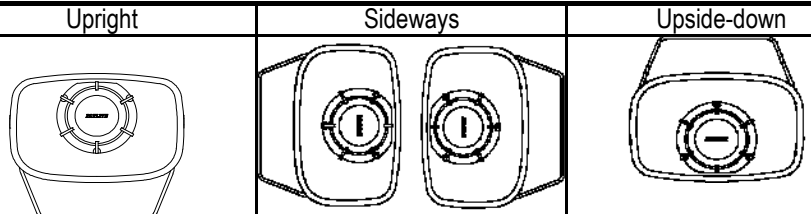
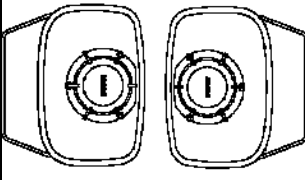
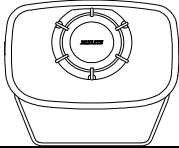
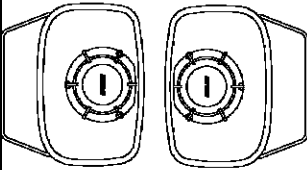
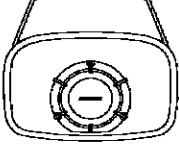


SPECIFICATIONS

1. Specifications

1-1. General Specification

| | | | | |
|--|--|---|---|-------------|
| Model | | EHV-M1 | | |
| Rated Voltage | | DC12 V-DC24 V | | |
| Operating Voltage Range | | DC10.8 V-DC35 V | | |
| Rated Current Consumption | Max. | 480 mA | | |
| | Typ. | 4.0 W (at DC12 V) | | |
| Rated Power Consumption (for NPN/No-voltage) | Conditions | Volume at maximum and a 1 kHz at -6 dB sinusoidal wave played back | | |
| | Max. | 5.8 W (at DC12 V) | | |
| | Conditions | At maximum volume and "Rapid Hi-Lo" alarm playback | | |
| | Typ. | 5.0 W (at DC12 V) | | |
| Rated Power Consumption (for PNP/Voltage Input) | Conditions | Volume at maximum and a 1 kHz at -6 dB sinusoidal wave played back | | |
| | Max. | 8.0 W (at DC31.6 V) | | |
| | Conditions | At maximum volume and "Rapid Hi-Lo" alarm playback | | |
| | Typ. | 5.0 W (at DC12 V) | | |
| Inrush Current | 4 A or less (at DC12 V) | | | |
| | 9 A or less (at DC24 V) | | | |
| | 12.5 A or less (at DC35 V) | | | |
| Operating Ambient Temperature | | -20 °C to +50 °C | | |
| Operating Ambient Humidity | | Less than 85 % (No condensation) | | |
| Storage Ambient Temperature | | -30 °C to +60 °C | | |
| Storage Ambient Humidity | | Less than 85 % (No condensation) | | |
| Mounting Location | | Indoors/Outdoors | | |
| Mounting Direction | Upright | Sideways | | Upside-down |
| |  | |  | |
| Protection Rating | | IP65 (IEC 60529) | | |
| Environmental Condition | | Upright Installation | | |
| Insulation Resistance | | More than 1 MΩ at 500 VDC between the terminals and the chassis | | |
| Withstand Voltage | | 500 VAC applied for 1 min between terminals and chassis without breaking insulation | | |
| Vibration Resistance | | 45.0 m/s ² IEC 60068-2-6:2007 (Upright Position) | | |
| Impact Resistance | | 250 m/s ² 6 ms for 1,000 times (3 axis 1 direction); 500 m/s ² 11 ms for 3 times (3 axis both directions) IEC 60068-2-27:2008 (Upright Position) | | |
| Mass (Tolerance: ±10%) | | 1.25 kg | | |
| Sound Pressure Level (Alarm) | | Maximum: 110 dB | | |
| Environmental Conditions | | Upright position from horn opening at a distance of 1 m. Volume at maximum and "Stutter" alarm played. | | |
| Sound Pressure level (MP3) | | Maximum: 105 dB | | |
| Environmental Conditions | | Volume at maximum and a 1 kHz at -6 dB sinusoidal wave played back from the horn opening. | | |
| Outer Dimensions | | Refer to 6. Outer Dimension Drawing | | |
| Conformity Standards | | EMC Directive (EN 61000-6-4, EN 61000-6-2) RoHS Directive (EN 50581) UL 464, CSA-C22.2 No. 205-M1983 FCC Part15 SubpartB Class A KC (KN22, KN24) | | |
| Remarks | | UL Listed (File No.S24210) | | |
| No.EHV-W18F-1 18 | | | | |
| PATLITE Corporation | | | | |

| | | | | |
|---|---|---|---|-------------|
| Model | | EHV-M2 | | |
| Rated Voltage | | AC100 V-AC240 V (50/60 Hz) | | |
| Operating Voltage Range | | AC90 V-AC264 V (50/60 Hz) | | |
| Rated Current Consumption | Max. | 150 mA | | |
| Rated Power Consumption (for NPN/No-voltage) | Typ. | 5.3 W (at AC240 V) | | |
| | Conditions | Volume at maximum and a 1 kHz at -6 dB sinusoidal wave played back | | |
| | Max. | 7.9 W (at AC264 V) | | |
| | Conditions | At maximum volume and "Rapid Hi-Lo" alarm playback | | |
| Inrush Current | | 6 A or less (at AC100 V) | | |
| | | 15 A or less (at AC240 V) | | |
| | | 23 A or less (at AC264 V) | | |
| Operating Ambient Temperature | | -20 °C to +50 °C | | |
| Operating Ambient Humidity | | Less than 85 % (No condensation) | | |
| Storage Ambient Temperature | | -30 °C to +60 °C | | |
| Storage Ambient Humidity | | Less than 85 % (No condensation) | | |
| Mounting Location | | Indoors/Outdoors | | |
| Mounting Direction | Upright | Sideways | | Upside-down |
| |  |  |  | |
| Protection Rating | | IP65 (IEC 60529) | | |
| Environmental Condition | | Upright Installation | | |
| Insulation Resistance | | More than 1 MΩ at 500 VDC between the terminals and the chassis | | |
| Withstand Voltage | | 1500 VAC applied for 1 min between terminals and chassis without breaking insulation | | |
| Vibration Resistance | | 45.0 m/s ² IEC 60068-2-6:2007 (Upright Position) | | |
| Impact Resistance | | 250 m/s ² 6 ms for 1,000 times (3 axis 1 direction); 500 m/s ² 11 ms for 3 times (3 axis both directions) IEC 60068-2-27:2008 (Upright Position) | | |
| Mass (Tolerance: ±10%) | | 1.25 kg | | |
| Sound Pressure Level (Alarm) | | Maximum: 110 dB | | |
| Environmental Conditions | | Upright position from horn opening at a distance of 1 m. Volume at maximum and "Stutter" alarm played. | | |
| Sound Pressure level (MP3) | | Maximum: 105 dB | | |
| Environmental Conditions | | Volume at maximum and a 1 kHz at -6 dB sinusoidal wave played back from the horn opening. | | |
| Outer Dimensions | | Refer to 6. Outer Dimension Drawing | | |
| Compliance Standards | | UL 464, CSA-C22.2 No. 205-M1983 FCC Part15 Subpart B Class A KC (KN22, KN24) | | |
| Remarks | | UL Listed (File No.S24210) There are no contents of controlled substances exceeding the threshold for the RoHS Directive. | | |
| No.EHV-W18F-2 18 | | | | |

PATLITE Corporation

1-2. Performance Specifications

| MP3 Mode Switch Condition | MP3 setting ON | MP3 setting OFF |
|-----------------------------|---|-------------------------|
| Volume Control | Volume Adjustable: Min. - Max. | |
| | Sound Reduction Input: It is a value specified as a reduction from the currently adjusted volume. (None, -10 dB, -20 dB, -30 dB selection) | - |
| Sound Playback | MP3 data / Alarm/Melody (Standard) | Alarm/Melody (Standard) |
| Number of Playback Channels | Bit Input: 8/binary input: 63 | |
| Alarm/Melody | 7. Sound List Reference | |
| Playback Mode | normal playback / input priority playback / hold playback / memory playback | |
| | Mode Switch (DIPSW) Selection Possible. | Hold Playback |
| Playback start-up time | 300 ms or less (Signal Input and Power Supply Startup) | |

1-3. MP3 Data Specification

| | |
|--------------------------------|--|
| Playback File | MPEG1-Audio Layer III (MP3, Fs:44.1kHz) |
| Bit Rate | 32 Kbit/s, 64 Kbit/s (Standard), 128 Kbit/s Constant Bit Rate (CBR) |
| Maximum Playback Time | A total of 220 seconds (calculated with one MP3 file at the standard bit rate) |
| Internal Memory Size | 2 MByte (Management Territory is Included) |
| Supported Memory Card | SD Card/SDHC Card |
| | Recommended Parts: SDV-2GP (option) |
| SD Card Format | FAT 16, 32 |
| Supported Application Software | PATLITE Playlist Editor 2 |
| | (MP3 data rewriting, alarm/melody selection) |
| Remarks | MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thomson Licensing. |

1-4. Signal Input Specification

| | | |
|--|---|--------------------------------------|
| Signal Input Priority | Channel 8 > Channel 7 > Channel 6 > Channel 5 > Channel 4 > Channel 3 > Channel 2 > Channel 1 (except for a binary input) | |
| Contact Control Method | [EHV-M1]: Non-voltage/Voltage Contact [EHV-M2]: Non-voltage Contact | |
| Contact Closed-Circuit Current | 12mA or less | |
| Contact Open-Circuit Voltage | [EHV-M1]: 6V or less [EHV-M2]: 8V or less | |
| Contact Input (Circuit Configuration) | <p>Non-voltage Contact</p> | <p>Voltage Contact (EHV-M1 Only)</p> |
| | Transistor Input (Circuit Configuration) | <p>NPN Transistor</p> |
| No.EHV-W18F-3_18 | | |

