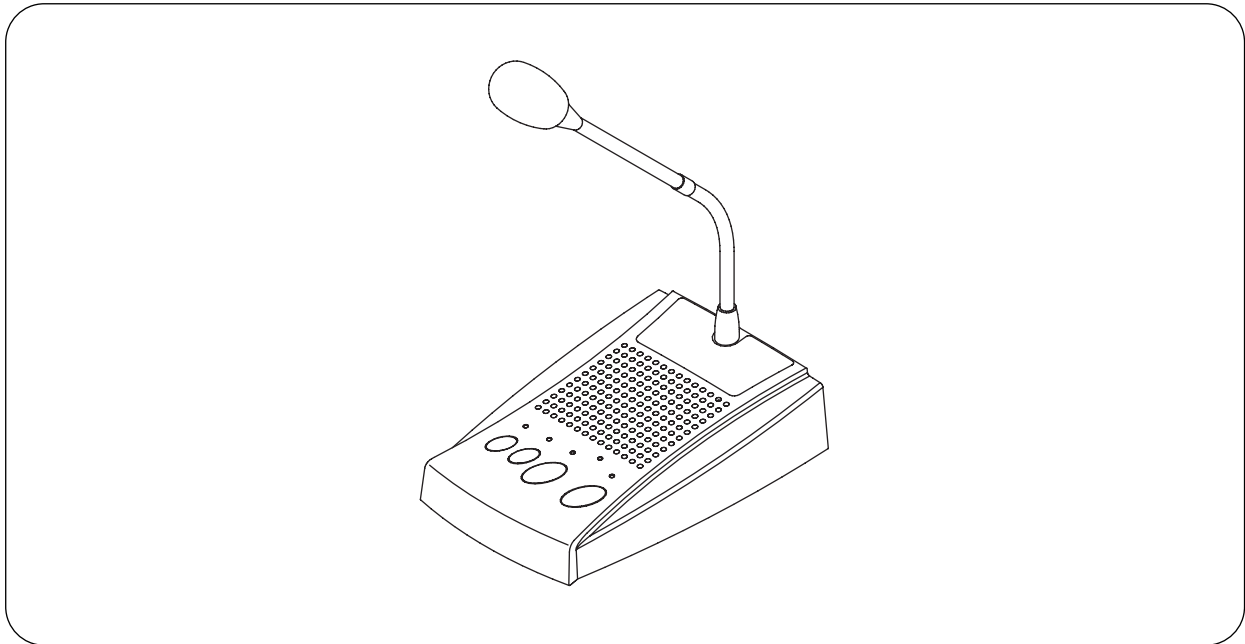


SOUND REPEATER
PM-20EV

TABLE OF CONTENTS

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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.

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.

Safety Symbol and Message Conventions

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operating your product, read this manual first and understand the safety symbols and messages so you are thoroughly aware of the potential safety hazards.



WARNING

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



CAUTION

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



WARNING

- Do not expose the unit to rain or an environment where it may be splashed by water or other liquids, as doing so may result in fire or electric shock.
- 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.
- 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.)
 - If it is malfunctioning (no tone sounds.)
- Do not place cups, bowls, or other containers of liquid or metallic objects on top of the unit. If they accidentally spill into the unit, this may cause a fire or electric shock.
- Do not touch the power supply plug during thunder and lightning, as this may result in electric shock.



CAUTION

- 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.
- Avoid installing the unit in humid or dusty locations, in locations exposed to the direct sunlight, near the heaters, or in locations generating sooty smoke or steam as doing otherwise may result in fire or electric shock.
- Make sure that the volume control is set to minimum position before power is switched on. Loud noise produced at high volume when power is switched on can impair hearing.
- Do not operate the unit for an extended period of time with the sound distorting. This is an indication of a malfunction, which in turn can cause heat to generate and result in a fire.
- Use the AC adapter AD-246 (optional) or its equivalent. As for the usable adapter, consult your TOA dealer. Note that the use of an adapter other than specified may cause a fire.
- If dust accumulates on the power supply plug or in the wall AC outlet, a fire may result. Clean it periodically. In addition, insert the plug in the wall outlet securely.
- 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.

2. GENERAL DESCRIPTION

The PM-20EV Sound Repeater is a paging microphone specially designed to record and play back the broadcast contents.

It features a Rehearsal function that permits recorded message contents to be monitored before broadcast, ensuring exacting announcement quality. Announcements can also be made directly from the PM-20EV's built-in microphone, without requiring playback of prerecorded messages.

3. FEATURES

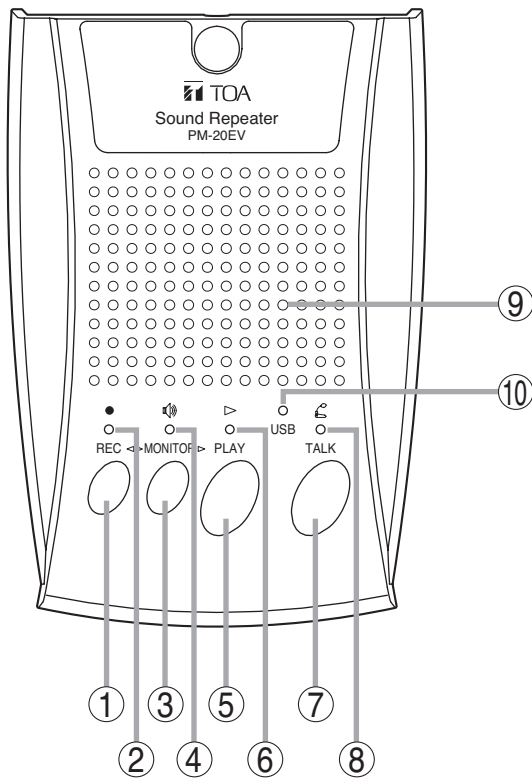
- Rehearsal function helps relieve tension and ensure accuracy during broadcasts.
- Built-in speaker permits recorded messages to be monitored before broadcast.
- Messages of up to 6 minutes in length can be recorded and played back with simple operation.
- Recorded data is not compressed, ensuring high quality sound output.
- A chime tone can be sounded before and after broadcasts.
- Internal chime data can be changed or messages recorded by connecting the unit to a personal computer (PC) using the supplied USB cable.
- Built-in compression circuitry prevents sound output distortion caused by excessive signal input.

