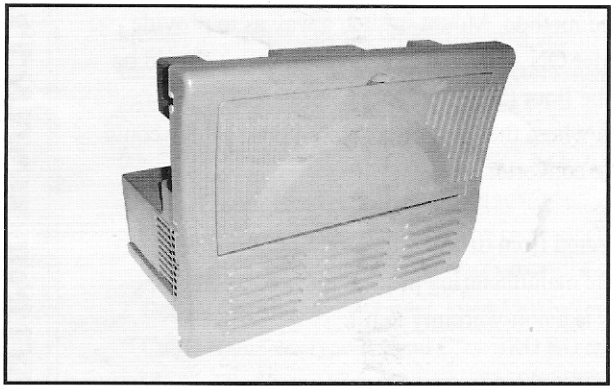
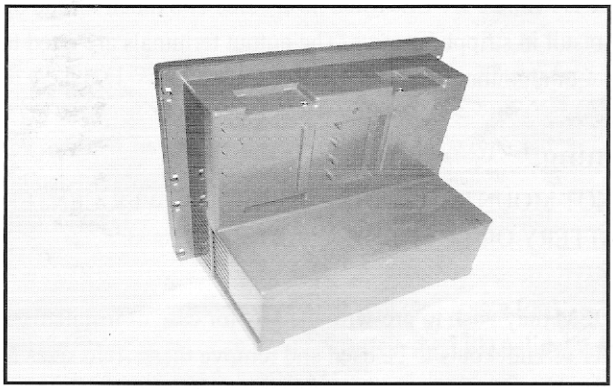
Installation/Operators Manual
For use with WFCO Power Center
Models WF-8935AN-P, WF-8945AN-P, WF-8955AN-P





WORLD FRIENDSHIP WFCO COMPANY

Distributed in the US by CHENG USA, INC.
Sales (574) 294-8997
Warranty Service (877) 294-8997

Installation/Operator's Manual

For use with WFCO Models: WF-8935AN-P, WF-8945AN-P, WF-8955AN-P

INSTALLATION INSTRUCTION

Mounting:

Select the mounting location near the shore power inlet and batteries and cut a rough opening 1/8" wider than the box to allow the power center to slide in easily. The hole should be framed so that the box can be secured tightly.

Mount horizontally is the preferred method. Mount in such a way as to provide adequate ventilation to the converter ON ALL SIDES. The 8900 series should be installed in a minimum of 1" off the floor (2" to 3"would be preferred).
Caution: Do not mount in an area where the owner may store items, as this could effect the efficient operation of the converter.

Be sure that all openings are protected from debris falling into the WF-8900. Metal shavings and debris from the manufacturing process allowed to enter the converter may cause damage (this is a non-warranty item).

On the fuse board use a slot driver to tighten terminal output screws. The tightening torque is Min. 20 IN-LB.-Max. 40 IN-LB. Too much torque or use of a power tool, may result in stripped screws. The output terminals are rated to accept 2 to 10 gauge copper or aluminum wire.

Warning:

DO NOT MOUNT THE WF-8900 SERIES POWER CENTER IN A BATTERY OR LP GAS COMPARTMENT.

The OEM may wish to pre-wire the box for ease of installation. Select the number of knockouts to be used and remove them. Two sizes have been provided. The 1 1/8" is for the 30 amp power cord. The 7/8" holes are for the Romex on the 120VAC side and the wires on the 12VDC side. Remember to select the proper gauge wire for the load and distance. Leave the rest of the knock-outs in place. Be sure to use appropriate Romex connectors and strain relief to secure the wires to the box. (See wiring diagram)

INSTALLATION INSTRUCTION

Fuses and Breakers:

Breakers

The WF-8900 series power center was designed to use a 30 AMP main breaker with branch circuits (Cutler-Hammer, ITE/SIEMENS, Square D, Murrey and T&B are approved breakers). Double breakers may be used for the branch circuits. Should a breaker become faulty, replace with the same type and rating breaker as provided by the OEM. Use only approved 120 VAC circuit breakers and 12V fuses. IMPORTANT: When replacing circuit breakers replace with the same type and rating as the original.

