The Master-Trol Controller Board Chip Upgrade allows you to upgrade an existing Master-Trol Controller to make it compatible with the latest version of Master-Trol software. The upgrade also gives you access to the latest features of the Master-Trol Water Management System. The upgrade chip can only be used with Controllers that have a manufacture date between 2002 and 2010. The upgrade chip can be preprogrammed by the manufacturer for non-communicating installations. When upgrading to the latest version of Master-Trol software, all Controllers must have a Controller Board Chip upgrade to be compatible with the latest software.

New features include:

- **24-Hour Limits** – For Use With Master-Trol Computers Only - This feature allows a facility to assign each valve a usage limit for a 24-hour period. These limits can be measured by time or activations. **Example**: A toilet valve can be given a limit of six (6) activations. Once the six (6) activations are used within a 24-hour period, the valve will automatically disable until a specified time of day is reached. Once the specified time of day is reached, the limits are reset and the user gets another six (6) activations for the next 24 hours.

- **Windows of Operation** – For Use With Master-Trol Computers Only – Along with the 24-hour limits, windows of activations can be assigned so that the valves can only be activated during specified times of the day. Up to three (3) windows can be configured for each valve per 24-hour period.

- **Queued Activation** – Valves can be set for queued activation to prevent simultaneous activation per Controller. Any valves activated at the same time will be queued and activated one at a time, waiting a specified time period between each activation.

- **Cycle Valve Function** – For Use With Master-Trol Computers Only – This function allows the valve to be activated from the computer using the valves’ programmed parameters.

- **Auto Cycle** – For Use With Master-Trol Computers Only – This function will automatically cycle a valve once every 24 hours at a specified time. This is used to help prevent sanitary p-traps from drying out and also to keep the rubber components in valves lubricated and free from sticking when sitting unused for extended periods of time. This is especially useful in facilities that are waiting to be occupied.

- **Variable Lockout** – This function allows you to set the number of activations a valve will perform within a specified window of time before a specified lockout occurs. **Example**: If a valve is activated three (3) times within a 5-minute window, then the valve will be disabled for 30 minutes.

Please visit [www.acorneng.com](http://www.acorneng.com) for most current specifications.
### CUSTOMER SPECIFIED PROGRAMMING & OPTIONS REQUIREMENTS (Factory Programmed):

<table>
<thead>
<tr>
<th>LINK #</th>
<th>CONTROLLER ADDRESS #</th>
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<tbody>
<tr>
<td>(From 1 to 8)</td>
<td>(From 1 to 32)</td>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<th>9</th>
<th>10</th>
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<th>12</th>
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<tbody>
<tr>
<td>Valve On Time</td>
<td>MM/SS</td>
<td>MM/SS</td>
<td>MM/SS</td>
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<tr>
<td>Default 10 Sec. (See Note Below)</td>
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<tr>
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</table>

### Valve Cycle

- CI Cycle Interrupt
- SC Single Cycle
- AM Accumulator Mode

### Variable Lock-Out

- Variable Lock-Out

### Number of Activations

- Specify Count

### Time Window:

- MM/SS

### Lock-Out Time:

- MM/SS

### On Time:

- MM/SS

### Station Queue

- Station Queue

- Station Queue Delay:

- Paired Operation:

**Important:** Installation instructions and current rough-in are furnished with each fixture. Do not rough in without certified dimensions. Dimensions are subject to manufacturer’s tolerance of plus or minus 1/4" and change without notice. Acorn assumes no responsibility for use of void or superseded data. © Copyright 2004 Acorn Engineering Company

**Note:** Valve On Time for -EVS-FV Master-Trol Electronic Flush Valve selection is 3 seconds only.

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**WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov