

The descriptions and specifications in this manual were in effect at the time of its approval for printing. Safari Motor Coaches reserves the right to change specifications or designs without notice or incurring obligation. This manual includes information on several different model options. Your motorhome may not contain every system described.

Revision Date: August 15, 1998



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The Department of Health and Human Services is pleased to announce the release of the final rule regarding the implementation of the Affordable Care Act. This rule will ensure that all Americans have access to affordable, quality health care. The Department is committed to working with all stakeholders to ensure a smooth transition to the new system.

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Foreword

To our valued customers:

Congratulations on the purchase of your beautiful new Safari Zanzibar. You have made a substantial investment of time and money in selecting your motorhome. Now let's take the time to get to know your coach. This, too, is worth the investment of your time and could save you some money.

Although we are quite sure this manual will never reach the *New York Times Best Sellers List*, or even *Barnes & Noble's Top Ten Beach Reads*, it will save you time and trouble, especially when you're out on the road, away from your local service center. Let's face it -- even though we have done everything possible to prevent such circumstances, sometimes things go wrong. By reading this manual and the other manuals that came with your coach, you can troubleshoot some of the more common problems.

This manual is not designed to be a service manual, nor should it be used as such. It has been designed to give you a comprehensive overview of your motorhome's operational systems and features. If you require service or need warranty assistance, please call the number(s) listed in your *Safari Owner's Manual*. And remember...before calling Warranty, it's always a good idea to write down the last five numbers of your Vehicle Identification Number (VIN) and your coach's mileage. This will speed the process of locating your records.

Thank you -- and we hope you enjoy your new Safari Zanzibar!

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CHAPTER 1 – VEHICLE OPERATION

OUTLINE

Your Safari Zanzibar has been built to enhance your living and driving pleasure. All components have been integrated to ensure maximum comfort. The main dashboard and side console have been designed so that the controls are conveniently placed and easy to read - day or night. The front cabin heating and air conditioning unit is state of the art. Zanzibar's comfortable driver's seat turns to face the rear of the coach for additional seating.

WARNING: This manual is meant for reference only. Become familiar with all procedures, cautions and warnings given in the various manufacturers' manuals provided before operating your motorhome.

WARNING: Make sure there is adequate ventilation when running your coach engine or heaters.

VEHICLE OPERATION

When starting the engine, first make sure the parking brake is on and the headlights are off. Put the transmission in NEUTRAL and turn the key to the ON position. The Check Engine and Engine Preheat lights will activate. Wait until the Engine Preheat light shuts off before starting the engine. (Under normal conditions, this should only take about five seconds. It will take longer when you are in colder climates.) At this time, it would be a good practice to turn off the ignition and repeat this cycle before actually starting the coach.

WARNING: When starting your coach, you must wait until the Engine Preheat light shuts off. Do not crank the starter for more than thirty seconds at a time. If the engine fails to start, wait before cranking again.

Check the engine oil pressure soon after starting. You should let the engine idle for three to five minutes before moving out, but do not allow the engine to idle too long. Idling for more than ten minutes can lead to improper fuel consumption and may cause problems with the efficiency of the engine.

NOTE: Minimize the load on the chassis batteries by turning off all unnecessary lights and accessories when starting your coach.

In cold weather the engine may be more difficult to start. Oil becomes thicker, making the engine crank more slowly. If you plan on traveling in cold areas (consistently below 20 degrees Fahrenheit), use oil that is recommended for colder climates.



A. Transmission Controls

The Allison World Transmission in your coach is a highly sophisticated, electronically-controlled automatic transmission. It is operated by a push-button panel to the left of the driver's seat. It operates much like a typical automatic transmission, only with a push-button control. However, unlike most automatic transmissions, this unit contains sophisticated electronics that evaluate every situation and actually "learn" the most efficient shifting pattern to match your driving.

The controls consist of seven buttons located on the Side Console Panel, to the left of the driver.

1. Top - GEAR INDICATOR WINDOW.
2. Top Left - REVERSE.
3. Top Right - MODE INDICATOR (standard shift or economy shift.)
4. Middle Left - NEUTRAL.
5. Middle Right - DOWNSHIFT.
6. Bottom Left - DRIVE.
7. Bottom Right - UPSHIFT.

For normal driving, depress the button corresponding with the desired gear. Pressing the "N" puts it in NEUTRAL, "R" in REVERSE, and "D" in DRIVE. The transmission will not shift into REVERSE if the coach is moving forward. The arrows allow you to upshift or downshift while in DRIVE. The transmission automatically prevents shifts that might be damaging to the transmission. The MODE button allows you to choose between the standard shift mode and the economy mode for fuel conservation.

The panel contains status lights to indicate the presence of a problem. If any of these lights are displayed, consult the chassis manual or an authorized service center immediately. The safeguards in the system may prevent certain shifts from occurring, and it will attempt to protect the transmission from further damage or problems. For detailed instructions refer to your Allison manual.

B. Washer/Wiper Controls

Rotate the knob clockwise to turn on windshield wipers. There are three stops. The first is intermittent, the second is slow/continuous and the third is fast/continuous. Depress the knob for washer fluid.

C. PAC Exhaust Brake Switch

The exhaust brake switch can be used to increase stopping efficiency and save the primary brakes from overuse. Exhaust brakes should be used only as a supplement to the primary brakes on your coach. Please refer to the manufacturer's manual for details on how to use the exhaust brakes.

NOTE: Cruise control will not operate while your Exhaust Brake switch is ON.

D/E. Cruise POWER, and SET/RESUME Switches

The Cruise Control POWER, SET and RESUME switches are to be used in operating the coach's cruise control. To engage the cruise control, follow the steps below:

