

BIGTIMECLOCKS® BHC®

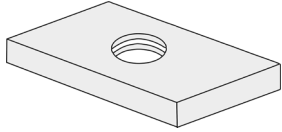
MODEL 544-WiFi

**WiFi SYNCHRONIZED
DIGITAL CLOCK**

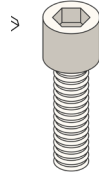


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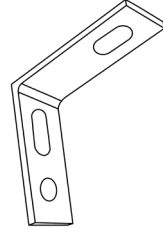
What's in the box



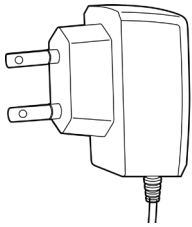
2x Sliding threaded plate (*pre mounted in frame groove*)



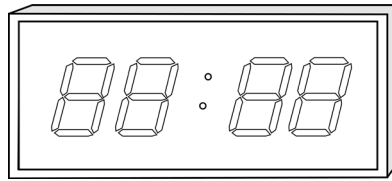
2x Cylinder head screw (*pre mounted in frame groove*)



2x Mounting bracket (*pre mounted on frame*)



1x Power supply



1x Digital clock

NOTE: All 500 Series models are plug-in digital clocks. A small battery is included in the clock for backup purposes in order to maintain clock functions in the background. The battery will however not illuminate the display. The clock will remain on time when power resumes.

1. Overview

BigTimeClocks® 500 Series WiFi synchronized clocks draw time data from NTP time servers either over the Internet or a LAN through WiFi. The synchronizing process lasts 1 hour and the clock will subsequently display atomic time without any time deviation.

NOTE: BigTimeClocks® 500 Series Synchronized Clocks are specialist timing equipment and require qualified IT experts to link the units to a Wifi network and input all IP parameters to synchronize to .

Figure 1

Clock screen view

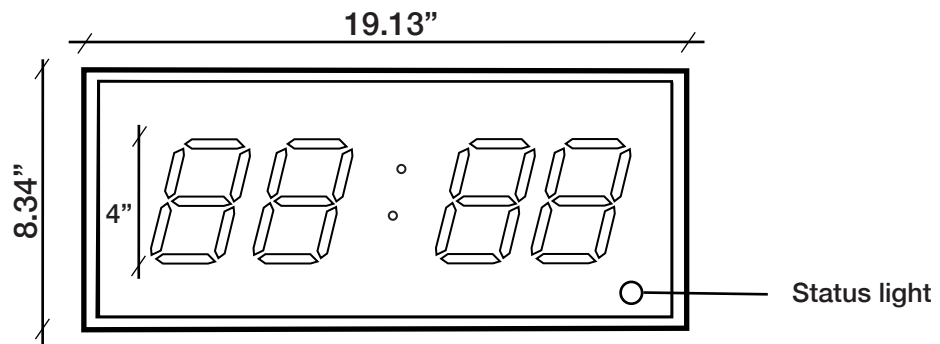
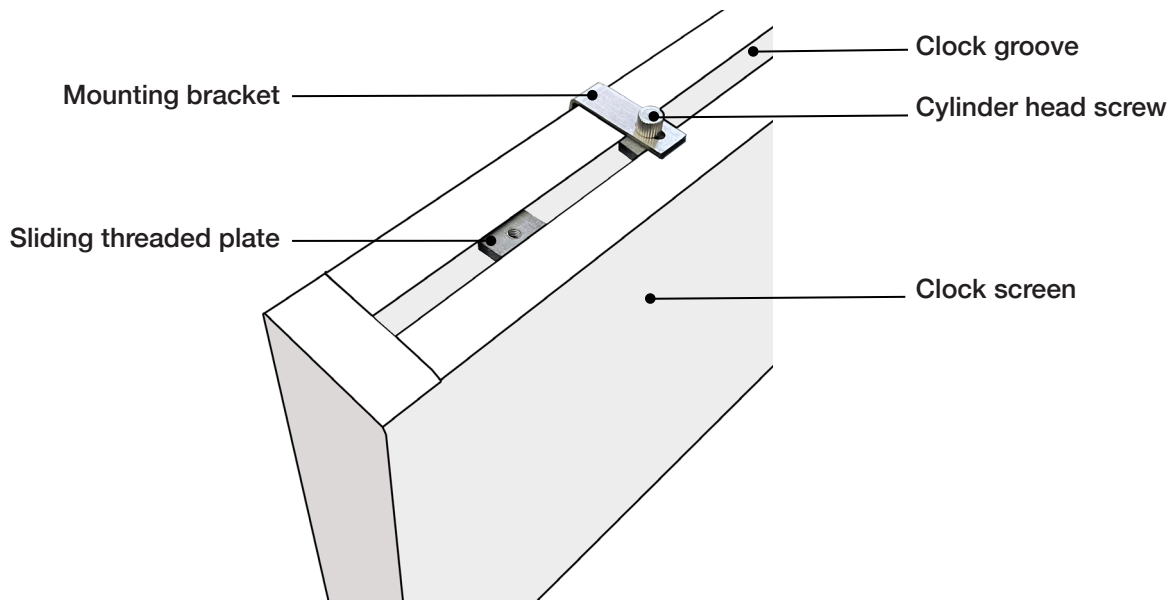


