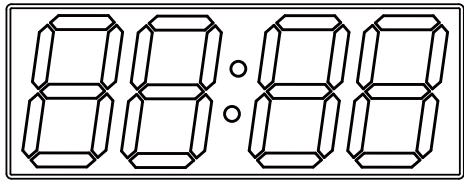


User Guide

WS-604S Network Digital LED Clock



WARNING

- Remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children.
Do NOT dispose of batteries in household trash or incinerate.
- Even used batteries may cause severe injury or death.
- Call a local poison control center for treatment information.
- The product contains non-replaceable batteries.
- Compatible battery type: LIR1220.
- Nominal battery voltage: 3.0V.
- Non-rechargeable batteries are not to be recharged.
- Do not force discharge, recharge, disassemble, heat above 70°C or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns.

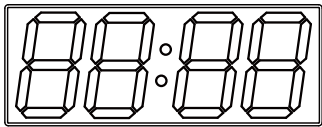


WARNING

- INGESTION HAZARD:** This product contains a button cell or coin battery.
- DEATH** or serious injury can occur if ingested.
- A swallowed button cell or coin battery can cause **Internal Chemical Burns** in as little as **2 hours**.
- KEEP new and used batteries **OUT OF REACH OF CHILDREN**
- Seek immediate medical attention** if a battery is suspected to be swallowed or inserted inside any part of the body.



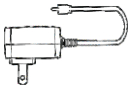
What' s in the box



1 x Digital Clock



1 x Remote Control



1 x Power Adapter



1 x Packet of screws (optional)



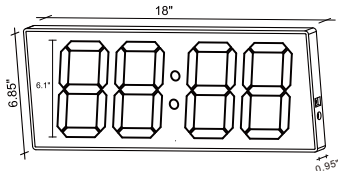
1 x Packet of Electrical Wire (optional)

1 . Overview

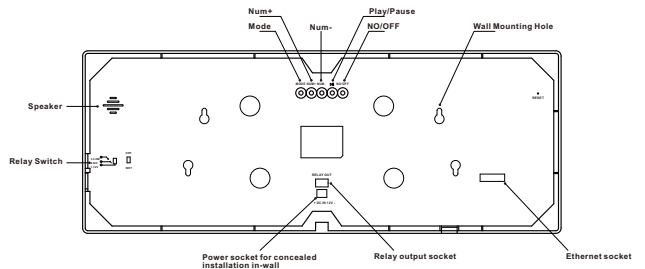
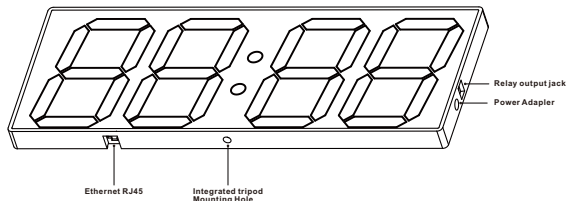
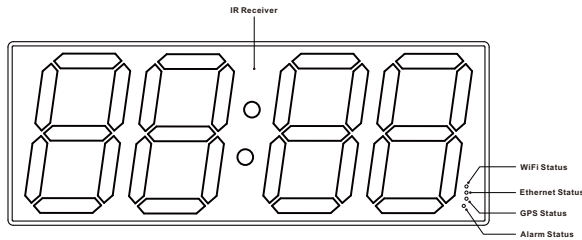
The WS-604S is a large, high-brightness network LED clock designed for precision and flexibility. It adapts seamlessly to various environments including schools, factories, gyms, churches, and homes.

- Precise Time Sync:** Auto-updates via NTP or optional GPS
- Remote Control:** Operate via infrared remote or network-based controller
- Smart Timers:** Three presets with optional repeat mode
- Multi-Alarm:** Up to 30 alarms to play audio, start a countdown, or activate a relay
- Brightness:** 4 adjustable levels

Clock dimensions



Get to know the clock



Memory Presets (M1-M4):

- M1:** Countdown preset (seconds)
e.g. 19:80 → 19.8 seconds
- M2:** Countdown preset (minutes)
e.g. 3:30 → 3 minutes 30 seconds
- M3:** Countdown preset (hours)
e.g. 99:15 → 99 hours 15 minutes
- M4:** Count-up timer (default 99:99 max)

Mode Functions (Fn1-Fn8):

