Wireless Outdoor Bell Box   BX-23-DS-AC

The Outdoor Bell Box is used to attract attention when alarm signal is received from Control Panel, by activating its siren and strobe light. The Bell Box can also alert you to tamper violation, and low battery status.

Identifying the Parts

1. **Mounting Holes**
2. **AC Input Terminal Block**
   Connect to a 9V 1A Adapter to power the Bellbox.
3. **Power Switch**
   The switch includes 3 positions:
   BT4: The Bellbox is powered by the 4 Alkaline batteries configuration.
   Off: The Bellbox is not powered by any battery.
   BT2: This configuration is currently reserved.
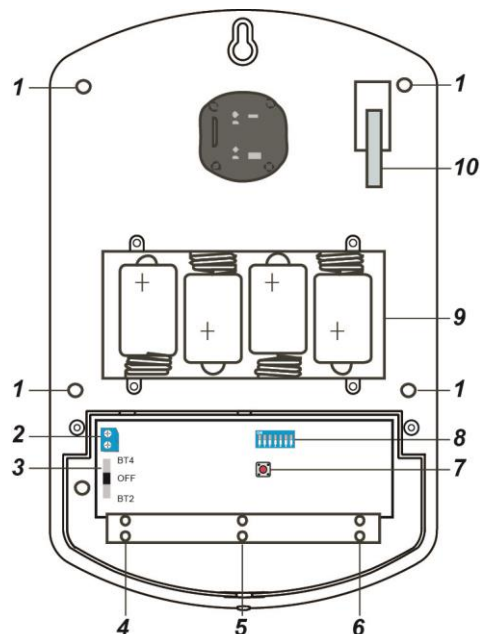4. **LED Group 3**
5. **LED Group 2**
6. **LED Group 1**
7. **Learn Button**
8. **Functional Switch Block**
9. **Battery Compartment**
10. **Tamper Switch**

Accessories included

In addition to the BX-23 itself, the following accessories are also included in the package.
   a. 4 x large wall plugs.
   b. 4 x 4 mm x 30 mm cross head fixing screws.
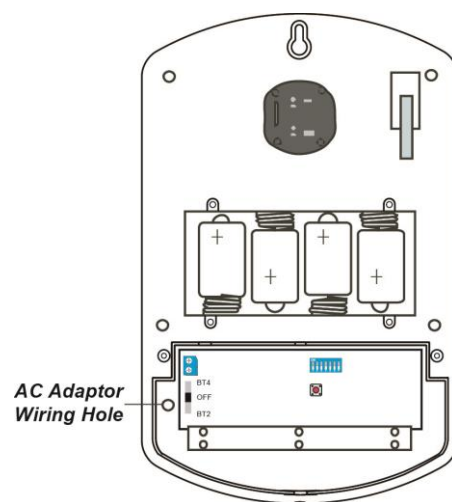   c. 4 x 1.5V D alkaline cells (pre-inserted)

Power Supply

The Bellbox can be powered by a 9V, 1A power adapter or it can be battery-powered.
Switch the power switch to the appropriate terminal.
Battery and AC Power:
When Power Switch is set to BT4 position, the Bellbox will use AC power if AC connection is available, and switch to battery power automatically if no AC power is detected.
Step 1.   Slide the Power Switch to BT4 position.
Step 2.   Break through the back cover to drill the hole (shown on the picture to the right) for the AC adapter wire to extend through.
Step 3.   Loosen the screws on the AC Input Terminal Block using a Philips screwdriver.
Step 4.   Extend the wires of the AC adapter through the hole and connect them to the appropriate terminal.
Step 5.   Tighten the screws on the AC Input Terminal Block using a Philips screwdriver. Make sure the wires are secured to the appropriate terminal.
Step 6.   Connect the power adapter to a power socket.
Step 7.   Open the battery compartment and insert 4 alkaline D-cells, then close the battery compartment and tighten with screw.
AC Power only:
When Power Switch is set to OFF position, the Bellbox will only use AC power and will not switch to battery power if AC power is disconnected.
Step 1.   Slide the Battery switch to the OFF position.
Step 2.   Connect AC power according to instruction above.

<NOTE>

☞   The Power switch position BT2 is currently reserved.

Supervision

The Bellbox will transmit a supervisory signal every 30-50 minutes in normal operation mode. If this signal is not received, the Control Panel will indicate that the particular BX-23 is experiencing an out-of-order problem.

Functional Switch Blocks

Functional Switch Blocks are used to determine different functions of BX-23.

