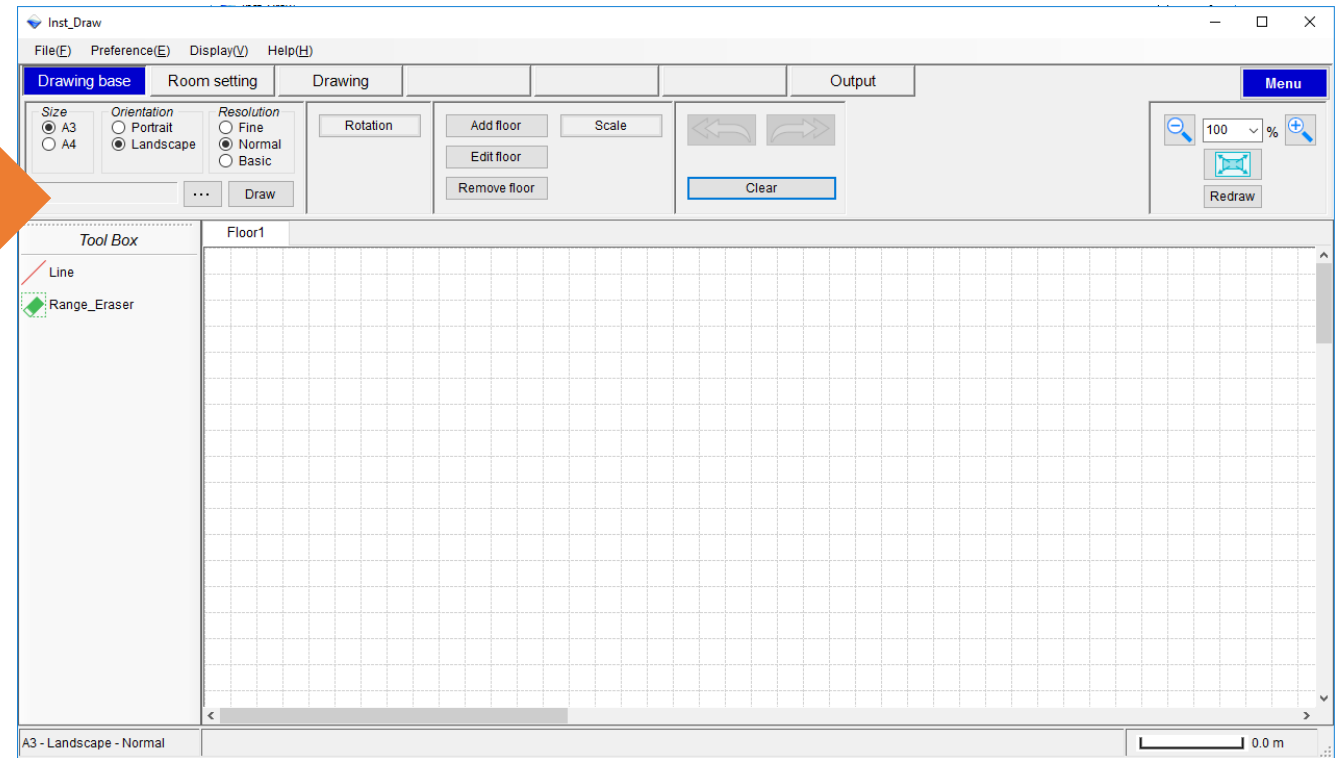
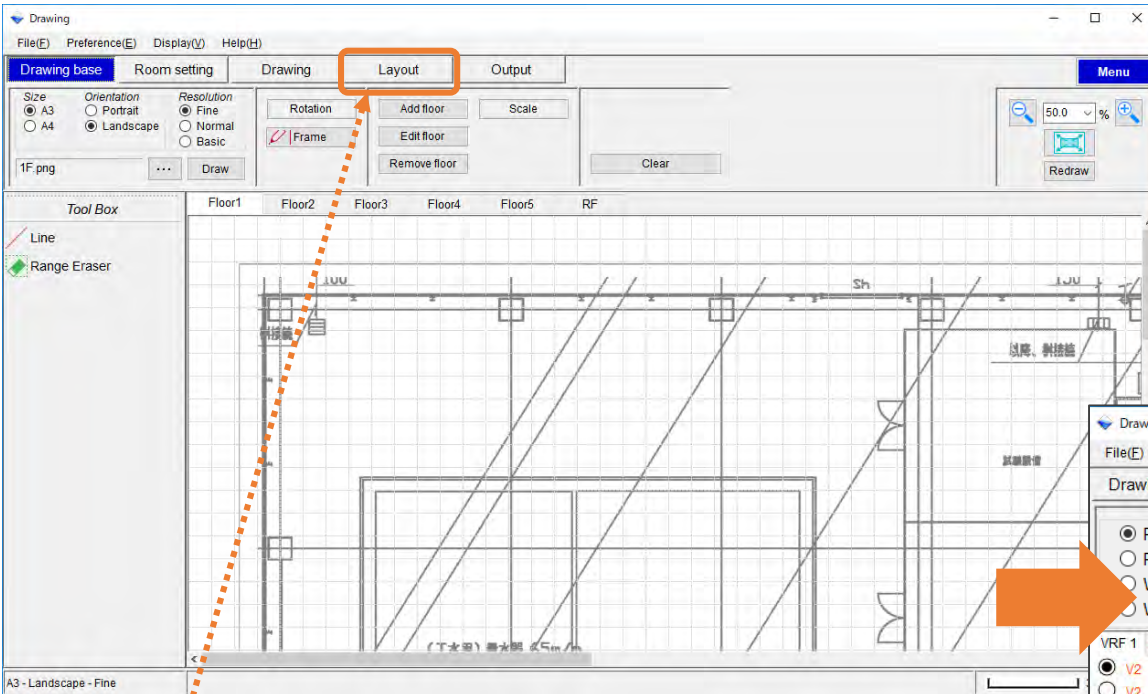


Select "Drawing Design"

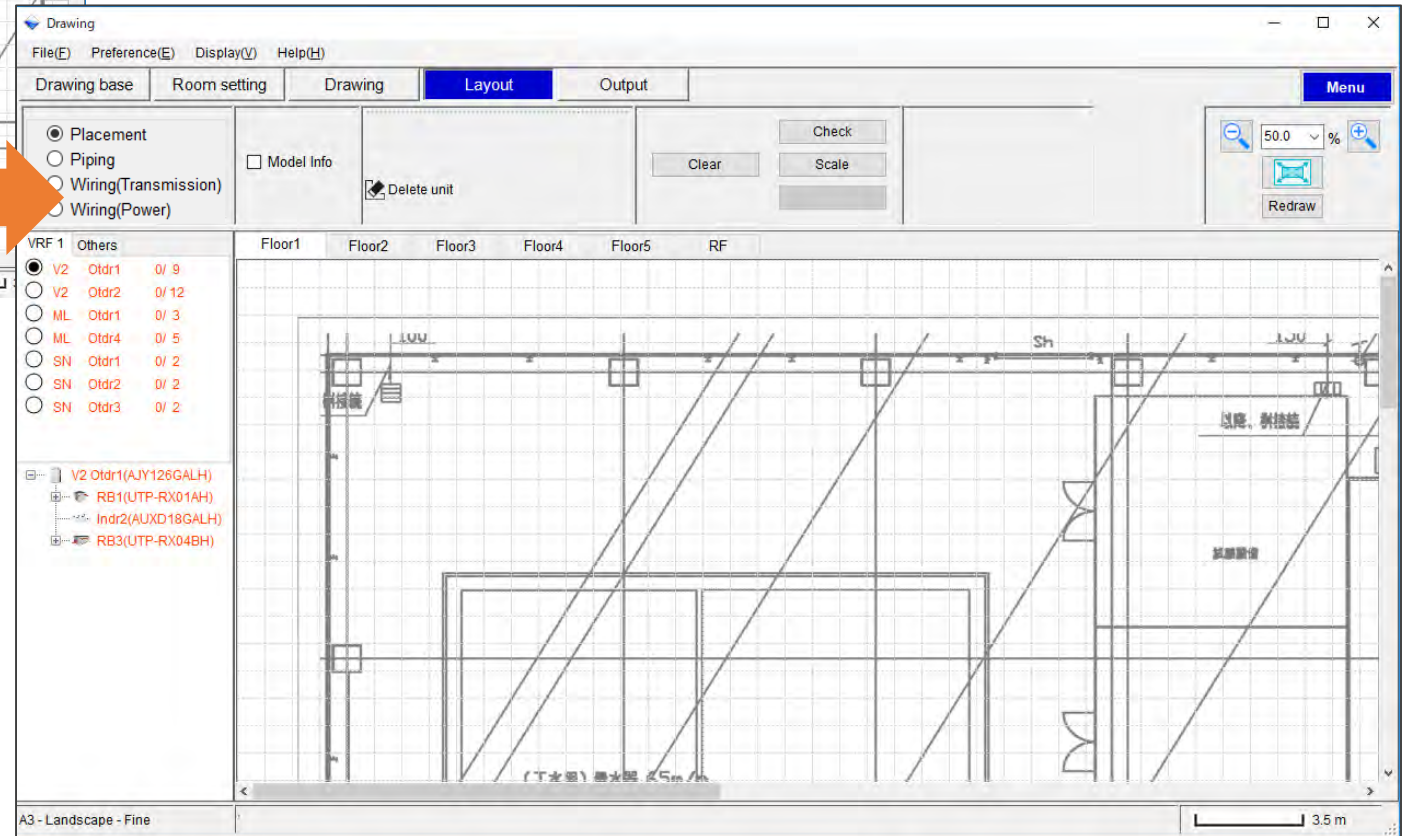
Drawing Design screen (Drawing base)

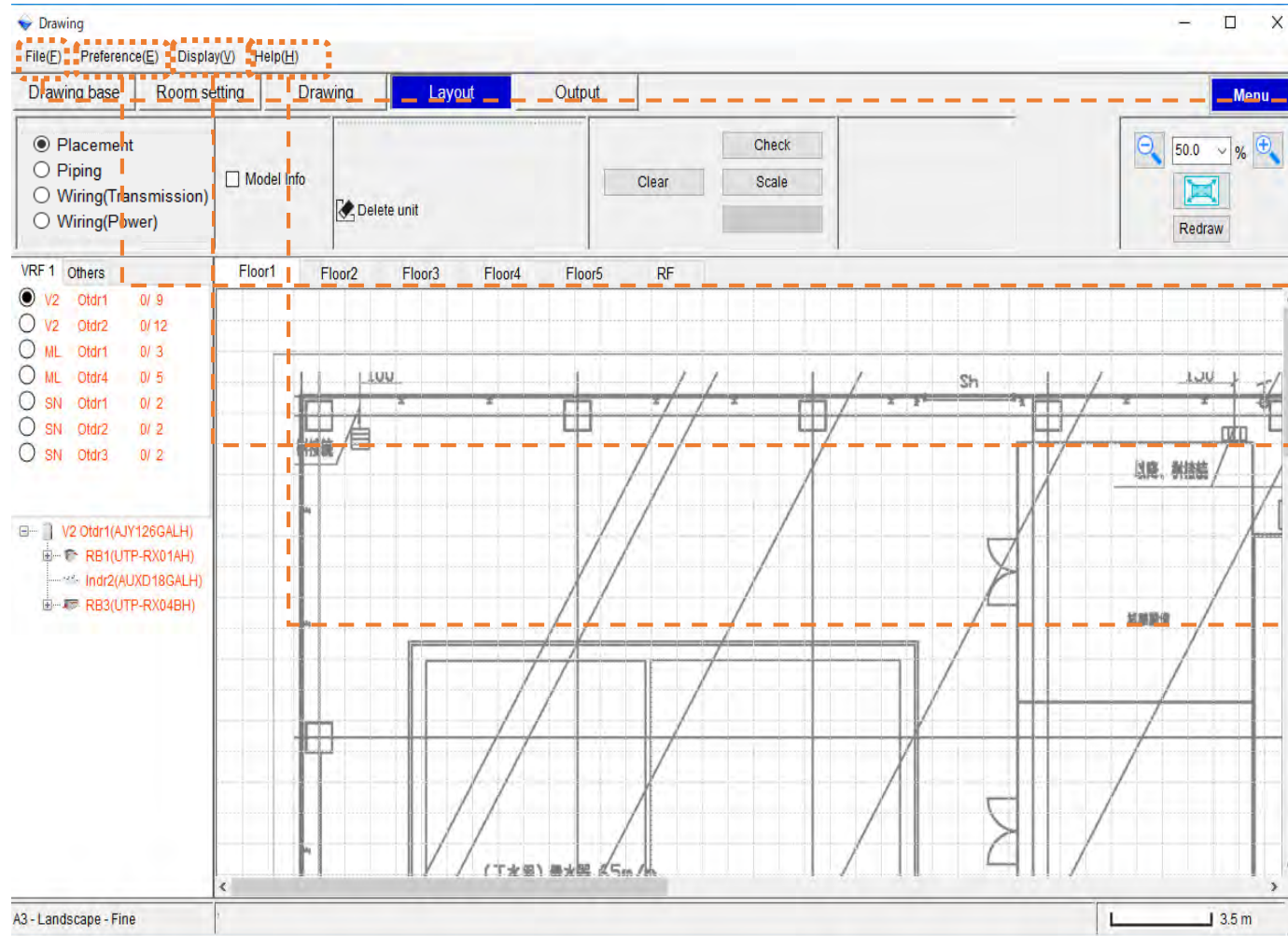




Select "Layout"

Layout screen (Placement)





## File

File(F)

Exit(X)

: Go to menu screen

## Preference

Preference(E)



Preference

: Refer to "Preference"

## Display

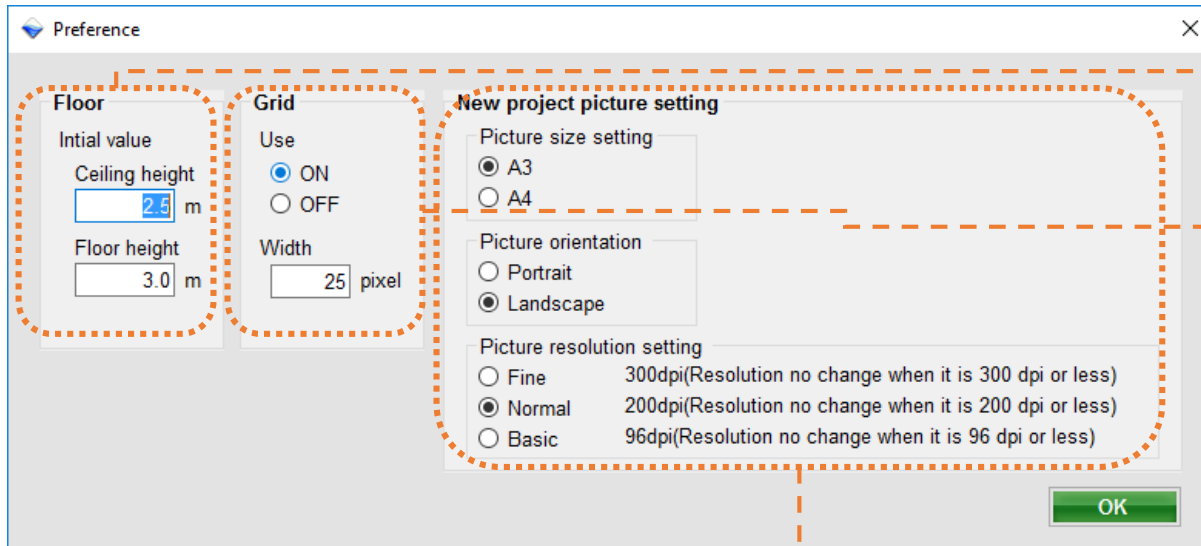
Refer to "Display"

## Help

Help(H)

Manual

: Display Manual



## 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

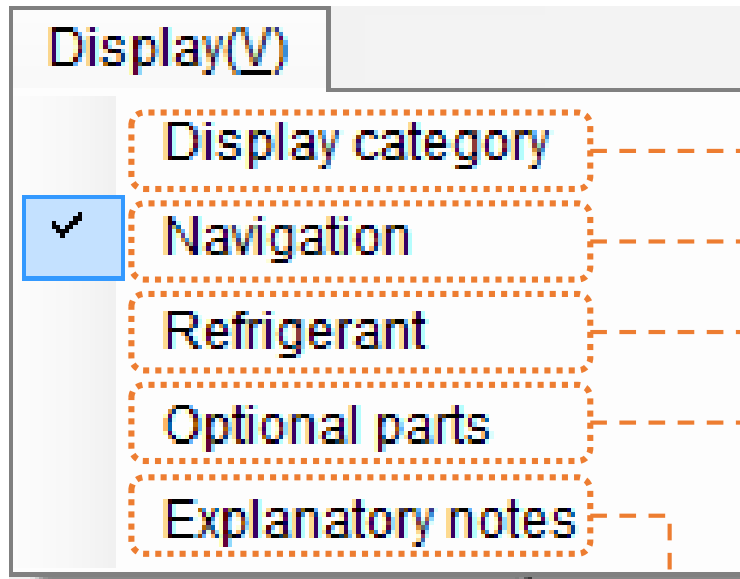
Fine : Capture with resolution equivalent to 300 dpi

Normal : Capture with resolution equivalent to 200dpi

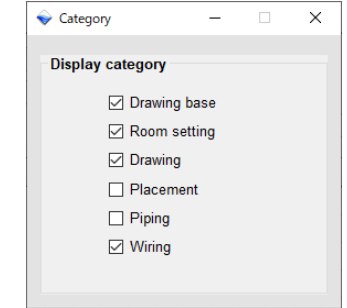
Basic : Capture with resolution equivalent to 96dpi

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





Display category screen  
Display category screen  
The selected screen is overlaid and displayed



Navigation  
Display Navigation screen

Refrigerant  
Display list of refrigerant equipment

Name	Model	Capacity	Dimensions	Floor	Room
chert	AQUA0010V	1000W / 1000W	1000mm x 1000mm		
RB1	UTP-RU04BH	-	200x58x28		
Indr1	AUUB10TLAV	18kW / 20kW	240x840x840		
Indr2	AUUB10TLAV	18kW / 20kW	240x840x840		
Indr3	AUUB10TLAV	18kW / 20kW	240x840x840		
Indr4	AUUB10TLAV	18kW / 20kW	240x840x840		
Indr5	AUUB10TLAV	18kW / 20kW	240x840x840		
Chp2	AQUA0010V	900W / 1000W	1000mm x 1000mm		
RB1	UTP-RU01BH	-	100x200x58		
Indr6	AUUB10TLAV	18kW / 20kW	240x840x840		
Indr7	AUUB10TLAV	18kW / 20kW	240x840x840		
RB3	UTP-RU01AH	-	100x200x58		
Indr8	AUUB10TLAV	18kW / 20kW	240x840x840		
Indr9	AUUB10TLAV	18kW / 20kW	240x840x840		

Refrigerant  
Display list of wiring terminal

Explanatory notes

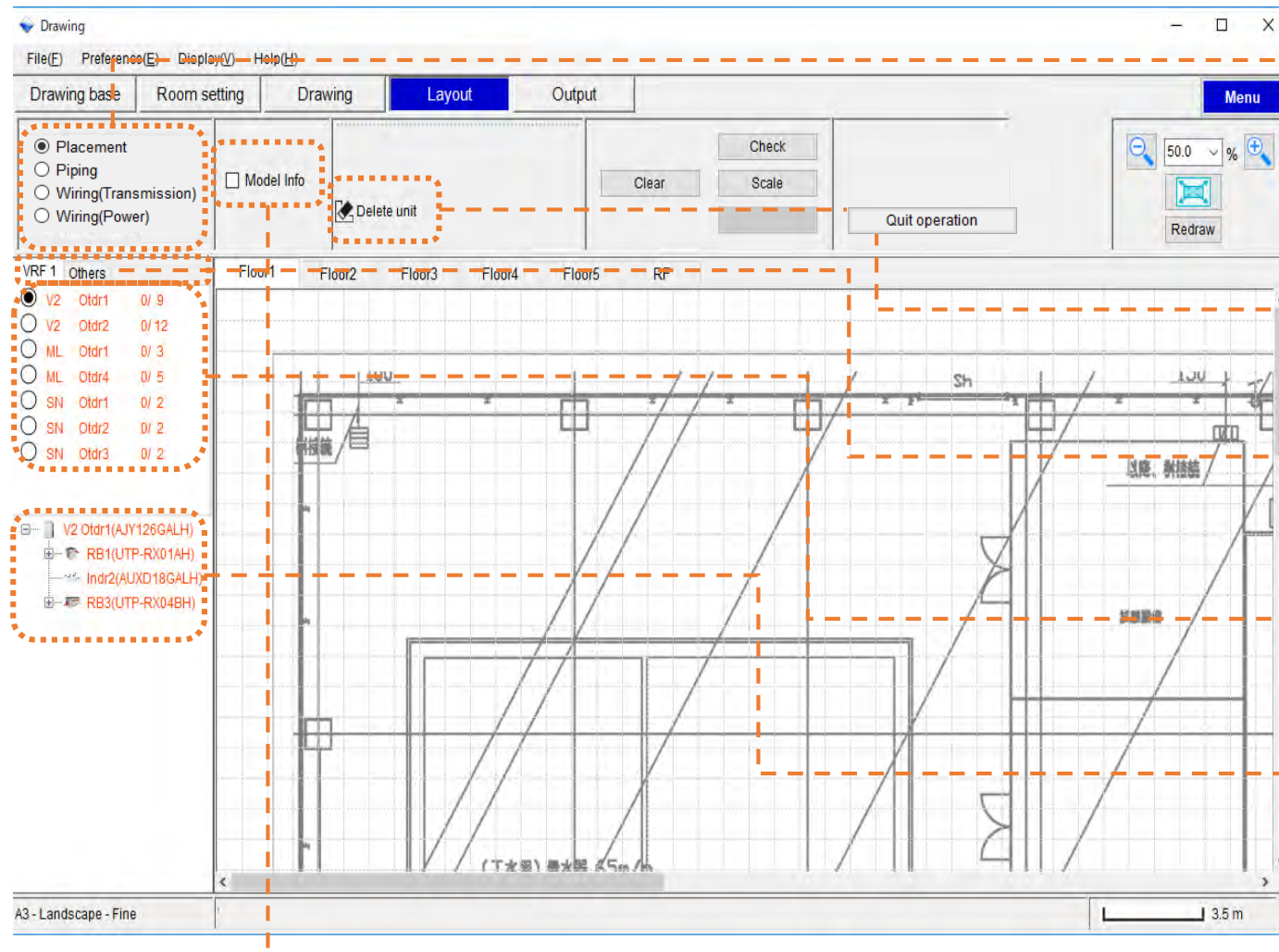
Wiring

Legend	Line	explain
T	X1,X2	Transmission
T1	1,2,3	Power line and Control line
TA	AB,SGND	Transmission BACNet(Hardware)
TP	1,2,3	Power line
K1	K1,K2,K3	Network Converter
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

