KGUSS MX3s

KGUSS MX3s Amplifier User Manual

Model: MX3s

1. INTRODUCTION

The KGUSS MX3s is a versatile audio device that integrates a Digital-to-Analog Converter (DAC), headphone amplifier, and power amplifier into a single compact unit. Designed to enhance your audio experience, it supports a wide range of input sources and output options, making it suitable for various audio setups from personal listening with headphones to driving a 2.1 speaker system.

Key features include a Merus Class D amplifier for efficient power delivery, a built-in AK4437 DAC for high-quality digital audio conversion, and a Qualcomm QCC3040 Bluetooth chip for reliable wireless connectivity. The MX3s also offers a dedicated subwoofer output for extended bass response.

Image: Front and rear view of the KGUSS MX3s Amplifier, showcasing its compact design and various input/output ports.

Product Overview Video

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Video: An overview of the TOPPING MX3s Class D amplifier, highlighting its all-in-one capabilities as a DAC, headphone amplifier, and power amplifier.

2. PACKAGE CONTENTS

Verify that all items are present in the package:

- MX3s Amplifier Unit
- Power Adapter
- Power Cable
- USB Cable
- Remote Control
- Bluetooth Antenna
- User Manual
- Warranty Card

Fully enhanced performance

	MX3s	MX3
Headphone output performance		
THD+N @1kHz A-wt	<0.003% @Output=270mW(32Ω) <0.001% @Output=30mW(300Ω)	<0.006% @Output=130mW(32Ω)
SNR @MAX OUT 1kHz A-wt	115dB improved by 12dB	103dB
Gain	2dB(Vrms/FS) @G=L 14.8dB(Vrms/FS) @G=H Provides two levels of gain	11.6dB
Noise @A-wt	<2.0uVrms @G=L <7.0uVrms @G=H Over 50% reduction	<18.0uVrms
Output Power	700mW x 2 @32Ω THD+N<1% 400mW x 2 @64Ω THD+N<1% 100mW x 2 @300 THD+N<1% Increased by 200%	257mW x 2 @32Ω THD+N<1% 42mW x 2 @300Ω THD+N<1%
Speaker output performance		
BTL SNR @MAX OUT 1kHz A-wt	110dB Improved by 19dB	91dB
BTL Noise @A-wt	<60uVrms @G=L <100uVrms @G=H	<500uVrms

Image: A visual representation of the KGUSS MX3s Amplifier and its included accessories, such as the power adapter, cables, remote control, Bluetooth antenna, user manual, and warranty card.

Unboxing Video

Video: An unboxing demonstration of the TOPPING MX3s amplifier, showing the contents of the package and initial presentation of the device.

3. SETUP

3.1 Connecting the Device

1. **Power Connection:** Connect the power adapter to the DC 26V input on the rear panel of the MX3s, then plug the power cable into a wall outlet.

2. **Bluetooth Antenna:** Screw the provided Bluetooth antenna into the "ANT" connector on the rear panel for optimal Bluetooth reception.

3. **Audio Inputs:**
   - **USB Input:** Connect your computer or other USB audio source to the "USB" port using the supplied USB cable.
   - **Optical Input:** Connect an optical cable from your source (e.g., TV, game console) to the "OPT" input.
   - **Coaxial Input:** Connect a coaxial cable from your source (e.g., CD player) to the "COAX" input.
   - **AUX Input:** Connect analog audio sources (e.g., turntable with pre-amp, portable player) to the "AUX IN" RCA ports.

4. **Audio Outputs:**
   - **Speaker Output:** Connect your passive speakers to the "R Out" (Right) and "L Out" (Left) speaker terminals. Ensure correct polarity (+ to + and - to -).
   - **Headphone Output:** Plug your headphones into the 3.5mm headphone jack on the front panel.
   - **Subwoofer Output:** Connect an RCA cable from the "SW" output to your active subwoofer for a 2.1 channel setup.

Image: Detailed view of the rear panel of the MX3s, illustrating the various input and output connections including USB, Optical, Coaxial, AUX, Bluetooth antenna, speaker terminals, subwoofer output, and power input.

4. OPERATING INSTRUCTIONS

4.1 Front Panel Controls

The front panel features a multi-function knob, a 3.5mm headphone output, and an LED screen for displaying status information.

Image: Front panel of the KGUSS MX3s, highlighting the volume knob/multi-function button, 3.5mm headphone output, remote control receiver, and LED screen.

4.2 Input Selection

Press the multi-function knob to cycle through available input channels: Bluetooth (BT), USB, Optical (OPT), Coaxial (COAX), and AUX. The selected input will be displayed on the LED screen.

4.3 Output Selection

Double-press the multi-function knob to switch between output modes: headphone only, speaker only, or both headphone and speaker outputs active.

4.4 Volume Control

Rotate the multi-function knob to adjust the volume. The volume level is displayed on the LED screen. The MX3s can display volume in percentage or in dB, configurable via settings.

Image: Two MX3s units, one displaying volume in percentage (58%) and the other in dB (-30 dB), illustrating the configurable volume display options.

4.5 Bluetooth Pairing

To pair a Bluetooth device, ensure Bluetooth input is selected. The MX3s supports AAC, SBC, aptX, aptX-HD, and aptX Adaptive protocols. For pairing mode, press and hold the brightness button on the remote control for 3 seconds.

Built-in DAC
Supporting common digital signal inputs

The MX3s features an AKM DAC and is equipped with a Qualcomm Bluetooth chip, the QCC3040, providing exceptional USB, optical, coaxial, and Bluetooth input capabilities. This allows for easy connection of various audio sources, such as computers, set-top boxes, DVD players, smartphones and tablets, making it incredibly versatile.

Nice Bluetooth performance

The MX3s supports Bluetooth protocols such as AAC, SBC, aptX, aptX-HD, and aptX Adaptive, achieving transmission distortion below 0.001%. It brings you an exceptional audio experience.

4.6 Equalizer (EQ) Function

The MX3s includes a built-in EQ function, allowing adjustment of treble and bass levels from -10dB to +10dB. These adjustments can be made using the remote control.

Spec

USB IN	44.1kHz-192kHz/16bit-24bit
COAX/OPT IN	44.1kHz-192kHz/16bit-24bit
BT IN	AAC/SBC/APTX/APTX-HD/APTX Adaptive

MX3s Headphone Amplifier specifications			
Input	USB/OPT/COAX	AUX	BT (@aptx Adaptive)
THD+N @1kHz (A-wt)	<0.003% @Output=270 mW (32Ω)	<0.003% @Output=270 mW (32Ω)	<0.003% @Output=270 mW (32Ω)
	<0.001% @Output=30 mW (300Ω)	<0.001% @Output=30 mW (300Ω)	<0.002% @Output=30 mW (300Ω)
SNR @MAX OUT 1kHz (A-wt)	115dB	127dB	115dB
Dynamic Range @1kHz (A-wt)	115dB	127dB	115dB
Frequency Response	20Hz-20kHz (+0.1dB/-0.3dB)		20Hz-20kHz (+0dB/-2dB)
	20Hz-40kHz (+0.1dB/-1.0dB)		
Output Level	3.4Vpp @G=L	10.2Vpp @G=L	3.4Vpp @G=L
	15.6Vpp @G=H	14.4Vpp @G=H	15.6Vpp @G=H
Noise (A-wt)	<2.0uVrms @G=L	<2.0uVrms @G=L	<2.0uVrms @G=L
	<7.0uVrms @G=H	<7.0uVrms @G=H	<7.0uVrms @G=H
Channel Crosstalk @1kHz	-90dB	-90dB	-90dB
Input sensitivity	0dBFS @G=L	4.2Vrms @G=L	0dBFS @G=L
	0dBFS @G=H	1.2Vrms @G=H	0dBFS @G=H
Gain	2dB (Vrms/FS) @G=L	-0.2dB @G=L	2dB (Vrms/FS) @G=L
	14.8dB (Vrms/FS) @G=H	12.6dB @G=H	14.8dB (Vrms/FS) @G=H
Output Impedance	<0.5Ω		
Output Power	700mW x 2 @32Ω THD+N<1%		
	400mW x 2 @64Ω THD+N<1%		
	100mW x 2 @300Ω THD+N<1%		
Load Impedance	>8Ω		

