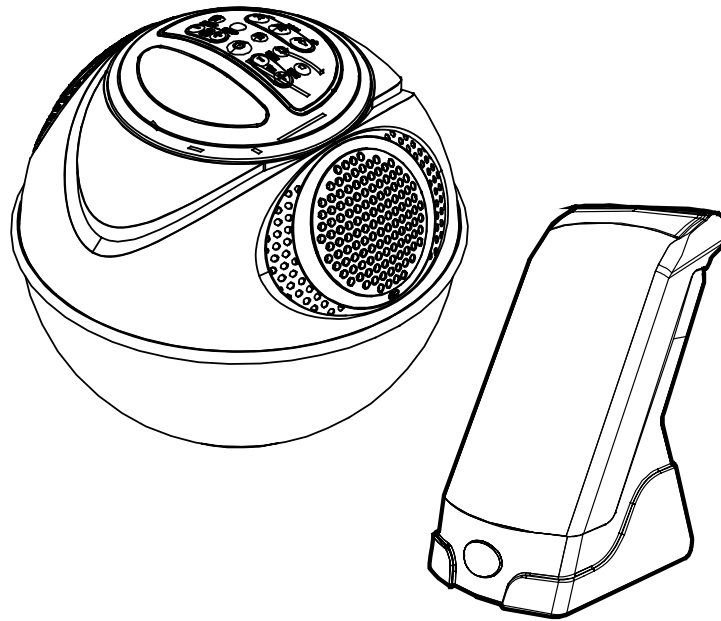# Floating Wireless Speaker System

NE-502

User's Manual

RoHS Compliant
Directive 202002/95/EC

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Important Safety Instructions

When used in the directed man ner, this unit has been designed and manufactur ed to ensure your personal safety. However, improper use can result in potential electrical shock or fire hazards. Please read all safety and operating instructions carefully before installation and use, and keep these instructions handy for future reference. Take special note of all warnings listed in these instructions and on the unit.

1. Water and Moisture
   The transmitter should not be used near water. For example: near a bathtub, washbowl, kitchen sink, laundry tub, swimming pool or in a set basement.
2. Ventilation
   The unit should be situated so that its location or position does not interfere with its proper ventilation. For example, it should not be situated on a bed, sofa, rug or similar surface that ma y block the ventilation openings. The ventilation should not be impeded by covering the ventilation openings with items, such as ne wspapers, table-cloths, curtains, etc. Also, it should not be placed in a built-in installation, such as a bookcase or cabinet, which may impede the flow of air through the ventilation openings.
3. Heat & Flame
   The unit should be situated away from heat sources such as radiators, heat registers, stoves or other appliances (including amplifiers) that produce heat.
   No naked flame sources, such as lighted candles, should be placed on the apparatus.
4. Power Source
   The unit should be connected to a pow er supply only of the t ype described in the operating instructions or as marked on the appliance.
   Where the AC/DC Adaptor is us ed as the disconnect device, th e disconnect de vice shall remain readily operable.
5. Power Cord Protection
   Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. It is always best to have a clear area from where the cord exits the unit to where it is plugged into an AC outlet.
6. Cleaning
   The unit should be cleaned only as recommended. See the section "Care and Maintenance" of this manual for cleaning instructions.
7. Object and Liquid Entry
   Care should be taken so that objects do not fall and liquids are not spilled into any openings or vents located on the transmitter. It shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
8. Attachments
   Do not use attachments no recommended by the product manufacturer.
9. Lightning and Power Surge Protection
   Unplug the unit from the wall outlet and disconnect t he periods of time. This w ill prevent damage to the product due to lightning and power-line surges.
10. Overloading
    Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire of electric shock.
11. Damage Requiring Service
    This unit should be serviced by qualified service personnel when:
    A. The power supply cord or plug has been damaged.
    B. Objects have fallen into or liquid has been spilled into the enclosure.
    C. The unit has been exposed to rain.
    D. The unit has been dropped or the enclosure damaged.
    E. The unit exhibits a marked change in performance or does not operate normally.
12. Periods of Nonuse
    If the unit is to b e left unused for an extended period of time, such as a month or longer, the power cord should be unplugged from the unit to prevent damage or corrosion.
13. Servicing
    The user should not attempt to service the uni t beyond those methods described in the user's operating instructions. Service methods not covered in the operating instructions should be referr ed to qualified service personnel.
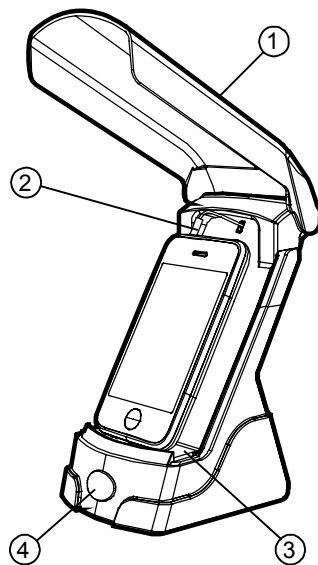
Features

