

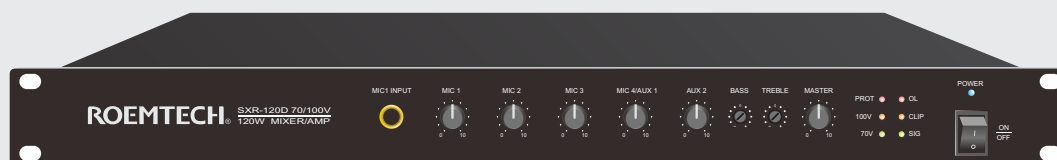
ROEMTECH®

SXR-120D 70/100V CLASS D AMPLIFIER



OPERATION MANUAL

SXR-120D 70/100V 120W 5Channel - MIXER/AMP



Please follow the instructions in this manual to obtain the optimum results from this unit. We also recommend that you keep this manual available for future reference.

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1. SAFETY PRECAUTIONS

- Be sure to read the instructions in this section carefully before use.
- Make sure to observe the instructions in this manual regarding the safety precautions. Ignoring the guidelines could severely reduce the life of the amplifier and possibly void the warranty.
- It is recommended that you keep this instruction manual available for future reference.

Safety Symbol and Message Conventions

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operating your product, please read this manual first and understand the safety symbols and messages so that you are thoroughly aware of the potential hazards.



WARNING

Indicates a potentially hazardous situation which, if mishandled, could result in death or serious personal injury.



CAUTION

Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury and/or property damage.



WARNING

When Installing the Unit

- Do not expose the unit to rain or an environment where it may be splashed by water or other liquids, as doing so may result in fire or electric shock.
- Use the unit only with the voltage specified on the unit. Using a voltage higher than that which is specified may result in fire or electric shock.
- Do not cut, kink, otherwise damage nor modify the power supply cord. In addition, avoid using the power cord in close proximity to heaters, and never place heavy objects -- including the unit itself -- on the power cord, as doing so may result in fire or electric shock.
- Be sure to replace the unit's terminal cover after connection completion. Because high voltage is applied to the speaker terminals, never touch these terminals to avoid electric shock.
- Be sure to ground the unit using a properly installed ground path to avoid electric shock. Never ground to a gas pipe, this is an explosion hazard.
- Avoid installing or mounting the unit in unstable locations, such as a weak shelf or a slanted surface. Doing so may result in the unit falling, causing personal injury and/or property damage.

When the Unit is in Use

- Should the following irregularity be found during use, immediately switch off the power, disconnect the power supply plug from the AC outlet and contact your nearest ROEMTECH dealer. Make no further attempt to operate the unit in this condition as this may cause fire or electric shock.
 - If you detect smoke or a strange smell coming from the unit.
 - If water or any metallic object gets into the unit
 - If the unit falls, or the unit case breaks
 - If the power supply cord is damaged (exposure of the core, cracking or fraying, etc.)
 - If it is malfunctioning (no tone sounds.)
- To prevent a fire or electric shock, never open or remove the unit case as there are high voltage components inside the unit. Refer all servicing to your nearest ROEMTECH dealer.
- Do not place cups, bowls, or other containers of liquid or metallic objects on top of the unit. If they accidentally spill into the unit, this may cause a fire or electric shock.
- Do not insert or drop metallic objects or flammable materials in the ventilation slots of the unit's cover, as this may result in fire or electric shock.

CAUTION

When Installing the Unit

- Never plug in or remove the power supply plug with wet hands, as doing so may cause electric shock.
- When unplugging the power supply cord, be sure to grasp the power supply plug; never pull on the cord itself. Operating the unit with a damaged power supply cord may cause a fire or electric shock.
- When moving the unit, be sure to remove its power supply cord from the wall outlet. Moving the unit with the power cord connected to the outlet may cause damage to the power cord, resulting in fire or electric shock. When unplugging the power cord, be sure to grasp the plug itself rather than pulling on the cord.
- Do not block the ventilation slots in the unit's cover. Doing so may cause heat to build up inside the unit, shortening the life of the unit.
- Avoid installing the unit in locations that may have the following environments; high humidity or steam, high dust, direct sunlight, near heaters, smoke or steam. Doing so may void the warranty, shorten the product life or result in electrical shock or fire.

