



Basic Manual Timber Constructions



Copyright

Any reproduction of the supplied documentation (Installation Guide, User Manual) or the SEMA programs or parts thereof or of the Instant Help in any form will be prosecuted. All copyrights in the SEMA software, the Instant Help and the User Manual are owned by SEMA GmbH.

The rightful acquisition of the software license gives you the right to use the software / Instant Help in the same way as you may use a book. As it is impossible for more than one person to read the same copy of a book in different places simultaneously, the installation program and all the SEMA programs must not be used on more than one computer at a time. Anyone who transfers this software to DVD, hard disk or any other medium except for backup and archival purposes is liable to prosecution.

Please note that your license, including your address and license number, is registered with SEMA GmbH. Make sure that no illegal copies of your program license are made! The registered address can also be determined from these copies, so that the owner of the corresponding original can always be detected and made liable according to the license agreement.

Infringement of our copyright will be subject to civil and criminal prosecution!

© SEMA GmbH. All rights reserved.

Limited Warranty

SEMA assumes no liability for errors and omissions in this document, the software or in the Instant Help. However, as every effort is made to provide accurate information, we would appreciate users calling our attention to any errors.

This manual is subject to changes without notice and specification of reasons. As every version of our software is reviewed and updated for your benefit, we would appreciate any ideas and suggestions from users. With constructive criticism you can help us to further improve and develop our programs and documentation.

Published by:

SEMA GmbH Computer, Software and Hardware-Vertrieb
Salzstraße 25
87499 Wildpoldsried at Kempten, Germany

Microsoft, MS-DOS, Windows and Internet Explorer are registered trademarks of the Microsoft Corporation.

The Internet Explorer has been made available by kind permission of the Microsoft Corporation. Reproduction in any form or disassembling is prohibited. All rights in this software product are owned by the Microsoft Corporation.

Table of contents

Preliminary remarks

Introduction.....	1-1
Installation Guide.....	1-3
Online Licensing of Software Modules	1-16
Short Description of the Program Help	1-20

Brief Introduction with the Help of a Exemple

Target: Creation of a Rafter System

1. Creating a New Building Project.....	2-2
2. Creating a Ground Plan.....	2-3
3. Creating a Purlin Roof Profile	2-5
4. Creating a Roof Design	2-11
5. Creating a Rafter System	2-13
5.1 Placing a Fixed Rafter	2-13
5.2 Spacing an Area	2-15
5.3 Mirroring a Reference Line	2-16
5.4 Creating Purlins	2-17
5.5 Creating Tie Beams	2-19
6. 3D View.....	2-21
6.1 3D Section - vertical	2-22
7. Transfer to the Material List.....	2-24
7.1 Viewing and Printing of the Materiel List	2-25
8. Joining Plans.....	2-27
8.1 Rafter Length	2-27
8.2 Purlin System	2-28
8.3 Profile	2-29

Target: Creating of Walls

1. Opening an Existing Building Project.....	3-2
2. Hiding the Rafter System and the Roof Design	3-2
3. Creating Walls in the Top View	3-3
3.1 Creating a Wall Shape	3-3
3.2 Creating a T-Wall	3-4
4. Inserting a Window	3-6
5. Creating Timber Members.....	3-8
5.1 Creating a Bottom Boom Timber and a Top Boom Timber.....	3-8
5.2 Variable Spacing of a Posts	3-9
5.3 Creating Trimmers	3-10
6. 3D View	3-12

Target: Creation of a Joist System

1. Opening an Existing Building Project.....	4-2
2. Creating a Joist System.....	4-2
2.1 Creation Auxiliary Elements	4-3
2.2 Creating a Reference Line	4-4
2.3 Variable Spacing of the Ceiling Beams	4-5
3. 3D View	4-7
4. Switching on of the Rafter System and the Roof Design	4-8

Dear SEMA customer!

Welcome to your new SEMA program. You have chosen a state-of-the-art, innovative and comprehensive program system that will make your work a lot easier.

What's special about the new version, are its many functions and features in combination with a user-friendly and modern user interface and a clear program structure. Thanks to the complete integration into the Windows operating system, you will quickly get familiar with the way it works and appreciate its excellent performance.

Nevertheless, only „practice makes perfect“ so you need some training to get familiar with all the tricks and knacks and to be able to fully use this comprehensive system.

How to start

Insert the dongle into a free USB port on your computer. Connect to the internet and go to the following download page in your browser: www.sema-soft.com/version-en

After downloading, run the EXE-file. The SEMA installation program will start. The EXE-file is automatically saved in the Windows download folder.

You also find a detailed description of the installation of the SEMA programs in the SEMA basic manual, section 1-3.

SEMA Basic Manual

To make things easier for you, we created a simple basic manual. With this manual you can start immediately and create your first simple building project. In this introduction to the SEMA program, the first steps are described in a simple but detailed way.

We recommend to place the list of contents of this basic manual right next to you when you go through the first steps with our program. It is a kind of guideline that shows one step after the other. If you follow the instructions closely for your first project, (almost) nothing can go wrong.

SEMA Homepage

Always up-to-date and well maintained - our website is the place to go for everything around SEMA.

At www.sema-soft.com you can

- read the latest news
- update your SEMA software
- talk to other SEMA customers in our forum
- information on SEMA (including photos and a short description of almost all our staff – so you know who you are dealing with)
- ... and, and, and.

There is a lot to discover.

Take the time and take a look at our website - you will be surprised how much else there is.



Homepage of the SEMA website

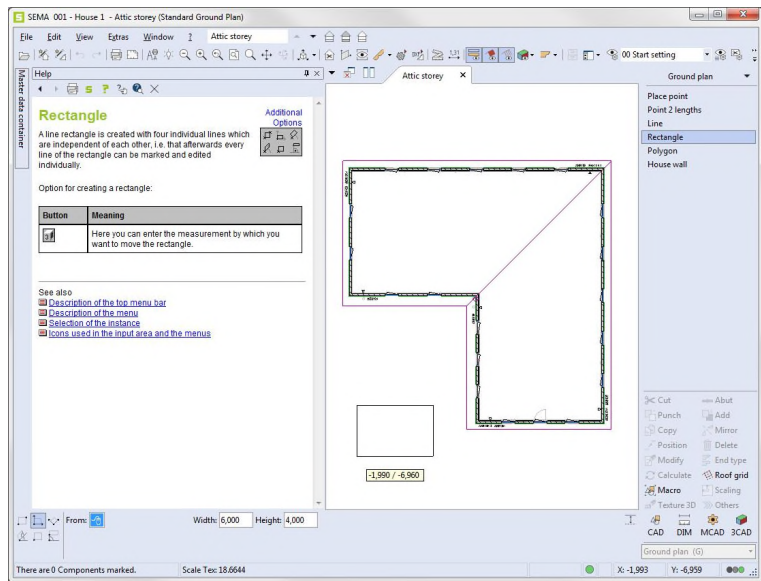
The Program's Help Function

To make sure that after the introduction to our program with the manual you can quickly move on, we integrated an extensive F1 Help function for our program.

The context-sensitive Help follows your movements, so to speak, and you will always find the necessary help and information for the currently active command or part of the program.

In addition to that, you can also go through the guided help topics function by function and read the information there.

That means you no longer have to study thick volumes of user manuals. Right after the Installation Guide of this basic manual, you find a detailed description of the integrated program Help.



context-sensitive Help in the program
(you can also click the links in the graphics/illustrations)

Seminars and Trade Fairs

But even the best descriptions for self-instruction cannot replace professional training courses.

With our qualified, professional instructors you will quickly learn to operate the program without losing endless time by try and error.

We have put together a comprehensive, varied training program for our customers, so that everybody will find the right course for her/his specific needs. It goes without saying that all our courses are held in small groups.

But what is most important: our instructors have practical experience and train you for your practical work!

And please: Do not hesitate to contact us if you have any problems. Let us know if there are any problems with your system's environment and also if you have specific suggestions and wishes. We need your feedback to perfect our programs. Thus we can show you that we are not a slow machinery but a spirited enterprise.

We wish you every success with your SEMA Software!



Alexander Neuss
Managing Director

P.S.:
Should you have any questions, please do not hesitate to contact our customer service:
E-Mail: support@sema-soft.com
Phone: +49 8304 - 939 140
Fax: +49 8304 - 939 245
If for once you cannot reach anybody in our office, please leave a message on our answering machine – we will call you back as soon as possible.

Installation Guide

General Information on Setting up



Before setting up, please close all other applications.

When you install SEMA, it does not affect old versions of our timber construction programs – these versions will neither be deleted nor altered in any way! The settings can be taken over from older versions.

The installation program sets up the SEMA programs on the hard disk of your computer. Please note that the installation forms the basis of your future work with the program. Please proceed very carefully!

Therefore, take your time and carry out the installation step by step as described in the installation guide. We can only guarantee the proper functioning of our programs if you install them using this installation program.

SEMA Installation

The installation of the SEMA program system under Windows is done via a separate installation program.

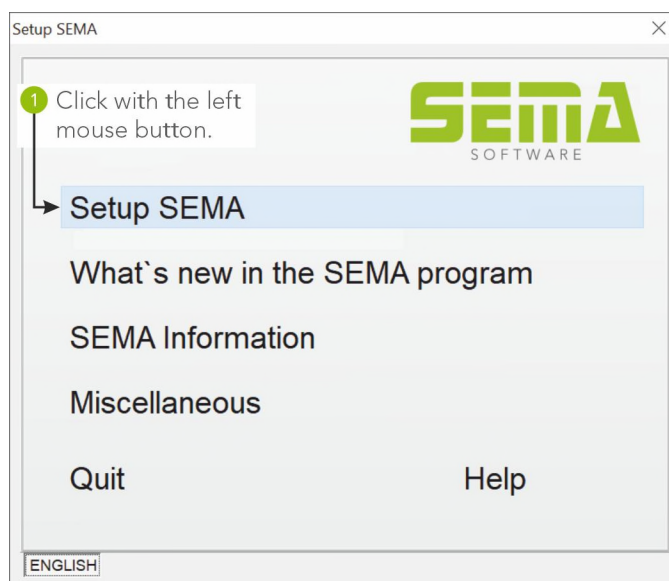


*.EXE

Starting the EXE-file under Windows:

After downloading, run the EXE-file. The SEMA installation program will start. The EXE-file is automatically saved in the Windows download folder.

Next Steps after the start:



The entry page of SEMA appears. Please select the desired language and type of installation:

Click with the left mouse button on the "Setup SEMA" box.

Installing the SEMA Programs



Please read the instructions on the screen very carefully before you take the next step or before you continue with the installation!

Please close all other programs under Windows before starting the installation. After having installed the SEMA program, we recommend to close Windows and to restart your computer!

In the following, we deal with the installation type most commonly used: the **complete local** installation of the SEMA on your computer.

Depending on whether and which type of program version is already set up on your computer, the installation program distinguishes three cases:

1. First Installation

If no SEMA program version has yet been installed on your computer, the installation program will automatically start under this option.

2. First Installation with SEMA already installed

If an older SEMA version has already been installed on your computer, a dialog box will appear after starting the installation. There you can decide whether or not to adopt the settings of this older version.

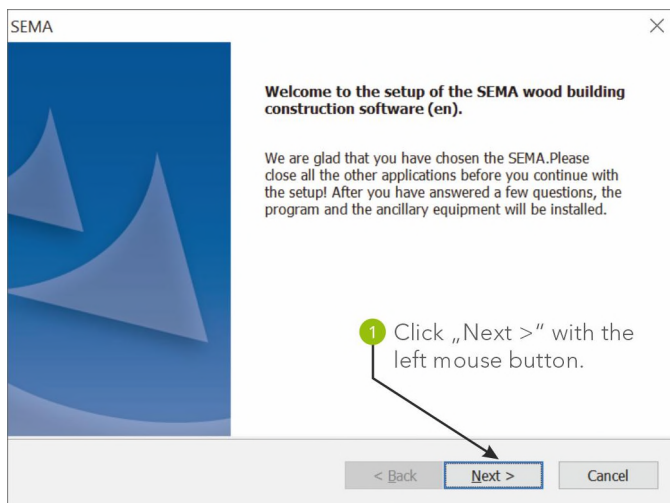
3. Change, Repair (Update Installation) or Remove (De-install Program) Program

If a SEMA program version has already been installed on your computer, you will be shown which BUILD No. has been installed.



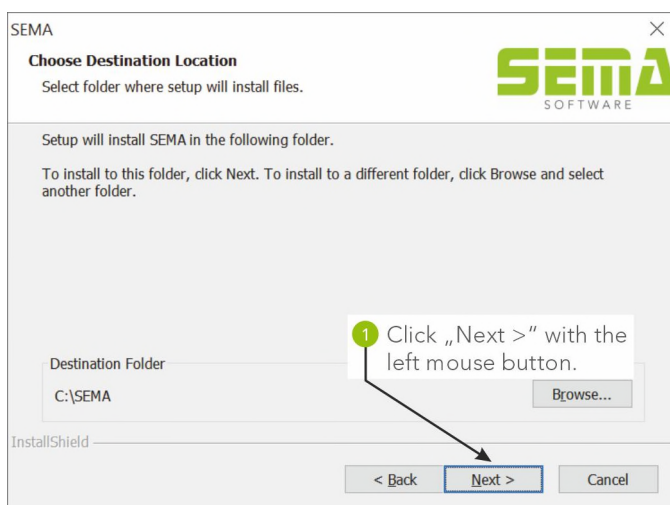
The installation of SEMA can here be changed, automatically updated or completely removed from your system!

1. First Installation



License Agreement

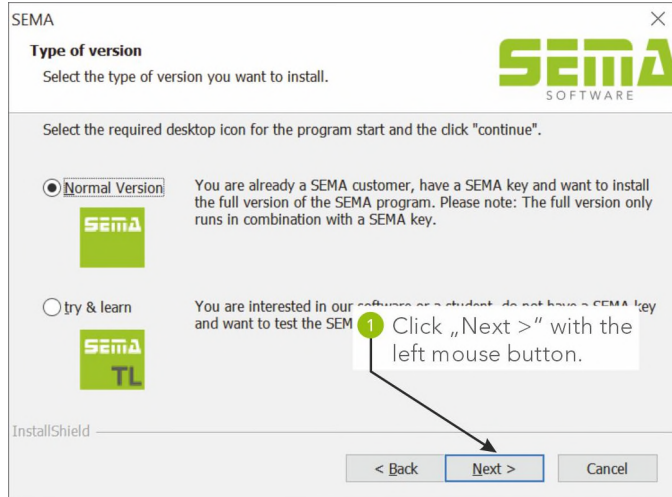
Please confirm the license agreement to continue with the setup.



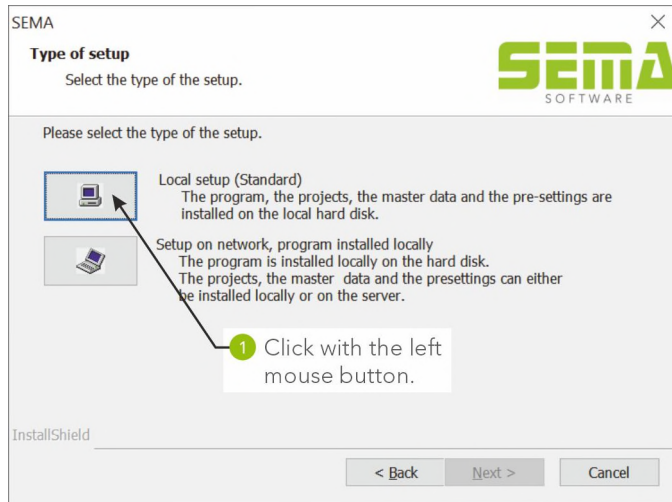
Select Target Path

As a standard, the program is filed under drive "C:" in the folder "SEMA".

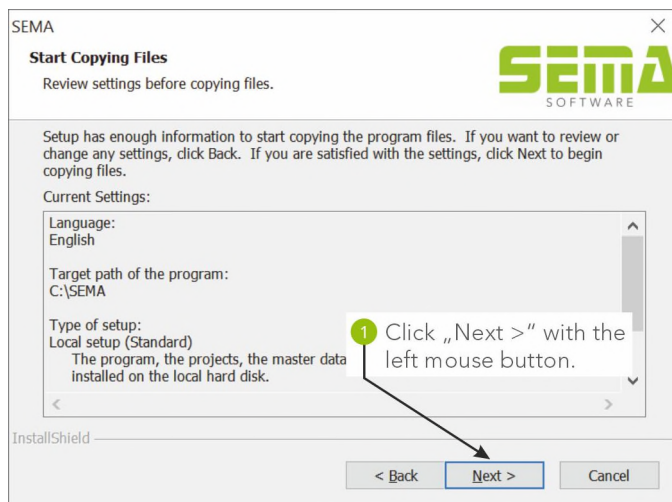
Select Type of Installation



Select Type of Setup



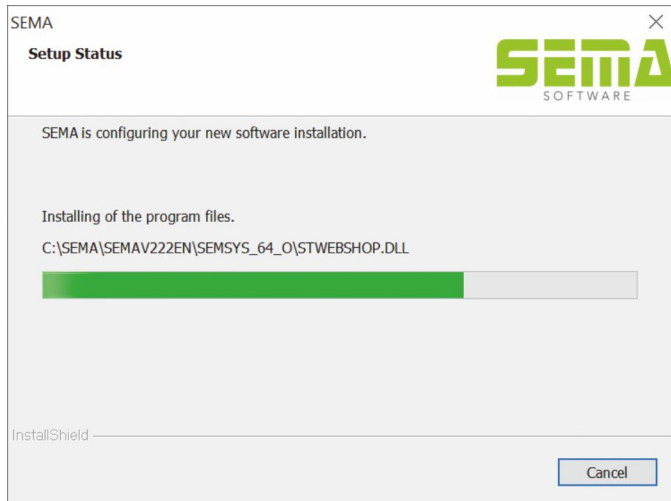
Display Installation Data



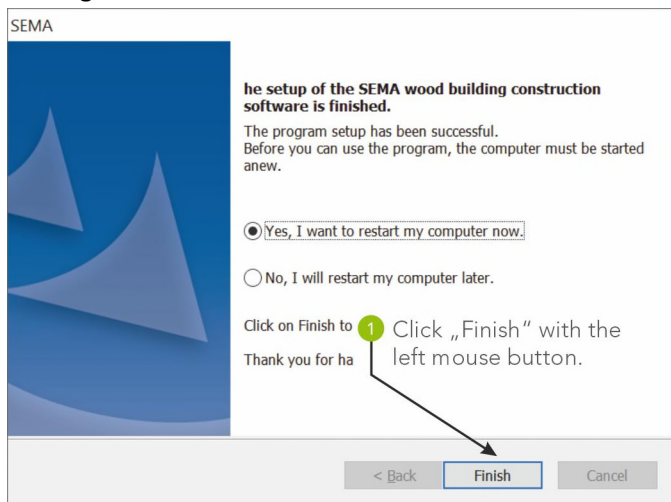
Copying the Programs

Here you can keep track of the the progress of the program installation. A diagram shows you how much of the program has already been installed.

In the background sample projects of the current version are introduced.

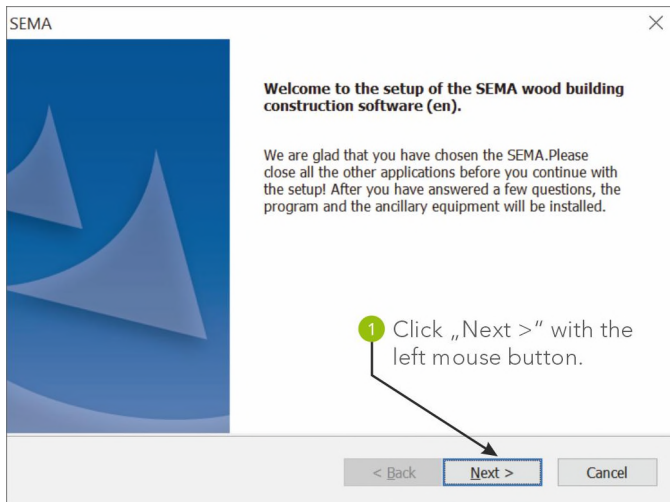


Ending the Installation Process

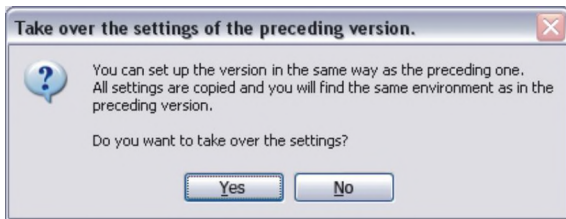


Please restart your computer after the installation of the SEMA programs. Leave **YES, I want to restart my computer now** selected and click **Finish!**

2. First Installation with SEMA already Installed



Adoption of Data of an Older Version.



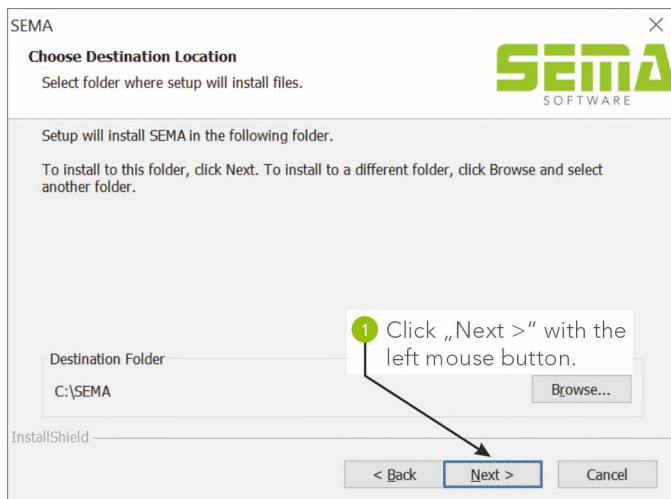
Here you can adopt the data from the older version, which has already been installed. Later on in the installation process you have to specify which data exactly you want to adopt.

If you confirm this query here with Yes, the selected installation path, type of installation and type of setup (e.g. standard) will be adopted.

If you do not want to adopt the data, please click No. The installation process will be continued as described under FIRST INSTALLATION.

Still, if you want to adopt the data later on after having already installed the SEMA program, you can do this via the "Extras" menu → "Options" → "Data transfer from ..."

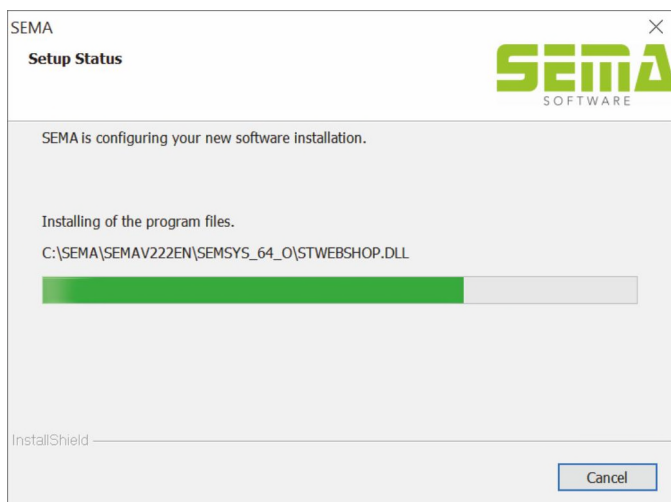
Display Installation Data



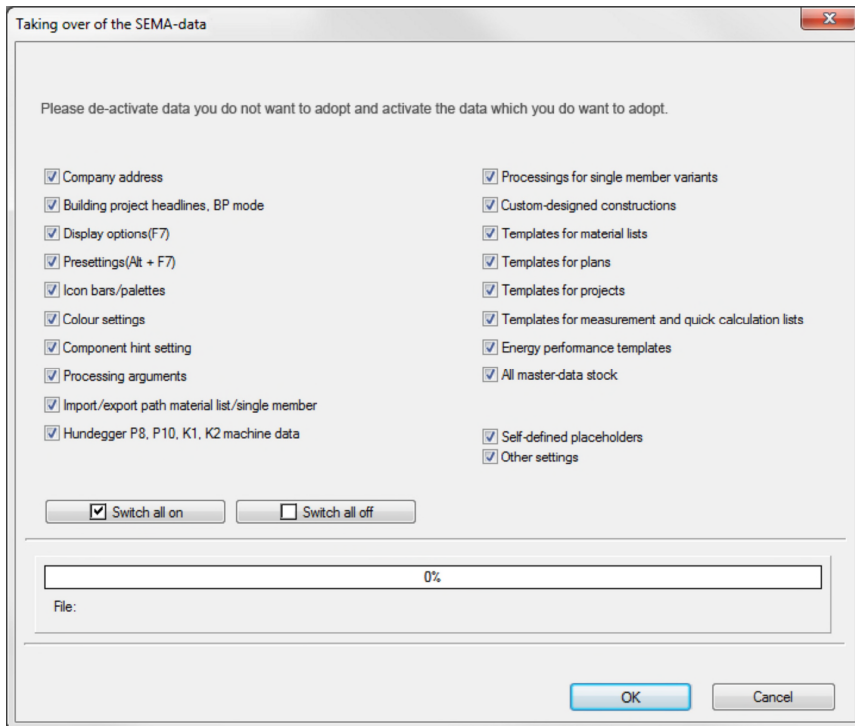
Copying the Programs

Here you can keep track of the the progress of the program installation. A diagram shows you how much of the program has already been installed.

In the background sample projects of the current version are introduced.

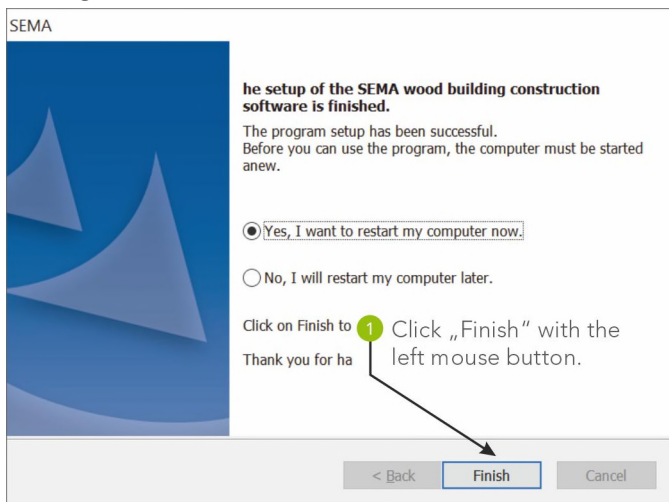



Query for Data Transfer from older version to new version




Please de-activate data you do not want to adopt and activate the data which you do want to adopt. Click on **OK** and the copying process is started.

Ending the Installation Process



 Please restart your computer after the installation of the SEMA programs. Leave **YES, I want to restart my computer now** selected and click **Finish!**

SEMA programm-icon und SEMA Presenter

 When installing the SEMA software you will find a SEMA program icon and a SEMA Presenter icon on your desktop. The SEMA Presenter is a module for the visualization of projects created with a full SEMA version. However, it's not possible to modify these projects by means of the SEMA Presenter.

3. Modify, Repair (Update Installation) or Remove (De-Install Program) Program

Here a installation can be changed, automatically updated or completely removed from your system.

If a SEMA program version has already been installed on your computer, you will be shown which BUILD No. has been installed. A submenu with two further options will appear after clicking the button.



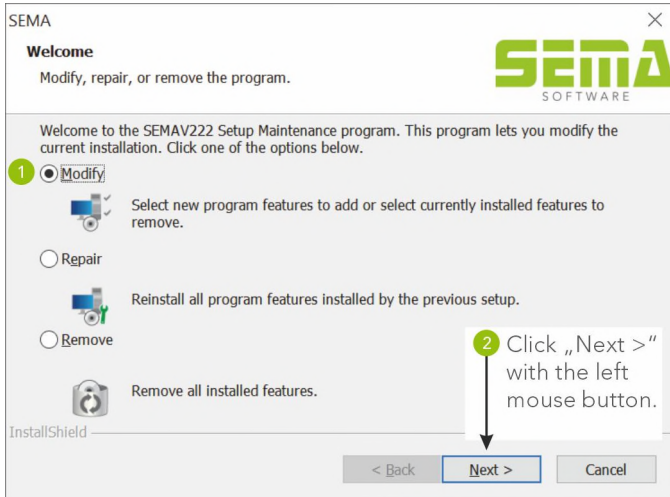
After clicking the installation button opens a drop-down menu with following options:

3.1 Modify Program

3.2 Repair Program

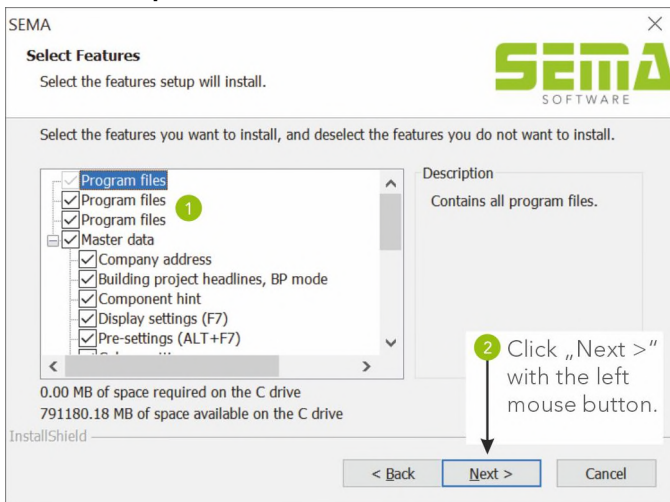
3.3 Remove Program

3.1 Modify the Program



Click the option **Modify** to

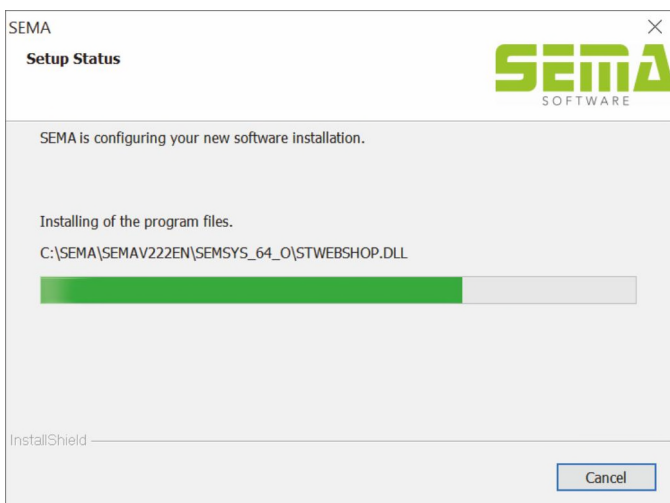
Select Components



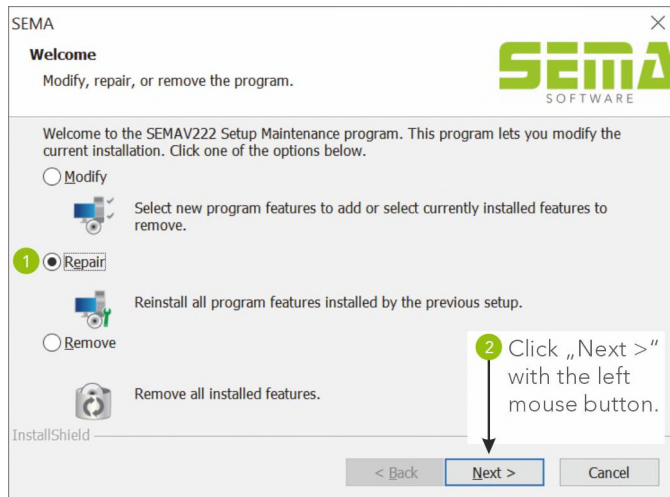
Select the components you want to install, and clear the components you do not want to install (e. g. company address or display settings).

Copying the Programs

Here you can keep track of the the progress of the program installation. A diagram shows you how much of the program has already been installed.



3.2 Repairing

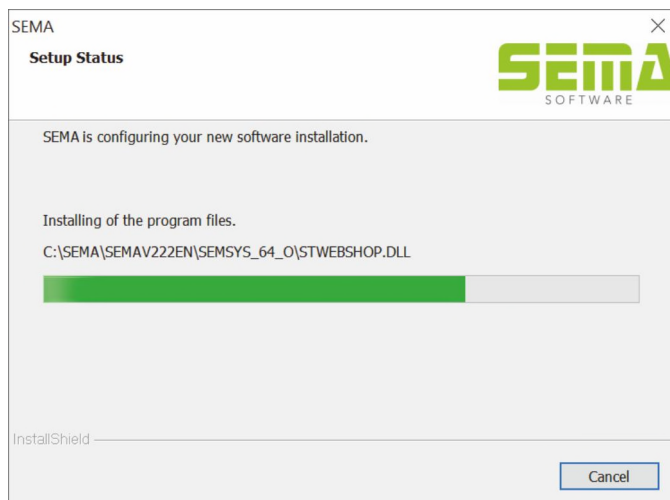


The setup option **Repair** installs all program data anew. In addition, all master data, the plan administration etc. are installed anew. Data which has been newly created or edited will not be affected.

Copying the Programs

Here you can keep track of the the progress of the program installation. A diagram shows you how much of the program has already been installed.


In the background sample projects of the current version are introduced.



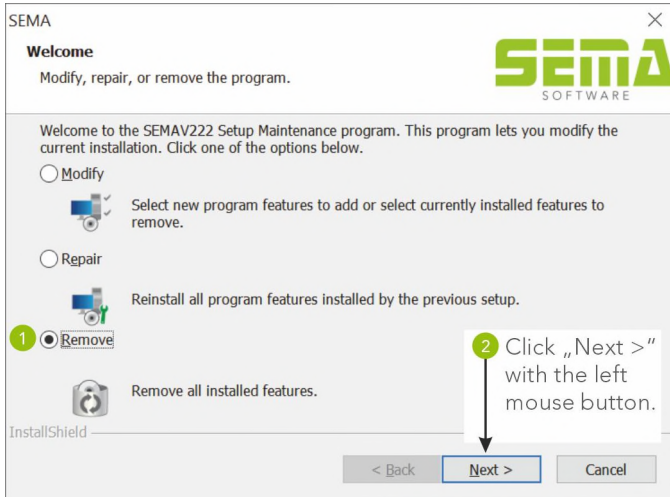
Ending the Update Installation



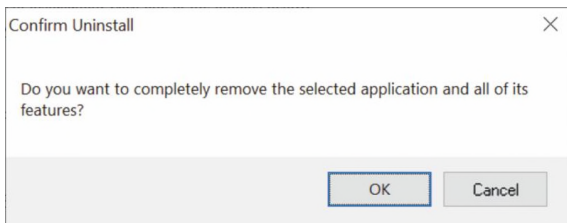
We recommend to restart your computer after the update installation.

Close all open programs under Windows and click  -> *Shut Down...* to end Windows and to restart your computer!

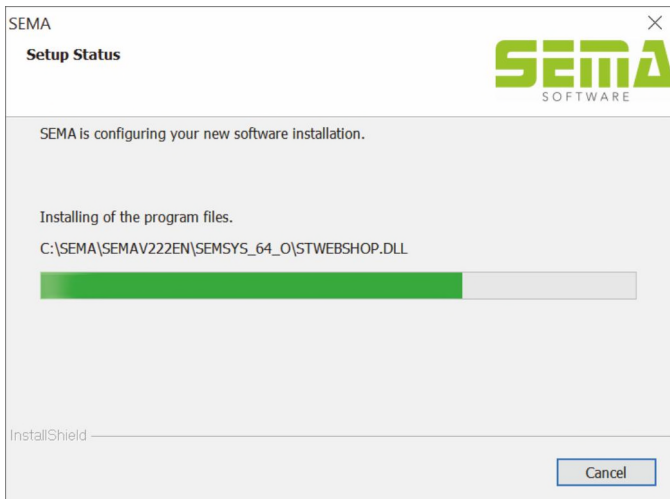
3.3 Removing (De-installation)



Click the option **Remove** to de-install the already installed program version.



Safety check to make sure you really want to de-install. This is your last chance to cancel the process. Once you confirmed with **OK**, the de-installation process starts.



Online Licensing of Software Modules

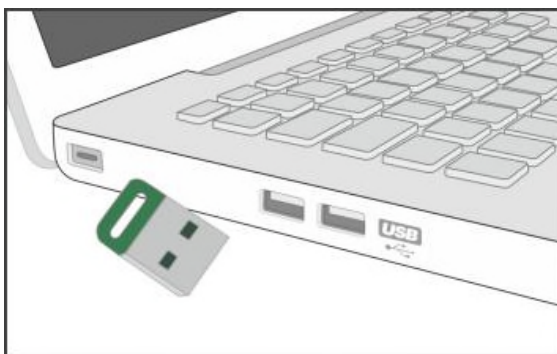
Activation of Software Modules

We provide your individual module combination of the SEMA program with all modules you have acquired online for activation. This means, you can either enable an already installed Try&Learn version to become a full SEMA version or activate later acquired modules for your SEMA program.

Automatic Online Licensing via Internet



The automatic online activation only works if your computer is connected to the internet and the SEMA program or the SEMA Try&Learn version has been correctly installed on your computer.

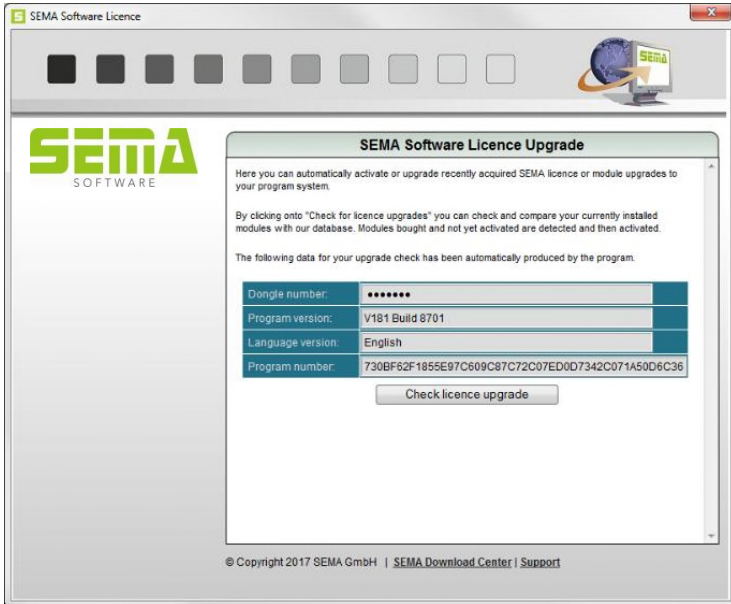


To start the online licensing process, insert the supplied key in a free USB port of your computer!

Now start the already installed SEMA program or SEMA Try&Learn version.

