

# Dieter's Nixie Tube Data Archive

This file is a part of Dieter's Nixie- and display tubes data archive

If you have more datasheets, articles, books, pictures or other information about Nixie tubes or other display devices please let me know.

Thank you!

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# NIXIE NUMERICAL INDICATOR

276-048

The Radio Shack #276-048 is a cold cathode, side viewing numerical indicator tube. It displays the numerals 0 through 9 and has two internal, independently operable decimal points located to the left and right of the numeral. The desired numeral is lit when its corresponding cathode is energized. The color of the display is neon red. The brightness of the numerical indicator is dependent upon cathode current, and the horizontal viewing angle is 100 degrees.

The Nixie tube has been designed to operate in strobed/time sharing applications. In a typical application, "same numeral" cathodes (e.g., all 1's, all 2's etc.) of all tubes are connected in parallel and the anodes are strobed sequentially.

# ARCHER

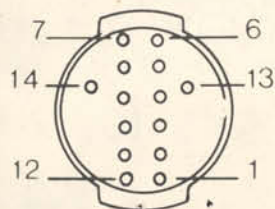
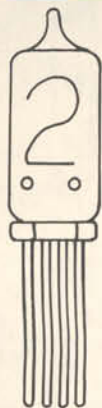
# TECHNICAL DATA

AN EXCLUSIVE RADIO SHACK SERVICE TO THE EXPERIMENTER

## ABSOLUTE RATINGS:

	SYMBOL	MINIMUM	MAXIMUM	UNIT
Ionization Voltage	$E_z$	110	170	Vdc
Supply Voltage	$E_{bb}$	175	270	Vdc
Cathode Current (peak numeral)	$i_k$	11	18	mA
Cathode Current (peak decimal)	$i_{kd}$		2	mA
IONIZATION TIME	$T_i$		15	$\mu\text{sec}$

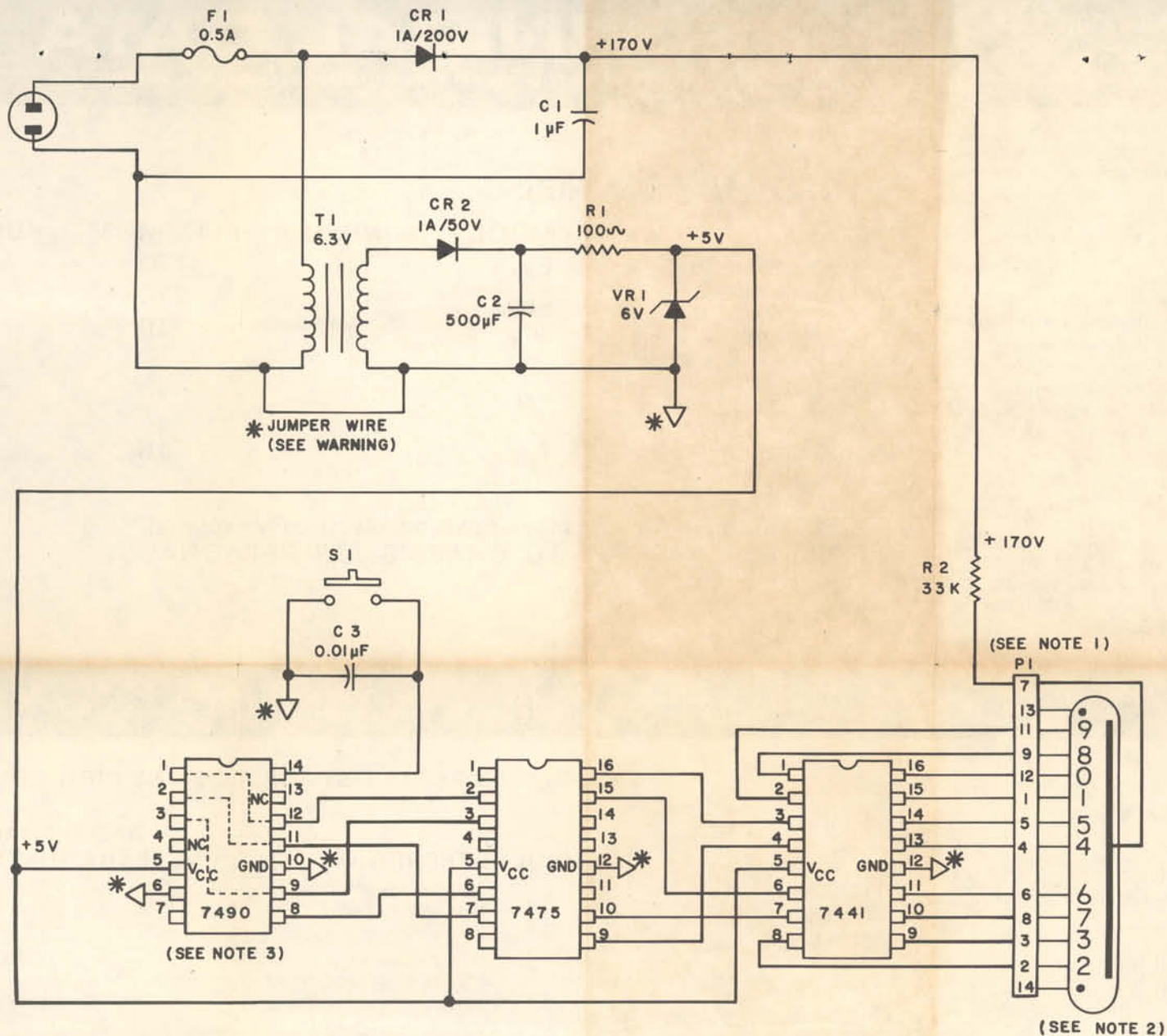
**WARNING:** All circuitry must be electrically isolated. DO NOT GROUND TO CHASSIS, OR PERSONAL INJURY MAY RESULT.



