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# 1. Introduction

⚠ REMOVING BATTERY WHILE CHARGING

Never remove battery and even open slip-cover when device is charging or connected to a computer.

This is leads to the combustion of several chips that are responsible for screen power and the drivers of transistors output DC-DC converter and charging module.

## DISCLAIMER

- The firmware is distributed in the hope that it will be useful, but without any warranty. It is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. The entire risk as to the quality and performance of the firmware is with you.

ArcticFox — third-party firmware by NFE Team for Joyetech, Eleaf, Wismec and co-branded devices.

NFE Tools — utilities set for flexible configuration, editing and firmware updates. The set includes:

- NToolbox — program for monitoring, updating and customizing ArcticFox firmware.
- NFirmwareEditor — program for editing and updating firmware.

## 1.1. Main ArcticFox differences

- Atomizer resistance: 0,05 — 3,5  $\Omega$ ;
  - 8 fully customizable profiles;
  - Smart mode — automatic profile switching by resistance;
  - Custom profile modes:
  - VW — variable wattage mode, an atomizer is supplied with constant or predetermined by preheat power;
  - TCR — temperature control mode by predetermined temperature coefficient;
  - TFR — temperature control mode by predetermined temperature curve;
  - Preheat;
  - PI Regulator;
  - Power Bank — use your device as a power source (limited to 2,1 A);
  - Clock;
  - Adjustable battery discharge curves;
  - The main screen skins with customizable output in infolines;
  - Custom timeouts for events and screen fading;
  - Custom button actions and their shortcuts.
- 

## 1.2. Technical limitations

- Minimal atomizer resistance 0,05  $\Omega$ ;
- Output power (depending on the device);
- Maximum charging current (depending on the device);
- Maximum output current (depending on the device);
- Output voltage range (depending on the device);

- Maximum output current in Power Bank mode is 2,1 A.

"Depending on the device" means that each device has its own values, which are chosen by the manufacturer. You can find this values on the product page of your manufacturer's website.

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## 2. Supported devices

ArcticFox - Main Nuvoton Branch

Joyetech:	Eleaf:	Wismec:	Co-branding:
eVic VTC Mini	Aster	Reuleaux RX75	VF Lite
eVic VTC Dual	iStick Pico 75W	Reuleaux RX mini	VF Stout
eVic VTTwo Mini	iStick Pico 25	Reuleaux RX200	VF Classic
eVic VTTwo	iStick Pico 21700	Reuleaux RX200S	BV Centurion
eVic AIO	iStick Pico Mega 80W	Reuleaux RX2/3	La Petite Box
eVic Basic	iStick Pico Dual	Reuleaux RX GEN3	VS Switchbox
eVic Primo	iStick Pico RDTA	Reuleaux RX2 20700	Twisp Vega
eVic Primo 2.0	iStick iPower 80W	Reuleaux RX2 21700	Twisp Vega Mini
eVic Primo Mini	iStick TC100W	Reuleaux RX300	MyVapors myTri
eVic Primo SE	iStick TC200W	Predator 228	
Cuboid Mini	iStick QC 200W	Presa TC75W	
Cuboid	iStick Tria	Presa TC100W	
Cuboid 200	iKonn 220	Sinuous P80	
eGrip II	Invoke	RX GEN3 Dual	

eGrip II Light	iStick Pico S	CB-80
Elitar Pipe	Pico Squeeze 2	Active
eVic Primo Fit	Aster RT	Luxotic DF
Ultex T80	iKuu i80	Luxotic MF
	Lexicon	Sinuous V80
		Sinuous V200
		ES300

#### ArcticFox - STM32 Branch

Joyetech :	Eleaf:	Wismec:	Co-branding:
	iStick Pico X	Sinuous V80	
	iStick Rim	Sinuous V200	
	iStick Rim C	R80	

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#### RedPanda

Joyetech:	Eleaf :	Wismec:	Co-branding:
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Espion                  Ravage230

Cuboid  
Lite

EKEE

**Builds can be found in [Nightly](#) branch**

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## 2.1. Version compatibility

NFE Tools and ArcticFox are related products, but can be published separately. Version compatibility is determined by the same version of the protocol.

