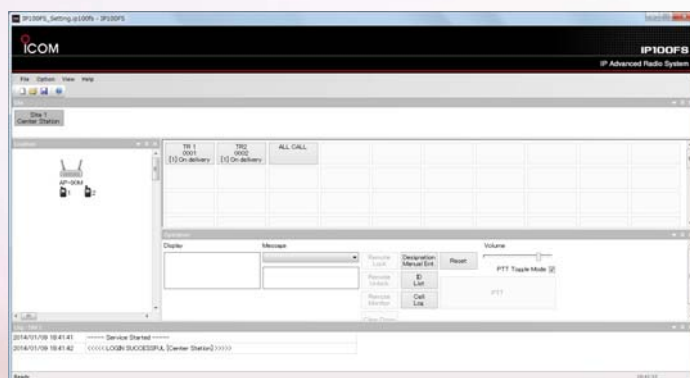# IP Advanced Radio System

IP100H / IP1000C / IP100FS Demonstration Setup Guide

Icom Inc.

OUTLINE

This guide is designed to provide demonstration setup guide about Icom's IP ADVANCED RADIO SYSTEM, based on the IP100H's firmware Revision 1.02 and IP1000C's firmware Revision 1.02.

If you have any questions about this guide, please contact your local Icom distributors.

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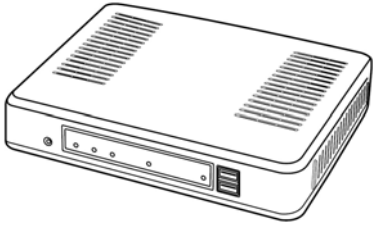IDAS is a trademark of Icom Incorporated.
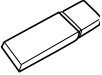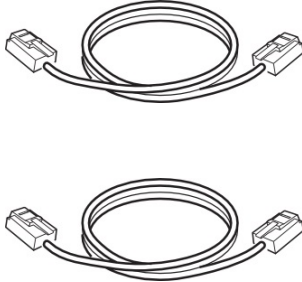
TABLE OF CONTENTS

SECTION 1   REQUIRED EQUIPMENT

The following equipment is required to demonstrate the system.

IP1000C	IP100H (2 units)	**Access point** • IEEE802.11a/g • Recommendation: Optional AP-90M
PC With one of the following OSs installed. • Windows® 8 (32/64bit) • Windows® 7 (32/64bit) • Windows Vista® (32bit) (Home Premium / Professional / Ultimate (or equivalent) editions are supported.)	IP100FS	LAN cable (2 cables)
CLONING CABLES **(For IP100H, both cables are required)** • OPC-2144 • OPC-478UC	**CLONING SOFTWARE** **(For IP100H)** CS-IP100H	

SECTION 2   SETTING EXAMPLES

2-1   STAND ALONE NETWORK CONNECTION AND IP ADDRESS SETTINGS

Set an access point, PC, IP1000C and IP100H using the following steps.

IMPORTANT! We recommend that you connect the access point, IP1000C and PC in a standalone configuration. If you connect them to your local network with the following connection settings, your local network may not operate correctly. (IP addresses may overlap.)

STEP 1: CONNECTION EXAMPLE

STEP 2: ACCESS POINT SETTINGS

STEP 3: IP1000C SETTINGS

STEP 4: IP100H SETTINGS

STEP 5: DEMONSTRATION

STEP 1 ➡ STEP 2 ➡ STEP 3 ➡ STEP 4 ➡ STEP 5

STEP 1: CONNECTION EXAMPLE
See each equipment's instruction manual for connection details.

LAN cable

[LAN]   **[LAN 2]**   **[LAN 1]**   **[LAN]**

Access point
IP address: 192.168.0.50
Subnet mask: 255.255.255.0

IP1000C
IP address: 192.168.0.1
Subnet mask: 255.255.255.0
DHCP Server: Enable

PC
IP address: 192.168.0.70
Subnet mask: 255.255.255.0

IP100H (TR 2)
DHCP Client: Enable

IP100H (TR 1)
DHCP Client: Enable

STEP 1 ⇨ **STEP 2** ⇨ STEP 3 ⇨ STEP 4 ⇨ STEP 5
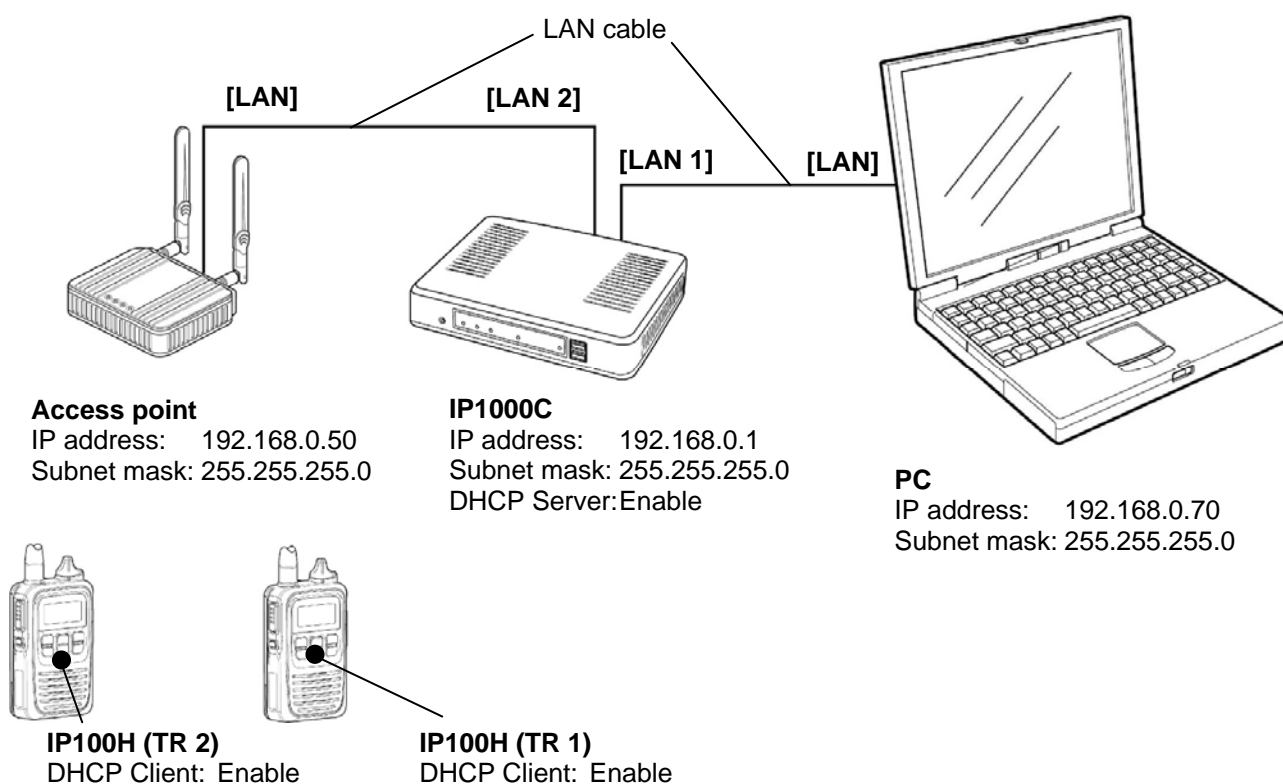
STEP 2: ACCESS POINT SETTINGS

Set your access point's **IP address** to **192.168.0.50**, and **SSID** to **WAVEMASTER-0**.

IMPORTANT! If you turn ON the Hide SSID function when using IEEE802.11a, the IP100Hs may not connect to the access point.

[RECOMMENDATION]
We recommend that you set the access point's authentication as follows:
For example:
• Authentication: WPA-PSK·WPA2-PSK
• Encryption Type: TKIP·AES
• PSK: 5cf97dgh6

STEP 1 ⇨ STEP 2 ⇨ **STEP 3** ⇨ STEP 4 ⇨ STEP 5

STEP 3: IP1000C SETTINGS

Setting steps are as follows.
STEP 3-1 The DHCP Server settings
STEP 3-2 Common settings
STEP 3-3 The IP100H (TR 1) settings
STEP 3-4 The IP100H (TR 2) settings

STEP 3-1 The DHCP Server settings

▼ Network Settings
  IP Address
  DHCP Server ———————→ Click
  Static Routing

DHCP Server

DHCP Server

DHCP Server:	○ Disable ◉ Enable ——→ Select
IP Pool Start Address:	192.168.0.10
Pool Size:	128
Subnet Mask:	255.255.255.0
Lease Time:	72 hours

Apply   Reset ———————→ Click

DHCP Server

Reboot   A reboot is required to apply all the new settings. ———→ Click

STEP 3-2 Common settings

Common Settings
Wireless LAN
ID List
Messages
Status
Common Settings

Click

Common Settings (Tenant1)

Common Settings

No.: 1

Wireless LAN
Wireless LAN: Transceiver's Setting

Common Settings
ID List: Disable
Message List: Disable

Click

Apply   Reset

Common Settings (Tenant1)

Common Setting List

No.	Wireless LAN	ID List Number	Common Message Group		
1	Transceiver's Setting	Disable	Disable	Edit	Delete

Delete All

Confirm

STEP 3-3 The IP100H (TR 1) settings

Click

Transceiver Registration (Tenant1)

Reboot the transceiver if you change the settings on this page.

Transceiver Settings

TRX No.:	1
Transceiver Model:	IP100H
Name:	Sales1
Unit ID:	0001

Security

Password:	iptrx

Connection Port

Transceiver Port Number:	30000
Server Port Number:	30000

Common Settings

Group:	1

Enter

Apply Reset

Click

STEP 3-4 The IP100H (TR 2) settings

Transceiver Registration (Tenant1)

Reboot the transceiver if you change the settings on this page.

Transceiver Settings

TRX No.:	2
Transceiver Model:	IP100H
Name:	Sales2
Unit ID:	0002

Security

Password:	iptrx

Connection Port

Transceiver Port Number:	30002
Server Port Number:	30002

Common Settings

Group:	1

Enter

Apply Reset

Click

[Confirm the IP100H (TR 1 and TR 2) settings]

Transceiver Setting Entry List

TRX No.	Transceiver Model	Name	Unit ID	Connection Port Transceiver	Server	Group		
1	IP100H	Sales1	0001	30000	30000	1	Edit	Delete
2	IP100H	Sales2	0002	30002	30002	1	Edit	Delete

Confirm

| STEP 1 | ➡ | STEP 2 | ➡ | STEP 3 | ➡ | **STEP 4** | ➡ | STEP 5 |

STEP 4: IP100H SETTINGS (A CS-IP100H is necessary to set up the IP100H)

BEFORE you use a CS-IP100H, the following procedures are required. See the CS-IP100H and OPC-478UC instruction manuals for setting and installation details.
• Install the CS-IP100H (Cloning software)
• Install the OPC-478UC (Cloning cable)'s USB driver
• Connect the OPC-478UC and the IP100H
• Run the CS-IP100H

The setting steps are as follows:
STEP 4-1 TR 1 settings
STEP 4-2 TR 2 settings

STEP 4-1 TR 1 settings

IP100H
  Wireless LAN Settings
  Provisioning Server Settings

Wireless LAN Settings

Encryption	
SSID	WAVEMASTER-0
Authentication	WPA-PSK/WPA2-PSK
Encryption Type	TKIP/AES
PSK	*********

Enter the same SSID as the access point

Select

Enter the same PSK as the access point
(Enter "5cf97dgh6" here)

IP100H
  Wireless LAN Settings
  Provisioning Server Settings

Provisioning Server Settings

Provisioning Server Settings	
IP Address	192.168.0.1
TRX No.	1
Password	*****

IP1000C's setting screen

▼ Network Settings
  IP Address
  DHCP Server
  Static Routing

IP Address

IP Address

IP Address: 192.168.0.1
Subnet Mask: 255.255.255.0

▼ Transceiver Settings
  Transceiver Status
  Transceiver Registration
  Transceiver Settings

Transceiver Registration (Tenant1)

Reboot the transceiver if you change the settings on this page.

Transceiver Settings

TRX No.: 1
Transceiver Model: IP100H
Name: Sales1
Unit ID: 0001
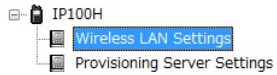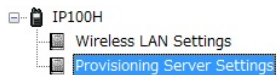**Security**
Password: iptrx

STEP 4-2 TR 2 settings

IP100H
  Wireless LAN Settings
  Provisioning Server Settings

Wireless LAN Settings	
Encryption	
SSID	WAVEMASTER-0
Authentication	WPA-PSK/WPA2-PSK
Encryption Type	TKIP/AES
PSK	*********

Enter the same SSID as the access point

Select

Enter the same PSK as the access point
(Enter "5cf97dgh6" here)

IP100H
  Wireless LAN Settings
  Provisioning Server Settings

Provisioning Server Settings	
Provisioning Server Settings	
IP Address	192.168.0.1
TRX No.	2
Password	*****

IP1000C's setting screen

▼ Network Settings
  IP Address
  DHCP Server
  Static Routing

IP Address

IP Address

IP Address: 192.168.0.1
Subnet Mask: 255.255.255.0

▼ Transceiver Settings
  Transceiver Status
  Transceiver Registration
  Transceiver Settings

Transceiver Registration (Tenant1)

Reboot the transceiver if you change the settings on this page.