4. HANDLING PRECAUTIONS

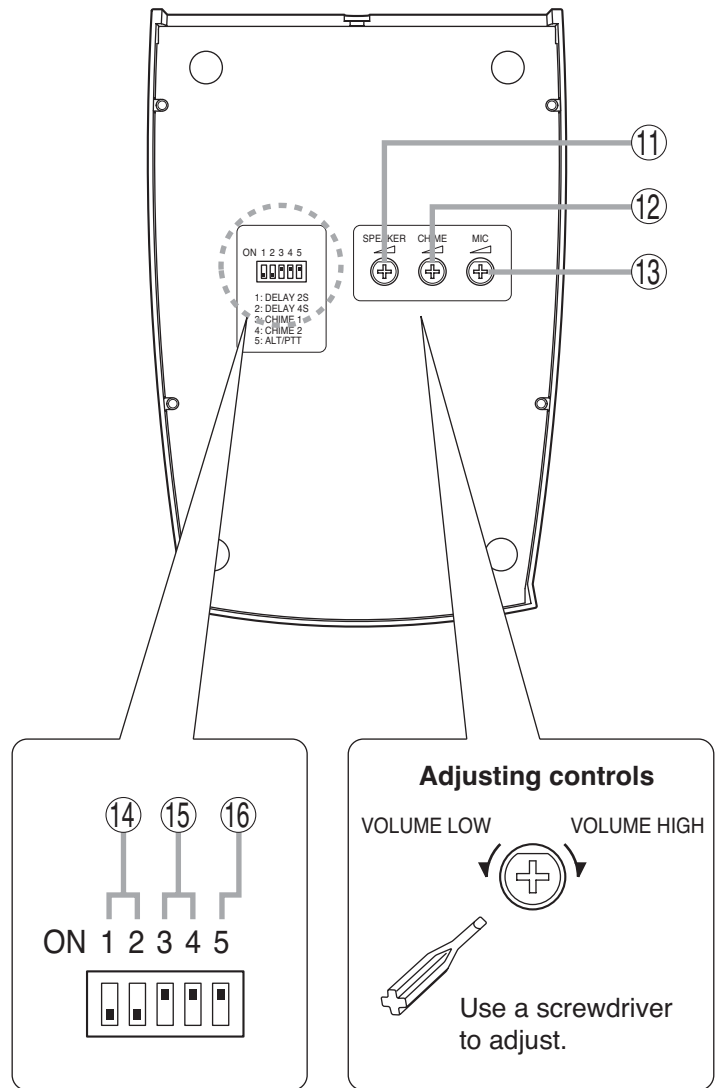
- **Warning:** This is a class A products. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
- **Note:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
- To avoid radio interference, keep the unit and the optional AC adapter as far away as possible from radios or wireless tuners.
- Do not open the case nor perform any modifications to the unit, as this may result in unit failure. Leave the inspection, adjustment and repair of the unit's internal circuitry to your TOA dealer.
- The CD-ROM supplied with the unit is not for audio applications, and should not be used in an ordinary audio CD player.
- Internal Copyright Acts prohibit the copy or use of commercially available music and sound data for commercial purposes without the approval of the copyright holder. It is strongly advised that a copyright lawyer be consulted when using such material.
- When cleaning the unit, be sure to switch off the unit's power first, then wipe with a dry cloth. Should the unit become very dirty, use a cloth dampened in a neutral detergent. Never use benzene, thinner or chemically-treated towels, as the unit's finish may be damaged.

5. NOMENCLATURE AND FUNCTIONS

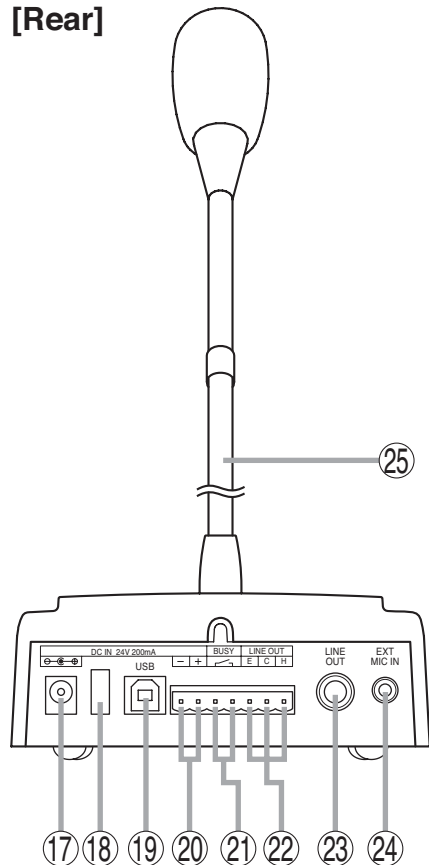
[Top]



[Bottom]



[Rear]



[Top]

1. **Record Key [REC]**
Records broadcast contents.
2. **Recording Indicator**
Flashes or continuously lights during recordings.
3. **Monitor Key [MONITOR]**
Permits monitoring of the recorded contents.
4. **Monitor Indicator**
Flashes or continuously lights during monitoring of recorded contents.
5. **Playback Key [PLAY]**
Plays back recorded contents.
6. **Playback Indicator**
Flashes or continuously lights while recorded contents are being broadcast.

7. Talk Key [TALK]

Press this key to make announcements directly from the microphone without broadcasting recorded contents.

8. Talk Indicator

Flashes or continuously lights while the Talk key (7) is held down for announcements.

9. Monitor Speaker

Used to monitor recorded contents.

10. USB Communication Indicator

Continuously lights or flashes during USB communications.

[Bottom]

11. Speaker Volume Control [SPEAKER]

Adjusts the monitor speaker (9) volume.

12. Chime Volume Control [CHIME]

Adjusts the chime volume.

13. Microphone Volume Control [MIC]

Adjusts the microphone (25) volume.

14. Delay Time Setting DIP Switches [1, 2]

Set the delay time between broadcast activation and actual start.

In addition, when time intervals between repeated broadcasts are set with the supplied software program, the busy output (21) during the intervals can be selected for "Make" (ON) or "Break" (OFF). Selecting "OFF" makes the delay time 0 seconds. (Refer to [p. 6](#).)

The delay time is factory-preset to 0 seconds, and the busy output during intervals between repeated broadcasts to "Make" (ON).

15. Chime Setting DIP Switches [3, 4]

Enables/disables pre- and post-announcement chimes.

[3] (CHIME 1): Pre-announcement chime

[4] (CHIME 2): Post-announcement chime

Both switches are factory-preset to ON (to sound chime tones before and after broadcasts).

Note

If the Chime setting switch is set to the OFF position, chime tones are not recorded. However, the chime tones do sound at the time of recording to precisely indicate the timing of the recording.

16. Talk Key Mode Selector DIP Switch [5]

Determines the Talk key (7) operation mode.

The switch is factory-preset to ON (the microphone turns on when the Talk key is pressed, and turns off when pressed again).