Optional parts  
Display list of Pipe and Branch and RB Unit Models

Optional parts

Pipe(HR)	Pipe(except HR)	RB unit	Branch	Header
Legend	Liquid	Discharge Gas	Suction Gas	
a)	8.35		8.52	
b)	8.35		12.70	
c)	8.35		15.88	
d)	9.52		12.70	
e)	9.52		15.88	
f)	9.52		19.05	
g)	9.52		22.22	
h)	12.70		15.88	



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 Split not connected to VRF network system is displayed in "Others"

Refrigerant list

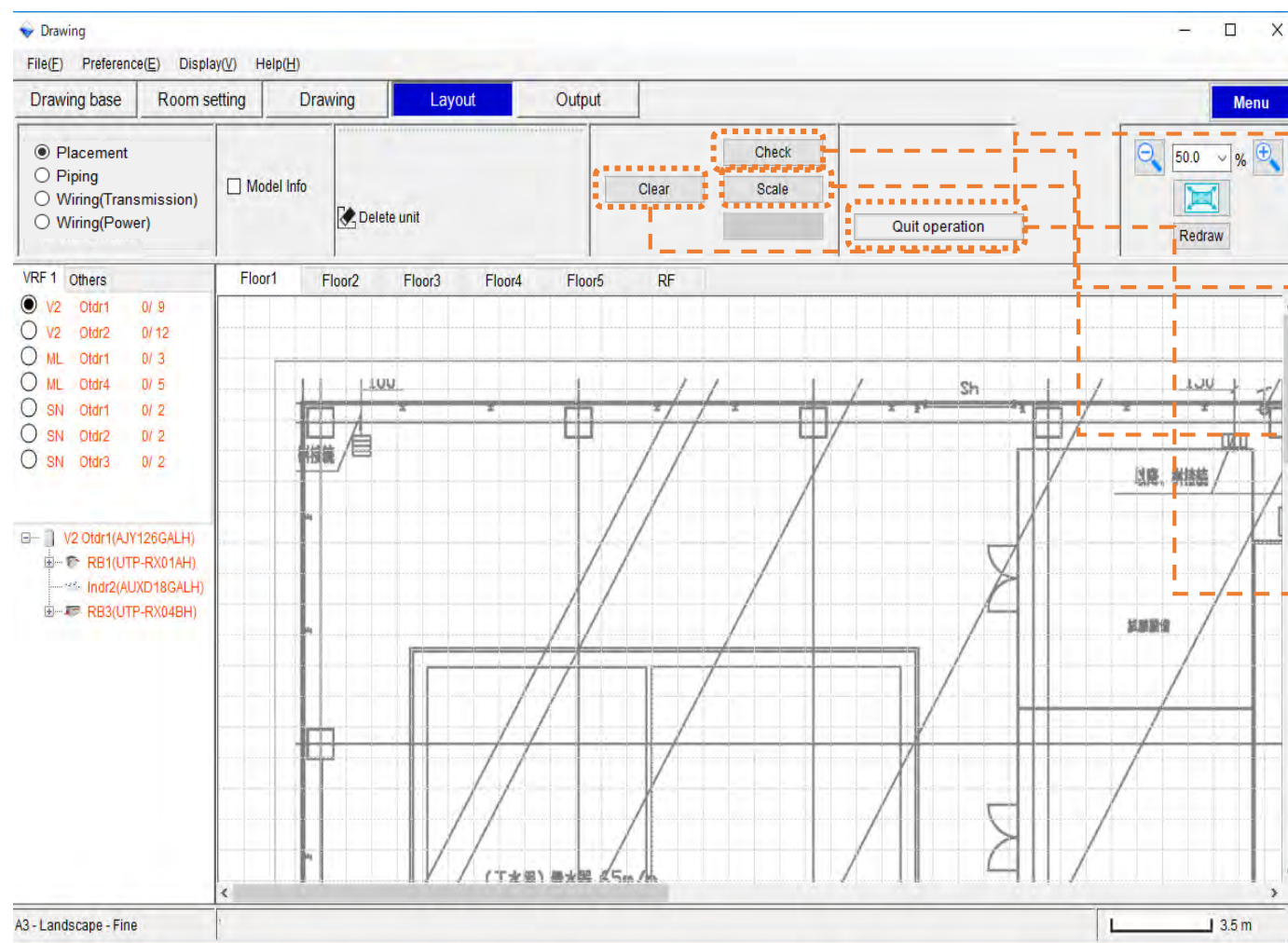
Refrigerants selected by Design simulator is displayed

Select refrigerant

Details of the refrigerant selected in the Refrigerant list are displayed

Model Info

Displays unit information

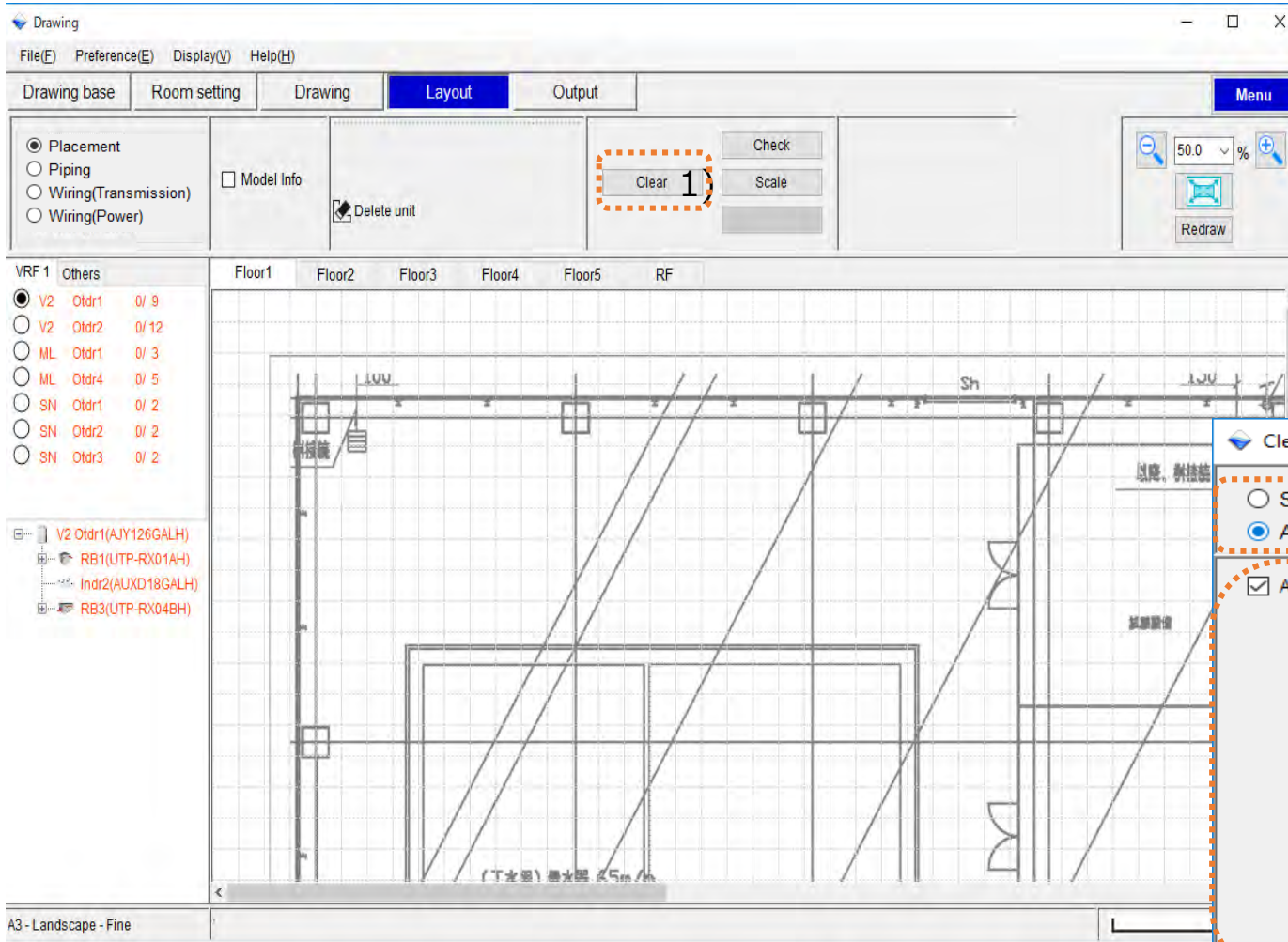


Clear  
Refer to "Clear"

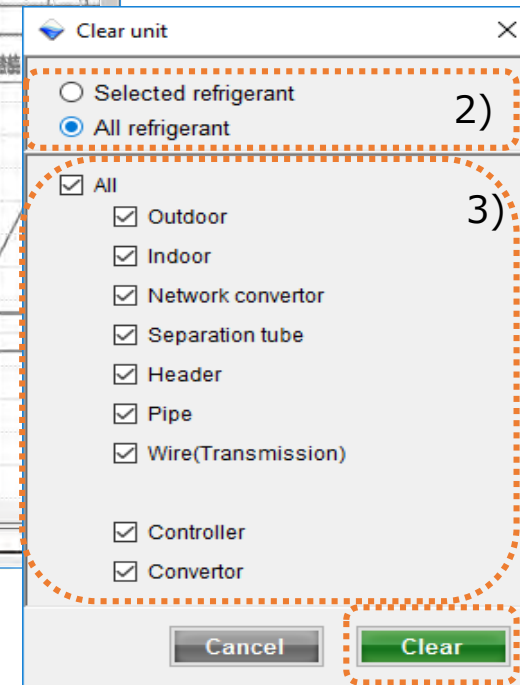
Check  
Refer to "Check"

Scale  
Refer to "Scale setting"

Quit operation  
Quit current operation

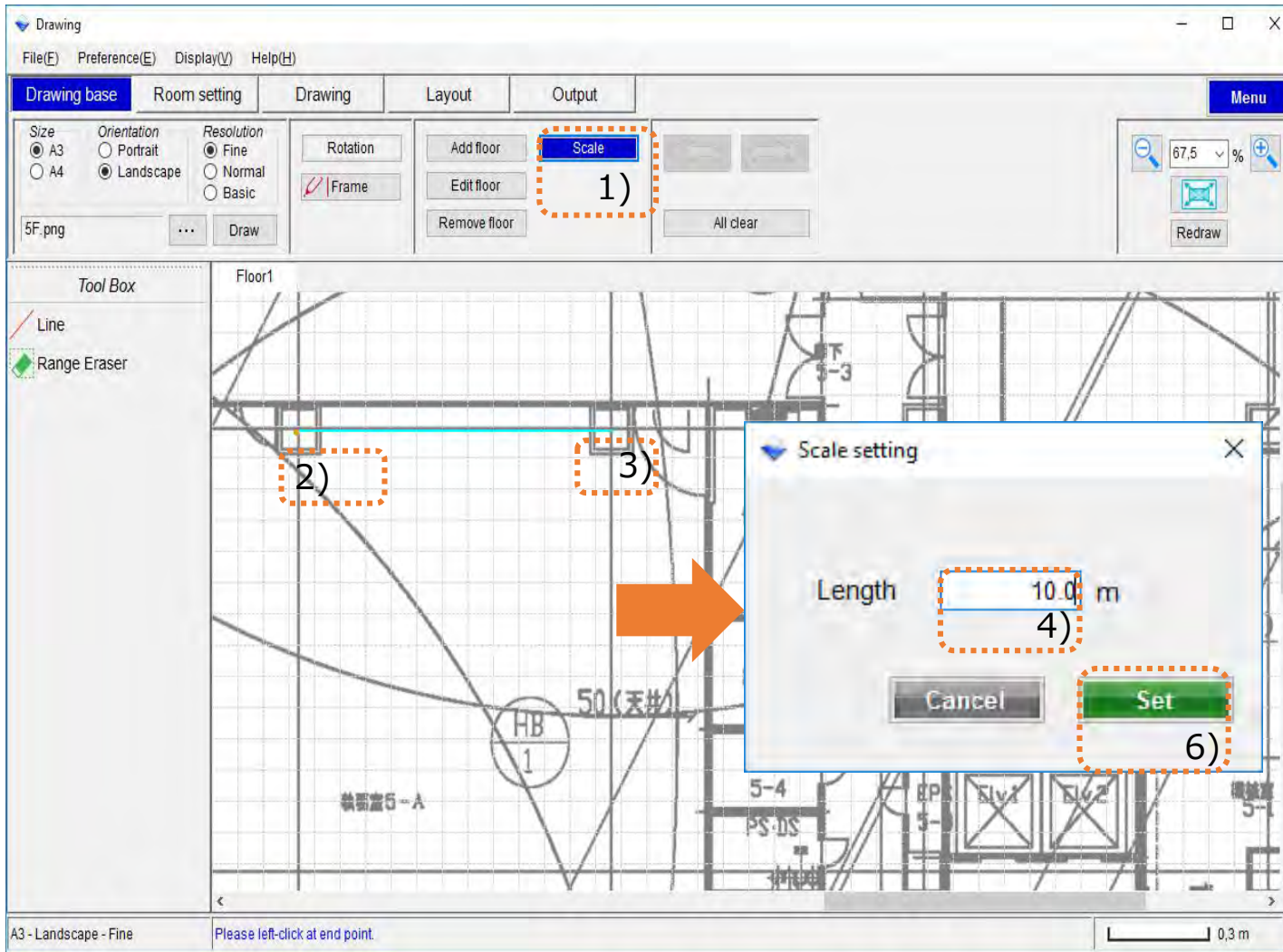


- 1) Press Clear button
- 2) Check the All or Selected refrigerant
- 3) Check the device or unit to be deleted
- 4) Press Clear





