

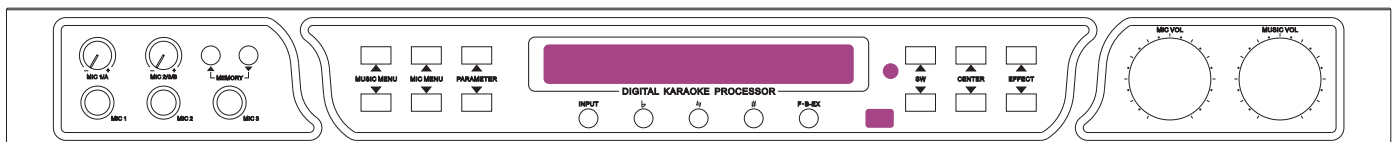
SONKEN

PROCESSOR SOUND SYSTEM FOR KTV

DSP-220

DIGITAL KARAOKE PROCESSOR

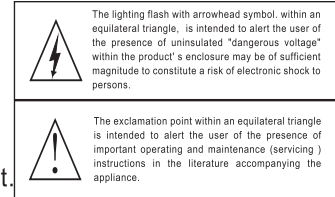
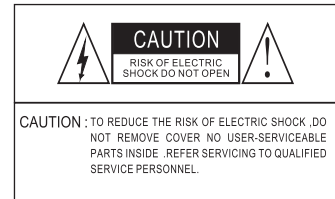
REFERENCE MANUAL



Kindly please go through this reference manual before operation of this appliance and keep this manual for further uses.

SAFETY PRECAUTIONS

1. **POWER:** This system should be connected to 220-230V AC 50Hz(110/115VAC 50 optional) household outlet.
2. Do not open the unit cover. All other servicing should be referred by the qualified service personnel.
3. The unit should be situated away from heat such as sunlight or the appliances that produce heat.
4. Care should be taken so that objects do not fall and liquids are not spilled into the en-clusure through opening.
5. Never keep the objects on the unit cover, and leave some distance from the wall.
6. The amplifier should not be used near to water, dust, or other wet environment.
7. The power cord should be un-plugged from the outlet when unused.