2. Model

EHV - M1 H F M

Rated Voltage

M1 DC12 V-DC 24V
M2 AC100 V-AC 240V

Wiring Specifications

H Cable
T Terminal Buss

Melody Type

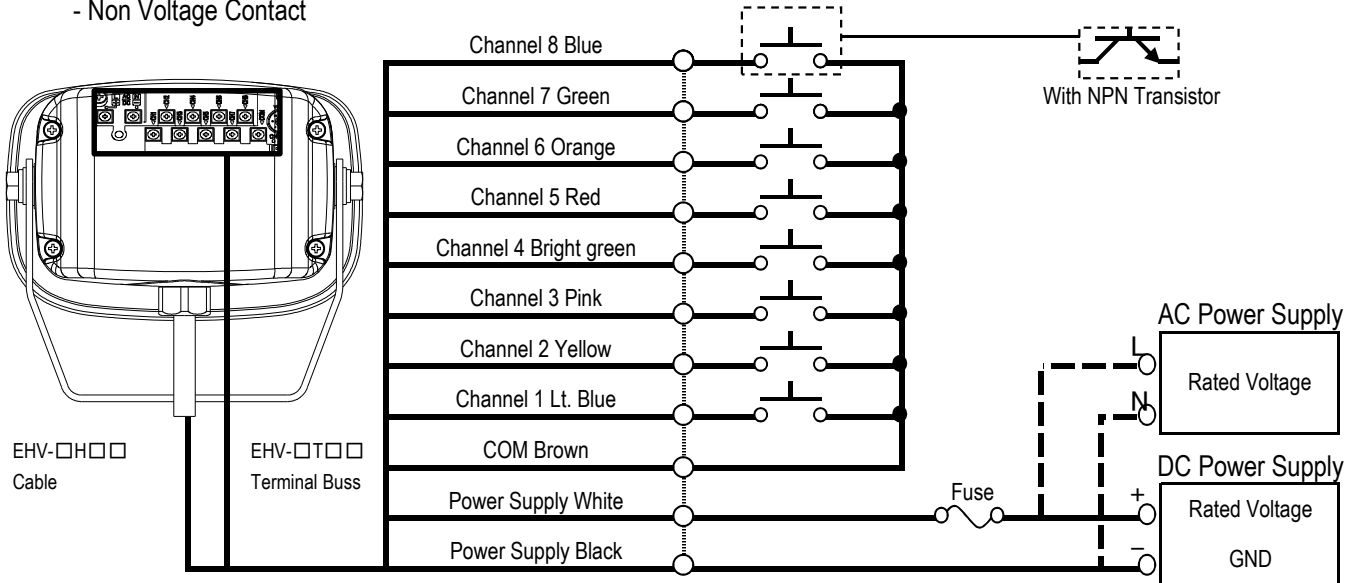
F Type F
G Type G

Message Recording

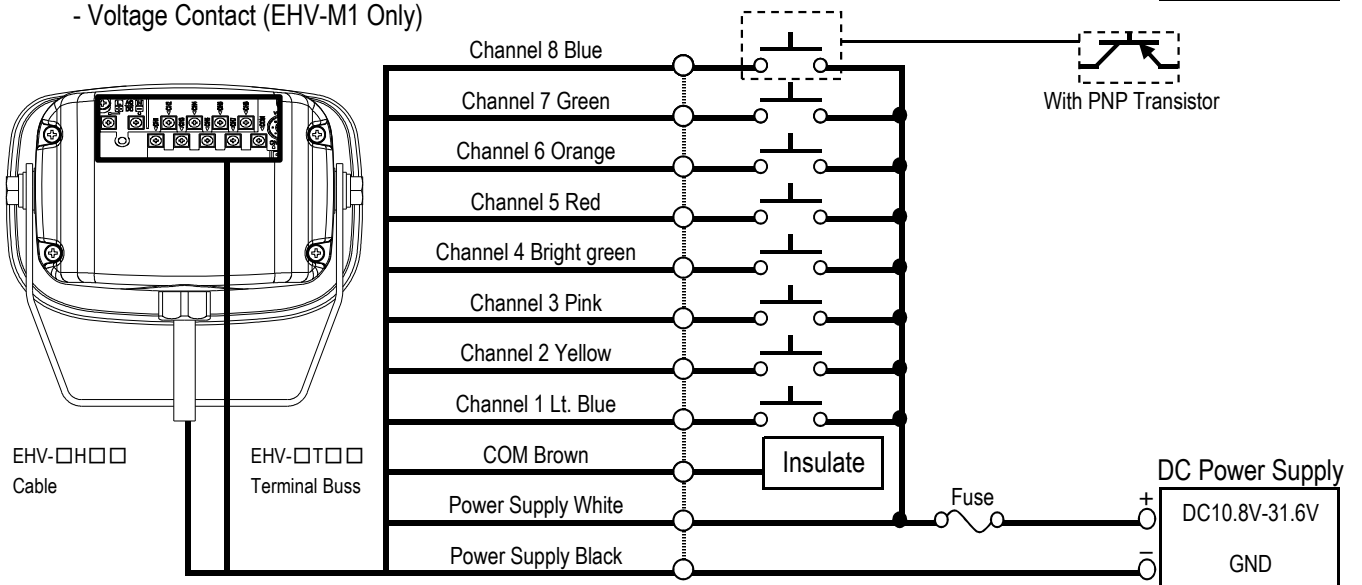
Blank None
M Factory Installed Messages

3. Wiring Diagram

- Non Voltage Contact



- Voltage Contact (EHV-M1 Only)



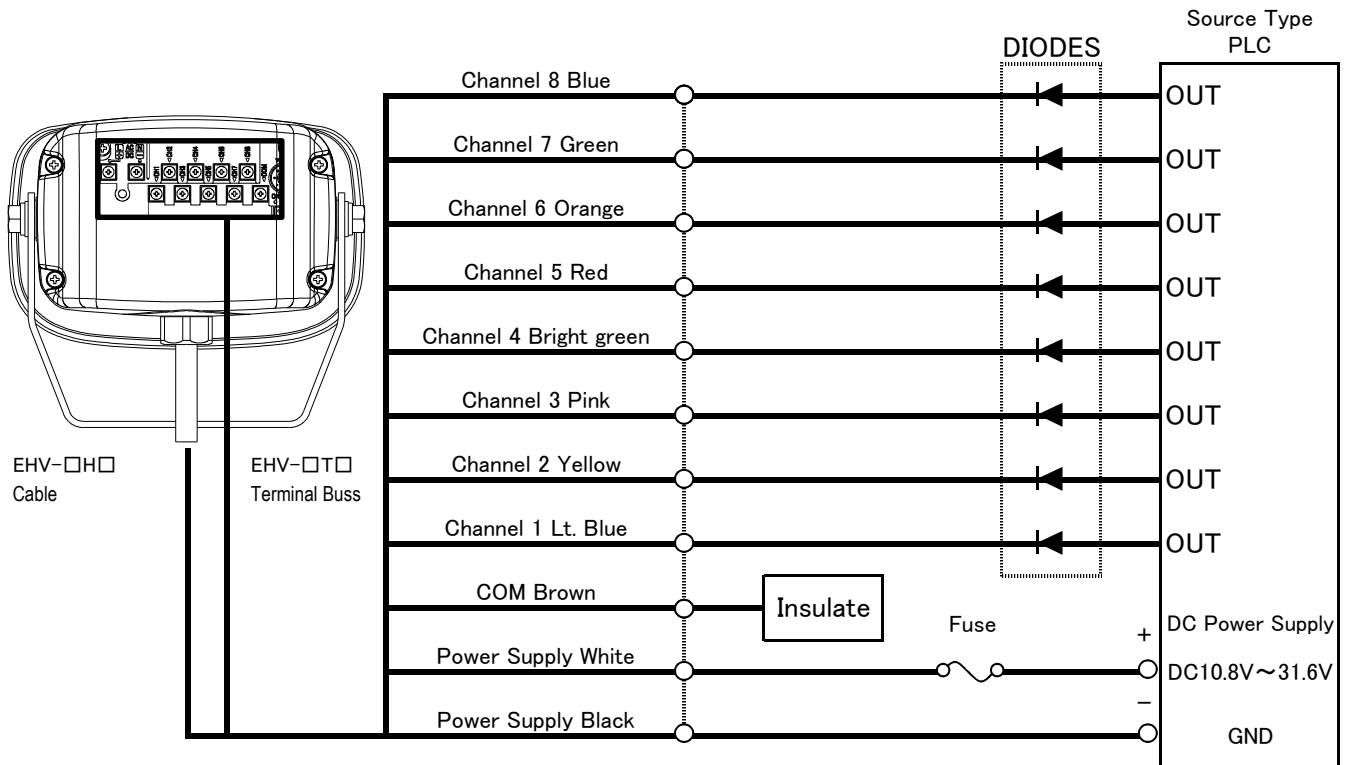
* Each channel color is indicated by the cable or lead wire.

* Voltage contact input should be in the range of DC10.8 V to DC31.6 V.

* When using the Terminal type model, round terminals with M3 insulated coating is recommended when wiring to the Terminal.

