Nixie Dream VFD Tube Clock V1.00 IV-11

Operation Manual

Software Version 1.00

Revision 17.06.2021

FOR YOUR SAFETY – PLEASE READ CAREFULLY FIRST.

Don't open the enclosure when the clock is powered up. Danger! Anode voltage of 170 Volts exists on the board. Do not operate the clock with damaged or removed tubes. Beware of hard impacts. Use the clock only in a dry environment. Don't expose the clock to moisture or rain. Don't expose the clock near heat sources or cover the clock. This clock is not a children's toy. Now when you are aware of the safety precautions we can proceed with the most interesting part.

Close adult supervision is necessary when any product is used by or near children.	To electrically disconnect the product remove the electrical power plug from the socket-outlet.
Do not operate any product with a damaged electrical cord or plug or operate it after the appliance malfunctions or has been damaged in any manner.	Do not place heavy articles on or step on the product.
Do not use the product close to any heat sources such as radiators, heat registers, stoves, or other products that produce heat.	Do not place the product on an unstable cart, stand, tripod or table.
	Do not use this product for other than intended use.
Do not let the power cord come in contact with hot surfaces.	This product is only intended for use indoors.
If you notice any smoke or scorched smell near the product, unplug the power cord and refer to qualified personnel for service and/or repair.	This product is not waterproof.
	Do not immerse this product in water and/or expose to dripping or splashing water.
Do not use or place any combustible or flammable substances near the product.	When this product is left unattended and unused for long period of time, unplug it from the wall outlet.

FIRST START AND SELF CHECK

Plug in the power connector of the supplied power adapter to the socket on the backside of the clock. The clock will shortly beep indicating its firmware is run successfully and run the "Tube Test Mode". This mode is intended to let you see if all the tubes are working correctly by cycling through the digits 00:00:00 to 99:99:99.

After the test is completed the clock will turn into its normal operation "Clock Mode" and show a default time.

CLOCK BUTTON'S FUNCTION

Core clock settings are carried with two buttons located on the rear left side of the upper part of the casing. Alternatively the clocks settings can be carried out with the supplied IR remote control plus the remote control is used for operational options, e.g., activating tube's lighting, changing nixie effects, etc. For all remote control functions please refer to the REMORE CONTROL section in this manual.

Normally the clock is always in "Clock Mode" showing the time. If you press buttons for differing lengths, different things will happen. MODE button has three functions, SET button has two functions, please see the table below for details.

Button	Pressing length		
	Brief press (0,5 sec)	Medium Press (2 sec)	Long Press (3 sec)
MODE	RGB/Flickering candle Lighting	UV Lighting	Clock Settings
SET	Date Display	---	Alarm Setting

MODE BUTTON

"Brief Press" of MODE button (less than 1 second, short beep will indicate a press): lets you switch between different underneath tubes lighting. Press it repeatedly to cycle through RGB lighting and 'Flickering Candle' effect. In RGB mode the colours are changing automatically. When RGB lighting is active, every next button press will stop the colours changing and keep the selected colour.

"Medium Press" of MODE button (more than 1 second, a second short beep will indicate that) will switch on/ off the UV (ultraviolet) tubes lighting. To switch it off just repeat perform the medium press again.

"Long Press" of MODE button (more than 3 seconds, a long beep will indicate that you reached it), will enter the clock settings.

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SET BUTTON

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"Brief Press" of SET butting (less than 1 second): a date will be shown for 5 seconds. This is useful if you want to know the date.

"Long Press" of SET button (more than 3 seconds, a long beep will indicate that you reached it), will enter the clock alarm mode. Please refer to the SETTING THE CLOCK ALARM SECTION in this manual for more information.

SETTING THE CLOCK

When in settings mode, pressing and releasing the SET Button will advance the parameter to move onto the next one. Active parameter will be highlighted, while others will be dimmed. Pressing the MODE button changes the value of the active parameter.

When you finish going through all the parameters, the clock returns to normal time display mode.

Clock's parameters are grouped into 'pages', one so called page consists of six tubes, where a particular parameter is shown within a pair of tubes. Parameters are explained in the manual on a page basis.

Let's get started now.

To enter the setting mode, press the MODE button for around 3 seconds until you hear a long beep, then release the button.

IMPORTANT: In the below sections first digit represent the menu page, the second, after dot represents the pair of tubes, first, second or third. E.g., 1.1 means 1st menu page and first pair of tubes, 1.2 means 1st menu page and 2nd pair of tubes.

<div align="center">

MENU PAGE 1

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1.1 HOURS:

The hours tubes light up bright, and the MINUTES and SECONDS are dimmed. Press the SET button repeatedly until the correct HOURS are shown. Press the MODE button to move to MINUTES.

