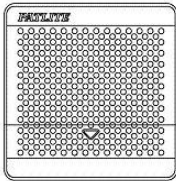
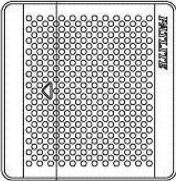
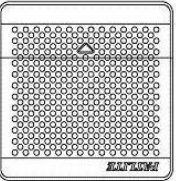


# SPECIFICATIONS

[General Specifications]

Product Name	Audible Alarm		
Model	BD-24A□-□		
Rated Voltage	12-24V DC		
Operating Voltage Range	10.8-26.4V DC		
Rated Power Consumption	Standby	0.5W	
	Max.	4.0W	
Inrush Current	1.0A or less (at 12V DC)		
	2.5A or less (at 24V DC)		
	2.5A or less (at 26.4V DC)		
Sound Pressure Level	Max. : 90 dB or more (with adjustable volume)		
Environmental Condition	Upright position from the Front Surface at a distance of 1m Volume at a maximum and "Rapid Hi-Lo" alarm played ※The sound pressure level may be lower depending on the tone color, usage environment.		
Input method	Level hold input (Sound is played while COM terminal and CH terminal are short-circuited.)		
CH Input	Bit input		
Number of Channels	4 channels		
Starting Time	Operation by CH signal: 170ms or less, Operation by turning on the power: 1s or less		
Priority Order for the Channels	CH4 > CH3 > CH2 > CH1		
Operating Ambient Temperature	- 20°C to +55 °C		
Operating Ambient Humidity	RH 85% or lower (no condensation)		
Mounting Location	Indoors		
Mounting Direction	Upright	Sideways	Inverted
			
Protection Rating	IP54(IEC 60529)		
Environmental Condition	Upright Installation, Front Surface Only		
Insulation Resistance	More than 1MΩ at 500V DC between the terminals and the chassis		
Withstand Voltage	500V AC applied for 1min between terminals and chassis without breaking insulation		
Vibration Resistance	19.6m/s <sup>2</sup> (IEC 60068-2-6)		
Mass (Tolerance ±10%)	160g		
Outer Dimensions	Refer to the Outer Dimension Drawing		
Conformity Standards	EMC Directive (EN 61000-6-4, EN 61000-6-2)		
	RoHS Directive (EN IEC 63000)		
	FCC Part15 SubpartB Class A		
	UL 464, CSA-C22.2 No. 205-M1983		
Remarks	UL Recognized Component (File No.S24210)		
	Conforms to the CE Requirements		
	Conforms to the UKCA Requirements		
Model	<b>BD - 24 A A - J</b>		
	■ Normal-rated Voltage	■ Sound chart type	■ Color of body front
	24 : 12-24V DC	A : Type A	J : Light Gray
		C : Type C	K : Dark Gray
		D : Type D	
	E : Type E		

