首检单记录表

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（出美国）</td><td colspan="4">说明类型：☐中文
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<tr><td>客户名称</td><td></td><td>客户代码</td><td></td><td>商 标</td><td>DIGISYNTHETIC®</td></tr>
<tr><td>文件编号</td><td>DS-09-1-08-1040</td><td>有效版本</td><td>V1.0</td><td>更改次数</td><td>第0次</td></tr>
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日期:26年2月25日</td></tr>
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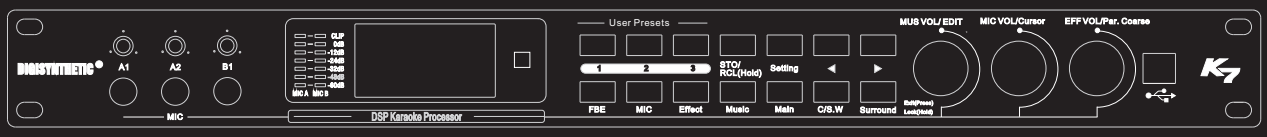
DIGISYNTHETIC®

K7

DSP Karaoke Processor



Product use guide

For more product information, please refer to the contents of disc with this device.

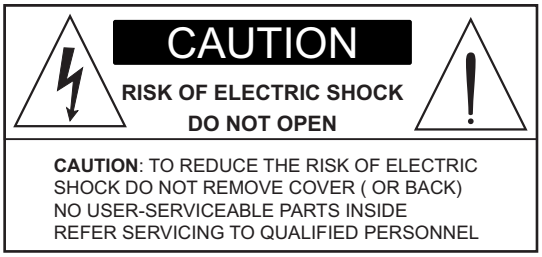
IMPORTANT SAFETY INSTRUCTION

Please read the basic protective measure as below 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.
3. 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.

4. To reduce the risk of injury, close supervision is necessary when the product is used near children.
5. 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.
6. Whether used this product alone or connected to the power amplifier, speaker or headset, excessive volume may cause permanent hearing loss. Don't use for a long time in large or any volume may cause discomfort. If you feel any hearing loss or tinnitus, Please seek medical advice.
7. This product should be located so that its location or position does not interfere with its proper ventilation.
8. This product should be located away from heat sources such as radiators, heat registers or other products that produce heat.
9. The product should be connected to a power supply only of the type described on the operation instructions or as marked on the product.
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.**
15. The power-supply cord should be unplugged from the outlet when the products is completely power off from the electric power sources and electric networks .



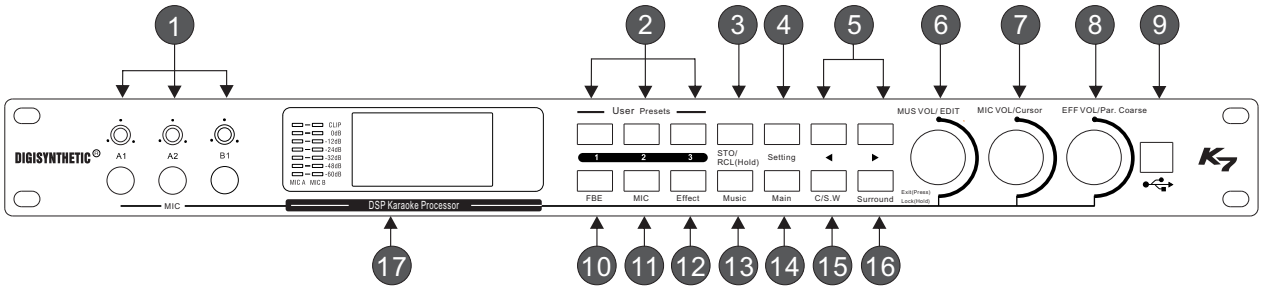
The lightning flash with arrowhead synbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure, that may be of sufficient magnitude to constitute a risk of electric shock to persons.

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

Only use it below the attitude of 2000ms for safty application.

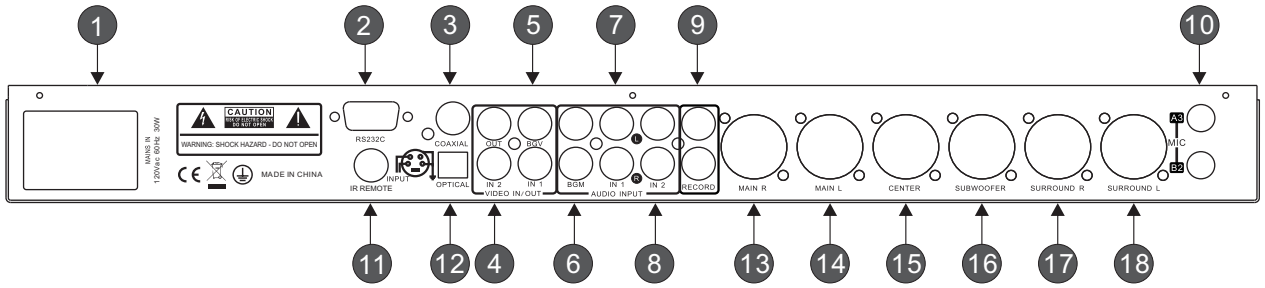
Only use it in nontropical climate condition for safty application.