- Fn1:** Brightness adjustment br [level] (use Num+/-)
- Fn2:** Volume adjustment SP [level] (use Num+/-)
- Fn3:** Announce WiFi IP (press ►II)
- Fn4:** Announce Ethernet IP (press ►II)
- Fn5:** GPS status SA [satellites] (for installation evaluation)
- Fn6:** Timezone code setup (for time sync)
- Fn7:** AP mode activation (PIN required, for WiFi reconfiguration)
- Fn8:** Factory reset (PIN required, erases all settings)

Other Controls:

- 12/24:** Toggle time format
- ::** Toggle colon blinking
- ←:** Func set - back to time display. Edit - delete digit
- Relay ON/OFF:** Toggle relay output
- ON/OFF:** Display ON/OFF toggle

2 . Connect Ethernet

If you are using a PoE switch, you can power the clock directly via the Ethernet cable. Otherwise, use the supplied power adapter.

Step 1

Connect the Ethernet cable and check the wired network indicator light (blue). If the light is on, the network connection is successful.

Step 2

Using a computer or smartphone on the same network, open a browser and enter **ws604s.local** in the address bar to access the clock's web server login page. Enter the default PIN: **1234** to log in.

Step 3

Once logged in, go to the **TIME & SYNC** menu. On the TIME & SYNC page, select your time zone and click **Save Settings**. After the clock restarts, it will automatically synchronize to the correct local time.

Notes

- The clock' s factory default is **DHCP mode** for wired networks, with hostname ws604s and PIN 1234.
- If your network does not support mDNS resolution, use the infrared remote:

- Press **Mode +** until the clock displays Fn 4.
- Press **►II (Play/Pause)**, and the clock will announce its current wired IP address (e.g., 192.168.1.123).
- Replace ws604s.local in your browser with this IP address to log in.

3 . Quick Setup Wi-Fi

We recommend configuring Wi-Fi through the web interface after connecting the clock via Ethernet. However, you can also set up Wi-Fi quickly without using a wired connection.

1. Enter Wi-Fi Setup Mode

- Press and hold the **Mode** button on the back of the clock, then plug in the power.
- The display will show **AP --**, and the clock will start a Wi-Fi hotspot named **"ws604s clock"**.

2. Connect to the Clock Hotspot

- On a computer or smartphone, connect to the Wi-Fi network **"ws604s clock"**.
- Open a web browser and enter **192.168.4.1** in the address bar to access the Wi-Fi setup page.

3. Complete Configuration (Two Steps)

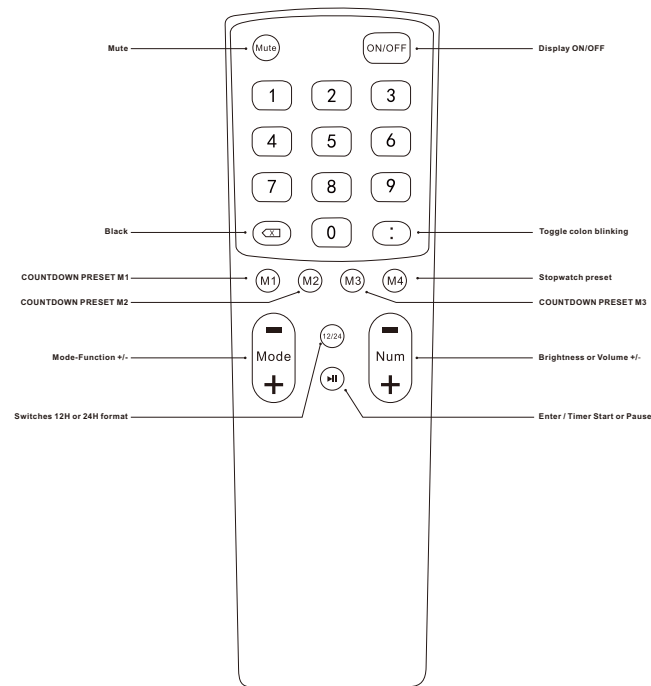
- Step 1:** Select your time zone and click **Continue**.
- Step 2:** Choose the local Wi-Fi network to connect:
 - For **OPEN networks**, no password is required.
 - For **WPA/WPA2 networks**, enter the Wi-Fi password.
 - For **WPA2-EAP enterprise networks**, enter both **username** and **password**.
- Click **Save & Restart**. The clock will reboot and attempt to connect.

