

## H805SB Instructions



### 1. Abstract

H805SB is a LED controller that is capable of controlling a variety of single or double-line driver chips with one port and has infrared remote control and nixie tube display functions. H805SB can control maximum 4096 pixels.

Auxiliary software is “LED Build Software”.

### 2. Supported Driver Chips

LPD6803, LPD8806, LPD6813, LPD1882, LPD1889, LPD6812, LPD1883, LPD1886, DMX512, HDMX, APA102, UCS6909, UCS6912, UCS1903, UCS1909, UCS1912, WS2801, WS2803, WS2811, WS2812, TM1803, TM1804, TM1809, TM1812, TM1829, TA9912, TM1913, TM1914, TM1916, TM1926, SM16711, INK1003, LX1003, LX2003, LX2006, TLS3001, TLS3002, DZ2809, P9813, P9816, SM16716, LD151x, LD153x, MBI6021, MBI6023, MBI6024, etc.

Note: many chips share the same option in software.

### 3. Performance

- (1). One port drives maximum 4096 pixels.
- (2). SD card supports FAT32 and FAT16 format, maximum capacity is 32G bytes, stores maximum 64 DAT files, which are played based on file name in alphabetical order.
- (3). With infrared remote control and nixie tube display functions.
- (4). Switch files, adjust brightness, set clock frequency and play speed with remote control.

#### **4. Remote Control Operations**

- (1). Switch DAT file:

Press “file” to enter DAT mode, nixie tube will display the DAT file number. Press “+” or “-” to switch to the next or previous file; You can still use the digital keys to enter the DAT file name you want to play and press “confirmation” to switch to the file.

- (2). Set the clock frequency:

Press “clock” to display the current clock, which includes an integer part and a decimal part, unit is MHZ. You can change the clock by pressing “+” and “-”, can also set the clock by using the digital keys, then press “confirmation” to confirm.

- (3). Set play speed:

Play speed ranges from 1 to 200, unit is frame per second. Enter a number with digital keys, press “confirmation” to confirm and save, you can also use “+”, “-” keys to increase or decrease

speed..

(4). Set brightness:

Brightness ranges from 1 to 31, it only works for those chips that support brightness adjustment (LPD6803&LPD8806 don't support brightness adjustment). Enter brightness value with digital keys, press "confirmation" to confirm and save, you can also use "+", "—"keys to set.

(5). Playing mode selection

H805SB defaults playing files in SD card recurrently, you can choose to play single file continuously.

"All Playback" is continuously playing all DAT files in cycle.

"Select Playback" is playing a single DAT file.

(6). Color modulation

Press "Select" to enter color modulation mode, then press "selection" to adjust the brightness of blue, press "select playback" to adjust the brightness of green, and press "all playback" to adjust the brightness of red. Particularly, LPD6803 and LPD8806 don't support color modulation function.

## **5. Operation Instructions**

(1). Nixie tube displays "05" after power-on; the right dot will keep flashing if SD card is not detected. Displaying "FE" means controller type is wrong or there are too many pixels. Displaying "F0"

means there is no valid DAT file in SD card. Displaying file number “01” means read SD card successfully.

(2). SD card must be formatted into FAT32 or FAT16 format after many times deletion. H805SB supports SDHC (high capacity SD card), maximum capacity is 32G. SD card can store maximum 64 DAT files, which are played based on file name in alphabetical order.

(3). In “LED Build Software”, choose “one line with a slave”, controller type must select “SB” and the chip type must be selected properly.

(4). Clock frequency and speed are set on controller. Normally, set the clock frequency at 1MHZ, set speed at 25 frames per second

## 6. Ports Definition

Connect GND, DAT when control single-line driver chip (like WS2812).

Connect GND, CLK, DAT when control double-line driver chip (like LPD6803).

Connect GND, D-, and D+ when control DMX512

## 7. Specifications

Input Voltage	DC5-24V
Power Consumption	1W
Drive pixels number	4096
Weight	40g
Working Temperature	-20C°--75C°

Dimension	L70 x W45 x H19
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