

**KingRex**

Technology Co., LTD



**USER MANUAL**  
**T20/T20U/PSU**



# USER MANUAL

## CONTENT

### A. T 20 AMP

- One KingRex T20 AMP – 20W audio amplifier
- One Switching Adaptor 110V~240V for worldwide using
- One AC power cord
- One user manual and one warranty card

### B. T 20 U AMP

- One KingRex T20 U AMP- 20W audio amplifier w/ USB port & build in DAC
- One Switching Adaptor 110V~ 240V for worldwide using
- One AC power cord
- One USB cord
- One user manual and one warranty card

### C. PSU (optional)

- One KingRex PSU – Reserved Power Supply Unit to compare with T20 AMP or T20 U AMP )
- One AC power cord
- One DC power cord
- One user manual and one warranty card

## **Design Consideration of T20 & T20 U AMP**

The cabinet is of a rigid construction with elegantly appearance by the size 180\*138\*45mm with 6mm thick aluminum face plate which with polished silver chrome volume control knob in the middle. The stylish design with the tiny size will bring fun for life. It also contributes to the touch and feel factor and is essential for the long lasting life even in a tough environment. All the components used in T20 & T20U are of the highest quality and have been selected through intensive listing sessions from the PCB itself over the high quality chassis to the anodize gold RCA and SP terminal.

## **Design consideration of PSU & PSU MKII**

All of the audio products (audio amplifier) need current while them working, or there won't be any good sonic performance as many detail will lost. So the power source is very important for the amplifiers. There will be three power sources most in common: switching power adaptor, linear power supply unit, and battery power supply unit.

The switching power adaptor should be most convenience and common power source the users could chose however it is not a good selection for music connoisseur who cares the sonic performance much more than the obtain convenience as it has the most noise and distortion by the high-frequency switching and harmonics in its design.

The linear power supply should be better choice for audiophiles. It has less noise and distortion than the switching power adaptor, however, during the AC to DC conversion and rectification process, there is still unavoidable following the unexpected noise and distortion. That's because the AC power should pass lots of electronic parts as transformer, diodes, voltage regulators, and components to be the lower current and neat DC.

For the better sonic performance demand and afford price issue, KingRex design the linear power supply unit - PSU to fit the demand for high power stream and low noise source.

## **Safety instructions:**

### **Warning**

- To prevent fire or shock hazard, do not expose this appliance to rain or moisture.
- Do not disassemble the machine with power on. If you do, you may receive an electric shock.
- Do not let children (or grownups) push anything into holes or slots in the case-this could result in harmful electrical shock and could cause damage of the equipment.
- Obstruct the necessary all- around ventilation: especially **DO NOT** place the set close to curtains or on soft furnishing such as carpets. Overheating can cause unnecessary damage and shorten the lifespan of the equipment.
- No user serviceable parts inside. Refer servicing to qualified technician. Never remove the cover unless qualified to do so. This unit contains dangerous voltage.
- Read the user manual and familiarize yourself with the functions before you attempt to use this equipment.

### **Important warning:**

You must earth this machine.(PSU)

If you cut off the moulded plug, get rid of it straight away. You cannot rewire the plug it into a socket

The wires in the mains lead have the following color code:

- Green and Yellow: Earth
- Blue: Neutral
- Brown: Live

If the wires in th main lead do not match the colors marked in your plug, do the following:

You must connect the green and yellow wire to the pin marked by the letter “ E” or by the safety ‘Earth symbol’ or colored green and yellow or green.

You must connect the blue wire to the pin which is marked with the letter “N” or colored black.

You must connect the brown wire to the pin which is marked with the letter “ L “ or colored red.

You must have a fuse in the plug, adaptor, or at the distribution board.

