

DTG-200

Omnitour Guiding System



[User Manual]

Manufacturer's Declaration

This product meets the following standards:

■ Federal Communications Commission Interference Statement

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

FCC INFORMATION

The Federal Communication Commission Radio Frequency Interference Statement includes the following paragraph:

The 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 instruction, may cause harmful interference to radio communication.

However, there is no grantee 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.

This device complies with part 15 of the FCC Rules.

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.

IMPORTANT NOTE: To comply with the FCC RF exposure compliance requirements, no change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

■ Europe – EU Declaration of Conformity

This device complies with Directive 2014/53/EU issued by the Commission of the European Community.

■ WEEE Statement

Electrical and electronic equipment must be disposed of at the end of their lifespan separately from household waste. Please dispose of this equipment at your local waste collection or recycling center. Please help to protect our environment.



■ Safety and Electromagnetic Emissions Certificates

Standard Compliance

- RoHS compliant
- European Directive 2011/65/EU

Certificates

- CE
- FCC
- NCC

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■ System components



OmniTour Receiver OTG-200R

OmniTour Receiver OTG-200R will be worn by group members and work respectively upon communication mode assigned by group leader.



OmniTour Transmitter OTG-200T

OmniTour Transmitter OTG-200T will be worn by group leader or assistant leader and is equipped with 3 communication modes for different applications.



Stationary Transmitter DST-OTG (*optional*)

Digital stationary transmitter DST-OTG for installed long-range transmission and professional conferencing market.



Desktop Charger C5

5-slot desktop charger for intelligent channel sync and availability of channel configuration via okayo's proprietary software OK-OTG-SW.



Portable Charger CHG-25

25-slot portable charger for intelligent channel sync and availability of channel configuration via okayo's proprietary software OK-OTG-SW.

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Wall-mounted Charger C50

50-slot wall-mounted charger for intelligent channel sync and availability of channel configuration via okayo's proprietary software OK-OTG-SW.



Proprietary Software OK-OTG-SW (*optional*)

Okayo's proprietary software for channel and setting configuration for OTG-200 series.



Ear-Mics (*optional*)

Various ear microphones are available for OTG-200 series.



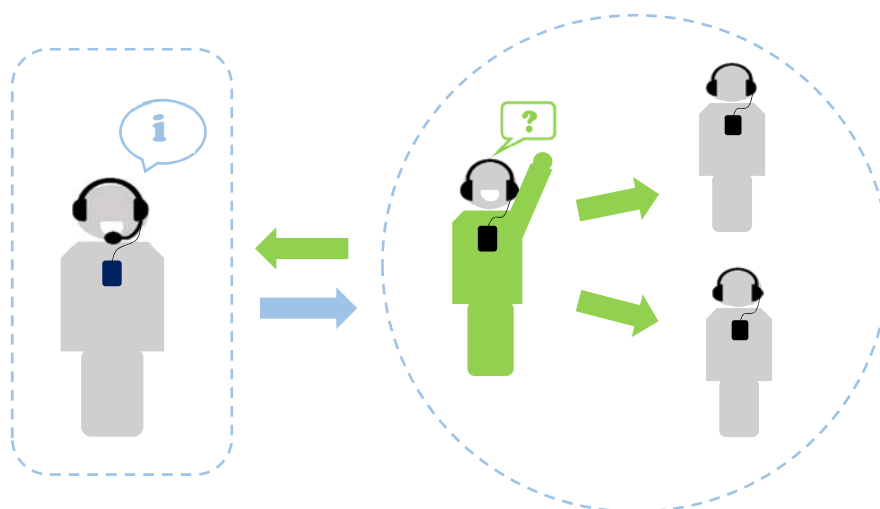
Instruction Manual

Detailed instruction manual included in each package for operation advice.

■ Quick start

◆ Mode Guiding

The group leader (OTG-200T) can freely talk during the tour. Any one (1) of group members is able to talk back or raise a question in a way of FIFT (first-in-first-talk) when the group leader permits.

