24V / 1000W 24V / 2000W True Sinewave Power Inverter

SW2410 (120V - 60Hz model) SW2420 (120V - 60Hz model) SW2410i (230V - 50Hz model) SW2420i (230V - 50Hz model)

Owner's Manual





For safety and optimum performance, the Power Inverter must be used properly. Carefully read and follow all instructions and guidelines in this manual and give special attention to the **CAUTION** and **WARNING** statements.

PLEASE KEEP THIS MANUAL FOR FUTURE REFERENCE

Disclaimer

While every precaution has been taken to ensure the accuracy of the contents of this guide, **KISAE Technology** assumes no responsibility for errors or omissions. Note as well that specifications and product functionality may change without notice.

Important

Please be sure to read and save the entire manual before using your **KISAE True Sinewave Power Inverter**. Misuse may result in damage to the unit and/or cause harm or serious injury. Read this manual entirely before using the unit and save it for future reference.

Product Numbers

120V model:

SW2410 Power Inverter 24V 1000W 120VAC (NEMA 5-15) SW2420 Power Inverter 24V 2000W 120VAC (NEMA 5-20)

230V Model:

SW2410i-EU Power Inverter 24V 1000W 230VAC (Schuko Socket - CEE 7/4)
SW2410i-UK Power Inverter 24V 1000W 230VAC (British Socket - BS1363)
SW2410i-AU Power Inverter 24V 1000W 230VAC (Australia Socket - NS/NZS3112)
SW2420i-EU Power Inverter 24V 2000W 230VAC (British Socket - CEE 7/4)
SW2420i-UK Power Inverter 24V 2000W 230VAC (British Socket - BS1363)
SW2420i-AU Power Inverter 24V 2000W 230VAC (Australia Socket - NS/NZS3112)

Document Part Nimber

MU SW2420 Rev. C

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1. INTRODUCTION

Thank you for purchasing the KISAE True Sinewave Power Inverter. With our state of the art, easy to use design, this product will offer you reliable service by providing both AC power and 5V USB power for your home, cabin, boat, and RV or Trailer. The Power Inverter can run many AC-powered appliances when you need AC power anywhere. The 5V USB power can charge many USB-powered devices.

This manual explains how to use this unit safely and effectively. Please read and follow these instructions and precautions carefully.

IMPORTANT SAFETY INFORMATION

This section contains important safety information for the True Sinewave Power Inverter. Each time, before using the unit, READ ALL the instructions and cautionary markings on or provided with the unit, and all appropriate sections in this guide.

The unit contains no user-serviceable parts. See Warranty section for how to handle product issues.

DANGER: Fire and/or Chemical Burn Hazard

• Do not cover or obstruct any air vent openings and/or install in a zero-clearance compartment.

DANGER: Failure to follow these instructions can result in death or serious injury

- When working with electrical equipment or lead acid batteries, have someone nearby in case of an emergency.
- Study and follow all the battery manufacturer's specific precautions when installing, using and servicing the battery connected to the inverter.
- Wear eye protection and gloves when manipulating batteries or working close to them.
- · Avoid touching your eyes while using this unit.
- Keep fresh water and soap on hand in the event battery acid comes in contact with eyes. If this
 occurs, cleanse right away with soap and water for a minimum of 15 minutes and seek medical
 attention.
- Batteries produce explosive gases. **DO NOT** smoke or have an open spark or fire near the system.
- · Keep the unit away from moist or damp areas.
- Avoid dropping any metal tool or object on the battery. Doing so could create a spark or short circuit
 which goes through the battery or another electrical tool that may create an explosion.

WARNING: Shock Hazard. Keep away from children!

- Avoid moisture. Never expose the unit to snow, water etc.
- The unit provides high AC voltage; treat the AC output socket the same as regular wall AC sockets at home.

WARNING: Explosion hazard!

- DO NOT use the unit near flammable fumes or gases (such as propane tanks or large engines).
- AVOID covering the ventilation openings. Always operate the unit in an open area indoors.
- Prolonged contact with high heat or freezing temperatures will decrease the working life of the unit.

FCC and EMC INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules (for 120V models) and to comply with the limits for CE EMC standard on 230V model. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or re-locate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Consult the dealer or an experienced radio/TV technician for help.

