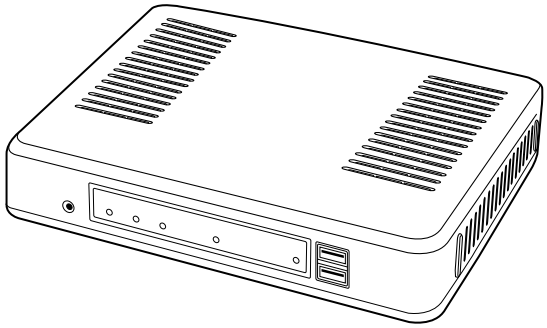
ICOM

INSTRUCTION MANUAL

IP ADVANCED RADIO SYSTEM
CONTROLLER

IP1000C



Icom Inc.

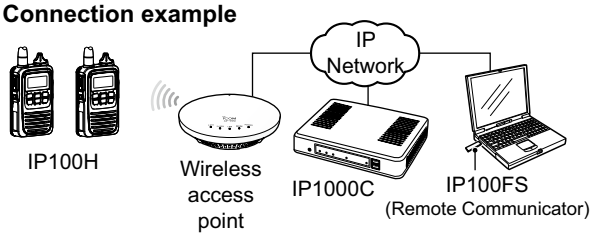
INTRODUCTION

Thank you for choosing this Icom product. The IP1000C IP ADVANCED RADIO SYSTEM 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 IP1000C.

FEATURES

- The IP1000C enables you to communicate through IP networks by using the IP1000C as a controller for the Icom Wireless LAN transceivers IP100H and IP110H (described as “WLAN transceivers” in this manual.)
  - A wireless access point is required.

Connection example



- A total of up to 100 WLAN transceivers and IP100FSs REMOTE COMMUNICATOR can be registered and used in the IP1000C system. (Depending on the IP1000C versions, only 20 terminals can be registered.)
  - The IP100FS enables you to remotely communicate with WLAN transceivers connected to your IP1000C from a PC through an IP network.
- The IP1000C has two methods of communications (Simplex and Full-Duplex.)
  - The Simplex is for communications where receptions and transmissions are done alternately one by one, and the Full-Duplex is for simultaneous receptions and transmissions as a telephone call.
- The call types are All Call, Group Call, Talkgroup Call, Individual Call, and Telephone Call.
  - The Talkgroup Call is the terminal selects the group that it belongs to.
- In the All Call, Group Call and Talkgroup Call, you can assign the simplex or full-duplex mode to the each calls.
- The Area Calls can be operated by limiting to a certain area.
- If you connect with Icom’s VE-PG3 (ver. 1.13 or later), you will be able to communicate with certain types of Icom transceivers.
  Also If you connect in bridge port with Icom’s VE-PG3 (ver. 1.03 or later), you will be able to communicate using the VoIP router, which enables you make extension phone calls and outline phone calls.
  Only the VE-PG3’s bridge ports that are set in the converter mode are connectable.
- A total of up to 50 ID list and 10 messages can be programmed for each setting group.
- Status settings can be programmed to send the status information (Example: Away from the desk) from the WLAN transceiver.
  - Up to 10 statuses can be programmed.
- The settings configured with the IP1000C is automatically set when the WLAN transceiver is turned ON.
- Automatic firmware updates for the WLAN transceivers can be done using the IP1000C.
- The LAN ports automatically select from 10BASE-T, 100BASE-TX or 1000BASE-T, and detect the port polarity type between MDI (straight) and MDI-X (crossover), depending on the connected devices.
- The [LAN] port is equipped with 4-port switching HUB.
- Supports SNMP as the network management.
- Automatic Restore using a USB flash drive.
- You can communicate with IP100Hs connected to the additional IP1000Cs on the network by using the [Additional Controller Link] function.
  - Use a VPN router such as Icom’s SR-VPN1 between sites, if necessary.

ⓘ This document is described based on the IP1000C firmware version 2.45.

OPTIONS

As of June 2022

OPC-1402A
Maintenance cable

IP100FS
REMOTE COMMUNICATOR

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

NOTE:
Approved Icom optional equipment is designed for optimal performance when used with an Icom transceiver.
Icom is not responsible for the destruction or damage to an Icom device in the event the Icom device is used with equipment that is not manufactured or approved by Icom.

NETWORK AND SYSTEM DEFAULT SETTINGS

Menu Item	Setting Window	Setting Item	Item Name	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
Management	Administrator	Administrator	Username	admin (fixed)
			Current Password:	admin (lower case)
	Date and Time	NTP	NTP Client	Enable
		SNTP Server	SNTP Server	Enable
	USB	USB	USB Flash Drive	Enable
			USB Access Permission	✓ Firmware Update
				✓ Backup/Restore
	Firmware Update	Automatic Update	Automatic Update	Enable

ⓘ See the Section 4 for more details on above settings.
ⓘ The Administrator's Username (admin) cannot be changed.

To prevent unauthorized access
• You must choose a strong password.
• Choose one that is not easy to guess.
• Use numbers, characters and letters (both lower and upper case).

SETTING PROCEDURE

Set up the IP1000C, following the procedure below.

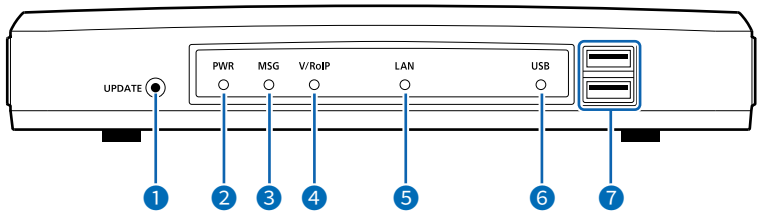
Step.1	Connect to a PC and turn ON the power	**CONNECTION GUIDE**
Step.2	Access the setting screen	**CONNECTION GUIDE/Section 2**
Step.3	Configuring the network connection	**pp. 4-11, 4-12**
Step.4	Registering the terminals	**pp. 2-5, 2-6**
Step.5	Configuring the settings for each terminals	**p. 2-7**
Step.6	Registering the terminals to a group	**p. 2-8**
Step.7	Configuring the settings for groups	**pp. 2-9 to 2-13**

BEFORE USING THE IP1000C

Section 1

1. Panel description

■ Front panel



❶ [UPDATE] button .....

When [MSG] lights green, a firmware update is ready.
To download and install the new firmware, hold down this button until [MSG] blinks.

- To use the Firmware Update function, an internet connection, DNS and default gateway settings are necessary.

❷ [PWR] .....

- Not lit: Power is OFF
- Lights green: Power is ON*1
- Blinks green: Booting*1*2
- Lights orange: Booting*1
- Blinks orange: Booting*1*2

*1 After the power is ON:
Blinks green > lights orange > blinks orange > lights green

*2 After [INIT] is pushed until the default resets are completed:
Blinks orange and green alternately.

❸ [MSG] .....

- Not lit: The latest firmware is installed
- Lights green: A firmware update is ready (Online update)
- Blinks green: Downloading new firmware (Online update)

❹ [V/RoIP] .....

- Not lit: No registration
- Lights green: IP communication terminal registered (More than 1 registration)

❺ [LAN]*3*4 .....

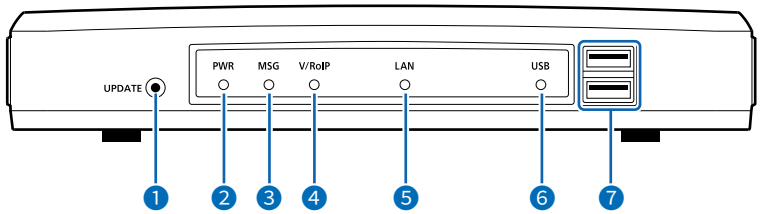
- Not lit: Not connected
- Lights green: LAN connected: All connections (1000BASE-T)
- Lights orange: LAN connected: More than 1 connection (10BASE-T/100BASE-TX)

*3 When 1000BASE-T/10BASE-T/100BASE-TX are mixed, the [LAN] LED lights orange.

*4 The data communication status for each [LAN] port can be checked with the [LAN] LED on the rear panel. (p. 1-4)

1. Panel description

■ Front panel



6 [USB].....

- Not lit: A USB flash drive is not inserted.
- Lights green: Inserting an USB flash drive.
- Blinks green: Accessing the USB flash drive*5
- Blinks orange: Accessing the USB flash drive*5

*5 While accessing (resetting or firmware updating) the USB flash drive, this LED alternately blinks green and orange.

7 [USB] ports (USB2.0×2) .....

If you insert the USB flash drive, the automatic load function for setting data can be used. When using the USB flash drive, detach the supplied power adapter, and then securely insert the USB flash drive into the [USB] port.

ⓘ Icom is not responsible for all the devices used with the USB flash drive.

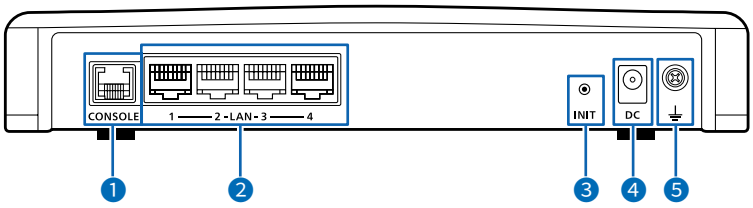
Using the Automatic Setting data upload with a USB flash drive

Insert a USB flash drive (purchase separately) to recover the configuration or to update the firmware. (p. 5-9)

- Turn OFF the IP1000C's power before inserting or removing the USB flash drive, to prevent data corruption.
- Either one of the USB slots accepts a USB flash drive, but insert only one drive at a time.
- Securely insert the USB flash drive.
- NEVER remove the USB flash drive or turn OFF the IP1000C's power, while transferring data. It will cause data corruption, or damage the USB flash drive.
- After the firmware updating is completed, check the firmware version on the setting window to verify that the update was correctly done.
- When importing setting data from the USB flash drive to the IP1000C, the originally programmed setting data is automatically saved as "bakdata.sav" on the USB flash drive, as a backup.
- A USB flash drive such as one with biometric authentication, or one with password protection is not supported.

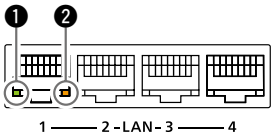
1. Panel description

■ Rear panel



❶ [CONSOLE] port (RJ-11 type) ..... Connect an RS-232C serial communication interface to externally configure the IP1000C. (Optional OPC-1402A is required.)

❷ [LAN] ports (RJ-45 type×4)..... Connect the network devices such as a HUB.
[LED indication]



Lights: LAN connected
Blinks: LAN data communicating
❶ Green: 1000BASE-T
❷ Orange: 10BASE-T/100BASE-TX

❸ [INIT] button ..... If you forget its IP address and you cannot access to the IP1000C setting screen, you can initialize (reset) the IP1000C by pushing [INIT] on the rear panel. (p. 5-4)
- See the “PRECAUTIONS” leaflet for details.
- Initializing resets all settings to the factory defaults.

❹ DC jack ..... Connect the supplied power adapter.

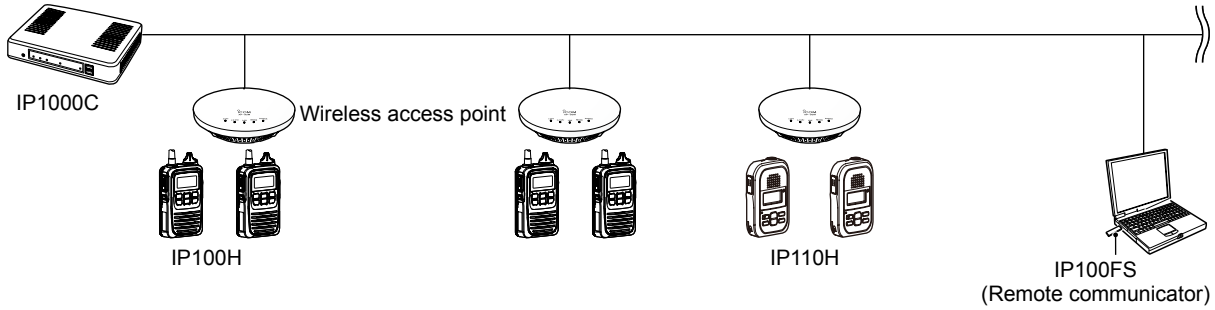
❺ Ground terminal..... Connect to the ground.

2. Feature description

■ About the basic connection

The IP1000C enables you to communicate through IP networks by using the IP1000C as a Controller for the WLAN transceivers.

- A wireless access point is required
- As of June 2022, the IP100H, IP110H, and IP100FS are available for the IP1000C client.



IP100H (WLAN transceiver)

IP100H enables you to communicate using the IP1000C and a wireless access point through IP networks.

- Verify the appropriate system formation according to the environment used, and then the IP communication terminal confirmation, wireless LAN settings and server settings using the CS-IP100H are required.
- See the IP100H instruction manual for more details.

IP100FS (Remote communicator)

The IP100FS enables you to remotely communicate with WLAN transceivers connected to your IP1000C from a PC through IP networks.

- See the IP100FS help file for more details.

CS-IP100H (Cloning software)

The CS-IP100H cloning software is designed to be used for data entry, setting and programming for the IP100H from a PC. (You can download the free software from the Icom's website)

- Connect the cloning cables correctly according to the CS-IP100H instruction manual uploaded on the Icom's website. Read the instruction carefully and completely.

IP110H (WLAN transceiver)

IP110H enables you to communicate using the IP1000C and a wireless access point through IP networks.

- Verify the appropriate system formation according to the environment used, and then the IP communication terminal confirmation, wireless LAN settings and server settings using the CS-IP110H are required.
- See the IP110H instruction manual for more details.

CS-IP110H (Programming software)

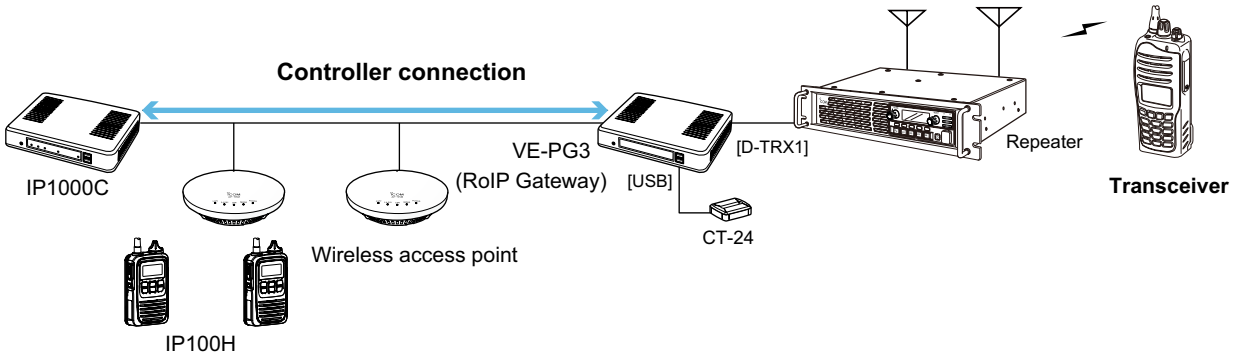
The CS-IP110H programming software is designed to be used for data entry, setting and programming for the IP110H from a PC. (You can download the free software from the Icom's website)

- Connect the programming cables correctly according to the CS-IP110H instruction manual uploaded on the Icom's website. Read the instruction carefully and completely.

2. Feature description

■ Connecting transceivers

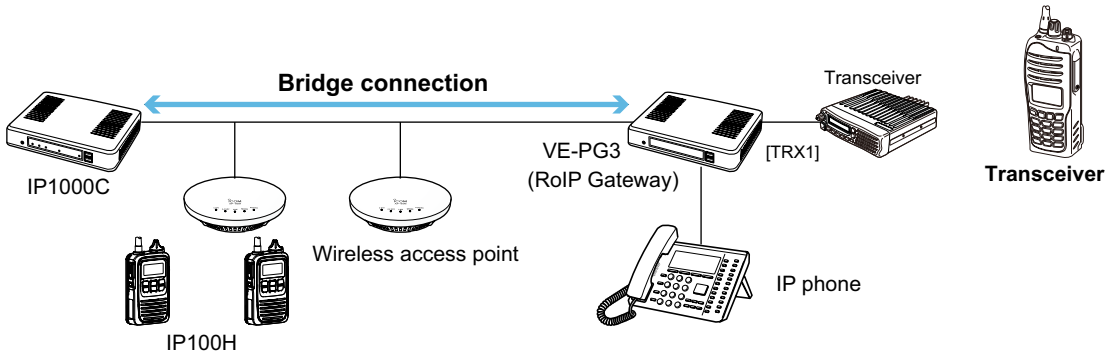
If you connect in controller connection with Icom's VE-PG3 (ver. 2.01 or later), you will be able to communicate with certain types of our transceivers.



ⓘ Only the VE-PG3's controller ports that are set as the bridge mode are connectable.

■ Connecting a telephone and transceivers

If you connect in bridge connection with Icom's VE-PG3 (ver. 1.13 or later), you will be able to communicate with certain types of our transceivers and also, using the VoIP router enables you make extension phone calls and outline phone calls.



ⓘ Only the VE-PG3's bridge ports that are set as the converter mode are connectable.

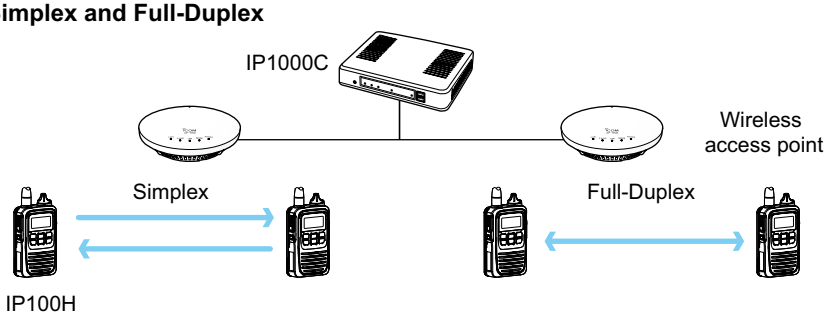
2. Feature description

■ Simplex and Full-Duplex

The IP1000C has two methods of communications (Simplex and Full-Duplex.)
The Simplex is for communications where receptions and transmissions are done alternately one by one, and the Full-Duplex is for simultaneous receptions and transmissions as a telephone call.
Set the Communication Method in “Transceiver Settings” for each IP communication terminal registered to the IP1000C.

- The Full-Duplex communications are done by connecting a microphone (purchase separately) to the IP100H.
- If no microphone is connected to the IP100H, the communication method is automatically set as Simplex.

Simplex and Full-Duplex

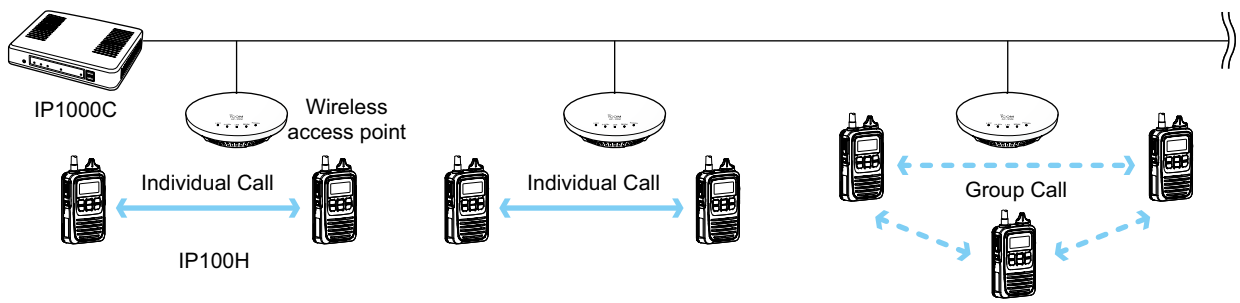


		Connection cables	Full-Duplex		Simplex	IP100H VOX function*1 (Set in the IP1000C)
			Hands free	PTT operation		
HM-153	EARPHONE MICROPHONE	OPC-2144		✓	✓	—
HM-153LS	EARPHONE MICROPHONE	—		✓	✓	—
HM-166	EARPHONE MICROPHONE	OPC-2144		✓	✓	—
HM-166LS	EARPHONE MICROPHONE	—		✓	✓	—
HM-183LS	SPEAKER MICROPHONE	—			✓	—
HM-186	SPEAKER MICROPHONE	OPC-2144			✓	—
HM-186LS	SPEAKER MICROPHONE	—			✓	—
HS-85 (Discontinued product)	VOX UNIT	OPC-2144	✓	✓	✓	Disable*2
HS-94	HEADSET	OPC-2006LS			✓	Enable
HS-95	HEADSET	OPC-2006LS			✓	Enable
HS-97	THROAT MICROPHONE	OPC-2006LS			✓	Enable
HS-102	HEADSET	OPC-2359*3	✓	✓	✓	Enable

*1 When a headset that supports the VOX function is connected, the communication mode automatically changes between reception and transmission by verifying the communication voice.
*2 Select [VOX] on the HS-85.
*3 Receive by using the OPC-2359.

■ Multi communication

To prevent a crosstalk in the IP network, simultaneous multiple communications can be made in the system.



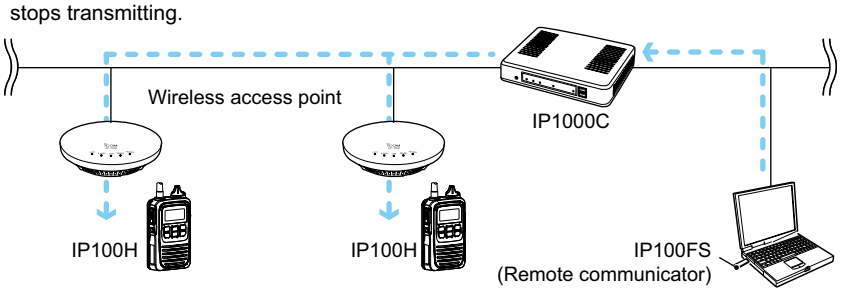
2. Feature description

■ All Call and Group Call

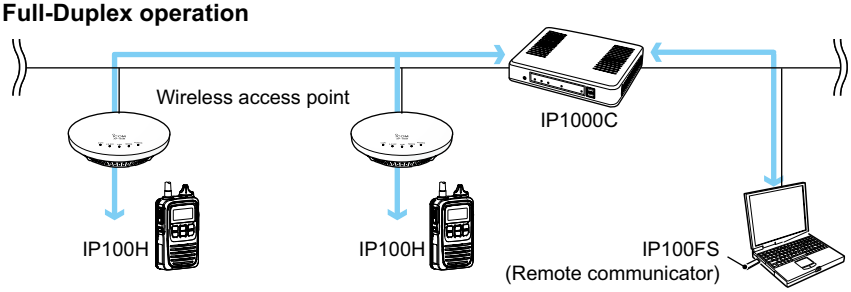
Simplex or Full-Duplex communication can be set for the All Call and Group Call.

Simplex operation

• When the Simplex is selected, the called station cannot reply until the caller station stops transmitting.



Full-Duplex operation



About All Calls

The All Call function is used to call all the WLAN transceivers and IP100FS that are registered in the Transceiver Registration window in the IP1000C.

About Group Calls

The Group Call function is used to call the desired group selected from the ID List.

• It is required to divide the registered WLAN transceivers and IP100FS in the [Transceiver Registration] screen into groups in the [Destination Settings] screen.

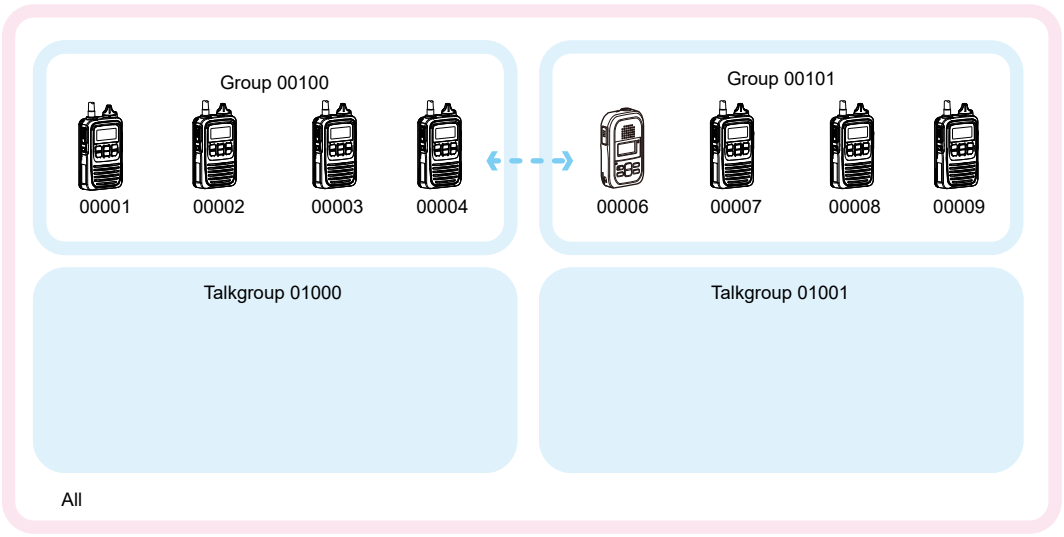
• The ID List and the destination settings set in the IP1000C are commonly used in each group that the WLAN transceivers and IP100FS belong to.

2. Feature description

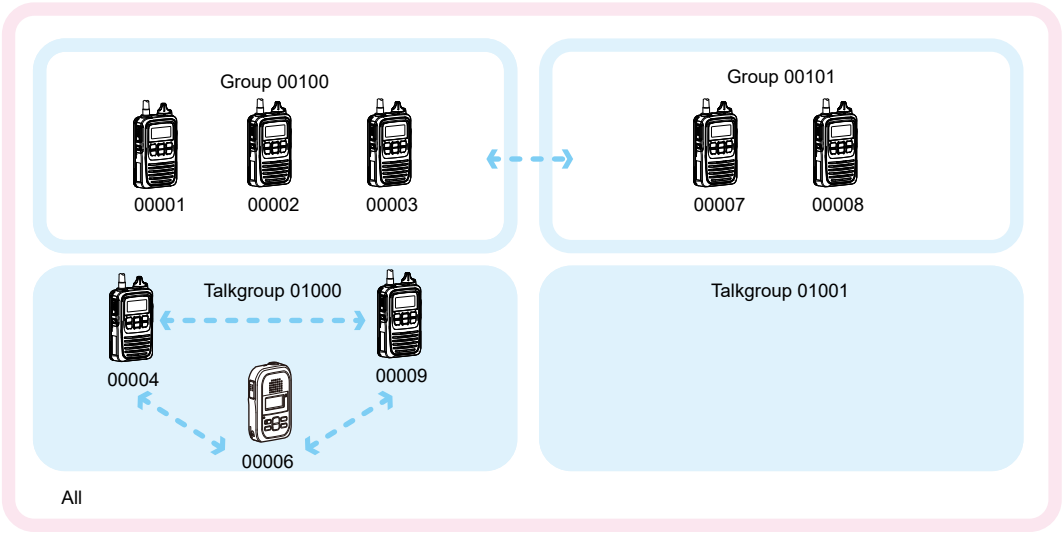
■ Talkgroup Call

The Talkgroup Call function allows user to select the group that belong to it from previously registered groups in the IP1000C.
When users select Talkgroup 01000, terminals are excluded from the original groups, as illustrated below.

When Talkgroup is OFF



When Talkgroup is selected



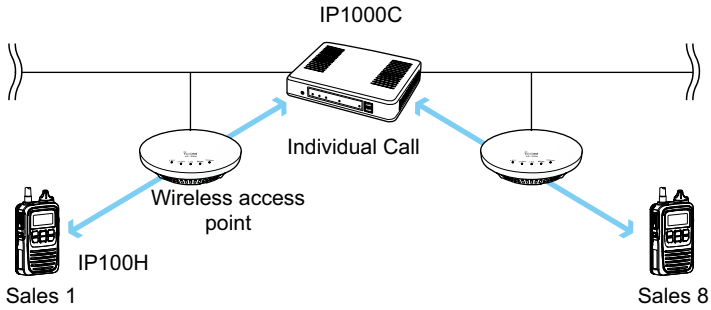
- The Talkgroup Call is required to register the Talkgroups in the [Destination Settings] screen and [ID List] screen. If the “Talkgroup Type” in the [Destination Settings] screen is set to “Multiplex Talkgroup,” the WLAN transceivers can make a Talkgroup Call between the linked talkgroups.
- Set to the IP1000C 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 IP1000C are commonly used in each group that the WLAN transceivers and IP100FS belong to.

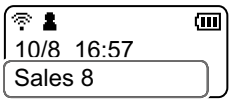
2. Feature description

■ Individual Call

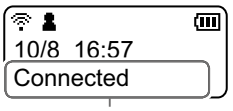
Individual Call is when you talk to a desired transceiver 1 on 1.
When an individual call is made, the WLAN transceiver displays the connection result. (Connected, Busy, or No response)

- If the destination that you are calling is out of range, “No response” is displayed.
- If desired, set the Receive Notification Tone in the [Common Settings] Screen in the [Common Settings] menu to notify a Call is received.





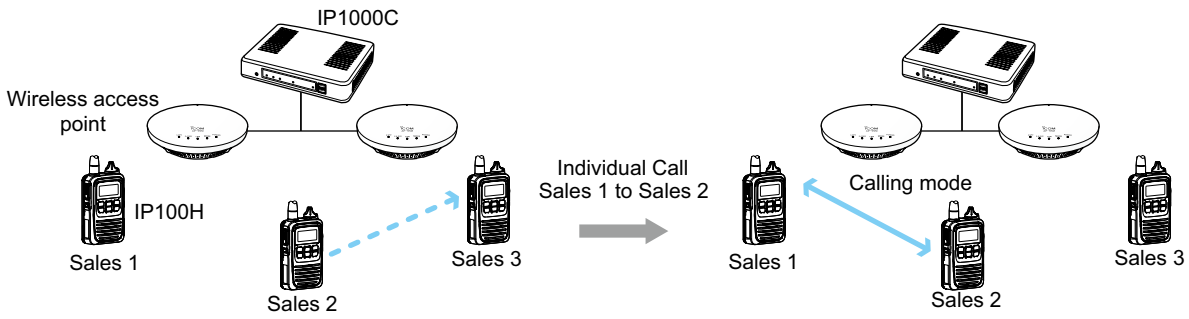
Selecting an Individual Call
(Example: Sales 1 calling Sales 8)



The display after transmitting

■ Calling mode

When you are receiving or transmitting, the transceiver is in the calling mode.
While in the calling mode, only the transmitting operation is needed to communicate with the transceiver you are calling.



Regular Individual Call destination: Sales 3

While in the calling mode, the Individual Call destination is changed to Sales 1.

About TalkBack Timer

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

About blocking the communications while in the TalkBack Timer

If there are new calls while in the TalkBack Timer, it is set to receive the calls in the priority order. (p. 4-133)

- A call cannot be received if it has an equal or lower priority than the call you are now making. Calls will be received after the TalkBack Timer.
- The TalkBack Timer that are commonly used by the WLAN transceivers belonged to the setting group is set in the IP1000C.

2. Feature description

■ Priority Call and its priority

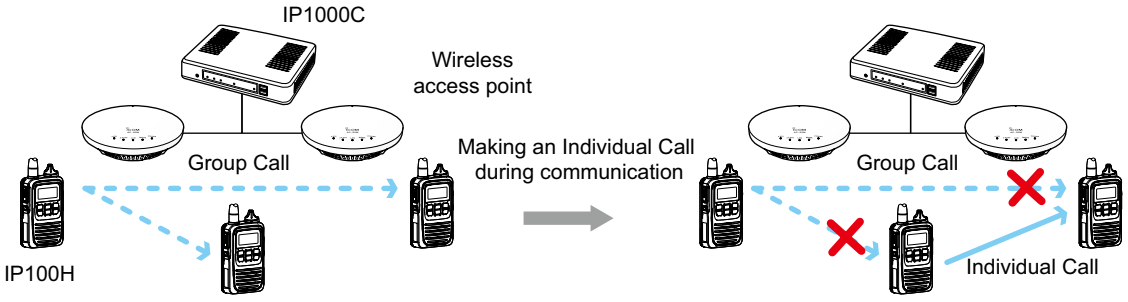
The Priority Call function is set to “Disable” in the default setting.
The priority levels of the Call types are in the following order.

Priority level	Priority	Call type	Priority Call	Remarks
High ↕ Low	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	—
		Group Call (Normal)	Disable	Includes the Area Call

* Selectable in the Call Type Priority item in the [RoIP Server] screen in the [RoIP Server settings] menu. (p. 4-22)

• The priority is given to the first call between calls with the same priority level.
• The reply call follows the priority level of the talk side.

Change the target during communication with the Priority Call function enabled

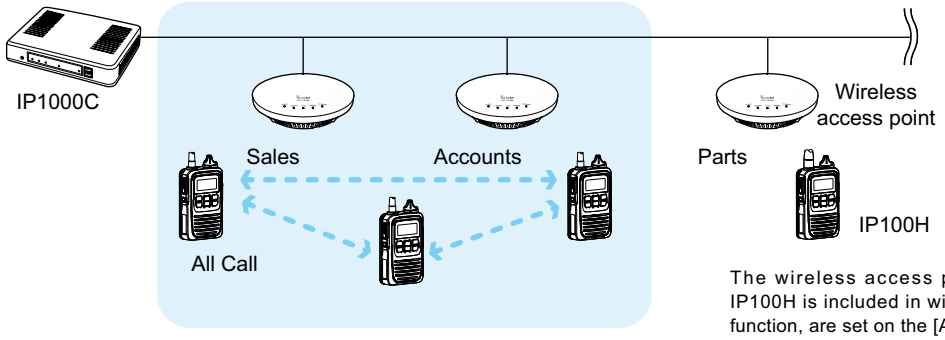


2. Feature description

■ Area Call

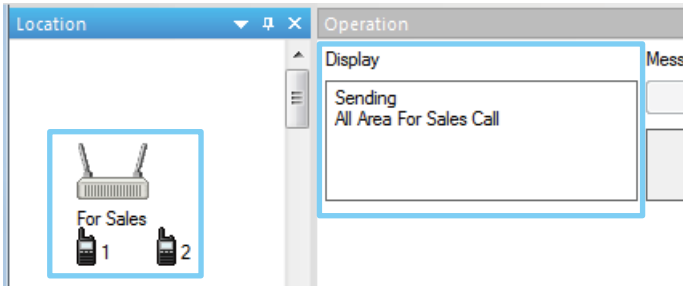
This function is used when operating by limiting to a certain area. (Default: Disable)
If you make an All Call or Group Call when Area Call in the WLAN transceiver is set to ON, the WLAN transceiver and IP100FS that are in the same area with the WLAN transceiver connected to the wireless access point are called.

IP100H makes an All Call with the Area Call function



The wireless access points that the IP100H is included in with the Area Call function, are set on the [Area Call] screen in the [RoIP Server Settings] menu.
(Example: For Sales and For Accounts)

IP100FS calls the All Call with the Area Call function



When the IP100FS uses the Area Call function, can call IP100Hs that are in the communication range of the access points assigned to the Area Call.
Select the access point in the [Location], the Call type (Individual, Group, All, Area or Telephone) and names are displayed

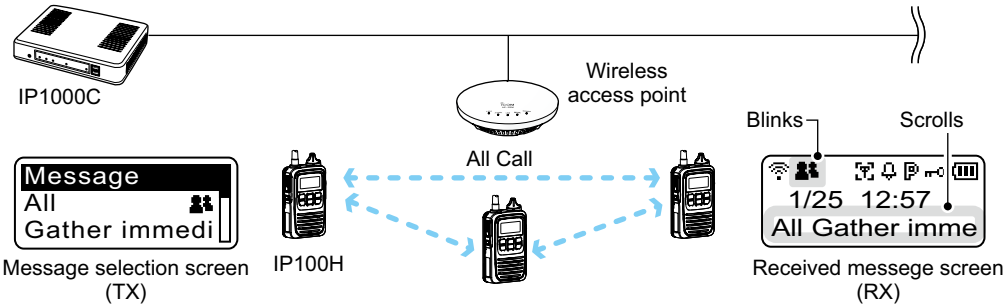
To use Area Call, it is required to enable the [Area Call] for each WLAN transceiver in the [Transceiver Settings] screen, and then register the area's wireless access point (BSSID) in the [Area Entry List].

2. Feature description

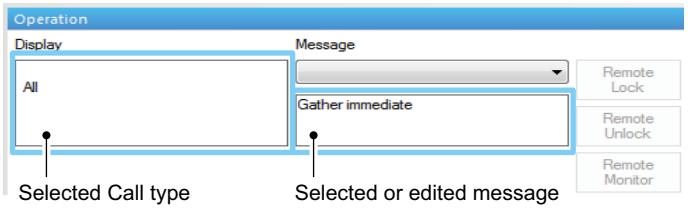
■ Messages

Set this function to send a message with the WLAN transceiver and IP100FS. (Default: Disable)
The fixed messages of up to 32 characters to send can be set in the [Messages] screen of the [Common Setting] Menu. Up to 10 messages can be registered.

IP100H transmits a message



IP100FS transmits a message



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

- To use this function, requires to enable the [Message] item in the [Transceiver Settings] screen for each WLAN transceiver.
- The messages that are registered to the IP1000C are commonly used by the WLAN transceivers that belong to the setting group.

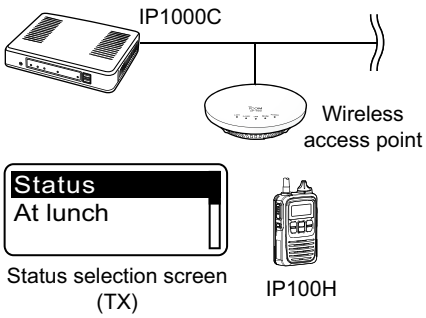
2. Feature description

■ About Status Settings

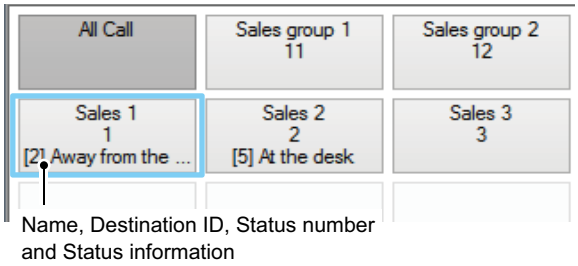
Set the Status to send the status information (Example: Away from the desk) from the WLAN transceiver.
(Default: Disable)

- The status information of up to 32 characters can be programmed in the [Status] screen on the [Common Settings] menu. Up to 10 status can be programmed.
- The status information sent using the WLAN transceiver can be displayed in the One-Touch Button screen or in the [Transceiver Management] screen on the [Transceiver Settings] menu.

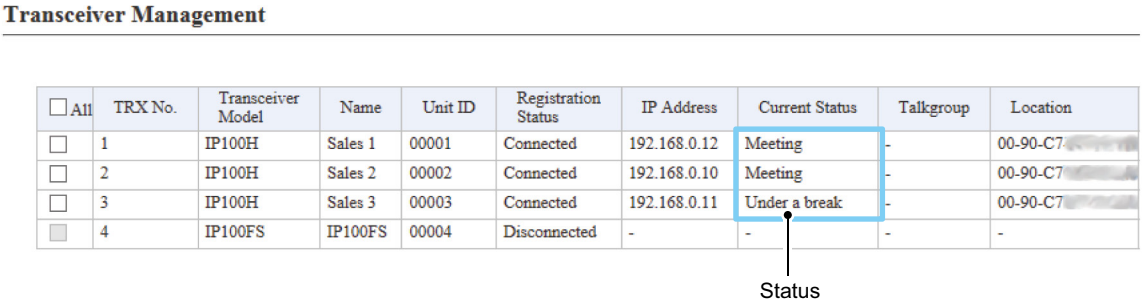
IP100H sends the Status



IP100FS One-Touch button



IP1000C Transceiver Management screen



To use this function, requires to enable the [Status] item in the [Transceiver Settings] screen for each WLAN transceiver.

SETTING UP THE IP1000C SYSTEM

Section 2

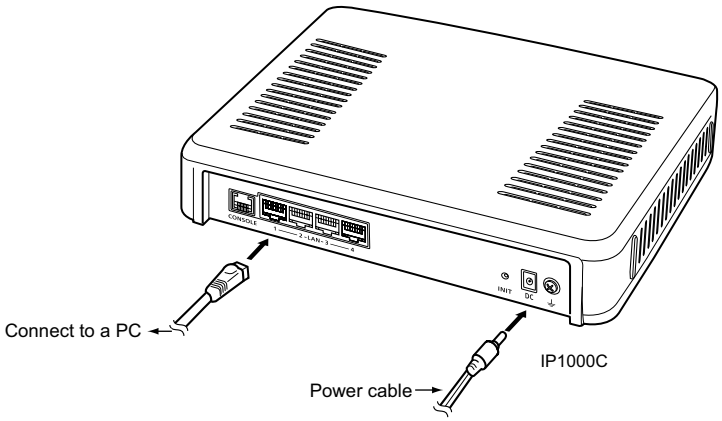
1. Flow using the WLAN transceiver

■ Prepare for connection and settings

This is an explanation of the flow from connecting with PC to accessing to the Setting screen.

1. Connect to a PC and turn ON the power **See the CONNECTION GUIDE (Separated) for details**

Connect a PC to the IP1000C's [LAN] port, and insert the power cable into the [DC] jack.



2. Access the setting screen **See the CONNECTION GUIDE (Separated) for details**

1. Open your web browser, then enter the IP address of the IP1000C into the address bar.
   ⓘ The default IP address is "192.168.0.1." (http://192.168.0.1/)
2. Push the [Enter] key.
   • The Login Authentication screen will appear.
3. Enter "admin" (fixed username) and "admin" (default password) in their respective input fields on the Login Authentication screen, and then click <OK>.

■ About the Setting procedures

This is an example flow that the setting procedures of the WLAN transceivers using the IP1000C setting screen. This manual explains after completing the wireless access point settings that the WLAN transceivers connect to.

1. Network Settings (pp. 4-11, 4-12)

Enter an IP address (default: 192.168.0.1) on the [IP Address] screen, and a DHCP server setting (default: Disable) on the [DHCP Server] screen, according to your system environment.

2 SETTING UP THE IP1000C SYSTEM

1. Flow using the WLAN transceiver

■ About the Setting procedures

2. Transceiver presettings

Register the IP100H, IP110H, or IP100FS to use into this IP1000C.

[Transceiver Registration] screen (pp. 2-5, 4-34)
Enter the Transceiver model, Name and Unit ID, Password and Setting group.
ⓘ The default password is “iptrx,” and you can change it for security.
ⓘ The common settings that are used by the group, are set in the [Common Settings] menu.

Setting by the CS-IP100H/CS-IP110H cloning (programming) software (p. 2-6)
After WLAN transceivers are registered to the IP1000C, set the wireless LAN setting, provisioning server setting (IP1000C) to all the WLAN transceivers.

- The CS-IP100H and CS-IP110H is a freeware that can be downloaded from the Icom website.
- First, read the instructions of the CS-IP100H and CS-IP110H that can be downloaded from the Icom website, and follow its procedure to connect the programming cable between the WLAN transceiver and a PC.

3. Transceiver Settings (pp. 4-38, to 4-137)

Set or assign the functions to all the WLAN transceivers that are registered on the [Transceiver Registration] screen.

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

4. Destination Settings (p. 2-8)

The registered WLAN transceivers or IP100FS on the [Transceiver Registration] screen, are assigned to a group, assigned a group ID and the communication type is set on the [Destination Settings] screen.

5. Common Settings (pp. 2-10 to 2-13)

Set 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 an IP1000C’s bridge connection is made with a VE-PG3, you can register the telephone number of the IP phone.

[Message] screen
Enter messages that the WLAN transceivers will send.
Up to 32 characters can be programmed. (Up to 10 messages.)

[Status] screen
Enter Statuses that the WLAN transceivers will send.
Up to 32 characters can be programmed. (Up to 10 statuses.)

[Common Settings] screen
Specify the ID list and message list of the group that the WLAN transceivers belongs.

1. Flow using the WLAN transceiver

■ About the Setting procedures

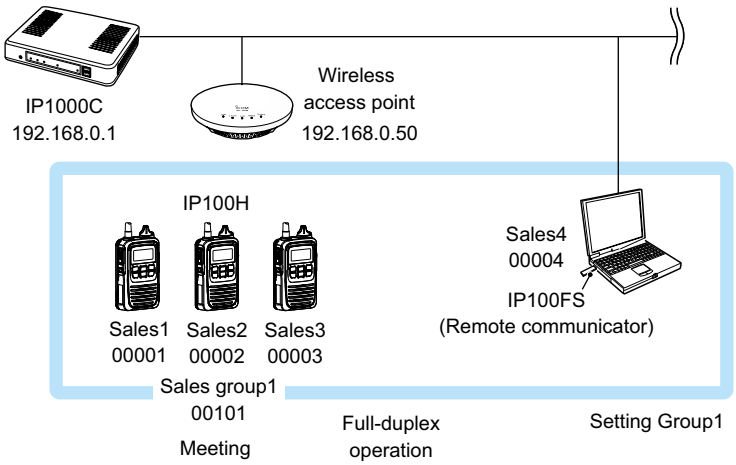
6. Mic gain, Notification beep or Talkback setting (pp. 4-38 to 4-136)

Depending on your system requirement, set the mic gain or assign the VOX function on the [Transceiver Settings] screen, set common settings, such as the various notice tones, talkback settings on the [Common Settings] screen.

About updating setup
If the IP1000C's setup has been changed, be sure to reboot the WLAN transceiver to read its setting.

2. Transceiver settings

Each terminal requires that you set the unit ID and so on.
The following illustration is an example of setting requirements to register an IP100H to an IP1000C.



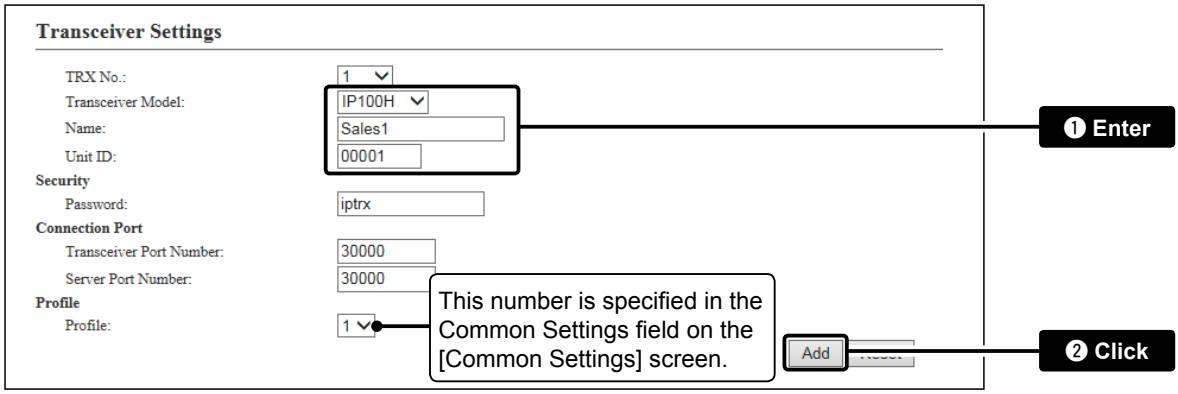
- Connect a wireless access point to the IP1000C network.
- Up to 100 of the total WLAN transceivers and IP100FS can register to the IP1000C.
- (Depending on the IP1000C versions, up to 20 of total WLAN transceivers and IP100FS can be registered.)
- This section describes the IP100H as an example of a WLAN transceiver.
- This manual explains that IP addresses of the WLAN transceivers or a PC using the IP100FS are automatically assigned by the DHCP server on the network.
- When assigning static IP addresses to the terminals, make sure that the addresses of the devices on the network do not overlap or conflict.

■ Registering the terminals

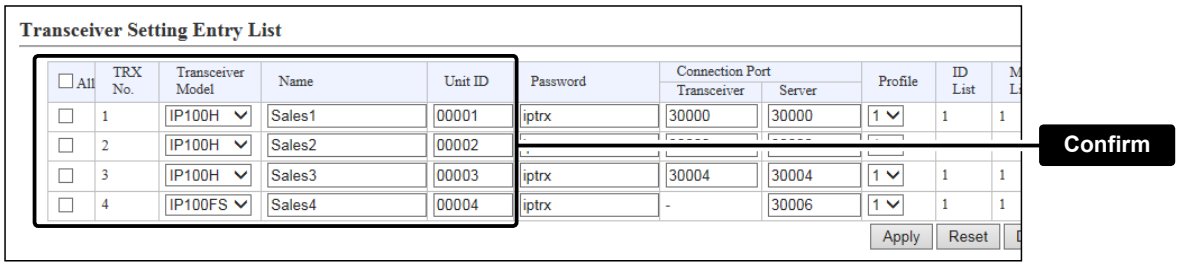
Set the Unit ID (Individual number) to register each WLAN transceiver or IP100FS.

1 Click [Transceiver Settings], then [Transceiver Registration].
• The [Transceiver Registration] screen is displayed.

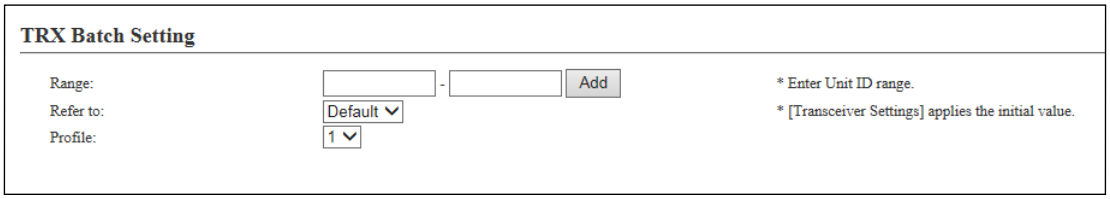
2 Enter the “Transceiver Model,” “Name” and “Unit ID” items in the “Transceiver Settings” field, and then click <Add>.



3 After registration is finished, confirm the registered contents the terminal in the “Transceiver Setting Entry List” field. (See pages 2-7 to 2-10.)



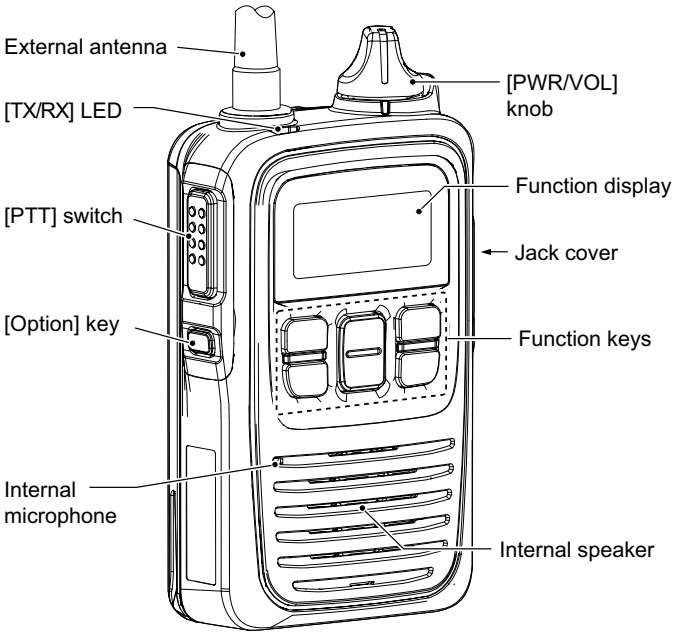
About the TRX Batch Setting
You can register a consecutive Destination ID collectively. You can also copy the Destination ID settings to other Destination ID settings.

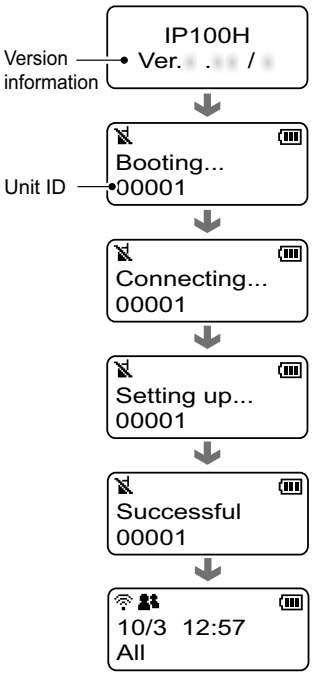


2. Transceiver settings

■ Confirming the registration and rebooting the WLAN transceiver

(Example: For the IP100H)
After the registration of the IP100H to the IP1000C is completed, program the IP100H using the CS-IP100H cloning software and a PC.
After that, reboot the IP100H and it will automatically read the contents of the IP1000C's setting.
• The CS-IP100H is a freeware that can be downloaded from the Icom website.
• If the IP100H will not display the standby screen, check the settings of the IP1000C and the wireless access point.





(Standby screen)

• Signal strength indicator
Displays the signal strength in three levels when your communication terminal is in a service area.
"" blinks when you are in out of the service area, and "" appears if your communication terminal is not registered, or not connected to the IP1000C.

About updating setup
If the IP1000C's setup has been changed, be sure to reboot the IP100H to read its setting.

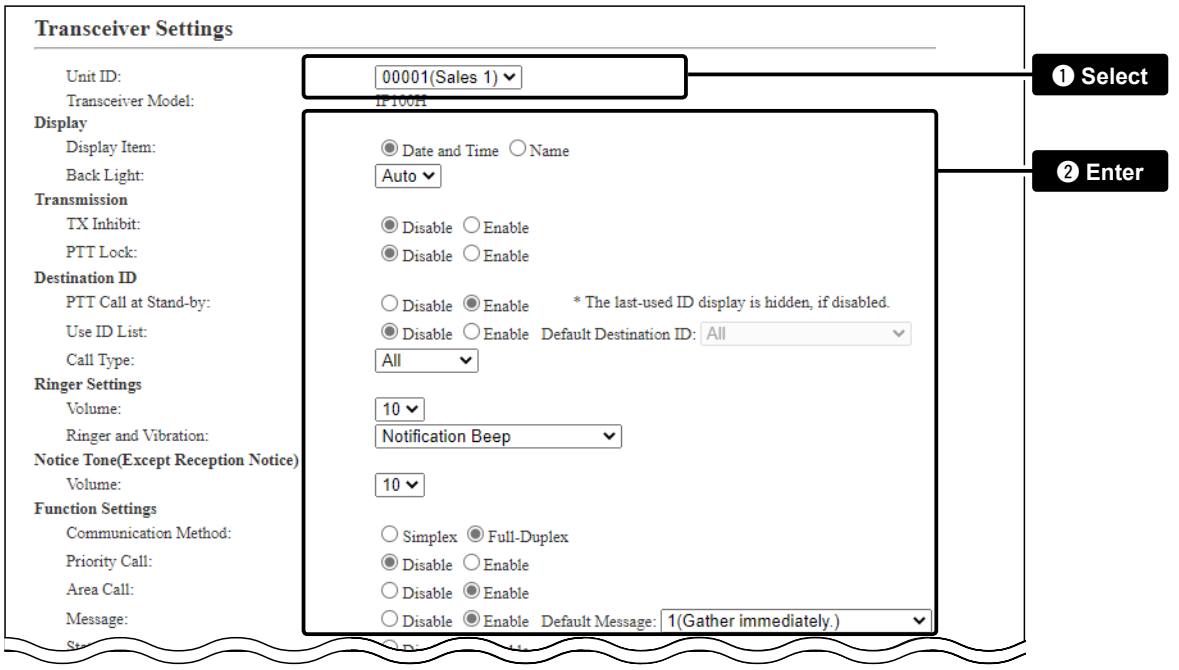
2. Transceiver settings

■ About the WLAN transceiver settings

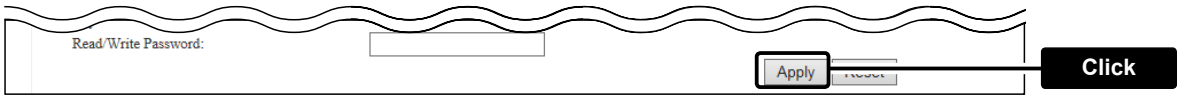
Example: For the IP100H
Set and assign functions to each registered WLAN transceiver.
After the settings have been changed, the WLAN transceiver needs to be rebooted.

1 Click [Transceiver Settings], then [Transceiver Settings].
• The [Transceiver Settings] screen is displayed.

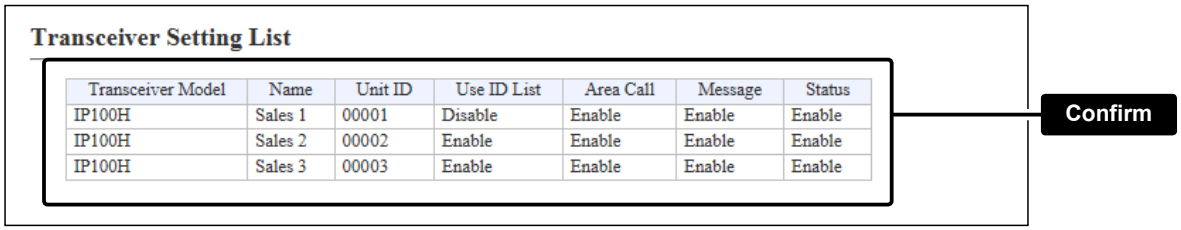
2 Select the “Unit ID” item to be set, then select and assign functions, depending on your requirements.



3 Click <Apply>.



4 After registration is finished, confirm the registered contents in the “Transceiver Setting List” field.



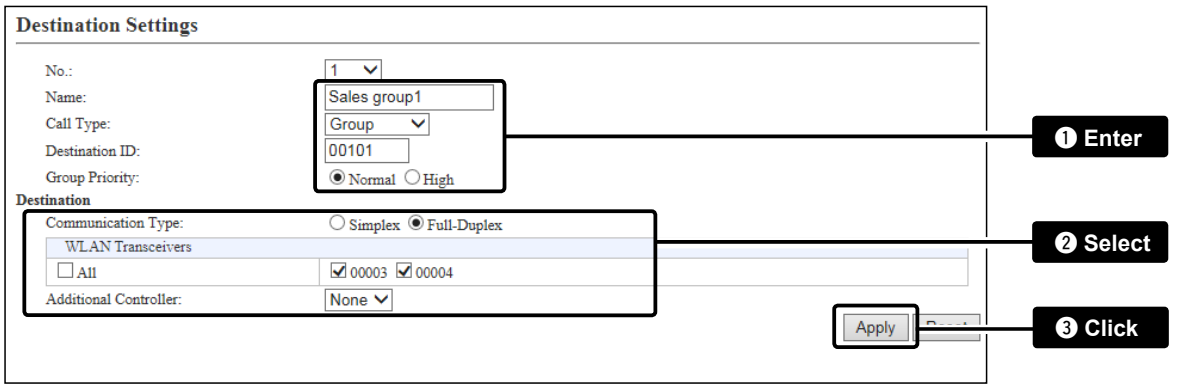
Transceiver Model	Name	Unit ID	Use ID List	Area Call	Message	Status
IP100H	Sales 1	00001	Disable	Enable	Enable	Enable
IP100H	Sales 2	00002	Enable	Enable	Enable	Enable
IP100H	Sales 3	00003	Enable	Enable	Enable	Enable

■ About the Group calls

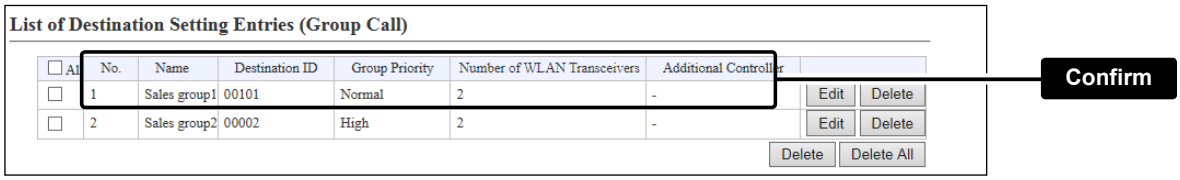
This topic describes registering WLAN transceivers or IP100FSs to a group, and they communicate with the full-duplex operation between three or more members as meeting.
After the settings have been changed, the WLAN transceiver needs to be rebooted.

1 Click [Destination Settings].
• The [Destination Settings] screen is displayed.

2 Enter the group name, Call type, and Group ID (00001 ~ 60000) in the “Destination Settings” field, then select the terminals in the list that belong to the group. Click <Apply>.



3 After registration is finished, confirm the registered contents in the “List of Destination Setting Entries (Group Call)” field.



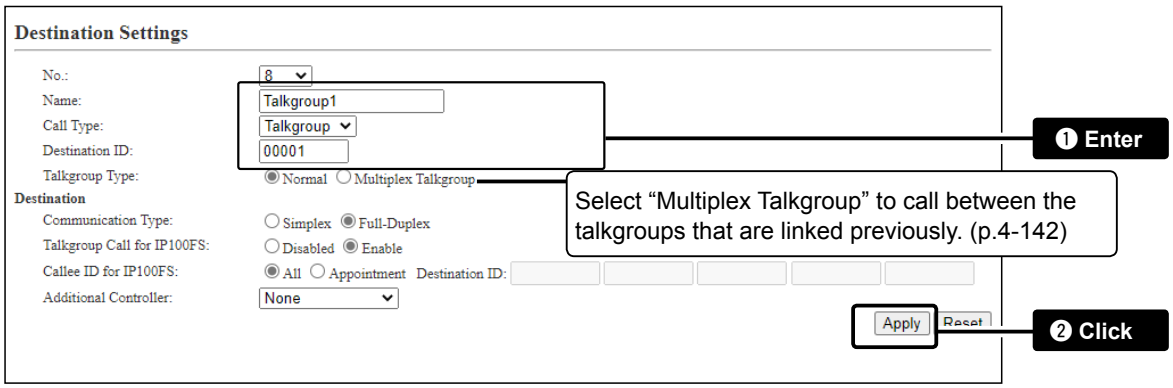
2. Transceiver settings

■ About the Talkgroup calls

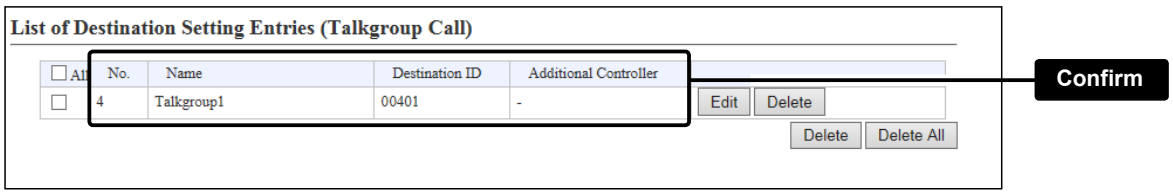
This topic describes registering WLAN transceivers or IP100FSs to a Talkgroup, and they communicate with the full-duplex operation between three or more members as meeting.
The Talkgroup Call function allows user to select the group that belong to it from previously registered groups in the IP1000C.
The [FUNC] key or [ID List] key can be assigned for selecting the Talkgroup.
After the settings have been changed, the WLAN transceiver needs to be rebooted.

1 Click [Destination Settings].
• The [Destination Settings] screen is displayed.

2 Enter the Talkgroup name, Call type, and Group ID (00001 ~ 60000) in the “Destination Settings” field. Click <Apply>.



3 After registration is finished, confirm the registered contents in the “List of Destination Setting Entries (TalkGroup Call)” field.



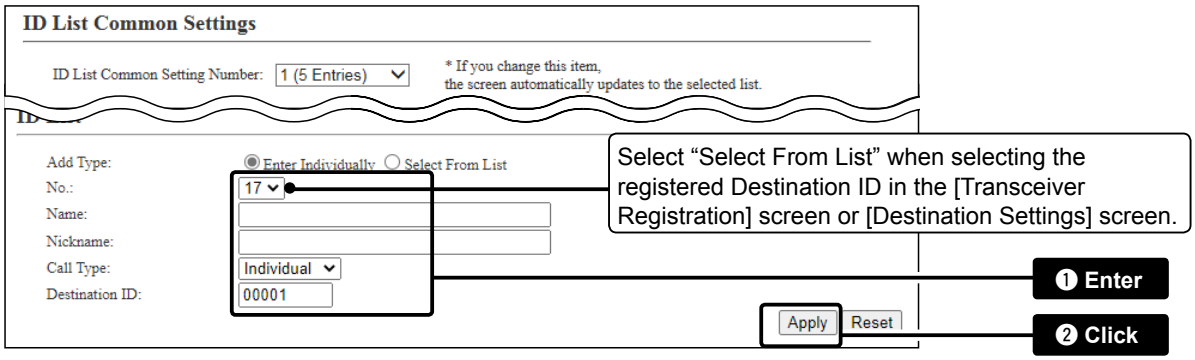
■ About the ID list

Enter Names, Call types and so on in an ID list that the WLAN transceiver will use.
After registration is finished, the WLAN transceiver needs to be rebooted.
When using the ID list, set the “Use ID List” to “Enable.” (p.4-40)

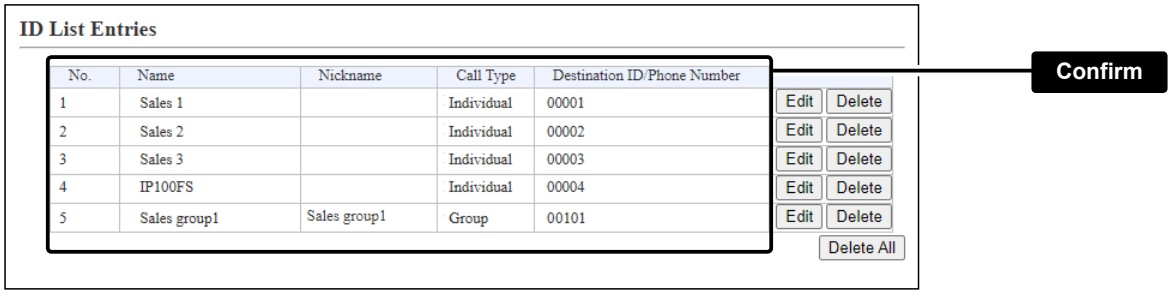
1 Click [Common Settings], then [ID list].
• The [ID List] screen is displayed.

2 Select the ID list group in the “ID List Common Settings” field.
• The ID list group number (example: 1) is used in the “ID List” item on the [Common Settings] screen.

3 Enter the name, Call type, and destination ID (00001 ~ 60000) in the “ID List” field, then click <Apply>.



4 After registration is finished, confirm the registered contents in the “ID List Entries” field.



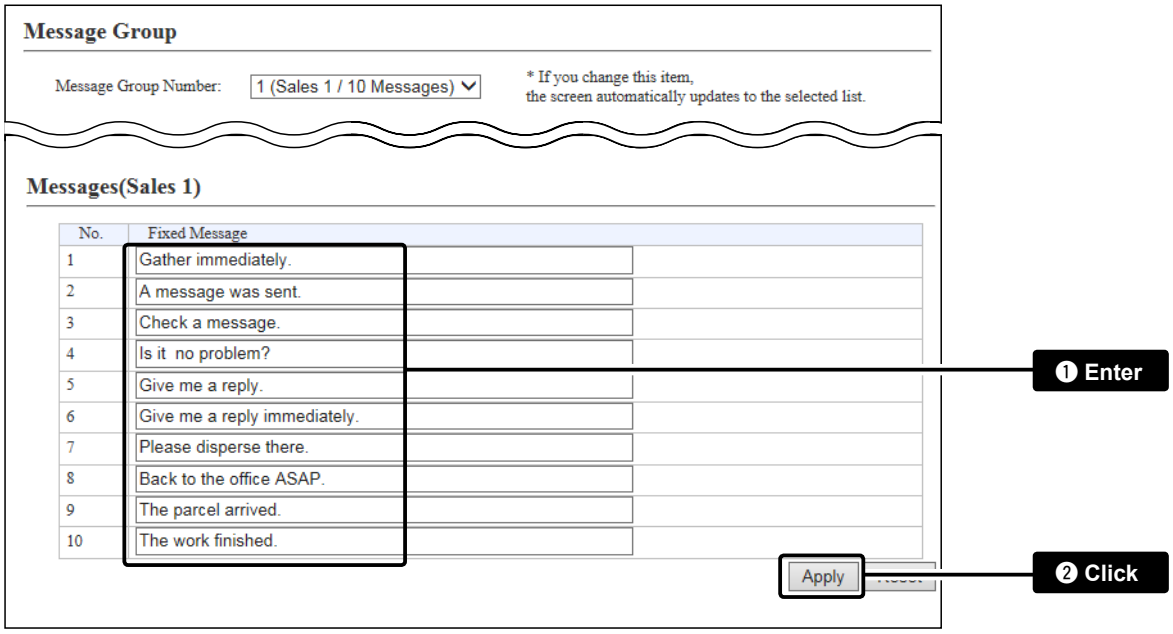
■ About messages

Enter messages that the WLAN transceivers will transmit.
After registration is finished, the WLAN transceiver needs to be rebooted.
When using the Message, set the “Message” to “Enable.” (p.4-45)

1 Click [Common Settings], then [Messages].
• The [Messages] screen is displayed.

2 Select the message group number in the “Message Group” field.
• The message group number (example: 1) is used in the “Message List” item on the [Common Settings] screen.

3 Enter a message of up to 32 characters in the “Messages” field. Then click <Apply>.
• Up to 10 messages can be registered in each group.

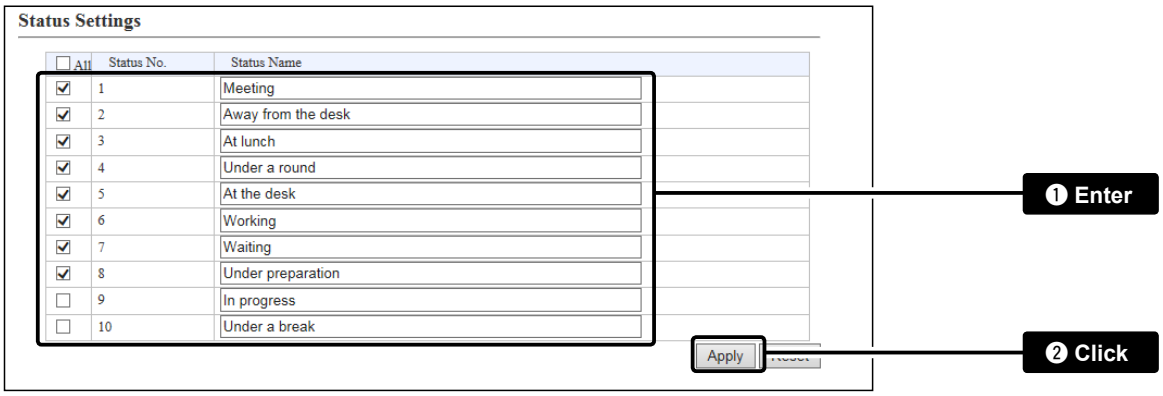


■ About the status settings

Enter the status that the WLAN transceiver will transmit.
After registration is finished, the WLAN transceiver needs to be rebooted.
When using the Status, set the “Status” to “Enable.” (p.4-46)

1 Click [Common Settings], then [Status].
• The [Status] screen is displayed.

2 Enter a status of up to 32 characters in the “Status Setting” field. Then click <Apply>.
ⓘ Up to 10 statuses can be entered.
ⓘ The items that are unchecked are not displayed on the WLAN transceiver.



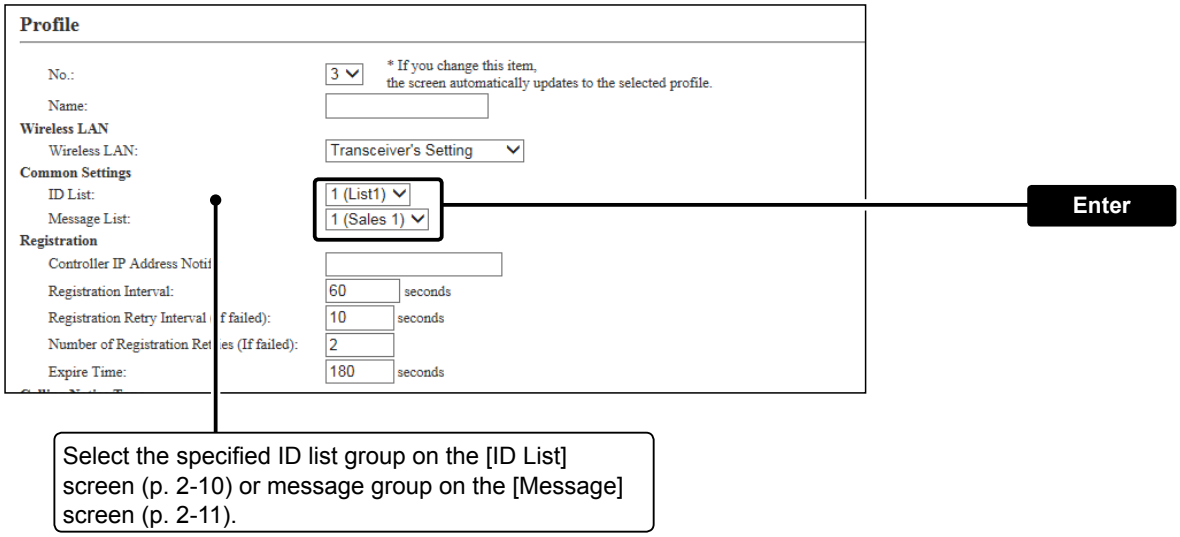
■ About commonly use the ID list and message in the group

Specify the ID and message lists of the group that the WLAN transceiver belongs to.
After registration is finished, the WLAN transceiver needs to be rebooted.

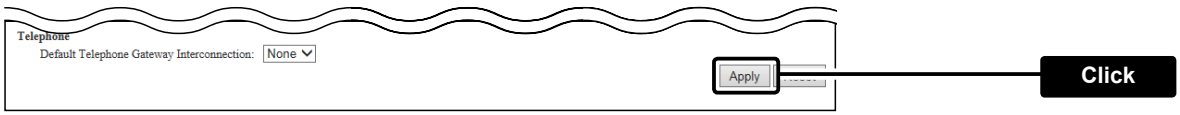
1 Click [Common Settings], then [Profile].
- The [Profile] screen is displayed.

2 Select the profile number in the “Profile” field.
- The profile number setting (example: 1) is specified in the “Profile” item on the [Transceiver Registration] screen in each WLAN transceiver.

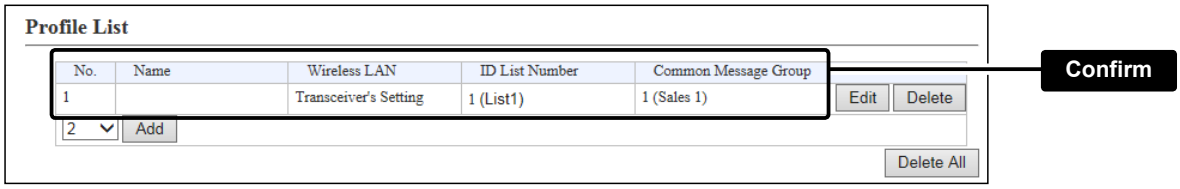
3 Select the “ID List” and “Message List” in the “Profile” field.



4 Click <Apply>.

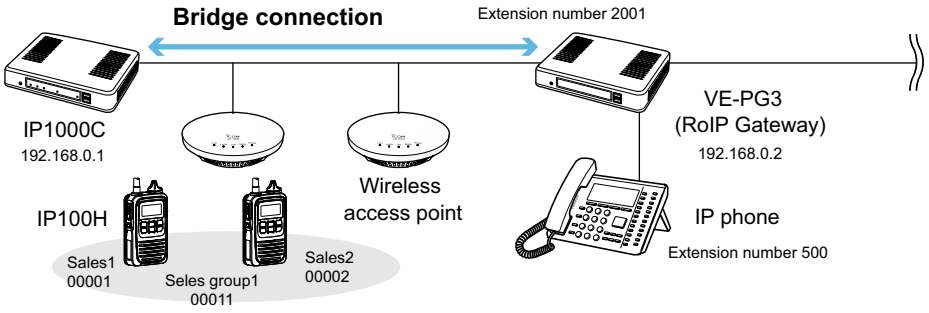


5 After registration is finished, confirm the registered contents in the “Profile List” field.



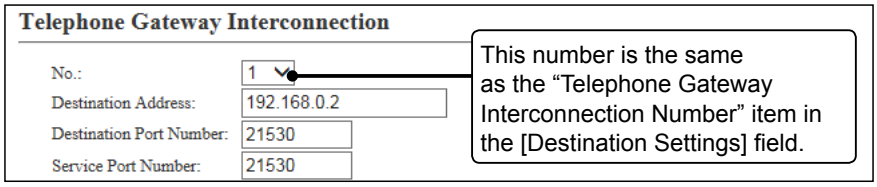
3. Bridge connection and Caller settings

When making a bridge connection with a VE-PG3*, the IP1000C system can communicate with the transceivers.
* A VE-PG3 with a firmware version 1.13 or less cannot communicate with the IP1000C system.
Before connecting the VE-PG3, check the firmware version on the VE-PG3's setting screen.

