

1.9 GHz Wireless Handheld Microphone

K-SHH24

Before operating this product, please read the instructions carefully and save this manual for future use.

Safety precautions

For U.S.A.

FCC CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

For U.S.A.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

For U.S.A. and Canada

This device complies with Part 15 of the FCC Rules and Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For Canada

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

For Canada

CAN ICES-003(B)/NMB-003(B)

Radio Frequency (RF) Exposure Warning

The available scientific evidence does not show that any health problems are associated with using low power wireless devices. There is no proof, however, that these low power wireless devices are absolutely safe. Low power Wireless devices emit low levels of radio frequency energy (RF) in the microwave range while being used. Whereas high levels of RF can produce health effects (by heating tissue), exposure of low-level RF that does not produce heating effects causes no known adverse health effects. Many studies of low-level RF exposures have not found any biological effects. Some studies have suggested that some biological effects might occur, but such findings have not been confirmed by additional research. K-SHH24 has been tested and found to comply with FCC/ ISED radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the ISED radio frequency (RF) Exposure rules.

Notice

FCC ID can be found on the battery compartment of the units.

MEDICAL:

Consult the manufacturer of any personal medical devices, such as pacemakers, to determine if they are adequately shielded from external RF (radio frequency) energy. (The unit operates in the frequency range of 1.92 GHz to 1.93 GHz, and the radiated power is less than 10.5 mW.

(Conducted Power is 6.3 mW (8.0 dBm))

DANGER:

Do not use unspecified batteries.

Do not disassemble the battery or dispose of it in fire.

Do not allow the + and - terminals of the batteries to come into contact with metallic objects such as necklaces or hairpins.

Do not charge, use or store batteries in hot places, such as under direct sunlight, inside closedoff cars during the summer, near open fires, stoves, etc.

- Danger of explosion or fire if battery is incorrectly replaced or mistreated.
- Short-circuiting may occur across the terminals, causing the battery to heat up, and you may seriously burn yourself if you touch the battery in this state.
- Battery fluid on your skin or clothing could result in skin inflammation or injury. Rinse with clean water and seek medical advice immediately.
- Battery fluid coming in contact with your eyes could result in loss of sight. In this case, do not rub your eyes. Rinse with clean water and seek medical advice immediately.

WARNING:

- 1) To prevent fire or electric shock hazard, do not expose this apparatus to rain or moisture.
- 2) The apparatus should not be exposed to dripping or splashing and no objects filled with liquids, such as vases, should be placed on the apparatus.

A lithium ion/polymer battery that is recyclable powers the product you have purchased.
Please call 1-800-8-BATTERY for information on how to recycle this battery.



For U.S.A.

The model number and serial number of this product may be found on the surface of the unit.
You should note the model number and serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model No. _____

Serial No. _____

Precautions

Turn off the power supply when inside an aircraft.

The product might interfere with operational safety of the aircraft.

Do not attempt to disassemble or short-circuit rechargeable batteries.

An exploding battery or leaking battery fluid may result in fire, injury and burns.

Avoid placing the product in unstable conditions.

Failure to do so may cause injury.

Stop operation immediately when something is wrong with the product.

When smoke goes up from the product or the smell of smoke comes from the product, continued use will result in fire. Immediately remove the battery and the battery charger, and contact your dealer.

Do not bring the product near medical equipment (do not bring it into operation rooms, ICUs, CCUs, etc.)

The radio waves emitted from the product may interfere with the medical equipment causing it to malfunction and lead to accidents.

Do not use near automatic doors, fire alarms, and other automatic controllers.

The radio waves emitted from the product may interfere with the automatic controllers causing them to malfunction and lead to accidents.

Do not pour liquid such as water or get it wet.

It may lead to fire or electric shock. It may lead to overheating and bursts in the batteries. Immediately remove the batteries and contact the retailer.

Do not use this apparatus near water.

Do not attempt to disassemble or remodel the product.

It may lead to fire or electric shock.

Do not let foreign substances into the product.

Water or metals entering the product may lead to fires or electric shocks. Immediately remove the battery and contact the retailer.

