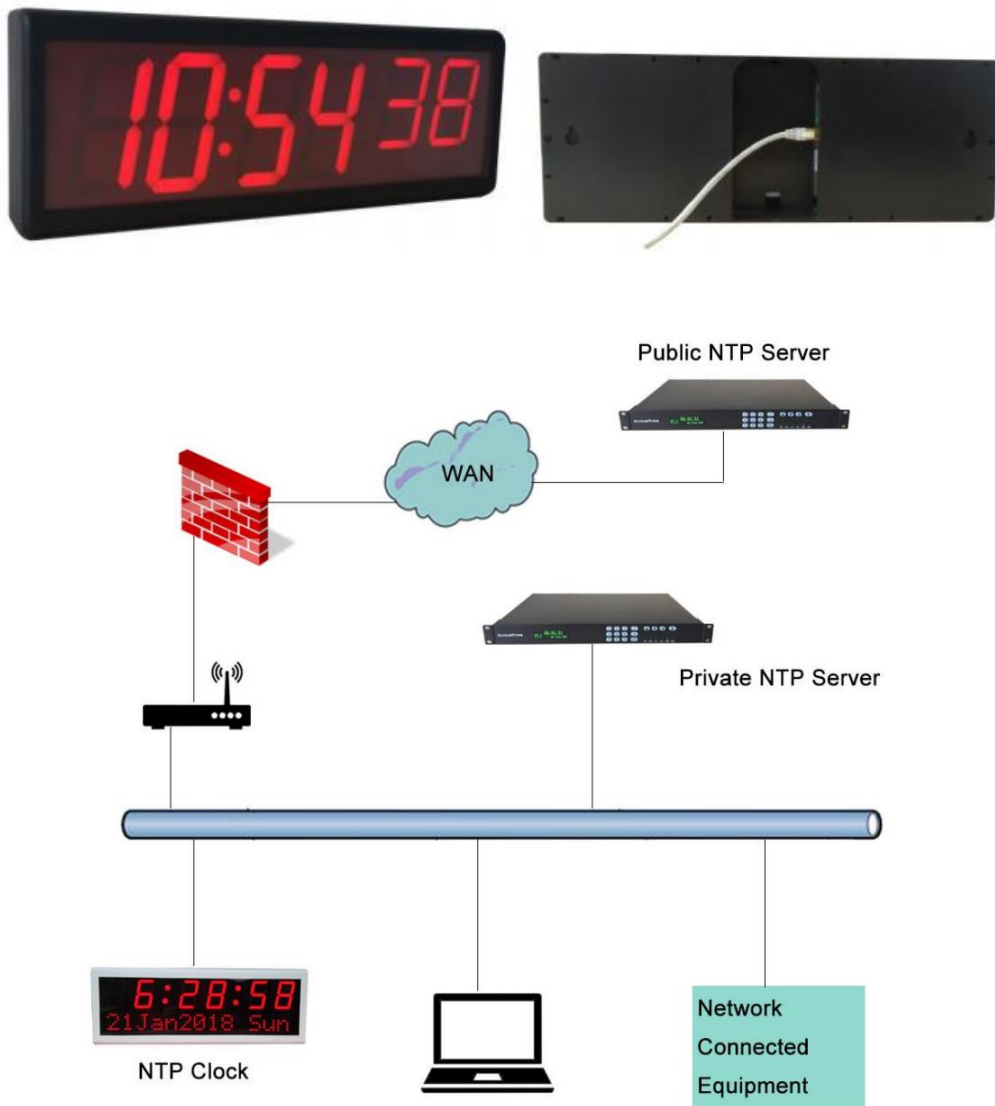




GlobalTime Electronic Co., Ltd

## *GTD368 Installation and User Manual*



**GFClock Yasapersada**

**PT. YASA PERSADA DEWANTARA**

Add: Graha Krama Yudha Lt.4 Unit B Jl. Warung Jati Barat No.43, Jakarta 12760 Telp./Fax.: +62 21 794 5301

Web: [www.yasapersada.co.id](http://www.yasapersada.co.id) - Direct Calls/WA +62 821 146 11732

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## 1. Introduction of NTP and PoE

**Network Time Protocol (NTP)** is a networking protocol for clock synchronization between computer systems over packet-switched, variable-latency data networks. NTP is the most popular time synchronization protocol in current use.

