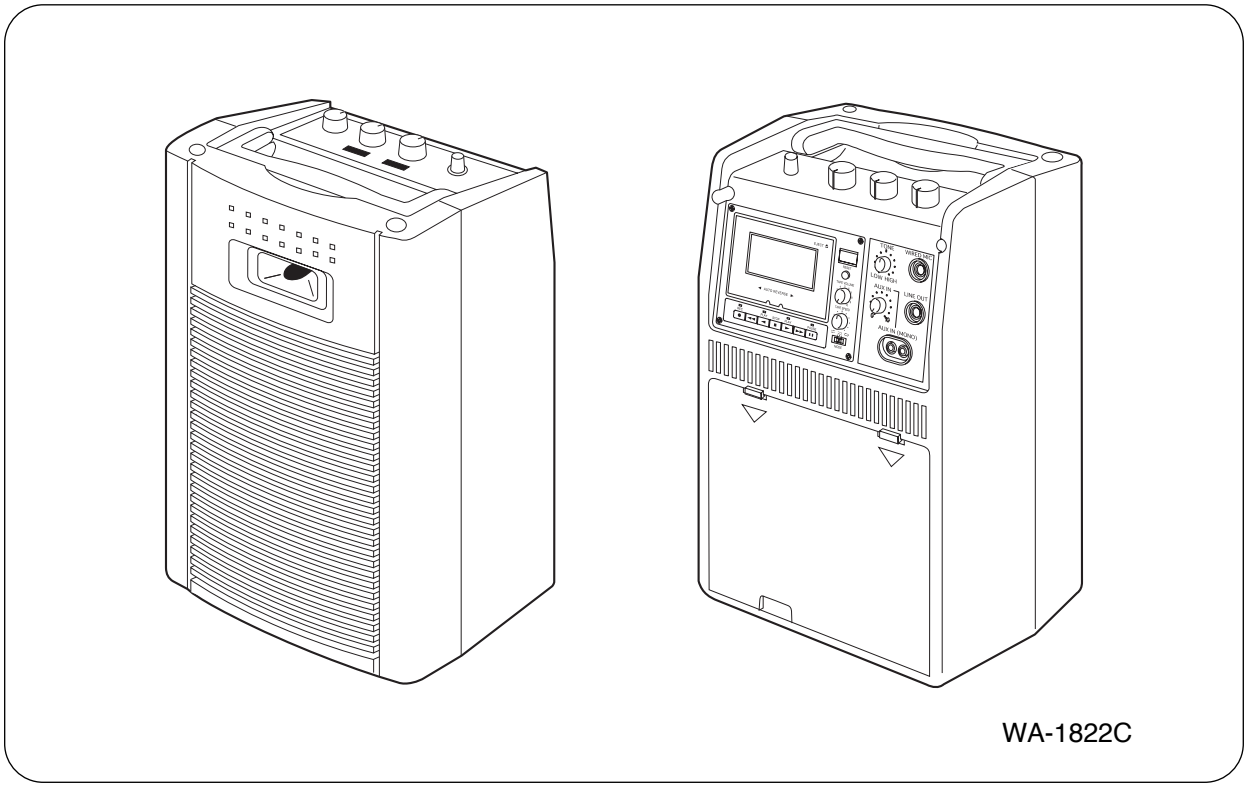
TOA

INSTRUCTION MANUAL

MEETING AMPLIFIERS

WA-1822
WA-1822C



WA-1822C

This instruction manual covers TOA's WA-1822 and WA-1822C Meeting Amplifiers, which can be used with the following tuner units. Please make sure that only the specified tuner units are used.

Model No.	Product Name	The Number of Mountable Tuner Units	Tuner Unit Model No.
WA-1822	Diversity Meeting Amplifier	2	WTU-4800, WTU-3800
WA-1822C	Diversity Meeting Amplifier with Cassette		

Please follow the instructions in this manual to obtain the optimum results from this unit.
We also recommend that you keep this manual handy for future reference.

TOA Corporation

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1. SAFETY PRECAUTIONS

- Be sure to read the instructions in this section carefully before use.
- Make sure to observe the instructions in this manual as the conventions of safety symbols and messages regarded as very important precautions are included.
- We also recommend you keep this instruction manual handy for future reference.

⚠ WARNING	Indicates a potentially hazardous situation which, if mishandled, could result in death or serious personal injury.

- **Warning:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. Do not place objects filled with liquids such as vases on the apparatus.

- **Attention.** Afin de réduire les risques de feu ou électrique,ne pas exposer l'appareil à la pluie ou à l'humidité. Ne pas poser sur l'appareil d'objets contenant du liquide tels que vases ou autres.

- **Avvertenze:** Al fine di evitare rischi d'incendio o scosse elettriche, non esporre l'apparecchio a pioggia o umidita. Non collocare oggetti contenenti liquidi, come vasi, sull'apparecchio.

- **Sicherheitshinweise:** Um Feuer oder einen elektrischen Schlag zu vermeiden, beachten Sie unbedingt die folgenden Hinweise: Setzen Sie das Gerät niemals Regen oder Feuchtigkeit aus. Stellen Sie keine offenen Behälter mit Flüssigkeiten wie beispielsweise Getränkegläser auf das Gerät.

- **Atención:** Para prevenir el riesgo de cortocircuito o incendio, no exponer el aparato a la lluvia ni a ambientes humedos. No colocar objetos que contengan líquidos, tales como vasos, encima el aparato.

When Installing the Unit

- The apparatus shall be connected to a mains socket outlet with a protective earthing connection.

- Use the unit only with the voltage specified on the unit. Using a voltage higher than that which is specified may result in fire or electric shock.

- Do not cut, kink, otherwise damage nor modify the power supply cord. In addition, avoid using the power cord in close proximity to heaters, and never place heavy objects -- including the unit itself -- on the power cord, as doing so may result in fire or electric shock.

- Avoid installing or mounting the unit in unstable locations, such as on a rickety table or a slanted surface. Doing so may result in the unit falling down and causing personal injury and/or property damage.

- To prevent lightning strikes, install the unit at least five meters away from a lightning rod, and yet within the protective range (angle of 45°) of the lightning conductor. Lightning strikes may cause a fire, electric shock or personal injury.

- The apparatus shall not be exposed to excessive heat such as sunshine, fire or the like.

When the Unit is in Use

- Should the following irregularity be found during use, immediately switch off the power, disconnect the power supply plug from the AC outlet and contact your nearest TOA dealer. Make no further attempt to operate the unit in this condition as this may cause fire or electric shock.
  - · If you detect smoke or a strange smell coming from the unit.
  - · If water or any metallic object gets into the unit
  - · If the unit falls, or the unit case breaks
  - · If the power supply cord is damaged (exposure of the core, disconnection, etc.)

- Do not insert nor drop metallic objects or flammable materials in the ventilation slots of the unit's cover or the cassette receptacle (cassette player), as this may result in fire or electric shock.

- Do not touch a plug during thunder and lightning, as this may result in electric shock.

• To prevent a fire or electric shock, never open nor remove the unit case as there are high voltage components inside the unit. In addition, modifying the internal parts or circuit may cause the unit to be against the regulations in your country.
Refer all servicing to your nearest TOA dealer.

⚠ CAUTION Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.

When Installing the Unit

• Never plug in nor remove the power supply plug with wet hands, as doing so may cause electric shock.

• When unplugging the power supply cord, be sure to grasp the power supply plug; never pull on the cord itself. Operating the unit with a damaged power supply cord may cause a fire or electric shock.

• When moving the unit, be sure to remove its power supply cord from the wall outlet. Moving the unit with the power cord connected to the outlet may cause damage to the power cord, resulting in fire or electric shock. When removing the power cord, be sure to hold its plug to pull.

• Avoid installing the unit in humid or dusty locations, or in locations generating sooty smoke or steam as doing otherwise may result in fire or electric shock.

• The socket-outlet shall be installed near the equipment and the plug (disconnecting device) shall be easily accessible.

When the Unit is in Use

• Do not place heavy objects on the unit as this may cause it to fall or break which may result in personal injury and/or property damage. In addition, the object itself may fall off and cause injury and/or damage.

• Do not stand or sit on, nor hang down from the unit as this may cause it to fall down or drop, resulting in personal injury and/or property damage.

• When the unit is not in use for 10 days or more, or when the AC power is used for operating the unit, be sure to take the batteries out of the unit because battery leakage may cause a fire, personal injury, or contamination of environment.

• Switch off the power, and unplug the power supply plug from the AC outlet for safety purposes when cleaning or leaving the unit unused for 10 days or more. Doing otherwise may cause a fire or electric shock.

