



Owner's Manual

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Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" (p.2) and "IMPORTANT NOTES" (p.3). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, read Owner's Manual in its entirety. This manual should be saved and kept on hand as a convenient reference.

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IMPORTANT NOTES

Power Supply

- Do not connect this unit to same electrical outlet that is being used by an electrical appliance that is controlled by an inverter or a motor (such as a refrigerator, washing machine, microwave oven, or air conditioner). Depending on the way in which the electrical appliance is used, power supply noise may cause this unit to malfunction or may produce audible noise. If it is not practical to use a separate electrical outlet, connect a power supply noise filter between this unit and the electrical outlet.
- The AC adaptor will begin to generate heat after long hours of consecutive use. This is normal, and is not a cause for concern.
- To prevent malfunction and equipment failure, always make sure to turn off the power on all your equipment before you make any connections.

Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- Noise may be produced if wireless communications devices, such as cell phones, are operated in the vicinity of this unit. Such noise could occur when receiving or initiating a call, or while conversing. Should you experience such problems, you should relocate such wireless devices so they are at a greater distance from this unit, or switch them off.
- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit.
- When moved from one location to another where the temperature and/or humidity is very different, water droplets (condensation) may form inside the unit. Damage or malfunction may result if you attempt to use the unit in this condition. Therefore, before using the unit, you must allow it to stand for several hours, until the condensation has completely evaporated.

- Depending on the material and temperature of the surface on which you place the unit, its rubber feet may discolor or mar the surface. You can place a piece of felt or cloth under the rubber feet to prevent this from happening. If you do so, please make sure that the unit will not slip or move accidentally.
- Do not put anything that contains water on this unit. Also, avoid the use of insecticides, perfumes, alcohol, nail polish, spray cans, etc., near the unit. Swiftly wipe away any liquid that spills on the unit using a dry, soft cloth.

Maintenance

- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.
- Please be aware that the contents of memory can be irretrievably lost as a result of a malfunction, or the improper operation of the unit.
- Unfortunately, it may be impossible to restore the contents of data that was stored in the unit's memory once it has been lost. BMB International Corp . assumes no liability concerning such loss of data.
- Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
- Never strike or apply strong pressure to the display.
- When disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.
- When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.

- Some connection cables contain resistors. Do not use cables that incorporate resistors for connecting to this unit. The use of such cables can cause the sound level to be extremely low, or impossible to hear. For information on cable specifications, contact the manufacturer of the cable.
- Depending on the circumstances of a particular setup, you may experience a discomfiting sensation, or perceive that the surface feels gritty to the touch when you touch this device, microphones connected to it, or the metal portions of other objects. This is due to an infinitesimal electrical charge, which is absolutely harmless. However, if you are concerned about this, connect the ground terminal (see figure) with an external ground. When the unit is grounded, a slight hum may occur, depending on the particulars of your installation.



Unsuitable places for connection

- Water pipes (may result in shock or electrocution)
- Gas pipes (may result in fire or explosion)
- Telephone-line ground or lightning rod (may be dangerous in the event of lightning)

Copyrights/Licenses/Trademarks

- It is forbidden by law to make an audio recording, video recording, copy or revision of a third party's copyrighted work (musical work, video work, broadcast, live performance, or other work), whether in whole or in part, and distribute, sell, lease, perform, or broadcast it without the permission of the copyright owner.
- Do not use this product for purposes that could infringe on a copyright held by a third party. We assume no responsibility whatsoever with regard to any infringements of third-party copyrights arising through your use of this product.

USING THE UNIT SAFELY

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About WARNING and CAUTION Notices

 WARNING	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
 CAUTION	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

About the Symbols

	The  symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
	The  symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.
	The  symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.

ALWAYS OBSERVE THE FOLLOWING

WARNING

Do not disassemble or modify by yourself

Do not open (or modify in any way) the unit or its AC adaptor.



Do not repair or replace parts by yourself

Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer.



Do not use or store in the following types of locations

- Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are
- Damp (e.g., baths, washrooms, on wet floors); or are
- Exposed to steam or smoke; or are
- Subject to salt exposure; or are
- Humid; or are
- Exposed to rain; or are
- Dusty or sandy; or are
- Subject to high levels of vibration and shakiness.



Do not share an outlet with an unreasonable number of other devices

Do not force the unit's power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through.



Do not use overseas

Before using the unit in a foreign country, consult with your retailer.



WARNING

Do not bend the power cord or place heavy objects on it

Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards!



Avoid extended use at high volume

This unit in combination with an amplifier and headphones or speakers may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist.



Do not place in an unstable location

Make sure you always have the unit placed so it is level and sure to remain stable. Never place it on stands that could wobble, or on inclined surfaces.



Do not drop or subject to strong impact

Protect the unit from strong impact. (Do not drop it!)



CAUTION

Place in a well ventilated location

The unit and the AC adaptor should be located so their location or position does not interfere with their proper ventilation.



Manage cables for safety

Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children.



Do not connect or disconnect the AC adaptor with wet hands



WARNING

Don't allow foreign objects or liquids to enter unit; never place containers with liquid on unit

Do not place containers containing liquid (e.g., flower vases) on this product. Never allow foreign objects (e.g., flammable objects, coins, wires) or liquids (e.g., water or juice) to enter this product. Doing so may cause short circuits, faulty operation, or other malfunctions.



Turn off the unit if an abnormality or malfunction occurs

Immediately turn the unit off, remove the AC adaptor from the outlet, and request servicing by your retailer:



- The AC adaptor, the power-supply cord, or the plug has been damaged; or
- If smoke or unusual odor occurs; or
- Objects have fallen into, or liquid has been spilled onto the unit; or
- The unit has been exposed to rain (or otherwise has become wet); or
- The unit does not appear to operate normally or exhibits a marked change in performance.

Adults must provide supervision in places where children are present

When using the unit in locations where children are present, be careful so no mishandling of the unit can take place. An adult should always be on hand to provide supervision and guidance.



CAUTION

Keep small items out of the reach of children

To prevent accidental ingestion of the parts listed below, always keep them out of the reach of small children.