Recommended Parts: J.S.T. Manufacturing Co., Ltd. N1.25-3 (article corresponding to RoHS)

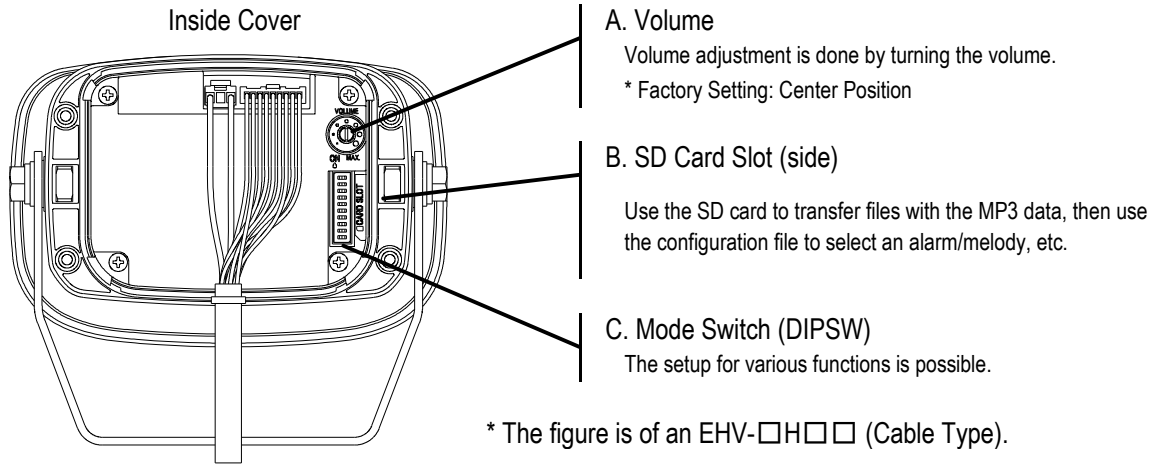
When connecting a Source-type PLC, be sure to insert a diode as indicated in the drawing below. Failure to insert a diode will lead to possible malfunction.



※Select a diode with ratings indicated below.

| | |
|-----------------|--------------|
| Forward Current | 50mA or more |
| Reverse Voltage | 50V or more |

4. Part Names and Functions



Mode Switch Function Assignment

| Mode Switch | (6) Forced Playback OFF | (6) Forced Playback ON |
|-------------------|---|---|
| (5) MP3 Setup OFF | <p>(6) Forced Playback (5) MP3 Setup (4) Sound Mode Open (2) Channel Input Method (1) Sound Group</p> | <p>(6) Forced Playback (5) MP3 Setup (4) Sound Mode Open (7) Tone Selection</p> |
| (5) MP3 Setup ON | <p>(6) Forced Playback (5) MP3 Setup (4) Sound Mode (3) Playback Mode (2) Channel Input Method Open</p> | <p>(6) Forced Playback (5) MP3 Setup (4) Sound Mode Open (7) Tone Selection</p> |

Mode Switch Function List

| Function Name | Setting Index | Details |
|--------------------------|---|---------------------------------------|
| (1) Sound Group | Groups A-P | Refer to "5-1. Sound Group." |
| (2) Channel Input Method | Binary/Bit | Refer to "5-2. Channel Input Method." |
| (3) Playback Mode | Normal playback / Input priority playback / Hold playback / Memory playback | Refer to "5-3. Playback Mode." |
| (4) Sound Mode | Factory Mode / Public Address Mode | Refer to "5-4. Sound Mode." |
| (5) MP3 Setup | MP3 Setup ON/OFF | Refer to "5-5. MP3 Setup." |
| (6) Forced Playback | Forced Playback ON/OFF | Refer to "5-9. Forced Playback." |
| (7) Tone Selection | Playback Sound Selection | |

5. Functionality Details

5-1. Sound Group

When "(5) MP3 setup" switch is being turned OFF, the sound group can be selected from up to 16 variations from groups A-P with the Mode Switch (DIPSW).

A sound group cannot be selected when "(2) channel input method" is set for binary.

Refer to "7. sound list" for the Mode Switch (DIPSW) and sound group combination which can be selected.

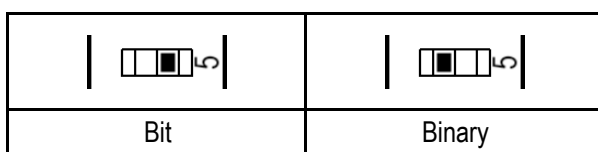
* Factory Setting: Group A

5-2. Channel Input Method

Channel input mode can be selected for bit/binary with the Mode Switch (DIPSW).

With the bit input, channels 1-8 can be used to reproduce up to eight channels.

With the binary input, channels 1-6 can be used to reproduce up to 63 channels.



* Factory Setting : EHV-□□□ ... Bit
 EHV-□□□M ... Specified Messages less than 8: Bit
 Specified Messages greater than 9: Binary

Binary Input Table

| Sound No. | Channel | | | | | | | | Sound No. | Channel | | | | | | | |
|-----------|---------|---|---|---|---|---|---|---|-----------|---------|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 | 0 | | | | | | | | 33 | 0 | | | | | 0 | | |
| 2 | | 0 | | | | | | | 34 | | 0 | | | | 0 | | |
| 3 | 0 | 0 | | | | | | | 35 | 0 | 0 | | | | 0 | | |
| 4 | | | 0 | | | | | | 36 | | | 0 | | | 0 | | |
| 5 | 0 | | 0 | | | | | | 37 | 0 | | 0 | | | 0 | | |
| 6 | | 0 | 0 | | | | | | 38 | | 0 | 0 | | | 0 | | |
| 7 | 0 | 0 | 0 | | | | | | 39 | 0 | 0 | 0 | | | 0 | | |
| 8 | | | | 0 | | | | | 40 | | | | 0 | | 0 | | |
| 9 | 0 | | | 0 | | | | | 41 | 0 | | | 0 | | 0 | | |
| 10 | | 0 | | 0 | | | | | 42 | | 0 | | 0 | | 0 | | |
| 11 | 0 | 0 | | 0 | | | | | 43 | 0 | 0 | | 0 | | 0 | | |
| 12 | | | 0 | 0 | | | | | 44 | | | 0 | 0 | | 0 | | |
| 13 | 0 | | 0 | 0 | | | | | 45 | 0 | | 0 | 0 | | 0 | | |
| 14 | | 0 | 0 | 0 | | | | | 46 | | 0 | 0 | 0 | | 0 | | |
| 15 | 0 | 0 | 0 | 0 | | | | | 47 | 0 | 0 | 0 | 0 | | 0 | | |
| 16 | | | | | 0 | | | | 48 | | | | | 0 | 0 | | |
| 17 | 0 | | | | 0 | | | | 49 | 0 | | | | 0 | 0 | | |
| 18 | | 0 | | | 0 | | | | 50 | | 0 | | | 0 | 0 | | |
| 19 | 0 | 0 | | | 0 | | | | 51 | 0 | 0 | | | 0 | 0 | | |
| 20 | | | 0 | | 0 | | | | 52 | | | 0 | | 0 | 0 | | |
| 21 | 0 | | 0 | | 0 | | | | 53 | 0 | | 0 | | 0 | 0 | | |
| 22 | | 0 | 0 | | 0 | | | | 54 | | 0 | 0 | | 0 | 0 | | |
| 23 | 0 | 0 | 0 | | 0 | | | | 55 | 0 | 0 | 0 | | 0 | 0 | | |
| 24 | | | | 0 | 0 | | | | 56 | | | | 0 | 0 | 0 | | |
| 25 | 0 | | | 0 | 0 | | | | 57 | 0 | | | 0 | 0 | 0 | | |
| 26 | | 0 | | 0 | 0 | | | | 58 | | 0 | | 0 | 0 | 0 | | |
| 27 | 0 | 0 | | 0 | 0 | | | | 59 | 0 | 0 | | 0 | 0 | 0 | | |
| 28 | | | 0 | 0 | 0 | | | | 60 | | | 0 | 0 | 0 | 0 | | |
| 29 | 0 | | 0 | 0 | 0 | | | | 61 | 0 | | 0 | 0 | 0 | 0 | | |
| 30 | | 0 | 0 | 0 | 0 | | | | 62 | | 0 | 0 | 0 | 0 | 0 | | |
| 31 | 0 | 0 | 0 | 0 | 0 | | | | 63 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 32 | | | | | | 0 | | | | | | | | | | | |

0 -- Switch ON

5-3. Playback Mode

The Mode Switch (DIPSW) can select from four different kinds of playback modes.
 When "(5) MP3 setup" is OFF, the hold playback function is active, regardless of the Mode Switch position.