MX3s Power Amplifier specifications			
Input	USB/OPT/COAX	AUX	BT (@aptx Adaptive)
THD+N @1kHz (A-wt)	<0.005% @Output=5W (4Ω)	<0.005% @Output=5W (4Ω)	<0.005% @Output=5W (4Ω)
	<0.004% @Output=5W (8Ω)	<0.004% @Output=5W (8Ω)	<0.004% @Output=5W (8Ω)
SNR @MAX OUT 1kHz (A-wt)	110dB	110dB	110dB
Dynamic Range @1kHz (A-wt)	110dB	110dB	110dB
Frequency Response	20Hz-20kHz (+0.1dB/-0.5dB)		20Hz-20kHz (+0dB/-2dB)
	20Hz-40kHz (+0.1dB/-1.5dB)		
Output Level	40Vpp @RL=4Ω	40Vpp @RL=4Ω	40Vpp @RL=4Ω
	44Vpp @RL=8Ω	44Vpp @RL=8Ω	44Vpp @RL=8Ω
Noise (A-wt)	<60uVrms @G=L	<60uVrms @G=L	<60uVrms @G=L
	<100uVrms @G=H	<100uVrms @G=H	<100uVrms @G=H
Channel Crosstalk @1kHz	-90dB	-90dB	-90dB
Input sensitivity	-2.0dBFS @G=L	1.0Vrms @G=L	-2.0dBFS @G=L
	-8dBFS @G=H	0.5Vrms @G=H	-8dBFS @G=H
Gain	26.5dB (Vrms/FS) @G=L	24dB @G=L	26.5dB (Vrms/FS) @G=L
	32.5dB (Vrms/FS) @G=H	30dB @G=H	32.5dB (Vrms/FS) @G=H
Output Impedance	<0.2Ω		
Output Power	62W x 2 @4Ω THD+N<10%		
	50W x 2 @4Ω THD+N<1%		
Output Power	40W x 2 @8Ω THD+N<10%		
	30W x 2 @8Ω THD+N<1%		
Load Impedance	4-8Ω		

Image: Two MX3s units displaying bass and treble adjustments on their screens, showing a +10dB bass setting and a -10dB treble setting, along with frequency response graphs.