HANDLING PRECAUTIONS

Do not install the unit in the following places

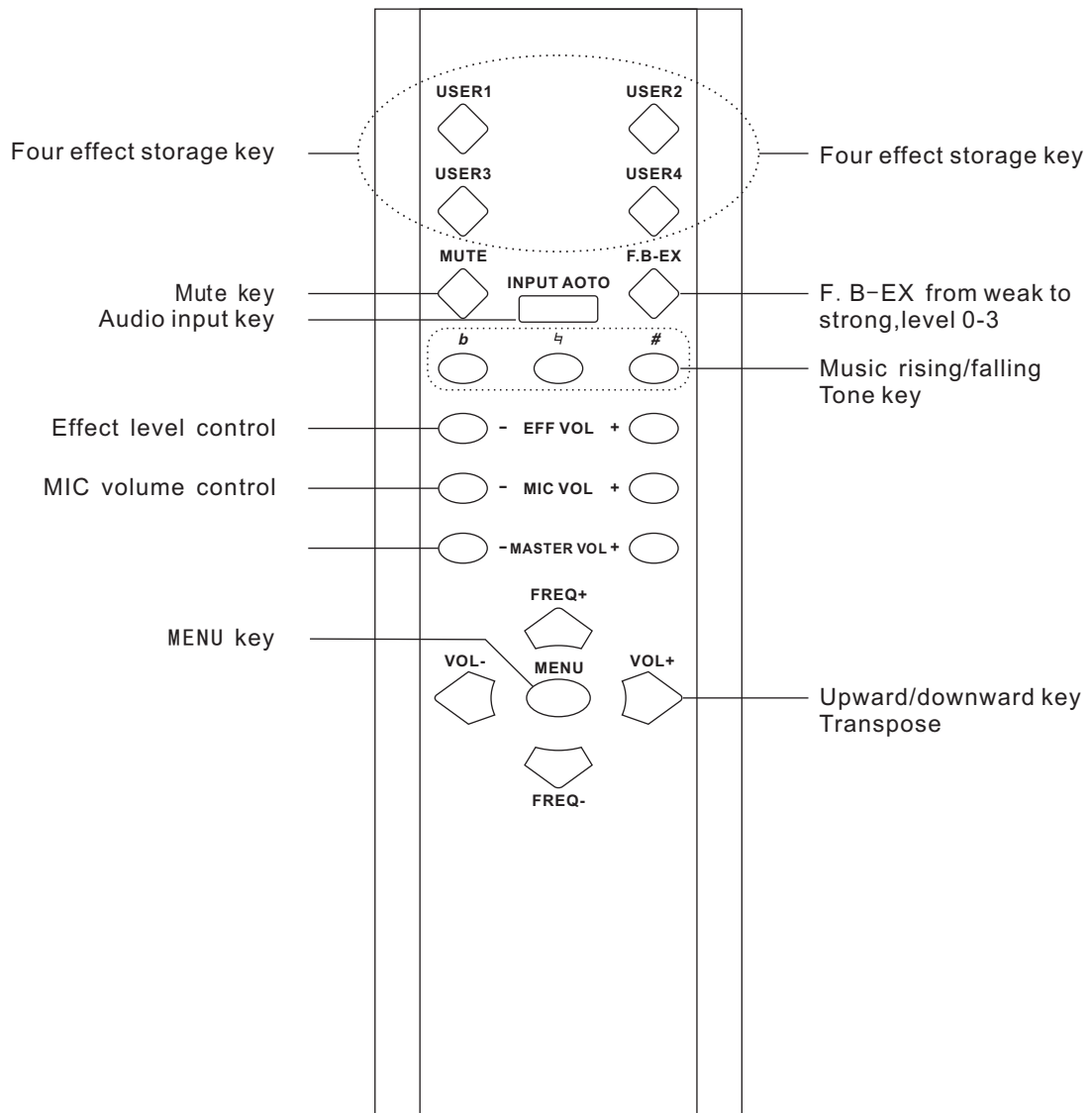
- A place which exposes to direct sunlight or near a source of heat such as a radiator.
- A place where is unable to escape from heat due to poor ventilation, or high humidity or dusty.
- A unstable place with excessive vibrations or sloping.
- A place which may be exposed to rain, such as near a window.
- A place which may be exposed to soot, vapor or heat, such as near a cooking table.

BEFORE CONNECTIONS

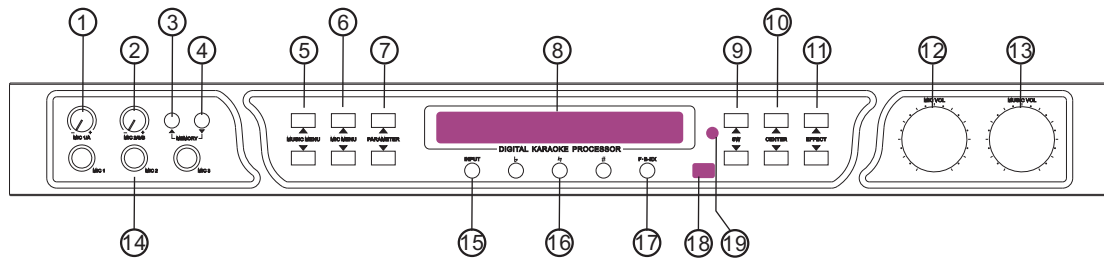
Connection precautions

- Be sure to switch the power off.
- The white input/output jacks of the amplifier are designed for the left channel, while the Red jacks are for the Right channel.
- Insert the plugs of the connection cords securely into the jacks.