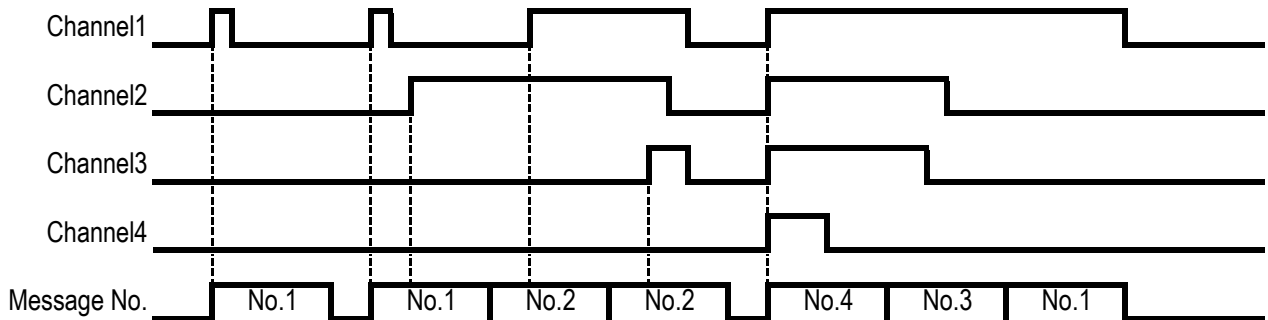
| | | | |
|-----------------|-------------------------|---------------|-----------------|
| | | | |
| Normal Playback | Input Priority Playback | Hold Playback | Memory Playback |

* Factory Setting : Normal Playback

- Normal Playback

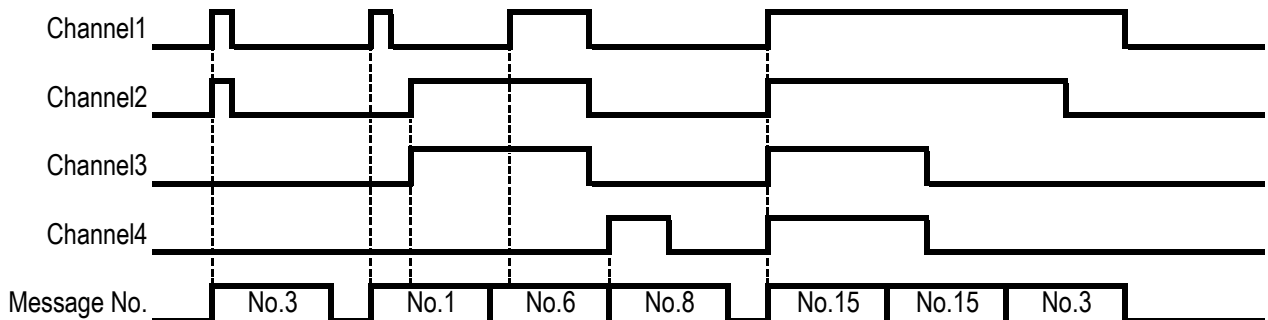
If a signal input (Playback) is a pulse input, playback is ended as soon as the pulse input is off.
 The signal input (Playback) is maintained only when the input is held on.
 The signal input (Playback) becomes invalid during playback.

- Channel Input Method : Bit Input



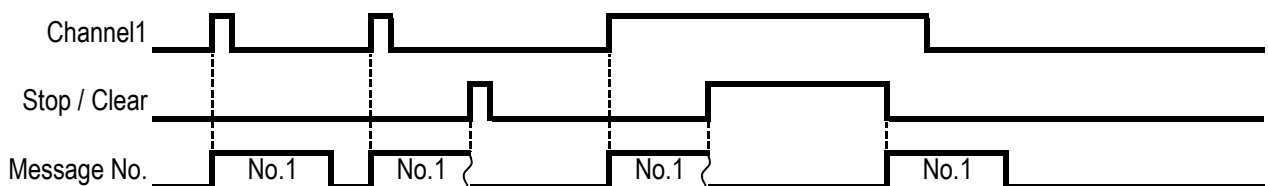
* All channels above 5 are the same

- Channel Input Method : Binary Input



* All channels above 5 are the same

- During a Stop / Clear Input



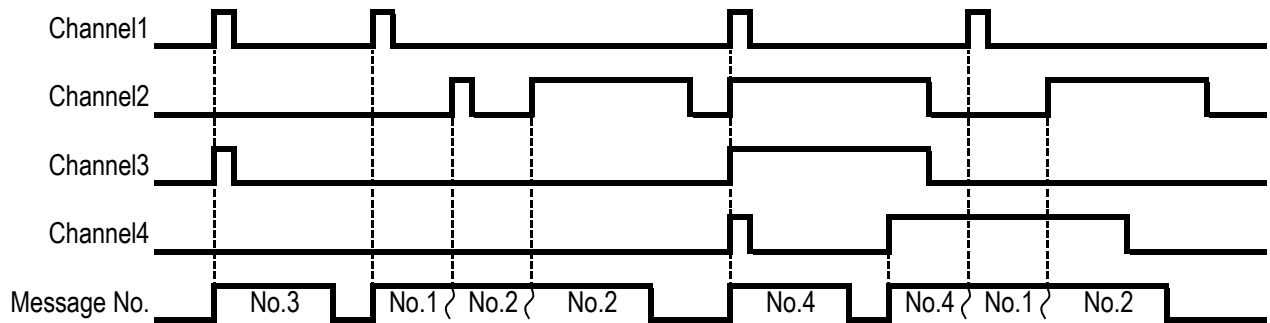
* The way line indicates when playback is stopped.

- Input Priority Playback

When a signal input (Playback) is on during playback, the playback is stopped and the channel from the signal input (Playback) is reproduced.

If the signal input (Playback) is a pulse input, even with the input held, playback plays only once.

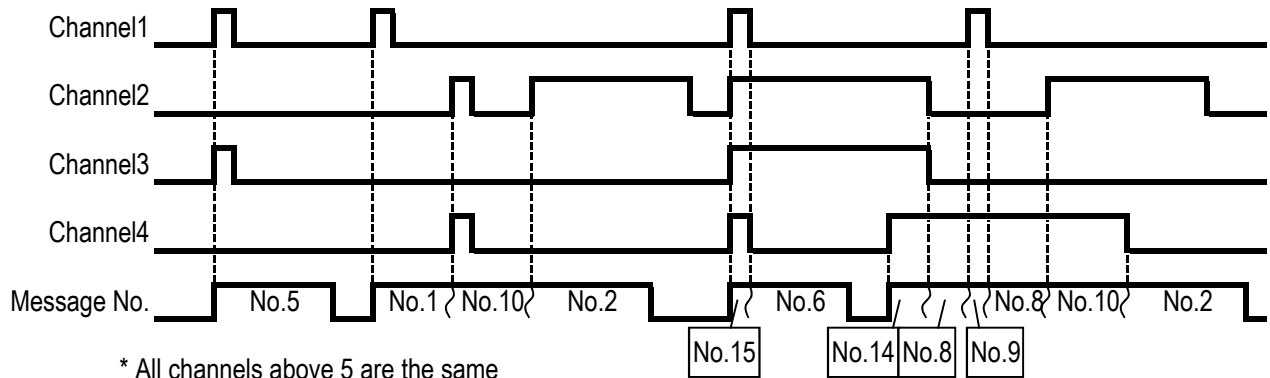
- Channel Input Method : Bit Input



* All channels above 5 are the same

* The wavy line indicates when playback was stopped and the message No. which was the priority signal input (Playback) is played.

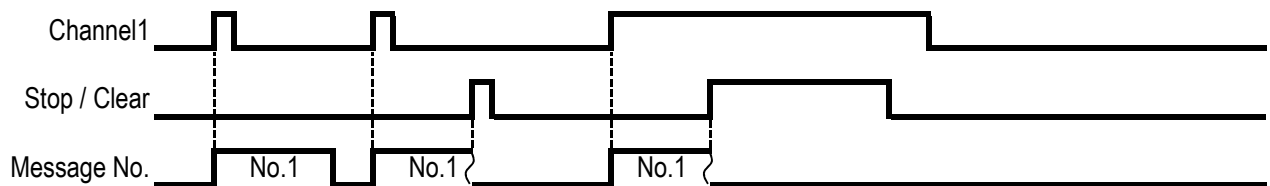
- Channel Input Method : Binary Input



* All channels above 5 are the same

* The wavy line indicates when playback was stopped and the message No. which was the priority signal input (Playback) is played.

- During a Stop / Clear Input

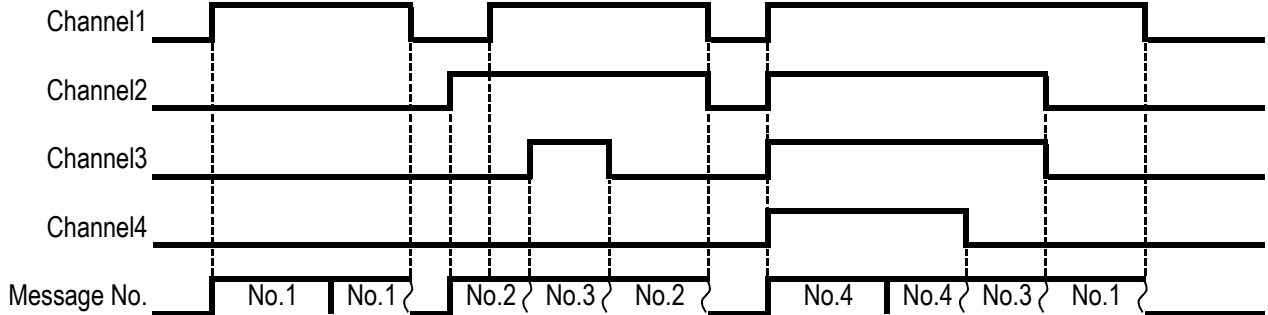


* The wavy line indicates when playback is stopped.

- Hold Playback

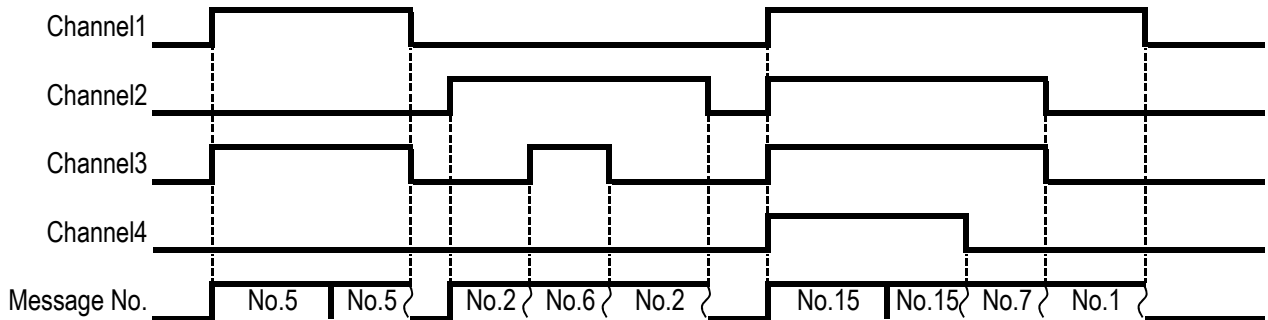
It only plays back while the signal input (Playback) is maintained.
 Playback is stopped when the signal input (Playback) is removed.
 Repeated playback is done by maintaining a signal input (Playback).
 It does not play back if a signal input (Playback) is a pulse input.