4.7 Gain Settings

The device offers two-step gain settings for both the power amplifier and headphone amplifier, adapting to different audio sources and output requirements. Gain can be adjusted via the remote control.
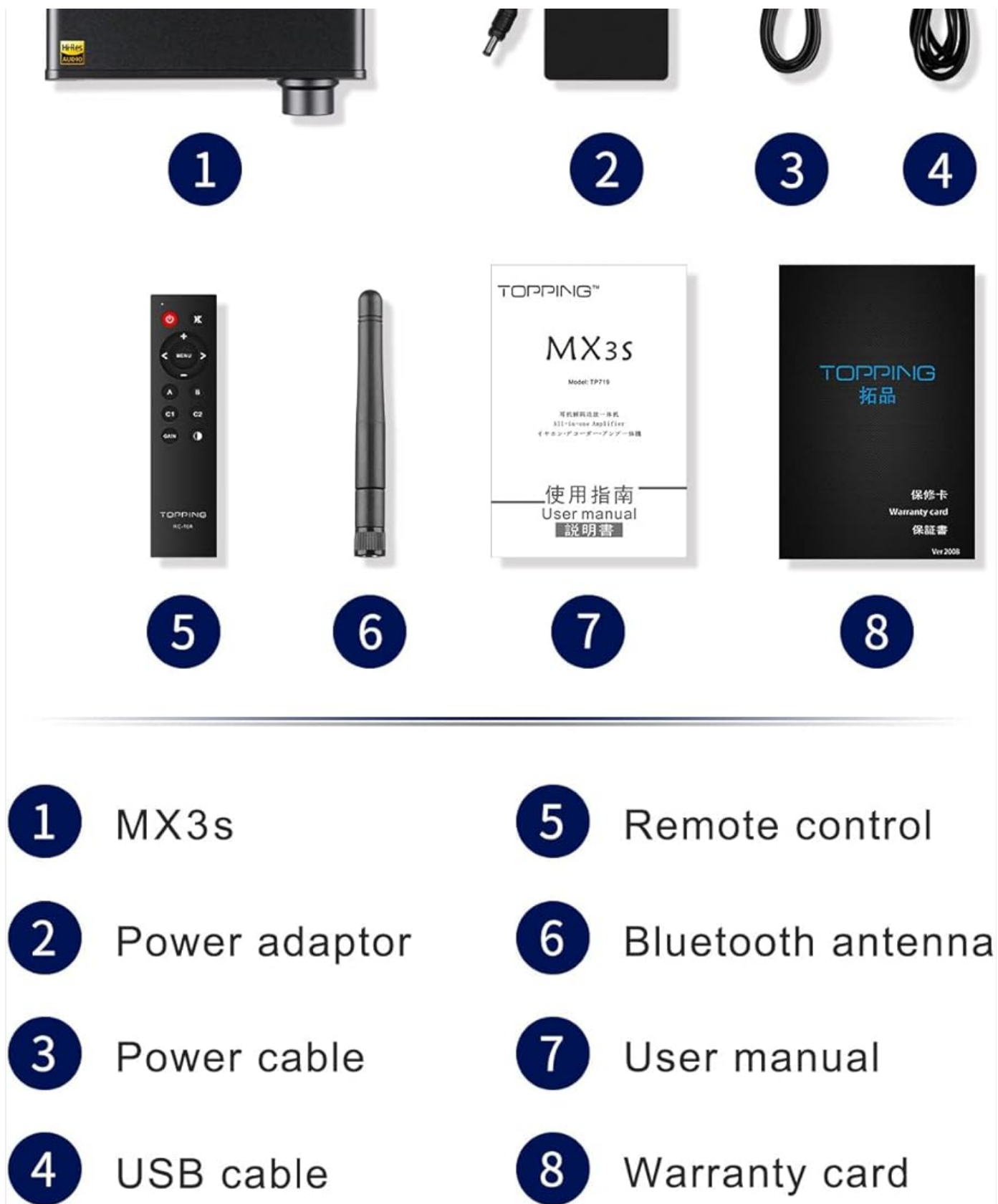

Content list

1	MX3s	5	Remote control
2	Power adaptor	6	Bluetooth antenna
3	Power cable	7	User manual
4	USB cable	8	Warranty card

Image: Two MX3s units showing "H" (High) and "L" (Low) gain settings on their screens, indicating the adjustable gain levels for the amplifier.

4.8 Auto On/Off

The digital inputs of the MX3s support an automatic power on/off function. The unit will power on when a valid digital signal is detected and enter standby within 1 minute if the signal is lost. This feature is not supported for analog inputs.

Auto On/Off

The digital input of the MX3s supports an automatic power on/off function (not supported by the analog input), which turns the power on immediately when a valid digital signal is detected.
If a valid signal is lost, it will automatically turn off (goes into standby) within 1 minute.
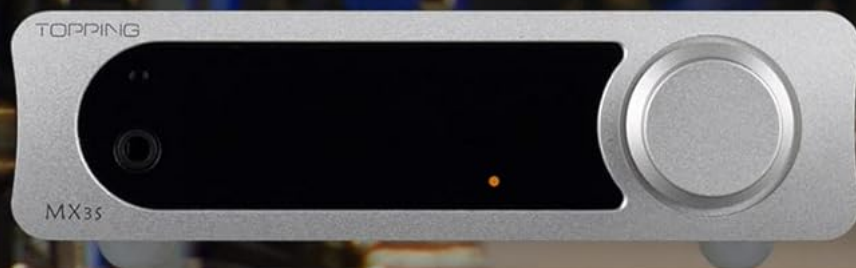
The MX3s screen can be set to automatically turn off after 30 seconds without operation, and only the current input is displayed when the screen is off.

