

# MADE TO LAST - LONG LIFE - SOLAR EQUIPMENT

Here is a selection of robust solar devices, which can last decades, and are near incorruptible.

**FACTORY FRESH - LATEST VERSION!**  
**ULTRA ROBUST GERMAN-AUSSIE DESIGN**  
**AUSSIE MADE - BUILT FOR DECADES OF WORK**  
**SEA AIR & TRAVEL VIBRATION HARDENED**

**5400W 5 SEC LONG SURGE - STARTS ANYTHING 1PHASE!**  
**2200W FOR 30 MINS** *Runs 2.2kW cookers, ovens, hot water booster, compressor etc.*  
**1800W CONTINUES** *Runs vacuums, washing machines, bread makers, fridges etc.*  
**IDEAL 10A MAINS REPLACEMENT** *Pure sine out protects sensitive devices*  
**Uses: Industrial, Home, Camping, Telecom, Aircraft, Marine, Truck, etc.**

**2 YEAR  
WARRANTY**

**TECHNOLOGY  
MADE-2-LAST  
DECADES**



There are many versions of LATRONICS inverters, ranging from 500W-7000W, but this is the most cost effective way to emulate a 10A mains outlet.

## LATRONICS INVERTER LS1824 SPECIFICATIONS

**Popular single phase unit - Goes well with 4 x 220AH Solid Crystal batteries which can comfortably deliver the required 90A, when the inverter is powering at its full 2200W.**

- **IN: 24V (20V-29V)**
- **OUT: 230 VAC +/- 4% @ 50hz +/- 0.1%**
- **POWER: TRUE CONTINUOUS 1800W PURE SINE WAVE 2200W for 30mins - enough to run most 10A appliances**
- **SURGE: 5400W FOR 5 LONG SECONDS - Starts most anything - even a 2400W air compressor!**
- **STANDBY CURRENT: just 60mA (Near zero battery drain)**
- **EFFICIENCY AT ALL LOADS: ~90% or better (95% Peak Efficiency)**
- **WARRANTY: 2 years**
- **11KG**
- **330 x 296 x 150 mm**
- **RRP \$2101 - Get it now for over 10% off as a combo with 4 x220Ah Solid Lead Crystal Batteries (which are not to be mistaken for the lesser robust Gel Lead Crystals!)**

# LATRONICS, THE "ROLLS" OF INVERTERS!

FOR MOBILE, HOME & COMMERCIAL USE

VIBRATION, DUST & SEA AIR RESISTANT – IDEAL FOR BOATS & CAMPERS

GERMAN / AUSTRALIAN ENGINEERING

AUSTRALIAN MADE & SERVICED

INDUSTRIAL GRADE, HEAVY DUTY, ROBUST & DURABLE PARTS USED ONLY

REAL WORLD SPECIFICATIONS - THEY PERFORM AS SPECIFIED!

SOLID 2 YEAR WARRANTY

30 YEARS OF HARSH AUSTRALIAN TRACK RECORD

OVER 70,000 UNITS SOLD - VERY FEW COMEBACKS

**MOST ECONOMICAL TO OWN** - They are designed to perform under load for decades and they will often outperform other brands which boast much higher outputs.

**NOT BUILT FOR LANDFILL** - Don't contribute to landfill by buying a cheap Mickey Mouse inverter! Get one which will last many years and can be repaired even after decades of use! When setting up an off grid system, the inverter is where you DON'T want to skimp!

***FACTORY FRESH - BUILT TO DEMAND!***  
***Factory direct delivery - Get latest development***  
***Factory direct warranty included***

Inverter works on 24 or 26V battery banks - Saves battery power like no other because of near zero drain when on standby (<80mA) - Peak efficiency 95%!  
True DC AC separation via heavy duty Toroid Transformer - Stops digital signals crawling all over your sensitive equipment. 1 x standard Aussie AC outlet + hard wire junction box on side.  
1m long, heavy DC cables with lugs.



**2 YEAR  
WARRANTY**

**TECHNOLOGY  
MADE-2-LAST  
DECADES**



## **THE BEST OF THE BEST - WHY?**

Here are some of the reasons why we (and many others) think that the Latronics inverters are among the best inverters in the world.....

## **GERMAN AUSTRALIAN ENGINEERING**

German and Australian engineers at Latronics have worked tirelessly to produce the best inverter range possible, for the demanding Australian environment. For 30 years, Latronics has proven that their inverters are truly of an industrial grade. Their high durability, heavy duty capability, high efficiency and reasonable prices make them a very wise choice. When compared to other quality inverter manufacturers, Latronics also excels by having amongst the lowest standby currents in the world (under 80mA). Together with astounding efficiencies across all load levels, (which maximise battery life), coupled with incredible durability, Latronics inverters come up as the clear winner for anyone wanting reliability and long term, mains compatible power. That's why the Australian government and many industrial companies buy their inverters from Latronics.

## **MADE IN AUSTRALIA**

Newly built solar powered factory

**DIRECT SHIPPING FROM  
THE LATRONICS FACTORY**



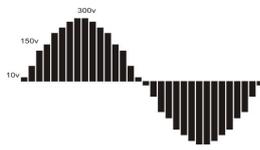
**SUNSHINE COAST AUSTRALIA**

All inverters are manufactured to top industrial standards in a "state of the art" factory on the Sunshine Coast. Only the highest quality parts are used and everything is built by hand and double checked before being thoroughly burned in and sent out.

