

LED Dot Matrix Digital Clock

v1.0.2

(5x7-1x6 Module)

Instructions

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Attention

- ◇ **Attention:** To prevent accidental damage, do not place this clock on an uneven surface.
- ◇ **Warning:** Use the correct power adapter or connect MINI USB cord to USB source.
- ◇ **Warning:** Clock is for indoor use only.
- ◇ **Warning:** Please do not let children touch the clock.

Functional Features

1. Six 5*7 LED dot matrix display modules.
2. Display hour, minute and second (12 or 24 hour format optional)
3. Display month and day.
4. GPS adjust: Automatic weekly or manual adjustment. (With optional GPS module).
5. GMT time zone functions: The clock will calculate the local time based on satellite.
6. Temperature display (°C or °F) with optional temperature sensor.
7. Two alarm clock.
8. 8 steps of adjustable brightness with manual or ambient auto brightness control.
9. 3 different display fonts.
10. 4 digital switching effects.
11. Display auto rotates with clock placement.
12. High-accuracy, ± 2 min/per year.
13. IR remote controller operation.
14. Built-in backup lithium battery will maintain clock time more than 3 years.

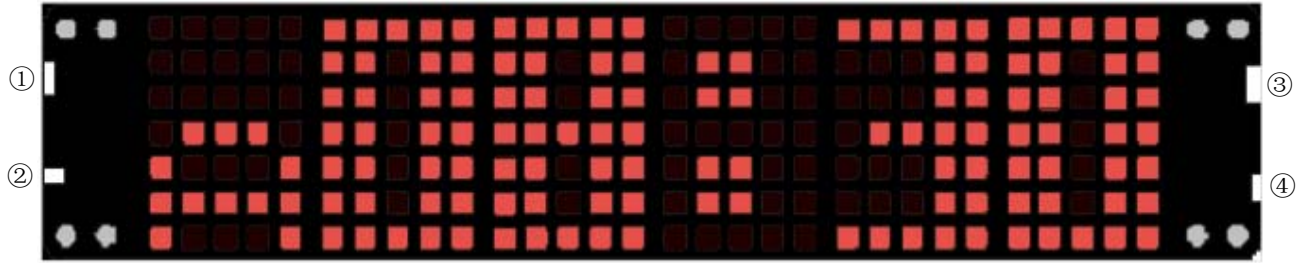
Technical Specifications

Input voltage:	DC5V
Working current:	200mA (Max 300mA)
LED module type:	5*7 square dot matrix LED display module (Red or Blue available)
Size:	272mm x 54mm x 25mm
Working temp.:	0°C - 55°C
Weight:	352g
Shell material:	Laser cut Acrylic plate.

Package Contents

Name	Quantity	Name	Quantity
LED clock	(1)	Power adapter	(1)
IR remote controller	(1)	User manual	(1)

Appearance Layout



Num	Name	Num	Name
①	Mini USB port	②	DC3.5/1.35 power port
③	Function button	④	GPS port

IR Remote Control Function



1. POWER	2. BACKLIGHT	3. SET
4. DATE	5. ALARM	6. TEMPERATURE
7. LEFT	8. RIGHT	9. FUNCTION
10. OK	11. CANCEL	12. NUM 0
13. NUM 1	14. NUM 2	15. NUM 3
16. NUM 4	17. NUM 5	18. NUM 6
19. NUM 7	20. NUM 8	21. NUM 9

IR controller uses (2) AG10 cells. Transportation rules may not permit shipment with lithium battery installed. Please insert battery or remove protective insulator to operate.

Note: Remote control may have cosmetic differences.

Operation Beep Tones

Beep	Description	Meaning
Be	a short beep	Normal Operation
bebebebe	four short beep	Set Error/Cancel/Alarm
Be...	a long beep	Confirm and saved

Display Mode Switch

1. Display time mode

After powering on the clock or pressing the POWER button in shutdown state, clock displays in time mode. Clock will display HOUR and MINUTE in this mode.

2. Display second mode

Press CANCEL button to enter display SECOND mode. Clock will return display time mode after ten seconds.

3. Display calendar date mode

Press DATE button to enter calendar date display mode. Clock will display MONTH, DAY. Press DATE button again and the clock will show the day of week. Clock will return to display time mode after three seconds.