MX3s can set to display the volume in percentage or in dB.

Image: A silver MX3s unit, illustrating the Auto On/Off feature where the device automatically powers on or enters standby based on digital

5. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the unit. Avoid using liquid cleaners or solvents.

- **Ventilation:** Ensure the MX3s is placed in a well-ventilated area to prevent overheating. Do not block ventilation openings.

- **Environmental Conditions:** Avoid exposing the unit to extreme temperatures, humidity, or direct sunlight.

- **Cable Connections:** Periodically check all cable connections to ensure they are secure and free from damage.

6. TROUBLESHOOTING

Refer to the following table for common issues and their solutions:

Phenomenon	Solution
Cannot be turned on	- Check the power adapter. Only connect the power adapter to a power outlet, not to the unit. If the LED on the adapter blinks or does not light up, the adapter is defective. - Check the power connection.
No sound	- The device did not power on. Check LED and the power connection. - Check that the proper input source is selected. Press the knob to switch input channel. - Check that the proper output channel is selected. Double-press the knob to switch output channel. - Check the connections for all devices. - Insert connection cables all the way in. - Check the volume of all devices and whether they are muted. **Bluetooth IN:** Too low volume on phone. Please adjust volume. **USB IN:** 1) Too low volume on PC. Please check and adjust the computer system volume, music player volume and driver volume. 2) Select the default output device of your music player or computer as this unit.
Abnormal sound	- One channel's positive output and negative output may be reversed, please check and correct it. - The cables may not be connected correctly, check and reconnect them. - Probably overloaded. Try turning down the volume. - May be caused by high temperature. Turn the power off, wait for the unit to cool down sufficiently, and then turn the power on again. Please place the unit in a place having good ventilation. - Check to see if the problem is with the source, downstream equipment and cables.

Phenomenon	Solution
One channel with noise/no output	- Check to see if the problem is with the source, downstream equipment and cables. - You can try swapping the left and right channel connections.
Channel imbalance	- Check to see if the problem is with the source, downstream equipment and cables. - You can try swapping the left and right channel connections.
Can the amp be used in bridged mode so that it can be used as a mono amp?	The amplifier is already internally bridged. So no you can't short any of the output terminals together.
Cannot pair Bluetooth	- Enable Bluetooth function in the setup menu first. - May be already connected to another Bluetooth device. Press and hold brightness button on the remote control for 3s to let this unit enter pairing mode. - Bring the Bluetooth device near to this unit. - Turn the power of the unit off and on again, and then try again. - Remove obstructions between the Bluetooth device and this unit.
Bluetooth in: the sound is cut off	- To prevent electromagnetic interference, locate this unit away from microwave ovens, wireless LAN devices and other Bluetooth devices. - Reconnect the Bluetooth device.
The connected USB device does not recognize this unit	- USB cable did not connect properly. Please check or change the cable. - Driver problem. Try to reinstall the driver. - May be caused by the PC. Check or try with another PC. - Some phones require OTG function to be enabled first.
Remote control not responding	- Enable remote control function in the setup menu first. - Try to insert two fresh AAA batteries. - Please aim at the remote control receiver. - Bring the remote control close to the device. - Use your Android phone's camera to look at the transmitter at the top of the remote, if it doesn't blink when you press the remote button, the remote is defective. - If you have more than one Topping device, check that you are using the correct remote control.
GAIN -1 / GAIN -2	Firmware upgrade failed. Unplug and re-plug the power cable, and then flash the firmware again.

