

**Slim Model MP3 Voice Annunciator**

**Instruction Manual**

[ TYPE : BSV ]

Thank you for purchasing the **PATLITE** Slim Model MP3 Voice Annunciator for you application. Please read these instructions carefully before installation, maintenance and repair. Store this manual in a safe place for future reference. If you have any questions regarding this product, please contact our PATLITE Sales Representatives.

**Notice for Safe Operation**

In order to prevent any damage to the user and other personnel or to assets, note the following:

The warning indications are divided into the following classes according to the degree of danger or damage incurred when the warning is not taken into consideration and the product is not correctly used.

**Warning** Indicates an imminently dangerous condition : failure to follow the instructions may lead to death or serious injury.

**Caution** Indicates a potentially dangerous condition: failure to follow the instructions may lead to slight injury or property damage.

**PLEASE** Indicates something to observe before using this product. The disregard to this indication may lead to product malfunction or failure.

**NOTE** Notice regarding supplementary information or convenient explanation is indicated.

**1. To operate this product properly, observe the following:**

**WARNING**

- Be sure the power is disconnected before wiring or installing this product. Possibility of electric shock may occur.
- Do not disassemble or modify this product. Possibility of fire or electric shock may occur. If repair is needed, refer to [8. Before Requesting Repair]. For questions concerning our product or for when repair is necessary, refer to the end of this document for contacting your nearest PATLITE Sales Representative.
- Be careful not to miswire this product. Possible miswiring can cause product failure or fire.
- Be sure to stay within the operating voltage range. Possibility of fire, failure or malfunction may occur.
- Request the installation and wiring be performed by a professional contractor. Otherwise, there is the possibility that fire, electric shock or falling from high places may result.

**CAUTION**

- To protect the power supply and other internal circuitry, be sure to connect an external fuse.
- Do not install the product in a location where vibrations exceeding the specifications exist. If installing where vibrations do exist, install the product in the upright position to prevent the risk of product detaching and it falling, causing injury to a passer-by, etc.

Contrary to Warnings and Cautions indicated in this document, product failure due to mishandling, disassembly, modifications or natural disasters, etc. is not covered by any Warranty. Moreover, avoid any applications outside those indicated in this document.

**PLEASE**

- Do not use in an environment exposing strong radio waves or inductance noise. Noise may be induced from the speaker horn causing malfunction or failure.
- Do not use in an environment where corrosive gas is present. Possible cause of failure may occur.
- To prevent damage from static electricity, touch hands or other body parts to metals or an earth ground to discharge the body from static charge before handling static sensitive parts, such as the SD Card.
- Use the recommended torque when attaching parts for installation, etc.
- When this product is used for security purposes, it should be inspected daily. In case a malfunction should occur, it is recommended that you use this product together with other security products.
- Do not misplace parts, such as the terminal cover or front plate, while performing maintenance or repair of the product to prevent possible damage.

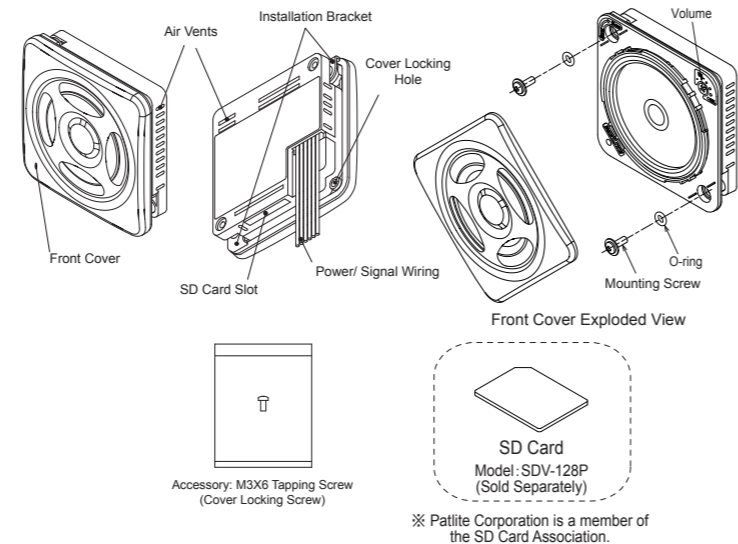
- Caution on copyright -  
Work that was recorded or copied from music CDs or other media used in public places may infringe upon copyrights and law enforcement may be imposed. When using a work that was recorded or copied from music CDs or other media, be sure to obtain permission from the author. In addition, copyright of audio/music data distributed or sold by PATLITE Corporation belongs to PATLITE. It is strictly prohibited to copy/reprint whole or partial contents of audio/music data belonging to PATLITE Corporation, or to transfer/sell such material on computer networks etc., without permission of the rightful holder.