- Removable Parts Screws



Avoid climbing on top of the unit, or placing heavy objects on it



Main Features

Professional Sound Effect

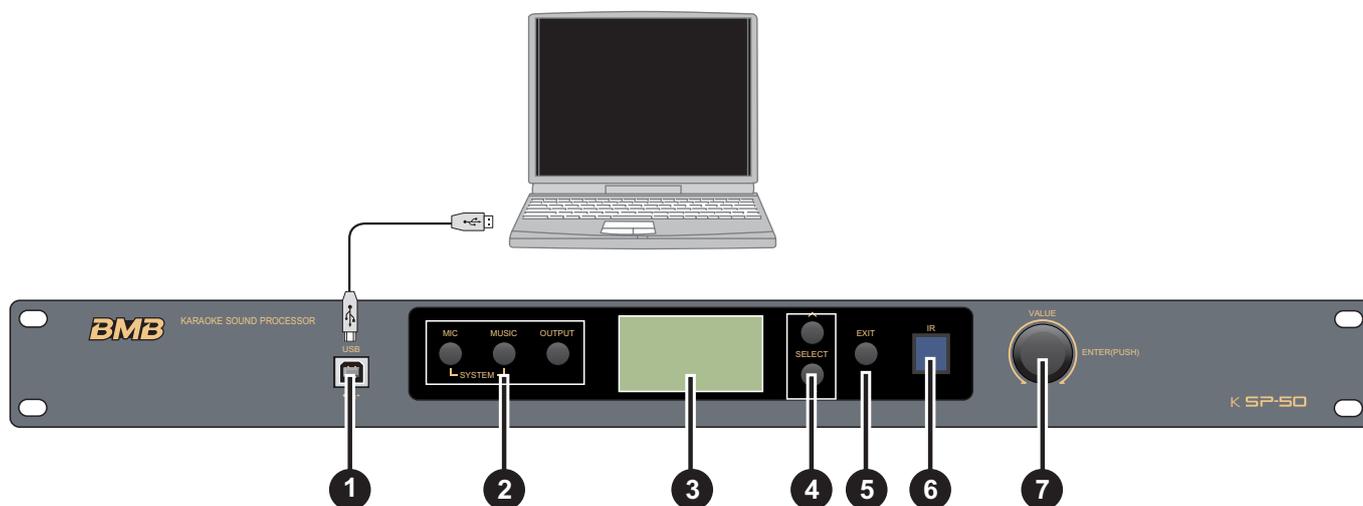
Adopt a variety of echo effects mode processing and the 5th generation reverb effect processing, achieve an ideal combination for musicians and music, to achieve the desired performance.

Characteristic

1. Quad-Core 56-bit high-speed processing DSP Chip, with high-precision algorithm to achieve high-quality sound effects.
 2. Low noise microphone amplifier design makes the sound more clear and sweet.
 3. Two sets of independent microphone parameters (hyperbolic), matching different microphone characteristics.
 4. The 5th generation reverb algorithm with professional early reflections and modulation give more excellent sound field and warmer.
 5. High quality echo algorithm with three modes: mono-echo, dual-echo and stereo-echo.
 6. The effect of the input / output gain is adjustable, the sound processing more flexible and accurate.
 7. Professional Pitch shift algorithm for music processing, reach ± 12 grades.
 8. Full-band auxiliary output interface design, free combination: subwoofer + center, stereo surround two kinds of combinations, make the use more flexible.
 9. Professional S / PDIF digital audio input (fiber), audio sampling rate up to 192kHz.
 10. Free driver USB interface, Online is more convenient.
 11. Computer software interface user-friendly design, intuitive and convenient.
 12. "Singing" "dance" two output modes automatically switch, applied to different scenarios.
 13. Maximum volume limit, effective protection of the amplifier and speakers. Maximum equalization gain limit, effective protection of signal distortion because of large increase equalization gain.
 14. Music tone automatic recovery function, to prevent forgetting to restore the original tune and affect the next song singing.
 15. Panel locking function to prevent misoperation. The parameter lock function to set the different users authority.
 16. Data manual reset function to restore factory settings easily.
 17. Automatic return function, easy to alter and debug the settings.
 18. Program management function to save up more than 15 programs. Data saved automatically when power off.
 19. Infrared remote control function to modify the control code easily. It can be applied to other remote controller or control equipment to control general parameters and functions.
-

