FLEPCHER™

Public Address System

PA-500 System Series

FLP-MCS500	Main Controller
FLP-ZSP502	Zone Selection Panel
FLP-ZCP503	Zone Control Panel
FLP-PMC501	Paging Station
FLP-PT580	Program Timer

User's manual

SAFETY PRECAUTIONS

Read this section thoroughly before use, strictly observe all safety warnings and instructions in this manual, and retain it for future reference

Safety Symbols and Notices

This manual contains safety symbols and notices to prevent personal injury and equipment damage caused by improper operation

WARNING: Improper operation may result in death or serious injury

When mounting this device in a rack:

- Do not expose this device to rain, water splashes, or other liquids to prevent fire or electric shock.
- Use only with the specified voltage rating - higher voltages may cause fire or electric shock.
- Do not cut or modify the power cord to avoid damage. Keep the power cord away from heat sources.
- Do not place heavy objects (including the device itself) on the power cord to prevent fire or electric shock.
- Do not install this device on unstable surfaces to prevent falling hazards and equipment damage.

When using the devices:

- If any of the following abnormalities occur during use, immediately turn off the power. Do not attempt to operate the device under these conditions to prevent fire or electric shock.
  If you detect smoke or unusual odors coming from the device
  If water or any metallic object enters or falls into the device
  If the device is dropped or its casing is damaged
  If the power cord is damaged (exposed wires, loose connections)
  If the device malfunctions (no sound output)

- Do not allow metal objects or flammable materials to enter the ventilation slots, as this may cause fire or electric shock.
- During thunder storms, avoid touching the power plug or antenna to prevent fire or electric shock.

CAUTION: Improper operation may cause minor to moderate injury or equipment damage.

When installing this device:

- When unplugging the power cord, always grasp the plug firmly - never pull on the cord itself.
- Do not obstruct the ventilation slots on the device cover, as restricted airflow may cause overheating and fire hazard.
- Avoid installing this device in humid, dusty, or smoke-filled environments, or in direct sunlight, to prevent fire or electric shock risks.

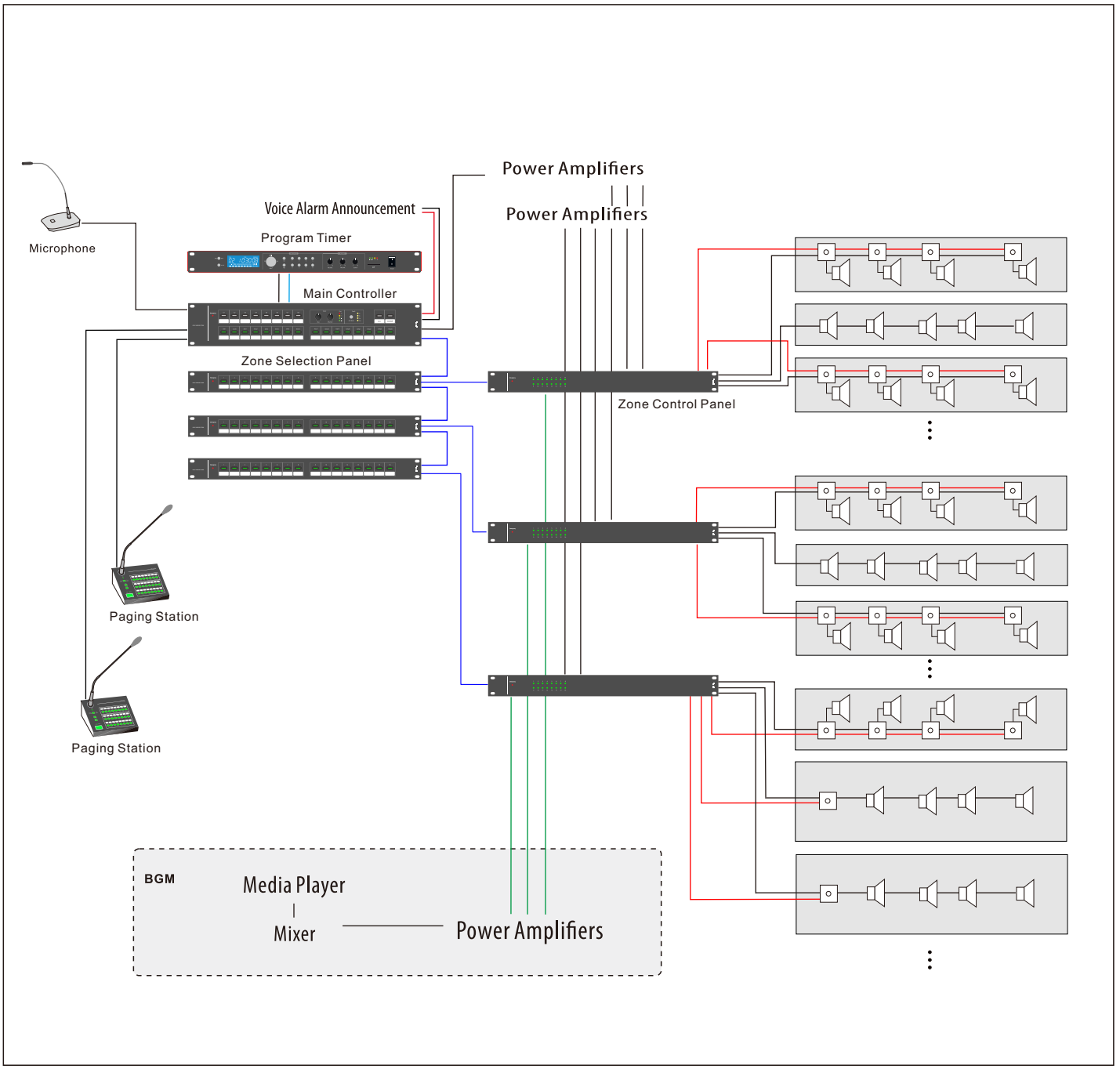
When using this device in this manner:

- Do not place heavy objects on the device, as this may cause it to fall or become damaged, potentially resulting in personal injury or impaired device functionality.
- For safety precautions, always turn off the power and unplug the AC power cord from the outlet when cleaning the device or when it will not be used for more than 10 days.

1.1: Overview

1. This system is a general-purpose broadcast system for background music, emergency, and business broadcasts.
2. It supports multiple system configurations. It can form a dual-channel system with independent BGM and emergency/business broadcast signal channels and be compatible with single-channel system. Using FLP-MCS500 main controller with 16-ch expansions, it can form a system controlling up to 256 zones and 24 groups.
3. When connected to the FLP-PT580 time schedule control message player, it achieves automated group-controlled business broadcasts, supporting up to 24 groups.
4. Multiple call stations can be connected, enable remote business calls on selected zones or groups.
5. It can integrate with network PA systems to create hybrid systems combining network management and analog equipments, suitable for large-scale systems with core PA system over IP and traditional control in sub-systems.
6. Emergency backup power supply is available, provide reliable uninterrupted DC 24V power supply.
7. The system is adapt to use 4/5/6 wire speaker attenuator, and 3-wire attenuator also can be used.
8. The system is compact yet fully functional, with excellent performance and flexible expansion capabilities, making it widely applicable.

1.2: Public Address System Composition



System Function Description

1. Public address and voice alarm system of 256 zones , 24 groups configurable.
2. Automatic weekly time schedule playing messages.
3. Two call stations enable remote group or zone selective paging functionality;
4. One voice alarm announcement can start emergency alarm with the highest priority, speaker attenuator in emergency mode zones will be bypassed.
5. Dual-channel system, one independent BGM power out channel, emergency and business calls to one zone won't affect BGM broadcasts in other zones.
6. One emergency power supply connected two 12V100Ah in series, When AC power fails during fire emergencies, delivering stable DC power to critical equipment to ensure uninterrupted operation of evacuation announcements.

