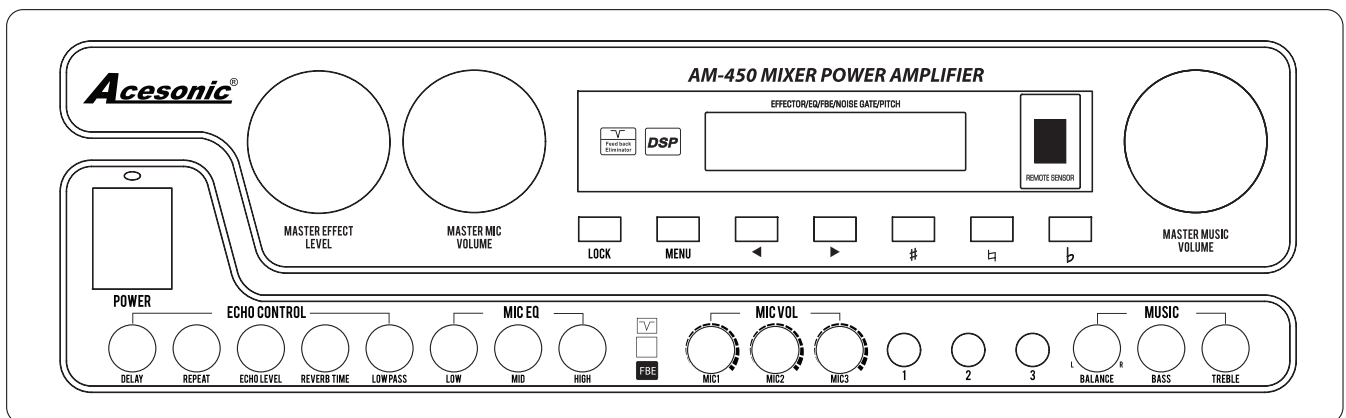


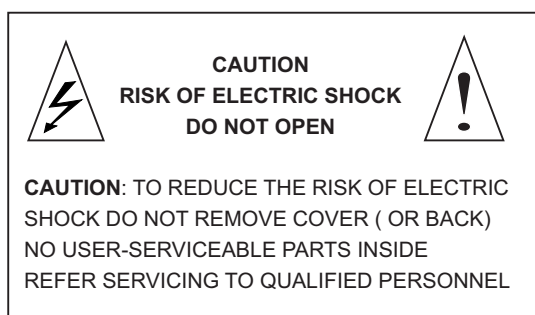
# Acesonic®

## AM-450 MIXER POWER AMPLIFIER



## Owner's Manual

## IMPORTANT SAFETY INSTRUCTION



The lightning flash with arrowhead symbol within an equilateral triangle 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.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operation and maintenance (servicing) instruction in the literature accompanying the appliance.

### Please see below basic protection proceeding before using:

1. Please read all the safety instruction before using the product.
2. This product must be earthed. If it should be malfunction or break down, grounding provides a path of least resistance for electric current to reduce risk of electric shock.

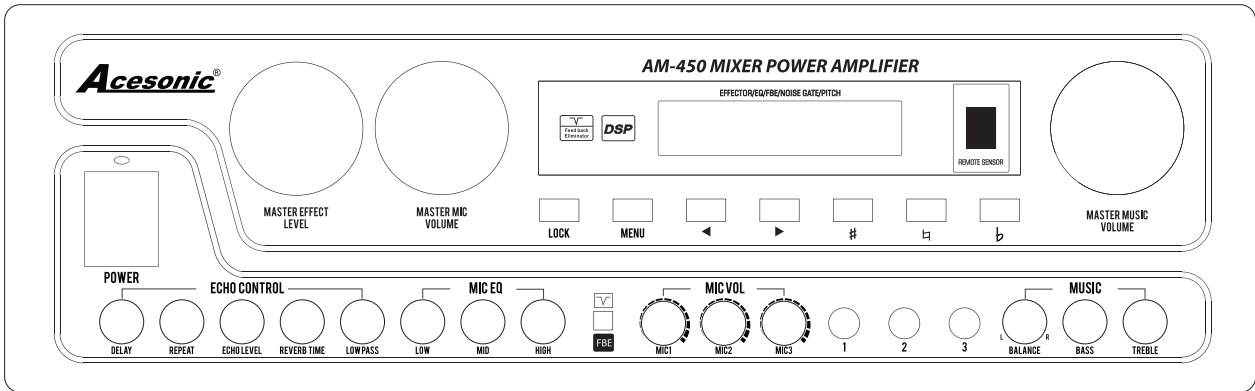
This product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and earthed in accordance with all local codes and ordinance.

