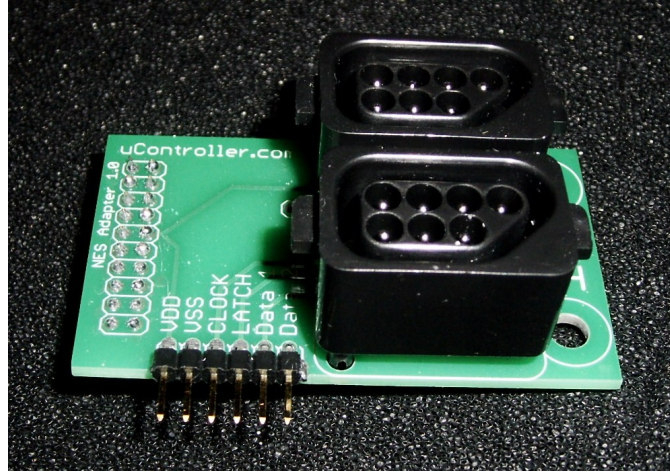
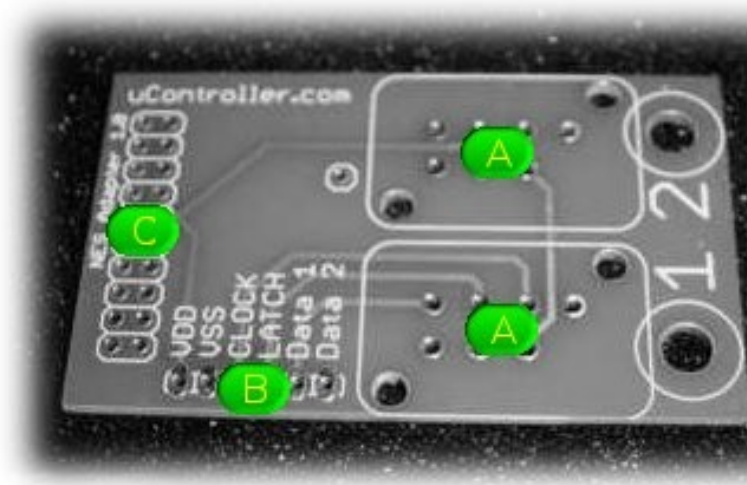


SpinStudio NES Controller Adapter



This adapter allows you to connect two NES style controllers to your SpinStudio development system, a modified Propeller ProtoBoard, or a Propeller with a Solderless breadboard. This will allow you to play many of the games available on the Parallax forums. Another possible application would be to control a robotic project.

Assembly



Start by setting the 6 pin right angle header in place (marked with a green B) from the top (the side of the PCB that has white silkscreen printing) Turn PCB and solder in place.

Next insert the 2 NES controller connectors into the postions marked with green “A”s in the illustration above. Turn the board over and solder the pins securely in place. These are very thick pins, so extra time may be required for your soldering iron to bring the pin to sufficient temperature for the solder to properly bond.

Now install the 20 pin female SpinStudio connector, green "C". **Note - This component is inserted from the bottom of the board, and soldered on the top, opposite of the other components!** You may want to solder 1 pin first, check to be sure the connector is positioned snugly against the bottom of the circuit board before soldering the remaining 19 pins. Also you may want to turn the circuit board while soldering, to "attack" the pins in each row from a different angle. How you solder is up to you, but just be careful not to create any solder bridges, or dry solder joints, as they may be difficult to track down later.

Usage

Your newly constructed NES adapter can be used in several ways. To be compatible with many currently available games, the adapter should reside on the following IO pins of the Propeller.

NES adapter	Propeller Pin
Clock	P3
Latch	P4
Data 1	P5
Data 2	P6

** other propeller pins can be utilized if the proper changes to software are made

VDD should be connected to 3.3 V – this is sufficient to power the onboard components contained within the typical NES controller and no voltage translation will be necessary between the adapter and the Propeller.

VSS shall be a common ground between the Propeller and the NES adapter.

The above connections can be made by 3 different methods.

- Plug the adapter into Socket A of a SpinStudio Mainboard
- Plug the adapter into a solderless breadboard via the 6 pin right angle header and use jumper wires to connect to your Propeller setup
- Add a socket A to your ProtoBoard to accept SpinStudio modules using the instructions found in the Propeller Cookbook, a pertinent excerpt of which is here - <http://ucontroller.com/cookbookexcerpt.pdf>