

# FREEDOM 458

## INVERTER/CHARGER

**xantrex™**  
Smart choice for power™

### Trusted solution in RV inverter/ chargers, economical and dependable

Available in:

1000 W  
50 A

1500 W  
75 A

2000 W  
90 A

2500 W  
130 A

3000 W  
140 A



Installed in RVs for almost two decades, this inverter/charger has proven itself, with filtered modified sine wave output, Freedom 458 inverter/chargers run most loads, from office equipment to household appliances and electronics.

Temperature controlled multi-stage charging ensures that your batteries are recharged quickly when electricity supplied by your RV's generator or campground hookup. Automatic low/high DC voltage shutdown and other safety features help to protect your expensive deep-cycle batteries from excessive depletion. Twin AC output breaker variant also available!

#### Product Features

- » Three-stage battery charger recharges batteries quickly while protecting your battery bank
- » Programmable front panel and LED indicators
- » Temperature sensitive charging for of all types of deep cycle batteries
- » Built-in 30 amp transfer switch automatically transfers between inverter power and incoming AC power
- » Customized settings can be programmed with the Xantrex Freedom Basic Remote Panel
- » Option of dual input and dual output connections for easy installation
- » Approved to the UL 458 and CSA 22.21 regulatory standards MSW AC power inverter with high surge capability

#### Protection Features

- » Power sharing prevents nuisance tripping of shore power breaker
- » Over voltage and under voltage protection
- » Over-temperature protection
- » Overload protection
- » Short circuit protection

#### Applications:



Recreational  
vehicles



Heavy duty  
trucks



Work  
vehicles



Specialty  
vehicles



Buses /  
coaches

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Electrical specifications – inverter	10	15	20	25	30
Output power (continuous)	1000 W	1500 W	2000 W	2500 W	3000 W
Surge power (AC amps)	25 A	37.5 A	50 A	62.5 A	75 A
Output frequency regulation	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz
Inverter voltage regulation	120 V +/- 5% true RMS	120 V +/- 5% true RMS	120 V +/- 5% true RMS	120 V +/- 5% true RMS	120 V +/- 5% true RMS
Output wave form	Modified sine wave	Modified sine wave	Modified sine wave	Modified sine wave	Modified sine wave
Efficiency (full load)	85%	86%	85%	87%	86%
Peak efficiency	93%	92%	92%	92%	93%
No load current draw (idle mode)	0.12 A	0.12 A	0.12 A	0.12 A	0.12 A
AC output connections	Single	Single*	Single*	Dual	Single / Dual
AC input connections	Single	Single	Single	Dual	Single/Dual
AC transfer switch	30 A	30 A	30 A	30 A	30A

Electrical specifications – charger	10	15	20	25	30
Charge rate	50 A DC	75 A DC	100 A DC	130 A DC	140 A DC
AC input voltage range	90 130 Vac	90 130 Vac	90 130 Vac	90 130 Vac	90 130 Vac
Battery voltage (nominal)	12 Vdc	12 Vdc	12 Vdc	12 Vdc	12 Vdc
Battery voltage range	10.0 15.5 Vdc	10.0 15.5 Vdc	10.0 15.5 Vdc	10.0 15.5 Vdc	10.0 15.5 Vdc
Low battery cut-out	10.0 Vdc	10.0 Vdc	10.0 Vdc	10.0 Vdc	10.0 Vdc
AC input (max. charge mode)	12 A AC	17 A AC	21 A AC	26 A AC	28 A AC
Bulk charge voltage**	14.3 Vdc	14.3 Vdc	14.3 Vdc	14.3 Vdc	14.3 Vdc
Float charge voltage**	13.4 Vdc	13.4 Vdc	13.4 Vdc	13.4 Vdc	13.4 Vdc
Equalize charge voltage	16.3 Vdc	16.3 Vdc	16.3 Vdc	16.3 Vdc	16.3 V
Charge control	3-stage	3-stage	3-stage	3-stage	3-stage
Battery type settings	Wet / Gel 1 / Gel 2 / AGM	Wet / Gel 1 / Gel 2 / AGM	Wet / Gel 1 / Gel 2 / AGM	Wet / Gel 1 / Gel 2 / AGM	Wet / Gel 1 / Gel 2 / AGM
Equalization	Yes	Yes	Yes	Yes	Yes
Temperature sensitive charging	Yes	Yes	Yes	Yes	Yes

General specifications	10	15	20	25	30
Optimal operating temperature range	32°F – 104°F (0°C – 40°C)*** derated below 0°C and above 40°C				
Optional remotes	Freedom Basic Remote or Link instrumentation				
Dimensions (H x W x L)	7.9 x 11.5 x 13.2" (201 x 292 x 335 mm)				
Weight	35 lb (16 kg)	45 lb (20 kg)	45 lb (20 kg)	50 lb (23 kg)	50 lb (23 kg)

Part numbers	10	15	20	25	30
Single input, single output	81-1010-12	81-1510-12	81-2010-12		81-3010-12
Single input, dual output - 20/20 circuit breakers		81-1521-12	81-2021-12		
Single input, dual output - 20/15 circuit breakers		81-1522-12	81-2022-12		
Single input, dual output - 15/15 circuit breakers		81-1523-12	81-2023-12		
Dual input, dual output				81-2530-12	81-3030-12

Accessories	10	15	20	25	30
Freedom Basic Remote	84-2056-01	84-2056-01	84-2056-01	84-2056-01	84-2056-01
Link 1000	84-2019-02	84-2019-02	84-2019-02	84-2019-02	84-2019-02
Link 2000	84-2000-06	84-2000-06	84-2000-06	84-2000-06	84-2000-06
Thermal Sensor Assembly 15'	76-0022-00	76-0022-00	76-0022-00	76-0022-00	76-0022-00
Thermal Sensor Assembly 20'	76-0022-01	76-0022-01	76-0022-01	76-0022-01	76-0022-01
Thermal Sensor Assembly 30'	76-0022-02	76-0022-02	76-0022-02	76-0022-02	76-0022-02

Regulatory and environmental compliance
UL and cUL listed to 458 standard

Specifications are subject to change without notice. \*For dual, see circuit breaker options below under "Part Numbers". \*\*Default value varies with battery type and temperature. \*\*\*Quartz regulated.