

# KENWOOD

## **WD-K10 series**

**DECT Intercom System  
USER MANUAL**

JVCKENWOOD Corporation

B5A-1775-00

## 1.1 Contents

<b>1</b>	<b>INTRODUCTION</b>	<b>1</b>		
1.1	Contents	1		
1.2	How to Read This USER MANUAL	3		
	Symbols Used	3		
	Content of This User Manual	3		
1.3	Features	4		
1.4	Precautions	5		
1.5	Dust Resistant/Water Resistant and Environment of Use	5		
1.6	Precautions for Proper Use	6		
1.7	System Configuration	7		
	System Configuration Diagram	7		
	System Configuration Table	8		
	System Type	9		
1.8	Part Names and Functions (Device Connection Method)	12		
	Portable Base WD-K10PBS/Transceiver WD-K10TR	12		
	Base Station WD-K10BS	15		
	Charger KSC-48CR	20		
	Clip Microphone with Earphone EMC-13	21		
	Clip Microphone with Earphone EMC-14	22		
	Headset KHS-37	23		
	Interface Cable WD-RC50	24		
	Interface Cable WD-RC100	25		
<b>2</b>	<b>PREPARATION</b>	<b>26</b>		
2.1	Preparing the Device	26		
	Replacing the Battery Pack	26		
	Charging the Battery Pack	28		
	Attaching the Belt Clip	29		
	Connecting the Clip Microphone	29		
	Connecting the Transceiver Connection Cable	30		
2.2	Turning On/Off the Device Power	32		
	Turning On/Off the Power of WD-K10BS	32		
	Turning On/Off the Power of WD-K10PBS / WD-K10TR	33		
2.3	Registering the Device	34		
	Registering Sub Unit to Base Unit	34		
	Starting WD-K10PBS in Transceiver Mode	38		
2.4	Setting Various Functions	39		
	Adjusting the Receiver Volume Level	39		
	Checking Battery Remaining Capacity	40		
	Configuring in Setup Menu Mode	41		
	Setting Key Lock On/Off	43		
	Changing the PTT Key Setting	44		
	Manual Reconnection (Transceiver Mode Only)	45		
	Notification Tones During the Use of Transceiver	46		
	Voice Announcement	47		
<b>3</b>	<b>MAKING A CALL</b>	<b>48</b>		
3.1	Operation Mode	48		
3.2	Making Calls (Group Call Mode)	49		
	When Out of Range	50		
3.3	Changing Groups	51		
3.4	Calling All Groups (All Call Mode)	52		
3.5	Using External Devices	53		
3.6	Performing PMR Link	54		
	Overview of PMR Link	54		
	Activating the PMR Link Function	55		
	Performing PMR Link by Pressing the [PMR Link] Key	56		
	Performing PMR Link by Pressing the [PTT] Key	57		
	Performing PMR Link by Pressing the [PMR Link (PTT Link)] Key	58		
3.7	Making Calls in High Audio Quality	59		
	Overview of High Audio Quality Mode	59		
3.8	Broadcasting	60		
	Activating the Broadcast Function	60		
	Broadcasting by Pressing the [Broadcast] Key	61		
	Broadcasting by Pressing the [PTT] Key	62		
	Broadcasting by Pressing the [Broadcast(PTT Link)] Key	63		
<b>4</b>	<b>USING LISTENING MODE</b>	<b>64</b>		
4.1	Listening Mode	64		
	Overview of Listening Mode	64		
	Limitations of Listening Mode	65		
	Display in Listening Mode	65		
4.2	Calling from Sub Units in Listening Mode (Listening Talk)	66		
4.3	Calling from Sub Units in Listening Mode (All Call Mode)	66		
4.4	Changing Groups	67		
4.5	Switching to Group Call Mode	68		

<b>5</b>	<b>OTHERS</b>	<b>69</b>
5.1	Troubleshooting	69
5.2	Specifications	71

## 1.2 How to Read This USER MANUAL

### Symbols Used

**Precautions**

Describes precautions concerning the operation of this product.

**Note**

Describes reference information, such as functions and usage restrictions of this product.

### Content of This User Manual

- All rights reserved by JVC KENWOOD Corporation. Unauthorized duplication or reprinting of this user manual, in whole or in part, is strictly prohibited.
- Other product and company names included in this user manual are trademarks and/or registered trademarks of their respective companies. Marks such as ™ and ® have been omitted in this user manual.
- Illustrated designs, specifications and other contents of this user manual are subject to change for improvement without prior notice.
- Portable Base WD-K10PBS (Base Station Mode) and Base Station WD-K10BS may be denoted as “base unit”; and Portable Base WK-K10PBS (Transceiver Mode) and Transceiver WD-K10TR may be denoted as “sub unit” in this manual.

## 1.3 Features

- The use of 1.9 GHz band digital communication technology allows for crisp and clear calls to be made in confidentiality.
- Licenses and application procedures are not required; the device can be used immediately on the day it was set up.
- A flexible system can be set up, from a small-scale system using one Portable base WD-K10PBS or Base Station WD-K10BS, to a large-scale system combining several base stations.
- Up to 10 sub units can be connected to a base station (base unit) at Normal Audio Quality, and up to 5 sub units can be connected at High Audio Quality.
  - \* The default Quality Mode during calls is Normal Audio Quality. However, for clearer and crispier calls, you can select High Audio Quality.
  - \* Similar for 2 or more base stations in a baselink system.
- Simultaneous bidirectional calls are possible.
- The operation and usage environment of a sub unit may be limited when using it in Listening Mode configured for dedicated receiving. However, more sub units can be operated with few base stations.
- Press the [PTT] key on the transceiver to call immediately at any time, without any complicated operations.
- Group calls can be made for up to 4 groups, according to different hierarchy and business use. You can contact all members of the group simultaneously or talk with other groups even in Grouping operation.
- Use a clip microphone for clearer calls with less noise even under a noisy environment.
- This system allows external audio signals to be input to intercom calls, and intercom calls to be output to audio signal monitor.
- The Portable base WD-K10PBS can be used continuously for 25 hours in the Transceiver Mode, and for 8 hours in the Base Station Mode (when 4 transceivers are connected).
- The Transceiver WD-K10TR can be used continuously for 20 hours.

## 1.4 Precautions

- As far as possible, use the transceiver and portable base at a distance away from external wireless systems. An error due to radio wave interference may occur if they are too near.
- Using earphones in a dry environment may cause tingling sensation in the ears. This is due to the static charges accumulated on the body and the connected device, not malfunctioning of the earphones. This is less likely to occur on someone wearing clothes made from natural materials or preventive actions taken to prevent the accumulation of static charges on the clothes.

## 1.5 Dust Resistant/Water Resistant and Environment of Use

- The Portable base/Transceiver has been tested in-house and verified of its IP67 dust resistant/water resistant performance at the design phase. However, the dust resistant/water resistant performance is not guaranteed for all situations in actual use.
  - \* IP67 (Dust resistant/water resistant):  
No detrimental effects on device after submerging device in fresh water/still water of 1 m deep without additional non-specified pressure and retrieving it 30 minutes later.
- Under normal usage, the device can maintain its IP67 dust resistant/water resistant performance for one year. (When terminal cover, battery cover is installed)
  - \* We do not have a special maintenance program to maintain the dust resistant/water resistant performance.
- Align the terminal cover and battery cover to the attaching position before securing. When attaching the covers, ensure that no fine foreign material (including fiber, hair and sand) is caught in between.
- Do not open or close the terminal cover or battery cover when the transceiver is wet.
- If the supplied microphone plug mounting bracket is used when connecting the specified option to the speaker/microphone terminal, the transceiver meets the IP67 dust resistant/water resistant specifications. The dust resistant/water resistant performance of the option varies with each optional product.  
If an option other than the above is connected, the transceiver is not dust resistant/water resistant.
- The supplied charger and AC adapter is not water resistant. Do not use the transceiver when it is wet.
- If an impact is exerted on the transceiver, it may affect its dust resistant/water resistant performance.
- Using the transceiver near electronic products such as TVs, radios, and PCs may subject it to radio frequency interference or cause radio frequency interference to other devices. Use the transceiver away from these devices.
- Do not subject the transceiver or submerge it in soapy water, detergents, seasonings, juice, salt water, or oil. Do not submerge or subject the transceiver to hot or cold water.

## 1.6 Precautions for Proper Use

### Portable base/Transceiver

- Do not drop or knock these devices. These are precision equipment that may malfunction if subject to strong impact.

### Clip Microphone with Earphone, Headset

- Do not use a non-compatible clip microphone with earphone, headset. This may cause malfunction.
- When pulling off the clip microphone, earphone, or headset microphone adapter, do not pull the cable. This may cause the cable to snap. Be sure to hold the plug and pull.
- Do not touch the metal part of the plug. This may cause poor contact. If the device is dirty, wipe with a dry clean cloth.
- When connecting the clip microphone with earphone or headset, be sure to turn off the power of the sub unit. Making a connection while the device is turned on activates the protector which disables operation on the sub unit. The clip microphone with earphone or headset is also disabled.
- Insert the plug of the clip microphone with earphone straight in.

### System

- As this DECT intercom system uses wireless communication, noise may occur and calls may be cut off if the system is moved to a place unreachable by radio waves.
- The call distance differs for a Portable base WD-K10PBS and Transceiver WD-K10TR.  
And the communication distance differs depending on the usage environment and conditions.  
For details, please consult the authorized dealer.
- Do not place the device near heating appliances or at locations subject to direct sunlight for long hours.
- When howling (audio feedback) occurs, adjust the speaker volume or change the direction and position of the microphone.
- The number of units that can be connected may be fewer depending on the radio wave environment and setup condition.

### Portable base/Transceiver Battery (Rechargeable Battery)

- Do not place the battery at locations subject to high temperature (such as direct sunlight). This will cause leaking or shorten the lifespan.
- The guideline for the number of battery recharging times is as follows.

Model	Recharging Times
Portable base WD-K10PBS	Approx. 500 times
Transceiver WD-K10TR	Approx. 500 times

- As the number of recharging times may change drastically depending on the usage temperature, usage time, and remaining capacity at the time of recharging, this guideline is not a guarantee.
- If the usage time has shortened sharply even when the number of recharging times is less than the guideline, the battery is considered to have reached the end of life. Please buy a new one.

### Daily Maintenance

Turn off the power first, then remove the battery or power plug. Perform the following maintenance.

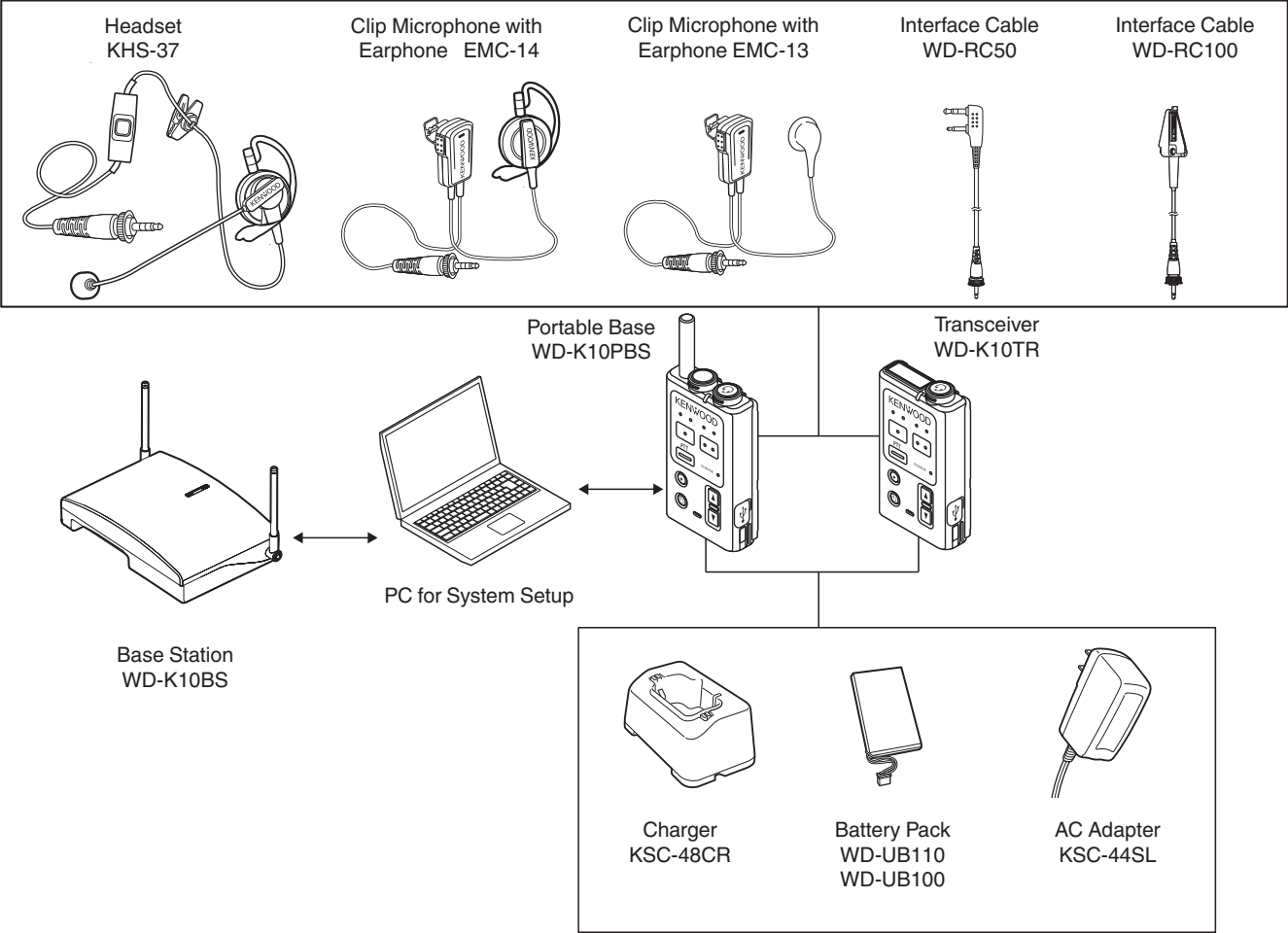
- If the device is dirty, wipe with a dry and soft cloth.
- If the device is extremely dirty, wet the cloth in diluted neutral detergent solution and squeeze dry before wiping off the dirt. Wipe again with a dry cloth to remove any excess moisture.

#### Precautions

- Do not use benzene or thinner. This may cause damage or malfunction in the body.

1.7 System Configuration

System Configuration Diagram





### System Configuration Table

No.	Model Name	Product Name	Remarks
1	WD-K10PBS	Portable Base	It is a transceiver for wireless communication as a base unit or sub unit of the DECT intercom system.
2	WD-K10TR	Transceiver	It is a transceiver that is the sub unit of the DECT intercom system. It communicates wirelessly with the Portable Base or Base Station.
3	WD-K10BS	Base Station	It communicates with the transceiver.
4	KSC-48CR	Charger	A charger for the Portable Base WD-K10PBS/Transceiver WD-K10TR.
5	KSC-44SL	AC Adapter	An AC adapter for the charger.
6	WD-UB110	Battery Pack	A battery pack for the Portable Base WD-K10PBS.
7	WD-UB100	Battery Pack	A battery pack for the Transceiver WD-K10TR.
8	EMC-13	Clip Microphone with Earphone	A clip microphone that is equipped with earphone.
9	EMC-14	Clip Microphone with Earphone	A clip microphone that is equipped with earphone.
10	KHS-37	Headset	A headset for the Portable Base WD-K10PBS/Transceiver WD-K10TR.
11	WD-RC100	Interface Cable (Universal type)	A conversion cable for the Portable base WD-K10PBS. It is used when performing the PMR Link function.
12	WD-RC50	Interface Cable (2-Pin type)	A conversion cable for the Portable base WD-K10PBS. It is used when performing the PMR Link function.

## System Type

This product is a DECT intercom system that combines and uses both base and sub units. The system may be of a portable or non-portable type, depending on the type of base unit.

### Note

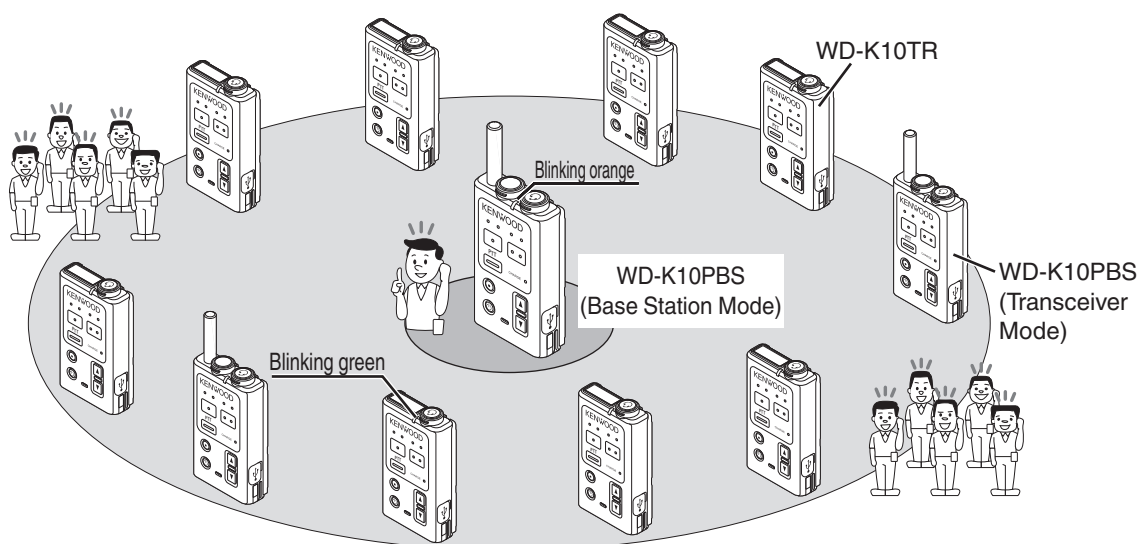
- The base and sub units have already been configured for your system when you receive the transceiver. For details on system configuration and setup, please consult the authorized dealer or installer.

## Portable Type

### ● Stand-alone

One Portable Base WD-K10PBS is operated as a base unit.

Up to 10 sub units can be connected at Normal Audio Quality using the Portable Base WD-K10PBS (Transceiver Mode) or the Transceiver WD-K10TR. Up to 5 sub units can be connected at High Audio Quality (including the base unit, maximum 11 units (or 6 units at High Audio Quality) can be used for simultaneous calls).