**2. Model Number Configuration**

**BSV - 24NM - W**

- Rated Voltage  
24: DC 12 ~ 24V
- Transistor Type  
N: NPN  
P: PNP
- Recorded Messages  
M: Pre-recorded Messages  
Blank: None (15 built-in Alarms)
- Front Cover Color  
W: Off-white  
D: Dark Grey  
S: Silver

**3. Part Names**



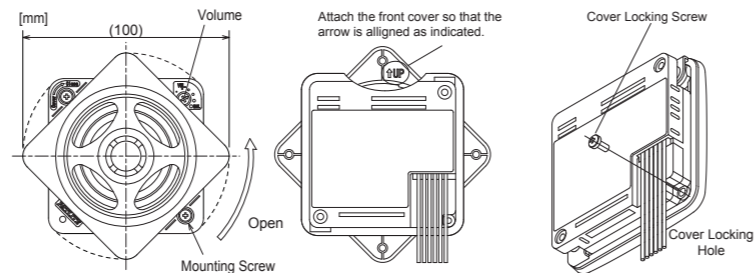
**4. Installation**

This product can be panel or wall mounted. Please attach in accordance with the procedure for mounting after removing the front cover.

**4-1. Front Cover**

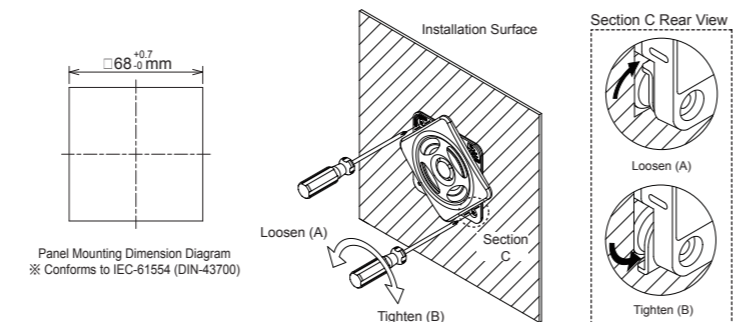
When installing or adjusting the volume control to this product, please open and close the front cover in the following manner.

- ① Turn the front cover in the counter clockwise direction 45 degrees. ※ Assure there is ample rotation space available for the front cover when mounting.
  - ② When attaching for wall-mounting, pull the front cover forward to remove, then pull-out the mounting screw and O-ring. (Refer to "3. Part Names" for the Front Cover Exploded View)
  - ③ Please attach the removed parts in steps ① and ② in the reverse order to reassemble. Attach the front cover so that the "UP" is on top. (Mounting Screw Recommended Torque: 0.3 N-m)
- Use the M3X6 tapping screw (Cover Locking Screw-included) indicated on the lower-right figure to fix the front cover. (Recommended Torque: 0.3 N-m)



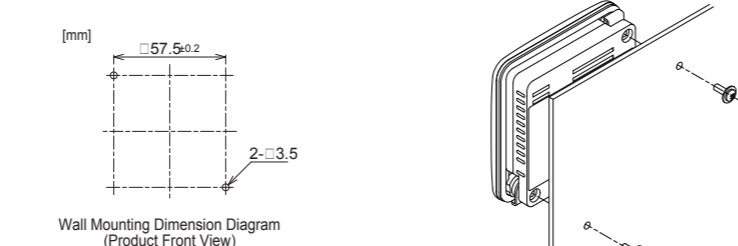
**4-2. Panel Mounting**

- ① Mount on a flat surface with a panel thickness of 1 mm to 3.5 mm for proper clamping. (Refer to the "Panel-mount Dimension drawing")
- ② Rotate the front cover counter-clockwise 45 degrees, then loosen and remove the mounting screws.
- ③ Check that the mounting bracket is in position (A) before inserting the product from the front, and secure it with the mounting screws, clamping the mounting nut to the rear of the mounting surface. (Recommended torque: 0.3 N-m)
- ④ Check that the product has been properly clamped before placing the front cover back on.



**4-3. Wall Mounting**

- ① Mount on a flat surface with a panel thickness of 1 mm to 3.5 mm for proper clamping. (Refer to the "Panel-mount Dimension drawing")
- ② Rotate the front cover counter-clockwise 45 degrees, then loosen and remove the mounting screws and O-rings.
- ③ Align the front cover with the hole positions, inserting the product from the front; insert the mounting screws from the back panel and tighten. (Recommended torque: 0.3 N-m)
- ④ Ensure the product is properly installed before installing the front cover.