2: Product Description

2.1 FLP-MCS500 Main Controller

Features:

- This is the central controller of the PA system. It features two operation modes: 24-group or 8-group/16-zone control, which can be flexibly configured according to project requirements.
- Comprehensive manual control keyboard with operation status indicators.
- Group control function allows creating groups from any combination of zones, enabling both group-level and zone-level control for flexible operation.
- Zone assignments can be modified without rewiring, simplifying system configuration and reducing maintenance costs.
- Includes All-Call (ALL) and Clear (CLEAR) manual controls that remain effective for all zones after system expansion.
- Extensive system control interfaces with 4-level audio priority management to meet various system requirements.
- 1 balanced MIC/Line input which can select MIC/Line input level, Phantom power and VOX on/off.
- 1 auxiliary AUX input.
- Two audio outputs: 1 balanced output with Phoenix terminals, 1 unbalanced output with 6.35mm JACK connector.
- Emergency broadcast interface with Phoenix terminals, including emergency audio input and level-triggered I/O ports.
- Two RJ45 ports for connecting:

  Several call stations (balanced audio/control)

  Embedded PA system terminal over IP, enabling seamless integration with network broadcasting for cross-platform, multi-functional large-scale systems.
- Five RJ45 control ports (CAT.5 cable) for connecting:

  16-ch control expansion

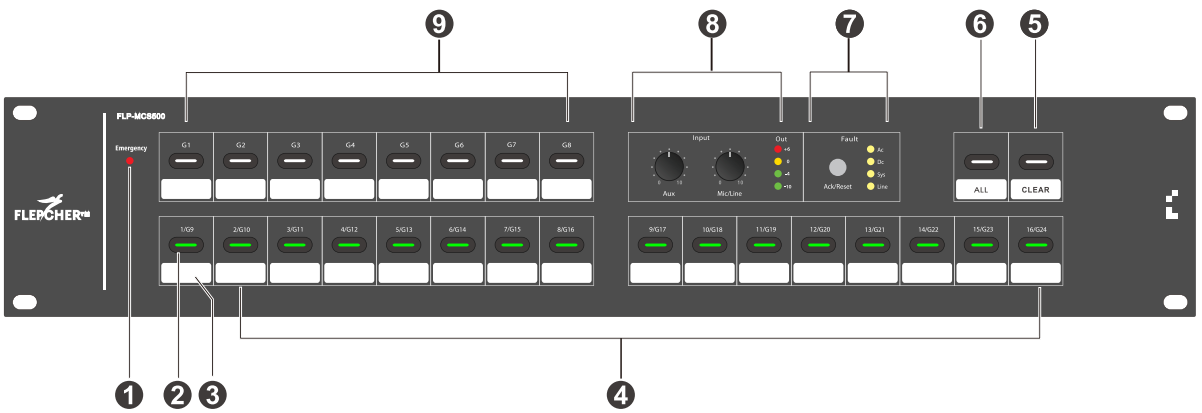
  16-ch control junction

  Emergency zone control interface

  Emergency power supply
- Dual 2P Phoenix terminal block for emergency power input and DC power output.
- Standard 19-inch 2U rack-mount chassis with black aluminum alloy front panel.

Components and Functions

Front Panel



❶ **Emergency Status Indicator:**
In normal mode, this light turns green. When the MCS500 is triggered by an external EMG DC24V signal or receives emergency control protocol from the fire alarm system, this light turns red.

❷ **1/G9, Zone/Group Control Button with Status Indicator:**
In 24-group control mode, this button controls Group 9. In 8-group/16-zone control mode, it controls Zone 1. The indicator light turns on when the zone/group is active and off when inactive.

❸ **1/G9, Zone/Group Label Area:**
For identifying zone/group names.

❹ **2/G10~16/G24, Zone/Group Control Buttons with Status Indicators**

❺ **All Zone Reset Button:**
Press once to deactivate all zones and groups.
Settings Save Button Press to save configuration when setting the operation mode or defining group zones.

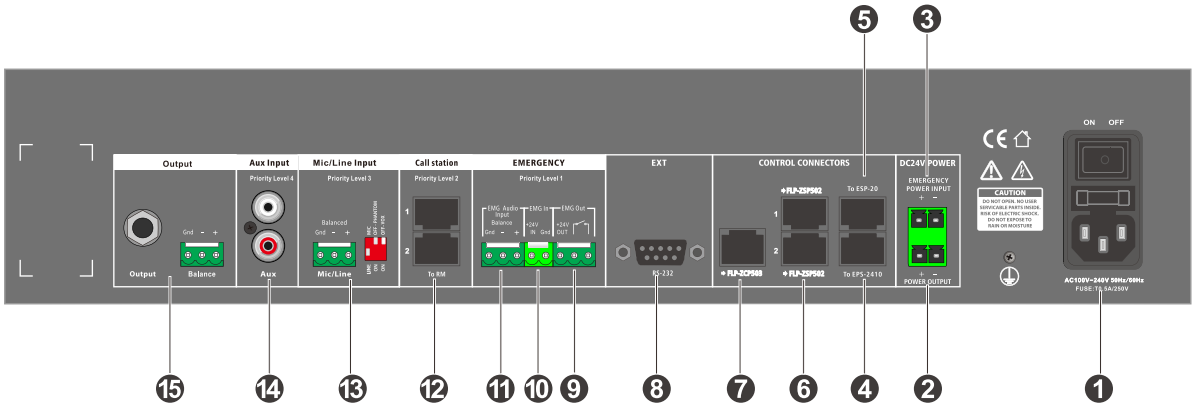
❻ **ALL (All Zones/Groups Activate) Button:**
Press once to activate all zones and groups.

❼ **Fault detection status indicators and Ack/Reset operation button:**
4 fault status orange LED indicators, AC and DC power supply, system connection and speaker line failure.
AC fault means AC power supply is disconnected. DC fault means DC power supply is cut off or battery trouble of Emergency power supply.
Sys light is system connection fault indicator: After system installation completes and press Ack/Reset button to register devices, if any device is found offline during operation, it indicates a system equipment fault.
LINE fault indicator: When lit, it indicates speaker wiring disconnection or shorted out.
When any one of them blink, the buzzer emits a "beep" sound indicating that fault is detected.
Press the ACK/Reset button to acknowledge the fault, at which point the buzzer stops. The indicator lights.
If the fault is resolved, the fault indicator turns off.
Press the Ack/Reset button to reset fault and recheck again.

❽ **AUX and MIC/Line input gain controls and output level indicators.**

❾ **Group 1 to 8 control buttons with control status indicators.**

Rear Panel



❶ Power input socket: Input AC100-AC240V AC power, with a built-in T0.5A/250V spare fuse and power on/off switch.

❷ DC24V power supply output: It adopts a 2-pin Phoenix terminal to output DC24V.

❸ Emergency power supply input: One 2-P Phoenix terminal block is used to connect emergency DC24V power supply to system control panel. When AC mains power supply cut off, emergency DC24V power switch into instantly.

❹ Emergency power supply communication Rj45 socket: Using CAT.5 cable to connect emergency power supply, for receiving working status of emergency power supply.

❺ One RJ45 emergency control socket: to connect emergency control panel.

