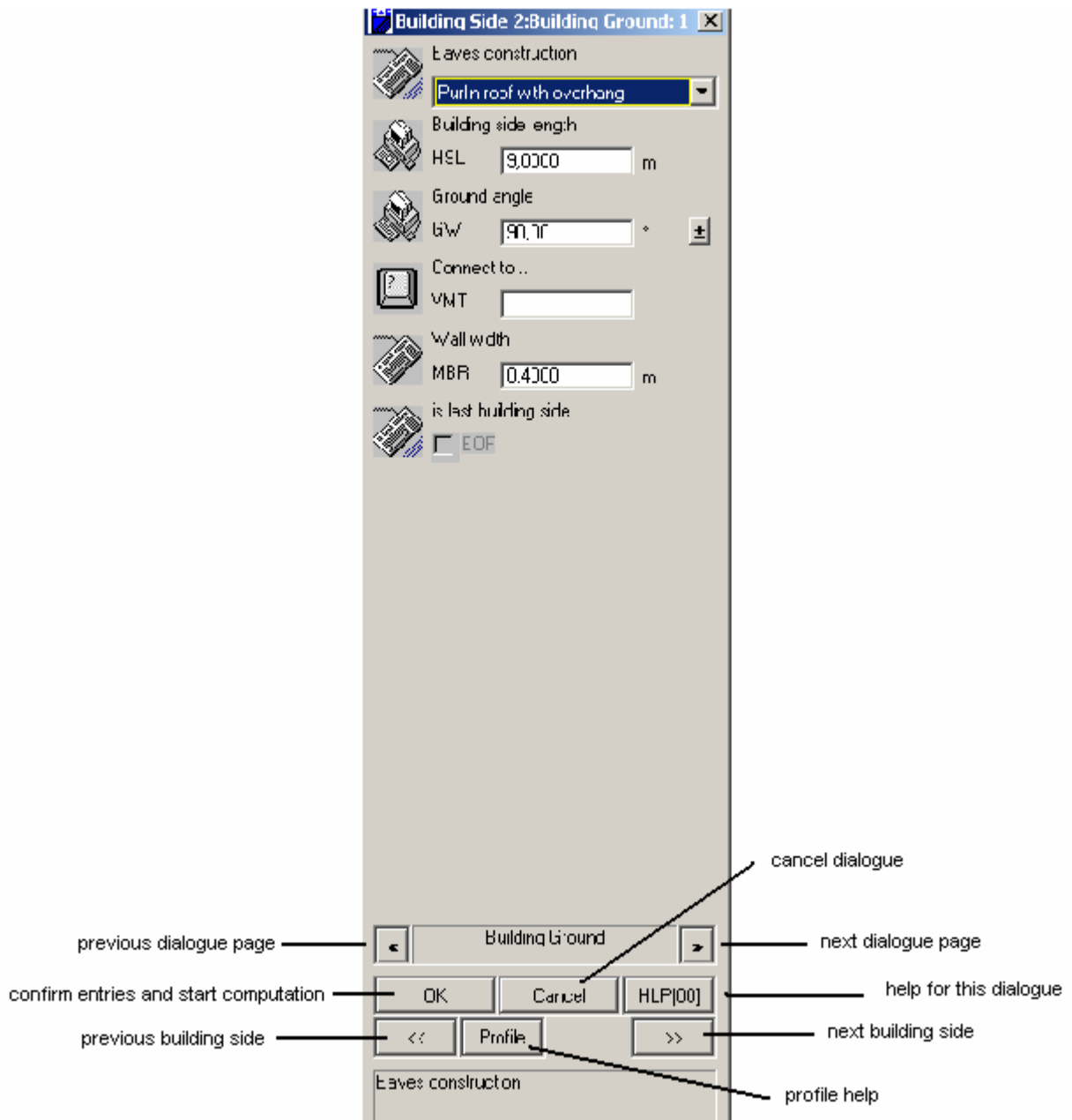


A user input was made.



The value was computed by the program.


In some dialogues you can decide which values you want to enter yourself and which values you want the program to compute by clicking on the icon next to the specific value. In some dialogues you can access an additional dialogue page by clicking on \pm . For example, this is possible for the roof pitch in the numerical ground plan input dialogue. Clicking on \pm takes you to a dialogue page asking you for a "Measure to ridge" and a "Ridge height" which will be used to compute the actual roof pitch. In every numerical dialogue item you can make simple calculations and the result will be displayed after pressing the ENTER-key. The four basic calculating operations (+, -, *, /) as well as $\cos(45)$, $\sin(45)$, and $\tan(45)$ are permitted.



There are several dialogues containing more than one page. Make sure to fill out all dialogue pages with the necessary entries. Pressing ENTER to confirm a value automatically takes you to the next dialogue item.


5.0) Creating a project in ABBUND ONE

The following rules are important:

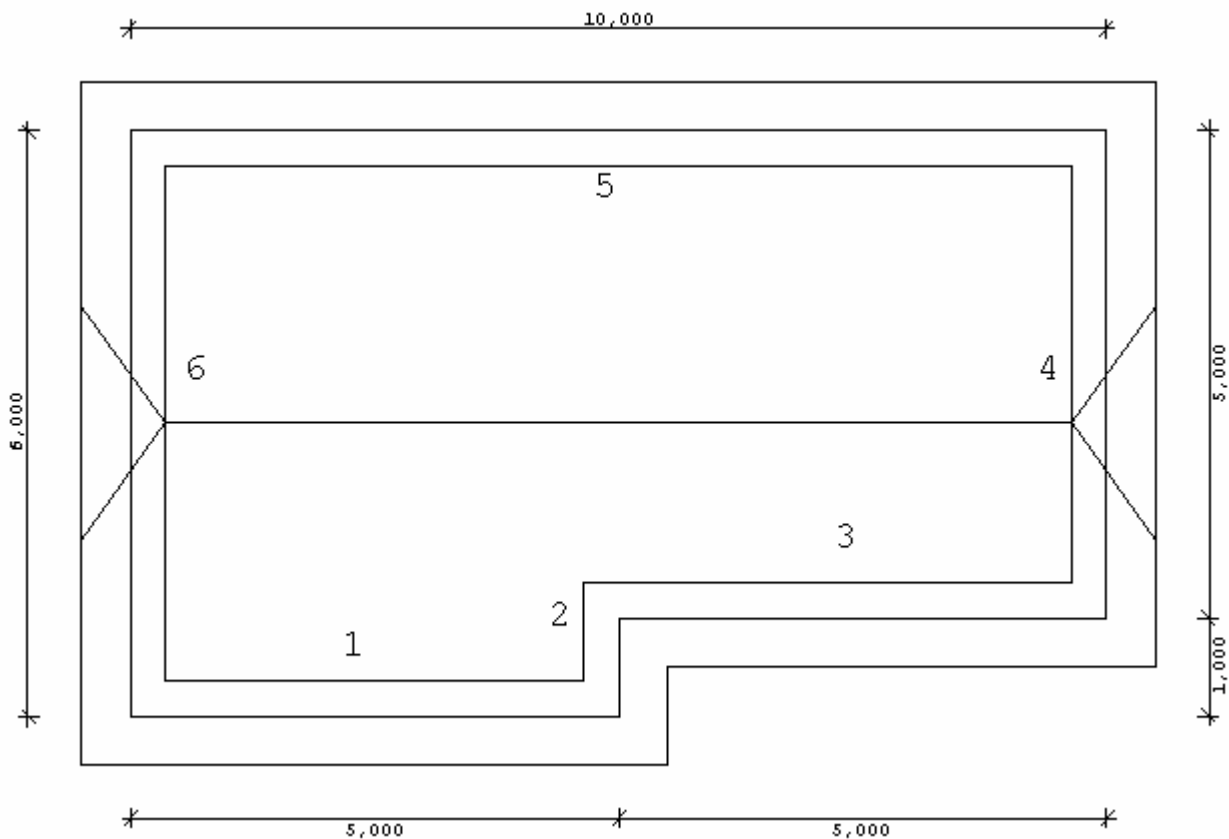
- Each building side has its own unique building side number.
- A ground plan is always entered counter-clockwise.
- When entering a round plan all angles are interior angles, e.g. the angle between building side 1 and building side 2.
- For each roof plane at least one building side is needed.
- For additional building sides lying under the same roof plane (in addition to its reference building side) Connect to... VMT has to be entered.
- When entering the last building side  should be enabled.

5.1) Creating a roof design using a numerical ground plan

There are two ways to access the numerical ground plan input dialogue:

- Via the menu item "Edit / Ground Plan / Numerical Ground Plan Input".
- By clicking on 

In this example we are going to enter a hipped gable roof with 6 building sides and only 4 roof planes (this means that we need to work with Connect to... VMT):



Building side 1

Eaves construction	: Purlin roof with overhang
Building side length	: 5,000
Wall width	: 0,365
Hor. roof overhang	: 0,500
Wall Plate, distance to wall plane	: 0,050
Perp. Obholz	: 0,150
Height TE wall plate	: 0,520
Roof pitch	: 40°
Wall Plate width	: 0,120
Wall Plate strength	: 0,120

Building side 2

Apply values from building side 1 and change to the following values:

Eaves construction	: Purlin roof with overhang
Building side length	: 1,000
Ground angle	: 90°
VMT	: 1
Wall width	: 0,365
Hor. roof overhang	: 0,500

Building side 3

Apply values from building side 1 and change to the following values:

Eaves construction	: Purlin roof with overhang
Building side length	: 5,000
Ground angle	: 270°
VMT	: 1
Wall width	: 0,365
Hor. roof overhang	: 0,500

Building side 4

Apply values from building side 1 and change to the following values:

Eaves construction	: Purlin roof with overhang
Building side length	: 5,000
Ground angle	: 90°
Wall width	: 0,365
Hor. roof overhang	: 0,500
Wall Plate, distance to wall plane	: 0,050
Perp. Obholz	: 0,150
Height TE wall plate	: 2,60
Roof pitch	: 50°
Wall Plate width	: 0,120
Wall Plate strength	: 0,120

Building side 5


Apply values from building side 1 and change to the following values:

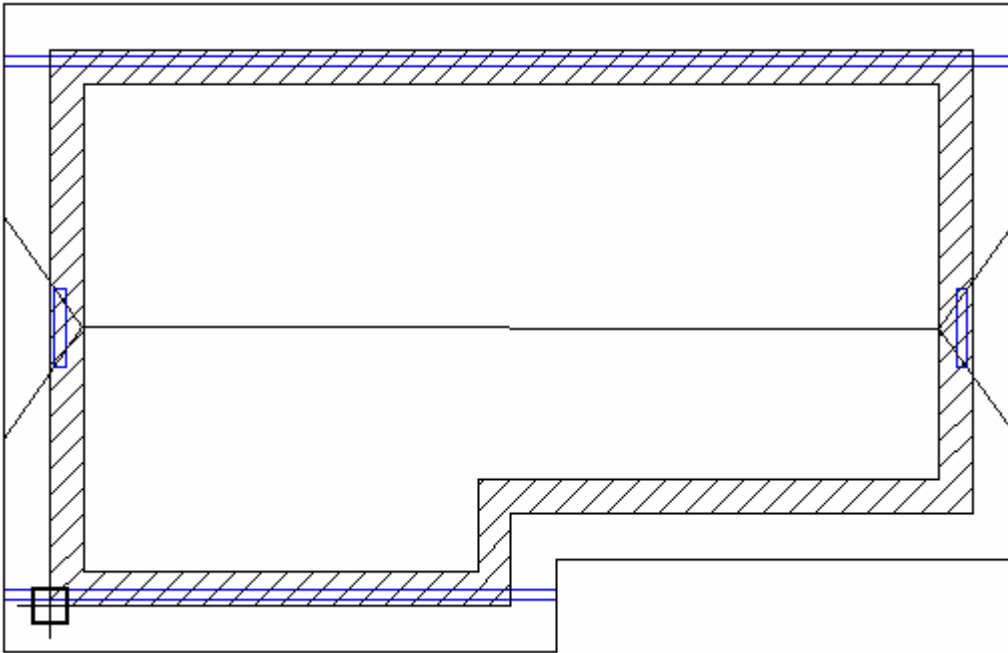
Eaves construction	: Purlin roof with overhang
Building side length	: 10,00
Ground angle	: 90°
Wall width	: 0,365
Hor. roof overhang	: 0,500
Wall Plate, distance to wall plane	: 0,050
Perp. Obholz	: 0,150
Height TE wall plate	: 0,520
Roof pitch	: 40°


Wall Plate width : 0,120
Wall Plate strength : 0,120

Building side 6

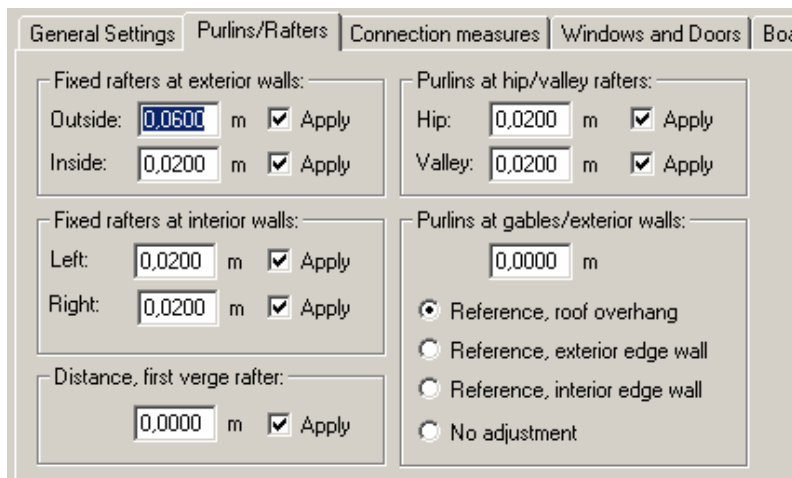
Apply values from building side 4 and change to the following values:
is last building side : enabled

After confirming the dialogue values by clicking on OK and then clicking on  the roof design will be computed and you will be taken back to the main screen. The roof design should look similar to the screenshot below:





Now you should save your current project by clicking on 

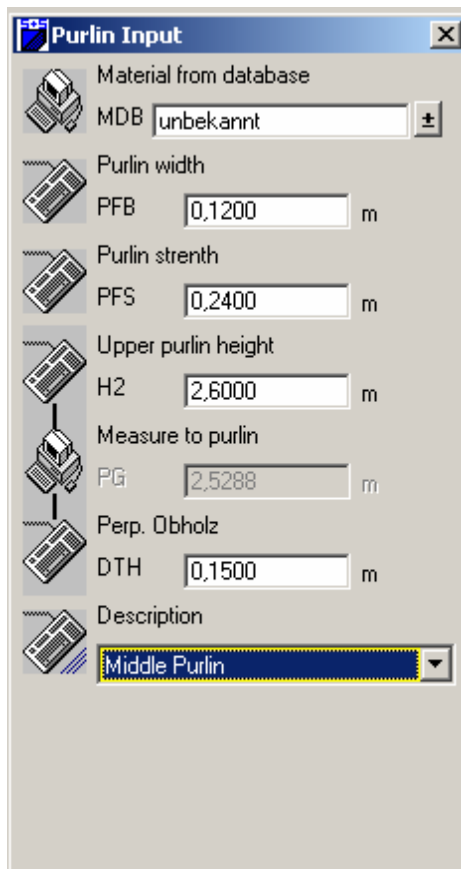
Check your settings relating to purlins and rafters by opening the context menu with your right mouse button and then selecting "Project Settings / Purlins/Rafters" with your left mouse button.




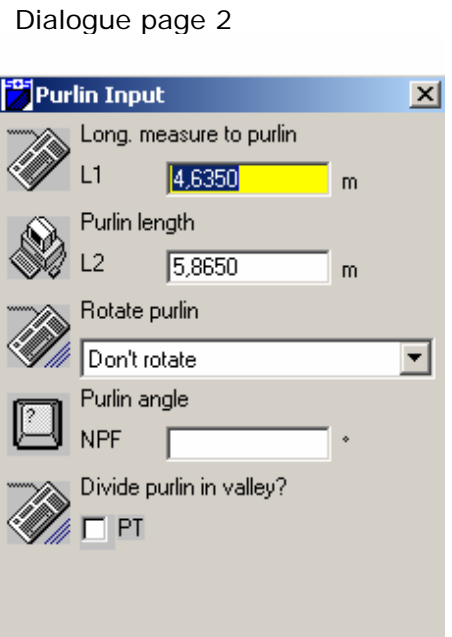
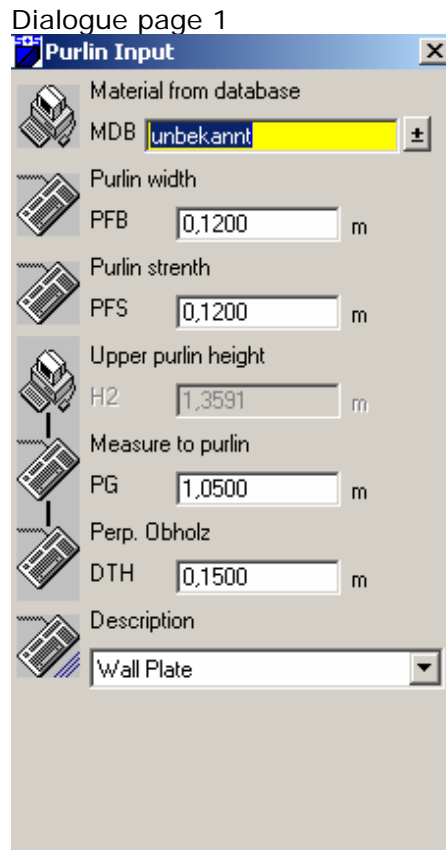
5.1.1) Purlins

What we would like to do next is enter the roof timber. All roof timber can be accessed via the menu item "Edit / Roof timber..." or by clicking on . Let's start with the purlins. Via the new menu item "Purlins / Purlins for selected profiles" you can select more than one profile by holding down the CTRL-key while making your selection. Hold CTRL and select profiles 1 and 5. Both profiles should be highlighted in red now. Pressing ENTER or clicking on  takes you to a dialogue that allows you to enter the middle purlins for both profiles at the same time.

Fill out the dialogue with these values and confirm it by clicking on OK:





Also, we should enter another wall plate for profile 1. Select the menu item "Purlins / Purlins for selected profiles" again and click on profile 1. Pressing ENTER or clicking on  takes you back to the same dialogue where you now enter all necessary wall plate values:

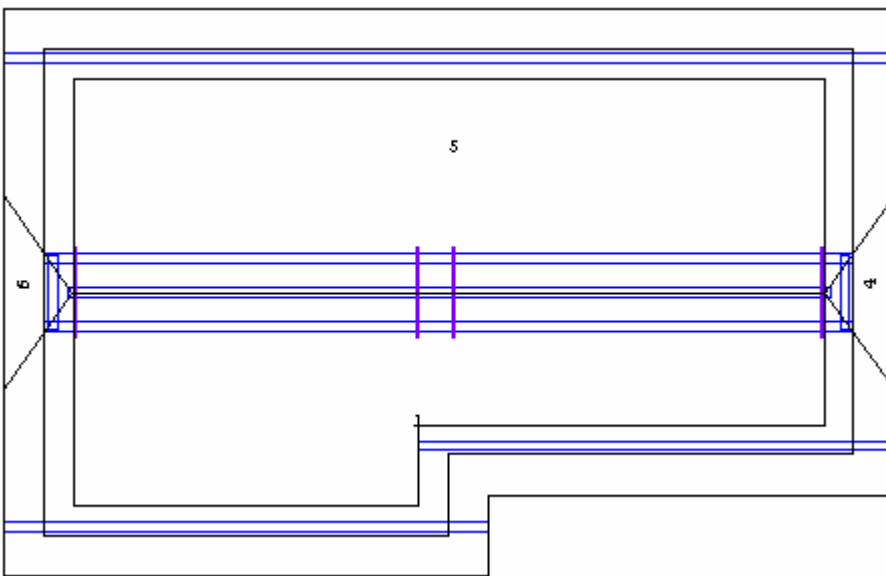


Next, we are going to enter the ridge plate. The menu item "Purlins / Ridge Purlins for all ridges" takes you directly to the first page of the dialogue needed. Enter the following values:


Purlin width	: 0,120
Purlin strength	: 0,120
Perp. Obholz Building Side 5	: 0,150

Perp. Obholz Building Side 1	: 0,150
Divide purlin in valley?	: No
Long. measure to purlin Building Side 1	: Will be computed automatically
Long. measure to purlin Building Side 5	: Will be computed automatically
Purlin length	: Will be computed automatically
Cleat width	: 0,024
Cleat strength	: 0,120
Insertion depth	: 0,020
Distance (parallel to rafter)	: 0,000
Cleat position	: Both sides at rafter
Ridge gap width	: 0,005


Start roof computation by clicking on OK and then clicking on . The example roof should look similar to the screenshot below. We should save the project by clicking on .