When the Unit is in Use

- Do not place heavy objects on the unit as this may cause damage to the unit and inhibit the convective cooling. There should be adequate space all around the unit so that it may remain cool while in operation.
- Make sure that the volume control is set to minimum position before the power is switched on. This unit is capable of producing extreme sound pressure and may cause hearing damage.
- Do not operate the unit for an extended period of time when the audio is distorting or the "clip" light on the front panel is emitting. Over time, this could damage the unit and create excess heat.
- Contact your ROEMTECH dealer as to the proper way to clean this unit. If dust is allowed to accumulate in and around it, this presents a fire hazard and may also cause damage to the amplifier.
- Inspect the power cord for damage periodically and keep it free from debris, dust and away from sharp metal objects that could damage it. Be certain the plug is fully inserted into the wall outlet.
- If the unit is to be unused for long periods of time, it should be powered down and unplugged.

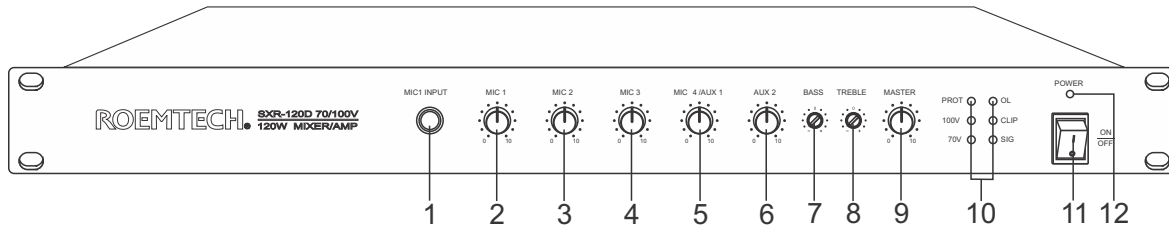
CAUTION: When using any 70V / 100V amplifier for distributed audio, bass settings should not be set to higher levels. This is because a phenomenon known as "transformer saturation" occurs in some speaker transformers at frequencies typically lower than 70Hz. Once saturation begins, the speaker's primary transformer coil causes an exceptionally high load on the entire system. This can lead to the destruction of the speaker transformer (a possible fire hazard) and/or an overload condition for the amplifier.

2. FEATURES

1. Rated Power: 120W RMS.
2. 100V, 70V speaker outputs.
3. Six total inputs (five mixable).
4. Two line level inputs.
5. One line level emergency full override/pass-through input.
6. Four mic level inputs.
7. EMC input has priority over all inputs.
8. Override feature mutes all except EMC inputs when signal is detected on MIC 1.
9. Treble and Bass adjustments.
10. Extensive thermal, short circuit, overload and power fluctuation protection circuitry.
11. Three year ROEMTECH warranty.

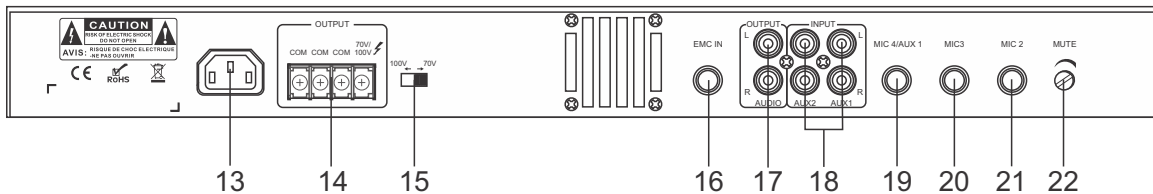
3. FEATURES ILLUSTRATED

3.1 FRONT PANEL



1. MIC1 unbalanced input jack
2. MIC1 volume control knob
3. MIC2 volume control knob
4. MIC3 volume control knob
5. MIC4 /AUX1 volume control knob
6. AUX2 volume control knob
7. BASS adjustment
8. TREBLE adjustment
9. Master volume control
10. PROT/100V/70V/OL/CLIP/SIG status indicators
11. Power switch
12. Power indicator