Front panel profile



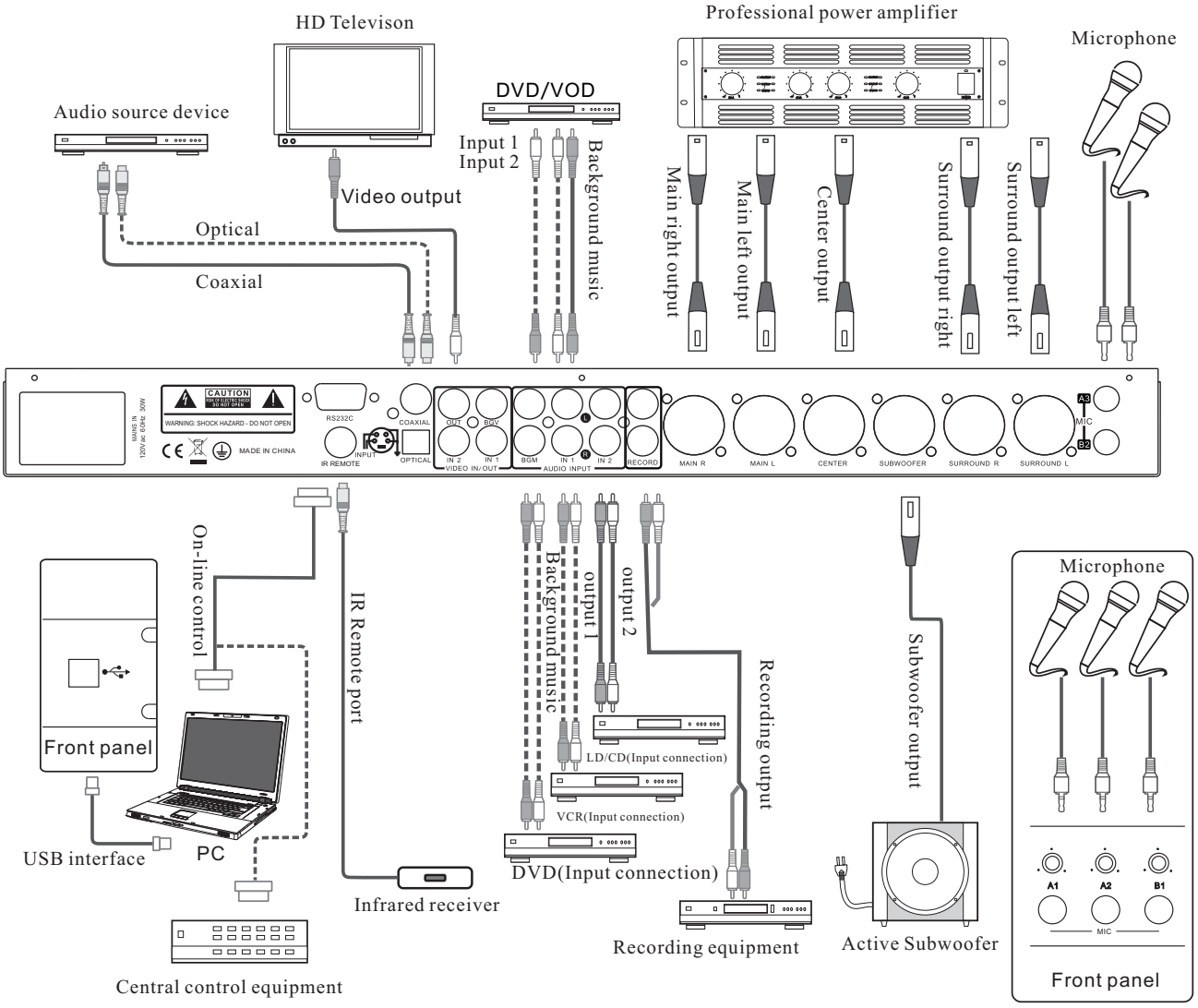
1. 3 microphone input jacks were divided into two groups. (MIC 1 and 2 in the group A, MIC 3 in the group B) ,each input has a corresponding adjustment potentiometer.
2. Direct key of user presets
3. Store/ recall preset key (store by press, recall by press and hold).
4. Device setting key.
5. Arrow key of menu pages and parameters (pitch-shift up and down of music just in the home menu).
6. Music volume knob/ EDIT / Exit &Lock with multiple functions (twist the knob to adjust the volume of music just in the home menu,otherwiseit adjusts the value of parameter.EXIT by press, LOCK by press and hold).
7. Microphone volume knob/Cursor adjust knob
8. Effect volume knob/Parameter coarse adjust knob
9. USB interface(Type B).
10. Feedback eliminate enable or disable key.
11. Microphone menu key.
12. Effect menu key.
13. Music menu key.
14. Main outputs menu key.
15. Center/Subwoofer output menu key.
16. Surround output menu key.
17. Dot-Matrix LCD display, used to display a variety of parameters adjustment information and infrared remote receiving window.

Rear panelprofile



1. Mains input
2. RS232C real-time PC control interface
3. S/PDIF coaxial input interface
4. Synchronous video output interface
5. 3-way (background / input 1/ input 2) video input interface
6. Stereo Audio background input
7. Stereo Audio input 1
8. Stereo Audio input 2
9. Stereo recording output interface
10. 2 microphone input (A3 and B2) Jacks
11. Infrared remote port
12. S/PDIF optical input interface
13. Right channel of main output
14. Left channel of main output
15. Center output
16. Subwoofer output
17. Surround output right
18. Surround output left