• Make sure to observe the following handling precautions so that a fire or personal injury does not result from leakage or explosion of the battery.

· Do not short, disassemble, heat nor put the battery into a fire.
· Avoid using both new and old batteries together.
· Do not solder a battery directly.
· Be sure to use the specified type of batteries.
· Note correct polarity (positive and negative orientation) when inserting a battery in the unit.
· Avoid locations exposed to the direct sunlight, high temperature and high humidity when storing batteries.

2. GENERAL DESCRIPTION

Toa's WA-1822 and WA-1822C are portable diversity meeting amplifiers featuring 2-way speaker system.
In addition, the WA-1822C has a built-in cassette player.
Both models can accommodate 2 diversity wireless tuner units of crystal-controlled PLL synthesizer system WTU-3800s or WTU-4800s. Other feature includes the antibacterial treated carrying handle.

3. FEATURES

- **Excellent Sound Quality**
  Both the built-in cone speaker and constant directivity speaker feature the highest sound quality.

- **High Intelligibility**
  New circuitry has been designed to reduce sound distortion at high-volume sound outputs to realize excellent intelligibility for both quiet and loud sounds.

- **High Power and Long Battery Life**
  Although rated at a high power output of 20 W, the WA-1822 consumes low power to maintain a longer battery life.

- **Lightweight Design**
  Carefully reviewed design and construction realize reduced and balanced weight that facilitates transport and makes the Meeting Amplifier seem lighter than it actually is.

- **Improved Operating Ease**
  · Knobs are easy to operate, and indications are larger and more legible.
  · Increased component storage volume is large enough to accommodate 2 wireless microphones, 1 wired microphone and a dust cover.
  · Power cord hanger facilitates storage of bulky power cord.
  · Cartridge type battery case facilitates battery replacement.
  · Battery check function indicates when batteries should be replaced.
  · Snap-in type external speaker terminal facilitates external speaker connection.

4. HINTS FOR BETTER USE

- **Positioning Orientation**
  Position the unit with its front (speaker side) oriented toward the listeners to avoid feedback. If feedback occurs, move the microphone away from the unit or decrease the output volume.

- **Location**
  Sound from the speaker can be heard more clearly by positioning the unit above floor level, such as on a desk. The distance between the meeting amplifier and the wireless microphone can also be made longer.

- **Dead Point**
  As the wireless microphone user moves, a point where signal reception is abruptly and temporarily lost may be encountered due to radio signal reflection or interference. To avoid such a dead point, keep the unit away from walls or desks, or move the unit location approximately 1 – 2 m in any direction.

- **Radio Signal Source Interference**
  Keep the unit away from fluorescent lamps or computers, which can generate high frequency noise, as radio interference could result, shortening the wireless microphone's transmission distance.

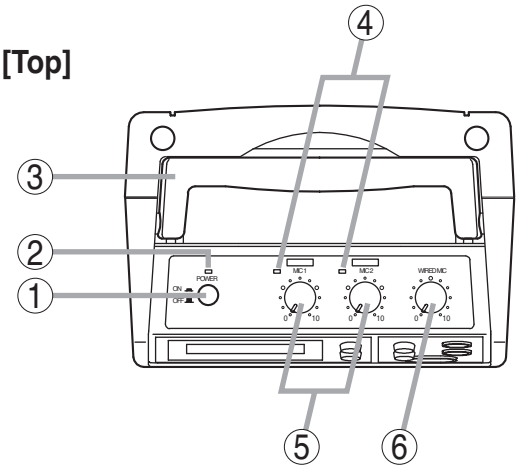
- **Wireless Microphone Distance**
  Keep the unit at least 3 m away from the wireless microphone. If the distance is shorter than 3 m, feedback noise can be generated, resulting in radio interference.

- **Cleaning**
  When cleaning, be sure to switch off the power, then wipe with a dry cloth. If the unit should become extremely dirty over time, use a cloth dampened in a neutral detergent. Never use volatile liquids such as benzene or thinner, because they can deform or discolor the unit's case.

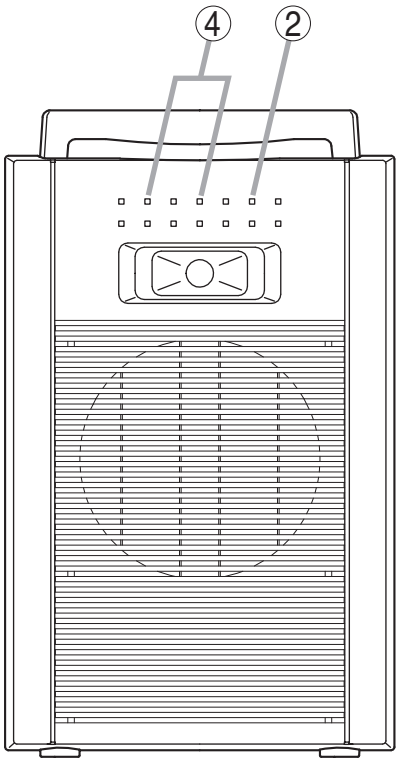
5. NOMENCLATURE AND FUNCTIONS

Figure shows the WA-1822C.

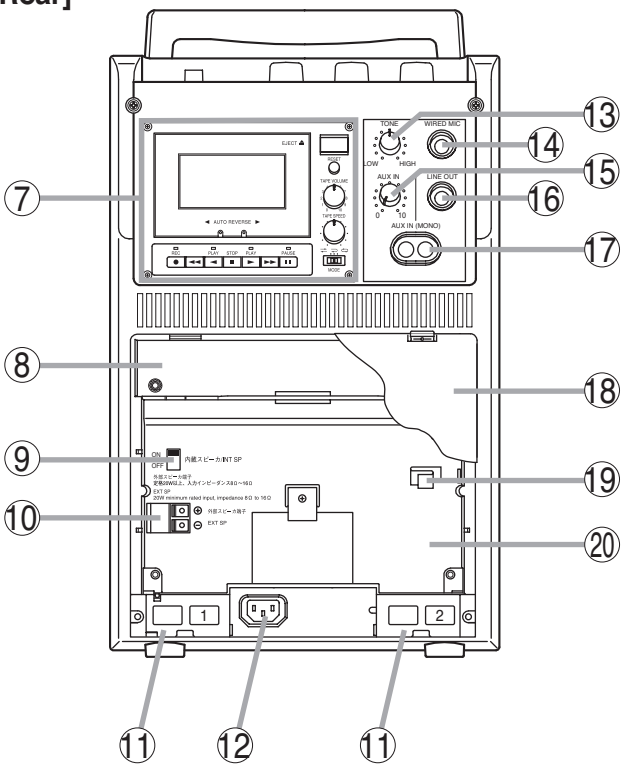
[Top]



[Front]

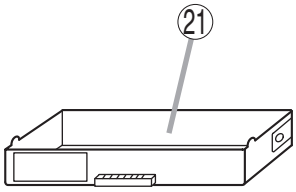


[Rear]



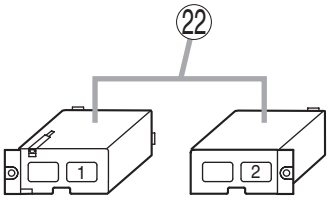
[Battery case]

To be installed in the Battery compartment (8).



[Tuner cover]

To be mounted to the Wireless tuner receptacle (11).



1. Power switch
Turns the power ON and OFF when pressed.

2. Power/Battery indicator
Lights green when the power switch is set to the ON position, and gets dark when the batteries begin to lose their charge during battery-powered operation.

3. Handle
Raise and use this handle to carry the unit.
Note: Use this handle only to transport the unit. Never suspend the unit from this handle.

4. Radio signal reception indicator lamps
Each lamp lights orange when the unit receives a radio signal from the wireless microphone.

5. Wireless microphone volume controls
As a general guideline, set these controls to Position 3 for clip-on microphones, and to Position 7 for hand-held microphones.
These positions are marked with larger dots.

6. Wired microphone volume control
Adjusts the volume of the microphone connected to the Microphone Input terminal. As a general guideline, set this control to Position 5 (larger dot marking).

7. Cassette deck (WA-1822C only)
Details of operation are described on p. 11 of this manual.

8. Battery compartment
Holds the unit's cartridge-type battery case.

9. Internal speaker ON/OFF switch
ON: Enables the internal speaker.
OFF: Disables the internal speaker.

10. External speaker terminal
Connect an 8 – 16 Ω speaker rated for at least 20 W to this terminal. Note the correct polarities when connecting.