### Note

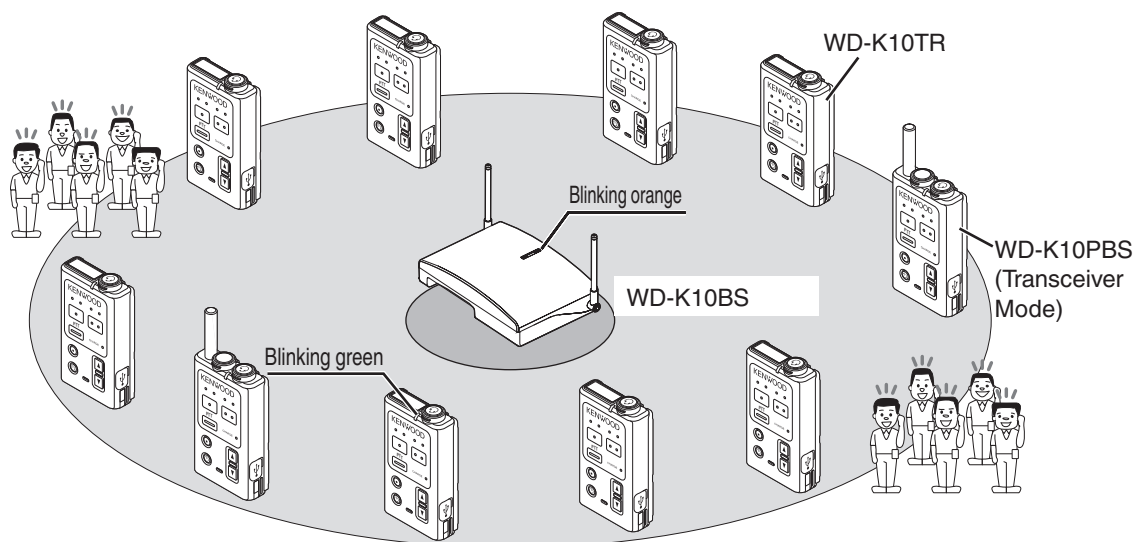
- To operate the Portable base as a sub unit, the mode on WD-K10PBS must be switched ( [on page 38](#)).
- You can use the system setup to change the quality mode from Normal Audio Quality to High Audio Quality for clearer and crispier calls. For details on the settings, please consult the authorized dealer or installer.

## Non-Portable Type

### ● Stand-alone

One Base Station WD-K10BS is operated as a base unit.

Up to 10 sub units can be connected at Normal Audio Quality using the Portable Base WD-K10PBS (Transceiver Mode) or the Transceiver WD-K10TR. Up to 5 sub units can be connected at High Audio Quality (a maximum of 10 units (or 5 units at High Audio Quality) can be used for simultaneous calls).

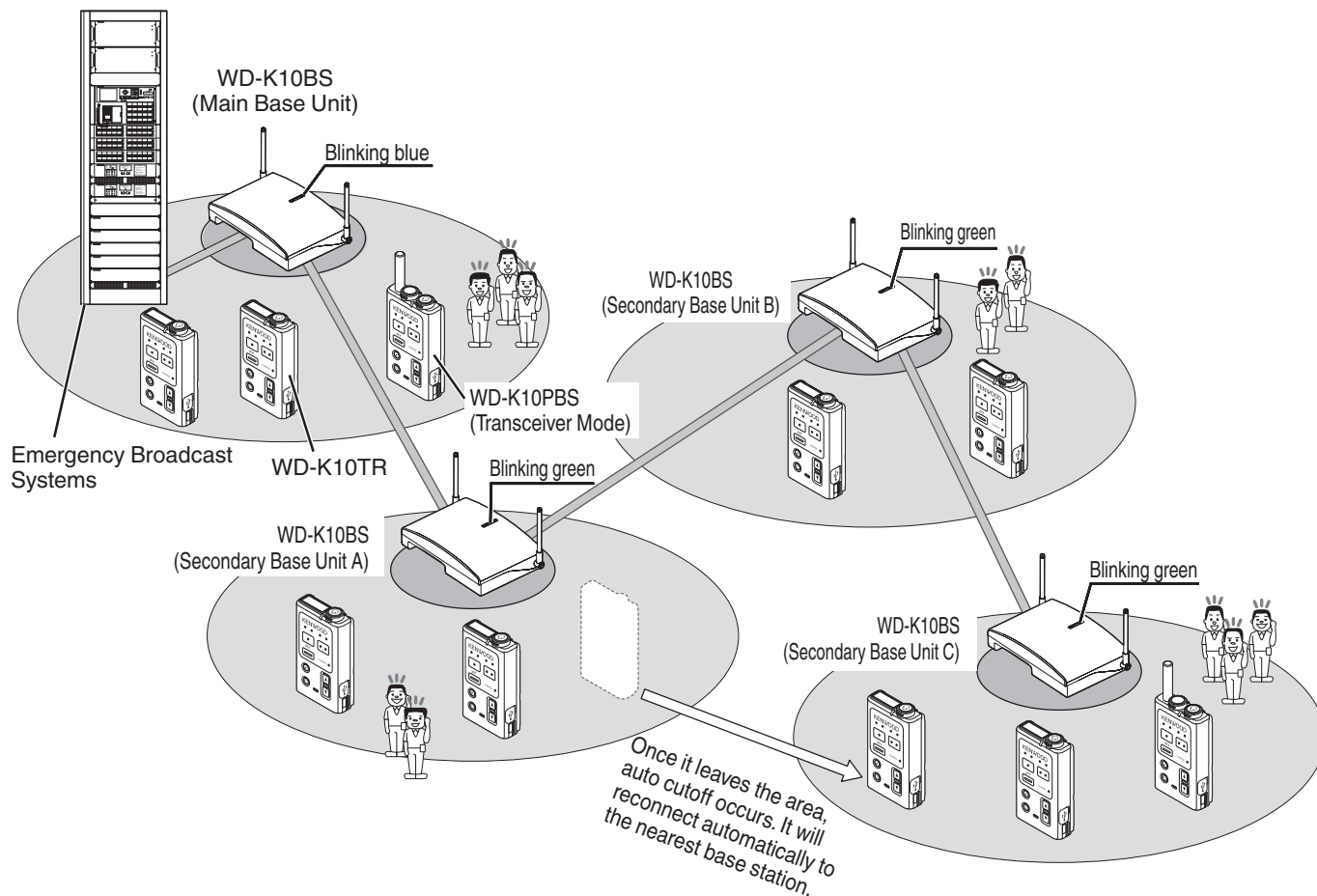


#### Note

- To operate the Portable base as a sub unit, the mode on WD-K10PBS must be switched ( [on page 38](#) ).

### ● Baselink

For a non-portable type system, the area can be expanded by wiring multiple (maximum 4) base stations WD-K10BS. One WD-K10BS is operated as a main base unit, and the rest (maximum 3 units) is operated as secondary base units. The main base unit WD-K10BS can be connected to external devices. It allows intercom calls from the hall master and audio signals from emergency broadcast systems to be heard over intercoms.



#### Note

- It may take some time to switch base stations when the area is moved.
- Connection is possible only if there is an empty channel at the base station of the moved destination.
- The number of simultaneously connected units changes according to the surrounding radio wave condition, setup condition, and environment.
- Only the main base unit can be connected to external devices.

1.8

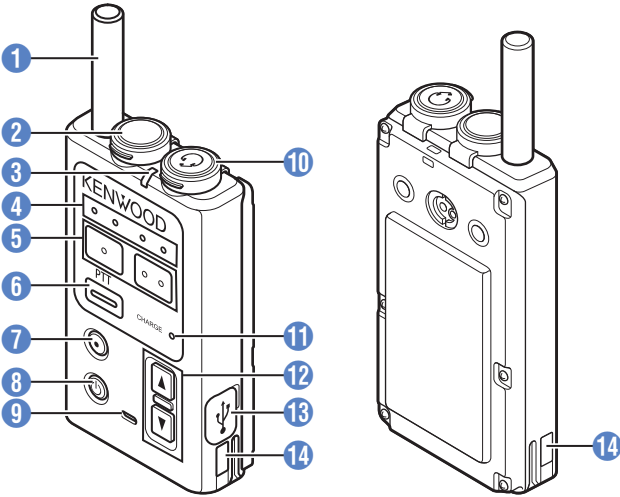
Part Names and Functions (Device Connection Method)

Note

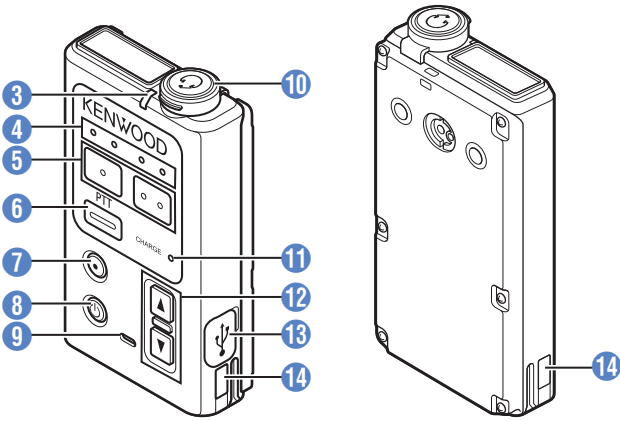
- For details on the connection method of the connecting jack of various devices, please consult the authorized dealer or installer.

Portable Base WD-K10PBS/Transceiver WD-K10TR

WD-K10PBS



WD-K10TR



**1 Antenna****2 PMR Link jack**

For performing PMR Link. Single external wireless trigger jack.

**3 Status LED**

Indicates the status of the transceiver.

Indication	Status	
	Base Station Mode	Transceiver Mode
Blinking green (slow)	—	Normal Mode/ Listening Talk
Blinking green (fast)	—	Menu Setup
Green	Wireless Sub Unit Registration Mode	
Blinking red (slow)	Low battery	
Blinking red (fast)	Very low battery	
Red	Power ON	Power ON/No line connection (Out of range, call disabled)
Blinking blue (slow)	—	Listening Mode
Blinking blue (fast)	System error	
Blue	Wireless setting by the PC	
Blinking orange (slow)	Normal Mode	—
Blinking orange (fast)	Menu Setup	—
Blinking green and orange alternately	Updating	Updating

- Blinking (slow): Blinks every 3 seconds
- Blinking (fast): Blinks every 1 second

**Precautions**

- When the Status LED blinks rapidly in blue and a system error appears, check that the plug of the clip microphone is firmly inserted into the Portable base WD-K10PBS/Transceiver WD-K10TR. Then turn on/off the power to reset. If the unit still does not recover, please consult the authorized dealer or installer.

**4 Group LED**

Indicates the current call group.

**5 [PF 1] key/[PF 2] key**

Press or press and hold to execute the function configured to each key.

- Any function can be configured to each key. The transceiver may come with different name and function for each key. For details, please consult the authorized dealer or installer.

**6 [PTT] key**

Press to make a call.

- Depending on the setting, this key is disabled when a clip microphone or headset microphone adapter which is sold separately is connected. For details, please consult the authorized dealer or installer.

**7 [All Call] key**

Press and hold to make an All Call.

- Any function can be configured to the [All Call] key. The transceiver may come with different function for each key. For details, please consult the authorized dealer or installer.

**8 Power key**

Press and hold to turn the power on/off. Press to check the remaining capacity in the battery. The battery charge LED blinks.

**9 Microphone**

When making a call with the transceiver without using the clip microphone, speak into this microphone.

- This key is disabled when a clip microphone or headset microphone adapter which is sold separately is connected.

**10 Microphone/ Earphone jack**

For connecting a clip microphone, earphone or headset microphone adapter which is sold separately. Do not connect any device other than the compatible models.

**11 Battery Charge LED**

Indicates the charging status.

- |                |  |
|----------------|--|
| Light up       | : Charging in progress                       |
| Blinking       | : Charging in preparation, or charging error |
| Light goes off | : Charging complete                          |

**12 [▲]/[▼] key**

For adjusting the receiver volume level. The receiver volume changes with each press of the ▲/▼ key, from level 1 to 15. For details, refer to “Adjusting the Receiver Volume Level” ( [on page 39](#)).

**13 Data setting connector**

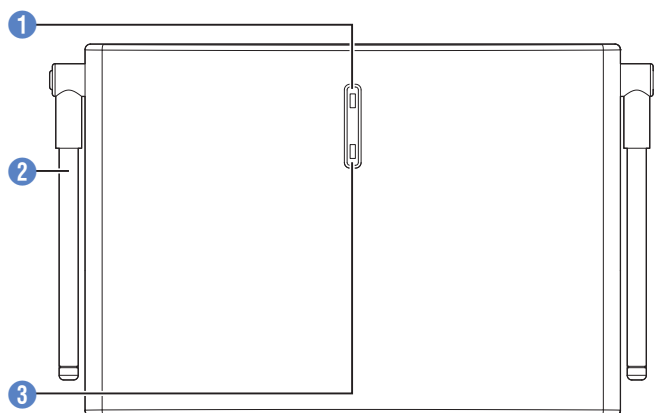
For registering the transceiver to the system or changing the settings.

- Normally not used. Do not open the cover. And do not touch the connector.

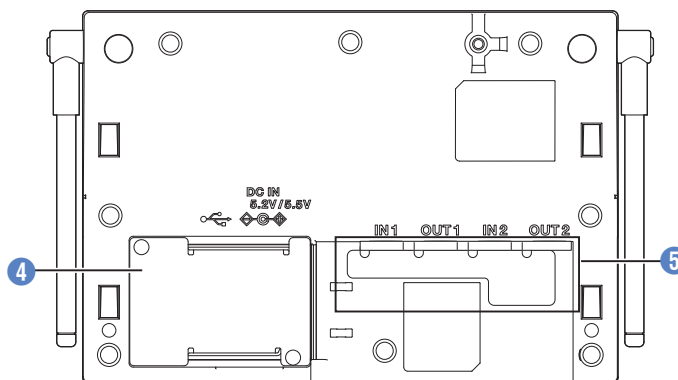
**14 Charge contact terminal**

## Base Station WD-K10BS

### FRONT



### REAR



#### 1 Status LED

Indicates the status of the base station with the LED color.

#### 2 Antenna

For registering sub units to the base station through wireless communication.

#### 3 [Registration] key

#### 4 Cover (DC plug area)

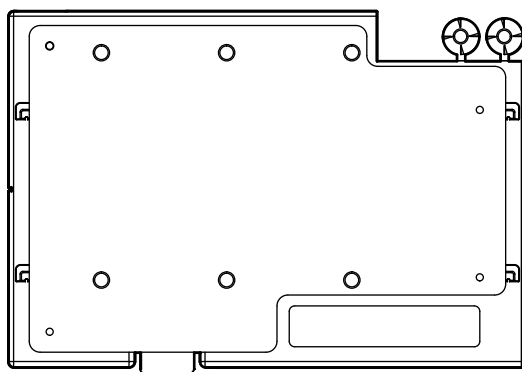
Remove the cover when connecting the AC adapter to the DC IN jack or when the data setting connector and baselink terminal block are used.

#### 5 Packing (Setting/ adjust area)

Remove this when connecting external audio equipment, adjusting volume, or using the Mode select switch.

### Mounting Plate

For use when installing the base station to the wall or ceiling.



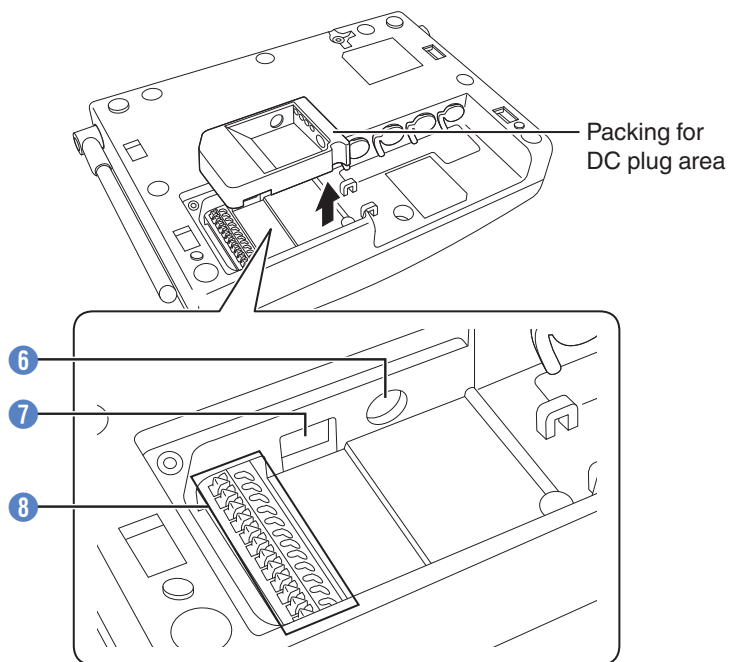


### Underneath the Cover (DC Plug Area)

There is a packing for the DC plug area underneath the cover (DC plug area). Remove the packing to use the DC IN jack, Data setting connector and Baselink/ External Control terminal block.

#### Precautions

- When the DC plug is dirty, noise may occur during conversation. Wipe with a dry cloth regularly.
- Be sure to connect or disconnect the DC plug only when the power is turned off.



#### **6 DC IN jack**

For connecting the DC plug of the AC adapter.

#### **7 Data setting connector**

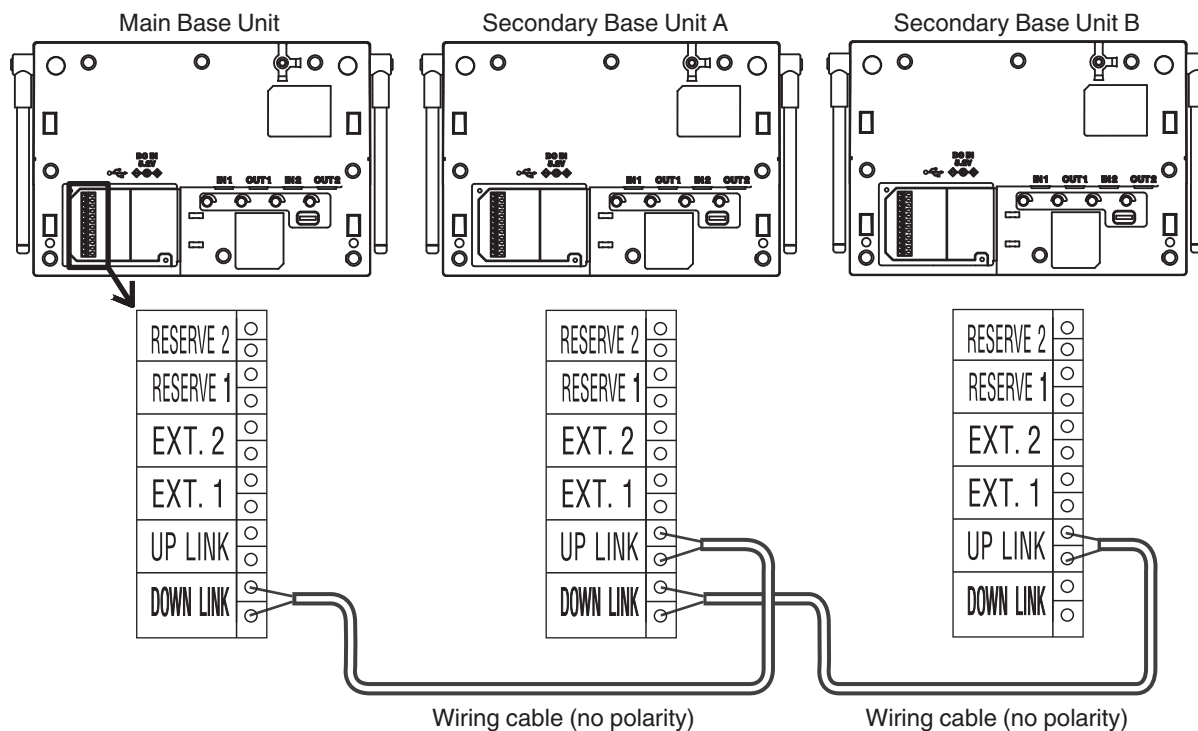
For registering the base station to the system or changing the settings using the Programming Software.  
Normally not used. Do not touch the connector.

## 8 Baselink/ External Control terminal

For operating the base station as the Baselink system or controlling an external device.

When operating in Baselink system, change the settings with the ⑪ Mode select switch ( on page 18), and connect the baselink control terminal blocks of the base units with a wiring cable.