**DANGER-** Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product - if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

3. To reduce the risk of injury, close supervision is necessary when the product is used near children.
4. Do not use this product near water-for example, near a bathtub, washbowl, kitchen sink, in wet basement or near a swimming pool or the lake.
5. This product may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
6. This product should be located so that its location or position does not interfere with its proper ventilation.
7. This product should be located away from heat sources such as radiators, heat registers or other products that produce heat.
8. The product should be connected to a power supply only of the type described on the operation instructions or as marked on the product.
9. This product may be equipped with a polarized line plug (one blade wider than the other). This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician to replace your obsolete outlet. Do not defeat the safety purpose of the plug.
10. The power-supply cord of the product should be unplugged from the outlet when left unused for a long period of time.  
When unplugging the power-supply cord, do not pull on the cord, but grasp it by the plug.
11. Care should be taken so that object do not fall and liquid are not spilled into the enclosure through opening.
12. The product should be serviced by qualified service personnel when:
  - A. The power-supply cord or the plug has been damaged; or
  - B. Objects have been fallen, or liquid has been spilled into the product; or
  - C. The product has been exposed to rain; or
  - D. The product does not appear to operate normally or exhibits a marked change in performance; or
  - E. The product has been dropped or the enclosure damaged..
13. Do not attempt to service the product beyond that described in the user-maintenance instructions.  
All other servicing should be referred to qualified service personnel.
14. **WARNING-** Do not place objects on the product's power cord or place it in a position where anyone could trip over, walk on or roll anything over it. Do not allow the product to rest on or to be installed over power cords of any type. Improper installations of this type create the possibility of fire hazard and/or personal injury.

**SAVE THESE INSTRUCTIONS**

# Product Features

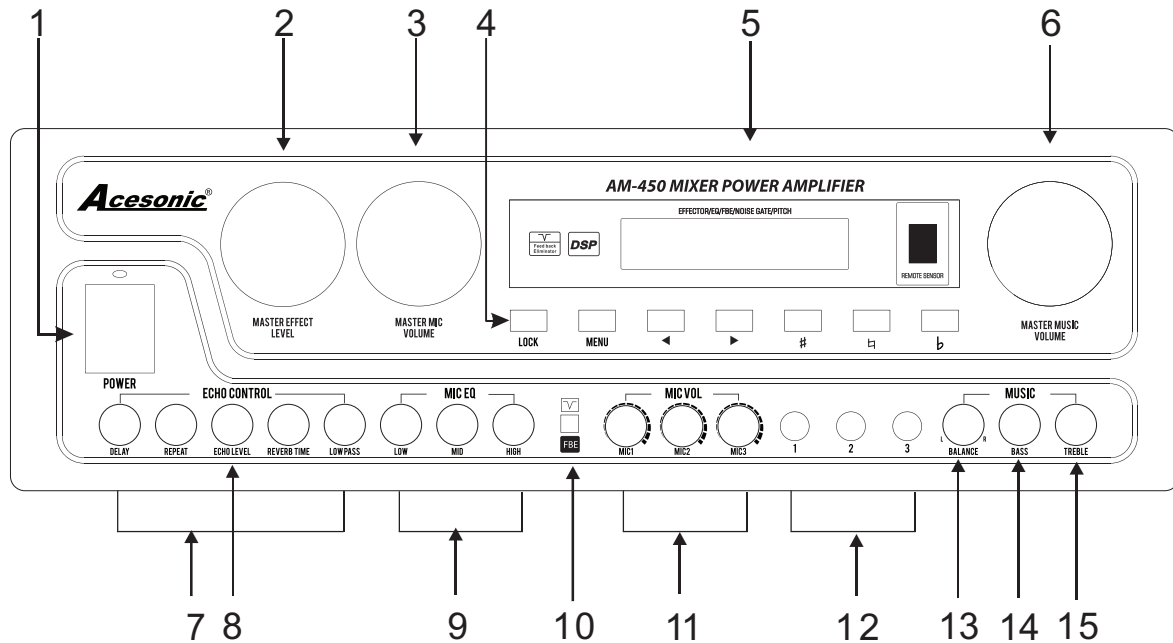


- This product adopts 24-bit high performance DSP and AD/DA, 48kHz sampling frequency of professional digital karaoke OK amplifier.
- High-quality professional vocal effects (reverb, ECHO, reverb + echo).
- Automatic digital feedback Eliminator.
- 7 stereo digital keying the modulation.
- Automatic priority 4 sets of audio and video inputs, background music (BGM).
- Digital potentiometer adjusting parameters, operation more convenient.
- Song VOD computer interfaces, wireless infrared remote control.
- Paragraph 4 input/output digital electric meter.
- Extremely low body noise.
- 160X32 white light blue dot matrix LCD in Chinese, more intuitive.
- Output power

RMS 2×300W (8Ω) RMS 2×500W (4Ω)

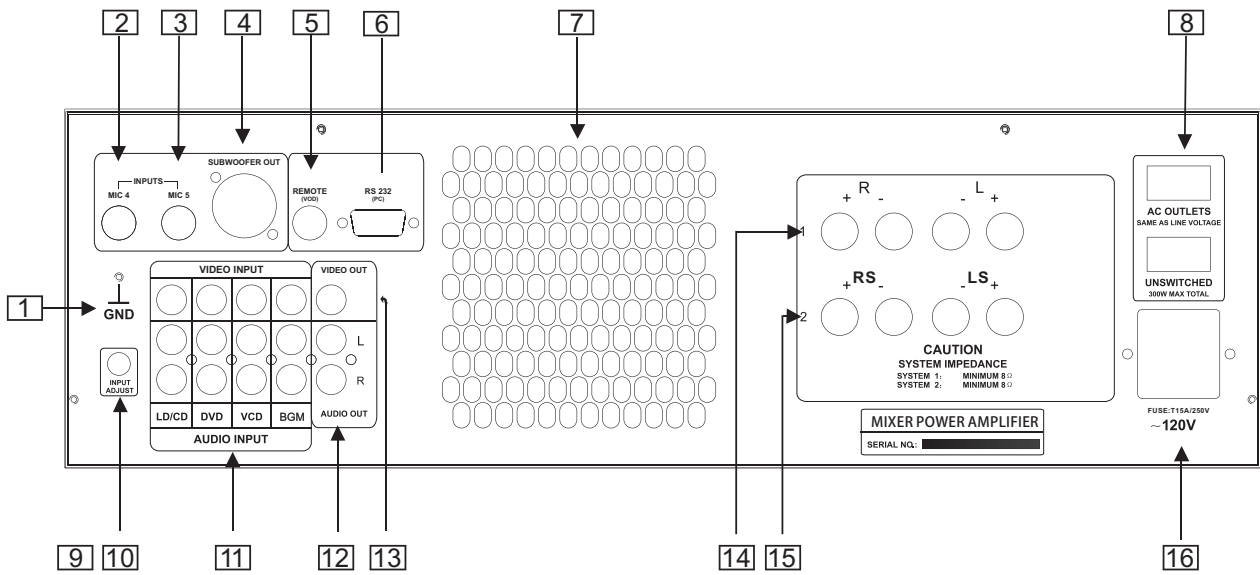
SR、SL 100W (8Ω)

## Front Panel Review



1. Power Switch.
2. Mic effect level volume (EFFECT MASTER) knob.
3. Microphone master volume (MIC MASTER) knob.
4. Control keys. From left to right: "LOCK" lock key, "MENU" menu button, "◀" parameter decrease key, "▶" parameter increase key, "#" music rising tone key tone sandhi, "⏪" reset button, "b" flat button.
5. LCD: 160x32 graphic Chinese display LCD used to display various parameters-adjustment information.
6. Master volume of music (MUSIC MASTER) knob.
7. Digital potentiometer adjust effect parameters. "DELAY" echo time "REPEAT" echo feedback, "ECHO/REV" effect mix, "REV TIME" reverberation time, "LOWPASS" reverberation and low-pass filters.
8. Digital potentiometer adjustment effect mode.
9. Microphone balanced digital potentiometer. "LOW" frequency, "MID" low, "HIGH" high.
10. Switch the microphone feedback inhibition.
11. 3-mic input level adjust potentiometer.
12. 3-mic input jack.
13. The musical output balance (BALANCE) the digital potentiometer.
14. Music bass (BASS) digital potentiometer.
15. Music treble (TREBLE) digital potentiometer.

# Rear Panel Review



1. Machine safety earthing terminal.
2. Microphone, auxiliary input jack.
3. Microphone, auxiliary input jack.
4. Subwoofer output.
5. Line remote control input interface.
6. RS232 real time control of Kara OK software interface.
7. Cooling fan.
8. Direct output 120V power outlets.
9. Video input terminals.
10. Audio input level adjustment knob.
11. 4-channel audio input terminal (LD/CD,DVD,VCD,BGM).
12. The mixed audio output terminals.
13. Video output terminal.
14. The main left and right speakers out.
15. The surround channels left and right channel speaker output.
16. Fuse specification: T15A/250V.

# Operation Indirection

## 1. Music

1-1 The audio signal (DVD,VCD) with 4 channel audio input (LD/CD,DVD,VCD, BGM)

Terminal in any way, and then adjust the audio input potentiometer to the right size. Then turn the music master volume (MUSIC MASTER) dial, adjust the music output volume size, entry shown in figure as below.

