ICOM

IDAS OPERATING GUIDE

HYBRID IP TRANSCEIVER

IP730D
IP740D

Icom Inc.

INTRODUCTION

Thank you for choosing this Icom product.
This product is designed and built with Icom's state of the art technology and craftsmanship. With proper care, this product should provide you with years of trouble-free operation.

IMPORTANT

FIRST, CAREFULLY READ:
1. **INSTRCUTIONS** boxed with the transceiver.
2. **INSTRUCTION MANUAL** that is uploaded to the Icom website.
   https://www.icomjapan.com/support/

SAVE THIS OPERATING GUIDE— This operating guide contains additional important operating instructions about the transceiver's IDAS mode.

Section **1**   **USING THE IDAS MODE**

Basic operation

◇ Operating keys

Rotary Selector	Rotate to select a channel, scroll the screen, or move the cursor.
[Emer]	Hold down until "Emergency" is displayed to send an Emergency call.
[PTT]	Hold down to transmit, release to receive.
[Sub PTT] **[Side 1]** **[Side 2]**	Functions may be assigned, depending on a presetting. See the INSTRUCTION MANUAL page 5-10 for assignable function details. You can also assign functions in the Detailed Set mode, or the CS-IP730D PROGRAMMING SOFTWARE.
[Address]	• Push to display the Call-to party selection screen
[Call History]	• Push to display the call history. • Push this key several times to toggle between the Call history types, Transmitted call, Received call, and Recording Log. • Hold down for 1 second to playback a selected Recording log (INSTRUCTION MANUAL page 5-9).
[▲]/[▼]	Push to scroll the screen, move the cursor, or selecting a channel.
[CLR/Lock]	• Push to return to the standby screen. • Hold down for 1 second to turn the Key Lock function ON or OFF. ⓘ [PTT], [Sub PTT], [VOL], [Emer], and the Monitor function are usable even while the Key Lock function is ON.
[FUNC]	• Push to display the Function screen. • In the function screen, push several times to select functions such as Operating mode selection, and so on*. *Selectable function may differ, depending on a Set mode setting.
[VOL]	• Rotate to turn ON or OFF the transceiver. • Rotate to adjust the audio output level.

Basic operation (Continued)

◇ Selecting a Zone

Certain channels are grouped together and assigned to a Zone according to their intended use.
For example, Analog channels 'Station 1' and 'Station 2' are assigned to an "Analog" Zone, and Digital channels 'Station 3' and 'Station 4' are assigned to a "Digital" Zone.
ⓘ Confirm the that the function to enter the Zone Selection screen is assigned to [Sub PTT], [Side 1], or [Side 2]. You can also assign functions in the Detailed Set mode. See the INSTRUCTION MANUAL page 6-5 on the Icom website for details.

1. Push or hold down the key that is assigned for entering the Zone Selection screen.
2. Rotate Rotary Selector or push [▲] or [▼] select a zone.
3. Push [Call History] to exit the Zone Selection screen and return to the Standby Screen.

◇ Receiving and transmitting

Receiving:
1. Rotate Rotary selector, or push [▲] or [▼] to select a channel.
    • When a Call is received, the Status indicator lights green.

Transmitting:

CAUTION: **DO NOT** transmit without an antenna.

1. Wait until the channel is clear to avoid interference.
2. While holding down [PTT], speak at your normal voice level.
3. Release [PTT] to receive.

IMPORTANT:
To maximize the readability of your signal:
1. After pushing [PTT], pause briefly before you start speaking.
2. Hold the microphone 5 to 10 cm (2 to 4 inches) from your mouth, then speak at your normal voice level.

◇ Transmitting Notes

Transmit inhibit function:
The transceiver has several inhibit functions which restrict transmission:

Lockout function:
The function inhibits transmission when the channel is busy. However, depending on a presetting, you can transmit when a call is received that includes a non-matching (or matching) CTCSS (DTCS), RAN (Radio Access Number), Individual ID, or Group ID.

Time-Out Timer:
If continuous transmission exceeds the preset Time-Out Timer time, the transmission is cut off. Release [PTT], and then hold down again to resume talking.