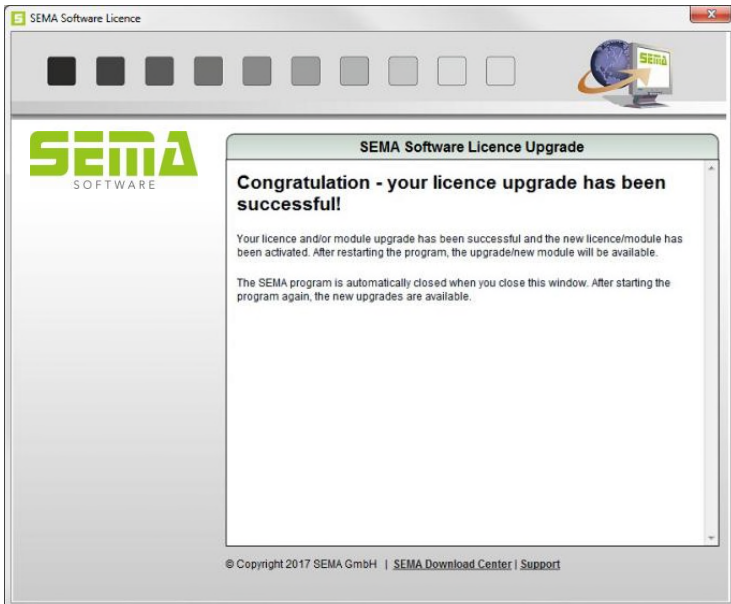


After starting the program, the "New licence" window will open if you are connected to internet. Please confirm by the button "Start online licensing now"!



Click the "Check license update" button.

This triggers a check of your locally installed modules with your data filed at SEMA.



If your license has been successfully enabled or your modules updated, the corresponding message will appear.

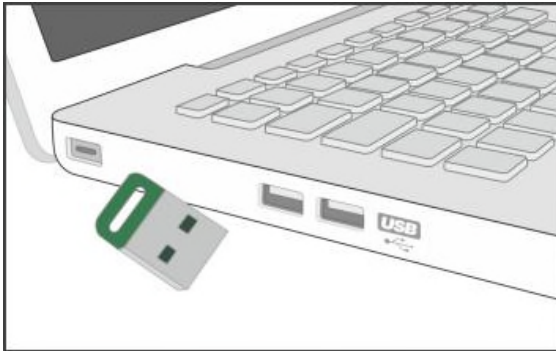
When you then close the window, the program is closed as well.

After restarting the program, you can use the SEMA program with all acquired modules.

Manual Offline Licensing without Internet Connection



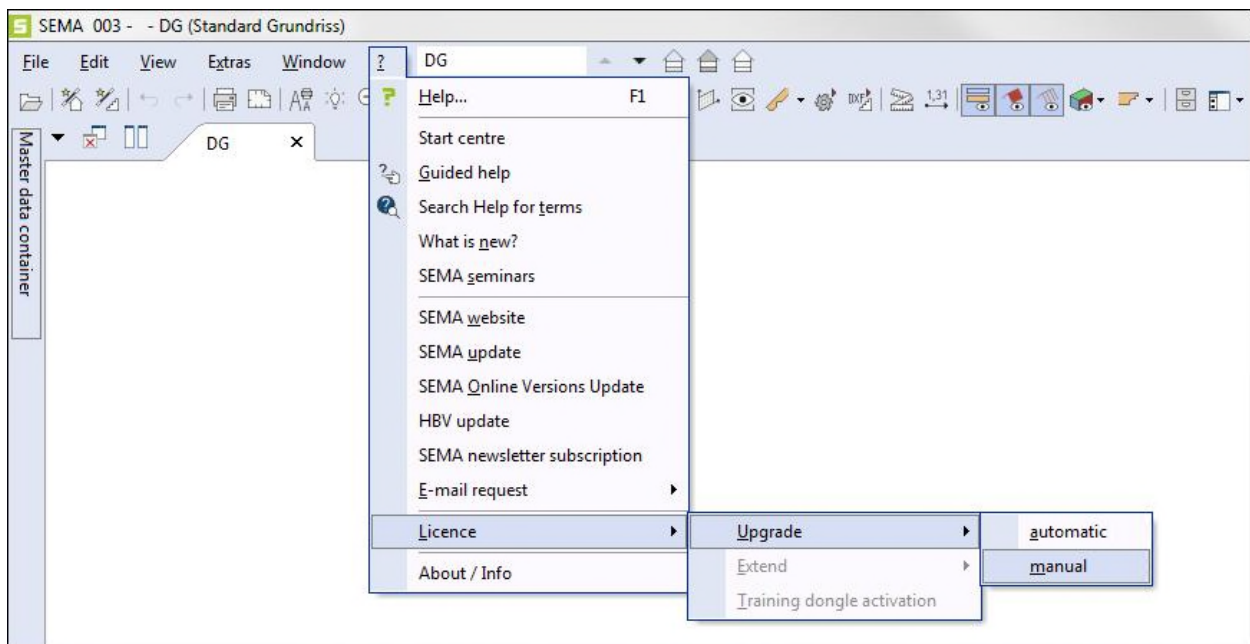
For manual licensing, the SEMA program or the SEMA Try&Learn version needs to be correctly installed on your computer.

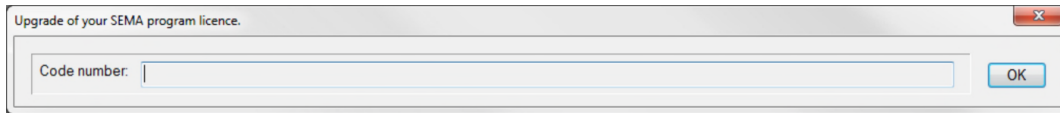


To start the manual offline licensing process, insert the supplied key in a free USB port of your computer.

Now start the already installed SEMA program or SEMA Try&Learn version.

After starting the SEMA program, go to “?” -> “Licensing” -> “Upgrade your current license” -> “manual”.



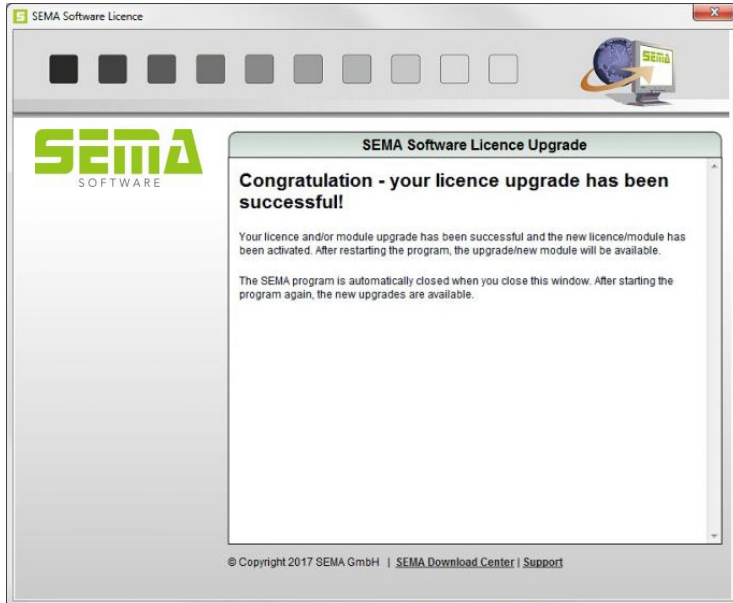


Upgrade of your SEMA program licence.

Code number:

OK

Please insert manually the license code number which you can find on the delivery note and confirm by **OK**.



If your license has been successfully enabled or your modules updated, the corresponding message will appear.

When you then close the window, the program is closed as well.

After restarting the program, you can use the SEMA program with all acquired modules.



If you encounter any technical problems or get error messages during the activation process, please contact SEMA customer support at +49 8304 - 939 140.

Short Description of the Program Help

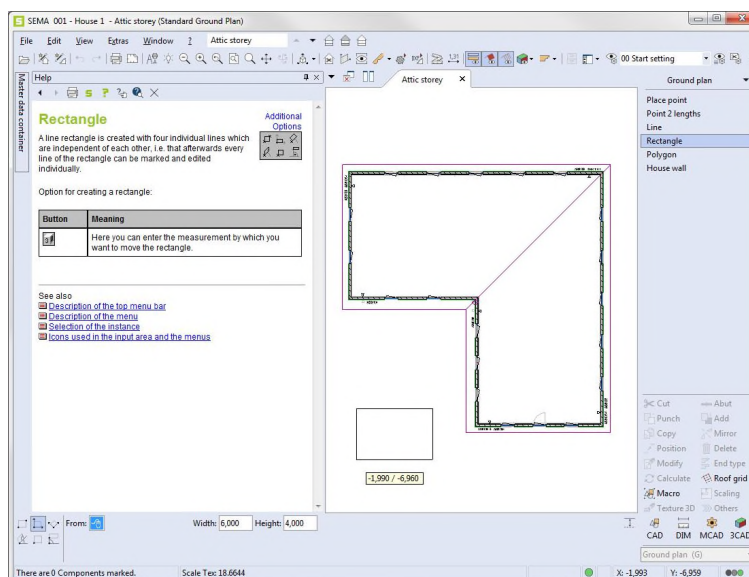
Introduction

To make things easier for you and to make sure you don't have to go through substantial manuals, we created a comprehensive Help function for our program.

It is completely integrated into the SEMA system and thus working with our programs becomes even easier and more efficient.

When we created this help feature, we focused on the most important points and illustrated them with practical examples – so that you can find everything you need at a glance.

This summary is to give you an overview of how the Instant Help works as well as to introduce you to the manifold possibilities this help tools offers.



Context-sensitive Help in the SEMA system - via F1

System Requirements

To be able to use the integrated Instant Help, you need to have an Internet Explorer for Windows, Version 4.x or higher.

Accessing Instant Help

So, if you don't know how to continue or have some kind of problem, simply press the **function key F1** and the relevant Help topic will appear.

Interesting Facts about Help

The Help function feature has been fully integrated into the SEMA program system, so you can work parallel on the project at any time.

Context-sensitive help means that always the relevant help topic for the active command is available, e.g. for the creation function "Place rafter" you automatically find the relevant information on placing rafters when you click the "?".

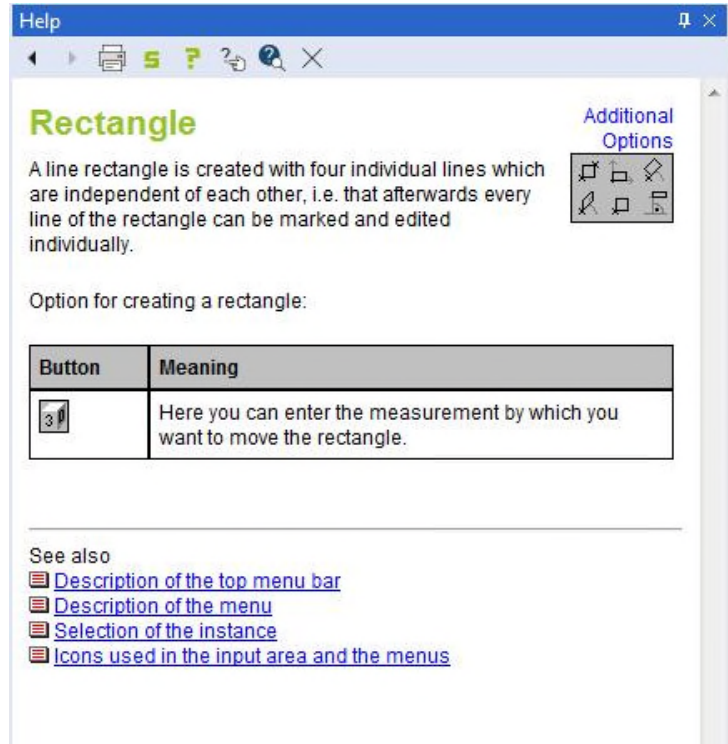
When you move on to another command, the Help function automatically "follows" and the help topic for this specific command is immediately displayed.

About Using Help

After you have clicked the "?", the drawing area will be divided into two sections and the help topic will be displayed on the left side of the screen in a separate window. And here you find further explanations for the command you are currently using.

In some cases (display options, pre-settings etc.) the Help topic is presented in a separate window to explain it better. Here you can switch between the Help topic and the SEMA program with the alt+tab key combination (= task change). Otherwise, everything works the same way as in the context-sensitive Help.

[Text underlined in blue](#) shows a link to further relevant topics. If you click on such a link, the program automatically goes to that help topic.



To keep the Instant Help fairly short and also to give it a clear layout, graphics (mainly buttons) have been linked as well. If you move with the mouse to such a linked graphic you will see that the mouse pointer changes into a hand. You find this feature for example for the graphical display of the additional options for the creation commands.

If there is no function or command active or if there is no help topic for it, some general information about the program is displayed.



Icon Bar of the Integrated Help

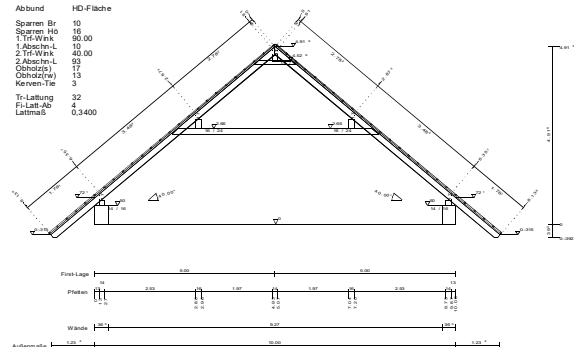
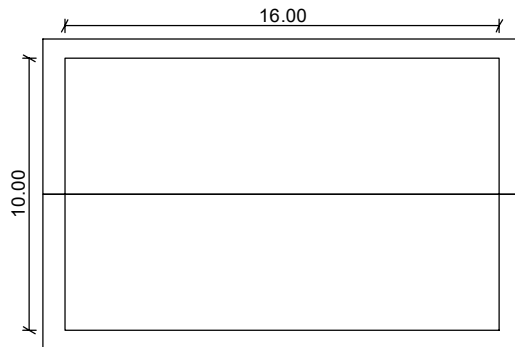
Button	Meaning
	To navigate through the context-sensitive Help. Goes back to the previous Help topic.
	To navigate through the context-sensitive Help. Goes to the next Help topic.
	To print out the active Help topic.
	To go to the Features + Release History of the current version.
	To open the general Help for the program. Here you can get a general overview of how to use the program.
	To open the context-sensitive Help for the program. Here you can get a general overview of the Help topics for all parts of the program.
	Search function of the context-sensitive Help.
	To close Help.

Brief Introduction with the Help of an Example

Creation of a Rafter System for a Saddle Roof with Joining Drawing and Material List (Timber List)

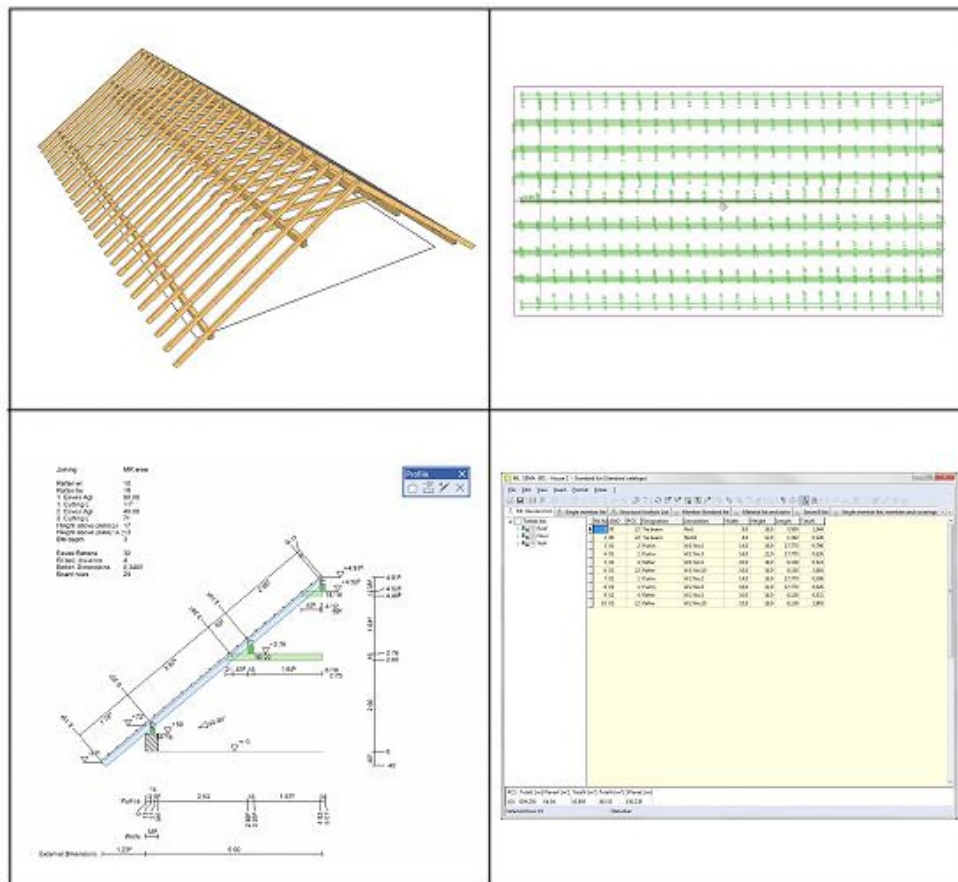
Task:

Please enter a roof for a rectangular ground plan of 10 x 16 m according to the following details:



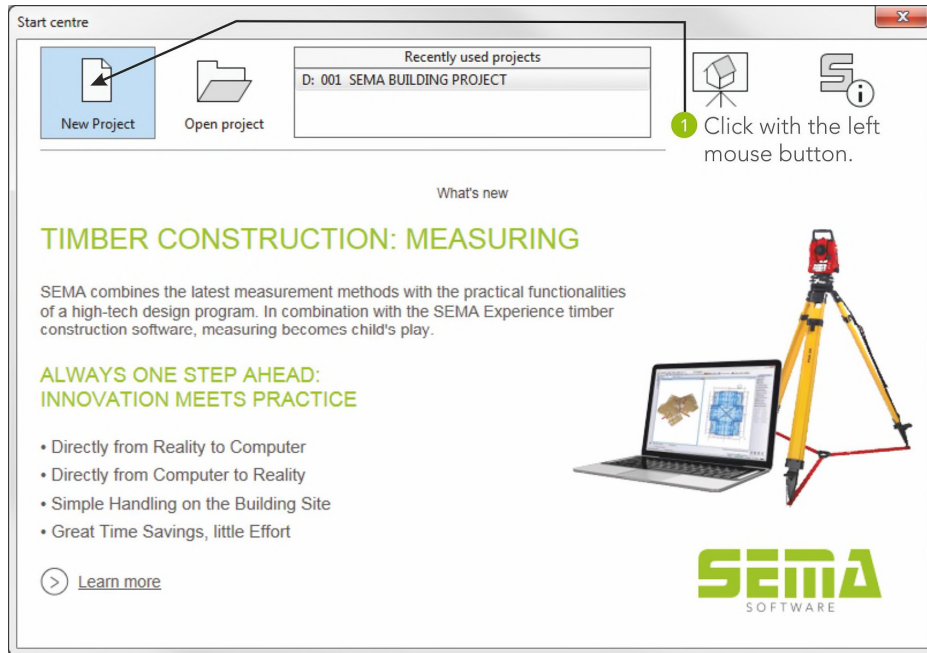
Result:

In the end, you will have created a 3D image, a purlin system, a profile drawing and the material list!

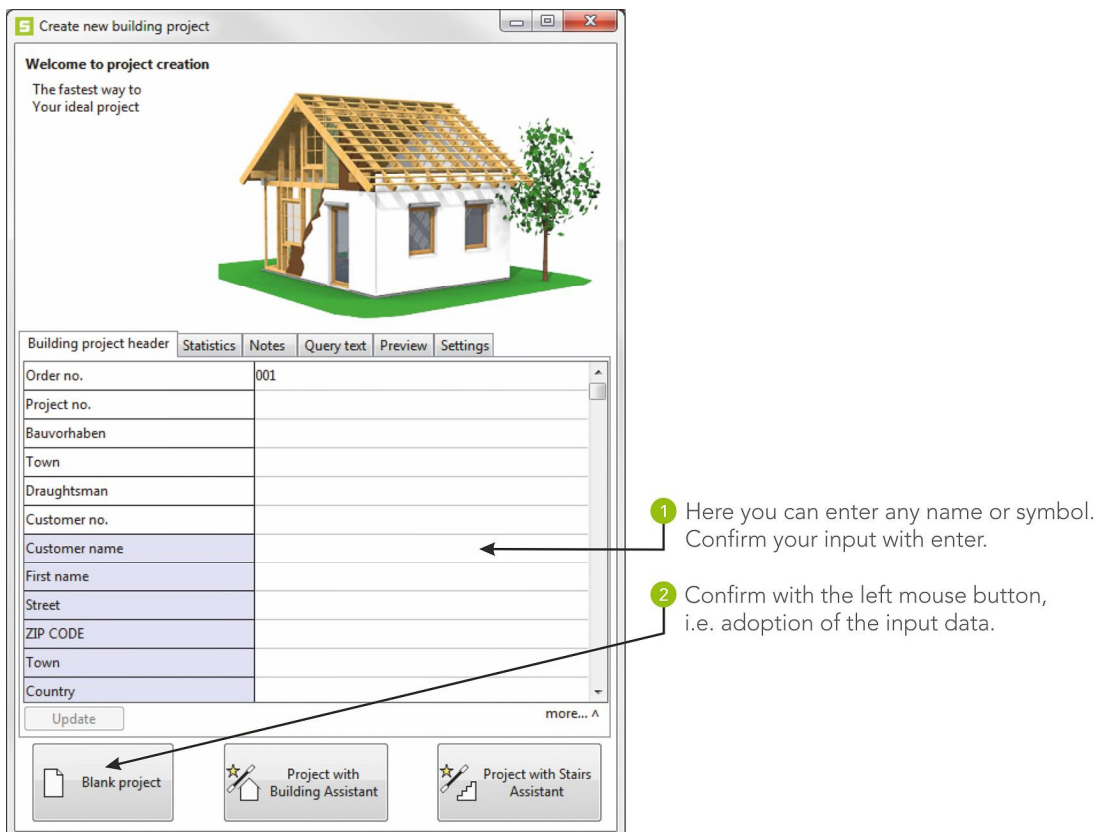


1. Creating a New Building Project

After the start of the SEMA program, the following Start Center will appear:



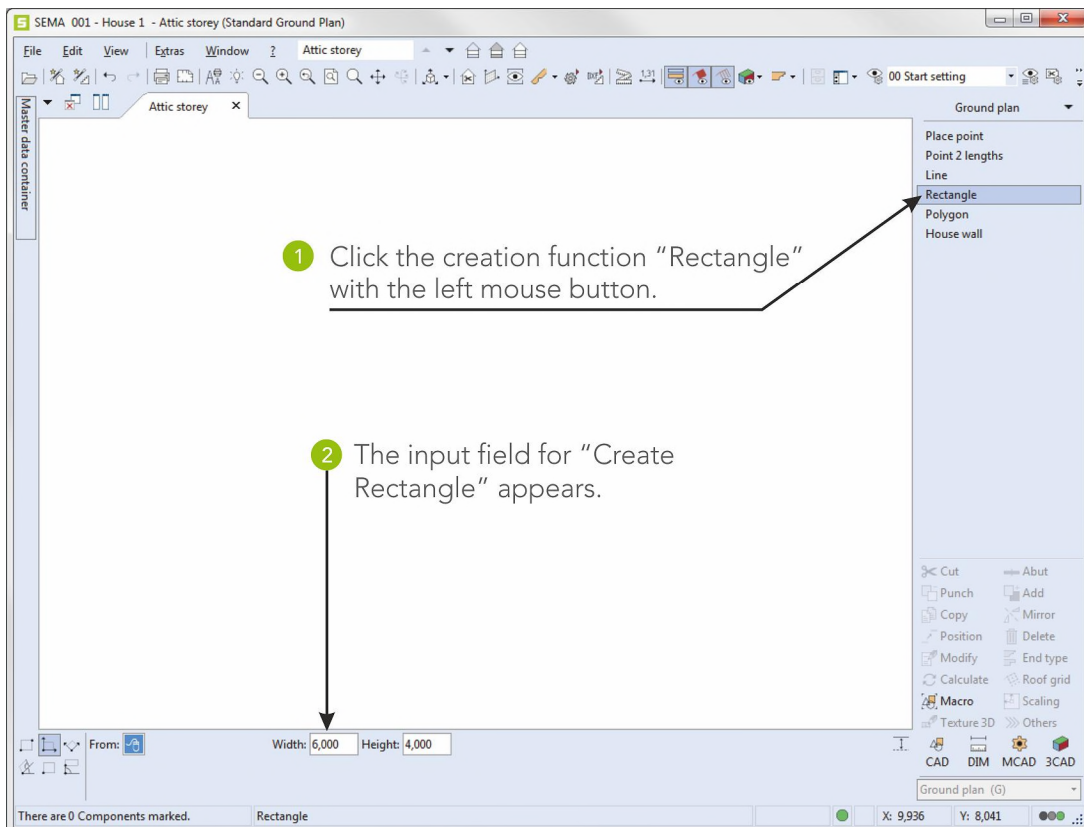
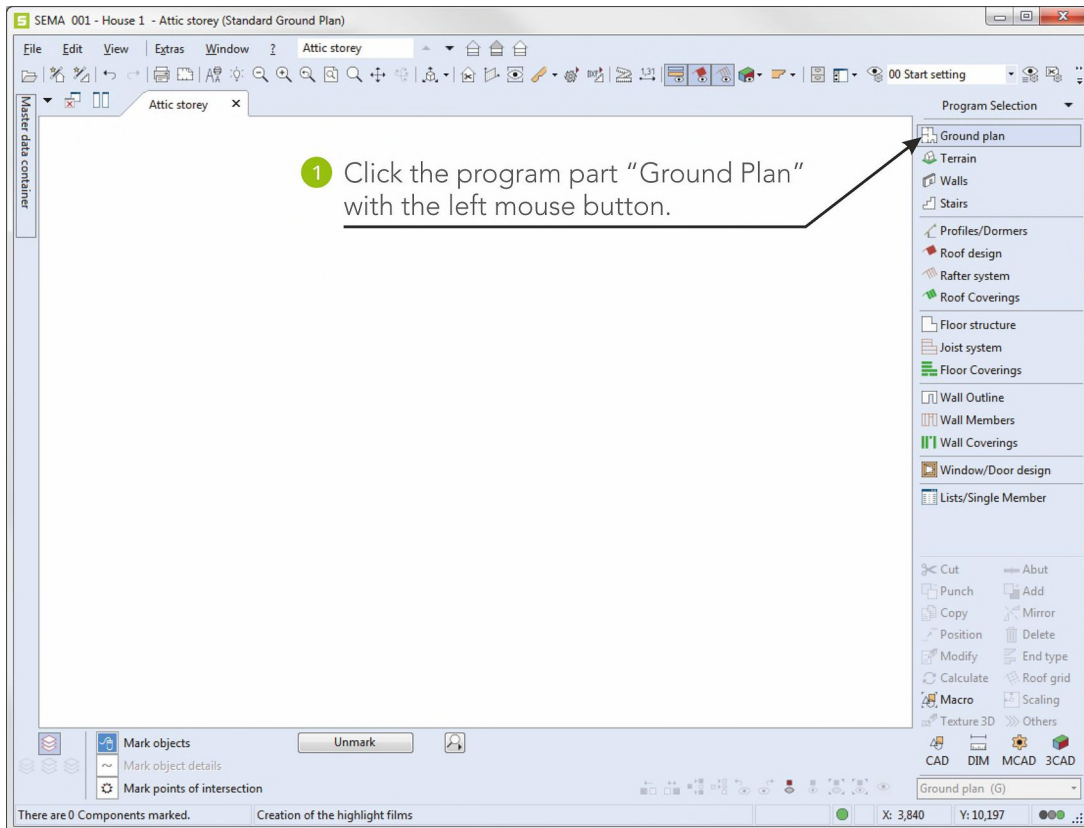
1.1 Filing a Building Project



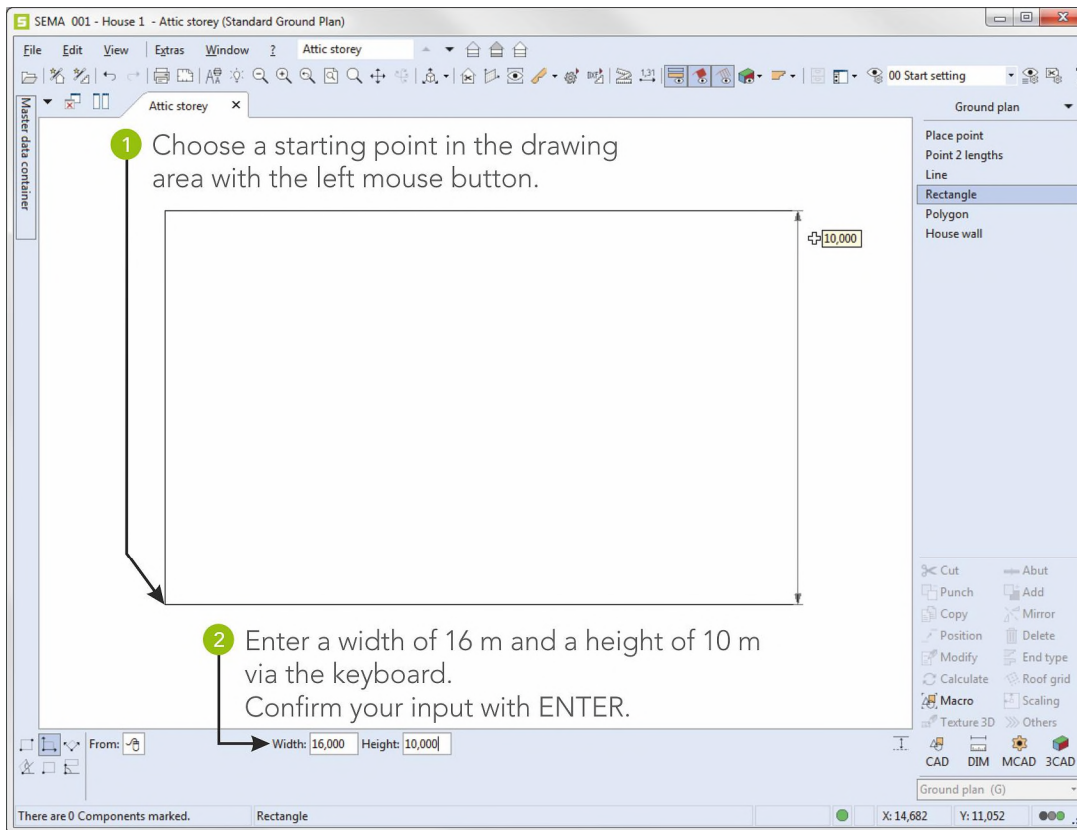
The menu window is closed and the building project which you have created is opened in the drawing area.

2. Creating a Ground Plan

Create the ground plan of a house with 10 x 16 m, but first select the part of the program “Ground Plan”.

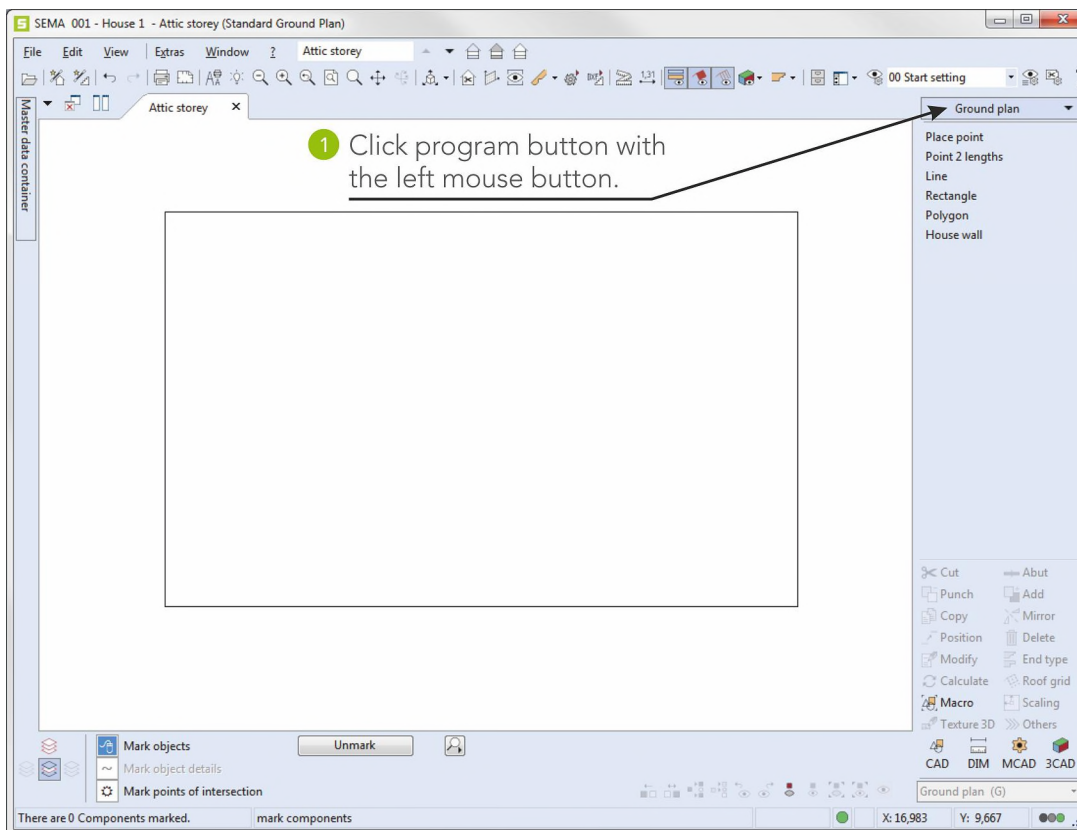


Brief Introduction Creating a Saddle Roof



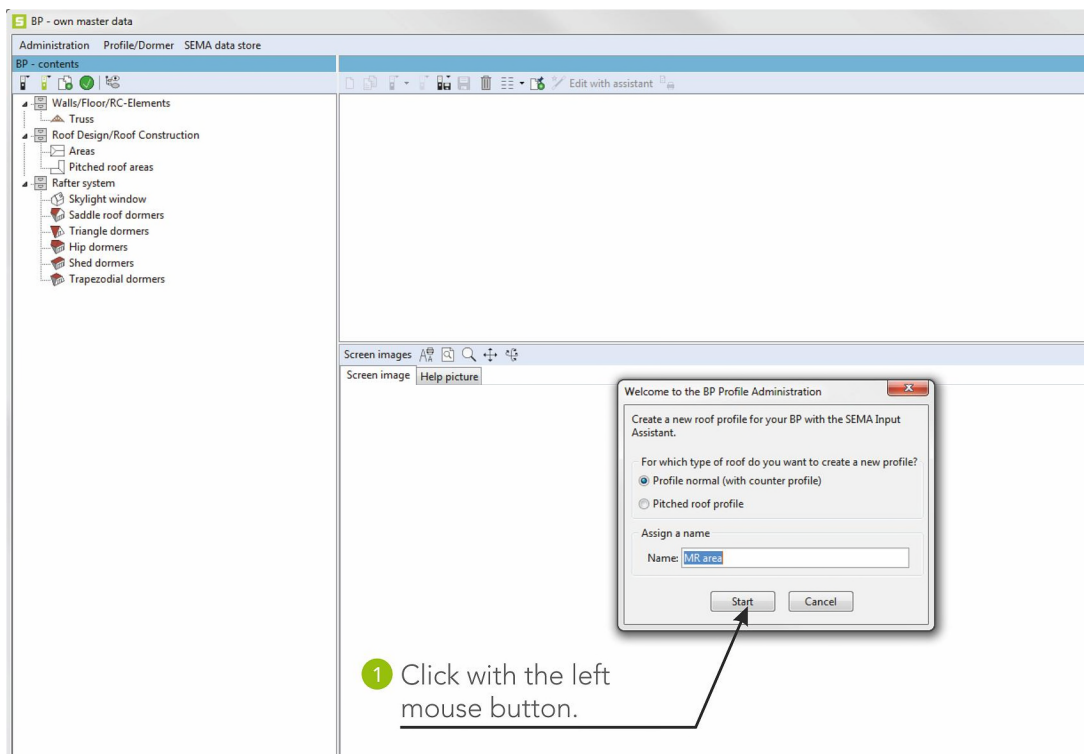
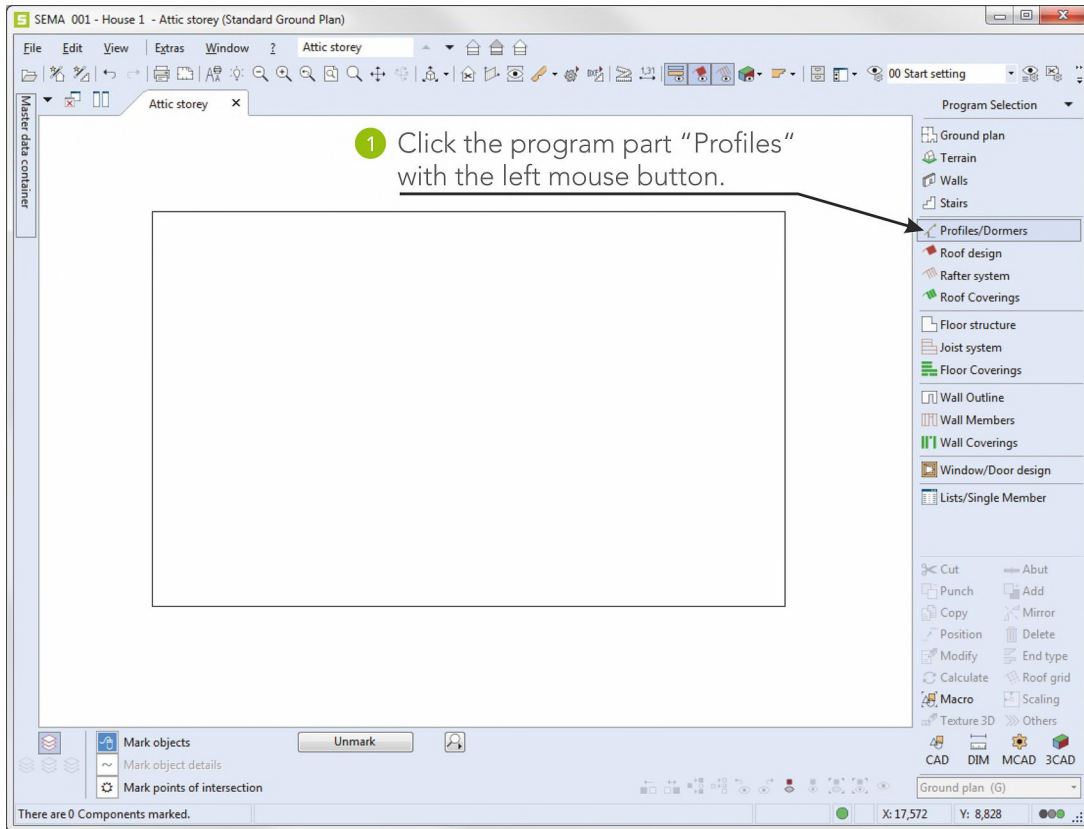
Close the function with Esc (**ESC**).