[Rear]

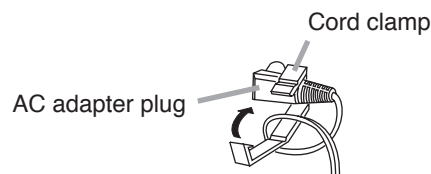
17. AC Adapter Input Terminal [DC IN]

Connects to the optional AD-246 AC adapter or its equivalent.

Tip: When this terminal and the DC Power Input terminal (20) are simultaneously used, the terminal receiving the higher voltage takes precedence.

18. Cord Clamp

Wrap the AC adapter cord around this clamp to prevent the plug from pulling out.



19. USB terminal

Connects to a PC or a USB hub using the supplied USB cable.

20. DC Power Input Terminal [DC IN]

Connects to the 24 V DC power supply.

21. Busy Output Terminal [BUSY]

Closed during broadcast. When time intervals between repeated broadcasts are set with the supplied software program, the busy output during the intervals can be selected for "Make" (ON) or "Break" (OFF) by the Delay Time Setting DIP switches (14).

Contact capacity: 30 V DC, 0.5 A

22. Line Output Terminal [LINE OUT]

Outputs the unit's playback contents.

(Refer to [p. 11](#).)

0 dB, 600 Ω , balanced.

Note: Avoid simultaneously using this terminal and the Line output jack (23).

23. Line Output Jack [LINE OUT]

Outputs the same contents as those of the Line output terminal (22).

0 dB, 600 Ω , balanced, phone jack.

Note: Avoid simultaneously using this jack and the Line output terminal (22).

24. External Microphone Input Terminal [EXT MIC IN]

Connects to an optional WH-4000A headset microphone. (Refer to [p. 10](#).)

-37 dB, 2.2 k Ω , unbalanced, mini jack.

Note: To avoid unit failure, do not connect any equipment other than the WH-4000A microphone to this terminal.

25. Microphone

A preinstalled unidirectional gooseneck microphone.

6. BROADCAST DELAY TIME AND BUSY ON/OFF SETTINGS

The delay time between message activation and the actual start of playback can be set to 0, 2, or 4 seconds with the unit's bottom-mounted Delay Time Setting DIP switches.

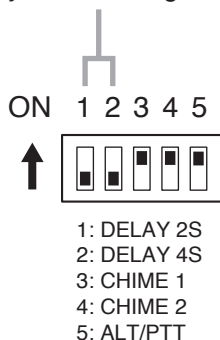
In addition, when time intervals between repeated broadcasts are set with the supplied software program, the busy output during the intervals can be selected for "Make" (ON) or "Break" (OFF).

(Factory-preset to "0" seconds, and the busy output during intervals between repeated broadcasts to "ON.")

Should the beginning of playback contents be lost due to operational delays experienced by connected external equipment, set the delay time to 2 or 4 seconds.

Note: If the delay time is set to 2 or 4 seconds, the Busy Output terminal is closed during the delay as well.

Delay Time Setting DIP Switches



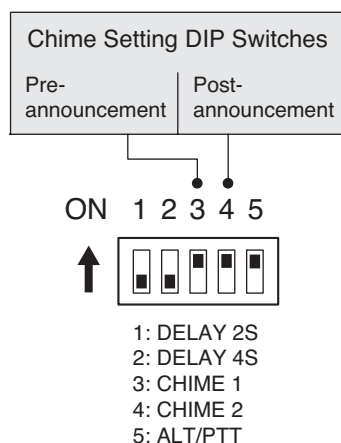
Set Delay Time	Delay Time Setting DIP Switches	Busy Output during Time Intervals*
0 seconds (Factory-preset)	ON 1 2 ↑	ON (Make)
2 seconds	ON 1 2 ↑	ON
4 seconds	ON 1 2 ↑	ON
0 seconds	ON 1 2 ↑	OFF (Break)

* Valid only when the time intervals between repeated broadcasts are set with the supplied software program.

7. CHIME SETTINGS

The built-in chime can be set to sound (or not) before and after recorded message broadcasts and direct microphone announcements using the unit's bottom-mounted Chime Setting DIP switches.

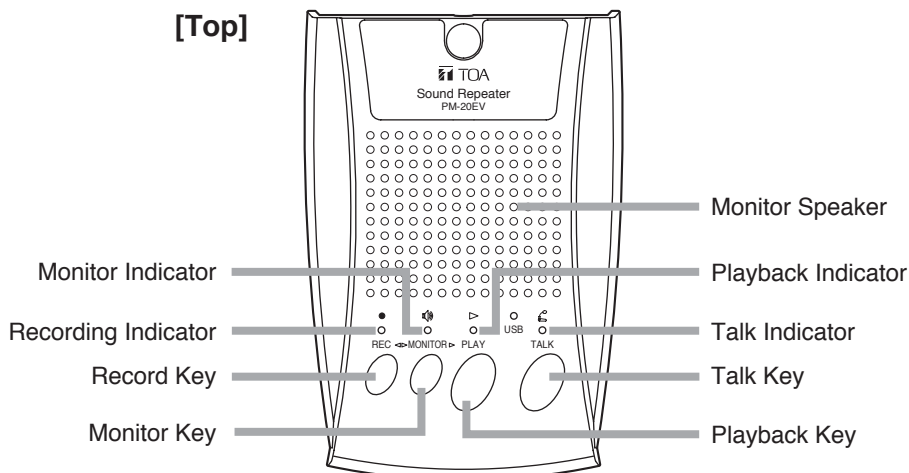
Note: The Chime switches are initially preset at the factory to sound chime tones before and after broadcasts (both switches set to ON).



CHIME	Chime Setting DIP Switches
Pre-announcement: Sounded Post-announcement: Sounded (Factory-preset)	ON 3 4 ↑
Pre-announcement: Sounded Post-announcement: Not sounded	ON 3 4 ↑
Pre-announcement: Not sounded Post-announcement: Sounded	ON 3 4 ↑
Pre-announcement: Not sounded Post-announcement: Not sounded	ON 3 4 ↑

Tip: When shipped, the chimes are set to sound an ascending 4-note tone before broadcast and a descending 4-note tone after broadcast. The chime tones can be changed using the data transfer program found on the supplied CD-ROM. For more information, please refer to the "EV20 Software Instruction Manual.pdf" file located on the CD-ROM.

8. OPERATION



8.1. Recording (REC)

Messages are recorded on the internal flash memory.

The total recording time is approximately 6 minutes, including chime plays. Because the recording circuitry features automatic gain control (AGC) function, the recording level does not need to be adjusted.

