



Operating Manual for  
Meg Ann III  
1998 5788 Bayliner

Revised 2023

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# OPERATIONS MANUAL

We hope you have a very enjoyable and safe trip aboard MEG ANN III and at your destinations. This manual is provided to assist you in operating the boat and all the systems aboard. **Please take time to review this manual thoroughly. Be sure to contact your Checkout Captain to verify information and/or ask any questions.**

The ultimate responsibility for the safety of crew and vessel is with the person who charters the boat. The chartering Captain has represented that his/her experience, judgment, and skills are adequate to overcome any errors and/or omissions in this manual and checkout procedures. This manual provides information necessary for an experienced boater to operate the systems and equipment on Meg Ann III. This is not a training manual and assumes that the reader has sufficient experience with similar yachts and systems. Safety is a top priority. All procedures should be clearly understood before proceeding. Safety cannot be completely managed by procedures alone and requires experience and common sense to be achieved.

This manual does not include navigational, weather assessment, or boat handling skill instructions.

Ask the Captain, you are responsible for the safety of all crew members and the yacht. It is the Captain's responsibility to understand all instruction and information provided in this manual. If there are any questions about this manual or if any scenario that this manual does not cover, please call Anacortes Yacht Charters at 1- 800-233-3004, for assistance.

## IMPORTANT POINTS:

Safety is the most important item in all of the following information and safety considerations will be emphasized. Plan ahead and review procedures to prevent accidents. Make sure your crew is prepared to assist as needed by training them beforehand. Inform all onboard how better to assist you and what is expected from them. This is especially important when readying the ship for voyage, for docking, and for anchoring. Almost anything done without preparation can be high risk for accidents, so take your time, train your crew before they have to perform, and let everyone enjoy the fun!

## SAFETY ITEM LOCATIONS

### Fire extinguishers

In salon in seat at back sliding door.

Under seat in bridge.

In engine room as you enter.

Main salon on wall on right as you enter.

**Flares** are under seat in bridge with the fire extinguisher.

**Air Horn** is in drawer under the electrical panel.

**Life Jackets** are under seats on flying bridge.

**First Aid** items in drawer labeled First Aid in main stateroom

**2 Smoke/Co2 Detectors** one in stateroom hallway, one in salon

Please read this complete manual thoroughly and ask AYC about anything that is not clear or that may be missing. Taking the time to read this manual completely will save you time, money, and risk of injury when arrive on holiday.

## PRE-START CHECK LIST

Before you operate the vessel for the day, do an inspection of the mechanical systems and the engine room. Any problem is much easier and safer to fix while securely tied up at dock, or at anchor than it is while adrift.

### MAIN ENGINE CHECKOUT (pre-start)

With a flashlight, enter engine room from the aft deck. The entry is located under the stair to the bridge hatch on the aft deck. Lift the stairs to gain access to the room. Engine room light is located on the right sidewall as you enter.

**CAUTION: WHEN REPLACING HATCH DO NOT LET IT SLAM SHUT.**

### ENGINE INSPECTION

Remember your “**WOBBS**” every morning. **W**ater (Coolant), **O**il, **B**ilges (Inspect and Pump-out), **B**elts and **S**ea Strainer.

Check the level of **COOLANT** in the expansion tank located forward of the engine in the cockpit under the floor. Check the level of **OIL** in the engine by checking the dipstick located portside of the engine. Look at the etch marks on the dipstick that indicate the proper oil level. **DO NOT OVERFILL OIL!** Only fill if the oil level is below the ½ way mark. Please use paper towels or oil rag, not the dish towels! Check the general condition of the **BELTS, HOSES** and **FUEL LINES**.

Ensure the valve on the **RAW WATER THRU-HULL** is in the “**open**” position (lever in-line with valve). Observe the glass of the **RAW WATER STRAINER** for debris. If necessary, close the seacock, open the strainer cover, clean the strainer and reassemble. Remember to reopen the seacock.

Check for water in the bilges. There should be no more than 1 inch or less in the aft portion of the aft lazarette area (or under the bedroom hallway). There should not be any in the engine room proper, if so manually turn on bilge pump to pump out). **Check general condition of all belts, hoses and fuel lines.**

Verify through-hull valves for each engine and the generator are open.

Check sea strainers inboard of each engine for obvious obstructions like seaweed or plastic. There are sea strainers for the engines (2), water maker (1), and generator (1).

To Clean Sea Strainers: Close thru hull valve for sea strainer raw water intake, and disassemble sea strainer and clean basket. Re-assemble sea strainer, open thru hull and make sure there are no leaks.

Inspect the Racor fuel filters and make sure they are clear and do not have water or debris accumulated in the bottom by shining the flashlight through the filter housing towards yourself. There are 2 filters per engine. If water is present, it may be drained out through the valve on the bottom of the filter housing. **BE SURE TO HAVE A CONTAINER READY AND PLACE AN ABSORBENT PAD UNDERNEATH TO CATCH ANY WATER AND FUEL!** Clean up any spilled fuel immediately. Make sure the valve is closed and not dripping.

8) Check transmission fluid levels weekly. Dip sticks are on the inboard side of each transmission. Re-insert dipsticks and make sure they are firmly in place.

9) Look for anything else that looks out of place, loose, disconnected, or broken. There should not be any fluids under the engines and the drip pads should be mostly clean. If you notice any significant fluid, identify the source and cleanup then notify AYC.

## **ALARMS**

Alarms will sound when the engines are running if coolant temperature exceeds a safe operating temperature, and the alarms receive signals from one of several sensors at different locations on the engine.

If you hear these alarms when the engine is running beyond the first several seconds or underway, there is probably an emergency situation and the engines should be dropped to an idle for 10 to 15 seconds while you observe the dash gauges for oil pressure and temperature condition. If you observe low oil pressure, shut down the affected engine immediately.

If you observe excessive temperature, first allow the engines to idle for around 10 seconds, if the alarm stops or if the temperature is dropping, continue running until the alarm stops. A slow drop usually indicates a blockage of the water intake or if the alarms occur only at higher cruising speed it could also indicate an excessive load on the propeller. If, however, no temperature progress is observed, you need to shut down the engine as the alarm could be coming from one of several engine conditions, such as failure of a water pump or belt, failed impellor in the pump, an extremely low oil condition or other problems.

If this occurs you need investigate the possible conditions and call AYC and or the Owner for instructions, prior to restarting the engine.

See pages 37-45 for Volvo Penta specific instructions for Instruments and Controls, Starting the Engines, Operation, Maneuvering, and Engine Shutdown.

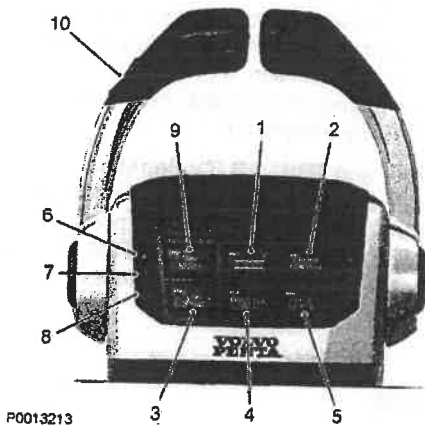


## Controls


This section describes the controls Volvo Penta sells for your engine. Contact your dealer if your boat is equipped with controls other than those described here, and you feel uncertain about their function.

### Electronic controls

Engine and drive features are controlled with push buttons on the control. The buttons and functions available depend on the installation.



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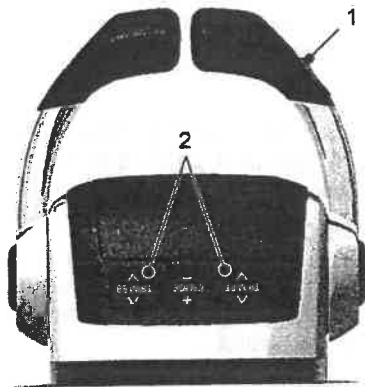
- 1 **STATION**  
The button lamp is lit if the helm station is active. Refer to *Operation, page 68* for further information.
- 2 **CRUISE CONTROL**  
Switch on cruise control by pressing the button (2). Fine tune the locked engine speed by increasing (+) or reducing (-) engine rpm with the button at the back of the control.
- 3 **LOW SPEED (Optional)**  
Refer to *Low Speed, page 43* for information about the *Lowspeed* function.
- 4 **THROTTLE ONLY**  
By activating **THROTTLE ONLY**, the shift function is disconnected and the control lever only affects the engine speed.
- 5 **SINGLE LEVER**  
Switch on the single lever function by pressing the button. The lever that is moved from its position first becomes the control lever for both engines. The other control lever has no function as long as the single lever function is activated. The button lamp lights up to show that the function is active. Exit the single lever function by pressing the button again.
- 6 **N**  
Neutral position. The symbol shows that the drive/reverse gear is disengaged.
- 7   
The warning triangle lights up if the system discovers a fault. Refer to *Fault handling, page 74* for more information about system faults. The warning triangle lights up on the same side as the drive line with the indicated fault.
- 8 For gasoline engines only

**9 TRIM ASSIST (Optional)**

Switch on the automatic interceptor control functionality by pressing the button (9). The interceptors are then automatically adjusted when needed. Refer to *Optional, page 61* for more information.

**10 TRIM (Optional)**

Manually adjust the interceptors. Manual adjustment using the TRIM button (10) will override the automatic function, if enabled. For twin engine installations, the adjustment of the drives are synchronized.



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The picture alongside shows the other side of the control.

**1 TRIM (Optional)**

Manually adjust the interceptors. Manual adjustment using the TRIM button (1) will override the automatic function, if enabled. For twin engine installations, the adjustment of the drives are synchronized.

**2 TRIM PT and TRIM SB (Optional)**

Manually adjust the interceptors individually by using the TRIM PT button (2) for portside interceptor adjustment, and the TRIM SB button (2) for starboard interceptor adjustment.

**Joystick**

The joystick is optional. The features are controlled with push buttons on the control. The buttons and functions available depend on the installation.

**1 Docking**

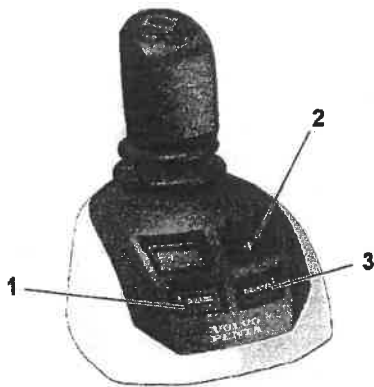
For operation and further function information, refer to *Joystick for Docking, page 47*.

**2 Joystick Driving**

For operation and further function information, refer to *Joystick Driving, page 49*.

**3 Thruster Mode**

For operation and further function information, refer to *Thruster Mode, page 45*.