Phenomenon	Solution
GAIN -3	Incorrect firmware version. Unplug and re-plug the power cable, and then reflash the correct firmware.
P-U / P-d	Supply voltage too high/too low. Please use TOPPING's power adapter.
r-d / r-r / r-A / P-0	• Check the power adapter. Only connect the power adapter to a power outlet, not to the unit. If the LED on the adapter blinks or does not light up, the adapter is defective. • Disconnect other devices and reboot. If the problem still persists, your unit may be defective. Please contact us by mail.
r-H	Abnormal DC voltage. After changing the song or turning down the volume/gain, unplug and re-plug the power cable and reboot the MX3s.
Frequency of the Subwoofer Output	It is full-band.

Troubleshooting Video

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Video: A troubleshooting guide for the TOPPING MX3s Power Amplifier, addressing common issues and providing solutions.

7. SPECIFICATIONS

7.1 General Specifications

Feature	Detail
Brand	KGUSS (Topping)
Model Number	MX3s
DAC Chip	AK4437
Bluetooth Chip	Qualcomm QCC3040
Connectivity Technology	Bluetooth, COAX, RCA, Subwoofer Output, USB
Controller Type	Infrared, Bluetooth
Compatible Devices	Smartphone, Speaker
Connector Type	3.5mm Jack, USB
Audio Output Mode	Surround (2.1 Channel)
Color	Black
Package Dimensions	11.06 x 7.83 x 2.99 inches
Item Weight	2.71 pounds

7.2 Power Amplifier Specifications

Parameter	USB/OPT/COAX IN	BT IN (aptX Adaptive)
THD+N @1kHz A-wt	<0.005% @Output=5W (4Ω)	<0.005% @Output=5W (4Ω)
	<0.004% @Output=5W (8Ω)	<0.004% @Output=5W (8Ω)
SNR @MAX OUT 1kHz A-wt	110dB	110dB
Dynamic Range	110dB	110dB
Frequency Response	20Hz-20kHz (+0.1dB/-0.5dB)	20Hz-20kHz (+0.1dB/-0.5dB)
	20Hz-40kHz (+0.1dB/-1.5dB)	20Hz-40kHz (+0.1dB/-1.5dB)
Output Level	40Vpp @RL=4Ω	40Vpp @RL=4Ω
	44Vpp @RL=8Ω	44Vpp @RL=8Ω
Noise (A-wt)	<60uVrms @G=L	<60uVrms @G=L
	<100uVrms @G=H	<100uVrms @G=H
Channel Crosstalk	-90dB	-90dB
Input Sensitivity	-2.0dBFS @G=L	-2.0dBFS @G=L
	-8dBFS @G=H	-8dBFS @G=H
Gain	26.5dB (Vrms/FS) @G=L	26.5dB (Vrms/FS) @G=L
	32.5dB (Vrms/FS) @G=H	32.5dB (Vrms/FS) @G=H
Output Impedance	<0.2Ω	<0.2Ω
Output Power	62W x 2 @4Ω THD+N<10%	62W x 2 @4Ω THD+N<10%
	50W x 2 @4Ω THD+N<1%	50W x 2 @4Ω THD+N<1%
	40W x 2 @8Ω THD+N<10%	40W x 2 @8Ω THD+N<10%
	30W x 2 @8Ω THD+N<1%	30W x 2 @8Ω THD+N<1%
Load Impedance	4-8Ω	4-8Ω

7.3 Headphone Amplifier Specifications

Parameter	USB/OPT/COAX	AUX	BT (aptX Adaptive)
THD+N @1kHz A-wt	<0.003% @Output=270mW(32Ω)	<0.003% @Output=270mW(32Ω)	<0.003% @Output=270mW(32Ω)
	<0.001% @Output=30mW(300Ω)	<0.001% @Output=30mW(300Ω)	<0.001% @Output=30mW(300Ω)
SNR @MAX OUT 1kHz A-wt	115dB	127dB	115dB
Frequency Response	20Hz-20kHz (+0.1dB/-0.3dB)	20Hz-20kHz (+0.1dB/-0.3dB)	20Hz-20kHz (+0.1dB/-0.3dB)

