

# 1<sup>ST</sup> CHOICE Portable Energy System

Your Best Outdoor Power Solution!

## Features:

- ✓ Rigid water and dust resistant casing design
- ✓ Ideal outdoor power solution, special for camping and outdoor activities.
- ✓ Internal battery powers your phone, tablet, laptop, camera, power tool, speaker, camping tools and more.



PES-A320



PES-A160

- ✓ Multiple outputs: 5V USB, 12V Car charger, 19V DC, 110V AC. Cover all your portable power requirements
- ✓ Build-in LED lights indicate system status
- ✓ Temperature activated cooling system
- ✓ Supporting DC, AC input, Solar panel input, ideal for outdoor activities(Solar panel not included)
- ✓ Selection between 2 different power level systems:
  - 320W: PES-A320(Li-ion); PES-A320N(NiMH)
  - 160W: PES-A160(Li-ion); PES-A160N(NiMH)



Flight Safety



Rigid Body: Impact 8J



Water Resistant: IP67



Light Weight



Solar Panel



Safety Protection

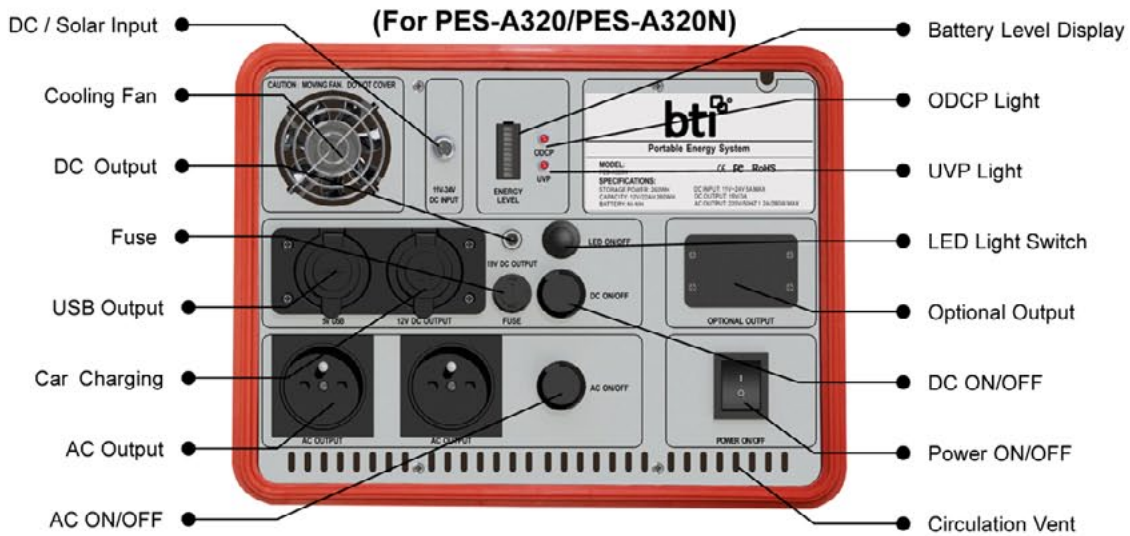


Efficient Cooling



Bright Lighting

# Top Panel:



## Optional Output

Name	Descriptions	Applications
Camera Output	Charging camera batteries: > DC Output: DC 4.2V, 8.4V, 12.6V, etc	
Battery Pack Charger	Battery Pack charging, discharging, cell balancing for: > 1-6 cell Li-ion / Li-Polymer / LiFe battery packs > 1-15 cell NiMH / NiCd battery packs > 2-20V Pb battery packs	
Car Starter	Start car with two battery clips: > Output voltage: DC 12V	

## AC Output Standard

Standard	Descriptions	Sockets
USA	Output voltage: 110-125V 60HZ.	
Europe	Output voltage: 220-250V50HZ.	
UK	Output voltage: 220-250V50HZ.	