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## Starting the Engine

### Helm stations

Shifting and adjusting speed is only possible at an active station. On a boat with one station, the station is always active.

The main station is automatically activated when the EVC-system is unlocked with the e- Key panel.

On a boat with two or more stations, the engine(s) can be started from another station with a start/stop panel – if the engine(s) are turned off. The station automatically becomes active when the engine(s) is/are started.

### Put the Gear in Neutral

Put the drive/reverse gear in **Neutral** by moving the control lever(s) to **Neutral (N)** at all stations.



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### Turn On the Ignition

A green light in the **IGNITION** button indicates that the ignition is on.

Press the **IGNITION** button to switch on the ignition if the green light is not shining.

### Check the instruments

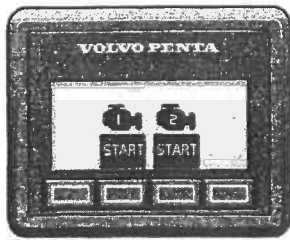
If a fault is registered, it will be shown in the display; please refer to *Fault handling, page 74* for further information and recommended actions.

### Starting Using the e-Key Panel

To start, press the **START/STOP** button once for each engine.



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### Starting Using the Start/Stop Panel

Press the **START/STOP** button for each engine.  
Release the button as soon as the engine has started.

### Overheating protection

If the starter motor is engaged for its maximum activation time (30 seconds), the starter motor circuit is automatically cut to protect the starter motor from overheating. If possible, leave the starter motor to cool for at least five minutes before making a new start attempt.

### Read the instruments and warm the engine up

Allow the engines to idle for the first ten seconds. Check that instruments and warning displays show normal values. Check that no messages are displayed and no warning signs are showing. If a fault is registered, please refer to section *Fault handling, page 74* for further information and recommended actions. Warm the engine up at low speed and low load, so normal operating temperature is reached before full power is used.



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### **IMPORTANT**

Never race the engine when it is cold.  
Racing the engine when it is cold can damage the engine components and decrease the engine lifetime.

# Operation

Learn to handle the engine, controls and other equipment in a safe and proper manner before casting off on your maiden voyage. Remember to avoid sudden and extreme rudder maneuvers and gear shifts. There is a risk for passengers and crew falling over or falling overboard.

## **⚠ WARNING!**

A rotating propeller can cause serious injury. Check that nobody is in the water before engaging ahead or astern. Never drive near bathers or in areas where people could be in the water.

## Reading the Instruments

Read all instruments and alarm displays directly after starting, and then regularly during the voyage.

## Alarms

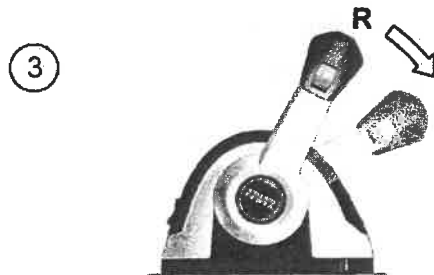
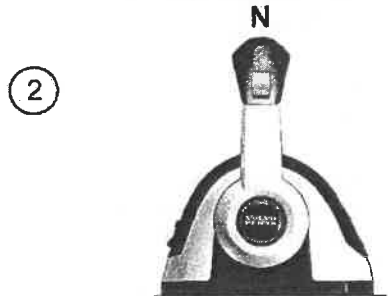
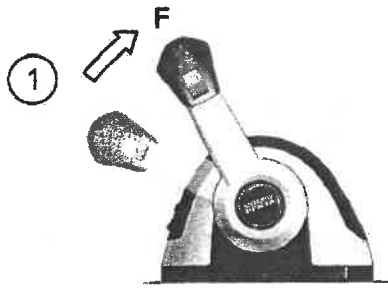
Alarms and messages are shown in the information display; some alarms do also have a sound alarm. If an alarm instrument is installed, the lamp in question will flash.

- 1 Read the message.
- 2 Acknowledge the alarm by pressing OK.
- 3 Take the indicated actions; see chapter *Fault Code Register*, page 80.

The fault will be stored as long as the fault remains. It will be possible to read out the fault code at an upcoming service.



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## Maneuvering

Shifting between forward and reverse is done at idling. Shifting at higher engine speeds can be uncomfortable for passengers and cause unnecessary stress on the transmission or cause the engine to stop.

If you attempt to shift gear at a high engine speed, a safety function is automatically activated, and will delay shifting until engine speed has fallen to 800 rpm.

### Execute a Forward/Reverse Operation as Follows:

- 1 Reduce engine speed to idle and let the boat, more or less, lose way.

#### **WARNING!**

Never shift to reverse when the boat is planing.

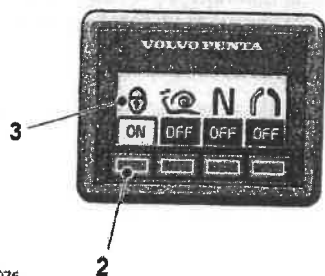
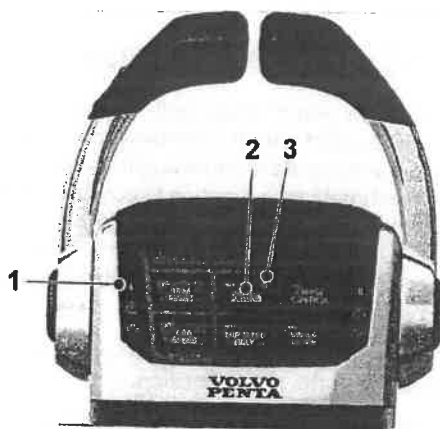
- 2 Move the control lever to **Neutral (N)** with a rapid, distinct movement. Make a brief pause.
- 3 Move the control lever to **Reverse (R)** with a rapid, distinct movement and increase engine speed.

#### **IMPORTANT:**

To avoid water entering the stationary engine via the exhaust pipe, it is important that all engines are running during reverse maneuvers.

### Activate station

- 1 Press the **STATION** button (2) to activate the station.  
The lamp (3) in the control button will light up when the helm station is active.



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### Helm station change

- 1 Move the control lever(s) to neutral (N).  
The neutral lamp (1) on the control lights up when the drive is in neutral.
- 2 If the helm station is locked, unlock it by pressing the **STATION** button (2). The padlock icon light (3) is switched off, indicating that the station is unlocked.
- 3 Activate the helm station being occupied by pressing the **STATION** button (2).  
The lamp in the control button will light up when the helm station is active.

If the helm station is inactive, the lamp will be switched off.

If the padlock icon (3) flashes, the helm station cannot be activated. Another helm station is active and locked, or unlocked with a drive selected (not in neutral).

### Locking/Unlocking Helm Stations

If a helm station is locked, it will only be possible to start and stop the engine or change helm stations from the locked helm station.

Lock or unlock an active helm station by pressing the **STATION** button (2).

The padlock icon (3) lights up when the helm station is locked.

### Cruising Speed

For best fuel economy operations at full speed must be avoided. We recommend a cruising speed that is at least 10% below the maximum engine revolutions at top speed (full throttle).

Depending on hull type, the choice of propeller, the load and sea state etc., the maximum revolutions at top speed may vary, but they should be within the full throttle range; refer to *Technical Data*, page 136.

If the engine is unable to reach its maximum throttle range, this may be due to a number of factors mentioned in *Fault handling*, page 78.

Select a propeller with greater pitch if actual engine revolutions exceed the full throttle range. Contact your Volvo Penta dealer for advice.

## Engine synchronization disable

When driving with twin engines, both the operating economy and comfort will be increased when the engines are operating at the same engine speed (rpm). When the synchronization function is activated, the engine speed (rpm) of the starboard engine is automatically adjusted to that of the port engine. The synchronization function is activated automatically if the following conditions are met.

- 1 The engine speed levers for both engines are in (approximately) the same position.
- 2 The engine speed levers are in a forward position.

The synchronizer is disengaged as soon as the conditions are no longer met or if the engines reach maximum throttle.

# Engine Shutdown

Allow the engine to run at low idle, in neutral, for a few minutes after operations are completed. In this way after-boiling is avoided at the same time as temperature equalization takes place. This is especially important when the engine has been run at high rpm or under heavy load.

## Stop the Engine

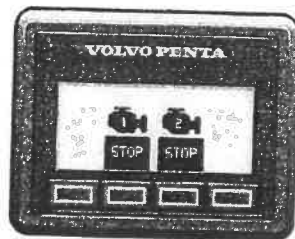
### **IMPORTANT:**

Never disconnect the current using the main switches when the engine is running or by disconnecting the battery cables.

The alternator and electronics could be damaged.

### **IMPORTANT:**

Make sure the Ignition is turned off before the main switches are switched off. Otherwise the alternator and electronics could be damaged.



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## Stopping Using the Start/Stop Panel

- 1 Disengage the drive/reverse gear by putting the control lever in **Neutral (N)**.
- 2 Stop the engine(s) by pushing the **STOP** button(s).



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## Stopping Using the e-Key Panel

- 1 Disengage the drive/reverse gear by putting the control lever in **Neutral (N)**.
- 2 Push the **STOP** button(s). Release the button(s) when the engine(s) has/have stopped.

## Turn the Ignition Off and Lock the EVC system

To turn the ignition off, press the **IGNITION** button. The green lamp in the **IGNITION** button is switched off to indicate that the ignition is off.

To lock the EVC system, hold the key fob in front of the (o) symbol on the e-Key panel. A flashing red light indicates that the system is locked.

## **ELECTRICAL SYSTEMS**

### **120 @ 240 VOLT SYSTEM: *power sources and discussion***

120 Volt electricity is used to run TV/DVD, Convenience Outlets Microwave and one of the two 24-volt Battery Chargers, etc.

The 240-volt circuits run the Cooktop/ Oven/ Washer/ Dryer and the other of the two 24-volt Battery Chargers.

The 120-volt system breakers are in the cabinet in the pilot house helm on the Starboard side aft of the pilothouse door. The 110-volt breakers are located at the base of the panel, directly below the 240-volt breakers.

Breaker switches for shore power or Ship (generator power) are located in this panel in the center just under the Voltage Meter. The breaker switch is set up with a slide cover so that only one source can be used at a time.

#### **240-volt power can be obtained from two sources:**

Shore power 50-amp plug

Shore power from two 30amp plugs using the Y adapter (must be 120/240 volts shore power with each 30 amps sourced from a different leg of the 240V service) 3. generator

#### **120-volt power can be obtained from three sources:**

Leg one of a 240 service (50 AMP Shore power)

Leg two of the 240-volt service (50 AMP Shore power)

Both legs as single source 120 volts when the 50 amp to 30-amp single adapter is used.

