

# SJE-Rhombus®

## Pump Switch Installation Instructions

SJE-Rhombus® wide angle pump switches are designed to provide automatic control of pumps in non-potable water and sewage applications. The SJE PumpMaster®, SJE PumpMaster® Plus and SJE PumpMaster® SPDT pump switches passed NSF Standard 61 protocol by an approved Water Quality Association laboratory for use in potable water applications.

### SJE PUMPMASTER®



**Mechanically activated pump switch for direct control of pumps in:**

- Sewage
- Non-potable Water
- Potable Water

U.S. Patent Nos. 5,087,801 & 5,142,108

tether length	<b>3.5 min.</b>	<b>6</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>	<b>24</b>
pumping range	<b>7</b>	<b>10</b>	<b>16</b>	<b>22</b>	<b>28</b>	<b>33</b>	<b>36</b>

### SJE PUMPMASTER® PLUS



**Mechanically activated pump switch for direct control of pumps in:**

- Sewage
- Non-potable Water
- Potable Water

U.S. Patent Nos. 5,087,801 & 5,142,108

tether length	<b>3.5 min.</b>	<b>6</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>	<b>24</b>
pumping range	<b>7</b>	<b>10</b>	<b>16</b>	<b>22</b>	<b>28</b>	<b>33</b>	<b>36</b>

### SJE PUMPMASTER® SPDT



**Mechanically activated pump switch for direct control of pumps in:**

- Sewage
- Non-potable Water
- Potable Water

U.S. Patent Nos. 5,087,801 & 5,142,108

tether length	<b>3.5 min.</b>	<b>6</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22</b>	<b>24</b>
pumping range	<b>7</b>	<b>10</b>	<b>16</b>	<b>22</b>	<b>28</b>	<b>33</b>	<b>36</b>

### JUNIOR SUPER SINGLE®



**Mercury activated pump switch for direct control of pumps in:**

- Sewage
- Non-potable Water
- Non-turbulent applications

U.S. Patent Nos. 4,429,854 & 4,572,934

tether length	<b>3.5 min.</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>12</b>	<b>15</b>	<b>17</b>
pumping range	<b>6.5</b>	<b>8.5</b>	<b>11</b>	<b>13</b>	<b>14</b>	<b>17</b>	<b>19</b>

### SUPER SINGLE®



**Mercury activated pump and control switch for:**

- Sewage
- Non-potable Water

U.S. Patent No. 4,302,641

tether length	<b>3.5 min.</b>	<b>5</b>	<b>7</b>	<b>9</b>	<b>13</b>	<b>15</b>
pumping range	<b>6.5</b>	<b>7.5</b>	<b>8.5</b>	<b>11</b>	<b>12.5</b>	<b>13.5</b>

### SJE AMPMASTER®



**Mechanically activated pump switch for direct control of pumps in:**

- Sewage
- Non-potable Water

U.S. Patent Nos. 5,087,801 & 5,142,108

tether length	<b>5 min.</b>	<b>10</b>	<b>14</b>	<b>18</b>	<b>22 max.</b>
pumping range	<b>9</b>	<b>13</b>	<b>17</b>	<b>21</b>	<b>24</b>

### PREVENTATIVE MAINTENANCE

- Periodically inspect the product. Check that the cable has not become worn or that the housing has not been damaged so as to impair the protection of the product. Replace the product immediately if any damage is found or suspected.
- Periodically check to see that the float is free to move and operate the switch.
- Use only SJE-Rhombus® replacement parts.
- The Junior Super Single® and Super Single® pump switches contain mercury and MUST be recycled or disposed of according to local, state, and federal codes.

### SJE-RHOMBUS® THREE-YEAR LIMITED WARRANTY

SJE-RHOMBUS® warrants to the original consumer that this product shall be free of manufacturing defects for three years after the date of consumer purchase. During that time period and subject to the conditions set forth below, SJE-RHOMBUS® will repair or replace, for the original consumer, any component which proves to be defective due to defective materials or workmanship of SJE-RHOMBUS®.

**THIS EXPRESS WARRANTY DOES NOT APPLY TO THE MOTOR START KIT COMPONENT. SJE-RHOMBUS® MAKES NO WARRANTIES OF ANY TYPE WITH RESPECT TO THE MOTOR START KIT.**

**ELECTRICAL WIRING AND SERVICING OF THIS PRODUCT MUST BE PERFORMED BY A LICENSED ELECTRICIAN.**

**THIS WARRANTY DOES NOT APPLY:** (A) to damage due to lightning or conditions beyond the control of SJE-RHOMBUS®; (B) to defects or malfunctions resulting from failure to properly install, operate or maintain the unit in accordance with printed instructions provided; (C) to failures resulting from abuse, misuse, accident, or negligence; (D) to units which are not installed in accordance with applicable local codes, ordinances, or accepted trade practices, and (E) to units repaired and/or modified without prior authorization from SJE-RHOMBUS®.

*Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.*

**TO OBTAIN WARRANTY SERVICE:** The consumer shall assume all responsibility and expense for removal, reinstallation, and freight. Any item to be repaired or replaced under this warranty must be returned to SJE-RHOMBUS®, or such place as designated by SJE-RHOMBUS®.

**ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS ARE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. SJE-RHOMBUS® SHALL NOT, IN ANY MANNER, BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES AS A RESULT OF A BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY.**

**⚠ WARNING****ELECTRICAL SHOCK HAZARD**

Disconnect power before installing or servicing this product. A qualified service person must install and service this product according to applicable electrical and plumbing codes.

