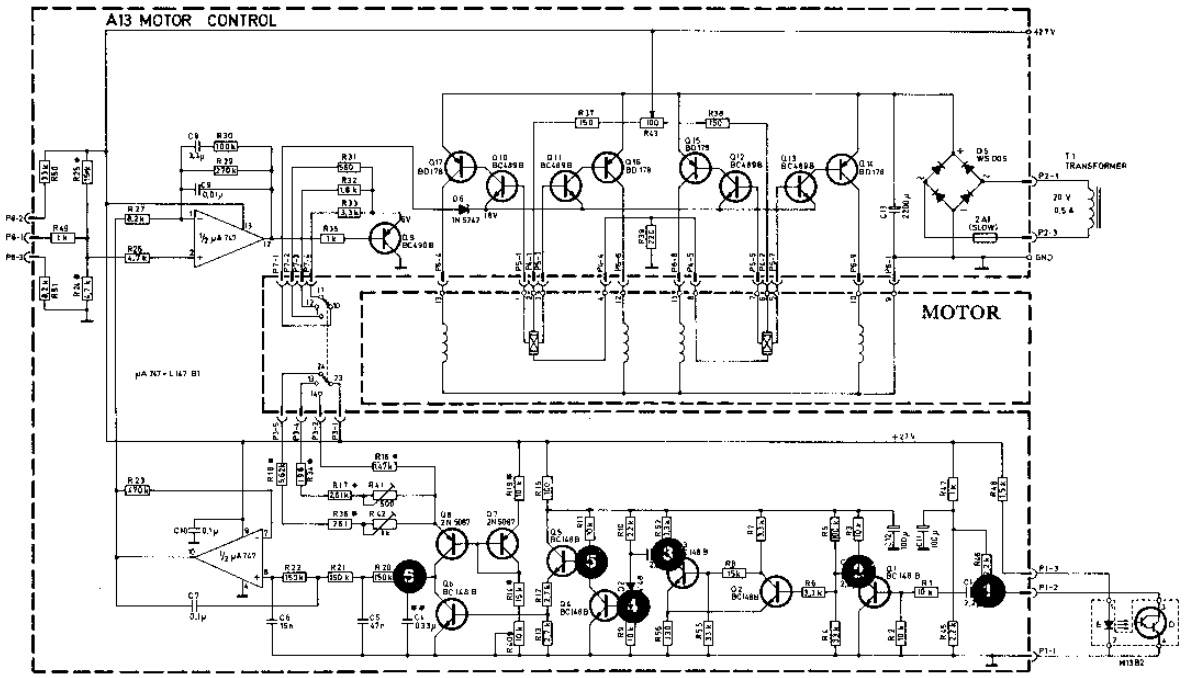

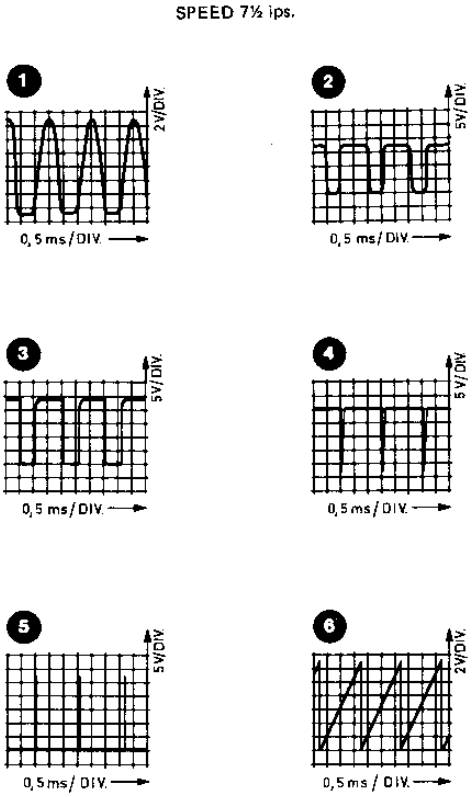

Fig. 7.6 Motor control with graphs

Modifications on page 31

This part of the I.C. circuit is a comparator that compares the two input voltages and amplifies the difference 30 times. The difference voltage is applied to the base of Q9 which controls the current supplied to the motor.

The resistors connected to the emitter of Q9 have the task of ensuring that the same degree of stability is maintained for all speeds.

The charging and discharging of C4 controls the speed of the motor. When the motor speed drops, C4 is charged to a higher value before it is discharged and the peak value of the sawtooth pulses increases (graph 6). This in turn increases the average value of the output voltage of the low pass filter at pin 10. The input, pin 1, to the Comparator receives a higher voltage and the output, pin 12, delivers a low voltage to the emitter follower Q9. Q9 delivers more current to the motor circuit which brings the motor speed back to normal.

ADJUSTING THE SPEED

Start adjusting the speed in 15 ips.

R40 can be used to adjust the 15 ips speed. It provides a stable voltage to the base of Q8 and current to C4.

R41 can be used to adjust the 7½ ips speed and R42 can be used to adjust the 3¾ ips speed.