Panel Descriptions

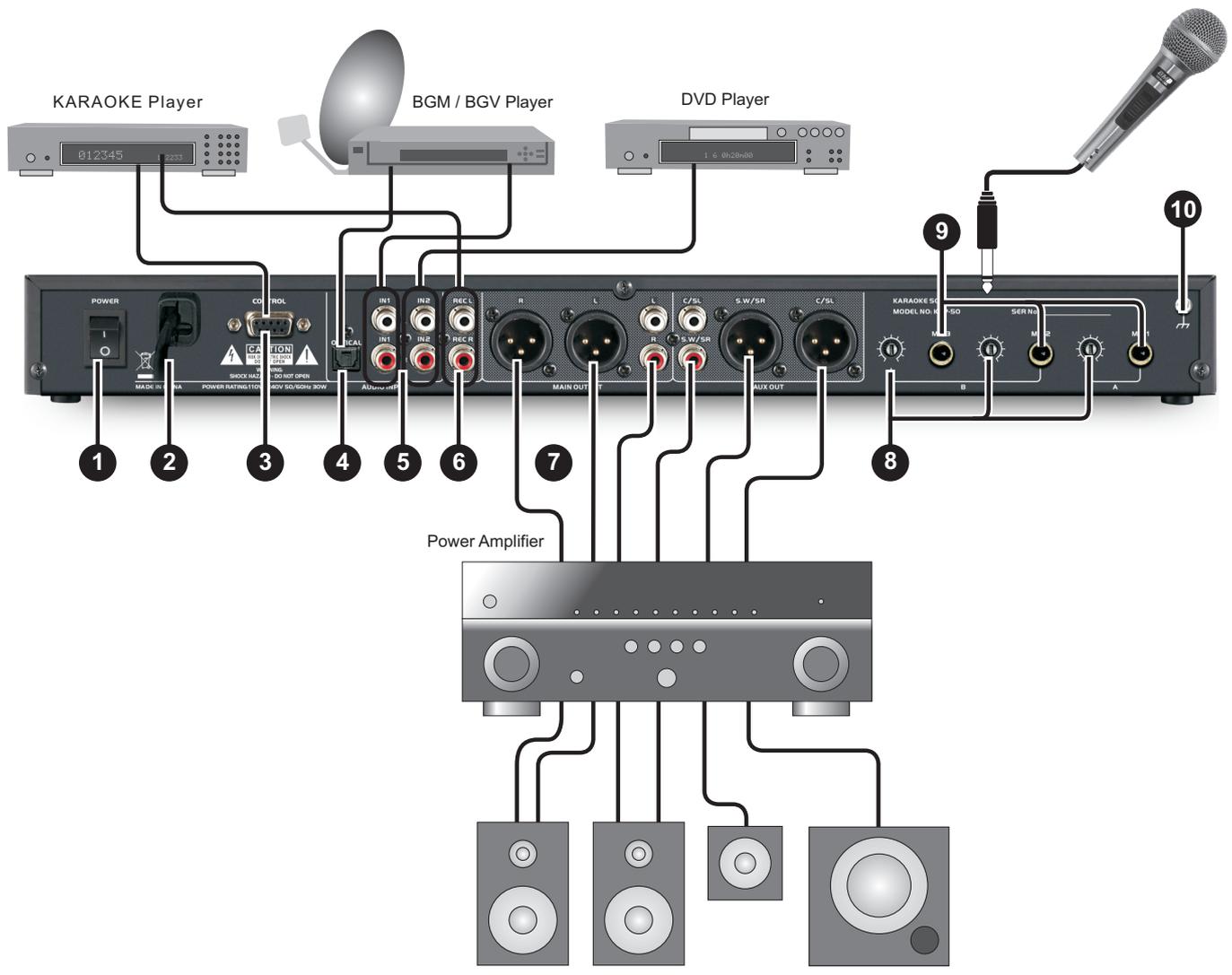
Front Panel



1	USB Port	Port for connecting maintenance PCs.	
2	[MIC] Button	Display "MIC" screen.	While holding down the [MIC] button, press the [MUSIC] button, Display "SYSTEM" screen.
	[MUSIC] Button	Display "MUSIC" screen.	
	[OUTPUT] Button	Display the "OUTPUT" screen.	
3	Display	Display various information depending on the operation.	
4	Select [▲] [▼] Button	Move the cursor position.	
5	[EXIT] Button	Return you to the previous screen. On some screens, this stops the execution of a function. In the top screen, you can press the [EXIT] button to access the key control screen. Turn the [VALUE] knob to change the pitch of the music. Press the [exit] button once again to close the screen.	
6	IR (Infrared Receiver)	Receive remote control (sold separately) operations.	
7	[VALUE] Rotary knob	Turn the knob to switch the scene or change the parameter value. Press the knob to confirm the new value or execute an operation.	

* To prevent malfunctions and equipment failure, always turn down the volume, and turn off all the units before making any connections.

Rear Panel



1	Power switch	This switches the power on and off.
2	Plug with power cord	Connect the power outlet.
3	CONTROL Connector	Accept connection of the karaoke player. This allows you to control KSP-50 from the karaoke player.
4	OPTICAL Connector	Connect an external source device via fiber.
5	AUDIO INPUT (IN1, IN2) Jacks	Accepts connection of the audio output plugs from external device (such as a karaoke player or DVD player).
6	RECOUT Jacks	Accepts connection of the audio output plugs from external device (such as a karaoke player).
7	AUDIO OUTPUT (FRONT-L, FRONT-R, SUR-L/CENTER, SUR-R/SUBWOOFER) Connector	Accept connection of commercial power amplifiers. The device is equipped with a balanced (XLR) connector, and the right side shows the jacks for these jacks. Before connect, view the wiring diagram of the other devices you want to connect firstly.
8	[GAIN] Knob	Adjust the input sensitivity of MIC 1-3.
9	MIC 1 – MIC 3 Jack	Connect the microphone.
10	Ground terminal	Connect it to the ground (see page 3 for details).



*To prevent malfunctions and equipment failure, always turn down the volume, and turn off all the units before making any connections.

Basic operation

This section introduces the basic operations for using the KSP-50.

Turning the Power On

Once everything is properly connected (page 6, page 7), be sure to follow the procedure below to turn on their power. If you turn on equipment in the wrong order, you risk causing malfunction or equipment failure.

Memo:

This unit is equipped with a protective circuit. A brief interval(a few seconds) after turning the unit on is required before it will operate normally.

Before turning the unit on/off, always be sure to turn the volume down. Even with the volume turned down, you might hear some sound when switching the unit on/off. However, this is normal and does not indicate a malfunction.

1. Turn on the KSP-50's power switch [].
2. Turn on the power of all peripherals devices except the power amplifier.
3. Turn the volume of the power amplifier all the way down.
4. Turn on the power amplifier.
5. Adjust the volume of the power amplifier.

Turning the Power Off

1. Turn the volume of the power amplifier all the way down.
2. Turn off the power amplifier.
3. Turn off the power of KSP-50 [], then turn off the power of peripheral devices.

Top Screen

This screen is the basic screen that appears when you turn on the power.

Scene	1		IN1
Music			0.0dB
MIC			0.0dB
Effect			Mute
FBE			Off

MEMO:

The explanations in this manual include illustrations that depict what should typically be shown by the display. However, that your unit may incorporate a newer, enhanced version of the system, so what you actually see in the display may not always match what appears in the manual.

Moving the Cursor

There are multiple parameters(settings) and selections on the screen. Press the SELECT [▲] [▼] buttons to move the cursor. The parameter value selected with the cursor will be highlighted.

Displaying the Advanced Settings Screen

Move the cursor to an item that begins with "▼" and press the [ENTER] button; The advanced settings screen will appear. However, the advanced settings screen will not appear if the setting is "Off".



Changing a Value

Before turning the unit on/off, always be sure to turn the volume down. Even with the volume turned down, you might hear some sound when switching the unit on/off. However, this is normal and does not indicate a malfunction.