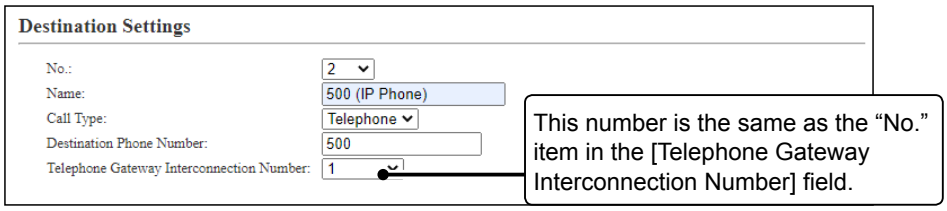


About the IP1000C settings

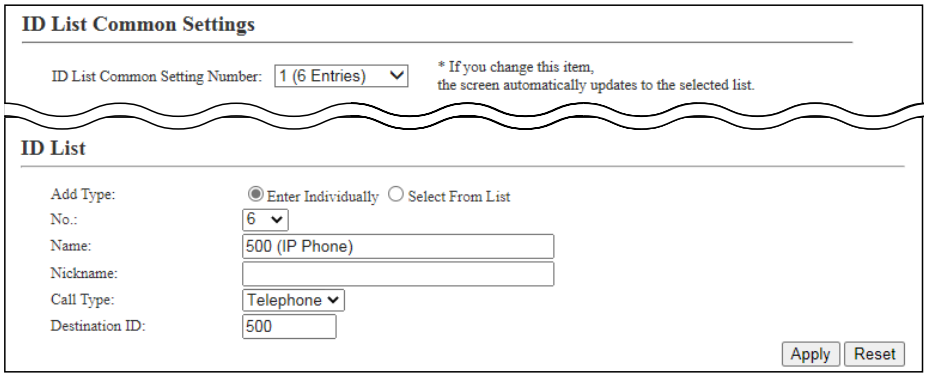
1. Enter the IP address of the VE-PG3 in the [Telephone Gateway Interconnection] field. (Example: 192.168.0.2)
   [RoIP Server Settings] (menu) > [Telephone Gateway Interconnection] (screen) > [Telephone Gateway Interconnection] (field)



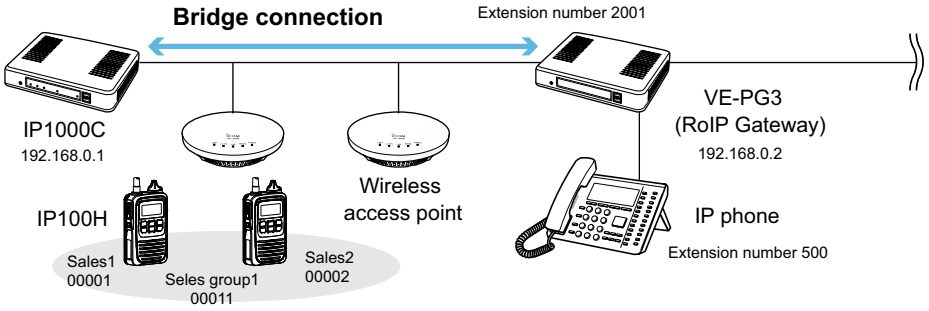
2. After setting the "Call Type" item to "Telephone," select the "Telephone Gateway Interconnection Number" item and then enter a telephone number in the "Destination Phone Number" item.
   [Destination Settings] (menu) > [Destination Settings] (screen) > [Destination Settings] (field)
   • Select the bridge number as same as the number that is selected the [Telephone Gateway Interconnection] field. (Example: 1)
   • Enter the VE-PG3's extension number. (Example: 500)



3. After setting the "Call Type" item to "Telephone," enter the "Destination Phone Number" item.
   [Common Settings] (menu) > [ID List] (screen) > [ID List] (field)
   • Enter the VE-PG3's extension number. (Example: 500)

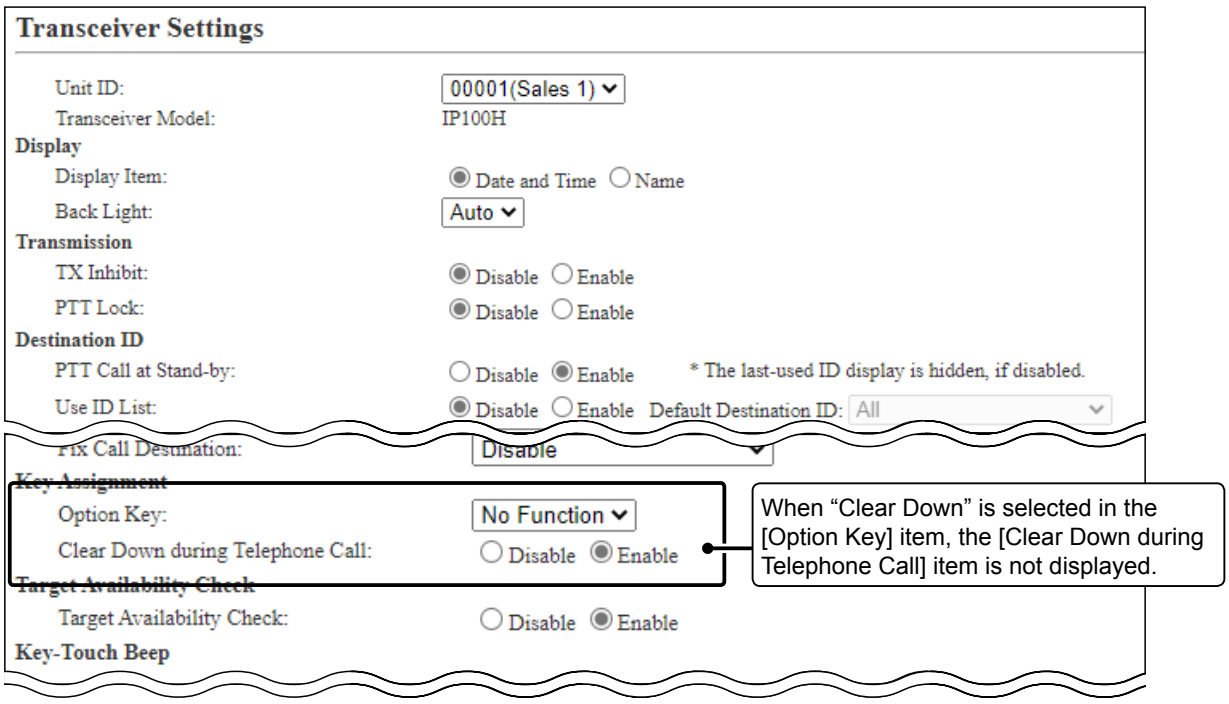


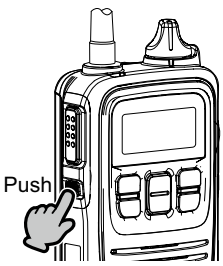
3. Bridge connection and Caller settings



About the IP1000C settings

4. Confirm the [Clear Down during Telephone Call] item in the [Transceiver Settings] field is set to “Enable.”
   [Transceiver Settings] (menu) > [Transceiver Settings] (screen) > [Transceiver Settings] (field)

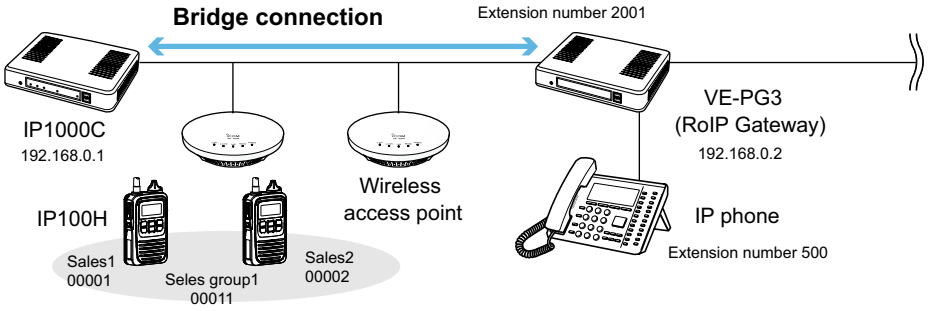




Before the target telephone is picked up, or during phone call, pushing [Option] terminates the phone call.

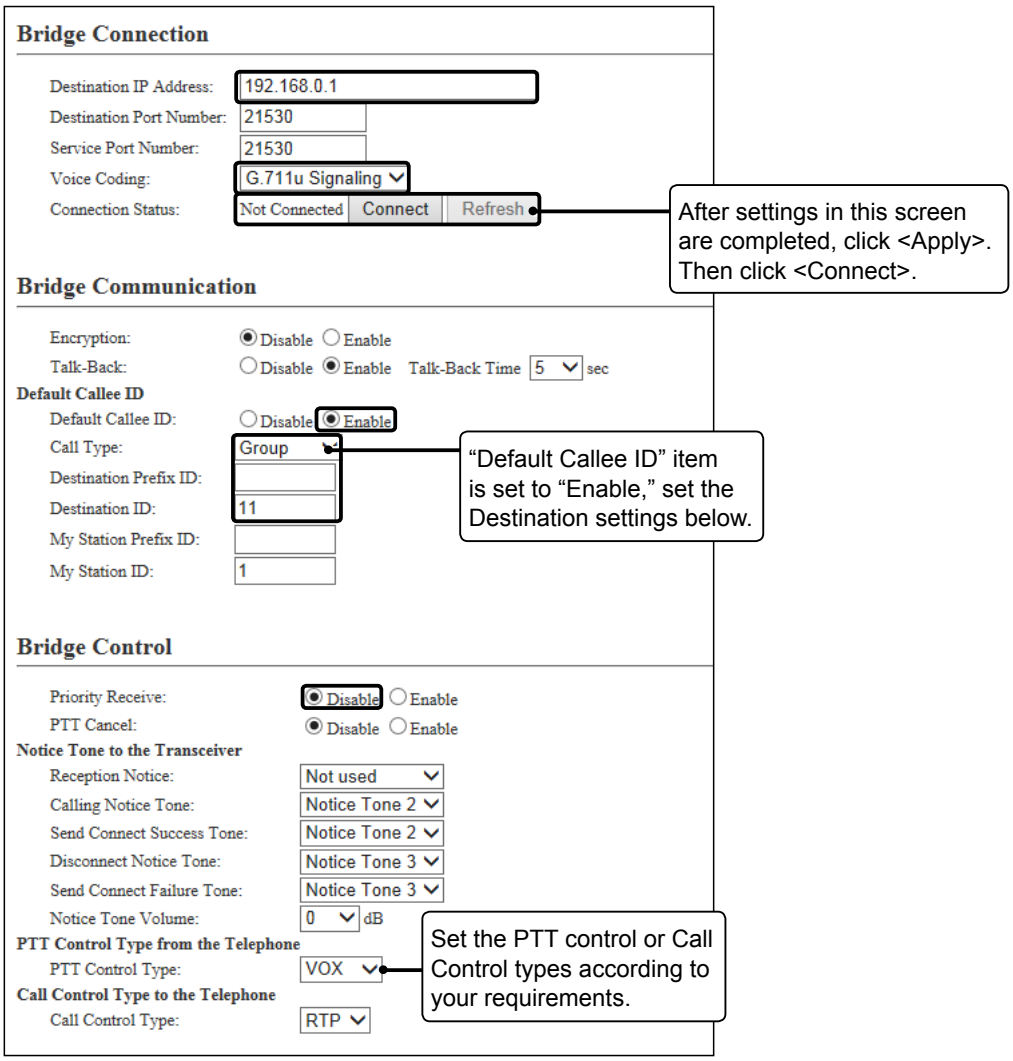
ⓘ The IP100H can terminate the phone call, when a telephone calls the IP100H individually, or when the IP100H calls a telephone.

3. Bridge connection and Caller settings

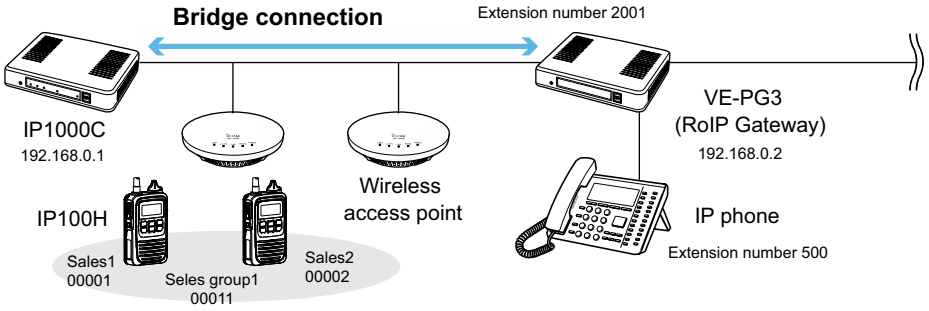


About the VE-PG3 settings (Converter mode)

1. Enter the IP address of the IP1000C in the [Bridge Connection] field. (Example: 192.168.0.1)
   Select the Voice Cording. (Example: G.711u Signaling)
   [Port Settings] (menu) > [Bridge] (screen) (Example: Bridge1) > [Bridge Connection] (field)
   ⓘ Make sure the using port number for connection do not duplicate with another connection.
2. Set the Call Type (Example: Group) and enter the Destination ID (Example: 11) in the [Bridge Communication] field.
   For Full-Duplex telephone operation, set the “Priority Receive” item in the [Bridge Control] field to “Disable.”
3. Click <Apply> at bottom of the screen. Then click <Connect> in the [Bridge Connection] field.
   • The “Connection Status” item changes form “Not Connected” to “During Transmit.”

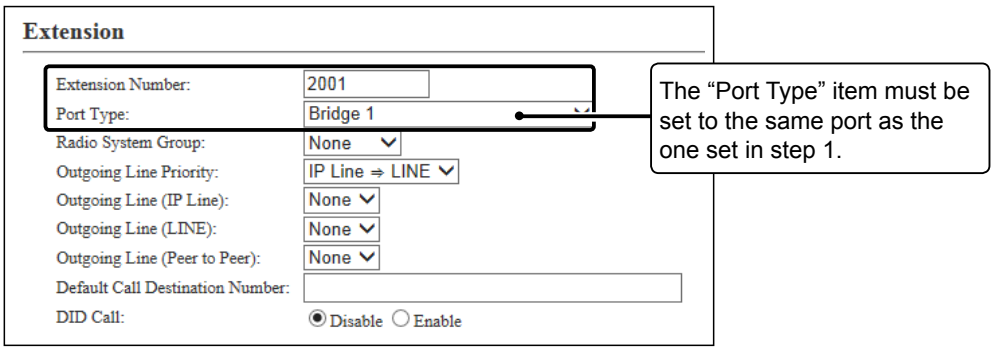


3. Bridge connection and Caller settings

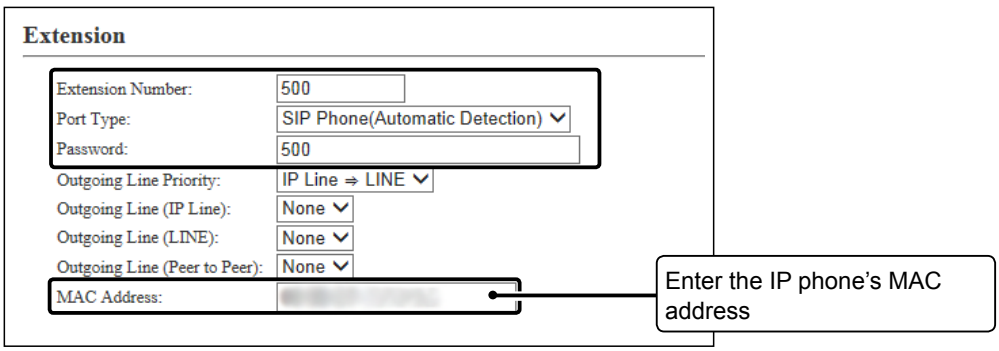


About the VE-PG3 settings (Converter mode)

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



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



❍ 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 IP100H (example: Sales 2 “00002”) calls the IP phone:

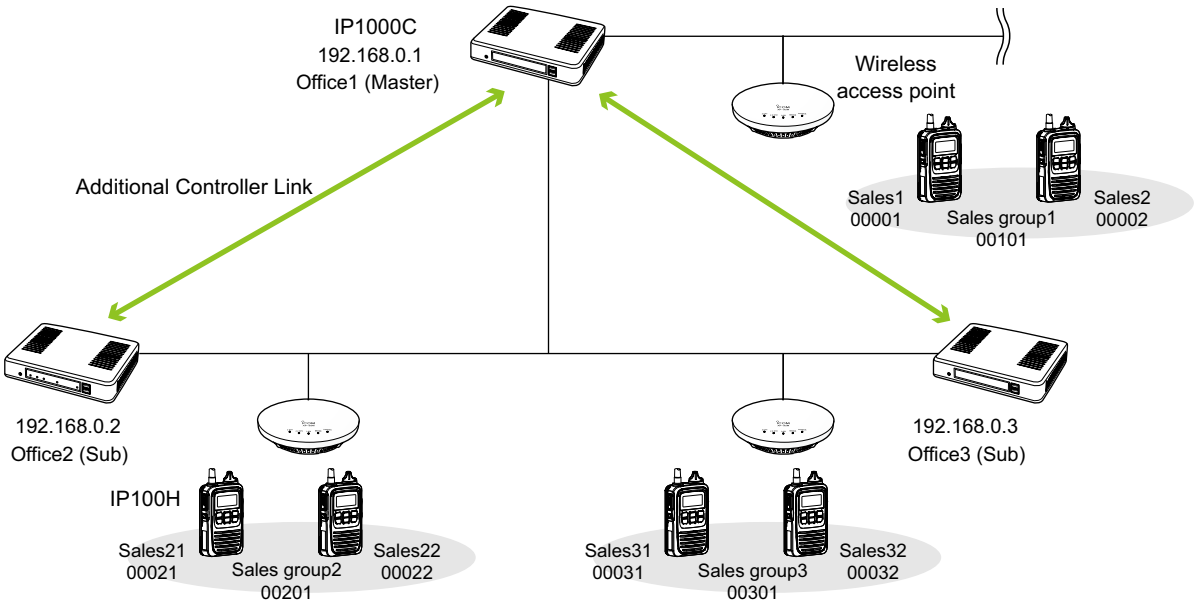
1. Display the IP phone’s Destination phone number on the IP100H’s screen.
   - The Destination phone number of the IP phone must be programmed in the IP100H’s ID list.
2. Hold down [PTT] for more than 1 second.
   - The caller number on the IP phone’s display will be the individual number of Sales 2. (Example: “∗011” + “00002”)

See the IP100H instruction manual for the operating details.

4. Additional controller link

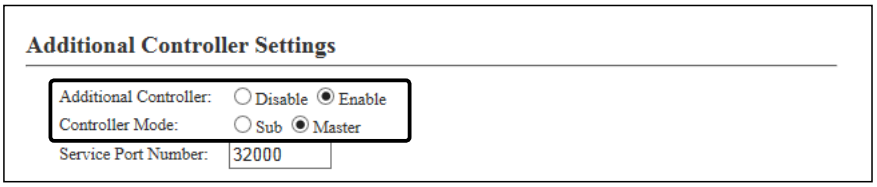
The Additional Controller Link function allows you to communicate another sites.
ⓘ Up to 10 sub IP1000Cs can be connected to a master IP1000C.
ⓘ Use a VPN router, such as Icom's SR-VPN1, between sites if necessary.

IP100H makes a Group Call with the Additional Controller Link

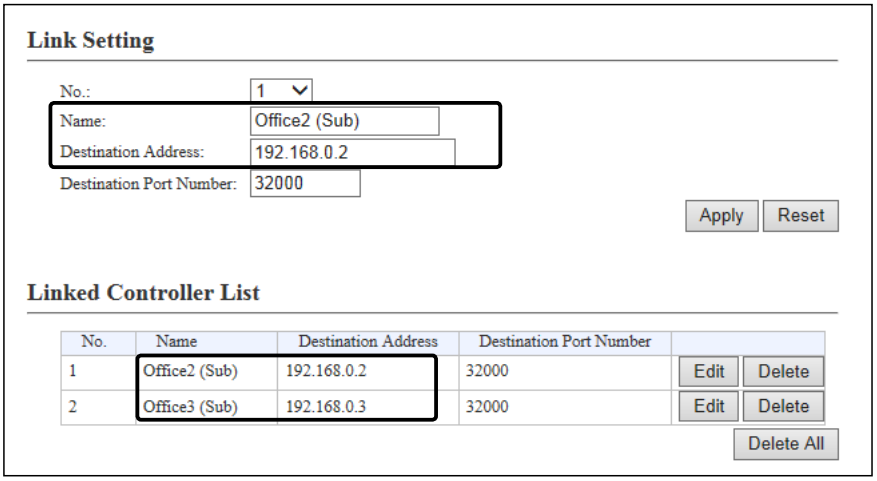


About the Office1 setting (Master)

1. Select "Enable" in the [Additional Controller] item, and "Master" in the [Controller Mode] item. Then click <reboot> to reboot the IP1000C.
   [RoIP Settings] (menu) > [RoIP Settings] (screen) > [Additional Controller Settings] (field)

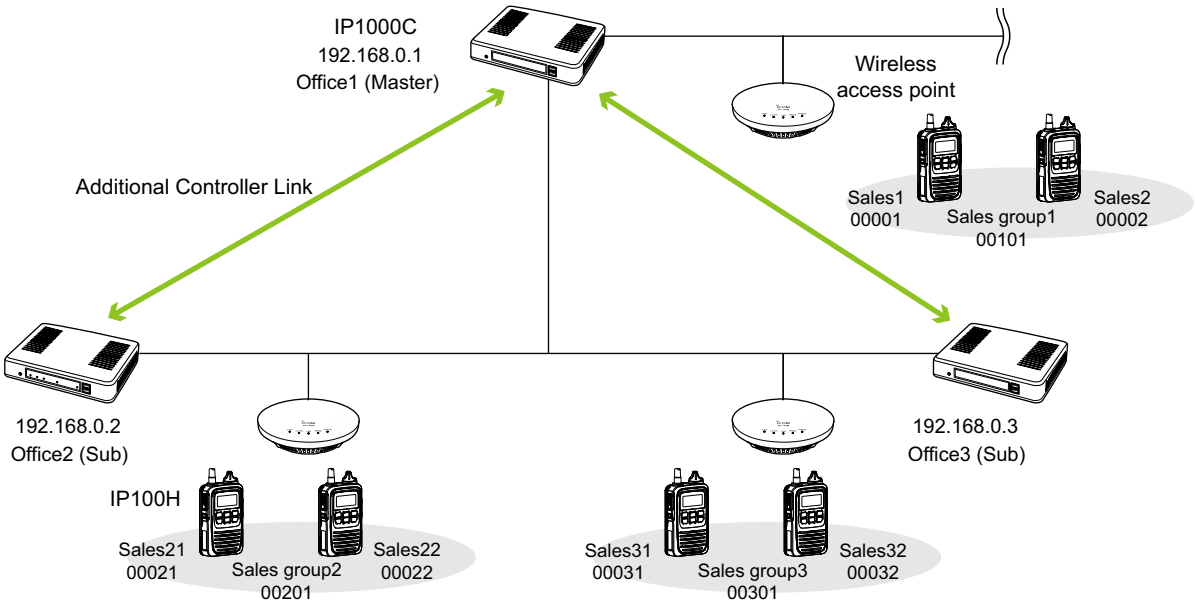


2. Enter a name and a destination IP address.
   [RoIP Server Settings] (menu) > [Additional Controller Link] (screen) > [Additional Controller Settings] (field)



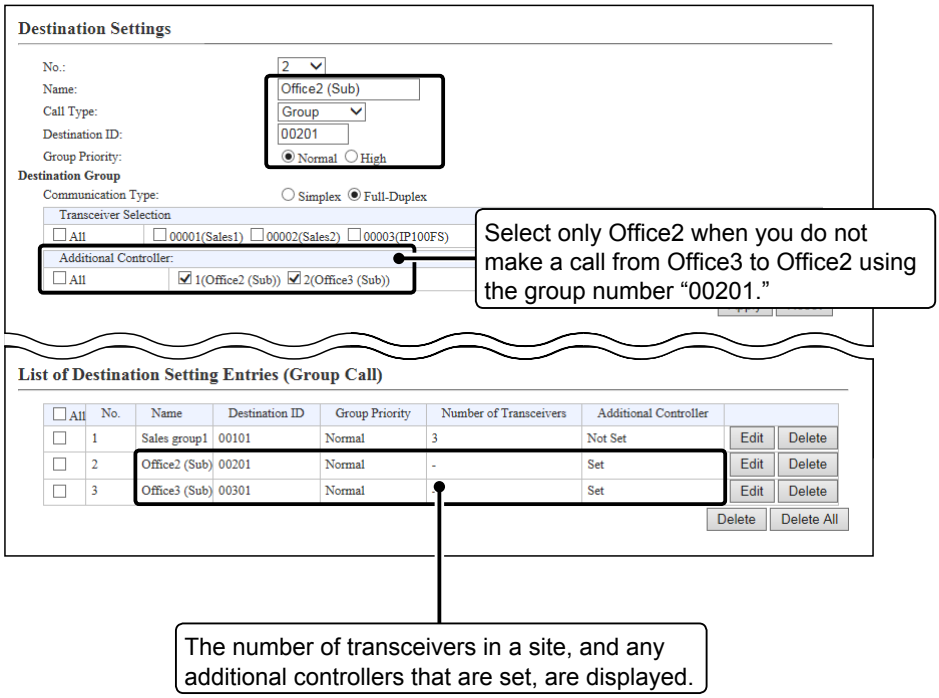
4. Additional controller link

IP100H makes a Group Call with the Additional Controller Link



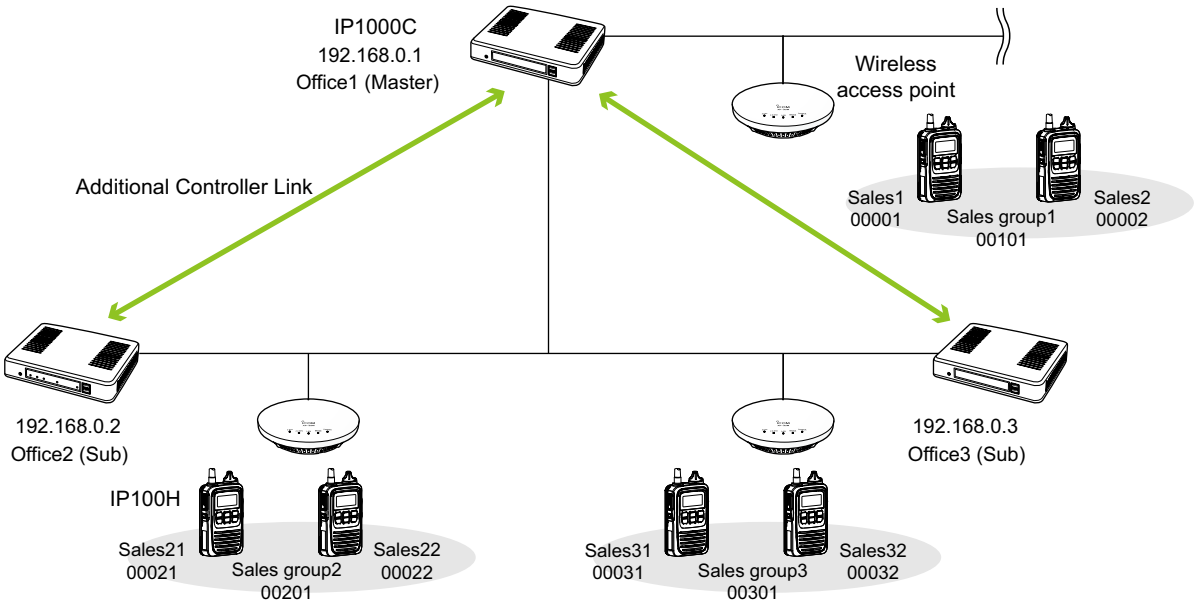
About the Office1 setting (Master)

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



4. Additional controller link

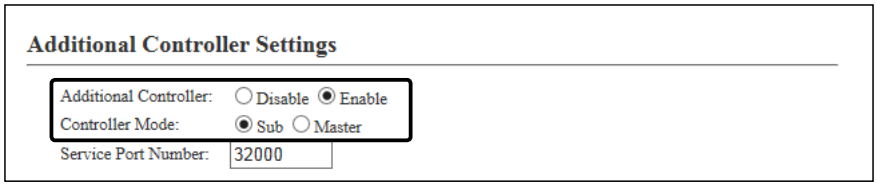
IP100H makes a Group Call with the Additional Controller Link



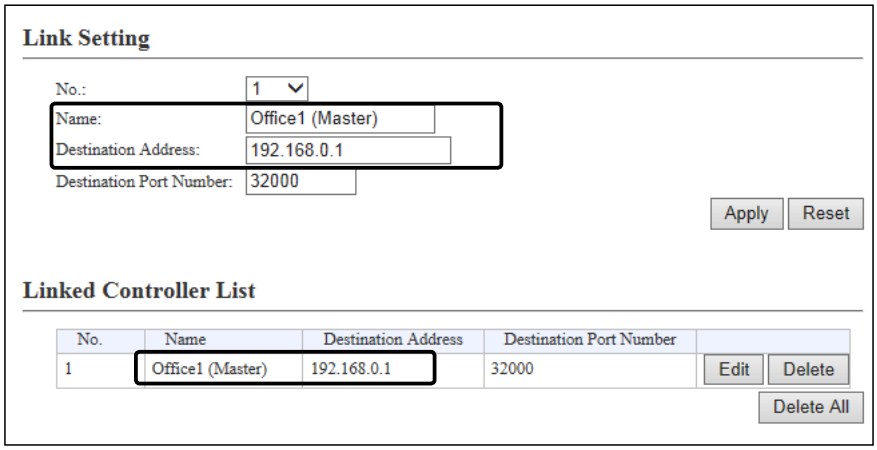
About the Office2 setting (Sub)

Example: Calling Sales group 2 (00201)

1. Select “Enable” in the [Additional Controller] item, and “Sub” in the [Controller Mode] item. Then click <reboot> to reboot the IP1000C.
   [RoIP Settings] (menu) > [RoIP Settings] (screen) > [Additional Controller Settings] (field)

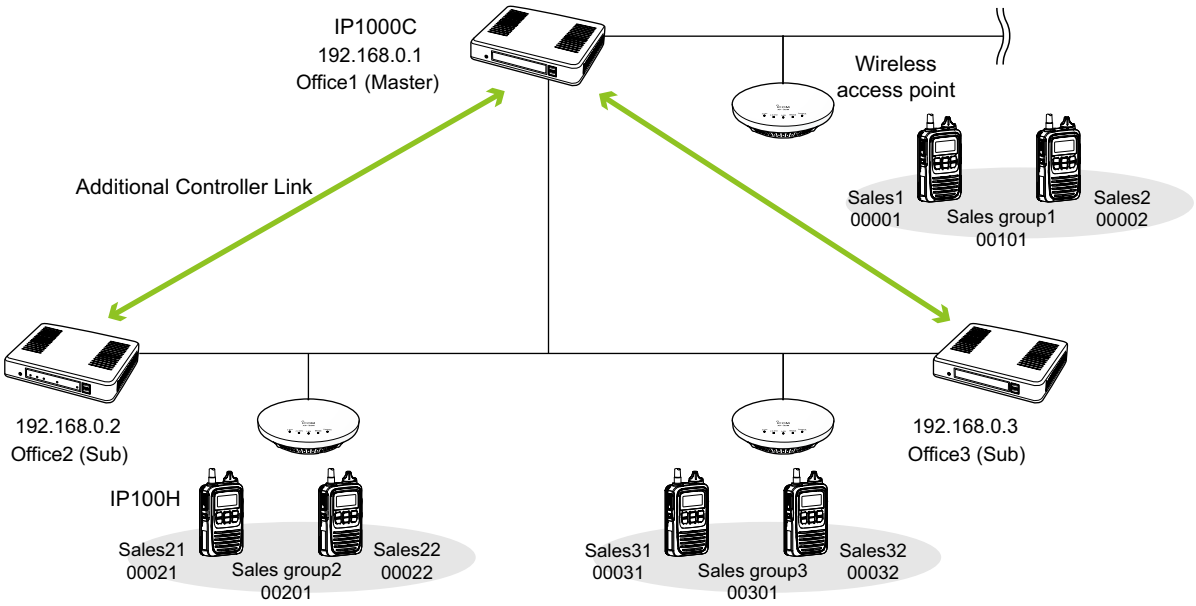


2. Enter a name and a destination IP address. (Example: Office1 (Master)).
   [RoIP Server Settings] (menu) > [Additional Controller Link] (screen) > [Additional Controller Settings] (field)



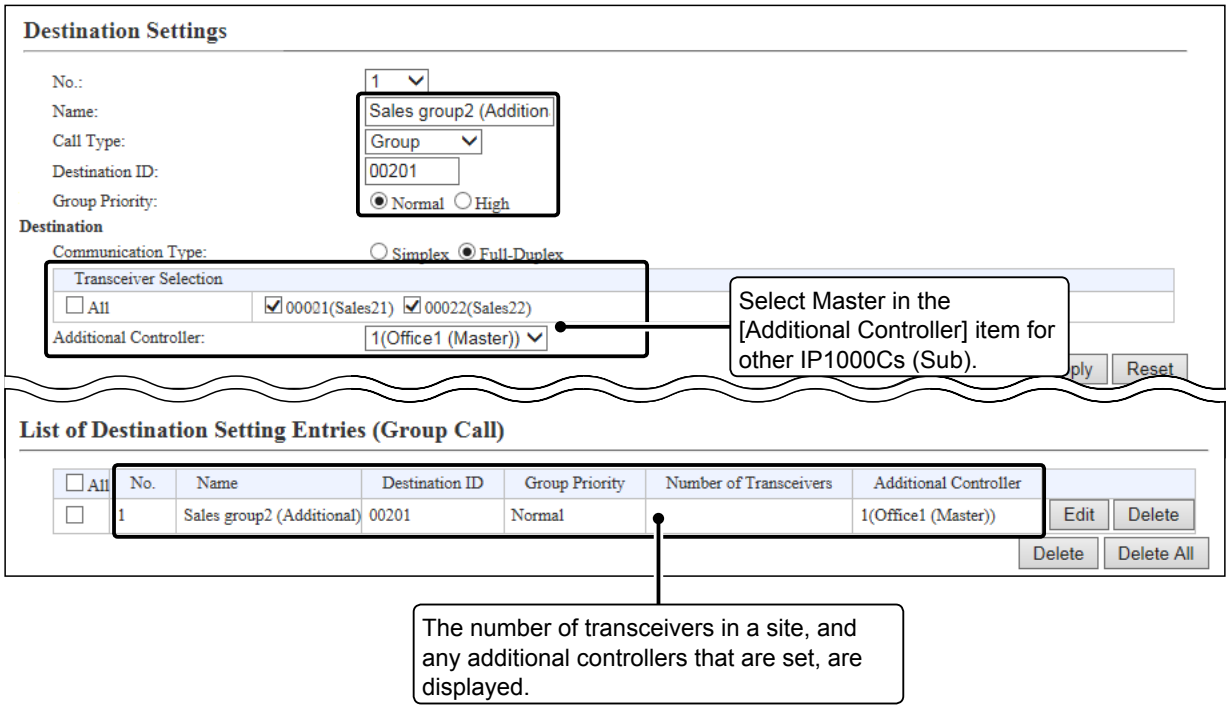
4. Additional controller link

IP100H makes a Group Call with the Additional Controller Link



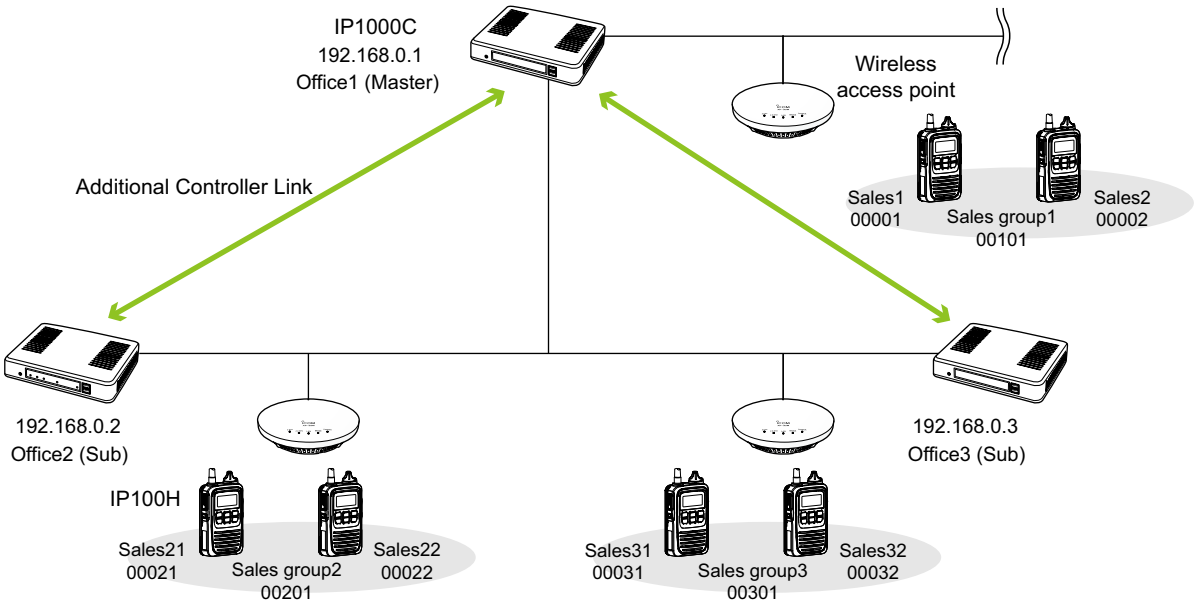
About the Office2 setting (Sub)

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



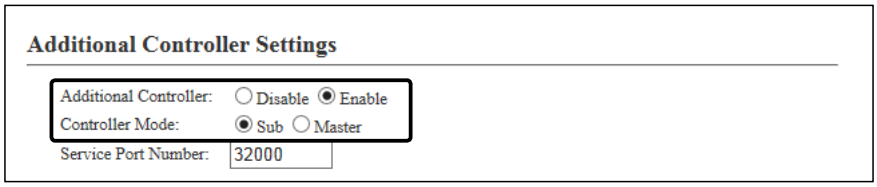
4. Additional controller link

IP100H makes a Group Call with the Additional Controller Link

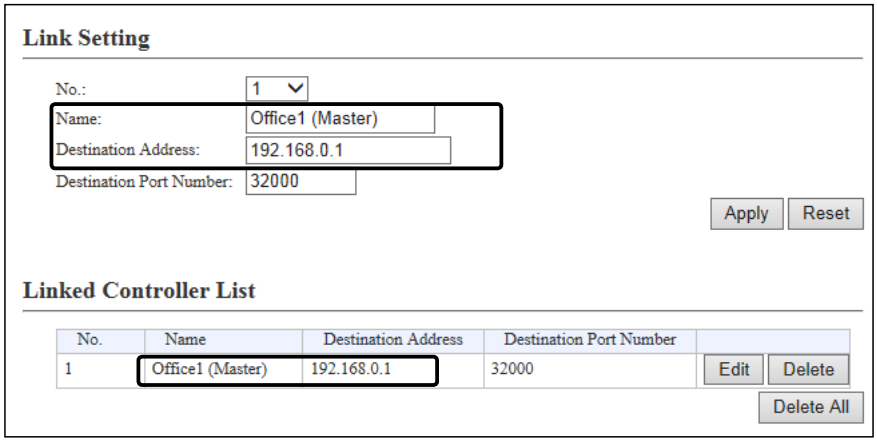


About the Office3 setting (Sub)

1. Select “Enable” in the [Additional Controller] item, and “Sub” in the [Controller Mode] item. Then click <reboot> to reboot the IP1000C.
   [RoIP Settings] (menu) > [RoIP Settings] (screen) > [Additional Controller Settings] (field)

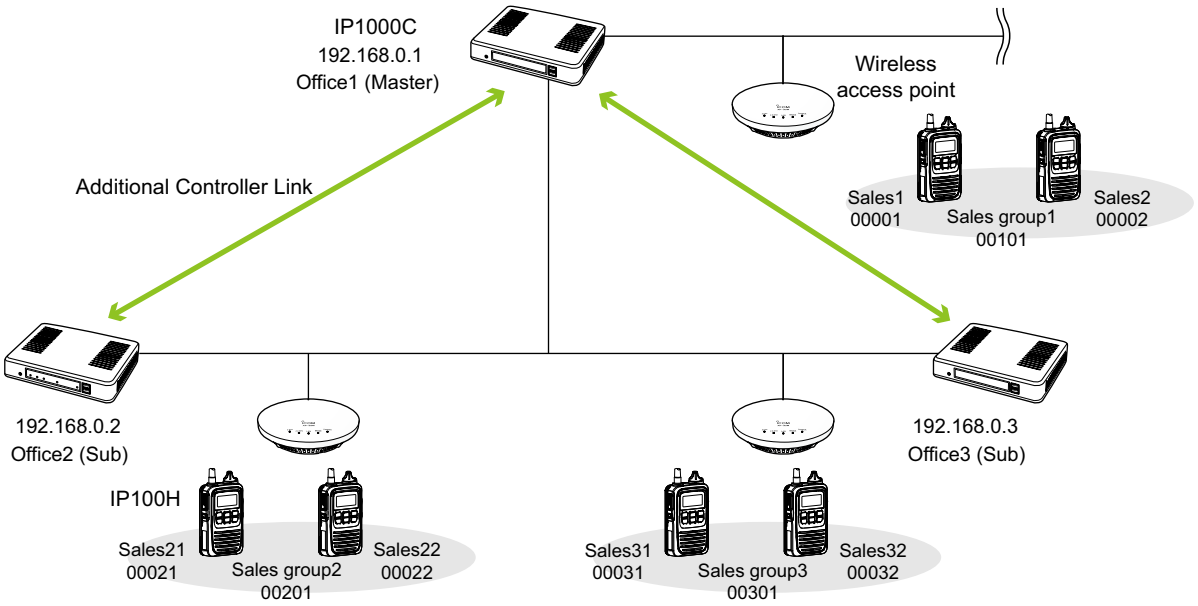


2. Enter a name and a destination IP address. (Example: Office1 (Master))
   [RoIP Server Settings] (menu) > [Additional Controller Link] (screen) > [Additional Controller Settings] (field)



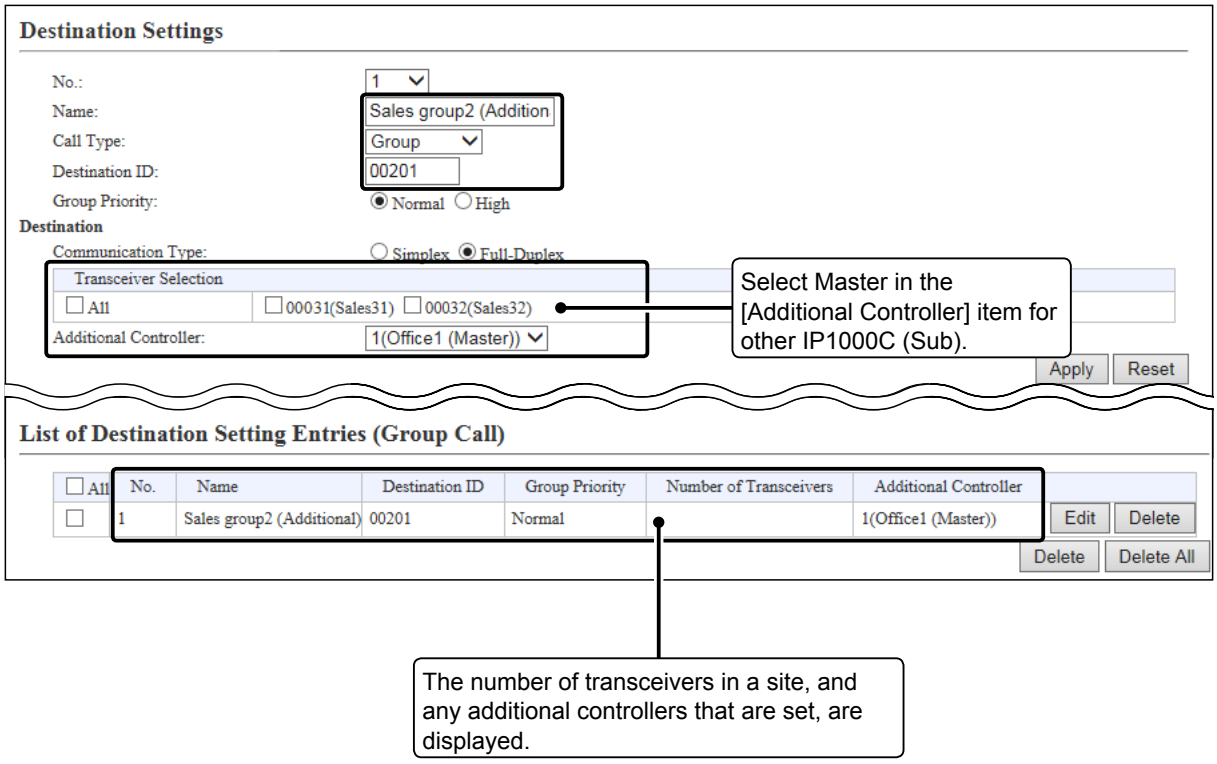
4. Additional controller link

IP100H makes a Group Call with the Additional Controller Link



About the Office3 setting (Sub)

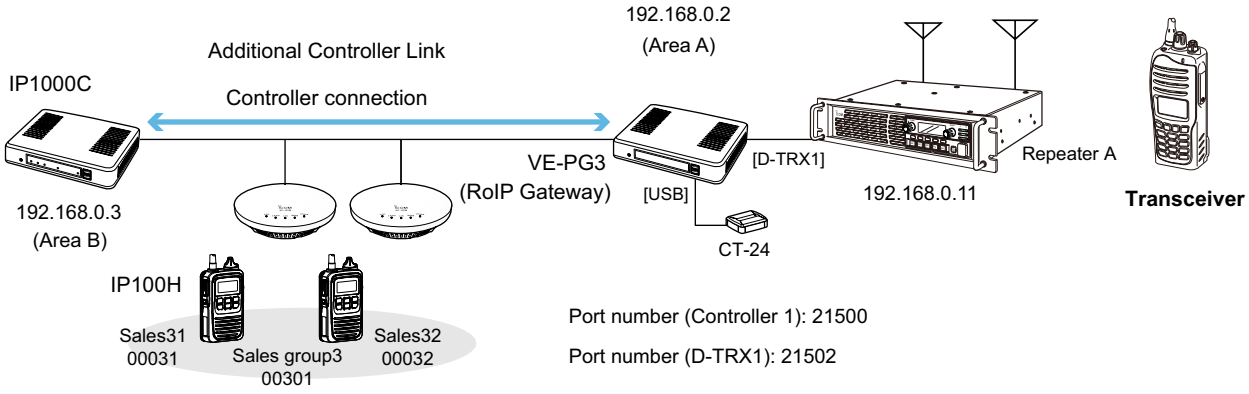
3. Select “Group” in the [Call Type] item and enter a destination ID. Select controllers in the [Additional Controller] item. (Refer to an example below.)
   [Destination Settings] (menu) > [Destination Settings] (screen) > [Destination Settings] (field)



5. Additional controller link with VE-PG3

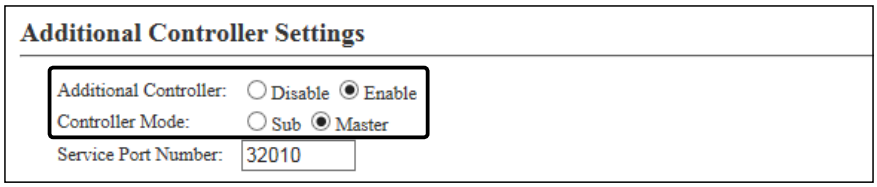
The Additional Controller Link function allows you to communicate with the digital transceiver in the IDAS system.

IP100H makes a Group Call with the Additional Controller Link (VE-PG3)

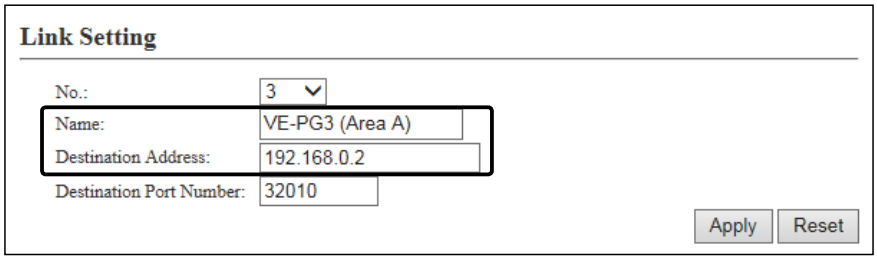


About the IP1000C settings

1. Select “Enable” in the [Additional Controller] item, and “Master” in the [Controller Mode] item. Then click <reboot> to reboot the IP1000C.
   [RoIP Settings] (menu) > [RoIP Settings] (screen) > [Additional Controller Settings] (field)
   ⓘ When several IP1000Cs are linked and use All call or Group call between the controllers, the IP1000C 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 IP1000C whose Controller mode is set to “Master.”

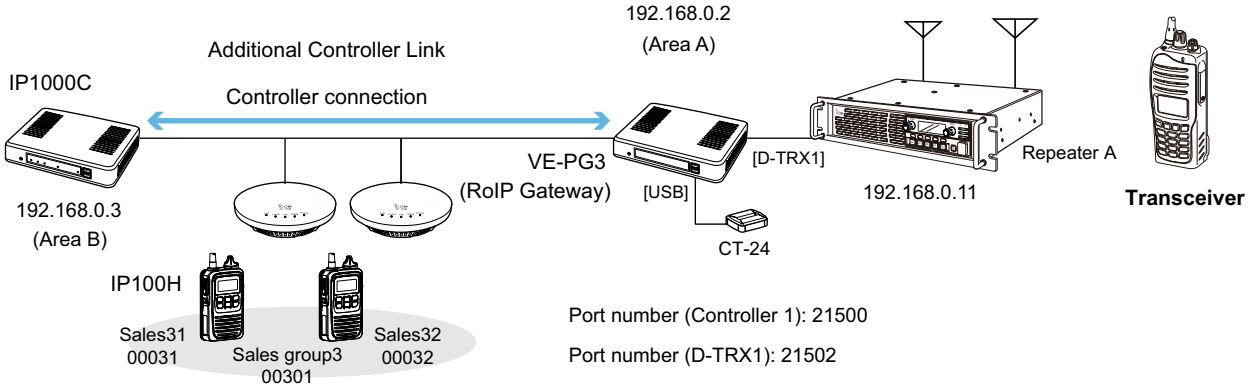


2. Enter a name and a destination IP address. (Example: VE-PG3 (Area A))
   [RoIP Server Settings] (menu) > [Additional Controller Link] (screen) > [Additional Controller Settings] (field)



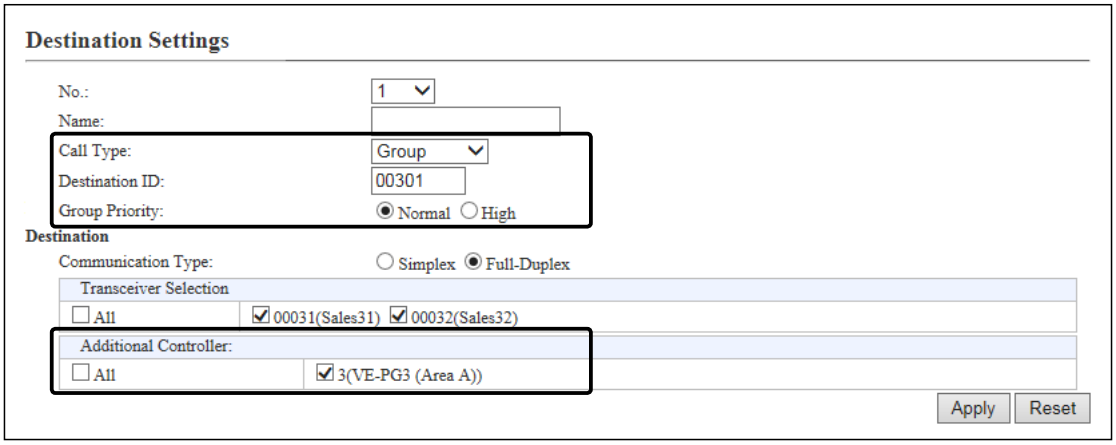
5. Additional controller link with VE-PG3

IP100H makes a Group Call with the Additional Controller Link (VE-PG3)



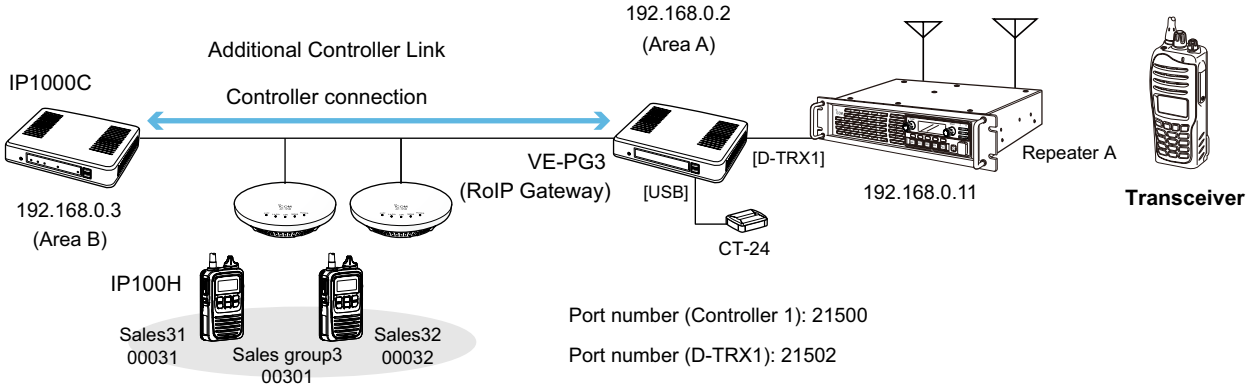
About the IP1000C settings

3. Select “Group” in the [Call Type] item and enter a destination ID. Select controllers in the [Additional Controller] item. (Refer to an example below.)
   [Destination Settings] (menu) > [Destination Settings] (screen) > [Destination Settings] (field)



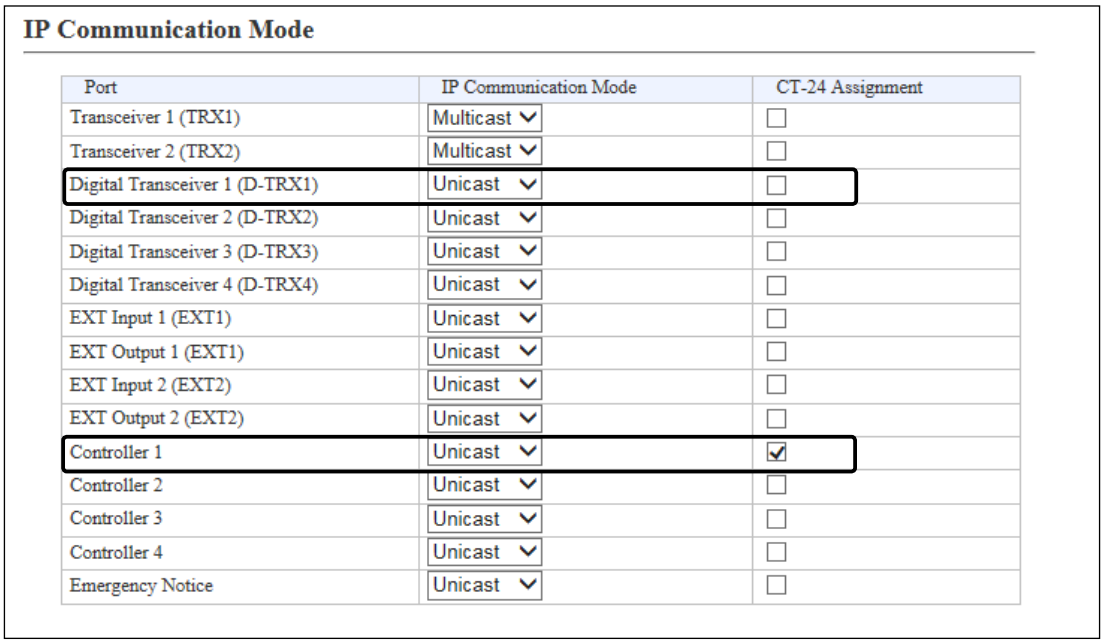
5. Additional controller link with VE-PG3

IP100H makes a Group Call with the Additional Controller Link (VE-PG3)



About the VE-PG3 settings (Bridge mode)

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

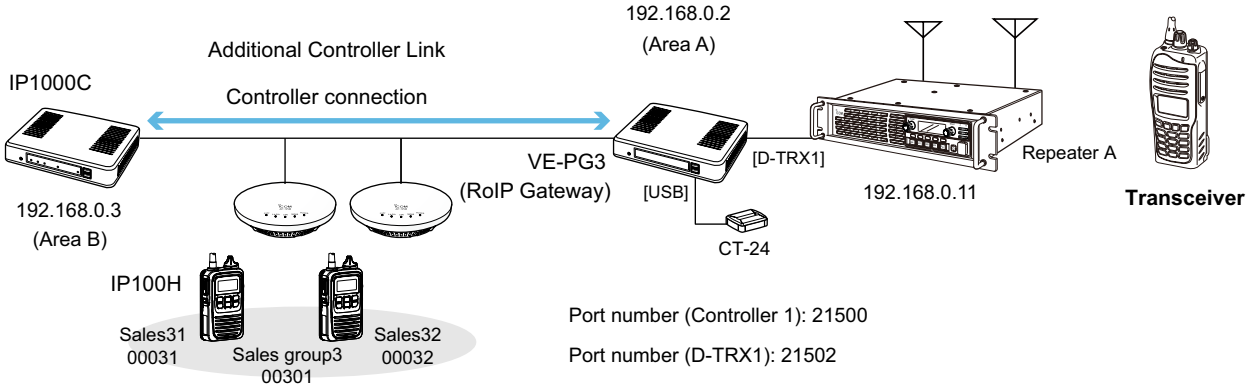


IP Communication Mode

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	☐

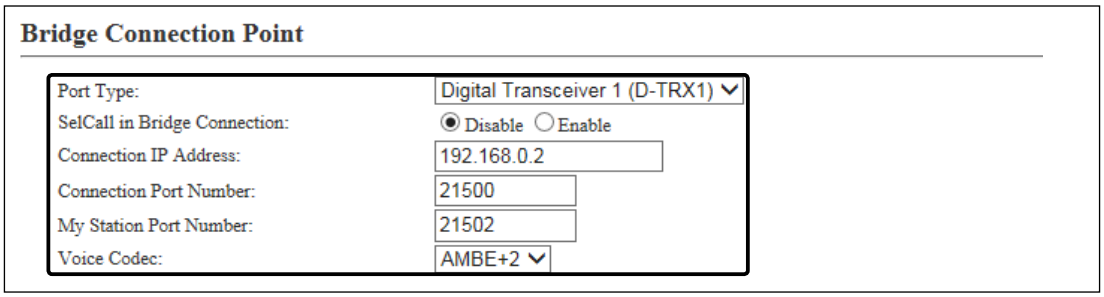
5. Additional controller link with VE-PG3

IP100H makes a Group Call with the Additional Controller Link (VE-PG3)

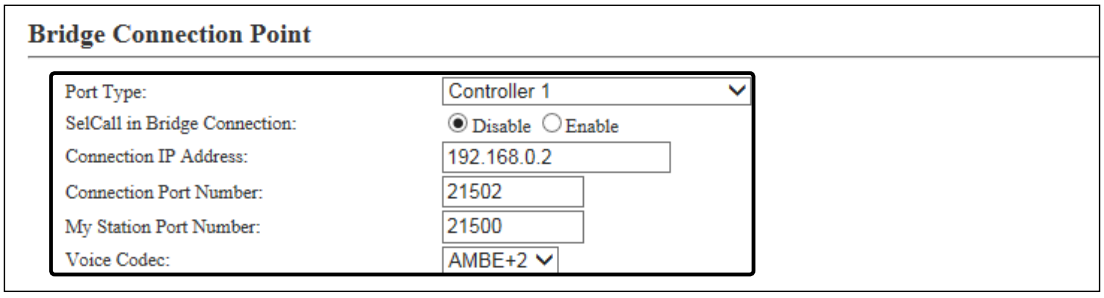


About the VE-PG3 settings (Bridge mode)

2. After selecting the “Port Type” item to “Digital Transceiver 1 (D-TRX1)” in the [Bridge Connection Point] field, 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 Cording. (Example: AMBE+2)
   [Bridge Connection] (menu) > [Bridge Connection] (screen) > [Bridge Connection Point] (field)
   ⓘ Make sure the using port number for connection do not duplicate with another connection.

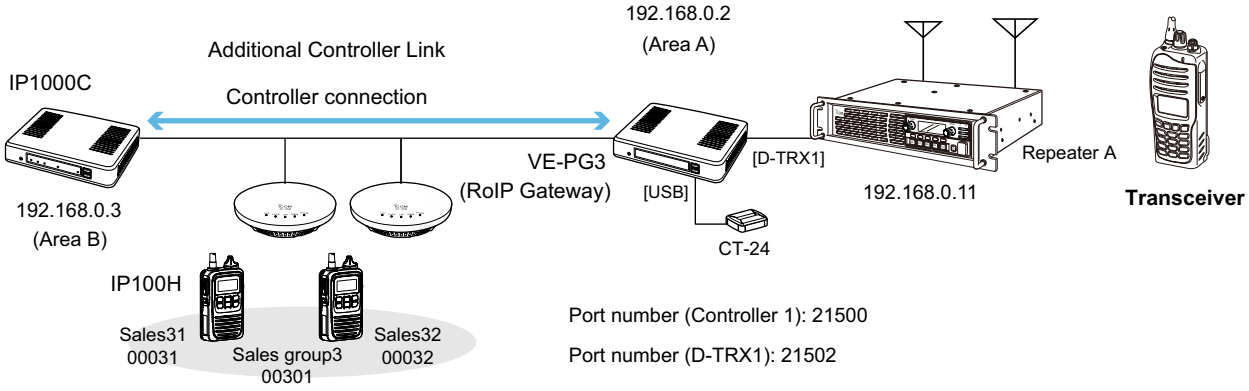


3. After selecting the “Port Type” item to “Controller 1” in the [Bridge Connection Point] field, enter the IP address of the VE-PG3. (Example: 192.168.0.2)
   Enter the Connection Port Number. (Example: 21502)
   Enter the “My Station Port Number” same as the Connection Port number of the Digital Transceiver 1 (D-TRX1). (Example: 21500)
   Select the Voice Cording. (Example: AMBE+2)
   [Bridge Connection] (menu) > [Bridge Connection] (screen) > [Bridge Connection Point] (field)
   ⓘ Make sure the using port number for connection do not duplicate with another connection.



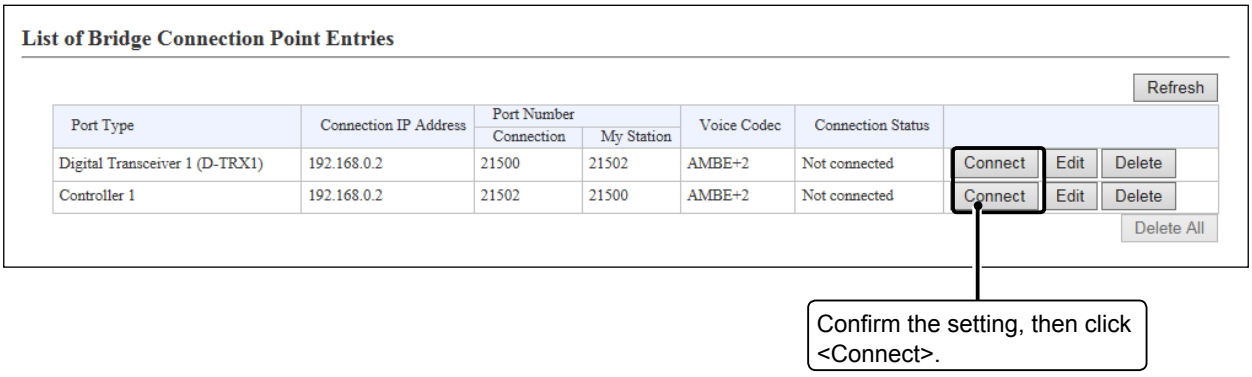
5. Additional controller link with VE-PG3

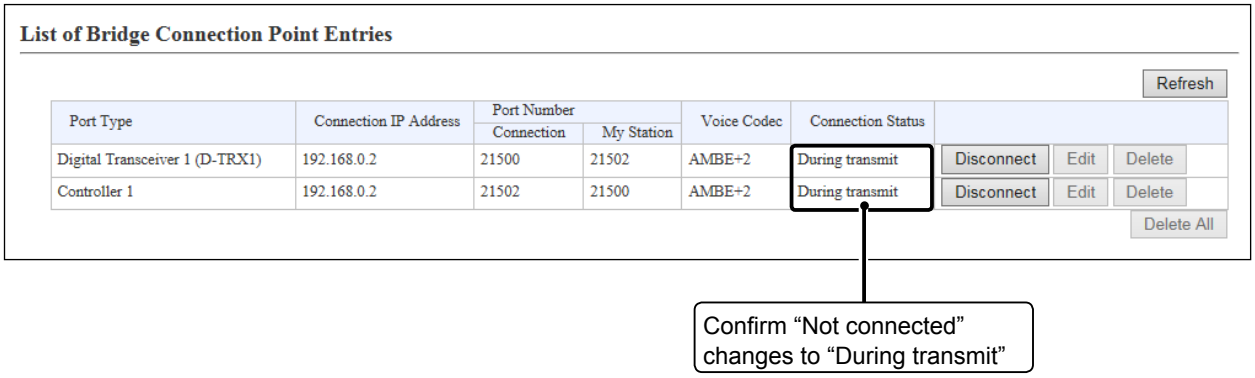
IP100H makes a Group Call with the Additional Controller Link (VE-PG3)



About the VE-PG3 settings (Bridge mode)

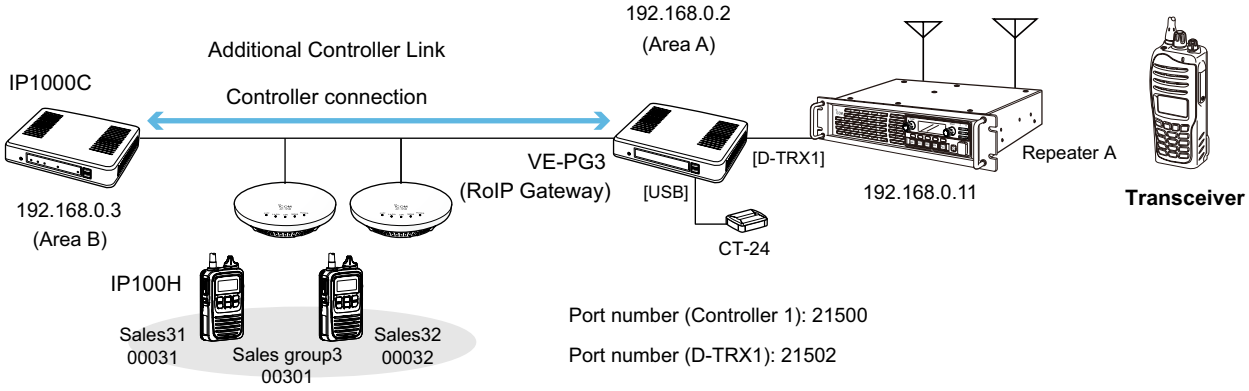
4. Confirm Digital Transceiver1 (D-TRX1) port setting, then click <Connect>.
   • Confirm “Not connected” changes to “During transmit.”
   Confirm Controller 1 port setting, then click <Connect>.
   • Confirm “Not connected” changes to “During transmit.”





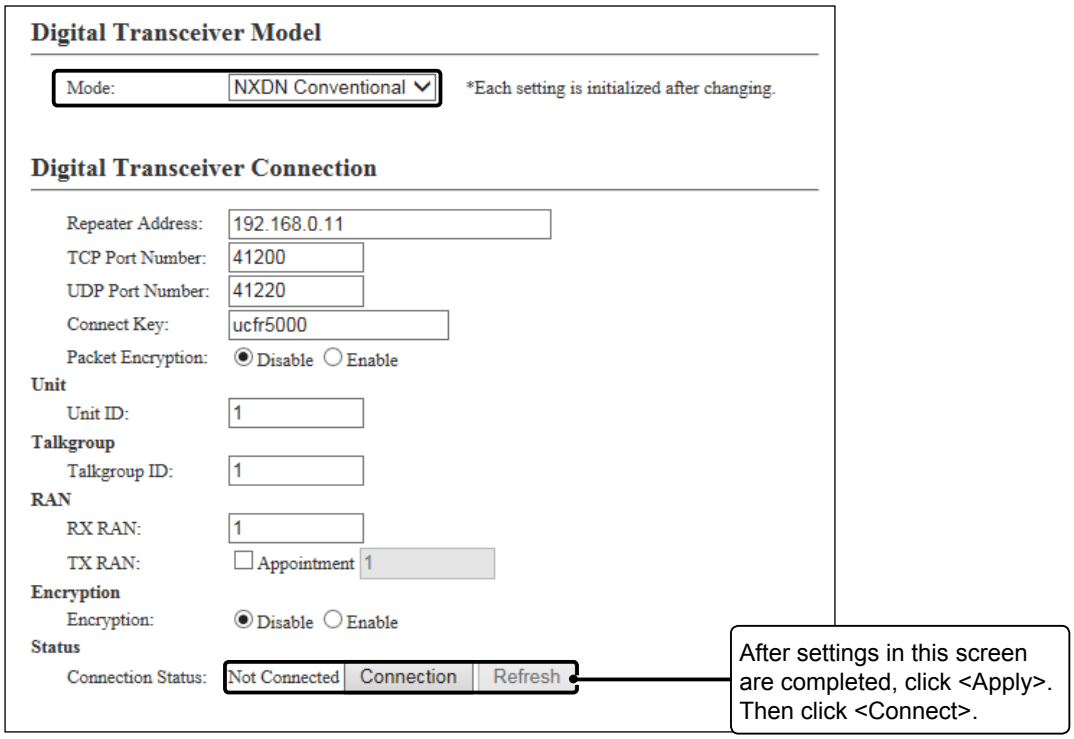
5. Additional controller link with VE-PG3

IP100H makes a Group Call with the Additional Controller Link (VE-PG3)



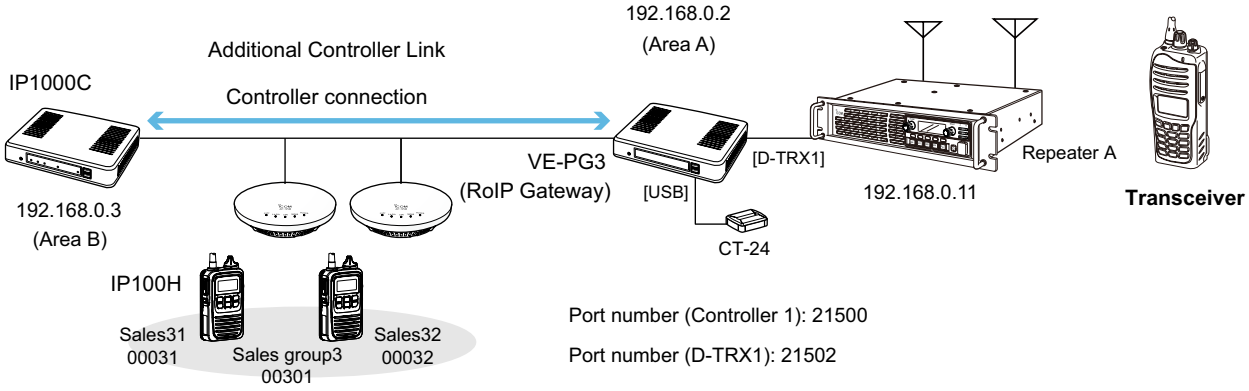
About the VE-PG3 settings (Bridge mode)

5. Select the “Mode” item to “NXDN Conventional” in the [Digital Transceiver Model] field.
   (Example: NXDN Conventional)
   [Port Settings] (menu) > [Digital Transceiver 1] (screen) > [Digital Transceiver Model] (field)
6. Enter the IP address of the repeater in the [Digital Transceiver Connection] field. (Example: 192.168.0.11)
   Enter the TCP Port Number (Example: 41200), or the UDP Port Number. (Example: 41220)
   [Port Settings] (menu) > [Digital Transceiver 1] (screen) > [Digital Transceiver Connection] (field)
   ⓘ Make sure the using port number for connection do not duplicate with another connection.



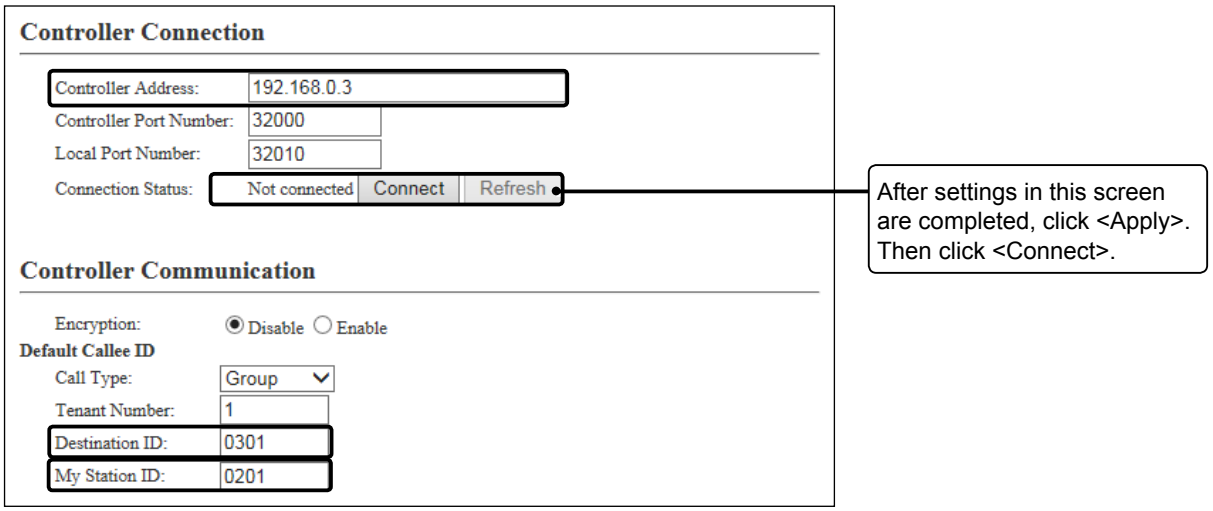
5. Additional controller link with VE-PG3

IP100H makes a Group Call with the Additional Controller Link (VE-PG3)



About the VE-PG3 settings (Bridge mode)

7. Enter the IP address of the IP1000C in the [Controller Connection] field. (Example: 192.168.0.3)
   Enter the Controller Port Number same as the IP1000C' Service port number in the Link setting field. (Example: 32000)
   Enter the Local Port Number same as the IP1000C' Destination Port number in the Additional Controller Settings field. (Example: 32010)
   [Port Settings] (menu) > [Controller 1] (screen) > [Controller Connection] (field)
   ⓘ Make sure the using port number for connection don't duplicate with another connection.



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

OTHER BASIC FUNCTIONS

Section 3

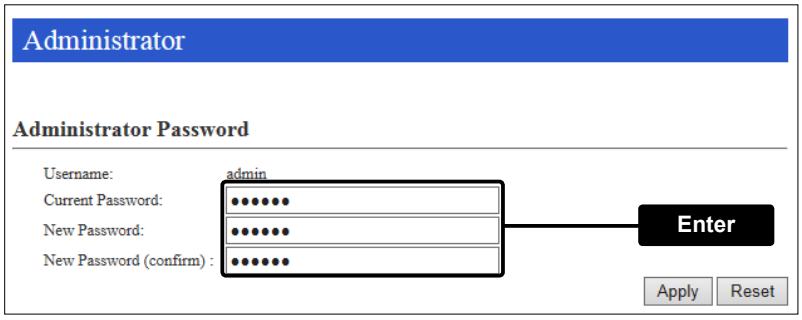
1. How to restrict access

If you set a new administrator password, you can restrict access to the IP1000C's setting screen.
The default administrator password is "admin."

■ Setting password

1 Click the [Management] menu, then [Administrator].
• The [Administrator] screen appears.

2 Enter [Current Password], [New Password] and [New Password (confirm)] in their respective input fields.
ⓘ The password can be composed of up to 31 characters (0–9, a–z and A–Z).
ⓘ The entered characters are displayed as an * (asterisk) or a • (dot).



3 Click <Apply>.

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 (both lower and upper case).

NOTE: When you forget the password, you cannot access to the IP1000C. In this case, initialize the IP1000C using the <INIT> button. (p. 5-4)

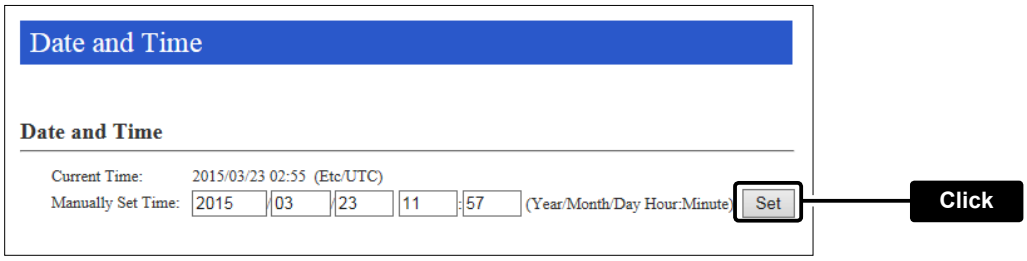
2. How to set the IP1000C's internal clock time

You can set the IP1000C's internal clock time.

■ Setting date and time (Manual setting)

1 Click the [Management] menu, then [Date and Time].
• The [Date and Time] screen appears.

2 Verify the PC's current time in the [Date and Time] field.
Click <Set> to synchronize the internal clock with the displayed time in the "Manual Set Time" item.
ⓘ You can also enter the time in the "Manually Set Time" item.

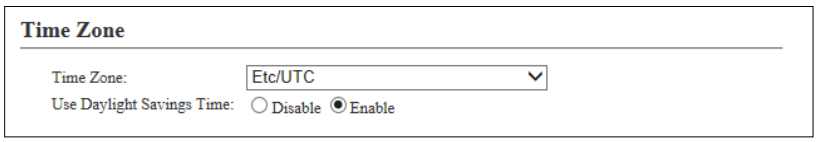


■ Setting date and time (Automatic setting)

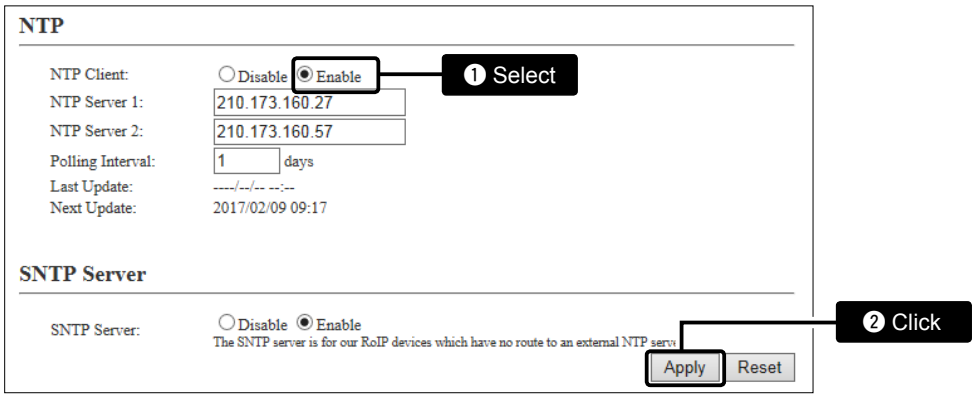
The Automatic Clock Synchronize function automatically synchronizes the internal clock with the time management server (NTP).
ⓘ To use this function, an internet connection and default gateway settings are necessary.

1 Click the [Management] menu, then [Date and Time].
• The [Date and Time] screen appears.

2 Select the appropriate Time Zone.



3 Select "Enable" in the "NTP Client" item, and then click <Apply>.



Note: The default NTP servers are provided by INTERNET MULTIFEED Co.

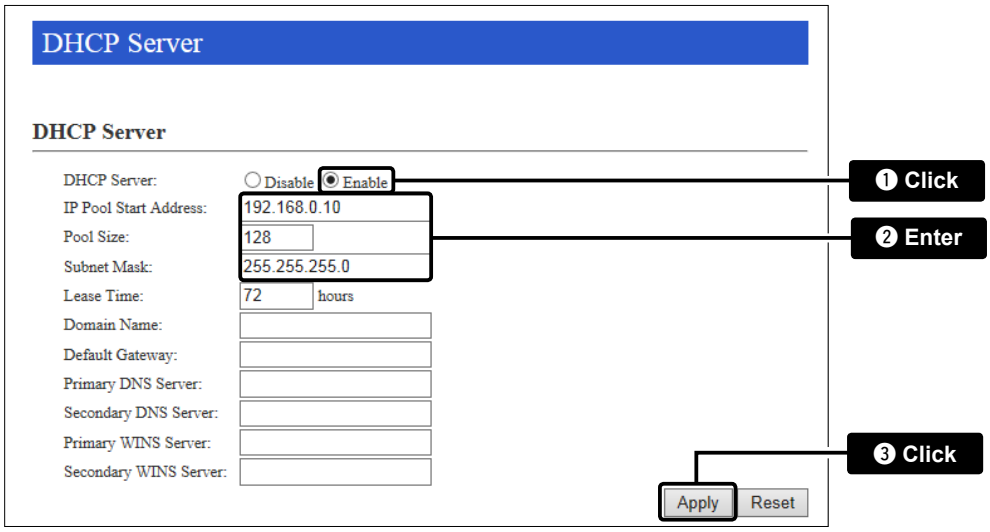
3. Using the DHCP function

You can use the DHCP function by following the procedures below.

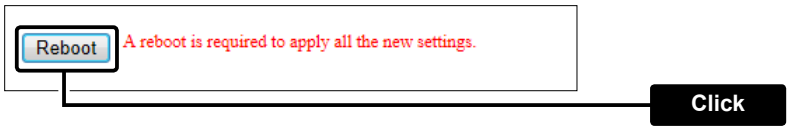
■ Setting example

1 Click the [Network Settings] menu, then [DHCP Server].
• The [DHCP Server] screen appears.

2 Select “Enable” in the “DHCP Server” item, and then click <Apply>.
Enter the new IP pool start address and so on, depending on your requirement, and then click <Apply>.
ⓘ The factory default of this setting is “Disable.”



3 Click <Reboot>.
• When you are asked to reboot the IP1000C, follow the instructions.



About the DHCP server function
The IP1000C’s DHCP server function is disabled as default.
ⓘ Before changing this function to “Enable,” make sure that the addresses of the devices on the network do not overlap or conflict.
If a DHCP server is already connected to the network, and there is an address conflict, a network problem will occur. See the Troubleshooting section for possible solutions.

About the maximum number of the IP addresses
Up to 128 addresses can be automatically assigned by the DHCP server function.
Another 32 addresses can be manually assigned.

