Computer Startup / Shutdown Controller

Installation / User Guide

1 ABOUT THE CSSC

The Computer Startup / Shutdown Controller (CSSC) was designed to help control custom computers in Arcade Machines, Pinball Machines, and automotive applications. Today, there are a number of DIY projects where computers are used with no easy way to control them safely powering up and down. This is where the CSSC comes in. The CSSC will monitor an external (machine) DC power source and power up or shut down a computer based on the state of this external supply. It does

Figure 1 – CSSC REV D

this by monitoring both the machine power supply and the computer state, via USB. If the machine power is turned on, the CSSC will trigger the power switch of the computer and wait for it to become active via USB. Once the power for the machine is turned off, the CSSC will trigger the power switch once again to shut down the computer. There are also a significant amount of logic in the CSSC to ensure the computer is in the proper state.
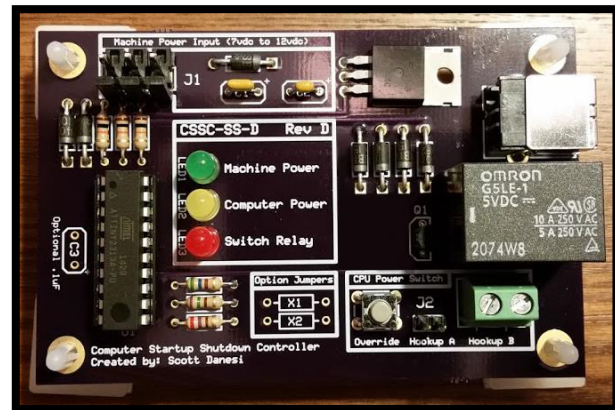
2 INSTALLATION AND HOOKUPS

The CSSC requires 3 connections to function properly; Machine Power Input, USB Connection, and the Computer Power Switch Hookup.

2.1 MACHINE POWER INPUT

The Machine Power Input is located at the top left side of the CSSC. This connection has a 3 pin .156 inch header (J1). The machine input power can be hooked up to any DC voltage between 7vdc and 12vdc. The pinouts are represented in Figure 3 to the right. Pin 1 is the KEY, which is not connected to anything, Pin 2 is the Ground of your machine power source, and Pin 3 is the Positive input of your machine power source. We have tested the CSSC on unregulated 12v circuits that bounce to 14vdc with no issues at all, but it is recommended not to exceed 14vdc as you may cause damage to the CSSC's internal voltage regulator. This power supply voltage should switch on and off with the power switch of the Arcade/Pinball machine or be hooked up to an ignition source in automotive applications.

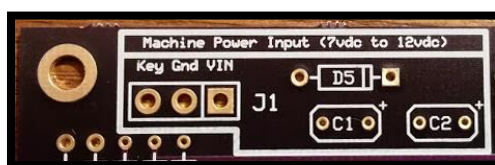*Figure 3 - Populated Machine Power Input Section*

Figure 2 - Un-populated Machine Power Input Section

2.2 USB CONNECTION

The USB connector is located on the right top side of the CSSC and uses a standard USB A to USB B cable. This connection is only used for monitoring the USB power from the computer and requires no software to be installed on the computer.

2.3 COMPUTER POWER SWITCH HOOKUP

This connection is located on the bottom right of the CSSC. There is a .100 2 pin header (J2) and a screw terminal. This screw terminal or J2 connection must be connected to the power button switch of the computer. There is usually a jumper on the motherboard you can use for this, or you may have to connect wires to the existing power switch on the computer. The CSSC will momentarily "click" the switch using this connection.

3 CSSC MODES

3.1 QUICK RESTART MODE

This mode will engage when you shut off the machine power and turn it back on. The CSSC will wait for the computer to fully shutdown, then quickly start it back up.

Note: In order to use this mode, you should wait until you hear the click of the switch relay before powering back on the machine or the computer will not restart. This is caused by some power supplies holding residual power. This is most common in power supplies that use transformers. This delay should be no longer than a few seconds.

3.2 COMPUTER STANDALONE MODE

This mode comes into play when you just want to power up the computer without powering on the machine. To use this mode simply power up the computer using its power switch or using the Power Switch Override button on the CSSC. The Computer Status LED will pulse in sets of 2, letting you know that the CSSC is in computer standalone mode.

4 TROUBLESHOOTING AND FAQS

4.1 MY USB IS ALWAYS POWERED UP, WHAT NOW?

This is a very common issue with some small PCs and will cause the CSSC to think it is not powering up and down the computer properly. There is usually a setting that you have to enable in the Bios of the PC called "EuP". Enabling this will disable the constant power output to USB devices and should restore the functionality of the CSSC.

4.2 IS THERE SOFTWARE THAT NEEDS TO RUN ON THE PC TO COMMUNICATE WITH THE CSSC?

There is no software that gets installed on the computer. It only reads the power from the USB to detect whether the computer is on or not. This will work on all computers with USB and a power button switch regardless of Operating System.

4.3 DOES THE CSSC WORK WITH ANY MACHINE POWER SUPPLY?

You can use any machine power supply as long as it does not exceed (too much) 12vdc. It also works with unregulated 12vdc sources as the CSSC contains a voltage regulator.

5 FURTHER SUPPORT

Please contact Scott at http://www.scottdanesi.com if you have any other issues or questions.

Thank you very much for your purchase of Scott's CSSC.