The ground plan is finished:

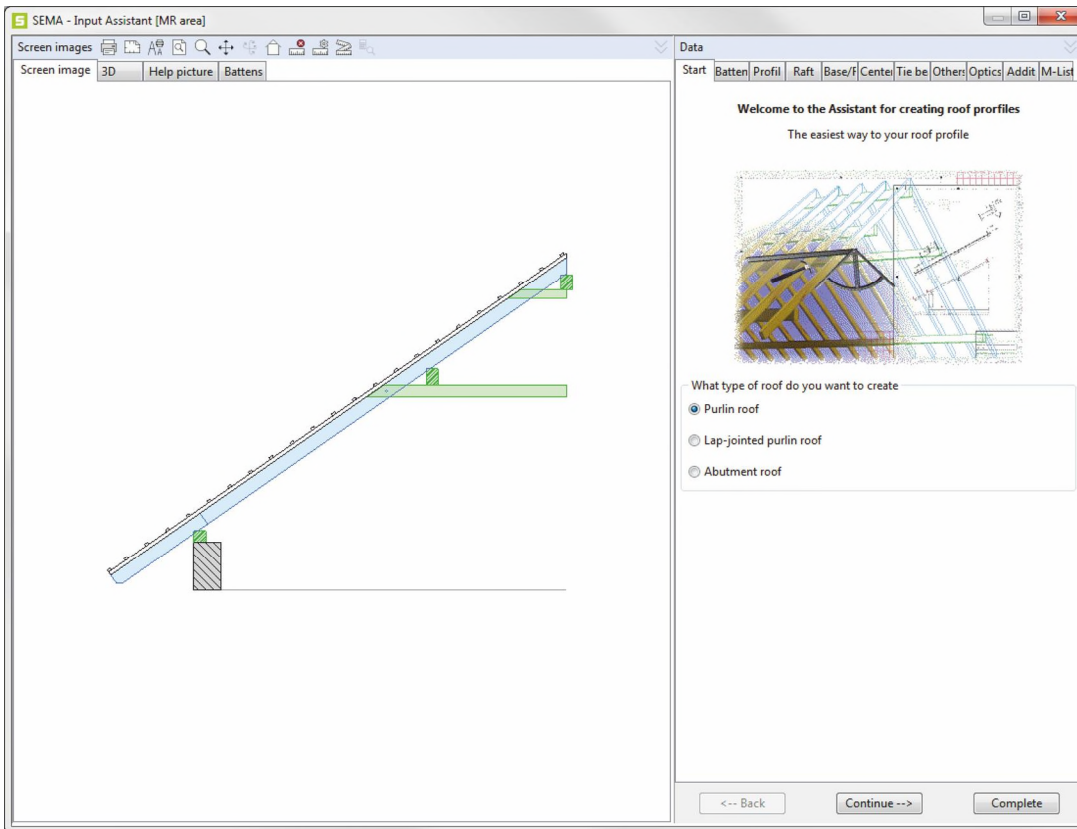


3. Creating a Purlin Roof Profile

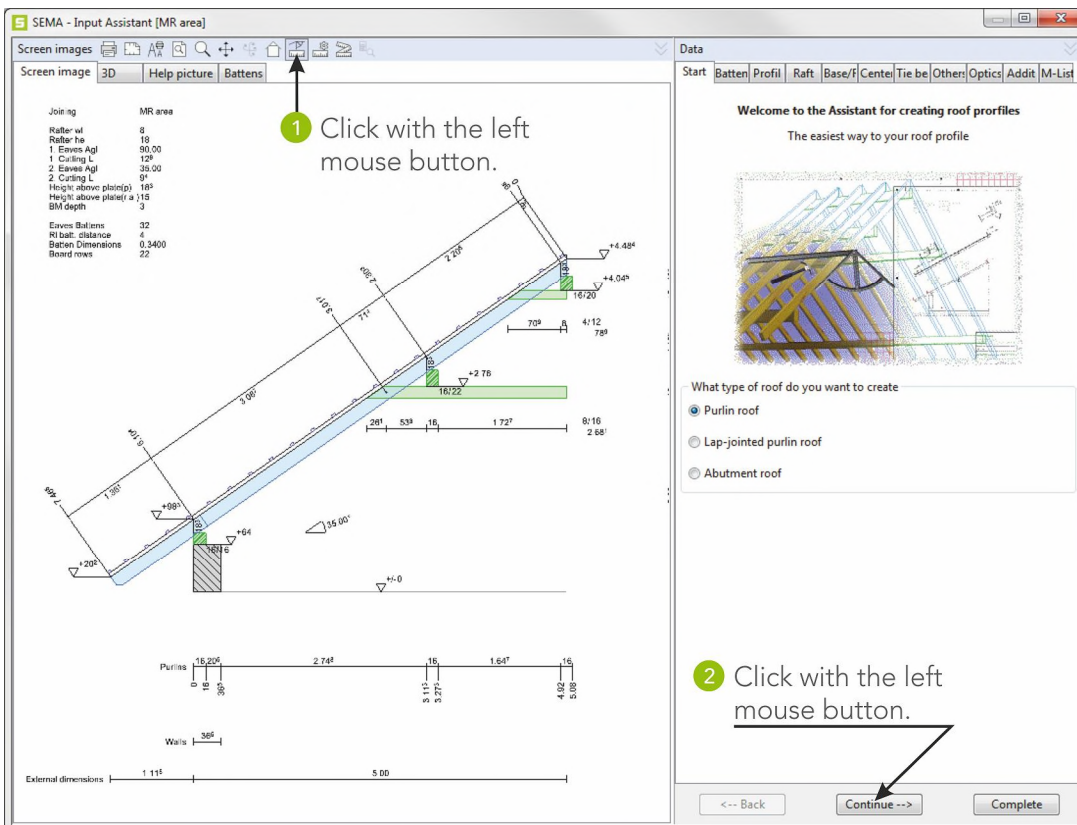
First select the part of the program "Profiles".



3.1 Input Assistant for Roof Profiles



The letters and numbers are entered via the keyboard. For all fields, behind which you find the symbol **Enter**, the entries have to be carried out as displayed and confirmed with “Enter”. For all other fields you just have to check and if necessary change the content.



Roof Battens

SEMA - Input Assistant [MR area]

Screen images: 3D | Help picture | Battens

Joining MR area

Rafter wd	8
Rafter hc	18
1 Eaves Agl	90,00
1 Ceiling L	120
2 Eaves Agl	36,00
2 Ceiling L	91
Height above plate(p)	190
Height above plate(a)	116
BM depth	3
Eaves Battens	32
Ri batt. distance	4
Batten Dimensions	0,3400
Board rows	22

Data

Start | Battens | Profil | Raft | Base/f | Cente | Tie be | Other | Optics | Addit | M-List

Roof structure

Data: Enter

Template: -

Structure height: 0,050

Eaves angle: Extension

Ridge distance: 0,040

Minimum: 0,312

Optimum: 0,340

Maximum: 0,345

Eaves battens: 0,320

Eaves distance: 0,000 free

Covering widths

Left: 0,300

Center: 0,300

Right: 0,270

Cross-section battens

Width: 0,050

Height: 0,030

1 Click with the left mouse button.

<< Back | Continue --> | Complete

Profile

SEMA - Input Assistant [MR area]

Screen images: 3D | Help picture | Battens

Joining MR area

Rafter wd	8
Rafter hc	18
1 Eaves Agl	90,00
1 Ceiling L	120
2 Eaves Agl	40,00
2 Ceiling L	91
Height above plate(p)	190
Height above plate(a)	116
BM depth	3
Eaves Battens	32
Ri batt. distance	4
Batten Dimensions	0,3400
Board rows	24

Data

Start | Battens | Profil | Raft | Base/f | Cente | Tie be | Other | Optics | Addit | M-List

Spacing options roof bat.

Adapt overhang length (rafter length) to fixed battens.

Adapt battens to existing (fix) overhang

Ignore battens when calculating the profile

What is known ?

Pitch + TL eaves purlin

Basic dimension: 5,000

Ridge height: 5,051

Eaves height: -0,180

Length of overhang: 1,234 overhang: 0,000

Roof pitch: 40,000

Top level Eaves Purlin: 0,660

Top level Rafter Jamb wall: 0,856

2 Click with the left mouse button.

<< Back | Continue --> | Complete

Rafter

SEMA - Input Assistant (MR area)

Screen image 3D Help picture Batterns

Rafter w: 10
Rafter h: 16
1. Eaves Agl: 90.00
1. Cutting L: 111
2. Eaves Agl: 40.00
2. Cutting L: 75
Height above plate(r): 17
Height above plate(r): 13
BM depth: 3

Eaves Battens: 32
Ri batt. distance: 4
Batten Dimensions: 0,3400
Board rows: 24

Profile of rafter
Rafter: 10-16 RA-H... Width: 0,100 Height: 0,160

Eaves work end (Cut)
Cut design: 2 - fold
first cutting angle: right-angl. **1**
Length first cutting: % 70,0
second cutting angle: horizontal

Ridge design (Cut)
Ridge work end as: Cut
Cut design: 1 - fold
first cutting angle: plumb
Length first cutting: m 0,000
second cutting angle: right-angl.

Tapering
Tapering: -

Cleat
Angle cleat: 0,6m long

2 Click with the left mouse button.

<-- Back Continue --> Complete

Base Point / Ridge Purlin

SEMA - Input Assistant (MR area)

Screen image 3D Help picture Batterns

Rafter w: 10
Rafter h: 16
1. Eaves Agl: 90.00
1. Cutting L: 111
2. Eaves Agl: 40.00
2. Cutting L: 75
Height above plate(r): 17
Height above plate(r): 13
BM depth: 3

Eaves Battens: 32
Ri batt. distance: 4
Batten Dimensions: 0,3400
Board rows: 24

Base point / ridge
Width: 0,365

Eaves purlin/sole plate
Eaves purlin: 14-16 Width: 0,140 Height: 0,160
Fix: Eav.Offset
Eaves purlin offset: 0,130 **1**
Play Raft/JW(plumb): 0,012
Fix: Bird's mouth(r...
pth of bird's mouth(rectangular): 0,030
HAP(rectangular): 0,130
HAP(plumb): 0,170

Ridge purlin/Ridge plank
Ridge purlin: 14-16 Width: 0,140 Height: 0,160
Position: Bird's mou0,030

2 Click with the left mouse button.

<-- Back Continue --> Complete

Center Purlin

SEMA - Input Assistant [MR area]

Screen images 3D Help picture Battens

Screen image

Rafter wl 10
Rafter Pa 16
1 Eaves Agl 90,00
1 Ceiling L 112
2 Eaves Agl 40,00
2 Ceiling L 75
Height above plane # 113
BM depth 3

Eaves Battens 32
Ro ball. distance 4
Batten Dimensione 0,3400
Board rows 24

Data

Start Batten Profil Raft Base/f Center Tie be Other Optics Addit M-List

Middle purlin 1

Purlin 1: 16-22 Width: 0,160 Height: 0,220
Position: BL: 2,760 Bird's mou: 0,030

Middle purlin 2

Purlin 2: - Width: 0,001 Height: 0,001
Position: TL: 3,000 Bird's mou: 0,030

Middle purlin 3

Purlin 3: - Width: 0,001 Height: 0,001
Position: TL: 4,000 Bird's mou: 0,030

Middle purlin 4

Purlin 4: - Width: 0,001 Height: 0,001
Position: TL: 5,000 Bird's mou: 0,030

External dimensions 1,23 5,00

1 Enter

2 Click with the left mouse button.

<-- Back Continue --> Complete

Tie-beams

SEMA - Input Assistant [MR area]

Screen images 3D Help picture Battens

Screen image

Rafter wl 10
Rafter Pa 16
1 Eaves Agl 90,00
1 Ceiling L 112
2 Eaves Agl 40,00
2 Ceiling L 75
Height above plane # 113
BM depth 3

Eaves Battens 32
Ro ball. distance 4
Batten Dimensione 0,3400
Board rows 24

Data

Start Batten Profil Raft Base/f Center Tie be Other Optics Addit M-List

Center tie beam 1

Tie beam 1: 8-16 under p... Width: 0,080 Height: 0,160
On Pr. Purlin 1

Center tie beam 2

Tie beam 2: - Width: 0,001 Height: 0,001
On Pr. Purlin 2

Center tie beam 3

Tie beam 3: - Width: 0,001 Height: 0,001
On Pr. Purlin 3

Center tie beam 4

Tie beam 4: - Width: 0,001 Height: 0,001
On Pr. Purlin 4

Ridge tie

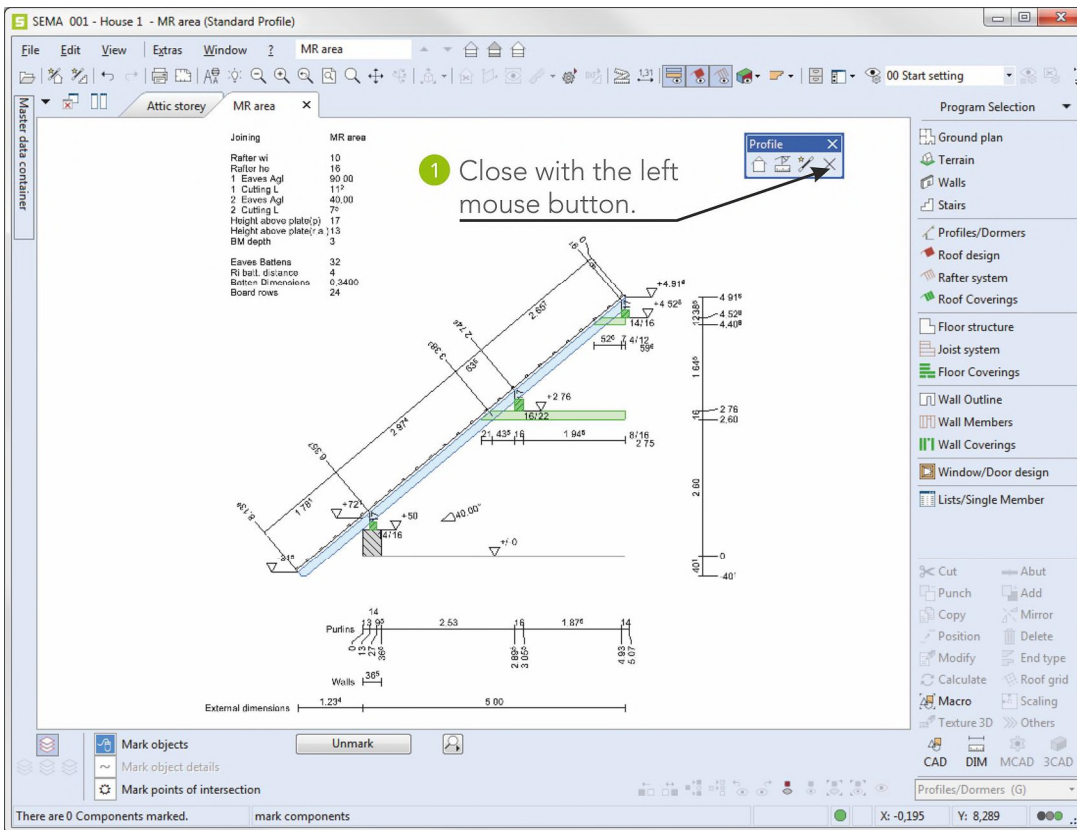
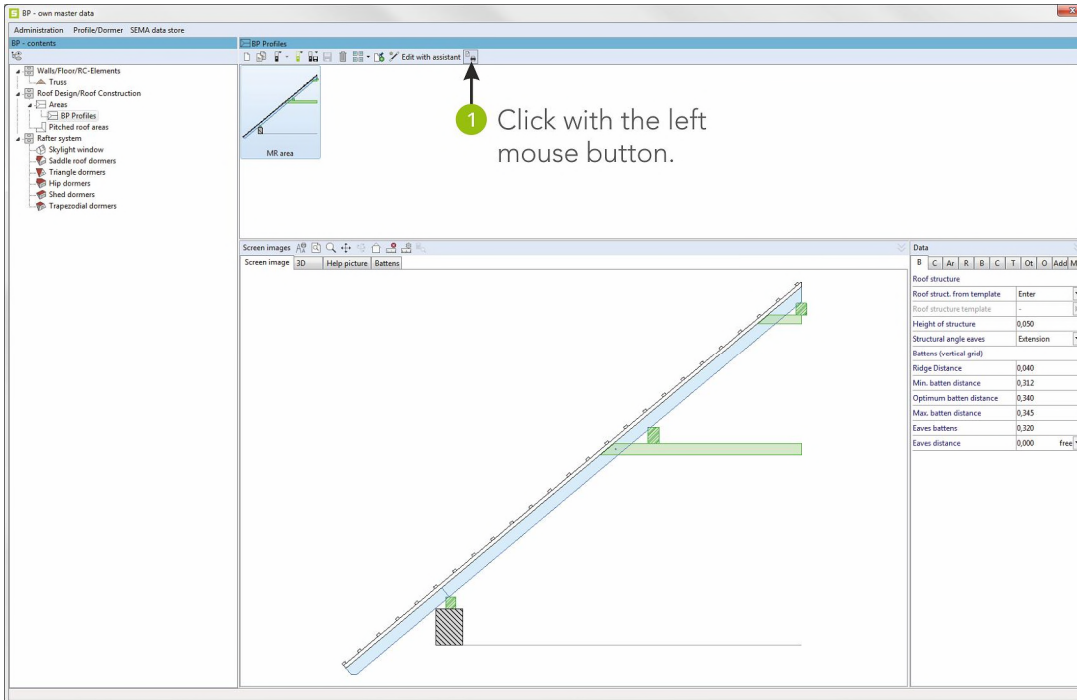
Ridge tie: 4-12 ridge tie Width: 0,040 Height: 0,120

External dimensions 1,23 5,00

1 Close with the left mouse button.

<-- Back Continue --> Complete

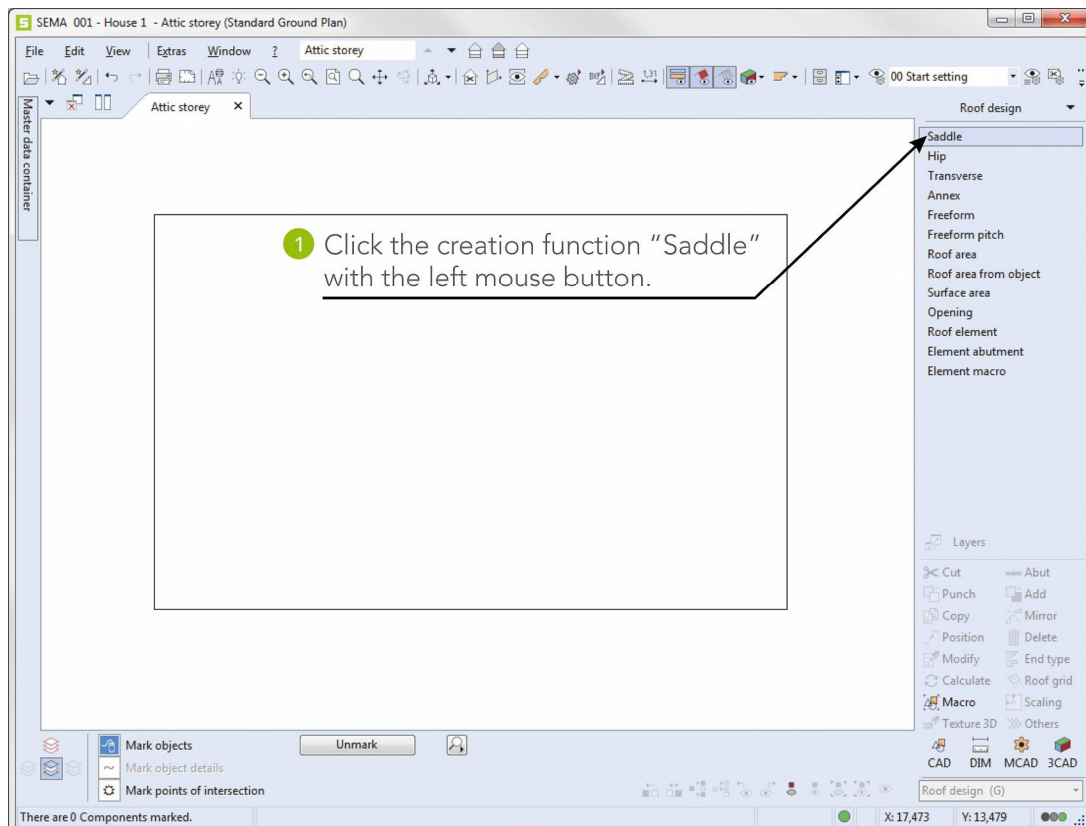
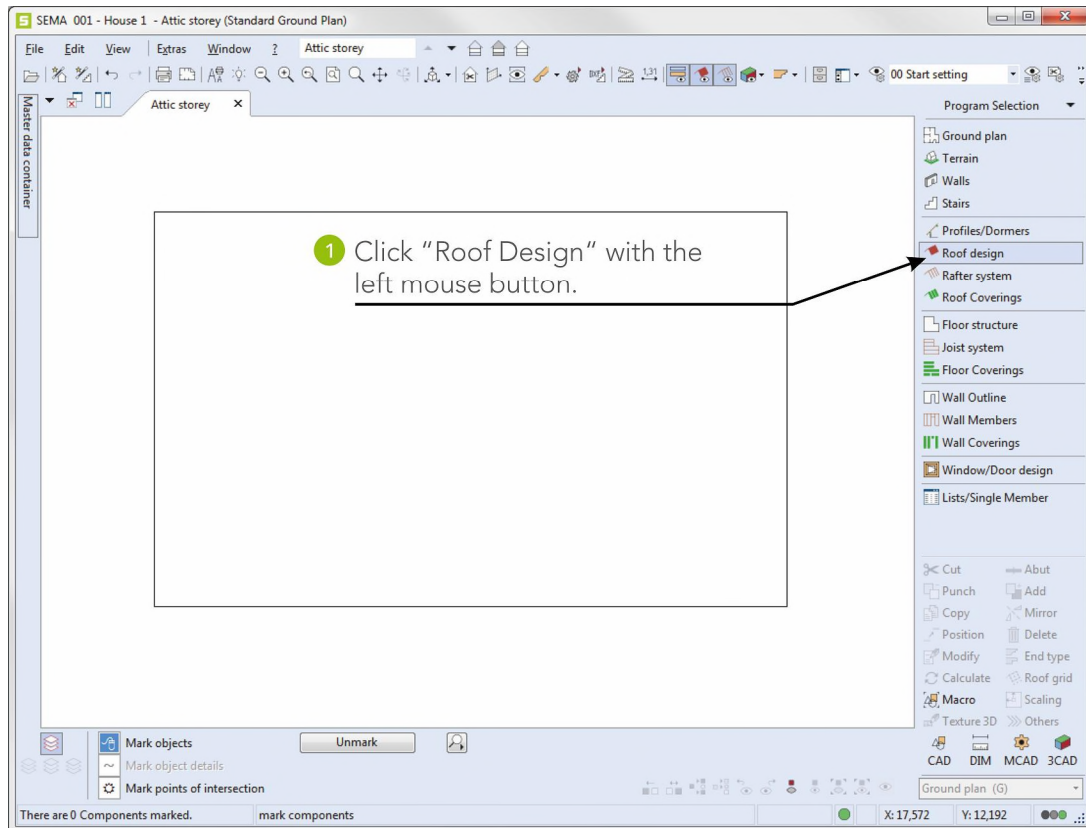
The input of the profile is finished.



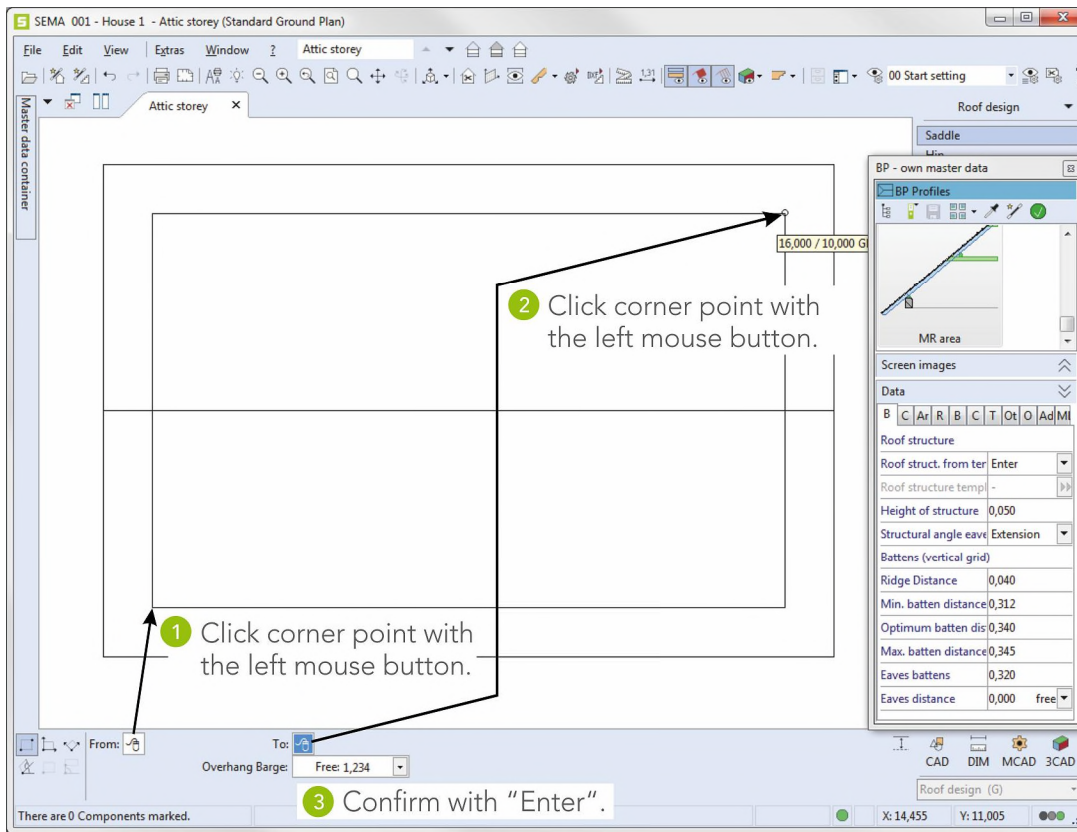
4. Creating a Roof Design

Here you can create the roof design with the existing ground plan and the profile created before.

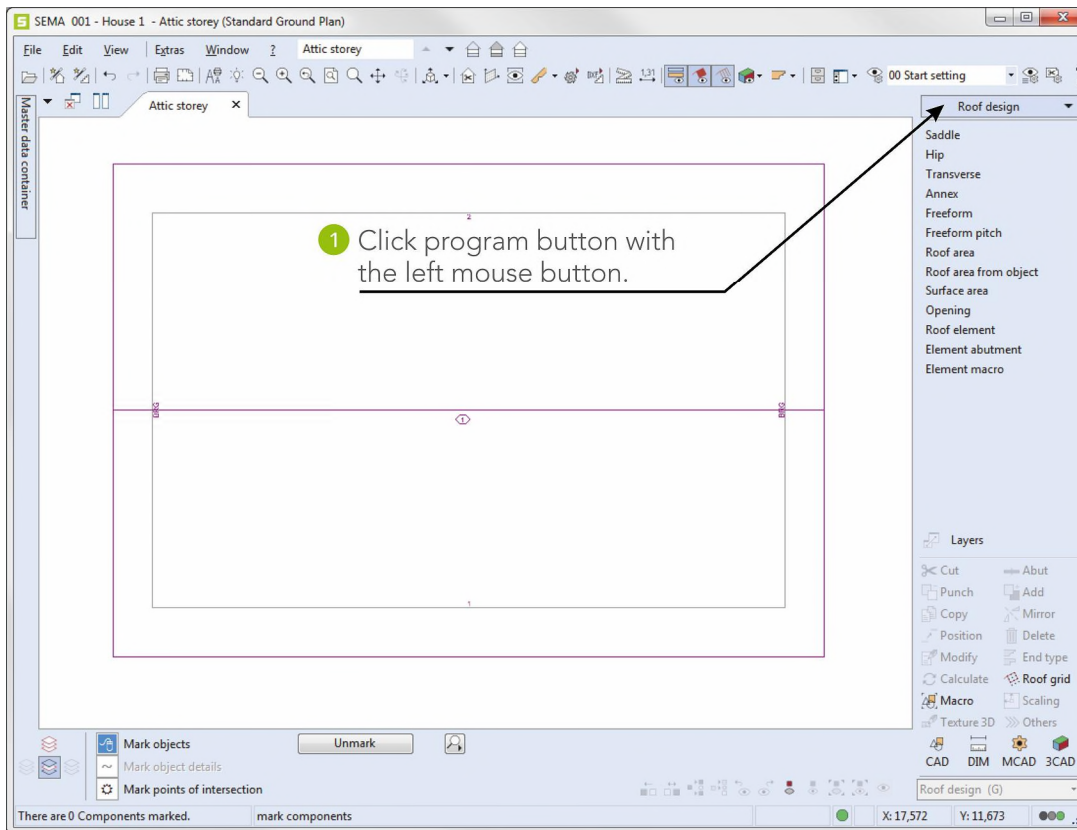
Select the part of the program “Roof Design”.



Brief Introduction Creating a Saddle Roof

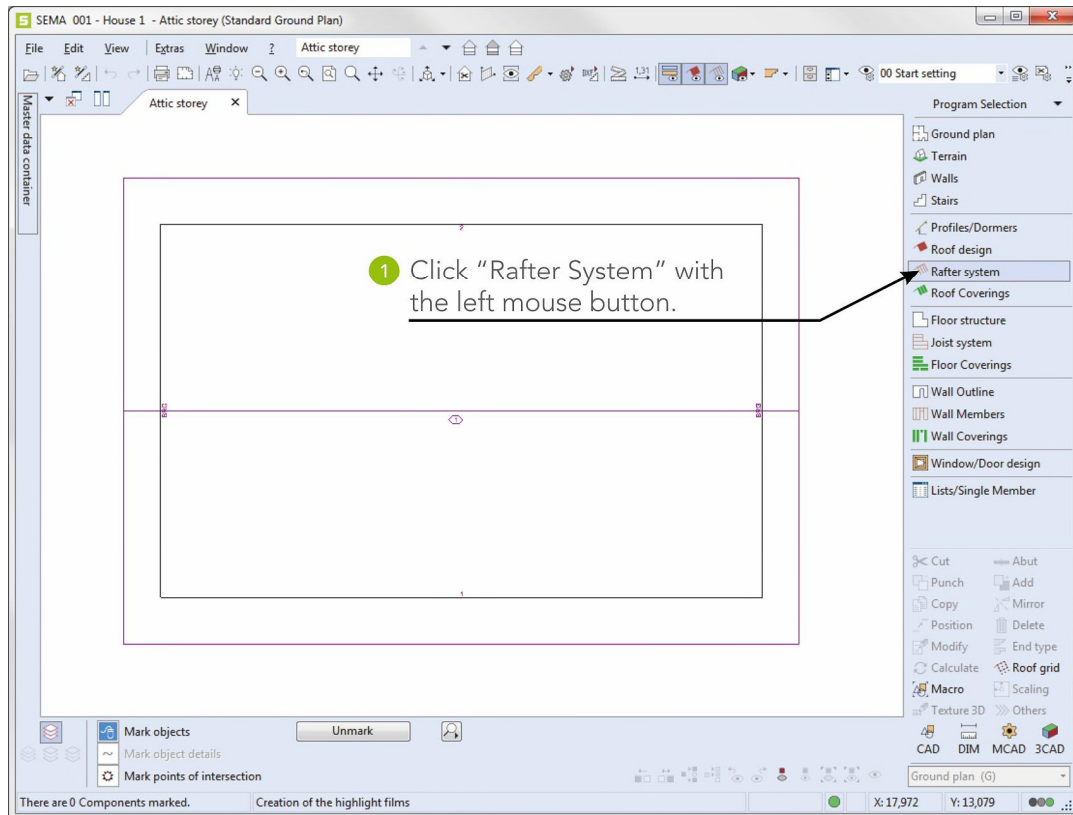


The roof design is finished.

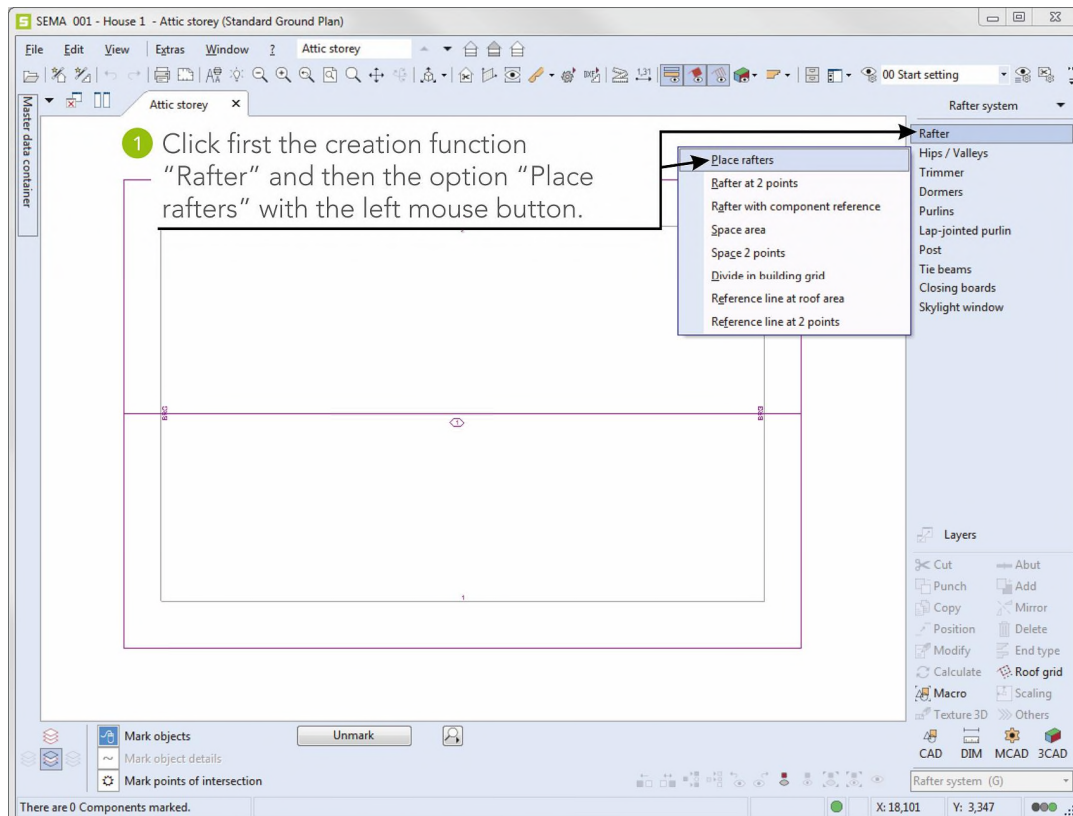


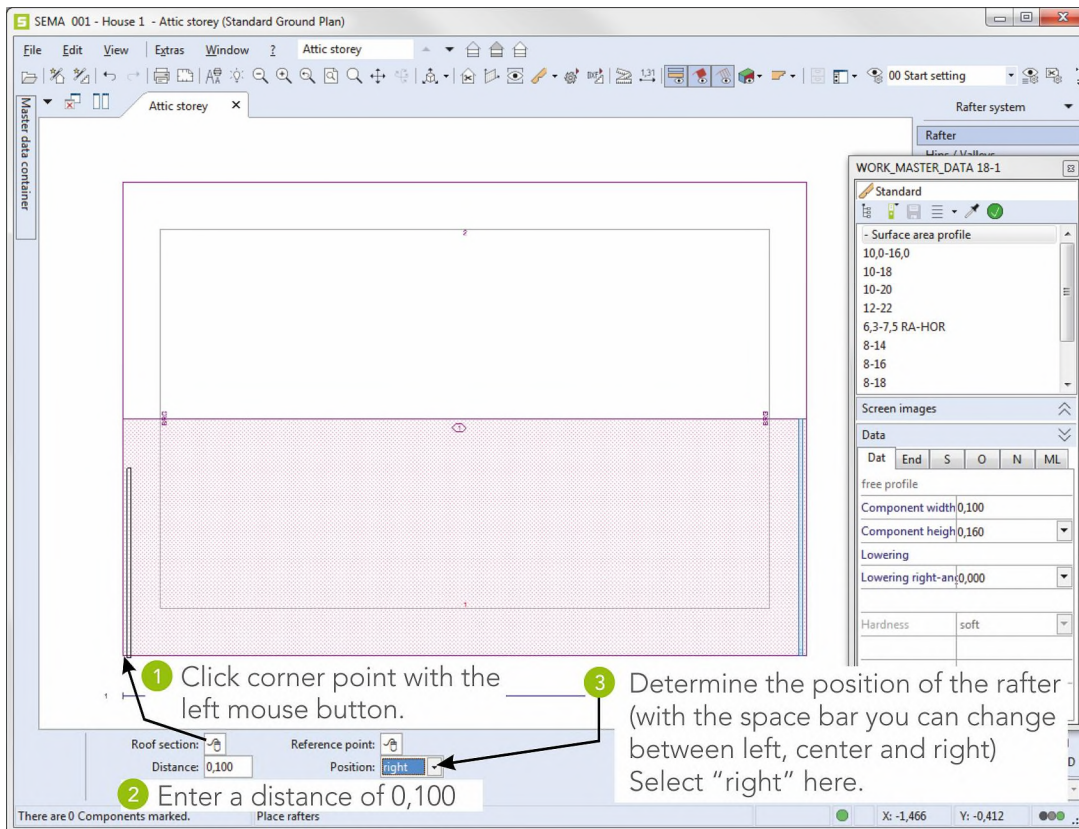
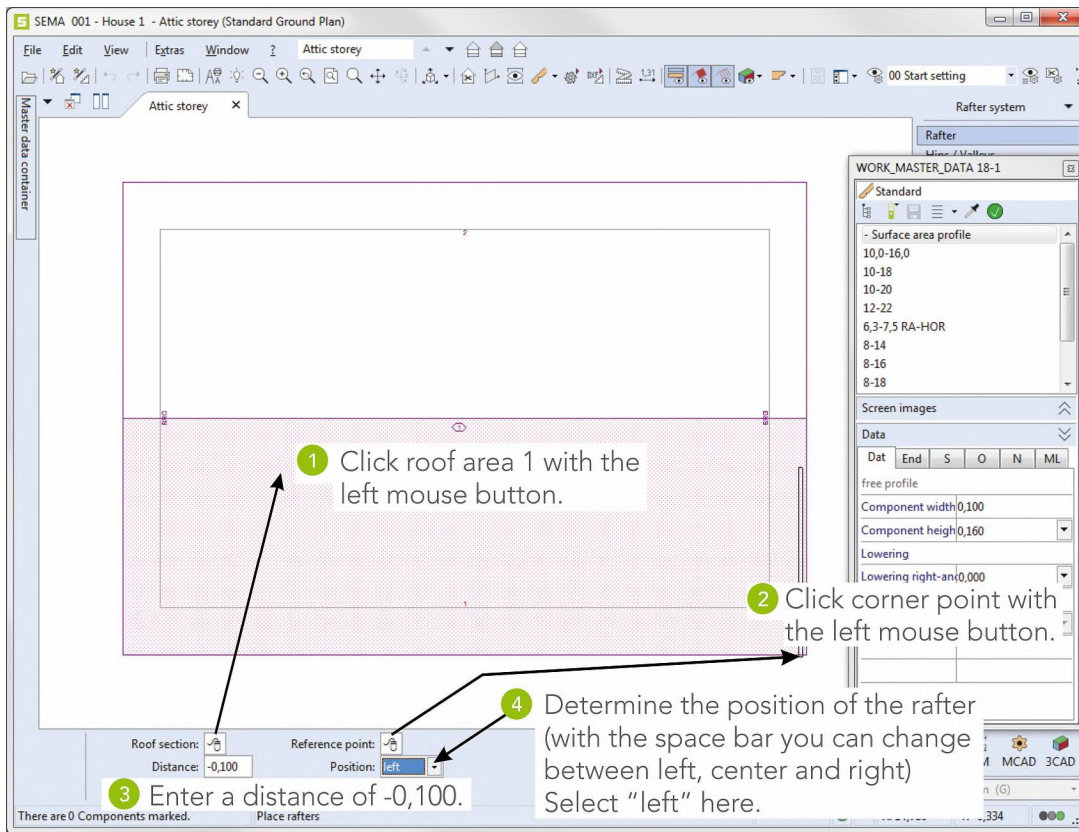
5. Creating a Rafter System

Here the components are drawn into the existing roof design. Click the program part "Rafter System".

