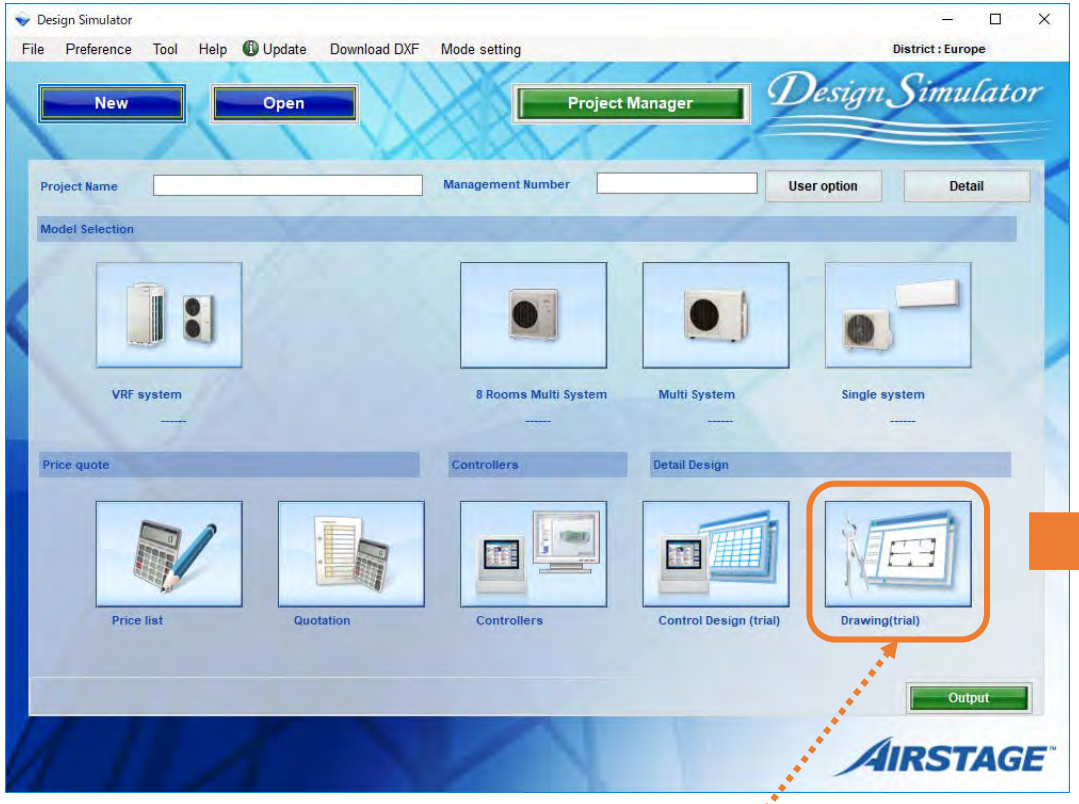
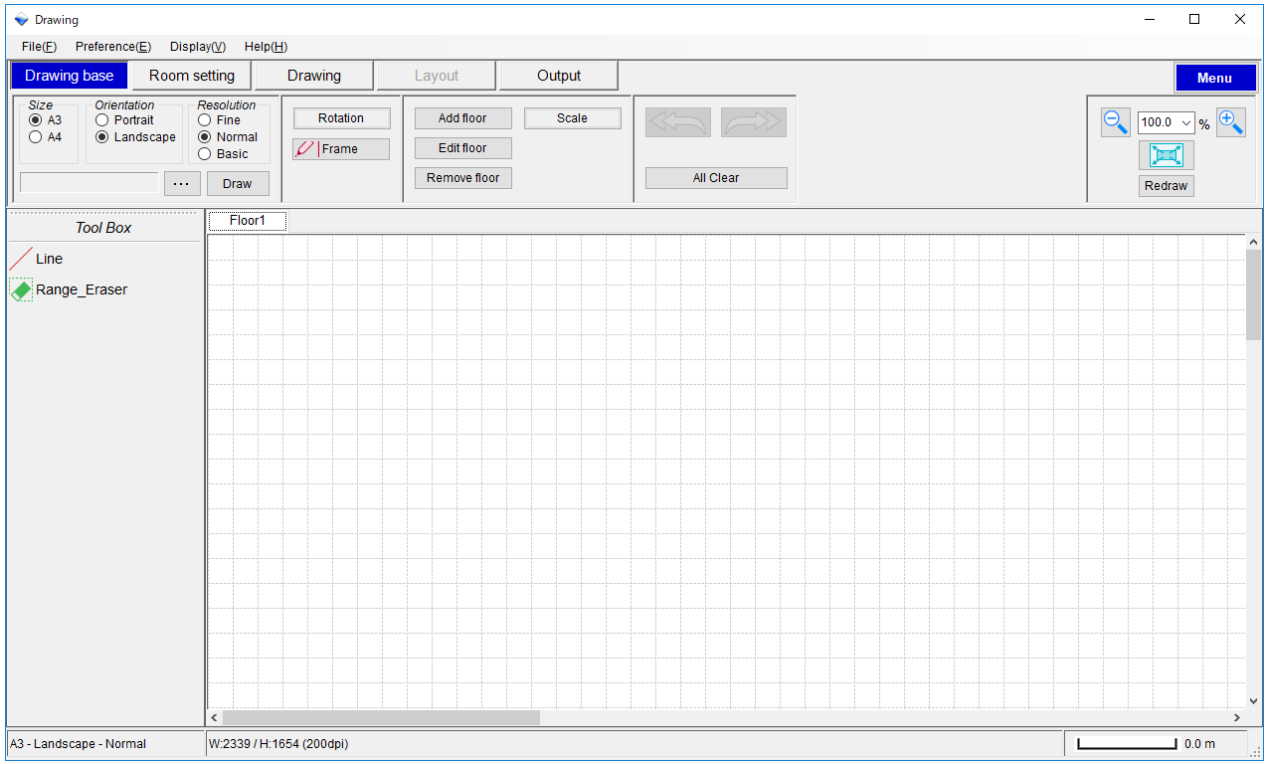
Drawing Design

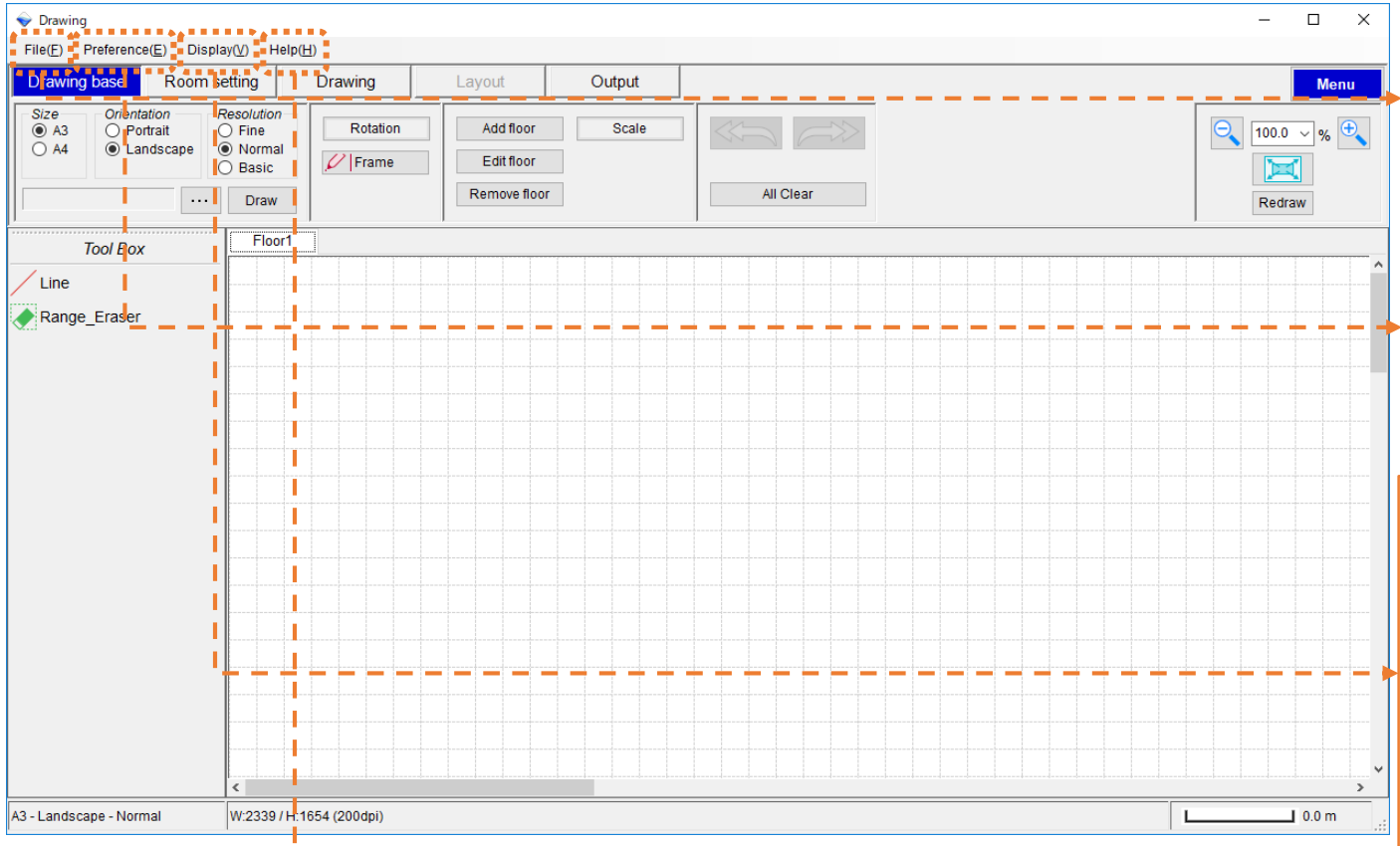


Select “Drawing Design”

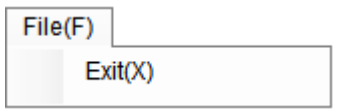
Drawing Design screen (Drawing base)



Tool menu

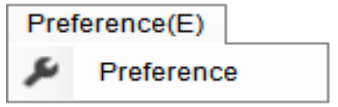


File



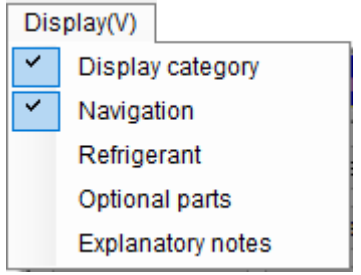
: Go to menu screen

Preference



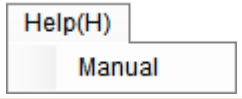
: Refer to “Preference“

Display

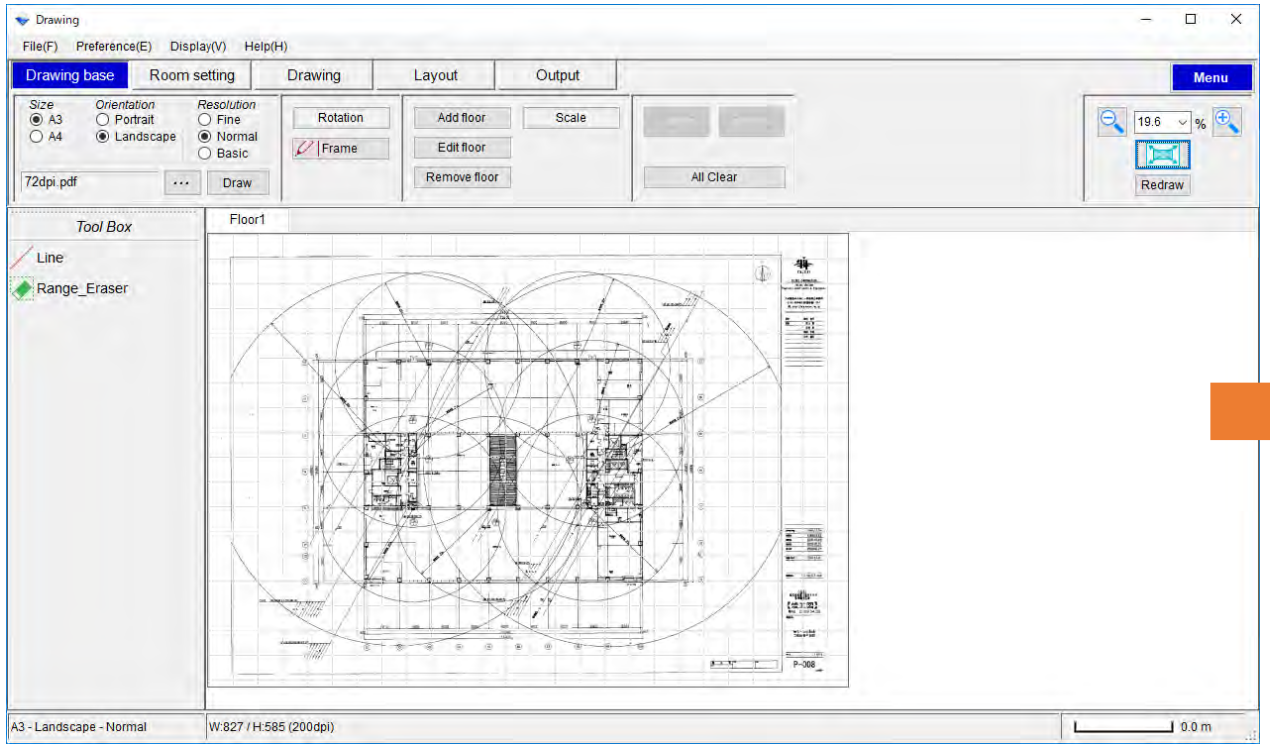


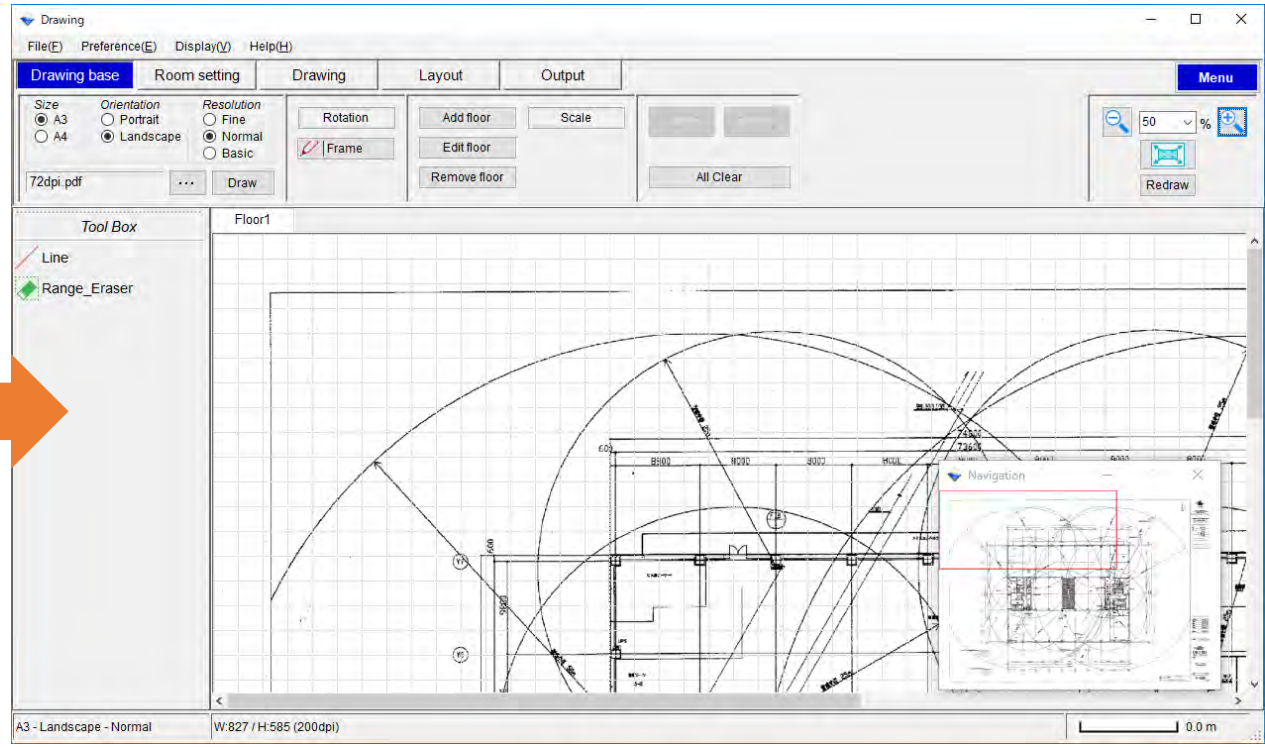
: Refer to “Display”

Help



Display Manual

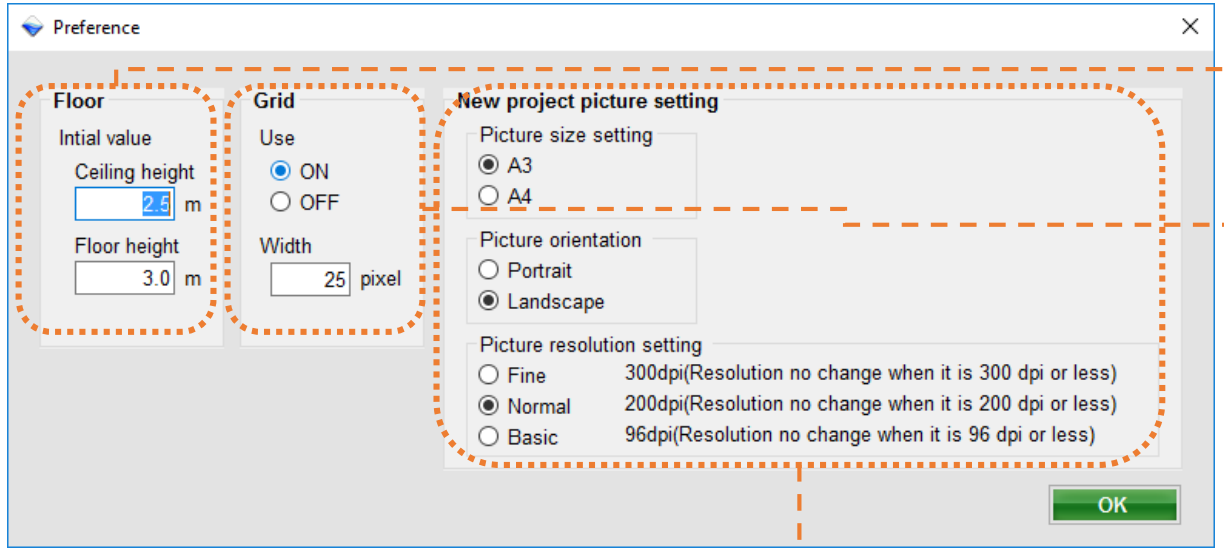




Navigation screen

When the image does not fit on one screen due to enlargement etc., the navigation screen is displayed and the part displayed on the screen is displayed with a red frame.

Preference



Floor

Sets the initial value of the floor

Grid

Use : Grid usage setting
Width : Set the width of the grid

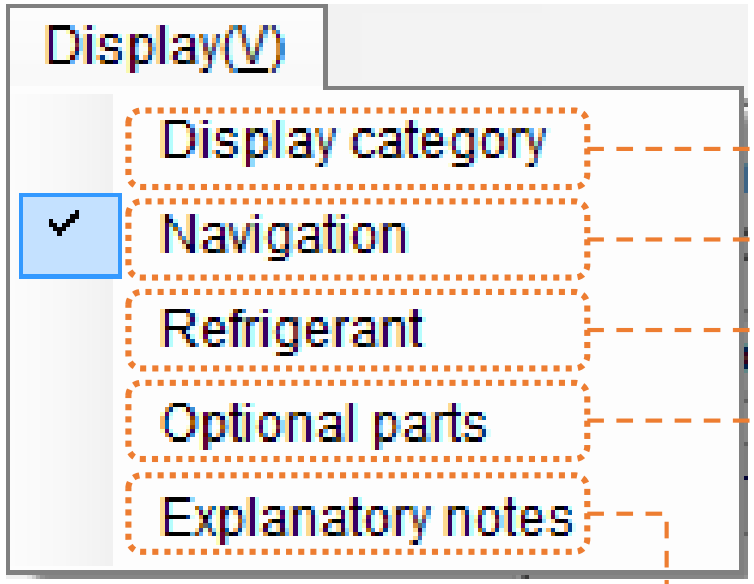
New project picture setting

New project import picture setting

Picture size setting : Set capture size of picture
Picture orientation : Set the orientation of picture
Picture resolution setting : Set picture resolution
- Fine : Capture with resolution equivalent to 300 dpi
- Normal : Capture with resolution equivalent to 200dpi
- Basic : Capture with resolution equivalent to 96dpi

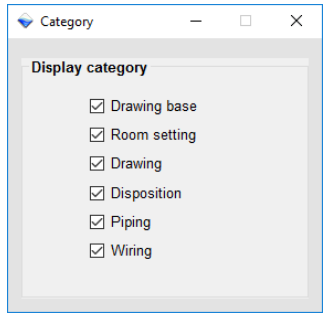
* Picture resolution setting is no change, when picture resolution or less

Display



Display category screen

Display category screen
The selected screen is overlaid and displayed

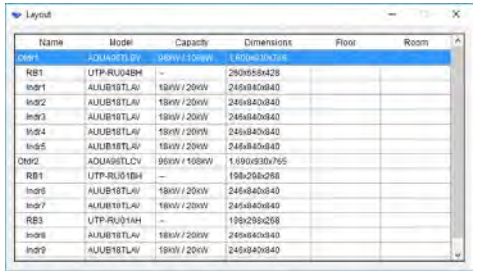


Navigation

Display Navigation screen

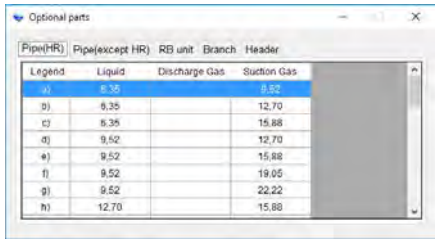
Refrigerant

Display list of refrigerant equipment



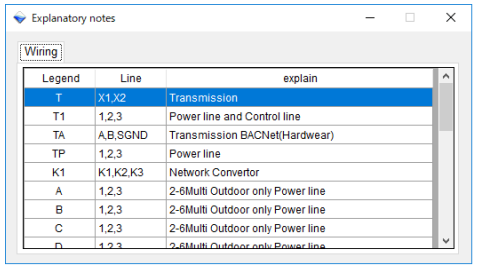
Optional parts

Display list of Pipe and Branch and RB Unit Models

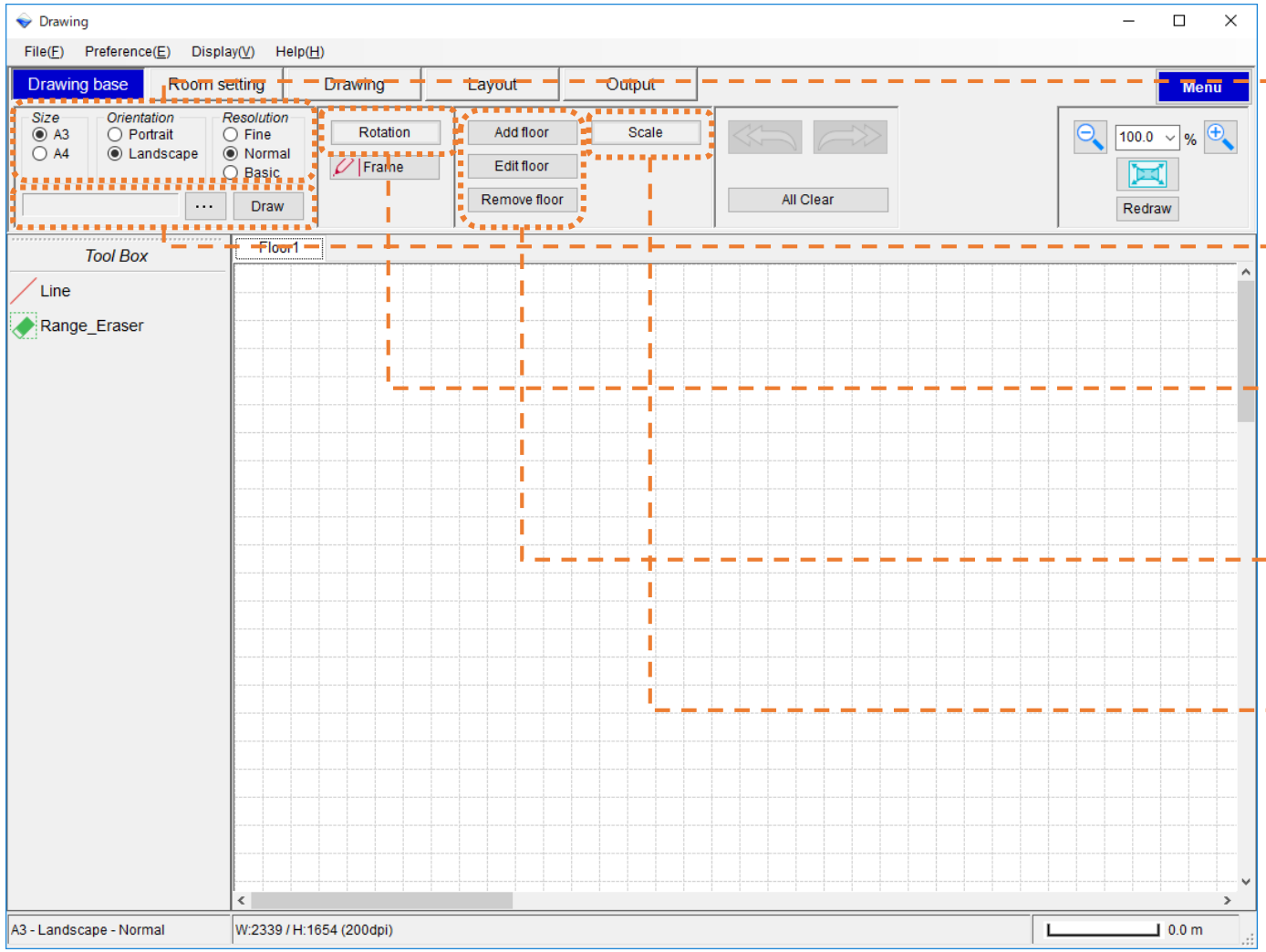


Refrigerant

Display list of wiring terminal



Drawing base (1/2)



Picture import setting

Size : Select the size of the picture
Orientation : Select orientation a Import in picture
Resolution : Select the resolution of the picture

Picture file setting

Refer to “Import picture file “

Rotation

Go to Rotation screen
Refer to “Rotate setting“

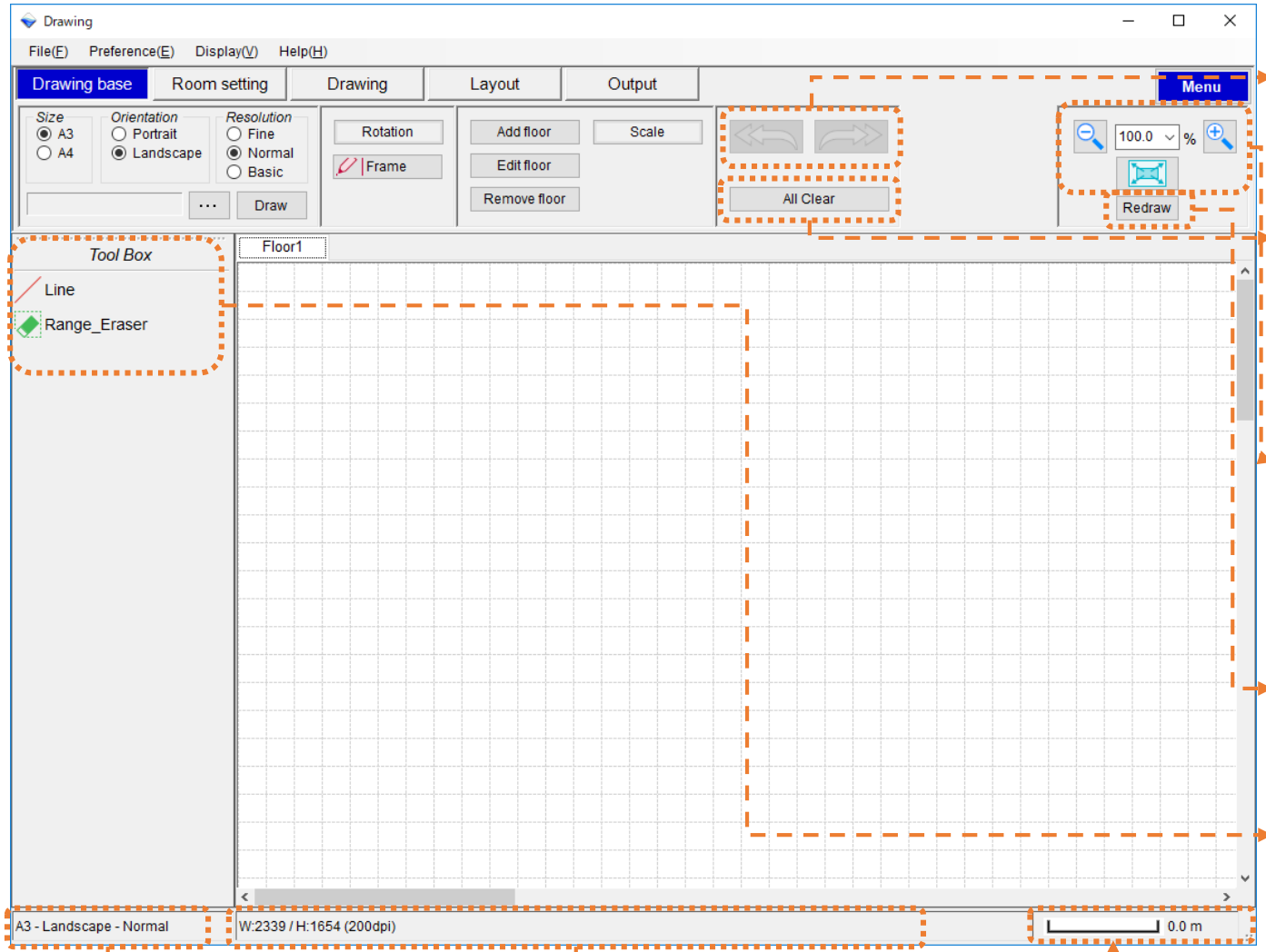
Floor setting

Add floor, Remove floor
Edit floor : Refer to “Floor edit“

Scale

Refer to “Scale setting“

Drawing base (2/2)



Undo , Redo (Tool Box , Scale , Rotation)
Undo : Cancel the previous object drawing
Redo : Redraw the previous canceled object

Clear
Remove picture file and drawing objects

Zoom to
: Zoom up
: Zoom down
:Select zoom
:Full picture display

Redraw
Draw the displayed picture again

Tool box
Line : Draw a line
Refer to “Tool box (1/2)”
Range Eraser : Remove parts in a picture
Refer to “Tool box (2/2)”

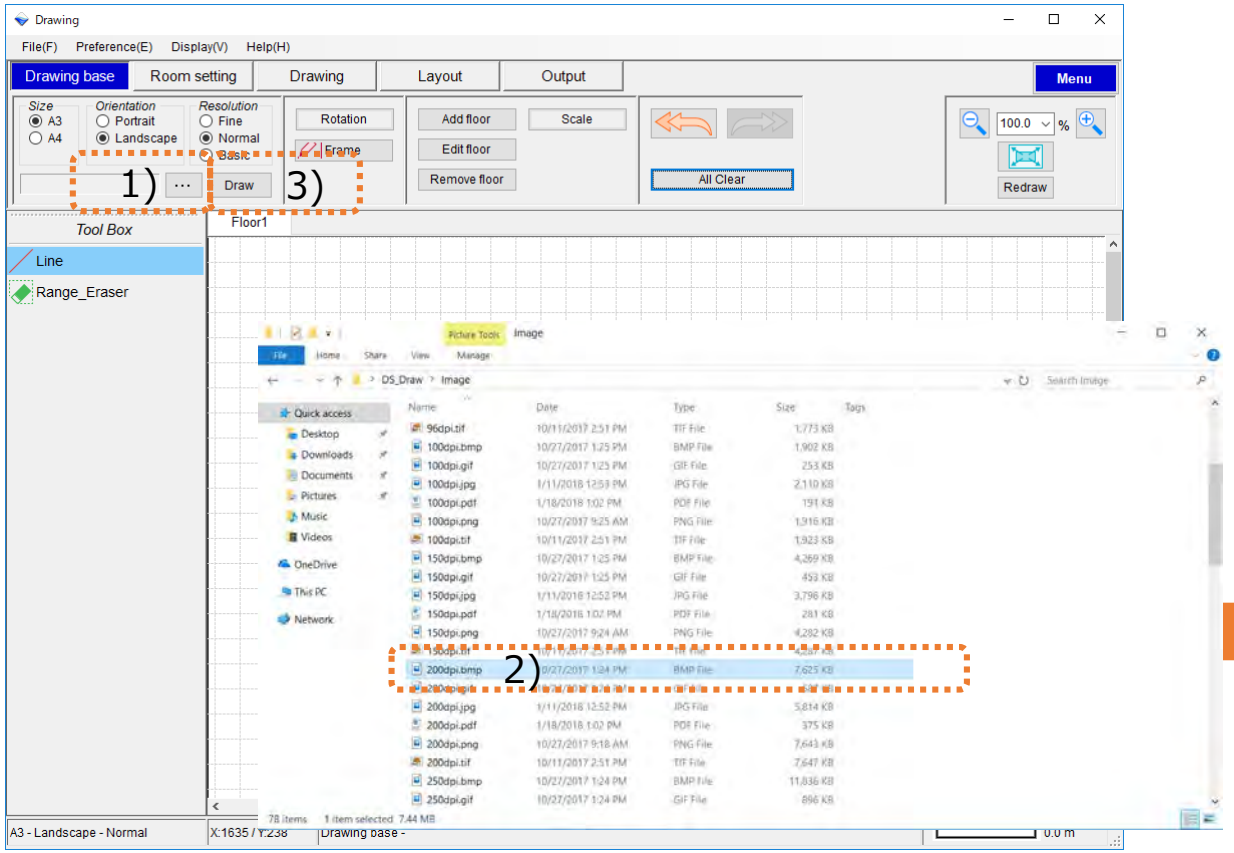
Message area

Scale bar

Picture setting
Size-Orientation-Resolution

Import picture file (1/2)

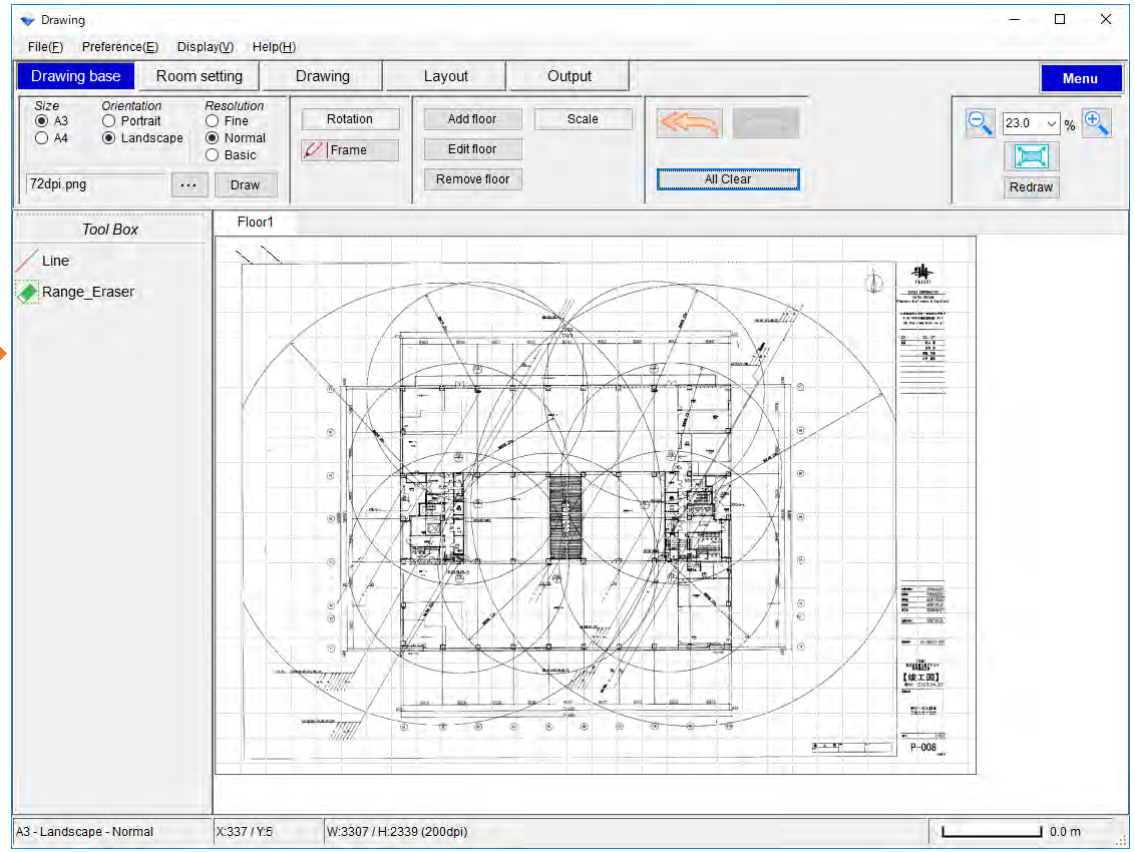
How to import picture file – File selection



1)Press ··· button

2)Select picture

3)Press Draw

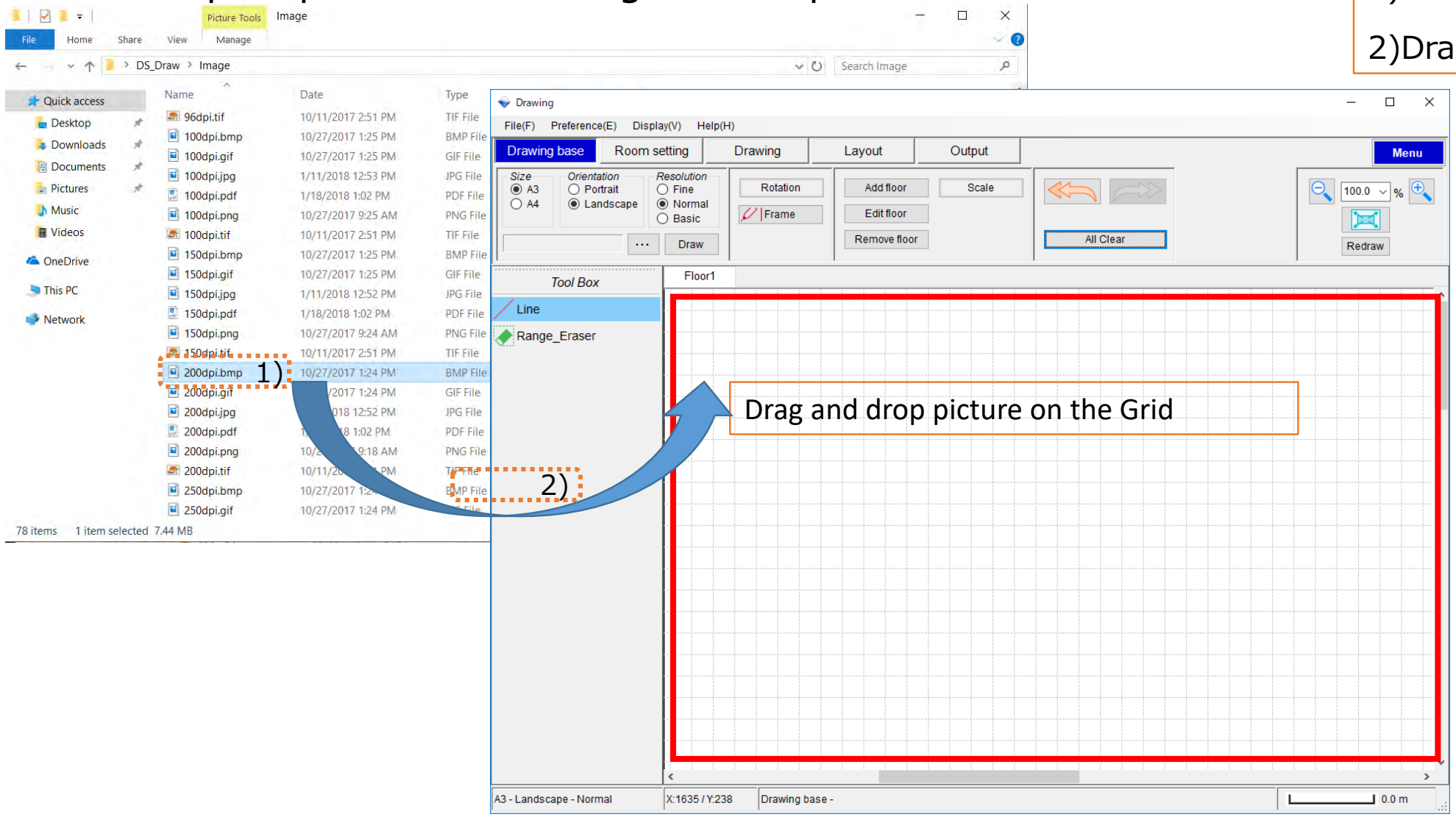


Import picture file (2/2)

How to import picture file – Drag and Drop

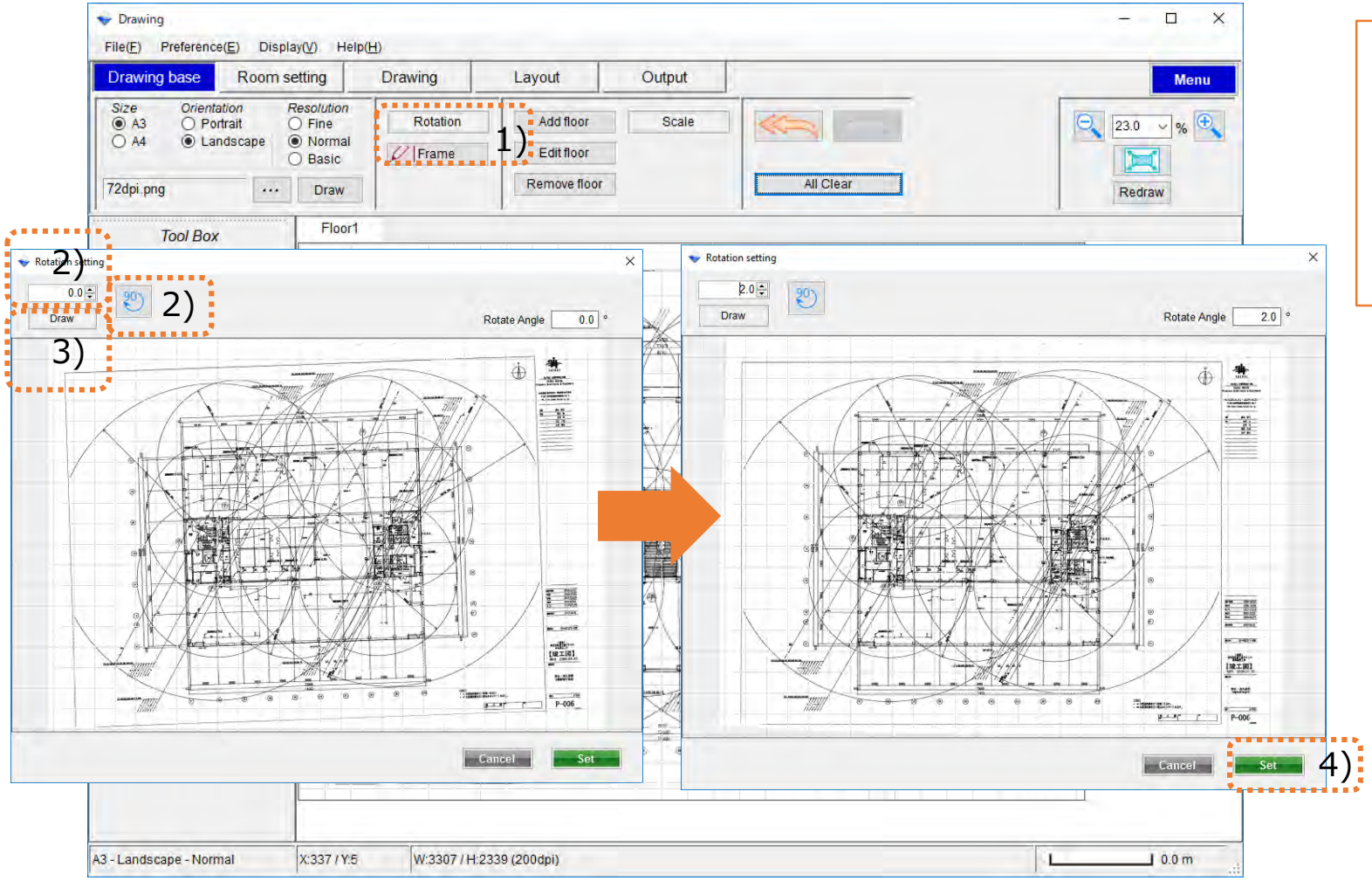
1)Select picture file.