BOTTOM VIEW

## SUGGESTED PARTS LIST FOR A 0-9 ONE DIGIT COUNTER

PIN NO.	ELEMENTS	SYMBOL	DESCRIPTION	RADIO SHACK PART NUMBER
1	NUMERAL 1	R-1	33K $\frac{1}{2}$ W Resistor	271-040
2	NUMERAL 2	R-2	100 ohm Resistor	271-012
3	NUMERAL 3	C-1	.01 $\mu\text{F}$ Disc Capacitor	272-1065
4	NUMERAL 4	C-2	1 $\mu\text{F}$ Capacitor	272-1055
5	NUMERAL 5	C-3	500 $\mu\text{F}$ Electrolytic Capacitor	272-957
6	NUMERAL 6	CR-1	1A/200V Diode	276-1102
7	ANODE	CR-2	1A/50V Diode	276-1101
8	NUMERAL 7	VR-1	6V Zener Diode	276-621
9	NUMERAL 8	IC-1	BCD-Decimal Decoder/Driver (7441)	276-1804
10	NO STEM LEAD	IC-2	Four-Bit Latch (7475)	276-1806
11	NUMERAL 9	IC-3	BCD Decade Counter (7490)	276-1808
12	NUMERAL 0	(3 ea.)	Dual In-Line IC Socket (16 pin standard)	276-030
13	R DEC PT	T-1	6.3V Transformer	273-1384
14	L DEC PT	S-1	SPST Pushbutton Switch	275-1547
		F-1	Slo-Blo Fuse $\frac{1}{4}$ A Fuse Holder	270-1288 270-364
			Power Cord	278-1255



**\*WARNING:** All circuitry must be electrically isolated. DO NOT GROUND TO CHASSIS! This is a common return only! Failure to isolate circuitry could result in serious injury!

**NOTES:**

1. P1 represents the pin numbers of the Nixie tube.
2. These numbers represent the numerical displays on the Nixie tube.
3. Pins 1 and 12, 2 and 11, 3 and 9, are to be connected externally (as indicated by the broken lines).
4. The decimals are not used in this circuit.
5. NC—no internal connection.