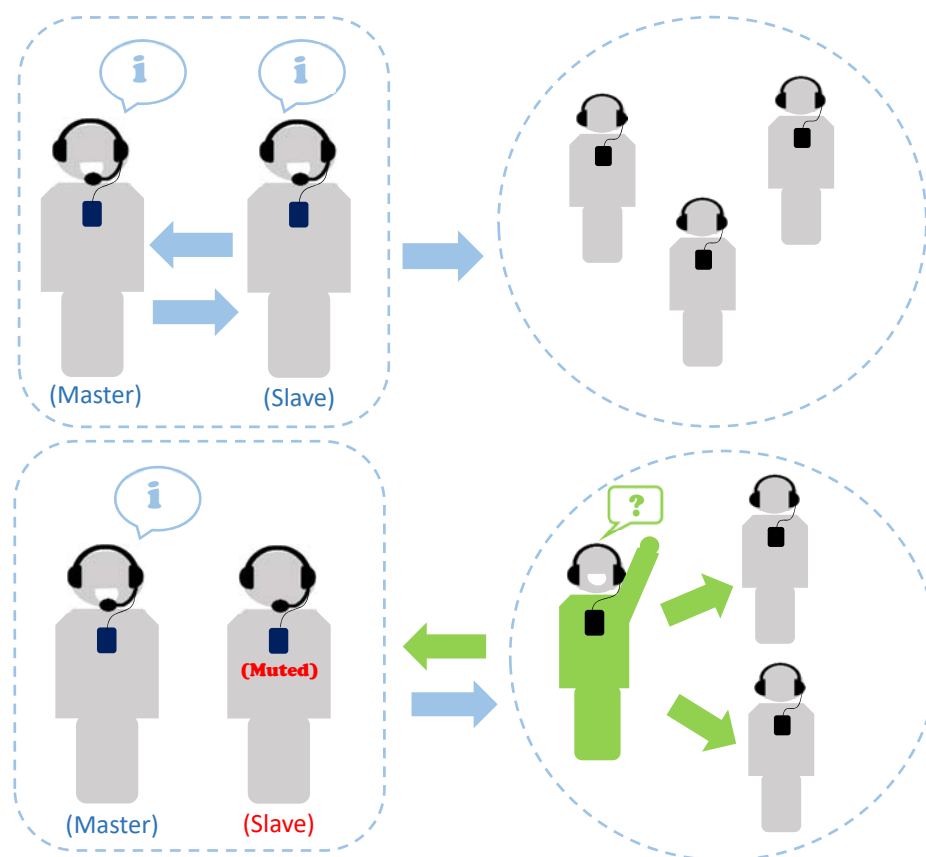


- **Power transmitter on and change its communication mode**
 - ✓ Press both **▼** (⑧) and **power** (⑨) button to turn the transmitter on.
 - ✓ Default mode **TEACHING** shows up. Press the **▲** or **▼** button (⑧) to select **GUIDING** mode.
 - ✓ Press the **power** button (⑨) to confirm (underline) the selection and leave the setting.
The transmitter will then be turned on automatically.
- **Assign your group channel**
 - ✓ Press both **▲** and **▼** buttons (⑧) simultaneously to unlock the channel when transmitter is on.
 - ✓ Symbol **🔒** disappears and press **▲** or **▼** button (⑧) to select another preferred channel.
 - ✓ To confirm newly selected channel, press the **power** button (⑨) or leave the transmitter idled for 1 second to leave the setting.
- **Power receiver on**
 - ✓ Now, press and hold the **power** button (㉑) for 1 second to turn the receiver on.
 - ✓ Press both **▲** and **▼** buttons (㉒) simultaneously to unlock the channel.
 - ✓ Symbol **🔒** disappears and press **▲** or **▼** button (㉒) to select same channel as that on transmitter.
 - ✓ To confirm newly selected channel, press the **power** button (㉑) or leave the receiver idled for 1 second to leave the setting automatically.

- ✓  will show up on the screen to indicate correct connection with the transmitter. *Note both transmitter and receiver need to be set at same channel to have correct communication mode (G, T or D) shown on receiver's screen.*
- **Talkback by receiver**
 - ✓ Any one (1) group member (receiver) is allowed to talk back (FIFT) with a press of PTT button () if the group leader (transmitter) tunes its master/slave switch () to "s".
- **Power off**
 - ✓ To turn transmitter/receiver off, press and hold the power button () till OFF shows up on the screen.

◆ **Mode Teaching**

In addition to the lecturer (OTG-200T, master), either the assistant (OTG-200T, slave) or any one (1) participant (OTG-200R) is allowed to talk in the room in a way of FIFT (first-in-first-talk).



- **Power transmitter on**
 - ✓ Press and hold the power button () for 1 second to turn transmitter on. Default mode  is shown on transmitter.

- **Tune master/slave switch on transmitter correctly**
 - ✓ The lecturer (master transmitter) tunes its master/slave switch (⑩) to “m” whereas “s” is tuned by the assistant (slave transmitter). *Note slave transmitter can work only when master transmitter exists.*
- **Assign your group channel**
 - ✓ Press both ▲ and ▼ buttons (⑧) simultaneously to unlock the channel when transmitter is on.
 - ✓ Symbol  disappears and press ▲ or ▼ button (⑧) to select another preferred channel.
 - ✓ To confirm newly selected channel, press the power button (⑨) or leave the transmitter idled for 1 second to leave the setting automatically.
- **Power receiver on**
 - ✓ Now, press and hold the power button (⑪) for 1 second to turn the receiver on.
 - ✓ Press both ▲ and ▼ buttons (⑫) simultaneously to unlock the channel.
 - ✓ Symbol  disappears and press ▲ or ▼ button (⑫) to select same channel as that on transmitter.
 - ✓ To confirm newly selected channel, press the power button (⑪) or leave the receiver idled for 1 second to leave the setting automatically.
 - ✓ T will show up on the screen to indicate correct connection with the transmitter. *Note both transmitter and receiver need to be set at same channel to have correct communication mode (G, T or D) shown on receiver's screen.*
- **Talkback by receiver**
 - ✓ Any one (1) participant (receiver) (FIFT) can press PTT button (⑬) to talk back if the assistant (slave transmitter) releases his talk right.

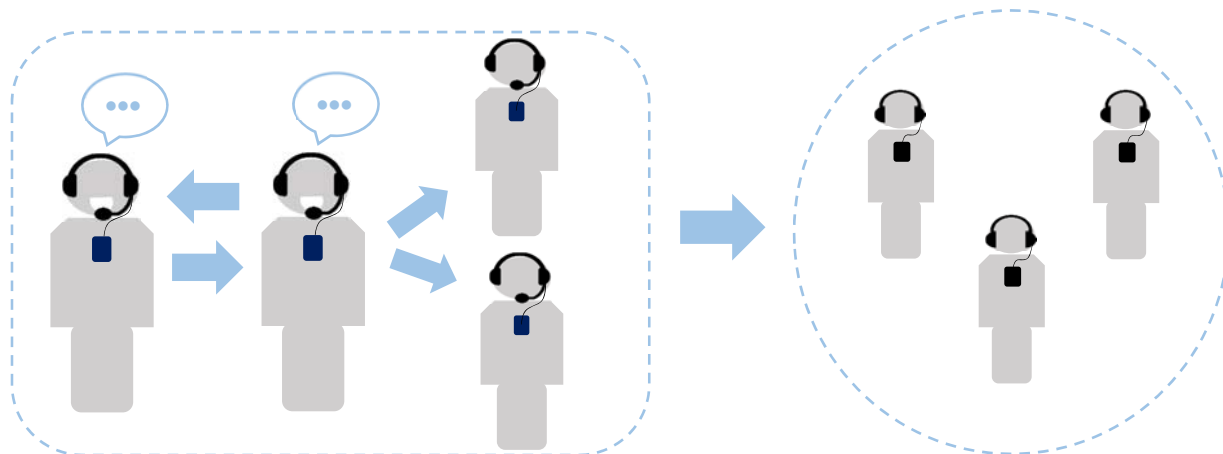


Make sure slave transmitter carried by the assistant is ① muted or ② its audio cable is removed from aux-in jack (②), if applicable.

