十速科技股份有限公司
tenx technology inc.

Advance Information

TP6704

Voice-activated LED controller

8 Bit Microcontroller

Application Note

Tenx reserves the right to change or discontinue this product without notice.

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PRODUCT NAME

TP6704

TITLE

Voice-activated LED controller

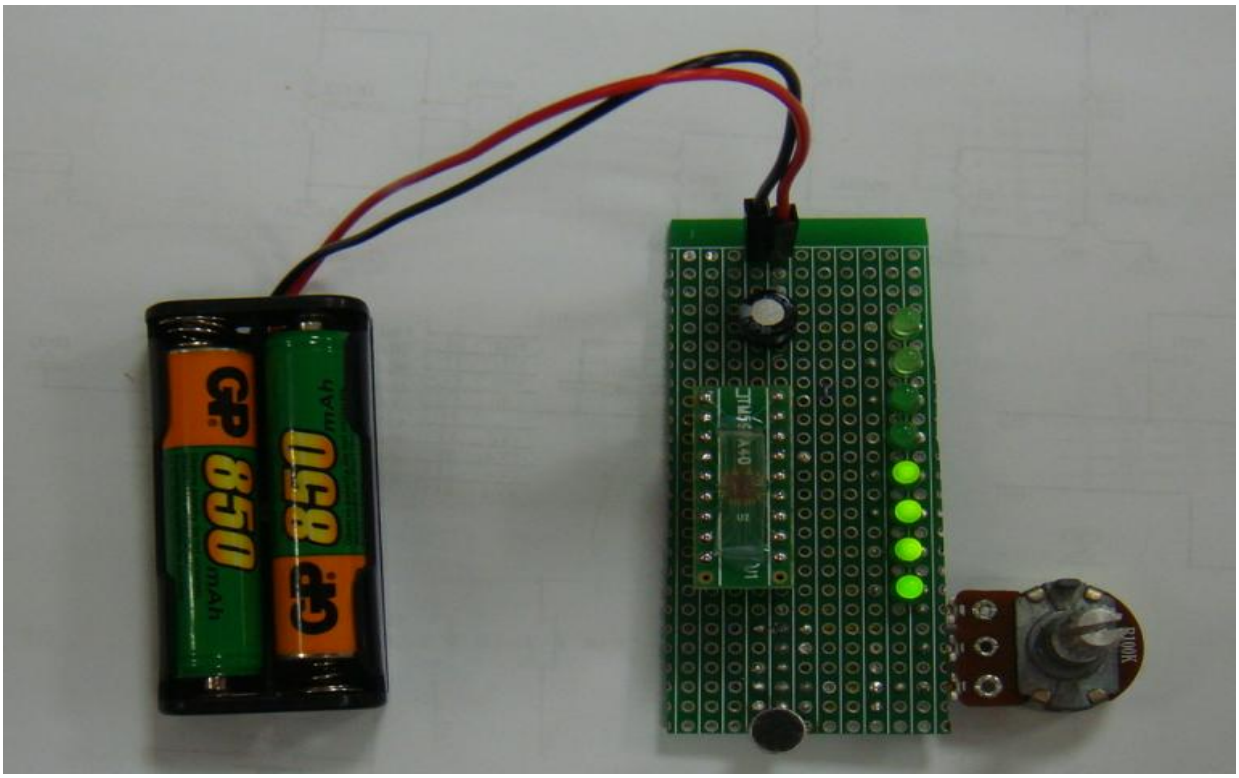
APPLICATION NOTE

1. Introduction to functions

1.1 Introduction to the function of voice-activated LED controller

(1) Product function and structure

2 AA batteries are used to provide working voltage. Sound is fed into the system using a microphone. After being amplified by an amplifying circuit, they are fed into TM57PE10 with an analog comparator input terminal. The sound intensity variation is calculated by comparing to an internal reference voltage by controlling the MCU TM578E101RV (Internal reference voltage) and then the volume level results are displayed using 8 LEDs.



1.2 Introduction to hardware functions

(1) Use TM57PE10 (a 8 Bit Microcontroller)

(2) One set of power input, (AA battery*2)

(3) One microphone to receive sound

(4) A variable resistor to adjust the amplify sensitivity of the volume.

(5) 8 LEDs to display the sound intensity variation

1.3 Introduction to structure functions

(1) **LED * 8** PA0，PA1，PA2，PA5，PA6，PB0，PB6，PB7

Sound intensity variation display (lower volume) ＜ － ＞ (higher volume)

(2) **Volume input** PB1 (IN0-)

PB1 is used as the microphone analog input and combined with PB2 to constitute a comparator. The volume is determined by controlling MCU TM57PE10 Analog Comparator Internal reference voltage.

2. 應用線路 Application Circuit