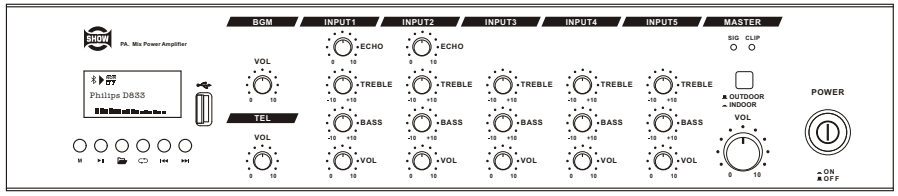
THE UNIVERSE OF INSTALLATION

PA. Mix Power Amplifier

User's Manual



PAS-150D/PAS-150F
PAS-300D/PAS-300F
PAS-500D/PAS-500F

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TECHNICAL SPECIFICATIONS

Models		PAS-150	PAS-300	PAS-500
AC Power supply	110-120V~,220-240V~ 50Hz/60Hz			
Rated power consumption	sine wave 1kHz,THD≦1%,LOAD 4Ω	180W	350W	600W
Rated output power	sine wave 1kHz,THD≦1%,LOAD 4Ω	180W	350W	600W
Sensitivity/ Impedances	MIC 1~4(balanced)	-45dBV (±2dB)	-45dBV (±2dB)	-45dBV (±2dB)
	LINE 1~4(balanced)	-5dBV (±2dB)	-5dBV (±2dB)	-5dBV (±2dB)
	AUX(unbalanced)	-5dBV (±2dB)	-5dBV (±2dB)	-5dBV (±2dB)
	TEL	-15dBV (±2dB)	-15dBV (±2dB)	-15dBV (±2dB)
S/N ratio	MIC	>65dB	>65dB	>65dB
	LINE	>75dB	>75dB	>75dB
	AUX	>75dB	>75dB	>75dB
Bandwidth	MIC+OUTDOOR	178Hz-7.96KHz	178Hz-7.96KHz	178Hz-7.96KHz
	MIC+INDOOR	132Hz-7.96KHz	132Hz-7.96KHz	132Hz-7.96KHz
	LINE+OUTDOOR	138Hz-12.6KHz	138Hz-12.6KHz	138Hz-12.6KHz
	LINE+INDOOR	70Hz-12.6KHz	70Hz-12.6KHz	70Hz-12.6KHz
	AUX+OUTDOOR	144Hz-17KHz	144Hz-17KHz	144Hz-17KHz
	AUX+INDOOR	76Hz-17KHz	76Hz-17KHz	76Hz-17KHz
THD+N	1/10 Rated Out/ 1W	≦1W	≦1W	≦1W
Tone control	BASS @ 100 Hz	±10dB	±10dB	±10dB
	TREBLE @ 10kHz	±0dB	±0dB	±0dB
Phantom supply	condenser microphone	18V	18V	18V
Priority Sensitivity	MIC+TEL	-60dBv/3S	-60dBv/3S	-60dBv/3S
CMRR	balance input	>60dB	>60dB	>60dB
Noise	all VR MAX	<30mv	<30mv	<30mv

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IMPORTANT!

Please read this manual carefully before operating this unit for the first time.

SAFETY RELATED SYMBOLS

The symbol is used to indicate that some hazardous live terminals are involved within this apparatus, even under the normal operating conditions.

The symbol is used in the service documentation to indicate that specific component shall be only replaced by the component specified in that Documentation for safety reasons.

Protective grounding terminal.

Alternating current /voltage.

Hazardous live terminal .

ON: Denotes the apparatus turns on.

OFF: Denotes the apparatus turns off, because of using the single pole switch, be sure to unplug the AC power to prevent any electric shock before you proceed your service.

WARNING: Describes precautions that should be observed to prevent the danger of injury or death to the user.

Disposing of this product should not be placed in municipal waste and should be separate collection.

CAUTION: Describes precautions that should be observed to prevent danger of the apparatus.

WARNING

- **Power Supply**

Ensure the source voltage matches the voltage of the power supply before turning ON the apparatus.

Unplug this apparatus during lightning storms or when unused for long periods of time.

- **External Connection**

The external wiring connected to the output hazardous live terminals requires installation by an instructed person, or the use of ready-made leads or cords.

- **Do not Remove any Cover**

There are maybe some areas with high voltages inside, to reduce the risk of electric shock, do not remove any cover if the power supply is connected.

The cover should be removed by the qualified personnel only.

No user serviceable parts inside.