LIMITATIONS ON USE

Do not use in connection with life support systems or other medical equipment or devices.

2. PRODUCT DESCRIPTION

The True Sinewaye Power Inverter includes the items listed below

- · Power Inverter base unit
- Owner's manual

Series	Model No.	Output Rating	AC Output Socket Types
120V model	SW2410	1000W	15A GFCI
120V IIIouei	SW2420	2000W	20A GFCI
230V model	SW2410i-EU, UK, AU	1000W	16A(EU), 13A(UK), 10A(AU)
230V model	SW2420i-EU, UK, AU	2000W	16A(EU), 13A(UK), 10A(AU)

3. INSTALLATION

WARNING: It is recommended that all wiring be done by a certified technician or electrician to ensure adherence to the applicable electrical safety wiring regulations and installation codes. Failure to follow these instructions can damage the unit and could also result in personal injury or loss of life.

CAUTION: Before starting the unit installation, please consider the following:

- The unit should be used or stored indoors and away from direct sunlight, heat, moisture or conductive contaminants.
- When placing the unit, allow a minimum of three inches of space around it for optimal ventilation.

Understanding the unit features

AC Output Front Panel



SW2420 (120VAC model)







Picture shows SW2420 (120VAC Model)

Preparing for Installation

Typical Wiring block diagram of charger:



24V Battery Bank:

- The use of a deep cycle battery is highly recommended for power inverter application
- For battery sizing, you need to identify how much and for how long the inverter has to provide AC power to the loads (based on Amps x hour energy consumption). It is recommended to purchase as much battery capacity as possible. See more in "Estimated Run Time" section 4.

DC Fuse or Circuit Breaker:

• A DC-rated fuse or DC-rated circuit breaker connected along the DC positive line is required.

Fuse/Circuit Breaker Rating	70 Adc (1000W Series)	
	150 Adc (2000W Series)	

- Based on the size of your 24V Battery Bank, determine the overall short circuit current rating of the
 battery bank from the battery manufacturer. The fuse or circuit breaker has to be able to withstand
 the short circuit current that can be generated by the battery bank. Typically, an ANL/Class-T fuse
 & holder is used.
- For Marine applications, the over-current protection device (either DC fuse or DC breaker) needs to be installed within 7 inches (18cm) from the battery positive terminals.

Battery Disconnect Switch:

- Use a 24V battery Disconnect Switch (on the positive) with the same or higher rating as the selected fuse or circuit breaker. Use ignition protected switches when required by local codes.
- The purpose of this switch is to disconnect the positive in between the unit and the battery bank during maintenance or repair service, when not in-use, or when troubleshooting. It could also be an A / B / A+B / OFF type switch to select either one of two or both (paralleling) battery banks (if available).

DC Input Wires Gauge and Length:

All DC wires should be insulated multi-strand low resistance ones.

• The DC wires must be copper and rated 105°C minimum.

Model	Thinnest Wire Gauge	Recommended Wire Length	
Model	Triirilest write Gauge	Recommended Wife Length	
	AWG # 8 (typical & suggested)	≤ 5 feet	
SW2410 / SW2410i	AWG # 6	≤ 7.5 feet	
	AWG # 4	≤ 10 feet	
	AWG # 2 (typical & suggested)	≤ 5 feet	
SW2420 / SW2420i	AWG # 1/0 (0)	≤ 7.5 feet	
	AWG # 2/0 (00)	≤ 10 feet	

<u>Caution:</u> The use of a thinner gauge in the DC wires may cause the inverter to trigger the undervoltage shut down under heavy load conditions. It may also melt the wire insulation and catch fire, resulting in death or serious injury. The choice of the wire gauge should also match or exceed the ampacity rating of the DC fuse being used.

Important: The typically recommended wire length is limited to 5 feet or less for each of the positive and the negative. For longer wires, a proportionally thicker gauge is required to compensate for additional voltage drop (see the above table).

Chassis Grounding Wire Size:

<u>Important</u>: The chassis of the unit has to be grounded through the corresponding stud terminal (with nut and washer) located near the DC negative terminal. Use it for both DC and AC grounds.

- For Marine applications, the DC grounding wire gauge can be one size thinner than the minimum size required for the DC current-carrying conductors (i.e. positive and negative) and never thinner than AWG #10 (as long as the mandatory DC+ fuse is used).
- For Recreational Vehicle or Caravan applications, the unit has to be grounded to the vehicle chassis with AWG #8 or thicker copper conductor.