## RUGGED DESIGN

Built with rugged casings, over specified electronics, salt air / moisture and dust proof electronics as well as with a shock resistant layout, these inverters are good performers in both stationary and mobile applications. Eg: on islands, in boats and campers as well as at home or in commercial environments.

## EXCELLENT SINE WAVE OUTPUT – BETTER FOR YOU & YOUR EQUIPMENT



The inverters provide a tough and clean sine wave output which can be used on sensitive as well as heavy duty equipment alike, just as you would use mains power. Unlike pure digital switching power supplies which can send high frequency signals crawling all over your power lines and equipment, the bulkier Latronics inverters use heavy toroid (doughnut-shaped) transformers to deliver a solid, clean and calm sine wave. The output is often even cleaner than the mains power itself!

Due to smart meter communications and the likes, the mains has an ever increasing amount of high frequency signals sent over it. This essentially turns your house into an antenna cage which you live inside of. There are many online videos and reports about the health ramifications of these frequencies. If you need 230VAC, then Latronics inverters are a healthy choice.

Another advantage of the toroid transformer is that it acts like a big shock absorber, which softens the blow to the DC electronics if the AC side is hit by a sudden surge. Digital inverters don't have this suspension and as such, can blow much easier.

## DURABILITY COUPLED WITH HEFTY SURGE CAPACITIES

Unlike many others, Latronics inverters perform beyond their actual specified power, making them very usable and anything but whimsical. For example, you won't find solder joints melting due to overheated parts, fans constantly blasting dust through the coolers at noisy cyclonic speeds or most annoyingly, the inverter not starting because it had to give a power surge for more than a few milliseconds!



The hard core Latronics inverters will supply sustained high surge currents for 5 long seconds and an 1800W inverter will even start a 3HP compressor, a full sized fridge, a heavy duty water pump and power tools. Try that with a cheap inverter!

Fact is that many budget inverters (even with 10kW surge ratings) often won't even start a bar fridge and as far as continuous output power is concerned, they often won't even provide half of what they are rated for and even if they did, they are likely to burn out if required to produce full power for longer periods of time. Anyone with experience in cheaper inverters will know exactly what we mean.

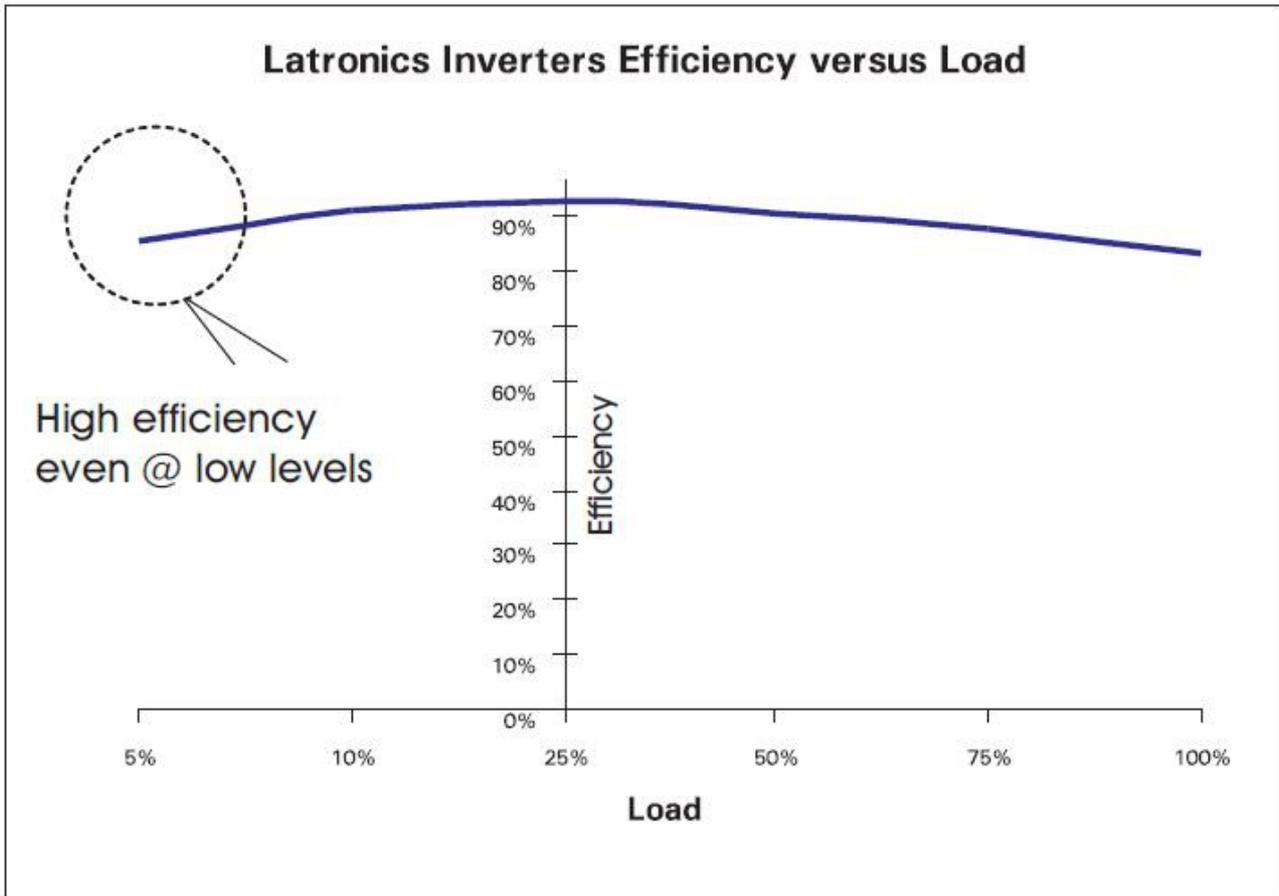
## ALMOST ZERO BATTERY DRAIN WHEN IN IDLE MODE

