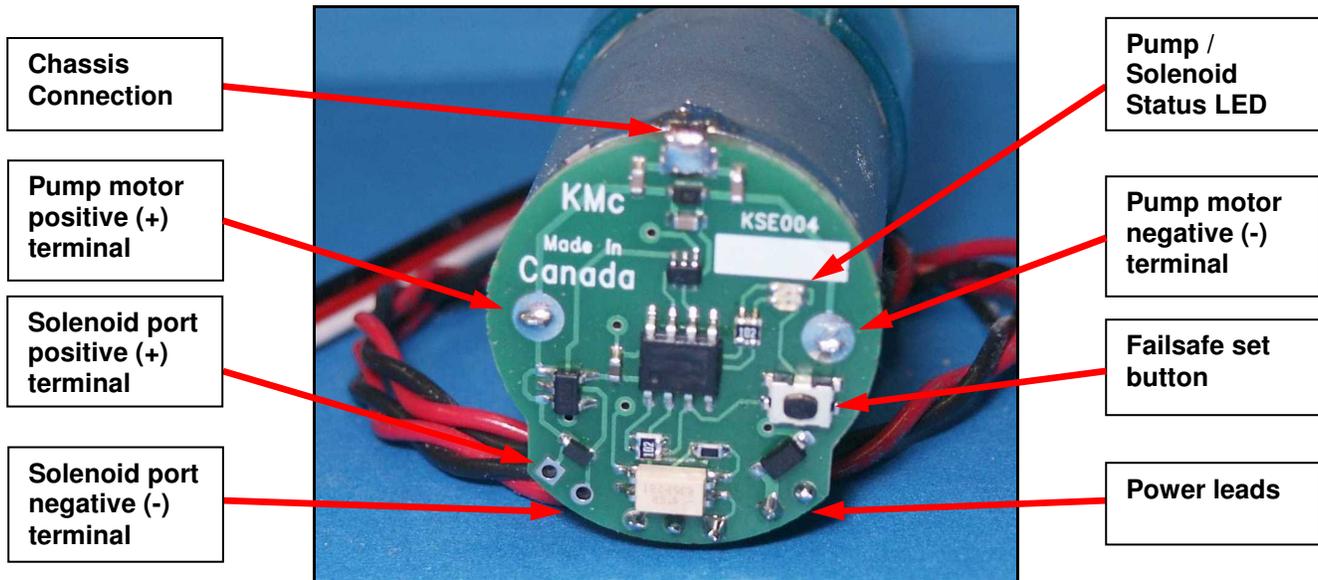


Pump and Solenoid Controller

General layout



Quick Setup Guide

1. Solder the Pump & Solenoid Controller (PSC) to a Caswell Air Pump (PN GSV2512N12V). The pump should be oriented so that the motor's positive terminal (marked with a red dot) is near to the PSC's **Solenoid terminals** (on the left side in the above photo) and the pump motor's negative terminal is near to the **Power leads**. See **Detailed PSC to Pump Installation Instructions** section for details on this operation.
2. Solder the PSC's **Power leads** to your power bus taking note of the correct polarity. (Red = positive, Black = negative)
3. Plug the PSC's **Receiver signal lead** into your receiver taking note of the correct polarity.
4. It is recommended to install a piece of wire or braid from the **Chassis Connection** pad to the can of the pump motor.
5. To support RCABS ballast systems, a solenoid can also be driven from the **Solenoid Port** with the positive lead on the square pad and the negative lead on the round pad.

Features

- Switches 6V to 12V pump and solenoid (up to 0.5A) while maintaining electrical isolation between "pump/solenoid" and "receiver" circuits. Note: Both pump and solenoid channels also have built-in spark-suppression filters.
- Status LED: A red LED will illuminate when the pump is being commanded ON. A green LED will illuminate when the solenoid is being commanded ON. (Note- The status LED is **not** powered by Receiver power so it will only illuminate when battery power is being provided through the **Power leads**.)
- User settable Failsafe on signal loss: In the event of signal loss the PSC will immediately remove power from both the pump and solenoid. If the signal does not return within another two seconds the PSC can automatically drive the pump, solenoid, or remove power from both, based on the user-programmable failsafe setting.

