

# PROVAPE



## PROVARI 3



### Owner's Manual

Rev: 1.7234

Thank you for purchasing a ProVari 3 personal vaporizer.  
We hope you get many years of enjoyment from this device.

[www.ProVape.com](http://www.ProVape.com)

#### Introduction

A personal vaporizer (PV) is a battery-powered device that provides inhaled doses of nicotine by way of a vaporized solution. In addition to the nicotine delivery, this vapor also provides a flavor and physical sensation similar to that of inhaled tobacco smoke. Vaporizers do not contain harmful smoke or tar and have just a few ingredients compared to several thousand found in traditional cigarettes. There is no tobacco, smoke or combustion involved in its operation. There is no ash, no cigarette smoke smell and no second hand smoke. Vaping is the 21st century alternative to smoking tobacco products. Just please keep in mind that personal vaporizers are not meant to be a smoking cessation device.

The ProVari 3 is a powerful microprocessor controlled PV that lets you adjust and fine tune the device to your exact preferences by adjusting the power (in voltage or wattage), along with a number of other parameters, which we will explain later in this manual. The ProVari 3 uses the latest technology to bring you some new and exciting features. The ProVari 3 has regulated power output which keeps the voltage or wattage the same with each puff regardless of your remaining battery power. As the battery drains, the device will keep the power output consistent, giving you the perfect vapor all day long. Now you can dial-in the perfect settings for your tank or atomizer, and e-liquid!

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## Warnings:

- Never abuse your ProVari 3 - even though it's made of metal, you can damage it by dropping it.
- Have your ProVari repaired by ProVape. Do not attempt to repair the unit yourself as damage or personal injury can occur. Any repairs done outside of ProVape will void the warranty.
- Do not remove the circuit board housing from behind the front cap. Doing so will void your warranty.
- Remove the battery from the ProVari 3 if you plan to store it for long periods of time.
- The ProVari 3 operates on a single battery. NEVER stack two batteries or use batteries that are not recommended for use in the ProVari 3. Never use magnets on your batteries. This is very dangerous.
- ProVape will not be responsible for damaged atomizers or tanks. Driving them with too much power for too long or running them dry can burn them out. We recommend you start with a low voltage/wattage setting and work your way up until you find the right power setting for your atomizer/tank.
- NEVER use primary or non-rechargeable batteries in this device. Only use recommended high drain rechargeable batteries. If you are unsure about which batteries to use, please contact us or purchase your batteries from [www.ProVape.com](http://www.ProVape.com) to ensure you use the correct batteries.
- Keep your ProVari 3 away from sources of excessive heat.
- Keep this device and all nicotine-related products out of reach of children and animals. Never drink the nicotine fluid.
- ALWAYS store your batteries in a plastic battery case. Never put batteries in your purse, pocket or other locations where coins, keys and other metal objects can touch together and cause a short. This could cause the battery to catch fire.
- The battery charger is for indoor use only. Do not let it get wet. Unplug the battery charger when cleaning it or when not in use.
- If a battery deforms, begins leaking or smells funny, dispose of it. Wash your hands after handling leaky batteries. Do not get the battery fluid in your eyes! If you do, seek medical attention immediately.
- Never use your ProVari 3 without an atomizer. Do not connect to a volt meter without a resistive load; high voltages without a resistance can damage the device and will void your warranty.



**Do not pour alcohol into the ProVari 3. This can damage the display and will void the warranty. If you have any problems, please contact our customer service team for assistance: <https://provape.zendesk.com/home>**

## ProVari 3 Features

- The ProVari 3 voltage can be adjusted from 2.9 - 6.0 in 0.1 volt increments.
- The ProVari 3 wattage can be adjusted from 3 – 20\* in 0.2 watt increments.
- Flat top design provides a clean hybrid look with the latest tanks.
- Self-adjusting center contact pin ensures maximum compatibility with tanks and atomizers.
- The new P3 thread is a unique top connection which allows you to adapt multiple tanks including 510, Ego and P3 threaded tanks (coming soon). As new connections become available, the P3 will be able to adapt with screw-in adapters. Ego style adapters will be sold separately. As new tanks are developed with the P3 thread, they will adapt for a clean hybrid look.
- Built-in OLED display with scrolling icon-based graphics allows you to visually adjust your settings.
- Each device has a unique digital serial number.
- A translucent seven color lighted push button acts as a low battery alert and allows you to select from seven color choices when the button is pressed. There is also a random option which rotates through all seven colors each time you press the button.
- On/Off mode allows you to shut the unit off completely.
- 16 second safety cutoff turns off the unit if the button is held down for too long.
- HotShot™ Boost mode allows you to get more vapor with a short power boost with each puff. This setting is adjustable allowing you to dial-in your favorite boost time setting.
- Scrolling OTS (Onboard Troubleshooting System) keeps the user informed of any problems and how to resolve them with clear instructions.
- Sub-ohm capability - down to .70 ohms \*
- Amperage limit of up to 5 amps \* will protect against over-current situations.
- Battery “mileage gauge” tells you how much energy is available to the atomizer.
- Smart safety features provide the highest levels of safety available on any device in the world. If you press the button and can vape, it’s safe!
- Thermal monitoring shuts the device off if it detects a high temperature condition.
- IQ™ (Input Quality) monitor provides feedback on the condition of your battery and connections. This never before seen feature not only can test your batteries, but also alert you if there is a problem with one of your cells. Battery safety is very important to us!
- Left & Right handed mode allows the user to select which way the display reads.
- Check All mode allows the user to see all their critical settings at a quick glance with one button press (adjustable settings).
- Save profile - Save all of your favorite settings into 5 available memory slots for quick recall.

- Scroll speed adjust allows the user to select the speed of the scrolling menu.
- OLED brightness adjustment lets you vary the display intensity.
- Exclusive reliable and safe electronic switch is designed for long life.
- Battery Monitoring shuts the unit off once a battery has reached end-of-charge.
- Reverse battery protection keeps the circuit safe if the battery is accidentally installed backwards.
- The P3 is compatible with flat top batteries.
- No compromise components ensures a high quality and reliable device.
- Proudly made in the USA.
- 1 Year Warranty: Excludes accessories like batteries and atomizers.
- 3.5" L x 0.90" D without atomizer.

\* Limits - The P3 will go down to .70 ohms and up to 20 watts but the conditions must be approved by the device for safety reasons. If the P3 detects you are using a battery that cannot handle the power output, it will limit the output to something that is safe. Please note that due to safety being our number one concern, there are limits set to prevent a dangerous situation.