4. Verify Connection

- If the Wi-Fi status indicator (green LED) is **solid ON**, the connection is successful.
- If the LED keeps **flashing**, the connection failed. Please check:
 - Your router status (try restarting it)
 - The correctness of the entered password or username

⚠ Note: The clock only supports **2.4GHz Wi-Fi networks**.

4. Remote Control

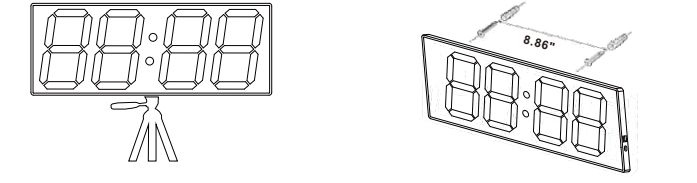


5. Multiple Installation Methods

- Mounted on tripod

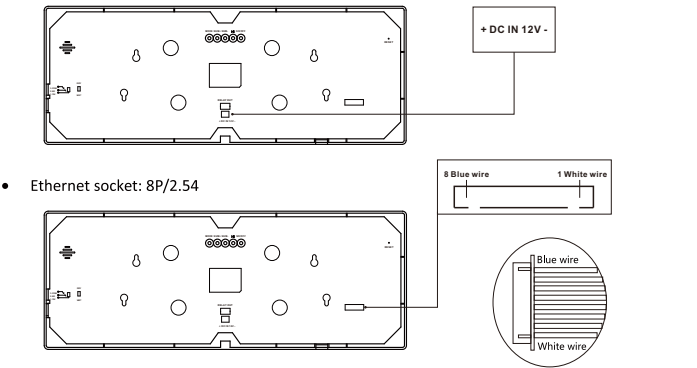
The clock has a built-in 1/4-20UNC nut, suitable for most tripods
- Wall installation

The clock can be installed in both forward and reverse directions depending on the direction of the Power socket.



Conceal installation

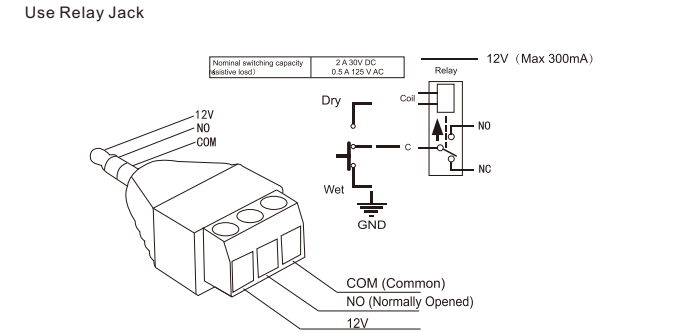
- Chose correct power source: DC 12 V / 6.4 Watt (Max)
 - Power socket: 2P/2.54
- Using the electronic wire (Red/Black) provided, the black one is ground, the red one is +12V.
- You can also see "-DC12V +"beside the DC power socket on the back of the clock, it is to help you
- 12V: red wire, GND: black wire



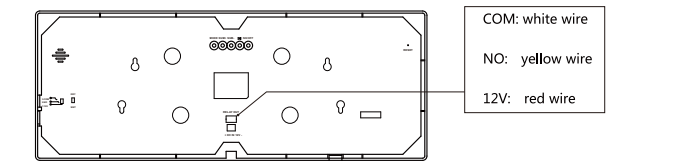
Appendix: Time Zone Code Table

RC Code	Country/Region	City/Area	RC Code	Country/Region	City/Area
0	Afghanistan	Kabul	20	Brazil	Recife
1	Albania	Tirana	21	Brazil	Sao Paulo
2	Andorra	—	22	Bulgaria	Sofia
3	Argentina	Buenos Aires	23	Canada	Atikokan
4	Armenia	Yerevan	24	Canada	Blanc Sablon
5	Australia	Adelaide	25	Canada	Dawson Creek
6	Australia	Brisbane	26	Canada	Edmonton
7	Australia	Darwin	27	Canada	Halifax
8	Australia	Eucla	28	Canada	Regina
9	Australia	Hobart	29	Canada	St John's
0	Australia	Lord Howe	30	Canada	Toronto
1	Australia	Perth	31	Canada	Vancouver
2	Australia	Sydney	32	Canada	Whitehorse
3	Austria	Vienna	33	Canada	Winnipeg
4	Azerbaijan	Baku	34	Cape Verde	—
5	Barbados	—	35	Chile	Santiago
6	Belarus	Minsk	36	China	Hong Kong
7	Belgium	Brussels	37	China	Shanghai
8	Bosnia	Sarajevo	38	China	Taipei
9	Brazil	Manaus	39	Colombia	BoGota

- The built-in relay can be operated and controlled through Alarm Events and the “Web Remote control” The relay output adapter in the accessories has three ports, defined as shown in the diagram below.