Transceiver Settings

TRX No.: 2
Transceiver Model: IP100H
Name: Sales2
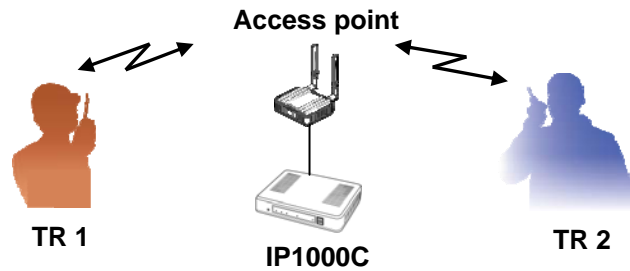Unit ID: 0002
Security
Password: iptrx

| STEP 1 | STEP 2 | STEP 3 | STEP 4 | **STEP 5** |

STEP 5: DEMONSTRATION [Talking between TR 1 and TR 2]

Access point

TR 1　　　**IP1000C**　　　**TR 2**

(1) Turn ON the IP100H's power (TR 1 and TR 2).

> **NOTE:** When connection is finished, 🛜 icon appears on the display.
> If the 🛜 icon does not appear on the display, check the following items.
> • Check the access point setting.
> • Check the IP100H's cloning setting.
> • Check the IP1000C's setting.

(2) Hold down TR 1's **[PTT]**, and then speak into the microphone at a normal voice level.
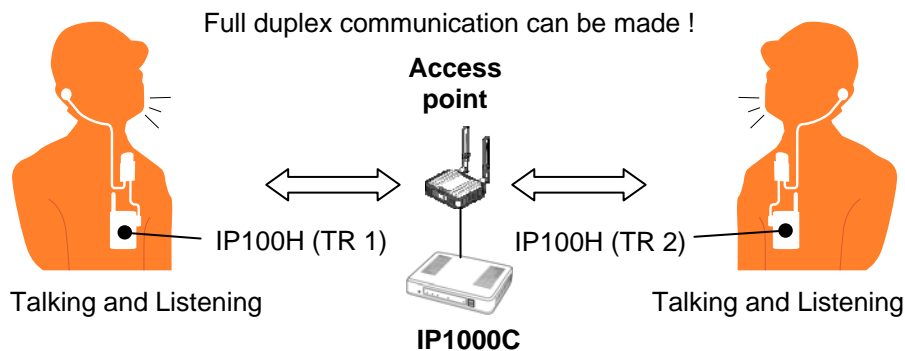Your voice is heard from TR 2's speaker.
After speaking, release **[PTT]** to listen.
(3) Hold down TR 2's **[PTT]**, and then speak into the microphone at a normal voice level.
Your voice is heard from TR 1's speaker.
After speaking, release **[PTT]** to listen.

CONVENIENT!
When you use the IP100H with optional HM-153LS or HM-166LS EARPHONE-MICROPHONE, you can use the IP100H in hand-free operation (full duplex mode).

Full duplex communication can be made !

Access point

IP100H (TR 1)　　　IP100H (TR 2)

Talking and Listening　　　Talking and Listening

IP1000C

2-2 IP NETWORK CONNECTIONS AND SETTING EXAMPLES

If you want to connect the IP ADVANCED SYSTEM to an existing IP network, set an access point, PC, IP1000C and IP100H as shown in the following steps.

IMPORTANT! Two static IP addresses are required for setting of the access point and the IP1000C. Ask your system administrator for details for about the IP addresses.
If another DHCP server is already working in the IP network, turn OFF the IP1000C's DHCP server function.

STEP 1: IP1000C'S IP ADDRESS SETTING

STEP 2: CONNECTION EXAMPLE

STEP 3: ACCESS POINT SETTINGS

STEP 4: IP1000C SETTINGS

STEP 5: IP100H SETTINGS

STEP 6: DEMONSTRATION

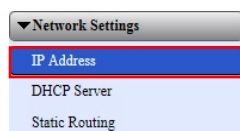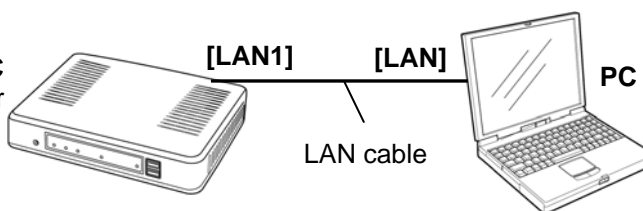**STEP 1** ▶ STEP 2 ▶ STEP 3 ▶ STEP 4 ▶ STEP 5 ▶ STEP 6

STEP1: IP1000C'S IP ADDRESS SETTING
Before you connect the IP1000C to an IP network, ask your system administrator for the IP1000C's IP address.
Connect a PC and the IP1000C via a LAN cable, and then enter it into the field as follow.

IP1000C [LAN1] [LAN] **PC**
Ask your system administrator for the IP address and subnet mask.
LAN cable

▼ Network Settings
IP Address ——— Click
DHCP Server
Static Routing

IP Address

IP Address

IP Address: ——— Enter
Subnet Mask: 255.255.255.0 ——— Enter

Apply Reset ——— Click

IP Address

Reboot A reboot is required to apply all the new settings. ——— Click

STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6

STEP2: CONNECTION EXAMPLE

See each equipment's instruction manual for connection details.

Access point
Ask your system administrator for the IP address and subnet mask.

IP1000C
Ask your system administrator for the IP address and subnet mask.

PC
DHCP Client: Enable

IP100H (TR 1)
DHCP Client: Enable

IP100H (TR 2)
DHCP Client: Enable
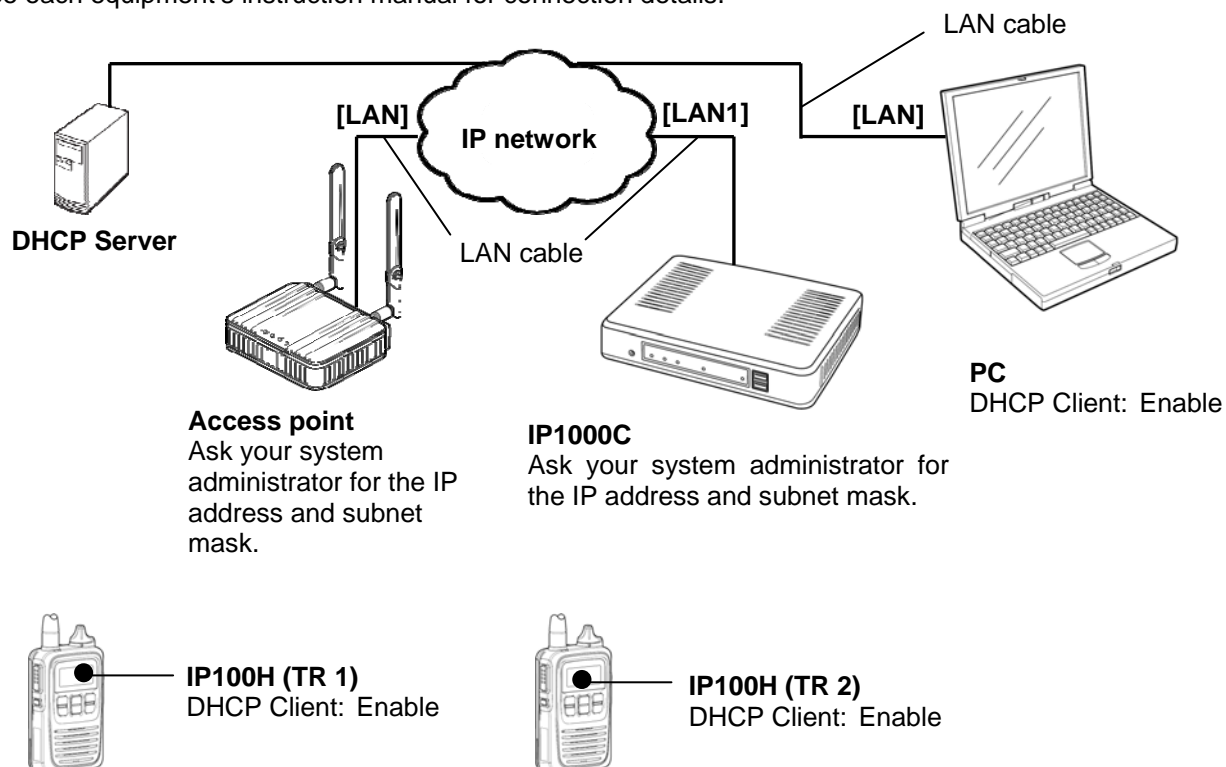
STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6

STEP3: ACCESS POINT SETTINGS

Ask your system administrator for the access point's IP address, and then enter it into the access point field, and then set the **SSID** to **WAVEMASTER-0**.

IMPORTANT! If you turn ON the Hide SSID function on IEEE802.11a, IP100H may not connect to the access point.

[RECOMMENDATION]
We recommend that you set the access point's authentication as follows:
For example:
• Authentication: WPA-PSK·WPA2-PSK
• Encryption Type: TKIP·AES
• PSK: 5cf97dgh6

STEP 1 ▶ **STEP 2** ▶ **STEP 3** ▶ **STEP 4** ▶ **STEP 5** ▶ **STEP 6**

STEP 4: IP1000C SETTINGS

The setting steps are as follows:
STEP 4-1 The DHCP Server confirming
STEP 4-2 Common settings
STEP 4-3 The IP100H (TR 1) setting
STEP 4-4 The IP100H (TR 2) setting

STEP 4-1 The DHCP Server confirming
If another DHCP server is already working in the IP network, confirm to turn OFF the IP1000C's DHCP server function as follows.

▼ Network Settings
 IP Address
 DHCP Server ──────────────────────► Click
 Static Routing

DHCP Server

DHCP Server

DHCP Server: ◉ Disable ○ Enable ──────► Confirm

STEP 4-2 Common settings

▼ Common Settings
 Wireless LAN
 ID List
 Messages
 Status
 Common Settings ──────────────────► Click

Common Settings (Tenant1)

Common Settings

No.: [1 ✔]
Wireless LAN
 Wireless LAN: [Transceiver's Setting ✔]
Common Settings
 ID List: [Disable ✔]
 Message List: [Disable ✔]

[Apply] [Reset] ──────────────────► Click

Common Settings (Tenant1)

Common Setting List

No.	Wireless LAN	ID List Number	Common Message Group		
1	Transceiver's Setting	Disable	Disable	Edit	Delete

[Delete All]

──────────────────► Confirm

STEP 4-3 The IP100H (TR 1) settings

▼ Transceiver Settings
Transceiver Status
Transceiver Registration
Transceiver Settings

Click

Transceiver Registration (Tenant1)

Reboot the transceiver if you change the settings on this page.

Transceiver Settings

TRX No.:	1
Transceiver Model:	IP100H
Name:	Sales1
Unit ID:	0001

Security

Password:	iptrx

Connection Port

Transceiver Port Number:	30000
Server Port Number:	30000

Common Settings

Group:	1

Enter

Apply   Reset

Click

STEP 4-4 The IP100H (TR 2) settings

Transceiver Registration (Tenant1)

Reboot the transceiver if you change the settings on this page.

Transceiver Settings

TRX No.:	2
Transceiver Model:	IP100H
Name:	Sales2
Unit ID:	0002

Security

Password:	iptrx

Connection Port

Transceiver Port Number:	30002
Server Port Number:	30002

Common Settings

Group:	1

Enter

Apply   Reset

Click

[Confirm the IP100H (TR 1 and TR 2) settings]

Transceiver Setting Entry List

TRX No.	Transceiver Model	Name	Unit ID	Connection Port		Group		
				Transceiver	Server			
1	IP100H	Sales1	0001	30000	30000	1	Edit	Delete
2	IP100H	Sales2	0002	30002	30002	1	Edit	Delete

Confirm

STEP 1 ▸ **STEP 2** ▸ **STEP 3** ▸ **STEP 4** ▸ **STEP 5** ▸ **STEP 6**

STEP 5: IP100H SETTINGS (A CS-IP100H is necessary to set up the IP100H)

The setting steps are as follows.
STEP 5-1 TR 1 settings
STEP 5-2 TR 2 settings

STEP 5-1 TR 1 settings

IP100H
  Wireless LAN Settings
  Provisioning Server Settings

Wireless LAN Settings	
Encryption	
SSID	WAVEMASTER-0
Authentication	WPA-PSK/WPA2-PSK
Encryption Type	TKIP/AES
PSK	*********

Enter the same SSID as the access point

Select

Enter the same PSK as the access point
(Enter "5cf97dgh6" here)

IP100H
  Wireless LAN Settings
  Provisioning Server Settings

Provisioning Server Settings	
Provisioning Server Settings	
IP Address	
TRX No.	1
Password	*****
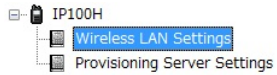
IP1000C's setting screen

NOTE: Ask your system administrator for the IP1000C's IP address.

▼ Network Settings
  IP Address
  DHCP Server
  Static Routing

IP Address

IP Address

IP Address:
Subnet Mask:

▼ Transceiver Settings
  Transceiver Status
  Transceiver Registration
  Transceiver Settings

Transceiver Registration (Tenant1)

Reboot the transceiver if you change the settings on this page.

