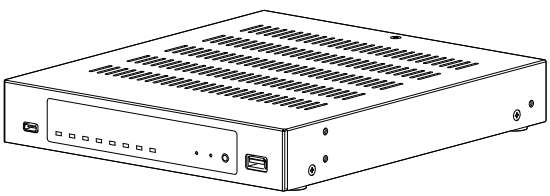
# INSTALLATION GUIDE

WLAN TRANSCEIVER
CONTROLLER

# IP1100CV





Icom Inc.

Thank you for choosing this Icom product.
The IP1100CV WLAN TRANSCEIVER CONTROLLER is designed and built with Icom's IP network technology.
We hope you agree with Icom's philosophy of "technology first." Many hours of research and development went into the design of your IP1100CV.

Icom is not responsible for the destruction, damage to, or performance of any Icom or non-Icom equipment, if the malfunction is because of:
- Force majeure, including, but not limited to, fires, earthquakes, storms, floods, lightning, other natural disasters, disturbances, riots, war, or radioactive contamination.
- The use of Icom transceivers with any equipment that is not manufactured or approved by Icom.

# Features

- The IP1100CV WLAN TRANSCEIVER CONTROLLER enables you to communicate wireless LAN transceivers that are connected to the Controller through IP networks.
- A total of up to 300 WLAN transceivers and IP100FSs REMOTE COMMUNICATOR can be registered and used in the IP1100CV system.
- Enables emergency calls to linked transceivers, and monitors unusual operation of the linked transceivers.
- A USB flash drive can be connected to the USB port for such as recording the audio communication between WLAN transceivers, updating the firmware and backing up or restoring the settings.
- Enables a bridge connection to the VE-PG3.
- Supports SNMP for network management.
- IP filtering function that restricts access from unknown network addresses.
- Automatic switching between 2.5GBASE-T, 1000BASE-T, and 100BASE-TX.
- Mountable into a 19 inch rack by installing the optional mounting bracket.

# About the construction of the manual

You can use the following manuals to understand and operate this Controller.

**Precautions (Comes with the Controller)**
Instructions for the connections, initialization, and precautions.

**Installation guide (This manual, PDF type)**
Instructions for the system requirements, the system setup basics, maintenance, and the specifications.
It can be downloaded from the Icom website.

**Operating guide (PDF type)**
The detailed references for the settings in the Controller Setting screen.
It can be downloaded from the Icom website.

Also refer to the manual for each device, that is connected to your system.

- The screen captures in this manual are examples of using Windows 10.
- In this manual, the IP1100CV is described as “Controller.”
- This document is described based on the IP1100CV firmware version 1.09.

# Network and system default settings

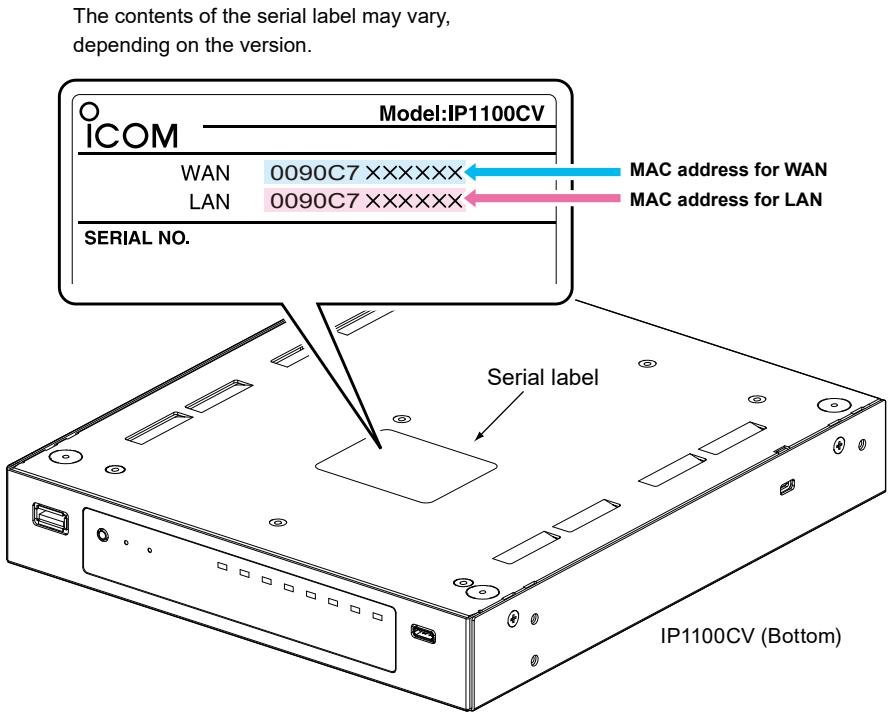
| Menu Item | Screen | Setting Item | Option | Value |
|---|---|---|---|---|
| Network Settings | IP Address | IP Address | IP Address | 192.168.0.1 |
| | | | Subnet Mask | 255.255.255.0 |
| | DHCP Server | DHCP Server | DHCP Server | Disable |
| Router Settings | WAN | Connection Type | Connection Type | Not used |
| Management | Administrator | Administrator Password | Username | admin (fixed) |
| | | | Current Password: | – |

ⓘ See the Operating guide for more details on above settings.
ⓘ The Administrator's Username (admin) cannot be changed.

***To prevent unauthorized access***
You must be careful when choosing your password.
• Choose one that is not easy to guess.
• Use numbers, characters, and letters (case sensitive).

# Confirming the MAC address

The MAC address of the built-in WAN or LAN module of the IP1100CV is shown on the Serial label at the bottom of the product.
ⓘ You can also check the MAC address on the setting screen. See the Operating guide for details.

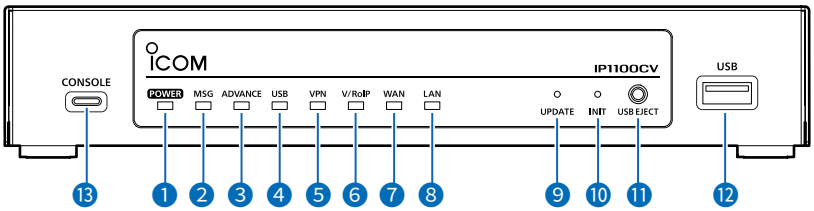


# BEFORE USING THE CONTROLLER

Section 1

# Panel description

## ■ Front panel




**INDICATORS**

**❶ [POWER]** .....

- Lights green: Power is ON
- Blinks green: Booting up
- Lights orange: Boot loader is booting
- Lights red: Boot loader prompt stopped
- Blinks red: UID indication
  ⓘ Used for identification purpose by administrator (operation on the web) in such case as 2 or more IP1100CVs are installed in a system.
- Not lit: Condition other than the above

**❷ [MSG]** .....

- Lights green: (Online update) A firmware update is ready.
- Blinks green: Initialization is in progress/ (Online update) Firmware update is in progress
- Not lit: Condition other than the above

**❸ [ADVANCE]** .....

Reserved for future function.

- Not lit: Any condition

**❹ [USB]** .....

- Lights green: A USB flash drive is mounted
- Blinks green: Accessing the USB flash drive
- Lights red: Failed updating the firmware/ Failed reading from a USB flash drive
- Not lit: A USB flash drive is unmounted or not connected

**❺ [VPN]** .....

- Lights green: At least one IPsec tunnel has been established
- Not lit: Not connected/VPN not used/Invalid setting

**❻ [V/RoIP]** .....

- Lights green: At least one WLAN transceiver has been successfully registered
- Not lit: Condition other than the above

**❼ [WAN]** .....

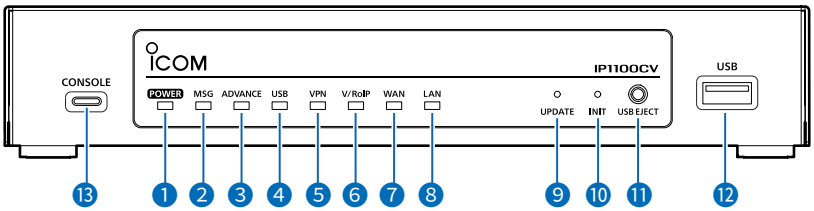
- Lights green: Connected to a WAN/ (PPPoE) PPP has been established/ (DHCP client) IP address obtained/
- Lights red: (PPPoE) Authentication failure/ (DHCP client) Failed to obtain an IP address
- Not lit: Condition other than the above

**❽ [LAN]** .....

- Lights green: Connected to a LAN
- Not lit: Condition other than the above

## Panel description

■ Front panel




**9 <UPDATE> BUTTON .....**
When [MSG] lights green, a firmware update is ready. Hold down this button until [MSG] blinks green to update the firmware.
ⓘ Use a pin to push the button.

**10 <INIT> BUTTON .....**
Push to initialize the settings. See Section 3 for details.
ⓘ Use a pin to push the button.

**11 <USB EJECT> BUTTON ...**
When removing the USB flash drive, hold down this button until [USB] (4) turns OFF.

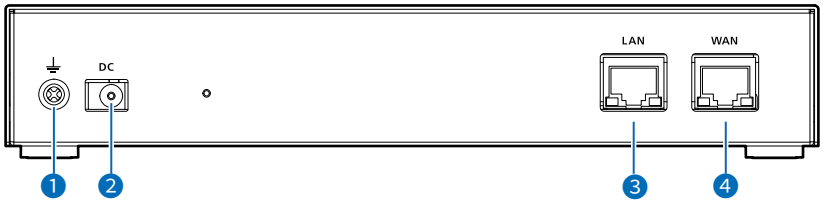
**12 [USB] PORT (USB 3.0) .....**
Connect a USB flash drive (user supplied) to save or restore settings or to update the firmware.
ⓘ You can save the recorded audio on a data storage device through the USB port. Only one storage device can be connected to the USB port at a time.
ⓘ Be sure to back up the data on the USB flash drive before connecting it to the Controller.
ⓘ A USB flash drive, such as one with biometric authentication, or one with password protection is not supported.
ⓘ Some USB devices may not be usable with the IP1100CV.

**13 [CONSOLE] PORT (USB Type-C) .....**
Connect a USB (Type-C) cable (user supplied) to remotely configure the Controller from a PC using a terminal software (user supplied.)

**About the USB driver**
To use the [CONSOLE] port, the USB driver for the Icom network devices is required.
Download the USB driver from the Icom website and install it on your PC.
https://www.icomjapan.com/support/

## Panel description

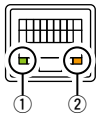
# ■ Rear panel




**1 [GND] TERMINAL** ..... Connect to ground.

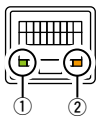
**2 [DC] JACK** ..... Connect the supplied power adapter.

**3 [LAN] PORT (RJ45 type)** ..... Connect a network device such as a Switch.




Lights: Connected
Blinks: Communicating
① Green: 1000BASE-T/2.5GBASE-T
② Orange: 100BASE-TX

**4 [WAN] PORT (RJ45 type)** ..... Connect a bridge modem (ADSL, VDSL, or CATV) or FTTH terminal.

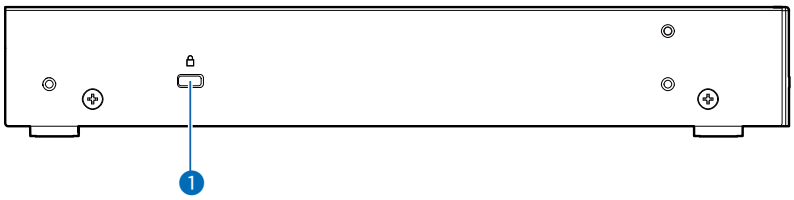



Lights: Connected
Blinks: Communicating
① Green: 1000BASE-T/2.5GBASE-T
② Orange: 100BASE-TX

ⓘ To use the [WAN] port, the [Line Type] setting is required.
(Router Settings > WAN > Connection Type)
See the Operating guide for details.

## Panel description

# ■ Side panel




**1 Security slot** ..... Attach a security wire (user supplied).
Refer to the instruction manual that comes with the security wire for details.

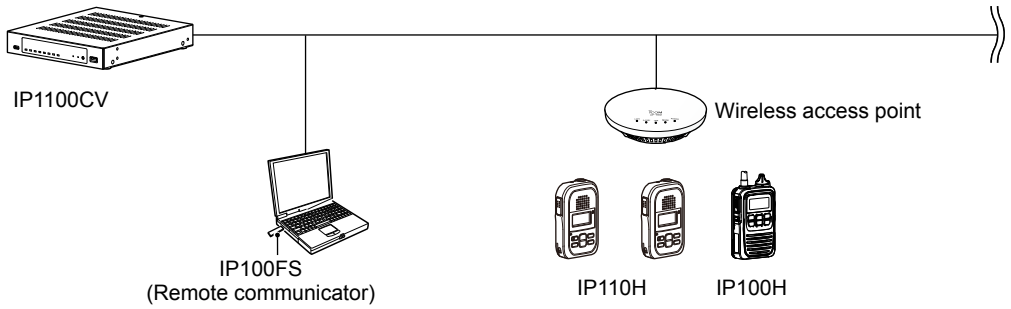
# Feature description

## ■ Controlling wireless LAN transceivers

You can communicate through IP networks using the IP1100CV as a controller for up to 300 WLAN transceivers.

ⓘ A wireless access point is required.

ⓘ The IP100H, IP110H, and IP100FS are usable, as of April 2024.




**IP100FS (Remote communicator)**

The IP100FS enables you to remotely communicate with WLAN transceivers connected to your IP1100CV from a PC through an IP network.

• See the IP100FS software help for more details.

**IP110H (WLAN transceiver)**

IP110H enables you to communicate using the IP1100CV and a wireless access point through an IP network.

• Verify the proper system formation according to your system environment, and then the WLAN transceiver configuration, wireless LAN settings, and server settings using the CS-IP110H are required.

• See the IP110H instruction manual for more details.

**CS-IP110H (Programming software)**

The CS-IP110H programming software is used for data entry, setting, and programming for the IP110H with a PC. You can download the free software and its manual from the Icom website.

• To communicate the IP110H and your PC, connect them with the USB cable supplied with the IP110H. See the CS-IP110H instruction manual for details.

**IP100H (WLAN transceiver)**

IP100H enables you to communicate using the IP1100CV and a wireless access point through an IP network.

• Verify the proper system formation according to your system environment, and then the WLAN transceiver configuration, wireless LAN settings, and server settings using the CS-IP100H are required.

• See the IP100H instruction manual for more details.

**CS-IP100H (Cloning software)**

The CS-IP100H programming software is used for data entry, setting, and programming for the IP100H with a PC. You can download the free software and its manual from the Icom website.

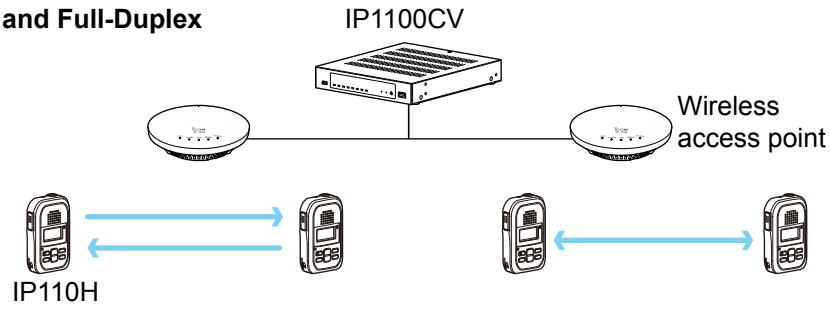
• To communicate the IP100H and your PC, the optional programming cable is required. See the CS-IP100H instruction manual for details.

Feature description

## ■ Simplex and Full-Duplex communication

The Controller has two methods of communication, Simplex and Full-Duplex.
Simplex is for communications where receive and transmit are done alternately one by one, and Full-Duplex is for simultaneous receive and transmit just like a telephone call.
Set the Communication Method in “Transceiver Settings” for each IP communication terminal registered to the IP1100CV.

**Simplex and Full-Duplex**



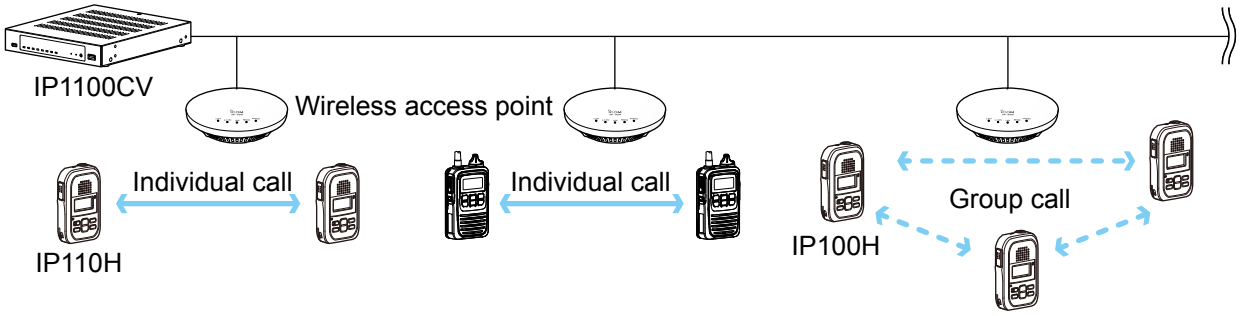

## ■ The VOX function

The VOX function allows you a hands-free operation. The VOX function starts transmission when you speak into the microphone, without needing to push [PTT]; then, automatically returns to reception when you stop speaking.

ⓘ To use the VOX function, an optional headset (and connection cable, depending on the headset) are required. See the WLAN transceiver’s manual for details.

## ■ Multiple communication

WLAN transceivers can simultaneously make multiple communications in an IP1100CV system since crosstalk does not occur in an IP network.



Feature description

# ■ All Calls and Group Calls

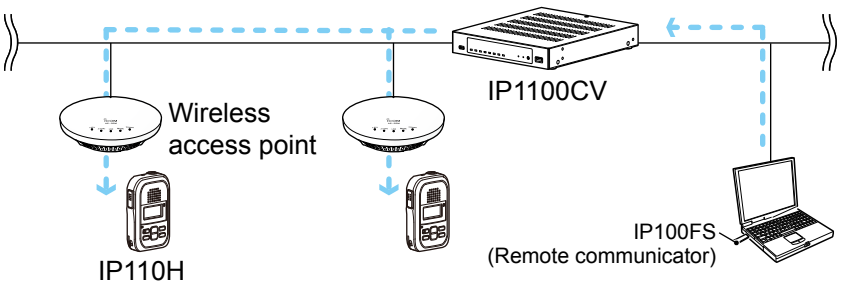
All Calls are used to call all the WLAN transceiver and IP100FS that are registered on the [Transceiver Registration] screen.
(Transceiver Controller > Transceiver Settings > Transceiver Registration)
Group Calls are used to call a group of WLAN transceivers and IP100FS.
You can make a group on the [Destination Settings] screen, and pick up IDs from the ID List that you want to register into the group.
(Destination Settings > Destination Settings)

ⓘ The ID List and the destination settings set in the IP1100CV are commonly used in each group that the WLAN transceivers and IP100FS belong to.

You can select Simplex or Full-Duplex communication for All Calls and Group Calls.

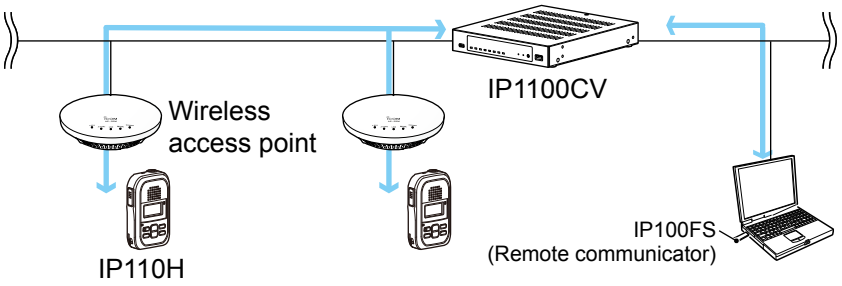
**Simplex operation**

• The called station cannot reply until the caller station stops transmitting.




**Full-Duplex operation**

• Caller and called stations can simultaneous receive and transmit just like a telephone call.

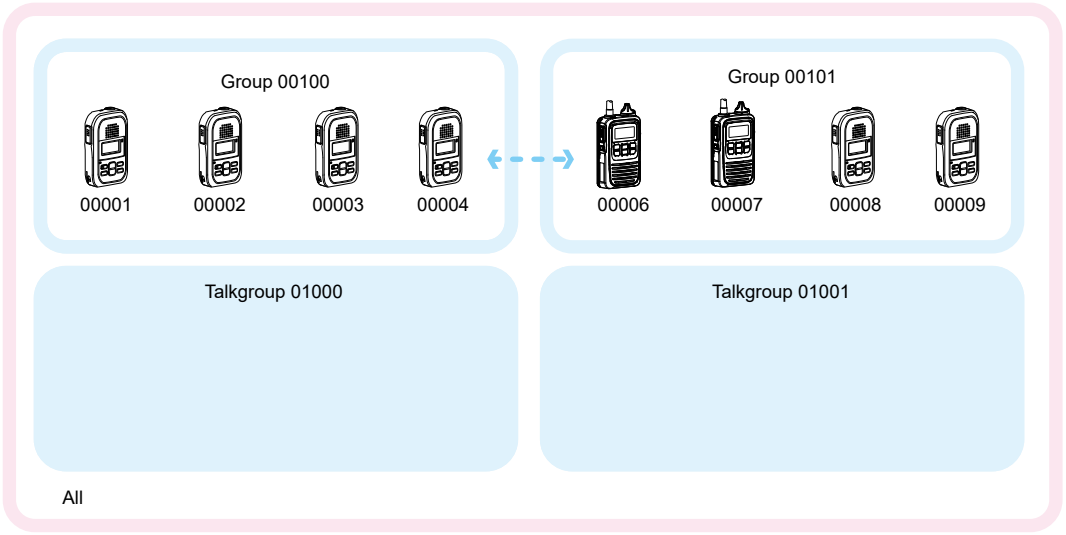


Feature description

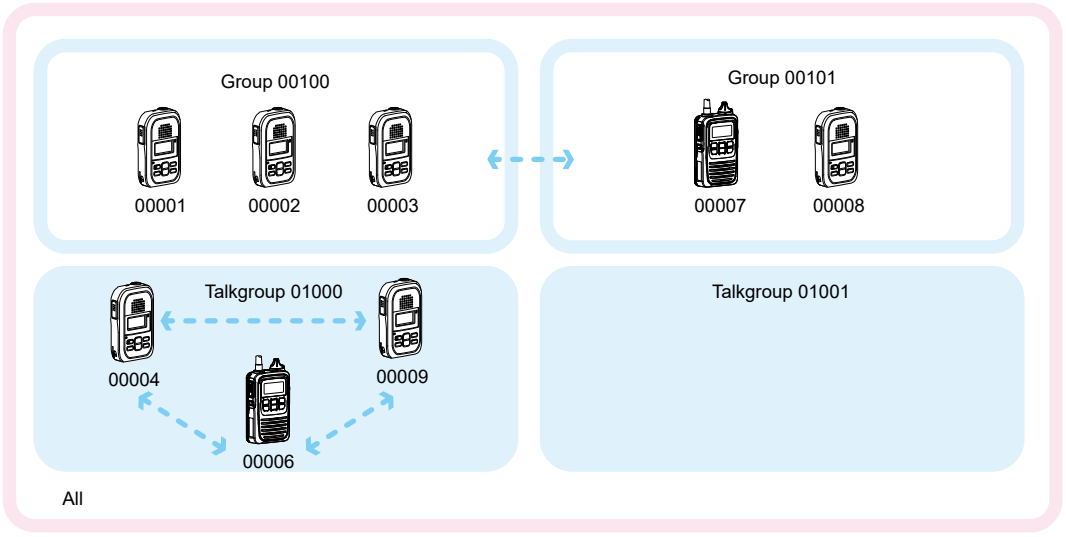
# ■ Talkgroup Calls

Talkgroup Calls enables WLAN transceivers to select the group that belong to it from previously registered groups in the IP1100CV.
When users select Talkgroup 01000, terminals are excluded from the original groups, as illustrated below.

**When no Talkgroup is selected:**




**When a Talkgroup is selected:**



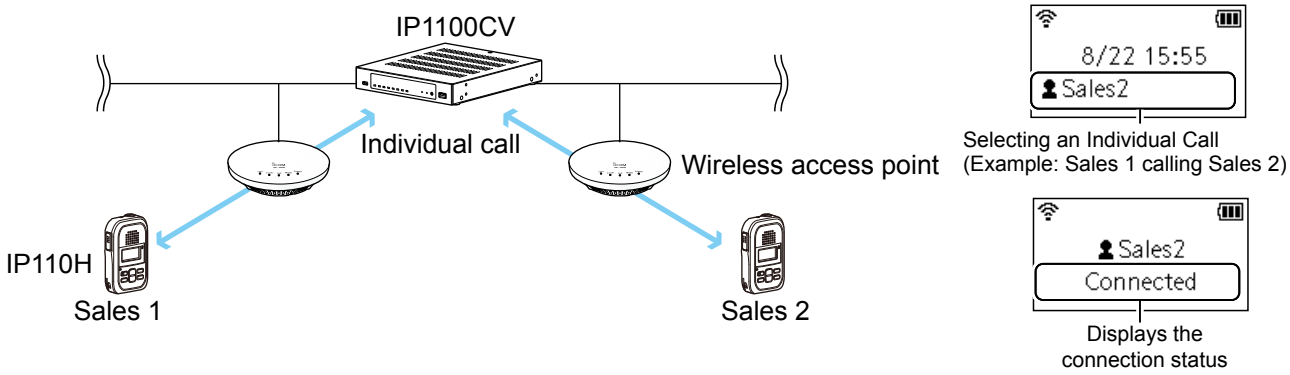

- Talkgroup Calls require registering the Talkgroups in the [Destination Settings] screen and [ID List] screen. If the "Talkgroup Type" in the [Destination Settings] screen is set to "Multiplex Talkgroup," a WLAN transceiver can make a Talkgroup Call between the linked Talkgroups.
  (Transceiver Controller > Common Settings > ID List)
  (Destination Settings > Destination Settings > Destination Settings > Talkgroup Type*)
  *Displayed only when [Call Type] is set to "Talkgroup."
- Set to the Controller whether All Call includes the Talkgroup or not, or the Talkgroup Call calls the IP100FS or not.
- The ID List and the destination settings set in the Controller are commonly used in each group that the WLAN transceiver and IP100FS belong to.

Feature description

# ■ Individual Call

Individual Calls are used to talk to a transceiver 1 on 1.
When an Individual call is made, the WLAN transceiver displays the connection status. (Connected, Busy, or No response)

ⓘ If the destination that you are calling is out of range, “No response” is displayed.
ⓘ Set the Receive Notification Tone on the [Profile] screen to notify a connection status, if necessary.
(Transceiver Controller > Common Settings > Profile)

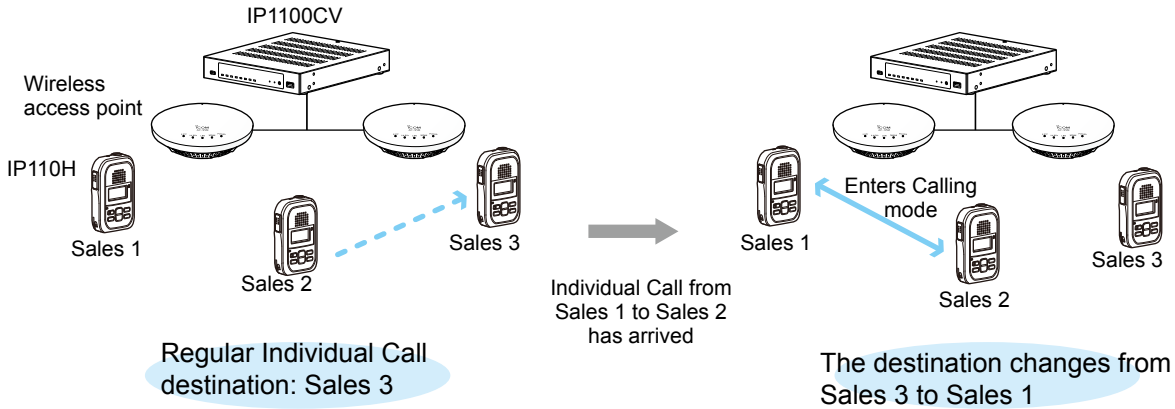



# ■ Calling mode

When you are receiving or transmitting, the transceiver enters the calling mode.
While in the calling mode (until the Talkback Timer elapses,) you can communicate to the destination only with the transmitting operation.

