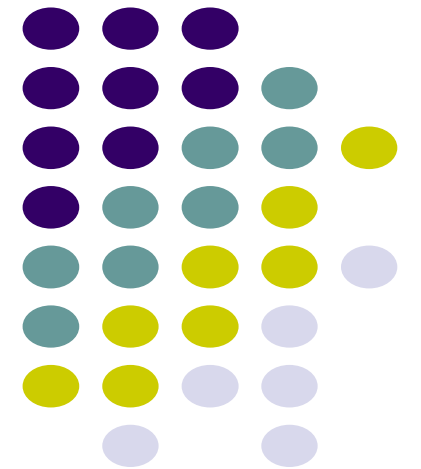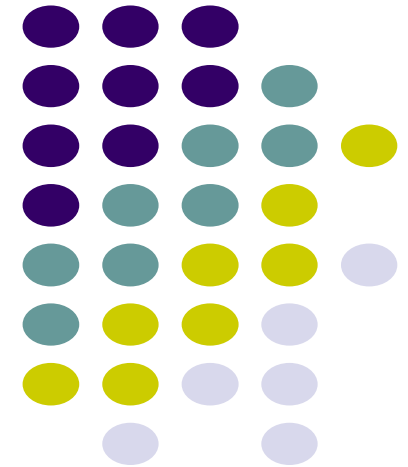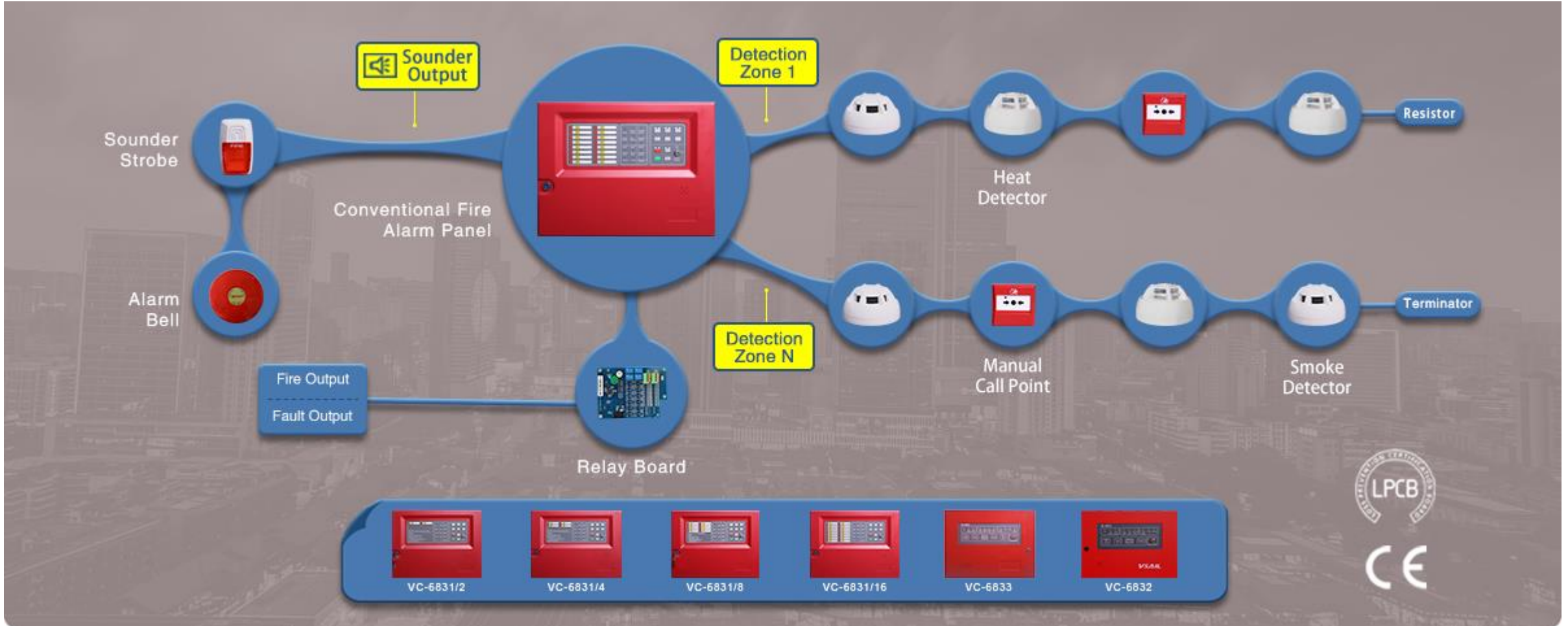# Welcome to
V-GREAT

Product Training Program
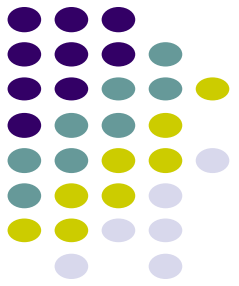
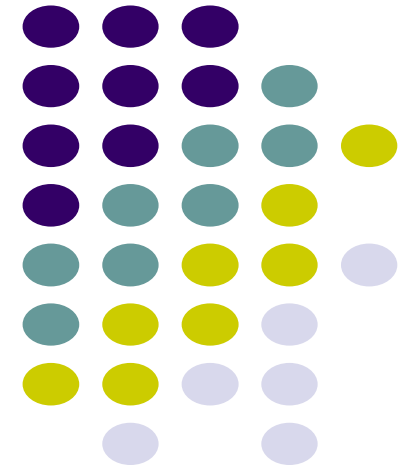**Conventional System**

Eric CHEN

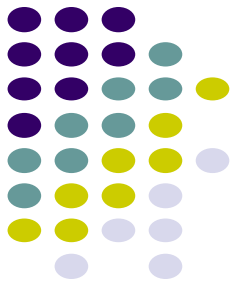# Conventional System Diagram

Conventional System

Field Device

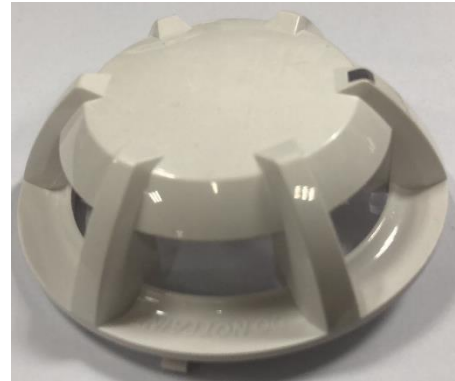# VG-6623 Smoke Detector

* 360° visible LED

* High performance on slow burning or smoldering fire

* Build-in program of Drift compensation

* Intelligent algorithm and judgment

* Special chamber against interferences

* Remote Indication Output

* Magnetic test available

* Talented plug-in structure without screw

* Used in conventional line only

* LPCB approval to EN54-7

VG-6623 Components
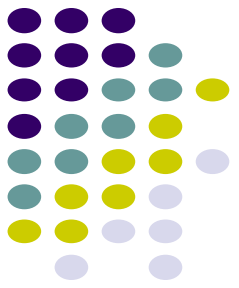
Top cover
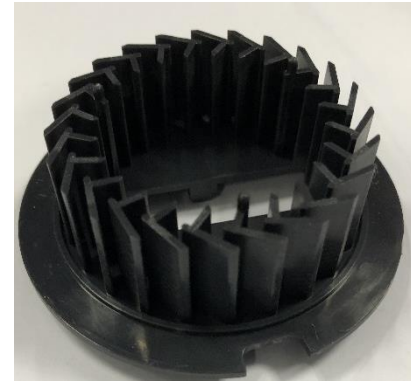
Smoke maze
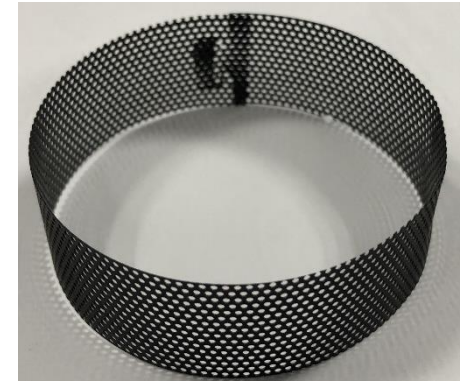
Filter

Bottom cover and Main board

VG-6623 Technical Data
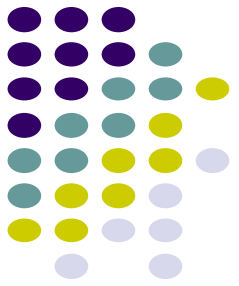
Operating Voltage: DC9V ~ 28V	Standby Current: ≤60µA	Alarm Current: 10mA≤I≤50mA
Remote Indicator: 10kΩ resistor required	Dimension: D-100mm, H-43mm	Base:VG-6611

Smoke Detector Theory

Optical Principle
Advantages:
- More reliable
- Environmental friendly
- Higher accuracy
- Faster responding time
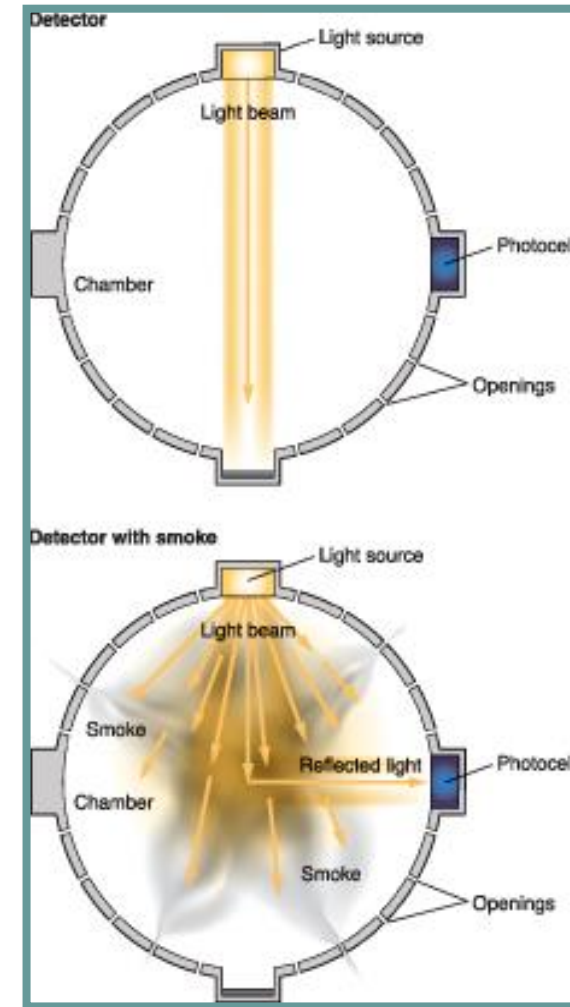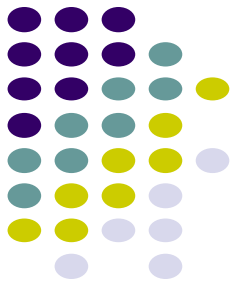
Smoke Detector Theory
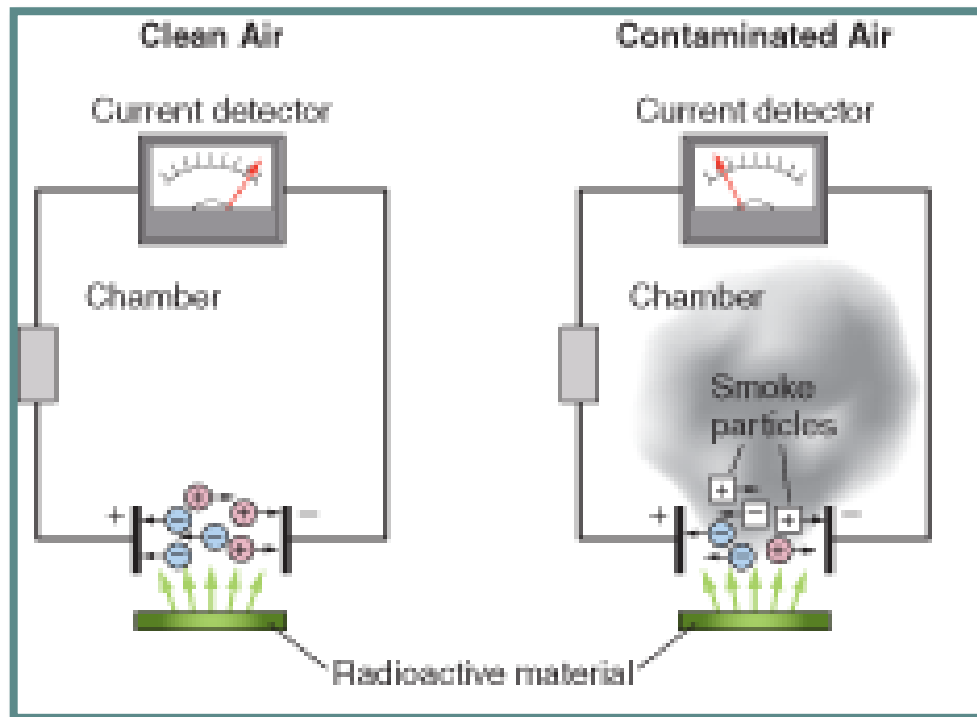
Ionization Principle
Disadvantages
- More prone to false alarm
- Slower in smoldering stage
- Radioactive pollution and damage

VG-6633 Heat Detector

* 360°visible LED
* Thermal sensor with high sensitivity
* Classification of A2R
* Principle of Fixed Temperature and Rate of Rise
* Remote Indication Output
* Magnetic test available
* Talented plug-in structure without screw
* Used in conventional line only
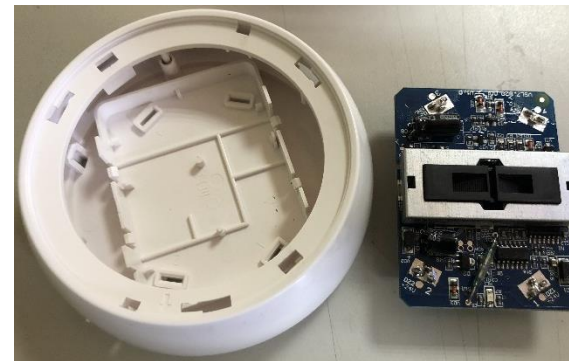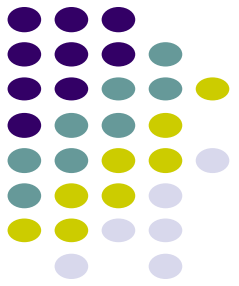* LPCB approval to EN54-5

VG-6633 Components
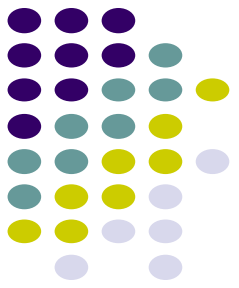
Top cover
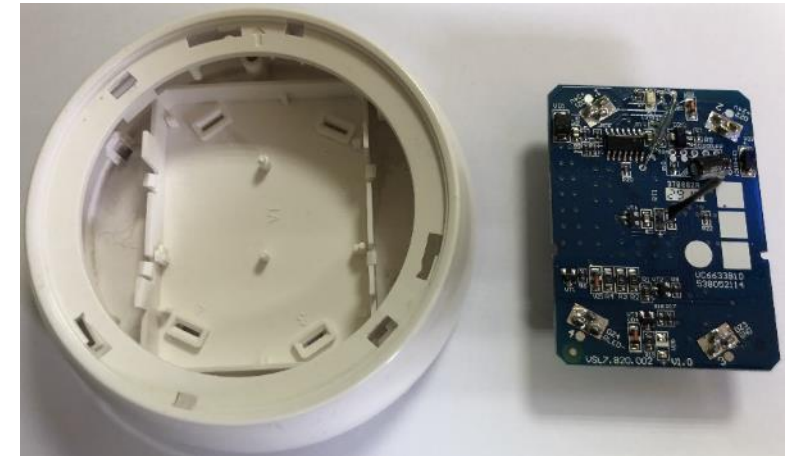
Bottom cover and Main board

VG-6633 Technical Data
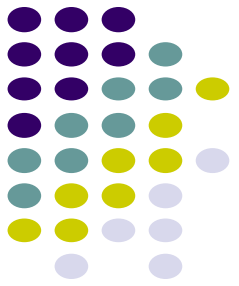
Operating Voltage: DC9V ~ 28V	Standby Current: ≤60µA	Alarm Current: 10mA≤I≤50mA
Classification: A2R	Remote Indicator: 10kΩ resistor required	Dimension: D-100mm, H-43mm
	Base: VG-6611	

Heat Detector Theory
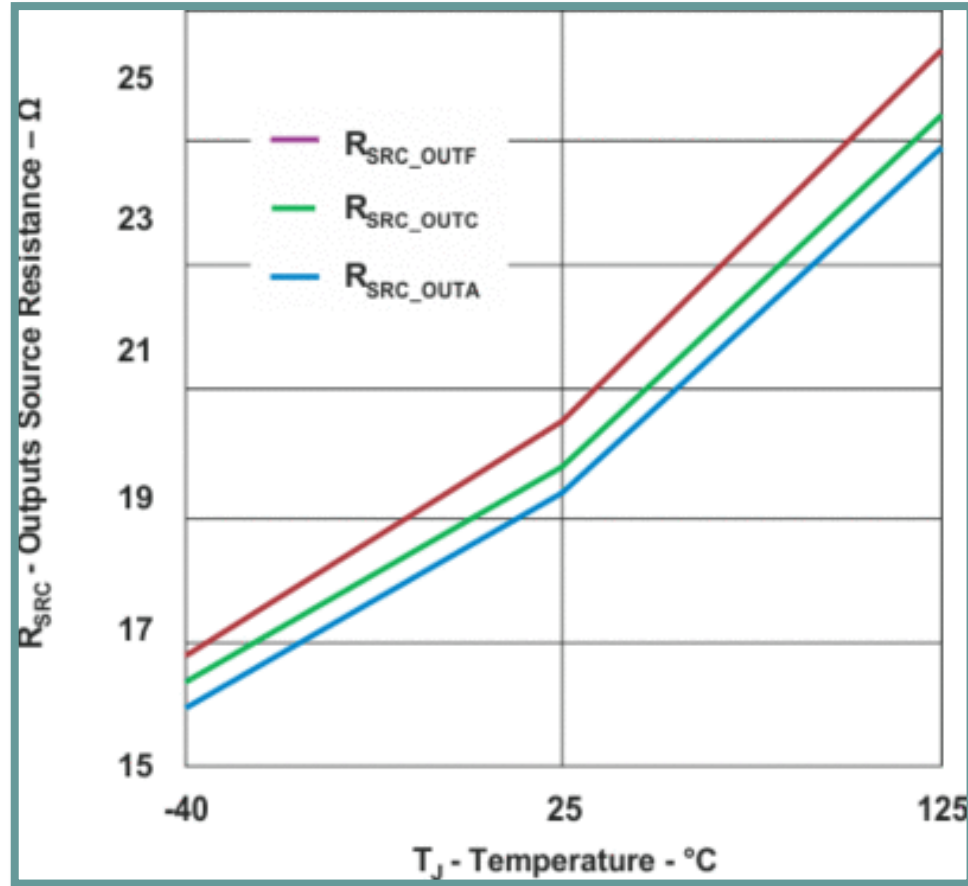
Heat sensitive eutectic alloy

Fixed Temperature (FT)
Solid to Liquid with ↑ Temp.
↑Temperature →
↑Resistance
Triggered at certain resistance

Heat Detector Theory

Rate-of-Rise (ROR)
Simultaneously collecting different temp in a period measuring the slope
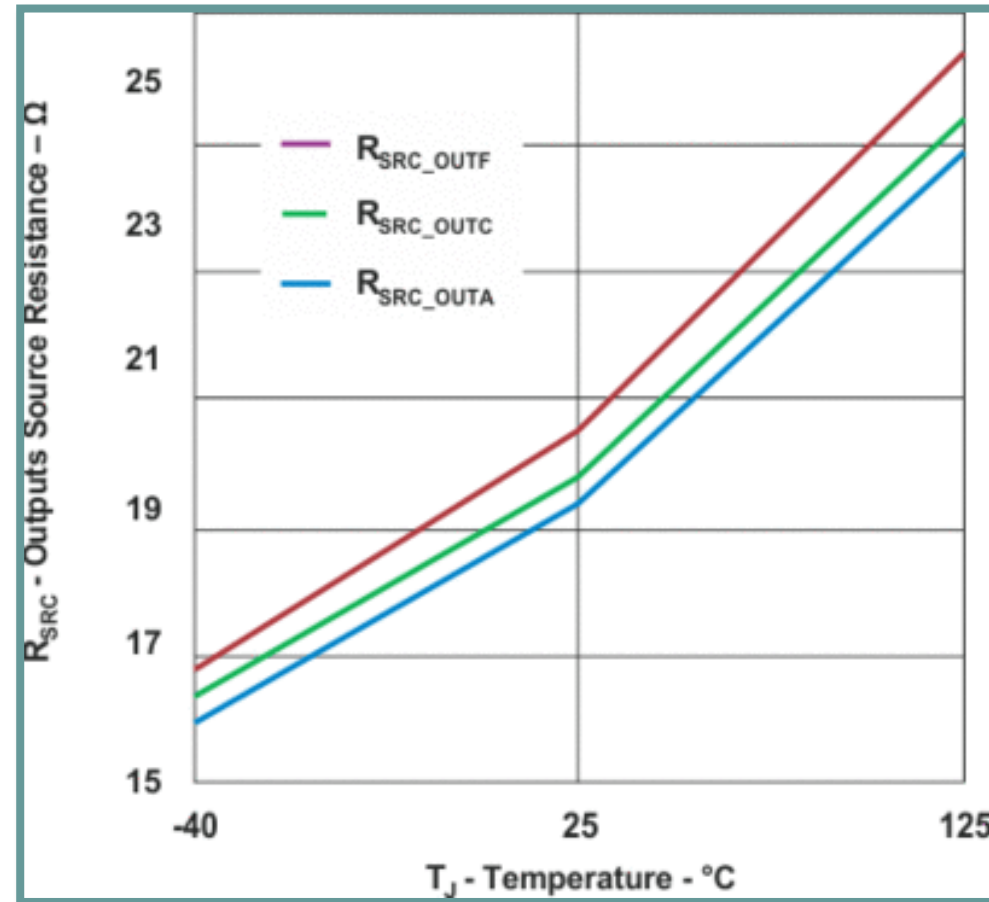
A2R:Thermal sensor (Thermocouple)
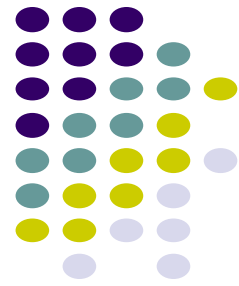
VG-6623/VG-6633 Wiring Diagram

Conventional Control Panel

①② ③④

4.7Kohms End of line resister
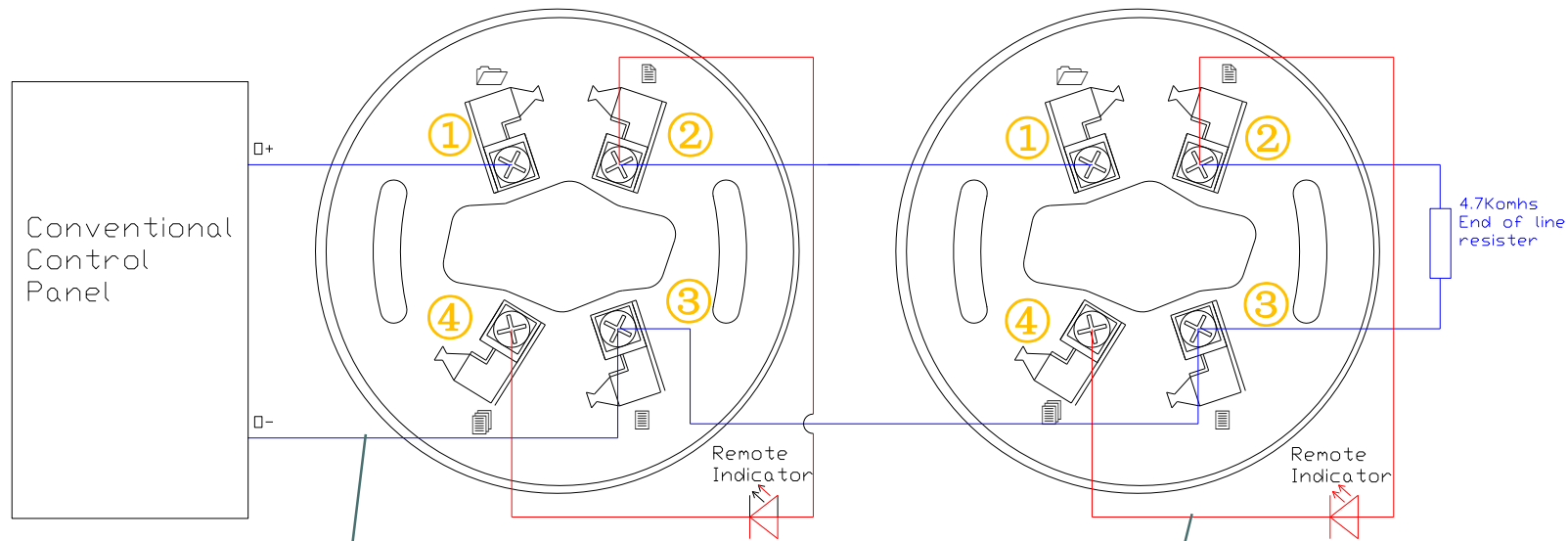
Remote Indicator

For Detection Line Wiring
1-positive IN; 2-positive Out;
3-negative IN/Out

For Remote Indicator Wiring
2-positive OUT
4-negative OUT

Important Notes:
Capacity:
* Max.30 per line
Zone Fault:
* 4.7K EOLR
* Loose connection
Device Damaged:
* Reversed Polarized

VG-6653 Manual Call Point
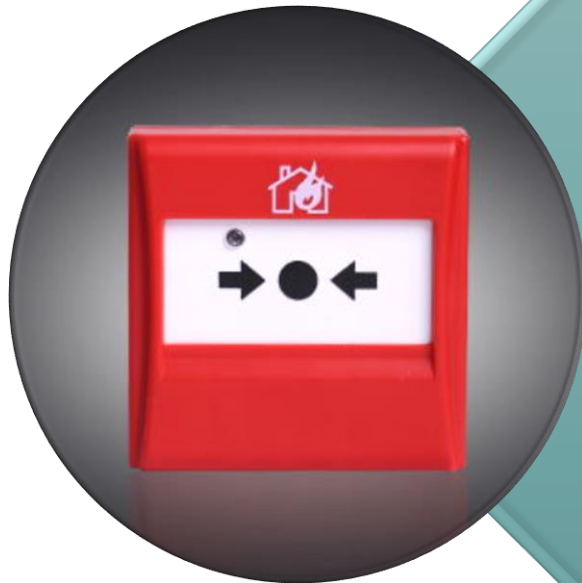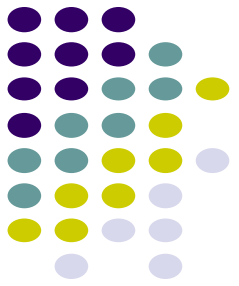
* Non-breaking and Resettable

