

PROTOVAPOR

XPV DNA-400



Thank you for purchasing the **Protovapor XPV** personal vaporizer. We hope this device will provide many years of enjoyment!

INCLUDED IN PACKAGE

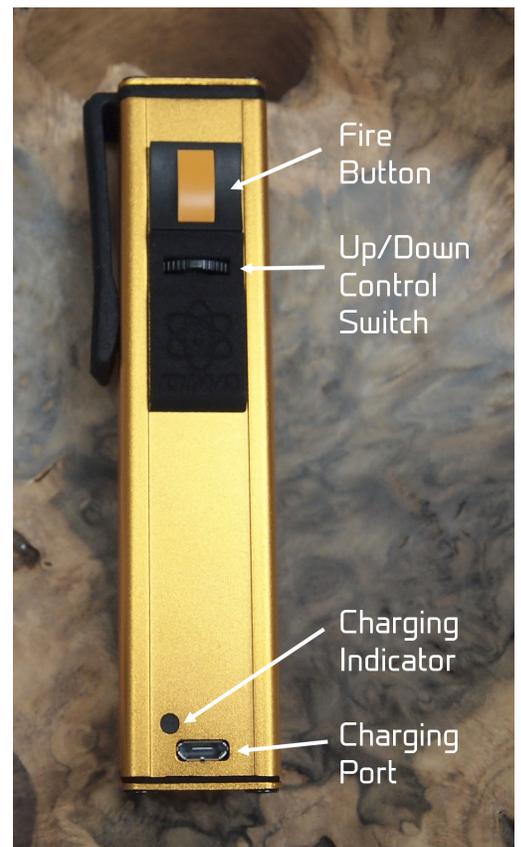
- ▶ Protovapor XPV Personal Vaporizer
- ▶ USB-to-Micro USB charge cable

OPERATING INSTRUCTIONS

Charging

Never charge device unattended!

1. Connect a micro-USB cable from a USB charging source (500mA minimum) to the XPV device via the port near the bottom. The indicator next to the port lights red when charging and green when charging is complete.
2. The device can be used while charging. If the battery gauge reads very low, it may need to be charged for at least 10 minutes before use, especially at high wattage settings.
3. Normal charge times from empty are 3-5 hours for the XPV (standard battery).



4. The XPV should be almost fully charged upon delivery from Protovapor. It can be used immediately.

General operation

1. Attach atomizer device containing e-liquid to the connector at the top of the unit. **DO NOT OVERTIGHTEN!**
2. To wake the device from power off state, tap the Fire button.
3. Adjust temperature and wattage as described below.
4. Depress firing button and hold while drawing on the atomizer device.

DNA 40D INFORMATION

Your XPV is powered by the DNA 40D board by Evolv Vapor.

Temperature Protection

The DNA 40D 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 compromises 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 be 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 the device is firing, the actual average temperature of the coil is displayed on the screen.

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

- 1) Lock the device by pressing the Fire button five times.
- 2) Push the UP/DOWN switch in for two seconds.
- 3) After two seconds, the maximum temperature will be displayed, and the UP/DOWN switch should be released.
- 4) Use the UP/DOWN switch 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° Fahrenheit and 600° Fahrenheit. To disable the temperature protection entirely, adjust the limit up to 600 degrees, then press UP one additional time. The temperature limit will read OFF. This will also disable the prompt when a new atomizer is attached.

Preheat

When the DNA 40D 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.

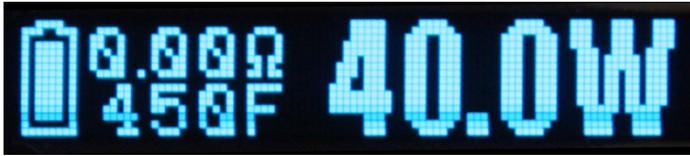
Attaching a New Atomizer

The DNA 40D 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 40D 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 and reconnect your existing atomizer, the DNA 40D will prompt you to confirm this change. When you fire the first time, before activating the DNA 40D will prompt

"New Coil? UP YES/DOWN NO". When you see this prompt, if you have attached a new atomizer, push UP. If you have disconnected and reconnected the same atomizer, push DOWN.