AC Breaker Manufacturer:

1. Main Circuit Breaker-Listed, rated 120Vac, maximum 30 A
   Culter-Hammer: Type BR and C. T&B: Type TB. Siemens/ITE: Type QP. Square D: Type HOM. Murrey: Type MH-T or MP-T
2. Branch Circuit Breaker-Listed, rated 120Vac, maximum 20 A
   Culter Hammer: Type BR and C, or BRD BD and A. T&B: Type TBBD or TB. ITE/Siemens: Type QT or QP. Square D: Type HOM or HOMT. Murrey: Type MH-T or MP-T

12 VDC Fuses

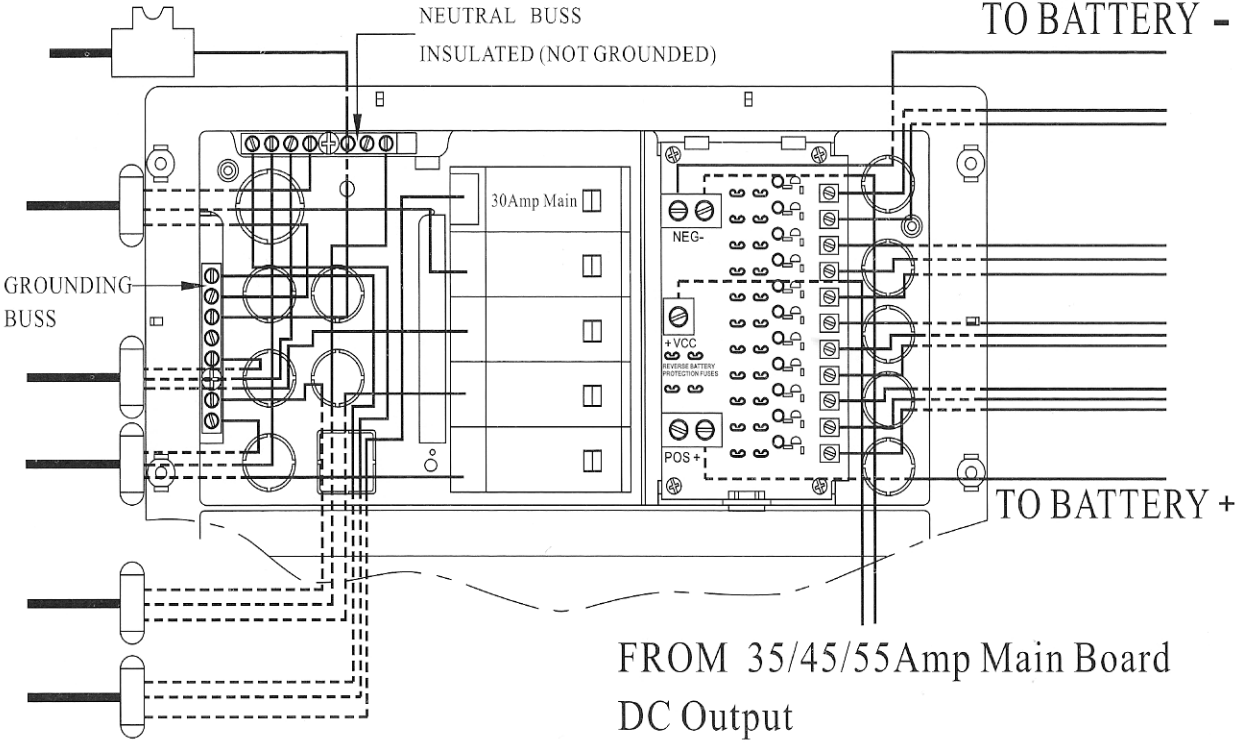
The DC panel output circuits (1-9) were designed for a maximum 20 amp fuse, circuits 10 and 11 were designed for a maximum of a 30 amp fuse. Should one need to be replaced, be sure to replace it with the same type and amp rating as the original, Littelfuse Type 257 automotive style fuse. Replacing it with either a higher or lower amp fuse could result in the panel not functioning properly.

Each 12VDC circuit of the WFCO distribution panel is provided with a LED indicator light. Should the fuse "blow" or an open be caused, the LED will light up indicating which circuit is open and which fuse needs to be replaced.

REVERSE Polarity Fuses

The WF-8900 series are equipped with reverse polarity fuses. Should these fuses "blow" either during the manufacturing process or while connecting the batteries, replace them with the same type and rating fuse as originally provided with the equipment.