3.2 REAR PANEL

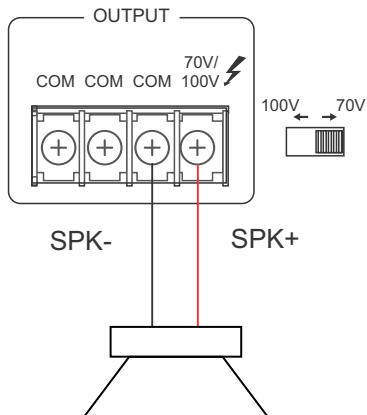


13. AC power input
14. 100V/70V output terminal
15. 100V/70V speaker output switch
16. Emergency input jack (line level)
17. Dual line output (RCA)
18. Two channel AUX RCA input
19. MIC4/AUX1 input interface (passive mix)
20. MIC3 input jack
21. MIC2 input jack
22. MUTE override level

4. OPERATION

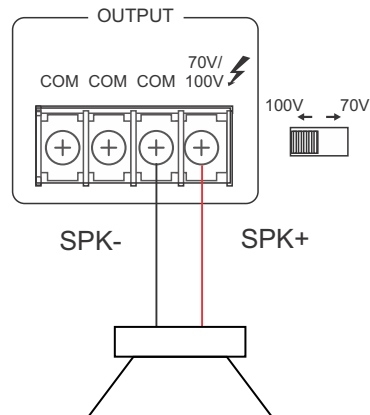
1. Connect the speakers:

① When the 100V/70V selector is switched to the 70V position, as shown below:



Maximum output voltage: 70V

② When the 100V and 70V selector switch to 100V position, as shown below:



Maximum output voltage: 100V

Note:

1. Before connecting the speakers, please make sure that the amplifier is powered off. If the amplifier is powered on during the wiring and installation process, electric shock is likely via the speaker connections.
2. Make sure there are no short circuits along the speaker connections before power up of the amplifier.
3. During the installation of speakers, please make sure that the sum of the speaker loads does not exceed the 120 watt rating of the amplifier.

2. Connect external devices:

- I. Please ensure that the amplifier and all equipment being connected are powered off.
- II. Make sure that all of the connections are impedance and level matched with the amp inputs.

3. Connect the power cord and turn on the amplifier:

- I. Please make sure that the power switch of the amplifier and its connected equipment are turned off (in the OFF position).
- II. Turn the master volume knob all the way down.
- III. Connect the supplied power line to the AC IN interface.
- IV. Plug the power cord in.
- V. Turn on the connected equipments (computer, etc.) then turn on the amplifier and adjust levels.

4. OPERATION

4. Plugging in microphones:

- I. Turn the volume all the way down, plug in the microphone and microphone cable to the amplifier.
- II. Adjust the volume to approximately 30% of max.
- III. Speak into the microphone and gradually turn up the volume until you reach the desired level.