Installing the Power Inverter System

WARNING: Electrical Shock Hazard

The unit 'On/Off' push button does not disconnect the DC power from the battery. Use the external battery switch or remove the DC input wires to disconnect the DC power from the battery before working on any AC appliance or hardwired circuits connected to the unit. Failure to follow these instructions can result in death or serious injury.

Installation:

- Choose an appropriate indoor mounting location.
- The unit can be mounted in any direction except with the DC Input panel facing downwards.
- Use the mounting template on the right to mark the positions of the mounting screws.
- Drill the 4 mounting holes and place the Power Inverter in position and fasten the unit to the mounting surface.

Important: The wire tightening torque on the DC terminal nuts should be 12-13 Nm

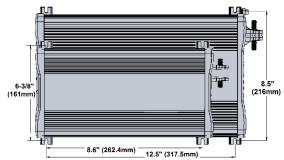
Chassis Grounding Connection:

<u>DANGER</u>: The unit chassis has to be grounded properly. Never operate the Power Inverter without proper grounding. Failure to do so will result in death or serious injury.

- Connect the grounding's ring terminal to the unit's ground stud terminal (with nut and washer) using the wire gauge as explained above.
- Connect the other side of the wire to the main DC grounding point (e.g. engine block, battery negative terminal, vehicle chassis, etc.). The main AC grounding point in the AC system should also be connected to the main DC grounding point* by a separate wire with a gauge no thinner than the one of the Hot and Neutral coming from the shore power main plug. Even though the chassis ground is bonded to the battery negative (either directly or through a main DC grounding

point), <u>NEVER</u> use the DC negative terminal of the unit to connect the chassis ground with a short jumper. The AC and DC chassis ground of the unit must use a separate and dedicated non-carrying-conductor.

Note *: In marine applications, the main AC-DC ground bonding may require galvanic isolators to avoid galvanic corrosion. Check your local electrical codes (i.e. NEC, UL, ABYC...).



DC Input Connection:

<u>CAUTION</u>: Reversing the DC Input terminal will damage the unit and it cannot be repaired. Damage caused by reverse polarity connection is not covered by the warranty.

- Connect the Inverter DC negative terminal directly to the battery negative terminal.
- Make sure the DC Disconnect Switch in the positive is in the OFF position.
- Connect the inverter DC positive terminal to one terminal of the Disconnect Switch. Then, connect the other terminal of the Disconnect Switch to one of the terminals of the fuse holder.
- Connect the other terminal of the fuse holder to the battery positive terminal. Most standards require this wire be no longer than 7 inches.
- Install the suggested fuse to the fuse holder, and turn on the battery disconnect switch.

Remote Switch (optional) Connection:

 Plug the Remote Switch accessory (RM1201-00) into the RJ11 (phone type jack) of the 'Remote Switch Port', located on the front panel of the unit. It is a momentary-on switch that connects in parallel to the "Power/Select" pushbutton on the front panel.

Test the Power Inverter connection and operate the unit:

 Turn the unit on by pressing and holding the Power/Select button until hearing a beeping sound (in about 1 sec.). Then, release your finger, and the unit starts a 7 sec. initiation period with the display showing "rx.x" (the panel software version) then "ux.x' (the main unit software version), with the 'Status' indicator going green (indicating that the unit is ON), and finally "PS0"/"PS1" if the Power Save function is Disabled/Enabled respectively.

- · After the 7-sec. starting-up initiation period, the display shows the battery voltage and the output power (in kW) alternately every 1 sec. Both AC and 5V USB outputs are now available.
- · Plug in a small appliance (e.g. a 40W table lamp or a receptacle tester) to the AC outlet, to verify that AC power is available. If no power is available, make sure the load is over 10W in case the Power Save function is enabled "PS1" (you may need to wait up to 5 sec.). Otherwise, check the GFCI outlet is not tripped (on 120V unit), and/or check for any potential error codes on that the display and refer to the troubleshooting section. The unit is successfully installed and functioning properly.

Test the GFCI Monthly: (North American 120V unit - SW2410. SW1220 models only)

Perform a monthly test of the AC Output GFCI Socket to ensure the GFCI is functioning properly, as per the following procedure.