## Specifications:

	Features	Specifications	PES-A160	PES-A160N	PES-A320	PES-A320N
Input	DC Input	Laptop adapter 15-20V	●	●	●	●
		11V-24V 5A (Max.)	●	●	●	●
	Solar Panel	17.5V/21W (Optional)	○	○	○	○
Output	USB x 2	5V/3.1A (Max.)	●	●	●	●
	DC12V Car Charger	12V/10A	●	●	●	●
	DC 19V Output	19V/3A	●	●	●	●
	AC Output x 2(AC 220V/110V) For Li-ion battery	160W/0.7A (Max.)	●	▪	▪	▪
		320W/1.5A (Max.)	▪	▪	●	▪
	AC Output x 2(AC 220V/110V) For NiMH battery	160W/0.7A (Max.)	▪	●	▪	▪
320W/1.5A (Max.)		▪	▪	▪	●	
Functional Accessories	LED light	3W	●	●	●	●
	System Status LED	Power ON, ODCP, UVP	●	●	●	●
	Battery Level LED	Multi-Levels LED Display	●	●	●	●
	DC ON/OFF Switch		●	●	●	●
	AC Output Switch		●	●	●	●
	LED Light Switch	L/M/H/ OFF	●	●	●	●
	Cooling Fan	Temperature Activated	●	●	●	●
Battery Module	Battery Type	Li-ion/NiMH	Li-ion	NiMH	Li-ion	NiMH
	Capacity(Li-ion)	150Wh/10.4AH; 300Wh/20.8AH				
	Max Power Output(Li-ion)		160W	▪	320W	▪
	Capacity(NiMH)	130Wh/11AH; 260Wh/22AH				
	MaxPower Output(NiMH)		▪	160W	▪	320W
	Built-in Protection Circuit	Cell Balancing, Over Voltage, Under Voltage, Over Current, Short Circuit, Temperature protection	●	●	●	●
Physical Characteristic	Dimensions	L*W*H (cm)	27.0*24.0*18.0		31.5*25.5*19.5	
		L*W*H (in)	10.5*9.5*7.0		12.5*10.0*7.5	
	Weight (Li-ion)	Net Weight (Kg)	4.8	▪	6.2	▪
		Net Weight (Lb)	10.6	▪	13.7	▪
	Weight (NiMH)	Net Weight (Kg)	▪	6	▪	8.5
		Net Weight (Lb)	▪	13.2	▪	18.7
Symbol: ●: Standard ○: Optional ▪: Not Available						

[The information in this flyer is subjected to change without notice]

## Power Efficiency:

Efficiency		Battery Type	Li-ion		NiMH	
DC Effective:	90%	Cell Capacity	2600mAh		11000mAh	
AC Effective:	80%	Battery Spec.	4S8P	4S4P	10S2P	10S1P
		Effective Power	300Wh/20.8AH	150Wh/10.4AH	260Wh/22AH	130Wh/11AH
		Power Rating (Wh)	300	150	260	130
		Max Power Output	320W max	160W max	320W max	160W max
DC Output	Connection Device		Full Load Run Time (hrs)			
USB	Standard USB 500mA Output		108.0	54.0	93.6	46.8
	Smart phone USB 1.4A Output		38.6	19.3	33.4	16.7
	iPad USB 2.1A Output		25.7	12.9	22.3	11.1
	Max USB 4.0A Output		13.5	6.8	11.7	5.9
12V DC	USB Car charging max output 4.2A		5.4	2.7	4.6	2.3
	Laptop Car charging 11.5V - 16VDC 5.6Amax 60W		4.5	2.3	3.9	2.0
	10.5L Mini car refrigerator 0.36kW/24hrs		18.0	9.0	15.6	7.8
	Surveillance camera DC12V ±10% 7W		38.6	19.3	33.4	16.7
	Car radio station DC13.8V		94.4	47.2	81.8	40.9
LED	5W LED Light		54.0	27.0	46.8	23.4
AC Output	Connection Device	Max Power (W)	Full Load Run Time (hrs)			
Mini electrical equipment	32 inch LED TV	55	4.4	2.2	3.8	1.9
	Blu-ray DVD Player	19	21.8	10.9	18.9	9.5
Camping equipment	Electronic mosquito lamp	15	16.0	8.0	13.9	6.9
Office equipment	Ultra Book: 45W Adaptor	45	5.3	2.7	4.6	2.3
	Medium laptop: 60W Adaptor	60	4.0	2.0	3.5	1.7
	High power laptop: 90W Adaptor	90	2.7	1.3	2.3	1.2
	Desktop PC	200	1.2	X	1.0	X
	Bubble Jet Printer	10	24.0	12.0	20.8	10.4
Power tool	Hand mill	300	0.8	X	0.7	X
	Electric hand drill	300	0.8	X	0.7	X
	Domestic pump (128W, 1.0cube, 12m head)	128	1.9	0.9	1.6	0.8
DC Output			Charge Cycle (times)			
Smart Phone	iPhone	5.5	49.1	24.5	42.5	21.3
	iPad	42.0	6.4	3.2	5.6	2.8
	iPad Mini	16.7	16.2	8.1	14.0	7.0
	iPad Air	32.0	8.4	4.2	7.3	3.7
	3000mAH Phone	11.1	24.3	12.2	21.1	10.5
	10AH Tablet	37.0	7	4	6	3
Input			Fully Charge (hrs)			
Solar Panel	17.5V/21W		14.3	7.1	12.4	6.2
Wall Outlet	110V/220V, 11V-24V 5A max Adaptor		5.7	3.6	4.4	2.2



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