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Section 1

ACCESSORY ATTACHMENT

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External antenna

When the External antenna is selected,* connect the supplied flexible antenna to the antenna connector.

**CAUTION:**
- **NEVER** carry the communication terminal by holding only the antenna.
- Transmitting without an antenna may damage the internal circuit.

Antenna connector cap

When the Internal antenna is selected,* connect the supplied antenna connector cap to the antenna connector.

*The antenna is selected in your System Controller.

**Information:**
The communication range will differ between the External and Internal antennas.
Battery pack

To attach or detach the battery pack:
To attach or detach the battery pack or battery case, follow the illustrations to the left.

NOTE: Even when the communication terminal power is OFF, a small current still flows in the communication terminal. Remove the battery pack or case when not using it for a long time. Otherwise, the batteries will become exhausted.

Belt clip

To attach the belt clip:
1. Remove the battery pack from the communication terminal, if it is attached.
2. Slide the belt clip in the direction of the arrow until the belt clip locks in place, and makes a ‘click’ sound.

To detach the belt clip:
1. Remove the battery pack from the communication terminal, if it is attached.
2. Lift the tab up (1), and slide the belt clip in the direction of the arrow (2).

Hand strap

To facilitate carrying the communication terminal, slide the hand strap through the loop on the top of the rear panel, as illustrated to the left.
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**Battery pack cautions**

⚠️ **DANGER! NEVER** short the terminals of the battery pack. Shorting may occur if the terminals touch metal objects such as a key, so be careful when placing the battery packs (or the communication terminal) in bags, and so on. Carry them so that shorting cannot occur with metal objects. Shorting may damage not only the battery pack, but also the communication terminal.

⚠️ **DANGER! NEVER** Use and charge only specified Icom battery packs with Icom communication terminals or Icom chargers. Only Icom battery packs are tested and approved for use with Icom communication terminals or charged with Icom chargers. Using third-party or counterfeit battery packs or chargers may cause smoke, fire, or cause the battery to burst.

◊ **Battery cautions**

Misuse of Li-ion batteries may result in the following hazards: smoke, fire, or the battery may rupture. Misuse can also cause damage to the battery or degradation of battery performance.

⚠️ **DANGER! NEVER** strike or otherwise impact the battery. Do not use the battery if it has been severely impacted or dropped, or if the battery has been subjected to heavy pressure. Battery damage may not be visible on the outside of the case. Even if the surface of the battery does not show cracks or any other damage, the cells inside the battery may rupture or catch fire.

⚠️ **DANGER! NEVER** leave battery pack in places with temperatures above 60°C (140°F). High temperature buildup in the battery, such as could occur near fires or stoves, inside a sun heated car, or in direct sunlight may cause the battery to rupture or catch fire. Excessive temperatures may also degrade battery performance or shorten battery life.

⚠️ **DANGER! NEVER** expose the battery pack to rain, snow, seawater, or any other liquids. Do not charge or use a wet battery pack. If the battery pack gets wet, be sure to wipe it dry before using.

⚠️ **DANGER! NEVER** incinerate a used battery pack since internal battery gas may cause it to rupture, or may cause an explosion.

⚠️ **DANGER! NEVER** solder the battery terminals, or NEVER modify the battery pack. This may cause heat generation, and the battery pack may burst, emit smoke or catch fire.

⚠️ **DANGER!** Use the battery pack only with the communication terminal for which it is specified. Never use a battery pack with any other equipment, or for any purpose that is not specified in this instruction manual.

⚠️ **DANGER!** if fluid from inside the battery gets in your eyes, blindness can result. Rinse your eyes with clean water, without rubbing them, and go to a doctor immediately.

⚠️ **WARNING!** Immediately stop using the battery if it emits an abnormal odor, heats up, or is discolored or deformed. If any of these conditions occur, contact your Icom dealer or distributor.

⚠️ **WARNING!** Immediately wash, using clean water, any part of the body that comes into contact with fluid from inside the battery.

⚠️ **WARNING! NEVER** put the battery pack in a microwave oven, high-pressure container, or in an induction heating cooker. This could cause a fire, overheating, or cause the battery pack to rupture.