4. Display GMT time zone mode

Press DATE button three times to enter display GMT time zone mode. Clock will return to display time mode after three seconds.

5. Display alarm mode

Press ALARM button to show alarm 1 mode. Press ALARM button again to show alarm 2 mode. Clock will return to display time mode after three seconds.

6. Display temperature mode

Press TEMPERATURE button to show temperature. (when used with the optional temp. sensor) Clock will return to display time mode after three seconds.

Digital Effects Switch

- **In the display time mode, press the LEFT or RIGHT button repeatedly to toggle between four kinds of digital display effects.**

1. Up and down

Old digit moves down and new digit moves in from the top of the display.

2. Fade in & fade out

Old digit will fade gradually. After the old digit fades out, the new digit will gradually fade in.

3. Flip over

When digit changes it is a similar effect to turning a page.

4. Rotating erase

Old digit would be erased by a rotating line and the new digit will appear as the rotating line completes the revolution.

- **This option is stored in the clock and is not lost when powered off.**

Digital Fonts Switch

- In the display time mode, press the **FUNC** button to toggle between three different built-in character fonts.
- This option is stored in the clock and is not lost when powered off.

Time Format 12H/24H

In the display time mode, press **OK** button repeatedly to toggle between time formats.

- Time format setting for 12H/24H is for the display time mode only. During setup time mode, time is always set using the 24H format.
- This option is stored in the clock and is not lost when powered off.

Temperature Units °C/°F

In the display temperature mode (with the optional temp sensor), press **FUNC** button to toggle between °C/°F .

- This option is stored in the clock and is not lost when powered off.

Adjust Display Brightness

In the display time mode, press **LIGHT** button change brightness repeatedly to display 8 different steps of brightness. After step 8, the clock will show "Auto", which means the clock will adjust brightness automatically according to the ambient light level.

- This option is stored in the clock and is not lost when powered off.

Set Time

In the display time mode, press the **SET** button to enter set time mode. After entering the set time mode, clock will show **HH:** meaning now setting **HOUR**. Press **LEFT** or **RIGHT** button to change setting position. **MM:** means now setting **MINUTE** and **SS:** means now setting **SECOND**. Press button **NUM0** - **NUM9** to change the numbers.

Press **OK** to save setting. Press **CANCEL** to abort setting and exit.

- After setting success, clock will beep for a long time, and return to display time mode.
- If setting is illogical, clock will beep four short times and abort. Settings will not be saved and the clock will return to display time mode.
- When setting time, clock displays in 24H format.

Set Date

In display date mode, press **SET** button to enter set date mode. After entering set date mode, clock will show **YY**: meaning now setting **YEAR**. Press the **LEFT** or **RIGHT** button change setting position between **YY - MM - DD**. **MM**: means now setting **MONTH** and **DD**: means now setting **DAY**.

Press button **NUM0 - NUM9** to change the numbers. Press **OK** to save settings. Press **CANCEL** to abort setting and exit.

- **After setting success, clock will beep for a long time, and return to display time mode.**
- **If setting is illogical, clock will beep four short times and abort. Settings will not be saved and the clock will return to display time mode.**
- **The moon date does not need setting, the clock will calculate automatically according to the Gregorian calendar.**
- **Two digit of YEAR (YY) means 20YY year.**

Set GMT Time Zone

In display GMT mode, press **LEFT** or **RIGHT** button to change the GMT time zone.

For example: BEIJING lies in GMT+08, press the **LEFT** or **RIGHT** button get the clock to display **+08**. Correct settings range between **-12** and **+12**.

Set Alarm

In display alarm 1/2 mode, press **SET** button enter set alarm mode.

In set alarm mode, **HOURL (HH)** will blink, meaning now setting **HOURL** of alarm. Press **LEFT** or **RIGHT** button to change between **(HH)** and **(MM)** setting position.

Press button **NUM0 - NUM9** to change the number.

Press **OK** to save setting. Press **CANCEL** to abort setting and exit.

- **After setting success, clock will beep for a long time, and return to display time mode.**
- **If setting is illogical, clock will beep four short times and abort. Settings will not be saved and the clock will return to display time mode.**
- **To disable the alarm function, press the FUNC button in alarm display mode, then clock display OFF, means this alarm is disabled.**
- **If the clock alarm is sounding, press any button to stop the alarm. The clock will automatically stop the alarm after 30 seconds.**

Set Date Display Interval

In display time mode, press **ALARM** button three times and clock will show **Dint**: meaning now setting the date display interval. The date will display for (3) seconds when active.