Only use attachments/accessories specified by the manufacturer.

Do not touch the battery pack with wet hands.

[Precautions for use]

- Operating temperature:
5 °C - 35 °C {41 °F - 95 °F}
When calculating the battery life, note that temperatures below 10 °C {50 °F} shorten the battery duration.
- Do not disassemble the product or touch internal parts.
- Exercise care when using the product in high places. If it falls down, it may cause personal injury or suffer damage.
- Do not use or leave the battery in places where it will be exposed to high temperatures, such as in strong direct sunlight, in a sun-heated car, by the fire, or in front of a stove.
- Do not touch the battery poles or contacts inside the battery cover with dirty hands. Otherwise, poor contact or noise may result. If dirty, wipe off with a dry soft cloth. The contacts inside the battery cover tend to get dirty. Clean them regularly (about once a month) with ethyl alcohol. Do not use solvents, such as benzine or thinner, or a metal polish. Otherwise, the contacts may become deformed or discolored, or the brass plating may come off.
- Do not use a deteriorated or short-circuited battery. A battery in this condition may leak fluid, overheat, and cause damage.
- The product is not made to drip-proof specification. Do not use the product with the wet hands in a place where it is directly exposed to water.
- This product is designed to be used indoors.
This product is not operable outdoors. Do not expose this product to direct sunlight for hours and do not install the product near a heater or an air conditioner. Otherwise, it may cause deformation, discoloration, and malfunction.
Keep this product away from water and moisture.
- Use the product in a location where it is relatively shielded from noise produced by rotating machinery, transformers or the ignition system or automobiles.
- Do not place the product on top of heat generating equipment, such as powered amplifiers, video monitors or measuring instruments, and do not leave it in a closed car in hot summer. When storing the product, do so in a dry place.
- The product is high-precision adjusted; exposing it to strong impact or dropping it on the floor may change its characteristics. Handle the product with due care. Do not expose the product to shock or impact as this will cause the audio output of the receiver to give off noise on impact.

Product care

- Clean the power source with a dry cloth.
- Do not clean with volatile liquids such as benzine and thinner.
- When using a chemical cloth for cleaning, observe the cautions provided with that product.

Useful hints

- Noise prevention
Turn off the power of this product, and turn down the volume of a powered amplifier, mixer, etc. before replacing, removing, or inserting the battery, as this might produce a large noise from these devices.

