



Manual

Analog indoor clock with WiFi (802.11) connection

Table of Contents

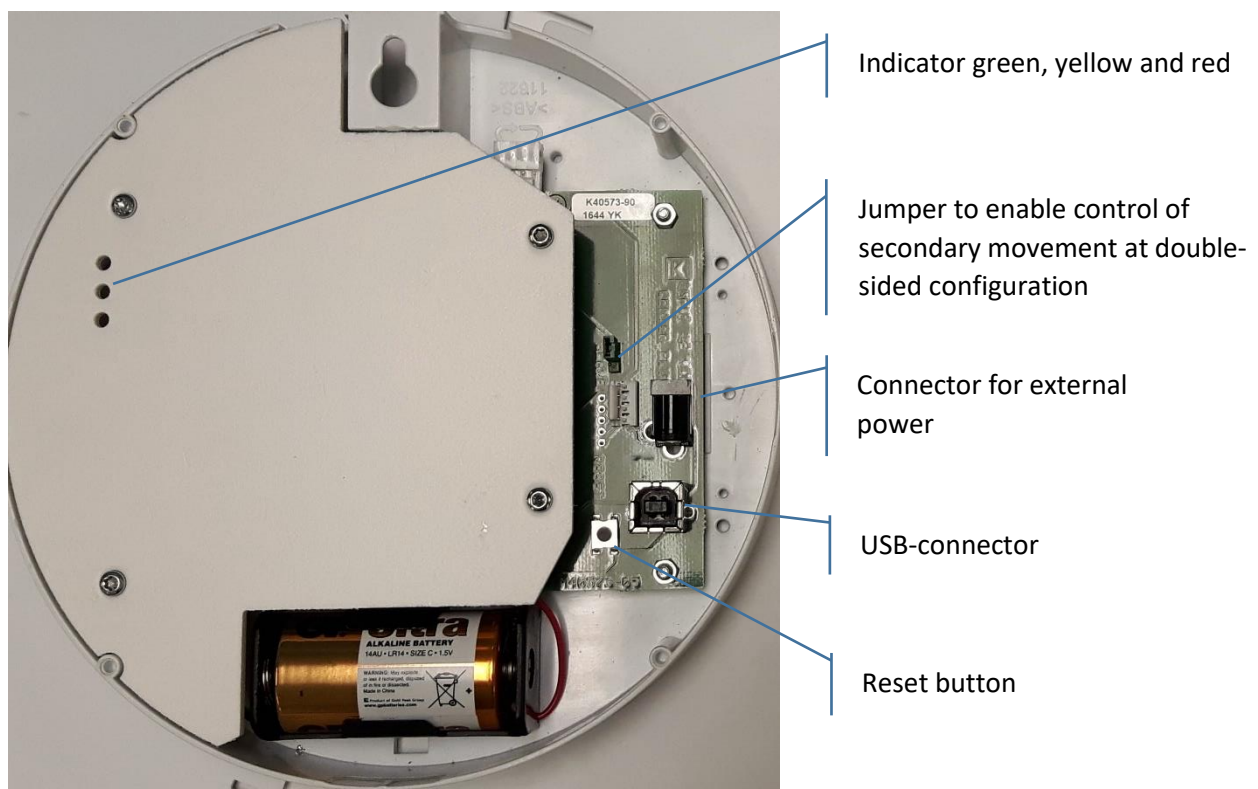
Content.....	1
General.....	2
Connections and functions.....	2
Indikator (LED).....	2
Jumper to enable secondary movement.....	2
USB-connector.....	3
External power	3
Reset-button.....	3
Factory reset.....	3
Program Wifi Configurator	4
Installation of software	4
Configuration.....	4
Settings.....	5
Funktion description.....	6
Technical data	6

Program Wifi Configurator is not included.
Please download from
www.westerstrand.com
Archives > Download

General

Westerstrand analog WiFi-clock provides the opportunity to create a time distribution system with high accuracy and high reliability. The WiFi-clock is equipped with a wireless 802.11b/g LAN module for easy access to existing wireless networks. The WiFi-clock has an analog movement with two motors for 3 hands. The clockwork starts automatically after receiving the correct time. The hour hand is sweeping, minute and second hand are stepping.

Connections and functions



Indicator (LED)

A green, yellow and red LED indicator is available for displaying function.

Green = WiFi active and approved connection

Yellow = flashes on data traffic

Red = WiFi active but not connected

These indicators only work when WiFi function is active. When the watch in normal operation has shut off WiFi to save battery power, these indicators will be turned off and will only illuminate while the clock makes a time synchronization.