- **Power off**
 - ✓ To turn transmitter/receiver off, press and hold the power button (⑨⑪) till OFF shows up on the screen.

◆ **Mode Discussing**

Any 2 discussion members (OTG-200T) are allowed to talk freely. Other listeners (OTG-200R) can only be in listen mode at this occasion.



- **Power transmitter on and change its communication mode**
 - ✓ Press both **▼** (⑧) and **power** (⑨) button to turn transmitter on.
 - ✓ Default mode **TEACHING** shows up. Press the **▲** or **▼** button (⑧) to select **DISCUSSING** mode.
 - ✓ Press the **power** button (⑨) to confirm (underline) the selection and leave the setting. Transmitter will then be turned on automatically.
- **Assign your group channel**
 - ✓ Press both **▲** and **▼** buttons (⑧) simultaneously to unlock the channel when transmitter is on.
 - ✓ Symbol **🔒** disappears and press **▲** or **▼** button (⑧) to select another preferred channel.
 - ✓ To confirm newly selected channel, press the **power** button (⑨) or leave the transmitter idled for 1 second to leave the setting automatically.
- **Power receiver on**
 - ✓ Now, press and hold the **power** button (⑳) for 1 second to turn the receiver on.
 - ✓ Press both **▲** and **▼** buttons (㉑) simultaneously to unlock the channel.
 - ✓ Symbol **🔒** disappears and press **▲** or **▼** button (㉑) to select same channel as that on transmitter.
 - ✓ To confirm newly selected channel, press the **power** button (㉑) or leave the receiver idled for 1 second to leave the setting automatically.
 - ✓ **D** will show up on the screen to indicate correct connection with the transmitter. *Note both*

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transmitter and receiver need to be set at same channel to have correct communication mode (G, T or D) shown on receiver's screen.

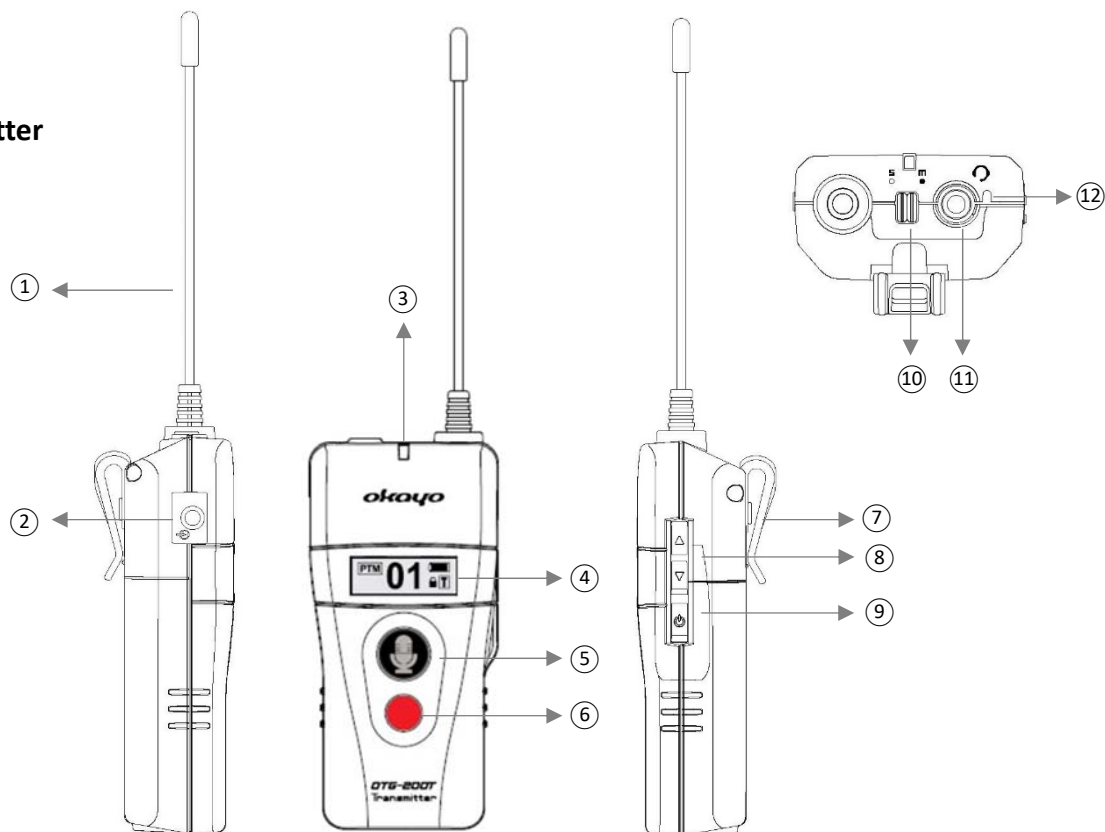


When receivers are at communication mode "Discussing", they do not have the talk right via the talk/mute button (⑰).

- **Power off**
 - ✓ To turn transmitter/receiver off, press and hold the power button (⑨⑳) till OFF shows up on the screen.

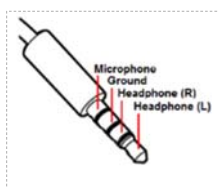
■ Interface

◆ Transmitter

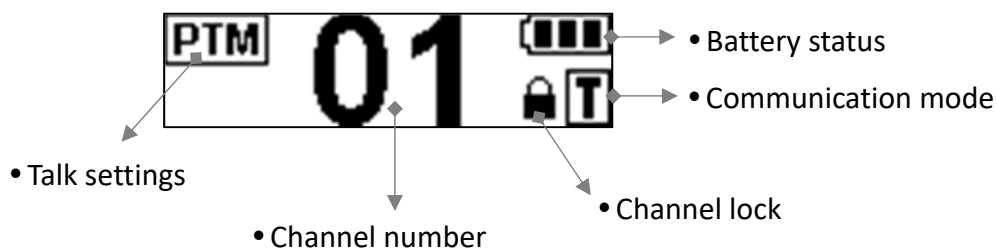


- | | |
|----------------------------|---------------------------------|
| 1. Whip antenna | 7. Belt clip |
| 2. Aux-in jack | 8. Up/Down button |
| 3. Signal/Status indicator | 9. Power button |
| 4. OLED screen (see below) | 10. Master/Slave switch |
| 5. Talk/Mute button | 11. Headphone/Microphone jack ✧ |
| 6. Call button | 12. Inbuilt microphone |