11. Wireless tuner receptacles
Accommodate optional wireless tuners.

12.AC inlet
Connect the supplied AC power cord to this inlet.

13. Tone control
Rotate clockwise to accentuate high-frequency sounds, and counterclockwise to accentuate low-frequency sounds.

14. Wired microphone terminal
Connect a wired microphone here.
(Applicable microphone: 600 Ω, –48 dB*, unbalanced type)

15. External input volume control
Adjusts the sound volume of the connected external equipment.

16. External output terminal
Connect an external cassette deck or amplifier to this terminal.
(1 kΩ, –10 dB*)

17. External input terminal
Used to connect a portable CD player or other sound source.
RCA jack x 2 (monaural)
(10 kΩ, –20 dB*, unbalanced type)

18. Compartment cover

19. Cord hanger
The lightly bundled power cord can be hooked onto this hanger for storage.

20. Component compartment
Used to store such components as the power cord, wired and wireless microphones, and dust cover.

21. Battery case
Insert 8 R20P ("D" cell) batteries, noting the correct polarities.

22. Tuner cover
This cover must be attached after installing the tuner.

* 0 dB = 1 V

6. ABOUT THE POWER SOURCE

The WA-1822(C) Meeting Amplifier is designed to operate on both AC power supply and standard dry batteries.

6.1. Using AC Power Supply

Remove the power cord from the component compartment, and connect to an AC outlet. Always be sure the unit's power is switched OFF before connecting or disconnecting the power cord.

Notes

- Approximately 1 W is continually consumed even if the power switch is set to the OFF position.
- When the unit is not used, remove the power cord from the AC outlet.

6.2. Using Batteries

6.2.1. Battery type

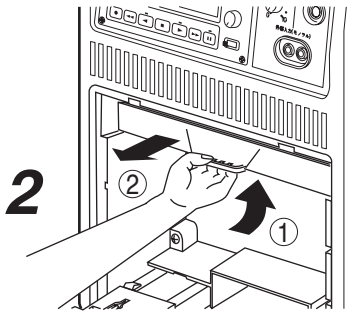
Eight R20P ("D" cell) batteries of manganese or alkaline types can be installed in the battery case.

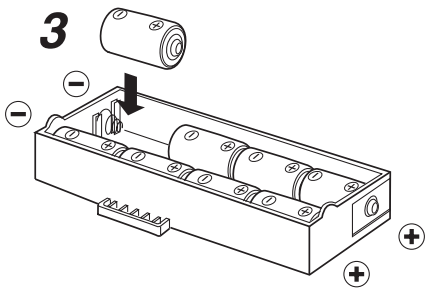
6.2.2. Battery installation

Step 1. Be sure to turn the power switch OFF and detach the power cord from the AC outlet.

Step 2. Remove the compartment cover, then pull the battery case out of the compartment.
The battery case can be easily removed by lifting slightly first before sliding it out of the compartment.

Step 3. Place 8 batteries in the case, noting the correct polarities indicated inside the case, then reinsert it in the battery compartment.





6.2.3. Power supply switching

Detaching the power cord from the AC outlet automatically switches the power source from AC to the battery.

6.2.4. Guidelines on battery replacement times

- A dimming power indicator indicates that the batteries are beginning to lose their charge and should be replaced as early as possible.
- Intermittent sound output may occur even when the power indicator remains steadily lit. It is recommended that the batteries be replaced as early as possible in this case, too.
- Approximate battery usage times (replacement times) are shown below.

[When using the WA-1822 at room temperatures of 25°C]

Manganese batteries: Approximately 12 hours (continuous use)
Alkaline batteries: Approximately 24 hours (continuous use)

[When using the WA-1822C at room temperatures of 25°C]

Manganese batteries: Approximately 6 hours (continuous use)
Alkaline batteries: Approximately 12 hours (continuous use)

Notes

- Avoid mixing manganese and alkaline batteries.
- When changing batteries, always replace all 8 batteries at the same time. Combined use of new and old batteries may cause battery leakage.
- Remove the batteries when not in use for prolonged periods of time (10 days or more).

7. USING A WIRED MICROPHONE

Step 1. Connect the wired microphone to the Wired Microphone terminal.

Step 2. Set the power switch to the ON position.

Step 3. Set the Wired Microphone volume control to Position 5.

Step 4. Adjust the sound quality using the tone control.

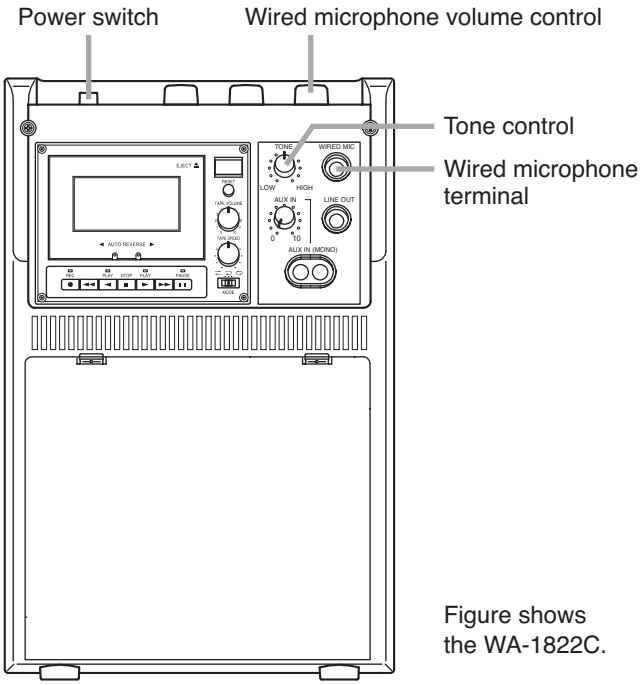


Figure shows the WA-1822C.

8. USING A WIRELESS MICROPHONE

Step 1. Set the power switch to the ON position.

Step 2. Set the wireless microphone's power switch to the ON position. (The Radio Signal Reception indicator lamp will light.)

Step 3. Adjust the volume by setting the corresponding Wireless Microphone Volume control (either WIRELESS MIC1 or WIRELESS MIC2) to Position 3 if a clip-on wireless microphone is used, or "7" if a hand-held wireless microphone is used.

Step 4. Adjust the sound quality using the tone control.

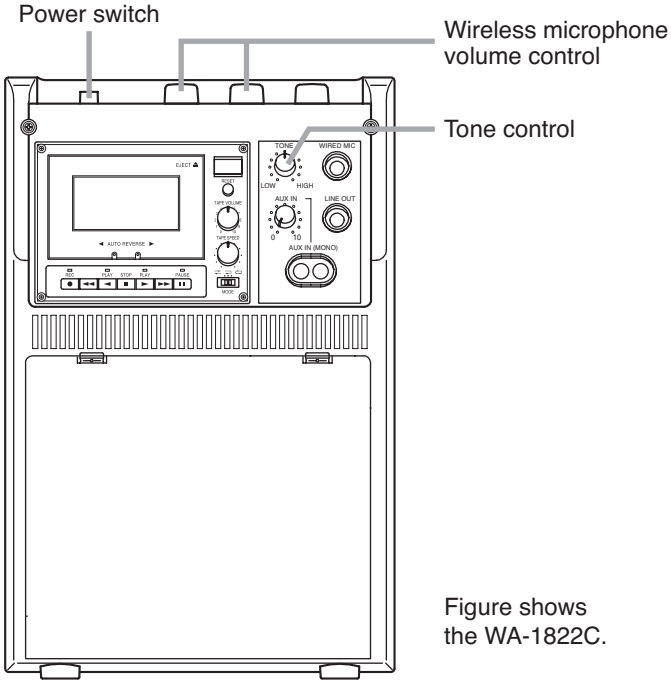


Figure shows the WA-1822C.

Notes

- Use only TOA wireless microphones.
- Set the wireless microphones 1 and 2 to different channels from each other. Otherwise, radio interference or noise may occur.
- Keep the wireless microphone 3 – 20 m away from the Meeting Amplifier.
- If the wireless microphone is positioned less than 3 m from the Meeting Amplifier, feedback noise or radio interference could result.
- When simultaneously using 2 different channels, keep the 2 wireless microphones at least 50 cm away from each other.
- When the Meeting Amplifier's power switch is set to the ON position, if the amplifier's Radio Signal Reception indicator lamp lights before the wireless microphone's power switch is turned ON, this indicates that the currently set channel is in use. In such cases, change the channel.

8.1. Tuner Unit Installation

The following TOA tuner unit models can be used.