The latest builds of NFE Tools and ArcticFox publishing on the forum with name of the

[PXX] {Product name} {Version}, where

- PXX — P means protocol and XX means version of the protocol, eg: P10;
  - Product name – ArcticFox or NFE Tools;
  - Version – YYMMDD, eg: 170822.
- 

## 3. Installing

Download latest versions of ArcticFox firmware and NFE Tools, from suitable section on the official forum:

- [ArcticFox](#)
- [RedPanda](#)
- [NFE Tools](#)

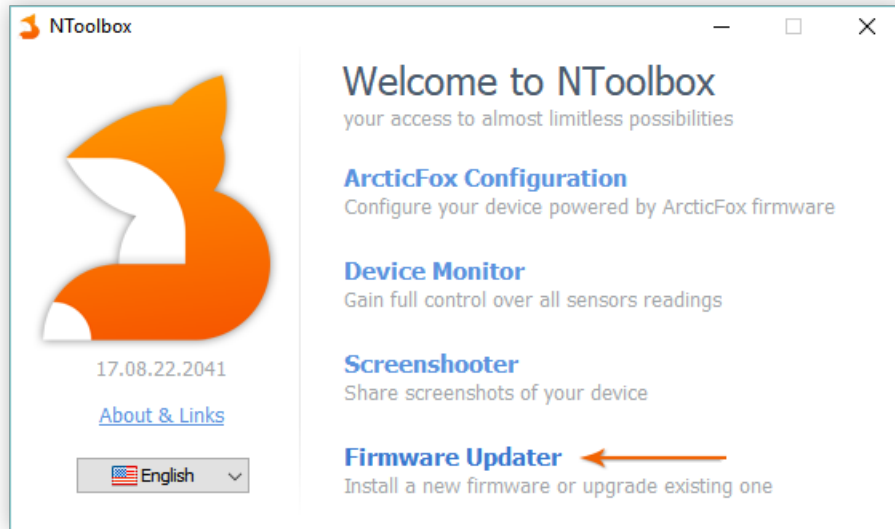
NFE Tools system requirements:

- Windows XP or higher;
- .NET Framework 4.0 or higher.

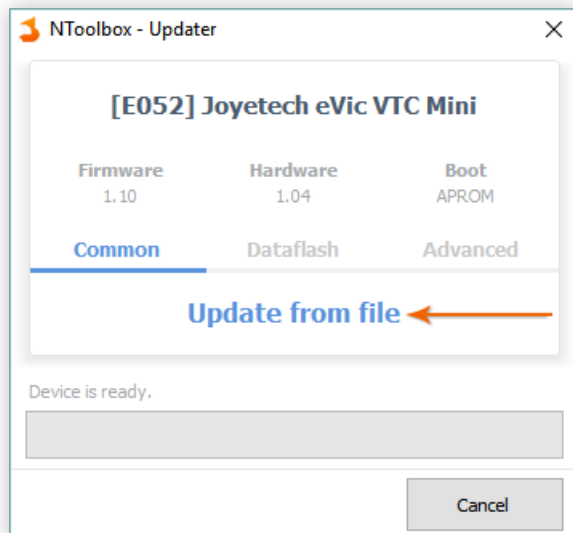
Installing:

The installation process is very simple and does not require special knowledge or skills.

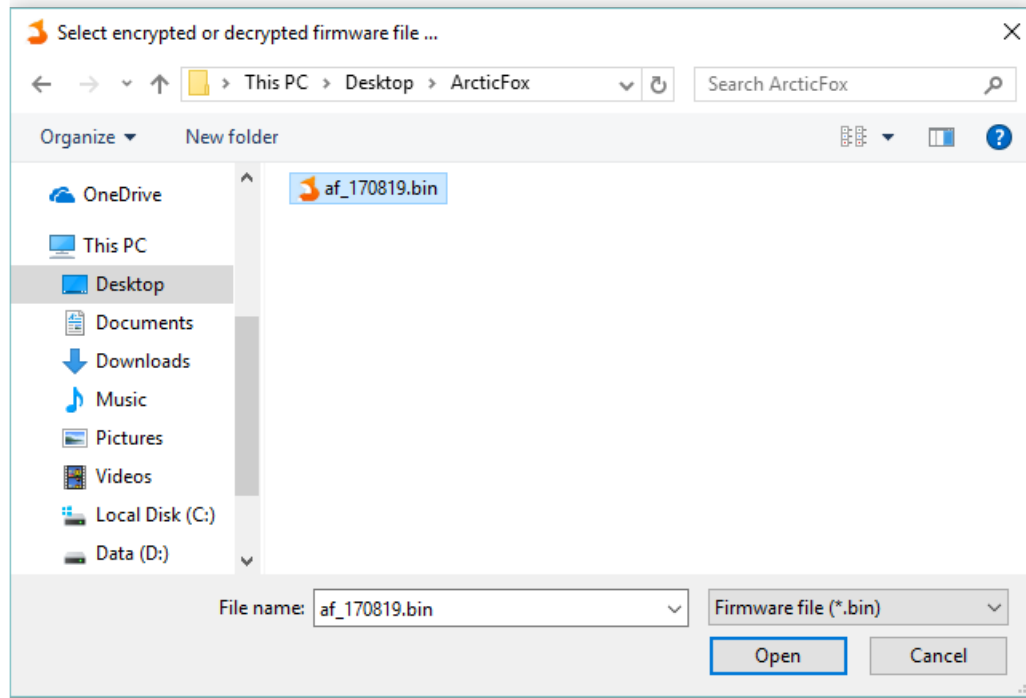
1. Unpack archive with NFE Tools.
2. Connect your device to the PC via USB cable.
3. Launch NToolbox.exe. In opened window choose «Firmware Updater»:



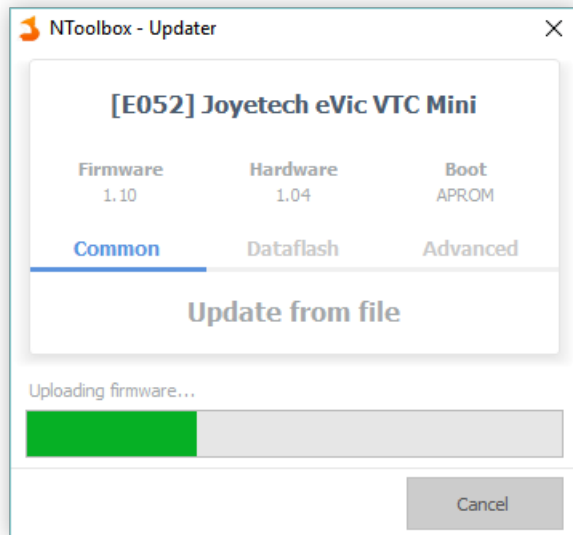
4. Firmware Updater dialog will appear, you should click on the big button «Update from file»:



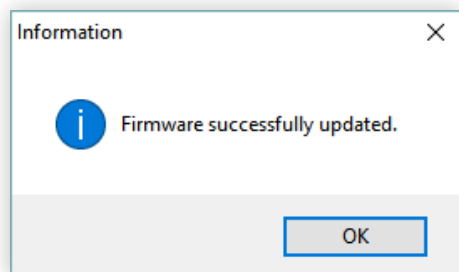
5. Choose ArcticFox firmware .bin file, that you've downloaded earlier:



6. Firmware installation process will be started immediately:



7. After a few seconds you will see notification that firmware was successfully installed:



8. You are done! Good job ;)



# 4. Description of the main features

## 4.1. Profiles

The main difference is the profile based user interface, so to say, the DNA-style, and the larger focus on customization than original Joyetech firmware. Profile is the set of parameters of used atomizer, such as coil material, resistance, power and temperature values. The user have 8 profiles which can be edited with NFE Toolbox, and which can be assigned to his favourite atomizers.

- Press **FIRE** 3 times (by default) to select the desired profile.

To edit the active profile:

- Hold **FIRE**+**+** to access the main menu and press **FIRE**.

### 4.1.1. Preheat

Preheat — increasing supplied power to atomizer for the first seconds. Used for faster heating of tricky coils.

Can be set as a time and preinstalled power or percentage of power. Also available is a more advanced setting: a graph of power versus time.

Preheat delay — used for intensive coil heating at the first puff. The next power increase will happens after the set time.

Enabled preheat is warned by the letter "P", if the indicator is flashing - this means that the delay of the preheat is currently activated.

### 4.1.2. Temperature Control

There are 13 spiral materials: VW - working with the disconnected temperature control (normal variable wattage mode), Ni, Ti, SS, TCR - standard Joyetech materials, and 8 preset TFR materials, which can also be downloaded as CSV files from [steam-engine.org](http://steam-engine.org).

Temperature control mode works in the same way as in the Joyetech firmware: you need to select the material of the coil, if this is not available, set the TCR or import TFR graph. After this, screw the room temperature (20 °C) atomizer and block the resistance. There are two ways to block resistance:

1. Set the resistance block to a buttons shortcut in NToolbox;
2. If the regular resistance is displayed on main screen, activate the editing mode of main screen (4 clicks by default), select resistance by **FIRE** button, and by **+** or **-**, toggle the lock.

You can reset or edit the saved profile resistance by two ways:

1. Open Main Menu → Profile settings → Coil and edit manually, or hold down **FIRE** button, which will cause for a forced resistance override (or reset, if no atomizer is installed);
2. To reset, enter the profile selection mode and hold down **++-** (for eVic VTC/VTwo you can

reassign shortcut in NToolbox).

Note: TCR coefficient for SS is changed from 120 to 92.

### 4.1.3. PI Regulator

To improve power and temperature stabilization in temperature control mode, the firmware implemented an actual PI controller. Detailed principles of working can be found in [Google](#) or on our [forum](#), as their description will take a few more pages.

In a simplified sense PI controller has the following settings:

- Range — temperature range when PI regulation becomes active. 0 means that regulator is always on and controls power distribution from start of puff, 20% for example - PI regulator turns on when temperature of coil reached 20% range from profile settings.
- P — proportional constant, the larger it is, the sharper the power changed. For example, on a simple coil better to increase this value, because they quickly losing their temperature, unlike more heavy coils.
- I — integral constant, the larger it is, the settled power distribution is smoother.

## 4.2. Smart Mode

Profiles can be switched automatically, based on saved coil resistance, and in manual mode. All you need to use the automatic switch is to enable "Smart" mode, install atomizer and assign them to the desired profile. You can also prepare profile using NToolbox.

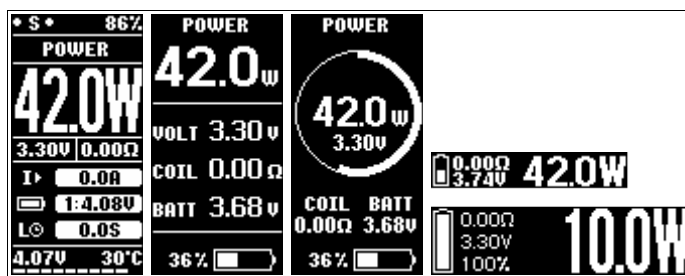
When you re-install this atomizer later, assigned profile will be activated automatically. If resistance of installed atomizer is not found in profiles, you'll be prompted to select a new profile or re-assign existing.

When you switching manually to profile that have saved resistance mismatch, you'll be prompted to update or keep settings of selected profile.

### 4.2.1. Lazy mode

Profile switching happens only when atomizer is changed and only when device is active. If you change atomizer while device was in deep sleep or loaded a configuration from NToolbox, the profile will not be switched automatically.

## 4.3. Skins



There are 3 main screen skins in firmware: Foxy, Classic and Circle. For smaller screen you can set the font thickness for infolines.

Editing the main screen differs from the original Joyetech firmware. To edit infolines on the main screen, call the «edit main screen» action (4 clicks by default). Single **FIRE** click switch to the next editing item. Edit selected item by pressing **+**/**-** buttons. To exit edit mode hold **FIRE** button for about 1 second. Main screen can be also set up in NToolbox.

Note: to reset vape counter, choose counter in infoline and hold **++--**.

## 4.4. Clock

Firmware supports time counting with hardware and without hardware support. For more convenient use, you can enable the time synchronization between device and PC. To do this, you need to right-click on the NToolbox icon in the tray (near the clock) and tick «Synchronize time when device is connected».

The clock can work in three modes of time counting:

LXT — RTC mode for devices with built-in 32768 Hz quartz resonator.

LIRC — default RTC mode for devices without quartz resonator. Time will be controlled by an internal LIRC oscillator in deep sleep mode. Time will be inaccurate due to the oscillator high noise. However, it is possible to assort an averaged frequency (LIRC Speed) in Settings → Clock. For each device, the value will be unique.

Assorting method: lower value by 100, leave device for 30 minutes, after, compare the time. Selection of the optimum value is possible only by trial and error, but it will not guarantee accurate clock movement. Also, you can turn on the LSL mode, then you don't need to assort the frequency.