Connection example: Connecting base units in a Baselink system



WD-K10BS Baselink/External Control terminal

	Name	Description
DOWN LINK	Baselink Down-Link	No polarity
DOWN LINK	Baselink Down-Link	No polarity
UP LINK	Baselink Up-Link	No polarity
UP LINK	Baselink Up-Link	No polarity
EXT.1	External Control 1	Contact output a No polarity Max. 24 V/1 A
EXT.1	External Control 1	Contact output a No polarity Max. 24 V/1 A
EXT.2	External Control 2	Contact output a No polarity Max. 24 V/1 A
EXT.2	External Control 2	Contact output a No polarity Max. 24 V/1 A
RESERVE 1	NC	Spare terminal
RESERVE 1	NC	Spare terminal
RESERVE 2	NC	Spare terminal
RESERVE 2	NC	Spare terminal

### • Conditions for wiring cable

Use a UTP cable (unshielded twisted pair cable) with a characteristic impedance of 100  $\Omega$  at a maximum frequency band of 1 MHz or above as the connecting cable between the base stations for communication.

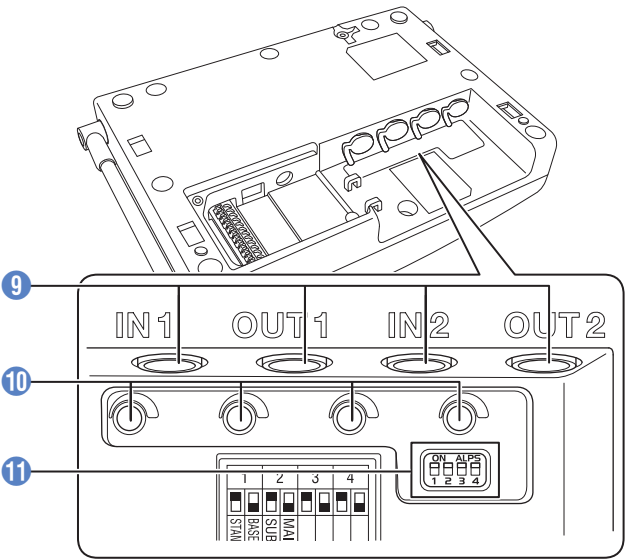
Fuji Electric Cable Co., Ltd. "Electronic button telephone digital transmission cable ICT"

Maximum wiring distance

Wire Diameter (mm)	Wiring Distance (m)
$\phi$ 0.5	600
$\phi$ 0.65	1000

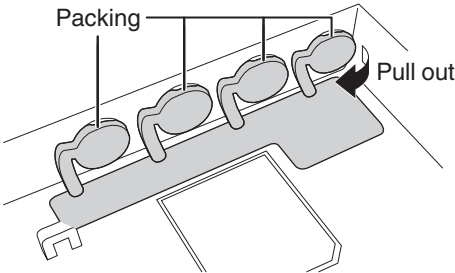
Underneath the Packing (Setting/ Adjust Area)

There is an Ext Audio input/output jack, a volume adjust knob and a Mode select switch underneath the packing.



9 Ext Audio input/output jacks (2 lines)

Group calls can be output externally by connecting this unit to an external audio equipment. Connecting to a hall master WT-MC60 or external device allows users to participate in group calls. Pull out the jack packing when connecting an external device.



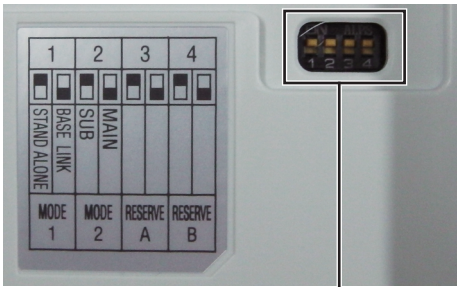
To maintain the waterproof performance, cover the jacks with the packing when not in use.

10 Volume adjust knob

For adjusting the volume of the external audio equipment or microphone connected. A flat-blade screwdriver is required for the adjustment.

11 Mode select switch

For configuring the device type and operation mode of the base station.



Mode select switch

	Stand-alone system base unit The unit operates as a stand-alone system when either of MAIN/SUB (SW2) is selected.
	Baselink Main Base Unit
	Baselink Secondary Base Unit

## Status LED Indication

Indication	Operation Mode		
	Stand-alone Base Unit	Baselink Main Base Unit	Baselink Secondary Base Unit
Blinking green (slow)	—	—	Normal Mode
Green	Wireless Sub Unit Registration Mode	Wireless Sub Unit Registration Mode	—
Blinking red (slow)	Power ON		Power ON, No line connection (Out of range, call disabled)
Blinking blue (slow)	—	Normal Mode	—
Blinking blue (fast)	System error		
Blue	Wireless setting by the PC		
Blinking orange (slow)	Normal Mode	—	—
Blinking green and orange alternately	Updating		

Blinking (slow): Blinks every 3 seconds

Blinking (fast): Blinks every 1 second

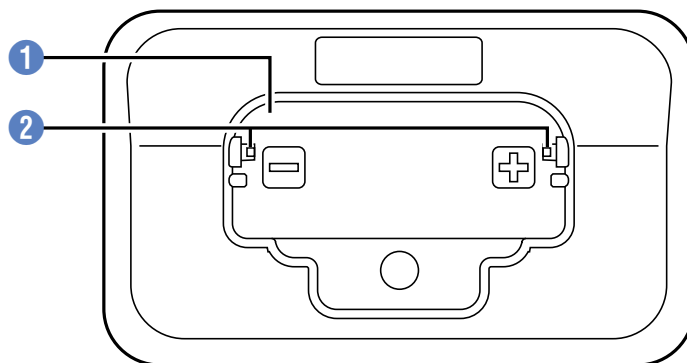
### Precautions

- When the Status LED blinks rapidly in blue and a system error appears, check that the plug of the clip microphone is firmly inserted into the Portable Base WD-K10PBS or Transceiver WD-K10TR. Then turn on/off the power to reset. If the unit still does not recover, please consult the dealer.

## Charger KSC-48CR

The charger KSC-48CR can be combined and used with the separately available AC adapter KSC-44SL or KSC-44ML.

### Top

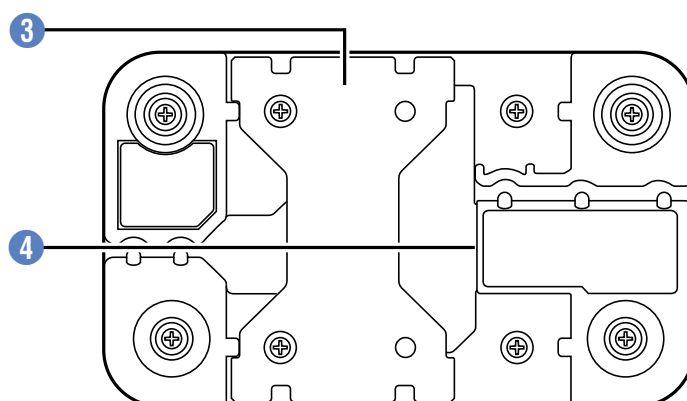


#### 1 Transceiver charging slot

Charging port for inserting the transceiver to be charged.

#### 2 Charging terminal

### Bottom



#### 3 Connecting bracket

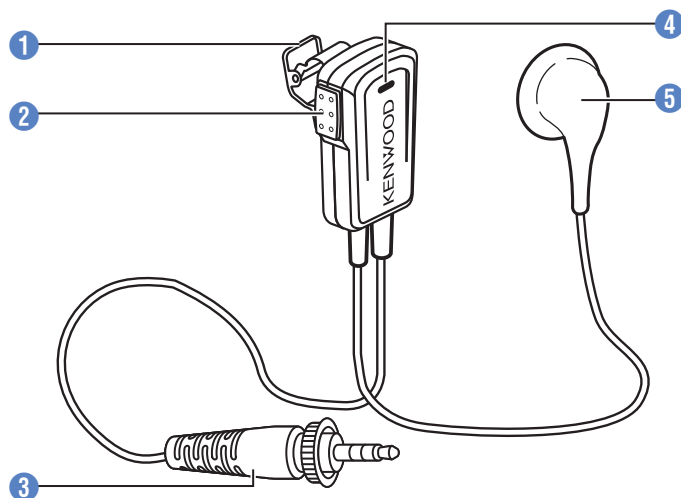
For connecting multiple (maximum 6) chargers.

For details on how to connect chargers, please refer to the instruction manual of Charger KSC-48CR.

#### 4 DC IN jack

For inserting the DC plug of the AC adapter.

### Clip Microphone with Earphone EMC-13



#### 1 Microphone clip

Use this to attach to the collar of your clothes.

#### 2 [PTT] key

Press this key for business contact as an intercom.

#### 3 Transceiver connection plug

For connecting to an appropriate transceiver.

#### 4 Microphone

The microphone is a close-talking type microphone. To speak, place your mouth close to the microphone. (5 cm)

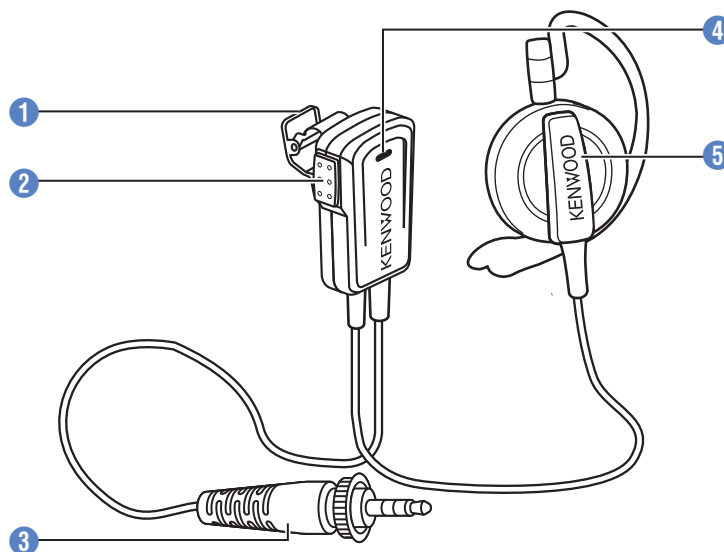
#### 5 Earphone

Insert into your ear to listen to the conversation.

#### Precautions

- Insert firmly into the terminal so that the plug does not come off, and tighten the cap. If the cap is not fully tightened, poor connection with the transceiver and noise may occur. Note that this is not water resistant.
- When the plug is dirty, noise may occur during conversation. Wipe with a dry cloth regularly.
- Be sure to connect or disconnect the plug only when the power is turned off.

## Clip Microphone with Earphone EMC-14



### 1 Microphone clip

Use this to attach to the collar of your clothes.

### 2 [PTT] key

Press this key for business contact as an intercom.

### 3 Transceiver connection plug

For connecting to an appropriate transceiver.

### 4 Microphone

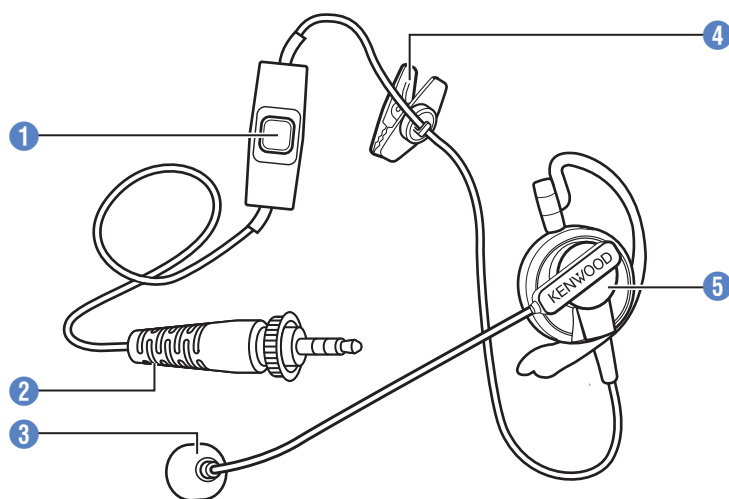
The microphone is a close-talking type microphone. To speak, place your mouth close to the microphone. (5 cm)

### 5 Earphone

Insert into your ear to listen to the conversation.

### Precautions

- Insert firmly into the terminal so that the plug does not come off, and tighten the cap. If the cap is not fully tightened, poor connection with the transceiver and noise may occur. Note that this is not water resistant.
- When the plug is dirty, noise may occur during conversation. Wipe with a dry cloth regularly.
- Be sure to connect or disconnect the plug only when the power is turned off.

**Headset KHS-37****1 Microphone clip with [PTT] key**

Press this key for business contact as an intercom.

**2 Transceiver connection plug**

For connecting to an appropriate transceiver.

**3 Microphone**

To speak, adjust the boom microphone such that it is about 1 cm away from your mouth.

The boom microphone can be moved up and down.

**4 Cord clip**

Use this to clip the cord to the collar of your clothes when it gets in the way.

**5 Earphone**

Insert into your ear to listen to the conversation.

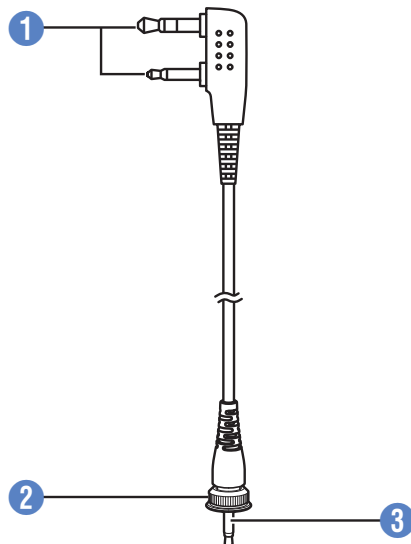
**Precautions**

- Insert firmly into the terminal so that the plug does not come off, and tighten the cap. If the cap is not fully tightened, poor connection with the transceiver and noise may occur. Note that this is not water resistant.
- When the plug is dirty, noise may occur during conversation. Wipe with a dry cloth regularly.
- Be sure to connect or disconnect the plug only when the power is turned off.



## Interface Cable WD-RC50

The transceiver connection cable WD-RC50 is a conversion cable for communication between the DECT intercom system WD-K10 series and external wireless system (KENWOOD brand). (For 2-pin connector)  
It is used to connect to the Portable base WD-K10PBS.



### 1 PMR Link jack

Connect to the 2-pin connector of the two-way radios of the KENWOOD in an external wireless system.

### 2 Cap

After connecting to the transceiver, turn the cap and secure.

### 3 Transceiver connection plug

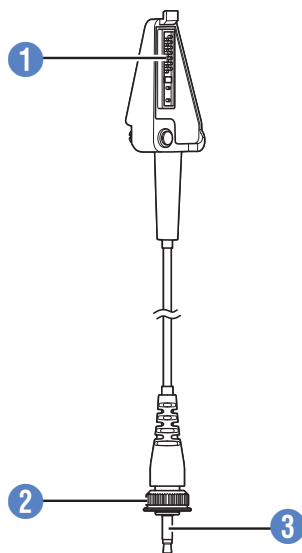
For connecting to an appropriate transceiver.

#### Precautions

- Insert firmly into the terminal so that the plug does not come off, and tighten the cap. If the cap is not fully tightened, poor connection with the transceiver and noise may occur. Note that this is not water resistant.
- When the plug is dirty, noise may occur during conversation. Wipe with a dry cloth regularly.
- Be sure to connect or disconnect the plug only when the power is turned off.

## Interface Cable WD-RC100

The transceiver connection cable WD-RC100 is a conversion cable for communication between the DECT intercom system WD-K10 series and external wireless system (KENWOOD brand). (For universal connector)  
It is used to connect to the Portable base WD-K10PBS.



### 1 PMR Link jack

Connect to the universal connector of the two-way radios of the KENWOOD in an external wireless system.

### 2 Cap

After connecting to the transceiver, turn the cap and secure.

### 3 Transceiver connection plug

For connecting to an appropriate transceiver.

#### Precautions

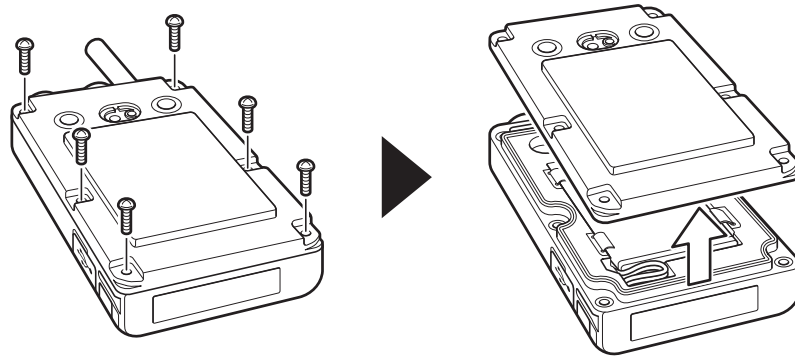
- Insert firmly into the terminal so that the plug does not come off, and tighten the cap. If the cap is not fully tightened, poor connection with the transceiver and noise may occur. Note that this is not water resistant.
- When the plug is dirty, noise may occur during conversation. Wipe with a dry cloth regularly.
- Be sure to connect or disconnect the plug only when the power is turned off.

## 2.1 Preparing the Device

### Replacing the Battery Pack

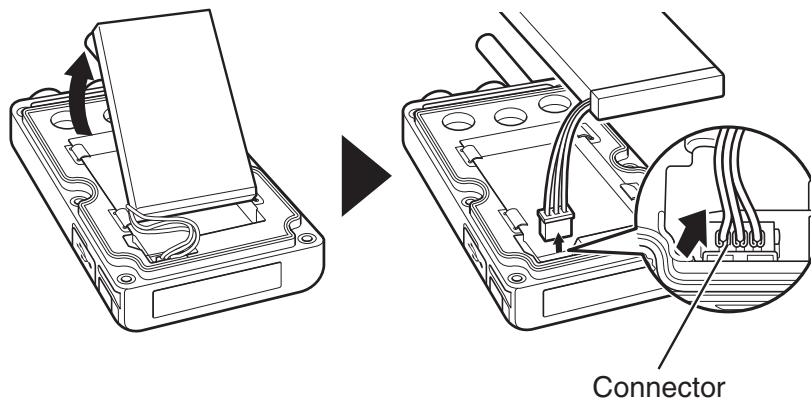
This transceiver comes with the battery pack already installed in it. To replace the battery pack, follow the steps below to remove and install the battery pack.

- 1 Remove the screws (x6) on the rear of the transceiver and remove the rear cover.

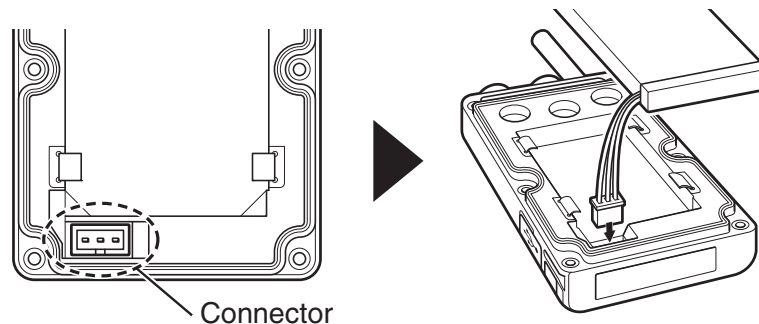


- 2 Take out the battery pack and remove the battery connector.

When removing the connector, hold the base of the connector and pull it straight up slowly.

