

# Operation Manual

**Multifunctional matrix host**  
**PP-6284II**

**Constant voltage power amplifier**  
**of multifunctional matrix type**  
**PP-6284II/4150P**  
**PP-6284II/4300P**  
**PP-6284II/4450P**  
**PP-6284II/4600P**

**Thinuna** Technology  
Innovative, Advanced, Reliable...

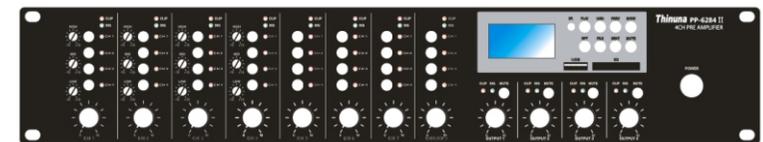
[www.thinuna.com](http://www.thinuna.com)

**RM-6284 II**

**Four-partition remote paging microphone**

**LM-6284II**

**Remote control panel**



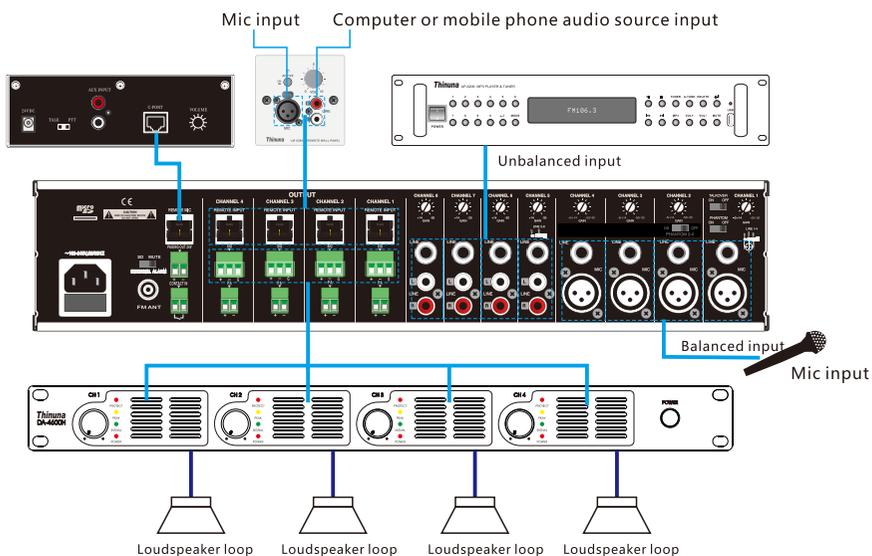
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**Thinuna**

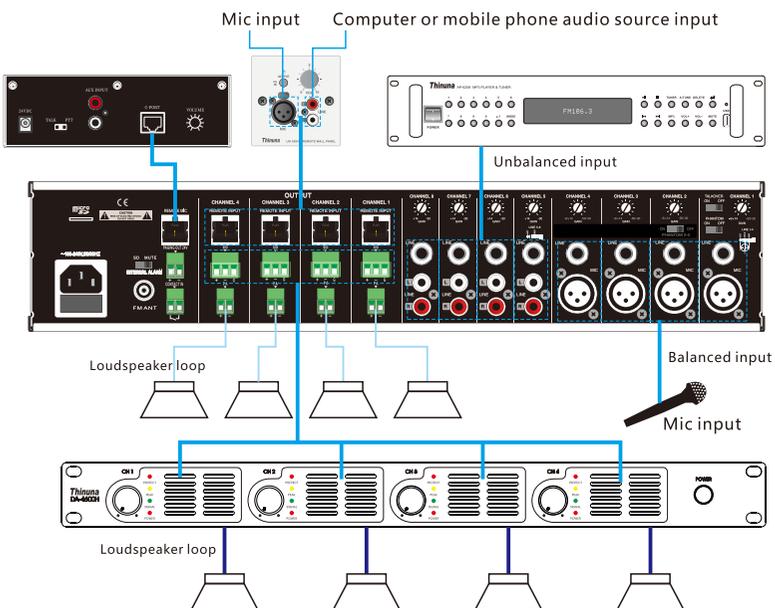


PP-6284 II Application Connection Diagram

No power amplifier version



Constant voltage power amplifier version



catalogue

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## Welcome

A personal welcome to you from the management and employees of Thinuna global.