CONTENTS

Important Safety Instructions

Precautions

Major operating controls and their functions

Inserting a battery

Using the microphone

Connecting an external device

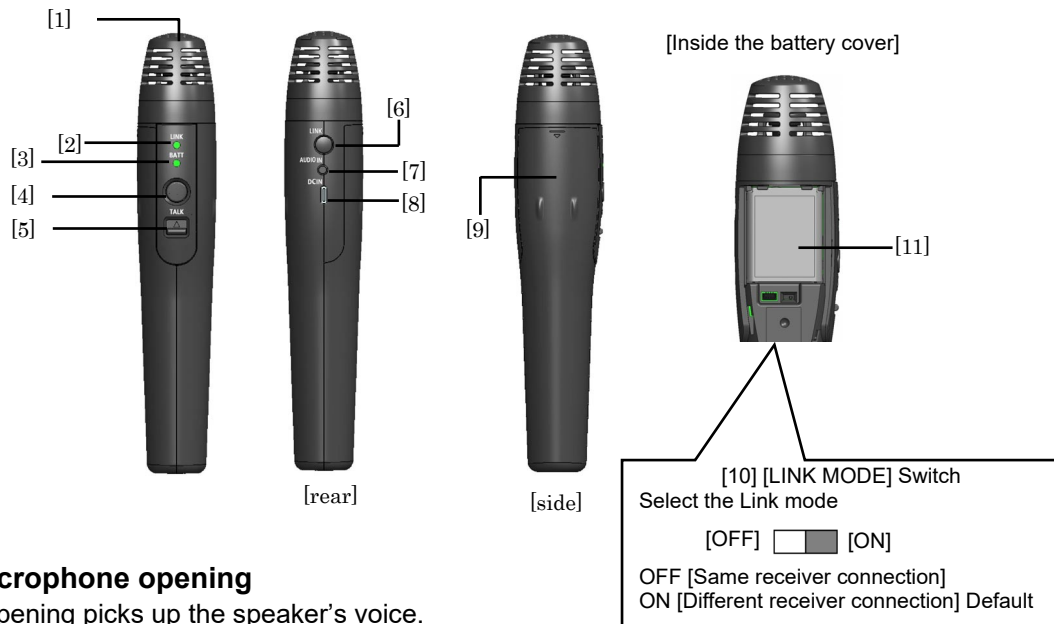
Replacing a battery

Charging a rechargeable battery

Troubleshooting

Specifications

Major operating controls and their functions



[1] Microphone opening

This opening picks up the speaker's voice.

[2] Link indicator [LINK]

Indicates the status of the microphone as follows:

Green light: Talking

Light off: Standby state*¹ or power is turned "OFF".

Blinking (green): Connected to a receiver* or audio is interrupted.

* When trying to connect a fourth microphone while three microphones are connected to the receiver.

Blinking (yellow): Out of range or pairing with a receiver.

Blinking (red): Pairing error with the receiver (Refer to Troubleshooting)

[3] Battery indicator [BATT]

Indicates the status of the microphone power supply and the battery condition as follows:

Green light: Power is turned "ON".

Yellow light: Power is turned "ON", but battery is nearing its end.

Red light: Battery is depleted. Charge the battery.

Light off: Standby state or power is turned "OFF".

When charging, the charging status is displayed as follows:

Red light: Charging completed.

Blinking (red): (blinks periodically by lighting up for 1 second and turning off for 2 seconds) Charging.

* When fully discharged, the LED lights red for the first minute.

Blinking (red): (blinks periodically by lighting up for 0.5 seconds and turning off for 0.5 seconds) Charge Error (Refer to Troubleshooting)

[4] TALK push button

You can talk using the microphone while pressing the TALK push button. When you release the button, the microphone goes into standby.

[5] [TALK] switch

[ON]: Usable Classroom Audio condition (It can talk with a microphone.)

[OFF]: standby condition. (It cannot talk with a microphone.)

[6] [LINK] button (rear)

When pairing registration with the receiver, it is button to operate by pressing at the same time TALK switch or TALK push button.

[7] External input terminal [AUDIO IN] (rear)

Transmits the audio from a connected external device to the receiver.

When an external device is connected to this terminal, audio from the [1]Microphone opening is muted.

[8] DC input terminal (rear)

Used to connect the charger for charging the battery installed in the microphone and to supply power to the microphone.

[9] Battery cover (side)

To remove the battery cover, push it down and pull it off.

[10] LINK MODE switch (inside the battery cover)

Select the Link mode.

[OFF]: Same receiver connection

[ON]: Different receiver connection (Default)

[11] Battery slot (inside the battery cover)

Install one lithium-ion rechargeable battery, paying attention to the charging terminal inside the battery cover.

*1 Standby function (Standby state): Function that improves the time taken to connect to a receiver.

When starting to talk by turning on the TALK switch or TALK push button from the off state, connecting to the receiver takes time, but within 30 minutes after switching off, the microphone goes into standby mode and shortens the connection time. After 30 minutes, the power will automatically turn off, but the power will not turn off while charging.

Inserting a battery

- To insert a battery, make sure that the microphone is not being used to talk and is not connected to the charger.
- To replace a battery, refer to “Replacing a battery”.

Note:

- Do not touch the battery poles with hands. Otherwise poor contact or noise may result. If dirty, wipe off with a dry soft cloth.



1 Confirm that the battery indicator is off.

2 Remove the battery cover.

Pull the battery cover in the arrow direction while pressing the A portion with both right and left thumbs to remove the cover.

3 Install a battery.

Insert the battery, making sure that their orientation is correct.

About batteries that you can use with this unit

The XD-5001 (Lithium Ion Battery) is the only battery that can be used in this microphone.

