

www.Kama-Labs.com

THYRATRON

(Assembly instructions and latest firmware you can find on my website)

Assembled my own hands 😊

Thanks for purchase!!!

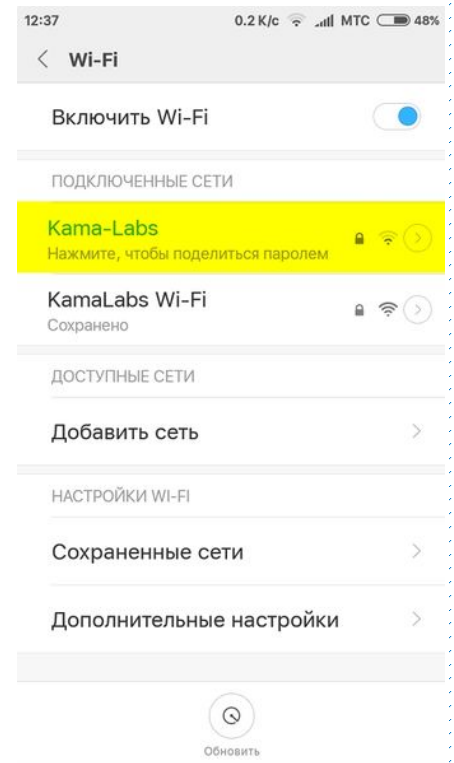
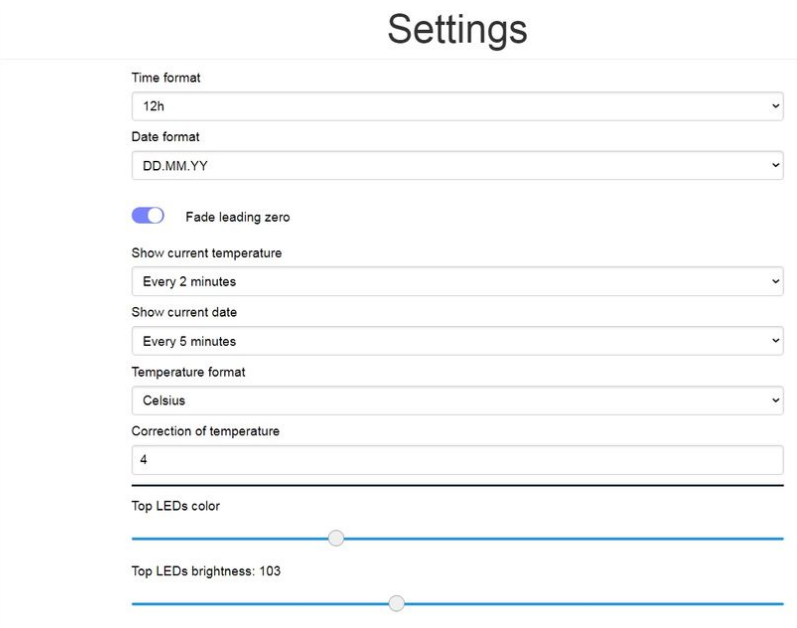
Features:

- * 6x Soviet ITS1-A thyratron tubes (made in 1984)
 - * Full remote control
 - * Full control of clock via Wi-Fi
 - * 32bit ESP32 processor
 - * 12/24h time mode
 - * Fade leading zero
 - * Wi-Fi connection to PC or smartphone
- * Synchronizing time and date from NTP server
 - * Over-the-air firmware update
- * High-precision onboard time chip DS3231
 - * High effective smooth routing of PCB
 - * 1 Alarm
 - * Thyratron tubes work in static mode
 - * Multicolour adjustable LED backlight
- * Automatic change color mode for LED backlight
 - * Temperature / humidity / pressure sensor
 - * Off clock at night by schedule
 - * Temperature C° or F°
 - * Correction of temperature
 - * Accurate to +/- 1 minute/year
- * Date in format DD.MM.YY or MM.DD.YY or YY.DD.MM
 - * Backup battery. Data is no lost when power off

- * Power source - DC 5V barrel plug 5.5mm/2.1mm ("+" inside, "-" outside) or **Micro-USB**
- * Consuming current - 700mA
- * Noiseless work
- * Dimensions of the clock - 180mm(W) x 50mm(L) x 60mm(H)

How connect to clock via Wi-Fi:

- 1) Turn on clock.
- 2) Connect to “Kama-Labs” Wi-Fi network via your smartphone or PC. Password: **nixieclock**
- 3) Open browser and go to “irina.local” or 192.168.4.1 or scan QR-code.
- 4) You will see page with all setting of clock.



Connecting to home Wi-Fi network:

The clock can connect to your home Wi-Fi network and synchronize time from NTP server. Also you will have access to clock from any device connected.

- 1) Go to “Wi-Fi” in menu
- 2) Fill fields “Name of Wi-Fi network” and “Password of Wi-Fi network” of your Wi-Fi network

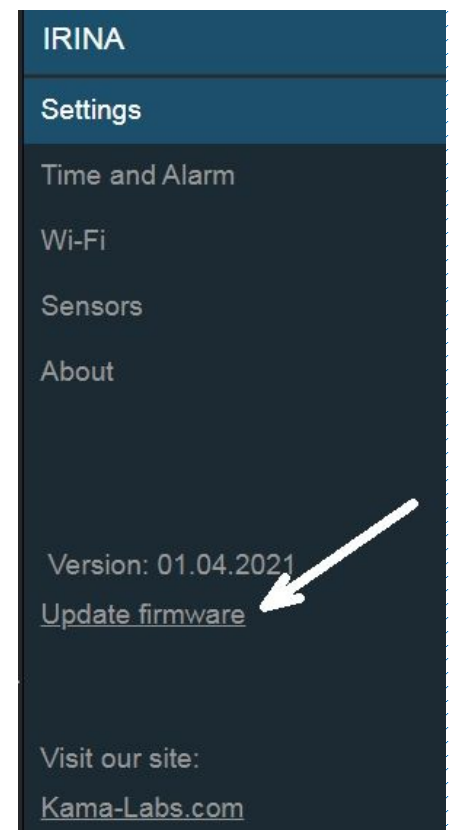
3) In “Wi-Fi mode” choose “Internet connection”

At now clock will connected to your Wi-Fi network.

If you will press “0” key on remote control clock will show status and IP-address. Also, to know IP address you can use “**Network Service Discovery**” app from PlayStore.

How to update firmware:

- 1) Go to https://kama-labs.com/manuals_and_firmwares and check for new firmware version. Current version you can see here:
- 2) Click “Update firmware” link
- 3) Choose file with firmware
- 4) Click “Update”. Done!



OTA Successful

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How to use remote control:

Button	Action
OK	
◀ ▶	
▲ ▼	
1	Show pressure
2	Show alarm
3	Show humidity
4	Show temperature
5	Show date
6	On/off alarm
7	
8	Turn off LEDs and tubes (clock still works)
9	Brightness of top LEDs
0	Wi-Fi status. Show IP address
*	
#	Change color LEDs
9 + 1	Set Wi-Fi mode as internet connection
9 + 2	Set Wi-Fi mode as Access point
9 + 3	Reset all settings
9 + 5	Tube test mode