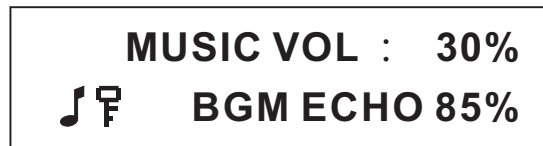


Figure I

1-2 Music by adjusting the treble (TREBLE) and bass (BASS). Can modify the music part of the frequency response curve. Adjusting range of -12dB~+12dB, steps of 1dB. Treble default upgrade frequency is 4.00kHz, bass default upgrade frequency is 200Hz.

1-3 Adjusting the output balance (BALANCE). Counterclockwise until the LCD shows "r 0%", represents the right channel output to a minimum. Rotate it clockwise until the LCD shows "10%", represents the left channel output to a minimum. "LR 100%" it means that the left and right channel outputs of the same. As shown in Figure II.



Figure II

1-4 The music in stereo tone adjustment. Using "#", "b", "q" key to music rising, will adjust tone change and reset operations. As shown in Figure II.

## 2. Microphone Part

2-1 The microphone connected to the input jack, and adjust the corresponding input potentiometer knob to the appropriate location. Back turning the microphone master volume (MIC MASTER) dials, adjust the microphone output volume size. Volume rotate effect (EFFECT MASTER) dials, adjust effects volume size. As shown in Figure III.

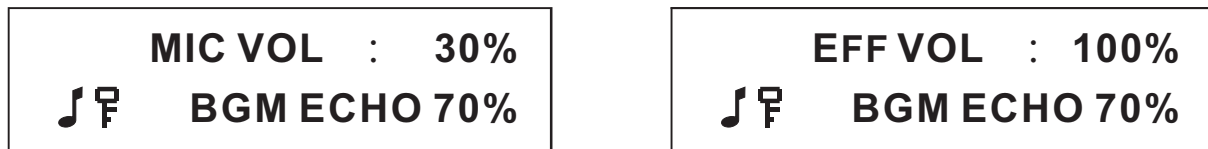
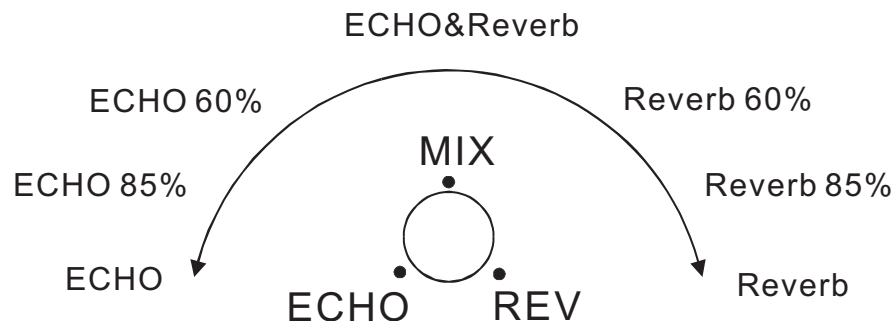


Figure III

2-2 Choose a vocal effect. Rotation effect mode scale digital potentiometers, increase the ratio of the echo when rotating counterclockwise, LCD screen will show " ECHO 60% "... " ECHO 85% " up to " Pure ECHO " effect mode, but at this time of reverberation effect ratio is zero. When the clockwise to increase the ratio of reverberation, LCD screen will show " Reverb 60% "... " Reverb 85% " up to " Pure Reverb " effect mode, which echoes the proportion effect is zero. When equal proportion of ECHO and reverb, and LCD screen will show "echo reverb" model. As shown in Figure three.



2-3 Adjust the effect parameters. Including the echo time (DELAY), ECHO depth (REPEAT), reverberation time (REV TIME), reverberation and low-pass (LOWPASS) parameters. Spin echo time respectively, ECHO depth echo effect in the effect parameter adjustment range, respectively (0~1200) Ms, depth (0~100). Rotate the reverberation time, pre-low pass effect reverb reverb effect parameters in its adjustment range respectively (0.0~6.0) seconds and low-pass (8.0~16.0) kHz. As shown in figure IV.

Note: When the effects mode is "pure echo" when the LCD screen displays "echoes", reverberation time, reverb low pass parameter adjustment failure because the current element of reverberation effect is not. Similarly, effects mode is "pure reverb" when the LCD screen displays "Reverb", ECHO, ECHO depth parameters fail, because when the results did not include echo components. In addition to "pure echo" and "Reverb" model and the rest mixed-mode adjustable reverberation and echo the arguments.

**ECHO TIME: 170mS**  
♪🎧 **BGM ECHO 70%**

**REV TIME : 2.4S**  
♪🎧 **BGM ECHO 70%**

**ECHO DEPTH: 98%**  
♪🎧 **BGM ECHO 70%**

**REV LPF : 8.0KHz**  
♪🎧 **BGM ECHO 70%**

Figure IV

3-4 Microphones balance adjustment. Microphone part of balanced, mainly pertaining to singing voices sound by changing the low, low, high, high frequency response curve, beautiful singing voice, strong performance. Panel to adjust the low frequency, low frequency and high frequency, PC software can adjust the low frequency, low frequency and high frequency, high frequency. Paragraphs balanced adjustment range, respectively (-9dB~+9dB), in which low frequency the default upgrade frequency is 100Hz, improvement of low frequency in the default frequency is 400Hz, promotion of high frequencies in the default frequency is 1.00kHz, high frequency default upgrade frequency is 4.00kHz. As shown in Figure V.

**L\_EQ GAIN : 7dB**  
♪🎧 **BGM ECHO 70%**

**M\_EQ GAIN : 9dB**  
♪🎧 **BGM ECHO 70%**

**H\_EQ GAIN : 9dB**  
♪🎧 **BGM ECHO 70%**

Figure V

3-5 Microphone automatic feedback suppressor. When singers sing handheld microphone for the speaker, and often a whistle, which often makes the listener feel agitated, serious damage when speakers. At this point you can press with a mechanical lock feedback inhibition of the function keys, howling will be automatically eliminated, effectively protect the speaker. When key lock when the play opened, microphone feedback inhibition of function is cancelled. As shown in Figure VI.

**MIC VOL : 30%**  
🔒♪🎧 **BGM ECHO 70%**

**MIC VOL : 30%**  
♪🎧 **BGM ECHO 70%**

Feedback Control Open

Feedback Control Close

Figure VI



### 3.Menu

3-1 This function contains some specifically Kara OK settings used on the project. Press the menu key to switch the menu, use keys "◀" and "▶" adjust the parameters of the current menu. Followed by operation, and switch between the different menus is shown below.

**SUB VOL : 3%**  
♪ F BGM ECHO 70%

**SUB CUTOFF:300Hz**  
♪ F BGM ECHO 70%

**SING SUB : 20%**  
♪ F BGM ECHO 70%

**DISC SUB : 3%**  
♪ F BGM ECHO 70%

3-2 The subwoofer has two different modes: The mode of singing and dance (Disco) mode. Under the two menus, setting different volume. While supporting "manual" switch and the "automatic" option.

**SING/DISC MANUAL**  
♪ F BGM ECHO 70%

Example: Singing bass 35%, dance (Disco) subwoofer is 25%.

In the "automatic" option, the system according to the there is no microphone signal, the test, switch to a different mode. When singers sing (the microphone signal), the system automatically converts the volume of the subwoofer to the preset "singing bass" sound level (35%). When the singers close the microphone (the microphone signal), the system automatically converts the volume of the subwoofer to "dance bass" sound level (25%). This setting is mainly used for application in Kara OK singing and dancing conditions, automatic switching of the subwoofer.

In the "manual" option, subwoofers must be part of the lock, system lock, press the "SUBWOOFER" button, manually switch the "singing" and "dance" when the subwoofer volume.

**MIC SENSITIVE: 5**  
♪ F BGM ECHO 70%

3-3 Bass under the automatic mode switch, set the detection sensitivity of the microphone input signal.

Music noise gate settings: In menu adjust music noise gate threshold adjusting range -90dB~-24dB. This argument can effectively eliminate some minor noise in the system, larger threshold value, eliminate noise, the more, of course, also includes some small signals, the default value is -60dB.

**MUS N\_GATE:-60dB**  
♪🔊 **BGM ECHO 70%**

**MUS DELAY: 1.0mS**  
♪🔊 **BGM ECHO 70%**

Music delay settings: Menu adjust music delay value adjusted in the range of 0mS~21mS. Compensation music phase.

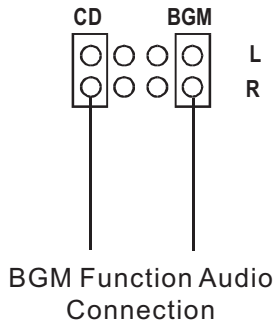
Music presets: In menu set the music part of the boot volume preset values. This parameter is set to work with Kara OK volume used in engineering, when the system boots up, always set the music volume size in the preset values, without manual intervention each adjustment, convenient tuner work, minimum if you want every time you turn the volume of the music, simply set the value to 0%.

**MUS INIVOL: 30%**  
♪🔊 **BGM ECHO 70%**

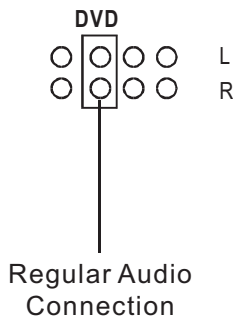
**MUS MAXVOL:100%**  
♪🔊 **BGM ECHO 70%**

Music volume limit: In its menu sets the music volume limits. Music allows you to adjust the maximum value of the parameter. Example: when this parameter is set to 75%, the music volume allows you to adjust the upper limit value for 75%, when you use the dial or remote control to adjust the music volume, maximum output volume is 75%. This parameter to 50%~100%. By setting this parameter, so the output in a certain range, so as to effectively protect the amplifier and speaker.