When a switch is slid to the side near the "ON" word, the switch is **ON**. When it is slid to the other side, the switch is OFF. All DIP switch are set to **OFF** by factory default.
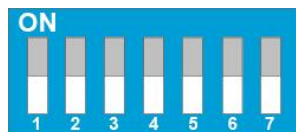
- **Functional Switch Block**

    Below displays the functions of each DIP switch of Functional Switch Block:

SW1		Reserved
SW2		Strobe Activation (LED groups 1-3)
OFF		only during siren alarm period (**default**)
ON		until alarm is disarmed
SW3	SW4	Alarm Length
OFF	OFF	3 minutes (**default**)
OFF	ON	5 minutes
ON	OFF	10 minutes
ON	ON	1 second
SW5	SW6	Siren Volume Control in Exit/ Entry Delay Time/ Confirmation Sound
OFF	OFF	Silent (**default**)
OFF	ON	Low
ON	OFF	Medium
ON	ON	High
SW7		Door Chime
OFF		Disable (**default**)
ON		Enable

    For further detail please see section F**unction Overview**.

Function Overview

1. Function Switch Block

- **Strobe LED Activation**

    The strobe LED groups 1-3 will flash to indicate various system statuses and can be programmed by SW2 as shown in DIP Switch table.
    - When the SW2 is in ON position, the strobe LED will still be active after the Siren stops sounding, until the system has been disarmed.
    - When the SW2 is in OFF position, the Strobe Light will be turned OFF if the Siren stops sounding.

- **Alarm Length**

    The alarm length of the bellbox is determined by SW3 & SW4 of the Functional Switch Block.
    - When both SW3 and SW4 are in the OFF position, the alarm length is 3 minutes (**Default**).
    - When SW3 is in the OFF position and SW4 in the ON position, the alarm length is 5 minutes.
    - When SW3 is in the ON position and SW4 in the OFF position, the alarm length is 10 minutes.
    - When both SW3 and SW4 are in the ON position, the alarm length is 1 second.

- **Siren Volume Control in Exit/ Entry Delay Time/ Confirmation Sound**

    The siren audio volume can be programmed by SW5 and SW6 of the Functional Switch Block.
    - When both SW5 and SW6 are in the OFF position, the siren is silent (**Default**).
    - When SW5 is in the OFF position and SW6 in the ON position, the siren volume is Low.
    - When SW5 is in the ON position and SW6 in the OFF position, the siren volume is Medium.
    - When both SW5 and SW6 are in the ON position, the siren volume is High.

    <NOTE>

    ☞   Exit or Entry Delay sound's On/Off setting is determined on the Control Panel webpage. When turned on by the Control Panel, the Exit or Entry Delay sound volume is controlled by SW5 and SW6 settings as indicated above. The user can **mute** the Exit or Entry Delay sound by setting SW5 and SW6 to the off positions. When turned off by the Control Panel, the Exit or Entry Delay sounds will not be available no matter which positons SW5 and SW6 are in.

    ☞   Confirmation sound's On/Off setting is determined on the Control Panel webpage. When turned on by the Control Panel, the confirmation sound volume is controlled by SW5 and SW6 settings as indicated above. The user can **mute** the conformation sounds by setting SW5 and SW6 to the off positions. When turned off by the Control Panel, the confirmation sounds will not be available no matter which positons SW5 and SW6 are in.

- **Door Chime**
  - When SW7 of Functional Switch Block is slid to the ON position, the Bellbox will sound a door chime whenever it receives a door chime signal from the Control Panel.
  - No door chime will sound when SW7 is slid to the OFF position (**Default**).

2. Others

- **Alarm Memory**

  If an alarm was triggered in your absence and the system was not disarmed before alarm length expiry, the Bellbox will sound a short alarm when the system is disarmed to warn the user that an alarm has been triggered when he is away. This suggests that the intruder could still be within the premises.

- **Alarm Length**

  When an alarm is activated by Control Panel, the Control Panel will notify the Bellbox to start alarming according to the panel's own alarm length setting. When the Panel's alarm length expires, it will notify the Bellbox to stop alarm.

  The Bellbox's own alarm length setting, which is set by Dip Switch SW3&4, determines how long the Bellbox should activate alarm if no stop signal is received from Control Panel:

  For example:

  If the Panel alarm length is set longer than Bellbox alarm length, after an alarm is activated, instead of waiting panel alarm length to expire, the Bellbox will stop alarming upon expiry of its own alarm length.