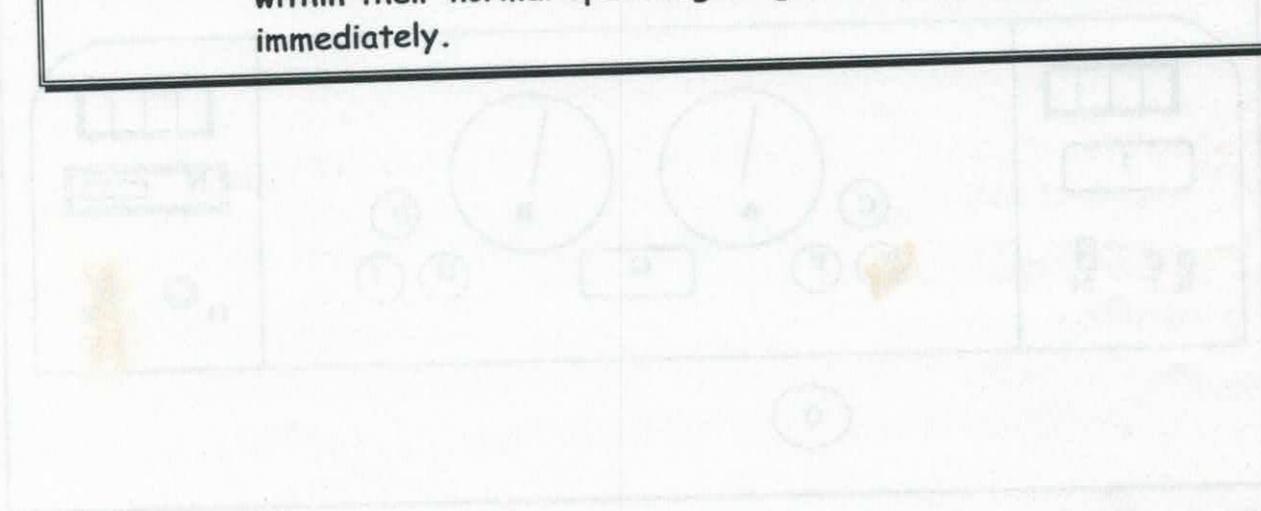
1. Turn on Cruise POWER switch.
2. When you are at the desired speed, push the Cruise SET button.
3. The cruise will disengage when you apply your brakes. To return to cruise speed, press the RESUME switch.
4. If you wish to increase cruising speed while driving, press the RESUME switch and the coach will increase speed. If you wish to decelerate, press the brake pedal lightly to disengage the Cruise Control and repeat steps one and two.



If the chassis batteries fail to provide enough power to crank the engine fast enough, press the battery boost switch to connect to the house batteries for added power.

Carefully monitor all gauges while running the engine. The normal operating ranges are discussed in this section and in the engine and chassis manuals. Before shutting the engine down, allow it to idle for a few minutes to cool the combustion chamber, bearings, turbo charger and crankshaft.

WARNING: Monitor your gauges closely while driving. If any readings are not within their normal operating range, take appropriate action immediately.



- | | | |
|-------------------------|-----------------------------|-----------------------------|
| J. Headlights | I. Tachometer | A. Transmission Temperature |
| K. Headlights | H. Engine Water Temperature | H. Engine Water Temperature |
| L. Driving Lights | G. Warning Lights Panel | G. Warning Lights Panel |
| M. Battery Boost Switch | F. Oil Pressure Gauge | F. Oil Pressure Gauge |
| N. Radio | E. Fuel Level Gauge | E. Fuel Level Gauge |
| O. Ignition | D. Voltmeter | D. Voltmeter |
| P. Parking Brake | C. Engine Fuel Level Gauge | C. Engine Fuel Level Gauge |
| | B. Speedometer/Voltmeter | B. Speedometer/Voltmeter |
| | A. Tachometer | A. Tachometer |

Main Dashboard

The Zanzibar dash is designed to be easy to read and easy to use. All important gauges are placed directly in front of the driver and arranged for comfortable viewing. The controls are arranged around the central instrument cluster and are well marked for quick identification. Most of these items require little explanation, but they are summarized here.

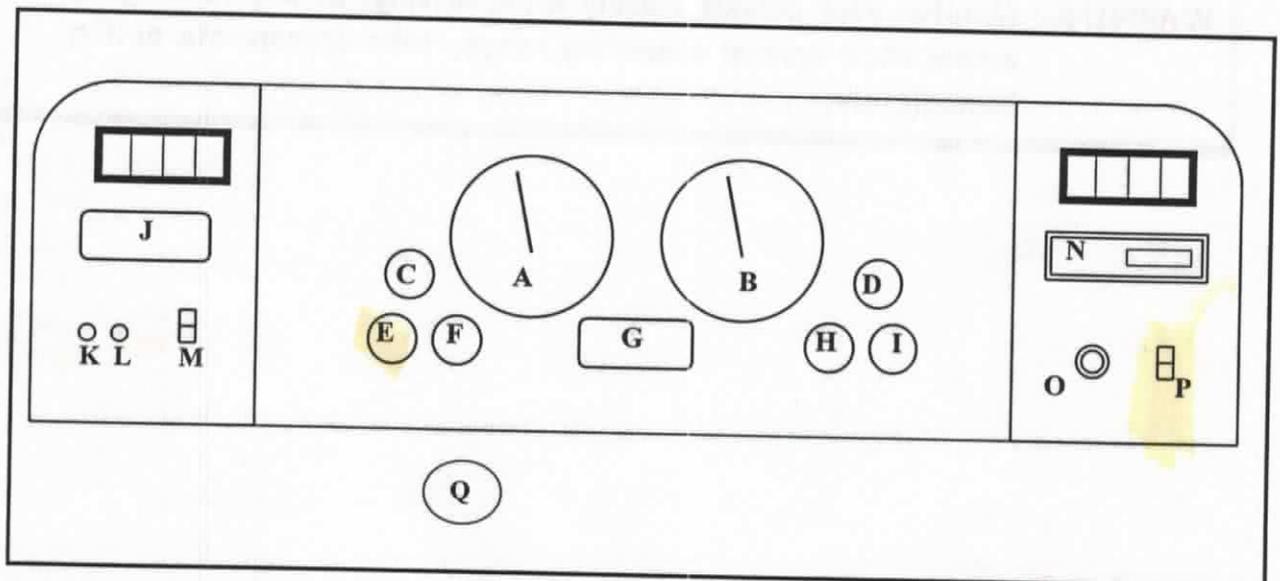


Figure 1. Zanzibar Dash

- | | | | |
|----|--------------------------|----|-------------------------|
| A. | Tachometer | J. | Heater/AC Controls |
| B. | Speedometer/Odometer | K. | Headlights |
| C. | Engine Fuel Level Gauge | L. | Driving Lights |
| D. | Voltmeter | M. | DS/PS Dash Fan Switches |
| E. | Air Pressure Gauge | N. | Radio |
| F. | Oil Pressure Gauge | O. | Ignition |
| G. | Warning Lights Panel | P. | Battery Boost |
| H. | Engine Water Temperature | Q. | Parking Brake |
| I. | Transmission Temperature | | |



A. Tachometer

The tachometer displays the engine rpm (revolutions per minute). The reading must be multiplied by 100. The engine should not be run at less than 1000 rpm for extended periods of time.