Penalty timer:
After the transmission is cut off by the Time-Out Timer, transmission is further inhibited for a preset penalty period of time.
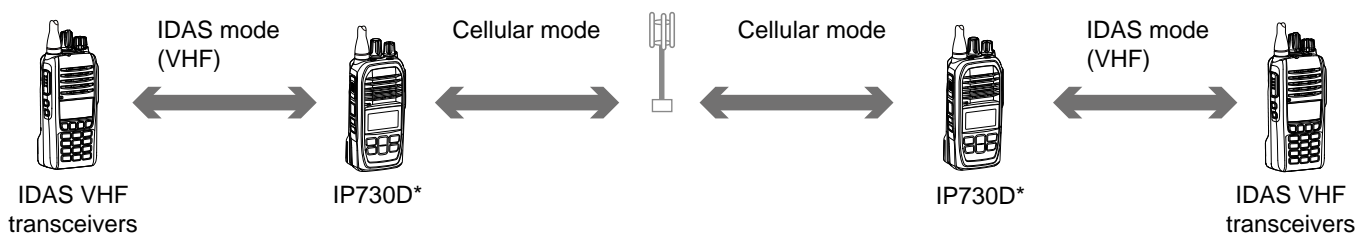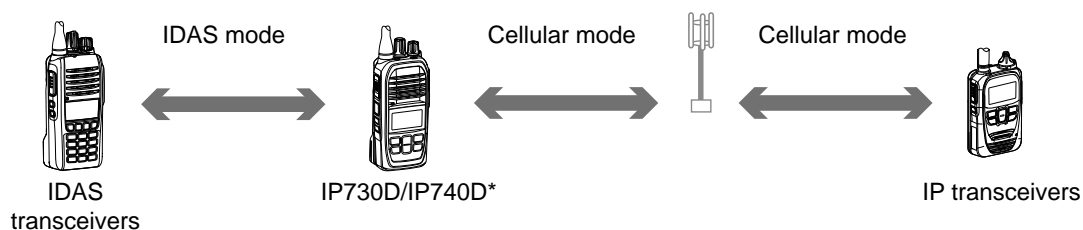
Other functions

◇ Repeater mode (Bridge function)

The Repeater Mode relays received IDAS audio to the cellular transceiver group, while transferring the cellular radio conversations to the IDAS transceiver group.
This function is useful when:
• Communicating outside of the cellular service coverage with IDAS transceivers.
• Connecting two IDAS transceiver groups.
ⓘ The Repeater mode may not be usable, depending on the presetting.
ⓘ The Repeater mode does not relay analog audio.

IDAS mode — IDAS transceivers — Cellular mode — IP730D/IP740D* — Cellular mode — IP transceivers

IDAS mode (VHF) — IDAS VHF transceivers — IP730D* — Cellular mode — Cellular mode — IP730D* — IDAS mode (VHF) — IDAS VHF transceivers

*The transmit power for the IDAS mode will be reduced to 1 W.

NOTE:
• The transceiver's operating time will be shorter when using the Repeater mode.
• The Repeater mode causes audio degradation because of the conversion to different voice codecs.
• Depending on the state of the cellular line, communication delays may increase.
• The Repeater mode operation may be prohibited in some countries. Check the legal requirements in your country before using the function.

Other functions (Continued)

Using the Repeater mode (Bridge function):
1. Push [FUNC] to display the Function screen.
   • The Function screen is displayed.
2. Push [FUNC] to display "Mode Select," if another function is displayed.
   ⓘ You may need to push [FUNC] several times, depending on the presetting.
3. Rotate Rotary selector or push [▲] or [▼] to select "Repeater Mode."

```
≡ Mode Select ≡
Repeater Mode
```

4. Push [Call History] to return to the Standby screen.
   • "RPT" is displayed.
   ⓘ Push [Address] to turn the function ON or OFF.
   ⓘ "In action" is displayed while the function is ON, and "Stopping" is displayed while it is OFF.

```
RPT L1 ✻        10:00▥
⁴ᴳ ᵢₗ All              ▨
Ⴀ  Grp 1              ▨
In action  Function
```
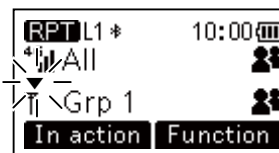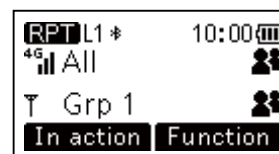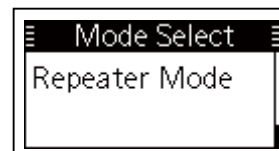
About the relay status:
"▼" is displayed while relaying from Cellular to IDAS, "▲" is displayed while relaying from IDAS to Cellular.

```
RPT L1 ✻        10:00▥
⁴ᴳ ᵢₗ All              ▨
Ⴀ  Grp 1              ▨
In action  Function
```