❻ Two RJ45 expansion control sockets: to connect 16ch expanded panels by CAT.5 cables which includes RS485 control signal and DC power supply. Up to 16ch expansion panels can be connected in cascade to build a 256 zones system.

❼ 16ch Junction panel socket: one Rj45 socket to connect 16ch junction panel.

❽ One RS-232 serial control port: one DB9 socket to connect Timed-schedule message player to system control panel for automatic timed message sending .

❾ EMG status output: This 3-pin terminal block outputs EMG status when system is into emergency working, there are two outputs, two pin closed contacts and a DC24V signal.

❿ EMG in terminal block: It is used to connect the digital voice alarm announcer, when accessing EMG DC24V control signal, the system working get into emergency state, and audio output EMG audio signal.

⓫ EMG audio input terminal block: balanced emergency audio input, -10dBV input level, that can connect to voice alarm announcer. It has the highest priority level.

⓬ Two RJ45 call station connection ports: To connect to the PMC501 call stations for business call on 24 groups or 128 zones selection. The connection use CAT.5 cable which involve Rs485 control signal and DC power supply.
It can also be used to connect to VoIP system's receiver terminal controller, enabling seamless integration of VoIP public address system with this ASES system and forming a cross-platform and multi-functional large-scale PA system.

⓭ MIC/Line balanced input: A 3-P Phoenix terminal block input and a 3-P DIP switch for that select MIC/Line input level, Phantom power and VOX on/off. When VOX function is enabled, this input signal has priority override AUX input .

⓮ AUX input: Unbalanced (-10dBV), RCA interface. It has the lowest priority level.

⓯ Audio outputs: One 3-P Phoenix terminal block and one 6.35mm JACK socket, balanced line(0dBV) outputs.

Operations

24-Group Control / 8-Group, 16-Zone Control Mode Setting

The unit factory default setting is 24-group control mode. To meet project requirements, the unit can be configured to operate in 8-group, 16-zone control mode.

Step1: Press and hold the ALL button for 5 seconds until all 24 indicator lights start flashing.

Step2: Then press any button from G1 to G8. At this point, only the G1-G8 group indicators will keep flashing while the G9-G24 group indicators turn off.

Step3: Press the CLEAR button to finish the settings. All G1-G8 group indicators will turn off, indicating the setup is complete.

FLP-MCS500 assign zones to groups

The unit has to finish the connection with its control expansions(FLP-ZCP503) at first, then configuration of group compositions can be operated. Refer to page 10.

Priority Management

The device features 4-level priority management .

Priority level sequence is as follows:

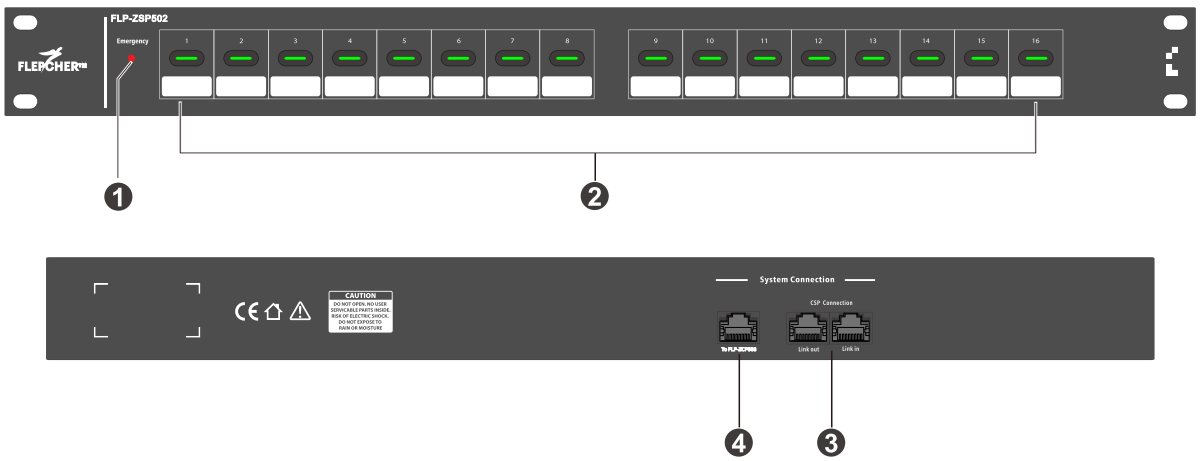
Input	Control	Priority level	features
Emergency audio input	EMG in (DC24V) Emergency zone control in (serial port)	**level 1** (highest)	1. Call station will be out of control and can not revert. 2.The original zones control will be restored after completion of emergency announcement.
Call station	Call station(serial port) VoIP system receiver (serial port)	**level 2**	1. Call stations in the same priority, the first calling will be given priority, subsequent calling can not be acceded. (first-in-first-out [FIFO]) 2.The original zones control will restored after completion of calling.
MIC/LINE input	VOX (input audio signal) Timed-schedule controller (Rs232 control)	**level 3**	1. Priority is given to the most recent zones control in the same priority level (Last-in-first-out [LIFO]) 2.The original zones control will not restored.
AUX input	Be muted by MIC/LINE input signal	**level 4** (Lowest)	

2.2 FLP-ZSP502 Zone Selection Panel

Feature

- 16-zone expanded controller with operational status indicators.
- Emergency status indicators.
- Equipped with Link In/Link Out cascade control ports.
- One set of 16-channel control junction (RJ45) connector.
- Standard 19-inch 1U chassis with black aluminum alloy front panel.

Components and Functions



❶ **Emergency status indicator:** When the current system is working in emergency state, this indicator lights red; in normal, it lights green.

❷ **16 control buttons with indicators:** The white silk screen blocks below buttons are used for labeling

❸ **2 Rj45 control ports for cascade connection :** Link in is used as the control input to connect to the previous one controller, and Link out is used as the control output to connect to next one expanded controller.

❹ **16-channel control junction (RJ45) control port:** It is used to connect to 16ch junction which belongs to itself.

Operations

Device ID setting

For FLP-ZSP502, if device ID is 1, button1 to 16 of this panel control zone 1 to 16 corresponded, and then that device ID is 2 control over zones 17-32, that ID is 3 means zones 33-48, and so on.

By this configuration, system supports device ID up to 16 , so the total zones capacity of extending are 256 zones.

For your attention, In a system, if the FLP-MCS500 is operating in 24-group control mode, the first connected FLP-ZSP502 should set ID to 1. If the FLP-MCS500 is operating in 8-group/16-zone control mode, the first FLP-ZSP502 should set ID to 2.

FLP-ZSP502's factory default device ID is 1.

Device ID setting method:

Step1: Press and hold any zone button for 5 seconds until the "Emergency" light flashes and some one button light turns on, the button number represents the device ID .

Step2: In this state, press the zone button which you want to set the number to be device ID, you can change your selection freely.