The music signal input selection: In the menu set the music signal input. The argument there were 8 options in turn, LD/CD,DVD,VCD BGM,B6,B9,B12,B15. B6,B9,V12,B15 for the priority switching of background music choices. Steps are as follows: the background music (BGM) connected to the audio inputs of the amplifier BGM input jack, and then in the other three-way either a set of stereo audio input, Kara OK set of audio signal, connection is complete!



Set priority switch automatic background music mode, enter the audio sources firstly select BGM enter when singing sound playback, the system will automatically switch to the road (left) as shown. After when the singing stops playing the sound source, BGM switching system based on preset time, then switch automatically to the BGM sound source. Example: when CD audio broadcast left after the system wait for 6 seconds, if the CD no audio signal input, then automatically switches to the BGM. B9,B12,B15 is representing automatically switches to wait 9 seconds, 12 seconds, 15 seconds.



Set a fixed audio source mode. First select and gain access to all the way to sing the sound sources such as (left) as shown. And then under this menu to set the input line, for example: VCD audio source in the left figure, the system will reset the input source between VCD way, regardless of whether the other input channels input signal. It is always fixed on the set to enter the road.

Microphone noise six settings: Under its menu to adjust the microphone noise gate's threshold value adjusted in the range of 90DB~24DB. This argument can effectively eliminate noise in the microphone, larger threshold to eliminate noise, the more, of course, also includes some small signal (the singer sang softly), the default value is -60DB.



Microphone volume presets: In menu setting the microphone part of the boot volume preset values. This parameter is set to work with Kara OK volume used in engineering, when the system boots up, microphone volume size is always set at the preset value. If you want each time you power on the receiver's volume to a minimum, you only need to set this value to 0%, as shown left-down.

**MIC INIVOL: 30%**  
♪🔊 **BGM ECHO 70%**

**MIC MAXVOL: 100%**  
♪🔊 **BGM ECHO 70%**

Microphone volume limit: Set the microphone volume limit under its menus. This parameter is the maximum microphone allows you to adjust the ... Example: when this parameter is set to 80%, then the microphone volume allows you to adjust the upper limit value for 80% when using dial or remote control to adjust the microphone volume, maximum output volume is 80%. Range for this parameter is 50%-100%. By setting this parameter, so the output in a certain range, so as to effectively protect the power amplifier's speakers, as shown right-up.

Effect preset volume and qualified: In the menu under settings effect the size of boot volume, and the maximum adjustable value.

**EFF INIVOL: 30%**  
♪🔊 **BGM ECHO 70%**

**EFF MAXVOL: 100%**  
♪🔊 **BGM ECHO 70%**

Microphone high-throughput: Filtering out the low frequency signal of the microphone signal.

**MIC HPF OFF**  
♪🔊 **BGM ECHO 70%**

Reset the volume: To control the volume of the microphone signal to reset the output of the machine the size range -30dB-0dB.

**CENTER VOL-10dB**  
♪🔊 **BGM ECHO 70%**

Reset the presets, and the volume limit: Set the central channel of the boot volume and the maximum adjustable value.

**CNT INIVOL-10 dB**  
♪🔊 **BGM ECHO 70%**

**CNT MAXVOL- 0 dB**  
♪🔊 **BGM ECHO 70%**

Phase and surround microphone volume: Set the volume of the microphone signal output from the surround channels and phase. Surround microphone volume ranges from -30DB-0DB.

**SUB MICVOL:-10**  
♪ ♪ BGM ECHO 70%

**SUB MIC PHASE:-**  
♪ ♪ BGM ECHO 70%

Surround microphones balance: Set around the microphone volume the relative volume of output from the surround left and right channels.

**S.MICBAL:LR 100%**  
♪ ♪ BGM ECHO 70%

Surround effect sound and direct sound: Set the microphone input signal from the road out of the direct sound and effect sound relative to the volume size.

**SUB DIRECT: 60%**  
♪ ♪ BGM ECHO 70%

**SUB EFFECT: 60%**  
♪ ♪ BGM ECHO 70%

Surround the music volume and phase: Set the music volume and phase of the signal input from the channel. Surround music volume ranges from -30DB-0DB.

**SUB MUSVOL: -10**  
♪ ♪ BGM ECHO 70%

**SUB MUS PHASE : -**  
♪ ♪ BGM ECHO 70%

Surround music balanced: Set up around the music signal from around the relative volume of the left and right channel inputs, as shown left-down.