# Specification

## MODEL: T20 CLASS T AUDIO AMPLIFIER

1. Using TRIPATH ® power module TA2020-20
2. “Audiophile” Quality Sound
  - 0.03%THD+N@10W 4Ω
  - 0.1% THD+N@12W4Ω
  - 0.18%IHF-IM@1W 4Ω
3. Power output
  - 22W@4Ω, 10%THD +N, VDD=13.5V
  - 13W@8Ω, 10%THD+N, VDD=13.5V
4. High Efficiency
  - 88%@12W 8Ω
  - 81%@20W 4Ω
5. Dynamic Range =99dB
  1. Over Current & Over Temperature Protection
  2. Using anodize gold RCA and SP terminal
  3. 6m/m thickness aluminum face plate and aluminum knob using audio grade capacitor.

## MODEL: T20U CLASS T AUDIO AMPLIFIER

1. Using TRIPATH ® power module TA2020-20
2. “Audiophile” Quality Sound  
0.03%THD+N@10W 4Ω  
0.1% THD+N@12W4Ω  
0.18%IHF-IM@1W 4Ω
3. Power output  
22W@4Ω, 10%THD +N, VDD=13.5V  
13W@8Ω, 10%THD+N, VDD=13.5V
4. High Efficiency  
88%@12W 8Ω  
81%@20W 4Ω
5. Dynamic Range =99dB
6. Over Current & Over Temperature Protection
7. Using anodize gold RCA and SP terminal
8. 6m/m thickness aluminum face plate and aluminum knob using audio grade capacitor.
10. W/ USB INPUT

# **LINEAR POWER SUPPLY UNIT**

## **MODEL: PSU (13V/3A)**

### **PSU MK II - THREE POWER OUTPUT SETTING**

#### **(13V/3A , 9V/3A , 5V/3A)**

1. Using a 48VA toroidal transformer ensure maximum current output.
2. Using Linear IC regulator circuit
3. 8pcs high quality NIPPON CHEMICON ELECTROLYTIC CAPACITOR total capacity 25100uF
4. 6m/m thickness aluminum face plate.
5. Output voltage:

PSU : 13V/3A

PSU MKII: 13V/3A(for DC 12V series Audio component upgrade)

PSU MKII: 9V/3A (for squeezebox 9V series)

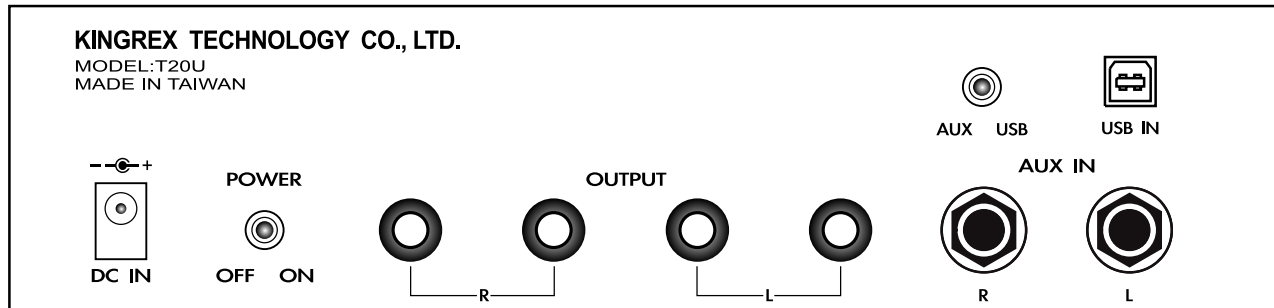
PSU MKII: 5V/3A(for squeezebox 5V series)