WTU-3800 VHF Diversity Tuner Unit
WTU-4800 UHF Diversity Tuner Unit

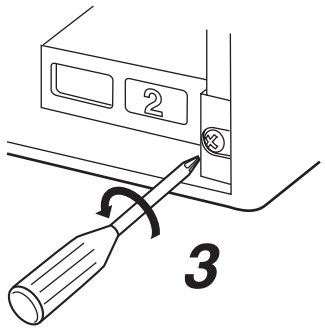
Step 1. Set the power switch to the OFF position.

Step 2. Remove the Compartment cover.

Step 3. Remove the tuner cover located in the lower left or right corner.

Step 4. Fully insert the tuner unit as shown in the accompanying figure until it is securely plugged into the back connector.

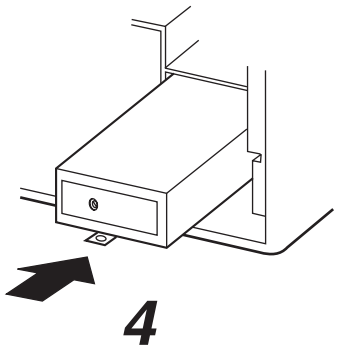
Note: Take care not to insert the tuner unit upside down.



Step 5. Replace the tuner cover after mounting the tuner unit.

Note: The tuner unit may become dislodged if the tuner cover is not correctly replaced.

Step 6. Tuner unit frequency settings are explained in the next section Frequency Setting.



8.2. Frequency Setting

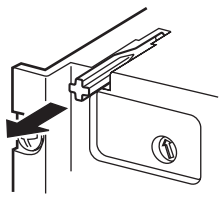
Set different channels as follows when adding a tuner unit or when radio interference occurs during use. Make sure that the amplifier's power switch is set to the OFF position when setting the channel.

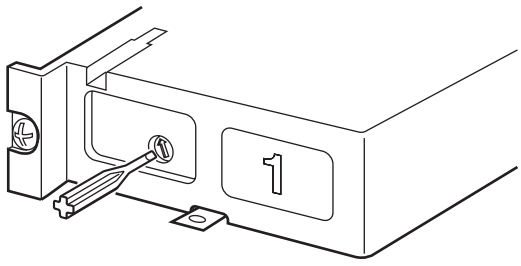
Step 1. Select the channel number according to the enclosed frequency table.

Note: Be sure to select different channels when simultaneously using 2 wireless microphones.

Step 2. Using the setting screwdriver provided inside the tuner cover 1 or the screwdriver supplied with the expansion tuner unit, set the setting switch arrows to the desired channel numbers.

Note: Set the expanded tuner unit to a different channel number.



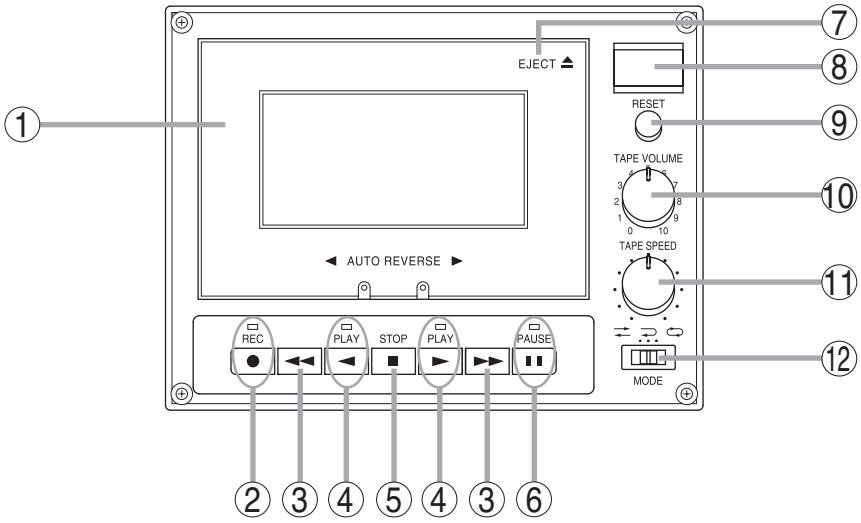


Step 3. Set the wireless microphone to the same channel number as that of the tuner unit.

Note: Using the setting screwdriver supplied with the wireless microphone, set the setting switch arrows to the same channel number as that of the tuner unit. Details are explained in the wireless microphone instruction manual.

9. USING THE CASSETTE DECK (WA-1822C only)

9.1. Nomenclature and Functions



1. Cassette door
Insert the tape into the door's receptacle.
Notes
- When the power is switched ON, cassette deck motor noise may be heard for approximately 1 second during initial setting.
- Do not subject the unit to impacts and shocks during cassette deck operation to avoid malfunctions.
- When operating on batteries, the cassette deck may not function properly if the batteries begin to lose their charge.

2. Recording button [●] / Recording indicator lamp (red)
Pressing this button places the deck in recording standby mode, causing the Pause indicator lamp to light orange, the Recording indicator lamp to light red, and the Direction indicator lamp (indicating which direction the tape will record) to flash green. In this state, recording is started by pressing either the flashing Play button (Direction indicator lamp) indicating the tape direction or the Pause button.

3. Fast forward/rewind buttons [◄◄ / ►►]
Wind the tape in the forward or reverse direction at top speed.

4. Play button [◄ / ►] / Direction indicator lamp (green)
Plays the tape in the arrow-indicated direction.

5. Stop button [■]
Stops tape operation.

6. Pause button [▮▮] /Pause indicator lamp (orange)
Temporarily stops tape operation. Note that this button cannot be used during fast forward or rewind operation.

7. EJECT [⏏]
Opens the cassette door to allow the tape to be loaded or removed.
Note: Avoid pressing the EJECT [⏏] during tape operation. When removing the tape, press the Stop button [■] to be sure that the tape is stopped, then press the EJECT [⏏].

8. Tape counter
Indicates the amount of tape used. The counter reading increases as the tape moves forward, and decreases as it moves backward.
Note: The counter is reset to [0000] when the power switch is switched off or the cassette door is opened.

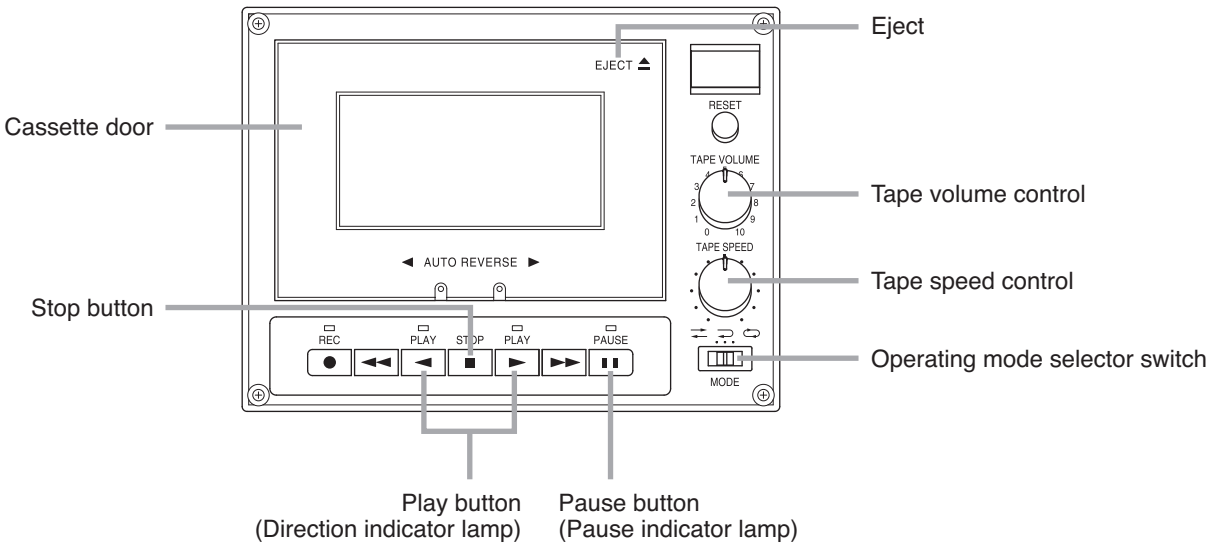
9. Reset button
Resets the counter to [0000].

10. Tape volume control
Adjusts the tape sound volume.

11. Tape speed control
Adjusts the tape speed. Tape operation is set to normal speed when the knob marker points up. Tape speed increases as the control is rotated clockwise, and decreases when rotated counterclockwise. This control can be only used in playback mode.
Note: Irrespective of the tape speed setting, the tape moves at normal speed after automatically reversed.

