

SpinStudio SD Card Adapter

The SpinStudio SD card adapter combines a SD card socket with the requisite pull up resistors. Only the SD card connections that are important for SPI interfacing are included in the connector. This provides an easy connection to many existing Propeller development setups, including the Protoboard, Propeller education kit and the Demo Board.

The 6 pin right angle header is connected to the following pads on the SD Card.

- DO (pad 7) is connected to P0 on the Propeller (Also pulled to 3.3 VDC via 10k resistor)
- CLK (pad 5) is connected to P1 on the Propeller (Also pulled to 3.3 VDC via 10k resistor)
- DI (pad 2) is connected to P2 on the Propeller (Also pulled to 3.3 VDC via 10k resistor)
- CS (pad 1) is connected to P3 on the Propeller (Also pulled to 3.3 VDC via 10k resistor)
- IRQ (pad 8) is pulled to 3.3 VDC via 10k resistor, no connection to Propeller
- GND (pads 3 & 6) are connected to VSS
- PWR (pad 4) is connected to VDD

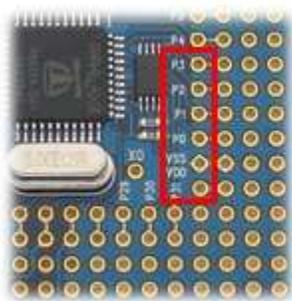
The 20 pin female header provides the same connections when plugged into Socket A on the SpinStudio mainboard. Socket A is the preferred location for the SD Card Adapter to provide compatibility with existing code that utilizes P0-P3 as the default SD Card interface pins.

*** Note : The first batch of SD Card Adapters will be assembled and tested to insure quality. Subsequent batches will be available in kit form. Only the surface mount SD Card socket will come pre-soldered. All of the through-hole components will have to be hand soldered before use.

Using the SD Card Adapter with other Propeller Development Systems

Propeller Proto Board:

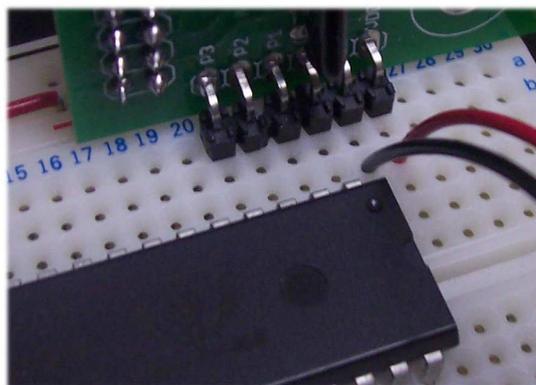
When using the SD card adapter with a Propeller Proto Board, it is not necessary to use the 20 pin header, simply use the 6 pin right angle header. There are pins for P3 through P0, VSS and VDD. These pins correspond with the holes indicated in the following diagram.



The adapter can be soldered directly to the Protoboard, or a 6 pin single row female header can be soldered to the board, allowing the SD card adapter to be plugged in only when needed.

Propeller Education Kit or other Solderless Breadboard mounted Propellers

If using the SD card adapter with a solderless breadboard, simply insert the 6 pin header into the rows corresponding with P3-P0, the VSS and VDD pins will be in the next 2 rows past the end of the Propeller IC. The row closest to the Propeller IC, next to P0, should be connected to VSS (ground), the last pin should be connected to VDD(3.3 volts), see the following photo for clarification. If using the default setup as shown in the documentation for your PE Kit, there may be components present in the rows necessary for the VSS and VDD connections. In this situation, it will be necessary to plug the SD Card adapter into a unused part of the breadboard and use jumper wires for all connections.

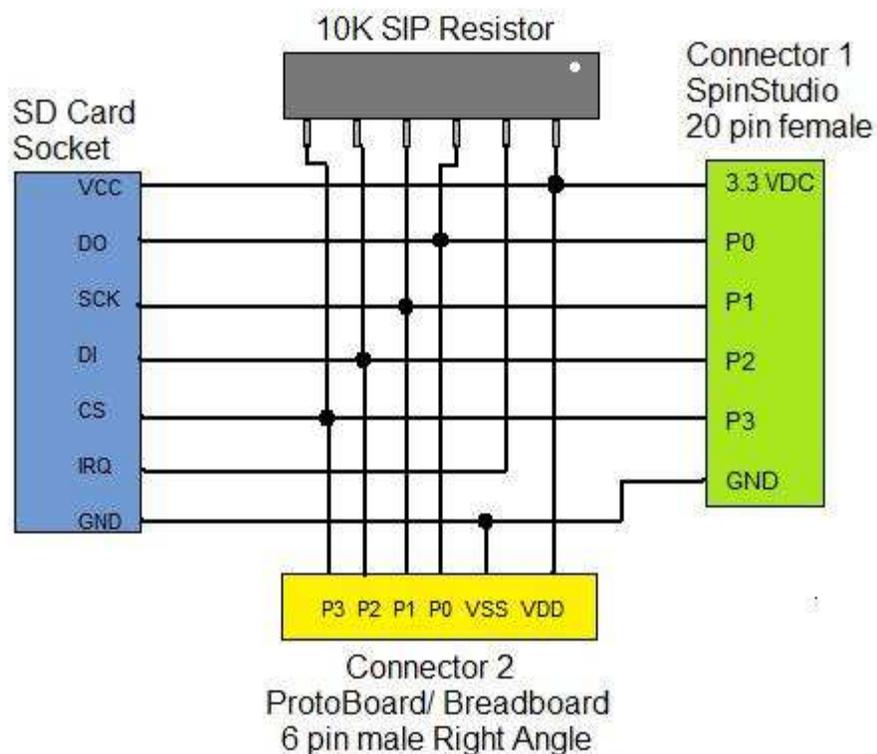


The black wire in this example is connected to ground. The red wire is connected to 3.3 volts.

Propeller Demo Board

In this application, the SD Card Adapter is connected in the same manner as the solderless breadboard example. Except that jumper wires must be used for all connections. Plug the Adapter into the breadboard area, then wire each of the pins to the appropriate spot in the female header adjacent to the breadboard.

Schematic



*** note - pins with no connection are not show in the above diagram for clarity. Both Connector 1 and the SD card socket have several pins with no connection.**

*** The 6 pin SIP resistor is the common bus type. Pin 1 is indicated by a white circle in this diagram.**