Transceiver Settings

TRX No.: 1
Transceiver Model: IP100H
Name: Sales1
Unit ID: 0001
Security
Password: iptrx

STEP 5-2 TR 2 settings

```
⊟ 🔋 IP100H
   ├─ 📄 Wireless LAN Settings
   └─ 📄 Provisioning Server Settings
```

Wireless LAN Settings	
Encryption	
SSID	WAVEMASTER-0
Authentication	WPA-PSK/WPA2-PSK
Encryption Type	TKIP/AES
PSK	*********

Enter the same SSID as the access point

Select

Enter the same PSK as the access point
(Enter "5cf97dgh6" here)

```
⊟ 🔋 IP100H
   ├─ 📄 Wireless LAN Settings
   └─ 📄 Provisioning Server Settings
```
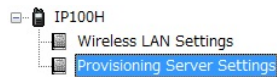
Provisioning Server Settings	
Provisioning Server Settings	
IP Address	
TRX No.	2
Password	*****

IP1000C's setting screen

NOTE: Ask your system administrator for the IP1000C's IP address.

▼ Network Settings
IP Address
DHCP Server
Static Routing

IP Address

IP Address

IP Address:
Subnet Mask:

▼ Transceiver Settings
Transceiver Status
Transceiver Registration
Transceiver Settings

Transceiver Registration (Tenant1)

Reboot the transceiver if you change the settings on this page.

Transceiver Settings

TRX No.: 2
Transceiver Model: IP100H
Name: Sales2
Unit ID: 0002
Security
Password: iptrx

STEP 1 ▶ STEP 2 ▶ STEP 3 ▶ STEP 4 ▶ STEP 5 ▶ **STEP 6**

STEP 6: DEMONSTRATION [Talk between TR 1 and TR 2]

(1) Turn ON the IP100H's power (TR 1 and TR 2).

> **NOTE:** When connection is finished, 🛜 icon appears on the display.
> If the 🛜 icon does not appear on the display, check the following items.
> • Check the access point setting.
> • Check the IP100H's cloning setting.
> • Check the IP1000C's setting.

(2) Hold down TR 1's **[PTT]**, and then speak into the microphone at a normal voice level.
Your voice is heard from TR 2's speaker.
After speaking, release **[PTT]** to listen.

(3) Hold down TR 2's **[PTT]**, and then speak into the microphone at a normal voice level.
Your voice is heard from TR 1's speaker.
After speaking, release **[PTT]** to listen.

CONVENIENT!
When you use the IP100H with optional HM-153LS or HM-166LS EARPHONE-MICROPHONE, you can use the IP100H in hand-free operation (full duplex mode).

2-3   HOW TO SET AND USE THE ID LIST

BEFORE you set the ID list, you must first complete the steps in 2-1 STAND ALONE NETWORK CONNECTION AND IP ADDRESS or 2-2 IP NETWORK CONNECTIONS AND SETTING EXAMPLES.

The IP1000C has an ID list function. If you want to initiate a group call or an individual call, register the name and ID into the list.

STEP 1: GROUP ID SETTINGS (IF REQUIRED)

STEP 2: ENTER THE DESTINATION ID

STEP 3: ID LIST GROUP NUMBER SETTING

STEP 4: USE ID LIST SETTING

STEP 5: DEMONSTRATION

| STEP 1 | STEP 2 | STEP 3 | STEP 4 | STEP 5 |

STEP 1: GROUP ID SETTINGS (IF REQUIRED)

NOTE: If you want to use the IP ADVANCED SYSTEM to make only individual calls, skip this step and go to STEP 2.

Set the ID list group to make group calls.
Enter the group call number and select the group members into this step.

(Setting example)
• Group name: Group1
• Group number: 0001
• Group member: 0001 (Sales1), 0002 (Sales2)

Destination Settings	Click

Destination Settings (Tenant1)

Destination Setting

No.:	1 ⌄	
Name:	Group1	Enter the Group name
Call Type:	Group ⌄	Select
Destination ID:	0001	Enter the Group call number

Destination Group

Communication Type: ○ Simplex ● Full-Duplex

Transceiver Selection

☑ 0001(Sales1) ☑ 0002(Sales2) ← Select the Group member

Apply   Reset ← Click

Destination Settings (Tenant1)

List of Destination Setting Entries (Group Call)   Confirm

No.	Name	Destination ID	Number of Transceivers		
1	Group1	0001	2	Edit	Delete

STEP 1 ➡ **STEP 2** ➡ STEP 3 ➡ STEP 4 ➡ STEP 5

STEP 2: ENTER THE DESTINATION ID

Select the individual and group numbers in the ID list.
If you want to enter two or more destination IDs, repeat STEP 2.

(Setting example)

No.	Name	Call Type	Destination ID
1	Sales1	Individual	0001
2	Sales2	Individual	0002
3	Group call	Group	0001

▼ Common Settings
Wireless LAN
ID List ⟶ Click
Messages
Status
Common Settings

ID List (Tenant1)

Reboot the transceiver if you change the settings on this page.

ID List Common Settings ⟶ Select

ID List Common Setting Number: [1 ▾] * If you change this item, the screen automatically updates to the selected list.

ID List (Tenant1)

ID List

No.: [1 ▾]
Name: [Sales1] ⟵ Enter the ID name
Call Type: [Individual ▾] ⟵ Select
Destination ID: [0001] ⟶ Enter the Individual ID number

[Apply] [Reset] ⟵ Click

Repeat the above settings twice for entering No. 2 and No. 3 destination IDs.

ID List (Tenant1)

ID List Entries ⟶ Confirm

No.	Name	Call Type	Destination ID/Phone Number		
1	Sales1	Individual	0001	Edit	Delete
2	Sales2	Individual	0002	Edit	Delete
3	Group call	Group	0001	Edit	Delete

[Delete All]

STEP 1 ➡ STEP 2 ➡ **STEP 3** ➡ STEP 4 ➡ STEP 5

STEP 3: ID LIST GROUP NUMBER SETTING

Select the same ID list group number that was set in step 2, in the ID List.

▼ Common Settings
Wireless LAN
ID List
Messages
Status
Common Settings

ID List (Tenant1)

Reboot the transceiver if you change the settings on this page.

ID List Common Settings

ID List Common Setting Number: [1 ▼] If you change this item, the screen automatically updates to the selected list.

For demonstration purposes, enter the same number.

▼ Common Settings
Wireless LAN
ID List
Messages
Status
Common Settings

Click

Common Settings (Tenant1)

Reboot the transceiver if you change the settings on this page.

Common Setting List

No.	Wireless LAN	ID List Number	Common Message Group		
1	Transceiver's Setting	Disable	Disable	Edit	Delete

Delete All

Click

Common Settings

No.:	[1 ▼]
Wireless LAN	
Wireless LAN:	[Transceiver's Setting ▼]
Common Settings	
ID List:	[1 ▼]
Message List:	[Disable ▼]

Select the common settings number

Select

Apply Reset

Click

Common Settings (Tenant1)

Reboot the transceiver if you change the settings on this page.

Common Setting List

No.	Wireless LAN	ID List Number	Common Message Group		
1	Transceiver's Setting	1	Disable	Edit	Delete

Confirm

STEP 1 ➡ STEP 2 ➡ STEP 3 ➡ **STEP 4** ➡ STEP 5

STEP 4: USE ID LIST SETTING

The setting steps are as follows.
STEP 4-1 The IP100H (TR1) settings
STEP 4-2 The IP100H (TR2) settings.

STEP 4-1 The IP100H (TR1) settings

Click

Select

Select

Click

STEP 4-2 The IP100H (TR2) settings

Select

Select

Click

Transceiver Setting List

Transceiver Model	Name	Unit ID	Use ID List	Area Call	Message	Status	Option Key
IP100H	Sales1	0001	Enable	Disable	Disable	Disable	Disabled
IP100H	Sales2	0002	Enable	Disable	Disable	Disable	Disabled

Confirm

STEP 1 ➡ STEP 2 ➡ STEP 3 ➡ STEP 4 ➡ **STEP 5**

STEP 5: DEMONSTRATION

Push
📖
Enter the ID list mode

Push
[CLR]
Exit the ID list mode

Push
📖

Group
0001
Group Call

Push
📖

Individual
0001
Sales1

Push
📖

All
All

Push
📖

Push
△ ▽

Next or previous
group numbers
appear.

Push
△ ▽

Next or previous
individual numbers
appear.

Push
△ ▽

While holding down **[PTT]**, speak into the microphone at a normal voice level.
You can communicate with selected ID's IP100Hs.

2-4   HOW TO ENTER AND SEND A MESSAGE

BEFORE you enter a message, you must first complete the steps in 2-1 STAND ALONE NETWORK CONNECTION AND IP ADDRESS or 2-2 IP NETWORK CONNECTIONS AND SETTING EXAMPLES.

IP1000C has a message function. The message function is convenient to send messages by only pushing [PTT], without speaking.

STEP 1: GROUP ID SETTINGS (IF REQUIRED)

STEP 2: ENTER THE DESTINATION ID

STEP 3: SELECT THE MESSAGE GROUP NUMBER AND ENTER THE MESSAGE

STEP 4: SELECT THE ID AND MESSAGE LIST

STEP 5: USE ID LIST AND MESSAGE SETTING

STEP 6: DEMONSTRATION

STEP 1	▶	STEP 2	▶	STEP 3	▶	STEP 4	▶	STEP 5	▶	STEP 6

STEP 1: GROUP ID SETTINGS (IF REQUIRED)

NOTE: If you want to use the IP ADVANCED SYSTEM to make only individual calls, skip this step and go to STEP 2.

Set the ID list group to make group calls.
Enter the group call number and select the group members into this step.

(Setting example)
• Group name: Group1
• Group number: 0001
• Group member: 0001 (Sales1), 0002 (Sales2)

Field	Value	
Destination Settings		Click

Destination Settings (Tenant1)

Destination Setting

No.:	1	
Name:	Group1	Enter the Group name
Call Type:	Group	Select
Destination ID:	0001	Enter the Group call number

Destination Group

Communication Type:	○ Simplex ⦿ Full-Duplex	
Transceiver Selection		
☑ 0001(Sales1) ☑ 0002(Sales2)		Select the Group member

Apply   Reset   Click

Destination Settings (Tenant1)

List of Destination Setting Entries (Group Call)

No.	Name	Destination ID	Number of Transceivers		
1	Group1	0001	2	Edit	Delete

Confirm

STEP 1 ▶ **STEP 2** ▶ STEP 3 ▶ STEP 4 ▶ STEP 5 ▶ STEP 6

STEP 2: ENTER THE DESTINATION ID

Select the individual and group numbers in the ID list.
If you want to enter two or more destination IDs, repeat STEP 2.

(Setting example)

No.	Name	Call Type	Destination ID
1	Sales1	Individual	0001
2	Sales2	Individual	0002
3	Group call	Group	0001

▼ Common Settings

Wireless LAN

ID List ←——————————— Click

Messages

Status

Common Settings

ID List (Tenant1)

Reboot the transceiver if you change the settings on this page.

ID List Common Settings ←——————————— Select

ID List Common Setting Number: [1 ▾] * If you change this item, the screen automatically updates to the selected list.

ID List (Tenant1)

ID List

No.: [1 ▾]
Name: [Sales1] ←——————————— Enter the ID name
Call Type: [Individual ▾] ←——————————— Select
Destination ID: [0001] ←——————————— Enter the Individual ID number

[Apply] [Reset] ←——————————— Click

Repeat the above settings twice for entering No. 2 and No. 3 destination IDs.

ID List (Tenant1)

ID List Entries ←——————————— Confirm

No.	Name	Call Type	Destination ID/Phone Number		
1	Sales1	Individual	0001	Edit	Delete
2	Sales2	Individual	0002	Edit	Delete
3	Group call	Group	0001	Edit	Delete

[Delete All]

STEP 1 ▶ STEP 2 ▶ **STEP 3** ▶ STEP 4 ▶ STEP 5 ▶ STEP 6

STEP 3: SELECT THE MESSAGE GROUP NUMBER AND ENTER THE MESSAGE
You select a message group number from 1 to 100, and enter up to 10 messages.

(Setting example)
• Message Group Number: 1
• Enter messages as follow.

No.	Fixed Message
1	Good morning
2	Thank you
3	Good bye
4	Hello!
5	Hot
6	Cold

▼ Common Settings

Wireless LAN
ID List
Messages   Click
Status
Common Settings

Messages (Tenant1)

Reboot the transceiver if you change the settings on this page.

Select the Message Group number

Message Group

Message Group Number: [1 ▼]   * If you change this item, the screen automatically updates to the selected list.

Messages

No.	Fixed Message
1	Good morning
2	Thank you
3	Good bye
4	Hello!
5	Hot
6	Cold
7	
8	
9	
10	

Enter the messages using PC's keyboard

Click

[Apply] [Reset]

STEP 1 ▶ STEP 2 ▶ STEP 3 ▶ **STEP 4** ▶ STEP 5 ▶ STEP 6

STEP 4: SELECT THE ID AND MESSAGE LIST

Select the same ID and Message Lists number that was set in steps 2 and 3.

For demonstration purposes, enter the same number.

