

LAMINA NIXIE CLOCK



OPERATION MANUAL



Congratulations for your new

Lamina Nixie Clock



The Lamina Nixie Clock is not just a nixie clock! It is a handcrafted, wooden framed timepiece with several programmable light effects.

Make your unique clock more unique! The easy access setup menu gives many possibilities to set your favorite colors to different time of the day, blinking, flashing or changing the light randomly!

With the optional built in Wi-Fi unit or the optional GPS unit your clock will be the most accurate nixie clock ever.

This professionally hand made product will give you joy for every day!

Pay attention!

Before remove your new clock from its box please read the operation manual carefully and follow the instructions!

To keep your Lamina Nixie Clock in perfect shape avoid any water or any other liquid interact with the clock.

Fingerprints, water or any other liquid can leave dark stains on the brass surface!

Use a fine brush to remove any dust and or antistatic cloth to clean the surfaces from fingerprint and stain.

Do not use any chemical agents for cleaning!

The wood is a living material. By the time it may darkens, changes its color.

Any water and liquid might cause dark spots and discolored surfaces on the brass parts.

Avoid to operate the clock in humid or very dusty environment!

Technical information

The clock operates from standard 12V, 1A power adaptor.

Do not use any 12V power adaptor below 1A.

Output connector size standard, 5.5mm, 2.1mm pin.

How to operate the clock

The clock has 3 buttons on its rear side to operate: SET - ALARM - ADJUST

The principle of operation is based on how long you press and hold the buttons.

In general...

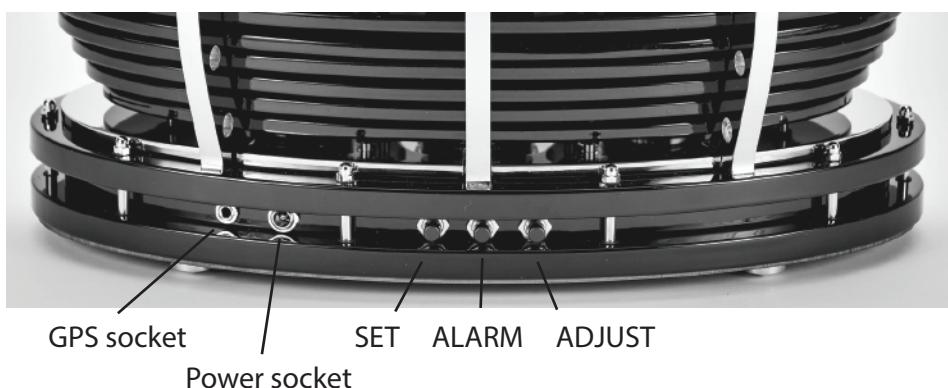
Press briefly a button while you hear 1 beep - you can step between parameters, change values with one step at the time.

Press and hold it pressed until you hear 2 beeps, then release - enter/exit menus, activate functions, revers value step directions.

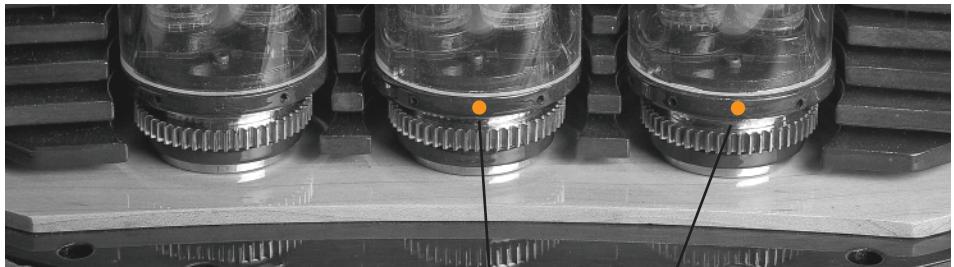
Press and hold it pressed for 3 beeps - enter/exit advanced menu or reset values, switch off alarm.

Press and hold it for 4 beeps and keep holding it - fast forward or backward steps when setting values.