1.2 MINUTES:

Now the HOURS and SECONDS are dimmed, and the MINUTES are bright. Press the SET button repeatedly until the correct MINUTES are shown. When finished press the MODE button to move to SECONDS.

1.3 SECONDS:

Now the HOURS and MINUTES are dimmed, and the SECONDS are bright. Press the SET button, to reset SECONDS to zero. Press the MODE button to toggle to the next DATE setting page.

MENU PAGE 2

DATE:

2.1 DAY: The DAY light up bright, since they are being set, and the MONTH and YEAR are dimmed. Press the SET button repeatedly until the correct DAY is shown. Press the MODE button to move to MONTH.

2.2 MONTH: Now the DAY and YEAR are dimmed, and the MONTH is bright. Press the SET button repeatedly until the correct MONTH is shown. When finished press the MODE button to move to YEAR.

2.3 YEAR: Now the DAY and MONTH are dimmed, and the YEAR is bright. Press the SET button repeatedly until the correct YEAR is shown. Press the MODE button to toggle to the WEEK DAY setting page.

MENU PAGE 3

3.1 WEEKDAY setting:

Press the SET button repeatedly until the correct WEEKDAY is shown.

Congrats! You are done now with the basic setting. You can leave the other settings as it is, if having time and date set is sufficient for you.

Or if you would like to explore all other settings of the clock, press the MODE button to move to the next page with other parameters.

MENU PAGE 4

4. 1 Time between TIME and DATE toggling

Press the SET button repeatedly until the desired time (in sec.) is shown when you would like the clock to toggle to DATE and back to TIME. Press the MODE button to move to the next option.

4.2 Digits transition effect when switching between TIME and DATE

Press the SET button repeatedly until the desired effect is selected. There are five different effects available:

0. No effect, direct toggle

1. Fading. The DATE is faded out, the TIME is faded in.

2. Slot machine. All digits are shuffled while transitioning between the TIME and DATE.

3. Cross-fading. While the DATE is faded out, the TIME is faded in simultaneously.

4. Repeating all effects in a loop. Every time the effect is new.

Press the MODE button to move to the next parameter.

4.3 DATE format

Press the SET button repeatedly until the desired DATE format is shown. There are two formats: DD:MM:YY or MM:DD:YY 0: DD:MM:YY 1: MM:DD:YY Press the MODE button to move to the next option.

MENU PAGE 5

5.1 12/24 Time Format

Press the SET button repeatedly until the desired Time format is shown.

Press the MODE button to move to the next option.

5.2 COLON effect

Press the SET button repeatedly until the desired COLON effect is shown. There are four effects:

0: Switched off
1: Frequent blinking

2: Normal blinking (1 Hz)

3: Constant lighting

Press the MODE button to move to the next option.

5.3 SECONDS digits transition effect

Press the SET button repeatedly until the desired SECONDS switching effect is shown.

There are four effects for SECONDS:

0: Digits change instantly

1: Fading

2: Shuffling

3: Crossfading

4: Repeating all effects in a loop

Press the MODE button to move to the next option.

Auto-Dimming Option

The clock has two dimmers: for evenings and nights. It can automatically adjust the brightness of the tubes in relation to the light in the room using a built-in light sensor. Auto-dimming feature can extend the lifespan of the tubes by 10-15 times.

On the menu pages 6, 7 you can setup the dimmer settings for evenings. On the menu pages 8, 9 you can set the dimmer settings for nights.

For each dimmer you can setup the lighting level when you want the clock to reduce its brightness, and what brightness should be than.

The ambient light is coming to the clock from its underneath semi-translucent cover. Please make sure there are no objects around blocking the light.

IMPORTANT INFORMATION: A first pair of tubes on all dimmer's menu pages (from 6 to 9) indicates a particular parameter, but not the value of the parameter:

6.1 – Evening Dimmer lighting level threshold – 01

7.1 – Evening Dimmer tubes brightness - 02

8.1 – Night Dimmer lighting level threshold – 03

9.1 – Night Dimmer tubes brightness – 04

Please take it into consideration when reading the below sections.

MENU PAGE 6

6.2 Current light level in the room – the darker it is in the room, the bigger the number displayed. E.g., when it is very light it can be around 25, when it is dark it can be around 60. The current light level is shown to define the threshold more precisely.

6.3 Tubes BRIGHTNESS Control _Evening_ threshold

This parameter sets the level of the ambient light in the room (refer to the current level shown in the 2nd pair of tubes) when the clock should decrease the brightness (e.g., in the evening)

For example, you would like the clock to decrease it brightness when the light level in the room is below 40, then set this parameter to 40. When the level will go below 40, the clock will decrease its brightness.