2)Drag and drop on Grid.



Rotate setting

How to rotate picture



1)Press Rotation button

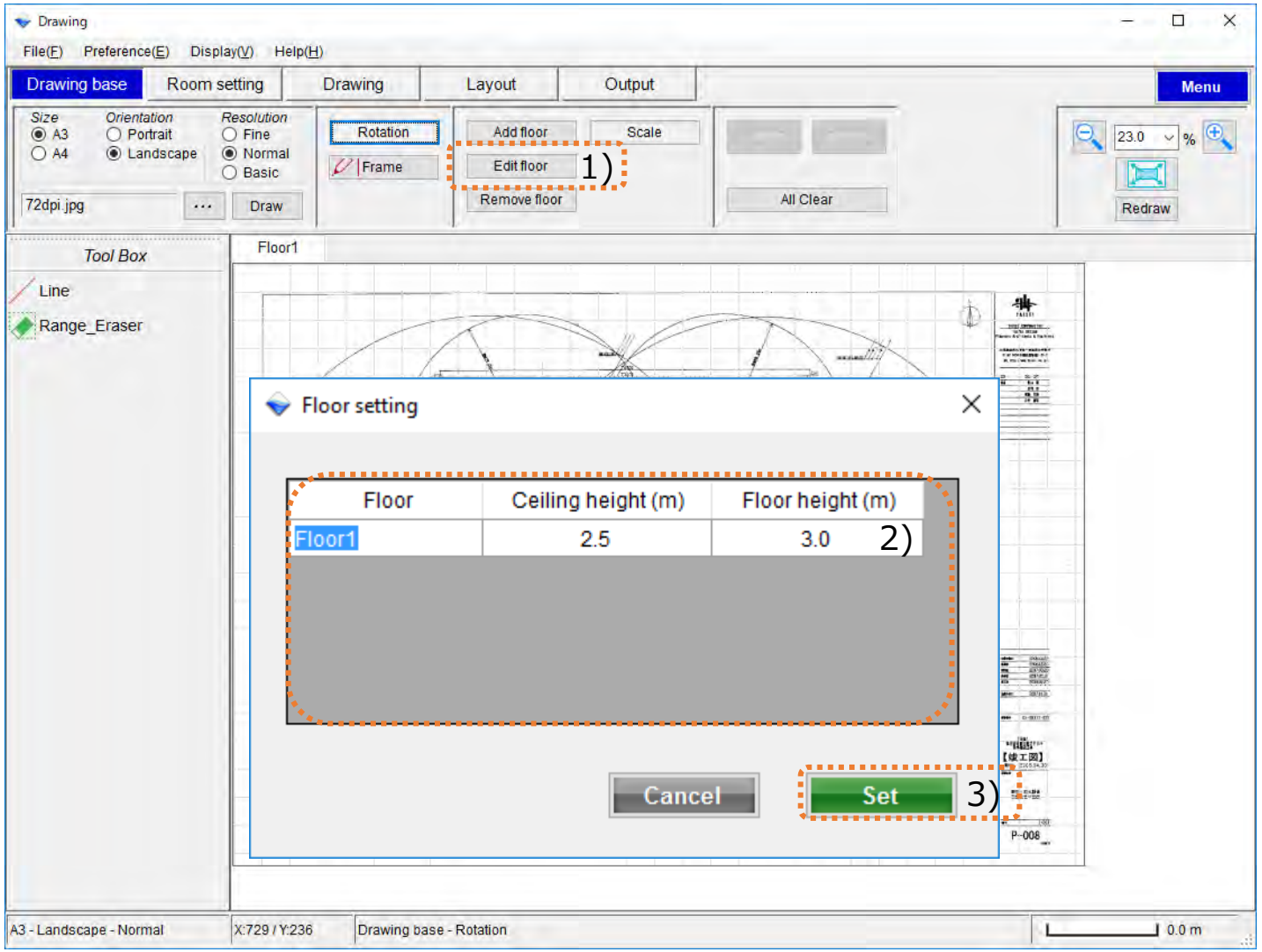
2)Input the rotation angle(right rotation)

Rotate 90 degrees

3)Press Draw

4)Press Set

Floor edit



1)Press Edit floor

2)Input floor list

3)Press set

Floor list

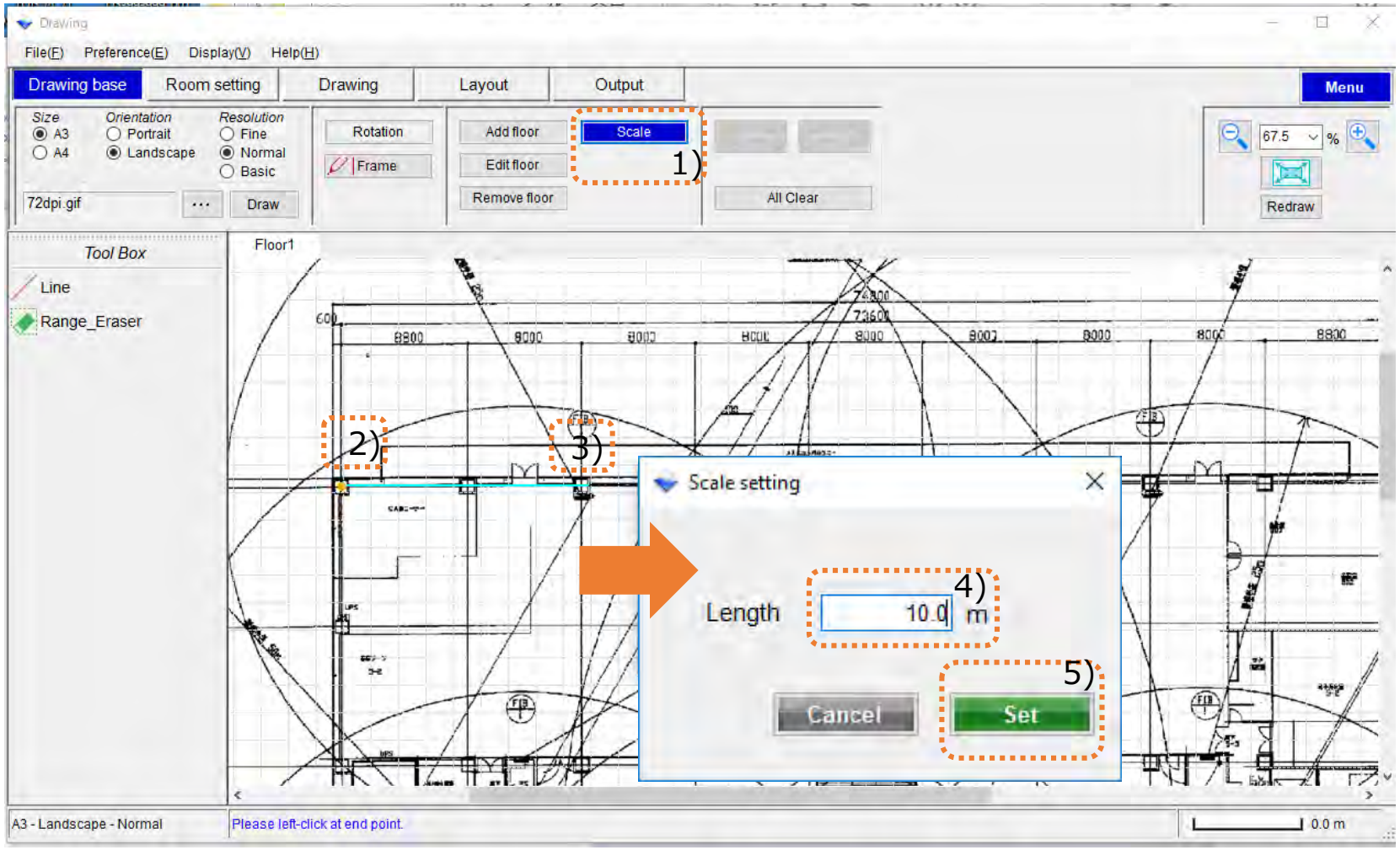
Floor name : Input the floor name

Ceiling height : Input the ceiling height

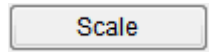
Floor height : Input the floor height

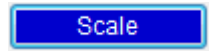
Scale setting

How to scale setting



1)Select Scale

Not selected scale 

Selected scale 

2)Left-click at starting point

3)Left-click at end point

4)Input the scale

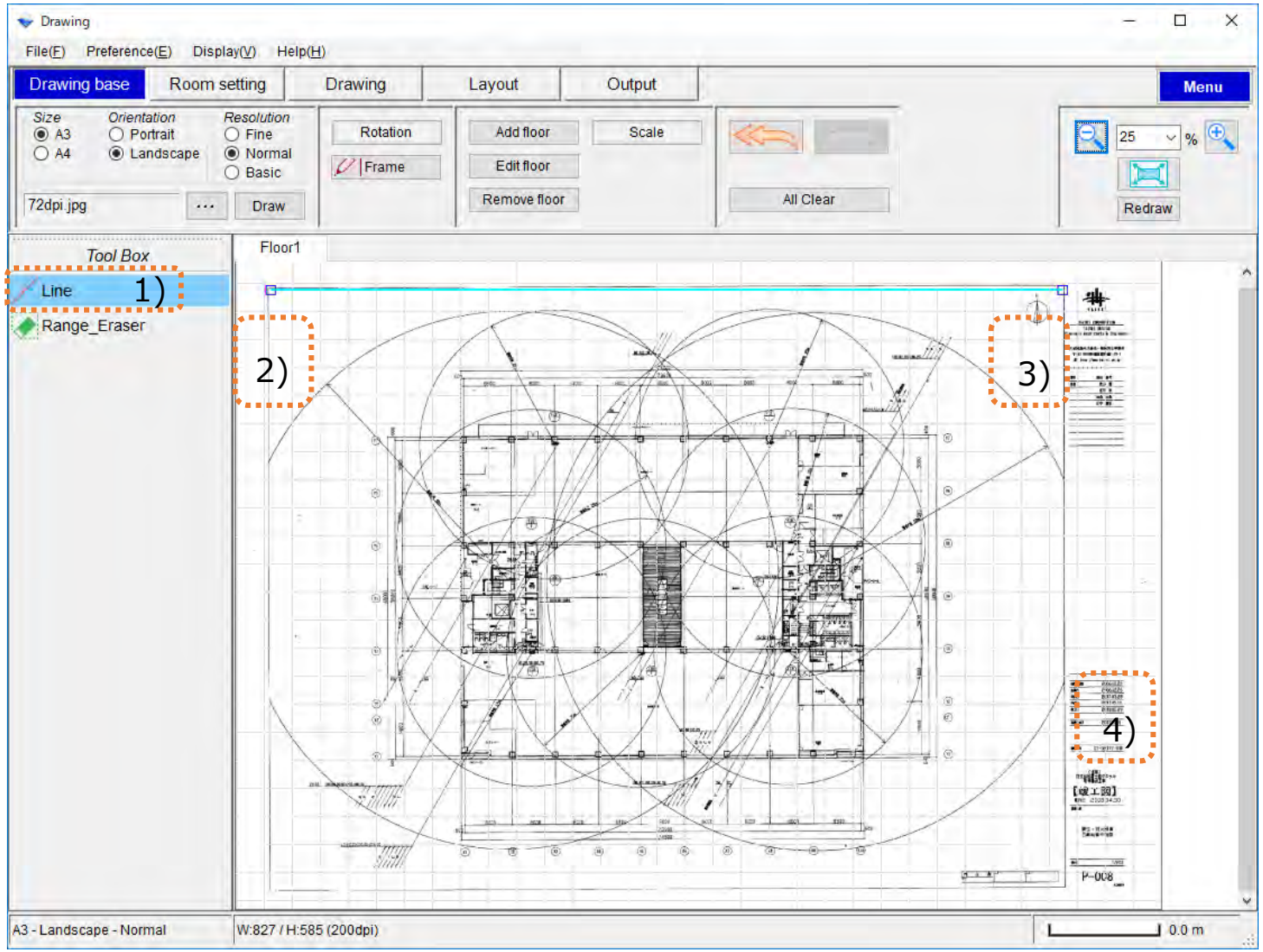
5)Press Tab key

6)Press Set

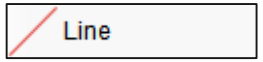
*If stop drawing ,Press the Esc button

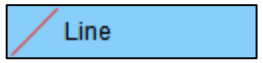
Tool box (1/2)

How to draw line



1)Select Line

Not selected Line 

Selected Line 

2)Left-click at starting point

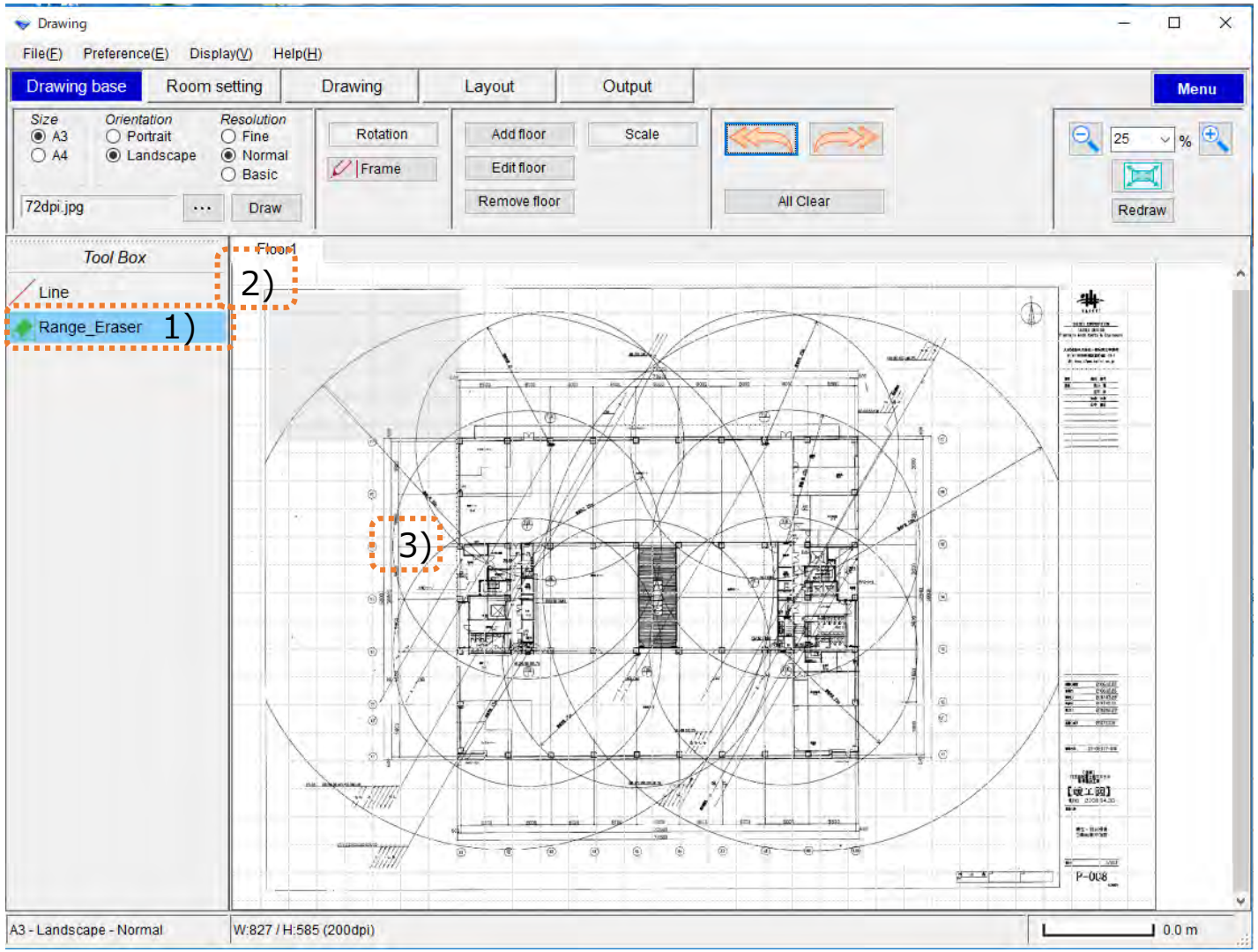
3)Left-click at end point

4)Draw with left-click on the picture

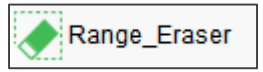
*If stop drawing ,Press the Esc button

Tool box (2/2)

How to Remove part of picture



1)Select Range Eraser

Not selected Range eraser 

Selected Range Eraser 

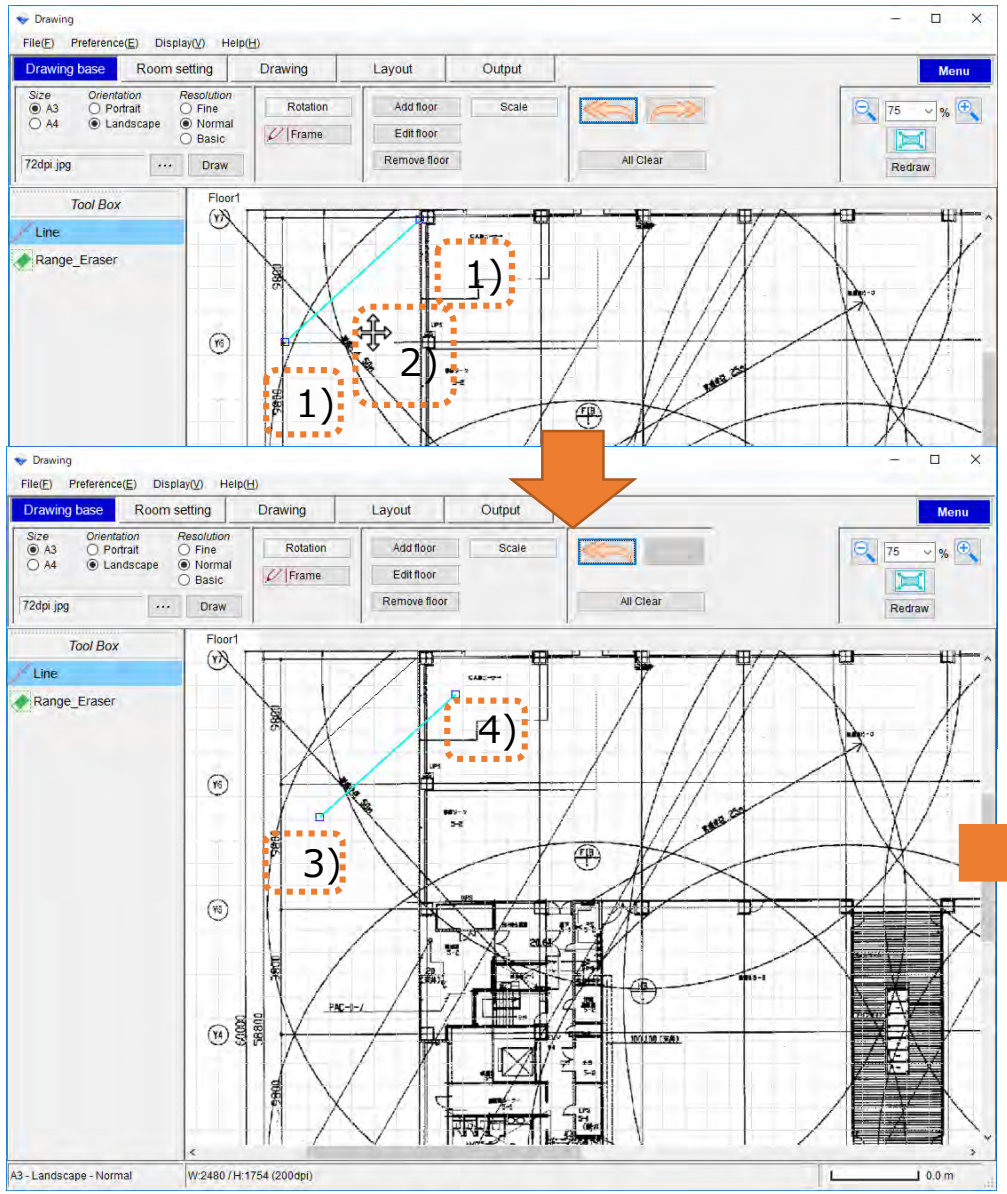
2)Left-click at starting point

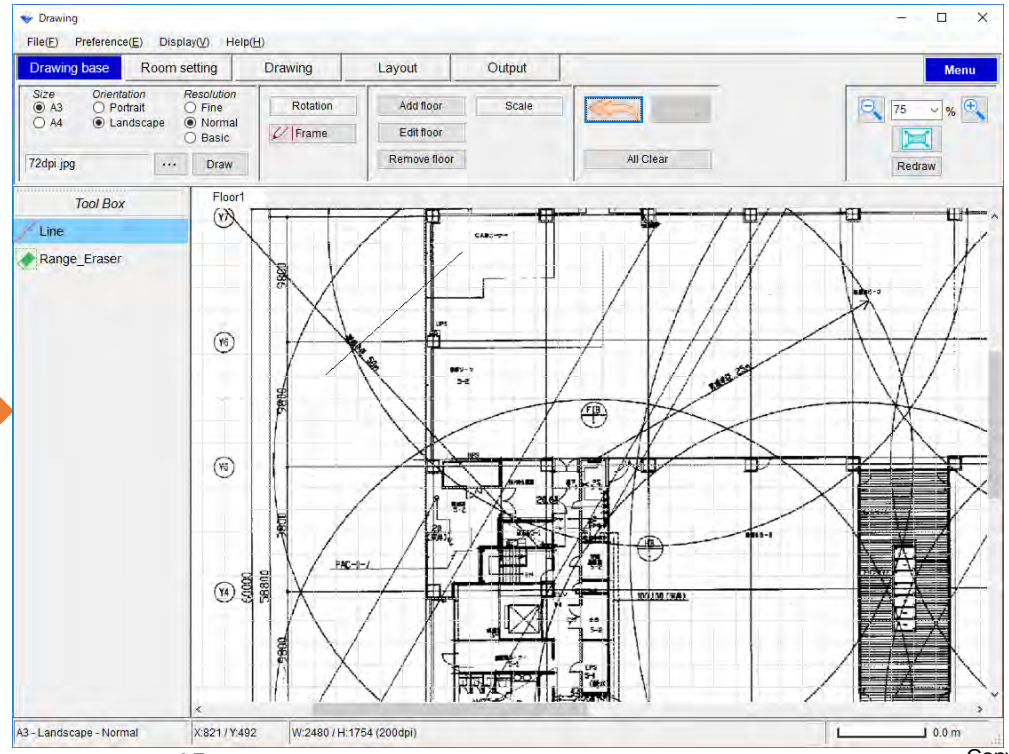
3)Drag to end point

*If stop drawing ,Press the Esc button

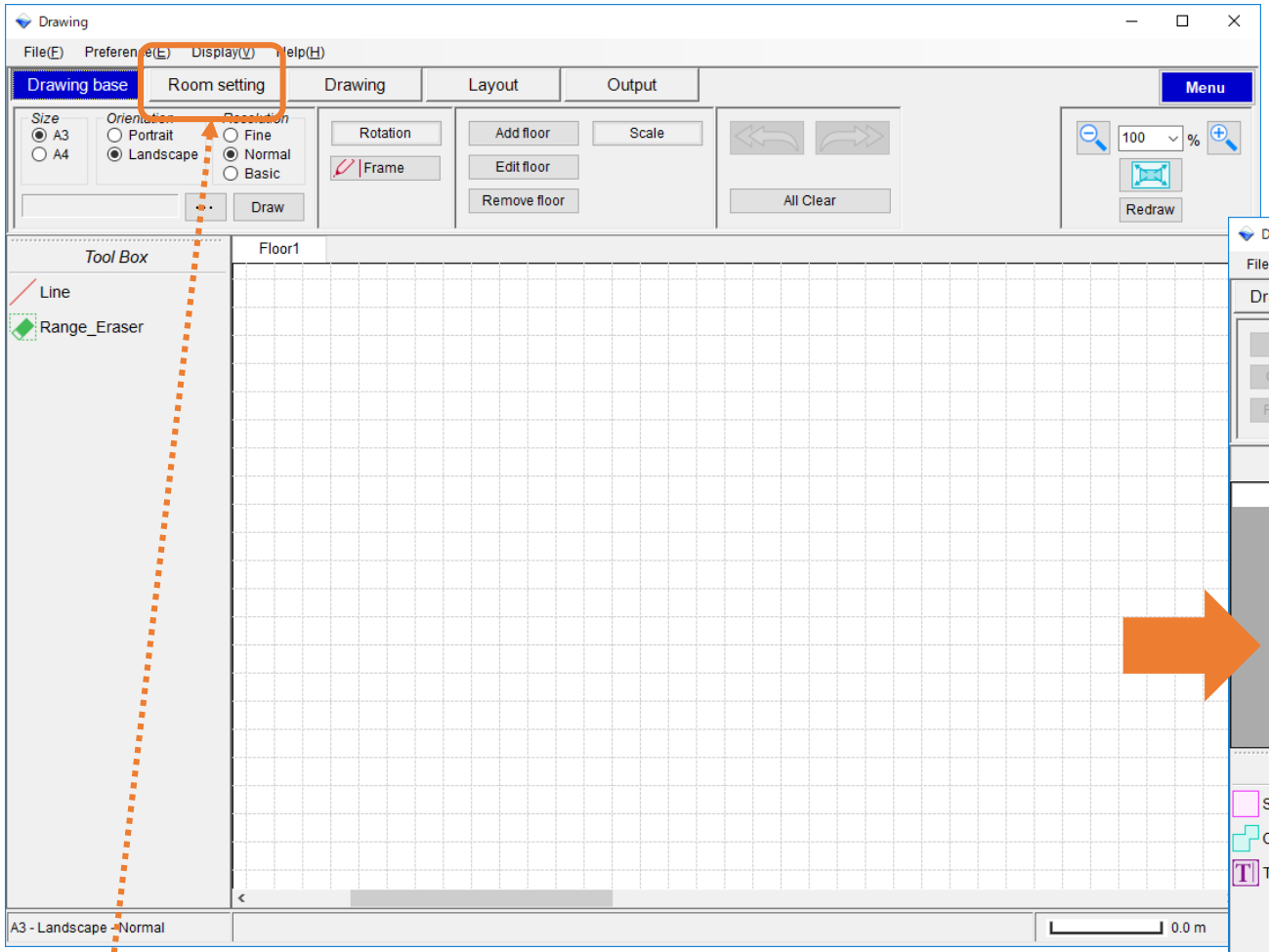
How to move of Line

1)Left-Click the start or end point of the Line
2)Left-click at Line of center
3)Drag to move
4)Draw with left-click on the picture



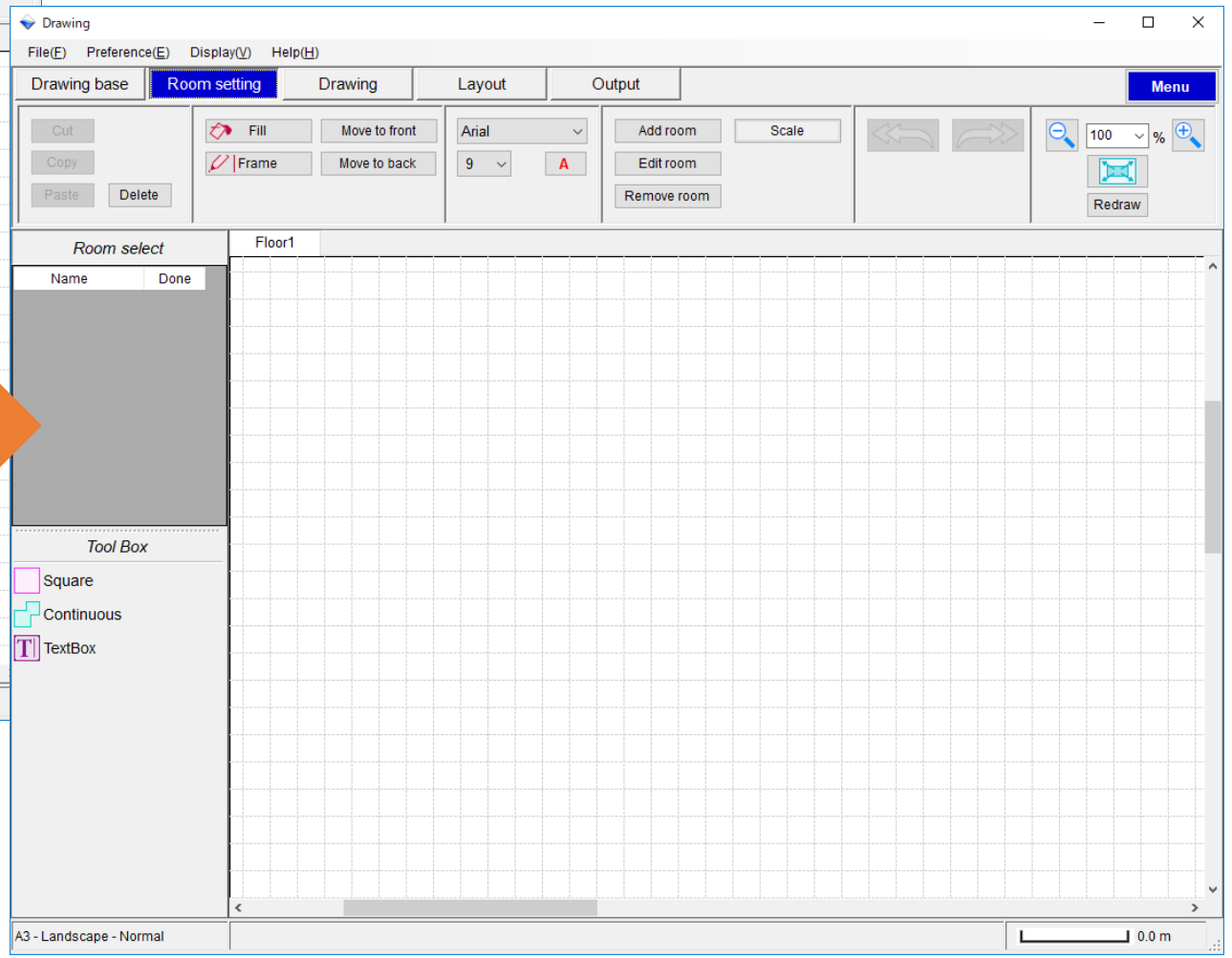


Room setting

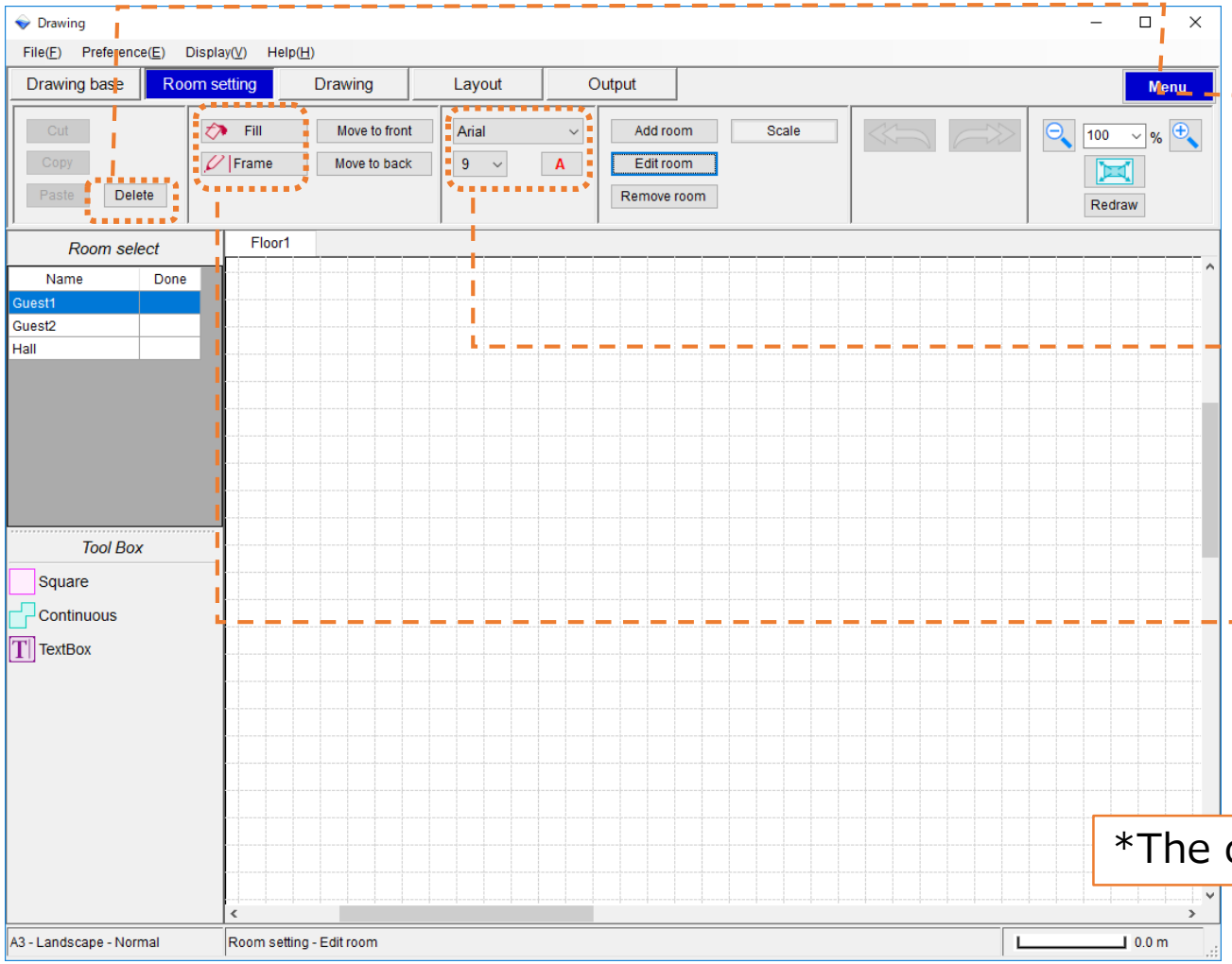


Select “Room setting”

Room setting screen (Drawing)



Room setting(1/2)



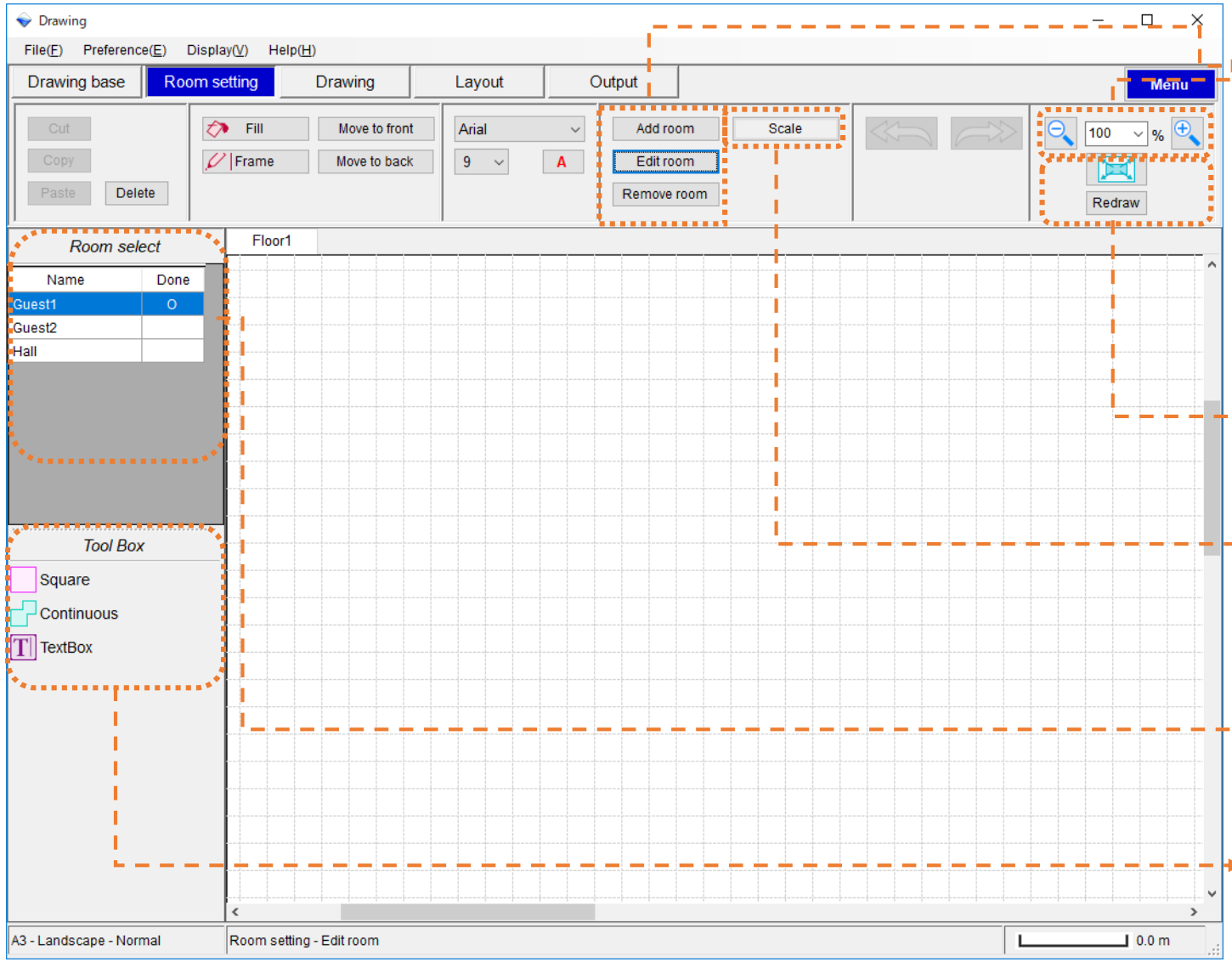
Delete object
Delete : Delete object

Font setting
Font type :Select font in textbox
Font size :Select font size in textbox
Font color :Select font color in textbox

Control object colors
Fill :Select object fill color
Frame :Select object frame color

*The contents setting on the panel are adapted in all drawing

Room setting(2/2)



Room setting

Add room, Remove room

Edit room :Refer to “Edit room“

Zoom to

: Zoom up

: Zoom down

: Select zoom

: Full picture display

Redraw

Redraw: Draw the displayed picture again

Scale

Refer to “Scale setting“

Room list

Room name

Done : “○” Made the room

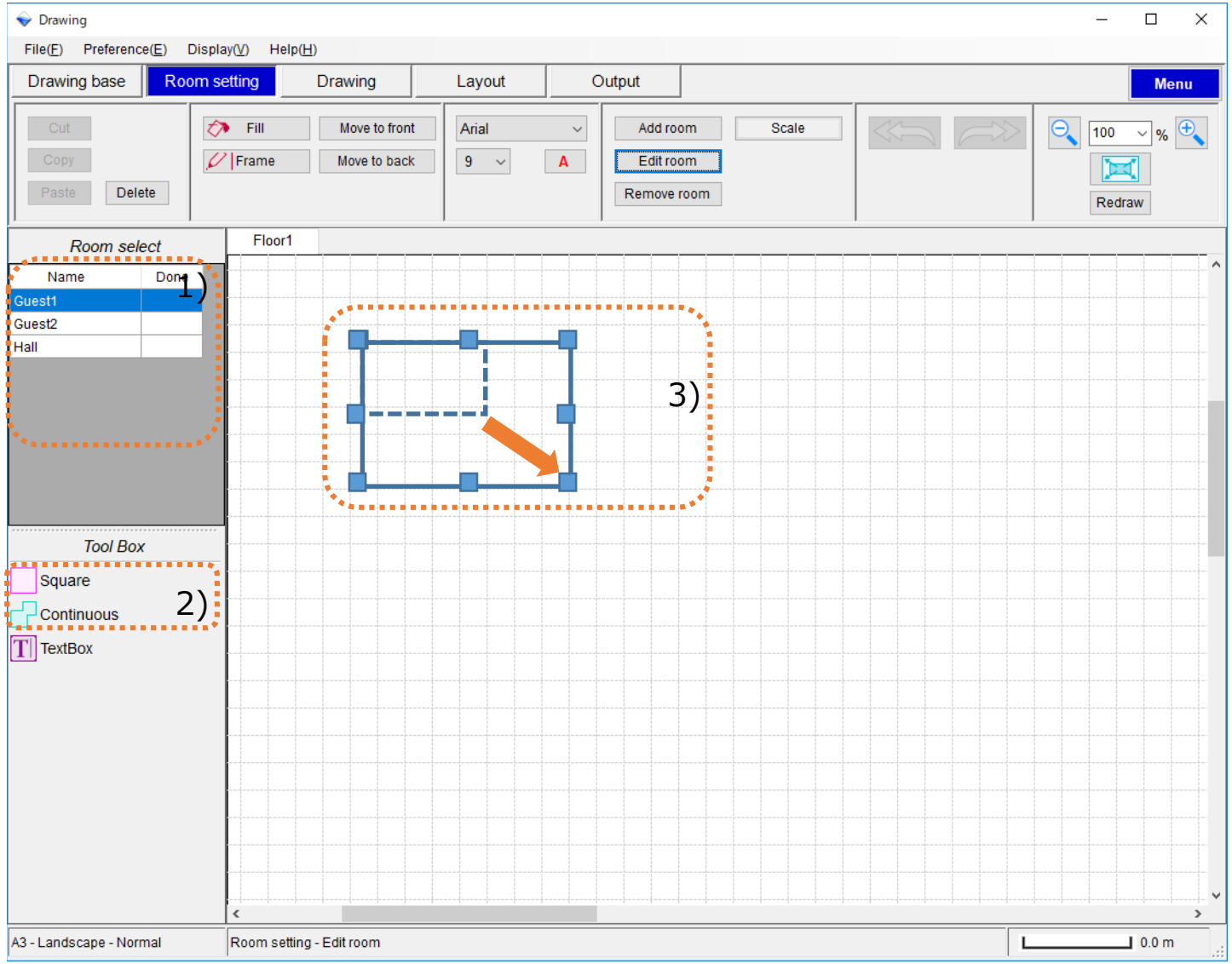
“ “ Not made the room

Tool Box

Square,Polygon,Textbox : Refer to “Making room”