Clock operation / control buttons



Indicator lights



Wi-Fi/GPS sync enabled/disabled

Alarm ON/OFF

Quick start your Lamina Nixie Clock

Connect the power and plug in the clock. It shows 6-5-4-3-2-1 numbers on the nixie tubes.

Press and hold the SET button for 2 beeps to start the clock. It will show 09:00:00 as the time, and 01.01.13 as the date. This is the initial start time.

From this point you can set the clock manually.

Press and hold the SET button for 2 beeps to set the date and time. The year will be highlighted first, set it to current with the ADJUST button.

Press one more time the SET button to go to the month. Pressing the ADJUST button set it to current than step forward to the day and set it, press SET again to go to the hour and minute to adjust. The seconds could be zeroed in a same way.

The “hour” must set by using 24 hours format. (settings only)

To EXIT, press and hold the SET button for 2 beeps.

Set the basics

To the clock's settings enter the parameter menu. To do this, press and hold the SET button for 3 beeps and release.

When you enter in the parameters menu, first you see the firmware versions of the clock.

The numbers start: eg.: 00 -1 24. This value can not be modified.

Press the SET button once than you step to the 1. parameter, press again for the 2. and so on. The clock has 34 parameters to set/modify.

Every change is saved immediately. To exit the parameter menu do the same as to enter, press and hold the SET button for 3 beeps. You can exit the parameter settings anytime.

Examples:

Firmware version	0	0	1	2	4
Date format	0	2			2
LED brightness	2	4	1	5	0
Color setting	2	0	1	2	5

Parameter # RGB variation Value

12 hours AM/PM or 24 hours mode

The clock can show the time in 24 hours format (Europe/military) or 12 hours AM/PM format.

Press and hold the SET button for 3 beeps to enter the parameter menu. By pressing the SET button briefly, step to the parameter #1. With the ADJUST button you can change the value of this parameter. If it is "0" (zero) the clock shows the 12 hours time format, if the value of the parameter #1 is "1", the clock shows the time in 24 hours format.

If it is set and you don't want to do any other changes, press and hold the SET button for 3 beeps to exit the parameter menu.

Change the date format

There are three time date formats what you can use to display the date:

0: MM:DD:YY / 1: DD:MM:YY / 2: YY:MM:DD

If you want to change it do the following:

Press and hold the SET button for 3 beeps to enter the parameter menu. By pressing the SET button briefly, step to the parameter #2. With the ADJUST button you can change the value of this parameter. If it is "0" (zero) the time format is: MM:DD:YY, if the value of the parameter #2 is "1", the clock shows the DD:MM:YY date format. If the value is "2", the time format is YY:MM:DD

If it is set and you don't want to do any other changes, press and hold the SET button for 3 beeps to exit the parameter menu.

Set the night mode

When it is dark at night you may not want to have the clock with its full brightness or you may want to switch it off.

By default the clock enters its “night” mode at 11 pm, the LED color lights are OFF and the nixie tubes shows the time dimmed.

To modify these settings enter the parameter menu:

Press and hold the SET button for 3 beeps to enter. By pressing the SET button briefly, step to the parameter #4.

With the ADJUST button set the desired time to activate the night mode. Only the hours are adjustable which set in 24 hours format only.

Next, press the SET button once briefly the go to parameter #5, here you can set the time when the night mode ends, using the ADJUST button.

The last step is decide what the clock should do at night mode, show the time dimmed, or switch off. Step to parameter #6 by pressing the “SET” button. With the ADJUST button change the value to “0” (zero) if you want the clock switched off, set it to “1” if you want to display the time dimmed.

If you don't want to do any other changes, press and hold the SET button for 3 beeps to exit the parameter menu.

Set the alarm

The clock has an alarm function with snooze option. To enable the alarm function, do this:

Press and hold the SET button for 3 beeps to enter the parameter menu. By pressing the SET button, step to the parameter #11. Press the ADJUST button change the “0” (zero) value to “1”. Now the alarm function is enabled. Press and hold the SET button for 3 beeps to exit the parameter menu.