Figure 2

Clock top view and features



2. Setup

2.1 Side bar buttons

Use the clock side buttons (see figure 3 below) to manually set the time zone or to restore factory settings.

2.1.1 Setting the time zone

- Press the “Set Time” key to enter the time zone setting mode.
- Then press the “Set Time” key to adjust to the time zone.
- Finally, press the “OK” key to save and exit.

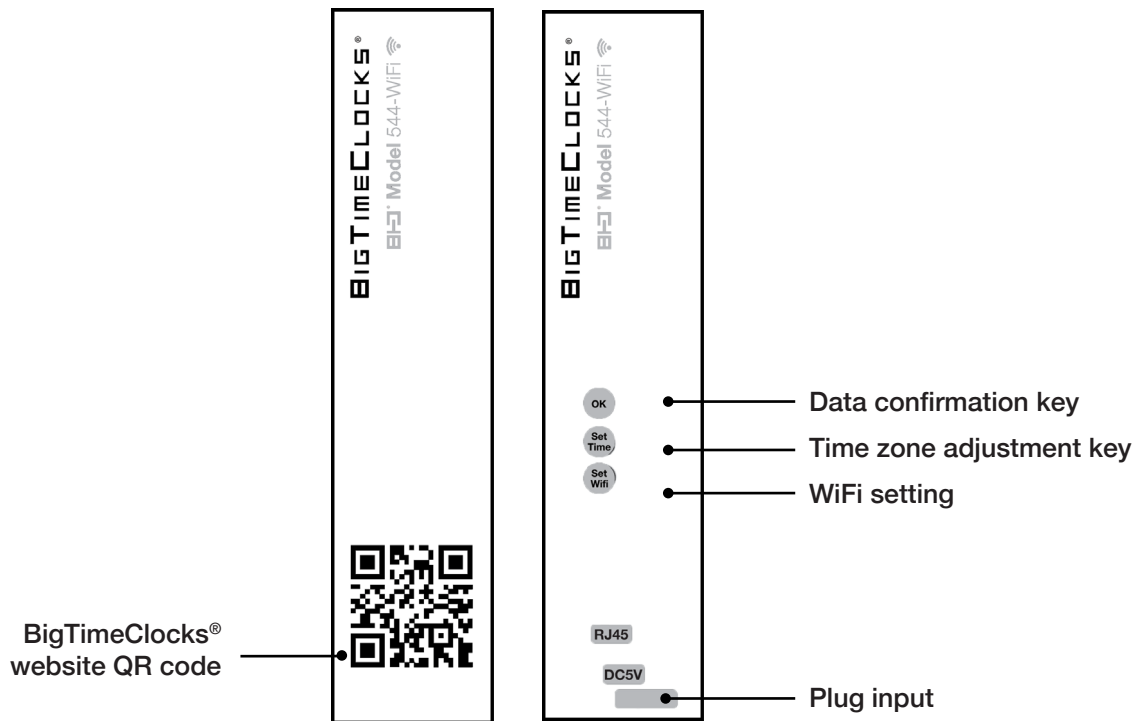
The time zone range covers UTC-12~UTC+14.

2.1.2 Setting the WiFi

The “Set Wifi” button sets the clock system to WiFi configuration mode and restores the internal configuration to factory settings and allows the user to change the clock WiFi parameters.

Figure 3

Clock side views



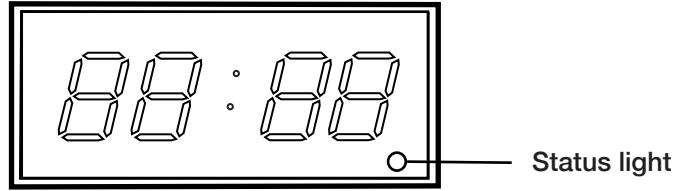
2.2 Status indicator

The status indicator light is located in the lower right hand corner of the clock.

When the clock has successfully synchronized with a time network server (NTP server), the indicator light is turned off. If the indicator light is on, time synchronizing is in progress. If synchronization is unsuccessful, the light flashes. Each error type generates a number of flashes (1 to 6). The error descriptions are summarized in table 1, page 7.

