# MINION

# Personal vaporizer

User manual

# Let's get started.

#### 1. Insert battery

Remove top cap whit negative contact screw. Insert battery. !!! Mind the polarity!!!

Put everything back together. Don't over stress the thread on negative contact screw. It's not necessary. Insert atomizer in 510 connection. 510connection has magnetic auto adjusting center pin to guarantee perfect connection for any atomizer.

Press few times the Fire button to turn the chip on.

#### 2. Maintenance

The body of the Minion box mod is made of non-corrosive aluminium alloy. Doesn't need special treatment, however avoid contact whit aggressive liquids like: corrosive house hold cleaners (anticalc), long exposure with acids (juice from citrus type or pineapple fruit).

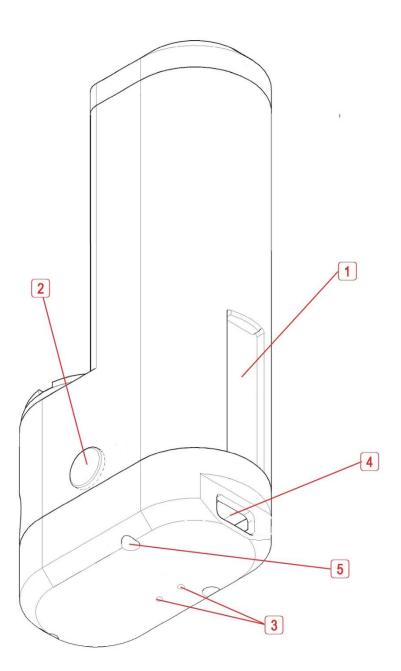
To clean use humid and dry cloth.

The 510 connection contact pin and negative contact screw are made of brass so they can corrode after time. For cleaning just use metal cleaner.

#### 3. Charging

For fast charging you will need mini USB cable and USB charger whit 5.5V 1Amp output.

Thank you purchasing our product. If you have any question or you need technical help, or for resolving problems, please contact us on: <a href="mailto:tek-division@gmail.com">tek-division@gmail.com</a>

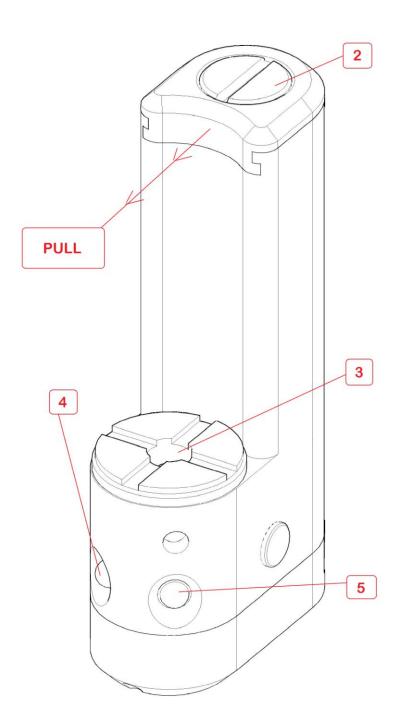


- 1. Display
- 2. **FIRE** button
- 3. Charging led indicators

**RED- Charging** 

**BLUE- Charging completed** 

- 4. Mini USB 1Amp charging port
- 5. !!!Warranty sealing!!!



- 2. Negative contact screw
- 3. 510 atomizer contact
- 4. DOWN button
- 5. UP button

## Chip specifications / Evolv Dna 40

	Minimum	Typical	Maximum
Output Power	1 Watt		40 Watt
Output Voltage	1 Volt		9.0 Volts
Output Current, continous			16.0 Amps
Output Current, instantaneous peak			23.0 Amps
Atomizer Resistance, standard wire	0.16 Ohm	0.7 Ohm	2.0 Ohms
Atomizer Resistance, temp. sensing wire	0.10 Ohm	0.4 Ohm	1.0 Ohm
Input Voltage	3.1 Volts	3.7 Volts	4.3Volts
Temperature limit	200°F	450°F	600°F
Input Current	0.5 Amps	8.0 Amps	16.0 Amps
Efficiency		92%	
Charging USB current 5.5V			1 Amp

