



FROM THE LABS AT
GRIN TECHNOLOGIES
FOR EBIKE RIDERS
AROUND THE WORLD

CYCLE SATIATOR 2014



A PROGRAMMABLE UNIVERSAL
FAST CHARGER FOR ALL
TYPES OF BATTERY PACKS

- Supports All Major Chemistries
- 20-60V Output Range
- 100-240 VAC Input Range
- Up To 8 Amps Charging Current
- Rugged, Sealed, and Compact
- 95% Power Efficiency

The Cycle Satiator® defines a whole new class of 'smart charger', one that gives you, as a user, dealer or OEM, full control to set up the optimal charging scenario for your batteries

DESIGN FEATURES



UNIVERSAL COMPATIBILITY

The Satiator is not limited to charging a specific battery type. Instead this one charger model can be configured for virtually any Lithium, Nickle Metal Hydride, or Lead Acid battery pack with a full charge of 60V or less.



FAN FREE EFFICIENCY

The power electronics were carefully designed to reach 95% efficiency at full load, eliminating the need for a fan to get rid of waste heat and keep things cool. No more buzzing fan noise and no risk of charger meltdowns if the fan fails.



SEALED AND WATERTIGHT

A gasketed enclosure and connector design strategy keeps the charger electronics protected in the face of rain, road spray, dust storms etc.

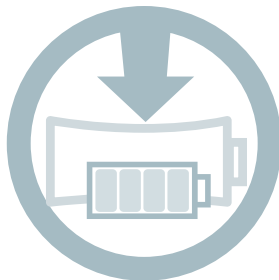


INFORMATIVE DISPLAY

A large and bright OLED display screen shows all your realtime charging statistics; you can see the total amp-hours and voltage along with a clear graphic indicating the approximate charge in the pack.

IMPRESSIVE POWER DENSITY

At almost 0.5 watts / cm³, the Satiator packs 2-3 times more power per volume than most other chargers available. That translates into big league charging currents in a portable size device.



COMPACT AND NARROW SIZE

The charger is less than 5cm high and 8cm wide, allowing it to fit easily in a saddle bag, under the rear rack, inside a frame triangle, or screwed to a chassis.



POWER FACTOR CORRECTED

AC Input runs from 100-240V, allowing for worldwide operation without any voltage selection switch, and features a 0.99 Power Factor which will please your utility grid too.

Such versatility and impressive specs provide many advantages both to end users and OEM's



BENEFITS



SERIOUSLY FAST CHARGING

With a 360 watt power output, the Satiator can charge your batteries in half the time of typical 4amp 'fast' chargers. It Delivers up to 8 amps with 24 and 36V packs, and 7 amps with 48V packs.

ONBOARD INSTALLATION

The rugged, compact, and fan-free design allows the charger to be permanently mounted on the vehicle without risk of premature failure from vibration or exposure.



ONE CHARGER FOR ALL

No need for a different charger for each battery type, the Satiator can be programmed to work correctly with almost any packs on hand. Select from one of our common preloaded profiles or make your own custom charge profiles.



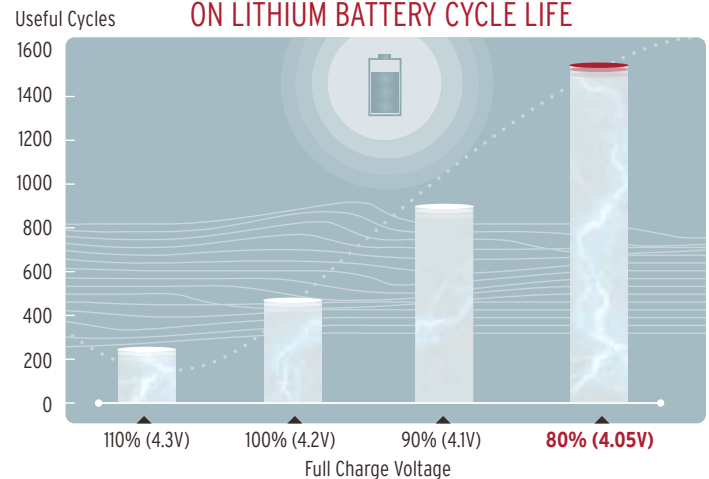
QUICK SELECT

Have anywhere from one to dozens of preconfigured charging profiles active, enabling you to readily switch between output modes with just a quick button press.

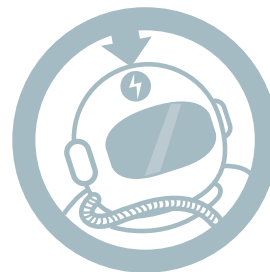
SATIATE FOR ENHANCED CYCLE LIFE

Most lithium batteries are capable of vastly improved cycle life if they are not fully charged to saturation all the time, but at the expense of reduced range.

EFFECT OF CHARGE VOLTAGE ON LITHIUM BATTERY CYCLE LIFE



With the Cycle Satiator, you can program your primary profile to give an 80% charge, and have a secondary profile that does a 100% charge when you need full range. Then have the best of both worlds, a battery that lasts thousands of cycles but still goes the distance when you need it.



FUTURE PROOF

The firmware can be upgraded in the field, and along with the flexible custom profiles this means your Cycle Satiator is ready for whatever batteries the future has in store.

SPECIFICATIONS

ELECTRICAL

Input Range	100-240VAC 50-60Hz
Output Range	24-60V*, 0-8A, 0-360 Watts
Operating Efficiency	95% @ 230V, 94% @ 120V
Power Factor	> 99%
No Load AC Power	< 1 Watt
Output Leakage	< 100uA

*Up to 63V possible for NiMH/NiCad and SLA Chemistries

MECHANICAL

Dimensions	237 x 78 x 48 mm
Mounting Holes	5mm Flange Slots 220mm Apart
Weight	1.06 kg (1.33 kg with AC-DC cords)
Chassis Material	Diecast Aluminum

CONNECTORS / CABLES

AC Input Connector	IEC320-C14
DC Output Connector	SINGATRON 2CT3002-W03400
DC Output Cable	1m with 3-Pin Neutrik XLR (1=DC+ 2=DC- 3=signal)

INTERFACE

Dual Tactile Push Buttons for Field Setup
128x64 OLED Graphical Display for Charge / Profile Info
LIN Bus on Signal Pin for PC Communication and Firmware Updates (Requires Custom Cable)

REGULATORY CERTIFICATIONS

Safety	UL 1012, CSA C22.2 No. 107.2, CE / IEC 60335-1/2-29
Emissions	FCC Part 15 B, EN55014, EN 61000-3-2, EN 61000-3-3
Immunity	EN 61000-4-2/-3/-4/-5/-6/-11



DESIGNED IN CANADA

The engineering and design team behind the Satiator are avid ebike users with years of experience in electric vehicle technology. This product is the charger they always wished they had, and we hope you feel the same way too.

FOR OEM AND BUSINESSES

In addition to electric bike enthusiasts, this charger is of great value to ebike businesses that need to manage a range of battery packs, and for OEMs wanting to distinguish their vehicle with a rugged and modern full featured charger.

CERTIFICATIONS

This device is CSA, UL, and CE listed, meaning it has passed rigorous safety and reliability tests, and can be legally resold in most jurisdictions.