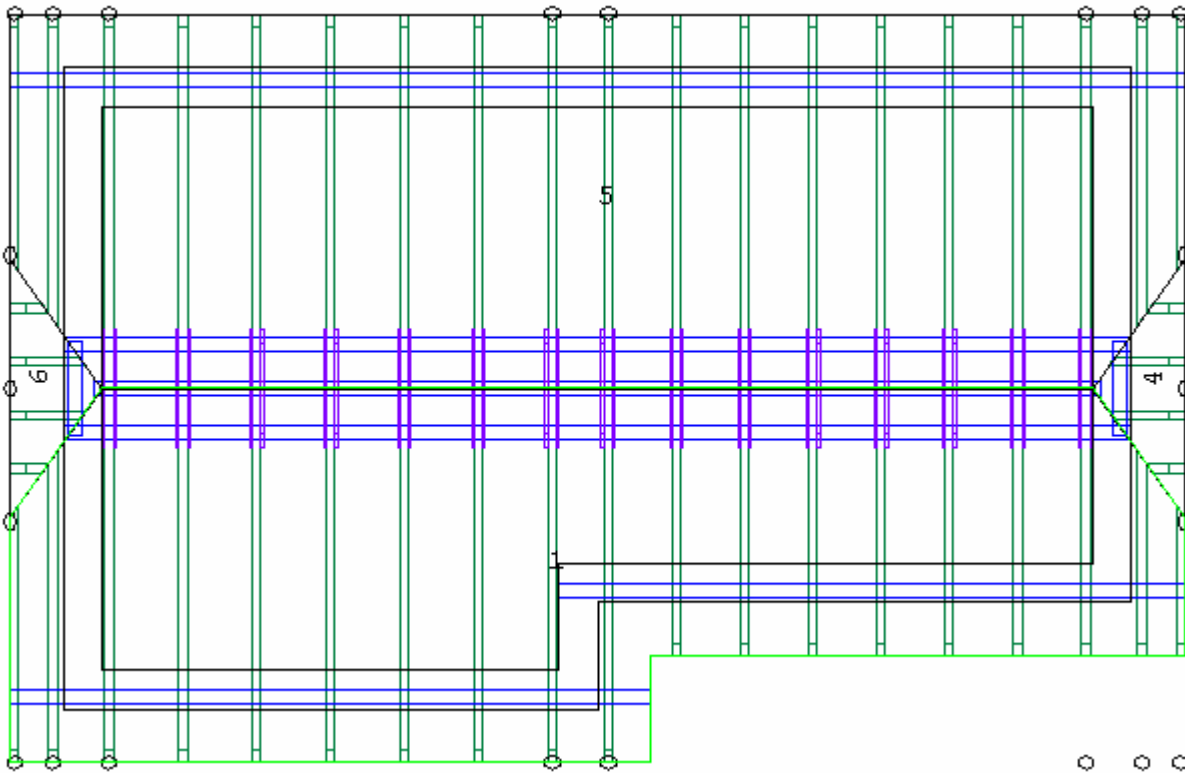
5.1.2) Rafters

Next, we are going to take care of the rafters. You can access any roof timber via the menu item "Edit / Roof timber..." or by clicking on . Proceed to rafters from there. The menu item "Rafters / Rafters for all profiles" takes you to a dialogue where you can enter the rafters for all four profiles at once. Enter the following values and press OK:

Rafter width	: 0,08
Rafter strength	: 0,18
Division	: Automatic
Type of division	: Symmetric
Rafter distance	: 0,70
Eaves, rafter end section	: Vertical
Ridge head section	: Perp. line

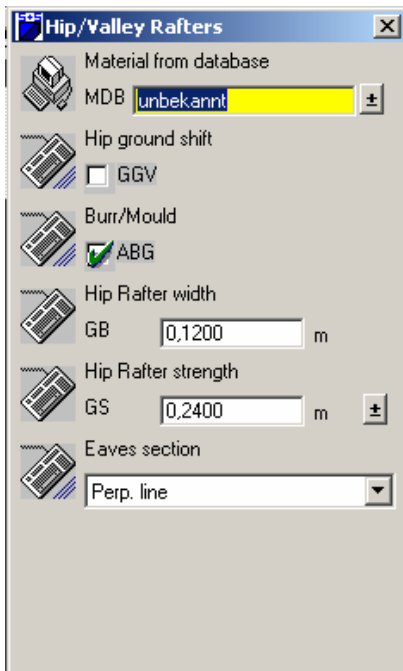
Now we are going to change the division type of roof planes 4 and 6 from symmetric to hip division via the menu item "Rafters / Rafters for selected profiles". Select both profiles by holding down the CTRL-key and clicking on profiles 4 and 6. Pressing ENTER or clicking on  takes you to the



dialogue where you enter the rafter values. Change "Type of division" from "symmetric" to "Hip division" and confirm your changes by clicking on the OK-button. Now your project should look like this:

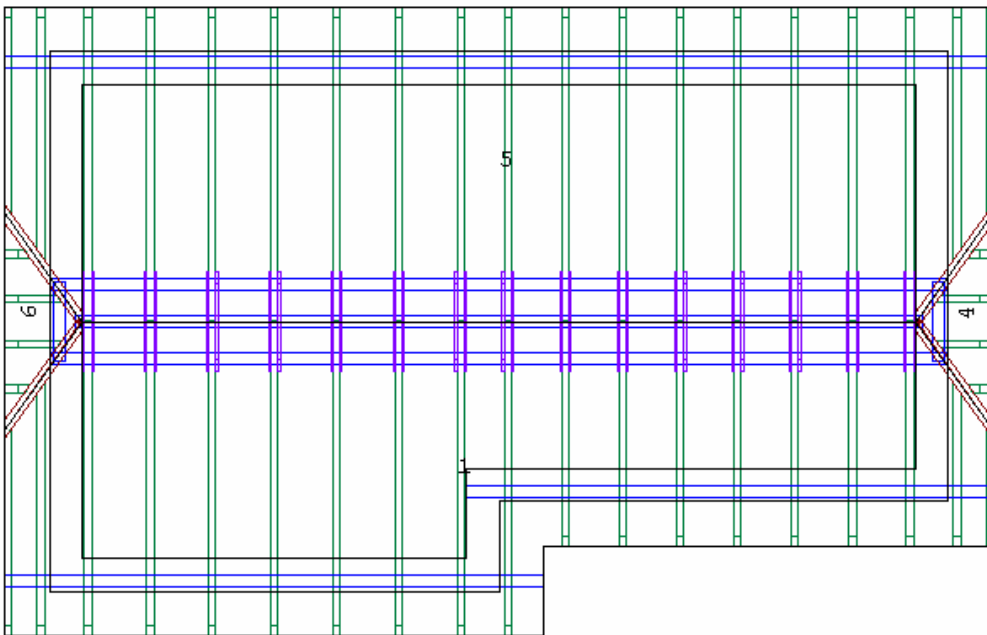


5.1.3) Hip and valley rafters

Next, we are going to create the four hip rafters. Again, access the roof timber menu and select "Hip/Valley Rafters". The menu item "Hip Rafters / Hip/Valley Rafters for entire roof" takes you to the following dialogue:

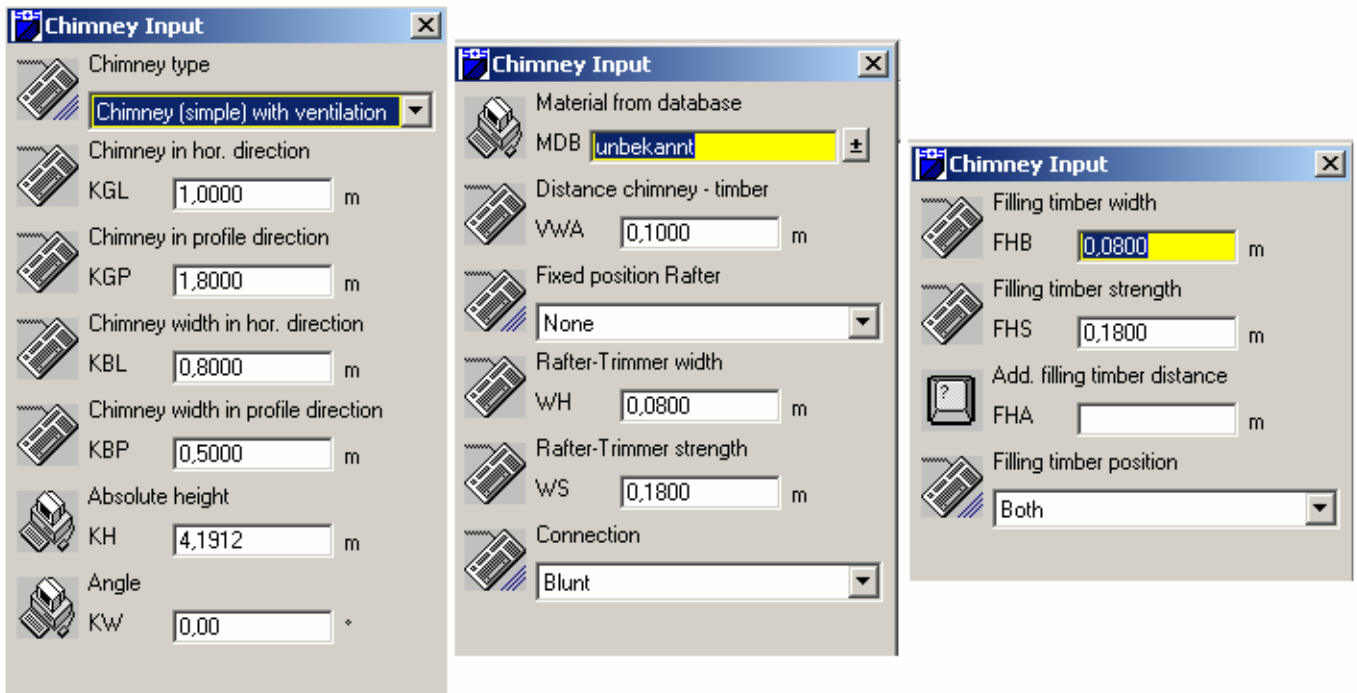


Fill out the dialogue with the above values and click on OK. After clicking on  your roof will be computed and should look similar to the screenshot below. The project should now be saved by clicking on .