Making Room

How to make a room



1)Select room

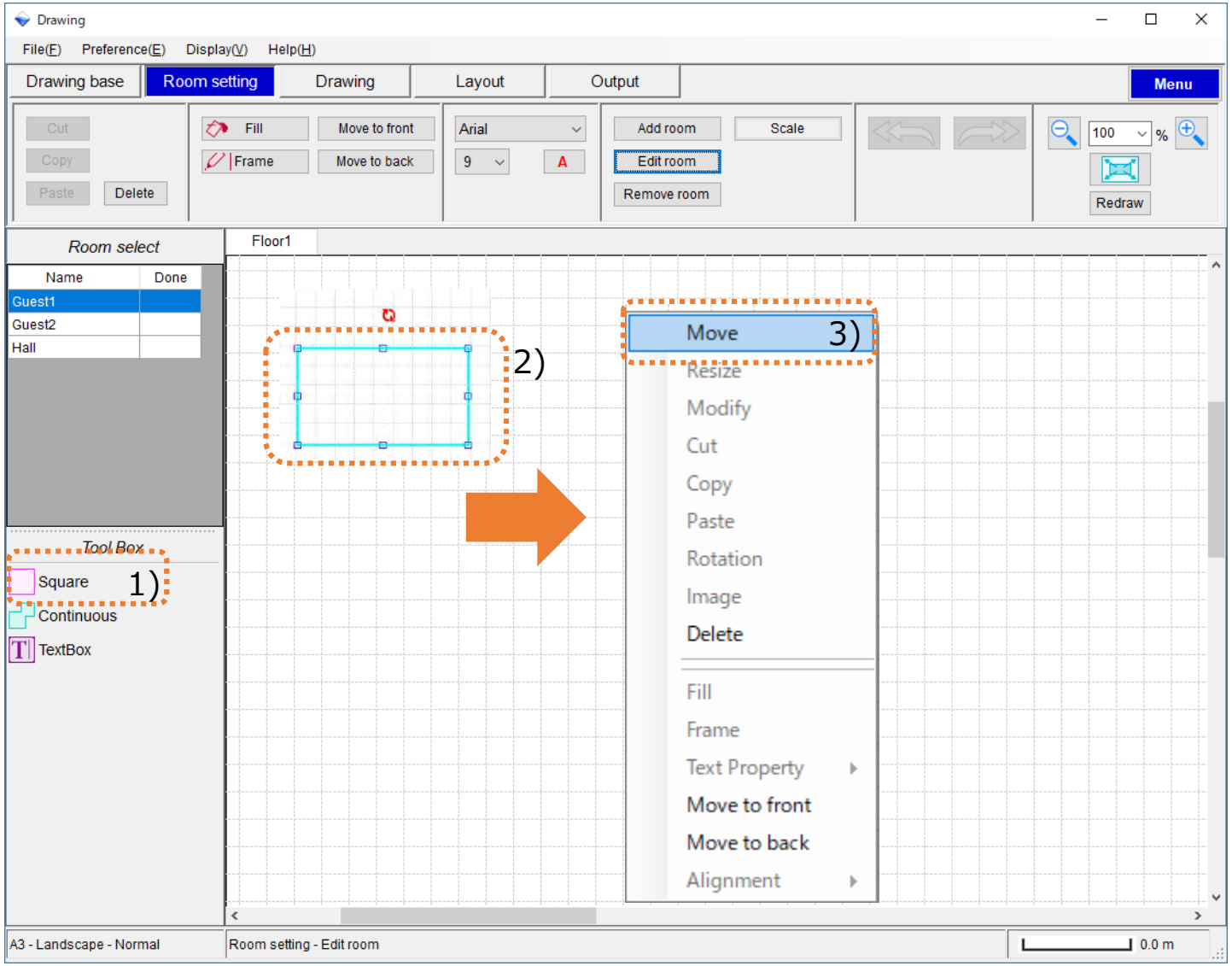
2)Select object

3)Draw object

Square,Polygon：Refer to “Drawing”

Moving Room

How to move room



1)Select object

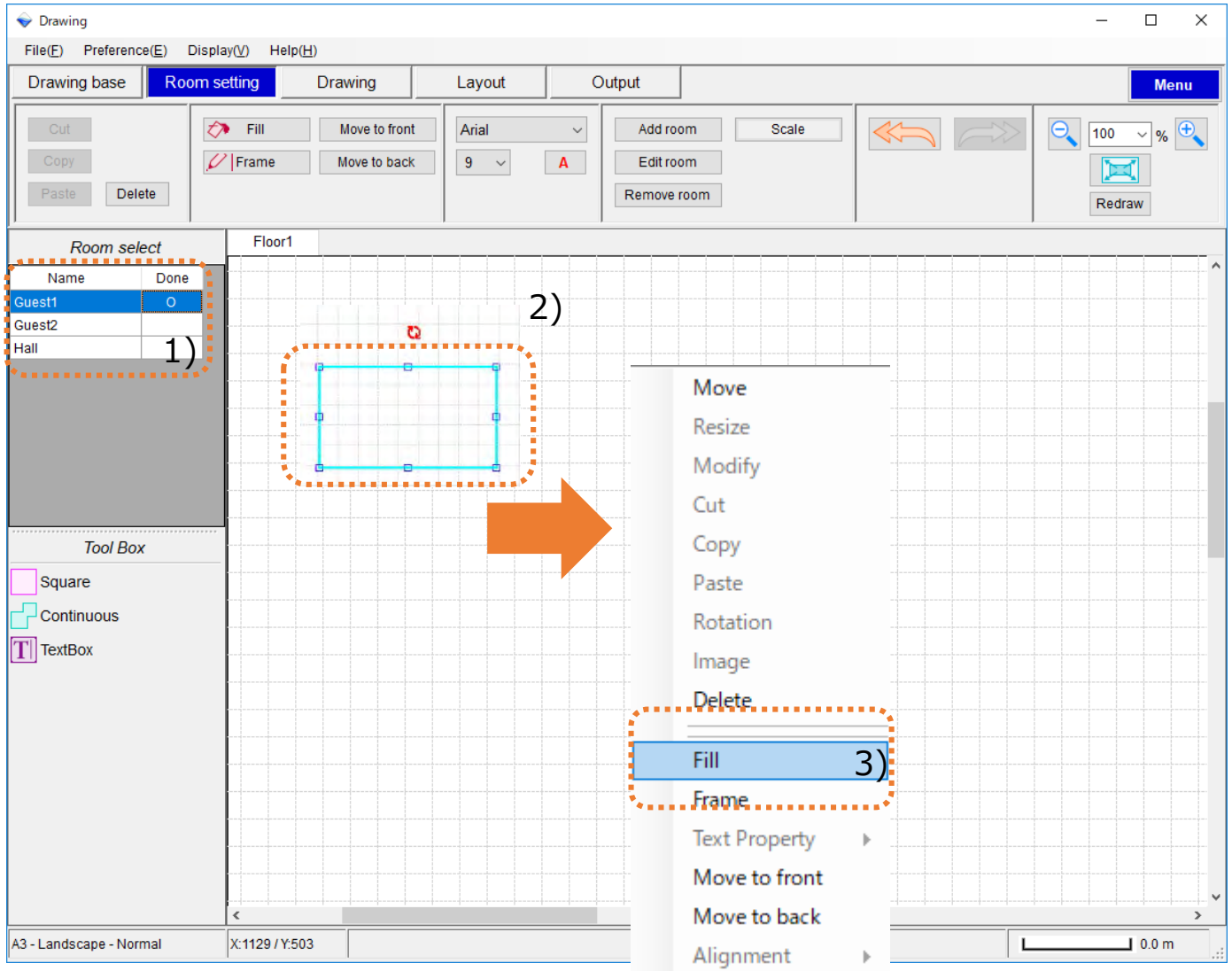
Select the room in Room list

2)Right-click

3)Select Move

Setting Room Color

How to change room color



1)Select object

Select the room in Room list

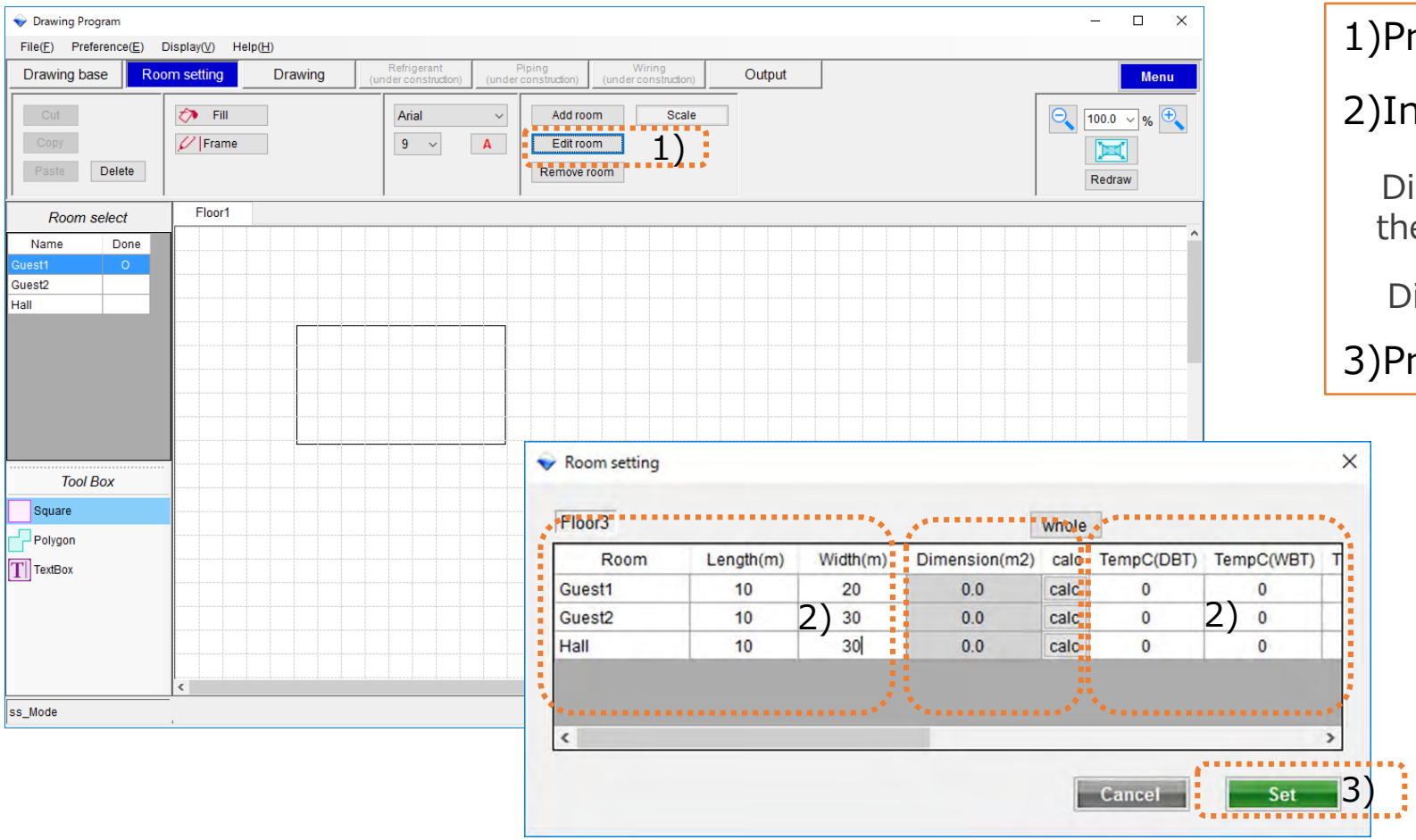
2)Right-click

3)Select Fill or Frame

Refer to “Drawing”

Edit room

How to edit the room



1)Press Edit room

2)Input room information

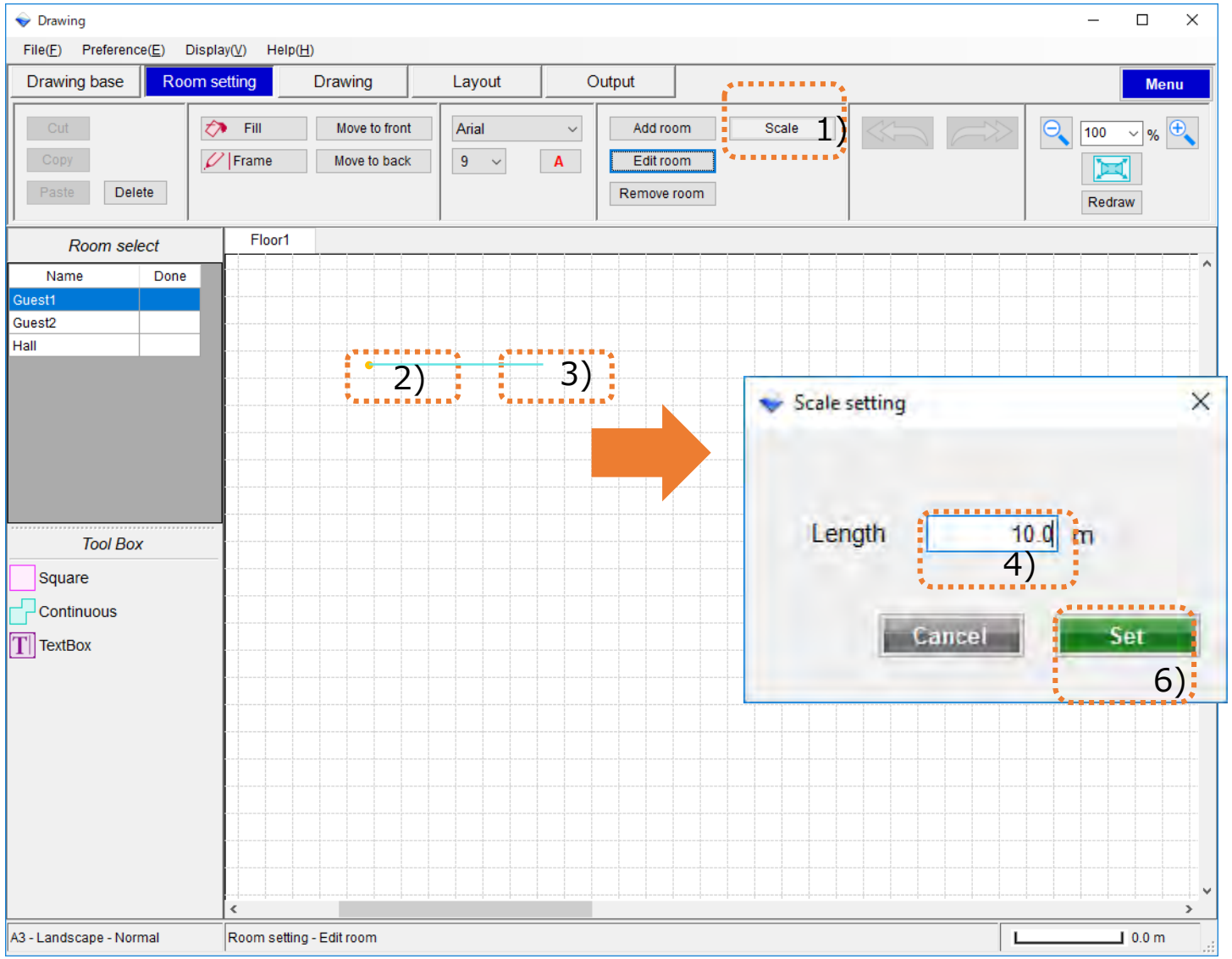
Dimension is not entered. Press calc, so display the dimension automatically

Displayed item kind is set in Design Simulator

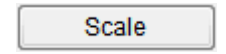
3)Press set

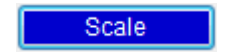
Scale setting

How to scale setting



1)Select Scale

Not selected scale 

Selected scale 

2)Left-click at starting point

3)Left-click at end point

4)Input the scale

5)Press Tab key

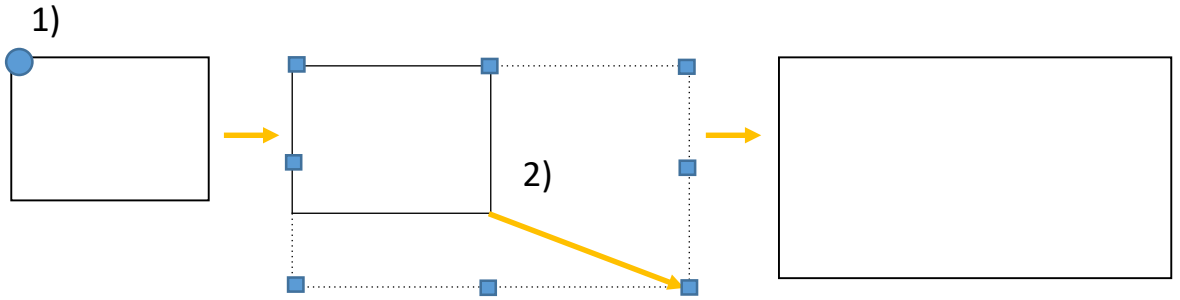
6)Press Set

*If stop scale setting,press the Esc button

Drawing(1/2)

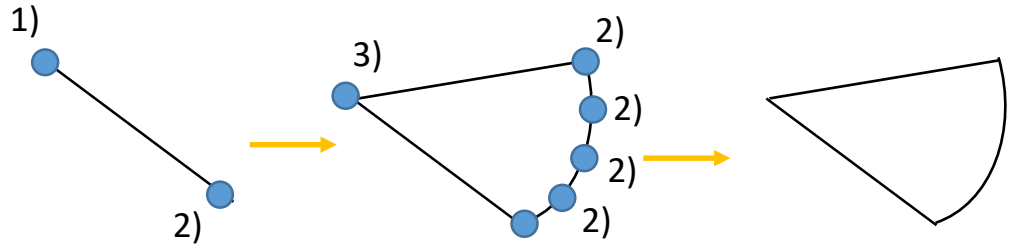
Square,Circle,Triangle

1)Left-click at starting point
2)Drag to end point



Polygon

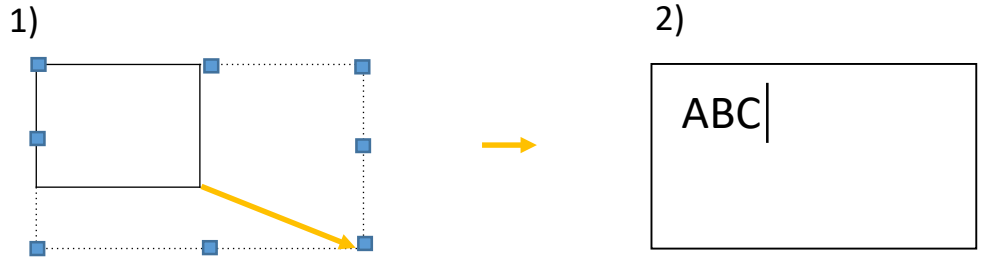
1)Left-click at starting point
2)Left-click at second point
Repeat
3)Double-click at end point
End point must be near the starting point
*The max number of points is 20



*If stop drawing ,Press the Esc button

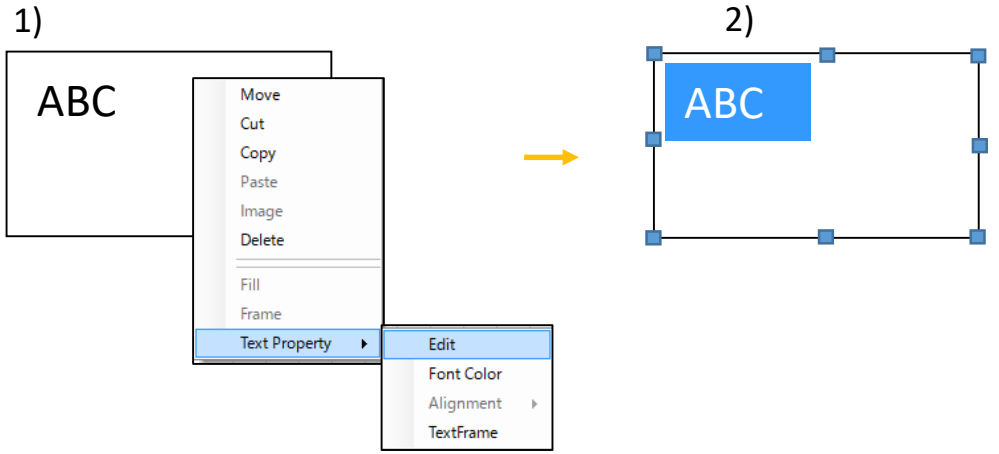
Text Box

1)Left-click at starting point & Drag to end point
2)Input text



Edit Text

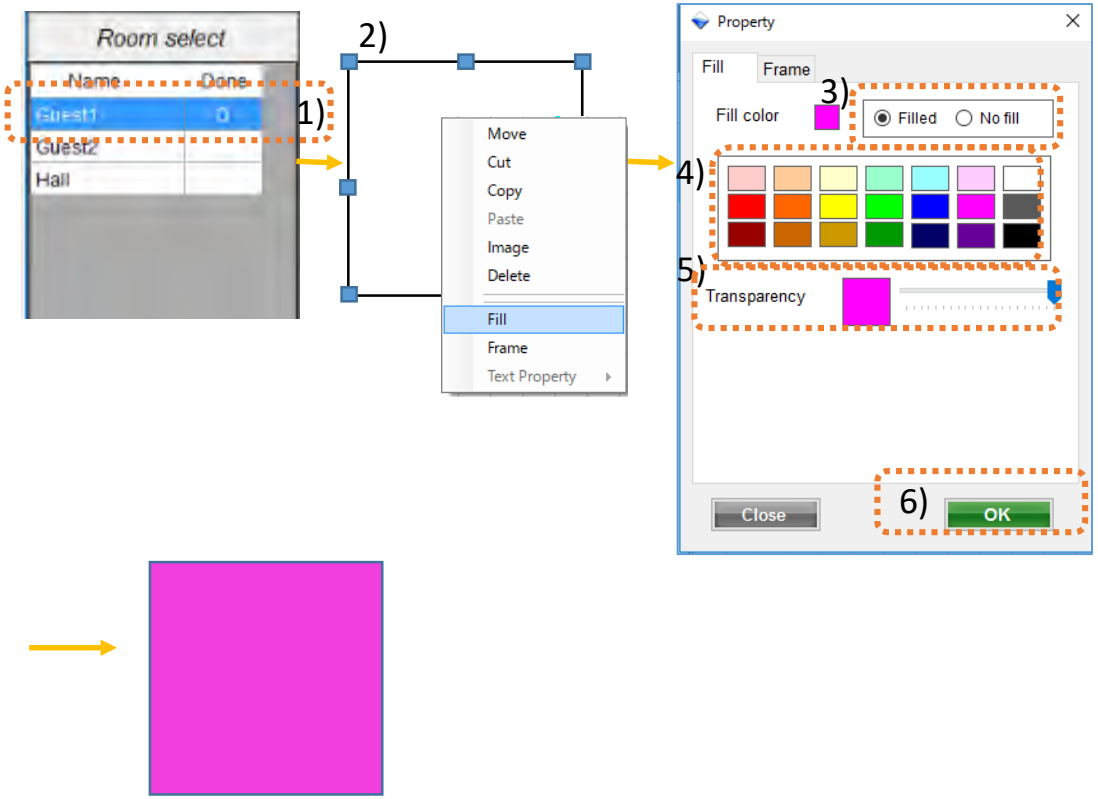
1)Right-click on text box's center point
2)Select Text Property,and Edit



Drawing(2/2)

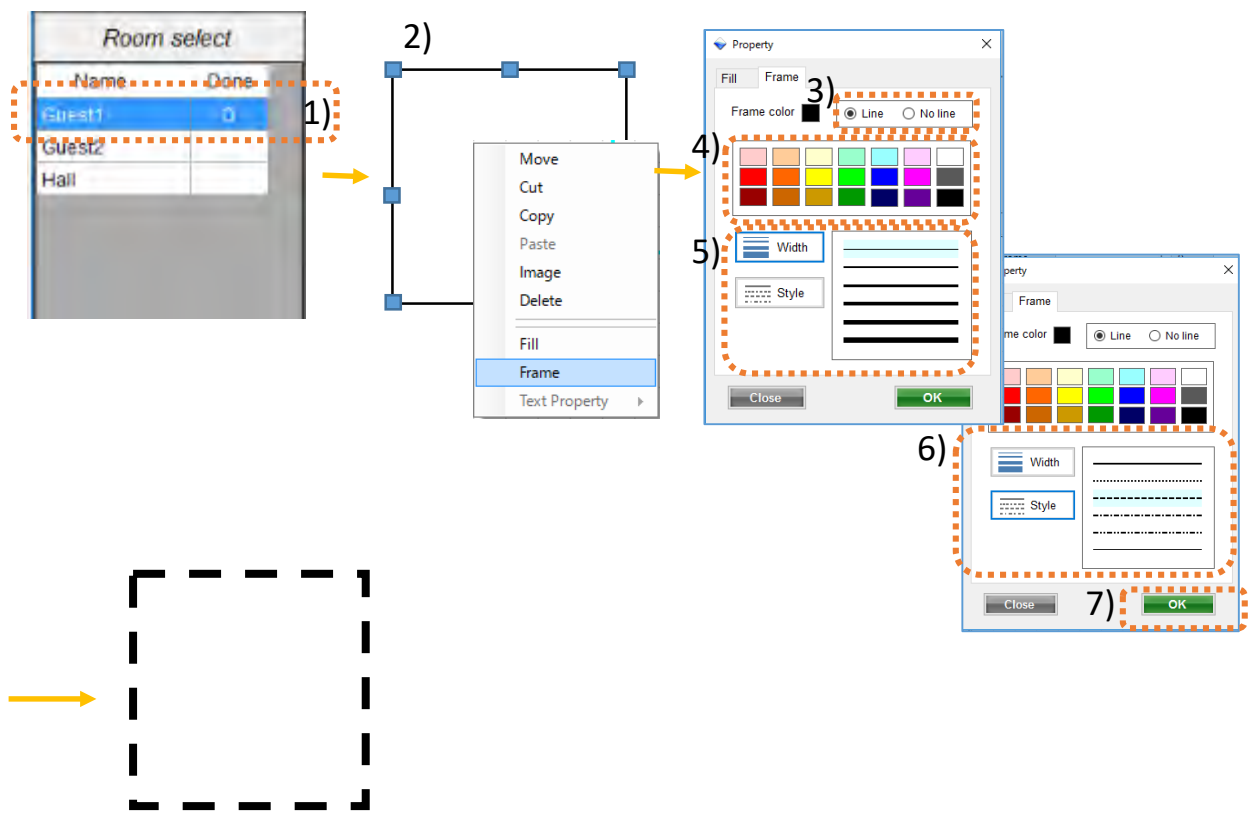
How to Fill a object (Square)

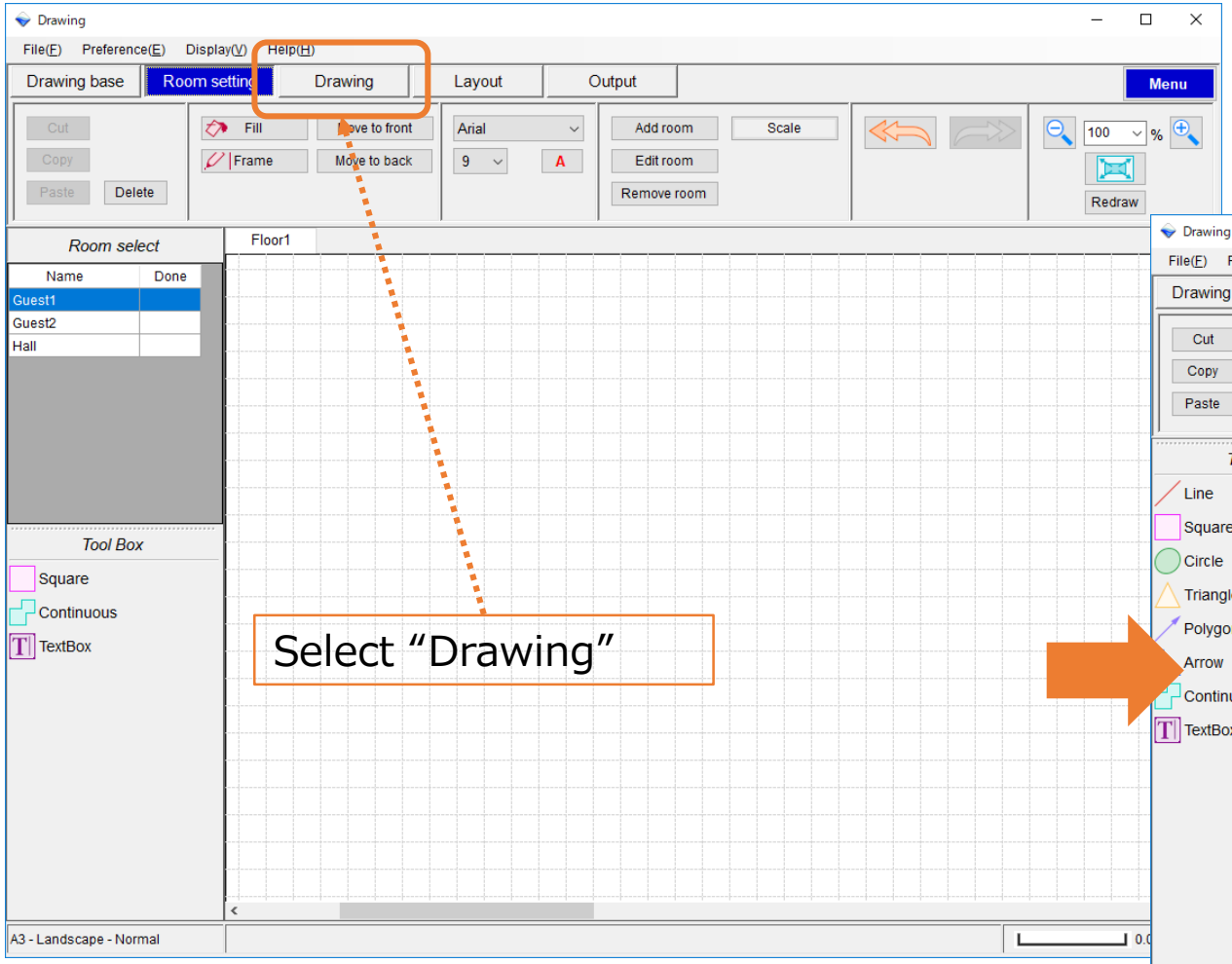
1)Select object
  Select the room in Room list
2)Right-click,and Select Fill
3)Select Filled
4)Select Color
5)Select Transparency
6)Select OK



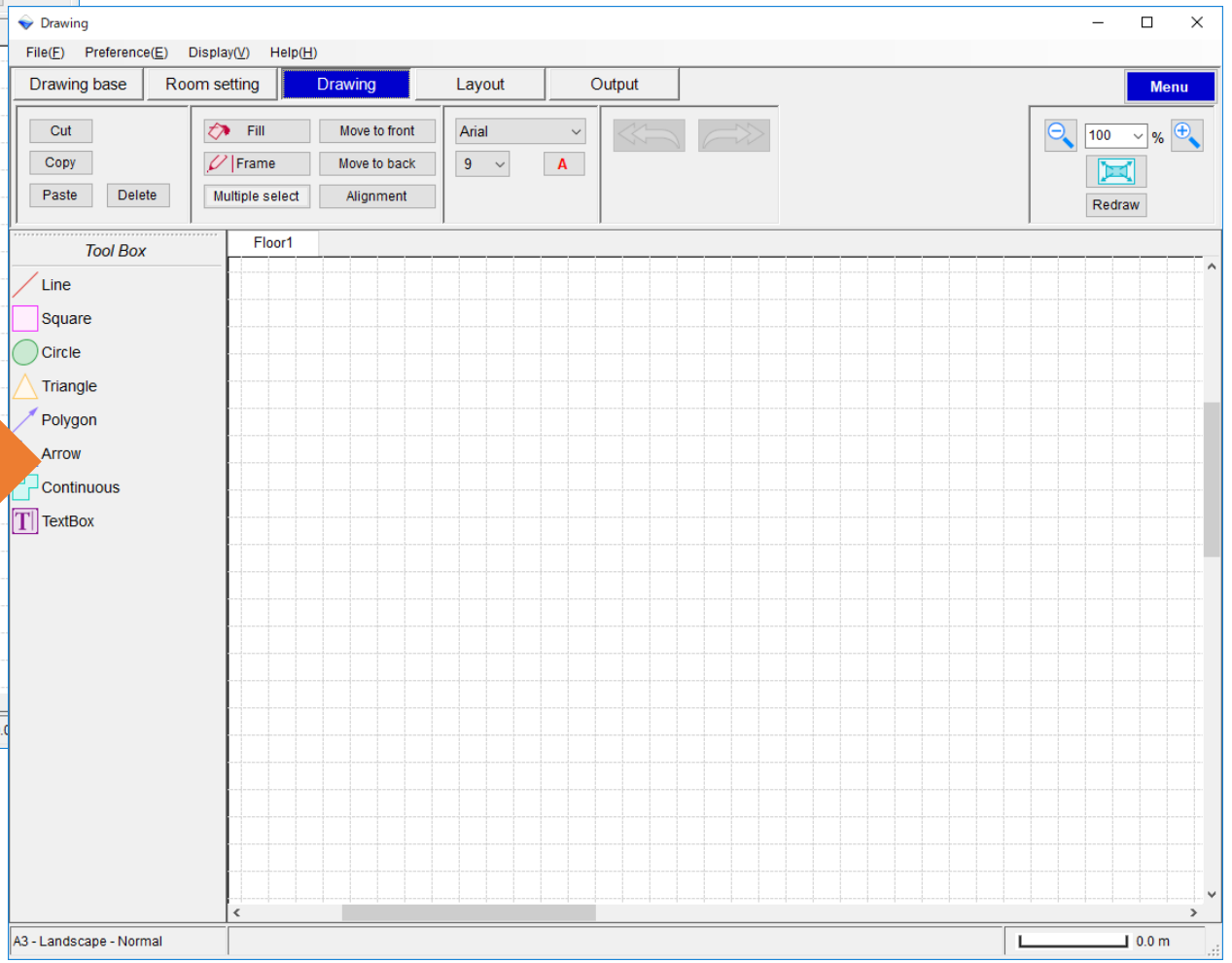
How to Frame a object

1)Select object
  Select the room in Room list
2)Right-click,and Select Frame
3)Select Line
4)Select Color
5)Select Width
6)Select Style
7)Select OK

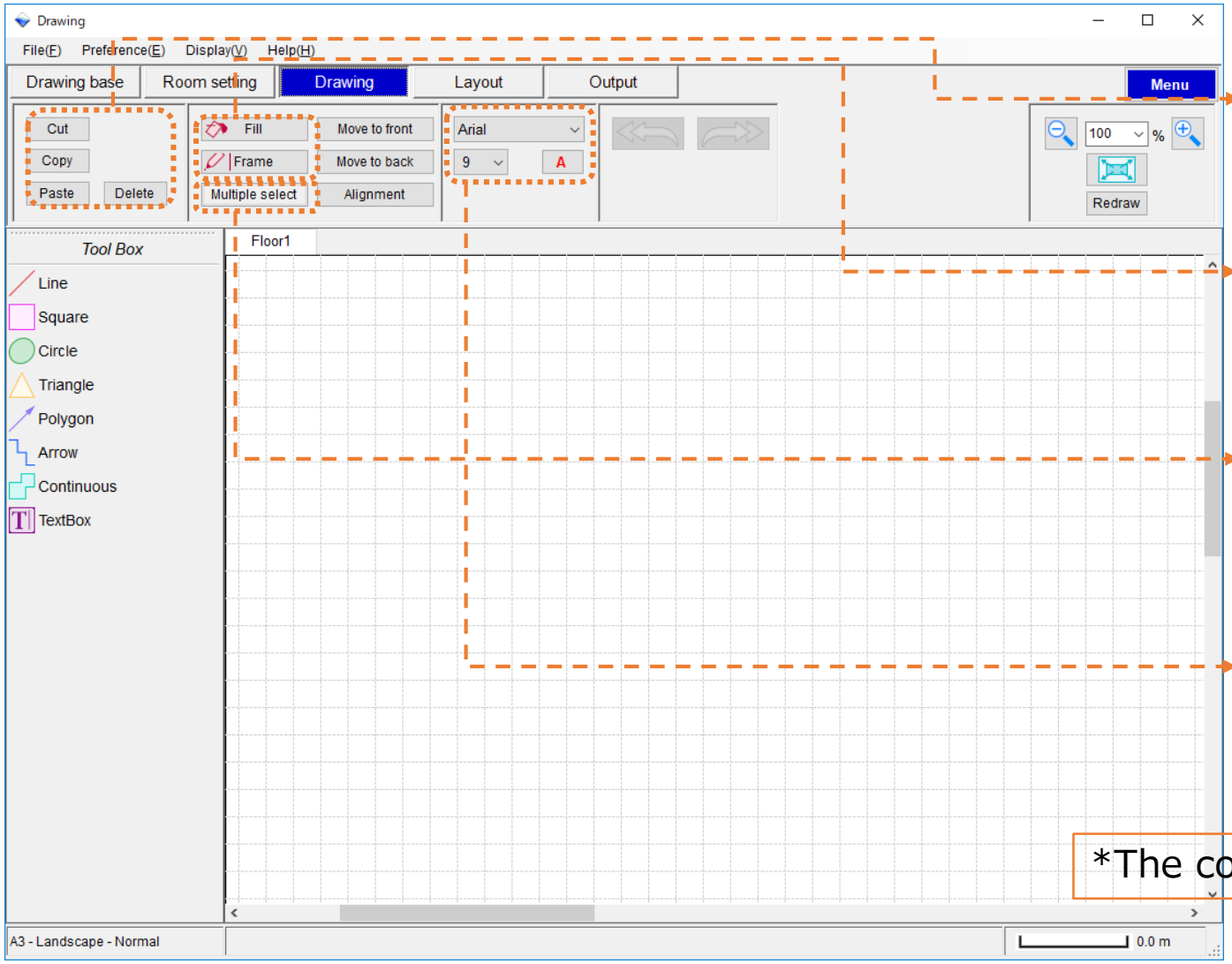




Drawing Design screen (Drawing)



Drawing (1/2)



Control objects

Cut,Copy,Paste, Delete : Control objects

Control object colors

Fill :Select object fill color
Frame :Select object frame color

Multiple select

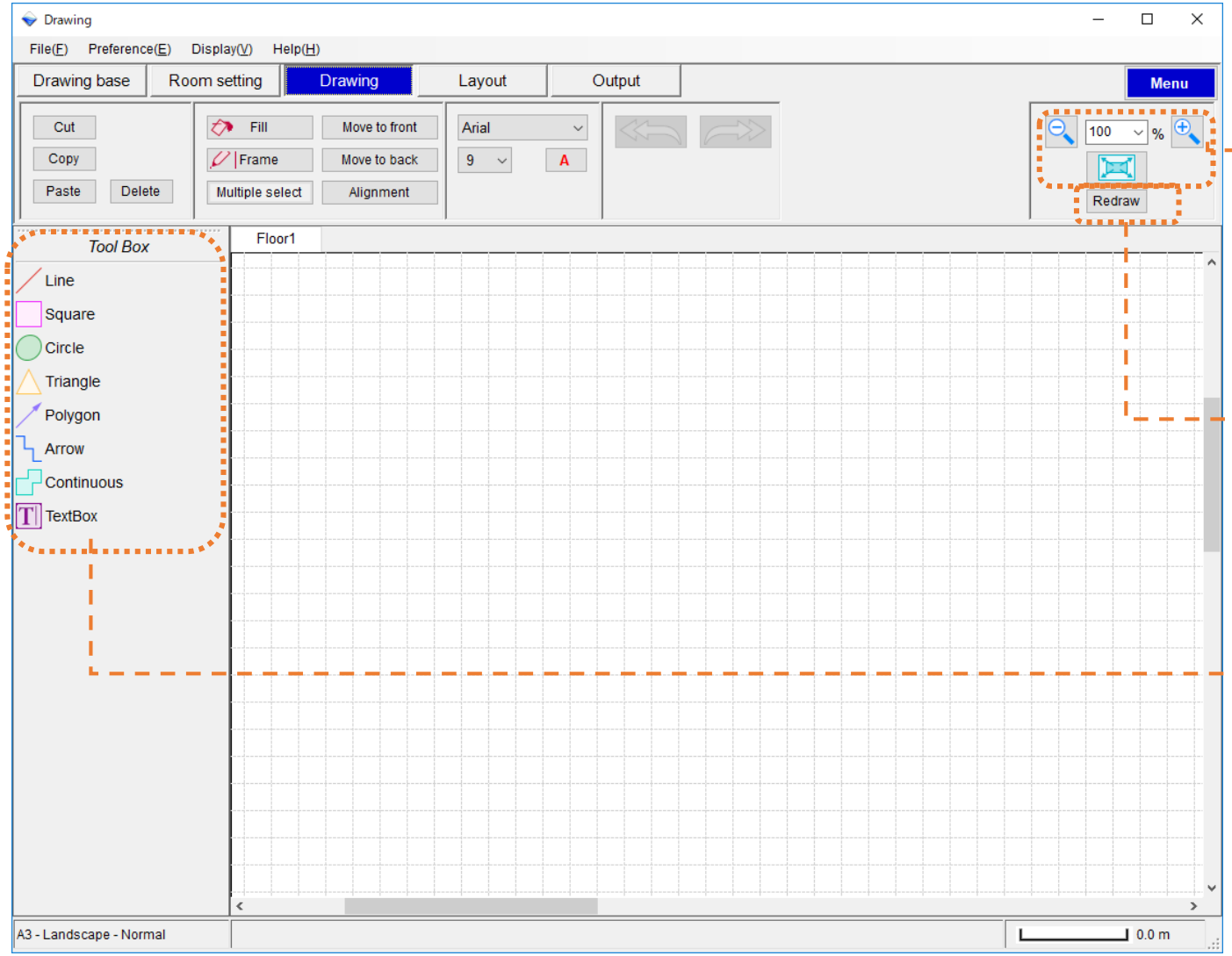
Multiple select :Select some objects

Font setting

Font type :Select font in textbox
Font size :Select font size in textbox
Font color :Select font color in textbox

*The contents set on the panel are adapted in all drawing

Drawing (2/2)



Zoom to

: Zoom up

: Zoom down

:Select zoom

:Full picture display

Redraw

Redraw: Draw the displayed picture again

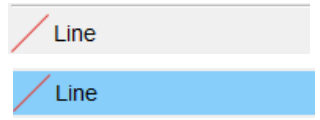
Tool Box

Line,Square,Circle,Triangle, Arrow,
Continuous,Polygon,Text Box :refer to”Tool Box”

Press button

Not selected Line

Selected Line



*If stop drawing ,Press the Esc button

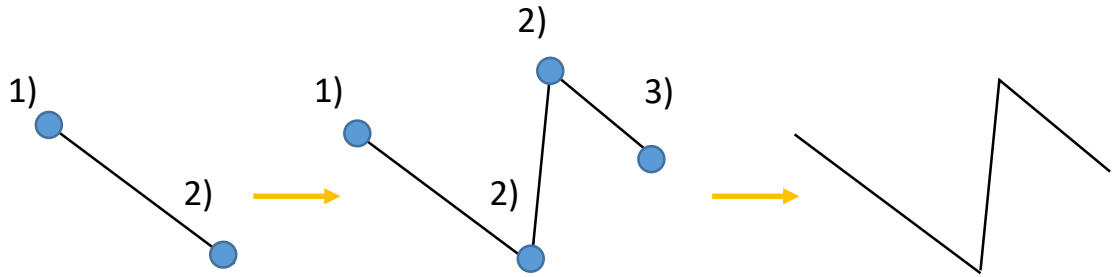
Tool Box(1/5)