### How to scale setting



#### 1) Select Scale

Not selected scale

Scale

Selected scale

Scale

#### 2) Left-click at starting point

#### 3) Left-click at end point

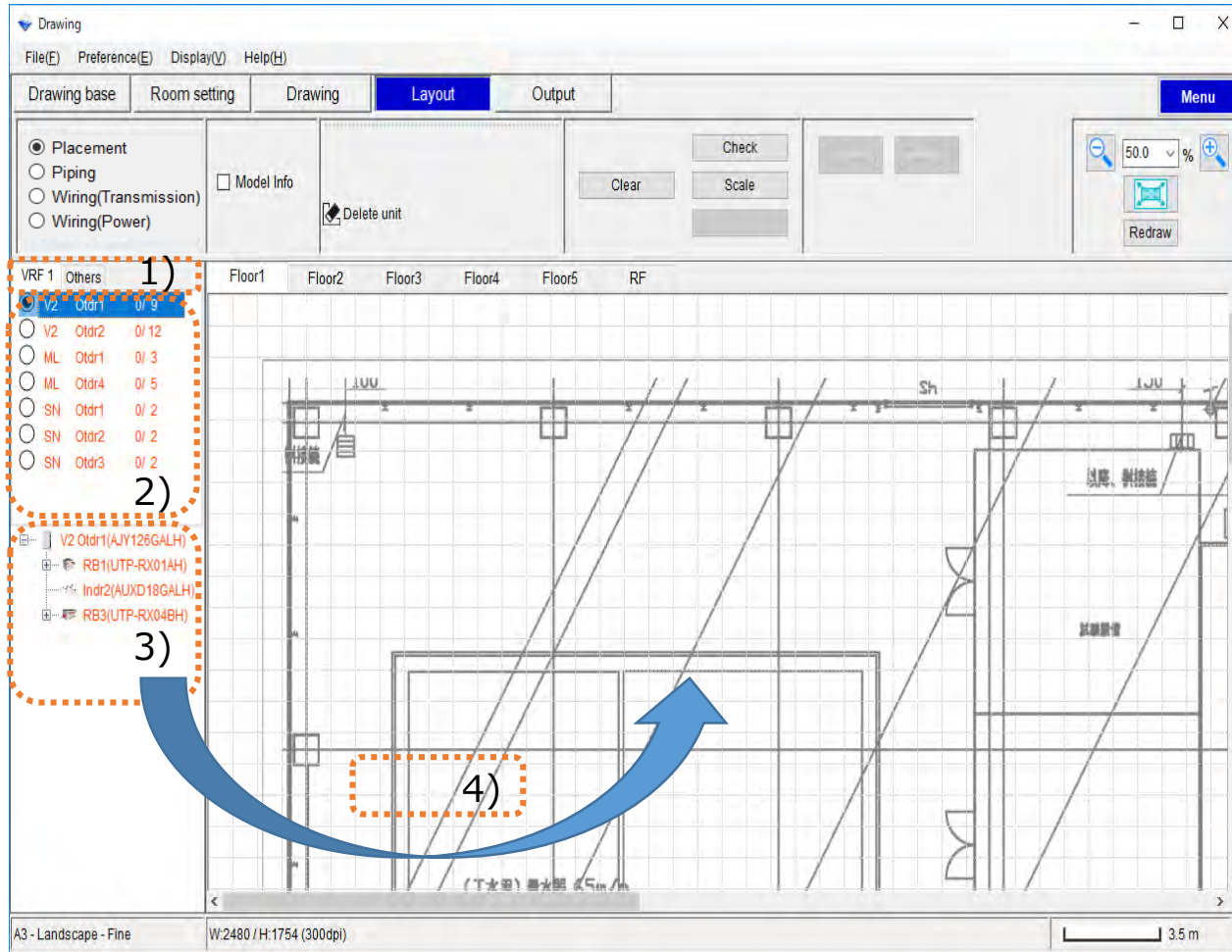
#### 4) Input the scale

#### 5) Press Tab key

#### 6) Press Set

\*If stop drawing ,Press the Esc button

## How to arrangement units



1) Select VRF Network System

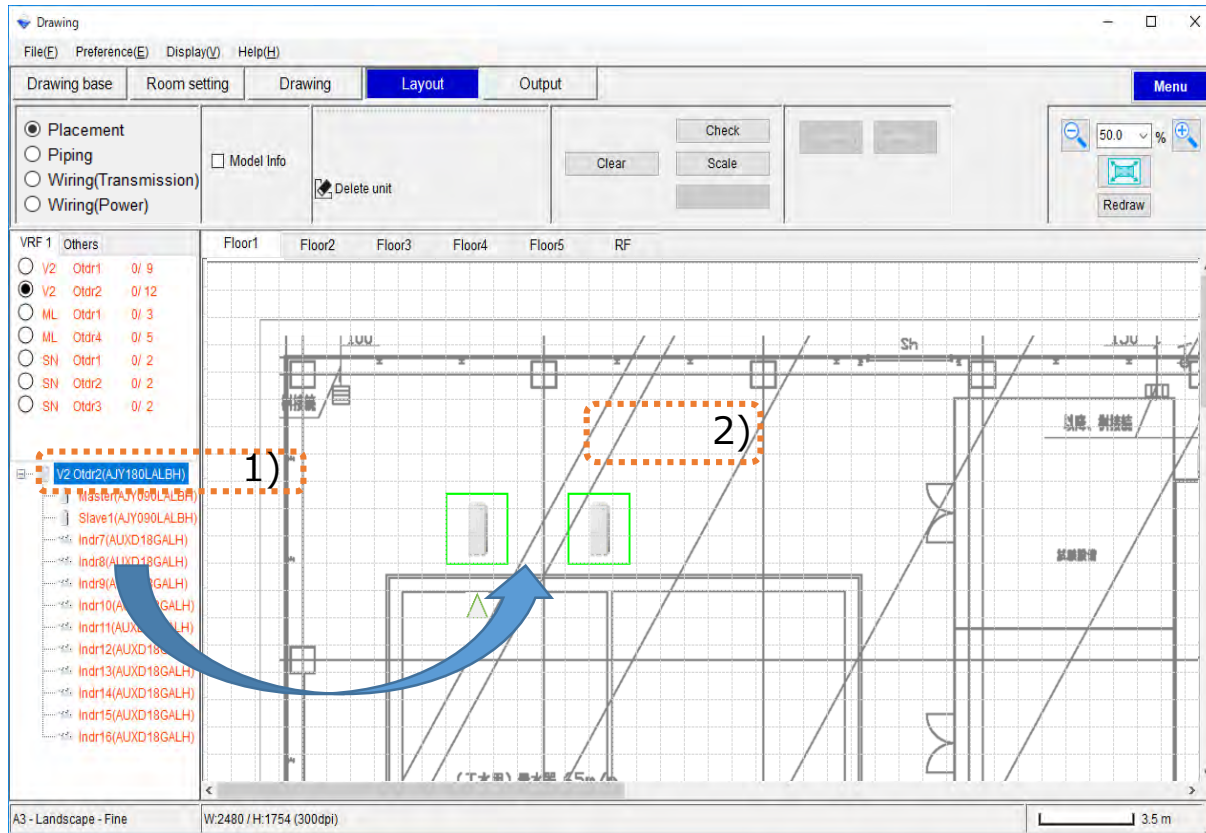
2) Select refrigerant

3) Select Unit

4) Drag & Drop On Work area

Unplaced is orange, and already arranged is light blue

## How to arrangement units(Combination)

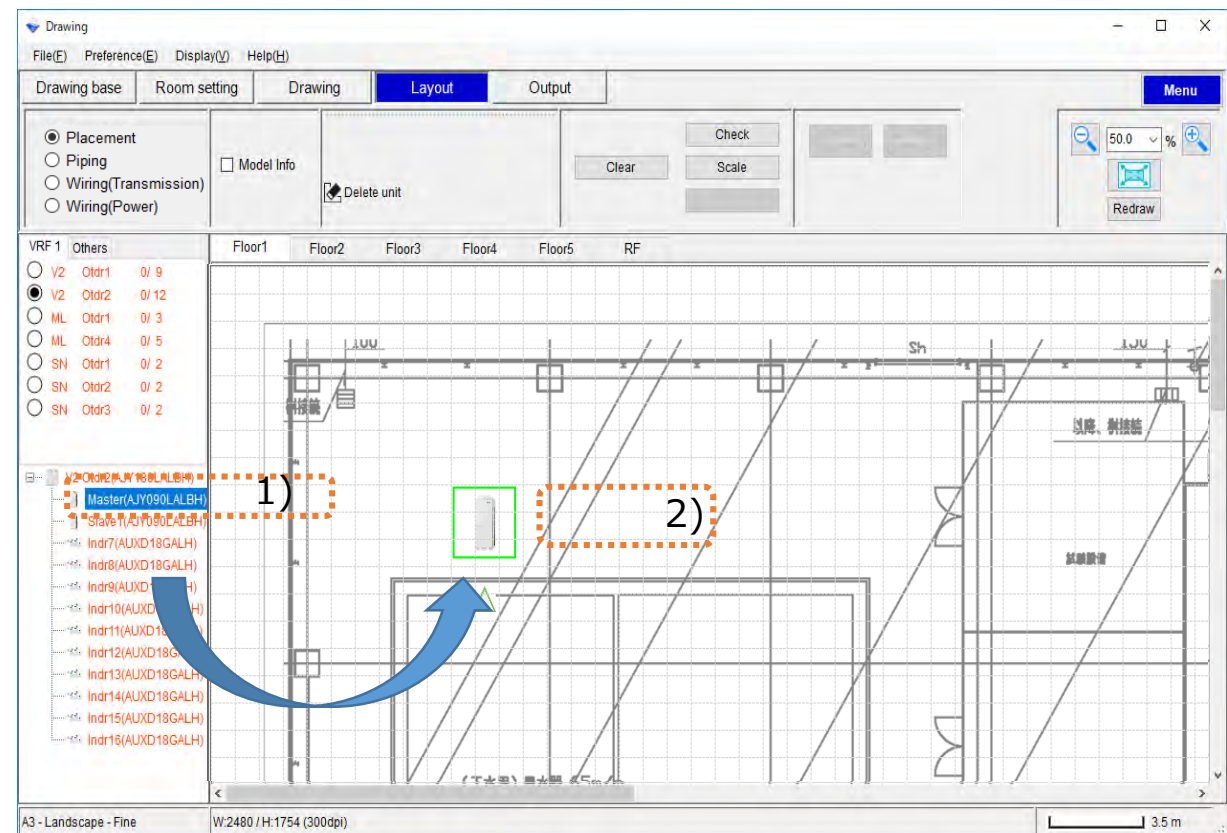


1) Select refrigerant

2) Drag & Drop on work area

When Refrigerant are Drag & Drop on work area ,  
master and slave units are arranged

## How to arrangement units(Single unit)



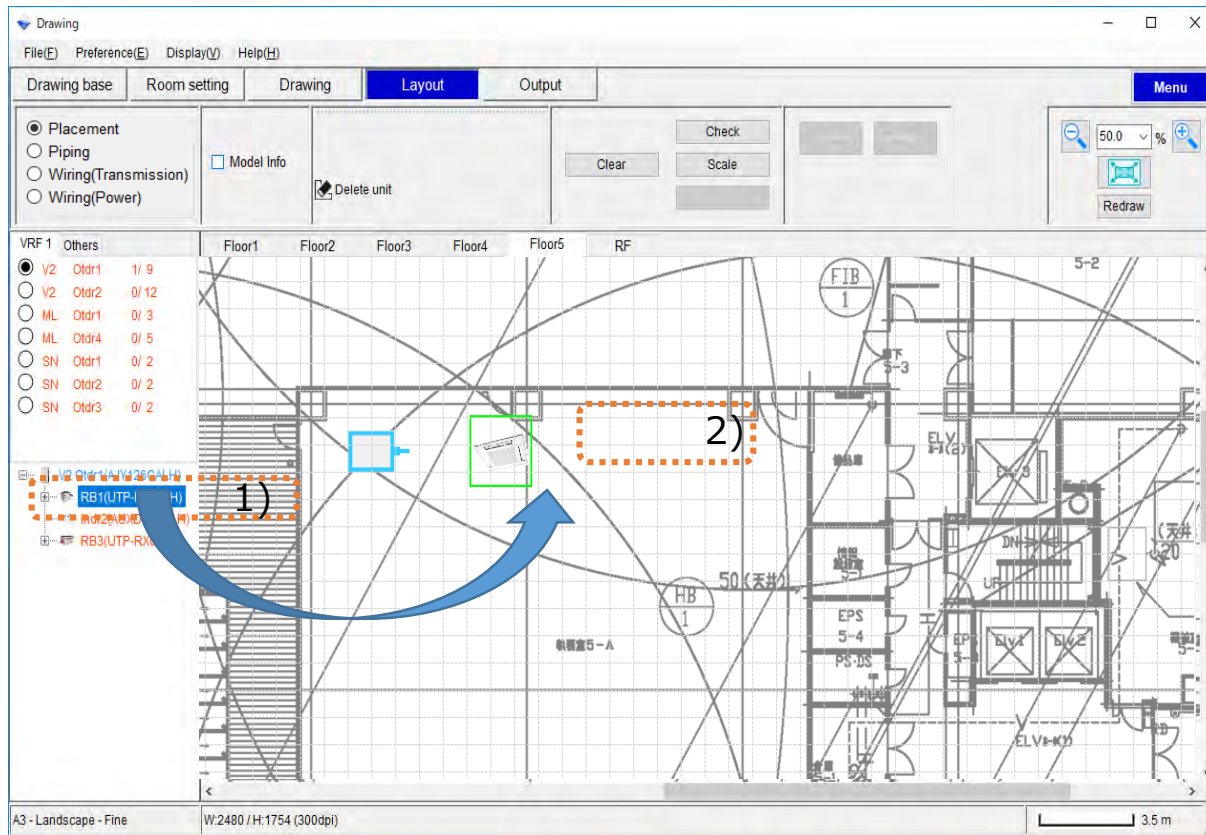
1) Select refrigerant

2) Drag & Drop on work area

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



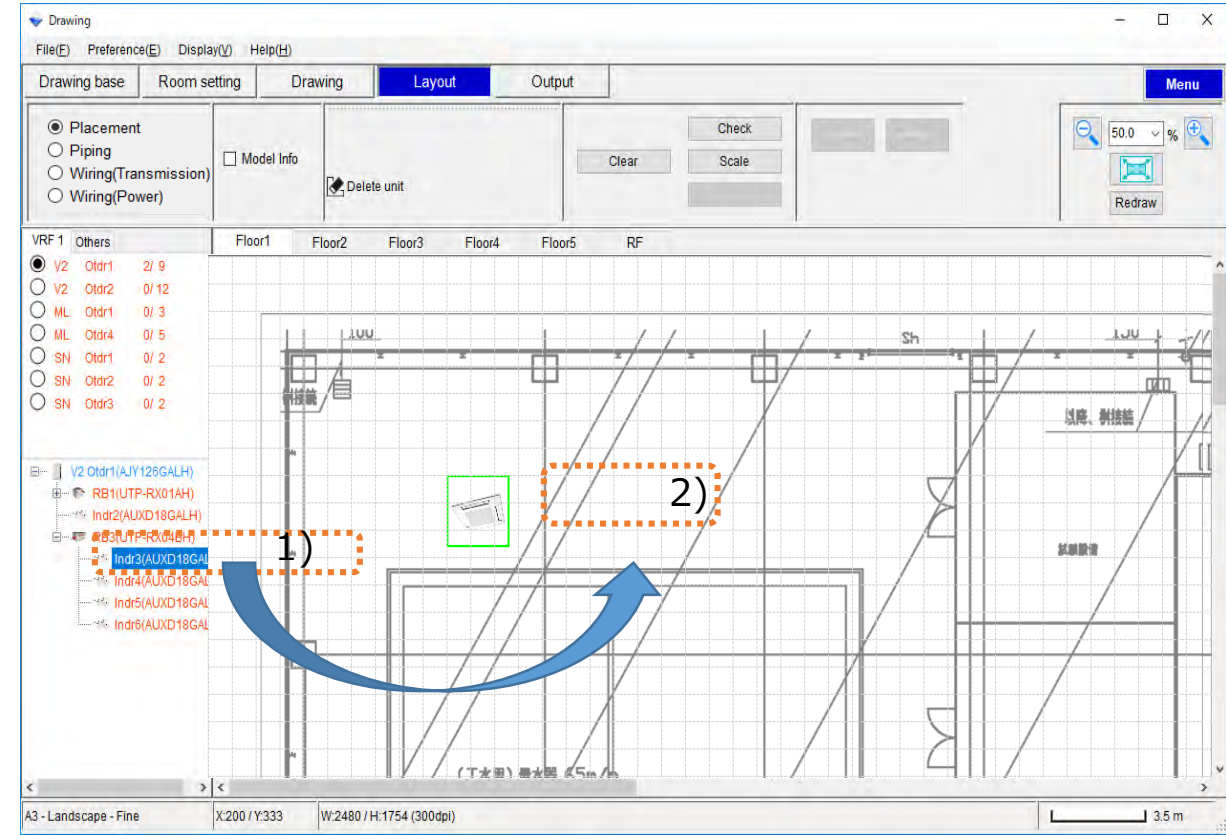
## How to arrangement units



1) Select refrigerant

2) Drag & Drop on work area

When RB unit are Drag & Drop on work area ,  
RB unit and indoor unit arrange



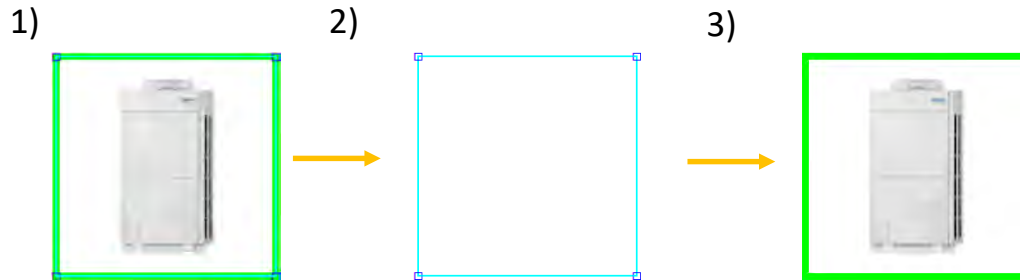
1) Select refrigerant

2) Drag & Drop on work area



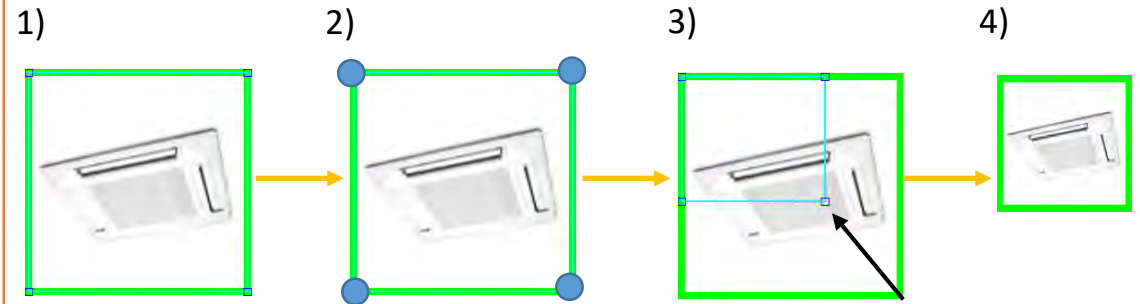
### Move(1/2)

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



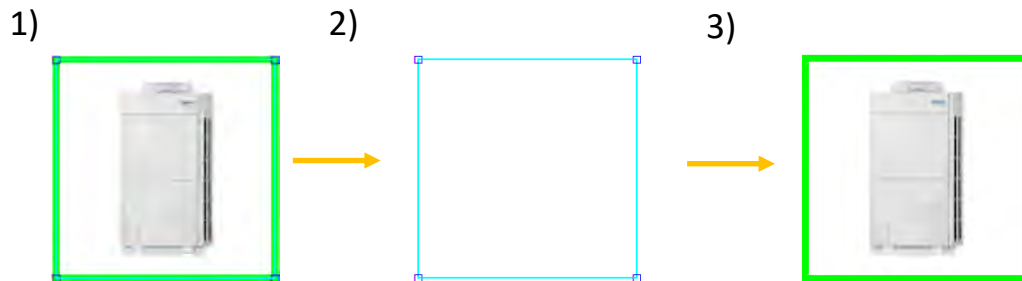
### Resize(Outdoor,Indoor)

- 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



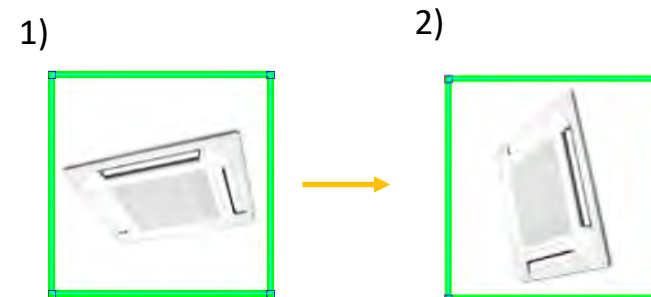
### Move(2/2)

- 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



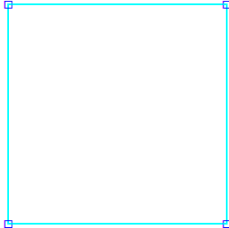
### Delete

- 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)



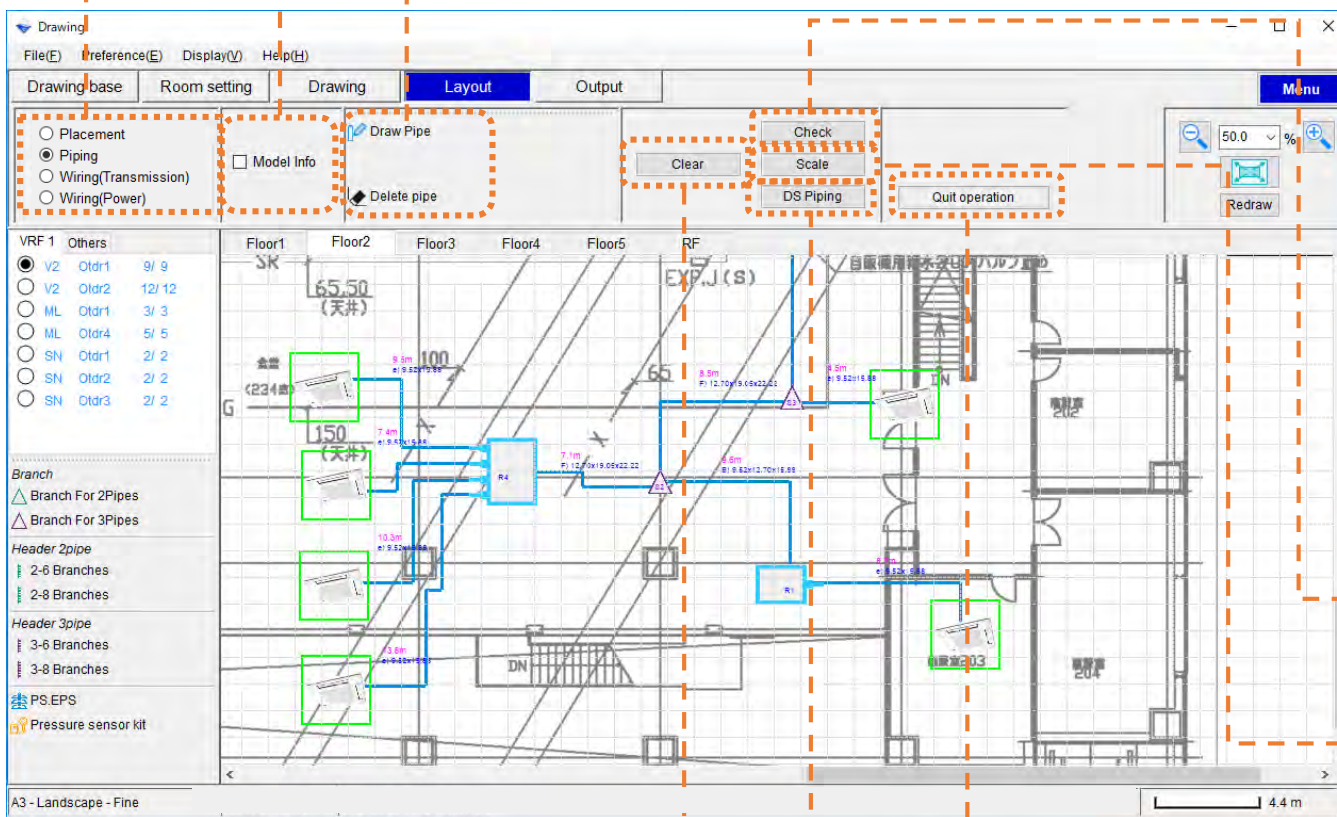
Figure 10 consists of three screenshots of the software interface, illustrating the process of moving a unit. Each screenshot shows a floor plan with various units and a list of units on the left. The units are categorized by VRF, and each unit has a name and a status (e.g., 9/ 9, 0/ 12, 0/ 3, 0/ 5, 0/ 2, 0/ 2, 0/ 2).

**Screenshot 1:** The unit 'V2 Otdr1(AJY126GALH)' is selected on Floor1. A context menu is open, showing options like Move, Resize, Modify, Cut, Copy, Paste, Rotation, Image, Delete, Fill, Frame, Text Property, Move to front, Move to back, and Alignment. An orange arrow points to the 'Move' option.