**WARNING**  
● Request the installation and wiring be performed by a professional contractor. Otherwise, there is the possibility that fire, electric shock or falling from high places may result.

**CAUTION**

- Be sure the power is disconnected before installing this product. Failure to comply may result in electric shock.
- Ensure the installation surface is sufficient enough to handle the weight of the product, and where there is less vibration. Also, do not install onto a vehicle. Failure to comply will lead to injury or damage to the product.
- Use two screws when installing and tighten with the recommended torque. Failure to comply may result in product failure due to falling or over-torquing.
- Do not apply a heavy load to the wires. Failure to comply may result in damage due to an electric short.
- Do not turn the front cover more than 45°. Failure to comply may result in product damage.

**PLEASE**

- Install the product on a flat surface with no uneven surfaces. Failure to comply will weaken its resistance to water and dust.
- If installing the product where vibrations exist, it is recommended to make periodic inspections to ensure the mounting screws are properly tightened.
- When installing in high places, choose a location which is accessible by a scaffold, ladder, etc., for repairs.
- When operating the product by controlling the power ON/OFF, be sure to include a switch by which the power supply can be easily cut near the main power for safety.
- Do not block any air vents when installing this product.
- Applying thread locking adhesive to the Cover locking screw may result in damage to the product.

**NOTE**

- Depending on the mounting surface material, thickness and the volume of the product, a vibration sound may be generated from the mounting screws. To prevent it, take countermeasure steps by reinforcing the mounting screws.

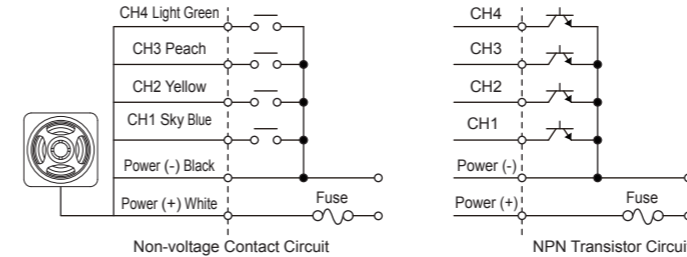
**5. Wiring**

When wiring to external contacts for the signal line, use non-voltage contacts such as a relay, switch or an NPN (PNP type also available) open collector circuit. Refer to table 1 below for contact capacity.

**Wiring Example**

- BSV-24N (NPN Transistor Type)

Do not short Power(+) to the CH line. Failure to do so will result in damage to the product.



**Wiring Example**

- BSV-24P (PNP Transistor Type)

Do not short Power(-) to the CH line. Failure to do so will result in damage to the product.

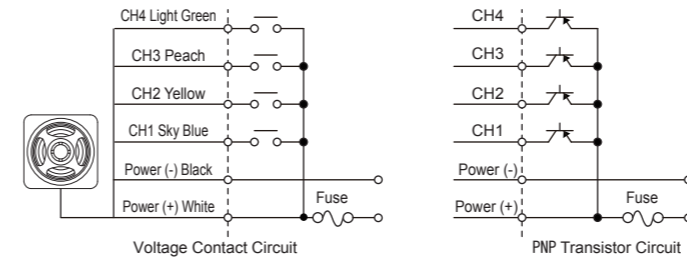


Table 1. Signal Contact Capacity

Current Capacity	15mA or more	Leakage Current	0.1mA or less
Withstanding Voltage	DC35V or more	"ON" Voltage(V <sub>sat</sub> )	1V or less

Table 2. Recommended Fuse

Rated Voltage	250V	Standard Fusion	Slow-blow
Rated Current	0.25A		

Table 3. Inrush Current Ratings

Inrush Current	17A
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**WARNING**

- Ensure the wiring is correct before connecting the power source. Miswiring may result in product damage.

**CAUTION**

- Be sure the power is disconnected before installing this product. Failure to comply may result in electric shock.
- Do not strongly pull or tug at the wires. Failure to comply may result in damage or failure to the product.

**PLEASE**

- To protect the power supply and other internal circuitry, be sure to connect an external fuse.
- Be sure to check for proper wiring before connecting the power.
- To countermeasure against interference noise, make wiring as short as possible and use shielded wires whenever possible. In addition, separate any signal lines which pass along high voltage cables or is susceptible to receive induction noises. Interference may influence signal inputs and cause product malfunction.
- If a non-voltage contact, such as a relay or switch etc., is used for the power supply line, consider inrush current capacity when selecting the contact. If the capacity is insufficient, it will cause pitting or welding of the contacts, causing malfunction.