On the bottom of the right tube under the nixie characters an orange light turns on. This indicate that the alarm is activated.

Now press the ALARM button briefly once to check the alarm time. The clock after a few seconds switches back to showing the time. To change the alarm press and hold the ALARM button for 2 beeps. Set the hour by pressing the ADJUST button. Press the SET button briefly to go to set the minutes. To exit press and hold the SET button for two beeps.

The alarm is now set.

When the alarm goes off, you can press the ALARM button once, to snooze it. The orange alarm indicator light is blinking, it means the alarm will go off again.

If you want to turn the snooze off, but keep the alarm for the next day, press and hold the ALARM button for 2 beeps while the alarm is beeping. The orange indicator light will stop blinking, lights continuously. It means the alarm is set for the next day.

If you want to switch off the alarm, press and hold the ALARM button for 3 beeps, but only when the alarm is not beeping. The alarm indicator light is now OFF. There will be no more alarm until it switched back by press and hold the ALARM button for 3 beeps.

Choosing different tube light options

The clock has two colored light mode options for the tube lighting.

1. Day/Night light mode - The tubes have a set color ON when daytime starts, set by parameter #4 and changes when "Night Mode" starts set by parameter #5.

2. AM/PM LED light mode - The tubes have a set AM color from midnight till noon, at 12:00 the color changes to the PM color.

Day Mode/Night mode values can dim or switch the lights OFF for the night.

The night time brightness of the lights can be set to zero to maximum. (parameter #25)

To choose between day/night light mode and AM/PM LED light mode go to parameter #19. Set the values to

“0” to have no lights at all,

“1” to day/night light mode,

“2” to day/night light mode with flashing effect,

“3” for AM/PM light mode,

“4” for color scan mode, when the lights change the colors randomly.

The color of the nixie tube characters can not be changed!

Change the tube colors

One of the most fun function of the Lamina Nixie Clock, that you can change the LED lighting colors around the nixie tubes.

This function may seem complicated, but at the end it will be real fun.

There are one RGB LED light in each acrylic tank around the nixie tubes. To see a particular color, it needs to be mixed from red, green, and blue light. Each of these three colors have a brightness value from 0-255. Zero when the light source is OFF, 255 at full brightness. The color mixing chart give you some basic information how to mix the colors.

Color reference chart



Example: Parameter 23 - (Afternoon, PM, LED color)

The B (blue) value of the color is on maximum (255)

BASIC COLORS:	R (1) - G (2) - B (3) values
RED	R=255, G=0, B=0
GREEN	R=0, G=255, B=0
BLUE	R=0, G=0, B=255
YELLOW	R=255, G=125, B=0
WHITE	R=255, G=255, B=255
CYAN	R=0, G=255, B=255
VIOLET	R=80, G=0, B=255
MAGENTA	R=255, G=0, B=255
ORANGE	R=255, G=40, B=0
DARK/LIGHTS OFF	R=0, G=0, B=0

Feel free to experiment with your own colors by giving different values.

An example, change the date color

Press and hold the SET button for 3 beeps to enter the parameter menu. By pressing the SET button briefly, step to the parameter #17, 20, 21, 22 or 23 to change the colors.

parameter #17: is the color of the tubes when the clock show the date.

Change the color of the lights when the clock shows the day.

Go to parameter #17

Now you see the following numbers on the nixie tubes: 17-11-50

This means you are at parameter #17-..-., the next character, '..-1-.' means you are setting the RED channel, ..-1-50 is the value (brightness) of the RED channel. In this case 150.

Press the ALARM button once, now the numbers are 17-20-00. On the third nixie tube the number changed to '2', this is the GREEN channel, the value behind 000, so it is OFF, no green color in the mix of magenta. Press ALARM button again and now the third nixie character is 255, this is the BLUE value at its maximum in the mix of magenta.

To step between the color channels just press ALARM button once at the time.