# **Temperature Protection**

The Dna 40 is the first power supply for electronic cigarettes to directly measure and limit the temperature of the heating coil during operation. By preventing the coil from becoming too hot regardless of fluid, wicking or airflow, a variety of undesirable situations can be prevented. For example, appropriate temperature settings will prevent the wicking material from charring, which compromise taste and introduces unintended chemicals into the vapor. Appropriate temperature settings will also reduce the breakdown of flavoring and base liquid components, which could impact taste or safety.

Evolv's Temperature Protection Technology requires a heating coil made from Nickel 200 alloy, rather than Nickel Chromium or Kanthal alloys. Nickel 200 is commercially pure nickel. It is often sold in vapor shops and online as "non-resistance wire". If the temperature reaches the maximum value, the wattage applied to the atomizer coil is reduced to prevent overheating. Please note that the temperature reading is the average temperature of the atomizer coil, and care should taken to construct the heating coil so that the temperature is uniform, without hot or cold spots. Ensure that the coil does not short to itself.

Because wattage, not temperature controls vapor volume, large vapor volumes can be produced without unnecessarily high temperatures. Temperature Protection is most helpful if the atomizer begins to dry out, the user pauses during a puff, the beginning or end of the puff, or if the wattage setting is inappropriate for the attached atomizer.

In normal operation, when the device is not firing the maximum temperature setting is displayed on the screen. When device is firing, the actual average temperature of the coil is displayed on the screen.

By default, the Temperature Protection setting is 450°F. To change the limit

- 1. Lock the device by pressing the **Fire** button five times.
- 2. Hold down the **Up** and **Down** adjust buttons for two seconds.
- 3. After two seconds, the maximum temperature will be displayed, and the **UP** and **Down** buttons should be released.
- 4. Use the **UP** and **Down** buttons to adjust the maximum temperature
- 5. When the display shows the desired maximum temperature, press the **Fire** button to exit temperature adjust mode.

The maximum temperature is adjustable between 200°F and 600°F. To disable the temperature protection entirely, adjust the limit up to 600°F, then press the **UP** button on additional time. The temperature limit will read **OFF**. This will also disable the prompt when a new atomizer is attached.

#### **Preheat**

When the Dna 40 is used with a temperature sensing atomizer, an additional feature called **Preheat** is activated. No vapor is produced when the temperature is below the boiling point of the liquid. Preheat applies extra power until the heating coil is up to operating temperature to shorten the delay between pressing the fire button and generating vapor. Because the preheat is temperature based, it will not overheat or burn the vapor.

#### **Attaching a New Atomizer**

The Dna 40 uses the resistance of the atomizer to calculate the temperature of the heating coil.

It continually looks to see whether a new or changed atomizer has been connected. If you are using temperature protection, be careful to only attach new atomizers that have cooled to room temperature to the device. If a new atomizer is attached to the Dna 40 before it has cooled down, the temperature may read and protect incorrectly until the new atomizer cools.

When you connect a new atomizer or disconnect a reconnect your existing atomizer, the Dna 40 will prompt you to confirm this change. When you fire the first time, before activating the Dna 40 will prompt "New Coil? UP YES/DOWN NO". When you see this prompt, if you have attached a new atomizer, press the UP button. If you have disconnected and reconnected the same atomizer, press the DOWN button.

#### Operation

Basic operation of the Dna 40 is as follows. To wake the device from power off state, tap the **Fire** button. To generate vapor, press the **Fire** button. To change the wattage setting for more or less vapor, click or hold the **UP** and **DOWN** buttons.

#### Display

The normal and special operating modes shown on display are discussed below. The Dna 40 will automatically detect whether a temperature sensing (Nickel 200) or standard Kanthal etc) coil is attached.

