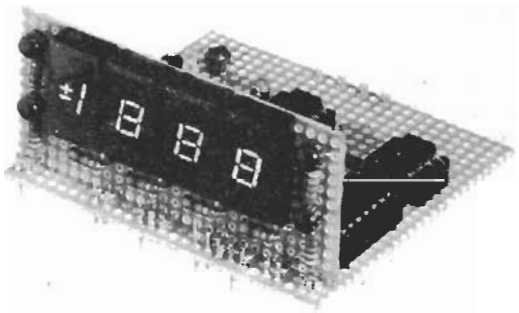
JAMES ELECTRONICS

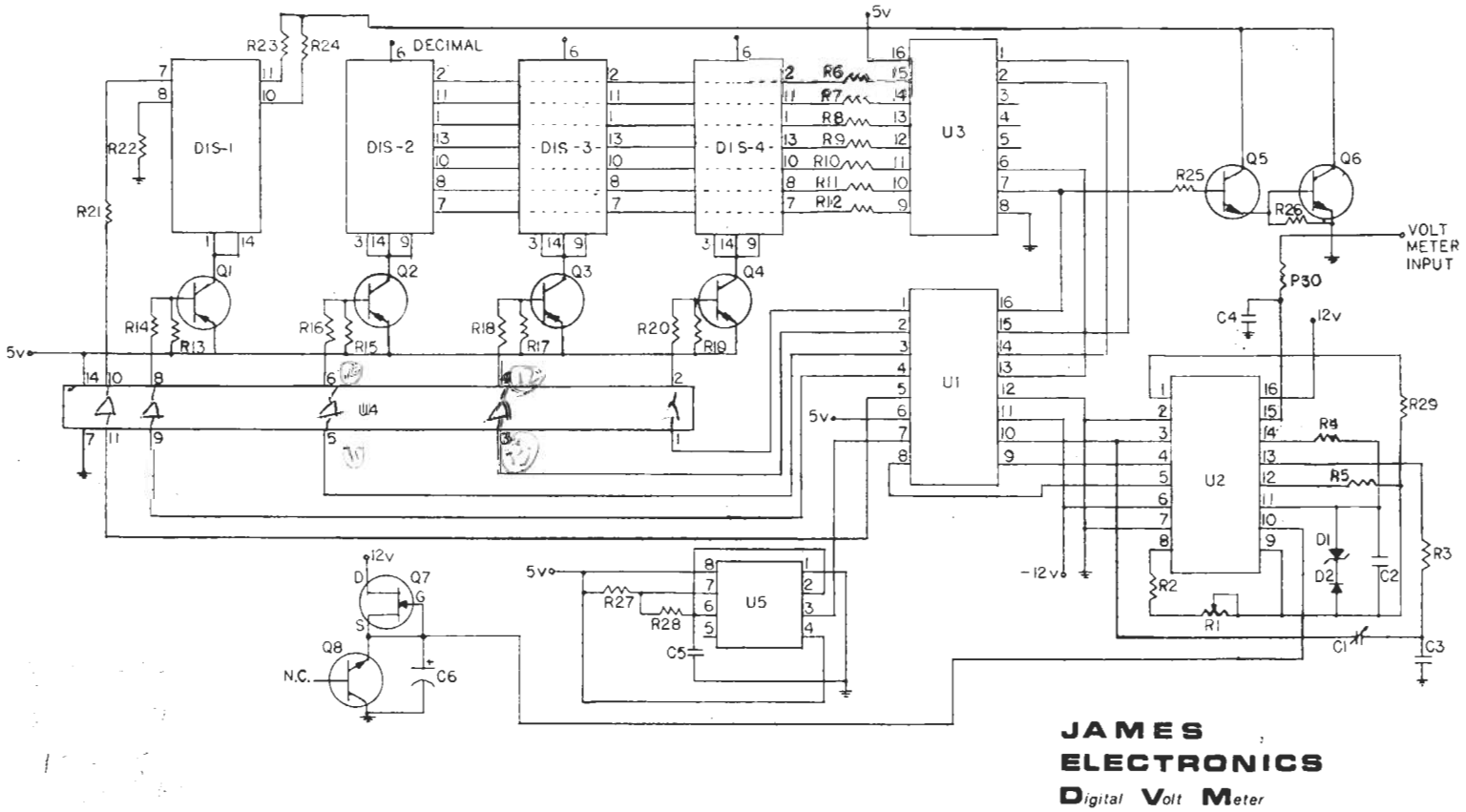
P. O. BOX 822 BELMONT, CALIFORNIA 94002
(415) 592-8097