To summarize, the third nixie character shows the RGB settings, '1' means the RED channel, '2' means GREEN channel, '3' is the BLUE. To change the values of each channel, just go to one of the RGB color and by pressing the ADJUST button change the value.

For example, if you want to change this color to green the RGB setting should be the following:

R (red) value: 000, G (green): 255, B (blue): 000

At parameter #17 set press and hold the ADJUST button for 3 beeps, this reset all the colors at this parameter to zero.

No light will go OFF, as all the brightness values are zero.

Now you are the the red color setup the clock shows: 17-10-00, press ALARM button once, now you are at the green color: 17-20-00. Press ALARM button one more time and now you are at the blue color: 17-20-00.

To set it green press ALARM button to go to the green channel (17-20-00)

Press ADJUST a few times. Now you see some green light, but stepping to the maximum value 255 would take long time. You can do 2 things. One is to press and hold the ADJUST button to reverse the value step direction, now if you press the ADJUST the value numbers will step backward. Set to value 255 and now the green color is at full brightness. The other way to change the color values is to press and hold the ADJUST button for 4 beeps and keep it pressed. Now the numbers are changing faster.

The green color is set for the date, time to EXIT the parameter menu, press and hold the SET button for 3 beeps.

Check the clock, press the SET button once to show the date. The color of the acrylic tube should change its color to green.

To change it back to magenta, use the following values:

Red: 150, Green: 000, Blue: 255

Further color settings:

Tube color mode I.

parameter #20: day mode color, day light period set in parameter #4 and #5

parameter #21: night mode color, night light period set in parameter #4 and #5

Tube color mode II.

parameter #22: AM tube color, from midnight till noon.

parameter #23: PM tube color, from noon till midnight.

Showing date periodically

The clock shows the date in every 10 minutes by default. If you want to change this or switch this function OFF go to parameter# 15, refer the PARAMETER CHART for values.

Using WiFi for time synchronization

If your clock equipped with built-in Wi-Fi unit it can synchronize the exact time by connecting it to your 2.4 Ghz wireless network. The clock checks the network every hours to synchronize.

Go to parameter #28 to enable/disable the Wi-Fi or GPS sync.

If the value is "0", there is no time sync, if the value is "1" the clock is set for GPS time sync (optional external GPS unit required), Value "2" enables the Wi-Fi connection.

Set the parameter to value "2" for Wi-Fi, then go to parameter 29 to reset the Wi-Fi module by pressing the ADJUST button briefly. The value character which is "0" will shows "1" for a short moment when you press the ADJUST button.

You may leave the clock now. Use your laptop, computer, tablet, mobile phone to connect to the clock. Look for SSID (Wi-Fi network) Lamina-Nixie-Clock and connect.

It will ask for the password: **laminanixie**

Wait for connection and open your web browser and go the following address (without www or http://...only these numbers without space)

192.168.8.1

and hit enter. You see a login/configuration page to connect your Lamina Nixie Clock to the 2.4 GHz wireless network.

Enter your SSID (network name) and your network password. Press Enter/Submit.

Now your clock can connect to your own network to synchronize the time. Pay attention to enter the required information accurately.

Now go back to your clock for further settings. Press SET button once to go to parameter #30.

The clock synchronized to the UTC/GMT time, which is in most cases not your current local time. At this parameter you can set the offset hours of your location from UTC/GMT time zone. E.g.: New York is -6 hours from GMT at day light saving period (DST), in this case the value would be 6.

There is no offset minutes, skip parameter #31, go to parameter, #32 to set the direction of the offset hour positive or negative. For New York you need the negative, set the value to "1".

How to check your offset hours/minutes?

Just type to your internet browser: "Current Local Time" and you will see the current time at your location, including the GMT offset hours.

Your clock is set, press and hold the SET button for 3 beeps to exit the parameter menu.

Press and hold the ADJUST button for 2 beeps to manually connect your Lamina Nixie Clock to your network.

The two neon light in the clock's base are alternately flashing, and the small light turns on under the middle tank.