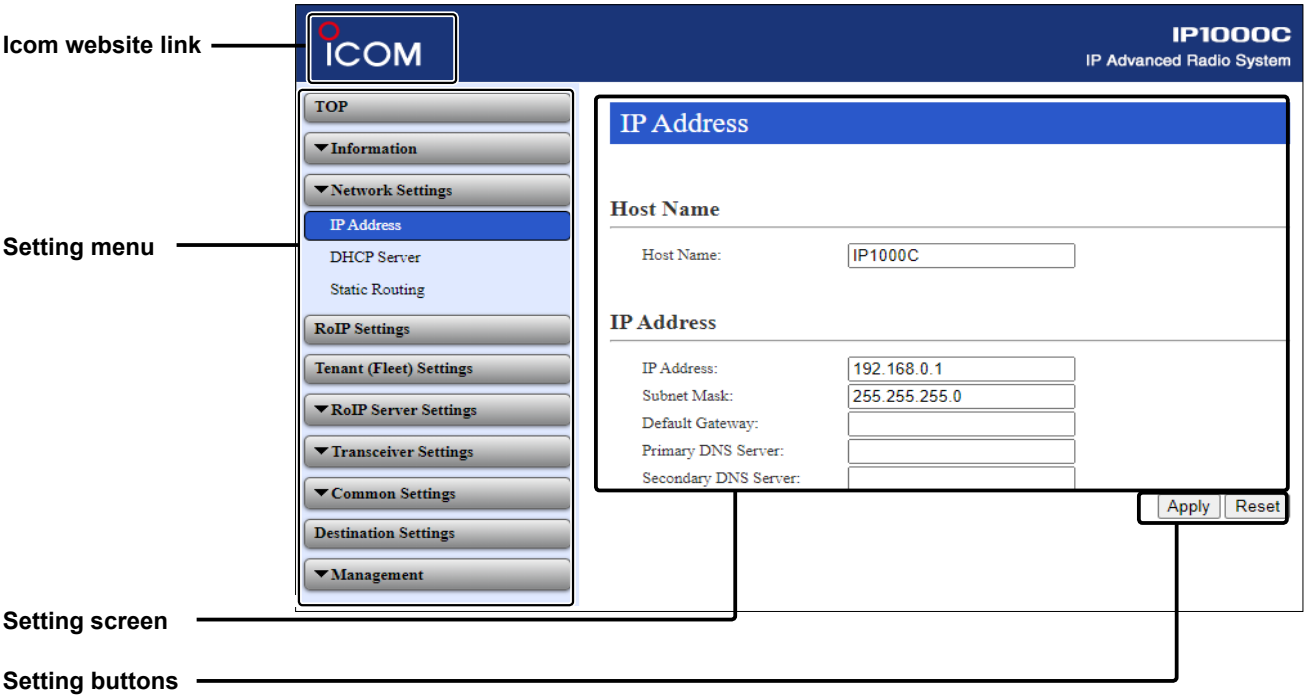
ABOUT THE SETTING SCREEN

Section 4

(Continued from the previous page)

(Continued from the previous page)

1. About the setting screen



Icom website link

Click the Icom logo to open the Icom website, if your PC is connected to the Internet.

Setting menu

Displays the screen name list on the menu line. When you click the menu line that "▼" is displayed at the left of the title, a list of screen names drops down. Then, you can click to select the desired screen name.

ⓘ If you click "TOP," all screen names are displayed or hided.

Setting screen

Displays the settings and values when you click the screen name.

Setting buttons

Save or cancel setting values.
If "A reboot is required to apply all the new settings." is displayed on the screen when you click the [Apply] button, click the [OK] button.
The IP1000C reboots, and the setting items and values are updated.
The following message is displayed on the screen while the IP1000C is rebooting.

Now rebooting.

Wait XX seconds for startup.
If this page doesn't automatically refresh after rebooting, click [Back].

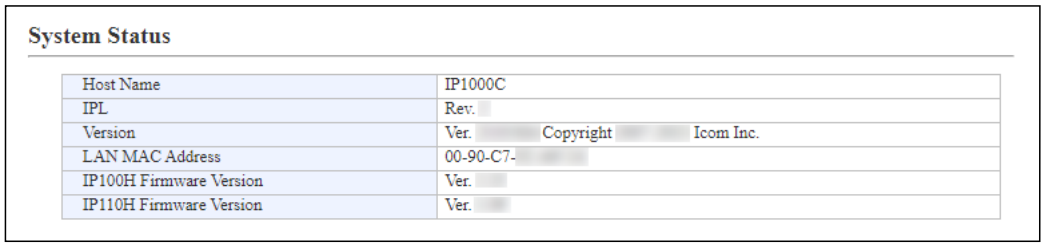
ⓘ If the setting screen does not automatically return, click [Back] after XX seconds have passed from the "Now rebooting." message appears.

ⓘ Items and buttons may differ, depending on the settings.

2. [TOP] Menu [TOP]

■ System Status

Displays the firmware version and MAC addresses.



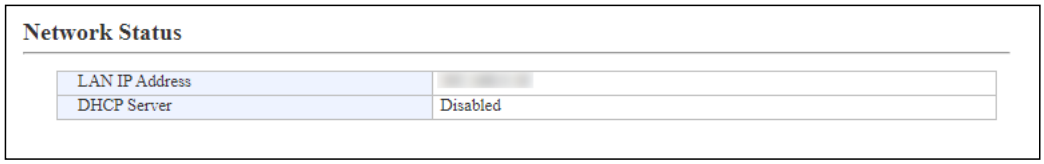
(This is only an example.)

ⓘ Information

- The MAC address is the assigned number peculiar to networking device which it has in each. It is displayed by 12 digits (0090C7XXXXXX).
- The MAC address is also printed on the label on the bottom of the IP1000C.
- The version information of the firmware in every WLAN transceiver registered into this IP1000C can be checked on the [TRX status] field. (p. 4-6)

■ Network Status

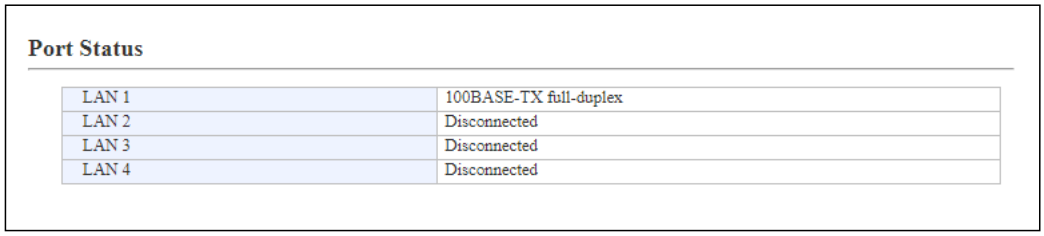
Displays the network information such as IP address.



(This is only an example.)

■ Port Status

Displays the communication rate and mode for each port.



Port Status

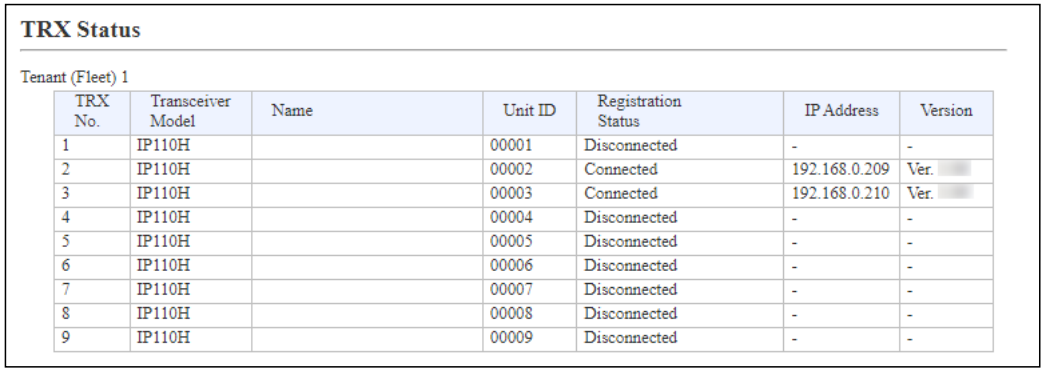
LAN 1	100BASE-TX full-duplex
LAN 2	Disconnected
LAN 3	Disconnected
LAN 4	Disconnected

(This is only an example.)

TIP:
- The IP1000C's [LAN] ports are auto-negotiation enabled, and can automatically select the optimal speed and duplex mode if the peer devices are auto-negotiation enabled as well.
- We recommend to always enable auto-negotiation on the peer devices.
  If a peer device is fixed to full-duplex mode, auto-negotiation enabled devices (including the IP1000C) may generally take it for half-duplex mode and cannot communicate properly.

■ TRX Status

Displays the registered WLAN transceivers and IP100FS information such as the Registration status, IP Address, and Version.



TRX Status

Tenant (Fleet) 1

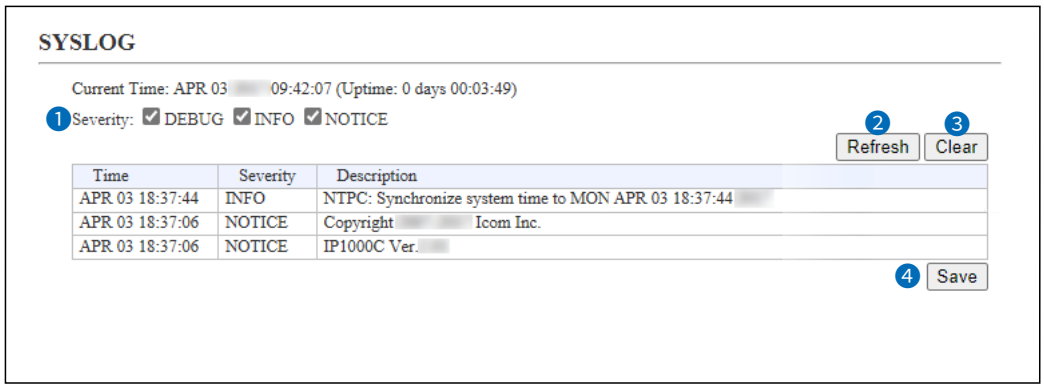
TRX No.	Transceiver Model	Name	Unit ID	Registration Status	IP Address	Version
1	IP110H		00001	Disconnected	-	-
2	IP110H		00002	Connected	192.168.0.209	Ver.
3	IP110H		00003	Connected	192.168.0.210	Ver.
4	IP110H		00004	Disconnected	-	-
5	IP110H		00005	Disconnected	-	-
6	IP110H		00006	Disconnected	-	-
7	IP110H		00007	Disconnected	-	-
8	IP110H		00008	Disconnected	-	-
9	IP110H		00009	Disconnected	-	-

(This is only an example.)

3. [Information] Menu [Information]–[SYSLOG]

■ SYSLOG

Displays the log information. The latest 500 log entries are displayed.



(This is only an example.)

1 Severity ..... Select the log information to display.
- Enter a check mark and click <Refresh> to display the log entries.
- Remove the check mark and click <Refresh> to hide the entries.

(Default: ☑ DEBUG ☑ INFO ☑ NOTICE)

ⓘ The selection is not stored, and reset when you leave this screen.

2 <Refresh> ..... Click to refresh the log screen.

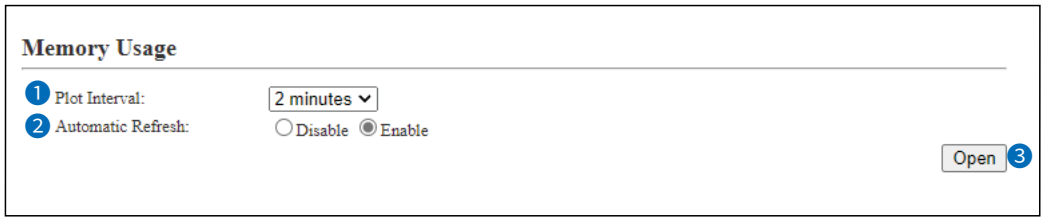
3 <Clear> ..... Click to delete all log entries.

ⓘ All log entries are also deleted when the IP1000C is turned OFF or initialized.

4 <Save> ..... Click to save the log to a PC with a text file (extension: “txt”). Click this button, and then select a folder to save the file.

■ Memory Usage

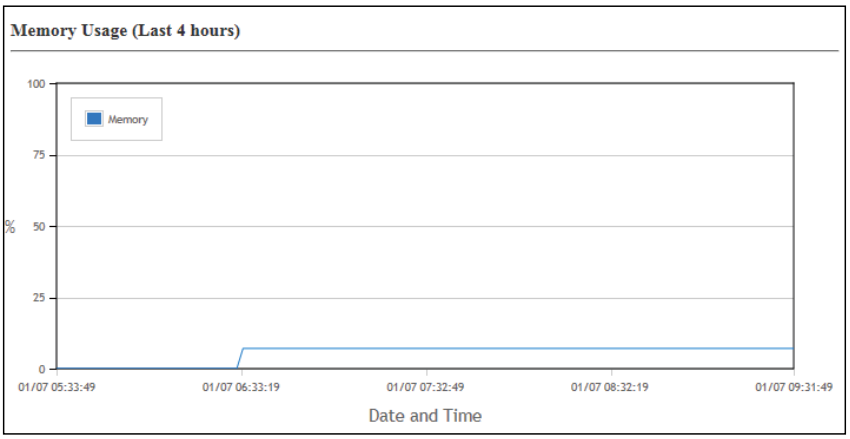
Displays a statistical graph of the memory usage.
ⓘ These setting items are reset when you leave this screen.



❶ Plot Interval ..... Select the plot interval. (Default: 2 minutes)

❷ Automatic Refresh ..... Select “Enable” to periodically refresh the graph. (Default: Enable)
ⓘ The graph is refreshed according to the set interval in [Plot Interval] (❶).

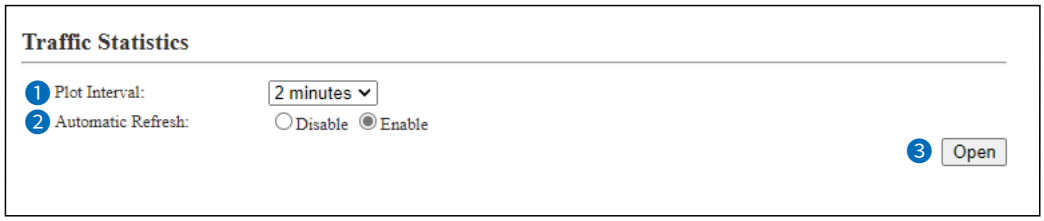
❸ <Open> ..... Click to open the memory usage graph window.
ⓘ The X axis represents the date and time, and the Y axis represents the usage (%).



(This is only an example.)

■ Traffic Statistics

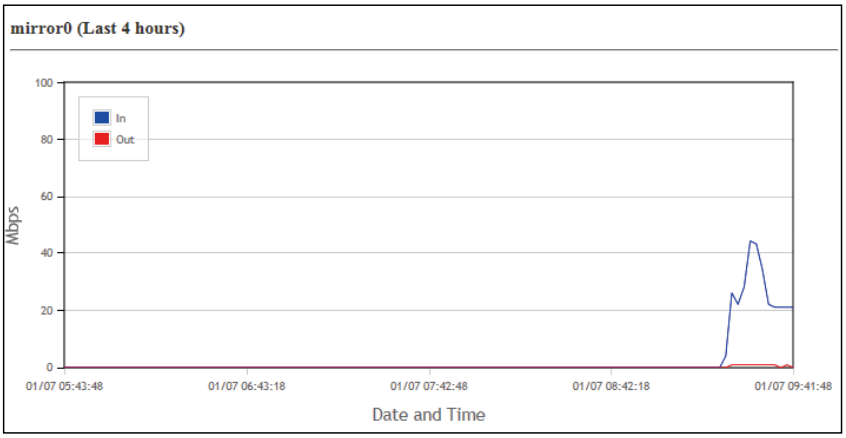
Displays the traffic graph for LAN port.
ⓘ These setting items are reset when you leave this screen.



❶ Plot Interval ..... Select the plot interval. (Default: 2 minutes)

❷ Automatic Refresh ..... Select “Enable” to periodically refresh the graph. (Default: Enable)
ⓘ The graph is refreshed according to the set interval in [Plot Interval] (❶).

❸ <Open> ..... Click to open the traffic graph window.
ⓘ The X axis represents the date and time, and the Y axis represents the traffic (Mbps).

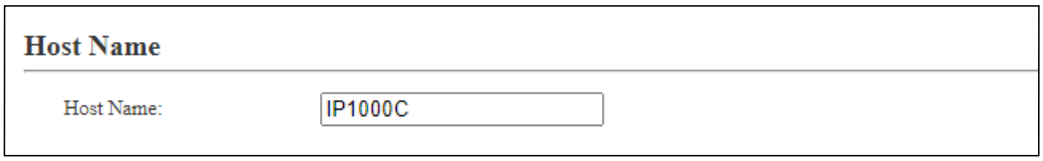


(This is only an example.)

4. [Network Settings] Menu

■ Host Name

Enter the host name.

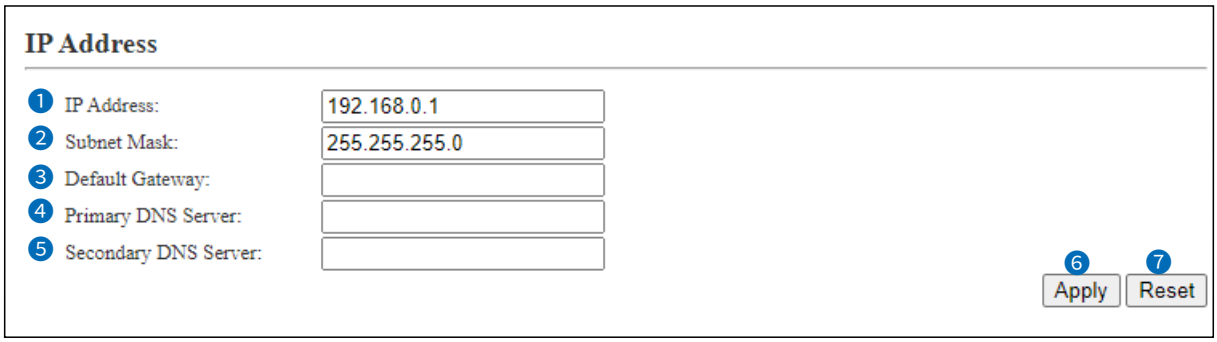


Host Name ..... Enter the host name. (Up to 31 characters) (Default: IP1000C)

ⓘ The name must start with an alphanumeric character, and must NOT start or end with a "–."

■ IP Address

Enter the IP1000C's IP Address.



1 IP Address ..... Enter the LAN IP address according to your network environment. (Default: 192.168.0.1)

ⓘ When using the DHCP Server function, the network part of the IP address must be the same as that set in the "IP Pool Start Address" item in the [DHCP Server] menu. (p. 4-12)

2 Subnet Mask ..... Enter the subnet mask according to your network environment. (Default: 255.255.255.0)

3 Default Gateway..... If a default gateway device (such as a router) is connected to the LAN port, enter the device's IP address.

4 Primary DNS server ..... Enter the DNS server address specified by your service provider. If you have two DNS server addresses, enter the primary address.

5 Secondary DNS server..... Enter the secondary DNS server address, if you have two DNS server addresses.

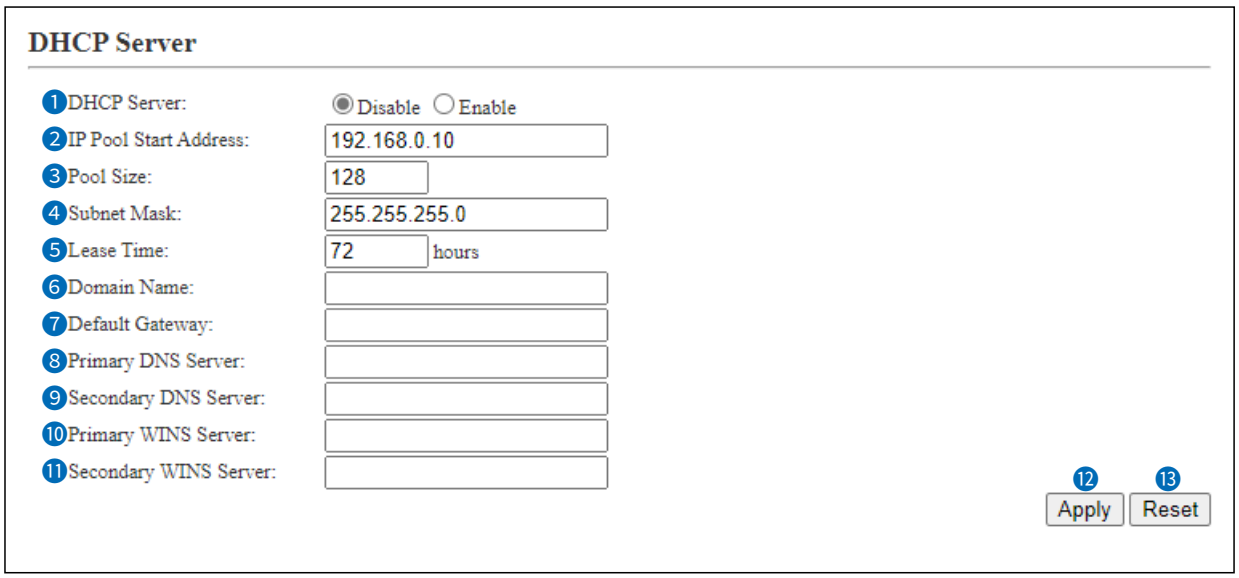
6 <Apply> ..... Click to apply the entries.

7 <Reset> ..... Click restore the settings.

ⓘ You cannot restore after clicking <Apply>.

■ DHCP Server

Configure the DHCP Server function.



❶ DHCP Server ..... Select “Enable” to use the DHCP Server function. (Default: Disable)

❷ IP Pool Start Address ..... Enter the IP pool start address. (Default: 192.168.0.10)

❸ Pool Size ..... Enter the size of IP pool. (Default: 128)
ⓘ Up to 128 addresses can be automatically assigned by the DHCP server function.
Another 32 addresses can be manually assigned.

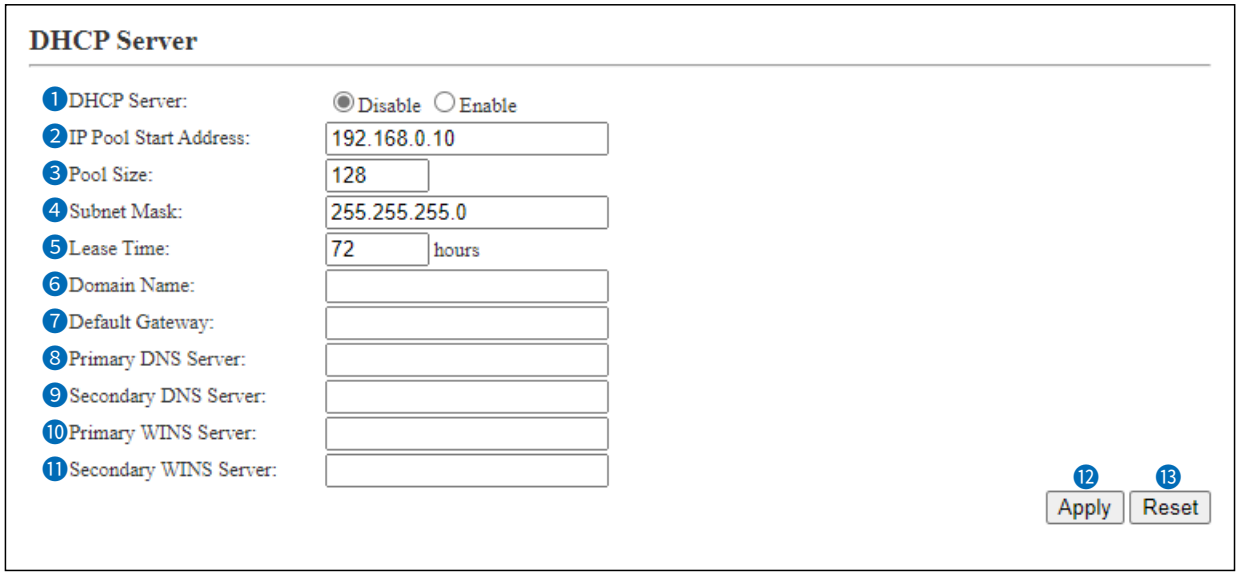
❹ Subnet Mask ..... Enter the subnet mask for the IP pool start address set in the “IP Pool Start Address” item (❷). (Default: 255.255.255.0)

❺ Lease Time ..... Enter the lease time period. (Default: 72)
• Range: 1–9999 (hours)

❻ Domain Name ..... Enter the network address domain name. (Up to 127 characters)

4. [Network Settings] Menu [Network Settings]–[DHCP Server]

■ DHCP Server



⑦ Default Gateway..... Enter the default gateway IP address.

⑧ Primary DNS Server ..... Enter the DNS server address specified by your service provider. If you have two DNS server addresses, enter the primary address.

⑨ Secondary DNS Server ... Enter the secondary DNS server address, if you have two DNS server addresses.

⑩ Primary WINS Server ..... Enter the WINS server's primary address, if you have two WINS server addresses, enter the primary address.

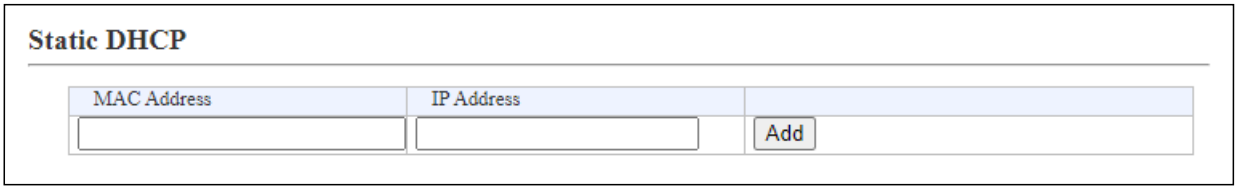
⑪ Secondary WINS Server ... Enter the WINS server's secondary address, if you have two WINS server addresses.

⑫ <Apply> ..... Click to apply the entries.

⑬ <Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

■ Static DHCP

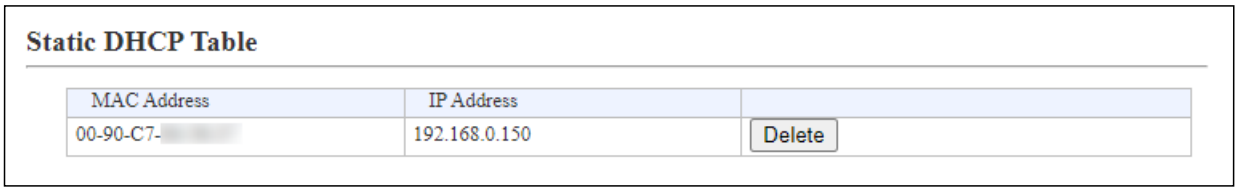
Enter MAC and static IP addresses to the DHCP server.
ⓘ You can enter up to 32 entries.



Static DHCP ..... Enter the MAC and IP addresses, and then click <Add>.
ⓘ Make sure that the addresses of the devices on the network do not overlap or conflict.
If a DHCP server is already connected to the network, and there is an address conflict, a network problem will occur.
See the Troubleshooting section for possible solutions.

■ Static DHCP Table

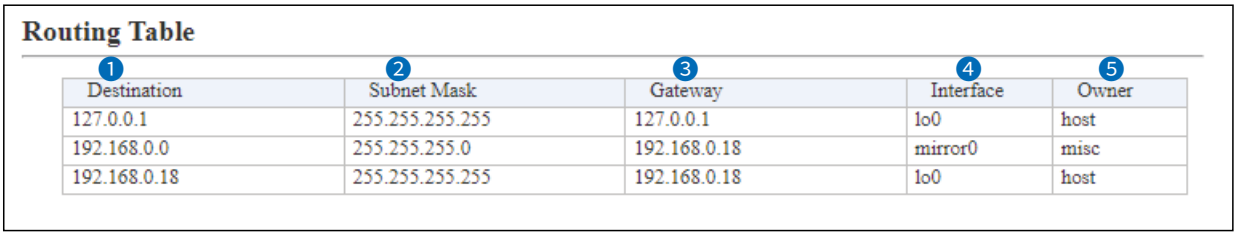
Displays the static DHCP entries.



<Delete> ..... Click <Delete> to remove the entry.

■ Routing Table

Displays the routing information.



Routing Table

❶ Destination	❷ Subnet Mask	❸ Gateway	❹ Interface	❺ Owner
127.0.0.1	255.255.255.255	127.0.0.1	lo0	host
192.168.0.0	255.255.255.0	192.168.0.18	mirror0	misc
192.168.0.18	255.255.255.255	192.168.0.18	lo0	host

(This is only an example.)

❶ **Destination** ..... The network address of the route's destination network.

❷ **Subnet Mask** ..... The subnet mask of the route's destination network.

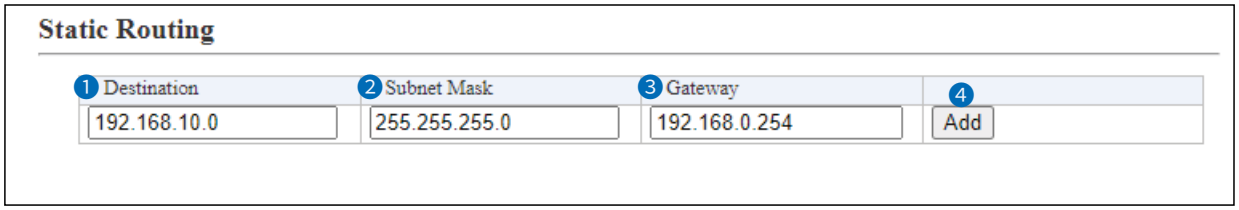
❸ **Gateway** ..... The route's gateway address.

❹ **Interface** ..... The routing interface.
- **lo0:** Loop back interface
- **mirror0:** LAN

❺ **Owner** ..... The type of routing path.
- **static:** Static route
- **misc:** Broadcast frame
- **host:** Host route

■ Static Routing

Enter the static routing destinations.
ⓘ You can enter up to 32 entries.



(This is only an example.)

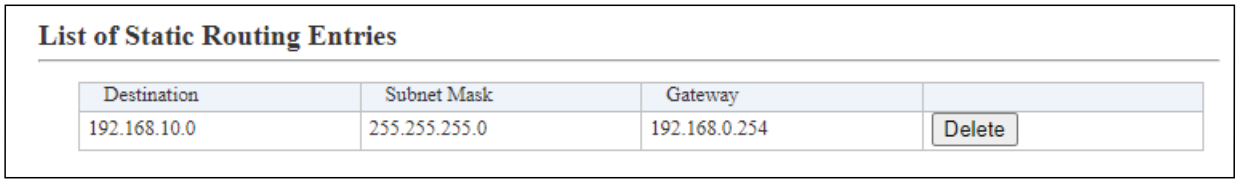
❶ Destination ..... The network address of the route's destination network.

❷ Subnet Mask ..... The subnet mask of the route's destination network.

❸ Gateway ..... The route's gateway address.

❹ <Add> ..... Click to add the entry.

■ List of Static Routing Entries



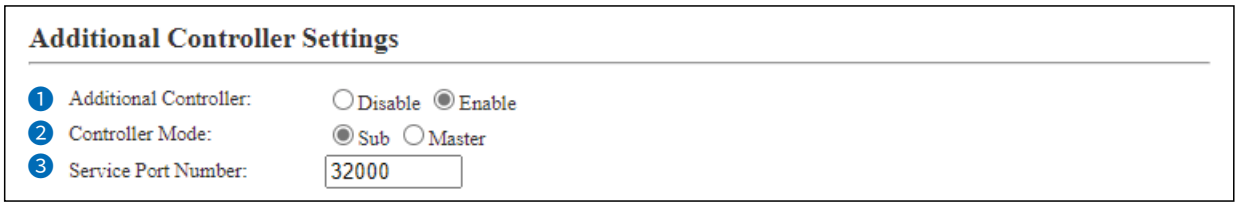
(This is only an example.)

<Delete> ..... Click <Delete> to remove the entry.

5. [RoIP Settings] Menu

■ Additional Controller Settings

Configure the Additional Controller Settings.



Example: The default of the [Additional Controller] item is “Disable.”
❷ and ❸ appear when selecting “Enable” in the [Additional Controller] item.

❶Additional Controller …… Select “Enable” in the [Additional Controller] item to communicate with additional Controllers. (Default: Disable)
When selecting “Enable,” you can communicate with the WLAN transceivers and the IP100FS registered to additional controllers.
ⓘ Register the destination controller on the [Additional Controller Link] item in the [RoIP Server Settings] menu.
ⓘ When using this Additional Controller Settings, you can link to the bridge mode’s VE-PG3 for communication.

❷Controller Mode …… Select “Master” for one master Controller. Select [Sub] for the other Controllers (up to 10 Sub Controllers can be set). (Default: Sub)
When several Controllers are linked and use All call or Group call between the controllers, the IP1000C 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 IP1000C whose Controller mode is set to “Master.”

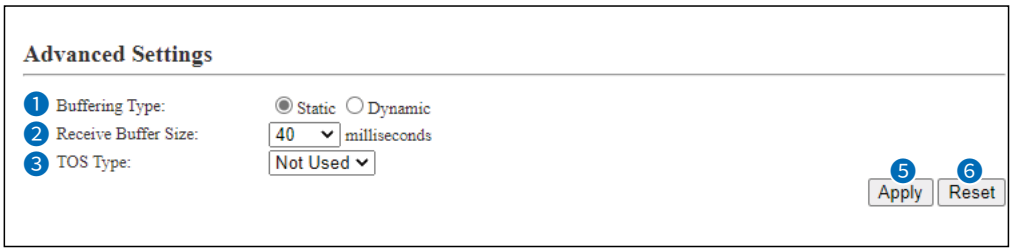
❸Service Port Number …… Enter the port number for receiving audio signals.
Range: “2” to “65534” (only even numbers) (Default: 32000)
The set port number (RTP) and the port number +1 (RTCP) are used for the communication.
ⓘ This number is also used for the caller port number.
ⓘ Do not set the port number which has already been used by another connection setting.

■ Advanced Settings

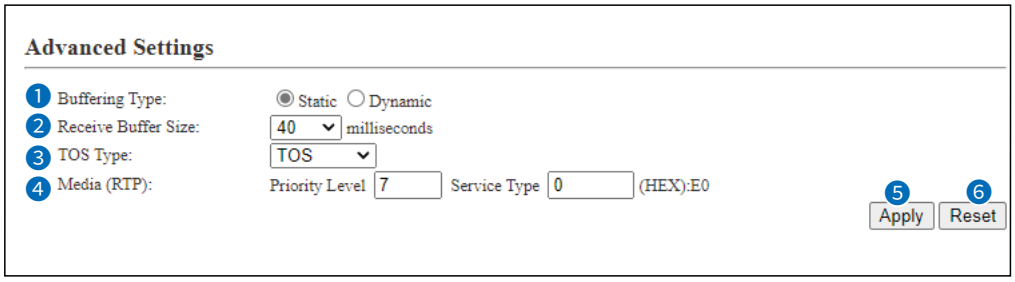
Set the V/RoIP details.

ⓘ The items on the [RoIP Settings] screen differs depending on the TOS Type setting.

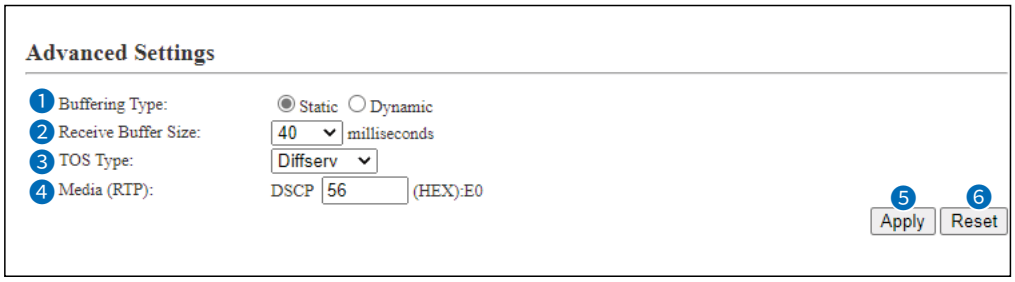
TOS Type: Not Used



TOS Type: TOS



TOS Type: Diffserv



(These are examples when the “Buffering Type” item is set to “Static.”)

❶ Buffering Type ..... Select the buffer type to reduce that the received audio breaks up. (Default: Dynamic)

- **Static**
  The buffer time is set the “Receive Buffer Size” item below.
- **Dynamic**
  The buffer time is changed, depending on the audio fluctuation.

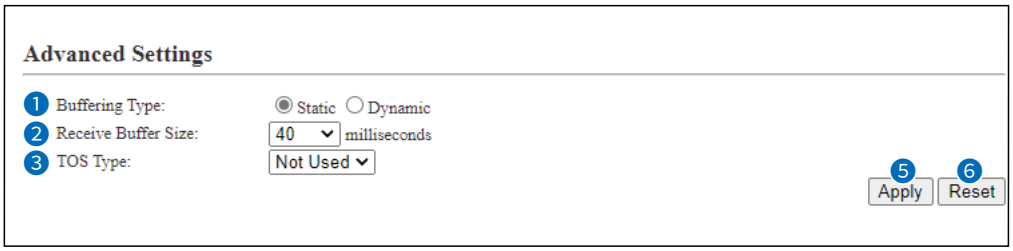
❷ Receive Buffer Size ..... Select the buffer time to keep the audio from breaking up. (Default: 40)
Shorter value improves the delay, but it may frequently break the audio signal.

ⓘ This item is displayed when the “Buffering Type” item is set to “Static.”

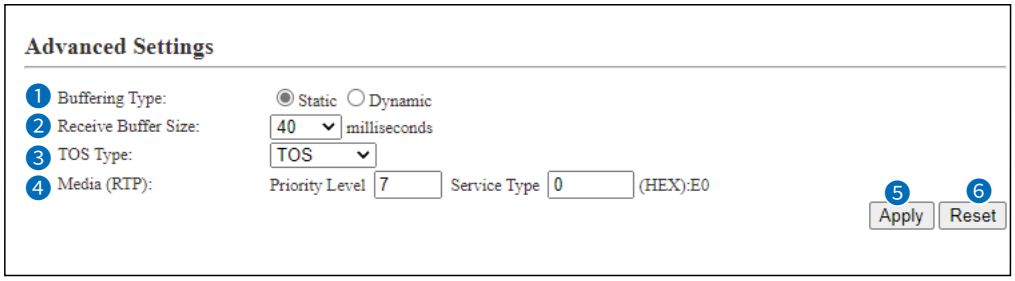
5. [RoIP Settings] Menu — [RoIP Settings]–[Advanced Settings]

■ Advanced Settings

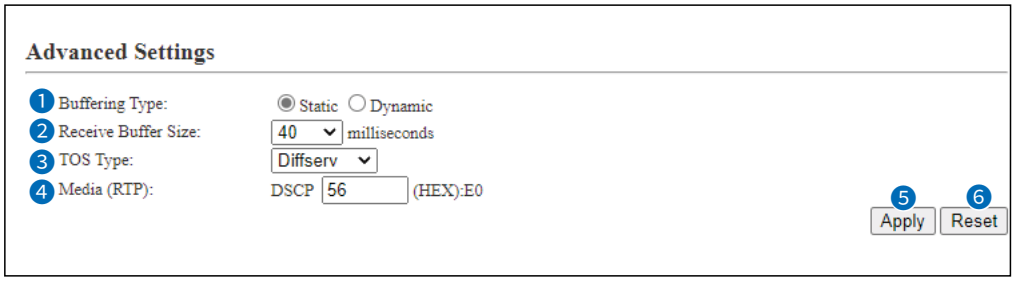
TOS Type: Not Used



TOS Type: TOS



TOS Type: Diffserv



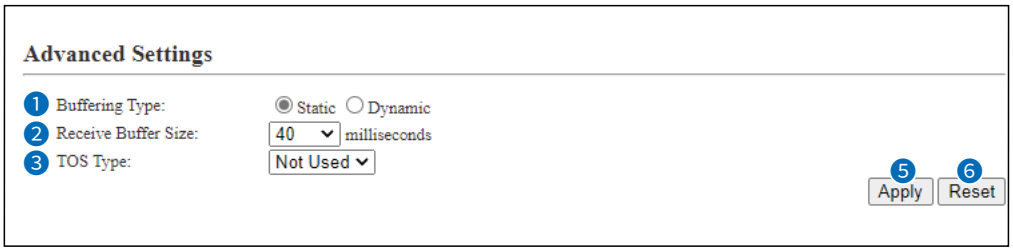
(These are examples when the “Buffering Type” item is set to “Static.”)

❸ TOS Type ..... Select the TOS (Type-Of Service) format. (Default: TOS)

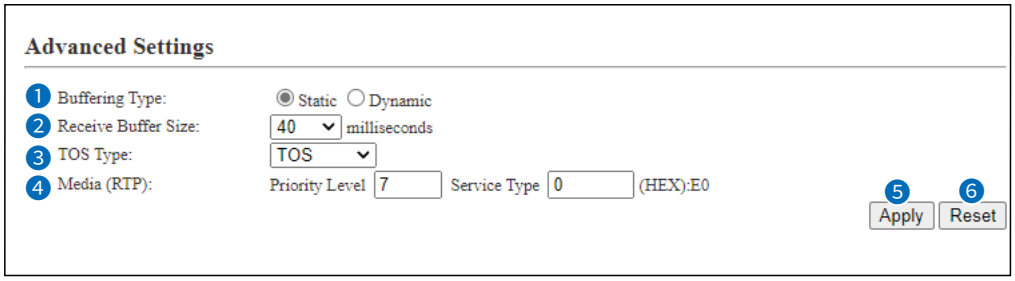
- **Not Used**
  Does not use the TOS function.
- **TOS**
  Sends the VoIP packets to TOS field (8 bits) in the IP header using the TOS format.
- **Diffserv**
  Sends the VoIP packets to TOS field (8 bits) in the IP header using the Diffserv (Differentiated Service) format.

■ Advanced Settings

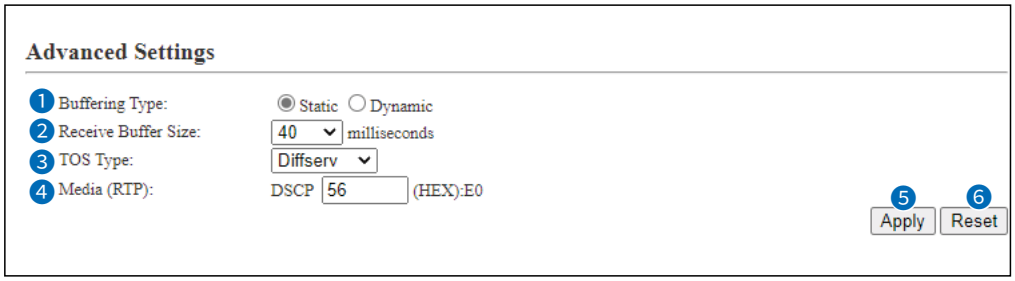
TOS Type: Not Used



TOS Type: TOS



TOS Type: Diffserv



(These are examples when the “Buffering Type” item is set to “Static.”)

4 Media (RTP)..... Select the Priority level and Service type of the sent VoIP packets.

- **Priority Level**
  Set the TOS priority level between 0 to 7 in decimal. (Default: 7)
- **Service Type**
  Set the TOS service type code between 0 to 15 in decimal. (Default: 0)
- **DSCP**
  Set the DSCP (Differentiated Services Code Point) code between 0 to 63 in decimal. (Default: 56)

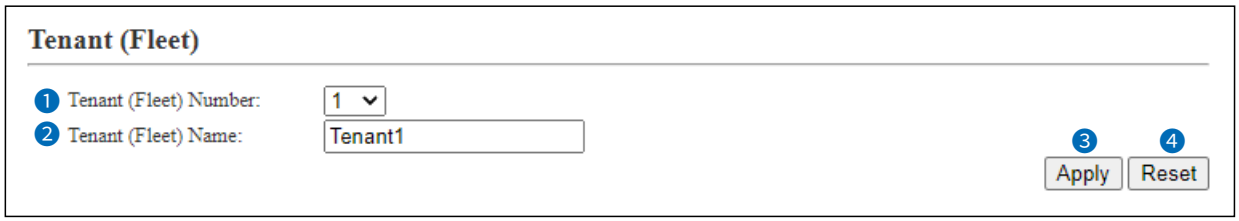
5 <Apply> ..... Click to apply the entries.

6 <Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

6. [Tenant (Fleet) Settings] Menu [Tenant (Fleet) Settings]–[Tenant (Fleet)]

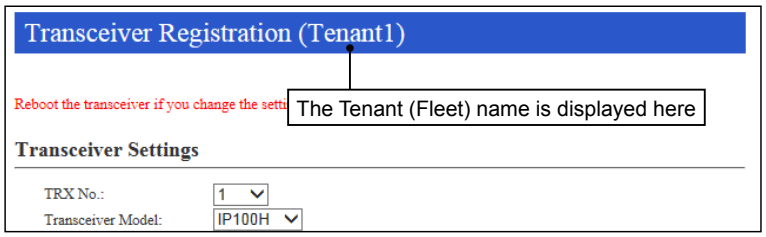
■ Tenant (Fleet)

The tenant (fleet) divides the WLAN transceivers or IP100FSs which belong to this IP1000C for a system management purpose. (Example: Security company/Commissioned company)
ⓘ The terminals cannot communicate among different tenants (fleets).



1 Tenant (Fleet) Number …… Select the tenant (fleet) number that is registered or edited. (Default: 1)

2 Tenant (Fleet) Name …… Enter the tenant (fleet) name. (Up to 31 characters) (Default: Tenant1)
The tenant (fleet) name is displayed on the following menus.
- RoIP Server Settings
- Transceiver Settings
- Common Settings (Except Wireless LAN menu)
- Destination Settings



(This is only an example.)

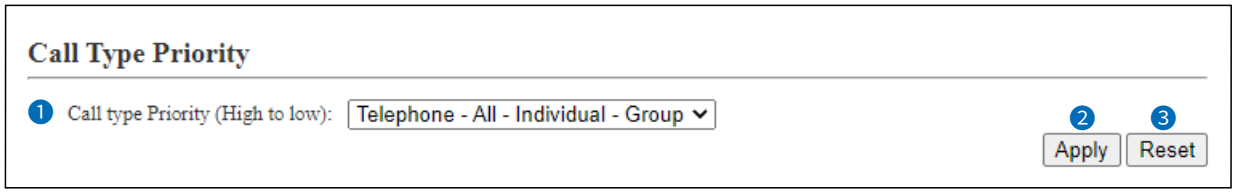
3 <Apply> …… Click to apply the entries.

4 <Reset> …… Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

7. [RoIP Server Settings] Menu

■ Call Type Priority

Select the priority level of the call types.



(This is only an example.)

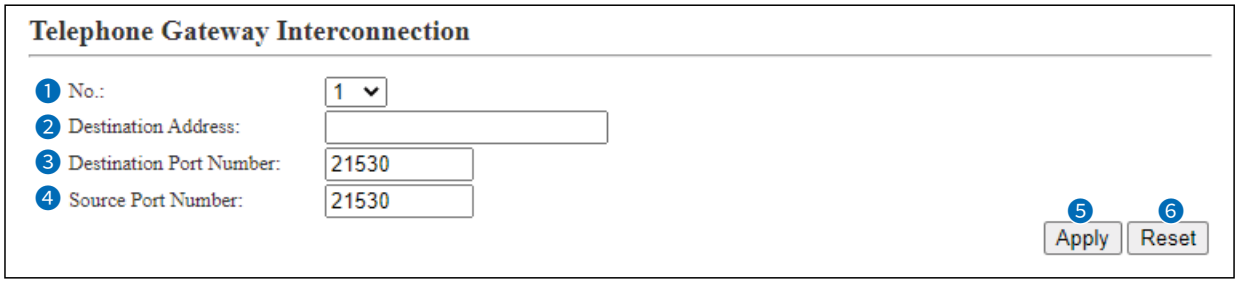
❶Call type Priority (High to low) Select the priority level of the call types.
(Default: Telephone – All – Individual – Group)

❷<Apply> ..... Click to apply the entries.

❸<Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

■ Telephone Gateway Interconnection

Set the Telephone Gateway Interconnection with a VE-PG3.



(This is only an example.)

1 No. ..... Select the number that is registered to a device.
ⓘ Up to 20 devices can be registered.

2 Destination Address ..... Enter the destination device's IP address or domain name. (Up to 63 characters)

3 Destination Port Number... Enter the destination VE-PG3's port number.
Range: '2' to '65534' (only even numbers)
ⓘ The set port number (RTP) and the port number +1 (RTCP) are used for the communication.

4 Source Port Number ..... Enter the port number for receiving audio signals.
Range: '2' to '65534' (only even numbers)

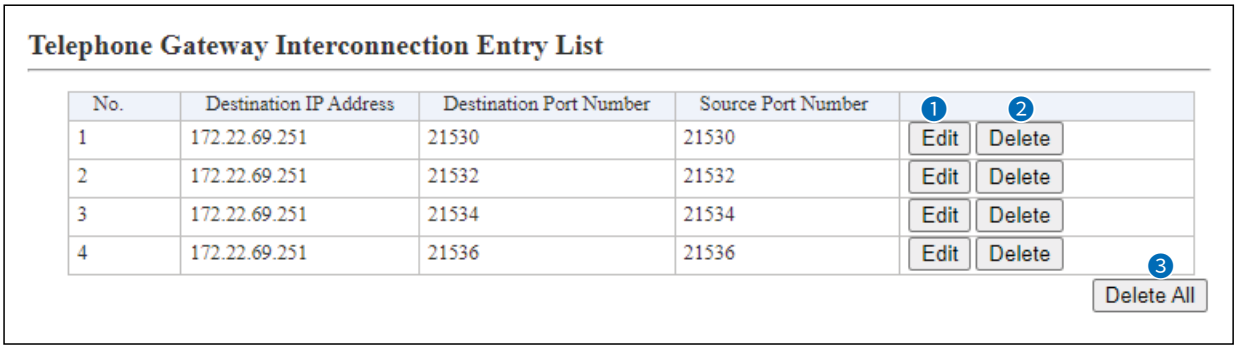
ⓘ **Information**
- The set port number (RTP) and the port number +1 (RTCP) are used for the communication.
- This number is also used for the caller port number.
- Do not set the port number which has already been used by another connection setting.

5 <Apply> ..... Click to apply the entries.

6 <Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

■ Telephone Gateway Interconnection Entry List

The list of the registered device for the Telephone Gateway Interconnection.



(This is only an example.)

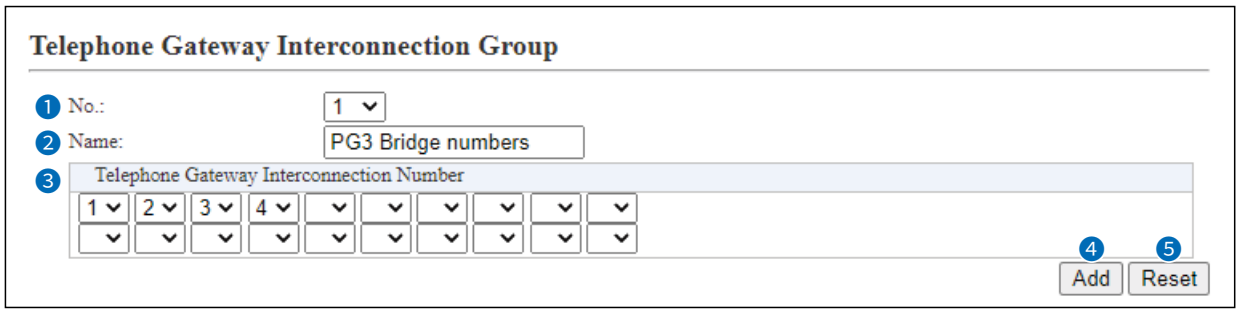
❶ **<Edit>** ..... Click to edit the setting on the [Telephone Gateway Interconnection] field.

❷ **<Delete>** ..... Click to delete the selected entry.
ⓘ After clicking <Delete>, the content cannot be recalled.

❸ **<Delete All>** ..... Click to delete all the entries.
ⓘ After clicking <Delete All>, the contents cannot be recalled.

■ Telephone Gateway Interconnection Group

If the courses of the Telephone Gateway Interconnection to the VE-PG3s are made into a group, the unused course in the group can be selected to dispatch.



(This is only an example.)

1 No. ..... Select the number that is registered to a group.
ⓘ Up to 20 groups can be registered.

2 Name ..... Enter the group name. (Up to 31 characters)

3 Telephone Gateway Interconnection Number ... Select the Telephone Gateway Interconnection to register to the group.

4 <Add> ..... Click to add the entries.

5 <Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Add>.

■ Telephone Gateway Interconnection Group Entry List

The list of the registered Telephone Gateway Interconnection group.

(This is only an example.)

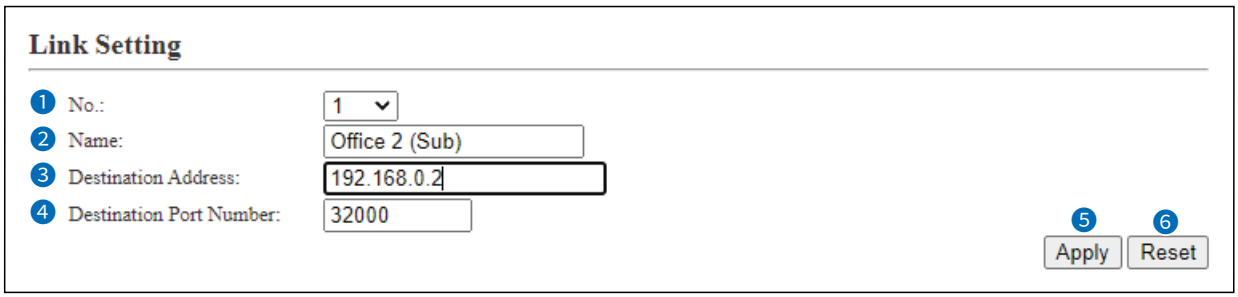
❶ <Edit> ..... Click to edit the setting on the [Telephone Gateway Interconnection Group] field.

❷ <Delete> ..... Click to delete the selected entry.
ⓘ After clicking <Delete>, the content cannot be recalled.

❸ <Delete All> ..... Click to delete all the entries.
ⓘ After clicking <Delete All>, the contents cannot be recalled.

■ Link Setting

This is a setting to link with other IP1000Cs, VE-PG3s (Bridge mode), or VE-PG4s.



(This is only an example.)

❶ No. ..... Select a number between 1 and 100 to register the other transceiver controllers.
ⓘ Up to 100 links can be made.

❷ Name ..... Enter the group name. (Up to 31 characters)

❸ Destination Address ..... Enter the destination device's IP address or domain name. (Up to 63 characters)

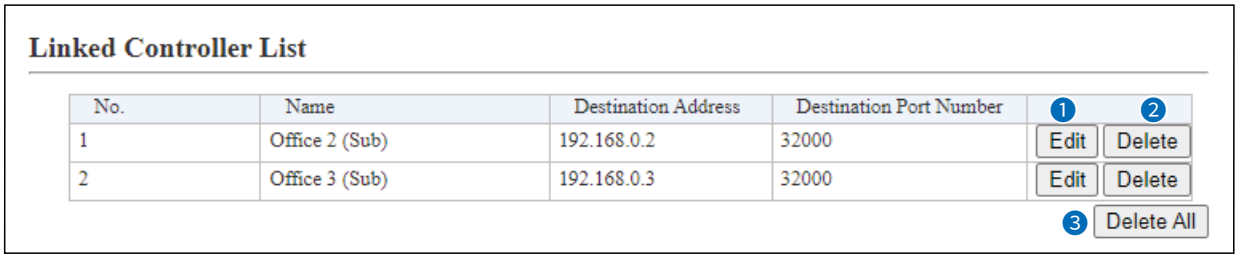
❹ Destination Port Number... Enter the destination controller's service port number of the Additional Controller Settings (p. 4-17).
Range: "2" to "65534" (only even numbers)
ⓘ The set port number (RTP) and the port number +1 (RTCP) are used for the communication.

❺ <Apply> ..... Click to apply the entries.

❻ <Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

■ Linked Controller List

The [Linked Controller List] is a list of the destination IP addresses and port numbers registered to this IP1000C.



(This is only an example.)

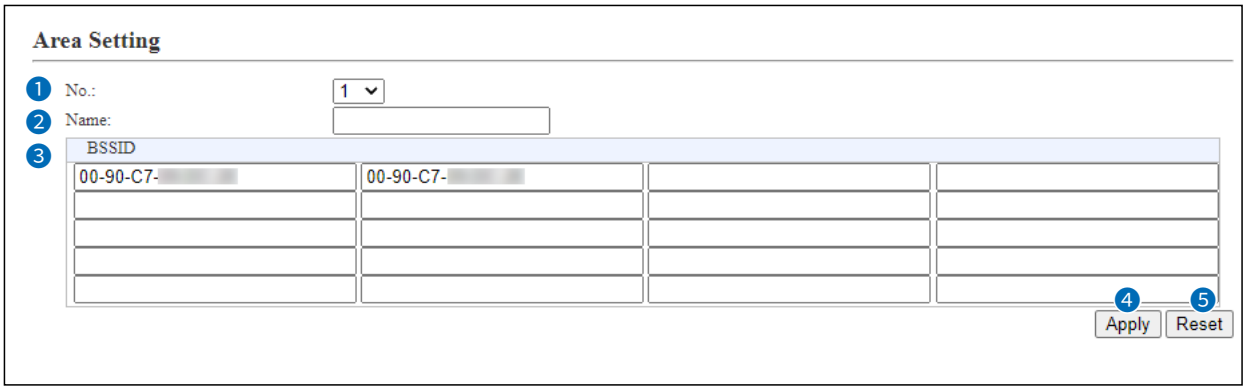
❶ **<Edit>** ..... Click to edit the setting on the [Link Setting] field.

❷ **<Delete>** ..... Click to delete the selected entry.
ⓘ After clicking <Delete>, the content cannot be recalled.

❸ **<Delete All>** ..... Click to delete all the entries.
ⓘ After clicking <Delete All>, the contents cannot be recalled.

■ Area Setting

The Area call function limits the communication with the devices in the specified area.
When a WLAN transceiver makes an All call or Group call using the Area call function, it calls other WLAN transceivers or IP100FSs in the same area.
ⓘ If you want to use the Area call from an IP100FS, specify the area by selecting the desired access points.



(This is only an example.)

1 No. ..... Select the number that is registered to the Area call.
ⓘ Up to 20 calls can be registered.

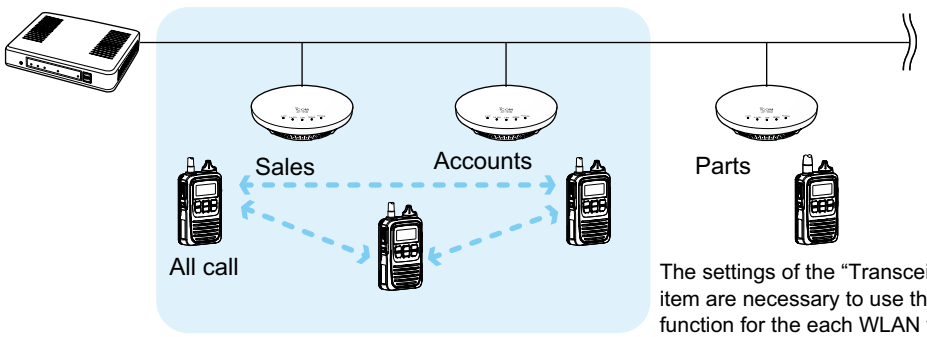
2 Name ..... Enter the area name. (Up to 31 characters)

3 BSSID ..... Enter the 12 digit BSSID of the wireless access point in the area.
(Example: Sales and Accounts)
When several access points are added, they are recognized as one area.
ⓘ Up to 20 access points can be registered to the area.

4 <Apply> ..... Click to apply the entries.

5 <Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

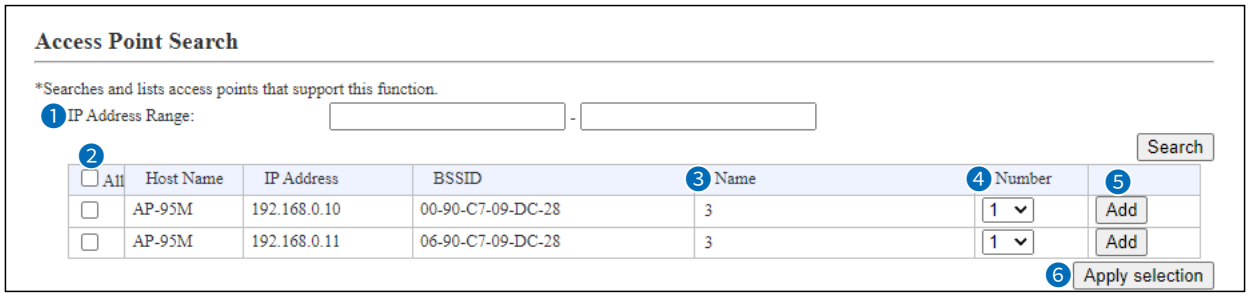
The WLAN transceiver makes All call in the area
Example: The wireless access points “Sales” and “Accounts” are registered in the same area. The access point “Parts” is registered in the different area.
In that case, two WLAN transceivers in the same area receive the call, however, the WLAN transceiver in the different area will not receive it.



The settings of the “Transceiver Settings” item are necessary to use the Area call function for the each WLAN transceiver.

■ Access Point Search

The IP1000C can search an access point on the network to register the access point for Area Call.
ⓘ Icom guarantees this function only for the AP-90M and AP-95M. (As of June 2022)



(This is only an example.)

❶IP Address Range ..... Click the <Search> button after entering the IP address range of the access points.
The searched access point information will be displayed in the list.

❷Selection Box ..... Click a selection box to add a check mark for registering a searched access point.
ⓘ By clicking the [All] Box, you can select or cancel all access points in the list.

❸Name ..... An area name, which is selected in the [Number] item is displayed.
ⓘ An area name is registered on the [Number] item in the [Area] setting.

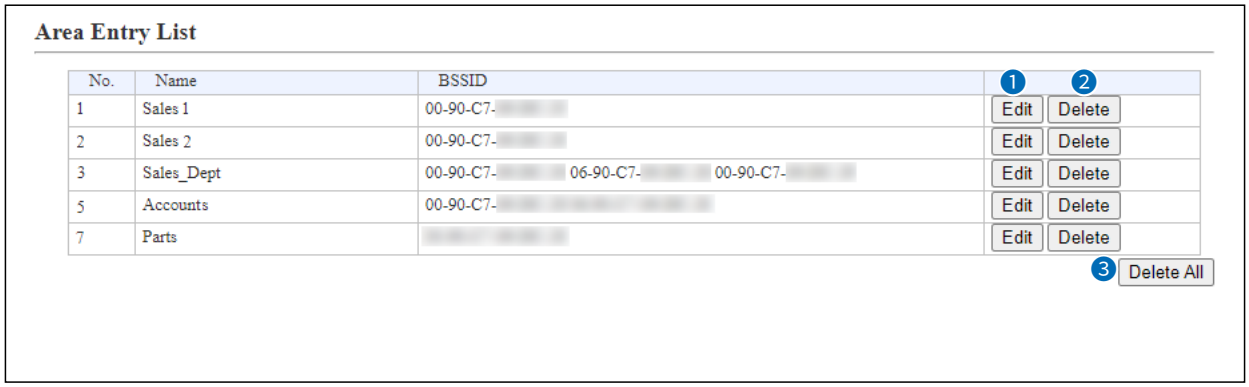
❹Number ..... Select an area to register from a “Number” item of [Area Setting].

❺<Add> ..... Click the <Add> button to register a searched access point in the [Access Point Search] setting.

❻<Apply selection> ..... Click the <Apply selection> button to register a selected access point in the selection box (❷) item.

■ Area Entry List

The list of the registered Area setting.



(This is only an example.)

❶ **<Edit>** ..... Click to edit the setting on the [Area Setting] field.

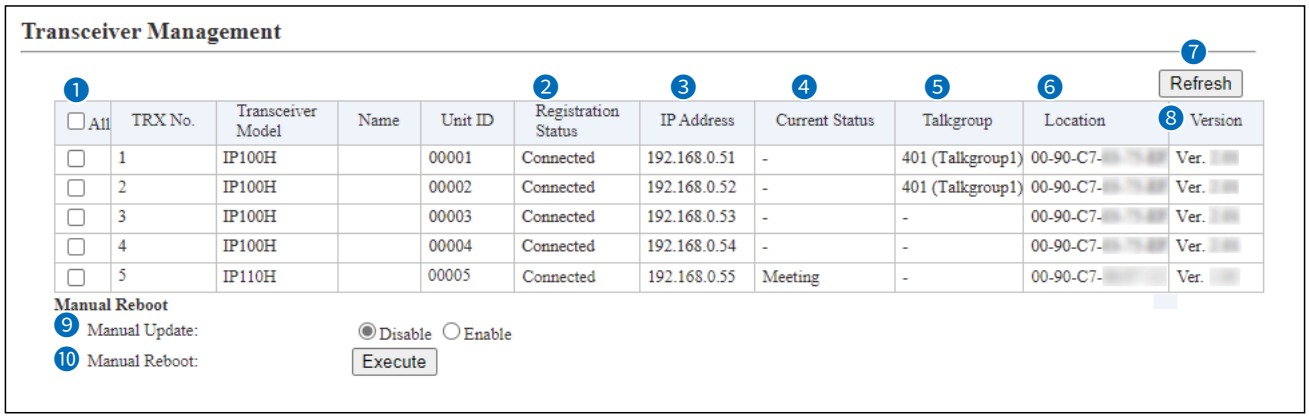
❷ **<Delete>** ..... Click to delete the selected entry.
ⓘ After clicking <Delete>, the content cannot be recalled.

❸ **<Delete All>** ..... Click to delete all the entries.
ⓘ After clicking <Delete All>, the contents cannot be recalled.

8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Management]

■ Transceiver Management

The IP1000C can monitor the registered WLAN transceivers and IP100FSs. And if necessary, The IP1000C can reboot the registered WLAN transceivers at the same time.



(This is only an example.)
ⓘ A WLAN transceiver is displayed in bold when the setting is changed and the reboot is required.

1 Selection Box ..... Click a Selection Box to add a check mark to the WLAN transceiver that you want to reboot.
- ⓘ You cannot select an IP100FS, or the WLAN transceivers that has "Disconnected" displayed in [Registration Status].
- ⓘ By clicking the [All] Box, you can select or cancel all WLAN transceivers in the list.

2 Registration Status ..... Displays the WLAN transceivers' or IP100FSs' Registration Status as either the "Connected" or "Disconnected."
- ⓘ If the WLAN transceiver is turned OFF or IP100FS's application is not running, displays "Disconnected."
- ⓘ When the IP1000C sends the reboot command to an WLAN transceiver from the [Transceiver Management] menu, the following status are displayed: "Receiving reboot command," "Reboot command reception success," "Reboot command reception failed," "Ready to reboot" "Rebooting," "Updating," "Update failed," "Downloading," "Status notification failed," "Low battery," and "Programming with software."

3 IP Address ..... Displays the IP Addresses of the WLAN transceivers or IP100FSs.
- ⓘ When [Registration Status] displays "Disconnected," "–" is displayed.

4 Current Status ..... Displays the Current Status of the WLAN transceivers. (Example: Meeting)

ⓘ Information
- If the Status function is set to OFF, "–" is displayed.
- If you click the <Refresh> button (7), the latest status will be displayed.
- When the WLAN transceiver is remotely locked by the IP100FS, and it cannot communicate with others or cannot transmit, "Transmit and receive disabled" or "Transmit disabled" is displayed.
- If the WLAN transceiver is sending an emergency call, "Emergency" is displayed.

8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Management]

■ Transceiver Management

Transceiver Management

Refresh

❶ All	TRX No.	Transceiver Model	Name	Unit ID	❷ Registration Status	❸ IP Address	❹ Current Status	❺ Talkgroup	❻ Location	❽ Version
☐	1	IP100H		00001	Connected	192.168.0.51	-	401 (Talkgroup1)	00-90-C7-	Ver.
☐	2	IP100H		00002	Connected	192.168.0.52	-	401 (Talkgroup1)	00-90-C7-	Ver.
☐	3	IP100H		00003	Connected	192.168.0.53	-	-	00-90-C7-	Ver.
☐	4	IP100H		00004	Connected	192.168.0.54	-	-	00-90-C7-	Ver.
☐	5	IP110H		00005	Connected	192.168.0.55	Meeting	-	00-90-C7-	Ver.

Manual Reboot

❾ Manual Update: ◉ Disable ○ Enable

❿ Manual Reboot: Execute

(This is only an example.)

ⓘ A WLAN transceiver is displayed in bold when the setting is changed and the reboot is required.

❺ Talkgroup ..... Displays the Talkgroup IDs that are selected by the WLAN transceivers or IP100FSs.

ⓘ While the WLAN transceiver or IP100FS does not select the Talkgroup, or "Registration Status" displays "Disconnected," "–" is displayed.

❻ Location ..... Displays the BSSIDs of the wireless access points that the WLAN transceivers are connected to.

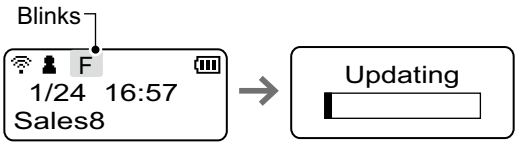
ⓘ While the "Registration Status" displays "Disconnected," "–" is displayed.

❼ <Refresh> ..... Click the <Refresh> button to renew [Registration Status].

❽ Version ..... Displays the version of the WLAN transceivers or IP100FSs that are registered to The IP1000C.

ⓘ While the "Registration Status" displays "Disconnected," "–" is displayed.

❾ Manual Update ..... Select "Enable" to manually update the WLAN transceiver's firmware when The IP1000C sends the reboot command (❿) to it.
When the WLAN transceiver is ready to update the firmware, "F" blinks on the display and then the WLAN transceiver automatically reboots and starts the firmware update.
(Example: For the IP100H)

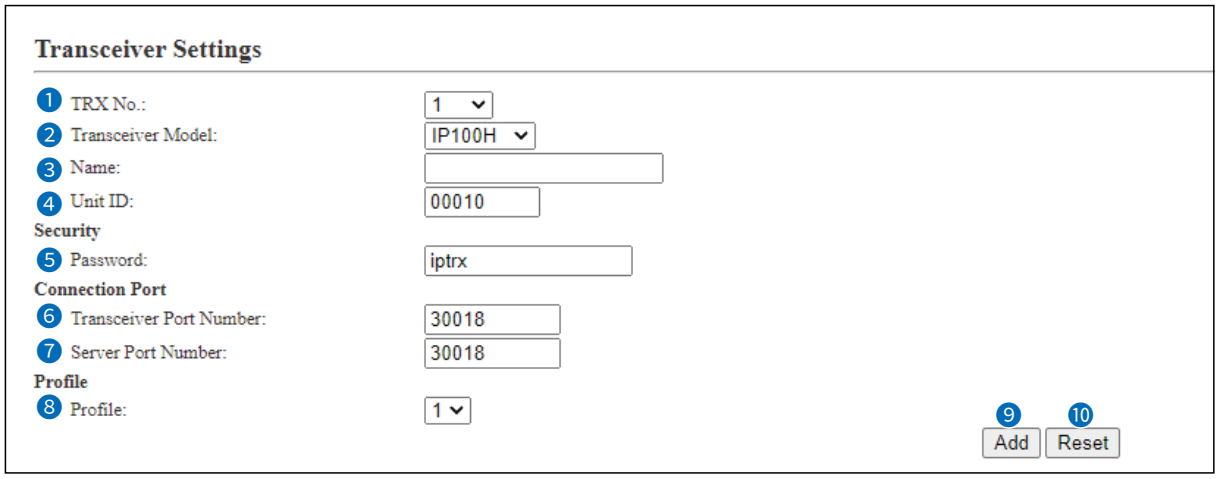


ⓘ When the WLAN transceiver has failed preparation of firmware update, it does not reboot automatically. If necessary, send reboot command to the WLAN transceiver.

❿ Manual Reboot ..... Click the <Execute> button to reboot all of the WLAN transceivers that are selected in the selection box (❶).

■ Transceiver Settings

Registers or edits the WLAN transceiver or IP100FS settings.
ⓘ After the setting is completed, you must reboot the WLAN transceiver.



(This is only an example.)

❶ TRX No. ..... Selects the number that the WLAN transceiver or IP100FS is registered to.
Up to 100 terminals can be registered.
ⓘ Depending on the IP1000C versions, up to 20 terminals can be registered.

❷ Transceiver Model ..... Select a WLAN transceiver model. (Default: IP100H)

❸ Name ..... Enter the transceiver name. (Up to 31 characters)

❹ Unit ID ..... Enter the Individual number (00001 ~ 60000). (Default: 00001)

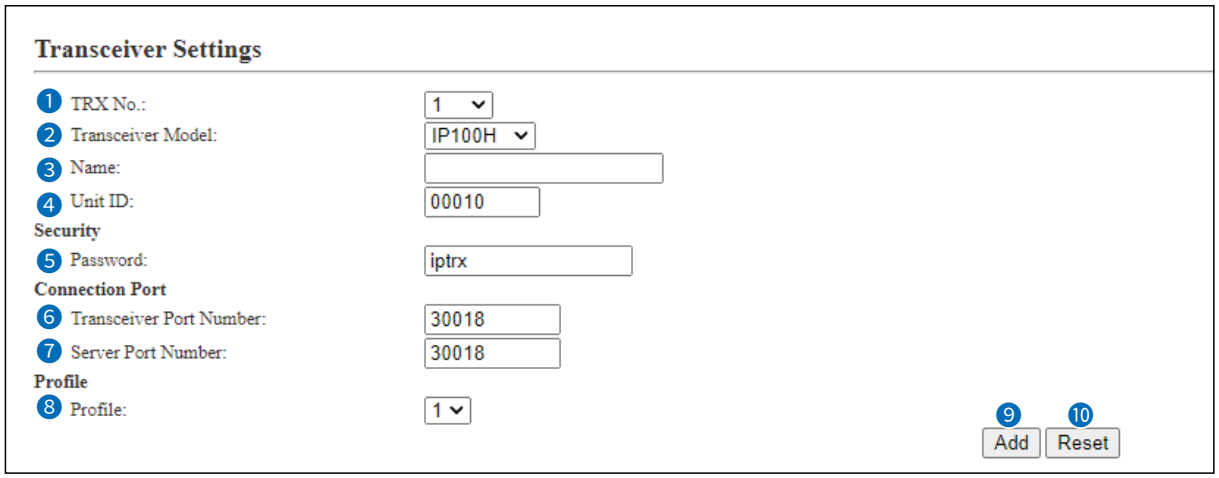
❺ Password ..... Enter the password to access to the IP1000C. (Default: iptrx)
ⓘ Up to 12 characters, lower or upper letters, numbers, symbols can be used.

❻ Transceiver Port Number Enter the port number that the WLAN transceiver uses to communicate with The IP1000C. (UDP port)

ⓘ Information
- The set port number (RTP) and the port number +1 (RTCP) are used for the communication.
- We recommend to use default port number, if it is not problem.
- The default number differs, depending on the [TRX No.] as shown below.
  (Default: TRX No. 1 (30000), TRX No. 2 (30002), TRX No. 3 (30004),
  TRX No. 4 (30006), ..., TRX No. 100 (30198))
- Setting range: Even numbers between 2 and 59998.
  (Some numbers may not be acceptable.)
- Do not set the port number which has already been used by another connection setting.
- When the “Transceiver Model” item (❷) is set to “IP100FS,” this item is not displayed.

8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Registration]

■ Transceiver Settings



(This is only an example.)

7 Server Port Number ..... Enter the port number that The IP1000C uses to communicate with the WLAN transceiver or IP100FS. (UDP port)

ⓘ Information
- The set port number (RTP) and the port number +1 (RTCP) are used for the communication.
- We recommend to use the default port number, if it is not problem.
- The default number differs, depending on the [TRX No.] as shown below.
  (Default: TRX No. 1 (30000), TRX No. 2 (30002), TRX No. 3 (30004),
  TRX No. 4 (30006), ..., TRX No. 100 (30198))
- Setting range: Even numbers between 2 and 65534.
  (Some numbers may not be acceptable.)
- Do not duplicate the port number.

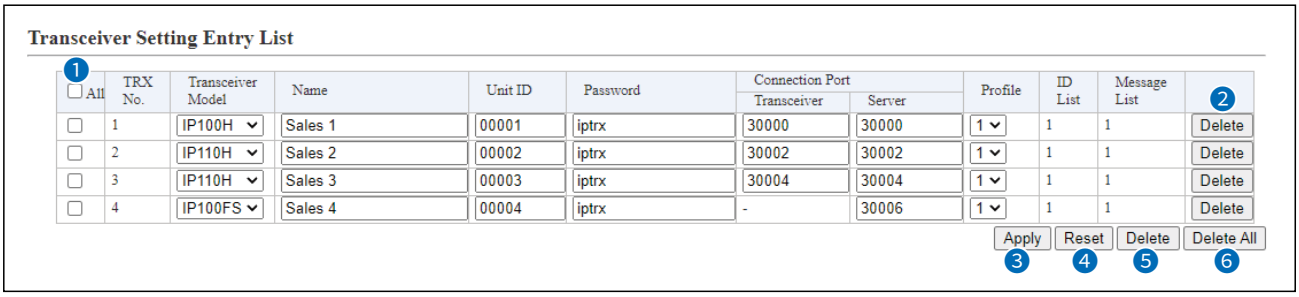
8 Profile ..... Select the Profile number that the WLAN transceiver or IP100FS belongs to. (Default: 1)
ⓘ 1 to 100 are selectable.
ⓘ Set the Profile setting in the [Common Settings] menu, such as ID list, message or Receive notification tone settings.

9 <Add> ..... Click to add the entries.

10 <Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Add>.

■ Transceiver Setting Entry List

The list of the registered WLAN transceivers and IP100FSs.



(This is only an example.)

❶ Selection Box ..... Click a selection box to add a check mark to delete an entry.
ⓘ By clicking the [All] box, you can select or cancel all entries in the list.

❷ <Delete> ..... Click to delete the selected entry.
ⓘ After clicking <Delete>, the content cannot be recalled.

❸ <Apply> ..... Click to apply the entries.

❹ <Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

❺ <Delete> ..... Click to delete an entry, which you select in the selection box.
ⓘ After an entry is deleted, the entry cannot be recalled.

❻ <Delete All> ..... Click to delete all the entries.
ⓘ After clicking <Delete All>, the contents cannot be recalled.

■ TRX Batch Setting

You can register consecutive Destination IDs collectively. Or you can copy the Destination ID contents to the other ID.

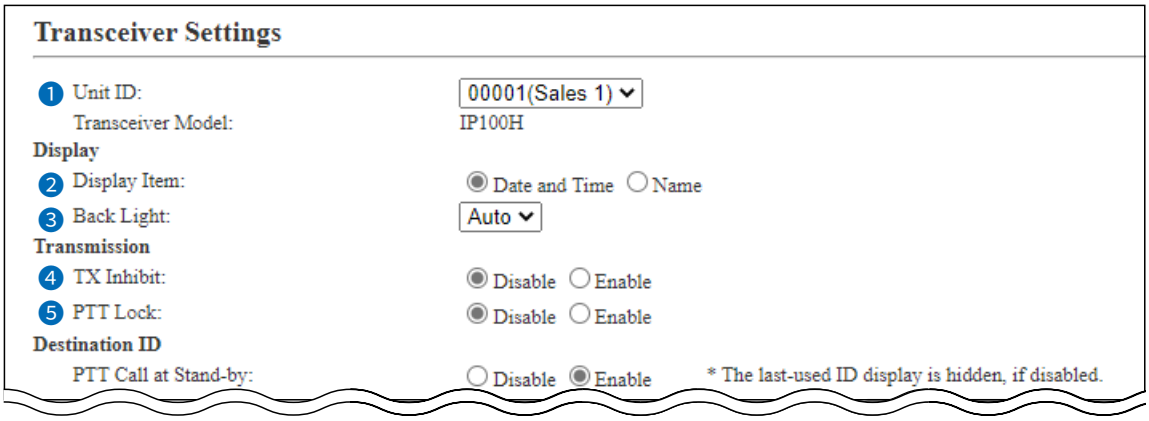
1 Range ..... Enter a range of collective Destination IDs.
<Add>
By clicking the <Add> button, you can register a consecutive Destination IDs collectively in the box.
ⓘ If a Destination ID is already registered, “Duplicate IDs” is displayed.

2 Refer to ..... Select the default settings or the programmed settings to refer to. (Default: Default)

3 Profile ..... Select a profile number, which WLAN transceivers or IP100FSs belong to. (Default: 1)
ⓘ 1 to 100 are selectable.
ⓘ You can set an ID List, Message List, or Notification beep setting of each profile in the [Common Settings] menu.

■ Transceiver Settings [IP100H]

Individually assign the functions or set the receive notification tone to the registered IP100H.
ⓘ After the setting is completed, you must reboot the IP100H.



(This is only an example.)

1 Unit ID .....

Select the Individual number (Name) that the IP100H is edited.
ⓘ Only the individual numbers for the WLAN transceivers are selectable. The individual number that the "Transceiver Model" item on the [Transceiver Registration] screen is set to "IP100FS," cannot be selected.