WIRING DIAGRAM



Automatic Microcontroller Operation

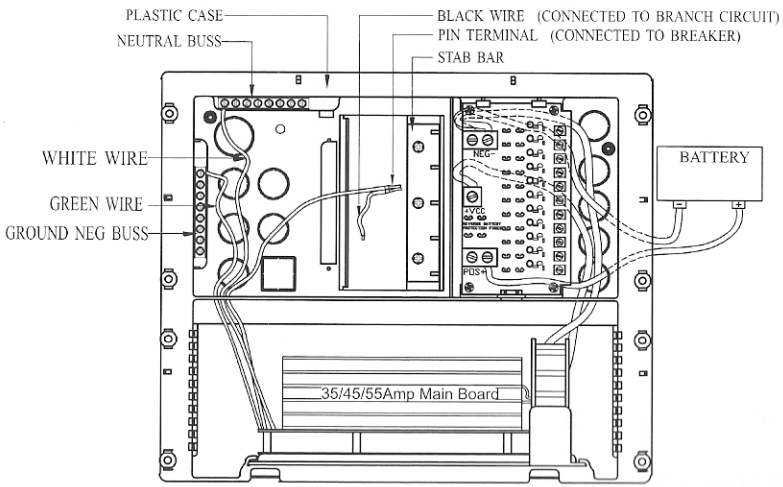
The WFCO series 3-stage switch mode power converters are fully automatic. The converter will sense which mode it needs to be in by checking the condition of the batteries.

The three modes include:

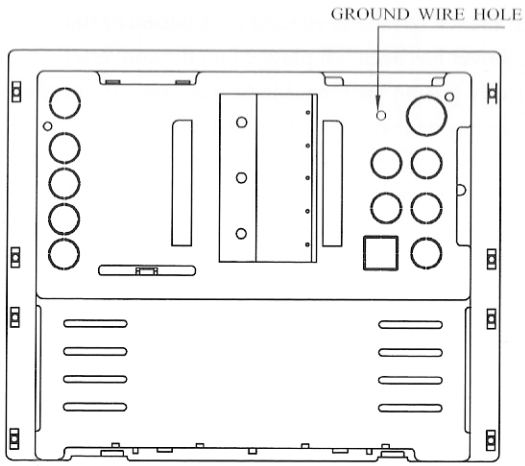
Absorption Mode: During this mode the converter output is in the 13.6 VDC range. This is the mode that the converter will function at normally. This mode provides the 12 VDC and the current required by the RV.

Bulk Mode: When the converter senses that the battery voltage is less than 13.2 VDC. The converter will automatically go into the Bulk Mode.

Float Mode: If the RV has not been used for a period of time and the shore power has been left plugged in, the converter will automatically go into the Float Mode. The converter will sense if there has been any demand. If there is no activity for a period, the converter will automatically go into the Float Mode. When the converter senses a demand by turning on lights the converter automatically goes into Bulk Mode and will return to the Absorption Mode after 4 hours.



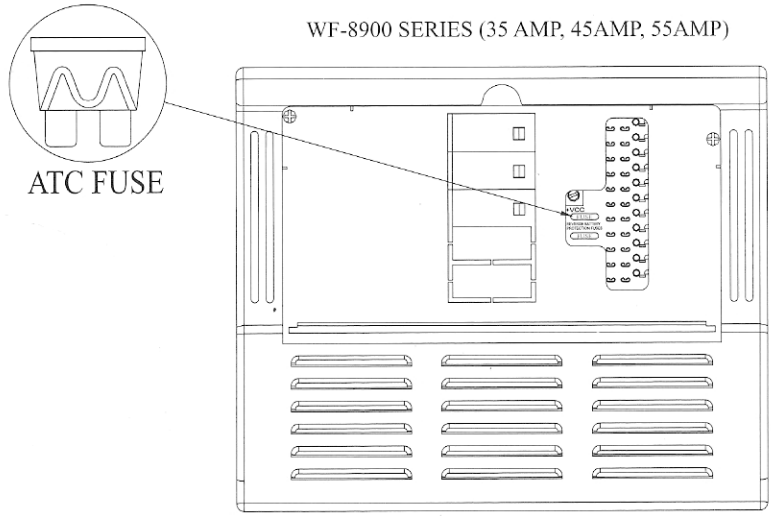
Rear view



INSTALLATION INSTRUCTION

Troubleshooting:

If there is power to the converter, check the reverse polarity fuses on the front panel of the WF-8900 series power center. First, visually inspect the fuses for any breaks, if none are found use a continuity tester to check for continuity.