**About TalkBack Timer**
The TalkBack timer starts when the calling transceiver finishes transmitting until the transceiver returns to the standby mode. (Default: 5 seconds)

**About the communication priority while in the TalkBack Timer**
If a new call has arrived while in the TalkBack Timer, it is accepted according to the call priority.
The transceiver accepts incoming calls with a higher priority than the current call, but not lower or equal priority. The incoming call will be accepted after the TalkBack Timer has elapsed.
The Talkback Timer set in the Controller is shared in each setting group to that the WLAN transceiver belongs.



Feature description

# ■ Priority Call and its priority

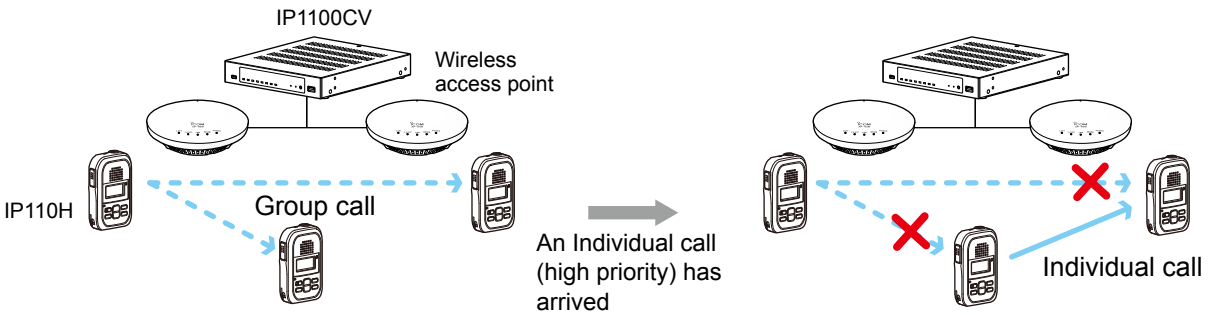
The Priority Call function is set to “Disable” in the default setting.
The priority levels of the Call types are in the following order.

| Priority level | Priority | Call type | Priority Call | Remarks |
|---|---|---|---|---|
| High ↑ | Fixed | Telephone | — | For telephone communication |
| | | Emergency (High) | Enable | — |
| | | Emergency (Normal) | Disable | — |
| | Selectable* | All Call (High) | Enable | Includes the Area Call or calling from an IP100FS |
| | | Individual Call (High) | Enable | Includes from an IP100FS |
| | | Group Call (High) | Enable | Includes the Area Call or calling from an IP100FS |
| | | All Call (Normal) | Disable | Includes the Area Call |
| | | Individual Call (Normal) | Disable | — |
| ↓ Low | | Group Call (Normal) | Disable | Includes the Area Call |

* Selectable in the Call Type Priority item on the [RoIP Server] screen.
(Transceiver Controller > RoIP Server Settings > RoIP Server)

- The call priority between the same priority level depends on the incoming order.
- The priority of the reply call depends on the caller’s priority level.

**Priority call interruption example:**



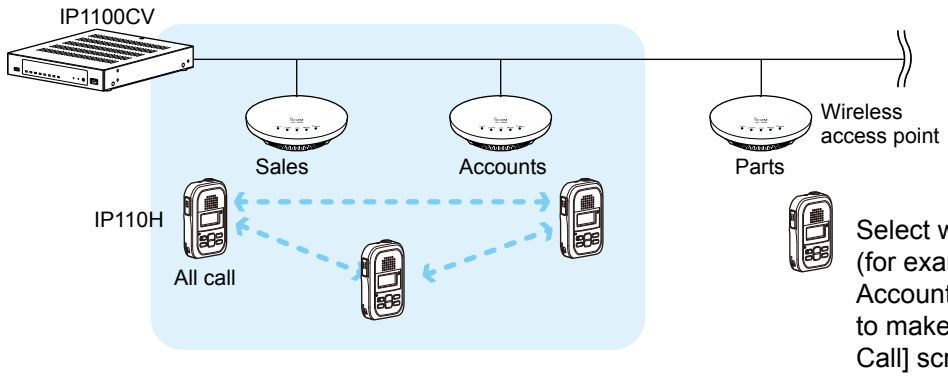
Feature description

# ■ Area calls

Area calls are used to call WLAN transceivers in a specific area. (Default: Disable)

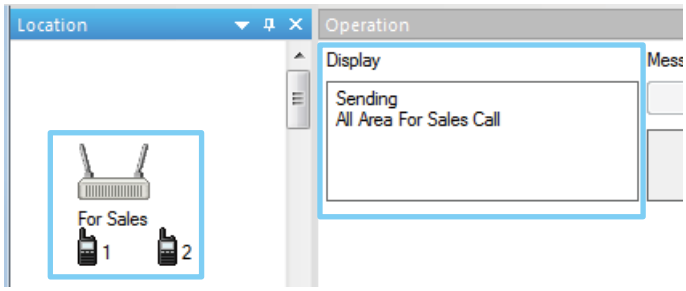
To use Area Call function, enable [Area Call] for each WLAN transceiver on the Transceiver Settings screen, and then register the area's wireless access point (BSSID).
(Transceiver Controller > Transceiver Settings > Transceiver Settings > Function Settings > Area Call)
(Transceiver Controller > RoIP Server Settings > Area Call > Area Setting)

**Making an All Call with the Area Call function**




Select wireless access points (for example, Sales and Accounts) that the IP110H uses to make Area calls, on the [Area Call] screen.

**(For the IP100FS) Making an All Call with the Area Call function**



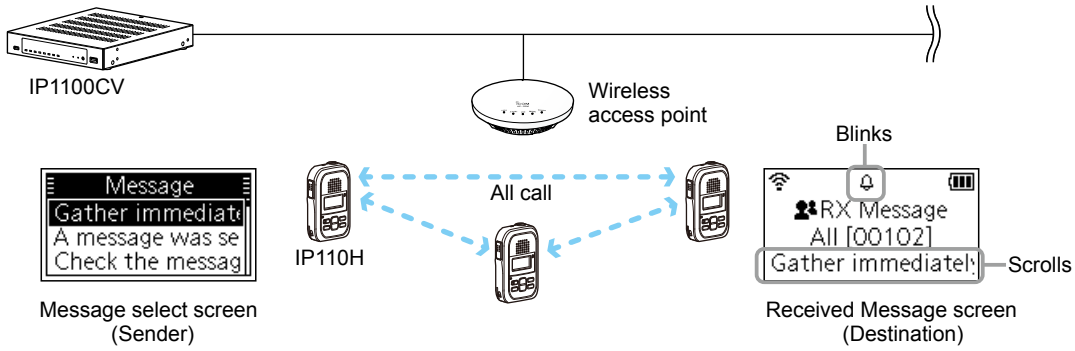

On the IP100FS, you can make an Area Call to the WLAN transceivers that belongs to the specified wireless access point. Select an access point in [Location], and then Call Type (Individual, Group, All, Area, or Telephone) and the name of the destination will be displayed.

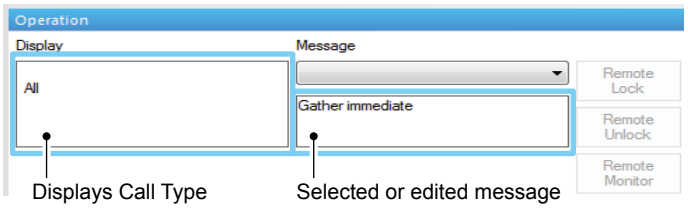
Feature description

# ■ Messages

The Messages function enables you to communicate with preset messages of up to 32 characters between WLAN transceivers and IP100FS. (Default: Disable)
You can register up to 10 messages to the IP1100CV on the [Messages] screen.
(Transceiver Controller > Common Settings > Messages)

**Example: Sending a message with All Call**




The IP100FS can store up to 100 messages in each site.
You can edit the stored messages.

- To use the Messages function, enable the [Message] on the [Transceiver Settings] screen for each WLAN transceiver.
- The messages that are registered to the Controller are commonly used by the WLAN transceivers that belong to the setting group.

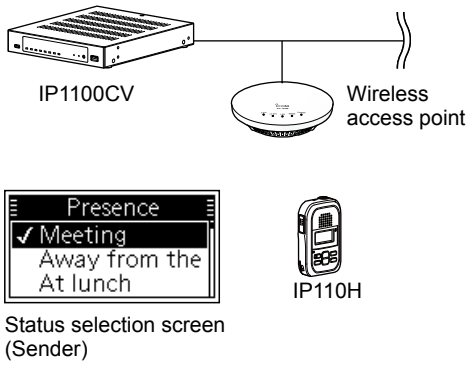
Feature description

# ■ Status Settings

The Status function is used to show your status information (Example: Meeting). (Default: Disable)

• You can preset 10 status texts of up to 32 characters on the [Status] screen.
(Transceiver Controller > Common Settings > Status)

**Sending status on the IP110H**



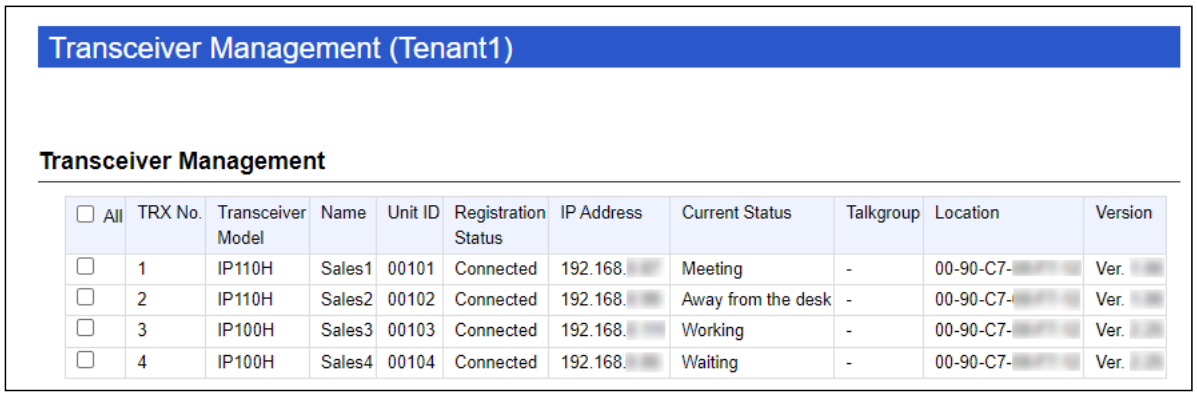

Status selection screen (Sender)

**On the IP100FS, One-Touch button**


Displays Name, Destination ID, Status number, and the Status information

**On the IP1100CV**

On the Controller, you can check the Status of each WLAN transceiver on the [Transceiver Management] screen. (Transceiver Controller > Transceiver Management)




| All | TRX No. | Transceiver Model | Name | Unit ID | Registration Status | IP Address | Current Status | Talkgroup | Location | Version |
|---|---|---|---|---|---|---|---|---|---|---|
| ☐ | 1 | IP110H | Sales1 | 00101 | Connected | 192.168. | Meeting | - | 00-90-C7- | Ver. |
| ☐ | 2 | IP110H | Sales2 | 00102 | Connected | 192.168. | Away from the desk | - | 00-90-C7- | Ver. |
| ☐ | 3 | IP100H | Sales3 | 00103 | Connected | 192.168. | Working | - | 00-90-C7- | Ver. |
| ☐ | 4 | IP100H | Sales4 | 00104 | Connected | 192.168. | Waiting | - | 00-90-C7- | Ver. |

Feature description

# ■ The Router function

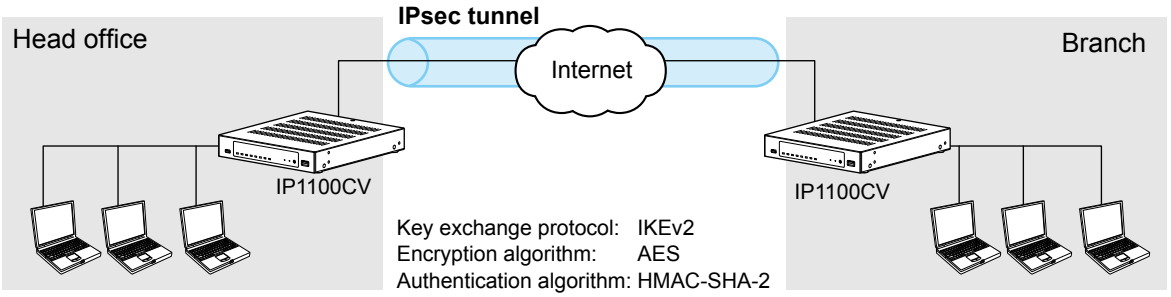
When the router function of the IP1100CV is enabled, the devices such as PCs that are connected to the IP1100CV can access the Internet. (Default: Disable)

ⓘ To use the router function, set the [Connection Type] (DHCP Client, Static IP, or PPPoE) and detailed settings according to your Internet environment. Ask your Internet service provider (ISP) or network administrator for details.
(Router Settings > WAN > Connection Type)

# ■ The VPN function

VPN (Virtual Private Network) enables a host computer to send and receive data over the shared or public networks like the Internet as if it were a private network. (Default: Disable)
The VPN function on the IP1100CV is compatible with the VE-PG4. (As of April 2024)

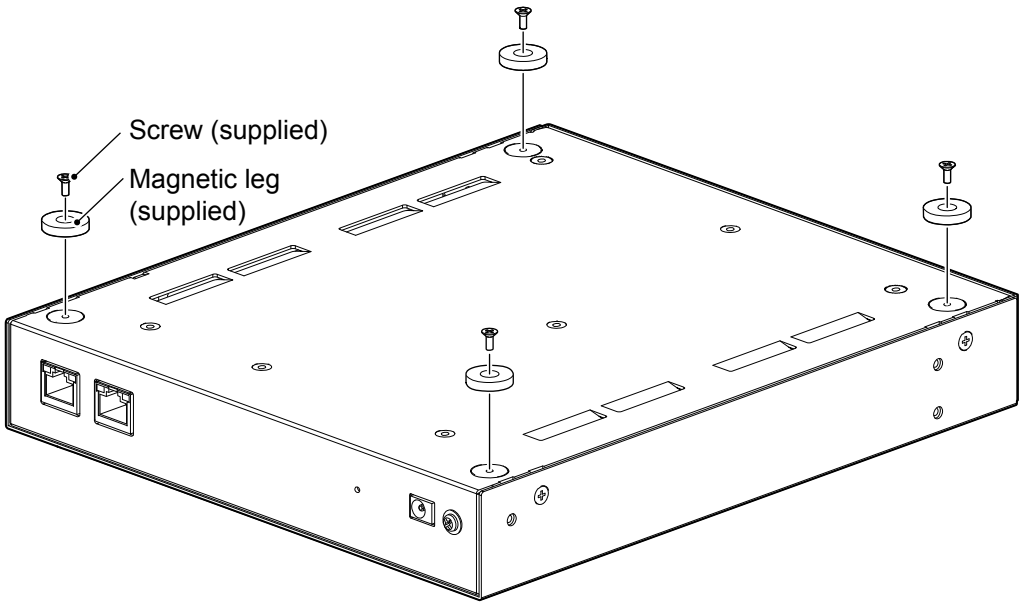
ⓘ To use the VPN function, connect the WAN line to the [WAN] port, and then configure the IPsec tunnel.
(Router Settings > VPN IPsec Tunnel Settings)



# Installation and connections

## ■ Attaching the magnetic legs

You can the supplied 4 magnetic legs on the bottom panel, and tighten the supplied screws to fix them.
ⓘ Never use other than the supplied screws.



Installation and connections

# ■ Setting a static IP address to a PC

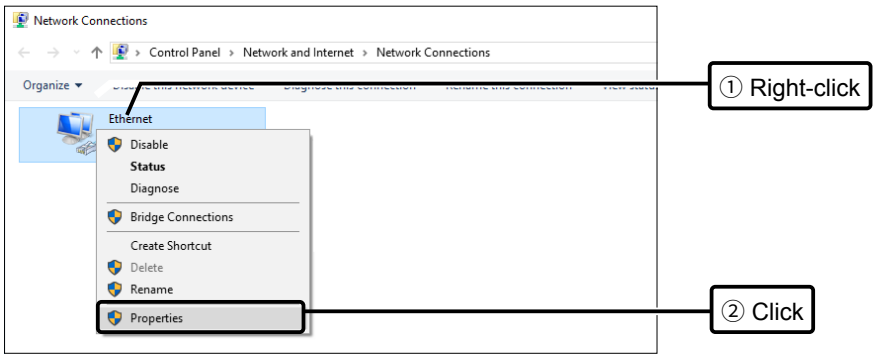
To access the IP1100CV setting screen from a PC, set a static IP address to the PC.
ⓘ As the default for the IP1100CV, the IP address is set to “192.168.0.1,” and the DHCP server is set to “Disable.”

The following steps shows how to set a static IP address (example: 192.168.0.100), based on Microsoft Windows 10.

1 Click <Start> (Windows logo) and then click [Settings].

2 In “Windows settings” window, click [Change adapter options].

3 Right-click “Ethernet,” and then click “Properties” in the displayed menu list.

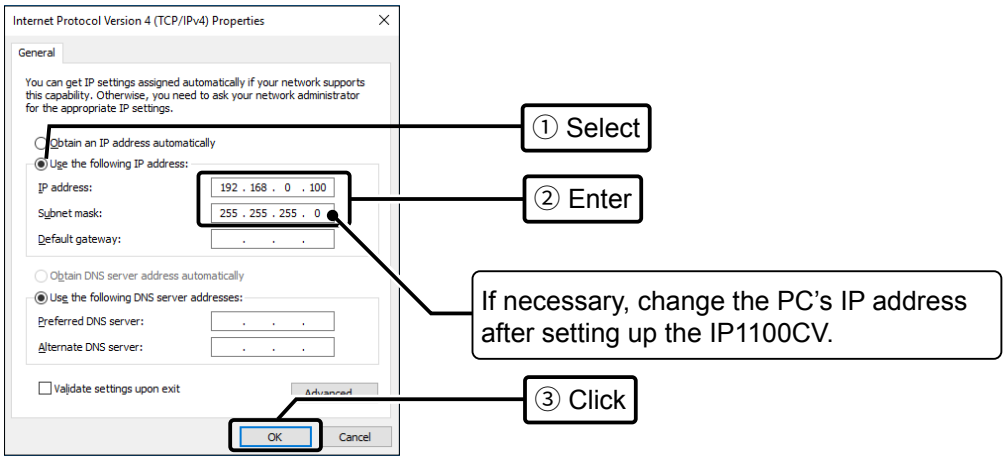



4 If the “User Account Control” message is displayed, click <Yes> to continue.

5 In the [Ethernet Properties] (for a cable LAN station) or the [Wi-Fi Properties] (for a wireless LAN station) screen, select “Internet Protocol Version 4 (TCP/IPv4),” and then click <Properties>.

• The “Internet Protocol Version 4 (TCP/IPv4) Properties” screen is displayed.

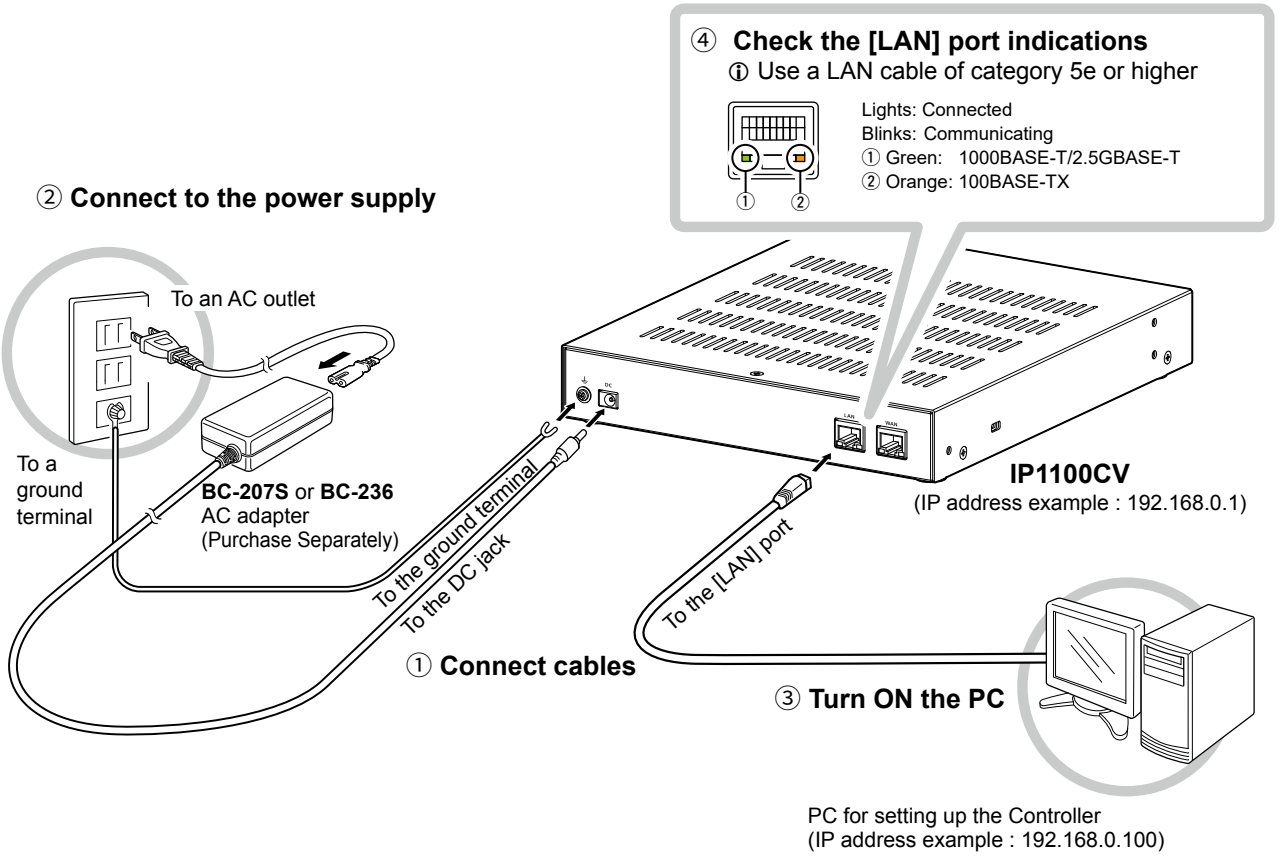
6 Select “Use the following IP address” and enter the IP address (example: 192.168.0.100) and the Subnet mask (example: 255.255.255.0), and then click <OK>.



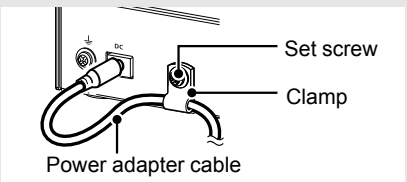

7 Close the window.

Installation and connections

# ■ Connecting the cables and the PC




**NOTE:** Use the supplied clamp to fix the power cable to the ground terminal.



# The Setting screen

## ■ Accessing the setting screen

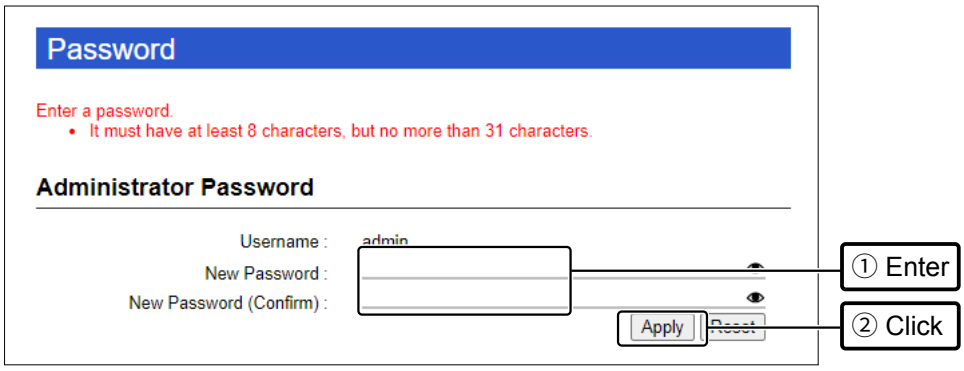
You can access the IP1100CV setting screen with the web browser on your PC.

1 Open your Web browser.
Enter the IP address of the IP1100CV into the address bar. (Default: 192.168.0.1)


2 Press the [Enter] key.

- The Login Authentication screen is displayed.
  When you access the IP1100CV for the first time, you have to set an Administrator password on the Password screen. Go to Step 3.
  Otherwise, go to Step 4.

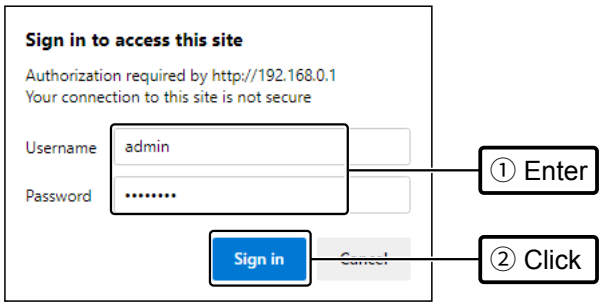
3 Enter a new password into both “New Password” and “New Password (Confirm),” and then click <Apply>.




ⓘ The password should be 8 to 31 of characters, numbers, and letters (case sensitive.)
ⓘ You can check the entered characters by clicking the eye icon to the right.

- The Login Authentication screen is displayed.

4 Enter the username “admin” (fixed username) and the password set in Step 3, and then click <Sign in>.

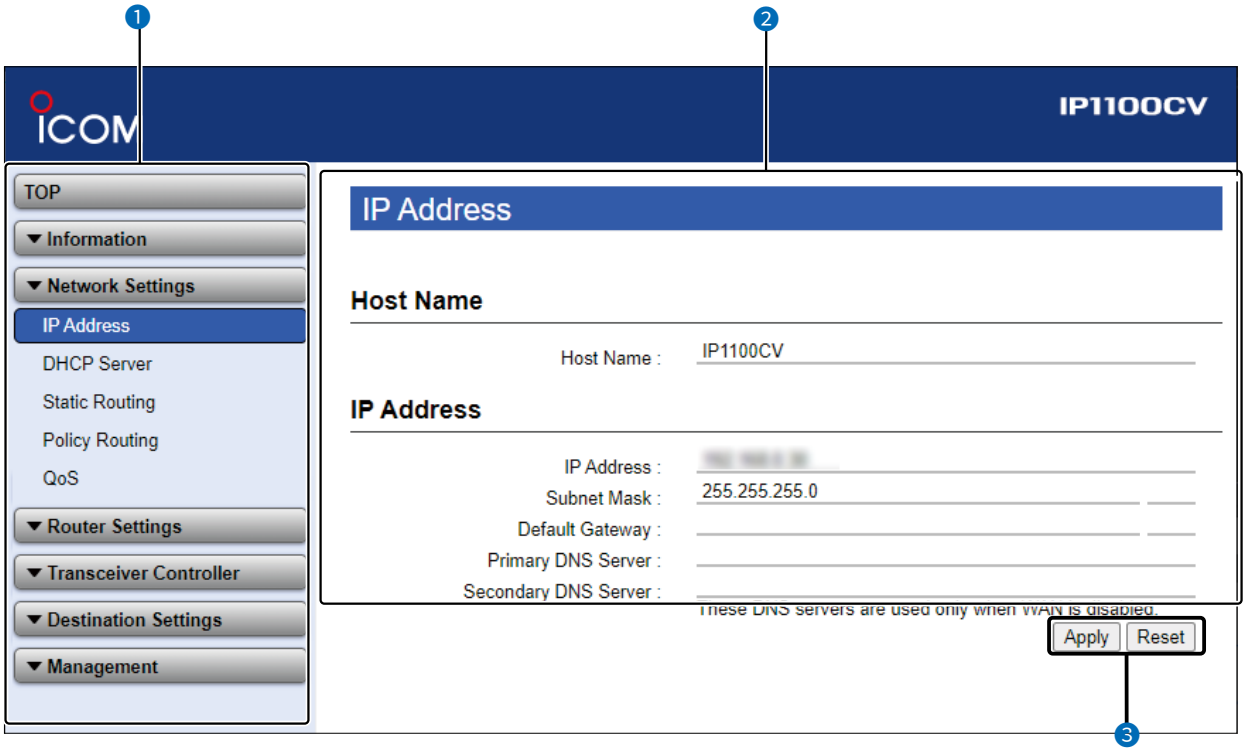



- The IP1100CV Setting screen is displayed. (See the next page.)

The Setting screen

## ■ Setting screen description

Refer to the Operating guide for each setting item details.