**S.MUSBAL : LR 100%**  
♪ ♪ BGM ECHO 70%

**REMOTE MODE: PreS**  
♪ ♪ BGM ECHO 70%

Remote-control mode: Under the menu set remote control, calling the effects of programs, 5 mode factory setting 10 stored with the user program, as shown right-up.

Temperature monitoring: Monitor display system in its menu the size of the temperature value of parameter is not in this menu allows you to adjust.

Remote working: In the menu under monitor display is working properly, is not allows you to adjust the parameters in this menu.

**DEGREE: 47**  
♪ ♪ BGM ECHO 70%

**REMOTE : OK**  
♪ ♪ BGM ECHO 70%

The Lock Operation: Long press the "LOCK" lock keys, LCD screen will prompt for a password (as shown in Figure VII). Press the "◀" and "▶" keys to change the cursor indicates the character, press the "↵" key in order from left to right to move the cursor's position. Password input has been completed, press the "MENU" button to enter the next step. The screen you will be prompted to enter the password again, repeat the above steps until after you have entered again, long press the " LOCK " key, and enter the same password twice before and after, will be locked out of the system, while in the lower left of the LCD screen displays "lock" icon. Similarly, operation is the same. Follow the above steps, input password and click " LOCK " keys to unlock the password entered is normal, in the lower left of the LCD screen the "lock" icon will disappear.