  If the panel is under disarm mode and the Bellbox tamper switch is triggered, the Bellbox will activate alarm according to its own alarm length setting since the panel is under disarm mode and will not activate alarm from tamper trigger.

- **Siren Tamper**

  The Bellbox is protected against any attempt to open the lid or to detach the bellbox from its mounting surface.

  If the Bellbox detects a tamper condition, it will activate the siren & strobe light for the programmed alarm period. A tamper signal will be sent to the Control Panel along with regular signal transmissions for the Control Panel to display the status accordingly. If the tamper condition persists, the Bellbox will sound a series of five beeps either every time the system is armed or when the tamper is enabled, to indicate a fault.

  Tamper feature can be disabled temporaily from the Control Panel using Siren Tamper control function. The Bellbox will stop tamper detection temporarity for one hour. This function is mainly designed for replacing battery or changing Bellbox installation location. After one hour, The Control Panel will automatically turn the function back ON after the duration. The tamper detection can also be enabled again manually using the Siren Tamper function.

- **Audio & Visual Status Indication**

  While arming / disarming the system, the BX-23 uses different methods to distinguish various statuses for the user, as listed in the table.

	Siren Audio	Strobe light indication
Arm/Home	1 beep*	3 LED groups flash once
Disarm	2 beeps*	Sequentially flashes for 1 cycle
Arm (Low Battery)	3 beeps	3 LED groups flash for three times
Disarm (Low Battery)	3 beeps	Sequentially flashes for 3 cycles
Arm (Tamper)	5 beeps	3 LED groups flash for 5 times
Disarm (Tamper)	5 beeps	Sequentially flashes for 5 cycles
Entry/Exit Sound	Count-down beeps	

  * The Siren Audio indication will be affected by the Confirmation ON / OFF setting in the Control Panel webpage. When Confirmation is turned off by the Control Panel, the confirmation sound will not be available. When Confirmation is turned on by the Control Panel, the confirmation sound volume is controlled by SW5 and SW6 settings, the user can **mute** the siren audio by setting SW5 and SW6 to the off positions.

Getting Started

Learning

Step 1: Release the bottom screw of the Bellbox using a Philips screwdriver and remove the top cover.

Step 2: Release the 4 screws securing the LED cover using a Philips screwdriver and remove the LED cover.

Step 3: Put the Control Panel into learning mode (refer to Control Panel's user manual for details).

Step 4: Power up the Bellbox (connect the AC adapter or sliding the power switch to BT4 position). All the LEDs will flash once and the buzzer will emit 1 beep.

Step 5: Press the Learn button once. The Bellbox will emit a short beep and LED groups 1 & 3 will turn on briefly. The Bellbox is now in learning mode and will transmit a learning code to the Control Panel.

Step 6: If the Control Panel did not receive a learning code, press the learn button again (the Bellbox will not sound a beep this time).

Top Cover

Bottom Screw
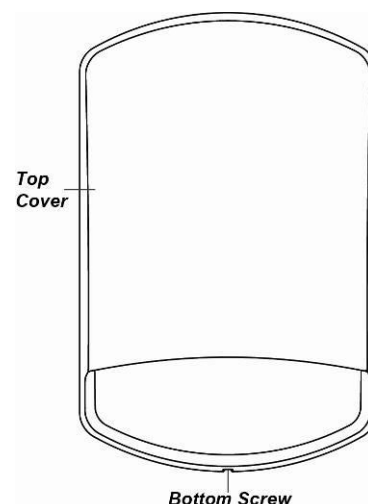
Step 7: If the Control Panel receives the learning code, it will list the device information accordingly, follow Control Panel manual instruction to complete the learning procedure. An acknowledgement will be sent to the Bellbox. When the acknowledgment is received, the Bellbox will sound a short beep with LED group 2 flashing once to indicate that learning process is successful. The Bellbox will then leave learning mode.

Step 8: Refer to the Control Panel manual and use Edit Device function to check Bellbox settings. You can edit the operation area, zone number, and device name for the Bellbox.

<NOTE>

☞ If the learning process fails, please remove the bellbox from the Control Panel and repeat steps 3-7 again.

☞ If the bellbox does not receive the confirm code from the Control Panel within one minute, the bellbox will leave learning mode and the LED groups 1 & 3 will turn off.

Edit Bellbox Operation Area

Follow instruction below to change Bellbox Operation Area in the Control Panel

Step 1: Use the panel Edit Device function to change Bellbox area setting.

Step 2: Press the learn button on the Bellbox to send signal to panel, the Bellbox will emit a beep and flash LED 1 & 3 once.