**CAUTION:** Always use the battery pack within the specified temperature range, –10°C to +60°C (+14°F to +140°F). Using the battery pack out of its specified temperature range will reduce the battery’s performance and battery life.

**CAUTION:** Shorter battery life could occur if the battery pack is left fully charged, completely discharged, or in an excessive temperature environment (above 50°C; 122°F) for an extended period of time. If the battery pack must be left unused for a long time, it must be detached from the terminal after discharging. You may use the battery pack until the battery indicator shows half capacity, then keep it safely in a cool and dry place at the following temperature range:

-20°C (~4°F) to +50°C (+122°F) (within a month)
-20°C (~4°F) to +35°C (+95°F) (within three months)
-20°C (~4°F) to +20°C (+68°F) (within a year)

**BE SURE** to replace the battery pack with a new one after five years, even if still holds a charge. The material inside the battery will deteriorate after a period of time, even with little use. The estimated number of times you can charge the battery is between 300 and 500. Even when the battery appears to be fully charged, the operating time of the communication terminal may become short when:

- Approximately five years have passed since the battery was manufactured.
- The battery has been repeatedly charged.
Battery pack cautions (continued)

**Charging caution**

⚠️ **DANGER! NEVER** charge the battery pack in areas with extremely high temperatures, such as near fires or stoves, inside a sun-heated vehicle, or in direct sunlight. In such environments, the safety/protection circuit in the battery pack will activate, causing the battery pack to stop charging.

⚠️ **WARNING! NEVER** charge the communication terminal during a lightning storm. It may result in an electric shock, cause a fire or damage the communication terminal. Always disconnect the power adapter before a storm.

⚠️ **WARNING! NEVER** charge or leave the battery pack in the battery charger beyond the specified time for charging. If the battery pack is not completely charged by the specified time, stop charging and remove the battery pack from the battery charger. Continuing to charge the battery pack beyond the specified time limit may cause a fire, overheating, or the battery pack may rupture.

⚠️ **WARNING! NEVER** insert the communication terminal (battery attached to the communication terminal) into the charger if it is wet or soiled. This could corrode the battery charger terminals or damage the charger. The charger is not waterproof.

**CAUTION: DO NOT** charge the battery pack outside of the specified temperature range:
- BC-202: 0°C to 40°C (32°F to 104°F)
- BC-211: 10°C to 40°C (50°F to 104°F)

Icom recommends charging the battery at +25°C (+77°F). The battery may heat up or rupture if charged out of the specified temperature range. Additionally, battery performance or battery life may be reduced.

<table>
<thead>
<tr>
<th>Charger</th>
<th>Battery pack</th>
<th>BC-202</th>
<th>BC-211</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP-271</td>
<td></td>
<td>2 hours</td>
<td>2 hours</td>
</tr>
<tr>
<td>BP-272</td>
<td></td>
<td>3.5 hours</td>
<td>3.5 hours</td>
</tr>
</tbody>
</table>
Using the BC-202

The BC-202 rapidly charges a battery pack. Charging time: Approximately 2 hours for the BP-271 Approximately 3.5 hours for the BP-272

The following item is required.

• A power adapter (A different type, or no power adapter is supplied, depending on the charger versions.)

About charging indicator
Lights orange: Charging
Lights green: Charging completed
Blinks orange: See page 7-2.

Using the BC-211

The BC-211 rapidly charges up to 6 battery packs. Charging time: Approximately 2 hours for the BP-271 Approximately 3.5 hours for the BP-272

The following item is required.

• A power adapter (not supplied with some versions.)

About charging indicator
Lights orange: Charging
Lights green: Charging completed
Blinks orange: See page 7-2.

IMPORTANT: Battery charging caution
Be sure that the guide rails on the battery pack are correctly aligned with the tabs inside the charger.
Battery status indicator

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Battery status</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ][ ][ ]</td>
<td>The battery charge has sufficient capacity.</td>
</tr>
<tr>
<td>[ ][ ][ ]</td>
<td>The battery charge is exhausted a little.</td>
</tr>
<tr>
<td>[ ]</td>
<td>The battery charge is nearing exhaustion. Charging is necessary. (The communication terminal can be operated for a short time.)</td>
</tr>
<tr>
<td>[ ]</td>
<td>The battery charge is almost exhausted. Charging is necessary. (The communication terminal will quickly become impossible to operate.)</td>
</tr>
</tbody>
</table>

When the battery charge is almost exhausted, the battery status indicator, “[ ],” starts blinking, and warning beeps sound every 30 seconds. Charge the battery pack when the beeps begin to sound.

