

120 VAC / 60 HZ INVERTERS SELECTOR GUIDE

	INVERTERS															
	MSW								TSW							
	X-Power 400	X-Power 450	X-Power 1000	X-Power 1500	X-Power 3000	X-Power 5000	PRO XM 1000	PRO XM 1800	PROwatt SW 600	PROwatt SW 1000	PROwatt SW 2000	PROsine 1000	PROsine 1800	Freedom Xi 1000	Freedom Xi 1800	
	813-0400-01	851-0451	813-1000-UL	813-1500-UL	813-3000-UL	813-5000-UL	806-1010	806-1810	806-1206	806-1210	806-1220	806-1000	806-18XX**	807-1000	807-2000	
ELECTRONICS																
Cell Phone Charger (25W)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Laptop Battery Charger (25W)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Audio Equipment (300W)			●	●	●	●	●	●	●	●	●	●	●	●	●	●
GPS Device (100W)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Video Game Console (20W)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Laptop Computer (100W)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Satellite TV Receiver (150W)									●	●	●	●	●	●	●	●
HD TV (200W)									●	●	●	●	●	●	●	●
APPLIANCES & TOOLS																
Blender (300W)			●	●	●	●	●	●	●	●	●	●	●	●	●	●
Refrigerator-small (300W)			●	●	●	●	●	●	●	●	●	●	●	●	●	●
Food Processor (500W)			●	●	●	●	●	●		●	●	●	●	●	●	●
Microwave (1000W)				●	●	●	●	●			●		●	●	●	●
Coffee Maker (1200W)				●	●	●	●	●			●		●		●	●
Hair Dryer (1250W)				●	●	●	●	●			●		●		●	●
Toaster (1000W)				●	●	●	●	●			●		●		●	●
Portable Work Light (150W)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Handheld Drill (1000W)				●	●	●	●	●			●		●		●	●
Window Fan (80W)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Electric Heater (1500W)					●	●	●	●			●		●		●	●
Portable Vacuum (500W)			●	●	●	●	●	●		●	●	●	●	●	●	●
FEATURES																
Continuous power (Watts)	320	360	1000	1500	2500	4000	1000	1800	540	900	1800	1000	1800	1000	1800	
Charging output (Amps)																
Transfer switch							●	●	^	^	^	●	●	●	●	
Remote panel			●	●	●	●	●	●	^	^	^	●	●	●	●	
Hardwire option					●	●	●	●	^^	^^	^^	●	●	●	●	
GFCI AC receptable	*	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
USB port									●	●	●					
UL458 compliance		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

^ Optional accessory
 * Non-GFCI AC receptable
 ^^ Achieved by adding the optional Transfer Switch (808-0915)
 ** Various models available. Consult your store rep for details

	INVERTER/CHARGERS									
	MSW				TSW					
	Freedom HF 1000	Freedom HF 1055	Freedom 458-20	Freedom 458-25	Freedom SW 2012	Freedom SW 2024	Freedom SW 3012	Freedom SW 3024	Freedom HFS 1055	Freedom HFS 2055
	806-1020	806-1055	81-25XX**	81-2530-12	815-2012	815-2022	815-3012	815-3024	807-1055	807-2055
Cell Phone Charger (25W)	●	●	●	●	●	●	●	●	●	●
Laptop Battery Charger (25W)	●	●	●	●	●	●	●	●	●	●
Audio Equipment (300W)	●	●	●	●	●	●	●	●	●	●
GPS Device (100W)	●	●	●	●	●	●	●	●	●	●
Video Game Console (20W)	●	●	●	●	●	●	●	●	●	●
Laptop Computer (100W)	●	●	●	●	●	●	●	●	●	●
Satellite TV Receiver (150W)					●	●	●	●	●	●
HD TV (200W)					●	●	●	●	●	●
Blender (300W)	●	●	●	●	●	●	●	●	●	●
Refrigerator-small (300W)	●	●	●	●	●	●	●	●	●	●
Food Processor (500W)	●	●	●	●	●	●	●	●	●	●
Microwave (1000W)			●	●	●	●	●	●	●	●
Coffee Maker (1200W)			●	●	●	●	●	●	●	●
Hair Dryer (1250W)			●	●	●	●	●	●	●	●
Toaster (1000W)			●	●	●	●	●	●	●	●
Portable Work Light (150W)	●	●	●	●	●	●	●	●	●	●
Handheld Drill (1000W)			●	●	●	●	●	●	●	●
Window Fan (80W)	●	●	●	●	●	●	●	●	●	●
Electric Heater (1500W)			●	●	●	●	●	●	●	●
Portable Vacuum (500W)	●	●	●	●	●	●	●	●	●	●
Continuous power (Watts)	1000	1000	2000	2500	2000	2000	3000	3000	1000	2000
Charging output (Amps)	20	55	100	130	100	50	150	50	55	55
Transfer switch	●	●	●	●	●	●	●	●	●	●
Remote panel	●	●	^	^	^	^	^	^	●	●
Hardwire option	●	●	●	●	●	●	●	●	●	●
GFCI AC receptable	●	●			^	^	^	^	●	●
USB port	●	●	●	●						
UL458 compliance	●	●	●	●	●	●	●	●	●	●