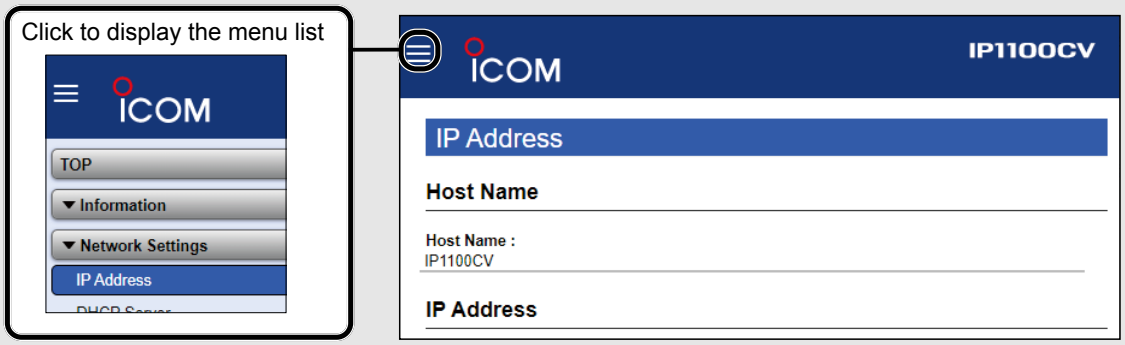



**❶ Menu list** ..... Displays the list on a menu line. When you click each menu, a list of the submenu drops down so you can click to display the setting screen to the right.

**❷ Setting screen** ..... Displays the settings and values when you click a submenu item to the left.

**❸ Button** ..... Applies or resets the setting values.
- The displayed buttons differ, depending on the screen.

**NOTE:** When the web browser window is not wide enough to display the whole width of the setting screen, the menu list will be hidden, and the menu icon will be displayed, as shown below. Click the icon to display the menu list.



The Setting screen

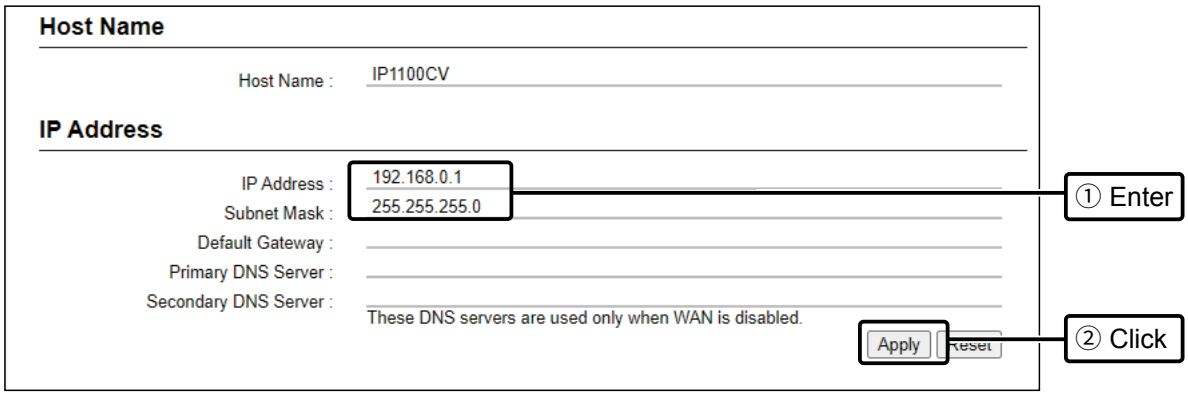
# ■ Changing the IP address on the setting screen

Network Settings > IP Address > IP Address

ⓘ Make sure the IP1100CV's IP address does not conflict other network devices.

1 Click "Network Settings", and then click "IP Address".

2 In the "IP Address" screen, enter the new IP Address and then click <Apply>.




• The changes are saved.

3 Click <Back> to return to the previous page.

• The login menu is displayed.

4 Confirm the new IP address is displayed, and then login the IP1100CV again.

**IP Address assigning**
An IP Address consists of two parts, the "Network" and "Host."
For example, in the IP1100CV IP address "192.168.0.1" (Class C), the digits "192.168.0" are the network digits and the "1" at the end is the host digit.
Network devices with the same network numbers are recognized as belonging to the same network.
Furthermore, the network devices in the network are identified by the host part.
Assign the IP Address considering the following points.
• Set the identical network digits for all the devices that you want to add into the network.
• Do not set the same host digit to network devices in the same network.
• Do not set the network address whose the first digit of the host part is "0."
• Do not set the broadcast address whose the last digit of the host part is "255."

# SETTING UP THE SYSTEM

Section 2

# Installation overview

The following shows a typical setting procedure for the WLAN transceiver controller on the IP1100CV Setting screen.

1 **Network Settings > IP Address**
Enter the IP address according to your network environment. (Default: 192.168.0.1)

**Network Settings > DHCP Server**
Enable or disable the Controller's DHCP server function. (Default: Disable)

2 **Transceiver Controller > Transceiver settings > Transceiver Registration**
**Transceiver Controller > Common Settings**

Enter the Transceiver Model, Name and Unit ID, Password and Setting group.
ⓘ The default password is "iptrx". You can change it for security.
ⓘ Customize the common settings for the transceiver group (Tenant) on the Common Settings screen.

**Setting by the CS-IP100H CLONING SOFTWARE or the CS-IP110H PROGRAMMING SOFTWARE**
After WLAN transceivers are registered to the Controller, set the wireless LAN settings and provisioning server settings (Controller) for all the transceivers.
ⓘ The CS-IP100H CLONING SOFTWARE and CS-IP110H PROGRAMMING SOFTWARE can be downloaded from the Icom website. Refer to each manual for details.

3 **Transceiver Controller > Transceiver settings > Transceiver settings**

Set the functions, such as Communication Method (Simplex or Full-Duplex), Priority Call, Area Call, Message, and Status, for each transceiver.
Enable the required functions for all the WLAN transceivers that are registered on the Transceiver Registration screen.

- Use ID list
- Communication Method (Simplex/Full-Duplex)
- Priority Call
- Area Call
- Message
- Status

4 **Destination Settings > Destination Settings**
Assign the registered WLAN transceivers or IP100FS on the Transceiver Registration screen to a group.
The group ID and the communication type are set on the Destination Settings screen.

(☞ Continued on the next page)

**NOTE: Applying the settings to the WLAN transceiver**
If the Controller's setup has been changed, be sure to restart the transceiver to apply the setting.

## Installation overview

5 **Transceiver Controller > Common Settings**
Set the common settings of each group that the WLAN transceivers or IP100FSs belong to, and are registered on the Transceiver Registration screen.

**ID List screen**
Register the unit IDs that are registered on the Transceiver Registration screen, or the group IDs that are registered on the Destination Settings screen.
ⓘ When a Controller's bridge connection is made with the VE-PG3, you can register the telephone number of the IP phone.

**Message screen**
Enter up to 10 messages that the WLAN transceiver will send.
ⓘ Up to 32 characters can be entered for each message.

**Status screen**
Enter up to 10 statuses that the WLAN transceiver will send.
ⓘ Up to 32 characters can be entered for each status.

**Profile screen**
Select the ID list and message list of the group that the WLAN transceiver belongs to.

6 Customize the settings, if required.
**Transceiver Controller > Transceiver settings > Transceiver settings**
Setting for the microphone gain, VOX function, or headset. (When an optional microphone is connected)

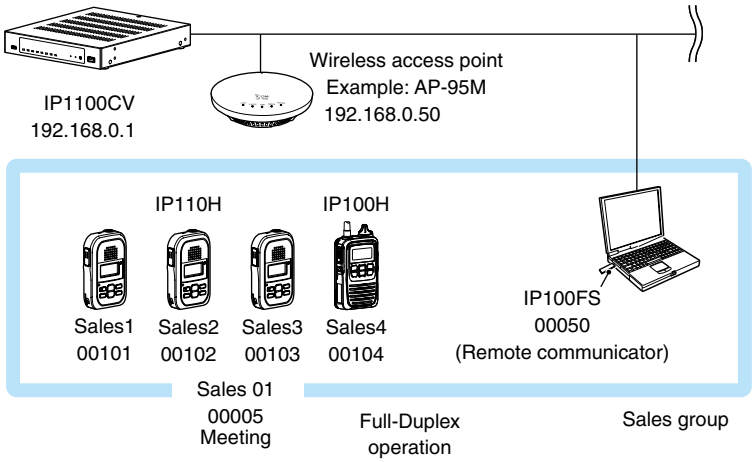
**Transceiver Controller > Common Settings > Profile**
Setting for the Ringers and Talkback timer.

# Configuring the WLAN transceiver system

## ■ Connecting to WLAN transceivers

Up to 300 of the total IP100H, IP110H, and IP100FS can register to the Controller.
The following illustration is an example of setting requirements to register an IP110H to a Controller.

- Each terminal requires that you set the unit ID and so on.
- Connect a wireless access point to the Controller network.
- In this manual, it is assumed that the IP address of PCs using WLAN transceiver or IP100FS is automatically obtained from the DHCP server in the same network as the Controller.
- When assigning static IP addresses to the terminals, make sure that the addresses of the devices on the network don't overlap or conflict.



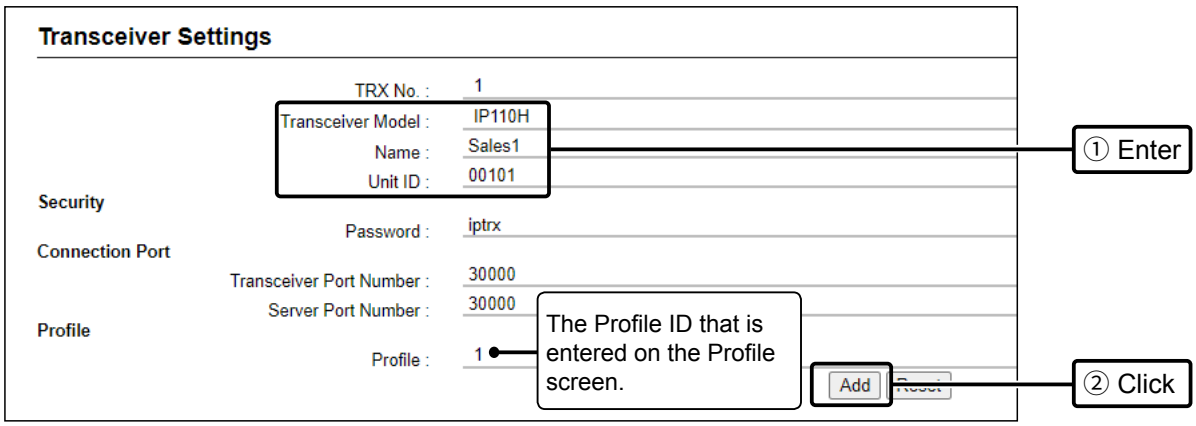
Configuring the WLAN transceiver system

# ■ Registering the WLAN transceivers

Register a WLAN transceiver or the IP100FS to the Controller.

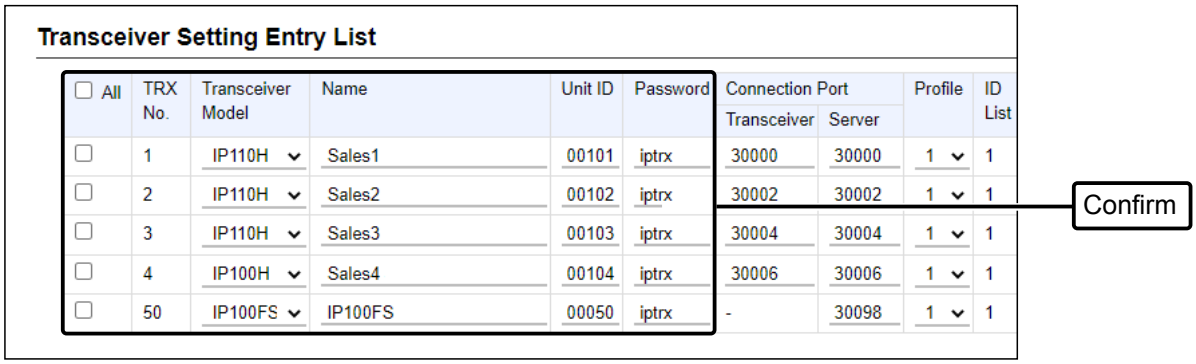
1 Open the Transceiver Registration screen.
(Transceiver Controller > Transceiver Settings > Transceiver Registration)

2 In [Transceiver Settings], enter the Transceiver Model, Name, and Unit ID (00001 ~ 60000), and then click <Add>.

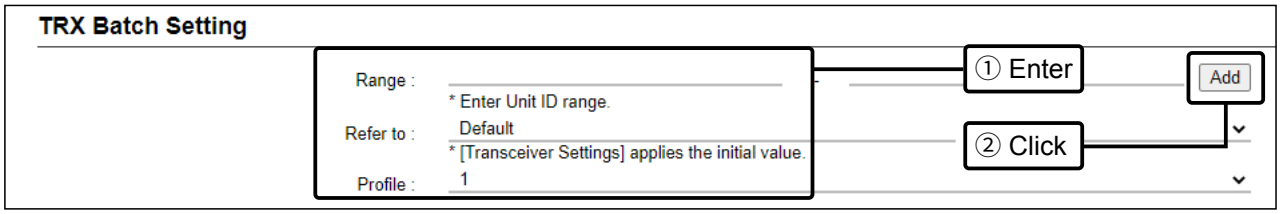



ⓘ Click <OK> if a confirmation message is displayed.

3 In Transceiver Setting Entry List screen, confirm the entry.



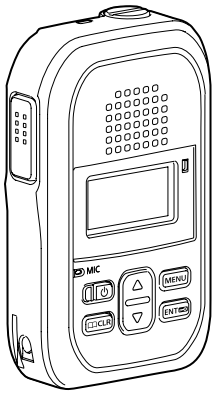

**Using TRX Batch Setting**
You can register 2 or more transceivers at once in sequential TRX numbering, or copy the settings from an already entered WLAN transceiver settings. Enter the range of TRX numbers that you want to copy to, select the TRX number of the original, and then click <Add>.

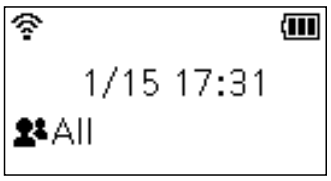


Configuring the WLAN transceiver system

# ■ Checking the WLAN transceiver settings

After registering the WLAN transceiver (Example: IP110H) to the Controller, enter the required settings of the IP110H on the PC, using the CS-IP110H PROGRAMMING SOFTWARE.
After the settings on the programming software have been applied to the WLAN transceiver, restart the WLAN transceiver to connect to the Controller to receive the settings from it.
When the WLAN transceiver settings are successfully completed, the transceiver will display the standby screen.




Standby screen

## Configuring the WLAN transceiver system

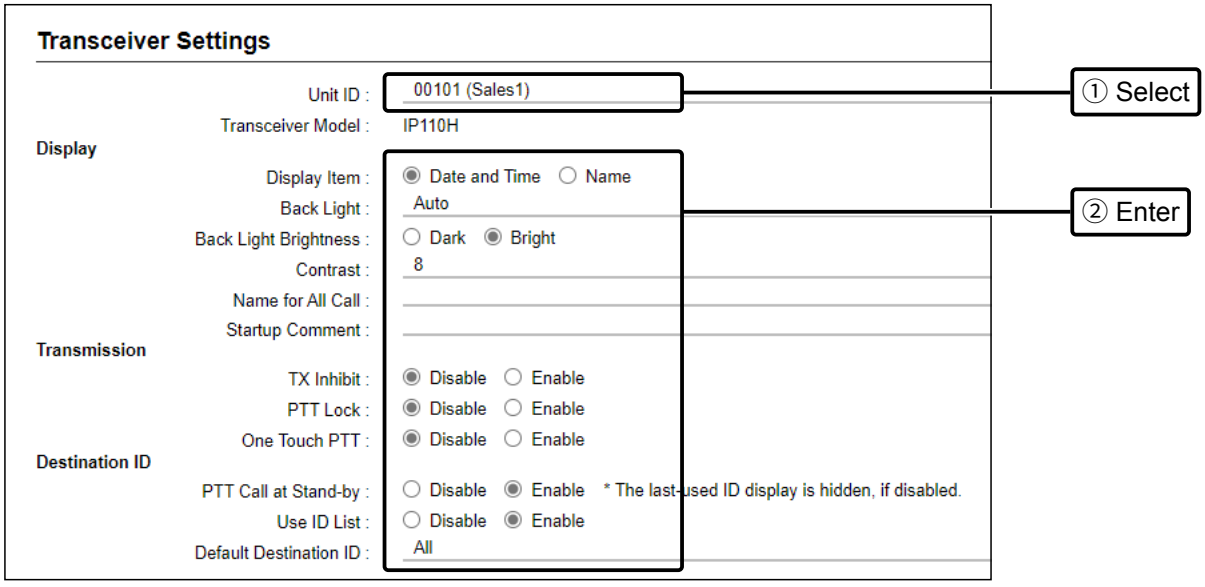
Transceiver Controller > Transceiver Settings > Transceiver Settings

# ■ The Transceiver Settings

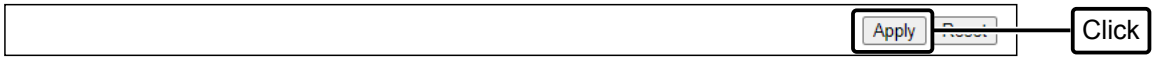
Set up each registered transceiver.
ⓘ After completing the settings on this screen, restart the transceiver to apply them.

1 Open the Transceiver Settings screen.
(Transceiver Controller > Transceiver Settings > Transceiver Settings)

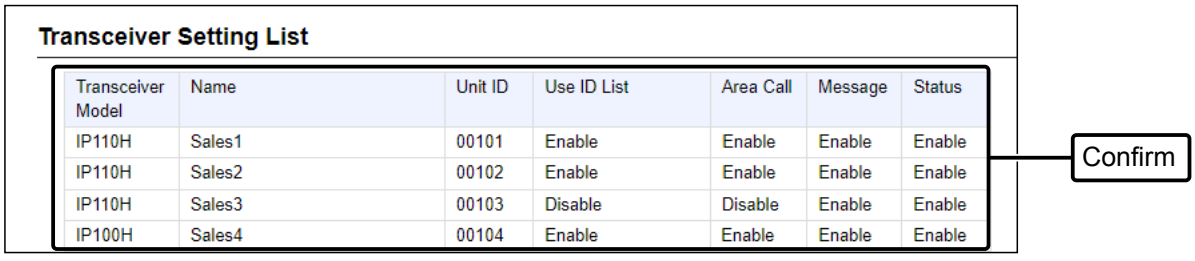
2 In [Transceiver Settings], select the Unit ID that you want to set up, and then enter the required settings.




3 Click <Apply>.




4 Confirm the setting in [Transceiver Setting List].



## Configuring the WLAN transceiver system

Destination Settings > Destination Settings

# ■ The Group Call

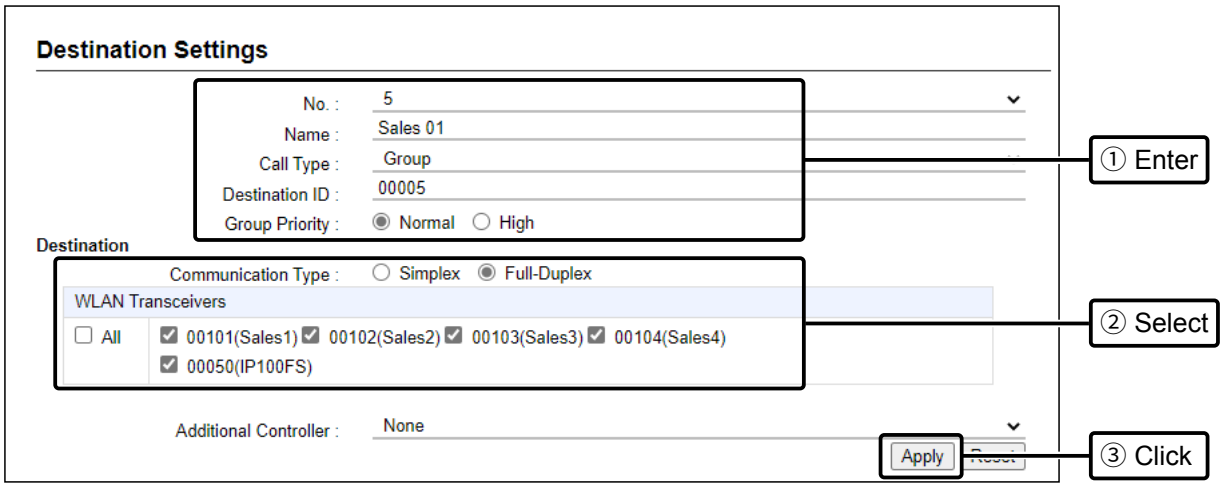
When registering WLAN transceivers or IP100FSs to a group, you can communicate in Full-Duplex, between three or more members in a conference call mode.

ⓘ You have to enter a Group and the Phonebook on the setting screen to make a Group Call.

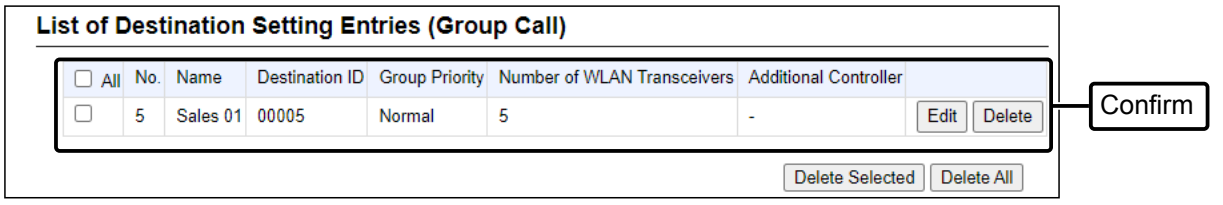
ⓘ After completing the settings on this screen, restart the transceiver to apply them.

1 Open the Destination Settings screen.
(Destination Settings > Destination Settings)

2 In [Destination Settings], enter Name, Call Type, and Group ID (00001 ~ 60000), select the target WLAN transceivers to add to the Group, and then click <Apply>.




3 Confirm the setting in the [List of Destination Setting Entries (Group Call)].



## Configuring the WLAN transceiver system

Destination Settings > Destination Settings

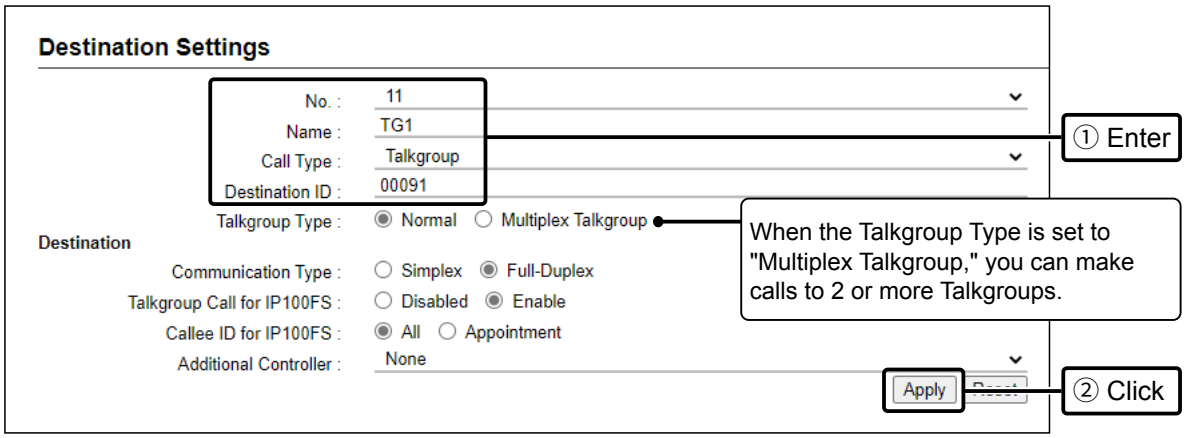
# ■ The Talkgroup Call

You can join a Talkgroup by selecting it from the preset Talkgroups on your WLAN transceiver. You can make a call to the selected Talkgroup.

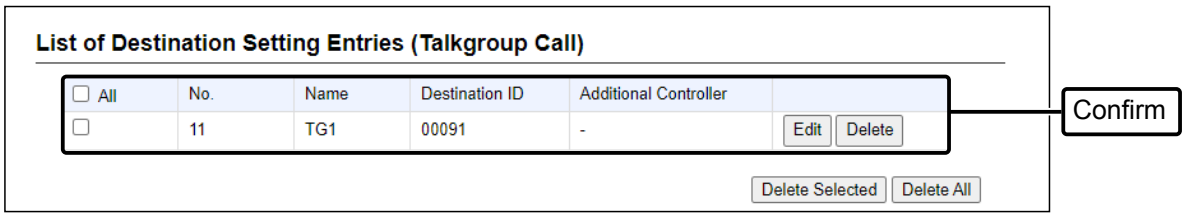
ⓘ You have to set about the Talkgroup Call and enter Talkgroup IDs to your phonebook.
ⓘ After completing the setting on this screen, restart the transceiver to apply them.

1 Open the Destination Settings screen.
(Destination Settings > Destination Settings)

2 In [Destination Settings], enter Name, Call Type, and Talkgroup ID (00001 ~ 60000), and then click <Apply>.




3 Confirm the setting in the [List of Destination Setting Entries (Talkgroup Call)].



## Configuring the WLAN transceiver system

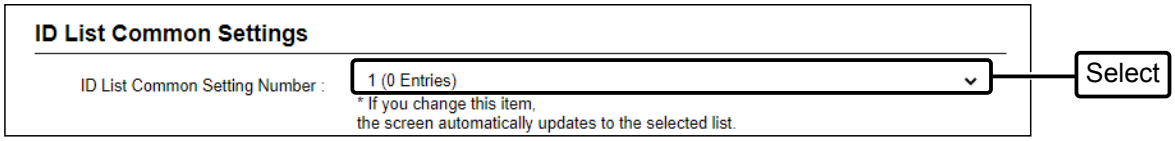
Transceiver Controller > Common Settings > ID List

# ■ The ID List

Enter names, call types and so on into an ID list that the WLAN transceiver will use.
ⓘ Set “Use ID List” to “Enable” to use the ID list.
(Transceiver Controller > Transceiver Settings > Transceiver Settings > Transceiver Settings)
ⓘ After completing the settings on this screen, restart the transceiver to apply them.

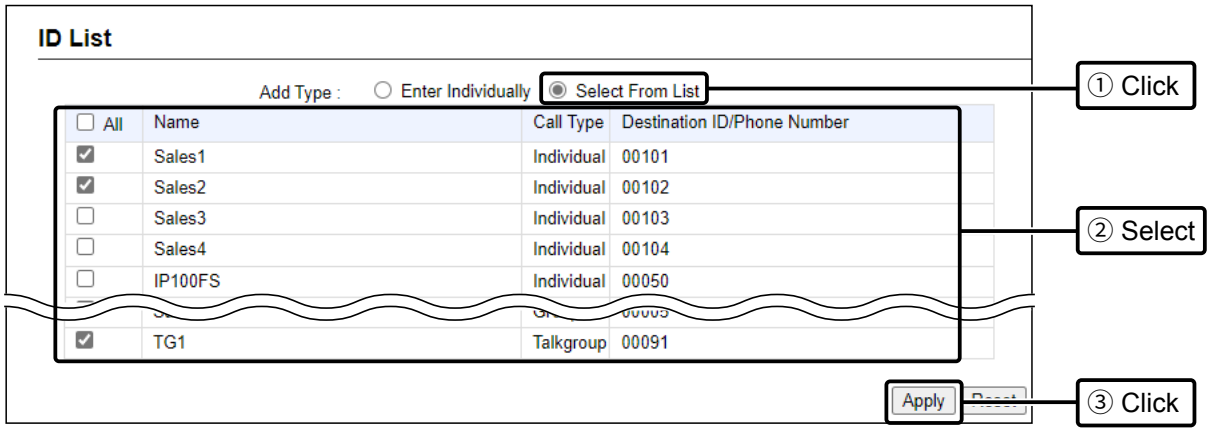
1 Open the ID List screen.
(Transceiver Controller > Common Settings > ID List)

2 In [ID List Common Settings], select an ID list common setting number (Example: 1) that you want to register.

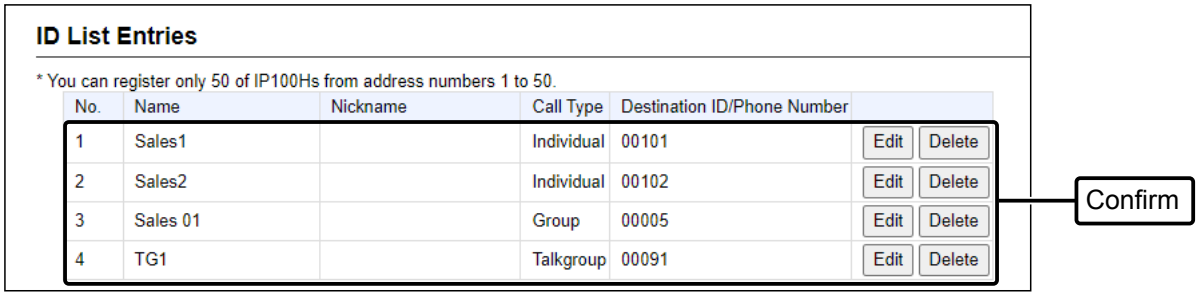



ⓘ You can enter up to 300 ID List Common Setting groups.