Note: Chime tones are not recorded if the Chime setting switch is set to the OFF position. However, the chime tones will still sound during recordings in order to precisely indicate the timing of the recording.

Step 1. Press the Record key until the recording indicator begins to flash.

After indicator operation changes from flashing to steady ON, speak into the microphone to start recording.

(The indicator begins to flash 1 second after the key is pressed. A chime tone sounds several seconds after the indicator begins to flash, and the indicator switches from flashing to steady ON after the chime sounds.)

Step 2. To stop the recording, press the corresponding Record key again.

Tips

- The Recording indicator begins flashing when only 5 seconds of recording time remain, and continues until recording is complete.
- To delete the recorded contents, press the Record key, then press the Record key again while the recording indicator is flashing.
- Sample chime tones contained in the supplied CD-ROM can be transferred to the PM-20EV for use. It is also possible to back up the messages using the data transfer software program contained in the supplied CD-ROM. For details, please read the "EV20 Software Instruction Manual.pdf" file located on the CD-ROM.

8.2. Monitoring Recorded Messages (MONITOR)

Recorded contents can be easily monitored.

Recorded messages are heard through only the unit's monitor speaker during monitoring operation.

This playback is not delivered through the Busy output and Line output terminals.

Step 1. Press the Monitor key.

The monitor indicator mode changes from flashing to steady ON, and the recorded message is played back for monitoring.

Step 2. To stop monitor playback, press the corresponding Monitor key again.

8.3. Broadcasting Recorded Messages (PLAY)

Recorded messages for broadcast are output through the Line output terminal. The Busy output terminal is closed during broadcast.

In addition, when time intervals between repeated broadcasts are set with the supplied software program, the busy output during the intervals can be selected for "Make" (ON) or "Break" (OFF).

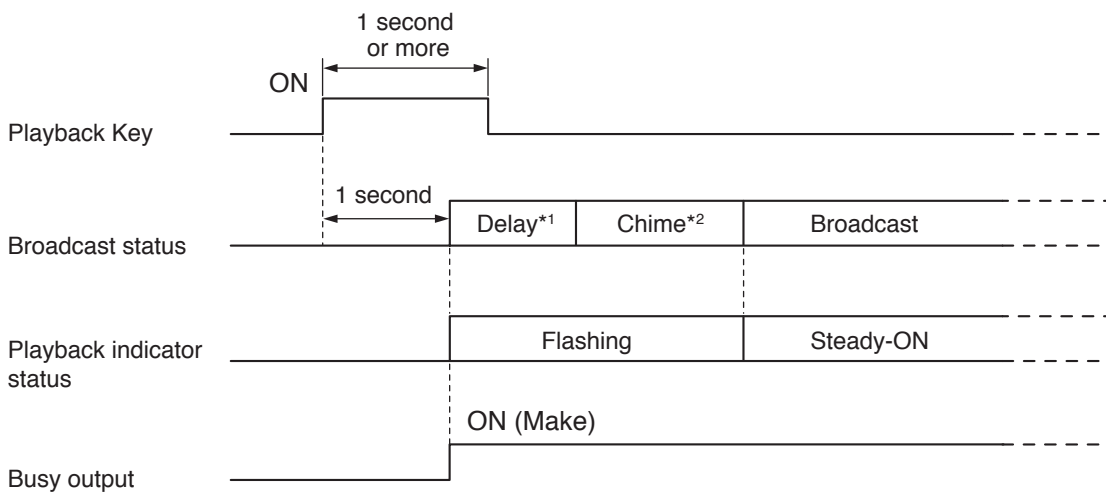
Step 1. Press the Playback key for 1 second or more.

The recorded message is broadcast when the indicator remains continuously lit.

When the message reaches its end, the broadcast is automatically terminated and the indicator is extinguished.

Step 2. Press the Playback key again to stop broadcasts while in progress.

[Operating status of the PM-20EV after the Playback key is pressed]

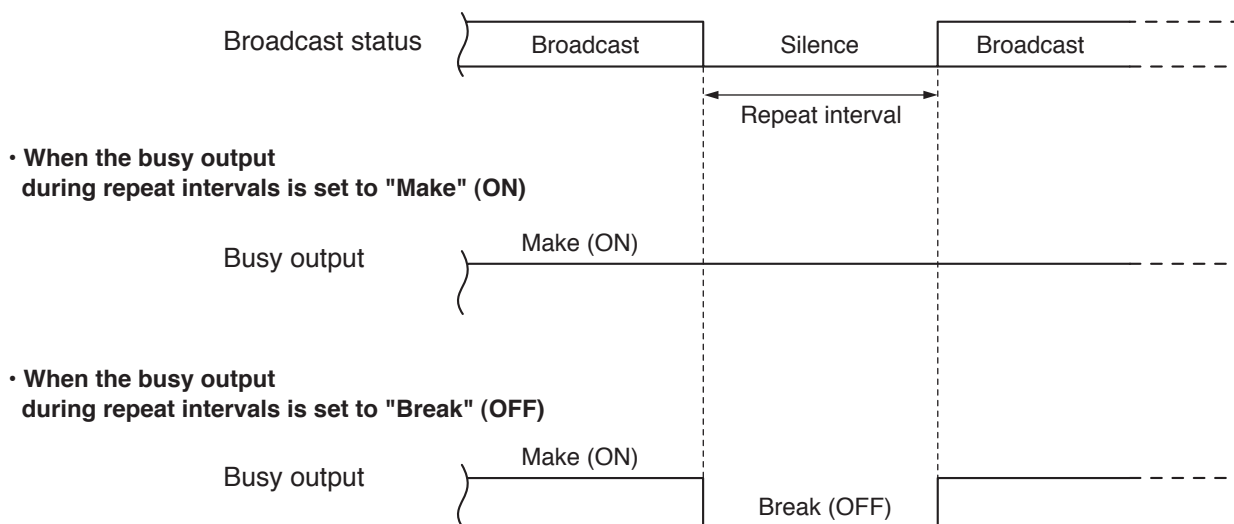


*1 Can be set to 0, 2 or 4 seconds using the Delay time setting switch.

*2 Time length changes depending on the set chime type.

[Operating status of the PM-20EV during repeat broadcasts]

Using the supplied software program, setting the "Interval" item to values other than "no repeat" permits repeat broadcasts. The busy output during the repeat intervals can be selected for "Make" (ON) or "Break" (OFF) by the Delay Time Setting DIP switches. When the "Interval" is set to "0 sec", the busy output remains at "Make" during repeated broadcasts irrespective of the Delay Time Setting DIP switch settings.



8.4. Making Announcements Directly from the Microphone (TALK)

Follow the procedure below to make announcements directly from the microphone using the Talk key, instead of broadcasting recorded messages.