B. Speedometer/Odometer/Tripometer

The speedometer indicates the forward speed of the vehicle in miles per hour. The odometer tracks the total miles the coach has traveled. Before each trip, you may set the tripometer to zero. The gauge will then record the distance, in miles, that the coach has traveled. For coaches sold in Canada, the gauge is metered in kilometers as well as miles.

C. Engine Fuel Level Gauge

The fuel reading will vary when cornering, accelerating, braking, and climbing or descending hills. The fuel tank has a fill capacity of 88 gallons.

D. DC Voltmeter Gauge

This gauge displays the performance of the chassis DC system, especially the batteries and alternator. With the engine off and the key switch on, it should read approximately 12 volts. The gauge should read approximately 13 volts with the engine running.

E. Air Pressure Gauge

The needle on the air pressure gauge shows the pressure in the chassis air system. The chassis air bags automatically level the coach while driving. The normal operating range of air pressure should read between 90 and 110 psi.

F. Oil Pressure Gauge

Low or high oil pressure indicates possible problems with the lubrication of the engine. While idling, the gauge should read about 10 psi and while driving it should rise to about 35 psi. When the engine is cold, the pressure will be considerably higher due to the increased viscosity (thickness) of the oil.

WARNING: If the oil pressure drops significantly below 35 psi while driving or 10 psi while idling, stop the engine immediately and check the oil level.

F. Warning Lights

Warning lights will activate under certain conditions to warn you of potential problems. They include: Check Engine, Park Brake, Do Not Shift, Intake Manifold Air Heater, and Brake Service. Also, to the extreme left and right, directional turn arrows are included in this cluster.

WARNING: If the Check Engine light activates while driving, the engine will automatically derate (operate at approximately half power with a maximum speed of 30 mph). If this happens, turn off the cruise control and press the SET/RESUME switch. The Check Engine light will then flash a two-digit diagnostics code that will be needed for repair if engine problems are detected. Do not shut off your engine before recording this code. (See engine manual for code details.)



H. Engine Water Temperature

The normal operating temperature for the engine is 190 to 215 degrees Fahrenheit. Overheating can occur because of insufficient coolant or a problem in the cooling system. It can also occur in hot weather with slow or stop-and-go driving.

WARNING: Do not operate the engine at temperatures over 230 degrees. If the temperature reading exceeds this level, pull over promptly and allow the engine to cool. Extended or frequent operation at this temperature will void your engine warranty.

I. Transmission Temperature

The transmission should normally operate between 140 and 250 degrees Fahrenheit.

WARNING: If the transmission temperature reaches 290 degrees, stop the vehicle, shift into NEUTRAL, and run the engine at 1200 rpm for two minutes or more. The temperature should drop to its normal range. If problems persist, check the transmission oil level or consult an authorized service center.

J. Dash Heat and A/C Controls

The cabin heater and air conditioning controls operate similarly to those in most automobiles. The left knob controls fan speed, the center controls amount of heat or cooling and the right controls air flow. Please refer to operating instructions included in your chassis owner's manual.

K. Headlight/Parking Light/Dimmer Switch

Turn the parking lights on by pulling the knob to the first stop. Turn the headlights on by pulling the knob out to the furthest extension. Turn the knob to the left or right to adjust the console dimmer lights brightness level to your comfort.

L. Driving Lights

The driving lights are a separate unit from the headlights and can be turned on or off independently of them. These lights are typically used when driving conditions do not require headlights, such as an overcast day, where using the lights on the coach will increase your safety by allowing other drivers to more easily see the coach from a distance. In Canada, driving lights are required to be on during daylight hours.

M. Dash Fan Switches

These switches control the cabin circulation fans located on the dash at the center point of the windshield.

N. Radio

The dash radio in your coach operates much the same as the dash radio in your automobile. See your radio manufacturer's manual for detailed operating instructions.

O. Ignition

Turn to start the engine and use accessory power. See chassis manual for details.



P. Battery Boost

The battery boost switch can be used in addition to the chassis batteries for extra DC power when needed when starting the engine. (See the Electrical section description for more detail.)

Q. Parking Brake

This handle is located below the main dash. Pull out the handle to set the parking brake. Release the parking brake by pushing in the handle. Allow air pressure in the chassis air bag system to build to at least 90 PSI before releasing the brake.

WARNING: Do not attempt to drive or move the coach with the parking brake set.

Side Console

- A. Transmission Controls
- B. Wiper Controls
- C. Exhaust Brake Switch
- D. Cruise Control Power Switch
- E. Cruise Set/Resume Switch
- F. Fast Idle Switch
- G. Mirror Heat
- H. Rear View Camera
- I. Courtesy Lights
- J. Mirror Controls
- K. Leveler Control Pad