Another very important feature of the Latronics inverter is that they only use 19-75 milliamps (depending on model) when in idle mode. This is important if you want to conserve battery power.



Other inverter brands (even the good ones) can have idle powers which run into the several amp region and that can drain your camp batteries within a night!

## HIGH EFFICIENCIES ACROSS THE BOARD



Latronics inverters have high durable efficiencies of around 90% under high as well as low load (not to be confused with the short term peak efficiency at optimal load level, which some budget inverter manufacturers choose to quote).

Heavy usage companies like SolarLaserProductions, have for years trusted Latronics to reliably run their heavy load LASER, lighting, fogging and sound equipment as well as their camp set-ups. Prior to using Latronics inverters, they tried many other inverters and were almost always disappointed. They also noticed that there is no hum or noise to be heard in their speakers when using Latronics inverters. Something many others could not provide.



## **SAFETY**

These inverters are built to stringent safety standards and have all the required built in protection to ensure highest human safety. This reduces the chance of electric shock, fire or your equipment burning out. Yes, bad inverters can dramatically shorten the life of your equipment! This safety the kind of thing which is often lacking in cheaper inverters. In fact, we have been amazed at the very low safety level of many imported products (not just inverters) with earth wires not connected, and wires on generators exposed in places where hands can touch them. One has to ask oneself if a death is really worth the savings one makes, when buying a cheaper product.

### **2 YEAR WARRANTY** (2-3 years depending on model)

Latronics inverters come with a full Australian based factory warranty. Even after the warranty expires, if you have a problem, don't throw it away, repair it! Inverters generally far outlive their warranties and in the rare case where one fails, repairs generally only cost \$300-\$600 and can be done within a few days.

## **SHIPPING – 10 WORKING DAYS**

To assure that each inverter is always built to the latest development standards, Latronics only builds to demand and rarely has stock on the shelf. Because of this, you may find that the shipment can take around 10 working days before it goes out. Please be patient. It's worth the wait. After all, what is a 10 day wait when you end up with an inverter which is likely to last you several decades!

## **HOW TO PICK THE RIGHT SIZE INVERTER**

Inverters under 1000W should have surge capacities of around 10x the motor wattage and inverters over 1000W should have at least 5x the motor wattage capacity. Eg. If your bar fridge has a 100 watt rating, you should aim for an inverter with at least a 1000 watts of surge rating.

The continuous output level is then calculated by adding up the power of all of your equipment which you will use simultaneously. You can choose a lower continuous power if you never run several appliances at the same time. You can help manage this by using timers or a manual switching system.

Eg. The fridge is always off during breakfast lunch and dinner time when kettles, toasters and induction cookers are being used. Don't vacuum when doing the washing. For simultaneous use of equipment, we recommend over-sizing your inverter or better still, getting 2 or 3 x 1800W inverters to supply separate circuits. This also has the advantage of you having a backup if ever one inverter needs to be sent away for repair.

## INCORRUPTIBLE SOLID CRYSTAL BATTERIES

These ultra robust and ultra safe batteries which can last decades, have been on the international market since around 2000 and are now available in Australia. They are available in all sizes from 6 & 12V UPS and alarm batteries, through 6 & 8V buggy, 12V car and truck, to deep cycle 2V solar batteries.

### What makes these batteries special, the technology explained in 84 Words...



Lead crystal batteries have special features, including a unique micro-absorbent mat, thick, high purity plates made from a life-extending lead calcium selenium alloy, combined with a SiO<sub>2</sub> based electrolyte solution. This improves the reaction ability between the electrolyte and active material on the plates to prevent it becoming brittle and falling away which boosts the life cycle.

When it's charged/discharged the liquid changes into a crystallised state which greatly reduces the risk of electrolyte leakage, making it safer to transport, store and use.