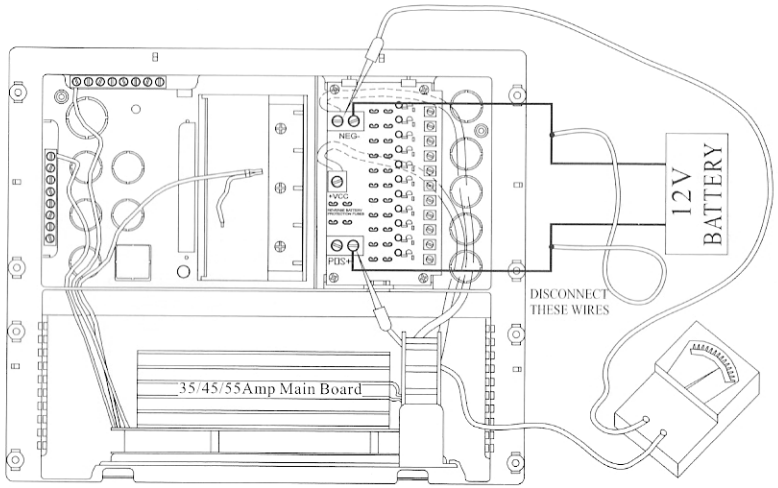


If the fuse(s) are blown it means the RV battery was accidentally connected in reverse, either at the battery or at the converter. Reconnect properly, then replace it with the same type and amp rating as the original, Littelfuse Type 257 automotive style fuse.

IMPORTANT: These fuses protect converter from damage in the event that the RV battery is accidentally connected in reverse. A reverse battery connection, even for a second, is the only reason that these fuses will blow.

The WF-8900 series is neither weather resistant nor designed for installation in wet locations. The WF-8900 series must be protected from direct contact with water.

Before checking the converter output voltage, it is necessary to disconnect both of the wires on the front of the converter (as shown below). Using a slot hex driver, disconnect the wires. Cap each wire or wrap with tape. Check the converter output voltage with a voltmeter. Place the **Positive** (red) probe on the **Positive** output (red) and place the **Negative** (black) test probe on the **Negative** (black) output terminals of converter. Be sure you have good connections at the terminals. If the voltage reads 13.6 volts (+/-.3volts) the converter is functioning properly.



If converter output voltage reads 13.6 volts, but the battery is still not charging, check for an open automatic reset circuit breaker (if provided), or an open between the converter and distribution panel or an open wire between the converter and the RV battery.

If the converter fuses check good and there is 120 VAC power at the outlet but the converter output still reads zero volts, the converter is not functioning properly and must be replaced.
For warranty service contact 1-877-294-8997.

GENERAL INFORMATION

The 8900 series power centers, are intelligent and reliable electronic switch mode converter / battery chargers. The 8900's are UL and CUL (Canadian) Listed. They meet FCC Class B requirements.

FCC Compliance Class B:

NOTE: 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:** These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case, the user will be required to correct the interference at his own expense.