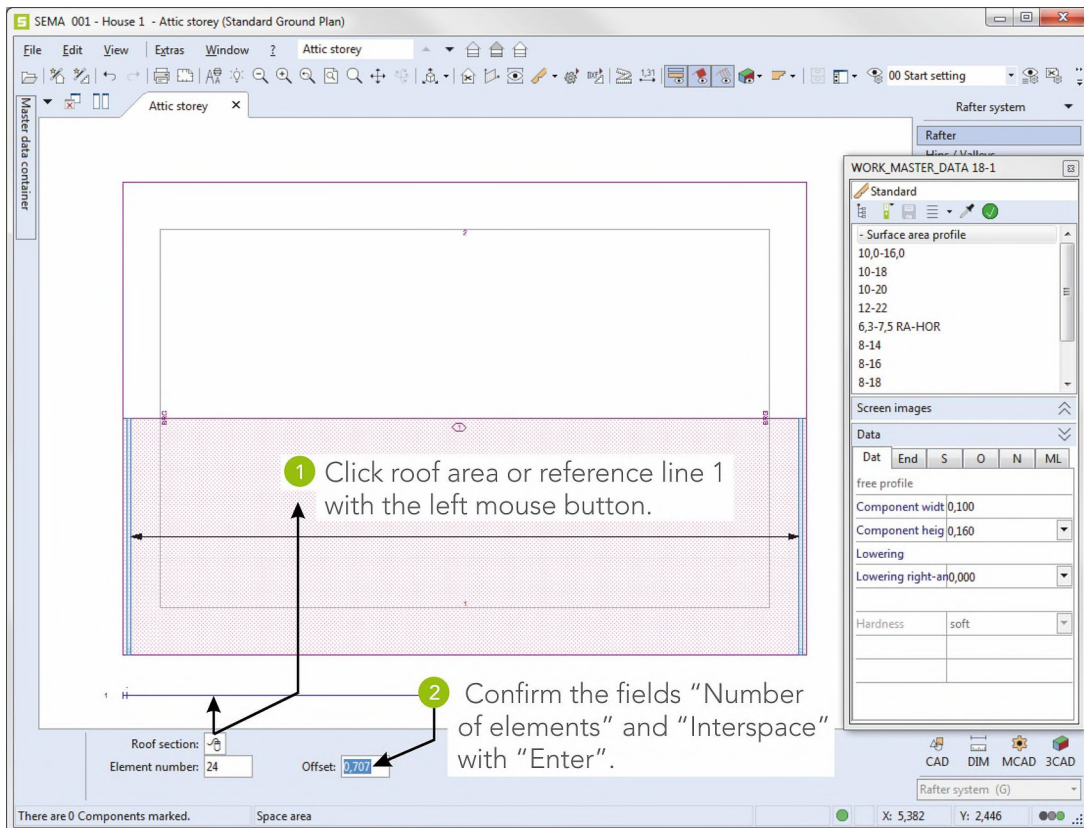
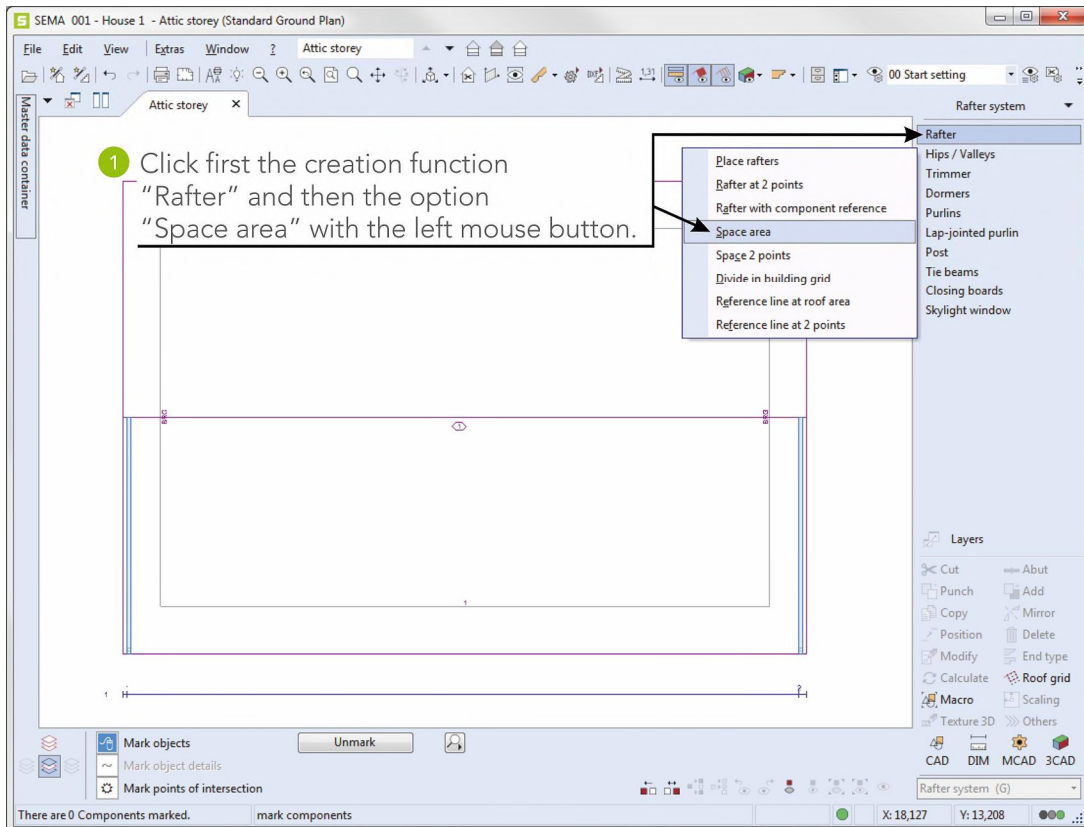


5.1 Placing a Fixed Rafter



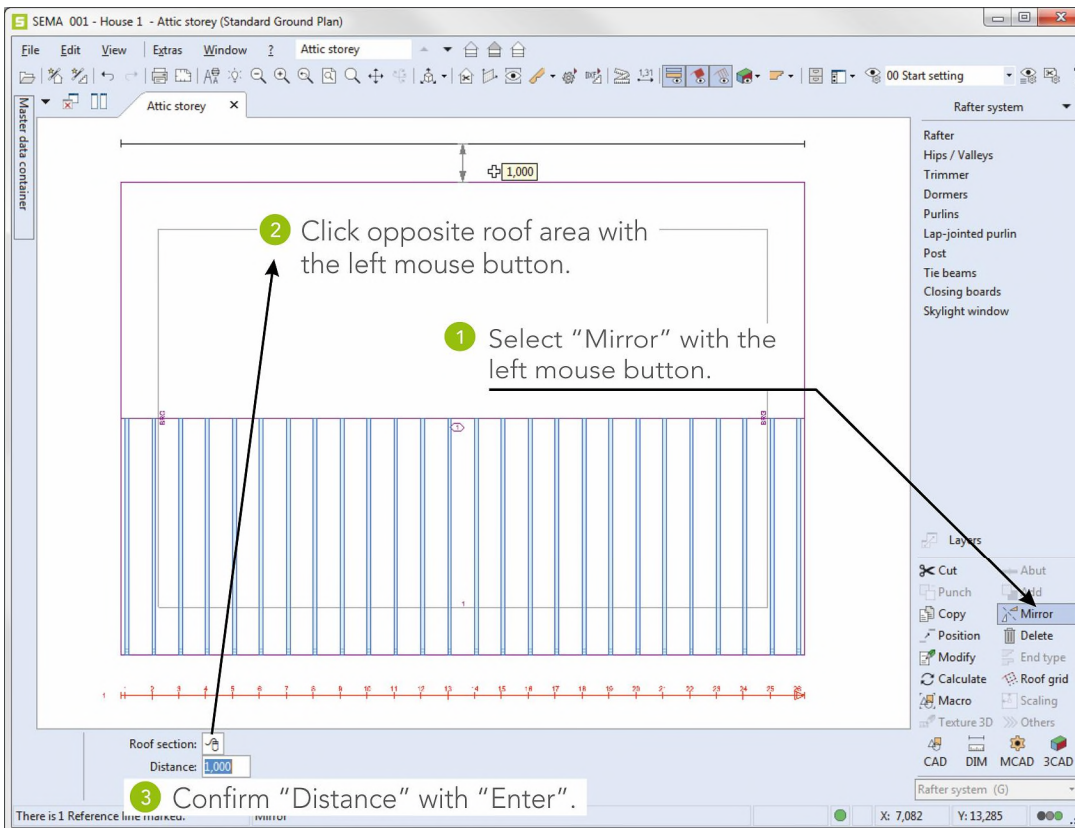
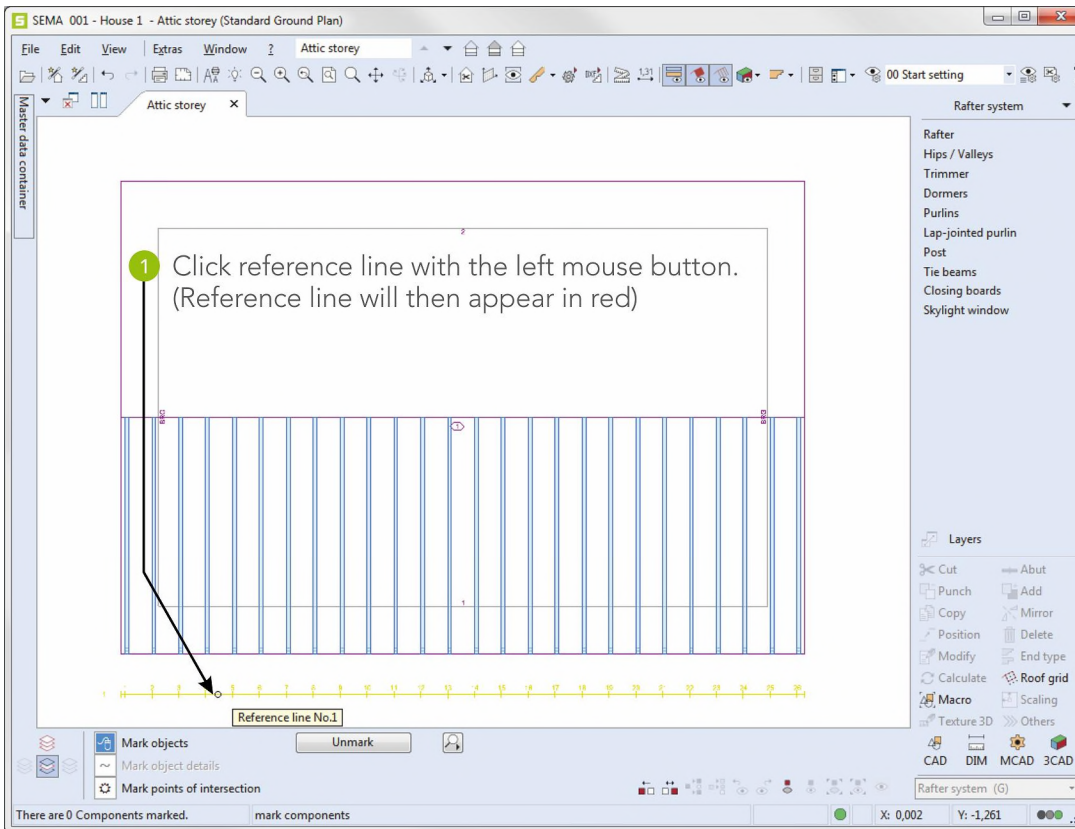


5.2 Spacing an Area

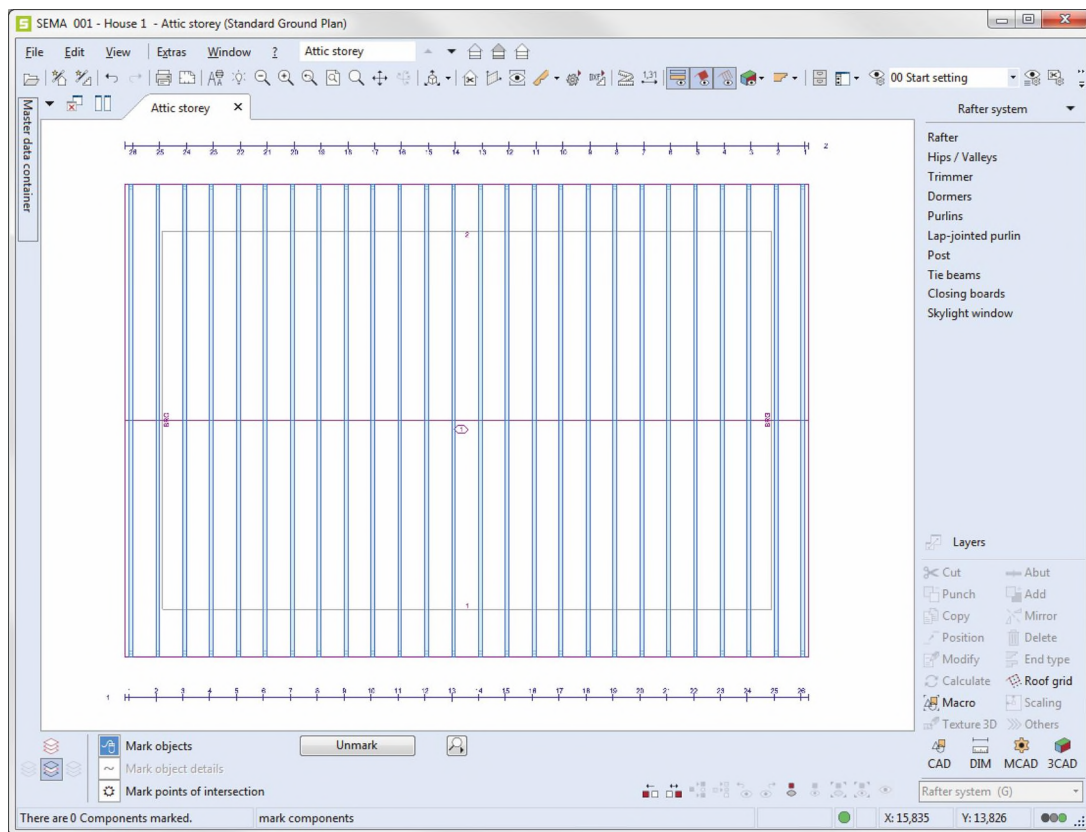


Close the function with Esc (**ESC**).

5.3 Mirroring a Reference Line

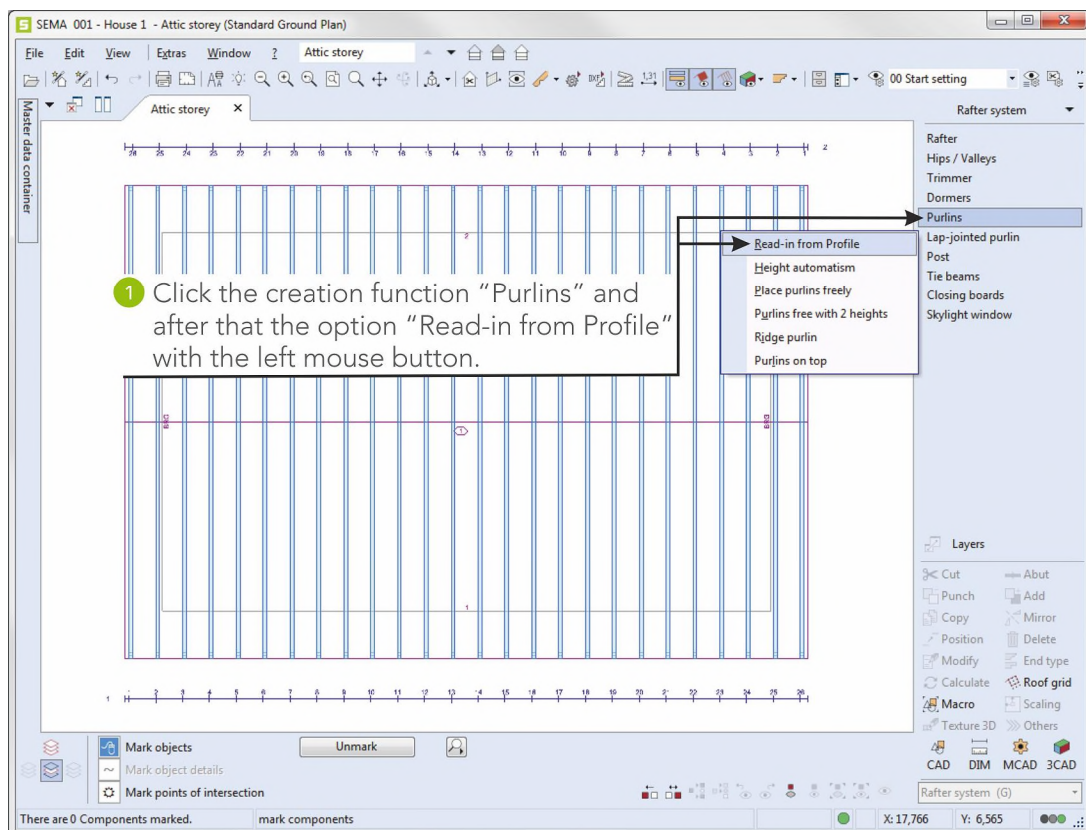


The spacing of the entire roof is finished.



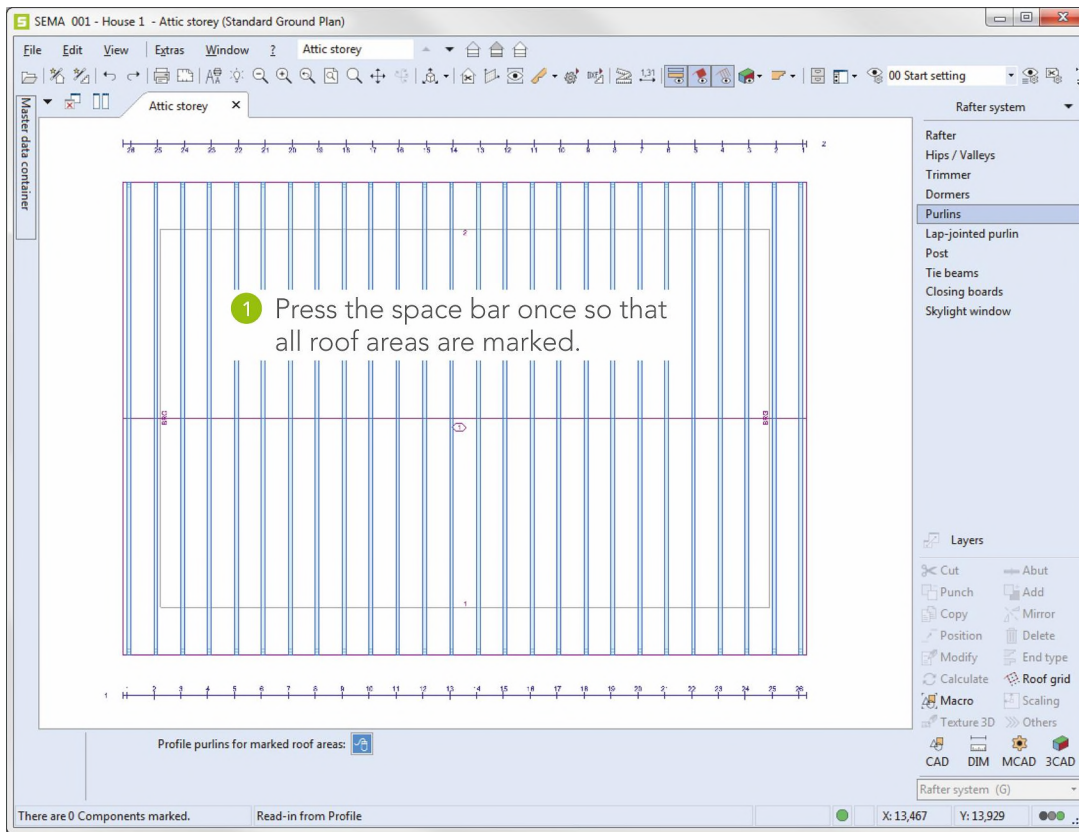
5.4 Creating Purlins

Read-in purlins from the created profile to the rafter system.

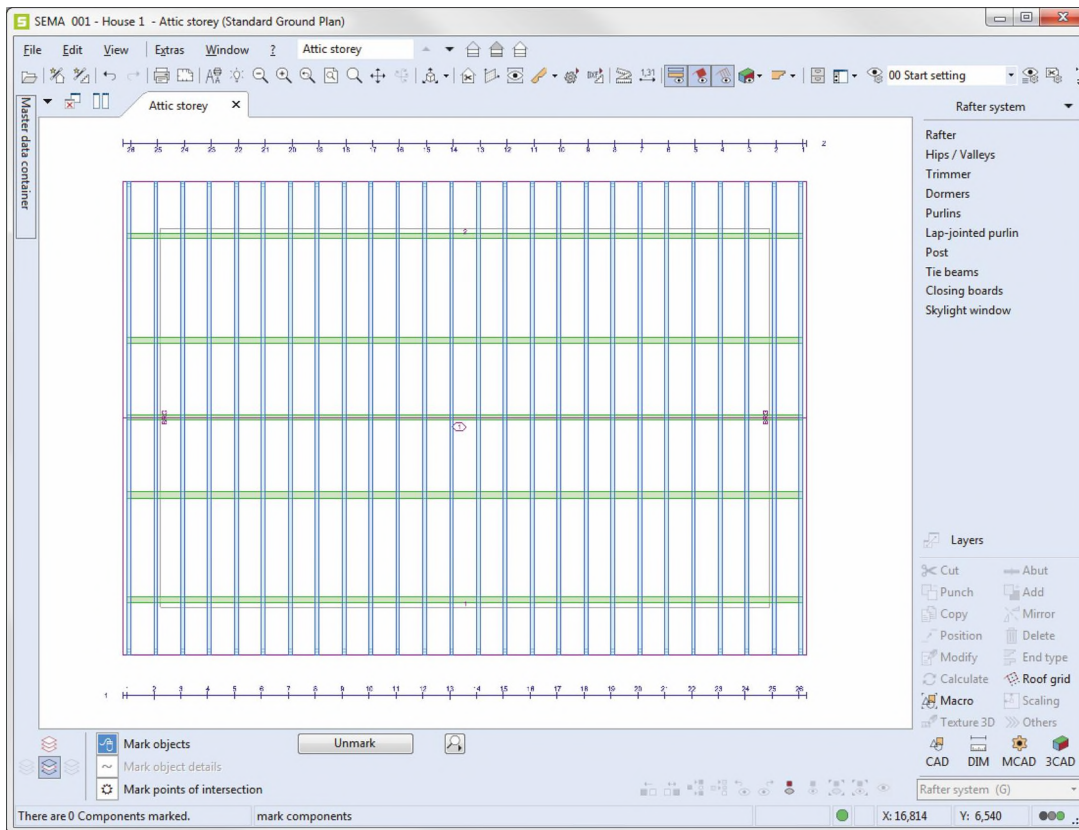


Brief Introduction

Creating a Saddle Roof

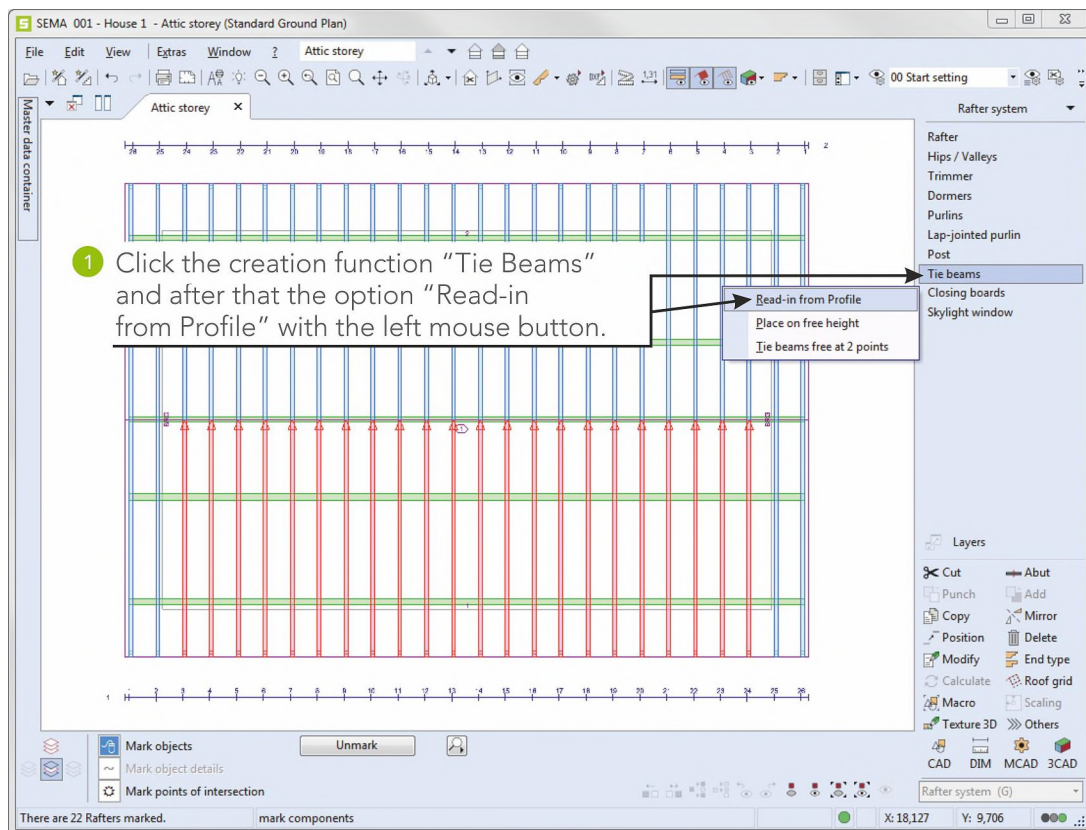
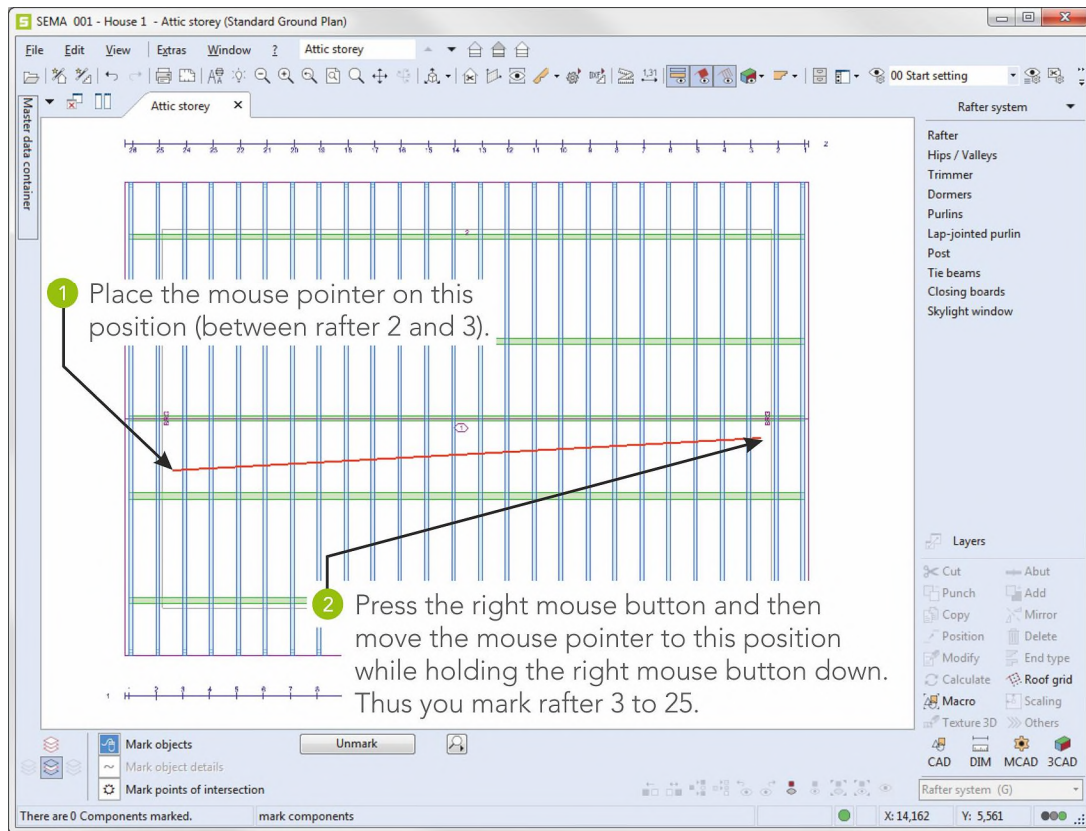


The purlins are being read-in from the profile to the rafter system.



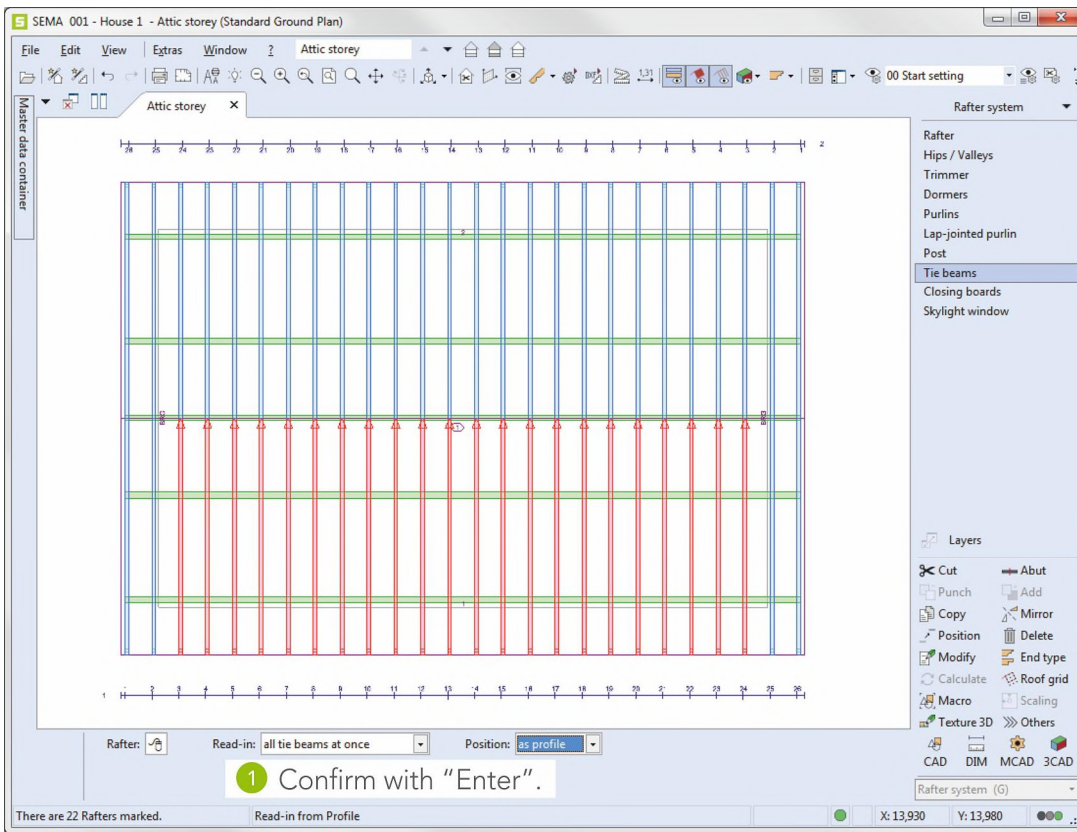
5.5 Creating Tie Beams

Read-in tie beams from the created profile to the rafter system.

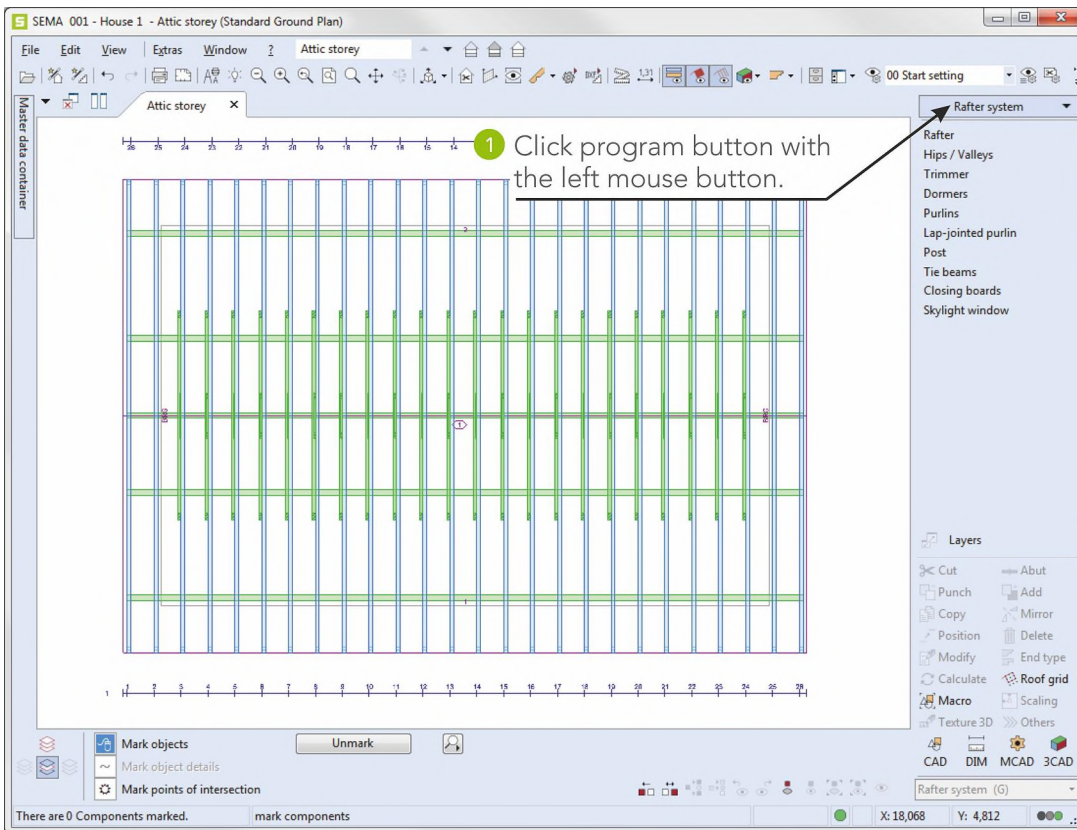


Brief Introduction

Creating a Saddle Roof

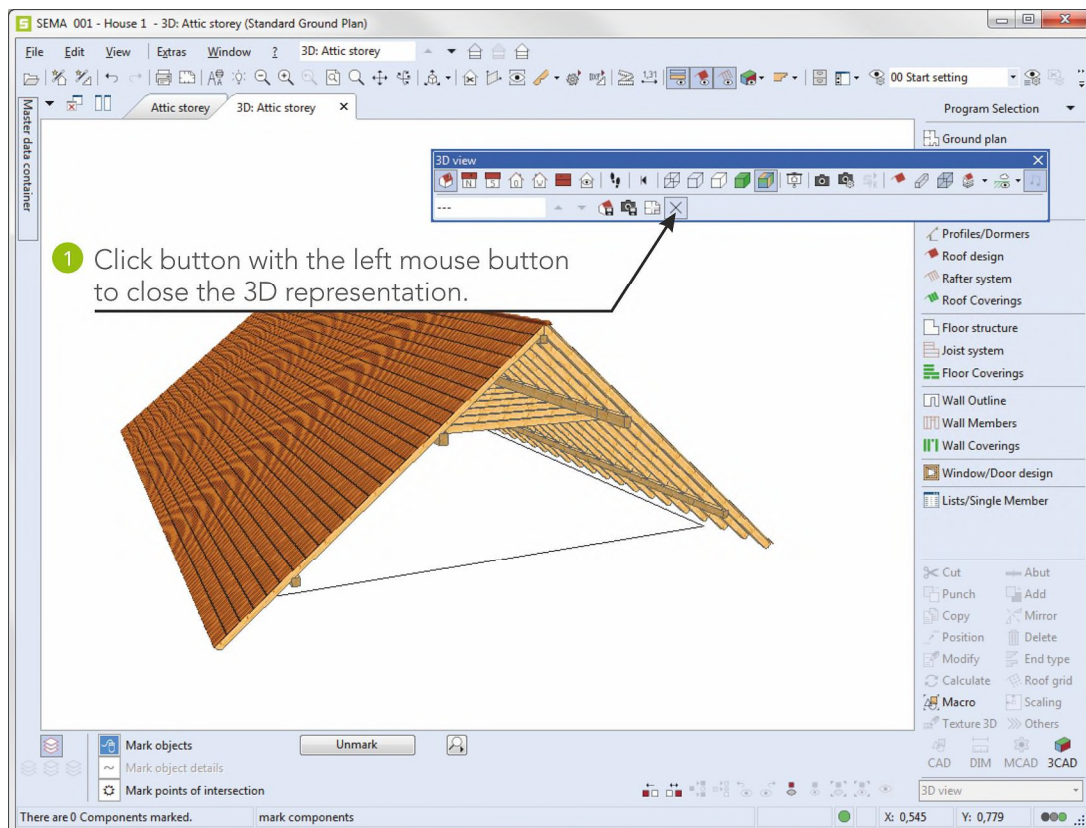
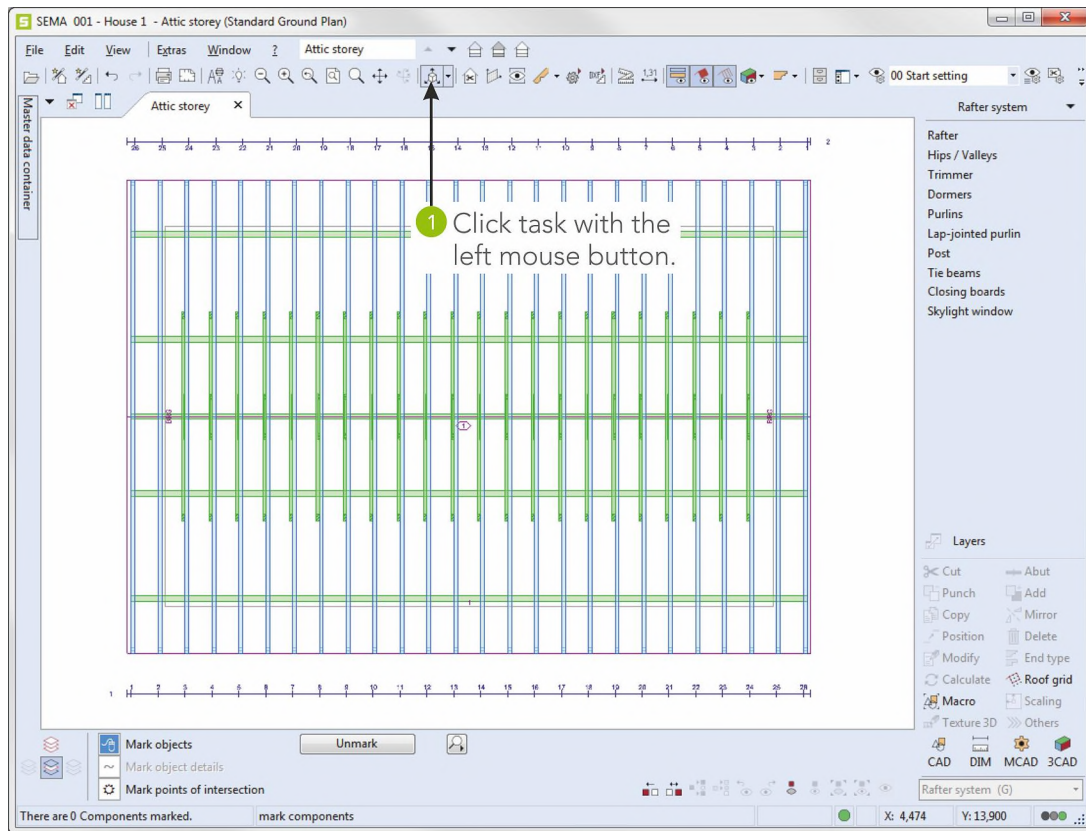


The tie-beams are being read-in from the profil and the rafter system is finished.