Conventions for describing procedures

In this document, an operation such as pressing the [MUSIC] button, selecting "Equalize", and then pressing the [ENTER] button is described as shown below.

Example:

1. Follow these steps: [MUSIC] button - "Equalize" - [ENTER] button

In this document, an operating such as pressing the [MIC] button and [MUSIC] button at the same time is described as shown below.

Example:

1. Press [MIC] + [MUSIC] (SYSTEM) buttons.

Editing the KSP-50's Basic Parameters

Parameters	Value	Explanation
Music	Mute, -60dB-+12dB, Step 0.5dB	Music volume
MIC	Mute, -30dB-+12dB, Step 0.5dB	MIC volume
Effect	Mute, -30dB-+6dB, Step 0.5dB	Effect volume
Feedback Eliminator	Off, 1-5 level	The higher the level, the stronger the feedback suppression

MEMO:

You can use the "maximum volume" to specify the upper limit of these settings. This can prevent excessive playback volume that may occur if the MASTER, MUSIC or MIC parameters are changed inadvertently. Please check manual instruction "system - maximum volume" for details.

Convenient Functions

Scene Save

1. Operation as below, [MIC]+[MUSIC](SYSTEM) button->"Scene Save"->[ENTER]. "Scene Save" screen appears.
2. Rotate [VALUE] button to select the program number need to be saved, click [ENTER].

MEMO:

It will block the program if the previous program number exist.

Scene Save	
Save to Scene 1 ?	
[ENTER] :	OK
[EXIT] :	Cancel

Scene Recall

1. Operation as below, [MIC]+[MUSIC](SYSTEM) button->" Scene Recall"->[ENTER]. "Scene Recall" screen appears.
2. Rotate [VALUE] to select program number need to be recall, click [ENTER] to recall.

MEMO:

It will show failure if recalling program is invalid.

Scene Recall	
Recall Scene 1 ?	
[ENTER] :	OK
[EXIT] :	Cancel

Music Tone Change and Automatic Restore

When the user wishes to change the accompaniment pitch when sings, the tone of the music accompaniment can be adjusted manually.

The procedure is as below:

Enter the "OPEN" (Click [EXIT] to back if other screen appears)->[EXIT]-> Rotate[VALUE].

It will automatic restore the original tone when detect of the switch to the next song.

The settings are as below:

[MIC]+[MUSIC](SYSTEM) button ->" Key Resume (ON)->[ENTER] to set threshold and time.

Sing/Disco mode and Auto Change Function

Operation as below, [MIC]+[MUSIC](SYSTEM) button ->"Sing/Disco"

SYSTEM	
Startup Scene	User 1
▼ Scene Save	
▼ Scene Recall	
▼ Sing /Disco	Sing

1. Explanations:

- 1) When the MIC is in input, the output channel is in singing mode, the setting is suitable for singing.
- 2) The MIC has no input more than a certain time (0~60 seconds), the output channel automatically switches to the "Disco" mode, the setting is suitable for Dancing.

2. The setting method:

- 1) Set to Sing mode, and then set the output channel parameters for singing
- 2) Set to Disco mode, and then set the output channel parameters for Dancing
- 3) Set to auto mode

3. Set the "threshold" and "time" to make the switch more in line with the real use:

- 1) MIC detection threshold: when the level detected by the MIC is greater than this threshold, there is MIC input, otherwise the input is judged to be "no"
- 2) MIC detection time: when the MIC has no input time longer than set time, the output channel automatically switches to the "DISCO" mode.

MEMO:

Interface software can copy the "SING" mode parameters to the "DISCO" mode.

Returning Settings to Default Factory Settings(Factory Reset)

1. Operation as following steps: [MIC]+[MUSIC] (SYSTEM) button ->Factory Reset->[ENTER] button. The "Factory Reset" screen appears.

Factory Reset	
Factory Reset ?	
[ENTER] :	OK
[EXIT] :	Cancel

2. Press the [ENTER] button (press [EXIT] return to the previous interface), to return to the default factory settings.

MEMO:

If you restore the default factory settings, previously saved settings will be lost.

Changing the Settings

Press the buttons shown below to change the settings of KSP-50. See the following pages for more information.

Setting	Operation
Music Parameter	Press the [MUSIC] button.
MIC Parameter	Press the [MIC] button.
Output Parameter	Press the [OUTPUT] button.
System Parameter	Press the [MIC]+[MUSIC] buttons.

MEMO:

For parameters shown with prefixed by ▼ in the display, you can move the cursors to that parameter and press the [ENTER] button to access advanced settings. However, the advanced setting screen will not appear if the setting is "off". Press the [EXIT] button to go back to the previous screen.

Auto Return Function

1. Under the MIC main menu, Music main menu, Output menu, System main menu, press [EXIT] to return to the main interface.
2. In other menus press [EXIT] to return to the last level menu.
3. In the non-open interface without any operation in 1 minutes, return to the open interface automatically.

Setting the MIC Parameters

MIC->Effect

Parameter	Value	Explanation
Effect Level	Mute, -30dB~+6dB, step 0.5dB	
Direct Level	0%~100%, step 1%	
Direct Phase	0°/ 180°	

MIC->High and Low Cut

Parameter	Value	Explanation
Low Cut Frequency	19.7Hz ~ 20200Hz	
Low Cut Type	Buttw, Bessel	
Low Cut Slope	12dB, 18dB, 24dB	
High Cut Frequency	19.7Hz ~ 20200Hz	
High Cut Type	Buttw, Bessel	
High Cut Slope	12dB, 18dB, 24dB	

MIC(A/B)

Parameter	Value	Explanation
Link	Yes/No	
Volume	Mute, -30dB~+12dB, step 0.5dB	MIC Volume
MIC(A/B) volume	Mute, -30dB~0dB, step 0.5dB	MIC(A/B) Volume
Noise Gate	Off, -90dB~-42dB, step 1dB	
Low Cut Frequency	19.7Hz ~ 20200Hz	
Low Cut Type	Buttw, Bessel	
Low Cut Slope	12dB, 18dB, 24dB	
High Cut Frequency	19.7Hz ~ 20200Hz	
high Cut Type	Buttw, Bessel	
High Cut Slope	12dB, 18dB, 24dB	
EQ Type	PEQ/LS12/HS12(parameter/low shelf/high shelf)	
EQ Frequency	19.7Hz ~ 20200Hz	
EQ Gain	-24dB~+12dB, step 0.1dB	
EQ Bandwidth	0.011 ~ 3.595	

