

MPC-5000 PCB Upgrade Instructions

All Spectra Watermakers with MPC controls shipped before February 23, 2006 were equipped with MPC-3000 printed circuit boards. After this date the new MPC-5000 printed circuit boards will be used. The new controls are compatible with all Newport, Catalina, and Ventura systems. Spare parts and replacement boards for these systems, shipped after February 23, will be the MPC-5000 version, providing the owner with enhanced features. Santa Cruz, Gulfstream and 380C watermakers cannot be retrofitted; Spectra will continue to provide MPC-3000 boards for these systems.

The new boards allow the operator to program the system from the display panel and over-ride the safety shutdowns as described in the MPC-5000 Owner's Manual. The primary differences between the two models are in the Feed Pump Outputs (PMP1 & PMP2), the Diversion Valve Output (DVLV), the Fresh Water Flush Output (FWV), And the AUX2 & AUX3 outputs.

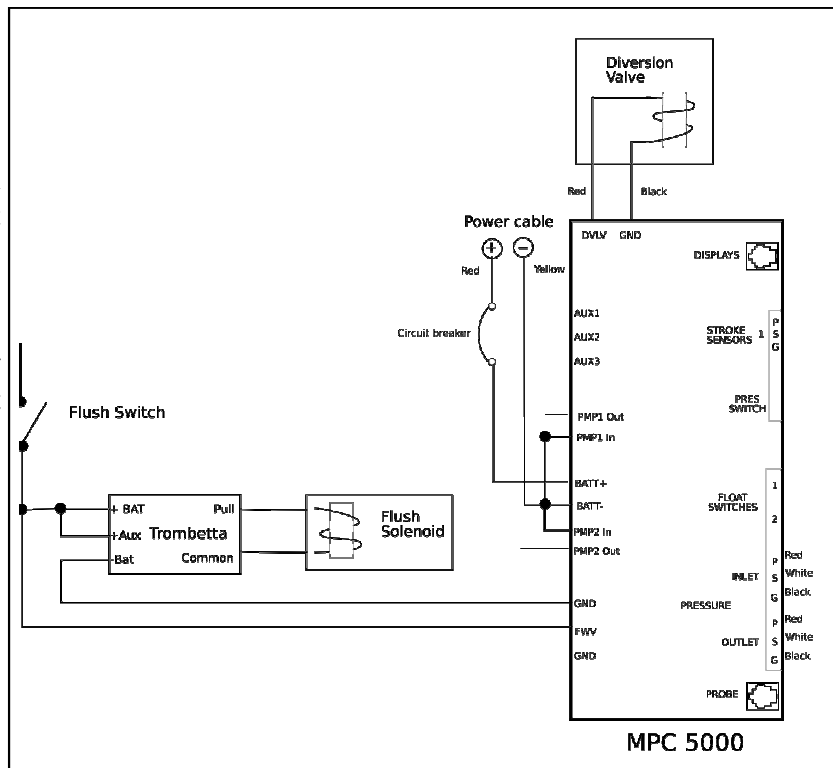
When changing from MPC-3000 to MPC-5000 the following changes must be made.

PUMP OUTPUTS: The PMP1 and PMP2 terminals no longer provide control voltage. They were PMP and GND, providing system voltage at PMP when the relay pulled in. They are now simply relay contacts between PMP IN and PMP OUT. When replacing the MPC-3000 board with an MPC-5000 board system voltage must be provided to the relay contacts by installing a jumper between BATT+ and PMP2 In and PMP1 In. The ground wire that originally was on the GND terminal may be connected to any other GND terminal on the board.

The diversion valve terminal DVLV, and the Flush Valve terminal FWV, no longer provide 24 volt outputs on 24 volt systems. The Outputs are now 12 Volts on all systems. When upgrading 24 volt watermakers to the MPC-5000 the solenoid valve coils must be replaced with 12 Volt coils. A Trombetta voltage regulator must be installed in the flush solenoid power leads on Newport systems having 24 volt control systems to accommodate manual flushing.

The Aux 2 terminal was used for operating a feed water boost pump on the MPC-3000. The MPC-5000 uses Aux 3 for this function.

On Catalina Watermakers the black relay mounted on the BATT- terminal must be relocated or allowed to float.



Programming: If possible the new MPC-5000 replacement board should be ordered from the factory preprogrammed for the system it will be installed into. When ordering the Model number, serial number, and date of installation of the system should be provided to Spectra to allow the board to be properly pre-programmed.

If the board must be programmed after installation, refer to the MPC-5000 OWNER'S MANUAL, or the MPC-5000 CONTROLS FIELD SERVICE MANUAL for instructions on how to program the board from the display or with a portable computer. Set the parameters to the same settings that were used on the original MPC-3000 board. If this information is not available consult Technical Support at Spectra Watermakers for detailed instructions for specific machines.