ARRL Handbook CD

Template File

Title:	Six-Digit Programmable Frequency Counter/Digital Dial
Chapter:	26
Topic:	A Six-Digit Programmable Frequency Counter and Digital Dial

Template contains:

Main board.

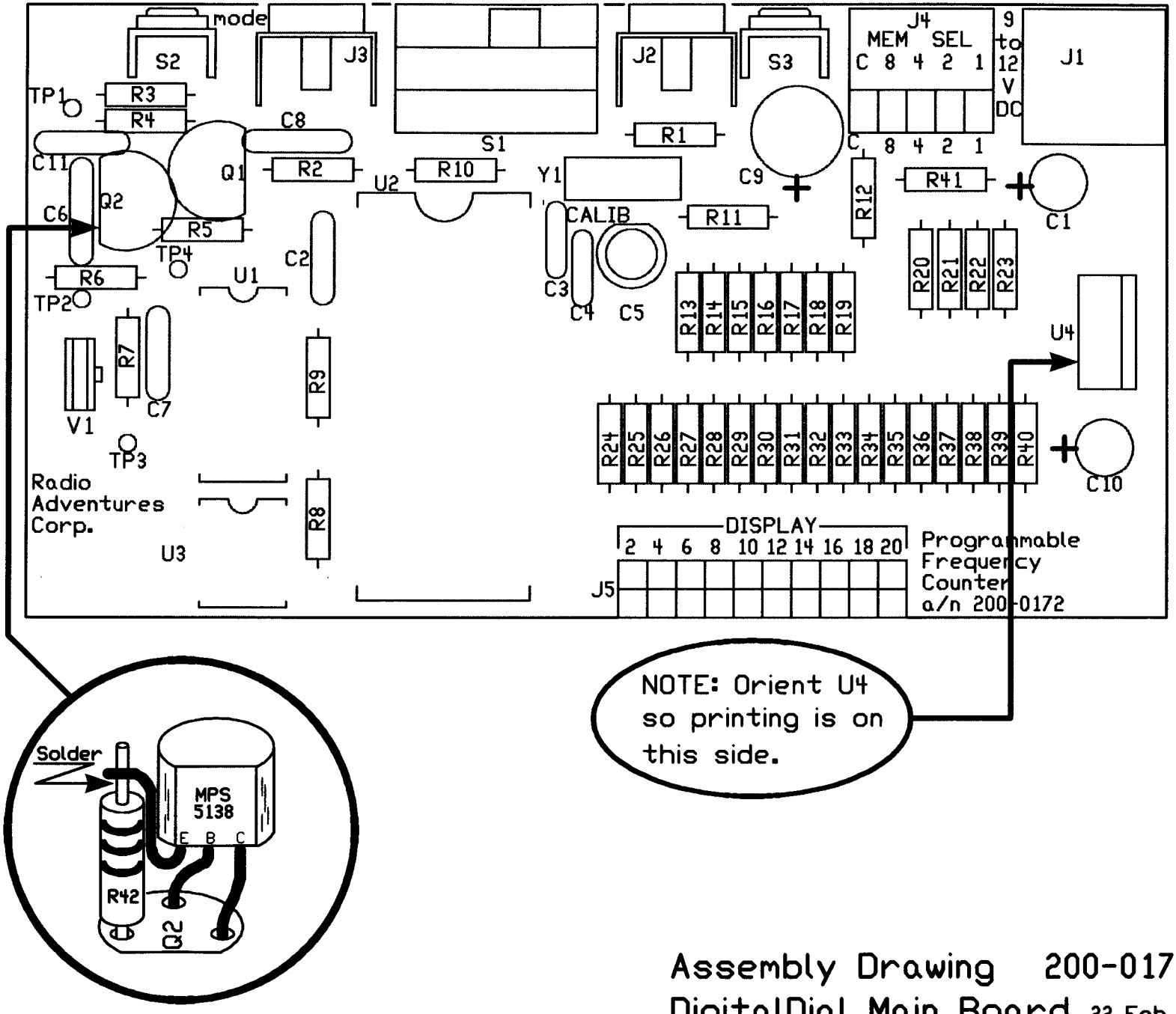
Six-Digit Display board.

