

# DEMA 80-69 Rinse and Sanitizer Control DEMAMaster™

This instruction sheet will describe the setup and operating procedure for the DEMA Rinse and Sanitizer Control Boards. The full wiring diagrams and tubing hook up configurations for DEMAMaster units can be found in the instruction sheets supplied with those units describing the full assembly and DEMAMaster installation.

*All installations must be in accordance with city, county, state or provincial electrical codes and be performed by a certified electrician.*

*When hooking up the a control board or installing a DEMAMaster dispenser, all electrical power must be turned off to the dish machine and any other circuit that is to be used for the installation. Lockout and tag procedures should be observed when installing this device. Never open the DEMAMaster unless power has been turned off. Signals may be present from dish machine, even with the power turned off. Only use electrical code approved insulated wiring and electrical fixtures with this installation*

It is important to know what DEMA rinse control board is being used. Table 1 describes the two different DEMA rinse control boards; additionally Figures 1 and 2 in this instruction sheet also illustrate the differences.

Table 1

DEMA Rinse and Sanitizer Control Boards						
DEMA P/N	Rinse Speed Control	Rinse Delay	Rinse Limit	Sanitizer Speed Control	Rinse Prime	Sanitizer Prime
80-69-5	Yes	Yes	Yes	No	Yes	No
80-69-6	Yes	Yes	Yes	Yes	Yes	Yes

- Both control boards require 24VAC 50/60Hz power for proper operation. The transformers that are built into the DEMAMaster products have an output voltage of 24VAC.
- Both control boards have 24VDC outputs for rinse pump.
- The 80-69-6 has an additional 24VDC output for a sanitizer pump.

To improve the installation and performance of the 80-69 rinse control it will be helpful to understand the functions of the features described in table 1. See figures 1 and 2 on next page to locate the various features on the control board.

**Rinse Speed Control:** This allows the rinse pump speed to be adjusted by using the potentiometer labeled “rinse” located on the control board. By simply turning the knob on the potentiometer the speed of the pump can be increased or decreased. This will increase or decrease the amount of chemical product delivered by the pump.

**Rinse Delay:** This allows the control board to delay the operation of the rinse pump when a signal is supplied to the control board. The delay time can be set for 0-12 seconds using the potentiometer labeled “delay” on the board. An application of this feature is to deliver rinse aid product at the end of a dish machine rinse cycle versus the entire rinse cycle. This feature does not have an effect on the sanitizer pump.

# DEMA 80-69 Rinse and Sanitizer Control DEMAMaster™

**Rinse Limit:** This allows the control board to limit the amount of time that the rinse pump will operate to 18 seconds when a signal is received. It is set by use of a jumper and 3 pins located on the control board. The jumper simply slides on to 2 of the pins. As shown in Figures 1 and 2, when the jumper is on the middle and far-left pin it is in the “off” position. When the jumper is on the middle and far right pin, it is in the “on” position. A common application that this feature may be useful is when the dish machine fills the tank through the rinse. When the rinse limit is in the “on” position, it will allow the rinse pump to run only the first 18 seconds during the wash tank fill. This feature does not have an effect on the sanitizer pump.

**Sanitizer Speed Control:** This allows the sanitizer pump speed to be adjusted by using the potentiometer labeled “sani” located on the control board. By simply turning the knob on the potentiometer the speed of the pump can be increased or decreased. This will increase or decrease the amount of chemical product delivered by the pump.

**Rinse Prime:** Will operate the rinse pump at full speed. Pressing the “rinse prime” can operate this feature switch located on the face of the DEMAMaster unit.

**Sanitizer Prime:** Will operate the sanitizer pump at full speed. Pressing the “sani prime” can operate this feature switch located on the face of the DEMAMaster unit.