4 Attach the battery cover.

Push up the battery cover to the direction of the arrow in the figure, and fit it to its original position.

Using the microphone



1 TALK push button ON.

While pushing the TALK push button, it can talk with a microphone.

Also, if you push up the TALK switch to turn it on, the talk status continues. Use for long talks. (MIC1 or MIC2 indicator of the receiver lights green. When using MIC3, the receiver's LINK LED lights green. Default indicator is MIC2.)

Important:

- While using the microphone, do not take the microphone close to the speaker. Loud noises such as feedback may damage your hearing.

Note:

If the LINK indicator flashes red or continues flashing yellow when you press the TALK push button or turn on the TALK switch, pair the microphone and receiver with the procedure below.

- Remove the battery cover and remove the battery.
- Turn on the LINK MODE switch inside the battery cover. (Different receiver connection)
- Insert the battery and attach the battery cover.
- Turn on the receiver's [LINK] button. (The link indicator of the receiver blinks.)
- Press [LINK] button and TALK push button of the microphone for one second or more.

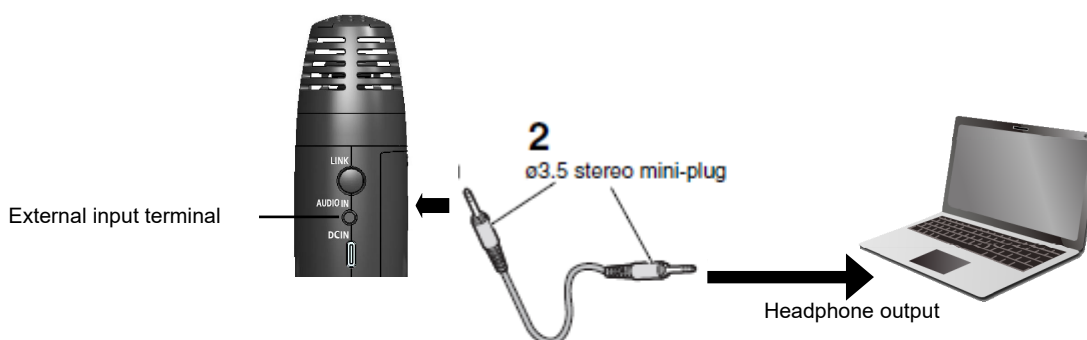
The LINK indicator on the microphone will flash yellow and the microphone will pair with the receiver.

Note:

- The [LINK] button does not work while talking. (Please operate after TALK switch is [OFF])
 - When using 3 microphones, the [LINK] button on the device with the receiver (K-SRB20) is disabled.
 - Also refer to the manual of the device with the receiver (K-SRB20).
- (*: out of range = radio waves do not reach (NOT Equal sound stops area))
- When want to do MUTE automatically as soon as possible in the place where user left the classroom, do MUTE automatically in voice call areas; can set it. (Refer to the manual of the device with the receiver (K-SRB20). "Serial communication command" SAA")

Connecting an external device

You can connect an external device (for example, MP3 player or computer) to the external input terminal and transmit the audio to the receiver.



1 Turn off the TALK switch on the microphone.

2 Connect an external device.

Use a ø3.5 stereo mini-plug to connect the external device (for example, the headphone output of a MP3 player, or computer) to the external input terminal.

3 Turn on the TALK switch on the microphone.

4 Adjust the volume.

Adjust the audio volume of the external device.

Note:

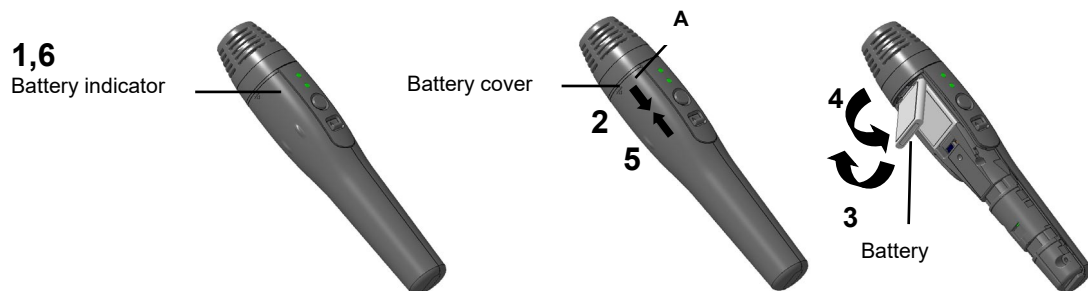
- Once a ø3.5 stereo mini-plug is plugged into the external input terminal, priority is given to this input and the audio from the microphone opening and the microphone input terminal will not be transmitted.
- If the audio of the external device is stereo, stereo signals will be mixed.
- In addition to this manual, refer to the operating instructions of the device to be connected.

Replacing a battery

- To replace the battery, turn off the power of the microphone, and make sure that the microphone is not connected to the charger.

Note:

- Do not touch the battery poles with hands. Otherwise poor contact or noise may result. If dirty, wipe off with a dry soft cloth.
- Battery power is slightly consumed even when the power of this product is OFF. If the battery is left unused, that may result in liquid leakage. To prevent this, remove the battery from the product when unused for a long time.



1 Turn off the power by pressing the power switch.

Confirm that the battery indicator is off.

2 Remove the battery cover.

Pull the battery cover in the arrow direction while pressing the A portion with both right and left thumbs to remove the cover.

3 Remove a battery.

Please take out an inserted battery.

4 Install a new battery.

Insert the battery, making sure that their orientation is correct.

About batteries that you can use with this unit

The XD-5001 (Lithium Ion Battery) is the only battery that can be used in this microphone.

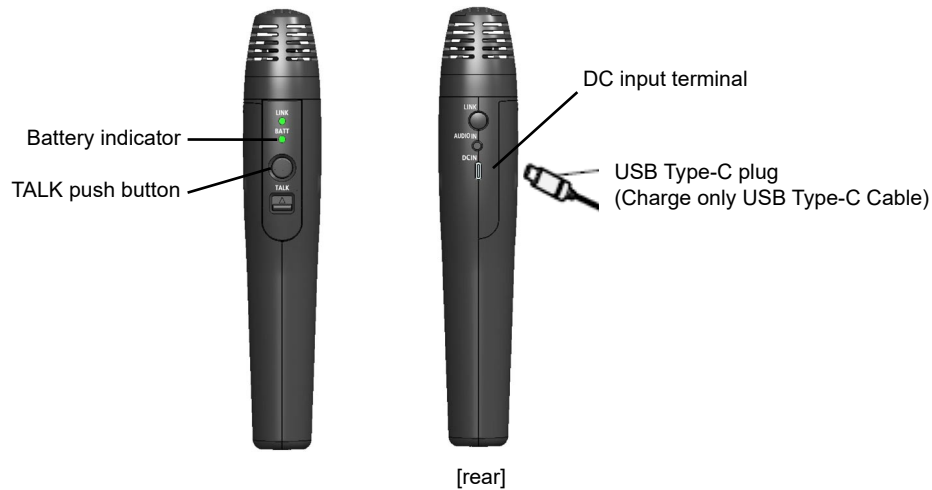
5 Attach the battery cover.

Push up the battery cover and fit it to its original position.

6 Confirm that the battery indicator lights.

Pressing TALK push button for one second or more, turn on the power of the microphone, and confirm that the battery indicator lights green or yellow.

Charging a battery



1 Turn off microphone.

2 Connect the USB Type-C plug of the charger to the DC input terminal of the microphone.

After connecting the microphone to the charger, the battery indicator indicates the charging status as follows:

Blinking (red): (blinks periodically by lighting up for 1 second and turning off for 2 seconds) Charging

* In the case of a complete discharge state, the first about 1 minute the battery indicator lights RED.

Blinking (red): (blinks periodically by lighting up for 0.5 seconds and turning off for 0.5 seconds) Charge Error. (Refer to Troubleshooting)

Light off: The charging connector is not connected or the battery is not installed.