### Sound List

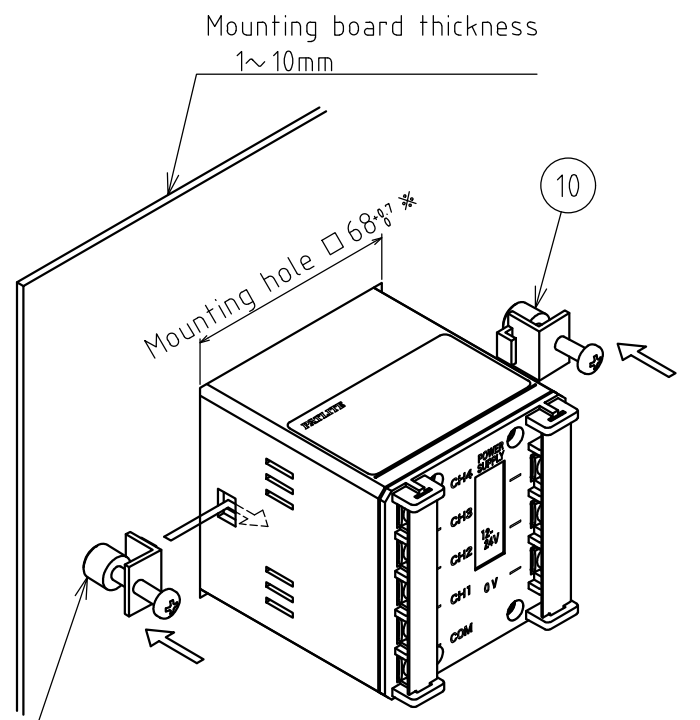
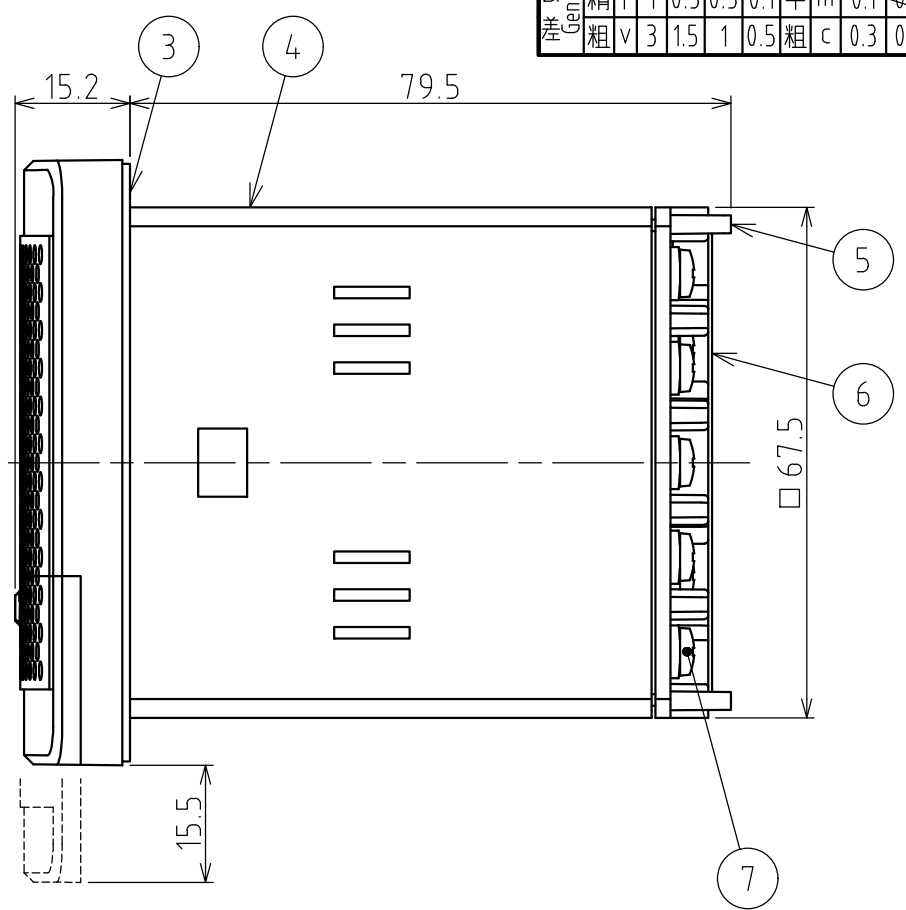
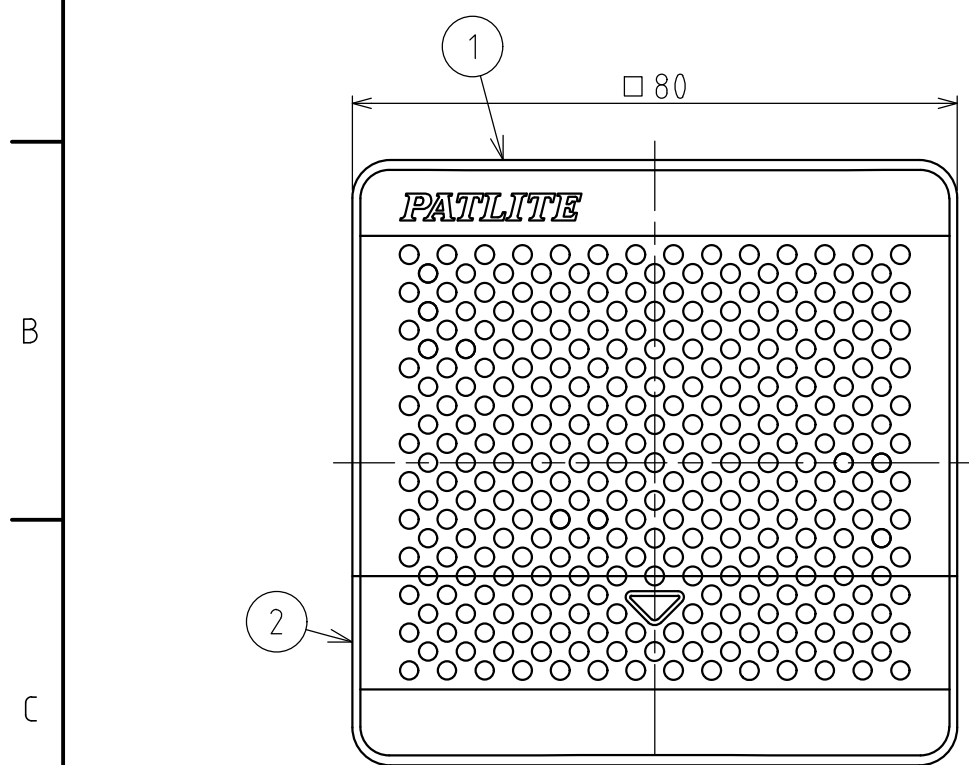
Type A	01	Beep (slow intermittent horn)	07	Synthesized Piano	13	Fur Elise	19	Mary had a little Lamb	25	Amaryllis	31	Grandfather's Clock
	02	Stutter (rapid intermittent horn)	08	Synthesized Bell	14	Maiden's Prayer	20	The camptown Races	26	Symphony No.40	32	Ave Maria
	03	Bell (clear highpitched bell)	09	Stutter + Bell	15	Minuet	21	Cuckoo	27	Silent Lakeside		
	04	Yelp (rapid siren)	10	Synthesized Melody Chime	16	Annie Laurie	22	Blacksmith in the village	28	Mountain musician		
	05	Rapid Hi-Lo	11	Chime	17	London bridge is falling down	23	On the Avignon bridge	29	Romance De Amour		
	06	Melody Chime	12	Call sign	18	Holdiridia	24	Daydream Believer	30	Petrouchka		
Type C	01	Beep (slow intermittent horn)	07	Synthesized Piano	13	Can't Take My Eyes off of You	19	Canon	25	I Don't Want to Miss a Thing	31	Imasugu Kisu Mi