MIC->EQ

Parameter	Value	Explanation
EQ 1Type	PEQ/LS12/HS12	
EQ 1 Switch	On/Flat	EQ cannot be adjusted when EQ is bypass
EQ 1 Frequency	19.7Hz ~ 20200Hz	
EQ 1 Gain	-24dB~+12dB, step 0.1dB	
EQ 1 Bandwidth	0.011 ~ 3.595	There is no parameter when type is LS12/HS12
EQ 15 Type	PEQ/LS12/HS12	
EQ 15 Switch	On/Flat	EQ cannot be adjusted when EQ is bypass
EQ 15 Frequency	19.7Hz ~ 20200Hz	
EQ 15 Gain	-24dB~+12dB, step 0.1dB	
EQ 15 Bandwidth	0.011 ~ 3.595	No parameter when type is LS12/HS12

MEMO:

MIC totally 15 bands EQ

Changing the Settings

Echo

Parameter	Value	Explanation
Volume	Mute, -30dB~0dB, step 0.5dB	Echo volume
Phase	0°/180°	Echo phase
Mode	Mono/Stereo/DAUL (Double-echo)	need to adjust separately under Double-echo mode
Echo to Reverb	On/Off	
Pre-delay	0mS~250mS, step 1mS	
Delay	100mS~600mS, step 2mS	
Echo time	0%~90%, step 1%	

Echo-> High and Low Cut

Parameter	Value	Explanation
Low Cut Frequency	19.7Hz ~ 1000Hz	
High Cut Frequency	8000Hz ~ 20200Hz	

Echo->EQ

Parameter	Value	Explanation
EQ 1Type	PEQ/LS12/HS12	
EQ 1 Switch	On/Flat	EQ cannot be adjusted when EQ is bypass
EQ 1 Frequency	19.7Hz ~ 20200Hz	
EQ 1 Gain	-24dB~+12dB, step 0.1dB	
EQ 1 Bandwidth	0.011 ~ 3.595	There is no parameter when type is LS12/HS12
EQ 5 Type	PEQ/LS12/HS12	
EQ 5 switch	On/Flat	EQ cannot be adjusted when EQ is bypass
EQ 5 Frequency	19.7Hz ~ 20200Hz	
EQ 5 Gain	-24dB~+12dB, step 0.1dB	
EQ 5 Bandwidth	0.011 ~ 3.595	No parameter when type is LS12/HS12

MEMO:

MIC totally 5 bands EQ

Reverb

Parameter	Value	Explanation
Volume	Mute, -30dB~0dB, step 0.5dB	Reverb volume
Phase	0°/180°	Reverb Phase
Type	Off/room/small hall/ big hall/church/ big church/human voice	
Pre-delay	0mS~250mS, step 1mS	
Time	0.5S~6S, step 0.1S	Reverb Time
Warmth	0~100%, step 1%	

Reverb-> High and Low Cut

Parameter	Value	Explanation
Low Cut Frequency	19.7Hz ~ 1000Hz	
Low Cut Frequency	8000Hz ~ 20200Hz	

Reverb->EQ

Parameter	Value	Explanation
EQ 1Type	PEQ/LS12/HS12	
EQ 1 Switch	On/Flat	EQ cannot be adjusted when EQ is bypass
EQ 1 Frequency	19.7Hz ~ 20200Hz	
EQ 1 Gain	-24dB~+12dB, step 0.1dB	
EQ 1 Bandwidth	0.011 ~ 3.595	There is no parameter when type is LS12/HS12
EQ 5 Type	PEQ/LS12/HS12	
EQ 5 Switch	On/Flat	EQ cannot be adjusted when EQ is bypass
EQ 5 Frequency	19.7Hz ~ 20200Hz	
EQ 5 Gain	-24dB~+12dB, step 0.1dB	
EQ 5 Bandwidth	0.011 ~ 3.595	No parameter when type is LS12/HS12

MEMO:

Reverb totally 5 bands EQ

Setting Music Parameters

Parameter	Value	Explanation
Volume	Mute, -60dB~+12dB, step 0.5dB	Music volume
Signal Voice Source adjustment	-12dB~-0dB, step 3dB	
Input Select	IN1/IN2/OPT(optical)	Music input
Noise Gate	Off, -90dB~-42dB, step 1dB	

Music->EQ

Parameter	Value	Explanation
EQ 1Type	PEQ/LS12/HS12	
EQ 1 Switch	On/Flat	EQ cannot be adjusted when EQ is bypass
EQ 1 Frequency	19.7Hz ~ 20200Hz	
EQ 1 Gain	-24dB~+12dB, step 0.1dB	
EQ 1 Bandwidth	0.011 ~ 3.595	There is no parameter when type is LS12/HS12
EQ 10 Type	PEQ/LS12/HS12	
EQ 10 switch	On/Flat	EQ cannot be adjusted when EQ is bypass
EQ 10 Frequency	19.7Hz ~ 20200Hz	
EQ 10 Gain	-24dB~+12dB, step 0.1dB	
EQ 10 Bandwidth	0.011 ~ 3.595	No parameter when type is LS12/HS12

MEMO:
Music totally 10 bands EQ

Setting Output Parameters

Main Output Parameter

Parameter	Value	Explanation
Volume	Mute, -30dB~+6dB, step 0.5dB	Main output volume
Left Delay switch	On/Off	Can't adjust Left Delay Time under Off
Left Delay time	0ms~30ms, step 0.1ms	
Right Delay switch	On/Off	
Right delay time	0ms~30ms, step 0.1ms	Can't adjust Right Delay Time under Off
Left Phase	0°/180°	
Right Phase	0°/180°	