## ProVari 3 Feature Details

- The ProVari 3 voltage can be adjusted from 2.9 - 6.0 in 0.1 volt increments. Just like the original ProVari, the voltage is user selectable and the correct setting is based on the user's preference.
- The ProVari 3 wattage can be adjusted from 3 – 20 \* in 0.2 watt increments. This new feature allows the user to select their power level in wattage. Wattage is another way to adjust the energy going into the atomizer. For example: adjustable voltage is like a manual transmission in a car, where you have to shift gears manually as you drive. Wattage is like an automatic transmission, and it shifts for you as the resistance of your atomizer changes. So, as your atomizer resistance changes, the ProVari 3 will automatically adjust the power to keep the wattage the same. The ProVari 3 constantly monitors the resistance and adjusts the wattage to keep it where you set it. Regardless, if you install a low or high resistance atomizer on the ProVari 3, it will automatically adjust the power to keep it at your preferred wattage setting.
- Built-in OLED display with scrolling icons allows you to visually adjust your settings. This feature brings a full graphic experience to the user allowing you to adjust your settings with an innovative scrolling menu. Later on in this manual we explain all the different options. While it looks complicated to use, it's actually easy and fun. After spending a little time with the new ProVari 3 menu, you will find it's easy to make changes and adjust your settings to customize the device to your liking.
- The translucent seven color lighted push button acts as a low battery alert and allows you to select from seven color choices when the button is pressed. In the menu, there is an option where you can select from seven different colors for the lighted push button: red, green, blue, aqua, yellow, pink or white. There is also a random option so every time you press the button, the color changes. When you press the button to heat up the atomizer, the button will glow in the color you select. When the battery is depleted and needs to be recharged, the light will flash red. This red flashing LED color cannot be changed.

- On/Off Mode allows you to shut the unit off completely. In the menu you have the option to turn the device off when it's not in use. This feature is helpful for when you want to store the device and don't want it to accidentally turn on while it's in your pocket or purse. Anytime a new battery is installed, the device will default to ON mode even if the device was previously turned off.

- The 16 second safety cutoff turns off the unit if the button is held down for too long. This safety feature ensures that the device automatically shuts down if it detects the button is being held down.

- HotShot® Boost mode allows you to get more vapor with a short power boost with each puff. This setting is adjustable allowing you to dial-in your favorite boost time setting. Boost mode is useful for those who want to heat up the atomizer faster. With Boost mode turned on, the atomizer will get a boost of power for a short period of time and then the power will drop down to your set power. For example, if you set your wattage to 9 watts and then turn on the boost mode to 1, by pressing the button, the device will boost the power for the first .25 seconds and then it will drop it down to 9 watts. Increasing the boost level to 2, 3, 4 or 5 will increase the amount of time the device boosts the power before it drops down to your selected 9 watts. Note that turning the ProVari up to max wattage and boosting up to 5 will not exceed the maximum output of the unit which is up to 20 watts.

Boost 1 - .25 seconds  
Boost 2 – .50 seconds  
Boost 3 – .75 seconds  
Boost 4 – 1.00 seconds  
Boost 5 – 1.25 seconds

- The OTS (Onboard Troubleshooting System) keeps the user informed if there is a problem and how to resolve the issue with clear instructions. If there is a problem detected, the ProVari 3 will display the error on the screen along with a recommended fix.

- The battery mileage gauge tells you how much energy is available to the atomizer. This new approach is a little different than a typical battery percentage meter. Most percentage meters, like on your cell phone, “count down” so the battery level is always going down until you reach 0%. The ProVari 3 works more like an average mileage calculator on a car. As you speed up (or raise your power level) the miles per gallon will go down because you are using more fuel. As you slow down (lower your power level) the miles per gallon go up. This is a much more accurate way of telling the user how much energy is left in the battery for the atomizer to use. This number changes based on the power level you have the P3 set to along with your style of vaping. You will notice that this percentage will adjust as you change settings and it's perfectly normal for it to go back up as the battery recovers between uses. When you first insert your battery you will see two question marks: ???. This simply indicates the P3 is evaluating the battery and after 1-2 puffs, it will update the status of the battery. When the battery runs out, the device will alert you with an “Empty” alert on the screen. At this time, recharge the battery.

- Smart safety features built-in provide the highest level of safety available.

- The Amperage limiting system protects against over-current situations. The ProVari 3 is capable of outputting up to 20 watts. If you want to use the ProVari 3 at maximum power, you will need to ensure you use the approved batteries sold by ProVape. If you install a battery that cannot safely handle the full power output, the ProVari 3 will not allow the device to work at those levels and the power limit will be reduced. Our number one mission is safety. If you use a subpar battery that can be damaged or if that battery is not capable of handling that kind of output power, the ProVari will know and it will prevent damage to the device and the user. This feature ties into the IQ™ feature which monitors the battery input quality and determines if that cell has the capacity to output enough power. Always use the approved batteries we offer on our website with the ProVari 3. People often try to save some money by using a cheap battery and this causes issues because not all batteries are made equally. This is why we recommend you only use the batteries that are tested and approved by ProVape to work with the P3.

- Thermal monitoring shuts the device off if it detects a high temperature condition. If the ProVari 3 ever



detects that the internal temperature is reaching a dangerous level, it will turn off and alert you on the screen that you need to remove the battery and let the device cool down before using it again.

- The IQ™ (Input Quality) monitor provides feedback on the condition of your battery and connections. IQ monitors the battery installed in the device and alerts the user if there is a problem with the battery or the connections along the way. If you have a bad spring, this will cause the IQ value to drop. If you use a poor quality battery, your input quality value will drop. A safe range is anything above 61. If you find your battery is not showing higher than 61, replace the battery with a new high drain battery. These are available on the ProVape website if you do not have a local source for them. The IQ value will vary a little but generally if it's 61 or above you are ok to use that battery. In addition to a value, the P3 will also tell you if the battery is great, good, ok, poor or bad. These readings are often caused by a weak connection, oxidation build-up where the spring is or a dirty contact pin. If you get a bad reading, try turning the spring a few times. This will remove oxidation build-up and you should get a better reading. This is a very sensitive and accurate reading so little changes can affect the value. Getting a low reading with a new battery does not mean you have a bad device. It just means you might have some adjustments to make on the spring or cleaning your contact pin. This numeric number is from 100 (best) to 0 (worst). If you get a IQ warning the best fix is to remove the bottom cap, wiggle the spring a little, and try reinstalling the bottom cap to see if that improves the IQ value. It's very normal for the IQ to bounce around. This is due to the IQ reading being a real-time monitor of the internal resistance. The IQ value mainly comes into play when you are vaping at above 15 watts. This is when we are most concerned about the quality of the connections to ensure the device is safe to use at the higher power levels.

- 1) Great (81 to 100 inclusive)
- 2) Good (72 to 80 inclusive)
- 3) OK (61 to 71 inclusive)
- 4) Poor (36 to 60 inclusive) - Power limited to 15 watts when your input quality is poor or bad
- 5) Bad (0 to 35 inclusive) - Power limited to 15 watts when your input quality is poor or bad

- Left & Right handed mode allows the user to select which way the display reads. This cool new feature allows the user to select if they want to flip the screen for left or right handed operation.