**6. Directions for Operation**

The following corresponds to the factory settings of this product according to the model and message registration contents at the time of order.

- The following applies to Model BSV-24NM-□
  - The factory setting is set for the "Bit Input", and "Hold Playback" mode when registration data is loaded into the internal memory.
  - When message registration is up to four (4) messages: The factory setting is set for "Bit Input" and "Normal Playback" mode when registration data is loaded into the internal memory.
  - When message registration is for five (5) messages and above: The factory setting is set for "Binary Input" and "Normal Playback" mode when registration data is loaded into the internal memory.
- The MP3 data will play back properly when the proper transistor, bit/binary input with the signal input are integrated.

**NOTE**

- Even when starting two or more units simultaneously, a lag will occur during message playback.

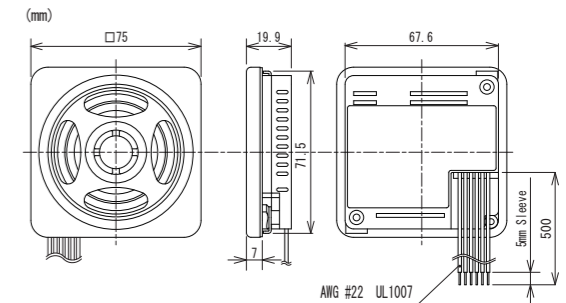
**6. Specifications**

Items	Specifications
Rated Voltage	DC 12 to 24V
Voltage Range	DC 10.8 to 26.4V
Power Consumption	Max. 3.5W <sup>(*)1</sup>
Sound Pressure Level	87dB or less: (For Panel Mount) / 85dB or less: (For Wall Mount) <sup>(*)2</sup>
Volume Control	Volume Adjustable
Number of Playback Messages	Bit Input: 5 (4) / Binary Input: 31 (7) <sup>(*)3</sup>
Initial Registered Data	The following alarm data is loaded when no set messages are ordered
	No. 1 Chime No. 2 Beep No. 3 Stutter No. 4 Bell No. 5 Yelp
	No. 6 Rapid Hi Lo No. 7 Melody Chime No. 8 Synthesized Piano No. 9 Synthesized Bell No. 10 Stutter + Bell
	No. 11 Synthesized Melody No. 12 Call Sign No. 13 Inverted Reveille No. 14 Galactic Motor No. 15 Two Tone
Audio File	MPEG1 Audio Layer III (MP3)
Bit Rate	32kbit/s, 64kbit/s, (Standard Rate)
Maximum Playback Time	Maximum Playback Time: 63sec (at Standard Bit Rate)
Internal Memory Size	508kB (MP3 data total)
Playback Startup Time	No less than 300ms (Bootstrap for Signal Input and Power Input Conditions)
File Format	SD Card Format: FAT16
	Recommended SD Card: SDV-128 (Sold Separately)
Operating Temperature Range	-10°C to +50°C
Storage Temperature Range	-20°C to +60°C
Relative Humidity	85% RH or less (No Condensation)
Mounting Direction	Panel Mount: Indoors: Upright, Sideways, Inverted / Outdoors: Upright Only
	Wall Mount: Indoors: Upright, Sideways, Inverted / Outdoors: None (Indoor Use Only)
Protection Rating	Panel Mount: IP54 (Upright Direction Only)
	Wall Mount: IP20
Insulation Resistance	More than 1MΩ at 500V DC between the terminals and chassis
Withstanding Voltage	500VAC applied for 1 minute between terminals and chassis without breaking insulation
Vibration Resistance	70m/s <sup>2</sup> at 30Hz in the X, Y and Z directions for 2 hours each
Mass (±10%)	100g

(\*)1 Test Conditions: DC24V, Max. Vol., Ch 1 to 4 on, 1kHz sine wave at -1dB  
 (\*)2 Test Conditions: Placed on a 300mm<sup>2</sup> base at a distance of 1 meter with a 1kHz sine wave at a -6dB input.  
 ※ Sound level of message will vary with the surrounding environment.

(\*)3 Values in brackets indicate available channels when sound reduction function is used

**[Outer Appearance]**



**NOTE**

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.  
 (2) This device must accept any interference received, including interference that may cause undersired operation.

- Despite the cautions and warnings provided in this manual, it is not the responsibility of PATLITE for any failure or damage occurred from mishandling.
- Due to changes, improvements, etc., the contents of this manual may change without advance notice.

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