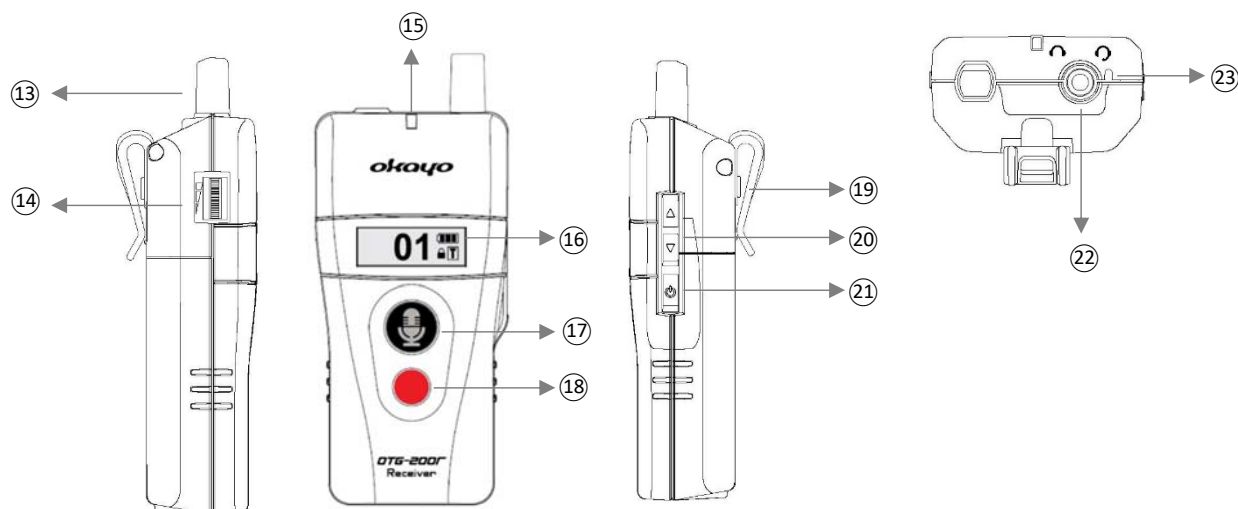
✧ Recommended 4-pin jack type is shown below.



◆ Transmitter Screen



◆ Receiver



13. Antenna

14. Volume control

15. Signal/Status indicator

16. OLED screen (see below)

17. PTT (push to talk) button

18. Alarm-release button

19. Belt clip

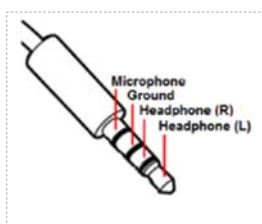
20. Up/Down button

21. Power button

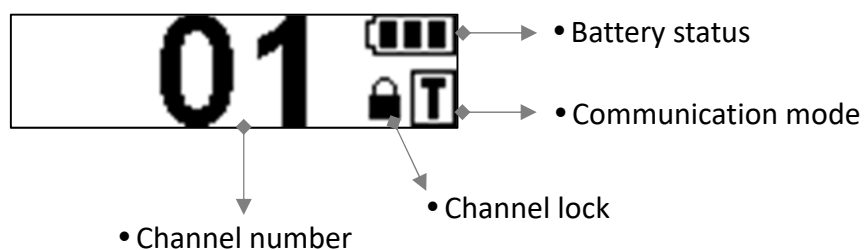
22. Headphone/Microphone jack ✧

23. Inbuilt microphone

✧ Recommended 4-pin jack type is shown below.



◆ Receiver screen



■ General operation

◆ Power on

- Press and hold the power button (⑨②①) for 1 second to transmitter/receiver on.

◆ Change communication mode on transmitter



- Press and hold both ▼ (⑧) and power (⑨) buttons simultaneously to turn transmitter on.
- Default mode TEACHING shows up. Press the ▲ or ▼ button (⑧) to change your preferred mode.
- Press the power button (⑨) to confirm (underline) the selection and leave the setting. Transmitter will then be turned on automatically.

◆ Detect communication mode on receiver



- Receiver will automatically detect the signal from transmitter when it is turned on.
- T, G or D will then show up on receiver's screen for mode differentiation and indicating correct connection with the transmitter. *Note both transmitter and receiver need to be set at same channel, then communication mode will show up automatically.*
- To change your mode, simply turn receiver off and then re-turn it on to acquire new signal from another transmitter.



Both transmitter and receiver can work together only when their channel and communication mode are same.

◆ Assign your group channel

- Press both ▲ and ▼ buttons (⑧②①) simultaneously to unlock the channel when transmitter or receiver is on.
- Symbol  disappears and press ▲ or ▼ button (⑧②①) to select another preferred channel.
- To confirm newly selected channel, press the power button (⑨②①) or leave the transmitter or receiver idled for 1 second to leave the setting automatically.



When the communication between transmitter and receiver is correct, their signal indicators (③①⑤) will show below.

- Transmitter: Slow flashing blue* light (*Continuous blue light shows up if the transmitter acquires the signal from one receiver.*)
- Receiver: Steady blue* light (*Slow flashing blue light shows up if it does not acquire the signal from the transmitter.*)

**Red light will show up if low battery happens.*

◆ Adjust transmitter's or receiver's volume

• Transmitter

Press ▲ or ▼ button (⑧) to adjust the headphone volume on transmitter.



If channel-lock function is deactivated (see paragraph of "Adjust default settings" on page 16), volume adjustment will be invalid and default volume will be fixed at level 5.

• Receiver

Tune the volume control (⑭) on the side of receiver for adjustment.



Total 11 volume levels are available and default level is set at 5. When level 0 is set, the device will be muted.



Kindly note listening at highly volume for long periods may damage your hearing.