Both legs as separate 120-volt sources when the 2@30 amp to 50 amp "Y" adapter is used

Inverter (feeds both of the two 120v panel areas) but none of the 240 panel area is available

There are 2 sections of the 120-volt panel area, the upper section draws power from the second leg of the 240 current and the lower section from the other.

Note: When using the Y- 2@30 amp to 50-amp adapter (when no 240/120 50 amp shore power is available) each 30-amp leg must be from a different leg of a 240volt dock wiring system which will give you a 240-volt source. When the single 30 amp to 50-amp adapter is used both sections of the 120-volt panel are active but with only 30 amps.

**NOTE:** When 240-volt power is supplied from shore power from a 50 amp connection or 2@30 amps feeds as described above, or from the generator, the remove trace inverter panel on the left of the AC Panel sidewall will indicate good power source when the two green indicator light are on, one solid and one blinking. Also, the inverter orange light to the left will come on for a few seconds and then automatically it will switch to the right top under "bulk" this indicates that the inverter charging system is active. When the inverter sees full charge the light will drop to the lower "float" position and turn green. The two-green light should always be on when a power source is supplied by one 50-amp cord including when using adapters



If a red error light appears or if only the orange inverter light is still on you are not getting an AC power source nor is the charging system active, and batteries will run down. Check for the proper position of the panel breakers, the shore power connection and or pedestal breaker on the dock and be sure the digital readout setting is on "Set Inverter, and the source indicator (small underline indication) is set to float. This needs attention and resolution before moving on to other activities. Hopefully this will not occur but if so refer to the race (Zantrax) manual overhead in the pilot house or the abbreviated copy on the actual inverter in the engine room. Occasionally the remote inverter panel is illegible and you will need to go to the main inverter control panel (identical appearance) on the face of the inverter in the engine room to make settings if needed.

**NOTE:** when operating on inverter power only you should see only the orange inverter light on. If there are no lights on, there is no AC power available on the boat.

**IF ADJUSTING THE INVERTER SETTINGS IS REQUIRED, CALL AYC OR THE OWNER FOR TROUBLE SHOOTING HELP!**

### **SHORE POWER: GENERAL**

**Important!! Make sure you read this section and understand it completely!**

Special Considerations: Care should be taken not to exceed the shore power available. This vessel's potential to consume electricity will exceed the dock's capacity to provide it unless you are connected to 50 Amp power. (Very rare for transient moorage)

Note that most shore power you connect to will be 120V 20, 30 or 50Amp. If 50 Amp power is not available there is 30 AMP cable in the engine room that connects to the 30 Amp outlet in the cockpit next to the 50 Amp cable.

The 100' 50-amp shore power cord is on an electrically operated cord (Glendenning reel system) located on the cockpit side of the transom and can be accessed from below the teak half table. Remove the chrome cover for the electric cord the move 3 position switch to the "out" position. The electric cord will begin to reel out onto into the cockpit. Once enough cord has been reeled out to allow it to be connected to the shore power receptacle turn the reel switch to the stop position.

To stow the electric cord simply reverse the operation using the retract side on the reel switch. Once fully retracted the reel will automatically stop but you need to return the switch to the center "off" position when done.

Be extra careful to be sure the chrome lid does not drop onto the cord while retrieving as it will jam and can damage the system. Feed the cord into the opening rather than letting the cord pull itself in. NEVER ALLOW THE PUG END OF THE CHORD TO FALL INTO THE SALTWATER! This will cause corrosion and future failure. If it should accidentally fall in the saltwater, flush with fresh water immediately before stowing.

**NOTE:** You cannot use all 120 circuits and electrical items with only one 30 amp source. (watts = volts x amps, IE: 30 amps at 110 volts = 3300 watts) It may pop the shore power circuit breaker. Check the ammeter on the power panel to see how much power you are using or simply do a quick calculation of the loads you want to access. You may have to alternate between electric cook-top, water heater, and battery chargers in order to avoid popping the shore power breaker. Priority should always be given to the inverter which will charge all the batteries.

## GENERATOR STARTING AND USE

When shore power is unavailable, the generator can fully power the boat. It is a good idea to run the generator every day that you have not been connected to shore power to recharge all the batteries. Monitor the battery voltage levels to determine how long to run the generator. The generator may be operated while underway or at anchor. When using while anchoring be sure that you are not over eel grass or other debris which might get drawn into the intake and stop water flow during operation. Monitor this process frequently during this use.

Access the main Power Panel:

1. To start generator simply press the start button in the AC electric cabinet. Listen for the generator engine noise.
2. Next, Move the 240-volt breaker slide over the shore power breaker and engage the Generator 240-volt breaker (left side of the primary power source diagram). This will put the generator online.
3. Never run generator for less than 30 minutes from a cold start.
4. To turn off generator press the stop button. This will automatically shut down the generator.



## **INVERTER – 4000-Watt 110v Power**

**NOTE:** The inverter system is setup to be totally automatic and should not need any changes to the settings. 120-volt power can be provided by the inverter which uses 24 volt battery power to make 120-volt AC current. 120-volt power is very limited with the inverter because it comes from a limited source. You cannot run high use devices like space heaters, hair dryers, waffle irons, at the same time or for any combined length of time. It will drain the batteries to the point of inverter shutdown.

The inverter's best use is to provide low wattage, or intermittent 120-volt power during an evening to save the generator from constant short start-ups and shut downs.

When the boat is on shore power or has the generator running, the inverter becomes a battery charger for the house battery banks.

The remote switch and indicator panel for the inverter is located to the left of the electrical panel console. **NO SETTINGS SHOULD BE CHANGED ON THE INVERTER CONTROL PANEL.**

To operate the inverter:

1. Turn on the breaker on the 120-volt panel.
2. The inverter is operated by the remote panel to the top right of the electrical panel. (or on the face of the inverter in the engine room)

The inverter can be in standby or off for 120-volt power. The charger can be selected on or off. Typically, the inverter is off and the charger is on. The proper setting is "SRC" (search) and the inverter will automatically change from inverting to shore power/ generator power when available.

3. The inverter will power the 120v AC outlets, ice maker, refrigerator and the microwave etc. (see AC panel)

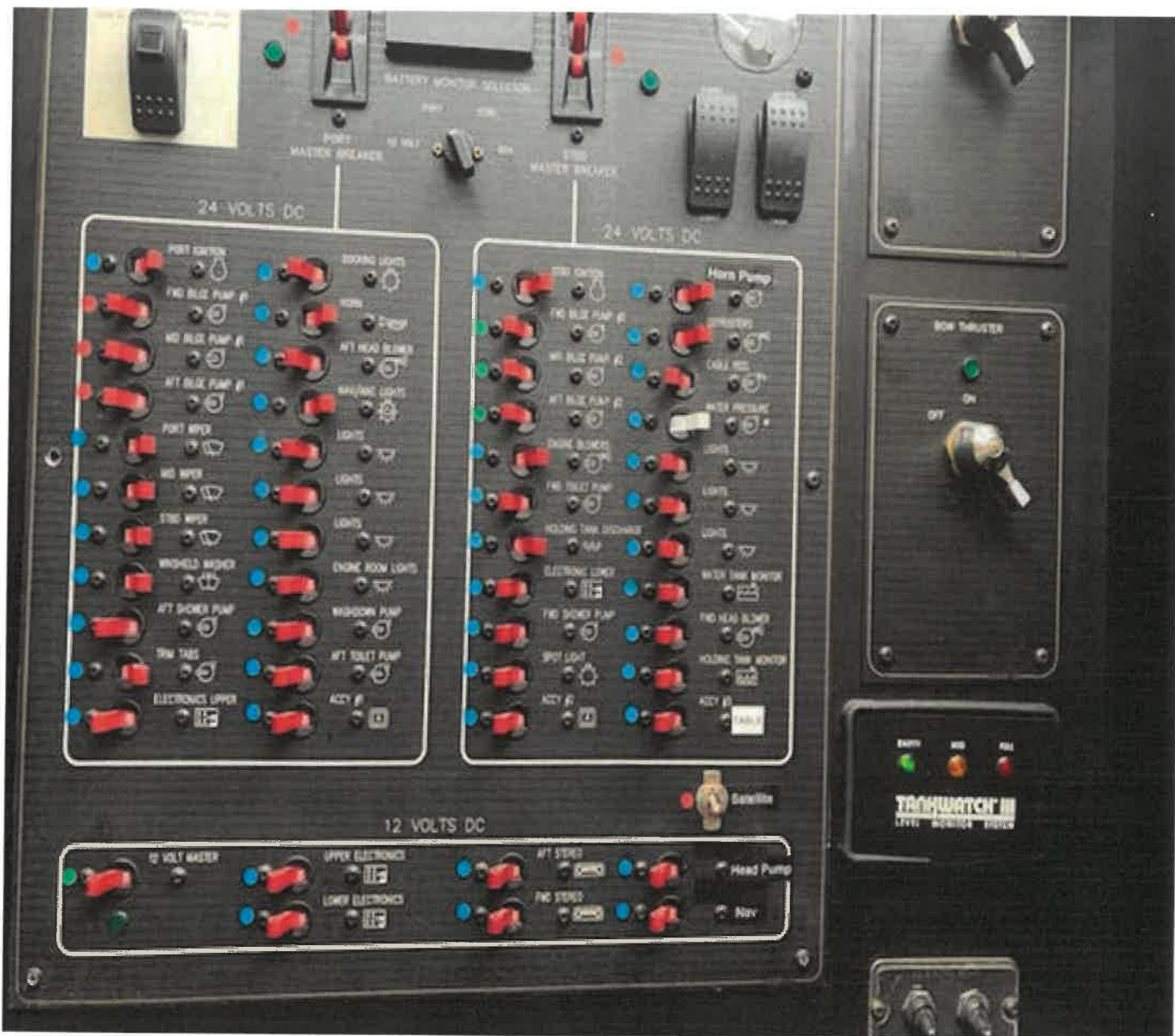
Be careful on entering the engine room not to turn inverter switch off (located near the bottom of the DC Battery switch panel and located where it can be hit accidentally with your leg.

## **ELECTRIC WATER HEATER**

The electric water heater runs off of the 120-volt system. The circuit breaker is on the 120-volt panel. **VERY IMPORTANT:** Do not use the electric water heater if the water tanks are very low or if they run dry. The electric element may burn up if the tank has no water. Turn off when conserving battery power (inverter mode when at anchor or no AC sources active). The water heater is also heated by the engines.

## **24 VOLT SYSTEM**

The 24-volt system runs the electrical systems necessary to operate the vessel. Bilge pumps, water pumps, electric toilets, navigation lights, house lights, electronics, etc. are 24-volt systems.



- Overboard sewage switch
- 24 Volt Breakers Windlass
- Bow Thruster only
- 24 Volt Battery power panel

### DC PANEL OPERATION

Turn on all 24V breakers.