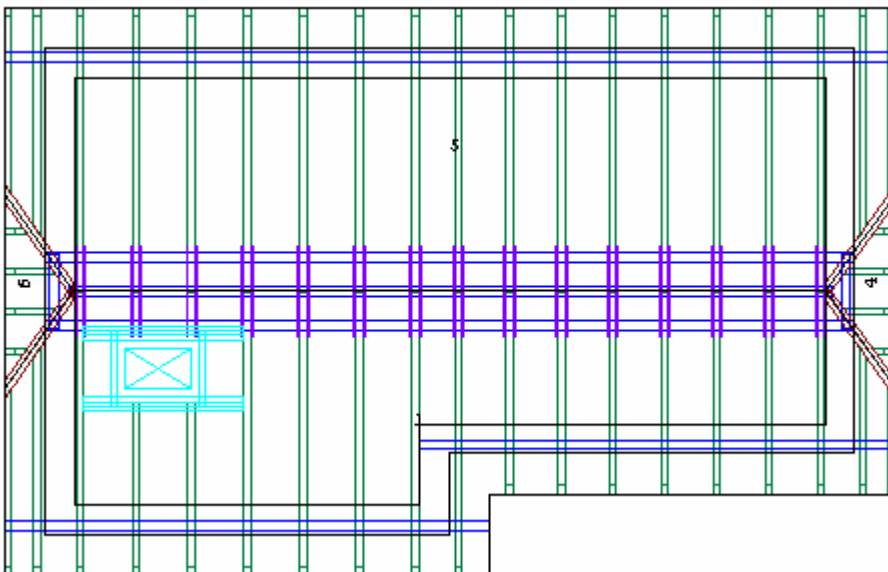


5.2) Chimneys

Also, we would like to insert a chimney into roof plane 1. After selecting the menu item "Edit / Ground Plan / Chimney" go on "Chimney / New..." and select roof plane 1. Fill out the three dialogue pages with the following values:

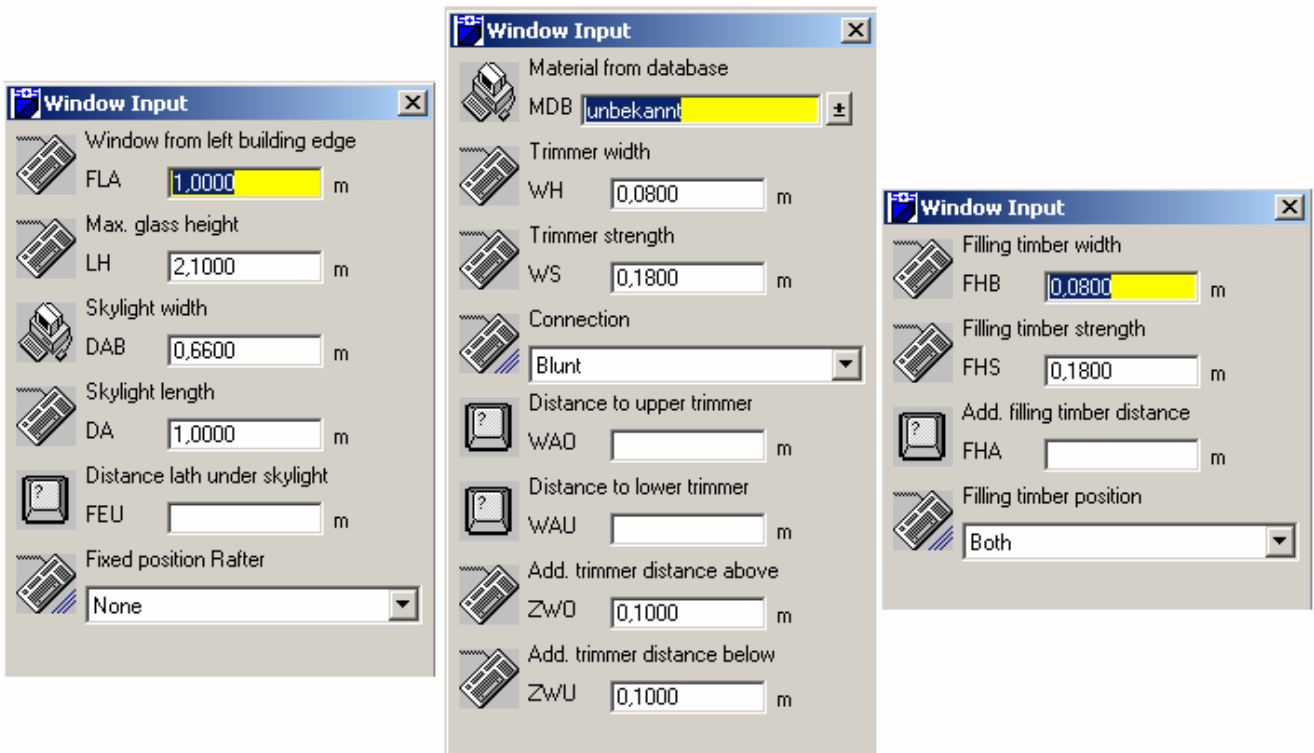


Confirm your entries by clicking on OK and start computing the roof by clicking on . Save your current project by clicking on and compare it to the following screenshot:

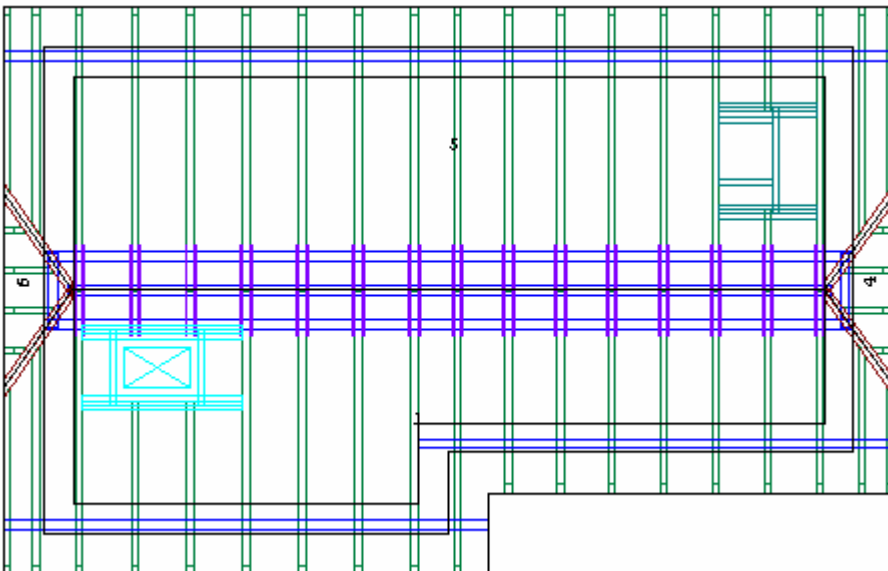


5.3) Skylights

Next, we would like to insert a skylight into roof plane 5. Access the skylight menu via “Edit / Ground Plan / Windows and Doors” and select „Skylight / Insert skylight...“. Select roof plane 5 by clicking on it. This takes you to the window input dialogue where you should fill out all three dialogue pages with the following entries:



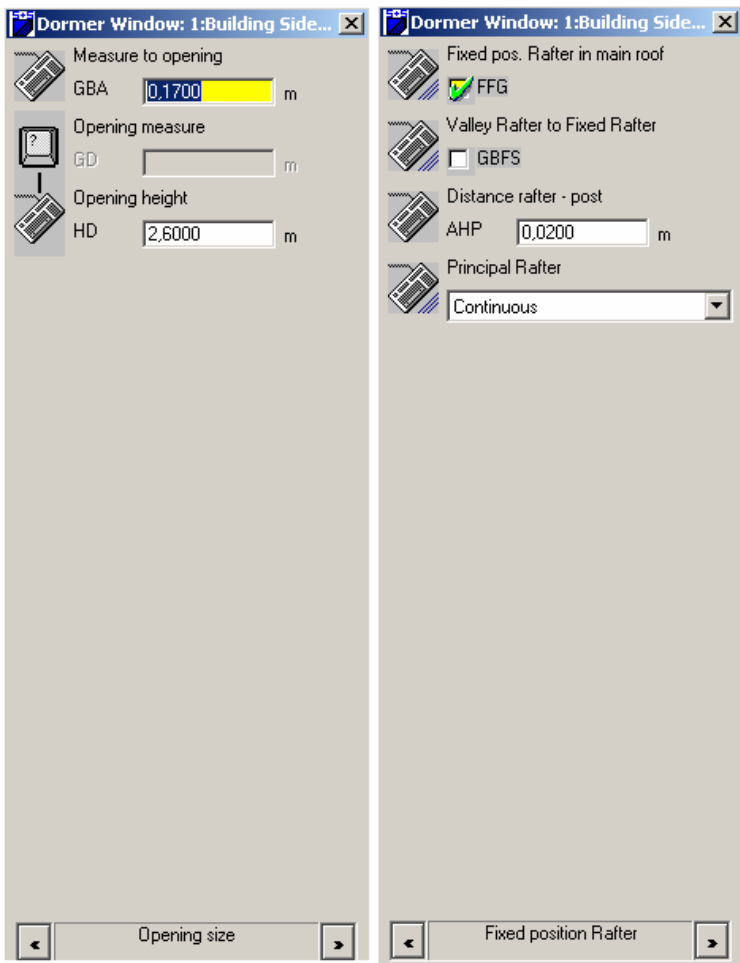
Confirm these values by clicking on the OK-button and start timber computation by clicking on . Clicking on saves your current project which should look similar to the following screenshot:





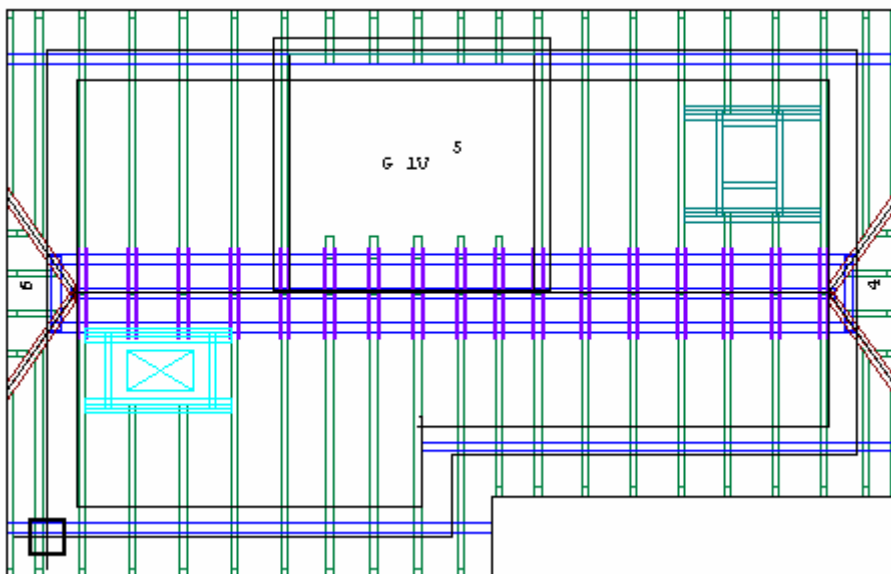
5.4) Dormer windows

Next, we are going to create a dormer window in roof plane 5. Go on "Edit / Ground Plan / Dormer Window" and select the new menu item "Dormer Windows / New dormer window...". Then select roof plane 5 and fill out all five pages of the following dialogue with these values:


Dormer Window: 1:Building Side...	Dormer Window: 1:Building Side...	Dormer Window: 1:Building Side...
<p>Dormer Window type Dormer Window</p> <p>Long. measure to dormer window GBG 4,0000 m</p> <p>Dormer window width BG 3,0000 m</p> <p>Width (to ridge) BH 3,0000 m</p>	<p>Gable angle NPF 8,00 °</p> <p>Dormer window height GH 3,1695 m</p> <p>TE dormer purlin PG 2,6000 m</p> <p>Purlin width PFB 0,1200 m</p> <p>Purlin strength PFS 0,1200 m</p> <p>Perp. Obholz DTH 0,1500 m</p>	<p>TE window railing LDFB 0,9000 m</p> <p>BE dormer window frame/sole plate LHS 0,5200 m</p> <p>Measure to post GF 0,0500 m</p> <p>Distance main rafter - window railing DFB 0,1411 m</p> <p>Front overhang UEV 0,2000 m</p> <p>Left overhang UEL 0,2000 m</p> <p>Right overhang UER 0,2000 m</p>
Dormer Window	Dormer window plane	Ridge

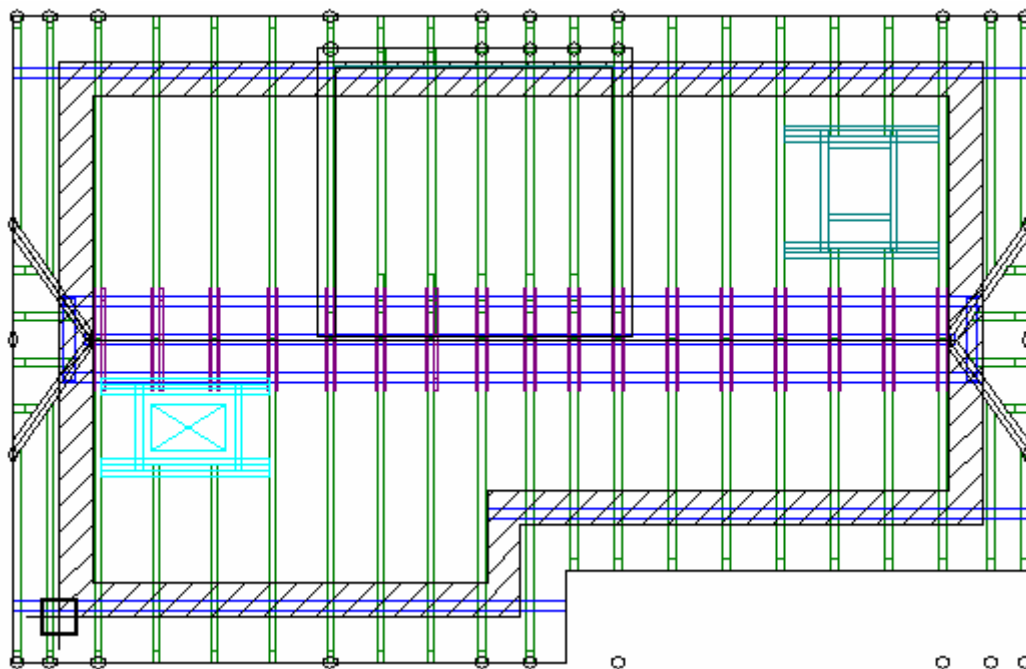


Confirm your entries by clicking on OK. After clicking on  all timber will be computed. Your roof should look similar to the one below and you should save it by clicking on .



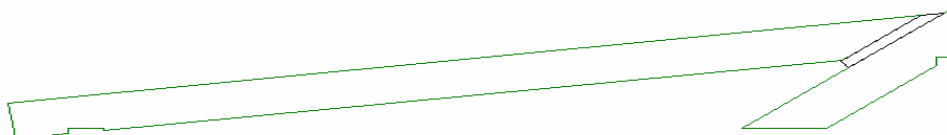
5.4.1) Adding rafters to the dormer window

We are going to put rafters in the new dormer window plane by selecting "Rafters" in the roof timber selection. Instead of choosing the menu item "Rafters / Rafters for selected profiles" and then selecting the dormer window plane we will use a shortcut: We want the rafters of our dormer window to be congruent with the rest of the rafters in the remaining roof. We can achieve this goal by selecting the menu item "Rafters / Copy division" and then clicking on the dormer window plane. This applies the rafter division of the main roof to the dormer window plane. Our roof should look similar to the one below and we should save our current project by clicking on 



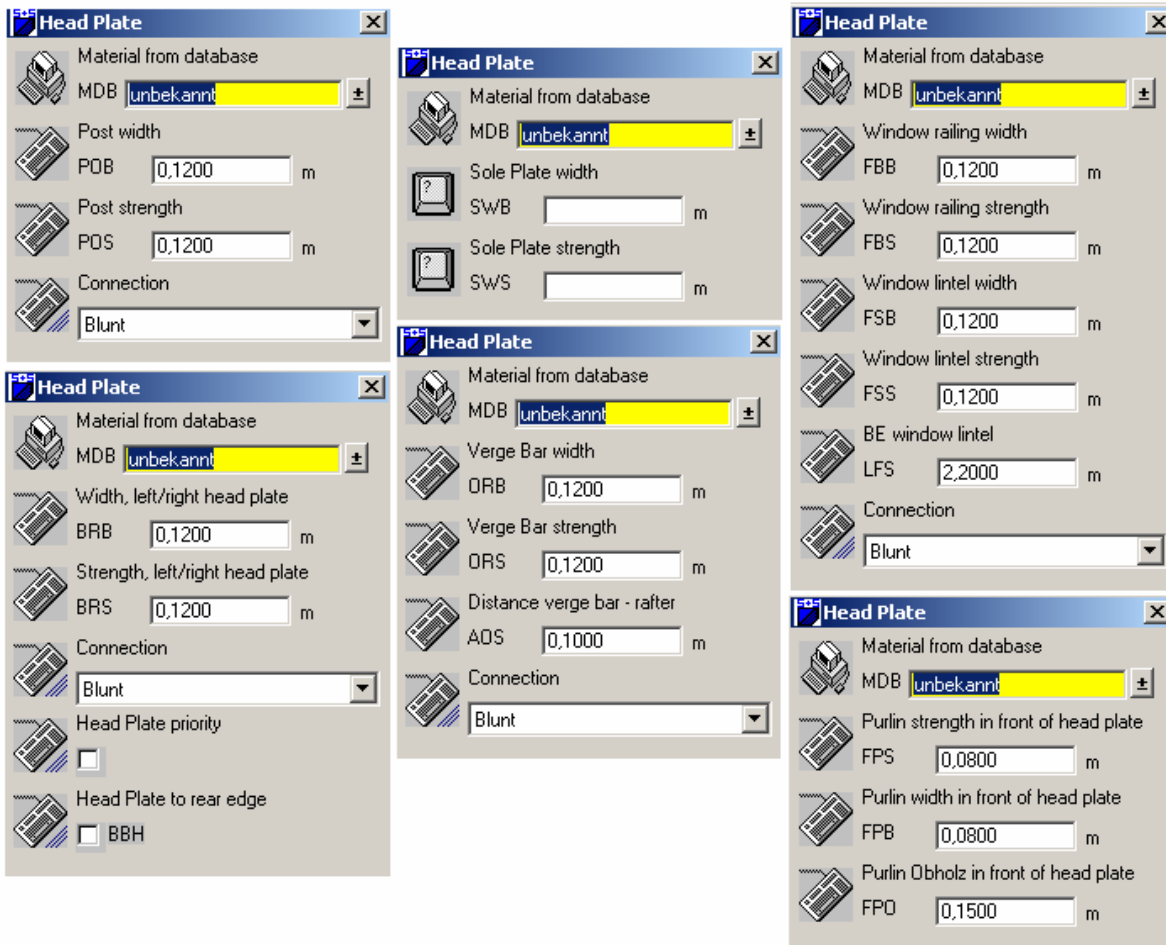
5.4.2) Inserting a valley board

If you would like you can insert a valley board with dimensions 0.4x0.04 by selecting "Hip/Valley Rafters" in the roof timber selection and then selecting "Hip Rafters / Valley Boards for selected edges".

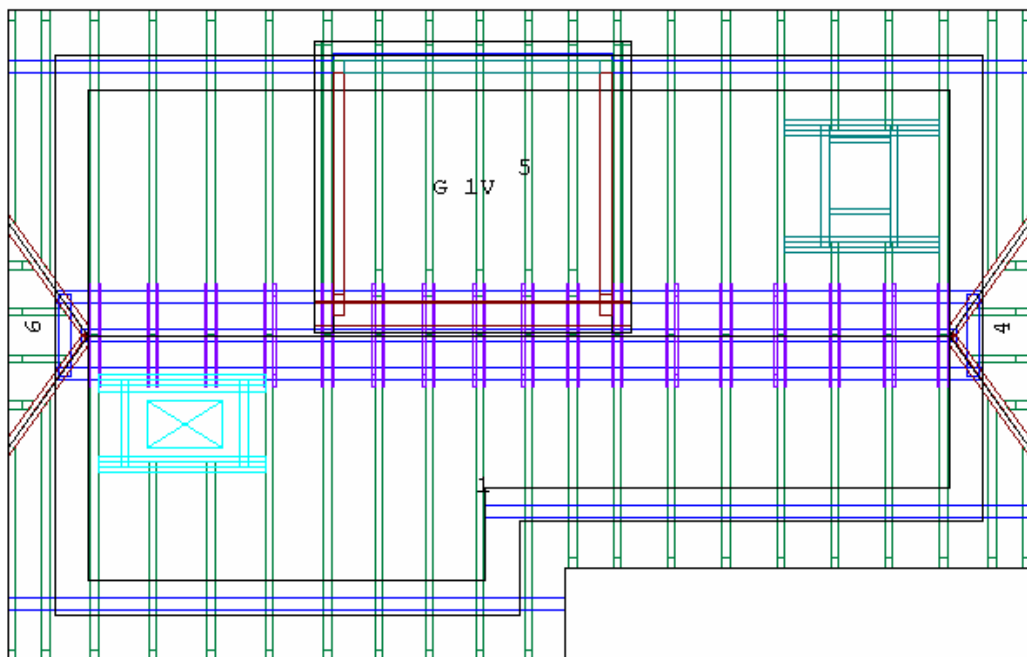


5.4.3) Dormer window timber

All dormer window timber can be accessed via "Dormer Window timber" in the roof timber selection. Select the menu item "Dormer Window timber / Dormer Window timber for all dormer windows" and fill out the dialogue pages with the following values:



After leaving the dialogue by clicking on OK start timber computation by clicking on and save your project by clicking on . Your roof should look similar to the screenshot below:



5.5) Changing eaves

Next, we would like to change the eaves line of roof plane 1 in order to alter the shape of this roof plane. We can do this by selecting the menu item "Edit / Ground Plan / Edit roof planes / Change eaves...". Click on roof plane 1 and then click on the eaves line of roof plane 1 with your right mouse button. Select "Insert point..." and enter the following coordinates when the dialogue opens up:

Long. direction : 0,50 Profile direction : -0,50. Confirm your entries by clicking on OK.

