

# Kingrex UPower User Guide

## Features of U Power:

1. A charge/discharge toggle switch that fully separates the charging and discharging circuits. This prevents any external noise interference from the AC charger or wall outlet when it is used for discharging as well as ensuring a pure and interference free DC output.
2. A constant current source based charging circuit that ensures the charging current is within the acceptable level for the battery for a significantly extended battery life.
3. Independent charging/discharging protection circuit board on the of battery cell to protect each cell of the battery against damage caused by over charging and discharging. Short circuit protection is included.
4. Independent charging and discharging indicators for a clear display of the status of your UPOWER: charging, charging completed, in use, and power low (lower than 10% of total capacity).
5. A robust and stylish aluminum casing that not only protects the internal PCB and battery cells but also has an excellent cooling function.
6. Uses the industry leading Sanyo 18650 Lithium-ion cells with up to 2600 maH capacity and a lifetime of 500 charging cycles.
7. Two outputs of different voltage. One of 7.5V for Kingrex series devices and the other of 5V with a USB connector for any mobile device with a USB charging port including: mobile phones, MP3 players, earphoneamp, PDAs and the like.

## Safety precautions:

1. DO NOT disassemble, repair or modify the circuit of your UPower. In case of any system failure or usage problem, please contact the dealer where you bought your UPower for any service that might be needed.
2. DO NOT keep your UPower in a damp place or touch the charger with wet hands to avoid the risk of electric shock.
3. Please use your UPower in a place with good ventilation as it needs to be cooled through the outer casing when charging and discharging. DO NOT place any object on top of your UPower.
4. Please charge your UPower with the attached 7.5V DC charger. DO NOT use any other charger. This could damage the UPower.

## **List of items in package:**

1. UPower
2. DC OUT cable
3. Charger

## Panel configuration



7.5V IN: Power input connector for your UPower charger (DC7.5V)

CHG/DC OUT: Charge/discharge toggle switch where CHG stands for charge and DC OUT for DC 7.5V AND USB 5V OUTPUT.



7.5V OUT: DC 7.5V output connector for Kingrex 7.5V series devices exclusively. For example: UC192, UD384 and...

USB 5V OUT: For any device that features a USB charging function.

CHARGING: The charging indicator turns blue when charging and turns off when the battery is fully charged.

DC OUT: The output indicator. This turns green when your UPower is in either 7.5V or 5V output mode. The light will flash when the battery capacity drops below 10% and turn off when the UPower is charging, or when the battery is flat.

## How to connect and use your UPower:

### Charging:

Connect the 7.5V output socket to your UPower DC 7.5V IN connector and press the CHG/DC OUT toggle switch to the CHG position. The charging process starts and the CHARGING indicator turns blue. It takes around 7 hours to fully charge your battery. The CHARGING indicator turns off after the battery is fully charged.

Please charge your UPower fully before using it for the first time.

### Discharging:

Connect the device to be powered by your UPower correctly. Press the CHG/DC OUT toggle switch to the DC OUT position and you are ready to use the pure DC current from your UPower. The 7.5V output is for Kingrex UC192 and UD 384 series products or any other device that requires DC 7.5V supply.

### Precautions when using lithium-ion batteries:

Your Kingrex UPower features two quality Sanyo lithium-ion cells to ensure high power density, low output impedance and more than 500 charge and discharge cycles. You may experience significant decline in battery capacity as the battery cells reach the end of their lives. This is normal. Please contact an authorized dealer for replacement cells.

## Specifications:

Power supply with lithium-ion cells

Charging by: Constant current source based charging circuit

Charging current: 0.7A

Charging time: Around 7 hours

Output voltage:

DC 7.5V OUT port: 7.5-8.4 V

USB port: DC 5V

Main device dimension:

Main device weight:

Package dimension:

Package weight:

# Why choose UPower

It is widely accepted that power is the key to any audio system. Pure power is the ultimate goal of each and every music enthusiast. From a dedicated power source, an exclusive wall socket, a quality power cord, down to premium filter capacitors, the pursuit for clean power is everywhere.

Kingrex has undertaken to provide pure power since its establishment. From PSU MKII to SLAP to the latest UPower, Kingrex continues to provide low-voltage DC power supplies for almost all audio peripherals and is highly appreciated by consumers.

Your UPower differs from most USB power supplies on the market with its clean DC current provided exclusively by battery cells. In order to achieve compact size and high capacity many other providers of power supplies use two 3.7v/2500ma battery cells in parallel that share a single protection PCB. Some Mainland Chinese products even come without protection circuits at all in order to reduce cost. With this design, the 5V USB power can only be achieved with a “dc to dc up converter” based boost switching power supply where a 3.7v DC current is converted to a steady 5V output by passing it through a fast switching circuit, up to hundreds of khz, and a simple filtering and regulating circuit. While you are under the impression that you are connecting to a pure 5V DC current (battery) power supply, your devices are actually being powered by an inferior 5V switching power supply. This may work for charging purposes but not when used to charge your mobile phone or MP3 player, or to power the playback function, because the sound quality could easily be affected.

The Kingrex UPower has a completely new design and guarantees perfectly clean DC current from its two output connectors.

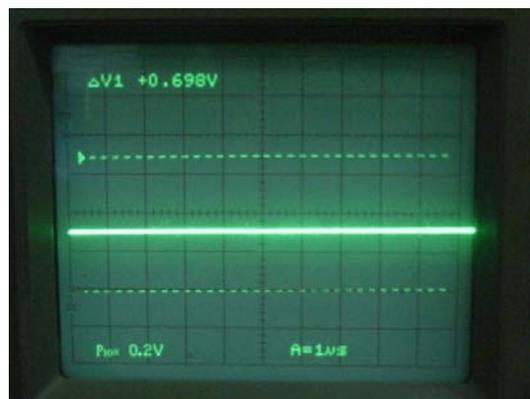
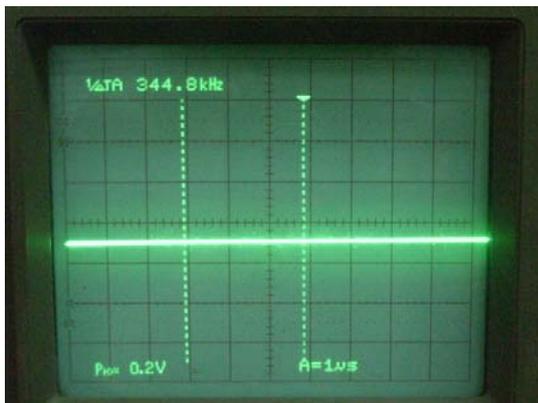
The 7.5V input connector directly connects to the two 3.75V Sanyo quality Lithium-ion cells

in series.

The 5V output is generated by dropping a 7.5V current through a linear regulator without the use of any switching power circuit.

Your device provides the so-called “audio grade” pure DC current.

The waveform of UPower at 5V/500ma output is a pure clean DC current as shown on the oscilloscope screen.



The waveform of other mobile power supplies at 5V/500ma output, as shown on the oscilloscope screen, have pulses of a magnitude up to 0.7V at 340KHZ.

