HANDI® CLOCKS

USER GUIDE

HANDI® 300
HANDI® 450
HANDI® 620
HANDI® 800

CE afaq ISO 9001 Qualité AFNOR CERTIFICATION afaq ISO 14001 Environnement AFNOR CERTIFICATION

GORGY ◐ **TIMING**
L A   M A R Q U E   D U   T E M P S

GORGY TIMING
LA MARQUE DU TEMPS

IMPORTANT SAFETY INSTRUCTIONS

WARNING! The following section provides the safety instructions for installation. Please read it carefully before installing your device.

To protect your device, plug it into a grounded outlet.

The device must be connected to an electrical installation which is in accordance with the NF C15-100 standard.

The wiring installation must include an easily accessible breaking device (circuit breaker or disconnecting switch). This device must withstand the nominal voltage and current values indicated on the device.

In Europe: in accordance with European regulations on the protection of individuals and the environment, it is your responsibility to dispose of this equipment at a collection site designed for this purpose (separately from household waste). For further information, contact your reseller, your collection site or the relevant local authorities.

Any modification or opening of the product without the consent from the Customer service department will void the warranty.

The **HANDI®** must only be installed, maintained and handled by competent and knowledgeable persons.

All maintenance operations must be carried out with the power off, including for systems connected to any relay outputs.

As a general rule, to avoid any interferences, the power (230V supply) and signal (time information) cables must not be too close to each other. (keep a few centimetres apart)

CAUTION! After unplugging the **HANDI®**, there is a risk of electric shock from the power connector/plug socket for up to 2 seconds.

To avoid the risk of electrical interference, position the **HANDI®** as far as possible from sources of radiation (Loudspeakers, antennas, high-frequency equipment, electromagnetic alarms…).

This product can be used with TT or IT grounding.

If a fuse is defective, it must be replaced with an identical one.

Gorgy Timing disclaims all liability in the event of accident or damage caused by improper use of **LEDI®.**

All GORGY TIMING products comply with the following standards: CE, EN62368, EN55032, EN50035.

EXPLANATION OF SAFETY SIGNS ON THE PRODUCT

⚠ General hazard – there is a risk of damage to the product if instructions are not followed

⚡ Electrical hazard – there is a risk of electrocution or personal injury if instructions are not followed.

⏚ Functional ground

Warnings

Please follow the precautions and instructions indicated below in order to ensure the safety of you and your environment, and to prevent any potential damage to your device.

⚠ WARNING: An isolating switch in compliance with EN60947 standards is used as a disconnecting device. It must be easily accessible and installed close to the power supply. It must disconnect all active poles.

⚠ The **HANDI®** is intended for indoor use only, at an altitude of less than 2000 metres.

Waste disposal by users in private households within the European Union

This symbol on the product or its packaging indicates the product must not be disposed of with your general household waste. Instead, it is your responsibility to dispose of your waste by taking it to a designated collection point for the recycling of electrical and electronic appliances. The separate collection and recycling of your waste contributes to the conservation of natural resources and helps to ensure that recycling is environmentally and health friendly. For more information about your nearest recycling centre, please contact the shop where you purchased your device, the household waste disposal services or your local authorities.

Technical specifications

Power supply	Voltage (following item)	230VAC 50/60Hz 110-240VAC 50/60Hz Low voltage 12-24 or 24 VDC NTP Version: PoE (Power over Ethernet)
Dimensions	Length	XXX mm
	Width	XXX mm
	Height	XXX mm
Condition de fonctionnement	Operating Temperature	-20°C to +50°C
	Hygrometry (non condensed)	90 %

The product contains a non-replaceable lithium battery.

CONTENTS

1.1. DESCRIPTION

Analogue clocks in receiving pulses version, AFNOR NFS 87500 / IRIG-B 122, DCF24v, RS485 ASCII or NTP.

1.2. CONNECTIONS

⚠️ *To reset the clock switch it off and on:*
- *by the "ON" / "OFF" located on the rear face of the clock (for versions where button is available)*
- *Or unplug and replug the clock (for pulse versions)*
- *Or open the clock and press the reset button on the card*
- *In the waterproof version, open the clock to perform this operation.*

1.2.1. PULSE RECEIVER VERSION

► Connect the clock to the impulse line as shown below in the opposite figure.
► To set the time on the clock manually, use the knob on the back of the movement.
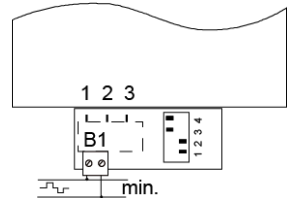
1.2.2. AFNOR NFS 87500 / IRIG-B 122 RECEIVER VERSION

► Connect the AFNOR NFS 87500 / IRIG-B 122 code (No polarity).
► Depending on the power supply option, connect the clock to the mains.
► Change the switch position on the back onto the "ON" position.

Wait a few minutes until the clock hands reach 12h position. After receipt of time code, the hands will reach the right position according to time information.

1.2.3. DCF24v RECEIVER VERSION

► Connect the DCF24v code (No polarity).

Wait a few minutes until the clock hands reach 12h position. After receipt of time code, the hands will reach the right position according to time information.

1.2.4. NTP RECEIVER VERSION

A. 230VAC Version
► Connect the clock to the computer network.

► Connect the clock to the mains.

B. PoE Version

► Connect the clock to the POE injector.

C. Wi-Fi Version

► Connect the clock to the mains.
► Consult chapter 5. « Pre-configuration Wi-Fi products » to connect clock to Wi-Fi network.

The hands are positioned at 12 o'clock and then, 3 to 4 minutes after receiving the code, are positioned according to the received time information. For the advanced configuration, see chapter 4. WEB INTERFACE.

1.2.5. ASCII RS485 RECEIVER VERSION

► Connect the ASCII code by following the following table:

Green wire	GND
Brown wire	RX-
White wire	RX+

► Connect the clock to the mains.
► Change the switch position on the back onto the "ON" position

The hands are positioned at 12 o'clock and then,

3 to 4 minutes after receiving the code, are positioned according to the received time information.

A. Gorgy Timing Protocol

► **Reception Mode**
► In this mode the clock is running in standalone mode but sets the time earlier compared with the ASCII code received (confguration: 2400 bits, format 8 bits, parity pair, 1 stop bit).
► The time information is in the form below:

STX	D	A	Y		10D	D	/	10M	M	/	10Y	Y			10H	H	:	10m	m	:	10S	S	CR

Byte Nr	Field	Size	Value/Meaning
1	STX	1	Start of Text ($02) – mark the beginning of the frame.
2,3,4	D,A,Y	3	The day in the week in a human-readable way (MON, TUE, WED, THU, FRI, SAT, SUN for Monday to Sunday)
5		1	Space character ($20)
6,7	10D,D	2	Day in the month on two ASCII characters ($30,$31 to $33,$31)
8	/	1	Forward slash character ($2F)
9,10	10M,M	2	Year on two ASCII characters ($30,$30 for 2000 – $39,$39 for 2099)
11		1	Forward slash character ($2F)
12,13	10Y,Y	2	Year on two ASCII characters ($30,$30 for 2000 – $39,$39 for 2099)
14,15		2	Two Space characters ($20)
16,17	10H,H	2	Hours on two ASCII characters ($30,$30 to $32,$33)
18		1	Colon character ($3A)
19,20	10m,m	2	Minutes on two ASCII characters ($30,$30 to $35,$39)
21		1	Colon character ($3A)
22,23	10S,S	2	Seconds on two ASCII characters ($30,$30 to $35,$39)
24	CR	1	Carriage Return ($0D) – mark the end of the frame

► This ASCII code could be:

1 - The time information using the protocol described in the above table generated by an RT4000 or any other ASCII code generator.

2 - Or the information from another clock of the same type functioning in transmitter mode, in which case the clock is completely enslaved to the latter.

3 - In HORO QUARTZ specific version the time information from a HORO QUARTZ pointing system.

B. Polaris Protocol

► The time information received must be in the following form:

\	H	M	S	C	Y	M	D	W	0	0	C H K

Here is the detailed description of the frame:

Byte Nr	Field	Size	Value/Meaning
1	\	1	Back slash character ($5C)
2	H	1	Hours on one binary character ($00 to $17)
3	m	1	Minutes on one binary character ($00 to $3B)
4	S	1	Seconds on one binary character ($00 to $3B)
5	C	1	Century on one binary character ($00 to $63)
6	Y	1	Year in the century on one binary character ($00 to $63)
7	M	1	Month in the year on one binary character ($01to $0C)
8	D	1	Day in the month on one binary character ($01-$1F)
9	W	1	Weekday on one binary character ($01 to $07 for Monday to Sunday)
10, 11	0, 0	2	Null character ($00)
12	CHK	1	Checksum = Sum in hexadecimal of all Field excluding the first

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1.4. FIXING & DIMENSIONS (IN MM)

1.4.1. HANDI® 300
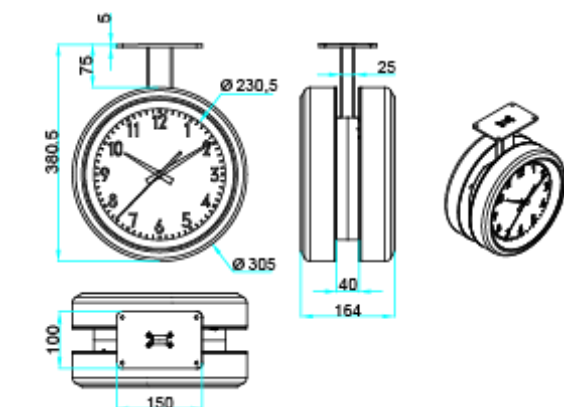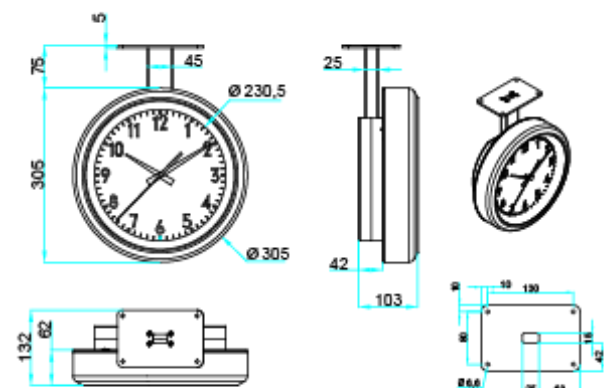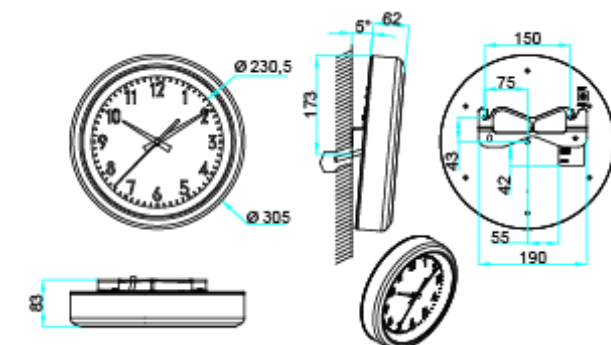
HANGING UP THE CLOCK WITH LOCKING

1

2
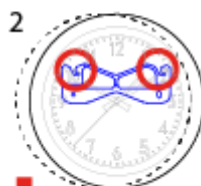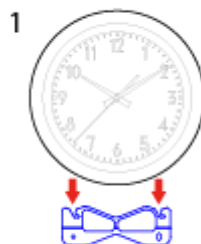
Locking by moving the clock to the right

Hook for wall mounting

LOCKING THE BRACKET
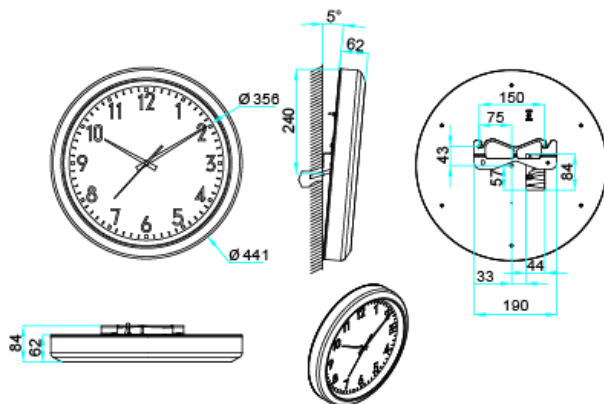
x3

1.4.2. HANDI® 450

HANGING UP THE CLOCK WITH LOCKING

1

2
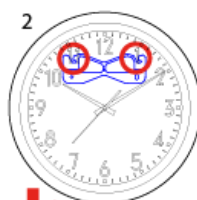
Locking by moving
the clock to the right

Hook for wall mounting

HOOK FOR
WALL MOUNTING

x3
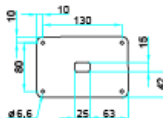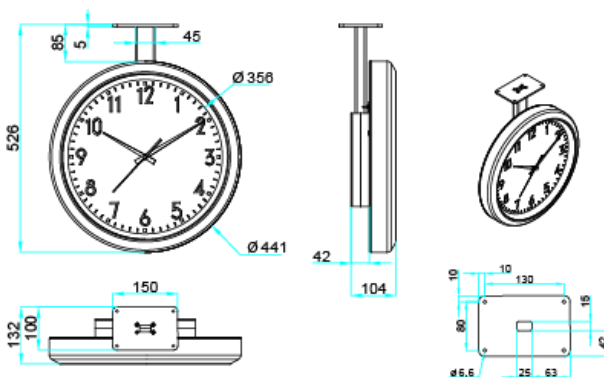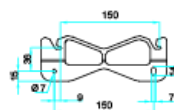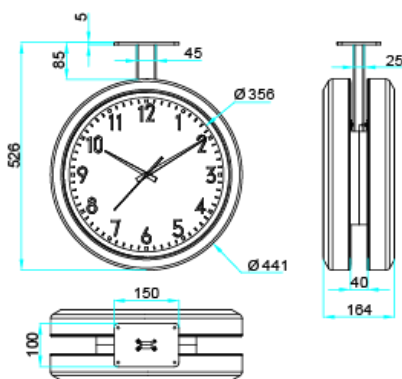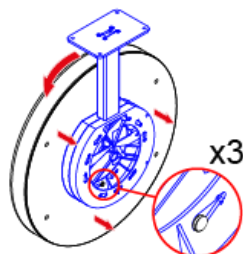
2.1. DESCRIPTION

Analogue clocks in receiving pulses version, AFNOR NFS 87500 / IRIG-B 122, DCF24v, RS485 ASCII or NTP.

2.2. CONNECTIONS

> ⚠️ *To reset the clock switch it off and on:*
> - *by the "ON" / "OFF" located on the rear face of the clock (for versions where button is available)*
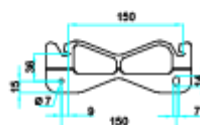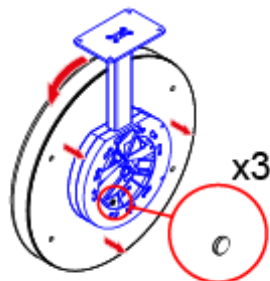> - *Or unplug and replug the clock (for pulse versions)*
> - *Or open the clock and press the reset button on the card*
> - *In the waterproof version, open the clock to perform this operation.*

2.2.1. PULSE RECEIVER VERSION

- ► Connect the clock to the impulse line as shown below in the opposite figure.
- ► To set the time on the clock manually, use the knob on the back of the movement.
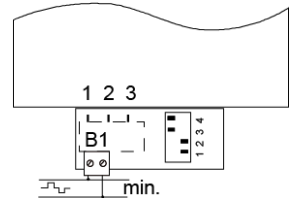
2.2.2. AFNOR NFS 87500 / IRIG-B 122 RECEIVER VERSION

- ► Connect the AFNOR NFS 87500 / IRIG-B 122 code (No polarity).
- ► Depending on the power supply option, connect the clock to the mains.
- ► Change the switch position on the back onto the "ON" position.

Wait a few minutes until the clock hands reach 12h position. After receipt of time code, the hands will reach the right position according to time information.

2.2.3. DCF24v RECEIVER VERSION

- ► Connect the DCF 24v code (No polarity).

Wait a few minutes until the clock hands reach 12h position. After receipt of time code, the hands will reach the right position according to time information.

2.2.4. NTP RECEIVER VERSION

A. 230VAC Version
► Connect the clock to the computer network.
► Connect the clock to the mains.

B. PoE Version
► Connect the clock to the POE injector.

C. Wi-Fi Version
► Connect the clock to the mains.
► Consult chapter 5. « Pre-configuration Wi-Fi products » to connect clock to Wi-Fi network.

The hands are positioned at 12 o'clock and then, 3 to 4 minutes after receiving the code, are positioned according to the received time information. For the advanced configuration, see chapter 4. WEB INTERFACE.

2.2.5. LIGHTING OPTION

► Connect the LED lighting supply cable to the mains.

In NTP Version, the LED lighting is power by the power cable.
In POE version, the LED lighting is powered directly by the network cable

2.3. FIXING & DIMENSIONS (IN MM)
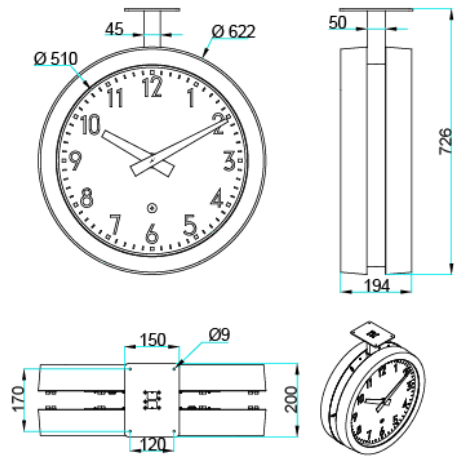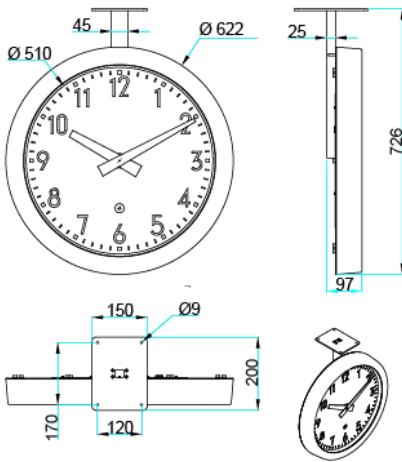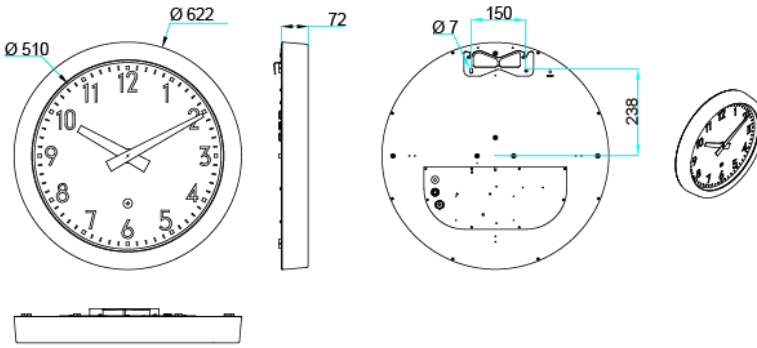
2.3.1. SINGLE FACE – MOUNTING WITH BRACKET

► The bracket can be fitted in the position of wall mount or side mount.
► Fixation of the rod (2 screws of 6 x 16)
   Remark: Mount at 6h on request.
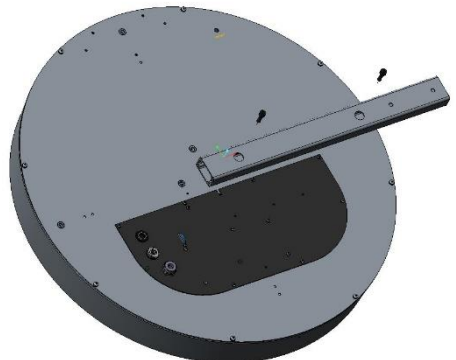
2.3.2. DOUBLE FACE – MOUNTING WITH BRACKET

The bracket can be fitted in the position of wall mount or side mount.
► Fix one rod on each clock face.
► (4 screws of 6 x 16)
► Fix the 3 corner brackets on the back panel of each face (6 self-tapping screws of 4.8 x 19)
► Pass the cables through the rods
► Put the two clock sides back-to-back, then assemble them by mounting the connecting plates on each corner bracket (self-tapping screws of 4.8 x 19)
► Fix the metal plate to the end of rod (6 screws of 5 x 20)
► Fix the circle strap onto the bracket (4 screws of 2.9 x 9)

Screws supplied with the clock
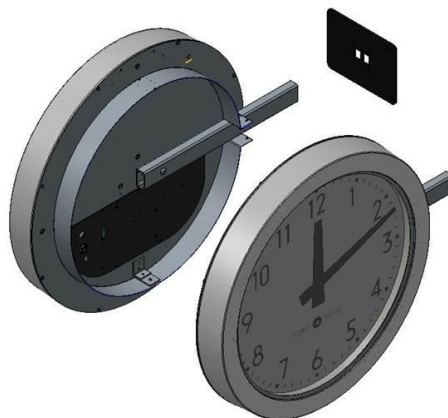
Side mount: special attention shall be given to the fixation of rods (mount at 3h or 9h).
Bottom Mount at 6h: on request. This option shall be mentioned on Purchase order.