The Talk key's operations can be set using the Talk Key Mode Selector DIP switch located on the bottom of the unit. (Factory-preset to ON.)

Talk Key Mode Selector DIP Switch	Setting Contents
<p>Talk Key Mode Selector DIP Switch</p> <p>ON 1 2 3 4 5</p> <p>1: DELAY 2S 2: DELAY 4S 3: CHIME 1 4: CHIME 2 5: ALT/PTT</p>	<p>ON (Factory-preset)</p> <p>Pressing the Talk key permits announcements to be made. (Because the microphone remains turned on, the Talk key may be released.)</p> <p>The announcement broadcast is terminated when the Talk key is pressed again.</p>
<p>ON 1 2 3 4 5</p>	<p>OFF</p> <p>Announcements can be made while the Talk key is held down.</p> <p>The announcement broadcast is terminated when the Talk key is released.</p>

8.4.1. When the Talk key mode selector switch is set to ON (initial setting at the factory)

Step 1. Hold down the Talk key until the indicator remains lit, then speak into the microphone.

Tip

When the chime is set to ON, the indicator flashes 1 second after the key is pressed and a chime tone sounds. After chime play completion, indicator operation changes from flashing to steady ON, allowing the microphone announcement to be made.

Step 2. Press the Talk key again to terminate the broadcast.

When the chime is set to ON, the indicator mode changes to flashing and a chime tone sounds.

8.4.2. When the Talk key mode selector switch is set to OFF

Step 1. Hold down the Talk key until the indicator remains lit, then speak into the microphone.

Tip

Do not release the Talk key even if the indicator begins to flash.

When the chime is set to ON, the indicator flashes and a chime tone sounds 1 second after the Talk key is pressed. After chime play completion, indicator operation changes from flashing to steady ON, allowing the microphone announcement to be made.

Step 2. Release the Talk key and terminate the broadcast.

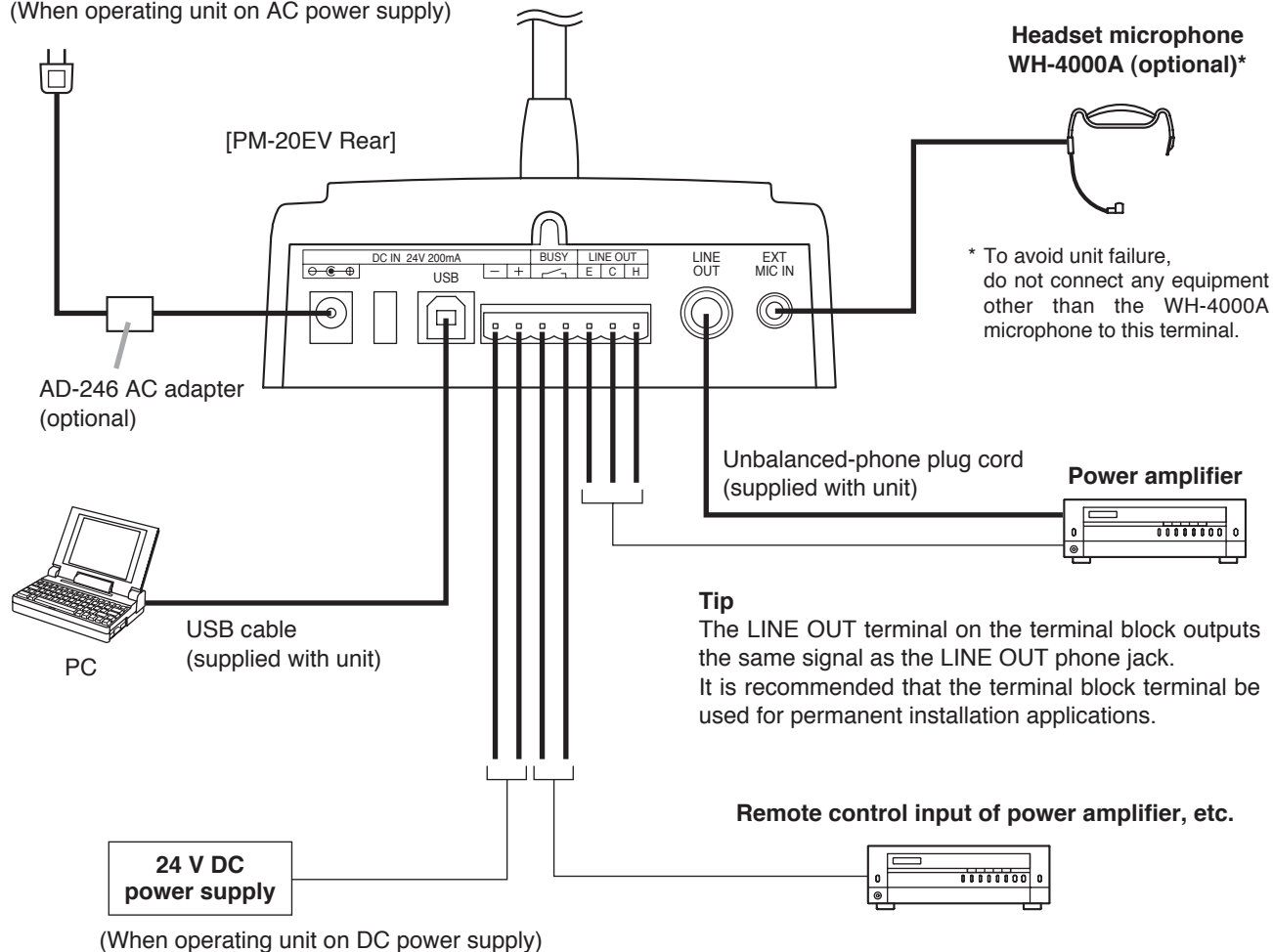
When the chime is set to ON, the indicator mode changes to flashing and a chime tone sounds.

9. CONNECTIONS

9.1. Connection Example

To AC mains, 50/60 Hz

(When operating unit on AC power supply)



Note

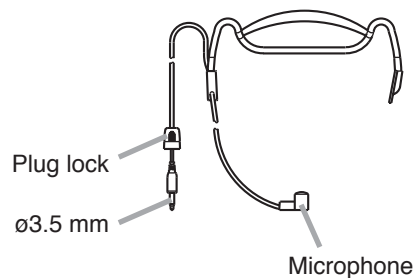
When the AC adapter input terminal and the DC Power Input terminal are simultaneously used, the terminal receiving the higher voltage takes precedence.

9.2. External Microphone Connections

An optional WH-4000A headset microphone can be connected to the External microphone input terminal located on the rear panel.