◇ Radio Access Number (RAN)

Radio Access Number (RAN) is a signaling system designed for digital radio communications. When a channel is set up with a RAN, the squelch will open only when a call containing a matching RAN* is received. If a call containing a different RAN is made on the same channel a user is using, a user will not hear the call.

*Depending on the settings in the CS-IP730D programming software, not only RAN but also individual ID or group ID must match.

◇ Encryption function

The Encryption function enables voice scrambling, which provides private digital communication between stations.
When an encrypted call is received, you can listen to the call only when it contains a matching Key ID and Encryption key.
If a call containing a different ID is made on the same channel, the squelch will not open, and the user will not hear the call.

Push [Encryption] to toggle the Encryption function ON or OFF.
• "🔒" is displayed when the Encryption function is ON.

ⓘ When the Encryption function is ON, push [PTT] to make an encrypted call.

Section 2   NXDN™ OPERATION

About the NXDN™ system operation

NXDN has a new "Common Air Interface" (CAI), the name for over-the-air methods by which transceivers and repeaters communicate. NXDN defines the next-generation digital transceiver.

You can transmit and receive an Individual Calls and Group Calls in the NXDN system.

The transceiver supports the following systems:

• NXDN Conventional operation
The NXDN Conventional system enables efficient Conventional operation in the digital mode. To select the Conventional Zone, see page 1-3.

• Multi-site Conventional operation
The Multi-site Conventional system can support up to 16 sites (each site has one repeater) through an IP network, and enables efficient Conventional operation in the digital mode. To select the Multi-site Conventional Zone, see page 1-3.

Receiving and transmitting a call

◇ Receiving an Individual Call

When an Individual Call is received:
• Mute is released.
• The Status indicator lights green.
• The calling station name (or ID) is displayed while receiving the call.

```
Tıl L2 ▲ *        10:00▥
003 CH-03
Station 1
[Address] [Function]
```

● Hold down [PTT] to transmit.
● Release [PTT] to receive.

◇ Receiving a Group Call

When a Group Call is received:
• Mute is released.
• The Status indicator lights green.
• The Group name and the calling station name (or ID) are alternately displayed while receiving the call.
① When an All Call is received, "All Call" is displayed.*
 In that case, you cannot reply to it.

```
Tıl L2 ▲ *        10:00▥
003 CH-03
Group 1
[Address] [Function]
```
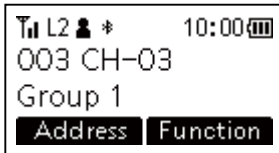
● Hold down [PTT] to speak.
● Release [PTT] to receive.

◇ Transmitting a call

NXDN operation enables you to make a call to a specific station (Individual call) or to a particular group (Group call). Other transceivers on the channel will not receive a call that does not match their Individual or Group ID and/or Radio Access Number (RAN) code.

◇ Transmitting an Individual Call

1. Push [Address] to display the Call-to party selection screen.
2. Rotate Rotary Selector or push [▲] or [▼] to select a individual station.

```
☰   Individual   ☰
1
Station 1
```
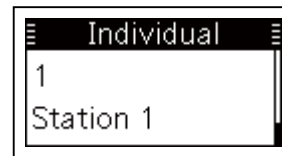
● Hold down [PTT] to transmit.
● Release [PTT] to receive.

◇ Transmitting a Group Call

1. Push [Address] to display the Call-to party selection screen.
2. Rotate Rotary Selector or push [▲] or [▼] to select a group.

```
☰     Group     ☰
1
Group 1
```
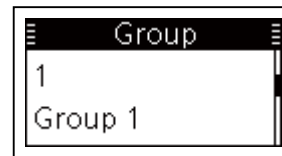
● Hold down [PTT] to transmit.
● Release [PTT] to receive.

Count on us!