



LE-- 371572 Sync Power Driver Circuit 1

Input Levels		Output Levels		Delays (usec)		
Min.	Max.	Min.	Max.	Turn On	Per	Circuit
-5.6	-3.0	2.7	3.5		Min.	.10
-6.4	-7.1	-0.5	-3.8	Max.	.22	
				Turn Off	Min.	.08
					Max.	.10

Sync Power Driver

The LE-- card consists of two circuits, a sync power driver circuit and a resistor coupling network to ground. The eight 95.3 ohm coupling resistors are used to terminate the unused outputs of the sync line driver as shown on the circuit diagram; they maintain the proper impedance matching into the driven cables.

A current mode P line from a 500kc oscillator is the normal input to the sync power driver circuit. The special mode output from this circuit is sufficient to drive three sync line drivers. This circuit functions as a power inverter circuit because a positive input swing results in a negative output swing.

Circuit Description

(Sync Power Driver connected to load as shown.) Assume a starting condition of T6 off and T5 on. Current

flows of 6ma through R28 and D30 keeps the emitter of T4 at -6v. A -P input at pin A reverse-biases T4 off. Conduction from the -6v supply, R31 and R32 to +6v, sets the base level of T5 and T6 to near +3.5v. Sufficient current flows from the load through R27 and T5 to +6v, and results in an output at pin C of approximately +3.2v. T6 is reverse-biased off at this time.

When a +P input is applied to pin A, T4 is forward-biased on and switches an additional 6ma of current through R32. The base level of the complementary emitter followers drops to near -2.2v. T5 becomes reverse-biased off and T6 is forward-biased on. Electron flow from the -6v supply, T6, and R26 into the load rapidly decreases the output at pin C to -2.5v. This down level exists until a -P input at pin A turns off T4.

Use of the complementary emitter followers results in sharp rise and fall characteristics of the output waveform controlling the sync line drivers.