2 Display Item .....

Select whether the IP100H displays the Date and Time or its Name in the standby mode. (Default: Date and Time)
ⓘ If the "Name" item on the [Transceiver Registration] screen has not been entered, and this setting is set to "Name," the IP100H displays the individual number.

3 Back Light .....

Select the IP100H backlight function. (Default: Auto)
- **OFF**
  The backlight does not light.
- **ON**
  The backlight lights continuously.
- **Auto**
  The backlight lights when an operation is performed, and goes out after 5 seconds.

4 TX Inhibit .....

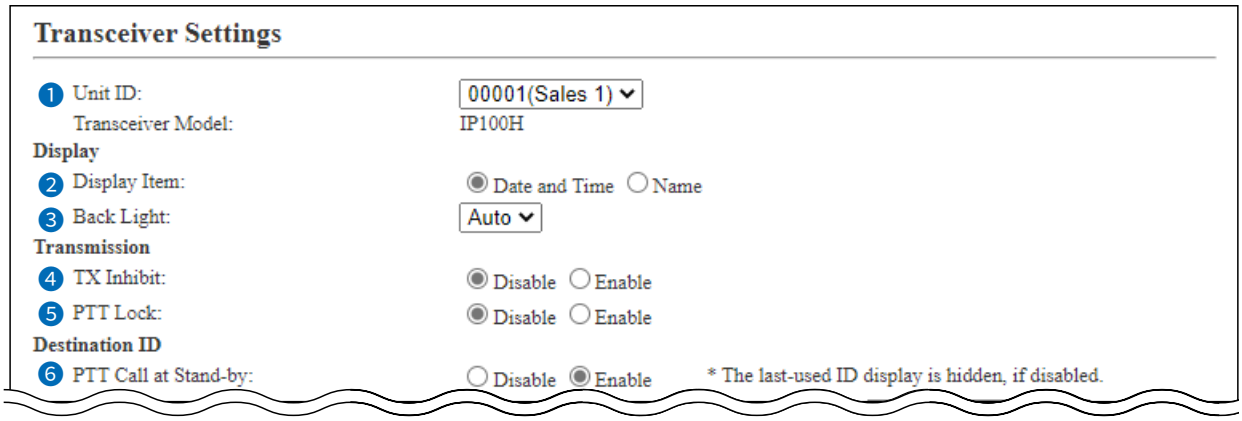
Select "Enable" to inhibit the IP100H's transmission. (Default: Disable)
ⓘ When this setting is set to "Enable," the IP100H cannot also transmit with an optional microphone or using VOX function as well.

5 PTT Lock .....

Select "Enable" to lock the IP100H's PTT switch. (Default: Disable)
ⓘ When this setting is set to "Enable," the IP100H cannot transmit by holding its PTT switch, but it can be transmitted with an optional microphone or using VOX function as well.

8. [Transceiver Settings] Menu — [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP100H]



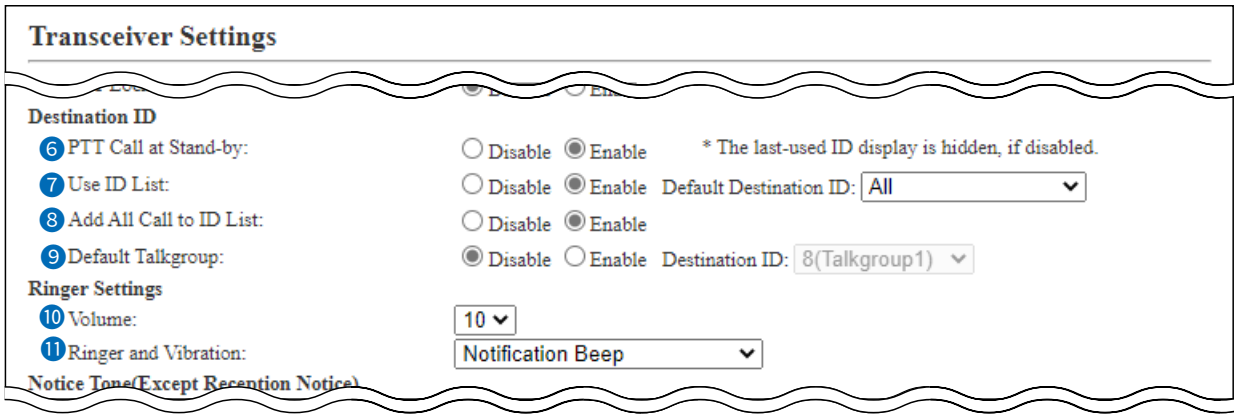
(This is only an example.)

6 PTT Call at Stand-by ..... Select whether the IP100H displays the Destination ID (Call type) in the standby mode or not. (Default: Enable)

- **Enable**
  The Destination ID (Call type) is displayed on the standby mode.
  ⓘ When the PTT on the IP100H is pushed, the IP100H calls the displayed ID (Call type).
- **Disable**
  The Destination ID (Call type) is not displayed on the standby mode.
  ⓘ The Destination ID (Call type) is displayed when you select the ID using function keys.

8. [Transceiver Settings] Menu — [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP100H]



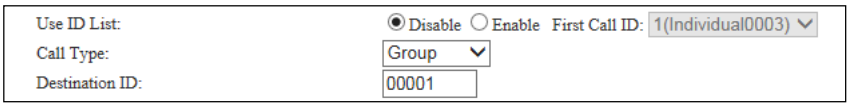
(This is only an example.)

7 Use ID List .....

(Address) key

Select whether or not the IP100H uses the ID list. (Default: Disable)

- **Disable**
  The call type is fixed to that which is selected in the “Call Type” item, as below, even if you push the [📖] key on the IP100H.
  ⓘ If you set the Call Type to “Individual” or “Group,” enter the destination ID (00001 ~ 60000) in the “Destination ID” item. (Default: All)

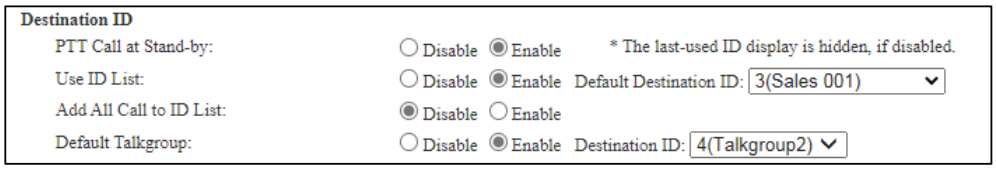


  ⓘ Even if “Disable” is selected, the IP100H displays a received ID in the ID list.
- **Enable**
  The call type is changed by pushing the [📖] key on the IP100H. Select Default Destination ID from All or an ID number (1 to 50) that is displayed when the IP100H is turned ON, and the Call type.
  ⓘ The ID list is selected on the Common Setting screen.

8 Add All Call to ID List .....

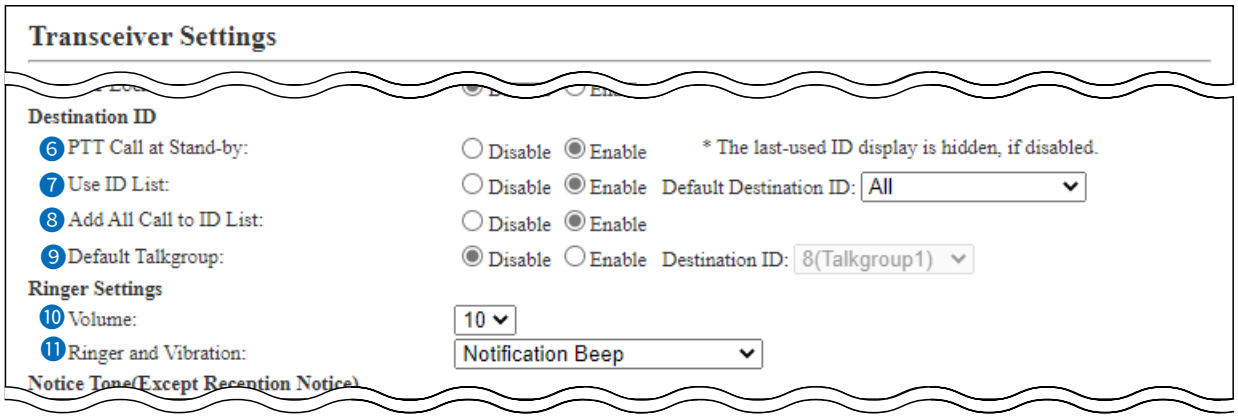
Select whether or not to display All Call in the ID list of the IP100H. (Default: Disable)

- **Disable**
  Does not display “All” in the ID list.
  ⓘ When “Disable” is selected in the [Add All Call to ID List] item, you cannot select an All call using the [📖] key.
- **Enable**
  ⓘ When the “Use ID List” item (7) is set to “Enable,” set the “Add All Call to ID List” and the“Default Talkgroup” items.



8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP100H]



(This is only an example.)

9 Default Talkgroup ..... Select a talkgroup if you want to set the IP100H to join a talkgroup when you turn ON the power. (Default: Disable)

- **Disable**
  The IP100 starts up without joining any talkgroup. The ID that is set in the "Default Destination ID" in the "Use ID List" item is displayed when the IP100H is turned ON.
- **Enable**
  The IP100 joins the selected talkgroup when it is turned ON.

ⓘ When the "Use ID List" item is set to "Disable," this item is not displayed.

10 Volume ..... Set the beep level when the IP100H receives a Call or message to between 0 and 32. (Default: 10)

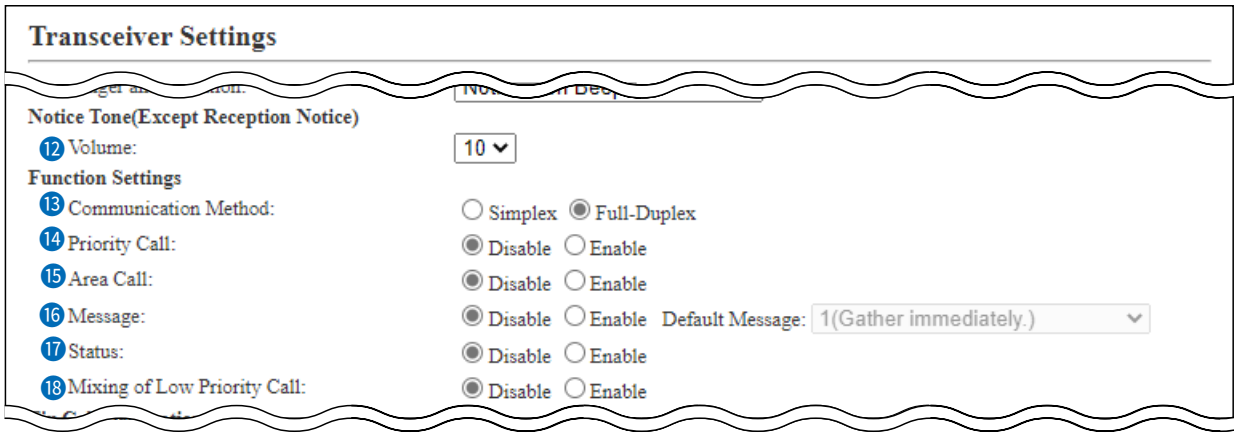
ⓘ When this setting set to "0," the notification beep becomes OFF.
ⓘ The notification beep is individually set for the Call type or message in the "Receive Notification Tone" item on the [Common Settings] screen.

11 Ringer and Vibration..... Set the action when the IP100H receives a Call or message to between "Notification Beep," "Vibration" and "Notification Beep + Vibration." (Default: Notification Beep)

- **Notification Beep**
  When the IP100H receives a Call or message, the specified Notification beep sounds depending on the Call or message.
  The notification beep is set in the "Receive Notification Tone" item on the [Common Settings] screen.
- **Vibration**
  When the IP100H receives a Call or message, it vibrates for notification.
- **Notification Beep + Vibration**
  When the IP100H receives a Call or message, the Notification beep sounds and it vibrates for notification.

8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP100H]



(This is only an example.)

⑫ Volume (Except Reception Notice)

Set the beep level when the IP100H transmits a Call or connecting to the IP1000C to between 0 and 32. (Default: 10)

ⓘ When this setting is set to "0," the notification beep becomes OFF.

ⓘ Depending on the [Common Settings], the IP100H sounds beeps when the IP100H is transmitting or connecting to the IP1000C.

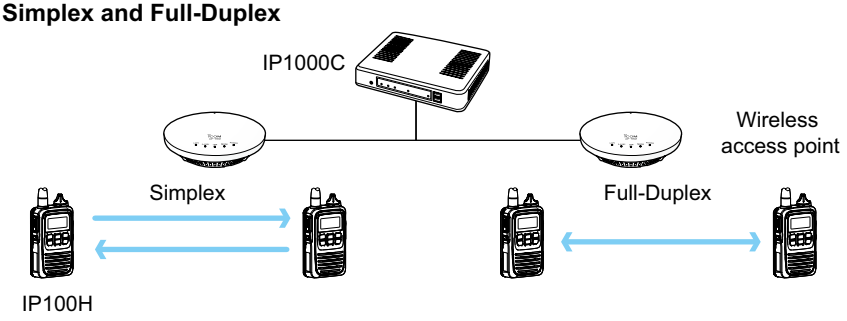
⑬ Communication Method …

Select the communication method that the IP100H uses. (Default: Full-Duplex)

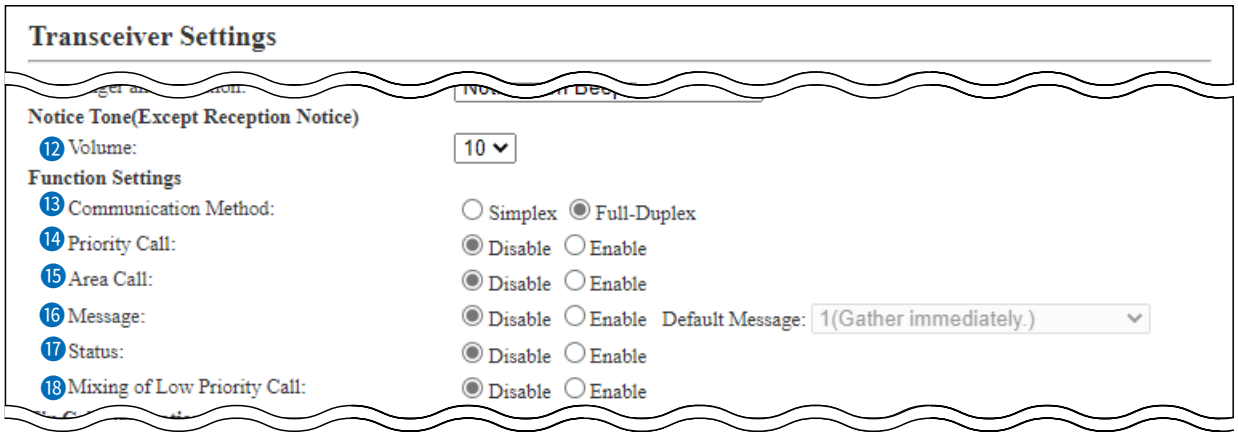
- **Simplex**
  Toggles the transmission (Talker) and reception (Listener) by turns for communication.
- **Full-Duplex**
  Operates the transmission and reception simultaneously like a telephone.

ⓘ When connecting the optional microphone to the IP100H, you can operate the IP100H like a telephone.

Simplex and Full-Duplex



■ Transceiver Settings [IP100H]



(This is only an example.)

⑭ Priority Call ..... Select whether the IP100H uses the Priority Call or not.

(Default: Disable)

The priority levels of the Call types are in the following order.

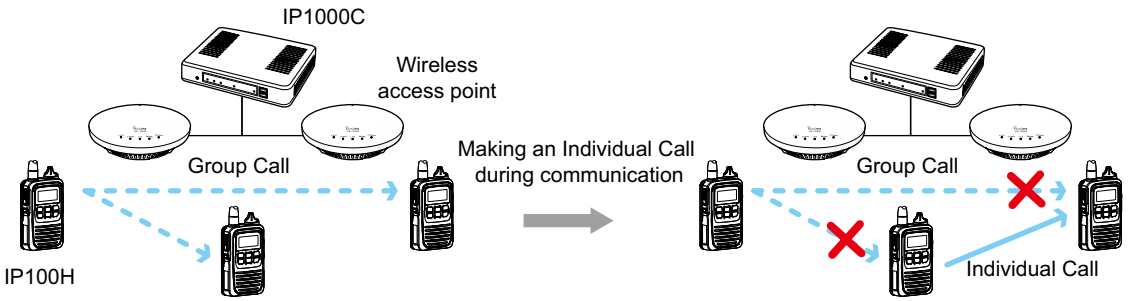
Priority level	Priority	Call type	Priority Call	Remarks
High ↑	Fixed	Telephone	—	For telephone communication
		Emergency (High)	Enable	—
		Emergency (Normal)	Disable	—
	Selectable *	All Call (High)	Enable	Includes the Area Call or calling from an IP100FS
		Individual Call (High)	Enable	Includes from 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 in the [RoIP Server] screen in the [RoIP Server settings] menu.

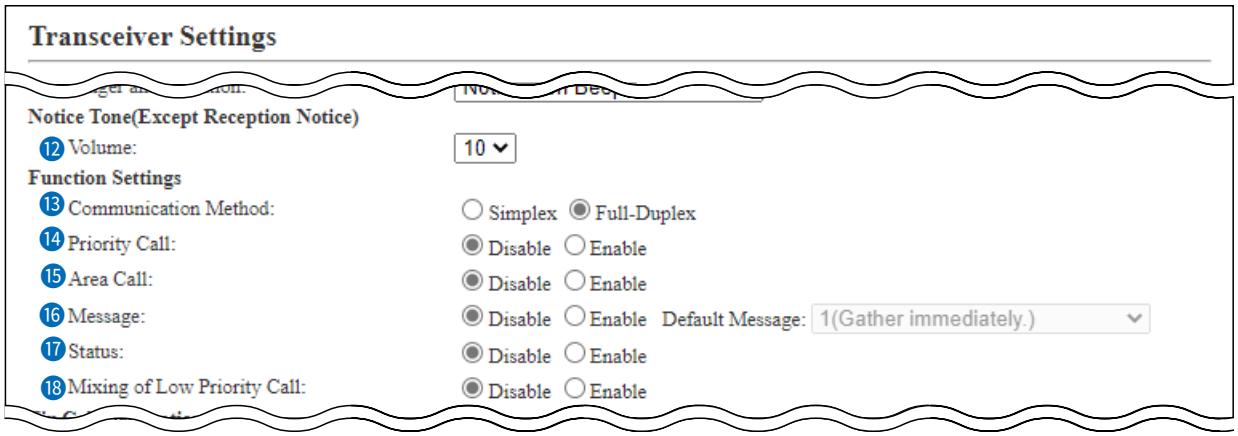
ⓘ The priority is given to the first call between calls with the same priority level.

ⓘ The reply call follows the priority level of the talk side.

Change the target during communication with the Priority Call function enabled



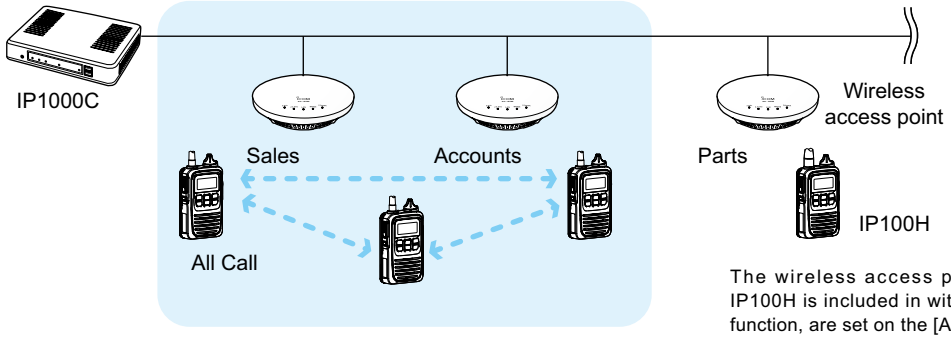
■ Transceiver Settings [IP100H]



(This is only an example.)

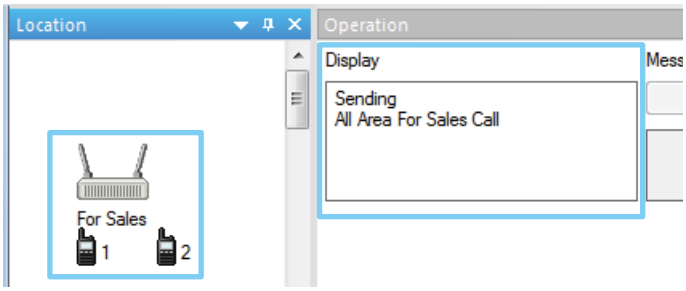
⑮ Area Call ..... Select whether the IP100H uses the Area Call or not. (Default: Disable) When the IP100H calls All Call or Group Call using the Area Call function, it calls only other IP100Hs or IP100FSs in the same area that it connects to the wireless access point.

IP100H makes an All Call with the Area Call function



The wireless access points that the IP100H is included in with the Area Call function, are set on the [Area Call] screen in the [RoIP Server Settings] menu.
(Example: For Sales and For Accounts)

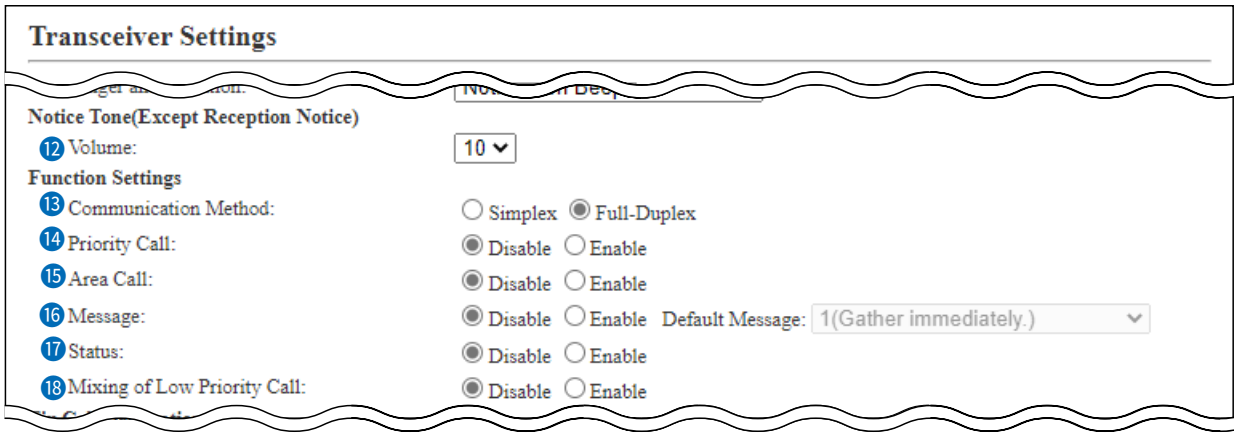
IP100FS calls the All Call with the Area Call function



When the IP100FS uses the Area Call function, the IP100FS can call IP100Hs that are in the communication range of the access points assigned to the Area Call. Select the access point in the [Location], the Call type (Individual, Group, All, Area or Telephone) and names are displayed.

8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP100H]



(This is only an example.)

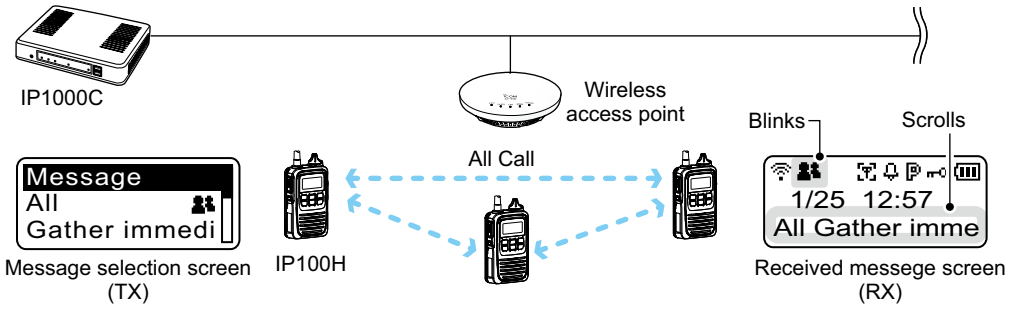
⑯ Message ..... Select whether the IP100H can send the messages or not.
(Default: Disable)

When “Enable” is selected, push [FUNC] on the IP100H once to enter the Message selection screen.

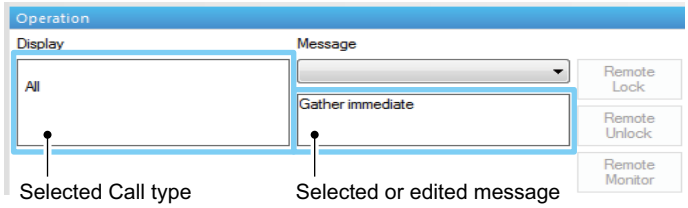
ⓘ Up to 10 messages of 32 characters or less can be programmed on the [Messages] screen in the [Common Settings] menu.

ⓘ Select the message number 1 to 10 in the “Default Message” item that is registered on the [Message] screen.

IP100H transmits a message



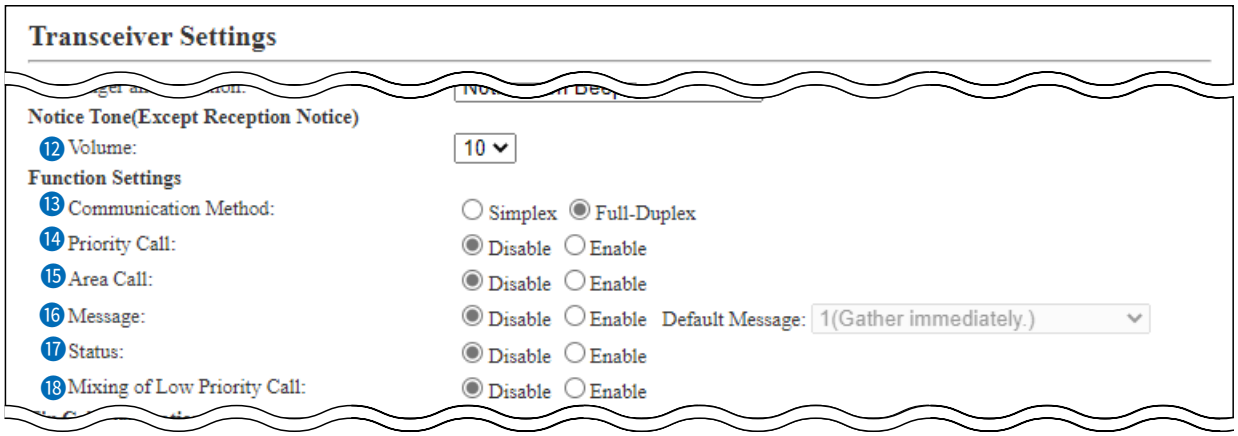
IP100FS transmits a message



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

8. [Transceiver Settings] Menu — [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP100H]



(This is only an example.)

⑰ Status ..... Select whether the IP100H can send the Status information or not.

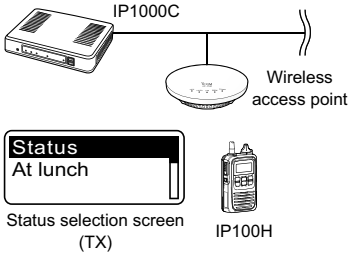
(Example: At lunch, Meeting, Waiting) (Default: Disable)

When “Enable” is selected, push [FUNC] on the IP100H twice to enter the Status selection screen.

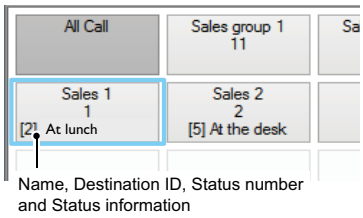
ⓘ Up to 10 statuses of 32 characters or less can be entered on the [Status] screen in the [Common Settings] menu.

ⓘ The status that the IP100H sends can be displayed on the [Transceiver Management] screen in the [Transceiver Settings] menu or the one-Touch button of the IP100FS.

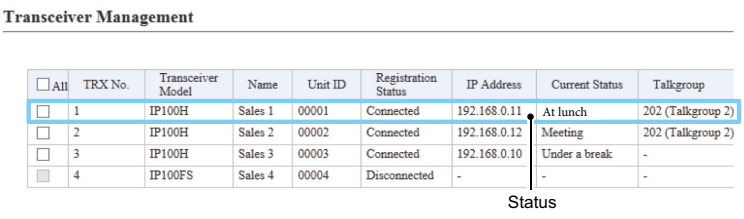
IP100H sends the Status



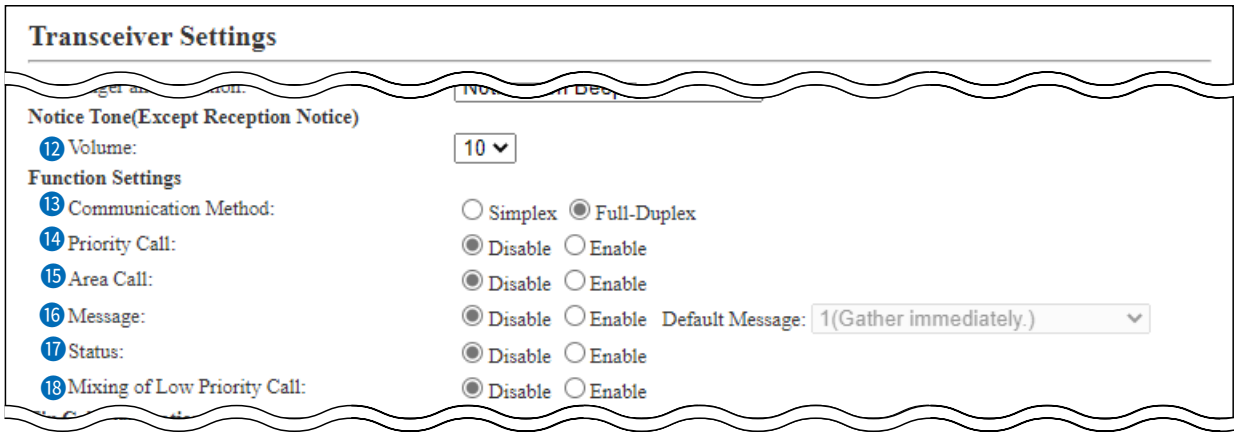
IP100FS One-Touch button



IP1000C Transceiver Management screen



■ Transceiver Settings [IP100H]



(This is only an example.)

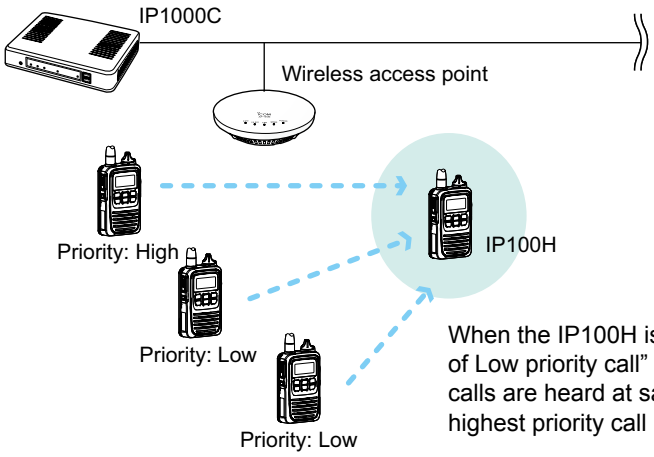
18 Mixing of Low Priority Call

Select whether the IP100H receives the mixing audio or not.
(Default: Disable)

When this setting is set to “Enable,” the IP1000C sends the mixing audio of all calls that call to the IP100H.

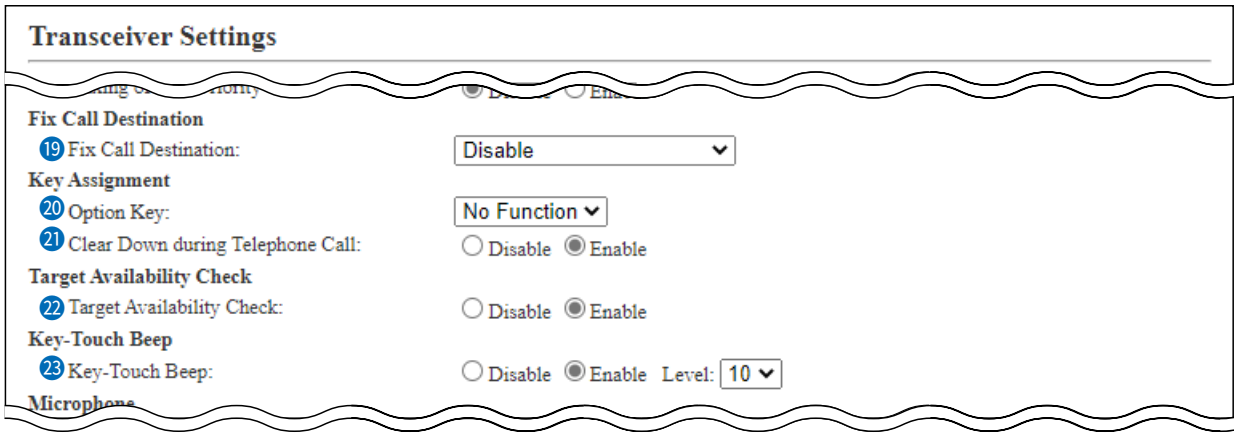
ⓘ The IP100H displays the called station that has the highest priority in the mixing audio.
See page 4-43 for details of the Priority level.

• Mixing of Low priority call



When the IP100H is set the “Mixing of Low priority call” setting, several calls are heard at same time, but the highest priority call is displayed.

■ Transceiver Settings [IP100H]

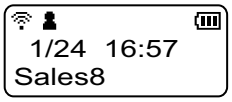


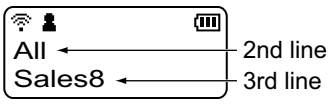
(This is only an example.)

⑲ Fix Call Destination ..... Select whether the IP100H uses the Fix Call Destination function or not. (Default: Disable)

When this setting is set to other than “Disable,” the IP100H calls the preset destination instead of the selected destination that is displayed on the third line. The Fix Call Destination function separates the fixed call from the general calls by the specified method to start transmission.

- **Disable**
  The Fix Call Destination is not specified, and the IP100H calls the selected destination.
- **PTT**
  The Fix Call Destination is specified as the PTT transmission.
  When [PTT] is held down, the IP100H calls the preset destination.

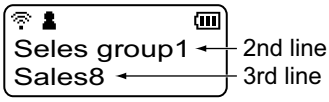




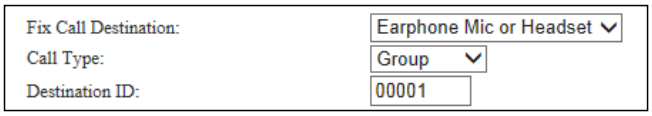
Call type is set to All

(Example: All call is specified to the PTT)

- **Earphone Mic or Headset**
  The Fix Call Destination is specified as the external Mic transmission.
  When the external microphone’s PTT switch is held down, or its VOX function is active, the IP100H calls the preset destination.



Call type is set to Group

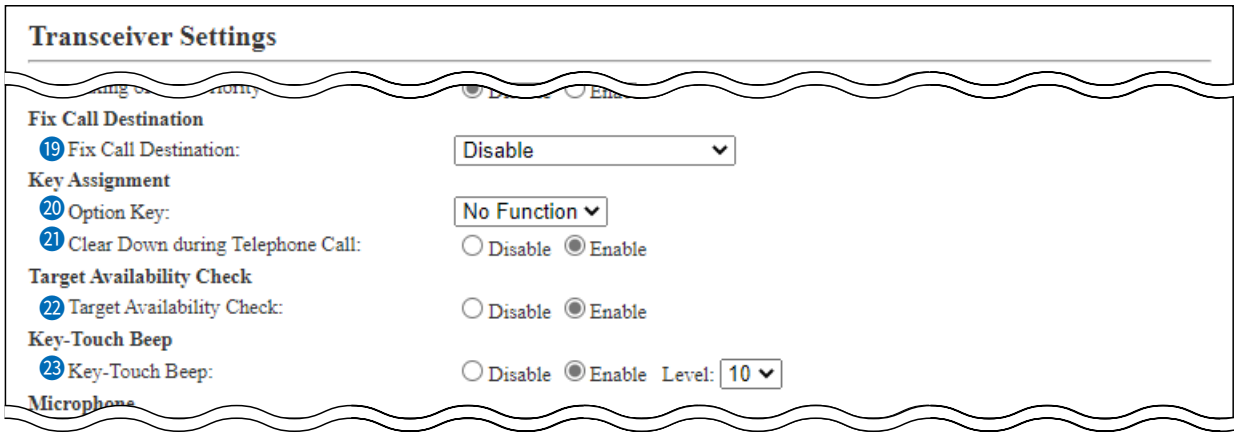


(Example: Group call is specified to the Earphone Mic or Headset)

ⓘ Information

- Specify the Call type from “Individual,” “Group” or “All.”
- When the “Call Type” item is set to “Individual” or “Group,” enter the Individual ID (00001 ~ 60000) or Group ID (00001 ~ 60000) in the “Destination ID” item.
- The Destination ID, Name (if “Name” is selected in the “Display Item” (②)) or Call type of the Fix Call Destination is displayed on the 2nd line.
  (Usually Date and Time or Own Name is displayed on the 2nd line.)
- When the IP100H receives a call with this setting, it does not display the Caller’s ID or Call type on the 3rd line.
- When both of the IP100H’s [PTT] and external microphone’s PTT switch are held down, the external PTT has priority and the internal microphone will be muted.

■ Transceiver Settings [IP100H]



(This is only an example.)

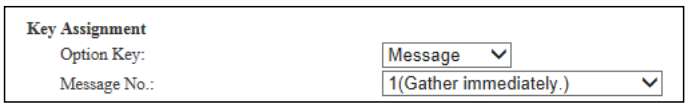
⑳ Option Key ..... Assign “Message,” “One Touch,” “Clear down,” “Mute,” “Emergency,” or “No function” to the IP100H’s Option key. (Default: No Function)

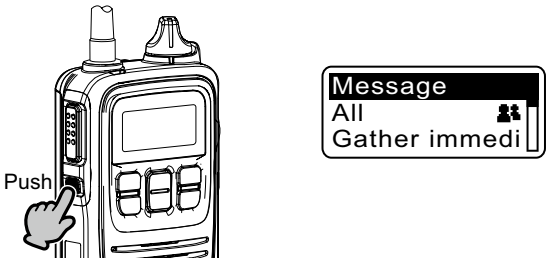
ⓘ When this setting is set to “No function,” nothing changes by pushing [Option] on the IP100H in the standby mode.

- **Message**

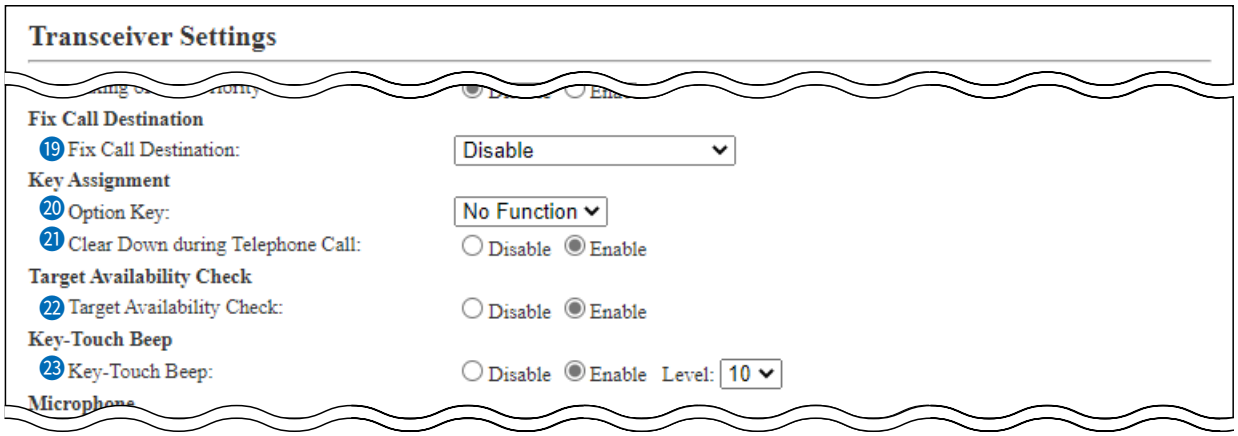
  Pushing [Option] on the IP100H displays the Message selection screen.

  ⓘ Select the message number 1 to 10 in the “Message No.” item that registered on the [Message] screen.





■ Transceiver Settings [IP100H]



(This is only an example.)

⑳ Option Key ……

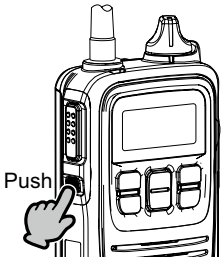
• **One Touch**

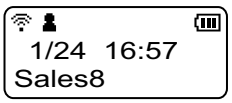
Pushing [Option] on the IP100H selects a specified Call type and destination ID or phone number.

Specify the “Individual,” “Group,” “All” or “Telephone” Call type.

ⓘ When “Individual” or “Group” is selected, enter the Individual ID (00001 ~ 60000) or Group ID (00001 ~ 60000) in the “Destination ID” item.

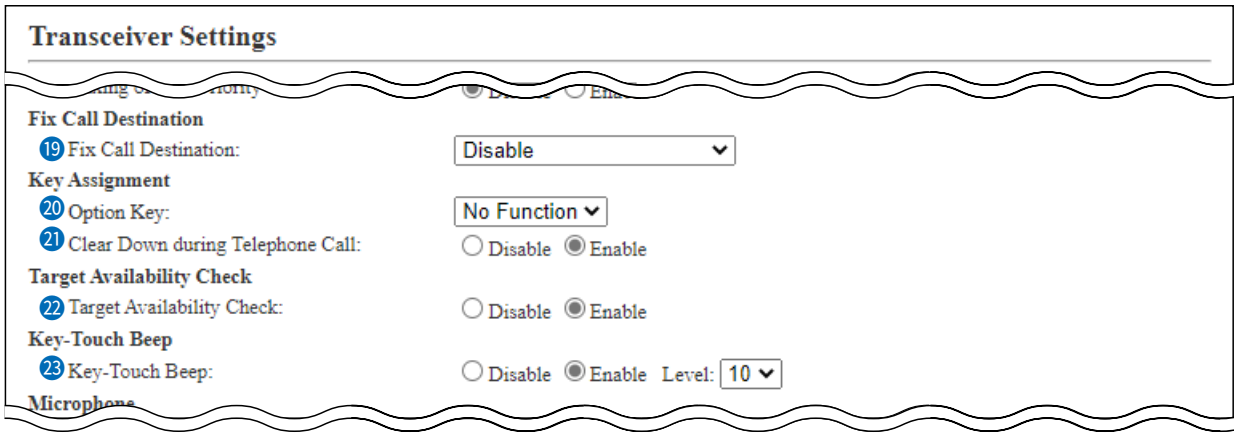
ⓘ When “Telephone” is selected, enter up to 31 numbers and symbols (#, ＊) in the “Destination Phone Number” item.





8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP100H]



(This is only an example.)

20 Option Key .....

- **Clear Down**

  Pushing [Option] on the IP100H terminates the phone call with an IP phone.

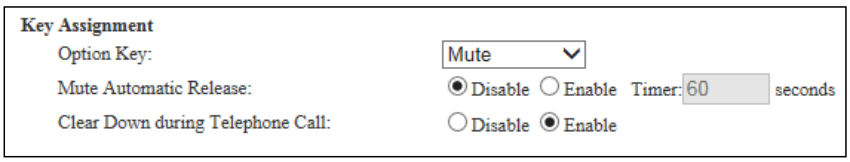
  ⓘ You can assign another function, if you select “Enable” on the [Clear Down during Telephone Call] (21) item.

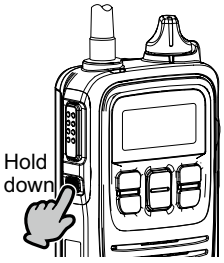
- **Mute**

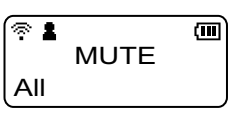
  Hold down [Option] for 1 second on the IP100H when you want to mute the received audio. (The Notification beep cannot be muted.)
  Hold down [Option] for 1 second to turn the mute function ON or OFF.

  ⓘ You can turn OFF the mute function by pushing [PTT]. However, if you select “Enable” in the [Clear Down during Telephone Call] (21) item, terminates the phone call in the phone call.

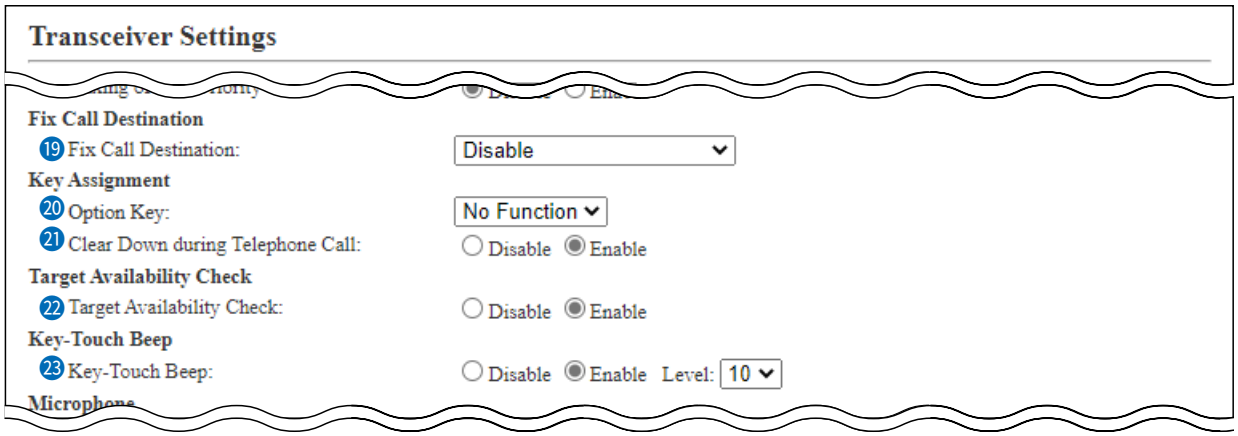
  ⓘ If you select “Enable” in the [Mute Automatic Release] item, turn OFF the mute function after specified time period has passed. (Default: Disable)
  If you select “Enable,” set the time period to release the mute function to between 10 to 600 (seconds). (Default: 60 (seconds))







■ Transceiver Settings [IP100H]



(This is only an example.)

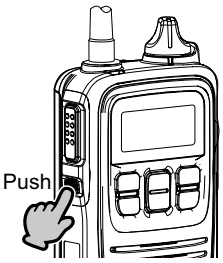
20 Option Key .....

- **Emergency**
  Hold down [Option] key until “Emergency” is displayed to send an emergency call.
  When the emergency call is sent, an alarm sounds. The emergency call is canceled and the alarm stops when the transceiver receives a response or [Option] key of the transceiver is held down.
  ⓘ The time of period for which the key must be held down to turn the emergency function ON or OFF is set in the [Emer SW ON Timer] item (35) or [Emer SW OFF Timer] item (36).

21 Clear Down during Telephone Call

Select “Enable,” if you want to terminate the phone call by pushing the IP100H’s [Option] key. (Default: Enable)

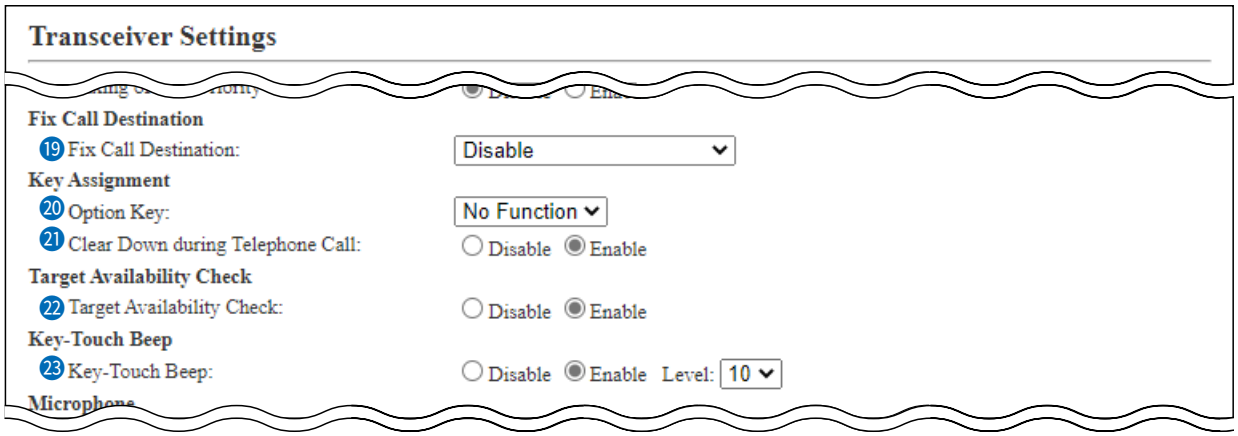
ⓘ When “Clear Down” is selected on the [Option Key] item (20), this item is not displayed.



Before the target telephone is picked up, or during phone call, pushing [Option] terminates the phone call.

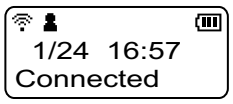
ⓘ The IP100H can terminate the phone call, when a telephone calls the IP100H individually, or when the IP100H calls a telephone.

■ Transceiver Settings [IP100H]



(This is only an example.)

22 Target Availability Check… Select whether the IP100H displays a confirmation after it makes an Individual Call, or not. (Default: Enable)
When “Enable” is selected, the IP100H displays the “Connected,” “Busy” or “No response” connection status.



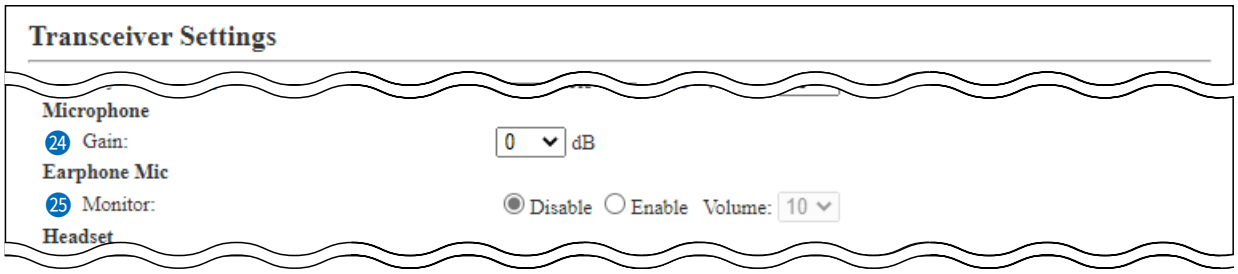
ⓘ When the target station is out of range, “No response” is displayed.
ⓘ If the “Connection Notice Tone” item is set to “Enable,” the Success Tone or Failure Tone sounds to notify its connection status.
Common Settings (menu) > Common Settings (screen) > Common Settings > Connection Notice Tone

23 Key-Touch Beep…… Select whether the IP100H sounds the key touch beep or not. (Default: Enable)
When “Disable” is selected, the IP100H does not sound the confirmation beep when a key is pushed.

- **Level**
  Set the volume level of the notification beeps when the IP100H’s key is pushed. (Default: 10)
  Selectable range are between 0 and 10.
  ⓘ When “0” is selected on this setting, IP100H does not sound any beep even if the volume level is set.
  ⓘ When selecting “Disable,” this setting is grayed out and the volume level cannot be changed.

8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP100H]



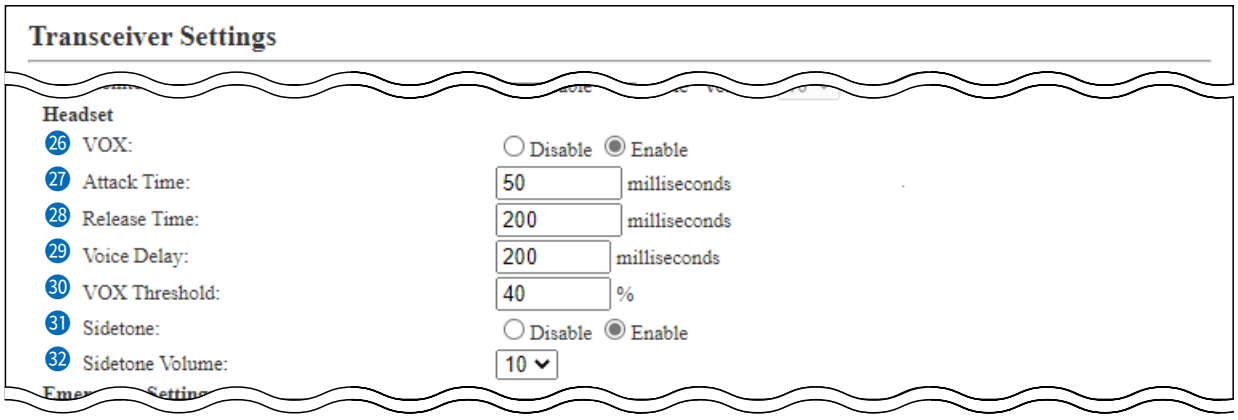
(This is only an example.)

24 Gain ..... Adjust the microphone sensitivity. (Default: 0 (dB))
The adjustable range is –12 (low) to 12 (high) dB, in 3 dB steps.
ⓘ When the noise level around the IP100H is high, set to low sensitivity and speak in a slightly louder voice that helps listening easily. Or when the noise level around the IP100H is quiet, set to high sensitivity and speak in smaller voice that helps listening easily.

25 Monitor ..... Select whether the IP100H with an earphone microphone uses the monitor function or not. (Default: Disable)
When this setting is set to “Enable,” you can hear your transmit audio from earphone. Set the monitor level to between 0 and 32. (Default: 10)
ⓘ To prevent howling, set this setting to “Disable” when using with a speaker microphone such as the HM-186LS.

8. [Transceiver Settings] Menu — [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP100H]



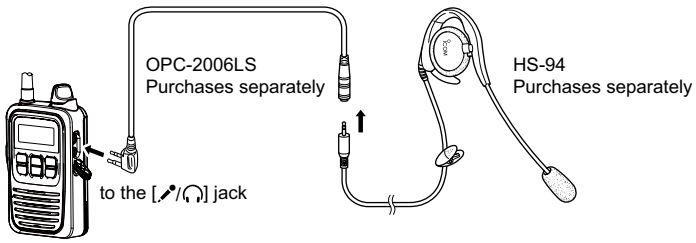
(This is only an example.)

26 VOX .....

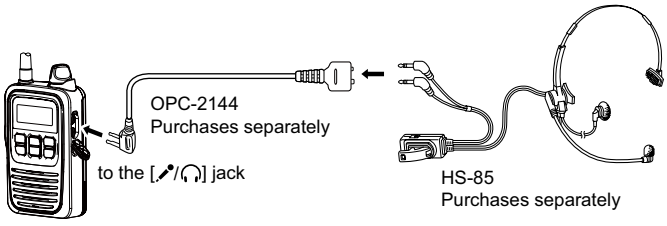
Select whether the IP100H can use the VOX (voice operated transmission) function or not. (Default: Disable)
The transceiver has a VOX function*, which allows hands-free operation.

ⓘ Information

- The VOX function requires to connect an optional headset and connection cable.
  Headset HS-94, HS-95, or HS-97 and Connection cable OPC-2006LS.
  Or Headset HS-102 and Connection cable OPC-2359.
- 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.
- Be sure to turn OFF the IP100H's power, before connecting or disconnecting optional equipment to or from the [/] jack.
- When "Enable" is selected, the "Attack Time" through "Sidetone Volume" items are displayed.

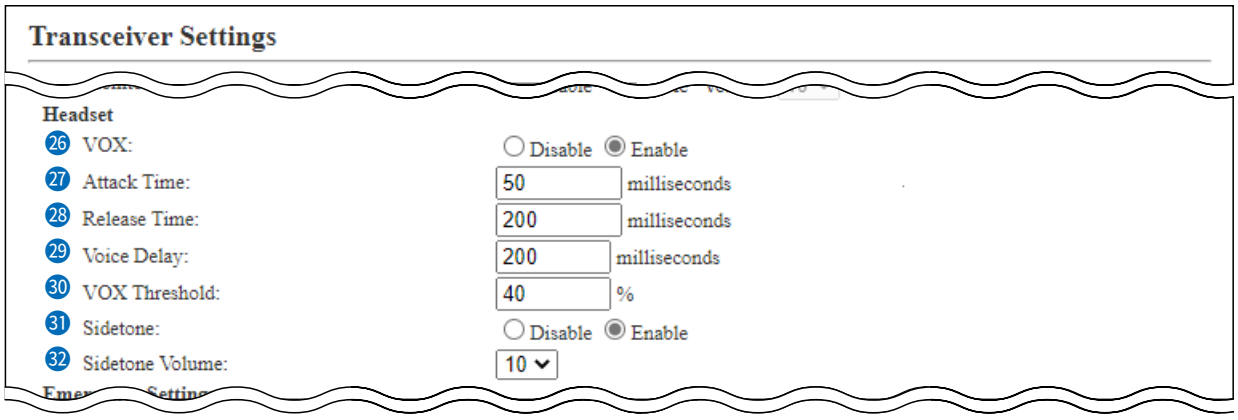


- The HS-85 (Discontinued product) has the VOX function, so if you connect the HS-85 to the IP100H through the OPC-2144, set the "VOX" item to "Disable."



8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP100H]



(This is only an example.)

27 Attack Time .....
VOX: Enable

Adjust the Attack time to between 5 and 2000 milliseconds in 5 millisecond steps. (Default: 50 (milliseconds))
When audio from a headset microphone is input for this specified time, the IP100H starts transmitting.

28 Release Time .....
VOX: Enable

Adjust the Release time to between 5 and 2000 milliseconds in 5 millisecond steps. (Default: 200 (milliseconds))
The release time is amount of time the transmitter stays ON after you stop speaking.

29 Voice Delay .....
VOX: Enable

Adjust the Voice Delay time to prevent clipping of the first few syllables after you begin speaking. (Default: 200 (milliseconds))
The adjustable range is between 0 and 500 milliseconds, in 5 millisecond steps.

30 VOX Threshold .....
VOX: Enable

Adjust the VOX Threshold level to between 0% and 100%. (Default: 40%)
Higher values make the VOX function more sensitive to your voice.

31 Sidetone .....
VOX: Enable

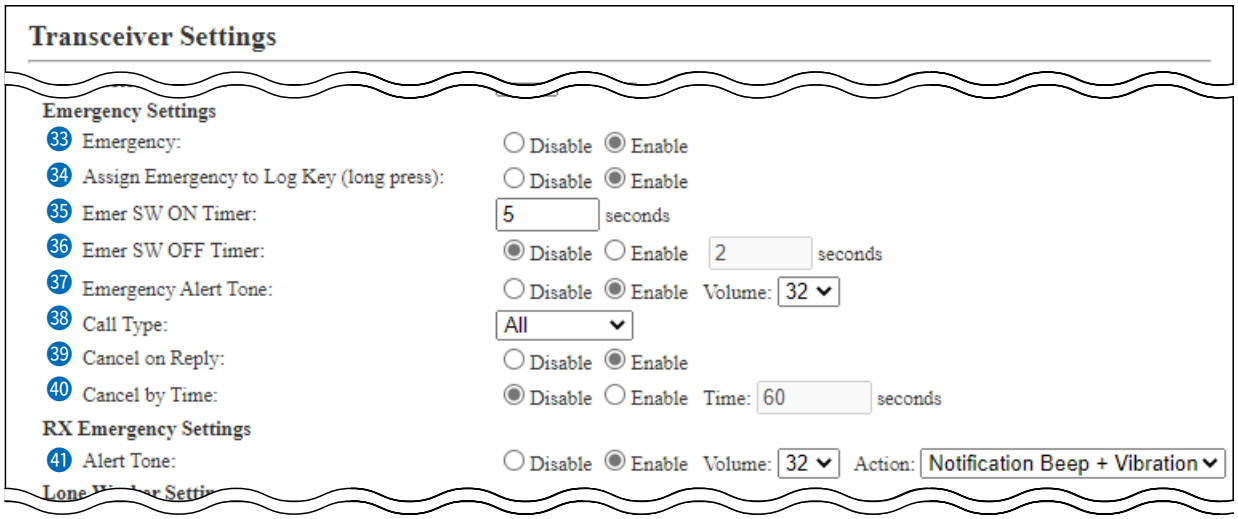
Select whether to use the Sidetone function or not. (Default: Disable)
When “Enable” is selected, you can hear your voice from the headset.

32 Sidetone Volume .....
VOX: Enable

Adjust the Sidetone level to between 0 (minimum) and 32 (maximum). (Default: 10)

8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP100H]



(This is only an example.)

33 Emergency .....

Select whether or not to use the emergency function. (Default: Disable)
Holding down the [Option] or [Log] key until "Emergency" is displayed turns ON the Emergency function, and sends an emergency call to the previously set User ID.
The emergency call is canceled when an RX code is received, or holding down the [Option] or the [Log] key for set period of time in "Emer SW OFF Timer" (36).
• The time of period for which the key must be held to turn the emergency function ON or OFF is set in [Emer SW ON Timer] item (35) or [Emer SW OFF Timer] item (36).

34 Assign Emergency to Log Key (long press) .....

Emergency: Enable

Select whether to use the [⎘] key to send an emergency call or not. (Default: Enable)

35 Emer SW ON Timer .....

Emergency: Enable

Enter the time period for which [Option] or [Log] must be held to turn the emergency function ON. (Default: 5 seconds)

36 Emer SW OFF Timer .....

Emergency: Enable

Select whether or not to cancel the emergency call by pushing [Option] or [Log]. (Default: Disable)
When "Enable" is selected, enter the time period for which [Option] or [Log] must be pushed and held to turn OFF the emergency function, between 1 to 10. (Default: 2 seconds)

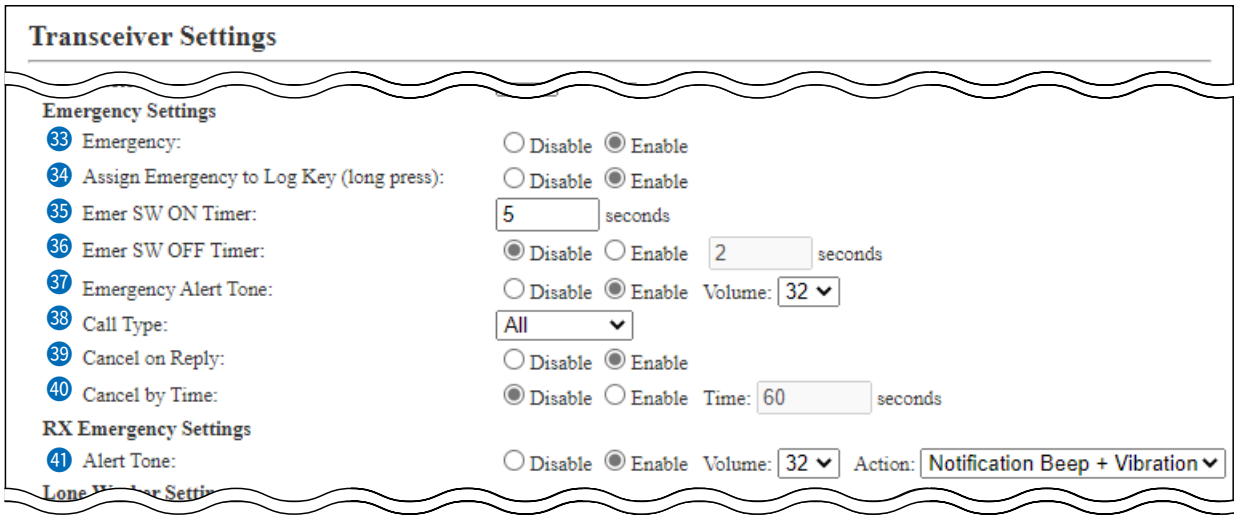
37 Emergency Alert Tone .....

Emergency: Enable

Select whether or not to sound an alarm when the emergency call is sent.
When this item is set to "Disable," IP100H sends the emergency call silently, without any alert on itself. (Default: Enable)
When "Enable" is selected, set the Volume (audio level) of the alarm to between 0 and 32. (Default: 32)

8. [Transceiver Settings] Menu — [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP100H]



(This is only an example.)

38 Call Type ..... Emergency: Enable

Select the call type of emergency call from Individual, Group, All, or Telephone. (Default: All)

ⓘ If you select “Individual” or “Group,” enter the destination ID (00001 ~ 60000). If you select “Telephone,” enter a Destination Phone Number of up to 31 characters (0–9, #, and *).

39 Cancel on Reply..... Emergency: Enable

Select whether or not to cancel the emergency call when any RX code is received. (Default: Enable)

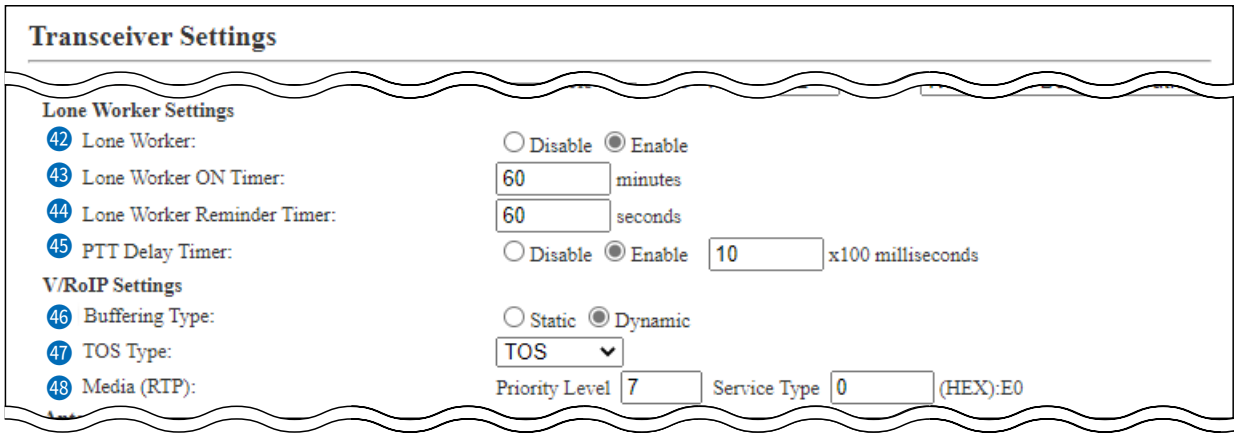
40 Cancel by Time ..... Emergency: Enable

Select whether or not to cancel the emergency call after the set period of time has passed. (Default: Disable)
If you select “Enable,” enter a time period to between 1 and 255 seconds. (Default: 60 (seconds))

41 Alert Tone..... Emergency: Enable

Select whether or not to cancel the emergency call after the set period of time has passed. (Default: Enable)
If you select “Enable,” enter the Volume (audio level) between 0 and 32, and select the Action. (Default: 32, Notification Beep+Vibration)

■ Transceiver Settings [IP100H]



(This is only an example.)

42 Lone Worker .....
Emergency: Enable

If the Lone Worker function is activated, the Emergency function is automatically turned ON after the set period has passed with no operation. (Default: Disable)

43 Lone Worker ON Timer.....
Lone Worker: Enable

Enter the time period for starting the Lone Worker function within the range of 1 to 255 minutes (1 minute steps). (Default: 60 (minutes))
• When the IP100H is operated within the time period in this item, the times for the “Lone Worker ON Timer” (43) and “Lone Worker Reminder Timer” (44) are reset.

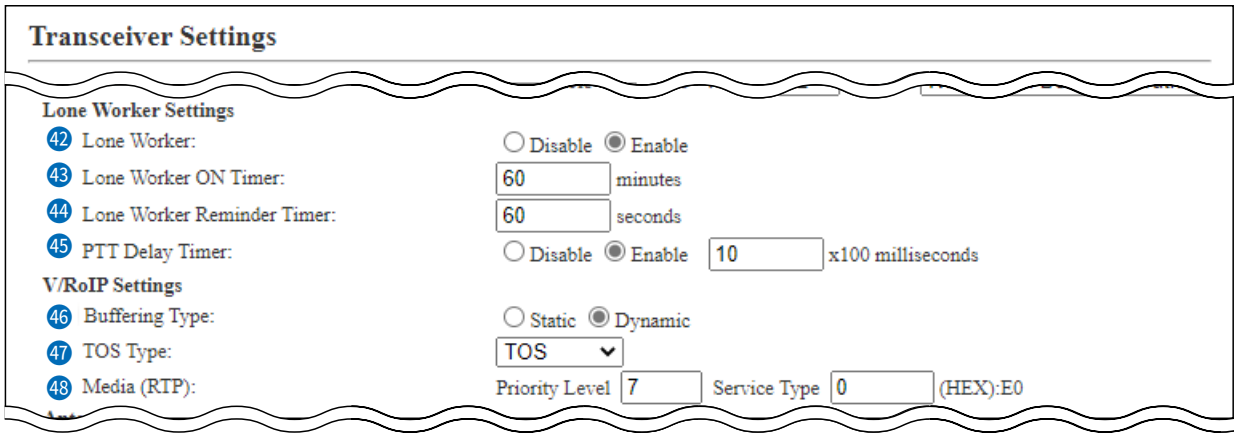
44 Lone Worker Reminder Timer
Lone Worker: Enable

Enter the time period to start the emergency call transmission within the range of 1 to 255 seconds (1 second steps). (Default: 60 (seconds))
ⓘ The emergency call is transmitted after this set period has passed from when the Emergency function is activated by the Lone Worker function.
ⓘ When the Lone Worker Reminder Timer is activated, beeps sound every 2 seconds until the timer is reset.

45 PTT Delay Timer.....
Lone Worker: Enable

Enter the time period for the delay time to transmit by pushing [PTT] while the Lone Worker On Timer and the Lone Worker Reminder Timer are activated.
Enter the range of 1 to 255 ×100 millisecond (100 millisecond steps).
(Default: 10 (×100 milliseconds))
ⓘ If this item is set to a longer period of time, you can reset the Lone Worker On Timer and Lone Worker Reminder Timer by momentary pushing [PTT] without transmitting.
ⓘ Hold down [PTT] for more than the set time period in this item to transmit.

■ Transceiver Settings [IP100H]



(This is only an example.)

46 Buffering Type ..... Select a type of buffers to reduce the received audio break-up. (Default: Dynamic)

- **Static**
  The buffer time is set the “Receive Buffer Size” item.
  Set the buffer time to between 20 and 500 milliseconds to keep the audio from breaking up.
  A shorter value improves the delay, but it may frequently break the audio signal.

- **Dynamic**
  The buffer time changes according to the audio fluctuation.

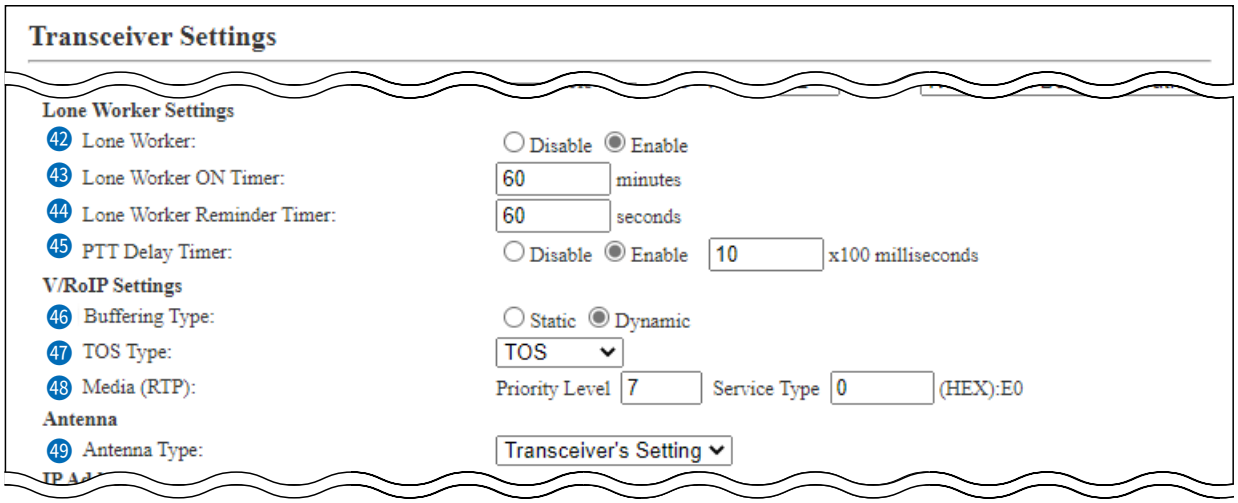
47 TOS Type ..... Select the TOS (Type-Of Service) format. (Default: TOS)

- **Not Used**
  The TOS function is disabled.

- **TOS**
  Sends the 8 bit VoIP packets to the TOS field in the IP header using the TOS format.

- **Diffserv**
  Sends the 8 bit VoIP packets to the TOS field in the IP header using the Diffserv (Differentiated Service) format.

■ Transceiver Settings [IP100H]



(This is only an example.)

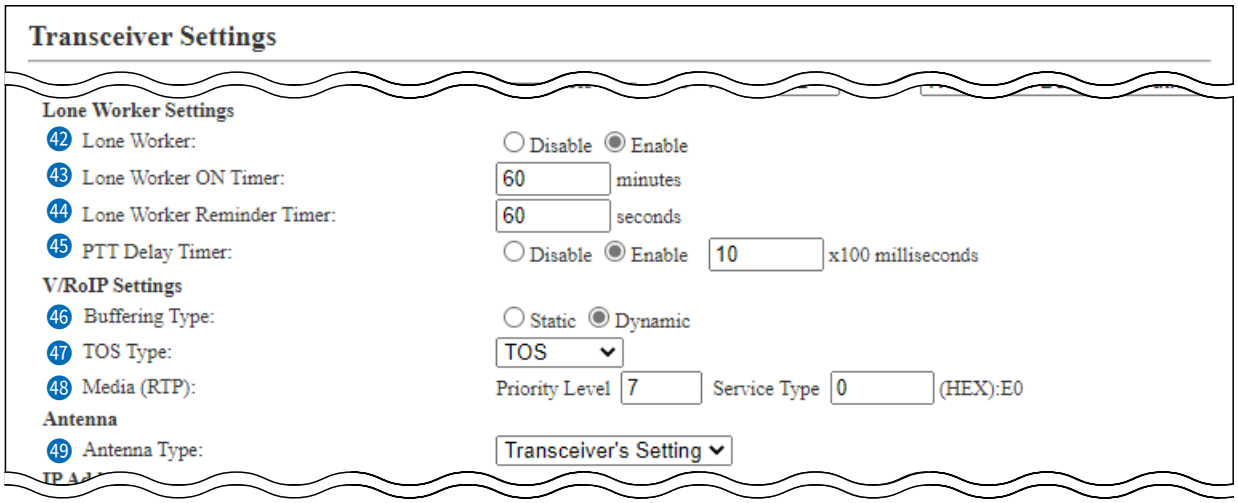
48 Media (RTP)…… Select the Priority level and Service type of the sent VoIP packets.

- **Priority Level**
  Set the TOS priority level to between 0 and 7. (Default: 7)

- **Service Type**
  Set the TOS service type code to between 0 and 15. (Default: 0)

- **DSCP**
  Set the DSCP (Differentiated Services Code Point) code to between 0 and 63. (Default: 56)
  - This item is displayed when the “TOS Type” item (47) is set to “Diffserv.”

■ Transceiver Settings [IP100H]



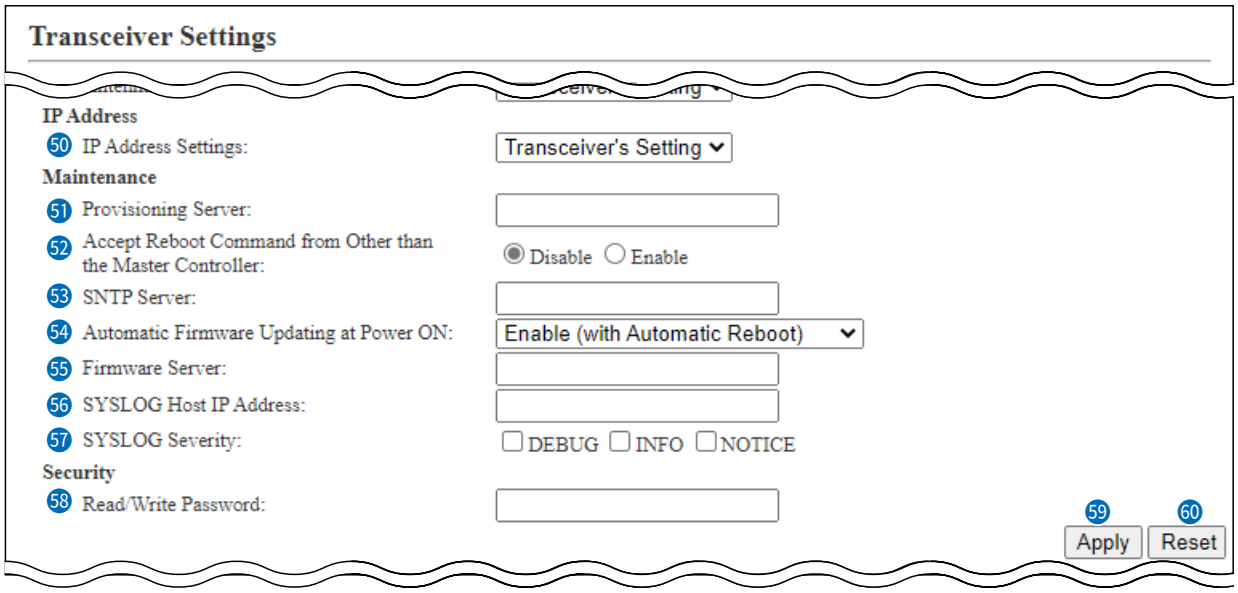
(This is only an example.)

49 Antenna Type …… Select the Antenna that the IP100H will use.
(Default: Transceiver's Setting)

- **Transceiver's Setting**
  Uses the last antenna set by the CS-IP100H or IP1000C.
- **Internal Antenna**
  Uses the internal antenna.
  The internal antenna reduces the communication range.
- **External Antenna**
  Uses the external antenna.
  The external antenna extends the communication range.

8. [Transceiver Settings] Menu — [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP100H]

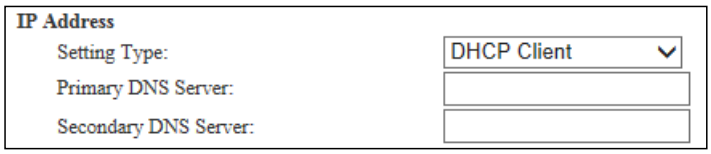


(This is only an example.)

50 IP Address Settings ..... Select the IP100H's IP settings. (Default: Transceiver's Setting)

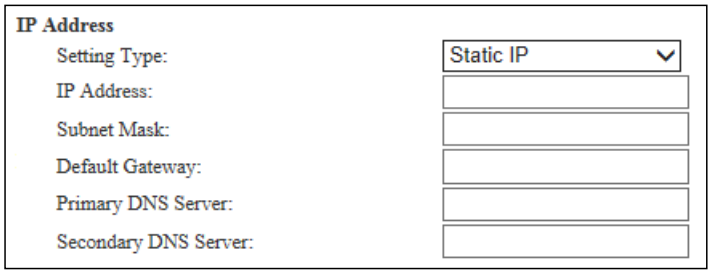
- **Transceiver's Setting**
  Uses the last IP setting set by the CS-IP100H or IP1000C.

- **DHCP Client**
  Selects the DHCP Client when the IP address is automatically obtained by a DHCP server.



ⓘ If necessary, enter the "Primary DNS Server" or "Secondary DNS Server" settings.