Main output->Matrix Volume

Parameter	Value	Explanation
Direct sound	Mute, -30dB~0dB, step 0.5dB	Main Output Direct Sound volume
Music	Mute, -30dB~0dB, step 0.5dB	Main Output Music volume
Echo	Mute, -30dB~0dB, step 0.5dB	Main Output Echo volume
Reverb	Mute, -30dB~0dB, step 0.5dB	Main Output Reverb volume

Main output ->EQ

Parameter	Value	Explanation
EQ 1Type	PEQ/LS12/HS12	
EQ 1 Switch	On/Flat	EQ cannot be adjusted when EQ is bypass
EQ 1 Frequency	19.7Hz ~ 20200Hz	
EQ 1 Gain	-24dB~+12dB, step 0.1dB	
EQ 1 Bandwidth	0.011 ~ 3.595	There is no parameter when type is LS12/HS12
EQ 10 Type	PEQ/LS12/HS12	
EQ 10 Switch	On/Flat	EQ cannot be adjusted when EQ is bypass
EQ 10 Frequency	19.7Hz ~ 20200Hz	
EQ 10 Gain	-24dB~+12dB, step 0.1dB	
EQ 10 Bandwidth	0.011 ~ 3.595	No parameter when type is LS12/HS12

MEMO:
Music totally 10 bands EQ

Changing the Settings

Center(Surround Left) Output

Parameter	Value	Explanation
Volume	Mute, -30dB~6dB, step 0.5dB	
Delay switch	On/Off	Can't adjust delay time under Off
Delay time	0ms~100ms, step 0.1ms	
Phase	0°/180°	

Center(Surround Left)->Matrix Volume

Parameter	Value	Explanation
Direct Sound	Mute, -30dB~0dB, step 0.5dB	Center(Surround Left) Direct Sound volume
Music	Mute, -30dB~0dB, step 0.5dB	Center(Surround Left) Music volume
Echo	Mute, -30dB~0dB, step 0.5dB	Center(Surround Left) Echo volume
Reverb	Mute, -30dB~0dB, step 0.5dB	Center(Surround Left) Reverb volume

Center(Surround Left)->EQ

Parameter	Value	Explanation
EQ 1Type	PEQ/LS12/HS12	
EQ 1 Switch	On/Flat	EQ cannot be adjusted when EQ is bypass
EQ 1 Frequency	19.7Hz ~ 20200Hz	
EQ 1 Gain	-24dB~+12dB, step 0.1dB	
EQ 1 Bandwidth	0.011 ~ 3.595	There is no parameter when type is LS12/HS12
EQ 3 Type	PEQ/LS12/HS12	
EQ 3 Switch	On/Flat	EQ cannot be adjusted when EQ is bypass
EQ 3 Frequency	19.7Hz ~ 20200Hz	
EQ 3 Gain	-24dB~+12dB, step 0.1dB	
EQ 3 Bandwidth	0.011 ~ 3.595	There is No parameter when type is LS12/HS12

MEMO:

Center(Surround Left) totally 3 bands EQ

Center->High and Low Cut

Parameter	Value	Explanation
Low Cut Frequency	19.7Hz ~ 303Hz	
Low Cut Type	Buttw, Bessel	
Low Cut Slope	12dB, 18dB, 24dB	

Subwoofer (Surround Right) Output

Parameter	Value	Explanation
Volume	Mute, -30dB~+10dB, step 0.5dB	
Delay Switch	On/Off	Can't adjust delay time under Off
Delay Time	0ms~100ms, step 0.1ms	
Delay Phase	0°/180°	

Subwoofer(Surround Right)->EQ

Parameter	Value	Explanation
EQ 1Type	PEQ/LS12/HS12	
EQ 1 Switch	On/Flat	EQ cannot be adjusted when EQ is bypass
EQ 1 Frequency	19.7Hz ~ 20200Hz	
EQ 1 Gain	-24dB~+12dB, step 0.1dB	
EQ 1 Bandwidth	0.011 ~ 3.595	There is no parameter when type is LS12/HS12
EQ 3 Type	PEQ/LS12/HS12	
EQ 3 Switch	On/Flat	EQ cannot be adjusted when EQ is bypass
EQ 3 Frequency	19.7Hz ~ 20200Hz	
EQ 3 Gain	-24dB~+12dB, step 0.1dB	
EQ 3 Bandwidth	0.011~3.595	There is No parameter when type is LS12/HS12

MEMO:

Subwoofer(Surround Right) totally 3 bands EQ

Subwoofer->Matrix Volume

Parameter	Value	Explanation
Direct sound	Mute, -30dB~0dB, step 0.5dB	Sub Direct volume(Surround Right)
Music	Mute, -30dB~0dB, step 0.5dB	Sub Music volume(Surround Right)
Effect	Mute, -30dB~0dB, step 0.5dB	Effect Volume (Subwoofer Only)
Echo	Mute, -30dB~0dB, step 0.5dB	Echo Volume (Surround Right Only)
Reverb	Mute, -30dB~0dB, step 0.5dB	Reverb volume (Surround Right Only)

Subwoofer ->Compressor (Subwoofer Mode Only)

Parameter	Value	Explanation
Switch	On, Off	Compressor Switch
Threshold	-40dB~0dB, step 0.5dB	Compressor Threshold
Ratio	1.00~128,step 2 (0.25n), n=0,1,2....32	Compressor Ratio
Attach	0mS~1000mS, step 1mS	Only GUI Adjust
Release	0mS~1000mS, step 1mS	Only GUI Adjust

Subwoofer ->High and Low Cut

Parameter	Value	Explanation
Low Cut Frequency	19.7Hz ~ 1000Hz	
Low Cut Type	Buttw, Bessel, LinkR	
Low Cut Slope	12dB, 18dB, 24dB	
High Cut Frequency	35.1Hz ~ 2000Hz	
High Cut Type	Buttw, Bessel, LinkR	
High Cut Slope	12dB, 18dB, 24dB	

Setting System Parameters

Setting up the Start-up Scene

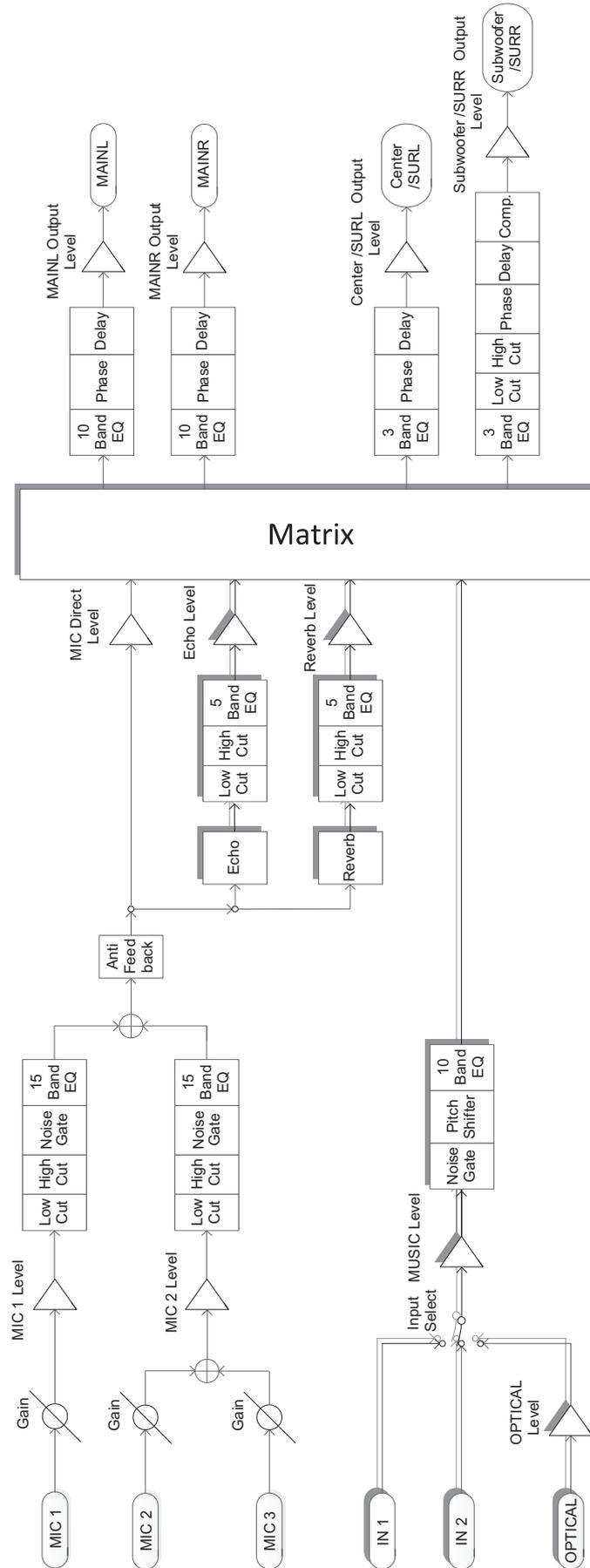
Start-up Scene	Features
Last	The status of Re-start up is the same as previous Power off. Convenient for debug, and prevent suddenly cut off.
User	The status of Re-start up is User Scene 1-4 whatever any parameters adjusted, Convenient for DJ work.

MEMO:

When the User Scene is set to recall and the User Scene does not exist, it will automatically recall the state before shutdown.

System -> Maximun Volume and EQ Gain

Parameter	Value	Explanation
Music	Mute, -30dB~+12dB, step 0.5dB	Music Maximum Level
Music EQ	+6.0dB~+12.0dB, step 0.1dB	Music EQ Maximum Level
MIC	Mute,-30dB~+12dB, step 0.5dB	MIC Maximum Level
MIC EQ	+6.0dB~+12.0dB, step 0.1dB	MIC EQ Maximum Level
Effect	Mute,-30dB~+6dB, step 0.5dB	Effect Maximum Level
Effect EQ	+6.0dB~+12.0dB, step 0.1dB	Effect EQ Maximum Level
Main Output	Mute,-30dB~+6dB, step 0.5dB	Main Output Maximum Level
Main Output EQ	+6.0dB~+12.0dB, step 0.1dB	Main Output EQ Maximum Level
Center/SUR Left	Mute,-30dB~+6dB, step 0.5dB	Center/SUR Left Maximum Level
Center/SUR Left EQ	+6.0dB~+12.0dB, step 0.1dB	Center/SUR Left EQ Maximum Level
SUB/SUR Right	Mute,-30dB~+10dB, step 0.5dB	SUB/SUR Right Maximum Level
Center/SUR Right EQ	+6.0dB~+12.0dB, step 0.1dB	Center/SUR Right EQ Maximum Level



Specifications

BMB KSP-50: KARAOKE SOUND PROCESSOR

Nominal Input Level	MIC 1-MIC 3	-37 – -6dBu
	AUDIO INPUT (IN1, IN2)	0dBu
Max Input Level	MIC 1-MIC 3	6dBu
	AUDIO INPUT (IN1, IN2)	+14dBu
Input Impedance	MIC 1–MIC 3	3.3kΩ
	AUDIO INPUT (IN1, IN2)	10kΩ
Nominal Output Level	AUDIO OUTPUT (FRONT-L, FRONT-R, SUR-L/CENTER, SUR-R/SUBWOOFER)	+5dBu
Max Output Level	AUDIO OUTPUT (FRONT-L, FRONT-R, SUR-L/CENTER, SUR-R/SUBWOOFER)	+14dBu
Output Impedance	AUDIO OUTPUT(FRONT-L, FRONT-R, SUR-L/CENTER, SUR-R/SUBWOOFER)	150Ω (Balanced)
Connectors	MIC 1–MIC 3 jacks	1/4 inch phone type
	AUDIO OUPUT (FRONT-L, FRONT-R, SUR-L/CENTER, SUR-R/SUBWOOFER) connectors	XLR type
	AUDIO INPUT IN 1 (L, R) jacks	RCA phone type
	AUDIO INPUT IN 2 (L, R) jacks	RCA phone type
	CONTROL connector	DB-9 type
	OPTICAL connector	Digital Optical Input Interface
	USB Port	USB B type (MIDI)
Display	Graphic LCD 128X64 dots	
Power Consumption	8.4W	
Dimension (W×H×D)	482(W)×161(D)×45(H)(mm)	
Weight	2.3kg	
Accessories	Owner's Manual, Registration Card	
Woring Environment Temperature	-10 to +45 °C	

WARNING

- . Shall be sufficient distances around the apparatus for sufficient ventilation.
- . The apparatus may be used in tropical and/or moderate climates.
- . The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
- . The MAINS plug is used as the disconnect device, the disconnect device shall remain readily operable.