Parameter	USB/OPT/COAX	AUX	BT (aptX Adaptive)
Output Level	3.4Vpp @G=L	10.2Vpp @G=L	3.4Vpp @G=L
	18.6Vpp @G=H	14.4Vpp @G=H	18.6Vpp @G=H
Noise (A-wt)	<2.0uVrms @G=L	<2.0uVrms @G=L	<2.0uVrms @G=L
	<7.0uVrms @G=H	<7.0uVrms @G=H	<7.0uVrms @G=H
Channel Crosstalk	-90dB	-90dB	-90dB
Input Sensitivity	0dBFS @G=L	4.2Vrms @G=L	0dBFS @G=L
	0dBFS @G=H	1.2Vrms @G=H	0dBFS @G=H
Gain	2dB (Vrms/FS) @G=L	2dB (Vrms/FS) @G=L	2dB (Vrms/FS) @G=L
	14.8dB (Vrms/FS) @G=H	12.6dB @G=H	14.8dB (Vrms/FS) @G=H
Output Impedance	<0.5Ω	<0.5Ω	<0.5Ω
Output Power	700mW x 2 @32Ω THD+N<1%	700mW x 2 @32Ω THD+N<1%	700mW x 2 @32Ω THD+N<1%
	400mW x 2 @64Ω THD+N<1%	400mW x 2 @64Ω THD+N<1%	400mW x 2 @64Ω THD+N<1%
	100mW x 2 @300Ω THD+N<1%	100mW x 2 @300Ω THD+N<1%	100mW x 2 @300Ω THD+N<1%
Load Impedance	>8Ω	>8Ω	>8Ω

Spec

USB IN	44.1kHz-192kHz/16bit-24bit
COAX/OPT IN	44.1kHz-192kHz/16bit-24bit
BT IN	AAC/SBC/APTX/APTX-HD/APTX Adaptive

MX3s Headphone Amplifier specifications

Input	USB/OPT/COAX	AUX	BT (@aptx Adaptive)
THD+N @1kHz (A-wt)	<0.003% @Output=270 mW (32Ω)	<0.003% @Output=270 mW (32Ω)	<0.003% @Output=270 mW (32Ω)
	<0.001% @Output=30 mW (300Ω)	<0.001% @Output=30 mW (300Ω)	<0.002% @Output=30 mW (300Ω)
SNR @MAX OUT 1kHz (A-wt)	115dB	127dB	115dB
Dynamic Range @1kHz (A-wt)	115dB	127dB	115dB
Frequency Response	20Hz-20kHz (+0.1dB/-0.3dB)	20Hz-20kHz (+0dB/-2dB)	
	20Hz-40kHz (+0.1dB/-1.0dB)		
Output Level	3.4Vpp @G=L	10.2Vpp @G=L	3.4Vpp @G=L
	15.6Vpp @G=H	14.4Vpp @G=H	15.6Vpp @G=H
Noise (A-wt)	<2.0uVrms @G=L	<2.0uVrms @G=L	<2.0uVrms @G=L
	<7.0uVrms @G=H	<7.0uVrms @G=H	<7.0uVrms @G=H
Channel Crosstalk @1kHz	-90dB	-90dB	-90dB
Input sensitivity	0dBFS @G=L	4.2Vrms @G=L	0dBFS @G=L
	0dBFS @G=H	1.2Vrms @G=H	0dBFS @G=H
Gain	2dB (Vrms/FS) @G=L	-0.2dB @G=L	2dB (Vrms/FS) @G=L
	14.8dB (Vrms/FS) @G=H	12.6dB @G=H	14.8dB (Vrms/FS) @G=H
Output Impedance	<0.5Ω		
Output Power	700mW x 2 @32Ω THD+N<1%		
	400mW x 2 @64Ω THD+N<1%		
	100mW x 2 @300Ω THD+N<1%		
Load Impedance	>8Ω		