12. Operating mode selector switch
Selects one of 3 tape operating modes: ⇄, ⮌, or ⟲.

9.2. Playback



Step 1. Set the power switch to the ON position.

Step 2. Press the EJECT [⏏] to open cassette door, and insert the cassette with its exposed tape surface facing down.

Step 3. Select the tape operating mode using the Operating Mode selector switch. For more information on the operating modes, refer to p. 16.

Step 4. Press the desired Play button [◄] or [►]. The tape will begin to play, and the Direction indicator lamp will light to indicate the current tape direction.

Step 5. Adjust the Tape Volume control.

Step 6. Tape speed can be adjusted by rotating the Tape Speed control.

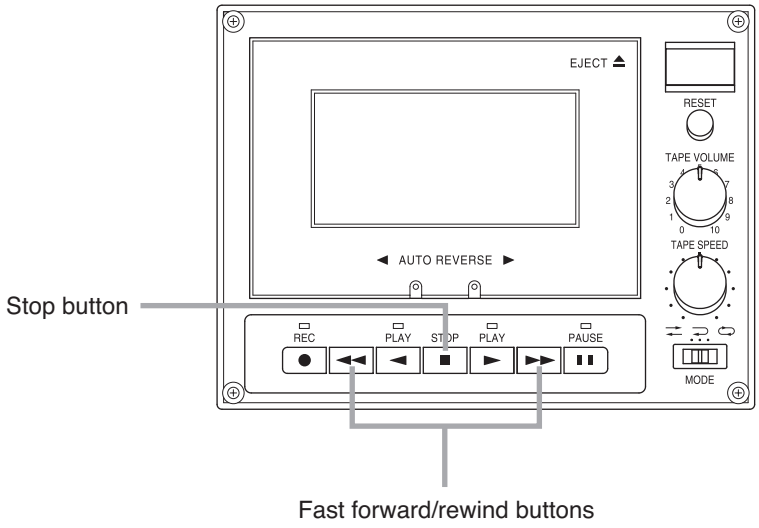
Step 7. To temporarily stop the tape during playback, press the Pause button [▮▮]. The deck will be put in standby mode, the Pause indicator lamp will light, and the Direction indicator lamp will flash. To restart playback, press the Pause button or the flashing Play button.

Step 8. To completely stop playback, press the Stop button [■].

Note

Do not turn OFF the power switch during tape operation because the tape cannot be ejected. In such cases, switch the power back ON again, and then press the Eject.

9.3. Fast-Forwarding and Rewinding the Tape



Step 1. Press the double arrow button [◄◄] or [►►] pointing to the direction that the tape is moving during playback to fast-forward the tape. Pressing the double arrow button pointing to the opposite direction will rewind the tape.

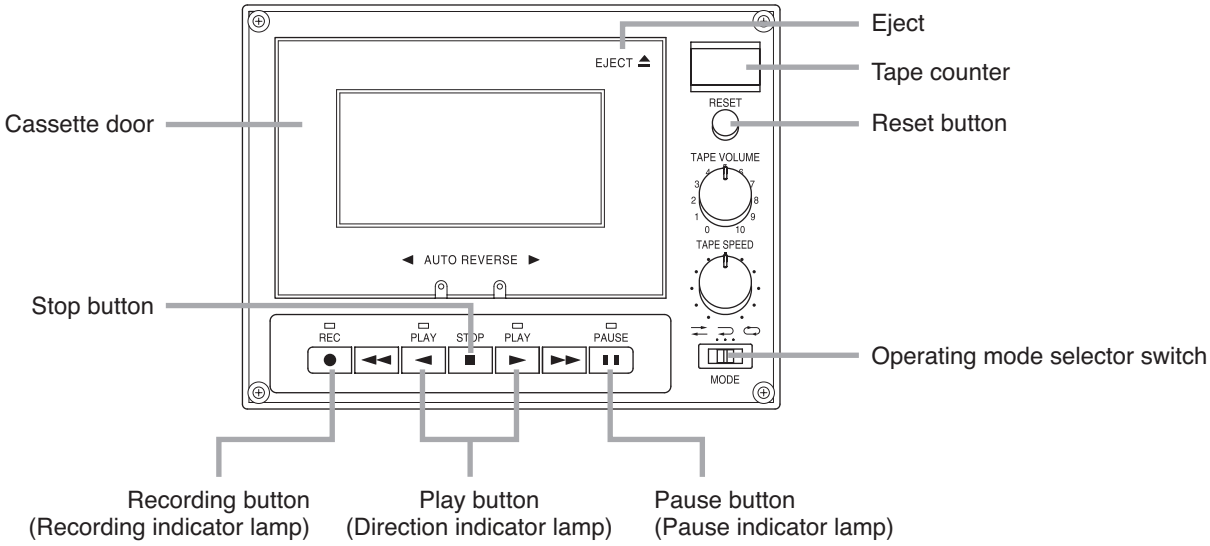
Step 2. To stop fast-forward or rewind in progress, press the Stop button [■].

Notes

- Pressing the Play button during fast forward or rewind operation could cause the tape to accidentally wind around the tape head. To avoid this, be sure to press the Stop button before pressing the Play button.
- Pressing the Fast forward or rewind button during playback switches the deck to Cue Mode, as described on p. 15.
- The Fast forward and the rewind buttons cannot be used during recording until after the Stop button has first been pressed.
- If fast forward or rewind operation reaches the end of the tape, the tape automatically stops regardless of the operating mode setting.

9.4. Recording

Because the WA-1822C's cassette deck features automatic recording level adjustment, no manual recording level settings are necessary.

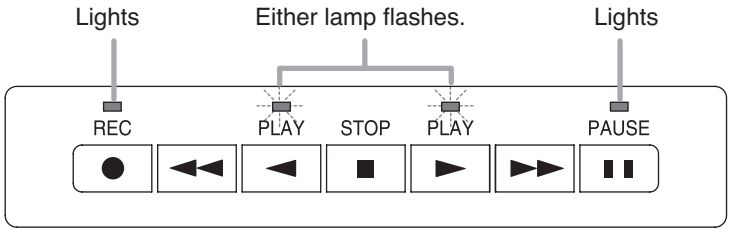


Step 1. Set the power switch to the ON position.

Step 2. Press the EJECT [⏏] to open cassette door, and insert the cassette with its exposed tape surface facing down.

Step 3. Select the tape operating mode using the Operating Mode selector switch. Details concerning the operating mode are explained on p. 16.

Step 4. Press the Recording button [●], and the deck will be put in recording standby mode. Both the Recording indicator lamp and the Pause indicator lamp will light, and the Direction indicator lamp will flash.



Step 5. Press the Pause button [▮▮] or the flashing Play button [◄] or [►]. The tape will begin to record, and the Direction indicator lamp will light to indicate the current tape direction.

Step 6. To temporarily stop the tape during recording, press the Pause button [▮▮]. The deck will be put in the same standby mode as is described in Step 4.

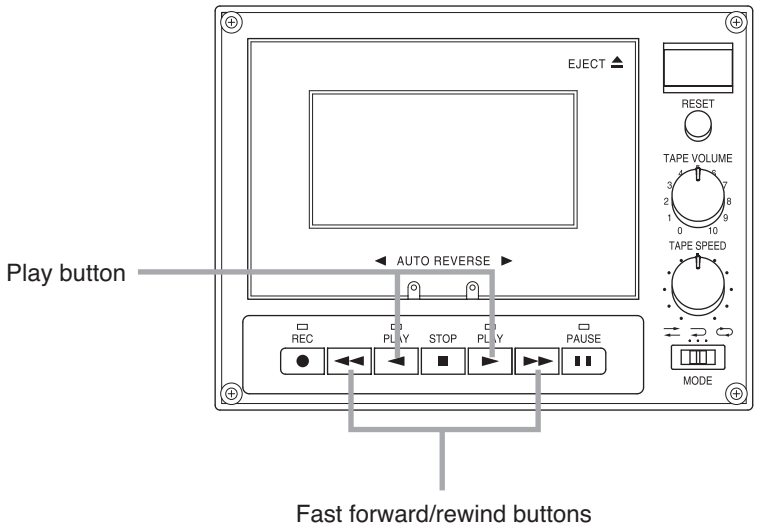
Step 7. To completely stop the tape during recording, press the Stop button [■].

Notes

- All input sounds are mixed and recorded.
- Recording cannot be made when the cassette tape's erasure prevention tab is removed.
- By pressing the Reset button to reset the Tape Counter to [0000] or by recording the tape counter reading before recording, the point at which the recording was started can be made clear.