WORLD FRIENDSHIP CO., LTD
MODEL: WF-8955AN
Power Converter With Panel 70VF
AC PANEL BOARD
POWER CONVERTE WITH PANEL
Tested To Comply With FCC Standards
ELECTRICAL RATING:
PANEL INPUT: 120VAC 60Hz 30AMP
CONVERTER INPUT: 105-130VAC, 950 WATTS
OUTPUT: 13.6VDC, 55AMP(INC CHARGING AND LOAD)
MAIN BREAKER
MUST BE INSTALLED IF THREE OR MORE BRANCH CIRCUITS ARE USED
1
2
3
4
5
AC Breaker Information:
Refer to circuit breakers for breaker torque ratings
Maximum 9 Branch Circuits with use of duplex breakers
Max. Main Circuit Breaker Size: 30Amp
Max. Branch Circuit Breaker Size: 20Amp
Max. 15 Amp Branch Circuit Breaker For Outlet Receptacle
Short-Circuit Current Rating 10,000A
WARNING
Hazard of electrical shock or burn, Turn off power supply to this equipment before working inside.
Failure to comply could result in death or serious injury.
The rating of battery charge is part of the total output rating provided with integral protection against overloads.
WARNING This equipment employs components that tend to produce arcs or sparks-to prevent fire or explosion, do not install in compartments containing batteries or flammable materials.
CAUTION To prevent fire, do not mount in zero clearance compartment. Do not cover or obstruct ventilating openings. Overheating may result. Do not disconnect under load.
ATTENTION:Ne pas installer dans un coffret sans espace libre. Afin de ne pas provoquer la surchauffe. Ne pas recouvrir ou obstruer les ouvertures de ventilation.
MAIN
OPT. MICRO-WAVE
AIR COND
REF./ WTR HTR CONVERT
GFI
Off/On
On/1
30
20
20
20
NOTICE: PER THE NEC, USE OF A LISTED ENERGY MANAGEMENT SYSTEM IS REQUIRED WHEN MORE THAN 5 CIRCUITS ARE UTILIZED WITH A 30A SUPPLY
CAUTION
For continued protection against risk of fire or electric shock. Replace only with same type and rating of breaker.
Reverse Polarity FUSE
• Fuse blows when battery is connected in reverse.
• Replacing fuse only with same Amperage Littelfuse Type 257
AC04W06161820
20
20
02
20
25
25
40
40
WIRING INSTRUCTIONS:
DC distribution panel output circuits 1-11 12VDC for RV 12 loads.
Replace with Littelfuse type 257 fuse.
Max. fuse Size: 20A.
If a fuse blows, do not replace with a higher amp fuse.
Terminal Block For Use 16-10AWG For 12VDC Wiring Copper Conductors.
The tightening Torque Max.20in-lb.
Temperature Rating is 75 °C.
1. 20 AMP RR ROOF
2. 20 AMP FR ROOF TOILET WTR PUMP
3. 20 AMP FURNACE
4. 20 AMP REF. RADIO
5. 7.5 AMP TEST PANEL
6. 7.5 AMP FR TV AMP
7. 7.5 AMP RR TV AMP
8. AMP
9. AMP
10. AMP
11. AMP
CLASS CTL PANELBOARD TYPE 1

WF-8955AN

Power Centers > WF-8900 Series

WF-8955 55 Amp Power Center

WF-8955PEC

Description

(Fully competible with WF-8955AN, with next generation faceplate design)