Jumper to enable secondary movement

If clock is made as double sided a secondary movement can be driven from same electronics by closing the pins with a jumper.



USB-connector

A USB-connector (type B) used for programming and setup.

External power

The WiFi clock can be powered from a battery (alkaline LR14 1.5V) or, as option from an external power supply. When a USB cable is connected, the clock is powered from the USB port.

Note! If the battery is powered by external supply, no battery should be installed.

Reset-button

Reset button pressed for about 1 sec, causing the clock to perform a new time synchronization.

Note! After battery change, the clock should be synchronized by pressing the reset button for about 1 sec.

Factory reset

To perform a factory reset of all settings, hold down the reset button until the red LED lights up, about 10 seconds.

Note! This reset function is not active when the clock is connected to PC via USB. PC connected clock use function button in PC program.

Program Wifi Configurator

To enable the WiFi-clock to connect to a wireless network, the network settings must be configured. This is done with the "Westerstrand WiFi Configurator" software, which is included on a CD.

Installation of software

The installation usually starts automatically when the CD is loaded. If the installation does not start automatically, go to 'Start', select 'Run' and type X: \ SETUP, where X will be replaced with the letter of the CD-ROM drive. Complete installation by following the onscreen instructions.

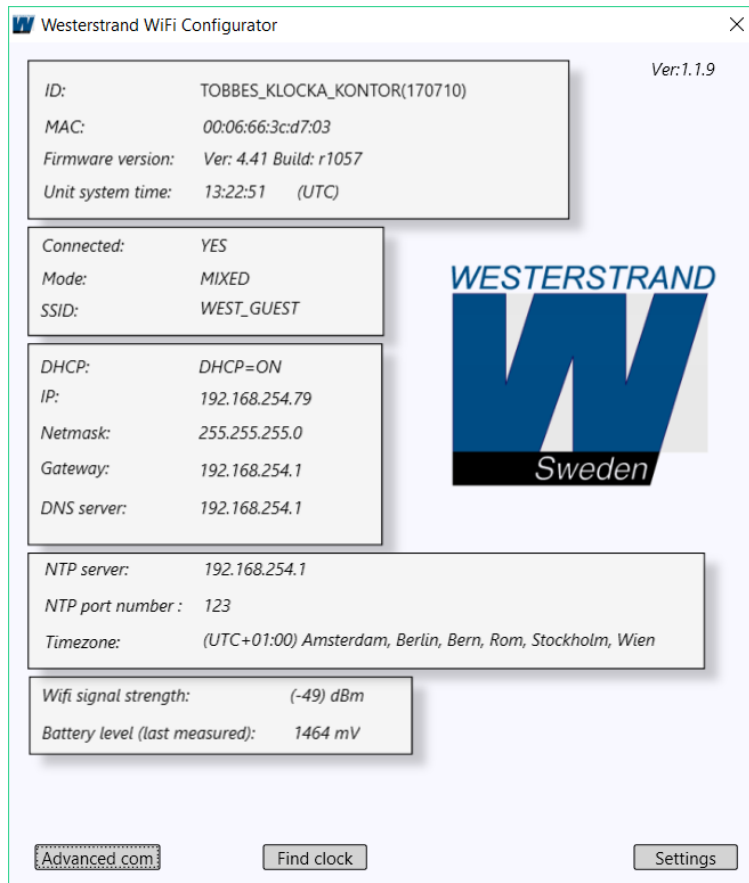
Note! The PC security settings may require the application to be installed with administrator privileges

Configuration

Start the program and connect the clock to a USB port on your PC.

Select "Find Clock" for the program to find the connected clock. This may take a few minutes and the text "Searching" will appear in the meantime. After the clock has been found, the program displays the current settings.

If the program fails to connect to the clock, an error message will appear. In that case, check that the USB cable is properly connected. In some cases, you may force the program to look for specified com ports through "Advanced com"



Westerstrand WiFi Configurator Ver:1.1.9

ID:	TOBBES_KLOCKA_KONTOR(170710)
MAC:	00:06:66:3c:d7:03
Firmware version:	Ver: 4.41 Build: r1057
Unit system time:	13:22:51 (UTC)

Connected:	YES
Mode:	MIXED
SSID:	WEST_GUEST

DHCP:	DHCP=ON
IP:	192.168.254.79
Netmask:	255.255.255.0
Gateway:	192.168.254.1
DNS server:	192.168.254.1