Thanks you for choosing our high quality product, we will always provide innovative, advanced, reliable products like before.

We are sincerely trust these products will provide years of satisfactory service, but if anything is not to your complete satisfaction, we will endeavor to make things right.

Welcome to Thinuna again, and thank you for becoming part of our worldwide extended family!

## Warning

**CAUTION**

RISK OF ELECTRIC SHOCK DON'T OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying the appliance.

Caution: To prevent electric shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

**WARNING**

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

Attentions: Pour prévenir les chocs électriques ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant on une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans en laisser aucune partie à découvert.

\* For the terminals marked with symbol of " " may be of sufficient magnitude to constitute a risk of electric shock. The external wiring connected to the terminals requires installation by an instructed person or the used of ready-made leads or cords.  
 \* The apparatus shall not be exposed to dripping or splashing and that objects filled with liquids, such as vases, shall not be placed on apparatus.  
 \* The appliance coupler is used as disconnect device, the disconnect device shall remain readily operable.  
 \* Protective earthing terminal. The apparatus should be connected to a mains socket outlet with a protective earthing connection.  
 \* Increase the minimum distance of the prototype to the surrounding environment.  
 \* no naked flame sources, such as lighted candles, should be placed on the apparatus;  
 \* The use of apparatus in tropical climates.  
 \* The use of apparatus in moderate climates.

\* Do not install this equipment in a confined space such as a book case or similar unit.  
 \* The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.  
 \* Worded: "WARNING FOR YOUR PROTECTION PLEASE READ THE FOLLOWING-WATER AND MOISTURE: Unit should not be used near water(e.g. near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc). Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings."

**Service Instructions**  
 \* Worded: "Caution: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so."  
 \* Location: Instruction Manual.

**NOTE** : This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## LM-6284 II Technical Parameters

Model	LM-6284 II
Mic input	-50dB, 20kΩ , Balanced
Line input	-0dB, 10kΩ , Unbalanced
Audio output	0dB, 600Ω , Balanced
Frequency response	20Hz - 20kHz
THD	<0.1%
S/N	>90dB
Power	DC± 7V, Supplied by matrix host PP-6284 II
Power consumption	<1W
Weight	0.5kg
Operating temperature / humidity	0°C ~ 40°C, <95%
Dimensions	86(W) × 86(H) × 50(D) mm
Installation bottom box	standard 86 electrician bottom box (concealed installation)

## Service

### Procedures

Ensure the problem is not related to operator error, or external system devices, Once it is certain that the problem is related to the product contact your warranty provider as described in the warranty section of this manual.

### Variations

Variations of this product exist to reflect the variations in AC power requirements throughout the world. Product supplied through local sources are compatible with local AC power requirements 110VAC or 220VAC.

### Optional accessory

This product do not have others optional accessory.

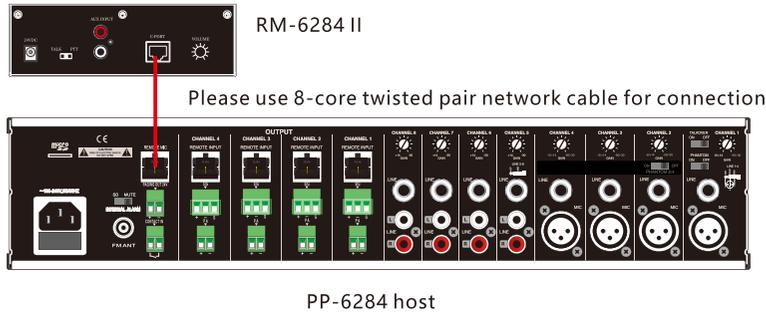
### Warranty

Warranty terms and conditions vary by country and may not be the same for all products. Terms and conditions of warranty for a given product may be determined first by locating the appropriate country which the product was purchased in, then by locating the product type.