Thank you for purchasing the Floating Wireless Speaker System.
This model incorporates following features:

- 864MHz (for EU) / 914MHz (for USA) wireless technology
- 3 frequency channels for the wireless communication selection
- Auto Scan System to lock speakers onto strongest signal
- Phase Lock Loop (PLL) transmitter
- Weather proof Speaker
- Open air operating distance of up to 30M
- ON/OFF control on Transmitter
- Auto Shut-Off on Speaker
- FM radio receiver with 20 preset channels
- LCD display with clock
- Sleep timer function
- Charging circuitry for rechargeable battery
- Playback MP3 song stored in USB and SD/MMC memory device
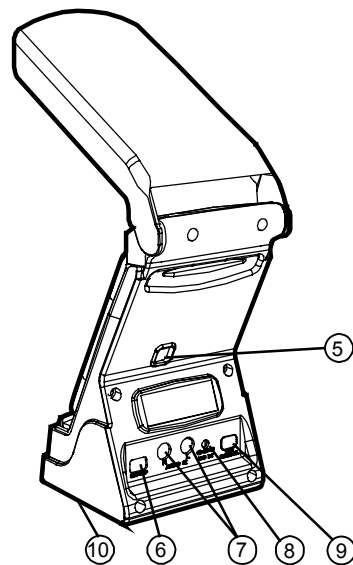
Description of Parts