Buffer/Clipper board.

6 Digit Counter Bill of Material (Main Board)

ITEM	MFGNO	DESC	SUPPLIER
	151-9014	14 Pin DIP socket tin plated dual leaf	Mouser
	151-9028	28 Pin DIP socket tin plated dual leaf	Mouser
	151-9008	8 Pin DIP socket tin plated dual leaf	Mouser
C1	XRL50V1.0	1 uF 50V Vertical Electrolytic	Mouser
C2 C7 C11	CD100U5-104M	.1uF 100V 20% Disk Capacitor	Mouser
C3 C4	100N2-018J	18 PF 100V 10% NP0 Capacitor	Mouser
C5	242-4220	4.2-20.0 pF 6MM Trimmer N450	Mouser
C8 C6	CD50Z6-103M	.01 uF 50V Disc Capacitor	Mouser
C9	XRL10V100	100 uF 10V Vertical Electrolytic	Mouser
C10	XRL50V2.2	2.2uF 50V Vertical Electrolytic	Mouser
J1	16PJ093	2.1mm x 5.5mm Power Jack PC mount	Mouser
J2 J3	161-4215	RCA Right angle PC mount	Mouser
J5	080-1004	20 Pin dual row Header pins 0.1 in spacing	
PCB	090-0106	Main PC board double side plated thru	Radio Adventures
Q1	2N3904	2N3904 NPN Transistor TO-92	
Q2	2N4126	2N4126 PNP Transistor TO-92	
R1	CF 1/4 56 5%	56 Ohm 1/4W 5% Carbon Film Resistor	
R12 R13 R14 R15			
R16 R17 R18 R19	CF 1/4 47K 5%	47K 1/4W 5% Carbon Film Resistor	
R2	CF 1/4 8.2K 5%	8.2K 1/4W 5% Carbon Film Resistor	
R3	CF 1/4 22K 5%	22K 1/4W 5% Carbon Film Resistor	
R4 R5 R24 R25 R26			
R27 R28 R29 R30			
R31 R32 R33 R34	CF 1/4 220 OHM 5%	220 ohm 1/4W 5% Carbon Film Resistor	
R41	CF 1/4 470 5%	470 ohm 1/4W 5% Carbon Film Resistor	
R6	CF 1/4 100 5%	100 ohm 1/4W 5% Carbon Film Resistor	
R7	CF 1/4 6.8K 5%	6.8K 1/4W 5% Carbon Film Resistor	
R8	CF 1/4 10K 5%	10K 1/4W 5% Carbon Film Resistor	
R9 R10 R11 R20 R21			
R22 R23	CF 1/4 3.9K 5%	3.9K 1/4W 5% Carbon Film Resistor	
S1	10SP012	DPDT Slide Switch PC Mount	Mouser
S2 S3	101-0013	SPST Mini Pushbutton PC Mount	Mouser
U1	74HC02	High Speed CMOS Quad 2 Input NOR Gate	
U2	C5	C5 6 Digit Frequency Counter	Radio Adventures
U3	24LC01B/P	128x8 Serial EEPROM	Radio Adventures
U4	NJM78M05FA	5V 500mA Positive Regulator TO220F	Mouser
V1	32AG405	50K .1W 20% Trimmer Pot Vertical PC Mount	Mouser
Y1	520-HCA403-20	4.032 Mhz 20pF HC-49/U Crystal	Mouser