Right-click on the eaves line again (past the point you just inserted) and select "Insert point...". Enter the following coordinates:



Long. direction : 1,00 Profile direction : -1,00. Confirm your entries by clicking on OK.

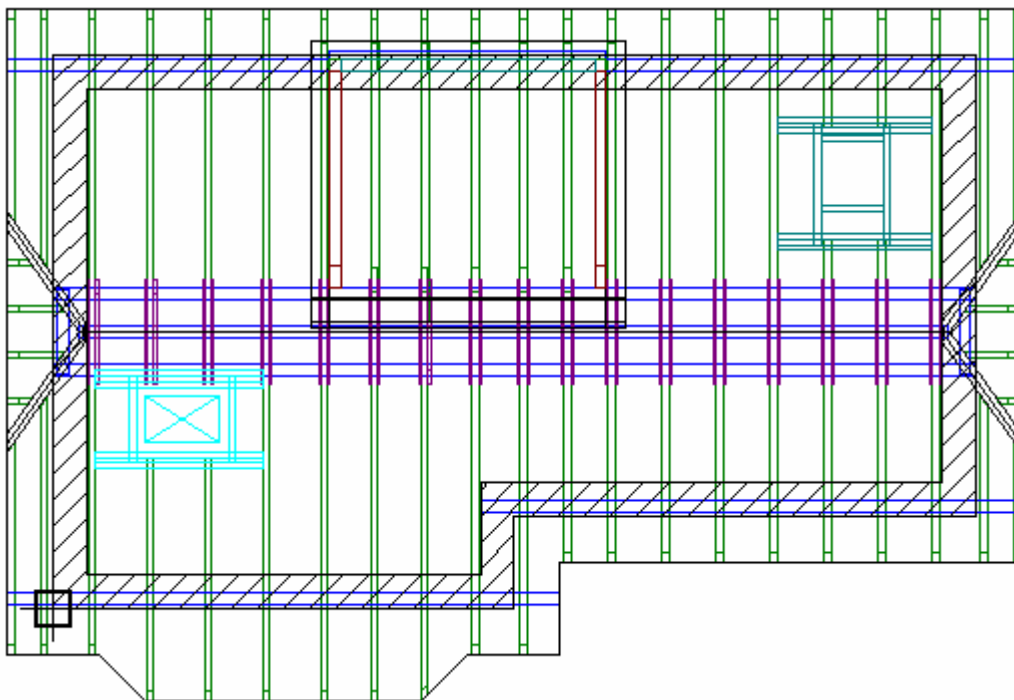
Right-click on the eaves line and select "Insert point..." again. Enter the following coordinates:

Long. direction : 4,00 Profile direction : -1,00. Confirm your entries by clicking on OK.

Right-click on the eaves line and select "Insert point..." again. Enter the following coordinates:

Long. direction : 4,50 Profile direction : -0,50. Confirm your entries by clicking on OK.

Click on  to start timber computation. Your roof should look similar to the screenshot below and you should save it by clicking on .




6.0) Graphical ground plan

You can enter ground plans, floors for both traditional and regular timber framing, and interior walls via the menu item "Edit / Ground Plan / Graphical Ground Plan Input".

In order to create a graphical ground plan click on the menu item "Roof Ground / Create building ground". Now you can choose the start point of your ground plan by a left mouse click anywhere on the screen. A dialogue opens up that lets you modify the coordinates of this start point with reference to the origin. After choosing a start point you can enter the actual ground plan counter-clockwise by either mouse or your cursor-keys.



Make sure that the menu item "Mode / Show extended dialogues" is enabled and that the floor selection is visible (click on  to activate it).



In order to create timber framing walls you need to create a floor first! You can choose a floor name for a single wall or for an entire ground plan.



Each floor can have a ceiling which is always located below the wall, e.g. the 1st floor will most likely have no ceiling strength.



After entering a graphical ground plan you can modify the height of each wall via the menu item "Floor / Edit wall height".

You can draw a roof ground or building ground/floor in two different ways:

1.) By mouse

By selecting a point with your mouse you open a dialogue where you can enter the exact values of the current building side/wall:





Input type	
Reference system	Coordinates
<input type="radio"/> Relative to origin	<input type="radio"/> Cartesian
<input type="radio"/> Relative to ref. point	<input checked="" type="radio"/> Polar
<input checked="" type="radio"/> Relative to startpoint	<input checked="" type="radio"/> Angle, absolute
	<input type="radio"/> Interior angle

Wall data, cartesian		Wall data, polar	
dx:	10,0000 m	Length:	10,0000 m
dy:	0,0000 m	Angle:	0,00 °

Width: 0,4000 m Last wall

2.) By cursor-key

Similarly, the above dialogue opens up when you press one of the four cursor-keys or the keys 1,3,7,9 on your numerical keyboard.

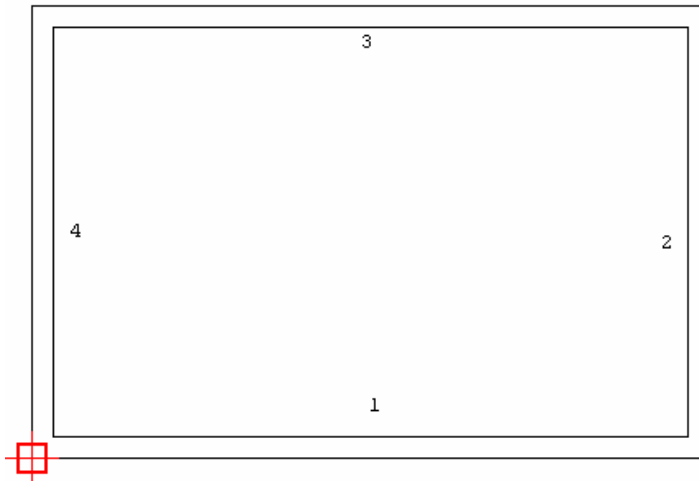
You can change any of the values and the wall will be created when you click on the  button. Activating "Last wall" in the dialogue marks the current wall as the last building side of the building ground you are entering. While entering a ground plan you can delete the last building side entered by pressing the BACKSPACE-key. Afterwards, you can delete any of the walls by right-clicking on them and selecting "Delete building side" in the context menu that will open up. After entering a building ground clicking on  takes you to the numerical ground plan input. By holding down the CTRL-key you can select as many building sides as necessary and pressing ENTER or clicking on  takes you to the numerical input dialogue that you are already familiar with. Here you can add and modify any of the values as usual, such as roof pitch etc. After making all necessary changes to all your building sides you can compute your roof design by clicking on .

6.1) Creating a graphical ground plan

As mentioned above, you access the graphical ground plan input by clicking on the menu item "Edit / Ground Plan / Graphical Ground Plan Input". Then you determine the start point of your ground plan by selecting "Roof Ground / Create building ground" and clicking anywhere on the screen. The following dialogue lets you modify the coordinates of the start point with reference to the red origin. Then you enter your ground plan counter-clockwise by either mouse or your cursor-keys.

We are going to enter two graphical ground plans and then we are going to switch over to the numerical ground plan input in order to enter all necessary profile values.

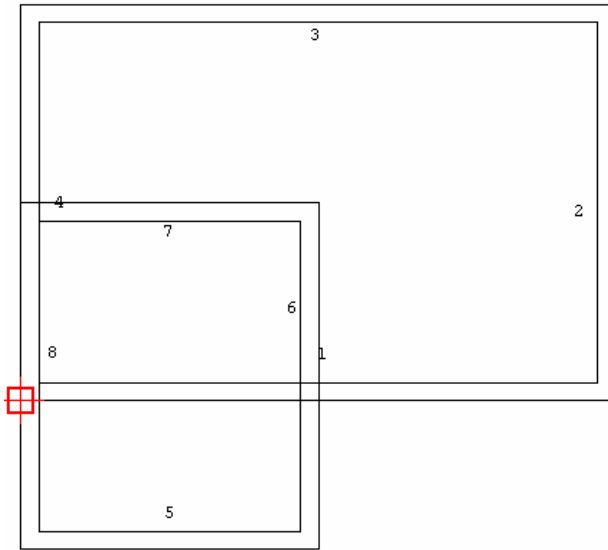
The first ground plan contains four building sides and its dimensions are 12,00 x 8,00 meters:



Select "Roof Ground / Create building ground" and click on the red origin. Leave the coordinates of the start point at dx 0,00 / dy 0,00 meters. Now draw the building ground counter-clockwise using the four cursor-keys. Remember to select "Last wall" when entering building side 4. If you need to make any changes to any of the walls after entering your building ground you can do so by right-clicking on the wall and choosing "Edit building side..." from the context menu to open the appropriate dialogue.

Note: The following feature is available in certain program versions only !

The second building ground contains four walls and its size is 5,90 x 7,00 meters:



Select "Roof Ground / Create building ground" and click on the red origin. Change the coordinates of the start point to dx 0,00 / dy -3,00 meters. Again, draw the building ground counter-clockwise using the four cursor-keys. Remember to select "Last wall" when entering the last wall.