9.5. Cue

The cassette deck features a cue function that automatically locates the silent tape section between recorded selections to play each selection from its beginning.



Step 1. Press the Play button [►] to play the tape.

Step 2. To cue the selection being played, press the Rewind button [◄◄]. While, to cue the next selection, press the Fast-forward button [►►]. The deck finds an unrecorded section of the tape to automatically play back.

Notes

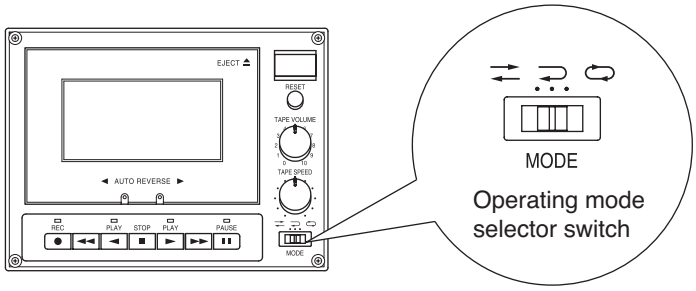
- When the Play button [◄] is pressed for playback in Step 1 above, the [►►] button functions as Rewind button and the [◄◄] functions as the Fast-forward button.
- Only 1 selection at a time is available for cue.
- Unrecorded section must be of at least 3 seconds in length to permit cue. It is highly recommended that unrecorded section of over 5 seconds in length be created between selections.
- To create unrecorded section of the tape, continue recording with all input volume controls set to minimum ("0" position).
- If the recorded selection has an extremely low recording level in a section, the section may be misconstrued to be a silent section from which playback will automatically start.
- If the Fast forward or rewind button is pressed for cue during playback pause, the deck will maintain the pause mode after locating the beginning of the selection.

9.6. About Operating Modes

The WA-1822C Meeting Amplifier's tape deck has 3 modes of tape operation.

- One-way mode [⇄] : Records or plays back only one side of the tape, and stops the tape at its end.
- Return mode [⮌] : Records or plays back both sides of the tape, and stops the tape at the end of its return.
- Endless mode [⟲] : Continuously plays the tape, switching from side to side at tape end. Note, however, that during recording this mode has the same operation as Return mode.

Select the desired tape operation mode with the Operating mode selector switch.

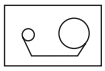
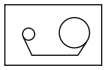
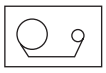
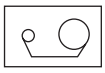
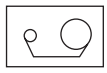
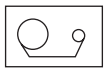
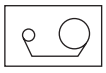
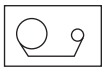
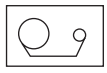
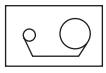


The following table shows tape operation when the Operating mode selector switch and other buttons are pressed.

- **Playback**

Operating mode	Depressed button	Tape operation
⇄	►	**Step. 1** Tape plays. ► ⇨ **Step. 2** Stops at tape end.
⇄	◄	**Step. 1** Tape plays. ◄ ⇨ **Step. 2** Stops at tape end.
⮌	►	**Step. 1** Tape plays. ► ⇨ **Step. 2** Automatically reverses at tape end. ⇨ **Step. 3** Tape plays. ◄ ⇨ **Step. 4** Stops at tape end.
⮌	◄	**Step. 1** Tape plays. ◄ ⇨ **Step. 2** Automatically reverses at tape end. ⇨ **Step. 3** Tape plays. ► ⇨ **Step. 4** Stops at tape end.
⟲	►	**Step. 1** Tape plays. ► ⇨ **Step. 2** Automatically reverses at tape end. ⇨ **Step. 3** Tape plays. ◄ ⇨ **Step. 4** Automatically reverses at tape end.
⟲	◄	**Step. 1** Tape plays. ◄ ⇨ **Step. 2** Automatically reverses at tape end. ⇨ **Step. 3** Tape plays. ► ⇨ **Step. 4** Automatically reverses at tape end.

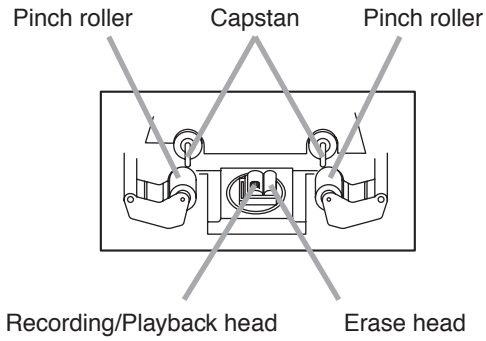
・Recording

Operating mode	Depressed button	Tape operation
		**Step. 1**  Tape records. ► **Step. 2**  Stops at tape end.
		**Step. 1**  Tape records. ◄ **Step. 2**  Stops at tape end.
		**Step. 1**  Tape records. ► **Step. 2**  Automatically reverses at tape end. **Step. 3**  Tape records. ◄ **Step. 4**  Stops at tape end.
		**Step. 1**  Tape records. ◄ **Step. 2**  Automatically reverses at tape end. **Step. 3**  Tape records. ► **Step. 4**  Stops at tape end.

10. CLEANING (WA-1822C only)

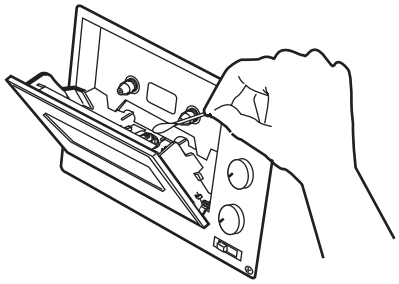
10.1. Cleaning the Head, Capstan and Pinch Roller

If the cassette deck is used for prolonged periods of time, its heads, capstans and pinch rollers will become dirty. As a result, sound output could be affected by lower output, a reduction in high-frequency sound output or irregular pinch roller rotation.
To avoid these problems, periodically clean these parts with a commercial cleaning tape or a cotton swab dampened in alcohol.



Note
Never use hard, sharp materials like a screwdriver blade or metal rod when cleaning.

When cleaning with a cotton swab, switch off the unit's power, then open the cassette receptacle door as shown at right.



Note
The cassette door cannot be detached.

10.2. Demagnetizing the Head

The Recording/Playback head could become magnetized as the cassette deck is used for prolonged periods of time, resulting in important recordings being consumed by noise or erased. To avoid these problems, periodically demagnetize the head using a commercial head eraser.

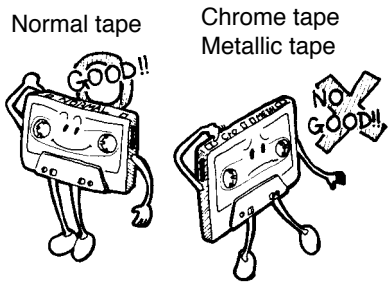
Note
Do not allow any magnetic or metal objects other than an eraser to contact the head.

Caution
Lubricating the cassette deck's mechanism may cause failure.
Never lubricate any part of the mechanism.

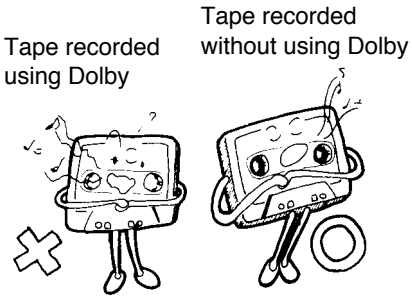


11. ABOUT CASSETTE TAPES

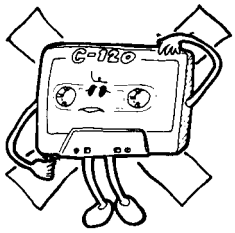
- **Use only normal bias tape.**
  Do not use the chrome or metallic tape. If other varieties of tape than Normal Bias are used, the sound output may become displeasing to the ears or previous recordings may not be erased when re-recording.



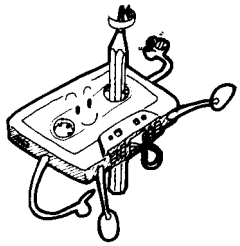
- **Do not play tapes recorded with noise reduction.**
  Sound quality may be drastically affected if tapes recorded with such noise reduction circuitry as Dolby are played back. Always use tapes recorded without noise reduction.



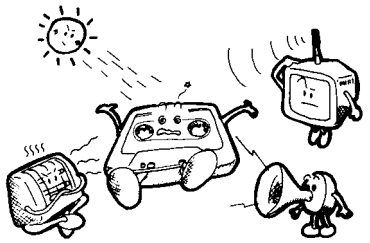
- **Do not use 120-minute tapes.**
  Since long-play tape is very thin and weak, it may become wound-up around the capstan. Therefore, use only C-46, C-60 or C-90 types.