# How to operate

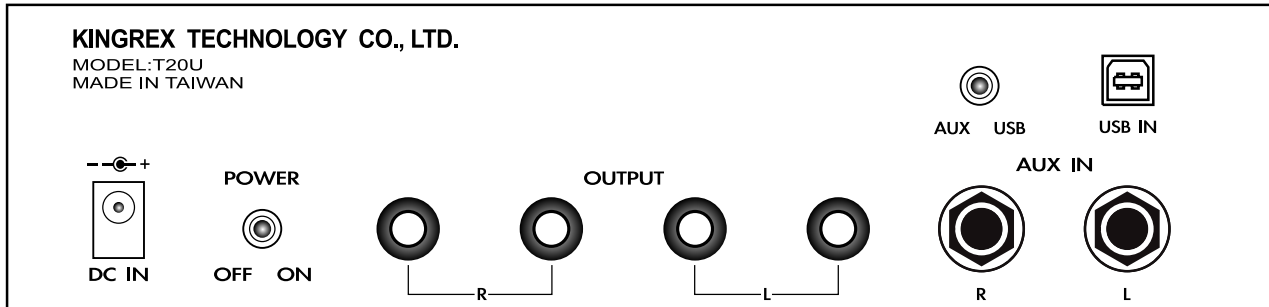
## T20 AMP

1. TURN POWER SWITCH TO OFF POSITION,ADJUST VOLUME KNOB TO MINIMUM VOLUME
2. CONNECT AC ADAPTOR OR PSU(POWER SUPPLY UNIT) WITH YOUR T20 AMP
3. CONNECT SIGNAL SOURCE(CD PLAYER,PC AUDIO,IPOD,.....)WITH INPUT TERMINAL
4. CONNECT UNPOWERED SPEAKER TO OUTPUT TERMINAL (L IS LEFT CHANNEL,R IS RIGHT CHANNEL).
5. TURN ON T20AMP POWER SWITCH,POWER INDICATOR WILL LITE,IF NOT, CHECK AC ADAPTOR OR PSU CONNECTION
6. START MUSIC PLAY AND ADJUST VOLUME KNOB TO EASY LISTENING LEVEL
7. INPUT POWER DO NOT OVER DC 13V, PLEASE ONLY USE KINGREX POWER SOURCE (POWER SOURCE: POWER ADAPTOR OR OPTIONAL POWER SUPPLY UNIT -PSU)
8. ENJOY YOUR MUSIC.



## T20U AMP

1. TURN POWER SWITCH TO OFF POSITION,ADJUST VOLUME KNOB TO MINIMUM VOLUME
2. CONNECT AC ADAPTOR OR PSU(POWER SUPPLY UNIT) WITH YOUR T20 AMP
3. CONNECT SIGNAL SOURCE(CD PLAYER,PC AUDIO,IPOD,.....)WITH INPUT TERMINAL
4. CONNECT USB CABLE FROM YOUR COMPUTER USB SOCKET
5. CONNECT UNPOWERED SPEAKER TO OUTPUT TERMINAL (L IS LEFT CHANNEL,R IS RIGHT CHANNEL)
6. TURN ON T20UAMP POWER SWITCH,POWER INDICATOR WILL LIGHT,IF NOT, CHECK AC ADAPTOR OR PSU CONNECTION
7. START MUSIC PLAY AND ADJUST VOLUME KNOB TO EASY LISTENING LEVEL
8. CHOOSING THE MUSIC SOURCE BY THE INPUT SELECTOR
9. INPUT POWER DO NOT OVER DC 13V, PLEASE ONLY USE KINGREX POWER SOURCE (POWER SOURCE: POWER ADAPTOR OR OPTIONAL POWER SUPPLY UNIT -PSU)
10. ENJOY YOUR MUSIC.