5. Shutting down the system:

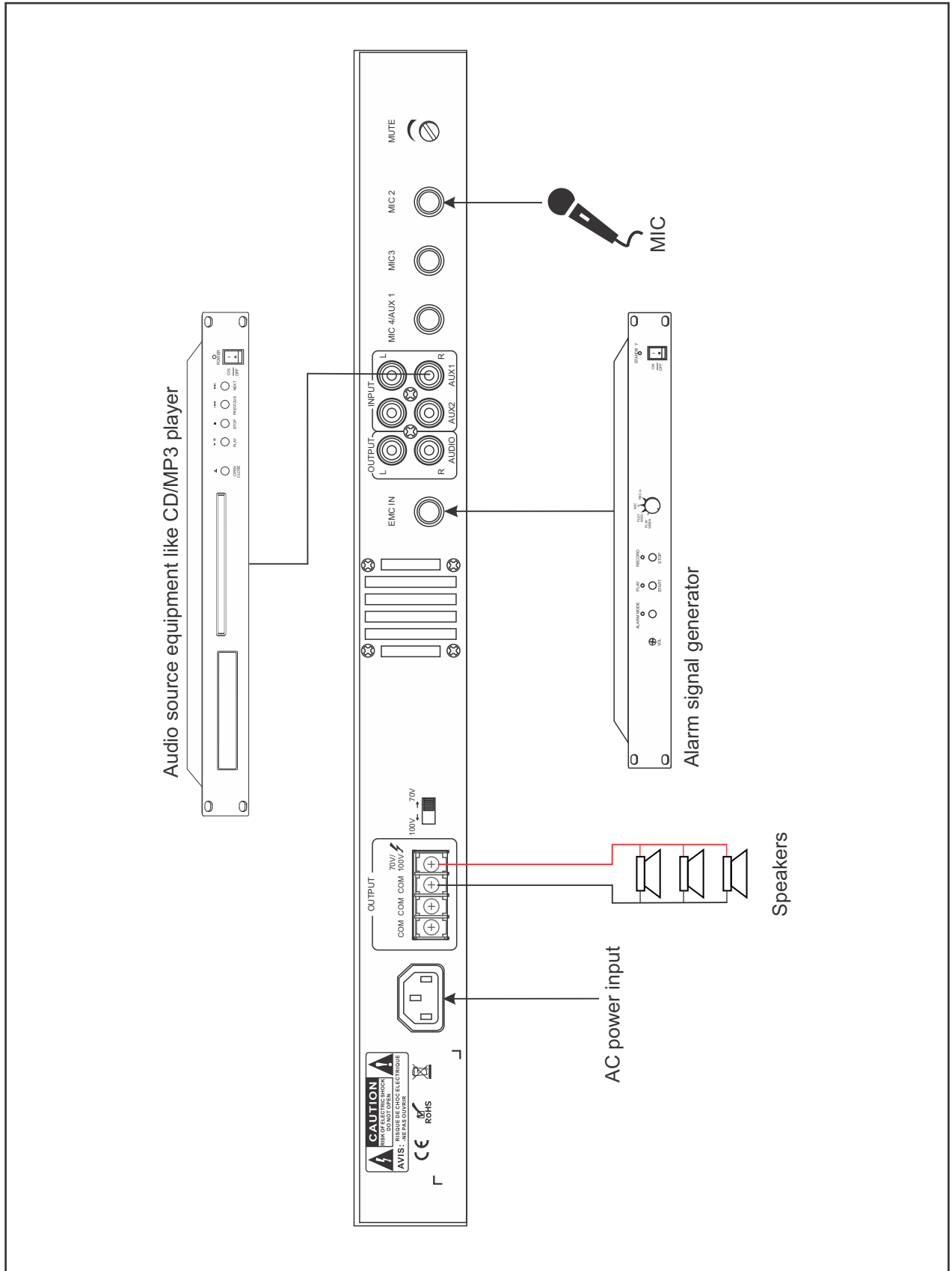
- I. Turn the master volume knob all the way down.
- II. Turn off the power switch of the amplifier. Afterwards, shutdown the connected audio sources.