3 In [ID List], click “Select From List,” check the IDs that you want to add to the ID List, and then click <Apply>.




4 After registration is finished, confirm the registered contents in the [ID List Entries].



## Configuring the WLAN transceiver system

Transceiver Controller > Common Settings > Messages

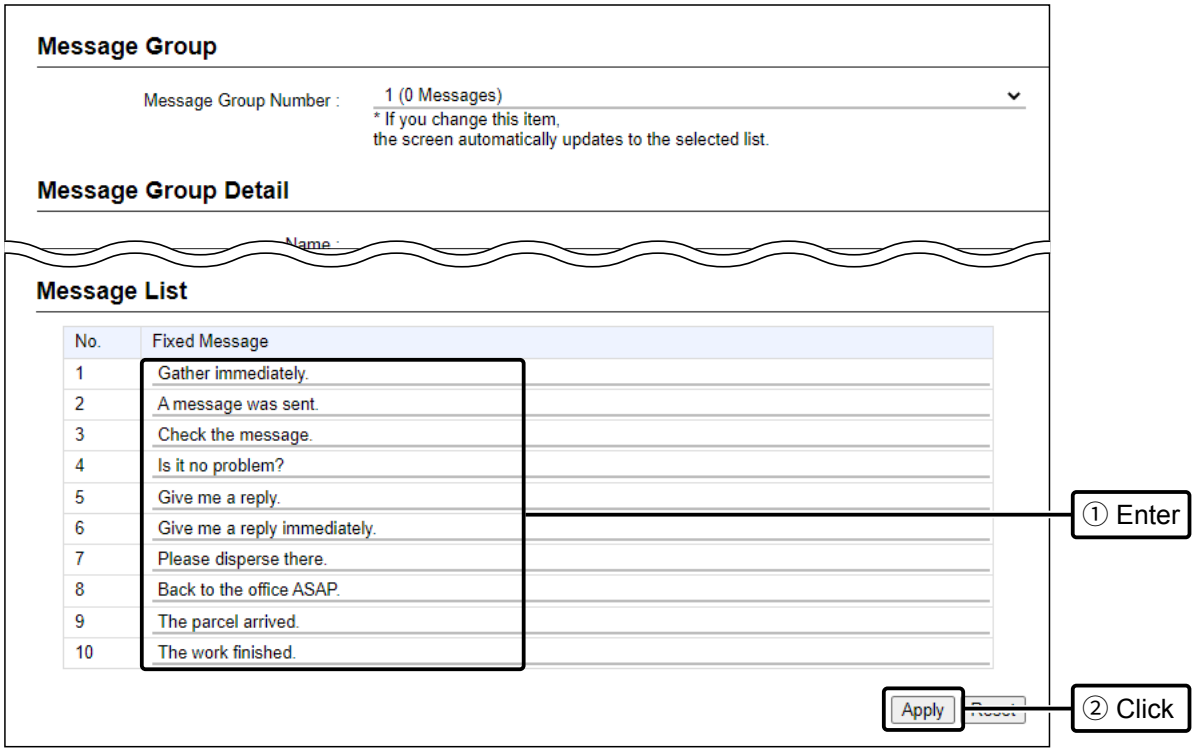
# ■ The Messages

Enter messages that the WLAN transceiver will transmit.
ⓘ Set “Message” to “Enable” to use the Message.
(Transceiver Controller > Transceiver Settings > Transceiver Settings > Transceiver Settings)
ⓘ After completing the settings on this screen, restart the transceiver to apply them.

1 Open the Messages screen.
(Transceiver Controller > Common Settings > Messages)

2 In [Message Group], select the Message Group number (Example: 1) that you want to enter messages into.

3 In [Message List], enter a message of up to 32 characters, and then click <Apply>.
ⓘ Up to 10 messages can be entered into each Message Group.



## Configuring the WLAN transceiver system

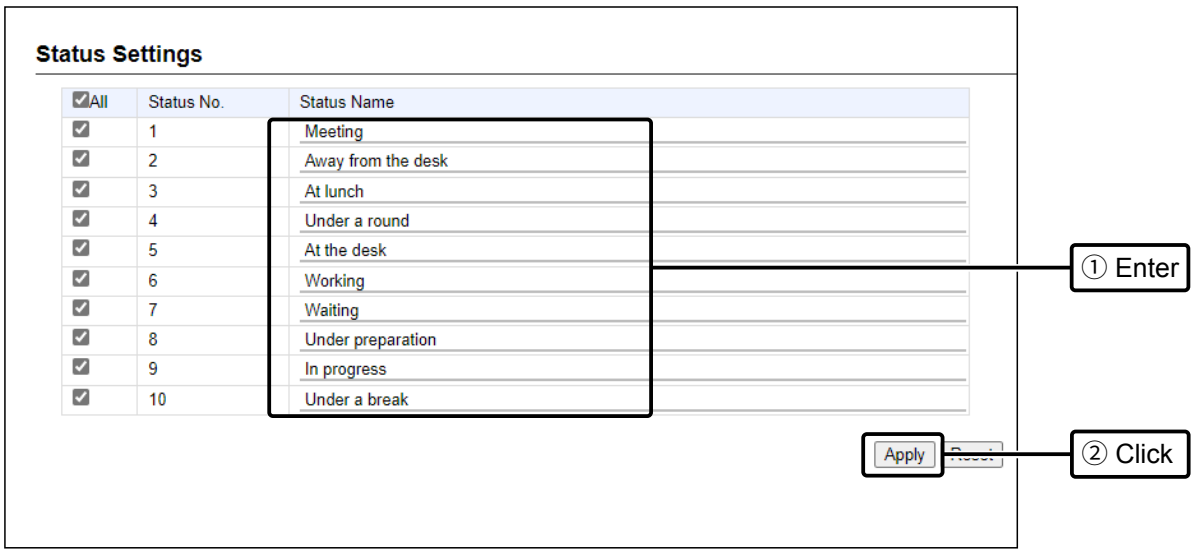
Transceiver Controller > Common Settings > Status

# ■ The Status

Enter a status that the WLAN transceiver will transmit.
ⓘ Set “Status” to “Enable” to use the status.
(Transceiver Controller > Transceiver Settings > Transceiver Settings > Transceiver Settings)
ⓘ After completing the settings on this screen, restart the transceiver to apply them.

1 Open the Status screen.
(Transceiver Controller > Common Settings > Status)

2 Enter status message of up to 32 characters, and then click <Apply>.
ⓘ Up to 10 status messages can be entered.
ⓘ Uncheck the box on the left of the status message, if you do not want to display it on the transceiver.



## Configuring the WLAN transceiver system

Transceiver Controller > Common Settings > Profile

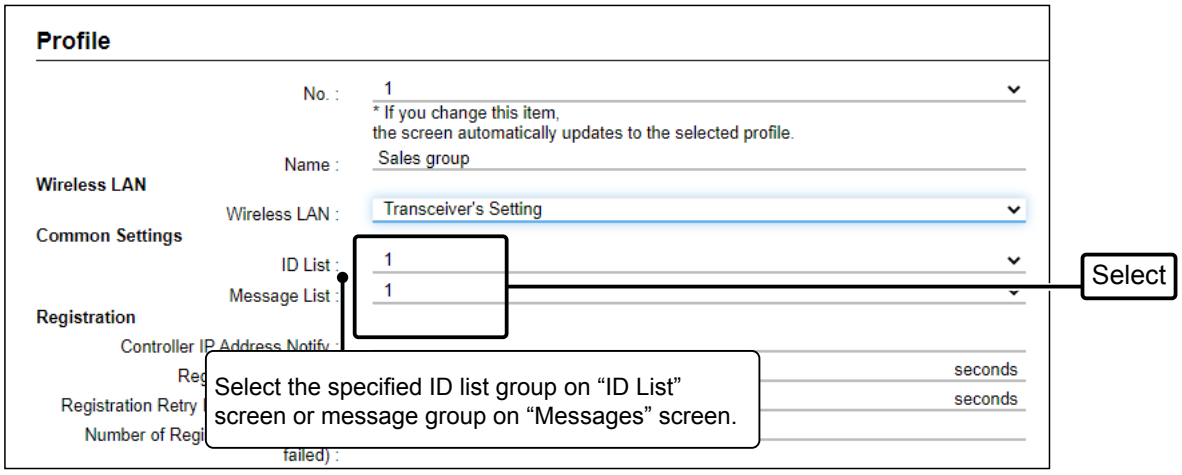
# ■ Setting the common ID List and Messages in the group

You can set the ID list and messages that are commonly used by the WLAN transceivers in a particular group.
ⓘ After completing the settings on this screen, restart the transceiver to apply them.

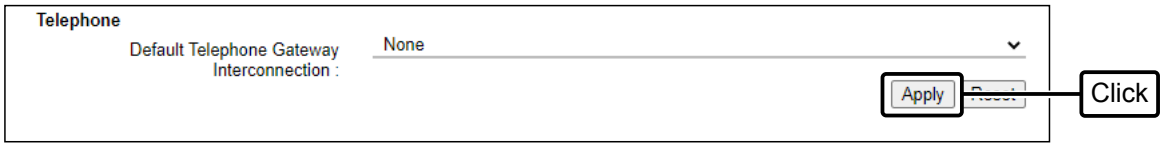
1 Open the Profile screen.
(Transceiver Controller > Common Settings > Profile)

2 In [No.], select a setting group number that you want to use.
ⓘ The group number is one that is entered on the Transceiver Registration screen.

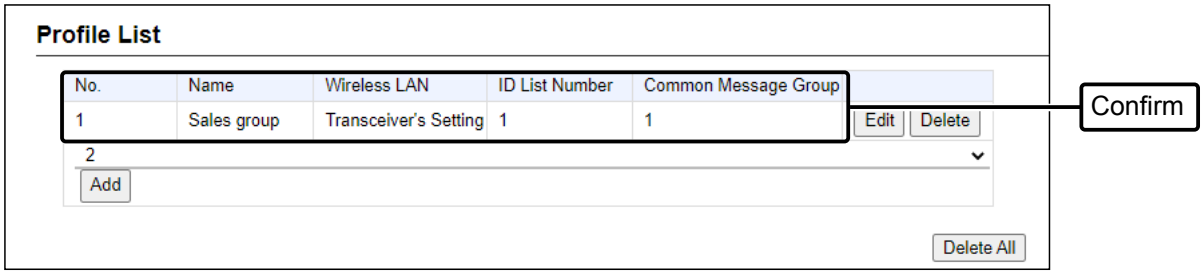
3 Select ID List and Message List numbers that you want to use in the setting group.




4 Click <Apply>.



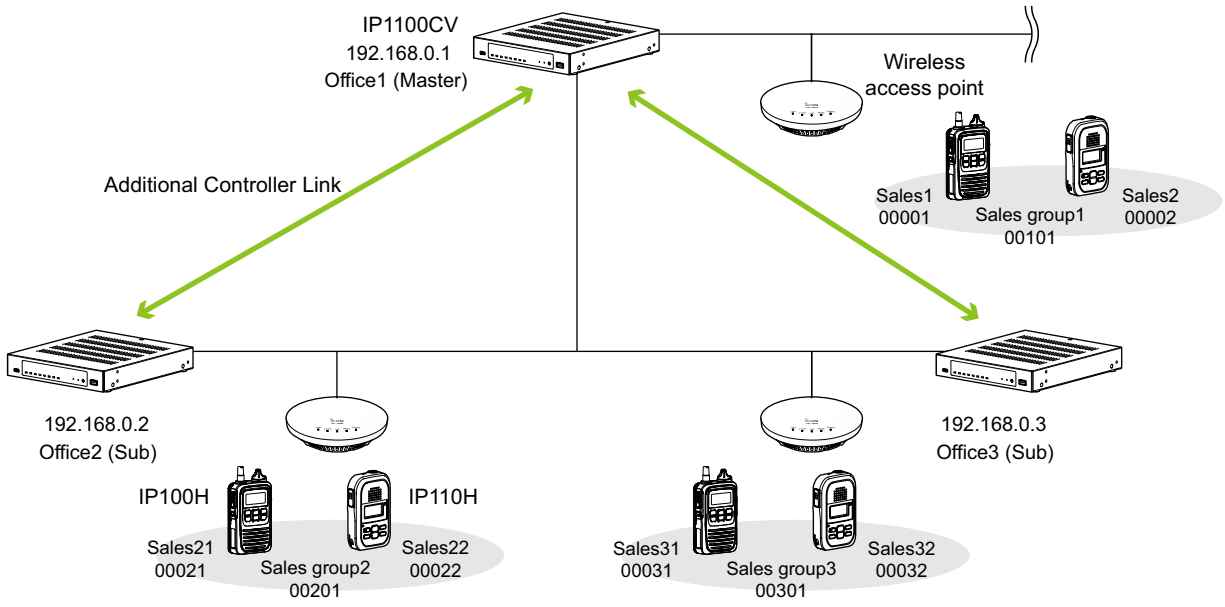

5 Confirm the entry in [Profile List].



# Additional controller link

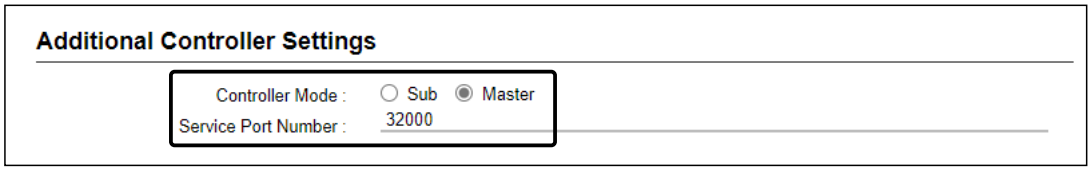
The Additional Controller Link function allows you to communicate with other sites.
ⓘ Up to 10 sub IP1100CVs can be connected to the master IP1100CV.
ⓘ The VPN function on the IP1100CV is compatible with the VE-PG4. (As of April 2024)

**The IP100H and the IP110H make a Group Call with the Additional Controller Link**

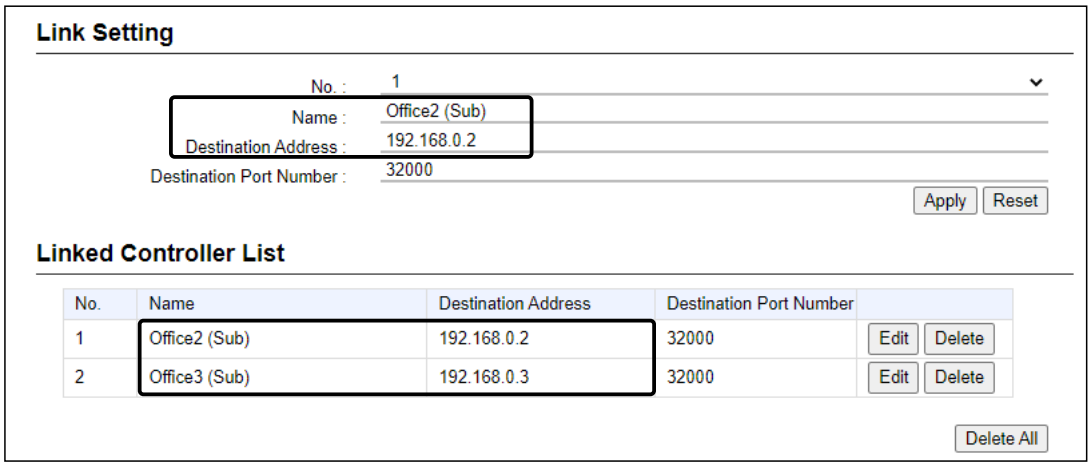



**About the Office1 setting (Master)**

1 Select “Master” in the [Controller Mode].
Then click <Apply> to reboot the IP1100CV.
(Transceiver Controller > RoIP Settings)

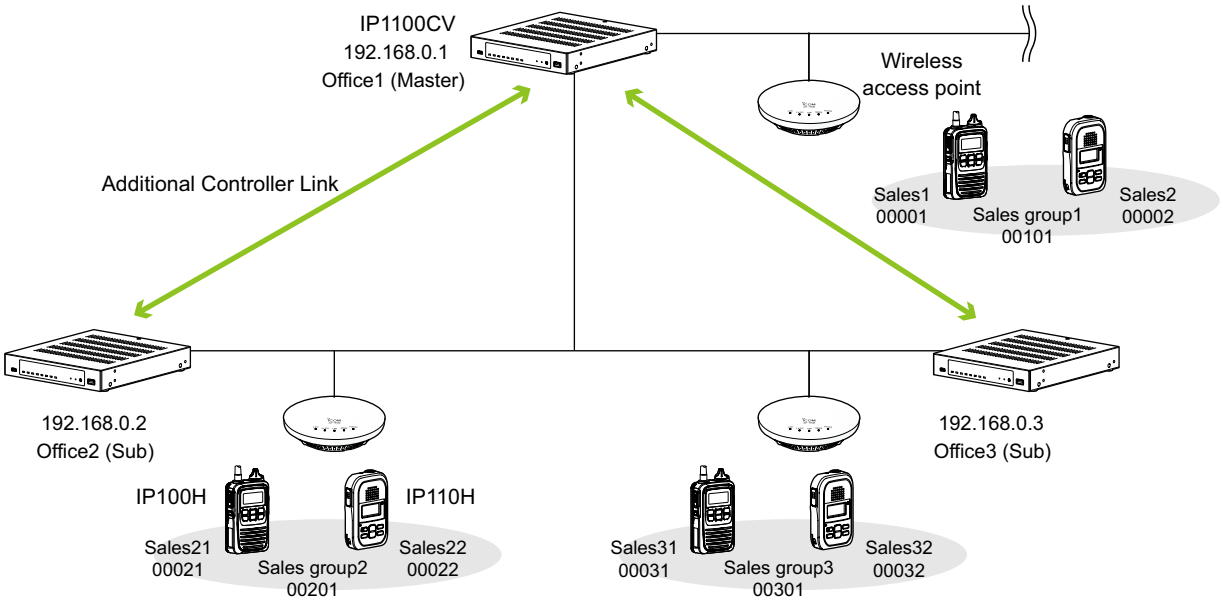



2 Enter a name and a destination IP address, then click <Apply>.
(Transceiver Controller > RoIP Server Settings > Additional Controller Link)



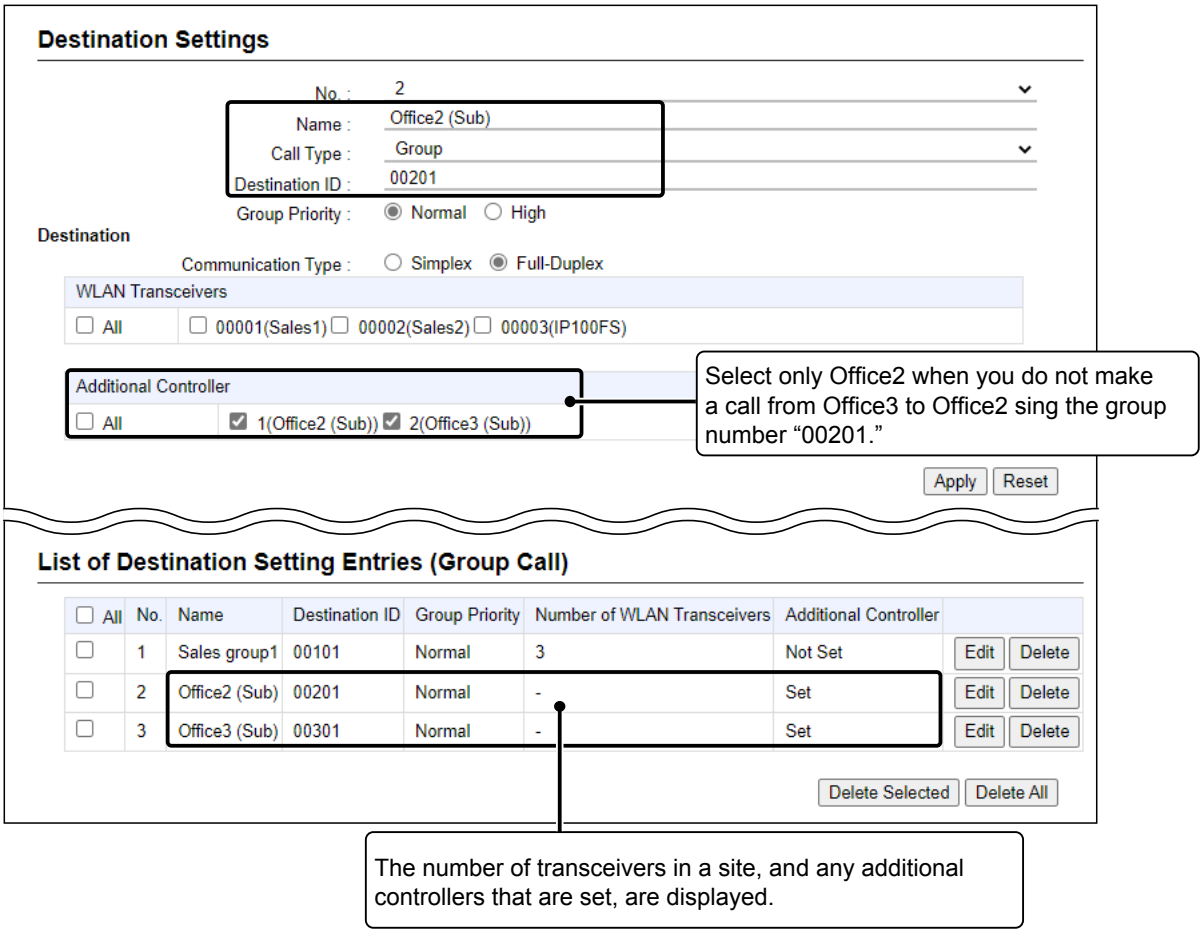
## Additional controller link

**The IP100H and the IP110H make a Group Call with the Additional Controller Link**



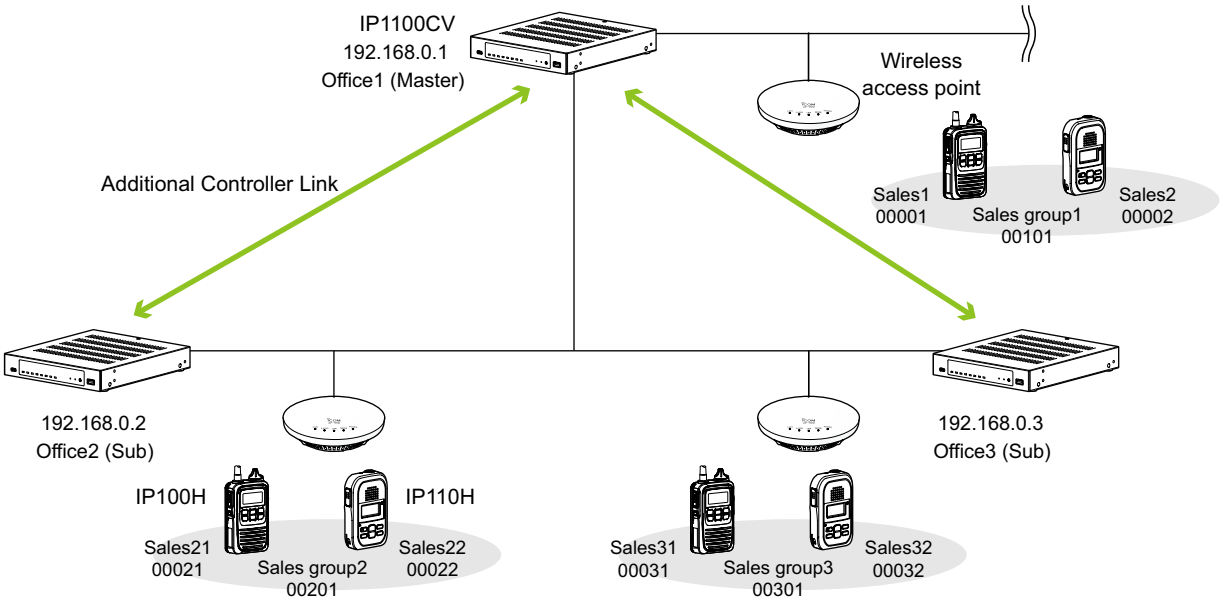

About the Office1 setting (Master)

3 Select “Group” in [Call Type], enter a destination ID and select a group priority.
Select controllers in [Additional Controller]. (Refer to an example below.)
(Destination Settings > Destination Settings)



## Additional controller link

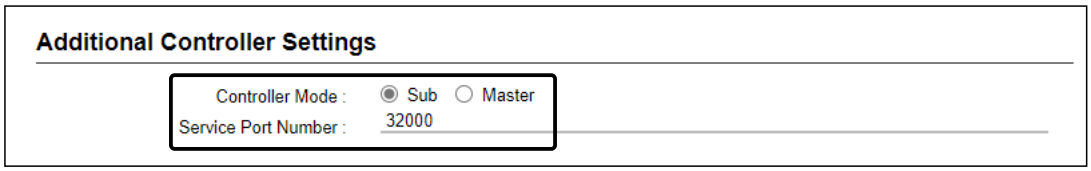
**The IP100H and the IP110H make a Group Call with the Additional Controller Link**



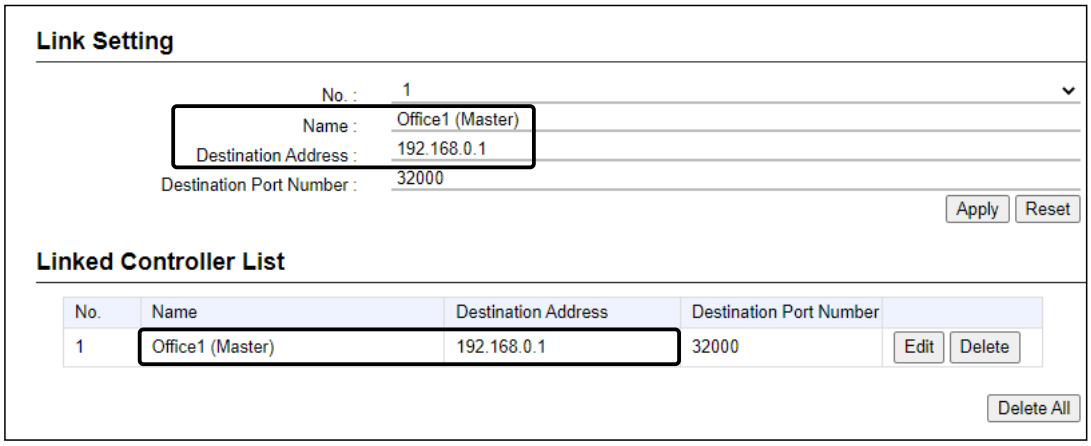

### About the Office2 setting (Sub)

Example: Calling Sales group2 (00201)

1 Select “Sub” in [Controller Mode].
Then click <Apply> to reboot the IP1100CV.
(Transceiver Controller > RoIP Settings)

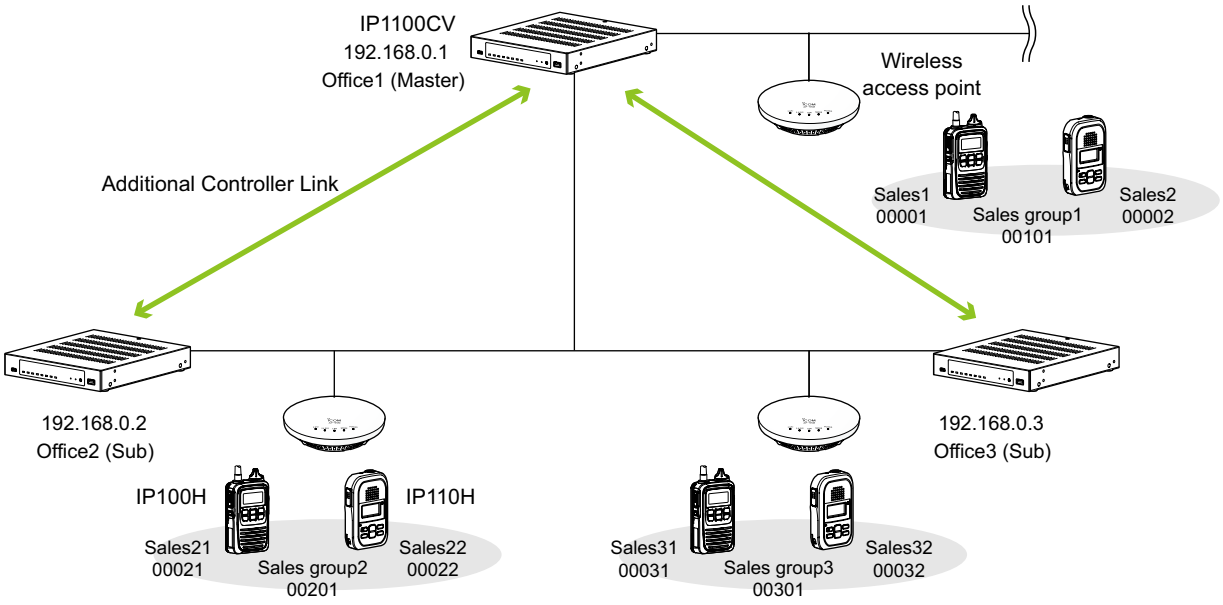



2 Enter a name and a destination IP address, then click <Apply>. (Example: Office1 (Master)).
(Transceiver Controller > RoIP Server Settings > Additional Controller Link)