After entering both building grounds we want to switch over to the numerical input (by clicking on the



button) in order to enter the remaining values needed. Select building sides 1,3,6,8 by holding the CTRL-key while clicking on these walls and open the dialogue by pressing ENTER or clicking on




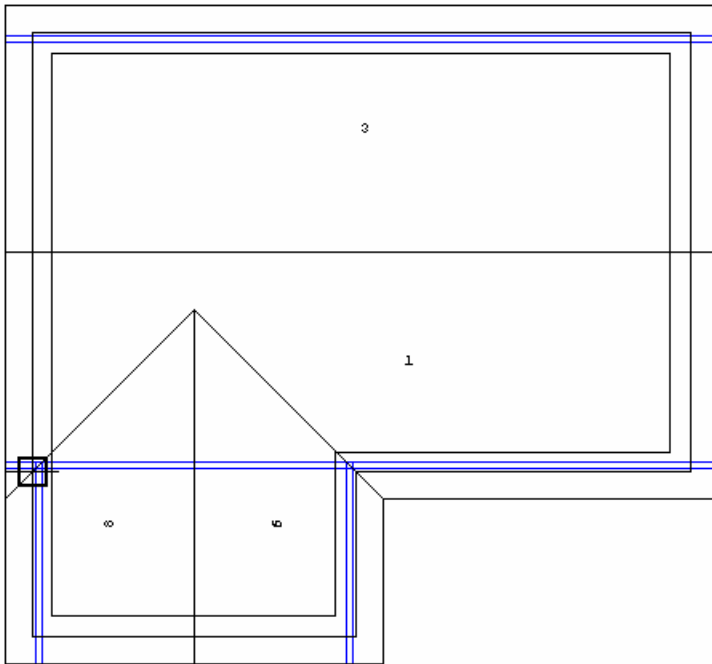
Fill out the dialogue with the following additional values:

Eaves construction	: Purlin roof with overhang
Wall width	: 0,365
Hor. roof overhang	: 0,500
Wall Plate, distance to wall plane	: 0,050
Perp. Obholz	: 0,150
Height TE wall plate	: 0,520
Roof pitch	: 40°
Wall Plate width	: 0,120
Wall Plate strength	: 0,120

Confirm your entries by clicking on OK. Then select building sides 2,4,5,7 as above and enter the following values:

Eaves construction	: Gable
Wall width	: 0,365
Hor. roof overhang	: 0,500

Confirm your entries by clicking on OK and then click on  to start computing your roof. Save your project and compare it to the screenshot below:



We are going to use timber macros to create the roof timber. First, we need to enter the desired timber dimensions and heights by right-clicking on the screen to open the context menu and then selecting "General Settings" and switching to the dialog page entitled "Timber Macro". Enter the following values for the different kinds of roof timber:

Rafters	:	Rafter width	:	0,08
		Rafter strength	:	0,18
		Rafter distance	:	0,70
Middle-Purlin:		Purlin width	:	0,16
		Purlin strength	:	0,24
		Perp. Obholz	:	0,15
		Purlin height	:	2,92
Ridge-Purlin:		Ridge width	:	0,12
		Ridge strength	:	0,14
		Perp. Obholz	:	0,15
		Cleat width	:	0,024
		Cleat strength	:	0,12
		Insertion depth	:	0,02
Hip/Valley:		Hip width	:	0,12
		Hip strength	:	0,24
Double Ties:		Double Tie width	:	0,08
		Double Tie strength	:	0,18
		Double Tie height	:	2,50

Also, check all items on the dialogue page "Purlins/Rafters" under "Project Settings". These values determine the position and length of your rafters and purlins:

Project Settings

General Settings | Purlins/Rafters | Connection measures | Windows and Doors | Br

Fixed rafters at exterior walls:

Outside: m Apply

Inside: m Apply

Fixed rafters at interior walls:

Left: m Apply

Right: m Apply

Distance, first verge rafter:

m Apply

Purlins at hip/valley rafters:

Hip: m Apply

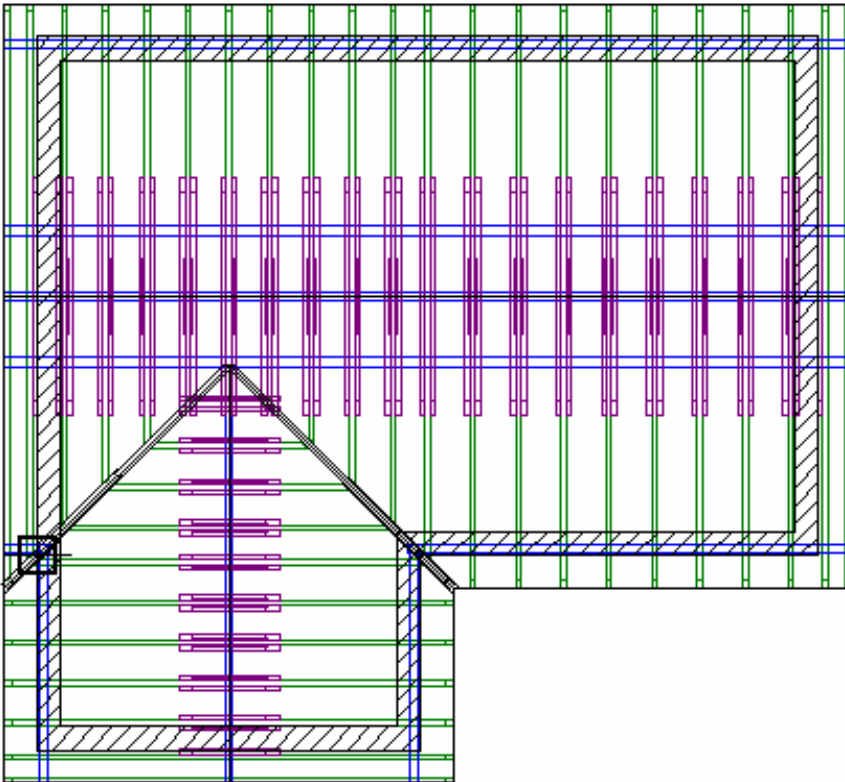
Valley: m Apply

Purlins at gables/exterior walls:

m

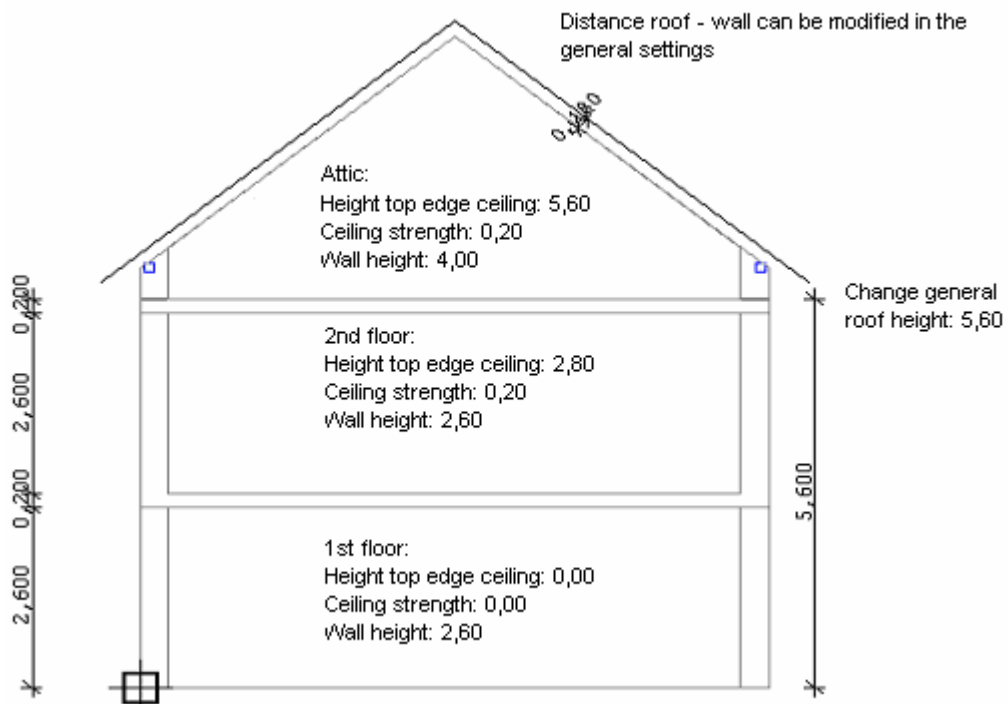
Reference, roof overhang
 Reference, exterior edge wall
 Reference, interior edge wall
 No adjustment

After making all necessary changes click on  and select "Execute timber macros" to compute all roof timber. Your roof should look similar to the following screenshot:



Note: The following feature is available in certain program versions only!

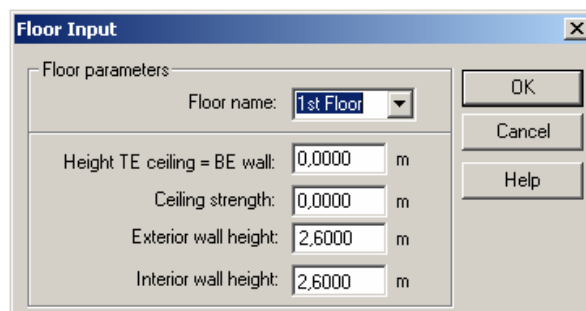
6.2) Creating floors



You can create floors for both traditional timber framing walls and TF-walls (walls that can contain several layers of different materials) by going on “Edit / Ground Plan / Graphical Ground Plan Input”. You don’t necessarily need to create a roof ground – you can create as many floors as desired starting with the bottom floor and then create a roof ground with all its roof timber later on. You can adjust the height of your roof ground via the menu item “Roof Ground / Change general roof height”. If you would like your walls to reach up to the bottom edge of your rafters the value “Distance roof – wall” under “General Settings” should equal your rafter strength.

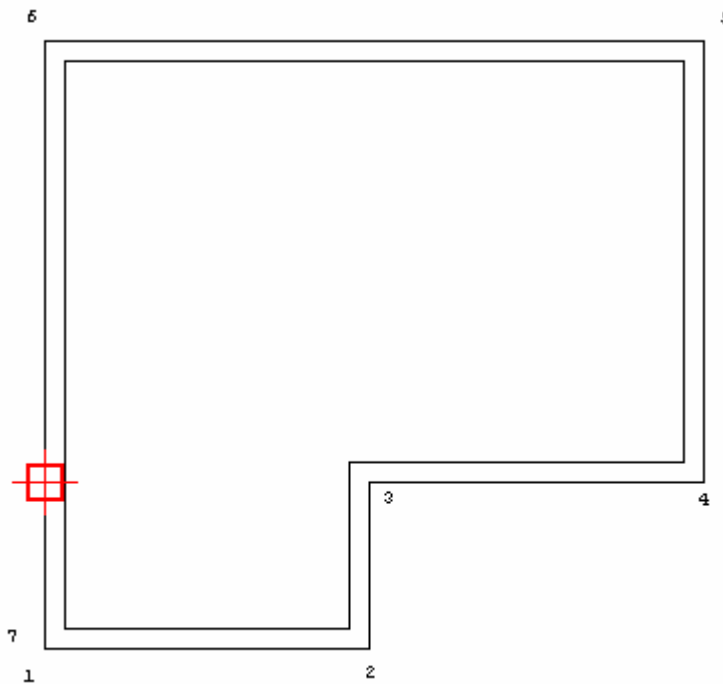
Creating the first floor:

Switch to the graphical ground plan input if you haven’t done so yet and select the menu item “Floor / New floor”. Select “1st Floor” or type in any floor name you would like and set the exterior and interior wall height to 2,60 meters:



Now go on the menu item “Floor / Draw floor” and click on the outer left end point of building side 5 (labeled as point 1 in the drawing below). If “Mode / Show extended dialogues” is enabled a dialogue should open where you can adjust the coordinates of the point entered if necessary. Confirm this

dialogue by clicking on OK and enter points 2-7 counter-clockwise in a similar manner and finally – after entering point 7 and leaving the dialogue - press the ESC-key to continue.