Step 3: When the Bellbox receives acknowledgement signal from panel, it will emit a beep and flash LED 2 once to indicate the setting has been updated. The Bellbox will return to normal operation.

Programming:

Use thee Control Panel "**Program Siren**" function to adjust Bellbox settings:

● **General Siren Function:**

Changing general siren function will affect the setting of all learned in siren/Bellbox:

Siren Tamper

- If it is set to **ON**, the bellbox will sound alarm when the tamper switch is triggered (**Default**).

- If it is set to **OFF**, the bellbox will remain silent when the tamper switch is triggered.

- After selecting On or Off, click "**Siren Tamper**" to send the command to all siren/bell box.

Confirm

- If it is set to **ON**, the bellbox will sound beeps when the system is armed or disarmed (**Default**). Please refer to SW5 and SW6 settings for volume control in the **Functional Switch Block** section.

- If it is set to **OFF**, the bellbox will remain silent when the system is armed or disarmed.

- After selecting On or Off, click "**Confirm**" to send the command to all siren/bell box.

Entry Sound

- If it is set to "**ON**", the bellbox will sound beeps when the Entry or Exit timer is activated (**Default**). Please refer to SW5 and SW6 settings for volume control in the **Functional Switch Block** section.

- If it is set to "**OFF**", the bellbox will remain silent when the Entry or Exit timer is activated.

- After selecting On or Off, click "**Entry Sound**" to send the command to all siren/bell box.

Installation

Proceed to installation after complete learning.

Step 1. Disable the Siren Tamper function on the Control Panel (please refer to the Control Panel instruction manual). The bellbox will sound a beep to indicate the tamper switch is now disabled.

<NOTE>

☞ The function Siren Tamper will only be OFF for a duration of one hour. The Control Panel will automatically turn the function back ON after the duration.

Step 2. Find the location where the Bellbox is to be mounted.

Step 3. Remove the Top cover by releasing the bottom screw using a Philips screwdriver and pulling the outer case out carefully.

Step 4. Remove the LED cover by releasing the 2 screws securing the cover using a Philips screwdriver and removing the cover.

Step 5. Hold the Bellbox at the position where it will be mounted, supply power to Bellbox

Step 6. Check whether BX has a strong enough signal with the Control Panel by putting the Control Panel into **Walk Test** mode (please refer to Control Panel manual). Press the **Learn Button** check whether the signal is strong enough (please refer to Control Panel manual for signal strength).

Step 7. If you are satisfied with the signal strength, remove the Bellbox from mounting location. Slide the power switch to the appropriate terminal (AC-powered or
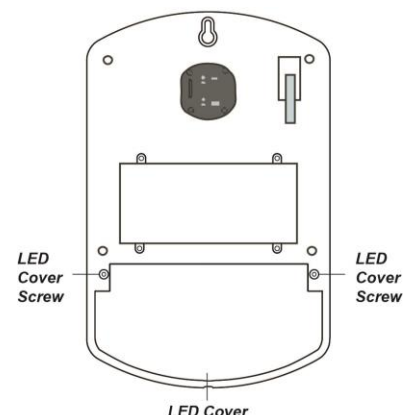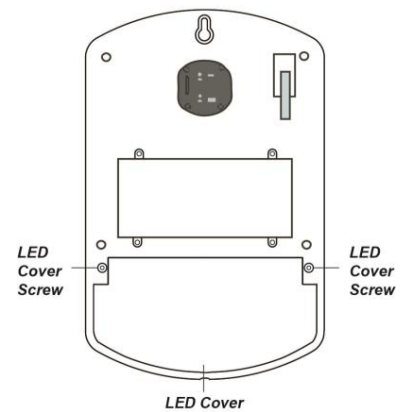
battery-powered) replace the LED cover and secure it with the 4 LED cover screws using a Philips screwdriver.

Step 8.   Identify the 4 mounting holes, mount and fix the Bellbox on the wall using the large screws and wall plugs provided. Secure the screws using a Philips screwdriver. Make sure the Tamper Switch is fully depressed against the wal

<NOTE>

☞   The tamper switch protrudes through the back of the unit. When the siren is pulled off from the wall, the alarm will be activated. Ensure it is fully depressed when the siren is mounted. If there is a gap, pack with a suitable spacing material.

Step 9.   Replace the Top cover by hooking the top of the Top cover onto the top of the base. Push the bottom of the Top cover onto the base and tighten the bottom screw using a Philips screwdriver.