Click

Click

Select the common settings number

Select

Select

Click

Confirm

STEP 1 ▶ STEP 2 ▶ STEP 3 ▶ STEP 4 ▶ **STEP 5** ▶ STEP 6

STEP 5: USE ID LIST AND MESSAGE SETTING

The setting steps are as follows.
STEP 5-1 The IP100H (TR1) settings
STEP 5-2 The IP100H (TR2) settings.

STEP 5-1 The IP100H (TR1) settings

STEP 5-2 The IP100H (TR2) settings

STEP 1 ▸ STEP 2 ▸ STEP 3 ▸ STEP 4 ▸ STEP 5 ▸ **STEP 6**

STEP 6: DEMONSTRATION

Push
FUNC
Enter the Message select mode

Push
CLR
Exit the Message select mode

Message
ALL Member 👥
Good morning

Push
△
▽

Next or previous messages appear.

Select a message

Push
📖
Enter the ID select mode

Push
CLR
Exit the ID select mode

All
All

Push
△
▽

Next or previous the IDs appear.

Select an ID

Push **[PTT]** to send the message, and display the status, as shown below.

NOTE: Audio signals cannot be sent at the same time.

Sending…

Send the message

2-5   HOW TO SET AND USE THE IP100FS

Set an access point, PC, IP1000C, IP100H, and IP100FS using the following steps.

IMPORTANT! We recommend that you connect the access point, IP1000C and PC in a standalone configuration. If you connect them to your local network with the following connection settings, your local network may not operate correctly. (IP addresses may overlap.)

STEP 1: CONNECTION EXAMPLE

STEP 2: ACCESS POINT SETTINGS

STEP 3: IP1000C SETTINGS

STEP 4: IP100H SETTINGS

STEP 5: IP100FS SETTINGS

STEP 6: DEMONSTRATION

STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6

STEP 1: CONNECTION EXAMPLE
See each equipment's instruction manual for connecting and setting details.
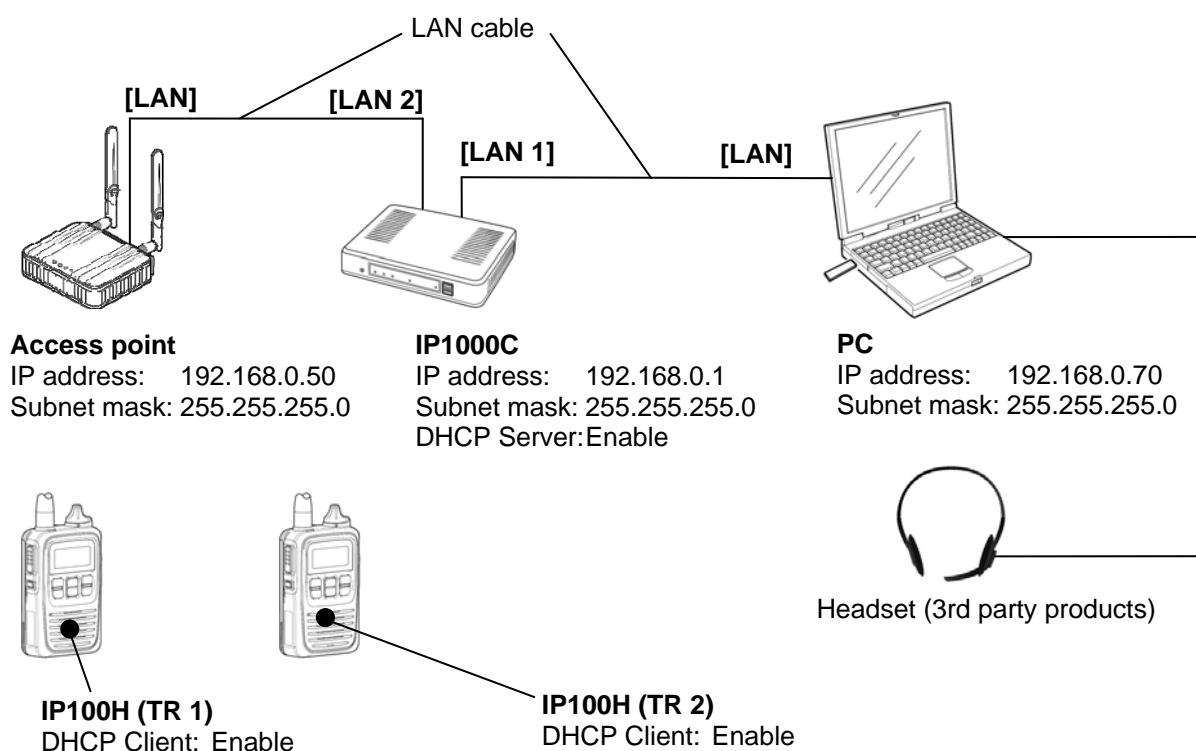
LAN cable

[LAN]   **[LAN 2]**

[LAN 1]   **[LAN]**

Access point
IP address: 192.168.0.50
Subnet mask: 255.255.255.0

IP1000C
IP address: 192.168.0.1
Subnet mask: 255.255.255.0
DHCP Server: Enable

PC
IP address: 192.168.0.70
Subnet mask: 255.255.255.0

Headset (3rd party products)

IP100H (TR 1)
DHCP Client: Enable

IP100H (TR 2)
DHCP Client: Enable

| STEP 1 | ▶ | **STEP 2** | ▶ | STEP 3 | ▶ | STEP 4 | ▶ | STEP 5 | ▶ | STEP 6 |

STEP 2: ACCESS POINT SETTINGS

Set your access point's **IP address** to **192.168.0.50**, and **SSID** to **WAVEMASTER-0**.

> **IMPORTANT!** If you turn ON the Hide SSID function when using IEEE802.11a, IP100H may not connect to the access point.

[RECOMMENDATION]
We recommend that you set the access point's authentication as follows:
For example:
• Authentication: WPA-PSK·WPA2-PSK
• Encryption Type: TKIP·AES
• PSK: 5cf97dgh6

| STEP 1 | ▶ | STEP 2 | ▶ | **STEP 3** | ▶ | STEP 4 | ▶ | STEP 5 | ▶ | STEP 6 |

STEP 3: IP1000C SETTINGS

The setting steps are as follows.
STEP 3-1 The DHCP Server settings
STEP 3-2 Common settings
STEP 3-3 Area Call settings
STEP 3-4 The IP100H (TR 1) settings
STEP 3-5 The IP100H (TR 2) settings
STEP 3-6 The IP100FS settings
STEP 3-7 Group ID settings (If required)
STEP 3-8 Enter the destination ID
STEP 3-9 Select the message group number and enter the message
STEP 3-10 Select the message list
STEP 3-11 Use ID list and message setting

STEP 3-1 The DHCP Server settings

Click

Select

Click

Click

STEP 3-2 Common settings

Click

Click

Confirm

STEP 3-3 Area Call settings

Click

Enter Area name

Enter the Access Point's BSSID

Click

[Confirm the Area name and BSSID settings]

Confirm

STEP 3-4 The IP100H (TR 1) settings

▼ Transceiver Settings

Transceiver Status

Transceiver Registration   →   **Click**

Transceiver Settings

Transceiver Registration (Tenant1)

Reboot the transceiver if you change the settings on this page.

Transceiver Settings

TRX No.:	1
Transceiver Model:	IP100H
Name:	Sales1 → **Enter**
Unit ID:	0001

Security

Password: iptrx

Connection Port

Transceiver Port Number: 30000

Server Port Number: 30000

Common Settings

Group: 1

[Apply] [Reset]   →   **Click**

STEP 3-5 The IP100H (TR 2) settings

Transceiver Registration (Tenant1)

Reboot the transceiver if you change the settings on this page.

Transceiver Settings

TRX No.:	2
Transceiver Model:	IP100H
Name:	Sales2 → **Enter**
Unit ID:	0002

Security

Password: iptrx

Connection Port

Transceiver Port Number: 30002

Server Port Number: 30002

Common Settings

Group: 1

[Apply] [Reset]   →   **Click**

[Confirm the IP100H (TR 1 and TR 2) settings]

Transceiver Setting Entry List

TRX No.	Transceiver Model	Name	Unit ID	Connection Port Transceiver	Server	Group		
1	IP100H	Sales1	0001	30000	30000	1	Edit	Delete
2	IP100H	Sales2	0002	30002	30002	1	Edit	Delete

→ **Confirm**

STEP 3-6 The IP100FS settings

Click

Transceiver Registration (Tenant1)

Reboot the transceiver if you change the settings on this page.

Transceiver Settings

TRX No.:	3	Select
Transceiver Model:	IP100FS	
Name:	Office	Enter
Unit ID:	0003	

Security

Password:	iptrx

Connection Port

Server Port Number:	30004

Common Settings

Group:	1

Apply   Reset   Click

[Confirm the IP100H (TR 1 and TR 2) and IP100FS settings]

Transceiver Setting Entry List

TRX No.	Transceiver Model	Name	Unit ID	Connection Port		Group		
				Transceiver	Server			
1	IP100H	Sales1	0001	30000	30000	1	Edit	Delete
2	IP100H	Sales2	0002	30002	30002	1	Edit	Delete
3	IP100FS	Office	0003	-	30004	1	Edit	Delete

Confirm

STEP 3-7 Group ID settings (If required)

NOTE: If you want to use the IP ADVANCED SYSTEM to make only individual calls, skip this step.

Set the ID list group to make group calls.
Enter the group call number and select the group members into this step.

(Setting example)
• Group name: Group1
• Group number: 0001
• Group member: 0001 (Sales1), 0002 (Sales2)

Click

Enter the Group name

Select

Enter the Group call number

Select the Group member

Click

Confirm

STEP 3-8 Enter the destination ID

Select the individual and group numbers in the ID list.
If you want to enter two or more destination IDs, repeat STEP 2.

(Setting example)

No.	Name	Call Type	Destination ID
1	Sales1	Individual	0001
2	Sales2	Individual	0002
3	Group call	Group	0001

Click

Select

Enter the ID name

Select

Enter the Individual ID number

Click

Repeat the above settings twice for entering No. 2 and No. 3 destination IDs.

Confirm

STEP 3-9 Select the message group number and enter the message

You select a message group number from 1 to 100, and enter up to 10 messages.

(Setting example)
• Message Group Number: 1
• Enter messages as follow.

No.	Fixed Message
1	Good morning
2	Thank you
3	Good bye
4	Hello!
5	Hot
6	Cold

▼Common Settings

Wireless LAN

ID List

Messages .... Click

Status

Common Settings

Messages (Tenant1)

Reboot the transceiver if you change the settings on this page.

Message Group

Message Group Number: [1 ▾] * If you change this item, the screen automatically updates to the selected list. .... Select the Message Group number

Messages

No.	Fixed Message
1	Good morning
2	Thank you
3	Good bye
4	Hello!
5	Hot
6	Cold
7	
8	
9	
10	

Enter the messages using PC's keyboard

[Apply] [Reset] .... Click

STEP 3-10 Select the ID and message lists

Select the same ID and Message Lists number that was set in 3-8 and 3-9.

For demonstration purposes, enter the same number.

Click

Click

Select the common settings number

Select

Select

Click

Confirm

STEP 3-11 Use ID and message setting

The setting steps are as follows.
STEP 3-11-1 The IP100H (TR1) settings
STEP 3-11-2 The IP100H (TR2) settings.

STEP 3-11-1 The IP100H (TR1) settings

▼ **Transceiver Settings**
Transceiver Status
Transceiver Registration
Transceiver Settings ——— **Click**

Transceiver Settings (Tenant1)
Reboot the transceiver if you change the settings on this page.
Transceiver Settings

Unit ID:	0001(Sales1) ∨ ——— **Select**
Destination ID	
Use ID List:	○ Disable ◉ Enable
First Call ID:	All ∨ ——— **Select**
Received Call Notification	
Volume:	10 ∨
Action:	Notification Beep ∨
Function Settings	
Communication Method:	○ Simplex ◉ Full-Duplex ——— **Select**
Priority Call:	◉ Disable ○ Enable
Area Call:	○ Disable ◉ Enable
Message:	○ Disable ◉ Enable First Message: 1 ∨
Status:	◉ Disable ○ Enable ——— **Select**

——— **Click**

Apply   Reset

STEP 3-11-2 The IP100H (TR2) settings

Transceiver Settings (Tenant1)
Reboot the transceiver if you change the settings on this page.
Transceiver Settings

Unit ID:	0002(Sales2) ∨ ——— **Select**
Destination ID	
Use ID List:	○ Disable ◉ Enable
First Call ID:	All ∨ ——— **Select**
Received Call Notification	
Volume:	10 ∨
Action:	Notification Beep ∨
Function Settings	
Communication Method:	○ Simplex ◉ Full-Duplex ——— **Select**
Priority Call:	◉ Disable ○ Enable
Area Call:	○ Disable ◉ Enable
Message:	○ Disable ◉ Enable First Message: 1 ∨
Status:	◉ Disable ○ Enable ——— **Select**

——— **Click**

Apply   Reset

Transceiver Setting List

Transceiver Model	Name	Unit ID	Use ID List	Area Call	Message	Status	Option Key
IP100H	Sales1	0001	Enable	Disable	Enable	Disable	Disabled
IP100H	Sales2	0002	Enable	Disable	Enable	Disable	Disabled

——— **Confirm**

STEP 1 ➡ **STEP 2** ➡ **STEP 3** ➡ **STEP 4** ➡ **STEP 5** ➡ **STEP 6**

STEP 4: IP100H SETTINGS (A CS-IP100H is necessary to set up the IP100H)

BEFORE you use a CS-IP100H, following procedures are required. See the CS-IP100H and OPC-478UC instruction manuals for setting and installing details.
• Install the CS-IP100H (Cloning software)
• Install the OPC-478UC (Cloning cable)'s USB driver
• Connect the OPC-478UC and the IP100H
• Run the CS-IP100H

The setting steps are as follows:
STEP 4-1 TR 1 settings
STEP 4-2 TR 2 settings

STEP 4-1 TR 1 settings

⊟ IP100H
　　 Wireless LAN Settings
　　 Provisioning Server Settings

Wireless LAN Settings	
Encryption	
SSID	WAVEMASTER-0
Authentication	WPA-PSK/WPA2-PSK
Encryption Type	TKIP/AES
PSK	*********

Enter the same SSID as the access point

Select

Enter the same PSK as the access point (Enter "5cf97dgh6" here)

⊟ IP100H
　　 Wireless LAN Settings
　　 Provisioning Server Settings

Provisioning Server Settings	
Provisioning Server Settings	
IP Address	192.168.0.1
TRX No.	1
Password	*****

IP1000C's setting screen

▼ Network Settings
　 IP Address
　 DHCP Server
　 Static Routing

IP Address

IP Address

IP Address: 192.168.0.1
Subnet Mask: 255.255.255.0

▼ Transceiver Settings
　 Transceiver Status
　 Transceiver Registration
　 Transceiver Settings

Transceiver Registration (Tenant1)

Reboot the transceiver if you change the settings on this page.

