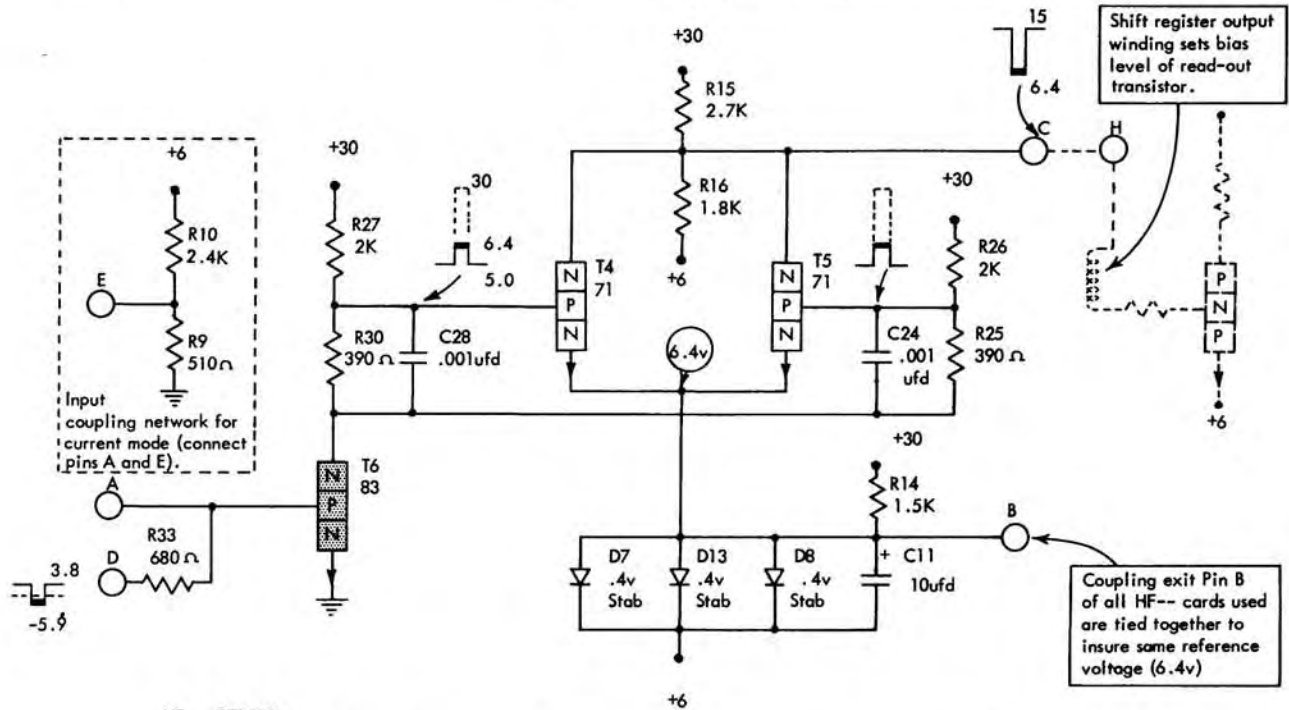


Logic Application



HF-- 371512

CM Input Level		CTDL Input Levels		Output Levels		Delays (usec)		Current Output On
Min.	Max.	Min.	Max.	Min.	Max.	Per	Circuit	
+0.4	6.2	1.4	+6.2	11.7	17.0	Turn On	Min.	0.3
-0.6	-6.2	-0.5	-6.2	6.1	7.2		Max.	0.7
						Turn Off	Min.	0.3
							Max.	0.76

Read-Out Control Driver

The read-out control driver is used to set the bias level on the read-out transistors of a shift register. When the driver is off, the transistor is reverse-biased to the extent that a core output cannot cause turn-on. When the driver is on, the transistor is only slightly reverse-biased and a core output pulse causes transistor turn-on. Each HF-- card contains one driver circuit and a coupling network. Back-panel wiring of the coupling network allows this driver to be driven by either a CTDL T line or a CM N line. A down input level causes a maximum current flow of 500ma in the output circuit and gives a constant 6.4v output. This drive is sufficient to control an 11 digit, 2-of-5 bit register with sign.

Circuit Description (CTDL T Line Input to Pin D)

With a +T input to pin D, the base of T6 becomes more positive than the emitter and T6 is turned on. Conduction through R30 and R27 to 30v, and through R25 and R26 to +30v sets the base voltage of T4 and T5 to near 5v. The emitters of T4 and T5 are held at +6.4v by R14 and the stabistors between +6v and +30v. There is a constant 0.4v drop across the stabistors. At this time T4 and T5 are reverse-biased and off. There is no current

in the output circuit and the output voltage at pin C is near +15v set by divider network of R16 and R15.

When the signal input is down, T6 is reverse-biased and off. The base voltages of T4 and T5 increase above the 6.4 emitter voltage and drives both transistors into heavy conduction. Each 071 transistor is capable of supplying 250ma to the output load.

The output voltage at pin C is at 6.4v and sets the bias level of the shift register read-out transistor so a core output can cause turn-on.

The 0.001μfd capacitors, and the 390 ohm, 2K resistor network equalize the loading of T4 and T5 to compensate for differences in characteristics of the 071 transistors.

Application

The read-out control driver is used for all types of shift registers. In normal operation, this driver should feed the register near its mid-point. If a current mode N signal is to drive into this circuit, extender pin A is back-panel wired to pin E and provides correct coupling. Pin B of all read-out control drivers used in a register operation are coupled together and insure the same reference voltage (6.4v) for all drivers.