LSL — Light Sleep Mode. When you turn off the device goes to sleep, but not completely. The central processor remains, which ensures accurate clock movement, while the battery is discharged by about 0.1-0.2 volts per day on single-battery devices. With any other settings, the clock does not affect to the power consumption. The activated LSL mode is warned with by «!» right of battery indicator or by the letter «L» in the Foxy skin.

Note: after switching the RTC mode, disconnect USB and restart your mod, remove battery for about 30 seconds. If the RTC module fails to start in LXT mode, the mode will automatically switch to LIRC/LSL, which may indicate a hardware problem or the absence of a quartz resonator on your device board.

Warning: overdischarge protection is disabled while LSL is activated. For a long time in standby mode batteries may be discharged to critically low level. Always check battery level yourself when using LSL mode, we recommend to remove batteries if you are planned not to use box for a couple of days.

## 4.5. Power Bank

Support for [Avatar RC adapter](#) and similar. Provides charging devices with a voltage of 5 volts (can be changed to 5.25 V, see § 6.4.1.) and current up to 2,1 A. To start charging, put RC adapter on box, connect device and press **FIRE** button. Power Bank mode has auto-off feature when current drain is not exceed 50 mA (indicated by blinking label «On»).

To turn off the screen while charging, press **-**.

To stop charging, press **FIRE** button.

To exit Power Bank mode press and hold **FIRE** button or regulatory **+**/**-** buttons simultaneously.

## 4.6. Stealth Mode

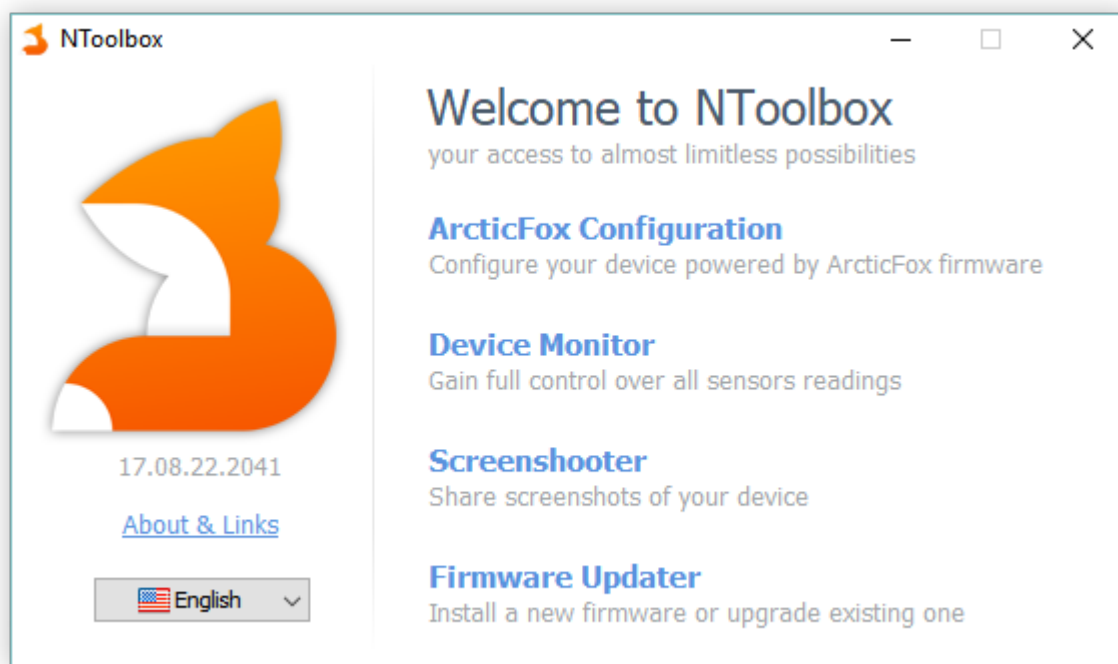
Supported devices are using LED displays, which are prone to burnout. To minimize risk of pixels burnout, there is a Stealth Mode. Activated by holding shortcut **FIRE**+**-** (by default, can be reassigned in NToolbox). Screen is turned off in Stealth Mode by default. Press **FIRE** to turn the screen on. For holding **FIRE** button (puff) or at the end of the screen timeout, screen will be turned off again. Also, stealth mode doesn't display the charging screen and screensaver by default, however they can be enabled in the «Stealth» section of the screen settings or in a [similar section](#) in NToolbox.

Note: backlight is off in devices with separate LED indicators (eGrip II/Light, eVic AIO, Pico RDTA, Sinuous P80) in stealth mode.