- Channel Input Method : Bit Input



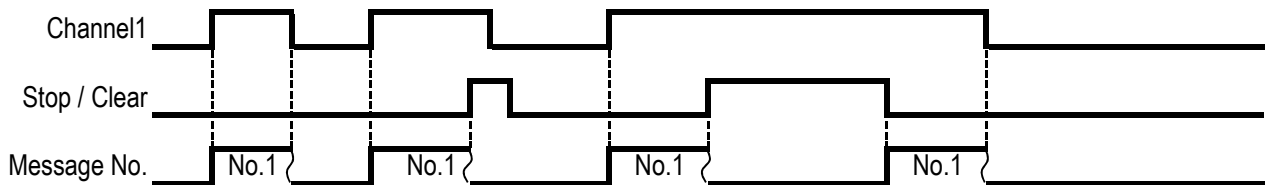
* All channels above 5 are the same
 * The wavy line indicates when playback was stopped and the message No. which was the changed signal input (Playback) is played.

- Channel Input Method : Binary Input



* All channels above 5 are the same
 * The wavy line indicates when playback was stopped and the message No. which was the changed signal input (Playback) is played.

- During a Stop / Clear Input



* The wavy line indicates when playback is stopped.

- Memory Playback

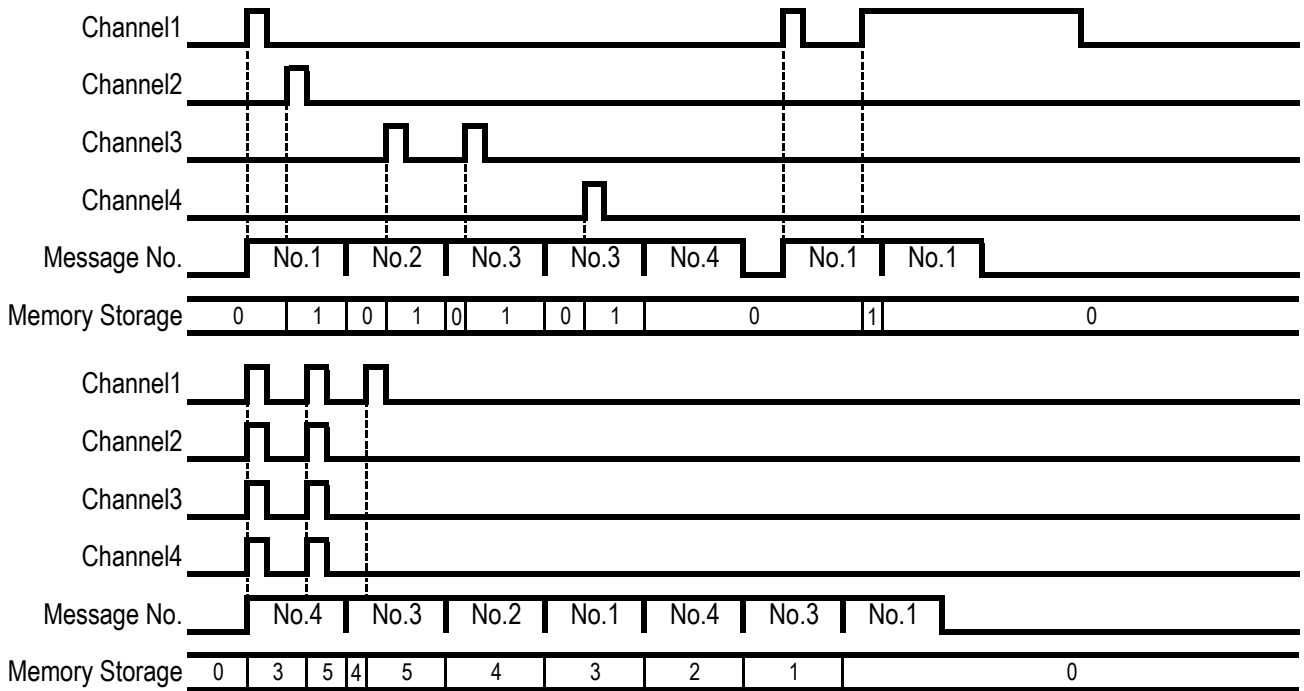
When several signal inputs (Playback) are entered during playback, the memory of up to 5 signal inputs will play the corresponding message No.

Signal inputs beyond the memory capacity is ignored.

When playback is ended, the next available channel stored in memory will play.

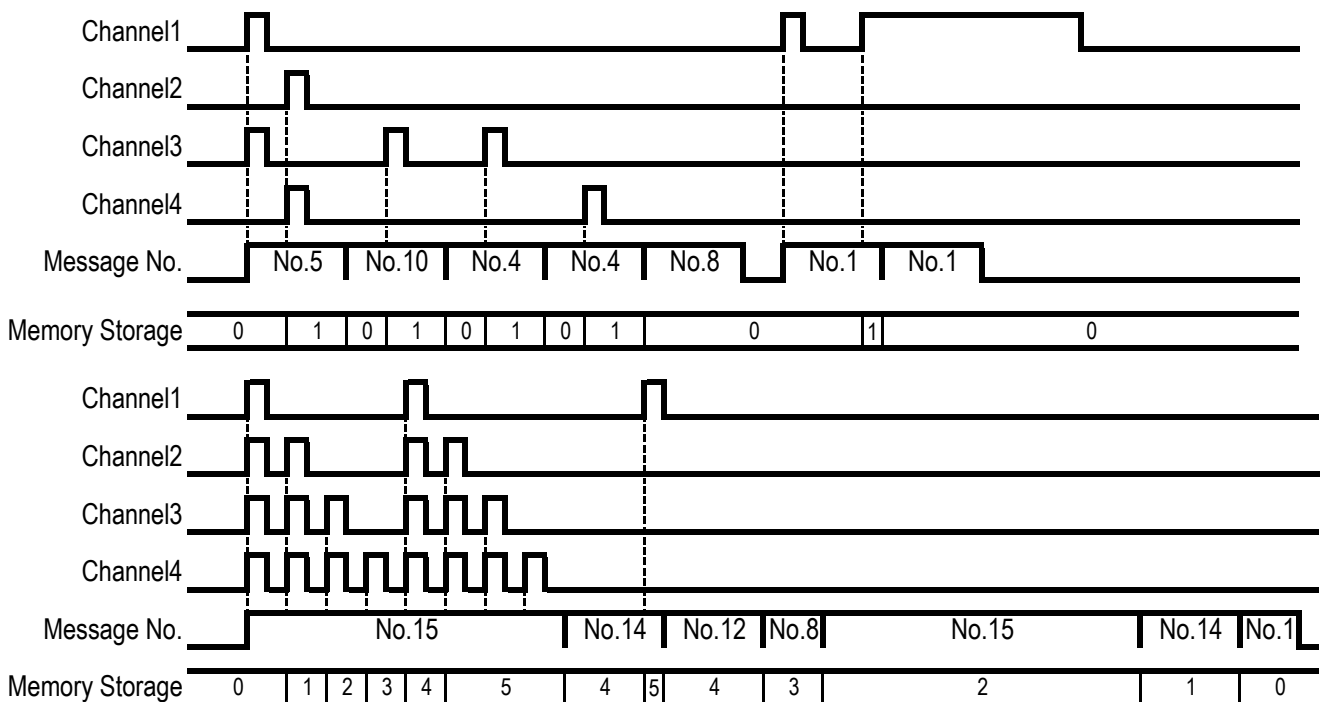
If the signal input (Playback) is a pulse input, even with the input held, the next message in memory is played back only once.

- Channel Input Method : Bit Input



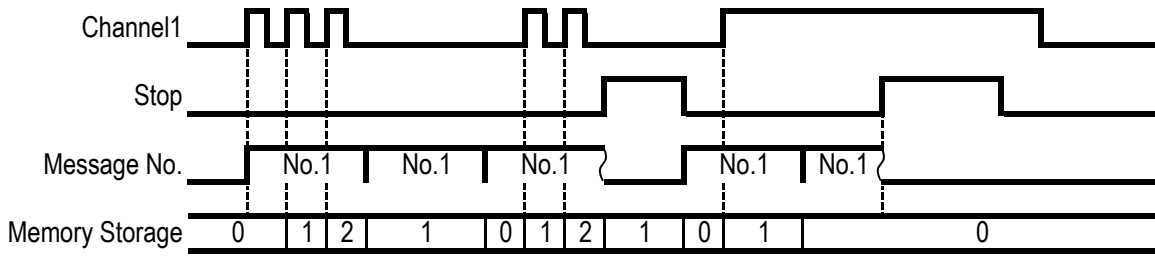
* All channels above 5 are the same

- Channel Input Method : Binary Input



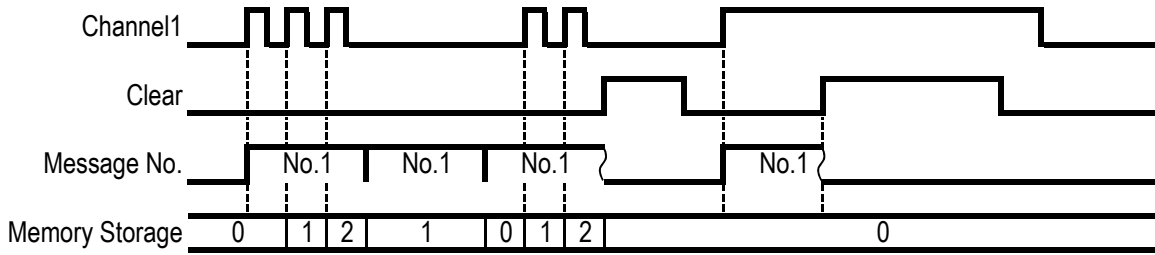
* All channels above 5 are the same

- During a Stop input



* The wavy line indicates when playback is stopped.