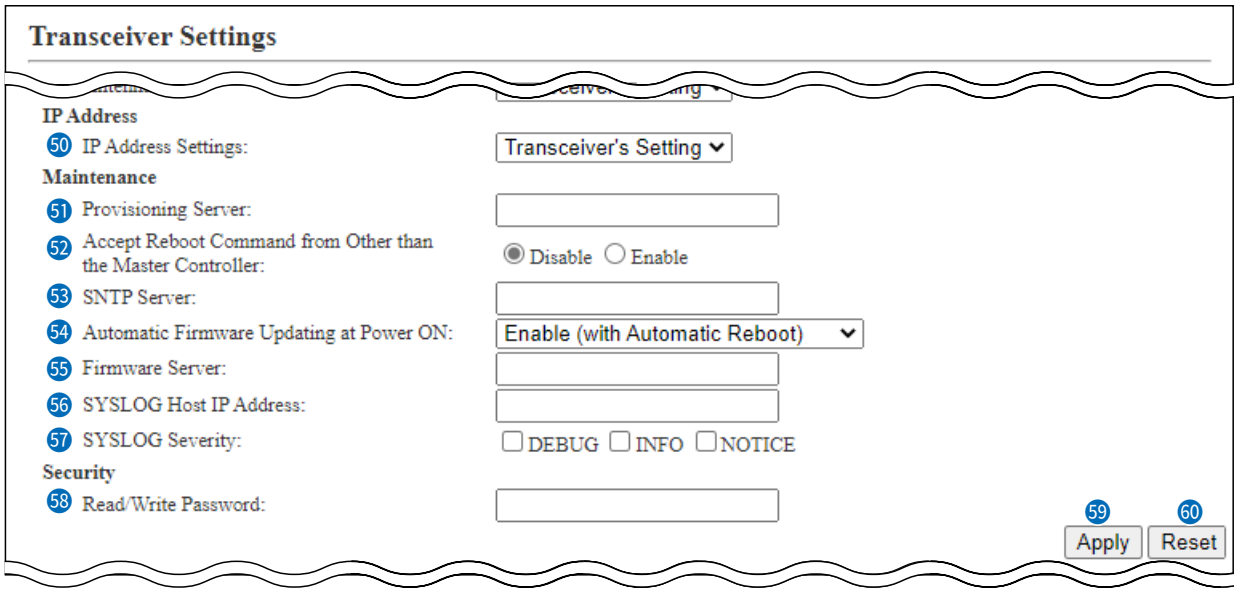
- **Static IP**
  Selects the Static IP address, if it is specified according to your network environment.



ⓘ Enter the default gateway address, if your network connects to a different network.
ⓘ If necessary, enter the "Primary DNS Server" or "Secondary DNS Server" settings.

8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP100H]



(This is only an example.)

51 Provisioning Server ..... Enter an IP address or Host name of the Provisioning Server for the IP100H, up to 63 characters.

ⓘ When the IP1000C is used as its Provisioning Server, this entry is not necessary.

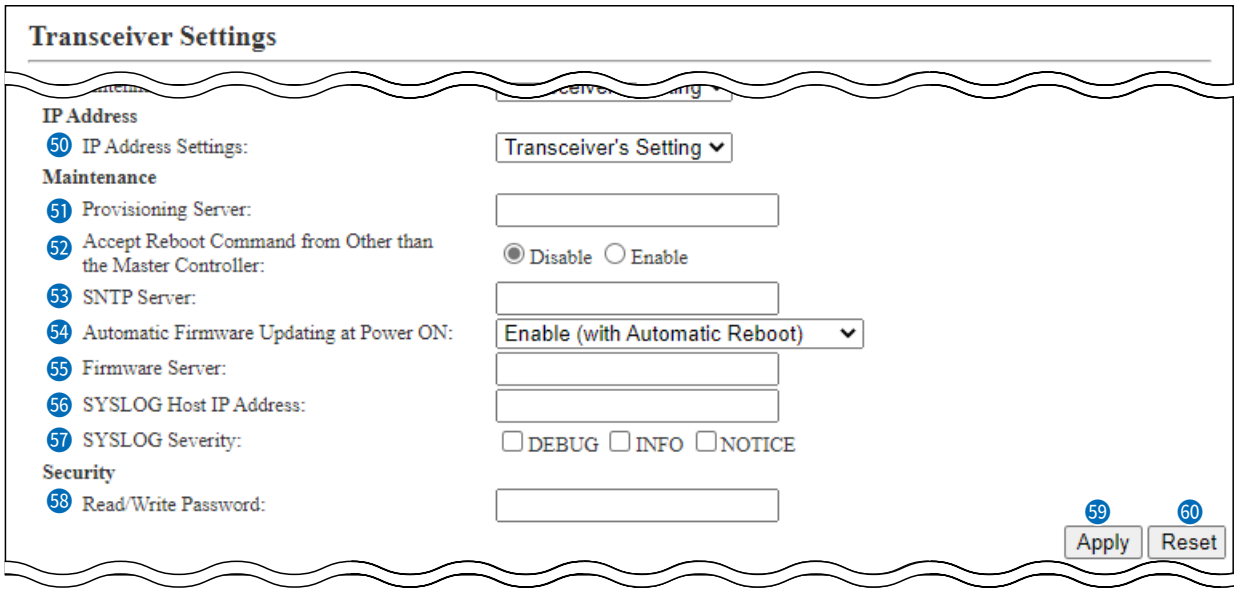
52 Accept Reboot Command from Other than the Master Controller ..... Select whether the IP100Hs can be rebooted by the other than the specified Provisioning server nor not. (Default: Disable)

ⓘ Only the IP1000C and VE-PG4 is compatible with this function. (As of June 2022)

53 SNTP Server ..... Enter the IP address of the device that is specified as the SNTP server for the IP100H.

ⓘ When the IP1000C is used as its SNTP Server, this entry is not necessary.

■ Transceiver Settings [IP100H]



(This is only an example.)

54 Automatic Firmware Updating at Power ON ……

Select whether the IP100H will use the Automatic Update function or not. (Default: Enable (with Automatic Reboot))

- **Disable**
  Disables the automatic firmware updating at the IP100H turns ON.

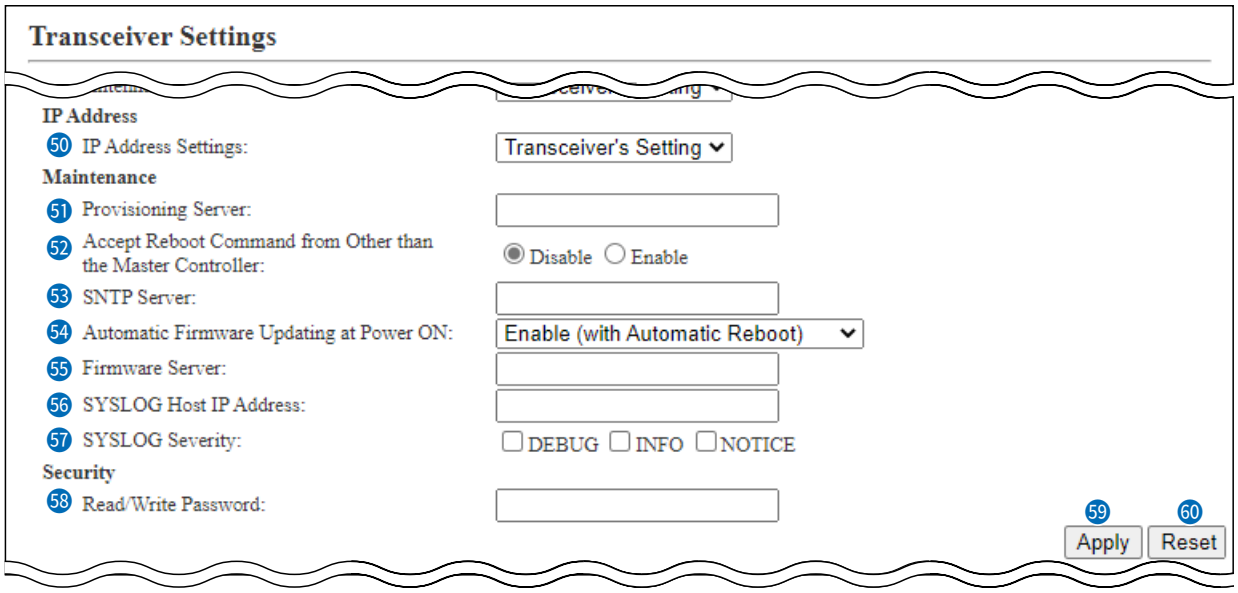
- **Enable (without Automatic Reboot)**
  When this setting is set to “Enable (without Automatic Reboot),” the IP100H works as follows.
  1. The IP100H confirms the latest firmware in the IP1000C when turning ON.
  2. The IP100H automatically downloads the firmware if it needs to update.
  3. The IP100H will be updated when it is turned ON again.

- **Enable (with Automatic Reboot)**
  When this setting is set to “Enable (with Automatic Reboot),” the IP100H works as follows.
  1. The IP100H confirms the latest firmware in the IP1000C when turning ON.
  2. The IP100H automatically downloads the firmware if it needs to update.
  3. The IP100H is updated automatically, and then it is rebooted.

ⓘ You can check the firmware version of the IP100H on the [TOP] menu.

8. [Transceiver Settings] Menu — [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP100H]



(This is only an example.)

55 Firmware Server..... Enter the IP Address or Host name of the Firmware Server for the IP100H, up to 63 characters.

ⓘ When the IP1000C is used as its Firmware Server, this entry is not necessary.

ⓘ Do not install the multiple firmware servers in the system.

56 SYSLOG Host IP Address Enter the SYSLOG host's address.

ⓘ The host device must have the SYSLOG server function.

57 SYSLOG Severity ..... Select the log information to send to the SYSLOG host.

(Default: ☐ DEBUG ☐ INFO ☐ NOTICE)

ⓘ Enter a check mark to send the log entries.

58 Read/Write Password ..... Enter a password of up to 16 characters. The password is used when reading from or writing to the IP100H, or updating the firmware using the CS-IP100H*.

* CS-IP100H is the cloning software for IP100H, and can be downloaded from the Icom website.

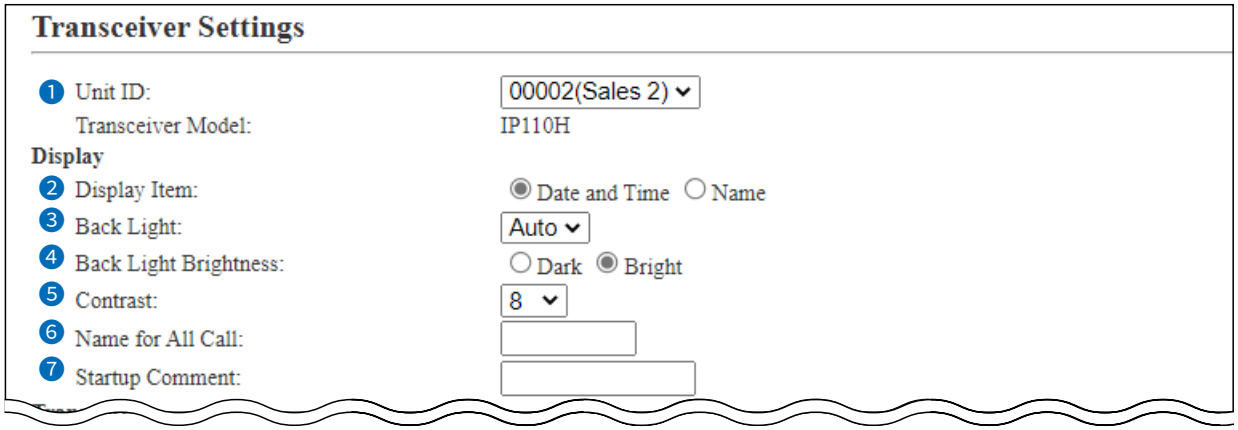
59 <Apply> ..... Click to apply the entries.

60 <Reset> ..... Click to restore the settings.

ⓘ You cannot restore after clicking <Apply>.

■ Transceiver Settings [IP110H]

Individually assign the functions or set the receive notification tone to the registered IP110H.
ⓘ After the setting is completed, you must reboot the IP110H.



(This is only an example.)

1 Unit ID .....
Select the Individual number (Name) of IP110H to be edited.
ⓘ Only the individual numbers for the WLAN transceiver are selectable. The individual number that the "Transceiver Model" item on the [Transceiver Registration] screen is set to "IP100FS," cannot be selected.

2 Display Item .....
Select whether the IP110H displays the Date and Time or its Name in the standby mode. (Default: Date and Time)
ⓘ If the "Name" item on the [Transceiver Registration] screen has not been entered, and this setting is set to "Name," the IP110H displays the individual number.

3 Back Light .....
Select the screen backlight function. (Default: Auto)
- **OFF**
  The backlight does not light.
- **ON**
  The backlight lights continuously.
- **Auto**
  The backlight lights when an operation is performed, and goes out after 5 seconds.

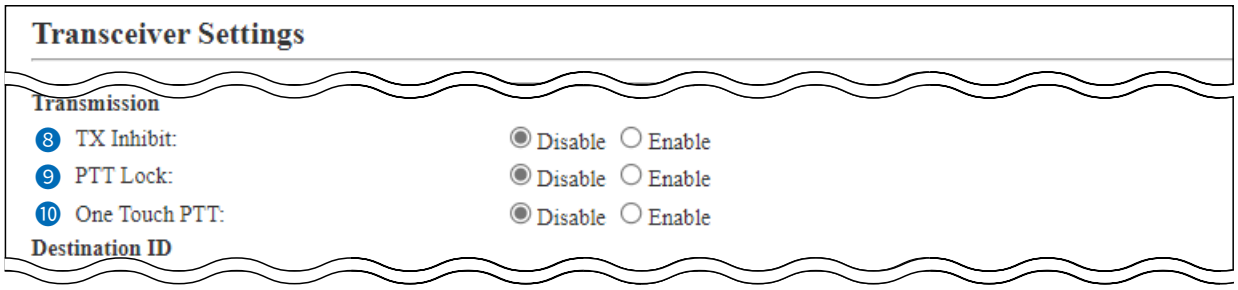
4 Back Light Brightness .....
Select the screen backlight brightness from Dark and Bright. (Default: Bright)

5 Contrast .....
Set the screen contrast to between 1 (the lowest) and 16 (the highest.) (Default: 8)

6 Name for All Call .....
Enter a name for All call of up to 5 characters, if necessary.

7 Startup Comment .....
Enter a comment of up to 8 characters. The comment is displayed when the IP110H boots up.

■ Transceiver Settings [IP110H]



(This is only an example.)

8 TX Inhibit ..... Select “Enable” to inhibit the IP110H’s transmission. (Default: Disable)

ⓘ When this setting is set to “Enable,” the IP110H cannot also transmit with an optional microphone or using VOX function as well.

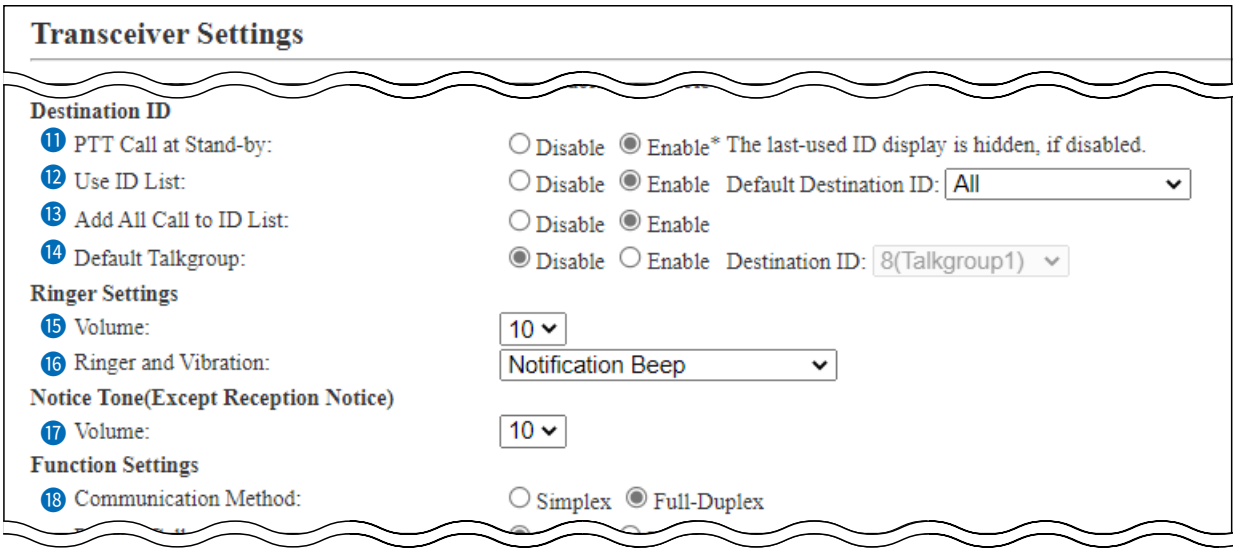
9 PTT Lock ..... Select “Enable” to lock the IP110H’s PTT switch. (Default: Disable)

ⓘ When this setting is set to “Enable,” the IP110H cannot transmit by holding its PTT switch, but it can be transmitted with an optional microphone or using VOX function as well.

10 One Touch PTT ..... Select whether or not to enable the One Touch PTT function. (Default: Disable)

This function enables you to push [PTT] to transmit and push again to standby, so you can transmit without continuously holding down [PTT].

■ Transceiver Settings [IP110H]



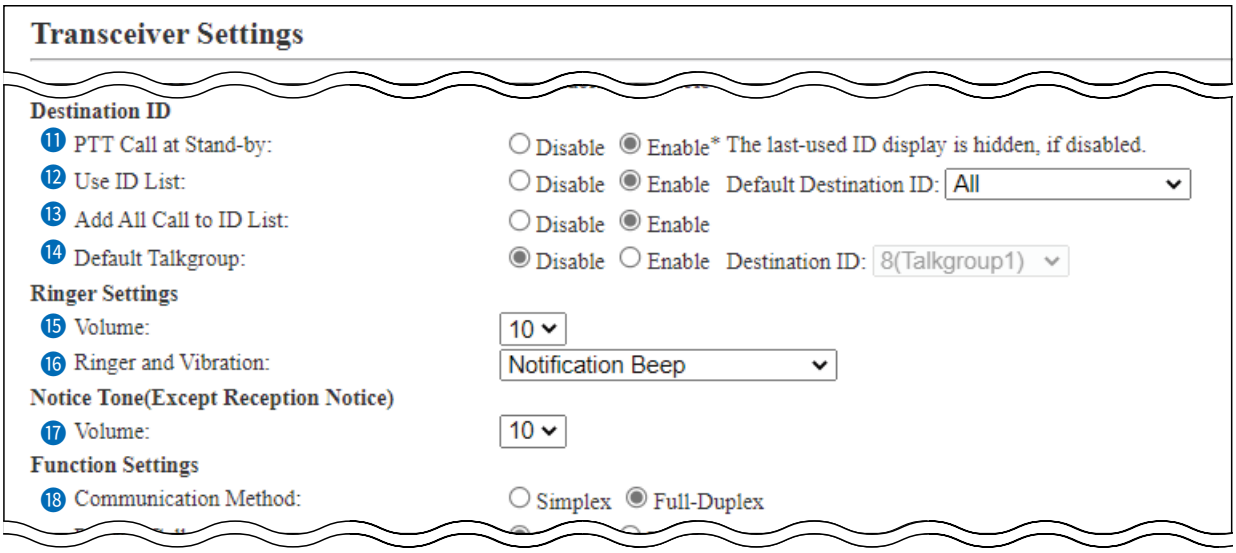
(This is only an example.)

⓫ PTT Call at Stand-by ..... Select whether the IP110H displays the Destination ID (Call type) in the standby mode or not. (Default: Enable)

- **Enable**
  The Destination ID (Call type) is displayed on the standby mode.
  ⓘ When the PTT on the IP110H is pushed, the IP110H calls the displayed ID (Call type).
- **Disable**
  The Destination ID (Call type) is not displayed on the standby mode.
  ⓘ The Destination ID (Call type) is displayed when you select the ID using function keys.

8. [Transceiver Settings] Menu — [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]



(This is only an example.)

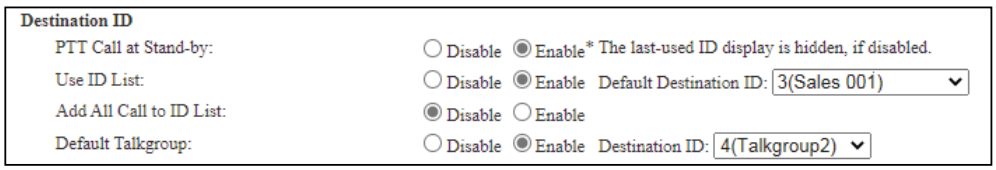
⓬ Use ID List ..... Select whether or not the IP110H uses the ID list. (Default: Disable)

- **Disable**
  The call type is fixed to the selected type in the "Call Type," as below, even if you push the [🕮 CLR] key on the IP110H.
  ⓘ If you set the Call Type to "Individual" or "Group," enter the destination ID (00001 ~ 60000) in the "Destination ID" item. (Default: All)

  ⓘ Even if "Disable" is selected, the IP110H displays a received ID in the ID list.
- Enable
  The call type can be changed by pushing the [🕮 CLR] key or selecting in the menu screen on the IP110H.
  Select Default Destination ID from All or an ID number (1 to 50) that is displayed when the IP110H is turned ON, and the Call type.
  ⓘ The ID list is selected on the Common Setting screen.

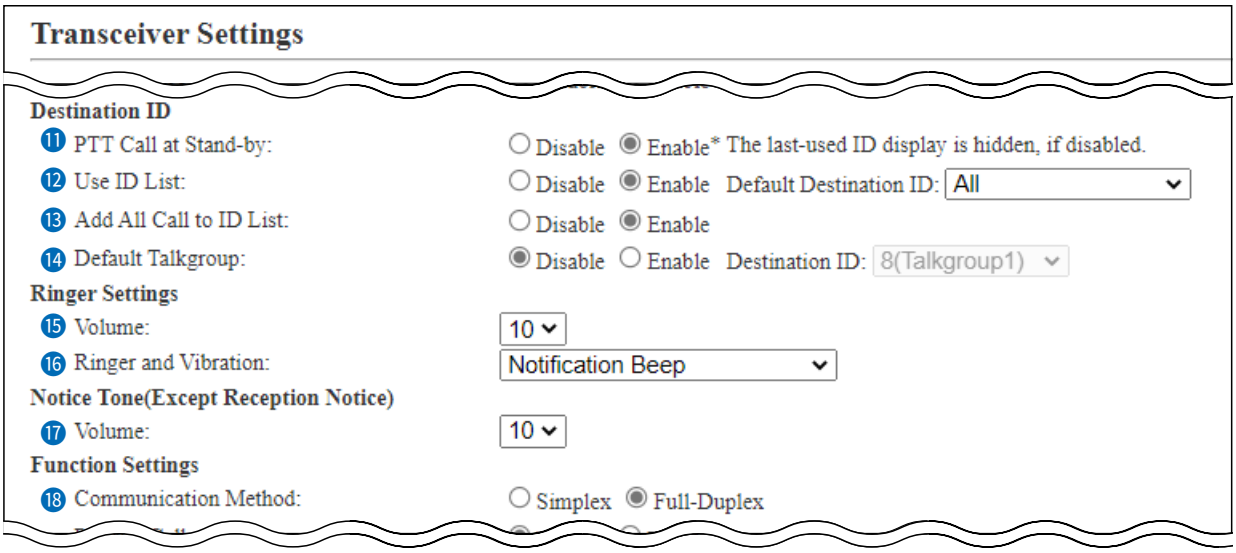
⓭ Add All Call to ID List ..... Select whether or not to display All Call in the ID list of the IP110H. (Default: Enable)

- **Disable**
  Does not display "All" in the ID list.
  ⓘ When "Disable" is selected in the [Add All Call to ID List] item, you cannot select an All call using the [🕮 CLR] key.
- **Enable**
  ⓘ When the "Use ID List" item is set to "Enable," set the "Add All Call to ID List" and the"Default Talkgroup" items.



8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]



(This is only an example.)

⓮ Default Talkgroup ..... Select a talkgroup if you want to set the IP110H to join a talkgroup when you turn ON the power. (Default: Disable)

- **Disable**
  The IP110H starts up without joining any talkgroup. The ID that is set in the “Default Destination ID” in the “Use ID List” item is displayed when the IP110H is turned ON.
- **Enable**
  The IP110H joins the selected talkgroup when it is turned ON.

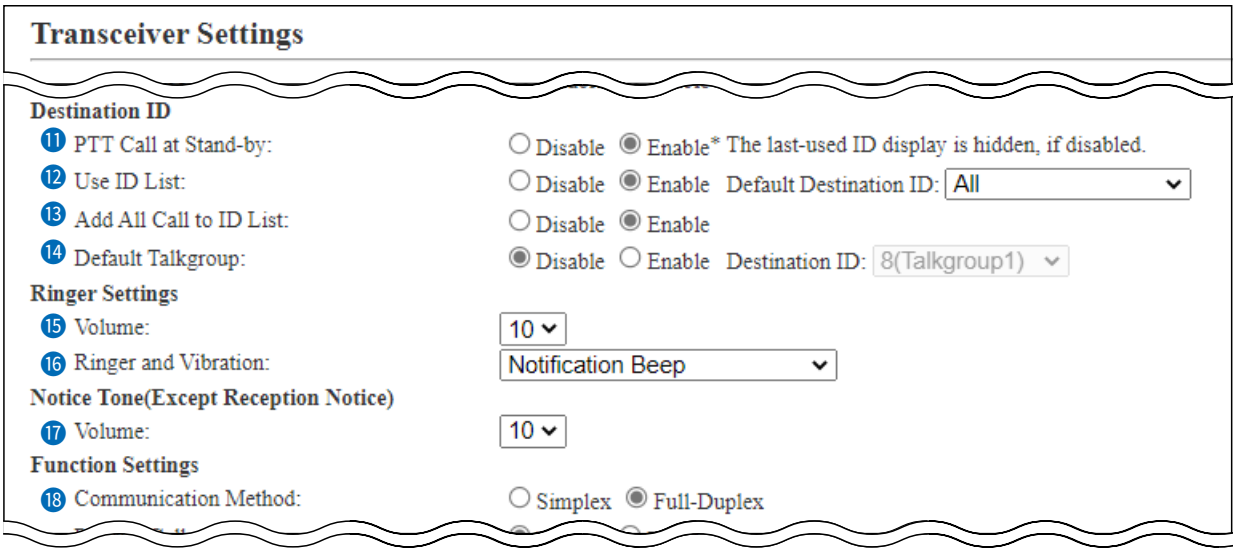
ⓘ When the “Use ID List” item is set to “Disable,” this item is not displayed.

⓯ Volume ..... Set the beep level when the IP110H receives a Call or message to between 0 and 32. (Default: 10)

ⓘ When this setting set to “0,” the notification beep becomes OFF.
ⓘ The notification beep is individually set for the Call type or message in the “Receive Notification Tone” item on the [Common Settings] screen.

8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]



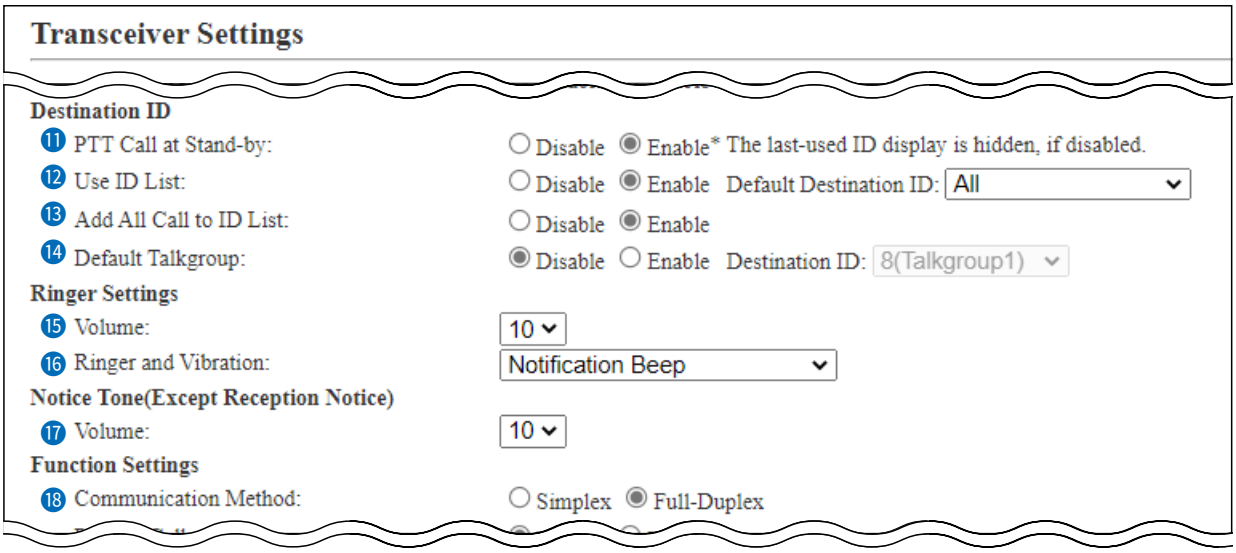
(This is only an example.)

⓰ Ringer and Vibration…… Set the action when the IP110H receives a Call or message to between “Notification Beep,” “Vibration” and “Notification Beep + Vibration.”
(Default: Notification Beep)

- **Notification Beep**
  When the IP110H receives a Call or message, the specified Notification beep sounds depending on the Call or message.
  The notification beep is set in the “Receive Notification Tone” item on the [Common Settings] screen.
- **Vibration**
  When the IP110H receives a Call or message, it vibrates for notification.
- **Notification Beep + Vibration**
  When the IP110H receives a Call or message, the Notification beep sounds and it vibrates for notification.

8. [Transceiver Settings] Menu — [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]



(This is only an example.)

⓱ Volume (Except Reception Notice)

Set the beep level when the IP110H transmits a Call or connecting to the IP1000C to between 0 and 32. (Default: 10)

ⓘ When this setting is set to "0," the notification beep becomes OFF.

ⓘ Depending on the [Common Settings], the IP110H sounds beeps when the IP110H is transmitting or connecting to the IP1000C.

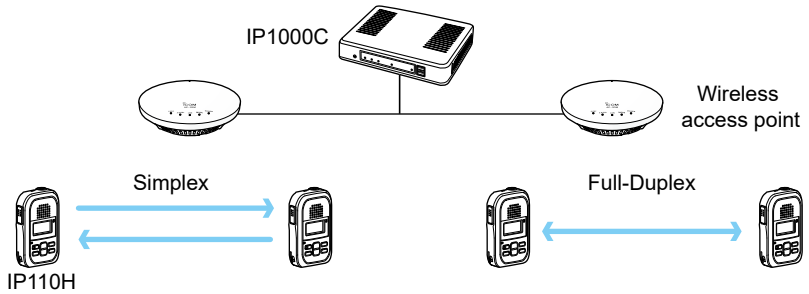
⓲ Communication Method …

Select the communication method that the IP110H uses. (Default: Full-Duplex)

- **Simplex**
  Toggles the transmission (Talker) and reception (Listener) by turns for communication.
- **Full-Duplex**
  Operates the transmission and reception simultaneously like a telephone.

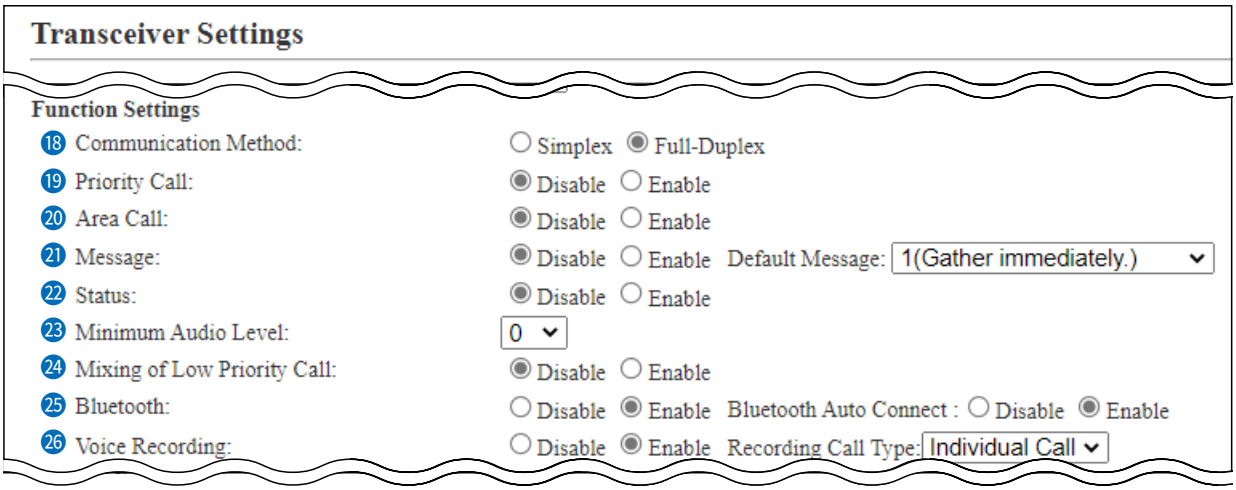
  ⓘ With the Full-Duplex communication, you can transmit and receive like a telephone, even while the destination is transmitting.

Simplex and Full-Duplex



8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]



(This is only an example.)

⑲ Priority Call ..... Select whether the IP110H uses the Priority Call or not.

(Default: Disable)

The priority levels of the Call types are in the following order.

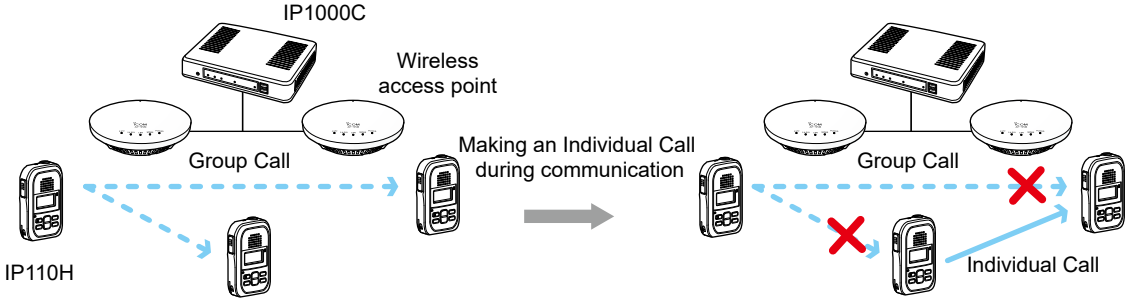
Priority level	Priority	Call type	Priority Call	Remarks
High ↑	Fixed	Telephone	—	For telephone communication
		Emergency (High)	Enable	—
		Emergency (Normal)	Disable	—
	Selectable *	All Call (High)	Enable	Includes the Area Call or calling from an IP100FS
		Individual Call (High)	Enable	Includes from 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 in the [RoIP Server] screen in the [RoIP Server Settings] menu.

ⓘ The priority is given to the first call between calls with the same priority level.

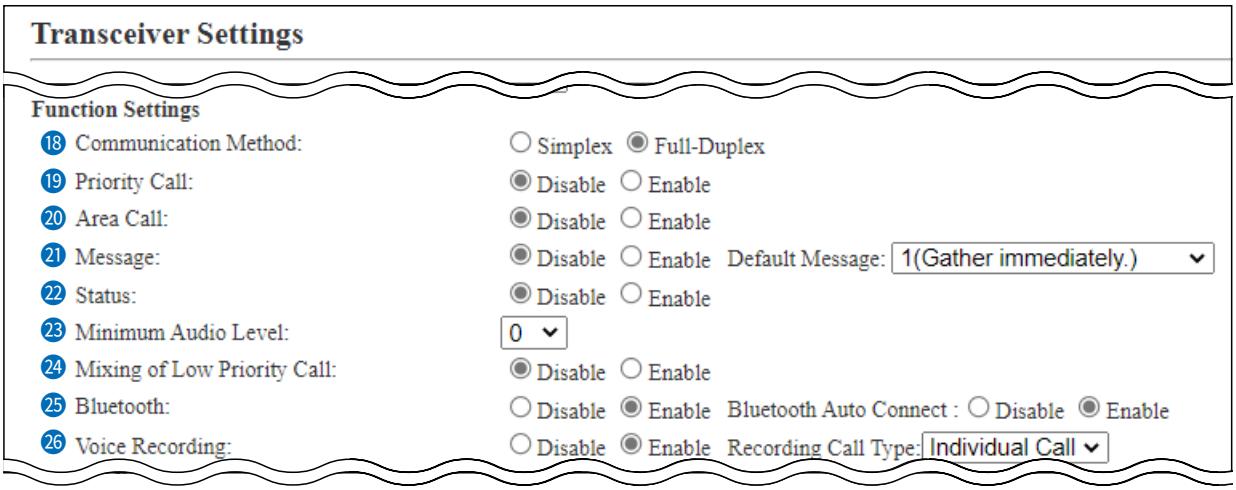
ⓘ The reply call follows the priority level of the talk side.

Change the target during communication with the Priority Call function enabled



8. [Transceiver Settings] Menu — [Transceiver Settings]–[Transceiver Settings]

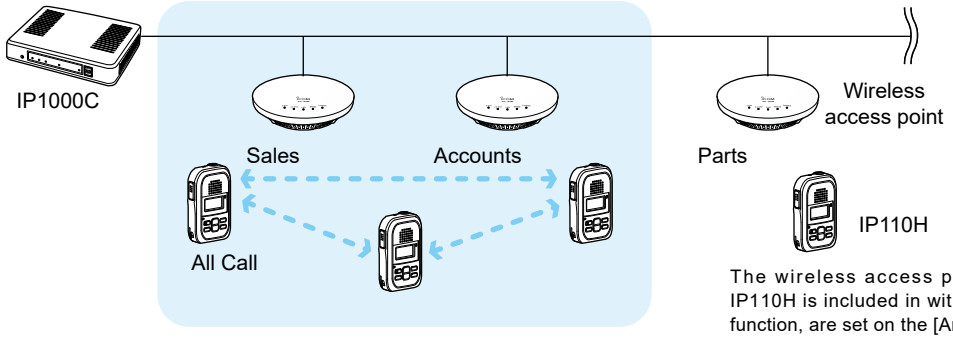
■ Transceiver Settings [IP110H]



(This is only an example.)

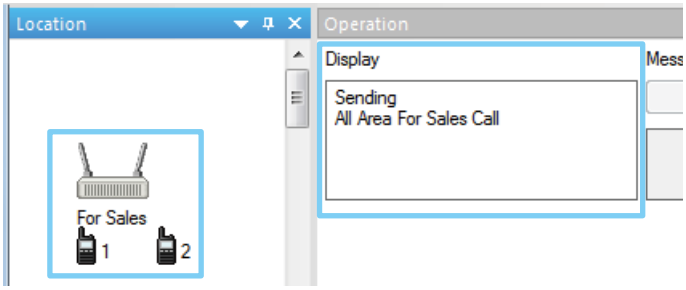
20 Area Call ..... Select whether the IP110H uses the Area Call or not. (Default: Disable) When the IP110H that is enabled Area Call calls All Call or Group Call, it calls only other IP110Hs in the same area that it connects to the wireless access point.

IP110H makes an All Call with the Area Call function



The wireless access points that the IP110H is included in with the Area Call function, are set on the [Area Call] screen in the [RoIP Server Settings] menu. (Example: For Sales and For Accounts)

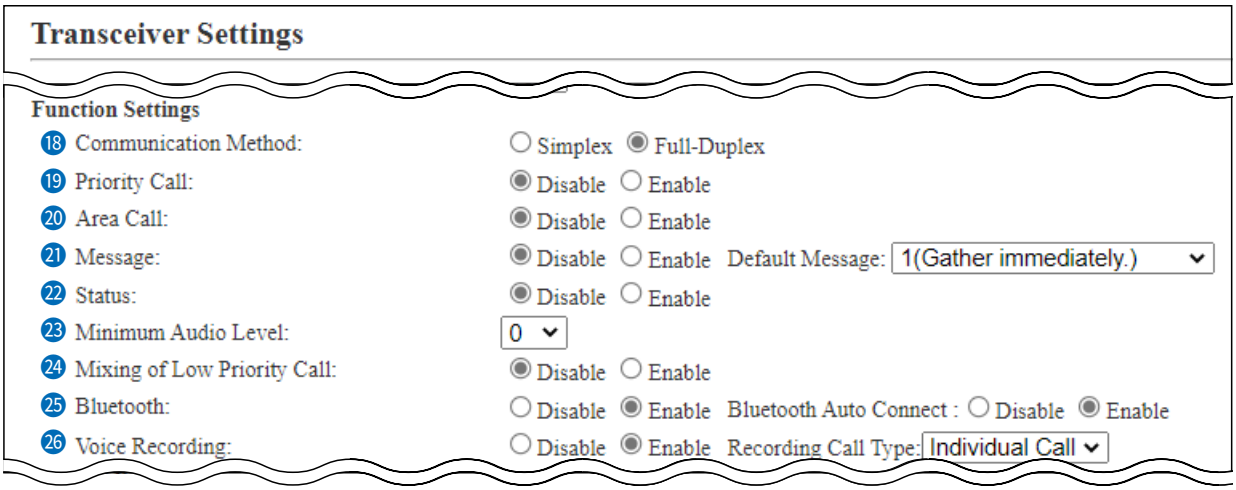
IP100FS calls the All Call with the Area Call function



When the IP100FS uses the Area Call function, the IP100FS can call IP110Hs that are in the communication range of the access points assigned to the Area Call. Select the access point in the [Location], the Call type (Individual, Group, All, Area or Telephone) and names are displayed.

8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]



(This is only an example.)

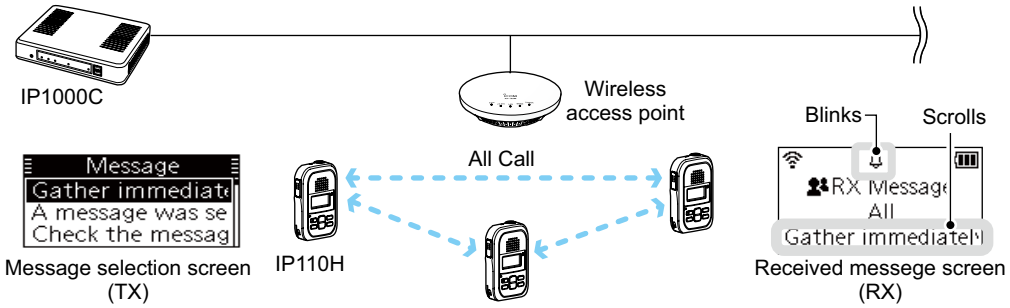
㉑ Message ..... Select whether the IP110H can send the messages or not.
(Default: Disable)

When “Enable” is selected, you can select a message from the menu screen on the IP110H.

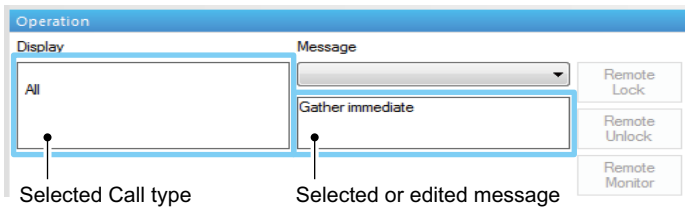
ⓘ Up to 10 messages of 32 characters or less can be programmed on the [Messages] screen in the [Common Settings] menu.

ⓘ Select the message number 1 to 10 in the “Default Message” item that is registered on the [Message] screen.

IP110H transmits a message



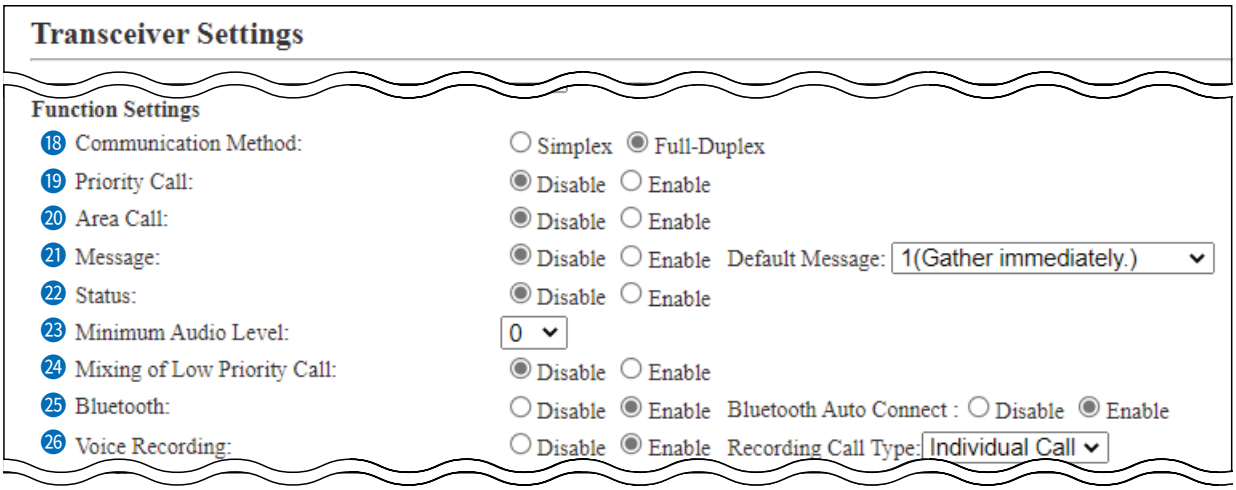
IP100FS transmits a message



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

8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]



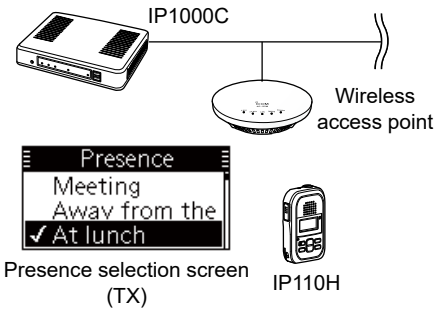
(This is only an example.)

22 Status ..... Select whether the IP110H can send the Status information or not. (Example: At lunch, Meeting, Waiting) (Default: Disable)

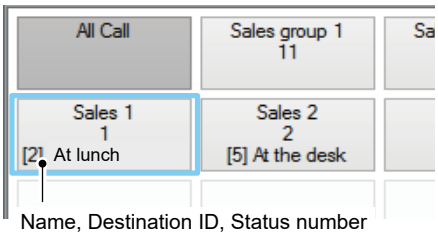
ⓘ Up to 10 statuses of 32 characters or less can be entered on the [Status] screen in the [Common Settings] menu.

ⓘ The status that the IP110H sends can be displayed on the [Transceiver Management] screen in the [Transceiver Settings] menu or the one-Touch button of the IP100FS.

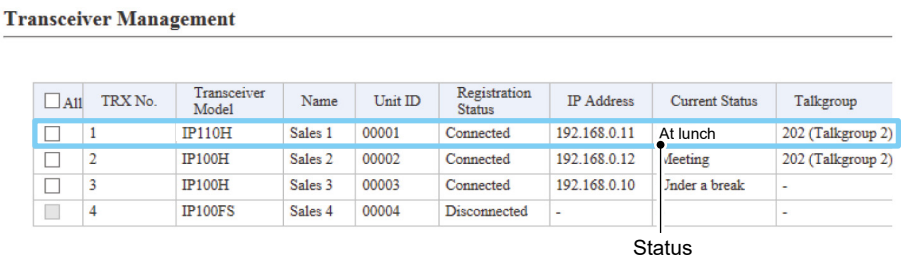
IP110H sends the Status



IP100FS One-Touch button

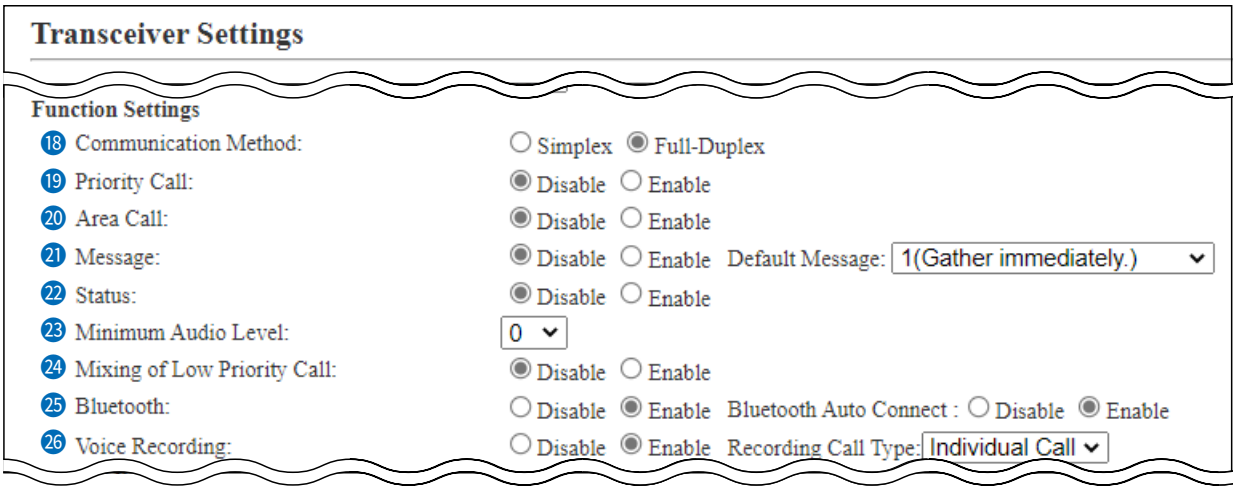


IP1000C Transceiver Management screen



8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]



(This is only an example.)

㉓ Minimum Audio Level …… Set the settable minimum audio level on the IP110H to between 0 and 32. (Default: 0)

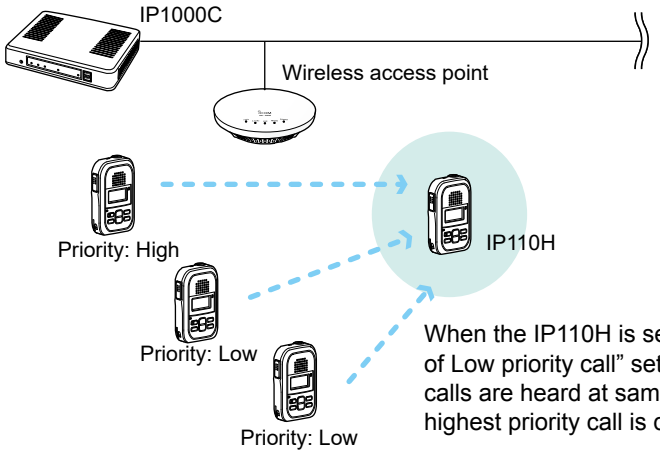
㉔ Mixing of Low Priority Call Select whether the IP110H receives the mixing audio or not. (Default: Disable)

When this setting is set to “Enable,” the IP1000C sends the mixing audio of all calls that call to the IP110H.

ⓘ The IP110H displays the called station that has the highest priority in the mixing audio.

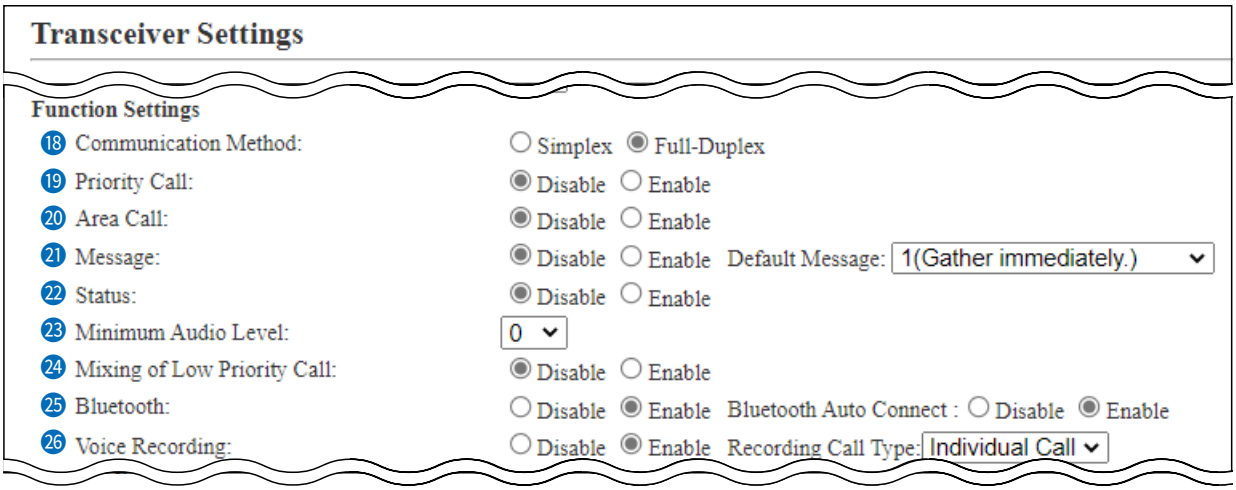
See page 4-74 for details of the Priority level.

• Mixing of Low priority call



8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

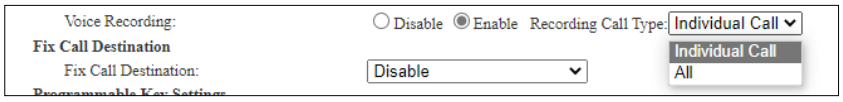
■ Transceiver Settings [IP110H]



(This is only an example.)

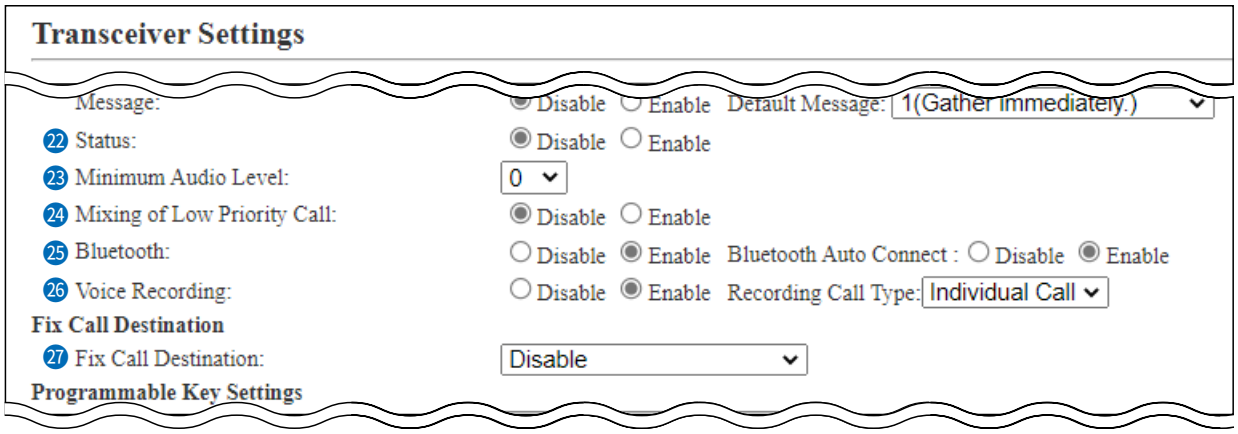
25 Bluetooth ..... Select whether or not to use the Bluetooth function. If enabled, set also whether or not to use the automatic connection with the paired Bluetooth devices. (Default: Disable)

26 Voice Recording ..... Select whether or not to record the transmitted and received audio. If enabled, you can turn the recording function ON or OFF from the menu screen on the IP110H. (Default: Disable)
Set also the type of call to be recorded, only Individual calls or All calls.



ⓘ The maximum record time is 4 minutes, and up to 10 files can be saved.
ⓘ For full-duplex calls, only the received audio is recorded.
ⓘ You cannot download the audio data from the transceiver.

■ Transceiver Settings [IP110H]



(This is only an example.)

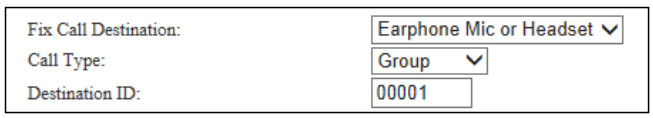
27 Fix Call Destination ..... Select whether the IP110H uses the Fix Call Destination function or not. (Default: Disable)

When this setting is set to other than “Disable,” the IP110H calls the preset destination instead of the selected destination that is displayed on the third line. The Fix Call Destination function separates the fixed call from the general calls by the specified method to start transmission.

- **Disable**
  The Fix Call Destination is not specified, and the IP110H calls the selected destination.
- **PTT**
  The Fix Call Destination is specified as the PTT transmission.
  When [PTT] is held down, the IP110H calls the preset destination.

(Example: All call is specified to the PTT)

- **Earphone Mic or Headset**
  The Fix Call Destination is specified as the external Mic transmission.
  When the external microphone’s PTT switch is held down, or its VOX function is active, the IP110H calls the preset destination.



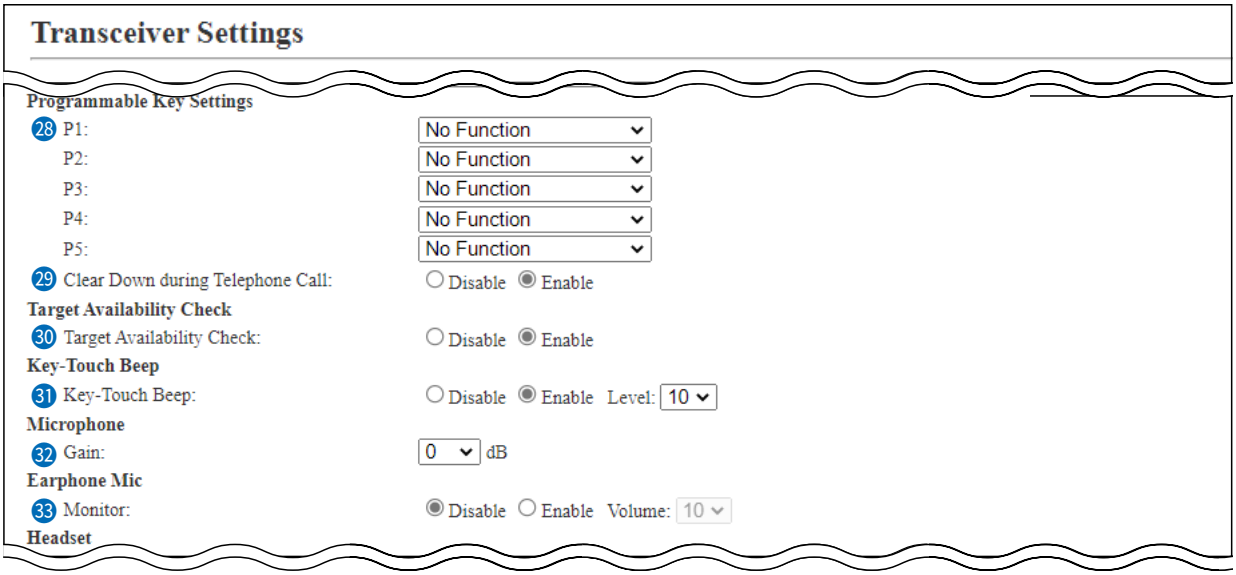
(Example: Group call is specified to the Earphone Mic or Headset)

ⓘ Information

- Specify the Call type from “Individual,” “Group” or “All.”
- When the “Call Type” item is set to “Individual” or “Group,” enter the Individual ID (00001 ~ 60000) or Group ID (00001 ~ 60000) in the “Destination ID” item.
- The Destination ID, Name (if “Name” is selected in the “Display Item” (p.4-67)) or Call type of the Fix Call Destination is always displayed on the above of the First call destination.
- When both of the IP110H’s [PTT] and external microphone’s PTT switch are held down, the external PTT has priority and the internal microphone will be muted.

8. [Transceiver Settings] Menu — [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]



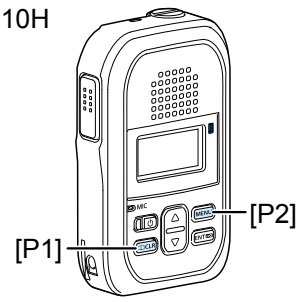
(This is only an example.)

28 [P1] ~ [P5] .....

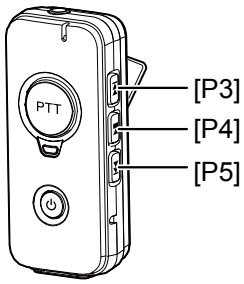
Assign “Message,” “One Touch,” “Clear Down,” “Mute,” “Emergency,” “Playback Recording,” “Temporaly Audio Level,” or “No Function” to a IP110H’s Programmable key ([P1] to [P5]).

ⓘ When this setting is set to “No Function,” nothing changes by Holding the programmable key in the standby mode.

IP110H



VS-3



- **Message**

  Holding the programmable key for 1 second displays the Message selection screen.

  ⓘ Select the message number 1 to 10 in the “Message No.” item that registered on the [Message] screen.

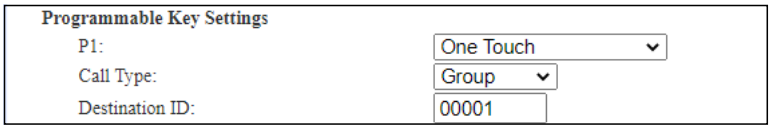
- **One Touch**

  Holding the programmable key for 1 second selects a specified Call type and destination ID or phone number.

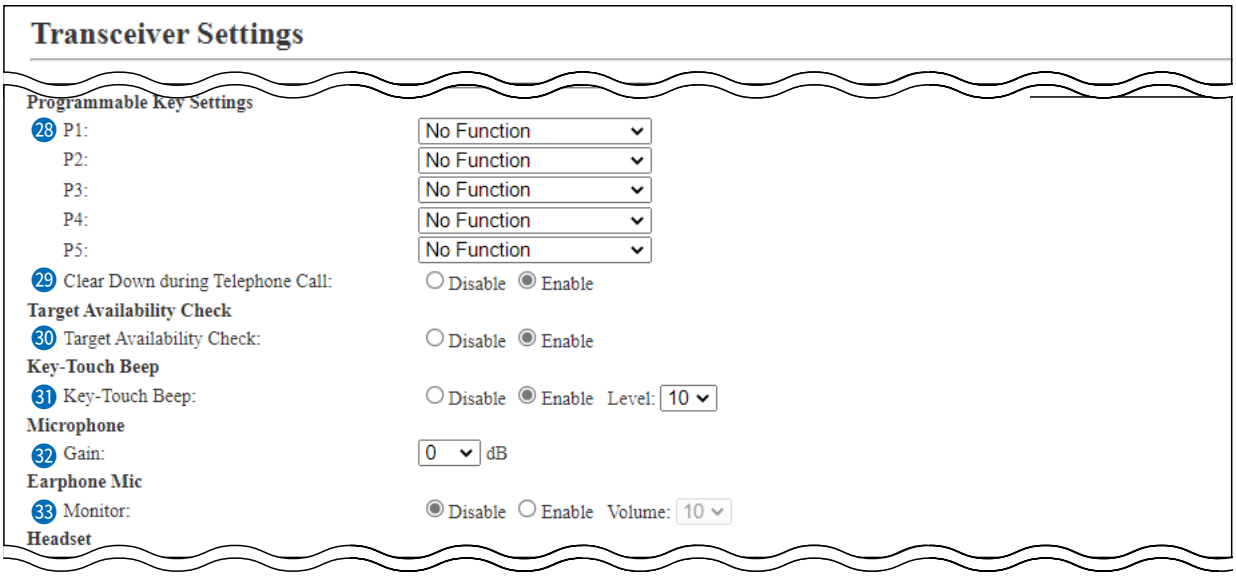
  Specify the “Individual,” “Group,” “All” or “Telephone” Call type.

  ⓘ When “Individual” or “Group” is selected, enter the Individual ID (00001 ~ 60000) or Group ID (00001 ~ 60000) in the “Destination ID” item.

  ⓘ When “Telephone” is selected, enter up to 31 numbers and symbols (#, ∗) in the “Destination Phone Number” item.



■ Transceiver Settings [IP110H]



(This is only an example.)

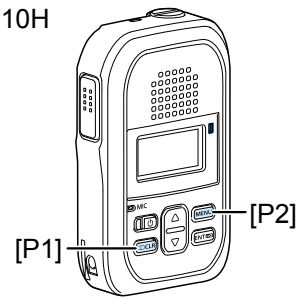
28 [P1] ~ [P5] .....

- **Clear Down**

  Holding the programmable key for 1 second terminates the phone call with an IP phone.

  ⓘ You can assign another function, if you select “Enable” on the [Clear Down during Telephone Call] (p. 4-85) item.

IP110H



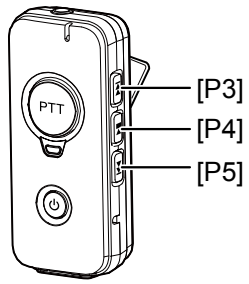
- **Mute**

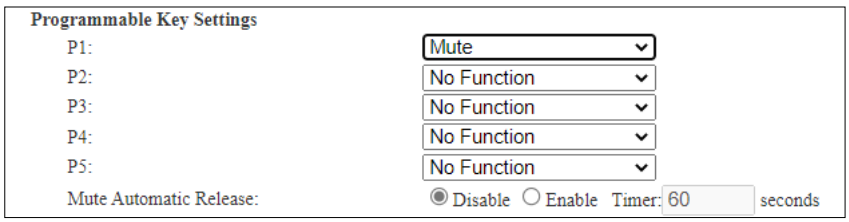
  Hold down the programmable key for 1 second when you want to mute the received audio. (The Notification beep cannot be muted.)
  Hold down a programmable key for 1 second to turn the mute function ON or OFF.

  ⓘ You can turn OFF the mute function by pushing [PTT]. However, if you select “Enable” in the [Clear Down during Telephone Call] (p. 4-85) item, terminates the phone call in the phone call.

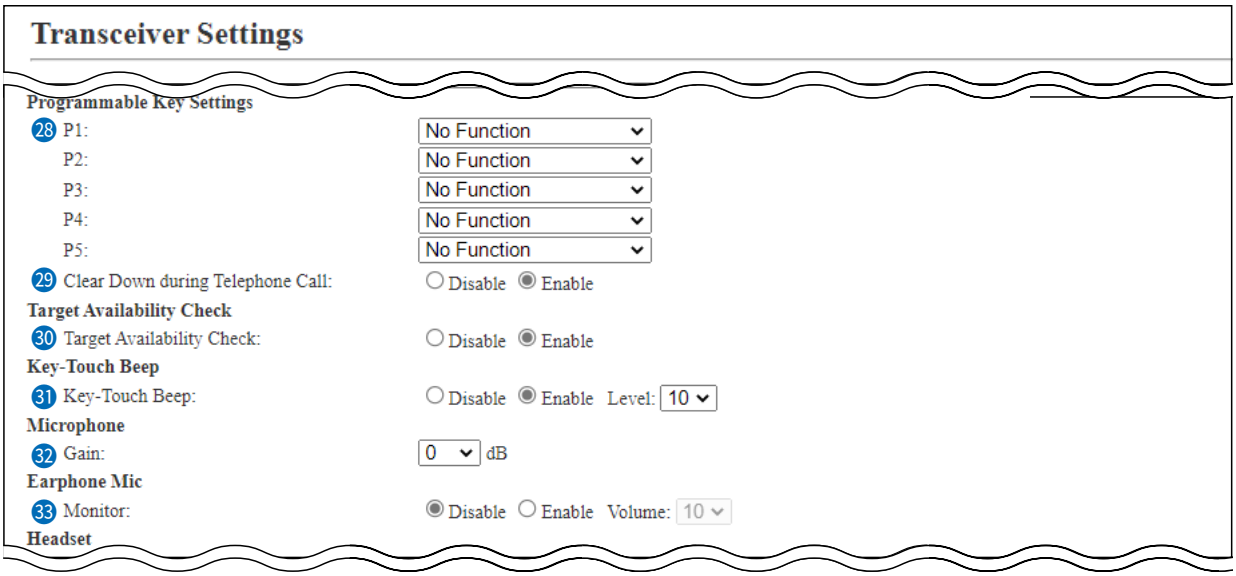
  ⓘ If you select “Enable” in the [Mute Automatic Release] item, turn OFF the mute function after specified time period has passed. (Default: Disable)
  If you select “Enable,” set the time period to release the mute function to between 10 to 600 (seconds). (Default: 60 (seconds))

VS-3





■ Transceiver Settings [IP110H]

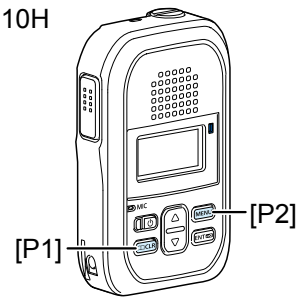


(This is only an example.)

28 [P1] ~ [P5] .....

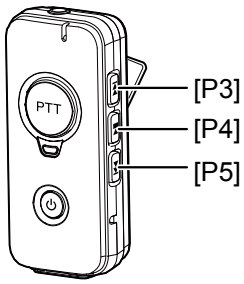
- **Emergency**
  Hold down the programmable key until “Emergency” is displayed to send an emergency call.
  When the emergency call is sent, an alarm sounds. The emergency call is canceled and the alarm stops when the transceiver receives a response or the programmable key of the transceiver is held down.
  ⓘ The time of period for which the key must be held down to turn the emergency function ON or OFF is set in the [Emer SW ON Timer] item or [Emer SW OFF Timer] item.

IP110H



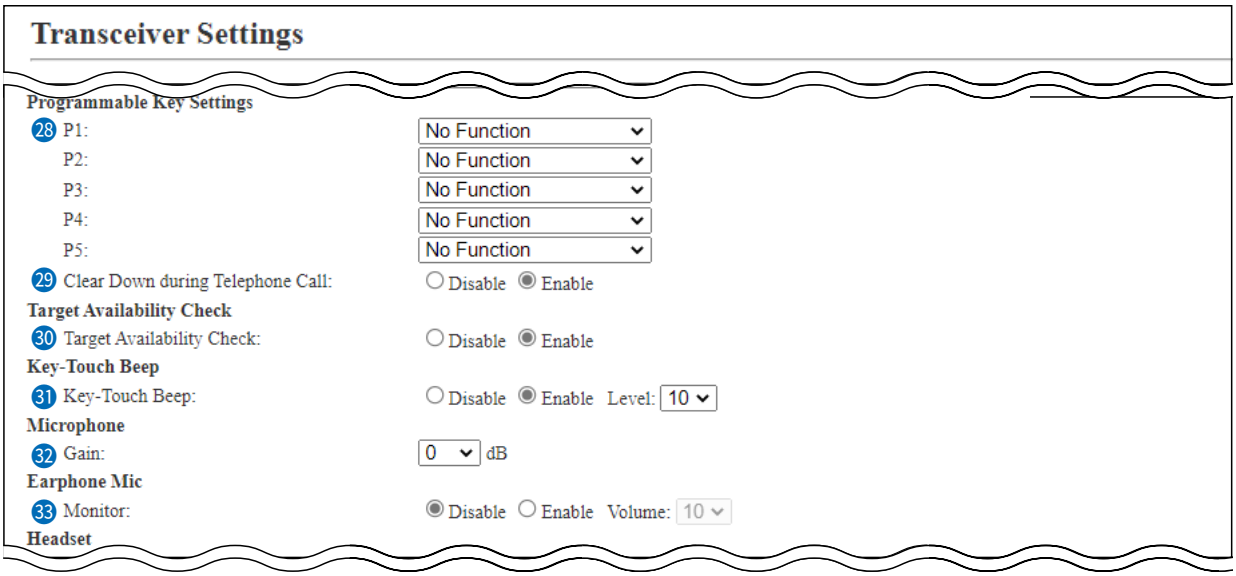
NOTE:
This function should not be used when high reliability is necessary. The communication cannot be made, depending on the environment around the transceivers, such as the consumption of a battery, the signal environment, or the access point or network status.
Use the [Emergency] and [Lone Worker] functions as a supplementary function.

VS-3



8. [Transceiver Settings] Menu — [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]

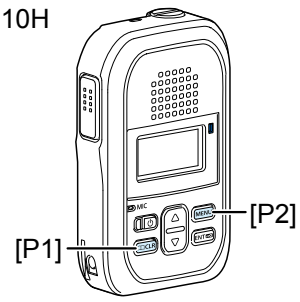


(This is only an example.)

28 [P1] ~ [P5] .....

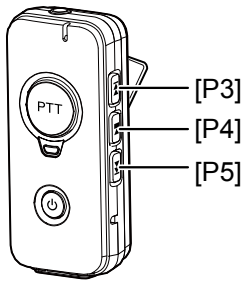
- **Playback Recording**
  Holding down the programmable key for 1 second displays the recorded log screen. Select and push [ENT] on the IP110H to start playing back the recorded audio.

IP110H

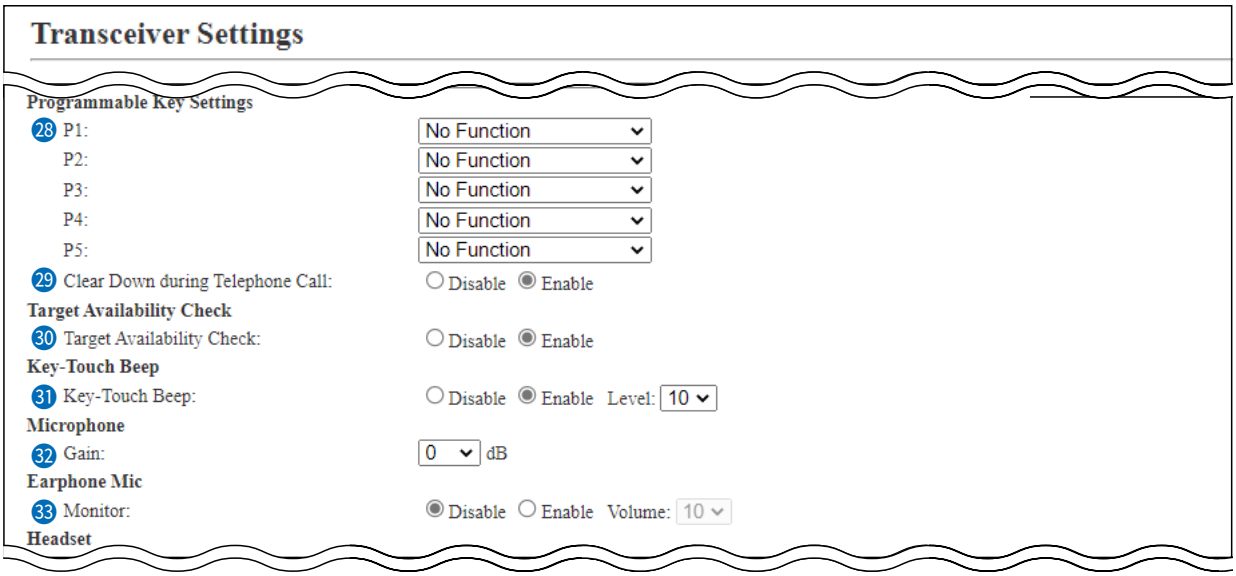


- **Temporary Audio Level**
  Holding down the programmable key for 1 second increases or decreases the Audio output volume, based on the current volume on the IP110H.
  Select the increasing or decreasing level to between “–32” and “+32” or “0” (disabled.)

VS-3



■ Transceiver Settings [IP110H]



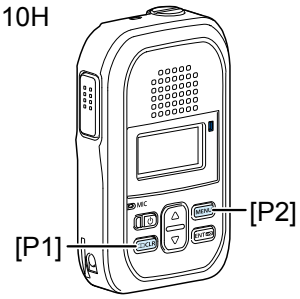
(This is only an example.)

29 Clear Down during Telephone Call

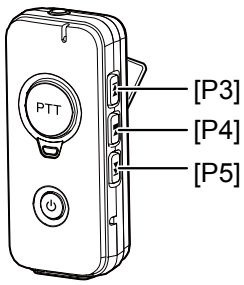
Select “Enable,” if you want to terminate the phone call by pushing the IP110H’s programmable key. (Default: Enable)

- ⓘ When the programmable key is set to “Clear Down,” this item will not be displayed.
- ⓘ Before the target telephone is picked up, or during phone call, pushing the programmable key terminates the phone call.
- ⓘ The IP110H can terminate the phone call only when a telephone calls the IP110H individually, or when the IP110H calls a telephone.

IP110H

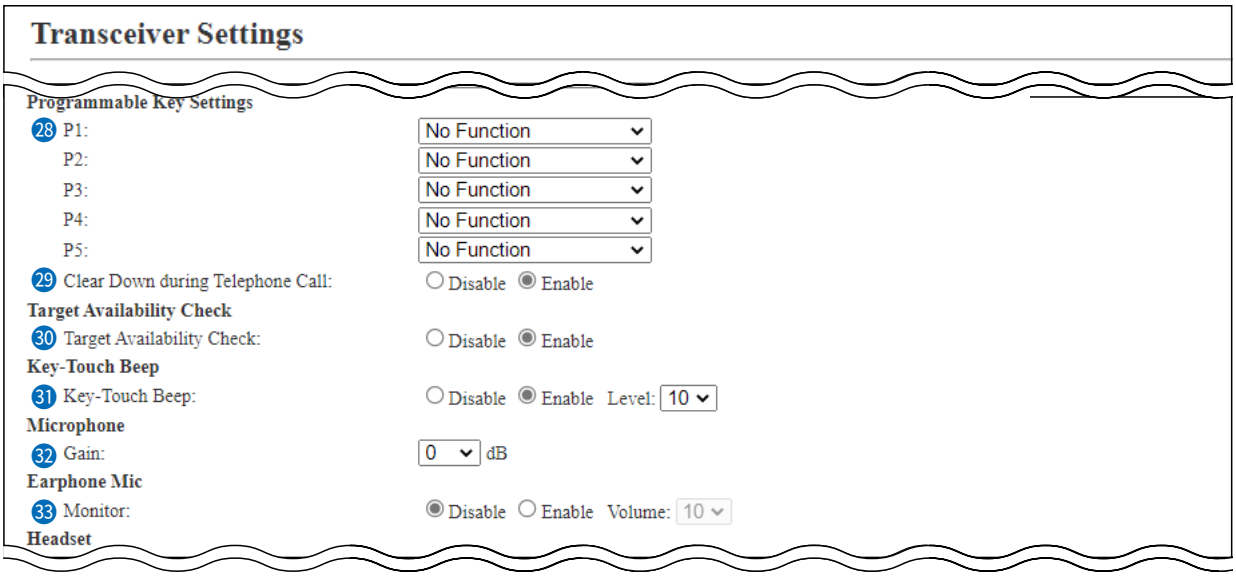


VS-3



8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]



(This is only an example.)

30 Target Availability Check… Select whether the IP110H displays a confirmation after it makes an Individual Call, or not. (Default: Enable)
When “Enable” is selected, the IP110H displays the “Connected,” “Busy” or “No response” connection status.

ⓘ When the target station is out of range, “No response” is displayed.

ⓘ If the “Connection Notice Tone” item is set to “Enable,” the Success Tone or Failure Tone sounds to notify its connection status.
Common Settings (menu) > Common Settings (screen) > Common Settings > Connection Notice Tone

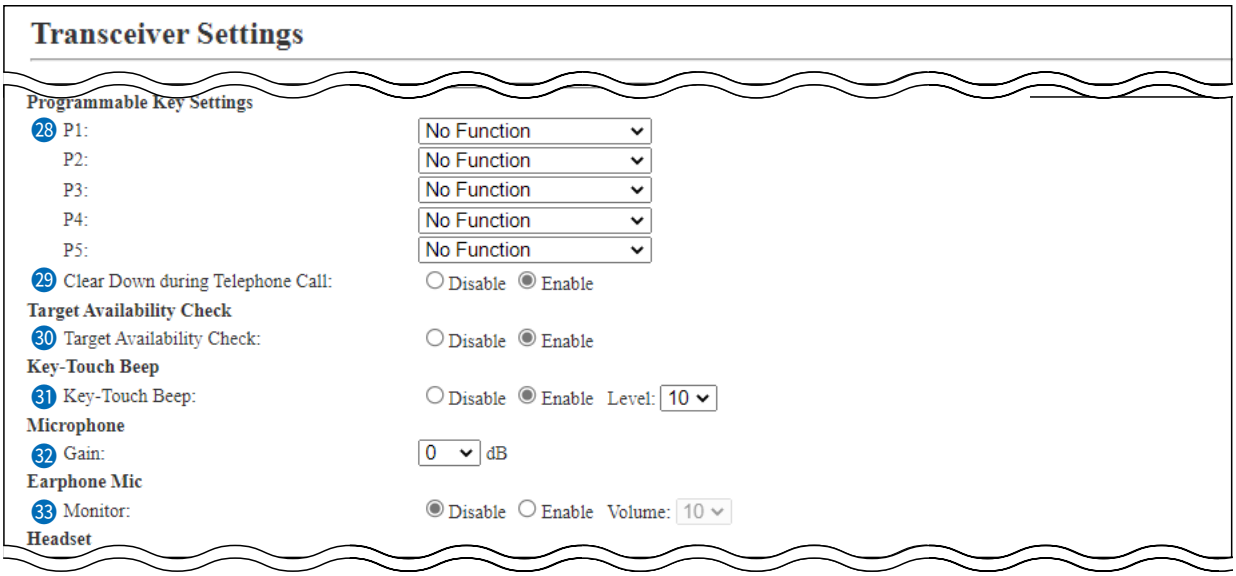
31 Key-Touch Beep…… Select whether the IP110H sounds the key touch beep or not. (Default: Enable)
When “Disable” is selected, the IP110H does not sound the confirmation beep when a key is pushed.