When “LOW BATTERY” is displayed, the communication terminal power will automatically turn OFF soon.

Battery life

<table>
<thead>
<tr>
<th></th>
<th>BP-271</th>
<th>BP-272</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>7.4 V</td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td>1150 mAh (minimum)</td>
<td>1880 mAh (minimum)</td>
</tr>
<tr>
<td></td>
<td>1200 mAh (typical)</td>
<td>2000 mAh (typical)</td>
</tr>
<tr>
<td>Battery life (approximate)</td>
<td>27 hours</td>
<td>40 hours</td>
</tr>
</tbody>
</table>

* Duty cycle: TX : RX : Standby = 1 : 1 : 8
  (based on operating style)

The approximate battery life (operating time) is shown to the left.

**NOTE:**
The battery life decreases if the communication terminal is out of a communication area for a long time, causing the terminal to continuously search for an access point (roaming).
Battery case

To use the BP-273 battery case, install three AA (LR6) size alkaline batteries, as described below.

1. Remove the battery case if it is attached.
2. Install three AA (LR6) size alkaline batteries.
   • Install only alkaline batteries.
   • Be sure to observe the correct polarity.
3. Attach the battery case. (p. 1-3)

A built-in step-up converter in the BP-273 increases the voltage to 5.5 V DC.

NOTE: When the BP-273 battery case is used, the battery status indicator cannot display the battery capacity of the alkaline batteries. The battery indicator remains like this: “.” It does not reflect with the true battery capacity.

CAUTION:
• When installing batteries, make sure they are all the same brand, type and capacity. Also, do not mix new and old batteries together.
• Keep the battery terminals clean. It’s a good idea to occasionally clean them.
• Never incinerate used battery cells since the internal battery gas may cause them to rupture.
• Never expose a detached battery case to water. If the battery case gets wet, be sure to wipe it dry before using it.
• Never use batteries whose insulated covering is damaged.
• Remove the alkaline batteries when battery case is not used. Otherwise the installed alkaline batteries will exhausted due to built-in step-up converter.
Section 3  BASIC OPERATION

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Adjusting audio level ................................................................. 3-2
Key lock function ................................................................. 3-3
### Turning ON the power

- **IP100H**
  - **Ver.** 
  - **Booting . . .**
  - **Setting up . . .**
  - **Connecting . . .**
  - **Successful**
  - **0001**
  - **1/23 12:34**
  - **All**

(Standby screen)

- Rotate [PWR/VOL] to turn ON the power.
  - A click and beep sound.

**NOTE:** The explanations in this manual are based on the registration to your Controller has been completed.

ⓘ When no standby screen is displayed, ask your system manager.

### Adjusting audio level

- Rotate [PWR/VOL].
  - A volume level between 0 and 32 is displayed.

(Example)
Key lock function

Turn ON to prevent unnecessary function access.

- Hold down [CLR•] for 1 second to turn the Key lock function ON or OFF.
- [PTT] and [PWR/VOL] can be used while the Key lock function is turned ON.
- When the Key lock function is turned ON and the locked key is pushed, “Key lock” is displayed.
- You can make an Emergency call while the Key lock function is turned ON, if the emergency call function is set in the Controller.
CALLING OPERATION

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Selecting messages or statuses ......................... 4-4
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◊ Individual call ............................................. 4-5
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◊ Selecting a talkgroup with [ ] key ............... 4-12
Calling procedures outline

1. Select an address book. (p. 4-3)
   • Push [ ] several times.
   • Select “All” for all terminals calls, “Group” for group calls, “Talkgroup” for talkgroup calls, “Individual” for individual terminal calls, or “Telephone” for telephone calls.
   • Selectable address books may differ, depending on the Controller setting.
   • You may select “Talkgroup” by pushing [FUNC], depending on the Controller setting. (p. 4-7)

2. Select an address (ID) or extension number. (p. 4-3)
   • Push [ ] or [ ] several times.
   • Selectable IDs or extension numbers may differ, depending on the Controller setting.
   • You can select a desired ID or extension number from the call history by pushing [ ]. (p. 4-7) Selectable logs may differ, depending on the Controller setting.