System connection diagram



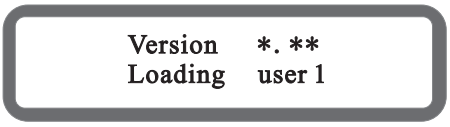
Product features

- This product is the use of 32-bit high performance DSP and AD/DA, 48kHz sampling rate of professional digital multi-Channel Karaoke processor.
- High quality professional vocal effects (Reverb, Echo, Reverb + Echo).
- Automatic digital feedback inhibition, 5 optional.
- ±12 level stereo music pitch-shifter.
- Parametric equalizer (can be set to low-shelf / high-shelf filter):
- Music (left / right) 15 bands, Microphone (A/B) 15 bands, Echo 10 bands, Reverb 10 bands,The main output (left / right) 10bands, Center 10 bands, Subwoofer 7 bands,Surround (left/right) 7 bands.
- Inputs, Outputs, Echo and Reverb have high-cut and low-cut filters with 12dB / 18dB / 24dB / 48dB of Bessel / Butterworth / Linkwitz-Riley
- Each input and output channel is equipped with high quality compressor.
- The music and the output channels are equipped with delay function
- Each output channel with matrix volume function
- Adjustment of Music (left / right), Microphone (A/B), and Main output (left / right) surround(left/right) can be Linked
- 3 groups of audio and video input (background / input 1/ input 2),automatic background music (6-15 seconds),2 groups of digital audio input (coaxial, optical fiber).
- VOD computer interface, wired or wireless infrared remote control, connect to various equipment conveniently.
- Computer real-time control by RS232C and USB, all parameters can be adjusted
- Extremely low noise floor.
- Initialize mode optional (Auto save or user presets 1-3).
- Automatic switching two modes between sing and disco.
- 128*64dotmatrix LCD display.
- Mass storage: 15 user program.

Normal boot process

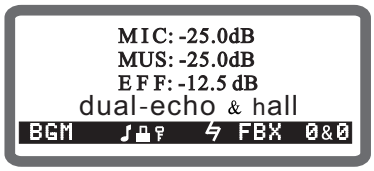
Connect the power cable, turn on the power switch, Logo and Model will be showed on screen, as follows:

Then display version and status, the device starts to load the data. Initialize mode optional (Auto save or user presets 1-3), as shown in the following figure:



Enter the boot screen after the completion of the loading.

The boot screen shows the current volume of microphone, music and effect , the fifth row is high lighted characters and the significance are as follows: the current music input port, the output mode, the panel lock, function lock , music pitch, feedback inhibition. As shown in the following figure:



Music menu:

1 . Switch to a different page of the music menu by continuous press [Music].
2 . Rotary knob [MUS VOL/EDIT] adjust the parameters, some parameters can be rough adjusted by rotating the knob [EFF VOL/Par. Coarse]
3 . Key[◀]and[▶] switch with a page of the cursor position, adjust other parameters (or with knob [MIC VOL/Cursor] for quickly adjusted the cursor position).
4. The music parameters are as follows:
(1)Music input selection:
BGM(Background music), input 1, input 2, BGM-6~BGM-15, coaxial (S/PDIF), optical (S/PDIF)
(2)The volume of music:
Mute, or -30dB to +12dB, step 0.5dB
(3)The volume of the left and right channels of music
Mute, or -30dB to +12dB, step 0.5dB
(4)Music equalizer (15 bands, left and right channels can be adjusted separately):
Type: PEQ/ Low-shelf / High-shelf
Frequency: 19.7Hz - 20200Hz
Gain: -15dB to +12dB, step 0.1dB
Bandwidth: 0.011~3.595
(5)Low-cut and High-cut filters of music (left and fight channels can be adjusted separately):
Frequency of Low-cut filter: 19.7Hz – 202Hz
Frequency of High-cut filter: 12100Hz - 20200Hz
Roll-off of filters: 12dB, 18dB, 24dB, 36dB
Type of filters: Bessel, Butterworth, Linkwitz-Riley
(6)Delay of Music (left and fight channels can be adjusted separately):
On / off
0.0mS to 50mS, step 0.1mS
(7)Compressor of music (left and right channels can be adjusted separately):
Off / Hard-knee / Soft-knee type Ⅰ / Soft-knee type Ⅱ / Soft-knee type Ⅲ / Soft-knee type Ⅳ / Soft-knee type Ⅴ
Threshold: -20dBu to 14.3dBu, step 0.5dB
Ratio: 1:1 to 16:1, step 2:1
(8)Noise gate of music (left and right channels can be adjusted separately):
Off, or -90dB to 42dB, step 1dB
(9)Pitch-shifter of music (in the boot menu, press keys [◀] and [▶] to adjust the pitch):
±12 grads, b12 to #12, step 100 cent
(10)Gain trim of music inputs:
Analog inputs (BGM/IN1/IN2) : 0dB, +3dB or +6dB
Digital inputs (S/PDIF, coaxial or optical): -12dB to 0dB, step 0.5dB
(11)Linking left and right channels of music
Yes / No

Microphone menu

1 . Switch to a different page of the microphone menu by continuous press [MIC].
2 . Rotary knob [MUS VOL/EDIT] adjust the parameters, some parameters can be rough adjusted by rotating the knob [EFF VOL/Par. Coarse]
3 . Key[◀]and[▶] switch with a page of the cursor position, adjust other parameters (or with knob [MIC VOL/Cursor] for quickly adjusted the cursor position).
4, Microphone parameters are as follows:
(1) Microphone volume:
Mute, or -30dB to +12dB,step 0.5dB
(2) The left and right microphone volume:
Mute, or -30dB to 0dB,step 0.5dB
(3) The volume of direct sound:
Volume: 0% to 100%, step 1%
Phase inverter: 0°/ 180°
(4) Microphone equalizer (15 bands,group A and B can be adjusted separately):
Type: PEQ/ Low-shelf / High-shelf
Frequency: 19.7Hz to 20200Hz
Gain: -15dB to +12dB, step 0.1dB
Bandwidth: 0.011 to 3.595
(5) Low-cut and High-cut filters of music (group A and B can be adjusted separately):
Frequency of Low-cut filter: 19.7Hz – 202Hz
Frequency of High-cut filter: 12100Hz - 20200Hz
Roll-off of filters: 12dB, 18dB, 24dB, 36dB
Type of filters: Bessel, Butterworth, Linkwitz-Riley
(6) Compressor of microphone (left and fight channels can be adjusted separately):

Off / Hard-knee / Soft-knee typeⅠ / Soft-knee type Ⅱ / Soft-knee type Ⅲ / Soft-knee type Ⅳ / Soft-knee type Ⅴ
Threshold: -40dBu to 0dBu, step 0.5dBu
Ratio: 1:1 to 16:1, step 2:1

(7) Noise gate of microphone (group A and B can be adjust separately):Off, or -90dB to 42dB, step 1dB

(8) Linking group A and B microphone:Yes / No

(9) Feedback inhibition of microphone: off ,5 grads, level 1 to 5

Effect menu

1 . Switch to a different page of the effect menu by continuous press [Effect].