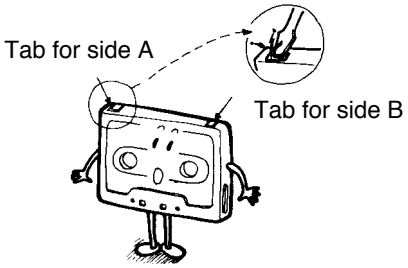
- **Take up the tape slack.**
  Use of slack tape could cause the tape to be cut or wound around the capstan. When tape slack is noticed, take up the slack using a pencil as shown in the figure at right before using.



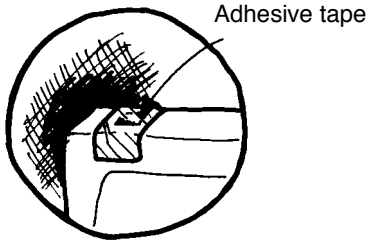
- **Use care in tape storage.**
  Avoid locating or storing the tape in locations where it might be directly exposed to sunlight, high temperatures such as near heaters, high humidity, and near television sets or speakers where magnetic fields exist. Failing to avoid these conditions could result in deteriorating tape quality, noise or loss of the recording



- **About the erasure prevention of recording.**
  Cassette tapes feature erasure prevention tabs that prevent the accidental erasure of important recordings. Remove the tab with screwdriver blade when not wanting recordings to be erased. Note that tapes with tabs removed cannot normally be used again for recording. To record over such tapes, cover the tab opening with a small piece of adhesive tape.



- **Do not use endless tapes.**
  Use of endless tape not only damages the tape, but can also cause unit failure due to tape winding.



12. ABOUT EXTERNAL EQUIPMENT

12.1. Using External Speaker

[Recommended External Speaker and Stand]

Speaker: A rated input of 20 W or more, and impedance of 8 – 16 Ω.
Stand: Mount the speaker on the TOA ST-16, or other stand.

Notes

- Note the correct polarities when connecting an external speaker.
- Take care that the External speaker terminals are not shorted during connection.

Step 1. Connect the external speaker to the External speaker terminal.

Step 2. Using the Internal speaker ON/OFF switch, enable or disable the internal speaker.

- ON: Enables the internal speaker.
- OFF: Disables the internal speaker.

Note

The External speaker terminal is always ON regardless of the Internal speaker ON/OFF switch setting.

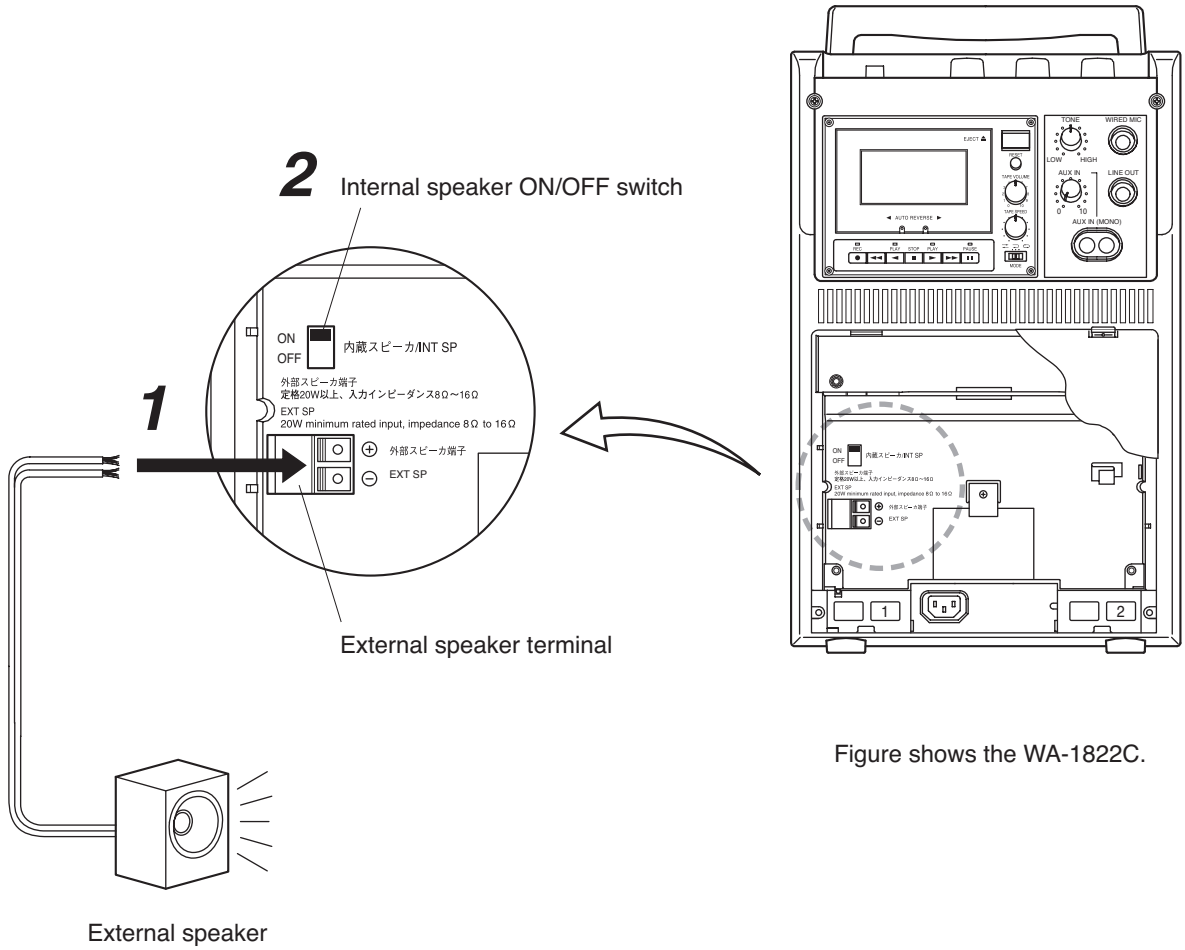


Figure shows the WA-1822C.

12.2. Using an External CD Player or Cassette Deck (for Playback)

Step 1. Connect the CD player or cassette deck line output to the unit's External Input terminal using a pin cable. Input sensitivity is –20 dB, 10 kΩ. (0 dB = 1 V)

Step 2. Adjust the volume with the External Input Volume control.

Note
The External Input is monaural. Even if the input signal is stereo, it is played back in single-channel monaural.

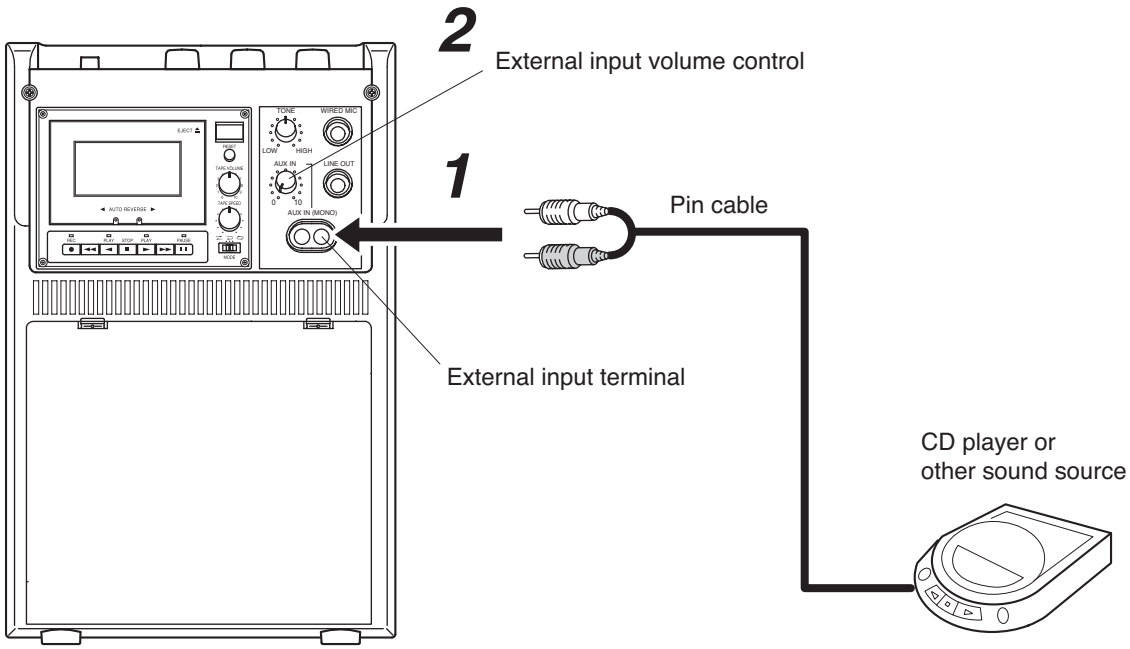


Figure shows the WA-1822C.