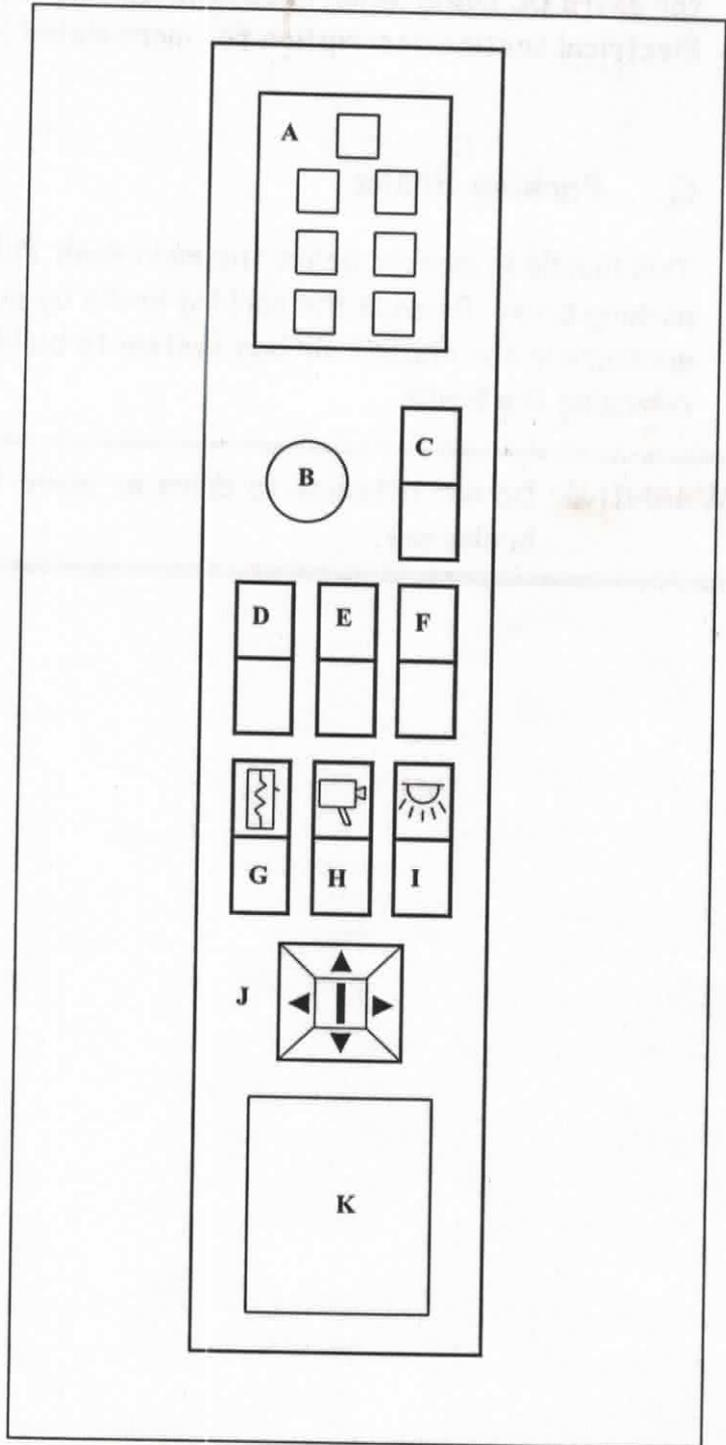


Figure 2. Side Console



F. Fast Idle Feature

The fast idle switch will control the coach's idle speed when the transmission is in NEUTRAL. This is useful for cold weather warm-ups. To engage, first push the Cruise Power switch to the ON position and then depress the Fast Idle switch until the desired idle speed is achieved. (On coaches with a Detroit engine, you must also push the Cruise Control SET/RESUME switch toward the top.) When the transmission is placed in DRIVE, the idle speed will return to normal.

G. Mirror Heat

Mirror heaters are used in extremely cold or icy conditions to prevent the fogging or icing of side-view mirrors.

H. Rear-View Camera

The television and stationary rear-view camera are factory-installed to be ready to use by turning on both power switches. The camera is mounted on the back of the coach to view a portion of the rear of the coach and the area behind. This is a very useful feature when backing up, checking a tow car and while driving to make sure no vehicles are directly behind the coach.

I. Courtesy Lights

Push this switch to activate exterior lights along the caps of the coach. This is useful to alert passing motorists when they have safe clearance to return into the lane when passing on two-lane highways.

J. Mirror Controls

One control operates both side-view mirrors. The selector in the center of the knob determines which mirror is being adjusted. Slide the lever to either the LEFT or RIGHT position. Arrows are located around the selector that point in which direction to adjust the mirror: up, down, left or right.

K. Levelers Control Pad

Please refer to the operating instructions in the Levelers section of this chapter.



Other Controls

Electric Step

The electric step is controlled by two methods: the activation of the ignition switch and by an ON/OFF switch near the doorway. The ON/OFF switch controls the 12 VDC power to the step. If the switch is on, then the step will extend and retract when the door is opened and closed. If the switch is off, the step will not move. Therefore, to lock the step in its extended position when parked, turn the switch on, open the door, and allow the step to extend, then turn off the switch.

The ignition switch overrides the ON/OFF switch. When the ignition is switched to the OFF position and the door is opened the step will extend. It will automatically retract when the door is closed.

Some are equipped with other safety features that help to prevent damage to the step or motor. The step mechanism does require regular lubrication and it must be kept clean. *Refer to the manufacturer's manual for details on step operation and maintenance.*

WARNING: Always make sure the step is retracted before moving the coach.

Inverter Remote Panel

This panel has a remote starter for the inverter and displays inverter functions. This switch is located on the bedroom wall. See the Inverter section of the Electrical chapter for details of operation.

Heater Craft

The airflow into the coach is controlled by this switch. The fans can be set to HIGH for faster heating of the coach, LOW for normal heating, or OFF when minimal or no heating is required. There are control switches located on the dining room and bedroom walls.

Levelers

Safari has installed a three-point hydraulic leveling system. This system is designed to be easy to operate, quick, reliable, and, most importantly, stable. The levelers use power provided by a 12 VDC pump. *Refer to your operations manual for operating details, troubleshooting and maintenance procedures before operating the leveling system on your coach. The following steps should be used only as a guideline after you are familiar with the procedure.*

NOTE: The front tires should always be blocked when leveling the coach.

NOTE: The leveling system should be operated at least once a month or each trip to keep the system in working condition.

NOTE: If leveling on asphalt or soft ground, use a pad under the jack to increase stability.

WARNING: Do not attempt to use the jacks on unstable ground. Do not stack objects under the jacks except for wood blocks as mentioned in Step 2 of the leveling procedure. Do not raise the tires off of the ground. If the ground is too uneven for the jacks to level the coach, the coach should be moved to a different location.



WARNING: DO NOT use the leveling system for changing tires or working under the vehicle. There is a possibility that the vehicle may move and cause injury or damage if not used properly. Use of the leveling system for any purpose other than intended may void the warranty.

WARNING: Do not allow anybody near the jacks or under the coach when operating the leveling system.

WARNING: If you are planning to use the slide out, DO NOT level the coach prior to fully extending the slide out unit.

Extending the system to level your coach.	
Step 1.	Block the front tires. Make sure your transmission is in PARK and the parking brake is set. Turn the ignition to the ACCESSORY position.
Step 2.	Check the jacks to ensure that they have a clear path to the ground. If leveling on asphalt or soft ground, place pads under the jacks. Pads should be made of wood and at least 2x8x8 inches in size.
Step 3.	Extend the jacks by pressing the rocker switches to EXTEND. Always lower the rear jacks first. While the jacks are extending, a red light will flash and a beeping alarm will sound. This will also occur if the ignition key is turned to the ON position while the jacks are extended.
Step 4.	If you plan to use the slide out unit, it is important to extend it fully <u>before</u> leveling the coach. Refer to the Slide Out chapter of the Safari Owner's manual for detailed instructions.
Step 6.	Press the leveling system switch to the ON position. The green light will indicate the system is ready.
Step 7	Turn off the leveling system switch and the ignition. All lights on the leveling panel should be off and the alarm should no longer sound.