Press the SET button repeatedly until the desired threshold level for switching for the evening is shown. The current light level in the room is shown in the middle tubes (6.2) for your convenience.

TIP: It is better to set this up at a light level when you want the clock to decrease its brightness.

Press the MODE button to move to set the brightness level setting.

MENU PAGE 7

BRIGHTNESS Control _Evening_ brightness

7.3 Press the SET button repeatedly until the desired tubes brightness level for the evening is shown. The brightness is set in the range from 04 to 32. Where 32 is the maximum brightness, 04 – is the minimum brightness.

Press the MODE button to move to the dimmer settings for the night.

MENU PAGE 8

8.2 Current light level in the room – the darker it is in the room, the bigger the number displayed. E.g., when it is very light it can be around 25, when it is dark it can be around 60. The current light level is shown to define the threshold more precisely.

8.3 Tubes BRIGHTNESS Control _Night_ threshold

This parameter sets the level of the ambient light in the room (refer to the current level shown in the 2nd pair of tubes) when the clock should decrease the brightness (e.g., in the evening)

For example, you would like the clock to decrease it brightness when the light level in the room is below 60, then set this parameter to 60. When the level will go below 60, the clock will decrease its brightness.

Press the SET button repeatedly until the desired threshold level for switching for the evening is shown. The current light level in the room is shown in the middle tubes (6.2) for your convenience.

TIP: It is better to set this up at a light level when you want the clock to decrease its brightness.

Press the MODE button to move to set the brightness level setting.

MENU PAGE 9

BRIGHTNESS Control <u>Night</u> brightness

9.3 Press the SET button repeatedly until the desired tubes brightness level for the night is shown. The brightness is set in the range from 04 to 32. Where 32 is the maximum brightness, 04 – is the minimum brightness.

Press the MODE button to move to the next option.

MENU PAGE 10

Auto-Dimming Option On/Off

10.1 Press the SET button repeatedly until the desired mode of the Auto-Dimming option is shown.

0: Auto-Dimming is ON
1: Auto-Dimming is OFF

MENU PAGE 11

Default tubes brightness (or normal brightness)

This setting allows you to adjust the normal brightness of the tubes.

11.3 Press the SET button repeatedly until the desired default level of the tube's brightness is shown. The default brightness is set in the range of 04-32. Where 32 is the maximum brightness, 04 – is the minimum brightness.

TIP: We recommend keeping the default brightness at level in a range of 08-12.

Press MODE button to exit the MENU or wait for a minute – the clock will exit the MENU automatically.

Congratulations, you are done now, and your clock is ready to use!

SETTING THE CLOCK ALARM

"Long Press" of SET button (more than 3 seconds, a long beep will indicate that you reached it), will enter the clock alarm mode.

Press the SET button repeatedly until the desired hours' time for the alarm is set.

Press the MODE button to move to the alarm minutes setting.

Press the SET button repeatedly until the desired minutes time for the alarm is set.