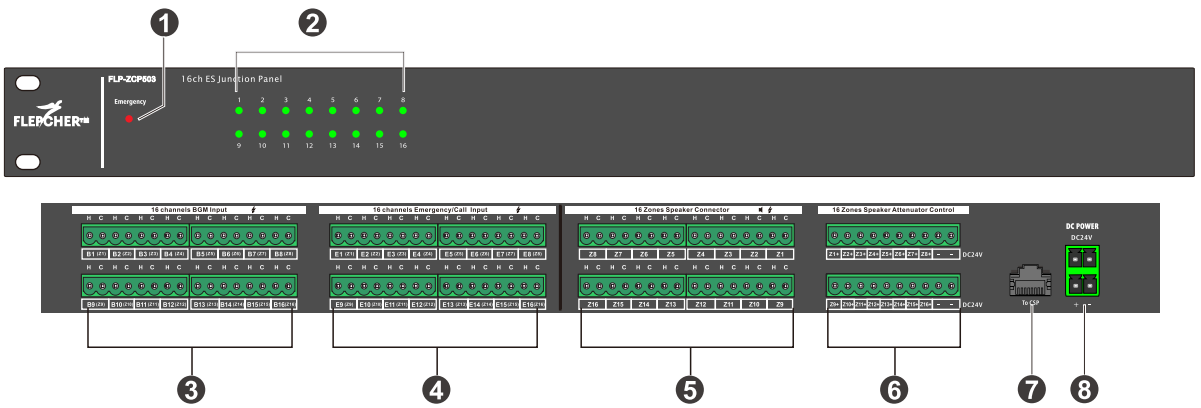
Step3: To complete the setup, press and hold the current ID button for 5 seconds to save the setting. The "Emergency" light will stop flashing, indicating successful setting.

2.3 FLP-ZCP503 Zone Control Panel

Feature

- 16-channel background music amplifier inputs and 16-channel emergency/business broadcast amplifier input terminals. 16-zone speaker outputs, support flexible configurations to form dual-channel systems - allowing emergency/business broadcasts in specific zones without interrupting background music in others, while maintaining compatibility with single-channel system.
- To connect to FLP-MCS500 series controllers to enable zoned business broadcast control.
- DC24V power supply terminals additional.
- 1U standard chassis with black aluminum alloy front panel.

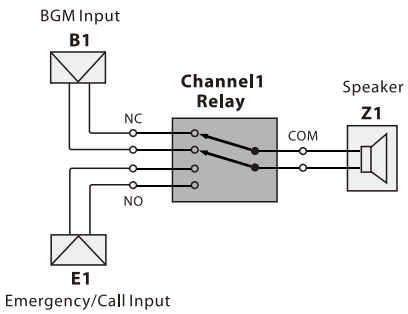
Components and Functions



1. **Emergency Status Indicator:** The indicator turns red when the connected controller is under emergency control. In normal mode, this light turns green.
2. **16-channel status indicators**
3. **16-channel background music power signal input**
4. **16-channel emergency/business power signal input**
5. **16-channel speaker connection ports**
6. **16-channel volume attenuator control output ports:** When the relevant channels are switched on in emergency mode, the corresponding channel control ports output DC24V, forcibly bypass the volume attenuator, and output the maximum volume.
7. **Connection port to control panel:** by CAT.5 cable which includes RS485 control signal and DC power supply.
8. **DC24V power supply connection port:** It adopts a phoenix terminal block for DC power supply input. it can to connect to the emergency power supply that for additional requirement of volume attenuator control.

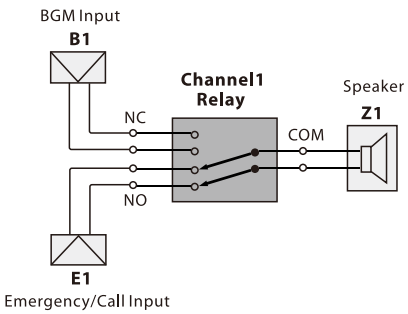
Operational Status Description

The system operates in three modes: BGM mode, Business mode, and Emergency mode.



BGM mode:

If there is no business call or emergency control on a channel, the channel relay does not switch on, so the zone speakers are connected to the BGM amplifier through the normally closed terminal of the relay.

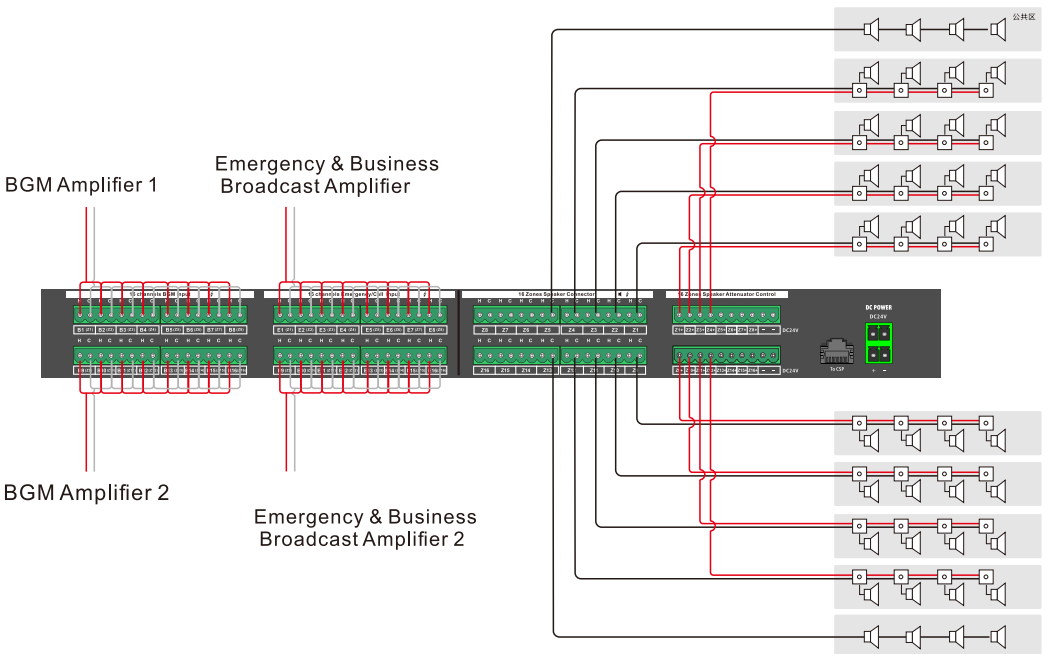


Business/Emergency mode:

When a zone receives Business/Emergency control signal, the channel relay switches on, the zone speakers are connected to the Business/Emergency amplifier.

As emergency control is priority override business working, so when system turn into emergency state, business controls become inactive, and that will be restored after completion of emergency announcement.

Connetion



- 16-channel emergency/business amplifier inputs are provided, supporting independent connections to 16 amplifiers.

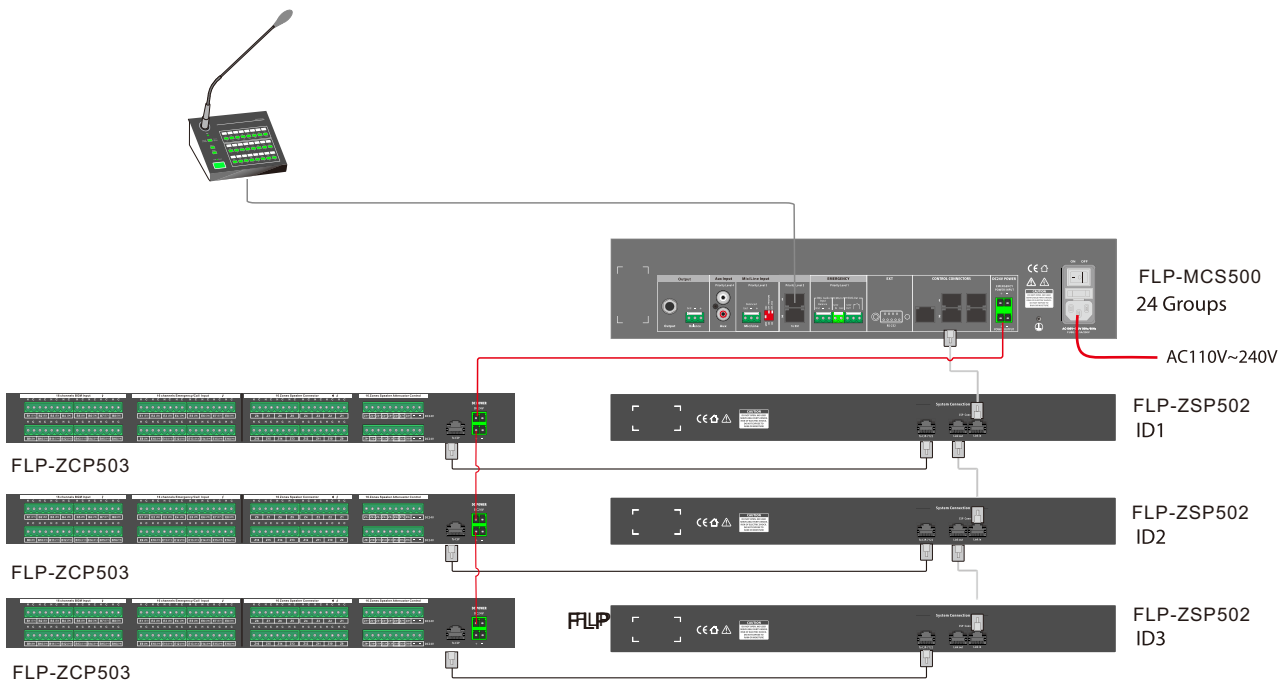
  Alternatively, speakers from different zones may be combined to a single amplifier, provided the total speaker load matches the amplifier's power capacity.