**3 YEAR  
WARRANTY**

**TECHNOLOGY  
MADE-2-LAST  
DECADES**

**330AH 2V**  
**VIRTUALLY INCORRUPTIBLE!**  
**SAFE SOLID CRYSTAL BATTERY!**  
**DRAIN TO 0V WITHOUT DAMAGE!**  
**10-20 YEARS LIFE SPAN!**

**7500 Cycles @ 10%**  
**200 x Less Gassing**  
**Industrial, Camping, Telecom,**  
**Aircraft, Marine, Truck, Solar**



**3 YEAR  
WARRANTY**

CNFJ-300		\$360.00
2V 300Ah	<b>3 Year Warranty</b>	
Cyclic: 2.45V 90A (25 °C)		
Float: 2.27V (25 °C)		
C10 = 300Ah C20 = 330Ah		
C120 = 360Ah		
Weight: 22 kg / 48.50 lbs		
Dimensions: L176xW154xH335mm		



**TECHNOLOGY  
MADE-2-LAST  
DECADES**

## ADVANTAGES OVER OTHER BATTERY TYPES

**Made of long lasting dry crystal materials**, they gas 200 x less than other sealed batteries. That is practically ZERO!

**Ultra safe, non explosive** and near impossible to get to sulphate (used by choice on many aircraft).

**They can be repeatedly flattened** and keep bouncing back. Never worry about flat battery damage again! See Video: <https://www.youtube.com/watch?v=O45eLd5YotM>

**Capacitor like – they charge 2-3 x faster** than standard lead acid batteries. Ideal for rainy days, as the batteries will bounce back quickly during short breaks in heavy cloud.

**They work through enormous temperature ranges** (-40 to 65C), where most other battery types would weaken or fail. The best range for strongest power is -5 to 35C.

**They are more environmental with less lead, only 5% acid** and because they dry out when used a few times, they are immune to the problem AGM and GEL's have of dyeing when when they dry out.

**Even though they are more expensive** than AGM or gel, at around \$5-6/Ah@12V, having 3-4 X the life cycle, they work out much cheaper. Here a heavy duty life cycle comparison.

	LEAD ACID	LEAD GEL	LEAD CRYSTAL®	LITHIUM
TEMPERATURE	-18°C - +45°C	-18°C - +50°C	-40°C - +65°C	-20°C - +65°C
USAGE LIFE	2-3 years	3-4 years	8 - 12 years	5-6 years
ENVIRONMENTAL IMPACT	harmful	harmful	friendly	friendlier
TRANSPORT SAFETY	poor	average	very good	very poor
HANDLING SAFETY	average	good	very good	average
80% DISCHARGE CYCLE	350	400	1400	1000
HIGH CURRENT DISCHARGE ABILITY	poor	poor	very good	average
PERFORMANCE	average	average	very good	good
RECYCLABILITY	good	good	very good	poor
SIZE	average	average	average	small
PRICE	lowest	low	low - med	5-6x higher than gel
COST PER CYCLE	average	average	low	high

Best Performer

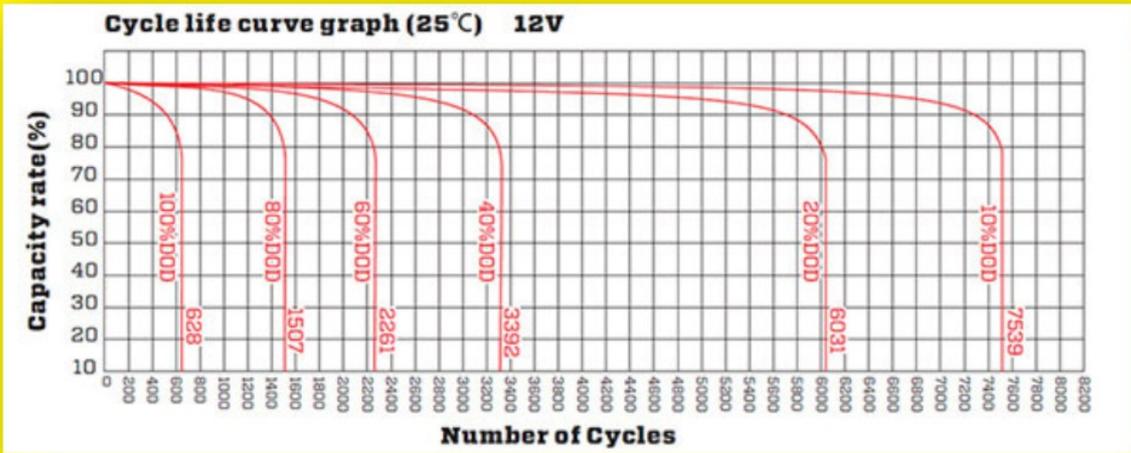
**COMPARE GENERAL USAGE LIFE**



**3 YEAR WARRANTY**

**TECHNOLOGY MADE-2-LAST DECADES**

**LIFESPAN@10% CYCLE=7500** (1 cycle/day = 20 years. 2 cycles/day = 10 years)



**3 YEAR  
WARRANTY**

**TECHNOLOGY  
MADE-2-LAST  
DECADES**

### What makes Lead Crystal batteries better value for money?

Easy answer... LASTS LONGER with MUCH BETTER PERFORMANCE

**LEAD  
CRYSTAL<sup>®</sup>  
BATTERIES**

#### Example:

- A 100amp/hr standard battery gives you 30 usable hours.
- A 100amp/hr lead crystal battery gives you 80 usable hours!
- Which also means you can buy a smaller lead crystal battery for the same usable hours as a larger standard battery.
- Plus, all lead crystal batteries come with a 3 year guarantee!!!