If the clock can connect to your network the alternate flashing lights stop, and the small light under the tank is continuously lit. If the connection did not happen for any reason, the small tank light will blink. You can repeat the manual sync to press again the ADJUST button.

If there is no connection go over on the the previous steps from the point where you reset parameter #29.

If your wifi network is not 2.4 GHz, the this function will not work.

If your location using daylight saving time (DST), the offset hours need be set accordingly twice a year.

PARAMETER CHART

For more settings enter the clock parameter menu. To do this press and keep pressed the SET button for 3 beeps. Pressing the SET button once you step to the 1. parameter, press again for the 2. and so on.

The clock has 34 parameters to set/modify.

Every change is saved immediately. To exit the parameter menu do the same as to enter, press and hold the SET button for 3 beeps. You can exit the parameter settings anytime.

Parameter	Value	Default
00	Firmware version	XX-XX.XX
01	12/24 Hr format	0: 12Hr mode, 1: 24 Hr mode
02	Date display format	0: MM:DD:YY, 1: DD:MM:YY, 2: YY:MM:DD
03	Leading Zero Character Show/Hide	0: OFF, 1: ON/Show
04	Hour of "Night Mode" start	0 -> 23 Hr (24Hr format only)
05	End of "Night Mode"	0 -> 23 Hr (24Hr format only)
06	Nixie operation in "Night mode"	0: Nixies OFF, 1: Nixies (Dimmed) ON
07	Brightness of the Nixies in "Night Mode"	0 -> 99
08	Brightness of the Nixies in "Day Mode"	0 -> 99
09	Character fading	0: OFF, 1: ON
10	Period of "Night Mode" override	0 -> 99 sec.
11	Alarm Repeat Mode	0: Alarm OFF, 1: Alarm enabled each day
12	Snooze period (4 times, then OFF)	0: None, 1: 5 min., 2: 10 min, 3: 15 min., 4: 20 min.
13	Dot light in "Day Mode"	0: OFF, 1: ON, 2: blinking, 3: slow blinking, 3: AM/PM, 4: AM/PM blinking
14	Dot light in "Night Mode"	0: OFF, 1: ON, 2: blinking, 3: slow blinking, 3: AM/PM, 4: AM/PM blinking
15	Auto Date display ON/OFF	0: OFF, 1: Each minute 50-55 sec), 2: Every 10min 50-55 sec, 3: Each hour 50-55 sec
16	Auto Date Backlight Color Changing ON/OFF	0: OFF, 1: ON
17	Color of Backlight in Auto Date Mode	RGB variables (see color value chart)
18	Nixie counting effect	0: OFF, 1: every min., 2: every 10min. 3: every hour, 4: at midnight

Parameter	Value	Default	
19	Effect LED light (3 nixie tanks)	0: OFF, 1: ON, 2: Blinking/sec. 3: AM/PM color indication, 4: Color scan	3
20	Effect light color in "Day Mode"	RGB variables (see color value chart)	BLUE
21	Effect light color in "Night Mode"	RGB variables (see color value chart)	PURPLE
22	Effect light color in "AM indication Mode"	RGB variables (see color value chart)	GREEN
23	Effect light color in "PM indication Mode"	RGB variables (see color value chart)	ORANGE
24	Overall brightness of LEDs in "Day Mode"	0 -> 255	150
25	Overall brightness of LEDs in "Night Mode"	0 -> 255	5
26	Half brightness of the LEDs in "Breath Mode"	0 - Normal brightness, 1 - Half brightness	0
27	LED BREATH effect	0: OFF, 1: ON	0
28	GPS Sync. ON/OFF	0: OFF, 1: GPS sync, 2: Wi-Fi sync	0
29	Wi-Fi reset	press ADJUST once, for 1 beep	
30	GPS Time Synch Offset Hours	0 -> 12	0
31	GPS Time Synch Offset Mins	0 -> 45	0
32	GPS Time Synch Offset Polarity	0: Positive, 1:Negative	0
33	Clock Fine Calibrate	1 unit: 0.18sec/day (+/- 0.18sec/day --> 22sec/day)	128
34	Restore Default Settings	At parameter 34 press ADJUST button for 1 beep to Restore Default Settings, then exit the parameter menu.	