- **Fuse**

To prevent a fire, make sure to use fuses with specified standard (current, voltage, type). Do not use a different fuse or short circuit the fuse holder.

Before replacing the fuse, turn OFF the apparatus and disconnected the power source.

- **Protective Grounding**

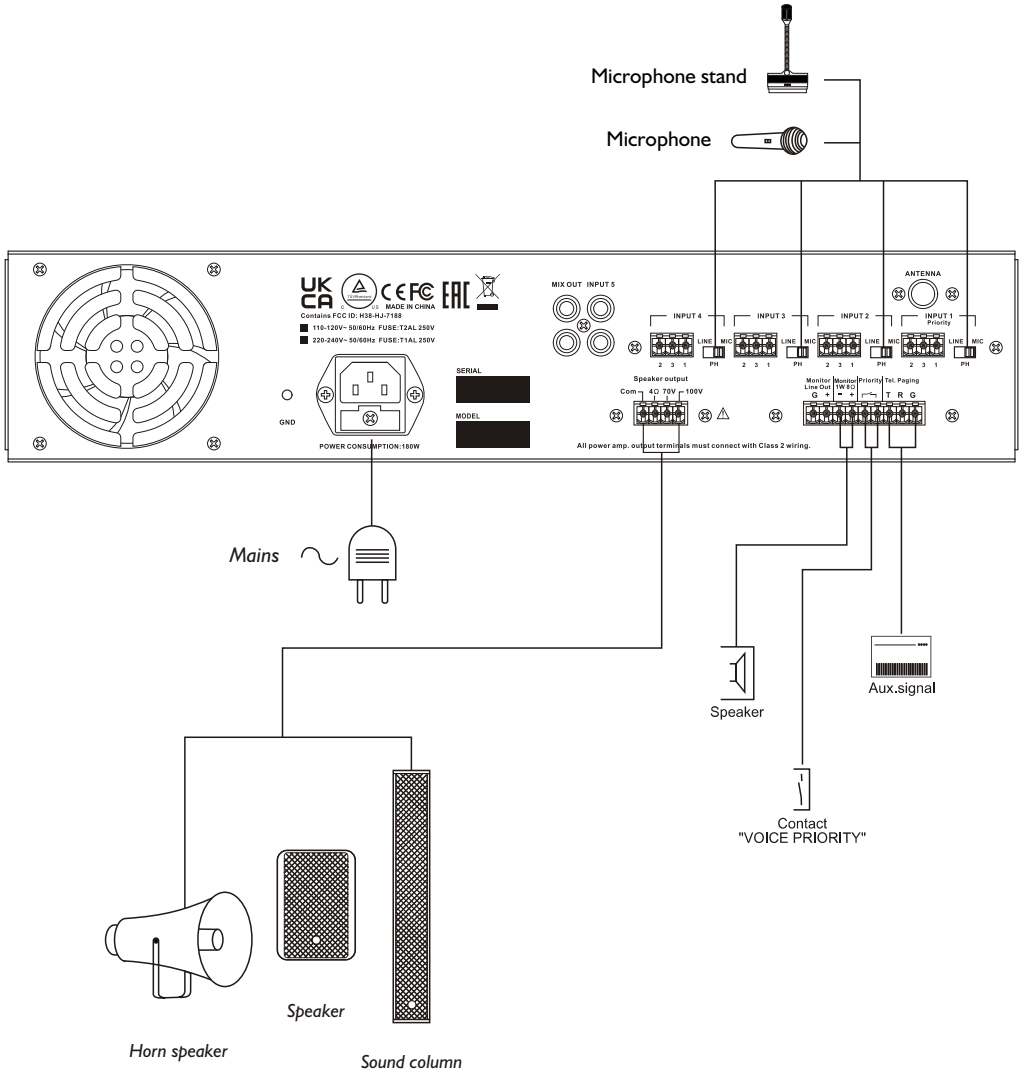
Make sure to connect the protective grounding to prevent any electric shock before turning ON the apparatus.

Never cut off the internal or external protective grounding wire or disconnect the wiring of protective grounding terminal.