2 . Rotary knob [MUS VOL/EDIT] adjust the parameters, some parameters can be rough adjusted by rotating the knob [EFF VOL/Par. Coarse]

3 . Key[◀]and[▶] switch with a page of the cursor position, adjust other parameters (or with knob [MIC VOL/Cursor] for quickly adjusted the cursor position).

4. Echo parameters as follows:

(1) Echo volume: Mute, or -30dB to 0dB, step 0.5dB

(2) Phase inverter: 0°/ 180°

(3) Echo mode: mono echo / stereo echo / dual echo

(4) Echo to Reverb: On / Off

(5) Delay time of ECHO 1: 100ms to 600ms, step 5ms

(6) Depth of ECHO 1: 0% to 100%, step 1%

(7) Pre-delay of ECHO 1: 0ms to 200ms, step 1ms

(8) Delay time of ECHO 2: 100ms to 600ms, step 5ms

(9) Depth of ECHO 2: 0% to 100%, step 1%

(10) Pre-delay of ECHO 2: 0ms to 200ms, step 1ms

(11) Echo equalizer (10 bands):
Type: PEQ/ Low-shelf / High-shelf
Frequency: 19.7Hz to 20200Hz
Gain: -15dB to +12dB, step 0.1dB
Bandwidth: 0.011 to 3.595

(12) Low-cut and High-cut filters of Echo:
Frequency of Low-cut filter: 19.7Hz – 1000Hz
Frequency of High-cut filter: 8000Hz - 20200Hz
Roll-off of filters: 12dB, 18dB, 24dB, 36dB
Type of filters: Bessel, Butterworth, Linkwitz-Riley

5. Reverb parameters as follows:

(1) Reverb volume: Mute, or -30dB to 0dB, step 0.5dB

(2) Phase inverter: 0°/ 180°

(3) Type of reverb: Off/ Room / Small Hall / Hall / church /Cathedral/Vocal

(4) Pre-delay of Reverb: 0ms to 250ms, step 10ms

(5) Reverb time: 0.5s to 6s, step 0.1s

(6) Reverb equalizer (10 bands):
Type: PEQ/ Low-shelf / High-shelf
Frequency: 19.7Hz to 20200Hz
Gain: -15dB to +12dB, step 0.1dB
Bandwidth: 0.011 to 3.595

(7) Low-cut and High-cut filters of Reverb:
Frequency of Low-cut filter: 19.7Hz – 1000Hz
Frequency of High-cut filter: 8000Hz - 20200Hz
Roll-off of filters: 12dB, 18dB, 24dB, 36dB
Type of filters: Bessel, Butterworth, Linkwitz-Riley

6. Effect parameters as follows:

(1) Effect volume: Mute, or -30dB to +6dB, step 0.5dB

Main output menu

1 . Switch to a different page of the main output menu by continuous press [Main].

2 . Rotary knob [MUS VOL/EDIT] adjust the parameters, some parameters can be rough adjusted by rotating the knob [EFF VOL/Par. Coarse]

3 . Key[◀]and[▶] switch with a page of the cursor position, adjust other parameters (or with knob [MIC VOL/Cursor] for quickly adjusted the cursor position).

4. Main output parameters as follows:

(1) The left and right channel of main output volume:
Mute, or -30dB to +6dB, step 0.5dB

(2) Main output equalizer (10bands, channel L and R can be adjusted separately):
Type: PEQ/ Low-shelf / High-shelf
Frequency: 19.7Hz to 20200Hz
Gain: -15dB to +12dB, step 0.1dB
Bandwidth: 0.011 to 3.595

(3) Low-cut and High-cut filters of main output (channel L and R can be adjusted separately):
Frequency of Low-cut filter: 19.7Hz – 202Hz
Frequency of High-cut filter: 12100Hz - 20200Hz
Roll-off of filters: 12dB, 18dB, 24dB, 36dB
Type of filters: Bessel, Butterworth, Linkwitz-Riley

(4) Volume of main output matrixes (channel L and R can be adjusted separately):
Volume of music: Mute, or -30dB to 0dB, step 0.5dB
Volume of direct sound: Mute, or -30dB to 0dB, step 0.5dB
Volume of echo: Mute, or -30dB to 0dB, step 0.5dB
Volume of reverb: Mute, or -30dB to 0dB, step 0.5dB

(5) Phase inverter of main output (channel L and R can be adjusted separately):
0°/ 180°

(6) Delay of main output (channel L and R can be adjusted separately):
On / Off,
0.0mS to 7mS, step 0.1mS

(7) Compressor of main output (channel L and R can be adjusted separately):
Off / Hard-knee / Soft-knee typeⅠ / Soft-knee type Ⅱ / Soft-knee type Ⅲ / Soft-knee type Ⅳ / Soft-knee type Ⅴ
Threshold: -20dBu to 14.3dBu, step 0.5dBu
Ratio: 1:1 to 16:1, step 2:1

(8) Linking channel L and R of main output:
Yes / No

Center output menu

1 . Switch to a different page of the center menu by continuous press [C/S.W].