Use Relay socket: 3P/2.54



6. GPS Clock User Guide

Please read this guide carefully before using GPS synchronization.

1. Installation Requirements

- Install the clock in a location where GPS satellite signals can be received (e.g., near a window or outdoors).
- Avoid reinforced concrete buildings or basements, as these may block signals completely.
- The clock only uses GPS **time signals**, accurate positioning is not required.

2. Usage Steps

Step 1: Set the Time Zone (Required)

- On the remote control, press **Mode+** until the screen shows **Fn 6**.
- Press **►|||**, the screen shows t _ _ _.
- Refer to the Time Zone Code Table and enter the correct RC Code (e.g., **New_York** → **146**).
- Press **►|||** again. If the screen shows **Succ**, the setting is successful.

Step 2: Check GPS Signal

- Place the clock in a suitable location and wait at least 1 minute after power-on.
- On the remote, press **Mode+** until the screen shows **Fn 5**.
- Press **►|||**, the screen will display SA xx:
 - SA -1** → No GPS function
 - SA 00** → No satellites detected
 - SA 01 ~ SA 30** → Number of visible satellites
- Check the GPS status LED (yellow):
 - Flashing** → Satellite time data received
 - Solid ON** → Full satellite data received, synchronization available

Step 3: Complete Synchronization

- When the yellow LED is flashing or solid ON, GPS synchronization is successful.
- Default synchronization interval is **1 hour**.
- To change the interval, connect the clock to the network and update settings via the web control interface.

RC Code	Country/Region	City/Area	RC Code	Country/Region	City/Area
80	Mexico	Tijuana	100	Russia	Astrakhan
81	Moldova	Chisinau	101	Russia	Irkutsk
82	Moldova	Tiraspol	102	Russia	Kaliningrad
83	Monaco	—	103	Russia	Krasnoyarsk
84	Montenegro	Podgorica	104	Russia	Magadan
85	Morocco	Casablanca	105	Russia	Moscow
86	Myanmar	Rangoon	106	Russia	Samara
87	Namibia	Windhoek	107	Russia	Saratov
88	Nepal	Kathmandu	108	Russia	Ulyanovsk
89	Netherlands	Amsterdam	109	Russia	Vladivostok
90	New Caledonia	Noumea	110	Russia	Volgograd
91	New Zealand	Auckland	111	Russia	Yakutsk
92	New Zealand	Chatham	112	Russia	Yekaterinburg
93	North Macedonia	Skopje	113	San Marino	—
94	Norway	Oslo	114	Serbia	Belgrade
95	Pakistan	Karachi	115	Slovakia	Bratislava
96	Poland	Warsaw	116	Slovenia	Ljubljana
97	Portugal	Azores	117	South Georgia	—
98	Portugal	Lisbon	118	South Korea	Seoul
99	Romania	Bucharest	119	Spain	Madrid

RC Code	Country/Region	City/Area	RC Code	Country/Region	City/Area
120	Sri Lanka	Colombo	140	USA	Guam
121	Sweden	Stockholm	141	USA	Hawaii
122	Switzerland	Zurich	142	USA	Honolulu
123	Thailand	Bangkok	143	USA	Los Angeles
124	Tonga	Tongatapu	144	USA	Metlakatla
125	Turkey	Istanbul	145	USA	Midway
126	UAE	Dubai	146	USA	New York
127	UK	Belfast	147	USA	Phoenix
128	UK	Gibraltar	148	Uruguay	Montevideo
129	UK	Guernsey	149	Vatican	—
130	UK	London	150	Venezuela	Caracas
131	Ukraine	Kiev	151	Zimbabwe	Harare
132	Ukraine	Uzhgorod			
133	Ukraine	Zaporizhzhia			
134	Ukraine	Zaporozhye			
135	USA	Adak			
136	USA	Alaska			
137	USA	Anchorage			
138	USA	Chicago			
139	USA	Denver			