* Flush-mount or Wall-mount

* Plug-in structure and easy installation

* Stylish appearance

* Used in conventional line only

* LPCB approval to EN54-11

VG-6653 Technical Data
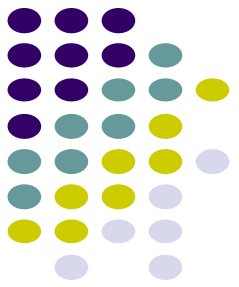
Operating Voltage: DC12～28V	Standby Current: ≤50µA	Alarm Current: ≤20mA
Dimension: 88*88*58mm	Type A, indoor use	Resettable with key
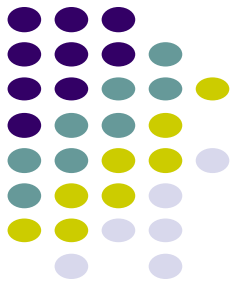
VG-6653 Wiring Diagram Between MCP
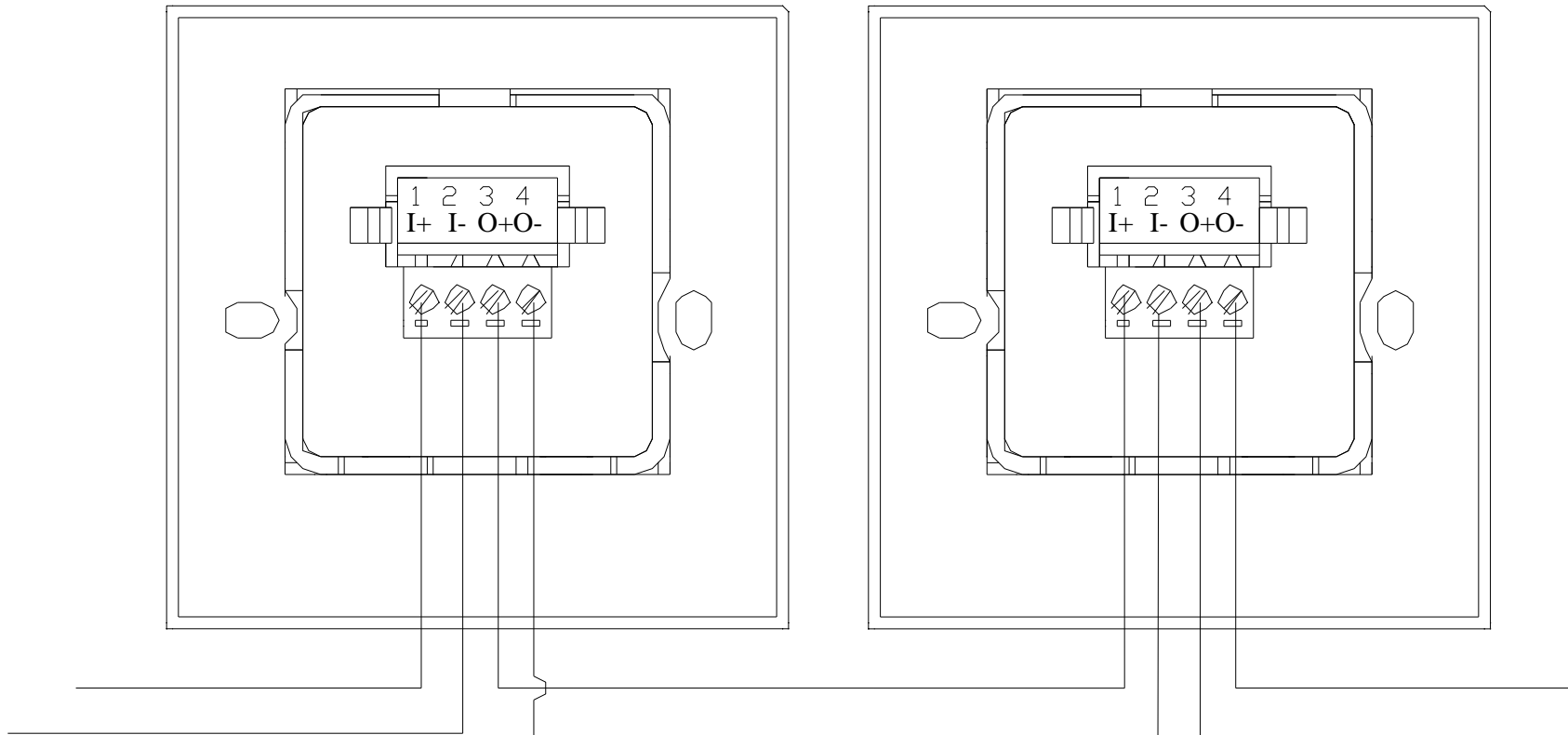
1-positive IN

2-negative IN

3-positive Out
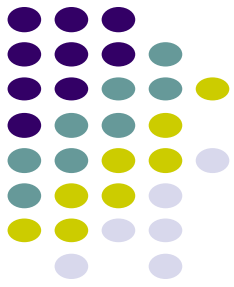
4-negative Out

VG-6653 Wiring Diagram with EOLR

4.7kΩ

EOL Resistor
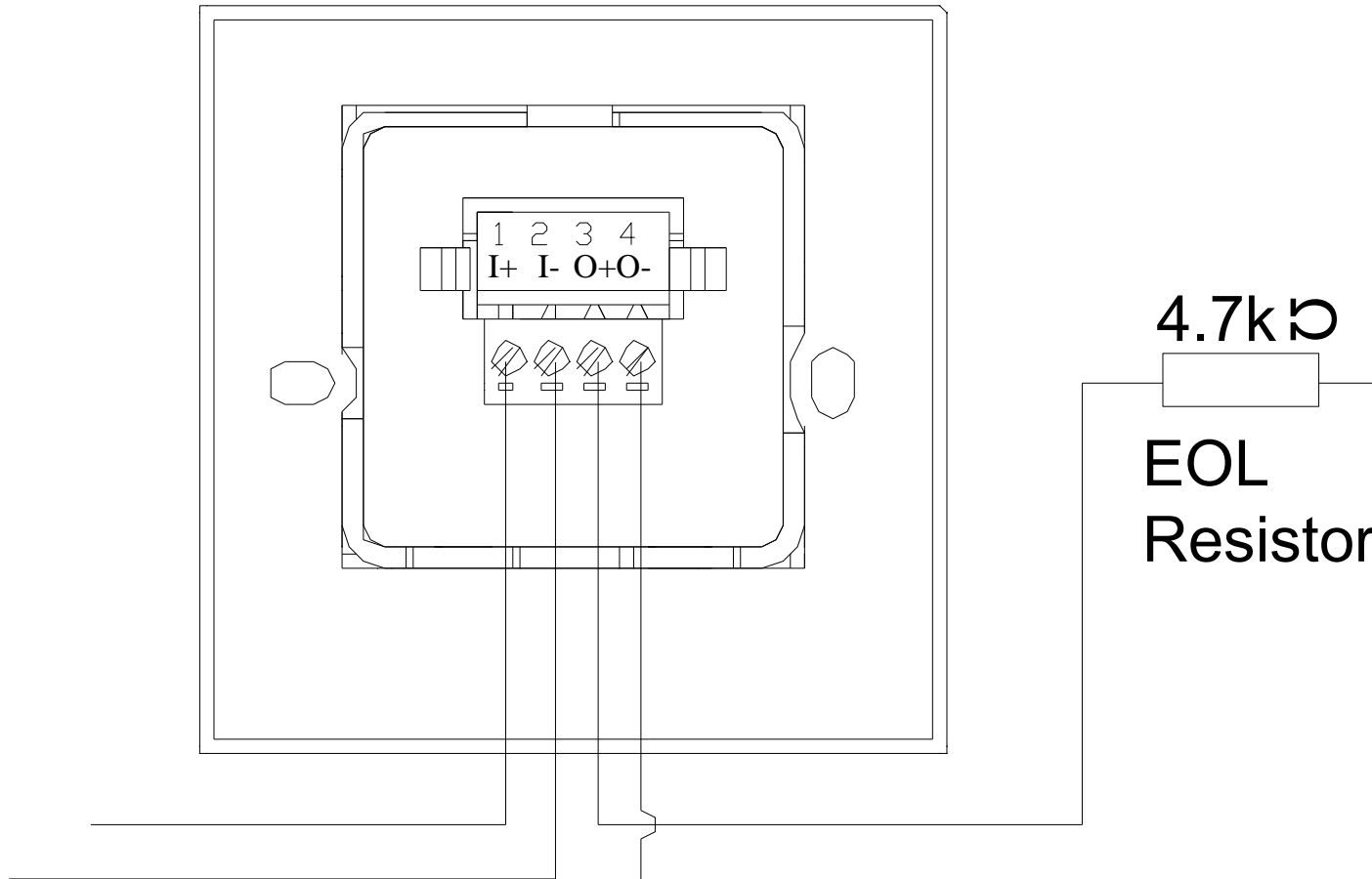
1-positive IN

2-negative IN

3-positive Out

4-negative Out

VG-6734 Sounder Strobe

* Audial and visual warning

*16 tones available

* No external power supply required

* Fast responding time and low power consumption

* Plug-in structure and easy installation

* Used in conventional sounder circuit only

* LPCB approval to EN54-3

VG-6734 Technical Data
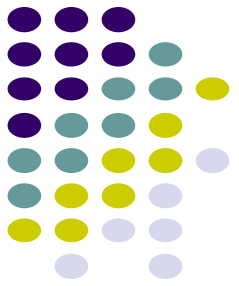
Operating Voltage: DC20V ~ 28V	Alarm Current: ≤35mA	Alarm Tone: 16 types
Flashing Frequency: 1.4×(1±20%)Hz	Circuit Capacity: Max.16	Dimension: 152*91*49.5mm

VG-6734 Wiring Diagram

5-negative

1-positve

5 4 3 2 1

60

VG-6711 Conventional Sounder Base

Note:
- Check the polarity(+/-)
- A 4.7K EOLR connected terminal 1 and 5
- Connected to sounder output on conventional panel
- Noise of Current – not compatible resistor

VG-6734 Setting of Tones

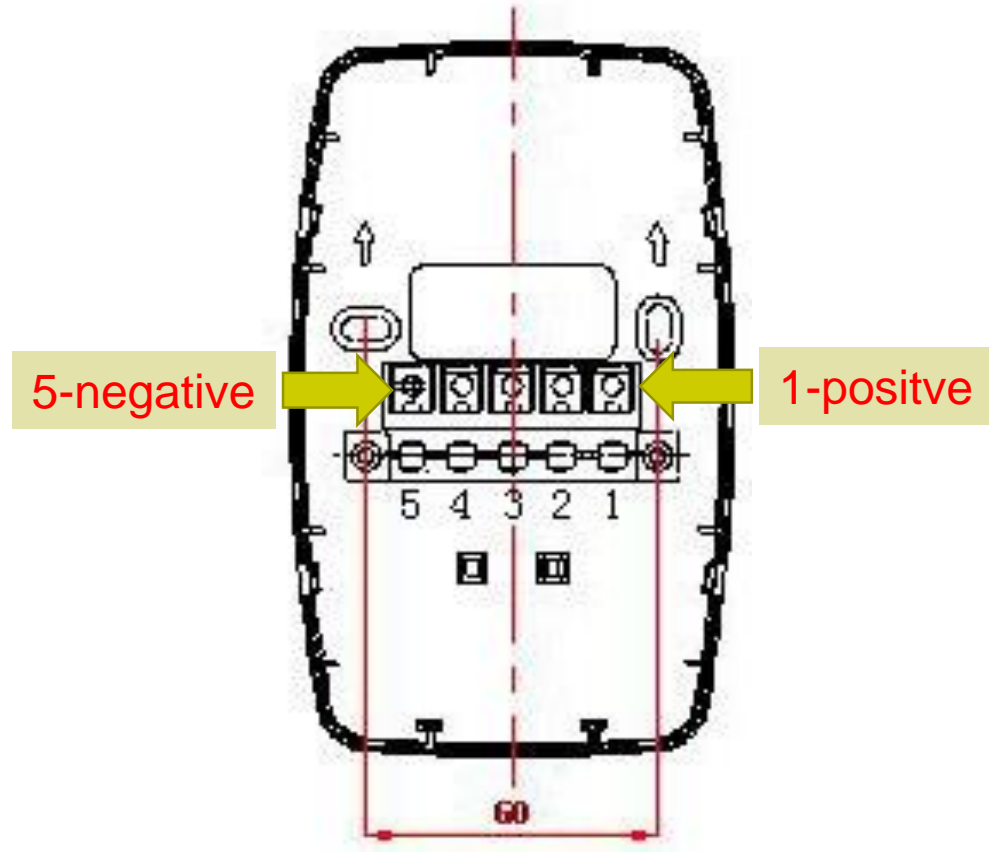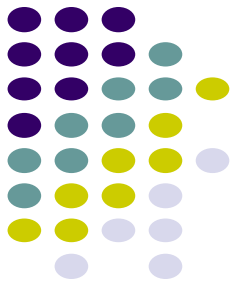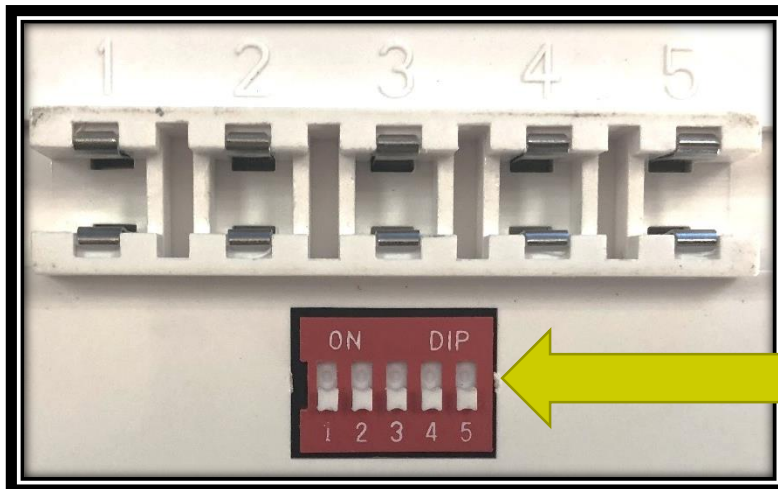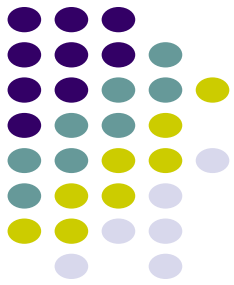| No. of the Switch Dip				Tone	Description
1	**2**	**3**	**4**		
0	0	0	0	01*	2400Hz -2900Hz @3Hz
1	0	0	0	02	2400Hz -2900Hz @9Hz
0	1	0	0	03	2400Hz
1	1	0	0	04	800Hz /970Hz @ 2Hz
0	0	1	0	05	970Hz
1	0	1	0	06	800Hz -970Hz @1Hz
0	1	1	0	07	970Hz 1s off/1s on
1	1	1	0	08	970Hz, 0.5s/630Hz, 0.5s
0	0	0	1	09	500Hz-1200Hz,3.75s/0.25s off
1	0	0	1	10*	500Hz -1200Hz×3, 3.5s on/0.5s off
0	1	0	1	11	2850Hz, 0.5s on/0.5s off×3/1.5s off
1	1	0	1	12	2850Hz 0.4s on,0.3s off
0	0	1	1	13	550Hz,0.7s/1000Hz,0.33s
1	0	1	1	14	500Hz -1200Hz @0.33Hz
0	1	1	1	15	1500Hz -2700Hz @3Hz
1	1	1	1	16	800Hz-970Hz@3Hz

*Tones approved to EN54-3
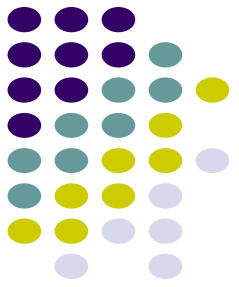
VG-6791 Remote Indicator

* Ultra-bright red LED is used as the light source.

* Remote Indicator of conventional type

* Used directly with conventional detectors

* Easy wiring and commission, reliable performance
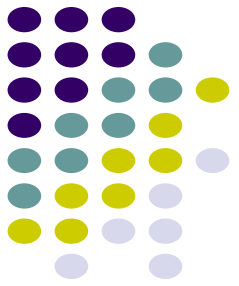
VG-6791 Technical Data

Operating Voltage: DC12V	Action Current: ≤0.35mA	Dimension: D-50mm H-25mm
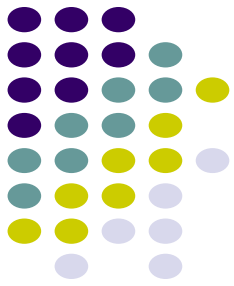
VG-6791 Wiring & Installation
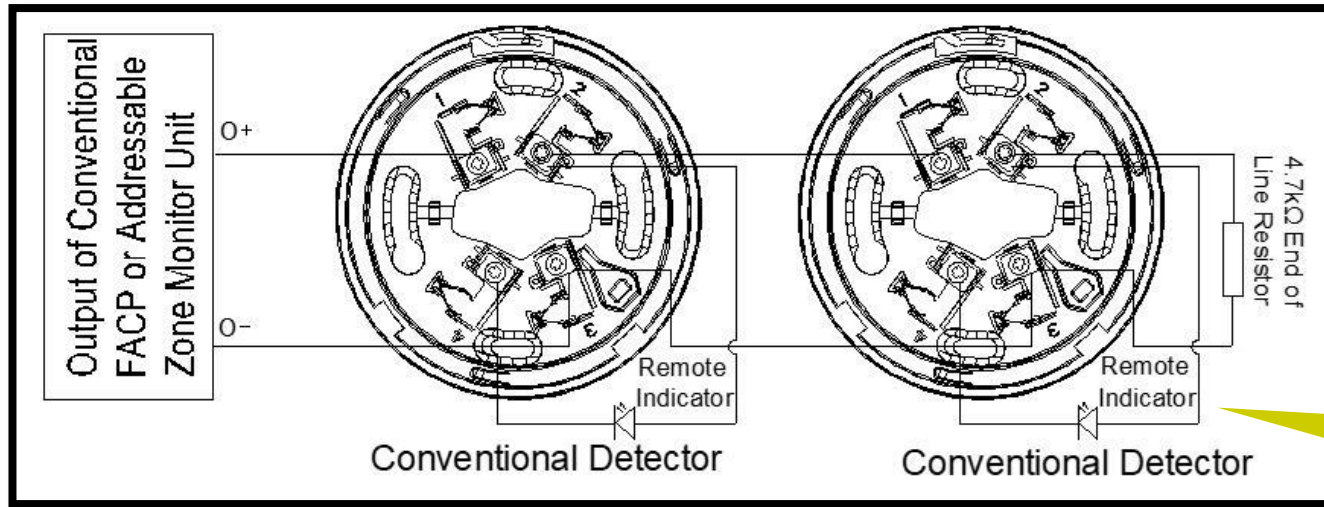
Note:
• Connected directly with detector base (2, 4)

Note:
• Remove the top cover
• Non-polarity of terminals (A1,A2)
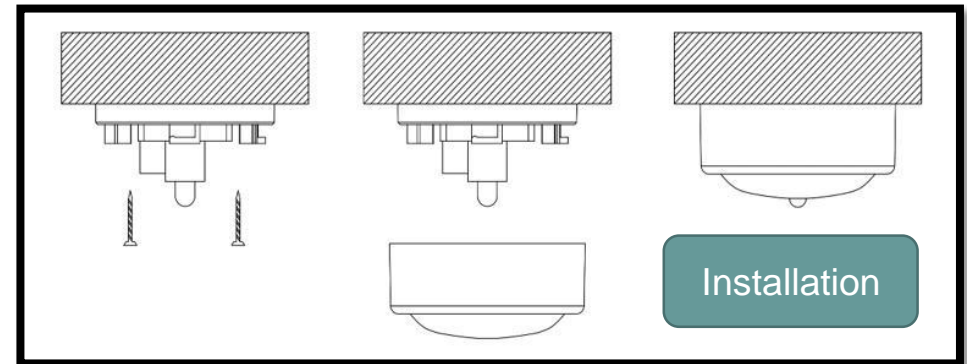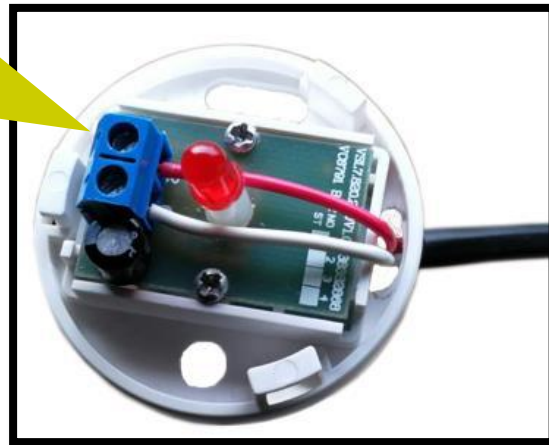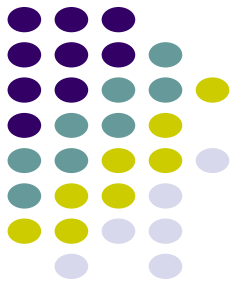
Installation

VG-6611S Alert Base

* Used as an warning device to generate fire alarm;

* Installation and wiring same as detector base;

* Driven by detection circuit, no need for extra power line.
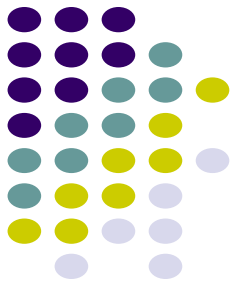
VG-6611S Technical Data

Operating Voltage: DC15~28V	Action Current: ≤4.0mA
Sound Volume: >75dB	Dimension: D-103mm H-38mm

VG-6611S Wiring Diagram
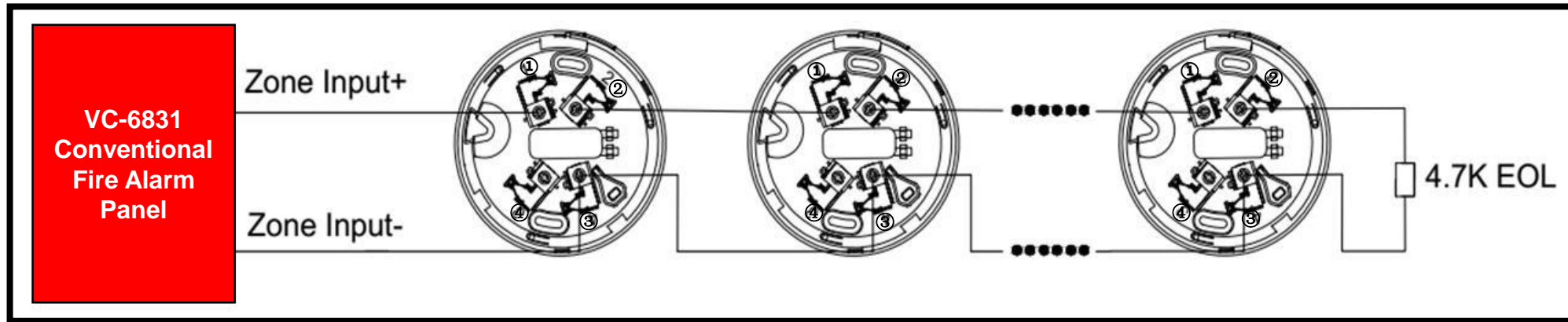
	Note: • Connected within Detection Line • Wiring same as VG-6611 • Terminals (Positive IN-1, Positive OUT-2, Negative IN/OUT-3) • Maximum 30 pieces

VG-6763 Repeater Panel
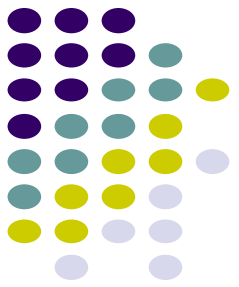
* A remote unit of Zone Indication of Conventional Panel

* Maximum 16 zones

* Separate indications of Fire and Fault

* Two buttons of MUTE and TEST

VG-6763 Technical Data

Operating Voltage: DC24V	Standby Current: ≤6mA
Alarm Current: ≤200mA	Dimension: 190*130*40mm

VG-6763 Wiring Diagram
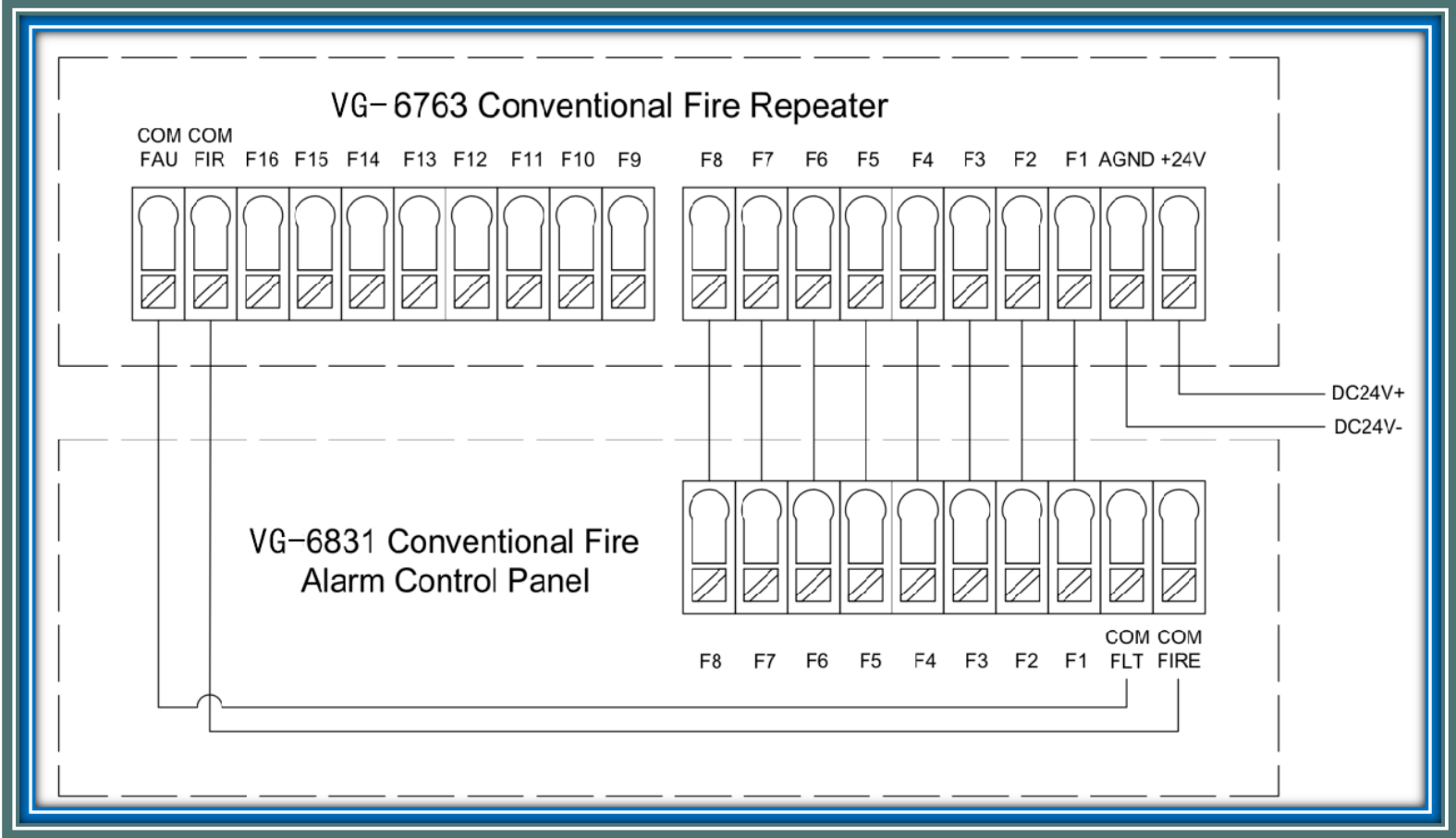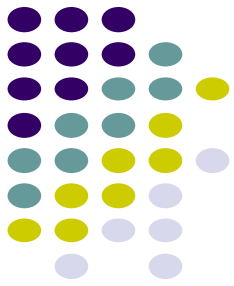
Conventional System