REMOTE CONTROL

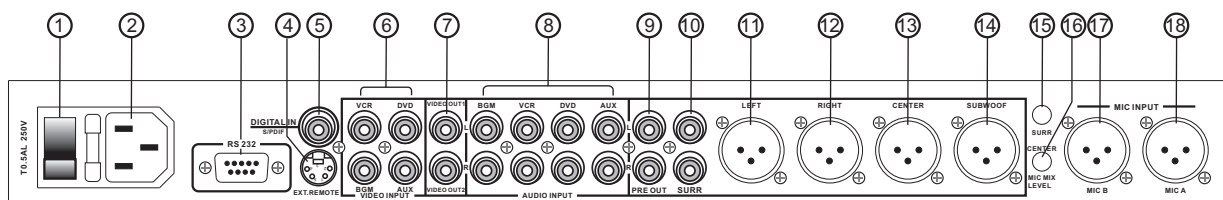


NAME OF FRONT PANEL AND FUNCTION



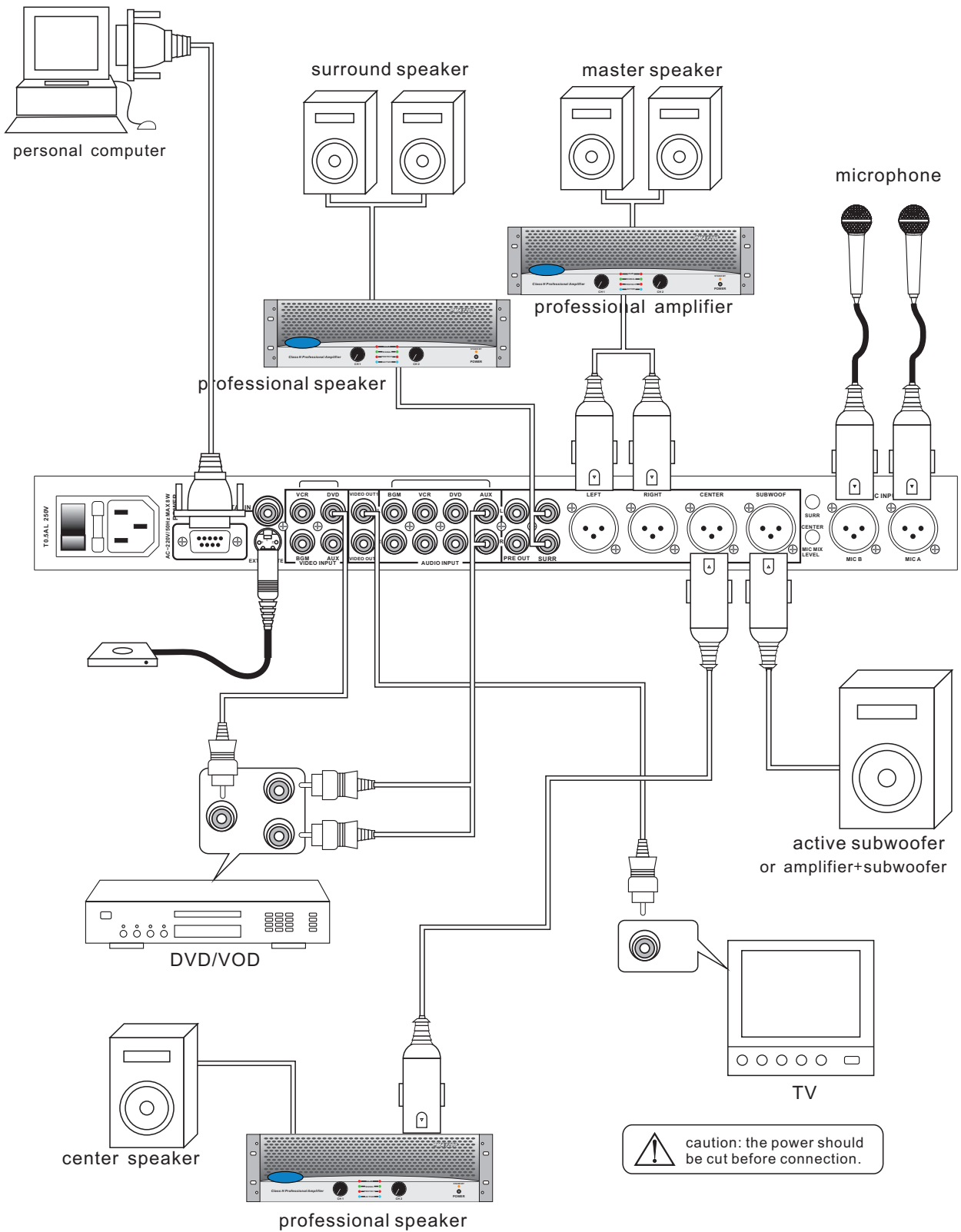
1. MIC1 AND A EFFECT LEVEL KNOB
Control MIC1 & MIC A effect level
2. MIC2/3 AND B EFFECT LEVEL KNOB
Control MIC2/ MIC3 and MIC B effect level
3. ADJUST PARAMETER STORE KEY ▲
Adjust the pre-store parameter, pre-store custom effect/factory setting
4. ADJUST PARAMETER STORE KEY ▼
Adjust the pre-store parameter, pre-store custom effect/factory setting
5. MUSIC MENU CONTROL
6. MIC MENU CONTROL
7. PARAMETER CONTROL
Adjust music and microphone parameter/effect storage
8. DISPLAY SCREEN
Dot-matrix display screen
9. SUB VOLUME CONTROL
10. CENTER VOLUME CONTROL
Control the volume of center speaker
11. EFFECT LEVEL CONTROL
12. MIC VOLUME KNOB
Using this knob to control the master volume of microphone
13. MUSIC VOLUME KNOB
Using this knob to control the master volume of music
14. MIC INPUT JACKS(MIC1, 2 &3)
15. INPUT CONTROL
Four audio input keys: BGM,VCR,DVD, AUX. Digital channel and auto audio input control function
16. RISING-FALLING TONE CONTROL
“b” Music falling tone control
“L” Tone re-cover control/Effect lock and unlock
“#”Music rising tone control
17. F.B-EX CONTROL
Free-back-EX control from weak to strong, level 0-3
18. REMOTE CONTROL RECEIVER WINDOW
Receiver the signal from remote control
19. POWER INDICATOR