Line

1)Left-click at starting point
2)Left-click at end point
3)Draw with left-click on the picture

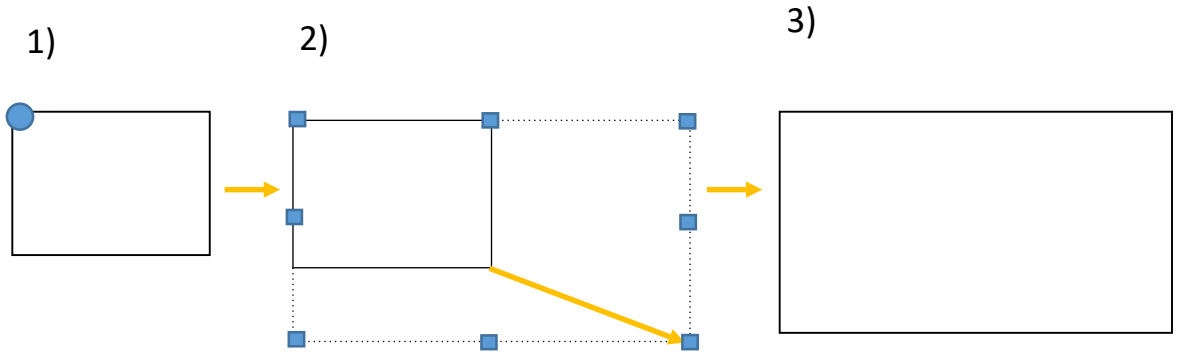
Continuous

1)Left-click at starting point
2)Left-click at second point
Repeat
3)Double-click at end point
*The max number of points is 20



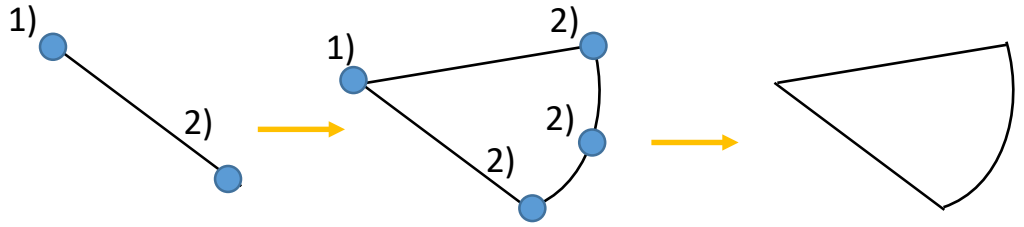
Square,Circle,Triangle

1)Left-click at starting point
2)Drag to end point



Polygon

1)Left-click at starting point
2)Left-click at second point
Repeat
3)Double-click at end point
End point must be near the starting point
*The max number of points is 20



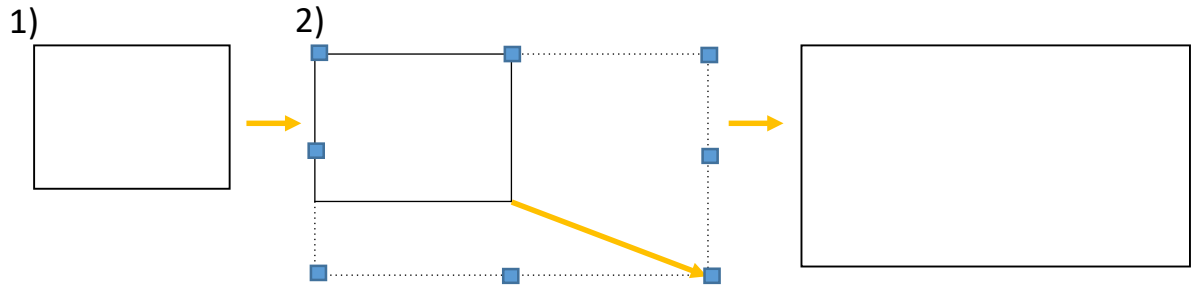
Tool Box(2/5)

Select a object (Square,Circle,Triangle)

1)Left-click on drawing object's center point
2)The object is selected

Resize (Square,Circle,Triangle)

1)Left-click at Drawing Symbol
2)Drag blue frame

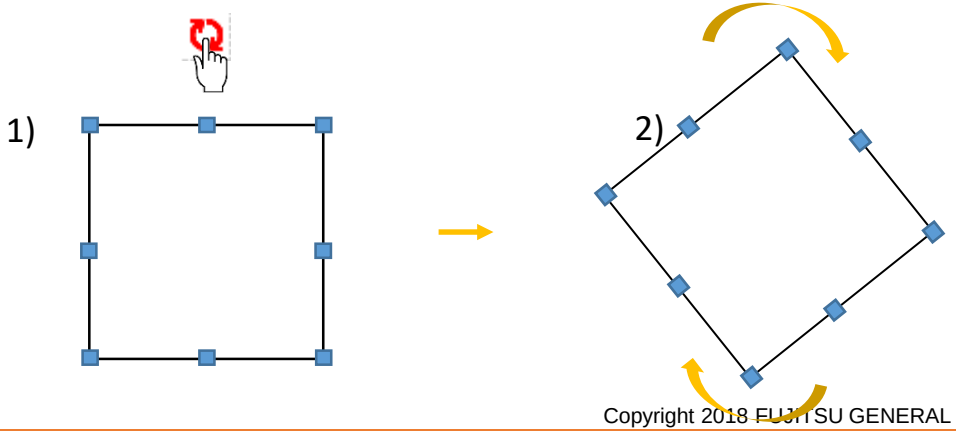


Select a line

1)Left-Click the start or end point of the Line
2)The line is selected

Rotation (Square, Triangle)

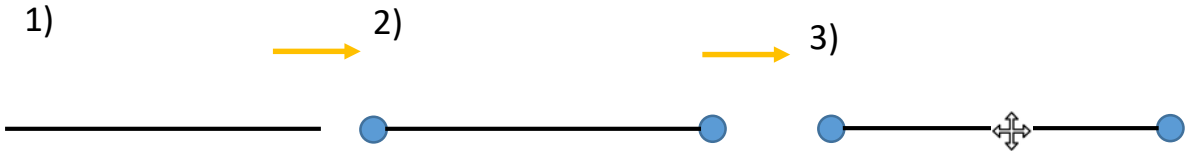
1)Left-click at a object
2)Left-click at Rotation mark of center
3)Turn a object



Tool Box(3/5)

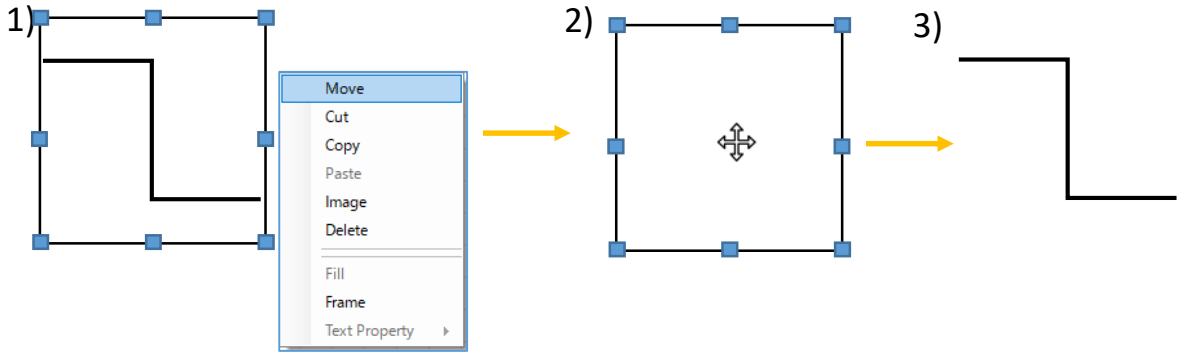
Move a line

1)Left-Click the start or end point of the Line
2)Left-click at Line of center
3)Drag to move
4)Draw with left-click on the picture



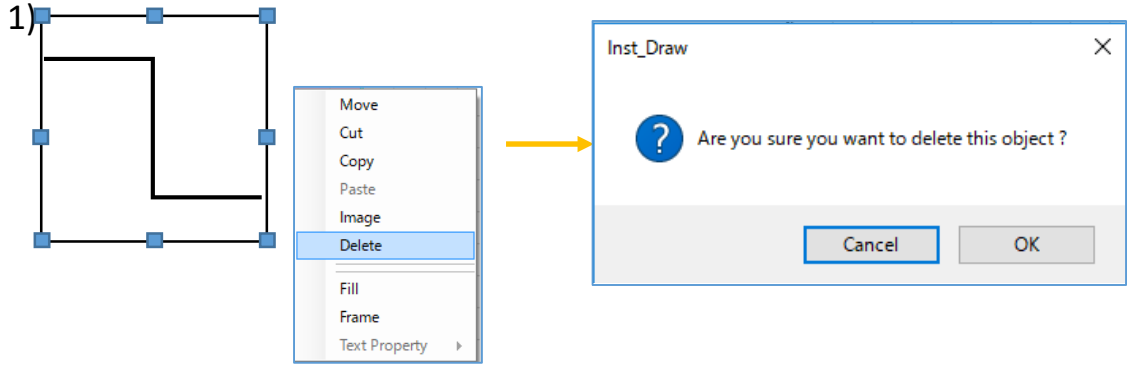
Move a Continuous,Polygon

1)Right-Click on drawing object's center point
Select Move
2)Drag to move
3)Draw with left-click on the picture



Delete a Continuous,Polygon

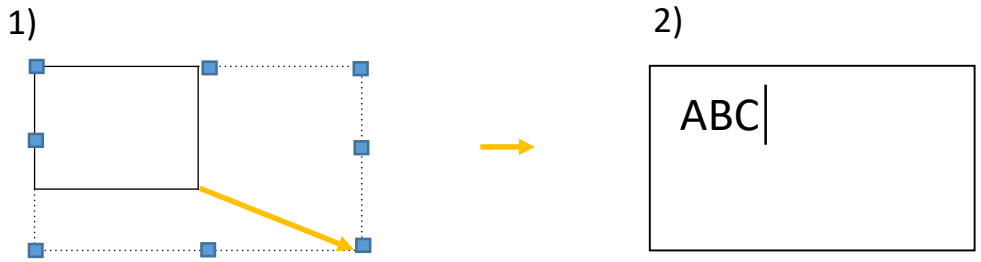
1)Right-Click on drawing object's center point
Select Delete
2)Select OK



Tool Box(4/5)

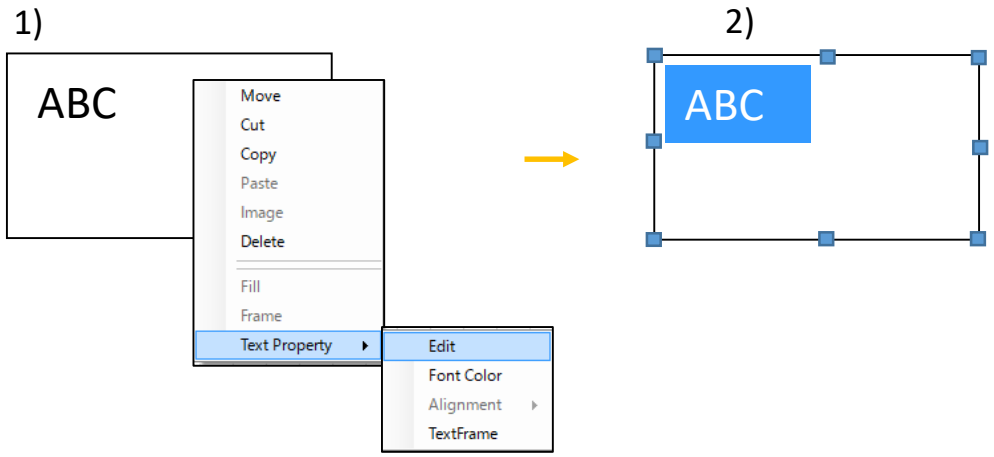
Text Box

1)Left-click at starting point & Drag to end point
2)Input text



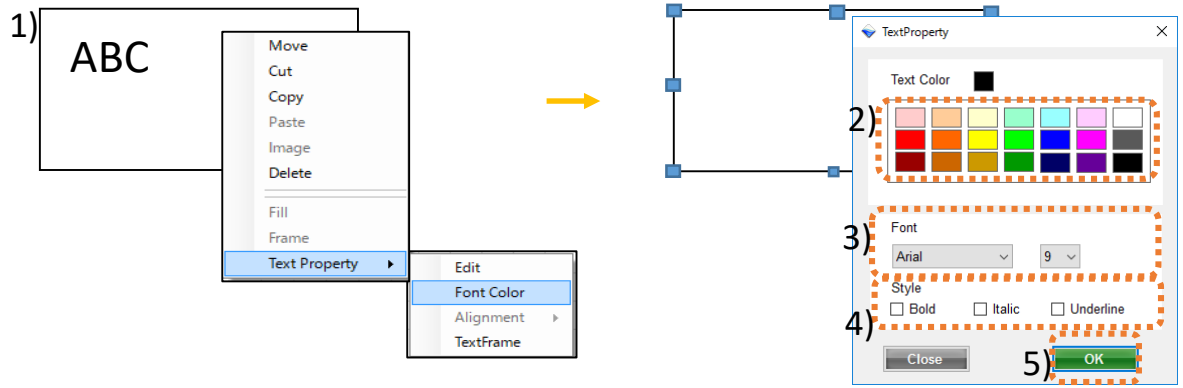
Edit Text

1)Right-click on drawing object's center point
2)Select Text Property,and Edit



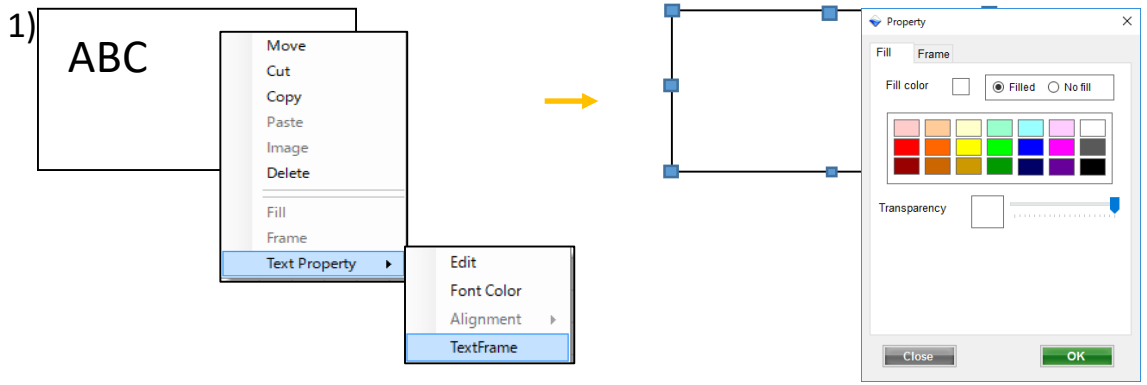
Font Color

1)Right-Click on drawing object's center point
Select Font Color
2)Select Text Color
3)Select Text and Text Size
4)Check Text Style
5) Select OK



Text Frame

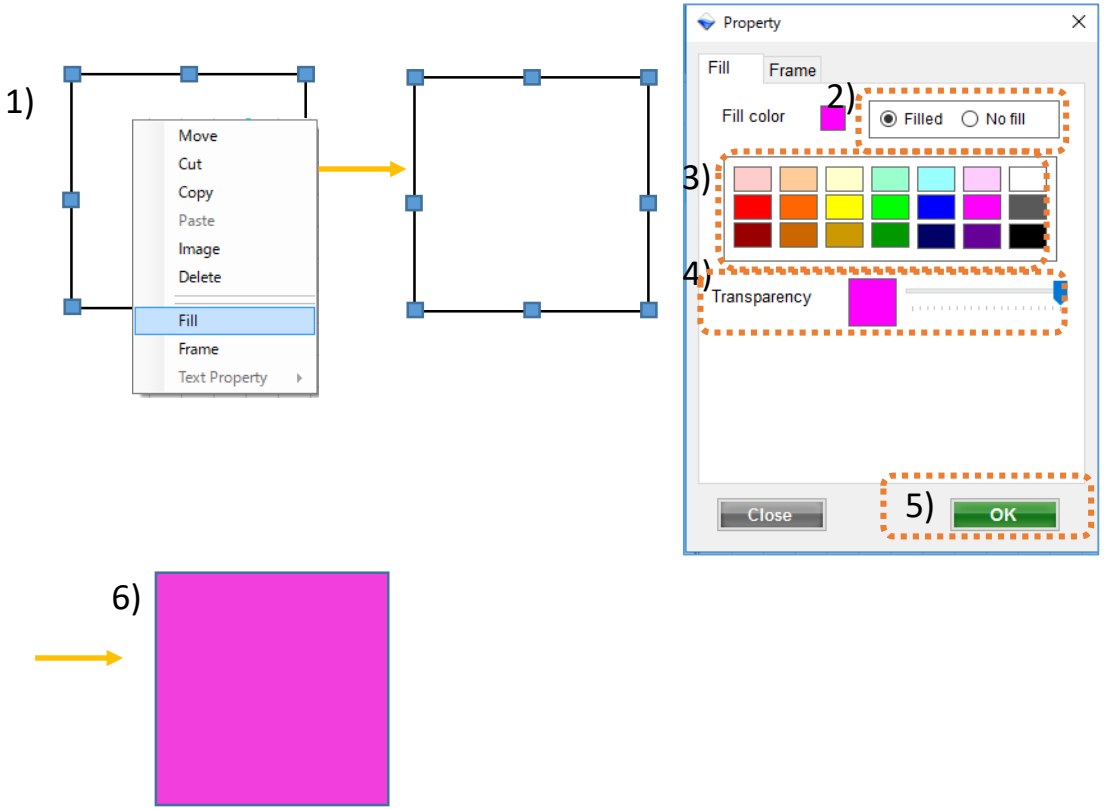
Refer to "Drawing(1/2)"



Tool Box(5/5)

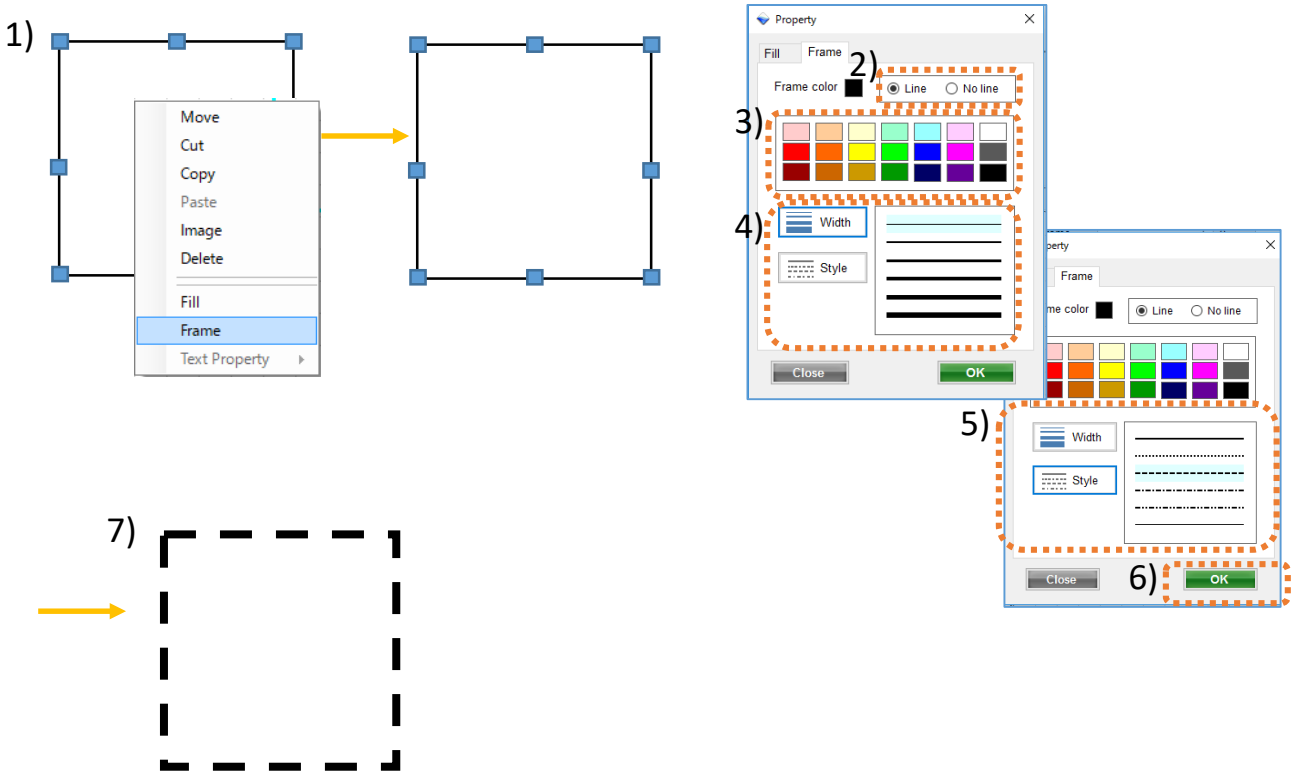
How to Fill a object (Square,Circle,Triangle)

1)Right-Click on drawing object's center point
  Select Fill
2)Select Filled
3)Select Color
4)Select Transparency
5)Select OK

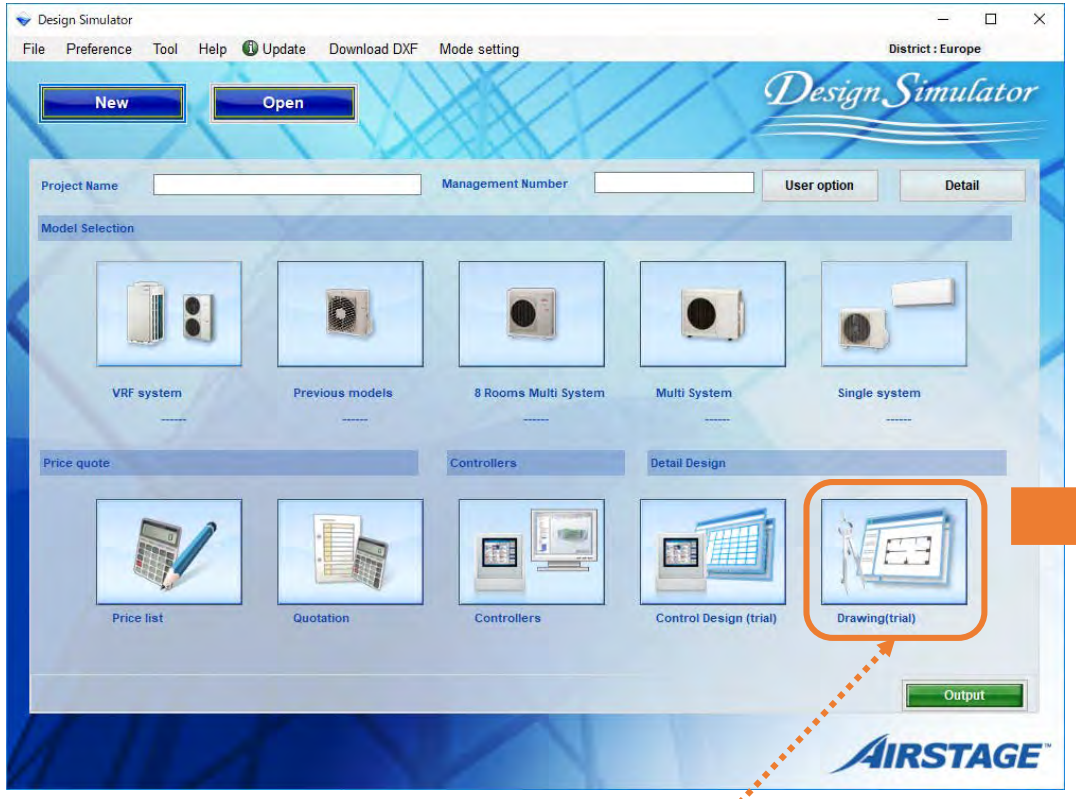


How to Frame a object

1)Right-Click on drawing object's center point
  Select Frame
2)Select Line
3)Select Color
4)Select Width
5)Select Style
6)Select OK

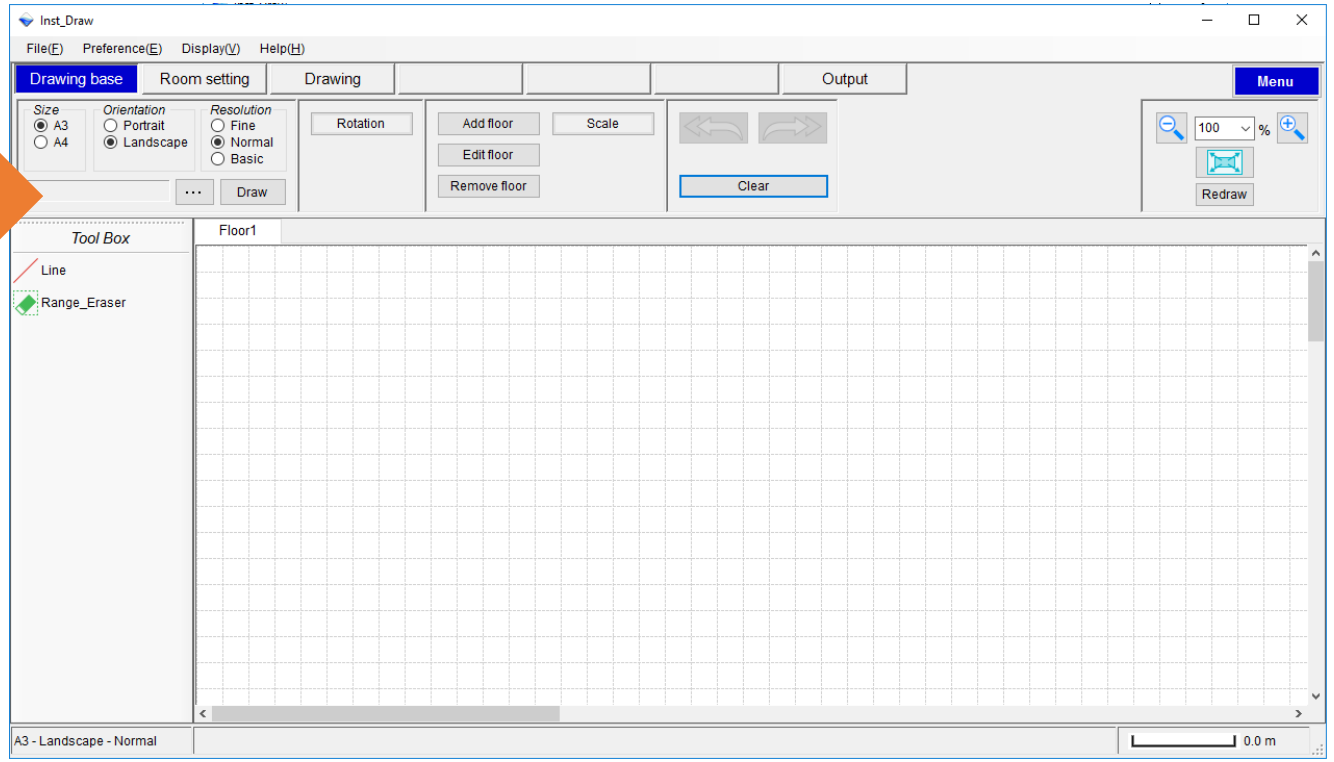


Drawing Design

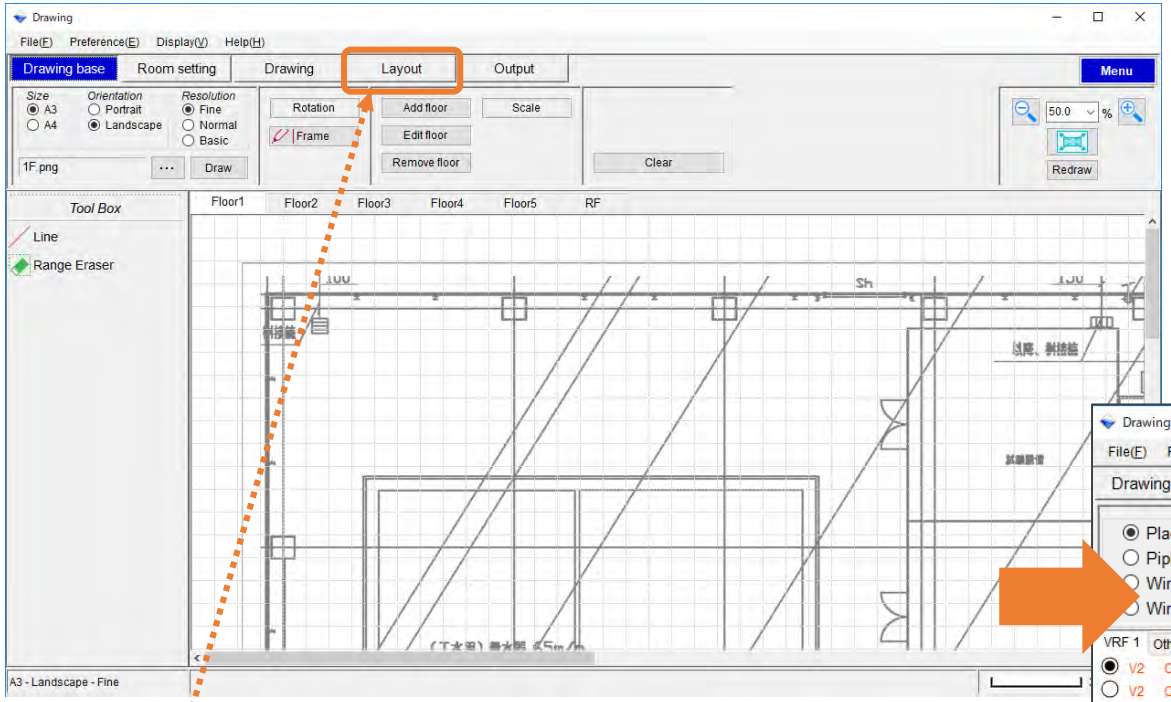


Select “Drawing Design”

Drawing Design screen (Drawing base)

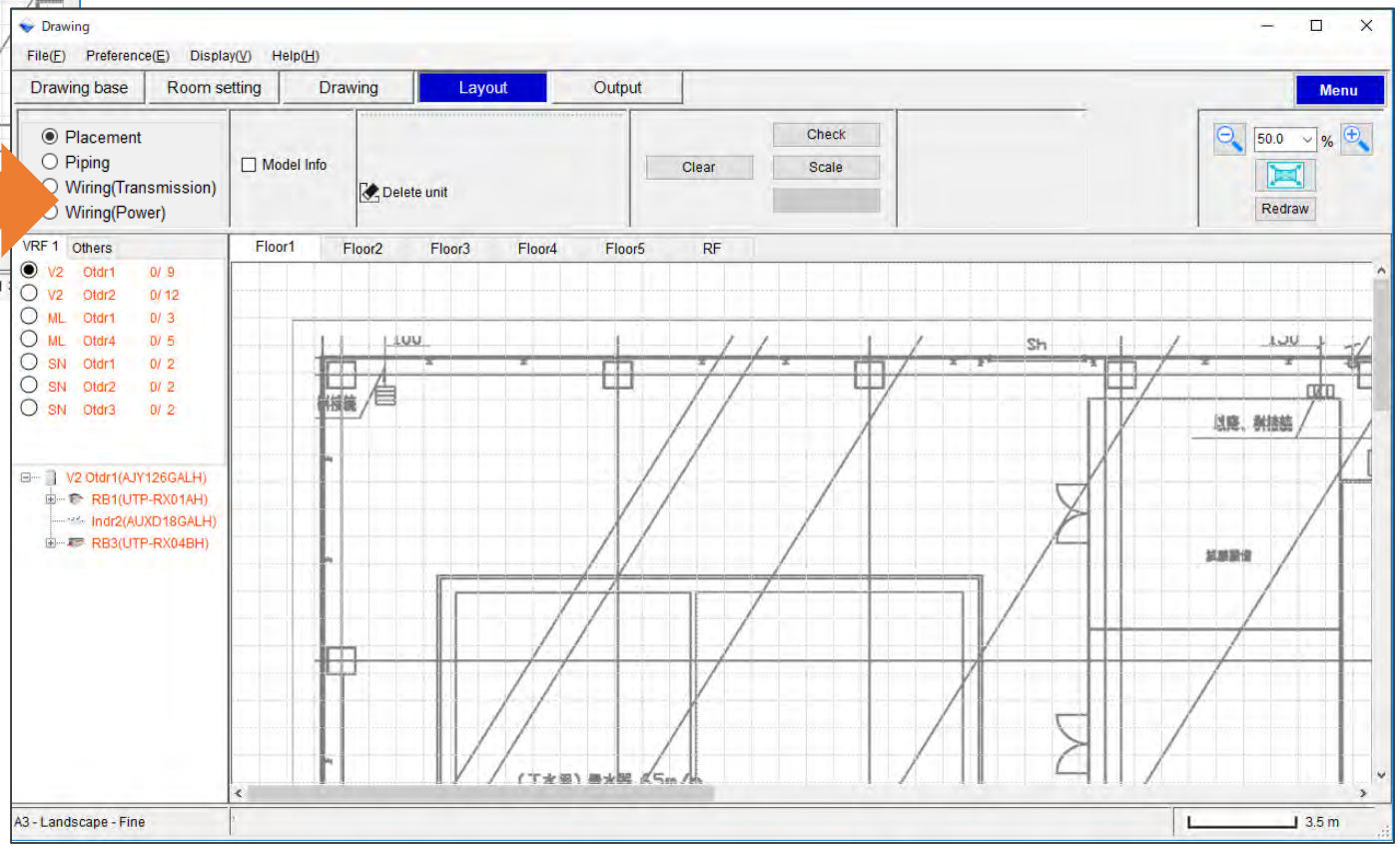


Layout

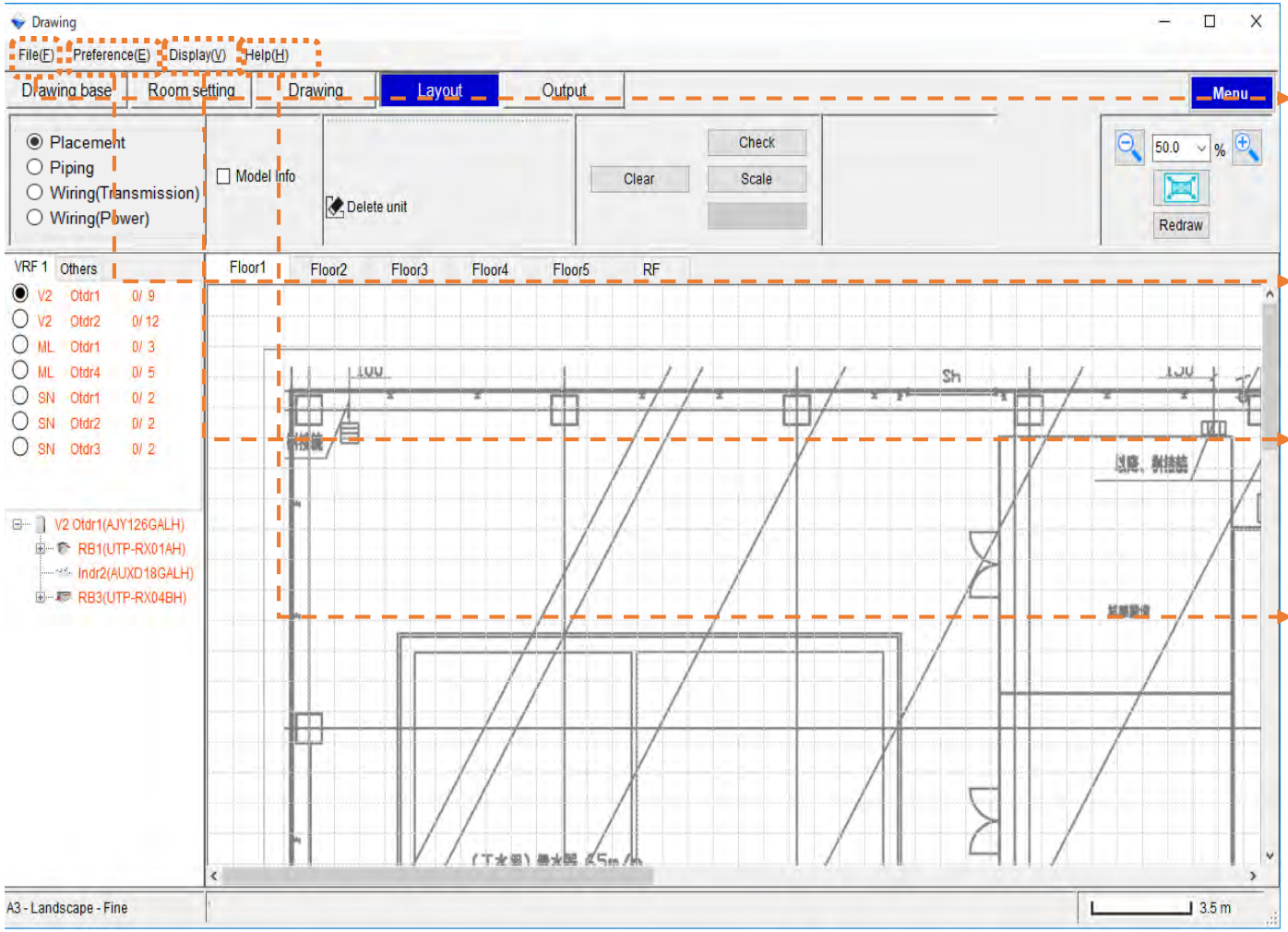


Select “Layout”

Layout screen (Placement)



Tool menu



File

File(F)

Exit(X)

: Go to menu screen

Preference

Preference(E)

Preference

: Refer to “Preference“

Display

Refer to “Display”

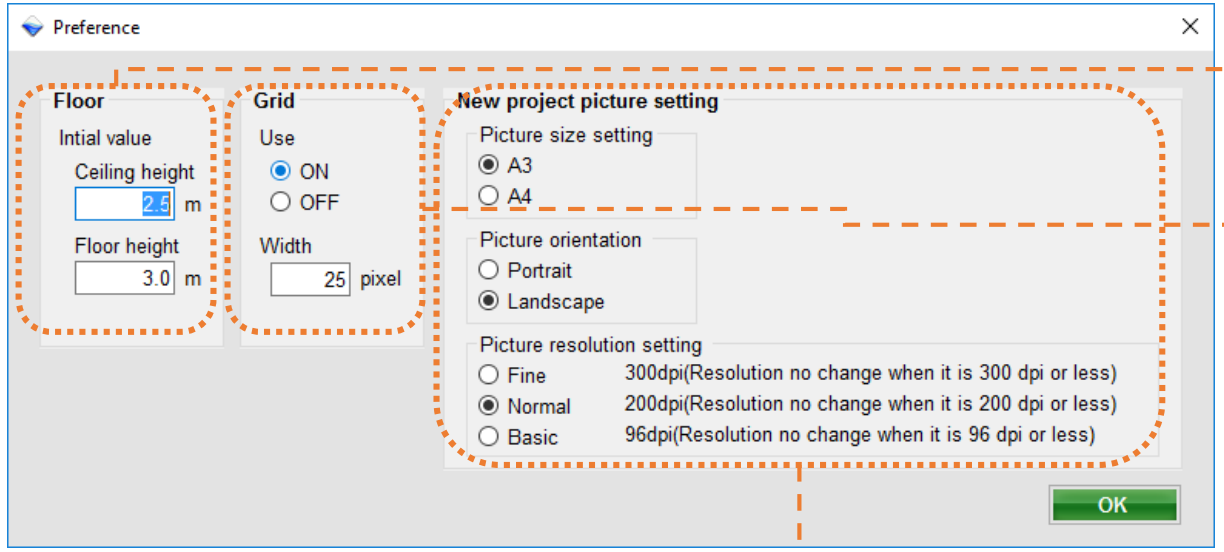
Help

Help(H)

Manual

: Display Manual

Preference



Floor

Sets the initial value of the floor

Grid

Use : Grid usage setting
Width : Set the width of the grid

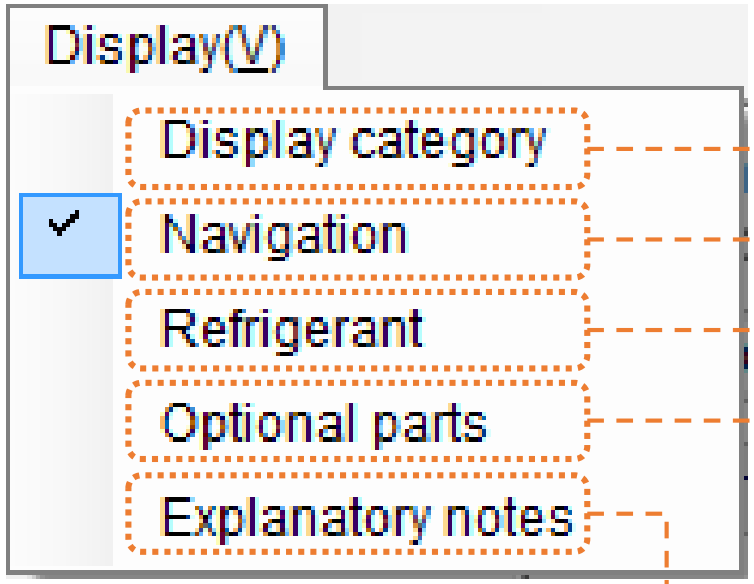
New project picture setting

New project import picture setting

Picture size setting : Set capture size of picture
Picture orientation : Set the orientation of picture
Picture resolution setting : Set picture resolution
- Fine : Capture with resolution equivalent to 300 dpi
- Normal : Capture with resolution equivalent to 200dpi
- Basic : Capture with resolution equivalent to 96dpi

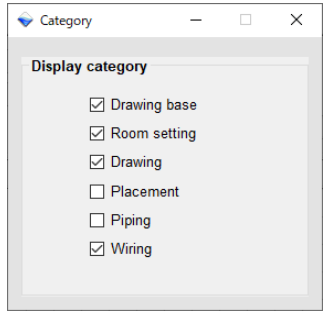
* Picture resolution setting is no change, when picture resolution or less