Figure 4

Status light location



2.3 Setting clock parameters

When BigTimeClocks® 500 Series WiFi clock is powered on for the first time, system parameters configuration is required.

After the clock has been successfully configured, time calibration will be completed within two minutes, and time synchronization between the clock and the time server will be carried out every hour.

NOTE: BigTimeClocks® 500 Series clock configuration can only be carried out on a PC computer and is not compatible with Apple devices at the present time.

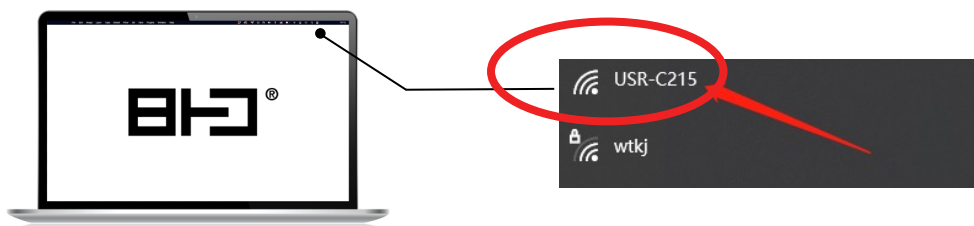
2.4 Clock configuration

2.4.1 Enter configuration mode

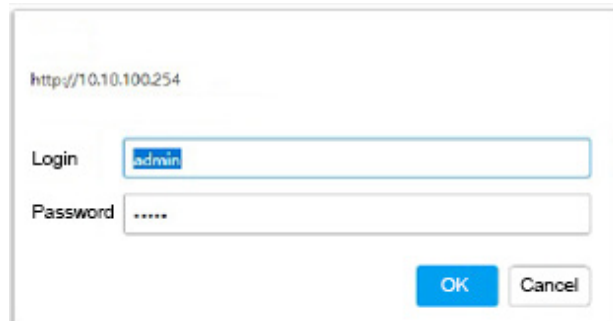
Press and hold the “Set Wifi” key for 5 seconds to restore the clock system parameters to factory settings.

2.4.2 Connect to the clock’s IP address

Use a PC computer or Android phone to connect to the clock’s hotspot “USR-C215”.



Open your browser and type "10.10.100.254" in the search bar. Once the IP address is accessed, the login interface will display (see screenshot below). Enter “admin” for both the login and password fields.



2.4.3 WiFi parameter settings

a. WiFi Work Mode: STA Mode

In the "WiFi Work Mode" field, select "STA mode"

WiFi Mode Select

WiFi Work Mode: STA mode

STA Mode

Network Name(SSID): tianqiongdianzi Search

Encryption Method: AUTO

STA Password: 2018tianqiong

DHCP: Enable

Save

b. Select WiFi network

Click the "search" box to enter the WiFi search interface and select your WiFi network.

Please select a SSID

Site Survey

SSID	BSSID	RSSI	Channel
tianqiongdianzi	04:D7:A5:F9:29:F5	-42	1
wtkj	AC:75:1D:17:FE:A0	-67	6
xylt-3	50:D2:F5:EA:FB:C9	-75	4
iTV-jNvr	7C:76:30:58:4F:51	-79	10
ChinaNet-jNvr	7C:76:30:58:4F:50	-81	10
wtkj	AC:75:1D:18:05:40	-83	1
fhpre-PJ4c	2C:F6:47:81:73:8C	-83	1
iTV-3SUP	5A:DF:A8:BA:68:A6	-89	6

OK Refresh

NOTE: The WiFi name **must not** contain special characters

c. Enter password

- In the STA Password field enter the WiFi network's password to establish a connection.
- Press "save" and ignore the restart box that pops up.

Save Success

Save Success!
Configurations will take effect after restart.
After restart, you will need to re-login the configuration interface for other settings, s
it is recommended to restart after completing all settings.
Please click [Restart] to restart now, or click [Back] to continue setting.
You can restart after all configuration.

Restart

d. Trans setting

Enter the following settings:

- Network set mode: **“Tranparent”**
- SocketA Connect Set: Protocol: **“UDP-Client”**, Port: 123, Server IP Address: enter your NTP server IP address (private or public).
- Click **“Save”**

System Status	Serial Port Set
WiFi Setting	Baud Rate (1200-460800 bps): <input type="text" value="115200"/> bps
Trans Setting	Data Bit: <input type="text" value="8"/> bit
Extra Function	Check Bit: <input type="text" value="None"/>
System Setting	Stop Bit: <input type="text" value="1"/> bit
Firmware Update	CTSRTS/485 <input type="text" value="NFC"/>
About USR	Network set
	Mode: <input type="text" value="Transparent"/>
	SocketA Connect Set
	Protocol: <input type="text" value="UDP-Client"/>
	Port: <input type="text" value="123"/>
	Server IP Address: <input type="text" value="10.10.100.254"/>
	SocketB Connect Set
	Protocol: <input type="text" value="OFF"/>
	Port: <input type="text" value="8899"/>
	Server IP Address: <input type="text" value="10.10.100.254"/>
	<input type="button" value="Save"/>

- Click **“restart”**
- Time calibration will complete once within 2 minutes and once every hour thereafter.

