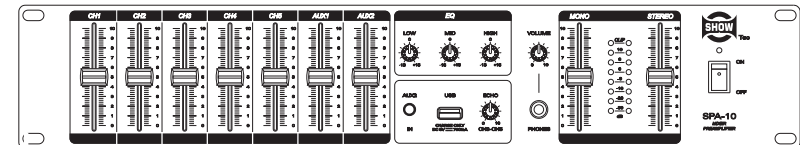




THE UNIVERSE OF INSTALLATION

# MIXER PREAMPLIFIER

## User's Manual



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SEIKAKU TECHNICAL GROUP LIMITED

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### SPA-10

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<b>STEREO/AUX in channels</b>	RCA input	RCA	
	Frequency response	+1/-3dB at output +4dB sine 20Hz to 22KHz	
	Distortion(THD+N)	<0.1% at +4dB, 22Hz~22KHz A-Weighted	
	Sensitivity	-20dBu	
	SNR	<-95dBr	
	Max. Input	+20dBu	
<b>Impedances</b>	Microphone Input	1k Ohms	
	All Other Input	10k Ohms or Greater	
	Rec Out	1k Ohms	
	All Other Outputs	120 Ohms	
<b>ECHO</b>	Yes (olny for CH3 ~ CH5), with knob adjust variation		
<b>MICI priority</b>	Off to -12dB		
<b>Main mix section</b>	EQ	High	±15 dB @12 kHz
		Mid	±12 dB @2.5 kHz
		Low	±15 dB @80 Hz
	MAX. Output	+26dBu Balanced; +21dBu un-Balanced	
	Fader range	Off to +10dB	
	Headphone level range	Off to +10dB	
	Hum & Noise	<-70dB @ 20Hz~22KHz, 1 channel & MAIN level: max , the other :minimum	
	channel Crosstalk	<-75dB @0dB 20Hz~22KHz , MAIN level: max , the other :minimum	
<b>USB Port</b>	5VDC 700mA(max) ( used to charge the MP3 player, I-phone, etc.)		
<b>Power supply</b>	main voltage	100-240V~ 50/60Hz Fuse :T500mA 250V	
	DC in 24V	24V 1000mA	
	rated power consumption	25W	
<b>Others</b>	Dimensions (W*H*D)	483*88*186mm	
	Net Weight	2.85KG; 3.4KG with DC24V in	

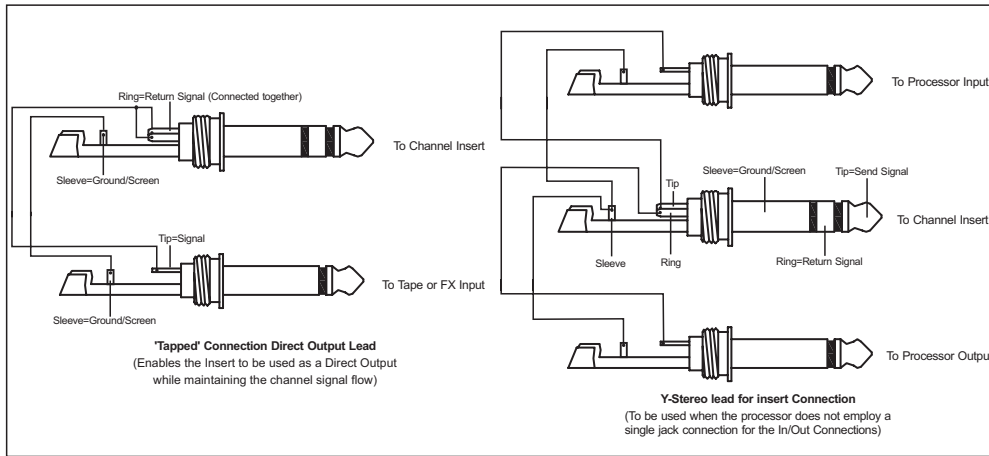
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**IMPORTANT!**

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

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## TECHNICAL SPECIFICATIONS

<b>MIC/LINE in channels</b>	Microphone input	XLR, Balanced
	Frequency Response:	+1/-3dB at output +4dB sine 20Hz to 22KHz
	Distortion( THD&N)	<0.1% at +4dB,22Hz~22KHz A-Weighted
	Sensitivity	-60dBu
	SNR	< -78dB
	Max input	-40dBu
	Phantom power	+15V with switch control
	Line input	1/4" TRS, balanced
	Frequency response	+1/-3dB at output +4dB sine 20Hz to 22KHz
	Distortion(THD+N)	<0.1% at +4dB,22Hz~22KHz A-Weighted
	Sensitivity	-20dBu
	SNR	< -95dB
	Max. Input	0dBu