2 . Rotary knob [MUS VOL/EDIT] adjust the parameters, some parameters can be rough adjusted by rotating the knob [EFF VOL/Par. Coarse]

3 .Key[◀]and[▶] switch with a page of the cursor position, adjust other parameters (or with knob [MIC VOL/Cursor] for quickly adjusted the cursor position).

4. Center output parameters as follows:

(1) Center output volume:
Mute, or -30dB to +6dB, step 0.5dB

(2) Center output equalizer (10 bands):
Type: PEQ/ Low-shelf / High-shelf
Frequency: 19.7Hz to 20200Hz
Gain: -15dB to +12dB, step 0.1dB
Bandwidth: 0.011 to 3.595

(3) Low-cut and High-cut filters of center output:
Frequency of Low-cut filter: 19.7Hz – 303Hz
Frequency of High-cut filter: 2520Hz – 20200Hz
Roll-off of filters: 12dB, 18dB, 24dB, 36dB
Type of filters: Bessel, Butterworth, Linkwitz-Riley

(4) Volume of center output matrixes:
Volume of music: Mute, or -30dB to 0dB, step 0.5dB
Volume of direct sound: Mute, or -30dB to 0dB, step 0.5dB
Volume of echo: Mute, or -30dB to 0dB, step 0.5dB
Volume of reverb: Mute, or -30dB to 0dB, step 0.5dB

(5) Phase inverter of center output: 0°/ 180°

(6) Delay of center output:
On / Off,
0.0mS to 21mS, step 0.1mS

(7) Compressor of center output:
Off / Hard-knee / Soft-knee typeⅠ / Soft-knee type Ⅱ / Soft-knee type Ⅲ / Soft-knee type Ⅳ / Soft-knee type Ⅴ
Threshold: -20dBu to 14.3dBu, step 0.5dBu
Ratio: 1:1 to 16:1, step 2:1

Subwoofer output menu

1 . Switch to a different page of the subwoofer menu by continuous press [C/S.W].

2 . Rotary knob [MUS VOL/EDIT] adjust the parameters, some parameters can be rough adjusted by rotating the knob [EFF VOL/Par. Coarse]

3 . Key[◀]and[▶] switch with a page of the cursor position, adjust other parameters (or with knob [MIC VOL/Cursor] for quickly adjusted the cursor position).

4. Subwoofer output parameters as follows:

(1) Subwoofer output volume:
Mute, -30dB to +10dB, step 0.5dB

(2) Subwoofer output equalizer (7 bands):
Type: PEQ/ Low-shelf / High-shelf
Frequency: 19.7Hz to 20200Hz
Gain: -15dB to +12dB, step 0.1dB
Bandwidth: 0.011 to 3.595
(3) Low-cut and High-cut filters of subwoofer output:
Frequency of Low-cut filter: 19.7Hz – 1000Hz
Frequency of High-cut filter: 35.1Hz – 2000Hz
Roll-off of filters: 12dB, 18dB, 24dB, 36dB
Type of filters: Bessel, Butterworth, Linkwitz-Riley
(4) Volume of subwoofer output matrixes:
Volume of music: Mute, or -30dB to 0dB, step 0.5dB
Volume of direct sound: Mute, or -30dB to 0dB, step 0.5dB
(5) Phase inverter of subwoofer output: 0°/ 180°
(6) Delay of center output:
On / Off,
0.0mS to 21mS, step 0.1mS
(7) Compressor of subwoofer output:
Off / Hard-knee / Soft-knee type Ⅰ / Soft-knee type Ⅱ / Soft-knee type Ⅲ / Soft-knee type Ⅳ / Soft-knee type Ⅴ
Threshold: -20dBu to 14.3dBu, step 0.5dBu
Ratio: 1:1 to 16:1, step 2:1

Surround output Menu

1 . Switch to a different page of the surround menu by continuous press [Surround].
2 . Rotary knob [MUS VOL/EDIT] adjust the parameters, some parameters can be rough adjusted by rotating the knob [EFF VOL/Par. Coarse]
3 . Key[◀]and[▶] switch with a page of the cursor position, adjust other parameters (or with knob [MIC VOL/Cursor] for quickly adjusted the cursor position).
4, the surrounding parameters are as follows:
(1) surround (left / right) volume:
Mute, -30dB~+6dB, step 0.5dB
(2) 7 bands PEQ(left / right):
Type: PEQ/ Low-shelf / High-shelf
Frequency: 19.7Hz~20200Hz
Gain: -15dB~+12dB, step 0.1dB
Bandwidth: 0.011~3.595
(3) High/low cut (left / right) :
Low cut frequency: 19.7 ~202Hz Hz
High frequency: 12100Hz~20200Hz
Roll-off of filters: 12dB, 18dB, 24dB, 36dB
Type of filters: Bessel, Butterworth, Linkwitz-Riley
(4) surround (left / right) matrix volume:
Music: Mute, -30dB~0dB, step 0.5dB
Direct sound: Mute, -30dB~0dB, step 0.5dB
Echo: Mute, -30dB~0dB, step 0.5dB
Reverberation: Mute, -30dB~0dB, step 0.5dB
(5) surround (left / right) phase:
0 / 180
(6) surround (left / right) delay:
On / off
0.0mS~21mS, step 0.1mS
(7) surround (left / right) compressor:
Off / Hard-knee / Soft-knee type Ⅰ / Soft-knee type Ⅱ / Soft-knee type Ⅲ / Soft-knee type Ⅳ / Soft-knee type Ⅴ
Threshold: -20dBu to 14.3dBu, step 0.5dBu
Ratio: 1:1 to 16:1, step 2:1
(8) surround link:
Yes / no