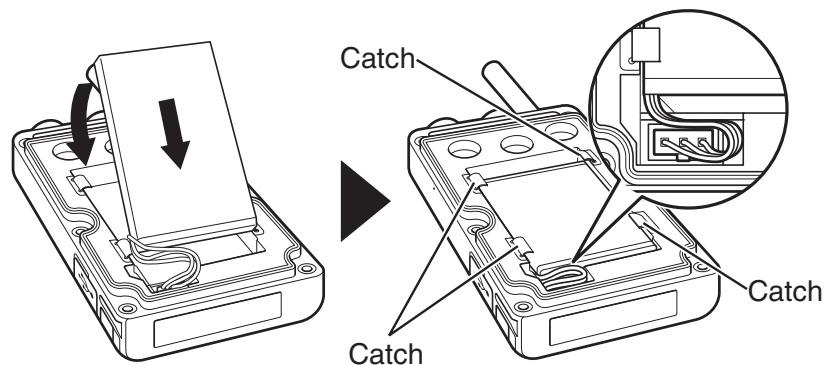


- 3 Connect the battery connector to the connector of the transceiver unit.



#### 4 Arrange the battery cable as shown in the illustration and push in the battery.

Push in firmly until the catches are sitting on the battery pack.



#### 5 Attach the rear cover to the transceiver unit and tighten the screws (x6).

After installing the battery pack, attach the rear cover and secure it by tightening the screws.

##### Precautions

- When attaching the rear cover, ensure that no fine foreign material (including fiber, hair and sand) is caught in between, so as to maintain the dust resistant/water resistant performance.  
To maintain the water resistant performance, please check with the authorized dealer.

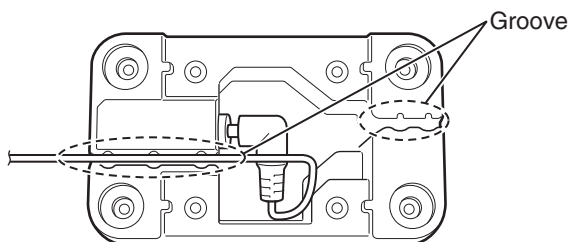
## Charging the Battery Pack

Be sure to charge the transceiver using the charger KSC-48CR before using.

- 1 Remove the bracket underneath the charger and insert the DC plug of the AC adapter into the DC IN jack of the charger.

For details on installing and removing the bracket, refer to the instruction manual of the charger KSC-48CR.

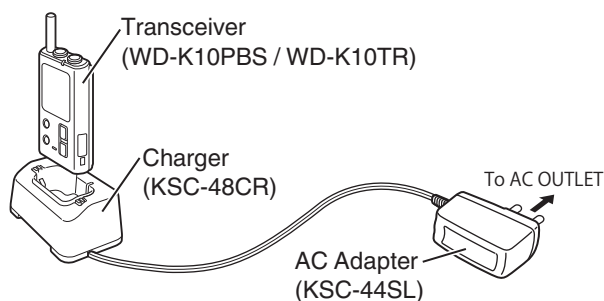
- 2 Insert the cable of the AC adapter into the left or right groove depending on where the charger is set up.



\* In this illustration, the cable is inserted in the left groove.

- 3 Reinstall the bracket and insert the AC adapter into the AC outlet.

- 4 Place the transceiver with the battery pack installed onto the charger.



- The battery charge LED lights up in red and charging begins.
- The transceiver turns off automatically if it is placed on the charger while it is turned on. For safety purpose, turn off the transceiver during charging.
- Check that the metal terminals of the transceiver are in firm contact with the terminals on the charger.
- The battery charge LED goes off when charging is complete. Take out the transceiver.
- The estimated time required to complete the charging is as follows:

WD-K10PBS: Approx. 6 hours

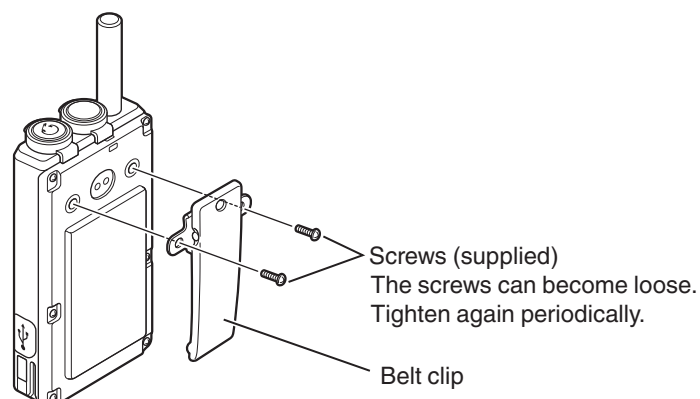
WD-K10TR: Approx. 5 hours

### Precautions

- Be sure to use the specified charger WD-C100CR to charge WD-K10PBS and WD-K10TR.

## Attaching the Belt Clip

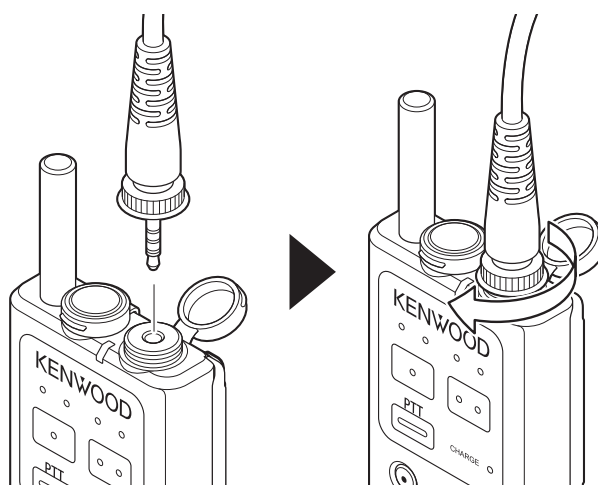
The transceiver can be attached to a belt using the supplied belt clip.



## Connecting the Clip Microphone

Use a clip microphone (sold separately) for clearer calls even under a noisy environment.

- 1** Insert the connecting plug into the connecting jack of the transceiver, and secure by turning the cap in the direction of the arrow.



### Note

- Be sure to read the instruction manual of the connecting device before using.
- Make sure to turn off the transceiver before making a connection. Making a connection while the transceiver is turned on activates the protector which disables operation on the transceiver. The clip microphone or headset microphone adapter is also disabled.
- For information on supported accessories of the clip microphone or headset microphone adapter, please refer to the DECT intercom system WD-K10 series website.  
[http://manual.kenwood.com/en\\_contents/search/keyword](http://manual.kenwood.com/en_contents/search/keyword)



## Connecting the Transceiver Connection Cable

Connect the transceiver connection cable WD-RC100 or WD-RC50 to allow communication between the DECT intercom system WD-K10 series and external wireless systems (KENWOOD brand).

- Compatible models:

Two-way radios of the KENWOOD brand that can be connected to the transceiver connection cable WD-RC100 or WD-RC50 are as follows:

WD-RC100: NX-200G, NX-300G, NX-5200, NX-5300

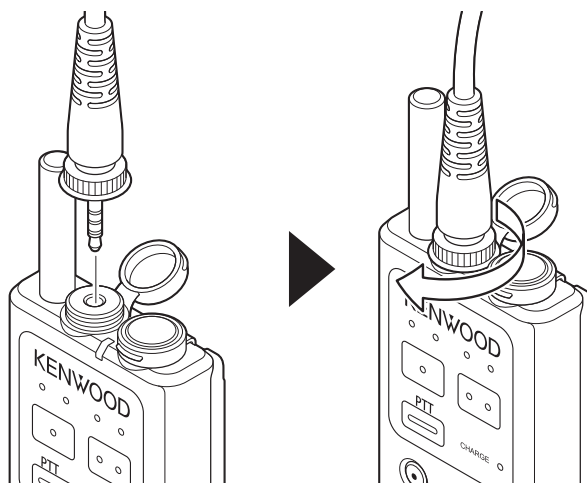
WD-RC50: NX-220, NX-320, TK-2000, TK-3000, TK-2302, TK-3302, TK-3401D, TK-3501

### Precautions

- As far as possible, use the transceiver and portable base at a distance away from external wireless systems. An error due to radio wave interference may occur if they are too near.
- Do not connect any two-way radios other than the compatible models.
- To communicate with external wireless systems, the "PMR Link" function must first be assigned. For details on assigning the function, please consult the authorized dealer or installer.

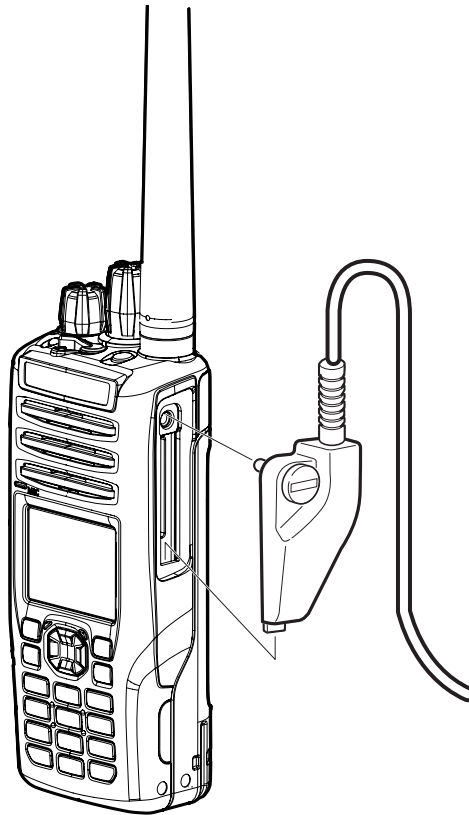
## Connecting to a Portable base WD-K10PBS

Insert the connecting plug into the connecting jack of the transceiver, and secure by turning the cap in the direction of the arrow.



#### Connecting to an External Wireless System Transceiver

Insert the guide of the transceiver connection cable into the groove of the transceiver, and secure tightly with screws. The screws can be tightened by hand but in order to ensure water resistance, use a coin screwdriver to tighten or remove.



#### Precautions

- When using two-way radio, do not use or place it on the charger. Be sure to remove it from the charger.

#### Note

- Make sure to turn off the external transceiver before making a connection.

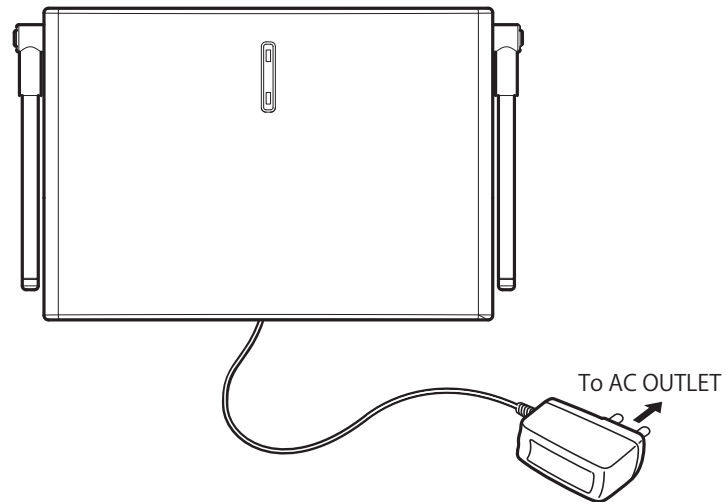


## 2.2 Turning On/Off the Device Power

### Turning On/Off the Power of WD-K10BS

#### Turning on the Power

Plug the AC adapter of WD-K10BS into the AC outlet to turn on.



#### Turning off the Power

Unplug the AC adapter of WD-K10BS from the AC outlet to turn off the power.

## Turning On/Off the Power of WD-K10PBS / WD-K10TR

### Turning on the Power

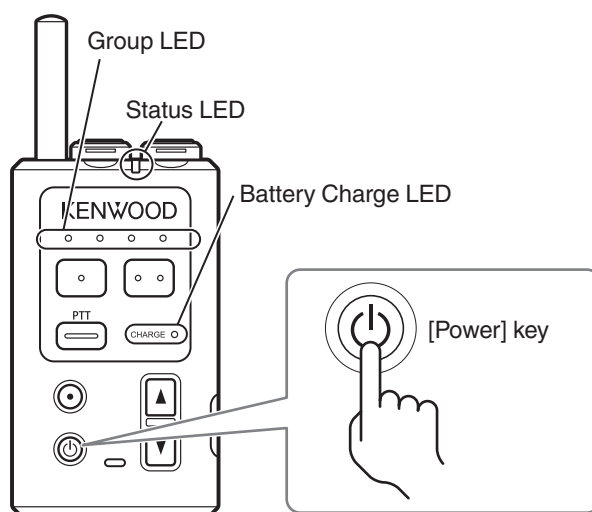
- 1 Hold down the **[Power]** key. Release after the Status LED (red), Group LEDs, and Battery Charge LED light up and then light off.

- **Base Station Mode**

When the unit is linked to the system, the Status LED blinks in orange. Group LEDs of the connected group light up for a few seconds and then blink. Voice announcement for the connected group is being played and the unit enters Group Call Mode.

- **Transceiver Mode**

When the unit is linked to the system, the Status LED blinks in green. Group LEDs of the connected group light up for a few seconds and then blink. Voice announcement for the connected group is being played and the unit enters Group Call Mode.

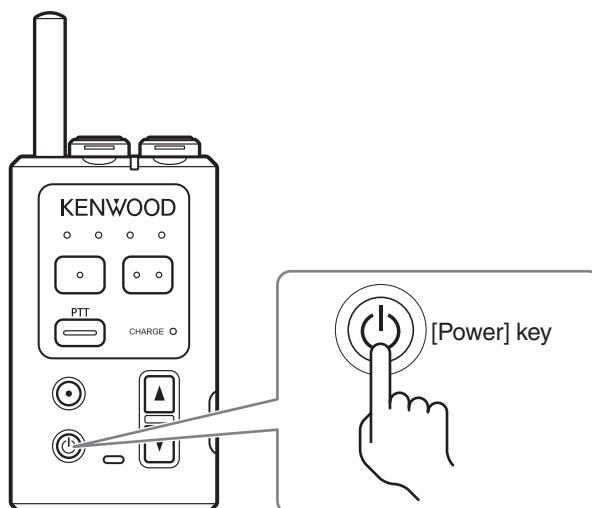


When the unit is unable to link to the system, the Status LED lights up in red. Move to a location where linking is possible.

### Turning off the Power

- 1 Hold down the **[Power]** key until the Status LED lights off.

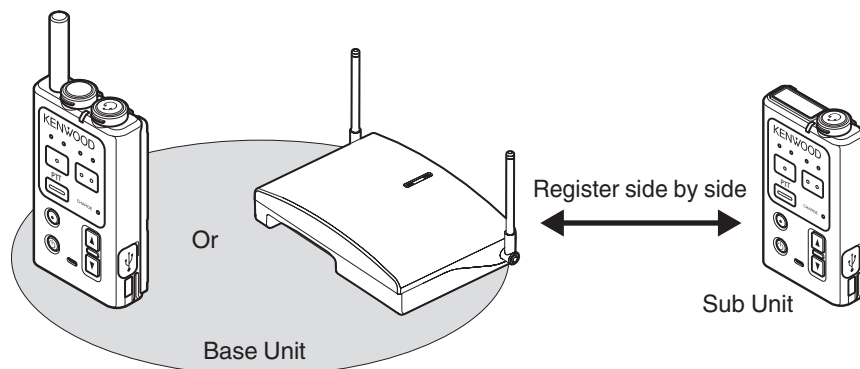
Check that the LED lights off and is not blinking.



## 2.3 Registering the Device

### Registering Sub Unit to Base Unit

This system is used when the transceiver to be used as a sub unit is registered to the Portable base WD-K10PBS or Base station WD-K10BS that is to be used as the base unit.



#### Precautions

- Up to 108 sub units can be registered to one base unit. Registration may fail if you try to register more than the maximum number of sub units to a base unit.

#### Note

- The Portable base WD-K10PBS (Transceiver Mode only) or Transceiver WD-K10TR can be registered as a sub unit.
- Perform registration for each device one at a time.

## Registering Sub Unit to WD-K10PBS (Base Station Mode)

### Note

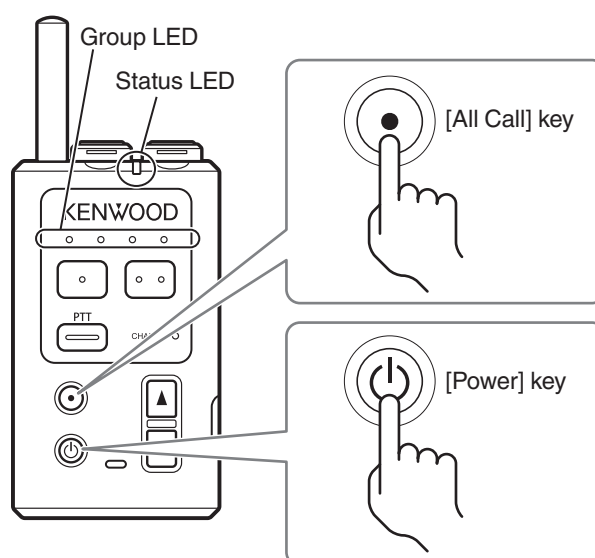
- For details on how to switch WD-K10PBS to Transceiver Mode, refer to [Starting WD-K10PBS in Transceiver Mode on page 38](#).

### 1 Turn off the base unit and sub unit if they have been turned on.

Press and hold the [Power] key until the Status LED goes off to turn off the power.

### 2 Start the base unit in registration mode.

While pressing the [All Call] key of the base unit, press and hold the [Power] key until the Status LED lights up in green and all the Group LEDs are blinking.  
The sub unit enters into registration mode.



### 3 Start the sub unit in registration mode.

While pressing the [All Call] key of the sub unit, press and hold the [Power] key until the Status LED lights up in green and all the Group LEDs are blinking.

The sub unit enters into registration mode.

The registration begins automatically when both the base unit and sub unit are in registration mode.

#### When registration is successful:

The Status LED of the sub unit lights up in green and all the Group LEDs light up.

#### When registration has failed:

The Status LED of the sub unit lights up in green but all the Group LEDs do not light up. Restart the units in registration mode and register again.

- All sub units are registered to the same group (Group A) by default.

#### 4 Restart the sub unit.

When registration of sub unit is successful, restart the sub unit.

After the registration is complete, turn on the power of the base unit and restart as well.

##### Note

- To exit registration mode, press and hold the [PF 2] key.
- If registration fails repeatedly, the maximum number of registrations may have been exceeded.

### Registering Sub Unit to WD-K10BS

##### Note

- A sub unit cannot be registered to a secondary base unit for a Baselink system. Register it to the main base unit.

#### 1 Turn off the sub unit if it has been turned on.

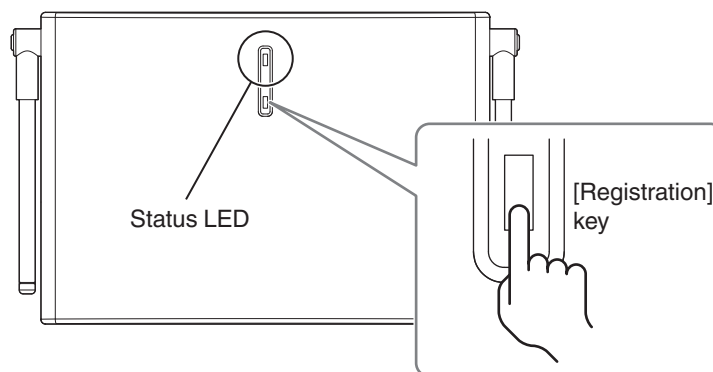
To turn off the sub unit, press and hold the [Power] key until the Status LED goes off.

#### 2 Turn on WD-K10BS.

Plug the AC adapter of WD-K10BS into the AC outlet to turn on.