◆ Connect external audio (*Transmitter*)

- Transmitter is available for 3.5 mm audio connection via aux-in jack (②).
- "Audio priority (*default: OFF*)" can be pre-set upon preference as advised in the paragraph of "Adjust default settings" on page 16.



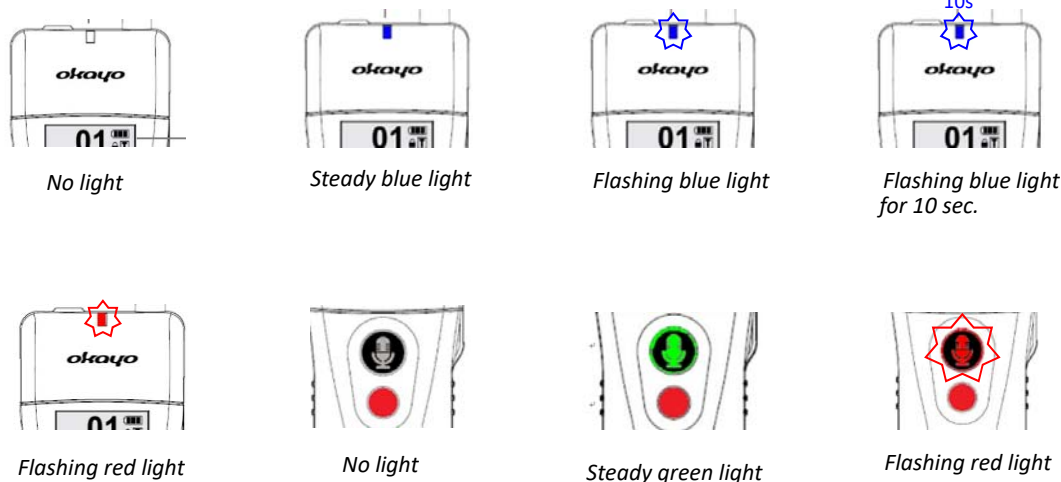
To release the talk right of 2nd transmitter when it is at communication mode "Teaching (slave)" or "Discussing", make sure it is ① muted or ② the audio cable is removed from aux-in jack (②), if applicable.

◆ Power off

- Press and hold the power button (⑨⑳) till OFF shows up on the screen to turn transmitter/receiver off.

■ Advanced operation

Symbol indication

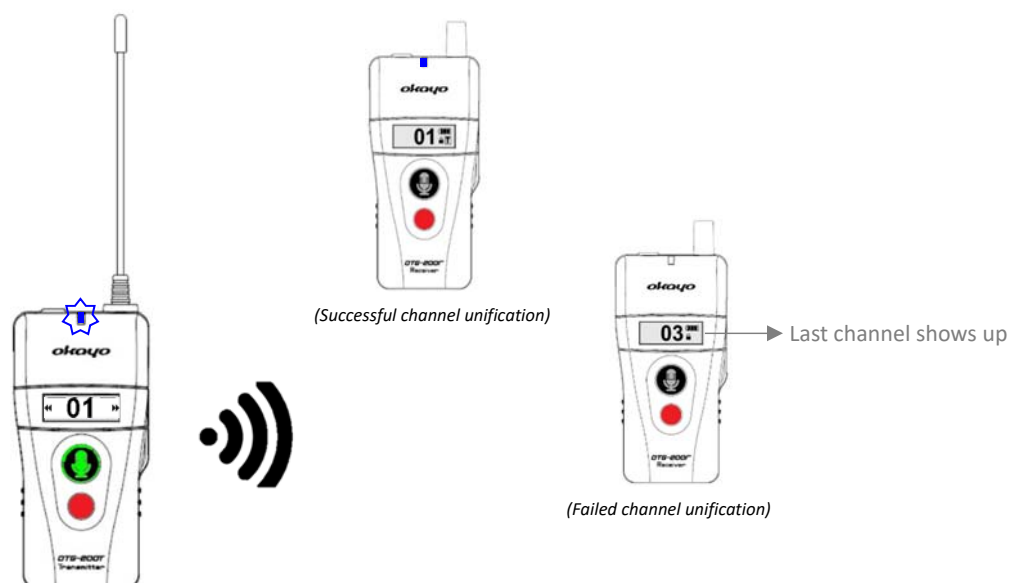


◆ Develop bespoke ID



Additional okayo's proprietary software is available for developing bespoke ID number (max. 4 digits) on OTG-200. To know more about this, please reference additional instruction manual of the software [OK-OTG-SW](#).

◆ Unify your group channel automatically



- Press both talk/mute (⑤) and power buttons (⑨) to turn transmitter on.
- Channel number flashes. Press ▲ or ▼ button (⑧) to select preferred channel.
- To confirm newly selected channel, press the power button (⑨) or leave the transmitter idled

for 5 seconds for auto-confirmation.

- After selected channel is confirmed, signal indicator (③) starts to flash quickly and the talk/mute button (⑤) lights up in green. Transmitter is ready to send signal of channel unification.
- Now, turn receiver on and it will automatically be channel unified. New channel and correct communication mode (G, T or D) will show up on its screen. Indication of successful or failed channel unification is shown above.
- Turn receiver off and then re-turn it on if failed channel unification happens.
- To release the transmitter from channel unification, simply short press the talk/mute button (⑤) again.



Communication mode (G, T or D) shown on receiver's screen varies upon transmitter from which receiver acquires the signal.