**PoE (Power over Ethernet)** is an exciting and relatively new technology that allows devices to get both power and data over standard network cabling. It is the same technology that powers Voice over Internet Protocol (VoIP) phones.

## 2. Safety Instructions

- To prevent injury, damage to the unit, or other harm, read this manual in its entirety before installing or operating the clock.
- Observe normal safety precautions and use appropriate safety equipment (safety glasses, gloves, ladders, etc.) when installing this product.
- Never install wiring during a lightning storm.
- Never install data jacks or electrical wiring in wet locations unless the equipment is specifically designed for that purpose.
- Be sure that mounting hardware is suitable for the mounting surface and sufficient to support the weight of the clock.
- Observe all local codes when installing the product.
- This product is not a toy! Please keep it out of the reach of children.
- Operation of this product in a manner inconsistent with the instructions in this manual may result in personal injury and damage to the product and will void the warranty.
- Do not use harsh cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- Do not place this product on an unstable cart, stand, or table. The product may fall, causing injury or damage.

### 3. Specifications

Accuracy	+/- 20 milliseconds		
Operating Temperature	-10°C to 60°C		
Operational Humidity	90% maximum, non-condensing		
Viewing Distance	50 meters		
Mounting Options	Surface		
Power Supply	IEEE 802.3 af Compliant, less than 13 Watts, Power over Ethernet ( PoE)		
	DC		
Network Interface	10 M, RJ 45		
Display Face	4- digit/ 6- digit, 7- segment LEDs		
Cabinets	High Strength Plastic in Black Metal case in Black is optional for 6-digit clocks.		
Color	Red, Green, Blue, White, Amber		
MTBF	50000 hours		
Certifications	CE, FC, RoHS		
Warranty	One year.		
4" 4- digit, Single-sided		4" 4- digit, Double-sided	
Dimensions	30.2cm*15.7cm*5.7cm	Dimensions	30.2cm*15.7cm*8cm
Weight	0.7kg	Weight	1.2kg
4" 6- digit, Single-sided		4" 6- digit, Double-sided	
Dimensions	43cm*15.7cm*5.7cm	Dimensions	43cm*15.7cm*8cm
Weight	0.9kg	Weight	1.5kg

### 4. Installation

#### 4.1. Packing List

Single-sided clock: one device of GTD368

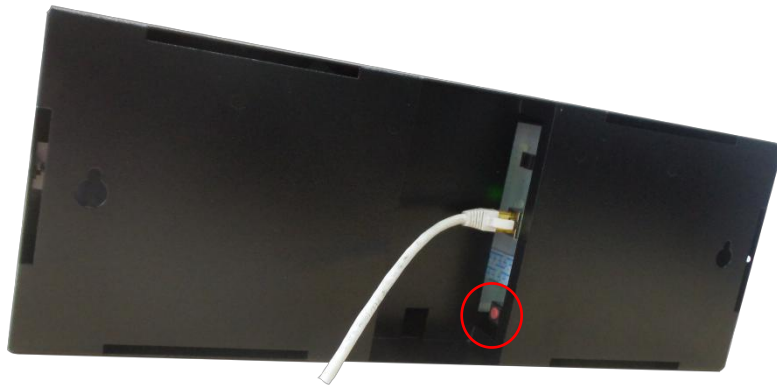
Double-sided clock: one device of GTD368 & one pc of ceiling mounting kit or wall mounting kit

#### 4.2. Power Supply

- 1) If the local network supports PoE, only one network cable is needed.
- 2) If not, an additional power adapter with a 5.5mm x 2.1mm connector is necessary.

#### 4.3. Method of Reset

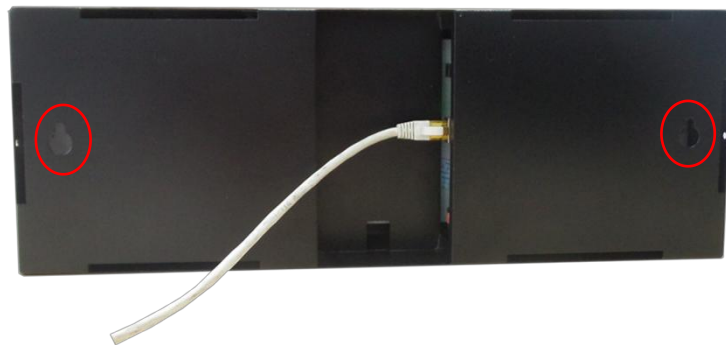
Please push the red button on the back of the clock and don't loose until the LED face displays RST or 12 or 24. We can click the button to change the display. When it displays RST, we should stop clicking, and the clock will restart. In this way, the clock is reset to factory default settings.