3.1. DESCRIPTION

Analogue clock in AFNOR NFS 87500 / IRIG-B 122, DCF24V, NTP version.

3.2. CONNECTIONS

⚠️ *To reset the clock switch it off and on:*
- *by the "ON" / "OFF" located on the rear face of the clock (for versions where button is available)*
- *Or unplug and replug the clock (for pulse versions)*
- *Or open the clock and press the reset button on the card*
- *In the waterproof version, open the clock to perform this operation.*

3.2.1. AFNOR NFS 87500 / IRIG-B 122 RECEIVER VERSION

► Connect the AFNOR NFS 87500 / IRIG-B 122 code (No polarity).
► Depending on the power supply option, connect the clock to the mains.
► Change the switch position on the back onto the "ON" position.

Wait a few minutes until the clock hands reach 12h position. After receipt of time code, the hands will reach the right position according to time information.

3.2.2. NTP RECEIVER VERSION

A. 230VAC Version
► Connect the clock to the computer network.
► Connect the clock to the mains.

B. PoE Version
► Connect the clock to the POE injector.

C. Wi-Fi Version
► Connect the clock to the mains.
► Consult chapter 5. « Pre-configuration Wi-Fi products » to connect clock to Wi-Fi network.

The hands are positioned at 12 o'clock and then, 3 to 4 minutes after receiving the code, are positioned according to the received time information. For the advanced configuration, see chapter 4. WEB INTERFACE.

3.2.3. LIGHTING OPTION

► Connect the LED lighting supply cable to the mains.

In NTP Version, the LED lighting is power by the power cable.
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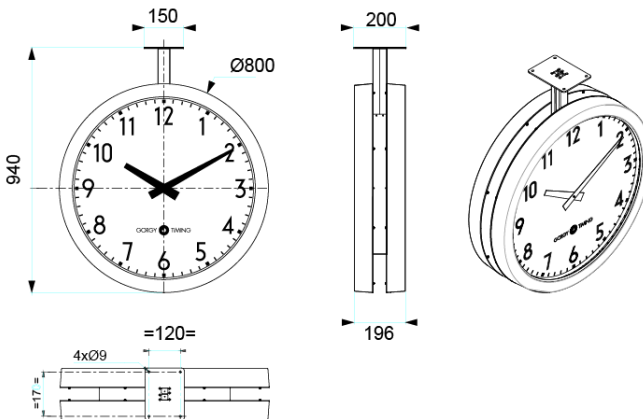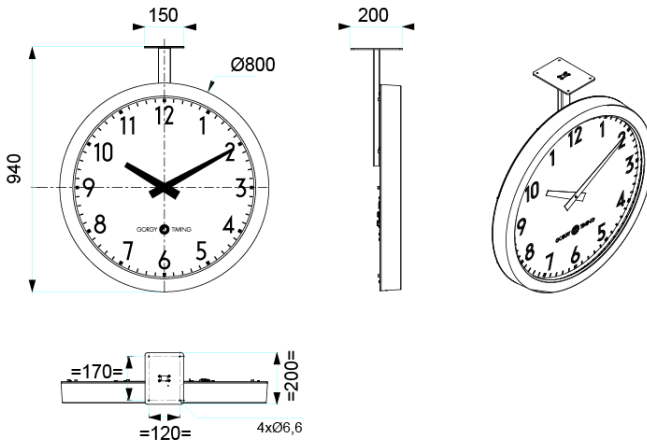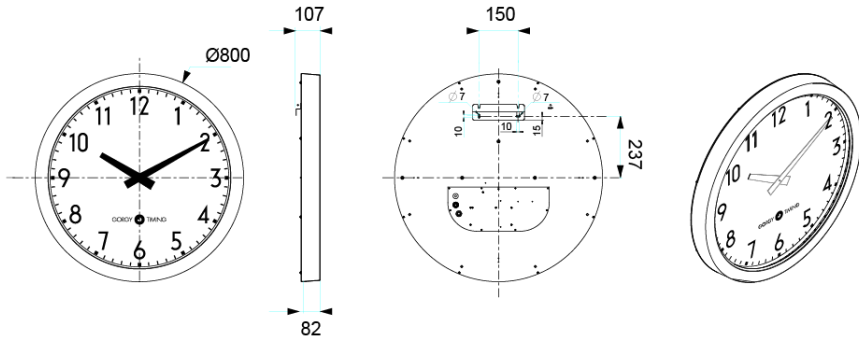
4.1. FIRMWARE VERSIONS 1.X.X.X

Many product parameters can be configured through the product's built-in web interface. For clock group configurations, you can also use the dedicated program GTNetConfig (see the User Manual on https://www.gorgy-timing.fr/188-modes-d-emploi.htm for more information)

To access the embedded web page, open your web browser (Firefox, Chrome, Internet Explorer...), and enter the product IP address.
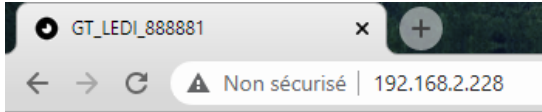
NB: By default, the product asks an IP address from DHCP server. It always keeps an auto-IP (169.254.x.y/16) and Link-Local IPv6 address (fe80::/64).
To easily detect GORGY-TIMING products in your network, you can use the GTNetworkManager2 program (or the old GT Network Manager version).

4.1.1. Main web page

► When you enter the product IP address in Web browser, it will ask you to enter product's login and password.

Upper and lower case letters are taken into account.
By default, Ids are :
User login: root
Password: gtmt
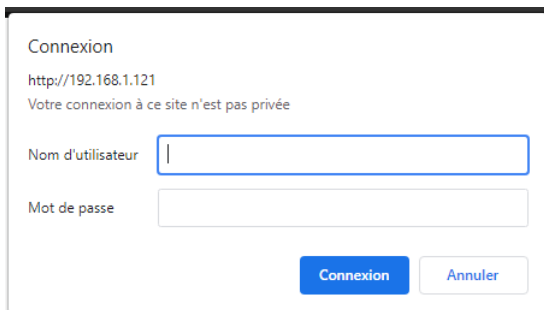
Home

Welcome to the GT HANDI management and configuration web interface.
You can use the navigation menus on the left to access additional pages.

Product:	GT HANDI
Serial Number:	195560
Connectivity:	Ethernet
Options:	DEBUG
Up Time:	(LOCAL)23:52:33
Battery State:	High
Ethernet IP Address(es):	169.254.230.250/16
	10.1.4.22/24
	fe80::4047:54ff:fe16:476b/64
Ethernet MAC Address:	42:47:54:16:47:6b
Ethernet Network State:	Wired to network since 7/19/2022, 2:01:43 PM
Synchronisation State:	Synchronized with 192.168.10.202 since 7/19/2022, 2:01:48 PM
Webserver Protocol:	HTTP./HTTPS
Internal Time:	7/20/2022, 1:53:18 PM (LOCAL)
	7/20/2022, 11:53:18 AM (UTC)
Output Time:	20/07/2022 13:54 (Central_Europe) - Summer Time
Firmware Version:	1.4.6.2 (Thu Oct 10 17:24:55 CEST 2019)

Changelog

The index web page displays general information about your product You will find among others the following information:

► **Product Name and Serial Number:** to identify the product and know what kind of GORGY-TIMING product it is.
► **Uptime and Internal Time:** how much time the product is on and current internal time (UTC).
► **IP Adresses :** it could have up to 4 IP addresses: 1 Auto-IP address, 1 IPv4 (DHCP/Static), 1 IPv6 Link Local and 1 Global IPv6 (DHCP/Static) which are dis-played here with netmask in CIDR notation.
► **MAC Adress:** the product interface MAC address
► **Network and Synchronization status:** to know if the product is connected to network and/or synchronized (or not) and since when.
► **Firmware Version and Change Log:** the firmware version of the product and a history of the evolutions and improvements of the software directly consultable from the product.

You can use the menu on the left side to browse along embedded webpages or change language if the browser wrongly set it.

4.1.2. Ethernet web page

Ethernet Network Settings

IP Settings: ⊙ Automatic Settings (DHCP) ○ Manual IP Settings

⊙ IPv4 DHCP ○ IPv6 DHCP   ○ IPv4+IPv6 DHCP
DHCP Ident: GT_HANDI_195560
IPv4 Gateway 10.1.4.254
DNS Server(s) 10.1.200.1
                10.1.200.2

☐ Disable Network Detection Protocol (ENDMI)

Apply

On this page, you can set the network configuration of your product. You can use auto settings (DHCP) or set a static IP address (Manual IP Settings option) with network mask and gateway.

Network settings support IPv4 addresses, IPv6 addresses or both.

ENDMI protocol allows the Gorgy-Timing clocks and Time servers network discovery. You can disable the ENDMI protocol on this web page. In this case, the product will not be visible by GTNetworkManager Software.

Ethernet Network Settings

IP Settings: ○ Automatic Settings (DHCP) ⊙ Manual IP Settings

	IPv4 Settings	☐ **IPv6 Settings**	
IPv4 Address	192.168.8.2	IPv6 Address	fedc:0482:cafe:ba05:a:
IPv4 Subnet Mask	255.255.255.0	IPv6 Subnet Mask	64
IPv4 Gateway	192.168.8.1	IPv6 Gateway	fedc:0482:cafe:ba05:a:

DNS Server(s)

Primary Server [   ]
☐ Secondary Server [   ]

☐ Disable Network Detection Protocol (ENDMI)

Apply

4.1.3. Security web page

Security Parameters

In this page, you can adjust the security level of your product.