	02	Stutter (rapid intermittent horn)	08	Synthesized Bell	14	Top of the World	20	Rara Sanshain	26	Yozorano Mukou	32	Haruyo Koi
	03	Bell (clear highpitched bell)	09	Stutter + Bell	15	The Entertainer	21	Uchuusenkan Yamato	27	Aiwa Katsu		
	04	Yelp (rapid siren)	10	Synthesized Melody Chime	16	Amazing Grace	22	Oshiete	28	Truth		
	05	Rapid Hi-Lo	11	Chime	17	Amairono Kamino Otome	23	Makenaide	29	Gattsudaze		
	06	Melody Chime	12	Call sign	18	Les Champs-Elysees	24	Gonna Fly Now(Theme for "Rocky")	30	Odoru Ponpokorin		
Type D	01	Beep (slow intermittent horn)	07	Synthesized Piano	13	Oribiao Kikinagara	19	Happy Birthday	25	Wiegenlied	31	When the Saints Go Marching In
	02	Stutter (rapid intermittent horn)	08	Synthesized Bell	14	A September	20	Hi Ho	26	Rudolph the Red-nosed Reindeer	32	Londonderry Air
	03	Bell (clear highpitched bell)	09	Chime	15	Doyoubino Koibito	21	I've been working on the Railroad	27	She Wore a Yellow Ribbon		