Conventional Panel
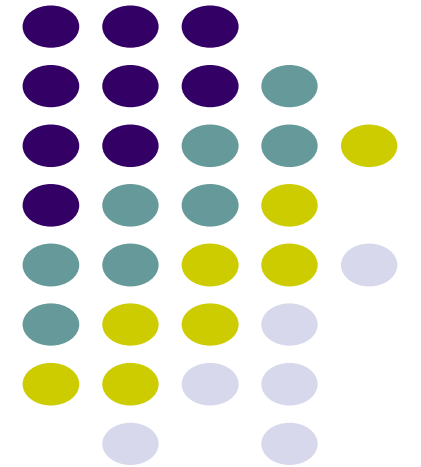
VG-6833 Conventional Fire Alarm Panel

* Mini-size of single zone conventional panel

* Single conventional zone of Max. 30 filed devices

* One sounder circuit of conventional sounder or alarm bell

* Three passive contacts of fire and fault outputs

* Two fire outputs logically respond to different alarm stages

* One Fault output, and two fire outputs of two alarm levels

* LED indicators and functional buttons available

* Ideal design for small-size of projects

VG-6833 Specification
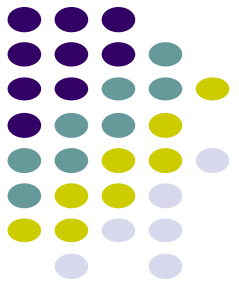
Main Power	Detection Line	Detection Line	Sounder Circuit	Fire Output	Fault Output
Voltage: **220V**	Voltage: **DC20~24V**	Resistance in fire: **150 ~ 1.5kΩ**	Voltage: **DC20~24V**	Capacity: **1A@24V**	Capacity: **1A@24V**
Frequency: **50Hz**	Standby Current: **100mA**	EoL Resistor: **4.7kΩ**	Current: **1A**	**Volt-free Contact**	**Volt-free Contact**
	Alarm Current: **1A**	Length: **1000M**	EoL Resistor: **4.7kΩ**	**Two Outputs**	

VG-6833 Wiring Diagram
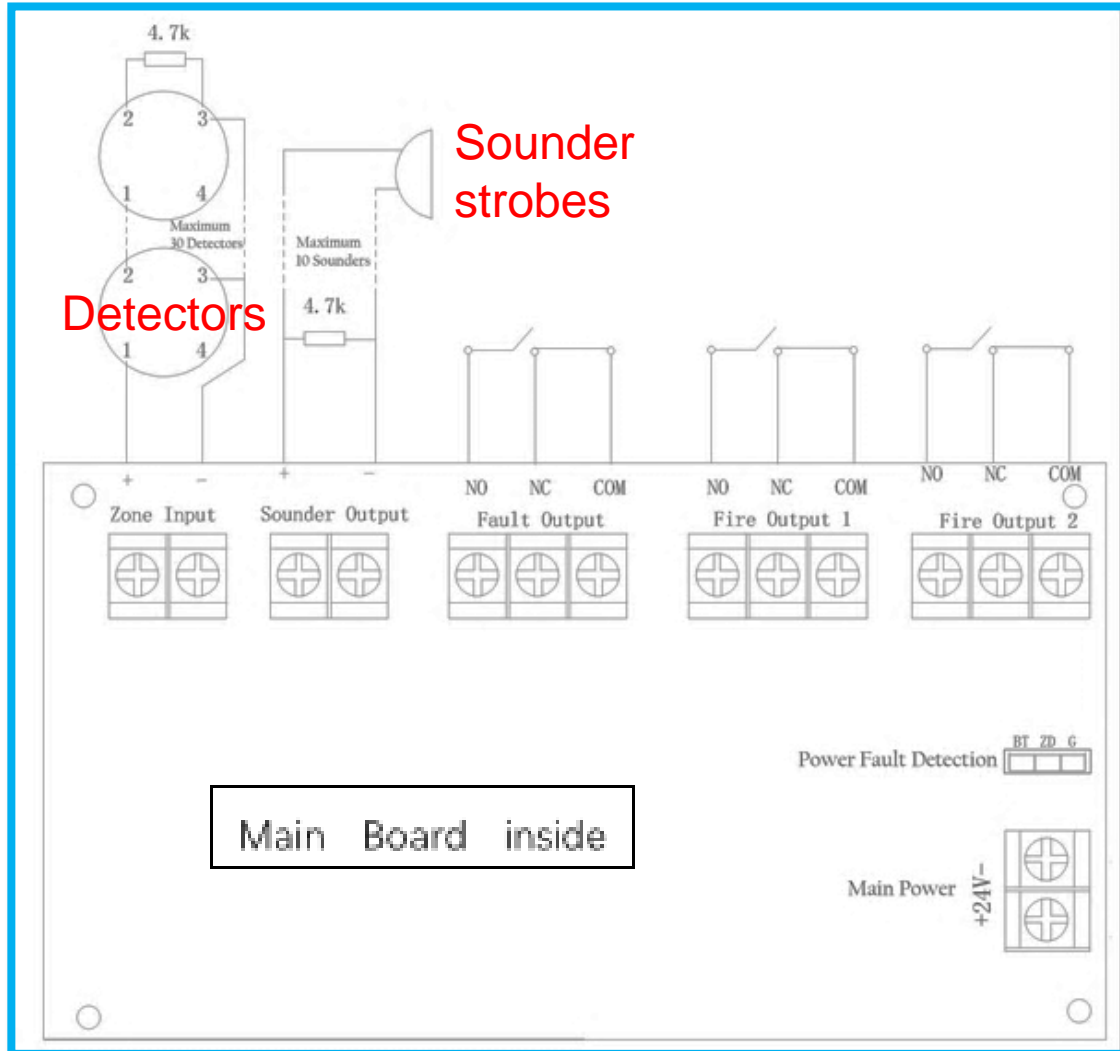
Note:
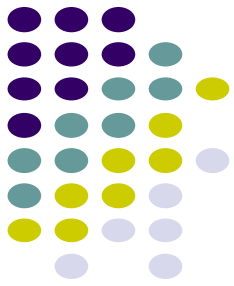- Maximum 30 conventional devices of detector and call point
- 4 .7kΩ resistor installed at the last device in a line
- A diode need to installed in the detector base in case of reversed wiring, but the detection capacity will be reduced
- Maximum 10 sounders in a sounder circuit
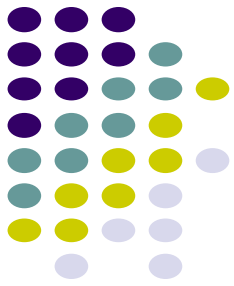
VG-6833 Operation Matrix

| Mode	Action		Fire	Fire Output	Fault Output	Zone Fault	System Fault	Common Fault	Power Fault	Power Supply	Mute	Sounder	Evacuate switch	Remarks
							Indicators							
Normal	Normal operating		off	off	off	off	off	off	off	green	off	off	O	
Alarm	D.L≤500M	Only one detector detects fire (Level 1)	flashes in red	flashes in red	off	off	off	off	off	green	off	illuminates in green	O	"Fire Output 1" and "Sounder Output" activated
		More than one detectors detect fire	illuminates in red	illuminates in red	off	off	off	off	off	green	off	illuminates in green	O	"Fire Output 1", "Fire Output 2"and "Sounder Output" activated
	D.L>500M	One or Two detector detecs fire (Level 1)	flashes in red	flashes in red	off	off	off	off	off	green	off	illuminates in green	O	"Fire Output 1" and "Sounder Output" activated
		More than two detectors detect fire	illuminates in red	illuminates in red	off	off	off	off	off	green	off	illuminates in green	O	"Fire Output 1", "Fire Output 2"and "Sounder Output" activated
	Press "Mute" button		illuminates in red	illuminates in red	off	off	off	off	off	green	green	illuminates in green	O	Turns off the panel alarm tone
Fault	Press "Mute" button		off	off	red	yellow	off	yellow	off	green	green	off	O	"Fault Output" activated and panel generates fault tone
	Press "Mute" button		off	off	red	off	off	yellow	off	green	green	flashes in green	O	
	Press "Mute" button		off	off	red	off	off	yellow	yellow	green	green	off	O	
	Press "Mute" button		off	off	red	off	off	yellow	yellow		green	off	O	
	Press "Mute" button		off	off	red	off	yellow	yellow	off	green	green	off	O	
Evacuate on	Switch "Evacuate" key points at "I		off	off	off	off	off	off	off	green	off	illuminates in green	I	Activates all the outputs of "Sounder Output, Fault Output, Fire Output1 and Fire Output2",
Short circuit	Press "Mute" button		off	off	red	yellow	off	yellow	off	green	green	off	O	"Fault Output" activated and panel generates fault tone

VG-6831 Conventional Fire Alarm Panel

* High quality and reliable performance

* 2/4/8/16 detection zones

* Up to 25 devices for each zone

* Up to 4 programmable supervised sounder circuits

* LED indication and key buttons

* One man walk-test and zone isolate facility

* DAY/NIGHT mode switchable

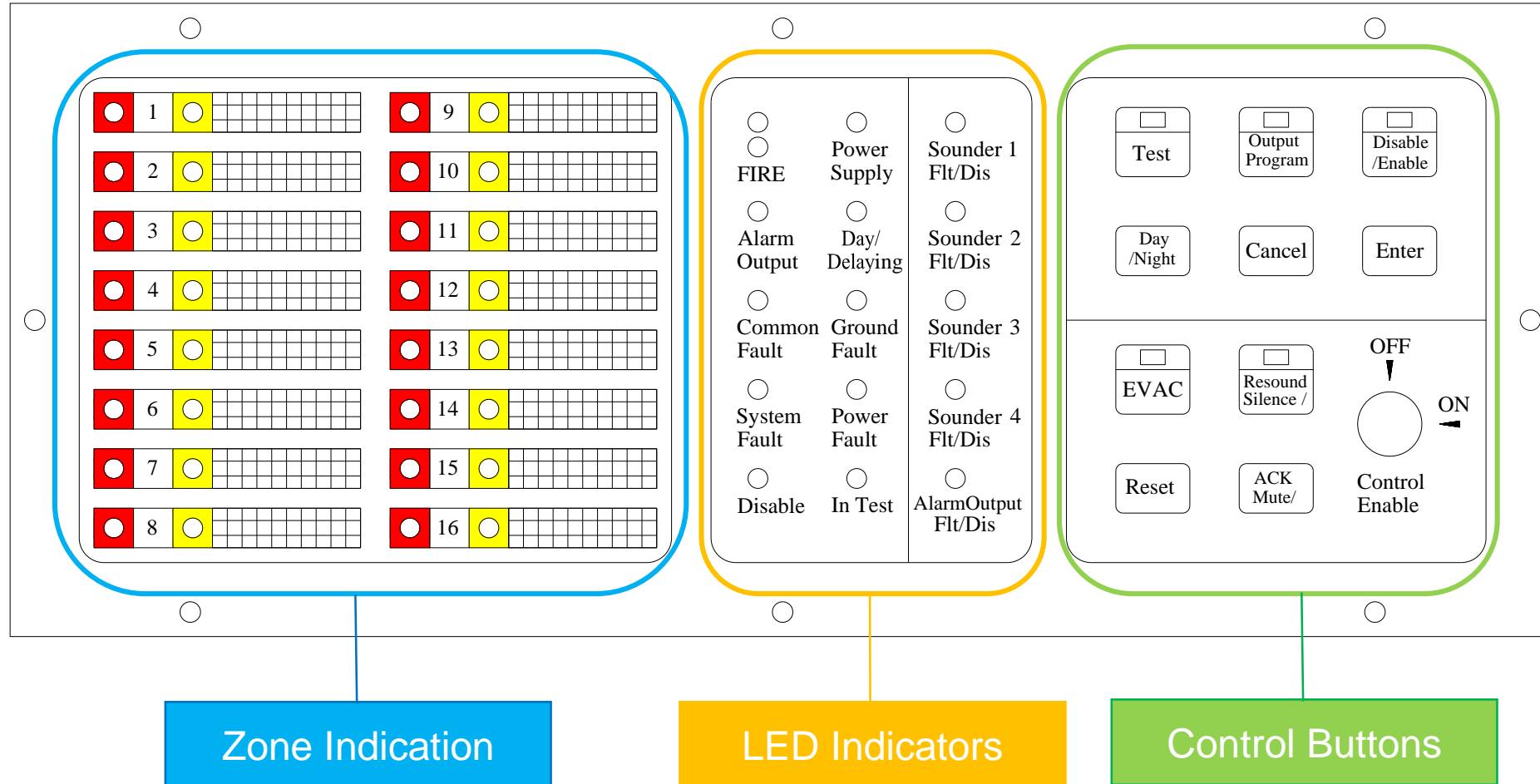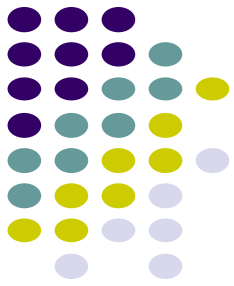* Fault buzzer mute facility

VG-6831 Conventional Fire Alarm Panel

* Fully programmable using simple menu options

* Keypad entry to a wide range of engineering functions

* Optional signal output board available for extension

* Three access levels settable via Key and DIP switch

* SMT and Microprocessor controller design

* Two wire system to reduce cabling and installer friendly

* Compatible with wide range of conventional devices

* LPCB approval to EN54-2 & EN54-4

VG-6831 Specification

V-GREAT
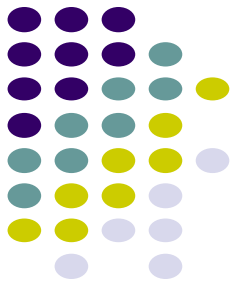
Main Power	Detection Line	Detection Line	Sounder Circuit	Alarm Output	Fault Output
Voltage: 100~120V 200~240V	Voltage: DC15~28V	Resistance in fire: 150 ~ 1.5kΩ	Voltage: DC18~28V	Voltage: DC18~28V	Capacity: 1A@24V
Frequency: 50/60Hz	Standby Current: 6mA	EoL Resistor: 4.7kΩ	Current: 300mA/each	Current: 300mA	Volt-free Contact
	Alarm Current: 400mA	Length: 1000M	EoL Resistor: 4.7kΩ	EoL Resistor: 4.7kΩ	

VG-6831 Panel Front

| Zone Indication | LED Indicators | Control Buttons |

VG-6831 Zone Indication

Status of Detection Zone

Fire: Red/Illuminating

Fault: Amber/Flashing

Disable: Amber/Illuminating

VG-6831 LED Indicators

Status of Panel & Output

- Power: Green/Illuminating
- Fire: Red/Illuminating
- Fault: Amber/Flashing
- Disable: Amber/Illuminating

VG-6831 LED Indicators [Panel]

Flashing when Fire Alarm occurred Illuminating after press "Mute/ACK" button

Illuminating when Fire Alarm Output activated

Flashing when any kind of fault occurred and Illuminating after press "ACK" button

Illuminating when System Fault occurred

Illuminating when Zone/Output isolated

Illuminating when system is operating

Illuminating during Day Mode and Flashing during Delay

Illuminating when Ground Fault occurred

Illuminating when Power Fault occurred

Illuminating when any Zone is in Test Mode

Panel labels: FIRE | Power Supply | Sounder 1 Flt/Dis | Alarm Output | Day/Delaying | Sounder 2 Flt/Dis | Common Fault | Ground Fault | Sounder 3 Flt/Dis | System Fault | Power Fault | Sounder 4 Flt/Dis | Disable | In Test | AlarmOutput Flt/Dis

VG-6831 LED Indicators [Output]
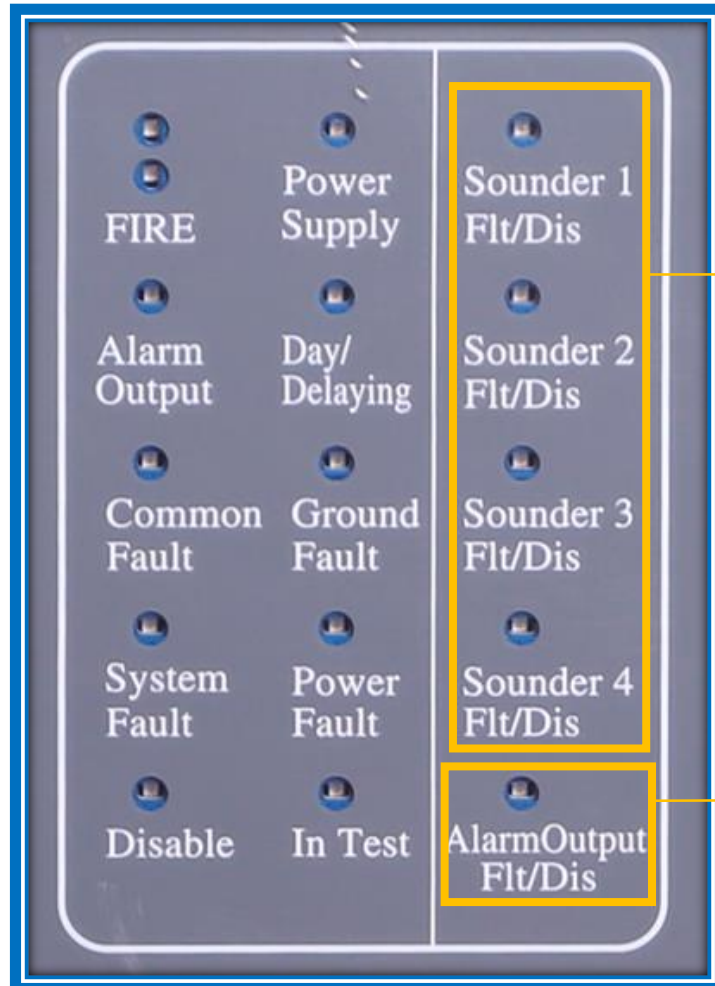
- ➢ Illuminating when the Sounder Output is disabled.
- ➢ Flashing when there is fault occurred on Sounder Output.

- ➢ Illuminating when the Alarm Output is disabled.
- ➢ Flashing when there is fault occurred on Alarm Output.
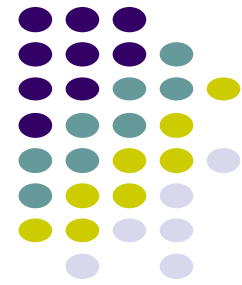
VG-6831 Control Buttons [Function Keys]

Illuminating when enter "Output Setting"

Illuminating during Test Mode

Press to enter "Test Mode"

Illuminating when any Zone/Output isolated

Press to enter "Disable Setting"

Press to enter "Output Setting"

Illuminating when activate Sounder Output

Illuminating when silence the Sounders

Press to activate Sounder Output

Press to silence/resound the Sounders
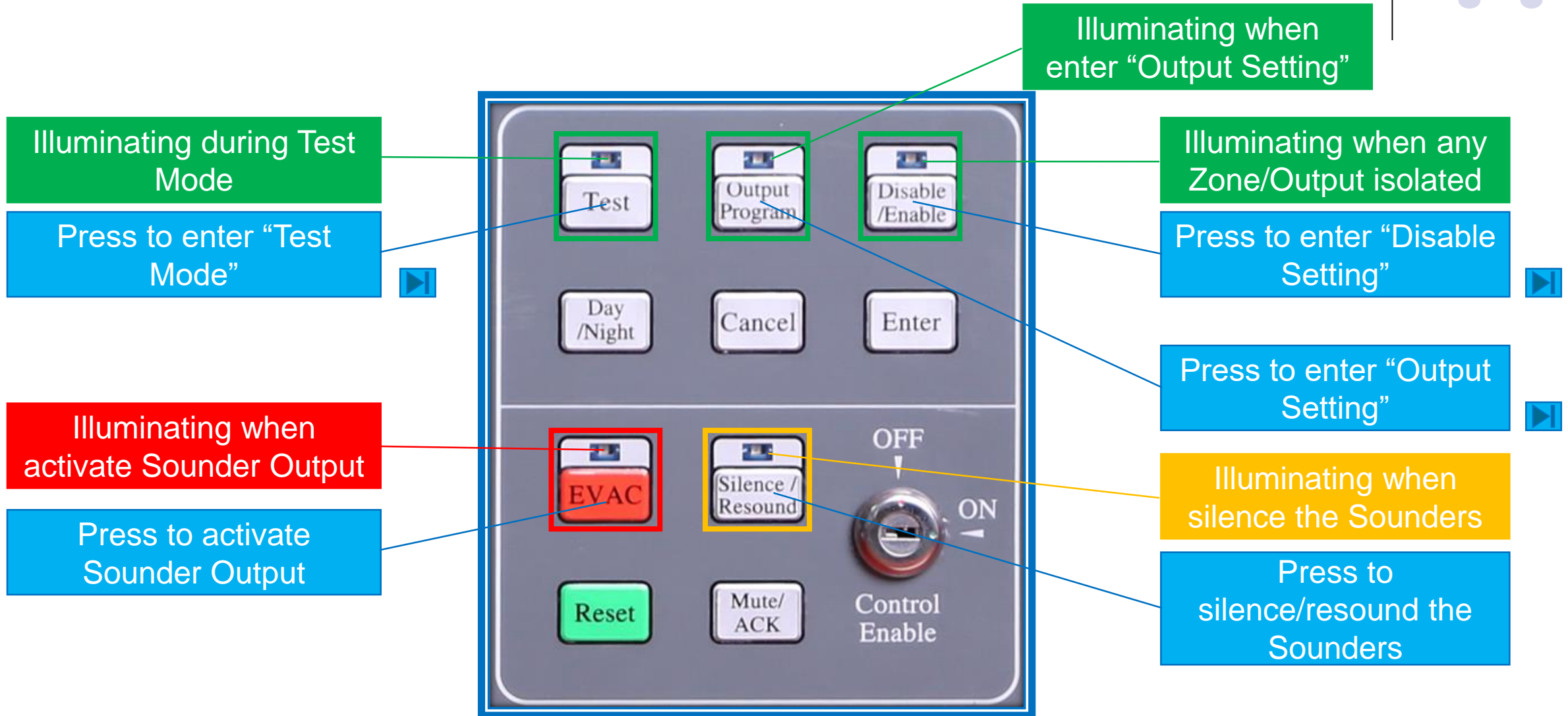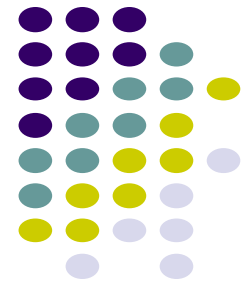
VG-6831 Control Buttons [Operation Keys]

Press to confirm the operating

Press to switch between "DAY" and "NIGHT"

Press to cancel/quit the operating

Press to reset the panel

Press to mute buzzer in the panel
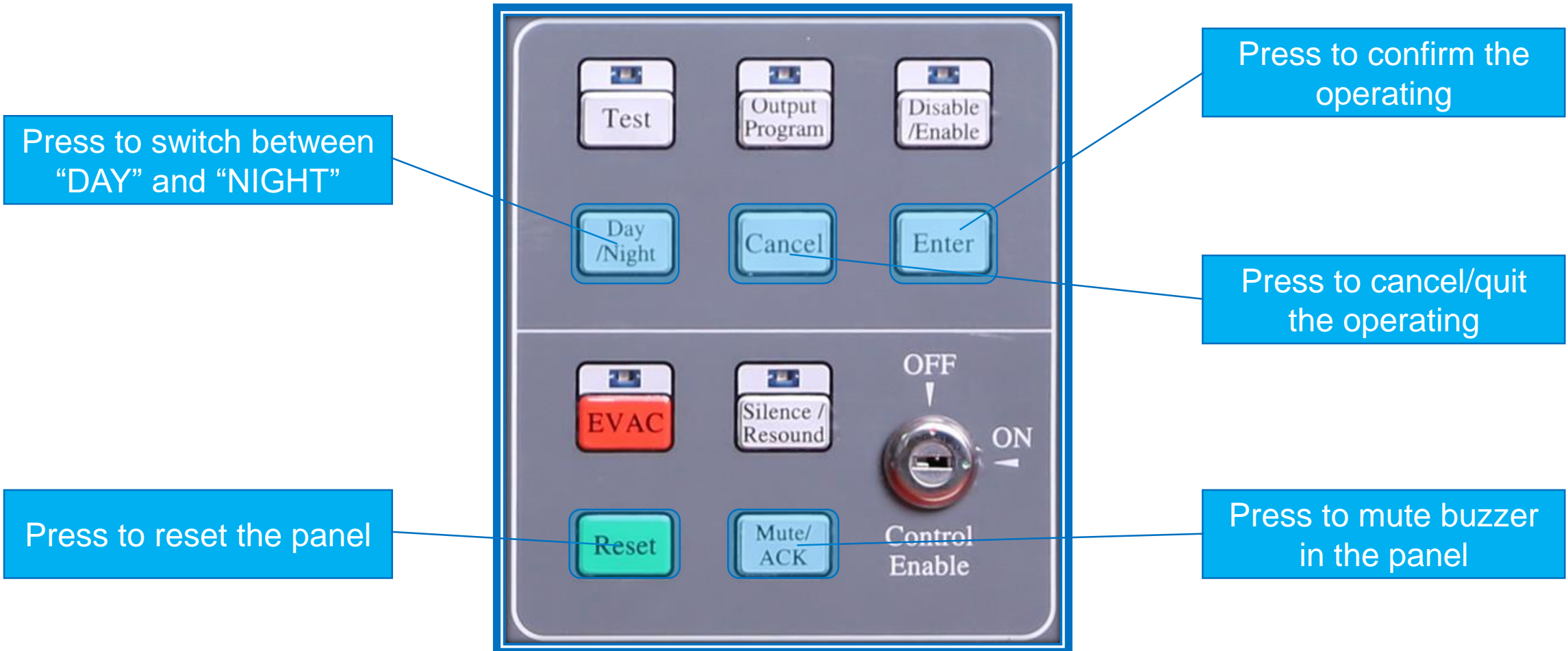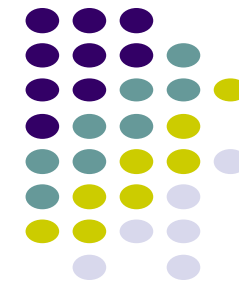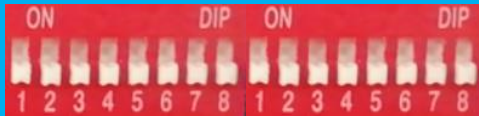
VG-6831 Access Level
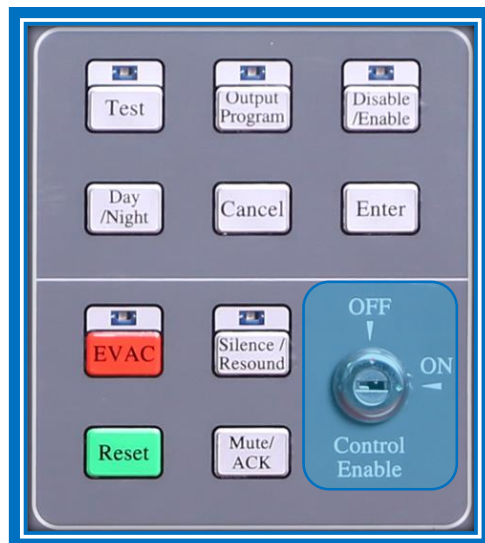
Access Level I
- Operation of "Mute/ACK" available only
- DIP switch as