► For example, you can restrict webpage access to HTTPS, change webpage credentials or disable product FTP/SSH server.
► You can also find Syslog settings here to report system event on Syslog server or read the internal logfile

A.   Secure Shell (for expert users only)

Access to SSH

► To enable SSH access, one must check the corresponding box in the Security Web Page.
For security reasons, SSH will only be active until the product reboots or the user disables it in the Security web page.
► SSH login and password are the same as for FTP. Default settings are: GT_Tablet /gtandroid. These can be changed in Security Webpage.

Main commands

Products are based on embedded Linux and use a lot of classic POSIX tools.
So for more information about a specific command and its options, please read the related POSIX manual or try to use --help argument after the command.

- ► **busybox:** as in lot of embedded Linux, to reduce memory consumption, some basic softwares are replaced by lighter one with only required options. Busybox gives lots of POSIX software with little memory footprint.
- ► **date:** display system internal time (in UTC).
- ► **get_sysv_info:** show information about configuration blocks used by the product and about current read/wirte permissions on these blocks (mutex).
- ► **hostname:** display complete product name: kind of product + serial number.
- ► **ip address:** display IP address(es) configuration of product.
- ► **ip route:** display IP route(s) configuration for example about gateway.
- ► **nslookup <nom DNS>:** check product DNS name resolution.
- ► **ntpq:** tool to communicate with internal NTP daemon. The command ntpq -p, dis-play NTP server list and lot of information about synchronization quality. See ntpq --help for more information.
- ► **ping <adresse IP>:** check product network communication to help diagnosis of network problem.check product network communication to help diagnosis of network problem.
- ► **ping6 <adresse IP>:** same use than ping but with IPv6 protocol.
- ► **ps:** display processes currently running in the product.
- ► **top:** display information about memory and CPU usage and about processes cur-rently running in the product.
- ► **uptime:** display time since the product start.
- ► **users:** display username of currenlty logged in users.

Software in /usr/bin directory (except those of Busybox) are develloped specifically for the GORGY TIMING product.

We recommend that you DO NOT USE software which is not documented here in order to avoid any problem on the product which may lead to product misfunction or in worst case product corruption.

4.1.4. Time input web page

On this page, you can configure the embedded NTP client to get time from one up to four remote NTP servers.

You can set the product to synchronize with a list of NTP server. You can use both IP ad-dresses and names, if your NTP server have one (a.e ntp.pool.org). You can also configure MD5 Authentication if needed.

NTP synchronization log reports NTP events since the start of the product. You can read its contents with a simple text editor in case of trouble.

Moreover, you can disable NTP client to set time manually if you do not have access to an NTP time server.

N.B : Attention, the product deals only with hours in UTC, international reference time).
In France in summer time, the legal time is in advance of 2 hours
on the UTC time, in winter time the legal time is in advance of one hour on the UTC time.

A. NTP Synchronization options

► **Polling Rate:** By default, NTP polling rate is automatically set to ensure a good synchronization with the minimum needed packet to reduce network traffic.
But you can force it to 1 request per minute if you want better precision or in another hand reduce it up to 1 request per 16 minutes to reduce network traffic.

► **Use burst:** By default, the product will use burst, so instead of sending one NTP packet at a time, it will sent 8 at each request ensuring less error as extreme value can be easily detected and discarded with more data. Stay this option enabled unless you have serious restriction on network traffic.

► **Respect server list order:** By default, NTP client will try to choose in the list order its synchronization source. NTP client still send packet to all available server of the list to ensure security and to check time integrity. If this option is disabled, NTP client will choose its synchronization server automatically on the "best" time server refering to its stratum, offset ,jitter and delay. In case of two or more indentical time server in the list, this option may lead to frequent switch between one or other of the server as they all may be the "best" at least for a moment.

► **Force synchronization on first enabled server in case they differ:** NTP client have numerous security to protect product against time inconsitency and/or time hacking.
For exemple, if a system have a large (more than 128ms) offset refering to other server in the list, it will be discarded (we say it named "false ticker" and a 'x' will appear before server ip in Synchronization Information). In a two server case, if the two server have large offset between them, the NTP client cannot know who is the false ticker (the one with wrong time information) and will prefer to loose synchro-nization (autonomous mode) than synchronize and so possibly take a wrong time information.
With this option, you could disable this security by telling the NTP client the first sever in the list is a "sure server". In that case, if some servers have wrong time and the NTP client cannot choose the right time value by its own, it will synchronize to the "sure server" instead of stay in autonomous mode.

► **Disable timegap security:** By default, NTP client cannot change sharply system time (except at the first synchronization) as it could lead to unstable system time and so unstable system.
So after the first synchronization, it will regularly keep system time updated by steps (control loop).
If you are sure, your servers are stable and have little jitter you could use this option to make GORGY Product system time update quicker

N.B: to fill in the IP addresses of the NTP servers manually, you have to disable this option, which will make the fields appear on the web page.

B. NTP Synchronization Information

Here you can find information about the NTP client and the synchronization status. A time server can have different symbols preceding their names showing their status:

- ► ***:** the star before time server IP address tells that it was chosen as synchronization source by the NTP client.
- ► **x:** the 'x' before time server IP address tells that this server is rejected from list of available server probably because it have a huge offset refering to others ("false ticker").
- ► **" ":** the space before time server IP address tells that the server is in the list of available servers (so NTP packet are sent to discuss with it) but was not chosen as the source of synchronization.
- ► **refid:** stands for "Reference Identifier", it is a up to 4 letters string who describe the remote time server time origin (GPS, IP address of another NTP server, PPS, DCF...)
- ► **st:** stands for "Stratum", it is a level to tell how close to an atomic reference clock the time server is. It could have value from 1 (directly connected to atomic clock) to 15. Value of 16 means the server is unreachable or there are synchronization problems.
- ► **t:** stands for "Type", in this product only NTP unicast ('u') is available but NTP can also do for example broadcast ('b'), multicast ('m').
- ► **when:** is the time in seconds since the NTP client has sent last packet(s) to this remote server.
- ► **poll:** stands for "Polling Rate", the period of NTP request in seconds.
- ► **reach:** is an octal flag indicating if a NTP packet was lost. Clasical value here is 377 which means that no packet was lost.
- ► **delay:** is the time in milliseconds a NTP packet takes to do the roundtrip between remote time server and NTP product (similar as ping)
- ► **offset:** is the time difference in milliseconds between remote time server system clock and GORGY product system clock..
- ► **jitter:** is the time variation in milliseconds of remote time server system clock. Less jitter ensure precise and stable synchronization.

4.1.5. SNMP settings web page

On this page, you can set SNMP (Simple Network Management Protocol) server settings to supervise your product.

► **System Information:**
You can set the field «Product Name», «Contact» and «Product Location» as you want to easily identify your product on the network.
N.B: You should keep "Product Description" to its default value ("LEDI®NET") to avoid breaking compatibility with some Gorgy Timing software.

► **SNMP v1/v2c Credentials:**
Set the community as you want to restrict SNMP server to talk only to SNMP client or SNMP trap server which uses the right community settings.
► **SNMP v3 Credentials:**
For better security, Gorgy-Timing product can use SNMPv3 protocol which allows pri-vacy and authentication features.
Basically for SNMPv3, you just need an username. SNMPv3 client must know this name to communicate with your products the same way that with the community for SNMPv1/2c. This SNMP packet can be easily read from network and community settings found.
   ► By setting **« MD5 Authentication Passphrase »**, you will enable authentication of SNMPv3 packets so SNMPv3 client must know this password to send pac-kets with the correct MD5 hash or they will be dropped. This MD5 Authentica-tion Passphrase will not be directly present in the SNMPv3 packets but request content will still be readable on the network.
   N.B: Authentication Passphrase must be at least 8 characters long.
   ► By setting "AES Privacy Passphrase", you will enable AES-128 encryption of SNMPv3 packets. So, the GORGY-TIMING product will only answer to encryp-ted packets which use the same Privacy passphrase. Privacy Passphrase and all SNMPv3 request content will not be readable in the SNMPv3 packet granting privacy on network.
   N.B: Privacy Passphrase must be at least 8 characters long.

► **Trap Generation:**
The product can spontaneously send information to an SNMP Trap server to alert on certain events. The list of alarms is available by consulting the MIB file of the product downloadable from this page.
The sending protocol, IPV4 or IPv6 addresses or hostnames (requires a DNS server), ports and protocols of the Trap servers must then be specified. N.B.: Traps use the identifiers configured above.
In the SNMP log you will find information about the SNMP server of the product.
It can be read easily with a text editor.

Trap Name	Condition of execution
ntpStarting	The NTP client has restarted. It generally occurs if the product reboots or if the NTP settings are modified..
newNTPSerSelected	The NTP client has selected a new NTP server to synchronize to. It is sent during the first synchronization occuring after a reboot, if the NTP client selects a new NTP server among those availalble or if the NTP client is synchronizing again after a synchronization loss..
autoNTPSerDetect	The NTP client has just detected a new NTP server that it can use to send its requests and retrieve the time. This Trap is only sent if the NTP mode is in automatic, at the start of the product.
noNTPSerDetected	The NTP client could not synchronize because it received no response to retrieve the time information.
trackingNTPSer	The NTP client is synchronized on the NTP server selected. It generally fol-lows the alarm neNTPSerSerlected to inform that the synchronization is done.
lostNTPSync	The NTP client has lost the synchronization. It usually happens if there is a network issue or if the time servers are all unreacheable.
userLocked	The user forced the product to run in Stand-alone mode. The product is not sending the alarms lostNTPSync, trackingNTPSer, newNTPSerSelected and ntpStarting anymore as the NTP client is disable in this mode..

The lists of possible events are listed in Product MIB which you can download on SNMP Settings webpage (see below). You can configure the SNMP trap server address and protocol version to use in this section. You can use IPv4, IPv6 or DNS resolved name for SNMP trap server addresses. With "Mode" settings, you can select which SNMP protocol to use (SNMPv1 /2c /3) or disable trap reporting to the server.

N.B: Traps use the same credentials than those previously configured and only work if the selected protocol is correctly enabled and configured in the previous sections

► **The product MIB (Management Information Base) file can be downloaded by clicking on "Product MIB" at the top of the page.**
It can be read with a text editor or by an SNMP client.