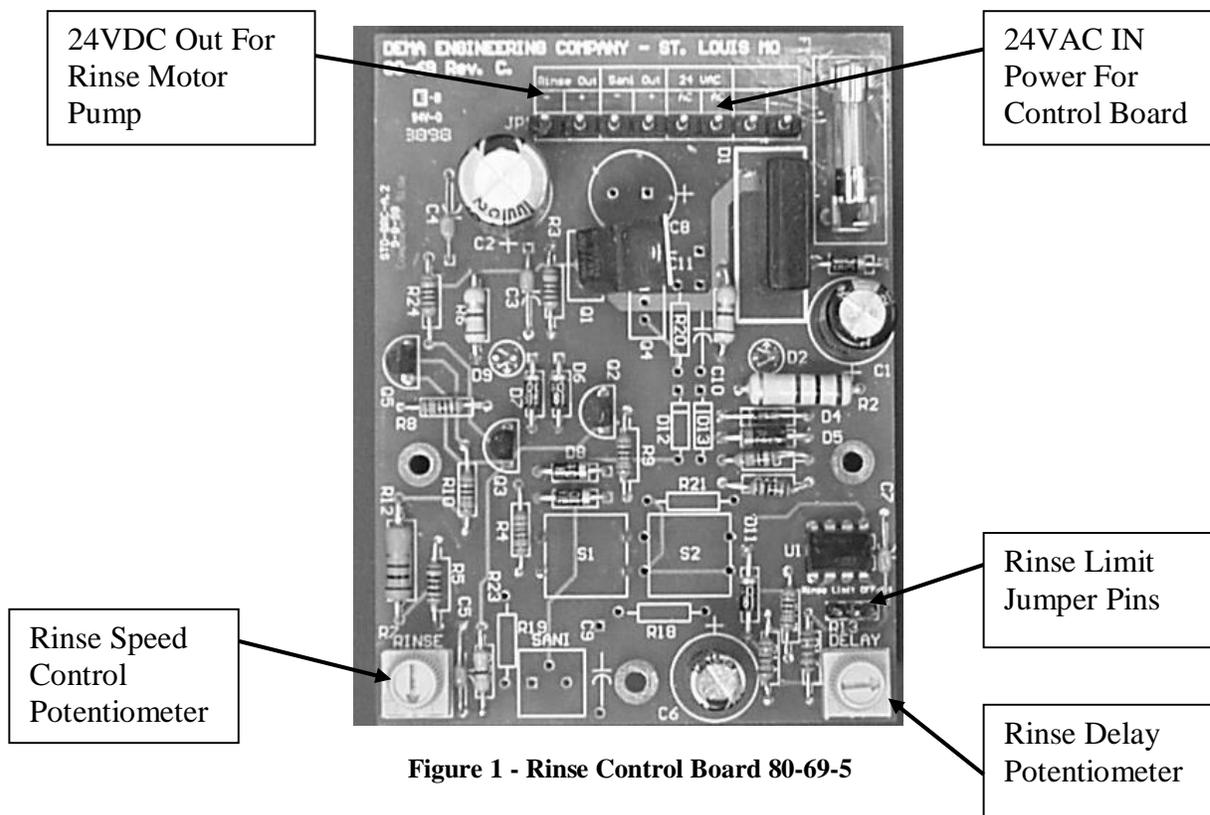


Figure 1 - Rinse Control Board 80-69-5

# DEMA 80-69 Rinse and Sanitizer Control DEMAMaster™

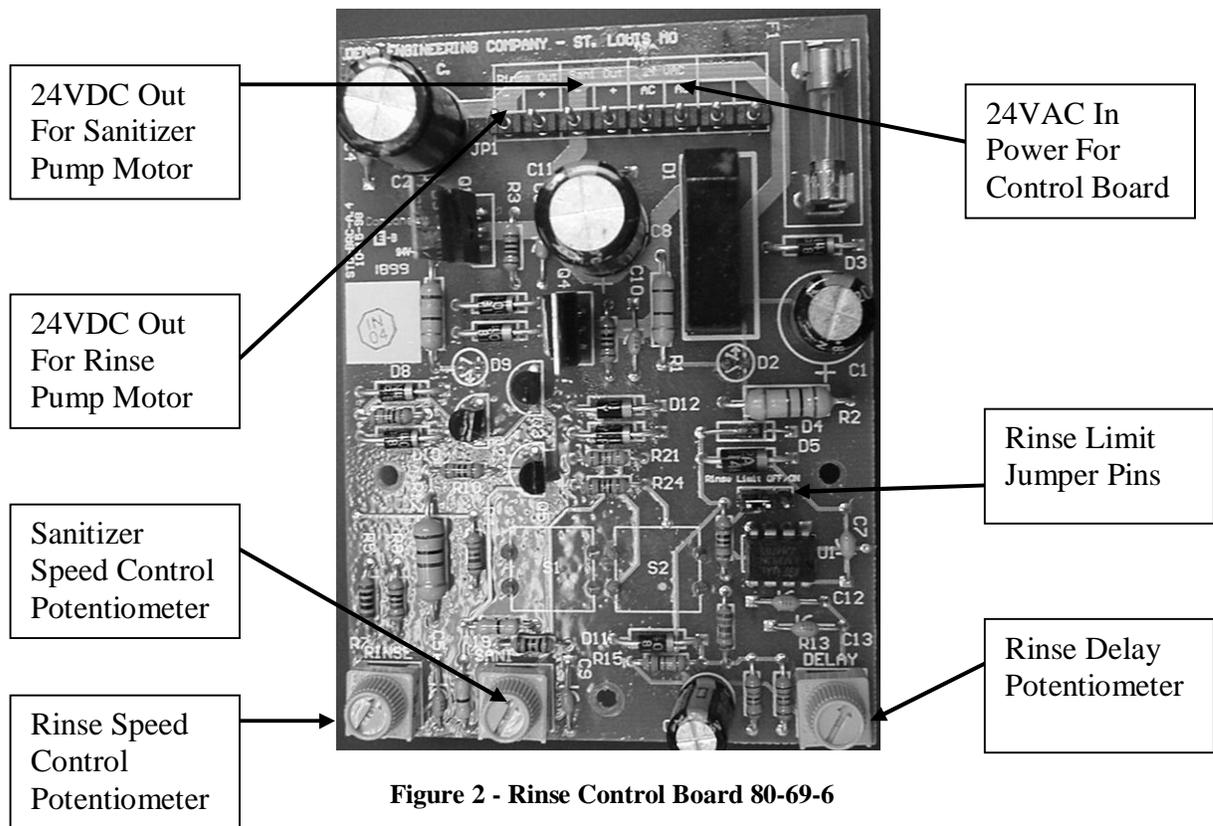


Figure 2 - Rinse Control Board 80-69-6

## Rinse and Sanitizer Calibration

The following procedure describes how to calibrate the rinse and sanitizer pumps. This procedure should not be done before completing the electrical and tubing hookup installation described in the DEMAMaster instruction sheet.

*Note: It should be noted that the potentiometers on the both 80-69-5 and 80-69-6 control boards will move towards maximum settings when they are turned clockwise.*

Prior to calibration the system must be primed using the rinse prime button located on the front of the DEMAMaster. When this button is pressed the rinse pump will run at maximum speed. Remember that a signal needs to be supplied to the rinse board to make the prime work. This may require operating the rinse cycle of the dish/cleaning machine. The system is primed when the chemical has filled the pump discharge tubing up to the injection point on the dish/cleaning machine.

## **Rinse Aid Calibration (80-69-5 and 80-69-6)**

1. In order to have a good idea of how to start the setup, it will be helpful to know how long the rinse cycle is on the dish machine.
2. Next, it is necessary to determine if the application requires the use of the rinse delay function. When this is determined, the amount of actual dispensing time can be determined by subtracting the amount of delay time from the rinse cycle time of the machine. This should help in deciding the rate of dispensing required during the rinse pump operation.