Explanations of the parameter settings menu

- 00 - The software version of the clock. Can not be changed!
- 01 - Define the time format. Set 24 Hrs format if you like to see afternoon for example 17:35, set 12 Hrs format if you like to see for example 5:35 PM.
- 02 - Date format (day-month-year) of the current date.
- 03 - When the displays are showing a single digit value, for example 8 o'clock at the morning, the tubes are not showing the "0" digit beside of the "8" character.
- 04 - The hour when the clock activate the "Night Mode" settings. The tubes are go OFF or dimmed, based on your settings, and the color effect lights are switch to dimmed or to the given value which is set in the "night Mode". Can not be the same as the parameter 05.
- 05 - The hour when the "Night Mode" ends. Can not be the same as parameter 4
- 06 - Define what the Nixie tubes do during night mode. If OFF than they are dark, when ON, the parameter 07 value takes effect. (Dimmed by default)
- 07 - The brightness off the nixie digits during "Night mode"
- 08 - The brightness off the nixie digits during "Day mode"
- 09 - When the numbers are changing on the nixie tubes value "0" change them directly, value "1" fade them into each other.
- 10 - If the tubes are OFF during "Night Mode", the clock will show you the current time for the given seconds long what you have set here, when the ADJUST button is pressed once.
- 11 - If this parameter value is "0" the alarm is disabled, no alarm will goes off, even if its set. If it set to "1", the daily alarm repeat can be set.
- 12 - Snooze repeating period. "0" is off, no snooze after the first alarm goes off. "1" when the alarm repeat in every 5 minutes, "2" for every 10 minutes, "3" for every 15 minutes and "4" every 20 minutes. The snooze repeat the alarm 4 times then it switches OFF for that day.
- 13 - Neon lights at DAY TIME in the base of the clock can light continuously, alternately show AM/PM, flashing, or ON all the time. when the value of this parameter is "0", the neon lights are OFF. Value "1" continuously ON, Value "2" flashing lights, Value "3" - slow flashing, "4" - AM/PM indication, left side is on at AM, right side is ON at PM. Value "5", AM/PM indication, while flashing.
- 14 - Neon lights at NIGHT TIME, same settings, but for the night period.

Explanations of the parameter settings menu

- 15 - If the value is "0" the clock will not show the date automatically. If it is "1", the date will show automatically in every 1 minutes, if it is: "2", then in every 10 minutes, at value "3" in every hour.
- 16 - When the date is shown, the color of the LED lights can be set to different color.
When it's ON the color of the lamina will change, if its OFF, nothing happens when the date shown automatically.
- 17 - The RGB color of the acrylic tanks when the DATE shown. (default color: MAGENTA)
- 18 - Nixie slot effect when the numbers are rolling periodically. This is an effect function only. Set the values between "1" - "4" to for repeating. Set "0" to disable it.
- 19 - Acrylic tank light can be set OFF ("0"), or showing one "Day Mode" color ("1"), ("2") for the same color blinking in each second, or switch colors indicating AM and PM time range. The value ("4") enables the RGB color, when the Lamina colors are constantly changing.
The RGB scan overrides all other color settings.
- 20 - "Day Mode" of the acrylic tank light color shown, when the parameter 19 is "1" or "2". To set a color see the color reference chart and feel free to play with it to find your favorite settings. (Blue by default.)
- 21 - "Night Mode" of the acrylic tank light, when the clock goes to "Night Mode" and parameter 28 is different from "0" To set a color see the color reference chart.
- 22 - This color indicate the AM time when the parameter 19 is set to "3", indicating AM/PM timerange. "Night Mode" brightness will apply at parameter "28". To set a color see the color reference chart and feel free to play with it to find your favorite settings. (Green by default.)
- 23 - This color indicate the PM time when the parameter 19 is set to "3", indicating AM/PM timerange. "Night Mode" brightness will apply at parameter "28". To set a color see the color reference chart and feel free to play with it to find your favorite settings. (Orange by default.)
- 24 - Global brightness of all the LED lights during "Day mode"
- 25 - Global brightness of all the LED lights during "Night mode"
- 26 - In dark environment the maximum brightness of the 'breath effect' might be too much.
This parameter allows to reduce the brightness. Set to 1 for reduce overall LED brightness during 'breath' effect. This parameter for the 'breath' effect ONLY!
- 27 - Enable "breath" effect on all the LED lights. All lights are pulsing from low brightness to higher. This feature overrides all color settings!
- 28 - The GPS/wifi synchronization is ON or OFF. Optional GPS unit needed to enable this function.
Value "0" - synchronization is OFF, Value "1" GPS sync ON, parameter 29 is disabled, or value "2" Wi fi sync enabled.