4.1.6. Firmware update web Page

Firmware Update

WARNING:

Selecting a valid image and pressing the submit button will immediately start the upload and update process. Once started, this can only be interrupted by a power cycle.

Select the new firmware image: [Parcourir...] Aucun fichier sélectionné.

[Submit] to upload the file!

► To update your GORGY-TIMING product, click on "Browse..." and select the firmware file "GT_FW_xxxx.bin" given by GORGY-TIMING Support Team.
Then click on "Submit" to begin the update.
Please, do not power off or reset the GORGY-TIMING product during firmware update, which will indicate you we when the product has been updated (around 2 minutes after firmware installation and reboot). You can now check the product software version in product Index Webpage.

4.1.7. FTP Firmware update

You can also update your GORGY-TIMING product with FTP protocol.

N.B: e sure FTP is enabled in the security Webpage and you have the correct system credentials (GT_Tablet/gtandroid by default).

4.1.8. With Windows Command prompt

```
C:\Users_____>cd Desktop
C:\Users_____\Desktop>cd "FW GT"
C:\Users_____\Desktop\FW GT>dir__  __
_____
 Répertoire de C:\Users_____.Desktop\FW GT

27/01/2017  10:41    <REP>          .
27/01/2017  10:41    <REP>          ..
12/01/2017  13:00         5 750 784 GT_FW_V1.1.6.5.bin
               1 fichier(s)        5 750 784 octets
               2 Rép(s)  216 378 236 928 octets libres

C:\Users_____.Desktop\FW GT>ftp 192.168.7.222
Connecté a 172.168.7.222.
220 "GORGY DEVICE FTP IPU4"
Utilisateur (192.168.7.222:(none)) : GT_Tablet
331 Please specify the password.
Mot de passe :
230 Login successful.
ftp> cd fw
250 Directory successfully changed.
ftp> put GT_FW_V1.1.6.5.bin
200 PORT command successful. Consider using PASV.
150 Ok to send data.
226 Transfer complete.
ftp : 5750784 octets envoyés en 62,95 secondes à 91,36 Ko/s.
ftp> quit
```

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► Open Windows command prompt and browse to directory (with "cd") where the firmware file is (GT_FW_Vx.y.z.bin). Check it with "dir".
► hen Type:
  ► ftp <ip_address>
    ► User: GT_Tablet
    ► Password: gtandroid
  ► cd fw
  ► put GT_FW_Vx.y.z.bin
  ► quit

The product will receive the firmware and after 1-2 minutes will restart with the new software version (check it in Index Webpage).

A. With FTP client Filezilla
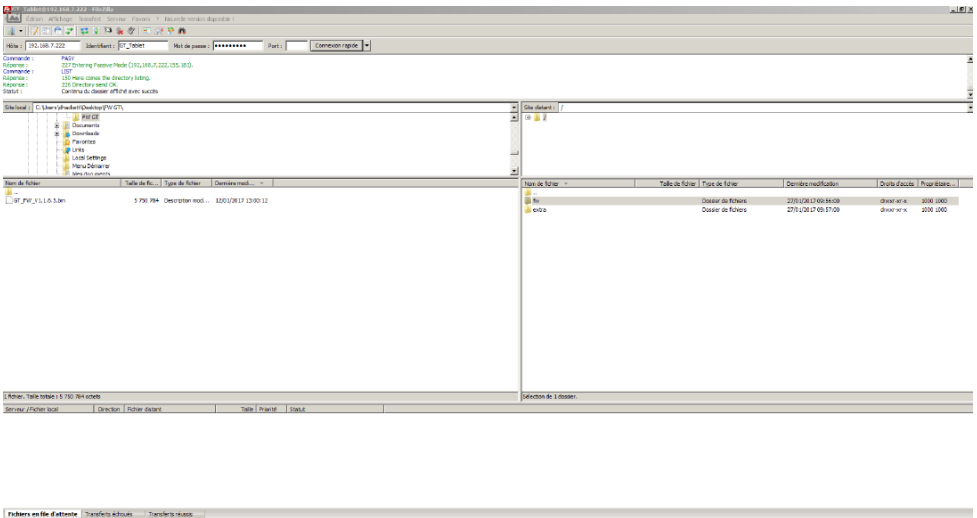
► Enter the product IP address and use GT_Tablet as login and gtandroid as password on the top of Filezilla windows. Then click connect.
► Drop with the mouse the firmware file (GT_FW_Vx.y.z.bin) from the left to the "fw" directory on the right side. The upload might begin.

The product will receive the firmware and after 1-2 minutes will restart with the new software version (check it in Index Webpage).

4.1.9. Factory Default web page

Reset Settings

Warning: Pressing the button below will reset all settings to factory defaults.
The product will restart to apply the new settings.

[Reset]

Export Settings

Settings file

Import Settings

Select the settings file: [Parcourir...] Aucun fichier sélectionné.

Press the button to upload the settings file. The product will restart to apply the new settings.

[Import]

► To reset product to factory settings, click on «Reset».
The product will reboot and after around 2 minutes, the product could be detected on the network and the web interface will be reachable...

Attention: P configuration and all specific configuration will be removed. Notice that the product will go back to DHCP IPv4 mode to request its IP address.

In this Webpage, you can also export the product configuration for backup or send configuration to update GORGY-TIMING product configuration (it will restart the product)

4.1.10. Reboot web page

Product Reboot

Press the button below to reboot the product.
The process will take about 1 minute.

[Reboot]

► To restart the product, click on "Reboot" button..

Product takes around 2 minutes to reboot and go back to the network.

4.1.11. HANDI settings web page

On this page, the local time displayed on the HANDI can be configured as well as various other parameters such as the behaviour of the red synchronization indication LED.

"Handi Configuration" Section

On this page, you can set the generic parameters of the product.

HANDI Configuration

Output Time : 21/07/2022 16:11 (Central_Europe) - Summer Time

Movement Type : SHENBANG

Local Time Configuration

◉ Preloaded Time Zone (TZID) : ○ Manual Time Zone :

Time Zone : [Central_Europe ▾]

Additionnal Options

HANDI LED Behavior : ○ Always OFF ◉ Always ON ○ ON when not synchronized ○ ON when synchronized

Report Time on ASCII Output : ☐
Reset and stop hands at 12h (Test Mode) : ☐

[Apply]

[HANDI Config and TZID Factory Default]

Local time settings

The local time of the product can be configured on this web page as well as various other options. For more information on the options available, please refer to the section on the type of output your product has.

To set the local time, you can choose:
- ► Iether a predefined time zone that includes time difference and time change policies
  For example Western_Europe, gives the time of all Western Europe (UK, Ireland, Portugal excluded) and makes an automatic time change in April and October. If you want to add a time zone not included, please contact our Support (support@gorgy-timing.fr) who will give you the procedure to add new zones to your products.

Local Time Configuration

◉ Preloaded Time Zone (TZID) : ○ Manual Time Zone :

Time Zone : [Central_Europe ▾]

The following is a non-exhaustive list of time zones already integrated into the product:

List of Time Zone (TZID) files and their values

TZID Name	Time difference from UTC (excluding Daylight Saving Time)	Time zone policy	Countries / Cities concerned
Brazillian Coast	UTC-3h	Summer time: Second last Sunday in October at 0:00 / Winter time: Second last Sunday in March at 0:00	Brazil outside the Amazon (Brazilia, Sao Paulo)...
China	UTC+8h	No time change	China, Taiwan, Mongolia
Eastern Europe	UTC+2h	Summer Time: Last Sunday in March at 1:00 am (UTC) / Winter Time: Last Sunday in October at 1:00 am (UTC)	Eastern Europe: Ukraine, Romania, Greece, Finland...
India	UTC+5h30	No time change	India
Iran	UTC+4h30	No time change	Iran
Japan	UTC+9	No time change	Japan, South Korea
Jordan	UTC+2	Summer Time: Last Friday in March at 0:00 (Local) / Winter Time: Last Friday in October at 0:00 (Local)	Jordan
Middle_East	UTC+2	No time change	Middle East: Saudi Arabia, Qatar, Yemen, Emirates (Dubai, Abu Dhabi..) (Attention Oman => UTC+4h)
Singapore	UTC+8	No time change	Singapore, Indonesia, Malaysia, Philippines
Sydney	UTC+10	Summer Time: First Sunday in October at 2:00 am (Local) / Winter Time: First Sunday in March at 3:00 am (Local)	Australia (Eastern part: Sydney)
US_East_Coast	UTC-5	Summer Time: Second to last Sunday in October at 3:00 am (Local) / Winter Time: Second to last Sunday in March at 2:00 am (Local)	US East Coast (New York, Boston, Miami, Washington D.C) + Canada (Montreal, Toronto, Ottawa)
US_West_Coast	UTC-8	Summer Time: Second to last Sunday in October at 3:00 am (Local) / Winter Time: Second to last Sunday in March at 2:00 am (Local)	US West Coast (Los Angeles, San Francisco, Seattle, Portland) + Canada (Vancouver)
UTC_GMT_ZULU	UTC+0	No time change	International time reference. Used in particular in NTP.
United_Kingdom	UTC+0	Summer Time: Last Sunday in March at 1:00 am (UTC) / Winter Time: Last Sunday in October at 1:00 am (UTC)	United Kingdom, Ireland, Iceland, Portugal
Vladivostok	UTC+10	No time change	Vladivostok
Western_Europe	UTC+1	Summer Time: Last Sunday in March at 1:00 am (UTC) / Winter Time: Last Sunday in October at 1:00 am (UTC)	France, Spain, Germany, Italy, Poland, Sweden, Norway...

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► either indicating the time difference to the international time UTC. This setting does not allow for automatic time changes unlike the TimeZone (TZID) files.

Local Time Configuration

◯ Preloaded Time Zone (TZID) : ◉ Manual Time Zone :

Offset from UTC : ◉ + ◯ - [02:30 ∨]

Other HANDI options

► **LED behaviour:** For clocks with the red LED option indicating synchronisation, the behaviour of this LED can be configured here.

The LED can be turned on in the event of a synchronization fault, during a synchronization, or it can be set to always be off or on.