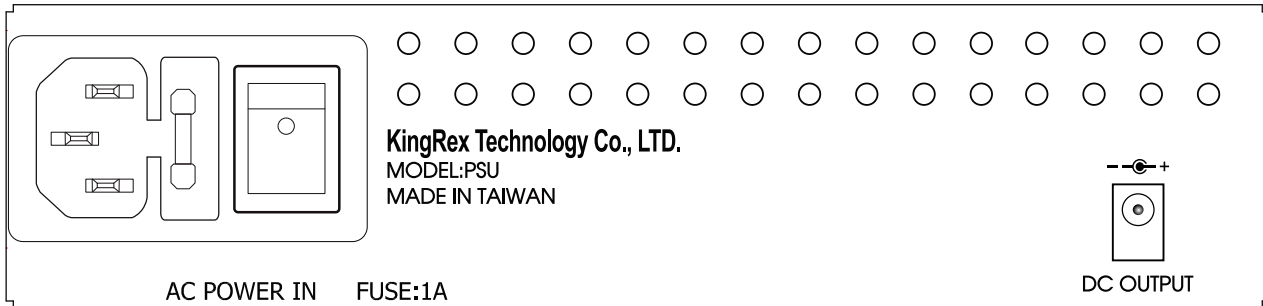


## How to setting the digital signal to T20 U AMP USB interface



# PSU

1. POWER SWITCH OFF
2. PLUG AC CORD INTO AC220V(OR AC110V) IN SOCKET
3. CONNECT DC OUTPUT CABLE TO YOUR T20 AMP
4. POWER SWITCH ON THEN POWER INDICATOR LIGHT WILL LIGHTEN
5. IF POWER INDICATOR NOT LIGHT UP, PLEASE TURN OFF POWER, DOUBLE CHECK AC CORD AND DC CORD CONNECTION OK OR NOT.



## **Burn in**

All new electronic equipment must be burned in to achieve optimum performance. Please allow the new amplifier to burn in by playing music with the loudspeakers connected for 200 hours before critical listening is performed.

## **Maintenance**

For cleaning the cabinet, use a dry cloth and wipe dust away. If needed, moisturize the cloth with a small amount of window cleaning dissolvent. Do not use excessive amounts of solvents, and do not let any of solvent spill into amplifier. The front panel is made of aluminum, it can be cleaned by using normal mild solvents and clean paper tissue or cloth. Do not use any other the scratch the mirror display at the front.

## **Service**

The simplicity of the KingRex T20, T20U, and PSU are very few parts can be breaking down. Should you ever require service, you can either contact your dealer or national distributor, who can solve any problems locally.

You are also very welcome to contact KingRex Technology Co., LTD directly if you need any information or help.

Our contact information is listed on the last page of this user guide.

## **Loudspeaker impedance**

Most loudspeakers are 8 or 4 Ohm, and they are specified so by the manufacturer. When using lower impedance loudspeakers, it could damage the chip. (**REMARK:** please notice the impedance while you serial connection or parallel connection the loudspeakers.)

## **Our best wishes ~**

We only use the best “raw materials” trimmed and rafted to perfection by the best engineers and sound enthusiasts for all audiophiles.

The guidance lines in this manual will assure you of an exquisite sound experience hope it will provide clear instruction to operate our products.

We hope you years of proud ownership and happy listening.

We feel confident that you will cherish this amplifier for both its amazingly clear reproduction as well as for its splendid craftsmanship, elegant appearance, and convenient size.

Hope you won't mind to share with us if there is any problem or questions. Please do not hesitate to contact with us. We look forward to hearing from you~

## **KingRex Technology Co., LTD**

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<http://www.kingrex.com>

## Limited Warranty

Kingrex technology warrants this product to be free from defects under normal uses for a period of one (1) year from the date of purchase (based on a proof-of-purchase receipt or invoice). This warranty includes exchange for new product within the first one (1) month and followed by repair service until this warranty expires on one (1) year from the purchase. Customer who requests warranty service is responsible for shipping costs mailing from the customer, and the returning shipping cost is covered by this warranty. KingRex Technology also offers repair service (charges of labor and/or parts) when warranty expires.

## Exclusions from Warranty – This Warranty does not apply to:

1. Conditions resulting from misused, abused, disassembled, unauthorized modification by the purchasers (negligence) or anyone else outside of our control.
2. Conditions resulting from improperly maintained or placed in an unsuitable physical or operating environment.
3. Conditions resulting from a natural disaster such as a lighting strike, flood, earthquake, etc.
4. The device identification labels (i.e. serial numbers) have been removed/ altered or have deteriorated beyond recognition.

**Product :**

**Serial Number :**

**Customer Name:**

**Date of Purchase:**

**Store of Purchase:**

**Mailing Address:**

**E-mail:**

**Phone Number:**



## **KingRex Technology Co., LTD**

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