	04	Yelp (rapid siren)	10	Call sign	16	Akino Kehai	22	Bear Song	28	Oh My Darling Clementine		
	05	Rapid Hi-Lo	11	Runner	17	Saafu Tengoku Sukii Tengoku	23	Toys Go Cha Cha Cha	29	Yellow Rose of Texas		
	06	Melody Chime	12	Mamotte Agetai	18	Iro Howaitoburendo	24	Konnako Irukana	30	Yankee Doodle		
Type E	01	Beep (slow intermittent horn)	07	Synthesized Piano	13	Train Ride	19	Ringin Phone	25	Annie Laurie	31	Ave Maria
	02	Stutter (rapid intermittent horn)	08	Synthesized Bell	14	Galloping Hi-Lo	20	Two Tone	26	London bridge is falling down	32	Grandfather's Clock
	03	Bell (clear highpitched bell)	09	Stutter + Bell	15	Alien Chatter	21	Alarm Clock	27	Mary had a little Lamb		
	04	Yelp (rapid siren)	10	Synthesized Melody Chime	16	Falling Crystals	22	Ringin Hi-Lo	28	The camptown Races		
	05	Rapid Hi-Lo	11	Chime	17	Inverted Revellie	23	Fur Elise	29	Amaryllis		
	06	Melody Chime	12	Call sign	18	Galactic Motor	24	Minuet	30	Symphony No.40		