## 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.

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

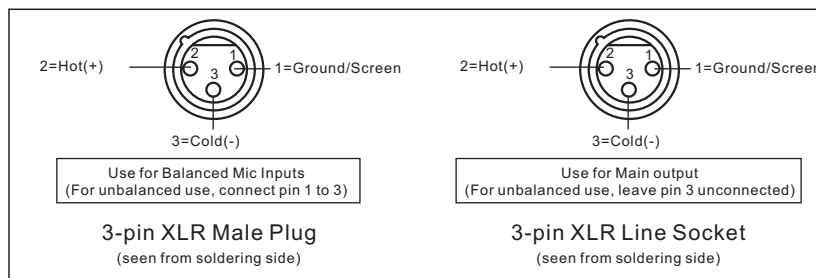
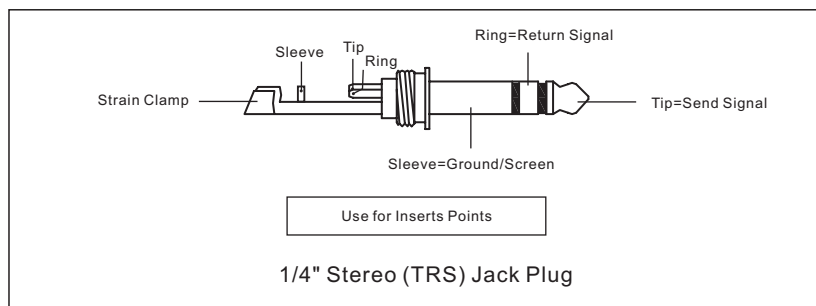
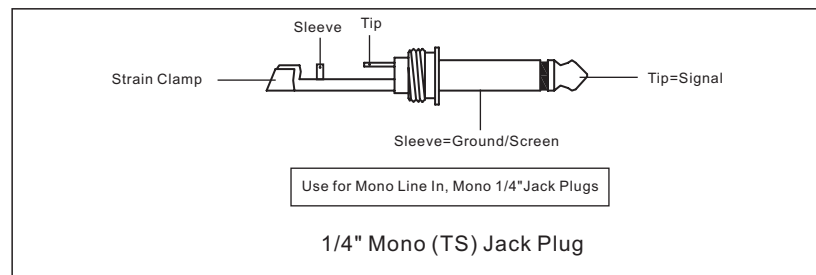
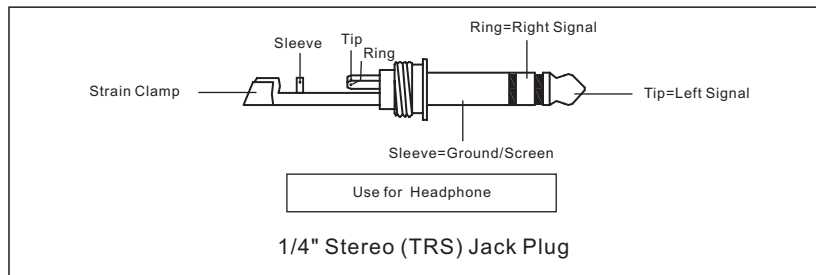
Refer all servicing to qualified personnel. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so .