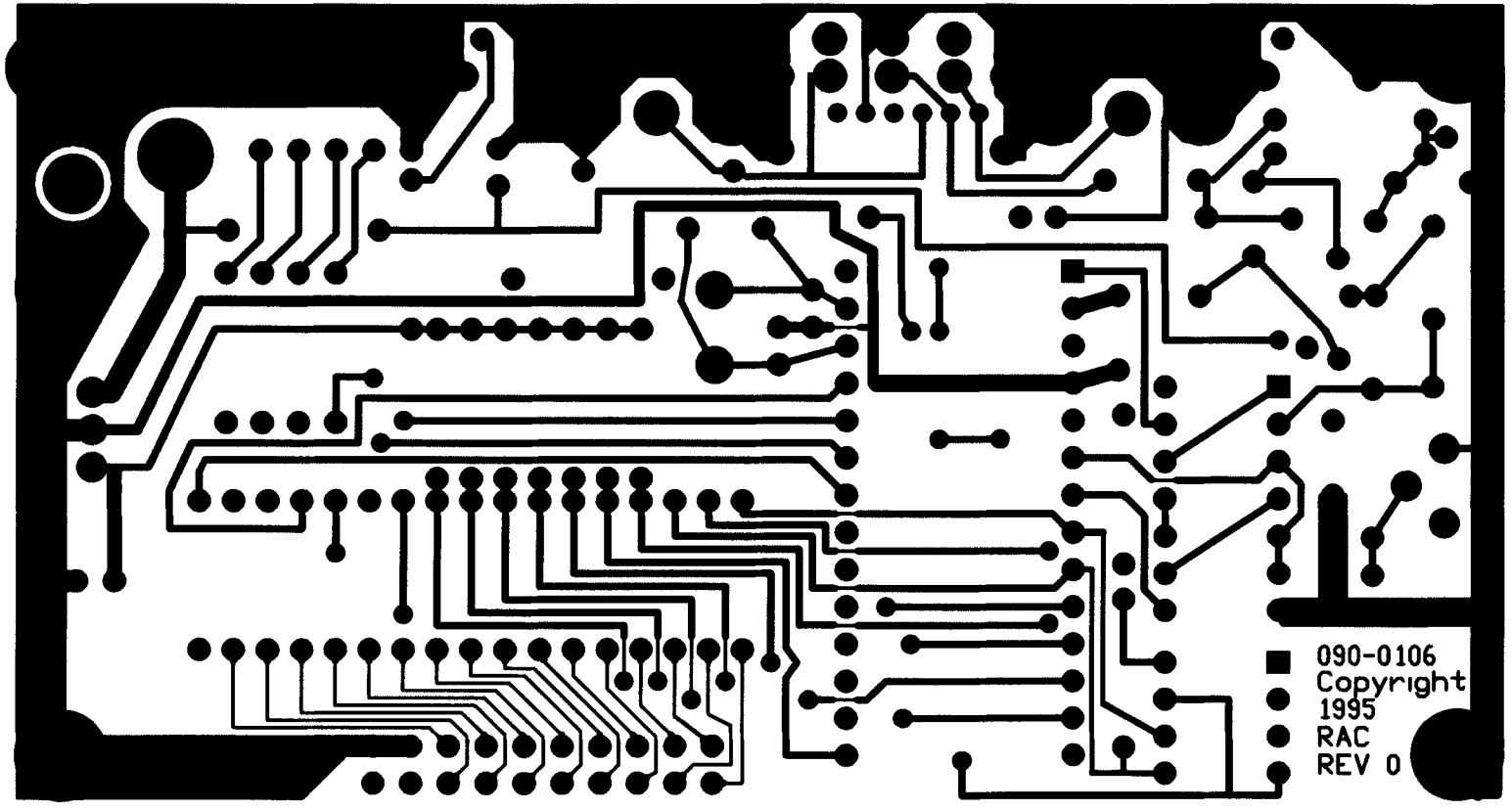
ITEM	MFGNO	DESC	SUPPLIER



Assembly Drawing 200-0172