- Check All mode allows the user to see all their critical settings at a quick glance (adjustable settings). The Check All feature shows an at-a-glance screen when you press the button once. This shows you the remaining power left in the battery, the current selected mode (voltage or wattage) along with your current power level. You will also get a resistance reading on the installed atomizer. If the atomizer is not installed or there is a problem with the atomizer, you will get an OP reading meaning OPEN. The device does not see the atomizer installed when this appears. Try changing out the coil or atomizer and try again. The check all menu can be turned off and you can also adjust the amount of time it appears on your screen every time you press the button once. See below for how to change these settings.

- Save profile - Save all of your favorite settings into 5 available memory slots for quick recall. The Save and Recall option is a unique new feature which allows you to setup the device with your favorite settings and then save them for easy recall later. While the device will always remember your settings, even when changing batteries, the Save and Recall allows you to have lots of different settings for easy recall. Let's say you have a vanilla flavored fluid you like at 9 watts and you want the LED color to be white when using this setup. You would simply setup the ProVari 3 with all these settings and then go into the menu and select SAV to profile 1. Now let's say you like cinnamon flavored fluid at 9.6 watts and want a red LED. You would setup those parameters and then go to the SAV to profile 2 in the menu. Now that you have two profiles saved, you can simply go to the recall menu and select which profile you want to load. This will display all your preferred settings quickly.

- Scroll speed adjust allows the user to select the speed of the scrolling menu. The default scroll speed is set to 2. Once you get used to the menu system, you will find that the default speed is too slow. When you are ready to increase the speed at which the menu items go by, you can access the scroll speed menu to change this speed. We recommend going to 3 and seeing how that works for you before turning

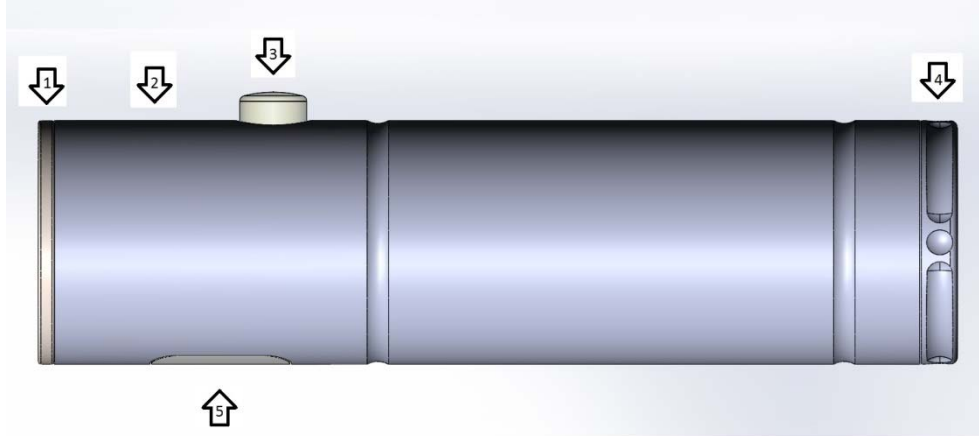
it all the way up to 5.

- The OLED brightness adjustment allows you to adjust the brightness of the display. Note that with OLED technology, if you set the brightness all the way to high, the display won't last as long as if it's turned down. While we expect you to get many years of enjoyment out of the ProVari 3, this setting can affect the life of the internal display.
- Reverse battery protection keeps the circuit safe if the battery is accidentally installed backwards. The ProVari 3 has a built-in reverse battery protection. If you install the battery backwards, it will not turn on. Simply install the battery properly to get power. The P3 is compatible with flat top batteries.



## ProVari 3 Components

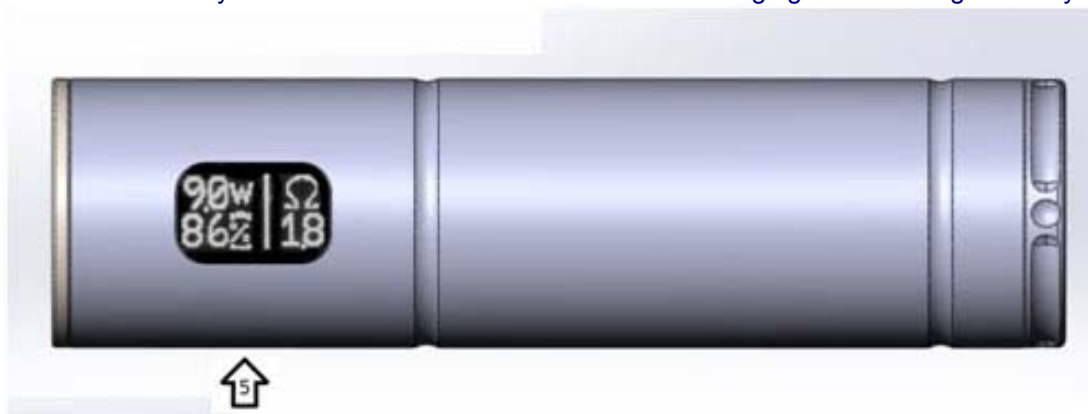
Tanks, cartomizers and atomizers screw into the Front Cap (1).  
Make sure you load these devices with your fluid of choice before attempting to use the ProVari 3.



**The Front Cap is permanently attached onto the Tube (2).  
Do not attempt to remove it.**

The Button (3) activates the heating element inside the tank which creates the vapor.  
The button is also used to change the user settings on the ProVari 3.

The End Cap (4) is where the battery goes.  
Be careful to avoid cross-threading the End Cap into the Tube.  
Refer to the Battery instructions for more information about charging and installing a battery.

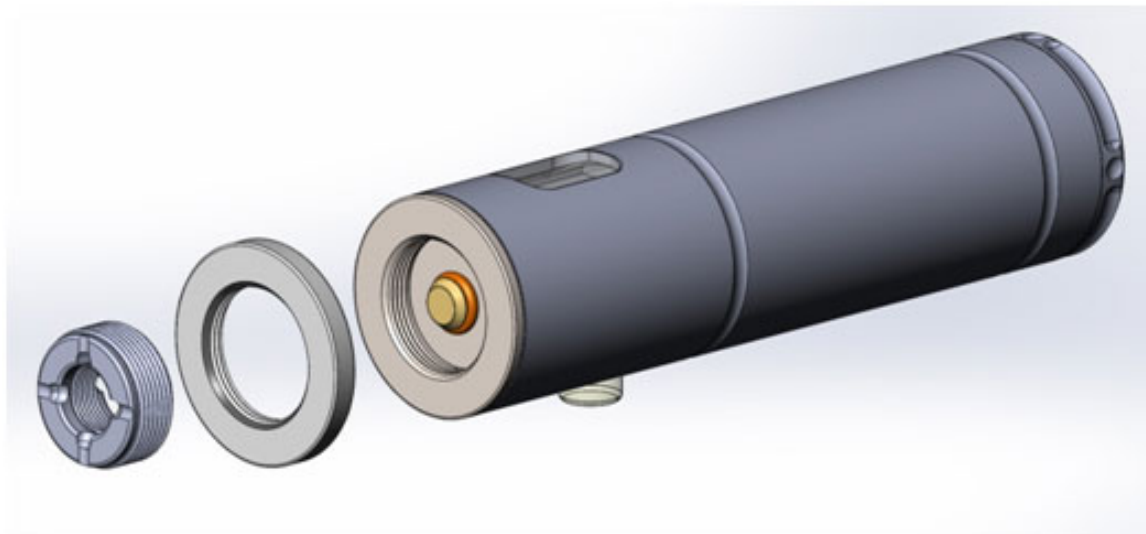


The Window (5) shows the voltage settings and other modes as well as error codes in the event of a malfunction.