For safety, Windlass Control breaker should be OFF except when using the windlass. Holding Tank Pump and Raw Water Wash Down Pump should be OFF.

NOTE: all bilge pump breakers should be ON and switches should be set to automatic all the time.

The 24-volt circuit breakers are located on the top of the DC panel. Only use the light you need. There are sufficient lights and other 24-volt devices to drain the house batteries of power if they were all left on overnight.

## BATTERY SWITCHES

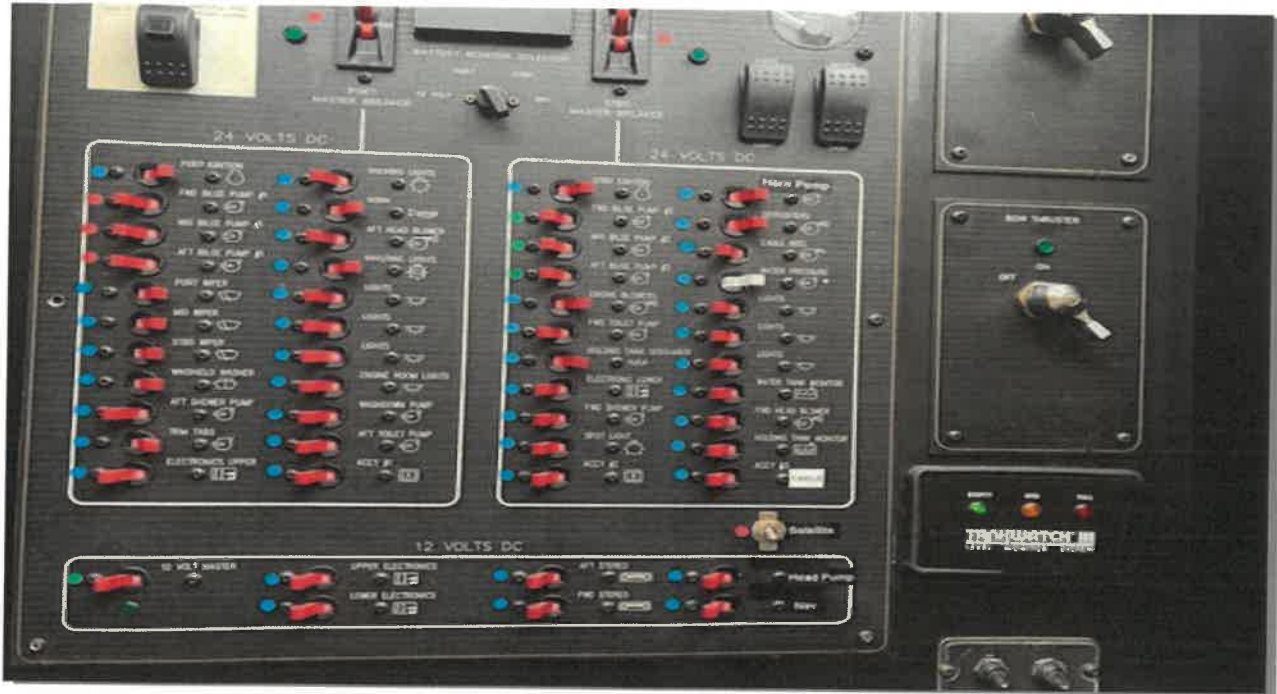
The battery switches are located in the engine room on the aft bulkhead immediately to the left as you enter the engine room. These are normally left in the “On” position.  
24-volt panel



12-volt panel  
12-volt breaker

## MARINE HEADS AND HOLDING TANK

This vessel has two heads, each with an electric toilet. It has one holding tank with a capacity indicator in the 240-volt cabinet.



### THE VACU-FLUSH HEADS



These premium heads are easy to use, odor free, and very reliable. They work with two separate vacuum pumps and vacuum accumulator tanks. A vacuum is maintained in the tank until the head is used, when the waste matter in the bowl is sucked out of the head by the vacuum, then it is pumped through the system by the head pump, which then also pumps up a vacuum again. Note that it is this rush of the head's contents caused by the accumulated vacuum that is important to the head's operation! This sudden rush causes any solid material in the waste stream to be shattered as it passes through the specially- shaped orifice in the bottom of the head. For this reason, proper head operation requires that the head pedal not be held down for long periods of time. The head uses about a half pint of fresh water from the ship's supply with each flush. The head is operated by a pedal to the left of the head base (as you face the head), and operation is as follows:

## TOILET OPERATION

- 1) Before using the head if the waste will be solid, lift the pedal to add water to the bowl;
- 2) Use the head;
- 3) Step on the pedal just long enough to hear the “whoosh” as the head is evacuated and a small amount of water rinses the bowl - - - about five seconds!
- 4) Releasing the pedal, if you wish to flush again, wait at least twenty seconds or so (until you hear the head pump stop) before flushing again. As the pedal is released, the ball-valve at the bottom of the head seals it so that the vacuum can be pumped up, the pump will then stop, and the head is again ready for use. If the head pump runs often or steadily between flushes; it is likely that the seal at the bottom of the bowl did not seal completely: you can tell if there is no water in the bowl. The solution is usually simple: Flush the head again and make sure the pedal comes all the way up when you remove your foot from it; then make sure the water doesn't leak out. **Only things which were eaten or drunk, or the toilet paper supplied with the boat, should be put in the heads! Facial tissues, tampons, and other foreign matter will clog the system. If these heads are used properly, they are quite reliable. Failures are virtually always due to mis-use! When it comes to tissue, usually “four squares are enough!”**

If the toilet bowl becomes clogged from too much paper try one again to flush but **DO NOT HOLD THE PEDAL DOWN CONTINUOUSLY!!** The toilet bowl fills with water whenever the pedal is depressed. If there is a clog, IE the waste will not suck through the small opening, you will have to follow the procedure as follows. **IF YOU HOLD THE PEDAL CONTINUOUSLY and let the bowl fill with water you cannot work on the issue any longer without the water spilling onto the floor.**

If there is a clog that won't suck through after one additional attempt, find a small object such as a coat hanger wire or kabob skewer and use it to gently push the obstruction through the small opening (visible only when the pedal is depressed and the white cover is retracted) at the very bottom (in the black plastic). However, you need to act quickly and cannot have the bowl already full if this is to be attempted.

If the obstruction does not suck through quickly stop and release the pedal to cut off the water flow. **If the obstruction is other than the permitted waste and paper type do not push it through!!** The problems magnify if the improper waste passes through and jams the system further along in the pumps!

### Procedure:

- a. Turn off the main vessel water pressure and toilet pumps switches on the DC Panel.
- b. Open faucets and tub cold water valves and let the water pressure in the boat drop completely and no more water comes out the faucets etc.
- c. Close these faucets and tub valves.
- d. You now can depress the foot pedal without more water entering the bowl and this gives you time to work the problem without chance of spillover.

If the obstruction is from excess permitted (supplied) toilet paper you can continue to try and gently push it through while hold the pedal down and exposing the bottom (black area) of the bowl below the white rotating lower bowl door but if the clog is from improper waste, it must be removed (if possible, without damage to the plastic components, Try making a small hook from a straightened coat hanger and pull it up into the bowl and remove it. If this cannot be done. You will need to cease use of the toilet and seek help from the Owner or AYC. If this is necessary you can turn on the water pressure and other switches on the DC panel, but do not depress the foot pedal again until this problem has been resolved. If the clog was from the AYC provided toilet paper, it will dissolve when wet and the clog might release later (if you have not already filled the bowl to the overflow point) If you have purchased other paper, waiting will not help.

In US. Waters, the Coast Guard Rules require that the valves be “secured” in the holding tank position to assure that all effluent will be kept aboard in the tank. However, the Coast Guard has allowed adequate warning and electronic disabling as on the Ques Sara to satisfy this requirement. Therefore, the Y Valve (to the right of the holding tank below the companionway floor) should be left to the overboard position.

The holding tank is below the companionway (hallway, Sole) floor below the removable carpeted floor



panels. These panels also give access to the pumping system, the washdown pump and two bilge pumps. MEG ANN III is equipped with holding tank indicators on the DC Panel.

A deck plate on the starboard side deck allows pumping of the holding tank at a shore-side waste pump out station. A mobile service is available through the marinas at Friday Harbor and Roche Harbor.



To pump the tanks overboard (Only in Canadian Water, pursuant to regulations). First make sure, the thru-hull valve located under the companion way is in the open position. To operate the pump the Breaker must be on in the DC panel. There is a macerator pump switch located in the upper left of the DC Panel. It has a safety switch on that must be pulled down prior to depressing the actual switch. It must be held down for the pumping to proceed.

Turn “on” the “Waste Pump” breaker in the DC panel by the salon-pilothouse steps. Operate the switch on the upper left side of the DC panel until the tank is empty. Do not let the pump run dry: It will be damaged! The effluent passes through at the hose and pipe aft to the pump and thru-hull valve.

When you are done, turn off the pilothouse DC panel “Waste Pump” breaker and close the thru-hull.

**IMPORTANT:** You must be mindful of the extent of your crew’s use of the holding tank. Do not rely only on the holding tank warning light located on the DC panel.

**NEVER allow the holding tank to overflow. It is possible to break a hose, clog the overflow vent, or burst the tank if it is used when it is full. The result is an indescribable unpleasant catastrophe for the whole crew and a costly repair bill.**

As note before, pumping out the holding tank is done one of two ways. There is a deck pump out port on the starboard side (at about the mid salon) for use with marina pump out stations. Also, the boat is equipped with a macerator overboard pump. The contents of the holding tank can be pumped overboard with the macerator pump in appropriate areas. (NOTE: Anchorages and harbors are never legal/appropriate places.)

## **TUB, SHOWER AND SUMPS**

The tub shower and single shower each have a sump pump that is activated by a float switch. This requires the 24-volt circuit breaker to be on. If the shower is used without the circuit breaker, the shower water will end up in the bilges and be pumped out by the bilge pumps. Shower water in the bilges can get smelly, so please make sure the sump pumps are used.

Each head has an exhaust fan. Do not leave running for long periods of time to avoid excessive battery drains if you are not using shore power.

## **GALLEY**

### **STOVE TOP**

The stove top is powered by the breaker on the 240-volt panel. You must have at least 30-amp shore power and limited other 110v use, or the generator running to operate the stove top.

### **MICROWAVE**

The microwave is connected to the power inverter. Do not use the microwave for extended cooking while on power inverter. Any cooking more than 15 minutes should be done while connected to shore power or running generator, otherwise, you may run down the inverter batteries.