Transmitter

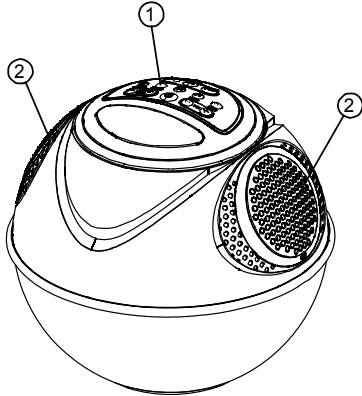Front View   Rear View

1. Audio player cover
2. Audio AUX-in plug
3. Audio player platform
4. Tx (transmit) Status LED indicator
5. AUX-in cable retrieve button
6. POWER ON/OFF switch
7. RCA type AUDIO IN jack ---- for the left & right channels of the secondary audio input signal
8. DC IN jack ---- For the connection of external DC power supply
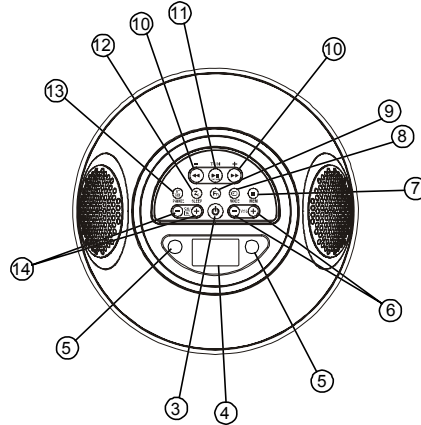9. Channel selector
10. Battery Compartment ---- Located at the bottom of the unit.
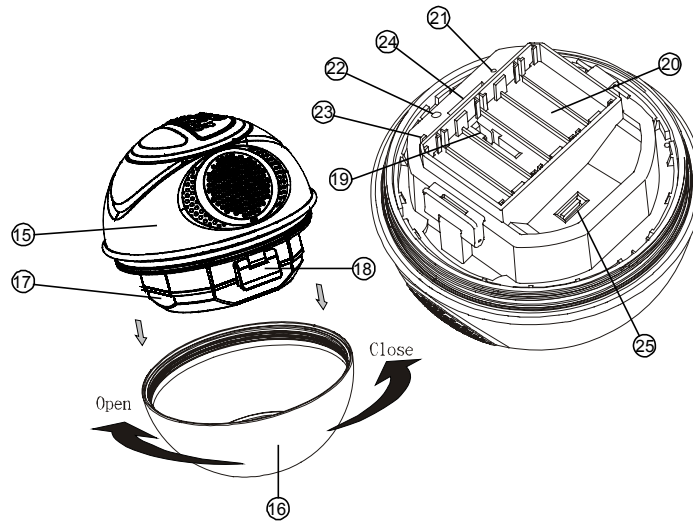
Speaker (Receiver)

Front View   Top Controls View

Inner Bottom View

Open   Close

1. Top control panel
2. Speakers
3. POWER ⏻ button ----- To turn the unit on and off.
4. LCD display
5. Audio LED indicator ---- Blinks and follows the audio signal level.
6. VOL +/- buttons ---- Adjust volume level up or down; Set clock minute.
7. MEM / STOP ■ button ---- Save radio preset station; Stop SD/USB playback.
8. MODE / DISPLAY ⊡ button ---- In power off mode : Select clock setting and 12/24 hour format;
                                    Select radio broadcast system.
                                    In power on mo de: Press to toggle between o   peration mode
                                    screen and clock display
9. Fn (function) button ----- Select FM radio / Wireless receiving / SD / USB modes.

4

10. TUN +/- ▶▶ / ◀◀ buttons ---- In power off mode: Set clock hour.
            In radio mode: Tune the radio frequency up/down.
            In SD/USB mode: Skip Forward or Skip Backward MP3 song/file.
11. PLAY/PAUSE ▶II / SCAN button ---- Scan the wireless receiving signal; Play/Pause SD/USB music.
12. SLEEP button ---- Select the time duration of the sleep timer
13. P-MODE / ST/MO button ---- Select play-mode type in USB or SD mo de; Select FM ra dio stereo/mono receiving mode.
14. CH / 10 +/- buttons ---- Select radio preset channel; Advance / Reverse back 10 songs in USB or SD/MMC mode.
15. Upper housing
16. Lower housing
17. Battery cover
18. Battery cover lock
19. Clock battery compartment slot
20. Battery Compartment
21. RESET button ---- Reset the unit
22. DC IN jack ---- For the connection of external DC power supply
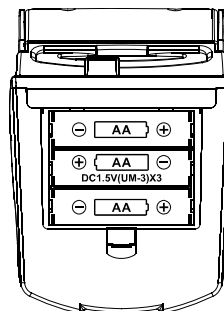23. Battery Type Switch
24. SD/MMC card slot
25. USB connector

Installation

Battery Installation

Transmitter
A battery compartment located at bottom of the transmitter.
(1) Open the battery compartment lid.
(2) Follow the polarity diagram shown inside the compartment and install 3 x AA (UM-3) batteries.
(3) Close the compartment lid.