NAME OF REAR PANEL AND FUNCTION



1. POWER SWITCH
2. POWER INPUT JACK
Standard triangle power input jack
3. RS232 CONNECT JACKS
Connect the output jacks of computer
4. EXTEND REMOTE RECEIVER
Connect with another remote receivers, synchronous effect
5. DIGITAL INPUT JACKS
S/P DIF input (only PCM44, 1Hz, 48KHz)
- 6.VIDEO INPUT JACKS
Four groups input (BGM, VCR, DVD, AUX), synchronous with audio
7. VIDEO OUTPUT JACKS
Two way video output jacks(VIDEO OUT1, VIDEO OUT2)
8. AUDIO INPUT JACKS
Four groups input jacks(BGM, VCR, DVD, AUX)
9. PRE OUTPUT
PRE signal output, synchronous with L/R signal
10. L/R SURROUND CHANNEL OUTPUT JACKS
It can be independent music signal/microphone or music+ microphone composite signal
11. LEFT CHANNEL OUTPUT JACKS
12. RIGHT CHANNEL OUTPUT JACKS
- 13.CENTER OUTPUT
Center balance output, when choosing music signal, volume and L/R music volume are synchronous and controlled by center volume(key 10 on front panel); when center output MIC signal, volume and MIC volume are synchronous and controlled by center effect control(key 16 on rear panel)
14. SUB OUTPUT
Sub-woofer balance output, volume and L/R music volume are synchronous, and controlled by key 9 on front panel
- 15.MIC SURROUND CHANNEL EFFECT CONTROL
16. MIC CENTER CHANNEL EFFECT CONTROL
17. MIC JACKS(MIC-B INPUT)
18. MIC JACKS(MIC-A INPUT)