- Turn the unit on and make sure the display shows "PS0" at the initiation period, so having the Power Save function disabled. Otherwise, proceed to disable that function by changing it from "PS1" to "PS0" as explained in section 5 of this manual.
- Plug a small AC load (e.g. 40W light bulb) into the AC Output GFCI Socket. Check that the AC load is ON.
- Push the 'Test' button. You should hear a clicking sound. Check that the AC load is turned off.
- Press the 'RESET' button and check that the AC load is back ON again.

Note: This test has to be performed with the inverter powered ON and in the "PS0" mode; otherwise, the GFCI cannot be reset. See note in the troubleshooting table in section 6.

4. UNIT OPERATION

Turning the unit ON and OFF

- Press and hold the "Power/Select" button for about 1 second until hearing a beep.
- The display will show either the message 'PS0' or 'PS1' for a few seconds to indicate the power save setting status ('PS0' = Power Save function disabled, 'PS1' = Power Save function enabled). See more details in "Understanding the Power Save Function" below in this section, and in "Power Save Setting" in Section 5.
- Then, the display will show the present battery voltage and output power in kW alternatively, every 1 sec., and the "Status" LED will turn green. The 5V USB and AC output power becomes available
- Press the "Power/Select" push button anytime to turn the unit either on or off.

LED Display:

'PS0' = Display shows Power Save function setting is disabled (factory default)

'PS1' = Display shows Power Save function setting is enabled (see section 5)

'12.5' = Display shows measured battery voltage (12.5V in this example)

'0.80' = Display shows total output AC power in kW (.8kW = 800W in this example)

'E01' = Display shows error or warning code. See *Understanding the Error Code* for details

<u>Status Indicator Conditions</u>: **Green:** Unit operation is normal

Amber/Green (alternately every 1-sec): Warning is detected. The unit will shut down at any time. Check "Understanding the Error Code" and "Troubleshooting" sections for details.

Error is detected, and the unit has shut down. Please check "Understanding the Error Code" and "Troubleshooting" sections for details.

Understanding the Power Save Function

The unit Power Save function reduces power consumption to conserve battery energy. Every time the unit is turned on, its display starts showing the power save setting once (either "PS0" or "PS1"), and then both the battery voltage and the power level alternately every second. When the power save function is enabled ("PS1"), the AC output of the unit goes ON briefly (for a few milliseconds) about every 5 seconds to monitor any potential AC load connected to the unit. If the connected load is >10W, the AC output will remain ON continuously until the AC load is reduced to below 3W (7W hysteresis). Then, the unit will go back to ON when it senses a >10W AC load connected again.

Understanding the Error Code

Code	Condition	Corrective Action
E01	Input battery voltage is too low and the unit has shut down	Recharge the battery immediately and restart the unit. See E05 below.
E02	Input battery voltage is too high and unit has shut down	Check battery voltage or determine if any external charger is connected to the battery bank
E03	AC output is overloaded or short-circuited and unit has shut down	Check the load connected to the output. Reduce load and restart the unit
E04	Internal temperature is too high and unit has shut down	Turn unit off and wait for 15 minutes before restarting. Check the fans and any potential object obstructing the air flow to the unit
E05	Input battery voltage is low and warning occurs	Recharge the battery as the unit will shut down shortly. Check the DC wire gauges and length against excessive voltage drop triggering the E05 and then the E01. Try thicker gauges and/or shorter wires.
E06	AC output load connected has sensed high and is close to shutdown limit	Reduce the load.
E07	Internal temperature is high and is close to shutdown limit	Reduce the load and check if any ventilation of the unit is blocked

AC Load and the Power Supplied by the Inverter

The Inverter can provide high surge (peak) power up to two times the rated nominal one, as long that surge does not last more than a few 60Hz cycles (about 100 msec.). Otherwise, the unit triggers the overload shutdown (E03 error) which can happen when providing power to inductive AC loads (e.g. with medium/heavy electric motors) particularly at their starting moment. If so, a higher power Inverter is required for those appliances.

Estimated Runtime

The following runtimes are estimates for reference only and based on the use of different battery

bank sizes. Actual runtimes may vary.