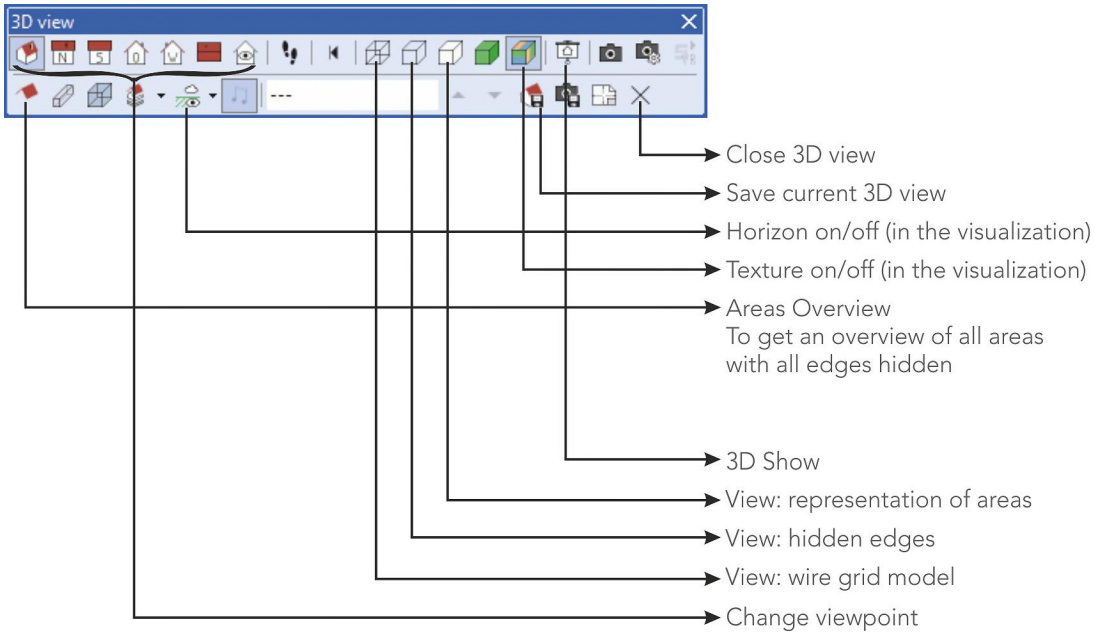
6. 3D View

The finished rafter system can now be displayed in a three-dimensional view.



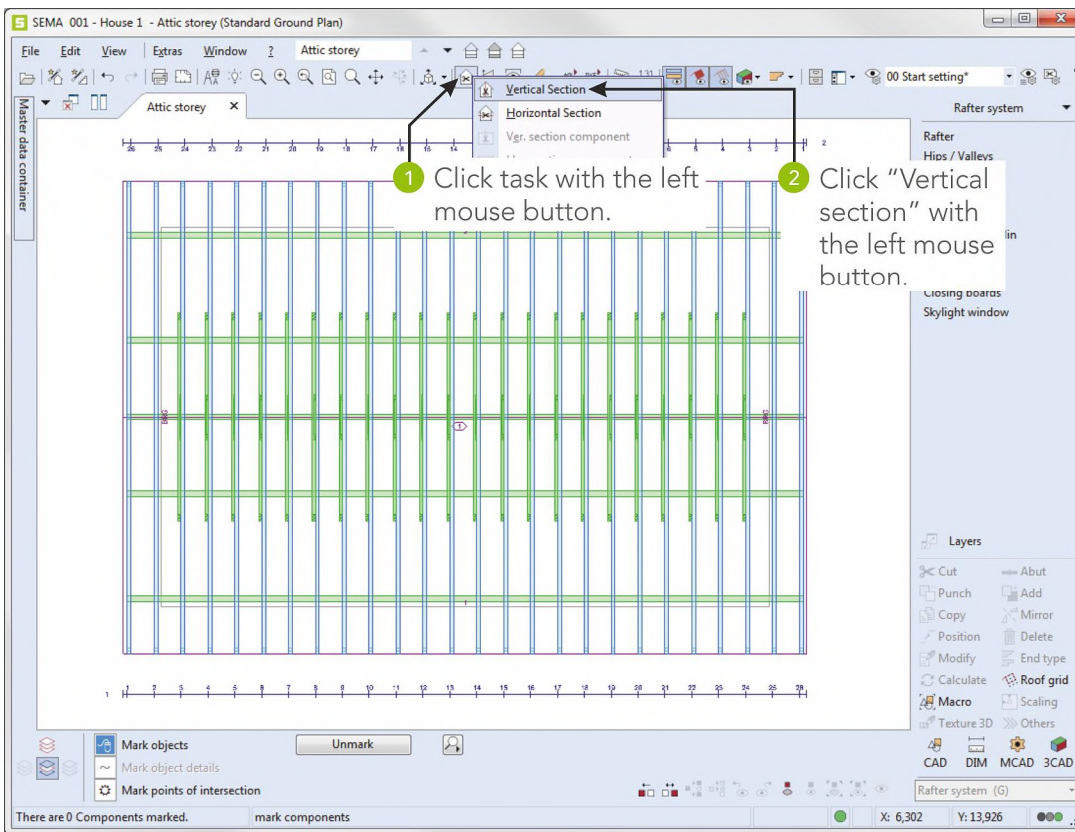
Note:

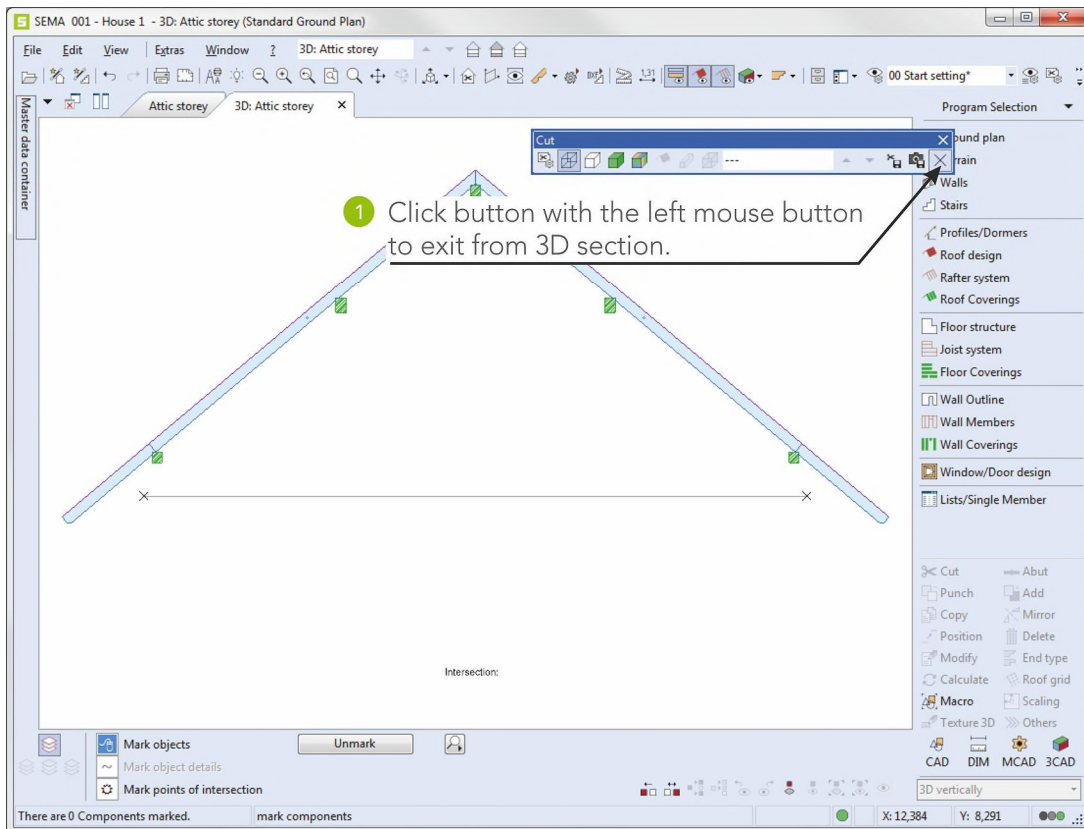
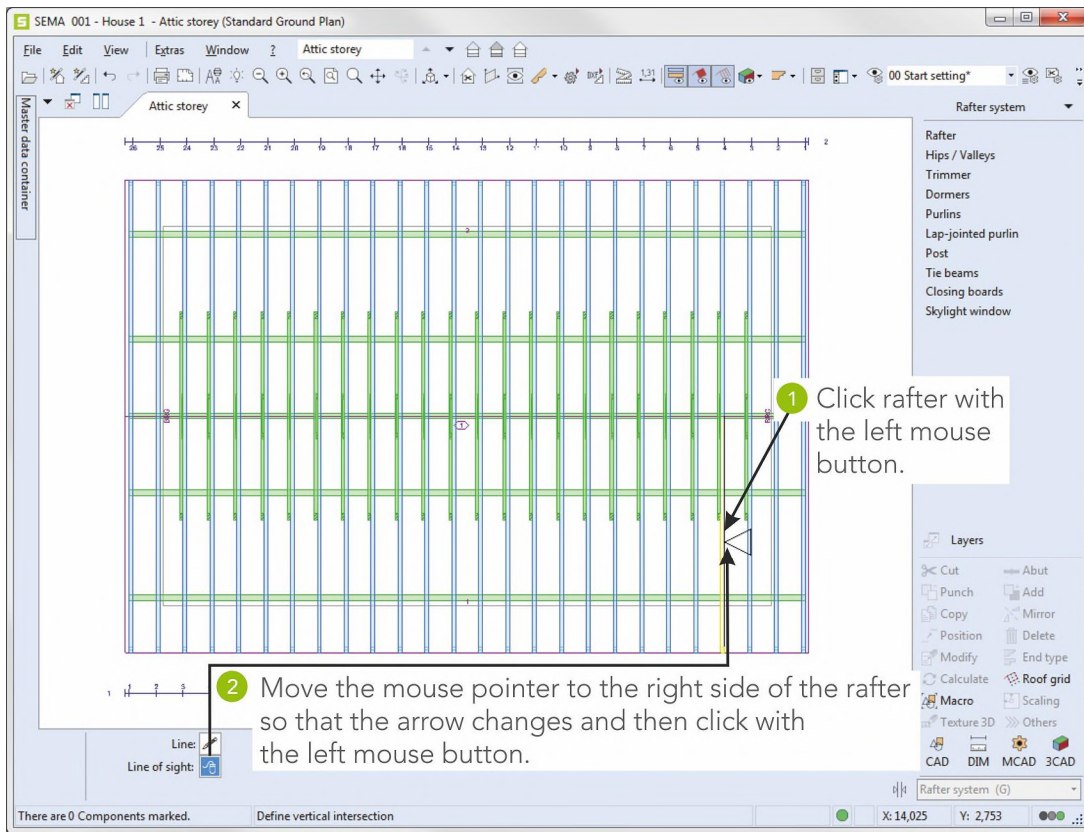
You can call up the following functions in the tool bar of the 3D view by clicking the respective symbols with the left mouse button:



6.1 3D Section - vertical

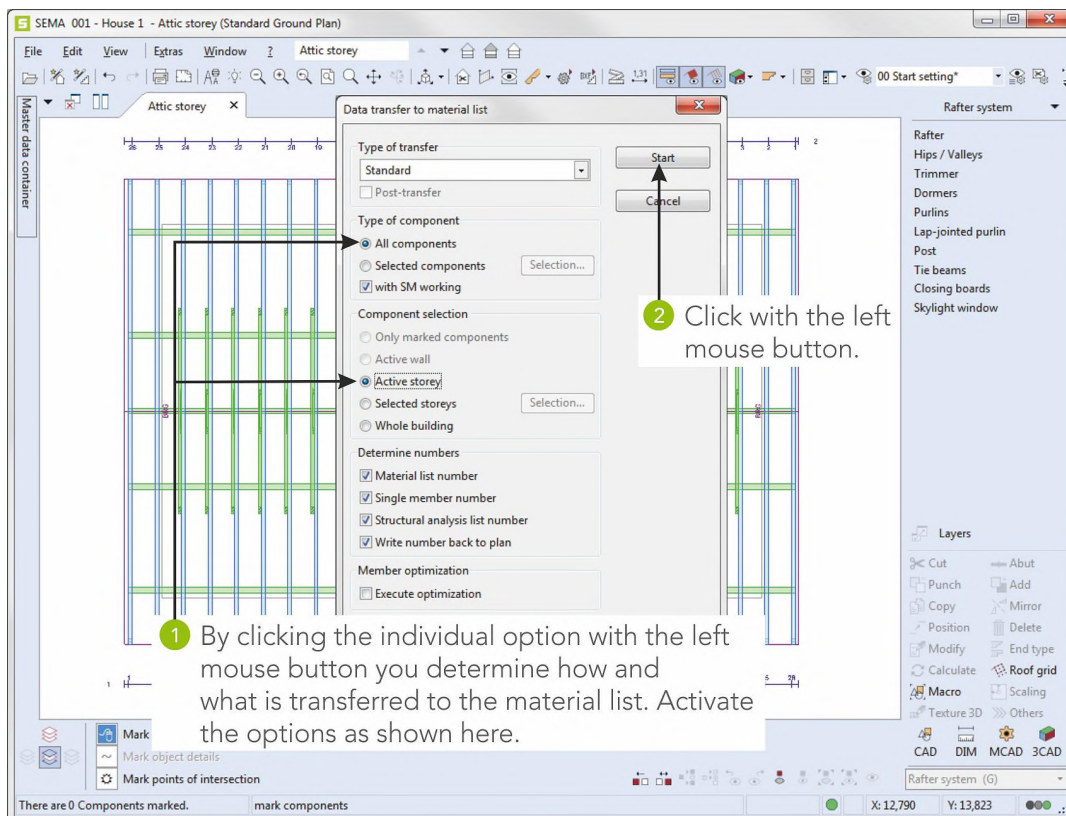
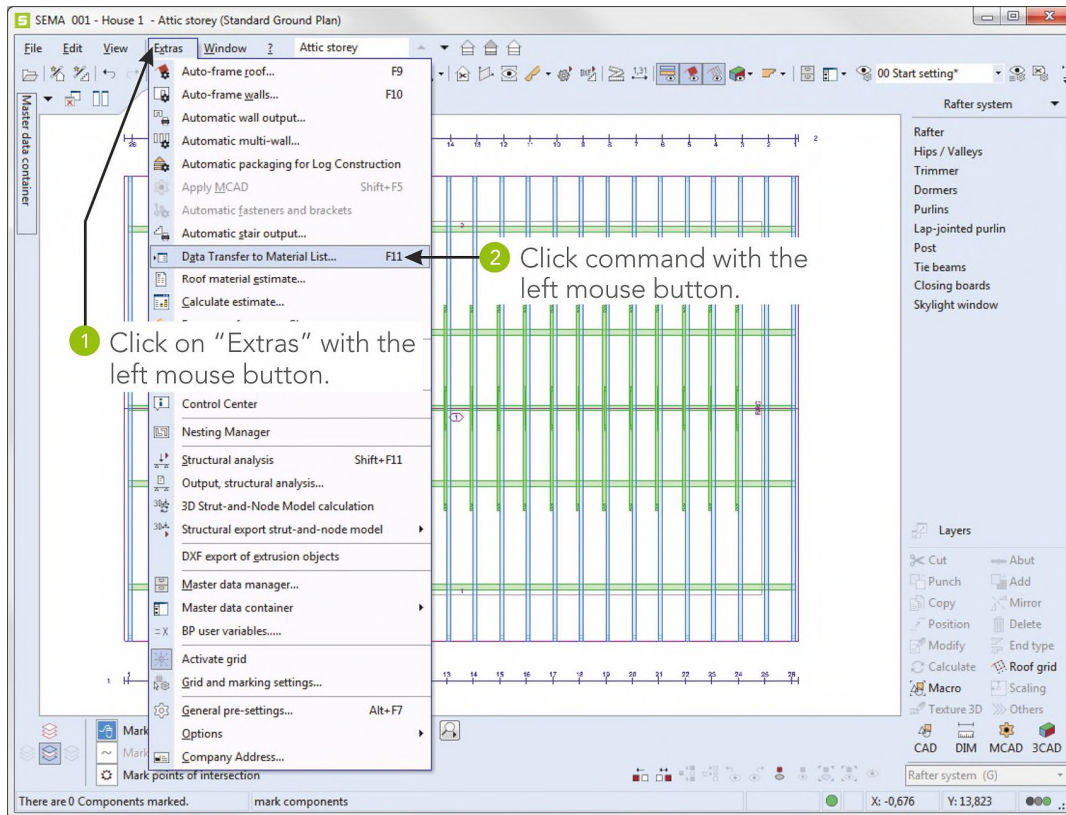
The finished rafter system can also be displayed as a vertical section.





7. Transfer to the Material List

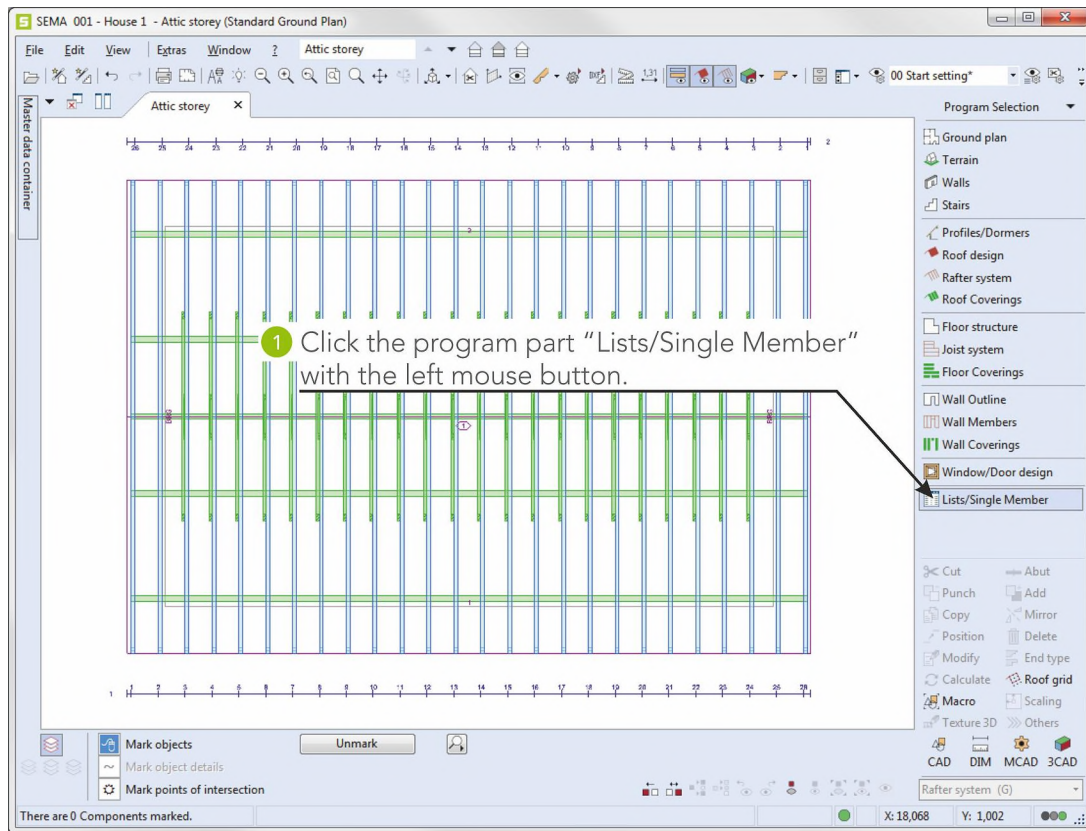
The construction program transfers all created components to the material list (timber list) with the help of which the required material can be ordered.



The transfer from the construction program to the material list is carried out.

7.1 Viewing and Printing of the Material List

Click the program part "Material List".



MLNo	ANO	PCS	Designation	Annotation	Width	Height	Length	TotalV
1	00	22	Tie beam	No:1	8,0	16,0	5,500	1,549
2	00	22	Tie beam	No:10	4,0	12,0	1,192	0,126
3	01	2	Purlin	W:1 No:1	14,0	16,0	17,770	0,796
4	01	1	Purlin	W:1 No:3	16,0	22,0	17,770	0,626
5	01	4	Rafter	W:1 No:1	10,0	16,0	8,138	0,521
6	01	22	Rafter	W:1 No:10	10,0	16,0	8,138	2,865
7	02	1	Purlin	W:2 No:2	14,0	16,0	17,770	0,398
8	02	1	Purlin	W:2 No:3	16,0	22,0	17,770	0,626
9	02	4	Rafter	W:2 No:1	10,0	16,0	8,138	0,521
10	02	22	Rafter	W:2 No:10	10,0	16,0	8,138	2,865

PCS	TotalL [m]	PlaneA [m ²]	TotalV [m ³]	TotalA [m ²]	SPlaneL [m]
101	659,250	64,04	10,893	345,53	150,238



To be able to print material lists, a printer must be installed on your Windows system!

Click with the left mouse button.

Confirm with the left mouse button.

PCS	TotalL [m]	PlaneA [m ²]	TotalV [m ³]	TotalA [m ²]	SPlaneL [m]
101	659,250	64,04	10,893	345,53	150,238

Selected lines: 10 Statusbar

The material list is being printed.

Click here with the left mouse button to close the material list.

MLNo	ANO	PCS	Designation	Annotation	Width	Height	Length	TotalV
00	22	Tie beam	No:1	8,0	16,0	5,500	1,549	
2 00	22	Tie beam	No:10					
3 01	2	Purlin	W:1 No:1					
4 01	1	Purlin	W:1 No:3					
5 01	4	Rafter	W:1 No:1					
6 01	22	Rafter	W:1 No:10	10,0	16,0	8,138	2,865	
7 02	1	Purlin	W:2 No:2	14,0	16,0	17,770	0,398	
8 02	1	Purlin	W:2 No:3	16,0	22,0	17,770	0,626	
9 02	4	Rafter	W:2 No:1	10,0	16,0	8,138	0,521	
10 02	22	Rafter	W:2 No:10	10,0	16,0	8,138	2,865	

PCS	TotalL [m]	PlaneA [m ²]	TotalV [m ³]	TotalA [m ²]	SPlaneL [m]
101	659,250	64,04	10,893	345,53	150,238

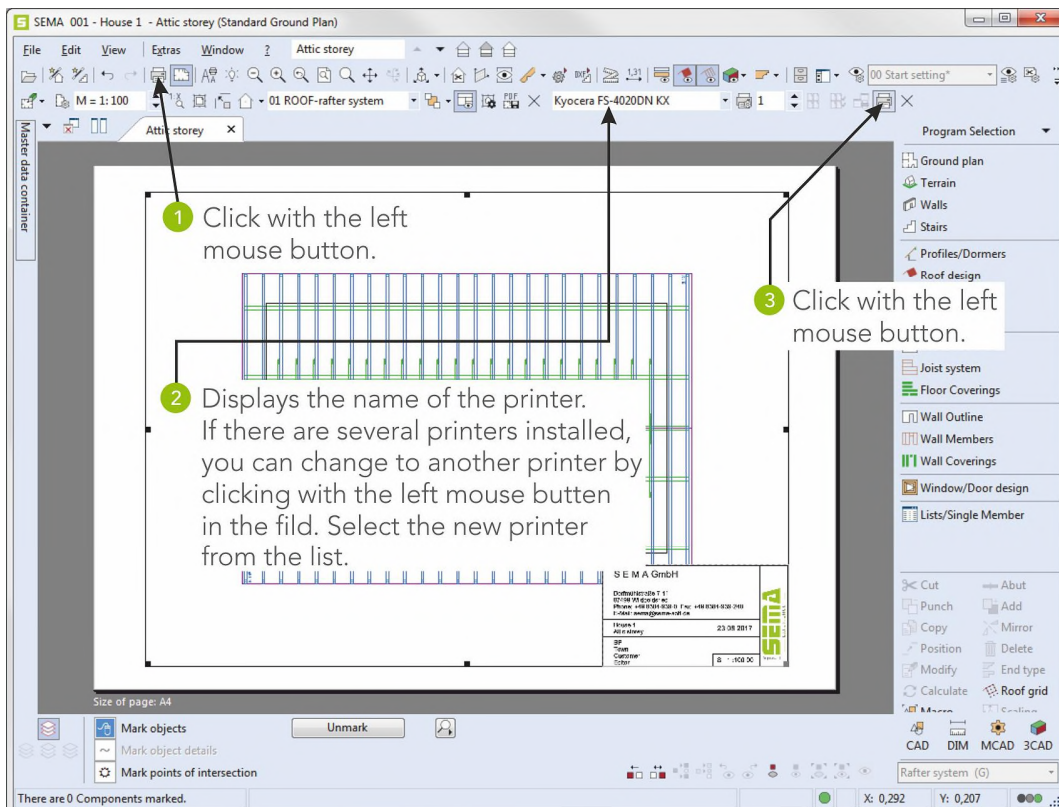
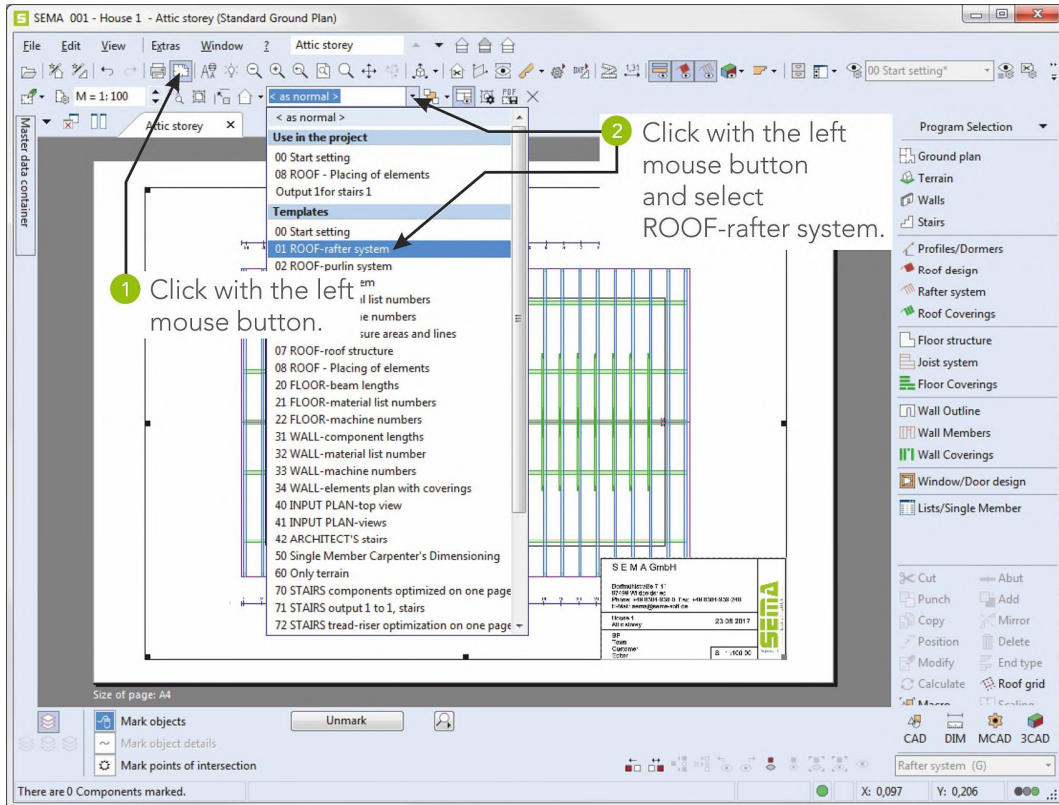
Selected lines: 10 Statusbar

8. Joining Plans

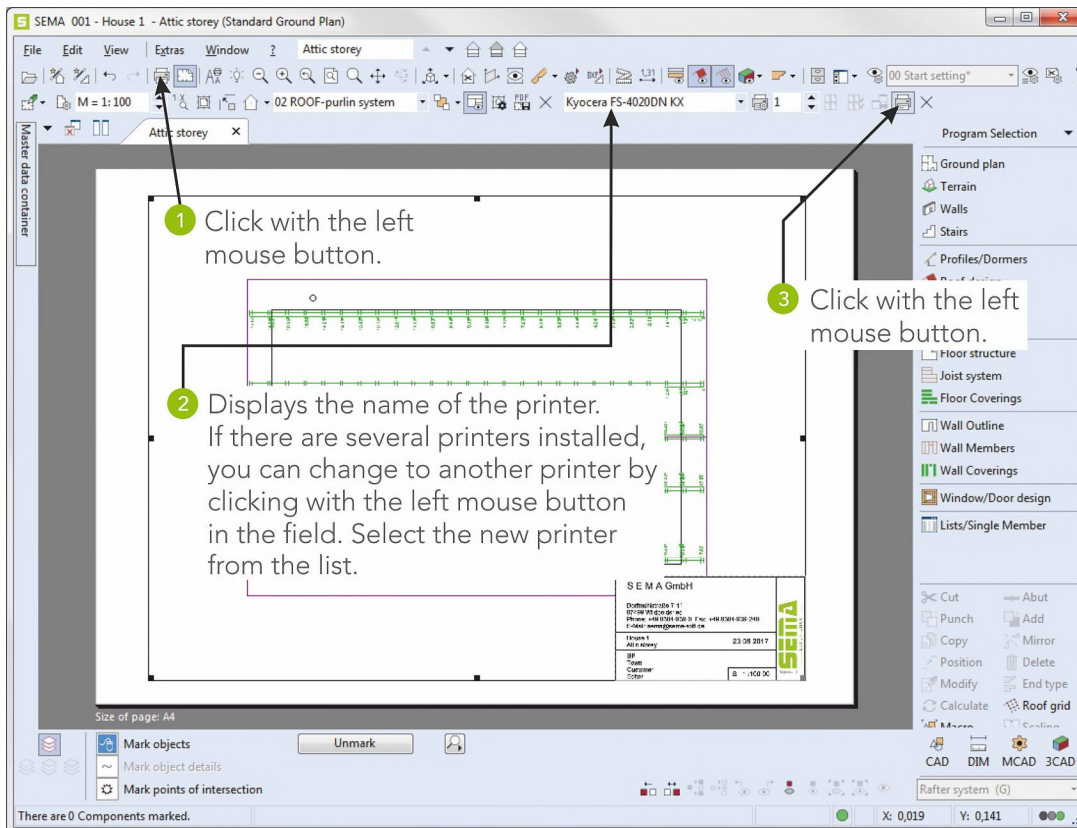
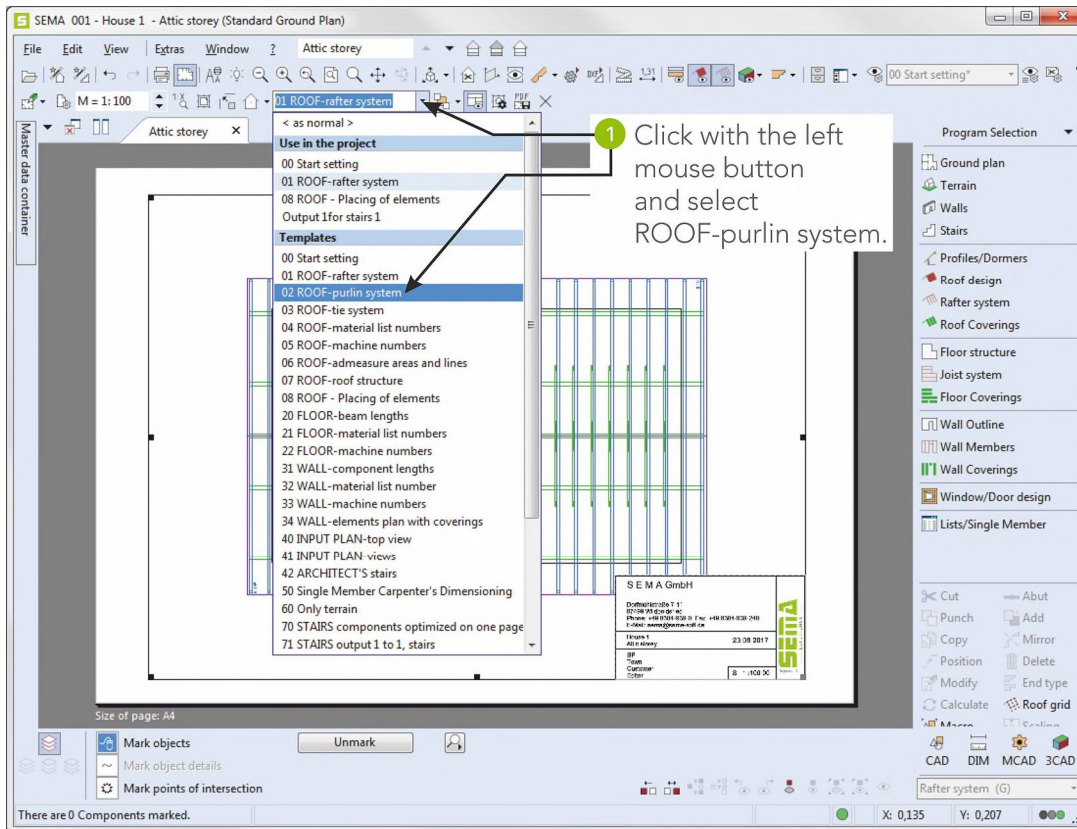



If you want to create and print joining plans, a printer/ plotter must be installed on your Windows system. If this is not the case, please skip this chapter!