- At the moment a emergency control is started in a zone, the speaker attenuator control port of the zone outputs DC24V to override volume attenuator, forcing maximum volume output.

Connection

FLP-MCS500+FLP-ZSP502+FLP-ZCP503 Connection and System Configuration

Connection Example of 24 Groups and 48 Zones System



FLP-ZSP502 ID Configuration:

Set the 3 FLP-ZSP502 IDs to 1, 2, and 3 respectively, where ID1 controls zones 1-16, ID2 controls zones 17-32, and ID3 controls zones 33-48; (Note: For the zone expansion panel ID setup method, refer to page 7).

FLP-MCS500 assign zones to groups

Step1: Enter group configuration mode by pressing and holding any group button for 5 seconds until this group button light flashes, while all currently assigned zones in the group are indicated on 3 connected FLP-ZSP502 controllers.

Step2: Press the zone buttons of 3 FLP-ZSP502 panels, to select or delete the zones that will be assigned to this group, the corresponding zone lights will illuminate or turn off.

Step3: After completing zone selection, press the "CLEAR" button on FLP-MCS500 to save settings and exit group configuration mode.

Step4: Press the group button to verify - illumination of all assigned zone lights indicates correct group configuration.

Specifications

FLP-MCS500	
Audio Input	AUX:-10dB unbalanced ; MIC/Line: -50dB/0dB Balanced
Audio Output	Balance Line: 0dB/50k
Control	RS-485, RJ45×5,9600bps; RS-232, DB9 ,9600bps
EMG Input	Emergency Audio Input: -10dB/50k , EMG Control: DC24V, Dry trigger
Callstation Input	Audio: Balance line, 0dB/50k , control: RS485
Prioritg Control	Emergency >Call Station >RS-232(Auto) /MIC/Line(VOX)>AUX/Background Music
DC24V Power Supply	Emergency power input and DC24V power output
Power supply	AC ~220V/50Hz
Dimensions	482x350x88(w.d.h/mm)
Weight	2.4Kg

FLP-ZSP502	
Control	RS-485, Rj45x3, 9600bps
Power Supply	DC24V, POC
Dimensions	482×150×88(w.d.h/mm)
Weight	1.2Kg

FLP-ZCP503	
Control	RS-485，RJ45×1 ,9600bps
(BGM)Amplifier Inputs	16 ch, each 240VAC 7A max
Emergency amplifier inputs	16ch, each 240V AC7A max
Speak channels	16 ch, each 240V AC 7A max
Vol Attenuator control Out	DC24V 16 ch
Power Supply	DC24V
Dimensions	482x150×88(w.d.h/mm)
Weight	2.3Kg

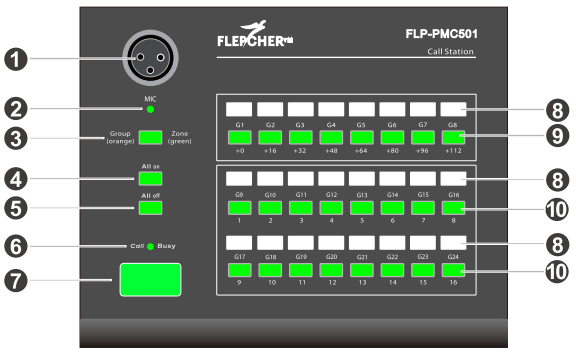
2.4 FLP-PMC501 Paging Station

FLP-PMC501 is a cost-effective paging station suitable for business PA systems. It is easy to install and convenient to operate. In numerous practical engineering applications, it has been proven to work stable and reliably.

Feature:

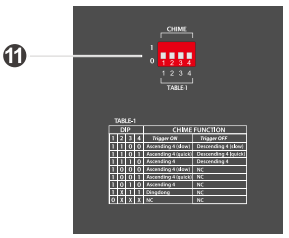
- 1 condenser gooseneck microphone (detachable) with volume control;
- 1 AUX audio input with volume control, which can be used as music input;
- 24 groups Control in group control mode and 128 zones control in zones control mode.
- It can be transmitted over long distances (up to 1Km), and audio and control signals are transmitted simultaneously by one CAT5. cable.
- Automatic chime function with a pleasant sound. Different chime modes can be selected and chime volume is adjustable.
- Multiple call stations can be connected to FLP-MCS500 , priority control for same priority level is first in first out (FIFO). The paging station that is activated first is given priority to control and speak, normally the later calling request cannot be accepted and the busy indicator will lit. But if to press and hold CALL button of the later paging station, it will get priority override the currently working paging station.

Panel Components and Functions



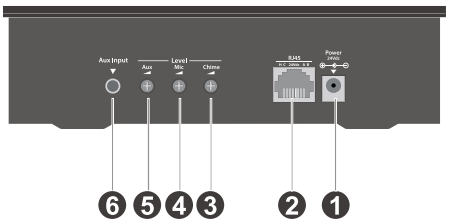
on the bottom

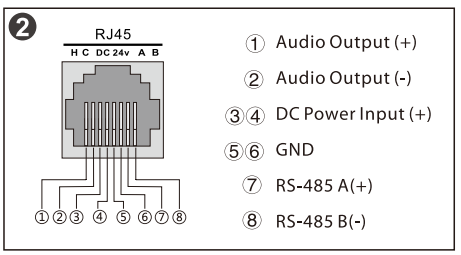
8 chime modes are available



1. **Gooseneck microphone socket:** Used for inserting gooseneck microphone;
2. **MIC signal indicator**
3. **Group/zone control switching button with 2-color light:** The button light is orange when in group control mode and green when in zone control mode.
4. **All on button:** Press to turn on all groups/zones;
5. **All off button:** Press to turn off all groups/zones;
6. **Call/Busy status light:** This is a 2-color light, flashing green indicates a call is in progress, lighting green constantly indicates a successful call; and flashing red indicates being busy, that there is another call station on calling. If the indicator lights red, it indicates that the system has entered in emergency state, and a call cannot be made in this state.
7. **CALL button**: It is used to start and end calls. After select zones or groups, then press CALL to start a call. If got busy, you can press and hold CALL button to make a higher priority call.
8. **Groups/zones control labeling area:** Used to indicate the name of the groups/zones;
9. **Group1-8 control/Zone panel selection buttons with status indication;**
   In group control mode, they are G1 to G8 group control buttons.
   In zone control mode, they are +0 to +112 buttons that function as 16 zones panel selection, so just one button always be switch on.
10. **Group9-24 control/zone1-16 control buttons with status indication;**
    In group control mode, they are G9 to G24 group control buttons.
    In zone control mode, After selecting the "+n" button above, operate the zone1 to 16 buttons to select zones. Up to128 zones can be controlled.
11. **4-DIP switch for chime mode selection;**
    There are 8 chime modes optional, see table-1below the DIP switch.