Speaker
A battery compartment located at the inner cabinet of the speaker unit.
(1) Wipe the unit with soft cloth to remove any water drop, if the unit has been played in water.
(2) To open the unit, grip the lower housing and turn it counterclockwise.
(3) Release the inner battery cover lock and open it.

Clock setting battery back-up
(4) For clock setting backup, follow t he polarity diagram shown inside the compartment and install a CR2032 lithium battery into the clock back-up battery slot. If the un it is at the first t ime usage, just remove the plastic insulation tag from the battery slot (battery included).

Main Battery, for radio, SD/USB and wireless receiving operation
(5) The unit allows regular alkaline type or rechargeable type battery to operate.

Install rechargeable battery
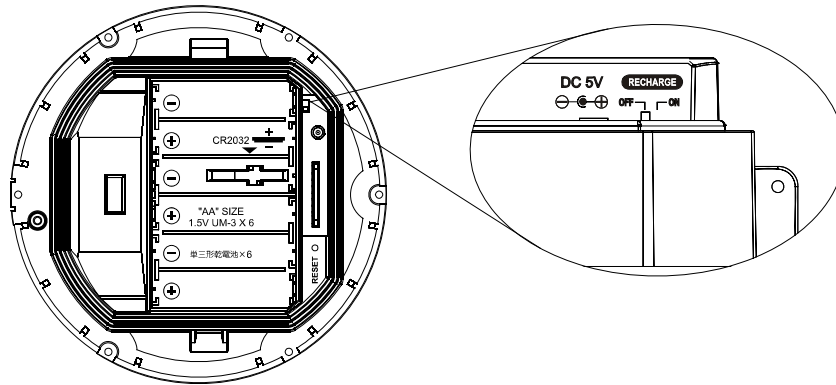 Follow the polar ity diagram shown inside the compartment an d install 6 x AA (UM-3) t ype rechargeable batteries (not included). The Batt ery type switch must slide to R ECHARGE ON position.

Install alkaline battery
 Follow the polarity diagram shown inside the compartment and install 6 x AA (UM-3) Alkaline type batteries (not included). The Battery type switch must slide to RECHARGE OFF position.

Note:
Switch to "RECHARGE ON" position to charge the rechargeable battery.
Switch to "RECHARGE OFF" position when normal type (e.g. alkaline type) battery is used.

5

Caution:
Never switch to "RECHARGE ON" position when regular battery (e.g. alkaline type battery) is installed which will damage the battery or may cause explosion.

(6) Close the inner battery cover and lock it.
(7) To close the unit, grip the lower housing and turn it clockwise until it locks tight with the upper housing.

Battery low detection
If the "low-battery" indicator ⊏▭ displays, the unit may operate abnormally.
You need to replace the used alkaline battery by the fresh one or to recharge the rechargeable battery.

Warnings:
- Batteries shall not be exposed to excessive heat such as sunshine, fire or the like.
- Be sure that the batteries are installed correctly. Wrong polarity may damage the unit.
- Do not mix old and new batteries.
- Do not mix alkaline, standard (carbon-zinc) or rechargeable (nickel- cadmium) batteries.
- Only batteries of the same or equivalent type as recommend are to be used.
- If the unit is not to be used for an extended period of time, remove the battery.
- Do not dispose of batteries in fire, battery may explode or leak.
- Danger of explosion if battery is incorrectly replaced.

Power Adaptor Connection for the Transmitter
The Transmitter can be powered by an external AC-DC power adaptor, required the output DC 5V 500mA (not included).
(1) Connect the adaptor's DC output plug to the DC IN jack of the transmitter.
(2) Firmly and securely plug the adaptor's AC plug into AC main outlet.

Power Adaptor Connection for charging the Speaker unit rechargeable battery
You can use the same AC-DC power adaptor (the output DC 5V 500mA) to charge the rechargeable battery in the Speaker unit.
(1) Connect the adaptor's DC output plug to the DC IN jack of the unit.
(2) Firmly and securely plug the adaptor's AC plug into AC main outlet.
(3) The inner portion of the battery indicator running (blinks) on display.