## 5. NToolbox

NToolbox — the utility included with NFE Tools. Provides huge opportunities to configure and monitor device from the computer. It is divided into 4 main components:

1. ArcticFox Configuration — a configurator that allows you to fully set up your device from a computer, as well as reset settings or save their backup in configuration file. Some settings are available only in NToolbox.
2. Device Monitor — tracking of all device sensors in real time. Allows you to record sensors and save them as .csv tables.
3. Screenshooter — broadcasts a device screen to a computer, creates screenshots
4. Firmware Updater — used to update the device software. Also shows the software and hardware version, allows you to reset and write Dataflash.



An example of the NToolbox main window.

## 6. ArcticFox

Third-party firmware developed by NFE Team. Currently supports 55 box-mods, working on boards of Joyetech and its subsidiaries. The firmware is created with the idea of safe device using with its maximum control. Provides a wide range of different settings:

### 6.1. Main Menu

ArcticFox

TITANIUM

Screen

Settings

Powerbank

Info

About

Exit

Settings

ArcticFox

Settings

Hold 1 second **FIRE**+**+** (by default) to enter menu.  
Hold **FIRE**+**-** or **+**+**-** to return to the previous menu.

### 6.2. Profile Menu





TITANIUM	TITANIUM	Wire	Preheat	PI-Reg
Wire Ti	TFR Def	SS	Type Curve	PI-Reg On
Coil 0.38Ω	T.Dom Off	TCR	Boost 1s	Range 20%
TFR N/A	1Watt On	Ni TFR	Time Def	P 350
T.Dom Off	1°C/2°F Off	Ti TFR	Relax 5s	I 180
1Watt On	Preheat	304 TFR	Exit	Exit
1°C/2°F Off	PI-Reg	316 TFR		
Preheat	Exit	316L TFR		

- Wire — coil material, temperature control or not (VW);
- Coil — saved coil resistance;
- TCR — value can be edited when selected Joyetech TC algorithm with custom TCR;
- T. Dom — temperature-dominant regulation style;
- 1 Watt — increment/decrement power by 1 Watt;
- 1°C/2°F — increment/decrement temperature by 1 or 2 degrees;
- Preheat — power control, use preheat or power curve;
- [PI-Reg](#) — PI Regulator for TC mode, improves power and temperature stabilization.

### 6.3. Screen Menu


Screen	Screen	Clock	Timeouts	Charge	Stealth
Wake <input type="checkbox"/> On	Clock	Type Digital	Dim 10s	Type Ext	Charge Off
Logo Off	Timeouts	On Main On	Dim <input type="checkbox"/> 5s	Add. Digital	Saver Off
Clock	Charge	Saver Off	Charge 10s	Exit	ClkOnF Off
Timeouts	Stealth	Exit	Logo 2s		Exit
Charge	Contrast		Clock 7s		
Stealth	Skin Foxy		Exit		
Contrast	Exit				

- Wake ☐ ☐ — waking device up by pressing regulatory **+**/**-** buttons;

- Logo — showing custom logo on main screen;
- Clock
- Type — analog or digital;
- On Main — show clock on main screen;
- Saver — show clock in standby mode;
- Timeouts
- Dim — idle time before the screen turns off;
- Dim  — idle time before the screen turns off in locked state;
- Charge — idle time before charging screen turns off, 0 - always on (the screen can be displayed by  or  buttons);
- Logo — idle time before displaying logo;
- Clock — idle time before displaying clock;
- Charge
- Type — charging screen type, standard or with additional information;
- Add. — extra item: clock or logo;
- Stealth — settings for screen in Stealth Mode:
- Charge — charging screen will be shown in Stealth Mode;
- Saver — screen saver will be shown in Stealth Mode;
- ClkOnF — if Clock on Main Screen is enabled, they'll be shown by  click;
- Contrast — adjust brightness of display;
- [Skin](#) — change main screen style.

## 6.4. Settings Menu

Settings	Smart		Clock	Regional	
Clicks	Smart	Lazy	Date/Time	Temp	°C
Smart	Range	10%	Adjust Time	Time	24h
Clock	Exit		LIRC Speed	Date	D.M.Y
Regional			Exit	Exit	
Advanced					
Exit					

- Puffs — counters settings:
- Counters — show counters;
- RCOBC — Reset Counters on Battery Change, clear vaping statistics;
- Cutoff — maximum puff time;
- Session — count puffs and vaping time while device in active state or use to limit puffs (chain vaping prevention);
- Limit — maximum puff count or time before device will lock/off (depends on 5 Clicks action), to switch units hold ;




- Clicks — actions assigned on

• 2/3/4  button clicks:

- None — not assigned;

• Main Menu — enter Main Menu, the same as +.