5. TROUBLESHOOTING

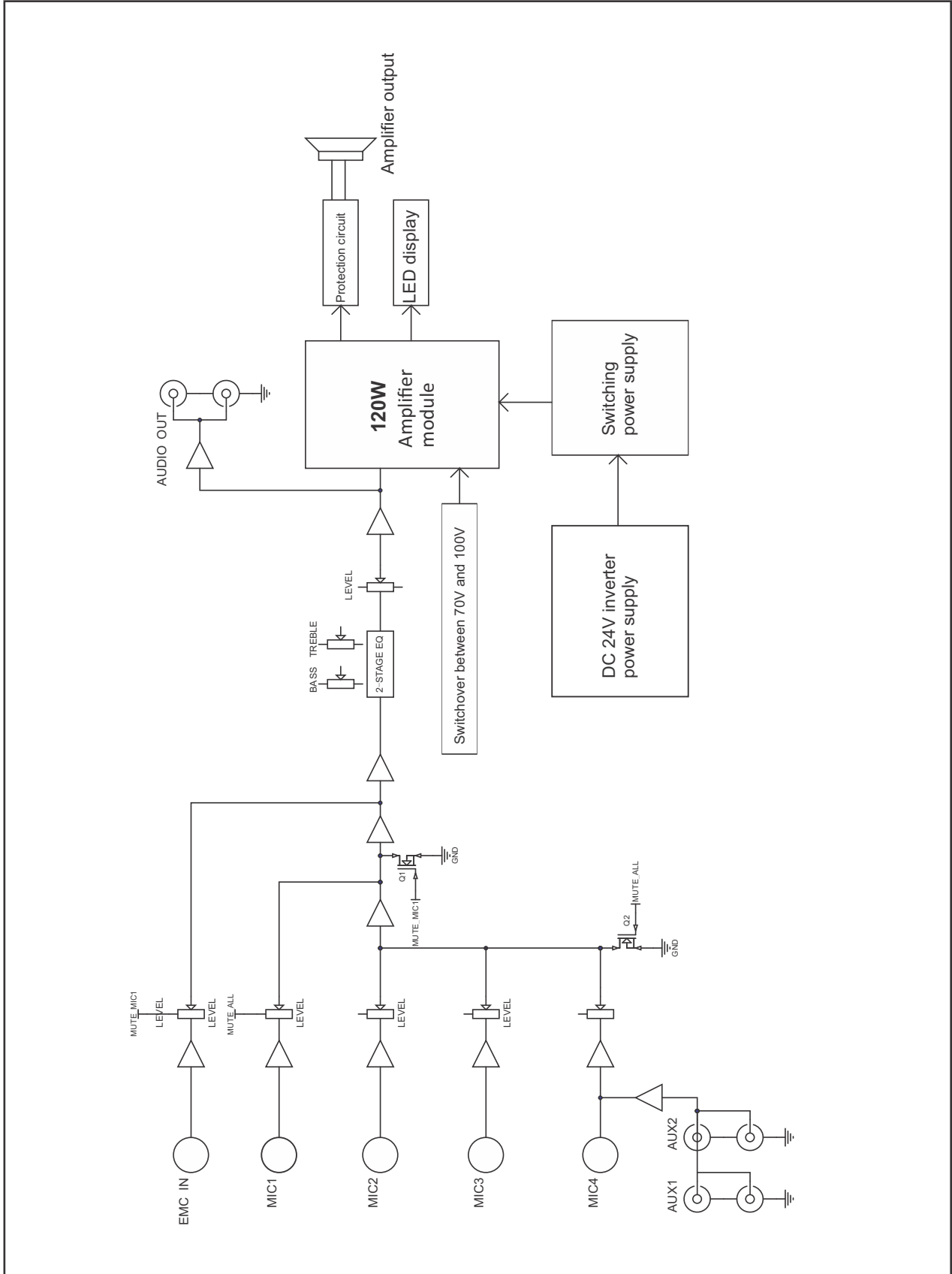
Symptom	Likely Cause
1. No power, no lights are lit on the amp.	<ol style="list-style-type: none">1. Power cord not fully connected2. Power switch on front panel is not on3. Check fuse, it is possibly blown due to speaker short
2. Inputs are connected, power light is on but there is no sound.	<ol style="list-style-type: none">1. Make sure source volume is up.2. Make sure mixer volume is up.3. Make sure master volume is up.4. Make sure there is no speaker short.5. Make sure speaker wires are all connected.
3. The audio suddenly goes quiet during normal operation.	<ol style="list-style-type: none">1. Make sure temperature "PROT" light is not on due to overheating.2. Check speaker wire continuity with a meter.
4. Low sound	<ol style="list-style-type: none">1. Improper taps are set on the speakers.2. Improper speaker voltage switch position.3. Source volume, or mixer volume is too low.
5. Sound is distorted	<ol style="list-style-type: none">1. Source volume is too high.2. Mixer volume is too high.3. Check to see if the "CLIP" light is on - it shouldn't be.

6. APPLICATIONS

REAR PANEL CONNECTIONS



7. BLOCK DIAGRAM

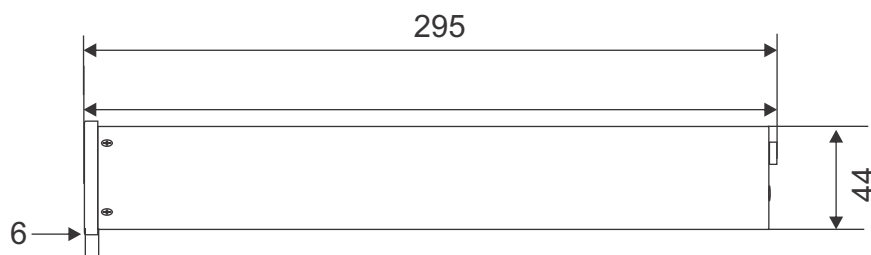
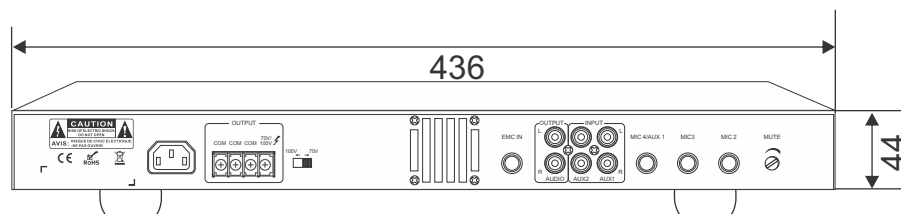
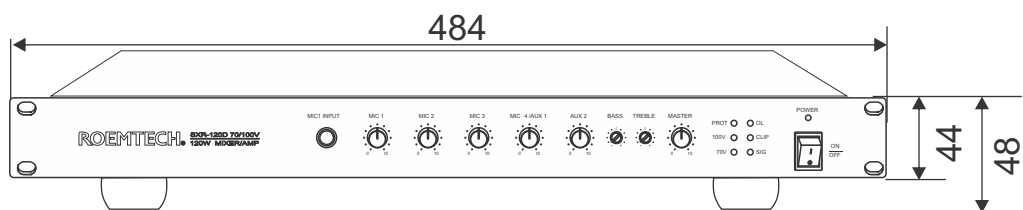