**Screenshot 2:** The unit 'V2 Otdr1(AJY126GALH)' is moved to Floor5. An orange arrow points to the unit on Floor5.

**Screenshot 3:** The unit 'V2 Otdr1(AJY126GALH)' is moved to Floor3. An orange arrow points to the unit on Floor3.

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



### 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

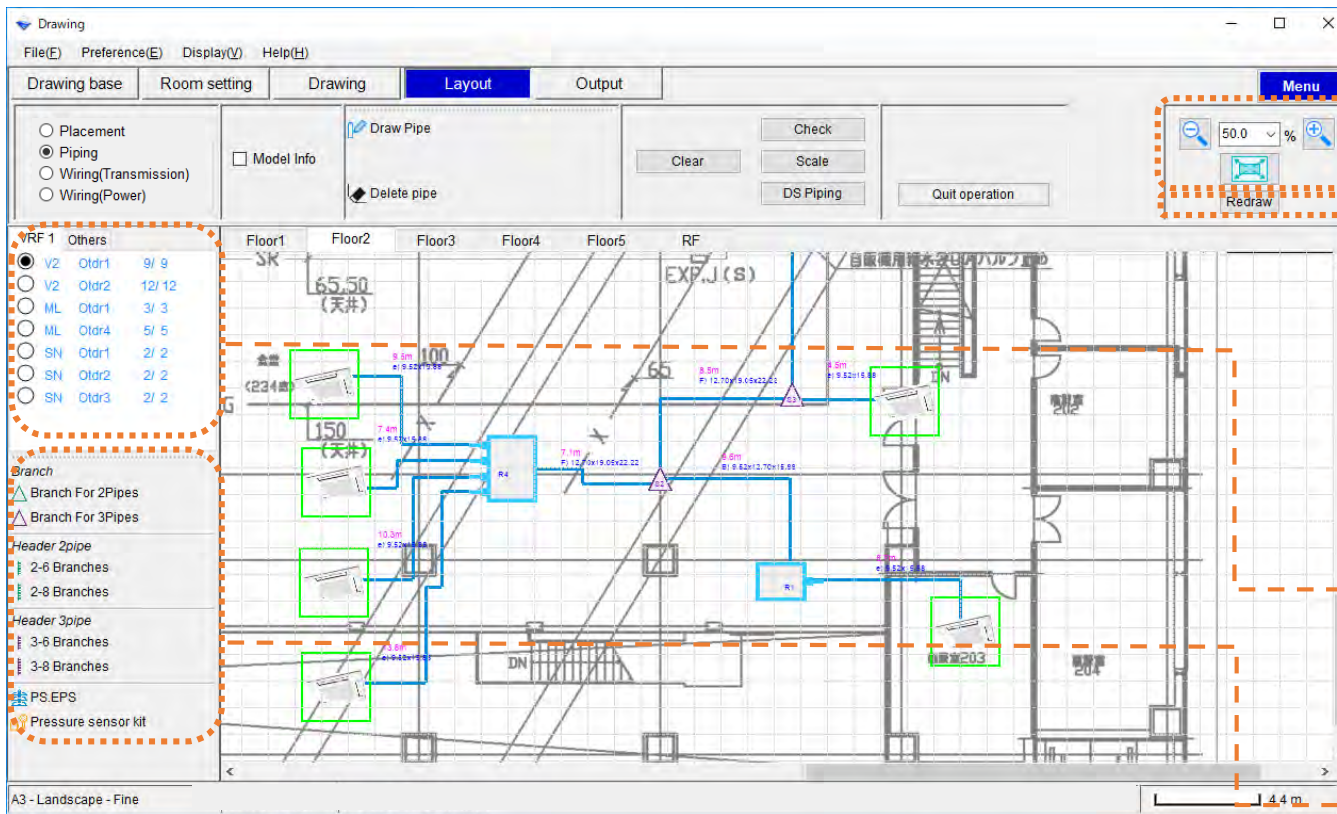
### Quit operation

Quit current operation





### Clear

Refer to "Clear"





### Zoom to

-  : Zoom up
-  : Zoom down
-  : 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

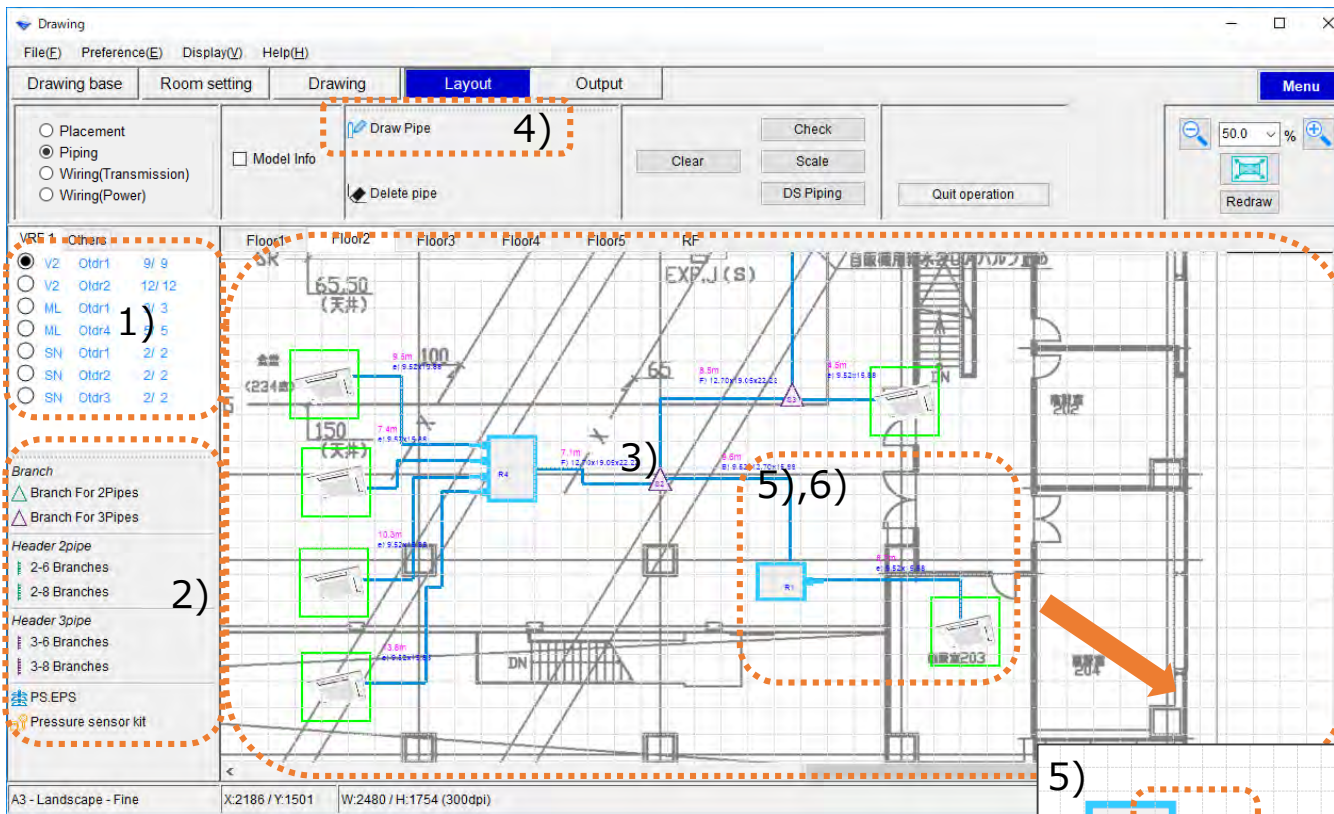
PS EPS, Pressure sensor kit :

Refer to "Draw Pipe -Auto","Draw Pipe -Manual"

\*PS : Pipe Space

EPS : Electric Pipe Space

## How to draw a pipe automatically



1) Select refrigerant

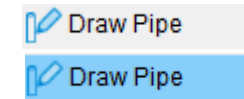
2) Select a part

3) Left-Click on work area for part placement

4) Press Draw Pipe

Not selected Draw Pipe

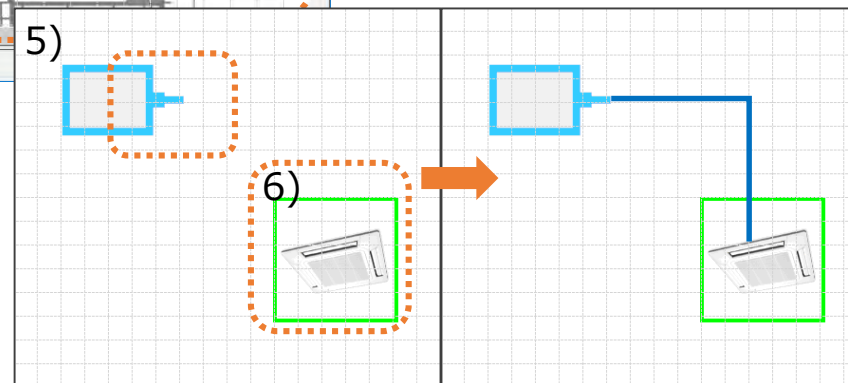
Selected Draw Pipe



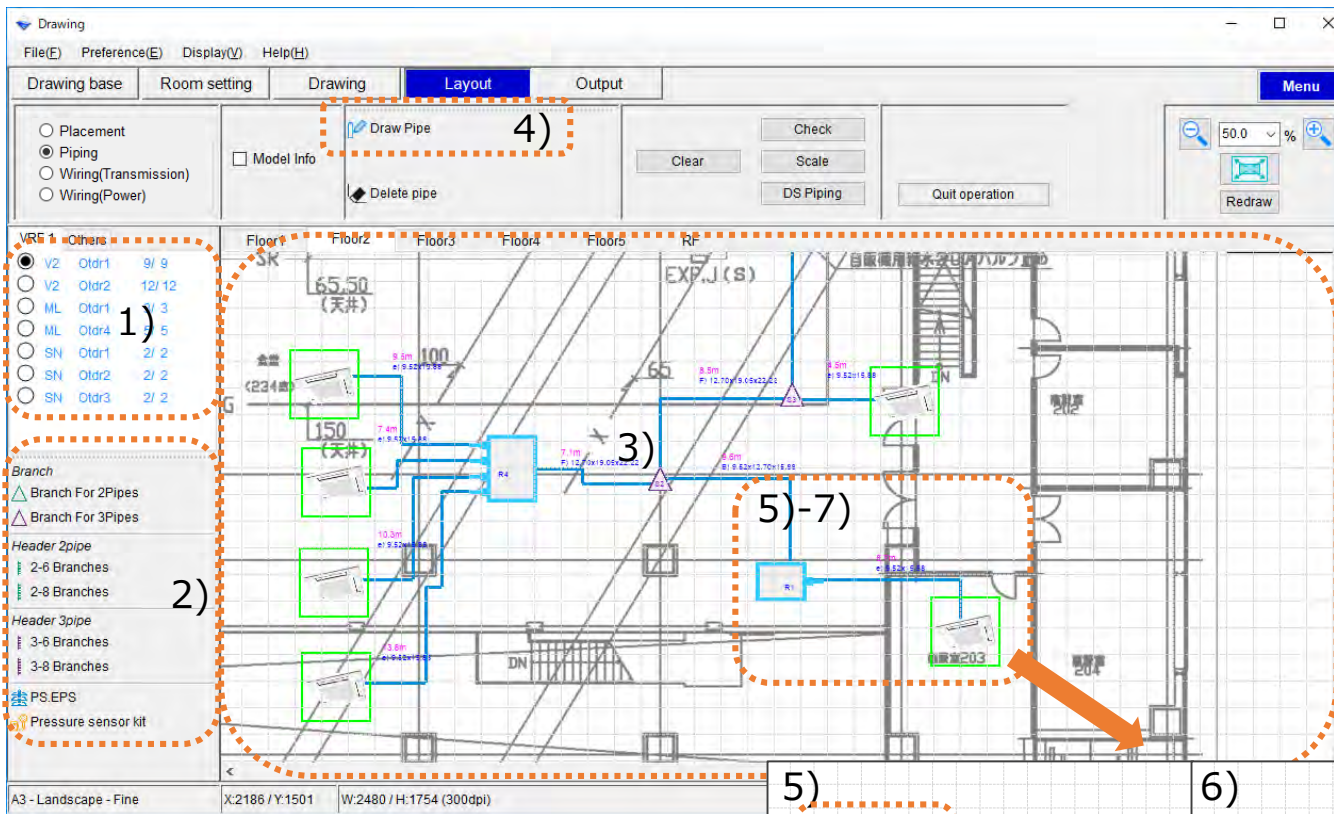
5) Left-Click on the unit

6) Double-Click on another unit

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



### How to draw a pipe manually



1)Select refrigerant

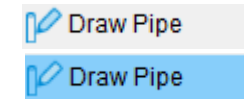
2)Select parts

3)Left-Click on work area

4)Press Draw Pipe

Not selected Draw Pipe

Selected Draw Pipe

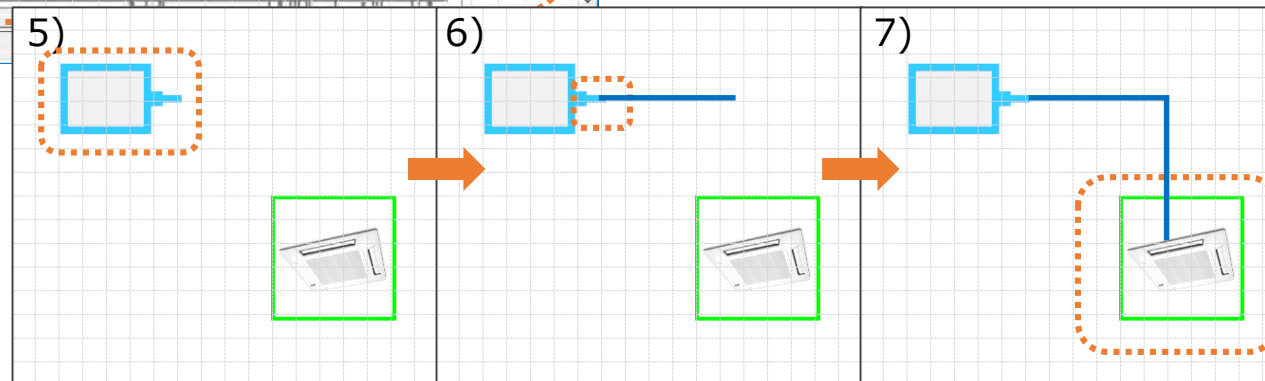


5)Left-Click on the unit

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

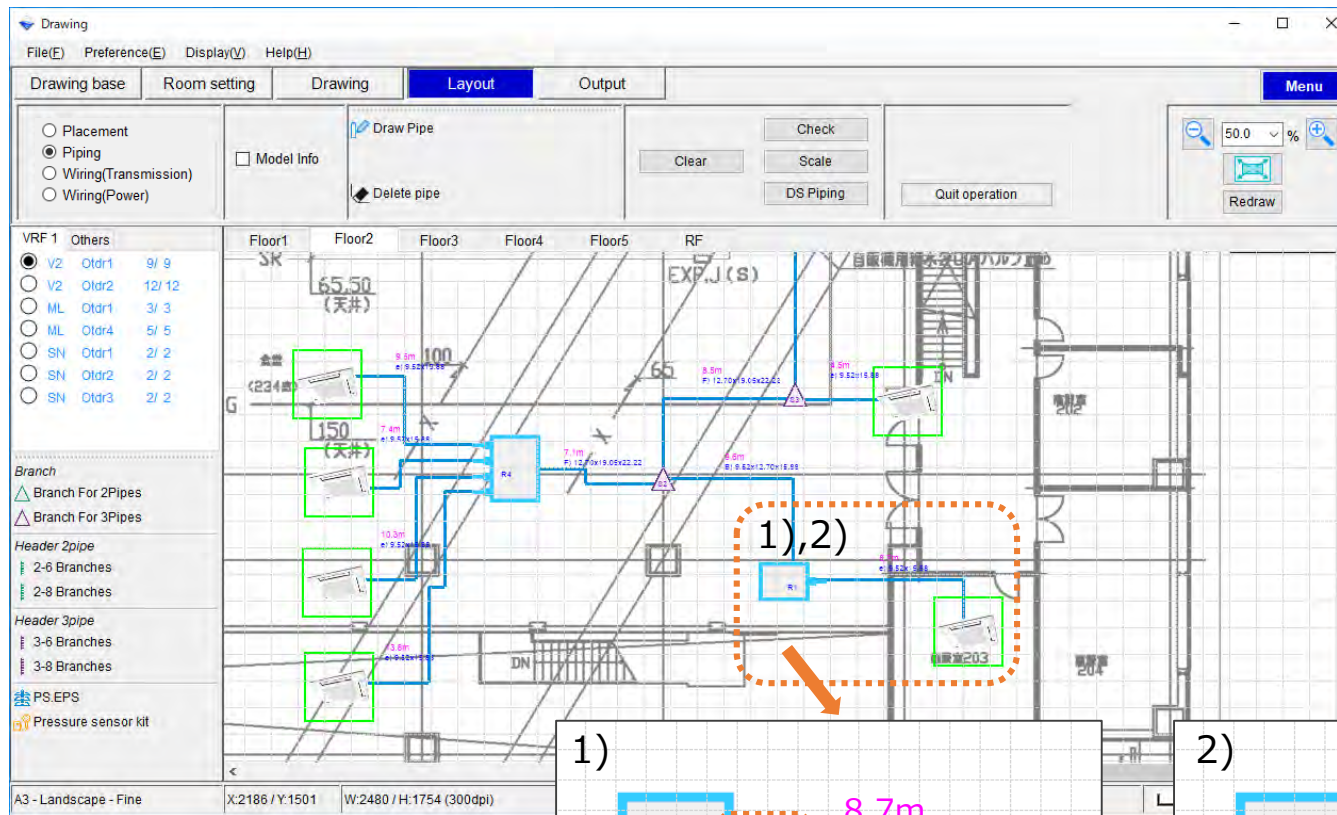




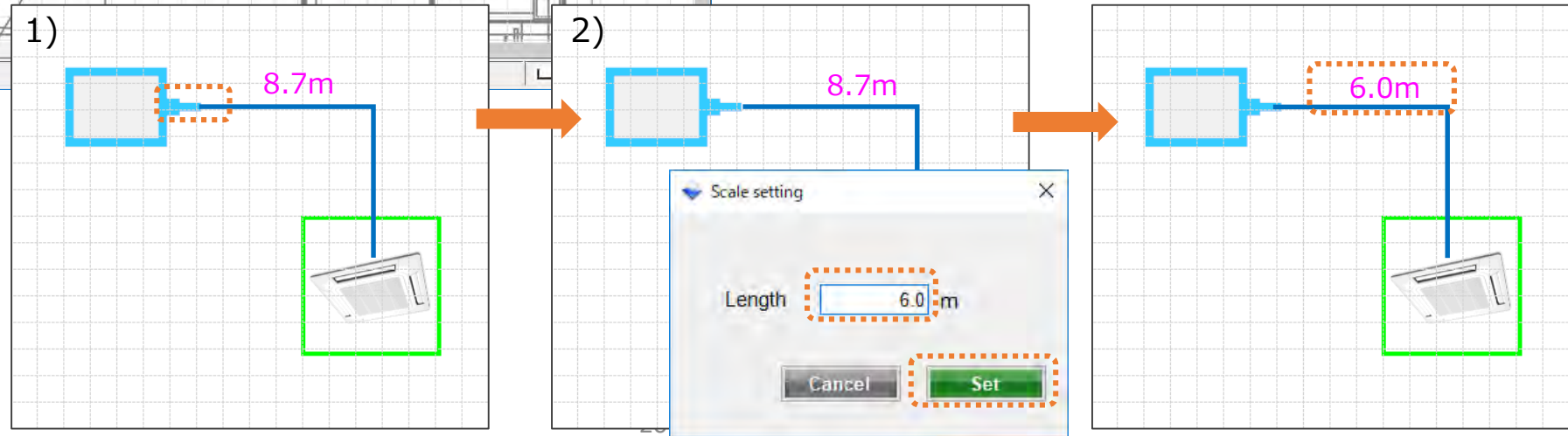
# Change Pipe length

## Drawing design

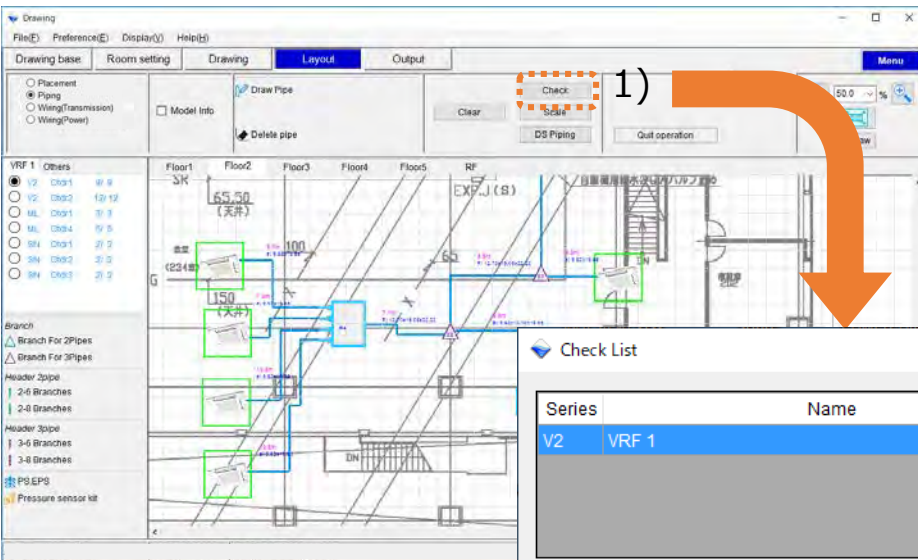
### How to change pipe length



- 1) Double-Click on start point or end point of pipe line
- 2) Input length, press Set