► **Reset and then stop the hands at 12 o'clock:** For testing. Resets the hands and locks them in the 12 o'clock position. This verifies that the hands are correctly positioned at 12 o'clock on the movement and that the movement is also functioning correctly.

► **factory default of the HANDI and TZID configuration:** Deletes the HANDI settings and all TZID files uploaded to the HANDI clock.

4.2. FIRMWARE 120.X.X.X VERSION

Many parameters can be configured through the WEB interface of the product. For group configuration, a dedicated program exists named GTNetConfig (for more information, please refer to https://www.gorgy-timing.fr/188-modes-d-emploi.htm)

In order to access to the embedded WEB page, open your browser (Firefox, Chrome) and enter the IP address of the product, like below:
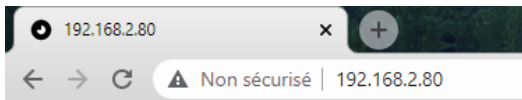
NB : By default, the product will get its IP address by DHCP. To easily detect GORGY-TIMING products on your network, you can use program GTNetworkManager2.

4.2.1. Main web page « HOME »

When you enter the IP address of the product in a WEB browser, no connection information is required to access to the first page, which is the home page of the clock.
But authentication will be necessary to navigate in the other pages.

The home page has the following informations:

► **Login Status :** Authentication status. After 15 minutes of inactivity, the user is automatically disconnected.

Upper and lower characters are taken into account.
By default, IDs are:
User name: admin
Password: gtmt

► **Network status :** Network connection type. The clock can be connected in Wi-Fi or Ethernet mode. This status indicate what type of connectivity is used. In case of Wi-Fi, this status also indicates if the product is in Access Point or connected to an Access Point.
► **Product Name :** Name of the product and serial number which identify the product GORGY-TIMING and its options.
► **Running for :** Uptime.

► **IPv4 Adress:** IPv4 address.
► **MAC Adress:** MAC address.
► **Synchronization Status:** Network and synchronization status.
► **Current NTP server Used:** Indicates which NTP server is used for UTC synchronization.
► **Latest Time Correction:** Last internal time correction (seconds and milliseconds and microseconds). Updated at each NTP response.
► **Current Internal Time (UTC):** UTC hour of the product.
► **Current Local Time:** Local hour of the product (according to the DST chosen in the web page).
► **Current Temperature** (only with temperature option) return the temperature measured by the sensor.
► **Firmware Version:** SW version.
► **Product description:** Product description.

The configuration is done thanks to the tabs on the left of the product.

4.2.2. Web page « NETWORK CONFIGURATION »

This page is used to change the network configuration of the product. The automatic configuration by DHCP (**Dynamic IPv4 address allocation (DHCP)**) is the default configuration.

It is also possible to specify a static IP (**Manual IPv4 address configuration**) with the sub-network mask, Gateway and DNS server.

The product only support IPv4 addresses.

ENDMI protocol is used to discover the clock and time servers from GORGY-TIMING on the network.

4.2.3. WEB page « NTP Configuration »

NTP Configuration

- ◉ Auto-configure the NTP settings
- ○ Set manually the NTP server(s) IPv4 addresses below:

Index	IPv4 Address	MD5 Key No.	MD5 Phrase
☑ NTP server #1	pool.ntp.org	none	
☐ NTP server #2	0.0.0.0	none	
☐ NTP server #3	0.0.0.0	none	

Apply

120.1.3.0 - GORGY TIMING

This page is used to configure the NTP client to receive time information. There are two ways to configure the NTP:

► By the automatic research of servers (**Auto-configure the NTP settings**) during lifetime of the product. It means that a NTP server is selected according to the content of the NTP frames received. So the current selected server can change automatically.

► By selecting manually until three NTP servers or pools **(Set manually the NTP server(s) IPv4 addresses below).** At least one server should be given for the clock to synchronize.
IP addresses or names can be used (with the presence of DNS server).
MD5 authentication is also possible (until 8 key ID).
The order of the servers defines the priority for the synchronization. The NTP client chose the first server activated (checked on the web page) from the list which is correctly responding to requests. If this server fails, the NTP client tries the next one.

N.B: The product only deals with UTC time (national time reference).

4.2.4. Web page « Autonomous Mode »

This page disable the NTP client so as to configure the date and time manually. This mode is called: autonomous mode.

Once applied, the internal hour of the clock is defined by the fields « Year », « Month », « Day », « Hours », « Minutes », « Seconds » filled by the user.

N.B : The product only deals with UTC hours.

In order to deactivate the autonomous mode, it is necessary to go back to the « NTP configuration » web page and click on « Apply ».

4.2.5. Web page « HANDI Configuration »

In this page you can configure the HANDI display.

A. Section Time settings

► **Time zone:** As the NTP protocol on transmit UTC time, it is mandatory to adjust the hours, minutes and seconds in order to have the local time on the clock.

► **Daylight Saving Time (DST) policy:** HANDI clocks currently support the following DST policies : Western Europe, Central Europe, Eastern Europe, Australian Central, Australian Eastern, US Alaska, US/Canada Pacific, US/Canada Mountain, US/Canada Central, US/Canada Eastern, US/Canada Atlantic, Chili, Cuba, Fiji, West Greenland, East Greenland, Jordan, Lebanon, Mexico, New Zealand, Paraguay, Samoa, Syria. Moreover, it is possible to configure a chosen DST thanks to "Manuel Date" or "Manual Rules" and by configuring the fields **Start Date** et **Stop Date**. Finally, it is also possible to deactivate the DST by selecting **None**.

B.   Reset to zero of the hands

Applying « Reset » on the bottom of the page will make the clock hands go to 12:00 until the next electrical start.

4.2.6. Web page « Security Account »

A.   Section Password Settings

This page allows the user to change their authentication password (web page and ftp).
► **Username:** the value is always « admin » and cannot be modified.
► **Enter the current password:** Enter the current password to confirm it. By default, the password is « gtmt ».
► **Enter the new password:** Enter the new password wanted, up to 32 characters.
► **Confirm the new password:** Confirm the new password.

Warning: If the previous/current password is not correct, the configuration is not taken into account.

Once the update is applied, the user is redirected to the home page. The new password is required to access the configuration through the tabs on the left.

A.   Section Protocol Settings

► **Webserver protocol:** Chose the WEB protocol between http and/or https
► **Enable FTP firmware update:** Activate or not the FTP access and, at the same time, the firmware update.

![GORGY TIMING - LA MARQUE DU TEMPS]

4.2.7. Web page « SNMP Configuration »

A. SNMP configuration through web page

Cette page permet de configurer les paramètres du serveur de supervision SNMP (Simple Network Management Protocol).

► **Product Name:** The pre-filled field is the name of the product. It is available on the label on the back of the product.
► **Product Location:** This field is the product location.
► **Contact :** This fiel dis the contact of the product.
► **Product Description:** This fixed field if the description of the product used for the autodetection thanks to the GORGY-TIMING tools. It is available on the label on the back of the product.
►

Note : The maximum length of the fields is up to 50 characters. Available characters are all the 95 printable ASCII chars (excepted /=\) :
!"#$%&'()+,-.0123456789:;<>?@*
ABCDEFGHIJKLMNOPQRSTUVWXYZ[]^_`
abcdefghijklmnopqrstuvwxyz{}~

► **Community:** Value of the community is by default « public ». The field is limited up to 7 characters. Only the equipment using this community can communicate with the product through SNMP, in SNMPv1 or SNMPv2.

► **Traps generation:** The product can spontaneously send traps information to a trap server (4 addresses can be configured at maximum). The purpose is to alert about certains events. The available events are listed here-below:

Name of the Trap	Event
ntpStarting	NTP client is starting (generally after the product starts or NTP configuration changes)
newNTPSerSelected	NTP client has found a new server to use for synchronization. Could appear at first synchronization or if the selected server changes.
autoNTPSerDetect	NTP client just dectected a new server for its requests. This trap is only sent when detected is automatic, when the product starts.
noNTPSerDetected	NTP client cannot synchronize because no server has been found.
trackingNTPSer	NTP client is synchronized. Generally, it appears a few time after newNTPSerSelected.
lostNTPSync	NTP client has lost its synchronization. Generally, it appears if the network is down or if there is no server available anymore.
userLocked	User forced the product in autonomous mode. The following traps are sent in this mode: lostNTPSync, trackingNTPSer, newNTPSerSelected ni ntpStarting.

► **SNMP write services :** If 'ON' is checked, the SNMP service is activate in writing mode.
If 'OFF', SNMP service is deactivated in writing mode.

► The MIB file (Management Information Base) of the product is downloadable on GORGY-TIMING web site *https://www.gorgy-timing.fr/188-modes-d-emploi.htm* It could be read with a text editor or directly by a SNMP client.

B. SNMP configuration through software

Functionalities available on the WEB page are, for some of them, configurable by SNMP. Moreover, some configurations (like advanced mode for chronometer) are only available through SNMP.

Here-below are presented the available OID on the HANDI®.

All OIDs start with 1.3.6.1.4.1.8955.1.16 and finish with the numbers presented in the table.

