

**12 v**

Available in:

**1000 W  
55 A**

**1800 W  
40 A**



### FREEDOM HF REDEFINED. Pre-wired AC & DC cables. 12V ignition lockout. Easy drop-in replacement.

The Freedom HF EMS Inverter/Charger is one of the smallest, lightest, and most affordable inverter/chargers in the market. Designed exclusively for the EMS market, the Freedom HF EMS Inverter/Charger is designed to operate a wide variety of electronics and appliances in emergency and specialty transport vehicles. The Freedom HF EMS is available in two models: 1000EMS - 1000 watts with a 55-amp charger and 1800EMS - 1800 watts with a 40-amp charger.

The Freedom HF EMS comes equipped with pre-wired DC cables with Anderson Connectors and a pre-wired AC shorepower cable and plug for simple installation and 'drop-in' replacement. The all new ignition lockout feature helps to minimize battery drain by disabling the inverter when the ignition is turned off.

Ignition-controlled 12 Vdc, 20-amp fused, power module operates onboard DC loads. Multistage charging helps ensure that batteries are recharged quickly and efficiently. All models are equipped with a built-in automatic transfer switch and dual GFCI receptacle. Detachable digital remote control panel display provides precise system information and can be mounted at a convenient location for remote monitoring.

#### Product Features

- ▶ Designed to power small appliances and other onboard electronic equipment
- ▶ Ignition lockout feature helps to minimize battery drain
- ▶ Pre-wired with AC & DC cables for easy installation and use
- ▶ Auxiliary 12 Vdc power module
- ▶ Digital, detachable remote panel pre-attached with 25' extension cable for remote system monitoring
- ▶ Automatic three-stage battery charger
- ▶ Designed to be hardwired or by connecting AC through GFCI receptacles (included)
- ▶ Built-in 30-amp relay to automatically transfer between inverter power and incoming AC utility power

#### Protection Features

- ▶ Battery over-voltage and under-voltage protection
- ▶ Over-temperature shutdown
- ▶ Automatic overload protection
- ▶ Short-circuit protection
- ▶ Ground-fault protection
- ▶ Tested to perform to KKK-A-1822 standards
- ▶ ETL certified to UL458 for use in mobile applications

#### Applications:



Emergency  
vehicles



Certified to  
CSA Standard  
C22.2 No. 107.1  
UL 458 with marine  
supplement  
FCC Class B

Conforms to KKK-A-1822 standards.



**xantrex™**  
Smart choice for power™

**Freedom HF-EMS Inverter/Chargers****Electrical Specifications - Inverter**

Models	HF 1055-EMS	HF 1800-EMS
Output power (continuous)	1000 W	1800 W
Surge power	2000 W	3600 W
Output frequency regulation	60 Hz	60 Hz
Inverter voltage regulation	115 +/-10 Vrms	115 +/-10 Vrms
Output wave form	Modified sine wave	Modified sine wave
Efficiency (full load)	> 80%	> 80%
Peak efficiency	> 87%	> 87%
No-load input power (producing output voltage)	< 10 W	< 10 W
Off mode current draw (display off)	< 1 mA	< 1 mA

**Electrical Specifications - Charger**

Charge rate	55 A	40 A
AC input voltage range	90 – 130 Vac	90 – 130 Vac
AC transfer relay	30 A	30 A
Battery voltage (nominal)	12 Vdc	12 Vdc
Operating voltage range	10.5 – 15.5 Vdc	10.5 – 15.5 Vdc
Low battery cut-out (low limit / high limit)	10.5 Vdc / 11.8 Vdc	10.5 Vdc / 11.8 Vdc
AC input (max. charge)	5 Aac	10 Aac
Default bulk charge voltage setting	14.2 Vdc	14.2 Vdc
Default float charge voltage setting	13.5 Vdc	13.5 Vdc
Battery charge outputs	One	One
Charge control	Three-stage	Three-stage
Battery type settings	Flooded / Gel / AGM / Fixed 13.5 Vdc	Flooded / Gel / AGM / Fixed 13.5 Vdc
Equalization	No	No
Internal temperature-sensitive charging	Yes	Yes

**General Specifications**

Optimal operating temperature range	32°F to 104°F (0°C to 40°C)	32°F to 104°F (0°C to 40°C)
Optional remotes	Detachable display	Detachable display
Unit weight	10 lb (4.5 kg)	12.8 lb (5.8 kg)
Unit dimensions (H x W x L)	4.2 x 9.5 x 15.5" (106 x 241 x 393 mm)	4.2 x 9.5 x 18.0" (106 x 241 x 457 mm)
Warranty	Two year	Two year
Part number	806-1055-02	806-1840-02

**Regulatory & Environmental Compliance**

ETL Certified to CSA Standard C22.2 No. 107.1, UL458 with marine supplement (drip shield, part # 808-9531). Tested to confirm to KKK-A-1822 standards.