Display



Display category screen

Display category screen
The selected screen is overlaid and displayed

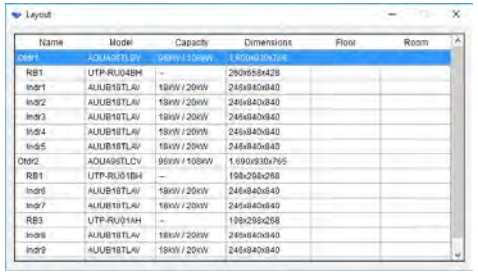


Navigation

Display Navigation screen

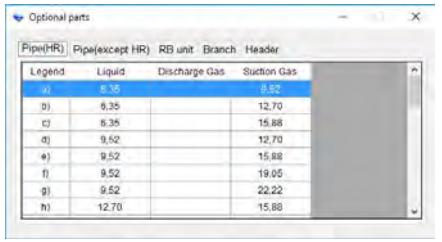
Refrigerant

Display list of refrigerant equipment



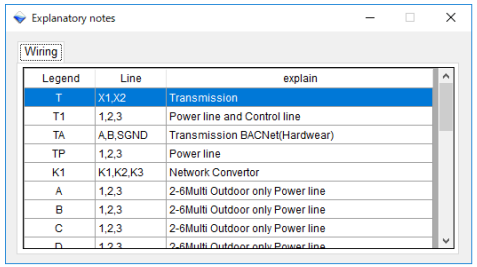
Optional parts

Display list of Pipe and Branch and RB Unit Models

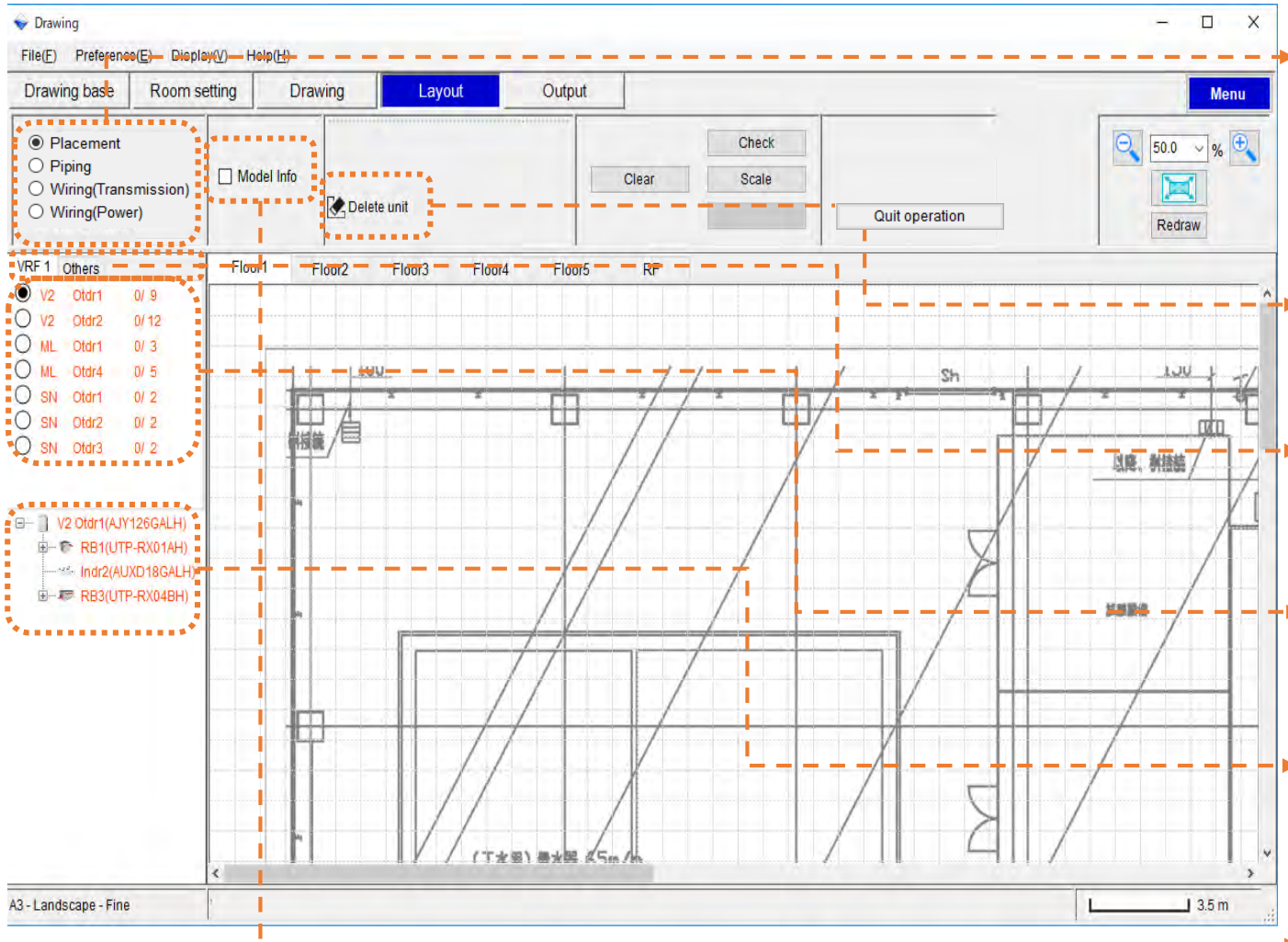


Refrigerant

Display list of wiring terminal



Layout-Placement (1/2)



Function switching(refer to function)

Placement : Refrigerant arrangement
Piping : Piping setting
Wiring(Transmission): Wiring setting
Wiring(Power) : Power supply setting

Delete unit

Delete the selected unit

VRF network system

Multi and Sprit not connected to VRF network system is displayed in "Others"

Refrigerant list

Refrigerants selected by Design simulator is displayed

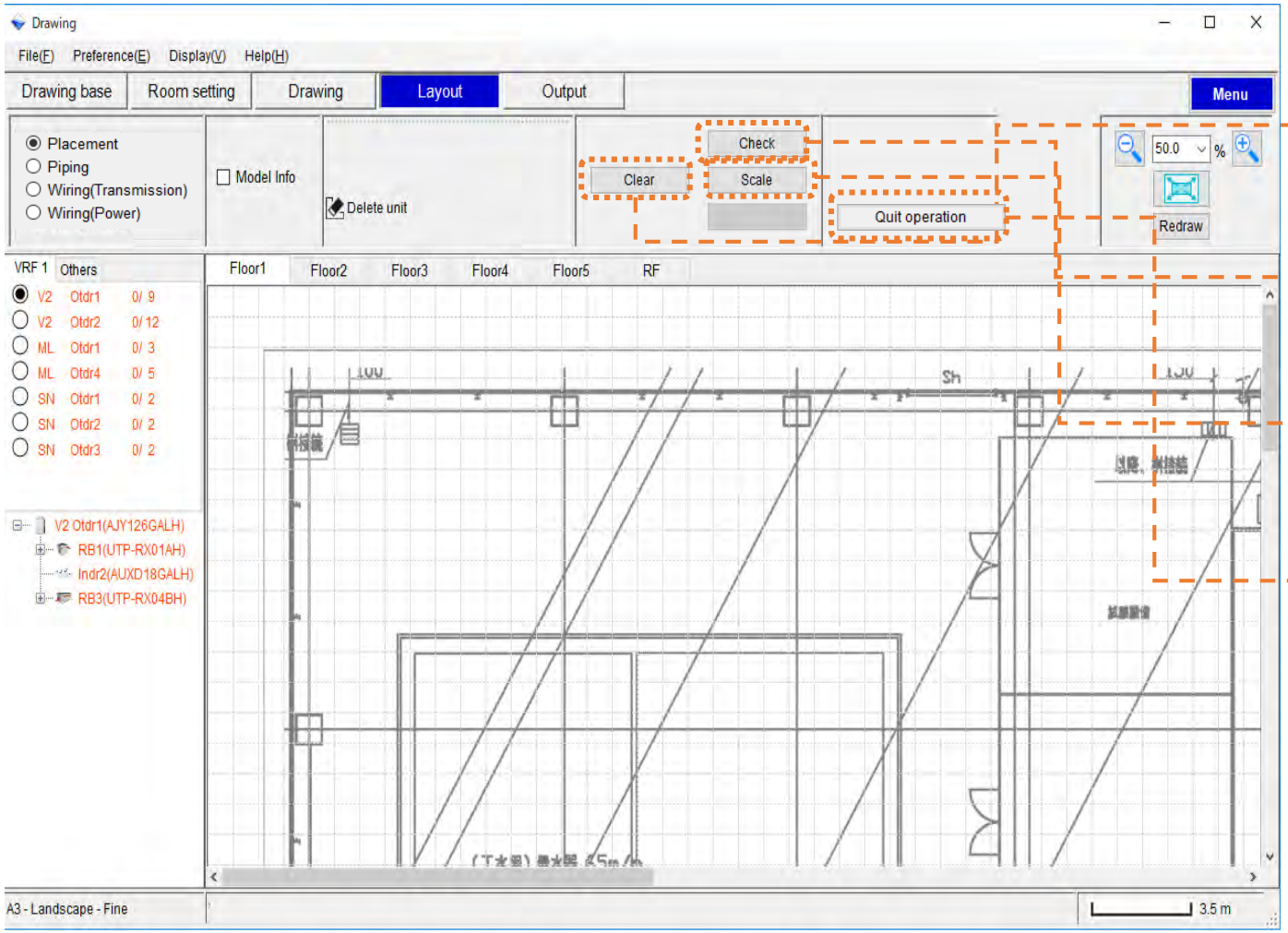
Select refrigerant

Details of the refrigerant selected in the Refrigerant list are displayed

Model Info

Displays unit information

Layout-Placement (2/2)



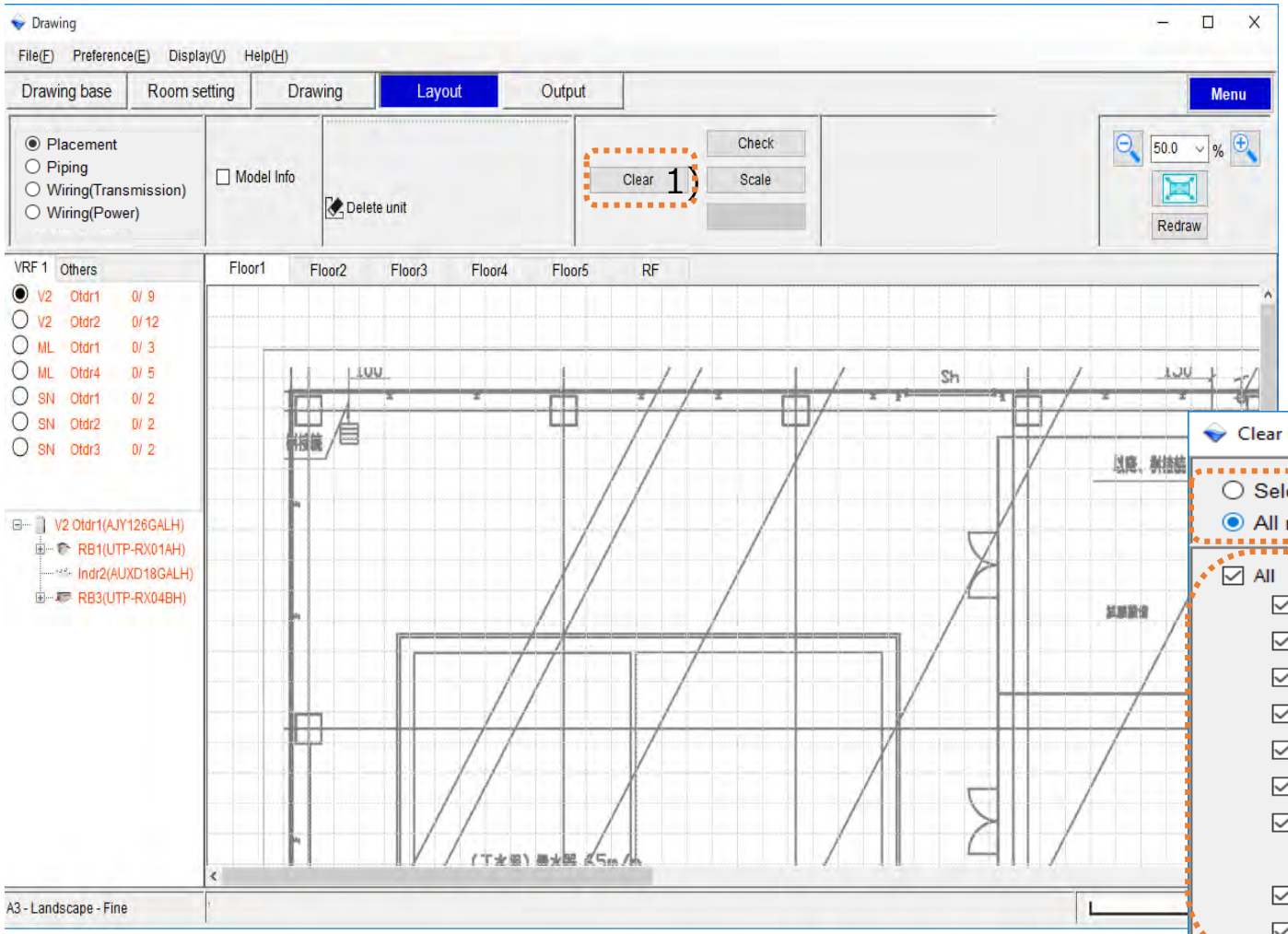
Clear
Refer to “Clear”

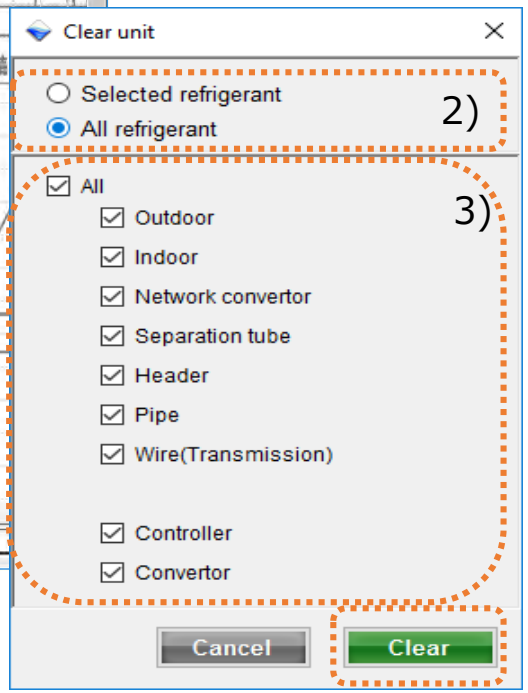
Check
Refer to “Check”

Scale
Refer to “Scale setting”

Quit operation
Quit current operation

Clear





1)Press Clear button

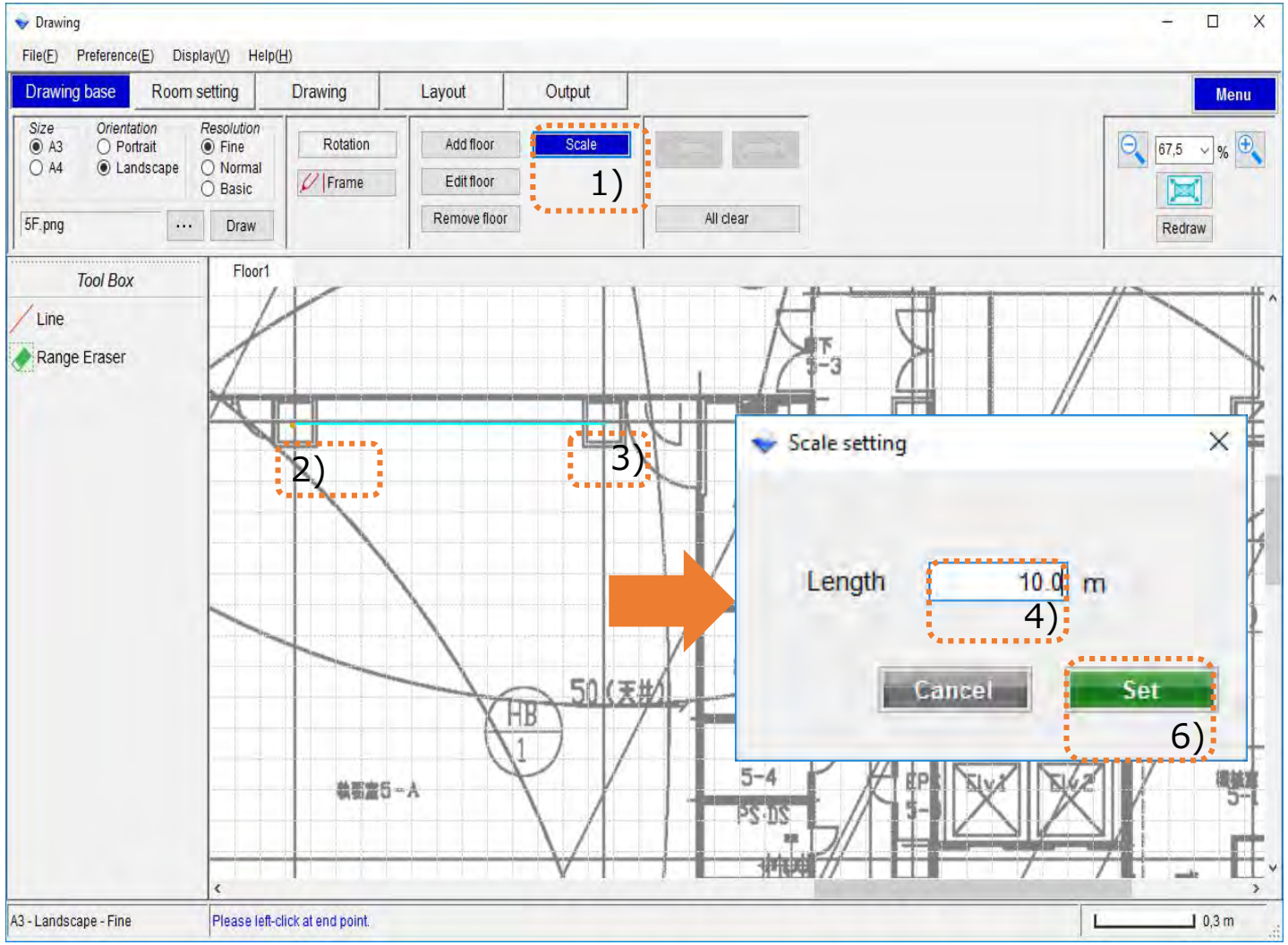
2)Check the All or Selected refrigerant

3)Check the device or unit to be deleted

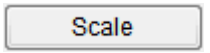
4)Press Clear

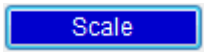
Scale setting

How to scale setting



1)Select Scale

Not selected scale 

Selected scale 

2)Left-click at starting point

3)Left-click at end point

4)Input the scale

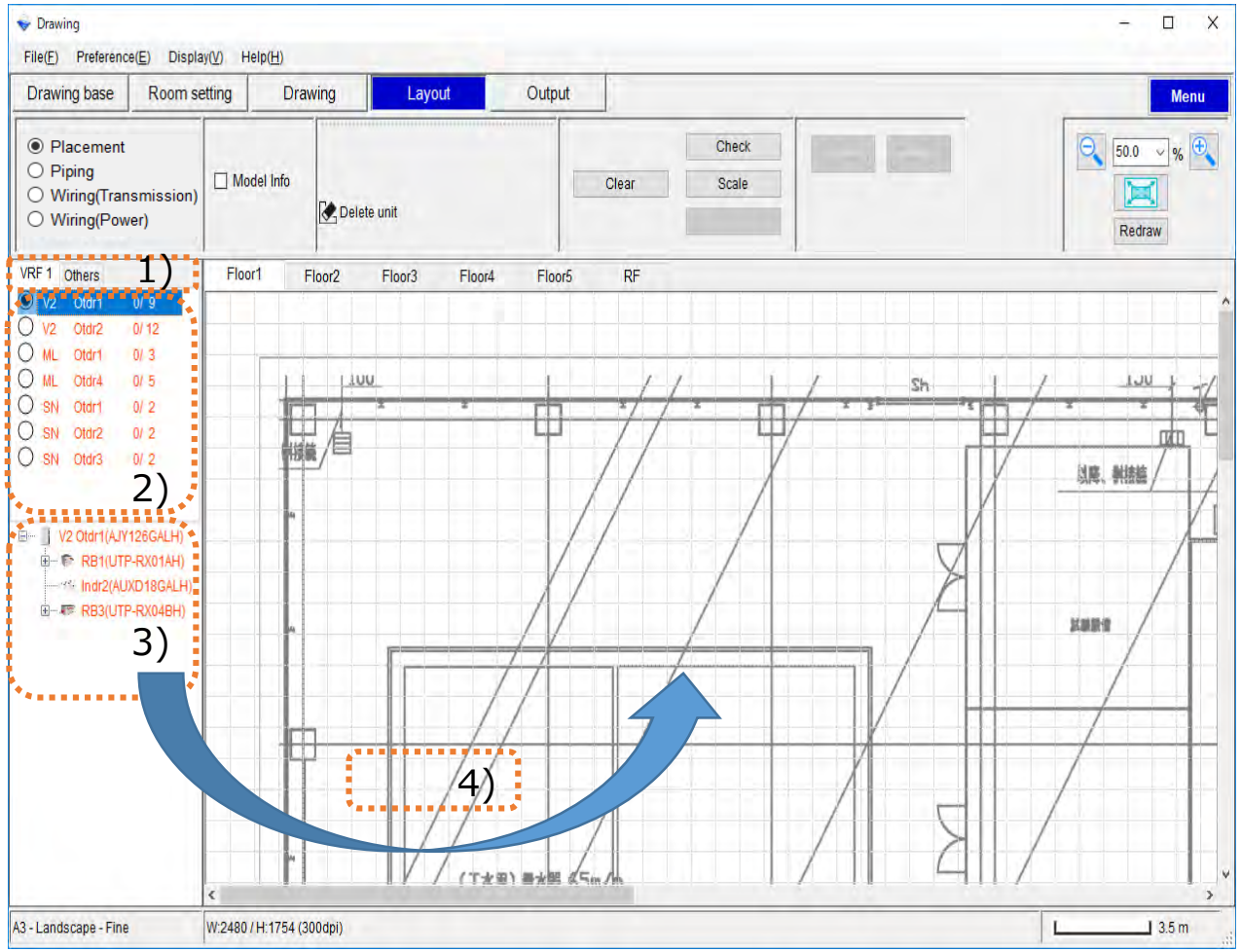
5)Press Tab key

6)Press Set

*If stop drawing ,Press the Esc button

Placement

How to arrangement units



1)Select VRF Network System

2)Select refrigerant

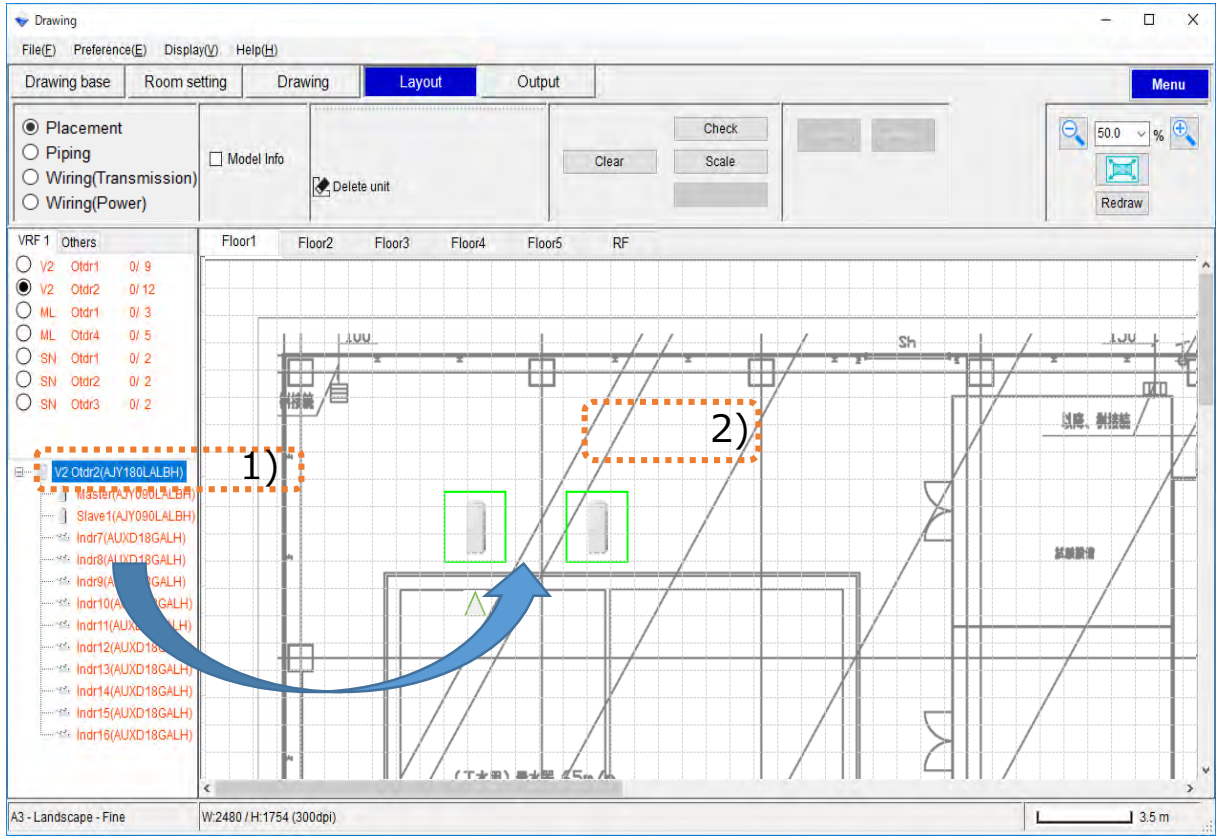
3)Select Unit

4)Drag & Drop On Work area

Unplaced is orange, and already arranged is light blue

Placement (Outdoor)

How to arrangement units(Combination)



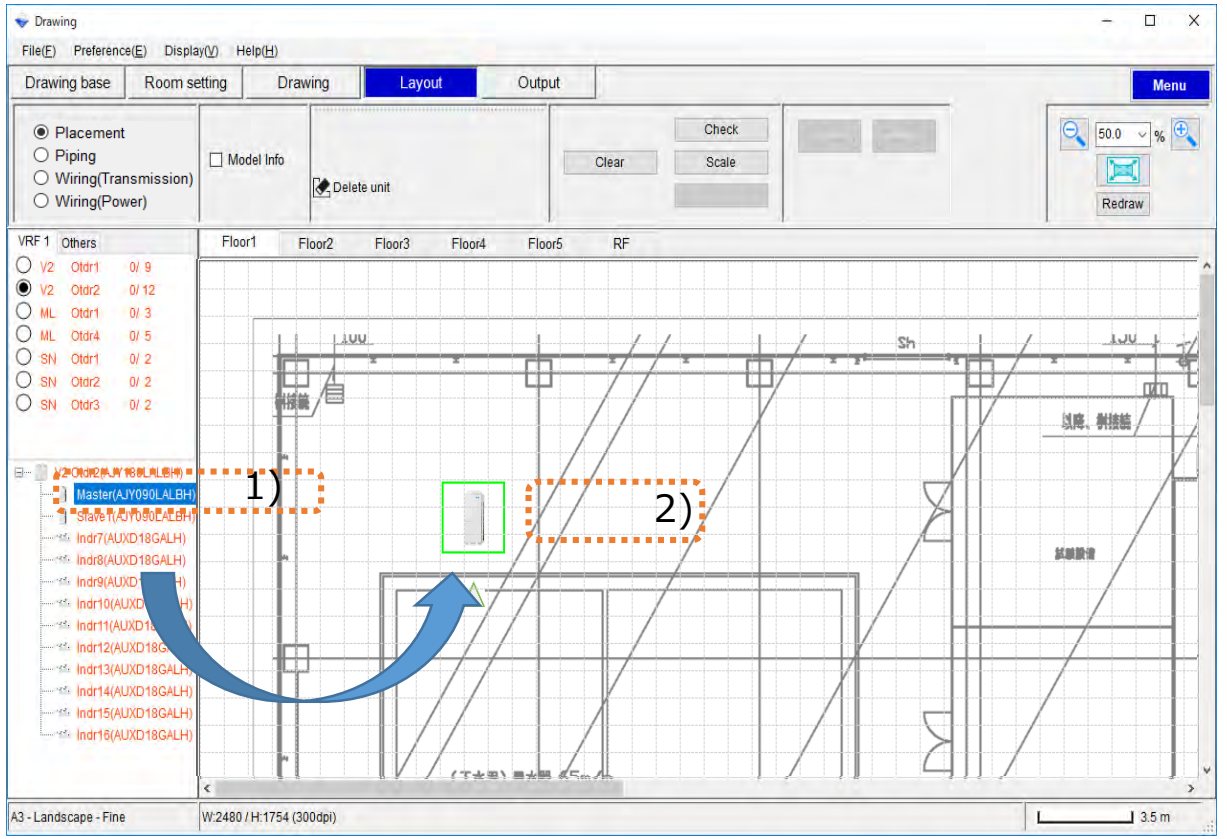
1)Select refrigerant

2) Drag & Drop on work area

When Refrigerant are Drag & Drop on work area ,

master and slave units are arrange

How to arrangement units(Single unit)



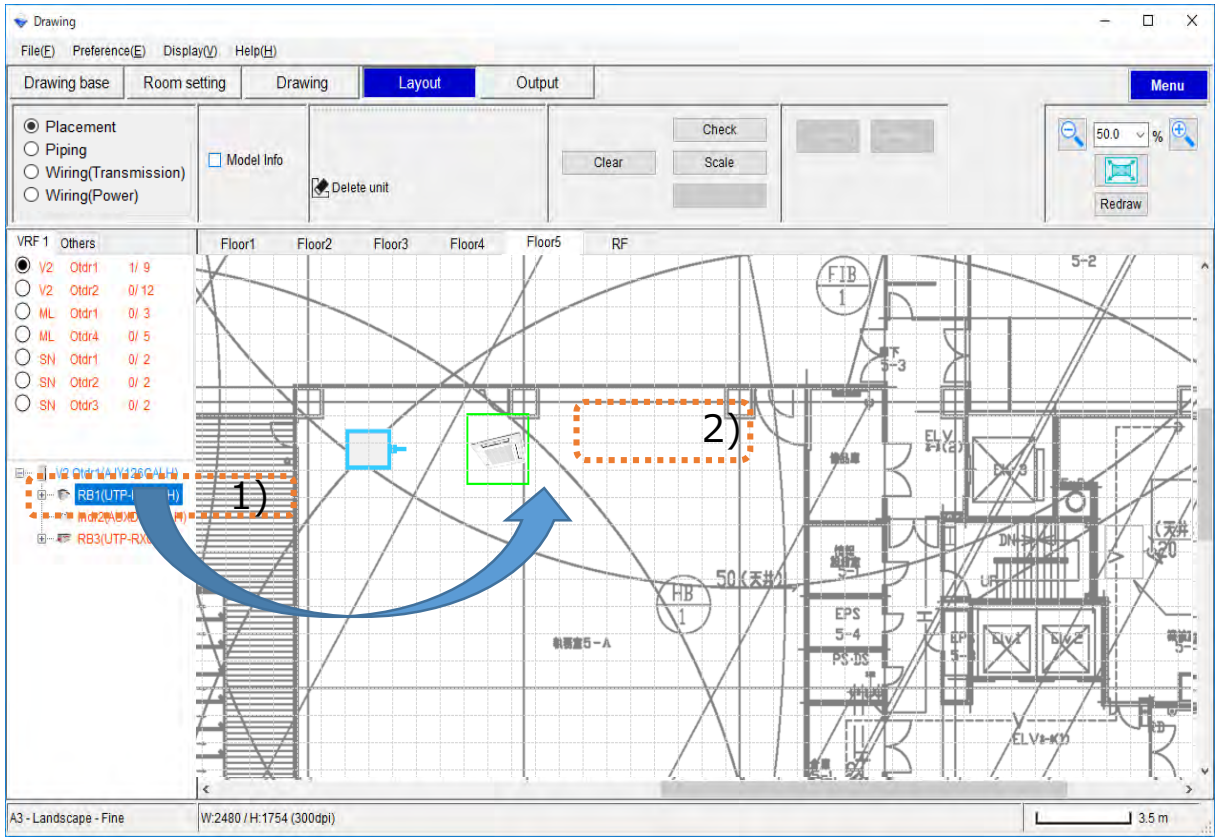
1)Select refrigerant

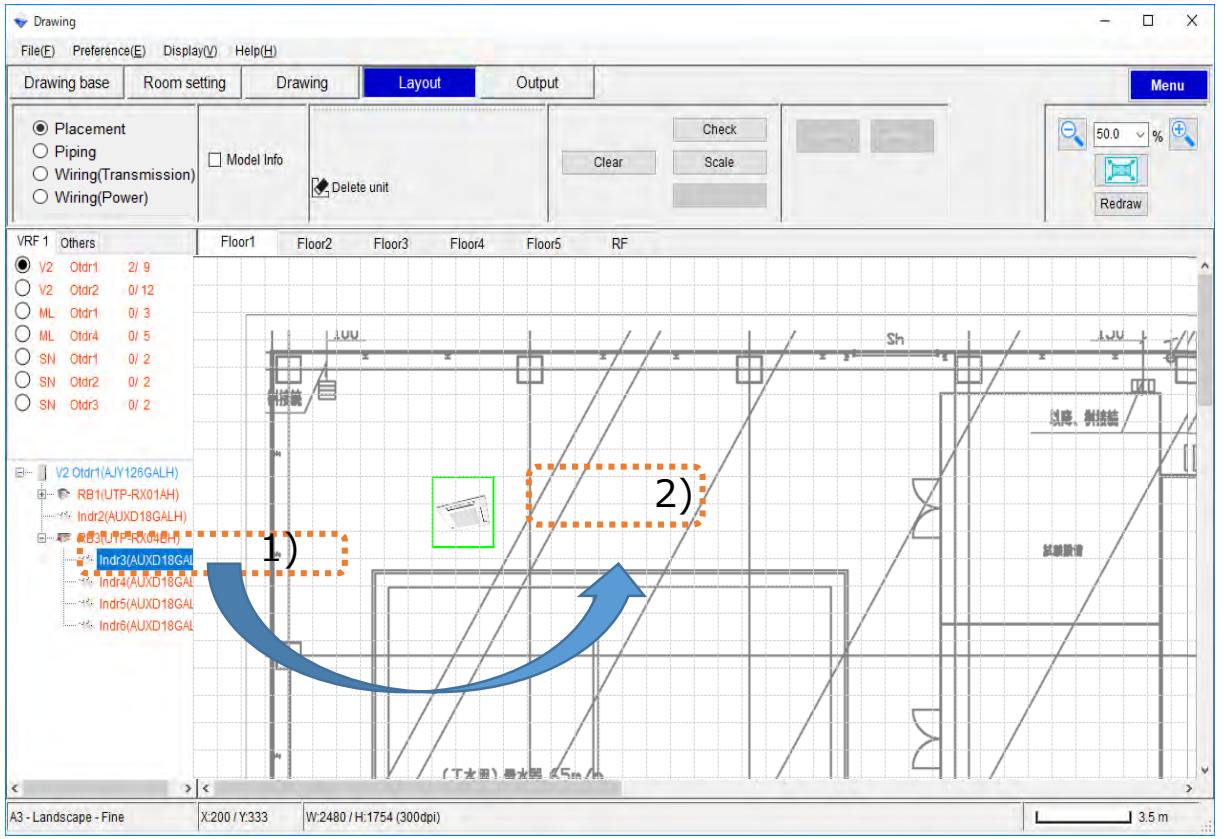
2) Drag & Drop on work area

When master or Slave units are Drag & Drop on work area ,master and slave unit only arrange

Placement (Indoor , RB Unit , Other)

How to arrangement units





1)Select refrigerant

2)Drag & Drop on work area

When RB unit are Drag & Drop on work area ,

RB unit and indoor unit arrange

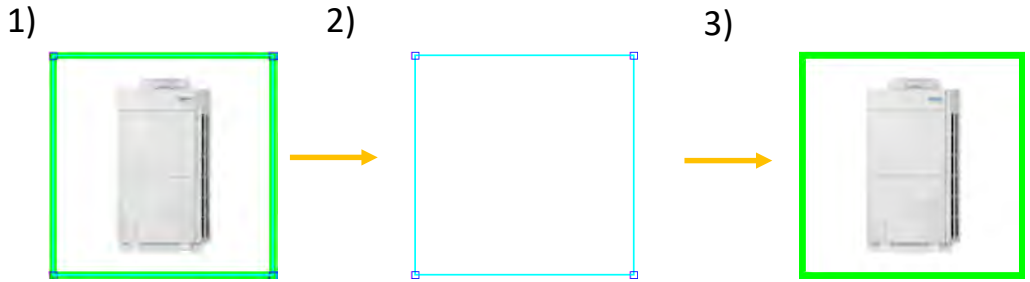
1)Select refrigerant

2) Drag & Drop on work area

Right-click menu(1/5)

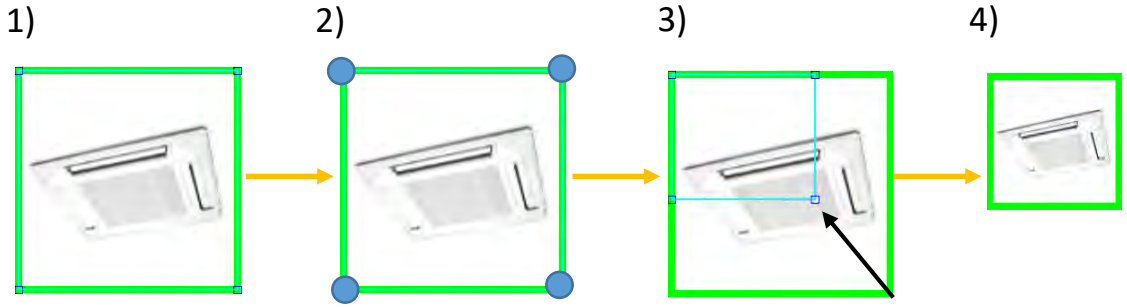
Move(1/2)

1)Right-click at Menu and Select Move
2)Drag to end point
3)Left-click at end point



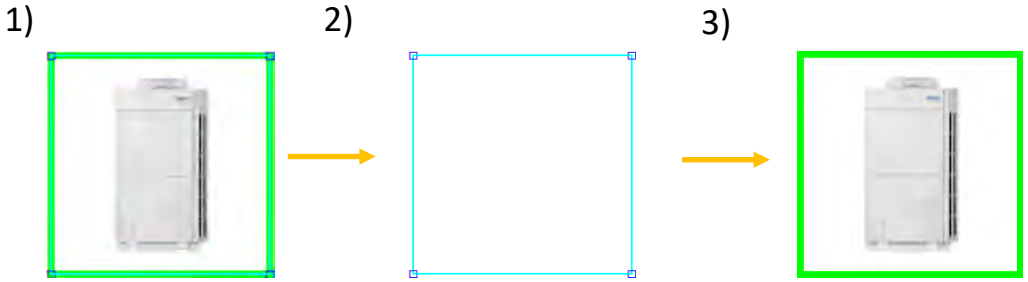
Resize(Outdoor,Indoor)

1)Right-click at Menu and Select Resize
2)Mouse cursor on any of the four corners of the Unit
3)Drag the mouse to the size to change
4) Left-click at Work area



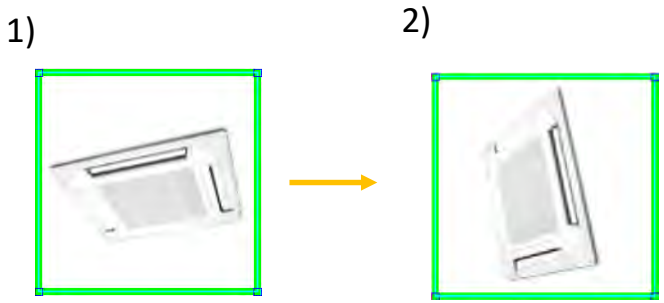
Move(2/2)

1)Left-click Unit
2)Drag to end point
3)Left-click at end point



Rotation

1)Right-click at Menu and Select Rotation
2)Unit to Rotate 90 degrees to the right



Right-click menu(1/2)

Delete

1)Right-click at Menu and Select Delete

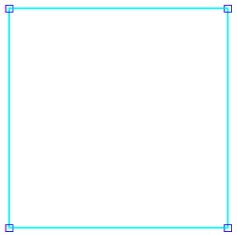
2)Confirmation dialog is displayed

2-1)Click OK to delete the unit

2-2)Click Cancel to cancel the deletion

1)

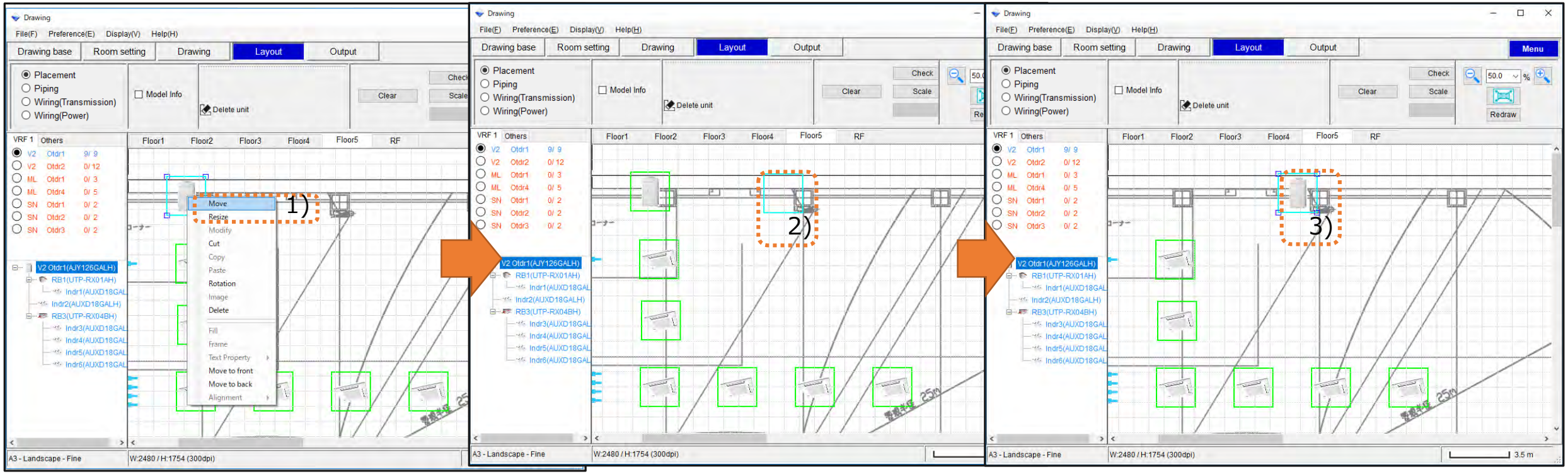
2-1)



2-2)

Reference：Right click menu(Move)