- **Level**
  Set the volume level of the notification beeps when the IP110H’s key is pushed. (Default: 10)
  Selectable range are between 0 and 32.

  ⓘ When “0” is selected on this setting, IP110H does not sound any beep even if the volume level is set.

  ⓘ When selecting “Disable,” this setting is grayed out and the volume level cannot be changed.

■ Transceiver Settings [IP110H]



(This is only an example.)

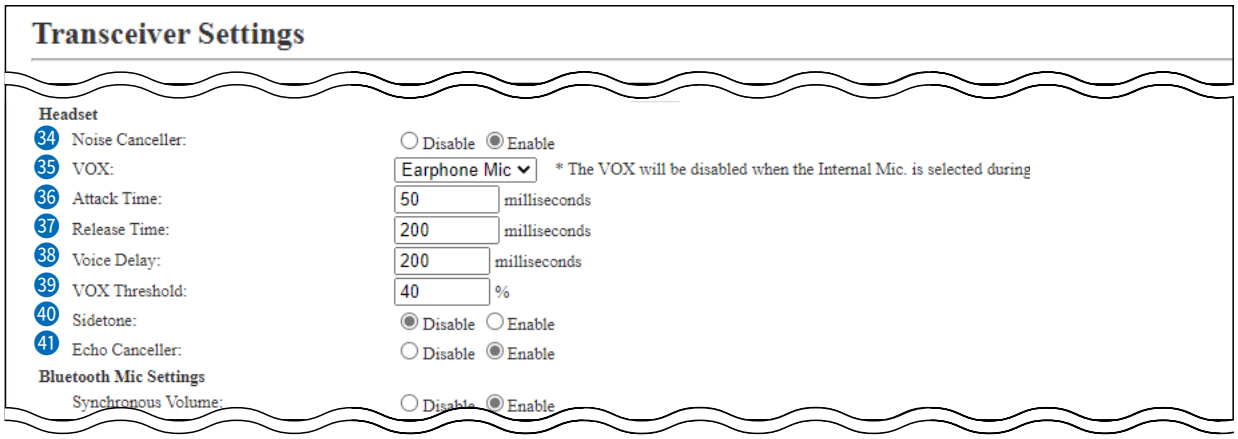
32 Gain ..... Adjust the microphone sensitivity. (Default: 0 (dB))
The adjustable range is –12 (low) to 12 (high) dB, in 3 dB steps.

ⓘ When the noise level around the IP110H is high, set to low sensitivity and speak in a slightly louder voice that helps listening easily. Or when the noise level around the IP110H is quiet, set to high sensitivity and speak in smaller voice that helps listening easily.

33 Monitor ..... Select whether the IP110H with an earphone microphone uses the monitor function or not. (Default: Disable)
When this setting is set to “Enable,” you can hear your transmit audio from earphone. Set the monitor level to between 0 and 32. (Default: 10)

ⓘ When setting this item to “0,” your voice is not heard from the earphone regardless of the audio volume setting on the IP110H.

■ Transceiver Settings [IP110H]



(This is only an example.)

Headset

34 Noise Canceller ..... Select whether or not to use the noise canceller function.
The function reduces the environmental noise and the destination can hear your voice clearer.
This setting commonly effects to the internal microphone, earphone microphone, and headset.
(Default: Enable)

35 VOX ..... Select whether the IP110H can use the VOX (voice operated transmission) function or not. (Default: Disable)
The transceiver has a VOX function*, which allows hands-free operation.

- ⓘ Turn OFF the IP110H before connecting and disconnecting the earphone microphone or headset.
- ⓘ When you select other than “Disable,” the setting items from “Attack Time” to “VOX Threshold” are displayed.
- ⓘ The VOX function is not usable when you select “Internal Mic” for the transceiver that is set to the Full-duplex communication.

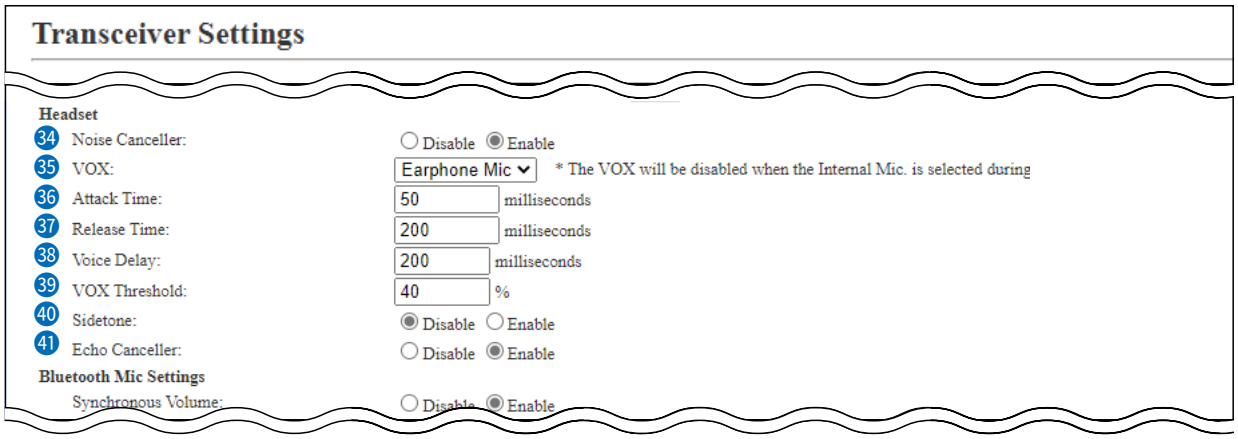
36 Attack Time ..... VOX: Enable
Adjust the Attack time to between 5 and 500 milliseconds in 5 millisecond steps. (Default: 50 (milliseconds))
When audio from a headset microphone is input for this specified time, the IP110H starts transmitting.

37 Release Time ..... VOX: Enable
Adjust the Release time to between 5 and 2000 milliseconds in 5 millisecond steps. (Default: 200 (milliseconds))
The release time is amount of time the transmitter stays ON after you stop speaking.

38 Voice Delay ..... VOX: Enable
Adjust the Voice Delay time to prevent clipping of the first few syllables after you begin speaking. (Default: 200 (milliseconds))
The adjustable range is between 0 and 500 milliseconds, in 5 millisecond steps.

8. [Transceiver Settings] Menu — [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]



(This is only an example.)

Headset

39 VOX Threshold ..... Adjust the VOX Threshold level to between 0% and 100%.

VOX: Enable

(Default: 40%)

Higher values make the VOX function more sensitive to your voice.

40 Sidetone ..... Select whether to use the Sidetone function or not. (Default: Disable)

When “Enable” is selected, you can hear your voice from the headset.

If enabled, adjust the Sidetone level to between 0 (minimum) and 32 (maximum).

(Default: 10)

ⓘ The Sidetone function and Echo Canceller function cannot be used together.

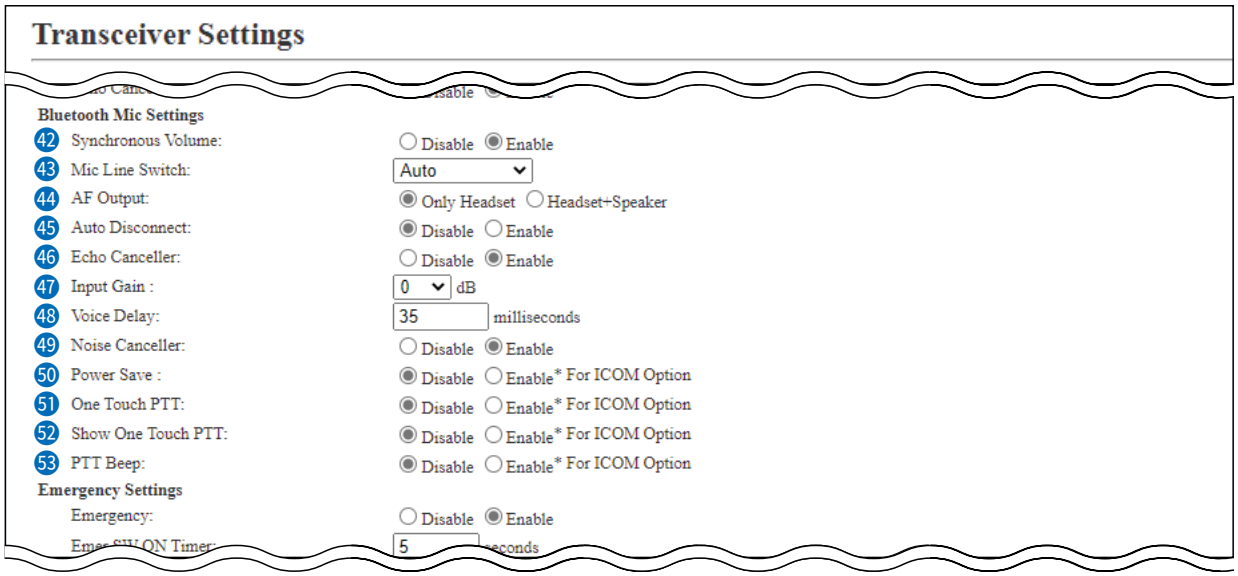
41 Echo Canceller ..... Select whether or not to enable the Echo Canceller function.

The function reduces caused during duplex communication.

(Default: Enable)

ⓘ The Sidetone function and Echo Canceller function cannot be used together.

■ Transceiver Settings [IP110H]



(This is only an example.)

Bluetooth Mic Settings

42 Synchronous Volume ..... Select whether or not to synchronize the audio volume level of the Bluetooth headset with the setting of IP110H. (Default: Enable)
When this function is enabled, you can adjust the headset audio volume on the IP110H.

43 Mic Line Switch ..... Select which microphone to use while the Bluetooth headset is connected. (Default: Auto)

- **Auto**
  Transmits the audio from the device whose [PTT] is pushed.

- **Radio Mic**
  When pushing the Bluetooth headset's [PTT], the IP110H transmits the audio from the optional microphone, if connected, or the transceiver's microphone if no optional microphone is connected.
  ⓘ No audio may be transmitted, depending on the type of connected microphone and the transceiver settings.
  ⓘ When pushing [PTT] on other than the Bluetooth headset, transmits the audio from the device whose [PTT] is pushed.

- **Bluetooth Mic**
  Transmits the audio from the Bluetooth headset's microphone, no matter which [PTT] is pushed.

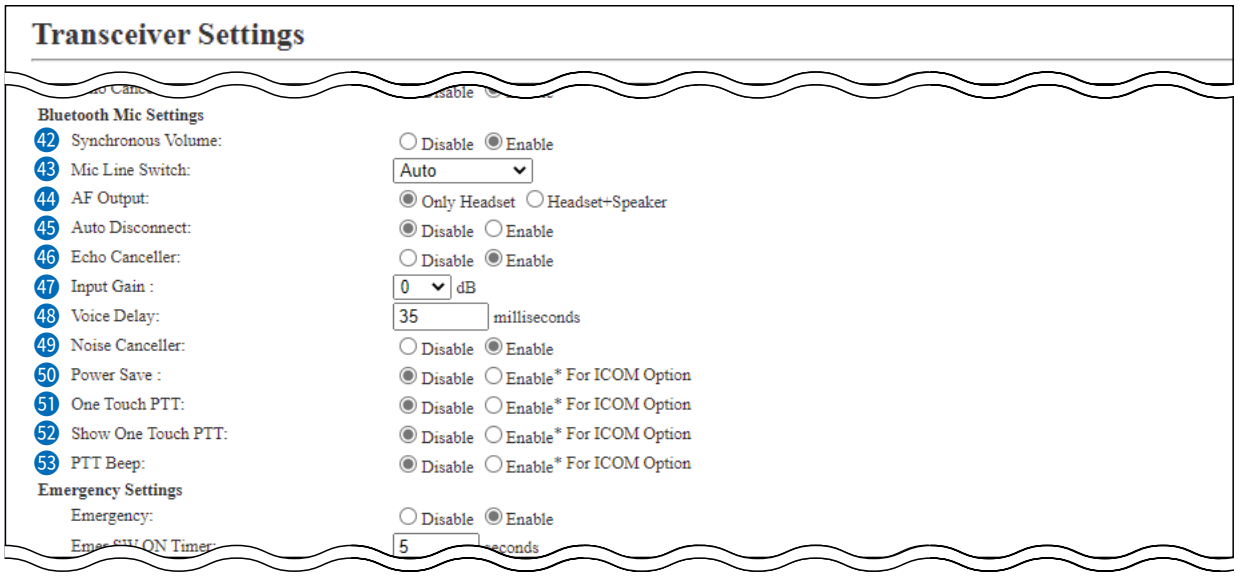
44 AF Output ..... Set the audio output device while using the Bluetooth headset. (Default: Only Headset)

- **Only Headset**
  Outputs the audio only to the Bluetooth device.

- **Headset+Speaker**
  Outputs the audio to both the IP110H and the Bluetooth device.

8. [Transceiver Settings] Menu — [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]



(This is only an example.)

Bluetooth Mic Settings

45 Auto Disconnect ..... Select whether or not to terminate the SCO (Synchronous Connection-Oriented) with the Bluetooth headset. (Default: Disable)
If enabled, the IP110H automatically disconnect the SCO link to the headset when the set period time in the “Auto Disconnect Time” item has passed without voice input or output from the headset.

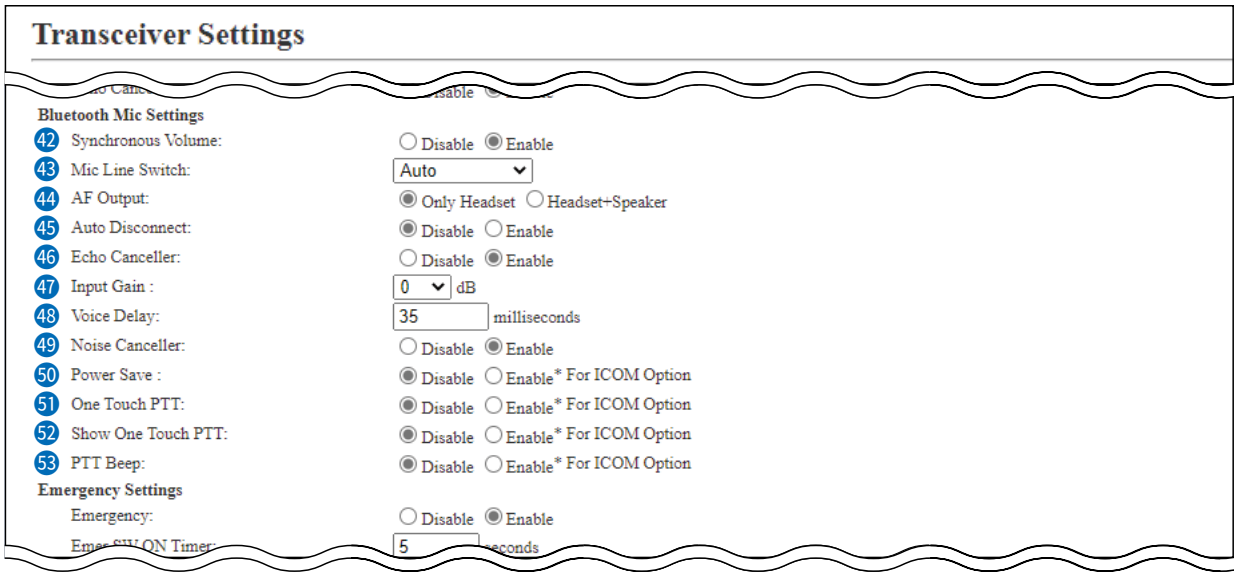
46 Echo Canceller ..... Select whether or not to enable the echo canceller function.
The function reduces caused during duplex communication.
(Default: Enable)

47 Input Gain ..... Set the signal echo canceller input gain when using a Bluetooth device to between –40 and 40 (dB). (Default: 0 (dB))

48 Voice Delay ..... Adjust the Voice Delay time when using a Bluetooth device to prevent clipping of the first few syllables after you begin speaking.
(Default: 35 (milliseconds))
The adjustable range is between 0 and 160 milliseconds.

8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]



(This is only an example.)

Bluetooth Mic Settings

49 Noise Canceller ..... Select whether or not to use the noise canceller function when using a Bluetooth device.
The function reduces the environmental noise and the destination can hear your voice clearer. (Default: Enable)

50 Power Save ..... Select whether or not to use the power saving function when using a Bluetooth device. (Default: Disable)

ⓘ The power saving function is temporarily disabled when a call has been received.

ⓘ When transmitting, push [PTT] to cancel the power saving function (a beep sounds,) and then push [PTT] again to transmit.

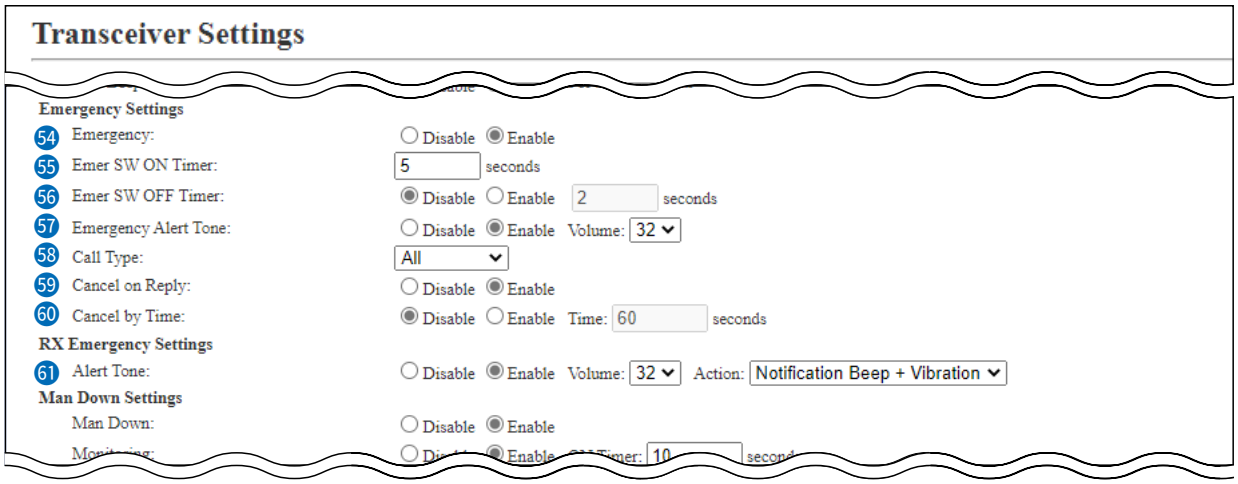
51 One Touch PTT ..... Select whether or not to use the One Touch PTT function when using a Bluetooth device. (Default: Disable)
The function toggles receiving and transmitting by momentarily pushing [PTT].

ⓘ Icom has checked the PTT operation with some 3M Peltor headsets, such as the WS Headset XP, WS ProTac XP, and WS Alert XP, however, compatibility is not guaranteed.

52 Show One Touch PTT ..... Select whether or not to display “One Touch PTT” on the transceiver’s Bluetooth menu screen. (Default: Disable)

53 PTT Beep ..... Select whether or not to use the PTT beep function when using a Bluetooth device. (Default: Disable)
When the function is enabled, a beep “Pi-Pa” sounds by pushing [PTT] on the Bluetooth microphone.

■ Transceiver Settings [IP110H]



(This is only an example.)

54 Emergency .....

Select whether or not to use the emergency function. (Default: Disable)
This function is usable only when the emergency function is assigned to a programmable key. (p. 4-81)
Holding down the programmable key that the emergency function is assigned to until "Emergency" is displayed turns ON the Emergency function, and sends an emergency call to the previously set User ID.
The emergency call is canceled when an RX code is received, or by holding down the programmable key for set period of time in "Emer SW OFF Timer" (See below).

- The time of period for which the key must be held to turn the emergency function ON or OFF is set in [Emer SW ON Timer] or [Emer SW OFF Timer].

55 Emer SW ON Timer .....
Emergency: Enable

Enter the time period for which the programmable key must be held to turn the emergency function ON. (Default: 5 seconds)

56 Emer SW OFF Timer .....
Emergency: Enable

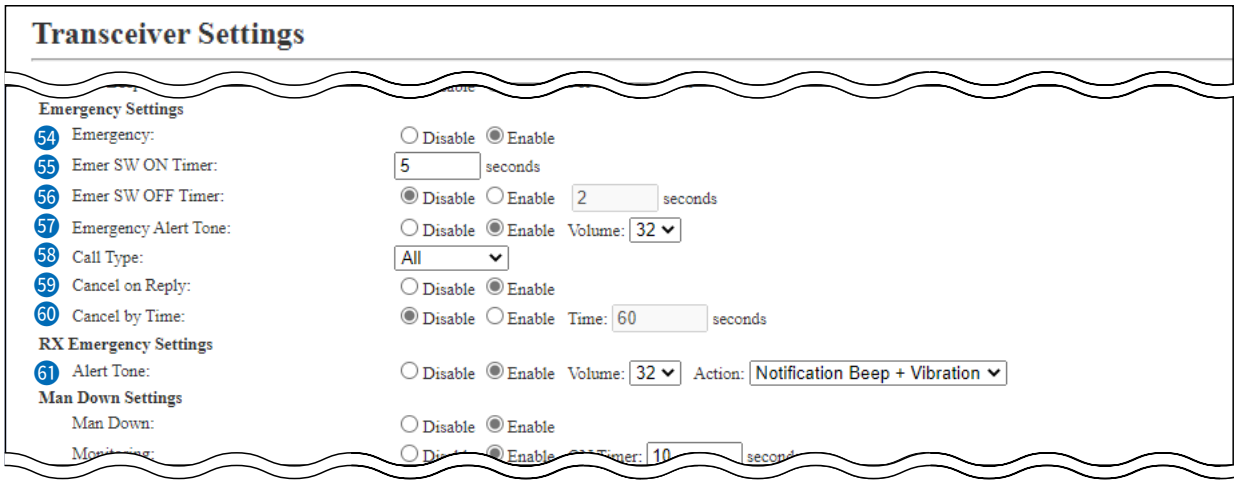
Select whether or not to cancel the emergency call by pushing the programmable key. (Default: Disable)
When "Enable" is selected, enter the time period for which the programmable key must be held to turn OFF the emergency function, between 1 to 10. (Default: 2 seconds)

57 Emergency Alert Tone .....
Emergency: Enable

Select whether or not to sound an alarm when the emergency call is sent.
When this item is set to "Disable," IP110H sends the emergency call silently, without any alert on itself. (Default: Enable)
When "Enable" is selected, set the Volume (audio level) of the alarm to between 0 and 32. (Default: 32)

8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]



(This is only an example.)

58 Call Type .....
Emergency: Enable

Select the call type of emergency call from Individual, Group, All, or Telephone. (Default: All)

ⓘ If you select “Individual” or “Group,” enter the destination ID (00001 ~ 60000). If you select “Telephone,” enter a Destination Phone Number of up to 31 characters (0–9, #, and *).

59 Cancel on Reply.....
Emergency: Enable

Select whether or not to cancel the emergency call when any RX code is received. (Default: Enable)

60 Cancel by Time .....
Emergency: Enable

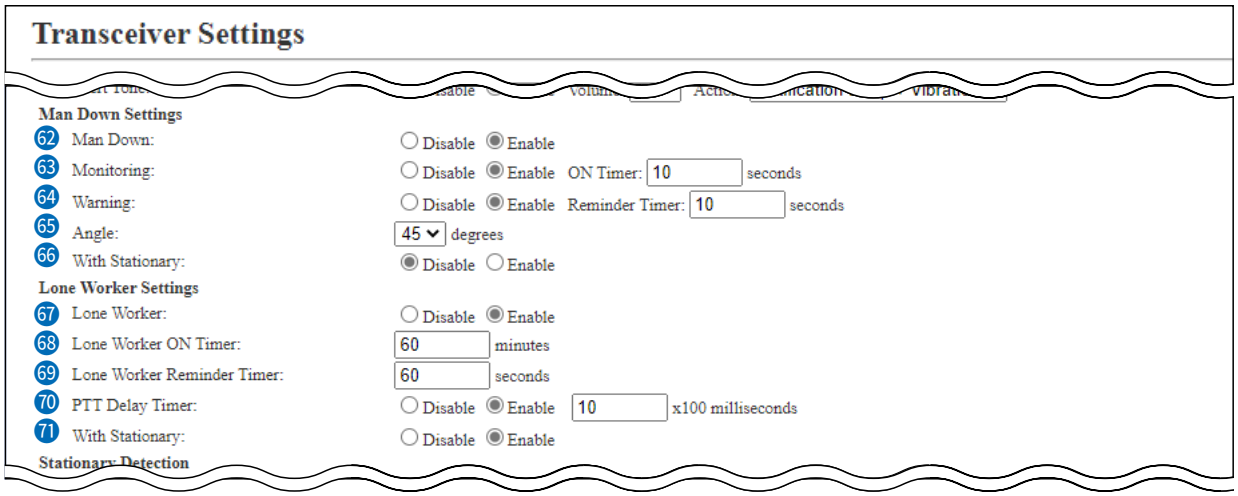
Select whether or not to cancel the emergency call after the set period of time has passed. (Default: Disable)
If you select “Enable,” enter a time period to between 1 and 255 seconds. (Default: 60 (seconds))

61 Alert Tone.....
Emergency: Enable

Select whether or not to cancel the emergency call after the set period of time has passed. (Default: Enable)
If you select “Enable,” enter the Volume (audio level) between 0 and 32, and select the Action. (Default: 32, Notification Beep+Vibration)

8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

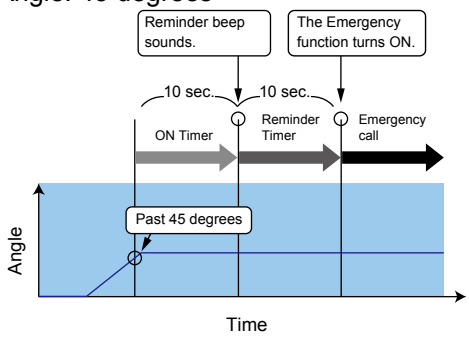
■ Transceiver Settings [IP110H]



(This is only an example.)

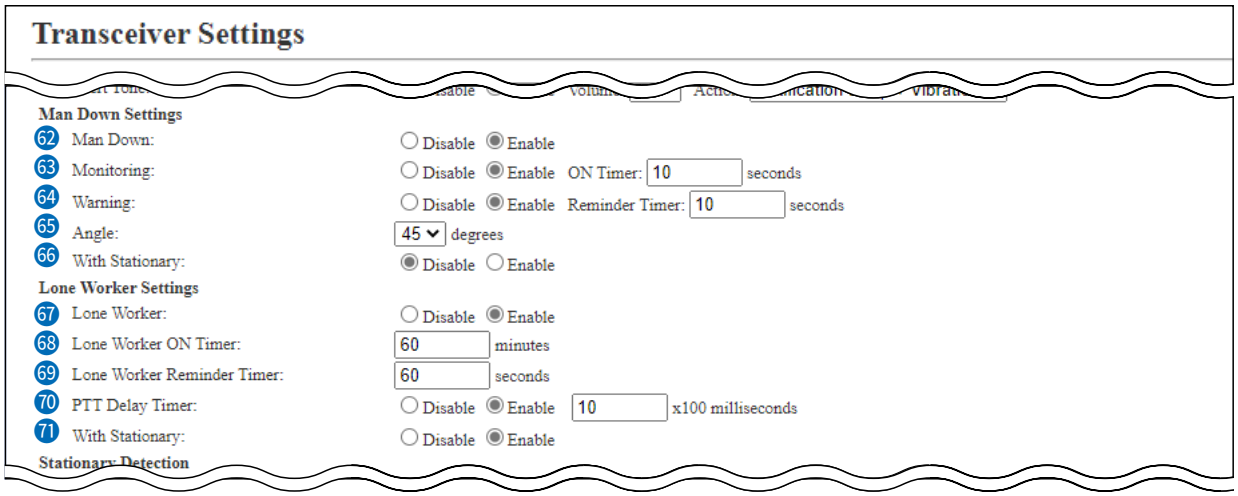
62 Man Down ..... Select whether or not to use the Man Down function. (Default: Disable) If the Man Down function is activated, the Emergency function is automatically turned ON after the set period of time has passed with the transceiver leaning past the preset angle.

Example:
ON Timer: 10 seconds
Reminder Timer: 10 seconds
Angle: 45 degrees



8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]



(This is only an example.)

63 Monitoring .....

Select whether or not to monitor for the set period of time until activating the Man Down function. (Default: Enable, 10 (seconds))
If enabled, set On Timer between 1 and 255 seconds.

- ⓘ When the transceiver is raised back from the preset angle towards the vertical position within this set period of time, Man Down's ON Timer is reset.
- ⓘ After this set period of time has passed with the transceiver leaning past the preset angle, Reminder Timer starts.

64 Warning .....

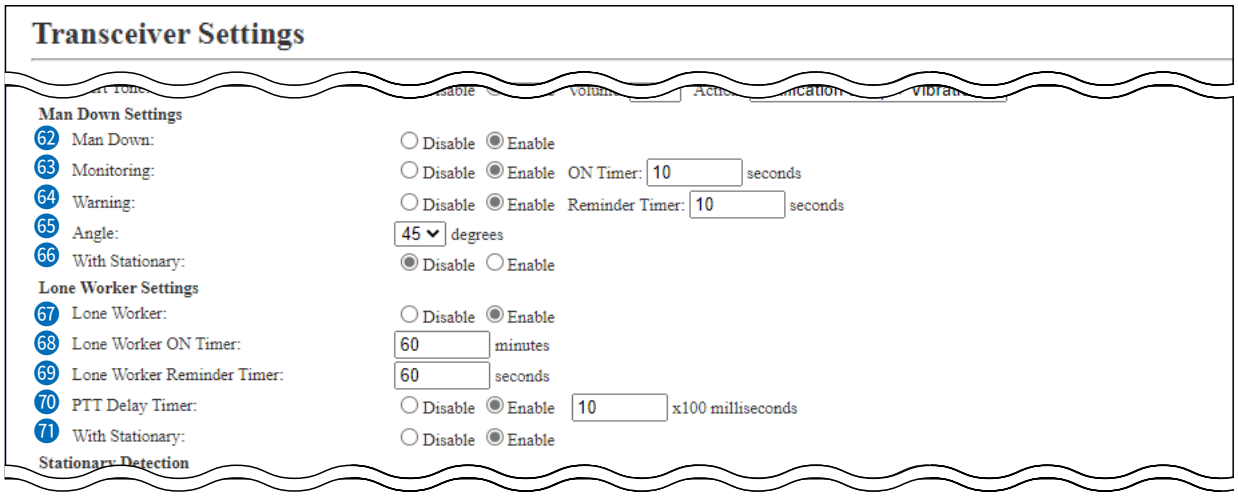
Select whether or not to countdown for set the period of time to start an emergency call transmission. (Default: Enable, 10 (seconds))
An emergency call is transmitted after this set period has passed.
If enabled, set Reminder Timer between 1 and 255 seconds.

- ⓘ Countdown beeps sound during the timer period.
- ⓘ When the transceiver is raised back from the preset angle towards the vertical position during the countdown, Man Down's ON Timer and Reminder Timer are reset.

65 Angle.....

Set the angle for the Man Down function. (Default: 45 (degrees))
If the transceiver leans past the set angle for the Man Down's ON Timer period, Reminder Timer starts.
Select 45, 60, or 75 degrees.

■ Transceiver Settings [IP110H]



(This is only an example.)

66 With Stationary .....

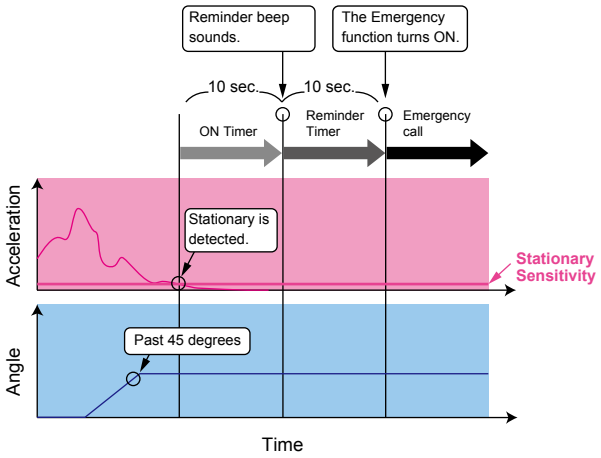
Select whether or not to use the Man Down function with the Stationary function option. (Default: Disable)
If this item is set to “Enable,” Reminder Timer starts when:
- The IP110H leans past the set angle for the Man Down’s ON Timer period.

AND
- The user is detected as stationary for the Man Down’s ON Timer period.

After the Reminder Timer period ends, an emergency call is transmitted.

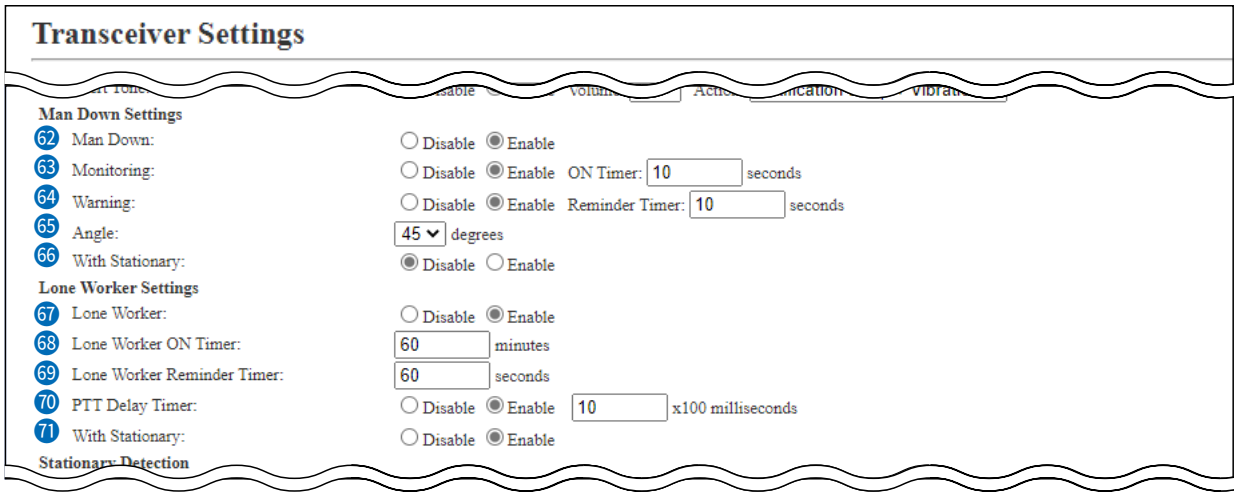
ⓘ The stationary status is detected by Stationary Sensitivity.
ⓘ When the transceiver is raised back from the preset angle towards the vertical position, or when the user moves the transceiver during the Reminder Timer period of time, Man Down’s ON Timer and Reminder Timer are reset.

Example:
ON Timer: 10 seconds
Reminder Timer: 10 seconds
Angle: 45 degrees



8. [Transceiver Settings] Menu — [Transceiver Settings]–[Transceiver Settings]

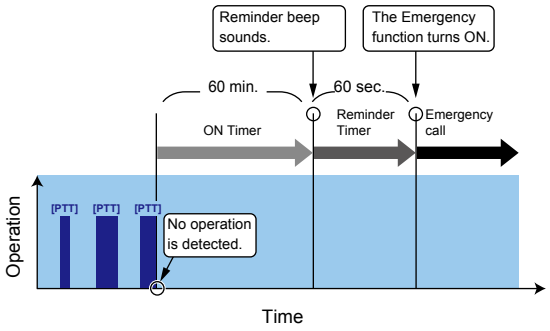
■ Transceiver Settings [IP110H]



(This is only an example.)

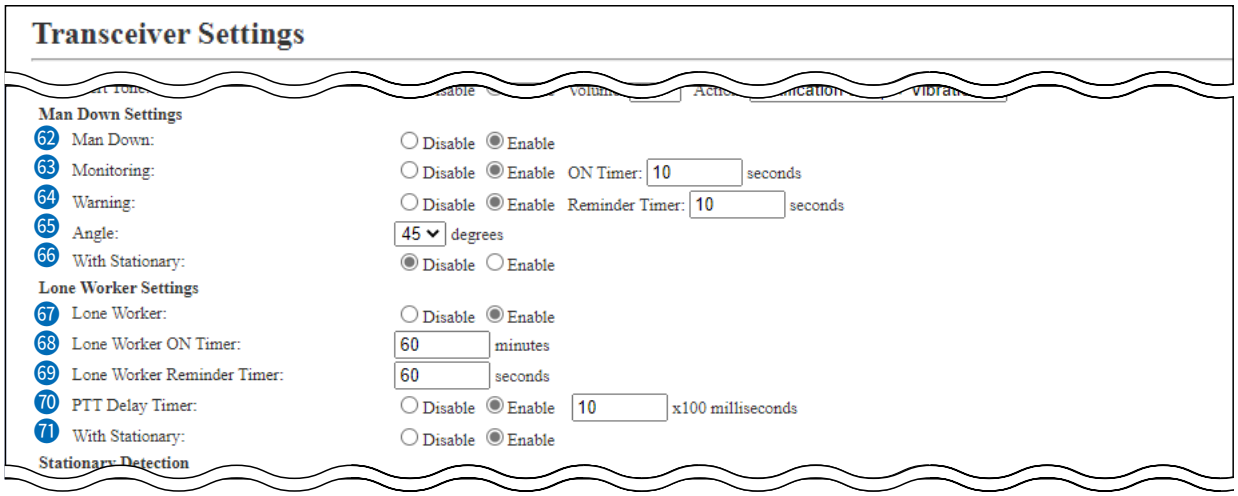
67 Lone Worker ..... If the Lone Worker function is activated, the Emergency function is automatically turned ON after the set period has passed with no operation. (Default: Disable)

Example:
ON Timer: 60 minutes
Reminder Timer: 60 seconds



8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]



(This is only an example.)

68 Lone Worker ON Timer…… Enter the time period for starting the Lone Worker function within the range of 1 to 255 minutes (1 minute steps). (Default: 60 (minutes))

- When the IP110H is operated within the time period in this item, the times for the “Lone Worker ON Timer” and “Lone Worker Reminder Timer” are reset.

69 Lone Worker Reminder Timer Enter the time period to start the emergency call transmission within the range of 1 to 255 seconds (1 second steps). (Default: 60 (seconds))

ⓘ The emergency call is transmitted after this set period has passed from when the Emergency function is activated by the Lone Worker function.

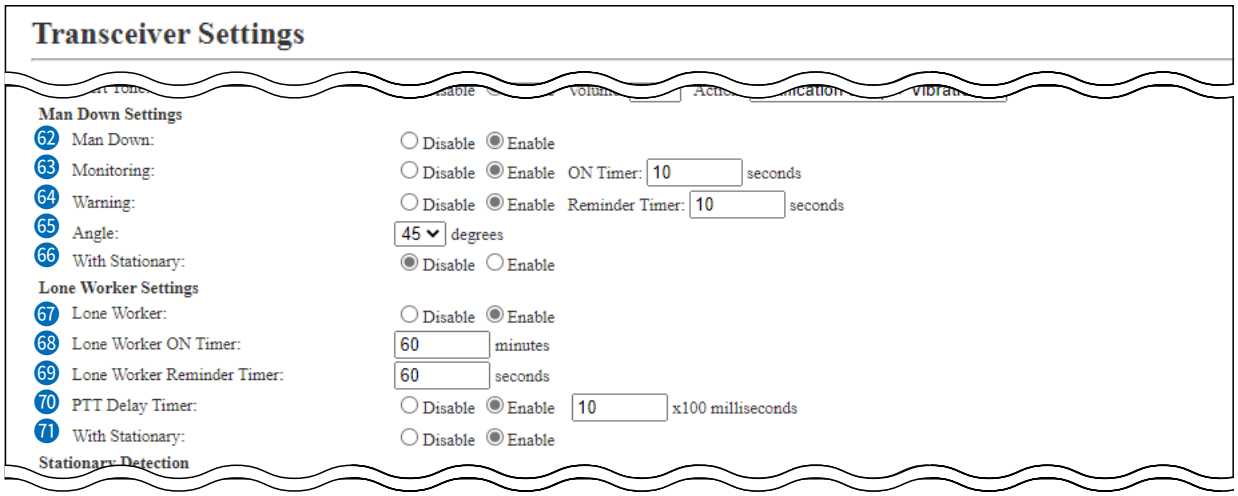
ⓘ When the Lone Worker Reminder Timer is activated, beeps sound every 2 seconds until the timer is reset.

70 PTT Delay Timer…… Enter the time period for the delay time to transmit by pushing [PTT] while the Lone Worker On Timer and the Lone Worker Reminder Timer are activated.
Enter the range of 1 to 255 ×100 millisecond (100 millisecond steps).
(Default: 10 (×100 milliseconds))

ⓘ If this item is set to a longer period of time, you can reset the Lone Worker On Timer and Lone Worker Reminder Timer by momentary pushing [PTT] without transmitting.

ⓘ Hold down [PTT] for more than the set time period in this item to transmit.

■ Transceiver Settings [IP110H]

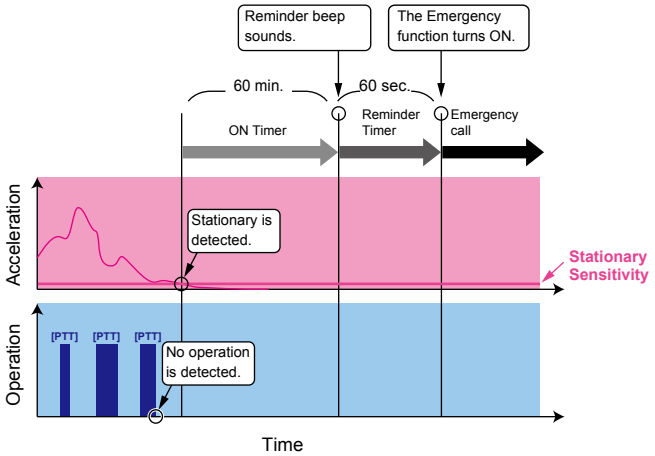


(This is only an example.)

71 With Stationary .....

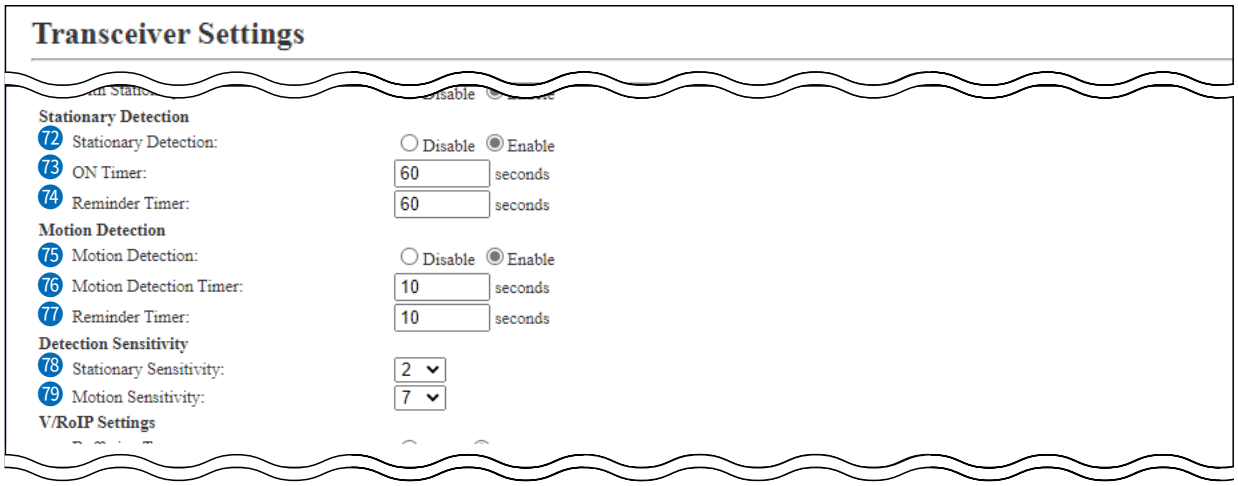
Select whether or not to use the Lone Worker function with the Stationary function option. (Default: Disable)
If this item is set to “Enable,” Reminder Timer is started when:
• No operation occurs for Lone Worker’s ON Timer period.
AND
• The user is detected as stationary for the Lone Worker’s ON Timer period.
After the Reminder Timer period ends, the emergency call is transmitted.
ⓘ The stationary status is detected by Stationary Sensitivity.
ⓘ When the transceiver is operated, or when the user moves the transceiver during the Reminder Timer period, Lone Worker’s ON Timer and Reminder Timer are reset.

Example:
ON Timer: 60 minutes
Reminder Timer: 60 seconds



8. [Transceiver Settings] Menu — [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]

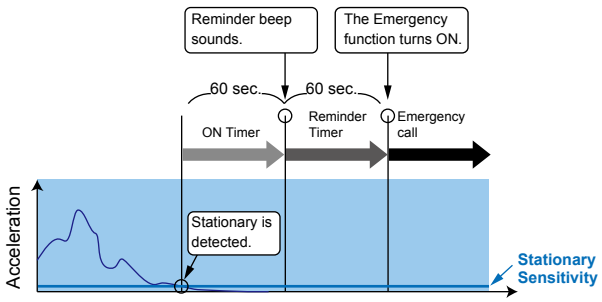


(This is only an example.)

72 Stationary Detection ..... Set whether or not to use the Stationary Detection function.
(Default: Disable)

73 ON Timer ..... Set a time between 1 and 255 seconds.
ⓘ When the user is detected as stationary for this set period of time, the Stationary Detection's Reminder Timer starts.
ⓘ The stationary status is detected by Stationary Sensitivity.

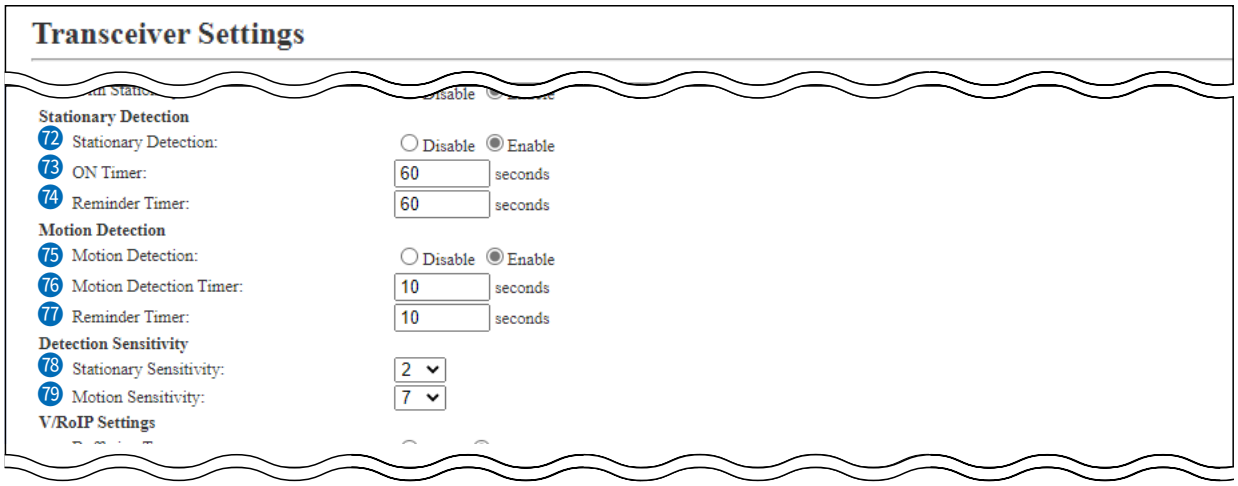
Example:
ON Timer: 60 seconds
Reminder Timer: 60 seconds



74 Reminder Timer ..... Set the period of time to start an emergency call transmission.
(Default: 60 (seconds))
An emergency call is transmitted after this set period has passed.
Set a time between 1 and 255 seconds.
ⓘ Countdown beeps sound during the timer period.
ⓘ If the user moves the transceiver during the countdown, Stationary Detection's ON Timer and Reminder Timer are reset.

8. [Transceiver Settings] Menu — [Transceiver Settings]–[Transceiver Settings]

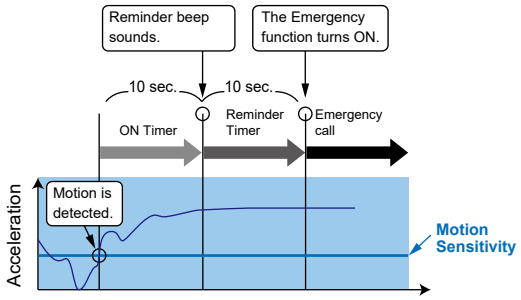
■ Transceiver Settings [IP110H]



(This is only an example.)

75 Motion Detection ..... Set whether or not to use the Motion Detection function.
(Default: Disable)

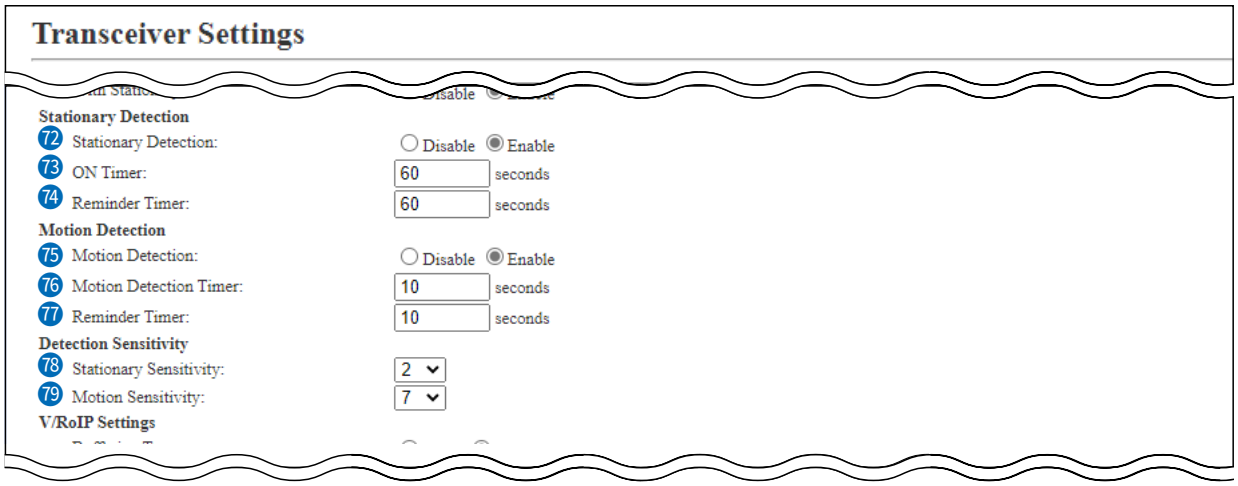
76 Motion Detection Timer ... Set the period of time to activate the Motion Detection function.
(Default: 10 (seconds))
Select a time between 1 and 255 seconds.
ⓘ When the user continuously moves the transceiver for this set period of time, Motion Detection's Reminder Timer starts.
ⓘ The motion status is detected by Motion Sensitivity.



77 Reminder Timer ..... Set the period of time to start an emergency call transmission.
(Default: 10 (seconds))
An emergency call is transmitted after this set period has passed.
Select a time between 1 and 255 seconds.
ⓘ Countdown beeps sound during the timer period.
ⓘ When the WLAN transceiver detected a motion during the countdown, Motion Detection's ON Timer and Reminder Timer are reset.

8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

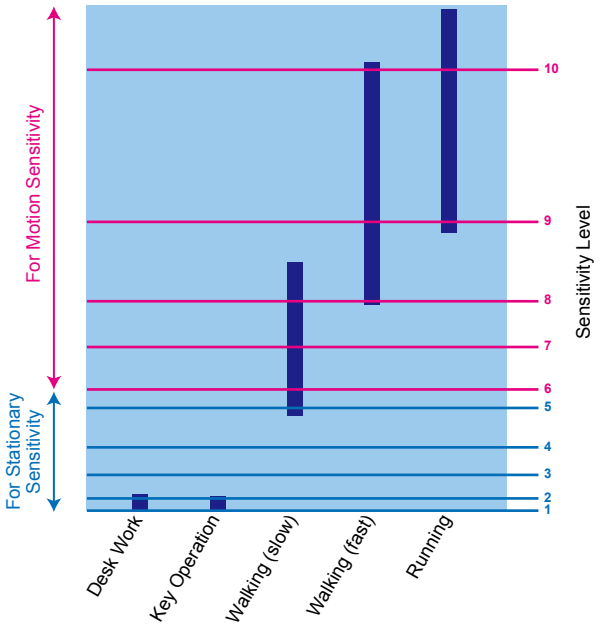
■ Transceiver Settings [IP110H]



(This is only an example.)

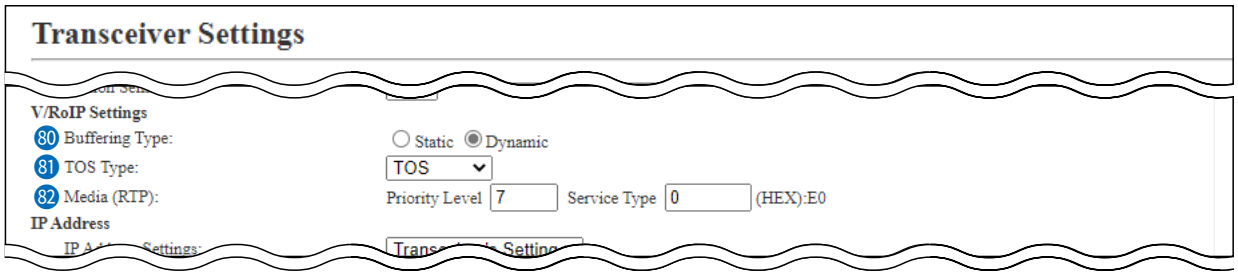
78 Stationary Sensitivity …… Set the acceleration sensor sensitivity to detect if the user is stationary or not for the Stationary Detection function. (Default: 2)
This setting is used for the Stationary Detection function, and it determines the acceleration threshold level to activate the Stationary Detection's ON Timer.
If you set at higher level, the Emergency function is more easily activated.
Select a level between 1 (high sensitivity) and 10 (low sensitivity).

• **Sensitivity example**



79 Motion Sensitivity …… Set the acceleration sensor sensitivity to detect whether the user is moving or not, for the Motion Detection function. (Default: 7)
This setting is for the Motion Detection function, and it determines the acceleration threshold level to activate Motion Detection Timer.
If you set a lower level, the Emergency function is more easily activated.
Select a level between 1 (high sensitivity) and 10 (low sensitivity).

■ Transceiver Settings [IP110H]



(This is only an example.)

80 Buffering Type ..... Select a type of buffers to reduce the received audio break-up. (Default: Dynamic)

- **Static**
  The buffer time is set the “Receive Buffer Size” item.
  Set the buffer time to between 20 and 500 milliseconds to keep the audio from breaking up.
  A shorter value improves the delay, but it may frequently break the audio signal.

- **Dynamic**
  The buffer time changes according to the audio fluctuation.

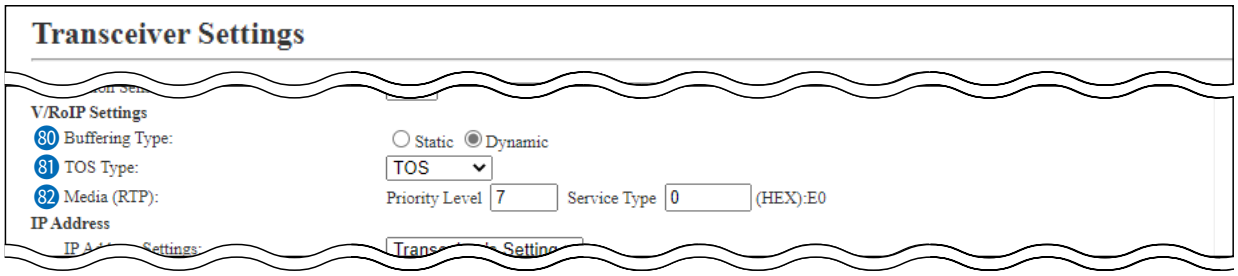
81 TOS Type ..... Select the TOS (Type-Of Service) format. (Default: TOS)

- **Not Used**
  The TOS function is disabled.

- **TOS**
  Sends the 8 bit VoIP packets to the TOS field in the IP header using the TOS format.

- **Diffserv**
  Sends the 8 bit VoIP packets to the TOS field in the IP header using the Diffserv (Differentiated Service) format.

■ Transceiver Settings [IP110H]



(This is only an example.)

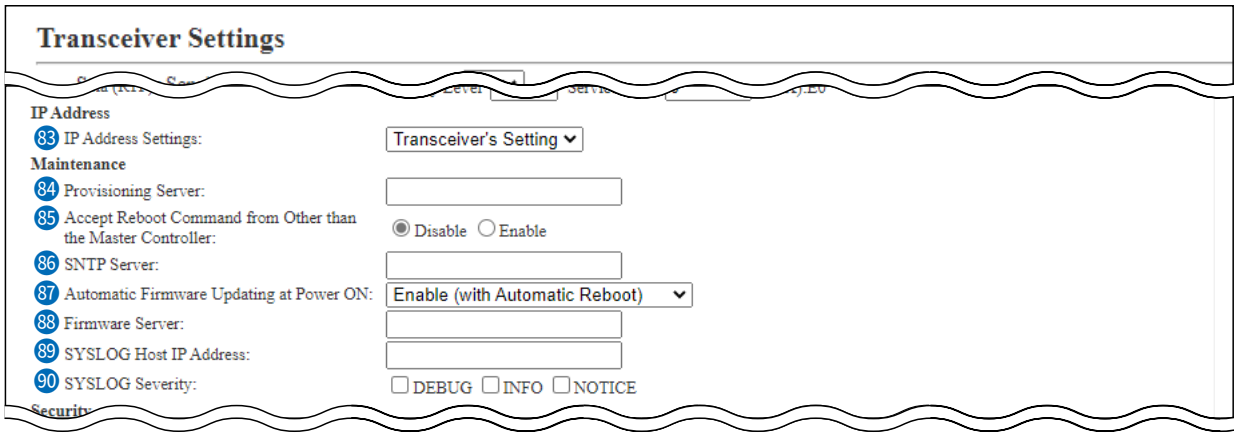
82 Media (RTP)…… Select the Priority level and Service type of the sent VoIP packets.

- **Priority Level**
  Set the TOS priority level to between 0 and 7. (Default: 7)

- **Service Type**
  Set the TOS service type code to between 0 and 15. (Default: 0)

- **DSCP**
  Set the DSCP (Differentiated Services Code Point) code to between 0 and 63. (Default: 56)
  - This item is displayed when the “TOS Type” item is set to “Diffserv.”

■ Transceiver Settings [IP110H]

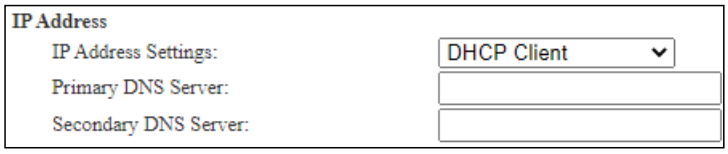


(This is only an example.)

83 IP Adddress Settings ..... Select the IP110H's IP settings. (Default: Transceiver's Setting)

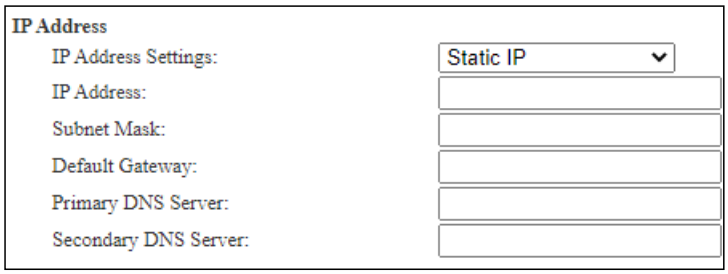
- **Transceiver's Setting**
  Uses the last IP setting set by the CS-IP110H or IP1000C.

- **DHCP Client**
  Selects the DHCP Client when the IP address is automatically obtained by a DHCP server.



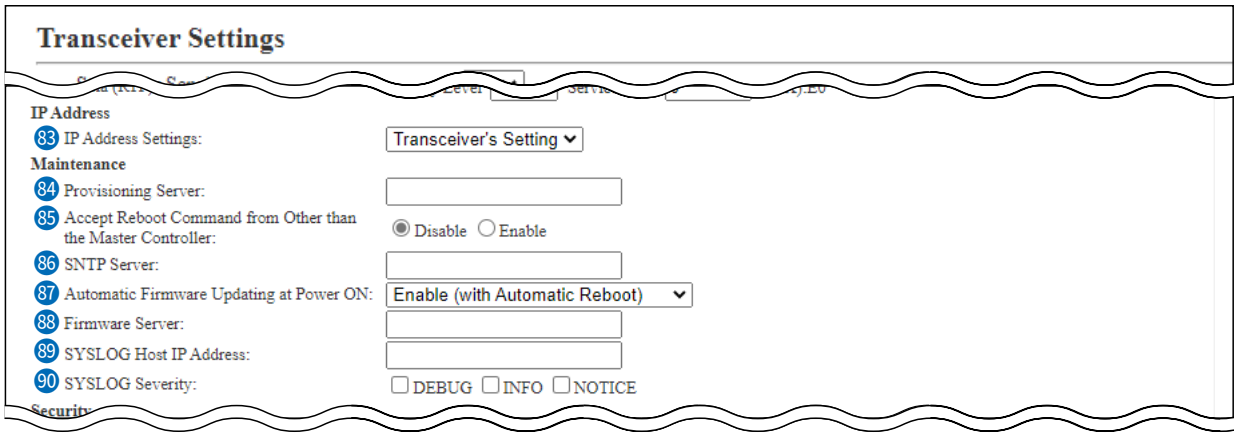
ⓘ If necessary, enter the "Primary DNS Server" or "Secondary DNS Server" settings.

- **Static IP**
  Selects the Static IP address, if it is specified according to your network environment.



ⓘ Enter the default gateway address, if your network connects to a different network.
ⓘ If necessary, enter the "Primary DNS Server" or "Secondary DNS Server" settings.

■ Transceiver Settings [IP110H]



(This is only an example.)

84 Provisioning Server ..... Enter an IP address or Host name of the Provisioning Server for the IP110H, up to 63 characters.

ⓘ When the IP1000C is used as its Provisioning Server, this entry is not necessary.

85 Accept Reboot Command from Other than the Master Controller ..... Select whether the IP110Hs can be rebooted by the other than the specified Provisioning server nor not. (Default: Disable)

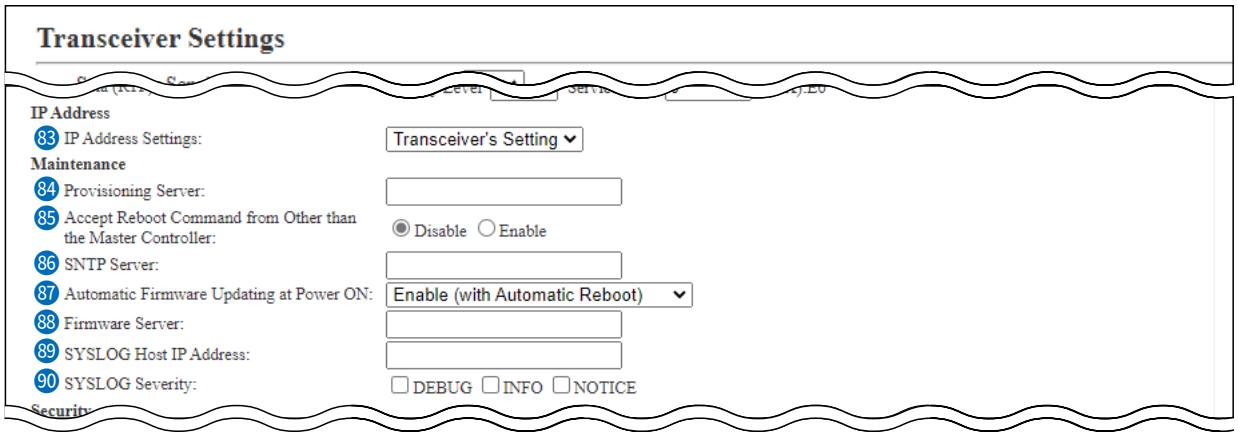
ⓘ Only the IP1000C and VE-PG4 is compatible with this function. (As of June 2022)

86 SNTP Server ..... Enter the IP address of the device that is specified as the SNTP server for the IP110H.

ⓘ When the IP1000C is used as its SNTP Server, this entry is not necessary.

8. [Transceiver Settings] Menu [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]



(This is only an example.)

87 Automatic Firmware Updating at Power ON ……

Select whether the IP110H will use the Automatic Update function or not. (Default: Enable (with Automatic Reboot))

- **Disable**
  Disables the automatic firmware updating at the IP110H turns ON.

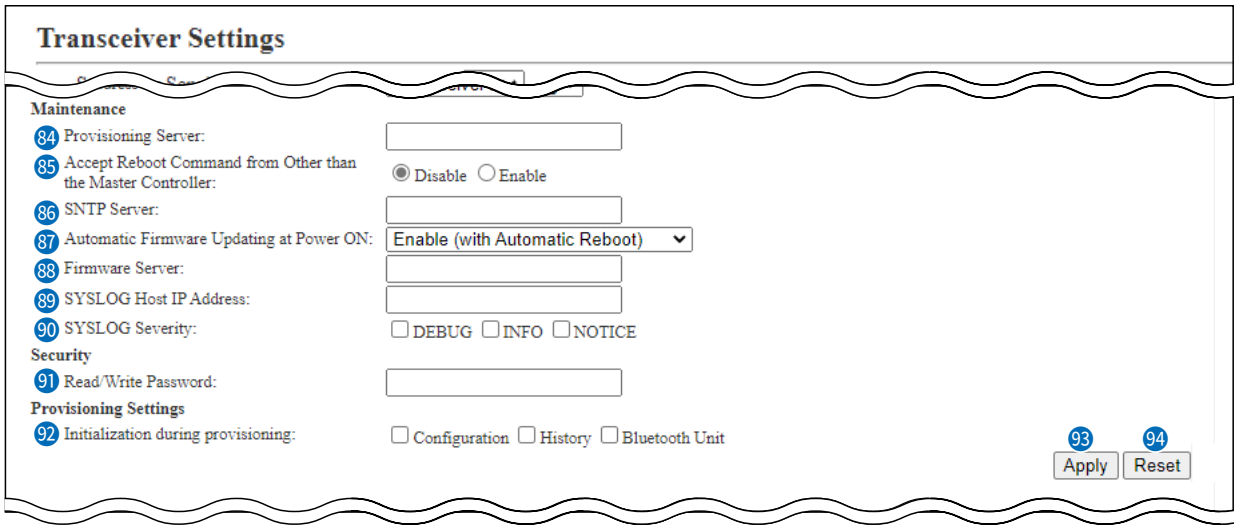
- **Enable (without Automatic Reboot)**
  When this setting is set to “Enable (without Automatic Reboot),” the IP110H works as follows.
  1. The IP110H confirms the latest firmware in the IP1000C when turning ON.
  2. The IP110H automatically downloads the firmware if it needs to update.
  3. The IP110H will be updated when it is turned ON again.

- **Enable (with Automatic Reboot)**
  When this setting is set to “Enable (with Automatic Reboot),” the IP110H works as follows.
  1. The IP110H confirms the latest firmware in the IP1000C when turning ON.
  2. The IP110H automatically downloads the firmware if it needs to update.
  3. The IP110H is updated automatically, and then it is rebooted.

ⓘ You can check the firmware version of the IP110H on the [TOP] menu.

8. [Transceiver Settings] Menu — [Transceiver Settings]–[Transceiver Settings]

■ Transceiver Settings [IP110H]



(This is only an example.)

88 Firmware Server..... Enter the IP Address or Host name of the Firmware Server for the IP110H, up to 63 characters.
ⓘ When the IP1000C is used as its Firmware Server, this entry is not necessary.
ⓘ Do not install the multiple firmware servers in the system.

89 SYSLOG Host IP Address Enter the SYSLOG host's address.
ⓘ The host device must have the SYSLOG server function.

90 SYSLOG Severity ..... Select the log information to send to the SYSLOG host.
(Default: ☐ DEBUG ☐ INFO ☐ NOTICE)
ⓘ Enter a check mark to send the log entries.

91 Read/Write Password ..... Enter a password of up to 16 characters. The password is used when reading from or writing to the IP110H, or updating the firmware using the CS-IP110H*.
* CS-IP110H is the programming software for IP110H, and can be downloaded from the Icom website.

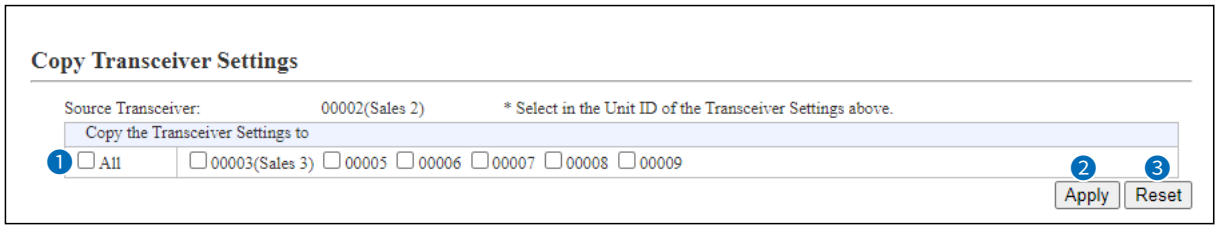
92 Initialization during provisioning ..... Select the item that you want to initialize the setting during provisioning.
(Default: ☐ Configuration ☐ History ☐ Bluetooth Unit)
ⓘ Enter a check mark to initialize.

93 <Apply> ..... Click to apply the entries.

94 <Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

■ Copy Transceiver Settings

The individual settings in the [Transceiver Settings] screen can be copied to another IP110H.
ⓘ IP address settings are not copied.



(This is only an example.)

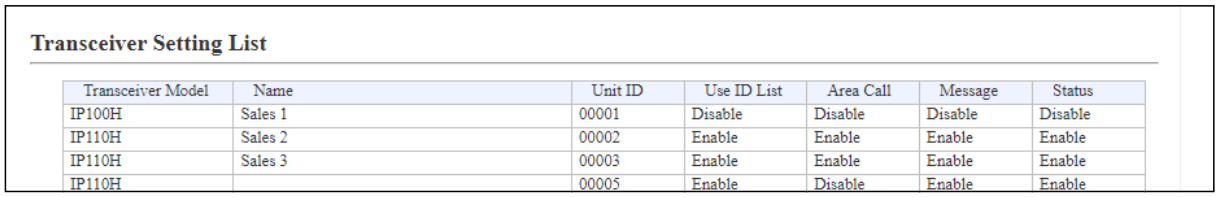
❶Selection Box ..... Enter a check mark to “All” or the “Unit ID” that you want to copy the settings to.

❷<Apply> ..... Click to apply the entries.

❸<Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

■ Transceiver Setting List

The list of the registered WLAN transceivers.
ⓘ When verifying the contents or editing the settings, select the individual number in Unit ID item.



(This is only an example.)

9. [Common Settings] Menu

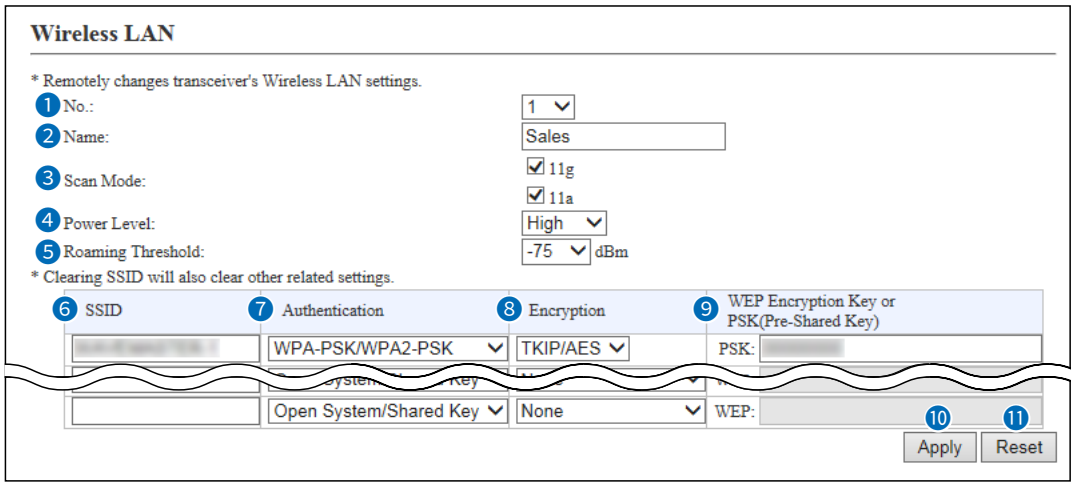
[Common Settings]–[Wireless LAN]

■ Wireless LAN

Registers wireless LAN settings that are commonly used by the WLAN transceivers.

ⓘ You can individually set the common settings to each registered group in the “Common Setting List” field on the [Common Settings] screen.

ⓘ If any setting in this screen has been changed, you must reboot the WLAN transceivers.



(This is only an example.)

1 No. ..... Select a group number between 1 and 20 to assign to the WLAN transceivers.
Up to 20 groups can be registered.

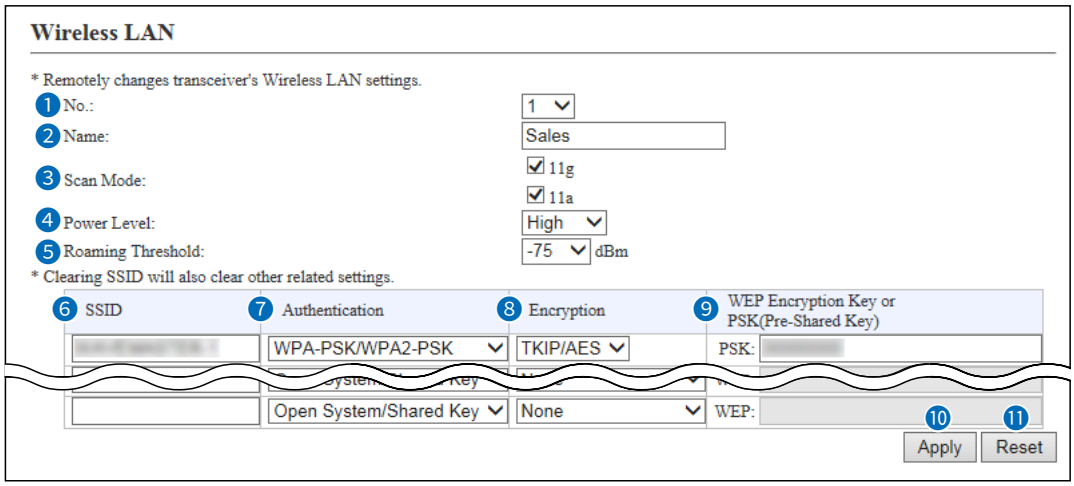
2 Name ..... Enter a Group name of up to 31 characters.

3 Scan Mode ..... Select the frequency band that the WLAN transceiver uses.
(Default: ☑ 11g, ☑ 11a)
Selecting “11g” includes “11b.”
ⓘ Access points that comply with the wireless LAN standards, can be used with the WLAN transceiver.

4 Power Level..... Set the WLAN transceiver transmit power level to High, Middle, or Low.
(Default: High)
ⓘ When “High” is set, the transmission distance of the WLAN transceiver is maximum.
Or when setting to a lower level, the distance will be reduced.
ⓘ Power Level is set to a lower level when you want to:
- Reduce the communication range.
- Limit the communication area and improve security.
- Reduce electrical interference among WLAN transceivers.
- Control the communication speed in an environment where some access points are installed in a comparatively small area.

5 Roaming Threshold ..... Set the received signal strength level when the WLAN transceiver starts roaming.
The selectable level is between –1 and –100 dBm. (Default: –75 (dBm))
ⓘ When setting to high level (example: –50 dBm), it becomes easy to start roaming. Or when setting to low level (example: –90 dBm), it becomes difficult to start roaming.

■ Wireless LAN



(This is only an example.)

6 SSID .....

Enter an SSID that is the same as the wireless access point.
Enter up to 32 characters, using numbers, symbols and letters (both lower and upper case).
Be careful to difference between lower and upper case.

ⓘ Information

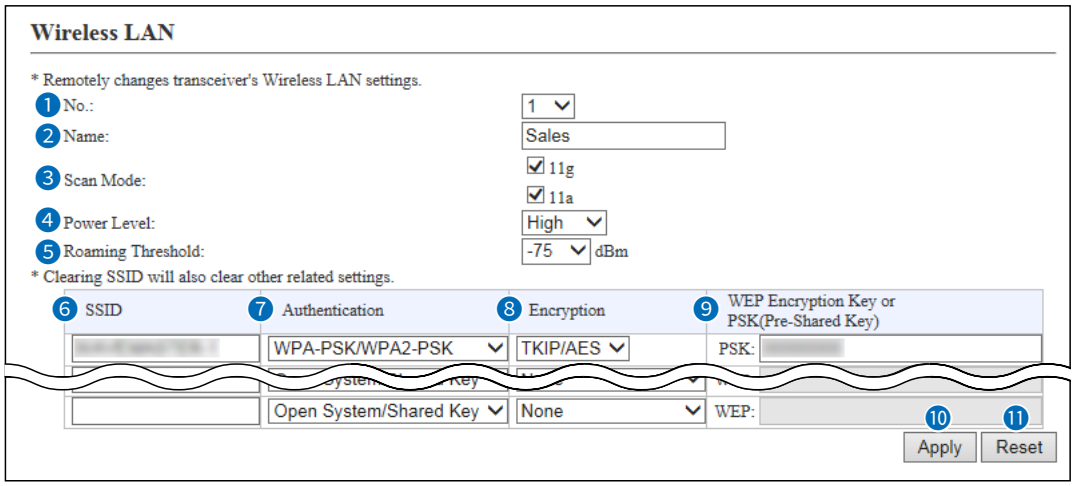
- Up to 10 SSIDs can be registered.
- The SSID is used to separate the wireless network groups. You cannot connect to different SSID groups.
- If two or more wireless access points exist in the same area, each wireless network group is identified by the SSID (wireless network name).
- If you register two or more SSIDs, the WLAN transceiver connects to the SSID which has the strongest radio wave.
- For any other wireless device, this may be called ESSID.
- The setting data before version 2.04 automatically moves to the top of the SSID setting.

NOTE:

You cannot apply the Wireless LAN settings when:

- The same combinations of the “SSID” setting and the “Encryption” setting exists.
- The top of the SSID setting overlaps with other Wireless LAN (a different value is set in “No.” (1) item) settings.

■ Wireless LAN



(This is only an example.)

7 Authentication ..... Select the authentication method that is the same as the wireless access point. (Default: Open System/Shared Key)

ⓘ Be sure to verify the Access point setting, because the terminals and access points cannot communicate using different authentication methods.

About authentication methods

- **Open System/Shared Key**
  When accessing to a wireless access point, “Open System” and “Shared Key” are automatically recognized. If the Encryption key is matched with the Access point, they can communicate.

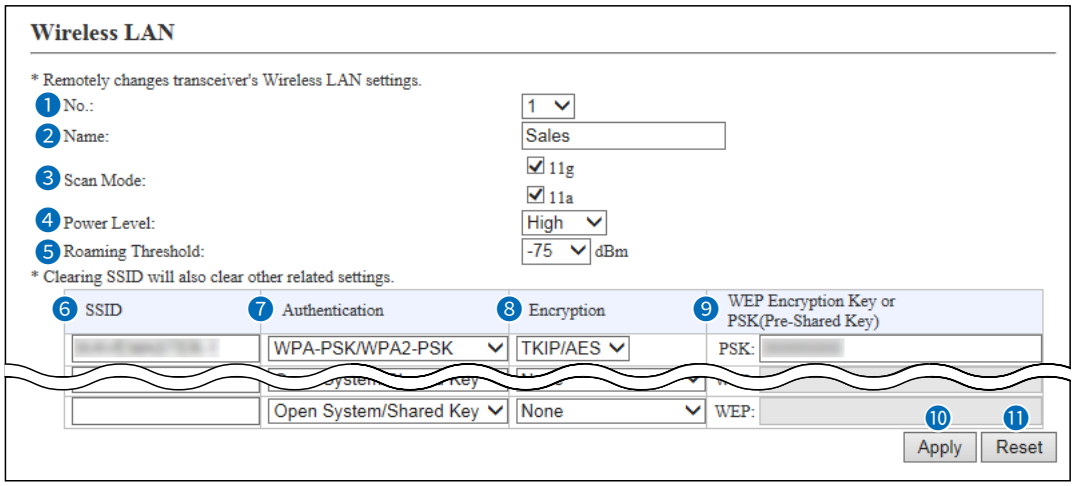
- **Open System**
  When accessing to a wireless access point, confirming the encryption is not necessary.