Note:

- If the charger remains connected after charging is completed, it will restart charging to make up for any amount lost due to self-discharge.
- If the charger is connected, but the battery indicator does not light, check to see that the USB Type-C plug of the charger is properly plugged into the DC input terminal, the power cable of the charger into the charger.
- Charging takes up to 4 hours (5V/500mA), but the charging time varies depending on status of use.
- Charging at temperatures outside the normal range or charging while talking may result in significantly longer charging times or may not reach full charge.

Note, however, that charging times may become longer even within the operating temperature range, if the temperature of the microphone is higher or lower than the normal condition.

- The charger and the microphone may get hot slightly during charging.
- Do not charge a rechargeable battery that has just been fully charged. Otherwise, you will shorten the life of the battery.
- Do not recommend charging a battery from PC.

Trouble shooting

Before asking for repairs, check the symptoms with the following table.

Contact a dealer if the suggested remedies do not correct the problem or if the problem is not described below.

Symptom	Cause/solution
The power cannot be turned on.	• Does rechargeable battery charger into the microphone (with no battery)? >>Insert the battery to the microphone.
	• Is the battery depleted? >> charge the battery.
Can not use (Link indicator Red blinking)	A pairing registration error with a receiver. >> Please check registration in the following procedure. • Remove the battery cover and remove the battery. • Turn on the LINK MODE switch inside the battery cover. (Different receiver connection) • Insert the battery and attach the battery cover. • Press a receiver's [LINK] button, and a receiver is made into register mode. • When an [LINK] button is pressed, the LINK LED blinks yellow at 20s. (pairing registration mode) • During this time, please register pairing by the following operation. (Please read the operating instructions of the Handheld Microphone (K-SHH24).) Pressing [LINK] button and TALK push button for one second or more will register for receiver.
Can not use (Link indicator Yellow blinking)	Pairing registration with a receiver has not been performed. >> (1) Press a receiver's [LINK] button, and a receiver is made into register mode. (2) Press microphone [LINK] and TALK push button will register for receiver. (microphone power OFF state) (Refer to the manual of the device with the receiver (K-SRB20).)
	Microphone is out of range. >>Please use in the range.
	Is the receiver's power supply on? >>Please check a receiver's power supply.

No sound	Is the ø3.5 stereo mini-plug connected to the external input terminal? >> Disconnect the ø3.5 stereo mini-plug from the external input terminal.
Does not charge (Battery indicator is off)	• Is a battery installed? >> Install a rechargeable battery.
	• Is the USB Type-C plug of the charger inserted all the way into the DC input terminal? >> Confirm the connection.
Does not charge (Battery indicator is blinking red ((blinks periodically by lighting up for 0.5 seconds and turning off for 0.5 seconds))	Has the battery deteriorated? >> Deteriorated rechargeable battery will shorten the battery duration or cannot turn on the microphone. Replace the deteriorated battery with a new rechargeable one.
It takes time by charge completion	Aren't you charging it from a PC? >> Please charge it from a charger connected to power outlet. Do not recommend charging a battery from PC.

Specifications

Radio Standard	DECT
Frequency Range:	1,920.0 - 1,930.0MHz
Coverage (*1)	20 m (NORMAL) 30 m (Hi POWER)
Microphone type	Unidirectional electret condenser microphone
Audio Frequency Response	100 Hz to 7 kHz (From Microphone to receiver)
External input	-24 dBV ø3.5 stereo mini jack (monaural mix)
Battery	Lithium Ion Battery (Chargeable)
Battery life	about 2 years (Battery needs to be replaced every 2 years)
Talk time	Around 8 hours
Charge Time	Around 4 hours(5V/500mA)
Charging method	Power Supply with USB Type-C charging terminal
Dimensions	217 H x 38 W x 44 D [mm], excluding projections.
Weight	0.287 lbs. (130 g) (not including Battery)
Temperature Range	5°C - +35°C {41 °F - 95 °F}
Humidity Range	10% - 90%
The Condition of Installation	Indoor use

(*1): Coverage is the distance to the microphone used for classroom audio.

Weights and dimensions indicated are approximate.

Specifications are subject to change without notice.