Rear panel





1. **DC power input:** This device can be powered over Rj45 control port by CAT5. cable short than 100 meters. Beyond this distance, you should plug in a DC power supply adaptor.
2. **Rj45 control port:** connected to the integrate controller FLP-MCS500, the wire sequence is shown in the figure upon including 1 RS485 serial control, DC24V power input and 1 channel audio signal.
3. Chime volume adjustment
4. Microphone volume adjustment
5. AUX volume adjustment
6. AUX input TRS 3.5mm socket

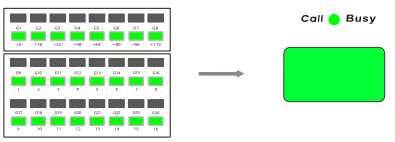
Operation

A: Select Group control or Zone control

The indicator lights orange for Group control and green for Zone control.

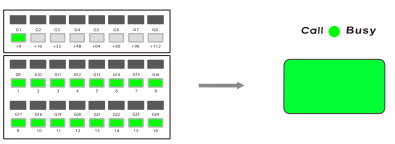
B. Call operations on the specified groups.

1. Switching to Group control mode at first, Select the groups you want to call (e.g. G1 and G2) - the group indicators will light up.
2. Press the CALL button to request control right, when successful, the green Call light turns on.
3. After broadcasting, press CALL button to exit control.



C. Perform call operations on the specified zones

1. Press the Group/Zone button to select Zone Control Mode.
2. Select the zone control area key (e.g. +0 area) - the zone key light will illuminate.
3. Then press zone1~16 buttons to select desired zones for calling.
4. Press the CALL button for calling to the selected zones.
5. After broadcasting, press CALL to turn off the microphone and exit zone control.



Specifications

Input	MIC: −46dBV/600Ω, Maximum input level: −24dBV
	AUX: −10dBV/50kΩ, Maximum input level: +10dBV
Output	Balanced LINE: 0dBV/600Ω, Maximum input level: +22dBV
Frequency Response	150-22000Hz(-3dB)
S/N ratio	−60dB maximum volume with ALL Vol
Control	RS-485 protocol, bidirectional communication, RJ45 interface
Group/Zones	24 group control and 128 zones control
Power Supply	Dual power supply modes: RJ45 interface, or DC24V power adapter supply.
Dimension	182x145x48(w*d*h/mm)
Weight	0.8Kg

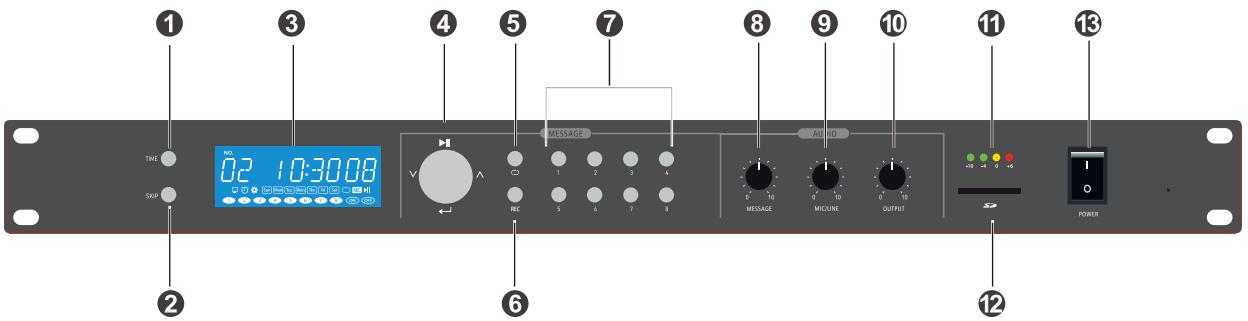
2.5 FLP-PT580 Program Timer

Featuure

- Supports weekly scheduled message playback and synchronize with 24-group controlling by serial port connection to FLP-MCS500 .
- 8 message quick playing buttons, with dry-contact trigger interfaces on the rear panel for remote playing control.
- Message playback modes: Single-play and repeat-play switches available.
- MIC/LINE input, features XLR and Phoenix terminals with a DIP-switche for VOX, MIC/LINE, and phantom power selection. When VOX switch on, it is priority override message playing. This input signal can be recorded in high quality MP3 format at 32-128Kbps bit rate.
- Useing SD card as files storage, WAV, WMA, and Mp3 audio formats are adoptable .
- Dedicated scheduling software: Exports standard TXT files - when copied to the SD card, the controller automatically recognizes and updates the inner time schedule.
- Two playback modes: MUSIC and MESSAGE (with separate folders). MUSIC playback can be manual controlled only, and MESSAGE play has higher priority to cut in MUSIC playback.

Components and Functions

Front Panel



1. **TIME setting button:** Press and hold for 3 seconds to enter time/weekday setting interface, then use the jog dial to set hours/minutes and weekday.

2. **SKIP button:**
Press and hold for 3 seconds to enter schedule viewing mode. Rotate the knob to browse scheduled tasks.

3. **LED display:** Shows time, weekday, track number, program number, and group number during standby, Message/music playback, time setting, and schedule viewing modes.

4. **Multifunction Knob:**
It works as both a dial and a button.
For music playback - press to enter music playback, rotate left/right to select tracks, press to play/pause;
On Message playing - press to stop;
On time setting - rotate to adjust time/weekday, press to toggle options or confirm;
For schedule browsing - rotate to navigate programs.

5. **Play mode toggle button:** Light tap to switch between single play (no icon) and single-repeat ("🔁" icon displayed) modes.

6. **Record button:** Press and hold for 3 seconds until "REC" appears on screen, then press number key (1-8) to select storage file number and adjust input signal level to ready recording.
Start Record: Press the jog dial to start record Mic/line input signals.
Stop Record: Press "REC" twice to stop record, recorded file will be automatically saved with corresponding numerical names.
Press the selected number button to play recordings

7. **Message direct-access buttons 1-8:** Correspond to messages named M001-M008. Press to play assigned message, press jog dial knob to stop.

8. **Message volume control knob**

9. **Microphone and line input volume control knob**

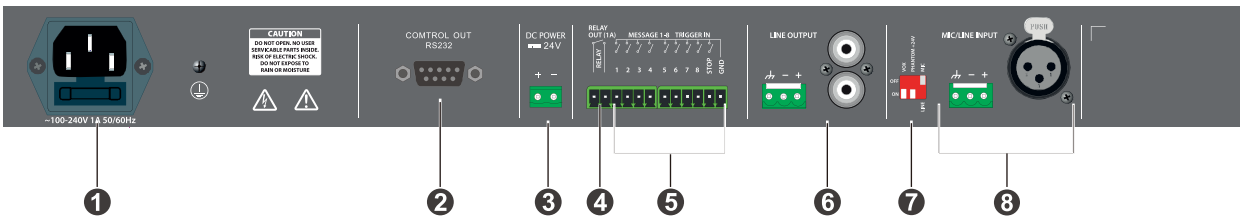
10. **Master output volume control knob**

11. **Output level indicator**

12. **SD card slot**

13. **Power switch**

Rear Panel



1. **Power inlet socket:** AC100-240V mains input with built-in T1A/250V spare fuse.