How to Move



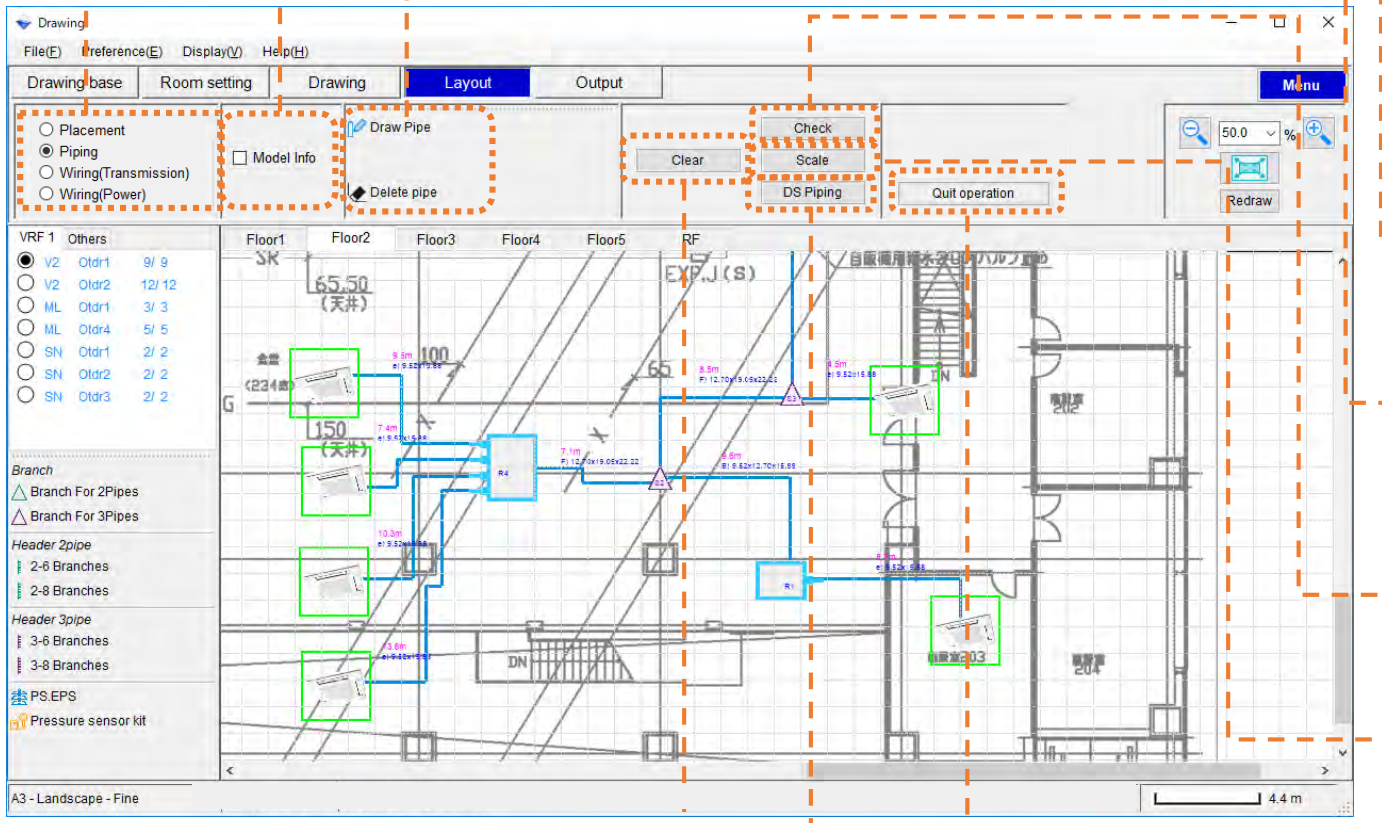
1)Select Move

2)Drag to end point

3)Left-click at end point

*If stop Move ,Press the Esc Key or Quit operation

Layout-Piping(1/2)



Function switching(refer to function)

Placement : Refrigerant arrangement
Piping : Piping setting
Wiring(Transmission): Wiring setting
Wiring(Power) : Power supply setting

Display setting

Model Info: Show unit's information

Pipe line

Draw pipe : Refer to "Draw Pipe-Auto" , "Draw Pipe -Manual"
Delete pipe : Delete the selected pipe

Check

Refer to "Check"

Scale

Refer to "Scale setting"

DS Piping

Show DS piping screen

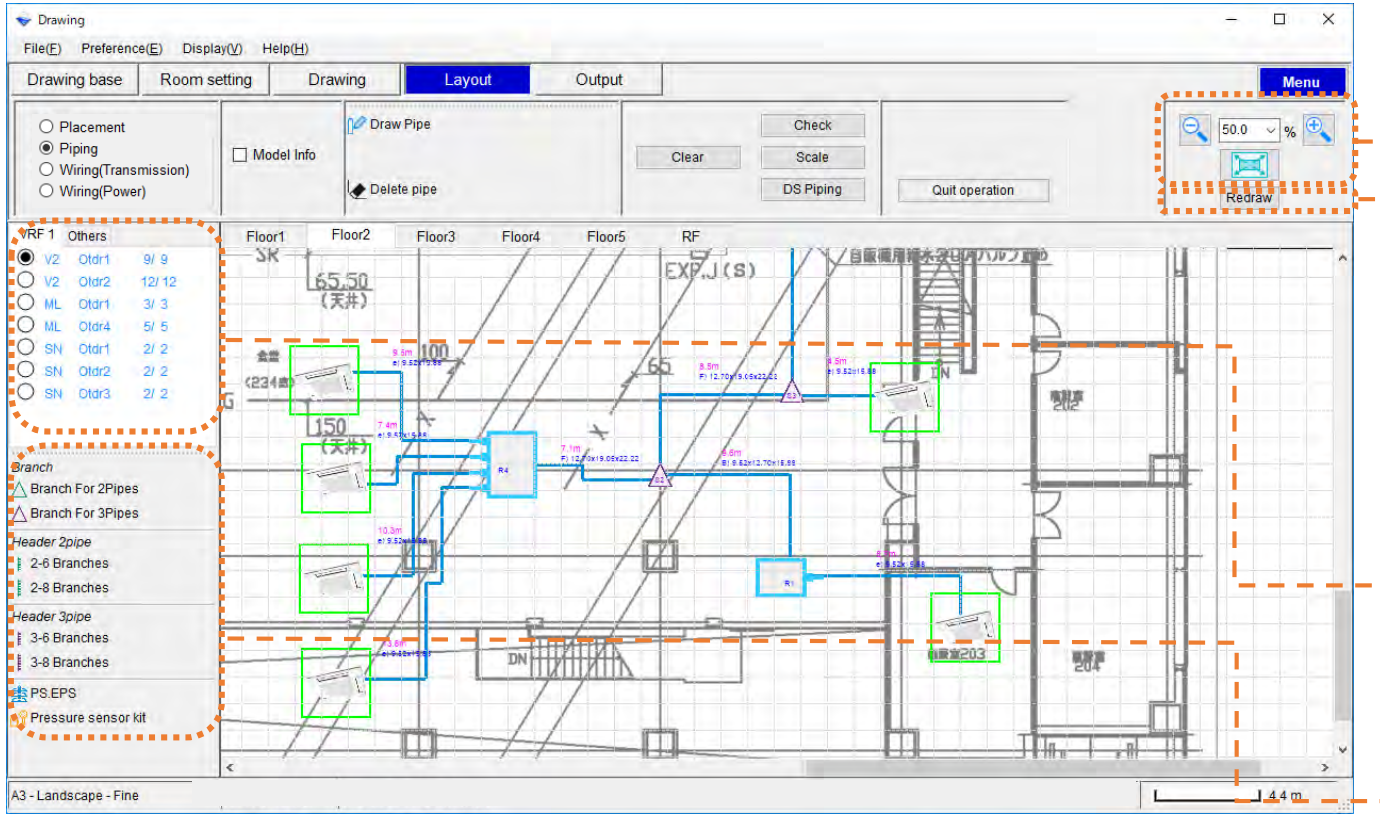
Quit operation

Quit current operation

Clear

Refer to "Clear"

Layout-Piping(2/2)



Zoom to

: Zoom up

: Zoom down

100 % : Select zoom

: Full picture display

Redraw

Redraw: Draw the displayed picture again

Refrigerant list

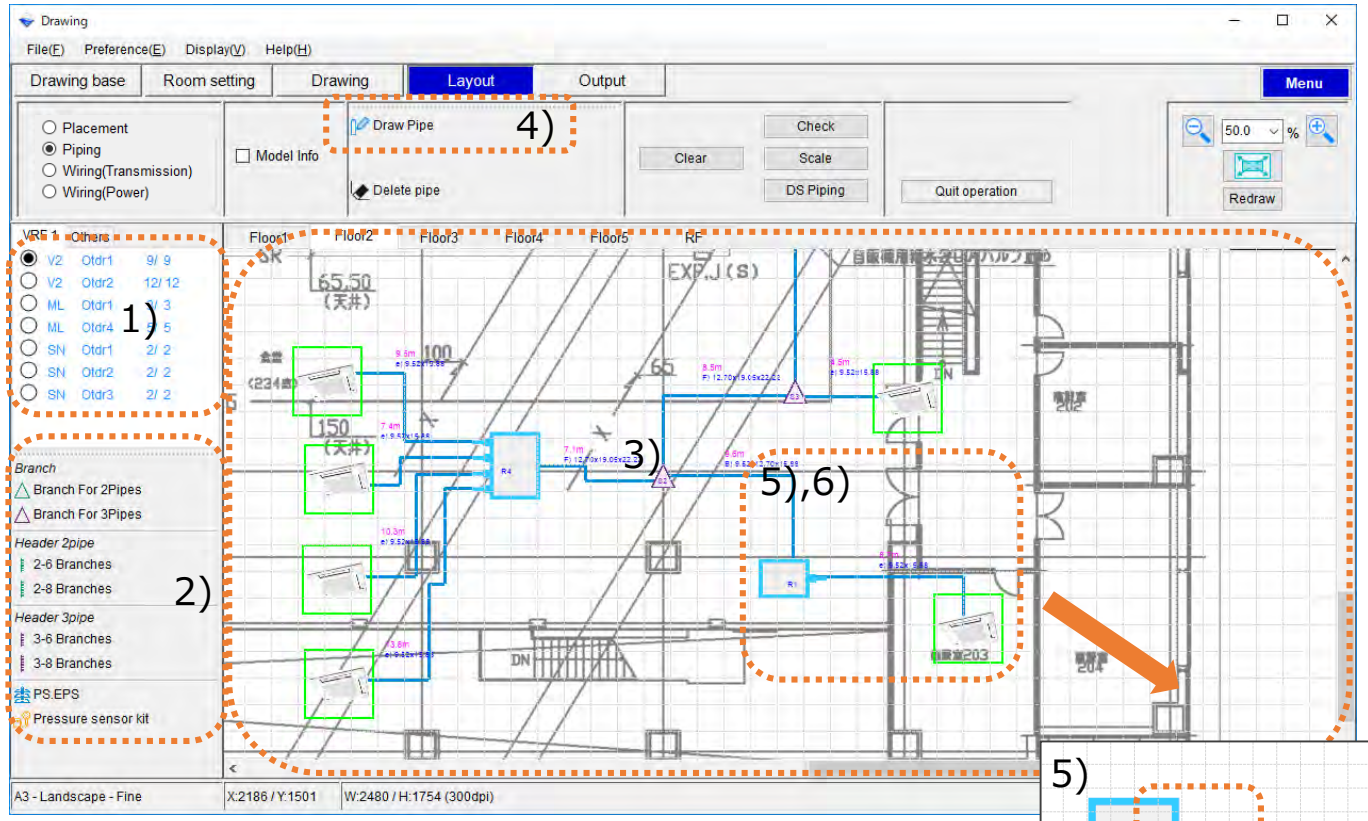
Refer to “Draw Pipe -Auto”,”Draw Pipe -Manual”

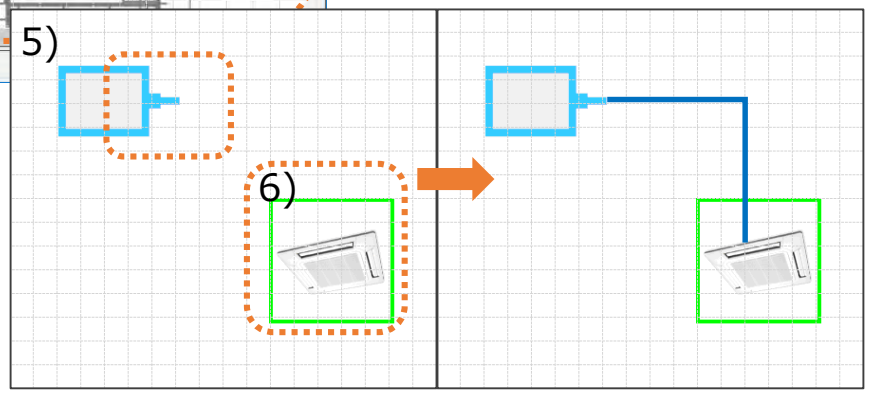
Tool box

Branch For 2Pipes, Branch For 3Pipes
Header 2-6Pipe,2-8Pipe,3-6Pipe,3-8Pipe
PS EPS, Pressure sensor kit :
Refer to “Draw Pipe -Auto”,”Draw Pipe -Manual”
*PS : Pipe Space
EPS : Electric Pipe Space

Draw Pipe -Auto

How to draw a pipe automatically





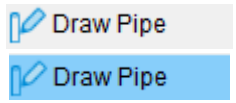
1)Select refrigerant

2)Select a part

3)Left-Click on work area for part placement

4)Press Draw Pipe

Not selected Draw Pipe
Selected Draw Pipe



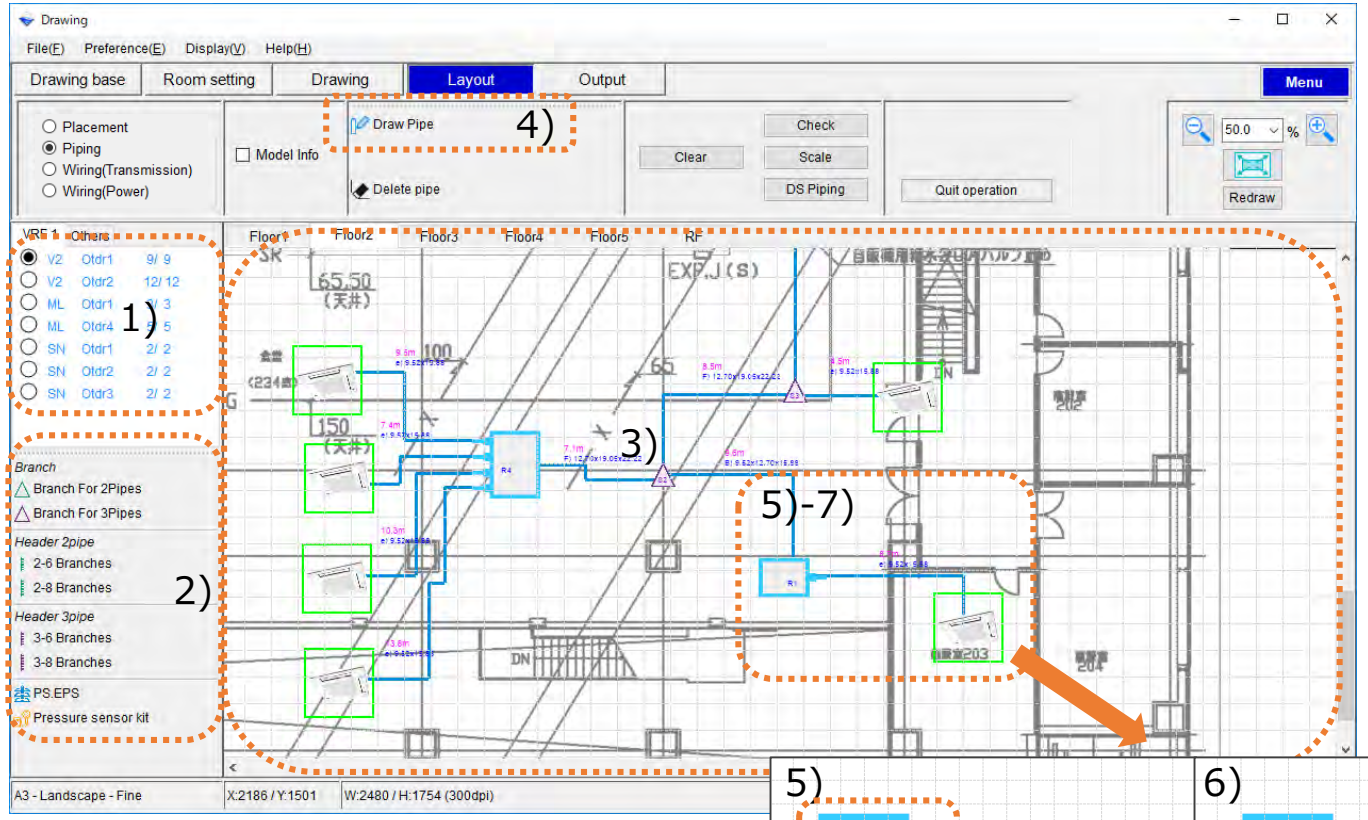
5)Left-Click on the unit

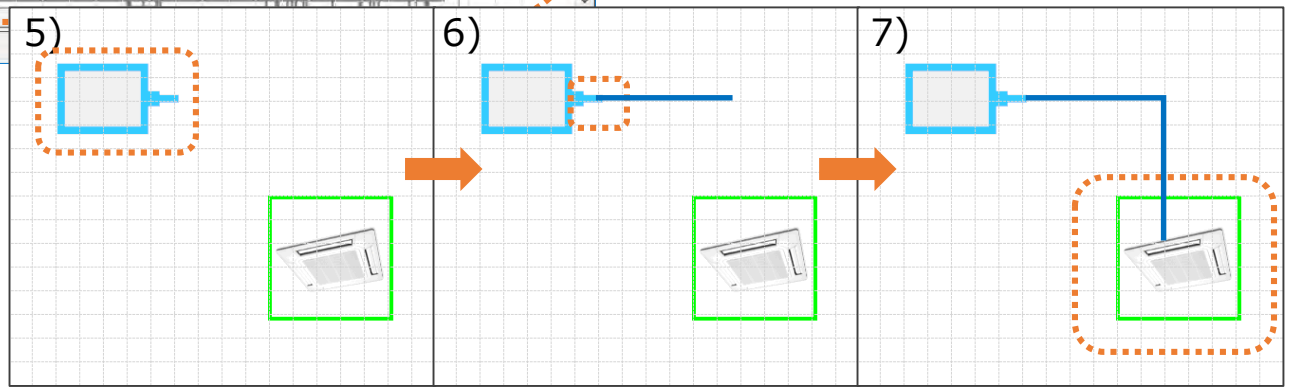
6)Double-Click on another unit

The case of 2-6Multi split, when drawing a pipe, wiring(transmission) line is drawn automatically

Draw Pipe -Manual

How to draw a pipe manually





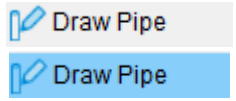
1)Select refrigerant

2)Select parts

3)Left-Click on work area

4)Press Draw Pipe

Not selected Draw Pipe
Selected Draw Pipe



5)Left-Click on the unit

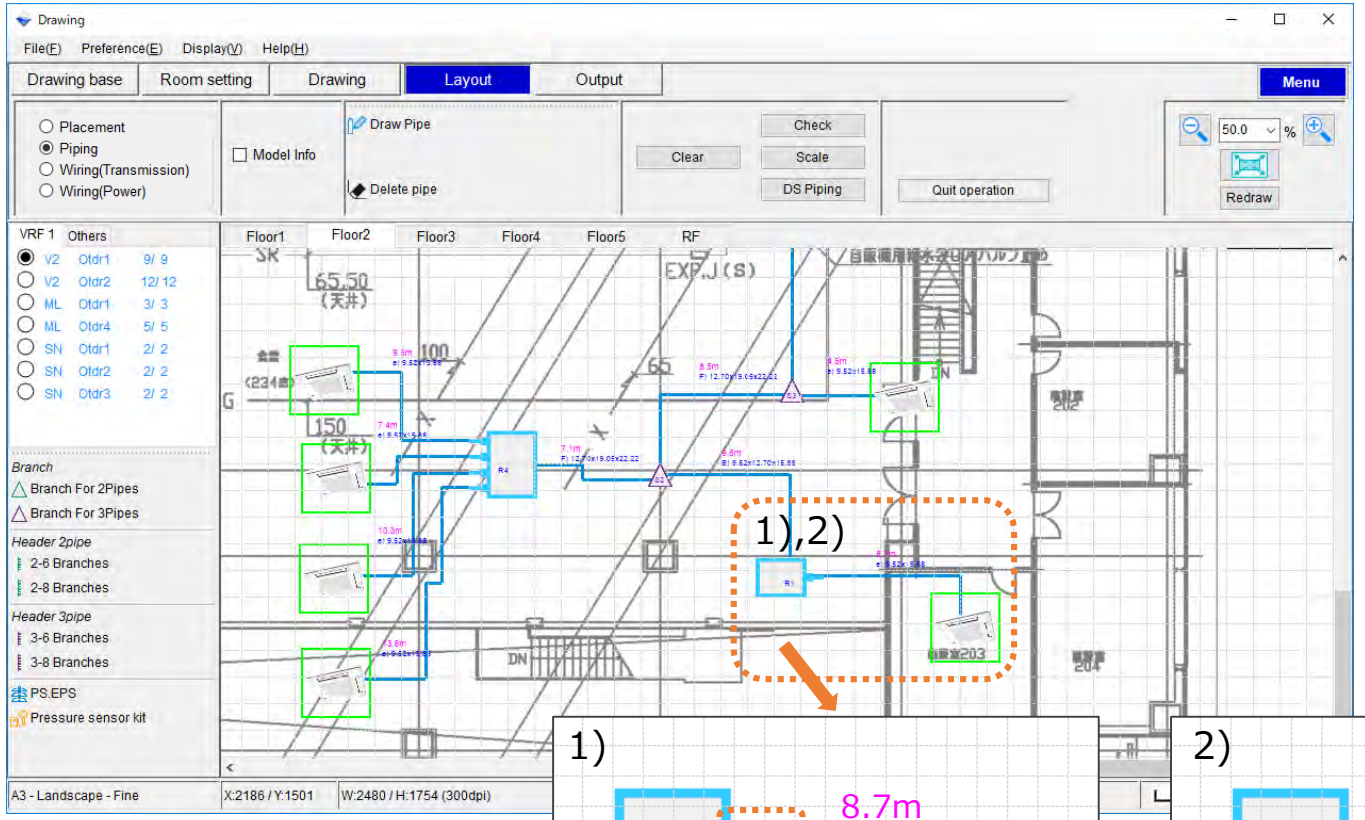
6)Left-Click on the work area

7)Double-Click on another unit

The case of 2-6Multi split, when drawing a pipe, wiring(transmission) line is drawn automatically

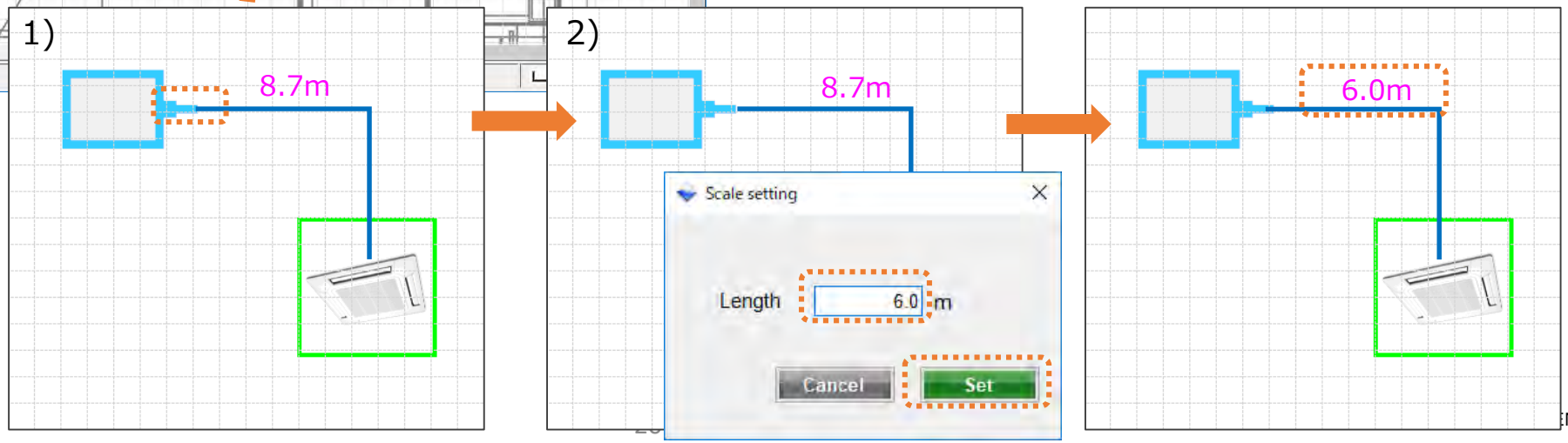
Change Pipe length

How to change pipe length

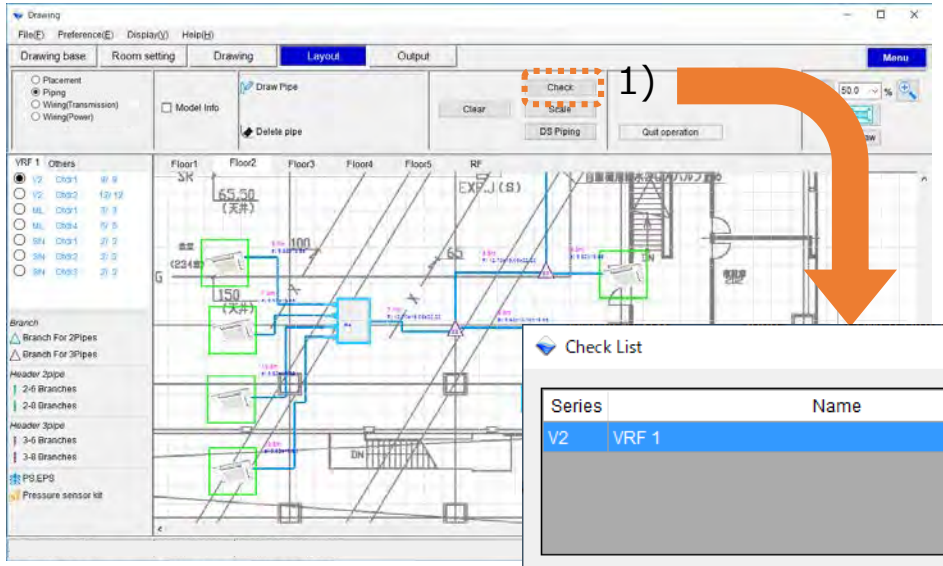


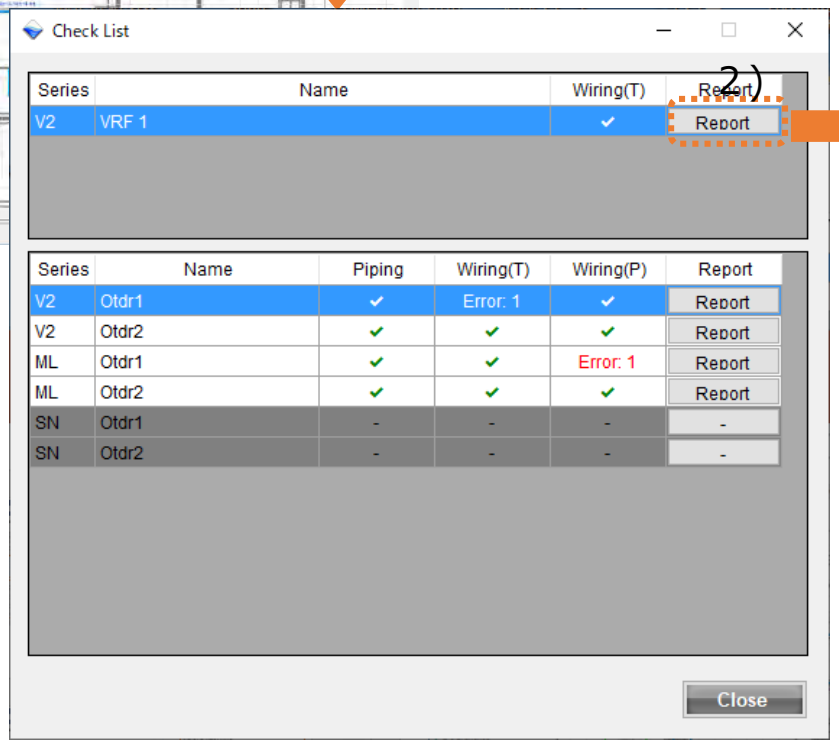
1)Double-Click on start point or end point of pipe line

2)Input length, press Set



Check

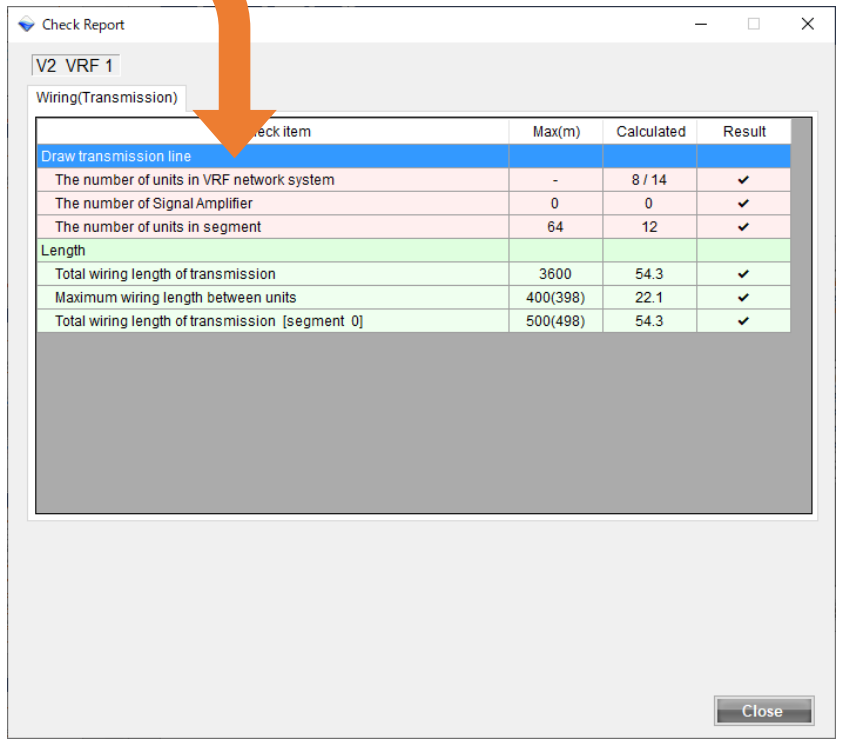




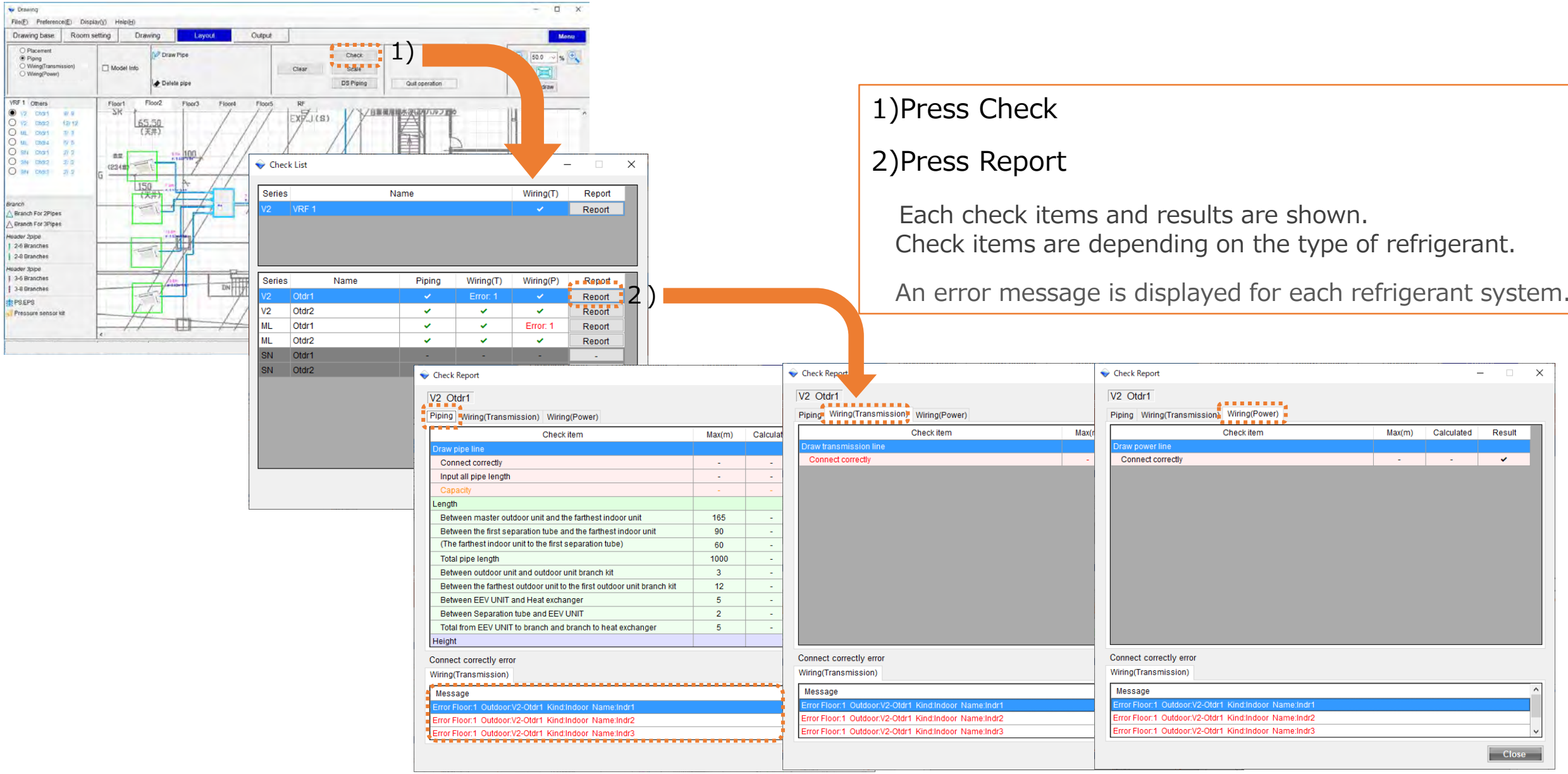
1)Press Check

2)Press Report

Each check items and results are shown.
Check items are depending on the type of VRF System



Check



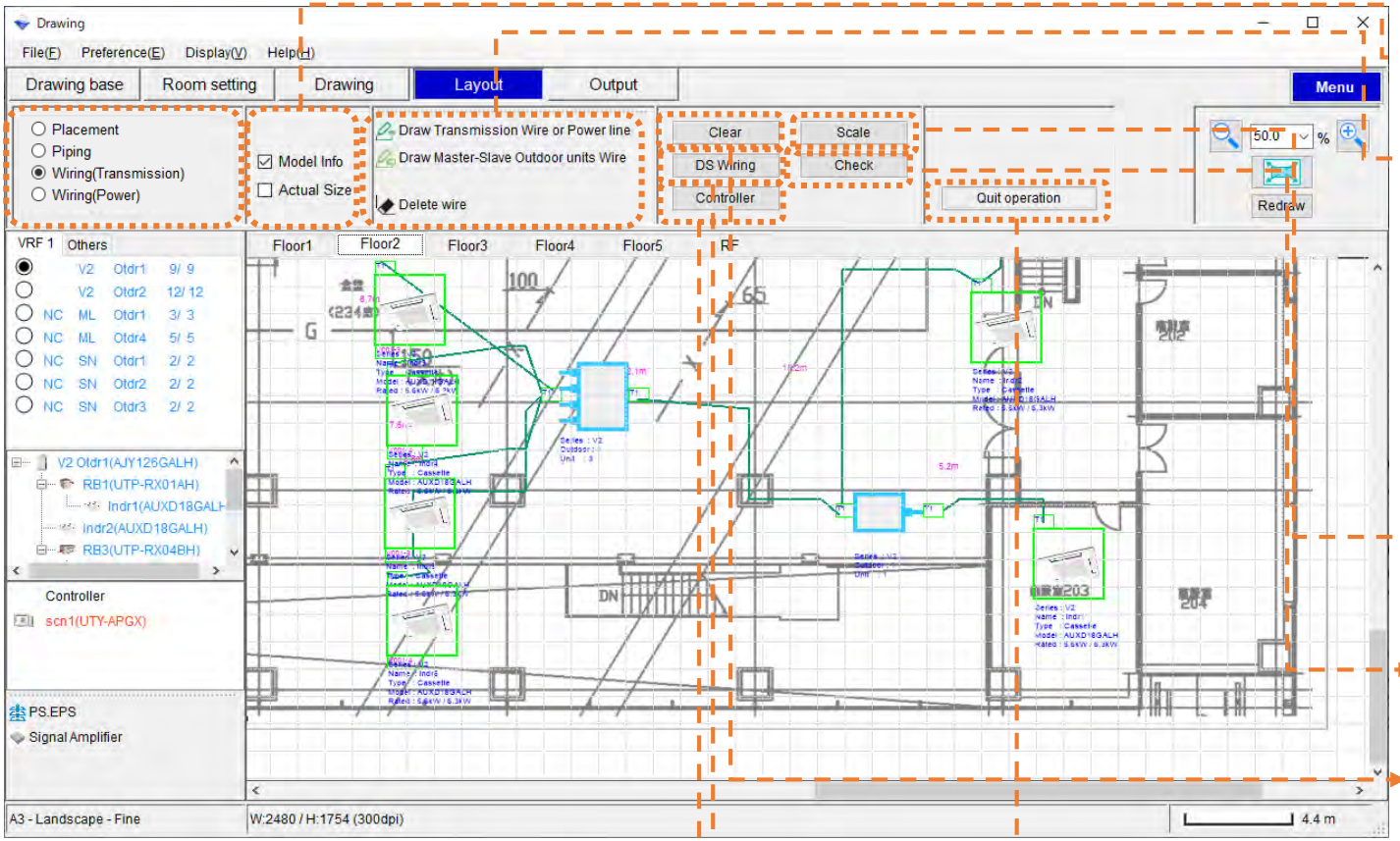
1)Press Check

2)Press Report

Each check items and results are shown.
Check items are depending on the type of refrigerant.

An error message is displayed for each refrigerant system.

Layout-Wiring(Transmission) (1/2)



Display setting
Model Info: Show unit's information

Wire line
Draw wire : Refer to "Draw Transmission Wire-Auto" & "Draw Transmission Wire-Manual" Refer to "Draw Master-Slave Outdoor units Wire-Auto" & "Draw Master-Slave Outdoor units Wire-Manual"

Delete wire : Delete the selected pipe

Scale
Refer to "Scale setting"

Check
Refer to "Check"

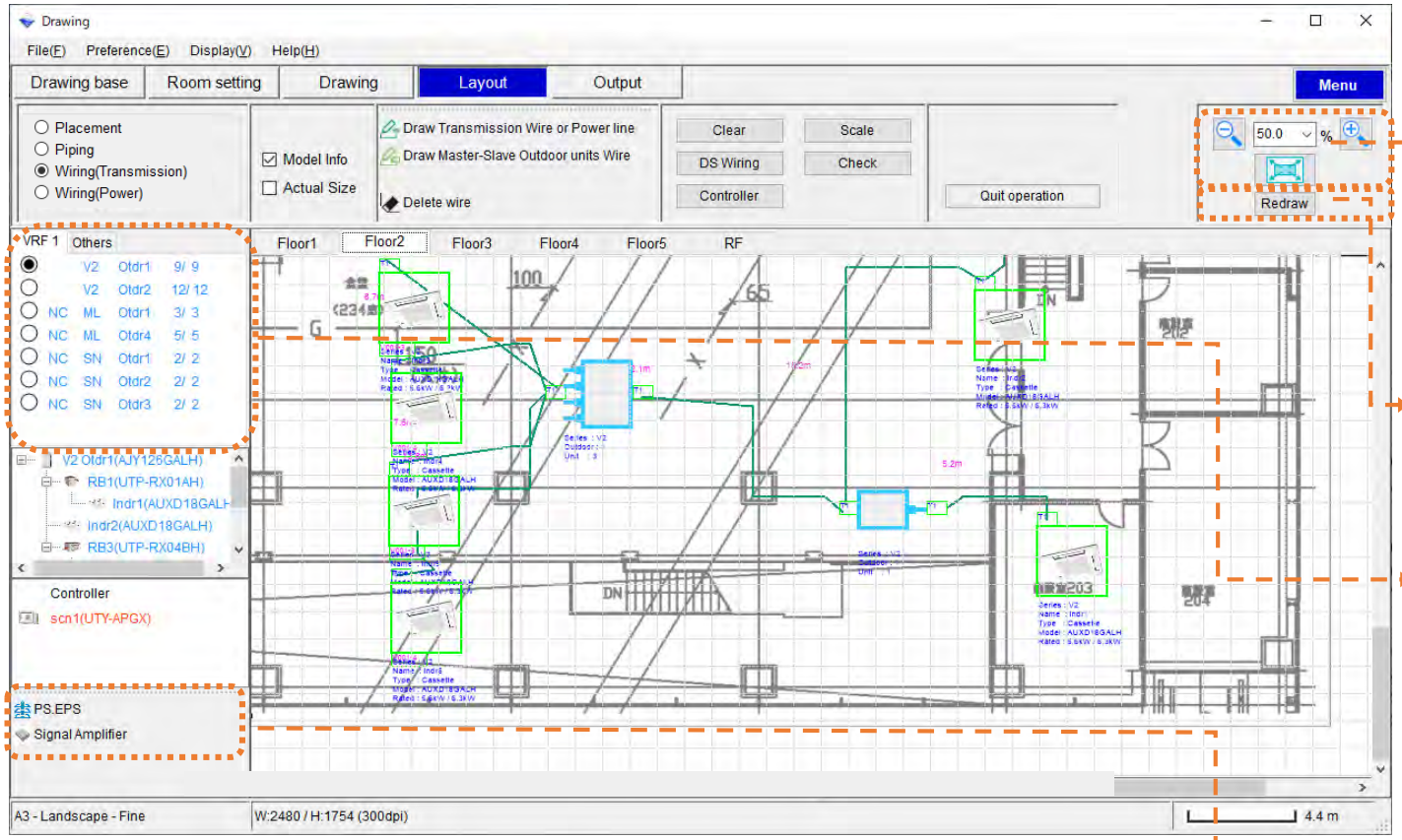
Clear
Refer to " Clear"

DS Wiring
Open "DS Wiring display"

Controller
Open "Control Design display"

Quit operation
Quit current operation is terminated.