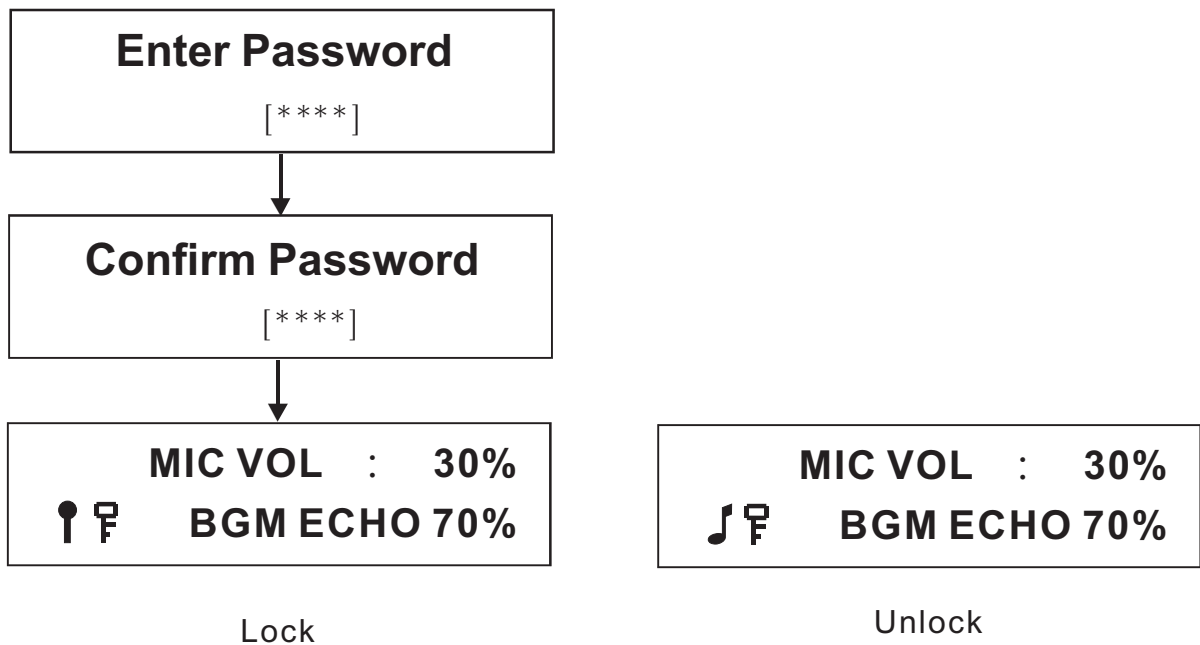


Figure VII

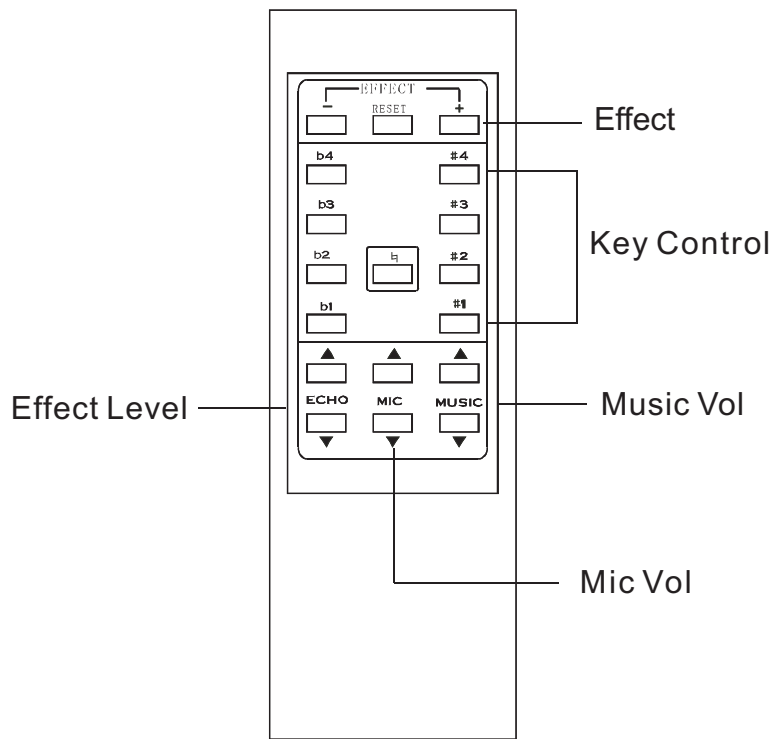
Note: After performing a lock operation, the system according to the different types of locks set by the user, the corresponding parameters are locked, such as (delay time delay depth effect, reverberation time, reverb low pass, three balanced microphone, balance, high and low sounds and switching feedback inhibition of the music, and the regulation of tone sandhi) and so on.

Details please refer to the help section of the software of computer control.

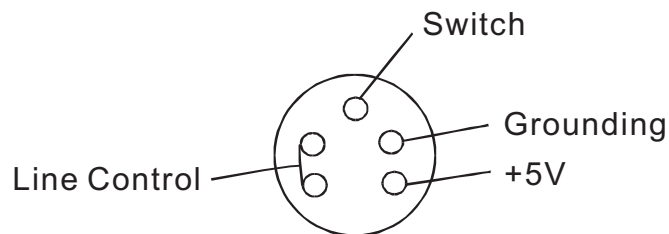
Note: Added automatic locking function of the machine, do not adjust in one minute after the small boot encoder, Encoder automatically locks after locked small encoder does not rotate, press the "MENU" menu button to unlock, the encoder can rotate, if you do not need this feature, can cancel the automatic locking computer interface software device menu, system reset, automatic locking function effectively.

## 4. Wireless Remote Control

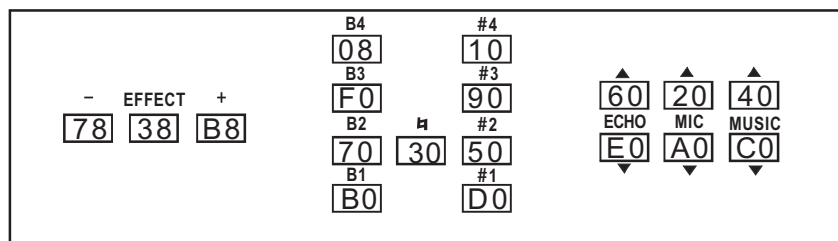
Easy to use remote control, eliminating the manual operation. Simple parameters, enable you to easily and quickly adjust parameter settings. As shown in the figure eight.



## Remote Code



User Code: B2,4d



# Technical Specification

Output Power(RMS) .....	RMS 2x300W(8Ω)	RMS 2x500W(4Ω)
		SR, SL 100W(8Ω)
SNR .....	Music Processing, Above 95DB(Pass Through, Tone off)	
	MIC Processing, Above 50DB(Effect Open)	
THD .....	0.3% 20Hz-20kHz, 2-Channel 2x100W(RMS) Out (Pass Through)	
Frenquency Response .....	20Hz-20kHz ± 1dB	
Input Sensitivity/Impdance		
MIC .....	0.5mV-100mV/2kΩ	
Line .....	0.707Vpp/10kΩ	
Video .....	1Vpp/47kΩ	
Tone Control		
Music		
Treble(increase / attenuation) .....	± 12dB, Step ± 1dB	
Bass(increase / attenuation) .....	± 12dB, Step ± 1dB	
MIC		
Treble(increase / attenuation) .....	± 9dB, Step ± 1dB	
Bass(increase / attenuation) .....	± 9dB, Step ± 1dB	
Modulating .....	± 7Grade, Step 100 Cent	
Output sensitivity/impdance		
Audio(Mix Output) .....	3.2V/4.7kΩ	
Video .....	1Vpp/320Ω	
Output Impedance		
With short circuit protection function .....	4-8Ω	
Recommended Impedance .....	8Ω	
Power Supply .....	AC 200V-240V/50Hz Selectable	
Fuse .....	T15A/250V	
Stardard Power .....	AC 120V/50Hz	
Power .....	800W	
AC Power Outlet		
Switching a set of .....	200W	
No switching groups .....	300W	
Weight .....	17kg	
Dimension .....	510×430×190(mm)	