NOTE: In wet, muddy, or icy weather the jacks can become covered with debris. This may cause the leveling system to function improperly. To eliminate this problem, periodically check each unit and clean any accumulation that may hinder proper operation.

Retracting the leveling system.	
Step 1.	With the slide out still extended, turn on the coach ignition and leveling system switches. Clean dirt off of the jack cylinders.
Step 2.	While it is possible to use the RETRACT-ALL switch and retract all jacks at one time, Safari recommends retracting the jacks using the individual jack switches. First, retract the front jack and then retract the two rear jacks simultaneously by pressing the rocker switches to RETRACT. This method will provide the smoothest possible retraction. The flashing red light and alarm will shut off when the jacks are within six inches of full retraction.
Step 3	Set the leveling system control switch to the OFF position.
Step 4.	Remove tire blocks and jack pads. Visually inspect the jacks to be sure they are fully retracted and then, following the directions in the Slide Out chapter of this manual, retract the slide out before moving your coach.

WARNING: Visually check to make sure all jacks are fully retracted. Do not rely on the warning light and alarm. Moving the coach with the leveling jacks extended can cause severe damage to the jacks and/or the coach.

WARNING: Never move the coach while the slide out unit is extended. This will cause severe damage to the slide out mechanism's alignment.

For leveling system and jack maintenance instructions and detailed operating procedures, consult the manufacturer's operating instructions included with your manual package.



Coach Monitor Panel

Located in the area above the dining table (front-entry) or above the entrance (mid-entry) in your Safari coach is the Coach Monitor Panel. This panel contains scan and select switches that allow you to remotely monitor battery levels, LP gas, water and holding tank levels. In the same area there are also switches to operate the water pump, generator and Hurricane system. In the same general vicinity, you will see switches for the slide out, porch light, entry step, electric awning and the DS and PS docking lights selector. (In front-entry models some of these switches may be located over the door.)

A description of some of these switches and their functions follows:

LP Gas, Water and Battery Monitor Panel

This panel monitors the levels of LP Gas, battery power and fresh, black and grey water tanks. Press the ON switch to illuminate the panel. The panel displays either EMPTY, 1/3 FULL, 2/3 FULL or FULL for the LP gas, fresh water, and holding tanks. For the battery levels, the panel displays whether the house batteries are WEAK, FAIR, GOOD or CHG (charged).

The panel also has a remote starting switch for the water pump. Push this switch upward and the pump will automatically start itself.

See the LP Gas, Electrical, Plumbing and Wastewater chapters for details on readings.

Generator Hour Meter

This meter displays the total hourly usage of the generator.

Generator Stop/Start Switch

Use this switch to start and stop the generator. Depress and hold until the generator starts. To stop the generator, press the lower portion of the switch until the motor comes to a complete halt.

NOTE: If the generator does not start within five seconds, release the button and try again. Continuous cranking can damage the generator starter.

Docking Light Selector

There are two switches labeled PS and DS located beneath the Coach Monitor Panel. After turning on the docking light switch, on the side panel in the cabin, use these switches to activate either the DS docking light or the PS docking light.

Slide Out Switch

This switch is located near the Coach Monitor Panel. Please familiarize yourself with the instructions for use of the slide out unit before operating this switch.



CHAPTER 2 – ELECTRICAL SYSTEM

OUTLINE

The electrical system in your Safari motor coach provides maximum power with a minimum amount of effort and maintenance from the owner. Any appliance you use in your home can be used in your coach within the amperage limits of the system. There are also features in place to prevent such problems as battery drain and circuit overload. This system is so automatic that you may be tempted to skip this part of the manual, but you will gain a diverse knowledge of your motorhome from a thorough understanding of this material.

Electrical System Operations

Your coach has five main sources of electrical power: the generator, the shore line connection, inverter, chassis batteries and coach batteries. All sources are independent of each other, but can be combined in a variety of ways to provide the most efficient electrical supply to the coach and to charge the batteries.

Your coach uses two types of power: 120 volt alternating current (VAC) and 12 volt direct current (VDC). Homes in North America use 120 VAC as their source of power, while 12 VDC is most commonly used in automobiles.

As in your home, most of the lights and appliances in your coach use 120 VAC. Power (120 VAC) is distributed through a main circuit breaker box located in the passenger side bedroom overhead cabinet. This power is separated into two main paths.

Engine starting and control, dash lights, pumps, fans, and chassis functions use 12 VDC. Batteries similar to those in automobiles provide this power source. The alternator charges these batteries while the engine is running.

Your coach is also equipped with an inverter that will convert 12 VDC power into 120 VAC power for use when the two primary sources -- shore power or the generator -- are not available. This inverter will also convert 120 VAC power to 12 VDC power to charge the batteries.

More information on operation of the generator, inverter, and the 12 VDC system is detailed later in this chapter. Please become familiar with your electrical system for your safety and to maximize its efficiency. Detailed manuals from the manufacturers of the generator and inverter are included with your manual package.

WARNING: Do not connect the shore line to any source other than an RV approved outlet. Connecting your shore line to 30 amp outlets such as dryer or welder outlets in the home or well pumps on a farm will cause extreme damage to the electrical system of your coach and may cause severe injury.



120 VAC SYSTEM

The 120 VAC system consists of the shore power, generator and inverter. The shore line connection is the primary source for power. Either the shore line or the generator powers all 120 VAC items in your coach. In the event no power is available from the shore line or generator, the inverter will provide power for such items as the television, VCR, or sound system. The system is protected from overloads by a set of circuit breakers and fuses.

The 120 VAC shore line system works via a power transfer switch. From this transfer switch, power is routed to the entire 120 VAC system. The inverter circuit is powered up through relays in the inverter itself, which then furnish 120 VAC power to the two circuits.

The system will take power from the most appropriate source automatically. The inverter remote switch must be ON for the inverter to furnish power to the 120 VAC system. When dry camping, it is wise to only turn on the inverter when it is needed. Leaving the inverter on at all times will result in drained batteries.