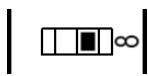
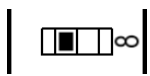
- During a Clear input



* The wavy line indicates when playback is stopped.

5-4. Sound Mode

The alarm/melody audibility reproduction can be selected with the Mode Switch (DIPSW).



| | |
|---|---|
|  |  |
| "Factory Mode" | "Public Address Mode" |

- Factory Mode -- The audible sound is suitable as a warning alarm.
- PA Mode -- The audible sound is suitable for public announcements.

* Factory Setting: "Factory Mode"

5-5. MP3 Setup

The MP3 can be selected for ON/OFF with the Mode Switch (DIPSW).

| | |
|---|---|
|  |  |
| MP3 setting OFF | MP3 setting ON |

- MP3 setup ON ... MP3 data + Alarm/Melody
 - MP3 data and alarm/melody data can be freely combined.
 - MP3 data can be freely written, using an SD card.
 - An alarm/melody can be selected from the built-in sounds.
 - Registration of MP3 data, and a select and registration of an alarm melody are exclusive software (PATLITE Playlist Editor 2).
It carries out by using it.
 - Playback modes can be selected.
- MP3 setup OFF ... Alarm/Melody
 - The alarm/melody can be selected among the built-in sounds.
 - The 63 sounds are divided and registered into 16 kind of groups.
 - A sound group is selected with the Mode Switch (DIPSW).
 - The Playback mode is made into the hold playback mode.

* Factory Setting : EHV-□□□ ... MP3 setup OFF
 EHV-□□□M ... MP3 setup ON

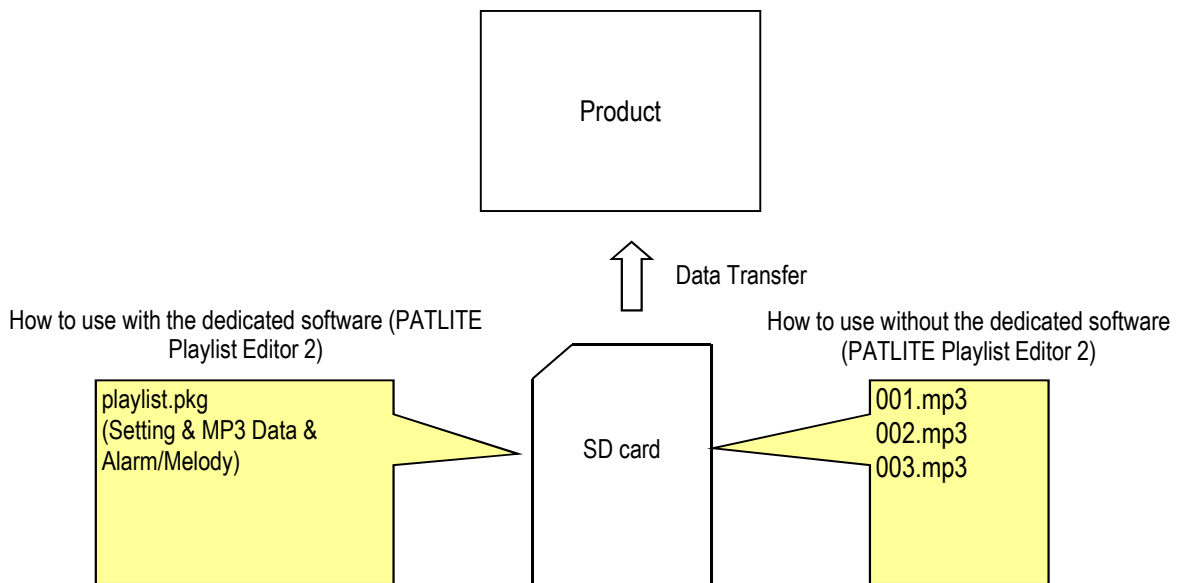
5-6. MP3 Data Rewriting

With the optional SD Card, MP3 data can be freely rewritten.

Rewriting MP3 data requires the use of dedicated software (PATLITE Playlist Editor 2) and designating a regular file name.

The built-in alarm/melodysounds are not overwritten.

| Item | When the dedicated software (PATLITE Playlist Editor 2) is used | When the dedicated software (PATLITE Playlist Editor 2) is not used |
|--|---|---|
| Playback message No. The number of MP3 data per one | A maximum of 16 data files (It is combined freely and can playback in order) | One piece of data |
| Individual MP3 data settings are made | When setting up sound volume, end of playback blank-time, and Repeat Playback. | Cannot set up manually. |
| Channel Assignment Function | When setting up to choose "playback", "sound reduction", "stop", and "clear". | All are assigned for "playback". |



Recommended SD Card: SDV-2GP (option)

5-7. Channel function (Function Which Uses Exclusive Soft "PATLITE Playlist Editor 2")

Dedicated software (PATLITE Playlist Editor 2) can be used to assign functions to each signal input. In order for the channel function assignments to be used, the setup data has to be transmitted to the product via the SD Card.

If the MP3 setup mode is OFF, this function becomes invalid.

- Playback
The corresponding channels are played back.
- Sound Reduction
The volume of sound being played back is decreased.
A maximum of two sound reduction channels can be assigned.
When two sound reduction values are set up, three sound reduction levels can be made.
- Stop
The channel during playback is stopped.
In the Memory Playback Mode, playback is stopped and the next channel in memory is played next.
A playback input is ignored during a STOP input.

- Clear
In the memory playback mode, all channels in memory is erased when an input occurs.
In other playback modes outside memory playback, the same operation as the stop function occurs.
If simultaneous inputs for CLR and STOP occurs, priority is given to the CLR input.
When channels are assigned for sound reduction, STOP, and CLR, the available number of playback channels decrease.

Example: For a maximum number of bit inputs;

```
channel1 - channel5    => playback
channel6              => sound reduction
channel7              => stop
channel8              => clearance
```

In this case, the available number of playback channels is set to five.

* Factory Setting : channels 1-8 are all set as "Playback".

5-8. Sound Reduction

- (6) When Forced Playback is OFF (the function which uses exclusive soft "PATLITE Playlist Editor 2")
Using the dedicated software (PATLITE Playlist Editor 2), If a signal input is assigned with the sound reduction function, the sound level of the message being played back will be reduced.
(Refer to "5-7. Channel Assignment Function")
The input state for sound reduction 1 and sound reduction 2 can be set up for three steps in sound reduction. (-10dB, -20dB, -30dB)

In order for the sound reduction function to be used, the setup data to assign the channel has to be transmitted to the product via an SD card.

| | | | | |
|-----------------------|--------------------|---------------|---------------|---------------|
| Sound Reduction 1 | With no input | With an input | With no input | With an input |
| Sound Reduction 2 | With no input | With no input | With an input | With an input |
| Sound Reduction Level | No Sound Reduction | -10dB | -20dB | -30dB |

* Factory Setting: Sound Reduction Function OFF

- (6) Forced Playback ON
With a Forced Playback, if a signal line input occurs, the playback sound can be reduced.
The sound reduction level can be selected by the channel input.
Priority rank is channel3>channel2>channel1.

| Signal Input Condition | Sound Reduction Volume |
|------------------------|------------------------|
| None | No Sound Reduction |
| Channel1 | -10dB |
| Channel2 | -20dB |
| Channel3 | -30dB |

5-9. Forced Playback

When the Forced Playback mode is turned ON, it will play back after power is supplied, even with no signal input. It can be used for testing the playback volume or when controlled by power supply start-up. The Forced Playback is selected for ON/OFF with the Mode Switch (DIPSW). The sound (channel) to play back can be selected by the Mode Switch (DIPSW).

MP3 setting ON : MP3 data and alarm/melody is selected with Mode Switch Numbers 1 - 6.

MP3 setting OFF : Built-in Sounds are selected with Mode Switch Numbers 1 - 6.