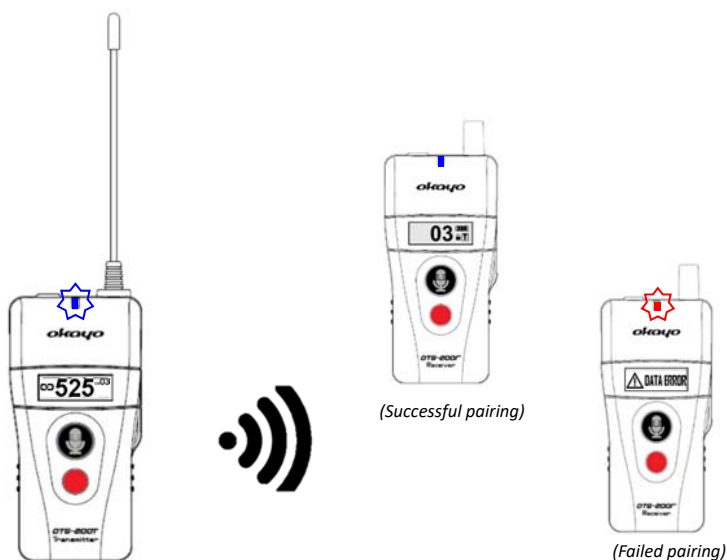
◆ Pair and unify your group channel



*To complete following advanced functions, including roll-call, calling/gathering alarm or out-of-range alarm, **prior pairing** for all transmitters/receivers in the group is a must.*



*When the transmitter is at communication mode "Teaching", only **master** transmitter, whose master/slave switch (⑩) is set at "m", can execute following advanced functions, including roll-call and calling alarm.*

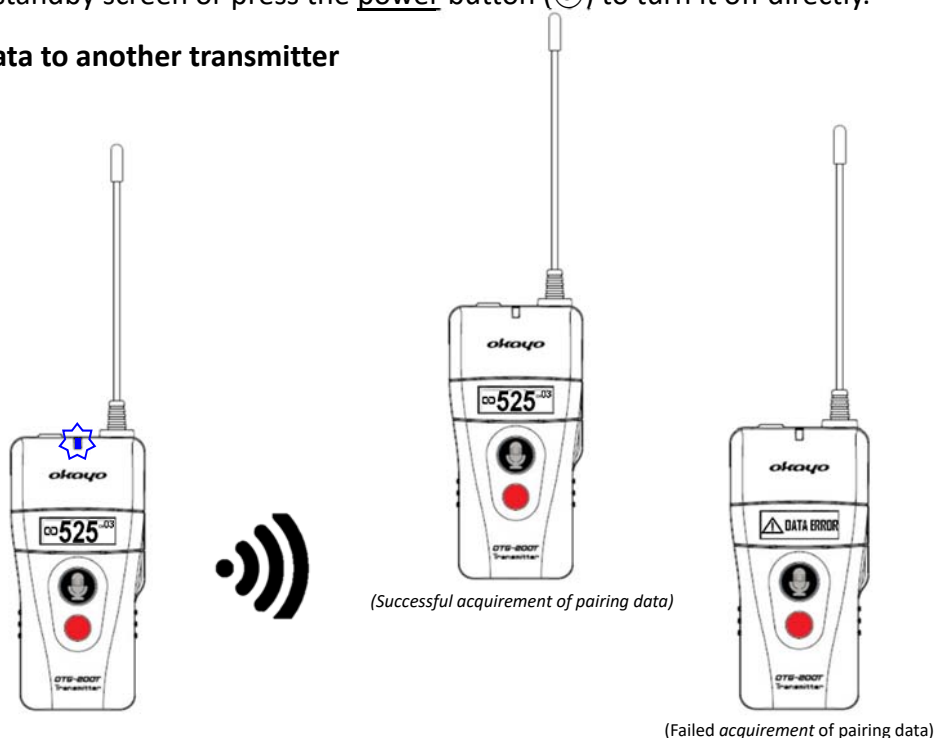


- Press both call (⑥) and power (⑨) buttons to turn transmitter on for group pairing and channel unification.
- Channel number on top flashes. Press the ▲ or ▼ button (⑧) to select preferred channel.
- To confirm newly selected channel, press the power button (⑨) or leave the transmitter idled

for 5 seconds for auto-confirmation.

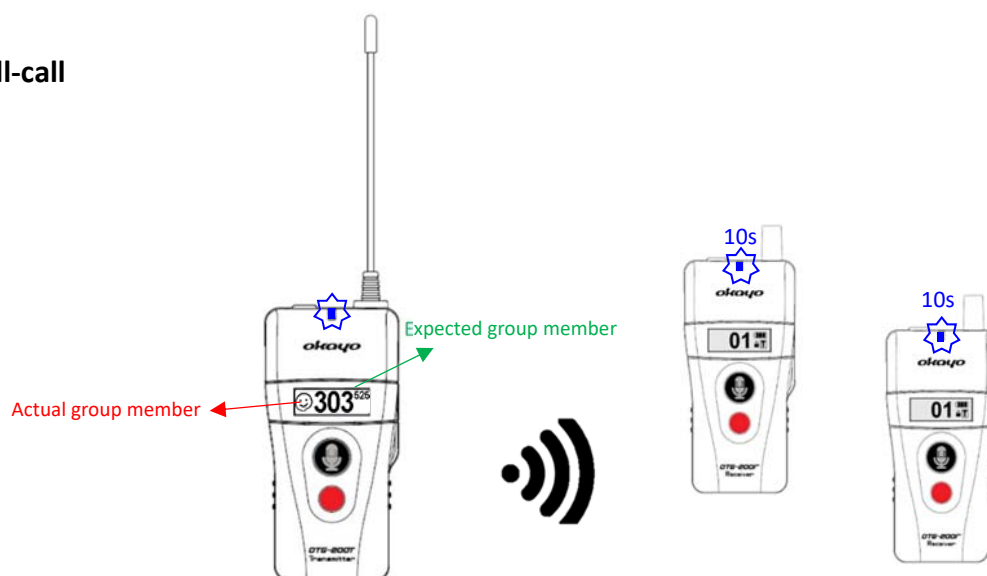
- Channel number stops flashing. Signal indicator (③) starts to flash quickly which means the transmitter is ready for pairing.
- Now, turn receiver on. It will be paired and channel unified. Indication of successful or failed pairing is shown above.
- Turn receiver off and then re-turn it on if failed pairing happens.
- Pairing quantity shown on transmitter will gradually increase until pairing is completed.
- To release the transmitter from group pairing, simply short press the call button (⑥) again to have it at standby screen or press the power button (⑨) to turn it off directly.