Explanations of the parameter settings menu

- 29 - Reset Wifi connection, forget all wifi settings
- 30 - Depending from your timezone, set the offset hours from the GMT. Plus or minus precursor set by this parameter! No Daylight Saving Time (DST) mode. The time need to be adjusted manually twice a year in DST zone countries.
- 31 - Depending from your timezone, set the offset minutes (if apply) from GMT.
- 32 - Hour/Minutes offset precursor + or - from GMT. "0" is, to east of UK (Europe and Asia), "1" is to west from UK, all USA and America
- 33 - If your clock is running faster or slower (GPS/Wifi synchronisation OFF), you can accurately set the clock without any GPS/WIFI unit. Study your clock behaviour, make notes for a few days before set anything. Press ADJUST button to run the clock faster, press ALARM button to run slower. Each incremental adds or subtracts 0.18 sec per day. Default middle value is 128. Range 0-255.
- 34 - Restore default settings! At parameter 38 press the ADJUST button for 1 beep to Restore Default Settings, then press and hold SET button for 3 beeps to exit the setup menu to activate the reset!

Tips and tricks:

Press and hold the ADJUST button for 2 beeps to reverse the step direction.

Press and hold the ADJUST button for 3 beeps to reset all color values to '000' to restart the color settings.

Press and hold the ADJUST button for 4 beeps and keep it pressed for fast rewind.

If you don't want to do any other changes, press and hold the SET button for 3 beeps to exit the parameter menu.



Place the box to a clean area and remove velcro strips
start from the top rear side



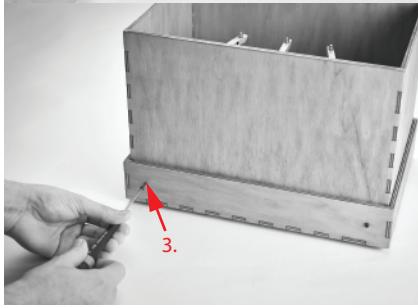
Take off the lid and the paper cover



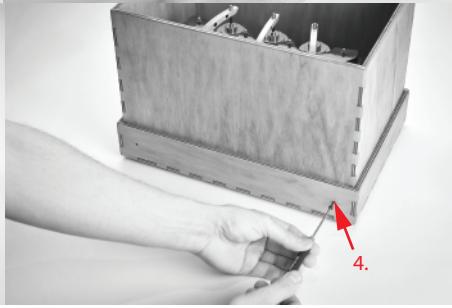
1.



2.



3.



4.

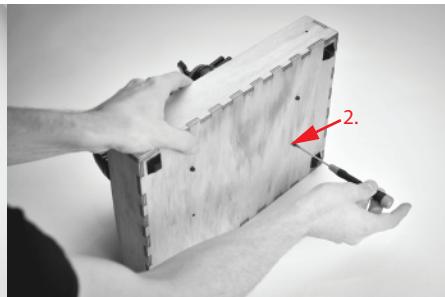
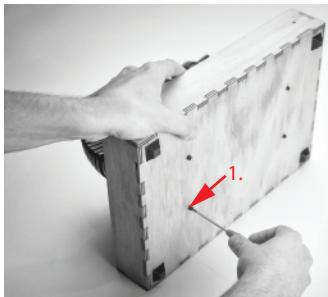
Remove the 4 screws around the lower side of the box with the supplied 2.5mm hexagonal key