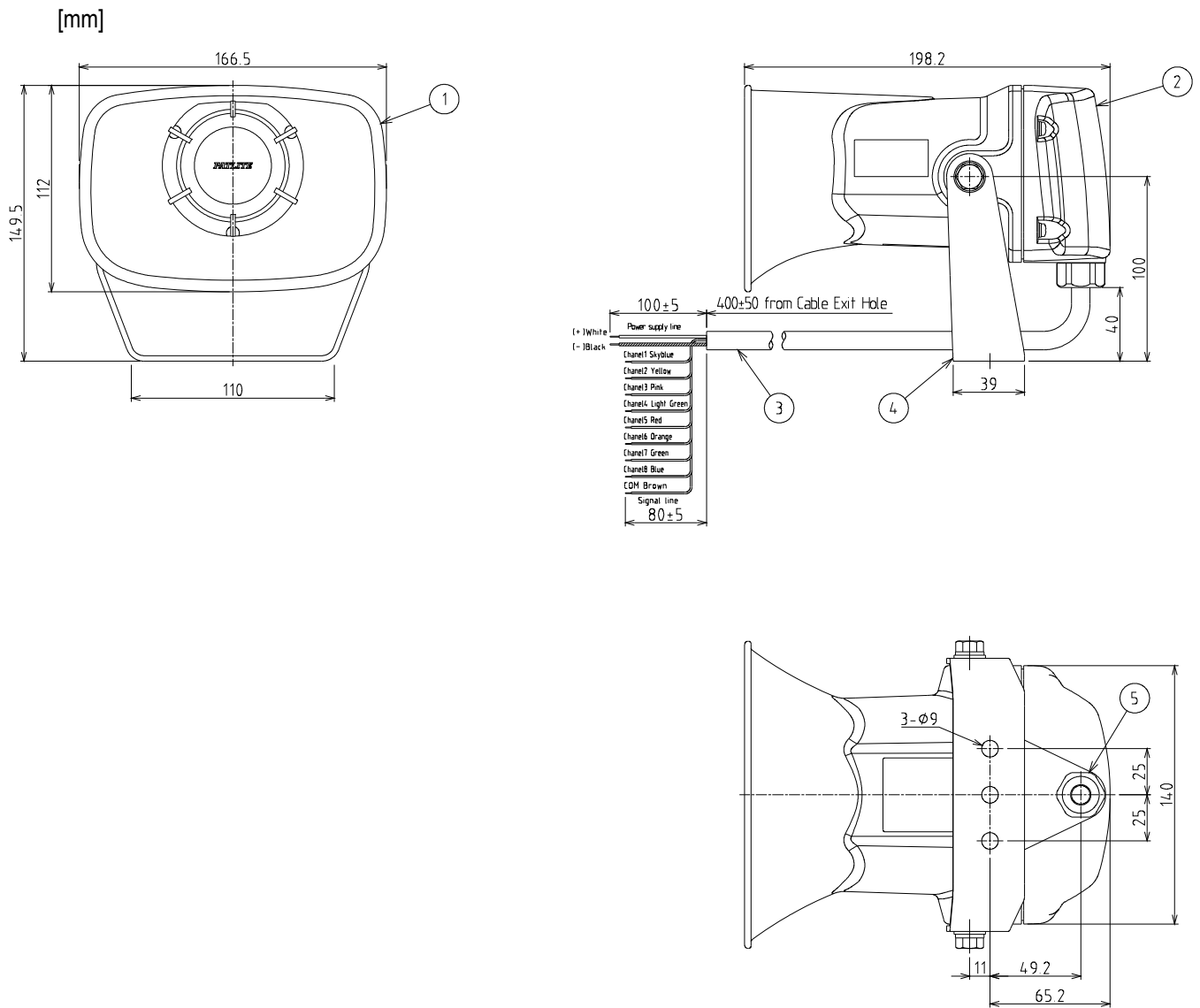
* Factory Setting: Forced Playback OFF

Sound Select Diagram

| Sound No. | Mode Switch | | | | | | Sound No. | Mode Switch | | | | | | |
|-----------|-------------|---|---|---|---|---|-----------|-------------|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | | 1 | 2 | 3 | 4 | 5 | 6 | |
| 1 | | | | | | | 33 | | | | | | | 0 |
| 2 | 0 | | | | | | 34 | 0 | | | | | | 0 |
| 3 | | 0 | | | | | 35 | | 0 | | | | | 0 |
| 4 | 0 | 0 | | | | | 36 | 0 | 0 | | | | | 0 |
| 5 | | | 0 | | | | 37 | | | 0 | | | | 0 |
| 6 | 0 | | 0 | | | | 38 | 0 | | 0 | | | | 0 |
| 7 | | 0 | 0 | | | | 39 | | 0 | 0 | | | | 0 |
| 8 | 0 | 0 | 0 | | | | 40 | 0 | 0 | 0 | | | | 0 |
| 9 | | | | 0 | | | 41 | | | | 0 | | | 0 |
| 10 | 0 | | | 0 | | | 42 | 0 | | | 0 | | | 0 |
| 11 | | 0 | | 0 | | | 43 | | 0 | | 0 | | | 0 |
| 12 | 0 | 0 | | 0 | | | 44 | 0 | 0 | | 0 | | | 0 |
| 13 | | | 0 | 0 | | | 45 | | | 0 | 0 | | | 0 |
| 14 | 0 | | 0 | 0 | | | 46 | 0 | | 0 | 0 | | | 0 |
| 15 | | 0 | 0 | 0 | | | 47 | | 0 | 0 | 0 | | | 0 |
| 16 | 0 | 0 | 0 | 0 | | | 48 | 0 | 0 | 0 | 0 | | | 0 |
| 17 | | | | | 0 | | 49 | | | | | 0 | 0 | |
| 18 | 0 | | | | 0 | | 50 | 0 | | | | 0 | 0 | |
| 19 | | 0 | | | 0 | | 51 | | 0 | | | 0 | 0 | |
| 20 | 0 | 0 | | | 0 | | 52 | 0 | 0 | | | 0 | 0 | |
| 21 | | | 0 | | 0 | | 53 | | | 0 | | 0 | 0 | |
| 22 | 0 | | 0 | | 0 | | 54 | 0 | | 0 | | 0 | 0 | |
| 23 | | 0 | 0 | | 0 | | 55 | | 0 | 0 | | 0 | 0 | |
| 24 | 0 | 0 | 0 | | 0 | | 56 | 0 | 0 | 0 | | 0 | 0 | |
| 25 | | | | 0 | 0 | | 57 | | | | 0 | 0 | 0 | |
| 26 | 0 | | | 0 | 0 | | 58 | 0 | | | 0 | 0 | 0 | |
| 27 | | 0 | | 0 | 0 | | 59 | | 0 | | 0 | 0 | 0 | |
| 28 | 0 | 0 | | 0 | 0 | | 60 | 0 | 0 | | 0 | 0 | 0 | |
| 29 | | | 0 | 0 | 0 | | 61 | | | 0 | 0 | 0 | 0 | |
| 30 | 0 | | 0 | 0 | 0 | | 62 | 0 | | 0 | 0 | 0 | 0 | |
| 31 | | 0 | 0 | 0 | 0 | | 63 | | 0 | 0 | 0 | 0 | 0 | |
| 32 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |

0 -- Switch ON

6. Outer Dimension Drawing



| Number | Part Names | Material | Quantity |
|--------|------------------|-------------------------------------|----------|
| 1 | Case | PC | 1 |
| 2 | Cover | PC | 1 |
| 3 | Cable | UL2464 (AWG18x2C+AWG22x9C) ϕ 9 | 1* |
| 4 | Angle Bracket | SUS304 t=3.0 | 1 |
| 5 | Waterproof Gland | PA | 1 |









* (3) is attached only to EHV-□H.

7. Sound List

| | | | | | | | | | | | | |
|--------|----|--------------------|----|-------------------------|----|-------------------------------|----|--------------------------|----|--------------------------------|----|-------------------|
| Type F | 01 | Beep | 13 | Galactic Hovercraft | 25 | Ending Notice Chime 2 | 37 | Daydream Believer | 49 | HATARAKU KURUMA | 61 | Furusato |
| | 02 | Stutter | 14 | Game Intermission | 26 | Fur Elise | 38 | Amaryllis | 50 | NINGENTTE IINA | 62 | BEAUTIFUL DREAMER |
| | 03 | Bell | 15 | Spring Melody | 27 | A Maiden's Prayer | 39 | Mozart Symphony No.40 | 51 | Robinson | 63 | JOLLY HOLIDAY |
| | 04 | Yelp | 16 | Jalopy Horn | 28 | Bach Minuet in Gmjr | 40 | Quiet Lakeside | 52 | WORLD FOOTBALL ANTHEM | | |
| | 05 | Rapid Hi-Lo | 17 | ET Doorbell | 29 | Annie Laurie | 41 | Mountain Musician | 53 | BANZAI SUKIDE YOKATTA | | |
| | 06 | Melody Chime | 18 | RR-crossing | 30 | London Bridge is falling down | 42 | Spanish Romance | 54 | NAMONAKI UTA | | |
| | 07 | Synthesized Piano | 19 | Train Whistle | 31 | Hol-Di-Li-Dia | 43 | Katyuscha | 55 | Genesis of Aquarion | | |
| | 08 | Synthesized Bell | 20 | Train Ride | 32 | Mary had a little Lamb | 44 | Grandfather's Clock | 56 | Mambo No.5 | | |
| | 09 | Stutter + Bell | 21 | Starting Notice Chime 1 | 33 | Camptown Races | 45 | Ave Maria | 57 | The Parade of the Tin Soldiers | | |
| | 10 | Synthesized Melody | 22 | Starting Notice Chime 2 | 34 | Cuckoo | 46 | RHYTHM AND POLICE | 58 | Turkey in the Straw | | |
| | 11 | Chime | 23 | Starting Notice Chime 3 | 35 | Village Blacksmith | 47 | ZANKOKUNA TENSHINO TEEZE | 59 | Aka Tombo | | |
| | 12 | Call Sign | 24 | Ending Notice Chime 1 | 36 | On the Avignon Bridge | 48 | MAJINGAA ZETTO | 60 | Funiculi, Funicula | | |