DigitalDial Main Board 22 Feb '96

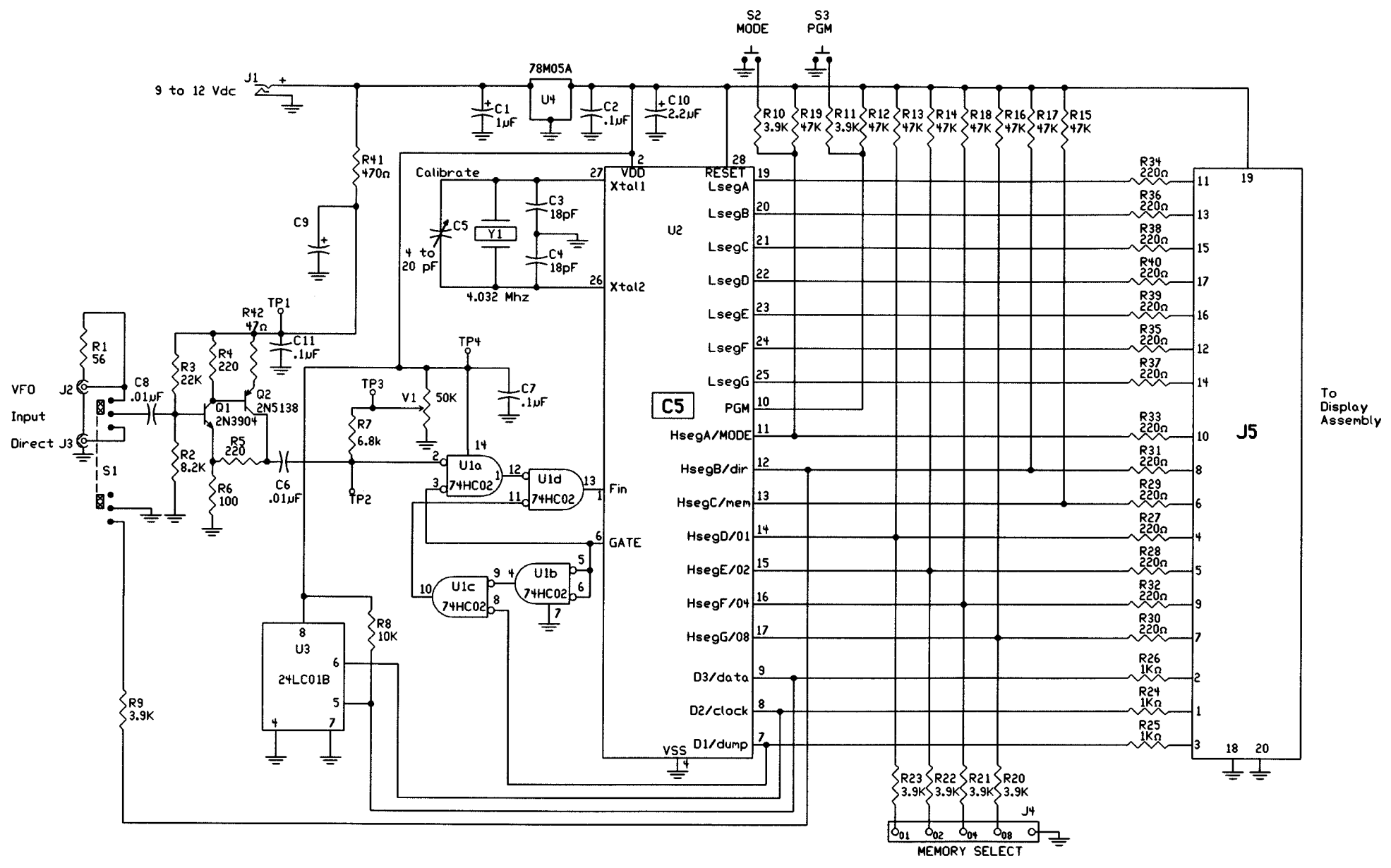
Top copper 2X

090-0106.TOP 12/27/95 11:07 am