Notes

- Connecting the external microphone disables the unit's built-in microphone.
- When using the WH-4000A headset microphone, position the microphone set approximately 1 cm away from the mouth and speak a bit louder. The WH-4000A microphone is fitted with a plug lock, however a corresponding lock is not included with the PM-20EV unit.



9.3. Connections to the Rear-Mounted Connectors

Notes

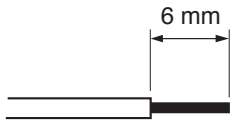
- Use the appropriate type of screwdriver for the connector wiring screws.
- When using stranded or shielded cable, do not solder the stripped and exposed ends. When the cable is clamped, the solder becomes crushed, increasing contact resistance and possibly resulting in an extreme rise in cable joint temperature.

9.3.1. Matching cable size

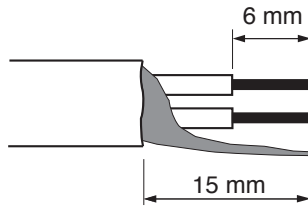
Conductor cross-sectional area	0.5 – 1.5 mm ²
AWG	AWG24 – 16

9.3.2. Stripped cable end

Solid and stranded cables



Shielded cable



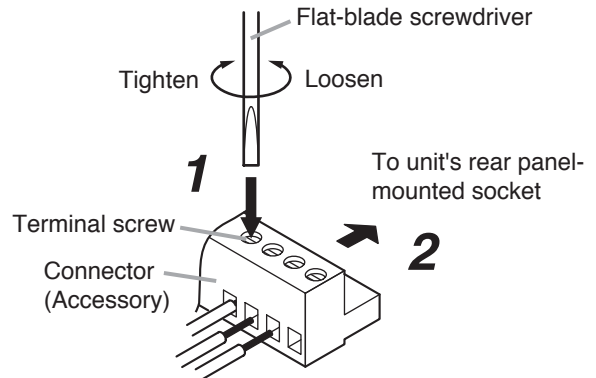
9.3.3. Cable connections

Step 1. Loosen the terminal screw to insert the cable into the connector, then retighten the screw.

Note

Tug lightly on the cable to be sure that it does not pull free. If the cable pulls free, loosen the terminal screw again and reconnect from the beginning.

Step 2. Insert the connector into the rear-mounted socket.



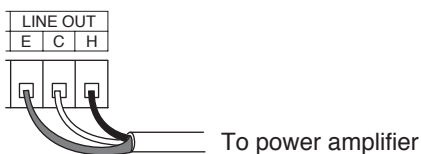
Notes

- Take care not to reverse Steps 1 and 2. When tightening the terminal screw, force is applied to the connector pins on the internal circuit board, possibly resulting in poor contact.
- Be sure all unused terminal screws are also tightened. Loose screws may produce rattling sounds in response to monitor speaker vibration.

9.3.4. Line output terminal connections

The Line output terminal is internally connected in parallel to the Line output jack. Do not use both terminals simultaneously.

[Connection to a balanced amplifier]



[Connection to an unbalanced amplifier]



Note

Short the E (ground) and C (cold) amplifier terminals when using the Line output jack.

10. USING THE SUPPLIED SOFTWARE

The PM-20EV is equipped with a USB interface jack.

The following operations can be carried out by connecting a PC using the supplied USB cable:

- Uploading the chime tone contained in the supplied CD-ROM.
- Downloading recorded data to the PC. (Recorded data backup)
- Uploading data backed up in the PC.

For instructions regarding use of the supplied software, read the "EV20 Software Instruction Manual.pdf" file located on the CD-ROM.

10.1. System Requirements

The following PC specifications are highly recommended for correct operation of the unit's software.

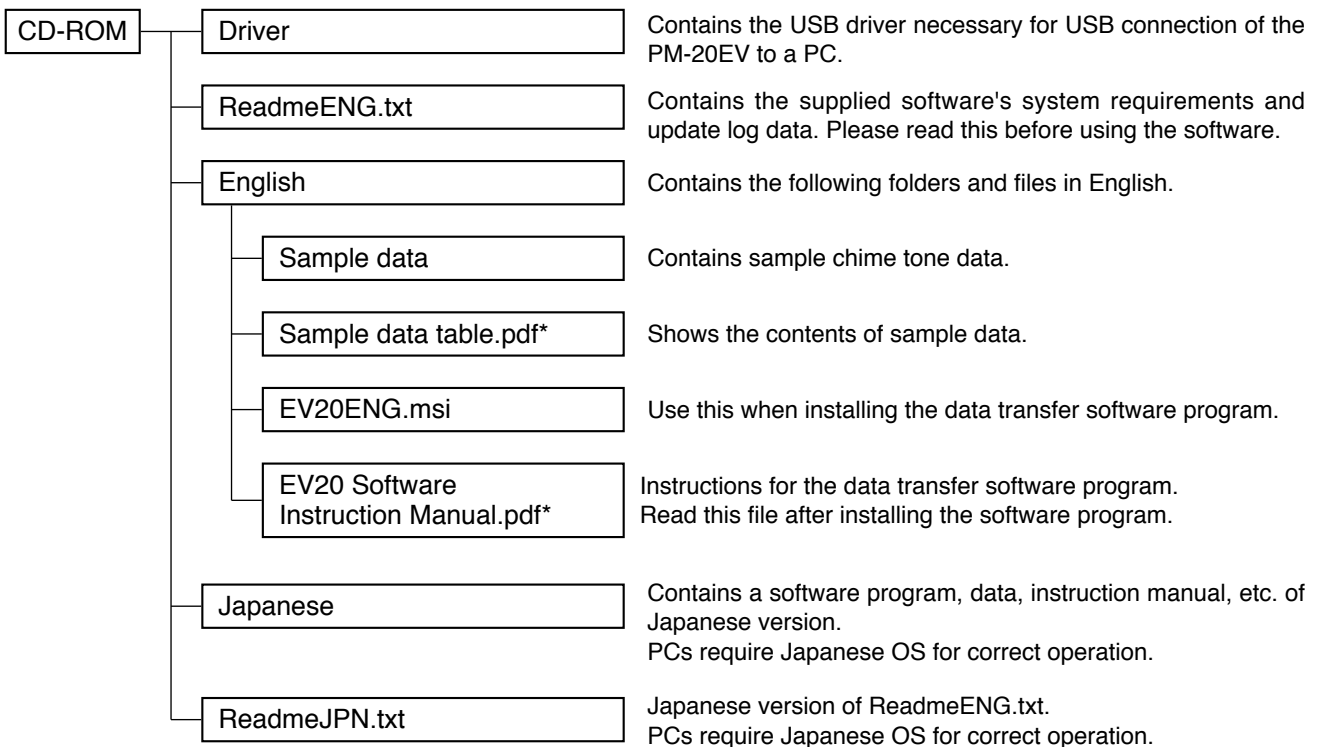
Personal Computer	IBM-AT compatible type (equipped with the USB terminal)
Main Specifications	CPU: Pentium compatible CPU of 133 MHz or more Memory: Over 64 MB (recommended: 128 MB or more) Free disk space: Over 10 MB (space for message storage excluded)
OS	Windows 2000/XP

Notes

- Pentium is a trademark of Intel Corporation.
- Windows is a trademark of Microsoft Corporation.