Access Level II
- Operation of "Disable/Test/Reset/EVAC/Silence"
- DIP switch as

Access Level III
- All operations and settings are available
- DIP switch as
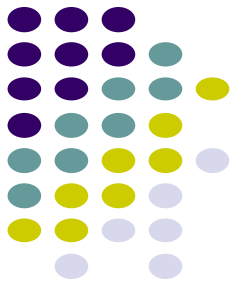
VG-6831 General Structure
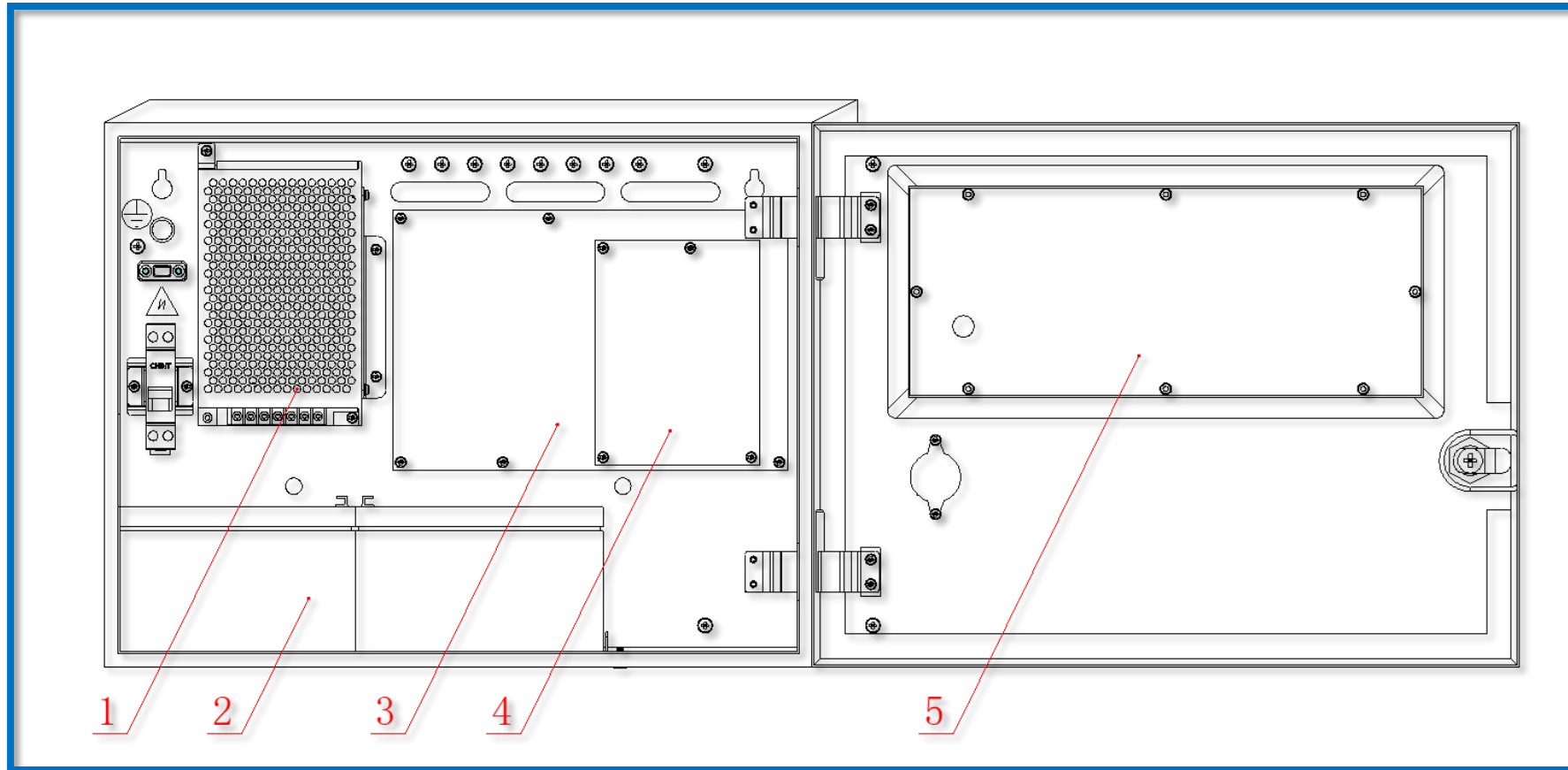
① AC/DC Power Supply   ② Batteries   ③ Main Board include power board

④ Relay Board with signal outputs ⑤ Display & Control Board

VG-6831 Wiring Diagram [Overview]
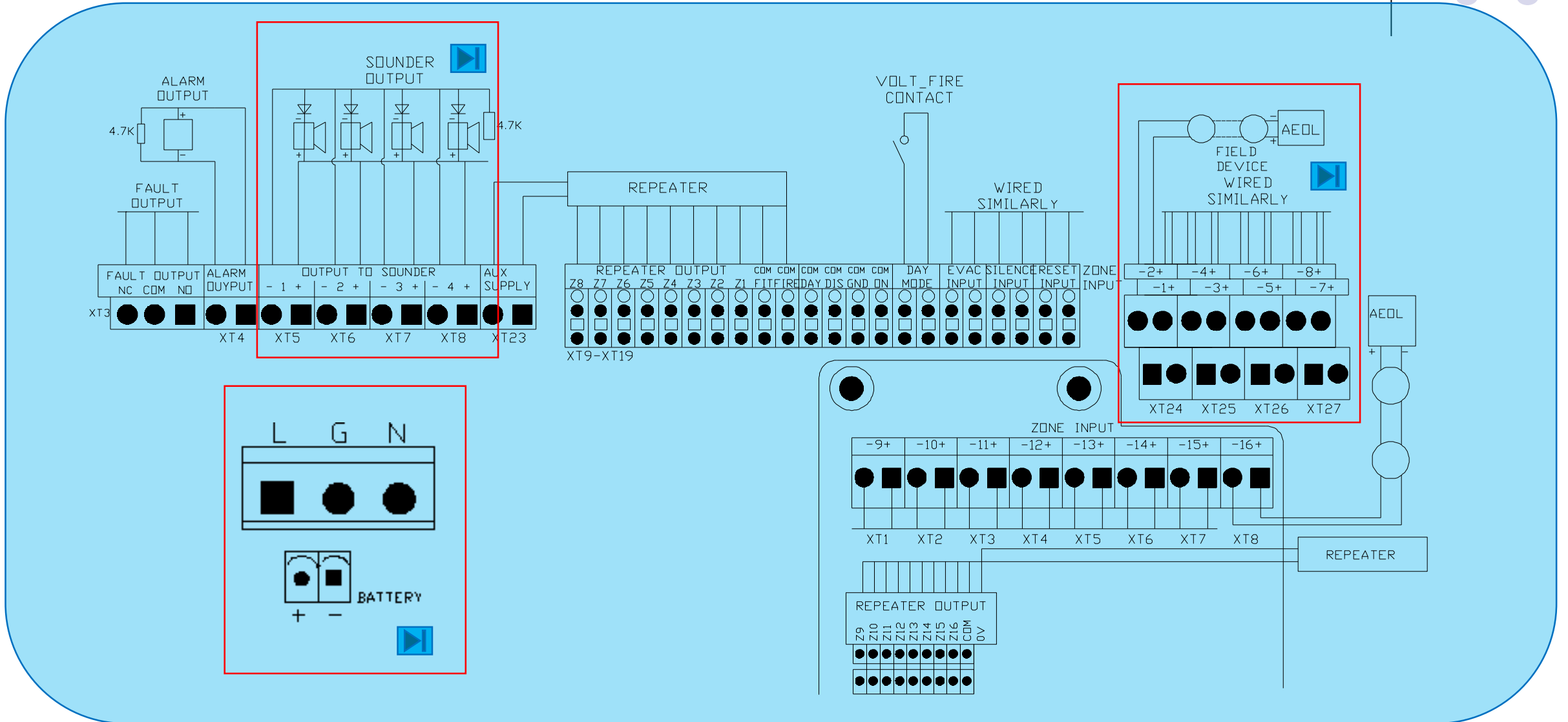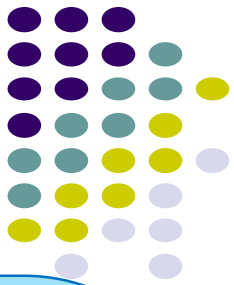
VG-6831 Wiring Diagram [Terminals]
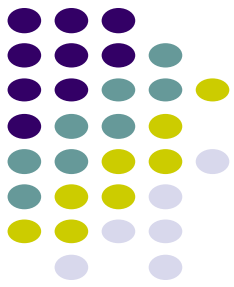
FAULT OUTPUT	Fault output (volt-free)
ALARM OUTPUT	Fire alarm output (300mA)
OUTPUT TO SOUNDER	Sounder output (Max.800mA)
AUX SUPPLY	Auxiliary power output
ZONE INPUT	Input of detection zone
BATTERY	Terminals of battery
L / G / N	Terminals of main power
DAY MODE	Terminals of Day/Night Mode
EVAC INPUT	Input of remote EVAC
SILENCE INPUT	Input of remote SILENCE
RESET INPUT	Input of remote SESET

REPEATER OUTPUT	Output terminals for Conventional Repeater
Z1~Z8	Zone terminals
COM FLT	Fault terminal
COM FIRE	Fire terminal
COM DAY	Day-mode terminal
COM DIS	Disable terminal
COM 0V	Negative terminal of Power
PW ON	Positive terminal of Power

VG-6831 Wiring Diagram [Power]

Mains cable

GND

PSU

L N

CHINT

N

L

DC24V Input

Main Board

Battery Input/Charging

XT2

BATTERY
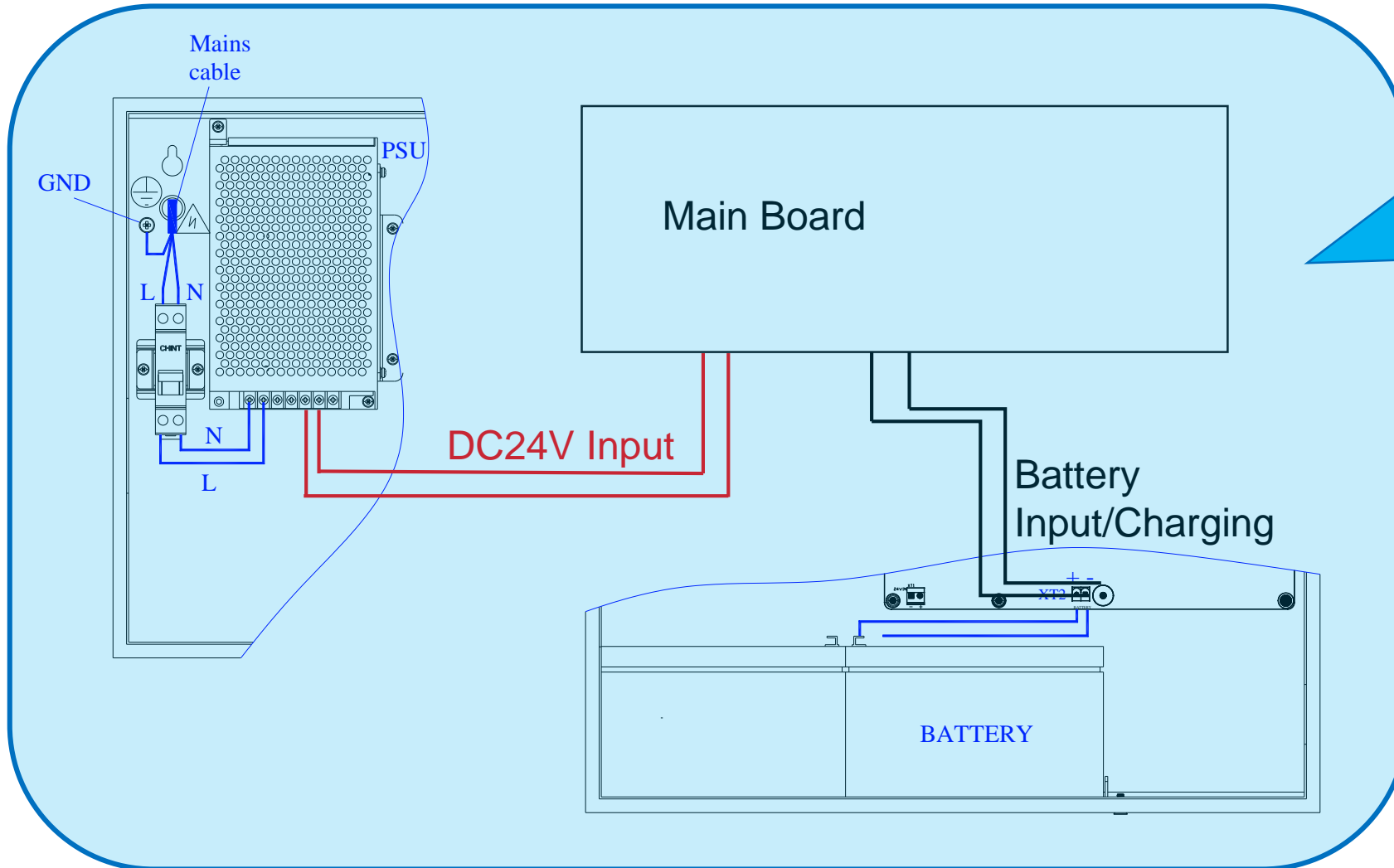
Note:
- Make sure the power is switched off.
- Check the Polarity(+/-)
- Make sure the live and neutral line connect at right terminal and firmly

VC-6831 Wiring Diagram [Detection Line]
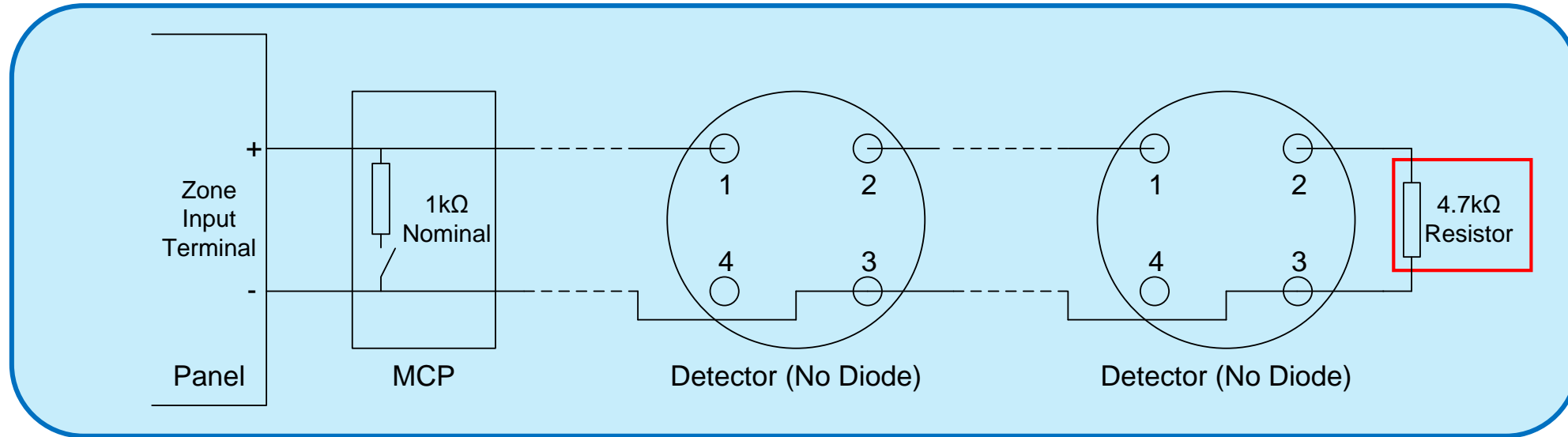
Device capacity of each zone	**Max. 32 pcs**
Detector capacity of each zone	**Max. 32 pcs**
MCP activated at the same time of each zone	**Max. 5 pcs**
Alarm current of detection line of each zone	**Max. 400 mA**

Note:
➤ MCP installed at the front of detector
➤ No Diode at the detector base
➤ 4.7kΩ Resistor at the end of line

VG-6831 Wiring Diagram [Detection Line]
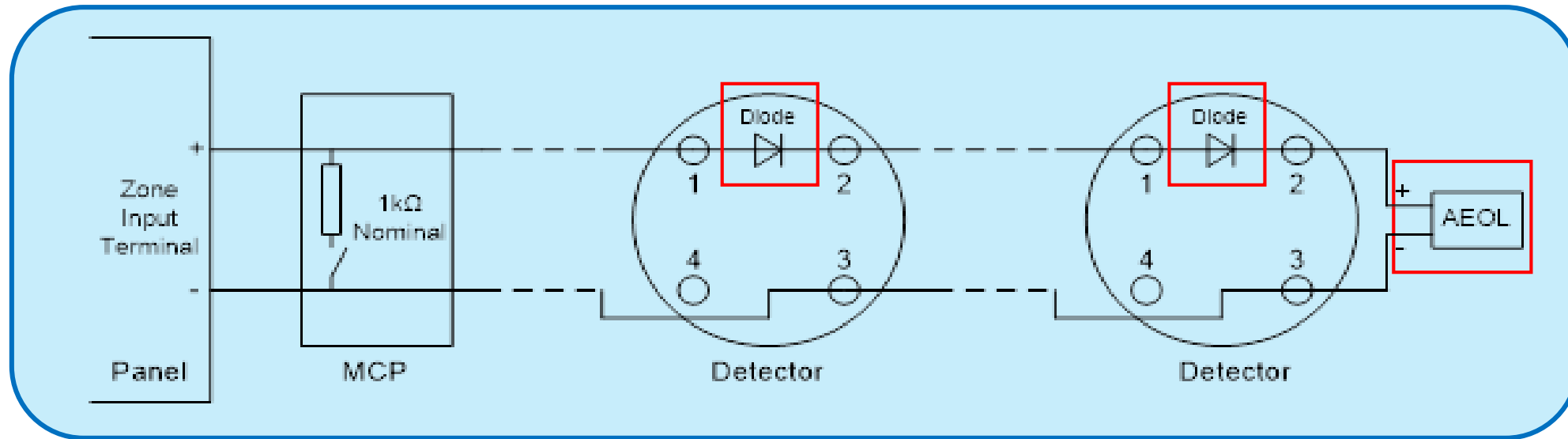
Device capacity of each zone	Max. 32 pcs
Detector capacity of each zone	Max. 32 pcs
MCP activated at the same time of each zone	Max. 5 pcs
Alarm current of detection line of each zone	Max. 400 mA

Note:
- MCP installed anywhere of the line
- Diode required at each detector base
- Active End of Line required at the end of detection line
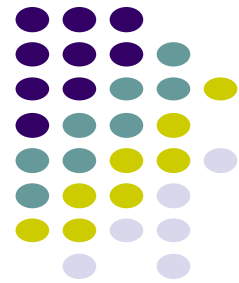
VG-6831 Wiring Diagram [Sounder Circuit]

V-GREAT

Sounder Output

+

−

① ⑤

① ⑤

4.7kΩ EOLR
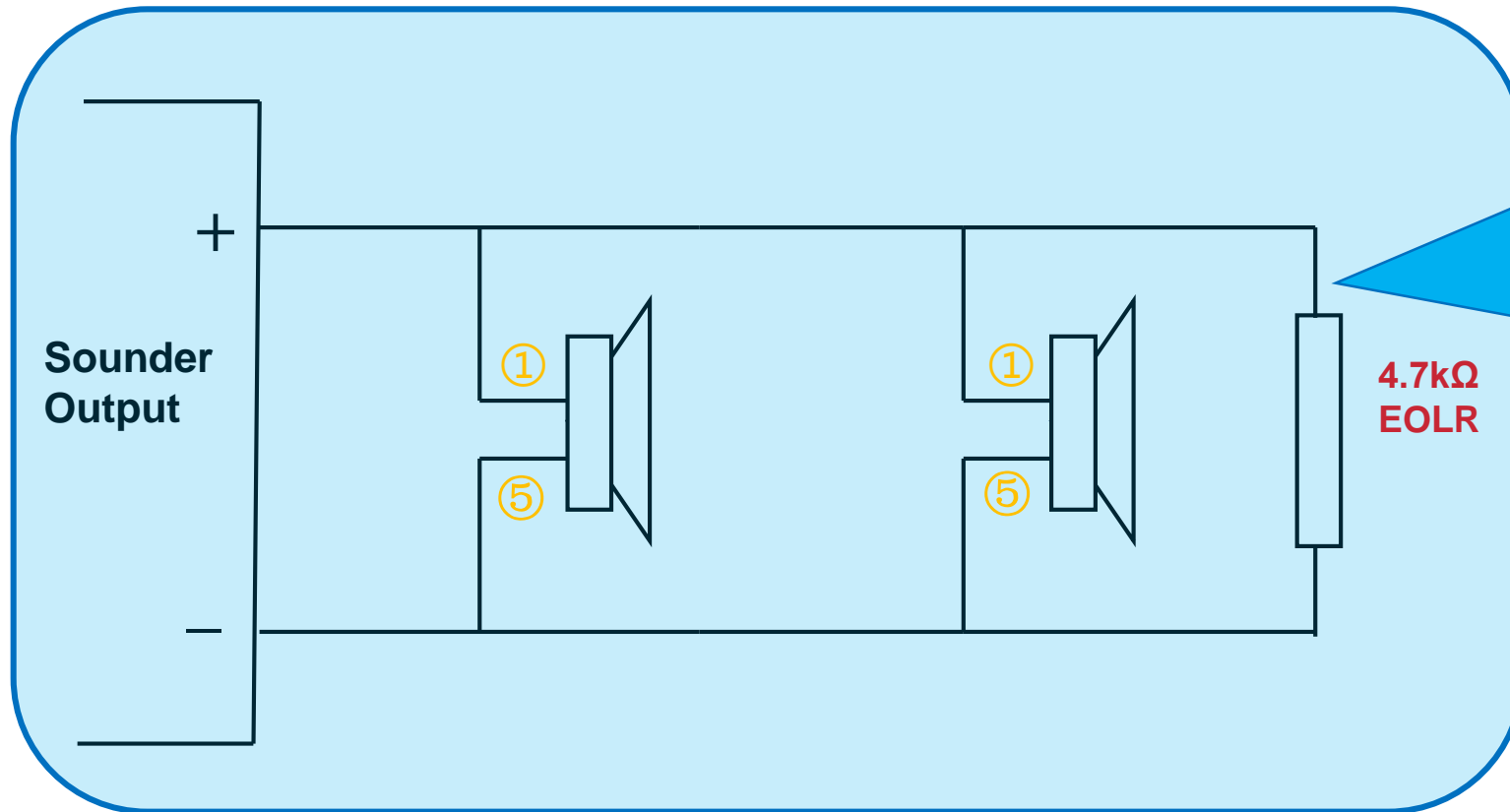
Note:
- Be careful with the polarity(+/-) of each line
- 4.7K EOLR need to be connected so as to avoid faults on the FACP
- Each Sounder Output allows 16 sounders
- Maximum 800mA for one Sounder Output
- Maximum 24 sounders for 4 Sounder Output
- Maximum 1.2A for 4 Sounder Outputs
- Different setting mode

Using Device of other brand

Action Current Consumption (mA): 90 (CHX)

Eg. Using sounder of other brand

CHX: 800mA/90mA = 8 devices
Other brand Detector Voltage > panel voltage range

Alarm Current	≤50 mA

Eg. Using VSAIL sounder strobe

800mA/50mA=16 devices
1200mA/50mA=24 device
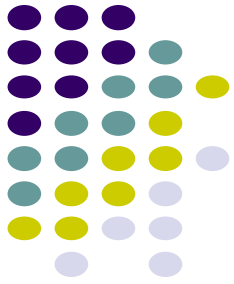
VG-6831/16 Extension Board
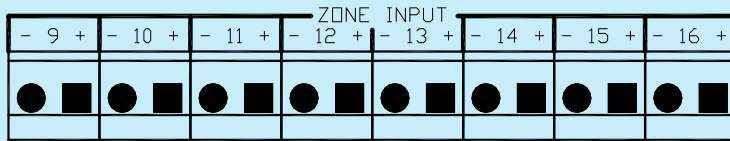
Input of Detection Line for Zone 9~16

ZONE INPUT

| – 9 + | – 10 + | – 11 + | – 12 + | – 13 + | – 14 + | – 15 + | – 16 + |

REPEATER OUTPUT

Z9 Z10 Z11 Z12 Z13 Z14 Z15 Z16 COM 0V
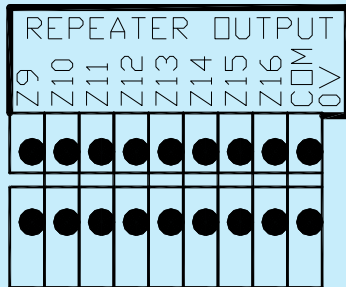
Output of Repeater Panel for Zone 9~16