SYSTEM CONNECTION



 **caution: the power should be cut before connection.**

MENU LIST

EFFECT STORAGE FUNCTION

C Volume

中置音量，遥控进入菜单出现

Subwoof Volume

低音音量，遥控进入菜单出现

Max Music Volume

最大音乐音量限制 (0-63)

Subwoof Reducer

低音衰减器 (OFF0 +20)

Subwoof LPF

低通滤波器 (40~150Hz)

Music Auto Level

音乐自动电平 (1-6)

Music Vocal

音乐消歌声

S Volume

环绕音量

Surround Sel

环绕声输出模式选择

Music Balance

声道输出平衡

Music Treble

音乐高音

Music Mid

音乐中音

Music Bass

音乐低音

BGM Volume

背景音乐音量

Digital Freq

(数字信号输入通道下出现。PCM频率选择)

Test Mode

测试模式

MIC CHANNEL FUNCTION MENU

Max Mic Volume

最大话筒音量控制

Echo Delay

话筒回声延时

Ok Mode

卡拉ok话筒输出模式

Noise Gate

噪声门

Mic Exciter

话筒激励

Feedback-Time

反馈抑制时间

Mic EQ 8kHz

五段均衡器

Mic EQ 2.7kHz

五段均衡器

Mic EQ 900Hz

五段均衡器

Mic EQ 300Hz

五段均衡器

Mic EQ 100Hz

五段均衡器

Reverb Level

混响电平

Reverb Time

混响时间

Echo Repeat

回声重复次数

Echo Mode

混响模式 (数字信号输入通道下出现)

TROUBLESHOOTING

Symptom	Possible Causes	Solution
No sound output from speakers at all.	<ol style="list-style-type: none"> 1. The power ON/OFF switch is set to OFF 2. The power cord is unplugged. 3. The MUSIC VOL control is in the minimum position. 4. The MUSIC EFFECT switch is set to *ON* while an external effector is connected to the unit. 5. The power of the external effector connected to the MUSIC EFFECT jacks is not turned ON. 	<ol style="list-style-type: none"> 1. Set the power ON/OFF switch to *ON*. 2. Plug the power cord securely into the power outlet. 3. Adjust the control. 4. Switch the MUSIC EFFECT to OFF. 5. Turn on the power of the external effector.
No Sound output from one of the speakers.	<ol style="list-style-type: none"> 1. The BALANCE control is turned fully to an extreme Position. 2. One of the speaker cords are disconnected. 	<ol style="list-style-type: none"> 1. Set the BALANCE control to the center position. 2. Insert the cord securely into the terminals.
No sound output from Microphone	<ol style="list-style-type: none"> 1. The microphone jack is not fully inserted. 2. The microphone switch is set to *OFF* 3. The corresponding MIC VOL control or MIC MASTER VOL Control is in the minimum position. 	<ol style="list-style-type: none"> 1. Insert the plug securely into the jack. 2. Switch ON the microphone. 3. Adjust the volume control.

SPECIFICATIONS

When largest volume, input 1 kHz analog signal, output 1V (RMS), testing in 10K ohms load condition:

MUSIC CHANNEL

Music frequency response	20Hz ~ 20KHz
Music input signal sensitivity	185mv
BGM input signal sensitivity	285mv
Maximum music output effect level.....	4.5V (THD \leq 0.5%)
Maximum output noise ratio effect	10mv
Minimum output noise ratio effect	8mv

MICROPHONE CHANNEL

MIC 1-3 input sensitivity	18mv
MIC 4-5 input sensitivity	15mv
MIC maximum signal output effect level.....	4.5V (THD \leq 0.5%)

OTHER

Power	AC~110V(50Hz) / AC~110V(50Hz)
Maximum power consumption	10W
Dimension	482mm(L)*147mm(W)*46mm(H)
Weight	2.4kg

* Specifications and design subjects to possible modification without notice due to improvement.