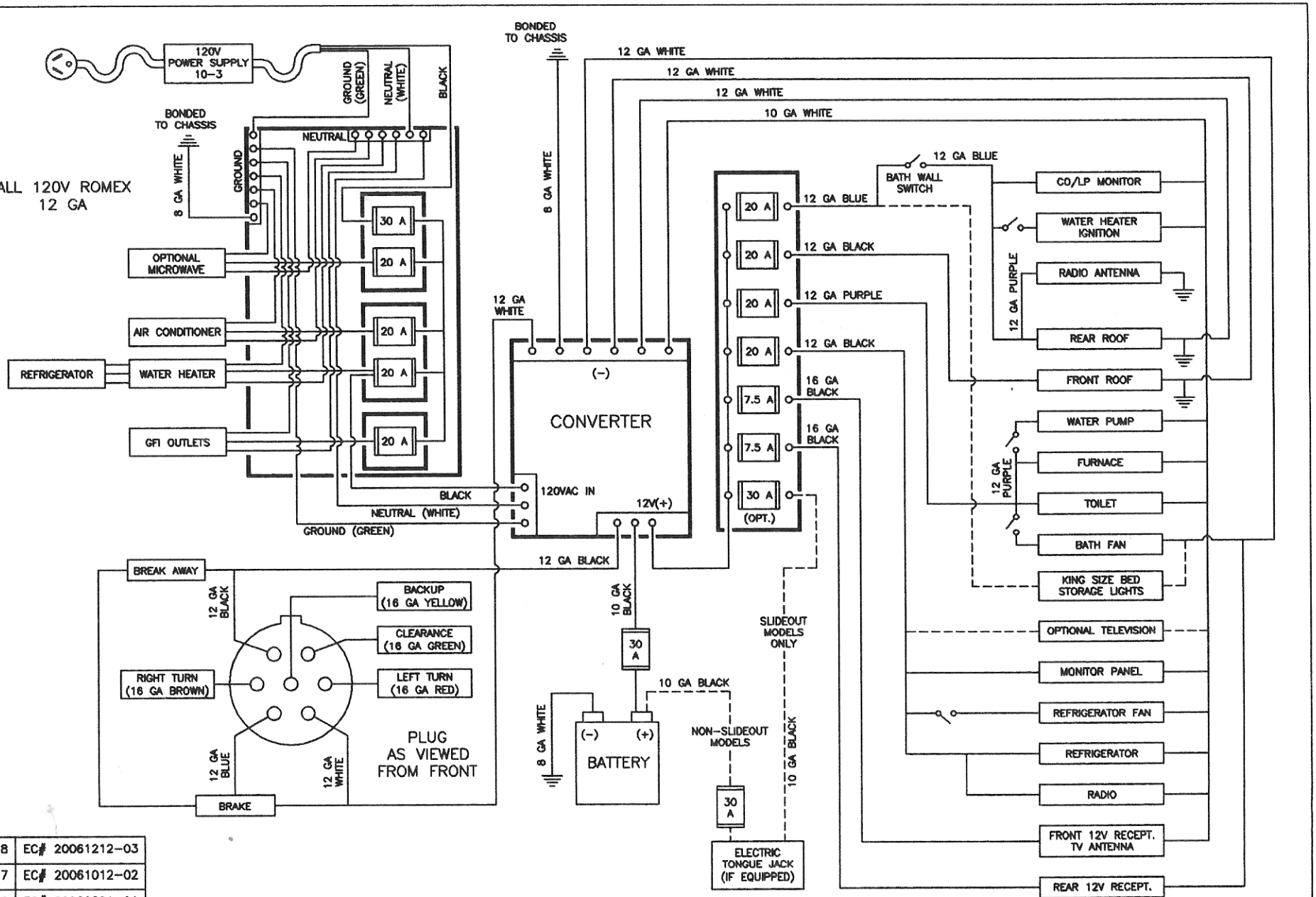
The WF-8900 Series has revolutionized RV power centers with its lighter weight, decorative doors and superior features. The WF-8955 model provides 55 amps and a clean, constant 13.6 Vdc nominal output, for reliable operation of electronics and appliances. Automatic three-stage charging extends the life of your battery with output voltage modes of 13.2 Vdc range “float” mode, 13.6 Vdc range “absorption” mode, and a 14.4 Vdc range “bulk” charge mode. The 8900 Series also maintains peace and quiet, as the cooling fan runs only when needed.

FCC Class B compliance for every power center model means that the units are dsigned not to cause interference with televisions, radios or other signals. Electronic current limiting automatically shuts down the power during overload or short-circuit conditions, protecting the life of your power center and electrical system.

The 8900 Series models provide AC and DC distribution with innovative features. They can accommodate a 30-amp main AC circuit breaker and up to five branch circuits. Eleven-branch DC circuits are available with LED lights for each DC circuit to illuminate and identify open circuits.

Specifications

Warranty Period	:	UL® and cUL®-Listed. FCC Class B Two Year Limited Product Warranty
Output Power	:	55 amps DC output
Input	:	105-130 VAC, 60 Hz (950 watt)
Output Ranges	:	- Nominal (Absorption Mode) 13.6 Vdc (includes charging and load) - Boost (Bulk Mode) 14.4 Vdc - Trickle (Float Mode) 13.2 Vdc (after 44 hrs.)
Dimensions	:	13.875” wide; 11.625” high; 9” deep
Weight	:	7 lbs.
Replacement Board	:	WF-8955-MBA (Main Board Assembly, 55 Amps)



REVISION HISTORY	
18	EC# 20061212-03
17	EC# 20061012-02
16	EC# 20060821-01
15	EC# 20060725-01

TrailManor

REV: 18	APPROVED BY:	CONVERTER\DISTRIBUTION PANEL SCHEMATIC
DATE: JULY 5, 1996	MODELS: ALL	DWG #: E\CONV_SCHEM