- **WPA-PSK/WPA2-PSK**
  The “WPA-PSK” and “WPA2-PSK” authentications are automatically recognized.

The combination of the Authentication and Encryption

	Open System	Open System/ Shared Key	WPA-PSK WPA2-PSK
None	✔	✔	–
WEP RC4	✔	✔	–
TKIP/AES	–	–	✔

■ Wireless LAN



(This is only an example.)

8 Encryption ..... Select the encryption type that is the same as the wireless access point. (Default: None)

ⓘ Be sure to verify the access point setting, because the terminals and access points cannot communicate using different encryption.

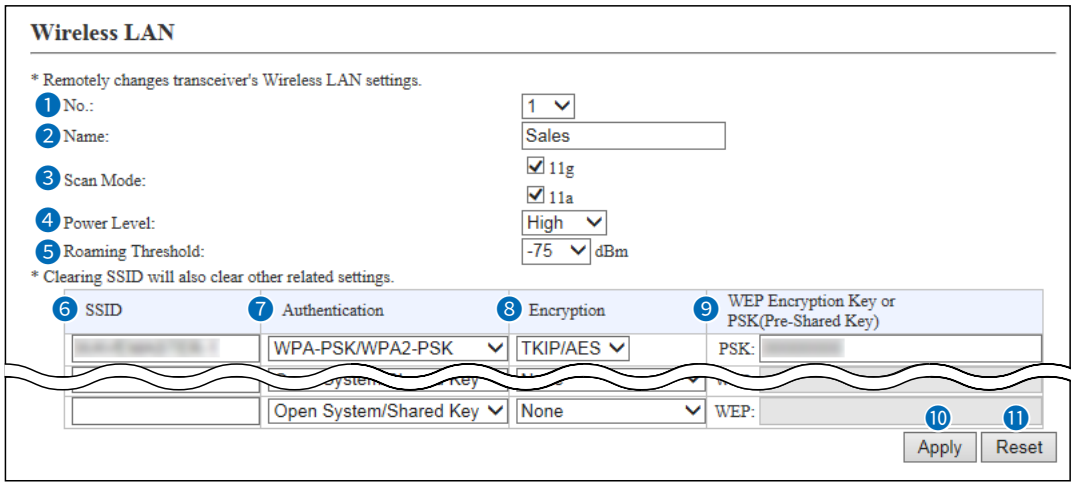
About the encryption types

- **None**
  No data is encrypted.
  ⓘ This option can be selected when the “Authentication” item (7) is set to “Open System” or “Open System/Shared Key.”

- **WEP RC4**
  It is an encryption type that can communicate when the encryption key matches.
  ⓘ You can set the encryption key length to between 64 (40) and 128 (104) bits.
  ⓘ You can select this option when the “Authentication” item (7) is set to “Open System” or “Open System/Shared Key.”

- **TKIP/AES**
  Either the “TKIP” or “AES” encryptions are automatically recognized when connecting to a wireless access point.
  ⓘ You can select this option when the “Authentication” item (7) is set to “WPA-PSK/WPA2-PSK.”

■ Wireless LAN

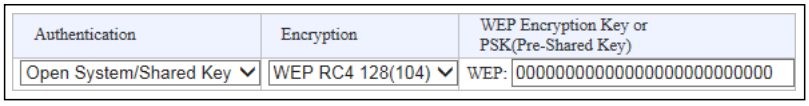


(This is only an example.)

9 WEP Encryption Key or PSK (Pre-Shared Key) ……

- **WEP Encryption Key**

  Enter the encryption key that is the same as the wireless access point.



  ⓘ This option can be selected when the “Authentication” item (7) is set to “Open System” or “Open System/Shared Key.”

  ⓘ Enter hexadecimal numbers with numbers (0 to 9) and letters (A to F). Or enter ASCII characters. The key length is same as the displayed digits, 10 or 26 using hexadecimal numbers, or half of the displayed digits, 5 or 13 characters using ASCII characters.

- **PSK (Pre-Shared Key)**

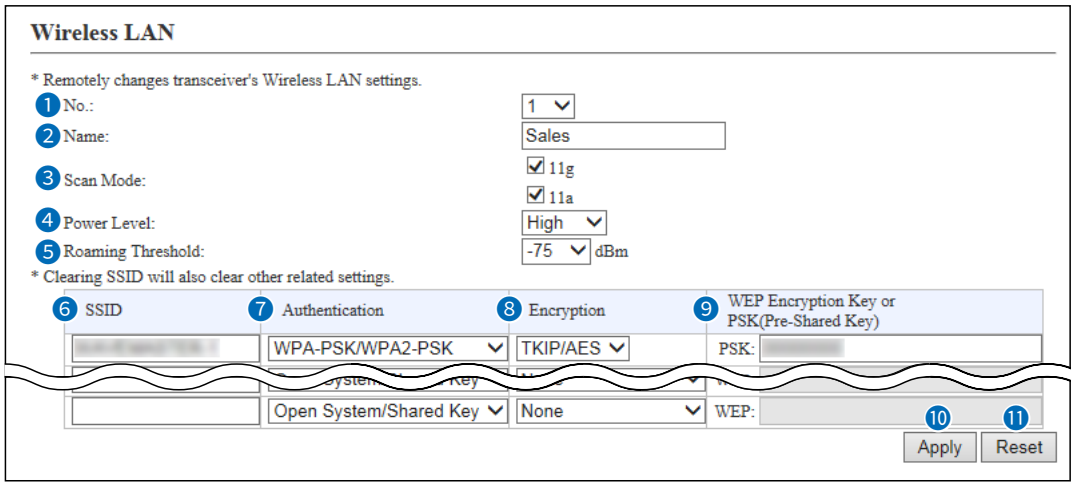
  Enter the pre-shared key that is the same as the wireless access point.

  ⓘ This option can be selected when the “Authentication” item (7) is set to “WPA-PSK/WPA2-PSK.”

  ⓘ Enter hexadecimal numbers with numbers (0 to 9) and letters (A to F). Or enter ASCII characters. The key length is 64 digits using hexadecimal number, or 8 to 63 characters using ASCII characters.

9. [Common Settings] Menu [Common Settings]–[Wireless LAN]

■ Wireless LAN



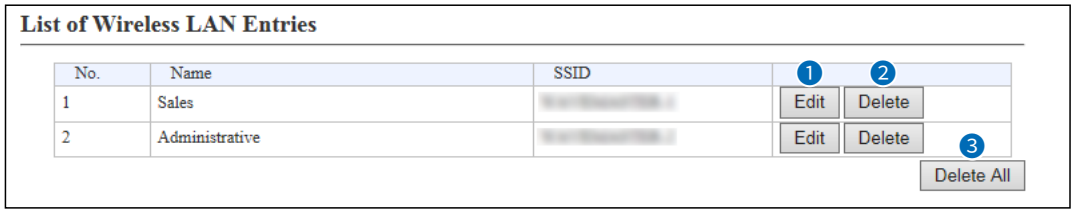
(This is only an example.)

⑩ **<Apply>** ..... Click to apply the entries.

⑪ **<Reset>** ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

■ List of Wireless LAN Entries

The list of the wireless LAN settings.



(This is only an example.)

❶ **<Edit>** ..... Click to edit the entries in the [Wireless LAN] field.

❷ **<Delete>** ..... Click to delete the selected entry.
ⓘ After clicking <Delete>, the content cannot be recalled.

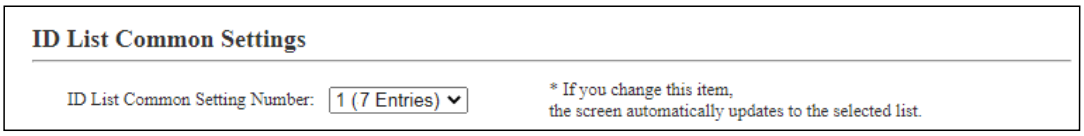
❸ **<Delete All>** ..... Click to delete all the entries.
ⓘ After clicking <Delete All>, the contents cannot be recalled.

■ ID List Common Settings

Selects an ID list that the WLAN transceivers will use.

ⓘ You can individually specify an ID list that the WLAN transceivers belong to the groups in the “Profile” field on the [Common Settings] screen.

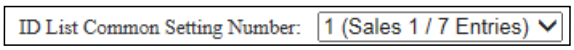
ⓘ If any entries on this screen have been changed, you must reboot the WLAN transceiver.



(This is only an example.)

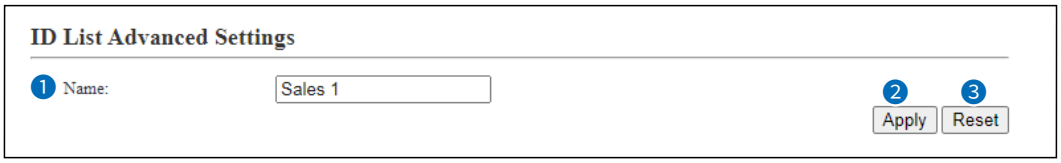
ID List Common Settings…… Select the group number to between 1 and 100, enter IDs that the WLAN transceivers will use.

ⓘ When the group name or IDs are registered in the group, displayed as below.



■ ID List Advanced Settings

Enters the group name that is selected in the “ID List Common Settings” field.



❶Name…… Enter a group name of up to 31 characters.
The group is selected in the [ID List Common Setting Number] item in the [ID List] screen.

ⓘ When the group is selected in the [ID List] and [Profile] screens, the group name is displayed.

❷<Apply>…… Click to apply the entries.

❸<Reset>…… Click to restore the settings.

ⓘ You cannot restore after clicking <Apply>.

■ Save or Write the ID List Setting

You can save an ID list file on your PC or load an ID list file to the IP1000C.
ⓘ If any WLAN transceiver settings have been changed, you must reboot it.

This is an example when group 1 is selected in the [ID List Common Setting] field.
If the name is not edited, displays only the item name.

❶Load Settings from File … Load an ID list file, which is saved on the [Save to File] item, to the IP1000C.
Click <Choose File> to select the file to load.
Select the target file on screen, and click <Open>. The selected file is displayed in the [Load Settings from File] item.
Click <Write> after selecting the target file. Then, the selected file is loaded to the [ID List Entries] item.
ⓘ When the file is loaded, the previous data in [ID List Entries] is deleted.
ⓘ If you select the file that is saved on the [Settings Restore] screen in the [Management] menu, the setting is overwritten.

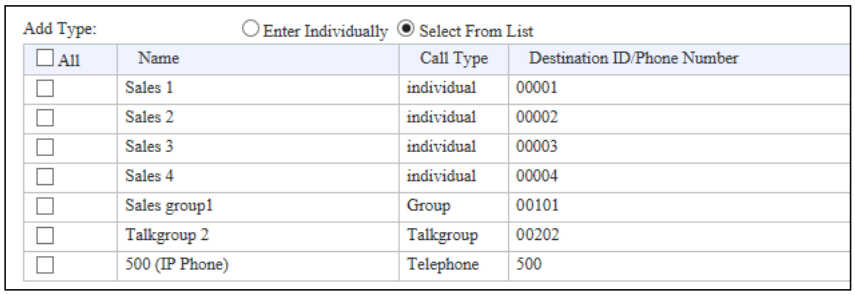
❷Save to File …… Save an ID list file, which is listed in the [ID List Entries] item, to your PC.
Click <Save>, and then <Save> on the box to save an ID list file (a CSV file) to your PC.
ⓘ A file name varies depending on the group number in the [ID List Common Settings] item. For example, the file name becomes “tn01_id_list001.csv” when group 1 of tenant 1 is selected.

■ ID List

Enters target IDs in the group that is selected in the “ID List Common Settings” field.
ⓘ You can enter up to 50 target IDs in each group.

This is an example when group 1 is selected in the [ID List Common Setting] field.
If the name is not edited, displays only the item name.

❶Add Type ..... Select the “Enter Individually” or “Select From List” Add Type.
When the “Select From List” is selected, the Destination IDs that are registered in the [Transceiver Registration] screen or [Destination Settings] screen, are displayed.
ⓘ By clicking the [All] box, you can select or cancel all entries in the list.



❷No. ..... Select a number to register the destination.
Up to 50 destinations can be registered to a group.

❸Name ..... Enter a destination name of up to 32 characters.

❹Nickname ..... Enter a nickname of up to 32 characters, if necessary.

❺Call Type ..... Select the “Individual,” “Group,” “Talkgroup” or “Telephone” Call type.

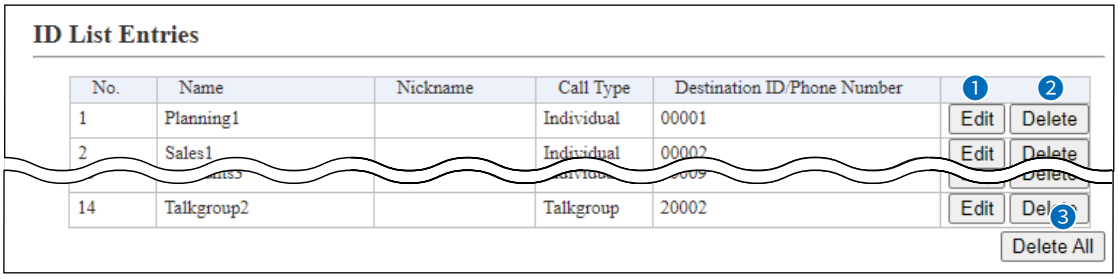
❻Destination ID ..... Enter the target Individual ID (00001 ~ 60000), Group ID (00001 ~ 60000) or Talkgroup ID (00001 ~ 60000).
When “Telephone” is selected as the “Call Type,” enter a target phone number of up to 31 digits using numbers and symbols (#, ∗).

❼<Apply> ..... Click to apply the entries.

❽<Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

■ ID List Entries

The list of entered Group Calls.



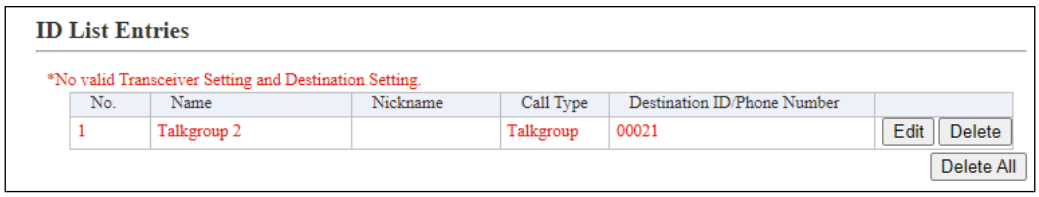
This is an example when group 1 is selected in the [ID List Common Setting] field.
If the name is not edited, displays only the item name.

❶ **<Edit>** ..... Click to edit the entries in the [ID List] field.

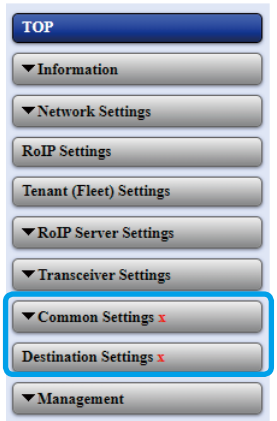
❷ **<Delete>** ..... Click to delete the selected entry.
ⓘ After clicking <Delete>, the content cannot be recalled.

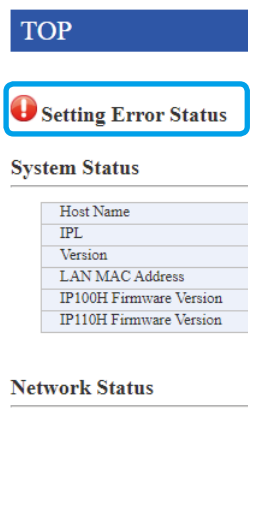
❸ **<Delete All>** ..... Click to delete all the entries.
ⓘ After clicking <Delete All>, the contents cannot be recalled.

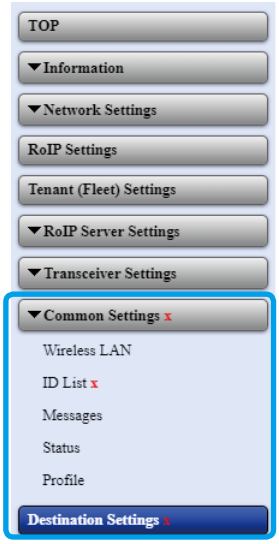
When entering the Destination ID that is not registered in this IP1000C
When applying the Destination ID to the ID list that is not registered in the [Transceiver Settings] screen or the [Destination Settings] screen, the ID is displayed in red as an error ID in the ID List Entries.

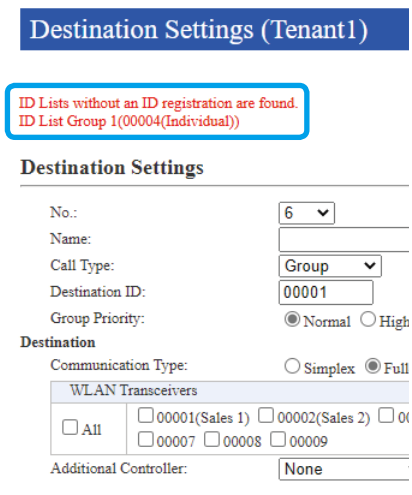


The error information is displayed in the [Top] screen, [Destination Settings] screen or Setting menu.







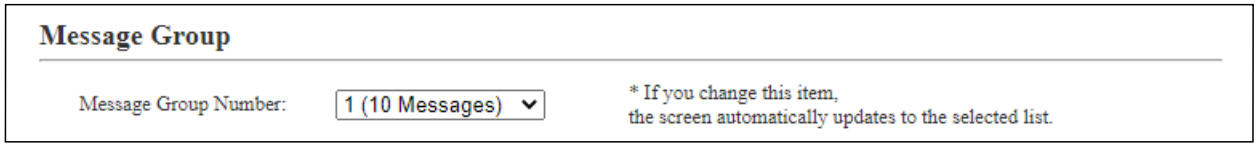


■ Message Group

Entering messages Selects to register a message that the WLAN transceivers will use.

ⓘ You can individually specify the message group that the WLAN transceivers belong to the groups in the “Common Setting List” field on the [Common Settings] screen.

ⓘ If any entries on this screen have been changed, you must reboot the WLAN transceivers.



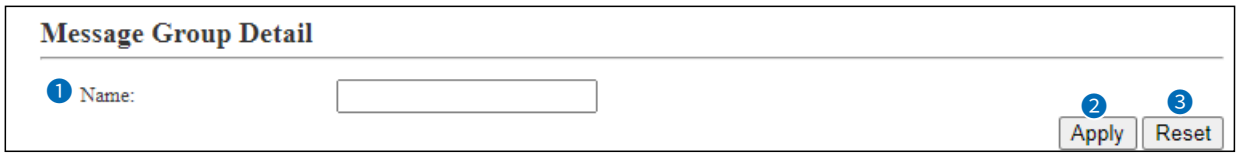
(This is only an example.)

Message Group Number ..... Select the group number to between 1 and 100 enter the messages that the WLAN transceivers will use.

ⓘ When the group name or messages are registered in the group, they are displayed as shown below.

■ Message Group Detail

Enters the group name that is selected in the “Message Group” field.



❶ Name ..... Enter a group name of up to 31 characters.
The group is selected in the [Message Group] item in the [Messages] screen.

ⓘ When the group is selected in the [Messages] screen and [Profile] screen, the group name is displayed.

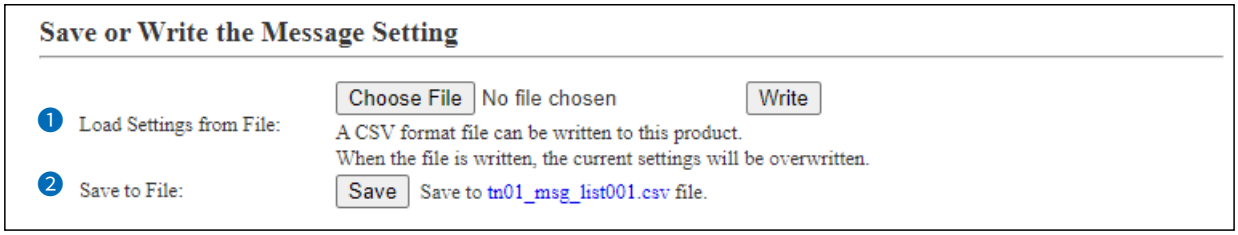
❷ <Apply> ..... Click to apply the entries.

❸ <Reset> ..... Click to restore the settings.

ⓘ You cannot restore after clicking <Apply>.

■ Save or Write the Message Setting

You can save a message file on your PC or load a message file to the IP1000C.
ⓘ If any WLAN transceiver settings have been changed, you must reboot it.



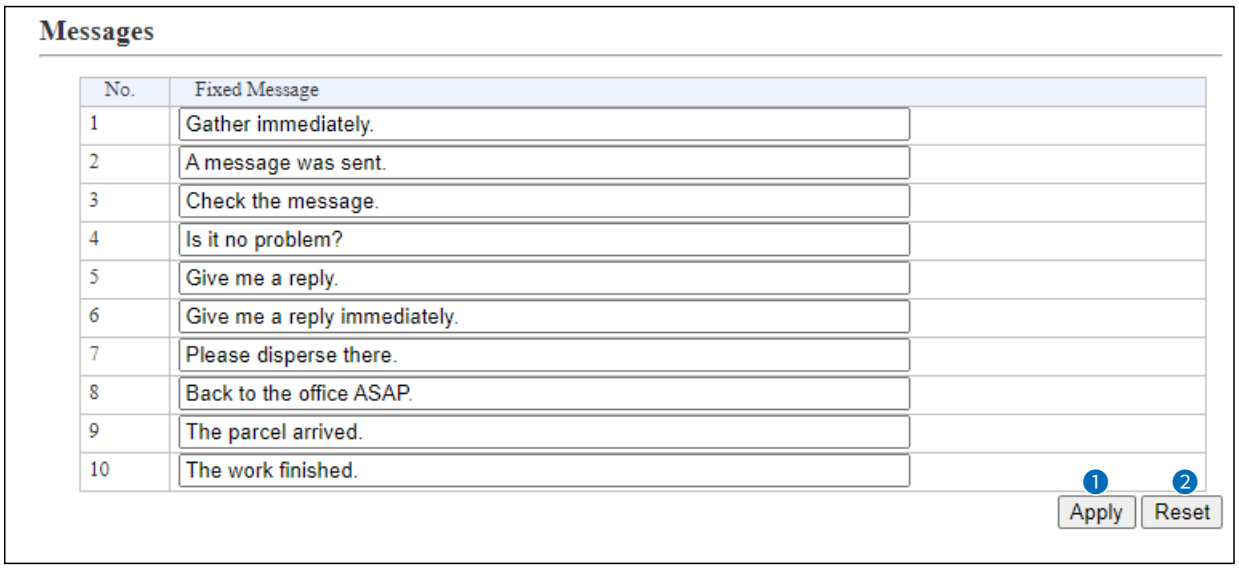
This is an example when group 1 is selected in the [Message Group] field.
If the name is not edited, displays only the item name.

❶Load Settings from File … Load a message file, which is saved on the [Save to File] item, to the IP1000C.
Click <Choose File> to select the file to load.
Select the target file on screen, and click <Open>. The selected file appears in the [Load Settings from File] item. Click <Write> after selecting the target file. Then, the selected file is loaded to the [Messages] item.
ⓘ When the file is loaded, the previous data in [Messages] is deleted.
ⓘ If you select the file that is saved on the [Settings Restore] screen in the [Management] menu, the setting is overwritten.

❷Save to File …… Save an message file, which is listed in the [Messages] item, to your PC.
Click <Save>, and then <Save> on the box to save a message file (a CSV file) to your PC.
ⓘ A file name varies depending on the group number in the [Message Group] item. For example, the file name becomes “tn01_msg_list001.csv” when group 1 of tenant 1 is selected.

■ Messages

Enter messages in the group that is selected in the “Message Group” field.
You can transmit fixed message of up to 32 characters.
ⓘ You can enter up to 10 messages in each message group.



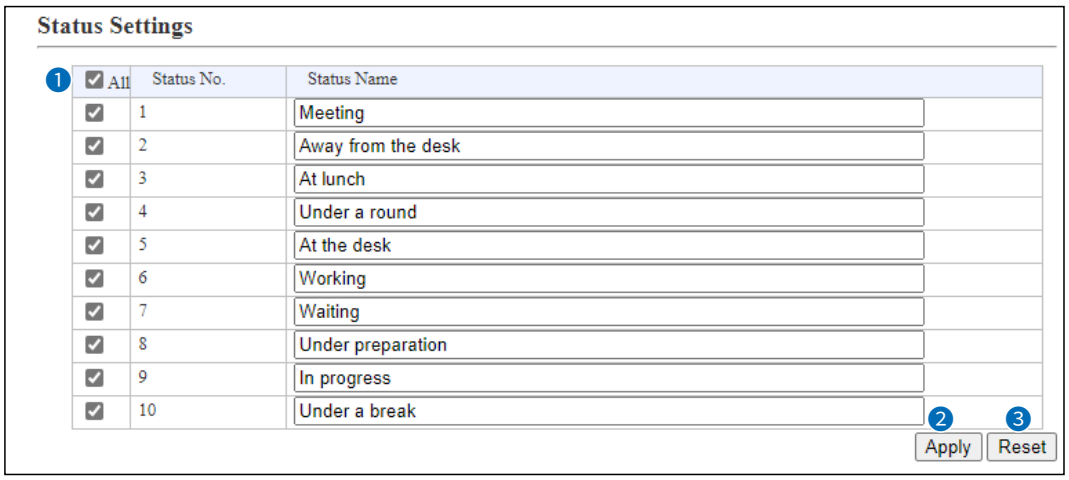
(This is only an example.)

❶ **<Apply>** ..... Click to apply the entries.

❷ **<Reset>** ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

■ Status Settings

Selects to register a status that the WLAN transceivers use.
ⓘ You can programmed statuses of up to 32 characters. You can enter up to 10 statuses.
ⓘ If any entries on this screen have been changed, you must reboot the WLAN transceivers.



(This is only an example.)

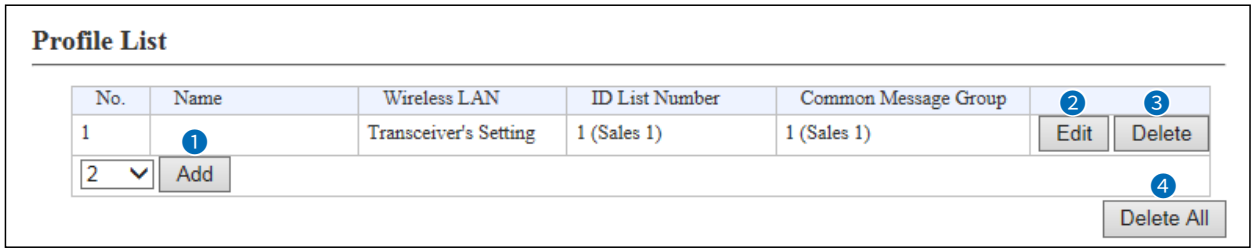
❶ Selection Box ..... Click a selection box to display a status name on the WLAN transceivers.
ⓘ When the box is not checked, the status name is not displayed on the WLAN transceivers even if you entered it.
When the status name is not entered, the status number is displayed on the WLAN transceivers only if the box is checked.
ⓘ You can check or uncheck them all at once by clicking [All].

❷ <Apply> ..... Click to apply the entries.

❸ <Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

■ Profile List

Displays the entries that are entered in the “Common Settings” item.



(This is only an example.)

❶ **<Add>** ..... Click to add an new profile.

❷ **<Edit>** ..... Click to edit the entries in the “Profile” items.

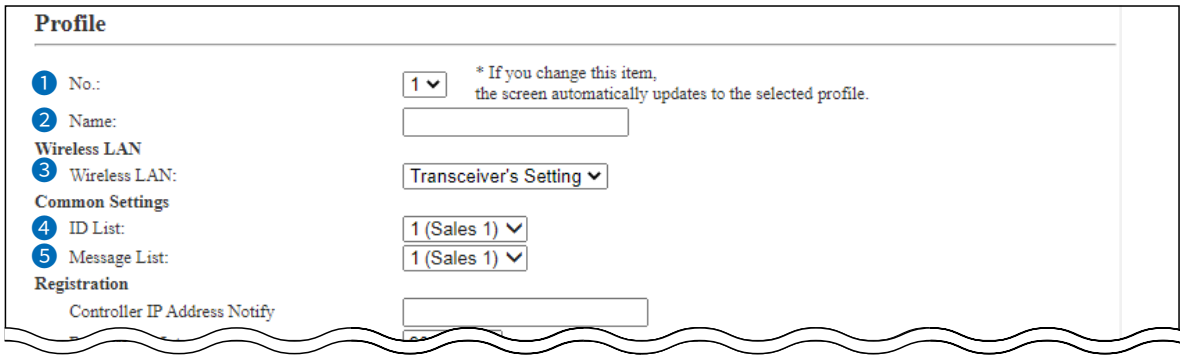
❸ **<Delete>** ..... Click to delete the selected entry.
ⓘ After clicking <Delete>, the content cannot be recalled.

❹ **<Delete All>** ..... Click to delete all the entries.
ⓘ After clicking <Delete All>, the contents cannot be recalled.

■ Profile

Individually assign an ID list, message list or receive notification tone to the group that the WLAN transceivers belong to.

ⓘ After the setting is completed, you must reboot the WLAN transceivers.



(This is only an example.)

❶No. ..... Select a profile between 1 and 100, to assign to the WLAN transceivers belong to.

❷Name ..... Enter a profile name of up to 31 characters.
The profile name is displayed in the [Profile List] item in the [Profile] screen.

❸Wireless LAN ..... Select the wireless LAN setting that is commonly used by the WLAN transceivers in the group. (Default: Transceiver's Setting)

- **Transceiver's Setting**
  Uses the last wireless LAN setting that was set by the programming software or IP1000C.

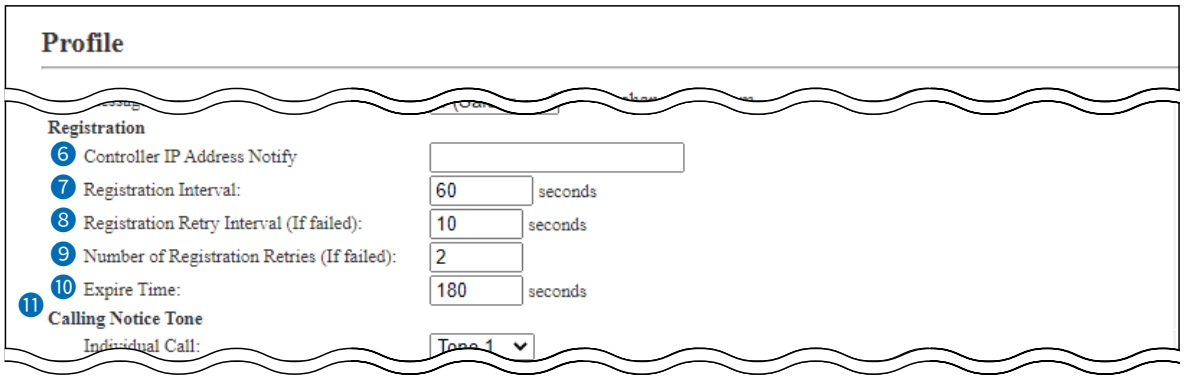
- **1 (Name) to 20 (Name)**
  Select a number with wireless LAN name that was entered in the Wireless LAN screen.

❹ID List ..... Select an ID list that are commonly used by the WLAN transceivers in the group. (Default: Disable)
ⓘ Select an ID number that is registered in the ID list screen.

❺Message List ..... Select a message list that are commonly used by the WLAN transceivers in the group. (Default: Disable)
ⓘ Select a message number that is registered in the Messages.

9. [Common Settings] Menu [Common Settings]–[Profile]

■ Profile



(This is only an example.)

6 Controller IP Address Notify Enter the IP address of the server that the WLAN transceivers connect to.

7 Registration Interval ..... Enter the transmit interval for the registration information that the WLAN transceivers will use. (Default: 60 (seconds))

- ⓘ Generally use the default setting.
- ⓘ When the interval period is short, and a WLAN transceiver goes out of the communication area, its registration status on the IP1000C can be updated earlier. Therefore, if the WLAN transceiver receives an Individual call, the IP1000C can quickly reply “No response” as a Target availability check.

8 Registration Retry Interval (If failed) ..... Enter a retry interval when the WLAN transceiver fails to register to the IP1000C, between 1 and 30 seconds. (Default: 10 (seconds))

9 Number of Registration Retries (If failed) ..... Enter a number of registration retries if the WLAN transceiver fails to register to the IP1000C, between 1 and 10. (Default: 2)

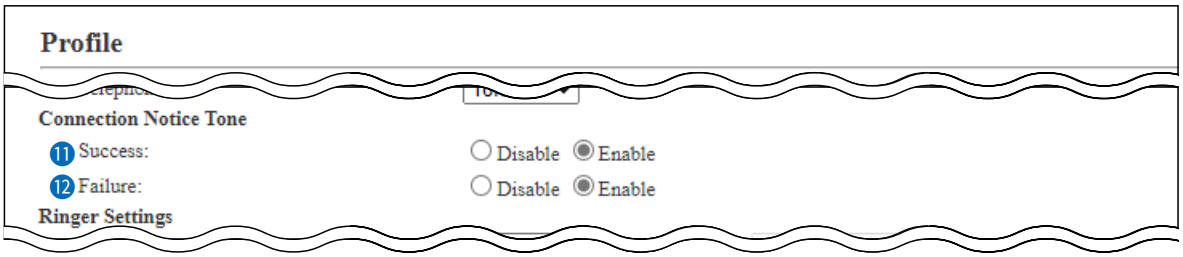
10 Expire Time ..... The IP1000C check the WLAN transceivers connection status in this interval. (Default: 180)

- ⓘ Setable range is Registration Interval (7) + 1 to 900 (seconds).
- ⓘ Generally use the default setting.
- ⓘ You cannot set this setting to shorter than Registration Interval (7).

11 Calling Notice Tone ..... Select a notice tone for calling. (Default: Tone 1)

- ⓘ This tone can be individually assigned to each call type, “Individual Call,” “Group Call,” “All Call” and “Telephone.”
- ⓘ You can select “Not Use” or “Tone 1” to “Tone 8.”

■ Profile



(This is only an example.)

Connection Notice Tone

⓬ Success ..... Select a notice tone for a successful connection. (Default: Enable)

ⓘ When an individual call, Message call, Status call or telephone call connection is successful, the notice tone sounds.

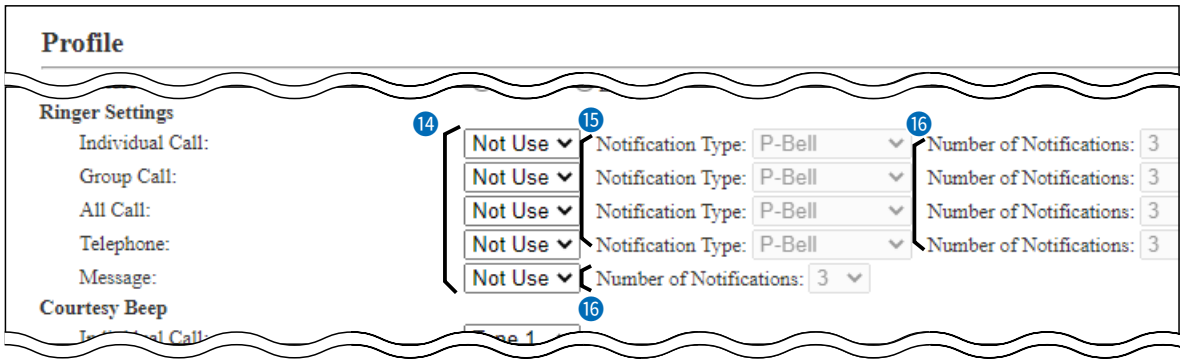
ⓘ When the “Target Availability Check” item in the [Transceiver Settings] screen is set to “Disable,” the notice tone will not sound.

⓭ Failure ..... Select a notice tone for connection failure. (Default: Enable)

ⓘ When an individual call, Message call, Status call or telephone call connection fails, the notice tone sounds.

ⓘ When the “Target Availability Check” item in the [Transceiver Settings] screen is set to “Disable,” the notice tone will not sound.

■ Profile



(This is only an example.)

⑭ Ringer Settings ..... Select a notice tone when a call is received. (Default: Not Use)

ⓘ This tone can be individually assigned to each call type, “Individual Call,” “Group Call,” “All Call,” “Telephone” and “Message.”

ⓘ You can select “Not Use” or “Tone 1” to “Tone 8.”

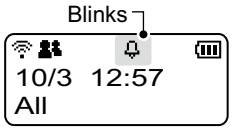
⑮ Notification Type ..... Select a notice type between “Pocket Beep” and “P-Bell.” (Default: P-Bell)

ⓘ This item can be selected when the “Ringer Settings” item (⑭) is set to “Tone 1” to “Tone 8.”

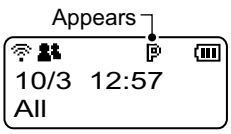
ⓘ You cannot select this item for a Message call.

- **Pocket Beep**
  When a specified call is received, the WLAN transceiver sounds the notification beep and the notification icon blinks.
- **P-Bell**
  When a specified call is received, the WLAN transceiver sounds the notification beep.
  The received audio is muted until you reply the call.
  ⓘ After pushing [PTT] on the WLAN transceiver, the mute will be released.

Example: IP100H



When the Pocket beep is active



When the P-Bell is ON

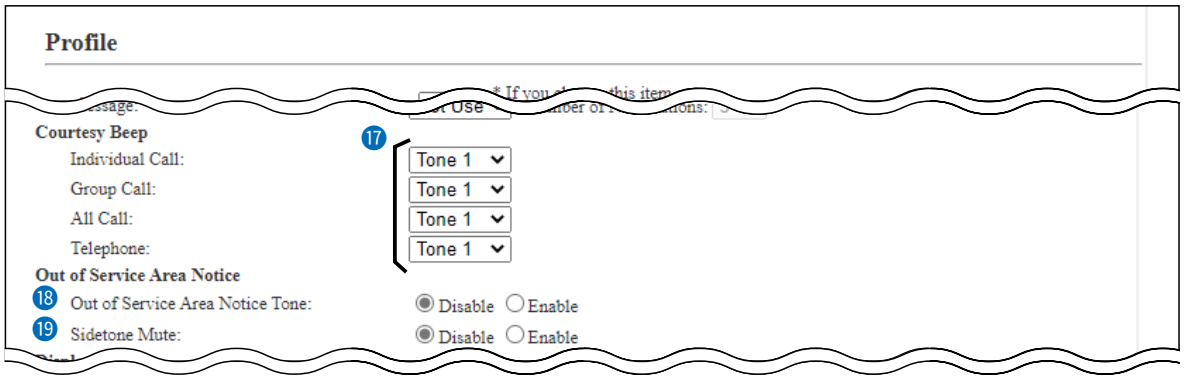
⑯ Number of Notification..... Select a notification number of “Continuous,” “1,” “3,” “10” or “20.” (Default: 3)

ⓘ You can select this item when the “Ringer Settings” item (⑭) is set to “Tone 1” to “Tone 8.”

ⓘ You cannot select this item for a Message call.

9. [Common Settings] Menu [Common Settings]–[Profile]

■ Profile



(This is only an example.)

⑰ Courtesy Beep ..... Select a notice tone when a received call is finished. (Default: Tone 1)

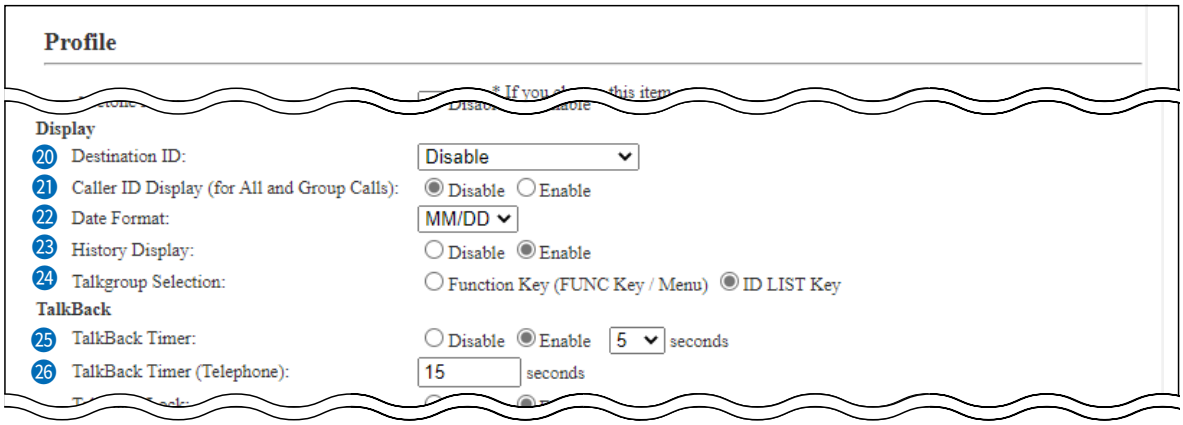
- ⓘ This tone can be individually assigned to each call type, “Individual Call,” “Group Call,” “All Call” and “Telephone.”
- ⓘ You can select “Not Use” or “Tone 1” to “Tone 8.”
- ⓘ After each received call is completed, the WLAN transceiver will sound the specified beep.

⑱ Out of Service Area Notice Tone ..... Select whether or not the WLAN transceiver sounds the Out of service area notice tone. (Default: Disable)
When “Enable” is selected, the WLAN transceiver sounds the notice tone when it goes out the service area or returns to the service area.

⑲ Sidetone Mute..... Select whether or not the WLAN transceiver uses the Side tone mute function. (Default: Disable)
When “Enable” is selected, the WLAN transceiver mutes the sidetone or monitor audio when it goes out the service area. At that time, you cannot hear your voice from a head set or earphone microphone.

- ⓘ When the [Monitor] item or [Sidetone] item is set to “Disable” in the [Transceiver Settings] menu, this function is not activated.

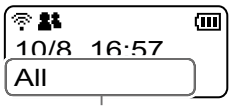
■ Profile



(This is only an example.)

20 Destination ID ..... Select a destination ID that will be displayed after returning to the standby mode. (Default: Disable)

- **Disable**
  Displays the destination ID or call type that is specified in the "Destination ID" item in the [Transceiver Settings] screen.
- **Transmit**
  Displays the IDs that the WLAN transceiver recently called.
- **Transmit and Receive**
  Displays either IDs that the WLAN transceiver recently called or was called by.
- **All operations**
  Displays either IDs that the WLAN transceiver recently called, was called by or displayed ID list/History.



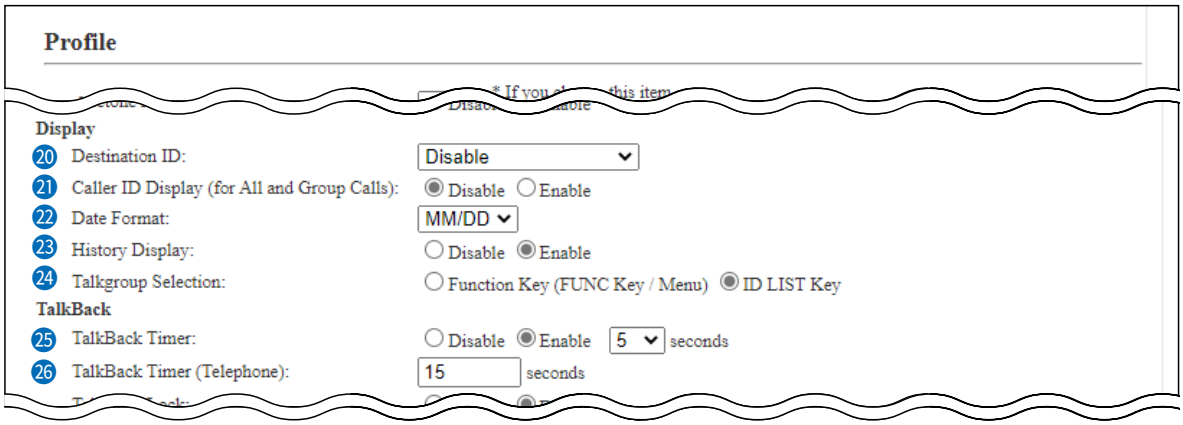
Destination ID
(Call type)

21 Caller ID Display (for All and Group Calls) … Select whether the WLAN transceiver displays the Caller ID in the All call or Group call. (Default: Disable)

- **Disable**
  When the WLAN transceiver or IP100FS receives an All call or Group call, only the Call type is displayed.
- **Enable**
  When the WLAN transceiver or IP100FS are received the All call or Group call alternately displays the Call type and Caller ID.

9. [Common Settings] Menu [Common Settings]–[Profile]

■ Profile



(This is only an example.)

㉒ Date Format..... Select a date format to display on the WLAN transceiver's standby screen. (Default: MM/DD)
You can select "MM/DD," "DD/MM," "MM-DD," "DD-MM," "MM.DD" or "DD. MM." (MM: Month, DD: Day)

㉓ History Display ..... Set the call history display. (Default: Enable)

- **Disable**
  Call histories are not displayed on the WLAN transceiver.
- **Enable**
  Call histories are displayed on the WLAN transceiver when you push [Call History] key on the IP100H or the menu operation on the IP110H.

㉔ Talkgroup Selection ..... Set the key to select the Talkgroup.
(Default: Function Key (FUNC Key / Menu))

- **Function Key (FUNC Key / Menu)**
  Select the Talkgroup by pushing the [FUNC] key on the IP100H or the menu operation on the IP110H.
- **ID LIST Key**
  Select the Talkgroup by pushing the [▭] key on the IP100H or the [▭ CLR] key on the IP110H.

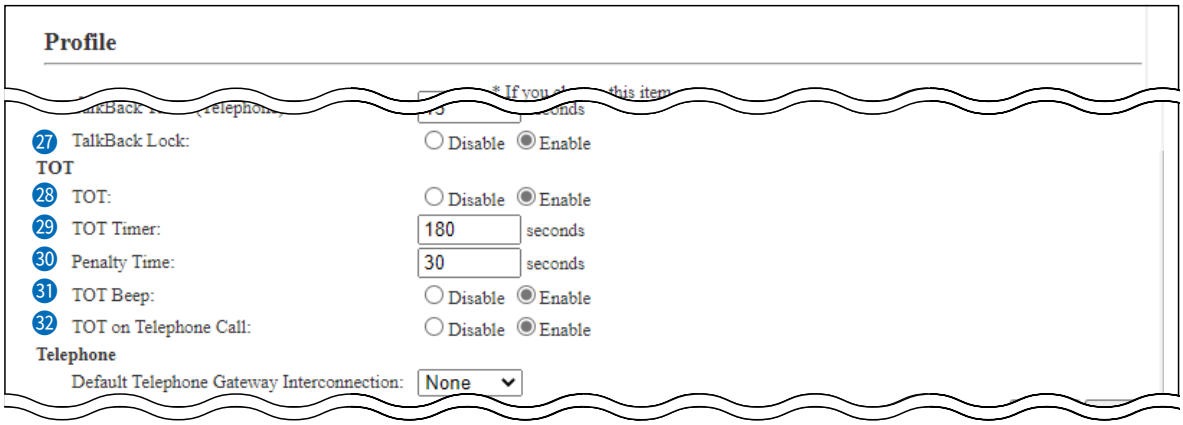
㉕ TalkBack Timer ..... Enter a time between 1 and 30 seconds that the WLAN transceiver will return to the standby mode after a received signal disappears. (Default: 5 (seconds))

ⓘ When "Disable" is selected, the WLAN transceiver returns to the standby mode (standby screen) as soon as the status indicator goes out.

㉖ TalkBack Timer (Telephone) Enter a time between 0 and 600 seconds that the WLAN transceiver will return to the standby mode after a received signal from a telephone disappears. (Default: 15 (seconds))

ⓘ When "0" is selected, the TalkBack timer (Telephone) is disabled. In that case, the connection does not terminate until the telephone hangs up or the WLAN transceiver terminates the call by pushing the [Option] key or the programmable key.

■ Profile



(This is only an example.)

27 TalkBack Lock ..... Select whether the Talk Back Lock function “Disable” or “Enable.”
(Default: Enable)

- **Enable**
  After a call is finished and the WLAN transceiver returns to the standby mode, if it is received another call in the Talk back timer, it accepts to receive when higher priority level call is received, or refuses same or lower priority level call is received than the finished call.
  After the Talk back timer has passed, a new call can be received.

- **Disable**
  Accepts to receive a new call after your current call is finished.

28 TOT ..... Select whether or not the WLAN transceiver uses the Time-out timer.
(Default: Disable)

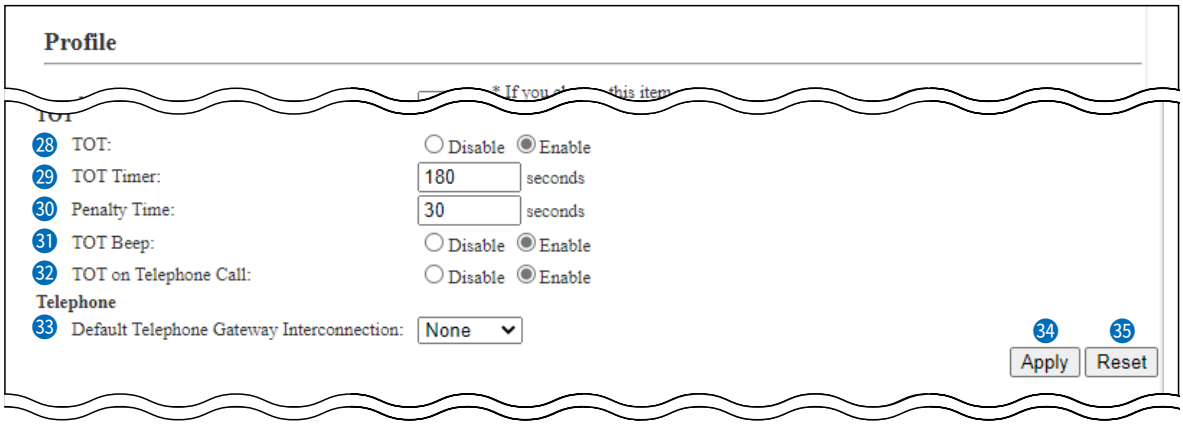
ⓘ When “Enable” is selected, the “TOT Timer,” “Penalty Timer,” “TOT Beep,” “TOT on Telephone Call” items are displayed.
ⓘ This function works when the WLAN transceiver’s PTT switch has accidentally been held down.

29 TOT Timer ..... Set the Time-out timer to between 11 and 600 seconds.
The this timer limits the WLAN transceiver’s continuous transmission.
(Default: 180 (seconds))

30 Penalty Time ..... Set the TOT Penalty time to between 1 and 600 seconds.
After the TOT timer period ends, the TOT Penalty timer starts and inhibits the user from transmitting during the penalty period.
(Default: 30 (seconds))

9. [Common Settings] Menu [Common Settings]–[Profile]

■ Profile



(This is only an example.)

31 TOT Beep ..... Select whether or not the WLAN transceiver uses the TOT beep function.
(Default: Enable)

32 TOT on Telephone Call..... Select whether or not the WLAN transceiver uses the Time-out timer on Telephone Call. (Default: Enable)

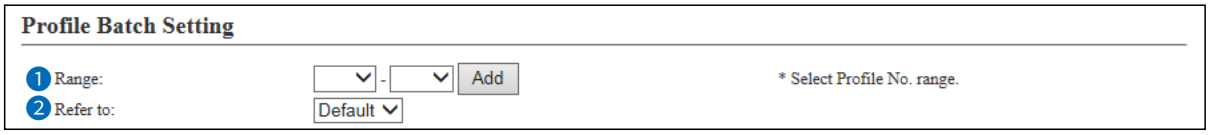
33 Default Telephone Gateway Interconnection ..... When the WLAN transceiver make a Telephone call and the callee phone number is not registered its Telephone Gateway Interconnection in the [Destination Settings] screen on the [Destination Settings] menu, the IP1000C uses this default Telephone Gateway Interconnection. (See pp. 4-146 and 4-151) (Default: NONE)
Selectable number or group number are only registered in the [Destination Settings] screen on the [Destination Settings] menu. (See pp. 4-23 and 4-25)

34 <Apply> ..... Click to apply the entries.

35 <Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

■ Profile Batch Setting

You can register consecutive Profiles collectively. Or you can copy the Profile contents to the other Profile.



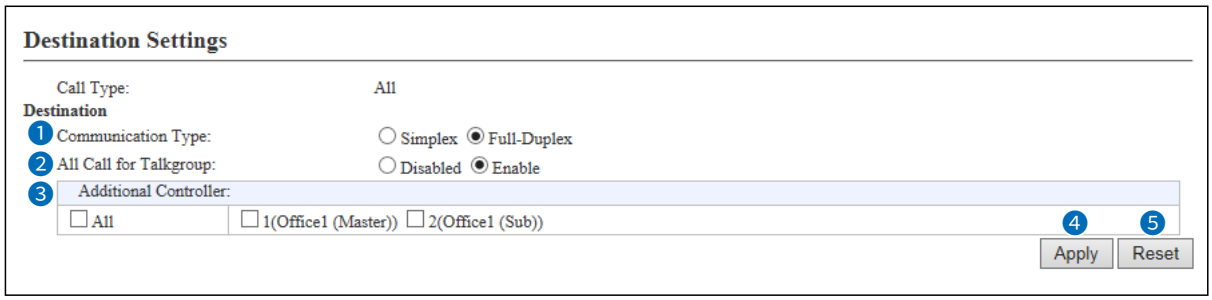
❶Range ..... Sets a range of collective Profiles.
<Add>
By clicking the <Add> button, you can register a consecutive Profiles collectively.
ⓘ If a Profile is already registered, “Overwrite the entry” is displayed.

❷Refer to..... Selects the default settings or the programmed settings to refer to.
(Default: Default)

10. [Destination Settings] Menu [Destination Settings]–[Destination Settings]

■ Destination Settings Call Type: All

Set the destinations to call all of the WLAN transceivers and IP100FSs in the tenant through the Internet.
ⓘ This screen is displayed when clicking <Edit> on the [List of Destination Setting Entries (All Call)] field.

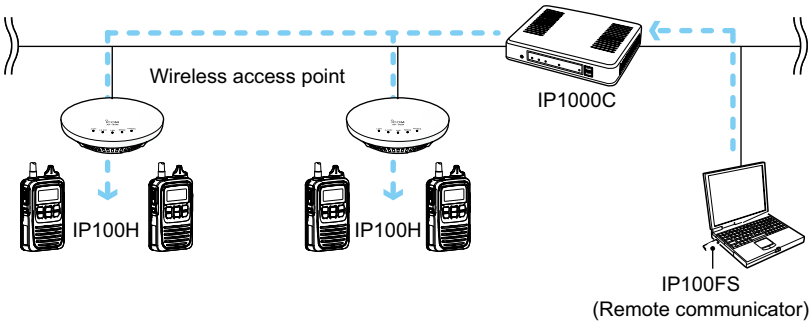


(These are examples when clicking <Edit> on the [List of Destination Setting Entries (All Call)] field.)

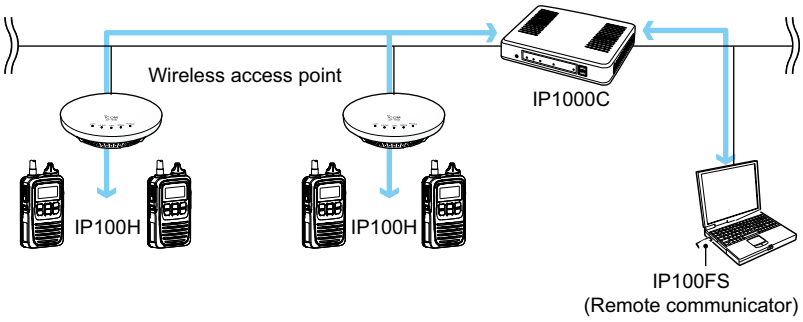
❶Communication Type …… Select “Simplex” or “Full-Duplex” to use the All call.

Simplex operation

ⓘ When the Simplex is selected, the called station cannot reply until the caller station stops transmitting.



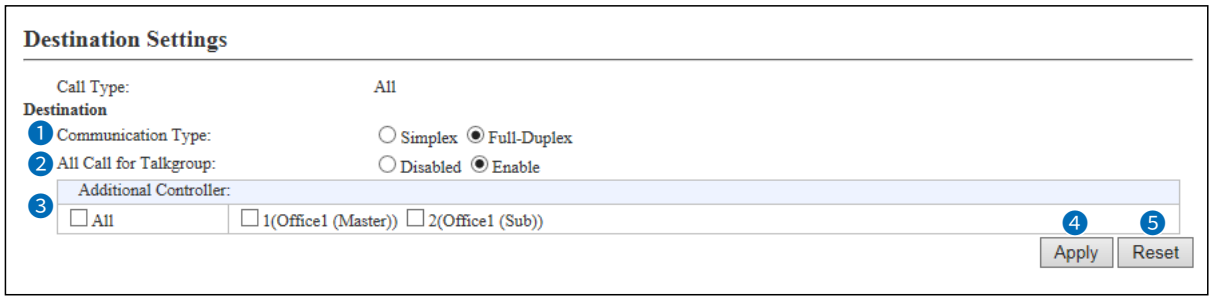
Full-Duplex operation



❷All Call for Talkgroup …… Select whether or not the All call includes the WLAN transceivers and IP100FS which belong to a Talkgroup. (Default: Enable)

10. [Destination Settings] Menu — [Destination Settings]–[Destination Settings]

■ Destination Settings **Call Type: All**

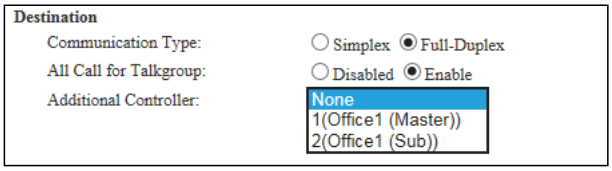


(These are examples when clicking <Edit> on the [List of Destination Setting Entries (All Call)] field.)

❸ Additional Controller ..... Select Additional Controller when configuring several controllers, and the All call calls between the different controllers.

ⓘ By clicking the [All] box, you can select or cancel all entries in the list.

ⓘ If [Sub] is selected on the [Controller Mode] item in the [RoIP Settings] screen, select the Additional controller on this setting as shown below.



❹ <Apply> ..... Click to apply the entries.

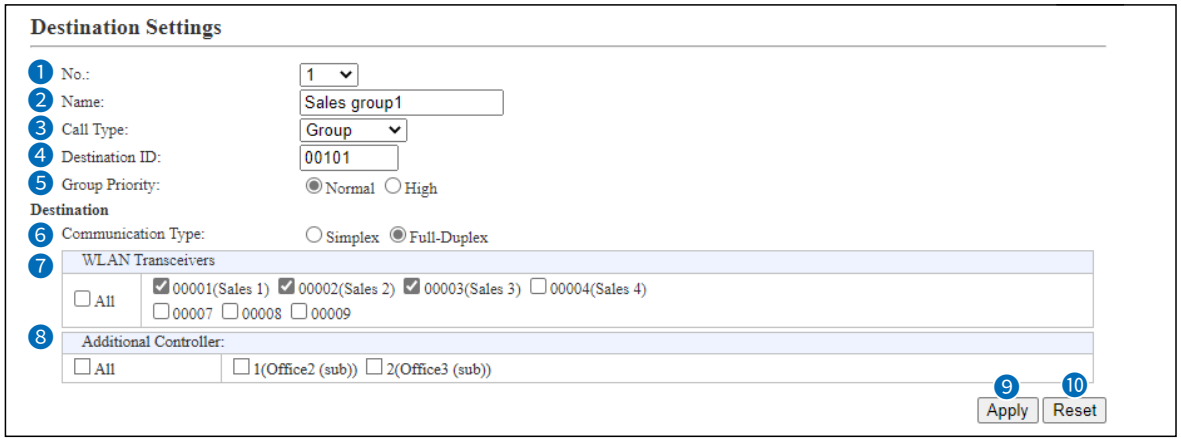
❺ <Reset> ..... Click to restore the settings.

ⓘ You cannot restore after clicking <Apply>.

10. [Destination Settings] Menu — [Destination Settings]–[Destination Settings]

■ Destination Settings **Call Type: Group**

Set the destinations to call the group through the Internet.
ⓘ The items on the [Destination Settings] screen differ depending on the Call Type setting.



(These are examples when the “Call Type” item is set to “Group.”)

❶No. ..... Select the number to register the destination groups. Up to 990 destinations can be registered.

❷Name ..... Enter the destination name. (Up to 31 characters)

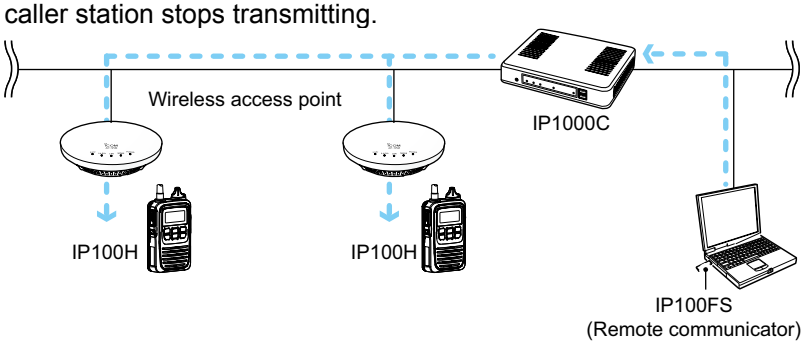
❸Call Type ..... Select “Group” to use the Group call.

❹Destination ID ..... Enter the destination number (00001 ~ 60000).

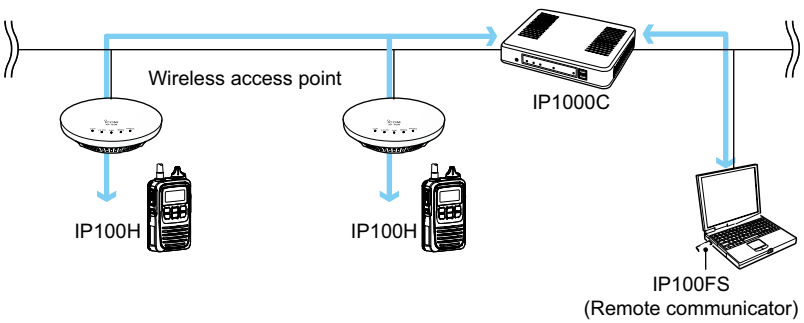
❺Group Priority ..... Select “Normal” or “High” to set the priority in a Group call.

❻Communication Type ..... Select “Simplex” or “Full-Duplex” to select the operation type.

Simplex operation
When the Simplex is selected, the called station cannot reply until the caller station stops transmitting.

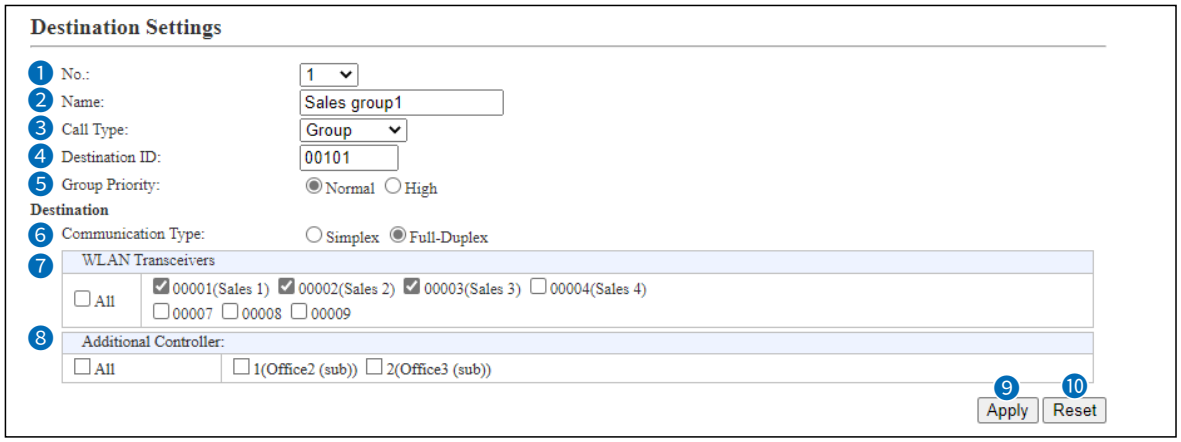


Full-Duplex operation



10. [Destination Settings] Menu — [Destination Settings]–[Destination Settings]

■ Destination Settings **Call Type: Group**



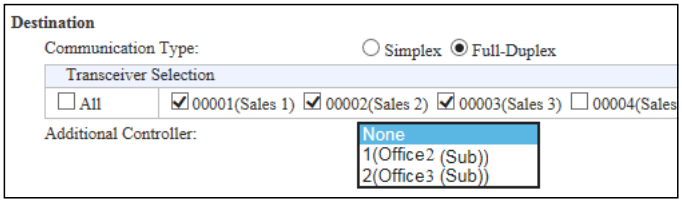
(These are examples when the “Call Type” item is set to “Group.”)

7 WLAN Transceivers ..... Click to select the WLAN transceivers or IP100FS which belong to the group.

- ⓘ Only the WLAN transceivers or IP100FSs that are registered in the [Transceiver Registration] screen are listed.
- ⓘ By clicking the [All] box, you can select or cancel all entries in the list.

8 Additional Controller ..... Select the additional controller when configuring several controllers, and the Group call calls between the different controllers.

- ⓘ By clicking the [All] box, you can select or cancel all entries in the list.
- ⓘ If [Sub] is selected on the [Controller Mode] item in the [RoIP Settings] screen, select the Additional controller on this setting as shown below.



9 <Apply> ..... Click to apply the entries.

10 <Reset> ..... Click to restore the settings.

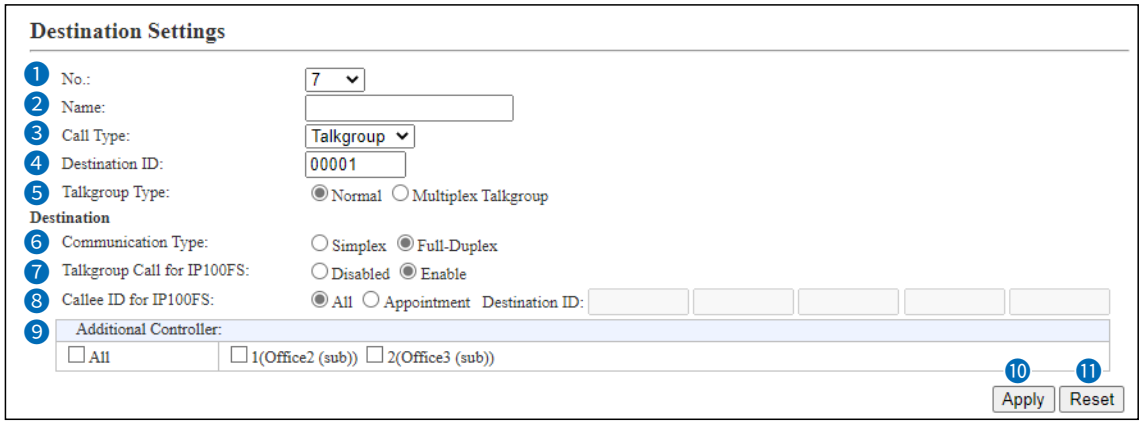
- ⓘ You cannot restore after clicking <Apply>.

TIP:
When configuring several controllers, set the same group setting between the controllers in the [Destination Settings] screen (p. 4-137).
For example, in the Controller 1 setting, the “Additional Controller” of the Group 1 is set to the Controller 2, you must set the “Additional Controller” of the Group 1 is set to the Controller 1 in the Controller 2 setting.
ⓘ Even if you configure three or more controllers using one Master and two or more Subs, follow the manner above.

10. [Destination Settings] Menu — [Destination Settings]–[Destination Settings]

■ Destination Settings **Call Type: Talkgroup**

Set the destinations to call a Talkgroup through the Internet.
ⓘ The items on the [Destination Settings] screen differ, depending on the Call Type setting.



(These are examples when the “Call Type” item is set to “Talkgroup.”)

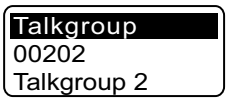
❶ No. ..... Select the number to register the destination Talkgroups. Up to 990 destinations can be registered.

❷ Name ..... Enter the destination name. (Up to 31 characters)

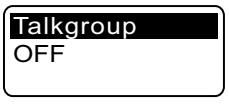
❸ Call Type ..... Select “Talkgroup” to use the Talkgroup call.

❹ Destination ID ..... Enter the destination number (00001 ~ 60000).
ⓘ This number must be registered to the [ID List] field on the [ID List] screen.
ⓘ You can call the same Talkgroup members by selecting a Talkgroup number on the WLAN transceiver.
When OFF is selected on the WLAN transceiver, the standby screen returns to the usual screen.

Example on the IP100H:

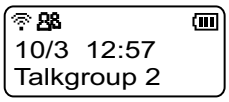


Talkgroup is selected

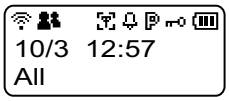


Talkgroup is OFF

• Standby screen



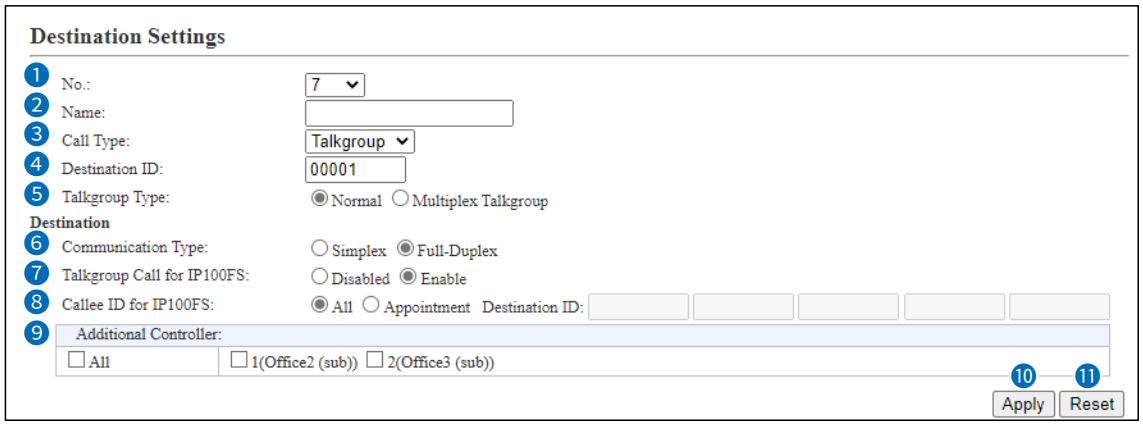
Talkgroup is selected



Talkgroup is OFF

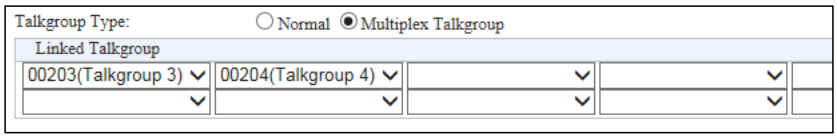
10. [Destination Settings] Menu — [Destination Settings]–[Destination Settings]

■ Destination Settings **Call Type: Talkgroup**



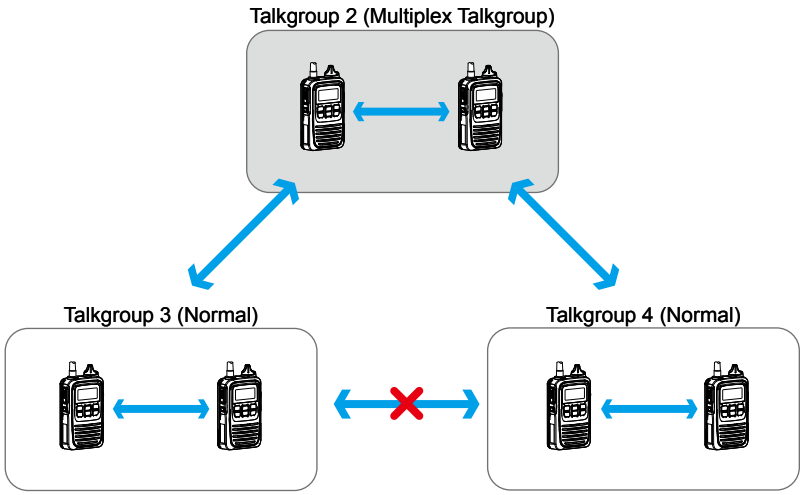
(These are examples when the “Call Type” item is set to “Talkgroup.”)

5 Talkgroup Type ..... When “Multiplex Talkgroup” is selected, you can talk to 2 or more Talkgroups.



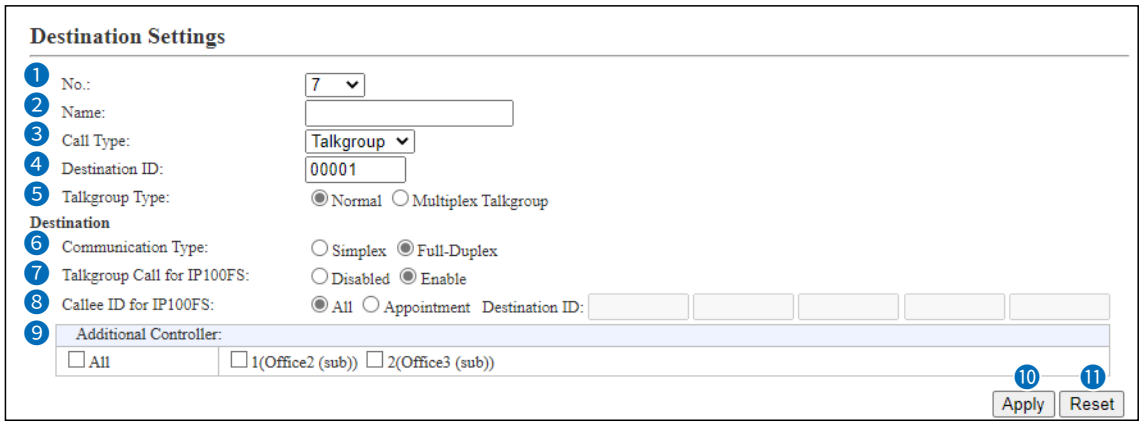
ⓘ You cannot register “Multiplex Talkgroup” type in other “Multiplex Talkgroup” type.
ⓘ “Normal” type Talkgroup can only belong to 1 “Multiplex Talkgroup” type.

Example: When Talkgroup 3 (Normal) and Talkgroup 4 (Normal) belong to Talkgroup 2 (Multiplex Talkgroup).
- Talkgroup 2 can call Talkgroup 2, Talkgroup 3, and Talkgroup 4.
- Talkgroup 3 can call Talkgroup 2 and Talkgroup 3.
- Talkgroup 4 can call Talkgroup 2 and Talkgroup 4.



10. [Destination Settings] Menu — [Destination Settings]–[Destination Settings]

■ Destination Settings **Call Type: Talkgroup**

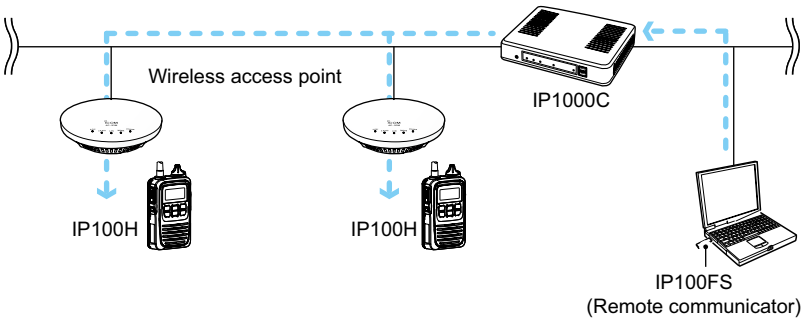


(These are examples when the “Call Type” item is set to “Talkgroup.”)

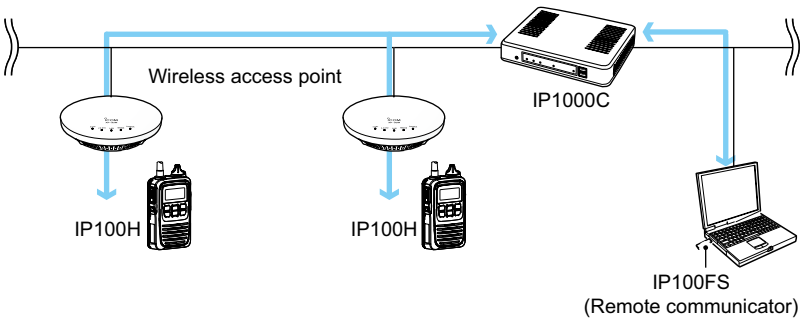
6 Communication Type …… Select “Simplex” or “Full-Duplex” to select the operation type.

Simplex operation

ⓘ When the Simplex is selected, the called station cannot reply until the caller station stops transmitting.

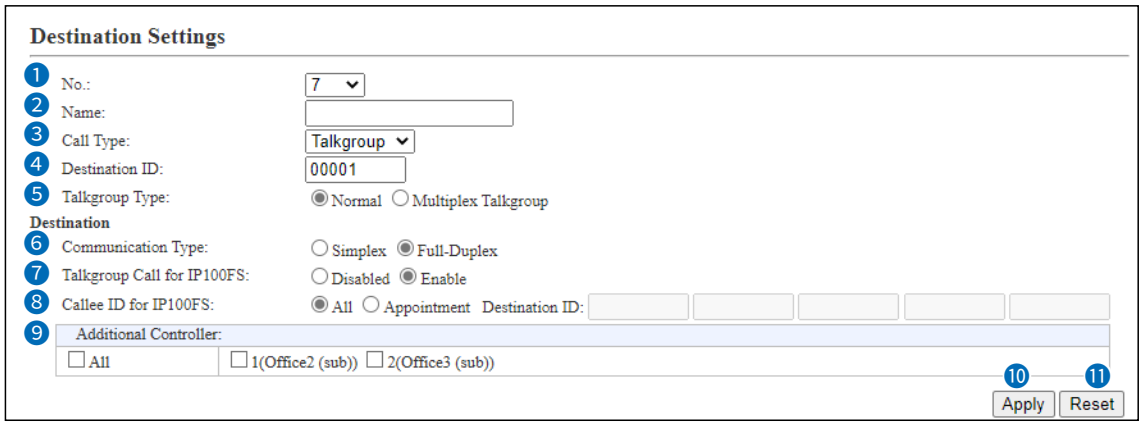


Full-Duplex operation



10. [Destination Settings] Menu — [Destination Settings]–[Destination Settings]

■ Destination Settings **Call Type: Talkgroup**

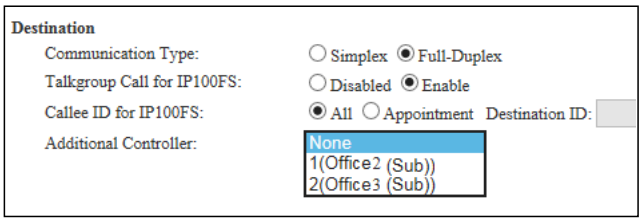


(These are examples when the “Call Type” item is set to “Talkgroup.”)

❼ Talkgroup Call for IP100FS Select whether or not the Talkgroup Call includes the IP100FSs. (Default: Enable)

❽ Callee ID for IP100FS …… When the “Talkgroup Call for IP100FS” item is set to “Enable,” set the destination IP100FSs. (Default: All)
When “Appointment” is selected, you can register up to 5 IP100FS’s Destination IDs (00001 ~ 60000).

❾ Additional Controller …… Select an Additional Controller when configuring several controllers, and the Talkgroup call calls between the different controllers.
ⓘ By clicking the [All] box, you can select or cancel all entries in the list.
ⓘ If [Sub] is selected on the [Controller Mode] item in the [RoIP Settings] screen, select an Additional Controller on this setting as shown below.