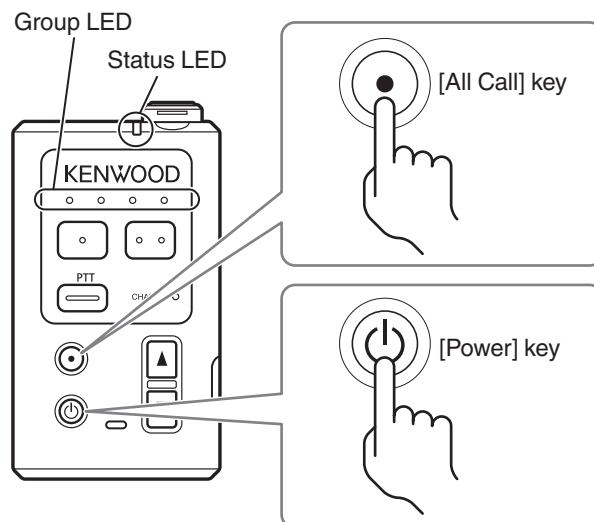
#### 3 Press and hold the [Registration] key until the Status LED lights up in green.

The sub unit enters into registration mode.



## 4 Start the sub unit in registration mode.

While pressing the [All Call] key of the sub unit, press and hold the [Registration] key until the Status LED lights up in green and all the Group LEDs are blinking.  
The sub unit enters into registration mode.



The registration begins automatically when both the base unit and sub unit are in registration mode.

### When registration is successful:

The Status LED of the sub unit lights up in green and all the Group LEDs light up.

### When registration has failed:

The Status LED of the sub unit lights up in green but all the Group LEDs do not light up. Restart the units in registration mode and register again.

- All sub units are registered to the same group (Group A) by default.

## 5 Restart the sub unit.

When registration of sub unit is successful, restart the sub unit.

After registration is complete, exit registration mode by pressing and holding the [Registration] key on WD-K10BS.

### Note

- If registration fails repeatedly, the maximum number of registrations may have been exceeded.

Starting WD-K10PBS in Transceiver Mode

WD-K10PBS can be used as a base unit or sub unit.  
To use as a sub unit, perform the following operations and start in Transceiver Mode.

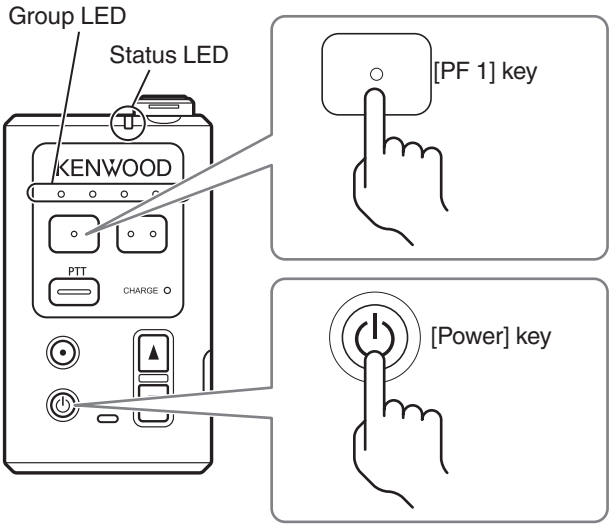
Precautions

- The mode in WD-K10PBS has been configured to your system in advance. Unless it is necessary, do not change the startup mode. For details on the settings, please consult the authorized dealer or installer.

1 If the unit is turned on, turn off the power by pressing and holding the [Power] key until the Status LED goes off.

2 While pressing the [PF 1] key, turn on the power by pressing and holding the [Power] key.

For turning on the power, refer to [Turning on the Power on page 33](#).  
The unit enters into Transceiver Mode. Voice announcement for the activation of Transceiver Mode is being played and the Status LED blinks in green.



The following table shows the Status LED indication and voice announcement during the activation of Transceiver Mode and Base Station Mode.

Startup Mode	LED Indication	Voice Announcement during Mode Activation
Base Station Mode	Blinking orange	Base Station
Transceiver Mode	Blinking green	Transceiver

Note

- Once the unit is start in Transceiver Mode, it will start in Transceiver Mode the next time simply by turning on the power.
- Performing the same operations when in Transceiver Mode (sub unit) changes the unit to Base Station Mode (base unit).
- The voice announcement may not be played depending on the transceiver settings. ( [on page 47](#) )

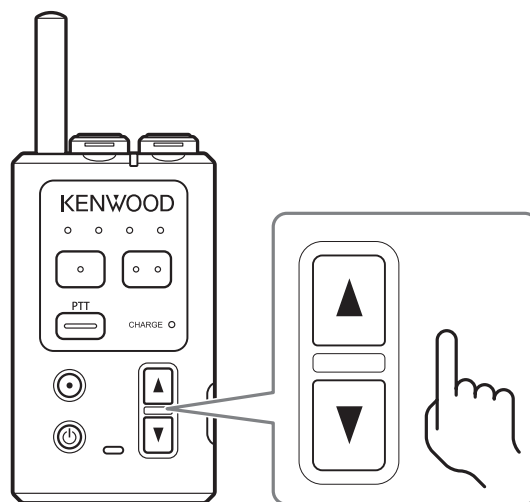
## 2.4 Setting Various Functions

### Adjusting the Receiver Volume Level

Use the [▲]/[▼] key to adjust to an appropriate volume level.

Use the [▲] key to increase the current volume level by 1.

Use the [▼] key to lower the current volume level by 1.



#### Note

- Pressing and holding the [▲]/[▼] key does not adjust the volume continuously.
- If you try to increase or decrease the volume when it is already at its maximum or minimum, a notification tone is emitted.

#### ● Lowering the volume level temporarily (Volume attenuation)

##### 1 Press and hold the [▼] key.

The volume level decreases to the value configured.

- Pressing the [▲] key during volume attenuation cancels the volume attenuation and restores the original volume level.

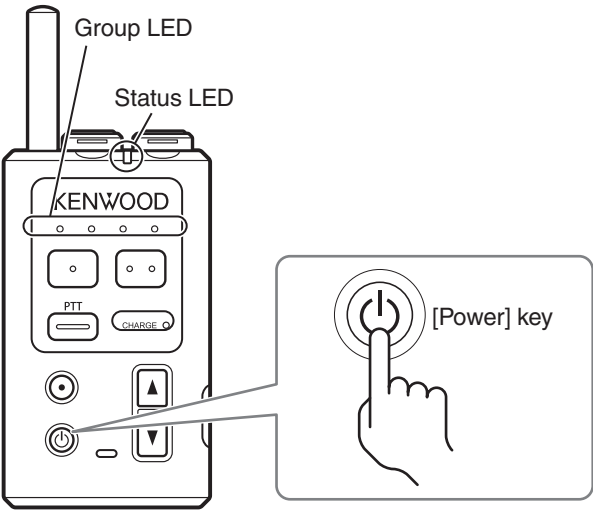


Checking Battery Remaining Capacity

You can check the current battery remaining capacity.

1 Press the [Power] key.

A voice announcement according to the battery remaining capacity is being played. The battery charge LED will display the remaining capacity for 4 seconds.



Remaining Capacity in the Battery	Battery Charge LED	Voice Announcement
30% or more	Blinks 3 times	Battery high
10% or more to less than 30%	Blinks 2 times	Battery middle
Less than 10%	Blinks 1 time	Battery low

Note

- When the remaining capacity in the battery is low, the Status LED blinks in red and the battery warning tone is emitted at every 10-second interval. Please charge the battery.
- The voice announcement may not be played depending on the transceiver settings. ( on page 47)

## Configuring in Setup Menu Mode

Start the transceiver in Setup menu mode to configure various functions.

- 1 If the unit is turned on, turn off the power by pressing and holding the **[Power]** key until the Status LED goes off.

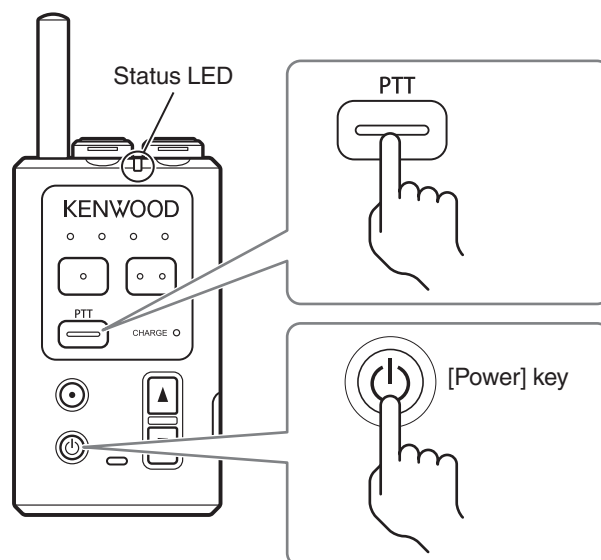
- 2 While pressing the **[PTT]** key, turn on the power by pressing and holding the **[Power]** key.

For WD-K10PBS, press until the Status LED blinks in orange.

For WD-K10TR, press until the Status LED blinks in green.

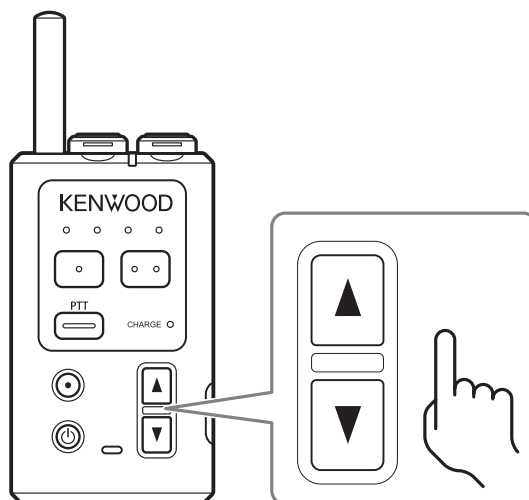
The Setup menu mode is activated.

After the voice announcement for the activation of the Setup menu mode is played, a voice announcement for the initial setup items will be played.



- 3 Press the **[▲]**, **[▼]** key and select an item to configure.

A voice announcement will be played for the item name every time an item is switched.



#### 4 Press the [PTT] key and confirm a setup item.

#### 5 Press the [▲], [▼] key and select a setting.

A voice announcement will be played for the setting details every time a setting is switched. To return to selecting a setup item, press the [PF 1] key.

#### 6 Press the [PTT] key to confirm a setting.

#### 7 Press and hold the [PF 2] key.

Save the setting. Restart the transceiver and return to Group Call Mode.

### ● Settings in setup menu mode

\*: Default setting

Item (Voice Announcement)	Settings	Content
Base Station Select (Base Select)	Auto*/Base 1/Base 2/Base 3/Base 4/Base 5/Base 6	Switches the base unit (Portable base or Base station) to be connected. If "Auto" is selected, the base station to be connected will be automatically selected.
Talk Setting (Talk Setting)	PTT*/PTT-Lock/VOX	Switches the operation of the [PTT] key. * PTT: You can make a call while the [PTT] key on this transceiver or the clip microphone is being pressed. * PTT-Lock: Press the [PTT] key on this transceiver or the clip microphone to call. Press it again to end the call. If "PTT-Lock Delay" is configured, the call ends automatically when the duration configured elapses. * VOX: The microphone automatically turns ON in response to audio signals. Hands-free call is possible without having to press the [PTT] key.
VOX Sensitivity (VOX Level)	Level 1 - Level 5 (3*)	Sets the sensitivity when the Talk Setting is set to "VOX".
Mic Gain (Mic Gain)	Level 1 - Level 5 (3*)	Adjusts the input sensitivity of the microphone.

## Setting Key Lock On/Off

Lock the function keys and All Call key of the transceiver to prevent the keys from being operated.

### Precautions

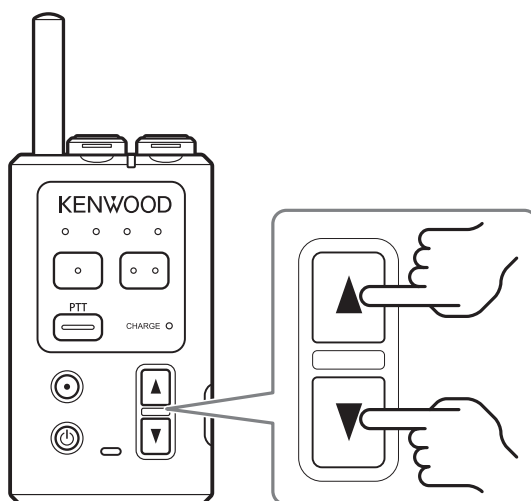
- This function cannot be executed by default. For details on the settings, please consult the authorized dealer or installer.

### Setting Key Lock On

Key operation during key lock is disabled. Notification tones and voice announcement will not be played as well.

- 1 While pressing the [▲] key, press and hold the [▼] key.

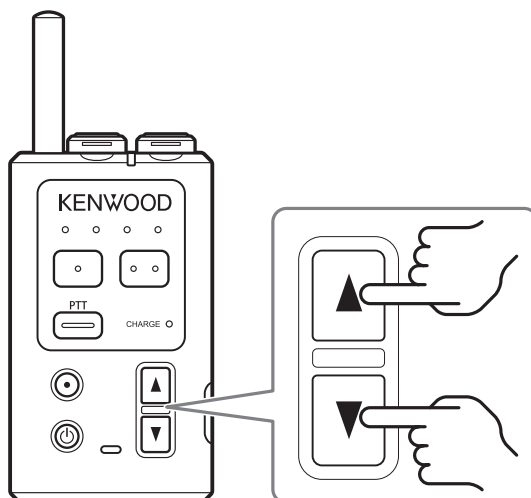
The Key Lock tone will be emitted and the keys will be locked.



### Setting Key Lock Off

- 1 While pressing the [▲] key during Key Lock, press and hold the [▼] key.

The Key Lock Off tone will be emitted and the keys will be unlocked.



## Changing the PTT Key Setting

“PTT”, “PTT-Lock”, or “VOX” can be selected for the Talk Setting.

### Precautions

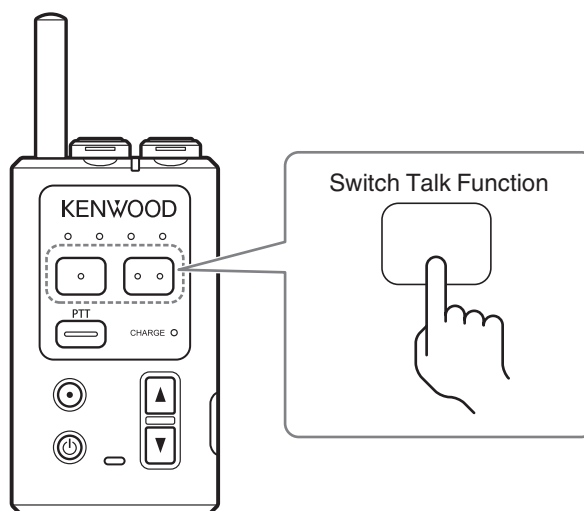
- The [Switch Talk Function] key is not assigned by default. Assign the function to any function keys. To configure the setting, consult the authorized dealer or installer.

### Note

- The Talk Setting can be changed using the “Setup menu mode”. For details, refer to “Setting Various Functions (Setup menu mode)” ( [on page 41](#)).

## 1 Press the [Switch Talk Function] key.

The unit functions in the setting as configured in Talk Setting. The Talk Setting after the change will be played back in a voice announcement.



Press the [Switch Talk Function] key again to return to the original talk operation.

## Manual Reconnection (Transceiver Mode Only)

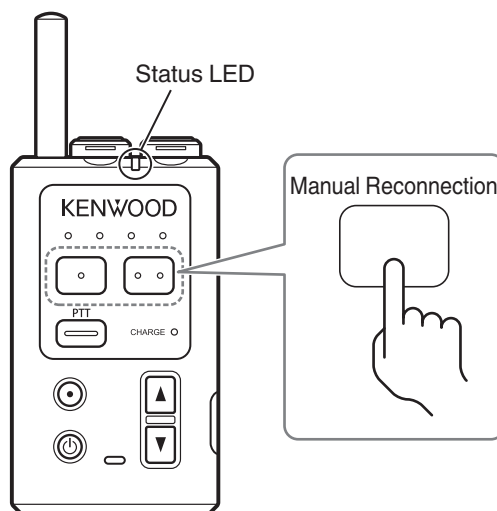
Reconnect regardless of the radio wave status.

### Precautions

- The [Manual Reconnection] key is not assigned by default. Assign the function to any function keys. For details on the settings, please consult the authorized dealer or installer.

### 1 Press the [Manual Reconnection] key.

Current connection with the base unit (Portable base or Base station) will be cut off.  
The Status LED lights up in red.



Once the unit is reconnected to the base unit, a voice announcement will be played and the Status LED blinks in green.

### Note

- The voice announcement may not be played depending on the transceiver settings. ( [on page 47](#) )

### Notification Tones During the Use of Transceiver

Depending on the selected mode and status, you can hear the notification tones of the transceiver from earphones. The following table shows the name and content of various notification tones.

Name	Status
Alert tone	Invalid key operation. When the operation mode of the transceiver did not change. Already in the mode.
Key Operation tone	When a key is pressed.
Out of Range Tone	The [PTT] key is pressed when the user moves to a location with weak radio signals or when there are no empty channels in the base station.
Battery Warning (10-second interval)	When the battery remaining capacity of the transceiver is low. Please charge the battery promptly.
Battery Warning Alert tone (5-second interval)	
Error	When there is an abnormality in the battery.
Listening Talk switch tone	When a sub unit in Listening Mode has switched to a transmission mode.
Listening Talk migration tone	When a sub unit in Listening Mode has switched to a call transmission mode.
Volume Change tone	When the volume has changed
Maximum volume notification tone	When you try to increase the volume when it is already at its maximum.
Minimum volume notification tone	When you try to decrease the volume when it is already at its minimum.
All Call tone	When All Call starts.
Mode Select	When the Call mode is switched in Group Select and All Call. When the unit returns to Group Call from All Call or broadcast status.
Key Lock tone	When Key Lock is executed.
Key Lock off tone	When Key Lock is canceled.
Settings saved complete tone	When contents configured in Setup menu mode have been saved.
External Control tone	When External Control is started.
Complete	When All Call or Broadcast is completed.
Hold start notification tone	When the Talk Setting is "PTT-Lock" and the [PTT] key is pressed and call transmission has started.
Hold end notification tone	When the Talk Setting is "PTT-Lock" and the [PTT] key is pressed and call transmission has ended.

Notification tones are set to On by default but you can set them to Off using the system setup. For details on the settings, please consult the authorized dealer or installer.

## Voice Announcement

Voice announcements for the operation of the Portable base WD-K10PBS and Transceiver WD-K10TR will be played.