#### **Temperature Protected**



Watt setting: The power level currently set on the Dna 40

**Battery indicator:** The current state of charge of the battery.

<u>Temperature display:</u> When not firing, the maximum heating coil temperature setting. While firing, the actual temperature of the heating coil is displayed.

<u>Ohms display:</u> The resistance of atomizer attached to the device. This is measured only when the unit is supplying power to the atomizer. At other times, it shows the most recent measurement.

## **Non-temperature Protected**



*Watt setting:* The power level currently set on the Dna 40.

**Battery indicator:** The current state of charge of the battery.

**Volts display:** The output voltage being supplied to the atomizer.

<u>Ohms display:</u> The resistance of atomizer attached to the device. This is measured only when the unit is supplying power to the atomizer. At other times, it shows the most recent measurement.

#### **Modes**

<u>Locked mode:</u> Pressing the **Fire** button five times with less then0.7 seconds between presses will cause the device to enter Locked mode. In locked mode, the device will not fire and the output power will not adjust accidentally. While in Locked mode, the screen will be off, except that pressing a button will show "**Locked, Click 5x**". To exit locked mode, press the fire button 5 times.

<u>Stealth mode:</u> While locked, holding the **Fire** and **DOWN** buttons simultaneously for 5 seconds will switch to stealth mode. In this mode the display is off. It will still exit power locked mode the **Fire** and **DOWN** buttons simultaneously for 5

seconds. This setting is stored to internal flash memory, and remains if power is removed.

<u>Right mode and Left mode:</u> While locked, holding the **Fire** and **UP** buttons simultaneously for 5 seconds flips the display. This allows for accommodating to left or right handed use. This setting is stored to internal flash memory, and remains if power is removed.

<u>Power Locked mode:</u> Holding down both the **UP** and **DOWN** buttons for 2 seconds will place the device in Power Locked mode. In this mode, the mod will operate normally, but you will not be able to change to power setting. This mode prevents accidental power level change due to the buttons being pressed while in a pocket. To exit Power Locked mode, hold **UP** and **DOWN** buttons for 2 seconds.

Maximum Temperature Adjust: From Locked mode, holding down both the **UP** and **DOWN** buttons for 2 seconds will place the device in Max Temperature Adjust mode. Once this mode is entered, the max temperature will be displayed. The **UP** and **DOWN** buttons are used to adjust the max temperature. To save the new temperature setting and exit, press the **Fire** button.

#### **Error Messages:**

The Dna 40 will indicate a variety of error states.

<u>Check Atomizer:</u> The Dna 40 does not detect an atomizer, the atomizer has shorted out, or the atomizer resistance is incorrect for the power setting.

**Shorted:** The atomizer or wiring are shorted circuited.

<u>Weak Battery:</u> The battery needs to be charged, or a higher rate battery needs to be used. If this happens, the Dna 40 will continue to fire the atomizer, but will not be able to provide the desired wattage. The **Weak Battery** message will continue to flash for few seconds after end of puff.

<u>Temperature protection:</u> The heating coil reached the maximum allowed temperature during the puff. If this happens, the Dna 40 will continue to fire, but will not be able to provide the desired wattage.

<u>Ohms Too High:</u> The resistance of the atomizer coil is too high for the current wattage setting. If this happens, the Dna 40 will continue to fire, but will not be able to provide the desired wattage. The **Ohms Too High** message will continue to flash for a few seconds after the end of puff.

<u>Ohms Too Low:</u> The resistance of the atomizer coil is too low for the current wattage setting. If this happens, the Dna 40 will continue to fire, but will not be able to provide the desired wattage. The **Ohms Too Low** message will continue to flash for a few seconds after the end of puff.

<u>Too Hot:</u> The Dna 40 has onboard temperature sensing. It will shut down and display this message if the internal board temperature becomes excessive.

# Auto power down:

The screen will be at full brightness while firing. After 10 seconds with no button presses, the screen will dim. 30seconds after the last button press, the screen will fade out and the device will go into sleep mode. To wake the device, press the **Fire** button.