

This drawing shows the back side of the DDAS board with the black plastic cover removed (power and saver switches to the bottom).

Figure 2, DDAS Board, Reverse Side

Turn the processor on and disconnect the power to the motor.

On the back of the motor is an 8 tooth sprocket with a proximity sensor (TPG) mounted above it. The distance between the tip of any tooth and the TPG switch should be as close as you can get without touching.

As you turn the sprocket on the back of the motor by hand, LED CR15 (see drawing) should light each time a sprocket tip is directly under the TPG. These are the timing pulses that regulate the processor functions. When the motor is running CR15 should be flashing at 8000 times per minute and will appear to be on constantly.

If the LED is *a*ways on or off when the motor is stopped, the TPG sensor is probably bad p/n 354-19-005.

CR17 (PLL) will light when power is sent to the motor. Normally it will be flashing once or twice each second to adjust the speed of the motor. If it is constantly on then the pulses are not being read by the TPG and the motor speed will be as fast as it can go.

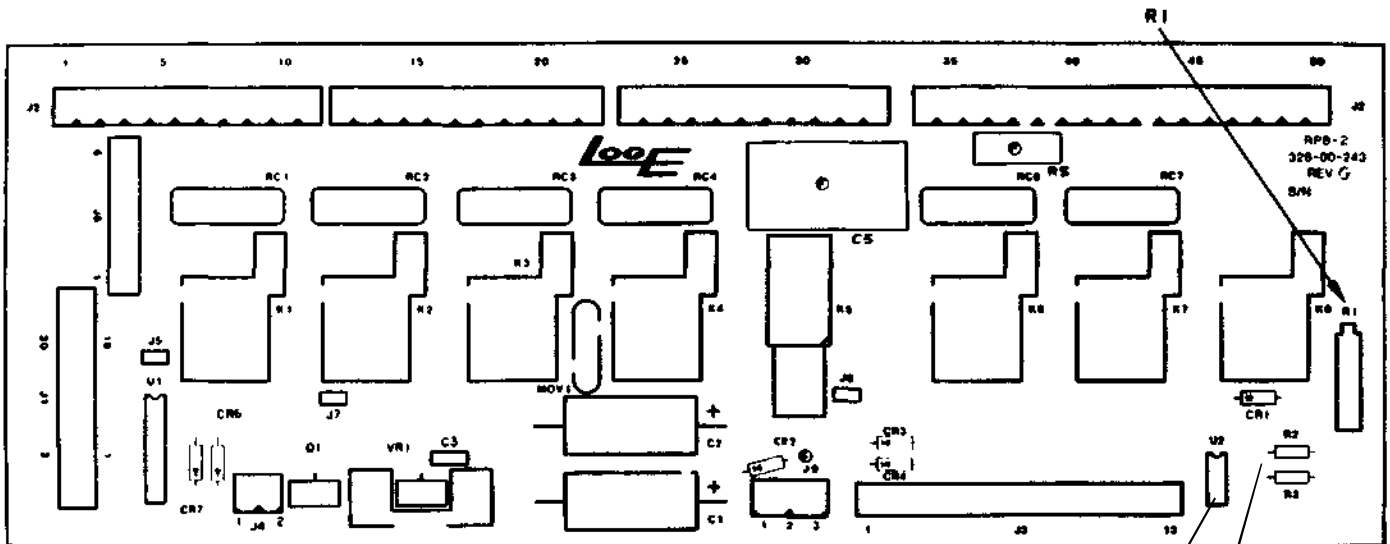
A common cause of speed control problems is the DDAS board becoming contaminated with developer (from fumes that come through the drive shaft hole) which is a very good conductor of electricity. **Try washing the board** (Yes, with soap and water! The chemistry is water soluble.) After drying with compressed air and heat (a hair dryer), try the board again.

U5 is the PLL chip. Sometimes reseating this chip can help.

Go on to page 2 to test the rest of the speed circuit.

If nothing else works then the board will need to be replaced. p/n 326-00-244-11.

