Sealand Magnum Opus Toilet Compatible Controller Board User Installation and Operation Manual

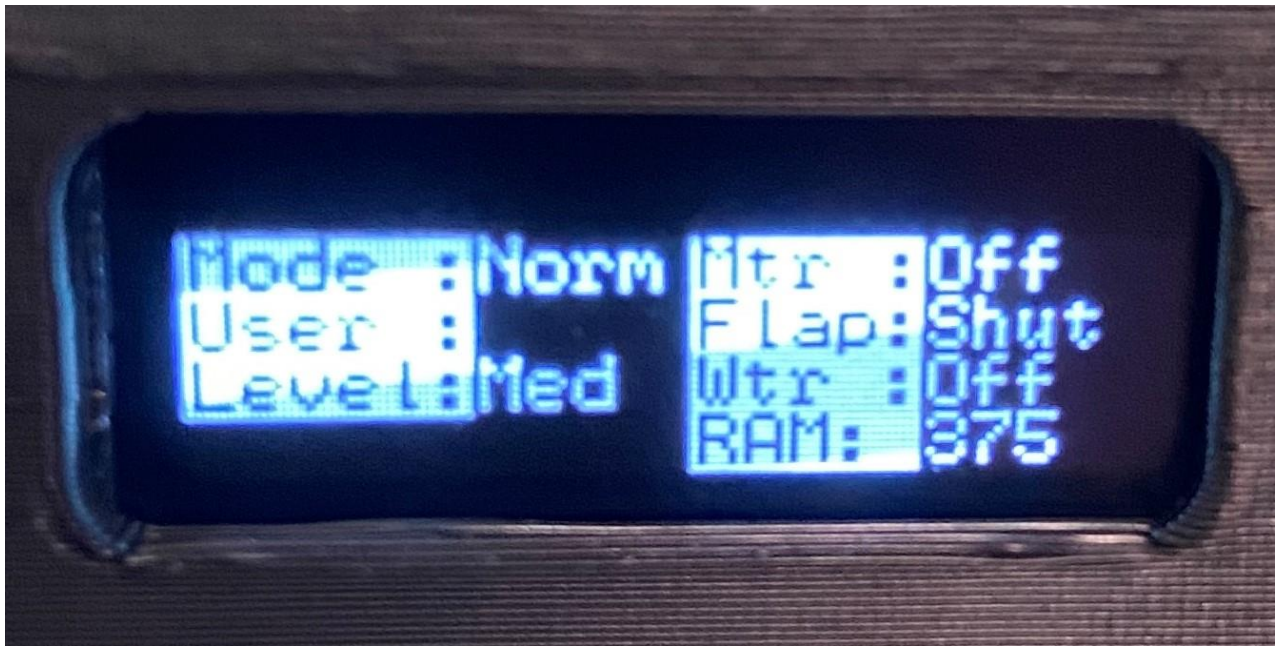
INSTALLATION

1. Tools Required:
    a. 1/8” flat head screw driver (included)
    b. Replacement Control Board
    c. Optional
        i. 8-Conductor toilet mechanism extension cable
        ii. 3-Conductor Flush/Water switch extension cable
        iii. 2-Conductor Power extension cable
2. Remove the fuse controlling power to the toilet to avoid any possibility of damage or short circuits. (consult your coach owner’s manual for fuse location)
3. Using the 1/8” flat head screwdriver, carefully remove the small screws holding the three connectors in place, being careful not to loose those screws as they will be reused for reconnecting to the new controller board.
   If you are having trouble getting to the screw heads, some users have passed the old board down through the back of the toilet and out the side to remove the cables.
   Carefully unplug the three connectors from the old board. (**Caution**: *Pull on the plug NOT on the wiring to unplug*).
    a. The 8-conductor connector goes to the mechanism inside of the toilet.
    b. The 2-conductor cable provides the 12v DC power to the toilet from your coach.
    c. The 3-conductor cable connection is for the Flush/Water switch that is mounted externally either to the outside of the toilet or in some cabinetry, typically under the bathroom sink counter.
4. Note: the old cable assemblies may not be long enough to connect to the new board and may require the optional extension cables to make assembly and future access easier.
5. You can now carefully remove the old controller board.
6. Carefully connect the three cables you removed in step 3 to the new control board. Reuse the small security screws on the old board connectors to secure the connectors to the new control board. These three screws will help prevent an inadvertent disconnect and interruption of service. If the optional extension cables are installed, connect it to the original cable first and then attach it to the new control board.
7. Hang the new controller box inside under the lid of the toilet in a similar manner as the original controller board was installed.
8. Replace the power fuse that you removed in step 2. (display should be illuminated)
9. Configure the control board switches to the desired positions.
    a. Left switch set to desired water level
    b. Right switch set to middle, normal operating mode

OPERATION

1. The left switch controls the water level desired;
    a. Left position = Low water level
    b. Center position = Medium water level
    c. Right position = High water level
2. The right switch controls the Operational Mode;
    a. Left position = Service Mode
    b. Center position = Normal operating mode
    c. Right position = Manual operating mode

DISPLAY



The display shows the status of the various control settings and the limit switches for the 'flapper'.

a. Mode = Indicates Mode switch position (**Serv, Norm, Man**)
b. User = Indicates Flush/Water switch position (**Flush, Fill**)
c. Level = Indicates Water level switch position (**Low, Medium, High**)
d. Mtr = Indicates Motor status to indicate status of the motor drive (**Off**, **Open** or **Close**)
e. Flap = Indicates the Flapper status (**Open, Clsd, ----, or Both**) to show whether the flapper is Open or Closed. (NOTE: *If the flapper status shows ---- then the flapper is between Open or Closed. If the flapper status is **Both**, there is an issue with the wiring or the limit switches on the mechanism*)
f. Wtr = Indicates Water valve status will display: **On** or **OFF** to reflect status of the water valve.
g. RAM = Indicates the available memory to the controller processor

ERROR MESSAGES

When an error is detected;

- The top line in the display will show "**DO NOT FLUSH**".
- The second line will display a reason for the error.
- The third line will display: "**Service to Reset**".

The following error Messages may be displayed:

- **Open Limit Error**
- **Closed Limit Error**

These Errors display when the controller tries to open or close the flapper and the expected Limit Switch does not activate within the required time interval.

If the error was caused by something blocking the flapper from closing, then set the Mode switch to Service Mode. The controller will clear the error and place the toilet in Service Mode with the flapper in the open position. Now remove the blockage carefully so as not to damage any seals.

Set the Mode Switch back to Normal to return the toilet back to its normal operation mode.