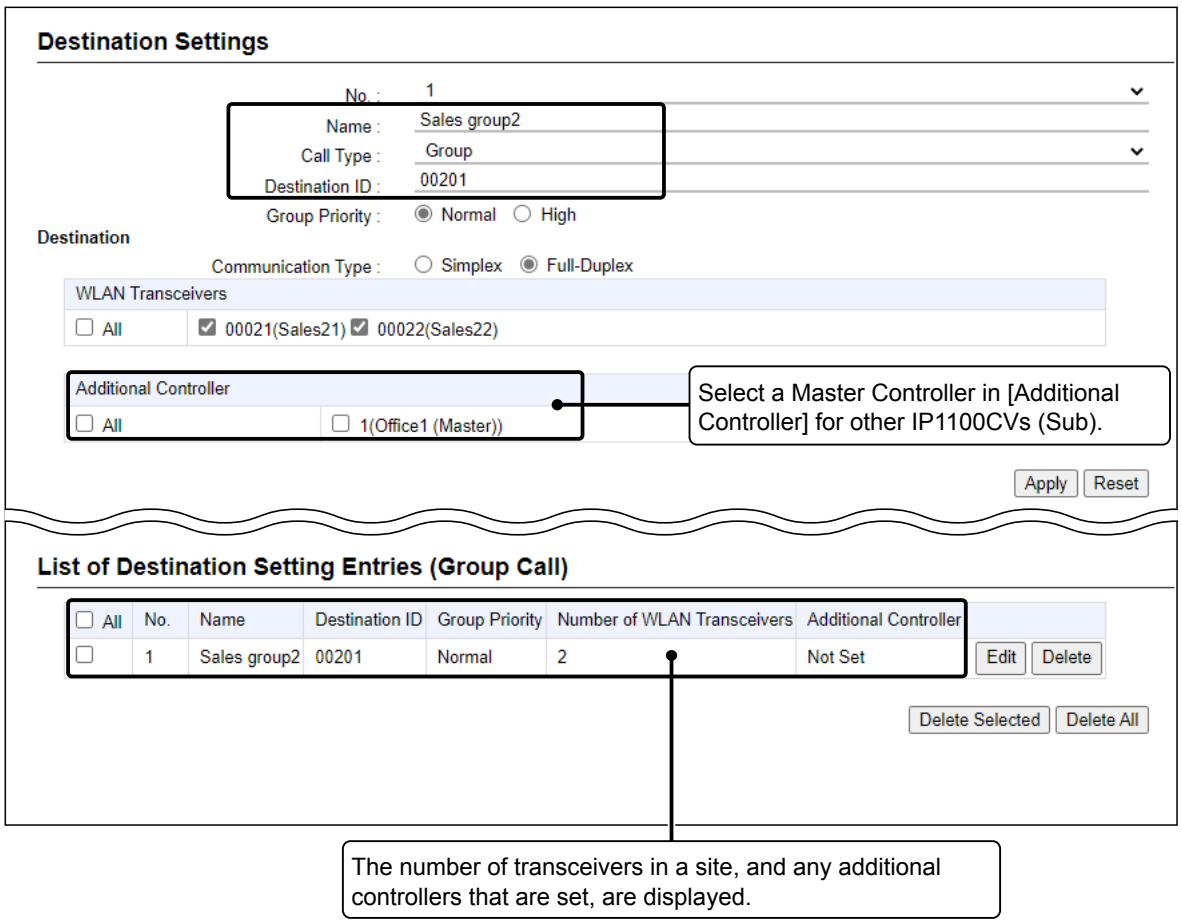
## Additional controller link

**The IP100H and the IP110H make a Group Call with the Additional Controller Link**



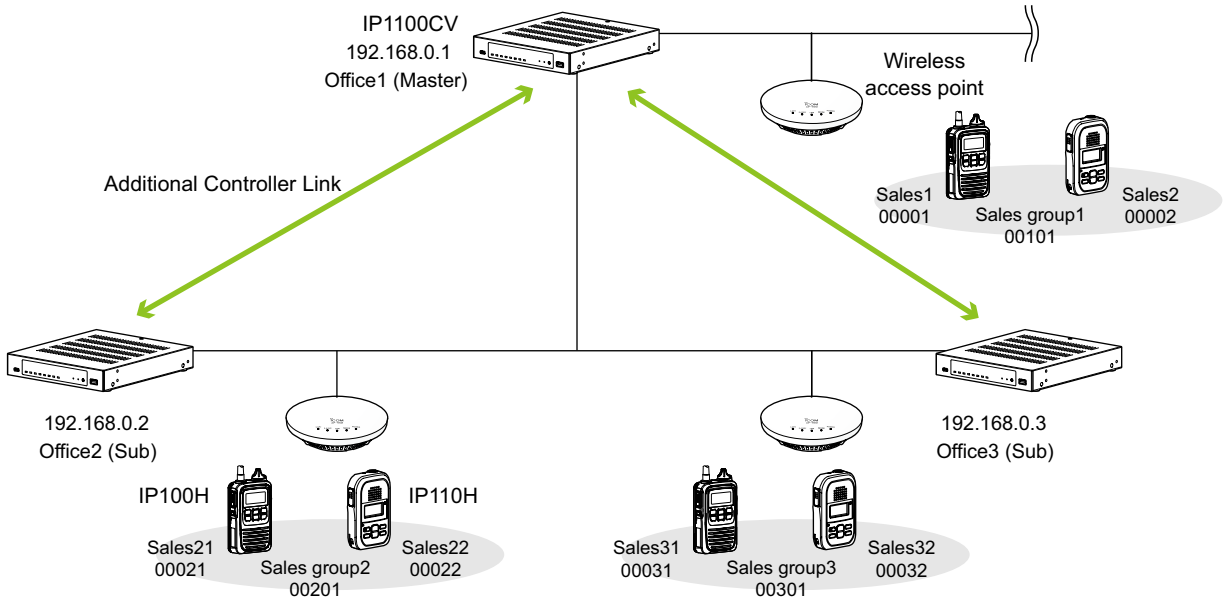

About the Office2 setting (Sub)

3 Select “Group” in [Call Type], enter a destination ID and select a group priority.
Select controllers in [Additional Controller]. (Refer to an example below.)
(Destination Settings > Destination Settings)



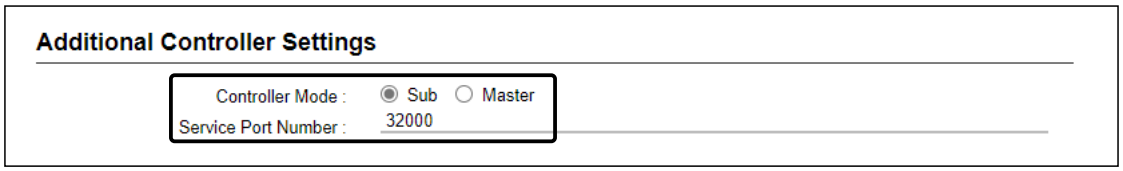
## Additional controller link

**The IP100H and the IP110H make a Group Call with the Additional Controller Link**

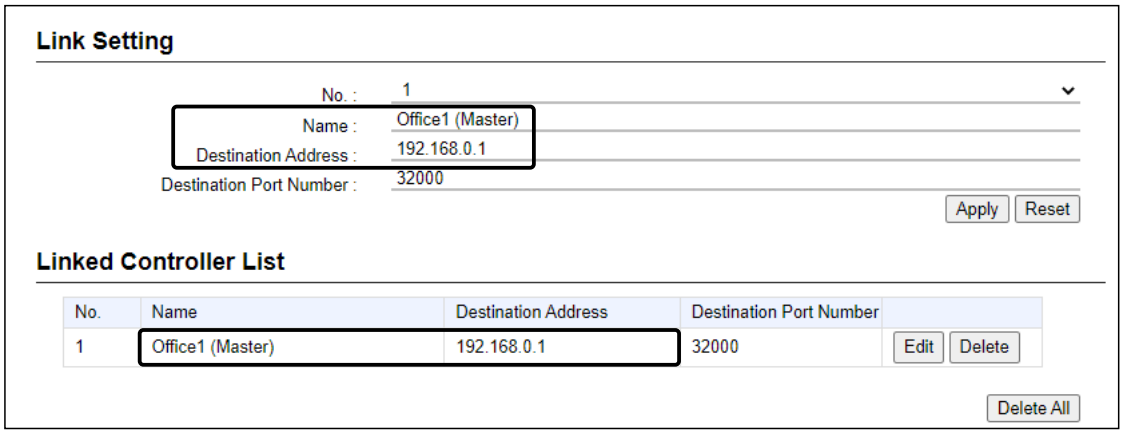



### About the Office3 setting (Sub)

1 Select “Sub” in [Controller Mode].
Then click <Apply> to reboot the IP1100CV.
(Transceiver Controller > RoIP Settings)

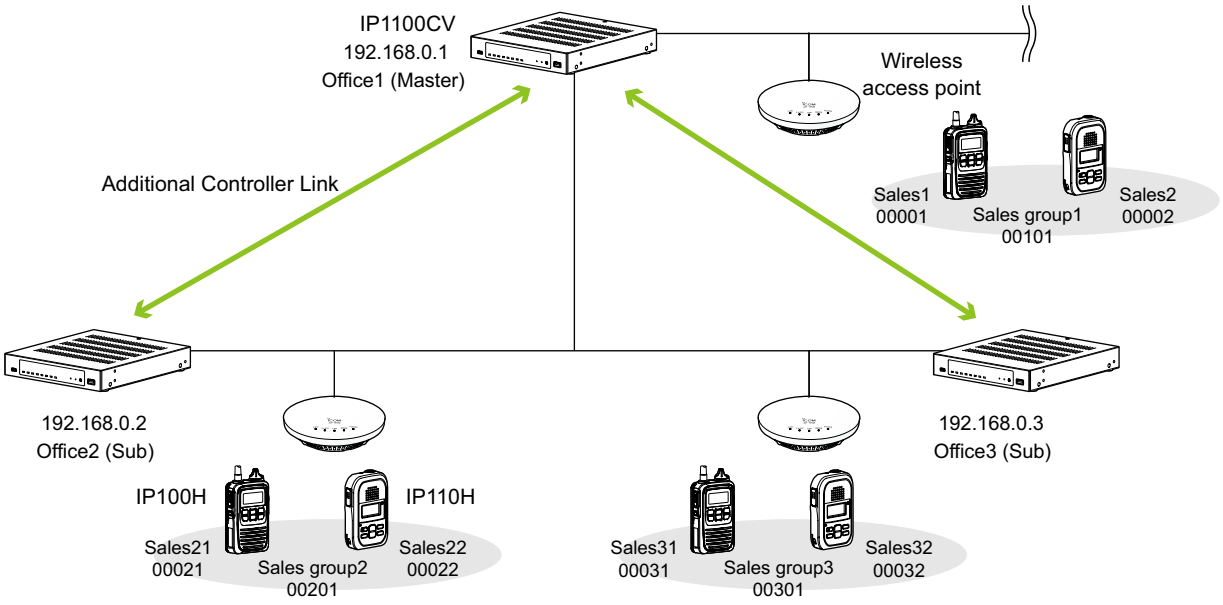



2 Enter a name and a destination IP address, then click <Apply>. (Example: Office1 (Master))
(Transceiver Controller > RoIP Server Settings > Additional Controller Link)



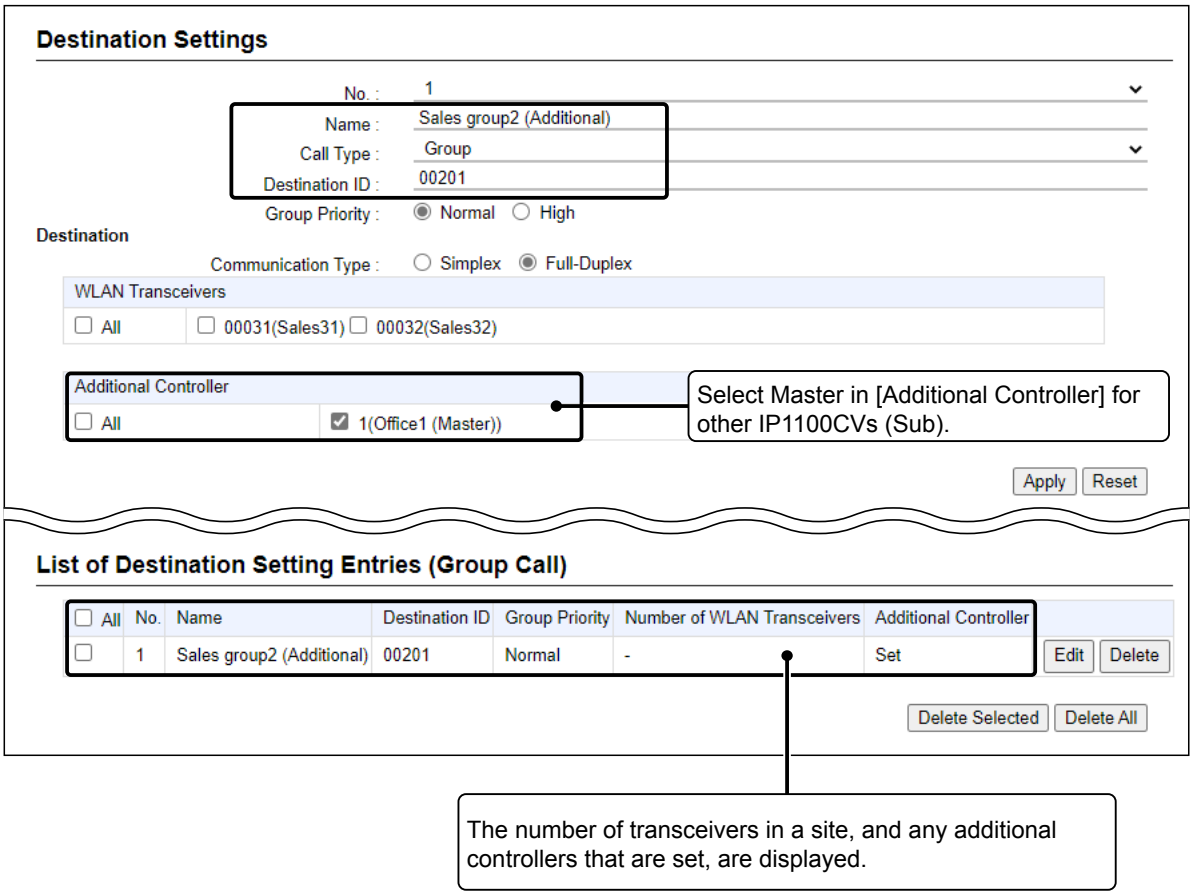
## Additional controller link

**The IP100H and the IP110H make a Group Call with the Additional Controller Link**



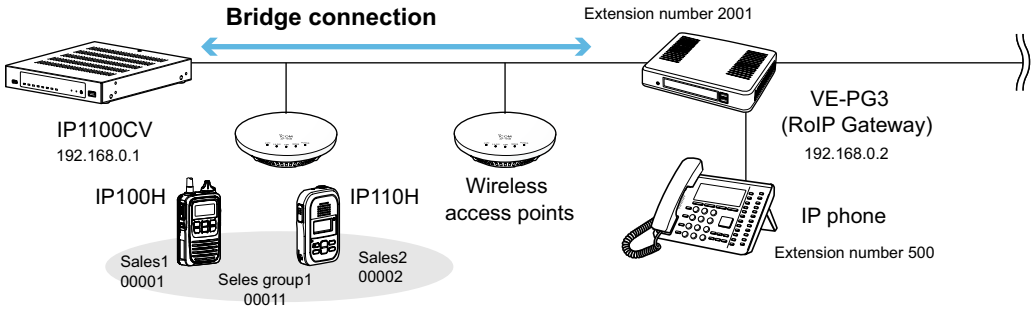

About the Office3 setting (Sub)

3 Select “Group” in [Call Type], enter a destination ID and select a group priority.
Select controllers in [Additional Controller]. (Refer to an example below.)
(Destination Settings > Destination Settings)



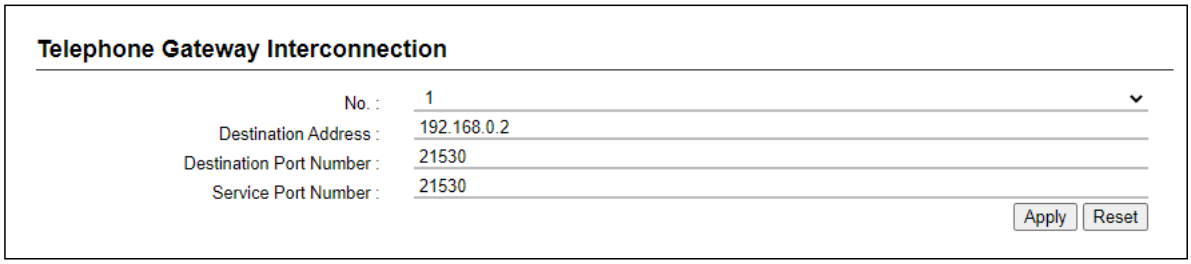
# Bridge connection and Caller settings

When making a bridge connection with the VE-PG3*, the IP1100CV system can communicate with the transceivers.
*The VE-PG3 with a firmware version 1.13 or earlier cannot communicate with the IP1100CV system.
Before connecting the VE-PG3, check the firmware version on the VE-PG3's setting screen.



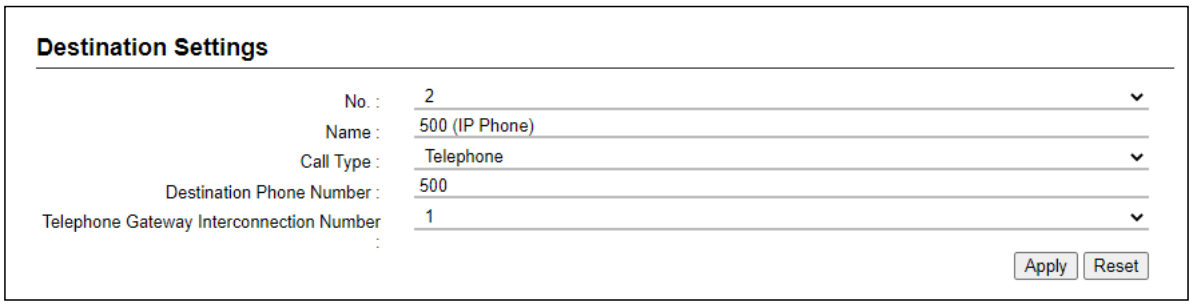

### About the IP1100CV settings

1 Enter the IP address of the VE-PG3 in [Telephone Gateway Interconnection]. (Example: 192.168.0.2)
(Transceiver Controller > RoIP Server Settings > Telephone Gateway Interconnect)



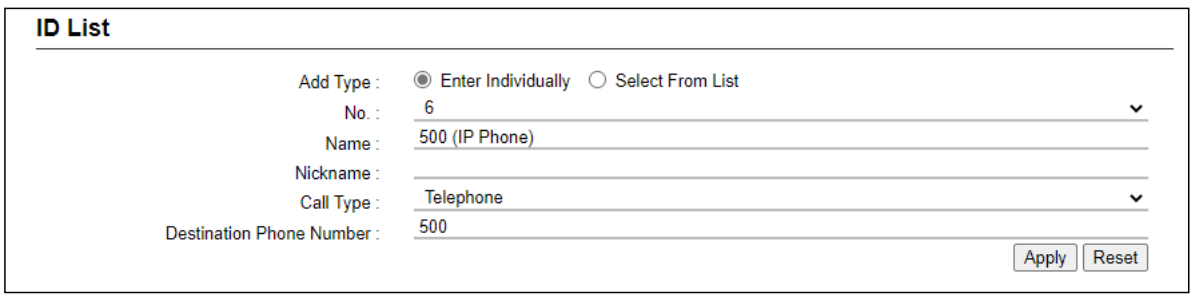

2 After setting "Call Type" to "Telephone," select "Telephone Gateway Interconnection Number" and then enter a telephone number in "Destination Phone Number".
(Destination Settings > Destination Settings)

- Select the bridge number as same as the number that is selected in [Telephone Gateway Interconnection]. (Example: 1)
- Enter the VE-PG3's extension number. (Example: 500)

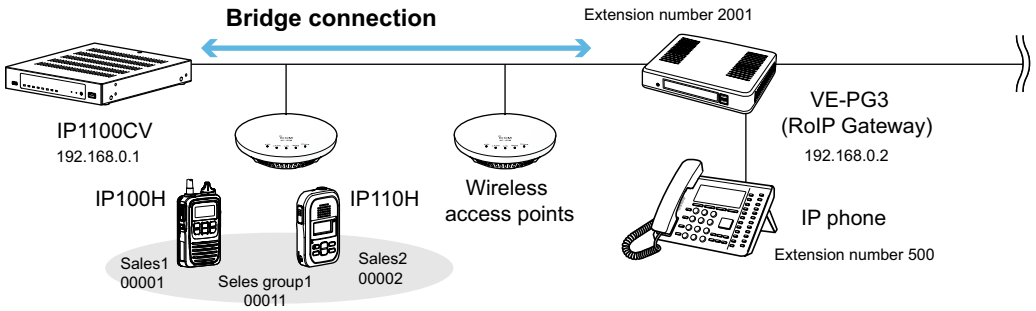



3 After setting "Call Type" to "Telephone," enter "Destination Phone Number" and click <Apply>.
(Transceiver Controller > Common Settings > ID List)

- Enter the VE-PG3's extension number. (Example: 500)

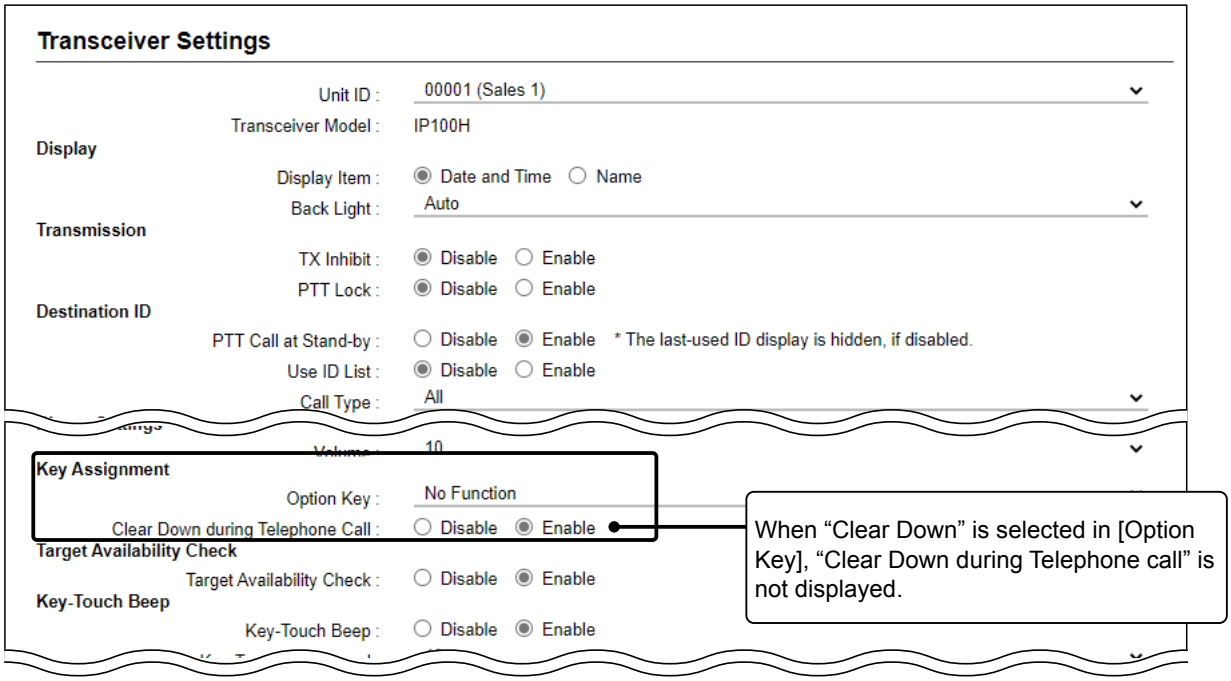


## Bridge connection and Caller settings




About the IP1100CV settings

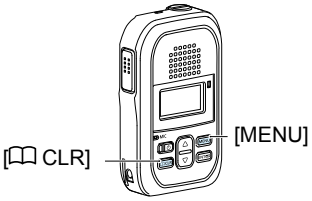
4 Confirm that “Clear Down during Telephone Call” in [Transceiver Settings] is set to “Enable.”
(Transceiver Controller > Transceiver Settings > Transceiver Settings)




Before the target telephone is picked up, or during a phone call, you can cancel the call by holding down a specific key.

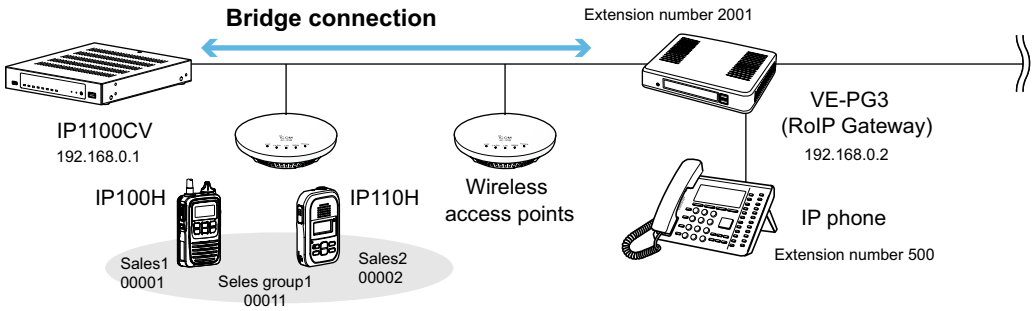
IP100H


IP110H




ⓘ The transceiver can terminate a phone call only when:
- A telephone individually calls the transceiver.
- The transceiver calls a telephone.