### Voice Announcement Guide

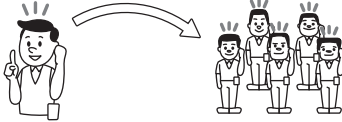
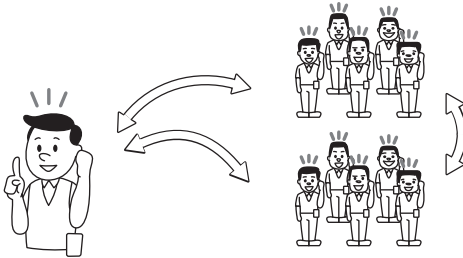
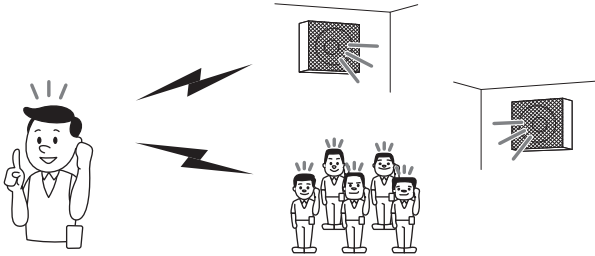
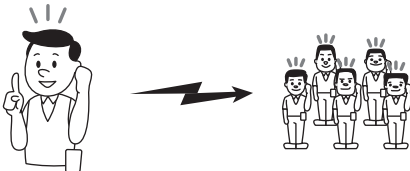
Voice Announcement		Description
Content	Audio	
Connected Group★	Group (Number)	The connected group number when a sub unit is connected to the base unit, or when the [Group Select] key is pressed and a group has been switched.
Listening Mode★	Listening Mode	When a sub unit starts up in Listening Mode.
Sub Unit Registration Mode★	Registration	When the Portable base WD-K10PBS or Transceiver WD-K10TR starts up in Sub Unit Registration Mode.
Transceiver Mode Activation★	Transceiver	When the Portable base WD-K10PBS starts up in Transceiver Mode.
Base Station Mode Activation★	Base Station	When the Portable base WD-K10PBS starts up in Base Station Mode.
Battery Level "High" ★	Battery high	When the [Power] key is pressed, and the battery remaining capacity is 30% and above.
Battery Level "Middle" ★	Battery middle	When the [Power] key is pressed, and the battery remaining capacity is 10% or more but less than 30%.
Battery Level "Low" ★	Battery low	When the [Power] key is pressed, and the battery remaining capacity is less than 10%.
Warning tone★	Error (Number)	When an error has occurred.
Setup Menu Mode Activation	Menu	When the Portable base WD-K10PBS or Transceiver WD-K10TR starts up in Setup menu mode.
Base Station Select	Base Select	Name of setting item in Setup menu mode.
	Auto/Base 1/Base 2/ Base 3/Base 4/Base 5/ Base 6	Content of base settings that are selected in "Base Select" of Setup menu mode.
Talk Setting	Talk Setting	Name of setting item in Setup menu mode.
	PTT/PTT-Lock/VOX	Talk operation that is selected in "Talk Setting" of Setup menu mode. Or talk operation that has been switched using the [Switch Talk Function] key.
VOX Sensitivity	VOX Level	Name of setting item in Setup menu mode.
	Level 1/Level 2/Level 3/ Level 4/Level 5/Level 6	Level selected in "VOX Level" of Setup menu mode.
Mic Gain	Mic Gain	Name of setting item in Setup menu mode.
	Level 1/Level 2/Level 3/ Level 4/Level 5/Level 6	Level selected in "Mic Gain" of Setup menu mode.

Voice announcements indicated with a (★) symbol are set to On by default but you can set them to Off using the system setup. To configure the setting, consult the authorized dealer or installer.



### 3.1 Operation Mode

The following operation modes are available in a call.

Name of Operation Mode	Operation Status
Group Call ( <a href="#">on page 49</a> ) Group Select ( <a href="#">on page 51</a> )	Operation mode as an intercom. All members in the same group can hear the conversation. 
All Call ( <a href="#">on page 52</a> )	This mode allows calls with all group members who are using this function. All group members can hear the conversation. 
External Audio Input/ Output External Connecting Device ( <a href="#">on page 53</a> ) Broadcast ( <a href="#">on page 60</a> )	External audio signals can be output from the transceiver and group call content can also be output to external devices using the Ext Audio input/output jacks of Base Station WD-K10BS. Devices connected to the external control terminal of Base Station WD-K10BS can be activated from the transceiver. 
Listening ( <a href="#">on page 64</a> ) (Only WD-K10TR)	In this mode, the Transceiver WD-K10TR is used as a dedicated call-receiving sub unit. Many sub units can be operated using a few base stations (base units). It is effective for giving instructions or replying to only specific people and where other people only listen to the conversation.  <ul style="list-style-type: none"> <li>The Listening Mode has limitations on the usage environment and sub unit operation. For details, please consult the authorized dealer or installer.</li> </ul>

#### Introduction of Terms

- Intercom: A simultaneous bidirectional communication device used for smooth communication between staff.
- Group: A term to categorize people who are using this system. People are divided into groups according to their jobs.

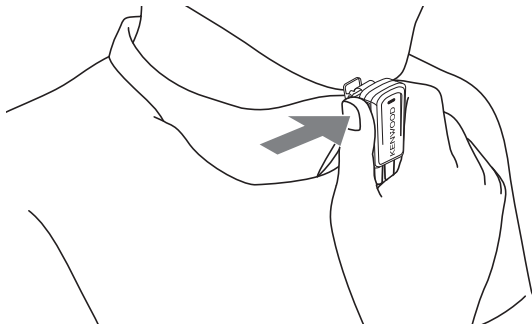
## 3.2 Making Calls (Group Call Mode)

This function allows you to talk to all members of the group that you belong to.

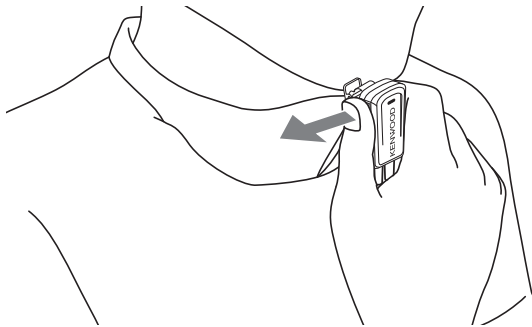
### Note

- Turn on the power of the transceiver to enter Group Call Mode.
- To change the group, consult the authorized dealer or installer.

### 1 Speak into the microphone while pressing the [PTT] key on the clip microphone or transceiver.



### 2 Release the [PTT] key to end the call.



## Operation on Configuring the PTT Key Function

The “PTT”, “PTT-Lock”, and “VOX” methods of calling are available using the [PTT] key. The method varies depending on the setting.

The operation method using the “PTT” setting is described in this manual.

- PTT: You can make a call while the [PTT] key on this transceiver or the clip microphone is being pressed.
- PTT-Lock: Press the [PTT] key on this transceiver or the clip microphone to call. Press it again to end the call. If “PTT-Lock Delay time” is configured, the call ends automatically when the duration configured elapses.
- VOX: The microphone automatically turns ON in response to audio signals. Hands-free call is possible without having to press the [PTT] key.

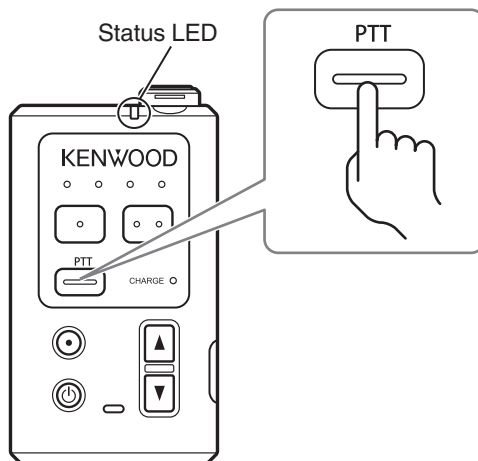
### Note

- The default setting is “PTT”.
- The PTT, PTT-Lock and VOX settings can be changed using the “Setup menu mode”. For details, refer to “Setting Various Functions (Setup menu mode)” ( [on page 42](#)).

### When Out of Range

When a sub unit has moved out of range of the base unit connection area, the Status LED lights up in red. An Out of Range notification tone will emit when the [PTT] key is pressed.

Move to a location where connecting to base unit is possible.



### Reconnecting Base Unit

The Status LED blinks in green.

#### Note

- The Out of Range notification tone differs according to the “Out of Range notification tone” settings in System Setup.  
For “Out-of-Range tone OFF”: A notification tone will not be emitted even if the sub unit is out of range.  
For “Out-of-Range tone ON”: A notification tone will continue to emit until the sub unit is connected to the base unit again.  
For “PTT Key Alert ON”: A notification tone will emit while the sub unit is out of range and the [PTT] key is being pressed.
- To configure the setting, consult the authorized dealer or installer.

## 3.3 Changing Groups

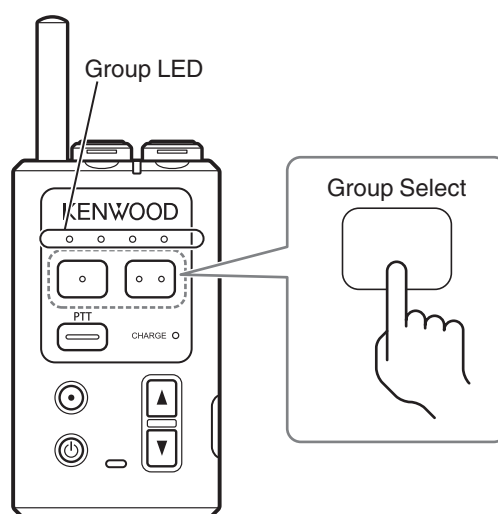
This function allows you to call a group that has been switched.

### Precautions

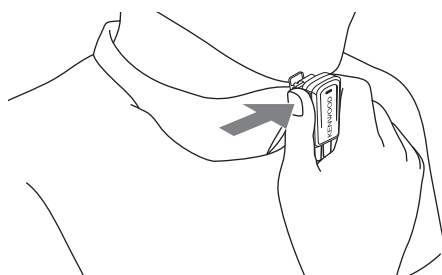
- The group that has been pre-configured in the system will be switched. For details on group settings, please consult the authorized dealer or installer.
- The [Group Select] key is not assigned by default. Assign the function to any function keys. To configure the setting, consult the authorized dealer or installer.

### 1 Press the [Group Select] key.

Every time the [Group Select] key is pressed, the 4 groups will be switched in the order of A → B → C → D → A. When a group is switched, the corresponding Group LED will light up for a few seconds and then blink. The name of the switched group will be announced.



### 2 Speak into the microphone while pressing the [PTT] key on the clip microphone or transceiver.



### Note

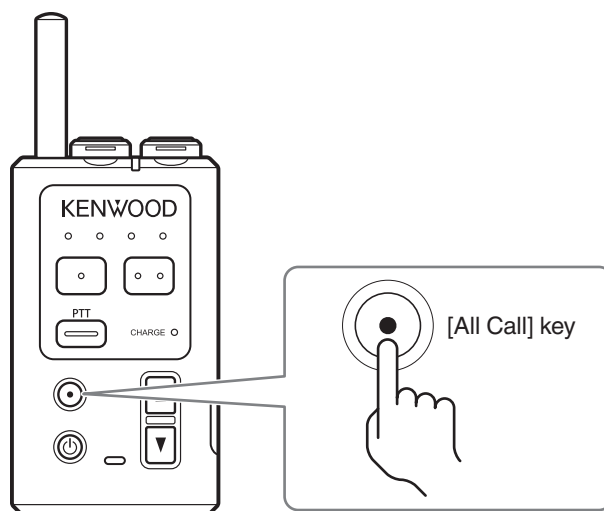
- When the power is turned off after changing the group, the group to connect to when the power is turned on again varies according to the setting of the transceiver.  
If "Power On Group" is set to "Resume": The group that the unit belonged to before turning off the power is connected.  
If a group is specified for "Power On Group": The specified group is connected regardless of the group that the unit belonged to before turning off the power.
- To configure group settings, consult the authorized dealer or installer.
- The voice announcement may not be played depending on the transceiver settings. ( [on page 47](#) )

## 3.4 Calling All Groups (All Call Mode)

You can make a call to everyone in all the groups that are using transceivers.

### 1 Press and hold the [All Call] key.

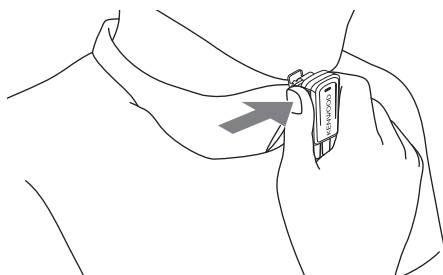
The All Call notification tone will emit from the transceivers of all group members and all groups can receive and send calls.



#### Note

- If a transceiver has been activated in All Call Mode, an invalid tone will emit, and this transceiver will not enter All Call Mode.

### 2 Speak into the microphone while pressing the [PTT] key on the clip microphone or transceiver.



### 3 Press and hold the [All Call] key again to end the call.

An End tone will emit and users will return to the "Group Call Mode" of their own groups.

- Only the person who has pressed the [All Call] key in Step 1 can operate the steps to return to the "Group Call Mode".
- After returning to "Group Call Mode", all group members will automatically return to "Group Call Mode".

#### Note

- All Call is canceled in the following situations.
  - When the time configured in All Call Time-out Timer has lapsed.
  - When the power of the transceiver that has started All Call is turned off, or when it is out of range.

## 3.5 Using External Devices

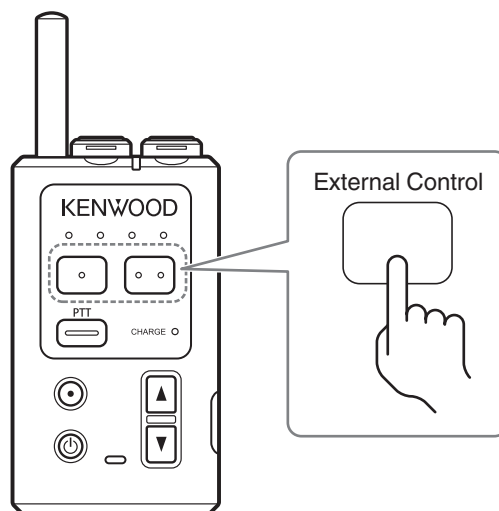
This function allows the unit to control external devices such as activating external audio source.

### Precautions

- External devices that have been pre-configured in the system will be controlled. For details on the device settings, please consult the authorized dealer or installer.
- The [External Control] key is not assigned by default. Assign the function to any function keys. To configure the setting, consult the authorized dealer or installer.

### 1 Press the [External Control] key.

An External Control tone will emit and the configured external devices will activate.



External devices that are controlled can also make group calls.  
To end external control, press the [External Control] key again.

### Note

- When other transceivers are under external control, an invalid tone will emit, and External Control cannot be executed.
- When the power of the transceiver that has started External Control is turned off, or when it is out of range, external control will be canceled.

## 3.6 Performing PMR Link

This system allows audio signals in group calls to be transmitted to groups of external wireless systems by using a transceiver connection cable WD-RC100 to connect the Transceiver WD-K10TR and Portable base WD-K10PBS to specified two-way radios.

### Overview of PMR Link

- The following models of two-way radios can be connected to external systems using PMR Link.

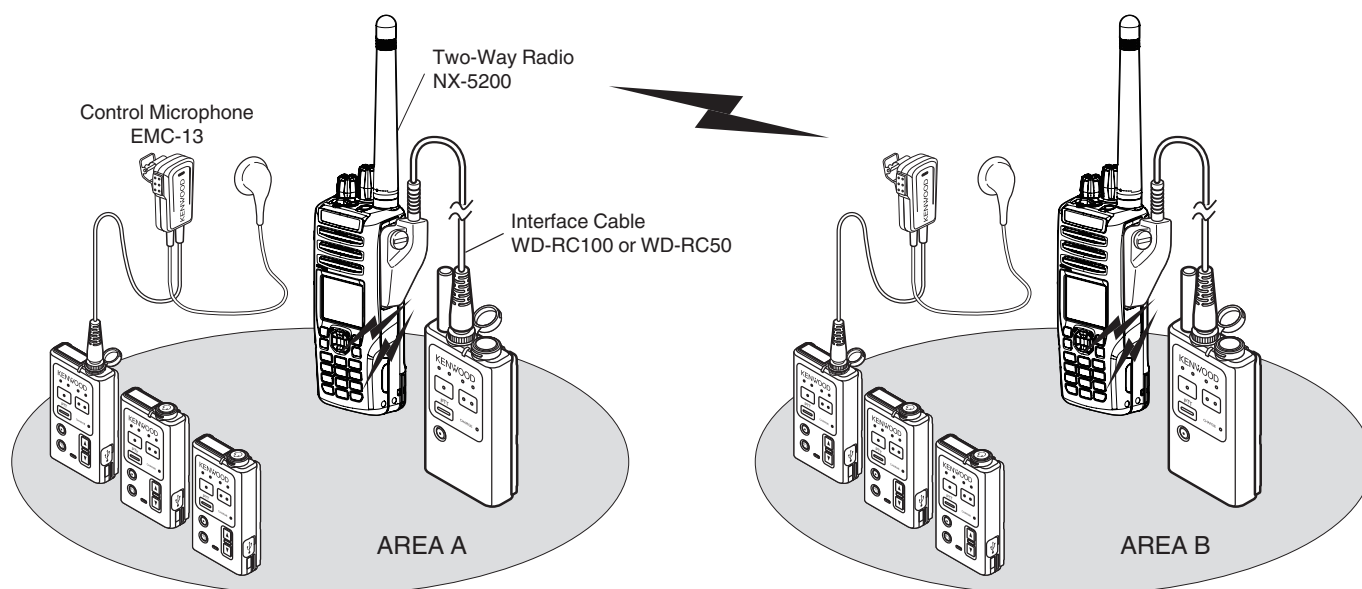
Target transceivers: KENWOOD two-way radios

Models using WD-RC100: NX-200G, NX-300G, NX-5200, NX-5300

Models using WD-RC50: NX-220, NX-320, TK-2000, TK-3000, TK-2302, TK-3302, TK-3401D, TK-3501

- Contents of mixed calls within the sending area can be heard at terminals in the receiving area through two-way radios. However, as this is an alternate communication, calls within the receiving area cannot be heard during transmission at the sending area.

Simultaneous calls can be made within each area.



#### Precautions

- In order to perform PMR Link, it is necessary to connect the transceiver connection cable WD-RC100 ( [on page 30](#) ) and change system setup. For details on the system setup, please consult the authorized dealer or installer.
- As far as possible, use the transceiver and portable base at a distance away from external wireless systems. An error due to radio wave interference may occur if they are too near.
- If the Background Noise function is set to "ON" when connecting WD-K10PBS to a transceiver, turn the volume knob of the transceiver to the 3 o'clock position. If the knob is not turned properly, the transceiver will remain in the mute status and audio signals will not be output.

## Activating the PMR Link Function

The following activation methods are available for performing PMR Link.

### [Performing PMR Link by Pressing the \[PMR Link\] Key on page 56](#)

Activate and deactivate the PMR Link function using the [PMR Link] key and talk by pressing the [PTT] key.

### [Performing PMR Link by Pressing the \[PTT\] Key on page 57](#)

Link the activation and deactivation of the PMR Link function to the operation of the [PTT] key to perform PMR Link.

### [Performing PMR Link by Pressing the \[PMR Link \(PTT Link\)\] Key on page 58](#)

Activate and deactivate the PMR Link function using the [PMR Link (PTT Link)] key and link the call to the key operation to perform PMR Link.

#### Precautions

- The [PMR Link] and [PMR Link (PTT Link)] keys are not assigned by default. Assign the function to any function key. To configure the operation of the [PTT] key or to assign functions to any function keys, consult the authorized dealer or installer.