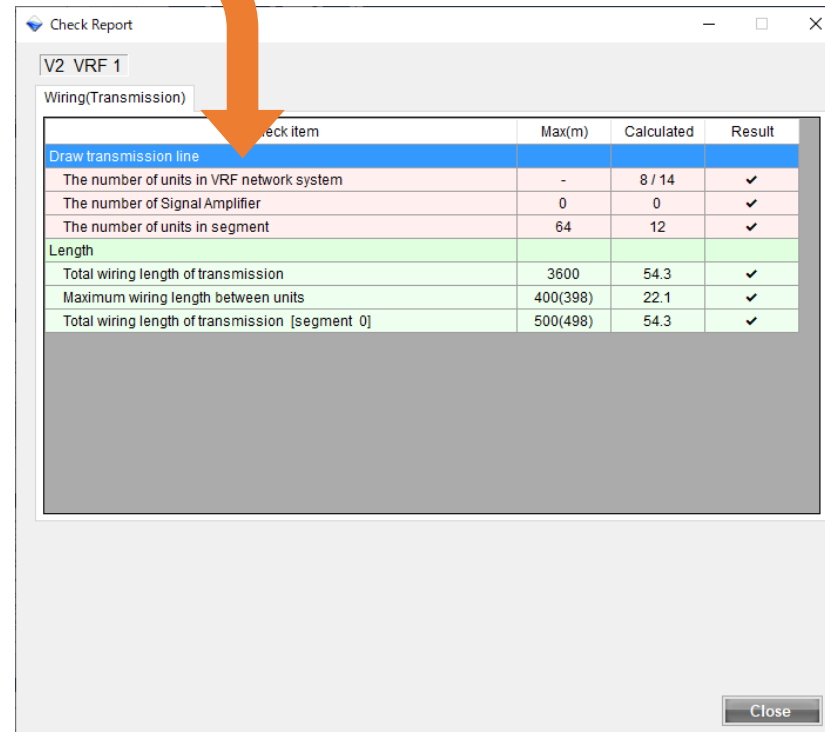
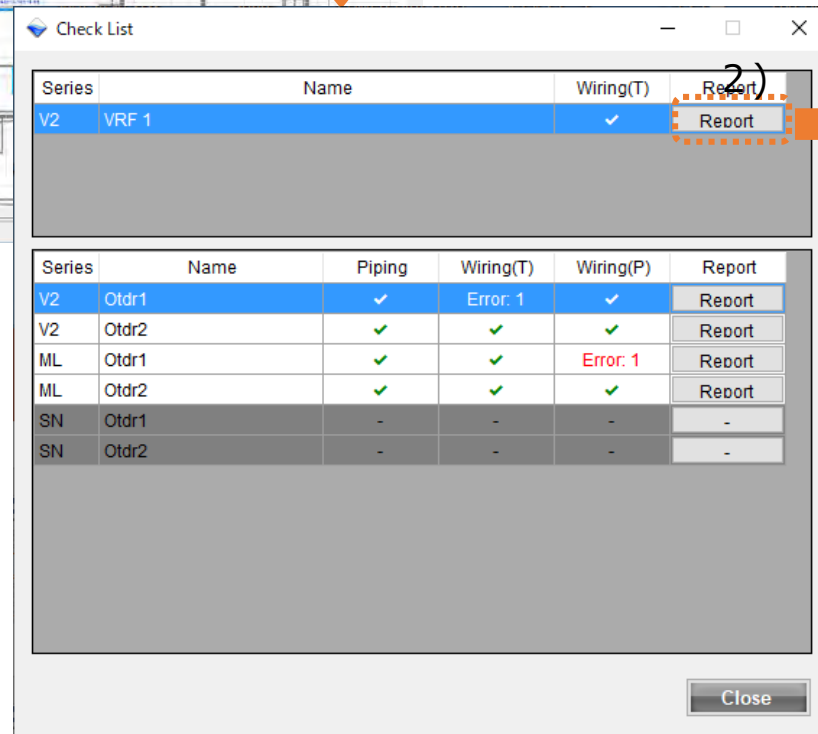


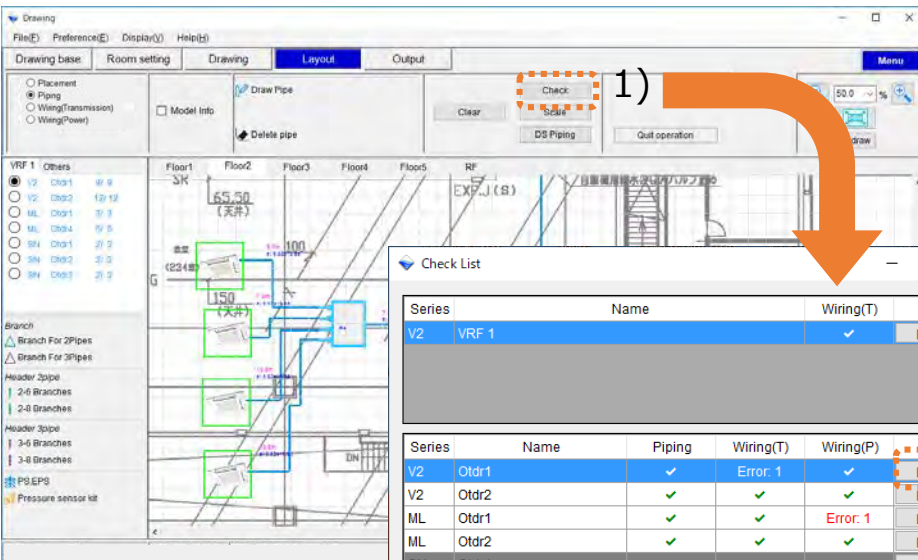


1) Press Check

2) Press Report

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





1)

Series	Name	Wiring(T)	Report
V2	VRF 1	✓	Report

Series	Name	Piping	Wiring(T)	Wiring(P)	Report
V2	Otdr1	✓	Error: 1	✓	Report
V2	Otdr2	✓	✓	✓	Report
ML	Otdr1	✓	✓	Error: 1	Report
ML	Otdr2	✓	✓	✓	Report
SN	Otdr1	-	-	-	-
SN	Otdr2	-	-	-	-

2)

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.

Check Report

V2 Otdr1

Piping Wiring(Transmission) Wiring(Power)

Check item	Max(m)	Calculated
Draw pipe line		
Connect correctly	-	-
Input all pipe length	-	-
Capacity	-	-
Length		
Between master outdoor unit and the farthest indoor unit	165	-
Between the first separation tube and the farthest indoor unit	90	-
(The farthest indoor unit to the first separation tube)	60	-
Total pipe length	1000	-
Between outdoor unit and outdoor unit branch kit	3	-
Between the farthest outdoor unit to the first outdoor unit branch kit	12	-
Between EEV UNIT and Heat exchanger	5	-
Between Separation tube and EEV UNIT	2	-
Total from EEV UNIT to branch and branch to heat exchanger	5	-
Height		

Connect correctly error

Wiring(Transmission)

Message

Error Floor:1 Outdoor:V2-Otdr1 Kind:Indoor Name:Indr1
Error Floor:1 Outdoor:V2-Otdr1 Kind:Indoor Name:Indr2
Error Floor:1 Outdoor:V2-Otdr1 Kind:Indoor Name:Indr3

Check Report

V2 Otdr1

Piping Wiring(Transmission) Wiring(Power)

Check item	Max(m)
Draw transmission line	
Connect correctly	-

Connect correctly error

Wiring(Transmission)

Message

Error Floor:1 Outdoor:V2-Otdr1 Kind:Indoor Name:Indr1
Error Floor:1 Outdoor:V2-Otdr1 Kind:Indoor Name:Indr2
Error Floor:1 Outdoor:V2-Otdr1 Kind:Indoor Name:Indr3

Check Report

V2 Otdr1

Piping Wiring(Transmission) Wiring(Power)

Check item	Max(m)	Calculated	Result
Draw power line			
Connect correctly	-	-	✓

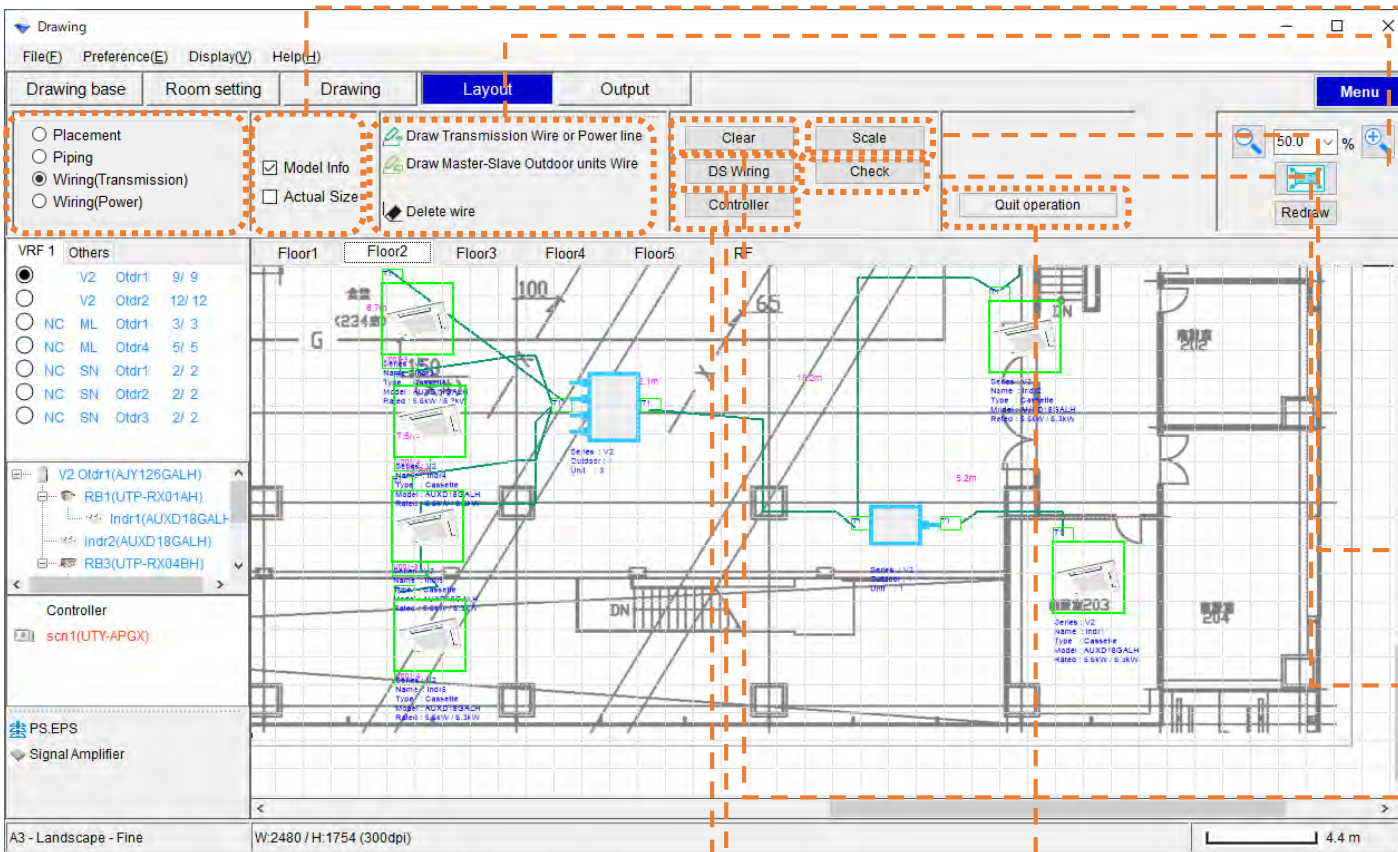
Connect correctly error

Wiring(Transmission)

Message

Error Floor:1 Outdoor:V2-Otdr1 Kind:Indoor Name:Indr1
Error Floor:1 Outdoor:V2-Otdr1 Kind:Indoor Name:Indr2
Error Floor:1 Outdoor:V2-Otdr1 Kind:Indoor Name:Indr3

Close



### 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

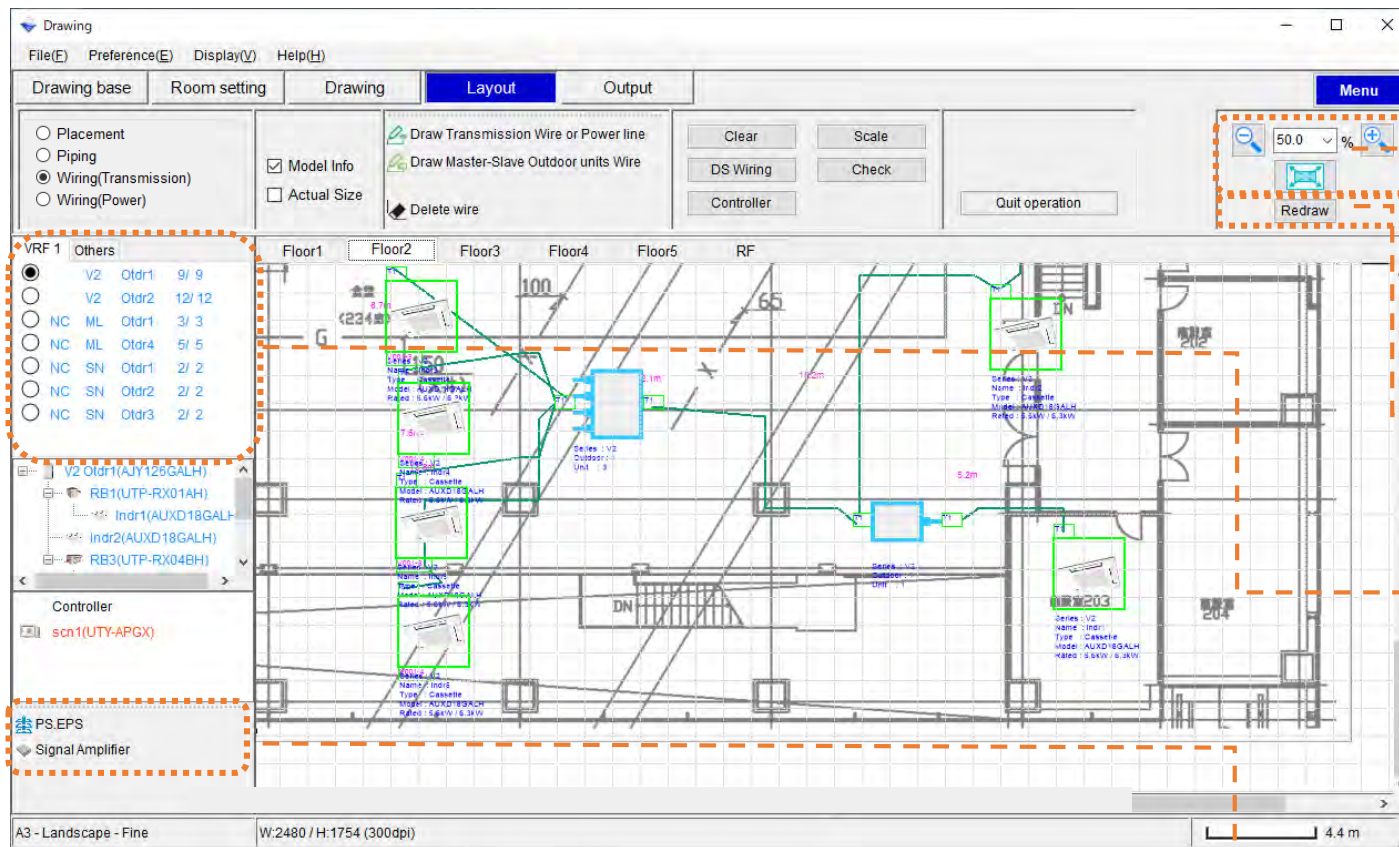
Open "DS Wiring display"

### Controller

Open "Control Design display"

### Quit operation

Quit current operation is terminated.



### 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"

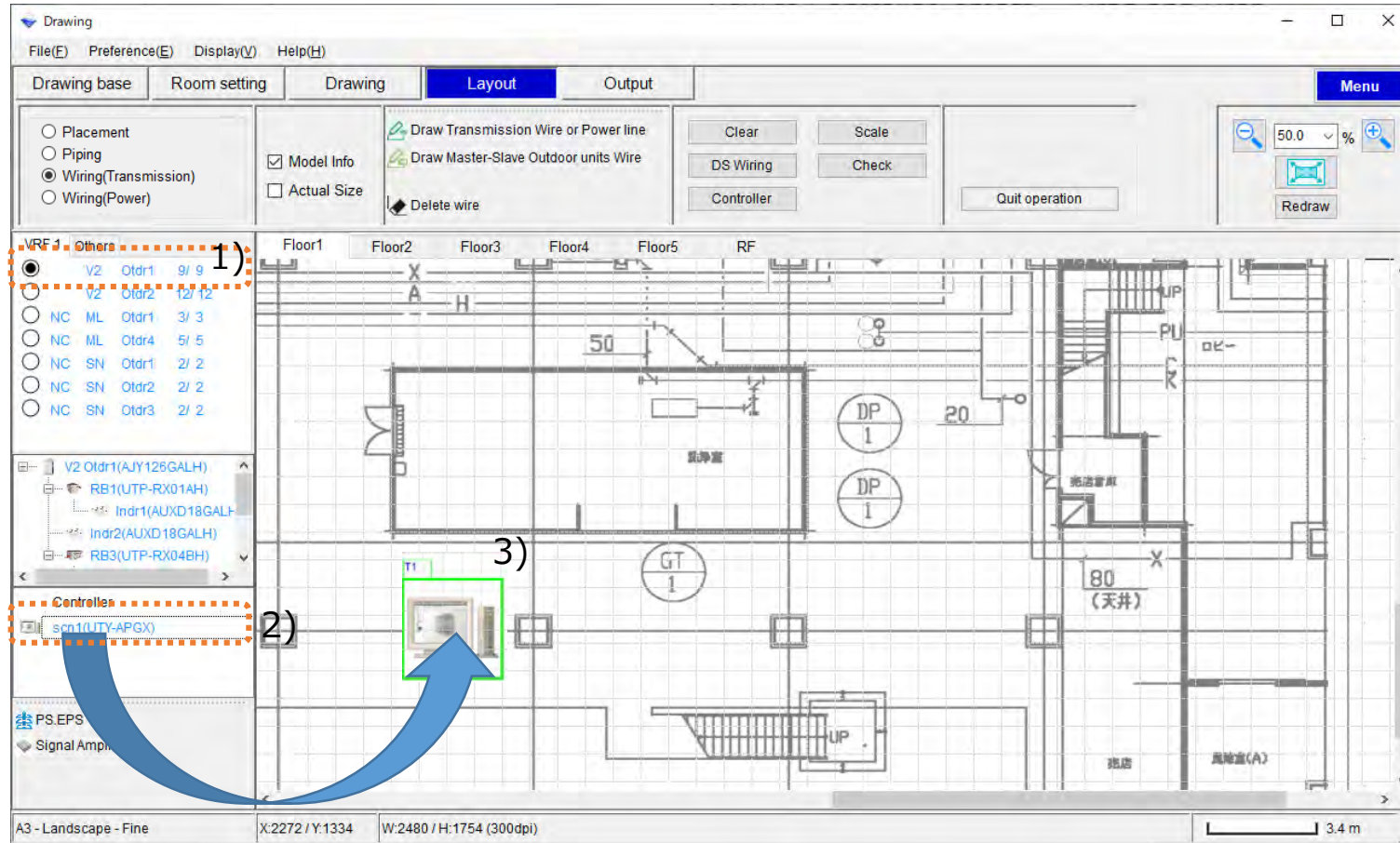
\*PS : Pipe Space

EPS : Electric Pipe Space

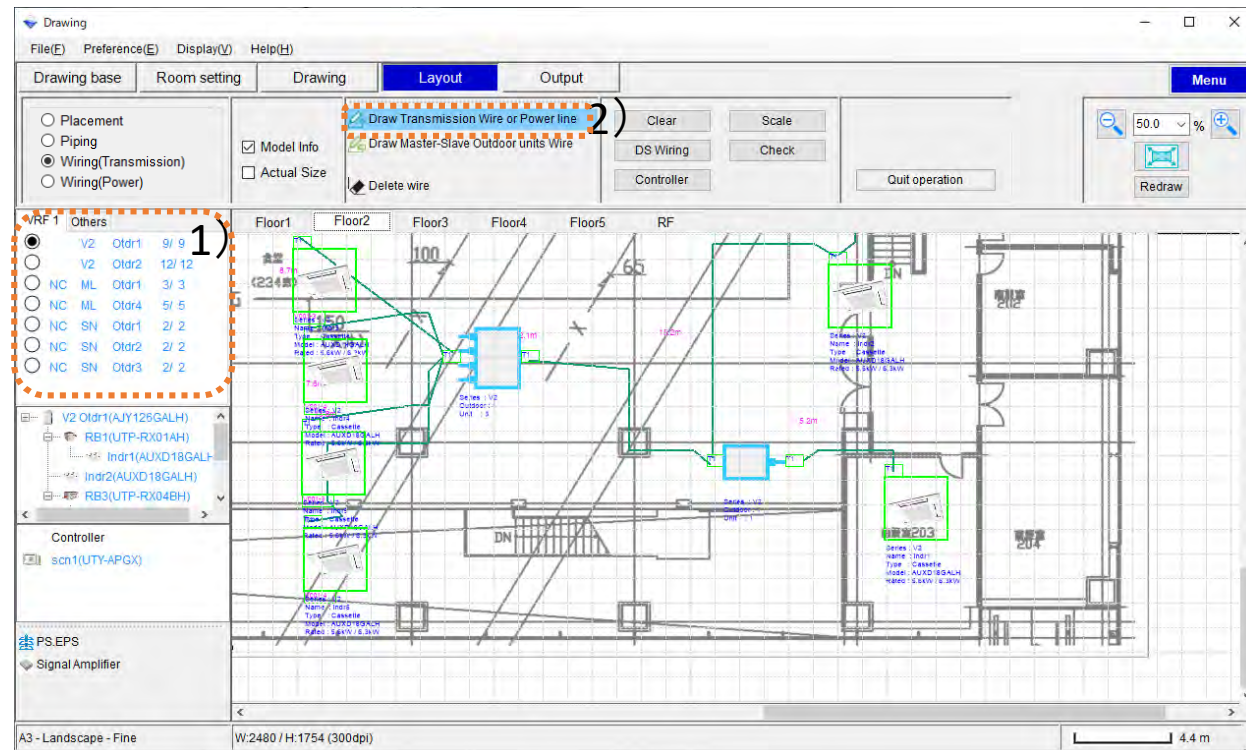
Signal Amplifier: Refer to "Signal Amplifier"



## 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.



1) Select Refrigerant

2) Press "Draw Tran"

Not selected Line

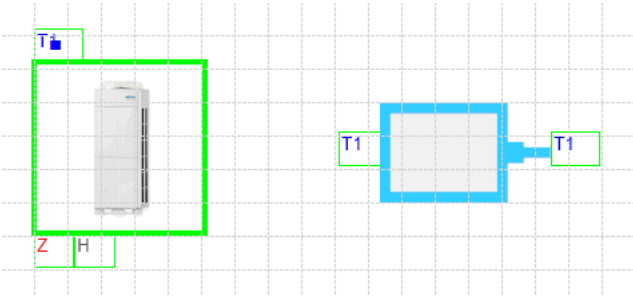
Selected Line

3) Left-Click on the unit Terminal

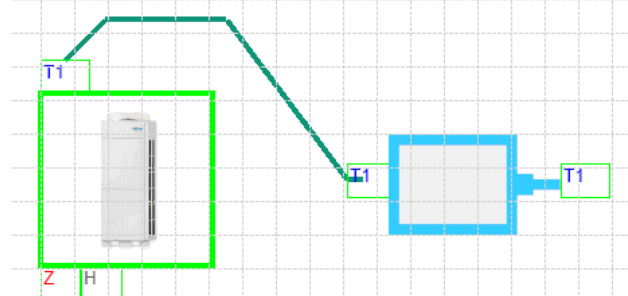
4) Left-double Click at Outdoor unit Terminal.