# DEMA 80-69 Rinse and Sanitizer Control DEMAMaster™

3. The standard DEMAMaster rinse pump can dispense  $\frac{3}{4}$  oz/min (47mL/min) of liquid (water) at 15 RPM. Select a desired rinse pump speed by adjusting the rinse speed control potentiometer. It should be noted that the rinse pump will operate at approximately 15 RPM, when the potentiometer is set in the maximum position.
4. Place the rinse pick up tube into a measuring cup or graduated measuring cylinder and fill with the rinse chemical product to a volume greater than the expected usage per rinse cycle.
5. Run the rinse cycle on the dish/cleaning machine.
6. Check level of rinse product in the graduated measuring cylinder. It should indicate that some quantity of rinse product was used. If the usage was too low, then increase the speed of the rinse pump. If the usage was too high, then decrease the speed of the pump. If the rinse delay is used, it may also be necessary to adjust the delay time to calibrate the rinse pump.
7. It may be necessary to repeat these steps several times to correctly calibrate the rinse pump operation.

## Sanitizer Calibration (DEMA P/N 80-69-6 Only)

1. It will be necessary to know how long the rinse cycle on the dish machine is in order to successfully set up the rinse board.
2. The standard DEMAMaster sanitizer pump can dispense  $\frac{3}{4}$  oz/min (47mL/min) of liquid (water) at 15 RPM. Select a desired sanitizer pump speed by adjusting the sanitizer speed control potentiometer. It should be noted that the rinse pump will run at approximately 15 RPM, when the potentiometer is set in the maximum position.
3. Place the sanitizer pickup tube into a measuring cup or graduated measuring cylinder and fill with the sanitizer chemical product to a volume greater than the expected usage per rinse cycle.
4. Run the rinse cycle on the dish/cleaning machine.
5. Check level of sanitizer product in the graduated measuring cylinder. It should indicate that some quantity of sanitizer product was used. If the usage was too low, then increase the speed of the rinse pump. If the usage was too high, then decrease the speed of the pump.
6. It may be necessary to repeat these steps several times to correctly calibrate the sanitizer pump operation.

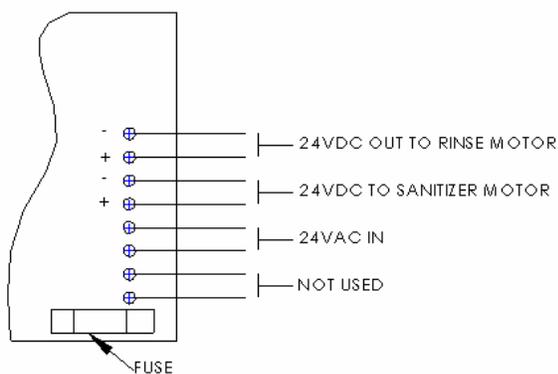


Figure 3 80-69 Wiring Diagram

### Return Policy

No merchandise may be returned for credit without DEMA Engineering Company's written permission. Return Merchandise Authorization (RMA) number required in advance of return.

### Warranty

DEMA products are warranted against defective material and workmanship under normal use and service for one year from the date of manufacture. This limited warranty does not apply to products that have a normal life shorter than one year or failure and damage caused by chemicals, corrosion, improper voltage supply, physical abuse or misapplication. Rubber and synthetic parts such as "O"-rings, diaphragms, squeeze tubing and gaskets are considered expendable and are not covered under warranty. This warranty is extended only to the original buyer of DEMA products. If products are altered or repaired without prior approval of DEMA, this warranty will be void.

Defective units or parts should be returned to the factory with transportation prepaid. If inspection shows them to be defective, they will be repaired or replaced without charge. F.O.B. factory DEMA assumes no liability for damages. Return merchandise authorization number to return units for repair or replacement must be granted in advance of return.