Step 10.   Enable Siren Tamper function on the Control Panel (Please refer to the Control Panel instruction manual)

Step 11.   Check if the installation is successful by testing from the Control Panel by arming and disarming function.

Successful arming/disarming is indicated by the table provided in **Audio & Visual Status Indication**.

<NOTE>

☞   If 5 short-beeps are noticed while arming/disarming, it means the tamper is not fully depressed. Check to ensure that tamper is properly set and then test from Control Panel again.

Step 12.   The installation is now completed.
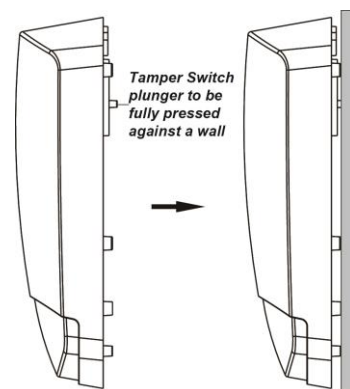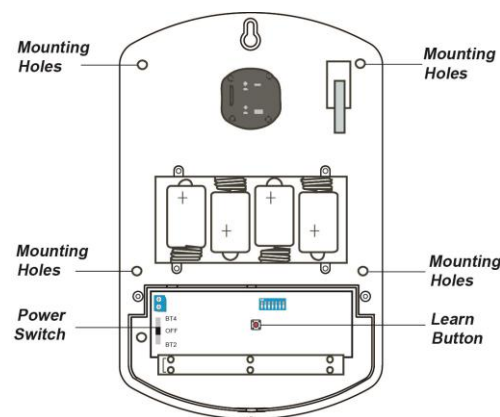
Changing the Battery

Step 1:   Disable the Siren Tamper function on the Control Panel (please refer to the Control Panel instruction manual). BX-23 will sound a beep to indicate the tamper switch is now disabled.

Step 2:   Release the cover-fixing screw at the bottom of BX-23 using a Philips screwdriver and pull the outer case out carefully.

Step 3:   Remove the LED cover by releasing the 4 screws securing the cover using a Philips screwdriver and removing the cover.

Step 4:   Slide Power switch to the off position.

Step 5:   The battery compartment is a large box in the BX-23 with a lid secured with 4 screws. Release the four screws using a Philips screwdriver and take off the compartment lid.

Step 6:   Remove the old batteries and press the Tamper Switch twice to discharge.

Step 7:   Insert new batteries into the battery compartment.

Step 8:   After inserting all batteries, slide the power switch to the BT4 terminal. All the LED will flash once and the buzzer will emit 1 beep as the bellbox powers on.

Step 9:   Replace the LED cover and secure it with the 4 screws securing the cover using a Philips screwdriver.

Step 10:   Replace the battery compartment lid and secure it with the four screws using a Philips screwdriver. Please do not over tighten.

Step 11:   Replace the Top cover by hooking the top of the Top cover onto the top of the base. Push the bottom of the Top cover onto the base and tighten the bottom screw using a Philips screwdriver.

Step 12:   Enter the Control Panel Program Siren webpage again to enable the Siren Tamper function again. The BX-23 will sound a beep to indicate the tamper switch is now activated.

Factory Reset

The Bellbox can be reset and memory contents cleared. Whenever the Bellbox is removed from the Control Panel, it should be put to factory reset to clear its Control Panel memory, otherwise the Bellbox will still raise alarm if it receives alarm signal from panel.

Step 1:   Disable the Siren Tamper function on the Control Panel (please refer to the Control Panel instruction manual). The Bellbox will sound a beep to indicate the tamper switch is now disabled.

Step 2:   Remove the Bellbox from Control Panel device list (please refer to the Control Panel instruction manual).

Step 3:   Release the bottom screw of the Top cover using a Philips screwdriver, remove the top cover..

Step 4:   Remove the LED cover by releasing the 4 screws securing the cover using a Philips screwdriver and removing the cover.

Step 5:   Slide the Power switch to the OFF terminal and (where applicable) disconnect the power adapter.

Step 6:   Insert batteries into battery compartment.

Step 7:   Press and hold the Learn Button and slide the Power switch to BT4 terminal. Continue to hold the Learn Button for 7 seconds. The LED groups will flash sequentially and the Bellbox will emit one beep.

Step 8:   Release the Learn Button when you hear the beep. The previous parameters in the Bellbox will be cleared and it will return to normal mode.

<NOTE>

☞   Whenever the Bellbox is removed from the Control Panel, it should be put to factory reset as well to clear its Control Panel memory.