10.2. CD-ROM File Configuration

The unit's supplied CD-ROM is configured as follows:



* Acrobat Reader is required to view this file. If Acrobat Reader is not installed in the PC to be used, download it from the Adobe web site.

Note: Both Adobe and Acrobat are trademarks of Adobe Systems Incorporated.

10.3. Notes on Use of Software

When the PM-20EV is in the following operating states, do not switch off its power nor insert or remove the USB cable. PC operation may stop.

- While the driver software program is being installed.
- While the OS is being activated or terminated.
- During the course of being suspended or resumed.
- While data is being transferred between the unit and the PC.

Because PC operations could also freeze, avoid performing the following:

- Frequent ON and OFF power switching
- Frequent USB cable insertion and detachment

10.4. Software Program Installation

To use the USB function, correctly install the software programs in the PC.

Two software programs need to be installed: The USB driver and data transfer software programs.

Note: Before operating, confirm the CD-ROM drive letter (such as E or F) of the PC to be used. The drive letter is displayed near the CD-ROM icon in "My Computer."

10.4.1. USB driver installation

Step 1. Start the PC.

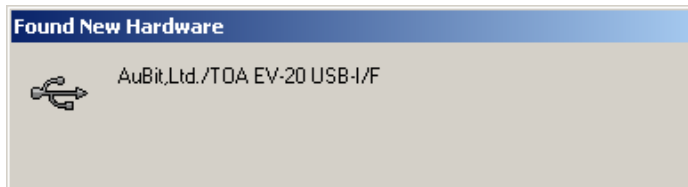
Step 2. Insert the supplied CD-ROM into the PC's CD-ROM drive.

Step 3. Check to be sure that the unit's power is switched OFF.

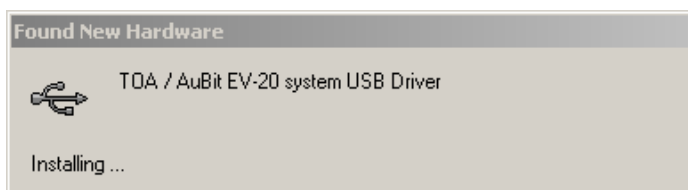
Step 4. Using the supplied USB cable, connect the unit's front-mounted USB terminal to the USB terminal of the PC or USB hub.

Step 5. Switch on the power to the unit.

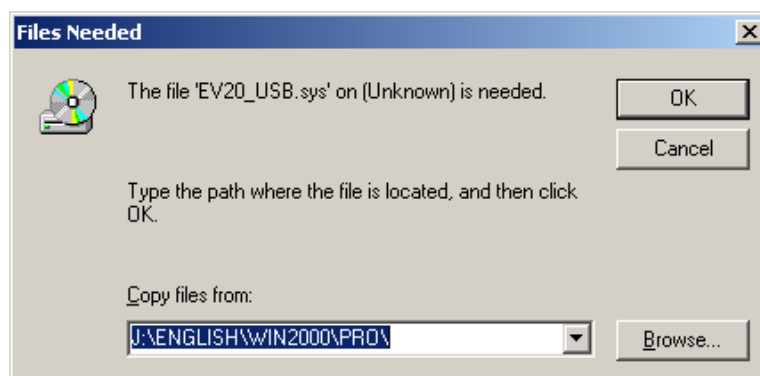
The following screen is displayed on the PC screen.



A few seconds later, the following screen is displayed.



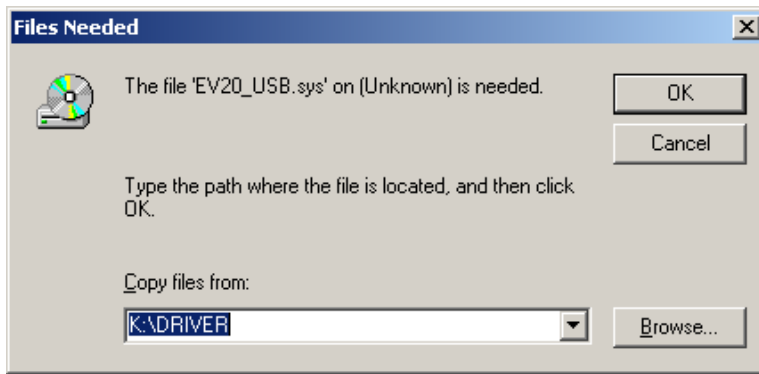
After another few seconds, the following screen is displayed.



Step 6. Select the source to copy.

Pull down "Copy files from:" to select "\Driver" in the CD drive.

Note: The drive letter may differ depending on the type of PC to be used.



Step 7. Click the OK button to start driver installation.

The screen disappears in several seconds and the driver installation is completed.

[Troubleshooting when the driver cannot be installed]

Cause	Remedy
USB cable is not correctly connected.	Unplug the USB cable, then reinsert it.
PC does not initiate USB operation.	<p>When connecting the PM-20EV to the PC, if the Step 5 screen for the USB driver installation is not displayed, the PC may be set to disable USB. Check PC settings with the following procedure:</p> <p>Step 1. Select "My Computer" – "Control Panel" – "System."</p> <p>Step 2. Click "Device Manager" in "Hardware."</p> <p>Step 3. Check to be sure that there is no "!" or "X" symbol in "USB Controller" and "USB Root Hub." When "!" or "X" symbols are displayed, perform settings so that USB can be used. For the setting procedure, refer to PC instruction manual.</p>
Unknown device programmed.	<p>When the driver cannot be correctly installed, the PM-20EV may be recognized as an "Unknown Device," making installation impossible thereafter. Delete "Unknown Device" with the following procedure:</p> <p>Step 1. Select "My Computer" – "Control Panel" – "System."</p> <p>Step 2. Click "Device Manager" in "Hardware."</p> <p>Step 3. Click "Display" to select "Device (classified by type) (E)."</p> <p>Step 4. Ensure there is no "Other Device."</p> <p>Step 5. When there is "Other Device," click that tab. If there is "Unknown File" under the tab, select and delete it.</p> <p>Step 6. Remove the USB cable and after reinserting it, reinstall the driver.</p>