2. **RS-232 serial control DB9 port:** For speakers selector controlling. If it to connect to FLP-MCS500

3. **DC24V power supply input**

4. **Message playing status relay output:** when any message start play, the relay contacts close simultaneously, when stop play, the contacts open. It is very useful for external controlling.

5. **Message1-8 playing dry-contact trigger inputs:** When any message is triggered, corresponding M001-M008 message will playback.

   Note: All trigger inputs support momentary/constant closure signals
   Priority hierarchy for contact 1-8 trigger control:
   8 > 7 > 6 > 5 > 4 = 3 = 2 = 1
   *(**Note:** Channels 1-4 follow FIFO (First-In-First-Out) control)
   STOP trigger: Immediately stops playback.

6. **Audio Outputs:**1 balanced 3P phoenix terminal output and1 unbalanced RCA output

7. **MIC/Line Input setting DIP switch**: Switches of MIC/Line input level, phantom power on/off and VOX on/off. If VOX is enabled, MIC/Line signal overrides MUSIC/MESSAGE signal.

8. **MIC/Line Balanced Input:** 3P Phoenix terminal and XLR socket.

Operation

Preparation

1.SD card: Supports up to 32GB FAT32 formatted SD flash drives, and can play WMA, WAV and high-quality MP3 (up to 320Kbps) audio formats.

2.Create two new folders in the SD card:

MUSIC folder for storing music files.

MESSA folder for storing MESSAGE voice announcements.

3.Rename track files:

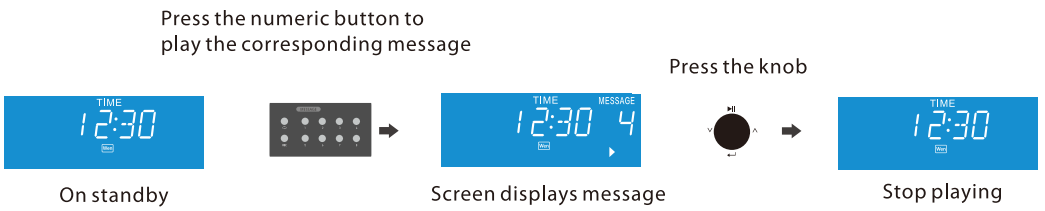
For files in MUSIC folder: Change names to "T001", "T002", etc. format where "T001" represents the 1st song, "T002" the 2nd song, and so on up to 99 songs. For easy identification/replacement of tracks, you can create a track number & song name reference table.

For files in MESSA folder: Change names to "M001", "M002", etc. format where "M001" represents the 1st message, "M002" the 2nd message, and so on. For easy identification/replacement, create a track number & message name reference table. The device's 1-8 number buttons correspond to M001-M008 voice messages. Up to 8 voice messages can be stored.

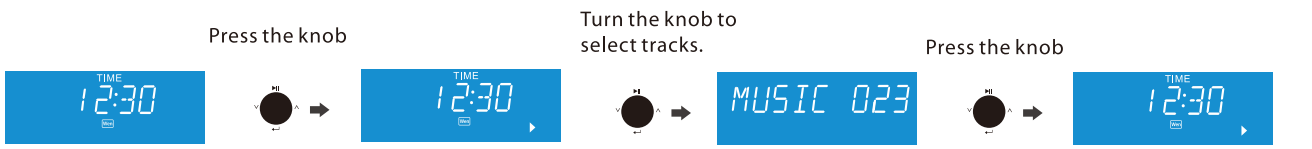
4.Copy tracks to SD card: Use a USB multi-function card reader to copy tracks into the corresponding folders on the SD card.

5.Insert SD card: Put the SD card into the slot on front panel.

Message Playback

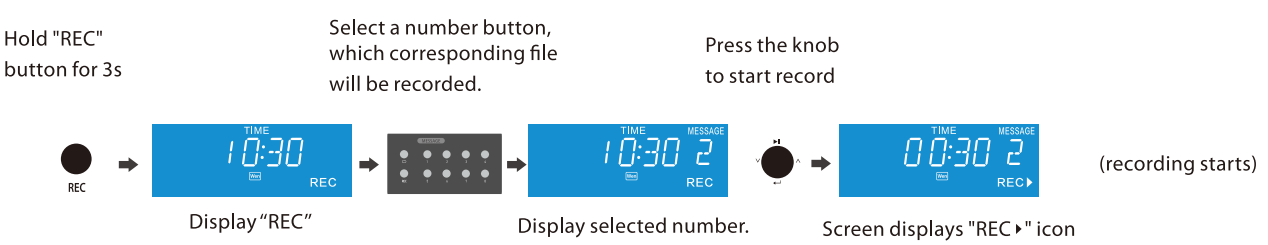


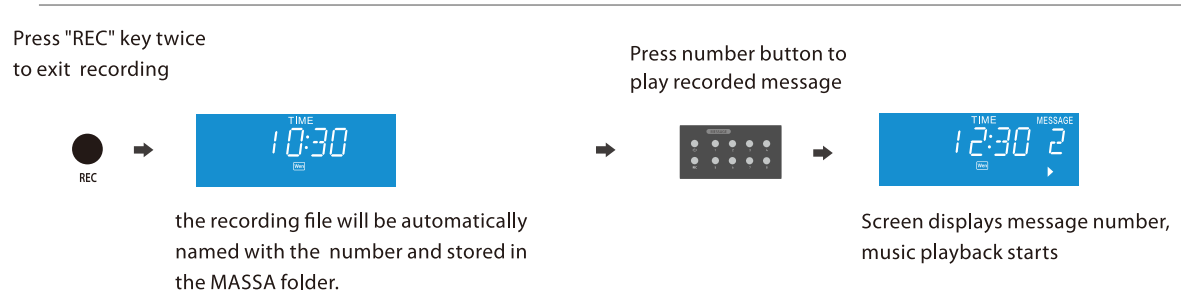
Music Playback



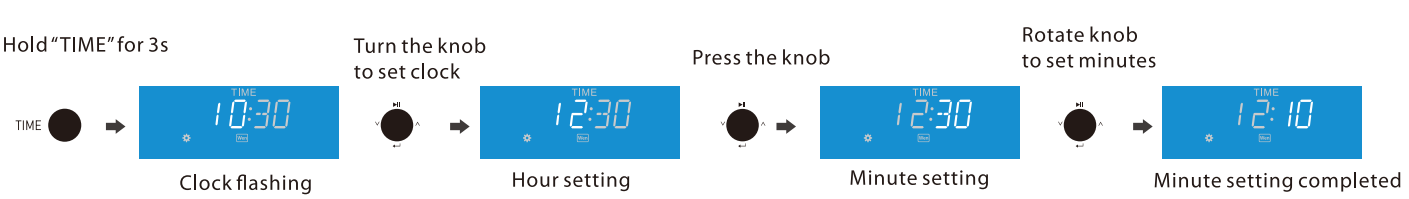
Record a message

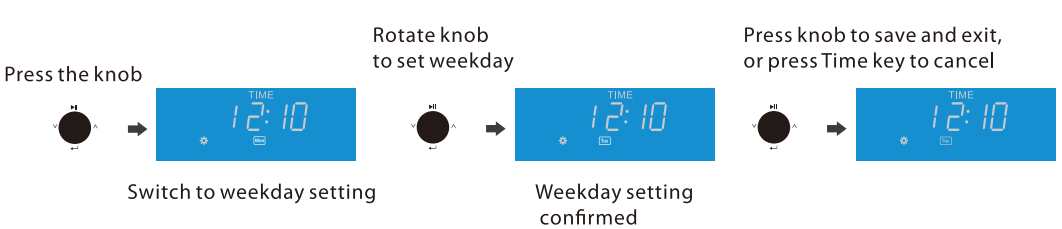
Record the MIC/LINE input signal as an MP3 format MESSA message and automatically store it in the "MESSA" of the SD card. Press the selected number key to automatically generate the corresponding file names M001 to M008.