FAULT 1 FAULT 2 FAULT 3 FAULT 4 FAULT 5 FAULT 6 FAULT 7 FAULT 8 FAULT 9 FAULT 10

FAULT 11 FAULT 12 FAULT 13 FAULT 14 FAULT 15 FAULT 16 ALARM 1 ALARM 2 ALARM 3 ALARM 4 ALARM 5

ALARM 6 ALARM 7 ALARM 8 ALARM 9 ALARM 10 ALARM 11 ALARM 12 ALARM 13 ALARM 14 ALARM 15 ALARM 16
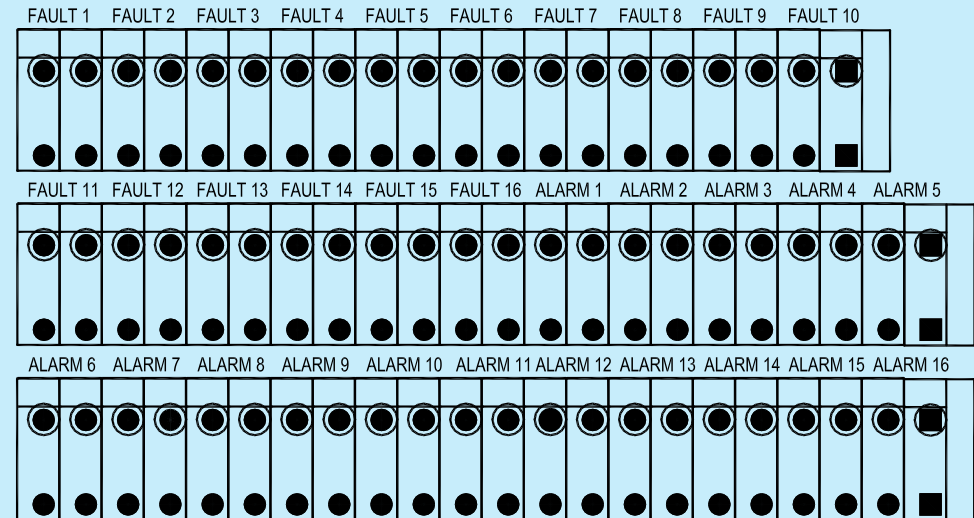
16 Fire Outputs/Voltage-free/NO/1A@24V
16 FAULT Outputs/Voltage-free/NO/1A@24V

V-GREAT

VG-6153(2/4/8) Relay Board
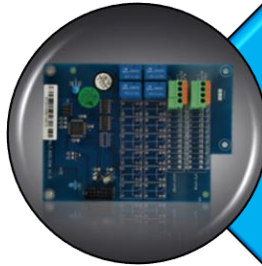
2 Fire Outputs/Voltage-free/NO/1A@24V
2 Fault Outputs/Voltage-free/NO/1A@24V
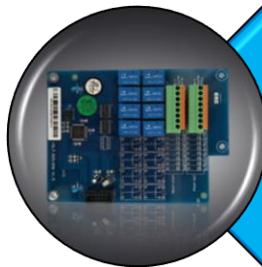
4 Fire Outputs/Voltage-free/NO/1A@24V
4 Fault Outputs/Voltage-free/NO/1A@24V
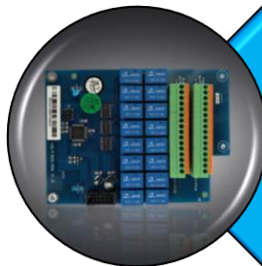
8 Fire Outputs/Voltage-free/NO/1A@24V
8 FAULT Outputs/Voltage-free/NO/1A@24V
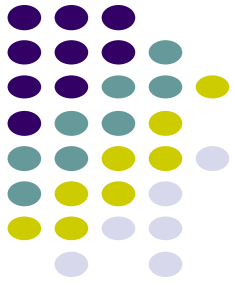
VG-6831 Setting of Sounder/Alarm Output

Setting Mode:
I. Active Output
II. Normally Open
III. Normally Close
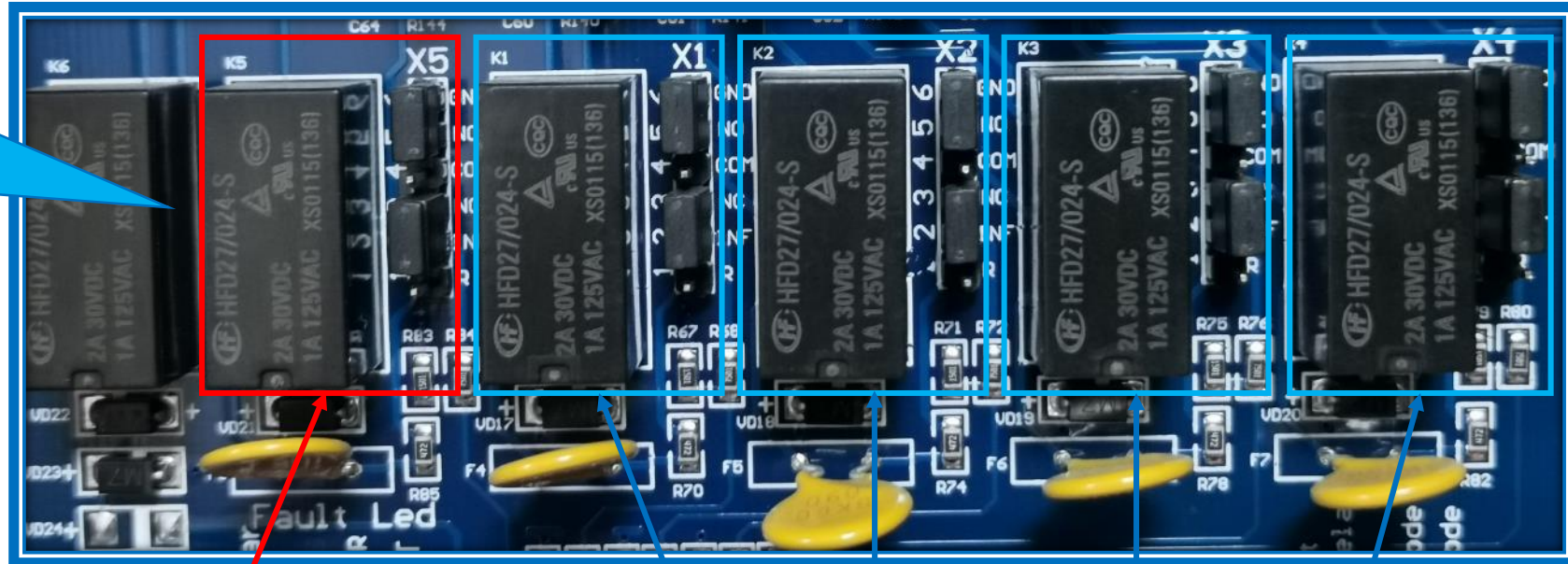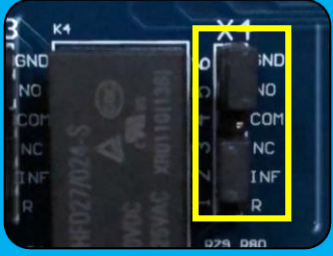
Jumper & Relay for ALARM OUTPUT

Jumper & Relay for SOUNDER OUTPUT 1/2/3/4
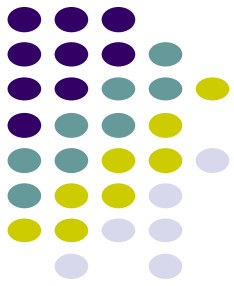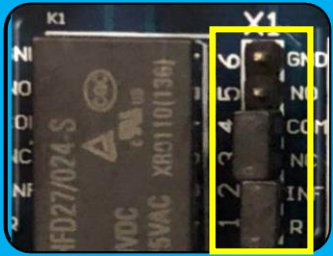
VG-6831 Setting of Sounder/Alarm Output
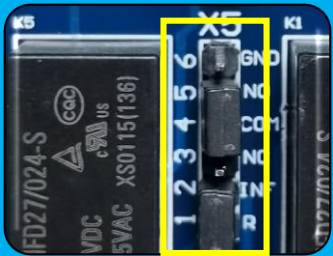
Active Output

- 2&3, 5&6
- Max. 800mA @ DC24V
- Default setting

Passive Output

- 1&2, 3&4
- Normally Closed Contact

Passive Output

- 1&2, 4&5
- Normally Opened Contact

VG-6831 Setting of Sounder/Alarm Output

OUTPUT	Active Output		NC Output		NO Output	
	Jumper [factory default]		Jumper		Jumper	
Sounder Output 1	X1/ 2&3, 5&6		X1/ 1&2, 3&4		X1/ 1&2, 4&5	
Sounder Output 2	X2/ 2&3, 5&6		X2/ 1&2, 3&4		X2/ 1&2, 4&5	
Sounder Output 3	X3/ 2&3, 5&6		X3/ 1&2, 3&4		X3/ 1&2, 4&5	
Sounder Output 4	X4/ 2&3, 5&6		X4/ 1&2, 3&4		X4/ 1&2, 4&5	
Alarm Output	X5/ 2&3, 5&6		X5/ 1&2, 3&4		X5/ 1&2, 4&5	

VG-6831 Setting of Auxiliary Power Output
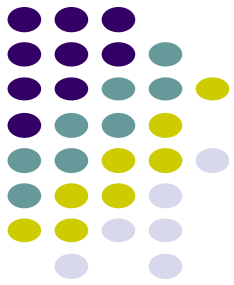
X8 Jumper

- X8 Jumper
- AUX SUPPLY + LOOP 24V
- AUX power output stopped for 3s when panel reset

Loop 24V
AUX SUPPLY
24V

Loop 24V
AUX SUPPLY
24V
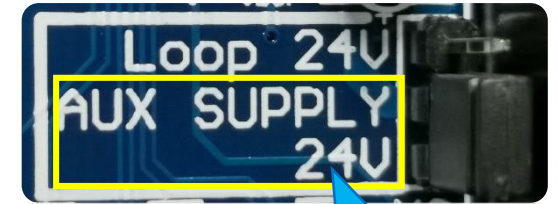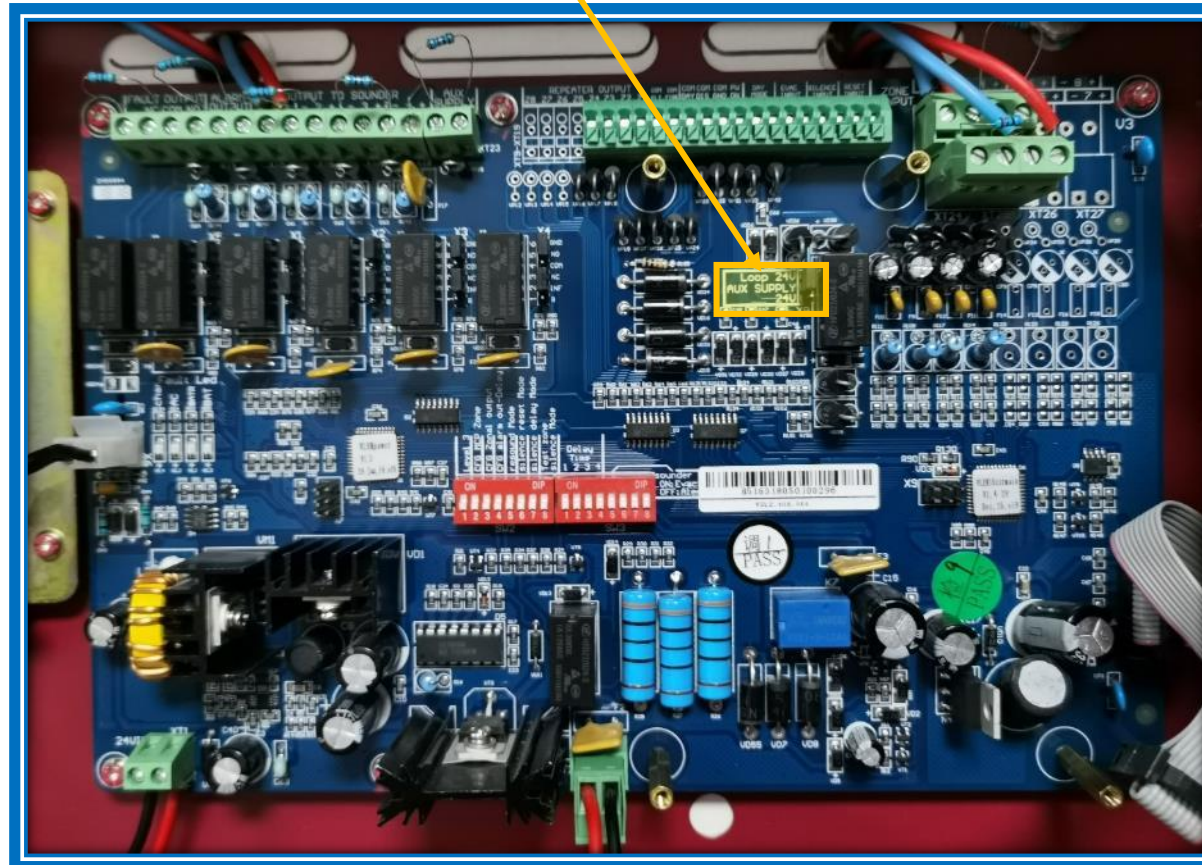
- X8 Jumper
- AUX SUPPLY + 24V
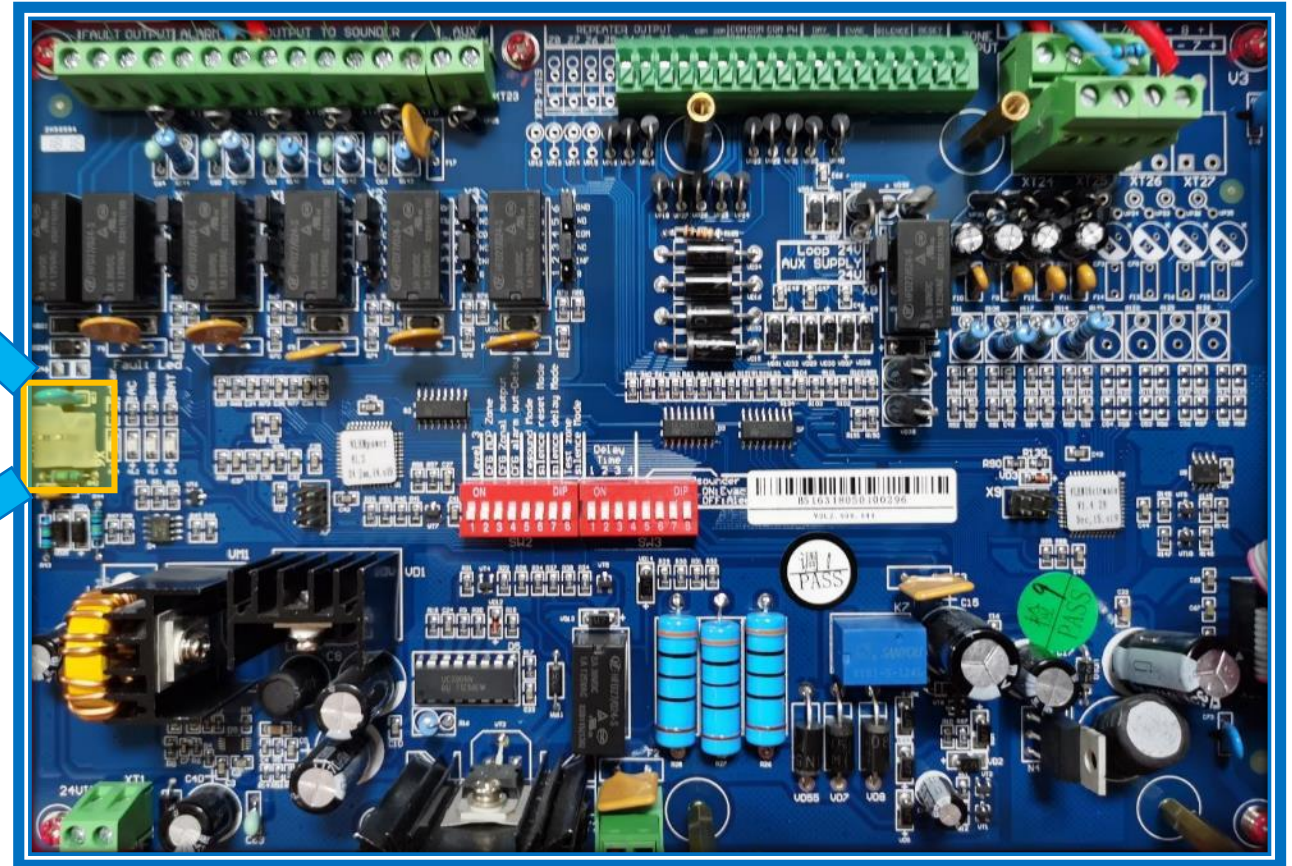- AUX power output provided continuously
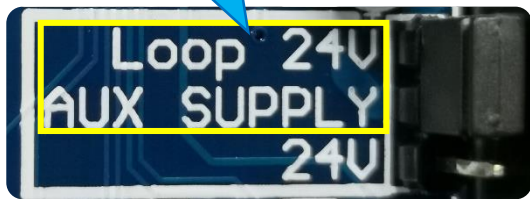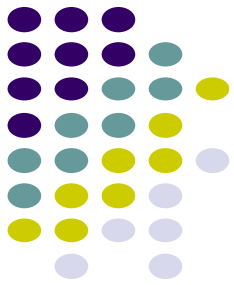
VG-6831 Setting of Earth Fault

Plug on X6 Jumper to check and generate Earth Fault

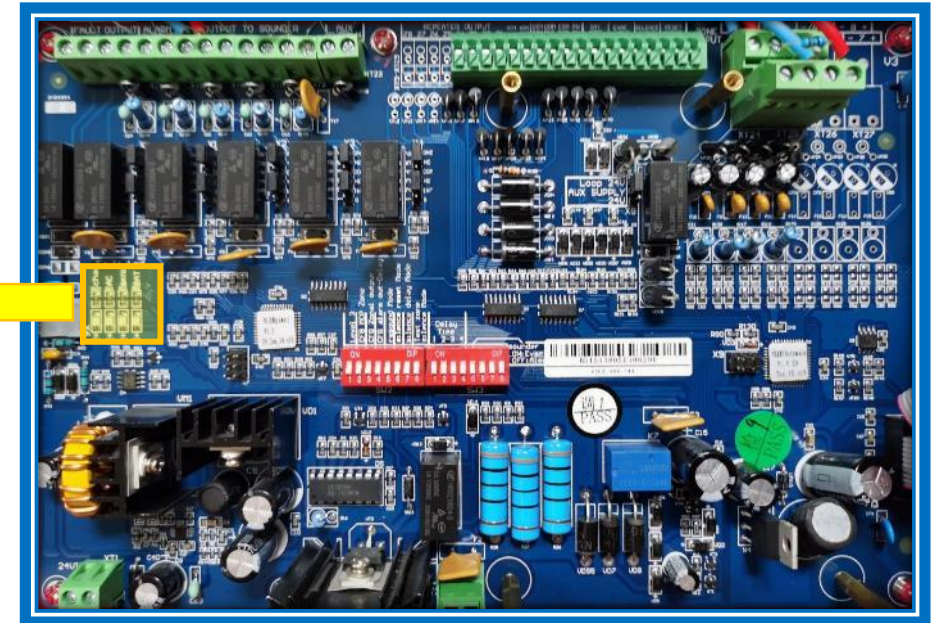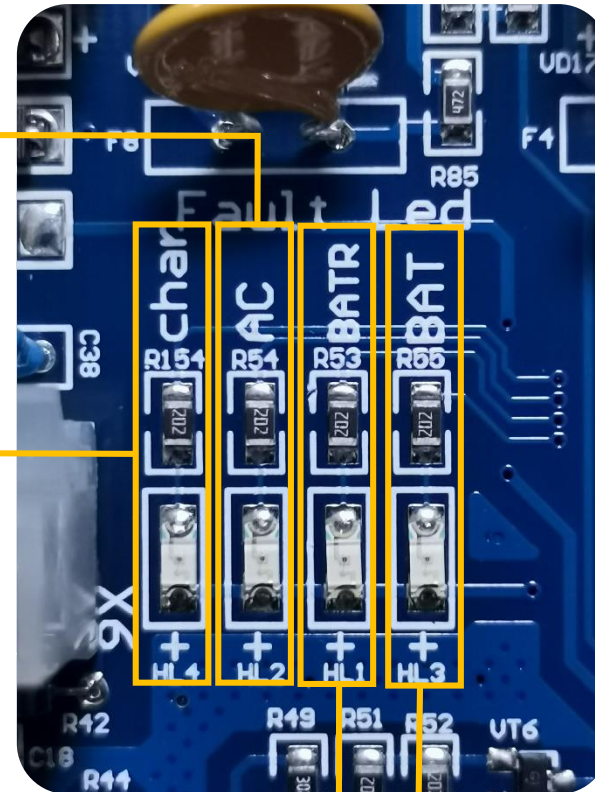Without X6 Jumper, the panel will not report Earth Fault
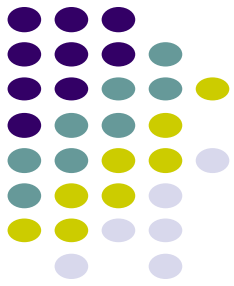
VG-6831 Indicator of Power Fault

Fault of Main Power

Fault of Battery Charging
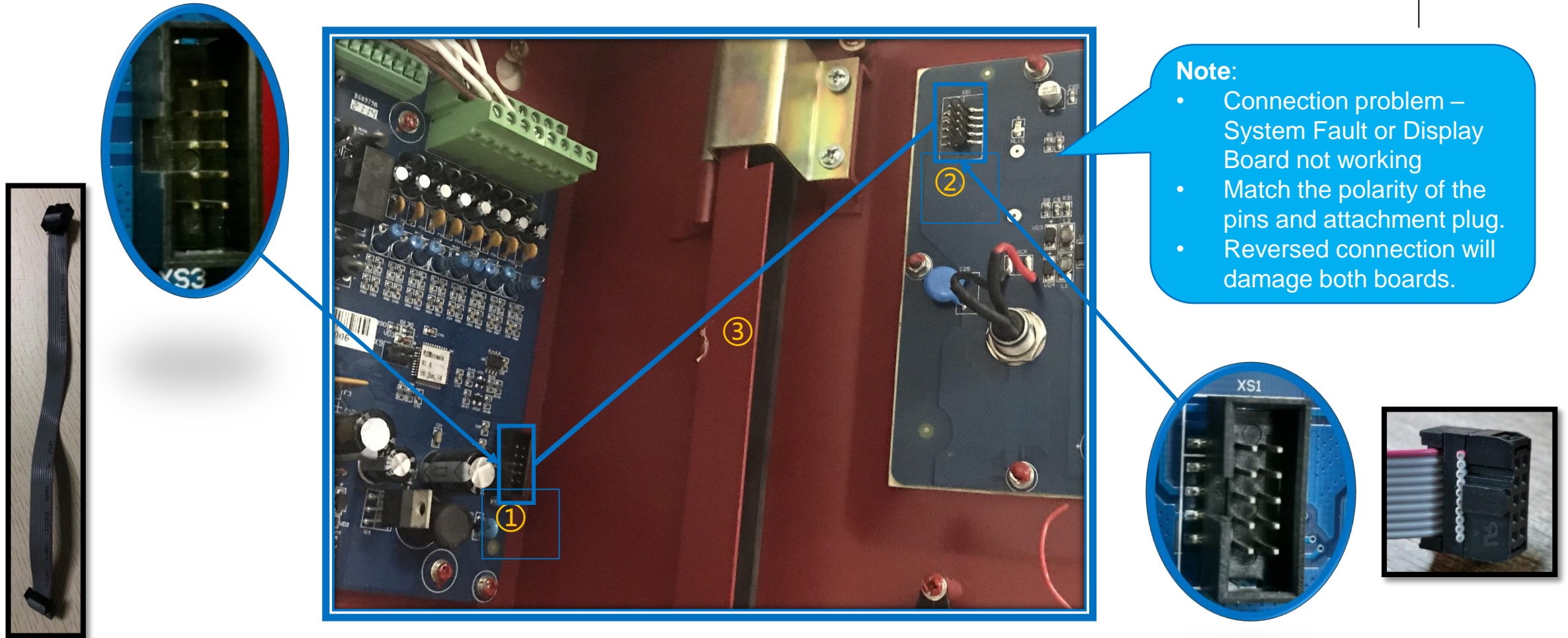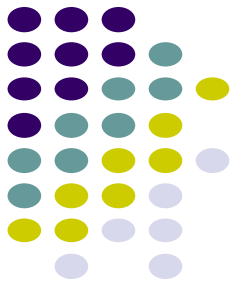
Fault of Battery Resistance

Fault of Battery

VG-6831 Connection between Boards

Note:
- Connection problem – System Fault or Display Board not working
- Match the polarity of the pins and attachment plug.
- Reversed connection will damage both boards.

