# Breadboard LED lights and warning sound description:

### ArduEZ Three DC power supply breadboard:

## What does the "beep" means?

The beep is a warning sound, and there will be a first "beep" to indicate that the boot is completed. When the short-circuit fault or the circuit output is overloaded, the power indicator will turn red and the warning sound will sound.

#### What do green and red lights mean?

The green light indicates that the power supply system is outputting supply regular currently. The red light means that the power is overloaded or the circuit is short-circuited, at the meantime circuit protection mechanism will be activated and the output power will be cut off.

#### What's microcomputer booting self-detection?

It's also called POST(Power-on self-test). When the breadboard is turned on, there are internal controlled by two "Z80" microcomputer chips, one is used as a three-power supply control circuit; and the other is equipped with a power-on inspection program inside. After the program is started, the green light will display to confirm three sets of 3V/5V/12V output circuits.

When the power supply go through the chip, all the output supply has been detected when it's normal ;then the red light signal will make" beep" sound to indicate that boot process is being executed, and the power supply is turned on, the output lights of each voltage will return to normal display then red light turn to green for normal voltage output.

If there is a fault, the LED of the voltage display will turn to a red light and a warning sound (beep sound). Once the circuit fault has been eliminated, "Z80" microcomputer chip will control and automatically restore the normal output voltage, the voltage display light will turn green, and the warning sound will stop.

## ArduEZ Raspberry Pi Breadboard LED Light Display Instructions:

The Raspberry Pi breadboard has 6 groups of function display LEDs, which are 1. RX=REV UARTO RX 2. TX=REV UARTO TX GP4=GPIO4 SCL=GPIO3. SDA=GPIO2. 5V=5V power supply. If the lights light on means high potential.

#### Description of the LEDs in the logic probe work area:

There are TEST-1 and TEST-2 on the logic probe work area, each with two sets of independent lights and test signal input ports.

The logic probe test status display is designed with five-state functions: the red light represents high potential, and the green light represents low potential. When the signal line is not connected, there is no light to display the output.

When the red and green flashing alternately is a frequency interaction phenomenon, the test frequency band is judged by three flash rate frequencies, and the test frequency is up to 1Mhz.

#### **Timing Diagram**



## ArduEZ Dual Power+Dual 5 States Microcomputer Logic Probe Breadboard Description of the LEDs in the logic probe work area:

There are TEST-1 and TEST-2 on the logic probe work area, each with two sets of independent lights and test signal input ports.

The logic probe test status display is designed with five-state functions: the red light represents high potential, and the green light represents low potential. When the signal line is not connected, there is no light to display the output.

When the red and green flashing alternately is a frequency interaction phenomenon, the test frequency band is judged by three flash rate frequencies, and the test frequency is up to 1Mhz.

## **Timing Diagram**



#### What does the "beep" means?

The beep is a warning sound, and there will be a first "beep" to indicate that the boot is completed. When the short-circuit fault or the circuit output is overloaded, the power indicator will turn red and the warning sound will sound.

#### What do green and red lights mean?

The green light indicates that the power supply system is outputting supply regular currently. The red light means that the power is overloaded or the circuit is short-circuited, at the meantime circuit protection mechanism will be activated and the output power will be cut off.

### What's microcomputer booting self-detection?

It's also called POST(Power-on self-test). When the breadboard is turned on, there are internal controlled by two "Z80" microcomputer chips, one is used as a three-power supply control circuit; and the other is equipped with a power-on inspection program inside. After the program is started, the green light will display to confirm three sets of 3V/5V/12V output circuits.

When the power supply go through the chip, all the output supply has been detected when it's normal ;then the red light signal will make" beep" sound to indicate that boot process is being executed, and the power supply is turned on, the output lights of each voltage will return to normal display then red light turn to green for normal voltage output.

If there is a fault, the LED of the voltage display will turn to a red light and a warning sound (beep sound). Once the circuit fault has been eliminated, "Z80" microcomputer chip will control and automatically restore the normal output voltage, the voltage display light will turn green, and the warning sound will stop.

\_\_\_\_\_