Transceiver Settings

TRX No.: 1
Transceiver Model: IP100H
Name: Sales1
Unit ID: 0001
Security
Password: iptrx

STEP 4-2 TR 2 settings

IP100H
└ Wireless LAN Settings
└ Provisioning Server Settings

Wireless LAN Settings	
Encryption	
SSID	WAVEMASTER-0
Authentication	WPA-PSK/WPA2-PSK
Encryption Type	TKIP/AES
PSK	*********

Enter the same SSID as the access point

Select

Enter the same PSK as the access point (Enter "5cf97dgh6" here)

IP100H
└ Wireless LAN Settings
└ Provisioning Server Settings

Provisioning Server Settings	
Provisioning Server Settings	
IP Address	192.168.0.1
TRX No.	2
Password	*****

IP1000C's setting screen

▼ Network Settings
IP Address
DHCP Server
Static Routing

IP Address

IP Address

IP Address: 192.168.0.1
Subnet Mask: 255.255.255.0

▼ Transceiver Settings
Transceiver Status
Transceiver Registration
Transceiver Settings

Transceiver Registration (Tenant1)

Reboot the transceiver if you change the settings on this page.

Transceiver Settings

TRX No.: 2
Transceiver Model: IP100H
Name: Sales2
Unit ID: 0002
Security
Password: iptrx

STEP 1 ▶ STEP 2 ▶ STEP 3 ▶ STEP 4 ▶ **STEP 5** ▶ STEP 6

STEP 5: IP100FS SETTINGS

IMPORTANT! Set the IP100FS's Windows® Firewall to permit before using IP100FS.

The setting steps are as follows.
STEP 5-1 Login to the IP100FS
STEP 5-2 IP100FS settings
STEP 5-3 Adding an access point icon
STEP 5-4 ID list setting
STEP 5-5 Message setting
STEP 5-6 One-touch button setting

STEP 5-1 Login the IP100FS

Click

Enter admin*

*Default setting

STEP 5-2 IP100FS settings

IP1000C's screen

Tenant Settings

Tenant Settings

Tenant

Tenant Number: 1
Tenant Name: Tenant1

▼Transceiver Settings
Transceiver Status
Transceiver Registration
Transceiver Settings

Transceiver Registration (Tenant1)

Reboot the transceiver if you change the settings on this page.

Transceiver Settings

TRX No.: 3
Transceiver Model: IP100FS
Name: Office
Unit ID: 0003
Security
Password: iptrx
Connection Port
Server Port Number: 30004
Common Settings
Group: 1

Apply   Reset

▼Network Settings
IP Address
DHCP Server
Static Routing

IP Address

IP Address

IP Address: 192.168.0.1
Subnet Mask: 255.255.255.0

Click

Select Show

Click

Settings

Common Settings | Site 1 | Site 2 | Site 3 |

⊟ **Site Button**
Show   Show
Name   Office
⊟ **Unit Setting**
Tenant ID   1
Unit ID   0003
Password   iptrx
Source Port   30004
Destination Address 192.168.0.1
Destination Port   30004
Registration Time(Sec) 60
TalkBack Timer(Sec)   5
TalkBack Lock   Enable
Volume   -36

OK   Cancel

40

STEP 5-3 Adding an access point icon in location window
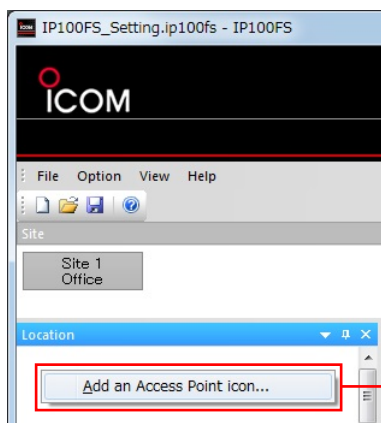
Right-click, and select
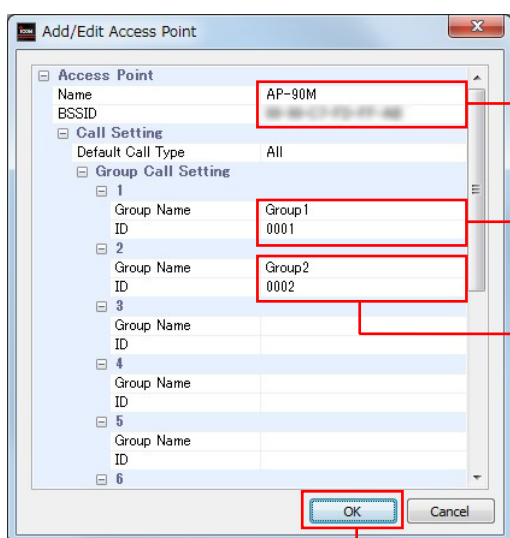
Enter the access point's name and BSSID

Enter (If necessary)

Enter (If necessary)
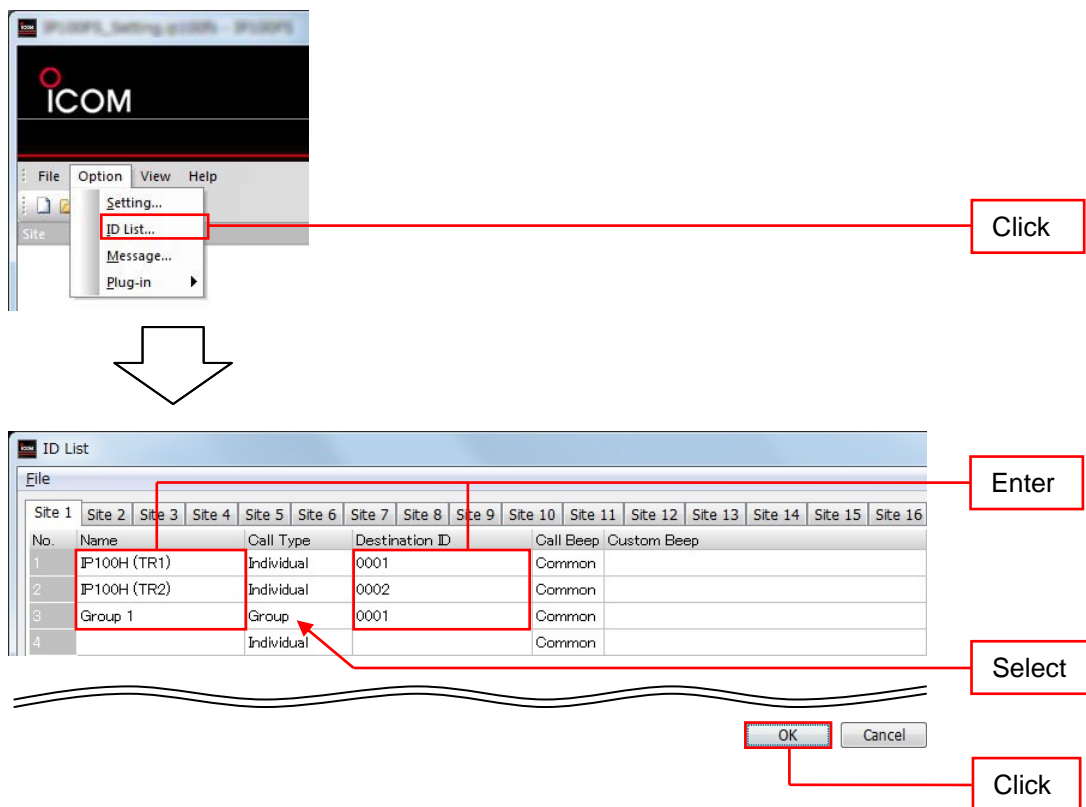
Click
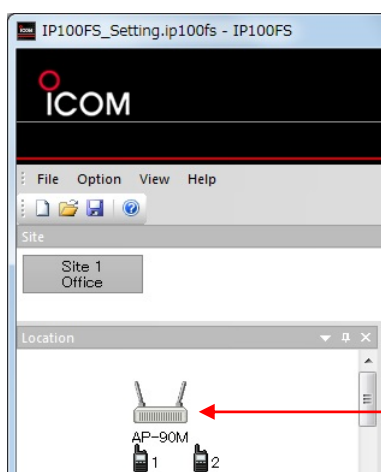
The added Access Point appears

The connected IP100Hs appear

STEP 5-4 ID list setting

Click
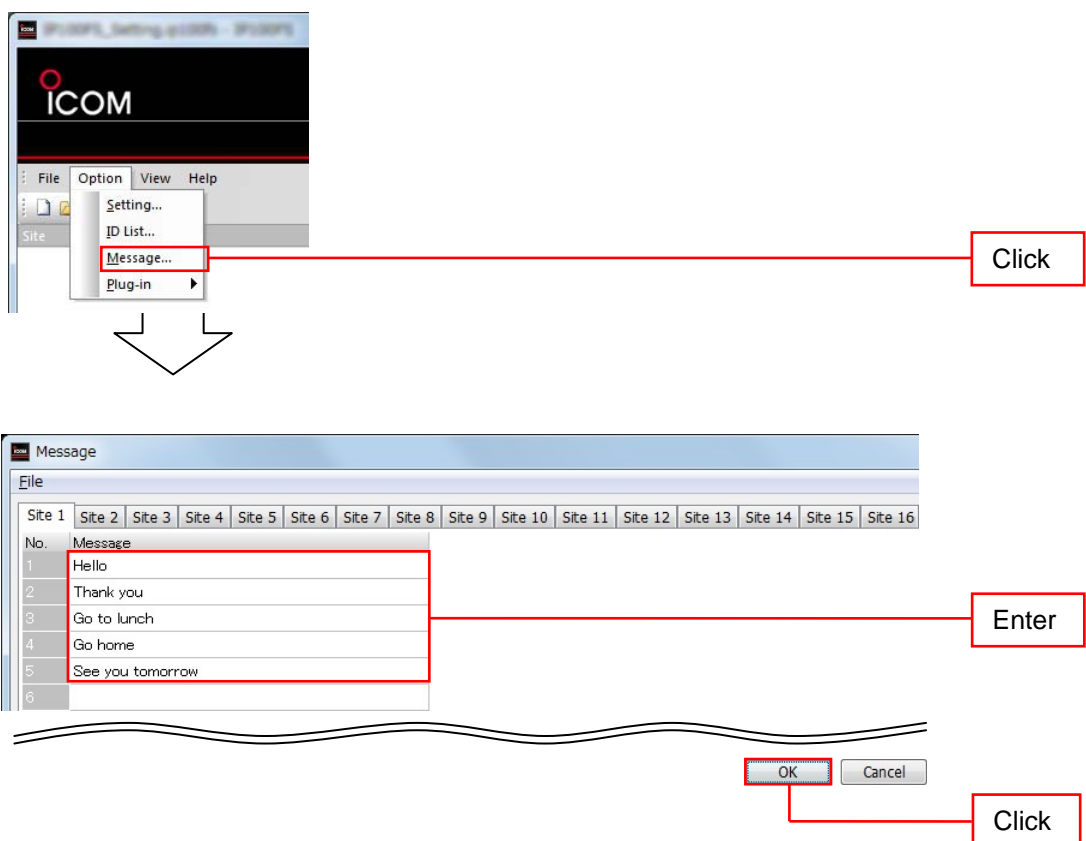
Enter

Select

Click

STEP 5-5 Message setting

Click

Enter

Click

STEP 5-6 One-touch button setting

Enter the following setting to each buttons.