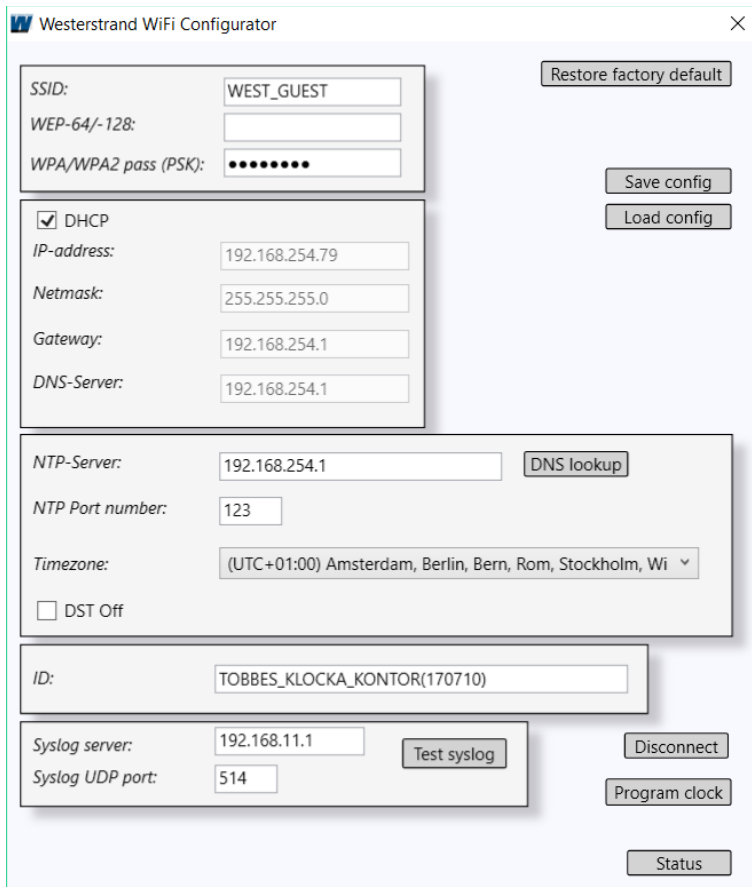
NTP server:	192.168.254.1
NTP port number :	123
Timezone:	(UTC+01:00) Amsterdam, Berlin, Bern, Rom, Stockholm, Wien

Wifi signal strength:	(-49) dBm
Battery level (last measured):	1464 mV

Advanced com Find clock Settings

Settings

Select "Settings" to configure the clock.



First, find out which network should be connected and type this in the "SSID" field. SSID with spaces is not supported. Fill in the current network settings. In addition to the IP address, the NTP server can also be entered as a DNS name. In this case, enter the DNS name in the "NTP Server" field and press "DNS Lookup." If the name is found, it will be converted to a valid IP address. Examples of ntp server may be "ntp.se".

At each synchronization, the clock can send messages with status and battery information to a syslog server. On the installation disk, you will find a simpler demo program for managing syslog messages. When all settings are made, press "Program clock" to program the clock. A message will appear if the programming has been successful. To check that the clock has been connected to the network, press "Status" and then "Find clock" to update the information. If the clock is connected to the network, it says "YES" after "Connected". After the configuration, the USB cable must be disconnected to synchronize and work normally.

Several clocks can be programmed sequentially without the need to reboot the program. The ID can then be changed between each programming if desired. The settings can be saved to a file by pressing "Save config" and then retrieved with "Load config".



Function description

- After a battery or power adapter is plugged in, the hands go to 00:00, 04:00 or 08:00. When the hands have reached this position, they stop, and the clock starts receiving the time information. The hands do not move until the time has been accepted.
- After the reception is complete, the hands will go to the right time and the clock will start normal operation. This may take several minutes.
- During normal operation, synchronize is performed 5 times a day. A correction will be made if necessary when the difference between received and displayed time occurs.
- The correct position of the hands is checked between 15:00 and 16:00 every day.
- To force a new synchronization, the reset button can be pressed for one second.
- If the WiFi connection disappears, the clock will continue to work using the built-in quartz crystal.

Technical data

Battery:	Alkaline LR14 1.5V
External power supply:	12VDC, 200mA, 2.1mm DC plug (+ on center pin)
Network module:	802.11b/g, frequency range: 2,402 to 2,480 MHz, channels: 1-14
Battery life:	approx. 1 year in normal operation
Synchronization interval:	Synchronization occurs at 2:00 AM, 3:00 AM, 4:00 AM, 12:00 PM and 8:00 PM local time.
USB connection:	USB 2.0 (USB-B connector)
Operating temperature:	0 to +40°C
Relative humidity:	max 95% non-condensing
OS support:	Windows 7/8.1/10