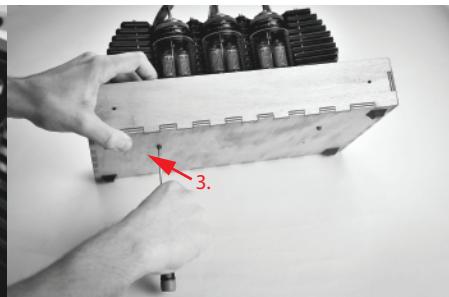
Hold the body of the box and lift it up carefully



The clock is still attached to the tray

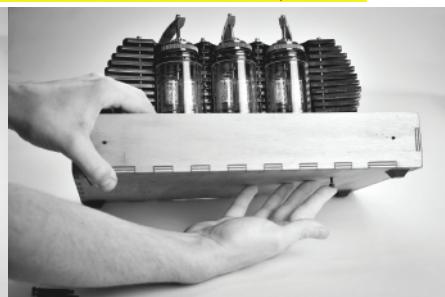
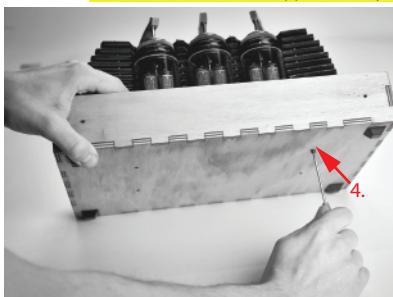


Lift up the tray by its front side and remove the **bottom rear screws**, the clock is still attached to the base by the front screws



Now hold the clock in place with your fingers, while lifting up the front of the tray and remove the **front screws**

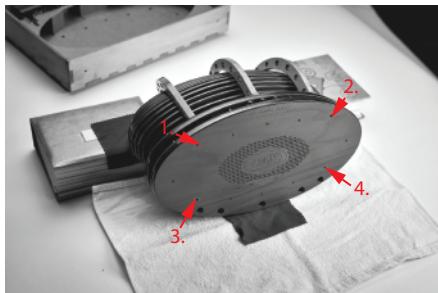
The clock will have no support when you remove the front screws, do not tilt the tray to much



Loosen the last screw, but keep it in place. Lower the tray and remove the screw carefully



Now remove the clock from the try, by holding it as you see on the picture. Do not hold it by the arms or any other part



Place the clock to a soft towel showing its back to you and tilt it forward to access the bottom part
Place two books to the two sides where the clock edges can sit. Make sure the arms and the tubes do not touch the surface
The next thing is to put in place all 4 small brass feet disks



The screw must go through the ring as it shown on the picture

Take the supplied 4 screws and screw them tight
use the threaded rings, without washers



Make sure the rings are firmly fixed and screw on the all the feet to the threaded rings



Remove the power adapter from the tray
and power up the clock

To set the time and discover all functions
follow the user manual

Product reference:

CLOCK TYPE:	
VERSION:	
FIRMWARE:	
SERIAL NUMBER:	
ASSEMBLY DATE:	
POWER ADAPTOR:	

Delivered settings:

12/24 HOUR MODE:	
NIGHT MODE:	
DAY MODE COLORS (TUBE LIGHTS):	
NIGHT MODE COLORS (TUBE LIGHTS):	
AM MODE COLORS (TUBE LIGHTS):	
PM MODE COLORS (TUBE LIGHTS):	
SHOW DATE COLOR:	
COUNTING EFFECT:	
OPTIONAL GPS/Wi-Fi: LOCAL SETTINGS:	
MAC ADDRESS:	
REMARKS:	

Material list:

IN-8 Nixie tubes
Glossy finished fine American walnut
Lacquered French maple
Polished Brass
Acrylic



Optional GPS unit available :
www.woodize.com/products

Instructions and details:
woodize.com/store/products/lamina-nixie-clock



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