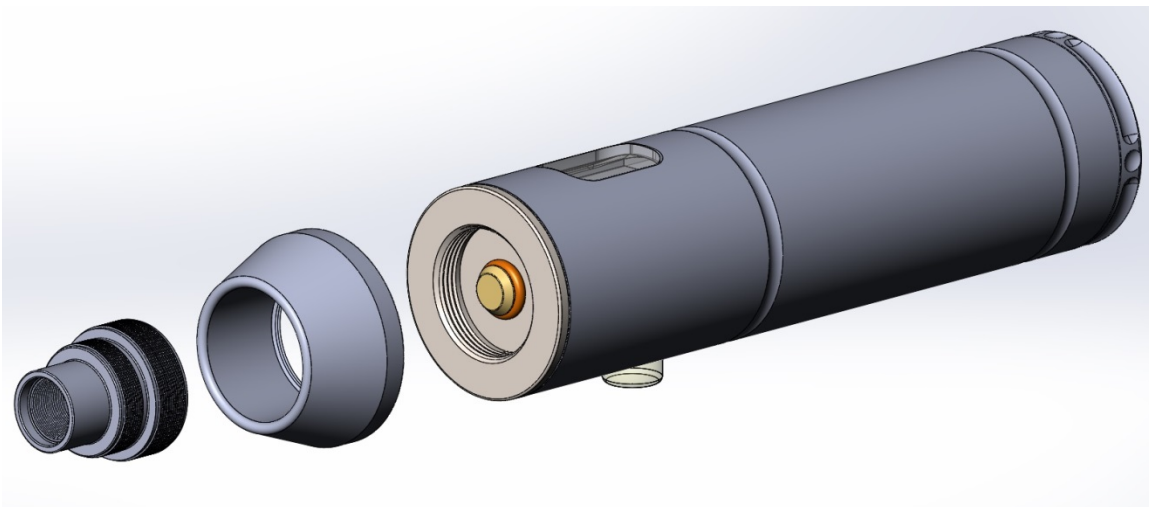
## ProVari 3 Adapter

The ProVari 3 features a new standardized thread (P3 thread) which allows the user to easily switch between 510-style threads, Ego-type threads and any new hardware equipped with properly designed P3 threads.

Not only is the P3 thread stronger and more robust than most other attachment systems available, it also features specially designed adapters to allow the use of virtually any atomizer, tank or cartomizer available on the market today. By setting a new thread standard with the P3, future innovations can be adapted for use on the ProVari 3 as well!



**ProVari 3 510-adapter and trim ring**



**ProVari 3 Ego-adapter and trim ring**

## Batteries

We recommend you only use IMR high drain batteries in this device. This will give you the full range of output power needed to use the device. Only use approved batteries. Always feel free to contact us if you are not sure which batteries to use. To ensure you get the correct batteries you should always purchase them at [www.ProVape.com](http://www.ProVape.com). The ProVari 3 has the ability to detect what type of battery you have inserted and if that battery is capable of providing adequate power to the unit. If you use a poor quality battery, the ProVari 3 will reduce the output power to match what the battery is capable of safely providing. Please see the IQ (Input Quality) feature for more information.



**The ProVari 3 operates on a single battery. Never stack two batteries.  
Never use batteries that are not recommended for use in the ProVari 3.  
Never use magnets on your batteries as this is very dangerous.**

## Charging a Battery

Plug the charger unit into an appropriate power supply.  
Insert a battery into the charger and make sure you put the battery in the correct direction.  
Align the positive (+) end of the battery with the positive (+) mark on the charger.  
The LED on the charger will glow red when the batteries are charging.  
The LED on the charger will glow green when the batteries are charged.  
(This could vary depending on the charger that you purchased)



**Do not attempt to charge other types of batteries in the battery charger.  
The ProVari uses a special kind of battery. Only use approved rechargeable cells.  
NEVER use alkaline batteries and never try to charge an alkaline battery.**

## Battery Life

When the battery is depleted, the lighted push button on the ProVari 3 will begin to slowly flash and the device will shut off. At this time recharge the battery.

## Inserting a Battery

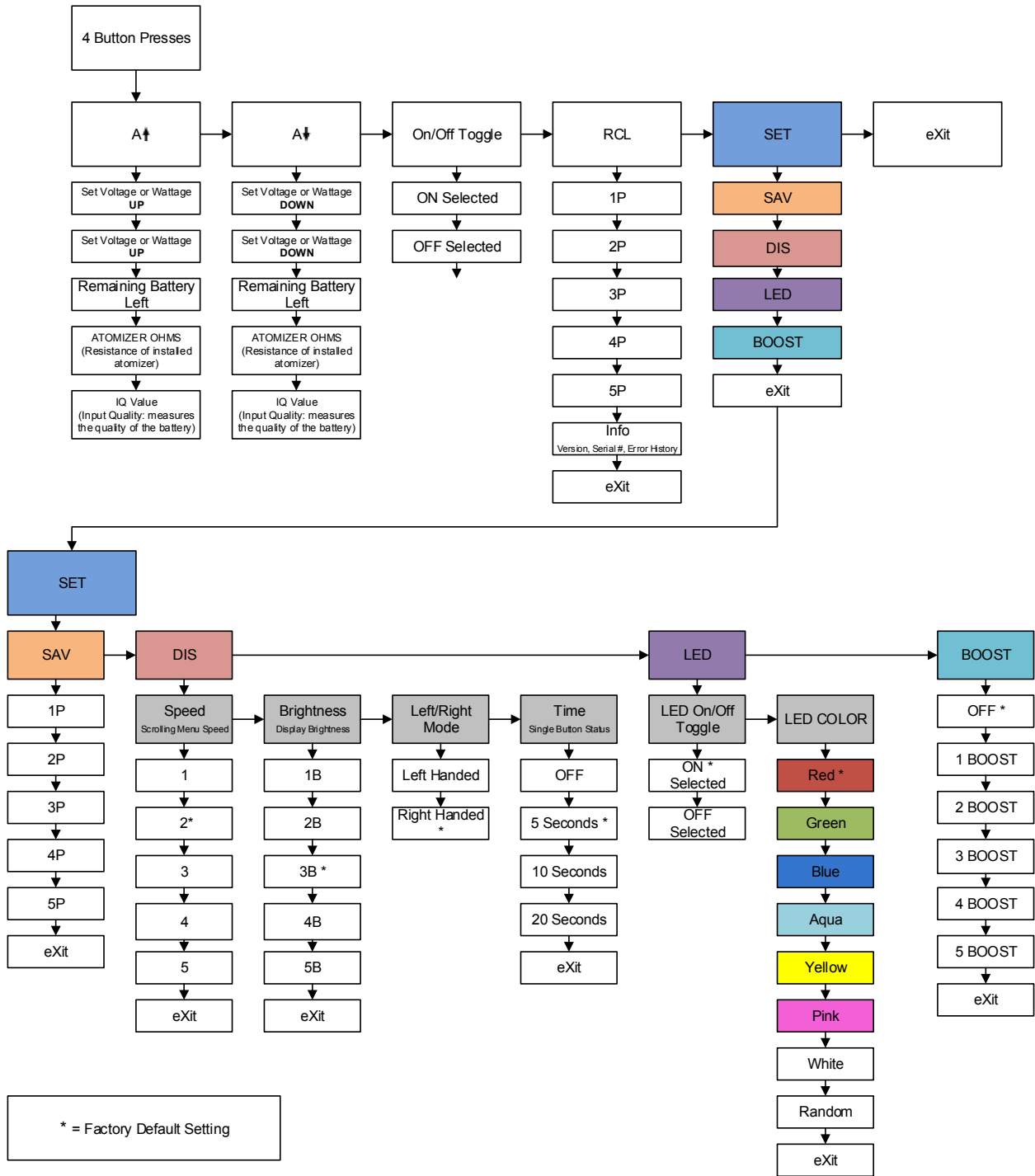
Unscrew the end cap and slide the battery, positive (+) end towards the front of the unit into the tube.  
Reinstall the end cap and take care not to over-tighten.