Setting menu

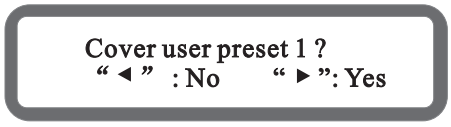
1 . Switch to a different page of the setting menu by continuous press [Setting].
2 . Rotary knob [MUS VOL/EDIT] adjust the parameters, some parameters can be rough adjusted by rotating the knob [EFF VOL/Par. Coarse]
3 . Key[◀]and[▶] switch with a page of the cursor position, adjust other parameters (or with knob [MIC VOL/Cursor] for quickly adjusted the cursor position).
4. Setting parameters as follows:
(1) Initialized mode:
Auto save or User preset 1-3
(2) Limits of maximum volume:
Music: Mute, or -30dB to +12dB, step 0.5dB
Microphone: Mute, or -30dB to +12dB, step 0.5dB
Effect: Mute, or -30dB to +6dB, step 0.5dB
Main output: Mute, or -30dB to +6dB, step 0.5dB
Center output: Mute, or -30dB to +6dB, step 0.5dB
Subwoofer output: Mute, or -30dB to +10dB, step 0.5dB
(3) Limits of Gain of equalizer:
Music: +6.0dB to +12.0dB, step 0.1dB
Microphone: +6.0dB to +12.0dB, step 0.1dB
Effect: +6.0dB to +12.0dB, step 0.1dB
Main output: +6.0dB to +12.0dB, step 0.1dB
Center output: +6.0dB to +12.0dB, step 0.1dB
Subwoofer output: +6.0dB to +12.0dB, step 0.1dB
(4) Automatic recovery of music pitch:
On / Off
Threshold: -30dB to 0dB, step 0.5dB
Time: 0 to 60S
(5) Sing and to disco mode switch:
Auto / Sing / Disco
Threshold: -30dB to 0dB, step 0.5dB
Time: 0 to 60S

Preset storage / recall

1. Preset storage

(1) Press Key [STO/RCL] to store Preset, then a confirmation dialog appears, as shown below:

(2) Twist the knob [EDIT] to select the sequence number of stack to be stored, the follow character indicates the status of stack,“Used” or “Empty”.
(3) Press key [STO/RCL] to confirm, there will be two situations:
If the status of stack is “Empty”, then will store directly to finish the steps, Else if the status of stack is “Used”, a confirmation dialog will appears again, as shown below:



(4) Press key [◄] to cancel, key [►] to confirm.

2. Preset recall

There are two ways to recall the user preset,
Ways1: Press keys [1],[2],[3] to recall the program 1-3 quickly and directly.
Ways2:To recall more other user presets, the steps as follows:
(1) Press and hold the Key [STO/RCL], to enter the program recalling process, a dialog as follows,

(2) Twist knob [EDIT] to select the sequence number of stack to be recalled, the follow character indicates the status of stack, “Used” or “Empty”.
(3) Press key [STO/RCL] again to confirm the sequence number, tip recalling failed and exit the recalling process if the stack is “Empty”. Otherwise forward to the final confirmation if the stack is “Used”, dialog as shown below.

(4) Press key [◄] to cancel, key [►] to confirm.

Initialized mode selection

Options [Initial] of the menu [Setting], to configure the initialized mode, there are four options, Auto save and user presets 1-3.

Initialized mode	Function description
Auto save	The function of this option is to automatically save all settings of user, shut down the device or suddenly power drop, then automatically reload to the last status. Especially suitable for situation that is tuning or often need to change the device settings.
User presets 1-3	Regardless of the status of the shutdown, the corresponding user preset (1 to 3) will be automatically recalled on reboot. This function suitable for situation of the KARAOK, in order to reduce the workload of tuner.

Output mode (Sing / Disco)

1. Function description:

(1) Each output port (Main left, Main right, Center, Subwoofer) has two sets of equalizer and volume setting, refer to sing mode and disco mode respectively;

(2) These two modes can be switched manually or automatically, its working principle is that when all the MIC input has no signal and reach the setted time, the output will be switched to the disco mode. When any one of the mic inputs is activated, working mode switched back to the sing.

(3) The range of threshold that a signal from microphone inputs can be considered effectively is: -30dB to 0dB, range of time is: 0s to 60s.

2. Setting process:

(1) Select for sing mode manually, and set the parameters for the equalizer and volume,

(2) Select for disco mode manually, and set the parameters for the equalizer and volume,

(3) Set an appropriate threshold and time for the microphone, and choose the auto mode, and then device will work well.

Limits of maximum Volume and Gain:

1. Function description:

To make the volume output in a certain range, the effective protection of the amplifier and speaker. Avoid destroy the sound field because setting the volume is too large.

For example:

When the microphone parameter is set to -10dB, then the upper limit value of the microphone volume is -10dB, when using the microphone volume knob or remote control to adjust the microphone volume, the maximum output volume is -10dB.

Automatic recovery of music pitch:

1.When users indue to their own physiological can not reach the original song's pitch, to adjust the pitch of musical accompaniment manually;

2.When detect the existing song ended, the next song will automatically return to the original pitch.

3.When you do not need to automatically recover, this function can be disable in device settings.

4.By setting the "threshold" and "time", making the functionmore practical use.

Panel lock, Function lock

1. Panel lock: Press and Hold the Key [Lock]which it combined with the knob [MUS VOL / EDIT] to enable the panel lock, Do it again to unlock.
2. Function lock: Just set up in the GUI (Graphical User Interface). By Menu ->System -> Lock.

Restore to factory settings

Warning: **The operation will clean all the data on the device.**

Press and hold the keys [Music]+ [Main] , Turn on the AC power switch, until the LCD monitor shows "RESET...", wait a moment so that the monitor shows “Succeed”, then device will recovery to factory settings.