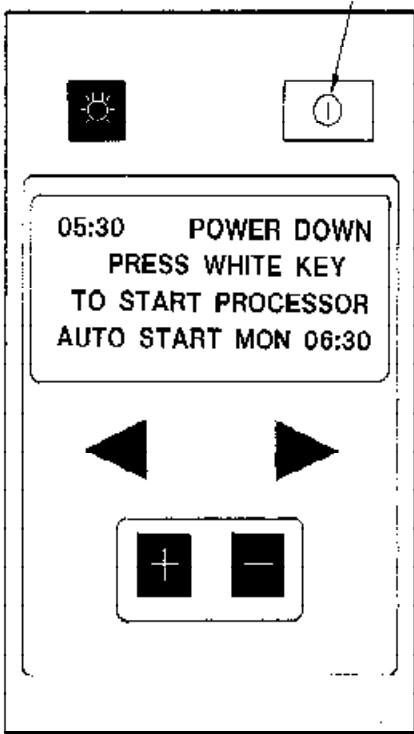
3. R1 now becomes the master speed control that you can set for a constant speed.



1. remove u2
2. put a jumper across the left side of r2 and r3

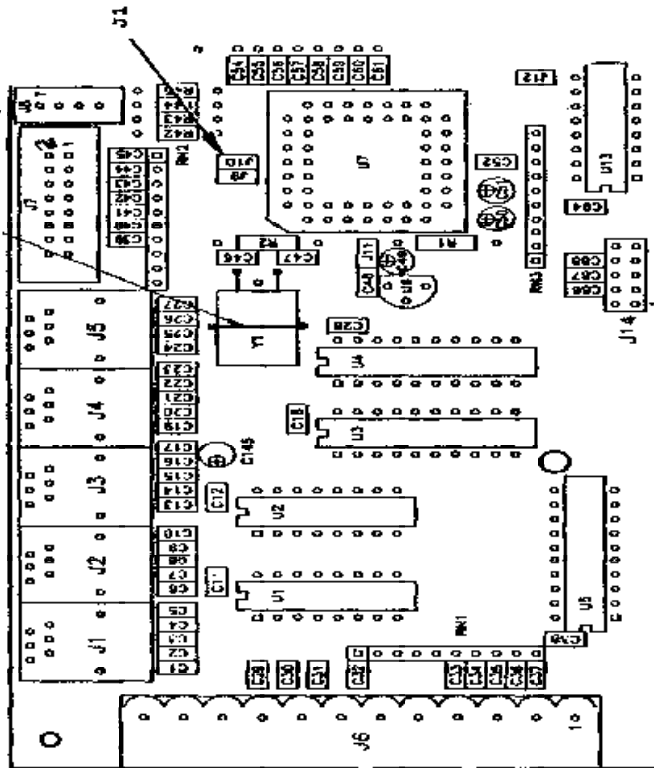
Figure 2, Relay Power Board

This test set up will bypass the PLL control on the DDAS board. This confirms that the motor, motor control board and this part of the RPB are OK and that the problem is with the feedback circuit (U5) on a DDAS board or (U14) if you have an MPC. You can get some work done by setting the speed to the desired developer time but you will not have automatic replenishment. (Most likely the film feed light is on and will not shut off and the replenishment and dryer and water run constantly. These are all controlled by the timing pulses.)



If your operator's control panel looks like this then you don't have a DDAS. Your PLL chip is U14 on the MPC board in the electronic chassis (under the aluminum cover). You won't have any LEDs to watch but the trick of bypassing the PLL circuit will still work (see page 1)

To test for TPG pulses you will have to have someone turn the sprocket on the back of the motor by hand while you measure across pins 1 to 2 (or 2 to 3) on J8. Each time the tip of the sprocket is under the TPG sensor, you should measure \approx 5vdc and 0vdc when the sprocket tips are not under the TPG sensor.



This is the bottom left corner of the MPC board. J1-5 are the telephone jacks. The plug connected to J8 will have 3 wires (#1 red, #2 brown and #3 black)