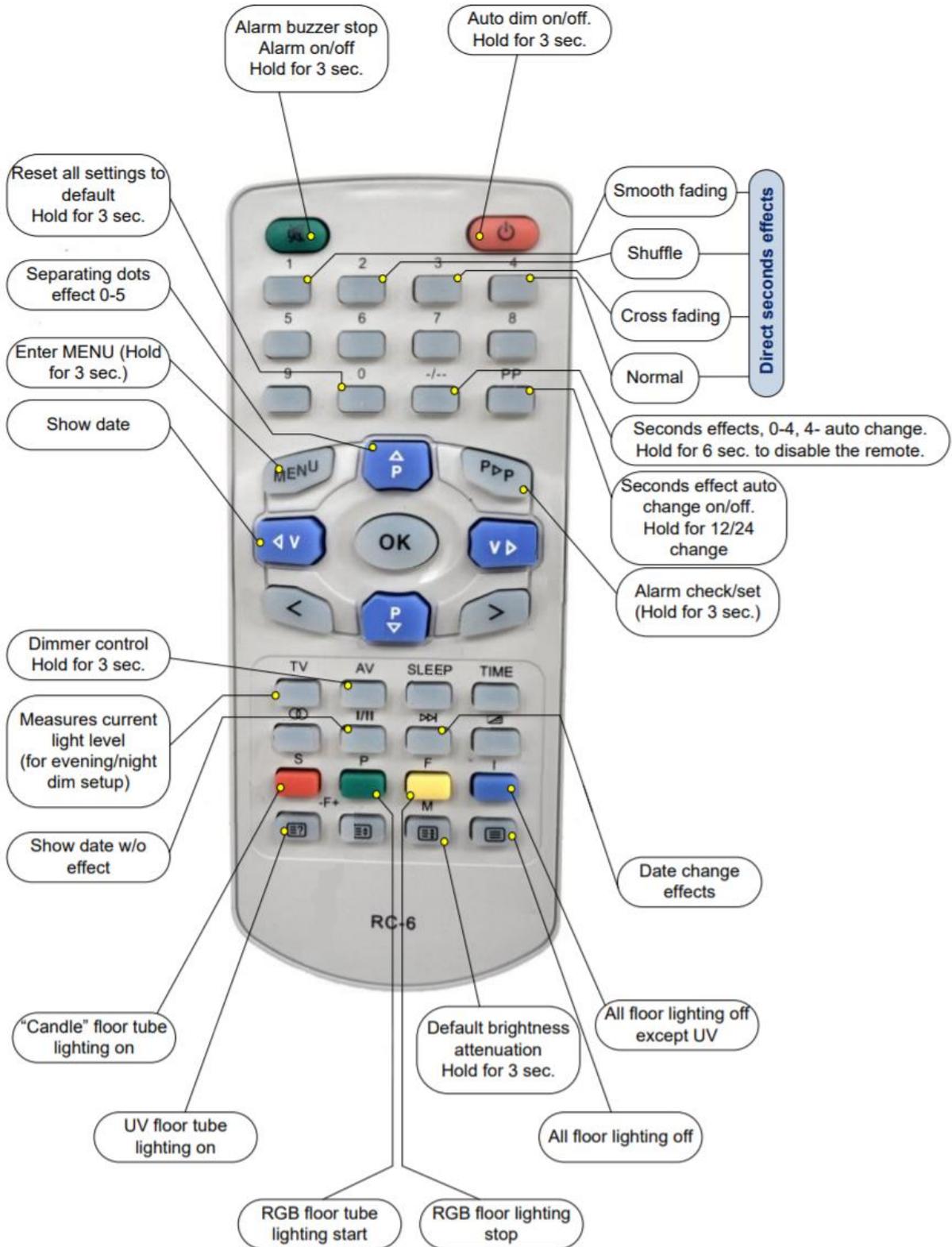Press the MODE button to move to the alarm enabling setting.

Press the SET button repeatedly until the desired mode of the alarm is shown.

0: Alarm is ON
1: Alarm is OFF

REMOTE CONTROL

With the IR Remote Control, you can control the tube's underneath lighting, select a desired nixie effect, see a current light level in the room and control some other features and settings. Please see below all the functions of the remote control.

Alarm buzzer stop
Alarm on/off
Hold for 3 sec.

Auto dim on/off.
Hold for 3 sec.

Reset all settings to default
Hold for 3 sec.

Smooth fading

Shuffle

Cross fading

Normal

Direct seconds effects

Separating dots effect 0-5

Enter MENU (Hold for 3 sec.)

Show date

Seconds effects, 0-4, 4- auto change.
Hold for 6 sec. to disable the remote.

Seconds effect auto change on/off.
Hold for 12/24 change

Alarm check/set
(Hold for 3 sec.)

Dimmer control
Hold for 3 sec.

Measures current light level
(for evening/night dim setup)

Show date w/o effect

Date change effects

"Candle" floor tube lighting on

Default brightness attenuation
Hold for 3 sec.

All floor lighting off except UV

UV floor tube lighting on

All floor lighting off

RGB floor tube lighting start

RGB floor lighting stop

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ALL CORE CLOCK'S SETTINGS

Setting		Parameter		
		1st pair of tubes	2nd pair of tubes	3rd pair of tubes
1	Time	Hours	Minutes	Seconds
2	Date	Date	Month	Year
3	Weekday	-	-	Weekday
4	TIME/DATE switch, Transition effects, Date format	Time between TIME and DATE shown (0-99)	Transition effects (0-5)	Date format (0-1)
5	Time Format, Colon, Seconds Transition effect	12/24 Format (12-24)	Colon effect (0-3)	Seconds transition effect (0-5)
6	Auto-Dimmer Evening Light Level	01	Current Ambient Level	Evening Ambient Light Level Threshold (10-60)
7	Auto-Dimmer Evening Tube's Brightness	02	-	Evening Tube's Brightness (04-32)
8	Auto-Dimmer Nights Light Level	03	Current Ambient Level	Night Ambient Light Level Threshold (10-60)
9	Auto-Dimmer Nights Tube's Brightness	04	-	Night Tube's Brightness (04-32)
10	Auto-Dimming Option On/Off	-	-	0-1
11	Default tubes brightness	-	-	04-32

If you require any further help in setting up the clock, feel free to contact us at info@nixiedream.com. We would be happy to support you.