## Bridge connection and Caller settings

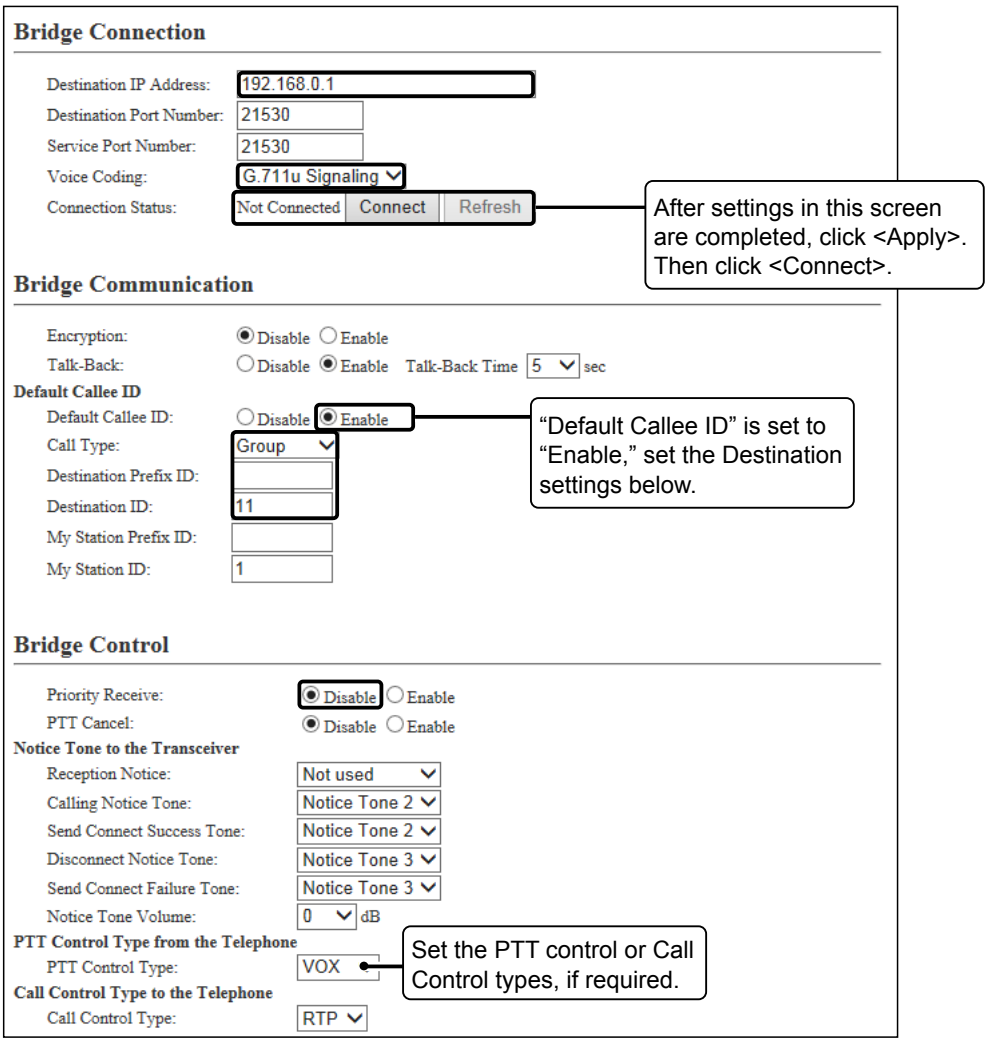



**About the VE-PG3 settings (Converter mode)**

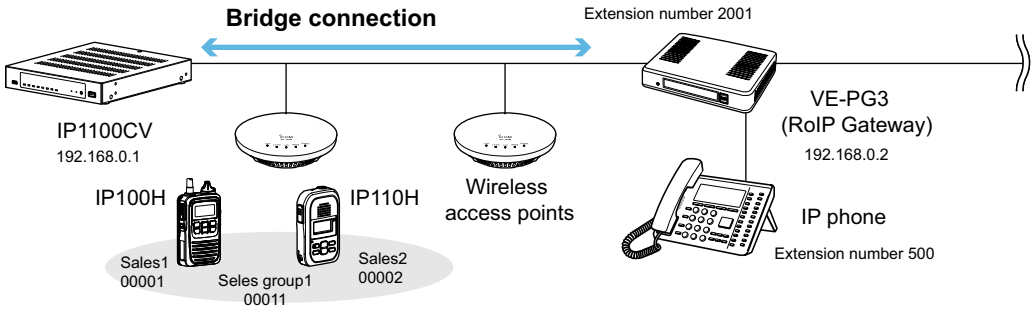
1 Enter the IP address of the IP1100CV in [Bridge Connection]. (Example: 192.168.0.1)
Select the Voice Cording. (Example: G.711u Signaling)
(Port Settings > Bridge ( Example: Bridge1) )
ⓘ Make sure that the port number used for the connection does not duplicate with any other connection.

2 Set the Call Type (Example: Group) and enter the Destination ID (Example: 11) in [Bridge Communication].
For Full-Duplex telephone operation, set “Priority Receive” in [Bridge Control] to “Disable.”

3 Click <Apply> at the bottom of the screen. Then click <Connect> in [Bridge Connection].
• “Connection Status” changes from “Not Connected” to “During Transmit.”

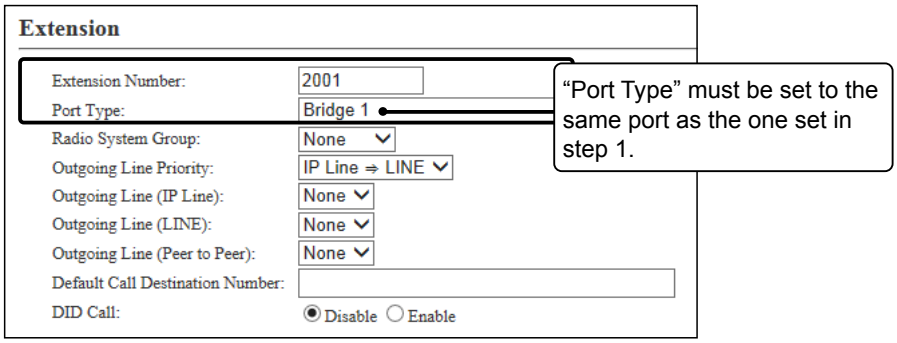


## Bridge connection and Caller settings

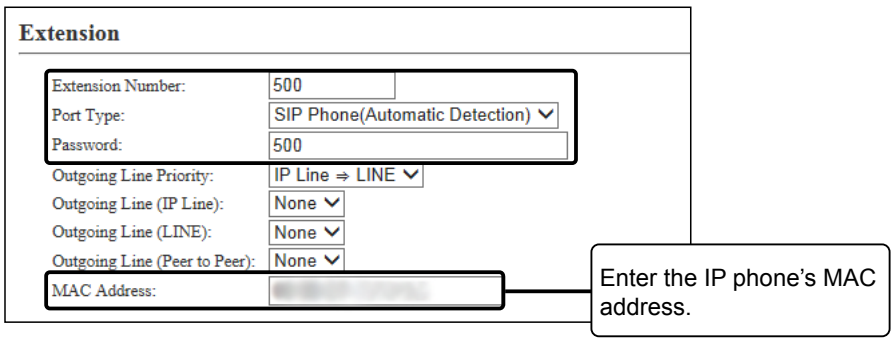



About the VE-PG3 settings (Converter mode)

4 Enter the extension number of the [Bridge 1] port in [Extension Number]. (Example: 2001)
(Extension Connect > Extension Connect)




5 Enter the extension number of the IP phone in [Extension Number]. (Example: 500)
(Extension Connect > Extension Connect)




ⓘ When the IP phone calls the number "2001," all the WLAN transceivers of sales group "00011" will be called.
• The caller number on the IP100H's display will be the extension number of the IP phone. (Example: 500)
ⓘ When the IP phone calls the number "∗011" + "00001," only the IP100H of Sales 1 "00001" will be called.
• The numbers "∗011" and "00001" are individual numbers for the [Bridge 1] port and Sales 1.
• The caller number on the IP100H's display will be the extension number of the IP phone. (Example: 500)
See the VE-PG3 instruction manual for the setting details.

ⓘ When the IP110H (Example: Sales 2 "00002") calls the IP phone:
Display the IP phone's Destination phone number on the IP110H's screen.
• The Destination phone number of the IP phone must be programmed in the IP110H's ID list.
Hold down [PTT] for more than 1 second.
• The caller number on the IP phone's display will be the individual number of Sales 2. (Example: "∗011" + "00002")
See the IP110H instruction manual for the operating details.

Bridge connection and Caller settings

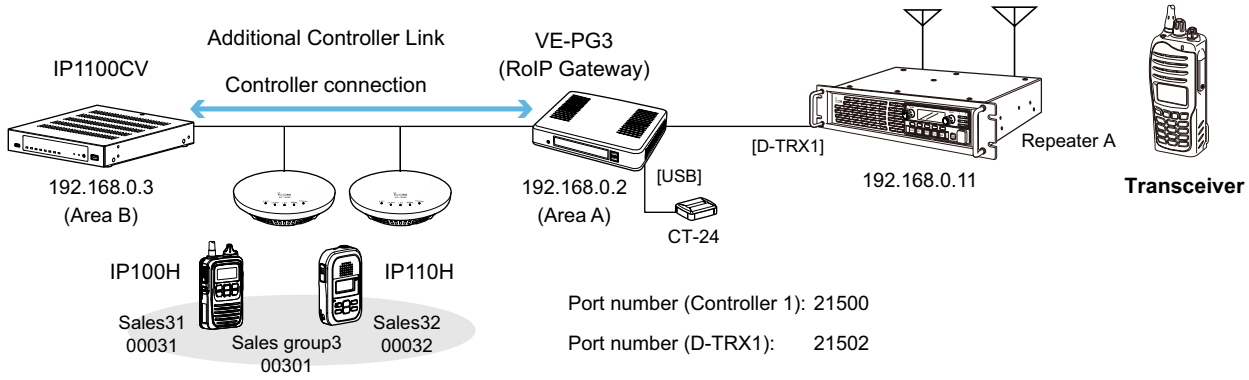
# ■ Additional controller link with VE-PG3

The Additional Controller Link function allows you to communicate with the digital transceiver in the IDAS system.

ⓘ Up to 10 sub IP1100CVs can be connected to the master IP1100CV.

ⓘ Use the VPN function, if necessary.

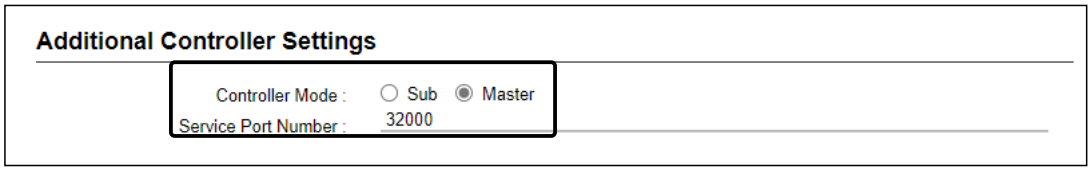
**IP100H and IP110H make Group Call with the Additional Controller Link (VE-PG3)**



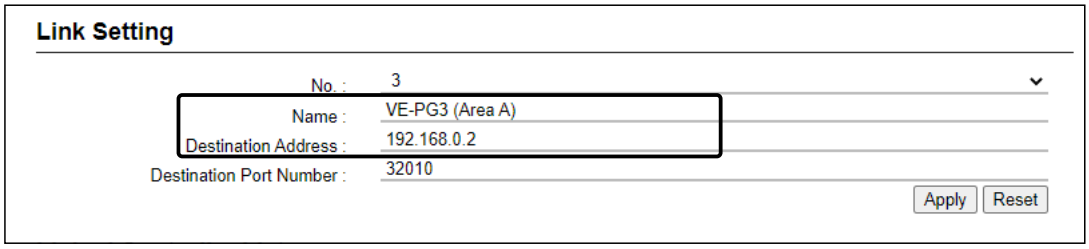

**About the IP1100CV setting**

1 Select “Master” in [Controller Mode].
Then click <Apply> to reboot the IP1100CV.
(Transceiver Controller > RoIP Settings)

ⓘ When several IP1100CVs are linked and use All call or Group call between the controllers, the IP1100CV whose Controller mode is set to “Sub” cannot link to the bridge mode’s VE-PG3 to additional controller.
In that case, the VE-PG3 must be linked to the IP1100CV whose Controller mode is set to “Master.”



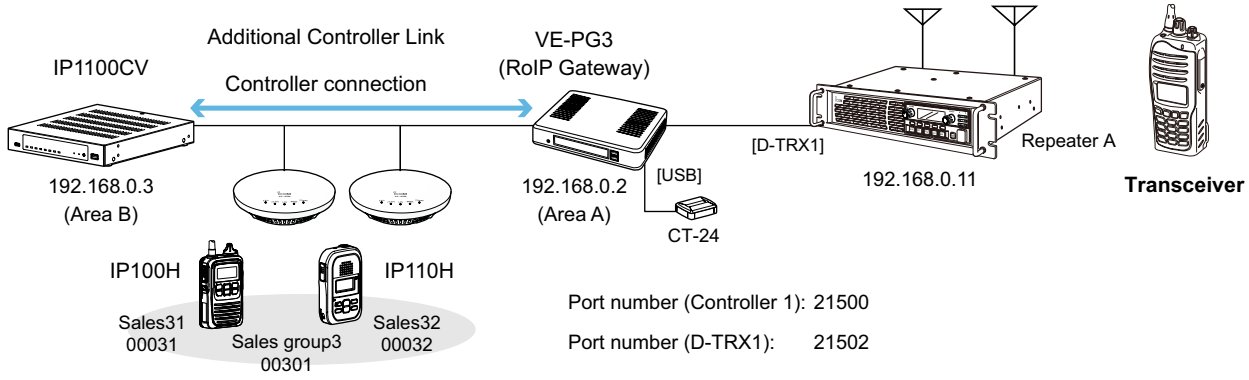

2 Enter a name and a destination IP address. (Example: VE-PG3 (Area-A))
(Transceiver Controller > RoIP Server Settings > Additional Controller Link)



## Bridge connection and Caller settings

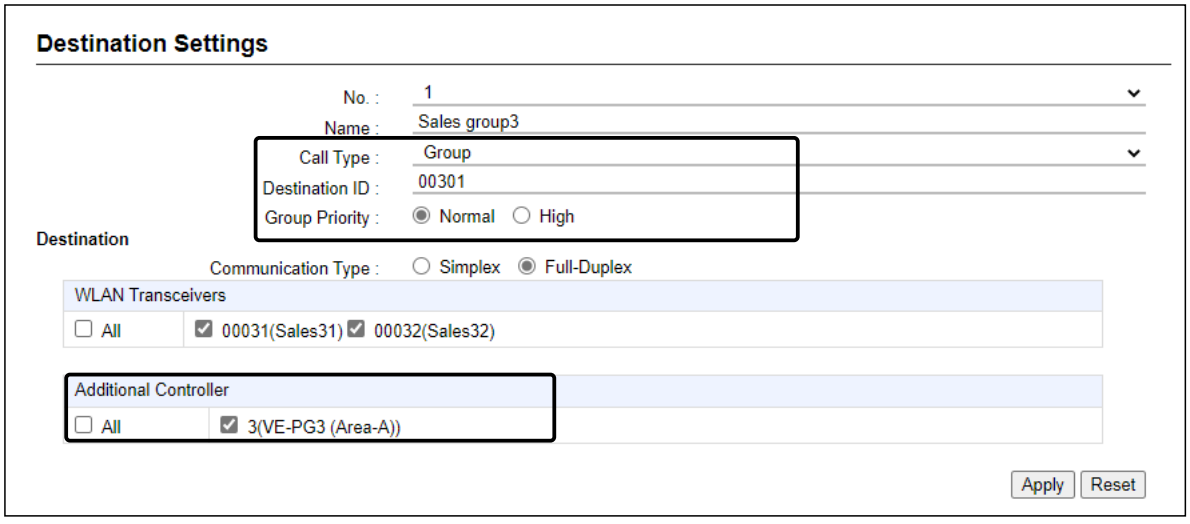
■ Additional controller link with VE-PG3

**IP100H and IP110H make Group Call with the Additional Controller Link (VE-PG3)**




About the IP1100CV setting

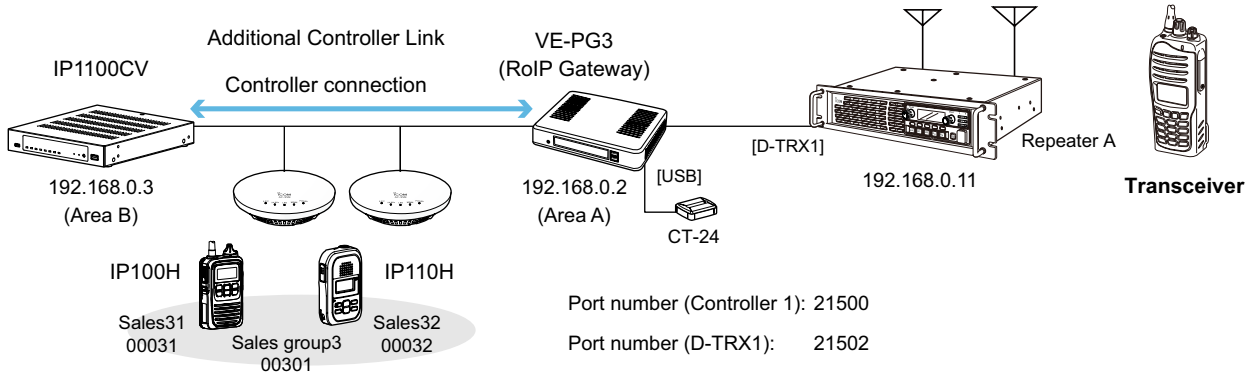
3 Select “Group” in [Call Type], enter a destination ID.
Select controllers in [Additional Controller]. (Refer to an example below.)
Click <Apply>.
(Destination Settings > Destination Settings)



## Bridge connection and Caller settings

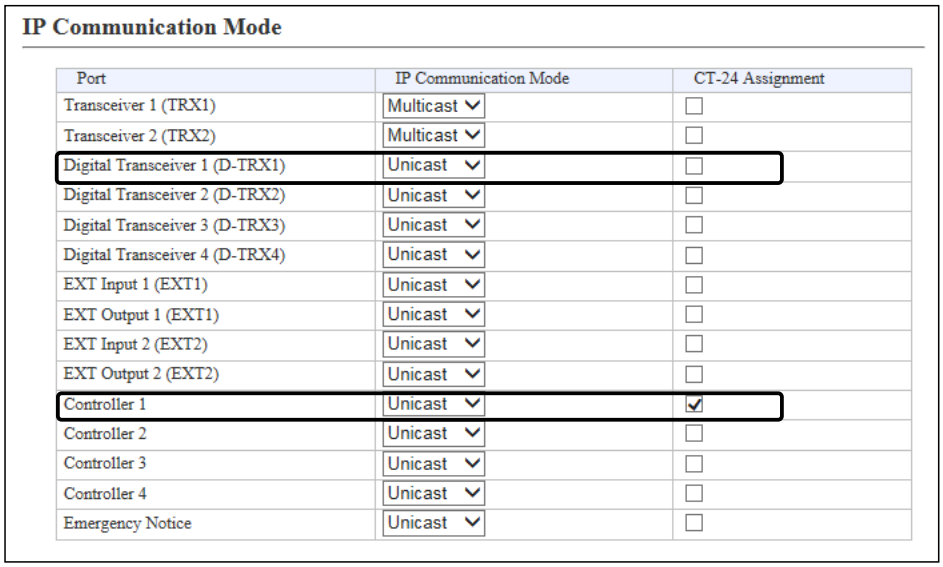
■ Additional controller link with VE-PG3

**IP100H and IP110H make Group Call with the Additional Controller Link (VE-PG3)**




**About the VE-PG3 settings (Bridge mode)**

1 Select “Unicast” in IP Communication Mode of the connected port.
(Example: Digital Transceiver 1 (D-TRX1))
Select “Unicast” in IP Communication Mode of the Controller 1, and then check the Check box for the CT-24 Assignment.
(Operating Mode > Operating Mode > IP Communication Mode)
ⓘ After the IP Communications have been changed, the VE-PG3 needs to be rebooted.



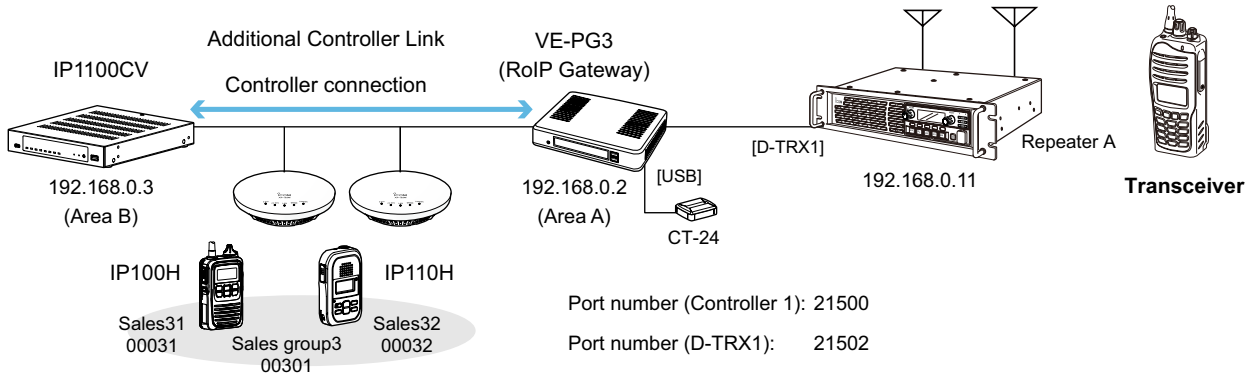
**IP Communication Mode**

| Port | IP Communication Mode | CT-24 Assignment |
|---|---|---|
| Transceiver 1 (TRX1) | Multicast | ☐ |
| Transceiver 2 (TRX2) | Multicast | ☐ |
| Digital Transceiver 1 (D-TRX1) | Unicast | ☐ |
| Digital Transceiver 2 (D-TRX2) | Unicast | ☐ |
| Digital Transceiver 3 (D-TRX3) | Unicast | ☐ |
| Digital Transceiver 4 (D-TRX4) | Unicast | ☐ |
| EXT Input 1 (EXT1) | Unicast | ☐ |
| EXT Output 1 (EXT1) | Unicast | ☐ |
| EXT Input 2 (EXT2) | Unicast | ☐ |
| EXT Output 2 (EXT2) | Unicast | ☐ |
| Controller 1 | Unicast | ☑ |
| Controller 2 | Unicast | ☐ |
| Controller 3 | Unicast | ☐ |
| Controller 4 | Unicast | ☐ |
| Emergency Notice | Unicast | ☐ |

## Bridge connection and Caller settings

■ Additional controller link with VE-PG3

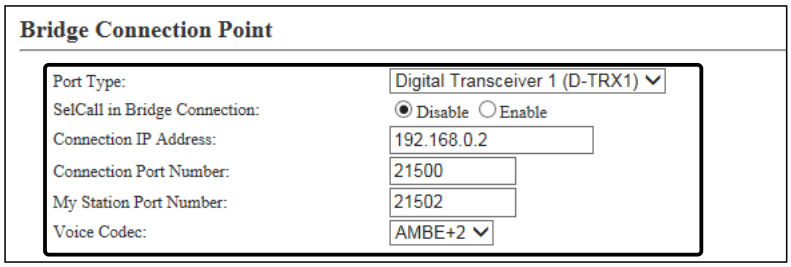
**IP100H and IP110H make Group Call with the Additional Controller Link (VE-PG3)**




About the VE-PG3 settings (Bridge mode)

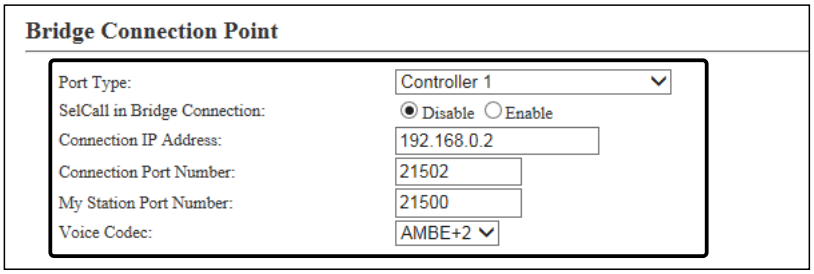
2 After selecting “Port Type” to “Digital Transceiver 1 (D-TRX1)” in [Bridge Connection Point], enter the IP address of the VE-PG3. (Example: 192.168.0.2)
Enter the Connection Port Number. (Example: 21500)
Enter the “My Station Port Number” same as the Connection Port number of the Controller 1. (Example: 21502)
Select the Voice Codec. (Example: AMBE+2)
(Bridge Connection > Bridge Connection > Bridge Connection Point)

ⓘ Make sure that the port number used for the connection does not duplicate with any other connection.




3 After selecting the “Port Type” to “Controller 1” in [Bridge Connection Point], enter the IP address of the VE-PG3. (Example: 192.168.0.2)
Enter the Connection Port Number. (Example: 21502)
Enter the “My Station Port Number” same as the Connection Port number of the Digital Transceiver 1 (D-TRX1). (Example: 21500)
Select the Voice Codec. (Example: AMBE+2)
(Bridge Connection > Bridge Connection > Bridge Connection Point)

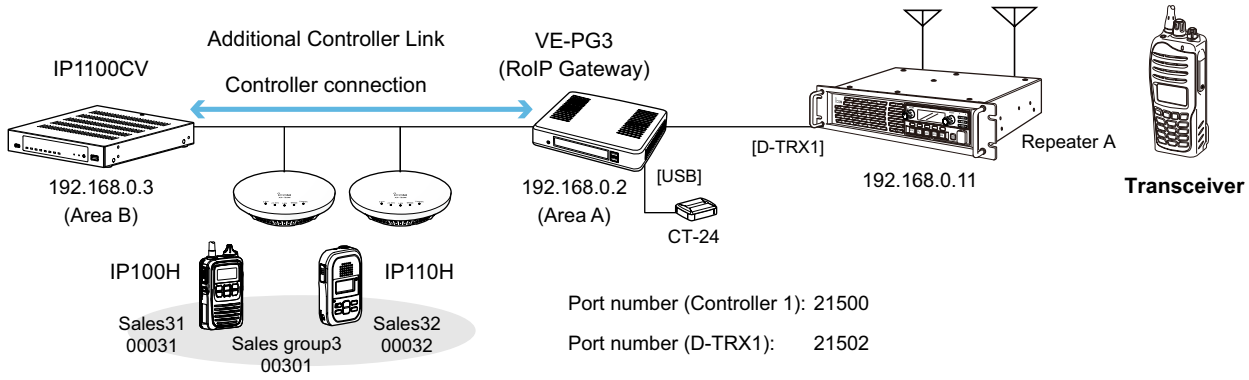
ⓘ Make sure that the port number used for the connection does not duplicate with any other connection.



## Bridge connection and Caller settings

■ Additional controller link with VE-PG3

**IP100H and IP110H make Group Call with the Additional Controller Link (VE-PG3)**




About the VE-PG3 settings (Bridge mode)

4 Confirm Digital Transceiver1 (D-TRX1) port setting, then click <Connect>.
- Confirm “Not connected” changes to “During transmit.”

Confirm Controller 1 port setting, then click <Connect>.
- Confirm “Not connected” changes to “During transmit.”

**List of Bridge Connection Point Entries**

Refresh

| Port Type | Connection IP Address | Port Number | | Voice Codec | Connection Status | | | |
|---|---|---|---|---|---|---|---|---|
| | | Connection | My Station | | | | | |
| Digital Transceiver 1 (D-TRX1) | 192.168.0.2 | 21500 | 21502 | AMBE+2 | Not connected | Connect | Edit | Delete |
| Controller 1 | 192.168.0.2 | 21502 | 21500 | AMBE+2 | Not connected | Connect | Edit | Delete |

Delete All

Confirm the setting, then click <Connect>.

**List of Bridge Connection Point Entries**

Refresh

| Port Type | Connection IP Address | Port Number | | Voice Codec | Connection Status | | | |
|---|---|---|---|---|---|---|---|---|
| | | Connection | My Station | | | | | |
| Digital Transceiver 1 (D-TRX1) | 192.168.0.2 | 21500 | 21502 | AMBE+2 | During transmit | Disconnect | Edit | Delete |
| Controller 1 | 192.168.0.2 | 21502 | 21500 | AMBE+2 | During transmit | Disconnect | Edit | Delete |

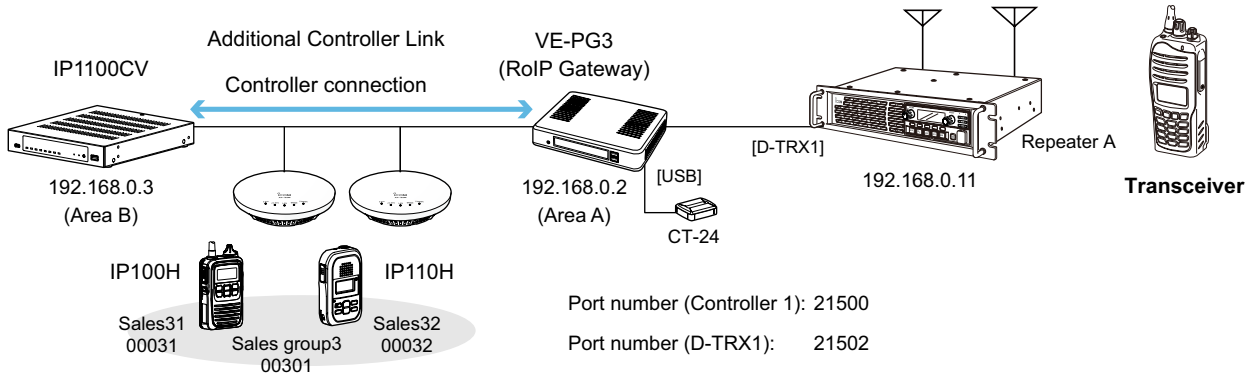
Delete All

Confirm that “Not connected” changes to “During transmit.”