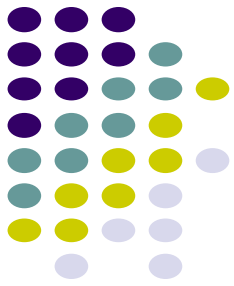① XS3 Port on Main Board ② XS1 Port on Display Board ③10pins straight-through wired cables

VG-6831 Connection on Board

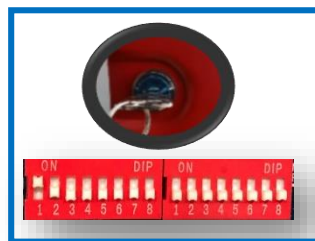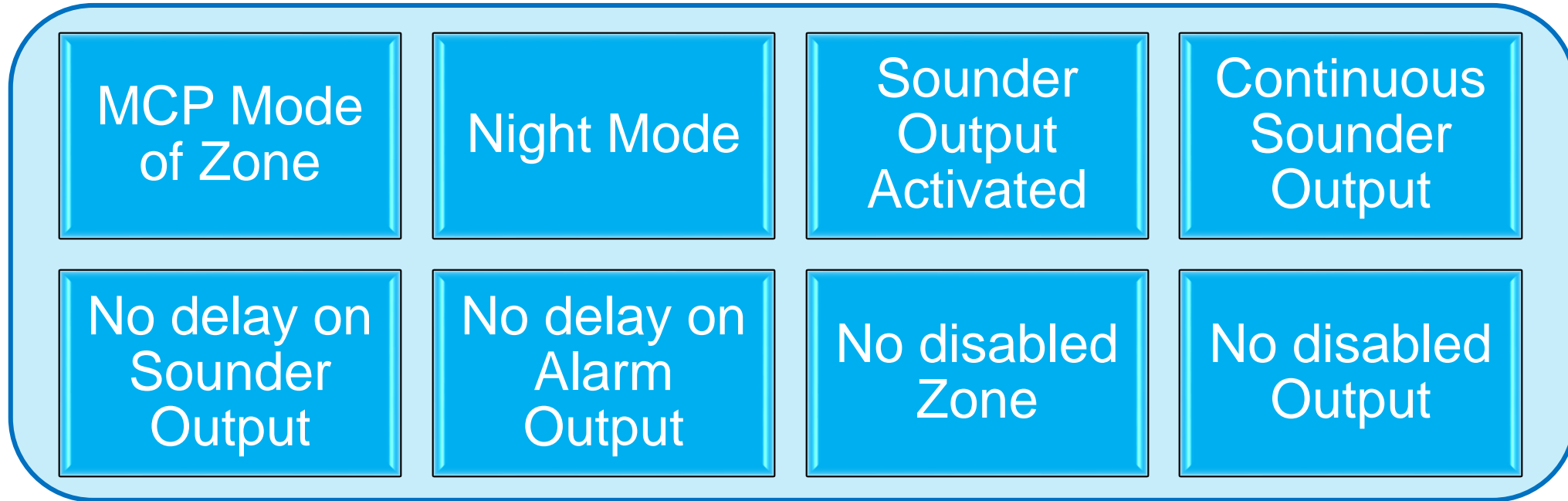Check this point if Key-switch does not work
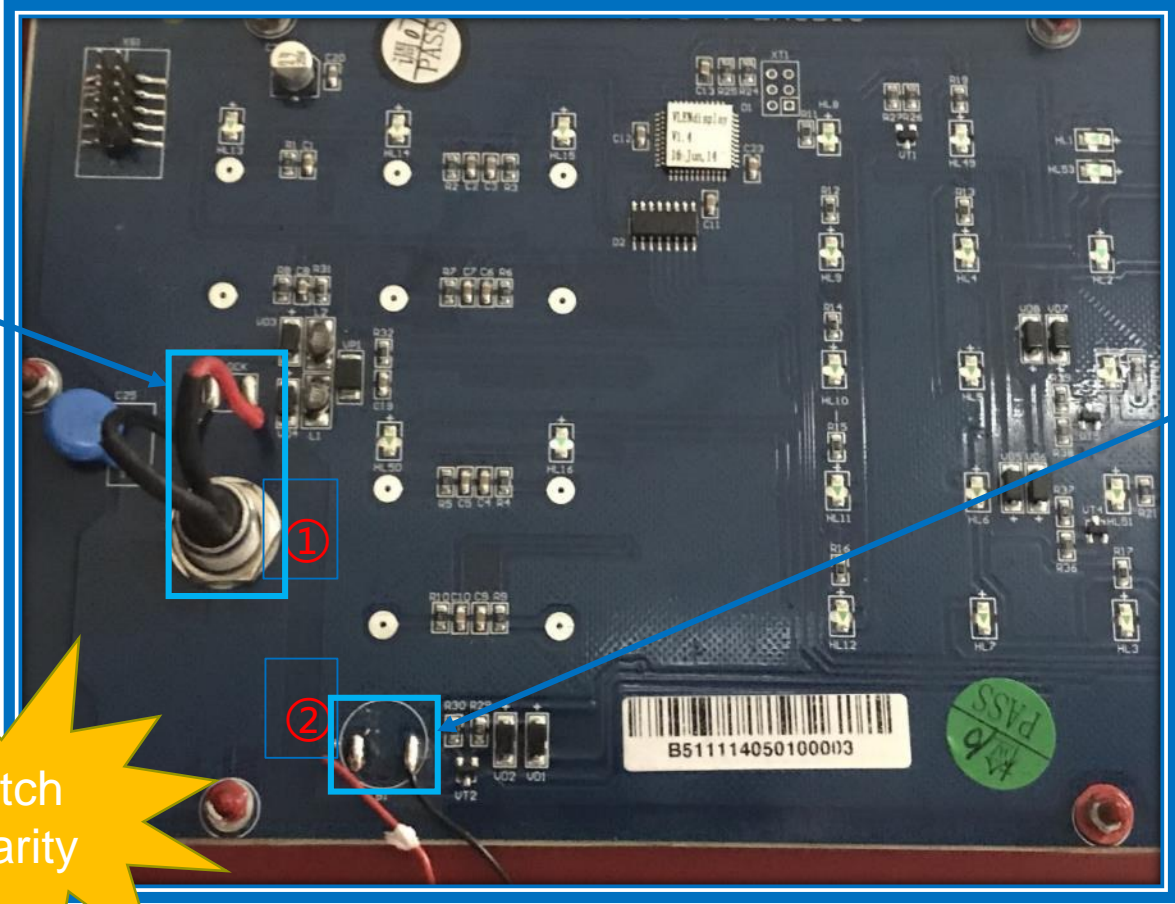
Check this point if Buzzer does not work

Match Polarity

VG-6831 Setting of Output Program [default]

MCP Mode of Zone	Night Mode	Sounder Output Activated	Continuous Sounder Output
No delay on Sounder Output	No delay on Alarm Output	No disabled Zone	No disabled Output

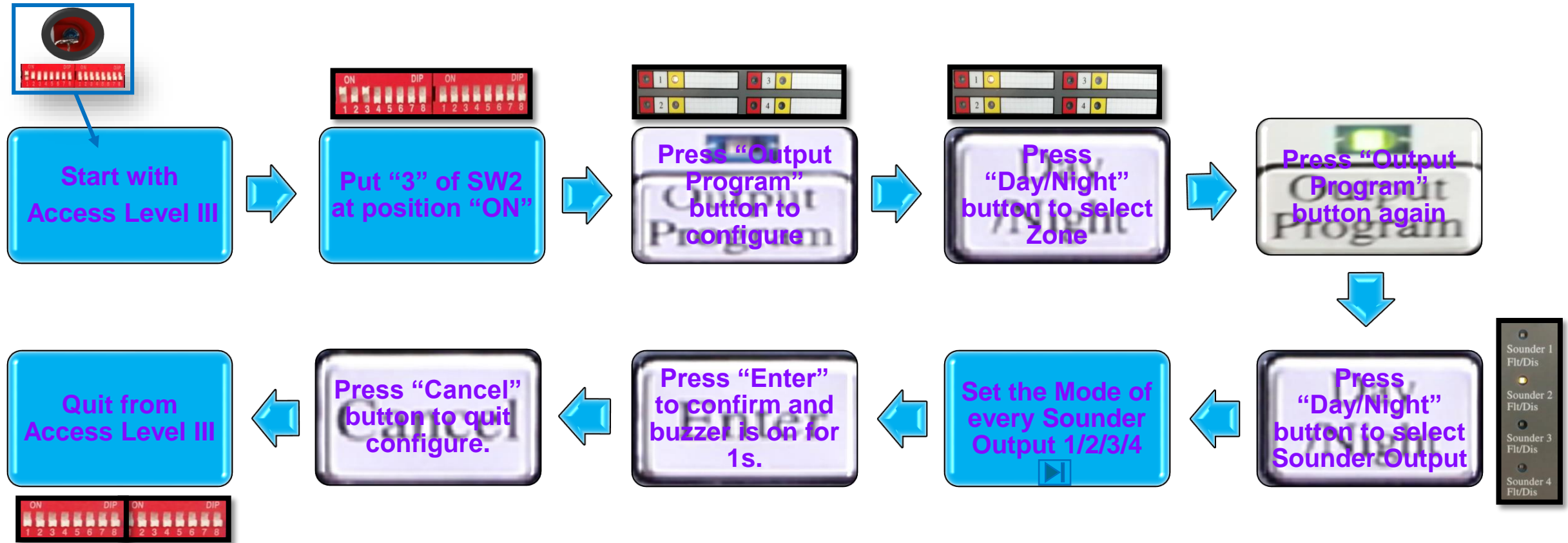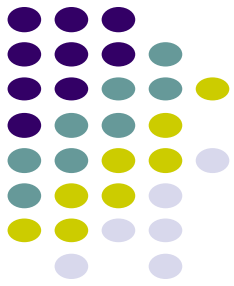Start with Access Level III → Press "Output Program" button for 2s. → Buzzer sound for 1s. → System back to default setting
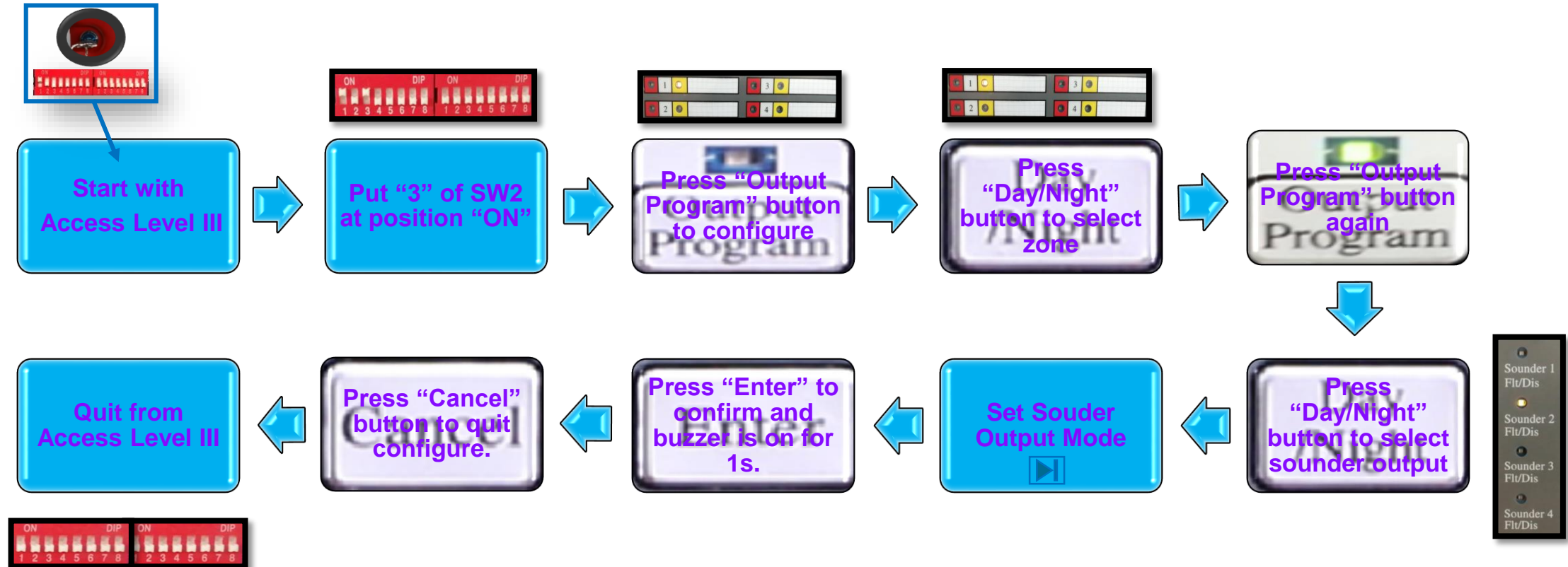
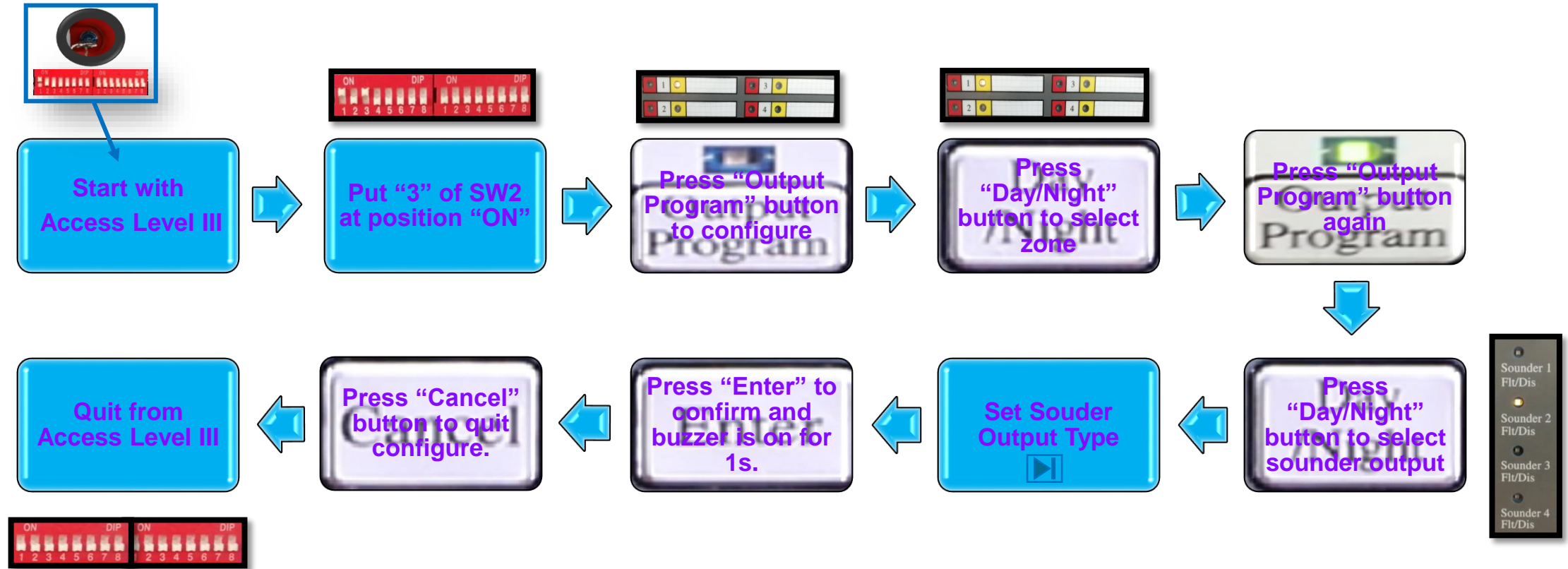# VG-6831 Setting of Sounder Output [Zone]

Start with Access Level III → **Put "3" of SW2 at position "ON"** → **Press "Output Program" button to configure** → **Press "Day/Night" button to select Zone** → **Press "Output Program" button again**

↓

Quit from Access Level III ← **Press "Cancel" button to quit configure.** ← **Press "Enter" to confirm and buzzer is on for 1s.** ← **Set the Mode of every Sounder Output 1/2/3/4** ← **Press "Day/Night" button to select Sounder Output**

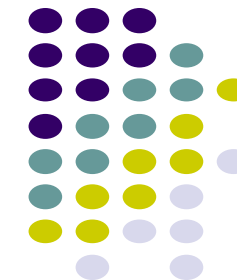Sounder 1 Flt/Dis
Sounder 2 Flt/Dis
Sounder 3 Flt/Dis
Sounder 4 Flt/Dis

VG-6831 Setting of Sounder Output [Mode]

Start with Access Level III → **Put "3" of SW2 at position "ON"** → **Press "Output Program" button to configure** → **Press "Day/Night" button to select zone** → **Press "Output Program" button again**

↓

Press "Day/Night" button to select sounder output ← **Set Souder Output Mode** ← **Press "Enter" to confirm and buzzer is on for 1s.** ← **Press "Cancel" button to quit configure.** ← **Quit from Access Level III**

VG-6831 Setting of Sounder Output [Type]

Start with Access Level III → **Put "3" of SW2 at position "ON"** → **Press "Output Program" button to configure** → **Press "Day/Night" button to select zone** → **Press "Output Program" button again**

↓

Press "Day/Night" button to select sounder output ← **Set Souder Output Type** ← **Press "Enter" to confirm and buzzer is on for 1s.** ← **Press "Cancel" button to quit configure.** ← **Quit from Access Level III**

VG-6831 Setting of Sounder Output [Mode]

Mode	Description	"Disable/Enable" Key and LED	"Test" LED	LED indication	
1	No output	Off	Off		
2	If alarm relay outputs, it outputs.	Off	On		
3	Delay output （ **Delay Mode** ）	On	Off		
4	Immediate output	On	On		
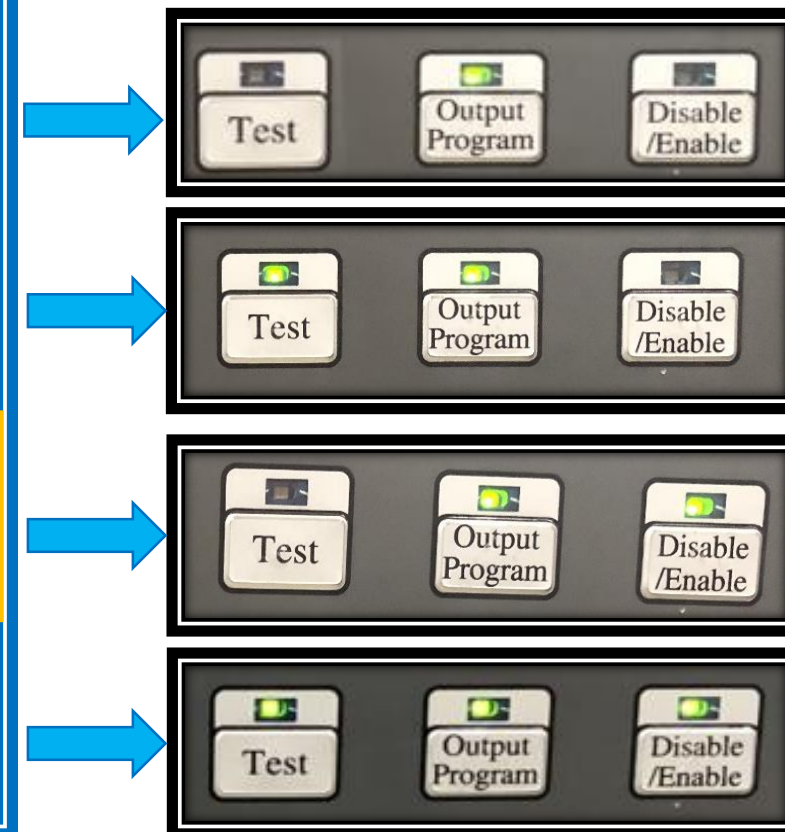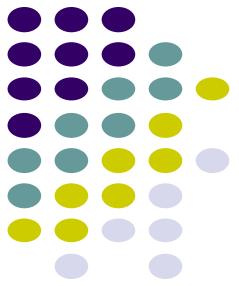
VG-6831 Setting of Sounder Output [Type]
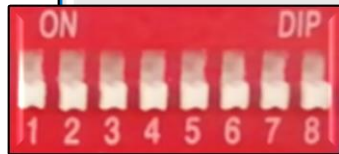
* "5" of SW3 at position "OFF"

* Pre-alarm Mode

* Pulse Output
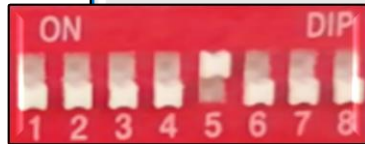
* "5" of SW3 at position "ON"

* EVAC Mode

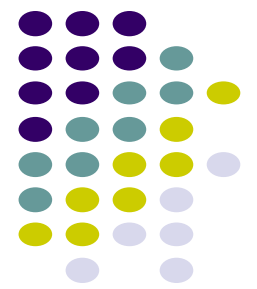* Continuous Output
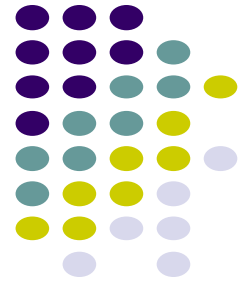
VG-6831 Setting of Delay [Sounder Output]

Start with Access Level III → **Put "3" of SW2 at position "ON"** → **Press "Output Program" button to configure** → **Press "Day/Night" button to select zone** → **Press "Output Program" button again**

Press "Cancel" button to quit configure. ← **Press "Enter" to confirm and buzzer is on for 1s.** ← **Set Delay Time** ← **Set Delay Mode** ← **Press "Day/Night" button to select Sounder Output**

Quit from Access Level III

Indicator On

Day Mode

MCP Mode

> LED indicator is flashing during Delay Time.
> LED indicator is illuminating after Delay Time is end.

VG-6831 Setting of Delay [Alarm Output]
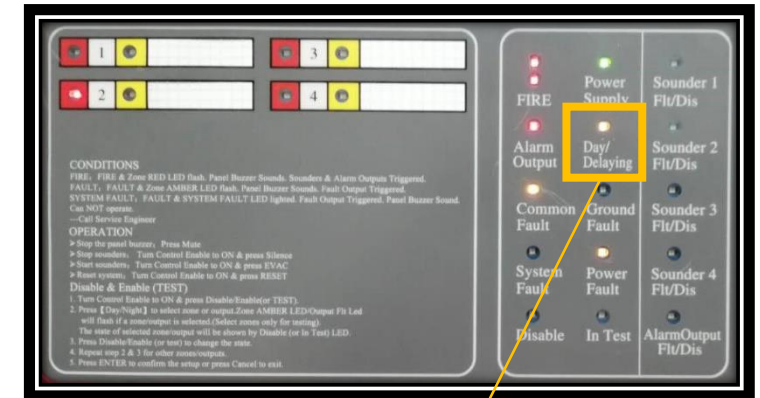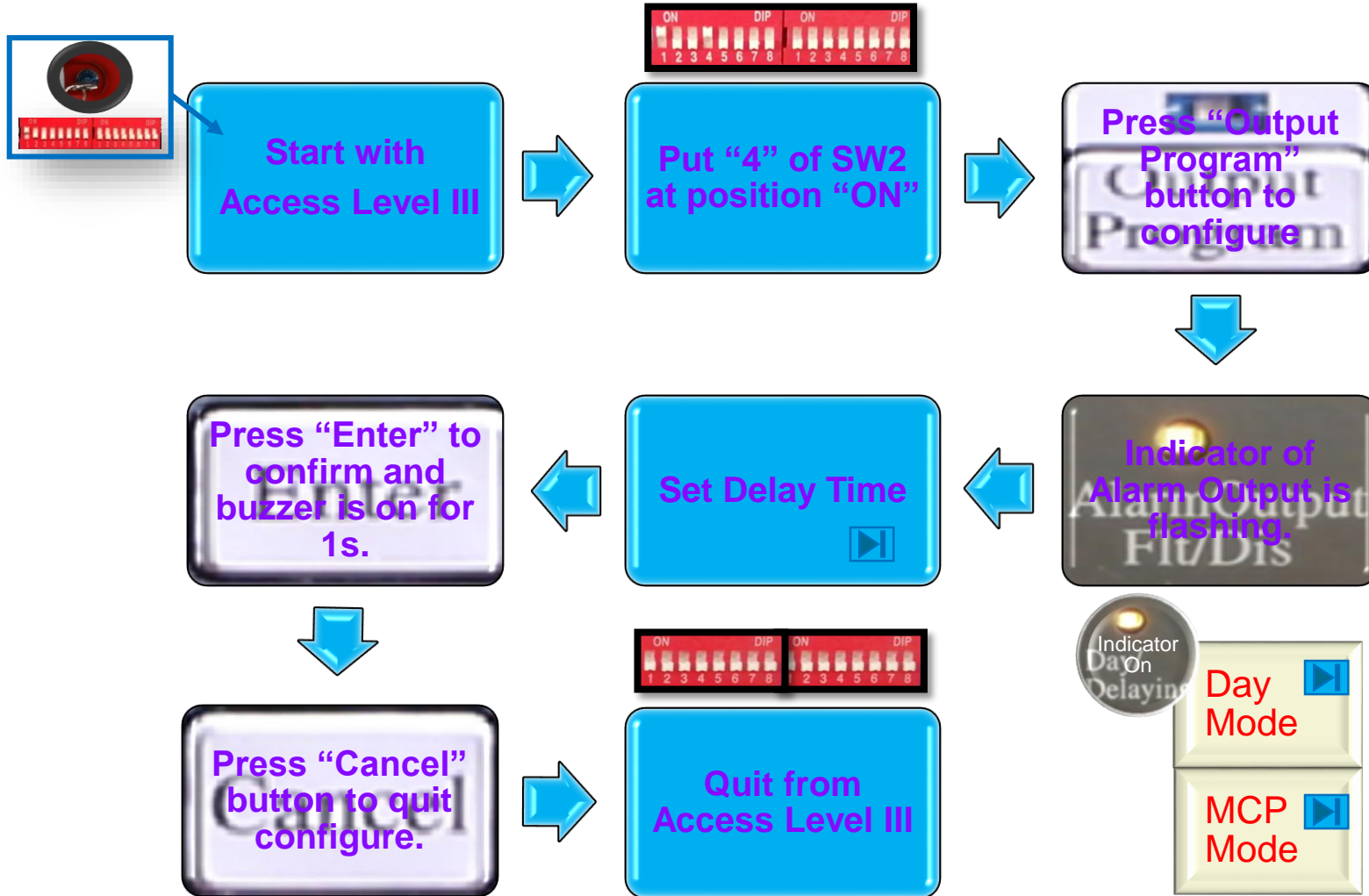
Start with Access Level III → **Put "4" of SW2 at position "ON"** → **Press "Output Program" button to configure**

↓

Indicator of Alarm Output is flashing. ← **Set Delay Time** ← **Press "Enter" to confirm and buzzer is on for 1s.**

↓ (back up)

Press "Enter" to confirm and buzzer is on for 1s.