- Edit Main — Joyetech default 3-clicks action;
- Preheat — preheat settings for active profile;
- Edit Profile — enter in Profile Menu;
- Profiles — Profiles Selector;
- Reset Cnt. — show vape stats info with opportunity to reset counters;
- T. Dom — temperature-dominant on/off;

- Coil  — switch coil resistance lock on/off (for TC modes);
-  Coil — re-reading atomizer resistance;
-  Smart — forced atomizer redefinition with a Smart call;


- Clock — show/hide clock on main screen;
- Info — show Info Screen;

•  [Bank](#) — switch device into Power Bank mode;


- Stealth — switch Stealth Mode on/off;
- Smart — switch Smart Mode on/off;
- LSL — switch light sleep mode on/off;

- Key  — switch Keylock on/off;
- Device  — lock all buttons but leave mod powered on;

- On/Off — switch mod on/off;

• 5  button clicks:

- On/Off — switch mod on/off;

• Device  — lock all buttons but leave mod powered on;

- [Smart](#) — automatic switching profiles settings:

- Off/On/Lazy — Smart Mode behavior setting;
- Range — resistance tolerance;

- Clock — realtime clock setup;

- Date/Time — set current date and time;
- Adjust Time — precise adjusting time by 1 second step;
- [LIRC Speed](#) — adjusting speed of internal imprecise oscillator (for LIRC RTC);




- Regional

- Temp — temperature in Celsius (° C) or in Fahrenheit (° F);
- Time — time in 24-hour or 12-hour format;
- Date — calendar date in the format DD.MM.YYYY or MM/DD/YYYY;

## 6.4.1. Advanced settings

Advanced		Advanced		USB		BVO		Puffs	
USB		RTC	LSL	NoSlp	On	1	0.00V	RCOBC	Off
BVO		DSleep	Std	Charge	On	2	0.00V	Session	On
Puffs		TEMP	Ext	Limit	N/A	3	0.00V	Exit	
Cutoff	5.0s	LED	Off	Exit		4	0.00V		
Shunt	100%	Bank	5.00V			Exit			
BATT	25R	R.Coil	On			B1:	4.12V		
RTC	LSL	Exit							

Advanced — settings section for expert users:

- USB — behavior while charging:
- NoSlp — do not enter deep sleep mode while connected to USB - may lead to self-discharging multi-cells boxes after charging stops;
- Charge — charging while connected to USB (for multi-cells devices only);
- [Limit](#) — charging current limitation (N/A — device can't regulate charging process by hardware);
- [BVO](#) — batteries voltages offset;
- Shunt — Ohm-meter correction;
- BATT — battery discharge profile;
- [RTC](#) — Realtime Clock mode;
- DSleep — deep sleep (enter after 3 minutes of inactivity by default, delay can be set with NToolbox) mode:
- Std — standard deep sleep;
-  — switch box to powered off state before going into deep sleep;
-  — lock box before going into deep sleep;
- TEMP — board temperature sensor, Ext - thermistor, Int - MCU;
- LED — backlight control for eGrip II/Light, eVic AIO, Pico RDTA, Sinuous P80;
-  Bank — applied voltage in Power Bank mode;
- R.Coil — (R means Real or Recent) allows to hold the last measured resistance of the atomizer on the screen, On = recent resistance while firing, Off = detected on installing atomizer, like before.

# 7. Solving Common Problems

## 7.1. BVO

Some devices have problems with an inaccurate voltage measurement on the batteries. There is a possibility to correct the device voltmeter, for proper voltage reading. It is named BVO — Battery Voltage Offset.

For example, you noticed unbalance of batteries charging in device: on one bank voltage at 100% 4.05 V another 4.10 V. However, measuring both batteries voltage by a tester or in an external charger gives same voltage: 4.05 V and 4.05 V. In this case, correction of BVO is necessary.