GORGY ● TIMING

LA MARQUE DU TEMPS

Category	OID	GET	SET	Description
Model	.1.1.0	Y	N	Name of the product
serialNumber	.1.2.0	Y	N	Serial number
versionNumber	.1.3.0	Y	N	Product version with the following pattern : x.x.x.x
Mac	.1.4.0	Y	N	MAC address of the product
messageString	.1.5.0	Y	N	Synchronization message (same as in the web page under « Synchronization Status:»)
utcDateTime	.1.6.0	Y	Y	UTC time. Always available in GET mode. In SET mode: Could only be configurable if the product is in autonomous mode. Else, it is a Read-Only field.
inputType	.1.7.0	Y	Y	NTP or autonomous mode
lastCompensate	.1.8.0	Y	N	Last time correction applied on the time retrieved by NTP.
reset	.1.9.0	Y	Y	Reset of the product. Always 0 when read.
batteryState	.1.10.0	Y	N	Battery state. Always 0.
wifiPower	.1.11.0	Y	N	Wi-Fi power in dBm if the product is in Wi-Fi mode. Else, « No Wi-Fi configured ».
functionMode	.2.1.0	Y	N	Actual functionalities of the clock.
altDateTime	.2.2.0	Y	Y	No used in HANDI
altTempText	.2.3.0	Y	Y	No used in HANDI
tempValue	.2.4.0	Y	N	Temperature value if the temperature option is activated. Else "--.-"
useButtons	.2.5.0	Y	Y	No used in HANDI
ntpInputVersion	.3.1.0	Y	N	NTP version used
ntpInputMode	.3.2.0	Y	N	Current mode of NTP : Client/Server Broadcast Else
ntpInputAuto	.3.3.0	Y	Y	Automatic detection state of the server (Automatic or server filled by user)
ntpInputOption	.3.4.0	N	N	No effect
ntpInputState	.3.5.0	Y	N	Synchronization state for the current NTP server. Best candidate for the time information.
ntpInputActiveServerAddress	.3.6.0	Y	N	Current IPv4 server
ntpInputLastAccuracy	.3.7.0	Y	N	Always 0
ntpInputRequestInterval	.3.8.0	Y	N	Always 0
ntpInputRequestNumber	.3.9.0	Y	N	Unused
ntpServerNumber	.3.10.0	Y	N	Max number of NTP server which can be manually configured
ntpServEntIndex	.3.11.1.1.[0,1,2]	Y	N	Index of each server 0,1,2 ou 3
ntpServEntAddress	.3.11.1.2.[0,1,2]	Y	Y	IPv4 address of the server
ntpServEntState	.3.11.1.3.[0,1,2]	Y	Y	State : Enable or disable
ntpServEntSecurityMode	.3.11.1.4.[0,1,2]	Y	Y	Authentication mode (MD5 only or disable)
ntpServEntPublicKeys	.3.11.1.5.[0,1,2]	Y	Y	Key index for NTP authenticated requests

ntpServEntPrivate Keys	.3.11.1.6. [0,1,2]	Y	Y	Key value up to 8 characters
snmpVersion	.4.1.0	Y	N	Value is always 2 for SNMPv2c
snmpName	.4.2.0	Y	Y	Name of the product as in the web page
snmpCommunity	.4.3.0	Y	Y	Community as in the web page
snmpLocation	.4.4.0	Y	Y	Location as in the web page
snmpContact	.4.5.0	Y	Y	Contact as in the web page
snmpDescription	.4.6.0	Y	N	Description as in the web page
snmpServerNumber	.4.7.0	Y	N	Number of trap servers configurable
snmpServEntIndex	.4.8.1.1.[0,1,2,3]	Y	N	Index of each server 0,1,2 ou 3
snmpServEntAddress	.4.8.1.2.[0,1,2,3]	Y	Y	IPv4 address of the server
snmpServEntMode	.4.8.1.3.[0,1,2,3]	Y	Y	State : Enable or disable
displayNumber	.5.1.0	Y	N	Unused in HANDI
disUnitEntIndex	.5.2.1.1.[0,..,6]	Y	N	Unused in HANDI
disUnitEntType	.5.2.1.2.[0,..,6]	Y	N	Unused in HANDI
disUnitEntMode	.5.2.1.3.[0,..,6]	Y	Y	Unused in HANDI
disUnitEntOption	.5.2.1.4.[0,..,6]	N	N	Unused in HANDI
disUnitEntColor	.5.2.1.5.[0,..,6]	Y	Y	Unused in HANDI
disUnitEntLum	.5.2.1.6.[0,..,6]	Y	Y	Unused in HANDI
disUnitEntOffset	.5.2.1.7.[0,..,6]	Y	Y	Unused in HANDI
disUnitEntDstLang	.5.2.1.8.[0,..,6]	Y	Y	Unused in HANDI
disUnitEntDstInterval	.5.2.1.9.[0,..,6]	Y	Y	Unused in HANDI
disUnitEntMessage	.5.2.1.10. [0,..,6]	N	N	Unused in HANDI
disUnitEntPeriod	.5.2.1.11. [0,..,6]	N	N	Unused in HANDI
disUnitEntTxtAfficheur	.5.2.1.12. [0,..,6]	N	N	Unused in HANDI
disUnitEntTestMode	.5.2.1.13. [0,..,6]	Y	Y	Unused in HANDI
disUnitEntWaveMode	.5.2.1.14. [0,..,6]	Y	Y	Unused in HANDI
disUnitEntDigitFw	.5.2.1.15. [0,..,6]	Y	N	Unused in HANDI
disUnitEntMatrixFw	.5.2.1.16. [0,..,6]	Y	N	Unused in HANDI
chronoStatus	.6.1.0	Y	N	Current running state of the chronometer (enabled, count up, count down, auto-count up, auto-count down, paused, stopped)
chronoDisplayed	.6.2.0	Y	Y	Current visible state (visible or not)
chronoStartValue	.6.3.0	Y	Y	Starting value of the counter. Used in basic mode.
chronoEndValue	.6.4.0	Y	Y	Ending value of the counter. Used in basic mode.

chronoStartDate	.6.5.0	Y	Y	Starting date of the counter.
chronoEndDate	.6.6.0	Y	Y	Ending date of the counter.
chronoCommand	.6.7.0	Y	Y	Chronometer command : Start down/up Reset Clear config Auto-start up/down Pause
chronoOptions	.6.8.0	Y	Y	Unused
chronoTime	.6.9.0	Y	Y	Time of the chronometer
ntpStarting	.0.3	Y	N	Trap SNMP
autoNTPSerDetect	.0.4	Y	N	Trap SNMP
noNTPSerDetected	.0.5	Y	N	Trap SNMP
newNTPSerSelected	.0.6	Y	N	Trap SNMP
trackingNTPSer	.0.7	Y	N	Trap SNMP
lostNTPSync	.0.10	Y	N	Trap SNMP
userLocked	.0.11	Y	N	Trap SNMP

4.2.8. Web page « Firmware Update »

► In order to update the firmware, select a new binary thanks to "Choisir un fichier". The file should be named "GT_FW_xxxx.bin", given by the SAV GORGY-TIMING.
Then, click on « Download » which will be available only if a file is selected.
The udpate could last long.

Do not unplug the alimentation cable during the update.
Do no restart manually the product.
After a few seconds, the web page will indicate than the product is going to reboot.

4.2.9. Firmware update via FTP

The products from GORGY-TIMING can also be update thanks to the FTP protocol on a control command (not Filezilla!)
N.B: Check that the FTP is activated on the web page and that your IDs are the correct ones.

On windows

► Open the command console on Windows in the repository where is stored the binary to upload. (GT_FW_Vx.y.z.bin). You can check the folders thanks to "dir"
► Then enter :
► ftp <ip_address>
    ► User: admin
    ► Password: gtmt
► put GT_FW_Vx.y.z.bin
► quit

The update will start after some minutes. The product will reboot by itself.

4.1.10. Web page « Restart / Restore »

A. Section periodically restart

► The clock offers the opportunity to be periodically restarted at a certain UTC time, every day. It is useful to counter some memories issues which appears if the network is instable (mostly in Wi-Fi mode). This functionality can prevent the clock to be frozen after a certain time.

B. Section Factory Default and Restart

► In order to go back to factory default configuration, check « Restore factory settings after restart » then click on « Restart ». The produc twill reboot after some minutes and will be detectable on network.

Warning : All the configuration (static IP, etc) will be reset. The produc twill start in DHCP mode.

To trigger a reboot without the factory default configuration (keeping everything), do not check « Restore factory settings after restart » but just click on « Restart ».

Note : It is possible to trigger the factory default thanks to the button with the following process:
- ► Shutdown the clock and restart is electrically.
- ► During the first 10seconds, at start, press the reset button until the clock shows "FD"
- ► Factory Default is ongoing

For Wi-Fi product, a specific step is needed to correctly configure the Wi-Fi connection et connect to Wi-Fi network.

5.1. GENERAL

Gorgy Timing products with Wi-Fi is compatible with the main part of existing Wi-Fi access point as we support Wi-Fi 2,4GHz, IEEE 802.11b/g/n.

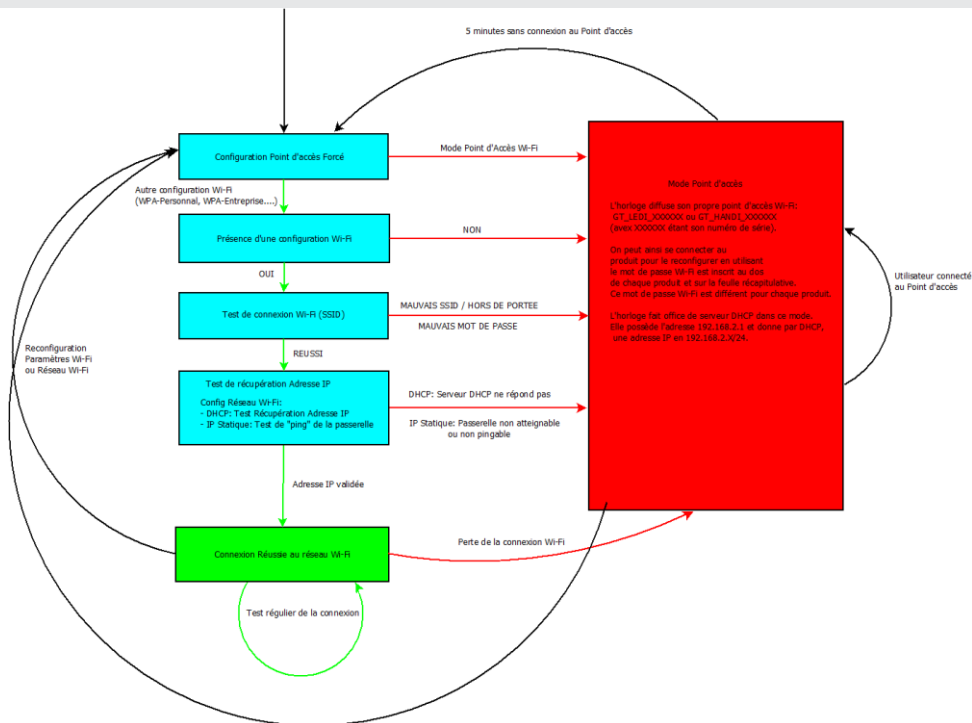*N.B: 5GHz Wi-Fi network (IEEE 802.11ac) are not yet detected by Gorgy Timing products*
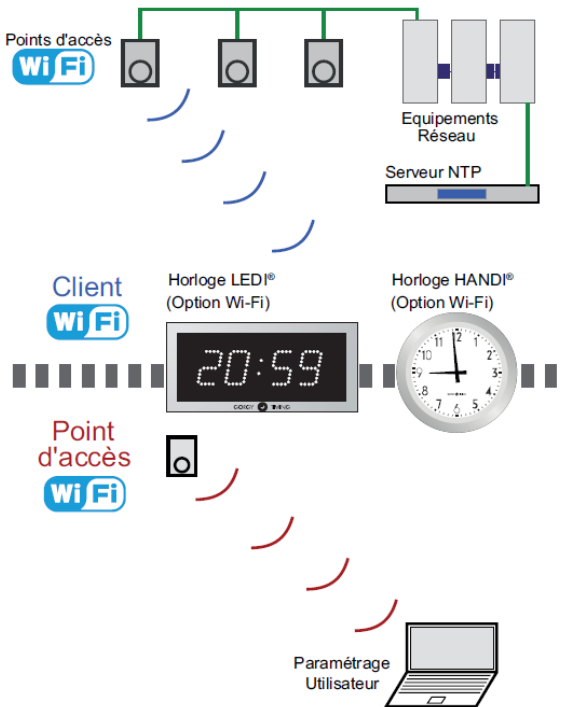
To connect to Wi-Fi access point, the product needs at least 2 parameters :
- ► SSID (name) of Wi-Fi access point which we want to connect the product.
- ► Access point password

N.B: In WPA-Enterprise mode, you will also have to give an username and sometimes a domainname also.