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

3)



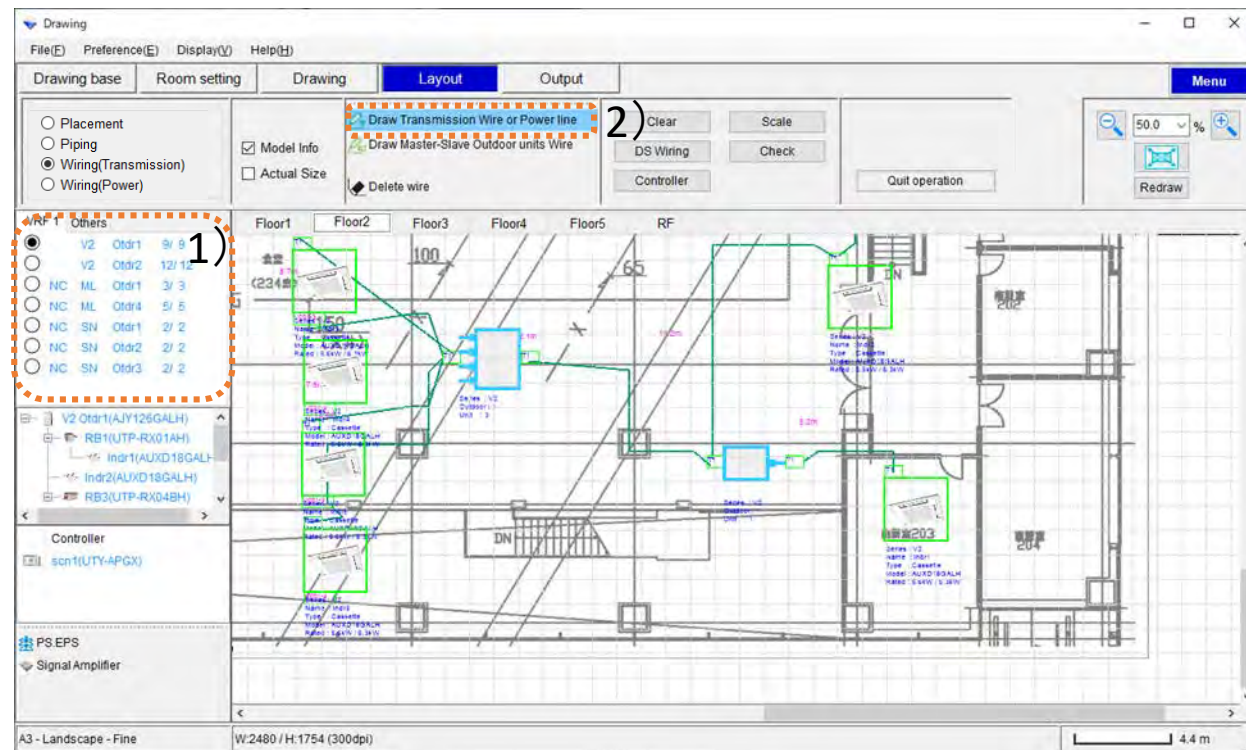
4)



Show all unit Terminal

Explanatory notes		
Wiring		
Legend	Line	explain
T	X1,X2	Transmission
T1	1,2,3	Power line and Control line
TA	A,B,SGND	Transmission BACNet(Hardware)
TP	1,2,3	Power line
K1	K1,K2,K3	Network Converter
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



1) Select Refrigerant

2) Press "Draw Transmission wire."

Not selected Line

Draw Transmission Wire

Selected Line

Draw Transmission Wire

3) Left-Click at Outdoor unit Terminal

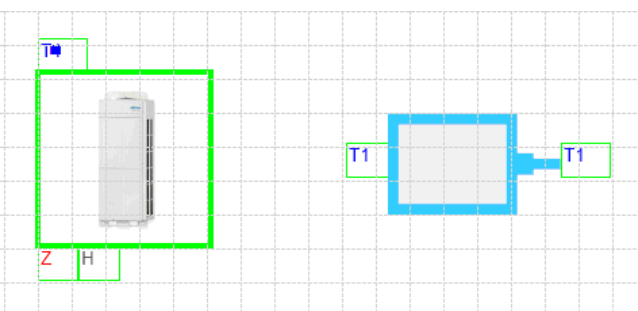
Left-click at second point

Repeat

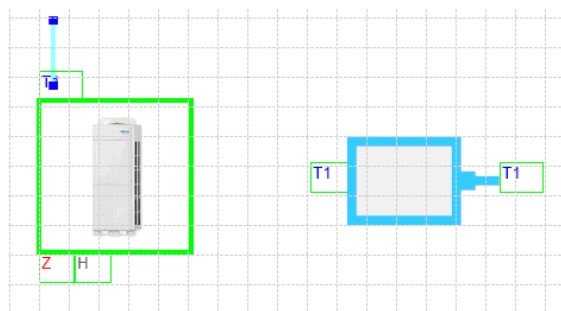
4) Left-double Click at Terminal end point

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

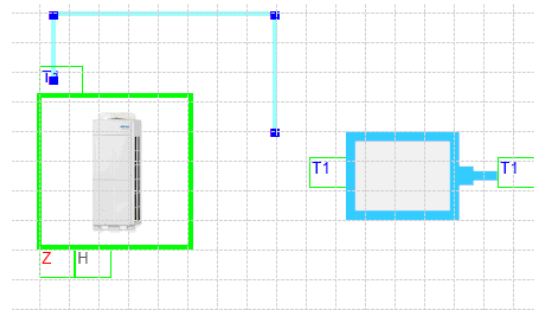
3)



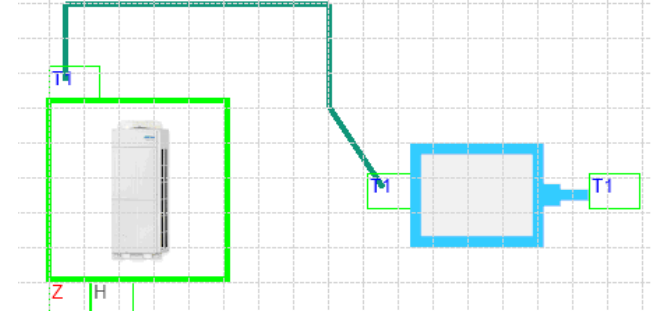
3)



3)

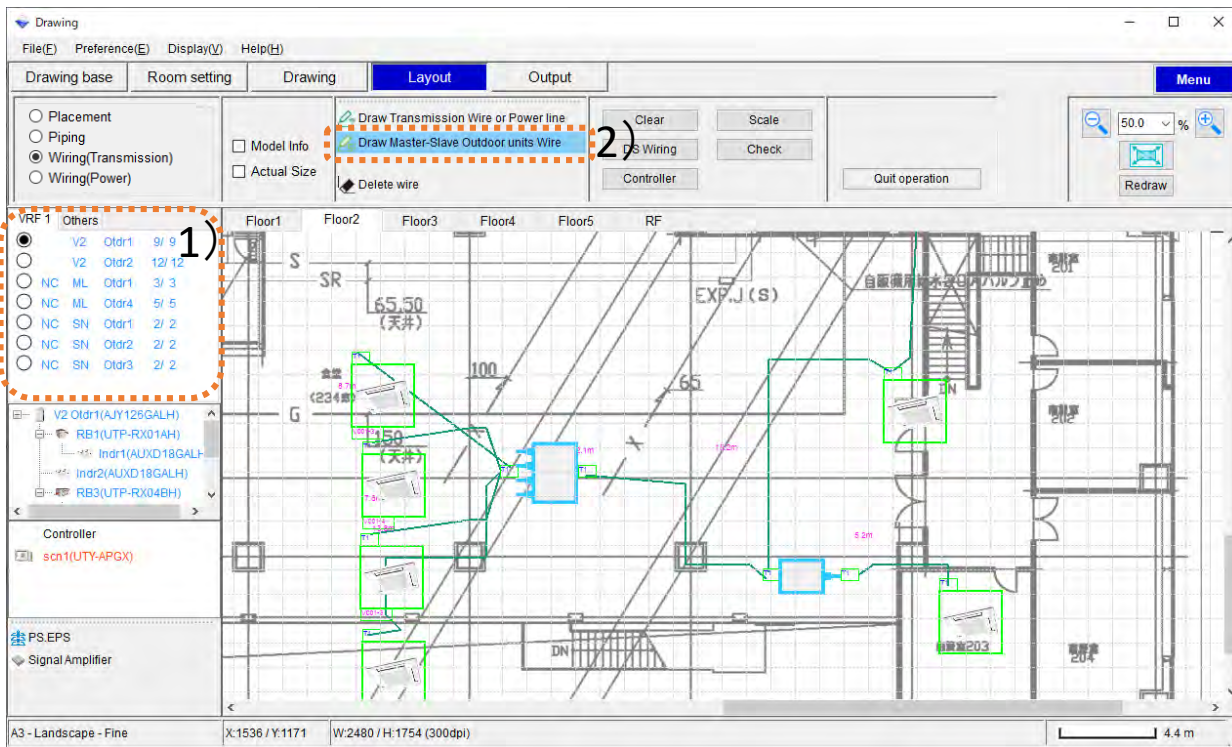


4)





# Draw Master – Slave Outdoor units Wire-Auto Drawing Design



1) Select Refrigerant

2) Press "Draw Master – Slave Outdoor units Wire."

Not selected Line

Draw Master-Slave Outdoor units Wire

Selected Line

Draw Master-Slave Outdoor units Wire

3) Left-Click at Master Outdoor unit Terminal.

Left-click at second point

Repeat

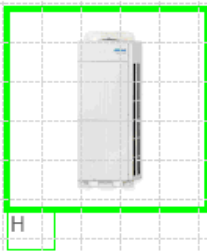
4) Left-double Click at Slave Outdoor unit Terminal.

3)



Master

3)

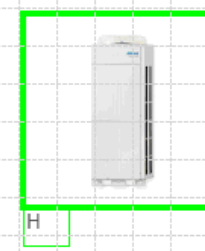


Slave

3)



Z H

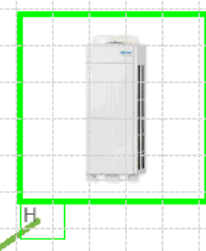


H

4)

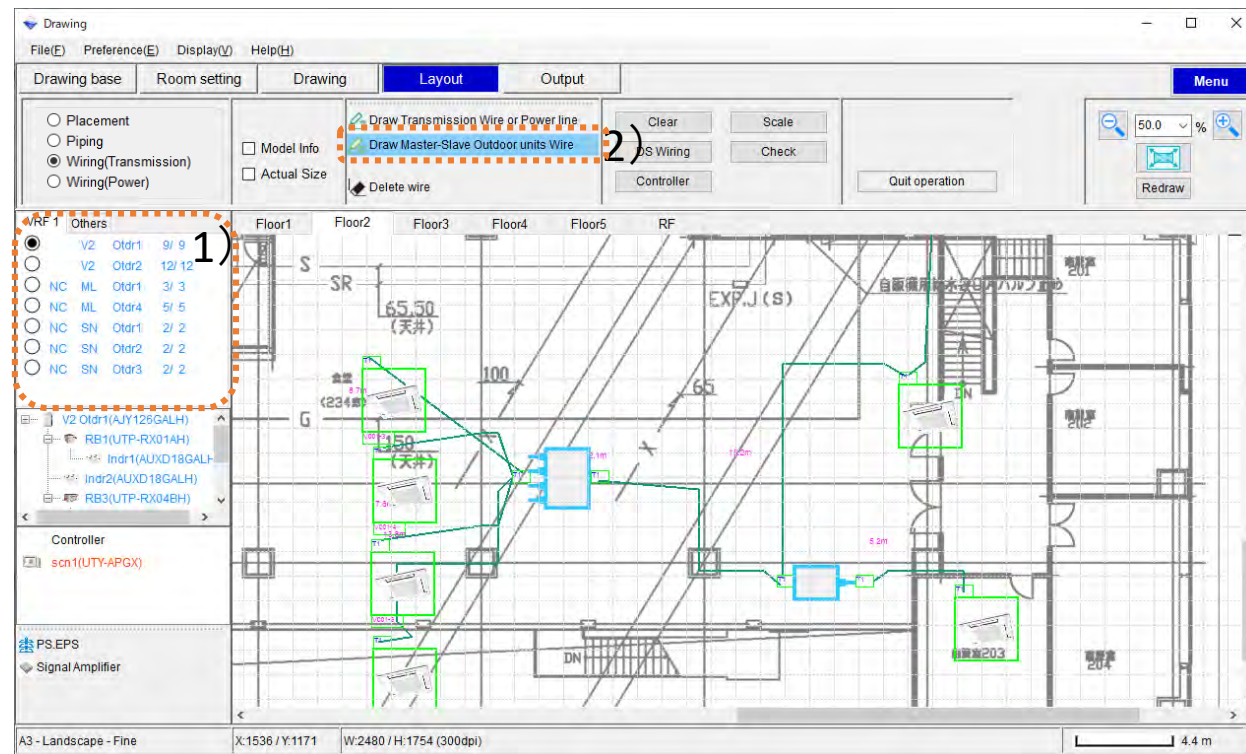


Z H



H

# 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.

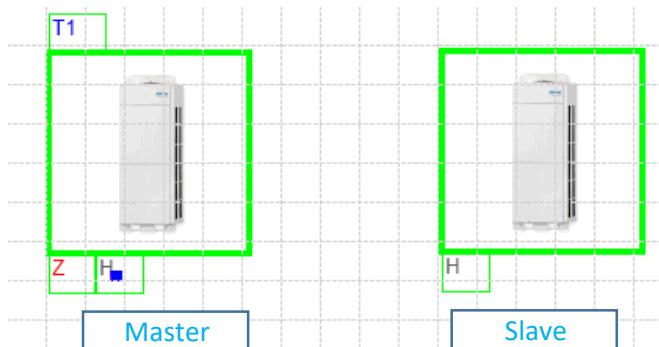
Left-click at second point

Repeat

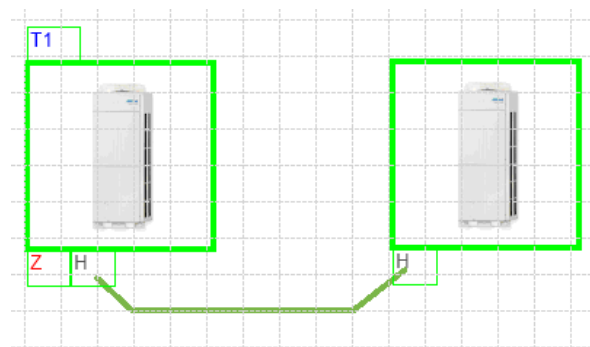
- 4) Left-double Click at Slave Outdoor unit Terminal.

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

3)



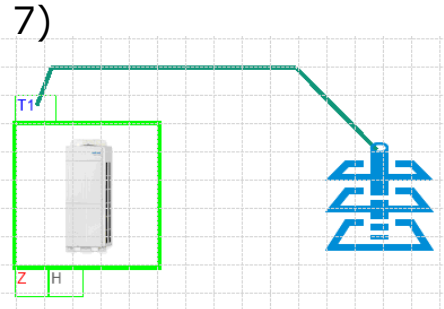
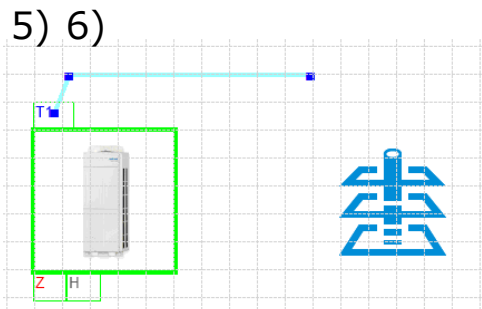
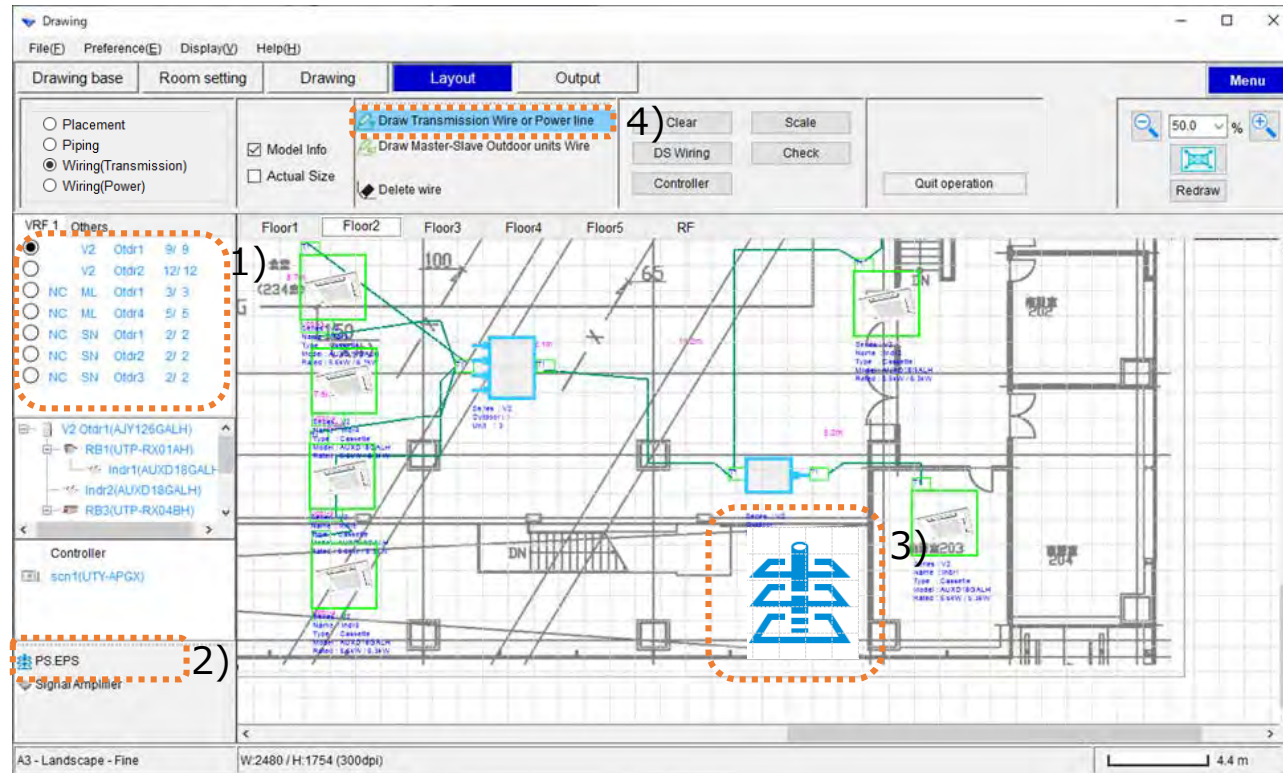
3) 4)







## How to Wiring PS, EPS



1) Select Refrigerant

2) Press PS, EPS.