#### Note

- An invalid tone will emit under the following situations, and the PMR Link function cannot be activated.
  - When other transceivers are performing PMR Link
  - When transceivers in which broadcast is activated is broadcasting to other broadcast groups
  - When transceivers are in the midst of All Call

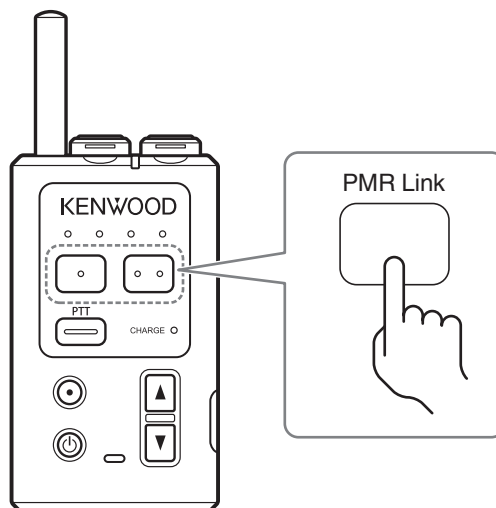


### Performing PMR Link by Pressing the [PMR Link] Key

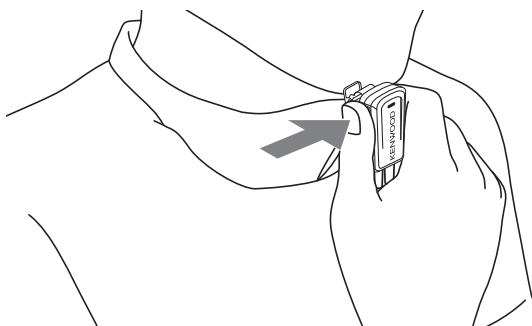
By assigning the PMR Link function to any function key as a [PMR Link] key, you can activate the PMR Link function by pressing the key.

#### 1 Press the [PMR Link] key.

The PMR Link function will activate and a mode change tone will emit.



#### 2 Speak into the microphone while pressing the [PTT] key on the clip microphone or transceiver.



Release the [PTT] key to end the call.

#### 3 To end the PMR Link, press the [PMR Link] key.

A mode change tone will emit and users will return to the "Group Call Mode" of their own groups.

##### Note

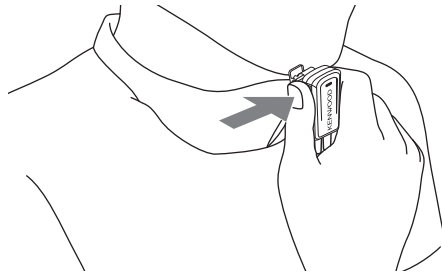
- The PMR Link function is canceled in the following cases.
  - When the time configured in PMR Link Time-out Timer has lapsed.
  - When the power of the transceiver that has started Broadcast is turned off, or when it is out of range.
  - When All Call has started.

## Performing PMR Link by Pressing the [PTT] Key

If “Function Link Start” is set to [Enable Link with], the operation is the same as “[Broadcasting by Pressing the \[Broadcast\] Key on page 61](#)”. Assign the Broadcast function to any function key to activate the Broadcast function.

### 1 Press the [PTT] key on the clip microphone or transceiver.

The PMR Link function will activate and a mode change tone will emit.  
Start the call after the mode change tone is emitted.



#### Note

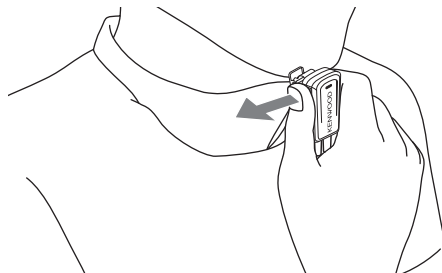
- If “Function Link Start” is set to [Disable Link with], the operation is the same as “[Performing PMR Link by Pressing the \[PMR Link\] Key on page 56](#)”. Assign the PMR Link function to any function key to activate the PMR Link function.

### 2 Speak into the clip microphone.

The broadcast continues while the [PTT] key is pressed.

### 3 To end the PMR Link, release the [PTT] key if “Function Link End” in “Talk Setting” is set to [Enable Link with]. This will also deactivate the Broadcast function.

A mode change tone will emit and users will return to the “Group Call Mode” of their own groups.



#### Precautions

- The operation is the same as “Performing PMR Link by Pressing the [PMR Link] Key” if “Function Link End” is set to [Disable Link with]. Assign the PMR Link function to any function key to end the PMR Link.
- This activation method starts the PMR Link when the [PTT] key is pressed so it is not suitable if you do not intend to always call to the external wireless system.

#### Note

- The PMR Link function is canceled in the following cases.
  - When the time configured in PMR Link Time-out Timer has lapsed.
  - When All Call has started.

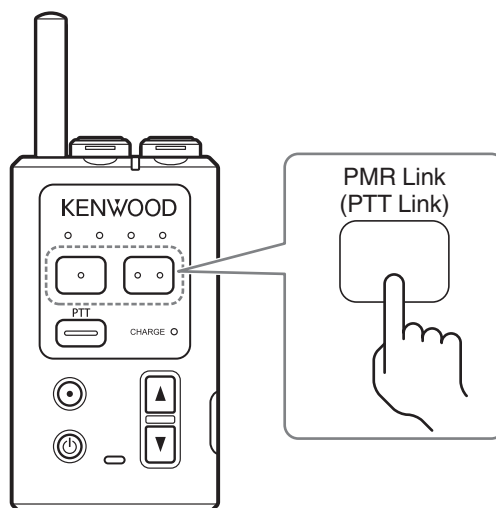
### Performing PMR Link by Pressing the [PMR Link (PTT Link)] Key

By assigning the PMR Link (PTT Link) function to any function key, you can activate the PMR Link function and start the PMR Link by a single [PMR Link (PTT Link)] key operation. Similarly, you can also end the PMR Link by a single operation.

#### 1 Press the [PMR Link (PTT Link)] key.

The PMR Link function will activate and a mode change tone will emit. And the device enters into call state at the same time.

Start the call after the mode change tone is emitted.



#### 2 While pressing the [PMR Link (PTT Link)] key, speak into the clip microphone.

#### 3 To end the PMR Link, release the [PMR Link (PTT Link)] key.

The users will return to the "Group Call Mode" of their own groups.

#### Note

- The PMR Link function is canceled in the following cases.
  - When the time configured in PMR Link Time-out Timer has lapsed.
  - When All Call has started.

## 3.7 Making Calls in High Audio Quality

The audio quality of calls between devices can be configured in this system.

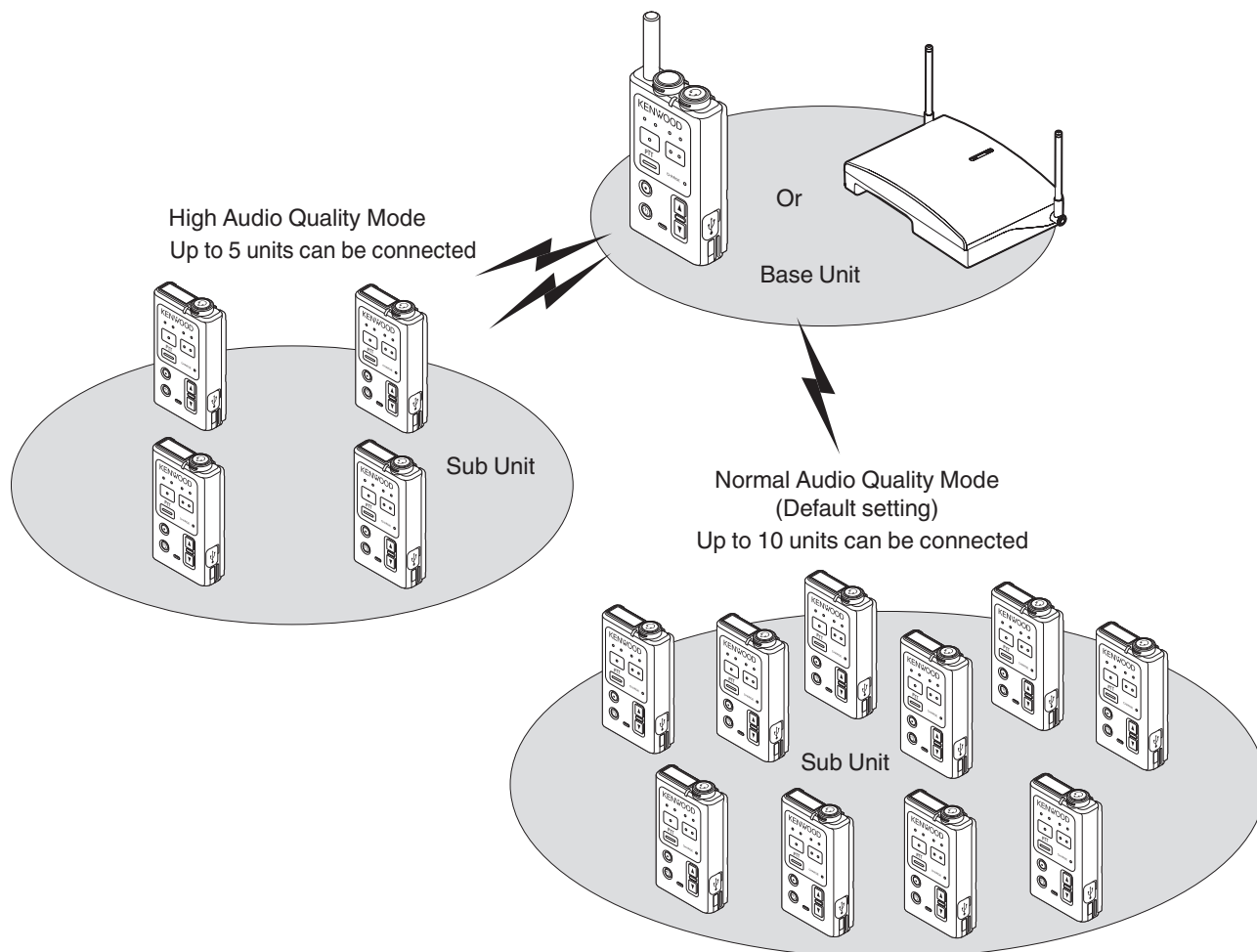
When “High Quality” is selected for “Audio Quality” in System setup, high-frequency audio can also be transmitted by bundling multiple communication for “Normal” and expanding the communication bandwidth. It is possible to make a call that is clearer and easier to pick up than in “Normal”.

### Precautions

- To use High Audio Quality, it is necessary to configure the device system. To change the setting, consult the authorized dealer or installer.
- The audio quality depends on the setup for each system. Audio quality cannot be selected for each device.
- When using High Audio Quality, groups that can be used for external connection will become one group.

### Overview of High Audio Quality Mode

- When High Audio Quality is selected, it is effective to use the device to broadcast directly to a facility or floor.
  - When using in Listening Mode, information can be shared clearly by setting the base unit to High Audio Quality.
  - As multiple communication is bundled, the maximum number of simultaneously connected sub units will be half the number of that in Normal Audio Quality.
- The number of groups will be two: A and B.  
Use according to your purpose.
- Depending on the performance of the accessories used (such as headset and speaker), it may be difficult to improve the audio quality.



## 3.8 Broadcasting

This function uses external devices to broadcast directly to a facility or floor.

### Activating the Broadcast Function

The following activation methods are available for performing broadcast.

#### [Broadcasting by Pressing the \[Broadcast\] Key on page 61](#)

Activate and deactivate the Broadcast function using the [Broadcast] key and talk by pressing the [PTT] key.

#### [Broadcasting by Pressing the \[PTT\] Key on page 62](#)

Link the activation and deactivation of the Broadcast function to the operation of the [PTT] key to broadcast.

#### [Broadcasting by Pressing the \[Broadcast\(PTT Link\)\] Key on page 63](#)

Activate and deactivate the Broadcast function using the [PMR Link (PTT Link)] key and link the call to the key operation to broadcast.

#### Precautions

- The [Broadcast] and [Broadcast(PTT Link)] functions are not assigned to the function keys by default. Assign the functions to any function keys.  
To configure the operation of the [PTT] key or to assign functions to any function keys, consult the authorized dealer or installer.
- To use the Broadcast mode function, it is necessary to connect external devices and set up the system. For details, please consult the authorized dealer or installer.

#### Note

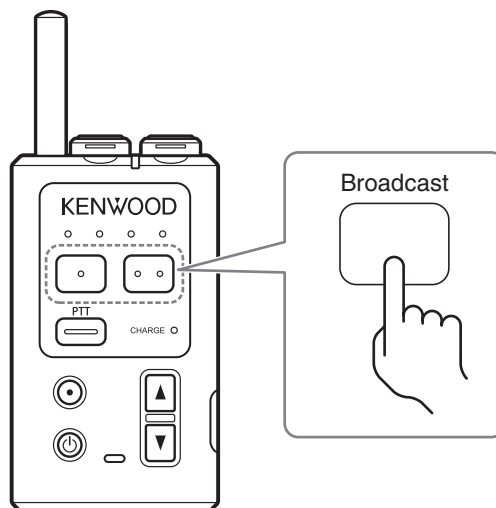
- By assigning the Broadcast (PTT Link) function to any function key, you can activate the Broadcast function and start the broadcast by a single [Broadcast(PTT Link)] key operation. Similarly, you can also end the broadcast by a single operation.

## Broadcasting by Pressing the [Broadcast] Key

By assigning the Broadcast function to any function key as a [Broadcast] key, you can activate the Broadcast function by pressing the key.

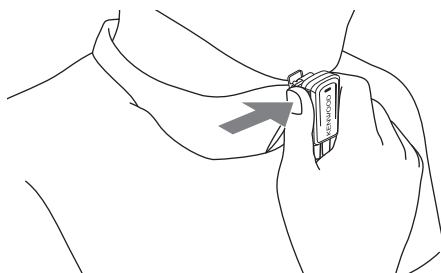
### 1 Press the [Broadcast] key.

The Broadcast function will activate and a mode change tone will emit from the activated transceiver.



### 2 Speak into the microphone while pressing the [PTT] key on the clip microphone or transceiver.

The broadcast continues while the [PTT] key is pressed.



Release the [PTT] key to end the call.

### 3 To end the broadcast, press the [Broadcast] key.

A mode change tone will emit and users will return to the "Group Call Mode" of their own groups.

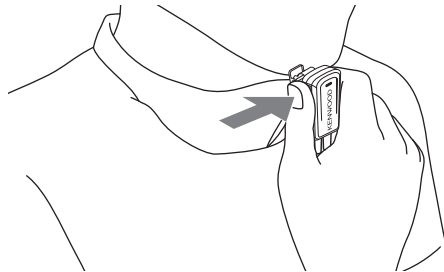
#### Note

- Broadcast is also canceled in the following situations.
  - When the time configured in Broadcast Timer has lapsed.
  - When the power of the transceiver that has started Broadcast is turned off, or when it is out of range.
  - When All Call has started.

## Broadcasting by Pressing the [PTT] Key

By setting “Function Link with” to “Broadcast” and “Function Link Start” to “Enable Link with” in “Talk Setting”, you can activate the Broadcast function and start the broadcast by a single [PTT] key operation.

### 1 Press the [PTT] key on the clip microphone or transceiver.



The Broadcast function will activate and a mode change tone will emit. Start the broadcast after the mode change tone is emitted.

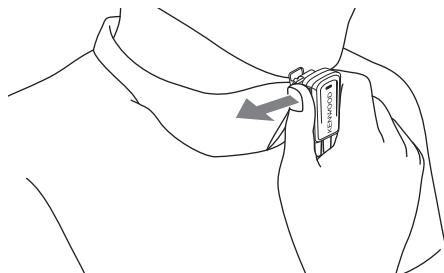
#### Note

- If “Function Link Start” is set to “Disable Link with”, the operation is the same as “Broadcasting by Pressing the [Broadcast] Key on page 61”. Assign the Broadcast function to any function key to activate the Broadcast function.

### 2 While pressing the [PTT] key, speak into the clip microphone.

The broadcast continues while the [PTT] key is pressed.

### 3 To end the broadcast, release the [PTT] key if “Function Link End” in “Talk Setting” is set to [Enable Link with]. This will also deactivate the Broadcast function.



A mode change tone will emit and users will return to the “Group Call Mode” of their own groups.

#### Precautions

- The operation is the same as “Broadcasting by Pressing the [Broadcast] Key” if “Function Link End” is set to [Disable Link with].  
Assign the Broadcast function to any function key to end the broadcast.
- This activation method starts the broadcast when the [PTT] key is pressed so it is not suitable if you do not intend to make a group intercom call.

#### Note

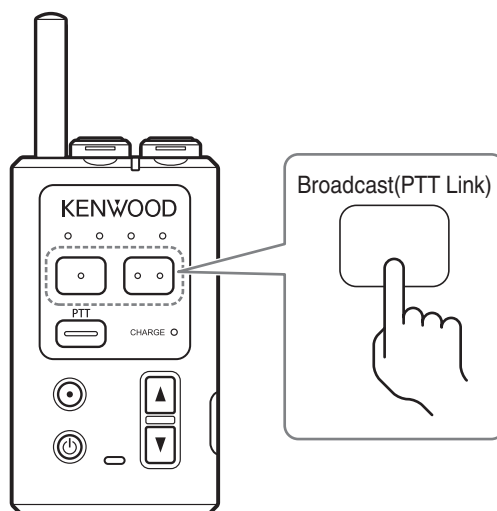
- The broadcast will be canceled before the broadcast ends in the following cases.
  - When the time configured in Broadcast Timer has lapsed.
  - When the power of the transceiver that has started Broadcast is turned off, or when it is out of range.
  - When All Call has started.

## Broadcasting by Pressing the [Broadcast(PTT Link)] Key

By assigning the Broadcast(PTT Link) function to any function key, you can activate the Broadcast function and start the broadcast by a single [Broadcast(PTT Link)] key operation. Similarly, you can also end the broadcast by a single operation.

### 1 Press the [Broadcast(PTT Link)] key.

The Broadcast function will activate and a mode change tone will emit from the activated transceiver. Start the broadcast after the mode change tone is emitted.



### 2 While pressing the [Broadcast(PTT Link)] key, speak into the clip microphone.

The broadcast continues while the [Broadcast(PTT Link)] key is pressed.

### 3 To end broadcast, release the [Broadcast(PTT Link)] key.

A mode change tone will emit and users will return to the "Group Call Mode" of their own groups.

#### Note

- The broadcast will be canceled before the broadcast ends in the following cases.
  - When the time configured in Broadcast Timer has lapsed.
  - When the power of the transceiver that has started Broadcast is turned off, or when it is out of range.
  - When All Call has started.