System Status	Save Success
WiFi Setting	Save Success!
Trans Setting	Configurations will take effect after restart.
Extra Function	After restart, you will need to re-login the configuration interface for other settings, so it is recommended to restart after completing all settings.
System Setting	Please click [Restart] to restart now, or click [Back] to continue setting.
Firmware Update	You can restart after all configuration.
About USR	<input type="button" value="Restart"/>

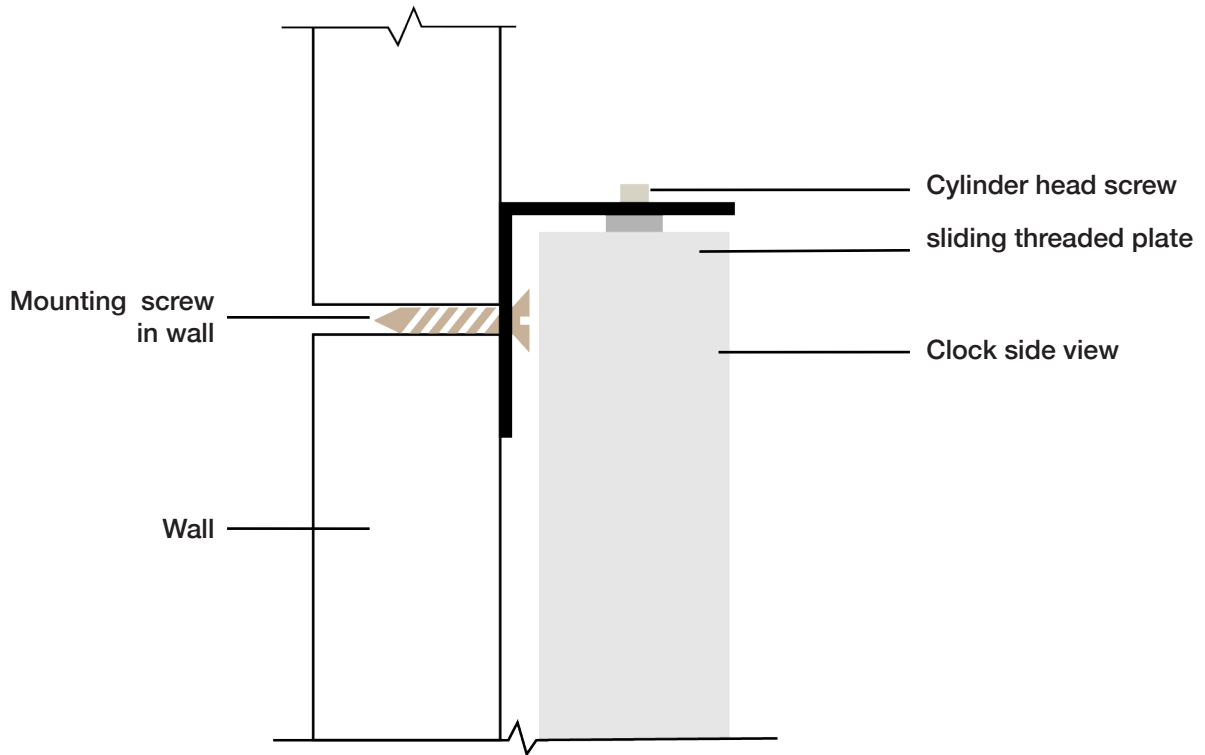
3. Error codes

Error code	Error description
1	WiFi not connected.
2	Weak WiFi signal.
3	Not set to STA mode.
4	Improper transparent transmission configuration.
5	Unable to Ping NTP server.
6	Unknown fault Possible causes: 1. NTP server address error. 2. There is an IP conflict.
Other	Try to reboot the clock. If the process fails, please contact technical support

4. Specifications

Category	Subclass	Description
Time	Time display	Hour, minute
Electrical	Power Supply	DC 5V/2A
	Power consumption	<5W
	Accuracy	MTBF>10000h
Mechanical properties	Framework	Electrophoretic aluminum frame / acrylic screen
	Installation method	Hanging type
	Dimensions	8.66" x 18.9" x 1.77"

5. Wall mounting



6. Contact

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