PS, EPS

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

Draw Transmission Wire

Selected Line

Draw Transmission Wire

5) Left-Click on the unit

6) Left-click at second point

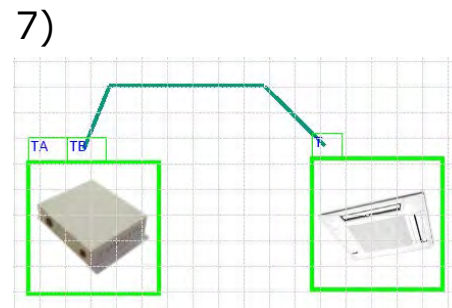
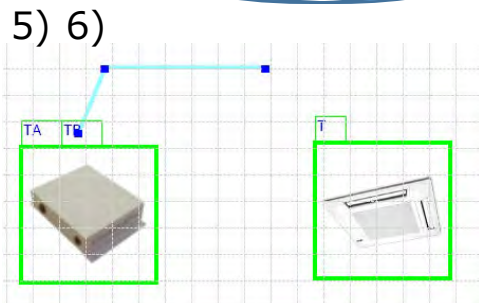
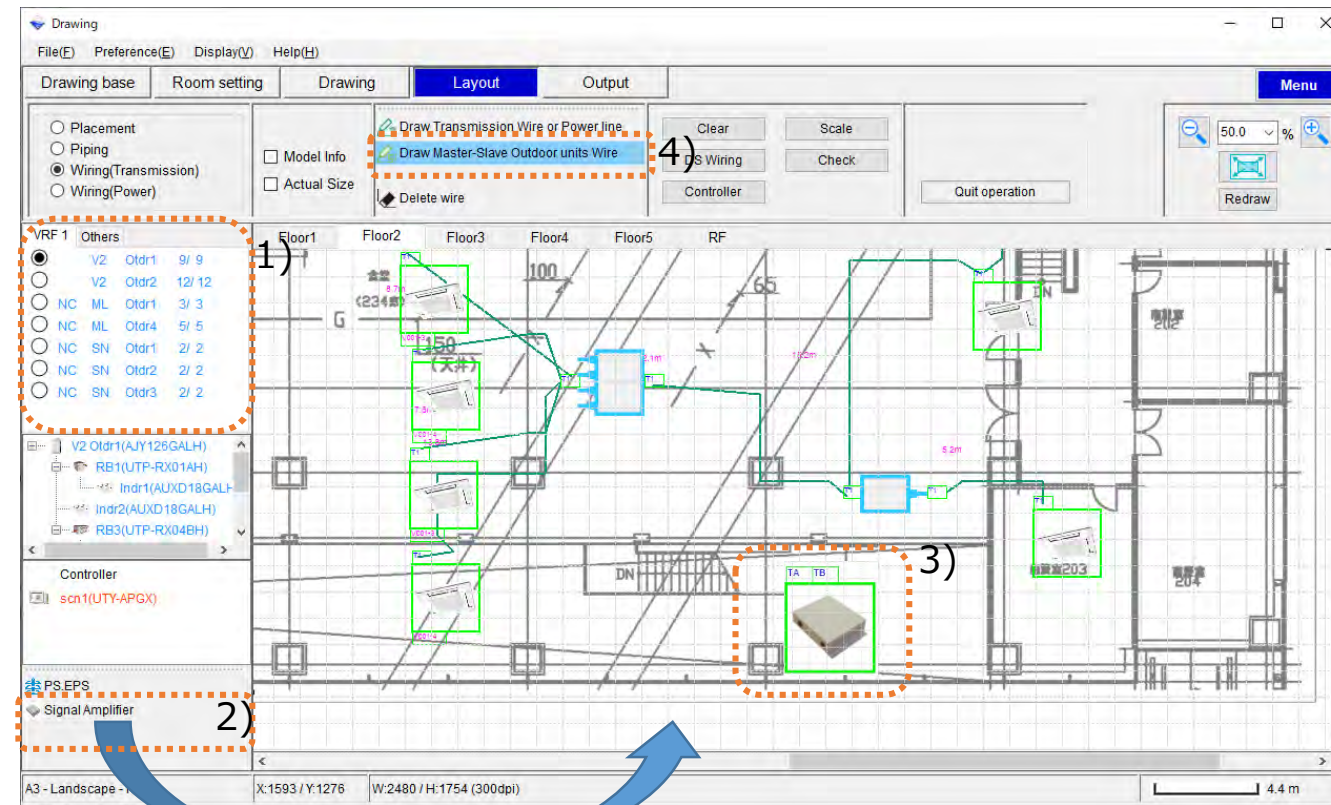
Repeat

7) Left-double Click at Terminal end point.

PS : Pipe Space

EPS : Electric Pipe Space

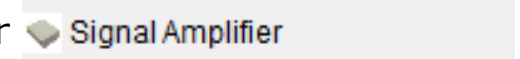
## How to Wiring Signal Amplifier



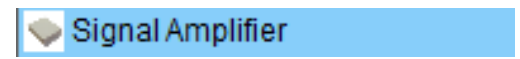
1) Select Refrigerant

2) Press Signal Amplifier.

Not selected Signal Amplifier



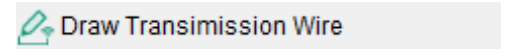
Selected Signal Amplifier



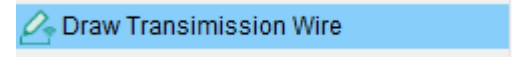
3) Left-Click on work area for part placement.

4) Press Draw Transmission Wire

Not selected Line



Selected Line



5) Left-Click on the unit

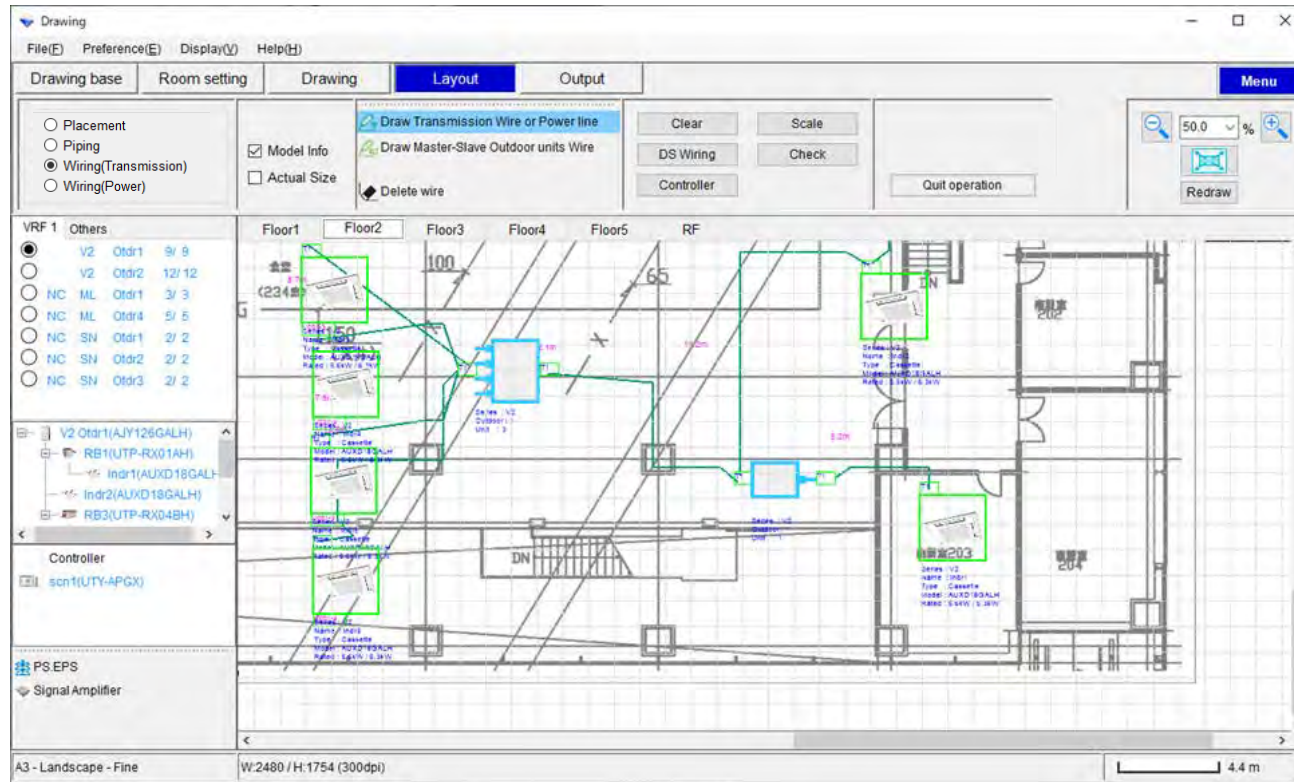
6) Left-click at second point

Repeat

7) Left-double Click at Terminal end point.

# Change wire length

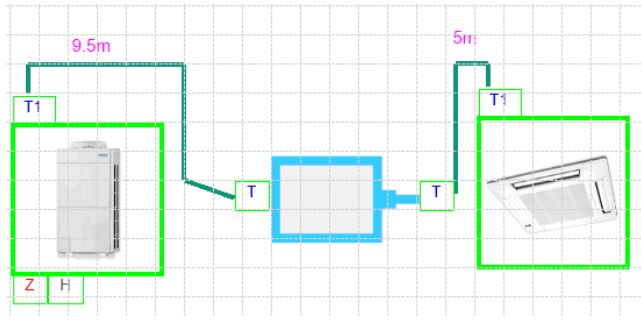
### How to change wire length



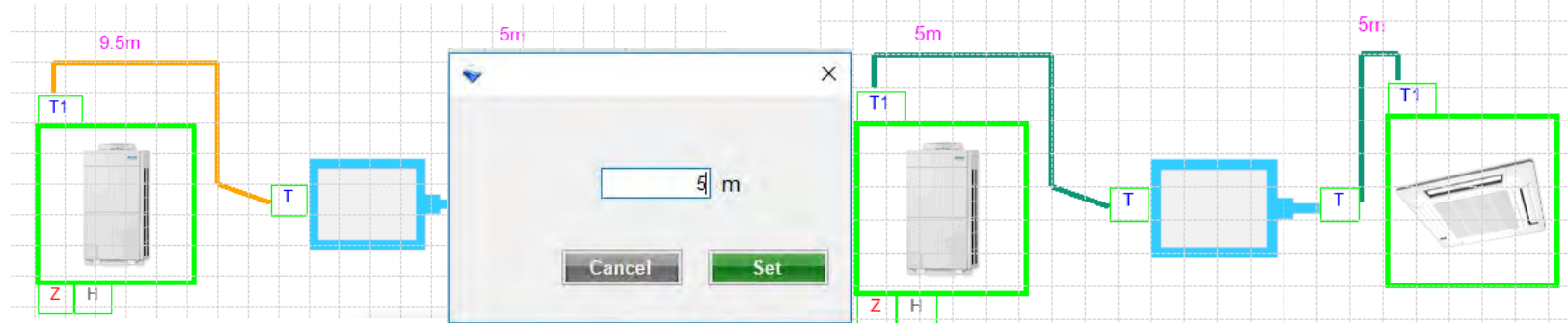
1) Double-Click on start point or end point of wire line

2) Input length, press Set

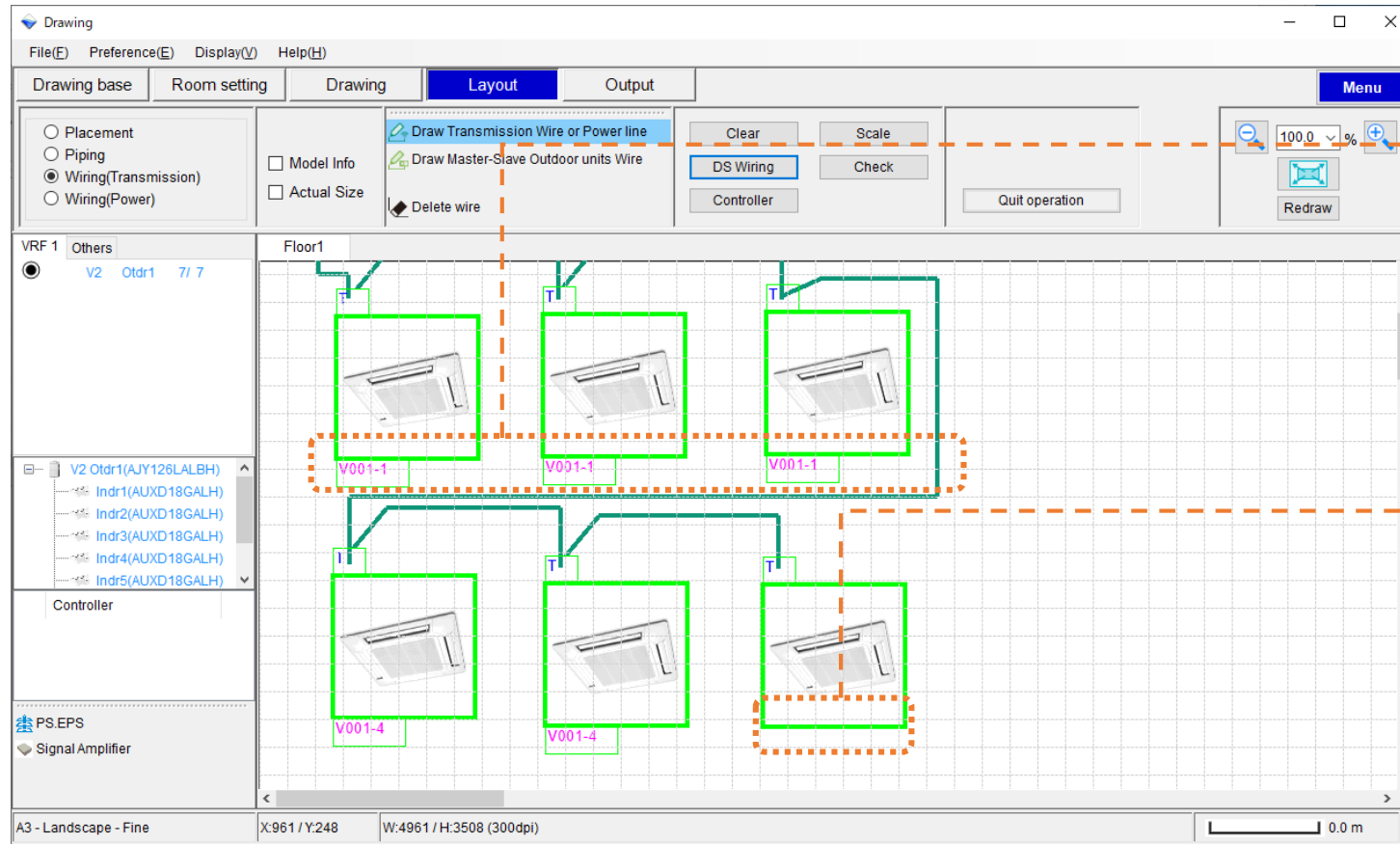
1)



2)





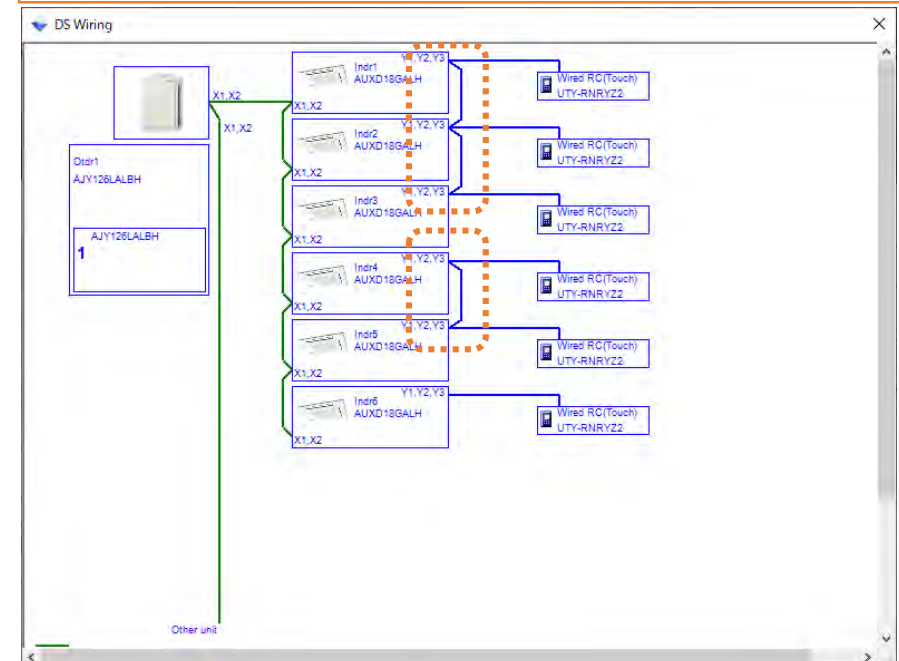


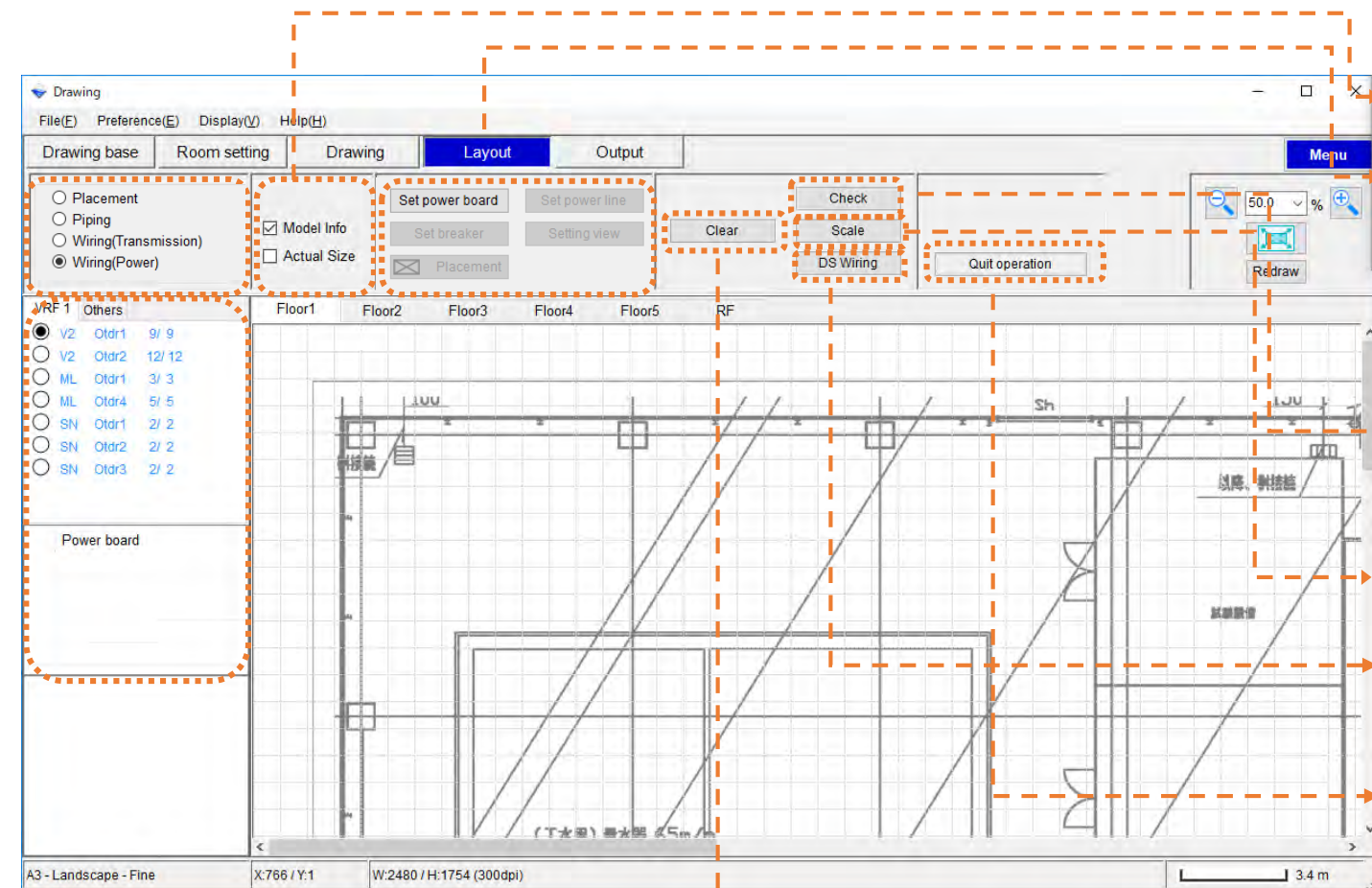
When creating RC Group , terminals are displayed under the indoor unit.

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.