Layout-Wiring(Transmission) (2/2)



Zoom to

: Zoom up

: Zoom down

: Select zoom

: Full picture display

Redraw

Redraw: Draw the displayed picture again

Refrigerant list

Refer to “Transmission wire-Auto”,” Draw Transmission wire- Manual”

Tool box

PS,EPS: Refer to “PS,EPS”

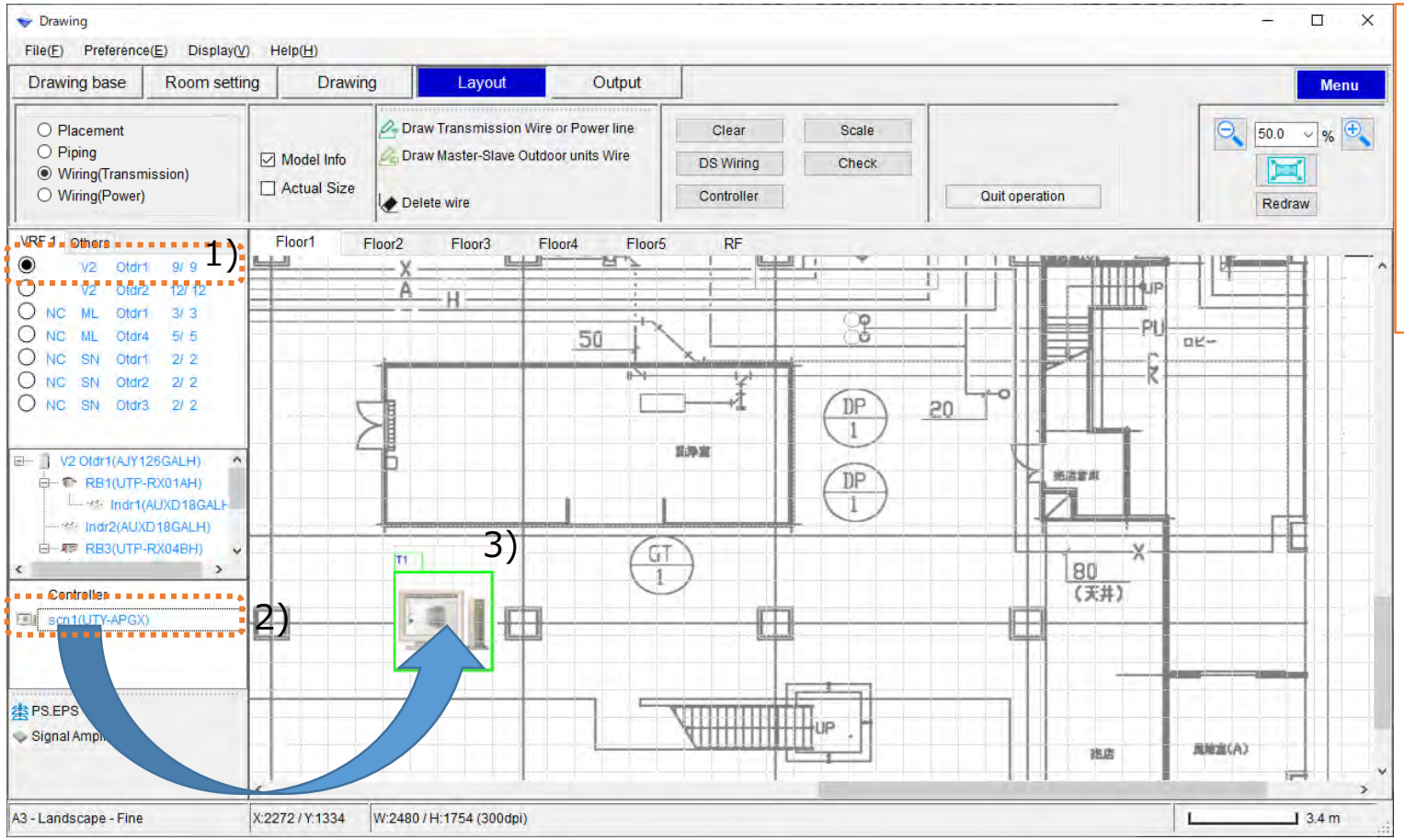
*PS : Pipe Space

EPS : Electric Pipe Space

Signal Amplifier: Refer to “Signal Amplifier”

Controller List

How to Controller object – Drag and Drop

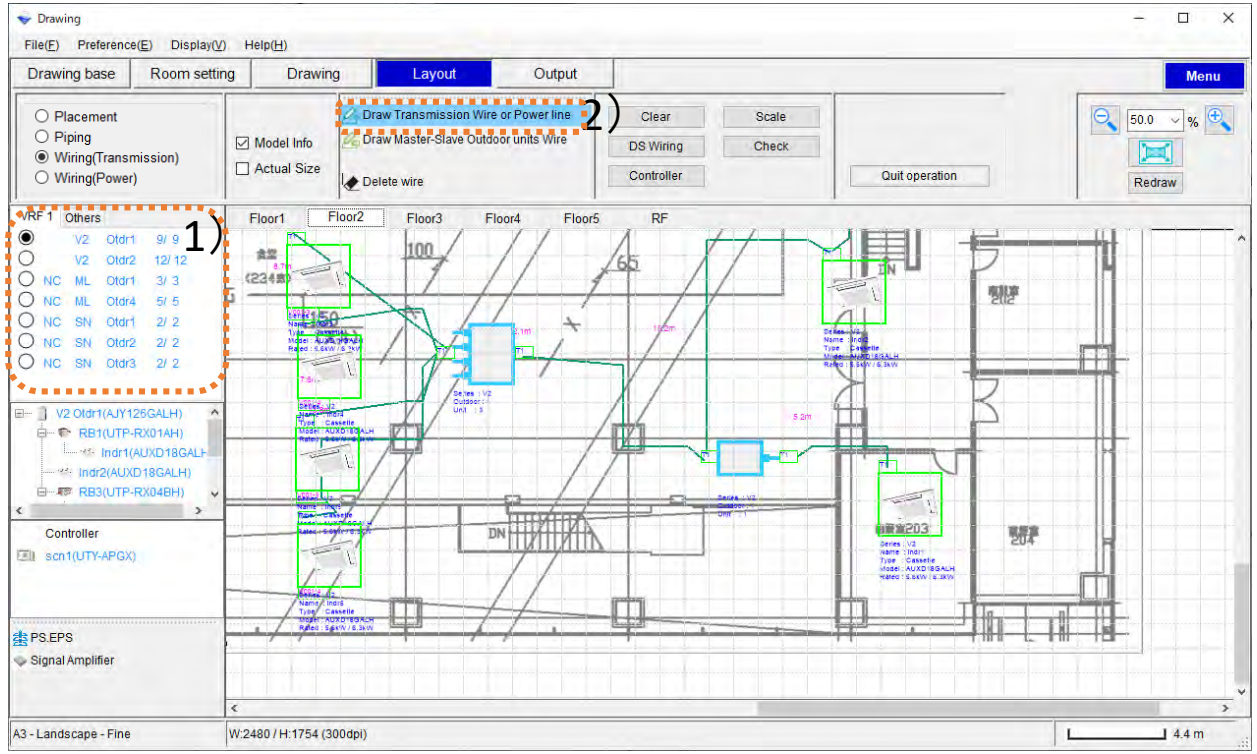


1) Refrigerant list
   Refrigerants selected by Design simulator is displayed

2)Select Controller.

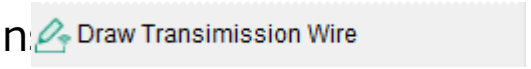
3)Drag and drop for part placement.

Draw Transmission wire-Auto

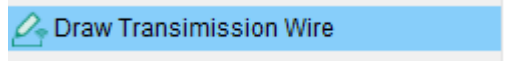


1)Select Refrigerant

2) Press “Draw Tran



Not selected Line



Selected Line

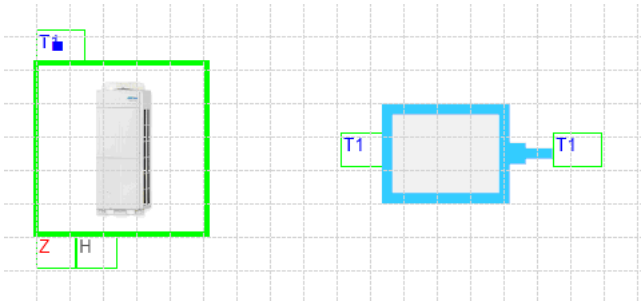
3) Left-Click on the unit Terminal

4)Left-double Click at Outdoor unit Terminal.

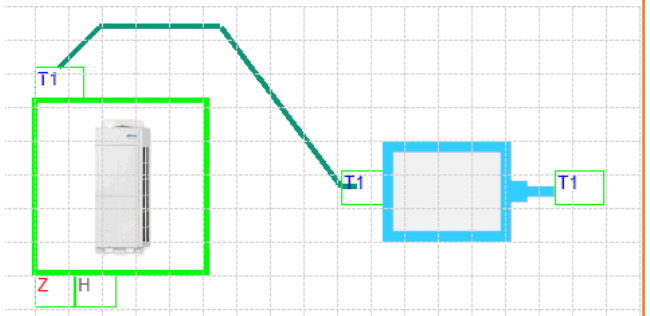
The case of 2-6Multi split, when drawing wirings,

Piping line is drawn automatically

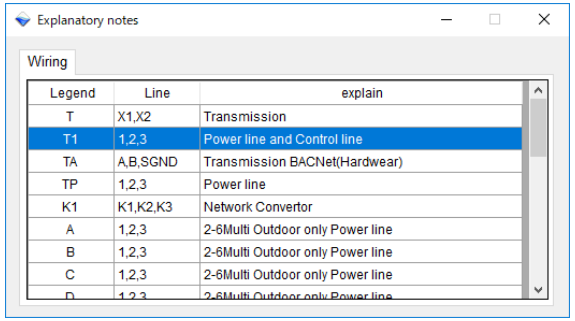
3)



4)



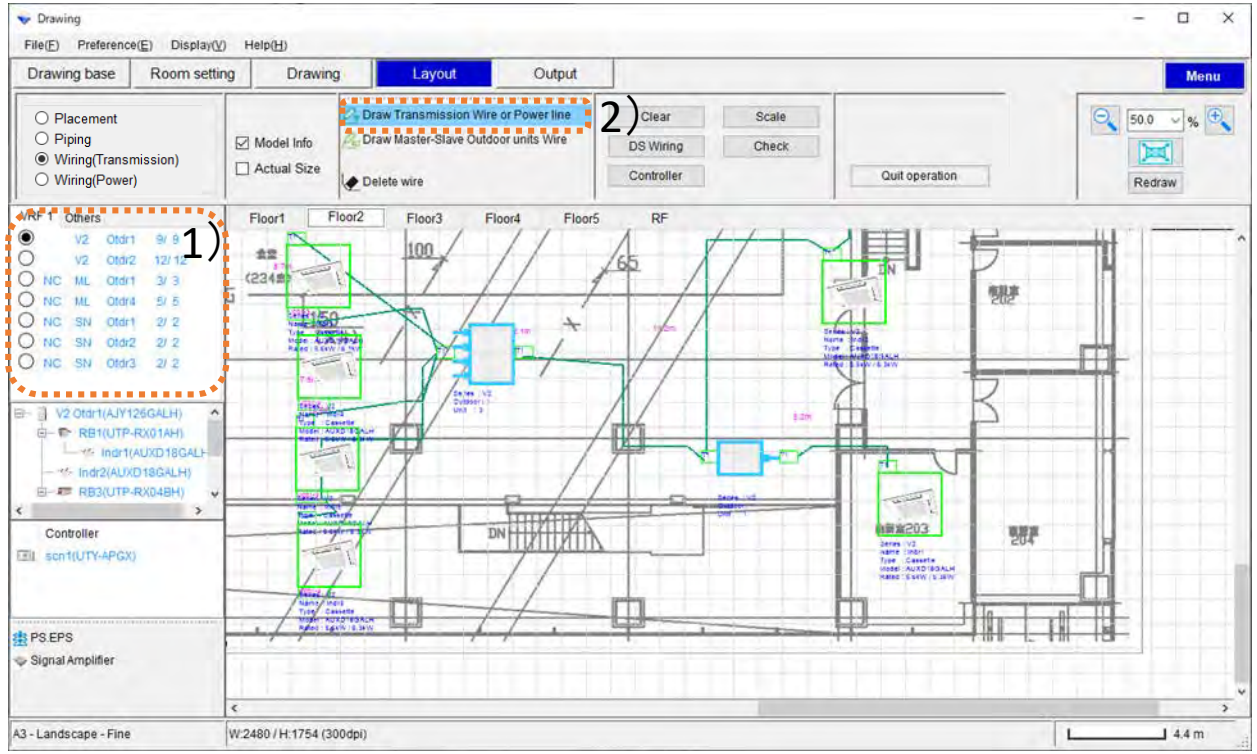
Show all unit Terminal



Legend	Line	explain
T	X1,X2	Transmission
T1	1,2,3	Power line and Control line
TA	A,B,SGND	Transmission BACNet(Hardwear)
TP	1,2,3	Power line
K1	K1,K2,K3	Network Convertor
A	1,2,3	2-6Multi Outdoor only Power line
B	1,2,3	2-6Multi Outdoor only Power line
C	1,2,3	2-6Multi Outdoor only Power line
D	1,2,3	2-6Multi Outdoor only Power line

*“Display – Explanatory notes“ in tool menu shows all terminal detail

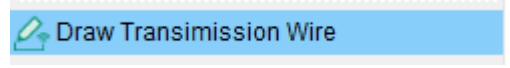
Draw Transmission wire- Manual



1)Select Refrigerant

2)Press “Draw Transmission wire.”

Not selected Line 

Selected Line 

3)Left-Click at Outdoor unit Terminal

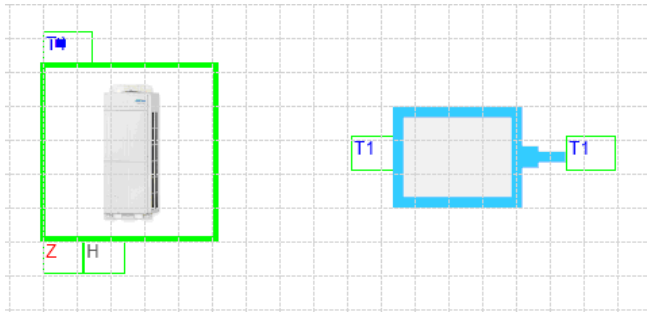
Left-click at second point

Repeat

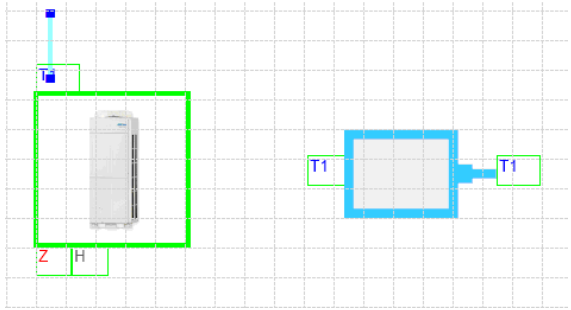
4) Left-double Click at Terminal end point

The case of 2-6Multi split, when drawing wirings, Piping line is drawn automatically

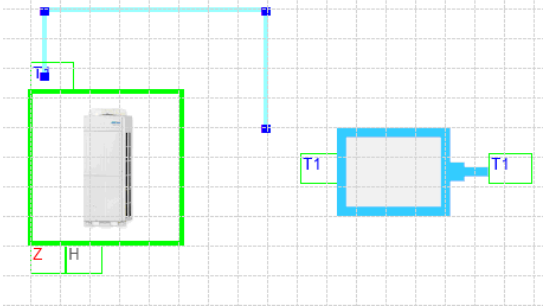
3)



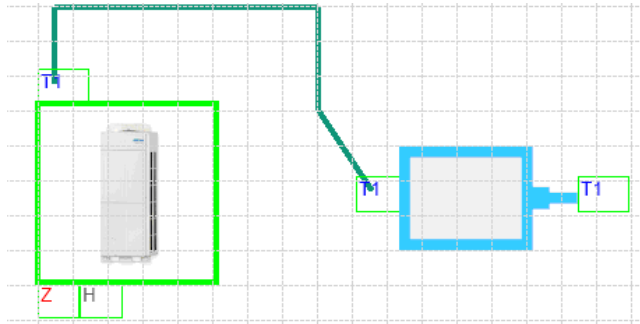
3)



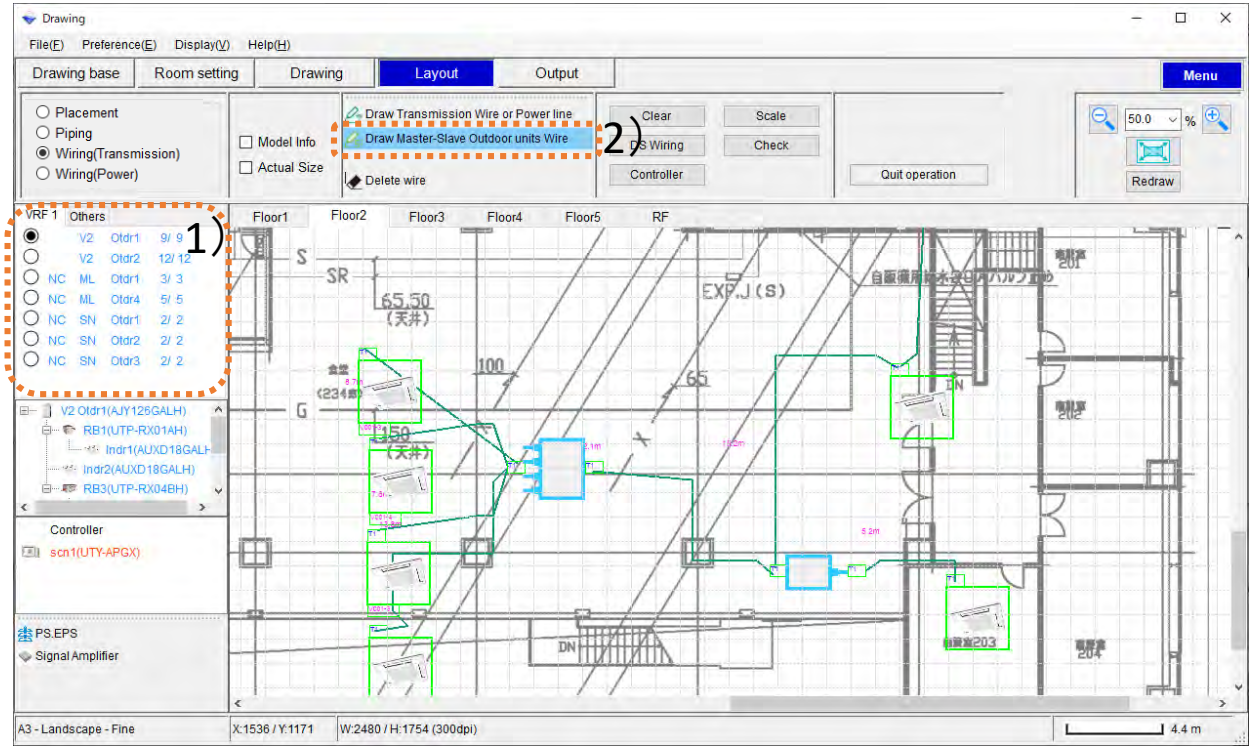
3)



4)



Draw Master－Slave Outdoor units Wire-Auto



1)Select Refrigerant

2)Press “Draw Master－Slave Outdoor units Wire.”

Not selected Line 

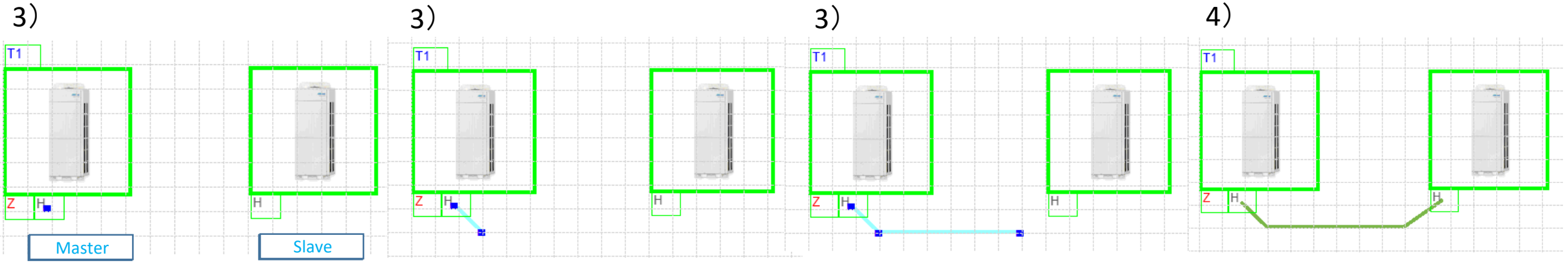
Selected Line 

3)Left-Click at Master Outdoor unit Terminal.

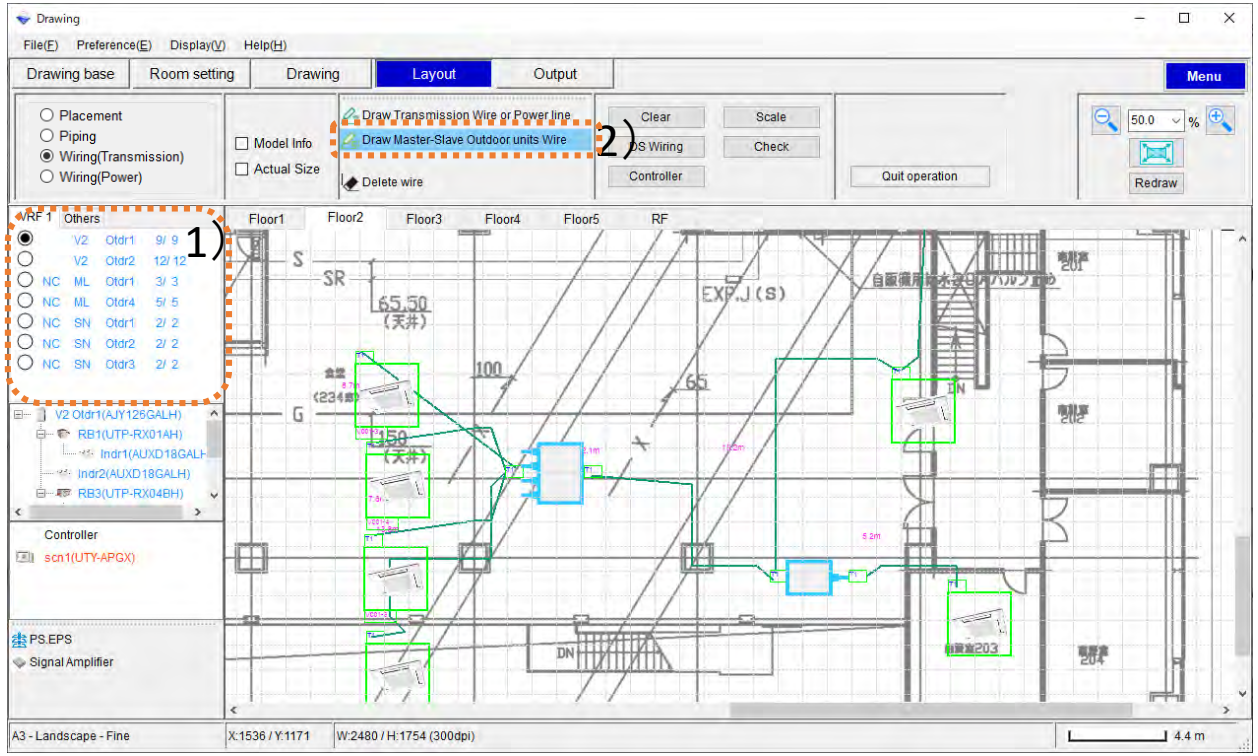
Left-click at second point

Repeat

4)Left-double Click at Slave Outdoor unit Terminal.



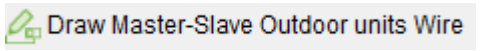
Draw Master-Slave Outdoor units Wire-Manual Drawing Design



1)Select Refrigerant

2) Press “Draw Master－Slave Outdoor units Wire.”

Not selected Line



Selected Line

3)Left-Click at Master Outdoor unit Terminal.

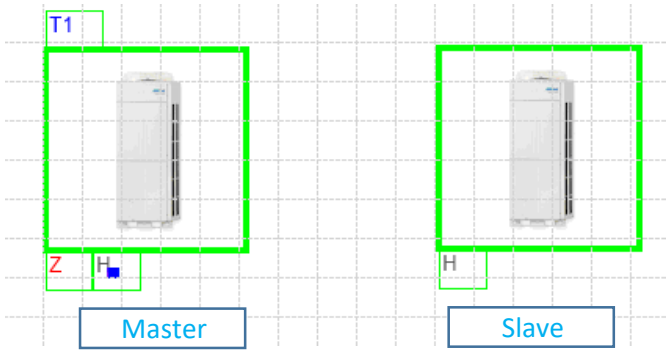
Left-click at second point

Repeat

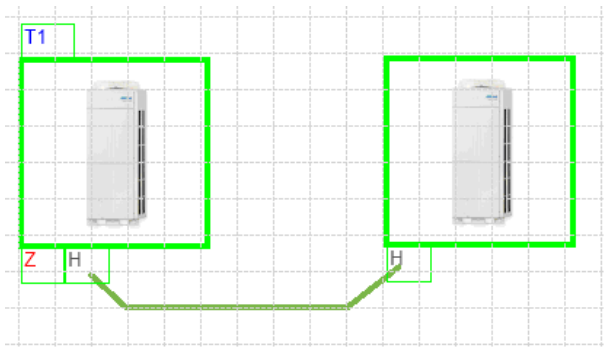
4) Left-double Click at Slave Outdoor unit Terminal.

It is possible to connect different refrigerant systems in the same way

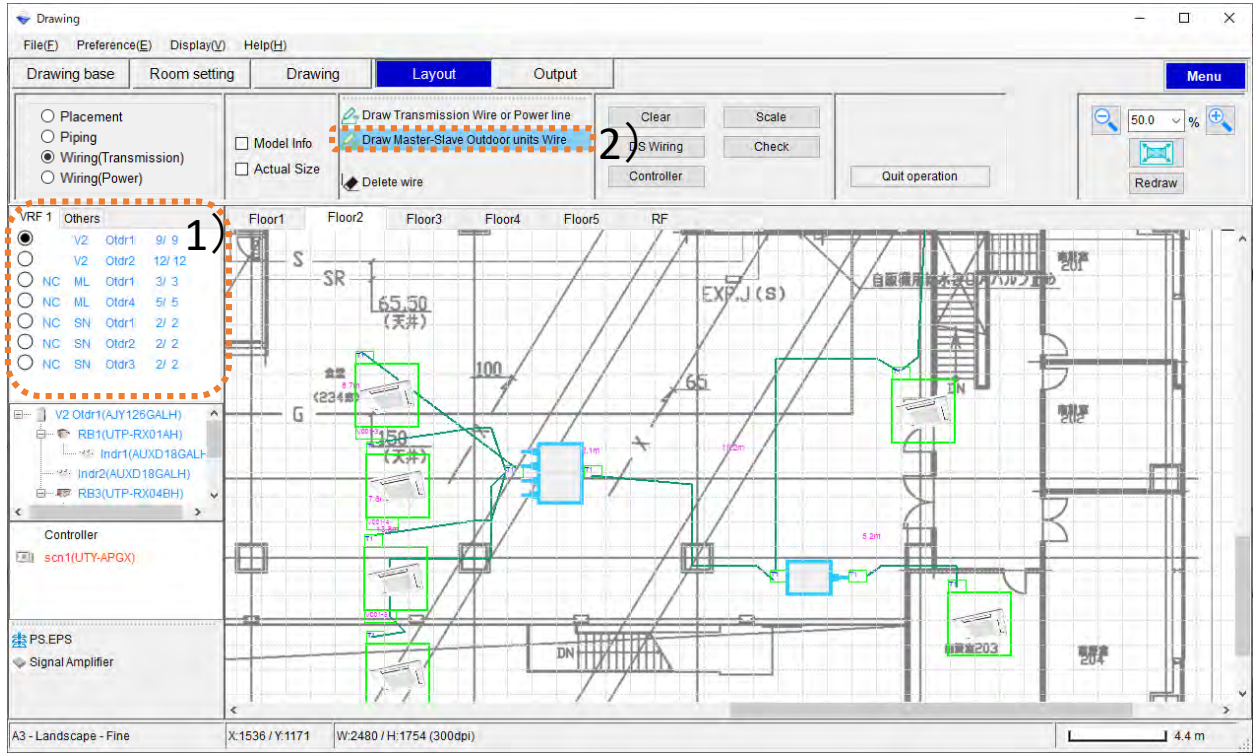
3)



3) 4)

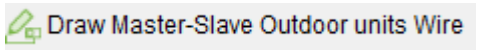


Draw different refrigerant circuit Wire-Manual



1)Select Refrigerant

2) Press “Draw Master－Slave Outdoor units Wire.”

Not selected Line 

Selected Line 

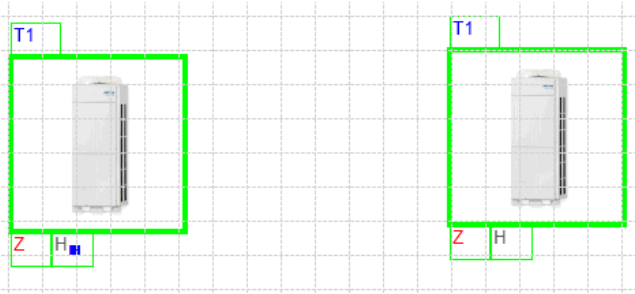
3)Left-Click at Outdoor unit Terminal.

Left-click at second point

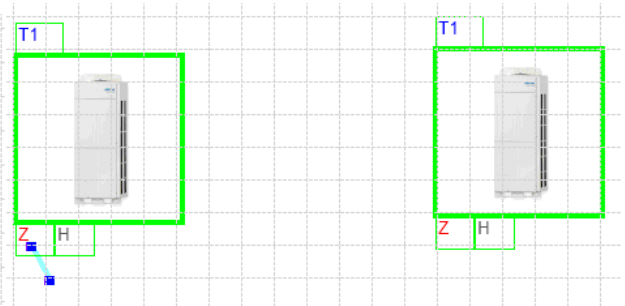
Repeat

4) Left-double Click at Slave Outdoor unit Terminal.

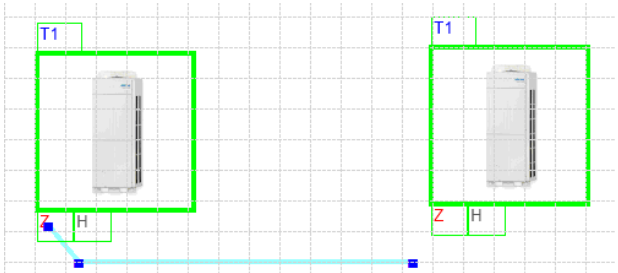
3)



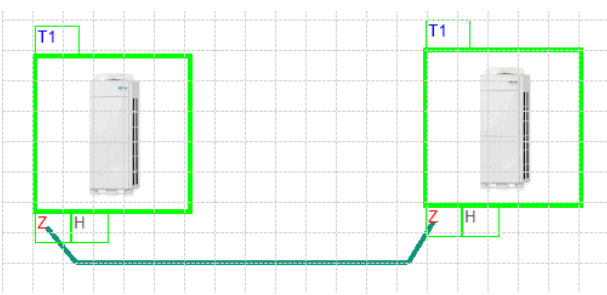
3)



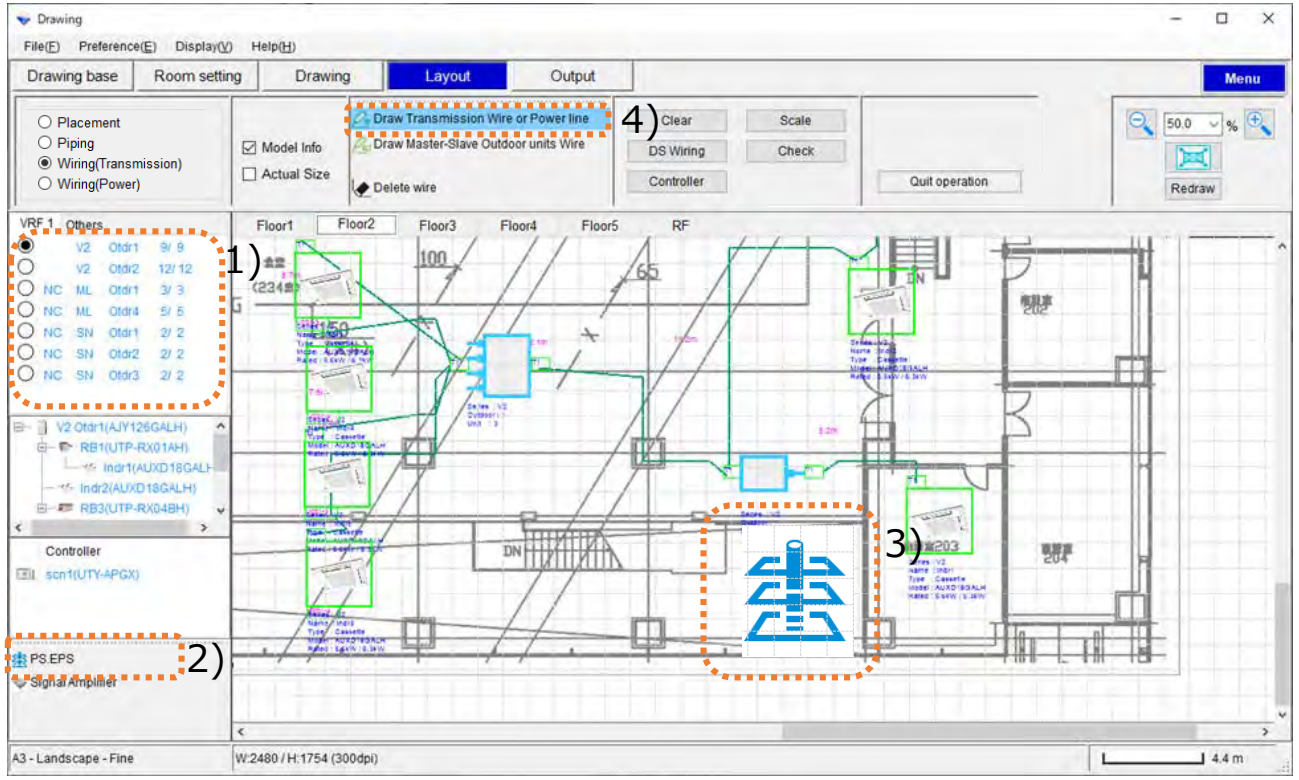
3)



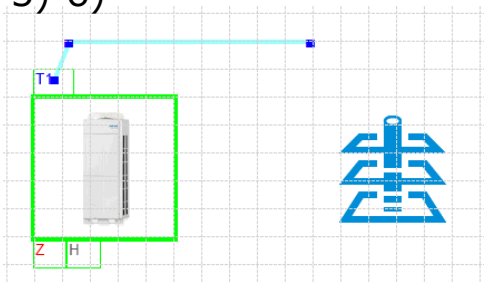
4)



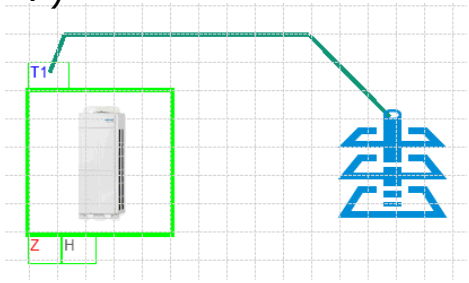
How to Wiring PS,EPS



5) 6)

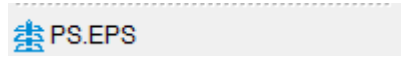


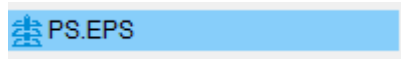
7)



1)Select Refrigerant

2)Press PS,EPS.



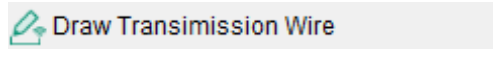


Not selected PS,EPS

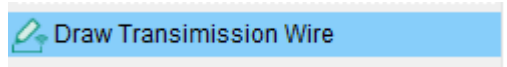
Selected Line PS,EPS

3)Left-Click on work area for part placement.

4)Press Draw Transmission Wire



Not selected Line



Selected Line

5)Left-Click on the unit

6)Left-click at second point

Repeat

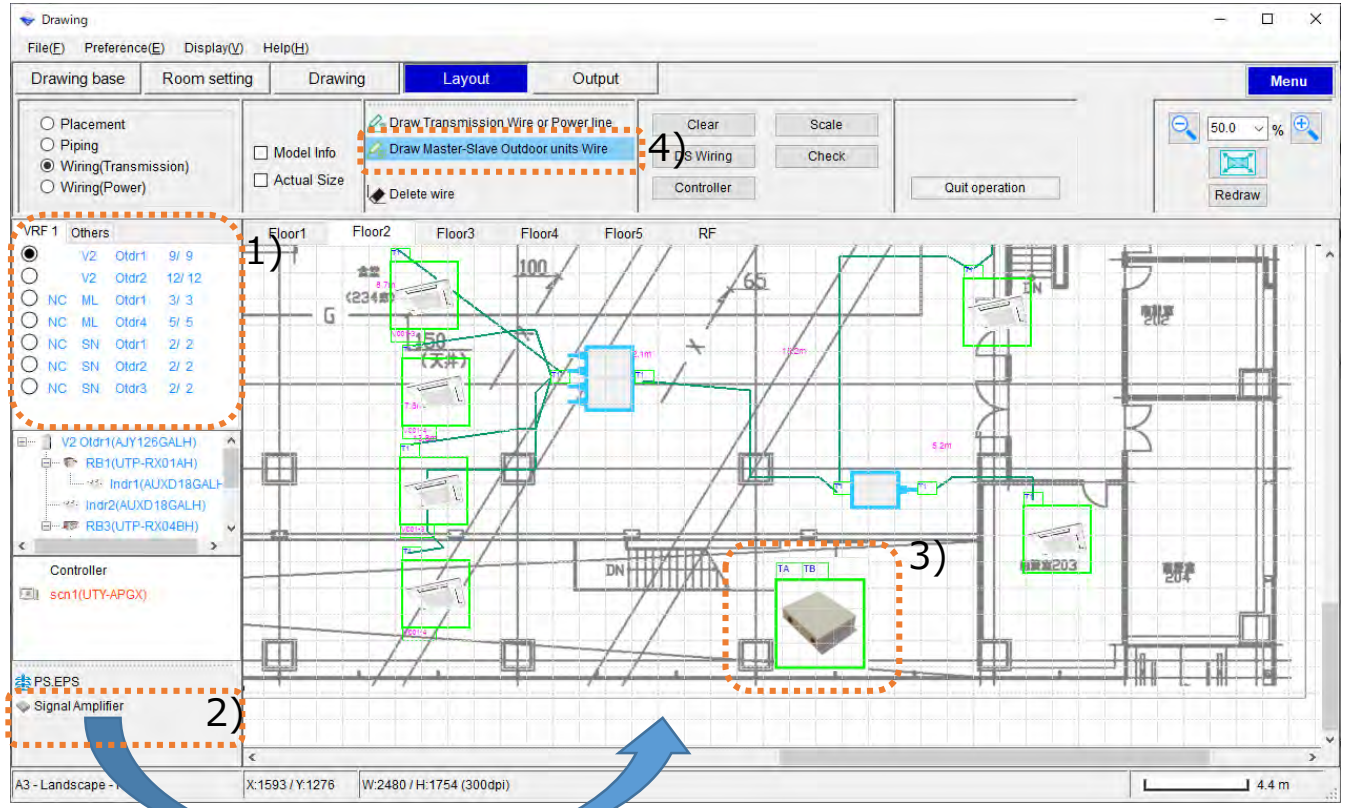
7)Left-double Click at Terminal end point.

PS : Pipe Space

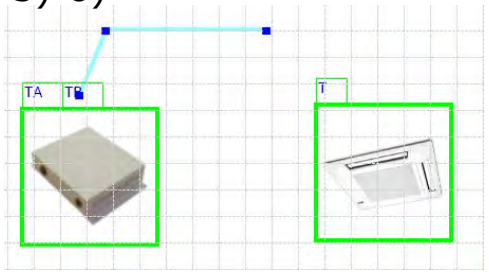
EPS : Electric Pipe Space

Signal Amplifier

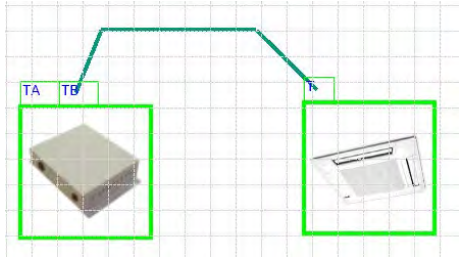
How to Wiring Signal Amplifier



5) 6)

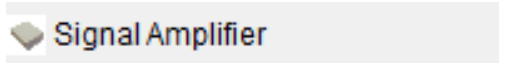


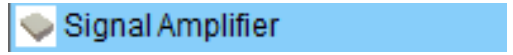
7)



1) Select Refrigerant

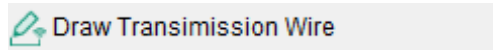
2) Press Signal Amplifier.

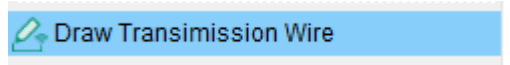
Not selected Signal Amplifier 

Selected Signal Amplifier 

3) Left-Click on work area for part placement.

4) Press Draw Transmission Wire

Not selected Line 

Selected Line 

5) Left-Click on the unit

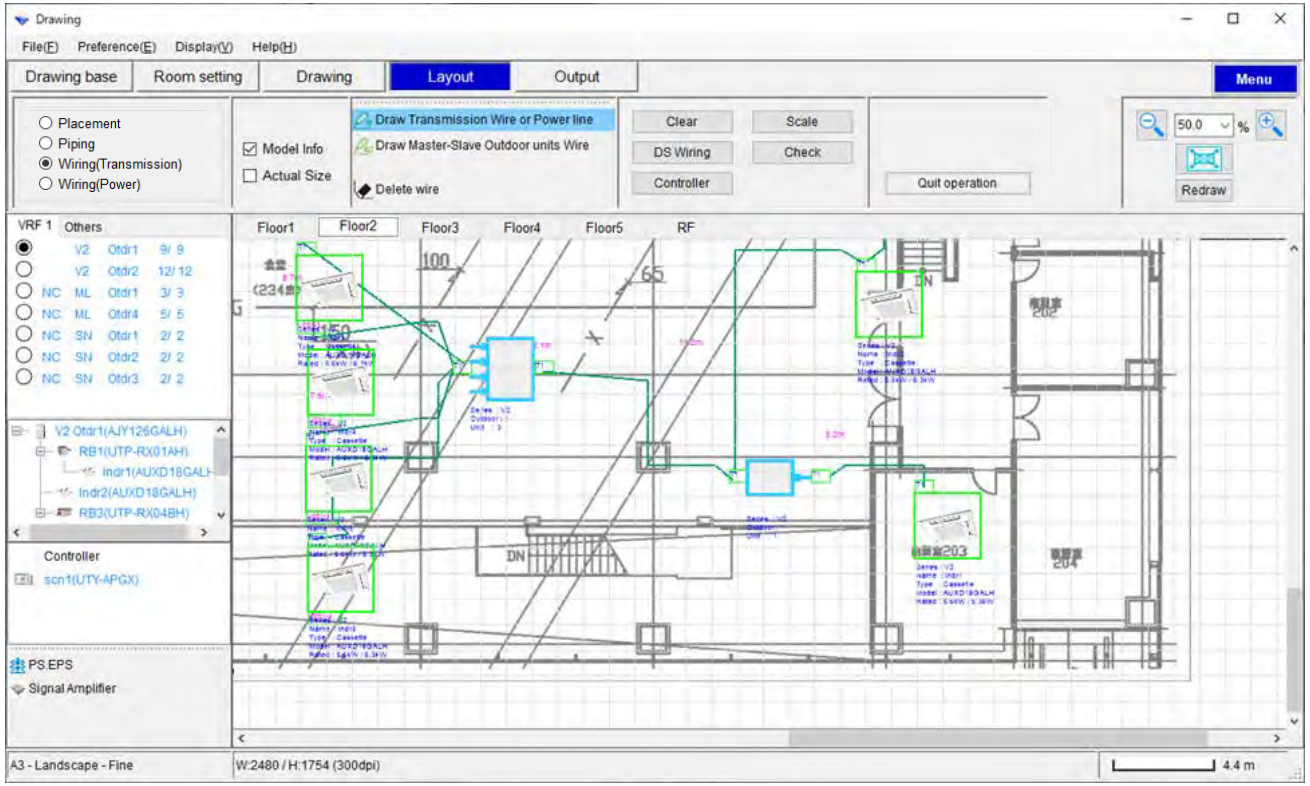
6) Left-click at second point

Repeat

7) Left-double Click at Terminal end point.