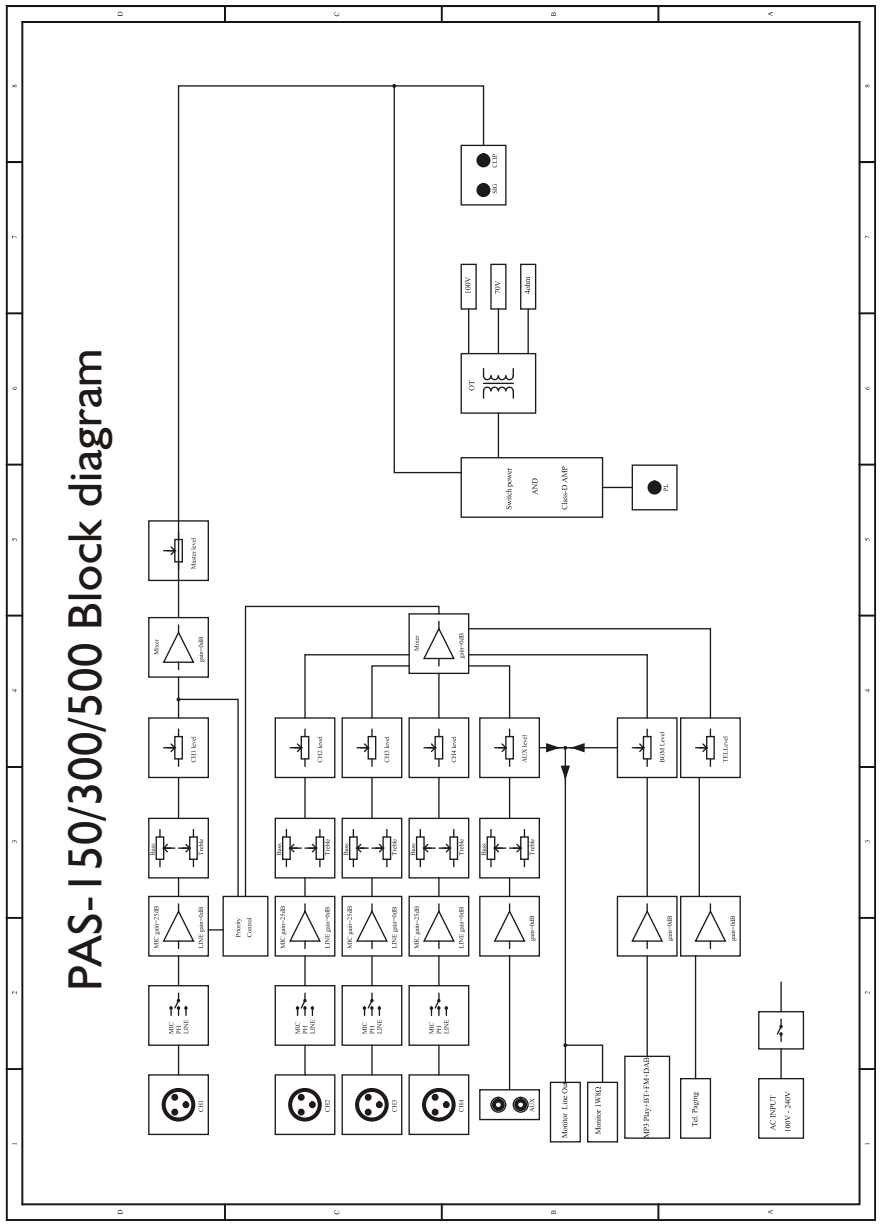
- **Operating Conditions**

This apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on this apparatus.

CONNECTION DESCRIPTION



BLOCK DIAGRAM



To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

Do not use this apparatus near water. Install in accordance with the manufacture-r's instructions. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. Do not block any ventilation openings.

No naked flame sources, such as lighted candles, should be placed on the apparatus.

IMPORTANT SAFETY INSTRUCTIONS

- Read these instructions.
- Follow all instructions.
- Keep these instructions.
- Heed all warnings.
- Only use attachments/accessories specified by the manufacturer.

• Power Cord and Plug

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.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

• Cleaning

When the apparatus needs a cleaning, you can blow off dust from the apparatus with a blower or clean with rag etc.
Don't use solvents such as benzol, alcohol, or other fluids with very strong volatility and flammability for cleaning the apparatus body. Clean only with dry cloth.

• Servicing

Refer all servicing to qualified personnel. 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 .

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.

The mains plug is used as the disconnect device , the disconnect device shall remain readily operable.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Statement:

"This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However , there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help."

INTRODUCTION

Function introduction:

PAS series models, the entire series uses class D modules High efficiency: The biggest advantage of Class D power amplifier is its high efficiency. Wide range of applications; Class D power amplifiers have a wide range of applications and low minimum connected loads. . Clear sound: The Class D amplifier lacks high and mid-range frequencies and can be adjusted relative to the frequency. The sound is very clear and the sound image positioning is quite accurate. Can be mass produced: Class D power amplifiers are very suitable for mass production.