HOW TO SELECT THE BEST INVERTER?



MODIFIED SINE WAVE (MSW)
 Produce AC power that is sufficient to run most electronics. Some applications such as laser printer, fax machine, satellite receiver and plasma tv set may not run properly with modified sine wave power, or they may demand true sine wave.

TRUE SINE WAVE (TSW)

Produce AC power that is similar to power from the public utility grid system. True sine wave power operates even the most sensitive and sophisticated electronics.

WHAT INVERTER SIZE DO I NEED?

Choosing the right inverter size depends on the power requirements of the electronics you expect to operate at any given time. Most Xantrex products will operate commonly used electronics and appliances. Select your Xantrex product based on either MSW or TSW type then on the total of highest wattage of each electronic device you may operate at the same time. Power requirements may vary depending on brands or models of the same type of electronics. Please refer to technical specs of electronics you will operate using the inverter. The charts are a general guideline, consult your technician for appropriate inverter system sizing and design.

Example

If you are going to operate 2 devices at once, add up the total wattage of both devices then add at least 50% more to account for start up spikes in the power draw.

Calculations

$$A + B = \text{Total Wattage [+50\%]} = C$$

1000 W [A]
+ 200 W [B]
1200 W
x 0.50
1800 W [C]

A Microwave 1000 W
 B Portable Lights 200 W
 C Recommended size of inverter

INVERTERS								INV/CHAR	
MSW			TSW					TSW	
X-Power 150	X-Power 300	X-Power 500	PROwatt SW 700i	PROwatt SW 1400i	PROwatt SW 2000i	PROsine 1000i	PROsine 1800i	Freedom SW 2024	Freedom SW 3024
813-0400-01	851-0451	813-1000-UL	806-1206-01	806-1210-01	806-1220-01	807-1000	807-XXXX**	815-2524-02	815-3524-02

ELECTRONICS										
Cell Phone Charger (25W)	●	●	●	●	●	●	●	●	●	●
Laptop Battery Charger (25W)	●	●	●	●	●	●	●	●	●	●
Audio Equipment (300W)				●	●	●	●	●	●	●
GPS Device (100W)	●	●	●	●	●	●	●	●	●	●
Video Game Console (20W)	●	●	●	●	●	●	●	●	●	●
Laptop Computer (100W)	●	●	●	●	●	●	●	●	●	●
Satellite TV Receiver (150W)				●	●	●	●	●	●	●
HD TV (200W)				●	●	●	●	●	●	●

APPLIANCES & TOOLS										
Blender (300W)			●	●	●	●	●	●	●	●
Refrigerator-small (300W)			●	●	●	●	●	●	●	●
Food Processor (500W)				●	●	●	●	●	●	●
Microwave (1000W)					●	●	●	●	●	●
Coffee Maker (1200W)					●	●	●	●	●	●
Hair Dryer (1250W)					●	●	●	●	●	●
Toaster (1000W)					●	●	●	●	●	●
Portable Work Light (150W)		●	●	●	●	●	●	●	●	●
Handheld Drill (1000W)					●	●	●	●	●	●
Window Fan (80W)	●	●	●	●	●	●	●	●	●	●
Electric Heater (1500W)						●	●	●	●	●
Portable Vacuum (500W)				●	●	●	●	●	●	●

FEATURES										
Continuous power (Watts)	150	300	500	700	1400	2000	1000	1800	2000	3000
Charging output (Amps)									50	75
Transfer switch							●	●	●	●
Remote panel				^	^	^	●	●	●	●
Hardwire option							●	●	●	●
SCHUKO	●	●	●	●	●	●	●	●	●	●
USB port				●	●	●				
CE compliance				●	●	●	●	●	●	●

^ Optional accessory.
 ** Various models available. Consult your store rep for details