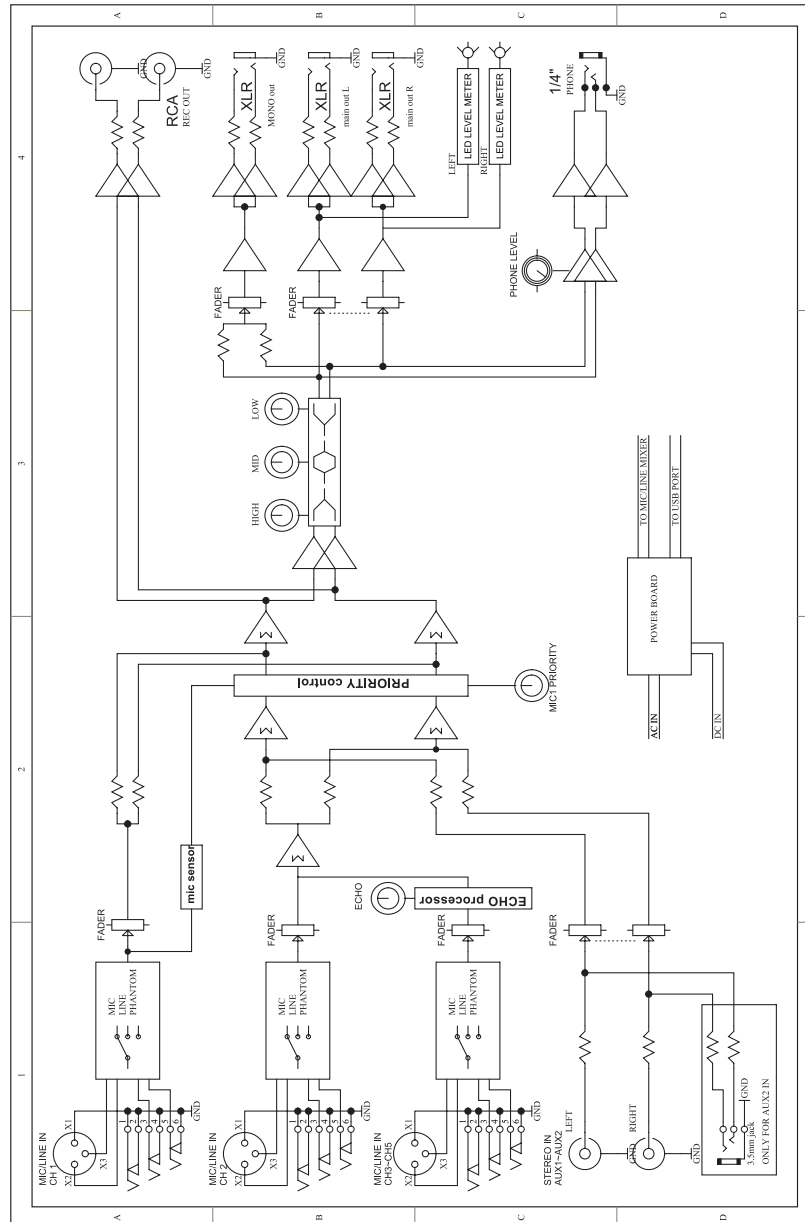
Servicing is required when the apparatus has been damaged in any way , such as power supply cord or plug is damaged , liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture , does not operate normally, or has been dropped.

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

### Some Final Tips on Wiring Configuration

You can connect unbalanced equipment to balanced inputs and outputs. Simply follow these schematics.



**BLOCK DIAGRAM**

**INTRODUCTION**

Thank you very much for expressing your confidence in our products by purchasing SPA-10 mixer preamplifier. The SPA-10 mixer preamplifier is a professional signal preamplifier processor dedicated to audio signal amplification, mixing, and adding effects and applications. It is a very powerful device offering simplicity and quality.

The SPA-10 mixer preamplifier is very easy to operate but we advise you to go through each section of this manual carefully. In this way you will get the best out of SPA-10 mixer preamplifier.

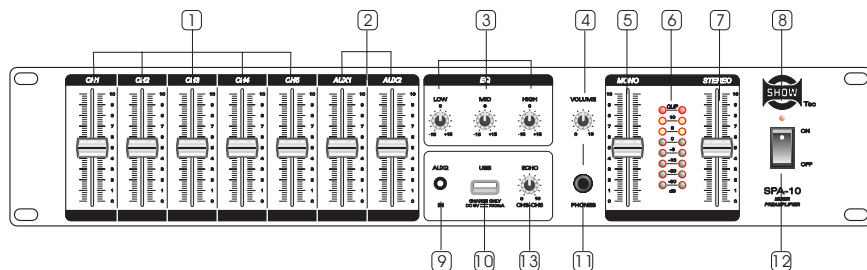
**Features:**

The SPA-10 mixer preamplifier is designed for professional application with following features:

- \* Applications: AV presenter, music band, bar, restaurant and hotel, etc
- \* Standard 2U 19"space rack, Simple & useful functional design
- \* 5 MIC/LINE combined mono input channels
- \* XLR-1/4" TRS combo input
- \* Ultra-low noise balanced input circuitry
- \* LINE/MIC input signals switchable (LINE IN /MIC IN/ MIC IN with phantom power)
- \* 60mm high-quality Fader channel volume control for each channel
- \* Priority function for CH1 input
- \* 2 stereo input channels
- \* RCA jack inputs
- \* AUX2 input channel includes a 3.5mm stereo input jack for connecting portable multi-media devices (MP3,I-pod,I-phone,etc)
- \* 3-BAND EQ
- \* 1 RECORD output with RCA jacks
- \* 1 1/4" phones output with volume control
- \* 1 mono output with balanced XLR socket
- \* 1 stereo output with balanced XLR socket
- \* 8-segment LED level meter
- \* ECHO effect for CH3~CH5 inputs, with knob adjust variation. (option)
- \* Supports DC24V input of power supply (option)
- \* Supports standard USB port to charge for portable music players or devices (MP3,I-pod,I-phone,etc)

## CONTROL ELEMENTS

### FRONT PANEL



#### 1. CH 1 ~ CH 5

Input level for mic/line 1 to 5.

#### 2. AUX 1 ~ AUX 2

Input level for AUX 1 to 2.

#### 3. EQ

3 bands EQ only for STEREO, MONO and HEADPHONE outputs.

The center frequencies are 80 Hz (LOW), 2.5 kHz (MID) et 12 kHz (HIGH)

#### 4. VOLUME - PHONES

Output volume for the headphone

#### 5. MONO - OUT

Output volume of MONO OUT.

Must be set to minimum when the power is switched on.

#### 6. DISPLAY L, R

LED display for STEREO OUT level.

The red light indicates a clipping status. Adjust the level until the LED switches off.

#### 7. STEREO - OUT

Output volume of the STEREO OUT.

Must be set to minimum when the power is switched on.

#### 8. ON/OFF INDICATOR

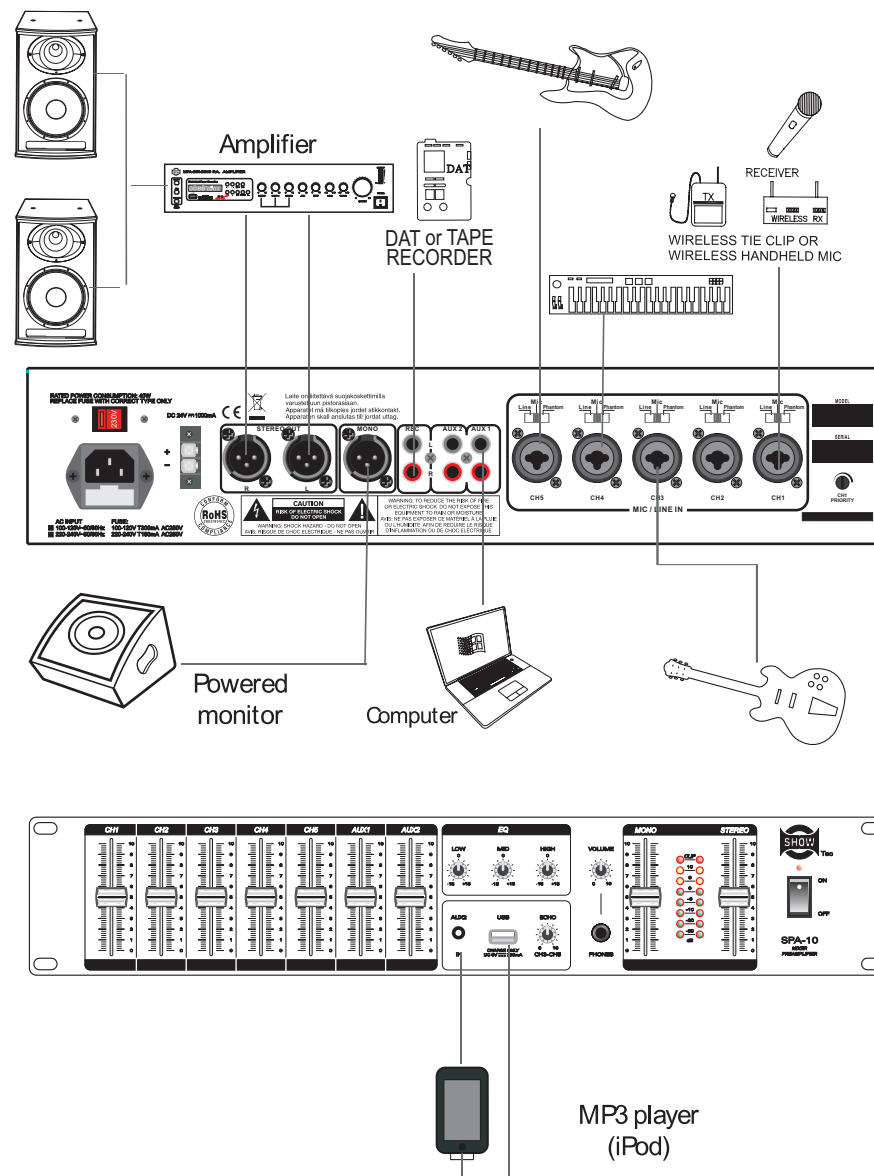
On/Off switch. The LED lights when power is on.