3 power levels: 150W, 300W, 500W,

6 models: PAS-150D, PAS-150F, PAS-300D, PAS-300F, PAS-500D, PAS-500F.
D stands for DAB function: Digital Audio Broadcasting (DAB for short) is the third generation of broadcasting after AM and FM traditional analog broadcasting - digital signal broadcasting. It provides sound close to CD quality, broadcasting and unlimited business opportunities. Data service has the advantages of anti-noise, anti-interference, anti-radio wave propagation fading, and is suitable for high-speed mobile reception, ensuring the quality of received signals when fixed, portable, and mobile.

F represents FM radio function: FM is the abbreviation of frequency modulation, which means frequency modulation. A commonly used term in radio: FM frequency modulation (FM) is a modulation method that uses instantaneous frequency changes of the carrier wave to represent information.

CONTROL ELEMENTS

⑲ **OUTPUT TERMINALS**
Connection for low impedance 4 speaker ;connections for constant voltage,70V or 100V speakers.

⑳ **MONITOR LINE OUT**
This terminal allows you to connect other device, such as amplifier, recorder, etc.

㉑ **1W8OHM MONITOR**
Use this terminal to connect small external speakers, which will be powered by an auxiliary power amplifier, offering a 1W of nominal output.

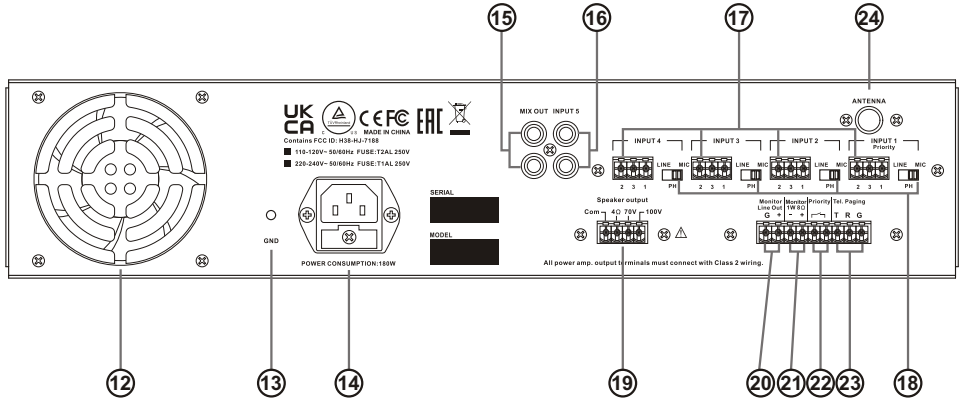
㉒ **PRIORITY TERMINAL**
When these terminals are in short circuit(e.g. Using an electrical switch), the audio signal from channels 2-5 are attenuated.

㉓ **TEL PAGING INPUT**
Use these terminals to connect an auxiliary signal. The input features of Voice Priority function, which overrides all other input signals once, an auxiliary message is sent.

㉔ **ANTENNA SOCKET**
Plug in the antenna to receive digital broadcast signals for DAB or FM signals for FM radio

CONTROL ELEMENTS

3. REAR PANEL



⑫ FAN

It is used to blow off heat and cool when the temperature rises during operation.

⑬ GND

It is ground connection.

⑭ POWER OUTLET

This connector is meant for connection of the supplied main cord.
Do not insert the power cord into this unit until voltage has been correctly set.

⑮ MIX OUT

Use a standard RCA cable to connect this output to the AUX input of another amplifier (such as another PAS amplifier).

⑯ INPUT 5

Use standard RCA cables to this unbalanced input

⑰ INPUT1-4

Balanced input, 1: Connect to the signal source GND, 2: Connect to the positive phase of the signal source, 3: Connect to the negative phase of the signal source