Note: many devices have a non-linear characteristic of the ADC, which leads to significant differences in the accuracy of measurements, which depended by voltage. Correctly choose battery voltage during calibration:

- if you charge batteries in devices, calibrate BVO with fully charged batteries (ideally - just removed from an external charger after the full charge is completed);
- if you want to use maximum of the battery capacity, calibrate the BVO with a battery voltage 3,3..3,5 volts.

## 7.2. Limitation of the battery charging current

The firmware have ability to adjust the battery current, as well as protect the external power source from overload. Works only on multi-battery devices and Pico 25. You can regulate current input in [Advanced settings](#) or in NToolbox.


Note: changes will take effect on next USB connection or charging starting.

## 7.3. Restore in the Safe Mode


Safe mode is a mode in which your device is booted in recovery mode. It is used for recovery after an unsuccessful firmware installation or for test the viability of the device. If you delve into the details, it is the boot loader. The boot loader is using to install firmware. Every device have own boot loader which we are not changing during firmware installation process.


Run Safe Mode:

- Unplug the USB cable if it was connected before;
- If your box has removable batteries:

- remove all batteries from device;
- press and hold  button;
- connect device to PC;

- If your box has built-in battery:

- connect device to PC;
- press and hold  button;
- click Reset button on device (refer user manual);

- Now you can release  button.

If you did everything correctly, your device is in Safe Mode.

How to understand that the device is in Safe Mode?

- The screen is off;
- The device does not respond to button presses;
- The device will be detected by the PC;
- Firmware version displays as "0.00";

- If you are using NToolbox — Firmware Updater, you will see that the "Boot Mode: is set to LDROM.

## 7.4. Roll back

To roll back firmware, you need to download a binary firmware file from your device manufacturer's site and update device, using NToolbox.

## 7.5. Hardware version failure

In very rare cases, a hardware version may fail due to a failure of device update process. As a result, the device's screen may not work or future device update can be crushed. In that case you need to start NToolbox, go to the Firmware Updater and in the «Expert» tab and set correct version of your hardware.

## 7.6. Extended Error Codes

Messages «Atomizer Low /x/» and «Atomizer Short /x/» have additional statuses (x is error code) that will help solve some problems yourself or facilitate diagnostics.

«Atomizer Low» error codes:

- 0 — atomizer is detected, but the resistance is below 0.05 Ohm, occurs when **FIRE** button is pressed in standby mode;
- L — resistance fell below 0.05 Ohm during the puff.

«Atomizer Short» error codes:

- E — estimated current for atomizer is exceeded. Can appear with incorrectly measured (overestimated) resistance when screwing atomizer, as well as with hardware problems (poor connections of the power section, insufficiently fastened coil, etc.). One of the symptoms leading to this error is the drop in the displayed coil resistance when **FIRE** is pressed and the increase in the standby mode;
- A — the current limit for coils with a resistance below 0.1 Ohm is exceeded, reduce the power;
- S — the resistance fell below 0.02 Ohm during the puff;
- P — coil resistance drops dramatically while puff (the measured resistance is below the fixed value by 4 times);
- X — most likely, the hardware part of the box is faulty: the resistance can not be measured correctly;
- 0 — occurs when **FIRE** button is pressed in the standby mode - it can signal the "bounce" of the contacts, because the atomizer resistance can be measured correctly, but the corresponding atomizer status is not set.

## 7.7. Force PID

A very small number of devices goes with a wrong bootloader from manufacturer. In this case, your device will be identified incorrectly in the NToolBox. Official firmware contains hardcoded code to support specified device and works fine on this kind of device. ArcticFox is a universal firmware for many devices and reads device identifier from bootloader and then decides how to work on device. If ArcticFox will be

installed on device with a "bad" bootloader, device will not work properly or will not work at all. To provide an ability to use ArcticFox firmware even with a defective devices, you can overriding device identifier (PID).

If your device has “bad” bootloader, you can try to force PID:

- run NToolBox -> Firmware Updater and hold down CTRL+SHIFT+ALT while you are selecting firmware file, whereupon will appear a window with PID selection.

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## 8. Credits

Our small but friendly NFE Team:

maelstrom2001

ReikoKitsune

Zinger

ArionWT

You always can find us on our official forum: <https://nfeteam.org/forum>.

### 8.1 Special Thanks

Special thanks is expressed ClockSelect for a wonderful project myEvic, which inspired us to create our own firmware and set of utilities to work with it.

### 8.2. Donations

If you like our project and you want to help in its development, you can [donate](#) us the amount of money you deem acceptable. All the details are on the official website.