DIGITAL VOLT METER

PARTS LIST

Quantity	Part No.	Designation
1	LD110	U1
1	LD111	U2
1	7447	U3
1	7404	U4
1	NE555V	U5
3	MAN7	DIS-2 DIS-4
1	MAN 1001A	DIS-1
4	2N2907	Q1-Q4
2	2N2222	Q5-Q6
1	2N5951	Q7
1	2N2222	Q8
1	IN757	D1
1	IN914	D2
1	4.5-50pf trimmer zero adj.	C1
2	.022 uf	C2-C4
1	.1 uf	C3
1	.0022 uf	C5
1	25 uf	C6
11	100 ohm	R6, R12, R21, R24
1	20k trimmer full scale adj.	R1
1	75K	R2
1	33k	R3
1	120k	R4
2	100K	R5, R29
1	1M	R30
4	91 ohm	R13, R15, R17, R19
4	240 ohm	R14, R16, R18, R20
1	5.1k	R25
1	1k ohm	R26
1	3 k ohm	R27
1	12 k ohm	R28





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Digital Volt Meter

ASSEMBLY INSTRUCTIONS

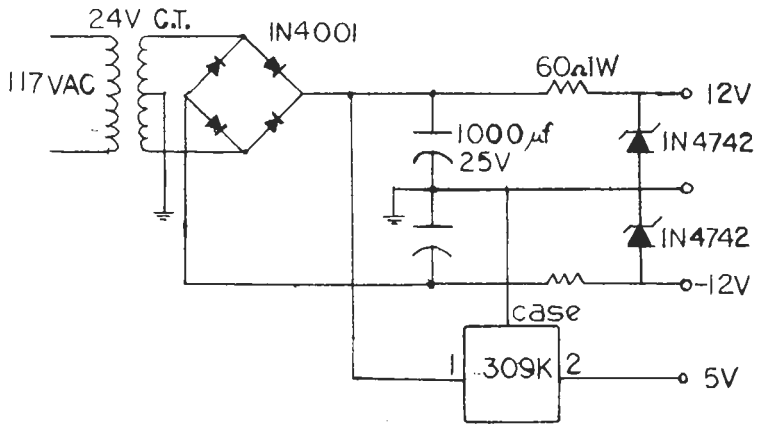
A digital voltmeter is a sophisticated piece of equipment and because of this fact great care should be taken in its assembly. This kit contains two MOS devices which are sensitive to static charges (U1 & U2) and care should be taken in their handling. All other devices are stable and need no special handling.

When assembling the circuit the following procedure should be followed in order to produce a working unit that is compact and uses the boards provided.

1) Mount push pins on boards as shown in figure 1
2) Assemble the display board using the board pattern for devices shown in figure 2 and the schematic.
3) Assemble the main logic board using the board pattern for devices shown in figure 3, and the schematic. It is recommended that sockets be used for U1 & U2.
4) Mount the display board to the main logic board as shown in figure 4 by soldering push pins to each other.

If the instructions above are followed the result will be a 0-2 volt digital voltmeter with a full scale accuracy of 1%.

POWER SUPPLY



DISPLAY BOARD

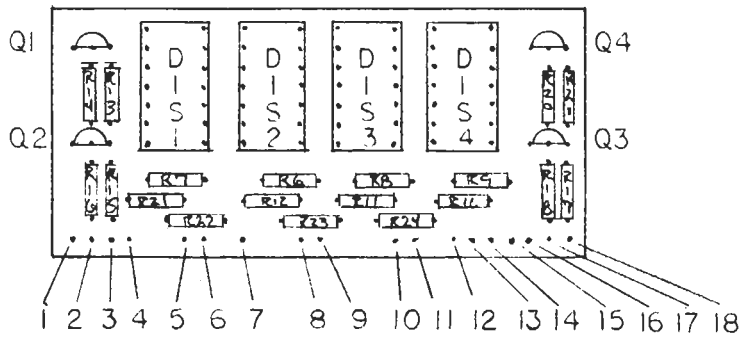
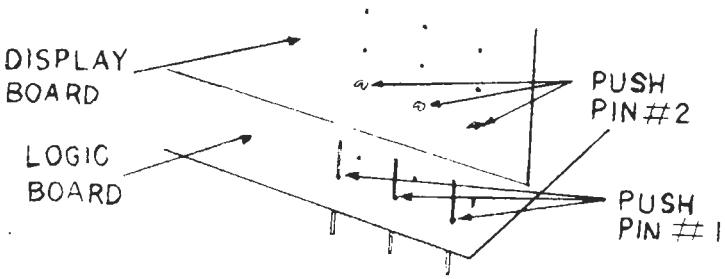


FIG 1



DISPLAY AND LOGIC BOARD PINOUT

1 Cathode digit one
2 Cathode digit two
3 Decimal point digit one
4 Decimal point digit two
5 One digit one
6 Segment A
7 Minus digit one
8 Segment B
9 Segment C
10 Segment D
11 Segment E
12 Decimal Digit #3
13 Decimal Digit #4
14 Segment F
15 Segment G
16 Ground
17 Cathode Digit #5
18 Cathode Digit #4

Logic Board Pinout

A – ±5 Volts
B – +12 Volts
C – –12 Volts
D – Ground
E – Voltmeter Input
F – Decimal Digit #2
G – Decimal Digit #3
H – Decimal Digit #4