Caution:
This set-up is for charging the rechargeable battery of the Speaker unit only.
Do not operate the Speaker with this set-up near Water and Moisture environment.

Listening to Wireless Audio Source

Transmitter
1. Raise the Audio player cover.
2. Pull out the AUX-in cable and connect the 3.5mm stereo plug to line-out jack or headphone jack of your external audio device.
3. Turn on the external audio device.
4. Press the AUX-in cable retrieve button located at the back of the transmitter and retrieve the AUX-in cable to a desired length, if necessary.
5. Place your audio device on the Audio player platform then close the Audio player cover.
6. To turn on the transmitter, slide the POWER switch to ON position. The Tx (transmit) Status LED indicator will turn on and change to Green colour which indicates that signal is transmitting.

Note:
  If the Tx Status LED indicator remains in Red colour, try to increase the volume level of your external audio device. Once sufficient audio level is detected and the Tx Status LED indicator will change to Green colour.

Speaker (receiver)
7. Press the POWER ⏻ button turning on the Speaker.
8. Press the Fn (function) button   to select the wireless receiving mode, the wireless indicator WIRELESS blinks on display.
9. Once it received the signal and the wireless indicator WIRELESS will display steadily.
10. Now you may press the VOL +/- button and adjust the volume to a desired level.

Secondary Aux-In

At rear of the Transmitter, Left and Right RCA type stereo jacks are available for the connection of secondary audio signal source. Instead of using the built-in AUX-in cable, you may connect an external audio device to the Transmitter by using a RCA type audio cable.

1. Connect an external audio device to the Transmitter by using a RCA type audio cable.
2. On the front of the Transmitter, unplug the 3.5mm stereo plug of the built-in audio cable from any external audio device, if apply.
   Note:
   If both front (Aux-in cable) and rear (RCA input jack) are presented with audio signals, where both signals will be broadcasted.
3. Turn on the external audio device.
4. Follow the steps 6 to 10 in the above "Listening to Wireless Audio Source "section.

Frequency Scanning

The system provides three frequency channels for your selection.
In case there is interference on current operating channel, you may implement following steps to obtain the best reception.

1. From the Channel Selector of the Transmitter, select other channel.
2. From the Speaker, press the SCAN button and the unit will match with the new channel automatically.

7

Battery Low Indication and Auto-Shut-Off of Speaker

Speaker
The Speaker is designed with an energy saving feature.

At wireless receiving mode:
In the case of turning off the Transmitter or no signal is received from the Speaker, where the wireless indicator **WIRELESS** on display will blink. Around four minutes later, the Speaker will shut-off automatically.

In FM radio, SD/USB and Wireless receiving modes:
When battery level in the Speaker is low, "low-battery" indicator ▭ displays and the unit will shut-off as well.
You may replace the battery with fresh one.

Transmitter
When battery level in the Transmitter is low, the Tx Status LED indicator will blink alternately in Red and Green light.
Replace the old battery with fresh one.

Radio Tuner Operation

Radio Tuning
1. Press the POWER ⏻ button to turn on the unit.
3. Press the Fn (function) button to select FM radio receiving mode.
4. To manually tune to a desired station, repeatedly press the TUN +/- button.
5. To automatically search for stations with strong signals, press and hold the TUN +/- button until the frequency digits on display begins to scan then release the button. The tuner will stop on the first strong signal it finds.

Notes:
- Manual tune to select weaker stations that might be skipped during automatic tuning.
- If the automatic tuning does not stop on the exact frequency of the station, for example, it stops on 88.9 MHz instead of 88.8 MHz, use the manual tuning method to "fine tune" to the exact frequency of the desired station.
- You may also press the S T/MO button to select FM stereo or mono receiving mode, if necessary.

Radio Preset Stations
The unit allows you to store up to 20 FM stations for easy recall at any time.