Return to the root menu

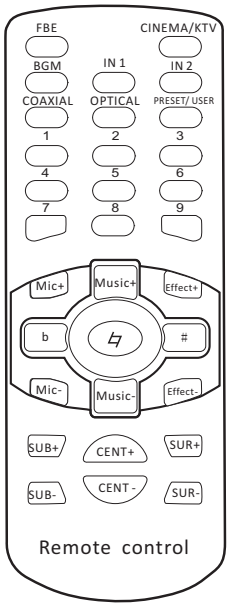
Press the Key [Exit] return the root of menu, or automatically return to the root menu when no operation of button or knob after 180 seconds approximately.

Infrared remote

Simple and easy to use remote control functions, the use of manual operation. Simple parameter adjustment, make you easy and fast adjust the frequent parameter settings. As the following table.

Infrared remote keys description

Keys name	Keysfunction
FBE	Enable or disable feedback inhibition function
PRESET / USER	Function of the key is not defined. Device will ignore it
BGM, IN 1, IN 2	Select analog input interface for music, Background/Input 1/input 2
COAXIAL, OPTICAL	Select digital input interface (S/PDIF) for music
1-9	Press these keys to recall the user program 1-9 directly
CINEMA / KTV	Function of the key is not defined. Device will ignore it
MIC+, MIC-	Increase or decrease the volume of Microphone
MUSIC+, MUSIC-	Increase or decrease the volume of Music
EFFECT+, EFFECT-	Increase or decrease the volume of Effect
b, 𝄫, ♯	Adjust the pitchof music,eg: Falling / Original / Raising
SUB+, SUB-	Increase or decrease the volume of Subwoofer
CENT+, CENT-	Increase or decrease the volume of Center
SUR+, SUR-	Function of the key is not defined. Device will ignore it



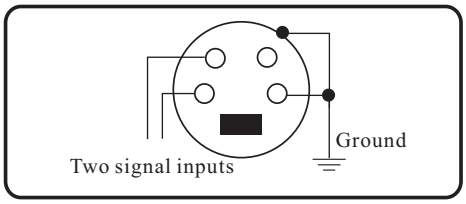
Remote code table

The code is hexadecimal, user code is 82H.

Buttons	Codes (Hex)	Buttons	Codes (Hex)
FBE	00	9	0E
CINEMA/KTV	01	Mic+	11
BGM	04	Mic-	17
IN 1	03	Music+	12
IN 2	02	Music-	18
COAXIAL	05	Effect+	13
OPTICAL	06	Effect-	19
PRESET/ USER	07	b	16
1	0A	♮	15
2	09	#	14
3	08	SUB+	1B
4	0B	SUB-	1D
5	0C	CENT+	1E
6	0D	CENT -	1F
7	10	SUR+	1A
8	0F	SUR-	1C

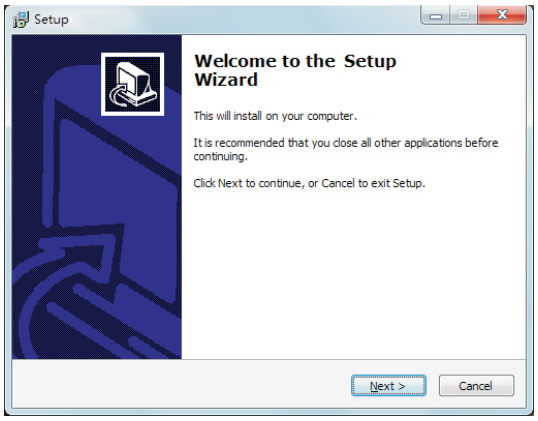
IR Remote description

As shown in the following schematic, the IR remote port has 5 pins, which have 2 input signal lines and 2 ground lines. In practical applications, only one of the two signal lines is required.

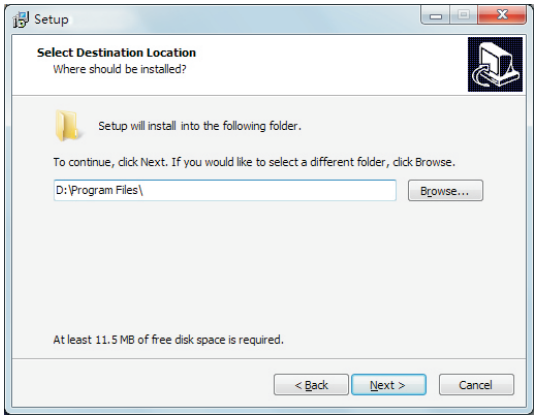


GUI software installation guide

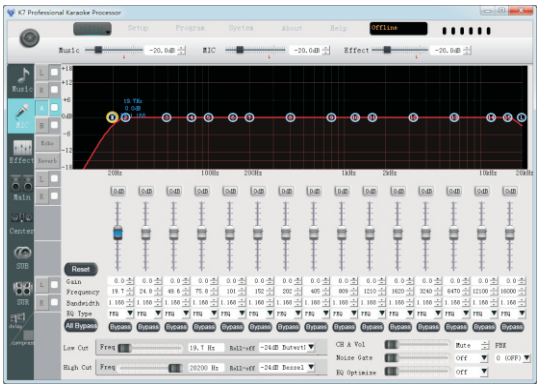
1.Put into the disk of accessories, open the CD-ROM and launch the application“Setup.exe” for installation.
2. The installation window appears, click the Next to continue.



3. Software will ask you to choose the installation path, and then click next to continue.
4. Follow the wizard until the installation is complete.



5. Please confirm that computer and device have been properly connected.Launch the GUI application, click Button “Online” in the menu,and select“USB” or “COM” to connect the device, which depends on how you actually connected the interface.