## Bridge connection and Caller settings

■ Additional controller link with VE-PG3

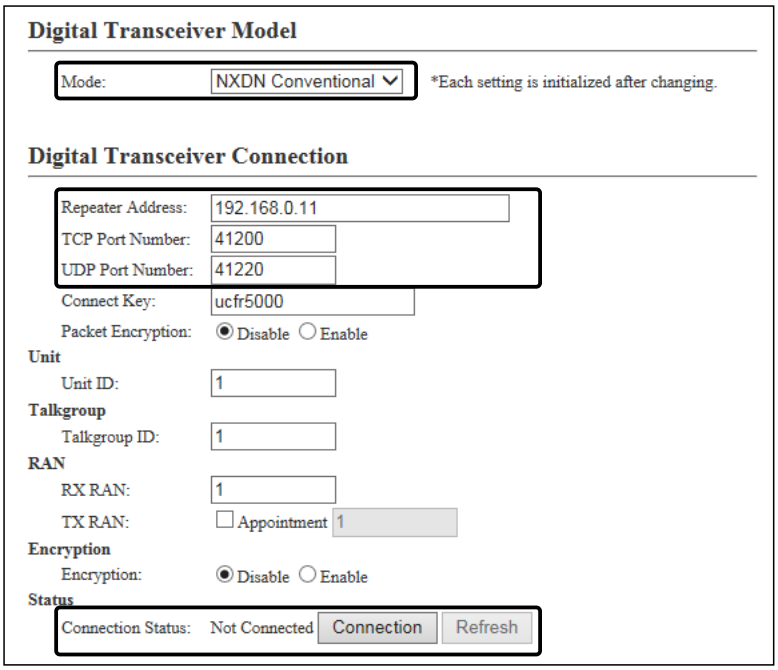
**IP100H and IP110H make Group Call with the Additional Controller Link (VE-PG3)**




About the VE-PG3 settings (Bridge mode)

5 Select “Mode” to “NXDN Conventional” in [Digital Transceiver Model].
(Example: NXDN Conventional)
(Port Settings > Digital Transceiver 1 > Digital Transceiver Model)

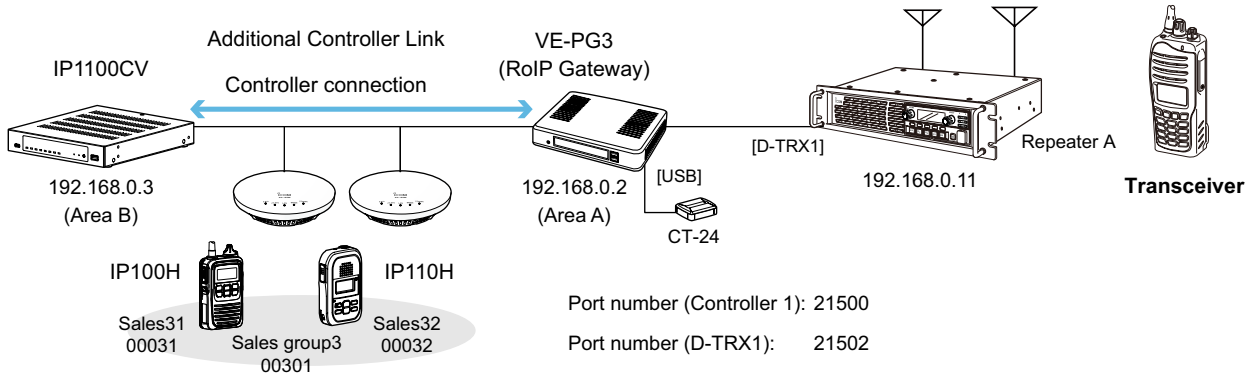
6 Enter the IP address of the repeater in [Digital Transceiver Connection]. (Example: 192.168.0.11)
Enter the TCP Port Number (Example: 41200), or the UDP Port Number. (Example: 41220)
(Port Settings > Digital Transceiver 1 > Digital Transceiver Connection)
ⓘ Make sure that the port number used for the connection does not duplicate with any other connection.



## Bridge connection and Caller settings

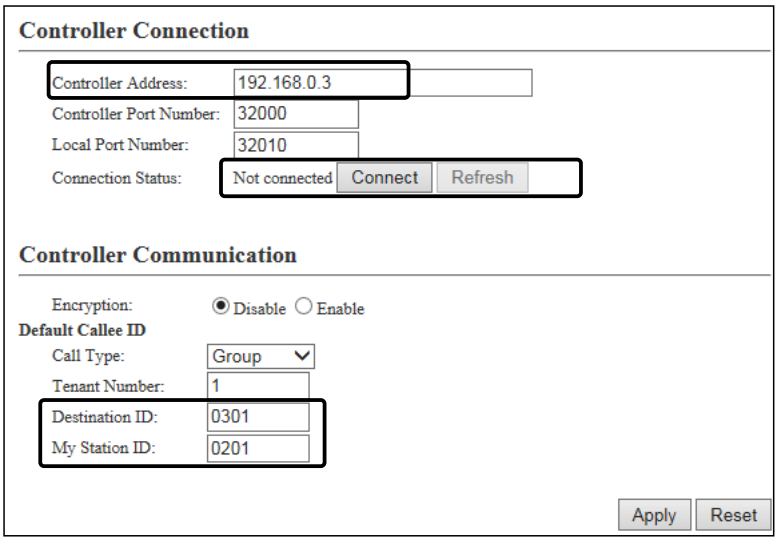
■ Additional controller link with VE-PG3

**IP100H and IP110H make Group Call with the Additional Controller Link (VE-PG3)**




About the VE-PG3 settings (Bridge mode)

7 Enter the IP address of the IP1100CV in [Controller Connection]. (Example: 192.168.0.3)
Enter the Controller Port Number same as the IP1100CV's Service port number in Link setting. (Example: 32000)
Enter the Local Port Number same as the IP1100CV's Destination Port number in Additional Controller Settings. (Example: 32010)
(Port Settings > Controller 1 > Controller Connection)




8 Select Call Type and enter the Destination ID. (Example: 0301)
Enter the My Station ID. (Example: 0201)

# MAINTENANCE

Section 3

# Checking and saving the settings

Management > Settings Backup/Restore

You can check the settings changed on the setting screen, and then save them as a setting file (format: .sav) on your PC.

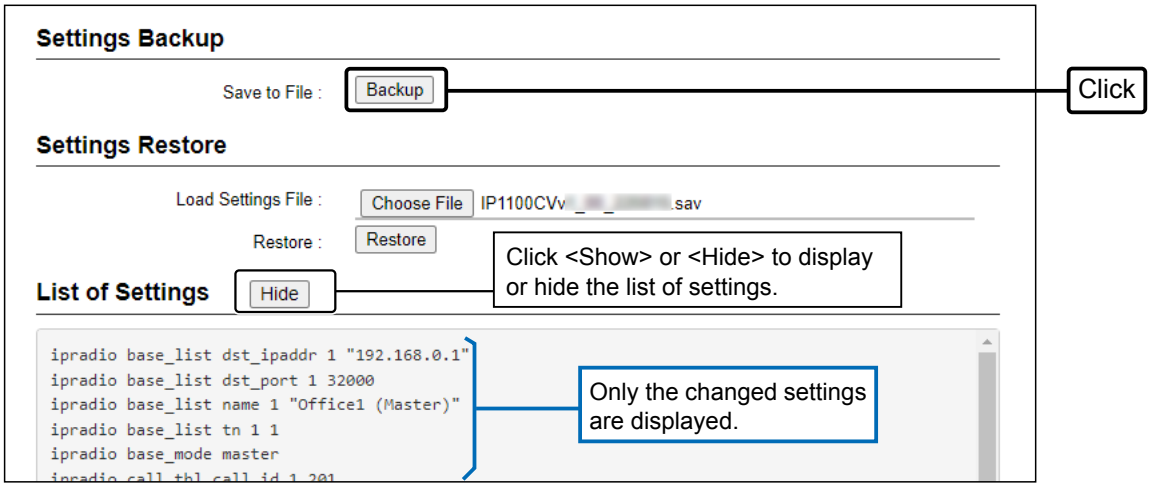
ⓘ The saved file (.sav) is not usable on devices other than the IP1100CV.

ⓘ You can use the saved file as a backup if the settings are lost or damaged.

1 Open the Settings Backup/Restore screen.
(Management > Settings Backup/Restore)

2 In [Settings Backup], click <Backup>.

- The setting is saved to a file “IP1100CVvXXX_yymmdd.sav” in the Download folder on your PC.
  The product name, version and saving date are displayed as the file name.



# Restoring the saved settings

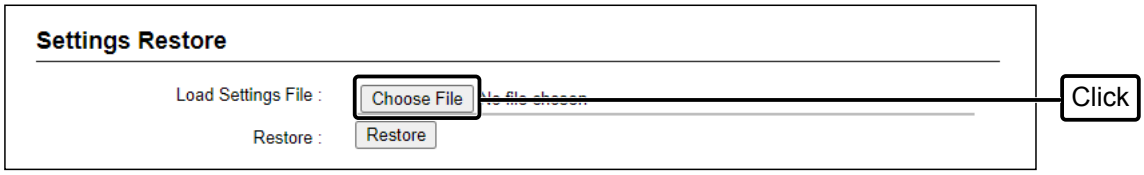
Management > Settings Backup/Restore

You can restore a previously saved setting file in the previous page to the IP1100CV.

**NOTE: DO NOT** write the saved file to any other devices.

1 Open the Settings Backup/Restore screen.
(Management > Settings Backup/Restore)

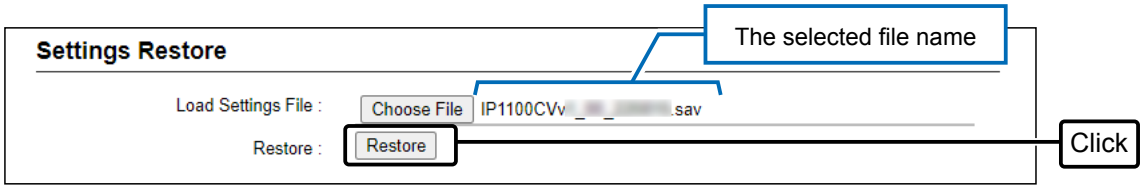
2 In [Settings Restore], click <Choose File>, and then select a settings file (extension: “sav”).




- The selected file name is displayed in the “Load Settings file” item.

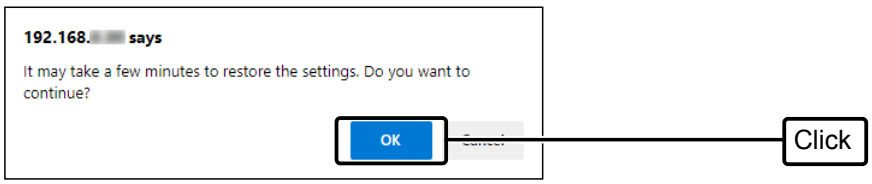
3 Select the setting file (format: .sav), and then click <Open>.
- The location of the setting file will be entered into the “Load Settings File.”

4 Click <Restore>.




- The confirmation dialog is displayed.

5 Click <OK> on the confirmation dialog.




- The Controller restarts to restore the settings. It may take several minutes until it completely reboots.

**CAUTION: DO NOT** turn OFF both the Controller and the PC while the Controller is restoring or rebooting.

6 After the Controller has completely rebooted, click “[Back]” (the red text on the screen) to return to the setting screen.

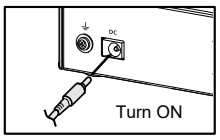
# Resetting to the factory defaults

When you reconfigure your network, and so on, you can reset the IP1100CV to the factory defaults.
There are two ways to reset to the factory defaults. Choose an appropriate way, according to your situation.

- Pushing the <INIT> button: When the Settings screen cannot be accessed because the IP address or password for the IP1100CV is unknown.
- Using the setting screen: When you can successfully access the setting screen.

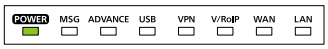
## ■ Pushing the <INIT> button

1 Disconnect all cables from the IP1100CV, and then connect the power adapter.
Confirm that the [POWER] indicator lights green.
ⓘ The status of other indicators may differ, depending on the operation status.



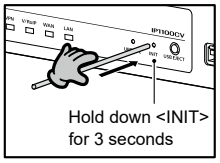

**Indicators status**

Lights green

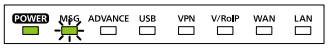



2 Hold down the <INIT> button on the on panel with a pin, until all the indicators light orange.

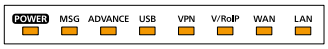
- The [MSG] indicator blinks green when the <INIT> button is held. Keep holding down it until all the indicators light orange.




Lights green




Blinks green

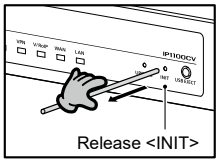



All lights orange

3 Release the <INIT> button.

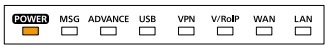
- The [POWER] indicator lights green when the Controller has completed resetting.

**CAUTION: DO NOT** turn OFF the IP1100CV until the [POWER] indicator lights green.

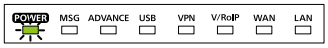



All blinks red and green

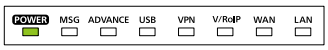
Lights orange




Blinks green




Lights green




**NOTE:** After resetting the IP1100CV to the factory defaults, the IP address is set to “192.168.0.1.”
If you cannot access the IP1100CV Setting screen, change your PC’s IP address.

## Resetting to the factory defaults

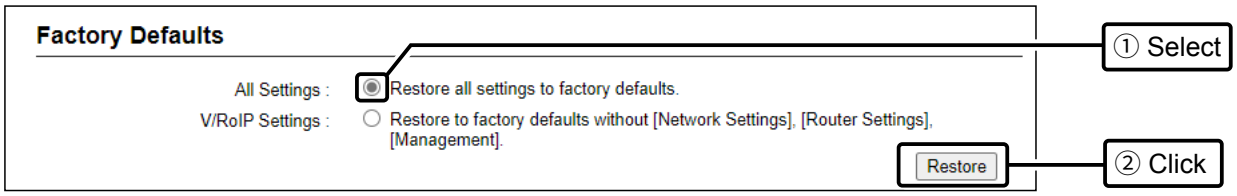
Management > Factory Defaults

When you can access the setting screen with the IP address and the administrator's password, you can restore all the default settings from the setting screen.
If the IP address and the password are unknown, see the previous page.

# ■ Resetting on the setting screen

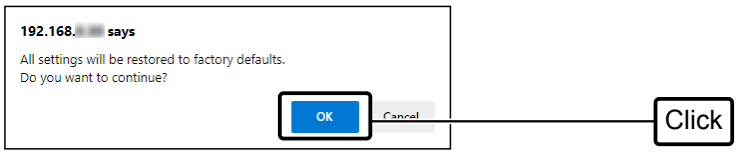
1 Open the Factory Defaults screen.
(Management > Factory Defaults)

2 Select "Restore all settings to factory defaults," and then click <Restore>.




• The confirmation dialog is displayed.

3 Click <OK> on the confirmation dialog.




• The Controller restarts to restore the settings. It may take several minutes to completely reboots.

**CAUTION: DO NOT** turn OFF both the IP1100CV and the PC while the IP1100CV is restoring or rebooting.

4 After the Controller has completely rebooted, click "[Back]" (the red text on the screen) to return to the setting screen.

**Factory Defaults options**

• All Settings: Restores all the settings to the factory defaults.
The IP address of the IP1100CV will be reset to "192.168.0.1."

• V/RoIP Settings: Restores the factory defaults other than the settings in the Network Settings, Router Settings, and Management menus.
The settings for the WLAN transceivers will be reset.

# Updating the firmware

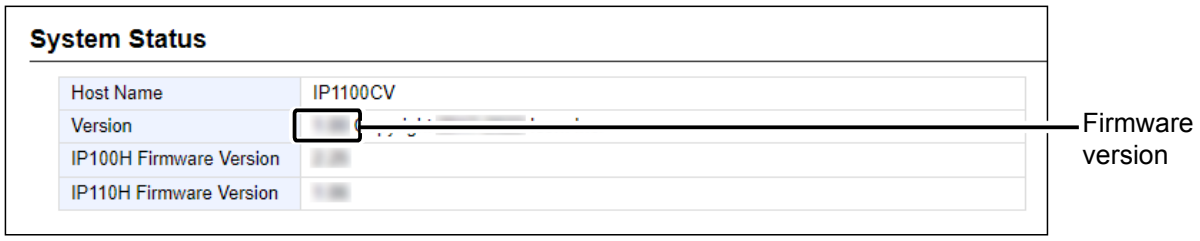
You can update the firmware of the IP1100CV in 4 ways.

- Manual update: In the case that the Controller cannot do the automatic update, first download the latest firmware from the Icom website, and then manually load the saved firmware. (p. 3-7)
- Online update: Automatically updates the firmware through the Internet. (p. 3-8)
- Pushing <UPDATE>: Manually update the firmware by pushing <UPDATE> button on the front panel of the Controller. (p. 3-9)
- Using the USB flash drive: Manually update the firmware from the USB flash drive. (p. 3-15)

TOP

## ■ About the firmware

The firmware is a fundamental program for the Controller, and internally saved on the flash memory.
The firmware may be updated when the functions and specifications of the Controller are improved.
Ask your dealer for updated function or specification details.




**NOTE:**
- NEVER turn OFF the power until the updating has been completed. Otherwise, the Controller may be damaged.
- If the firewall is running, stop it before updating the firmware. If you want to stop the firewall, ask your network administrator for the detail.
- Icom is not responsible on the consequence of the updating the firmware.

**When updating the firmware to version 1.09 or later:**
If the administrator password you set is 7 characters or less, you will need to set a new password of 8 to 31 characters after the firmware update.

## Updating the firmware

Management > Firmware Update

# ■ Manual update

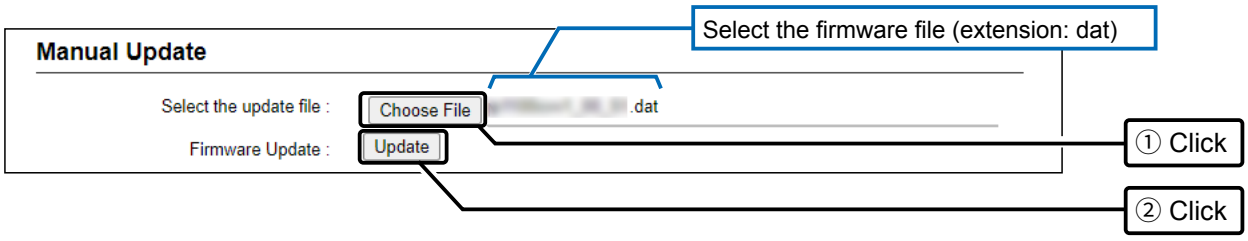
Before updating the firmware, save the current setting into a file.

**NOTE:** Some settings may be returned to their defaults after the firmware update. Refer to the Icom website for details.

**TIP:** In order to protect the Controller from maintenance by unknown users, Icom recommends restricting access to the setting screen during normal use.

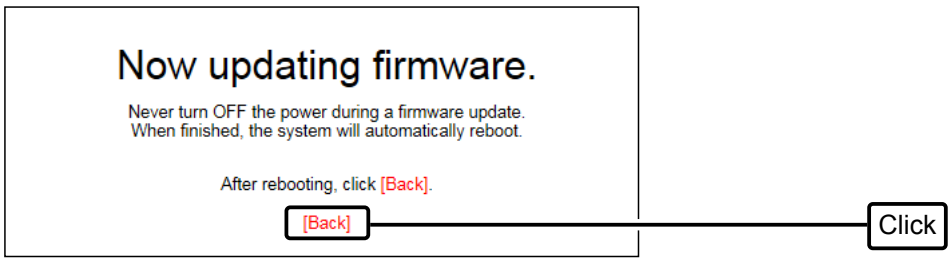
1 Open the Firmware Update screen.
(Management > Firmware Update)

2 In [Manual Update], click <Choose file...>, and then select a firmware file (extension: “dat”).
• The selected file name is displayed in the “Select the update file” item.




3 After the update is complete, click [Back].

• Returns to the setting screen.
If the setting screen is not displayed, the update may not be completed. Wait for a few minutes, and then click [Back] again.




**CAUTION: DO NOT** turn OFF the Controller and the PC while updating the firmware. It will cause data corruption, or damage.
If you cannot access the Controller setting screen after the updating, the IP address of the Controller may be reset to the default (192.168.0.1).
Set your PC’s IP address to the same network domain (for example: 192.168.0.100) and access the Controller. After changing the Controller’s address properly, return the PC’s address according to your network environment.

## Updating the firmware

Management > Firmware Update

# ■ Online update

You can automatically check whether a new firmware version is available or not by pushing the <UPDATE> button on the front panel of the Controller.
The [MSG] indicator on the front panel of the Controller lights green if there is an Online update.

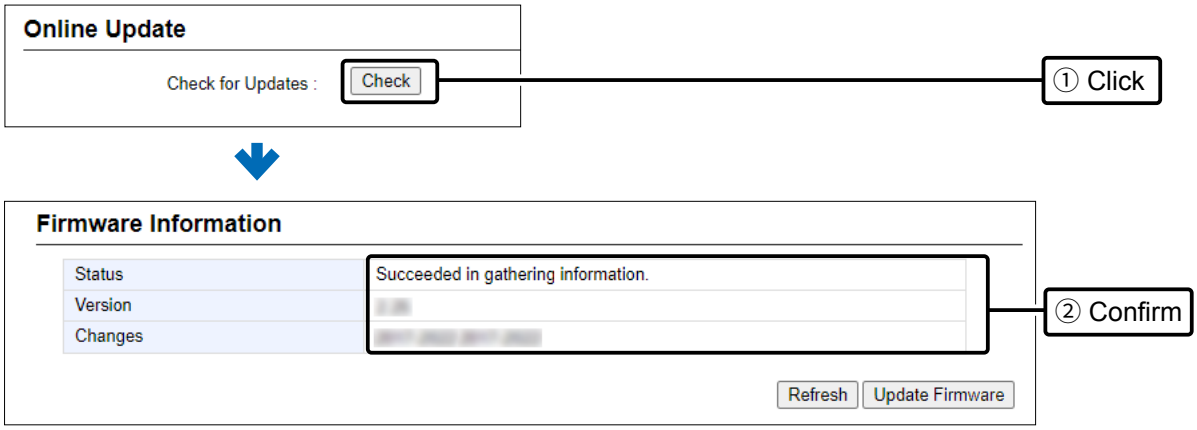
### Information

• The DNS and the default gateway must be set to the Controller in order to use the Online update through the Internet.
• Before the Online update, we recommend that you save your Controller settings for a backup.

1 Open the Firmware Update screen.
(Management > Firmware Update)

2 In [Online Update], click <Check> to check if there is an available firmware update.

ⓘ If there is no update, “No Firmware update” is displayed or the [MSG] indicator does not light.

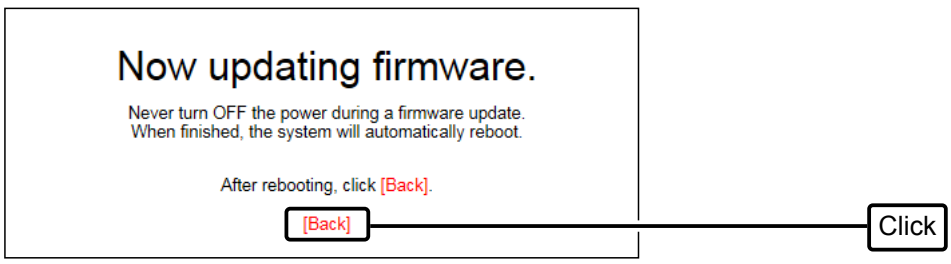



3 Click <Update Firmware>.

• The Controller starts accessing the Icom server to download the updates.
ⓘ Depending on the firmware version, the Controller may require that you initialize the settings.
Before the Online update, we recommend that you save your Controller settings for a backup.

4 After the update is complete, click [Back].

• Returns to the setting screen.
If the setting screen is not displayed, the update may not be completed. Wait for a few minutes, and then click [Back] again.



## Updating the firmware

Management > Firmware Update

# ■ Online update with the <UPDATE> button

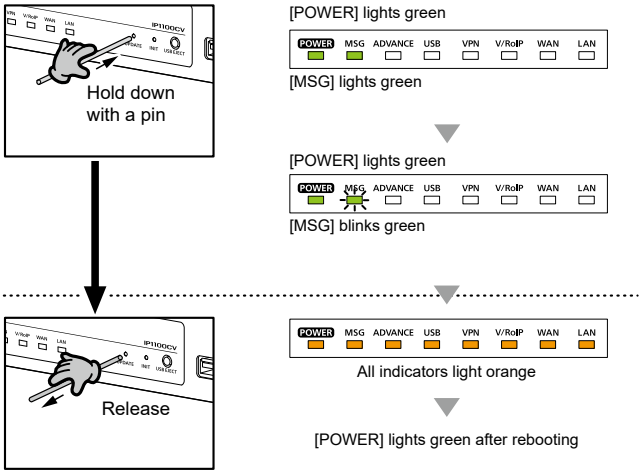
You can check whether a new firmware version is available or not by pushing the <UPDATE> button on the front panel of the Controller.
The [MSG] indicator on the front panel of the Controller lights green if the firmware is ready for an online update.

1 Hold down <UPDATE> with a pin until the [MSG] indicator blinks green.

2 After the [MSG] indicator blinks green, release the <UPDATE> button.

- The Controller starts downloading the new firmware, automatically installs it, and reboots.

ⓘ Restart your PC after the Controller has completely rebooted.




ⓘ The other indicator status other than [MSG] differ, depending on your system environment.

# Automatic Restoring from a USB flash drive

You can load the Controller's settings or update firmware, that are saved on a USB flash drive (user supplied). This is useful for cloning the settings to 2 or more IP1100CVs with a USB flash drive.

## ■ Using a USB flash drive

**Before inserting the USB flash drive:**
- Backup the current setting of the Controller and the contents in the USB flash drive.
- Confirm the [USB] indicator is not lit, to prevent data corruption.

**When inserting or removing the USB flash drive:**
- Insert the USB flash drive firmly and securely, until the [USB] indicator lights green.
- NEVER remove the USB flash drive or turn OFF the Controller while transferring data (the [MSG] indicator blinks while transmitting.) It will cause data corruption, or damage the USB flash drive.
- After the firmware update is completed, check the firmware version on the setting screen to verify that the update was correctly done.

**NOTE for updating the settings or the firmware:**
- When the USB authentication key is enabled, the Automatic Restore function does not function until the keys in the USB flash drive and the Controller match.
- The firmware or the setting file will not be updated when:
  - The source data in the USB flash drive is as same as the current settings or firmware.
  - The source data is damaged.
  - The source data is not for the IP1100CV.
- When both the firmware and settings for the IP1100CV are saved in the USB flash drive, the firmware will be updated after the settings data is loaded.
- When restoring the setting data from a USB flash drive to the Controller, its original settings is automatically saved as "bakdata.sav" onto the USB flash drive, as a backup.

## ■ Usable USB flash drive specifications

- Interface: USB 3.0 / 2.0 / 1.1
- Device: USB flash drive (USB Mass Storage Class)
- File format: FAT16/FAT32 (exFAT and NTFS are not supported)

ⓘ A USB flash drive such as one with biometric authentication, or one with password protection is not supported.
ⓘ Self-power supply may be required, depending on the device's current consumption.

Automatic Restoring from a USB flash drive

## ■ About the file names

The files that are saved on a USB flash drive for the automatic restore function must be named as follows:

• Settings file: savedata.sav
ⓘ Only the settings file that is saved on the IP1100CV setting screen can be used for the Automatic Restore function. (Management > Settings Backup > Settings Backup)

• Firmware: firmware.dat
ⓘ Use the downloaded firmware from the Icom web site.
Download the firmware file, extract it, and then rename the file to “firmware.dat”.

## ■ The settings backup files

When restoring the setting data from a USB flash drive to the Controller, its original settings are automatically saved as “bakdata.sav” onto the USB flash drive, as a backup.
The latest 11 backup files (revisions) are stored on the USB flash drive, as the file name “bakdata_X.sav” (X=Revision number.)

| | | |
|---|---|---|
| (Example) | The latest backup: | bakdata.sav (without a revision number) |
| | The second backup: | bakdata_1.sav |
| | The third backup: | bakdata_2.sav |
| | : | : |
| | The oldest (11th) backup: | bakdata_10.sav |

ⓘ If the content of the settings file is the same as the Controller’s current settings, no setting backup file will be saved.
ⓘ The firmware is not backed up.
ⓘ When a Controller setting has been changed, the original settings are automatically saved onto the USB flash drive, if it is inserted into the IP1100CV.