To obtain specific warranty information and available service locations contact Thinuna directly or the authorized distributor for your specific country or region.

RM-6284 II Four-partition remote paging microphone manual

Wiring Diagram

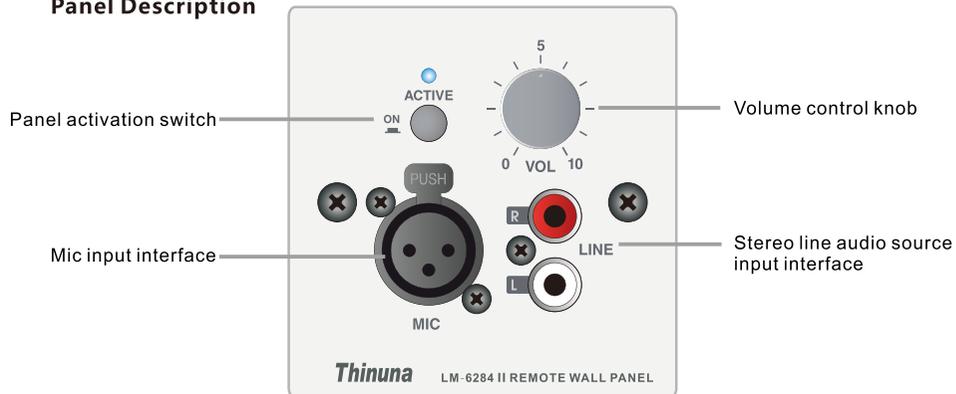


LM-6284 II Wall control panel

Features

- Must be connected to the PP-6284 II eight-in and four-out mixing audio matrix for normal use.
- RJ45 standard network interface.
- Each of the four outputs of PP-6284 II can be connected to one panel.
- Use category 5 or more unshielded twisted-pair wiring.
- With panel activation switch (ACTIVE button).
- Can input mic or stereo line audio source for this zone

Panel Description



Installation Environment

Installation this system is not difficult and complex. But you still need to spend some time to read this manual and ensure the connection and installation is exact. Never place this product in an environment which could alter its performance or reduce its service life. Such environments usually include high levels of heat, dust, moisture, and vibration.

Important Safety Instructions



1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

- Avoid excessive heat, humidity, dust and vibration  
Keep the unit away from locations where it is likely to be exposed to high temperatures or humidity-such as near radiators, stoves, etc. Also avoid locations which are subject to excessive dust accumulation, or to vibration that could cause mechanical damage.
- Avoid physical shocks  
Strong physical shocks to the unit may cause damage. Handle the unit with care.
- Do not open the case or attempt repairs or modifications yourself  
This product contains no user-serviceable parts. Refer all maintenance to qualified Thinuna service personnel. Opening the case and/or tampering with internal circuitry voids the warranty.
- Always power off before making connections  
Always turn the AC mains OFF before connecting or disconnecting cables. This is important to prevent damage to the unit itself as well as other connected equipment.
- Handle cables carefully  
Always plug and unplug cables (including the AC mains power cord) by gripping the connector, not the cord.
- Clear with a soft dry cloth  
Never use solvents such as benzine or paint thinner to clean the unit. Wipe clean with a soft, dry cloth.

## PP-6284 II Eight-input and four-output mixing audio matrix host

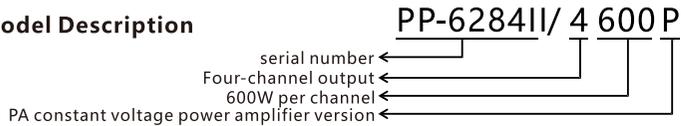
### Features:

- Eight-input and four-output mixing audio matrix, any eight input channels audio source can be freely assigned and mixed to the four channels audio output.
- Can connect a four-partition paging microphone RM-6284 II (RJ45 interface).
- Can connect four remote audio source input panels LM-6284 II (RJ45 interface).
- Four mono Mic / Line (microphone or line) balanced inputs, with high, medium and bass three-band equalization adjustment (front panel) and input gain adjustment (rear panel).
- Input channel 1 with strong-cut mute function, with independent phantom power switch.
- Input channels 2 ~ 4 with phantom power switch.
- Four stereo or mono Line unbalanced inputs, with input gain adjustment (rear panel).
- Four mono balanced audio outputs, with mute button (front panel).
- Four-channel built-in power amplifier, optional configuration (refer to model description)
- One all-zone emergency trigger switch.
- Built-in multimedia module with FM, MP3 and Bluetooth function, and mix with input channel 8.
- All input and output channels are equipped with level indicator light and clipping indicator light.
- 220-240VAC power supply.

### Accessory pac

- The product contains a separate AC power cord for power supply.
- An FM antenna.
- A multimedia infrared remote control.

### Model Description



### Priority Specification

Priority level	Corresponding audio source	Description
1	RM remote paging microphone	The channel selected by the RM for operation has the highest priority (when the emergency is triggered, it has a strong-cut function for all channels)
2	Emergency audio source	After the emergency trigger, it outputs 24V, and all output channels play the audio files stored in the TF card on the rear panel (switch to "SD") or mute (switch to "MUTE")
3	Channel 1 strong-cut	Enable channel 1 strong-cut function, when channel 1 has a signal, the trigger has priority.
4	LM remote panel	Press "ACTIVE" on the panel to trigger.
5	Local audio source	When there is no high priority audio source to preempt, select the output channel through the front panel selection button.

The smaller the priority value, the higher the priority level.

## RM-6284 II Four-partition remote paging microphone manual

### RM-6284 II Partition paging microphone operation method:

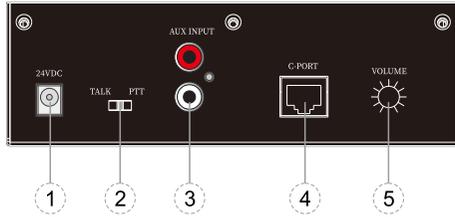
1. Select the path of input audio source, MIC, LINE or both are selected as mixing input.
2. Select output partition, you can choose any partition or multiple partitions of A, B, C, D as output.
3. After the partition is selected, if you need to play the prompt tone before paging, please double-click the "CHIME" button.
4. Press the "TALK" button to start the paging broadcast.

### RM-6284 II Technical Parameters

Model	RM -6284 II
Mic input	- 50db • Balanced
Line input	- 10db • Unbalanced stereo
Audio output	0db • Balanced
Frequency response	AUX: 20Hz~20KHz Mic: 45Hz~15KHz
S/N	>90dB(A)
THD	<0.1%
Power	Supplied by matrix host PP -6284 II + External power supply DC24V 1A
Power consumption	<3W
Net weight	1KG
Dimensions	160( W ) x 55( H ) x 110( D ) mm, Microphone length: 390mm

## RM-6284 II Four-partition remote paging microphone manual

### RM microphone rear panel description

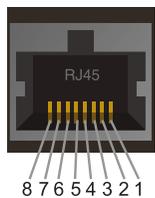


1. 24V power input port ( Note: the power adapter is optional )  
In the case of insufficient power supply for the remote host, the local 24V power supply is required.
2. Mode toggle switch  
Can select TALK mode or PTT mode.
3. External audio source input port  
Can connect to the audio input of other players, such as computer, mobile phone, CD player, etc.
4. Control and power connection port  
To connect to the REMOTE MIC port on the host, please use an 8-core twisted-pair network cable (above Category 5) as the connection line. The connection line transmission includes power, control signals and audio signals, and the maximum transmission distance is 1000 meters.
5. Output volume knob  
In the process of long-distance transmission, the volume output can be adjusted appropriately for appropriate compensation

### Wiring guidance

For proper operation, the partition paging microphone RM-6284 II should be connected to the corresponding Remote Mic port on the rear panel of the mixing audio matrix PP-6284 II.