↓

Press "Cancel" button to quit configure. → **Quit from Access Level III**

Indicator On
Day Delaying

Day Mode ▶|
MCP Mode ▶|

- ➢ LED indicator is flashing during Delay Time.
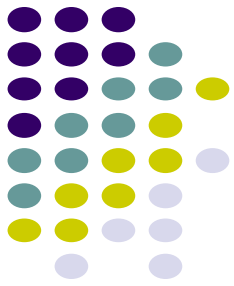- ➢ LED indicator is illuminating after Delay Time is end.
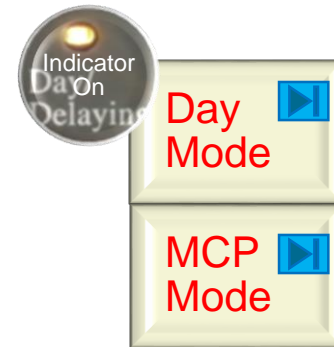
VG-6831 Setting of Delay Time

| Delay Time min	"1" to "4" of SW3 （Delay Time）				DIP State	Delay Time min	"1" to "4" of SW3 （Delay Time）				DIP State
	1	2	3	4			1	2	3	4	
0	Off	Off	Off	Off		4	Off	Off	Off	on	
0.5	on	Off	Off	Off		4.5	on	Off	Off	on	
1	Off	on	Off	Off		5	Off	on	Off	on	
1.5	on	on	Off	Off		5.5	on	on	Off	on	
2	Off	Off	on	Off		6	Off	Off	on	on	
2.5	on	Off	on	Off		6.5	on	Off	on	on	
3	Off	on	on	Off		7	Off	on	on	on	
3.5	on	on	on	Off		7.5	on	on	on	on	

VG-6831 Setting of Day/Night Mode

Day Mode
- Delay Mode available for Sounder/Alarm Output
- Allow manual confirm to reduce false alarm

Night Mode
- When alarm occurred, Sounder/Alarm Output will be activated immediately

Method One
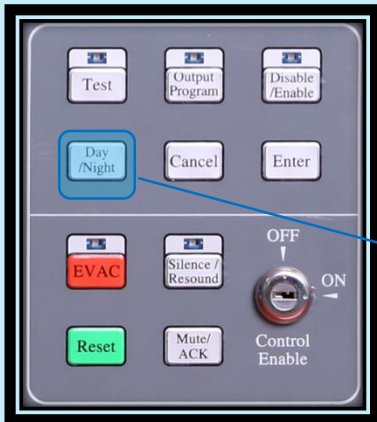
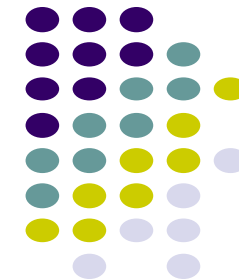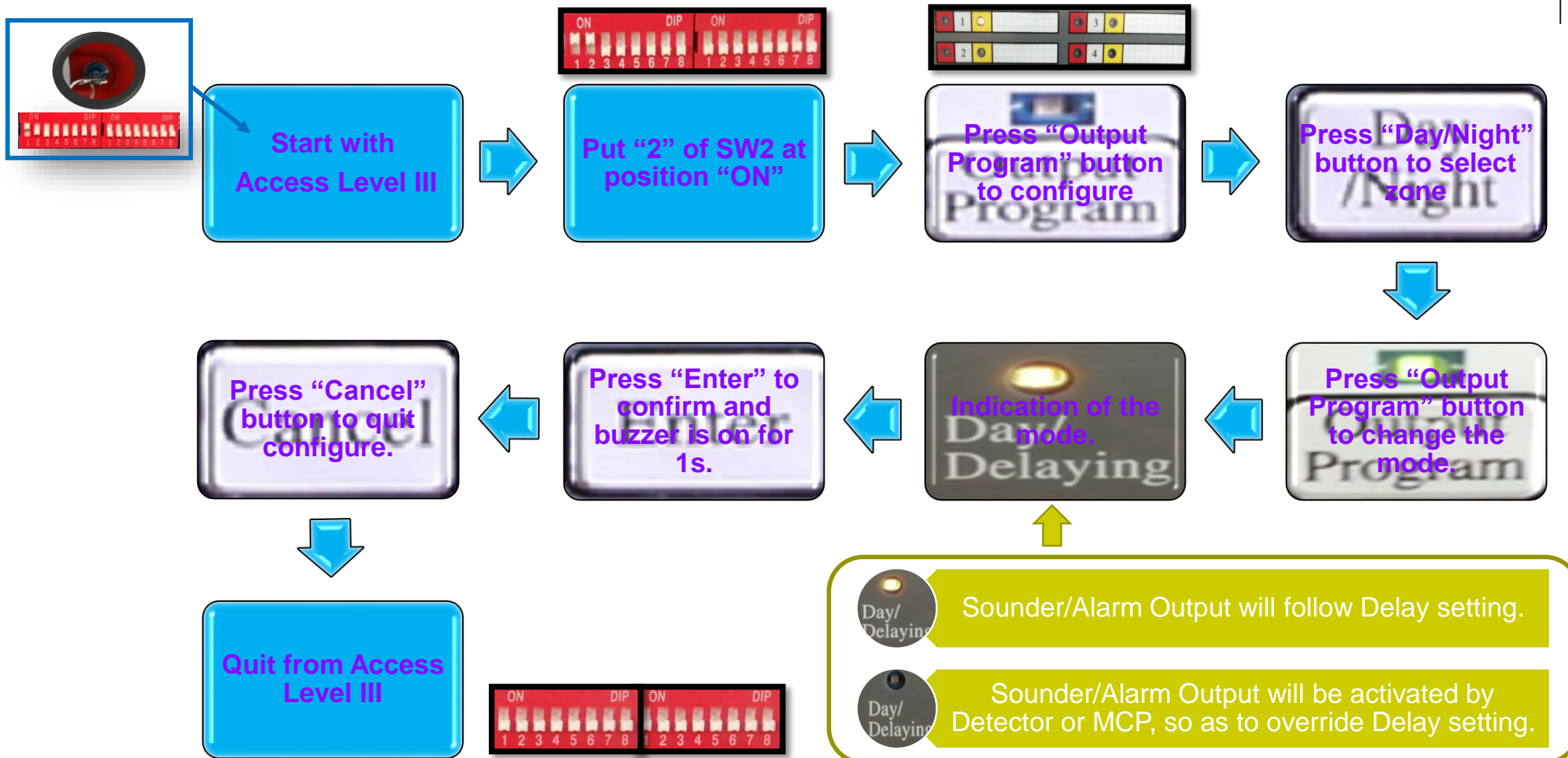Press "Day/Night" button for 2s to switch between "DAY" "NIGHT"

Method Two
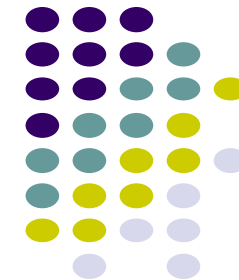
Connect NO switch to "DAY MODE" terminals on main Board. "NO" ⟶ "NC"

VG-6831 Setting of MCP Mode

Start with Access Level III → **Put "2" of SW2 at position "ON"** → **Press "Output Program" button to configure** → **Press "Day/Night" button to select zone**

Press "Cancel" button to quit configure. ← **Press "Enter" to confirm and buzzer is on for 1s.** ← **Indication of the mode.** ← **Press "Output Program" button to change the mode.**

Quit from Access Level III

Sounder/Alarm Output will follow Delay setting.

Sounder/Alarm Output will be activated by Detector or MCP, so as to override Delay setting.

VG-6831 Setting of Test Mode

Start with Access Level II → Press "Test" button to enter configure → Press "Day/Night" button to select zone

Indicator of In Test is illuminating. ← Indicator of Zone is flashing. ← Press "Test" button to confirm.

Setting deleted after power off!

Press "Enter" to confirm and buzzer is on for 1s. → Press "Cancel" button to quit configure.

In Test Mode, Sounder/Alarm/Repeater/Fault Output will be disabled.

VG-6831 How to Quit Test Mode

Start with Access Level II → **Press "Test" button to enter configure** → **Press "Day/Night" button to select zone** → **Press "Test" button to confirm**

↓

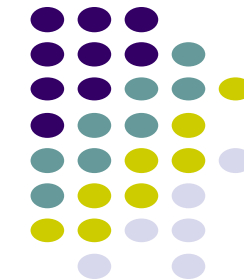**Indicator of Zone is flashing.** ← **Indicator of In Test is off** ← **Press "Enter" to confirm and buzzer is on for 1s.** ← **Press "Cancel" button to quit configure.**
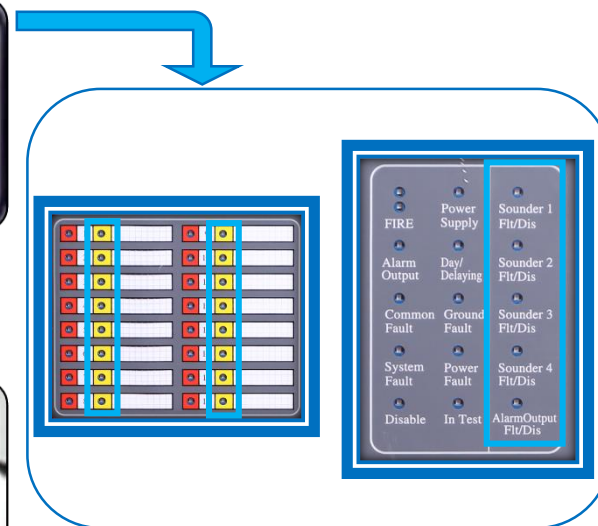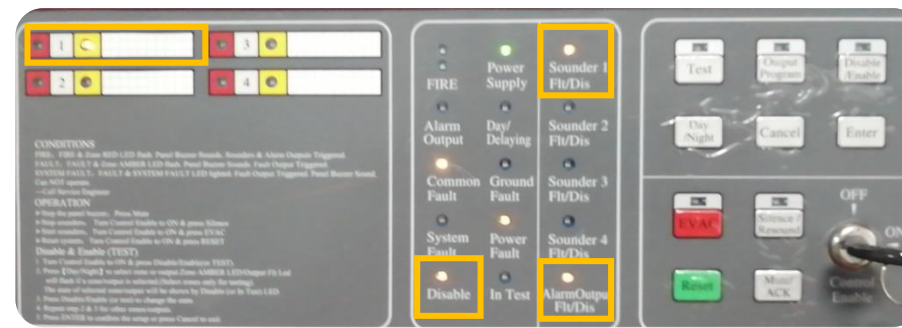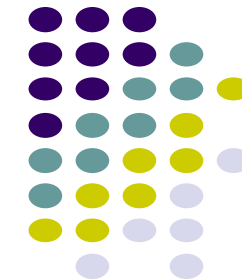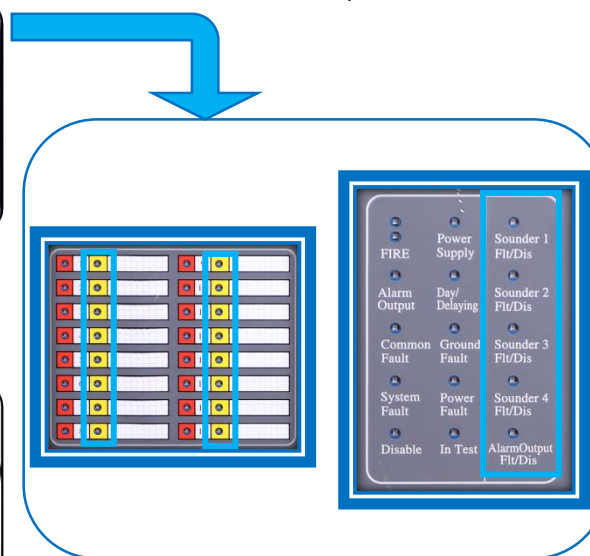
Setting deleted after power off!

VG-6831 Setting of Disable

Start with Access Level II → Press "Disable" button to enter configure → Press "Day/Night" button to select Zone and Output →

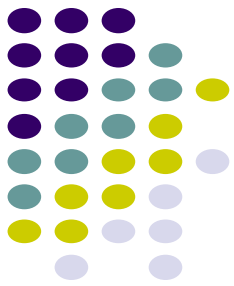Press "Disable" button to confirm. ← Indicator of Zone/Output is flashing. ← Indicator of Disable is illuminating.

Setting saved after power off!

Press "Enter" to confirm and buzzer is on for 1s. → Press "Cancel" button to quit configure.

VG-6831 Setting of Enable

Start with Access Level II → **Press "Enable" button to enter configure** → **Press "Day/Night" button to select Zone or Output**

Indicator of Disable is off. ← **Indicator of Zone/Output is flashing.** ← **Press "Enable" button to confirm.**

Setting saved after power off!

Press "Enter" to confirm and buzzer is on for 1s. → **Press "Cancel" button to quit configure.**
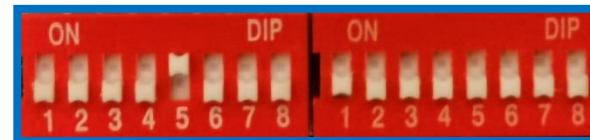
VG-6831 Setting of Resound Mode

Resound Mode On:
1. When alarm occurred in Zone 1, Sounder Output 1 is activated, then press "Silence" button to silence the sounder.
2. Afterwards, if there is another alarm occurred in Zone 2, Sounder Output 1 will resound again.
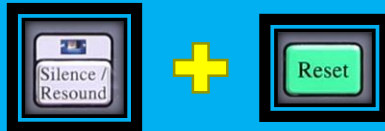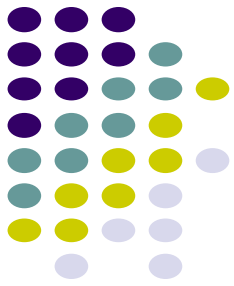
Put "5" of SW2 on position "ON"
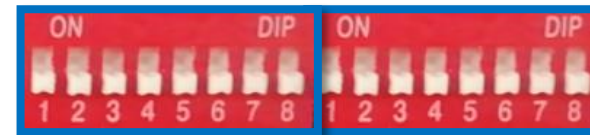
Put "5" of SW2 on position "OFF"

Resound Mode Off:
1. When alarm occurred in Zone 1, Sounder Output 1 is activated, then press "Silence" button to silence the sounder.
2. Afterwards, if there is another alarm occurred in Zone 2, Sounder Output 1 will remain silenced.
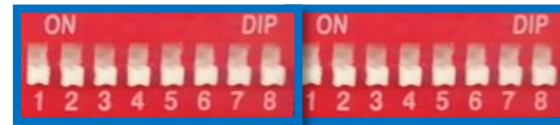
VG-6831 Setting of Silence+Rest Mode

Silence+Reset Mode On:
1. When alarm occurred, Sounder Output is activated.
2. Press "Silence" + "Reset" button to reset the panel.
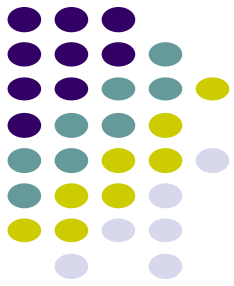
Put "6" of SW2 on position "ON"

Put "6" of SW2 on position "OFF"

Silence+Reset Mode Off:
1. When alarm occurred, Sounder Output is activated.
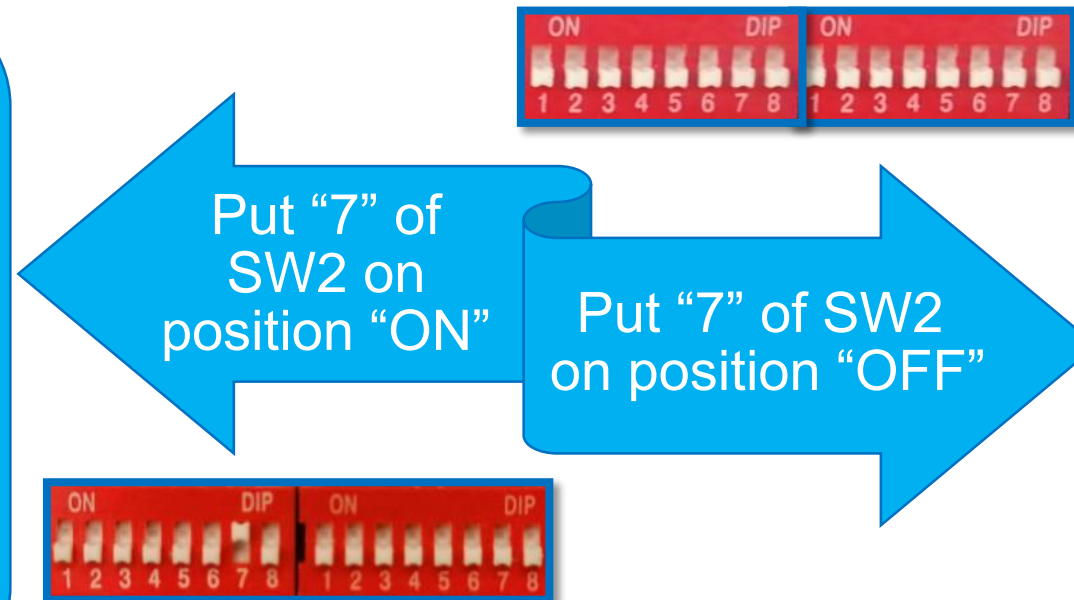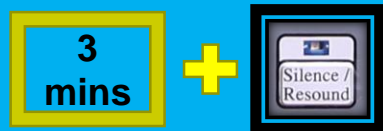2. Press "Reset" button only to reset the panel.

VG-6831 Setting of Silence Delay Mode

Silence Delay Mode On:
1. When alarm occurred, Sounder Output is activated.
2. There is time delay of 3 minutes.
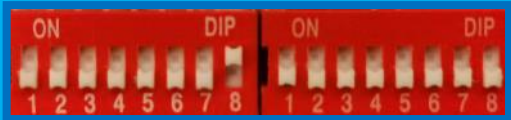3. Afterwards, Press "Silence" button to silence the sounder.

| 3 mins | + | Silence / Resound |

Put "7" of SW2 on position "ON"

Put "7" of SW2 on position "OFF"

Silence-Reset Mode Off:
1. When alarm occurred, Sounder Output is activated.
2. Press "Silence" button immediately to silence the sounder.

Silence / Resound
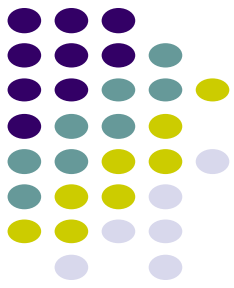
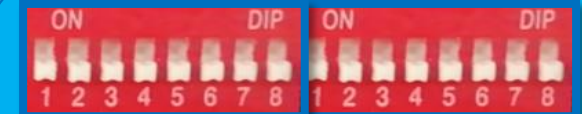# VG-6831 Setting of Sound of Test Zone

Sound of Test Zone On:
1. Zone 1 is set in Test Mode.
2. When alarm occurred in Zone 1, the Sounder of Zone 1 will be activated for 15 seconds.
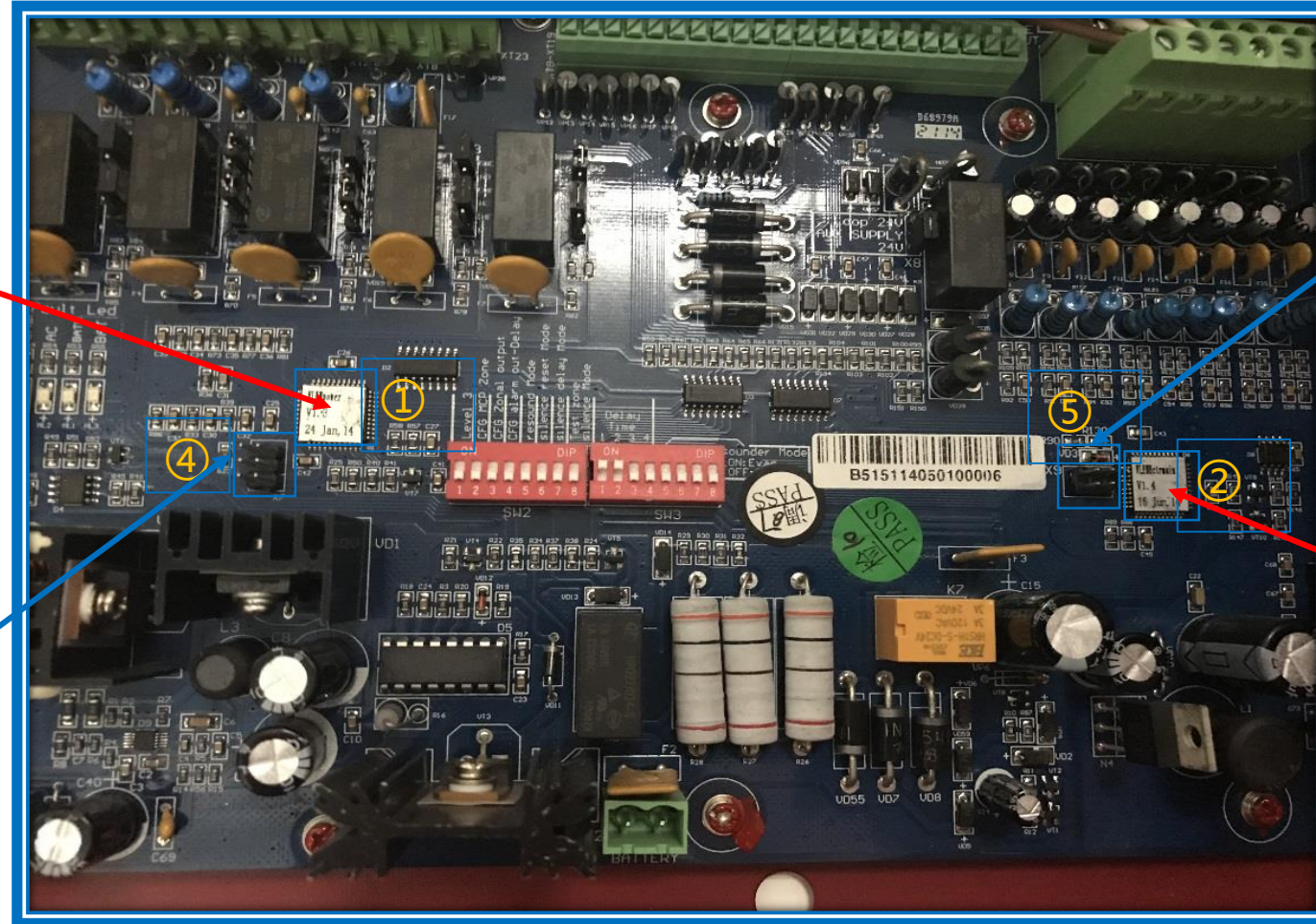
Put "8" of SW2 on position "ON"

Put "8" of SW2 on position "OFF"

Sound of Test Zone Off:
1. Zone 1 is set in Test Mode.
2. When alarm occurred in Zone 1, the Sounder of Zone 1 will not be activated.
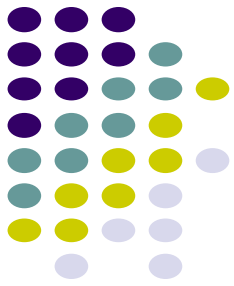
VG-6831 Program Update [Main Board]

MCU of Power Supply

Updating port for main program

Updating port for program of Power Supply
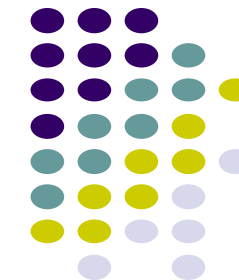
MCU of Main Board

VG-6831 Program Update [Main Program]

Updating port for main program

MCU of Main Board

VLEM4ctrmain
V1.40
29 Dec 15.s19

Program:
- Detection Zone
- Operation and Setting of Access Level II

VG-6831 Program Update [Program of Power Supply]
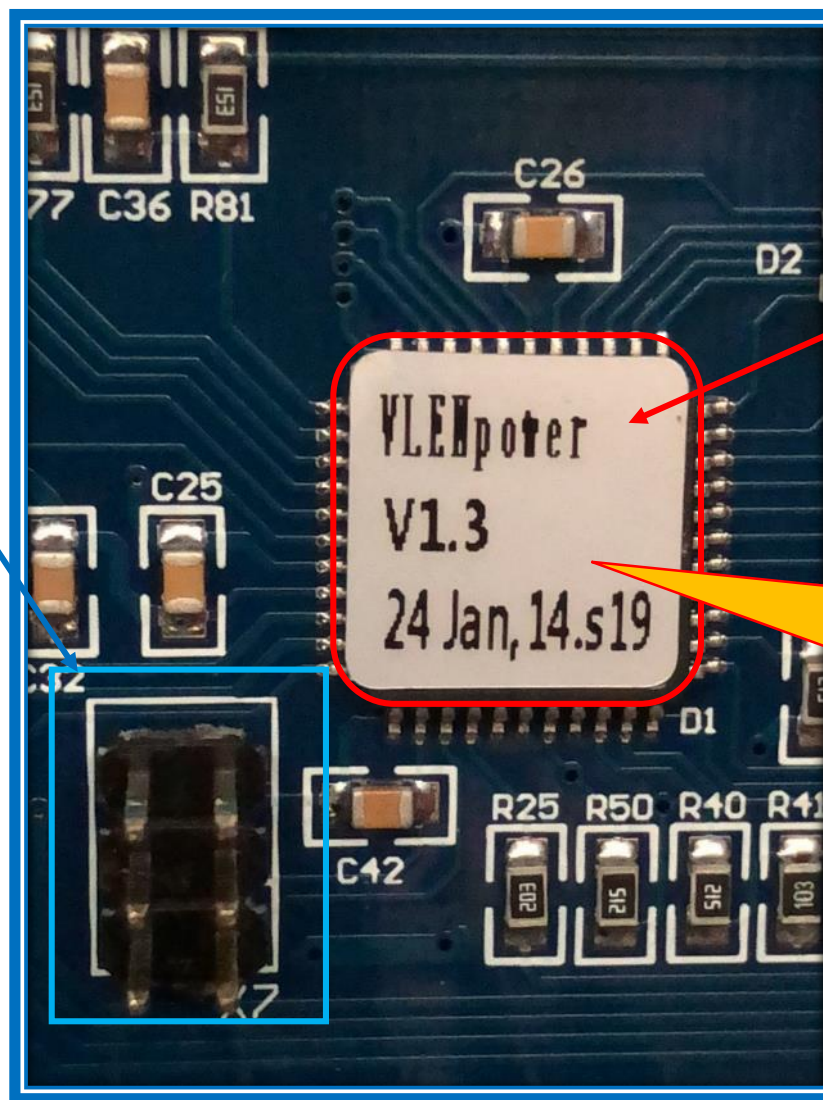
MCU of Power Supply

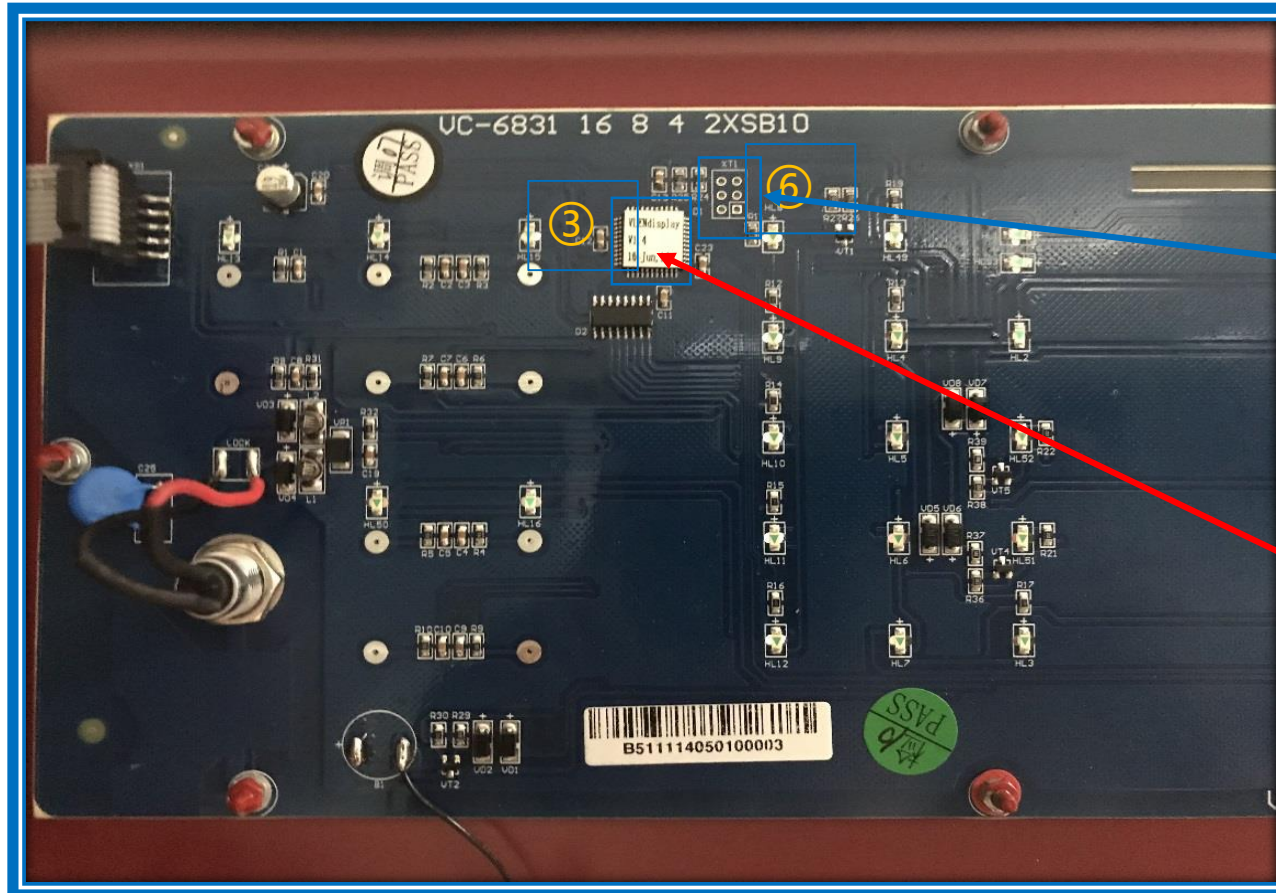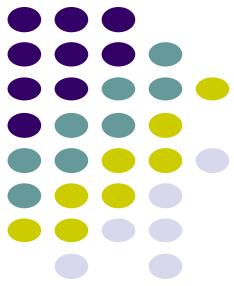Updating port for program of Power Supply