When assembling the unit, do not over-tighten the threaded parts. They should be snug, but not so tight that you won't be able to unscrew them when you need to replace the battery.

### Questions? Problems?

If you have any questions or problems with your ProVari 3, please feel free to contact us or visit the retail location where you purchased your device. To contact ProVape, visit [www.ProVape.com](http://www.ProVape.com) and click on the "Contact Us" link.

# Menu Flow Chart



## Screen Layout



You can enter the main menu by pressing the button 4 times. When the menu appears, you will notice there are several icons and options available. In the following pages, we will walk you through all of the different icons and how each one allows you to select various options.

In this example, the top section of the screen shows the scrolling icons. As the icons go by, clicking the button will select that menu item and take you further into that section. This is where you can make changes as to how the device works.

On the bottom left of the screen, you will see what mode you are currently in. In this example above, we are in Voltage mode and our voltage is set to 4.5V.



In the middle of the screen you will see a small arrow pointing up. This shows which feature you would select if you press the button.



In this example, if you press the button, this takes you into the Atomizer Up adjustment.



As the icons scroll by, click the button once when you see the icon you want to select.

4 Button Presses

## Check All Screen



The Check All function allows you to quickly see your basic settings on one screen. When this function is turned on (default) one button press will allow you to see the mode you are in (voltage or wattage), what the current voltage or wattage setting is, the amount of battery power remaining and the resistance of your atomizer (or the Boost Value selected). Every time you press the button, the Ohms and Boost Value toggle. This allows you to see both values within two button presses. If you have Boost turned 'off' then you won't see this value on your Check All screen.



In this example, we are in wattage mode and we have the wattage set to 9.0 watts.



The battery is at 86% power remaining.



Atomizer Ohms is at 1.8 ohms.



The Boost Value is 1B  
(this value appears every other button press, If turned on)




The Check All feature is adjustable or can also be turned off. The available options are OFF, 5 seconds, 10 seconds and 20 seconds. These values correspond to the amount of time the Check All display will stay on the screen after you release the button.

If you select OFF, then the Check All screen will not appear when you press the button.

To make changes to the Check All function, visit the menu SET > DIS > TIME. You will have a number of options where you can adjust the Check All Screen.



**Warning System** - The P3 has a warning system that alerts you about a problem. Anytime there is an issue that needs attention, this icon will appear on the status screen. 

In this example, the device is detecting OP (Open) meaning there is no atomizer installed or the atomizer is burned out. Making a correction to fix the problem will automatically reset this warning. If you want to know more details about this warning and how to fix the problem, you can get the details by going to the A(up) or A(down) menu. As the menu scrolls past the various icons, you will notice at the end of the scrolling icons there is a matching warning symbol that appears before the exit.



Click the button on this new menu item and the P3 will tell you what the problem is and how to fix it.

Note that after you fix the problem, this temporary menu item will go away and return to the normal set of menu icons (Set then Exit).



## Menu Options and Functions

In this section, we will discuss all the various functions of the ProVari 3 and what they do. While the ProVari 3 is a very powerful device and there are a lot of options, you will find that it's easy to operate and use with a little practice.

Press the button 4 times and you will start the scrolling icons for all the various functions. When you see a function that you want to access, press the button one more time and it will select this menu item.



This is the first set of icons that scroll when you first access the menu. The icons for Atomizer Up, Atomizer Down, Atomizer On/Off, Recall and Set will scroll on the screen. The menu will scroll twice before automatically exiting the menu system.

Next, we will describe each screen and what you can set in that area.



**Atomizer Up** – When selecting this menu item, you will be able to increase the Voltage (or the Wattage) supplied to your atomizer. In this section you will also have access to your battery life, atomizer ohms reading and the IQ (Input Quality) value of your battery and battery connection.

Once you have selected the Atomizer Up option, the first screen you will see will be the Voltage Adjustment screen. Clicking the button while on this screen will increase the voltage by 0.1 volts. Keep clicking the button or just hold it down to scroll through all of the available voltages.



When you have selected the voltage you want, stop pressing and/or release the button. After 5 seconds, the screen will automatically exit out of the menu system.

If you do not adjust the voltage on the first screen, after 5 seconds the Wattage Adjust screen will appear.



Clicking the button while on this screen will increase the wattage by 0.2 watts. Keep clicking the button or just hold it down to scroll through all of the available wattages.

When you have selected the wattage you want, stop pressing and/or release the button. After 5 seconds, the screen will automatically exit out of the menu system.

If you do not adjust the voltage on the first screen, after five seconds the Battery Mileage Gauge screen will appear. This screen displays the percentage of battery energy available to power the atomizer.



Five seconds after the Battery Mileage Gauge screen appears, the Atomizer Ohms screen will appear. This displays the resistance of the atomizing device attached to the ProVari 3.



Five seconds after the Atomizer Ohms screen appears, the IQ or Input Quality screen will appear.



The IQ value relates to the quality of your battery and the battery connection to the P3. IQ values lower than 50 signal a problem either with the battery or the connection. A poor quality, old or worn out battery will cause a low IQ value. Dirty contacts on either the battery or inside the P3 battery compartment can also cause the IQ value to be low. Try stretching your spring out a little to see if this helps improve your IQ value or stabilize that value. Also note that the IQ value does not really come into play until you go over 15 watts. If you use the device under 15 watts you do not need to be concerned with the IQ value.