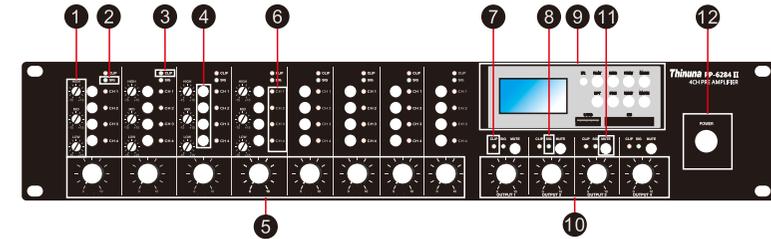
The corresponding function of RJ45 PIN is as follows:



1. + 15 Volts
2. Ground
3. - 15 Volts
4. Data -
5. Data +
6. Ground
7. Signal +
8. Signal -

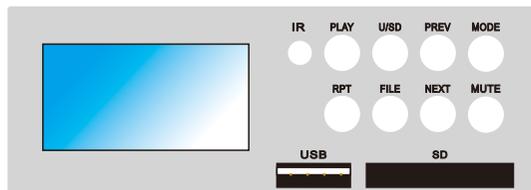
[ Note: This microphone should be connected with UTP CAT-5 cable ]

## Front Panel



1. Input channel equalizer control  
It can control the equalization adjustment of channel 1~4 input signal at 80Hz (low frequency), 2.5kHz (intermediate frequency) and 12.5kHz (high frequency).
2. Signal indication: display the input signal of each channel.
3. Input signal clipping indication  
The indicator light warns when each input channel is overloaded and clipped. It is recommended to adjust the GAIN on the rear panel when the CLIP indicator is flashing to achieve the best results.
4. Output channel selection button: you can select the output channel of each input signal.
5. Input channel volume knob: adjust the input volume of each channel.
6. Selected channel indicator: display the output channel of the current signal.
7. Output channel limiting indication  
The indicator light will warn each time the output channel is overloaded and clipped. It is recommended to adjust the GAIN on the rear panel when the CLIP indicator flashes to achieve the best effect.
8. Output level indication: the indicator light shows the current output signal.
9. The multimedia module has FM, MP3 and Bluetooth functions, and is mixed with input channel 8.
10. Output channel volume knob: can adjust the volume of each output channel.
11. Output channel mute switch: one key mute can be realized for each output channel.
12. Power switch: power switch button.

### Multimedia Module Description



Button	Way	Empty mode	MP3	Bluetooth	FM
Play / Pause (PLAY)	Short press	NA	Play / Pause	Play / Pause	NA
	Long press	NA	NA	NA	Automatic search for radio station
USB / SD switch (U/SD)	Short press	NA	Switch the USB/SD	NA	NA
	Long press	NA	NA	Clear connection	Search the radio station forward
Previous song / Volume down (PREV)	Short press	NA	Previous song	Previous song	Previous radio station
	Long press	NA	Volume down	Volume down	Volume down
Mode switch (MODE)	Short press	Mode switch	Mode switch	NA	Mode switch
	Long press	NA	NA	NA	NA
Cycle switch (RPT)	Short press	NA	Cycle switch	Cycle switch	NA
	Long press	NA	NA	NA	Automatic search for radio station
File browsing (FILE)	Short press	NA	File browsing	NA	NA
	Long press	NA	NA	NA	Search the radio station backwards.
Next song / Volume up (NEXT)	Short press	NA	Next song	Next song	Next radio station

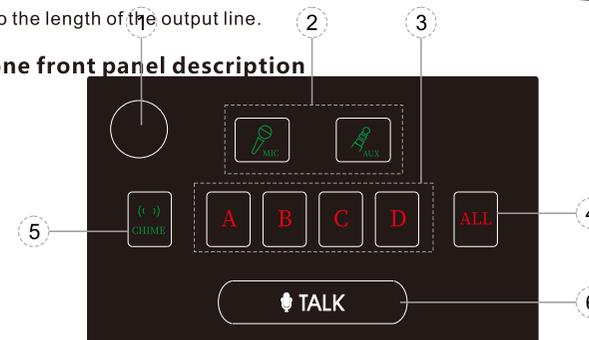
### RM-6284 II Four-partition remote paging microphone manual

#### Features:

- The surface is touch panel made of acrylic material, with high sensitivity touch buttons.
- Connect to PP-6284 II eight-input four-output matrix, each matrix can be equipped with one microphone.
- Four independent partitions are optional, and any partition or multiple partitions can be selected as output.
- MIC, LINE mixing input function.
- Prompt tone function and TALK (one-key talk)/PTT (push to talk function).
- Output volume control knob, can be appropriately compensated according to the length of the output line.