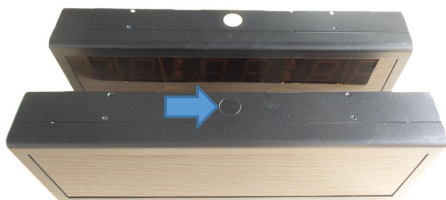
## 4.4. Installation

### 4.4.1. Wall Mounting for Single Sided Clocks

For single-sided clocks, there are two holes on the back for hanging them on the wall, so only screws are needed. Wall mounting kit and ceiling mounting kit are optional, not necessary for single sided clocks. The installation method of using a walling mounting kit or a ceiling mounting kit for single sided and double sided clocks are the same.



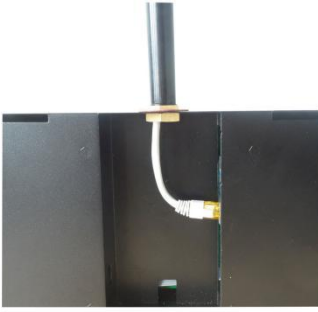
### 4.4.2 Ceiling Mounting Kit for Double Sided Clocks



Step 1 Remove the round cover



Step 2 Fix the ceiling mounting kit

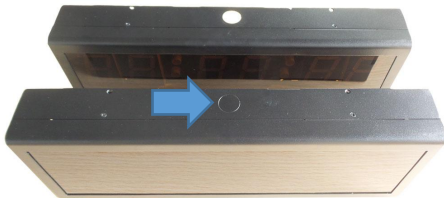


Step 3 Plug the cable

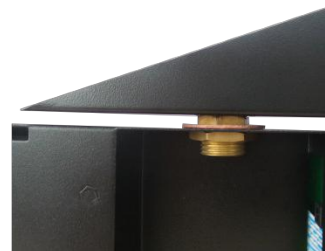


Step 4 Install the rear display screen and fix the ceiling mounting kit

#### 4.4.3. Wall Mounting Kit for Double Sided Clocks



Step 1 Remove the round cover



Step 2 Fix the wall mounting kit



Step 3 Plug the cable  
kit



Step 4 Install the rear display screen and fix the wall mounting

### 5. Operation Status

Once powered up, the clock will go through:

- Self-Check
- IP Address
- Time Display

### 5.1. Self Check

Self- check status aims to inspect whether all LED segments are in good condition. This status lasts 10 seconds, showing 99:99, 88:88...to 00:00.

### 5.2. Configuring an IP Address

There are two options to for configuring an IP Address to each GlobalTime clock:

- DHCP (Factory Default)
- Assigned Static IP v4 Address

By default, when powered up, the clock shows "dHCP" first and then the IP address. If no DHCP server available, then please use a static IP, the default IP of the clock is 192.168.2.55.

### 5.3. Time Display

At first, the time is displayed as 00:00+ time zone. If it is not synchronizing with the external time source, it will keep running based on this time zone. Once the clock can synchronize with the network time sever, it will display the correct time. When we choose 12 hour format, there will be a dot on the left upper corner to show PM, if there is no dot, it is AM.

## 6. Management Software "ClockSniffer"

Download Link:

For 64-bit windows computer : [https://drive.google.com/open?id=18Cc-vs6XOuEyG3IhM\\_jxVjMLTlmbuvbc](https://drive.google.com/open?id=18Cc-vs6XOuEyG3IhM_jxVjMLTlmbuvbc)

For 32-bit windows computer: [https://drive.google.com/open?id=1Lis5qS-6OzSCjiPV9Vs8Lvjo\\_8NfAdDG](https://drive.google.com/open?id=1Lis5qS-6OzSCjiPV9Vs8Lvjo_8NfAdDG)

Notes:

- (1) Run the software as administrator
- (2) The default login password is Admin@GTC. It can be reset via the software.
- (3) After setting, please just click "Modify", no need to enter the Secret Key if you have not set a secret key.