TRUECHARGE² 12 V MODELS

Battery Size / Application	Amp-hour rating, 12 V	10 Amp	20 Amp	40 Amp	60 Amp	80 Amp*	100 Amp*	120 Amp*
Jet ski	18	^						
Group U1	35	●	^					
Group 24	75	●	●	^				
Group 27	90	●	●	^	^			
Group 31	105	●	●	^	^			
4 D	160		●	●	^	^		
8 D	220			●	●	^	^	^
Dual 6 V golf cart	225			●	●	^	^	^
Triple group 27	270			●	●	^	^	^
Dual 8 D	440				●	●	●	^
Triple 8 D	660					●	●	●

* Output achieved by stacking two TRUECharge2 units in parallel. Note: 10 A / 12 V model is not equipped with parallel stacking feature
 ^ These charts are a general guideline, consult battery manufacturer specifications and your technician for appropriate sizing of battery charger to your battery bank/type. Mixing battery types is not recommended

DETERMINING YOUR BATTERY BANK REQUIREMENTS

The example below will help you to determine the battery bank capacity you need to operate common appliances using a standard 12 V battery system.

Appliance or product	Continuous wattage	DC power consumed (watts / 10*)	Appliance run time	Amp hours consumed between charge cycles	Battery bank required (Ah / 0/50**)
Audio system	100 W	10 A	4 Hr	40 Ah	
Coffee maker	1200 W	120 A	1/2 Hr	60 Ah	
Microwave	1000 W	100 A	1/4 Hr	25 Ah	
	2300 W	230 A		125 Ah	250 Ah

The above scenario would result in a 12V battery bank total system requirement of 250 amp-hours. The battery bank total amp-hours must exceed the total amp-hours required by the system for best performance & battery life
 * Dividing watts by 10 allows for easy mathematics and typical system losses
 ** Deep cycle batteries should only be discharged no lower than 50% State-of-Charge (SoC)
 Note for 24 V battery systems: 125 Ah in a 24V battery system contains equivalent energy of 250 Ah in a 12V battery system

WHAT TYPE OF BATTERIES SHOULD I USE?

Xantrex recommends using only high quality deep cycle batteries for inverter applications. Deep cycle batteries are designed specifically for deep discharge which results in better system performance and battery life. Do not use starting batteries for inverter applications.

DO I NEED TO INSTALL MY INVERTER NEAR MY BATTERIES?

Ideally an inverter should be installed within 10 feet of the battery bank. If you increase this distance, you will need to use thicker DC cables to compensate for a drop in voltage and related lower inverter performance.

TRUECHARGE² 24 V MODELS

Battery Size / Application	Amp-hour rating, 24 V	10 Amp	20 Amp	30 Amp	40 Amp*	50 Amp*	60 Amp*
Dual group U1	35	●	^				
Dual group 24	75	●	●	^			
Dual group 27	90	●	●	^	^	^	^
Dual group 31	105	●	●	●	^	^	^
Dual 4 D	160		●	●	●	^	^
Dual 8 D	220			●	●	●	●
Four 6 V golf cart	225			●	●	●	●
Four 4 D	320				●	●	●
Four 8 D	440					●	●

* Output achieved by stacking two TRUECharge2 units in parallel
 ^ These charts are a general guideline, consult battery manufacturer specifications and your technician for appropriate sizing of battery charger to your battery bank/type. Mixing battery types is not recommended

BACK-UP POWER SELECTOR GUIDE

Features	PowerHub 1800	PowerPack 1500
Max. continuous power	1440 watts	1350 watts
Waveform output	Modified Sine Wave	Modified Sine Wave
Automatic transfer to AC power	Yes	No
Battery capacity	100-400 Ah*	Built-in 51 Ah
Charger capacity (12 V)	40 Amps	5 Amps
AC receptacles	4	2
AC hardwire capability	Yes	No
12 volt DC port	No	Yes
Digital display	Yes (advanced)	No
Solar input**	Yes (hardwire, up to 12 V / 32 A)	Yes***
Wind input**	Yes (hardwire, up to 12 V / 80 A)	Yes***
Installation	Stationary	Mobile
Operating time	17-68 hours*^	8 hours*

* Customer installs 100 - 200 Ah battery (ies) in the included battery enclosure, second battery enclosure (sold separately) can accommodate another 200 Ah = total 400 Ah. Battery not included
 ** Charge controller not included
 ^ Small office combo consisting of laptop, inkjet printer, cordless phone & wireless modem / router
 *** Solar or wind may be connected through 12 V DC port (max. 8 amps) or hardwired to direct DC terminal, requires external charge controller