Preset Stations
1. Press the POWER ⏻ button to turn on the unit.
2. Press the Fn button to select FM radio receiving mode.
3. Tune to the radio station you want to store in memory by pressing the TUN +/- button.
4. Press the MEM button. The preset channel number appears on display and blinks.
5. To select desired preset station number, press the CH +/- button.
6. To confirm preset location, press the MEM button.
7. Repeat steps 3 to 6 to store other stations, if apply.

Notes:
1. There is a few seconds delay when programming, after this delay time, the unit will automatically switch back to normal tuner mode.
2. You can overwrite a preset station by overwriting and storing the new frequency in its place.

Recalling Preset Station
1. Press the POWER ⏻ button to turn on the unit.
2. Press the Fn button to select FM radio receiving mode.
3. To select desired preset station, press the CH +/- button.

Radio Broadcast System Selection
In case the unit is moved to ot her countries with slightly different radio broadcast system, the unit allows you to select USA, EU, Australia and Japan systems.

1. Set the unit to Power Off mode.
2. Press the MODE button once and the flashing indicator USA, EU, JAP or AUS displays.
3. Press the VOL +/- button to select one of the broadcasting systems.
4. Press MEM button to save the setting and exit the setting mode.

Note: The followings are the specifications of the three radio broadcast systems:
USA's Radio Broadcast System
FM 87.5 - 108 MHz, 0.1 MHz tuning step

Australia (AUS) and EU's Radio Broadcast System
FM 87.5 - 108 MHz, 0.05 MHz tuning step

Japan's (JAP) Radio Broadcast System
FM 76.0 – 90 MHz, 0.1 MHz tuning step

Listening to USB Flash Drive or SD/MMC card Music

The unit has a built-in USB port and SD/MMC card connector for the connection of an USB Flash Drive and SD/MMC card. It playback MP3 file/song which is saved in those devices.

1. Wipe the unit with a soft cloth to remove any water drop, if the unit has been played in the water.
2. To open the unit, grip the lower housing and turn it counterclockwise.
3. Release the inner battery cover lock and open it.
4. Plug the USB flash drive into the USB connector or insert the SD/MMC card into the SD card slot. Before the USB drive /SD card connection, ensure that those memory devices are loaded with MP3 file.
5. Close the inner battery cover and lock it.
6. To close the uni t, grip the lower housing and t urn it clockw ise until it locks tight with the upper housing.

USB / SD music playback
1. Press the POWER ⏻ button to turn on the unit.
2. Press the Fn (function) button to select USB or SD mode. The "USB" or "SD" indicator displa y respectively.
3. The unit detects the MP3 song / file stored in the device and plays it automatically.
4. You may press the Tun + / ▶▶ and Tun - / ◀◀ button to go to next / previous song (file).
   You may also press the 🔟 +/- button and advance / reverse back 10 songs.
   To pause the music playback, press the PLAY/ PAUSE ▶❚❚ button. To resume playback, press the PLAY/PAUSE ▶❚❚ button again.
   To stop music playback, press the STOP ■ button.

USB / SD Play Modes

To repeat playback all songs/files, press the P-Mode butto n until the "repeat all" (ALL) indicator displays.

To repeat playback of one song / file, press the P -Mode button until the "repeat one" ⊂⊃ indicator appears on the LCD.

To repeat pla yback of song / file in a directory , press the P-Mode button until th e "repeat directo ry" DIR⊃ indicator appears on the LCD.

To playback songs /files in random order, press the P-Mode button until the "random" **RND** indicator appears on the display.

Note:

During USB / SD operation, if necessary you may press the MODE / DISPLAY ▱ button to show the clock on di splay. Press the MO DE / DISPLA Y ▱ button again to display MP3 so ng/file playback time.

Clock Setting

When the unit is OFF (power off mode):

Set 12/24 Hour format
1. Press the MODE button twice entering 12/24 hour format setting mode.
2. Press the VOL +/- button to select 12 or 24 hour display format.