## 4.1 Listening Mode

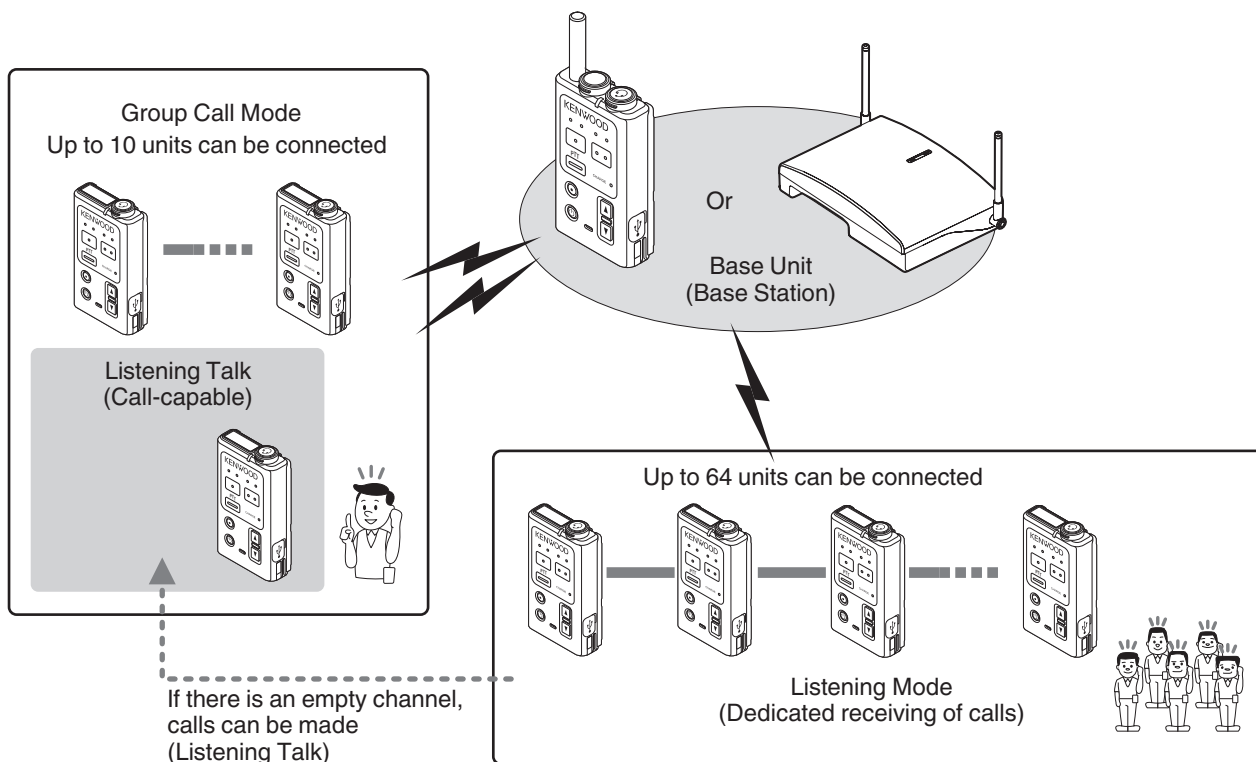
- “Listening Mode” is available in this system where multiple sub units (transceivers) are configured to only receive calls. The usage environment and sub unit operation may be limited when using the sub unit in the Listening Mode. However, more sub units can be operated with few base units (base stations). It is effective for giving instructions or replying to only specific people and where other people only listen to the conversation.

### Precautions

- To use Listening Mode, it is necessary to configure the system setup of the sub unit. To change the setting, consult the authorized dealer or installer.

## Overview of Listening Mode

- Sub units in Listening Mode can only receive calls.
- When there is an empty channel in the base station, sub units in Listening Mode can receive and send calls (Listening Talk/All Call Mode).  
For details on sending calls in Listening Mode, refer to [Calling from Sub Units in Listening Mode \(Listening Talk\) on page 66](#).
- Sub units in Listening Mode will start up in this mode when the power is turned on.
- Sub units configured to Listening Mode and sub units in Group Talk mode can be mixed and used within the same system.
- Up to 64 sub units configured to Listening Mode can be used.



## Limitations of Listening Mode

### Target models:

- Portable base WD-K10PBS
- Transceiver WD-K10TR
- Base station WD-K10BS

### Usage environment:

When units are out of range from the connection area, the Status LED lights up in red and calls cannot be heard (an Out of Range notification tone will emit depending on the setting).

When units are brought into the connection area, the Status LED blinks in blue and voice announcement will be played for the connected groups.



- The voice announcement may not be played depending on the transceiver settings. ( [on page 47](#) )

### Limitations on operation:

Sub units configured to Listening Mode may have the following limitations.

- Calls (Listening Talk) can only be made if there is an empty channel in the base station when the [PTT] key is pressed. It may take some time for the units to enter a call-ready state.
- VOX calls are not available.
- Groups cannot be changed during Listening Talk.
- Groups can be changed when units are in call-receiving only mode.

## Display in Listening Mode

When sub units are set to Listening Mode, they will start up in this mode when the power is turned on.

You can check the mode in the sub units using the Status LED indication and voice announcements.

Startup Mode	LED Indication	Voice Announcement during Mode Activation
Transceiver Mode (Group Call Mode)	Blinking green	Transceiver
Listening Mode	Blinking blue (Blinking green during Talk)	Listening Mode



- As the blinking interval is longer than usual, check the Status LED if the interval is more than 10 seconds.
- The voice announcement may not be played depending on the transceiver settings. ( [on page 47](#) )

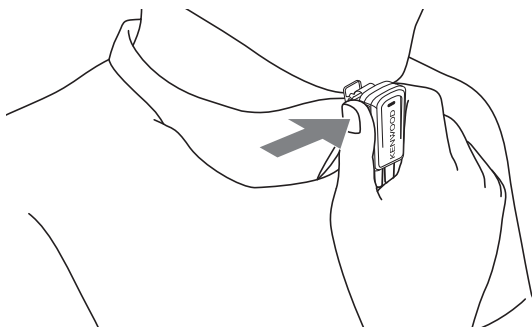
## 4.2 Calling from Sub Units in Listening Mode (Listening Talk)

When there is an empty channel in the base station, sub units in Listening Mode can change into “Listening Talk” mode to send calls temporarily.

### Precautions

- The duration to change to Listening Talk or call-receiving only mode may prolong depending on the system setup and radio wave environment. For details on the system setup, please consult the authorized dealer or installer.

### 1 Press and hold the [PTT] key on the clip microphone or transceiver.



The call can be heard and the Listening Talk migration tone will be emitted.

When changing to a call-sending mode, the Listening Talk switch tone will be emitted. The Status LED blinks in green.

- If the Listening Talk migration tone continues to emit even when the [PTT] key is pressed and held for 5 seconds, wait for a while and try again.

### 2 Speak into the microphone while pressing the [PTT] key on the clip microphone or transceiver.

### 3 Release the [PTT] key to end the call.

When the [PTT] key is released and some time has lapsed (approx. 4 seconds), the Status LED will light up in red. After that, the unit will switch to a call-receiving only mode. The Status LED will blink in blue.

### Note

- The duration to change from Listening Talk to call-receiving only mode differs according to the transceiver settings. The default is approx. 4 seconds.  
To configure the setting, consult the authorized dealer or installer.

## 4.3 Calling from Sub Units in Listening Mode (All Call Mode)

When there is an empty channel in the base station, the All Call Mode is available even during the Listening Mode. For details on the operation method, refer to All Call Mode ( [on page 52](#) ).

## 4.4 Changing Groups

Only groups in which voice channels 1 to 4 have been configured in Groups A to D can be switched.

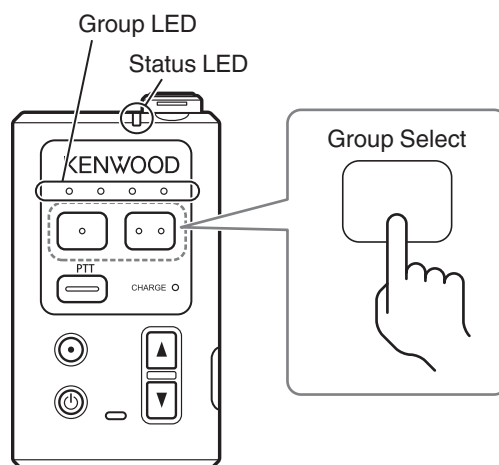
### Precautions

- The group that has been pre-configured in the system will be switched. For details on group settings, please consult the authorized dealer or installer.
- The maximum number of connected sub units depends on the number of groups configured. For details, please consult the authorized dealer or installer.
- Groups cannot be changed during Listening Talk. Groups can be changed when units are in call-receiving only mode.
- The [Group Select] key is not assigned by default. Assign the function to any function keys. To configure the setting, consult the authorized dealer or installer.

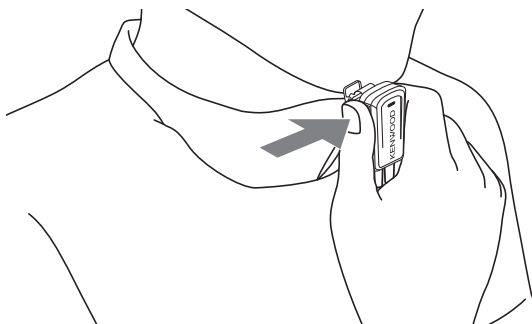
### 1 Press the [Group Select] key.

The Status LED lights up in red.

After a while, the Status LED blinks in blue, and the corresponding Group LED will light up. When the group is changed, the corresponding Group LED blinks and calls in the connected group can be heard.



### 2 Speak into the microphone while pressing the [PTT] key on the clip microphone or transceiver.



### 3 To return to the original group, press the [Group Select] key to change the group.

The unit will return to its listening group.

4.5

Switching to Group Call Mode

Sub units in the Listening Mode will switch to the Group Call Mode.

Precautions

- The mode in the sub units has been configured to your system in advance. Unless it is necessary, do not change the startup mode. For details on the settings, please consult the authorized dealer or installer.

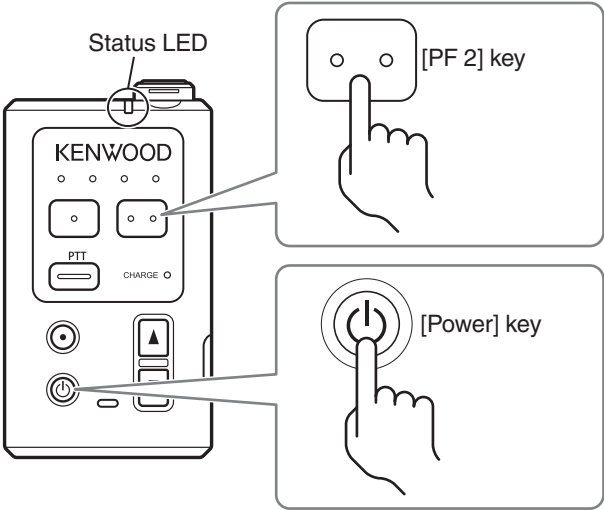
1

If the unit is turned on, turn off the power by pressing and holding the **[Power]** key until the Status LED goes off.

2

While pressing the **[PF 2]** key, turn on the power by pressing and holding the **[Power]** key.

For turning on the power, refer to [Turning on the Power on page 33](#).  
The unit enters into Transceiver Mode. Voice announcement for the activation of Transceiver Mode is being played and the Status LED blinks in green.  
When the mode is switched, conversation in the call group to which the unit belongs to can be heard.



The following table shows the Status LED indication and voice announcement during the activation of the Transceiver Mode (Group Call Mode) and Listening Mode.

Startup Mode	LED Indication	Voice Announcement during Mode Activation
Transceiver Mode (Group Call Mode)	Blinking green	Transceiver
Listening Mode	Blinking blue (Blinking green during Talk)	Listening Mode

Note

- Once the unit is start in Transceiver Mode, it will start in Transceiver Mode the next time simply by turning on the power.
- Performing the same operations when in Transceiver Mode changes the unit to Listening Mode.
- The voice announcement may not be played depending on the transceiver settings. ( [on page 47](#) )

## 5.1 Troubleshooting

Check that the problem is genuine before requesting for repairs.

Problem	Cause	Solution	Reference Page
The unit is prone to entering service non-coverage area (out of range).	The surrounding environment and operation status affect the field intensity of signals emitted from the device. Therefore, it is easy to enter a service non-coverage area (out of range).	Adjust the “Communication Disconnect Zone Selection Level” and “Communication Disconnect Time”. The situation may improve somewhat. For details, please consult the authorized dealer.	-
A beeping sound is heard and All Call or Broadcast is unavailable even when the [All Call] key or [Broadcast] key is pressed.	Only one person can use All Call or broadcast to the same output destination at the same time.	Wait for the person to complete All Call or Broadcast, and try again.	on page 52
Calls are cut off during use and noise can be heard.	Depending on the radio wave status, radio waves from the base station do not reach the unit and other base stations are being searched. If a base station cannot be found, or if there are no empty channels in the base station, the unit continues to search for a connectable base station and during that time, communication is unavailable (Status LED lights up in red).	If the unit is near a base station and yet it cannot communicate, please check with the authorized dealer. You can also minimize the out of range tone at the default setting. For details, please consult the authorized dealer.	-
A “buu” noise may occur from the earphone of the sub unit.	This system uses digital wireless communication of 1.9 GHz band. When there is a nearby device in which noise occurs, changing digital signals to audio signals may change the signal to noise instead.	Use the unit away from noise sources such as computers, monitors, and discharge-type air purifiers. Or move the base station installation site to a location away from these equipment. Noise may occur if the unit is too close to a base station (within 2 m). Move the base station installation site or use the unit away from a base station.	-
When a sub unit is moved from the connection area to a service non-coverage area (out of range), it reconnects to the base station only when it is very near to the base station after returning to the connection area.	Settings have been made so that the sub unit only connects when radio reception is strong. This is to prevent frequent changing of connection with base stations, and connection with faraway base stations of weak reception.	Configure the strength of the radio waves during connection. If you are concerned, please check with the authorized dealer.	-
Calls in all groups can be heard.	The unit is in All Call Mode.	End the All Call Mode and change to Group Call Mode. Only the person who has started the All Call Mode can end this mode.	on page 52

Problem	Cause	Solution	Reference Page
The sub unit cannot connect even when it is near the base station. The Status LED lights up in red.	You have exceeded the number of connected units to a base station.	The number of sub units connected to a base station is up to 10 in Normal Audio Quality or 5 in High Audio Quality for both stand-alone and Baselink systems.	<a href="#">on page 9</a>
	A sub unit has not been registered to the base station.	Register a sub unit to the base station.	<a href="#">on page 36</a>
Calls cannot be made in the Listening Mode of Portable base WD-K10PBS/Transceiver WD-K10TR.	There are no empty channels in the base station.	Please consult the authorized dealer.	-

## 5.2 Specifications

Specifications and external appearance of the product are subject to change for improvement without prior notice.

### Portable base WD-K10PBS

Transmission/Receiving frequency	1.9 GHz band
Transmission power	10 mW and below (average)
Type of radio wave	F1D, F1E
Receiving sensitivity	-90 dBm@BER1x10 <sup>-3</sup> and below
Power	DC 3.7 V (rechargeable lithium ion battery)
Usage time	Approx. 8 hours (when 4 transceivers are connected in Base Station Mode) Approx. 25 hours (Transceiver Mode)
No. of sub units connected simultaneously	10 units (Normal Audio Quality Mode) 5 units (High Audio Quality Mode)
Operating temperature range	-10 °C to 60 °C
Water resistant/Dust resistant level	IP67 equivalent (JIS water protection level 7)
External dimensions	54 mm (width) x 94 mm (length) x 23.5 mm (thickness)
Mass	Approx. 135 g (including battery)
Finishing	PC resin black
Accessories	User guide x 1 Belt clip x 1 Screw (for securing belt clip) x 2 Battery pack (WD-UB110) x 1 (The battery pack is attached to this unit upon shipment.)

### Transceiver WD-K10TR

Transmission/Receiving frequency	1.9 GHz band
Transmission power	10 mW and below (average)
Type of radio wave	F1D, F1E
Receiving sensitivity	-90 dBm@BER1x10 <sup>-3</sup> and below
Power	DC 3.7 V (rechargeable lithium ion battery)
Usage time	Approx. 20 hours
Operating temperature range	-10 °C to 60 °C
Water resistant/Dust resistant level	IP67 equivalent (JIS water protection level 7)
External dimensions	54 mm (width) x 94 mm (length) x 20.5 mm (thickness)
Mass	Approx. 118 g (including battery)
Finishing	PC resin black
Accessories	User guide x 1 Belt clip x 1 Screw (for securing belt clip) x 2 Battery pack (WD-UB100) x 1 (The battery pack is attached to this unit upon shipment.)



**Base Station WD-K10BS**

Transmission/Receiving frequency	1.9 GHz band
Transmission power	10 mW and below (average power per channel)
Type of radio wave	F1D, F1E
Receiving sensitivity	-90 dBm@BER1x10 <sup>-3</sup> and below
Contact terminals	Audio input x 2 [Stereo standard jack]: -10 dBs (balance or unbalanced) Audio output x 2 [Stereo standard jack]: -10 dBs (balance), -16 dBs (unbalanced) Link terminal x 2 [Terminal block bipolar] (Uplink/Downlink) External control terminal x 2 [Terminal block bipolar] Data setting terminal [Serial interface] Power terminal [DC jack] DC 5.5 V (Dedicated AC adapter)
Power	Approx. 5 W
Power consumption	-10 °C to 50 °C
Operating temperature range	IP54 (JIS water protection level 4)
Water resistant/Dust resistant level	196 mm (width) x 136 mm (height) x 50 mm (depth)
External dimensions	Approx. 995 g
Mass	PC resin white
Finishing	Dedicated AC adapter x 1 Mounting plate x 1 (Pre-mounted on the unit.) Fall prevention wire x 1 Screw (for fall prevention wire) x 1 Washer x 1 User guide x 1
Accessories	

**Clip Microphone with Earphone EMC-13****● Microphone unit**

Element type	Electret condenser
Sensitivity	-42 dB
Impedance	1.5 kΩ

**● Earphone unit**

Element type	Dynamic
Output level	105 dB
Nominal input power	20 mW
Impedance	72 Ω

**Clip Microphone with Earphone EMC-14****● Microphone unit**

Element type	Electret condenser
Sensitivity	-42 dB
Impedance	1.5 kΩ

**● Earphone unit**

Element type	Dynamic
Output level	95 dB
Nominal input power	50 mW
Impedance	54 Ω

**Headset KHS-37****● Microphone unit**

Element type	Electret condenser
Sensitivity	-35 dB
Impedance	1.5 kΩ

**● Earphone unit**

Element type	Dynamic
Output level	105 dB
Nominal input power	20 mW
Impedance	55 Ω

**Charger KSC-48CR**

Power	DC 5.5 V
Charging time	WD-K10PBS: Approx. 6 hours WD-K10TR: Approx. 5 hours
Operating temperature range	5 °C to 40 °C
External dimensions	100 mm (width) x 45 mm (height) x 60 mm (depth)
Finishing	PC resin black
Compatible models	WD-K10PBS, WD-K10TR

**AC Adapter KSC-44SL E/T**

Power	AC 100 - 240 V, 50 Hz/60 Hz, DC output 5.5 V
Operating temperature range	0 °C to 40 °C
External dimensions (excluding cord)	E: 22.5 mm (width) x 58.5 mm (height) x 53.2 mm (depth) T: 49 mm (width) x 58.5 mm (height) x 43.8 mm (depth)
Cord length	1.8 m
Mass	E: Approx. 65 g T: Approx. 85 g

**Battery Pack WD-UB100**

External dimensions	35 mm (width) x 54.6 mm (height) x 7.6 mm (thickness)
Mass	30 g
Nominal output voltage	3.7 V
Nominal current capacity	1,430 mAh
Compatible models	WD-K10TR

**Battery Pack WD-UB110**

External dimensions	35 mm (width) x 54.6 mm (height) x 10.8 mm (thickness)
Mass	39 g
Nominal output voltage	3.7 V
Nominal current capacity	1,880 mAh
Compatible models	WD-K10PBS

**Interface Cable WD-RC100**

External dimensions	997 mm (width) x 23 mm (height) x 28 mm (depth)
Mass	Approx. 40 g
Operating temperature range	-10°C to 60 °C
Finishing	PC resin black
Compatible models	WD-K10PBS
Target models	NX-200G, NX-300G, NX-5200, NX-5300

**Interface Cable WR-RC50**

External dimensions	953 mm (width) x 26 mm (height) x 15 mm (depth)
Mass	Approx. 24 g
Operating temperature range	-10 °C to 60 °C
Finishing	PC resin black
Compatible models	WD-K10PBS
Target models	NX-220, NX-320, TK-2000, TK-3000, TK-2302, TK-3302, TK-3401D, TK-3501

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