	Estimate runtime on different 24V Battery Bank Sizes				
AC Load	30AH	60AH	90AH	120AH	150AH
50 W	11 hrs.	22 hrs.	33 hrs.	44 hrs.	55 hrs.
100 W	5 hrs.	11.5 hrs.	17 hrs.	23 hrs.	29 hrs.
200 W	2.5 hrs.	5 hrs.	8 hrs.	11 hrs.	13.5 hrs.
500 W	49 mins	2 hrs.	3 hrs.	4 hrs.	5 hrs.
1000 W	15 mins	49 mins	1.5 hrs.	2 hrs.	2.5 hrs.
1500 W *	8 mins	27 mins	49 mins	1 hr	1.5 hrs
2000 W *	N.R.	15 mins	34 mins	49 mins	1 hrs
Note: * - 2000W Model only, N.R Not Recommended					

The following runtimes are estimates for reference only and based on the typical load using a 24V-60AH battery bank. Actual runtimes may vary.

Load	Consumption	Estimate Runtime
Cordless Phone	5W	180 hrs.
Clock/Radio	8W	135 hrs.
Table Lamp	40W/60W	27 hrs. / 18 hrs.
Freezer (8.8 cu. ft.)	80W	15 hrs.
20" LCD TV	100W	11.5 hrs.
Refrigerator (18 cu. ft.)	120W	9 hrs.
Sump Pump (1/2 hp)	350W	3 hrs.
Microwave (mid-size)	1000W	49 min
Coffee Maker *	1200W	37 min

Note: * - 2000W Model only

5. POWER SAVE SETTING

All the settings of the Inverter (i.e. the voltage, current and temperature thresholds for triggering alarms,

warnings, beeping, shutdowns, and potential recoveries) are already set and fixed in the factory and cannot be changed. The only exception is the setting for either enabling or disabling the Power Save feature. In order to change the power save setting, proceed as follows.

Default Factory Setting:

"PS0" = Power Save feature is disabled.

Setting the Power Save Feature:

The power save feature allows you to reduce the no-load current draw from the battery when an AC load lower than 10W is plugged into the inverter's GFCI outlet.

To either enable or disable the Power Save function, push and hold the "Power/Select" button for 5 seconds to enter the *Power Save* select mode. Then, the display shows the present setting ("**PS0**" = Power Save disabled. "**PS1**" = Power Save enabled).

If you wish to change the setting, push again the "Power/Select" button once to change to the other setting. You can swap both settings by pushing the "Power/Select" button repeatedly within 5 sec. The unit will automatically exit the select mode after 5 seconds touching the "Power/Select" pushbutton.

6. TROUBLESHOOTING

Please note any possible error code displayed on the main unit and review the "Understanding the Error Codes" in section 4. Then, refer to the following table.

Problem	Possible Cause/Condition	Solution
No AC Output. All the	The unit is off.	Turn the unit ON (Press and hold the "Power/Select"
LEDs and the display		button for a second until hearing a beep)
are off.	No power is coming into the unit.	Check if the DC Fuse or the DC Disconnect switch (if installed) is either blown or turned OFF.
No AC Output. Status	Check error code on display	Verify the error condition and make correction
indicator is Amber	GFCI outlet is tripped	Check load for Ground Fault or Neutral-Ground
	(120V model only)	bonding on the load side, and reset the GFCI*
AC Output is turning ON and OFF briefly (pulsed)	Power Save function is enabled "PS1" and the load being connected to the unit is less than the threshold setting (<10W)	If you want the Power Save feature enabled (PS1) just keep it that way and wait for a total AC load over 10W of power. Otherwise, disable the Power Save function by changing the unit setting from "PS1" to "PS0" as explained in section 5 of this manual

^{*}About how to reset the GFCI outlet: All GFCI's contain a lockout feature that will prevent RESET if there is no power being supplied **continuously** to it. Therefore, make sure: a) To unplug all the AC loads. b) The inverter is **powered on** before attempting to reset its GFCI receptacle. c) The Power Save mode is **DISABLED** ("PS0"), so that the inverter is providing continuous (and not pulsed) AC Power to the GFCI outlet input. If necessary check the section 5 to change from PS1 (Power Save enabled) to PS0 (Power Save disabled).

7.SPECIFICATIONS

Note: Specifications are subject to change without notice.