Change wire length

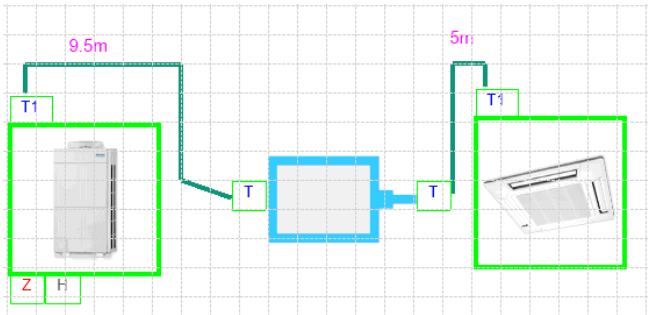
How to change wire length



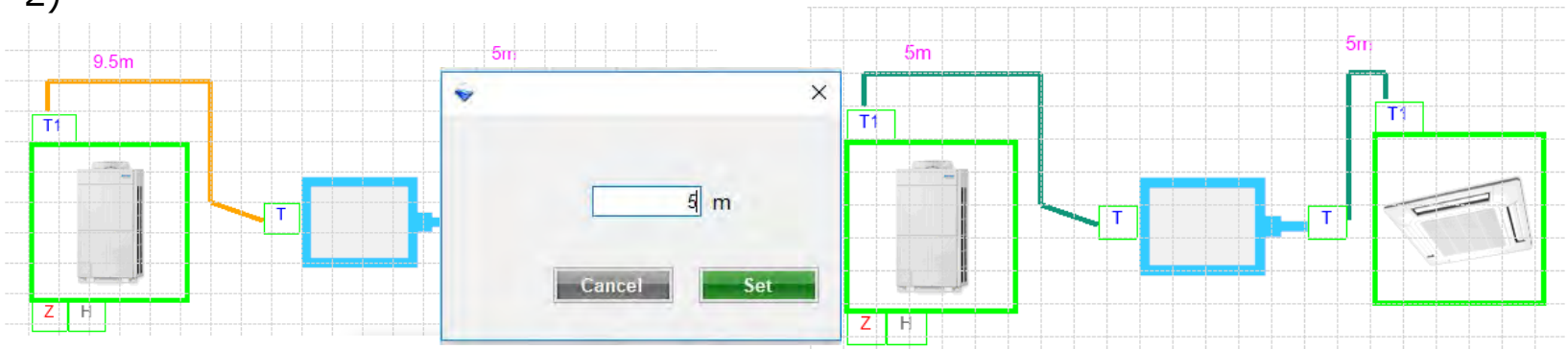
1)Double-Click on start point or end point of wire line

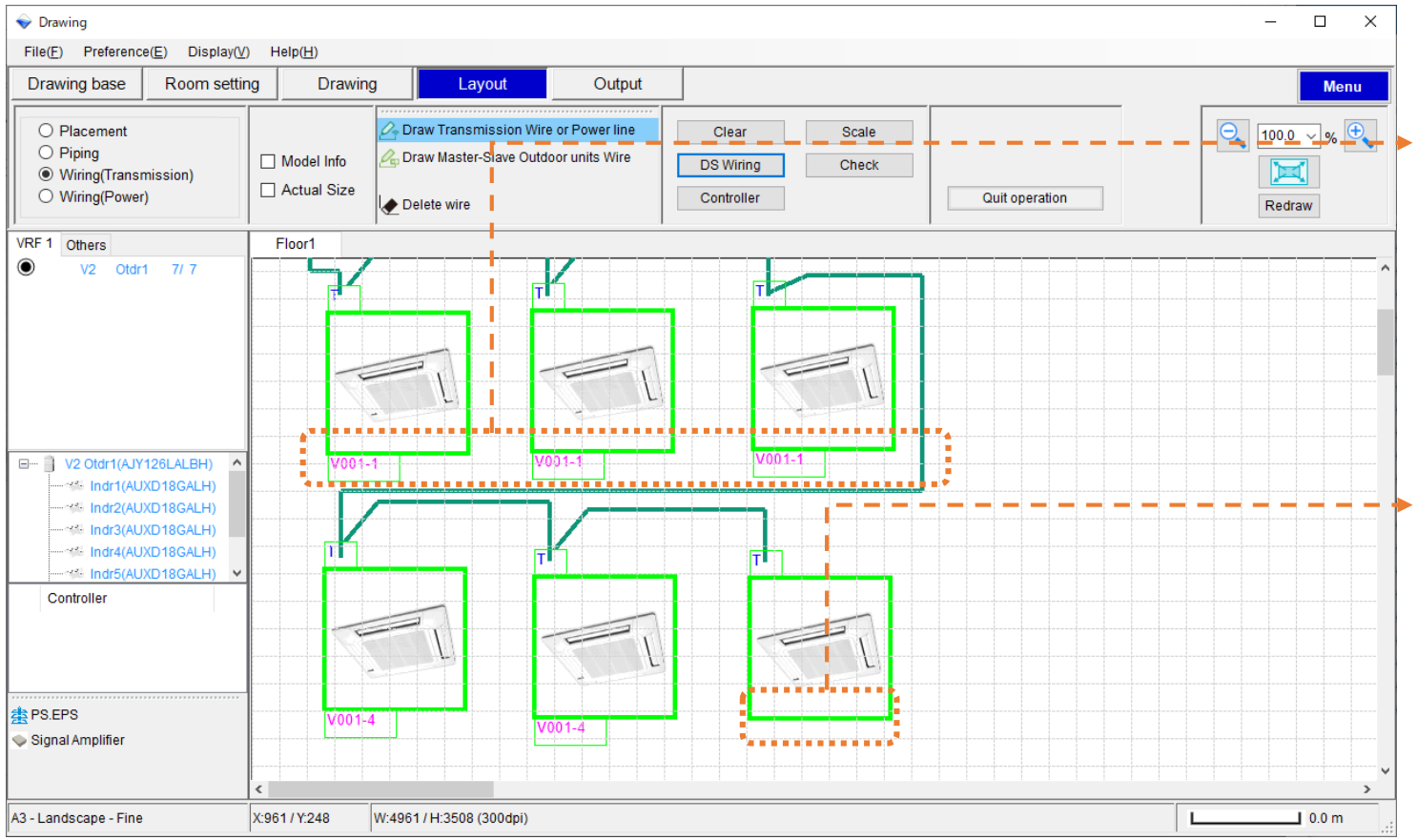
2)Input length, press Set

1)



2)



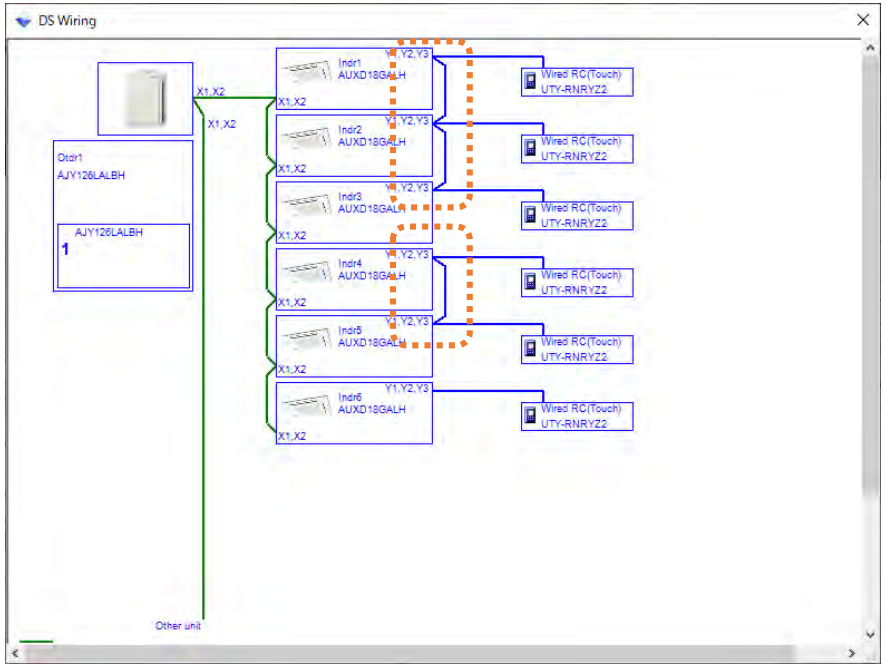


When creating RC Group ,
terminals are displayed under the indoor unit.

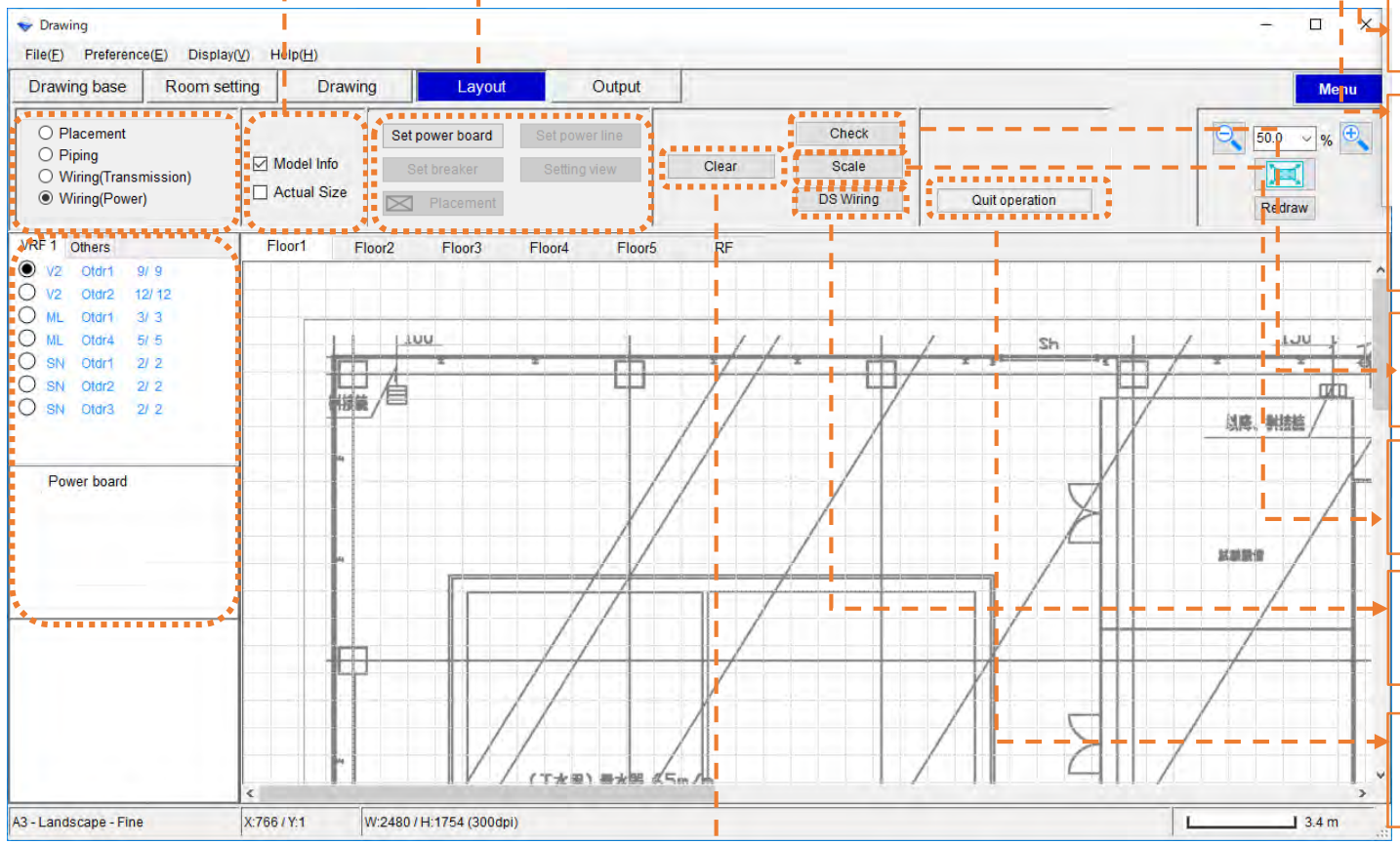
RC Group Terminal name:
Series + Outdoor Index + RC Gr. No

Series :
V:VRF, F:8RoomMulti, M:2-6Multi split, S:Single split
Outdoor Index: 1-100
RC Gr. No : 1-64

Single RC terminal is not displayed.



Layout-Wiring(Power) (1/2)



Display setting
Model Info: Show unit's information
Actual Size: Display in actual size (Require Scale setting)

Power board setting: Refer to "Set Power Board " & "Set Breaker"
Refer to "Placement" & "Set power line" & "Setting view"

Check
Refer to "Check"

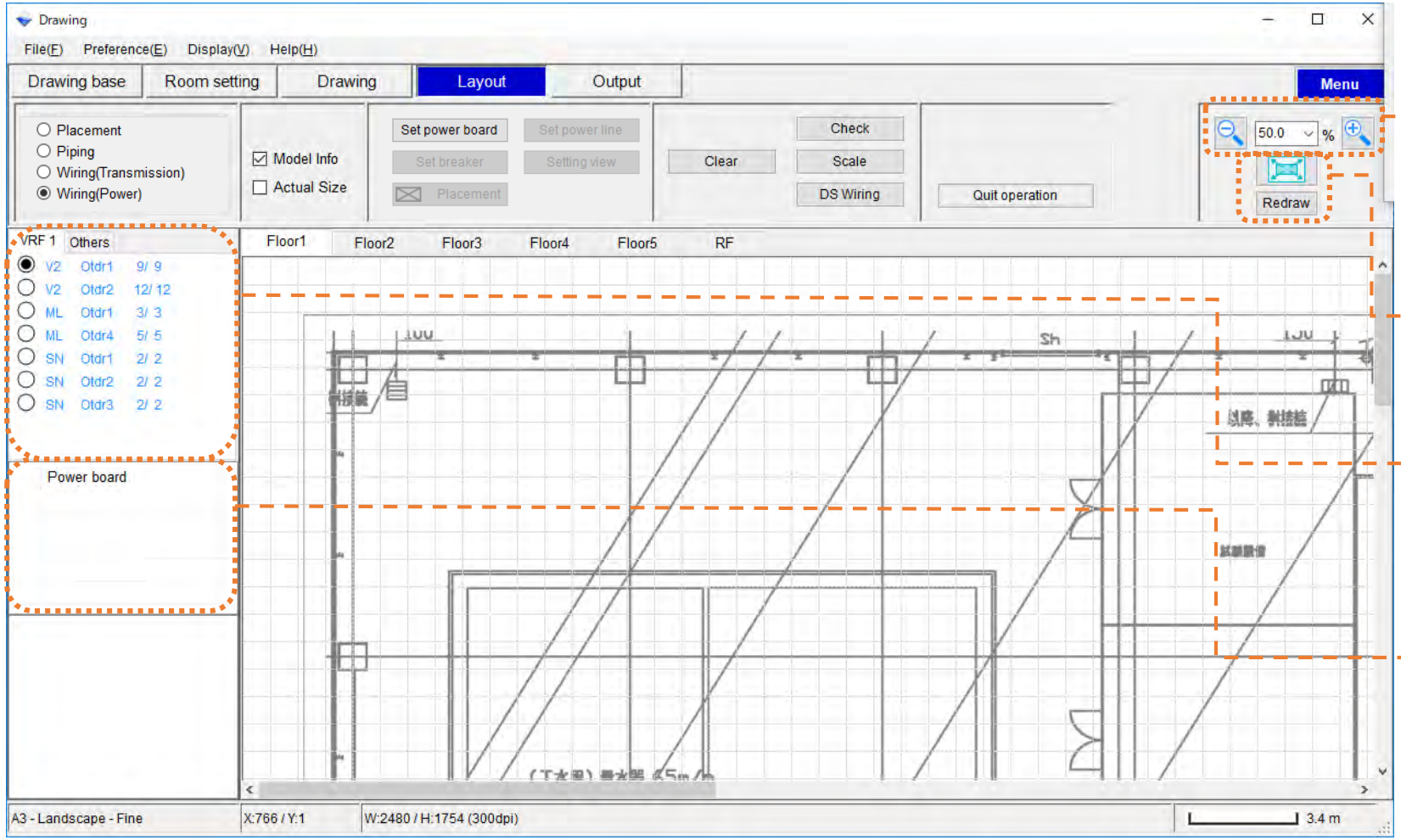
Scale
Refer to "Scale setting"

DS Wiring
Open "DS Wiring display"

Quit operation
Quit current operation is terminated.

Clear
Refer to " Clear"

Layout-Wiring(Power) (2/2)



Zoom to

: Zoom up

: Zoom down

: Select zoom

: Full picture display

Redraw

Redraw: Draw the displayed picture again

Refrigerant list

Selecting refrigerant

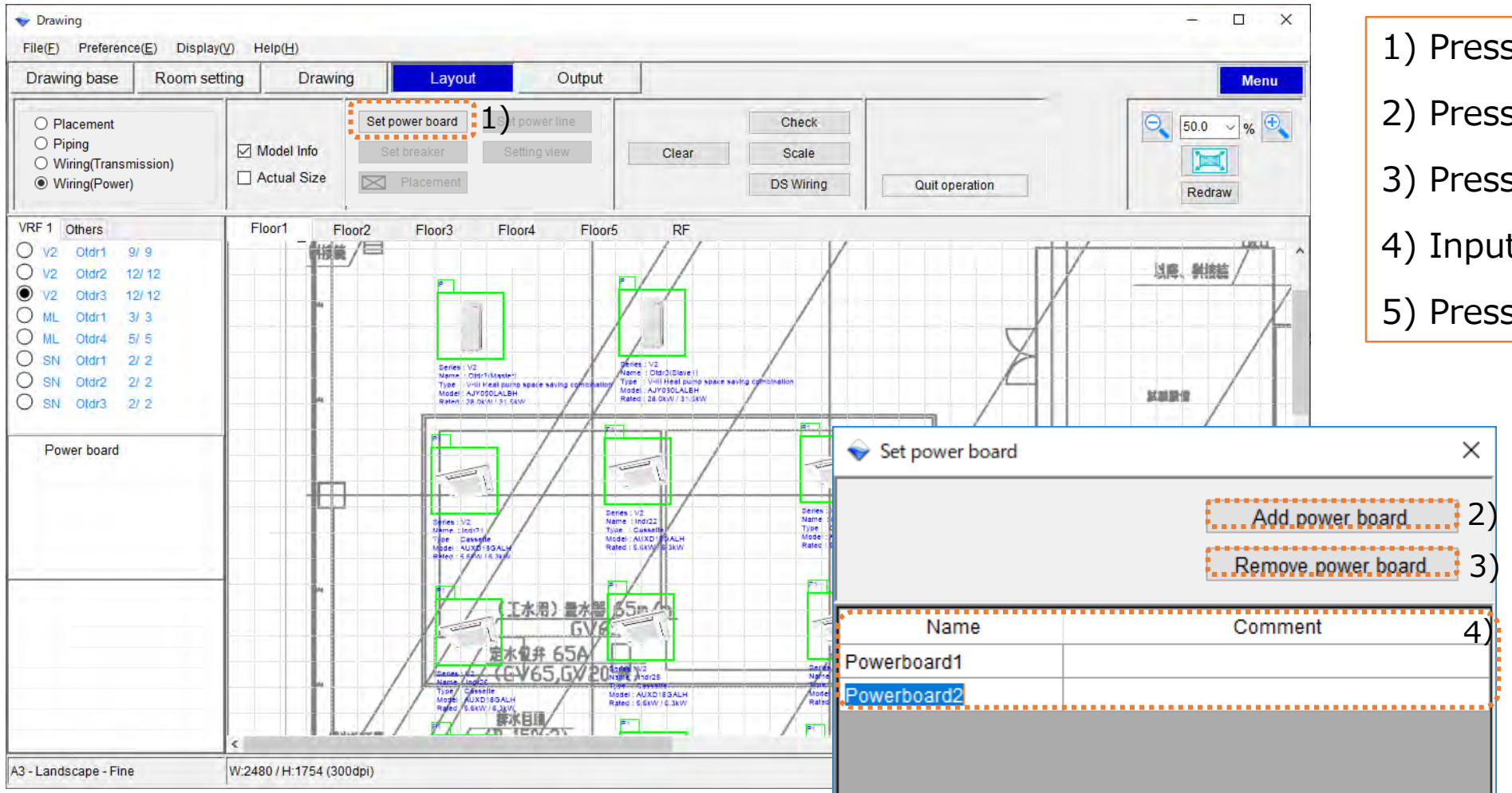
Power board

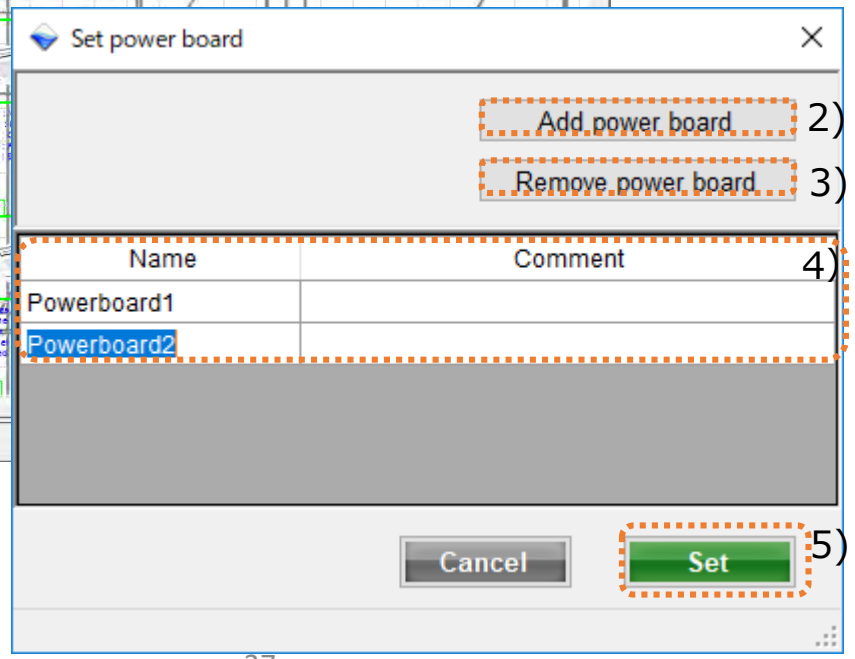
Done : “✓”Made Power board

“ ” Not made Power board

Set power board

How to Controller object – Drag and Drop





1) Press Set power board

2) Press Add power board

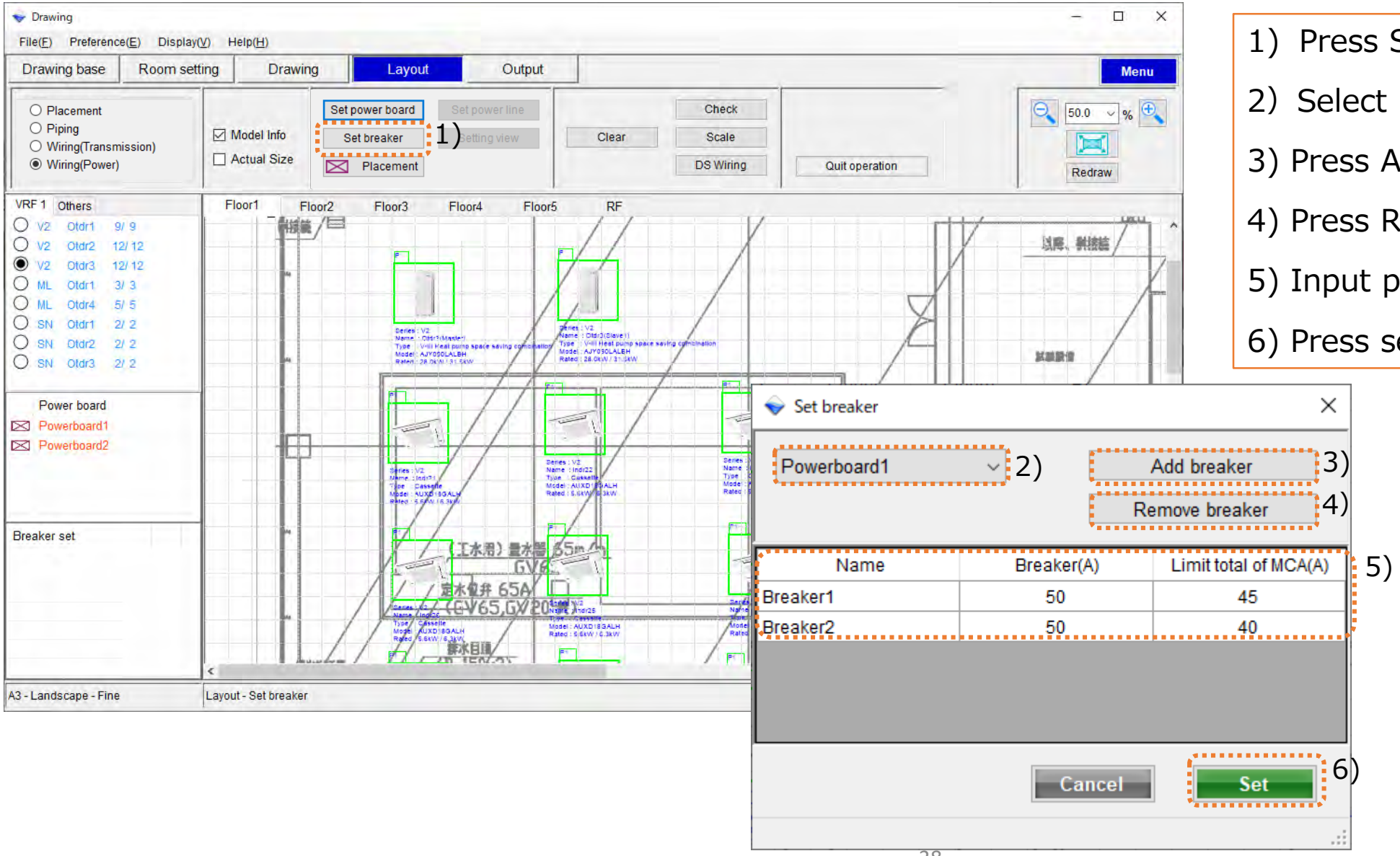
3) Press Remove power board

4) Input power board information

5) Press set

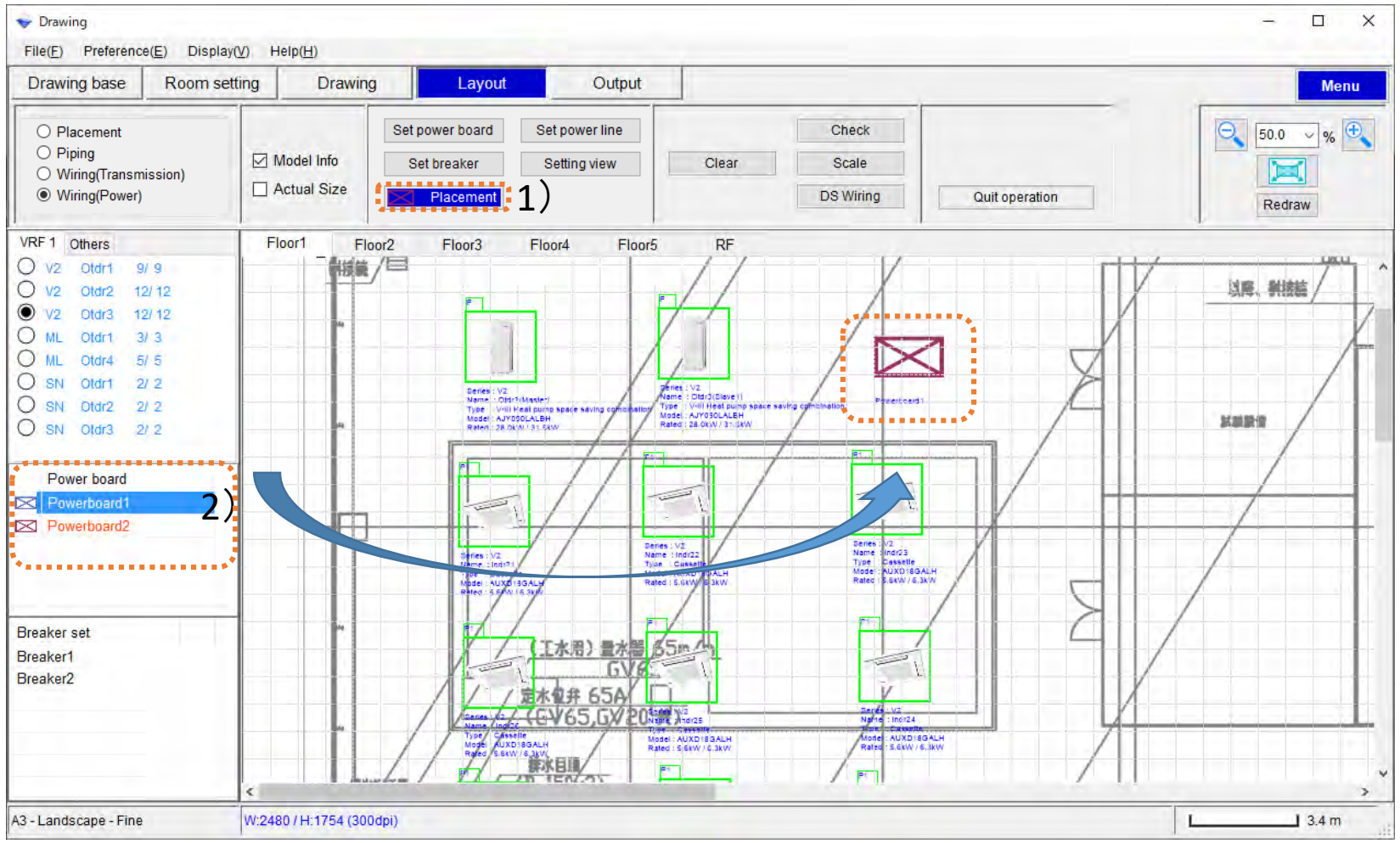
Set breaker

How to Controller object – Drag and Drop



1) Press Set breaker
2) Select Power board
3) Press Add breaker
4) Press Remove breaker
5) Input power board information
6) Press set

Placement



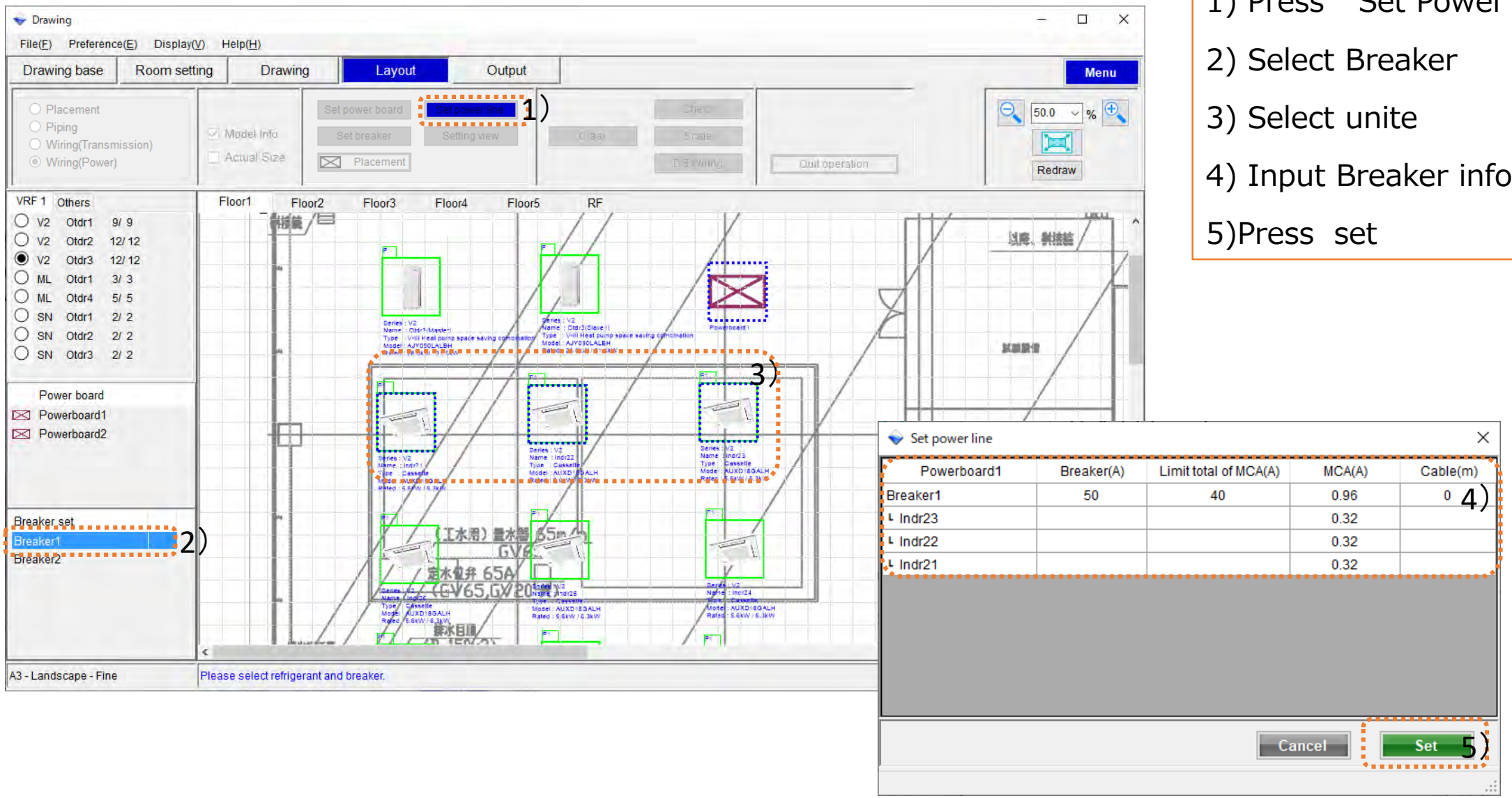
1) Press “Placement.”

2) Select Power board

Drag & Drop on work area

Unplaced is orange, and already arranged is light blue

Set power line



1) Press “Set Power board.”

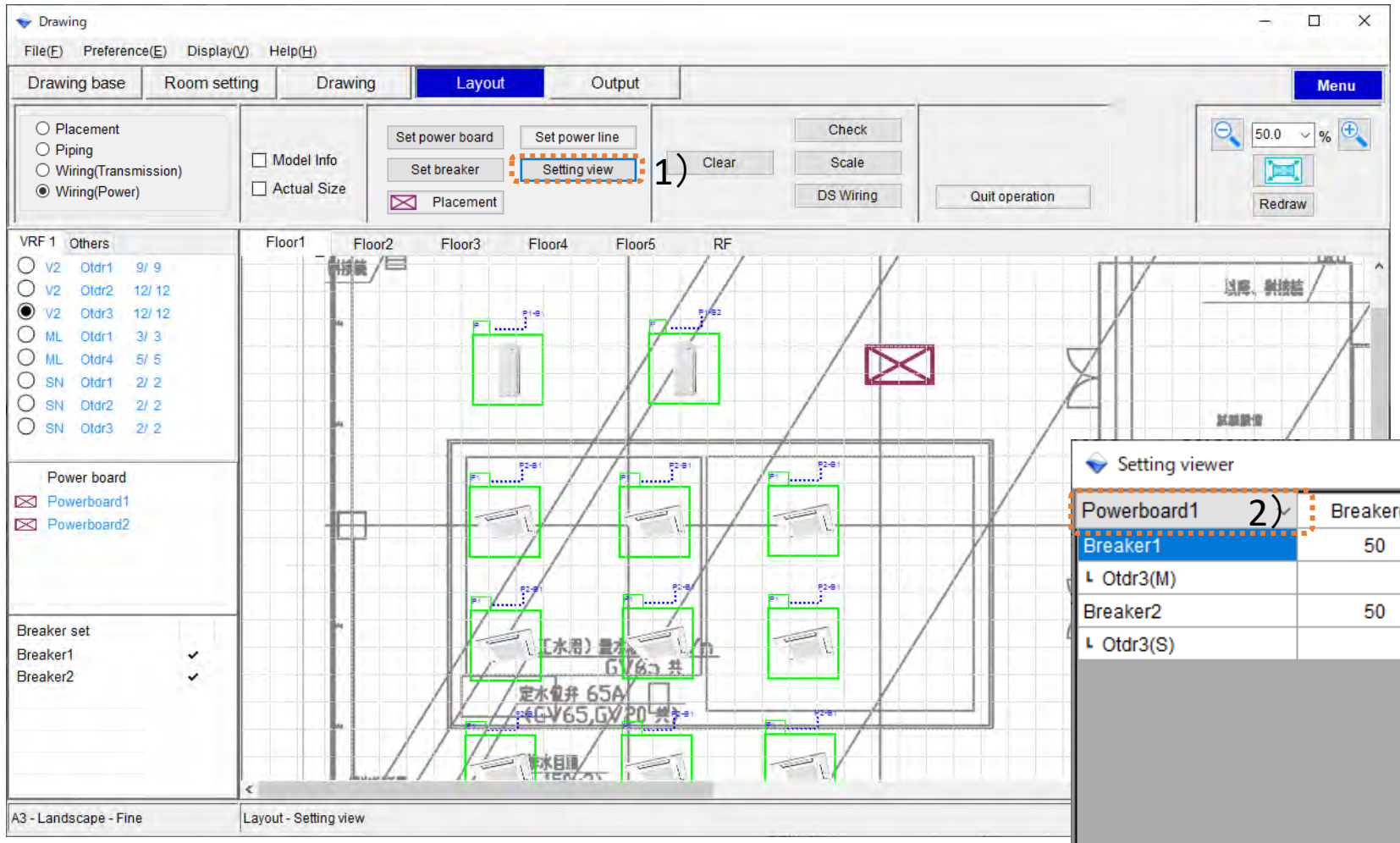
2) Select Breaker

3) Select unite

4) Input Breaker information

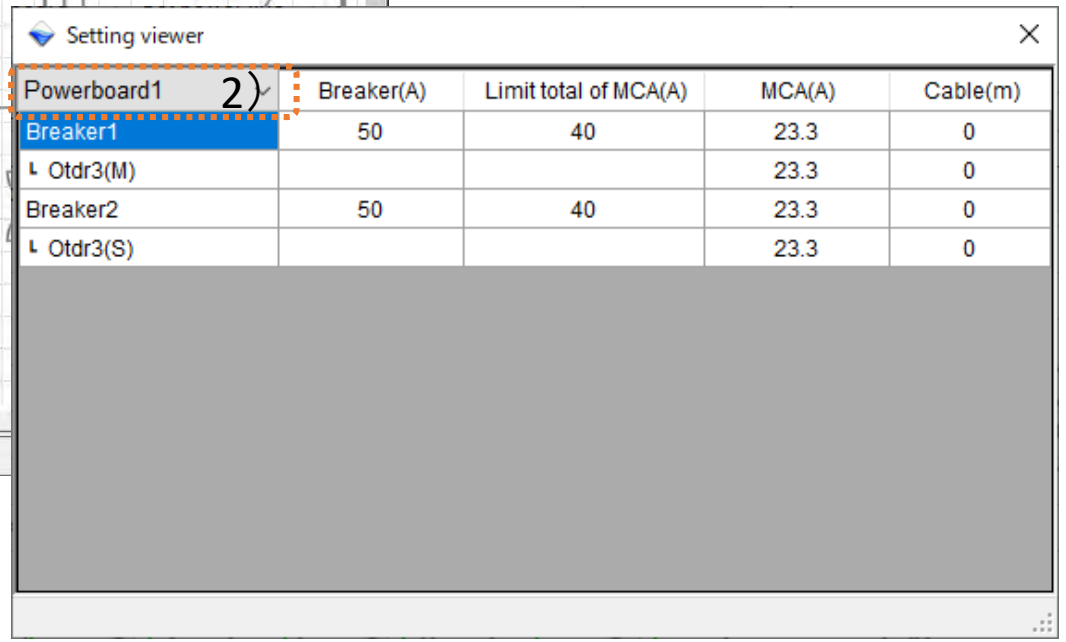
5)Press set

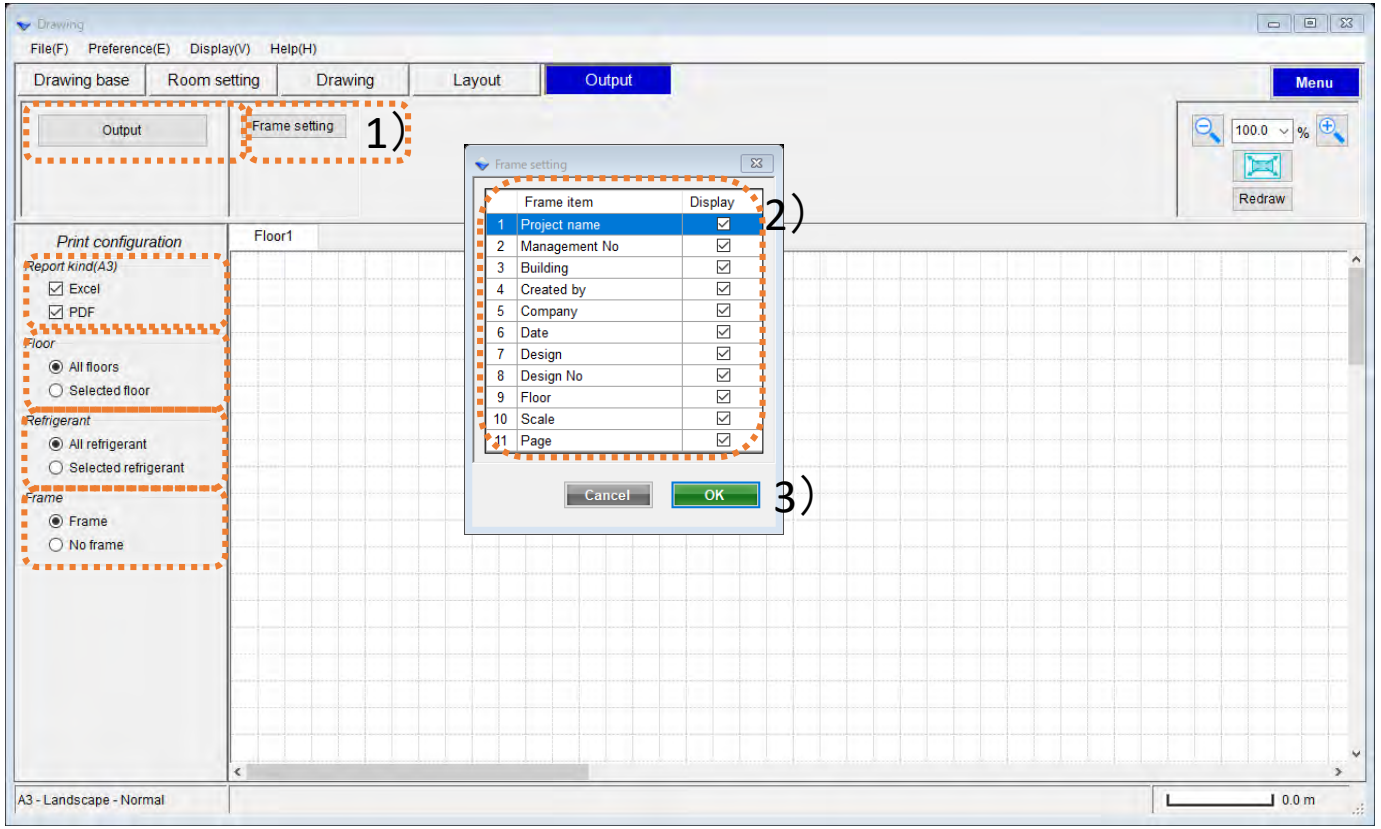
Setting viewer



1) Press “Setting view.”

2) Select Power board





Report kind(A3)

Select ” Excel” or “PDF”

Floor

Select ”All Floor” or “Selection Floor”

All Floor :Output all Floor

Selection Floor: Output Selection Floor

Refrigerant

Select ”All refrigerant” or “Selected refrigerant”

Frame

Select ”Frame” or “No Frame”

Output

Output the image of Layer set by Display

*Outputs the contents displayed in the display category.

Display-Display category

Frame setting

1)Press Frame setting

2)Check Frame item

3)Press ok