**3 YEAR  
WARRANTY**

**TECHNOLOGY  
MADE-2-LAST  
DECADES**

**Less batteries do more.** Theoretically, if you were to thrash these batteries and cycle them to 60% depth so that they would only last as long as standard batteries would at 20% cycle depth, you can get away with a 3 x smaller battery set (costing less). You then only need to have a set big enough to cover your max surge amps, which should not exceed 1/3 the amps of the battery Ah rating, and then calculate how much (if any) more power you need for a night cycle.

Eg: a 440AH 24V battery bank can safely deliver 150A continuously = 3.6kW. As such, a small bank of 4 truck size batteries with an 1800W inverter which draws 2200W for up to 30 mins will pretty much start anything running on a single phase, including stubborn air compressors. And if you thrashed your batteries at 60% drain per night, they can provide you with over 6kW per night cycle for a good 6 years!!

**Useful and safe** for solar off-grid, camping, 4WD & RV dual set up, mobility scooters, golf carts, fork lifts, floor scrubbers, cars, trucks, UPS, telecommunications, NBN, aircraft and basically anything where standard batteries are used and you want a longer more robust lifespan.

### Uses for lead crystal batteries

Any application where lead acid, lead gel or AGM batteries are used including:

- ✓ Off grid solar systems
- ✓ 4WD dual set up
- ✓ Mobility scooters
- ✓ Floor scrubbers
- ✓ Camping and RV
- ✓ Electric trolling motors
- ✓ Tele communications
- ✓ Fork lifts
- ✓ Marine batteries
- ✓ Golf carts
- ✓ Standby applications
- ✓ NBN



**3 YEAR  
WARRANTY**

**TECHNOLOGY  
MADE-2-LAST  
DECADES**

**Buyer be aware,** as there are other cheaper batteries being sold as "Lead Crystal Batteries" but they are not the same. They are GEL batteries and don't perform well when cold and can dry out easily if heated or charged to fast. They also don't have anywhere near the lifespan and if you flatten them a number of times, they fail. Before buying the cheaper ones, please make a careful comparison of the specifications and the discharge/cycle graphs. You will soon see why the BETTA batteries are actually cheaper in the long run and truly maintenance free. They are the only battery which you don't have to treat with "kit clothes"!

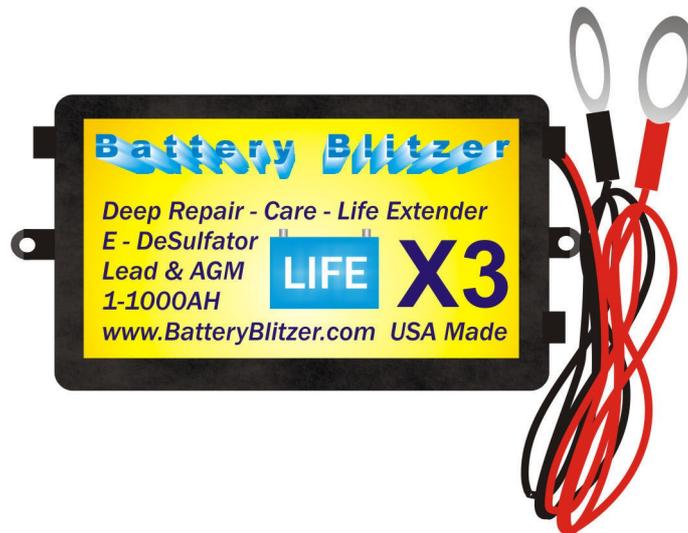
**DELAYS DUE TO HIGH DEMAND:** Demand for these batteries is so high that stock of certain types sometimes sells out quickly. Generally, the warehouse has most battery types available and we can get them to you in around 5 working days but on some occasions, some types may only become available upon the next monthly container shipment. This can delay shipping to you by several weeks. Be patient, It will be worth the wait!

## BATTERY DESULFATORAS – LIFE EXTENDERS

If you already have flooded, AGM or Gel lead acid batteries, then you can extend their life span by electronically suppressing sulfation. This works by sending reverse pulses into the battery, which reverses the sulfation build up on the lead plates, as well as strengthens the acid.

There are many desulfators on the market but there is one which is from the USA which stands out because it not only works well, but is water and acid proof, very cost effective and lasts decades.

PRICE: \$59 inc. postage



## BATTERY BLITZER SETUP

**WARNING: DO NOT CONNECT BATTERYBLITZER TO 24V OR HIGHER!**

Use 2 in series for 24V, 3 for 36V and 4 for 48V.

You can also use just one Blitzer on one 12V bank and then move it after a week or so to the next 12V bank, and so on. Keep rotating it until all of the banks in your 24-48V set are strong. Also, if you have more than 1000AH bank capacity, use 2 or more in parallel.

Place them as far away as possible from each other on the bank.

Be patient. Cleaning up a 1000AH bank can take up to 6 months.