Radio Setup

- The PSC is designed to activate the pump when it sees a signal between 20% and 100% of throw in one direction and a solenoid (optional) when it sees a signal between -20% and -100% of throw in other direction. The PSC can be used "standalone" on its own channel or connected through a Y-connector with a servo-operated valve.

Failsafe Setup

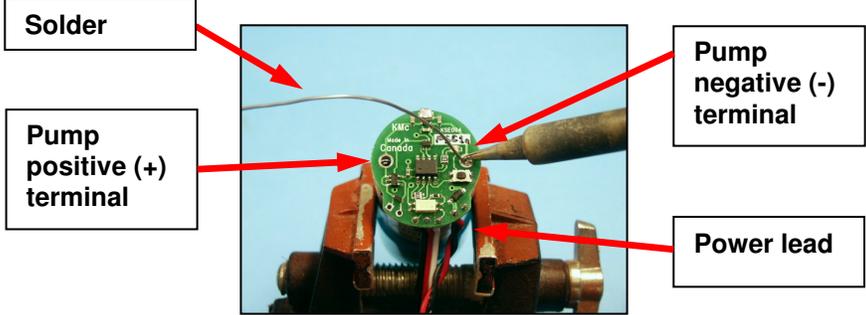
- The PSC is can activate either the pump, solenoid, or neither in the event of signal loss. To set the failsafe setting, command the desired function (pump, solenoid, or neither) from your radio and push and hold the Failsafe Set button for two seconds. The LED will briefly turn off confirming that the current command has been saved. Test the failsafe setting by turning off your transmitter while leaving the battery/receiver power applied to your system.

Detailed PSC to Pump Installation Instructions

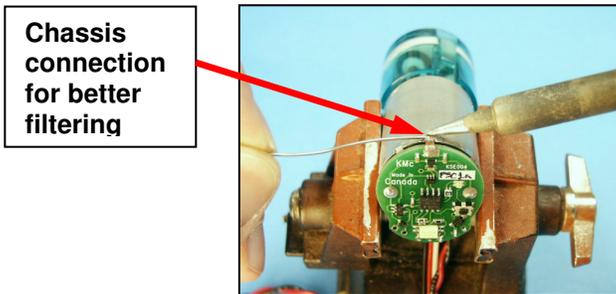
1.) To install your Pump & Solenoid Controller you'll need a good 25W soldering iron, some solder, a clamp to support your pump while you work, some masking tape, and a Caswell Air Pump (PN GSV2512N12V). If you're using this as part of an RCABS system, you'll also need a 6V – 12V solenoid.



2.) The first step is to securely clamp the pump and identify its positive terminal. (The recommended Caswell Air Pump has its positive terminal identified with a red dot.) Place the PSC over the motor leads ensuring that the motor's positive lead is underneath the **Pump positive terminal**, as shown right. (Use masking tape to help secure the PSC in place if required.) Use the tip of the soldering iron to apply heat to the motor terminal and the pad of the PSC at the same time as shown. Solder the negative and positive motor terminals.



3.) The next step is not required for your PSC to operate, although it will provide the best possible noise filtering setup for your installation. In this step a connection is made between the pump motor can and the **Chassis connection** pad on the PSC. *Note: to achieve a good solder joint on the motor can you will need to use a higher wattage soldering iron (35 – 50W).* First bend a short piece of wire or braid into an "L" shape and place against the motor can and chassis pad on the PSC, temporarily securing it to the motor can with another piece of masking tape. Solder the wire to the PSC chassis pad, then remove the tape. Next, using plenty of flux, solder the wire to the motor can end adjacent to the pump motor end cap as shown. Clean any residual flux away with alcohol.



4.) The last step is only required if your PSC is being used for an RCABS system. Solder a solenoid to the **Solenoid control port** as shown. If your solenoid is polarity sensitive, connect the positive lead to the square pad and the negative lead to the round pad, as shown.

