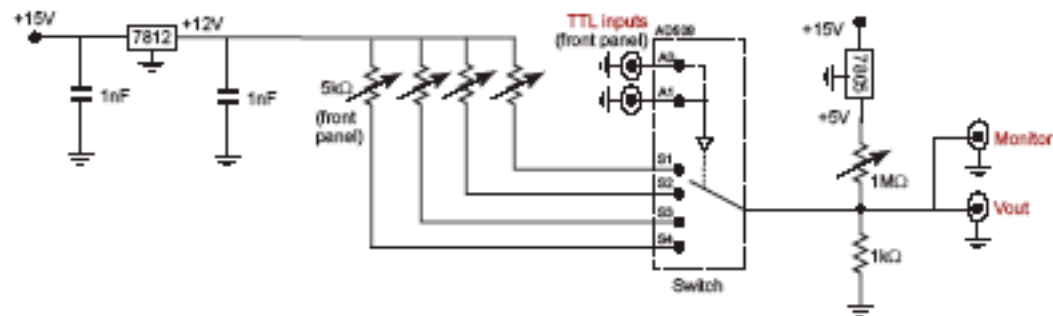


The front panel switch selects input from potentiometer (manual control) or from TTL input (V_{in}). V_{in} is the function generator output (range -5 to +5V), so is summed with 5V to shift range (0 to 10V). An electronic switch, computer controlled by a TTL line, switches the output on and off. The final stage of the circuit adds a small voltage (0.5mV) such that V_{out} is always slightly positive. (V_{out} is the gate input to the FET circuit (chip wire/bias field coils current control circuit), which is maintained in a state with active feedback by keeping the gate voltage just above zero.)



This circuit supplies an input voltage to the FET circuit which controls the atom chip end wires/cancelling bias coils. Two TTL lines select between 4 preset voltage levels. A small voltage (0.5mV) is added to the output, as above, such that V_{out} is always slightly positive.

Figure E.1 Switching circuits for control voltage to FET circuits.