**Atomizer Down** – When selecting this menu item, you will have access to all the same functions as Atomizer Up except you will be able to lower the power level.



**On/Off (Atomizer)** – This menu selection allows you to turn the Atomizer On and Off. In the event you will be storing the device in a pocket or purse and you do not want the power button to accidentally be pressed, you can set this to OFF. The atomizer will not fire until you turn this back on or you remove the battery which will reset this back to ON.

Once you have selected the Atomizer ON/OFF option, the next screen will confirm your selection. If you press the button again it will toggle back and forth.



When you see the setting you want, wait for 5 seconds and it will be set and the screen will automatically exit out of the menu system.





**RCL (Recall)** – Recall allows you to load a saved profile. A profile consists of all of the unique settings in use at a particular time. This makes it easy to retrieve special settings for different juices or accessories.

Later in this manual we will discuss how to save your settings into a profile.

Once you have selected the Recall option, you will be taken to the Recall screen. You can use the button to select one of the five different user profiles.

As you press the button, Profiles 1 through 5 and the Info icon will scroll past. When you see the profile you want to recall, press the button once.

For example, if you were to press the button while “4P” is on the screen, you would recall User Profile #4. After you have selected a profile, the screen will automatically exit out of the menu system after 5 seconds.



The Info icon provides additional information about your device.



Ver = the version of your software

SN1, SN2, SN3 - This is the digital serial number of your device. The combined three sets of digits creates the full serial number.

Error 1, Error 2, Error 3, Error 4, Error 5 - This set of error codes is helpful to ProVape if you are having trouble. If you need service or a ProVape customer service representative asks for the list of your error codes, you can access this area and read off the codes to help the rep understand and resolve the issues with your device.

If you choose not to recall a profile, you can select the Exit option to return to the previous menu level.





**Set (Settings)** – In the Set menu there are numerous different settings that allow you to customize the function and appearance of the ProVari 3. Under the Set category you can save a profile, adjust your display brightness, scroll speed, switch between left and right hand display mode, change the OnTime settings for the Check All function, switch the push button LED On or Off, alter the LED button color and adjust the Boost mode settings.

Once you have selected the Set option, you will be taken to the Set screen where you will see numerous menu options scroll on the screen. You can use the button to select one of the device setting options.



The icons for Save Profile, Display, LED and Boost will scroll on the screen.

The menu will scroll twice before automatically exiting the menu system.



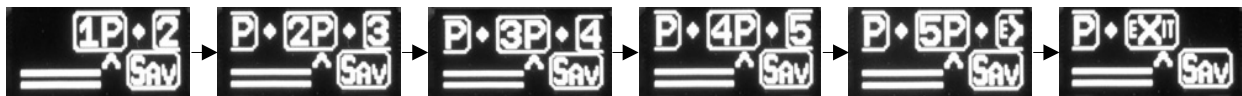
**Sav (Save)** – Save allows you to save a user specific profile. A profile consists of all of the unique settings in use on the device at a particular time.

These user specific settings include:

- Voltage or Wattage power level
- Boost level setting
- LED color
- LED On/Off setting
- Display screen brightness
- Display screen scroll speed
- Display screen left or right display
- Check All status screen display time (Time)

This makes it easy to retrieve special settings for different juices or accessories.

Once you have selected the Save option, you will be taken to the Save screen where you can use the button to select one of the five different user profiles.



Profiles 1 through 5 will scroll past.

When you see the profile you want to save, press the button once.

For example, if you were to press the button while “4P” is on the screen, you would save User Profile # 4.



If User Profile # 4 already has settings saved in it, they will be replaced with the current settings on the device. Old profile settings are overwritten.

After you have saved a profile, the screen will automatically exit out of the menu system after 5 seconds.

If you choose not to recall a user profile, you can select the Exit option to return to the previous menu level.





**Dis (Display)** – In the Display menu there are numerous different settings that allow you to customize the appearance of the OLED display. Under the Display option you can adjust your display brightness, scroll speed, switch between left and right hand display mode and change the OnTime settings for the Check All function.

Once you have selected the Display option, you will be taken to the Display screen where you will see numerous menu options scroll on the screen. You can use the button to select one of the device setting options.



The icons for Scroll Speed, Display Brightness, Display Right/Left mode, and Check All screen Time (time duration) will scroll on the screen.

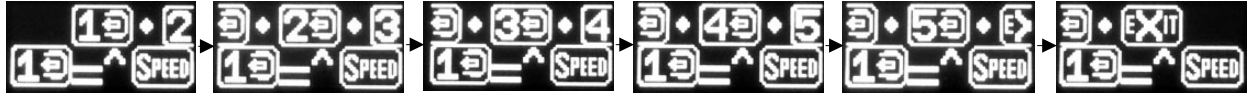
The menu will scroll twice before automatically exiting the menu system.





**Scroll Speed** - This section allows you to adjust the speed of the scrolling menu.

When entering this menu area, you will be presented with speed selections 1 through 5.



Each time you press the button to select a number, the display will scroll faster or slower depending on what setting you have selected.



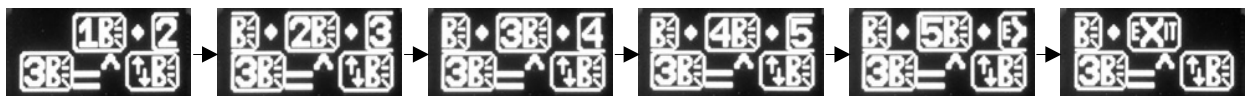
In this example, the unit is set to Scroll Speed # 1 which is the slowest speed. If we were to select # 3 the screen would begin scrolling faster.

Once you are happy with the scroll speed, select Exit to save.



**B (Brightness)** – This will change the brightness of the display.

When entering this menu area, you will be presented with brightness selections 1 through 5.



Each time you press the button to select a setting, the display will get brighter or dimmer depending on what setting you have selected.



In this example, the unit is set to display Brightness 3B which is the medium intensity setting. If we were to select 1B, the screen would become dimmer since 1B is the lowest intensity.

Once you are happy with the screen brightness, select Exit to save.





**L/R - Left or Right screen display** – This setting changes the orientation of the display. This feature is used to switch the device for use in either the right or left hand.

As you select the two options, you will see the display flip from left to right handed mode. In this example, if we were to select the icon on the screen, the display would flip upside-down.



Once you are happy with the screen orientation, select Exit to save.



**Time** – This setting controls the Check All status screen duration. The status screen shows all the critical data with one button press. Battery capacity, atomizer ohms and voltage (or wattage) settings are displayed.

In this menu, you can turn this feature off or change the duration of the Check All status screen to 5, 10 or 20 seconds.



Click the button to select the time duration you want. In this example, the current setting is 5 seconds. If we were to select the icon on the screen, we would change the Time duration to 10 seconds.

Once you select the option you want, select Exit to save.