| | | | | | | | | | | | | |
|--------|----|--------------------|----|---------------------|----|-------------------------------|----|-----------------------------------|----|-----------------------------|----|--------------------|
| Type G | 01 | Beep | 13 | Train Ride | 25 | Spring Melody | 37 | Mary had a little Lamb | 49 | Can-can | 61 | Nedelka |
| | 02 | Stutter | 14 | Galloping Hi-Lo | 26 | Jalopy Horn | 38 | Camptown Races | 50 | Radetzky March | 62 | Moonlight Serenade |
| | 03 | Bell | 15 | Alien Chatter | 27 | ET Doorbell | 39 | Amaryllis | 51 | Funiculi, Funicula | 63 | WAREWA UMINO KO |
| | 04 | Yelp | 16 | Falling Crystals | 28 | RR-crossing | 40 | Mozart Symphony No.40 | 52 | Csikos Post | | |
| | 05 | Rapid Hi-Lo | 17 | Inverted Reveille | 29 | Starting Notice Chime 1 | 41 | Ave Maria | 53 | Polka Trablanka | | |
| | 06 | Melody Chime | 18 | Galactic Motor | 30 | Starting Notice Chime 2 | 42 | Grandfather's Clock | 54 | O Vreneli | | |
| | 07 | Synthesized Piano | 19 | Ring Phone | 31 | Ending Notice Chime 1 | 43 | The Parade of the Tin Soldiers | 55 | KAERUNO GASSHOU | | |
| | 08 | Synthesized Bell | 20 | Two Tone | 32 | Ending Notice Chime 2 | 44 | If You're Happy and You Know It | 56 | El Condor Pasa (If I Could) | | |
| | 09 | Stutter + Bell | 21 | Alarm Clock | 33 | Fur Elise | 45 | Flea Waltz | 57 | Hungarian Dance No.5 | | |
| | 10 | Synthesized Melody | 22 | Ring Hi-Lo | 34 | Bach Minuet in Gmjr | 46 | Turkey in the Straw | 58 | William Tell Overture | | |
| | 11 | Chime | 23 | Galactic Hovercraft | 35 | Annie Laurie | 47 | The Battle Hymn of the Republic | 59 | Pomp and Circumstance | | |
| | 12 | Call Sign | 24 | Game Intermission | 36 | London Bridge is falling down | 48 | J'ai perdu le do de ma clarinette | 60 | Greensleeves | | |

Sound Group List

| Sound Group | Group A | Group B | Group C | Group D | Group E | Group F | Group G | Group H |
|----------------------|--|--|--|--|---|--|--|--|
| Sound Type / Channel |  |  |  |  |  |  |  |  |

| | | | | | | | | | |
|--------|----------|-------------------------------|------------------------|-----------------------|-------------------------------|---------------------|------------------------|-------------------|--------------------------|
| Type F | Channel1 | Fur Elise | Mary had a little Lamb | Amaryllis | Grandfather's Clock | Spanish Romance | Mary had a little Lamb | Beep | RHYTHM AND POLICE |
| | Channel2 | A Maiden's Prayer | Camptown Races | Mozart Symphony No.40 | Ave Maria | Camptown Races | Mozart Symphony No.40 | Stutter | ZANKOKUNA TENSHINO TEEZE |
| | Channel3 | Bach Minuet in Gmjr | Cuckoo | Quiet Lakeside | Daydream Believer | Bach Minuet in Gmjr | Hol-Di-Li-Dia | Bell | MAJINGAA ZETTO |
| | Channel4 | Annie Laurie | Village Blacksmith | Mountain Musician | London Bridge is falling down | Ave Maria | Daydream Believer | Yelp | HATARAKU KURUMA |
| | Channel5 | London Bridge is falling down | On the Avignon Bridge | Spanish Romance | Bell | Stutter + Bell | Rapid Hi-Lo | Rapid Hi-Lo | NINGENTTE IINA |
| | Channel6 | Hol-Di-Li-Dia | Daydream Believer | Katyuscha | Yelp | Synthesized Melody | Melody Chime | Melody Chime | Robinson |
| | Channel7 | Chime | Chime | Chime | Synthesized Piano | Synthesized Piano | Synthesized Piano | Synthesized Piano | Synthesized Piano |
| | Channel8 | Call Sign | Call Sign | Call Sign | Synthesized Bell | Synthesized Bell | Synthesized Bell | Synthesized Bell | Synthesized Bell |

| | | | | | | | | | |
|--------|----------|-------------------------------|-----------------------|-------------------------------|-------------------|-------------------|--------------------|-------------------|-----------------------------------|
| Type G | Channel1 | Fur Elise | Bach Minuet in Gmjr | Fur Elise | Alien Chatter | Train Ride | Rapid Hi-Lo | Beep | The Parade of the Tin Soldiers |
| | Channel2 | Bach Minuet in Gmjr | Annie Laurie | London Bridge is falling down | Falling Crystals | Galloping Hi-Lo | Chime | Stutter | If You're Happy and You Know It |
| | Channel3 | Annie Laurie | Amaryllis | Mary had a little Lamb | Inverted Reveille | Inverted Reveille | Stutter | Bell | Flea Waltz |
| | Channel4 | London Bridge is falling down | Mozart Symphony No.40 | Camptown Races | Galactic Motor | Galactic Motor | Ring Phone | Yelp | Turkey in the Straw |
| | Channel5 | Mary had a little Lamb | Grandfather's Clock | Amaryllis | Ring Phone | Alarm Clock | Stutter + Bell | Rapid Hi-Lo | The Battle Hymn of the Republic |
| | Channel6 | Camptown Races | Ave Maria | Grandfather's Clock | Two Tone | Ring Hi-Lo | Synthesized Melody | Melody Chime | J'ai perdu le do de ma clarinette |
| | Channel7 | Chime | Chime | Chime | Alarm Clock | Synthesized Piano | Synthesized Piano | Synthesized Piano | Synthesized Piano |
| | Channel8 | Call Sign | Call Sign | Call Sign | Ring Hi-Lo | Synthesized Bell | Synthesized Bell | Synthesized Bell | Synthesized Bell |

| Sound Group | Group I | Group J | Group K | Group L | Group M | Group N | Group O | Group P |
|----------------------|---|---|---|---|--|---|---|---|
| Sound Type / Channel |  |  |  |  |  |  |  |  |

| | | | | | | | | | |
|--------|----------|--------------------------------|-----------------------|-----------------------|--------------------------|---------------------|-------------------------------|-----------------------|-------------------------|
| Type F | Channel1 | WORLD FOOTBALL ANTHEM | Turkey in the Straw | RHYTHM AND POLICE | ZANKOKUNA TENSHINO TEEZE | Galactic Hovercraft | Annie Laurie | Camptown Races | Daydream Believer |
| | Channel2 | BANZAI SUKIDE YOKATTA | Aka Tombo | BANZAI SUKIDE YOKATTA | MAJINGAA ZETTO | Game Intermission | London Bridge is falling down | Cuckoo | Amaryllis |
| | Channel3 | NAMONAKI UTA | Funiculi, Funicula | Mambo No.5 | HATARAKU KURUMA | Spring Melody | Hol-Di-Li-Dia | Village Blacksmith | Mozart Symphony No.40 |
| | Channel4 | Genesis of Aquarion | Furusato | Galactic Hovercraft | NINGENTTE IINA | Jalopy Horn | Mary had a little Lamb | On the Avignon Bridge | Quiet Lakeside |
| | Channel5 | Mambo No.5 | BEAUTIFUL DREAMER | Game Intermission | Genesis of Aquarion | ET Doorbell | BANZAI SUKIDE YOKATTA | WORLD FOOTBALL ANTHEM | Starting Notice Chime 1 |
| | Channel6 | The Parade of the Tin Soldiers | JOLLY HOLIDAY | Spring Melody | Aka Tombo | RR-crossing | NAMONAKI UTA | Turkey in the Straw | Starting Notice Chime 2 |
| | Channel7 | Starting Notice Chime 3 | Ending Notice Chime 1 | Ending Notice Chime 2 | Jalopy Horn | Train Ride | Furusato | Funiculi, Funicula | Chime |
| | Channel8 | Stutter | Stutter | Stutter | Stutter | Stutter | BEAUTIFUL DREAMER | JOLLY HOLIDAY | Call Sign |

| | | | | | | | | | |
|--------|----------|---------------------|-----------------------------|-------------------------|-----------------------------------|-------------------------|---------------------------------|---------------------------------|-----------------------------|
| Type G | Channel1 | Can-can | KAERUNO GASSHOU | Nedelka | The Parade of the Tin Soldiers | Galactic Hovercraft | Fur Elise | Mary had a little Lamb | Ave Maria |
| | Channel2 | Radetzky March | El Condor Pasa (If I Could) | Moonlight Serenade | J'ai perdu le do de ma clarinette | Game Intermission | Bach Minuet in Gmjr | Camptown Races | Grandfather's Clock |
| | Channel3 | Funiculi, Funicula | Hungarian Dance No.5 | WAREWA UMINO KO | Funiculi, Funicula | Spring Melody | Annie Laurie | Amaryllis | Radetzky March |
| | Channel4 | Csikos Post | William Tell Overture | Spring Melody | Nedelka | Jalopy Horn | London Bridge is falling down | Mozart Symphony No.40 | Polka Trablanka |
| | Channel5 | Polka Trablanka | Pomp and Circumstance | Jalopy Horn | RR-crossing | ET Doorbell | If You're Happy and You Know It | Flea Waltz | O Vreneli |
| | Channel6 | O Vreneli | Greensleeves | ET Doorbell | Starting Notice Chime 2 | RR-crossing | Csikos Post | Turkey in the Straw | El Condor Pasa (If I Could) |
| | Channel7 | Galactic Hovercraft | Galactic Hovercraft | Starting Notice Chime 1 | Ending Notice Chime 2 | Starting Notice Chime 1 | KAERUNO GASSHOU | The Battle Hymn of the Republic | Hungarian Dance No.5 |
| | Channel8 | Game Intermission | Game Intermission | Ending Notice Chime 1 | Chime | Ending Notice Chime 2 | Greensleeves | Can-can | William Tell Overture |

Although copyright licensing has been acquired for the F type in Japan for our company, since the copyright licensing for countries outside Japan has not been acquired, if used in countries other than Japan, there is a necessity to acquire copyright licensing for the customer.