◆ Send pairing data to another transmitter



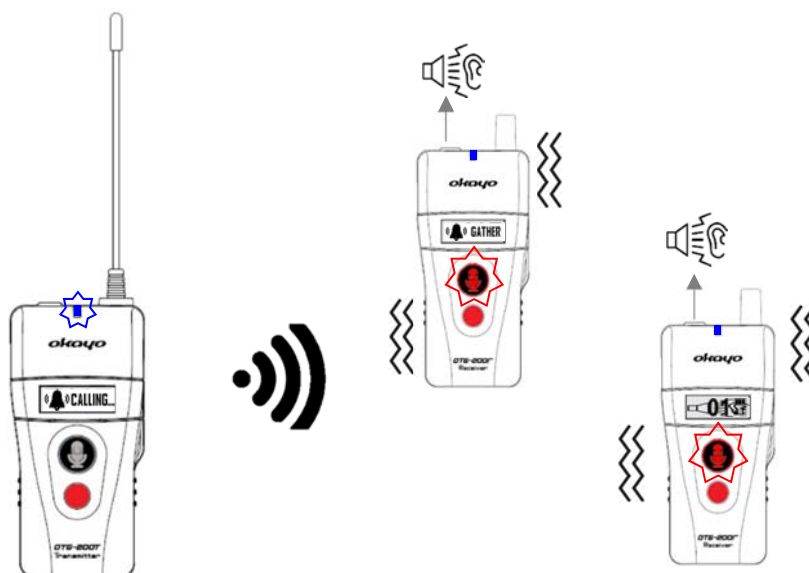
- Keep 1st transmitter on after it has paired all group members (receivers). *Note this transmitter cannot release itself from pairing mode at this step.*
- Now, press both call (⑥) and power (⑨) buttons to turn 2nd transmitter on in order to obtain pairing data from 1st transmitter. *Note same communication mode and channel need to be set on both transmitters (if the communication mode is “Teaching”, the master/slave switch (⑩) on both transmitters needs to be tuned at “m”).*
- Turn 2nd transmitter off and then re-turn it on if failed acquirement of pairing data occurs.
- To release transmitters from transmission/acquirement of pairing data, simply short press the call button (⑥) again to have it at standby screen or press the power button (⑨) to turn it off directly.

◆ Roll-call



- Short press the call button (⑥) when transmitter is on.
- Roll-call symbol (😊) shows up and signal indicator (③) starts to flash quickly which means the transmitter is sending the signal of roll-call.
- If receiver acquires roll-call signal from the transmitter, its signal indicator (⑮) will flash quickly for 10 seconds and then in steady blue light again.
- The number shown on transmitter will gradually increase until roll-call is completed.
- To release the transmitter from roll-call, simply short press the call button (⑥) again.

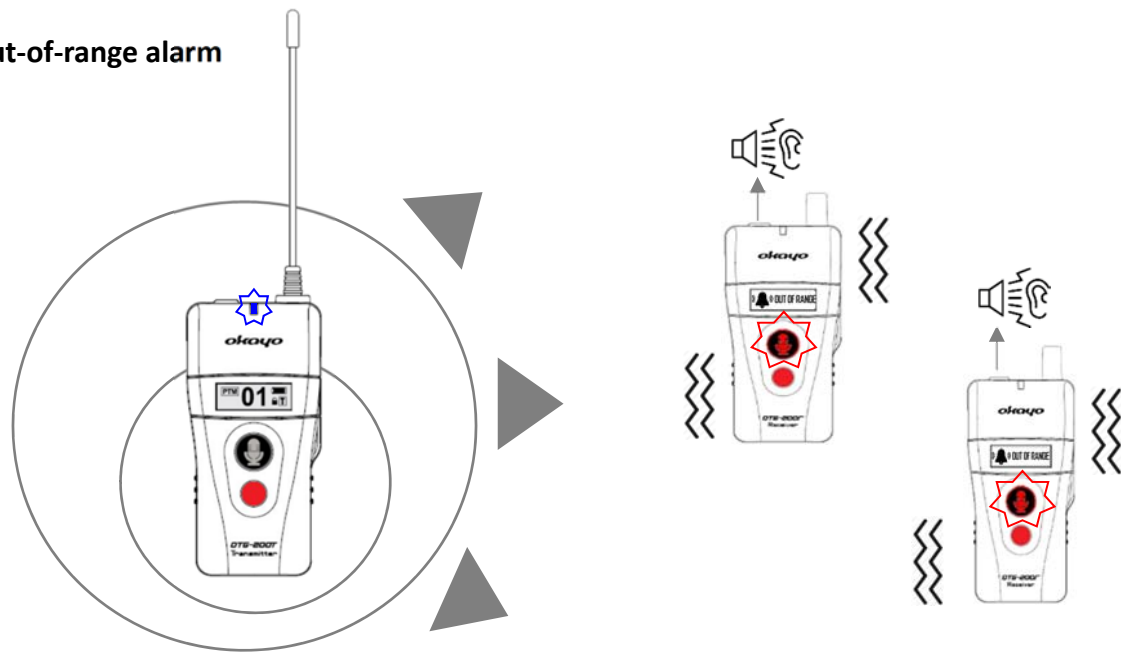
◆ Calling alarm



- Press and hold the call button (⑥) on transmitter for 3 seconds when transmitter is on.
- Calling symbol (🔔CALLING...) shows up and signal indicator (③) starts to flash quickly which means the transmitter is sending the signal of calling alarm.
- Receivers, which receive the calling alarm from transmitter, will start to vibrate and beep. Also, symbol of gathering alarm (🔔👥) shows up on the screen and its PTT button (⑰) starts to flash quickly in red light.

- To release receivers from being alarmed, simply press the alarm-release button (18).
 - To release the transmitter from calling alarm, simply short press the call button (6) again.
- ⚠ Receivers will automatically be turned off if the alarm keeps on for 20 minutes.

◆ Out-of-range alarm



- Receivers will automatically start to vibrate and beep if they are out of transmitter’s range for 3 minutes.
- Out-of-range symbol (⚡ OUT OF RANGE) shows up and PTT button (17) starts to flash quickly in red light.
- The alarm can only be released when receivers are within the operation range of the transmitter again or the alarm-release button (18) on receivers is short pressed.

⚠ Receivers will automatically be turned off if the alarm keeps on for 20 minutes.