Note: The following feature is available in certain program versions only!

Creating the second floor and the attic:

Next, we are going to create the 2nd floor. Since all walls have the same position and length as the ones on the first floor all we need to do is go on the menu item "Floor / Copy floor from" and then select the first floor as our source floor and fill out the dialogue with the following values:

The screenshot shows a dialog box titled "Floor Input". It contains the following fields and buttons:

- Floor name: 2nd Floor (dropdown menu)
- Height TE ceiling = BE wall: 2,8000 m
- Ceiling strength: 0,2000 m
- Exterior wall height: 2,6000 m
- Interior wall height: 2,6000 m
- Buttons: OK, Cancel, Help

Finally, we are going to create the attic. Again, we can copy the floor we just entered by going on "Floor / Copy floor from" and selecting the second floor as our source floor. Then we modify the values as follows:

Floor Input [X]

Floor parameters:

Floor name:

Height TE ceiling = BE wall: m

Ceiling strength: m



Exterior wall height: m

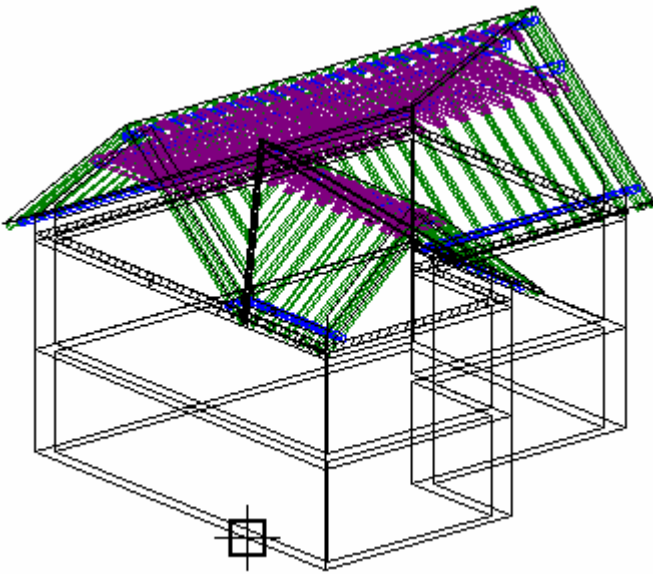
Interior wall height: m

OK

Cancel

Help

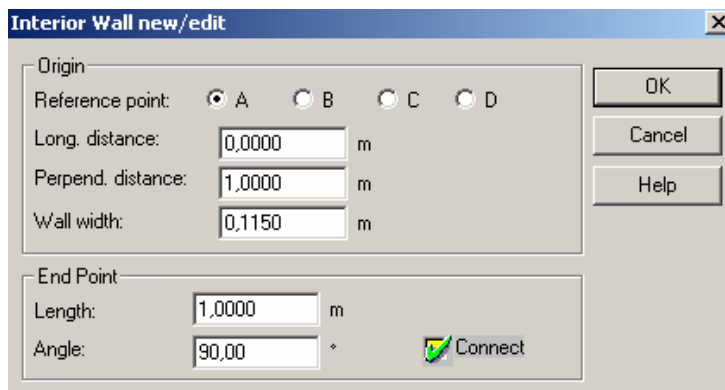
Clicking on  starts all necessary computations. You should save your project by clicking on  and compare it to the screenshot below. If you cannot see any of the floors make sure that "Floor / Change general roof height" is set as mentioned above.





6.3) Creating interior walls

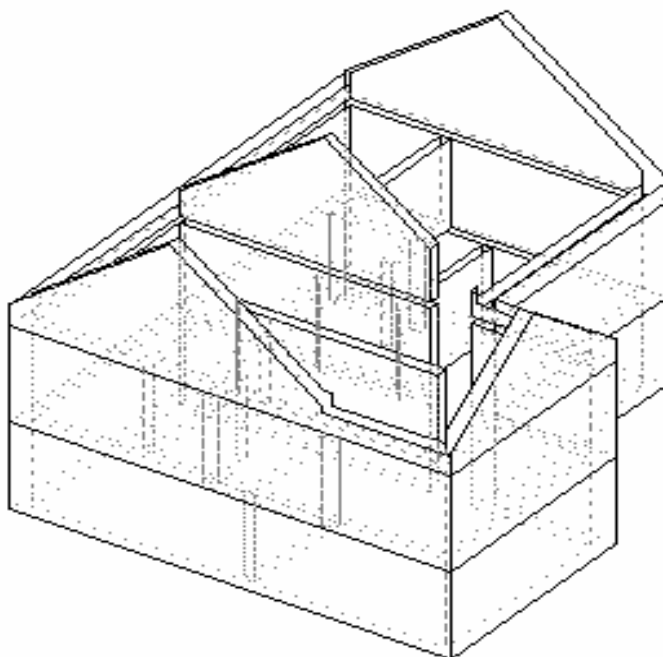
You can create interior walls by going on "Edit / Ground Plan / Graphical Ground Plan Input" and then enabling the menu item "Mode / Edit interior wall". Make sure that your floor selection dialogue is visible and select the floor you would like to work on. In order to create and connect a new interior wall to an already existing exterior or interior wall right-click on it and select "Create interior wall..." in the context menu. You can modify an already existing interior wall by opening its context menu with a right mouse click and then selecting "Edit interior wall..." or delete the wall altogether by selecting "Delete interior wall".

We are going to insert an interior wall on the first floor: Select "1st Floor" in the floor selection and click on the third wall with your right mouse button and click on "Create interior wall...". When the dialogue opens up enter the following values:



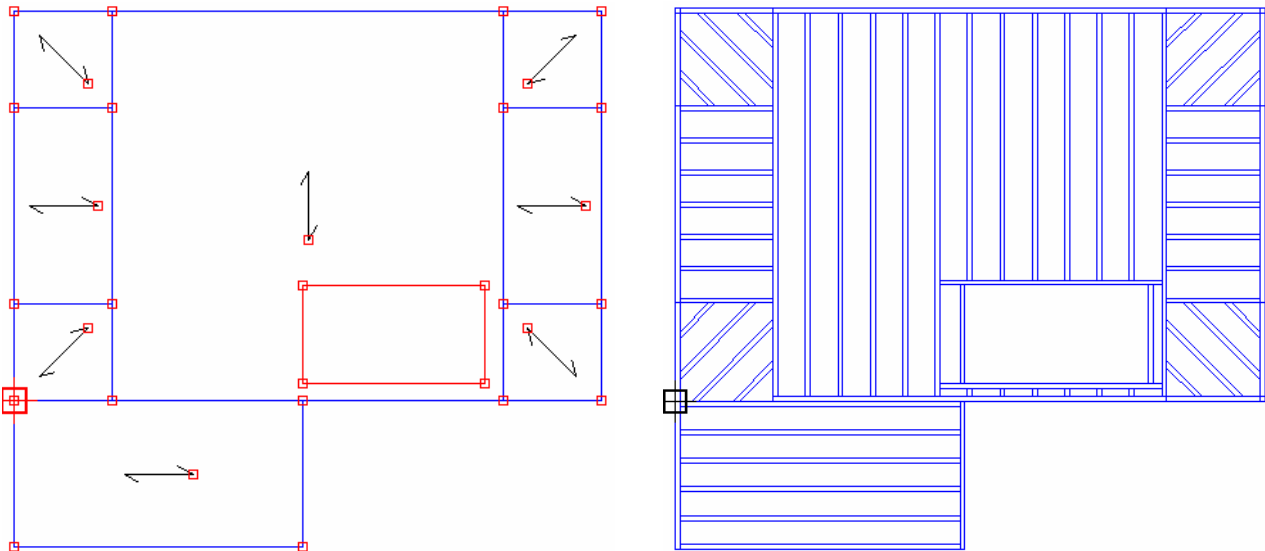
You should practise and create a couple of different interior walls on different floors.

Start computation by clicking on  and save your project by clicking on . It should look similar to the following drawing, depending on the interior walls you entered:




6.4) Creating a series of joists





To create a series of joists select the menu item "Edit / Ground Plan / Series of Joists". In order to create a series of joists you either need a regular or a user defined floor. After creating a floor having a ceiling strength or a user defined floor you can create a partial series of joists or a series of joists having a specific installation orientation. Similar to entering a floor you always enter a series of joists or opening counter-clockwise.



Each partial series of joists can have a different orientation angle which you determine by mouse or by double-clicking on the red square attached to the arrow.

After defining all partial series of joists and openings you should click on . Now you can start entering any roof timber by selecting the menu item "Edit / Roof timber".

7.0) Importing DXF-ground plans into ABBUND ONE

You can import any 2D DXF-file having meters as its unit for length. The origin of the DXF-drawing should be somewhere on one of the outside wall edges of your building ground. You can open a DXF-file by going on "File / Open..." and selecting *.dxf as file extension. Select which layers to be displayed by going on "File / Options/Settings / Settings / DXF". For example, you could activate the layer(s) of the DXF containing the ground plan and then switch over to the graphical ground plan input and go on "Roof Ground / Create building ground" to trace the DXF-ground plan by its corners to obtain an actual ABBUND ONE -ground plan that you can work with in ABBUND ONE. Note that sometimes it is easier to work with several separate ground plans instead of trying to trace an entire DXF to obtain one single ground plan. After entering all ground plans you should switch over to the numerical ground plan input (by clicking on  or via its menu item) where you enter any additional values for each building side. Remember that you can edit multiple building sides at the same time by selecting them with your mouse while holding down the CTRL-key and then clicking on  or pressing the ENTER-key to confirm your selection and open the dialogue. After making all necessary changes click on  to compute your roof design. Now you should save your project by clicking on the  button. When you are done you can deactivate any DXF-layers visible by going on the menu item "File / Options/Settings / Settings / DXF".