VLEHpoter
V1.3
24 Jan, 14.s19

Program:
- Fault indication of AC/BAT/BATR/Char
- Program of Sounder Output

VG-6831 Program Update [Display Board]

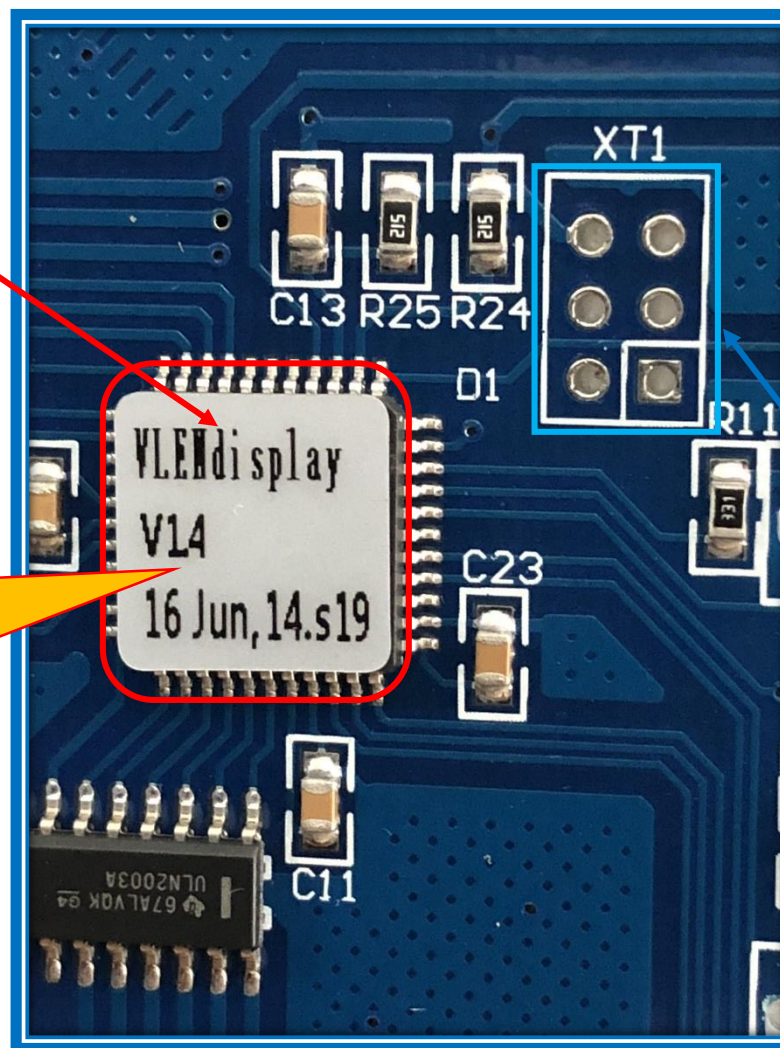Updating port for program of Display Board

MCU of Display Board

VG-6831 Program Update [Program of Display Board]

MCU of Display Board

Program:
➢ Zone Indication
➢ LED Indicators
➢ Control Buttons
➢ Access Level I
➢ Panel Buzzer

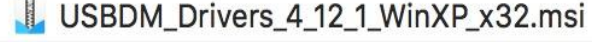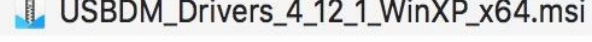Updating port for program of Display Board

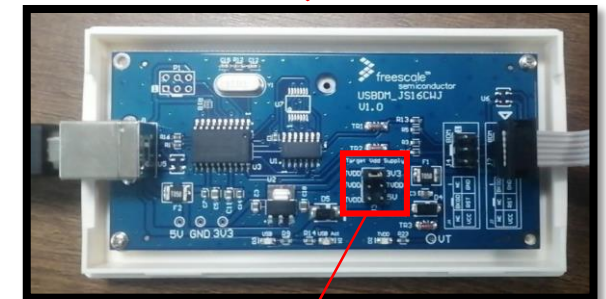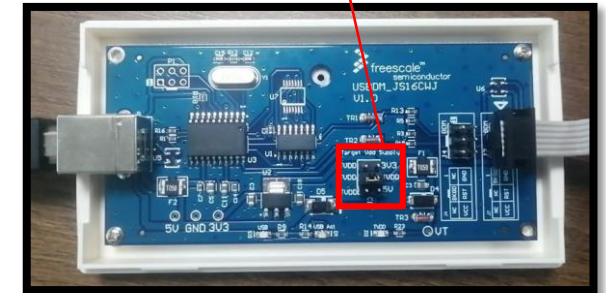# VG-6831 Program Update [Programmer]

USBDM Flash Programmer

Compatible IDEs:

Windows-XP-32bit,
Windows-7-32bit,
Windows-7-64bit
Windows-10-64bit

Software needed:

USBDM_4_12_1_110_Win.msi
USBDM_Drivers_4_12_1_Win_x32.msi
USBDM_Drivers_4_12_1_Win_x64.msi
USBDM_Drivers_4_12_1_WinXP_x32.msi
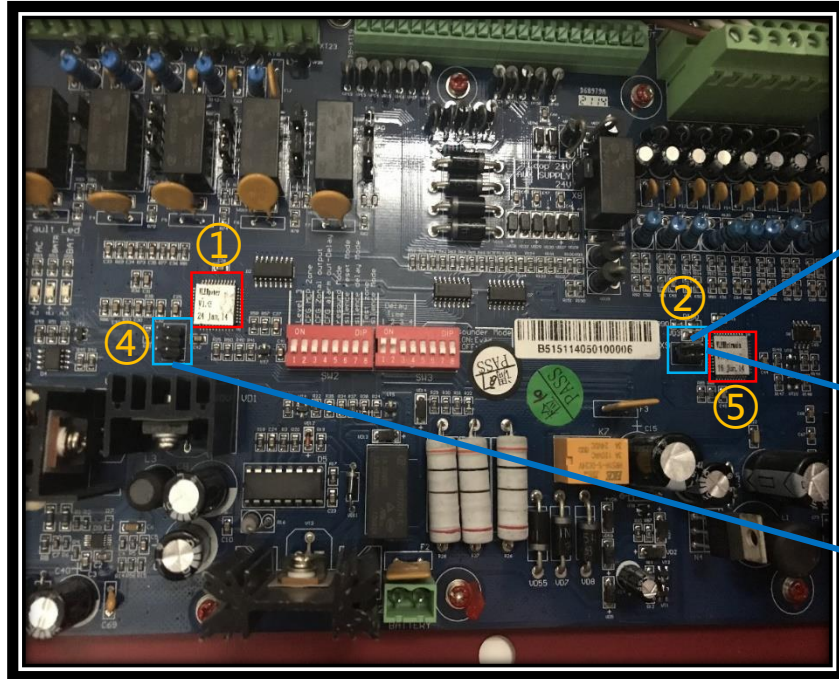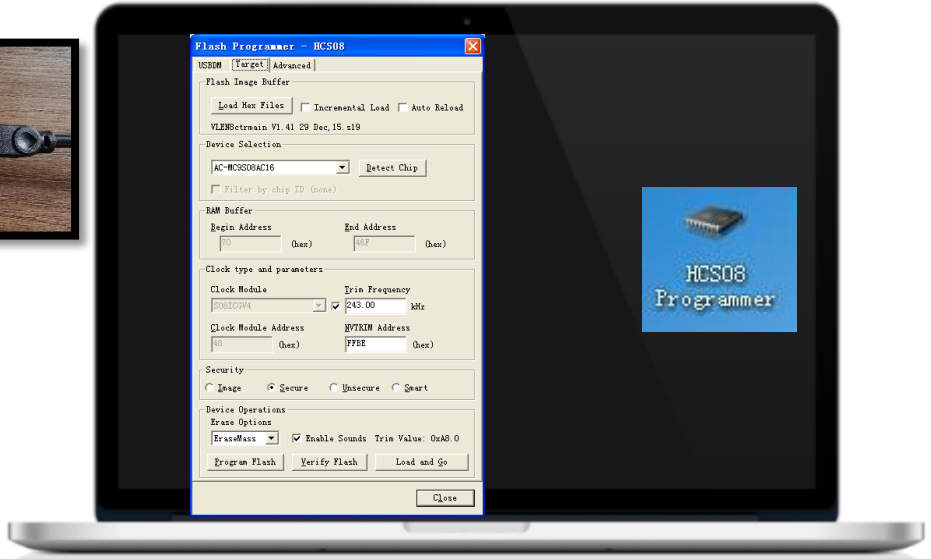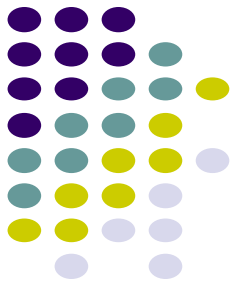USBDM_Drivers_4_12_1_WinXP_x64.msi

Jumper on **"TVDO"** as default

Jumper on **"3V3"**

VG-6831 Program Update [Connection]
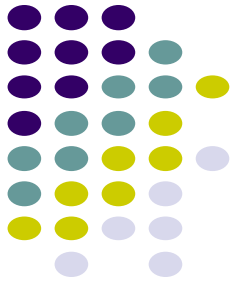
Program Mode

Yellow LED flashing

Program Burner

USBDM

VG-6831 Program Update [Connection]

Program Mode

Yellow LED flashing

Program Burner

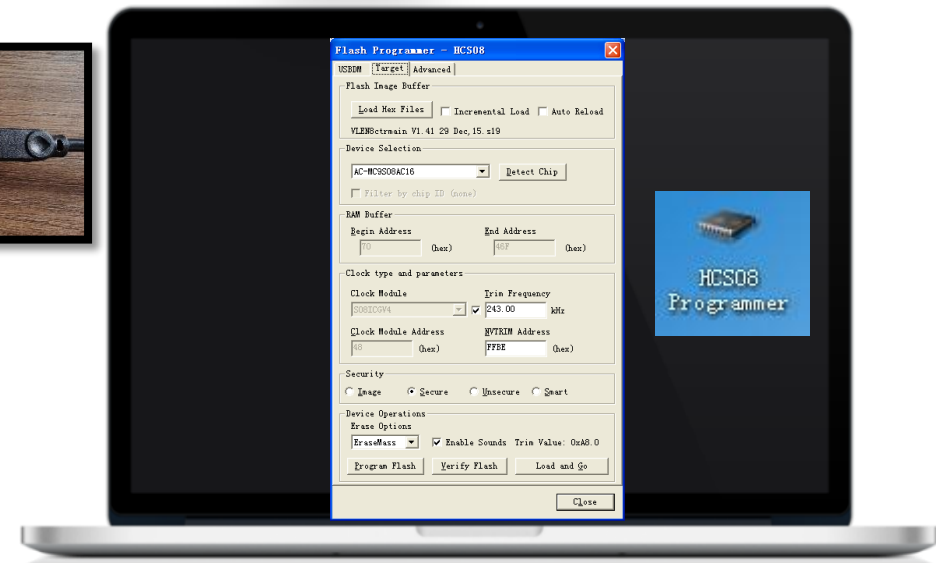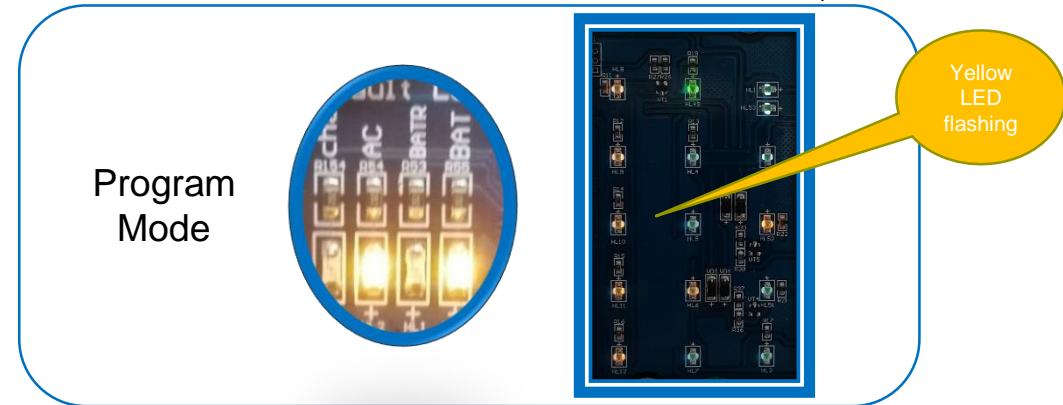USBDM

VG-6831 Program Update [Connection]

Program Mode

Yellow LED flashing

Program Burner
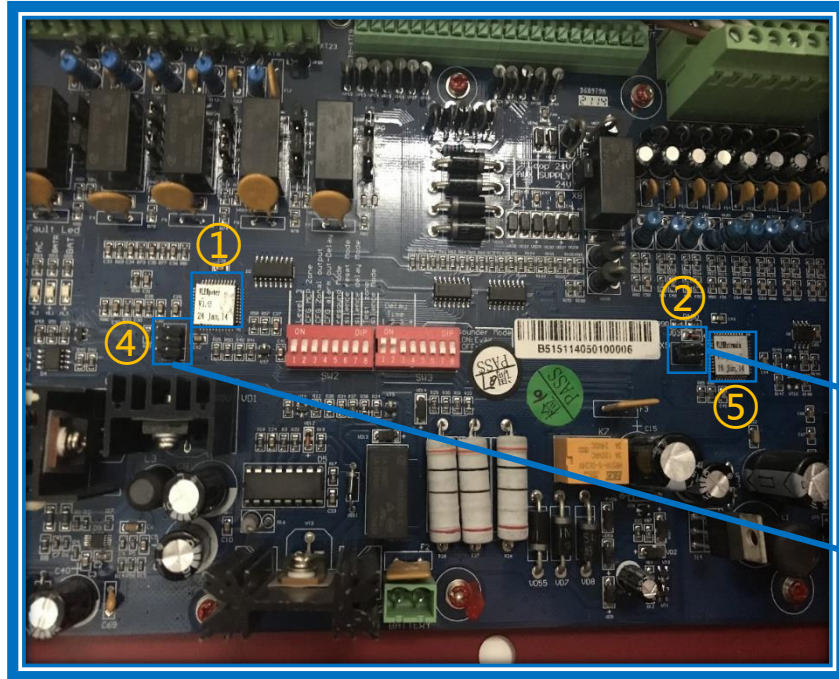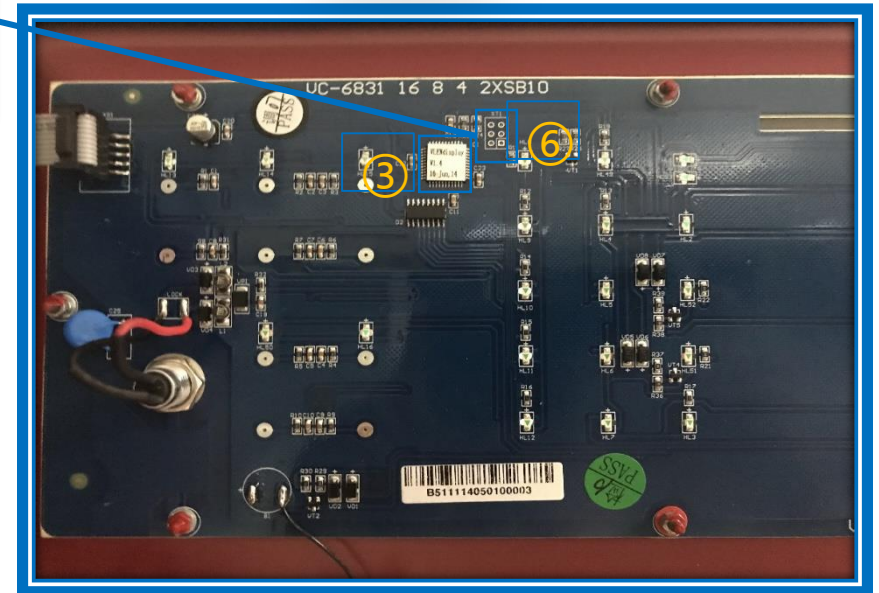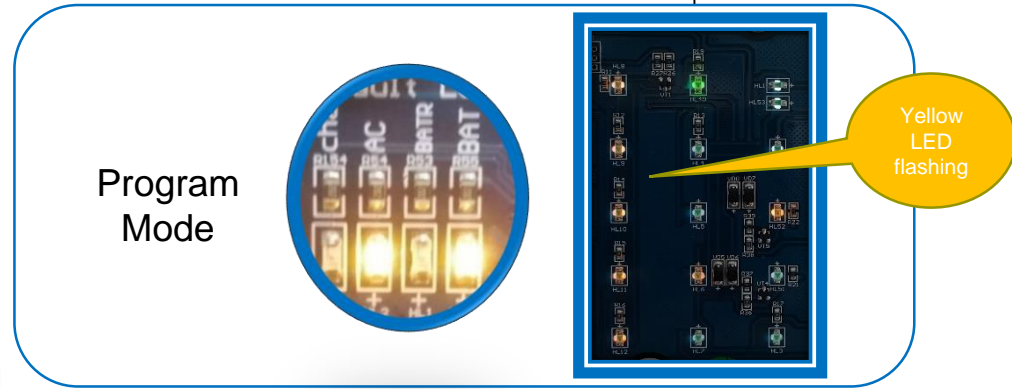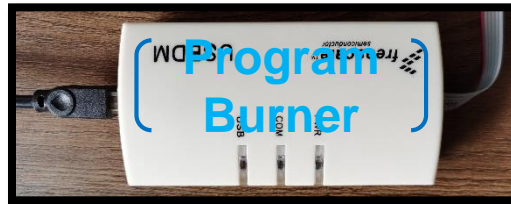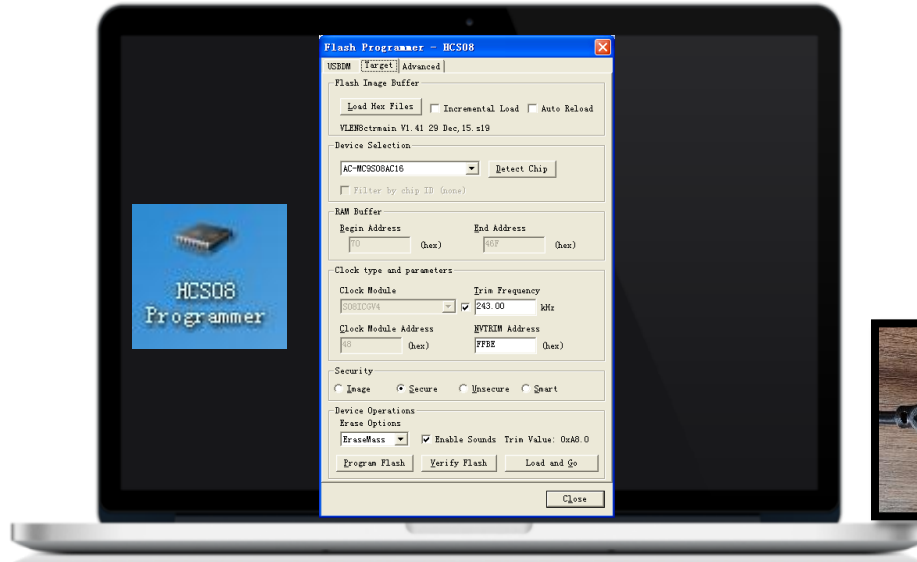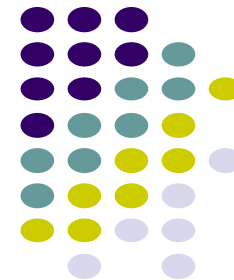
VG-6831 Program Update

File of program must be saved at root of Disk C!

HCS08 Programmer

Click to select CPU type
AC-MC9S08AC16

AC-MC9S08AC16
AC-MC9S08AC32
AC-MC9S08AC48
AC-MC9S08AC60
AC-MC9S08AC96
AC-MC9S08AC128
AW-S9S08AW8A
AW-S9S08AW16A
AW-MC9S08AW16
AW-MC9S08AW32
AW-MC9S08AW48
AW-MC9S08AW60
DE-MC9S08DE32
DE-MC9S08DE60
DN-MC9S08DN16
DN-MC9S08DN32
DN-MC9S08DN48
DN-MC9S08DN60
DV-MC9S08DV16
DV-MC9S08DV32
DV-MC9S08DV48
DV-MC9S08DV60
DV-MC9S08DV96
DV-MC9S08DV128
DZ-MC9S08DZ16
DZ-MC9S08DZ32
DZ-MC9S08DZ48
DZ-MC9S08DZ60
DZ-MC9S08DZ96
DZ-MC9S08DZ128

Flash Programmer - HCS08

USBDM | Target | Advanced

Flash Image Buffer ③
Load Hex Files | ☐ Incremental Load | ☐ Auto Reload
VLEN8ctrmain V1.41 29 Dec,15.s19

Device Selection
AC-MC9S08AC16 | Detect Chip
☐ Filter by chip ID (none) ②

RAM Buffer
Begin Address: 70 (hex) | End Address: 46F (hex)

Clock type and parameters
Clock Module: S08ICGV4 | Trim Frequency ☑ 243.00 kHz
Clock Module Address: 48 (hex) | NVTRIM Address: FFBE (hex)

Security
☐ Image | ● Secure | ☐ Unsecure | ☐ Smart

Device Operations ①
Erase Options
EraseMass | ☑ Enable Sounds Trim Value: 0xA8.0
Program Flash | Verify Flash | Load and Go ④
Close

Tick the box

Click to select program

Select Binary File to Load

VLEN8ctrmain
VLEN8display
VLEN8pixer

Click to start updating

Accessing Target

Programming... (3.75 kBytes/sec)

Elapsed time: 0:00:05

Load and Go Completed

Programming is complete.
Target has been reset and is running.

Program another device?

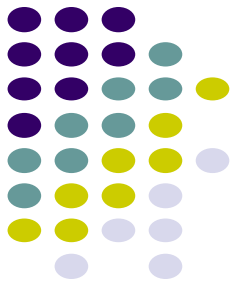是(Y) | 否(N)

Updating successes!

Updating failed!

USBDM - BDM Not Found

No suitable USBDM interface was found.
Retry?

是(Y) | 否(N)

V-GREAT

VG-6831 Program Update [Checking]

Buzzer on!
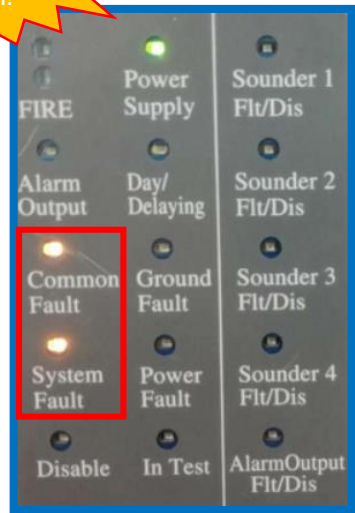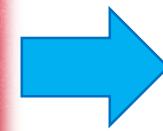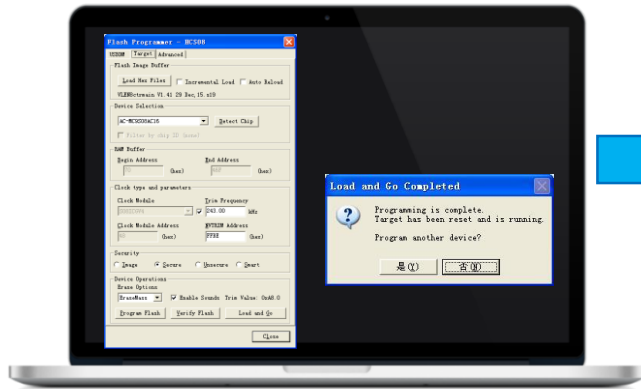
If the wrong program was updated, then there is System Fault indicated!

Main Board

Power Supply

Display Board

VG-6155 Tools Kit

Tools
- VG-6160 Bluetooth Interface
- VG-6161 Bluetooth Adapter
- STM32 Programmer
- PL2303HXD Programmer
- *USBDM Programmer*
- USB Flash Disk
- Data Cables

Software
- Commission Software
- Power Calculator
- Mobile APP
- COM Tester
- Drive of STM32 Programmer
- Drive of PL2303HXD Programmer
- *Drive of USBDM Programmer*

VG-6831 Trouble Shooting

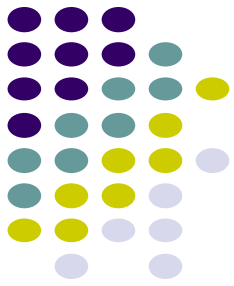| Problem	Reason	solution
No LED lights on power-up	a. Power doesn't work properly.	a. Replace the control board.
	b. Connection between the control board and display board is loose.	b. Check and reconnect the cable.
Reports Power Fault on switch on.	a. No AC power.	a. Check and apply AC power
	b. Battery is not fitted or 5A fuse is blown.	b. Connect the batteries or replace 5A fuse.
	c. Low battery.	c. If the problem still exists after the FACP has been applied with AC power for over 24 hours, please replace the batteries.
Incorrect report on detection zone status or	a. Pin X1 to X5 on the control board are not set correctly.	a. Check settings of X1 to X5
	b. Control board damaged.	b. Replace the control board.
Settings cannot be saved	CPU D6 on the control board is damaged	Replace the control board.
The lock cannot be operated.	Connection line of lock is loose.	Check the connection.
Noise from Sounder	Not compatible Voltage or current	a.Check the EOLR b. check power supply c.Check the connection cable