Press **LEFT** or **RIGHT** button to change interval "N" seconds. 0 means no date display during time display mode. Available intervals are in 10 second increments between 00 and 90 seconds. After setting, the date will display for (3) seconds during the time display mode according to **Dint** setting interval.

Note: Scrolling display of the Date or Temperature are sequential events that will be separated by the interval "N seconds". If both Date and Temp are set to scroll, the time between displays of the date will be equal to the sum of the Date interval and Temp interval.

Set Temperature Display Interval

In display time mode, press **ALARM** button four times and clock will show **Tint**: meaning now setting the temperature display interval.

Press **LEFT** or **RIGHT** button to change interval "N" seconds. 0 means no date display during time display mode. Available intervals are in 10 second increments between 00 and 90 seconds. After setting, the date will display for (3) seconds during the time display mode according to **Dint** setting interval.

Note: Scrolling display of the Date or Temperature are sequential events that will be separated by the interval "N seconds". If both Date and Temp are set to scroll, the time between displays of the date will be equal to the sum of the Date interval and Temp interval.

GPS Adjust Date & Time

In setting date or setting time mode, press **FUNC** button, clock will enter GPS adjusting mode. After enter GPS adjusting mode, the first LED display module will show a rotating animation, to indicate GPS is connecting the satellite. After receiving the current time of satellite, clock will adjust itself and beep for a long time, then return to the time display mode.

- **Clock will enter GPS adjusting mode automatically at 08:00 every MONDAY.**
- **In GPS adjusting mode, press CANCEL button to exit adjusting mode.**
- **After receiving the current time of satellite, the clock will calculate the local time based on the GMT setting.**
- **If the GPS receiver is not connected, the time display will return after 3 seconds.**
- **Clock display returns after 15 minutes if GPS cannot receive a signal from satellite.**

Setup & Message Display Utilization

This clock has a function to display a custom message consisting of up to 10 groups of messages (words) of 6 characters (upper and lower case letters, numbers or characters) each. During off-mode (press power off button), press 0-9 to display the message of 0-9 which you are setting.

After press 0-9 it would be displaying "**Msg N:**" (N for the present number of messages) and the details of message will follow.

Press button "OK" in the off-mode to start the scrolling message function. It will show the messages sequentially from msg 0 to 9. Messages that are empty are skipped in the display sequence; and "**No msg**" will be shown on the screen if msg 0-9 are empty.

Editing the message

First, press the **NUMBER** button to choose one message location and while it is displayed on the screen press the **SET** key to edit. Cursor will be on the first character and you can use left and right arrow keys to switch between the positions.

Character Setting Details: (Use buttons on the remote control)

Number 0: 0 space

Number 2: 2 A B C a b c

Number 4: 4 G H I g h I

Number 6: 6 M N O m n o

Number 8: 8 T U V t u v

Number 1: 1 . + - : []

Number 3: 3 D E F d e f

Number 5: 5 J K L j k l

Number 7: 7 P Q R S p q r s

Number 9: 9 W X Y Z w x y z

Press **OK** to save and **CANCEL** to cancel.

Edit the time interval of scrolling display

During off-mode and in the message display mode, press the **FUNC** key to enter the mode of editing time interval of scrolling display (**Scroll int**). Press the **NUMBER** key 0-9 to set time interval (in seconds from 01-99). Press **OK** to save and **CANCEL** to cancel. Minimum interval is 1 second and system will autocorrect to 01 second if 00 second is saved.

- **No message by default.**
- **Default time interval is 5 seconds and can be set in the range of 1-99 seconds.**
- **Please edit all messages with spaces if you want to clear present message.**
- **The font of the message can be switched by the setting the numbers font.**

Resetting The Clock

If you want to completely reset the clock, please press and hold the button on the clock, then power the clock, clock will sound a long beep three times. Release the button after the beeps and the clock resets to factory original state.

- **After clock reset, all user settings of the clock will be lost, including the alarm setting. This reset function will not change the date and time setting of the clock.**
- **For any questions, please contact the designer.**

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