**LED Menu** - This menu section allows you to turn the LED button on and off and lets you change the color of the LED button.

Once you have selected the LED option, you will be taken to the LED screen where you can select either the LED On/Off option or the LED Color option.



The menu will scroll twice before automatically exiting the menu system.



**On/Off – LED Button On/Off option.** This toggles the LED button on or off. When you press the button to heat up your atomizer, if the LED is turned on, then the button will light up the color of your choice. When this function is turned off, the LED button will not turn on.

When you see the setting you want, press the button once to select it. After 5 seconds, the screen will automatically exit out of the menu system.

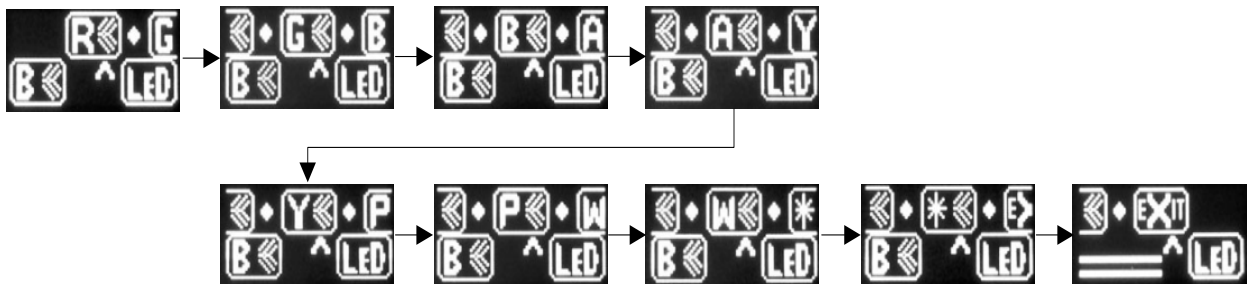


If you choose not to change settings, you can select the Exit option to return to the previous menu level.



**C – LED Button Color** – The LED color selection allows you to change the color of the LED button. Available options are red, green, blue, aqua, yellow, pink, white or random.

Once you have selected the C option, you will be taken to the LED Button Color screen, where you can select any of the optional button colors. When you enter this menu, the button will light up and show you all the different colors as it rotates through the different selections.



When you find a color you like, simply press the main button once and that color will be selected. In this example, the color “red” has already been selected. If you were to press the button to select the current icon “G”, the button color would be changed to “green”.



To save that color, select Exit.





**Boost Menu** - This menu section allows you to turn the Boost Mode On and Off and lets you change the duration of the Boost.

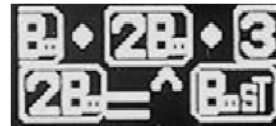
- Boost 1 - .25 seconds
- Boost 2 - .50 seconds
- Boost 3 - .75 seconds
- Boost 4 - 1.00 seconds
- Boost 5 - 1.25 seconds

Once you have selected the Boost option, you will be taken to the Boost screen where you can set the Boost mode Off or set the Boost mode duration which automatically turns Boost mode On.



The menu will scroll twice before automatically exiting the menu system.

For example, if you set your wattage to 9 watts, then turn on boost mode 2. When you press the button, the device will boost the power for the first .5 seconds and then it will drop down to 9 watts.



Increasing the boost level to 2, 3, 4 or 5 will increase the amount of time the device boosts the power before it drops down to your selected 9 watts.

Note that turning the ProVari up to max wattage and boost up to 5 will not exceed the maximum output of the unit which is up to 20 watts.

Once you select the option you want, select Exit to save.



## Error Messages and Fixes

Error Message		Suggested Fix
OUTPUT TOO HIGH OR BAD ATOMIZER [1]	>>>>>	REDUCE VOLTS / WATTS OR REPLACE ATOMIZER
ATOMIZER OHMS BELOW LIMIT [2]	>>>>>	REPLACE ATOMIZER AND TRY AGAIN
OUTPUT TOO HIGH [3]	>>>>>	REDUCE VOLTS / WATTS
TEMPERATURE HIGH [4]	>>>>>	LET COOL AND REPLACE BATTERY
TEMPERATURE HIGH [5]	>>>>>	LET COOL AND REPLACE BATTERY
OUTPUT FAULT [6]	>>>>>	RETURN FOR REPAIR
OUTPUT FAULT [7]	>>>>>	REPLACE ATOMIZER AND TRY AGAIN
INTERNAL FAULT [8]	>>>>>	RETURN FOR REPAIR
INTERNAL FAULT [9]	>>>>>	RETURN FOR REPAIR
BATTERY VOLTS HIGH [10]	>>>>>	USE CORRECT BATTERY
INPUT QUALITY [IQ] POOR / BAD - OUTPUT LIMITED [30]	>>>>>	CHECK BATTERY, CONTACTS AND SPRING
OUTPUT SETTING OR ATOMIZER OHMS TOO HIGH [31]	>>>>>	REDUCE WATTS OR CHANGE ATOMIZER
OUTPUT SETTING OR ATOMIZER OHMS TOO LOW [32]	>>>>>	INCREASE WATTS OR CHANGE ATOMIZER
VOLT SETTING TOO HIGH OR ATOMIZER OHMS TOO LOW [33]	>>>>>	REDUCE VOLTS OR CHANGE ATOMIZER

## Error Message Details

In the event that you get an error message, the P3 will alert you on screen as to the reason for the error and the suggested fix. Above is a list of the error messages that can occur.

**Check Battery, Contacts and Spring** - This error appears when the IQ value is too low. This can happen if you are using a bad battery or the spring is not making a good connection with the battery. Oftentimes this can be fixed by removing the end cap and adjusting your spring, checking that all your contacts are clean and then reinstalling the end cap.

**Reduce Watts or Change Atomizer** - If the atomizer ohms are too high or your output wattage is set too high this error can occur. Try lowering the power level or change your atomizer.

**Increase Watts or Change Atomizer** - There are situations where you need to increase the watts. For example, if you set the device to 3 watts and try to use a low resistance atomizer, the device cannot drive power at that level. This scenario will prompt this error.

**Reduce Volts / Watts or Replace Atomizer** – This error can occur if the voltage or wattage is set too high and P3 cannot safely power the atomizer with your current settings. This can also happen if you have the voltage or wattage set too high along with the boost mode set too high. Try lowering your

settings. Most of the time, if you have these power settings too high, you will be burning the juice and it won't taste very good or you risk burning out your atomizer.

**Replace Atomizer and Try Again** – This can happen if the resistance of your atomizer is too low or has failed. Anytime the resistance of your atomizer drops, in most cases it has burned up or failed. This can also occur if you make your own coil on a RBA and you go below the resistance level that is safe. Typically this is anything below .70 ohms. Try installing a new atomizer and see if the problem goes away.

**Let Cool and Replace Battery** – While these are very rare error messages, the system is monitoring for an unsafe condition with your battery. If your battery ever gets too hot and it's not safe to use, carefully remove the battery and discard. If the unit is too hot, it's best to set it down and wait for it to cool off before removing the cell. Anytime you have a battery fail, always discard the cell and replace it with a new one. Never try to recharge or reuse a bad battery. Also remember to always use the correct batteries in the P3.