Coffee maker, toaster, and other electrical appliances may be plugged into the power outlets in the galley that are powered by the battery inverter. **Use care when using multiple devices simultaneously** as the breaker may pop or inverter power may turn off due to over loading the circuit. **THESE APPLIANCES ARE STOWED BELOW THE COUNTER ACCESS PANEL TO THE LEFT OF THE COOKTOP, SOME ITEMS IN COUNTER TOP HATCH.**

Galley Crew Note:

The sink does not have a garbage disposal. Do not put coffee grounds down the drain. Doing so, will clog the overboard drain. Note the sink discharges directly into the water. All waste should go into Trash bags. Or in garbage bags to be disposed of at marinas.

### **REFRIGERATORS, FREEZER AND ICE MAKERS**

Galley: This refrigerator freezer is 110 volts only and runs off the shore power, generator, or inverter powered by the house batteries. The refrigerator will take 8-12 hours to fully cool down when first turned on. However, it is normally on prior to the commencement of charter. If on the hook and using inverter power it is standard procedure to turn off the inverter prior to going to sleep to protect the batteries. Or turn off the heavy loads (refrigerator, CB, Water Heater, Battery charges, and ice maker. The refrigerator/freezer will remain cold during the night. Remember to turn on the refrigerators or the inverter in the morning or the generator (necessary for hot water for showers).

Flybridge: There is an under-counter style mini fridge/icemaker under the sink counter. The mini fridge is controlled by a breaker in the AC Panel "refrigerator CB" next to the refrigerator breaker.

Main Salon: An under-counter Ice maker is located near the bar sink.

## **MARINE DIESEL FURNACE**

The heating system is a hydronic system which uses a Webasto Furnace to heat coolant which is then pumped throughout Meg Ann III to small fan coil units in various rooms and fan coil units connected by hose to small flush vents such as bathrooms etc.

There is a digital thermometer in each room on the boat except the pilothouse. The furnace can be turned on by simply lifting the switch in the galley marked "Diesel Heat".

The furnace itself is located in the engine room on the port side behind and beyond the port engine. It exhausts out the port side of the aft portion of the vessel. Be sure no ropes, fenders, or obstacles are near the exhaust when operating the furnace as it is very hot.

The system works as follows: When the furnace switch is turned on the furnace fires up and heats a reservoir of coolant to a prescribed temp. It thereafter turns off and on as required to maintain that temp. When there is a call for heat from any of the thermostats or pilothouse manual switch, a circulating pump sends the heated coolant through the boat in a continuous loop. Each fan coil unit turns on when a thermostat calls for heat and air is blown over the radiator coils in the room, supplying heated air until the thermostat is satisfied. When the system is switched off the internal furnace fan will continue to run until the unit cools down.

## **ELECTRONICS: NAVIGATION EQUIPMENT, RADIOS & RADAR**

The boat is equipped with extensive electronic equipment, including VHF radios, radar, Furuno MDF, depth sounder, and an autopilot GPS.

There is a standalone PC port lower helm. This is powered by 110V. Port outlet breakers must be on to power this system. As a normal personal computer or PC press the power button and wait for the screen to read BIOS. Press the blue button bottom left of keyboard and F1 key to bring up the navigation system windows PC. Then click on Nobel Tec Navigation system to start operating navigation system. There is a remote mouse at the helm for the PC or on the keyboard there is a mousepad to use. Make sure displays port and starboard of helm are powered on. You will be able to use your radar, chart plotter, depth sounder and cameras for backing up and engine room viewing. NOTE: If 110 power is interrupted, you will have to re-start the system.

12V DC provides power to all other navigation equipment, including radio and auxiliary navigation system. The 12V DC breaker must be in the ON position to power the other systems previously mentioned.

The DC power supply for this equipment is controlled by a single electronics master circuit breaker at the bottom of the DC power panel. Each unit or group has its own power switch in the same location. This manual does not attempt to provide operating instructions for any of the electronic equipment. Instead, you are referred to the equipment's own manuals kept in the pilothouse overhead cabinet

## **VHF RADIO**

The VHF radios' controls are at both helm stations, in the salon and on the flying bridge. The radios are designed for easy access to Channel 16, which is the hailing and emergency channel in the Northwest. Other buttons allow you to select different channels, weather channels, high and low power, and US/International operation. Your checkout skipper and/or the radio's own instructions will quickly familiarize you with basic operation.

**Be sure to re-check the squelch each time you turn it on.**

## **PILOT HOUSE EQUIPMENT LAYOUT**

The MEG ANN III is equipped radar that can be used, combined with the electronic chart units, for operation in restricted visibility, with the radar primarily serving as a device for collision avoidance while the chart unit provides position.

Proper and safe use of a ship's radar requires lots of practice and careful study. While you are using the boat, you can have the radar on as much as you like to get used to the way it displays images, but for detailed operating instructions we refer you to the radar's own complete manual and details bottom of next page.

Note that charterer's insurance DOES NOT PERMIT OPERATION OF THE VESSEL IN RESTRICTED VISIBILITY. You should confine your use of the radar to familiarization and training only in weather with good visibility.

**NOTE: RADAR IS NOT A SUBSTITUTE FOR VISIBILITY AND CANNOT DISPLAY ALL OBSTACLES OR DANGERS.** (Example: it is impossible for radar to see the cable between a tug and its tow, or realize that that is the situation without visible clues.) Only use radar for supplemental information or when seeking shelter if caught in fog.

**REMEMBER: THE ELECTRONIC CHARTING SYSTEM IS NOT A SUBSTITUTE FOR CAREFUL STUDY OF TRADITIONAL PAPER CHARTS.** You are required by maritime law to use your paper charts for navigation information, especially since electronic chart technology does not always permit full cartographic details to show, especially underwater hazards. The electronic charts are for convenience only!

Note: Northwest waters are rocky and depths change rapidly. You should be especially careful to study your charts, and then check them often whenever running in lesser depths, so that you don't hit a rock! Just as our islands "pop up" to heights of 50, 100, or even thousands of feet in a very small distance, so do rocky obstacles underwater! Also remember the 15ft tidal swing in depth, rocks that may have been 16 ft under water may at some point in time be merely 3 ft under the surface. MEG ANN III draws 5.5ft.

## **NOBELTEC NAVIGATION SYSTEM**

The first of the two Navigation systems is Nobeltec software installed on a PC located left of the wheel in the pilothouse. Attached to the computer are USB connections for the GPS receiver and a dongle for the wireless mouse. The PC is connected to the screen to left of the pilothouse equipment displays.

To operate this system, you need to start up the PC, the power button is on the front of the PC. The monitor on button is on the bottom of the screen frame. Select and load the Nobel Tec software icon on the desktop. While loading you will be prompted to select Navigation or Planning, select Navigation. Operate the program intuitively or ask for instruction.

**NOTE:** If you switch off shore power while the PC is on it shut off due the temporary loss of power. Simply re-start the PC if this happens.

## FURUNO GPS CHARTPLOTTER

A second independent (redundant) navigation system is provided by the Furuno NavNet VX2 on the center of the console. The manual is located in the overhead cabinet above the table seating. This will provide an independent Plotter offer redundant verification of your course.

## DEPTH SOUNDERS

MEG ANN III is equipped with depth sounder in the pilothouse and on the flybridge. The pilothouse gauge is the slave to the flybridge. The flybridge must be on for the pilot house gauge to work. There also a depth display on the pilothouse Furuno NavNet VX2 unit in the center of the dash.

## RATHEON AUTOPILOT

The boat is equipped with a Raytheon “Raypilot” Autopilot. The primary control is at the lower helm. A second smaller remote control is at the upper helm on the starboard side of the console. The autopilot also has a rudder display in the pilothouse unit.

**NOTE:** The auto pilot does not have a dedicated breaker on the DC panel. It is located in the engine room by the inverter, windless breakers, etc. It's easy to accidentally have the autopilot engaged while at anchor or moored. If you hear a clicking sound coming from the lazarette, this is the likely cause.



Basic operation is simple:

**ONLY USE THE AUTOPILOT FOR STEERING AND COURSE CONTROL DO NOT USE WAYPOINT FUNCTIONS!**

- 1) **The autopilot should be in standby mode when underway as the default mode.**
- 2) To engage the autopilot, push “auto” button. You can now steer the boat by rotating the dial. Also, it will maintain whatever course direction you set.
- 3) To disengage the pilot, push “Stby”, the unit returns to “Standby”.
- 4) **Pressing the standby button return manual steering control to the wheel**

**ALWAYS MAINTAIN A CAREFUL LOOKOUT WHEN USING THE AUTOPILOT! It is an aid**

to comfortable cruising, not a replacement for an aware, diligent helmsperson! Remember, you can disengage it quickly at any time simply by pushing "Standby"!

The switch (breaker) for turning the autopilot on or off is in the engine room on the lower left side of the battery switch panel at the base of the stair.

Please refer to the Raymarine Operator's Guide for more details.

## **BOW THRUSTER**

MEG ANN III is equipped with bow thruster. A thruster control station is located at both helms. Thrusters use a great deal of current and the load is heavy. They should not be used for continuous operation longer than 15 seconds at a time. It is protected by an internal overheat disconnect switch to protect the motors. If held on too long it will overheat and shut down and will not be available until it has cooled sufficiently for the switches to reset, probably 5 minutes or more. Therefore, do not use thrusters for primary controls but to assist in maneuvering, to trim or adjust and or when moving sideways away from or towards a dock.

## **REMOTE CONTROL SPOTLIGHT**

Turn on the switch located on the control panel. Use the joy stick to move the light up, down, left or right.

## **GENERAL VESSEL OPERATION**

Always operate the vessel from the helm station that provides sufficient visibility given your course, speed, and sea conditions. During docking maneuvers that may require backing, always operate from fly bridge as there is little visibility astern from the pilot house. It is best to center the wheel and use only the engines to maneuver the boat backwards at very slow speeds. It is extremely important that the trim tabs be in the full up position (bow-up) whenever the boat is maneuvered for docking. When using engines for steerage, avoid using engines simultaneously in opposite directions. Although effective, it puts more strain on the drive train than using one engine at a time. You can almost always attain the desired results by alternate use of engines or alternating directions on a single engine. When in a harbor or when docking, use only one engine at a time, alternating between each as needed. The MEG ANN III has large 32" props WHICH WILL PUSH THE VESSEL AT 7 KNOTS with both engines engaged. Always put one engine in gear and then take it out and observe what effect that had on the vessel before moving to the next engagement of an engine, this will help you learn the boat and also stay out of trouble.