For EU Countries



- UK** This symbol indicates that in EU countries, this product must be collected separately from household waste, as defined in each region. Products bearing this symbol must not be discarded together with household waste.
- DE** Dieses Symbol bedeutet, dass dieses Produkt in EU-Ländern getrennt vom Hausmüll gesammelt werden muss gemäß den regionalen Bestimmungen. Mit diesem Symbol gekennzeichnete Produkte dürfen nicht zusammen mit den Hausmüll entsorgt werden.
- FR** Ce symbole indique que dans les pays de l'Union européenne, ce produit doit être collecté séparément des ordures ménagères selon les directives en vigueur dans chacun de ces pays. Les produits portant ce symbole ne doivent pas être mis au rebut avec les ordures ménagères.
- IT** Questo simbolo indica che nei paesi della Comunità europea questo prodotto deve essere smaltito separatamente dai normali rifiuti domestici, secondo la legislazione in vigore in ciascun paese. I prodotti che riportano questo simbolo non devono essere smaltiti insieme ai rifiuti domestici. Ai sensi dell'art. 13 del D.Lgs. 25 luglio 2005 n. 151.
- ES** Este símbolo indica que en los países de la Unión Europea este producto debe recogerse aparte de los residuos domésticos, tal como esté regulado en cada zona. Los productos con este símbolo no se deben depositar con los residuos domésticos.
- PT** Este símbolo indica que nos países da UE, a recolha deste produto deverá ser feita separadamente do lixo doméstico, de acordo com os regulamentos de cada região. Os produtos que apresentem este símbolo não deverão ser eliminados juntamente com o lixo doméstico.
- NL** Dit symbool geeft aan dat in landen van de EU dit product gescheiden van huishoudelijk afval moet worden aangeboden, zoals bepaald per gemeente of regio. Producten die van dit symbool zijn voorzien, mogen niet samen met huishoudelijk afval worden verwijderd.
- DK** Dette symbol angiver, at i EU-lande skal dette produkt opsamles adskilt fra husholdningsaffald, som defineret i hver enkelt region. Produkter med dette symbol må ikke smides ud sammen med husholdningsaffald.
- NO** Dette symbolet indikerer at produktet må behandles som spesialavfall i EU-land, iht. til retningslinjer for den enkelte regionen, og ikke kastes sammen med vanlig husholdningsavfall. Produkter som er merket med dette symbolet, må ikke kastes sammen med vanlig husholdningsavfall.

- SE** Symbolen anger att i EU-länder måste den här produkten kasseras separat från hushållsavfall, i enlighet med varje regions bestämmelser. Produkter med den här symbolen får inte kasseras tillsammans med hushållsavfall.
- FI** Tämä merkintä ilmaisee, että tuote on EU-maissa kerättävä erillään kotitalousjätteistä kunkin alueen voimassa olevien määräysten mukaisesti. Tällä merkinnällä varustettuja tuotteita ei saa hävittää kotitalousjätteiden mukana.
- HU** Ez a szimbólum azt jelenti, hogy az Európai Unióban ezt a terméket a háztartási hulladéktól elkülönítve, az adott régióban érvényes szabályozás szerint kell gyűjteni. Az ezzel a szimbóllummal ellátott termékeket nem szabad a háztartási hulladék közé dobni.
- PL** Symbol oznacza, że zgodnie z regulacjami w odpowiednim regionie, w krajach UE produktu nie należy wyrzucać z odpadami domowymi. Produktów opatrzonych tym symbolem nie można utylizować razem z odpadami domowymi.
- CZ** Tento symbol udává, že v zemích EU musí být tento výrobek sbírán odděleně od domácího odpadu, jak je určeno pro každý region. Výrobky nesoucí tento symbol se nesmí vyhazovat spolu s domácím odpadem.
- SK** Tento symbol vyjadruje, že v krajinách EÚ sa musí zber tohto produktu vykonávať oddelene od domového odpadu, podľa nariadení platných v konkrétnej krajine. Produkty s týmto symbolom sa nesmú vyhazovať spolu s domovým odpadom.
- EE** See sümbol näitab, et EL-i maades tuleb see toode olemprügist eraldi koguda, nii nagu on igas piirkonnas määratletud. Selle sümboliga märgitud tooteid ei tohi ära visata koos olmeprügiga.
- LT** Šis simbolis rodo, kad ES šalyse šis produktas turi būti surenkamas atskirai nuo buitinių atliekų, kaip nustatyta kiekviename regione. Šiuo simboliu paženklinėti produktai neturi būti išmetami kartu su buitiniams atliekomis.
- LV** Šis simbols norāda, ka ES valstīs šo produktu jāievāc atsevišķi no mājsaimniecības atkritumiem, kā noteikts katrā reģionā. Produktus ar šo simbolu nedrīkst izmest kopā ar mājsaimniecības atkritumiem.
- SI** Ta simbol označuje, da je treba proizvod v državah EU zbirati ločeno od gospodinskih odpadkov, tako kot je določeno v vsaki regiji. Proizvoda s tem znakom ni dovoljeno odlagati skupaj z gospodinskimi odpadki.
- GR** Το σύμβολο αυτό υποδηλώνει ότι στις χώρες της Ε.Ε. το συγκεκριμένο προϊόν πρέπει να συλλέγεται χωριστά από τα υπόλοιπα οικιακά απορρίμματα, σύμφωνα με όσα προβλέπονται σε κάθε περιοχή. Τα προϊόντα που φέρουν το συγκεκριμένο σύμβολο δεν πρέπει να απορρίπτονται μαζί με τα οικιακά απορρίμματα.