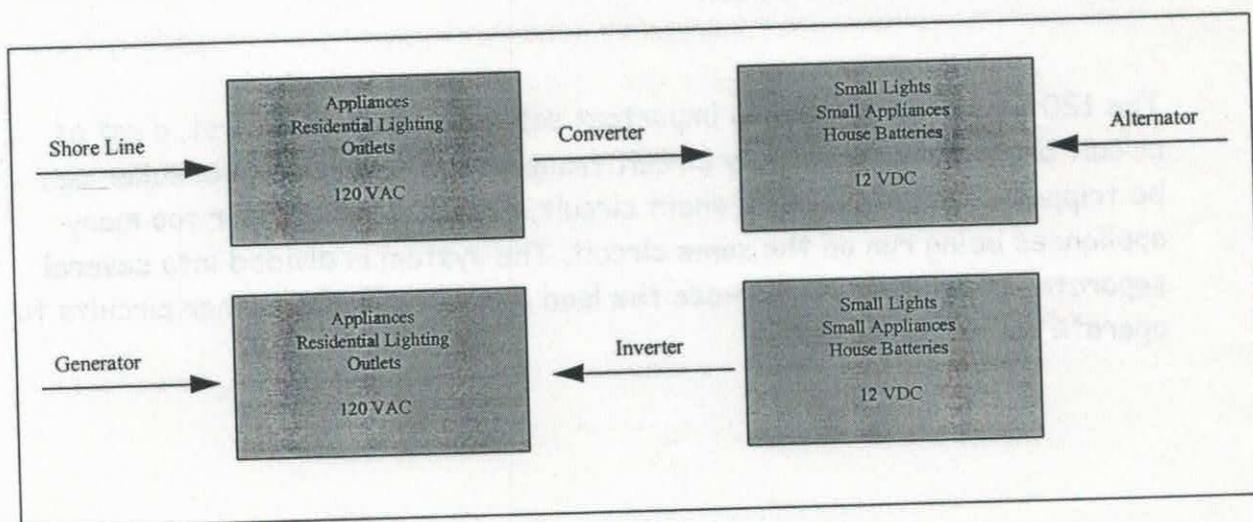


Figure 3 Simplified Electrical System

WARNING: Modifying the circuitry in your motorhome may void the warranties of the coach and any appliances on that circuit. Never work on a live circuit. Never bypass breakers or fuses.

Table 1. 120 VAC Operations

These items operate **ONLY** with shore line power or while running the generator:

- | | |
|---|---|
| <ul style="list-style-type: none"> • Rear roof air conditioning • Front roof air conditioning • Washer/dryer combo • Hot Water Tank | <ul style="list-style-type: none"> • Inverter/charger • Refrigerator • Microwave/convection oven * <p>*Non-CSA Vehicles with 2000 watt inverter only</p> |
|---|---|

These items can operate with power from the inverter.

- | | |
|---|--|
| <ul style="list-style-type: none"> • VCR/Satellite • Bose system amplifier • Front TV • Living room sconce lights • Living room OS table • Dining light fixture • Galley G.F.C.I. outlet • Fluorescent galley light • Two other galley outlets | <ul style="list-style-type: none"> • Pantry receptacle • Patio receptacles • Bathroom G.F.C.I. outlet • Bathroom lights • Bedroom sconce lights • Driver side night stand outlet • Passenger side night stand outlet • Rear TV |
|---|--|

Circuit Breakers and G.F.C.I.

The 120 VAC system has two important safety mechanisms. First, a set of circuit breakers prevents any circuit from being overloaded. A breaker can be tripped as the result of a short circuit, a faulty appliance, or too many appliances being run on the same circuit. The system is divided into several separate circuits which decrease the load on each and allow other circuits to operate if one goes down.



WARNING: A circuit without a breaker presents a serious safety hazard. Never attempt to bypass the circuit breakers for any reason. Doing so will void both your coach warranty and that of any appliance on the circuit.

The main breaker panel is labeled with the names of the appliances and outlets located on each circuit. The inverter contains its own circuit breaker so power from it is not channeled through the main panel. The RESET switches are located on the inverter itself, in the same bay as the 50 amp shore line. If the inverter is not producing power, check the breaker on the inverter.

G.F.C.I. refers to Ground Fault Circuit Interrupt. This is a safety feature that halts power through a circuit if a short or other malfunction occurs. This is an important mechanism and has been designed to help prevent electrocution injuries. The *G.F.C.I.* works in a manner similar to a circuit breaker. If a fault is detected in the circuit, a switch inside the *G.F.C.I.* is tripped, halting the power flow. The circuit will not operate again until the switch is reset on the *G.F.C.I.* receptacle.

WARNING: *G.F.C.I.* circuits are designed to help prevent electrical shock, not overloads. They do not replace circuit breakers.

NOTE: Several outlets, as well as coach lighting, may be connected to the *G.F.C.I.* circuit. Therefore, if a set of interior lights are not working or if an appliance is not operating, check the nearest *G.F.C.I.* reset switch to see if it has been tripped.

Generator

The generator runs on LP gas. This type of generator provides a very efficient source of 120 VAC power. The following section contains only an overview - please refer to the manufacturer's manual in the warranty pack for full specifications, instructions, and maintenance requirements on the generator.

You can start your generator by using one of two generator switches. The first one is located on your Coach Monitor Panel. If your coach is a front-entry model, the Coach Monitor Panel is in the galley section of the coach, above the dining table, and if you own a mid-entry model, it will be above the entry.

The other switch is located on the generator itself in the driver's side far rear compartment. Hold down the start button until the generator starts. A delay of up to five seconds is normal. To stop the generator, press the lower portion of the switch until the motor comes to a complete halt.

NOTE: If the generator does not start, release the button and try again. Continuous cranking can damage the generator starter.

Do not neglect maintenance of the generator. A full schedule is provided in the generator manual. An hour meter is mounted on the monitor panel for your convenience. If you are operating in dirty or dusty conditions you should accelerate the schedule accordingly. Monitor the generator for signs of problems, such as odd noises, power loss, and overheating. If any such signs appear, have the generator serviced promptly.



WARNING: Never use your generator as an emergency power source for a residence, or any other facility connected to an electric utility service. Using the coach generator to provide power to any building on an electric utility energy grid may allow electricity to flow back to the utility lines. This would present an extreme hazard to any technician working to restore power.

WARNING: Never store anything in the generator compartment. Using this area for storage presents a fire hazard, and may prevent the correct operation of the generator.

Power Transfer Switch

An automatic power transfer switch, located in the bay on the driver's side behind the rear wheels, connects the coach to available external power. If 120 VAC power is not present from the external power source, the transfer switch will select generator power approximately 40 seconds after the generator starts producing electricity. Regardless of shore power presence, the Power Transfer Switch has generator priority. It will stay on as long as the generator is running.