3. If you want to send a message (p. 4-6), or make an area call (p. 4-9), push [FUNC] several times.
   • Select “Message” to transmit a message, or “Area Call” for an Area Call.
   • Push [ ] or [ ] several times to select a desired message.
   • Selectable messages may differ, depending on the Controller setting.
   • When Area Call is selected, push [ ] or [ ] to select ON.

5. Hold down [PTT], and speak at your normal voice level.
7. Repeat the steps 5 and 6 until you finish your conversation.
8. To hang up a telephone call, push [Option].
   • The function assigned to [Option] may differ, depending on the Controller setting. (p. 5-2)
   • Ask your system manager which function is assigned.

Information:
When the VOX function or full-duplex mode is set in the Controller, steps 5 and 6 are unnecessary. When the VOX function is set, speak into the headset microphone to transmit, then stop speaking to listen.
In full-duplex, you can speak and hear the other person at the same times.

NOTE: Use one of the following options for full-duplex operation.
• HM-153LS
• HM-166LS
• HS-85 with OPC-2144
• HM-153 with OPC-2144
• HM-166 with OPC-2144
• HS-102 with OPC-2359
Selecting address books, and addresses (ID)

1. Push \([\square]\) several times to select an address book.
   - Select “All” for all stations calls, “Group” for group or talkgroup\(^*\) calls, “Individual” for individual station calls or “Telephone” for telephone calls.
   - Selectable address books may differ, depending on the Controller setting.
   - Refer to the Section 4 about the talkgroup calls. (p.4-10)

2. Push \([J]\) or \([K]\) several times to select a desired ID or extension number.
   - Selectable IDs or extension numbers may differ, depending on the Controller setting.

* Address book and address (ID) selection sequence

\*1 Returns to the first address (ID) in the category, when the talkgroup function is assigned to \([\square]\) key.

\*2 “Talkgroup” is displayed only when the talkgroup function is assigned to \([\square]\) key.
Selecting messages or statuses

1. Push [FUNC] several times.
   - Select “Message” to transmit messages, “Status” to transmit statuses, “Area Call” to turn the area call function ON or OFF, or “Talkgroup” to make talkgroup calls.
   - Selectable function may differ, depending on the Controller setting.

2. Push [△] or [▼] several times to select a desired message or status.
   - The selected message or status may scroll, depending on the message length.
     ① Selectable message or status may differ, depending on the Controller setting.

• Message, Status, Area Call, and Talkgroup function selection sequence
  (Selectable function may differ, depending on the Controller setting.)
Voice communication

**Diamond call**
1. Press [ ] several times to select “Individual.”
2. Press [△] or [▼] several times to select a desired individual address (ID).
   - When your call is successful, “Connected” may be displayed and beeps may sound, depending on your system Controller setting.
4. Hold down [PTT] and then speak at your normal voice level.
5. Release [PTT] to listen.
6. Repeat the steps 4 and 5 until you finish your conversation.

**All call**
1. Press [ ] several times to select “All.”
2. Press [PTT] to call.
3. Hold down [PTT] and say your message at your normal voice level.

**Group (or Talkgroup) call**
1. Press [ ] several times to select “Group” or “Talkgroup.”
   - * Only when the Talkgroup is assigned to [ ] key. Refer to the Section 4 for details on the talkgroup function. (p. 4-10)
2. Press [△] or [▼] several times to select a desired group address (ID) or a talkgroup address (ID).
4. Hold down [PTT] and say your message at your normal voice level.
5. Release [PTT] to listen.

**Telephone call**
1. Press [ ] several times to select “Telephone.”
2. Press [△] or [▼] several times to select a desired extension number (ID).
4. Wait until reply is heard.
5. After the reply, hold down [PTT] and then speak at your normal voice level.
7. Repeat the steps 5 and 6 until you finish your conversation.
8. To hang up the call, press [Option].

---

Information:
Only one terminal can reply to an All, Group call. We recommend you to carefully listen for a reply after you making an All or Group call.

When the VOX function or full-duplex mode is set at the Controller, the [PTT] toggling between transmit and listen is not necessary.