**⚠ WARNING****EXPLOSION OR FIRE HAZARD**

Do not use this product with flammable liquids. Do not install in hazardous locations as defined by National Electrical Code, ANSI/NFPA 70.

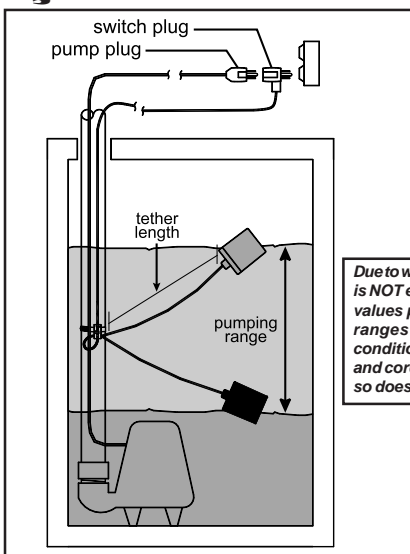
Failure to follow these precautions could result in serious injury or death. Replace product immediately if switch cable becomes damaged or severed. Keep these instructions with warranty after installation. This product must be installed in accordance with National Electric Code, ANSI/NFPA 70 so as to prevent moisture from entering or accumulating within boxes, conduit bodies, fittings, float housing, or cable.

*For detailed specifications on this product, or for the complete line of SJE-Rhombus® panel, alarm, and switch products, visit our web-site at [www.sjerrhombus.com](http://www.sjerrhombus.com).*

**MOUNTING THE SWITCH**

1. Determine the required cord tether length according to product specifications on the front page and as shown in Figure A.
2. Place the cord into the clamp as shown in Figure B.
3. Locate clamp at desired activation level and secure the clamp to the discharge pipe as shown in Figure B. **Note:** Do not install cord under hose clamp.
4. Tighten the hose clamp using screwdriver. Over tightening may result in damage to the plastic clamp. Make sure the float cable is not allowed to touch the excess hose clamp band during operation.
5. Follow direct wire or piggy-back instructions for further installation.

**Note:** All hose clamp components are made of 18-8 stainless steel material. See your SJE-Rhombus® supplier for replacements.

**Figure A**

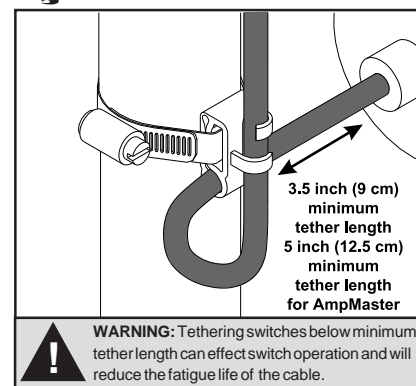
*Due to weight of cable, pumping range above horizontal is NOT equal to pumping range below horizontal. Use values published on front page as a guide. Pumping ranges are based on testing in non-turbulent conditions. Range may vary due to water temperature and cord shape. Note: As the tether length increases, so does the variance of the pumping range.*

**PIGGY-BACK PLUG INSTALL**

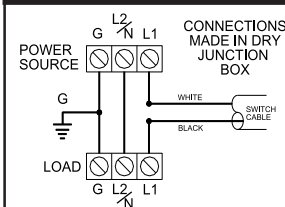
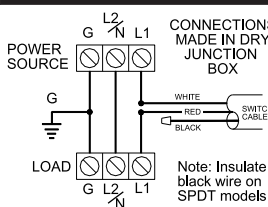
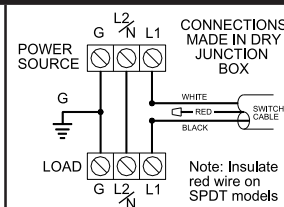
- Electrical outlet must not be located in pump chamber.
  - Electrical outlet voltage, piggy-back plug voltage, and pump voltage must match.
1. Follow steps 1 through 4 of "Mounting The Switch."
  2. Insert switch's piggy-back plug into outlet.
  3. Plug pump into piggy-back plug as shown in Figure A.
  4. Check installation. Allow system to cycle to insure proper operation.

**DIRECT WIRE INSTALL**

1. Follow steps 1 through 4 of "Mounting The Switch."
2. Wire switch as shown below.
3. Check installation. Allow system to cycle to insure proper operation.

**Figure B**

**⚠ WARNING:** Tethering switches below minimum tether length can effect switch operation and will reduce the fatigue life of the cable.

**Normally Open and Normally Closed****SJE PumpMaster® SPDT Only****Normally Closed****Normally Open****⚠ WARNING**

In 230 VAC installations, one side of the line going to the load is always **HOT**. This condition exists if the switch is on or off. Install double pole disconnect on all 230 VAC circuits.

On SPDT Models, insulate unused red or black wires with wire nut. Wire can become electrically hot.

Ensure cable connections are performed in a **dry** junction box or other watertight seal that seals both conductors and cable jacket. Failure to do so could result in electrical shock hazard and/or water traveling down cable and entering the switch. Failure to guard against this may affect switch performance.

# SJE-Rhombus®

22650 County Highway 6 ■ P.O. Box 1708 ■ Detroit Lakes, Minnesota 56502 USA  
1-888-DIAL-SJE (1-888-342-5753) ■ Phone: 218-847-1317 ■ Fax: 218-847-4617 ■ E-mail: [sje@sjerrhombus.com](mailto:sje@sjerrhombus.com)

Instl. Instr. PN 1011973J  
©SJE-Rhombus 04/08