Inverter

The inverter is located in the compartment behind the driver's side rear wheel. It transforms 12 VDC into 120 VAC power that is usable by the major appliances. It also allows use of these items without the generator or shore line, utilizing the power stored in the house batteries. The remote inverter panel is located in the bedroom. Not all circuits are connected to the inverter and so not all appliances can be run without the generator or shore line. (See Table 1 earlier in this section.)

The inverter has its own internal breakers; therefore, power from the inverter is not channeled through the circuit breaker panel. If power is not reaching appliances served by the inverter, you should reset the inverter by depressing the RESET button.

The power for the inverter comes from the house batteries. You should monitor the battery level as you use your appliances. The battery level can be checked using the Coach Monitor Panel.

Your coach is equipped with a 1500 watt inverter. This inverter is ample for most purposes. The 1500 watt inverter is not capable of safely powering the micro/convection oven. This appliance requires either shore line or generator power to operate.

NOTE: Power provided by the inverter is intended for your convenience. It should be used sparingly so that it doesn't drain the batteries.

WARNING: Never store liquids or flammable material near the Automatic Transfer switch or the inverter.



12 VDC SYSTEM

The 12 VDC coach system provides power for a variety of applications. Many coach lights, fans, the water pump, and other coach accessories use 12 VDC. In addition, 12 VDC power is used to ignite the heating system or furnace, power its fans, and run the indicator lights in the refrigerator and monitor panel. The 12 VDC system also can provide power for the 120 VAC appliances with use of the inverter.

The 12 VDC system is divided into two sections. The "chassis" section powers the engine, running lights, dash accessories, radio and generator. It includes the "chassis" batteries and alternator.

The "house" section powers the 12 VDC interior lighting, ceiling fans, refrigerator, furnace, water heater, monitor panel, and water pump. This section includes the set of "house" batteries. It also provides power to the inverter.

A boost switch connects the two systems. This allows the house system to supplement the chassis system and also prevents the chassis battery from being drained by house demands. This is more fully discussed in the next section.

Chassis System

The chassis electrical system is enhanced by Safari in several ways. The system provides power for starting the engine and also powers the leveler pump and generator.

It is recharged by the alternator and protected by a 250 amp fuse. It can also be charged with generator or shore power by turning the ignition key counter-clockwise to the ACCESSORY position. (See Boost Switch section below.)

Isolator

Power from the alternator is channeled through an isolator. This device allows the alternator to simultaneously charge the chassis and house system, while keeping the two systems separate. With the isolator, draining the house batteries will not affect the chassis batteries, and vice-versa. With a small amount of care, at least one battery system will always be charged.

Boost Switch

If the chassis batteries lose their charge and become unable to start the engine, it is possible to apply the house system to the task. A boost switch, located on the left driver's console, connects the two systems. By activating the switch, the starter can get power from the house batteries and converter. The boost switch should only be activated for the time that the power is needed.

NOTE: To start the engine when both the chassis and house batteries have lost their charge, connect the shore line to an approved RV outlet and activate the boost switch. Do not start your coach until there is enough charge in the battery system. This will be indicated on the remote panel when the amp charge has dropped from its starting level.



House System

The house 12 VDC system provides the power for all 12 VDC accessories with the exception of the engine starter, leveler pump, generator, and automotive functions. The system includes four batteries that are designed to preserve their power even after repeated drains and charges, as long as the battery is properly maintained. This battery type is known as a "deep cycle" battery. The system is routed through the fuse panel located over the bed in the rear of the coach.

The system is charged by several sources. The alternator charges the system through the isolator when the engine is running. As mentioned above, the isolator keeps the house system separate from the chassis system, preventing the chassis battery from being drained by the house appliances. The converter provides power from a 120 VAC source, either the generator or shore line. It operates automatically according to the presence of 120 VAC power.

The house battery system provides power directly to the inverter. It serves circuits which run to the interior and lighting. These include the ceiling fans, furnace, water heater, water pump, cargo lights, heating system and refrigerator. They are connected directly to the house batteries through a 250 amp fuse located under the bed and in a panel located near the bedroom door. A circuit breaker panel is located by the 120 VAC breaker in the bedroom overhead cabinet. The house battery system is also connected to the chassis system through the boost switch.

The main circuit breaker panel is separated from the batteries by a fuse and a relay. The switch to control the relay is mounted on the firewall near the coach entry. The fuse is located under the bed.

The strength of the batteries can be checked using the Coach Monitor Panel. The monitor can only give a general indication of the charge level of the battery, but is an important tool for your power management.

With three ways to recharge your batteries (shore line, generator, and alternator), you have plenty of options to assist your power management. One factor to remember is that recharging time is greatly affected by the load. The less drain from lighting and accessories, the faster the batteries will recover.

Fuses

Fuses offer a simple and effective method of protecting the 12 VDC lines from overloads. By burning out during an overload, they stop the current and end the hazard the overloaded circuit might present to the appliances and to the coach. Fuses are an important safety feature, and should never be bypassed.

If power no longer flows to a particular 12 VDC appliance or circuit, the fuse should be one of the first items to check. A fuse can be checked visually, but an ohmmeter will detect whether the fuse still conducts electricity if you are in doubt. If the fuse is blown, there may be a problem in the system. Check the appliances on the circuit for signs of damage or defects and check the wiring for possible shorts.

NOTE: When replacing a fuse, always use a fuse of the same amperage rating -- never higher.

TV Antenna System

Your coach is equipped with an amplified TV booster. It is located in the overhead cabinet above the driver's seat. The path from the antenna can be followed down to the antenna booster switch. The antenna booster switch will light RED, indicating that the booster is in operation.

This switch also controls whether the system is sending signals to the VCR from the antenna or a cable connection. When the switch is on, the antenna is being selected. A shore cable is in use when the switch is off.



Both lines are tapped off the living room television line. Therefore, different channels cannot be viewed on the coach's televisions at the same time.

There is a third television outlet located in the basement storage for outdoor program viewing. Like the bedroom outlet, this line is tapped off of the living room television line. Therefore, different channels cannot be viewed on the coach's televisions at the same time.

The output of the booster switch is wired to the input of the VCR, then from the output of the VCR to the TV splitter, which supplies signals to all outlets. This system allows you to view from antenna, cable, or VCR on all three television connections.

NOTE: Turn the antenna boost switch off when not in use. It will continue to draw power from the batteries even when the television is off.