MX3s Power Amplifier specifications

Input	USB/OPT/COAX	AUX	BT (@aptx Adaptive)
THD+N @1kHz (A-wt)	<0.005% @Output=5W (4Ω)	<0.005% @Output=5W (4Ω)	<0.005% @Output=5W (4Ω)
	<0.004% @Output=5W (8Ω)	<0.004% @Output=5W (8Ω)	<0.004% @Output=5W (8Ω)
SNR @MAX OUT 1kHz (A-wt)	110dB	110dB	110dB
Dynamic Range @1kHz (A-wt)	110dB	110dB	110dB
Frequency Response	20Hz-20kHz (+0.1dB/-0.5dB)		20Hz-20kHz (+0dB/-2dB)
	20Hz-40kHz (+0.1dB/-1.5dB)		
Output Level	40Vpp @RL=4Ω	40Vpp @RL=4Ω	40Vpp @RL=4Ω
	44Vpp @RL=8Ω	44Vpp @RL=8Ω	44Vpp @RL=8Ω
Noise (A-wt)	<60uVrms @G=L	<60uVrms @G=L	<60uVrms @G=L
	<100uVrms @G=H	<100uVrms @G=H	<100uVrms @G=H
Channel Crosstalk @1kHz	-90dB	-90dB	-90dB
Input sensitivity	-2.0dBFS @G=L	1.0Vrms @G=L	-2.0dBFS @G=L
	-8dBFS @G=H	0.5Vrms @G=H	-8dBFS @G=H
Gain	26.5dB (Vrms/FS) @G=L	24dB @G=L	26.5dB (Vrms/FS) @G=L
	32.5dB (Vrms/FS) @G=H	30dB @G=H	32.5dB (Vrms/FS) @G=H
Output Impedance	<0.2Ω		
Output Power	62W x 2 @4Ω THD+N<10%		
	50W x 2 @4Ω THD+N<1%		
Output Power	40W x 2 @8Ω THD+N<10%		
	30W x 2 @8Ω THD+N<1%		
Load Impedance	4-8Ω		

Image: A table detailing the power amplifier and headphone amplifier specifications of the MX3s, including THD+N, SNR, frequency response, output level, noise, channel crosstalk, input sensitivity, gain, output impedance, and output power for various inputs.

7.4 Performance Comparison (MX3s vs. MX3)

Parameter	MX3s	MX3
Headphone Output Performance		
THD+N @1kHz A-wt	<0.003% @Output=270mW(32Ω) <0.001% @Output=30mW(300Ω)	<0.006% @Output=130mW(32Ω)
SNR @MAX OUT 1kHz A-wt	115dB (Improved by 12dB)	103dB
Gain	2dB (Vrms/FS) @G=L 14.8dB (Vrms/FS) @G=H (Provides two levels of gain)	11.6dB
Noise @A-wt	<2.0uVrms @G=L <7.0uVrms @G=H (Over 50% reduction)	<18.0uVrms
Output Power	700mW x 2 @32Ω THD+N<1% 400mW x 2 @64Ω THD+N<1% 100mW x 2 @300Ω THD+N<1%	257mW x 2 @32Ω THD+N<1% 42mW x 2 @300Ω THD+N<1%
Speaker Output Performance		
BTL SNR @MAX OUT 1kHz A-wt	110dB (Improved by 19dB)	91dB
BTL Noise @A-wt	<60uVrms @G=L <110uVrms @G=H	<500uVrms

Image: A comparison table highlighting the improved headphone and speaker output performance specifications of the MX3s compared to its predecessor, the MX3.

8. WARRANTY AND SUPPORT

KGUSS (HIFI College) is committed to customer satisfaction and product quality.

- **Money-back Guarantee:** A 30-day money-back guarantee is offered for any reason.
- **Warranty:** The product comes with more than a 12-month warranty covering all quality defects.
- **Price Matching:** Supports 30-day price matching.

For any questions or support needs, please contact HIFI College directly:
Email: HIFICOLLEGE@gmail.com