8. SPECIFICATIONS

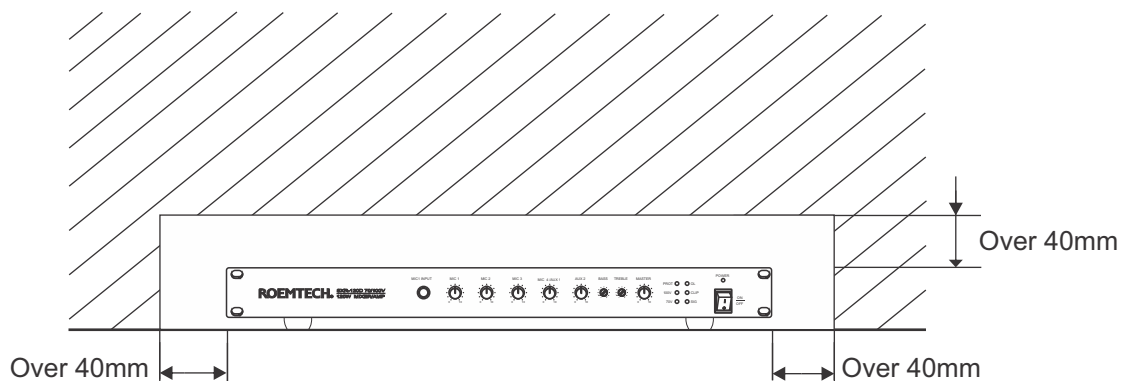
Model	SXR-120D
Rated Power	120W
Output Level	70V/100V
Input Sensitivity	MIC:5mV \pm 1mV AUX: 350mV \pm 20mV EMC: 775mV \pm 40mV
Pre-output	AUDIO OUT: 1V \pm 50mV/100 Ω
Mic Frequency Resp.	Low frequency : \pm 10dB at 100Hz; High frequency : \pm 10dB at 10KHz
Music Frequency Resp.	Low frequency : \pm 10dB at 100Hz; High frequency : \pm 10dB at 10KHz
Frequency Response	AUDIO OUT : 20Hz \sim 20KHz (\pm 3dB) MIC: 200Hz \sim 16KHz (\pm 3dB)
SNR	MIC: \geq 65dB; Music: \geq 70dB
THD	THD+N \leq 0.1%
LED Indicators	PROT, 70V, 100V, OL, CLIP, SIG & POWER
Short-circuit Mode	Short-circuit, no voltage
Cooling Mode	Air cooling
Protection Mode	Overheat/Short-circuit
Operation Temperature	+5 $^{\circ}$ C \sim +40 $^{\circ}$ C
Storage Temperature	-20 $^{\circ}$ C \sim +70 $^{\circ}$ C
Relative Humidity	<95%(No condensation)
Voltage	<input type="checkbox"/> \sim 110V 50Hz <input type="checkbox"/> \sim 110V 60Hz <input type="checkbox"/> \sim 120V 50Hz <input type="checkbox"/> \sim 120V 60Hz
Power Consumption	200W
Weight	3.6Kg
Dimension	484 \times 295 \times 44mm

9. DIMENSIONAL DIAGRAM

UNIT:mm



Keep all sides over 4 cm away from objects that may obstruct air flow to prevent the unit's internal temperature rise.



PUBLIC ADDRESS AMPLIFIER SXR-120D MIXER/AMP



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