## INSTALLATION INSTRUCTIONS

- 1.) Install the Red wire to the positive (+) terminal on your 6 or 12 volt battery.
- 2.) Install the Black wire to the negative(-) terminal on your 6 or 12 volt battery.
- 3.) Verify that the Green LED is on, the device is working.
- 4.) The desulfating process will take 4-6 weeks.
- 5.) Your done, happy desulfating.

## FAQ:

**Do I keep it on the battery or do I take it off after 6 weeks?** - Keeping it on is best. Take it off to clean other batteries but put it back every month or so for at least a week.

**Will it drain my battery?** No. It uses only mA and then shuts off if the battery ever were to get to low.

**Can it damage sensitive electronics like car electronics?** Not that we have experienced.

**How do I best charge an old battery?** Use an intelligent charger of some sort and make sure that your charger power is right. Charging a battery too fast can cause it to warm up and dry out. A rough rule of thumb is to use around 10% charge power of the AH value of the battery. Eg.: a 50AH car battery would rejuvenate well and stay cool enough using a 4-5A charger. The reason for this 'soft charging' is because, as the battery plates become cleaner, they drain more energy from the charger due to their inner resistance going towards a short circuit. A healthy clean battery can go as low as 1-4mOHM and if you have a charger which can supply heavy loads, the battery will keep demanding more and more amps, heat up and start steaming off the fluid or Gel moisture.

Unlike flooded batteries, it is almost impossible to save Gels after they dry out, so be careful and regularly feel your battery during a charging cycle and make sure it never gets more than only slightly warm. Also, for Gels and AGM batteries, make sure your charger is set to 'Gel' or 'AGM' as they require a different charging and saturation pattern than flooded batteries do and if they are charged to high, they won't last.

### **QUALITY OF THE BATTERYBLITZER**

Based on pioneering research which started around 25 years ago in the USA, BatteryBlitzer contains the latest version of the highest grade rejuvenator & battery maintenance circuitry available in its range, with features not found in other desulfators.

Use BatteryBlitzer to keep your car, tractor, buggy, motor bike, truck, solar batteries tip top.

### **FUNCTION**

The function sounds simple but the science behind it is quite daunting and it took decades to max out the effect.

Basically, as a battery does work, the plates react chemically with the acid forming an ever growing crystal layer on the plates. A set of frequencies pulsed in a specific way have proven to reverse this effect. The crystals do not only disappear from the plates but dissolve back into the acid where they make the acid more potent again.

Because the plates are now rougher than when they were when they were new, they can actually provide higher currents due to the slightly increased surface area. This is probably why, some people report a desulfated battery as being better than when it was new.

There are also chemical battery desulfators but they have the disadvantage that they can't be used on sealed batteries and can leave residue which can reduce the life of the battery. Electronic desulfation is as far as we can see, the best way to rejuvenate a battery.

### **TECHNICAL SPECIFICATIONS**

BATTERY VOLTAGE 4.52 Vdc – 16.1 Vdc

OUTPUT VOLTAGE 59V (pk-pk) inductive (10uS pulse every 1mS approx.)

RATED CURRENT 44mA (average / 12Vdc)

FREQUENCY RANGE 0.79 – 1.19 KHz. (temperature and input voltage dependent)

OVERLOAD Protected

OVER VOLTAGE WARNING! Over 16 Volts can kill the device. Eg: If you have 2x12V=24V system, use 2 units!!

REVERSE POLARITY Protected

LOW VOLTAGE Auto shut-down and will not drain the battery

WORKING TEMP. 0C ~ +61C (+32F ~ +140F) (+273K ~ +333K)

WORKING HUMIDITY 19 ~ 91% RH non-condensing

STORAGE TEMP. -19C ~ +84C (-4F ~ +185F) (+253K ~ 358K)

VIBRATION MAX. 10-500HZ, 2G 10min.

WITHSTAND VOLTAGE I/P – O/P: <3000VAC

ISOLATION RESISTANCE I/P – O/P: 100m ohms / 500VDC

MTBF 230.700K hours min. MIL-HDBK-217F (+25C)

DIMENSION 81mm(L) x 38mm(W) x 27mm(H) (3.2"L x 1.5"W x 1.1"H)

## SOLAR PANELS

**We also supply high quality new and pre-loved solar panels** with low cost regulators where required. If you set up a 26V battery bank and your panels have 37V open circuit, then you can go direct into the batteries without an inverter. You will only need to balance the max number of panels so that their max Amps do not exceed 1/3 the battery Ah rating. Eg: For a 440Ah 24V battery set, you should not go over 150A charge. That would be 3600W of panels in the high summer sun. That's 15 x 250W panels.

## CLOUDY DAY SOLAR BOXES

Ground mounted, DIY solar box kits are available. They are designed to harvest the maximum amount of energy from ambient light. With steep panel angles, they stay cool and are resilient against sunburn and hail. It is thinkable that the panels could last over 50 years.

Rough price is around \$13k for the kit. The final price depends on your exact needs.



**CLOUDY DAY SOLAR POWER SYSTEM**  
**Plug-n-Play. All electrics inside box. Battery Life span 20y @ 10%**  
**Daily Output\* 4-6kW per cloudy & 10-15kW per sunny day**  
**Rainy Day Output\* 1-2kW + 3x faster charge with each cloud break**  
**Enough to power an energy conscious house!** Powers most things a 10A mains socket will.  
\* Rough guides only. Measured in Autumn during cloudy & rainy weather in SE Qld Australia.