One-touch button	Button 1	Button 2	Button 3	Button 4
Name	IP100H (TR1)	IP100H (TR2)	ALL CALL	Group 1
Call Type	Individual	Individual	All	Group
Destination ID	0001	0002		0001

Appear
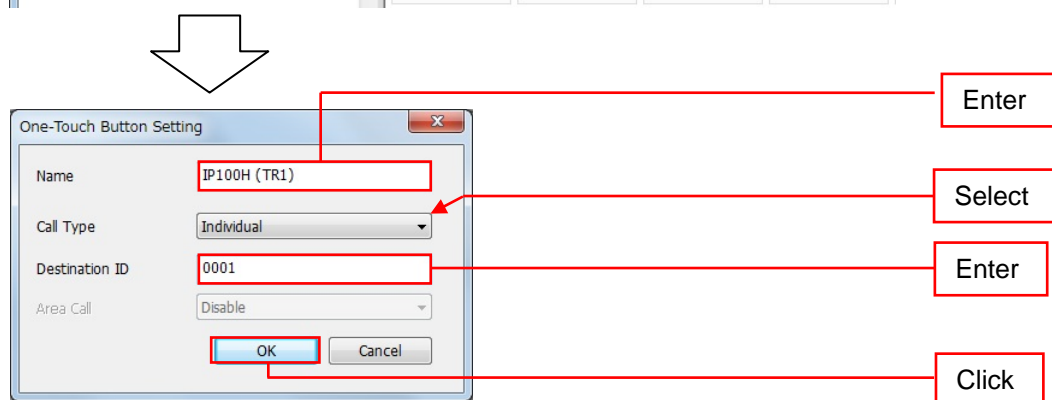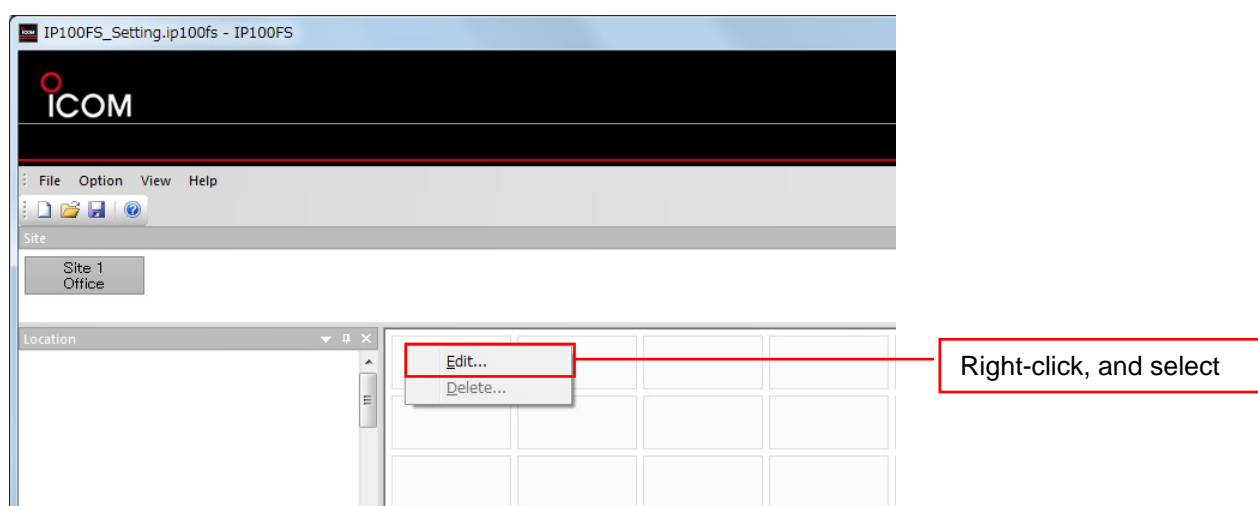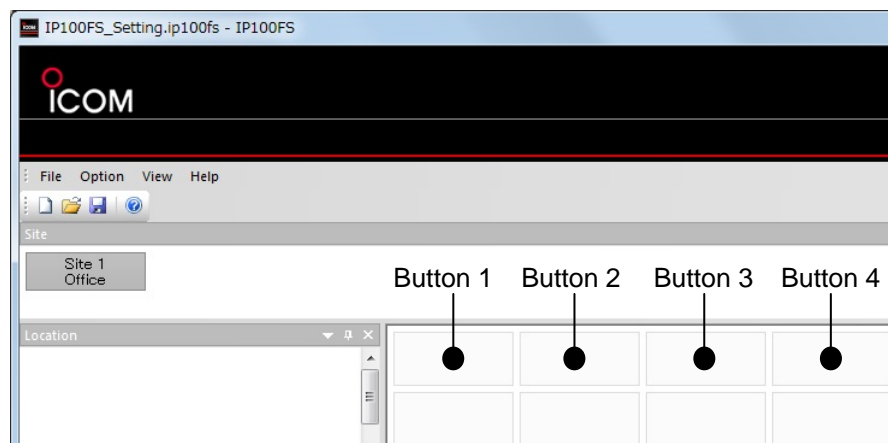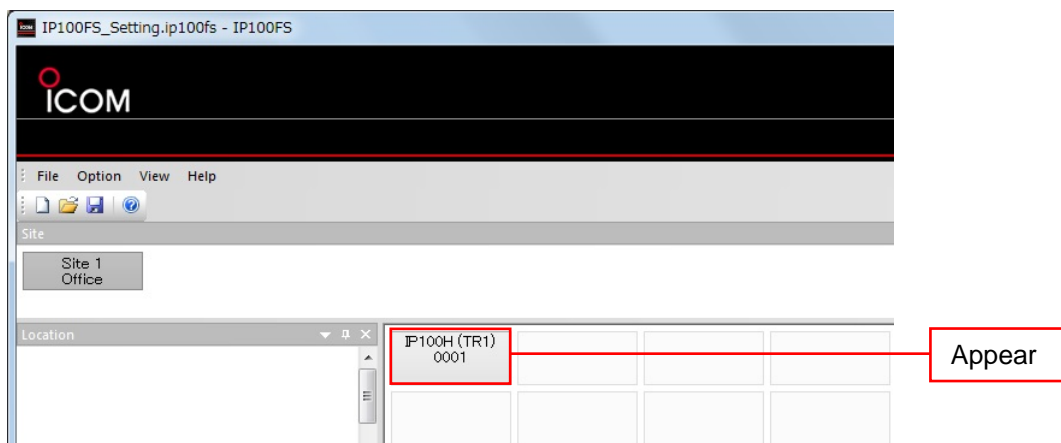
Repeat same one-touch button settings for Button 2, Button 3 and Button 4.
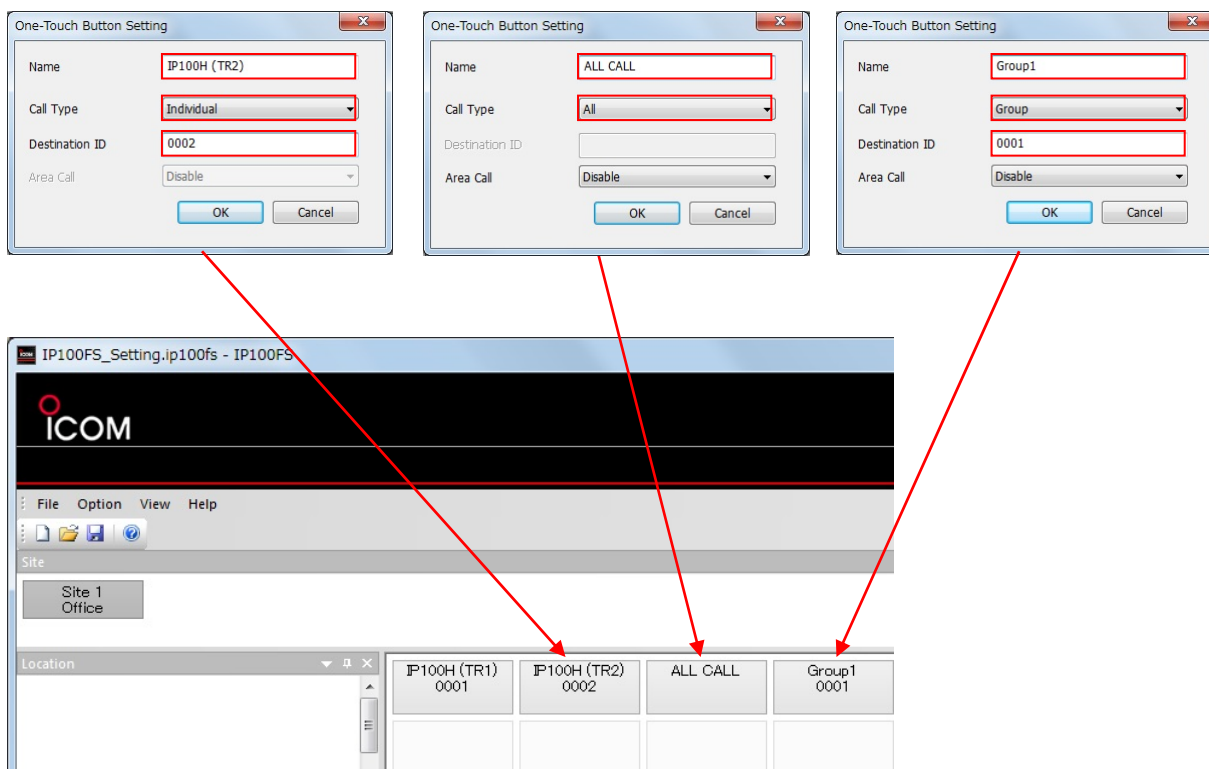
STEP 1 ▪ STEP 2 ▪ STEP 3 ▪ STEP 4 ▪ STEP 5 ▪ **STEP 6**

STEP 6: DEMONSTRATION
STEP 6-1   TALKING TO AN IP100H USER
STEP 6-2   SEND A MESSAGE TO AN IP100H USER
STEP 6-3   USING THE LOCATION WINDOW

STEP 6-1   TALK ING TO AN IP100H USER

When calling from the IP100FS to TR 1 (IP100H)

TR 1   Access point   IP1000C   IP100FS
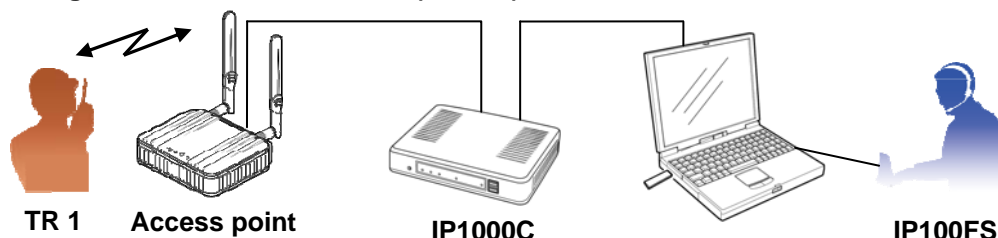
(1) Turn ON TR 1's power, and start up the IP100FS.
(2) Click [TR1] on the IP100FS to select the IP100H that you want to call.
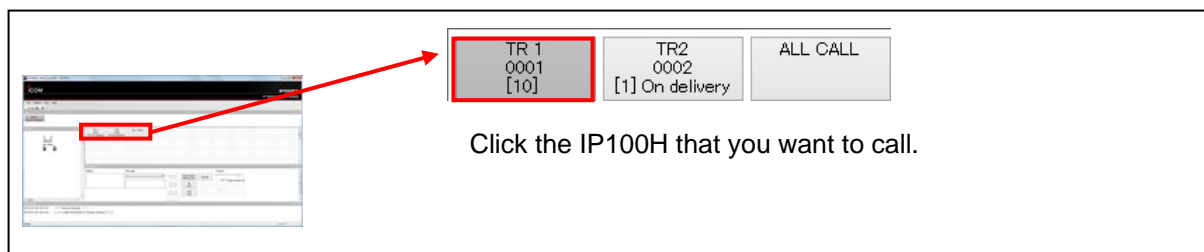
Click the IP100H that you want to call.

(3) Click and hold IP100FS's **[PTT]**, and then speak into the microphone at a normal voice level.
     The IP100FS displays the following screen, and your voice is heard from TR 1's speaker.
   After speaking, release IP100FS's **[PTT]** to listen.

The background lights red while making a call.

The action, type of call and ID are displayed.

Click and hold IP100FS's [PTT] to speak to the target user.
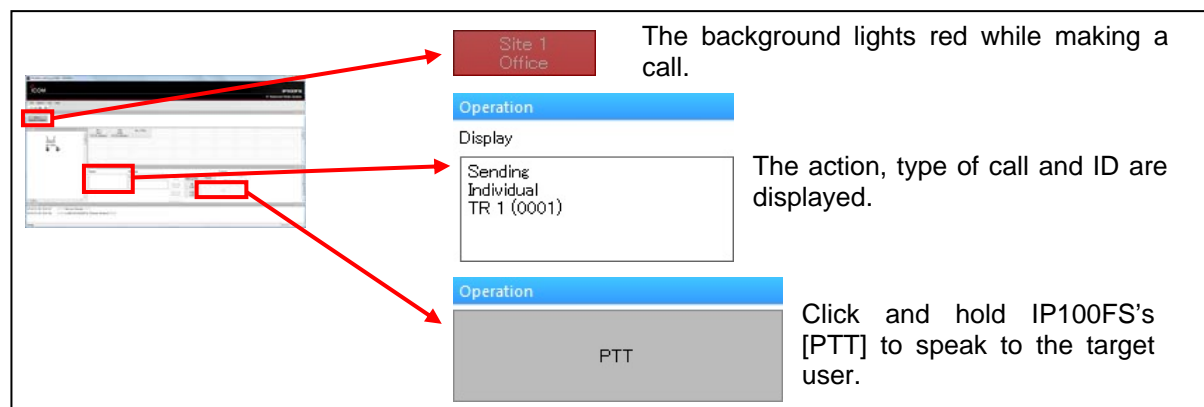
(4) Hold down TR 1 (IP100H)'s **[PTT]**, and then speak into the microphone at a normal voice level.
     The IP100FS displays the following screen, and then your voice is heard from the headset via through IP100FS.