When the VOX function is set, speak into the headset microphone to transmit, stop speaking to listen.

In full-duplex, you can speak and hear the other person at the same times.

**NOTE:** Use one of the following options for full-duplex operation.
- HM-153LS
- HM-166LS
- HS-85 with OPC-2144
- HM-153 with OPC-2144
- HM-166 with OPC-2144
- HS-102 with OPC-2359
Message call

◊ To an individual terminal
1. Push \[D\] several times to select “Individual.”
2. Push \([\Delta]\) or \([\uparrow]\) several times to select a desired individual address (ID).
3. Push [FUNC] several times to select “Message.”
4. Push \([\Delta]\) or \([\uparrow]\) several times to select a desired message.
   • The selected message may scroll, depending on the message length.
   • When your message call is successful, “Successful” may be displayed and beeps may sound, depending on your system Controller setting.

◊ To all terminals
1. Push \[D\] several times to select “All.”
2. Push [FUNC] several times to select “Message.”
3. Push \([\Delta]\) or \([\uparrow]\) several times to select a desired message.
   • The selected message may scroll, depending on the message length.
   • When your message call is successful, “Successful” may be displayed and beeps may sound, depending on your system Controller setting.

◊ To a Group (or a Talkgroup)
1. Push \[D\] several times to select “Group” or “Talkgroup.”
   * Only when the Talkgroup is assigned to \[D\] key. Refer to the Section 4 for details on the talkgroup function. (p. 4-10)
2. Push \([\Delta]\) or \([\uparrow]\) several times to select a desired group or talkgroup address (ID).
3. Push [FUNC] several times to select “Message.”
4. Push \([\Delta]\) or \([\uparrow]\) several times to select a desired message.
   • The selected message may scroll, depending on the message length.
   • When your message call is successful, “Successful” may be displayed and beeps may sound, depending on system Controller setting.
Using a call history

You can make a call using previously transmitted and received call settings. Up to 10 calls can be stored in each TX log, RX log, TX message log, RX message log, TX telephone log and RX telephone log.

- Selectable log may differ, depending on your system Controller setting.

1. Push [\[\]] several times to select a desired history log.
   - Tx log: Transmitted call
   - Rx log: Received call
   - Tx MSG log: Transmitted message
   - Rx MSG log: Received message
   - Tx TEL log: Transmitted telephone
   - Rx TEL log: Received telephone
2. Push [\[\]] or [\[\]] several times to select a desired log call.

Erasing all log items

All items in the Tx log, Rx log, Tx MSG log, Rx MSG log, Tx TEL log and Rx TEL log, can be manually erased.

1. Turn OFF the communication terminal if it is ON.
2. While holding down [FUNC], turn ON the power.
   - When “SET” is displayed, release [FUNC].
3. Push [\[\]] or [\[\]] several times to select “CLR.”
4. Push [\[\]].
   - “Deleting…” is displayed, and then “– – –” is displayed after all the logs are deleted.
5. Push [CLR].
   - The IP100H restarts.
Status Call

1. Push [FUNC] several times to select “Status.”
2. Push [△] or [▼] several times to select a desired status.
   • The selected status may scroll, depending on the message length.
   • When your status call is successful, “Successful” may be displayed and beeps may sound, depending on your system Controller setting.

Information:
A transmitted your status can only be confirmed with your system Controller or IP100FS remote communicator. Not for an individual IP100H communication terminal.
The Area Call function allows you to call the areas that the selected wireless access points cover. The Area Call function may or may not be enabled, and the areas you can call depends on your system Controller setting.

1. Push [FUNC] several times to select “Area Call.”
2. Push [△] or [▼] to select ON.
3. Push [CLR•] to return to the standby screen.
   * “ό” is displayed.

**When an area call is received**
“ό” is displayed for a while even if the area call is set to OFF.
Talkgroup Call function

Using the Talkgroup Call function, the user can select a talkgroup which IP100H belong to, from the previously registered groups in the Controller. The terminals which belong to a talkgroup are excluded from the original groups, as illustrated below.

When Talkgroup is OFF

When Talkgroup is selected
**Multiplex Talkgroup**

You can select a talkgroup previously set in the Controller. When the talkgroup is set as a multiplex talkgroup, the IP100H can make a talkgroup call between the linked talkgroups.