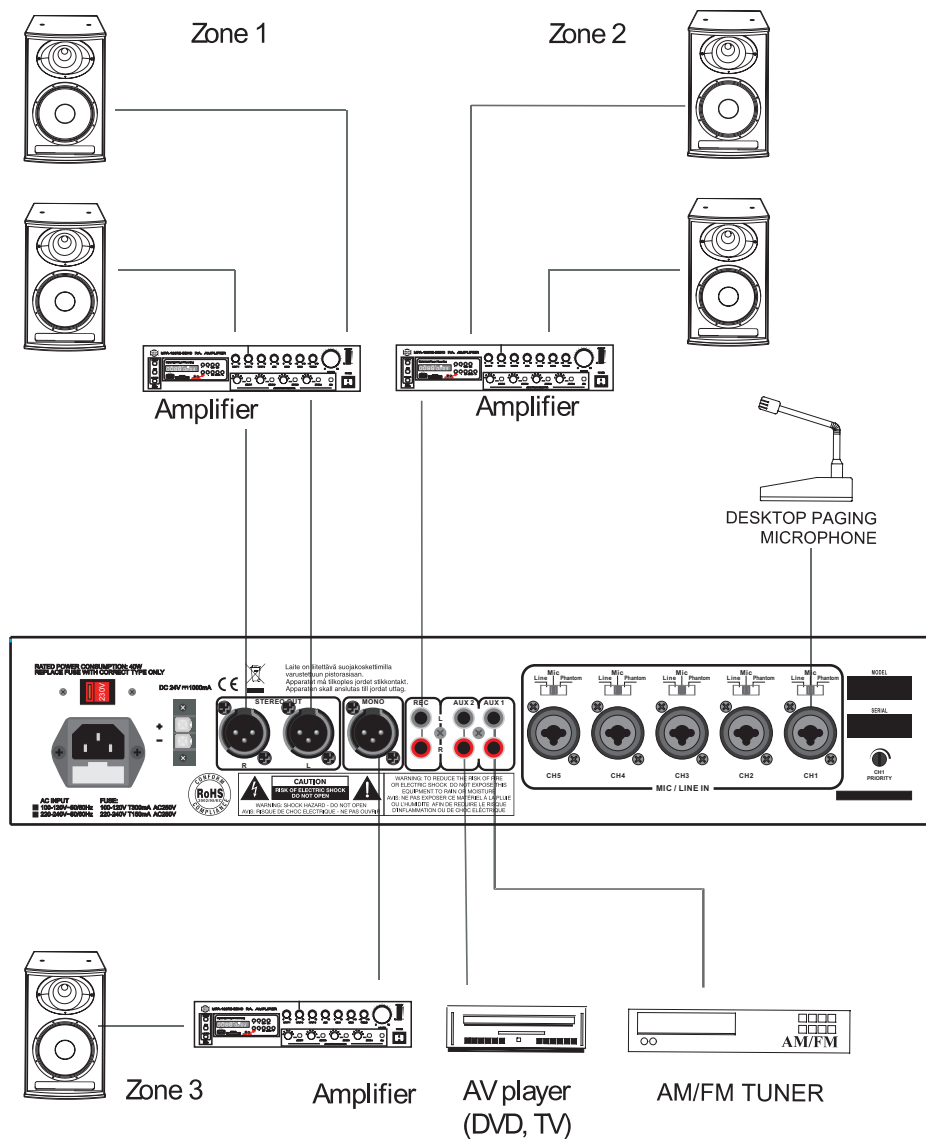
#### 9. AUX 2

Mini jack 3.5 mm input for pocket MP3 player

The front and the rear panel AUX 2 sockets are connected in parallel and cannot be used simultaneously.