Note: Specifications are subject to chair Specification	SW2410	SW2420	SW2410i - EU, UK, AU	SW2420i - EU, UK, AU
Inverter				
AC Output Power	1000W	2000W	1000W	2000W
AC Output Current	8.3A	16.6A	4.3A	8.7A
AC Surge Power (Peak)	2000W	4000W	2000W	4000W
AC Output Voltage	120	VAC	230VAC	
AC Output Frequency	60Hz		50 Hz	
AC Output Waveform		True S	Sinewave	
AC Output Socket	GFCI	GFCI	EU, UK, AU	EU, UK, AU
	15A	20A	1 pc	2 pc
Nominal DC Input Voltage		25.	0 VDC	
No Load battery draw	< 0.	6 ADC (with Pov	ver Save OFF =	"PS0")
-	< 0.1 ADC (with Power Save ON = "PS1")			
DC Input Voltage operating range	21.0 – 31.0 VDC			
Under Voltage Alarm				
Under Voltage Shutdown 21.0 VDC				
Under Voltage Recovery	23.6 VDC			
Over Voltage Shutdown		31.	0 VDC	
Load Sense in the Power Save ful	nction			
'ON' Threshold		>	10W	
'OFF' Threshold		<	: 3W	
USB				
USB Port	5Vdc, 2.1 A			
Safety and Environmental				
Agency Markings	cETLus	CE, e9	cETLus	CE, E9
Operating Temperature		0°C to 40°C	(32°F to 104°F)	
Storage Temperature		-20°C to 60°C	(-4°F to 140°F)	
Relative Humidity	5-90% noncondensing			
Operating Altitude	Up to 9,843ft (3000m) above sea level			
Weights and Dimensions				
Weights	SW2410 series: 6 lbs. (2.7 kg)			
	SW2420 series: 11.5 lbs. (5.2 kg)			
Dimensions			3 x 3-1/2" (324 x	
	SW2420 serie	s: 15.0 x 9.1 x 4	.3" (381 x 230 x	110 mm)

8. WARRANTY

ONE YEAR LIMITED WARRANTY

The limited warranty program is the only one that applies to this unit, and it sets forth all the responsibilities of KISAE. There is no other warranty, other than those described herein. Any implied warranty of merchantability or fitness for a particular purpose on this unit is limited in duration to the duration of this warranty.

This unit is warranted, to the original purchaser only, to be free of defects in materials and workmanship for one year from the date of purchase without additional charge. The warranty does not extend to subsequent purchasers or users.

The manufacturer will not be responsible for any amount of damage in excess of the retail purchase price of the unit under any circumstances. Incidental and consequential damages are specifically excluded from coverage under this warranty.

This unit is not intended for commercial use. This warranty does not apply to damage to units from misuse or incorrect installation/connection. Misuse includes wiring or connecting to improper polarity power sources.

RETURN/REPAIR POLICY:

If you are experiencing any problems with your unit, please contact our customer service department at info@kisaetechnology.com or Phone 1-877-897-5778 before returning the product to the retail store. After speaking to a customer service representative, if products are deemed non-working or malfunctioning, the product may be returned to the purchasing store within 30 days of original purchase. Any defective unit that is returned to the manufacturer within 30 days of the date of purchase will be replaced free of charge.

If such a unit is returned more than 30 days but less than one year from the purchase date, the manufacturer will repair the unit or, at its option, replace it, free of charge. If the unit is repaired, new or reconditioned replacement parts may be used, at manufacturer's option. A unit may be replaced with a new or reconditioned unit of the same or comparable design. The repaired or replaced unit will then be warranted under these terms for the remainder of the warranty period. The customer is responsible for the shipping charges on all returned items.

LIMITATION:

This warranty does not cover accessories, such as adapters and batteries, damage or defects result from normal wear and tear (including chips, scratches, abrasions, discoloration or fading due to usage or exposure to sunlight), accidents, damage during shipping to our service facility, alterations, unauthorized use or repair, neglect, misuse, abuse, failure to follow instructions for care and maintenance, fire and flood.

If your problem is not covered by this warranty, call our Customer Service Department at info@kisaetechnology.com or 1-877-897-5778 for general information if applicable.

Service Contact Information

Email: info@kisaetechnology.com Phone: 1-877-897-5778 www.kisaepower.com