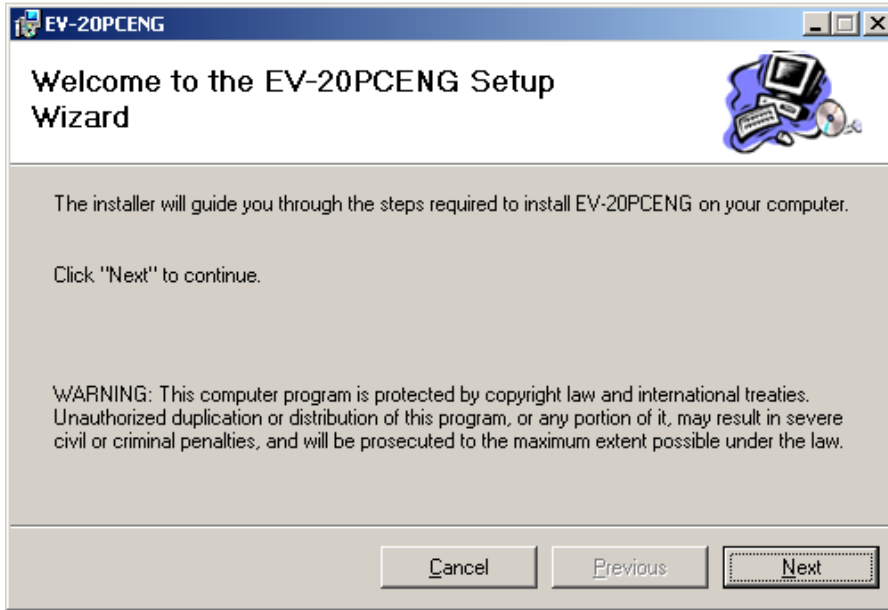
10.4.2. Installing the data transfer software program

Step 1. Start the PC.

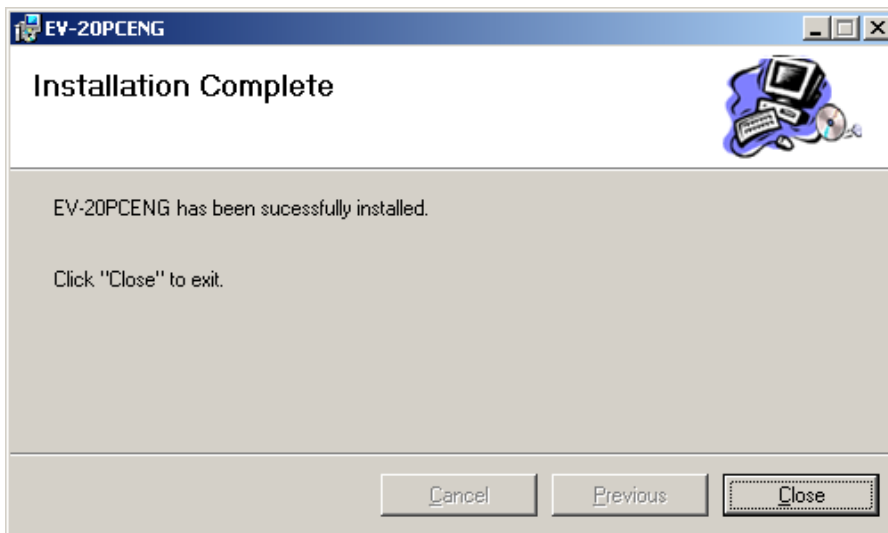
Step 2. Insert the supplied CD-ROM into the PC's CD-ROM drive.

Step 3. Double-click "CD-ROM Drive" from "My Computer" on the desktop screen.

Step 4. Select "English" folder and double-click "EV20ENG.msi."
The following screen is displayed on the PC screen.



Step 5. Click the Next button according to the instructions on the screen until the installation is completed.



The Data Transfer Program "EV20man.exe" file has been installed in the designated folder (c:\ProgramFiles\EV-20PC\ by default).

Step 6. Click the Close button.

The screen disappears, completing the software program installation. Ensure that the "EV20man.exe" file has been correctly installed.

11. SPECIFICATIONS

Power Source	Supplied from an external 24 V DC/200 mA power supply or from an optional AD-246 AC adapter or its equivalent
Power Consumption	5 W (rated output)
Wave Format	44.1 kHz sampling frequency, 16-bit PCM (monaural)
Frequency Response	50 – 20,000 Hz \pm 3 dB (1 kHz)
Distortion	Under 1% (1 kHz, rated output)
Recording System	USB data transfer or analog recording
Control Output	Busy: Contact capacity 30 V DC/0.5 A, terminal block type connector
Input	Unidirectional gooseneck microphone (preinstalled on the unit) External microphone: -37 dB*, 2.2 k Ω , unbalanced, mini jack
Output	Line output: 0 dB*, 600 Ω , balanced, phone jack 0 dB*, 600 Ω , balanced, terminal block type connector Monitor speaker (built inside): 0.2 W
LED Indicator	USB, REC, MONITOR, PLAY, TALK
Internal Chime Tone	2 tones: 4-tone chime (Up) and 4-tone chime (Down), ON/OFF operations
Maximum No. of Messages	1
Maximum Recording Time	6 minutes (including chime playback)
Message Delay Time	0, 2 s, or 4 s (selectable)
Playback Interval Time	∞ , 0, 5 s, 10 s, 30 s, 1 min, 5 min, 10 min, 30 min, or 1 h (selectable)
Finish	Case: ABS resin, silver
Dimensions	122 (w) x 48.8 (h) x 180 (d) mm (microphone and projections not included)
Weight	710 g

[USB Data Transfer Software Operation Environment]

Personal Computer	IBM-AT compatible type (equipped with the USB terminal)
Main Specifications	CPU: Pentium compatible CPU of 133 MHz or more Memory: Over 64 MB (recommended: 128 MB or more) Free disk space: Over 10 MB (space for message storage excluded)
OS	Windows 2000/XP

* 0 dB = 1 V

Notes

- The design and specifications are subject to change without notice for improvement.
- Pentium is a trademark of Intel Corporation.
- Windows is a trademark of Microsoft Corporation.
- Regarding other company names and products, they are also trademarks of individual companies.

• Accessories

CD-ROM (USB data transfer software and sample chime tones recorded)	1	Unbalanced-phone plug cord (2 m)	1
USB cable (1 m)	1	Terminal block type connector (7 poles)	1

• Optional products

AC adapter: AD-246
Headset microphone: WH-4000A

Note: When you need the AC adapter, be sure to consult your TOA dealer.