When a Gorgy Timing Wi-Fi product fails to connect to a Wi-Fi network for any reason (no configuration, no network, wrong encryption key...), it will create a Wi-Fi access point. The following diagram explains the transition between the different states "Connected to a Wi-Fi network" and "Access point" mode.

5 minutes sans connexion au Point d'accès

Configuration Point d'accès Forcé

Mode Point d'Accès Wi-Fi

Mode Point d'accès

L'horloge diffuse son propre point d'accès Wi-Fi:
GT_LEDI_XXXXXX ou GT_HANDI_XXXXXX
(avec XXXXXX étant son numéro de série).

On peut ainsi se connecter au
produit pour le reconfigurer en utilisant
le mot de passe Wi-Fi est inscrit au dos
de chaque produit et sur la feuille récapitulative.
Ce mot de passe Wi-Fi est différent pour chaque produit.

L'horloge fait office de serveur DHCP dans ce mode.
Elle possède l'adresse 192.168.2.1 et donne par DHCP,
une adresse IP en 192.168.2.X/24.

Autre configuration Wi-Fi
(WPA-Personnal, WPA-Entreprise....)

Présence d'une configuration Wi-Fi

NON

OUI

Test de connexion Wi-Fi (SSID)

MAUVAIS SSID / HORS DE PORTEE

MAUVAIS MOT DE PASSE

REUSSI

Utilisateur connecté
au Point d'accès

Reconfiguration
Paramètres Wi-Fi
ou Réseau Wi-Fi

Test de récupération Adresse IP

Config Réseau Wi-Fi:
- DHCP: Test Récupération Adresse IP
- IP Statique: Test de "ping" de la passerelle

DHCP: Serveur DHCP ne répond pas

IP Statique: Passerelle non atteignable
ou non pingable

Adresse IP validée

Connexion Réussie au réseau Wi-Fi

Perte de la connexion Wi-Fi

Test régulier de la connexion

In "Access Point" Mode, the product has the following settings :

► SSID:GT_KIND_xxxxxx where « KIND » reflect product type (a.e « LEDI » ou « HANDI
► ») and « xxxxxx » is the product serial number.
► Password: Access point password is written on the backside of each product or in the Wi-Fi passwords summing document delivred with each command.
► IP Address: 192.168.2.1
► Subnetwork Mask: 255.255.255.0

Moreover, in "Accès point Mode", the product enable its own DHCP server, which gives automatically an IP address in the product subnet range (192.168.2.x/24) to computers which connect to the product.

Wi-Fi configuration will be done by following these steps:

► Connect to product Access Point
► Transfer of the configuration to the clock
► Disconnecting the access point from the clock

These operations are detailed in the following sections.

5.2. WI-FI SETTINGS BY WEB PAGE

The manual configuration of the clocks can be done through the product web page.

5.2.1. Firmware 1.X.X.X versions

A. Connection to the Wi-Fi "Access Point"

► First, you need to connect a terminal (PC, Smart-phone, Tablet...) to the product's Wi-Fi "Access Point".
  ► 1- Using the system tools, perform a detection of the Wi-Fi networks in range.
  ► 2- Choose the Wi-Fi product to configure and use the encryption key written on the back of it to connect to it.

B. Access to web interface of the clock

When the computer is connected, it should receive an IP address like 192.168.2.x/24 by DHCP.

► To access the configuration interface, open a web browser (Firefox, Chrome, Internet Explorer, ...) and enter the following IP address: 192.168.2.1 in the address bar.
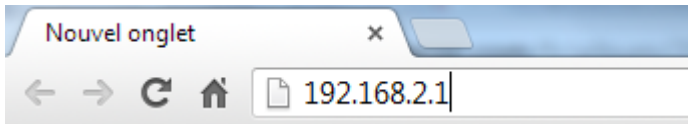
► The browser will then ask the user to identify themselves. The default credentials are:

<div align="center">

login: root
Password: gtmt

</div>

C. Web page Configuration Wi-Fi

► To tell the clock which Wi-Fi network to connect to, open the "Wi-Fi Settings" web page, choose the target Wi-Fi type (Open Wi-Fi, WPA-Personal, WPA-Enterprise...) and fill in the SSID (Wi-Fi network name) and Shared Key (Encryption Key) fields. A user name is also required in WPA-Enterprise mode.

Once this configuration is validated, the clock will automatically try to connect to the specified network. The access point mode is then immediately cut, and the user is disconnected from the product (Web interface not accessible).

If the configuration is valid, the clock connects to the Wi-Fi network, and the configuration web interface becomes accessible using the Wi-Fi clock's IP address on the Wi-Fi network.

N.B: If not, after trying for 1 minute to connect, the clock returns to access point mode to receive a new configuration.

5.2.2. Firmware 120.X.X.X Versions

A. Connection to « Wi-Fi access Point »

► First, it is necessary to be connected on the Access Point of the Wi-Fi product.
    ► 1- Using the available tools, detect the close Wi-Fi access points.
    ► 2- Chose the Wi-Fi product to connect with, and use the key written on the label on the back of the product.

B. Access to web interface of the clock

When the terminal is connected to the Wi-Fi access point of the clock, it is possible to find the IP address of the clock by using the "Scan" feature on the GTNetworkManager2 software. By default the IP address of the product is 192.168.0.2.

► To access the configuration interface, open a web browser (Firefox, Chrome, Internet Explorer, ...) and enter the following IP address: 192.168.0.2 in the address bar.

In the Home page:

► **Login Status**: Requires login to follow the explanations in the next section.
By default
login: admin
password: gtmt

► **Network Status:** Corresponds to the network status of the clock.
WIFI: AP corresponds to the access point mode
WIFI: STA corresponds to the mode connected to a network

C. Wi-Fi Configuration Web Page « Wi-Fi Configuration »

► To select an access point, simply click on it to have it fill in the SSID and MAC fields.
► **Wi-Fi password:** Enter the password for the selected Wi-Fi. The clock takes a few seconds to change operating mode and then shows a "Success" message once the connection is re-established.

If the "Force to connect to this MAC address" box is checked, then the MAC address is set during the connection.

► **Access point country code :** Change the 'country code' of the access point to declare the country where the product is. It facilitates the detection of the frequency bandwith which could be used.
► **Color change in Access point mode :** Not available in HANDI.
► **Disconnect :** Force the deconnection and return to access point.

If the clock was in access point, then it changes IP address (automatically assigned by DHCP server or manually configured) and the connection to the Wi-Fi GET_LEDI_xxxx is no longer possible. The terminal (PC, Smartphone, tablet...) is thus disconnected from the Wi-Fi access point of the clock. The clock has connected to the desired access point, so it is necessary to be on the same network as it to detect it and access its new IP address.

If the clock was not in access point, in the same way according to the operating mode:
- Manual: the clock keeps the same IP address
- Dynamic/IP address assignment by DHCP server: the clock may have changed its IP address.

In both cases, the use of "GT Network Manager" can again be useful.

If the connection is lost, the clock tries to reconnect but if the reconnection is not possible, due to the distance between the clock and the access point or to a loss of network, then the clock returns to the access point at the address 192.168.0.2. At this point, the procedure for connecting to a network must be repeated.

6.1. PRODUCT TROUBLESHOOTING

6.1.1. Generic issues

Issue	Cause	Solution
Product is not powered	**Power supply is not plugged**	**Plug in the alimentation cable**
	ON/OFF button is not ON position	**Put this button on ON position**
	Product is PoE powered and the Ethernet Port is not connected to PoE compatible (IEEE 802.3af) switch or injector.	**Connect the product to PoE compatible (IEEE 802.3af) switch.**
Product have wrong hour information	**Product is not synchronised**	**Check the Synchronization/Code Input is correctly plugged and configured**
	Product have time setting of another timezone	**Set timezone setttings (Offset/DST) in synchronization source or directly in the product with buttons or with its Web page (if any).**

ENGLISH

8.1.2. Ethernet Network issues

Issue	Cause	Solution
I cannot detect the product with GTNetworkManager2 (Gorgy Timing product detection tool).	**Product network cable is disconnected**	**Connect the network cable**
	Product is in DHCP (by default) but there is no DHCP server in the network.	**Change computer IP address to one in Auto-IP range (169.254.1.1/255.255.0.0) and restart scan with GTNetworkManager2.**
	Computer is not in the same subnetwork	**Configure the computer to have the same subnetwork than the product or use additionnal Unicast range of GTNetworkManager2.**
	Firewall, spyware or other security block GTNetworkManager2	**Check with your network administrator firewall, spyware and network security to allow GTNetworkManager2 to send and recieve packets especially Broadcast ones.**
I detect the product but I cannot access it Web Page	**Product use HTTPS only (so HTTP is disabled)**	**Add "https://" before product's IP address to access product web page.**
	Computer's proxy does not allow me to access product webpage	**Configure the proxy with help of your network administrator to exclude product address range from proxy settings.**

MODE D'EMPLOI / USER GUIDE

CODE : 1974

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