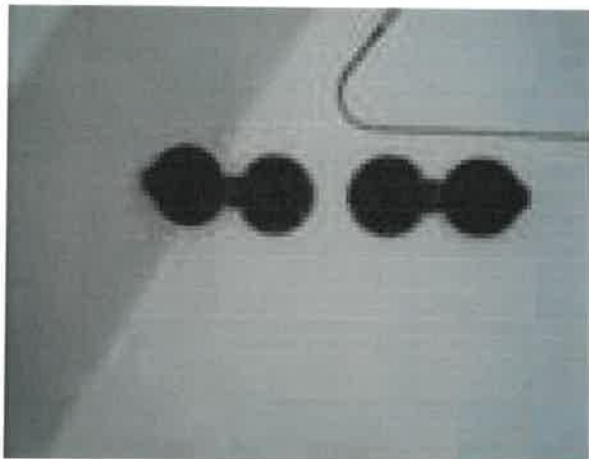
If you find yourself in a situation in which you are not certain of what to do, or if a maneuvering command does not do what you thought it would do bring the vessel to a complete stop, stop the motion of vessel and re-group and start over. The Meg Ann III weighs around 70,000 lbs. fully loaded and "motion can cause great damage in tight quarters.

## WINDLASS AND ANCHOR

The anchor windlass uses a large amount of electrical power (90-120 amps). It is always best to have main engines running when operating the windlass so you retain control of the boat and minimize battery drain.

**NOTE: The Windlass is a powerful machine and can be dangerous to use. Make sure, all crew operating the windlass have been trained how to operate it and to keep hands, fingers, feet and clothing out of harm's way.**

Windlass controls are at the flybridge helm and at the windlass. Controls at the flybridge helm may be used if a second person is positioned on the deck to monitor the setting and conditions. The windlass can also be run from the deck. It is highly recommended the windlass is controlled from the deck in order to manage the angle of retrieval (always vertical retrieval) and to make sure the anchor does not swing into the boat.



Foot switches for the windlass are on the port side of the bow.

### SETTING ANCHOR

**CREW NOTE:** The skipper will signal when to drop the anchor. Make sure the chain dog is clear to allow the chain out. Open the deck switch cover with the arrow pointing forward. Start with a few taps on the windlass deck switch to let the anchor roll off slowly and without suddenly dropping. Once the anchor is hanging vertical, you can step on the deck switch and release as much chain as the skipper requests.

Anchoring safely requires two persons, one at the helm maneuvering the boat and one on the bow operating the anchor. Putting the bow of the boat over the spot where the anchor is to be placed after checking the depth on the depth sounder, the windlass foot-switches are used to lower the anchor slowly toward (but not onto) the bottom.

When the anchor is about to reach bottom, the boat is backed away by putting the engines into reverse for 3 seconds: Eddies from the chain indicate motion. Resume lowering the anchor while drifting backwards (watch the eddies and add another burst or reverse if necessary!) until the desired amount of chain is out. Stop paying out chain. Engage reverse for 3 seconds at a time until the chain starts to pull straight off the bow toward the anchor. A straight chain indicates a "set" anchor!

**NEVER** pull on the chain for more than five seconds, and never at any engine RPM other than idle! Putting the boat's weight plus its horsepower on the chain forcefully even at idle will bend the anchor and/or damage the mooring gear!

If while checking the set, the chain rumbles and clunks, and seems to release in bursts, it means you're anchoring on a rocky bottom and the anchor is not holding. Be patient: It may not set on the first try, and you'll have to repeat the process sometimes to get a good "bight" on the bottom.

## **ANCHORING**

Anchoring can be accomplished safely with a minimum of fuss if you are prepared. Or, if you are not ready; it can be stressful and dangerous for you or the boat.

Before attempting to anchor, select an anchorage with a soft bottom such as sand, mud, or gravel, if possible. Look at the charts and cruising guides for tips on good locations. Then, choose the spot in the anchorage where you have room to "swing" on the anchor without disturbing other boats. Remember, responsibility for leaving room goes to each successive boat to arrive, for the first boat has priority in the anchorage!

Here in the Northwest, because of the deep waters, all-chain rodes and small bays, we anchor a little differently than in the Gulf of Mexico or Caribbean, for example. First, except in severe weather we use anchor chain scopes of only 4-to-1 or 5-to-1. For example, in water that is 40 feet at high tide in the typical anchorage, we might use 160 feet of chain unless the weather was to be gale force or greater winds.

Second, because of the small bays and steep bottoms, we often rig a shore line from the stern of the boat to shore. The best example of this would be at Todd Inlet at Butchart Gardens. Here is a bay that can accommodate 8 - 10 boats, yet it is only about 150' wide and 200' long! Boats attach their bows to the mooring buoys or, in a few cases, anchor; and then their sterns are secured to rings provided in the steep cliffs overlooking the bay. Boats are thus perhaps only 15-20' apart, side to side.

Third, boats often will "raft" side by side in busy marinas, although this is not too common.

Fourth, courteous boaters will call vessels coming into busy bays and offer to let them raft to the same buoy, if signs on the buoys do not limit usage to only one boat depending upon length.

## **CHECKLISTS & MANEUVERING SUGGESTIONS**

### **SHORE LINES**

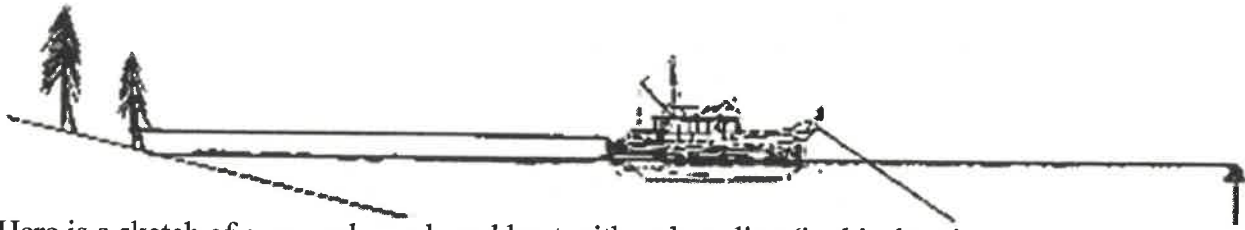
When a shore line is required, anchors are set 75 - 100 feet from shore, with the boat backing toward shore during anchor-setting. The stern line is put around a tree, and brought back to the boat.

During this process, be sure to keep clear of rocks near the shore, and allow for our Northwest tides, occasionally twelve feet, and sometimes 20 feet when further north! Check the present tide, and high and low tides before beginning anchoring: No sense anchoring in 15 feet of water if you're at the "top" of a 15-foot tide!

To get to the shore, you will need to have a dinghy down, and then have your mate keep the boat's stern toward shore with short bursts of reverse gear. Sometimes a helpful boater already anchored will help you by taking your line to shore for you with his dinghy, a neat "good deed" that you might reciprocate. We've met some nice boaters this way!

The shore line is in the lazarette, and is long enough to usually allow taking it to a tree, around it, and back to the boat so you don't have to go ashore to untie when leaving. With a crew member keeping the boat in position, take the dinghy to shore pulling the end of the shore line with you. Pass it around a tree, and pull it back to the boat if you can, since then to get away in the morning all you have to do is release the bitter end from the boat, and pull it aboard. Pull the line tight, as long as you've got over 100' total of line out: There is plenty of sag/stretch, and we want to keep the boat in its area! If necessary, put a crab pot float or fender on the line to warn others it's there!





Here is a sketch of a properly anchored boat with a shore line (in this drawing,  $S$ =Scope, which should be at least  $4 \times DL$ , the Depth at Low Tide):

When setting the anchor let out 50ft more than you have determined you will need, set the anchor backing up slowly until it grabs, then set it with one engine in reverse. If it holds, return to neutral and take up the extra 50 ft of chain.



When selecting an anchoring location check the depth in all areas you expect the boat to swing ( $360^\circ$ ), then look up the current depth on a tide chart and calculate the depth you are at high and low tides to determine the adequacy of your selection. Also, be aware of the location and potential swing of other vessels anchoring in the area. All rope anchoring will swing at full length but in light wind or still conditions you will probably swing over the end of the chain where it hits the bottom not the anchor, this affects how the boats will reposition over the night. Remember, first boat to anchor has right of way over subsequent anchoring.

1. Make sure the crew setting anchor has been trained in using the windlass and anchor and knows what you expect them to do.
1. Turn on the windlass breaker which is in the lower right-hand portion of the DC panel located in the stairway to the lower-level bedrooms.
3. Always use proper anchoring procedures when anchoring. (See Chapman's)
4. Bring boat to complete stop before lowering anchor.
5. Pay out sufficient scope before setting anchor.

**ALLOW FOR HIGH WINDS DURING THE NIGHT.**

There is only enough anchor chain (400') to anchor in 80' of water or less with a 5:1 scope. Know how much the tide will change while anchored.

**CAUTION:** Review the copy of Chapman's onboard if you need to review the correct anchor setting procedure or the amount of scope to use. Be Safe! Drifting in the middle of the night is unpleasant at best and always very dangerous.

6. Be sure you do not allow MEG ANN III to ride at anchor directly against the windlass. Properly snub the anchor rope using a snap ring and line attached to the deck cleats.
7. Monitor the vessel's position periodically after setting anchor to see that the anchor remains set. This is important because both the wind and currents change constantly.
8. **NOTE:** If snubbing line is not used on the anchor chain, it will make a snapping noise when winds swing the boat. If anchoring on a rocky bottom, the noise from the chain dragging across the rocks when the current or wind shifts will magnify and the sound will follow the chain into the boat (These will be heard mostly in the middle of the night when it is dark and cold and wet on the bow) Insert a snap-ring in a chain link and run a line through the snap-ring and take pressure off of the chain by securing the line to the forward cleats.

## **WEIGHING ANCHOR**

CREW NOTE: You will be signaling the skipper which direction to move in order to retrieve the anchor. The objective is to always have the chain vertical when retrieving. NEVER allow the boat to run over the chain, or pull the boat with the windlass.

**Do not force a stuck anchor with the windlass. It will pop the breaker or damage the windlass.**

If the windlass strains or stalls, wait ten seconds and try again. Often this will let the anchor pull free. If this does not work, notify the skipper. Consult Chapman's for suggestions.

Stop the chain when the anchor is within 3 feet of the roller. Turn the anchor so the point is towards the bow. Very briefly tap the deck switch until the anchor slowly comes up over the roller and snugly back against the roller. Make sure the chain is snug but not stiff and tight. Secure with a safety line and hook.

1. Make sure the crew weighing anchor has been trained in using the windlass and knows what you expect them to do.
2. Always start main engines before you begin to weigh anchor. Do not pull the boat with the windlass – this could cause the windlass to fail and require manual (read painful) retrieval. Keep the chain vertical when raising the anchor. This will minimize windlass strain and anchor swinging.
3. Care should be taken that anchor does not swing into bow.
4. Stop the windlass when the anchor shank reaches the roller. Make sure the anchor is aligned to have the points down. Carefully raise the anchor shank over the roller until the chain is snug.
5. When finished with windlass, turn off breaker at panel.

