

## TC-326 DIGITAL INPUT BOARD FUNCTIONAL DESCRIPTION

REV 1.03 03/31/93 WJS

The TC-326 Digital Input Board is a 4.5" x 6.5" card designed to monitor up to sixteen optically isolated digital inputs. Typical applications include operator control consoles, push button selection stations, and any type of proximity or infrared sensors for externally triggered show operation.

The TC-326 typically resides in a 19" x 5.25" card frame, seated in a TC-616 digital backplane where up to four TC-326 Input or TC-316 Digital Output cards are then connected to the processor backplane via 6 pin .1" Molex KK series connectors, and through an insulation displacement header connector to a DB-37F female connector.

Each of sixteen digital inputs appears as a plus and minus terminal at the edge connector of the board where the inputs may be programmed individually or connected to a common buss (bussing options are also available on the card). Each input controls a 4N33 opto isolator through a current limiting resistor on the card. An individual tally light for is provided to monitor each of the inputs.

The TC-326 transfers the current input status to the computer on a two wire (strobe and data) serial stream at the current show frame update rate. A "data in" pin allows more than one TC-326 to be daisy-chained together for additional input capacity. However, in most Triad applications, a dedicated input port is used for each TC-326 for a faster serial transfer.

Support for the TC-326 is provided in the Triad LDC/SCU configuration.

### Physical Dimensions:

4.5" x 6.5" printed circuit board  
22/44 .156 gold plated edge connector

### Power Requirements:

+5V @ 100MA, +12V/+24V @ 200MA for input triggers

### Related Documents:

PIN326.TXT Pin assignment and application information  
TC326.ASM Assembly diagram

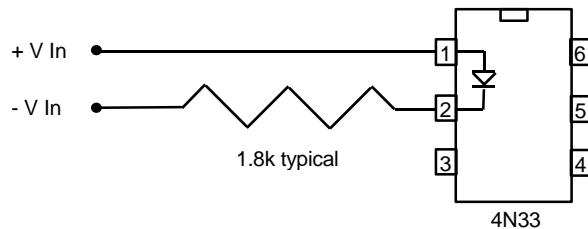
## I/O PORTS

### Free Edge Buss Connector Rear View

SOLDER SIDE			COMPONENT SIDE
+5VDC Logic	A	1	+5VDC Logic
	B	2	Data In -
Strobe In -	C	3	Data Out -
	D	4	
Odd +V Buss	E	5	Even + V Buss
+ V In 1	F	6	1 - V In
+ V In 2	H	7	2 - V In
+ V In 3	J	8	3 - V In
+ V In 4	K	9	4 - V In
+ V In 5	L	10	5 - V In
+ V In 6	M	11	6 - V In
+ V In 7	N	12	7 - V In
+ V In 8	P	13	8 - V In
+ V In 9	R	14	9 - V In
+ V In 10	S	15	10 - V In
+ V In 11	T	16	11 - V In
+ V In 12	U	17	12 - V In
+ V In 13	V	18	13 - V In
+ V In 14	W	19	14 - V In
+ V In 15	X	20	15 - V In
+ V In 16	Y	21	16 - V In
Digital Ground	Z	22	Digital Ground

#### NOTES:

- All inputs are normally isolated, opto-isolator diodes, with a series limiting resistor designed to sense 12-24 volt DC inputs. The series resistor is on the LOW side of the diode.



- For active low (normal) inputs, strap + V IN pins together and connect to positive supply, and provide (contact) closures to ground to the - V IN pins.
- For active high (sourcing) inputs, strap - V IN pins together and connect to negative supply, and provide voltage to the + V IN pins.
- A buss is provided on the card allowing the + V INPUTS to be tied together, using jumper straps on the card. Standard cards are NOT strapped to provide fully independent, isolated inputs.
- All inputs should be stable for at least 33 ms. for proper sensing (at 30 frames per second).