#### RM microphone front panel description



1. Microphone input port  
Insert a condenser microphone, this microphone base with 7V phantom power supply.
2. Input audio source selection  
Can select any audio source of MIC and LINE or mixed as input.
3. Output partition selection  
Can choose any partition or multiple partitions of A, B, C, D as output channels.
4. Select all/cancel partitions  
Press the button to select all partitions, in this state, click this button again to cancel the selected partitions.
5. Prompt tone trigger  
When the output partition is selected, double-click this touch button to trigger the prompt tone output.
6. "TALK" talk button  
When the output partition is selected, talk after the button is pressed and bounced (TAKL mode) or push to talk (PTT mode), the two modes are switched by the dial switch on the rear panel.

## PP-6284 II Technical Parameters

Model	PP-6284 II
Power consumption	<10W
Net weight	5KG
Power	100 - 240VAC, 50/60Hz
Mic input	-60dB ~ -16dB, Balanced, 20KΩ
Line input	-20dB ~ +4dB, Unbalanced, 10KΩ
Remote mic and audio source input	0dB, Balanced, 600Ω
Audio output	0dB, Balanced, 600Ω
Frequency response	20Hz ~ 20kHz (± 3dB)
Crossover distortion	>70dB
THD	<0.1%
Equalization adjustment	Treble : 12kHz±15dB; Mediant : 2.5kHz±15dB; Bass : 80Hz ±15dB
Operating temperature / humidity	0°C ~ 40°C, <95%
Dimensions	476(W) x 87(H) x 354(D) mm

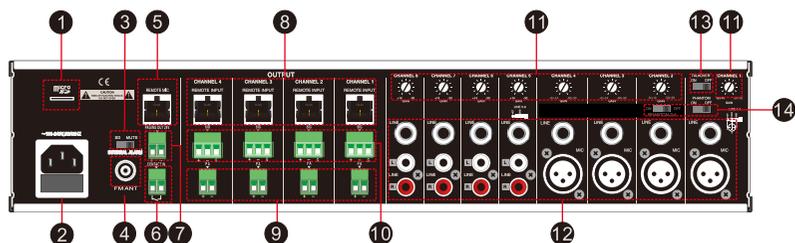
Model	PP-6284 II/4150P	PP-6284 II/4300P	PP-6284 II/4450P	PP-6284 II/4600P
Power consumption	<610W	<1210W	<1810W	<2410W
Net weight	7.5KG			
Power	220 - 240VAC, 50/60Hz			
Mic input	-60dB ~ -16dB, Balanced, 20KΩ			
Line input	-20dB ~ +4dB, Unbalanced, 10KΩ			
Remote mic and audio source input	0dB, Balanced, 600Ω			
Audio output	0dB, Balanced, 600Ω			
Frequency response	20Hz ~ 20kHz (± 3dB)			
Crossover distortion	>70dB			
THD	<0.1%			
Equalization adjustment	Treble : 12kHz ± 15dB; Mediant : 2.5kHz±15dB; Bass : 80Hz ± 15dB;			
Operating temperature / humidity	0°C ~ 40°C, <95%			
Dimensions	476(W) x 87(H) x 354(D) mm			