The background lights green while receiving a call.

The action, type of call and ID are displayed.
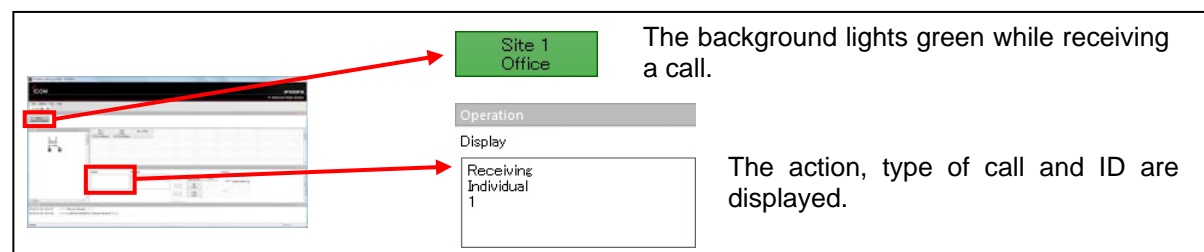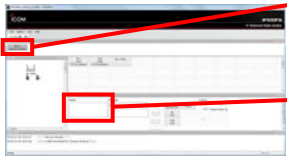
After speaking, release TR 1's **[PTT]**.

When calling from TR 1 (IP100H) to the IP100FS

TR 1   Access point   IP1000C   IP100FS
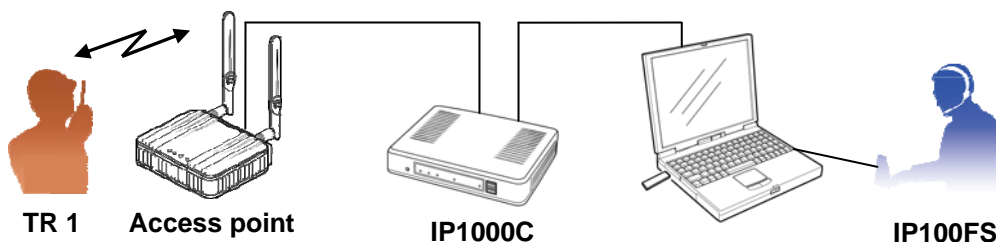
(1) Turn ON TR 1's power (IP100H), and start up the IP100FS.
(2) Push ▭ to select the IP100FS's ID.
    While pushing and holding TR 1's **[PTT]**, speak into the microphone at a normal voice level.
    The IP100FS displays the following screen, and then your voice is heard from the headset through the IP100FS.
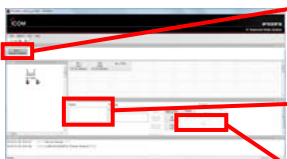
Site 1 Office	The background lights green while receiving a call.
Operation Display Receiving Individual 1	The action, type of call and ID are displayed.

    After speaking, release TR 1's **[PTT]**.
(3) While clicking and holding the IP100FS's **[PTT]**, speak into the microphone at a normal voice level.
    The IP100FS displays the following screen, and then your voice is heard from TR 1's speaker.
    After speaking, release IP100FS's **[PTT]**.

Site 1 Office	The background lights red while making a call.
Operation Display Sending Individual TR 1 (0001)	The action, type of call and ID are displayed.
Operation PTT	Click and hold IP100FS's [PTT] to speak to the target users.

STEP 6-2 SEND A MESSAGE TO THE IP100H OPERATOR

When sending a message from an IP100FS to a TR 1 (IP100H)

Sending a message!

TR 1   **Access point**   **IP1000C**   **IP100FS**
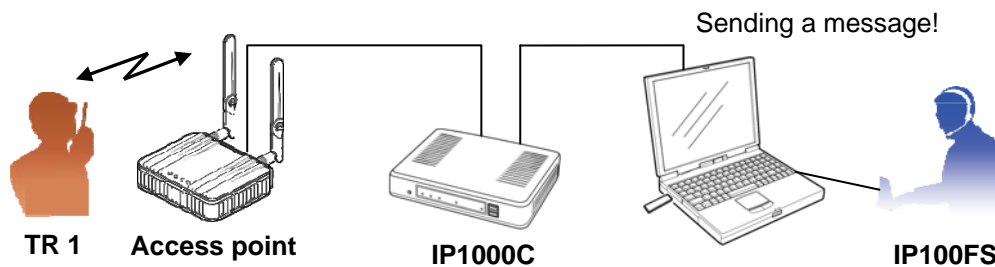
(1) Turn ON TR 1's power (IP100H), and start up the IP100FS.
(2) Click the message combo box, and then a drop-down list appears.

Operation
Message

Hello
Thank you
Go to lunch
Go home
See you tomorrow

A drop-down list appears
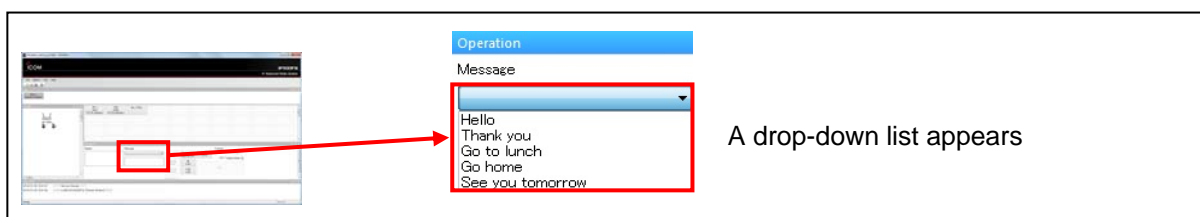
(3) Select the desired message from the list.

Operation
Message

Thank you

The selected message is displayed.
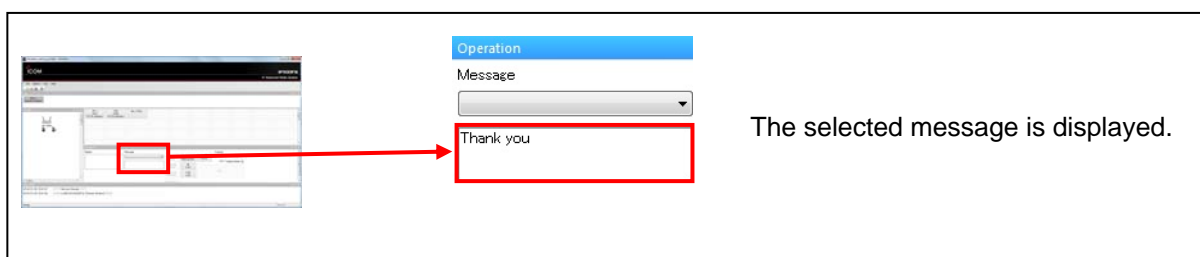
(4) Click [TR1] on the IP100FS to select the desired IP100H that you want to send a message to.

TR 1 0001 [10]	TR2 0002 [1] On delivery	ALL CALL

Click the desired button that you want to send
a message to.
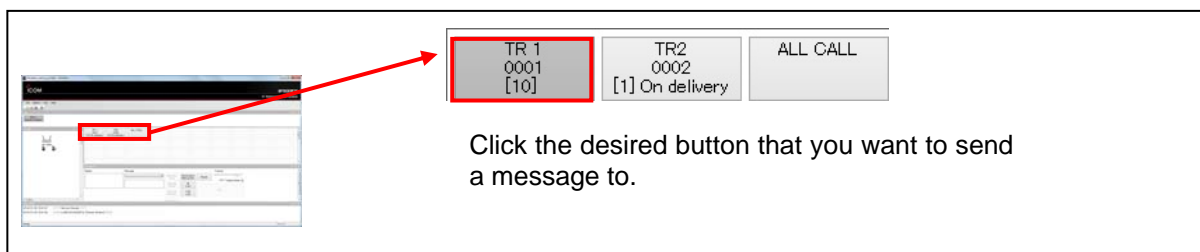
(5) Click IP100FS's **[PTT]** to send the message.

Operation
PTT

Click IP100FS's [PTT], and
the message is sent.
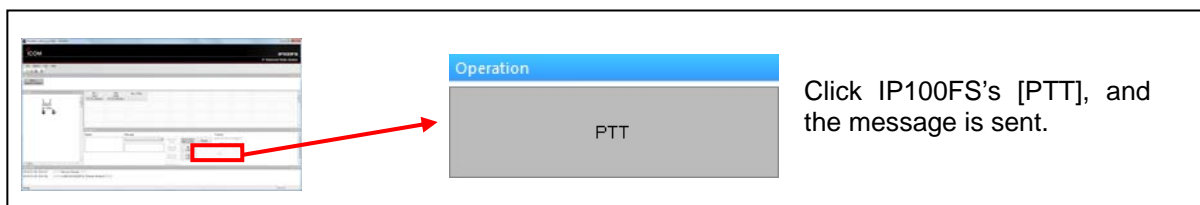
When sending a message from a TR 1 (IP100H) to an IP100FS

Sending a message!

TR 1   **Access point**   **IP1000C**   **IP100FS**
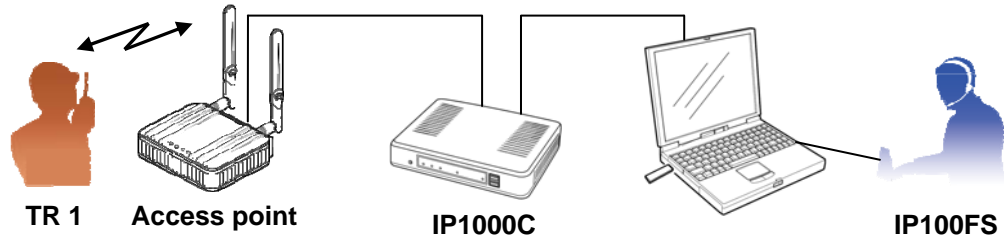
(1) Turn ON TR 1's power, and start up the IP100FS.
(2) Push [FUNC] to enter the message select mode, and then select a desired message.
(3) Push [□] to select the IP100FS's ID.
Push TR1's **[PTT]** to send the selected message to the IP100FS
The IP100FS displays the message, as shown below.

The received message is displayed.
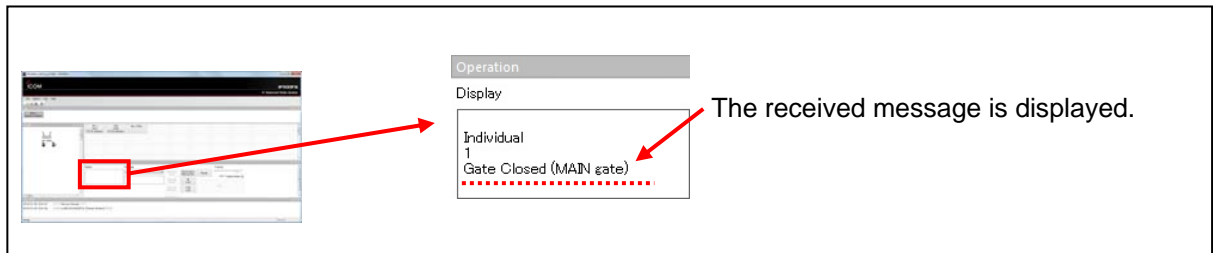
After sending, release TR1's **[PTT]**.

STEP 6-3 USING THE LOCATION WINDOW

When area calling from the IP100FS to an access point (All Call)

What is Area Calling?
If two or more access points are used on an IP network, you can communicate to only IP100Hs that are connected to a specified access point, by using the Area Calling function.

TR2   TR 1   **Access point**   **IP1000C**   **IP100FS**
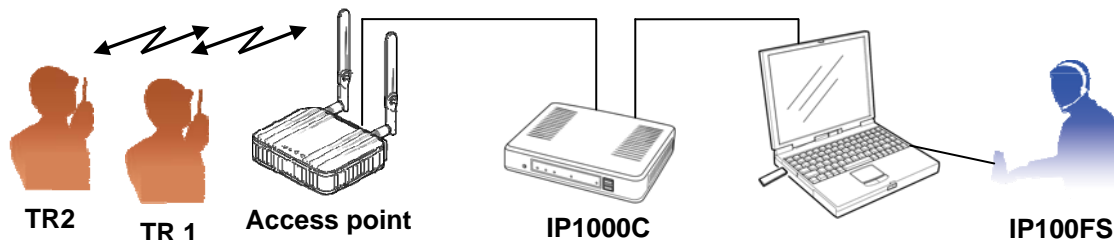
(1) Right click on the access point icon, and then a drop down menu appears.
(2) Move the mouse cursor to **Call Setting**, and then click **All** on the next drop down menu.
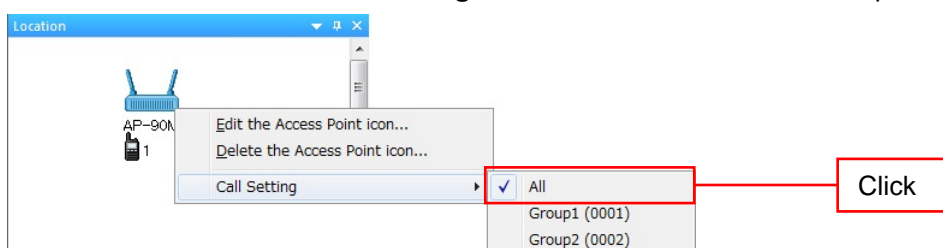
Click

(3) Double-click the access point, and then the selection detail is displayed on the IP100FS screen.

