

4.2.6 Capstan Motor Servo Adjustment

This procedure is not necessary unless the Capstan Motor is replaced.

1. Remove the Rear Cover by removing the eight phillips head screws and lifting the Cover off the machine. Loosen the two captive screws that hold the Control PCB Assembly and allow it to fold down.

NOTE: Loosen and tighten the two captive screws carefully, in tandem, to prevent the clips which captivate the screws from coming loose and being lost.

2. Thread the machine with tape and apply Power.
3. Set the tape speed to 15 ips, using the SPEED HI/LO button and, if necessary Sw 1-3 (Speed Pair) on the Control PCB. Select Fixed Speed mode.
4. Connect the oscilloscope to Check Point CP 3 and CP 2 (GND) on the Control PCB. Refer to Figure 4-15.
5. Press the PLAY button, and adjust the oscilloscope controls so that it shows one complete cycle of the 0 ~ 5 V square wave. While playing the tape, adjust VR 7 so that the duty cycle of the displayed waveform is approximately 50%.
6. While observing the oscilloscope, apply a load to the Capstan Motor by briefly pinching the Capstan Shaft between your thumb and forefinger. Adjust VR 4 on the Control PCB for minimum recovery time.
7. Set the tape speed to 7.5 ips, and repeat Step 5 using VR 6, and then repeat Step 6 using VR 3.
8. Set the tape speed to 3.75 ips, and repeat Step 5 using VR 5, and then repeat Step 6 using VR 2.
9. Connect the frequency counter to CP 1 and CP 2 (GND).
10. Set the Pitch Control to the center of its range. Make sure the Speed Mode selector is set to the Fix position.
11. While playing the tape, adjust VR 1 until the counter indicates 9600 Hz \pm 10 Hz.
12. Disconnect the frequency counter and close the Rear Cover of the machine. Clean the Capstan Shaft and Pinch Roller.

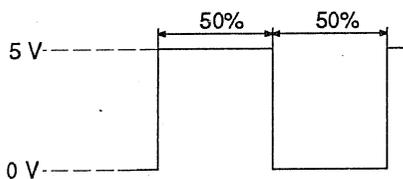


Figure 4-14
Capstan Waveform Display

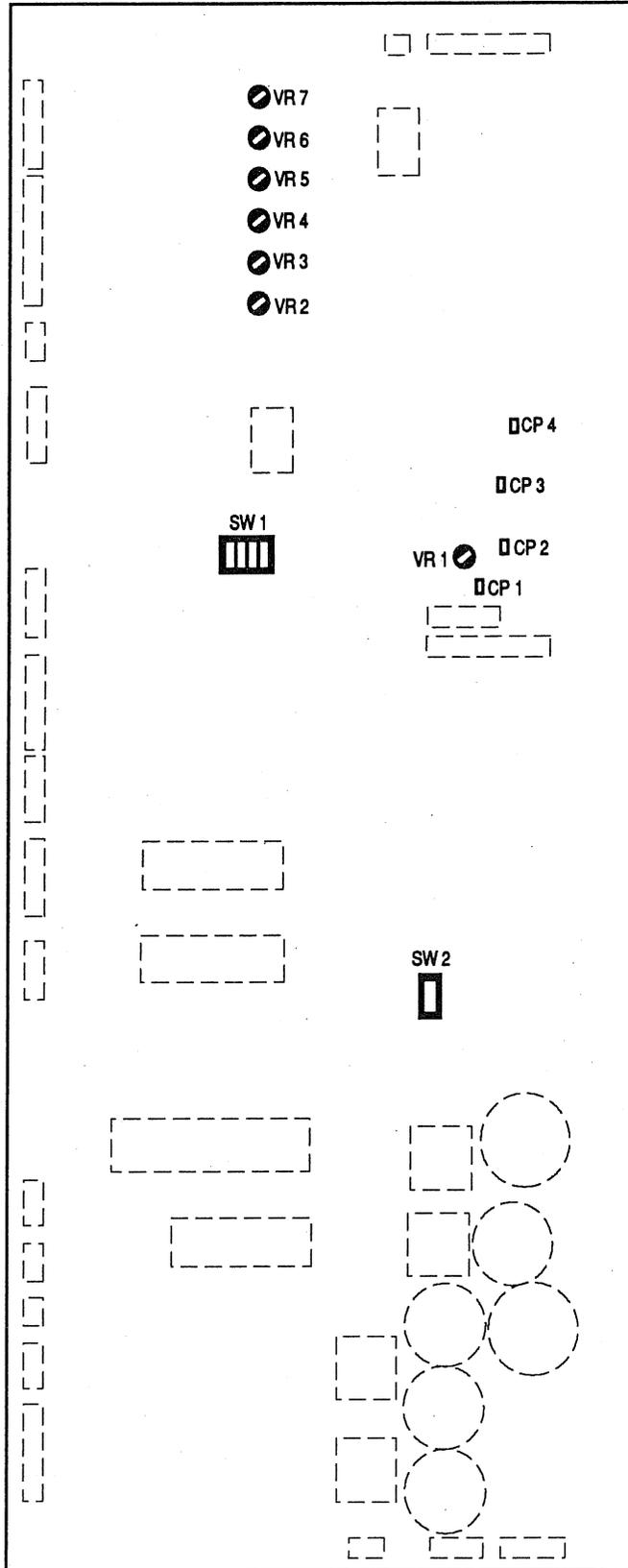


Figure 4-15
Location of Controls on the Control PCB Assembly