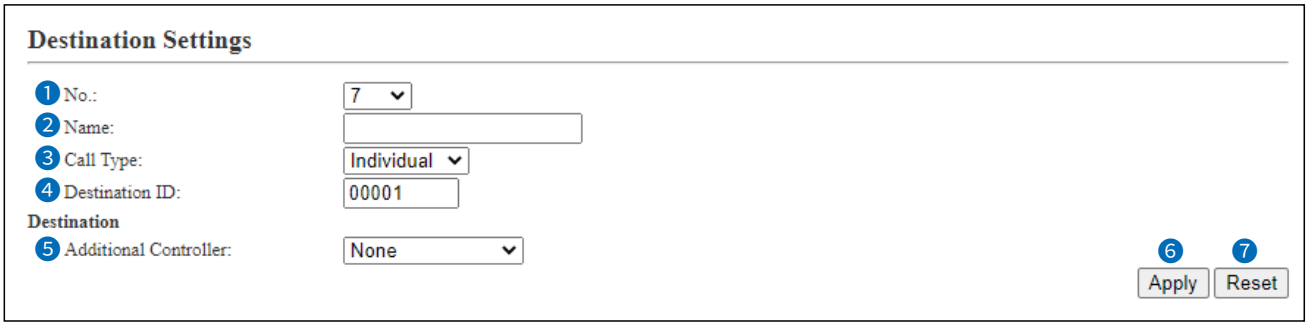
❿ <Apply> …… Click to apply the entries.

⓫ <Reset> …… Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

10. [Destination Settings] Menu [Destination Settings]–[Destination Settings]

■ Destination Settings Call Type: Individual

Set the destinations to call the group through the Internet.
ⓘ The items on the [Destination Settings] screen differ depending on the Call Type setting.



(These are examples when the “Call Type” item is set to “Individual.”)

1 No. ..... Select the number to register the destination groups.
Up to 990 destinations can be registered.

2 Name ..... Enter the destination name. (Up to 31 characters)

3 Call Type ..... Select “Individual” to use the Group call.

4 Destination ID ..... Enter the destination number (00001 ~ 60000).

5 Additional Controller ..... Select the additional controller when configuring several controllers, and the Individual call calls between the different controllers.

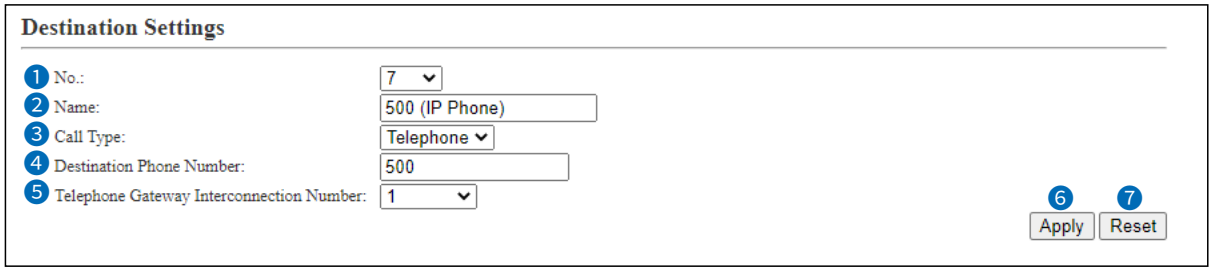
6 <Apply> ..... Click to apply the entries.

7 <Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

10. [Destination Settings] Menu — [Destination Settings]–[Destination Settings]

■ Destination Settings **Call Type: Telephone**

Set the destinations to call the IP phone through the Internet.
ⓘ The items on the [Destination Settings] screen differ depending on the Call type setting.



(These are examples when the “Call Type” item is set to “Telephone.”)

1 No. ..... Select the number to register the destination IP phone.
Up to 990 destinations can be registered.

2 Name ..... Enter the destination name. (Up to 31 characters)

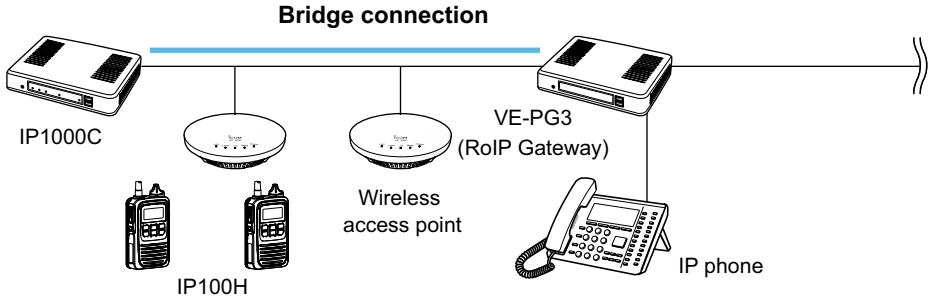
3 Call Type ..... Select “Telephone” to call the IP phone.
ⓘ The “Telephone” option includes the transceivers in the VE-PG3’s network.

4 Destination Phone Number Enter the phone number.
Up to 31 digits numbers and symbols (#, ∗).

5 Telephone Gateway Interconnection Number ... Select the bridge connection device (VE-PG3) to call the IP phone.
ⓘ It is necessary to complete the bridge connection setting between the IP1000C and the VE-PG3s that are registered in the [Telephone Gateway Interconnect] screen on the [RoIP Server Setting] menu.

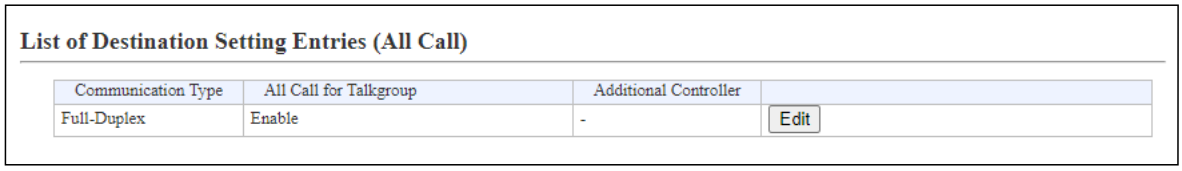
6 <Apply> ..... Click to apply the entries.

7 <Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.



■ List of Destination Setting Entries (All Call)

Click to edit the setting on the [Destination Settings] field.



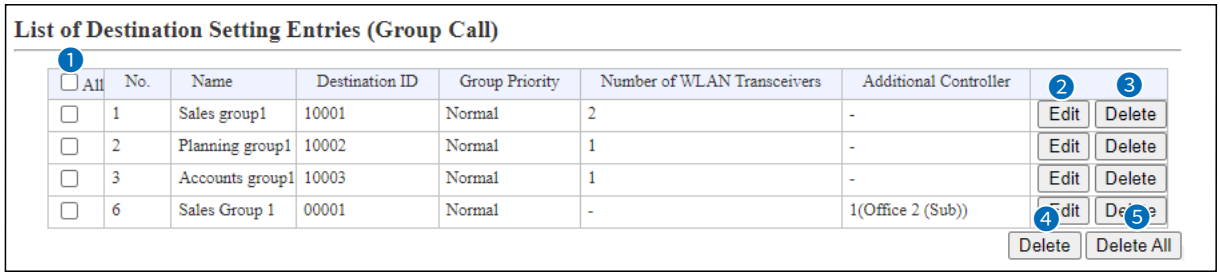
List of Destination Setting Entries (All Call)

Communication Type	All Call for Talkgroup	Additional Controller	
Full-Duplex	Enable	-	Edit

(This is only an example.)

■ List of Destination Setting Entries (Group Call)

The list of the registered Group Calls.



List of Destination Setting Entries (Group Call)

❶ All	No.	Name	Destination ID	Group Priority	Number of WLAN Transceivers	Additional Controller	❷	❸
☐	1	Sales group1	10001	Normal	2	-	Edit	Delete
☐	2	Planning group1	10002	Normal	1	-	Edit	Delete
☐	3	Accounts group1	10003	Normal	1	-	Edit	Delete
☐	6	Sales Group 1	00001	Normal	-	1(Office 2 (Sub))	Edit	De[illegible]

❹ Delete ❺ Delete All

(This is only an example.)

❶ **Selection Box** ..... Click a selection box to add a check mark to delete an entry.
ⓘ By clicking the [All] box, you can select or cancel all entries in the list.

❷ **<Edit>** ..... Click to edit the entries in the [Destination Settings] field.

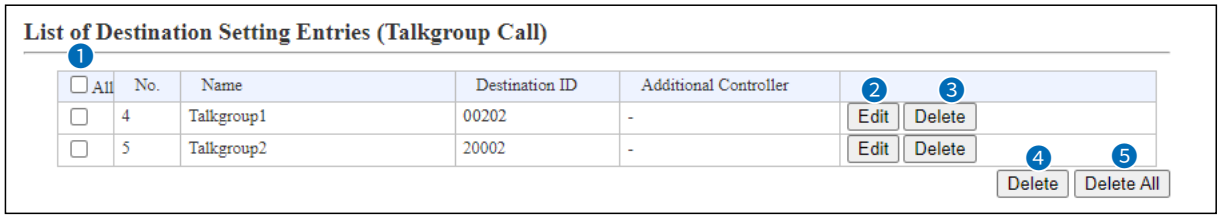
❸ **<Delete>** ..... Click to delete the selected entry.
ⓘ After clicking <Delete>, the content cannot be recalled.

❹ **<Delete>** ..... Click to delete an entry, which you select in the selection box.
ⓘ After an entry is deleted, the entry cannot be recalled.

❺ **<Delete All>** ..... Click to delete all the entries.
ⓘ After clicking <Delete All>, the contents cannot be recalled.

■ List of Destination Setting Entries (Talkgroup Call)

The list of the registered Talkgroup Calls.



(This is only an example.)

❶Selection Box ..... Click a selection box to add a check mark to delete an entry.
ⓘ By clicking the [All] box, you can select or cancel all entries in the list.

❷<Edit> ..... Click to edit the entries in the [Destination Settings] field.

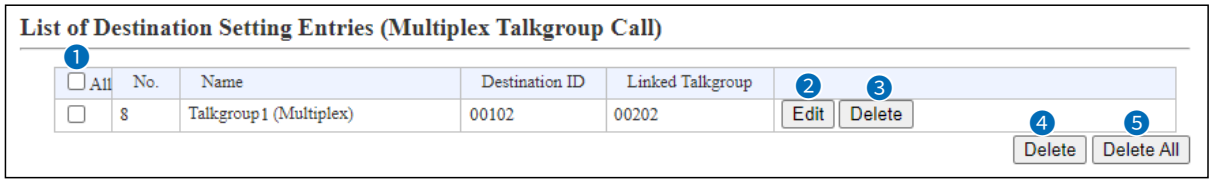
❸<Delete> ..... Click to delete the selected entry.
ⓘ After clicking <Delete>, the content cannot be recalled.

❹<Delete> ..... Click to delete an entry, which you select in the selection box.
ⓘ After an entry is deleted, the entry cannot be recalled.

❺<Delete All> ..... Click to delete all the entries.
ⓘ After clicking <Delete All>, the contents cannot be recalled.

■ List of Destination Setting Entries (Multiplex Talkgroup Call)

The list of the registered Management Talkgroup (Multiplex Talkgroup) Calls.



(This is only an example.)

❶Selection Box ..... Click a selection box to add a check mark to delete an entry.
ⓘ By clicking the [All] box, you can select or cancel all entries in the list.

❷<Edit> ..... Click to edit the entries in the [Destination Settings] field.

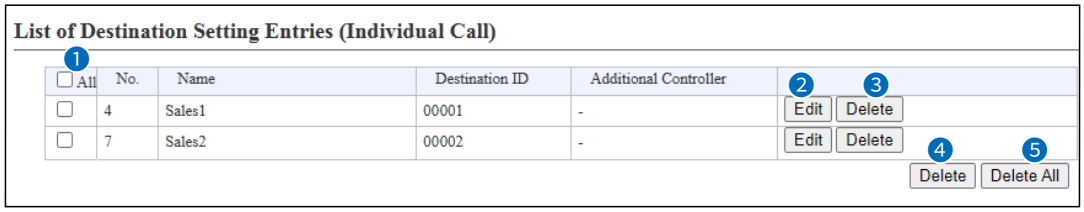
❸<Delete> ..... Click to delete the selected entry.
ⓘ After clicking <Delete>, the content cannot be recalled.

❹<Delete> ..... Click to delete an entry, which you select in the selection box.
ⓘ After an entry is deleted, the entry cannot be recalled.

❺<Delete All> ..... Click to delete all the entries.
ⓘ After clicking <Delete All>, the contents cannot be recalled.

■ List of Destination Setting Entries (Individual Call)

The list of the registered Individual Calls.



(This is only an example.)

❶ Selection Box ..... Click a selection box to add a check mark to delete an entry.
ⓘ By clicking the [All] box, you can select or cancel all entries in the list.

❷ <Edit> ..... Click to edit the entries in the [Destination Settings] field.

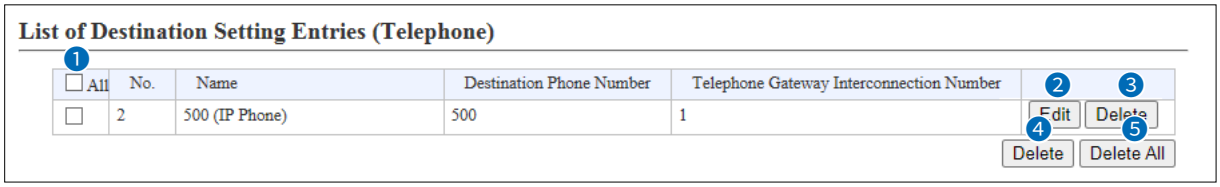
❸ <Delete> ..... Click to delete the selected entry.
ⓘ After clicking <Delete>, the content cannot be recalled.

❹ <Delete> ..... Click to delete an entry, which you select in the selection box.
ⓘ After an entry is deleted, the entry cannot be recalled.

❺ <Delete All> ..... Click to delete all the entries.
ⓘ After clicking <Delete All>, the contents cannot be recalled.

■ List of Destination Setting Entries (Telephone)

The list of the registered Phone Calls.



(This is only an example.)

❶ Selection Box ..... Click a selection box to add a check mark to delete an entry.
ⓘ By clicking the [All] box, you can select or cancel all entries in the list.

❷ <Edit> ..... Click to edit the entries in the [Destination Settings] field.

❸ <Delete> ..... Click to delete the selected entry.
ⓘ After clicking <Delete>, the content cannot be recalled.

❹ <Delete> ..... Click to delete an entry, which you select in the selection box.
ⓘ After an entry is deleted, the entry cannot be recalled.

❺ <Delete All> ..... Click to delete all the entries.
ⓘ After clicking <Delete All>, the contents cannot be recalled.

■ Destination Batch Setting

You can register consecutive Destinations collectively. Or you can copy the Destinations contents to another Destination.

❶ Call Type ..... Select the Call Type of the Destinations that you want to add.

❷ Destination ID ..... Enter a range of collective Destination IDs.
<Add>
By clicking <Add>, you can register consecutive Destination IDs collectively.
ⓘ If a ID is already registered, “Override the settings” is displayed.

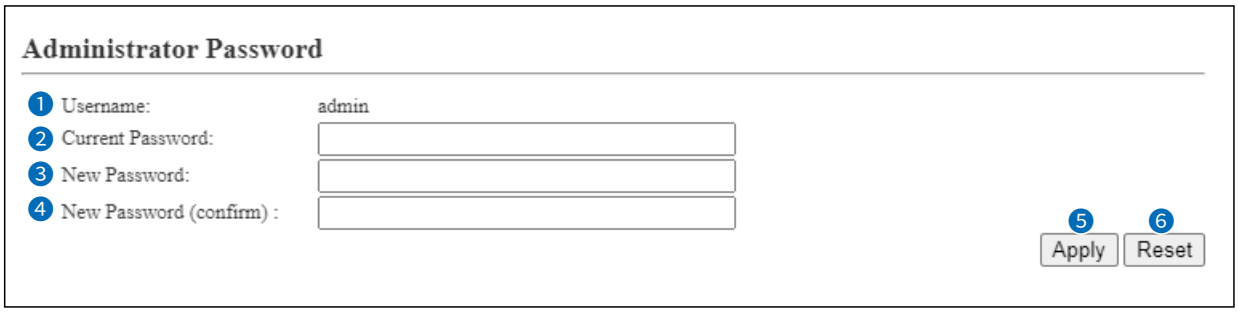
❸ Refer to ..... Select the programmed setting to refer to.

11. [Management] Menu

[Management]–[Administrator]

■ Administrator Password

Set the administrator password.



1 Username..... Displays the administrator login ID (“admin”).

2 Current Password ..... Enter the current password, when you change it. (Default: admin)
ⓘ The entered characters are displayed as an * (asterisk) or a • (dot).

3 New Password ..... Enter a new password up to 31 characters.
ⓘ The entered characters are displayed as an * (asterisk) or a • (dot).

4 New Password (confirm) ... Enter the new password again.

5 <Apply> ..... Click to apply the entries.

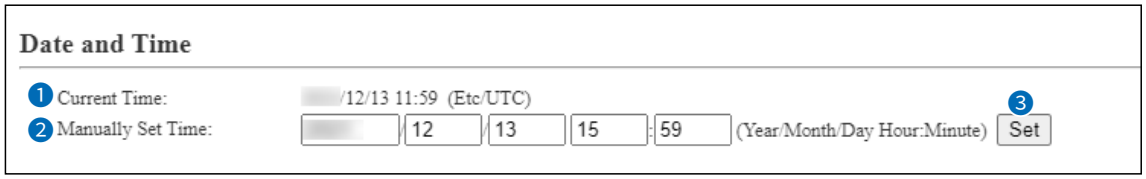
6 <Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

CAUTION: If you have forgotten the password, you cannot access the IP1000C’s setting screen again. In this case, you have to initialize the IP1000C using the <INIT> button. See page 5-4 for details.

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 (both lower and upper case).

■ Date and Time

You can set the IP1000C's internal clock time. (See Section 3 for details.)



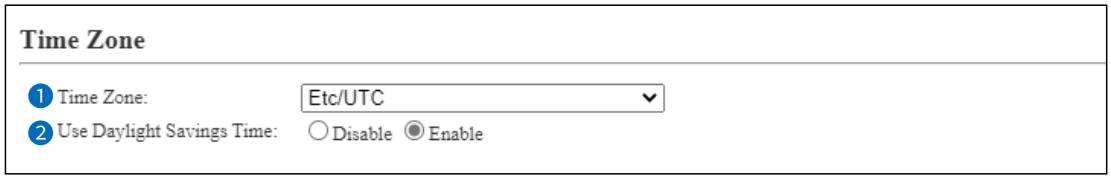
❶ Current Time ..... Displays the current time.

❷ Manually Set Time ..... Displays the time when you have opened this screen.
Note: Refresh the browser screen to refresh the time.

❸ <Set> ..... Click to set the internal clock to the time displayed in "Manually Set Time" item (❷).
ⓘ Before clicking <Set>, refresh the browser screen.

■ Time Zone

Select the appropriate Time Zone.



1 Time Zone ..... Select the appropriate Time Zone. (Default: Etc/UTC)

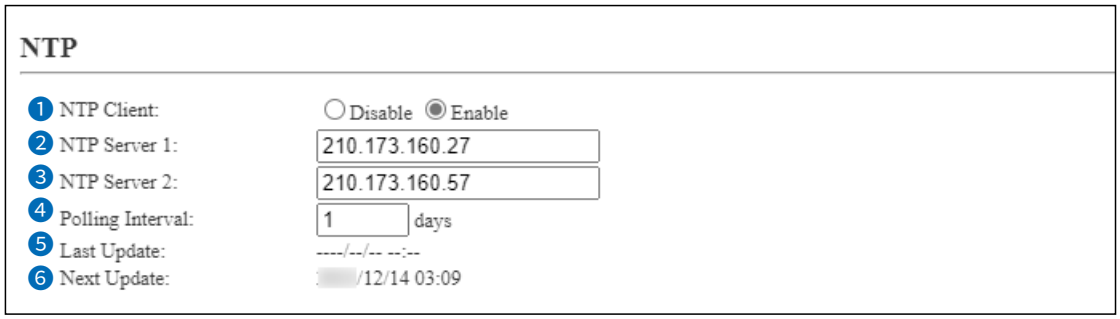
2 Use Daylight Savings Time Select “Disable” if not necessary. (Default: Enable)

ⓘ If “Enable” is selected, the IP1000C automatically adjusts the time according to your time zone.

ⓘ If the Daylight Savings Time is not used in your area, this selection doesn’t affect the time setting.

■ NTP

The Automatic Clock Synchronize function automatically synchronizes the internal clock with the time server (NTP).
ⓘ To use this function, an internet connection and default gateway settings are necessary.



❶NTP Client ..... Select “Enable” to use the Automatic Clock Synchronize function. (Default: Enable)

❷NTP Server 1 ..... Enter the time management server’s IP address. (Default: 210.173.160.27)
ⓘ If the IP1000C cannot access this address, then the address set in the [NTP Server 2] (❸) item is used.
Note: The default NTP servers are provided by INTERNET MULTIFEED Co.

❸NTP Server 2 ..... Enter the second time management server’s IP address. (Default: 210.173.160.57)

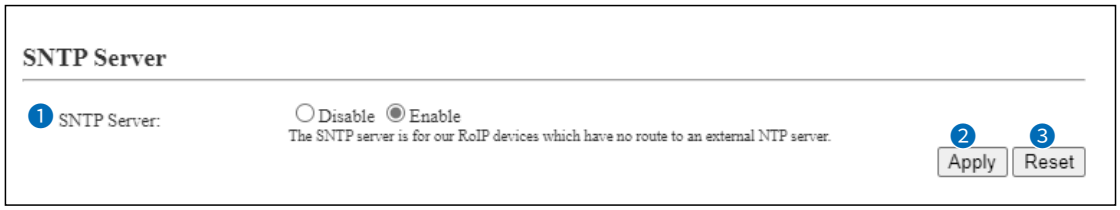
❹Polling Interval ..... Enter the time synchronization interval. (Default: 1)
Range: 1 to 99 (day)

❺Last Update ..... Displays the date and time when the IP1000C has last accessed the time management server.

❻Next Update ..... Displays the scheduled date and time when the IP1000C accesses the time management server next.

■ SNTP Server

The SNTP server is for our RoIP device which have no route to an external Time server (NTP).
ⓘ To use this function, an internet connection and default gateway settings are necessary.



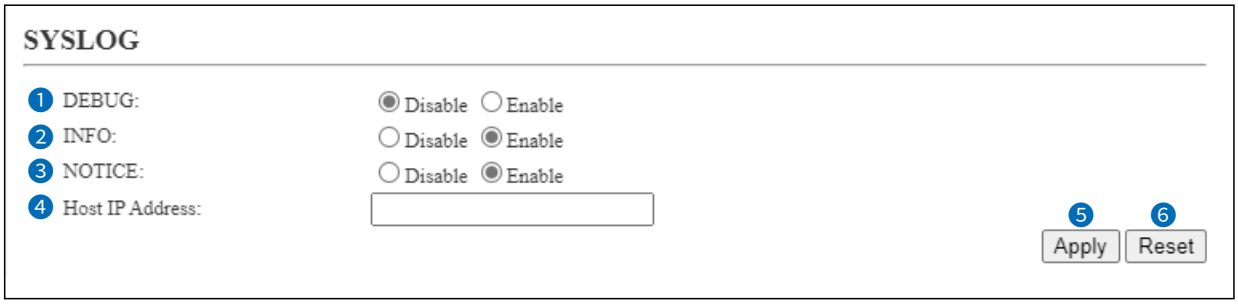
1 SNTP Server ..... Select “Enable” to use the SNTP function. (Default: Enable)

2 <Apply> ..... Click to apply the entries.

3 <Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

■ SYSLOG

Select the information to be saved to the SYSLOG host.



❶DEBUG ..... Select “Enable” to display the debug information. (Default: Disable)

❷INFO ..... Select “Enable” to display the INFO messages. (Default: Enable)

❸NOTICE ..... Select “Enable” to display the NOTICE messages. (Default: Enable)

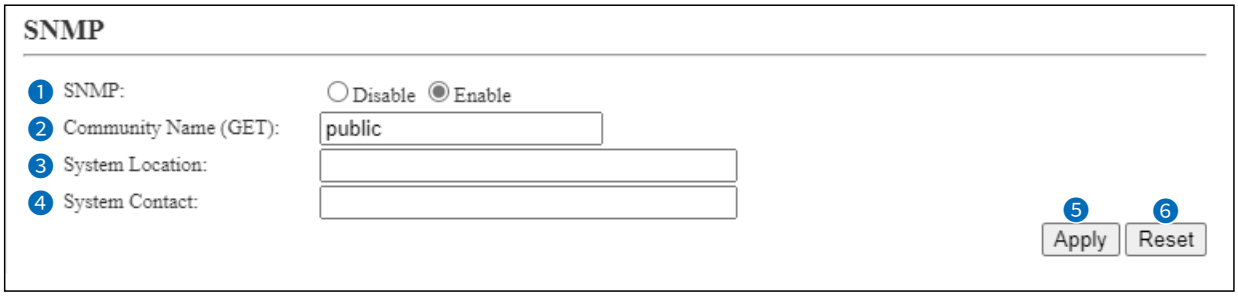
❹Host IP Address ..... Enter the SYSLOG host’s address.

❺<Apply> ..... Click to apply the entries.

❻<Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

■ SNMP

Configure the SNMP function.



❶SNMP..... Select “Enable” to use the SNMP function. (Default: Enable)

❷Community Name (GET) ... Enter the Community name to get the SNMP community string. (Up to 31 characters) (Default: public)

❸System Location ..... Enter the SNMP system location. (Up to 127 characters)

❹System Contact ..... Enter the SNMP system contact. (Up to 127 characters)

❺<Apply> ..... Click to apply the entries.

❻<Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

■ USB

Select the USB flash drive option.

1 USB Flash Drive..... Select “Enable” to use a USB flash drive. (Default: Enable)
Note: If you use the Automatic firmware update function or Automatic Setting Load function, select “Enable.”

2 USB Access Permission ... Select the USB flash drive access option.
(Default: ☑ Firmware Update
☑ Settings Backup/Restore)

- Firmware Update (p. 5-15)
- Settings Backup/Restore (p. 5-12)

3 <Apply> ..... Click to apply the entries.

4 <Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

■ Ping Test

Run the Ping test.

❶Host ..... Enter the IP address or host name to send the Ping packets to.

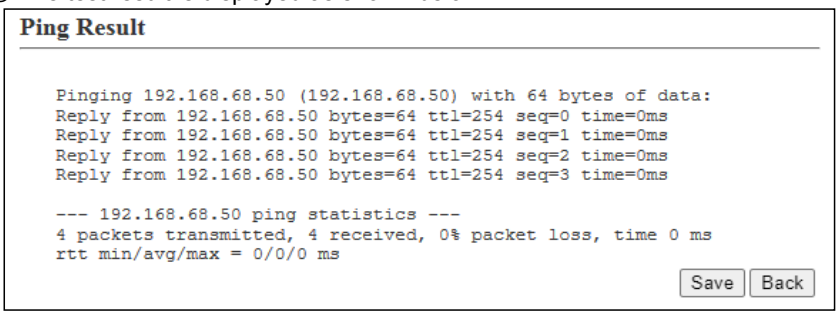
❷Number of Times ..... Select the number of times to send. (Default: 4)

❸Packet Size ..... Select the size of the packet's data part. (Default: 64)

❹Timeout..... Select the Ping response time. (Default: 1000)
Note: If there is no response within the selected time, a time out error is returned.

❺<Ping> ..... Click to run the Ping test.

ⓘ The test result is displayed as shown below.



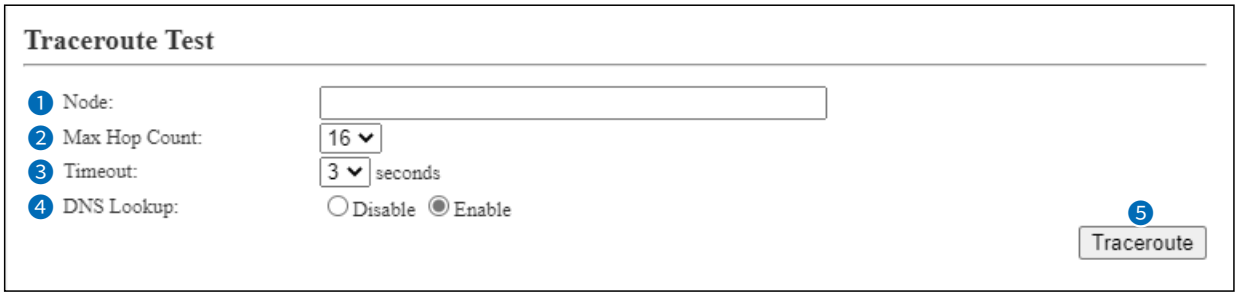
(This is only an example.)

ⓘ Click <Save> to save the result to a PC as a text file (extension: "txt").
Note: The file is saved as "ping_*host's address*.txt."

ⓘ Click <Back> to return to the Ping Test screen.

■ Traceroute Test

Run the Traceroute test.



1 Node ..... Enter the node's (device's) IP address.

2 Max Hop Count ..... Select the maximum hop number. (Default: 16)

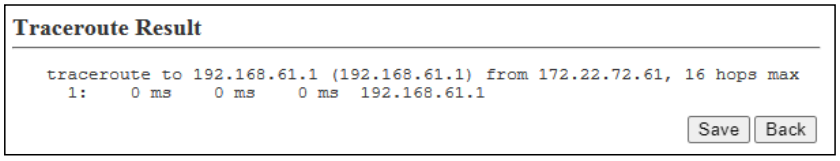
3 Timeout..... Select the response time. (Default: 3)
Note: If there is no response within the selected time, a time out error is returned.

4 DNS Lookup ..... Select "Enable" to convert the node's (device's) IP address into the host name. (DNS name resolution) (Default: Enable)

5 <Traceroute> ..... Click to run the traceroute test.

ⓘ Information

• The test result is displayed as shown below.

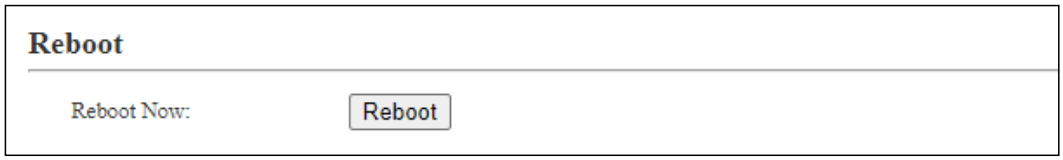


(This is only an example.)

• Click to save the result to a PC as a text file (extension: "txt").
• The file is saved as "tracert_*node's address*.txt."
• Click <Back> to return to the Traceroute Test screen.

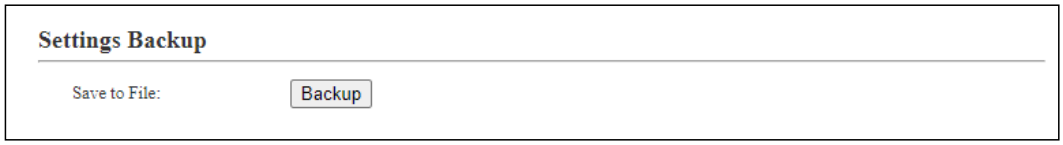
■ Reboot

Click <Reboot> to reboot the IP1000C.
ⓘ When clicking <Reboot>, the “Do you want to reboot the system?” message appears. Click <OK> to continue.



■ Settings Backup

Save the IP1000C's settings to a PC as a backup.

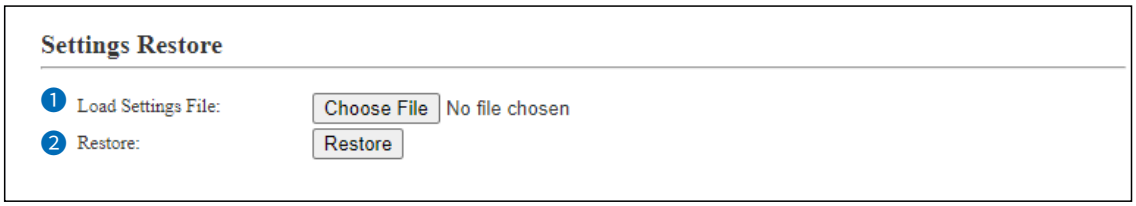


Save to File ..... Click <Backup> to save the settings to a PC as a backup file (Extension: sav).
See the topic below to load the saved file into the IP1000C.

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

■ Settings Restore

Load the setting file (Extension: "sav") to the IP1000C.
Note: Loading takes a few minutes.



1 Load Settings File ..... Click <Choose File> to select the setting file.

2 Restore ..... Click <Restore> to load the setting into the IP1000C.

Notes:
- The IP1000C's setting is overwritten.
- After loading, the IP1000C automatically reboots.

Caution: A modified setting file will damage the IP1000C.

■ Online Settings

You can remotely configure the IP1000C, through the secured network path.
ⓘ An SFTP server is required for this function.

❶ Online Settings ..... Select “Enable” to use this function. (Default: Disable)

❷ Sever Host Name ..... Enter the SFTP server IP address or FQDN (Fully Qualified Domain Name) up to 128 characters.

❸ Subscriber Name ..... Enter the SFTP server username up to 128 characters.

❹ Password ..... Enter the SFTP server password up to 128 characters.

❺ Upload ..... Click to upload the IP1000C’s setting file to the SFTP server.

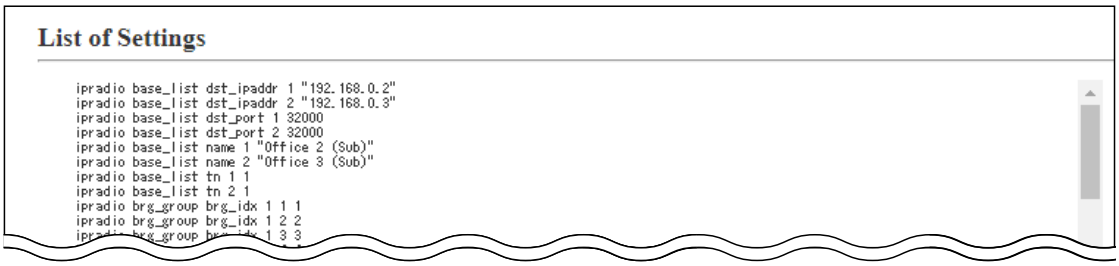
❻ Download ..... Click to download the IP1000C’s setting file from the SFTP server.
ⓘ The IP1000C automatically reboots.

❼ <Apply> ..... Click to apply the entries.

❽ <Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

■ List of Settings

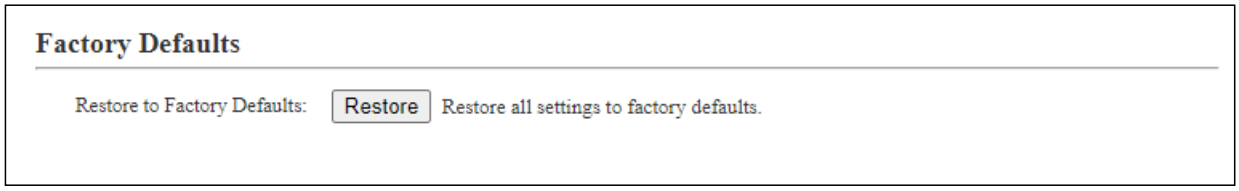
Displays the changed settings.
Note: The list is clear when the IP1000C is initialized.



(This is only an example.)

■ Factory Defaults

Click <Restore> to return all settings to the factory default.



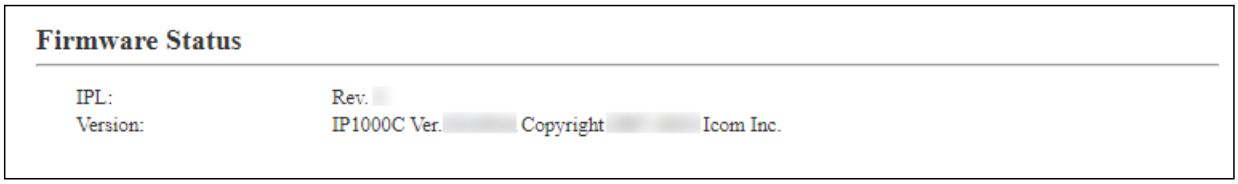
ⓘ If you cannot access the IP1000C's setting screen, initialize the IP1000C using the <INIT> button.
See page 5-4 for details.

NOTE:
- After the IP1000C is initialized, the IP address is returned to the default (192.168.0.1).
- If the network part of the PC IP address is different from that of the IP1000C, you cannot access the IP1000C setting screen.
  In such case, change the PC IP address according to your network environment.

NOTE:
• NEVER turn OFF the power until the updating has been completed. Otherwise, the IP1000C may be damaged.
• Ask your dealer for updated function or specification details.

■ Firmware Status

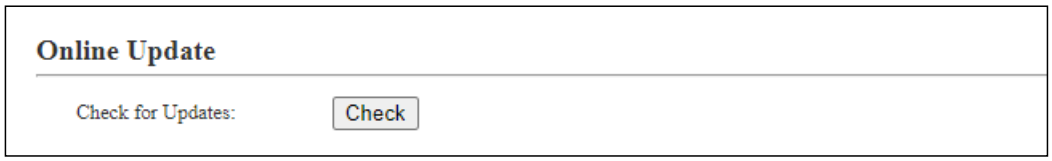
Displays the firmware version.



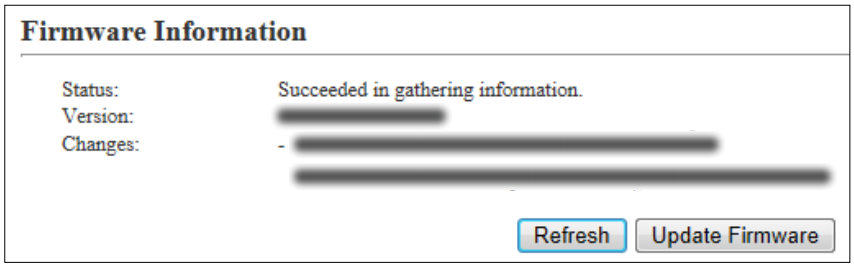
(This is only an example.)

■ Online Update

Downloads the firmware through the Internet, and automatically updates it.
Note: To use this function, an Internet connection, DNS and default gateway settings are necessary.



Check for Updates …… Click <Check> to access the update management server.
When the IP1000C has successfully accessed the server, the latest firmware version is displayed as shown below.



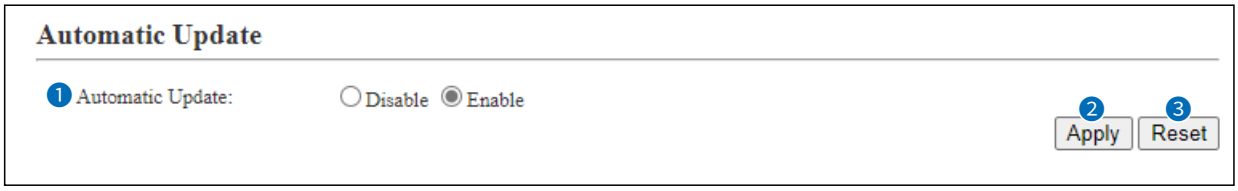
(This is only an example.)

About the firmware information:

- When there is a newly updated firmware, the <Update Firmware> button is displayed.
- When there is no updated firmware, “Firmware already up-to-date” is displayed.
- When an error message appears, check the Internet connectivity.

■ Automatic Update

The firmware can be automatically downloaded and updated.



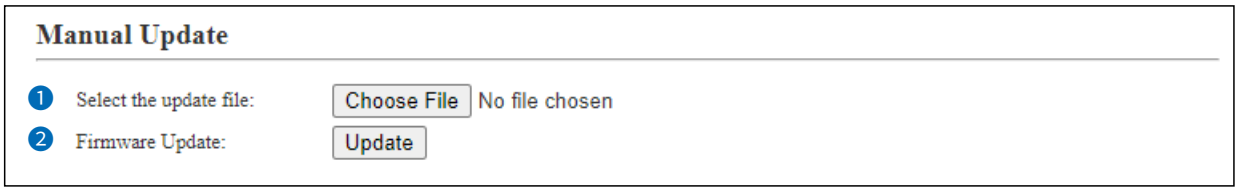
1 Automatic Update ..... Select “Enable” to use the Automatic Update function. (Default: Enable)
ⓘ Select “Disable” if you do not desire to automatically update the firmware.

2 <Apply> ..... Click to apply the entries.

3 <Reset> ..... Click to restore the settings.
ⓘ You cannot restore after clicking <Apply>.

■ Manual Update

The firmware can be updated using the saved firmware.

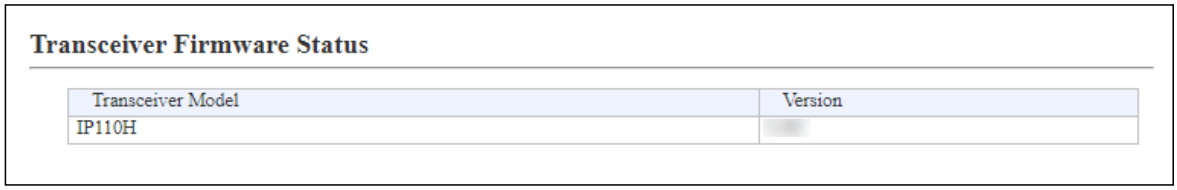


1 Select the update file ..... Click <Choose File> to select the firmware file (extension: “dat”).
ⓘ The selected file appears in the “Update Firmware using File” item.

2 Firmware Update ..... Click <Update> to update the firmware.
Note: After updating, the IP1000C automatically reboots.

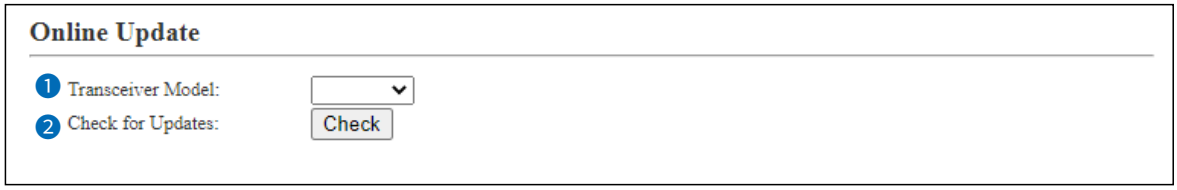
■ Transceiver Firmware Status

Displays the built-in firmware for the WLAN transceiver. The model name and the version of the firmware are listed.



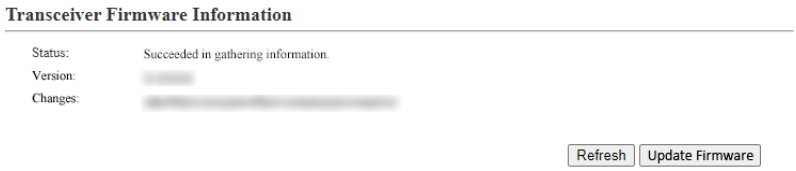
■ Online Update

Downloads the built-in firmware for the WLAN transceivers through the Internet, and updates it.
Note: To use this function, an Internet connection, DNS and default gateway settings are necessary.



1 Transceiver Model…… Select the model name that you want to update the firmware.
ⓘ As of June 2022, only the IP110H is selectable.

2 Check for Updates…… Click <Check> to connect to the update management server. When the IP1000C has successfully connected, the latest firmware status is displayed.



About the firmware information
- When there is no firmware update, “Firmware already up-to-date” is displayed.
- When there is a new firmware update available, the <Update Firmware> button is displayed.

ⓘ If an error message is displayed, confirm that the default gateway and DNS server address are properly set. (Network Settings > IP Address)
Ask your network administrator if a web transmission from the IP1000C is blocked.

CAUTION:
- **DO NOT** turn off the IP1000C while updating the firmware. Otherwise the IP1000C and the transceivers may be damaged.
- Ask your dealer for updated function or specification details.

MAINTENANCE

Section 5

1. How to save the IP1000C's setting to a PC

You can save the IP1000C's settings of its setting screen to a PC or USB flash drive.
The saved settings can be used to recover the configuration.
ⓘ The settings can be directly loaded into the IP1000C from the USB flash drive.

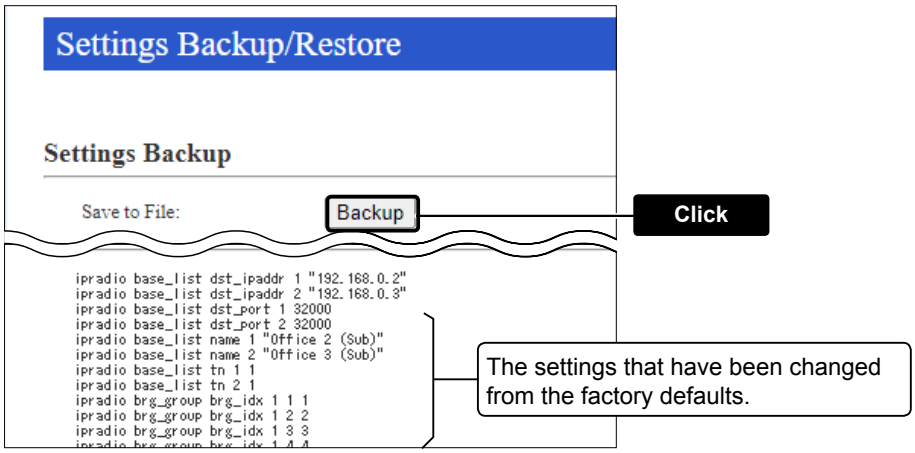
■ Saving the setting

1 Click [Management], then [Settings Backup/Restore].

- The [Settings Backup/Restore] screen appears.

2 Click <Backup>.

- The File Saving window appears.



3 Select a desired folder/location, then click [Save] in the File Saving window.

ⓘ The setting file (extension: "sav") is saved in the selected folder.
ⓘ The default file name is composed of the model name (IP1000C), version number and date.

2. How to load the saved file to an IP1000C

You can load the IP1000C's settings from a PC.
ⓘ The settings can be directly loaded into the IP1000C from a USB flash drive. (p. 5-12)

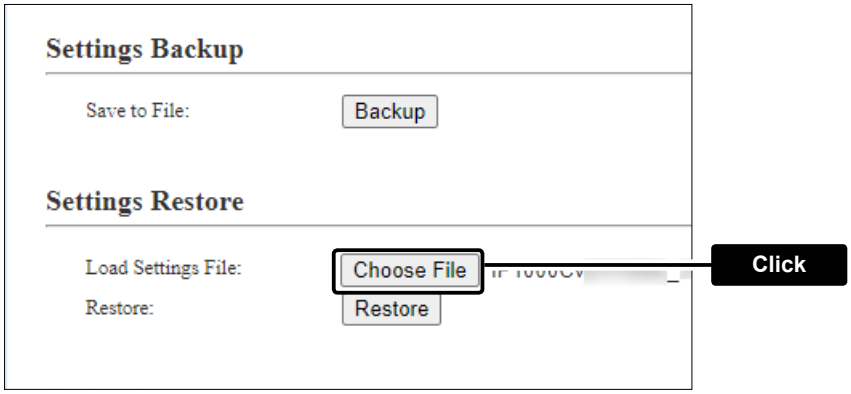
■ Reloading the settings file into the IP1000C

1 Click [Management], then [Settings Backup/Restore].

• The [Settings Backup/Restore] screen appears.

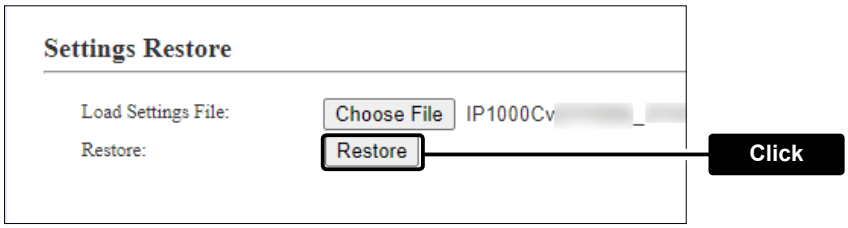
2 Click <Choose File> in the Settings Restore.

• The File Selection window appears.



3 Select the setting file (extension: "sav"), and then click <Restore>.

• After loading the file, the IP1000C automatically reboots.



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

3. How to initialize the settings to the factory default

There two ways to initialize the IP1000C.
ⓘ Set the IP1000C's IP address again after the IP1000C is initialized.

A: Using the <INIT> button.
If you cannot access the IP1000C setting screen, initialize the IP1000C by pushing the <INIT> button.
B: Initialize on the IP1000C's setting screen.
If you can access the IP1000C setting screen, initialize the IP1000C on the setting screen. (p. 5-5)

A: Using the <INIT> button

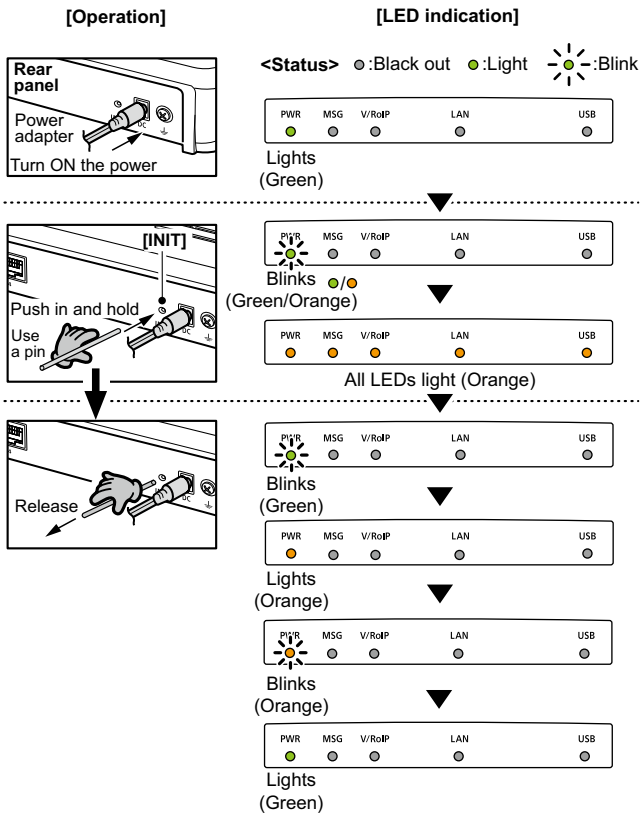
Initializing clears all the settings.
ⓘ If the network part of the PC IP address is different from that of the IP1000C, you cannot access the IP1000C setting screen. In such case, change the PC IP address according to the IP1000C address.
See the supplied "Precautions" leaflet for details.

1 Disconnect all cables from the IP1000C, and then connect the power adapter.

- Verify that the [PWR] indicator lights green.

2 Push in and hold [INIT] with a pin on the rear panel until all indicators on the front panel light orange, and then release.

ⓘ When the initialization has been completed, the [PWR] indicator lights green.



About the initializing condition
You can restore all the IP1000C's settings. The IP1000C's IP address is set to "192.168.0.1," when initialized. Set the PC's IP address to "192.168.0.xxx." (You can set xxx to any number from 2 to 254.)

3. How to initialize the settings to the factory default

B: Using the IP1000C's setting screen

1 Click [Management], then [Factory Defaults].

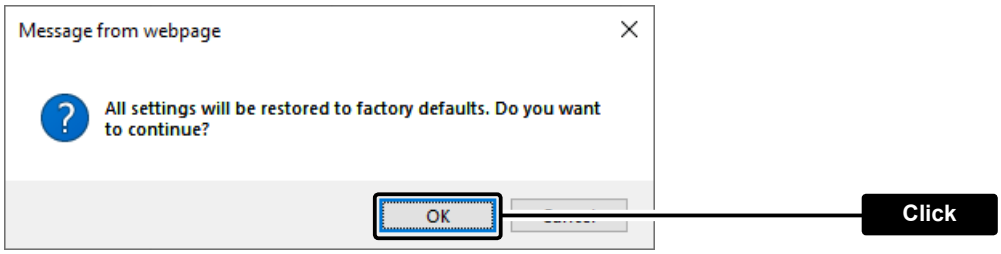
- The [Factory Defaults] screen appears.

2 Click <Restore>.

- The warning window appears.

3 Click <OK>.

- The IP1000C automatically reboots.



About the initializing condition
You can restore all the IP1000C's settings. The IP1000C's IP address is set to "192.168.0.1," when initialized. Set the PC's IP address to "192.168.0.xxx." (You can set xxx to any number from 2 to 254.)

4. How to update the firmware

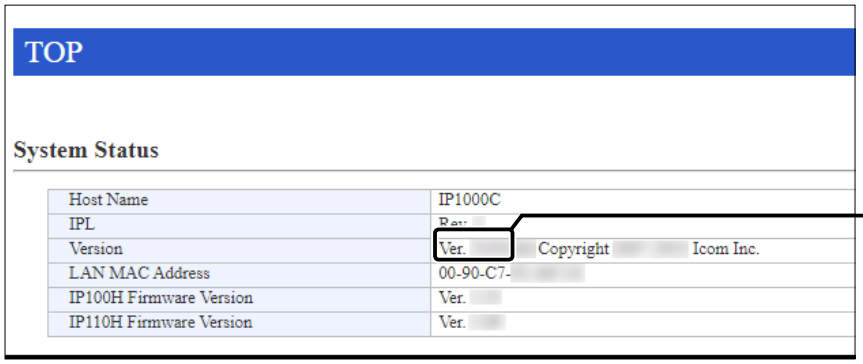
There are two ways to update the firmware.

A: Updating on the setting screen.
Update the firmware on the setting screen.
B: Use the Firmware Update function. (p. 5-8)
The firmware can be automatically downloaded and updated.

ⓘ You can update the firmware using a USB flash drive. (p. 5-15)
ⓘ When [MSG] lights green, a firmware update is ready. See the “Precautions” leaflet for details.

■ About the Firmware

The firmware may be updated to improve the functions and specifications of the IP1000C.
Ask your dealer for updated function or specification details.



NOTE:
- NEVER turn OFF the power until the updating has been completed. Otherwise, the IP1000C 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.

4. How to update the firmware

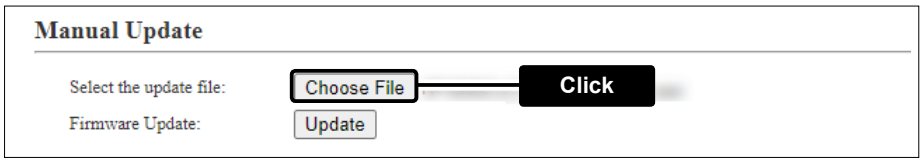
A: Update the firmware on the setting screen

We recommend that you save the current settings in the PC before updating the firmware. (p. 5-12)
Note: Some settings may be returned to their default after the firmware update. Check the Icom website for details.
ⓘ Restricting access to the setting screen is recommended. (p. 3-2)

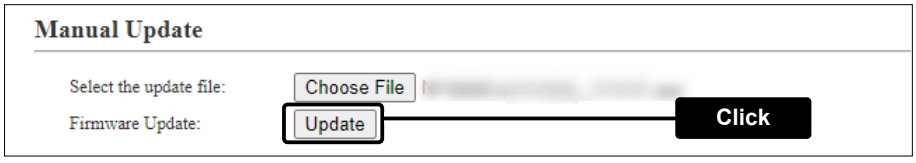
1 Download a new firmware (extension: “dat”) from the Icom website.

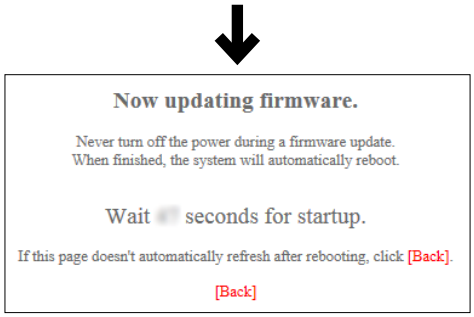
2 Click the [Management] menu, then [Firmware Update].
- The [Firmware Update] screen appears.

3 Click <Choose File>, select the new firmware file, and then click <OK>.



4 Click <Update>.
- The “Now updating firmware” screen appears.





NOTE:
- NEVER turn OFF the power until the updating has been completed. Otherwise, the IP1000C may be damaged.
- The IP1000C’s IP address is set to “192.168.0.1,” when initialized by the firmware update. Set the PC’s IP address to “192.168.0.xxx.” (You can set xxx to any number from 2 to 254.)

4. How to update the firmware

B: Use the Online Firmware Update function

When [MSG] lights green, a firmware update is ready.
See the “Precautions” leaflet for details.

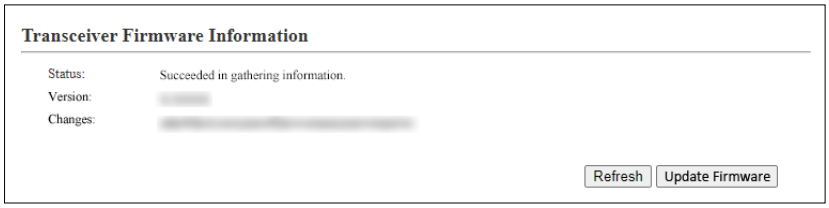
ⓘ To use this function, an Internet connection, DNS and default gateway settings are necessary.
ⓘ If you enabled the Automatic Update function, the firmware may be automatically updated, depending on the revised issue.
ⓘ We recommend to save the setting file as the backup. (p. 5-12)

1 Click the [Management] menu, then [Firmware Update].

- The [Firmware Update] screen appears.

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

- The IP1000C connects to the update management server.
  When the IP1000C has successfully connected, the latest firmware status is displayed.



3 Carefully read the displayed update details before starting the firmware update.

4 Click <Update Firmware>.

- The IP1000C accesses the update management server, and starts update.

5 Wait for several minutes until the firmware update will be completed.

- The IP1000C will automatically restart after the update.

5. About the Automatic Restore using a USB flash drive

You can clone the IP1000C's settings and firmware using a USB flash drive.
ⓘ See pages 5-12 to 5-16 for details.

About the USB flash drive:
- Before using the USB flash drive, save the content to a PC as a backup.
- The USB flash drive is not supplied. Purchase separately.
- A USB flash drive with biometric authentication, or one with password protection cannot be used.
- Turn OFF the IP1000C's power before inserting or removing the drive, to prevent data corruption.
- Either one of the USB slots accepts the drive, but insert only one drive at a time.
- Insert the drive securely.
- NEVER remove the USB flash drive or turn OFF the IP1000C's power, while transferring data. It will cause data corruption, or damage the USB flash drive. While transferring data, the [USB] LED alternately blinks orange and green.
- After the firmware updating is finished, check the firmware version on the setting screen to verify that the update was correctly done.
- When importing setting data from a USB flash drive to the IP1000C, the originally programmed setting data is automatically saved as "bakdata.sav" in the USB flash drive, as a backup.
- If both firmware and setting files are saved on a USB flash drive, the firmware and setting data are sequentially updated.

Supported USB specification:
Interface: USB 2.0
Device: USB flash drive (USB Mass Storage Class)
File format: FAT16/FAT32 (exFAT and NTFS are not supported.)
Note: Some USB flash drives are not guaranteed.

5. About the Automatic Restore using a USB flash drive

[About the settings file name]
The settings file must be saved as “savedata.sav” on the flash drive.

ⓘ Only the settings file that is saved in the [Settings Restore] field can be used for the Automatic restore. See page 5-2 for details.
[Management] (menu) > [Settings Backup/Restore] (screen) > [Settings Restore] (field)

The firmware file, which is downloaded from Icom website, must be saved as “firmware.dat” on the flash drive.

[About the Automatic Settings Backup function]
The latest 10 backup files (revisions) are stored on the USB flash drive with the file name “bakdata_X.sav” (X=Revision number).

(Example)
The oldest backup file’s name: “bakdata_10.sav”

- The firmware is not automatically saved as a backup.
- The latest settings backup file is saved as “bakdata.sav” (with no revision number).
- If the content of settings file is the same as the IP1000C’s current settings, no setting backup file is saved.

5. About the Automatic Restore using a USB flash drive

[How to clone the settings and the firmware using a USB flash drive.]
A USB flash drive can contain settings and firmware files for different IP1000Cs.
You need to create folders, whose names are each IP1000C's LAN MAC address (p. 4-5), and save the firmware and settings files to each folder.

(Example)
The IP1000C's LAN MAC address is "0090C7000001."

ⓘ Create the folder named "0090C7000001" on a USB flash drive, and then save the firmware and settings files to the folder.
Insert the USB flash drive, into the IP1000C. Then the setting backup file is automatically created in the "0090C7000001" folder.
The firmware and settings files are loaded from the "0090C7000001" folder.
Note: The firmware and settings files in any other folders are not loaded.

ⓘ If inserting the flash drive (Figure 1 and 2 in the picture below) into the IP1000C (0090C7000002), the setting backup file is automatically created in the root directory as there is no folder whose name is IP1000C's LAN MAC address.
The firmware and settings files in the root directory are loaded.

Figure 1

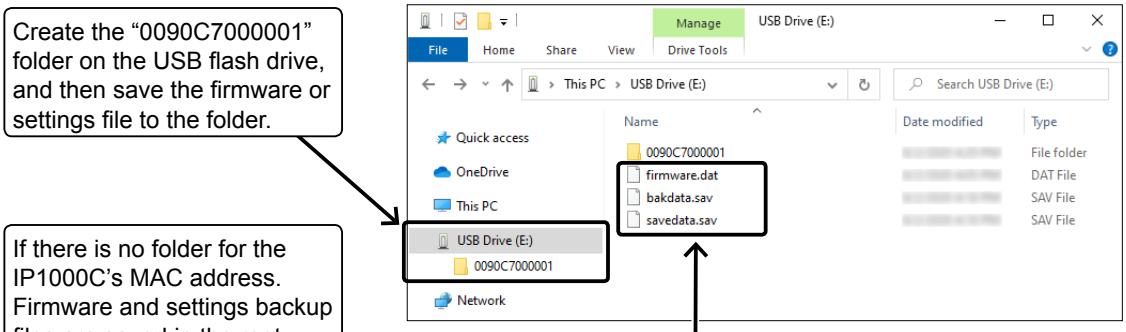
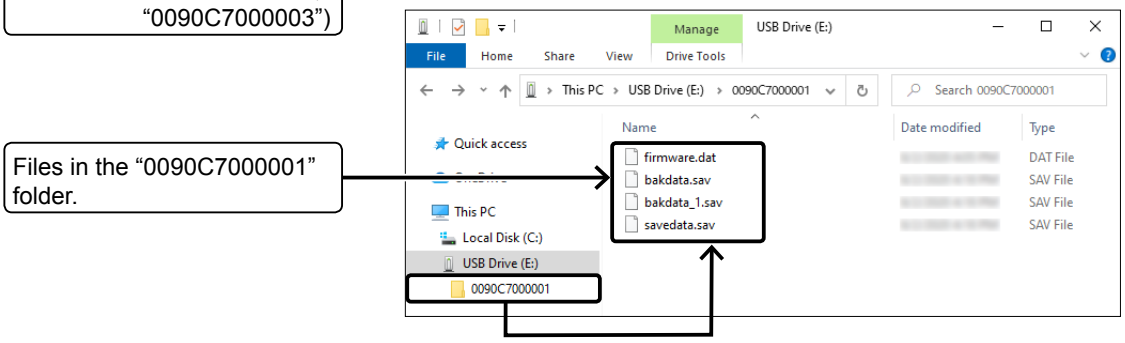


Figure 2



6. How to restore the configuration using a USB flash drive

You can clone the settings to the other IP1000Cs.
It is convenient when you sequentially configure multiple IP1000Cs.
Note: Before using a USB flash drive, see page 5-9.

■ Saving the settings file to a USB flash drive

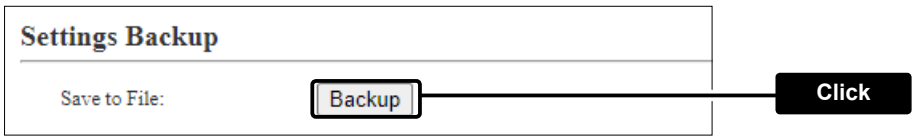
1 Insert the flash drive securely into one of the PC's USB ports.

2 Open the IP1000C's setting screen.

3 Click [Management], then [Settings Backup/Restore].

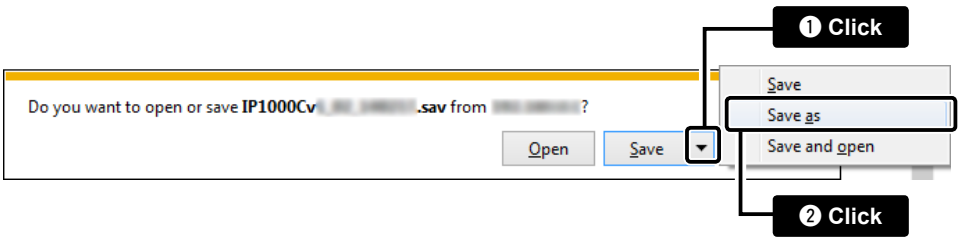
- The [Settings Backup/Restore] screen appears.

4 Click <Backup>.



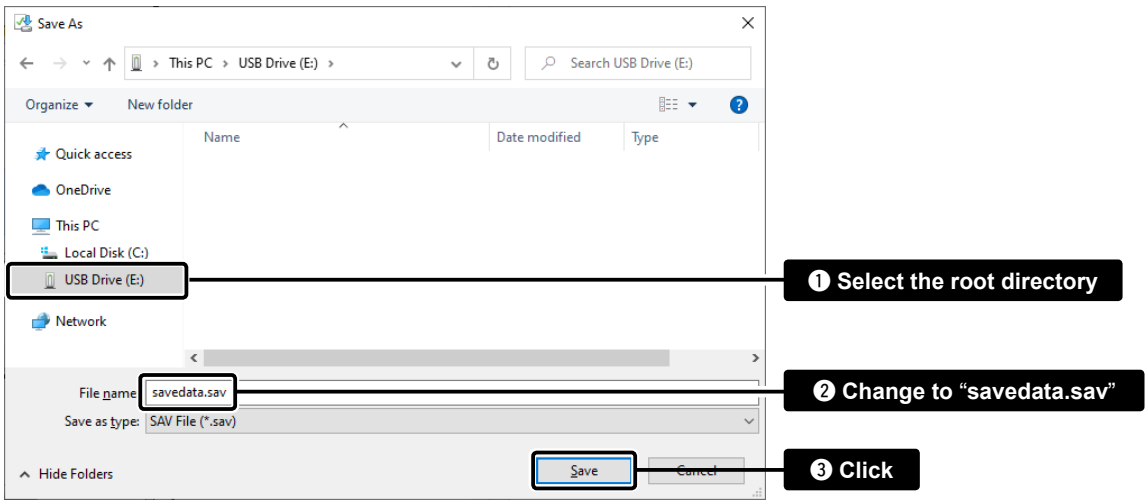
5 Click "▼" of <Save>, and then select "Save as."

- The [Save As] screen appears.



6 Select the root directory of the USB flash drive, and save the settings file as "savedata.sav."

- Any other file name is not acceptable.



6. How to restore the configuration using a USB flash drive

■ Loading the settings from the USB flash drive

1 Remove the USB flash drive from the PC appropriately.

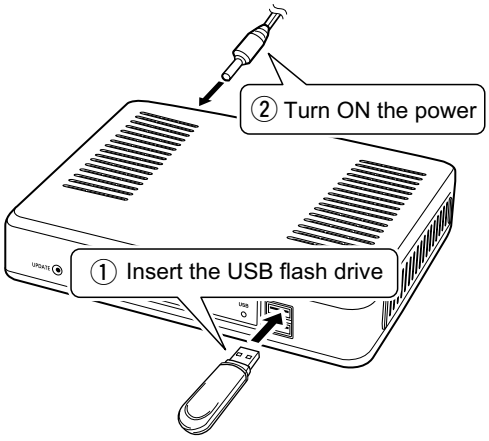
2 Prepare the IP1000C to load the settings.

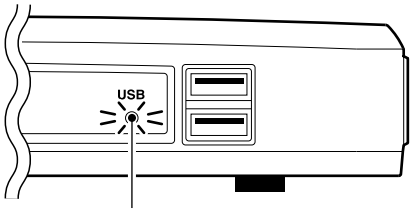
3 Turn OFF the power.

Note: Turn OFF the IP1000C's power, before inserting the USB flash drive.

4 Insert the USB flash drive, that contains the setting data (savedata.sav), into a [USB] port, and then turn ON the power.

- While setting data, the [USB] LED alternately blinks orange and green.





Alternately blinks orange and green while accessing the device.

Note: NEVER remove the USB flash drive or turn OFF the IP1000C's power, while setting data. It will cause data corruption, or damage the USB flash drive.

6. How to restore the configuration using a USB flash drive

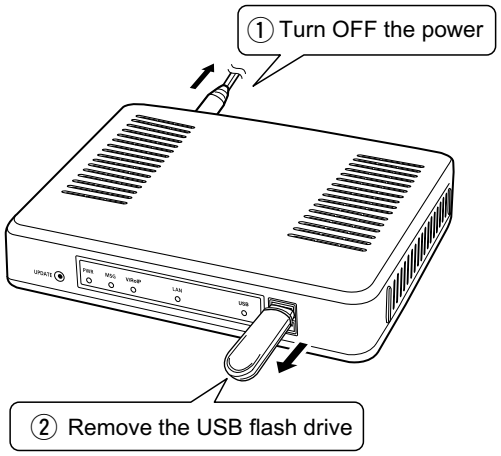
■ Loading the settings from the USB flash drive

5 When the all data has been loaded, the [USB] LED turns OFF, and the IP1000C automatically reboots.

Verify that the [PWR] LED lights green, then turn OFF the power.
Then remove the USB flash drive from the IP1000C.

ⓘ The IP1000C's old setting data is automatically saved in the USB flash drive as "bakdata.sav."

Note: NEVER remove the USB flash while the IP1000C's power is ON.



TIP: If "Disable" is selected in the "USB Flash Drive" item on the [USB] screen, this function cannot be used. (p. 4-160)

7. How to update the firmware using a USB flash drive

The firmware update can be done by using a USB flash drive.
Note: Before using a USB flash drive, see page 5-9.

■ Updating the firmware

1 Download a new firmware (extension: “dat”) from Icom website.

2 Insert the USB flash drive to the PC.

3 Select the root directory of the USB flash drive, and save the firmware file as “firmware.dat.“

ⓘ Any of other file name is not acceptable.
ⓘ If you made the folder name is the IP1000C’s LAN MAC address (example: “0090C7000001”), save the file to the folder.

4 Remove the USB flash drive from the PC appropriately.

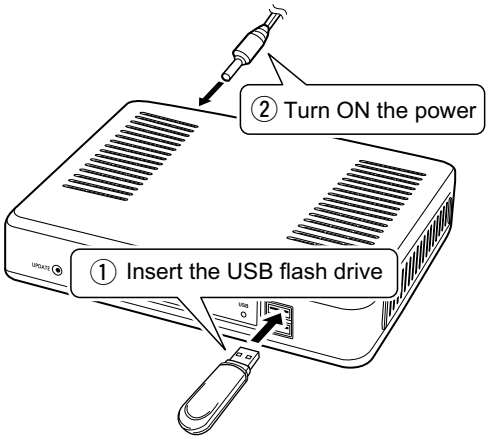
5 Prepare the IP1000C to update the firmware.

6 Turn OFF the power.

Note: Turn OFF the IP1000C’s power, before inserting the USB flash drive.

7 Insert the USB flash drive to the [USB] port, and then turn ON the power.

ⓘ While transferring data, the [USB] indicator alternately blinks orange and green.



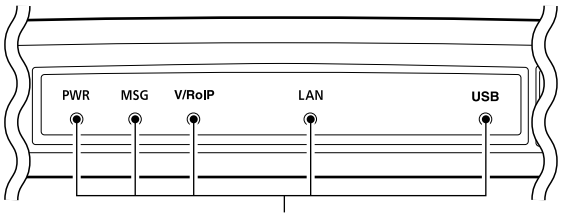
NOTE:
• NEVER turn OFF the power until the updating has been completed. Otherwise, the IP1000C may be damaged.
• Icom is not responsible on the consequence of the updating the firmware.

7. How to update the firmware using a USB flash drive

■ Updating the firmware

8 All LEDs light orange while the firmware update is in progress.

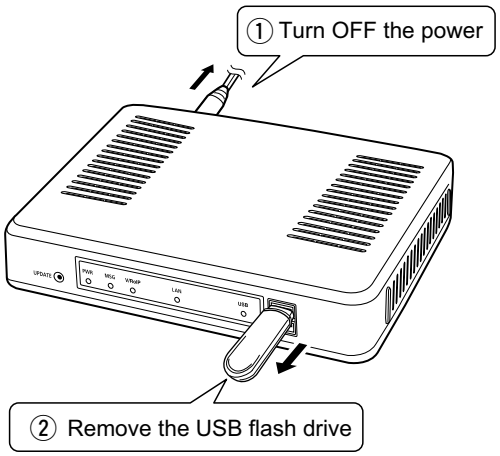
Note: NEVER remove the USB flash drive or turn OFF the IP1000C's power.



Lights orange while updating the firmware.

9 When the update has been finished, the IP1000C automatically reboots.

ⓘ After rebooting, verify that [PWR] lights green, and then turn OFF the power.
Note: NEVER remove the USB flash drive while the IP1000C's power is ON.



TIP: After the firmware updating is finished, check the firmware version on the setting screen to verify that the update was correctly done.

FOR YOUR INFORMATION

Section 6

1. Troubleshooting

If the IP1000C seems to be malfunctioning, please check the following before sending it to a service center.

The [PWR] LED does not light.

- **The power adapter is not connected to the IP1000C.**
  - Verify that the power adapter is securely connected.
- **The power adapter is connected to the AC outlet interlocked with a PC.**
  - Connect the power adapter to a different AC outlet.

The [LAN] LED does not light.

- **The Ethernet cable is not properly connected to the IP1000C.**
  - Verify that the Ethernet cable is securely connected.
- **The HUB or PC is turned OFF.**
  Turn ON the HUB or PC.

You cannot access the IP1000C's setting screen.

- **The PC's IP address is incorrect.**
  - Manually set the PC's IP address after you set the IP1000C to the default setting.
- **The network part of PC's IP address is different from the IP1000C.**
  - Set the network part of PC's IP address to the same as the IP1000C.
- **A proxy server is set for the web browsing.**
  - Confirm the proxy setting of your PC on the "Proxy" screen.
    (Start (Windows logo) > Settings > Network & Internet > Proxy)

The IP1000C's setting screen is not properly displayed.

- **The javascript or cookie functions are turned OFF.**
  - Set the javascript and cookie functions to ON.

The IP1000C cannot automatically update the firmware

- **The IP1000C's IP Address or DNS server's IP is not correctly set.**
  - Correctly set the "IP Address" item in the Network Settings menu. (See page 4-11 for details.)
    Network Settings (menu) > IP Address (screen) > IP Address (item)
- **The firewall is running.**
  - Stop the firewall.
    If you want to stop the firewall, ask your network administrator for details.

6 FOR YOUR INFORMATION

1. Troubleshooting

The WLAN transceiver displays the “Out of range” icon or “Connecting...”

- **The distance between the WLAN transceiver and its wireless access point is too far.**
  - Move closer to the access point.
- **The wireless access point does not turn ON.**
  - Turn ON the access point.
- **The wireless LAN setting of the WLAN transceiver does not match the access point’s.**
  - Check the wireless LAN settings of the access point.
  - Using the CS-IP100H or CS-IP110H, check and modify the wireless LAN settings of the WLAN transceiver.
- **In the 5 GHz band operation, the stealth SSID is set to ON, or the SSID Broadcast is set to OFF in the access point.**
  - Set the stealth SSID to OFF, or set the SSID Broadcast to ON.

The WLAN transceiver displays “Setting Error...”

(When the WLAN transceiver displays “In the range” icon.)

- **The provisioning server settings of the WLAN transceiver are different than the connected the IP1000C.**
  - Using the CS-IP100H or CS-IP110H, check and modify the provisioning server settings.
  - In the IP1000C software, check and modify the provisioning server settings of the WLAN transceiver.
- **The IP1000C does not connect to the network.**
  - Check the connections between the IP1000C or Hub and check the LAN cables.

The WLAN transceiver cannot communicate with any other devices

- **The setting of the Individual ID or Group ID is incorrect.**
  - Enter the correct Individual ID or Group ID.
- **The Individual ID or Group ID is not registered on the ID list.**
  - Enter the “Destination ID/Phone Number” in the “ID List” item on the [ID List] screen.
  - When using the RoIP gateway VE-PG3, check the bridge connection with the VE-PG3.

The WLAN transceiver cannot use the Area call function

- **The function setting of the Area Call is set to “Disable.”**
  - Set the “Area Call” item in the Transceiver Settings screen. (p. 4-44)
  - Reboot the WLAN transceiver and get the setting from the IP1000C.
  - Push [FUNC] on the IP100H’s front panel, then turn ON the “Area Call” function.
  - Enable the Area Call function in the Menu screen on the IP110H.
- **The wireless access point that the WLAN transceiver connects to in the Area Call, is not set.**
  - Enter the “Area Setting” item in the [Area Call] screen. (p. 4-29)

2. How to connect to the IP1000C using Telnet

For Windows® 10: Before performing the following procedure, turn ON [Telnet Client] from the screen that is displayed when “Turn Windows features on or off” is entered in the search box on the taskbar.

■ How to connect

1. Start up Windows.
2. Input “telnet.exe” in the search box on the taskbar, and then push [Enter].
3. The Telnet screen appears, then input the appropriate address, as shown below.
   Microsoft Telnet>open IP1000C’s LAN IP address. (Example: open 192.168.0.1)
4. Input login ID and password, and then push [Enter].
   login: admin
   password: admin (The IP1000C’s default password)
5. When the Telnet access is successful, “IP1000C #” is displayed on the Telnet screen.

■ How to use the [CONSOLE] port

The IP1000C can be configured using a terminal software. (Optional OPC-1402A is required.)
Set the COM port as shown below, to communicate with the IP1000C.

COM port settings:
• COM port number: The port number that the optional OPC-1402A is connected to.
• Bits per second: 115200 (bps)
• Data bits: 8
• Parity: None
• Stop bits: 1
• Flow control: None
After settings are completed, push [Enter] to display “IP1000C #.”

■ About Telnet commands

The following commands can be used with the Telnet function.

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

Command help …… After typing “help,” enter a command to display the command description.
Example: “help save” (the “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

3. Specifications

Note: All specifications are subject to change without notice.

■ General

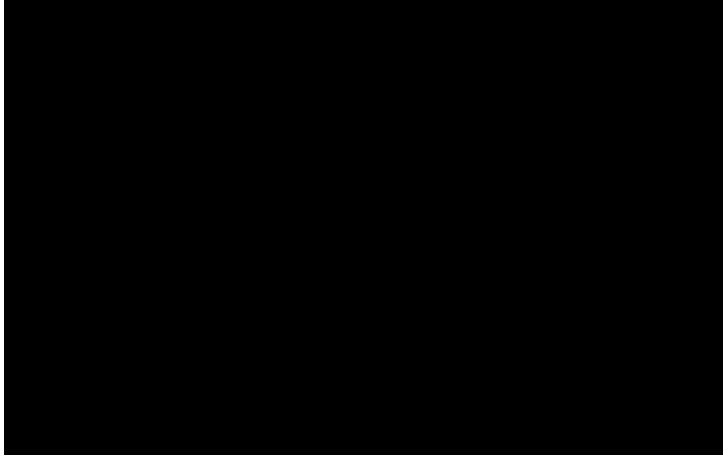
Power supply:	12 V DC ±10% [Plug polarity: ⊖—◉—⊕] Less than 15 Watts
Usable condition:	Temperature 0 to +40°C; +32 to +104°F, Humidity 5–95% (At no condensation)
Dimension:	Approximately 232 (W) × 38 (H) × 168 (D) mm; 9.1 (W) × 1.5 (H) × 6.6 (D) in (projections not included)
Weight:	Approximately 0.8 kg; 28 oz (without the supplied accessories)
Regulatory Compliance:	FCC Part15 Subpart B/Canada ICES-003 [USA-11] EN55022/EN55024/EN61000-3-2/EN61000-3-3 [EUR-12], [EUR-14]
Interface:	LEDs (PWR, MSG, V/RoIP, LAN, USB) Buttons (UPDATE, INIT) [USB] port (USB 2.0) ×2

■ Communication Interfaces

Interface:	[LAN] port (RJ-45 type) × 4 (Auto MDI/MDI-X) • IEEE802.3/10BASE-T • IEEE802.3u/100BASE-TX • IEEE802.3ab/1000BASE-T [CONSOLE] port (RJ-11 type) × 1 • RS-232C
Communication rate:	[LAN] port 10/100/1000 Mbps (Automatic switching, Full-Duplex)

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

How the World Communicates



A7125-3EX-10
 Jun. 2022

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