Set Clock
3. Press the MODE button again and the clock digits blink.

4. Press the TUN +/- button to set hour.

5. Press the VOL +/- button to set minute.

Exit setting mode
6. To save all settings and exit the setting mode, press the MODE button or wait for a few seconds.

Sleep Timer Function

Sleep to timer
This feature allows you to fall asleep to the radio or wireless receiving signal up to 120 Minutes.
The unit shuts off automatically when the time expires.

1. Press the POWER ⏻ button to turn the unit on.
2. Either tune to the desired radio station in r adio mode, in SD/USB mode or playback music from wireless reception.
3. To select the sleep timer to turn the unit off after 15, 30, 45, 60, 90 or 120 minutes, press the SLEEP button repeatedly. The display shows the indicator zZ. The unit plays for the selected length of time then automatically turns off.
4. To turn the unit off before the sleep timer counts down to zero, pre ss the POWER ⏻ button at any time.

Notes:
If you are falling asleep to music from wireless reception, the sleep timer will shut off the Speaker only and it will not turn off the transmitter.
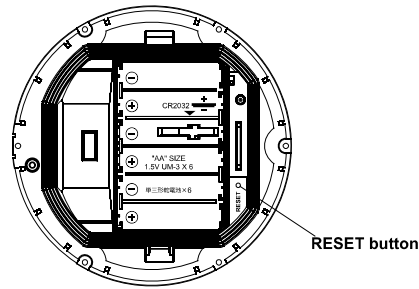
10

Care and Maintenance

- Do not subject the unit to excessive force, shock, dust or extreme temperature.
- Do not tamper the internal components of the unit.
- Clean your unit with a damp (never wet) cloth. Solvent or detergent should never be used.
- Avoid leaving your unit in direct sunlight or in hot, humid or dusty places.
- Keep your unit away from heating appliances and s ources of electrical noise such as fluorescent lamps or motors.

Resetting the Unit

If the unit experi ences a power surge or electric shock, it is possible that the internal micro-controller may lock up and the unit will not respond to any commands from the top panel controls.

In this event, use a straightened paper clip, toot hpick or similar objects to press the RESET b utton located at the inner bottom of the Speaker (see the below figure). The reset operation clears the system memory and all of your previous settings will be erased.

CAUTION: DO NOT USE SHARP, POINTED OBJECT TO PRESS THE RESET BUTTON.
IT MAY DAMAGE THE RESET SWITCH INSIDE THE UNIT.

RESET button

Technical Data

Transmitter
Battery for operation: DC1.5V "AA" (UM-3) type alkaline battery x 3 (not included)

Speaker
Battery Back-up for clock / memory: DC3V CR2032 Lithium Battery x 1 (included)
Battery for operating the unit: DC1.5V "AA" (UM-3) type battery x 6 (not included)

Operating Frequency for wireless transmission mode:
3 Channels (For EU version): 863.5MHz / 864MHz / 864.5MHz
3 Channels (For USA version): 914MHz / 914.5MHz / 915MHz

FM Radio Frequency Range and Time Display Format:

Region/Country	Frequency	Time Display Format
USA (USA)	FM87.5-108MHz, 0.10MHz tuning step	12 Hours
Europe (EU)	FM87.5-108MHz, 0.05MHz tuning step	24 Hours
Japan (JAP)	FM76.0-90MHz, 0.1MHz tuning step	12 Hours

Compliance with FCC Regulations

FCC Caution: Any changes or modifications not expressly approved by the party responsible for the compliance could void the user's authority to operate this equipment.

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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the Interference by one or more of the following measures:

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

THE SPECIFICATION AND EXTERNAL APPEARANCE OF THE SET ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

If at any time in the future you should need to dispose of this product please note that: Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice. (Waste Electrical and Electronic Equipment Directive).