12.3. Using an External Amplifier or Cassette Deck (for Recording)

Step 1. Connect the unit's External Output terminal to the external amplifier's AUX terminal or the cassette deck's Line Input terminal using a phone plug cable. Output sensitivity is – 10 dB, 1 kΩ. (0 dB = 1 V)

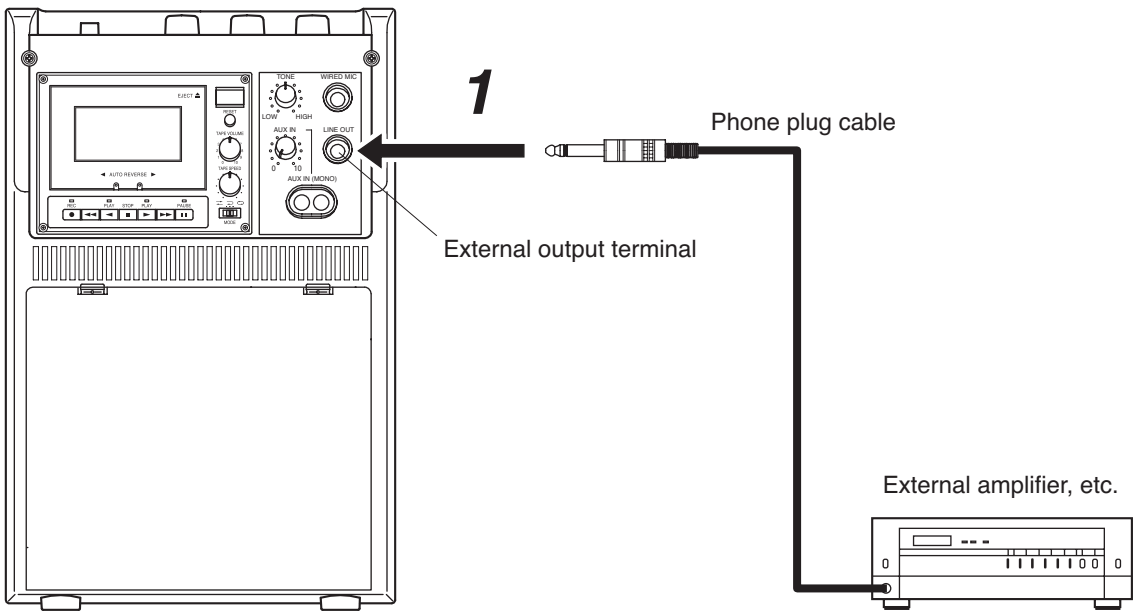


Figure shows the WA-1822C.

13. TROUBLESHOOTING

Symptom	Cause	Remedy
The power indicator lamp does not light even when the power switch is set to the ON position. (Power is not supplied.)	[When operated on AC power] The power plug is not connected to an AC outlet.	Insert the power plug into the AC outlet.
	[When operated on batteries] Batteries not inserted with correct polarities.	Reinstall the batteries correctly.
The power indicator lamp flashes.	[When operated on batteries] Batteries discharged.	Replace batteries with new ones.
No sound output.	The Internal speaker ON/OFF switch is set to the OFF position.	Set the Internal speaker ON/OFF switch to the ON position.
	The volume control is set to the "0" position.	Rotate the volume control clockwise.
When using a wireless microphone		
The Radio signal reception indicator lamp does not light. (No signal reception.)	The tuner unit is not installed.	Install the tuner unit.
	The wireless microphone's power switch is switched OFF.	Set the wireless microphone power switch to the ON position.
	The wireless microphone's batteries have lost their charge.	Replace the microphone's batteries with new ones.
	The wireless microphone's frequency setting (Channel) does not match the tuner unit's setting (Channel).	Set both the wireless microphone and the tuner unit to the same frequency (Channel).
No sound output.	The Volume control is set to the "0" position.	Rotate the Volume control knob clockwise.
When using the cassette deck (WA-1822C only)		
Tapes are not played back.	The Tape Volume control is set to the "0" position.	Rotate the Tape Volume control knob clockwise.
The deck does not go into recording mode.	The cassette's erasure prevention tab has been removed.	Attach a piece of adhesive tape over the tab opening.
• Recorded sound breaks up when played back. • Recording cannot be completely erased. • No high-frequency sound output.	The head, capstan and/or pinch roller are dirty.	Clean the head, capstan and pinch roller.
	The tape is worn thin.	Test by playing another recorded tape. If played back correctly, change the tape.
• Tape speed varies widely. • Rewind and fast-forward operations are slow.	The tape is slack.	Take up tape slack with a pencil or similar implement.
The cassette tape cannot be ejected. **Note** The tape may not be ejected if the power is switched OFF or the cassette player stops because of low battery charge during operation. In such cases, take steps detailed at right, then press the EJECT [⏏].	The power switch is switched OFF.	Switch ON the Power switch.
	[When operated on AC power] The power plug is not connected to an AC outlet.	Insert the power plug into an AC outlet, then switch ON the Power switch.
	[When operated on batteries] Batteries discharged.	Replace with the new batteries or after connecting to the AC power supply, switch ON the power switch.

14. SPECIFICATIONS

Model	WA-1822	WA-1822C
Power Source	LT version: 110 V 50/60 Hz, L version: 120 V 50/60 Hz, H version: 220 – 230 V 50/60 Hz, UK version: 220 – 230 V 50/60 Hz, 12 V DC (8 R20P or "D" type batteries*1)	
Rated Output	AC: 20 W (40 W max. including external speaker output), DC: 8 W	
Power Consumption	LT version: 43 W, 1.5 A DC (rated output) L version: 43 W, 1.5 A DC (rated output) H version: 44 W, 1.5 A DC (rated output) UK version: 44 W, 1.5 A DC (rated output)	LT version: 45 W, 1.7 A DC (rated output) L version: 45 W, 1.7 A DC (rated output) H version: 46 W, 1.7 A DC (rated output) UK version: 46 W, 1.7 A DC (rated output)
Applicable Tuner Unit	WTU-3800 or WTU-4800 (optional)	
Battery Life (25°C)	Manganese type: Approx. 12 hours Alkaline type: Approx. 24 hours	Manganese type: Approx. 6 hours Alkaline type: Approx. 12 hours
Frequency Response	70 – 10000 Hz ±3 dB	
Distortion	Under 10% (rated output)	
Input	Wired microphone: –48 dB*2, unbalanced, 6.3 mm phone jack, applicable to 600 Ω microphone External input: –20 dB*2, 10 kΩ, unbalanced, RCA jack	
Output	External speaker: 8 – 16 Ω, over 20 W, lever terminal External output: –10 dB*2, 1 kΩ, unbalanced, 6.3 mm phone jack	
Other Feature	Internal speaker ON/OFF switch: Enables or disables the internal speaker	
Signal-to Noise Ratio	Over 70 dB (rated output)	
Antenna	Rod antenna	
Speaker System	2-way speaker system: 20 cm full-range speaker and tweeter (piezo-electric speaker)	
Cassette Deck	—	Tape transport: Auto-reverse Usable tape: Normal tape Recording system: AC bias Erasing system: AC erase Tape speed: 4.76 cm/s (±10% variable at playback) Wow and flutter: Under 0.2% Track format: 2 tracks / 1 channel (monaural) Fast forward/rewind time: Approx. 130 seconds (C-60 tape)
Operating Temperature	AC: –10 to +50°C, DC: 0 to +40°C	
Finish	ABS resin, light gray	
Dimensions	298 (w) x 460 (h) x 200 (d) mm	
Weight	6 kg (main unit only)	6.7 kg (main unit only)

*1 Batteries are optional.
*2 0 dB = 1 V

Note: The design and specifications are subject to change without notice for improvement.

• **Accessories**
Dust cover 1
Setting screwdriver 1
AC power cord (2 m) 1

Traceability Information for Europe (EMC directive 2004/108/EC)

Manufacturer:
TOA Corporation
7-2-1, Minatojima Nakamachi, Chuo-ku, Kobe, Hyogo, Japan

Authorized representative:
TOA Electronics Europe GmbH
Suederstrasse 282, 20537 Hamburg, Germany

TOA Corporation

URL: http://www.toa.jp/

C33-07-006-6A