8.1 Rafter Length

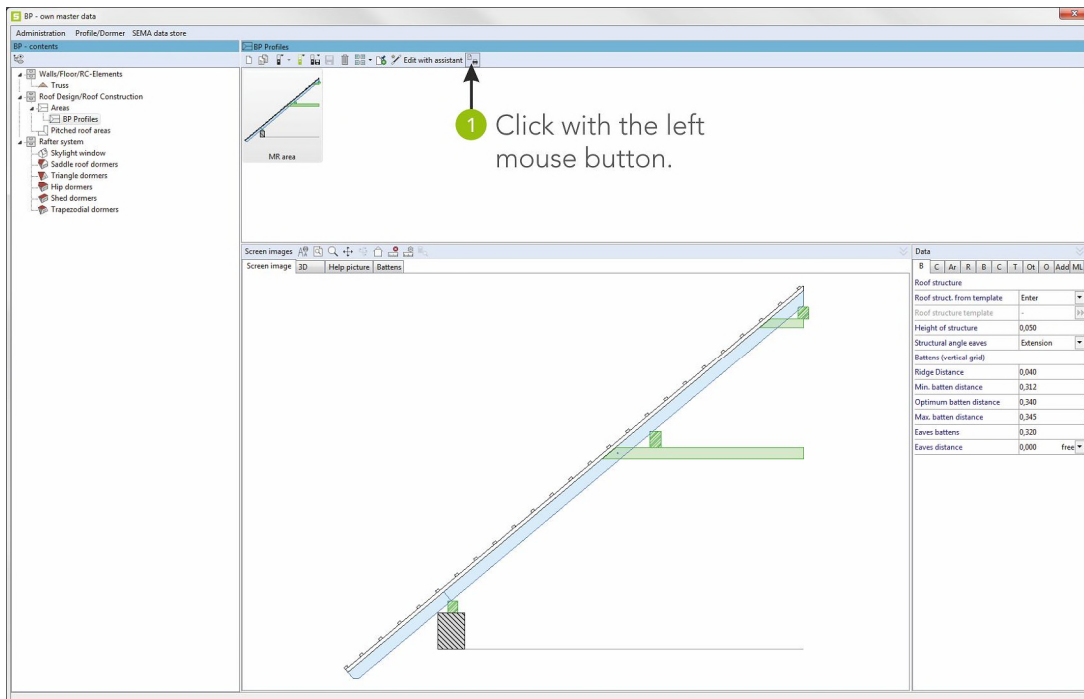
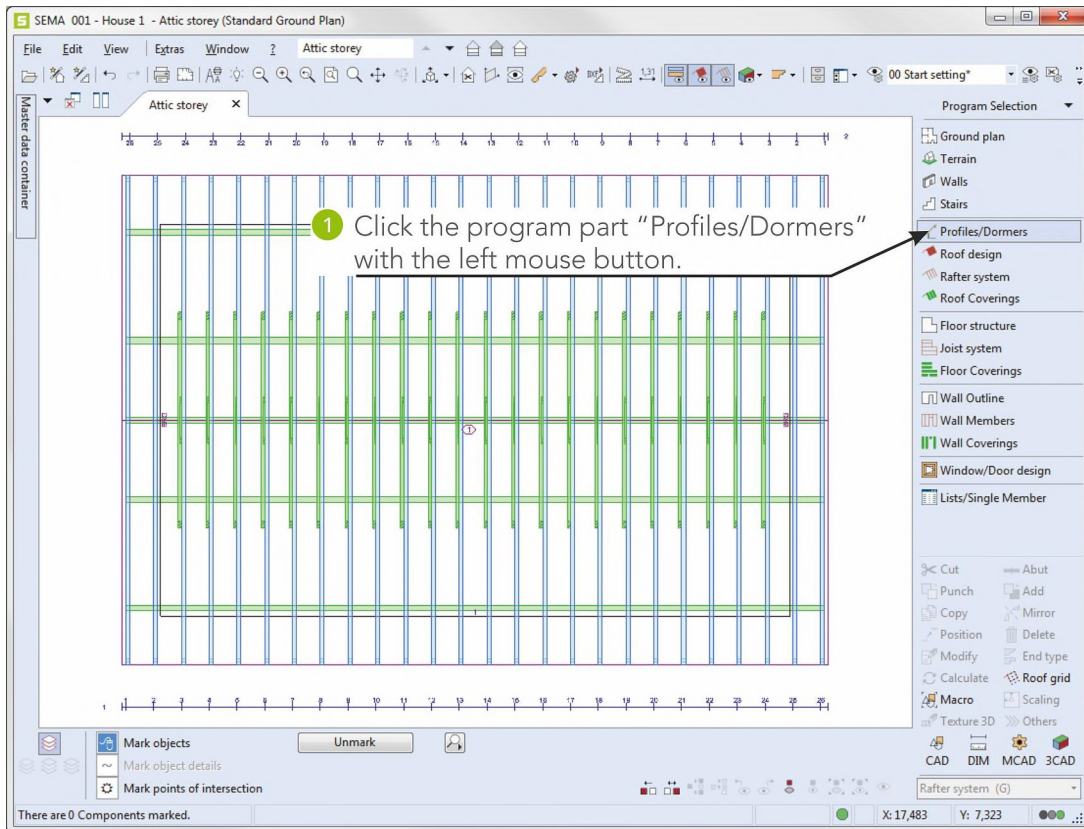


8.2 Purlin System



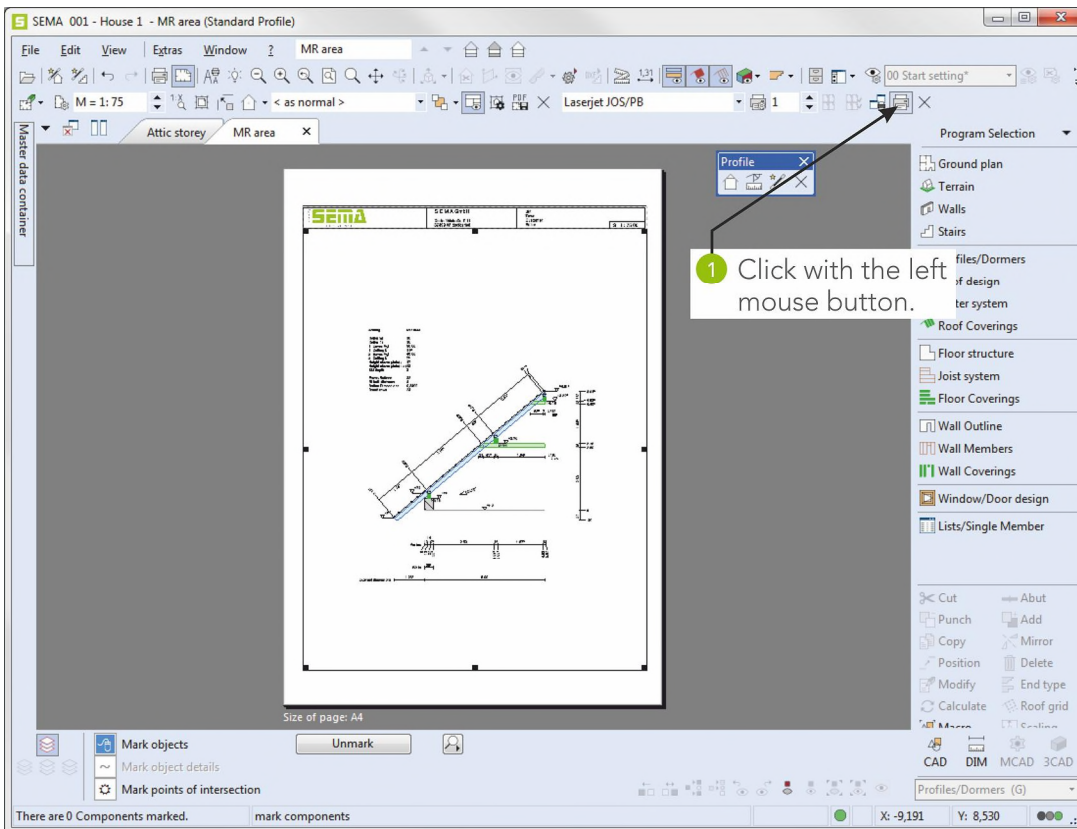
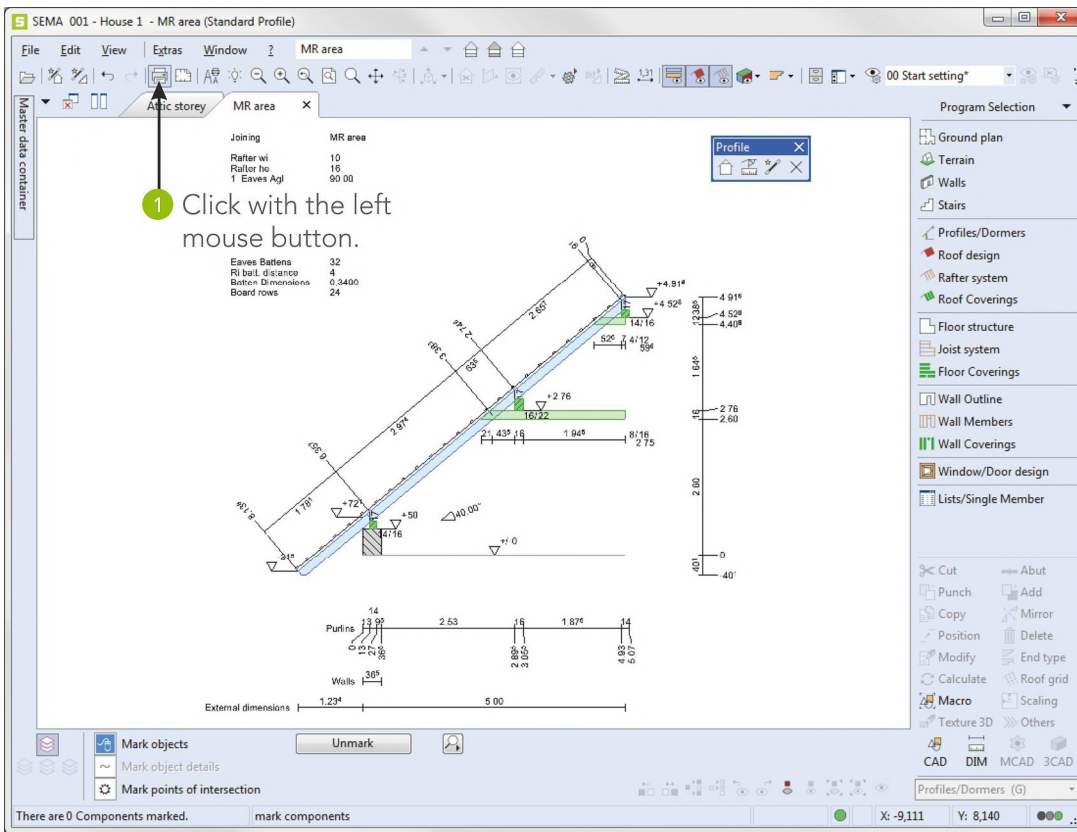
After you have printed the purlin system, close the layout view via the button  in the tool bar.


8.3 Profile



Brief Introduction

Creating a Saddle Roof



After you have printed the profile, close the layout view and then the profile drawing with  in the tool bar.

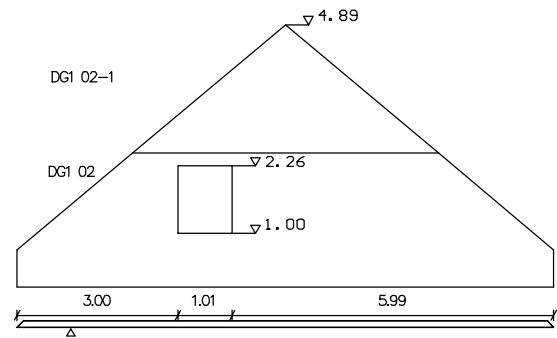
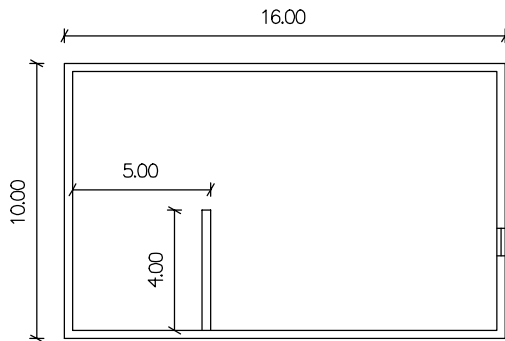
Creation of Walls in Top View with T-Wall and Intersection with the Roof



This example for the creation of walls is based on the saddle roof created before!
In case the saddle roof does not yet exist, please return to the beginning to enter the saddle roof.

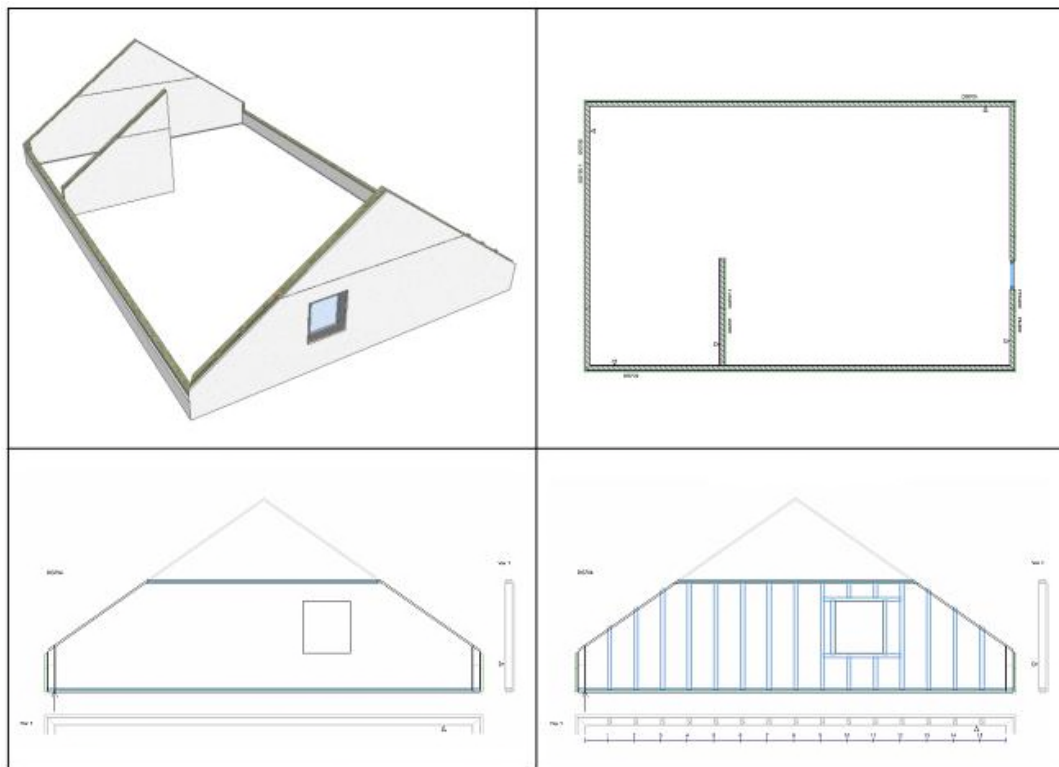
Task:

To enter walls on the rectangular ground plan of 10x16 m according to the following details:



Result:

In the end, you will have created a 3D image, a wall shape in top view, a wall view and a wall view with timber members!

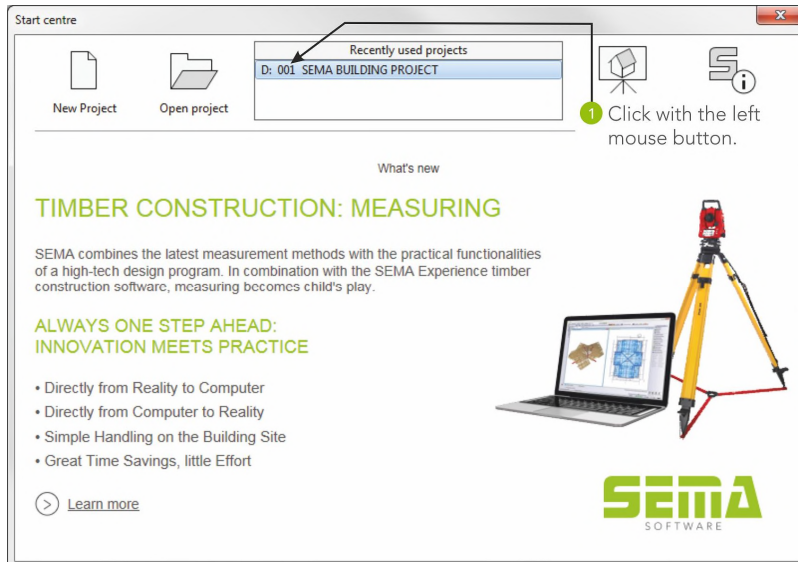


1. Opening an Existing Building Project



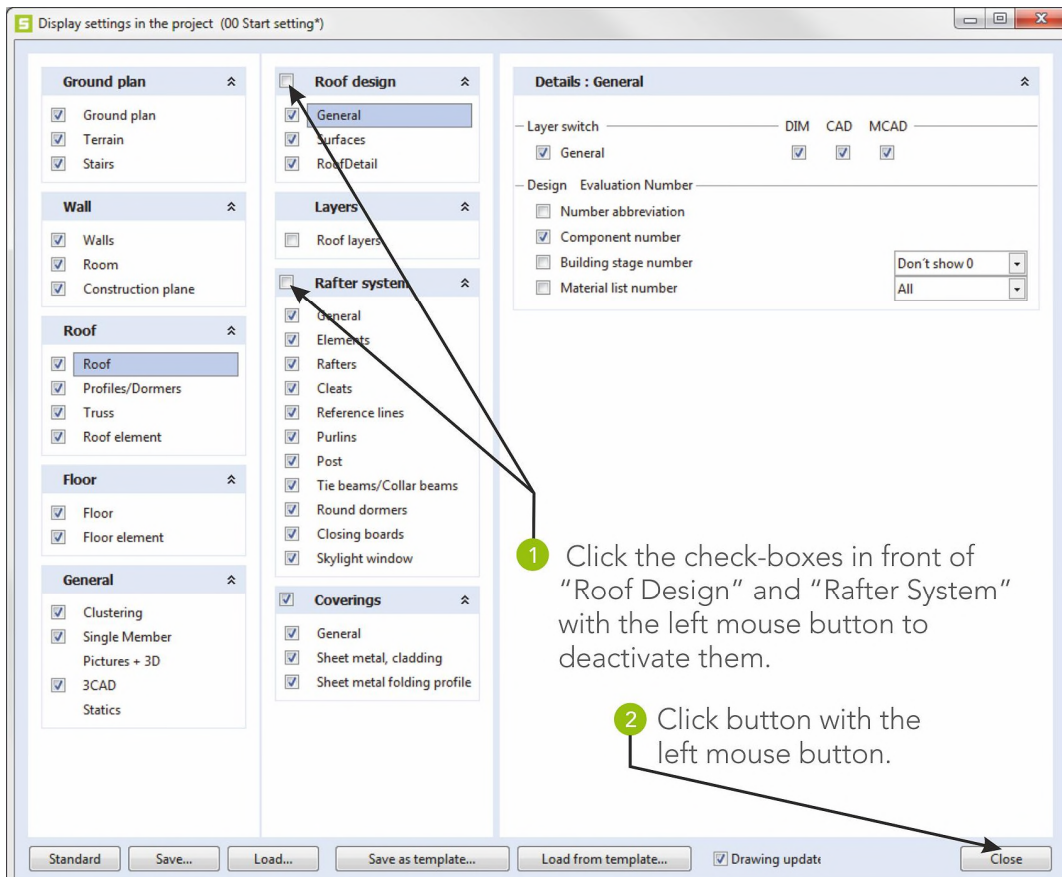
In case you have **not** closed the SEMA program after the saddle roof, you can immediately continue with point 2!

If you have closed the SEMA program, the building project created under saddle roof must be opened again!



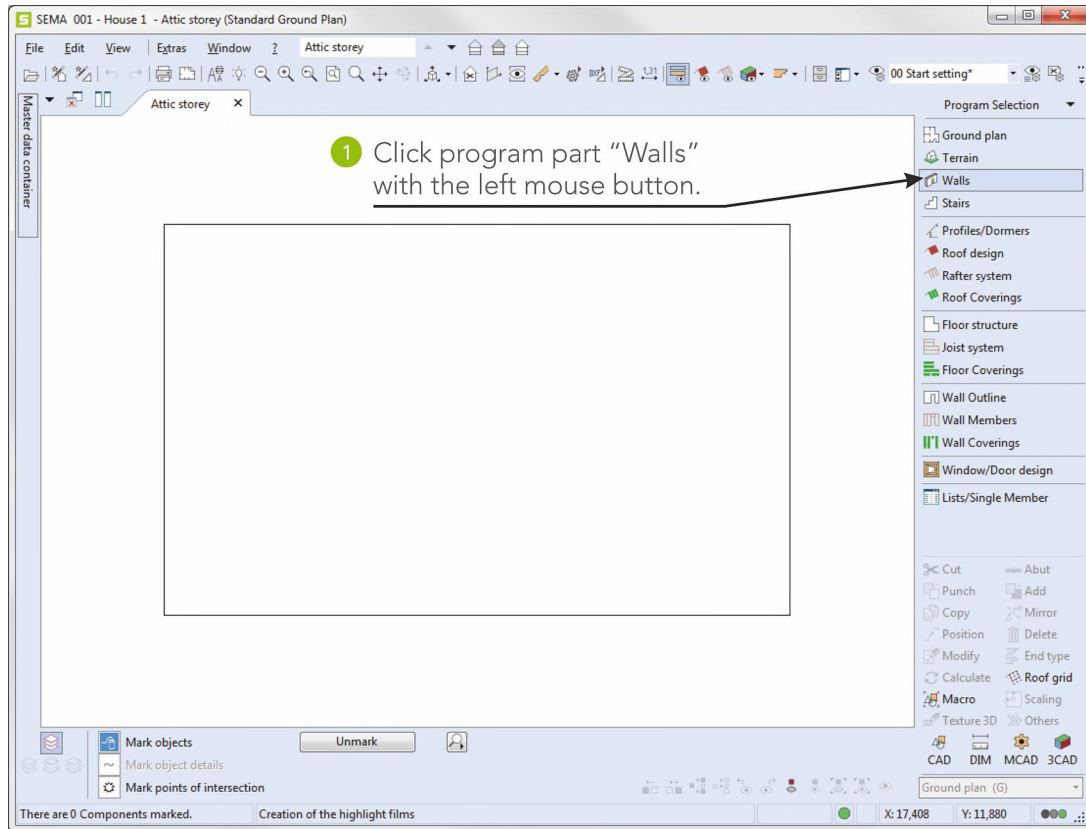
2. Hiding the Rafter System and the Roof Design

The roof design and the rafter system are hidden to obtain a letter overview. Open the “Display Settings” menu via the function key **(F7)**.

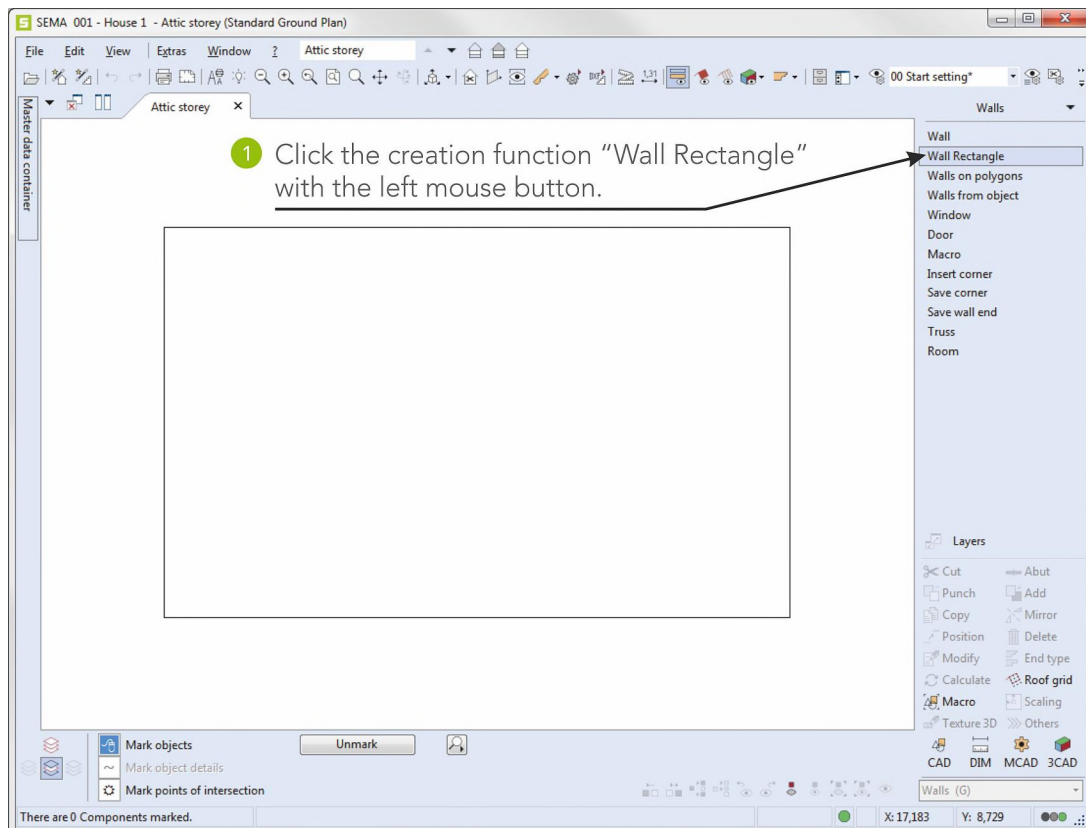


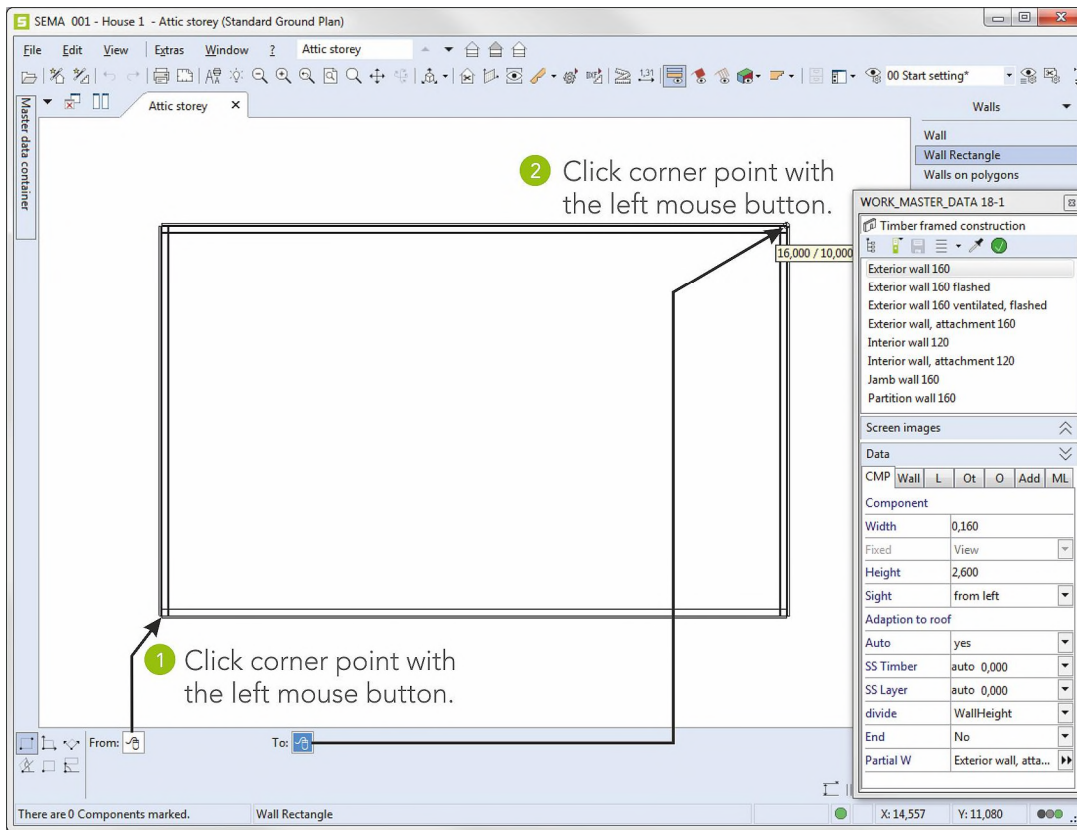
3. Creating Walls in Top View

Creation of walls on the ground plan created before. Click the program part "Walls".



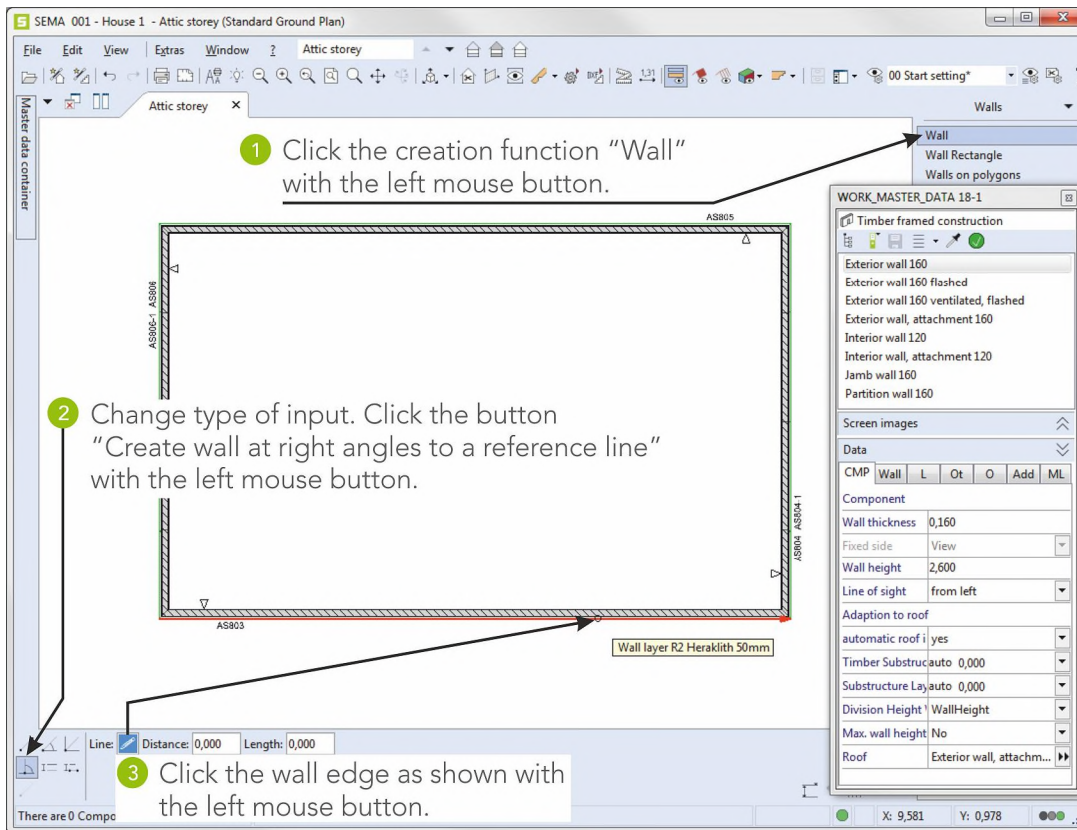
3.1 Creating a Wall Shape

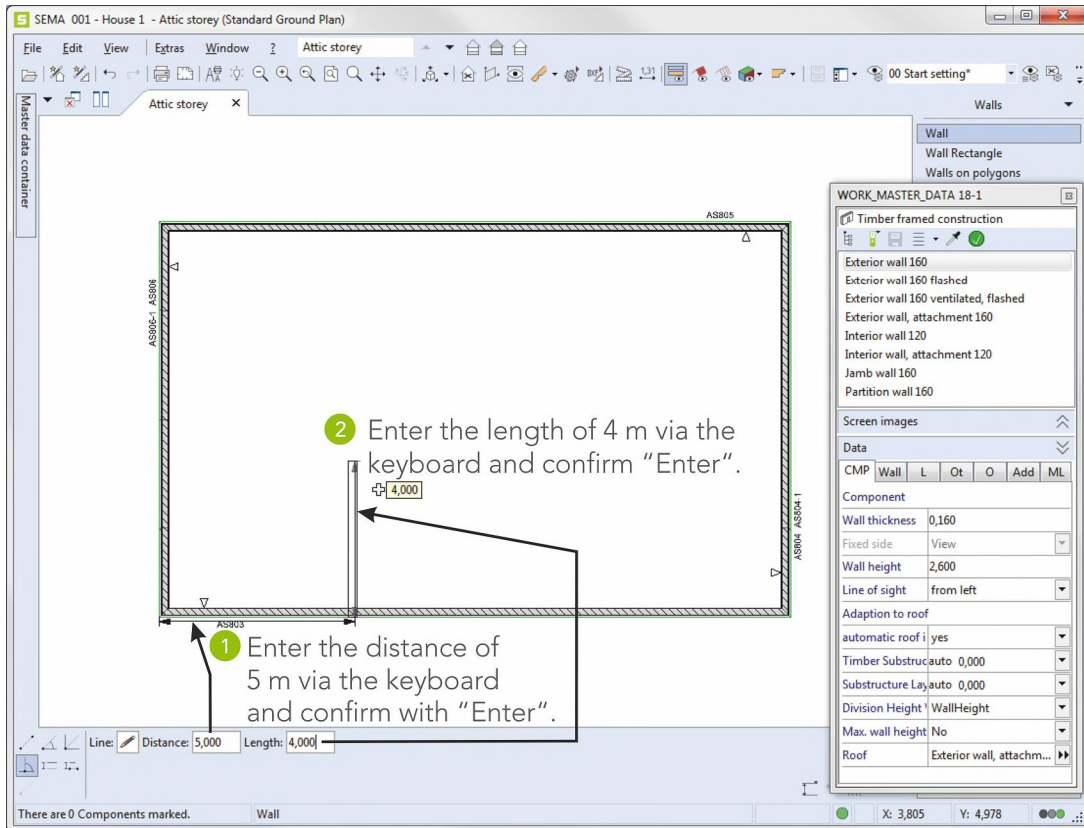




The walls are finished.

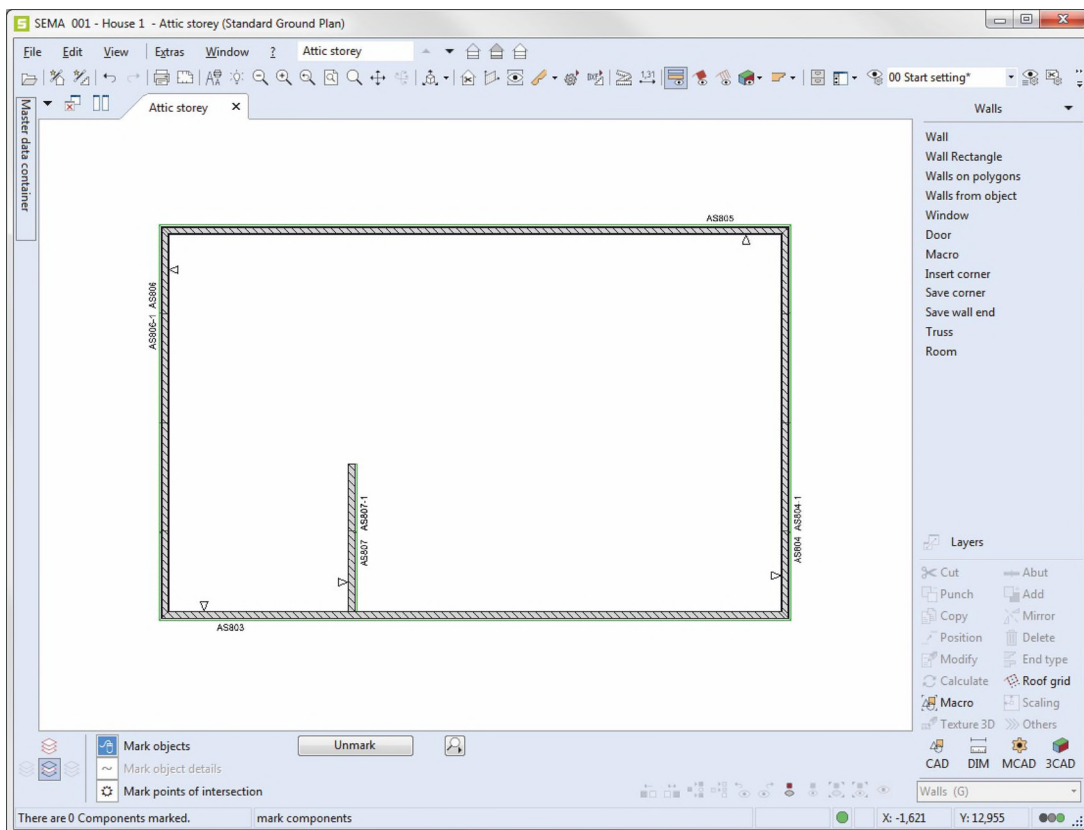
3.2 Creating a T-Wall





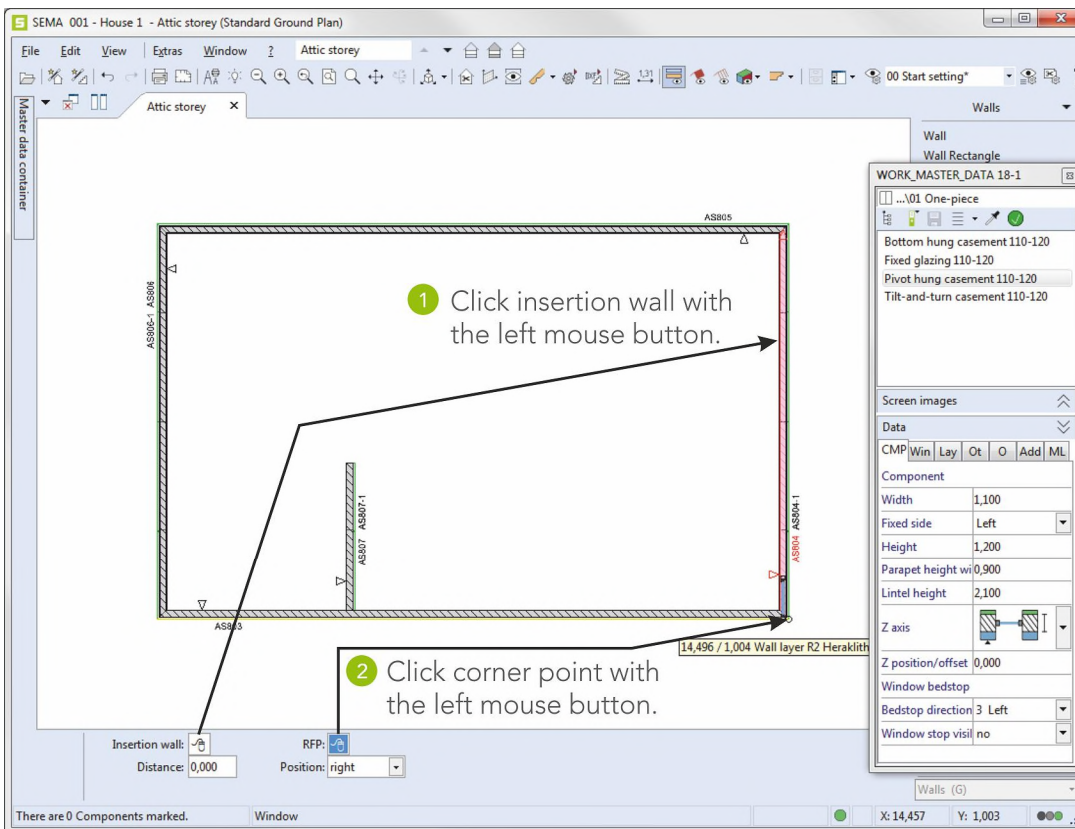
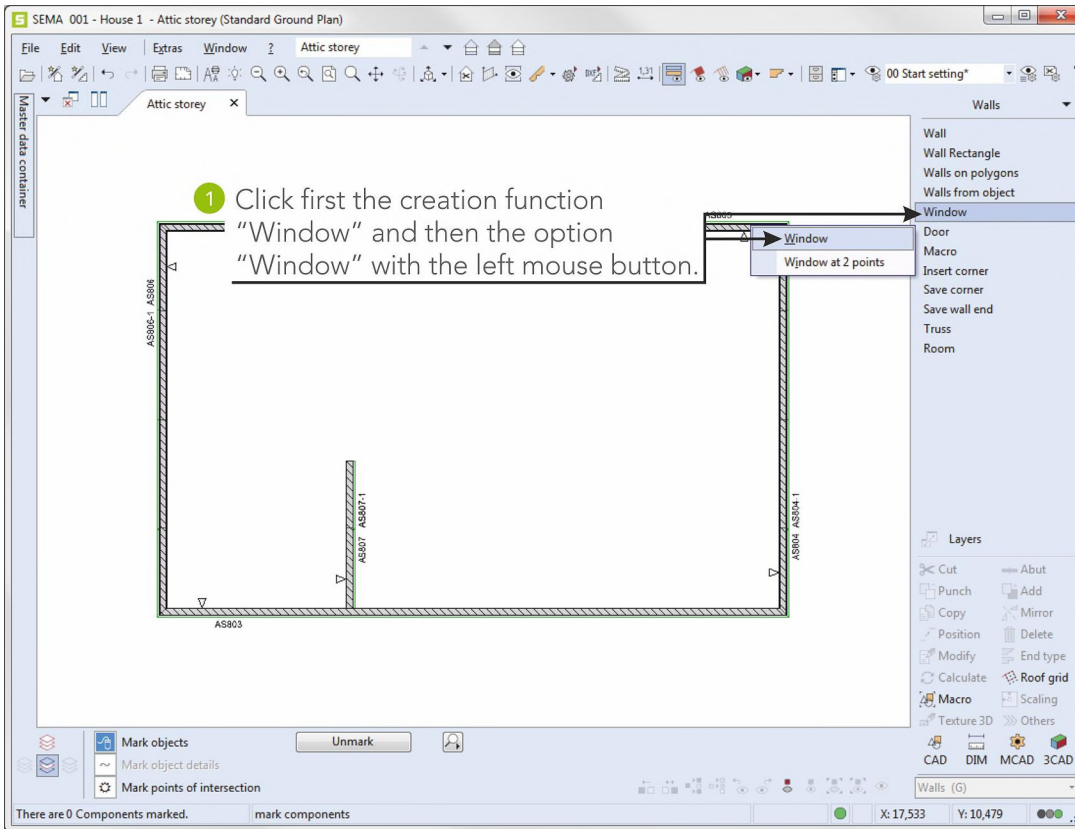
Press Esc (**ESC**) to end the input.