**Supplied are:**  
**Frame, Base, Connectors, Fuses, Cable, Switches**  
**32 x 200W 12V long lasting Solar Panels**  
**13 x 440Ah 2V Crystal Batteries**  
**1 x 1800W / 2200W 30min Latronics Inverter**  
**Warranty on parts ranges from 2-25 years**

**For just a few \$/day** (financing), you can have this long-life "set & forget", system in your yard within a couple of weeks. All you then need to power your house, shed, farm pump, eCar, etc., is an extension cord & it only takes up the space of a king size bed!

**Only robust parts with huge life spans are used.** Eg: Incorruptible Solid Crystal Batteries (~2 decades @ 10% cycle), toughest high efficiency Aussie inverters from Latronics (2-5 decades 24/7), optional low energy, ultra robust Aussie brushless DC water pump to pressurize the house (~5 decades @ 1hr/dy).

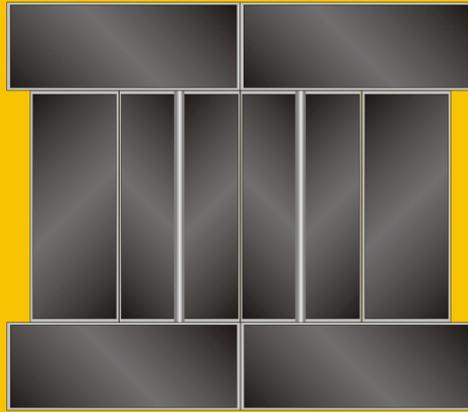
**The ground mounted, easy to clean** steep solar surfaces are less prone to lightening, wind gusts, hail & sunburn damage, & as such, should last 5+ decades.

**Upgrades:** In-built solar electric hot water. Long throw, non blinding yard & walkway lights with timer or motion detection. As a pump only, this unit can push 10 cubic m/dy up 20m on a cloudy day and 2-3 x that on a sunny one. Need more power, get small external boxes to increase solar input. Need a second phase or to double your power, get a second complete system at a discount.

**For more info** call Serge on **07-54845963**

**2.5x2.5x2.5m**

*(C) Serge Douw 2017*

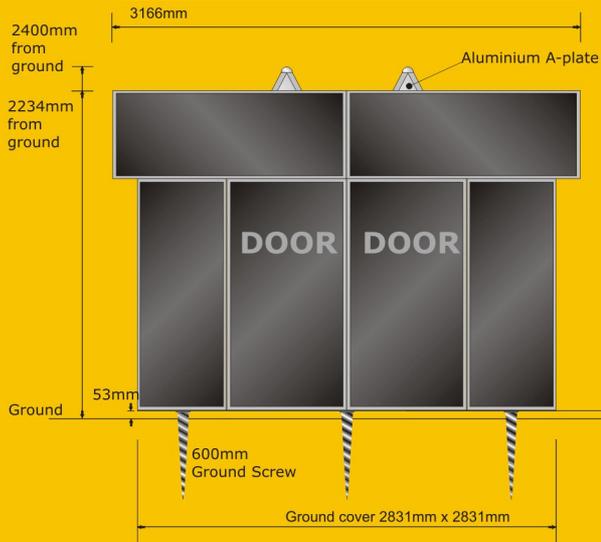


**TOP**

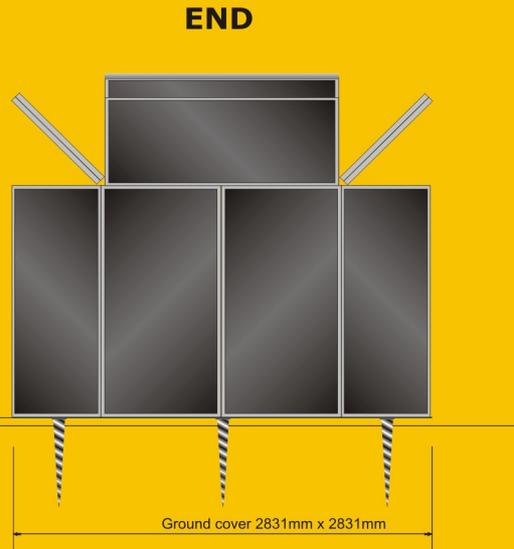
**CloudyDaySolar Box Specifications**  
**32 x 190W Panels**  
 Total average output / Cloudy Day = 4kWh  
 Total max output / Sunny Day = 12kWh  
 Battery Capacity = 17kWh (26V x 660Ah)

**Nightly drain vs. life span (Rough estimate)**  
 15% = 2.5kWhr/n = 19Y  
 20% = 3.4kWhr/n = 16Y  
 30% = 5kWhr/n = 13Y

**Capacity before inverter cuts off = ~8KW.**  
 That equates to around 3.5hrs of 2200Whr draw or 48hrs of running a household which uses around 4kWh/day. (Typically a fridge, LED lights, communications, LED TV, kettle, toaster, water pressure pump)