### 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

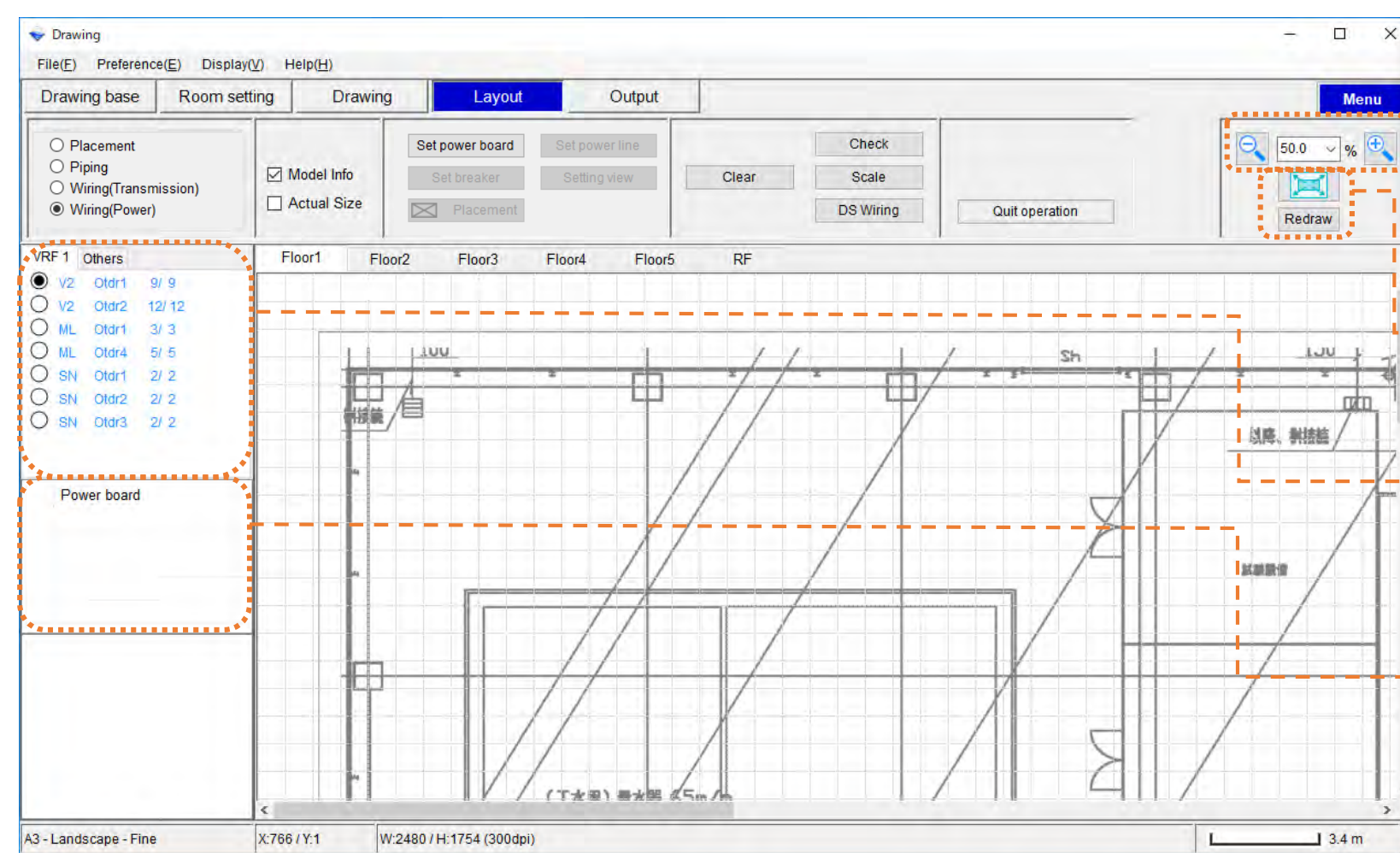
Open "DS Wiring display"

### Quit operation





Quit current operation is terminated.

### Clear

Refer to "Clear"



### Zoom to

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

### Redraw

Redraw: Draw the displayed picture again

### Refrigerant list

Selecting refrigerant

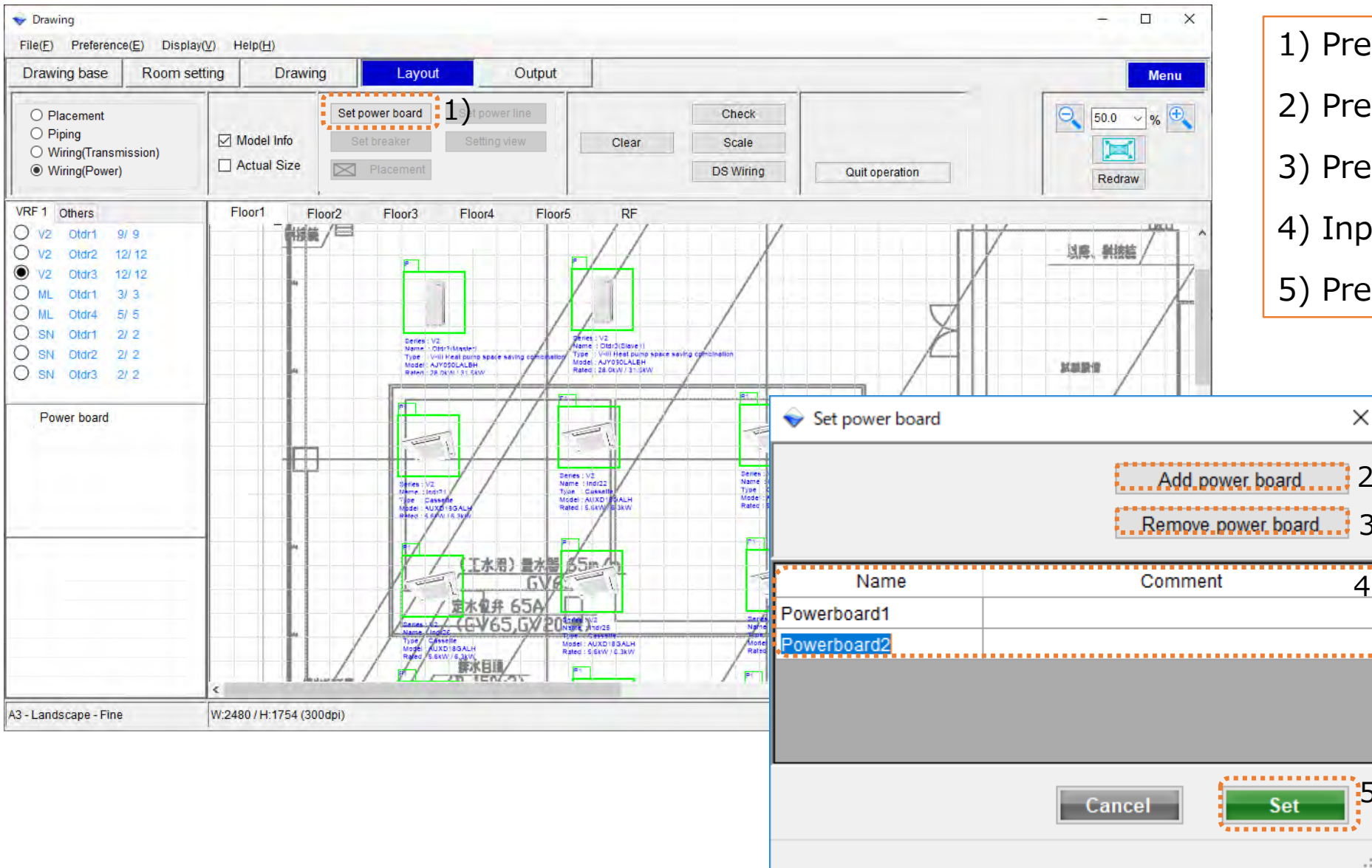
### Power board

Done : "✓" Made Power board  
 " " Not made Power board



## 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



## 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

The screenshot shows the 'Set breaker' dialog box in a software interface. The dialog has a dropdown menu for 'Powerboard1' (labeled 2), buttons for 'Add breaker' (labeled 3) and 'Remove breaker' (labeled 4), and a table with columns 'Name', 'Breaker(A)', and 'Limit total of MCA(A)' (labeled 5). The table contains two rows: 'Breaker1' with 50A and 45A limit, and 'Breaker2' with 50A and 40A limit. The 'Set' button is highlighted in green (labeled 6).

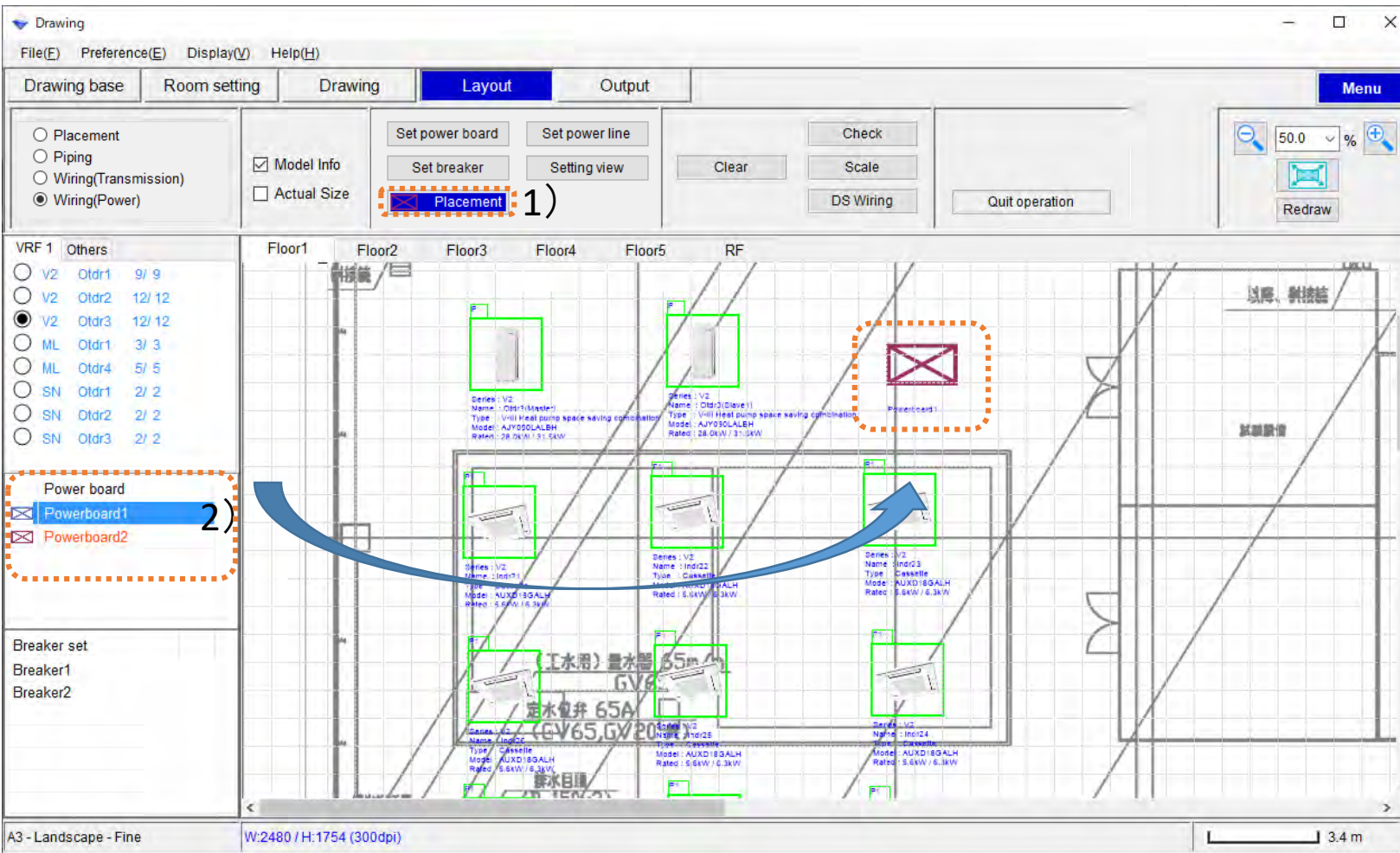
Name	Breaker(A)	Limit total of MCA(A)
Breaker1	50	45
Breaker2	50	40

1) Press "Placement."

2) Select Power board

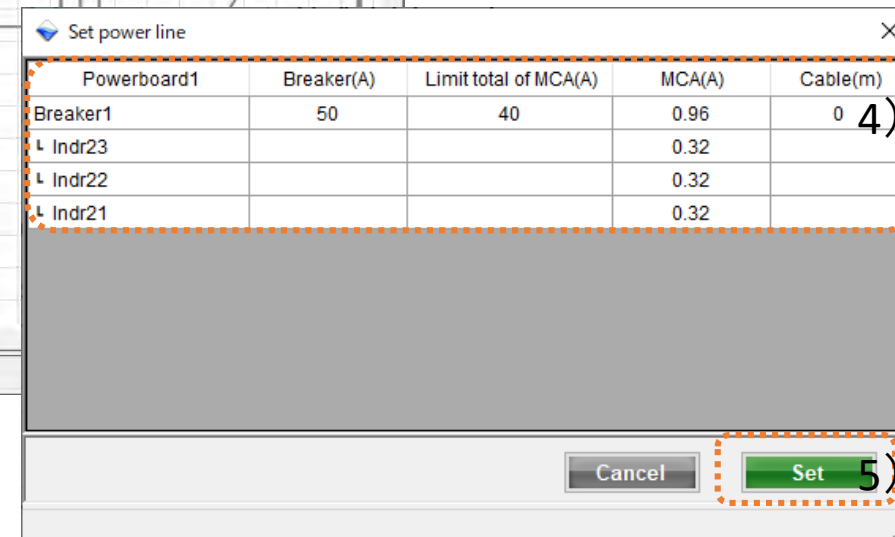
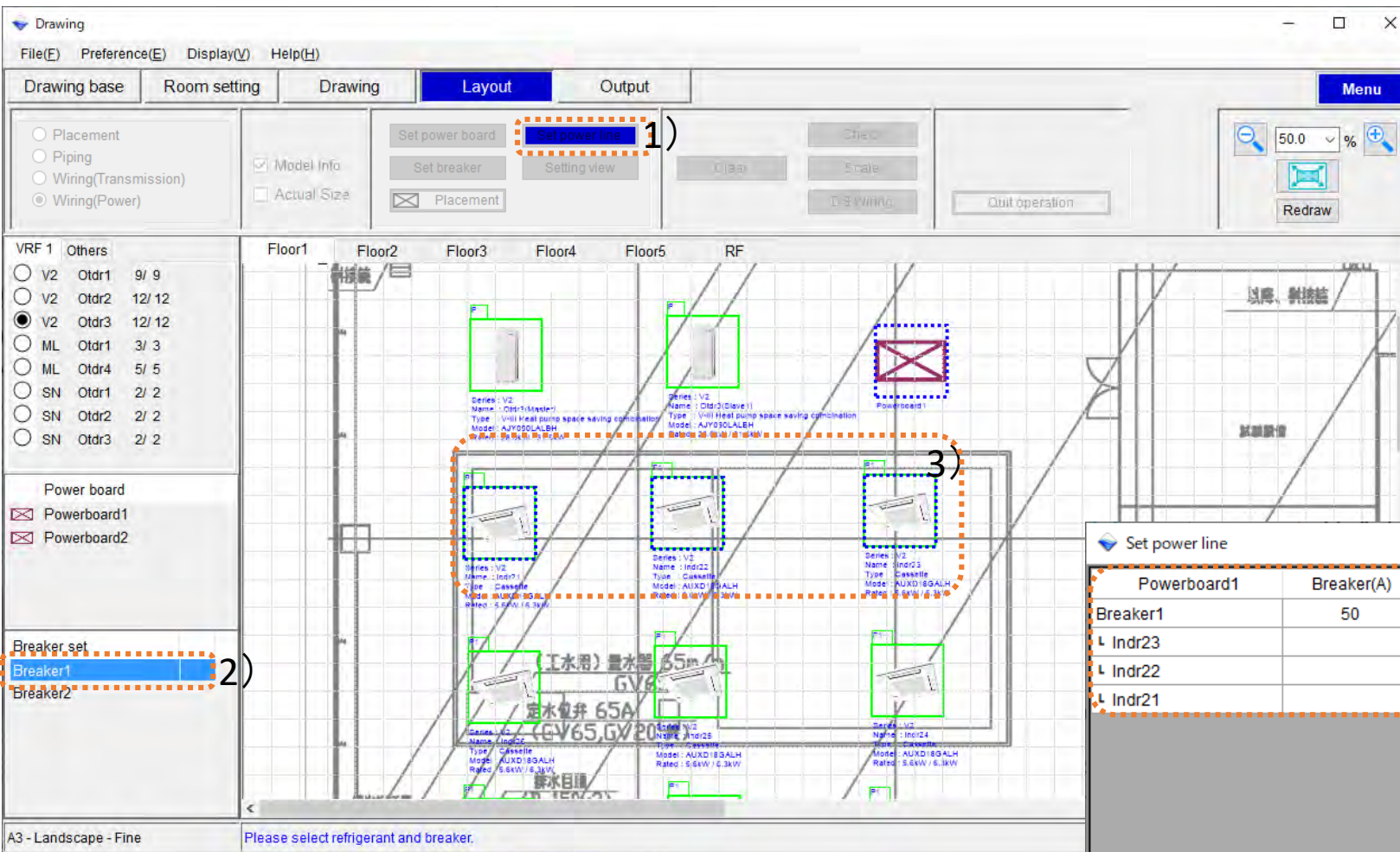
Drag & Drop on work area

Unplaced is orange, and already arranged is light blue



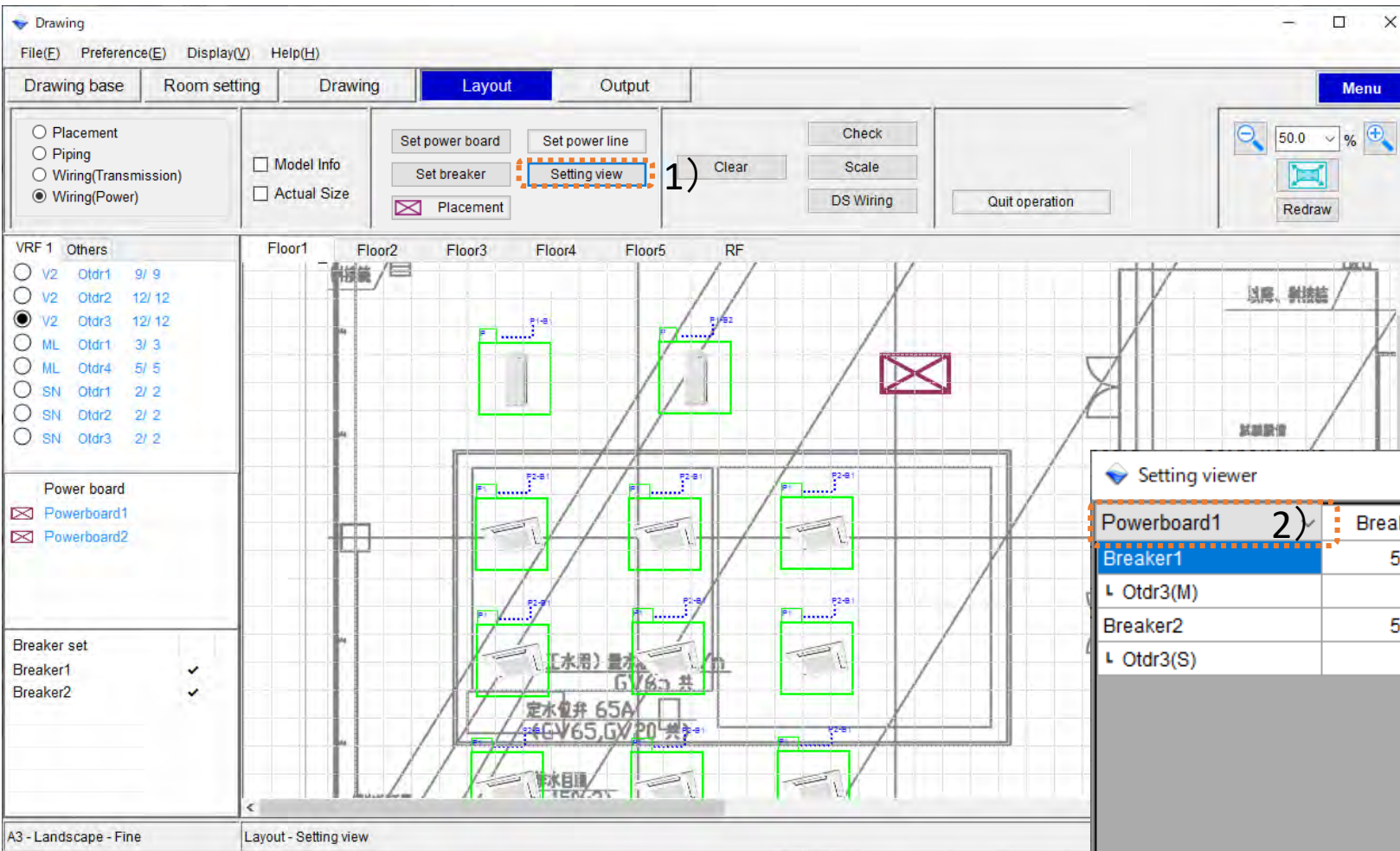


- 1) Press "Set Power board."
- 2) Select Breaker
- 3) Select unite
- 4) Input Breaker information
- 5) Press set



1) Press "Setting view."

2) Select Power board



Setting viewer

Powerboard1	Breaker(A)	Limit total of MCA(A)	MCA(A)	Cable(m)
Breaker1	50	40	23.3	0
└ Otdr3(M)			23.3	0
Breaker2	50	40	23.3	0
└ Otdr3(S)			23.3	0