**Return for Repair** – If you get this error, try installing a new battery and replace the atomizer to see if the problem goes away. If you continue to get this error, contact customer service for assistance.

**Use Correct Battery** – This error will occur if you try to stack two batteries together or you use the wrong battery. Replace your battery or only use one cell and try again.



## P3 Energy Gauge

### What is Different about the ProVape 3 Available Energy Display?

The P3 Available Energy Display is not like any other battery meter you have seen before for several reasons. This section will explain why it is so different.

All other devices in use today that use a battery and have some sort of a "gas gauge" have low current drain loads (cell phones, tablets, MP3 players).

Low current drain loads take a small amount of energy out of the battery in each use cycle or continuously take a small amount of current out of the battery. The amount of energy drain is typically less than ½ watt. Also, the current used is typically consistent, meaning it is close to the same all the time. In addition, these devices typically have a captive battery (one that you cannot replace) that is a controlled component that is not changed. This is NOT the case with the P3.

Because of this, ProVape engineering has designed a special energy gauge algorithm to be more useful to the P3 user. It displays the true percentage of available energy more accurately.

The following factors are used in the special algorithm that allows the energy gauge to be more accurate.

- 1) The lithium ion battery can supply more energy to the atomizer if its rest time between uses is longer AND will supply less energy if the rest time is shorter.
- 2) The battery can supply more energy if the use current is less and uses less energy than if the use current is larger.
- 3) All batteries are different. There is a huge difference between one brand and another. The battery capacities and internal resistances can be significantly different, as much as 40% to 50% between brands. Capacities and internal resistance can be +/- 15% difference between batteries even within the same brand. And to make it even more complex, each time you use a battery, its capacity and internal resistance will degrade and change. This is why after 200 to 300 charge/discharge cycles, the battery capacity will be down to 75% - 85% of what it was when it was new. Beyond 300 charge/discharge cycles, the capacity will degrade at an even faster rate.
- 4) The Available Energy can also be affected by the quality of the end cap tightness, the end cap spring and any corrosion on the battery contacts including the positive and negative battery surfaces. The P3 also has a feature that allows the user to measure and view the quality of the battery and all input contact resistances. This is a feature called Input Quality (IQ). For a detailed description of this feature, see the ProVape IQ description document. These contact surfaces are much more sensitive because of the high current drain used by the P3. To heat an atomizer to the temperatures needed to vaporize the e-liquid can require currents in excess of 3 to 4 amps. Very few, if any, alternate hand-held devices use this kind of power in their application.

When considering these factors in this unique application, ProVape engineering has designed the energy gauge display of Available Energy to provide a more TRUE display. Because of this, it will work differently than what you are used to using. It will work differently in the following ways:

- 1) When a battery is initially installed, the energy gauge will display ?? instead of a percentage for about 1-2 button presses. It is arriving at its initial estimate of the battery's Available Energy. Remember, the battery you install may not be fully charged. It has to determine what is the initial state of charge.
- 2) Each time you press the button to use energy from the battery, it makes a new estimate using all the factors above.
- 3) The energy gauge displayed percentage could go up or down. That is TOTALLY different from other gas gauge displays, but perfectly normal for the P3. It is important to remember that the P3 gas gauge is NOT displaying the amount of energy that is in the battery but instead the amount of Energy that is Available to the atomizer. This can change from button press to button press depending on the factors described above. An analogy is to compare the miles you can get out of a car gas tank. You will get more miles if you drive slower because the air friction is less. But, at the same time, realize that a battery is a completely different kind of chemical energy supply system compared to the chemical energy in a car fuel tank. You will get more uses out of a battery if you let it rest longer between button presses. This is NOT the case with the fuel in a car's fuel tank.

The energy gauge display in the P3 is very unique in this regard.  
This is another example of innovation that you can expect from PROVAPE.

## P3 IQ Description

### P3 Input Quality (IQ) Feature Description

The P3 has a unique feature which is called Input Quality (IQ). The original ProVari was the 1<sup>st</sup> PV to offer the user the capability to measure the atomizer resistance. This new feature extends to the P3 with the capability to allow the user to measure the total quality of any input contact or the battery's internal resistance.

Why is input resistance so important? The short answer is because without this measurement, it prevents the P3 from using the full capacity of the battery.

The long answer is that this happens in two ways. It happens because higher input resistance, no matter what the cause, converts input energy into wasted heat energy that does not get to be used by the atomizer. In addition, this input resistance, when high currents are drawn, drops voltage. This voltage drop is then added to the normal voltage drop and will cause the P3 to terminate the battery use because the P3 thinks the battery has no energy left. The P3 cannot tell if the voltage drop is due to a normal end-of-charge condition OR because it is due to a higher than normal input resistance.

What are the causes of a higher than normal input resistance?

- 1) Internal Battery Resistance. The highest quality batteries have a very low internal resistance. There are some very poor quality batteries that are not designed to be used in high current drain applications like this PV. The IQ feature will allow you to make this measurement and determine if you are going to get good performance.
- 2) Positive Contact resistance. Sometimes corrosion and/or dirt can collect on the positive contact in the P3. This is designed to be a high performance gold plated contact. If there is dirt build-up, it can cause the series resistance to be higher than normal and will start to affect the system performance. If dirt or corrosion build-up is suspected, it is best to inspect the contact and clean it with a Q-tip. A Cleaning Kit is available for this purpose.
- 3) The battery spring is a high use part that gets exercised often. As it wears out, its performance can degrade to the point where the spring tension is not as strong as it was when it was new. This can result in a higher input resistance. This part should be routinely replaced every 6 months.
- 4) The metal surfaces on the batteries can have dirt or oxide layer build-up that will start to affect the internal resistance. These surfaces should be polished often to minimize any surface dirt/corrosion build-up.
- 5) The end cap threads, which conduct the high currents, should be routinely cleaned every few weeks. Any dirt/corrosion build-up on the end cap threads can cause the input resistance to increase.

The IQ feature allows the combination of all these resistances to be measured. It has no way to directly know which resistance is the problem but it does give you the information that a problem is present. There is a way to indirectly determine if the battery is the problem because the battery can be replaced with another battery. If the IQ with one battery is GOOD and the alternate battery is BAD, then the problem can be isolated to the battery. However, sometimes the contact resistance can change with the simple act of removing one battery and inserting another. Caution is advised when using deductive reasoning to isolate problems.

Also, the use of a simple log to track the IQ can be beneficial. Measure and record the IQ when the unit is new and monitor it over the life of the unit to determine if it is degrading. You can even keep track of which batteries are the best and how the resistance changes over the life of a battery. This new tool is now available to help determine if the system is performing at a high level and when it is not, it can help to isolate the cause of the problem.

The IQ (Input Quality) feature is another innovation of ProVape.



ProVape Inc.

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