Example: When two normal talkgroups (Talkgroup 1000 and 1001) belong to a multiplex talkgroup (Talkgroup 0100)

- Talkgroup 0100 can call Talkgroup 0100, Talkgroup 1000, and Talkgroup 1001.
- Talkgroup 1000 can call Talkgroup 0100 and Talkgroup 1000.
- Talkgroup 1001 can call Talkgroup 0100 and Talkgroup 1001.
**Talkgroup Call function (continued)**

◊ **Selecting a talkgroup with [FUNC] key**

Available only when the Talkgroup Call function is assigned to [FUNC] key in your system Controller.

1. Push [FUNC] several times to select “Talkgroup.”
2. Push [▲] or [▼] to select a desired talkgroup.
3. Push [CLR] to return to the standby screen.
   - “●” and the selected talkgroup ID are displayed. The terminal is ready to talk to the terminals in the same talkgroup.
   - You can exit the talkgroup and return to the original group by selecting “OFF” in “Talkgroup.” in step 2.

◊ **Selecting a talkgroup with [□] key**

Available only when the Talkgroup Call function is assigned to [□] key in your system Controller settings.

1. Push [□] several times to select “Group.”
2. Push [▲] or [▼] several time to select the desired talkgroup.
3. Push [CLR] to return to the standby screen.
   - “●” and the selected talkgroup ID are displayed.
   - You can exit the talkgroup and return to the original group by selecting “OFF” in “Talkgroup” or any Group in step 2.
OTHER FUNCTIONS

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P-Bell function ......................................................................... 5-2
About the [Option] switch ........................................................ 5-2
About the display backlight ..................................................... 5-3
Emergency call function ............................................................. 5-4
  ◇ Transmitting an Emergency call ......................................... 5-4
  ◇ Receiving an Emergency call .............................................. 5-4
Lone Worker function ................................................................. 5-4
Pocket beep function

The Pocket beep function sounds beeps and blinks the “Q” icon to let you know a call is being received.
• This function is set by your system Controller.

P-Bell function

The P-Bell function sounds beeps to let you know a call is being received. However, you cannot listen to the call until you answer it.
• Push [PTT] to answer the call, then listen to the caller.
• The “P” icon is displayed when the P-Bell function is used.
• This function is set by your system Controller.

About the [Option] switch

One of the following functions may be assigned to the [Option] switch by your system Controller.

• Message: Selects often used messages.
• One touch: Selects often used call types with an address. (either All, Group, Individual or Telephone)
• Clear down: Hangs up a telephone call.
• Mute: Holding the [Option] switch for 1 second turns the received audio ON or OFF.
• Emergency: Transmits an emergency call by holding down the [Option] switch until “Emergency” is displayed. (p.5-4)

Ask your system manager which function is assigned.
About the display backlight

IP100H has a display backlight. The backlight is convenient for nighttime operation. One of three states can be set by your system Controller.

• **OFF**: Never lights.
• **Auto**: Lights for approximately 5 seconds when pushing any key except [PTT], or when rotating [PWR/VOL]. (Default)
• **ON**: Continuously lights while the communication terminal power is ON.
Emergency call function

The Emergency call function may be assigned to the [Option] or [fake] by your system Controller. Ask your system manager for the details on the assigned function.

◊ Transmitting an Emergency call

   • The emergency call is transmitted to the previously set ID, and an alarm sounds, depending on the setting.
2. Wait for an answer back.
   • When the IP100H have received an answer back, the alarm stops.
   1 To cancel the emergency call, hold down [Option] until “Emergency” disappears, or turn OFF the IP100H.
   1 The function may differ, depending on the Controller settings.

◊ Receiving an Emergency call

When an emergency call is received, “Emergency” is displayed and an alarm sounds, depending on the setting.

• Hold down [PTT] to transmit.
  • The alarm stops.

Lone Worker function

If the Lone Worker function is activated, the Emergency function is automatically turned ON after the IP100H has been left without any operation for the specified time period. When the reminder beep sounds, operate any key or the volume control within the specified time period to reset the timer.