### LIVE MUSIC



**BAR, HOTEL, RESTAURANT, SHOP**

**10.USB**

USB socket used to power an iPod player. It delivers 5V - 700mA.

There is no data transmission from this socket, only power supply.

**11.PHONES**

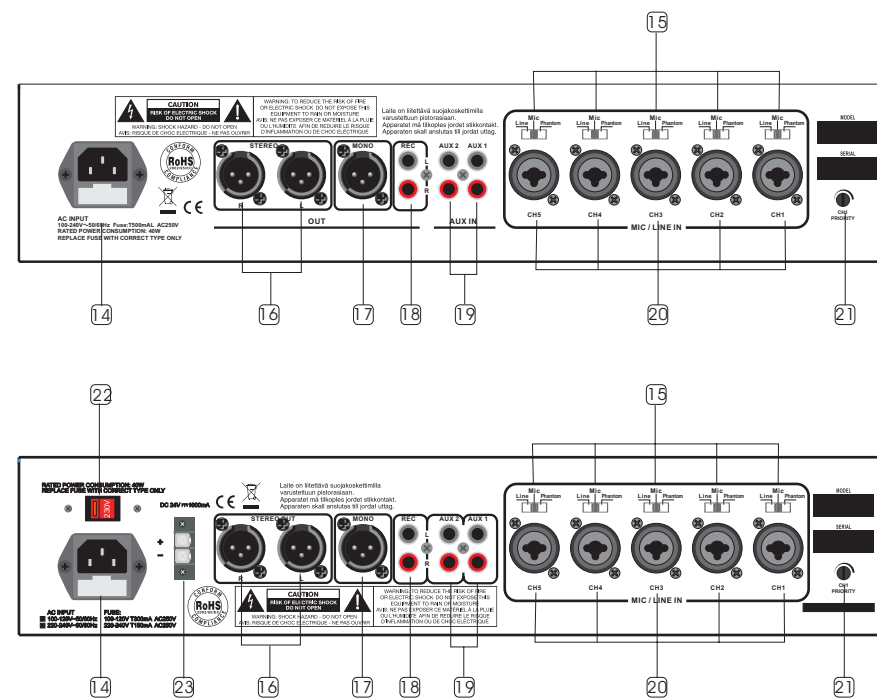
Output jack for headphone.

**12.ON/OFF**

On/Off switch. To operate with output levels at minimum

**13.ECHO EFFECT CONTROL**

This is the ECHO effect control over CH3-CH5. Its range goes from 0(off)to 10(max.).

**REAR PANEL**


#### 14.AC INPUT

Power cord socket including the power fuse.

Before connection, check the power supply compatibility Use similar type of fuse for replacement.

#### 15.LINE / MIC / Phantom

3 positions selector : - Line In: 1/4" TRS, balanced.

- Dynamic microphone: XLR, balanced.

- Electret microphone with + 15 V phantom power: XLR, balanced.

#### 16.STEREO OUT

Balanced XLR outputs.

#### 17.MONO OUT

Balanced XLR output.

#### 18.REC OUT

Unbalanced RCA stereo output. To be used with external processing devices or power amplifiers. There is no EQ and level adjustment on this output.

#### 19.AUX IN

Unbalanced RCA stereo input. To be used with sound sources like CD, DVD, MP3, etc. The front and the rear panel AUX 2 sockets are connected in parallel and cannot be used simultaneously.

#### 20.MIC / LINE IN

Balanced mic/line inputs equipped with combo XLR / 6.35 mm Jack sockets.

#### 21.CHI PRIORITY

The muting circuitry activates in the presence of signal from Mic 1. This potentiometer determines the mixing level of Mic or line input signals with signals of priority channels, adjusting it to minimum shall cut off all other inputs when signal is presence in priority channel (Mic 1). Whereas setting it to max shall allow free mix of all signals including priority input.

Some application shall not require this feature, such as in the hall of prayer, thereby to bypass the circuitry, adjust the level to the maximum.

#### 22.VOLTAGE SELECTOR

There are two kinds of voltage for selection. When the voltage is selected, the corresponding fuse shall also be changed with accurate rating and type.

#### 23.DC SOCKET

SPA-10 mixer pre-amplifier can also operate using 24V DC power supply. When both the AC and DC source is connected, it shall operate using AC main whereas the DC supply shall be only consumed whenever the former failed.

## APPLICATIONS

### CONFERENCE, PRESENTATION