### Sound groups

Type A					Type C				
group	CH1	CH2	CH3	CH4	group	CH1	CH2	CH3	CH4
A ※1	Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear highpitched bell)	Yelp (rapid siren)	A ※1	Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear highpitched bell)	Yelp (rapid siren)
B	Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell	B	Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
C	Stutter + Bell	Synthesized Melody chime	Chime	Call sign	C	Stutter + Bell	Synthesized Melody Chime	Chime	Call sign
D	Fur Elise	Maiden's Prayer	Chime	Call sign	D	Can't Take My Eyes off of You	Top of the World	Chime	Call sign
E	Minuet	Annie Laurie	Chime	Call sign	E	The Entertainer	Amazing Grace	Chime	Call sign
F	London bridge is falling down	Holdiridia	Chime	Call sign	F	Amairono Kamino Otome	Les Champs-Elysees	Chime	Call sign
G	Mary had a little Lamb	The camptown Races	Chime	Call sign	G	Canon	Rara Sanshain	Chime	Call sign
H	Cuckoo	Blacksmith in the village	Chime	Call sign	H	Uchuusenkan Yamato	Oshiete	Chime	Call sign
I	On the Avignon bridge	Daydream Believer	Chime	Call sign	I	Makenaide	Gonna Fly Now(Theme for "Rocky")	Chime	Call sign
J	Amaryllis	Symphony No.40	Chime	Call sign	J	I Don't Want to Miss a Thing	Yozorano Mukou	Chime	Call sign
K	Silent Lakeside	Mountain musician	Chime	Call sign	K	Aiwa Katsu	Truth	Chime	Call sign
L	Romance De Amour	Petrouchka	Chime	Call sign	L	Gattsudaze	Odoru Ponpokorin	Chime	Call sign
M	Grandfather's Clock	Ave Maria	Chime	Call sign	M	Imasugu Kisu Mi	Haruyo Koi	Chime	Call sign
N	Holdiridia	Mountain musician	Stutter + Bell	Synthesized Melody chime	N	Les Champs-Elysees	Truth	Stutter + Bell	Synthesized Melody Chime
O	Mary had a little Lamb	Romance De Amour	Stutter + Bell	Synthesized Melody chime	O	Canon	Gattsudaze	Stutter + Bell	Synthesized Melody Chime
P ※2	The camptown Races	Cuckoo	Petrouchka	Grandfather's Clock	P ※2	Rara Sanshain	Uchuusenkan Yamato	Odoru Ponpokorin	Imasugu Kisu Mi
Type D					Type E				
group	CH1	CH2	CH3	CH4	group	CH1	CH2	CH3	CH4
A ※1	Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear highpitched bell)	Yelp (rapid siren)	A ※1	Beep (slow intermittent horn)	Stutter (rapid intermittent horn)	Bell (clear highpitched bell)	Yelp (rapid siren)
B	Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell	B	Rapid Hi-Lo	Melody Chime	Synthesized Piano	Synthesized Bell
C	Runner	Mamotte Agetai	Chime	Call sign	C	Stutter + Bell	Synthesized Melody Chime	Chime	Call sign
D	Oribiao Kikinagara	A September	Chime	Call sign	D	Train Ride	Galloping Hi-Lo	Chime	Call sign
E	Doyoubino Koibito	Akino Kehai	Chime	Call sign	E	Alien Chatter	Falling Crystals	Chime	Call sign
F	Saafu Tengoku Sukii Tengoku	Iro Howaitoburendo	Chime	Call sign	F	Inverted Revellie	Galactic Motor	Chime	Call sign
G	Hi Ho	Bear Song	Chime	Call sign	G	Ringin Phone	Two Tone	Chime	Call sign
H	Konnako Irukana	Rudolph the Red-nosed Reindeer	Chime	Call sign	H	Alarm Clock	Ringin Hi-Lo	Chime	Call sign
I	Oh My Darling Clementine	Yankee Doodle	Chime	Call sign	I	Fur Elise	Minuet	Chime	Call sign
J	Runner	Mamotte Agetai	Oribiao Kikinagara	A September	J	Annie Laurie	London bridge is falling down	Chime	Call sign
K	Doyoubino Koibito	Akino Kehai	Saafu Tengoku Sukii Tengoku	Iro Howaitoburendo	K	Mary had a little Lamb	The camptown Races	Chime	Call sign
L	Happy Birthday	HIHO	I've been working on the Railroad	Bear Song	L	Amaryllis	Symphony No.40	Chime	Call sign
M	Toys Go Cha Cha Cha	Konnako Irukana	Wiegenlied	Rudolph the Red-nosed Reindeer	M	Ave Maria	Grandfather's Clock	Chime	Call sign
N	She Wore a Yellow Ribbon	Oh My Darling Clementine	Yellow Rose of Texas	Yankee Doodle	N	Fur Elise	London bridge is falling down	Chime	Call sign
O	When the Saints Go Marching In	Londonderry Air	Runner	Mamotte Agetai	O	Annie Laurie	Minuet	Chime	Call sign
P ※2	Hi Ho	I've been working on the Railroad	Yankee Doodle	When the Saints Go Marching In	P ※2	Two Tone	Alarm Clock	Symphony No.40	Ave Maria

※1 Factory default setting(groupA)