• The time periods depend on the controller settings.
Section 6  

OPTIONS

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◊ Battery packs/case ..................................................................................6-2
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Connection ....................................................................................................6-3
Option list

◊ Battery packs/case
• BP-271/BP-272 Li-ion BATTERY PACKS
• BP-271: 7.4 V/1150 mAh (min.), 1200 mAh (typ.)
• BP-272: 7.4 V/1880 mAh (min.), 2000 mAh (typ.)
• BP-273 BATTERY CASE
  For LR6 (AA) × 3 alkaline batteries

◊ Battery chargers
• BC-202 DESKTOP CHARGER + BC-123S AC ADAPTER
  Rapidly charges Li-ion battery pack.
  Charging time: Approximately 2 hours for the BP-271
  Approximately 3.5 hours for the BP-272

◊ Others
• LC-181 CARRYING CASE
• MB-127 BELT CLIP
• SP-13 EARPHONE + OPC-2144 ADAPTER CABLE

◊ Headset/Microphones
• HM-153/HM-166 EARPHONE MICROPHONES
  + OPC-2144 ADAPTER CABLE
  Usable for full-duplex operation
• HM-153LS/HM-166LS EARPHONE MICROPHONES
  Usable for full-duplex operation
• HM-183LS SPEAKER-MICROPHONE
  Usable for full-duplex operation
• HM-186 SPEAKER-MICROPHONE
  + OPC-2144 ADAPTER CABLE
• HM-186LS SPEAKER-MICROPHONE
  For simplex operation
• HS-85 VOX UNIT + OPC-2144 ADAPTER CABLE
  Usable for full-duplex operation
• HS-102 HEADSET + OPC-2359 PTT SWITCH CABLE
  Usable for full-duplex operation
• HS-94/HS-95 HEADSETS/HS-97 THROAT MICROPHONE
  + OPC-2006LS ADAPTER CABLE
  /OPC-2328 PTT SWITCH CABLE
• HS-94: Ear-hook type
• HS-95: Neck-arm type
• OPC-2006LS: For VOX operation

6-2
Connection

Be sure to turn power OFF before connecting or disconnecting optional equipment to or from the [✓/✓] jack.

**CAUTION:** Attach the jack cover when optional equipment is not used.

**Connectable options**

- **HM-153LS/HM-153**
  - Earphone microphone
  - **HM-153LS**

- **HM-166LS/HM-166**
  - Earphone microphone
  - **HM-166LS**

- **HM-183LS**
  - Speaker-microphone

- **HM-186LS/HM-186**
  - Speaker-microphone
  - **HM-186LS**

  - Vox unit
  - **HS-102**, **HS-102**
  - Headset
  - **HS-13**
  - Earphone

- **OPC-2144** is required.
- **OPC-2006LS** is required for VOX operation.
- **OPC-2328** is required for PTT switch operation.
- **OPC-2359** is required for PTT switch operation.
- **Disables the VOX function in the Controller setting.**
- **To use the VOX function, enables the VOX function in your system Controller setting.**
Section 7 FOR YOUR REFERENCE

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Specifications .................................................................... 7-3
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  ◇ BC-202 DESKTOP CHARGER ...................................... 7-3
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Troubleshooting

The following chart is designed to help you correct problems which are not equipment malfunctions. If you are unable to locate the cause of a problem, or solve it through the use of this chart, contact your nearest Icom Dealer or Service Center.