Time Calibration





Time schedule Introduction

Schedule Table:
Each schedule table can store 99 timed weekly tasks, that each task requiring 4 parameters: "Time", "Day of Week", "Message/BGM", and "Zone".

Time: Set the start time for automatic scheduled task (24-hour format, precise to seconds).

Day of Week: Set the execution days of the week (weekly recurring tasks).

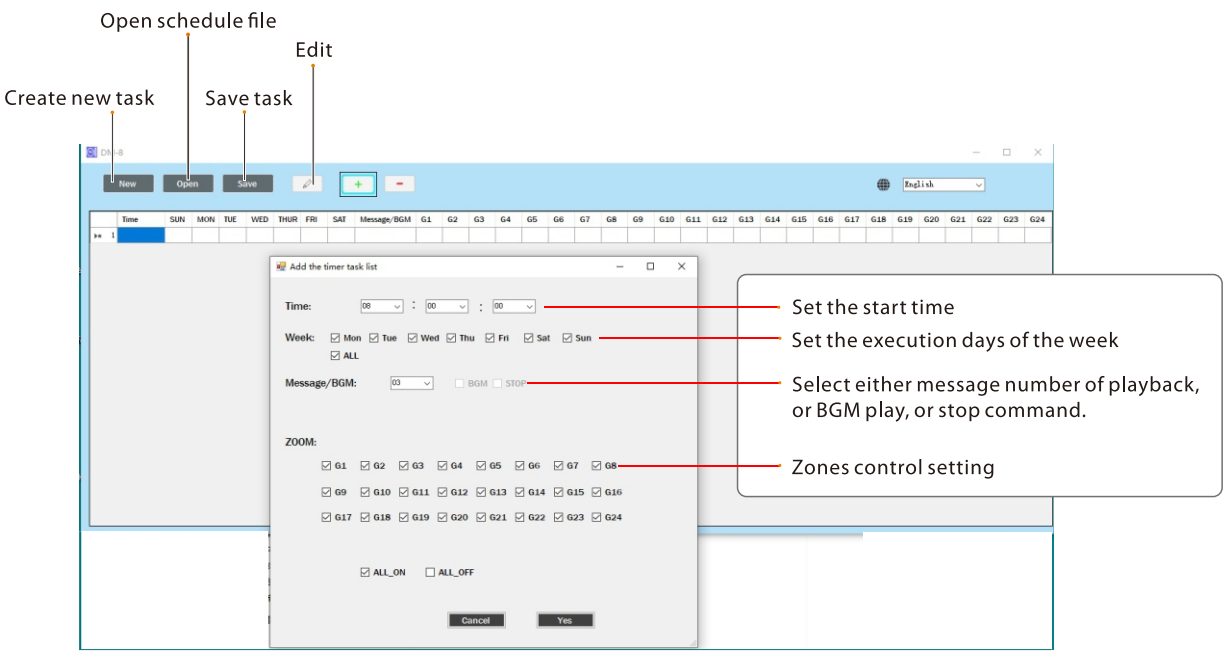
Message/BGM: Select either message number of playback, or BGM play, or stop command.

Zone: Zones control setting, 24 groups/zones can be controlled when connected to FLP-MCS500

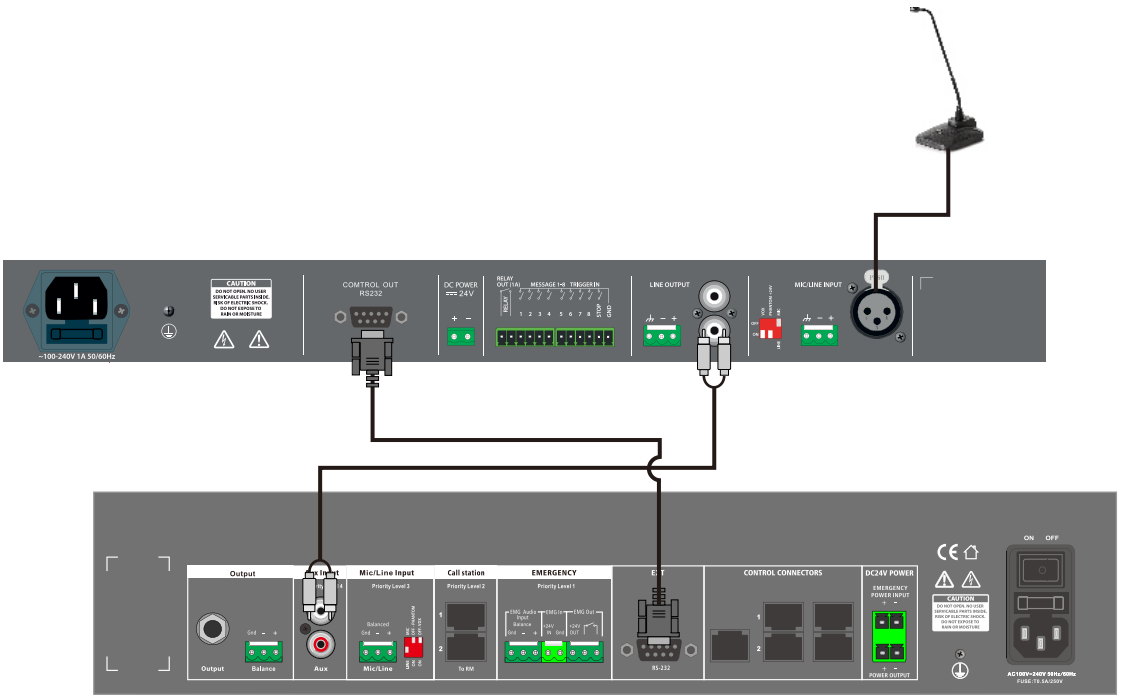
Time schedule editing software

The PC software designed for this device supports Windows 7/8/10/11 and later operating systems.

This portable (green) software runs directly via PT580.exe without installation, enabling users to edit schedule table, save the time schedule file as timing.txt, and copy this file to the SD card. when insert the SD card in the controller, it will automatically recognizes the new timing.txt and updates the inner time schedule.



System Connecting Diagram



Specifications

Input	Mic:-50dBV balanced /10KΩ， LINE:-10dBV balanced /10KΩ
Phantom power	DC24V,DIP switch controlled
Frequency Response	100~20KHz, −3dB/+3dB
THD	<0.05% (1kHz,-10dB main vol; +4dB output)
S/N Ratio	Mic:-65dB ; Line: -75dB
Player	Supports high-quality audio formats: WAV,WMA,Mp3 High-quality MP3 recording at 32-128Kbps bitrate
REC	Supports dual recording modes: microphone input & line input
Output	+4dBV balanced/500Ω，0dBV unbalanced/1KΩ
Power supply	AC220V，DC24V
Dimensions	482×100×44;(wx hx d)mm
Weight	1.8Kg