⚠ Out-of-range alarm can be deactivated upon preference as advised in the paragraph of “Adjust default settings” on page 16.

◆ Adjust default settings

- **Transmitter**
 - ① Press both ▲ (8) and power (9) buttons to turn transmitter on.
 - ② Following settings will show up in sequence for selection via ▲ or ▼ button (8).

✓ Channel Lock	➤ ON
Auto channel lock when the transmitter is turned on.	➤ OFF
✓ Talk (setting)	➤ PTB: push to bolt
	➤ PTT: push to talk
	➤ PTM: push to mute

✓ Mic Gain	➤ 1~5 (default: <u>3</u>)
✓ RF Power	➤ Hi ➤ <u>Low</u>
✓ Audio Priority <i>Simultaneous transmission for both AUDIO and MIC. If this function is activated (<u>ON</u>), only audio will be transmitted (MIC message will be muted).</i>	➤ ON ➤ <u>OFF</u>

- ③ To confirm (underline) each selection, press the power button (⑨) and enter next setting.
 ④ When final selection is completed, the transmitter will exit the menu and automatically be turned on afterwards.

- **Receiver**

- ① Press both ▲ (⑳) and power (㉑) buttons to turn receiver on.
 ② Following settings will show up in sequence for selection via ▲ or ▼ button (㉒).

✓ Channel Lock <i>Auto channel lock when the receiver is turned on.</i>	➤ <u>ON</u> ➤ OFF
✓ Auto Power-Off <i>Receiver will automatically be off if it does not get the transmitter signal for 20 minutes.</i>	➤ <u>ON</u> ➤ OFF
✓ Auto Power-On <i>Receiver will automatically be powered on when leaving charger.</i>	➤ ON ➤ <u>OFF</u>
✓ Alarm <i>Out-of-range alarm will be activated if receiver does not get the transmitter signal for 3 minutes.</i>	➤ <u>ON</u> ➤ OFF
✓ Earphone Output <i>Earphone level can be tuned to be compatible with HAC users.</i>	➤ <u>Regular</u> ➤ HAC level

- ③ To confirm (underline) each selection, press the power button (㉑) and enter next setting.
 ④ When final selection is completed, the receiver will exit the menu and automatically be turned on afterwards.

◆ Back to default

Settings on both transmitter and receiver can be back to default at any time if ▲, ▼ (⑧②①) and power (⑨②①) buttons are pressed simultaneously when transmitter/receiver is off. Followings are default settings for transmitter/receiver.

- **Transmitter**

- ① Channel: 01
- ② Channel Lock: ON
- ③ Talk: PTB
- ④ Mic. Gain: 3
- ⑤ RF Power: Low
- ⑥ Audio Priority: OFF
- ⑦ Mode: T EACHING

- **Receiver**

- ① Channel: 01
- ② Channel Lock: ON
- ③ Auto Power-Off: ON
- ④ Auto Power-On: OFF
- ⑤ Alarm: ON
- ⑥ Earphone Output: Regular

■ Troubleshooting

◆ NO DATA shows up on transmitter



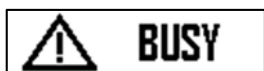
- This screen might show up on transmitter and it means no prior pairing was completed. Please pairing before requested operation is done.

◆ NOT APPLICABLE shows up on transmitter



- This screen might show up on transmitter and it means the function is not applicable.

◆ BUSY shows up on transmitter



- This screen might show up on transmitter and it means the talk right is occupied, please ask that occupied transmitter/receiver to release this talk right.

◆ DATA ERROR shows up on transmitter or receiver



- **Transmitter**

Pairing data fails to acquire. Please turn the transmitter off and re-turn it on again for successful acquirement of pairing data. *Note same communication mode and channel need to be set on both transmitters (if the communication mode is "Teaching", the master/slave switch (Ⓔ) on both transmitters needs to be tuned at "m").*

- **Receiver**

Pairing fails to complete. Please turn the receiver off and re-turn it on again for successful pairing.

◆ Receiver can't hear Transmitter

- Make sure the volume control (Ⓐ) is tuned at appropriate level.
- Make sure the channel number on both transmitter and receiver is same.
- Make sure the "communication mode" (G, T or D) shown on both transmitter and receiver is same.

◆ Receiver can't talk back via PTT button

- If the receiver is set at GUIDING mode, make sure master transmitter is tuned its master/slave switch (Ⓔ) from "m" to "s" and no other receiver occupies the talk right.

- If the receiver is set at TEACHING mode, make sure slave transmitter or any other receiver does not occupy the talk right.
- Receivers do not have the function of talkback if DISCUSSING mode is set.

◆ **Channel unification failed to proceed on Transmitter**

- If the transmitter is set at TEACHING mode, make sure its master/slave switch (⑩) is tuned to be “m” not “s”.
- If the transmitter is set at DISCUSSING mode, make sure any 2nd transmitter does not occupy the talk right.

■ Specifications

- **Transmitter OTG-200T**

Frequency range	748 ~ 938 MHz (region dependent)
Modulation	4 GFSK
Channels	Various upon countries
Latency	18 ms
T.H.D.	< 7 %
RF output power	Hi: 13 dBm (region dependent) Low: 10 dBm
Built-in Microphone	Electrical condenser
Power requirements	2 x 1.2 V NiMH rechargeable battery or 2 x 1.5 V Alkaline battery
Operation time	16 ~ 18 hours @ 2,100 mAh (Alkaline)
Charging time	4 ~ 6 hours @ 1,600 mAh (NiMH)
Operation range	70 ~ 100 meters (line of sight)
Dimensions (W x D x H)	46.5 x 33 x 95 mm (with belt clip but without antenna)
Weight	105 g (with batteries)

- **Receiver OTG-200R**

RF output power	10 dBm
Built-in Microphone	Electrical condenser
Earphone	3.5 mm
Power requirements	2 x 1.2 V NiMH rechargeable battery or 2 x 1.5 V Alkaline battery
Dimensions (W x D x H)	46.5 x 33 x 95 mm (with belt clip but without antenna)
Weight	105 g (with batteries)



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