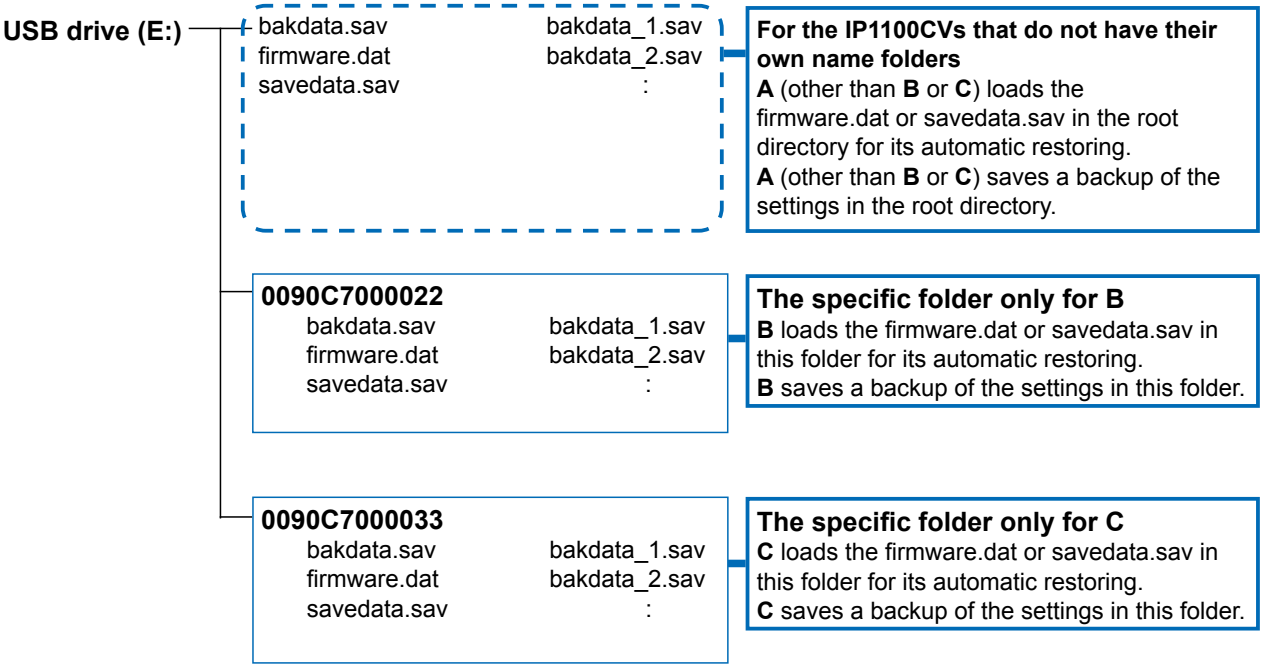
Automatic Restoring from a USB flash drive

## ■ Managing 2 or more IP1100CVs with a USB flash drive

You can backup or restore the setting files for 2 or more IP1100CVs by making a separate folder for each IP1100CV. Before inserting the USB flash drive into the IP1100CV, make folders that are named the same as the MAC address for the LAN of the IP1100CVs that you want to manage with the drive.

Example: Managing the 3 of IP1100CVs whose MAC addresses are as follows:

- **A**: 00-90-C7-00-00-11
- **B**: 00-90-C7-00-00-22
- **C**: 00-90-C7-00-00-33



# Restoring the settings from the USB flash drive

Management > Settings Backup/Restore

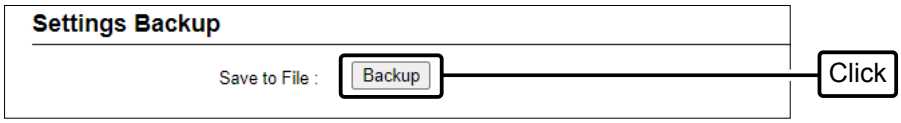
You can copy a Controller settings to use to clone another gateway, with a USB flash drive.
First, save the settings data of that you want to copy from onto the USB flash drive, then load the settings to another Controller.

1 Insert the USB flash drive to your PC.

2 Access the setting screen of the Controller.

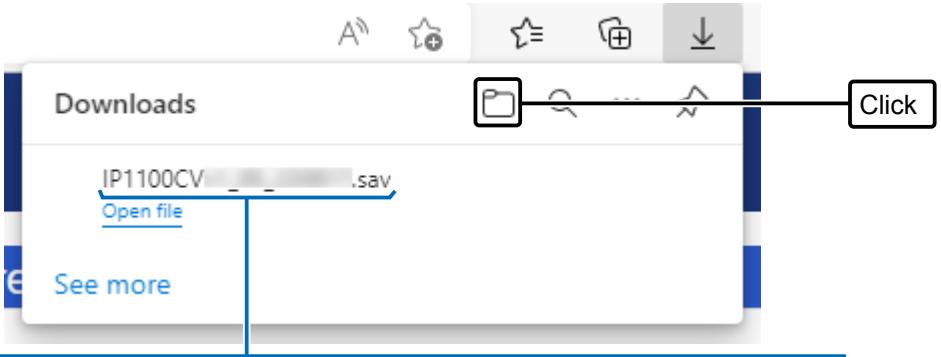
3 Open the Settings Backup/Restore screen.
(Management > Settings Backup/Restore)

4 In [Settings Backup], click <Backup>.




- The setting is saved to a file “IP1100CVvXXX_yymmdd.sav” in the Download folder on your PC.
  The product name, version and saving date are displayed as the file name.

5 Click the folder icon to open the “Download” folder.




Model name, firmware version, and the date is displayed as the file name

6 Move the downloaded backup file to an appropriate folder of your USB flash drive.

(☞ Continued on the next page)

## Restoring the settings from the USB flash drive

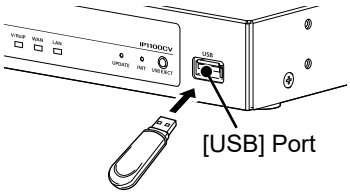
Management > Settings Backup/Restore

7 Unmount and remove the USB flash drive from the PC.

8 Locate the IP1100CV that you want to load settings from the USB flash drive.

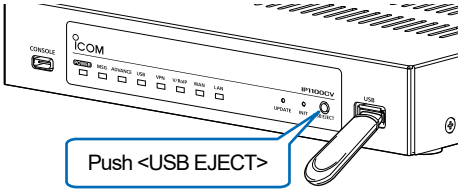
9 Insert the USB flash drive to the Controller.

- The [USB] indicator lights green when the USB flash drive is successfully mounted.



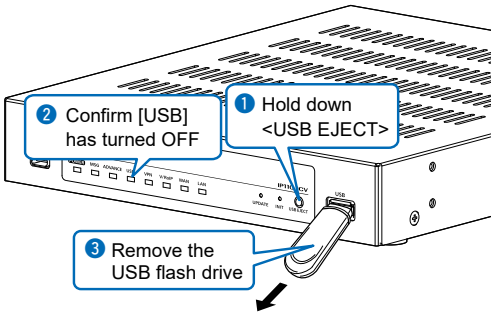

10 Push the <USB EJECT> button.

- The Controller starts reading the settings from the drive.
- After the settings are loaded successfully, the Controller restarts.




11 Confirm the [POWER] indicator lights green, and hold down the <USB EJECT> button until the [USB] indicator turns OFF.
After the [USB] indicator turns OFF, and then remove the USB flash drive from the Controller.

ⓘ The automatically saved IP1100CV settings data is located as the bakdata.sav on the USB flash drive,




**CAUTION:**

- **DO NOT** remove the USB flash drive or turn OFF the Controller until the setting file is completely restored. Otherwise the settings data or the Controller may be damaged.
- **DO NOT** access the Controller setting screen until it is completely rebooted.
- Before removing the USB flash drive, confirm the [USB] indicator is not lit.

**TIP: When the USB flash drive is enabled**
(Management > Management Tools > USB)
If the Controller reboots while a USB flash drive is attached, the Controller starts reading from the USB flash drive.

## Updating the firmware from a USB flash drive

You can update the Controller firmware by using a USB flash drive (user supplied).
Download the firmware and save it onto the USB flash drive as follows, and then update the Controller.
Also, refer to the “Automatic Restoring from a USB flash drive” and “Updating the firmware” former in this section.

1 Download and extract the IP1100CV firmware from the Icom web site.

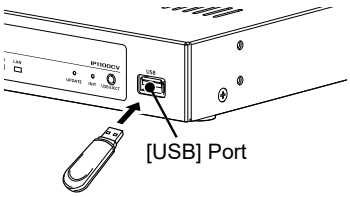
2 Save the firmware data onto the USB flash drive, with the file name “firmware.dat.”

ⓘ If there is a specific folder of the IP1100CV, save the firmware into the folder.
ⓘ The IP1100CV cannot read the firmware from the other file than “firmware.dat.“

3 Select a IP1100CV to update the firmware.

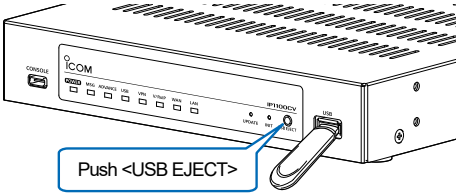
4 Insert the USB flash drive into the USB port of the IP1100CV.

- The [USB] indicator lights green when the USB flash drive is successfully mounted.

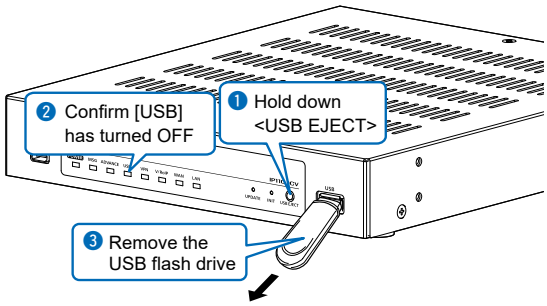



5 Push the <USB EJECT> button.

- The Controller reboots to update the firmware.




6 Confirm the [POWER] indicator lights green, and hold down the <USB EJECT> button until the [USB] indicator turns OFF.
Confirm the [USB] indicator turns OFF, and then remove the USB flash drive from the Controller.




7 Confirm the Controller firmware version has been updated on the setting screen.
(TOP > System Status)

**CAUTION:**

- **DO NOT** remove the USB flash drive or turn OFF the Controller until the firmware is completely updated. Otherwise the settings data or the Controller may be damaged.
- **DO NOT** access the IP1100CV Setting screen until it is completely rebooted.
- Before removing the USB flash drive, confirm the [USB] indicator is not lit.

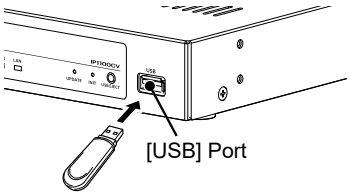
# Issuing a USB authentication key

Management > Management Tools

By setting an authentication key and saving it to a USB flash drive, you can securely authenticate the USB flash drive that is used for automatic backup and restore, or updating the firmware.
When the USB authentication key is set, the Controller reads or writes the setting data or the firmware from/to only the USB flash drive that has a matching authentication key.

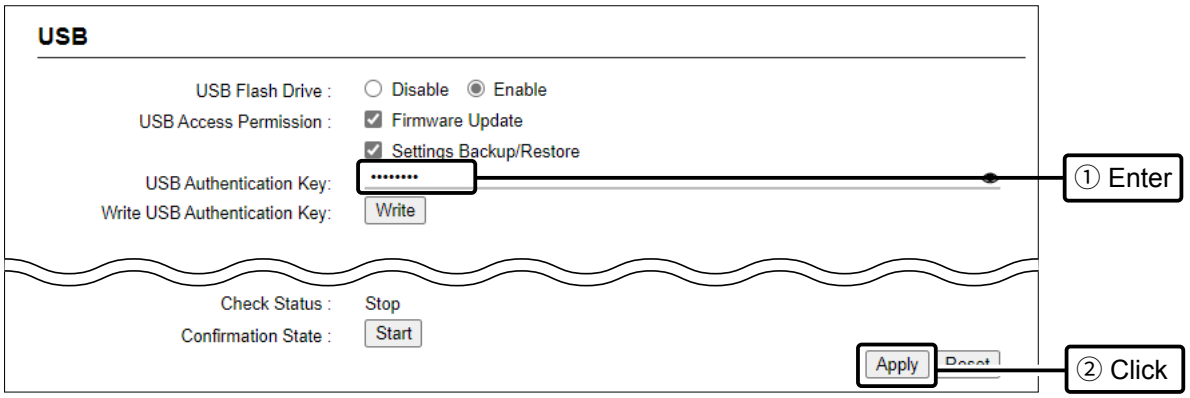
1 Insert the USB flash drive into the USB port of the Controller.

- The [USB] indicator lights green when the USB flash drive is successfully mounted.

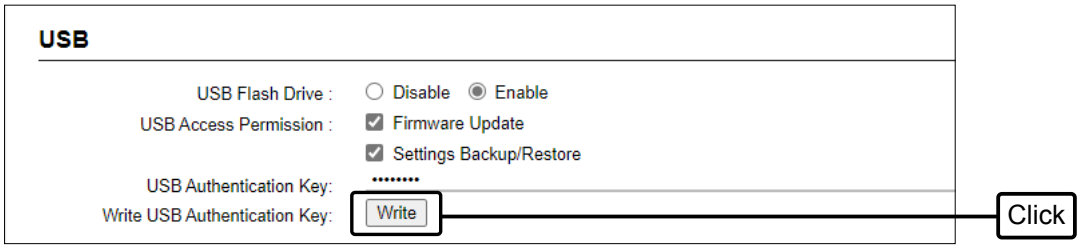



2 Open the Management Tools screen of the Controller setting screen.
(Management > Management Tools)

3 In [USB], enter the USB Authentication Key of up to 64 characters, and then Click <Apply>.



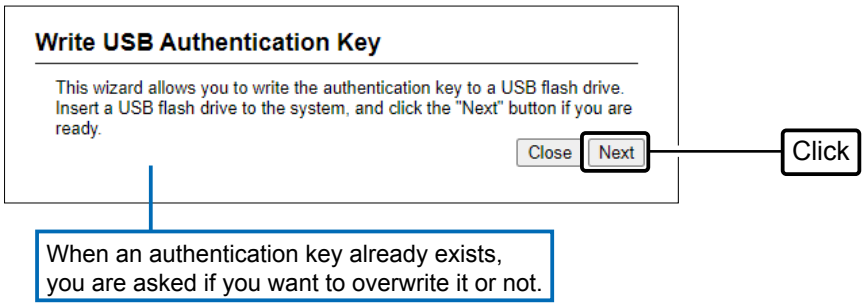

4 Click <Write>.



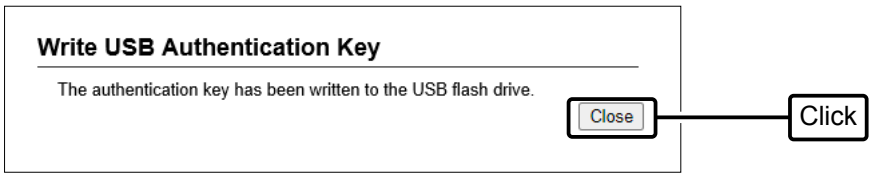

(☞ Continued on the next page)

## Issuing a USB authentication key

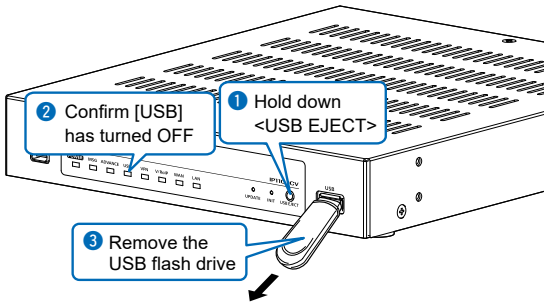
5 When the following dialog is displayed, click <Next>.




Click <Close>.




6 Confirm the [POWER] indicator lights green, and hold down the <USB EJECT> button until the [USB] indicator turns OFF.
Confirm the [USB] indicator turns OFF, and then remove the USB flash drive from the Controller.



# FOR YOUR INFORMATION

Section 4

# Troubleshooting

The following conditions are not due to a malfunction. Check before sending a request for repair.

### The [POWER] indicator does not light

- The power adapter is not connected.
  - Check the adapter or DC jack connection.
- The power adapter is connected to the same power outlet used by the PC.
  - Connect the power adapter to a different power outlet.

### The [LAN] indicator (On the rear panel) does not light

- The Ethernet cable is not properly connected to the Controller.
  - Make sure the Ethernet cable is securely connected.
- The Switch or PC is turned OFF.
  - Turn ON the Switch or PC.

### The setting screen does not open properly

- The JavaScript or Cookie functions are turned OFF.
  - Turn the functions ON.

### Cannot access the Controller's setting screen

- The PC's IP address is incorrect.
  - Set a static IP address to the Controller and the PC.
- The network part of the PC's IP address is different from that of the Controller.
  - Set the network part of PC's IP address to same as that of the Controller.
- A proxy server is set in the web browser setting.
  - Disable the web browser's proxy server setting.
    Click "Tools" in the web browser menu, and then click "Internet option."
    Click the "Connections" tab, then click <LAN settings>, and then confirm there is no check mark in "Automatically detect settings" and "Use a proxy server for your LAN."

### Cannot connect to the Internet

- The Internet connection is currently out of service.
  - Ask your ISP for the connection status.
- The MAC address is not registered to your ISP.
  - Some ISPs require WAN MAC address registration.
- When using a Bridge modem or DCE (FTTH), the wrong connecting method is set.
  - Ask your ISP for the connection type (DHCP Client, Static IP or PPPoE).
- The broadband modem or DCE (FTTH) is not correctly connected to the Controller.
  - If you use a Bridge modem or DCE (FTTH), set the connection type as specified by your ISP.
- IP address is not obtained from WAN (ISP)
  - Check the connection between Controller and DCE (FTTH).
    The IP address obtained from the WAN is displayed in the "Connection Status" on the WAN screen.
- The DNS server address is not properly set.
  - Check the set DNS server address in the "Network Settings" menu or the "Router Settings" menu.

### Cannot access the Controller through the [WAN] port while the Router function is in use

- The default IP filter setting blocks the packets from the [WAN] port.
  - Change the IP filter setting.
  ⓘ Icom is not responsible for any accidents caused by the security degradation.

## Troubleshooting

**The inserted USB flash drive is not recognized**

• The USB function is set to “Disable.”
  - Enable the USB Flash Drive setting on the Setting screen.
    (Management > Management Tools > USB > USB Flash Drive)

**[Input/Output Digital Gain] doesn’t work**

• Internal codec is not used.
  - Use [Input/Output Analog Gain] to adjust the signal level.

**The receiving sound breaks up while operating in the Bridge’s Multicast mode**

• Two or more transceivers that are connected through different Controller are transmitting at the same time.
  - Use only one Controller in the Always-on connection mode.
  - Set the Always-on connection mode to disable.

**The Controller does not automatically update the firmware**

• The Ethernet cable is not properly connected to the Controller.
  - Properly connect the Ethernet cable to the Controller.
• The Controller is not connected to the Internet.
  - Set the Controller properly to connect to the Internet.
• The firewall is running.
  - Stop the firewall. If you want to stop the firewall, ask your network administrator for details.

# Accessing with Telnet/SSH

## ■ Accessing the Controller with Telnet/SSH

Use Telnet according to your OS or Telnet/SSH client.

ⓘ You can not access from the Telnet client because the “Telnet” setting of the Controller is disabled by default. Enable it to access from the Telnet client. (Management > Management Tools > Telnet/SSH)

ⓘ The Controller supports UTF-8 character codes. Use a terminal software that supports UTF-8.

**How to login:**

1. Enter the login name, and then push the [Enter] key to log in.
   Login: admin (Fixed)
   Password: Enter the administrator password set on the Administrator screen.
   (Management > Administrator > Administrator Password)

2. When Telnet/SSH is successfully connected to the Controller, “IP1100CV>” is displayed.

**Saving the setting:**

After making changes, enter “save,” and then push the [Enter] key.

**How to log out:**

Enter the command “quit,” “exit,” or “logout” to log out from the Controller.

## ■ About Telnet/SSH commands

**Command list ……** Push the [Tab] key to display the Telnet command list. After typing a Telnet command, push the [Tab] key to display the subcommand list.

**Command help ……** Enter “ ?” after a command to display the command description.
(Example) “save ?” (“save” command description is displayed.)

**Automatic complement ……** After typing the first few characters of the command, push the [Tab] key. The rest of the characters for the command are automatically entered.
(Example) “n” + [Tab] → network
Suggested commands are displayed.
(Example) “res” + [Tab] → reset  restart

Accessing with Telnet/SSH

## ■ Using the [CONSOLE] port

You can control the Controller using the terminal software by connecting the [CONSOLE] port of the Controller to a USB port of the PC through a USB (Type-C) cable (user supplied).

The USB driver for the Icom network devices is required.
Download the USB driver and the manual from the Icom web site and install it according to the manual.
https://www.icomjapan.com/support/

After installing the USB driver, set the serial port settings in the terminal software as follows:

- Port: Check the COM port number setting on your PC
- Baud rate: 115200 bps
- Data: 8 bit
- Parity: None
- Stop: 1 bit
- Flow control: None

When the COM port setting is finished, press the [Enter] key to display the “IP1100CV login:” prompt.

# The setting screen menu list

The list of the menu items, displayed on the IP1100CV setting screen by default.

| Menu | Setting screen | Setting item |
|---|---|---|
| TOP | TOP | System Status |
| | | MAC Address |
| Information | Network Status | Interface List |
| | | Ethernet Port Connection Status |
| | | DHCP Lease Status |
| | SYSLOG | SYSLOG |
| Network Settings | IP Address | Host Name |
| | | IP Address |
| | DHCP Server | DHCP Server |
| | | Static DHCP |
| | | List of Static DHCP Settings |
| | Static Routing | Routing Table |
| | | Static Routing |
| | | List of Static Routing Entries |
| | Policy Routing | Source Address Routing |
| | | List of Source Address Routing Entries |
| | QoS | QoS Setting |
| | | QoS Rule |
| | | QoS Rule List |
| Router Settings | WAN | Connection Status |
| | | Connection Type |
| | NAT | NAT |
| | | DMZ Host |
| | | Port Forwarding |
| | | List of Port Forwarding Entries |
| | IP Filter | General Settings |
| | | IP Filter |
| | | List of IP Filter Entries |
| | Simple DNS | Simple DNS Server Settings |
| | | List of Simple DNS Server Settings |
| | VPN | IPsec Settings |
| | | IPsec Tunnel Settings |
| | | List of IPsec Tunnel Settings |
| Transceiver Controller | RoIP Settings | Additional Controller Settings |
| | | Advanced Settings |
| | Tenant (Fleet) Settings | Tenant (Fleet) |
| | RoIP Server | Call Type Priority |
| | Telephone Gateway Interconnect | Telephone Gateway Interconnection |
| | | Telephone Gateway Interconnection Entry List |
| | | Telephone Gateway Interconnection Group |
| | | Telephone Gateway Interconnection Group Entry List |
| | Additional Controller Link | Link Setting |
| | | Linked Controller List |
| | Area Call | Area Setting |
| | | Access Point Search |
| | | Area Entry List |
| | Transceiver Management | Transceiver Management |

## The setting screen menu list

| Menu | Setting screen | Setting item |
|---|---|---|
| Transceiver Controller | Transceiver Registration | Transceiver Settings |
| | | Transceiver Setting Entry List |
| | | TRX Batch Setting |
| | Transceiver Settings | Transceiver Settings |
| | | Certificate Management |
| | | Copy Transceiver Settings |
| | | Transceiver Setting List |
| | Wireless LAN | Wireless LAN |
| | | List of Wireless LAN Entries |
| | ID List | ID List Common Settings |
| | | ID List Advanced Settings |
| | | Save or Write the ID List Setting |
| | | ID List |
| | | ID List Entries |
| | Messages | Message Group |
| | | Message Group Detail |
| | | Save or Write the Message Setting |
| | | Message List |
| | Status | Status Settings |
| | Profile | Profile List |
| | | Profile |
| | | Profile Batch Setting |
| | Call Recording | Common Setting |
| | | Recorder Setting |
| | | List of Recording Box Entries |
| | Destination Settings | Destination Settings |
| | | List of Destination Setting Entries (All Call) |
| | | List of Destination Setting Entries (Group Call) |
| | | List of Destination Setting Entries (Talkgroup Call) |
| | | List of Destination Setting Entries (Multiplex Talkgroup Call) |
| | | List of Destination Setting Entries (Individual Call) |
| | | List of Destination Setting Entries (Telephone) |
| | | Destination Batch Setting |
| Management | Administrator | Administrator Password |
| | Date and Time | Date and Time |
| | | Time Zone |
| | | NTP |
| | | SNTP Server |
| | SYSLOG | SYSLOG |
| | SNMP | SNMP |
| | | SNMPv3 |
| | Management Tools | USB |
| | | HTTP/HTTPS |
| | | Telnet/SSH |
| | | Unit ID Confirmation |
| | Network Test | Ping Test |
| | | Traceroute Test |
| | Reboot | Reboot |
| | Settings Backup/Restore | Settings Backup |
| | | Settings Restore |
| | | List of Settings |

## The setting screen menu list

| Menu | Setting screen | Setting item |
|---|---|---|
| Management | Factory Defaults | Factory Defaults |
| | Firmware Update | Firmware Status |
| | | Online Update |
| | | Automatic Update |
| | | Manual Update |
| | Transceiver Firmware Update | Transceiver Firmware Status |
| | | Online Update |

# The feature functions

### Communication

- Transceiver management (Up to 300 entries)
- Simplex communication
- Full-Duplex communication
- Multiple communication
- All/Group call
- Talkgroup call
- Individual call
- Priority call
- Area call
- Status function (Up to 10 entries)
- Message function (Up to 10 entries)
- Phonebook (ID List)
  (IP110H: up to 500 entries, IP100H: up to 50 entries)
- Mute received audio
- Call audio recording
- Auto provisioning
- Additional controller link
- Bridge connection to the VE-PG3
- Communication with the Icom transceivers
  (Requires VE-PG3)

### Router

- PPPoE connection
- IP masquerade
- Static IP connection
- Static IP masquerade
- DHCP client
- DMZ
- DHCP server
- Static DHCP server
- Static routing
- Policy routing
- DNS proxy
- IP filter
- QoS
- VPN

### Network management

- SYSLOG
- SNMP (MIIB-II)

### System management

- Communication between different locations
- Bridge connection to a VoIP system
- Wireless LAN transceiver controller
- Gateway for IP transceivers

### Others

- Administrator Authentication
  (Administrator ID/Password)
- Internal clock settings
- Firmware updates (Web/USB)
- Setting backup/restore (Web/USB)
- Browser maintenance (HTTP/HTTPS)
- Telnet maintenance (TELNET/SSH)
- Console maintenance (USB)
- Online Firmware updates (Manual/Automatic)

# Specifications

## ■ General

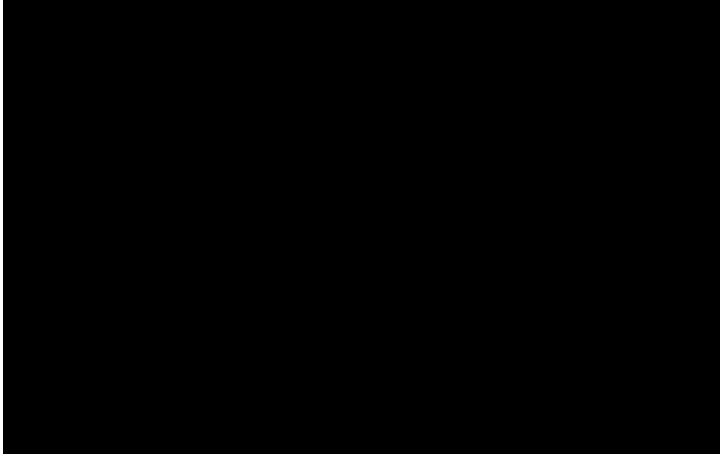
All stated specifications are subject to change without notice or obligation.

| | |
|---|---|
| Power supply: | 12 V DC ±10% [Polarity: ⊖—◉—⊕]<br>The optional power adapter (BC-207S, 100–240 V AC ±10%)<br>Maximum 33 W (with the BC-207S) |
| Usable condition: | Temperature 0 to 40°C, +32 to +104°F, Humidity 5–95% (At no condensation) |
| Dimension (approximate): | 213 (W) × 242 (D) × 36.8 (H) mm, 8.4 (W) × 9.5 (D) × 1.4 (H) in.<br>(Projections not included) |
| Weight (approximate): | 1.5 kg, 3.3 lb (Without accessories) |
| Regulatory Compliance: | FCC Part 15 Class B/ ICES003 (B),<br>EN 55032:2015/A11:2020, EN 55035:2017/A11:2020,<br>EN 61000-3-2:2014, EN 61000-3-3:2013,<br>EN 60950-1:2006/A11:2009+A1:2010+A12:2011 |
| Interface: | Indicators (POWER, MSG, ADVANCE, USB, VPN, V/RoIP, WAN, LAN)<br>Buttons (UPDATE, INIT, USB EJECT)<br>[USB] ports (USB A type, USB 3.0)<br>[CONSOLE] port (USB Type-C, USB 2.0) |

## ■ Communication interfaces

| | |
|---|---|
| Network ports: | [WAN] port (RJ45 type) ×1 (Auto MDI/MDI-X)<br>[LAN] port (RJ45 type) ×1 (Auto MDI/MDI-X)<br>• IEEE 802.3u/100BASE-TX<br>• IEEE 802.3ab/1000BASE-T<br>• IEEE 802.bz/2.5GBASE-T |
| Communication rate: | 100/1000/2500 Mbps (Automatic switching/Full-duplex) |

How the World Communicates





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