



Card Code	Part No. 37----	Extender Inputs Circuit	CM Output Circuit	Collector Loading		Delay (usec)						Circuit Use	
				Ckt1	Ckt 2	Per	Basic Block	Parallel Collector	CM Base	Diode	100 uufd		
CJYC	1071	1,2	No	Yes	Yes	Turn On	Min.	.20	.00	.00	.00	.02	+O +OA -A -AO -TA
							Max.	.70	.007	.02	.02	.05	
						Turn Off	Min.	.06	.004	.005	.00	.03	
							Max.	.18	.01	.02	.005	.06	

CTDL Three-Way -AND Extensible Inputs

The cjyc card consists of two three-way PNP logic circuits. Each circuit on the card normally performs a -AND and INVERT logical function and translates a T input to an out-of-phase U output. Both circuits on the card have internal collector loads that provide CTDL outputs at pins N and H. Extender pins G and P permit additional inputs to control circuits 1 and 2.

Circuit Description

The -AND function is performed by the diode mix of D33, D31, and D32 returned to -12v, and the INVERT function is accomplished by the transistor circuit. Coincidence of -T levels is required at input pins D, E, and F to forward-bias T2 into saturation. With T2 on, the output at pin N nears 0v (minus the small voltage drop across the transistor). When any of the input signals increases to +6v, T2 is turned off. The low forward impedance of the conducting logic diode rapidly removes excessive

minority carriers from the base region and minimizes the effect of operating the transistor in saturation. This action assures a fast response at the trailing edge of the output waveform. At this time, the transistor acts as a high impedance and the output at pin H decreases to -12v (No Load).

Because of the large input signals used, input loading conditions do not affect the transistor status. The transistor is either in saturation or at cut-off. Output voltage levels are dependent on loading conditions.

Application

Logical functions performed by these circuits are indicated by the symbols listed in the chart labeled Circuit Use. The DOT functions are accomplished by connecting similar output pins together to share a common collector load. CTDL and voltage-mode outputs are available from these circuits as noted on the schematic.