Display



The normal and special operating modes shown on the display are discussed below. The DNA 40D 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 40D.

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

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

Ohms display: The resistance of the 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 40D.

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

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

Ohms display: The resistance of the 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

Locked mode: Pressing the fire button five times with less than .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.

Stealth mode: While locked, holding the fire and down buttons simultaneously for five seconds will switch to stealth mode. In this mode the display is off. It will still show error and lock messages. To switch back to normal display mode, hold down the Fire button and push DOWN simultaneously for 5 seconds. This setting is stored to internal flash memory, and remains if power is removed.

Right Mode and Left Mode: While locked, holding the Fire button and pushing UP simultaneously for 5 seconds flips the display. This allows for maximum flexibility in designing the mod, as well as accommodating left handed use. This setting is stored to internal flash memory, and remains if power is removed.

Power Locked mode: Pushing in the UP/DOWN switch for two 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 the power setting. This mode prevents accidental power level changes due to the buttons being pressed while in a pocket. To exit Power Locked mode, push in the UP/DOWN switch for two seconds.

Max Temperature Adjust: From Locked Mode, pushing in the UP/DOWN switch for two 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 are used to adjust the max temperature. To save the new temperature setting and exit, press the Fire button.

Error Messages

The DNA 40D will indicate a variety of error states.

Check Atomizer: The DNA 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 short circuited.

Weak Battery: The battery needs to be charged, or a higher rate battery needs to be used. If this happens, the DNA 40D 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 a few seconds after the end of puff.

Temperature Protection: The heating coil reached the maximum allowed temperature during the puff. If this happens, the DNA 40D will continue to fire, but will not be able to provide the desired wattage.

Ohms Too High: The resistance of the atomizer coil is too high for the current wattage setting. If this happens, the DNA 40D 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.

Ohms Too Low: The resistance of the atomizer coil is too low for the current wattage setting. If this happens, the DNA 40D 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.

Too Hot: The DNA 40D 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. 30 seconds 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.

ADDITIONAL INFORMATION



Protovapor 510 connector

The XPV has a self-adjusting 510 connector. It has a spring-loaded center pin and should work automatically with most atomizers. Atomizers can be snugged down, but do not apply excessive tightening force especially if the body of the atomizer does not bottom against the connector. The connector is sealed. Occasionally wipe the connector clean of juice and condensation.



The Protovapor 510 connector is designed to work with atomizers measuring 3.5-5.0mm from tip of positive pin to bottom face (left).

Maintenance

The XPV requires no regular maintenance. The device should operate trouble-free through the life of the battery. Please take care not to allow e-liquid, water or other foreign substances to enter the device through the controls, USB port, etc. Casing can be cleaned with a dry or damp cloth if needed. Do not use abrasive or caustic cleaning products. **Do not use alcohol.**

The display screen is protected by a plastic cover. Clean this cover with a microfiber lens cloth. Blow off any foreign objects or dust on the surface first, or scratching could result.

Occasionally, check the tightness of the screws in the top and bottom of the casing.

Replacing battery

The battery of the XPV is connected with a push connector. It can be replaced without special tools. This is intended to only be done when the battery reaches the end of its life. New batteries with appropriate connectors are available from Protovapor. Protovapor will install new batteries purchased from us free of charge (customer covers shipping).

LIMITED WARRANTY

The XPV is covered for a period of 90 days from purchase against defects in workmanship and materials. Internal components including the DNA 40D board are covered for a period of 1 year from purchase.

Repairs

Repairs on all components of the XPV are available from Protovapor.

SPECIFICATIONS

Output wattage: 1-40 watts

Output voltage: 1.0 to 9.0 volts

Output current: 16A continuous, 24A peak

Atomizer resistance*:

0.16 ohm-2.0 ohms standard wire

0.10 ohm-1.0 ohm temperature sensing wire

Temperature limit: 200F-600F

Efficiency: 92%

* Board will operate above and below these parameters, limited by amperage and/or voltage