Online Client

IP(SN)Wire:6

192.168.5.111 (NTPDCV3.22018031169)

192.168.5.118 (NTPDCV3.22018031169)

192.168.5.147 (NTPDCV3.22018031169)

192.168.5.175 (NTPDCV3.22018031169)

192.168.5.192 (NTPDCV3.22018031169)

192.168.5.194 (NTPDCV3.22018031169)

☒ Broadcast ☐ Unicast

SN:

Search

Basic Info NTPs Info Other Info Bell Info System Info

Time Synchronization Information

Firmware: 1.11

Last Sync Time: 2019-11-01 14:40:19

Sync Server:

Time Setting

Time Format: ☐ 12 ☒ 24

Time Zone:

Clock IP Setting

☒ Dynamic IP ☐ Static IP

IP Address:

Subnet Mask:

Default Gateway:

DNS Server:

Daylight Saving Time Setting

☐ Daylight Saving Time Enable

Start at:  O'clock on the   In

End at:  O'clock on the   In

Brightness Setting

From  To

☒ Display Dim ☐ Display Close

Brightness

Secret Key:

Modify

Online Client

IP(SN)Wire:6

192.168.5.111 (NTPDCV3.22018031169)

192.168.5.118 (NTPDCV3.22018031169)

192.168.5.147 (NTPDCV3.22018031169)

192.168.5.175 (NTPDCV3.22018031169)

192.168.5.192 (NTPDCV3.22018031169)

192.168.5.194 (NTPDCV3.22018031169)

☒ Broadcast ☐ Unicast

SN:

Search

Basic Info NTPs Info Other Info Bell Info System Info

Login Password

☐ User Password Setting

Old Password:  ☐ show

New Password:  ☐ show

Confirm Password:  ☐ show

Secret Key

☐ Secret Key Setting

New Key:  ☐ Show

Confirm Key:  ☐ Show

Update

☐ Update

IP Address :  Mac Address :

....

Secret Key:

Modify

## 6.1. IP Search

The management software supports both Broadcast (255.255.255.255) and Unicast way to search out online client clocks. Broadcast is factory default.

- Broadcast

Select Broadcast, and click search, the software will automatically search online clock in the subnet, and group IPs based on different subnets.

- Unicast

Select Unicast, and input initial IP you want in the bar, then click Search, the software will search from the initial IP to the last one. For example, to search all clocks in subnet 192.168.3.0, you can input 192.168.3.001, and then search one by one till 192.168.3.254.

## 6.2. Basic Information and Settings

### 6.2.1 Password

As to the old software "NTPClock", the default **user password** is [admin](#). Default **global password** is [globalpw](#). **Global password** is for batch modification. Batch modification is under improvement currently, so please set the clocks one by one as possible. As to the new software "ClockSniffer", no need of password.

### 6.2.2 Basic Setting

- ✓ Time Zone and Time Format
- ✓ Clock IP Setting
- ✓ NTP Setting
- ✓ Energy Saving Setting
- ✓ Countdown Setting
- ✓ Daylight Saving Setting

### 6.2.3 Optional Setting

- ❖ Bell Setting

We can add a bell relay to the clock, then the clock can be connected to a bell. The voltage and current of the bell should be  $\leq 5A$  30VDC, or  $\leq 5A$  250VAC.

Below is the software interface of bell info.

Online Client

IP(SN)Wire:6

- 192.168.5.111 (NTPDCV3.220)
- 192.168.5.118 (NTPDCV3.220)
- 192.168.5.147 (NTPDCV3.220)
- 192.168.5.175 (NTPDCV3.220)
- 192.168.5.192 (NTPDCV3.220)
- 192.168.5.194 (NTPDCV3.220)

☒ Broadcast ☐ Unicast

SN:

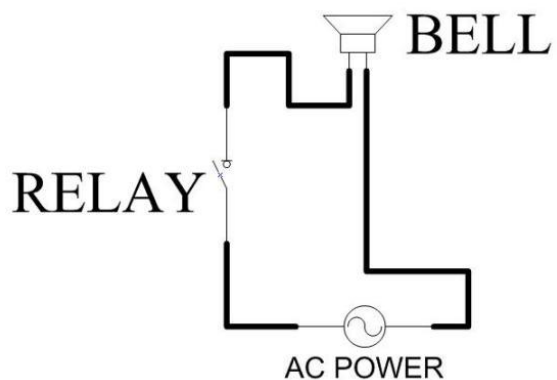
Secret Key:

Basic Info NTPs Info Other Info **Bell Info** System Info

BELL1 BELL2 BELL3

Event	Start Time	Days	Durations(s)
<input type="checkbox"/> 1	⌵ : ⌵ : ⌵	<input type="checkbox"/> Sun <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat	⌵
<input type="checkbox"/> 2	⌵ : ⌵ : ⌵	<input type="checkbox"/> Sun <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat	⌵
<input type="checkbox"/> 3	⌵ : ⌵ : ⌵	<input type="checkbox"/> Sun <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat	⌵
<input type="checkbox"/> 4	⌵ : ⌵ : ⌵	<input type="checkbox"/> Sun <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat	⌵
<input type="checkbox"/> 5	⌵ : ⌵ : ⌵	<input type="checkbox"/> Sun <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat	⌵
<input type="checkbox"/> 6	⌵ : ⌵ : ⌵	<input type="checkbox"/> Sun <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat	⌵
<input type="checkbox"/> 7	⌵ : ⌵ : ⌵	<input type="checkbox"/> Sun <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat	⌵
<input type="checkbox"/> 8	⌵ : ⌵ : ⌵	<input type="checkbox"/> Sun <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat	⌵
<input type="checkbox"/> 9	⌵ : ⌵ : ⌵	<input type="checkbox"/> Sun <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat	⌵
<input type="checkbox"/> 10	⌵ : ⌵ : ⌵	<input type="checkbox"/> Sun <input type="checkbox"/> Mon <input type="checkbox"/> Tue <input type="checkbox"/> Wed <input type="checkbox"/> Thu <input type="checkbox"/> Fri <input type="checkbox"/> Sat	⌵

## ❖ Bell Connection



Connection



Connector

## **7. Troubleshooting**

### **7.1. The Display Screen Shows Wrong Time.**

Check the host IP configuration and verify the network can communicate with the time server preset.

### **7.2. The Display Screen Remains Unchanged**

Check the condition of the button.

### **7.3. The LED Display Screen Shows the Default IP Address.**

The host configuration is DHCP. Please make sure the network support DHCP server. If the clock cannot get IP address from the DHCP server for a long time, it will resort to the default IP: 192.168.2.121.

### **7.4. Some LED Segments Are Dark.**

Reboot the clock, check if there are dark segments under self-check process. If yes, the display screen need to be replaced.

### **7.5. The Management Software Fails to Search out the Clock.**

Make sure that the user's computer and the clock are in the same sub network and the firewall is set correctly.

### **7.6. The Clock can not Synchronize with Any Time Server.**

The user should make sure that his network can visit the internet time source, and the time server is running its NTP service successfully.

GlobalTime has a software to help the user check that, if you need, please contact with us.

### **7.7. The Display Screen is Dark.**

The clock applies PoE technology, which gets power through the network. Please make sure that the switches supports PoE.

### **7.8. The Small light at the Bottom Right Corner is on All the Time.**

This condition indicates that the clock can not synchronize with the time server preset. Please check the network configuration and the operation status of the time server.

## **8. Warranty and Maintenance**

### **8.1. Warranty**

GlobalTime warrants the clocks to be free from defects in material and workmanship during a one-year period. The Warranty begins on the date the unit is shipped from GlobalTime. Extended warranties are available via certain agreements.

GlobalTime' liability under this Warranty is limited to repairing or replacing, at GlobalTime' option, the defective equipment and providing upgrade version changes for firmware. In case of repair, the product must be returned to an authorized GlobalTime Service Center.

This Warranty does not apply if repairs are required due to acts of nature beyond GlobalTime' control such as, but not limited to, lightning strikes, power surges, misuse, damage, neglect, or if repairs/ modifications have been made or attempted by anyone other than personnel authorized by GlobalTime.

**In no event will GlobalTime be liable for any indirect, special, incidental, or consequential damages from the sale or use of this product. This disclaimer applies both during and after the term of the warranty. GlobalTime disclaims liability for any implied warranties, including implied**