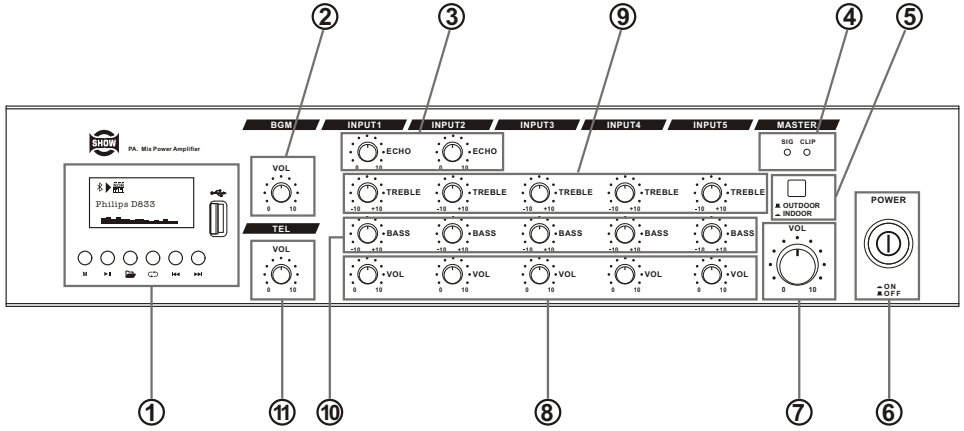
⑱ MIC/PHANTOM/LINE SELECT SWITCH

This knob is used to adjust the ZONE1 gain of the unit.

CONTROL ELEMENTS

Take the below model with MP3 player + ECHO for example.

1. FRONT PANEL



① MP3 MODULE

Regarding its function and operation, please see the BGM module description in detail.

② BGM VOL KNOBS

The knobs are used to adjust the gain of MP3. Adjust clockwise to increase the volume while adjust counterclockwise to decrease the volume.

③ ECHO EFFECT KNOB

Rotate left to attenuate the echo effect; rotate to the right to enhance the echo effect.

④ SIGNAL INDICATOR LIGHT

When there is signal input, the SIG light lights up; when the signal input exceeds the input sensitivity, the CLIP light lights up

⑤ FREQUENCY RESPONSE SELECTION SWITCH

MIC	OUTDOOR	200Hz~8KHz
	INDOOR	150Hz~8KHz
LINE	OUTDOOR	170Hz~13KHz
	INDOOR	90Hz~13KHz

⑥ POWER SWITCH AND POWER INDICATOR

Press the power switch and the power indicator lights up when the power is turned on

CONTROL ELEMENTS

⑦ **MASTER KNOB**

Controls the overall volume output. Rotate left, the volume output is attenuated; rotate right, the volume output is enhanced.

⑧ **INPUT 1-5VOL KNOBS**

The knobs are used to adjust the gain of input1-5 respectively. Adjust clockwise to increase the volume whi le adjust c ounter-clockwise to decrease the volume.

⑨ **TREBLE(INPUT1-5)**

Use the knob to control the high frequency at the range of 10dB. Turn clockwise to boost and counterclockwise to attenuate the treble response. Tone is flat at centre.

⑩ **BASS(INPUT1-5)**

Use the knob to control the low frequency at the range of 10dB. Turn clockwise to boost and counterclockwise to attenuate the treble response. Tone is flat at centre.

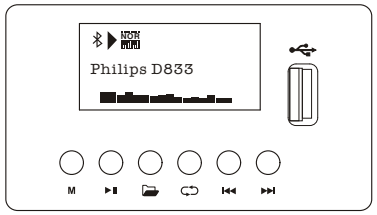
⑪ **TEL VOLUME**

Allows you to set the a : udio signal output volume from the phone line. When you don't use the phone line, we recommend to use the volume level to 0.

CONTROL ELEMENTS

2. MP3 Operation Instructions

The Functions Description of USB PLAYER



Control Keys

	USB	BT	FM	DAB
M	Mode selection	Mode selection	Mode selection	Mode selection
▶II	1.Play pause 2. Start/pause recording in recording state (version with recording function) 3. File browsing status: Select	play / Pause	Start searching/ pause searching	Start searching/ pause searching
🗁	1. Short press: browse song files 2. Long press: enter recording mode (version with recording function)	Long press: Disconnect Bluetooth connection	Manual frequency reduction	Manual frequency reduction
⮌	Sound effect mode selection	NA	Manual FM Plus	Manual FM Plus
⏮	1. Short press: Previous song 2. Long press: volume decreases 3. File browsing status: last song	1. Short press: Previous song 2. Long press: volume decreases	Previous radio station	Previous radio station
⏭	1. Short press: next song 2. Long press: volume up 3. File browsing status: next song	1. Short press: next song 2. Long press: volume up	next station	next station

Bluetooth Connection

When using a Bluetooth connection between the amplifer and other devices like smartphones,search the RTL-29 matching name and valid the connection.

Frequency range	Bluetooth: 2402-2480MHz
Maximum EIRP	Bluetooth: -4.07 dBm