## **HOISTING DINGHY ON AND OFF MEG ANN III**

This section also applies in most part to hoisting any dinghy to or from the flybridge. Hoist operation requires 2 people to safely manage the operation.

- **The Davit hoist is heavy machinery and is inherently dangerous. All precautions must be followed to avoid serious damage and/or injury.**
- **Make sure your crew knows exactly what you want them to do and not to do before you start!**
- **Never allow passengers to be in the Dinghy when it is being hoisted or lowered.**
- **Never allow anybody to be directly underneath the Dinghy when it is being hoisted or lowered.**
- **Only use the hoist in calm water and calm winds. DO NOT hoist the Dinghy up or down while Meg Ann III is rocking.**

## OFF-LOADING DINGHY

### Preparation

1. Get the davit control out of storage area located under the sink in the fly bridge area.
2. Connect controls wire cable to the connector on aft side of the davit arm and screw to base using 1/4 turn.
3. Remove the two tie down straps from the dinghy.
4. Verify that the dinghy lifting harness is connected, free, and ready for hoisting. Remove any twists before proceeding.
5. Make sure a stern and bow line are available for the crew to guide the dinghy during transit.
6. Make sure all harness cables are free and connectors locked closed.
7. Be sure the drain plug is screwed in tight on the stern of the dingy. Turn battery switch on under the seat.
8. Position the boom arm up so that the cable is centered over the dingy with a slight favor to the right (when facing from the outboard end) to allow for bending when the load is applied. The goal is to be centered on the chucks when lifting.  
Note: you will want the (hydraulic control) boom set in this up position before re loading the dingy to best position it over the chucks.

### Off-Loading

1. Hydraulically raise the boom enough to swing out from the curtains and clear the outboard motor.
2. Detach the davit cable from the boom clip.
3. Position the boom arm up so that the cable is centered over the dingy with a slight favor to the right (when facing from the outboard end) to allow for bending when the load is applied. The goal is to be centered on the chucks when lifting.
4. Position the davit arm to where the hoist cable is over Dinghy lift ring. Have someone hold onto the weight until it can be attached to the lifting harness. Be careful weight does not swing into people or dinghy.
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5. Lower CABLE OUT until hook can be attached to the harness lift ring. Attach the hook to the ring and between the two rear cables. All 3 cables should slide to the bottom of the ring before hoisting. Adjust cable position before lifting
6. Ensure tie down straps securing the dinghy to the cradle have been removed.
7. Attach a line to the bow and stern of the dinghy and hand the free ends to an assistant on the upper deck of MEG ANN III. Remind the person to stay clear! The crew will use the lines to guide the dinghy's descent and to tie the dinghy when it gets to the water.
8. Make sure the cable remains vertical while lifting the dinghy. Adjust the davit boom arm up/down (hydraulic) to put the cable in vertical position.
9. Once aligned, push the davit control button to lift the dinghy 2-3 inches to verify the cable is in the right position. When properly aligned, continue to raise the dinghy using the davit control buttons until it is free of the cradle.
10. When free, the dinghy should ride approximately level. (if not, there might be water in the bottom which needs to be drained)
11. Continue to raise the dinghy until it is clear of the cradle. Raise to the highest position possible but do not let the weight or cable stop to reach the upper pulley.

12. Rotate the davit arm outboard (to port), being careful to keep the prop and skag from hitting the supports on the aft portion of the deck, until the dinghy is parallel to the starboard side of MEG ANN III. IF the dinghy starts to swing, stop it using the bow and stern lines until it is steady. Note: as the dinghy moves to the side of the MEG ANN III it will cause a slight list to the port which in turn will make the dinghy and boom want to swing out. Be sure to hold the stern dingy rope sufficiently to not let this happen freely but rather pay out the line slowly.

13. Using the davit control buttons let the cable out. Be careful that the dinghy is clear of MEG ANN III's railing. At that point, continue to lower the dinghy to the water.

14. Once the dinghy is on the water, have your crew tie it to MEG ANN III.

15. Lower the cable until your assistant can release the harness from the hoist cable. IMMEDIATELY raise the hoist CABLE IN until the cable weight is within 3 feet of the boom. Do not let the cable and weight swing free. The cable, boat, or crew, can be damaged by it swinging. Rotate the davit inboard to its original stored position. Re-attach the hook to the boom. Be sure never to allow the retrieval of the hook end without the weight applied as the line may tangle on the spool.

To operate the dinghy, see Starting the Motor below.

## RE-LOADING DINGHY TO THE FLYBRIDGE

No heavy gear or people should be in the dinghy when it is being moved on or off MEG ANN III. Excess gear could overload the hoist or cause failure.

- The hoist is heavy machinery and is inherently dangerous. All precautions must be followed to avoid damage and/or serious injury.
- Make sure your crew knows exactly what you want them to do and not to do before you start loading!
- Never allow passengers to be in the dinghy when it is being hoisted.
- Never allow anybody to be directly underneath the dinghy when it is being hoisted.
- Only use the hoist in calm water. DO NOT hoist the dinghy up or down while MEG ANN III is rocking to prevent collision with MEG ANN III or crew.

## Preparation

1. Remove all loose gear from the dinghy
2. Tie the dinghy to Meg Ann III's starboard side with the bow of the dinghy facing towards the bow of Meg Ann III.
3. Attach the harness. Make sure all 3 cables are running free and all connectors are closed.
4. Raise the outboard motor to a position between  $\frac{3}{4}$  up to allow the prop and skag to clear the aft deck when rotating it back onto Meg Ann III.
5. Locate your crew to hookup the hoist cable hook to the dinghy.

## **Loading**

1. Release the Hoist cable from the keeper.
2. Follow the steps in offloading the dingy to center the boom over the centerline of the chucks before swinging it over the side to retrieve the dingy.
3. Rotate the davit arm outboard until it is over the dinghy lift ring.
4. Lower the CABLE OUT and adjust the davit arm to enable the hook to be connected to the dinghy directly below the boom tip.
5. Connect the cable hook to the top of the harness fitting. This will lift the ring up and slide all 3 attached cables to the bottom of the ring.
6. Raise hoist cable until harness cables are taut. Assistant holds the bow and stern lines in order to guide the dinghy during on-loading process. Untie all lines attaching the dinghy to Meg Ann III.
7. Raise the dinghy until the dinghy is as high as the cradle. Your assistant should fend off the dinghy as needed. The cable should be raised to the highest position possible without letting the weight to hit the top pulley. At that point, your assistant should swing the dinghy into position to go on the cradle
8. Rotate until the dinghy is positioned on the cradle. Lower the cable as necessary to align the dinghy with the cradle. Be sure the engine will not touch the deck when the dinghy is lowered.
9. Lower the dinghy until the harness is slack enough to remove the cable hook. Remove the hook and hold onto the hook while rotating the hoist back to its storage position
10. Strap down the dinghy securely even for a short transit! Remember, it is can slide off the deck and cradle if not secure.
11. Return the davit arm and cable back to its stowed position.
12. Remove the hoist controller cable and put the control back in the storage cabinet.
13. Turn battery switch off. Battery switch is under the seat.

## **OPERATING THE DINGHY**

### **Before taking off:**

1. Make sure each passenger has a lifejacket available on the dinghy. By Washington State law, children under age 12 must be wearing their lifejackets at all times when in the dinghy.
2. Check level of gas in gas tank.
3. Secure all loose baggage, charts, clothing. The wind pattern underway will suck most light objects out of the boat.
4. Make sure all lines are secured in a way to keep them from falling overboard and getting into the prop. Especially the bow and stern line.
5. Make sure the motor is lowered and pointed straight back.
6. The motor is an electric start. Push the key in while turning to the start position to activate the choke.
7. Make sure all passengers are sitting down before getting underway.
8. Pull all fenders into the boat.

### **SALON COFFE TABLE ADJUSTMENT**

The coffee table in the main salon can be raised and lowered to make it suitable for an additional dining area. The rocker switch on cabinet on the kitchen side of the salon (between the two counters. This is a gear driven mechanism. **DO NOT SIT OR STAND ON THE TABLE OR LET CHILDREN RIDE UP AND DOWN**, it will break (and has) with this type of use.

### **STACKED WASHER/DRYER**

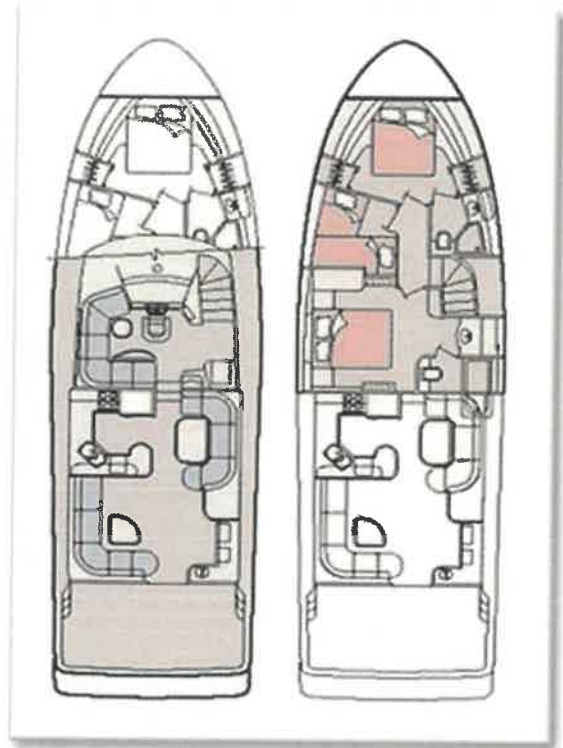
Running the washer/dryer requires 50-amp shore power or running the generator. It works well so long as it is not overloaded. The dryer vents to the outside. As with all dryers remove lit from the



screen after each use.

# MEG ANN III: 5788 Bayliner

## Additional Specifications: Description of Vessel



### **Dimensions**

LOA: 57' Beam: 17'4" Displacement (Loaded): 70,000 lbs.