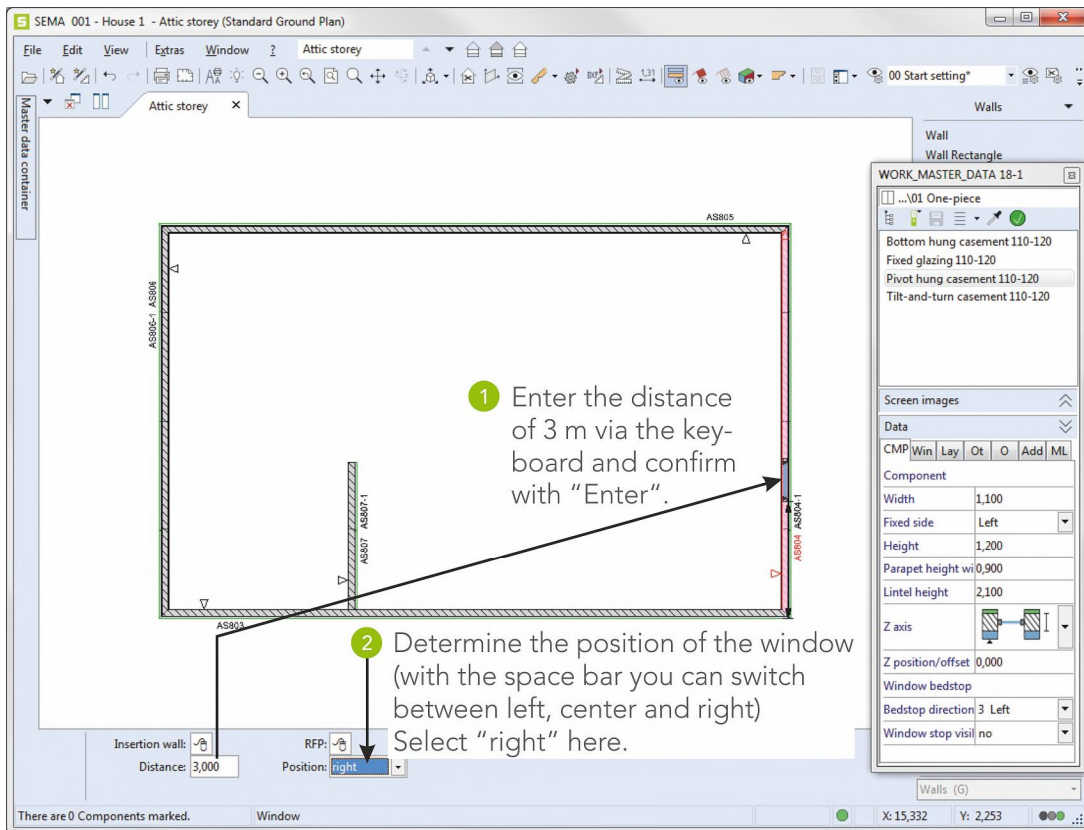
The T-wall is finished.



4. Inserting a Window

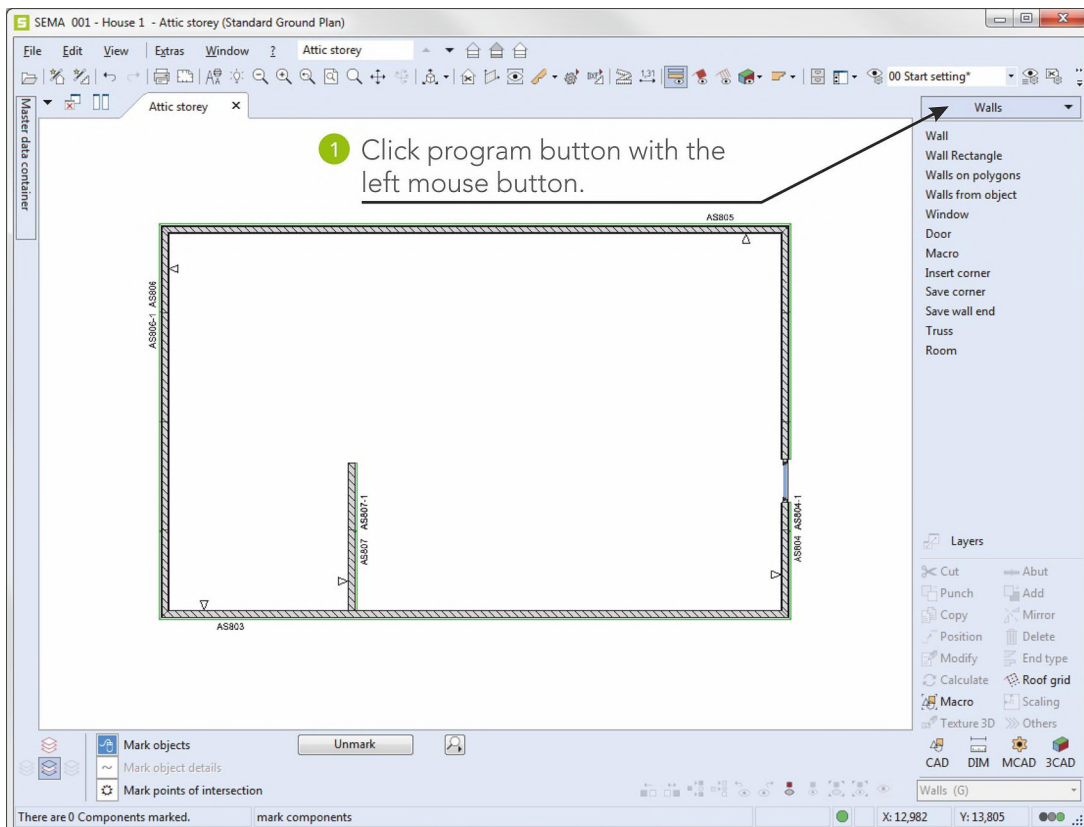
How to insert a window in the walls created before.





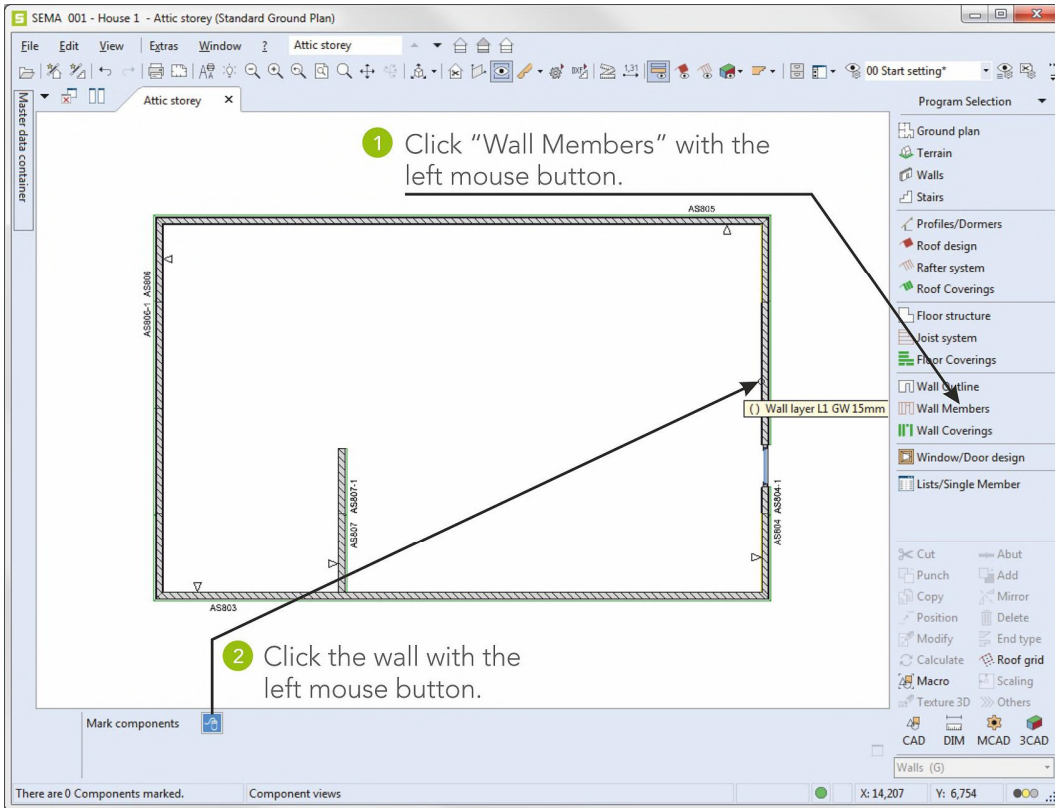
End the function with Esc (**ESC**).

Now, a window has been inserted.

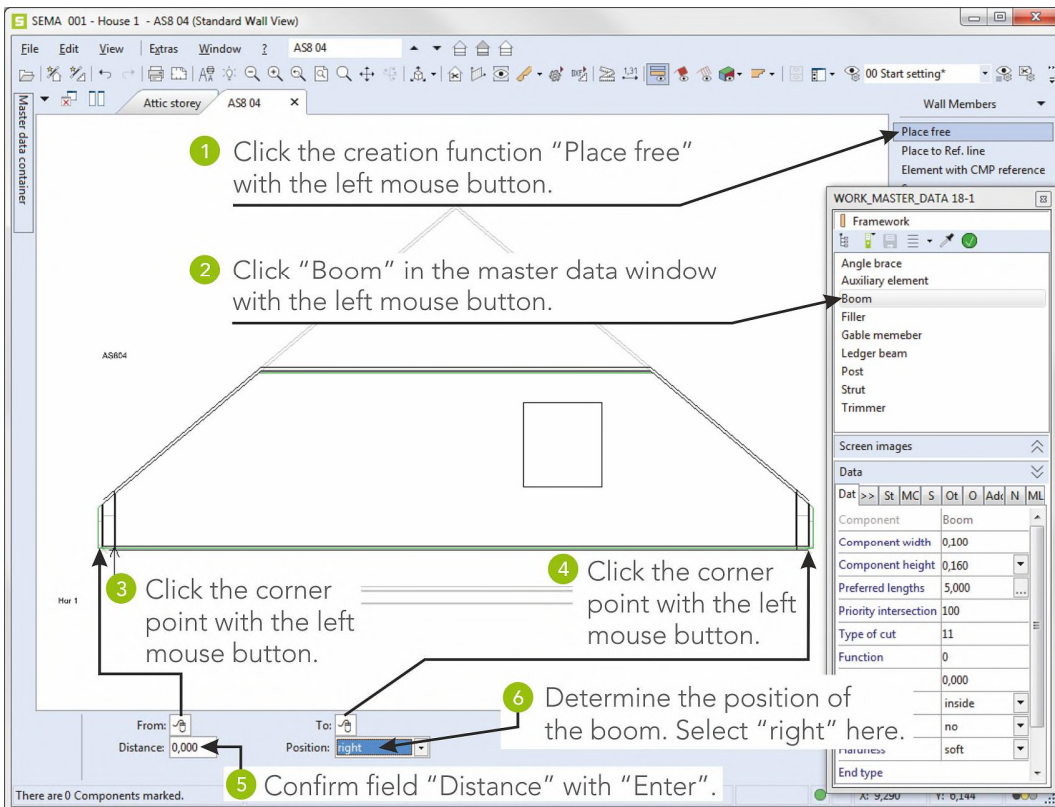


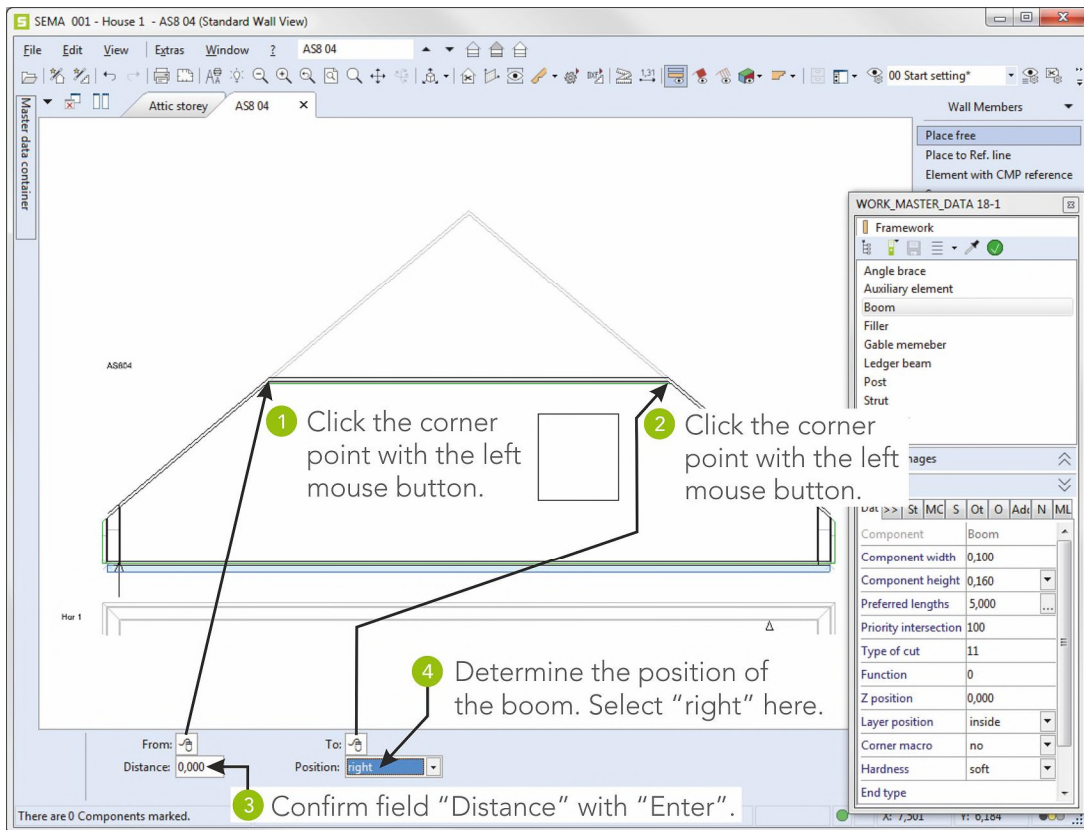
5. Creating Timber Members

Here timber members and trimmers (windows) are inserted in an existing wall. Select the program part "Wall Members" and display the wall in front view.



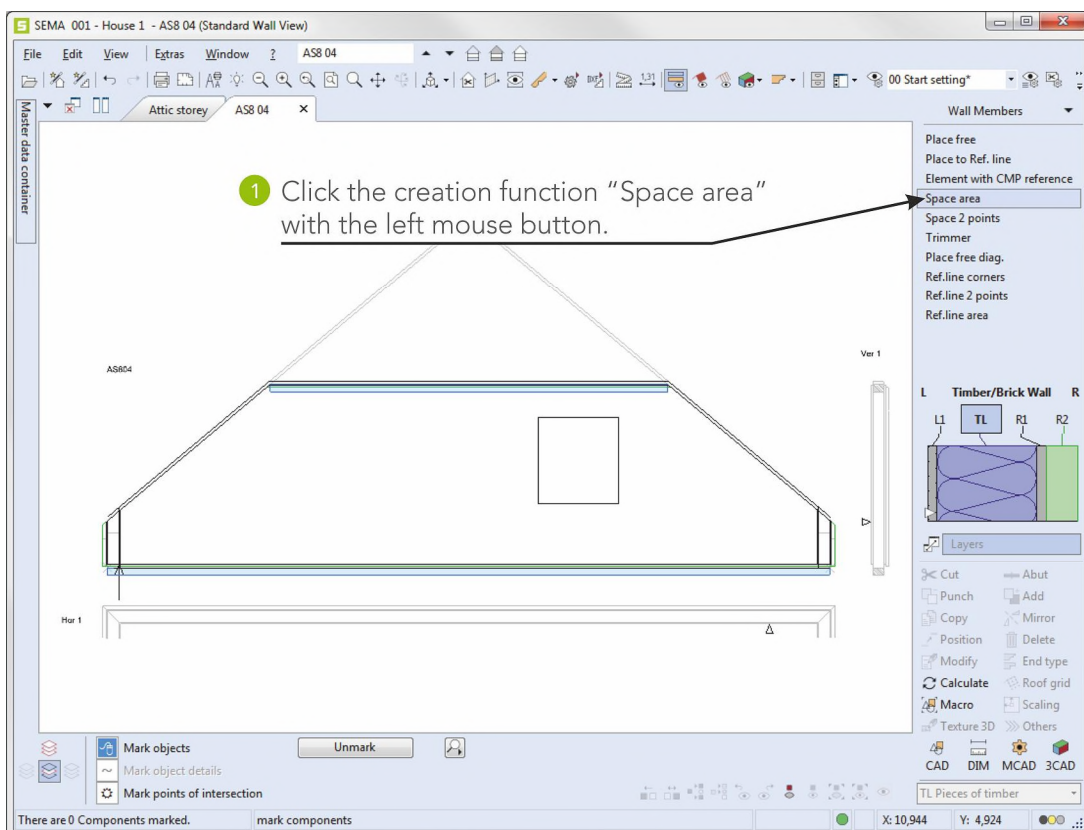
5.1 Creating a Bottom Boom Timber and Top Boom Timber

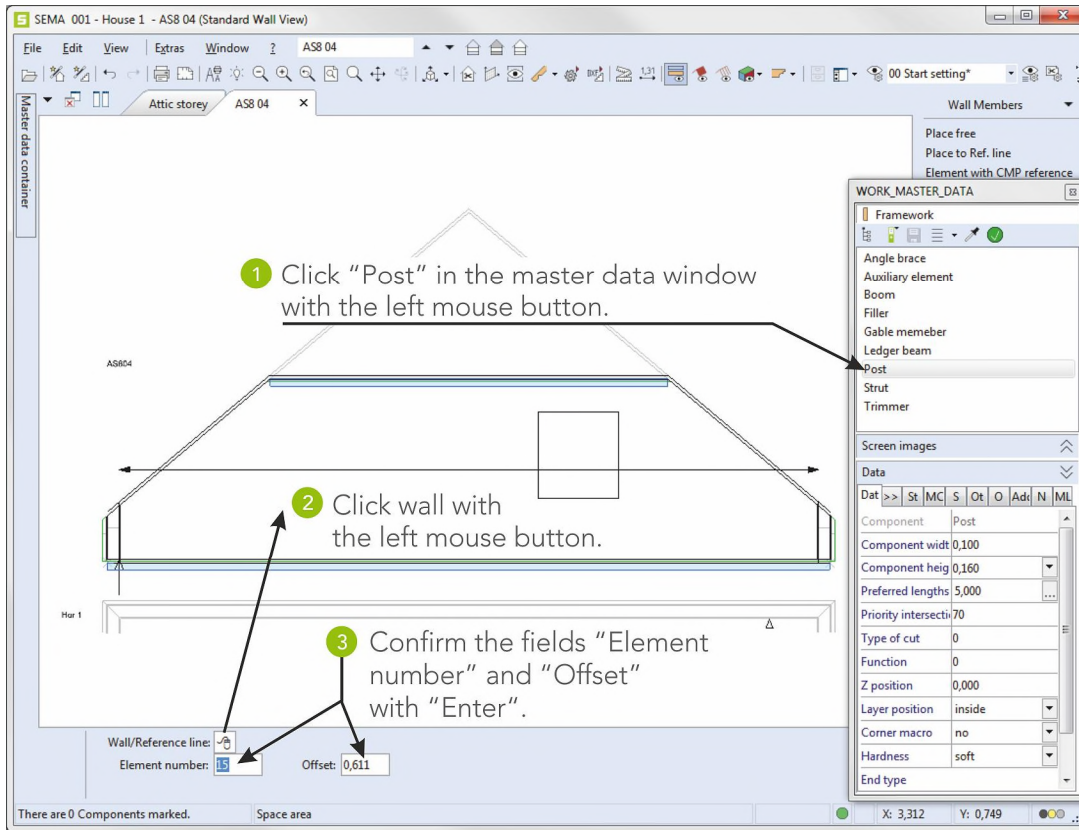




Once you are finished, end task with Esc (**ESC**).

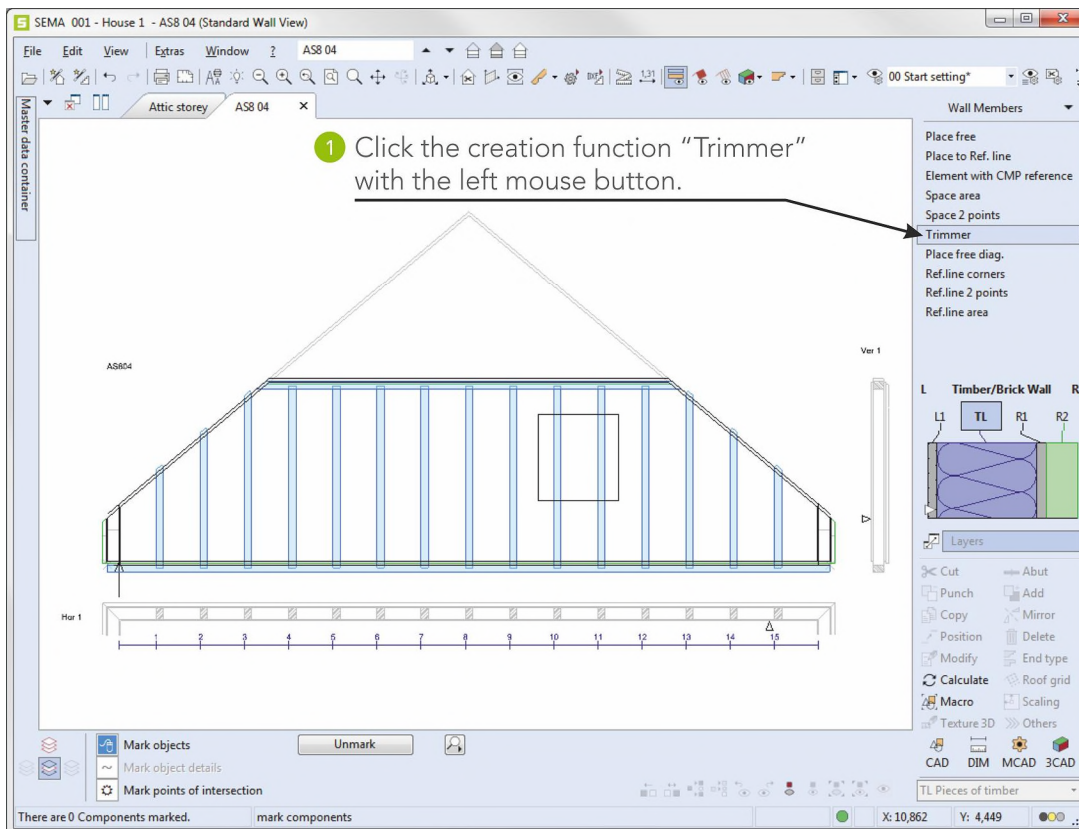
5.2 Variable Spacing of Posts

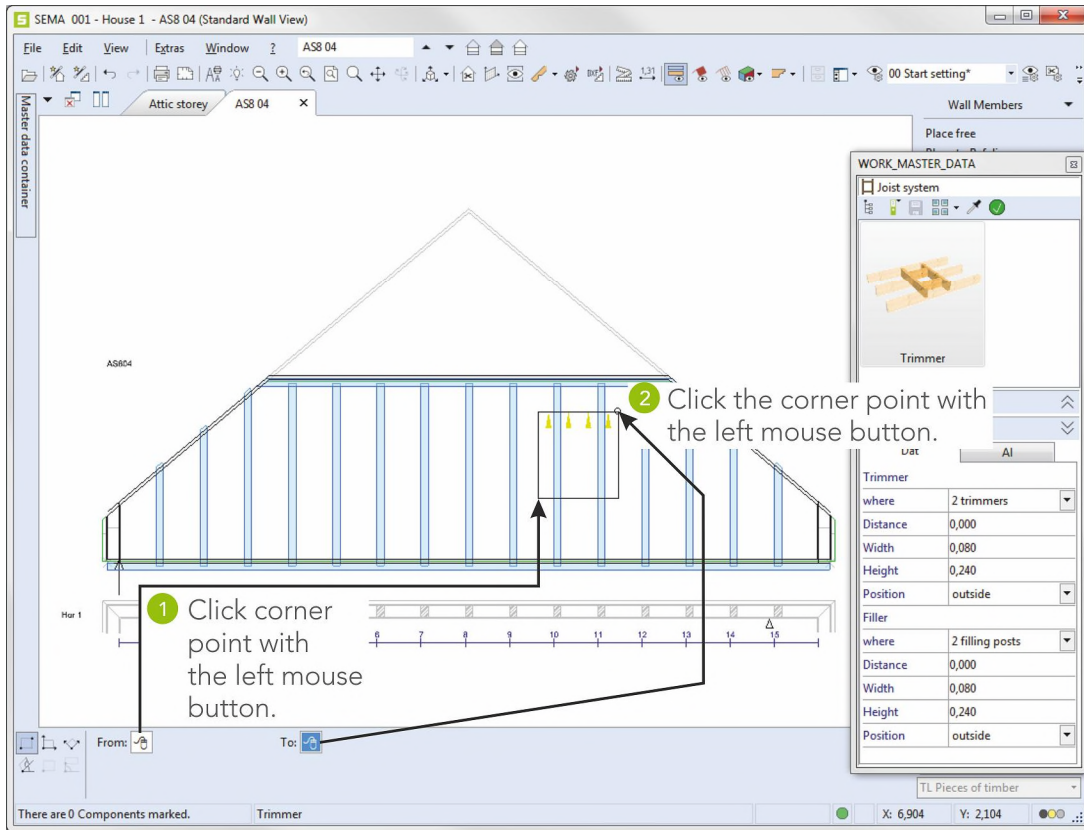




End the function with Esc ((**ESC**)).

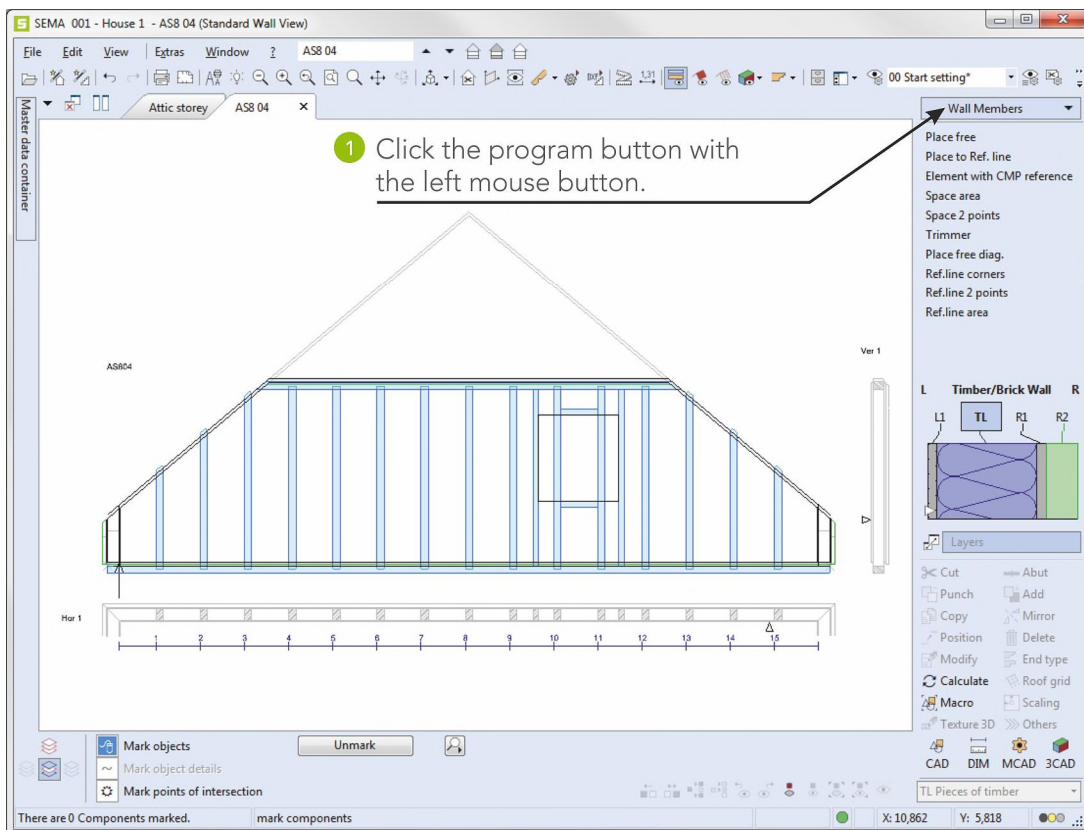
5.3 Creating Trimmers





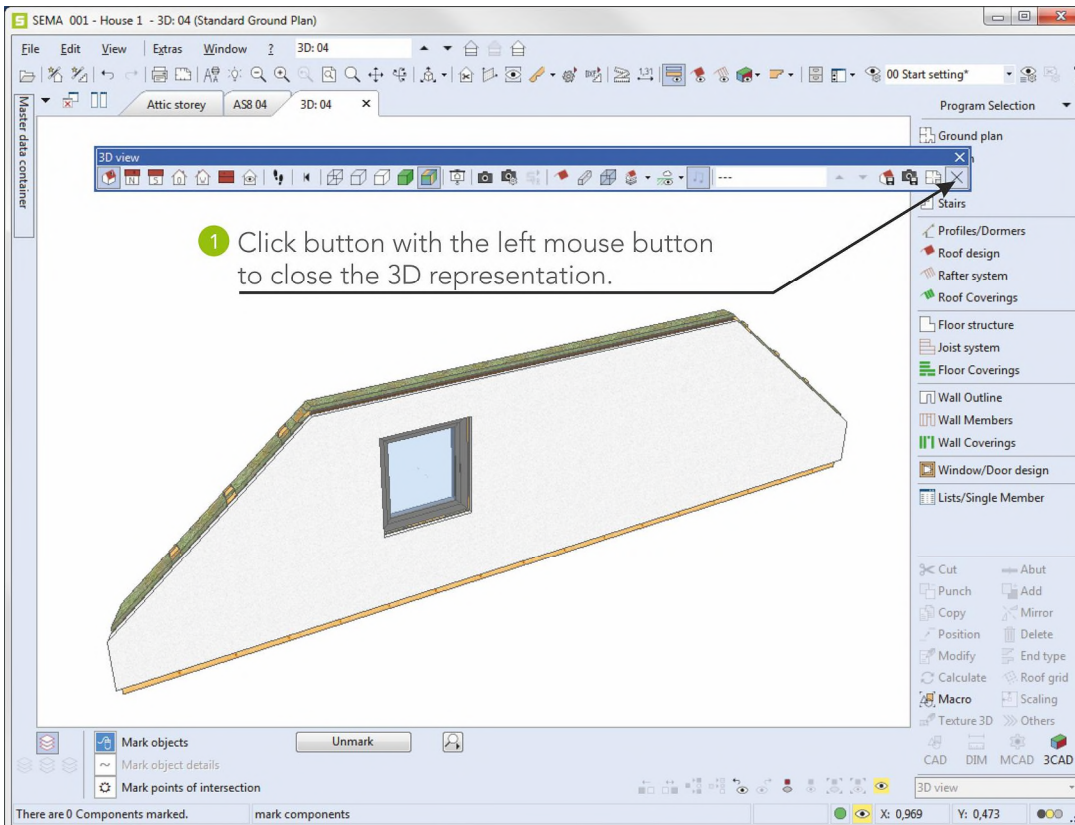
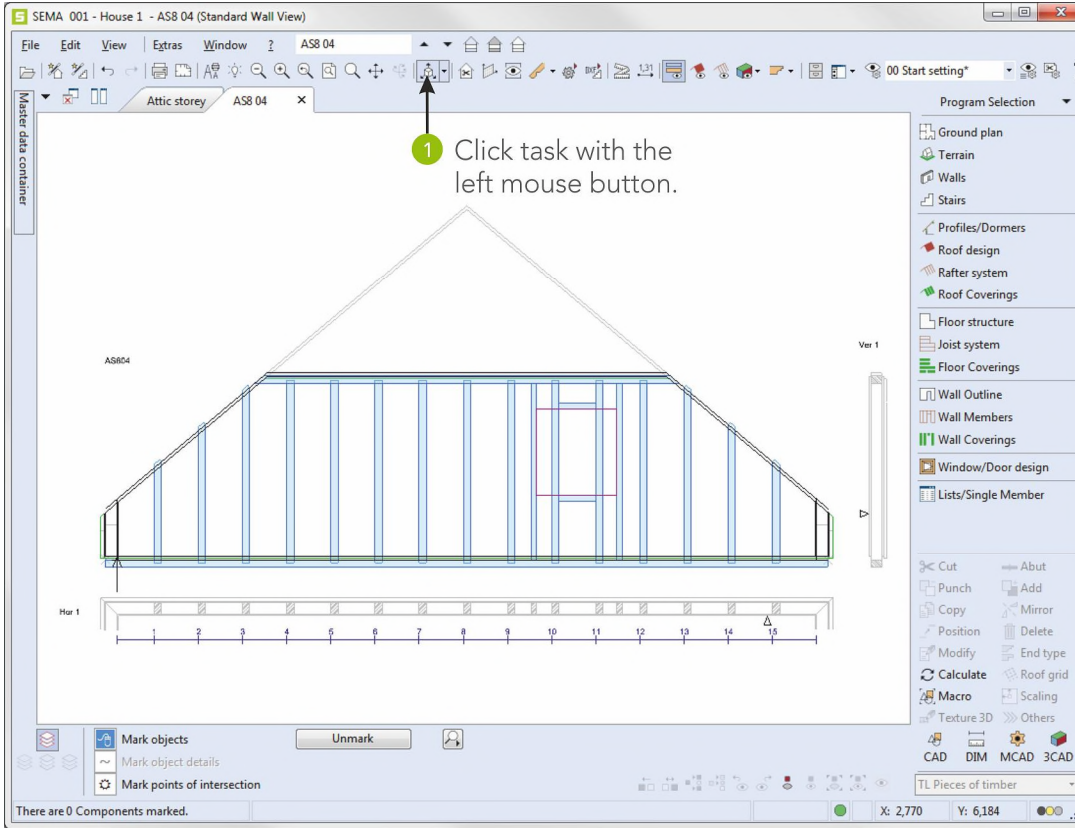
End the function with Esc (**ESC**).

Here is the finished wall with all members.



6. 3D View

The finished wall can now be displayed three-dimensionally.



Creation of a Joist System

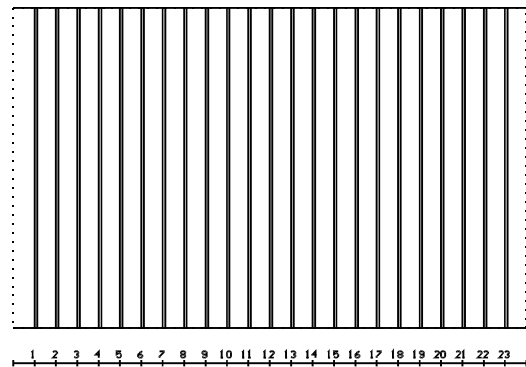
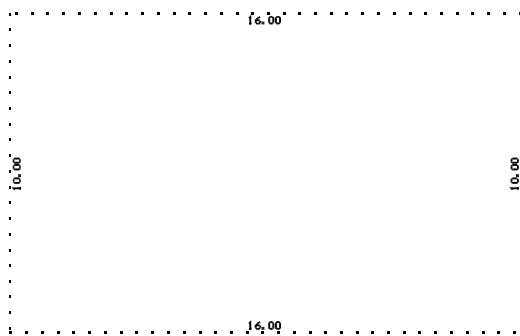


The example explained here is based on the ground plan created before!

If this ground plan does not yet exist, please return to the start and enter the ground plan.

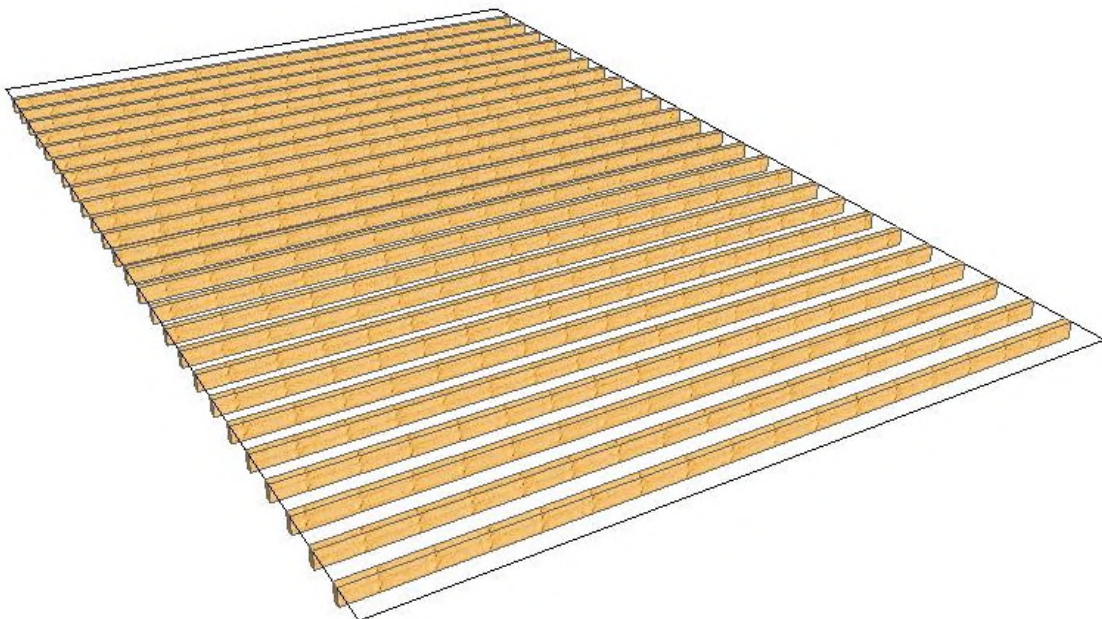
Task:

To create a joist system on the rectangular ground plan of 10 x 16 m created before, according to the following details!



Result:

In the end, you will see a 3D image of the joist system.

