



# KA DIGITAL PROCESSOR AMPLIFIER

## User's Manual



**CAUTION**  
READ  
INSTRUCTIONS  
BEFORE OPERATING

Contact Information  
[support@singeasy.com](mailto:support@singeasy.com)  
<https://singeasy.com>

## IMPORTANT SAFETY INFORMATION

### WARNING FOR YOUR PROTECTION READ THE FOLLOWING:

KEEP THESE INSTRUCTIONS  
HEED ALL WARNINGS  
FOLLOW ALL INSTRUCTIONS

The apparatus shall not be exposed to dripping or splashing liquid and no object filled with liquid, such as vases, shall be placed on the apparatus.

CLEAN ONLY WITH A DRY CLOTH.

DO NOT BLOCK ANY OF THE VENTILATION OPENINGS. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. DO NOT INSTALL NEAR ANY HEAT SOURCES SUCH AS RADIATORS, HEAT REGISTERS, STOVES, OR OTHER APPARATUS (INCLUDING AMPLIFIERS) THAT PRODUCE HEAT. ONLY USE ATTACHMENTS/ACCESSORIES SPECIFIED BY THE MANUFACTURER.

UNPLUG THIS APPARATUS DURING LIGHTNING STORMS OR WHEN UNUSED FOR LONG PERIODS OF TIME.

Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or third prong are provided for your safety. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

Use only with the cart stand, tripod bracket, or table specified by the manufacture, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

**POWER ON/OFF SWITCH:** If the equipment has a Power switch, the Power switch used in this piece of equipment DOES NOT break the connection from the mains.

**MAINS DISCONNECT:** The plug shall remain readily operable. For rackmount or installation where plug is not accessible, an all-pole mains switch with a contact separation of at least 3 mm in each pole shall be incorporated into the electrical installation of the rack or building.

**FOR UNITS EQUIPPED WITH EXTERNALLY ACCESSIBLE FUSE RECEPTACLE:**  
Replace fuse with same type and rating only.

**MULTIPLE-INPUT VOLTAGE:** This equipment may require the use of a different line cord, attachment plug, or both, depending on the available power source at installation. Connect this equipment only to the power source indicated on the equipment rear panel. To reduce the risk of fire or electric shock, refer servicing to qualified service personnel or equivalent.

If connected to 240V supply, a suitable CSA/UL certified power cord shall be used for this supply.



**WARNING:** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE

The symbols shown above are internationally accepted symbols that warn of potential hazards with electrical products. The lightning flash with arrowpoint in an equilateral triangle means that there are dangerous voltages present within the unit. The exclamation point in an equilateral triangle indicates that it is necessary for the user to refer to the owner's manual.

These symbols warn that there are no user serviceable parts inside the unit. Do not open the unit. Do not attempt to service the unit yourself. Refer all servicing to qualified personnel. Opening the chassis for any reason will void the manufacturer's warranty. Do not get the unit wet. If liquid is spilled on the unit, shut it off immediately and take it to a dealer for service. Disconnect the unit during storms to prevent damage.

## IMPORTANT SAFETY INFORMATION

### SAFETY INSTRUCTIONS

NOTICE FOR CUSTOMERS IF YOUR UNIT IS EQUIPPED WITH A POWER CORD.

WARNING: THIS APPLIANCE SHALL BE CONNECTED TO A MAINS SOCKET OUTLET WITH A PROTECTIVE EARTHING CONNECTION.

The cores in the mains lead are coloured in accordance with the following code:

GREEN and YELLOW - Earth BLUE - Neutral BROWN – Live

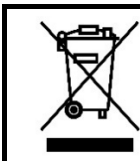
As colours of the cores in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

- The core which is coloured green and yellow must be connected to the terminal in the plug marked with the letter E, or with the earth symbol, or coloured green, or green and yellow.
- The core which is coloured blue must be connected to the terminal marked N or coloured black.
- The core which is coloured brown must be connected to the terminal marked L or coloured red.

This equipment may require the use of a different line cord, attachment plug, or both, depending on the available power source at installation. If the attachment plug needs to be changed, refer servicing to qualified service personnel who should refer to the table below. The green/yellow wire shall be connected directly to the units chassis.

CONDUCTOR		WIRE COLOR	
		Normal	Alt
L	LIVE	BROWN	BLACK
N	NEUTRAL	BLUE	WHITE
E	EARTH GND	GREEN/YELLOW	GREEN

WARNING: If the ground is defeated, certain fault conditions in the unit or in the system to which it is connected can result in full line voltage between chassis and earth ground. Severe injury or death can then result if the chassis and earth ground are touched simultaneously



If you want to dispose this product, do not mix it with general household waste. There is a separate collection system for used electronic products in accordance with legislation that requires proper treatment, recovery and recycling

Private household in the 25 member states of the EU, in Switzerland and Norway many return their used electronic products free of charge to designated collection facilities or to a retailer (if you purchase a similar new one).

For countries not mentioned above, please contact your local authorities for a correct method of disposal. By doing so you will ensure that your disposed product undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health.

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## 1.1 Welcome

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Congratulations on your purchase of the Sing Easy KA Series. The KA Series is a simple to use full-featured digital processor with integrated amplifier, designed specifically for karaoke installations. With a variety of audio connectivity options, effects processing, and REC and PRE outputs, the KA provides you with all the connectivity and processing required for an amazing karaoke experience.

### Features

- High-performance 32-bit DSP and A/D and D/A Converter, 24 bit, 48kHz HD Audio processing
- Up to High-efficiency 800-watt, two channels Class D amplifier
- Four levels of AFE (Automatic Feedback Elimination) technology
- Large TFT display for settings information
- Two RCA inputs and one optical input
- Bluetooth and USB inputs offer flexible music connectivity
- Independent microphone volume controls
- Bass, mid, and treble EQ for music and microphone inputs
- USB port on the front panel for MP3 playback

### Package Contents

- Sing Easy KA digital processor with integrated amplifier
- Owner's Manual
- Power Cable
- Infrared Remote Controller

### How to Use This Manual

This manual provides you with the necessary information to safely and correctly setup and operate your amplifier. It does not cover every aspect of installation, setup or operation that might occur under every condition. For additional information, please contact technical support, your system installer or retailer.

We strongly recommend you read all instructions, warnings and cautions contained in this manual. Also for your protection, please save your bill of sale — it's your official proof of purchase.

## 1.2 Contact Info

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### On the World Wide Web:

[www.singeasy.com](http://www.singeasy.com)

### Professional Contacts, Outside the US:

Contact the Sing Easy Distributor in your area. A complete list of Sing Easy international distributors is provided on our website @ [www.singeasy.com](http://www.singeasy.com)

## 2.1 Front Panel Features

**1 Power Switch**

- Amplifier is on when the switch is in the UP position.

**2 Echo Level Control**

- Rotate to adjust the effect volume.

**3 Mic Level Control**

- Rotate to adjust the mic volume.

**4 Music Level Control**

- Rotate to adjust the music volume.

**5 Music Input Selection, Pitch/Key and FBX Level (on the left)****LCD Screen (in the middle)**

- This LCD display allow you to easily see all the configuration in a single page.

**Repeat, Play, Next, Previous and Mode Buttons (on the right)****6 IR sensor****7 USB Port for MP3 playback****8 Microphone volume control**

- Use a Philips screwdriver to adjust the microphone volume.

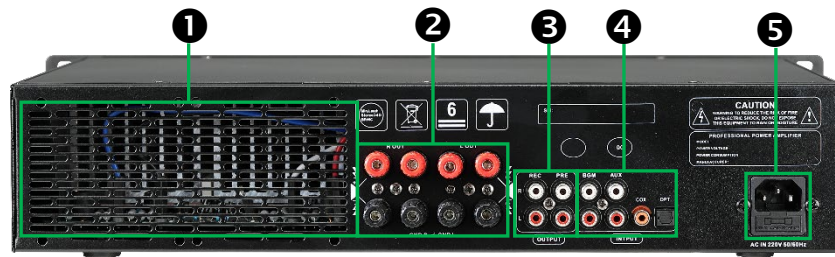
**Microphone inputs****9 Bass, Mid and Treble EQ**

- Use a Philips screwdriver to adjust the EQ.

**10 Echo Delay**

- Use a Philips screwdriver to adjust the Echo Delay.

## 2.2 Back Panel Features



- |          |   |
|----------|---|
| <b>1</b> | <b>Cooling Vents</b><br>Front-to-rear forced airflow.   |
| <b>2</b> | <b>Binding Post Output Jacks</b><br>One pair per channel; accept banana plugs, spade lugs or bare wire. |
| <b>3</b> | <b>REC and PRE Outputs</b>  |
| <b>4</b> | <b>Analog BGM, AUX, Coaxial, and Optical Inputs</b>   |
| <b>5</b> | <b>IEC Power Connector &amp; Fuse Holder</b>  |

## 2.3 Protection Features

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KA Series amplifiers provides extensive protection including output current limiting, thermal protection, and circuit breaker.

### 1. Output Current Limiting

Output Current Limiting circuitry protects the amplifier output stage for damage caused by short-circuit loads.

### 2. Thermal Protection

The Thermal Protection circuit will activate if the internal heatsink temperature exceeds proper operating temperatures (85 °C or 185 °F).

When the heatsink temperature has fallen to a safe level (75°C to 80°C or 167°F to 176°F), this protection circuit will automatically be reset. Principle causes of thermal protection are:

- 1) Inadequate ventilation of the equipment rack
- 2) Incorrect load impedance
- 3) Output cable short circuit
- 4) Blocked air vent
- 5) Heatsinks in need of cleaning
- 6) Cooling fan failure.

The cause of your amplifier's thermal protection state should be determined and corrected as soon as possible. Without correction, the Thermal Protection circuit will typically reactivate.

### 3. Fuse Holder

The high-voltage power supplies of your Sing Easy amplifier are protected by a fuse.



### 3.1 Get Started

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#### Choose Output Wire and Connectors

Sing Easy recommends using professionally wired, high quality, two-conductor, heavy gauge speaker wire and connectors.

You may use banana plugs, spade lugs, or bare wire for your output connectors. To prevent the possibility of short-circuits, wrap or otherwise insulate exposed loudspeaker cable connectors.

Using the guidelines below, select the appropriate size of wire based on the distance from amplifier to speaker.

Distance	Wire Size
up to 7.5m or 25 ft.	16 AWG
7.6 to 12m or 26-40 ft.	14 AWG
12.2 to 18m or 41-60 ft.	12 AWG
18.1m to 30m or 61-100 ft.	10 AWG
31.1 to 45m or 101-150 ft.	8 AWG
45.1 to 76m or 151-250 ft.	6 AWG

**CAUTION: Never use shielded cable for output wiring.**

## 3.2 Connect Your KA Series



1. Power on all audio output devices then power on the KA Series.
2. While playing back audio, slowly increase the volume of the KA Series to the desired listening level.
3. When powering off the system, remember to first power off the KA Series to avoid speakers clipping.

### 3.3 Connect to AC Mains

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Connect the KA Series to the AC mains power source (power outlet) with the supplied AC power cordset. First, connect the IEC end of the cordset to the IEC connector on the KA Series; then, plug the other end of the cordset to the AC mains.



**WARNING:** The third prong of this connector (ground) is an important safety feature. Do not attempt to disable this ground connection by using an adapter or other methods.

Amplifiers don't create energy. The AC mains voltage and current must be sufficient to deliver the power you expect. You must operate your amplifier from an AC mains power source with not more than a 10% variation above or a 15% variation below the amplifier's specified line voltage and within the specified frequency requirements (indicated on the amplifier's back panel label). If you are unsure of the output voltage of your AC mains, please consult your electrician.

### 3.4 Protecting Your Speaker

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It's wise to avoid clipping the amplifier signal. Not only does clipping sound bad, but it can also damage high frequency drivers. To prevent clipping, insert a limiter between your mixer output and amplifier input.

That way, no matter how strong a signal your mixer produces, the amplifier will not clip. Set the limiter threshold so that mixer signals above 0 on the mixer meters do not quite drive the amplifier into clipping.

Also, avoid sending strong subsonic signals to the amplifier. High-level, low-frequency signals from breath pops or dropped microphones can blow out drivers. To prevent subsonic signals, insert a high pass filter between mixer output and amplifier input (or between mixer and limiter). Alternatively, switch in high pass filters at your mixer. Set the filter to as high a frequency as possible that does not affect your program. For example, try 35 Hz for music and 75 Hz for speech. On each mixer input channel, set the filter frequency just below the lowest fundamental frequency of that channel's instrument.

### 3.5 Startup Procedure

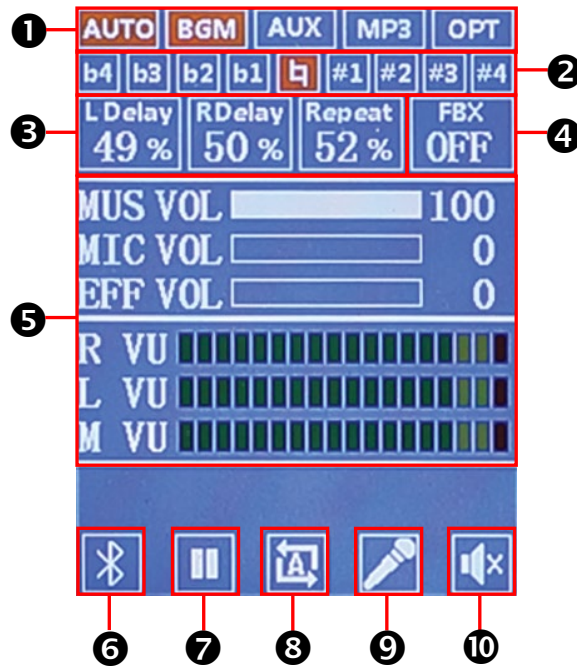
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Use the following procedure when first turning on your amplifier:

1. Turn down the level of your audio source.
2. Turn down the level controls of the amplifier.
3. Turn on the "Power" switch. The Power indicator should glow.
4. Turn up the level of your audio source to an optimum level.
5. Turn up the Level controls on the amplifier until the desired loudness or power level is achieved.
6. Turn down the level of your audio source to its normal range.

If you ever need to make any wiring or installation changes, don't forget to disconnect the power cord.

### 3.6 LCD Screen



**1 Audio source signal selection**

Shows existing audio source signal, for auto selection, please select AUTO.

**2 Music pitch/key**

Minor				N	Flat			
b4	b3	b2	b1	0	#1	#2	#3	#4

**3 Echo Delay and Repeat**

**4 Analog BGM, AUX, Coaxial, and Optical Inputs**

**5 FBX Level**

**6 Volume Level Display & VU Meter**

**7 Music Pause**

Shows pause status under Bluetooth or MP3 modes

**8 Music Repeat**

Confirms repeat mode under Bluetooth or MP3 modes

**9 Wireless Microphone Module (Optional)**

**10 Mute**

### 3.7 Precautions

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Your amplifier is protected from internal and external faults, but you should still take the following precautions for optimum performance and safety:

1. Before use, your amplifier first must be configured for proper operation, including input and output wiring hookup. Improper wiring can result in serious operating difficulties.
2. Use care when making connections, selecting signal sources and controlling the output level. The load you save may be your own!
3. Do not short the ground lead of an output cable to the input signal ground. This may form a ground loop and cause oscillations.
4. **WARNING:** Never connect the output to a power supply, battery or power main. Electrical shock may result.
5. Tampering with the circuitry or making unauthorized circuit changes may be hazardous and invalidates all agency listings.
6. Do not operate the amplifier with the red Clip LEDs constantly flashing.
7. Do not overdrive the mixer, which will cause clipped signal to be sent to the amplifier. Such signals will be reproduced with extreme accuracy, and loudspeaker damage may result.
8. Do not operate the amplifier with less than the rated load impedance. Due to the amplifier's output protection, such a configuration may result in premature clipping and speaker damage.

**Remember:** Sing Easy is not liable for damage that results from overdriving other system components.

## 4.1 F.A.Q.

Before submitting the device for repair, please check the below frequently asked questions.

FAULT	REASON	SOLUTION
No sound output and the display does not light up	The power plug is not plugged in properly	Connect the power plug correctly and ensure good contact
	AC 220V fuse blown	Unplug the power cable, replace the fuse with the same specification
No sound output but display is lighted up	The output speaker signal is not connected properly	Check the speaker's connection, reconnect and ensure good contact
	Main volume set to minimum	Turn up the main volume
	The unit is set to mute	Unmute
Audio can only be listened on one side	No output from the input source	Check the input source, reconnect and ensure good contact
	The speaker cable is not properly connected	Check the speaker cables connection and ensure good contact
	Of one the input signal cable is wrongly inserted or loosen	Check the input cables then reconnect and ensure good contact
	Damaged signal cable	Replace the damaged signal cable, reconnect, and make sure good contact

**Note:** If the fault can't be resolved, please send the equipment to a nearby dealer for troubleshooting.

## 5.1 Specifications

	KA400	KA600	KA800
<b>Channels</b>	2	2	2
<b>Stereo, 8Ω per channel</b>	400W	600W	800W
<b>Stereo, 4Ω per channel</b>	600W	900W	1200W
<b>Frequency Response</b>	Music: 20 Hz - 20k Hz (± 2 dB) Mic: 40 Hz - 18k Hz (± 2 dB)		
<b>Signal to Noise Ratio</b>	95dB		
<b>Damping Factor</b>	>300		
<b>Total Harmonic Distortion</b>	Music: ≤0.5% at 1kHz Mic: ≤1% at 1kHz		
<b>Crossover Modes</b>	Music: Bass (100Hz), Mid (1kHz) and Treble (10kHz) Mic: Bass (100Hz), Mid (1kHz) and Treble (10kHz)		
<b>Inputs</b>	BGM, AUX, Coaxial and Optical		
<b>Outputs</b>	Pre-Out and Rec Out		
<b>Power Requirements</b>	AC 220V ± 10% 50-60Hz		
<b>Power Consumption</b>	1080W	1800W	2400W
<b>Net weight</b>	13Kg	14.5Kg	16Kg
<b>Dimensions (W x H x D)</b>	483×90×290mm		
<b>Packing (W x H x D)</b>	530×145×400mm		

**Note: The design and specifications are subject to change without notice for improvement.**