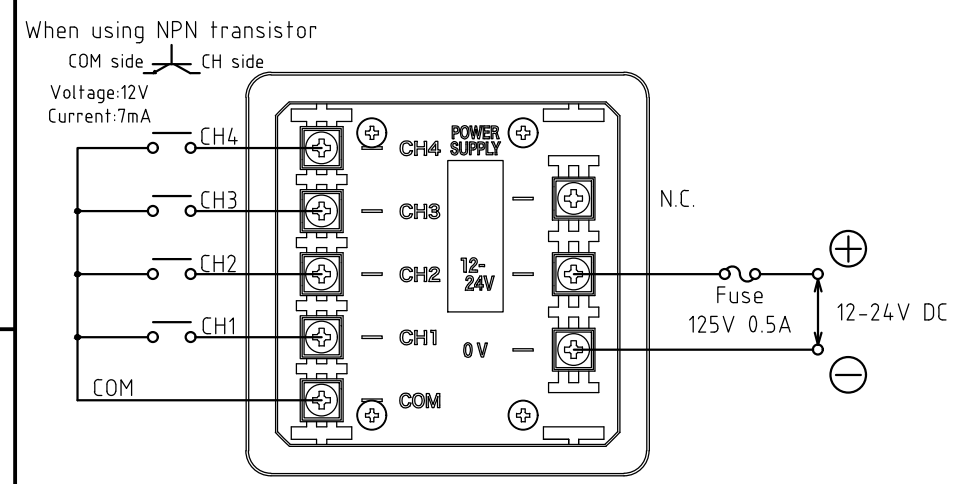
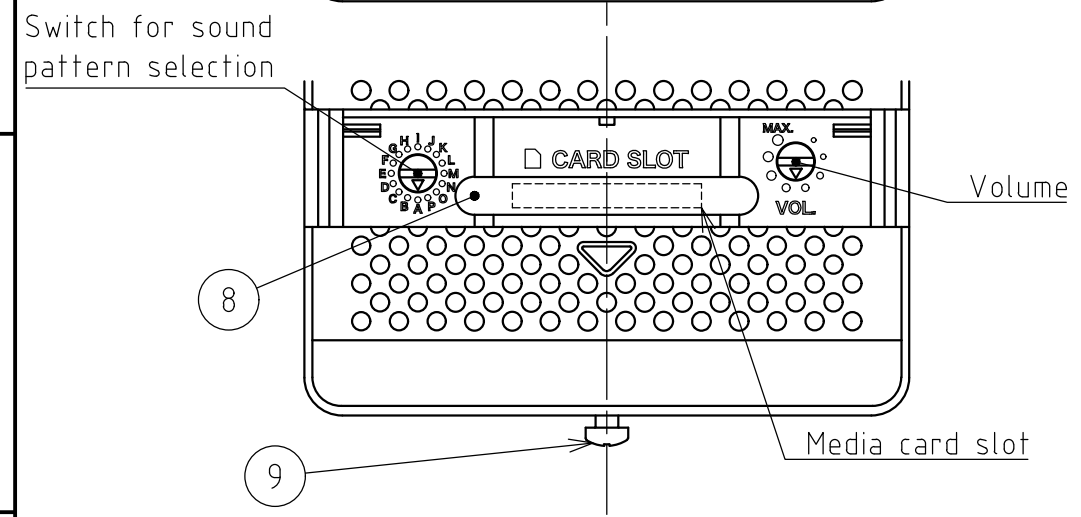
※2 Sounds can be chosen from the sound list and combine freely using an SD card (Type : SDV-2GP Sold separately)



Hang two Mounting Angles on the hole of product's side face and tighten it's screws after inserting product in mounting hole .  
(Recommended tightening torque 0.7±0.1N·m)

\* Mounting hole dimension complies with IEC-61554(DIN-43700).

Product mounting drawing



10	Mounting Angle	2	Accessory
9	+Pan Head Screw	1	M3X6 For Front Cover Mounting
8	Slot Waterproof Rubber	1	EPDM
7	+Pan Head Screw With Square Washer	8	M3X6 For Wiring
6	Terminal Cover	2	PC t=0.43
5	Rear Cover	1	ABS Dark Gray
4	Case	1	ABS Dark Gray
3	Waterproof Sheet	1	CR t=1.0
2	Front Cover	1	ABS Light Gray/Dark Gray
1	Front Panel	1	ABS Light Gray/Dark Gray
番号 No.	部品名 Part Name	数量 Qty.	記事 Remarks

機種 Model	BD-24A	特注No. S.P.No.	-	図名 Name	Outer Dimensions Drawing
品目コード Part No.	-	尺度 Scale	-	三角法 3rd Angle P.	単位 Unit mm
		株式会社		パトライト	
		PATLITE Corporation			