Double-click

Selection detail is displayed
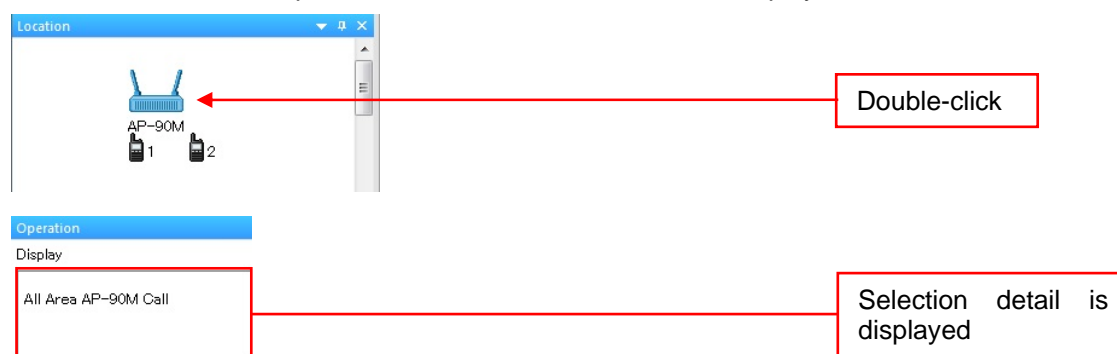
(4) Click and hold IP100FS's **[PTT]**, and then speak into the microphone at a normal voice level.
The IP100FS displays the following screen, and your voice is heard from TR 1 and TR 2's speaker.
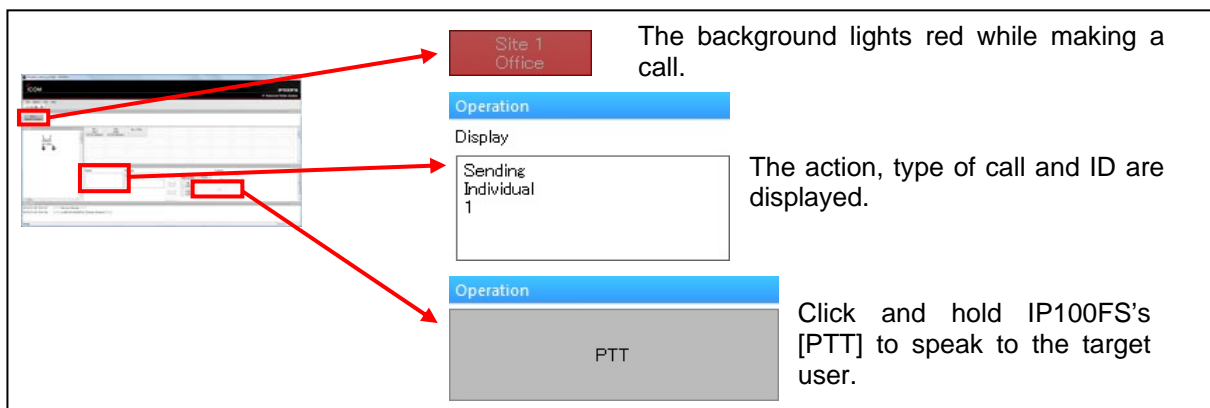After speaking, release IP100FS's **[PTT]** to listen.

The background lights red while making a call.

The action, type of call and ID are displayed.

Click and hold the IP100FS's [PTT] to speak to the target user.
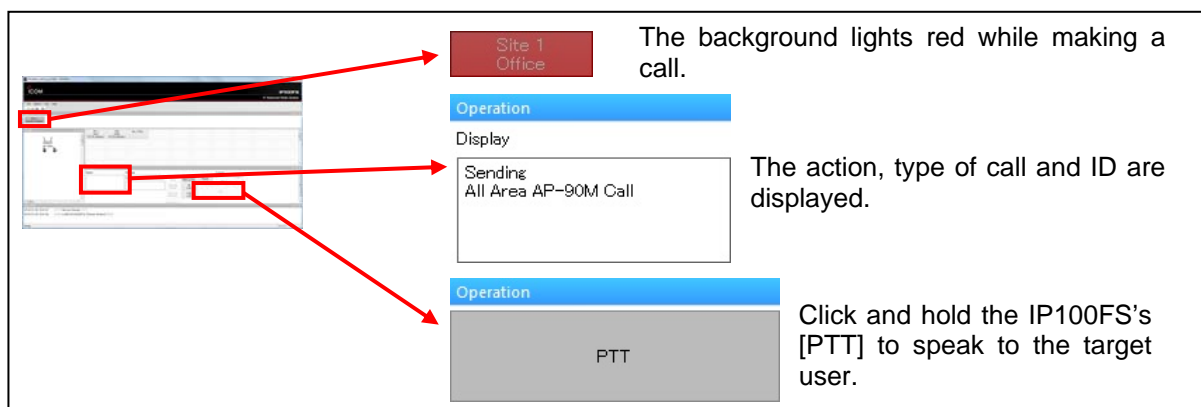
When calling from the IP100FS to a specified IP100H (Individual Call)

TR 1   **Access point**   **IP1000C**   **IP100FS**
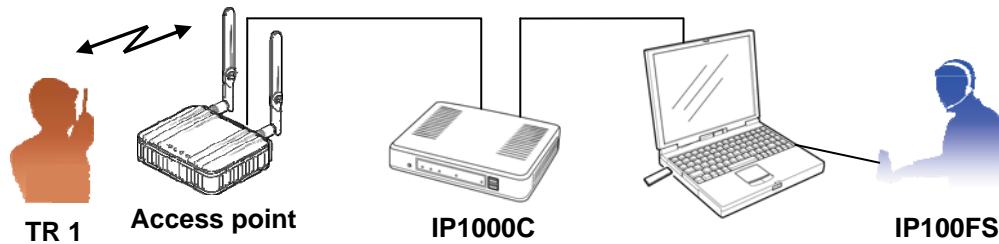
(1) Click the IP100H (TR 1) icon, and then the selection detail is displayed on the IP100FS screen.
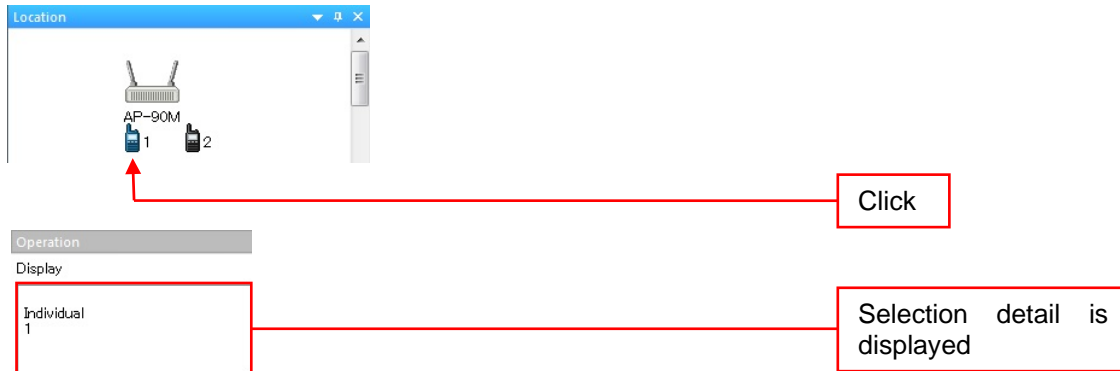
Click

Selection detail is displayed

(2) Click and hold IP100FS's **[PTT]**, and then speak into the microphone at a normal voice level.
The IP100FS displays the following screen, and your voice is heard from TR 1's speaker.
After speaking, release IP100FS's **[PTT]** to listen.

The background lights red while making a call.

The action, type of call and ID are displayed.

Click and hold IP100FS's [PTT] to speak to the target user.

SECTION 3   Q & A

CATEGORY	QUESTION	ANSWER
IP100H	If the IP100H is out of the service range, and is locked by the IP100FS, does the IP100H remain locked when it enters the range again?	The remote control lock is only activated when the IP100H is online. If you want to lock the IP100H when it enters the range again, delete the IP100H registration from the IP1000C.
	Is there any alarm function to indicate when the IP100H goes out of range?	The IP100H has no alarm function, and the 📶 icon blinks
	Can the IP100H switch between the simplex mode and the full duplex mode?	No. The IP100H cannot switch between the simplex and full duplex modes. When you connect the headset to the IP100H, you can operate in the full duplex mode.
	How can you read a message that is too long to display on one line?	Scroll the message from right to left.
	How does the IP100H switch to a different access point (roaming)?	The IP100H automatically switches to a different access point by checking the signal strength level. You can set the threshold of the signal strength to switch.
	The IP100H automatically downloads firmware updates from the IP1000C when you turn ON the IP100H's power. If the IP100H's power is turned OFF while the download is in progress, what happens?	The IP100H keeps an internal firmware copy. Therefore, the IP100H is turned ON using the previous firmware. However, sometimes after an interruption, the IP100H may not work properly.
	It takes about 38 seconds to be the usable condition after you turn ON the IP100H. Is it normal?	It takes a certain amount of time to set data, download address, and other processes; therefore the waiting time is necessary.
	Is it possible to operate full-duplex without a headset?	No, you cannot use full-duplex without a headset.
	Is it possible to increase the IP100H output power?	You cannot increase the IP100H output power.
	What is necessary to expand the communication coverage area?	Simply add more access points to expand the communication coverage area.
IP100FS	Can the dispatcher immediately see when a user turns a terminal ON or OFF?	The IP100H can be used about 40 seconds after turning it on. This is a system specification. The IP100H needs that time to collect information from the IP1000C controller, set data and other processes.

CATEGORY	QUESTION	ANSWER
System	What is difference between an area and a site?	An area is the communication coverage area of a single access point. A Site is where the IP1000C and the connected access points are physically located.
	Are there any regulation problems in making telephone calls through an IP100H?	Check with your local regulations before considering using the system for telephone calls.
	Up to 100 sets of the IP100H can connect to a IP1000C. However, if you have 120 sets of IP100H, and you turn OFF 20 of them, can we use the remaining 100 IP100Hs?	IP100H's number must be registered. Therefore, more than 100 IP100Hs cannot be registered.
	If 10 people try to talk at the same time, can their communication be heard and understood?	The voice audio may be garbled. This differs depending on several factors. Up to 4 persons can talk at the same time.
	Is it possible to have detailed log information for security purposes? (Example: Transceiver / Access time / Access point information)	Not at this time.
	How do you upgrade the controller from a 20 transceiver system to a 100 transceivers system?	At this time you cannot use the setting data of the IP1000C 20 transceiver version to configure the 100 transceiver version. The format is different.
	How do you recover the system if the IP1000C controller breaks down?	You can exchange the controller with one of the same version, and then install the original setting data from a backup that you made on a USB flash drive. **NOTE:** There is no compatibility between 20 transceiver version and 100 transceiver version setting data.
	Is it possible to operate the IP Advanced Radio system in a public Wi-Fi network?	If you are a public Wi-Fi network provider and you want to use the system in your network, you can install the IP1000C in the network. In such a case, if you do, we strongly recommend that you use different SSID to separate the public Wi-Fi and the IP Advanced Radio system in the network. **NOTE:** The IP Advanced Radio system is not designed to be used in a public Wi-Fi network. Therefore, we don't recommend you to use the system in a public Wi-Fi network.

CATEGORY	QUESTION	ANSWER
Wireless LAN	Is there any problem or function limitation when using 3rd party access points, rather than Icom access points?	Almost any access point can be used. But, we recommend you to use Icom's access point.
	How can we know when the number of IP100Hs simultaneously used exceeds the maximum limit?	Simultaneously communicating on 12 IP100H is the maximum number recommended. The audio quality from the speaker may be decreased. Icom's access point can set a limitation on the number of terminals that can connect to the system by setting the CAC (Call Admission Control) function to help limit decreased audio quality.
	Can we use an IEEE802.11N access point?	Yes, you can use IEEE802.11N access points. You can also use IEEE802.11A/G; 11B/G/N for 2.4GHz and 11A/N for 5 GHz.
Access point	Is there a problem using only one SSID?	It is better to have an exclusive SSID for the IP Advanced Radio system. Current WLAN access points have a multi-SSID function so you should consider an exclusive SSID for the IP Advanced Radio System. If the network for an IP Advanced Radio system and WLAN for guests is separated by different SSID, the separated network is more secure.
	How many access points can connect to a site system?	If the access points are set in one area, the maximum number of access points depends on the Wi-Fi channel interference in the area. If the cell and network design is well organized, you can basically connect as many access points as you need.