# www.Kama-Labs.com

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



# Made my own hands Thanks for purchase!!! Features:

\* 6x IN-4 Russian NIXIE tubes (made in 1982-86) \* 4x INS-1 NIXIE separators (show am/pm and on/off of alarm) \* 32bit ESP32 processor \* Full control of clock via Wi-Fi \* Wi-Fi connection to PC or smartphone \* Motion sensor (no need burn tubes when nobody near) \* Synchronizing time and date from NTP server \* Over-the-air firmware update \* 12/24 hours mode \* 1 Alarm \* Temperature / humidity / pressure sensor \* 8 animations for digits \* Off clock at night by schedule \* Fade leading zero \* Smooth PCB routing \* Support remote control \* High-precision onboard time chip DS3231 \* Double Multicolour led glow (independent random color leds and **RGB** leds under each tube)

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\* Adjustable brightness of RGB and AUTO leds
\* RGB led (6 colors of backlight or autochange color mode)
\* Adjustable high-voltage block. 150-190 volts.
\* IN-4 tubes works in static mode
\* 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 not lost when power off
\* Power source - DC 12V barrel plug 5.5mm/2.1mm ( "+" inside, "-" outside)
\* Consuming current - 600mA
\* Noiseless work
Dimensions of the clock in case - 232mm(W) x 52mm(L) x 53mm(H)

#### DANGER! HIGH VOLTAGE! (~165 volts)

#### How connect to Sonya clock via Wi-Fi:

1) Turn on the clock.

- 2) Connect to "Kama-Labs" Wi-Fi network via your smartphone or PC. Password: nixieclock
- 3) Open browser and go to "sonya.local" or 192.168.4.1 or scan QR-code.
- 4) You will see page with all setting of Sonya clock.



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## **Connecting to home Wi-Fi network:**

Anuta 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
- 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.



### How to update firmware:

1) Go to https://kama-

<u>labs.com/manuals\_and\_firmwares</u> 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!







#### How to use remote control:

Button	Action
OK	
	Next animation of digits
	Change brightness of tubes
1	
2	Show alarm
3	Show humidity
4	Show temperature
5	Show date
6	On/off alarm
7	Brightness of back LEDs
8	Turn off LEDs and tubes (clock still works)
9	Brightness of back LEDs
0	Show IP address of the clock
*	Change brightness of front LEDs
#	Change color of front 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

Look at backside of clock and there you will see orange LED. It show Wi-Fi status of clock:

- LED not glow the clock connected to you home Wi-Fi network;
- LED blink fast the clock try connect to you home Wi-Fi network;
- LED blink slow the clock in Access Point mode.