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>POSSIBLE CAUSE</th>
<th>SOLUTION</th>
<th>REF.</th>
</tr>
</thead>
<tbody>
<tr>
<td>No power comes ON.</td>
<td>• The battery charge is exhausted.</td>
<td>• Charge the battery pack, or replace the batteries.</td>
<td>pp. 2-4</td>
</tr>
<tr>
<td></td>
<td>• Loose connection of the battery pack (case).</td>
<td>• Clean battery pack (case) terminals.</td>
<td>2-6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>–</td>
</tr>
<tr>
<td>No sound comes from the speaker.</td>
<td>• Volume level is too low.</td>
<td>• Rotate [PWR/VOL] to adjust to a desired level.</td>
<td>p. 3-2</td>
</tr>
<tr>
<td>No reply is received</td>
<td>• Too far from an access point.</td>
<td>• Move your location, then try again.</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>• The &quot;SSID&quot; icon blinks.</td>
<td>• Wait until the operator is back, or ask system manager about the status.</td>
<td>–</td>
</tr>
<tr>
<td>&quot;Key lock&quot; is displayed when a key is pushed</td>
<td>• The Key Lock function is turned ON.</td>
<td>• Hold down [CLR] for 1 second to turn the Key Lock function OFF.</td>
<td>p. 3-3</td>
</tr>
<tr>
<td>Cannot charge the battery pack completely</td>
<td>• The communication terminal power is ON.</td>
<td>• Turn OFF the power.</td>
<td>p. 2-4</td>
</tr>
<tr>
<td>The charging indicator blinks orange, or alternately blinks orange and green</td>
<td>• The battery pack is not properly inserted.</td>
<td>• Insert the battery pack properly.</td>
<td>p. 2-4</td>
</tr>
<tr>
<td></td>
<td>• Charging the battery pack outside of the chargeable temperature range.</td>
<td>• Charge the battery pack in the chargeable temperature range:</td>
<td>p. 2-3</td>
</tr>
<tr>
<td></td>
<td>• Loose connection of charging terminals.</td>
<td>• BC-202: 0°C to 40°C (32°F to 104°F)</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>• The communication terminal power is ON.</td>
<td>• BC-211: 10°C to 40°C (50°F to 104°F)</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Clean the charging terminals.</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Turn OFF the power.</td>
<td>–</td>
</tr>
<tr>
<td>The “SSID” icon blinks, or “Connecting…” is displayed (standby screen won’t be displayed)</td>
<td>• SSID Broadcast function is OFF in an access point (when 5 GHz band is used).</td>
<td>• Ask your system manager about the access point settings.</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>• Too far from an access point.</td>
<td>• Move your location, then try again.</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>• Access point power is OFF.</td>
<td>• Turn ON the access point power.</td>
<td>–</td>
</tr>
</tbody>
</table>
Specifications

◇ IP100H

• Power supply requirement:
  Icom BP-271, BP-272 battery pack or
  BP-273 battery case

• Current drain:
  Less than 150 mA average
  (Tx: 100 mA, Rx: 150 mA,
  standby: 50 mA)

• Usable temperature range:
  –10°C to +60°C (+14°F to +140°F)

• Dimensions:
  58(W) × 95(H) × 26.4(D) mm
  (2.3(W) × 3.7(H) × 1.0(D) inches)
  (projections not included)

• Weight:
  Approximately 205 g (7.2 oz)
  (with antenna and BP-271)

• Wireless LAN standard:
  IEEE802.11 n/a/b/g

• Authentication and Encryption:
  WEP (64/128 bit),
  WPA-PSK (TKIP/AES),
  WPA2-PSK (TKIP/AES)

• Protocol:
  TCP/IP

• Output power (typical):
  2.4 GHz  11.0 dBm
  W52/W53  10.5 dBm
  W56    8.5 dBm

• Audio codec: G.711 μ-law (64 kbps)

• Audio output power:
  Internal speaker
  More than 400 mW
  (at 10% distortion into a 16 Ω load)
  External speaker
  More than 200mW
  (at 10% distortion into an 8 Ω load)

• Audio output impedance:
  Internal speaker
  16 Ω
  External speaker
  8 Ω

◇ BC-202 DESKTOP CHARGER

• Power supply requirement:
  12 to 16 V DC or the specified Icom
  power adapter

• Charging temperature range:
  0˚C to 40˚C (32˚F to 104˚F)

• Weight:
  Approximately 104 g; 3.7 oz
  (without power adapter)

• Dimensions:
  88(W) × 72.6(H) × 46.5(D) mm
  (3.5(W) × 2.9(H) × 1.8(D) inches)
  (projections not included)

◇ BC-211 MULTI-CHARGER

• Power supply requirement:
  12 to 16 V DC or the specified Icom
  power adapter

• Charging temperature range:
  10˚C to 40˚C (50˚F to 104˚F)

• Weight:
  Approximately 1200 g; 2.6 lb
  (without power adapter)

• Dimensions:
  303.2(W) × 78.2(H) × 179.7(D) mm
  (11.9(W) × 3.1(D) × 7.1(H) inches)
  (projections not included)