**SIDE**



**END**

**This unit pumps 4500lph at 22m head** for 3.5hrs/day, at a nursery in Gympie. It runs through cloudy days.

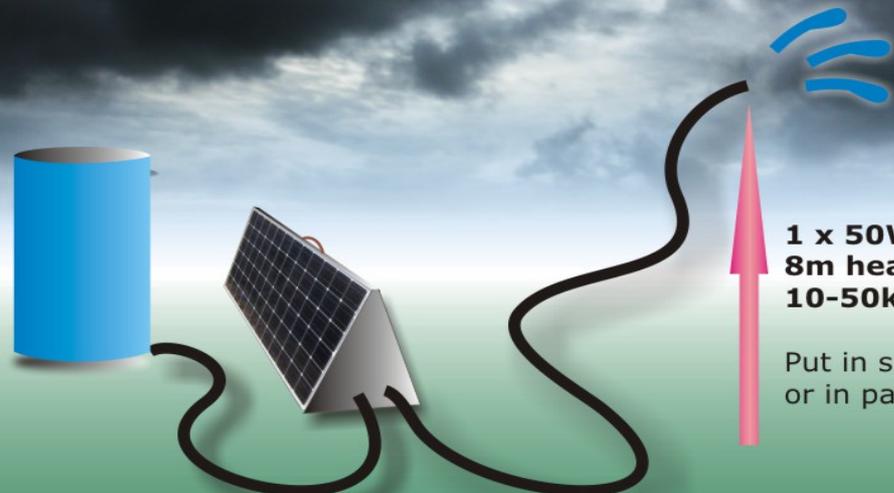
15 fist-size brushless DC truck pumps are used in tandem. They are designed to last 10,000-50,000hrs and at 3.5hrs a day, 50,000 hrs would be 40 years!



**Portable solar pumps also available.**

**For farmers, fire fighters etc.,** portable units which can easily be pulled off the back of a UTE and work through a cloudy day, are a dream come true. They can be strung together in series to pump water high up hills. The first pump in a series can also be a floating pump. Perfect for a stream or dam. They can be made specifically for your needs and if you only want several hundred litres a day pumped up to a holding tank, they can be made very compact.

## CloudyDaySolar - Long Life Water Pump



**1 x 50W brushless pump  
8m head, 6000 lpd  
10-50kHr life span**

Put in series for more head  
or in parallel for more flow

(C) CloudyDaySolar 2017



1.5 bar pressure, 30-40lpm flow at ground level, 3hr runtime through cloud

## OTHER PRODUCTS:

### INCORRUPTIBLE SOLAR POWERED, LOW RADIATION (LOW EMF) COMPUTERS



*Kiss computer problems goodbye!*  
**Incorruptible Computers**  
*repair themselves* by dumping all internet traces  
& system changes at shutdown, staying  
clean, fast, & reliable always



Upgrades, new, refurbished,  
Trade-ins, rentals available

Call Serge **5484 5963** General repairs also available

**First developed 2002**, Incorruptible Computers have been steadily proving their worth ever since, with computers from then still working like new, today!

#### ADVANTAGES

**Incorruptible Computers practically nullify repairs** and can reduce maintenance to a 15 min yearly update.

**They always recover** from hacks, attacks, errors, blue screens and stay like new with each restart. This is because they dump all changes to the system upon shut-down and boot up from a locked "frozen-in-time" always clean system. Unlocking the system to add new programs or do the occasional update of programs or the operating system, is quick and easy.

**When locked, the "MyDocuments" folder is the only place** where you can permanently store your data, all else is snapped back to "like new" upon each restart. Because viruses try to upset your system, even if they are lodged somewhere in your documents, a quick restart will disarm the virus and a quick scan of your documents will rip it out.

**Incorruptibles also come with fully automatic MyDocuments backup** to external drive, which quickly copies any new documents every time you plug it into the USB port. Because a snapshot of the entire Incorruptible system is also in your MyDocuments folder, in the case of an emergency, if you had to run from the house, simply taking the backup usb will enable you to quickly recreate your entire computer on a new hardware, keeping all your programs and settings exactly as is. As such, Incorruptibles can live beyond the life of your hardware and you don't have to keep reinventing your ever so familiar work environment when getting a new PC.

**Incorruptibles are the most robust solution** out there. Great for banking, where all traces are wiped from the system at each new start, leaving nothing for hackers to swipe.

**New, pre-loved or hire** Laptops & Desktops available.

**Or,... get your existing PC upgraded** to the INCORRUPTIBLE status.

**General repairs also available.** Often without callout via remote access.

#### ABOUT US

Buy with confidence as we are a well rated, ethical Australian family business, with decades of experience in the fields of electronics, optics, computers and solar. We seek to supply new and used, high quality goods, which are made to last. If you have any questions, please don't hesitate to contact us.

#### OUR COMMITMENT

We are sure that you will get as much enjoyment from the products we supply, as we have in supplying them. Nothing is more satisfying to us than a pleased customer, so even after your purchase, if you are unhappy for any reason, please contact us and we will sort the problem out for you. We are here for the long haul.

**To order, or to get more information, call Serge on 07 54845963.**

**Cheers!**