## Remote Control



Button	Way	MP3	Radio	Bluetooth	Standby
PLAY / PAUSE	Short press	Pause/ Play	Automatic search for radio station	Pause/ Play	NA
	Long press	NA	NA	NA	NA
CH -	Short press	File browsing -	Previous radio station	NA	NA
	Long press	NA	NA	NA	NA
CH +	Short press	File browsing +	Next radio station	NA	NA
	Long press	NA	NA	NA	NA
EQ :	Short press	Audio effect adjustment	NA	NA	NA
	Long press	NA	NA	NA	NA
VOL -	Short press	Volume down	Volume down	Volume down	NA
	Long press	Volume down	Volume down	Volume down	NA
VOL +	Short press	Volume up	Volume up	Volume up	NA
	Long press	Volume up	Volume up	Volume up	NA
PREV	Short press	Previous song	Frequency point -	Previous song	NA
	Long press		Frequency point -	NA	NA
NEXT	Short press	Next song	Frequency point +	Next song	NA
	Long press		Frequency point +	NA	NA
0-9	Short press	Digitally select songs	Radio station selection/frequency	NA	NA
PICKSON	Short press	File browsing	NA	NA	NA
ENTER	Short press	Cycle switch	NA	NA	NA
MODE	Short press	Mode switch	Mode switch	Mode switch	NA

## Rear Panel



### 1. TF card emergency voice storage card slot

This TF card slot can be inserted into a TF card, which is used to store the audio source files played in case of emergency triggering.

### 2. AC power input connection

You need to use the correct fuse and power cord. Make sure that the fuse is of the same specification before replacing.

### 3. Emergency audio source toggle switch

When this switch is turned to "SD", all-zone will play MP3 files in the TF card when the emergency trigger is activated; when the switch is turned to "MUTE", all-zone will be muted when the emergency trigger is activated.



### 4. FM antenna interface

Connect a British F-head FM antenna.

### 5. Remote four-partition paging microphone connection port

Through this RJ45 terminal, four-partition remote paging microphone can be connected to realize remote microphone zone broadcasting. (see the right picture)

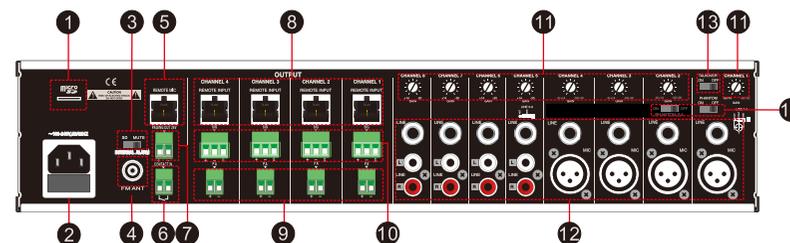
### 6. Emergency trigger switch

Through the external dry contact signal of this switch, it can be triggered remotely, play the designated emergency audio source, and output DC24V for the linkage of other equipment.

### 7. DC24V power output connection terminal

Through this DC24V power output port, it can provide DC24V power output to other equipment to realize fire-fighting linkage, or for four-wire strong cut control.

## Rear Panel



### 8. Remote wall panel input port

The RJ45 terminal can be connected to the remote wall control panel of this mixing audio matrix, and the audio source can be remotely input to the current output zone. (see the right picture)

### 9. Power amplifier output interface (\*power amplifier version)

Each channel can be directly connected to the load speakers.  
 PP-6284II/4150P(4\*150W) PP-6284II/4300P(4\*300W)  
 PP-6284II/4450P(4\*450W) PP-6284II/4600P(4\*600W)



### 10. Audio output interface

The line output terminal can be connected to the power amplifier.

### 11. Gain control of each channel input signal

Receive wide horizontal input, microphone input from -50dB to -6dB, line input from -30dB to +14dB.

### 12. Eight-channel signal input interface

Channels 1-4 are mono balanced input: including TRS input (HOT, COLD, GND) and XLR mic input (HOT, COLD, GND);  
 Channels 5-8 are unbalanced line input: including TS mono input (HOT, GND) and RCA stereo input (HOT, GND);

### 13. Input channel 1 priority strong-cut switch

When this priority switch is turned on and channel 1 has audio signal input, it will automatically strong-cut the input signals of other channels.

### 14. Input channel 1-4 phantom power switch

Input channel 1 is set with an independent phantom power switch, input channels 2-4 are simultaneously turned on or off phantom power, and support condenser microphone input.