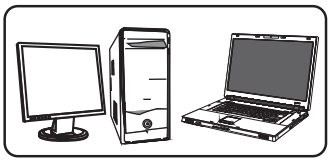


GUI software Notes

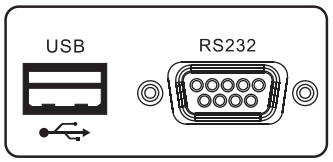
All the panel buttons and the knobs cannot be controlled when the device is connected to the GUI.
No need to select which one serial port, software can automatically search.
USB driver free.
GUI software can set all the parameters of the device.
Please refer to the help documentation for the GUI software operation instructions.

Necessary online control tips:

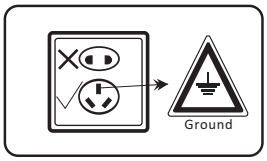
Before the user is online control operation, be sure to read the following notes in detail:
Otherwise it will increase the risk of abnormal conditions such as offline, computer damage, and so on when you are online:
1.In order to ensure the normal operation of the device, please firstly check AC power if in the range of the device.
2.If conditions permit, AC power outlet needs to have the grounding connection settings. And use a grounding power connected to the computer and the device.
3.The same model and the same version of GUI software don't repeatedly install.
4. All of the GUI software don't install in the same directory.
5. To avoid the use in strong interference and strong magnetic field environment.
6.The following acts may lead to the failure of online control, and even damage the device or your computer:
1) Before the implementation of online, Please do not plug in or pull out the line connected the device after it is turned on.
2) After the success of online, please do not move the computer, device and control line.
3) After the success of online, please do not operate by panel; including touching any keys on the device.
4) After the success of online, please do not go to plug the device or personal computer online connector.
5) After the success of online, please do not open the same type of online control software in the computer.
6) After the success of online, please do not use a computer to control many different device.
7. Please refer the important security matters content from the manual.



Available online computer



Available online interface



ACPower Grounding

Accessories

Description	Quantity
RS232C Cable	1
USB Cable	1
Product software CD	1
Product usage guide (This document)	1
Remote	1

Frequent troubleshooting guidelines

Issues	Troubleshooting method
LCD monitor no display, light-emitting diodes (LED)are dark	1.Check the power cable is connected correctly. 2. Check the fuse is burned. 3. Check the power switch is closed.
GUI cannot be online with device	1. Check the communication cable is connected correctly 2. If you use the RS232C port in the back of the device, make sure that USB cable is not connected. 3.Reopen the GUI software and reconnect the communication cable.
No sounds output	1. Check all the input signals are normal. 2. Check all the output connection is correct, include power amplifier and loudspeakers. 3. Restart the device. 4. Restore to factory status, Please refers to the relevant chapter above. 5. Try to restart the device many times is still unable to solve the fault, please contact the distributor to resolve
LCD displays fault tips,"error xx"	1.Restart the device. 2.Restore to factory status, Please refers to the relevant chapter above. 3.Try to restart the device many times is still unable to solve the fault, please contact the distributor to resolve
LCD displays fault tips:"Storage error"	1. Restart the device 2. Try to restart the device many times is still unable to solve the fault, please contact the distributor to resolve
LCD display fault tips:"DSP1 error"	1. Restart the device 2. Try to restart the device many times is still unable to solve the fault, please contact the distributor to resolve

Technical specification

Music Part		
SNR	Flat,Original pitch	⩾107dB(analog), ⩾114dB(digital)
THD+N	Output 1Vrms @ 1 kHz	⩽0.002%(analog), ⩽0.001%(digital)
Frequency Response	Main / Center/Surround output	20Hz-20kHz±0.5dB
	Subwoofer output	20Hz-2000Hz ±0.5dB
Maximum Input Level	Analog input: BGM / IN1 / IN2	4Vrms
	Digital input: Optical / Coaxial	0dBFS = 2Vrms
Maximum Output Level		4Vrms
Gain	Analog input: BGM / IN1 / In2	-30dB to +18dB
	Digital input: Optical / Coaxia	-30dB to +12dB
Pitch-Shifter		b12 to #12, 100 cent (half-tone) pre step
Microphone Part		
SNR	Effect bypass	⩾99dB
THD+N	Effect bypass, Output 1Vrms @1kHz	⩽0.006%
Frequency Response	Main / Center/Surround output	20Hz-20kHz ±0.5dB
	Subwoofer output	20Hz-2000Hz ±0.5dB
Sensitivity / Impedance	Front Inputs (3 Chs)	31mVrms/3.3kΩ
	Back Inputs(2 Chs)	44mVrms/10kΩ
Gain	Front Inputs (3 Chs)	30dB to 42dB
	Back Inputs (2 Chs)	39dB
Video Part		
Input / Output	3 inputs and 1 output, synchronously switching with music	
Sensitivity / Impedance	1Vpp/75Ω	
Parametric EQ & HPF/LPF		
Parametric EQ	Music: 15 bands, Mic: 15 bands, Main: 10 bands, Center:10 bands, Subwoofer/Surround: 7 bands, Effect: 10 bands	Freq.：19.7Hz-20.2kHz, 19.7Hz-2000Hz (Subwoofer)
	Bandwidth (Oct)：0.011-3.595	Gain：-15dB to +12dB
	Group A & B or channel L & R, can be adjusted independently	
HPF/LPF	HPF Freq.：19.7Hz-202Hz	LPF Freq.：12.1kHz-20.2kHz
	Type： Flat/Bessel/Butterworth /Linkwitz-Riley	Roll-off：12dB,18dB,24dB,36dB,48dB
Other description		
Remote	1 Wireless Infrared receiver, 1 IR Remote port (5 pins, type S socket)	
Online control port	1 RS232C port (9 pins, type D-SUB, female), 1 USB port (type B, driver free)	
Mains In	AC 120V 60Hz	
Power Consumption	⩽21.5W	
Fuse Size	T1AL/250VAC	
Net weight	3.5kg	
Dimensions (L×W×H)	482×158×45(mm)	

Above technical changes without notice

Signal Flow Graph