Draft: 4'11"

### **Engines**

Engine(s): Twin Engine(s) HP: 600 diesel:

Engine Model: Volvo 5788

Cruising Speed: 16 knots

Max Speed: 22 knots

### **Propellers**

2@ 32x34 four bladed Bronze

### **Tankage**

Fuel: 800gal

Fuel Consumption: Low 7gph, High: 40gph. Average: total fuel by hours used on trip (hrs. meters) Trip average 20gph

Water: 226gal

Holding: 76gal

### **Misc. Equipment**

Anchor: 60# ss plow with 150ft 3/" chain and 150ft 3/4" rode (spare 35# danforth)

Bilge pumps-four 2,200 GPH & two 1,250 GPH

15 kW Westerbeke Generator w/soundshield

Electrical bonding system w/sacrificial anode

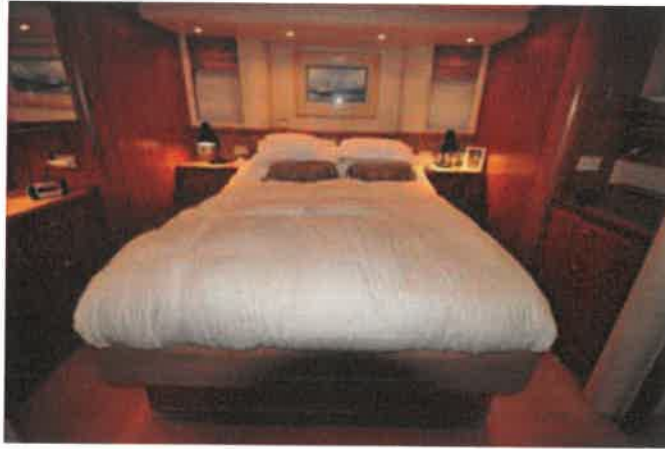
Glendinning Cblemaster with 100ft 50 amp 120/240 V power chord

30 Amp chord and adapters.  
4kW Inverter /charger  
(1) 80amp & (1) 40amp 24V battery chargers plus inverter charging  
Navigation lights  
Ignition engine alarms for engine overheat and low oil pressure condition.  
Halon engine room automatic Fire suppression system  
Oil change system  
Foredeck sun lounge  
Anti-fouling bottom paint  
Central vacuum system  
Diesel furnace/hydronic heating system with individual room thermostats and coil heat exchangers  
Bow Thrusters  
Spare props  
8 pfd under flybridge seat cushions  
4 kid's PFD  
Stainless propane portable BBQ  
Foredeck fender racks for four fenders  
Splitter – 50 amp to two 30 amps for dock power

### **Cabin Heat**

Cabin heat is a diesel heater that heats water and pumps to registers in salon, pilot house, each head, and staterooms. Each has its own temperature control.  
Main switch to turn on is under the upper counter in the galley. Green light indicates ON.  
Keep lines and fenders away from exhaust.





**Sleeping Accommodations:**

The MEG ANN III Sleeps up to 6 guests in three double staterooms and two enclosed heads with overflow capacity in main salon and pilothouse



**Master Stateroom**

- Mid-ships Master Stateroom w/ Island Queen Berth
- Abundance of built-in locker & drawer Storage
- Cedar lined hanging lockers
- Vanity w/mirrored cabinet & molded sink
- Private head /vacu-flush toilets and large tub/shower.
- Night stands w/two drawers
- Corian counter tops
- TV/DVD player
- CD AM-FM radio



**Forward VIP Guest stateroom**

- Centerline Queen Berth
- Built-in Locker & Drawer Storage
- Dual Opening Overhead Skylight Hatches
- Privacy Door Aft & Private Entrance to second head with shower



**Guest Stateroom:**

- Two single berths at right angles with clothes locker and 4 drawers
- Hall access to 2nd head/shower.



**Hallway:** Over Under electric Asko clothes washer and dryer

## **Galley**

Double stainless-steel sinks with pullout faucet  
Frigidaire 12.6 cubic foot refrigerator/freezer  
Whirlpool Microwave oven  
U-Line icemaker (salon) Creda  
Electric Stove/Oven Frigidaire  
Dishwasher  
Corian counter tops  
Coffee Maker  
Dishes, silverware, pots and pans

## **Salon**

Corian counter tops L-Lounge  
seating (six)  
Hi-Lo cocktail/dining table w/2 stool/footrests  
Entertainment center with CD/DVD  
42-inch TV  
Blender built in at bar  
Intercom system to staterooms  
Lg skillet, blender, & bowl under settee seat.

## **PROBLEM SOLVING**

### **1. ANCHOR CHAIN WON'T COME OUT OF CHAIN LOCKER**

The anchor chain is continuous, secured at both ends, and cannot tangle. But sometimes a pile of chain will fall over, and one loop of chain will fall through another loop. Usually you can clear this by grasping the chain where it exits the hawse pipe from the chain locker with your hands, and pulling it up or down to "jiggle" the loop out of the chain; you may have to retrieve some chain to do this, in order to have enough slack to jiggle it! It is rare when this will not clear the jam. The other solution: go below and clear the tangle in the chain locker. Caution: Turn off the windlass breaker to protect your hands when manhandling chain!

### **2. ANCHOR FOULED, CAN'T RAISE IT**

This can happen if you "pull the boat to the anchor" with the windlass. You should move the boat under power until it is over the anchor, or, even better, slightly ahead of it before hauling. Usually this will clear it. Otherwise, take a line and form a fixed, loose loop around the chain. Weight the loop, and lower it down the line until it reaches the bottom, sliding down the chain. Then, using the dinghy, take the line forward past the anchor so that you can pull the anchor out, opposite the direction its flukes are pointing. This should help you to pull the anchor free.

### 3. ANCHOR WINDLASS WON'T TURN

If the motor isn't running, is the circuit breaker by the lower helm on? If the motor is running Use the anchor windlass handle in the drawer under the 120-240 electrical panel. Windlasses are equipped with a shear pin to protect them: if you sheared the pin, you will have to haul the anchor by hand using the emergency handle.

If the windlass motor is running but the chain wheel is not turning, check the clutch:

### 4. BATTERIES (HOUSE) KEEP RUNNING DOWN

Have you run the engines enough? Is something left on (like the engine room or mast lights, too many electronics, etc.) that is too great a load for the time you were not charging? Are you using the inverter for big jobs? Use the stove or shore power. Have you had the inverter on whenever plugged in to shore power? You must, for the house batteries to charge.

### 5. ENGINE OVERHEATS

Is the drive belt for the water pump intact? Spare belts are in the engine room spares kit. Is the sea strainer or intakes clogged? Is the impeller shot? If sea strainer is clear and belt is good, this is likely. Call AYC, Do not run engine if it overheats!

### 6. ENGINE WON'T START

If starter does not turn, is transmission in neutral? Try jiggling shift lever while Pushing start button. Check battery, battery switches. Try starting with battery switch set to "both". IS the ignition breaker on in the 24 Volt panel in the stairway to the cabins.

### 7. FOG DELAYS RETURN

Call AYC by telephone or VHF marine operator and advise for instructions.

### 8. HEAD WON'T FLUSH

Is breaker on? Is the pump switch on in the head? Turn them on. Have you overfilled the holding tank? Pump it to allow more effluent to enter it. See the "Heads" section of this manual. If all else fails, just use only the other head.

### 9. HIT A FISH NET

Engines in Neutral: don't try to back off, you may foul the net more. Try pulling the boat back with the dinghy & outboard. Get assistance from the fisherman. You are responsible for damage you cause to a net.

10. HIT A LOG OR ROCK See EMERGENCY PROCEDURES, next chapter.

## 11. PROPELLER FOULED OR DAMAGED

Have the prop checked by a diver. Check for vibration. Try turning shaft by hand in engine room, both should be turn-able with engine in neutral. Is shaft noisy, or does it load engine? Do not use that side or call Vessel Assist. See emergency procedures, next chapter.

## 12. WATER (FRESH) WON'T FLOW

Is there water in the tank? Is F.W. Pump breaker on? If capable, check pressure switch on pump.

## 13. EMERGENCY PROCEDURES Protect your lives first!

- Put on life jackets Contact the Coast Guard with an emergency "MAYDAY" call. If adrift, prepare to anchor to keep the boat from drifting into danger. If the boat is really sinking, consider "beaching it" if necessary.

Launch the dinghy and prepare to board if necessary. If an engine is available and you have time. Be sure to wear life jackets!

- Then, worry about the boat!
- In a true emergency, you certainly are authorized to call for immediate commercial assistance as minimally required to assure the safety of you and the boat.
- It is not an emergency, however, if neither you nor the boat are at risk. For all non-emergency assistance or mechanical repairs done by others, Anacortes Yacht Charters MUST give prior approval for you to be reimbursed!

- If you think it may not be an emergency:
- If you have any concern about your long-term safety, contact the Coast Guard, either normally or using an urgent "PAN" call. Tell them that you are calling to advise them about your situation, so they can keep in touch.
- Be sure that the status and safety of the boat and crew is someone's responsibility while you sort out the boat's problem. For example, delegate your mate to keep a watch for hazards, or to operate the boat on course slowly while you deal with the difficulty.

14. Here is a checklist for solving the problem:

- (A) Isolate it;
- (B) Get the manuals; Get parts;
- (D) If necessary, call Anacortes Yacht Charters for help.

15. Over the years, most problems with charter boats are caused by misuse! Holding tanks overflow because they aren't checked; heads clog because foreign matter (especially facial tissues and tampons) are put in them; engines fail because they run out of fuel, then must be "purged" to re-start. Use the boat carefully, and you'll avoid these.

16. Almost all problems that are not operator-caused, i.e., that are boat deficiencies, are caused by pumps that fail, hoses and belts that break, and seawater strainers that get clogged. Generally, these problems are annoyances, and usually they are inconvenient, but they still can happen. Try to stay calm, collected, and be a professional by dealing with the problem in a businesslike, calm way. It will make everyone's day a better one!

17. Hitting a Log, Rock, or Debris ----- Please Don't!

18. Hitting a log is a real risk in our Northern waters because logging, and "log rafts," are such a big part of our commerce.

19. If you hit a log:

Did you put a hole in the boat? Idle the engines, then think: usually, you can tell just by where the noise of the hit came from. Check the bilges (don't forget the lazarette area, where the rudder posts are) after putting the engines into idle and/or neutral, if necessary. If you did "hole" the boat, go immediately to the "If an Emergency" on the preceding pages.

20. If no hole, and still idling, is the boat vibrating? If "yes," put each engine into neutral in turn, identify and shut down the offender. Then continue on one engine. Call Anacortes Yacht Charters after you reach the closest safe harbor. If no vibration at idle, slowly accelerate one engine at a time. Is there vibration on either? If "yes," run at idle or on only the good engine, to reach a close, safe harbor. Then contact Anacortes Yacht Charters. With a twin-screw boat, the damaged running gear can't be used after hitting an object. However, if while under way on one engine the other engine's propeller shaft rotates by itself because of water passing over its propeller, then you must let the unused engine idle in neutral so that its transmission has lubrication, and the cutlass bearings on the damaged shaft are lubricated. This is still true whether the boat has dripless shaft seals or a standard shaft "log". When running on one engine with the other idling as required, be sure that the idling engine is pumping water through its exhaust pipe.

21. If there is no vibration on either engine, you probably did no running gear damage. Congratulations! Our diver will check your vessel's bottom upon your return, just as after every charter.

**Thank you for reading this manual fully. Enjoy your time on the Meg Ann III. Have a safe, fun cruise.**