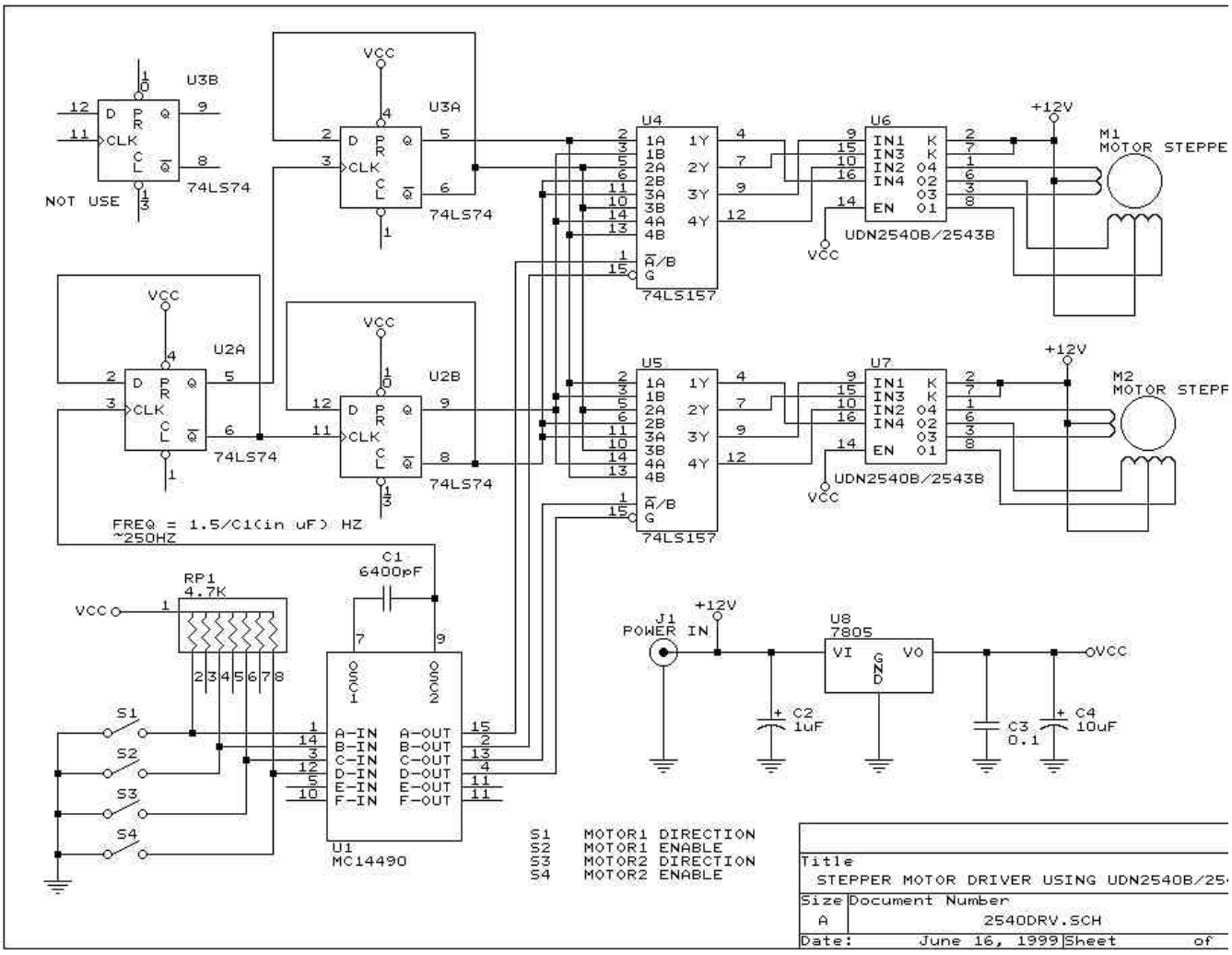

The UDN2540B is a quad darlington power driver, manufactured by Allegro. Each output can sink up to 1.8A continuous. The typical applications include print heads, relays, solenoids, and stepping motors. It is a replacement for L6221A.

In this design we use two UDN2540B to drive two stepping motors at the same speed. Each motor can be independently controlled. The S1, S2 switches control the ON/OFF and the moving direction of Motor1. The S3, S4 control the Motor2, respectively.

The U1 MC14490 is a hex contact bounce eliminator, it uses to de-bounce the switches and the clock for operation of the chip can also be used to driver the motor phase generator circuit.

The U2 and U3 (74LS74) generate the necessary clock pulse to drive the motors, the U4 and U5 (74LS157) select the phase direction.