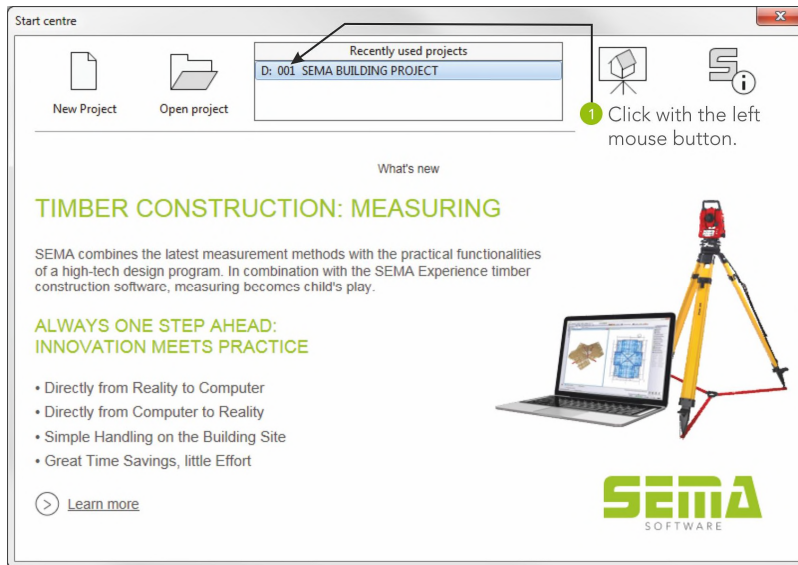


1. Opening an Existing Building Project



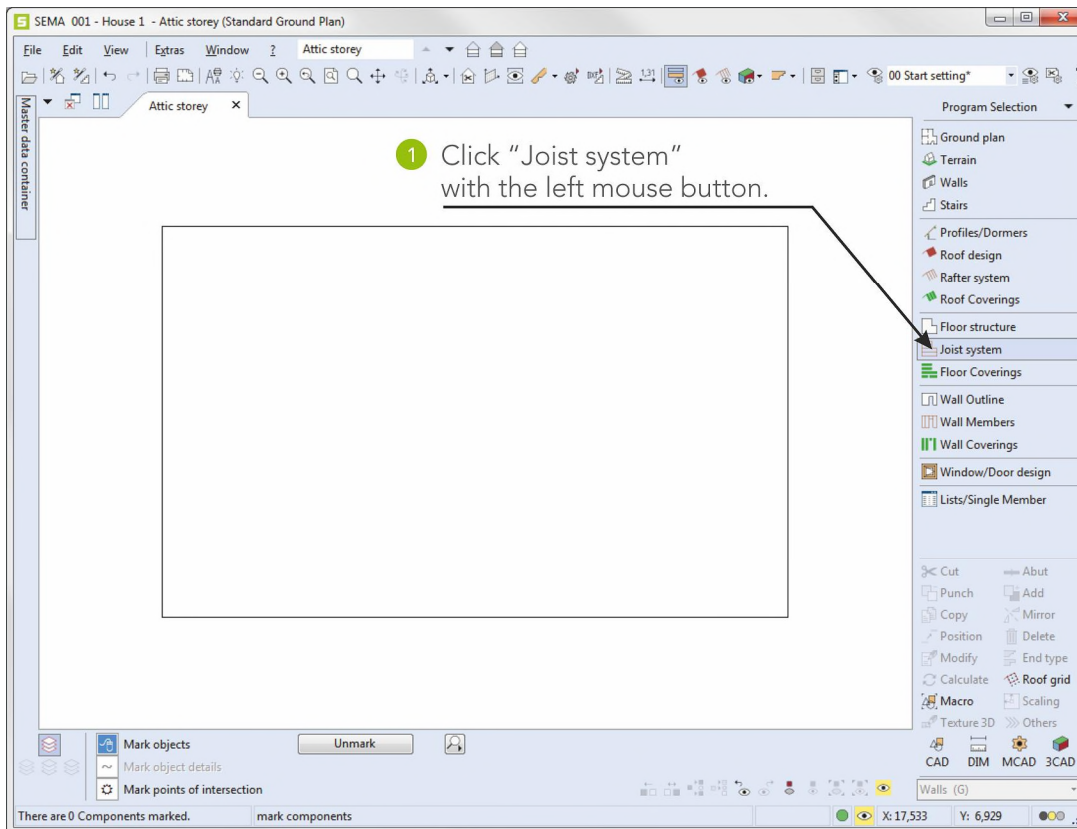
If you have **not** closed the SEMA program after the you have created the walls, you can immediately continue with point 2!

If you have closed the SEMA program, the building project created under saddle roof must be opened again!

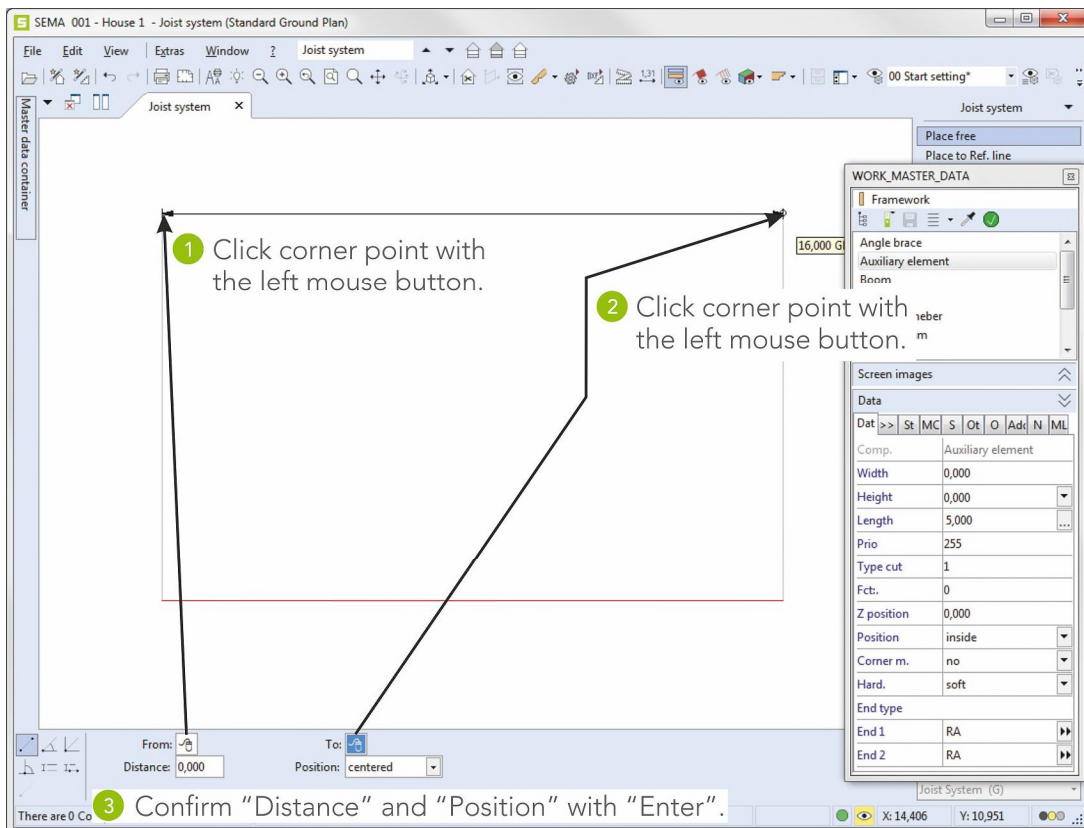
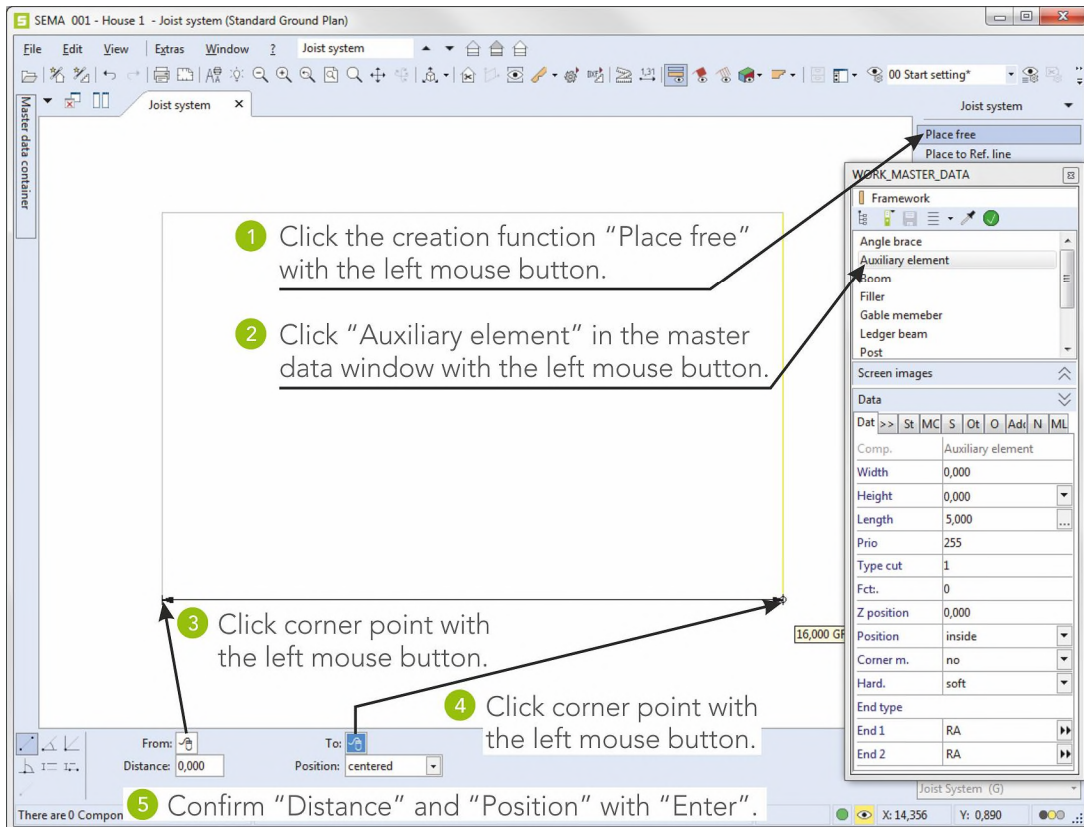


2. Creating a Joist system

First of all, you have to select "Joist system".



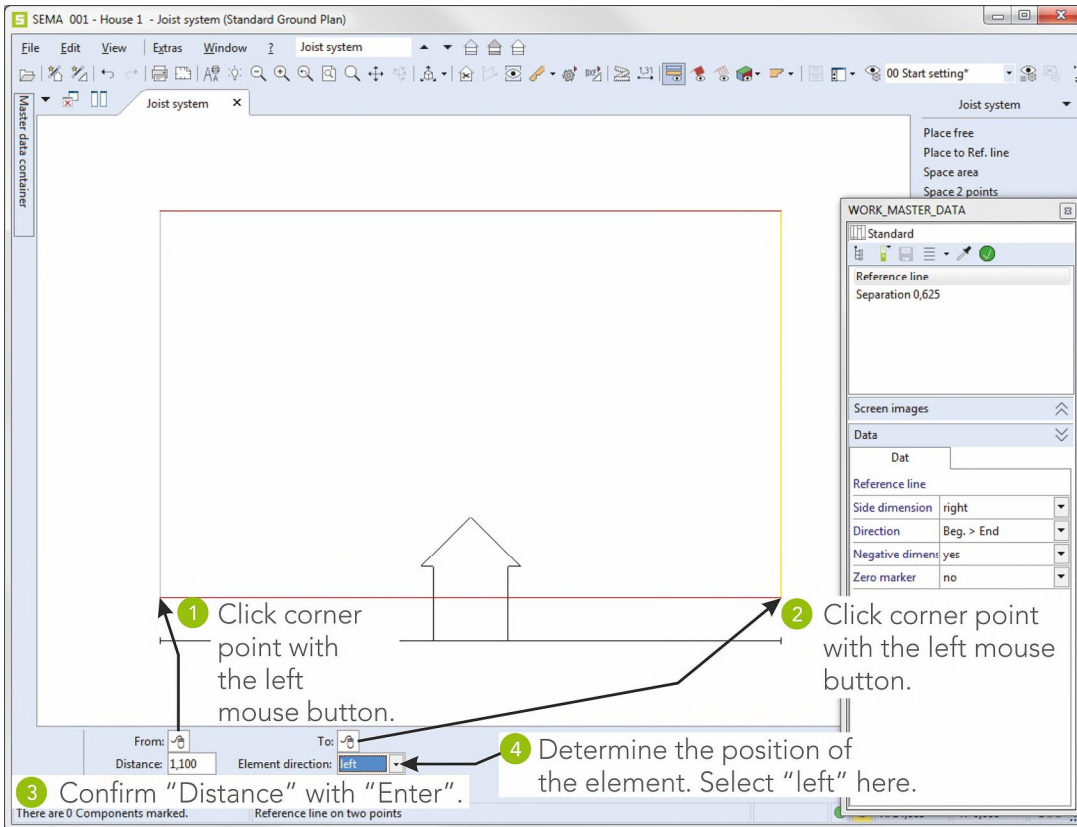
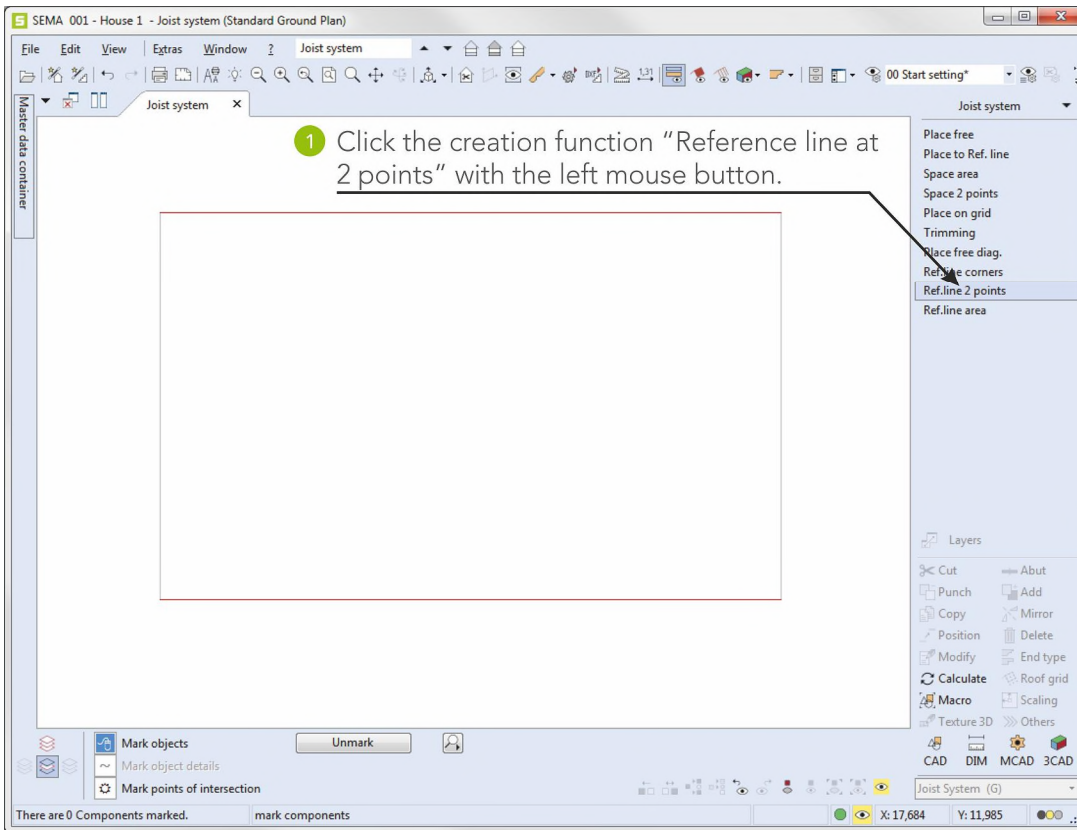
2.1 Creating Auxiliary Elements



Close the function with Esc (**ESC**).

Task

2.2 Creating a Reference Line

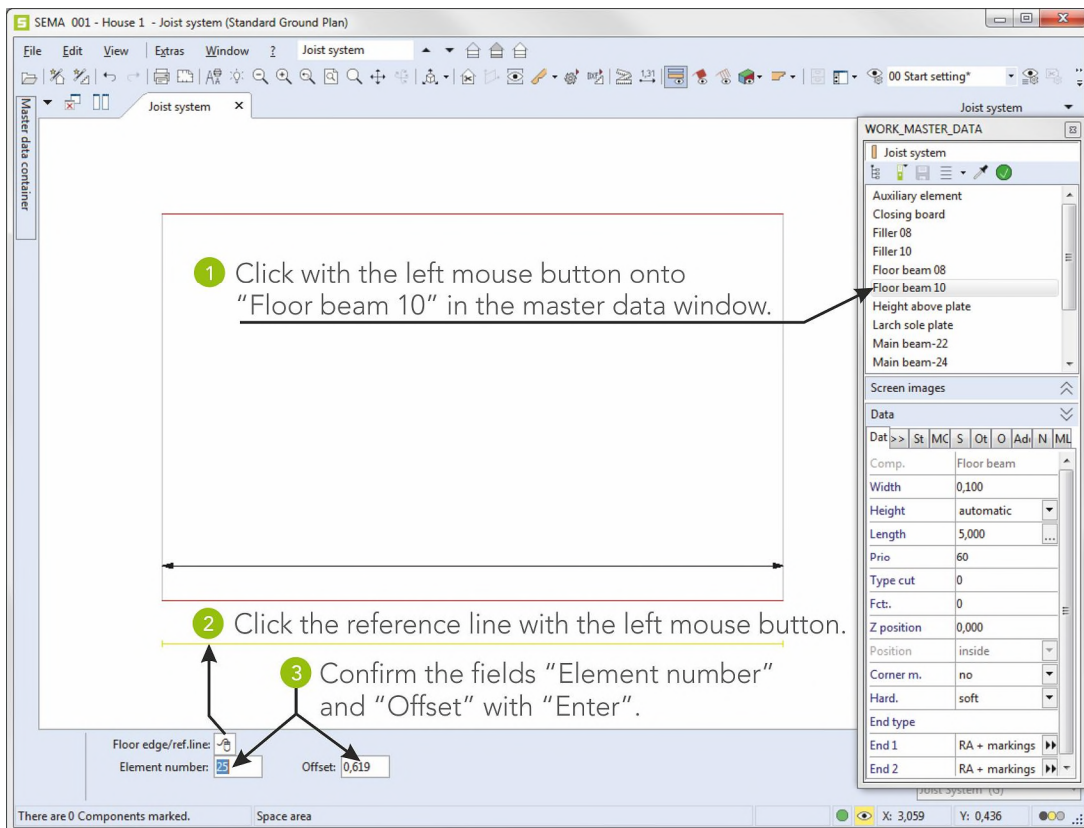
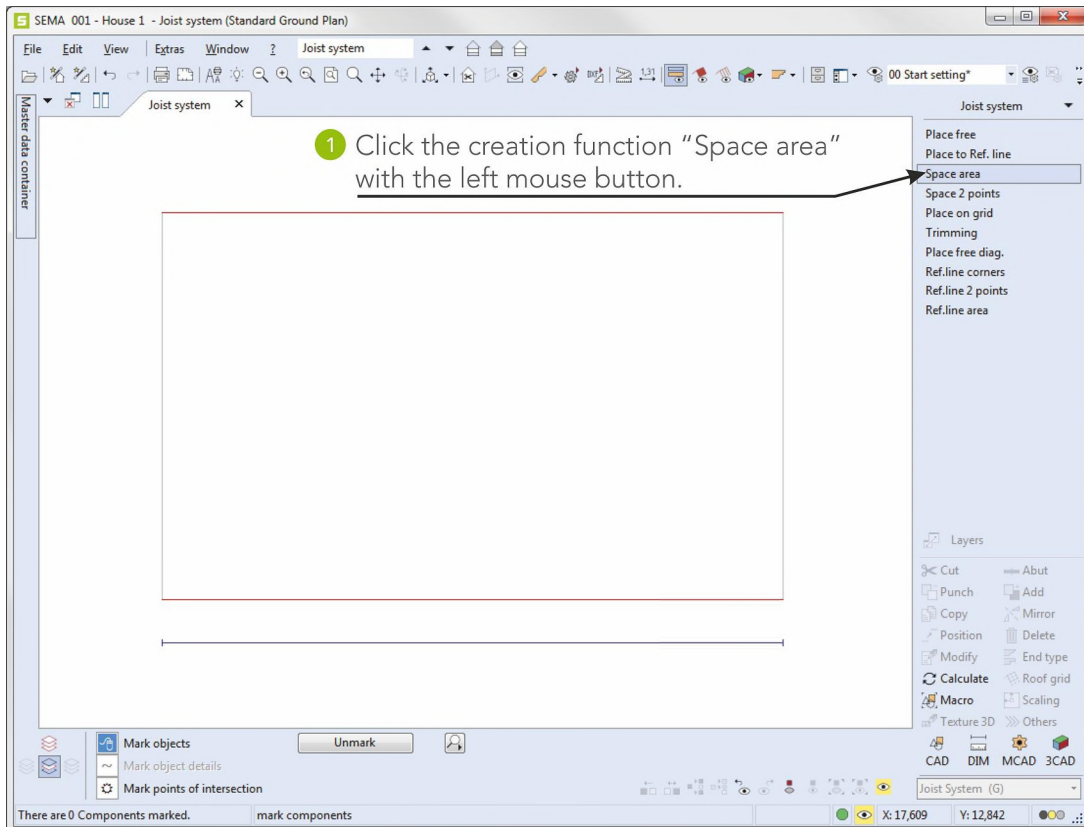


Please close the function with Esc (**ESC**).

Task

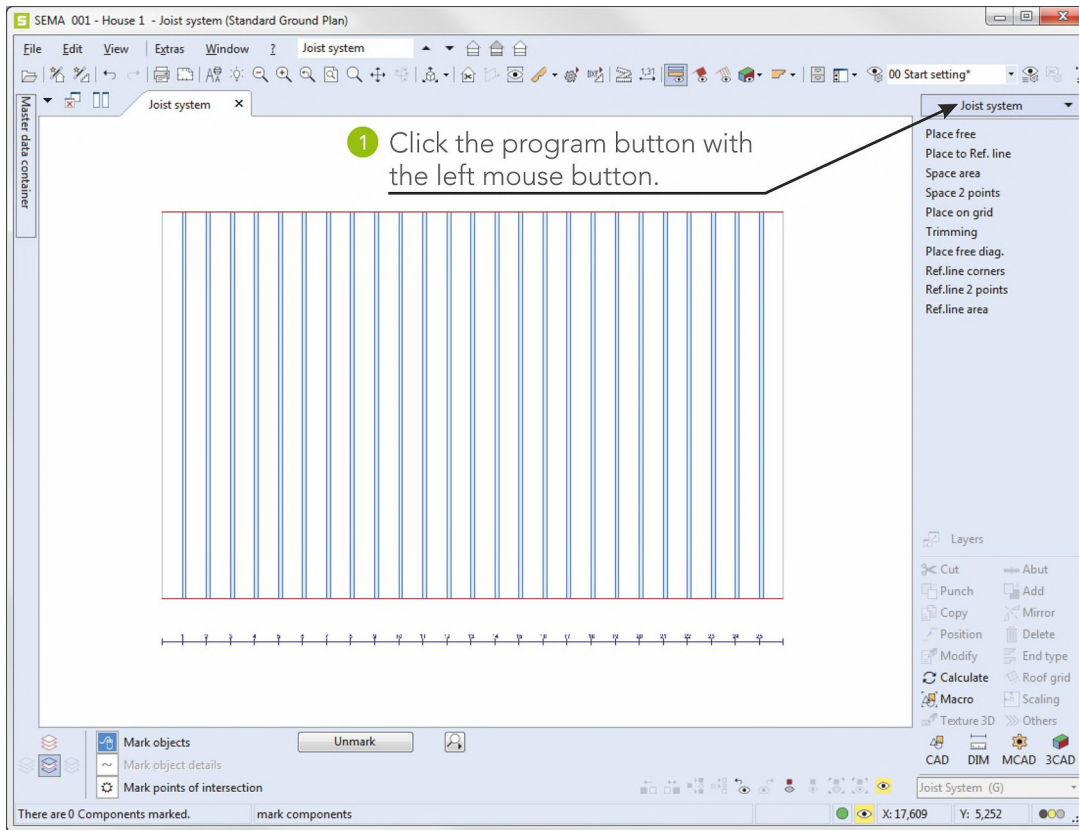
4-4

2.3 Variable Spacing of the Ceiling Beams



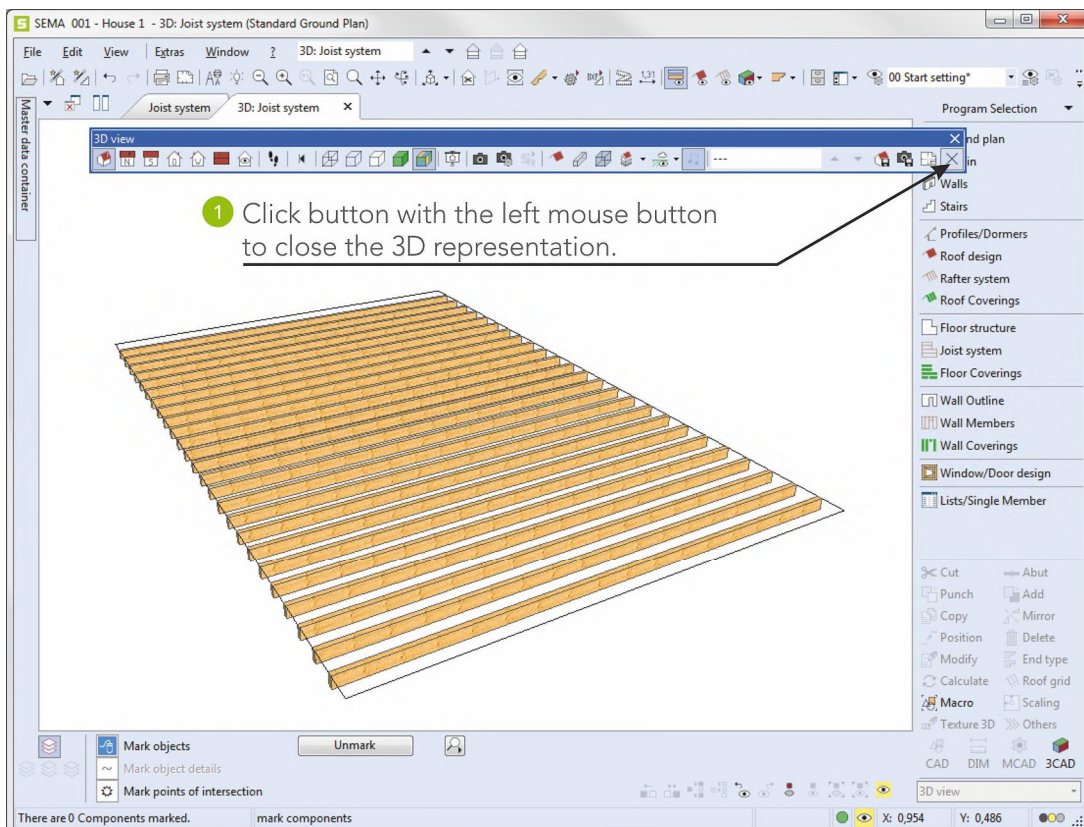
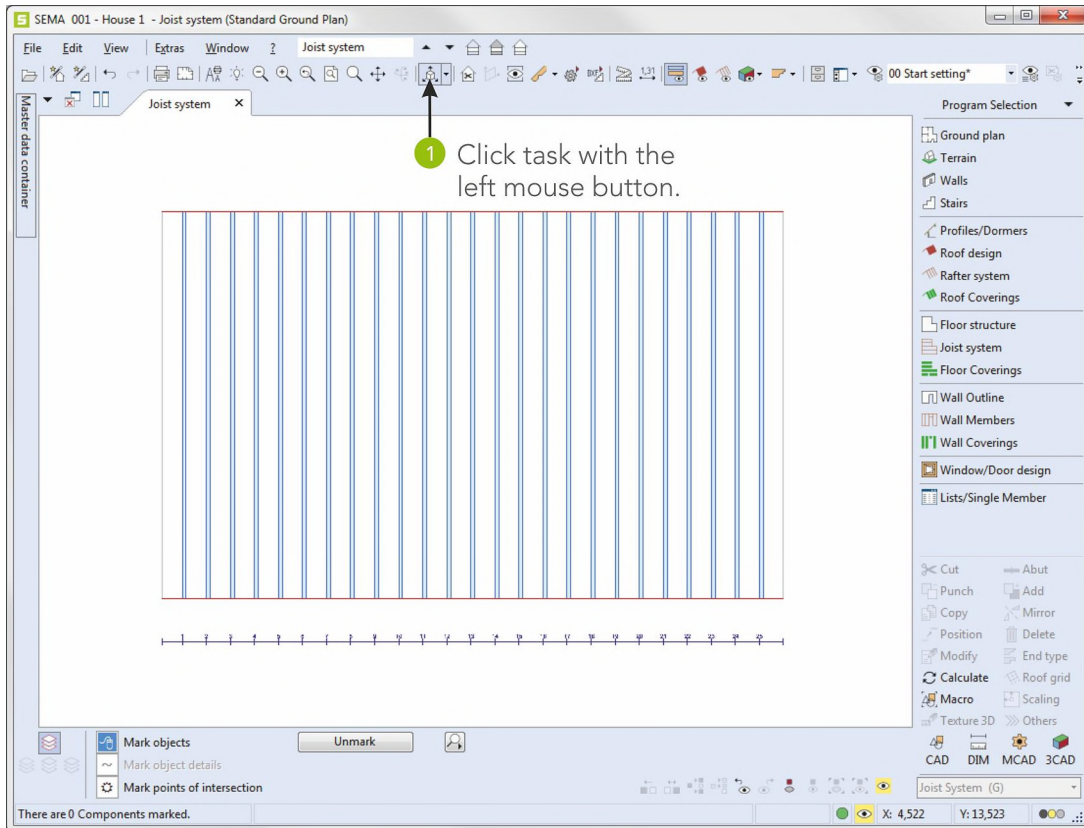
Close the function with Esc (**ESC**).

Now the joist system is finished.



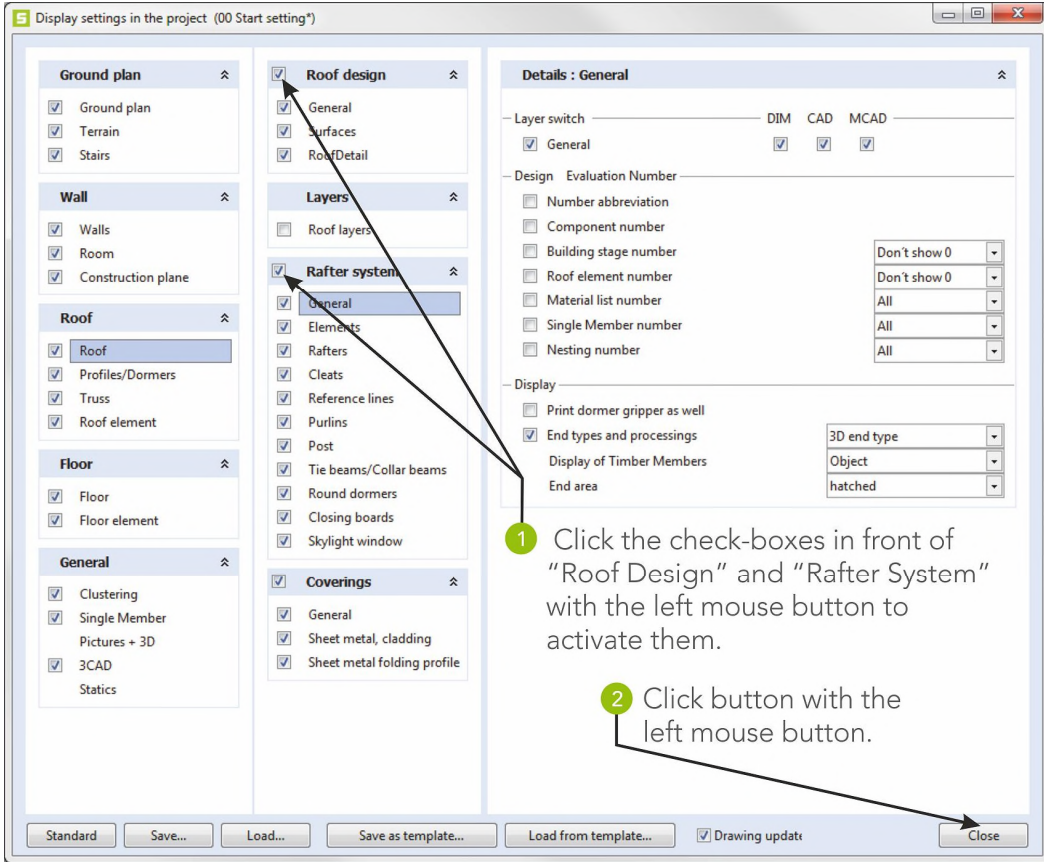
3. 3D View

The finished joist system can now be displayed three-dimensionally.

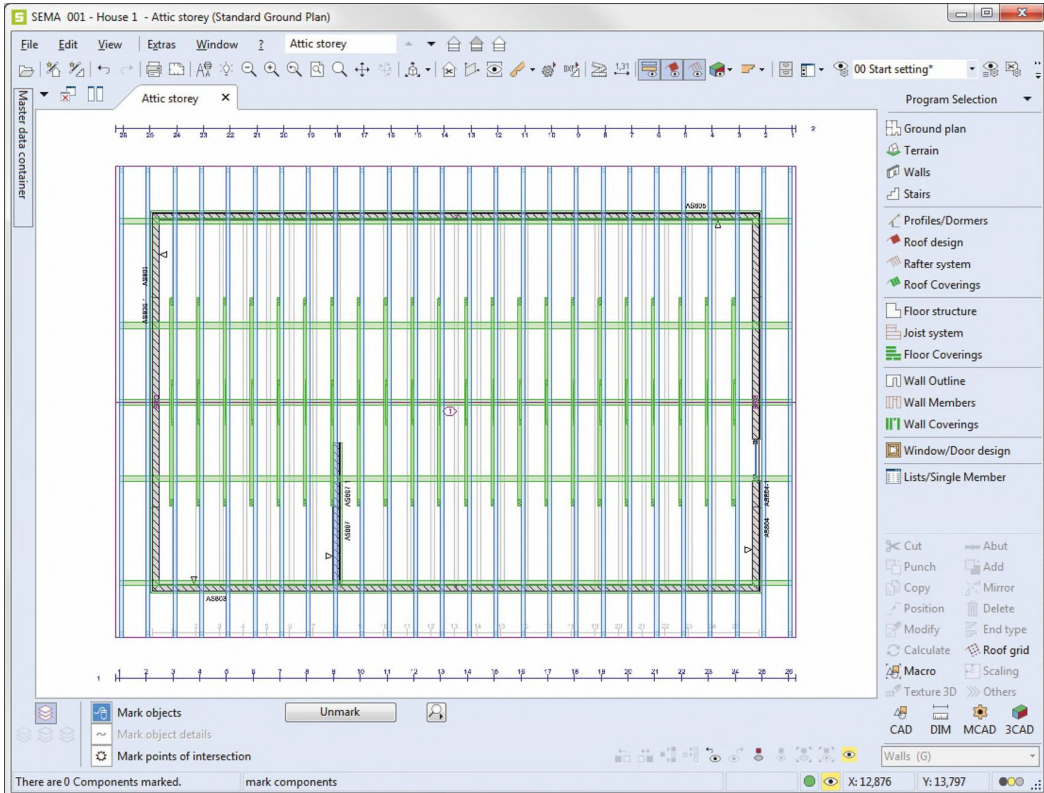


4. Switching on of the Rafter System and the Roof Design

With the function key **F7** you can open the "Display Settings" menu.



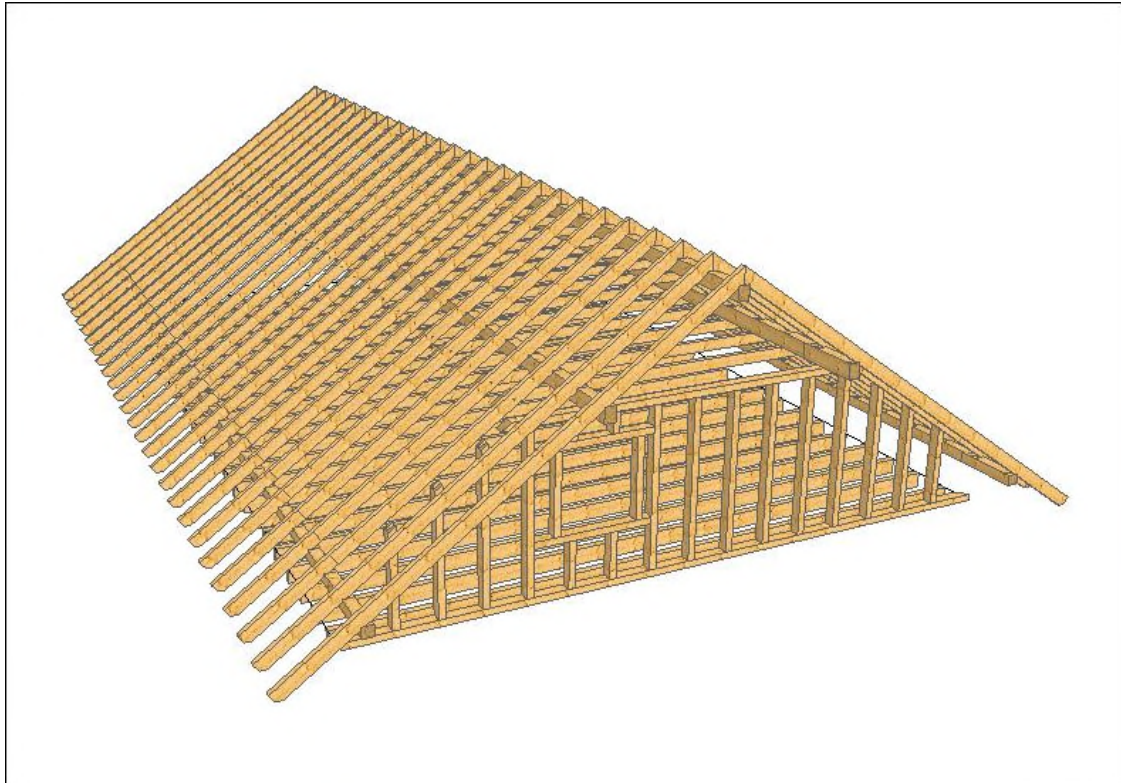
The roof design and the rafter system are now visible again.



We have arrived at the end of our brief introduction. As you could see for yourself, working with the SEMA program is simple and efficient. Nevertheless, it takes some training and exercise to get to know all the many different functions and all the ins and outs of the program.

The developed Instant Help is a powerful tool that will make your work a lot easier and enjoyable. And whenever you are stuck in the program, simply push the function key F1 (**F1**) and you will find the appropriate help topic.

We wish you every success with your first own projects.



Calculated 3D image of the example

P.S.: Should you have any questions, please do not hesitate to contact our customer service:

E-Mail: support@sema-soft.com
Phone: +49 8304 - 939 140

If you call outside our normal office hours, please use our answering machine – we will call you back as soon as possible.

SEMA

SOFTWARE