Coach Support System

The Coach Monitor Panel will keep you updated on your support systems. In front-entry models, this panel is located in the galley section of the coach, above the dining table. If you own a mid-entry model, it will be above the entry. The Coach Monitor Panel enables you to monitor fluid levels in each holding tank, the charge level of the coach batteries, and fluid level of the LP gas tank.

The coach batteries power it. If the monitor does not display any readings, make sure you have turned the 12 VDC power on and that the coach batteries are properly charged. To operate, depress and hold the selected function switches.

There is also an hour meter near this panel that records the run time of the generator. This meter displays the amount of time the generator has been running for maintenance purposes. This meter will only display while the generator is operating.



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Appendix A – Location Reference Guide

OUTLINE

This appendix provides charts and tables giving reference information. This information was correct at the time of printing, but is subject to change without notice. The presence of certain options may also cause changes affecting these tables. The following abbreviations are used in this appendix: PS = Passenger Side DS = Driver's Side

Reference Guides

The following tables are designed to help you locate various items in your coach. The location of many items varies with the floor plan and with certain options.

Plumbing and Waste

Function	Location
Fresh water tank	Basement front between rails
Black waste tank	Under toilet
Grey waste tank	Basement rear floor - coach exterior
Water tank drain valve	Fresh water tank PS
Low point drain valves	Plumbing service center
Water pump	DS, behind the plumbing service panel
Water heater	PS, wardrobe in bathroom
Water filter	PS, in front of rear wheels in water bay service center

Appliances and Connections

Function	Location
Plumbing service center	DS, forward of rear wheels
Chassis service center	PS, far rear bay
LP gas tank service center	DS; behind front wheels
LP furnace	Under refrigerator
Generator	DS, far rear bay
Electric bay	DS, console access panel

Electrical

Function	Location
Transfer switch	DS behind rear wheels
House batteries	PS, behind rear wheels in bay
Chassis batteries	PS, behind rear wheels in bay
Coach power switch	Entry stepwell
Inverter monitor	Bedroom TV cabinet
AC breaker panel	Bedroom overhead cabinet
Fuse panel (House)	Bedroom overhead cabinet



Miscellaneous

Function	Location
Coach monitor panel	Front-entry/Dinette overhead Mid-entry/Above entry
Front thermostat	Refrigerator cabinet
Generator switch	Front-entry/Dinette overhead Mid-entry/Above entry
Entry step switch	Above entry door
Slide out control	Front-entry/Dinette overhead by Monitor Panel Mid-entry/Above entry by Monitor Panel
Bedroom thermostat	Bedroom TV cabinet
Fuse panel (House)	Bedroom overhead cabinet

Engine and Chassis

Function	Location
Fuel tank	Between rails, behind front axle
Fuel fill	DS, front corner
Oil fill	Above radiator at exterior rear access
Oil dipstick	Above radiator at exterior rear access (or) battery compartment rear PS
Transmission fill & dipstick	Battery compartment rear PS
Hydraulic fluid reservoir	Exterior rear access
Fuel/water separator	Rear PS, best reached from below
Coolant fill	Above radiator at exterior rear access, top of surge tank
Oil filter	DS, middle of engine
Coolant filter	(None)
Air filter	Rear PS, best reached from below
Air restriction indicator	Above radiator at exterior rear access
Secondary fuel filter	Exterior rear access
Auxiliary air chuck	Rear PS, best reached from below
Service light	Exterior rear access
Service plug	Under DS dash
Hydraulic fluid	Exterior rear access

Electric Bay

The following diagrams list the purposes and requirements of the various breakers and fuses. These are subject to change without notice.

The electrical bay is located on the driver's side shift console. The house fuse block and AC breakers are located in the bedroom overhead cabinet.

Breaker Board (Part A) DS Shift Console		
This block is connected to the <i>chassis battery</i> but is HOT all the time. These items are operable whether or not the ignition switch is in the ON position.		
Ckt	Amps	Function
1	15	Ignition switch power
2	20	Park lights, clearance light relay
3	20	Horn, emergency flasher
4	20	Slide out power
5	30	Spare
6	20	Condenser fan relay
7	30	Entry-step power
8	15	Dash radio, speedometer power
9	30	ACME dash air conditioning/heater (high fan speed)
10	20	Entry-step switch
11	20	Headlight power
12	15	LP detector (chassis)

Breaker Board (Part B) DS Shift Console		
This block is connected to the <i>chassis battery</i> and is HOT only when the ignition switch is in the ON position.		
Ckt	Amps	Function
21	20	Dash and shift panel
22	20	Engine ECU and transmission VIM
23	15	Dash gauges
24	20	Dash fans, back-up lights
25	20	Brake lights
26	20	Spare
27	20	Windshield wipers
28	20	Levelers
29	20	ACME dash air conditioner/heater (low fan speed)
30	15	Entry-step ignition power
31	20	Remote control mirror
32	20	12 VDC outlet



Breaker Board (Part C) DS Shift Console

This block is connected to the *house batteries*, but is HOT all the time. These items are operable whether or not the ignition switch is in the ON position.

Ckt	Amps	Function
41	15	Battery boost solenoid
42	15	
43	8	
44	20	LP detector (house)
45	15	
46	20	
47	30	
48	15	Cargo Lights

House Fuse Block

PS Rear Bedroom Overhead Cabinet (to the right of the 120 VAC Main Panel)

This block is connected to the *house batteries*. These circuits can be cut off using the 12-volt (Coach Power) switch in the step well. **Note** the CO Detector will not function if the Coach Power switch is turned OFF.

Ckt	Amps	Function
1	20	Livingroom ceiling lights, PS overhead lights, porch light
2	20	Bathroom ceiling lights
3	20	Bedroom ceiling lights, map lights
4	15	Bath fan, toilet fan, galley fan
5	15	Monitor panel, water pump
6	20	Slide out room lights
7	15	Water heater igniter, furnace power
8	15	TV booster
9	5	Refrigerator

House 120 VAC Breaker Panel PS Rear Bedroom Overhead Cabinet

This panel controls all AC Power from the Transfer Switch. **Note:** The inverter circuits may still be ON even if Breaker #5 is turned off. With Breaker #5 turned off and the inverter turned off, the circuits should be off. Disconnect House Batteries to be certain the inverter circuits are off.

Ckt	Amps	Function
1		
2	50	MAIN
3	50	MAIN
4	20	Front roof air conditioner
5	30	Inverter/Converter - All 120 VAC lights, electronics and outlets.
6A	20	Refrigerator
6B	20	Micro/Convection oven
7A	20	Rear roof air conditioner
7B	20	Washer/Dryer (optional)
8		