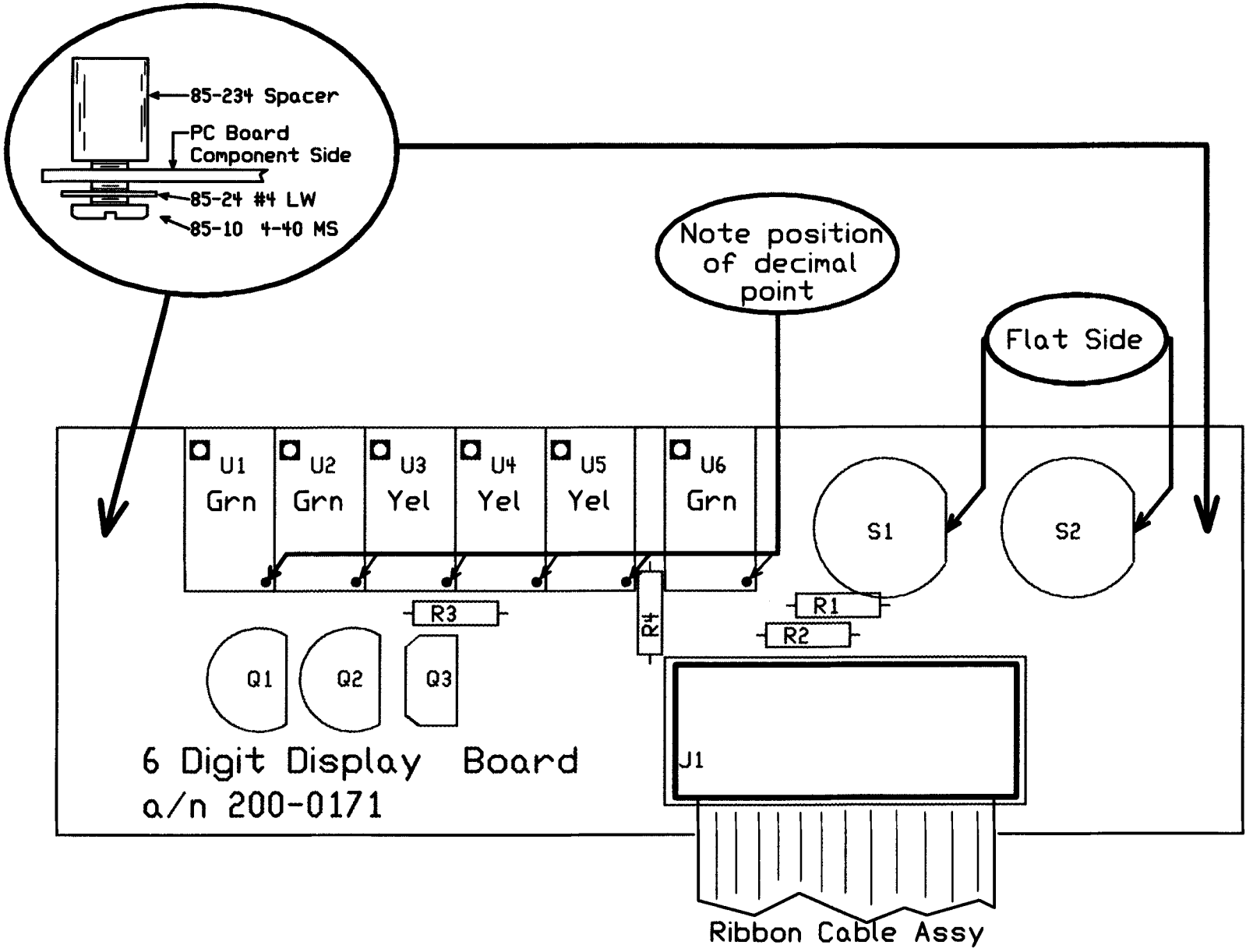
090-0106.BOT 12/27/95 11:07 am

Bottom copper 2X

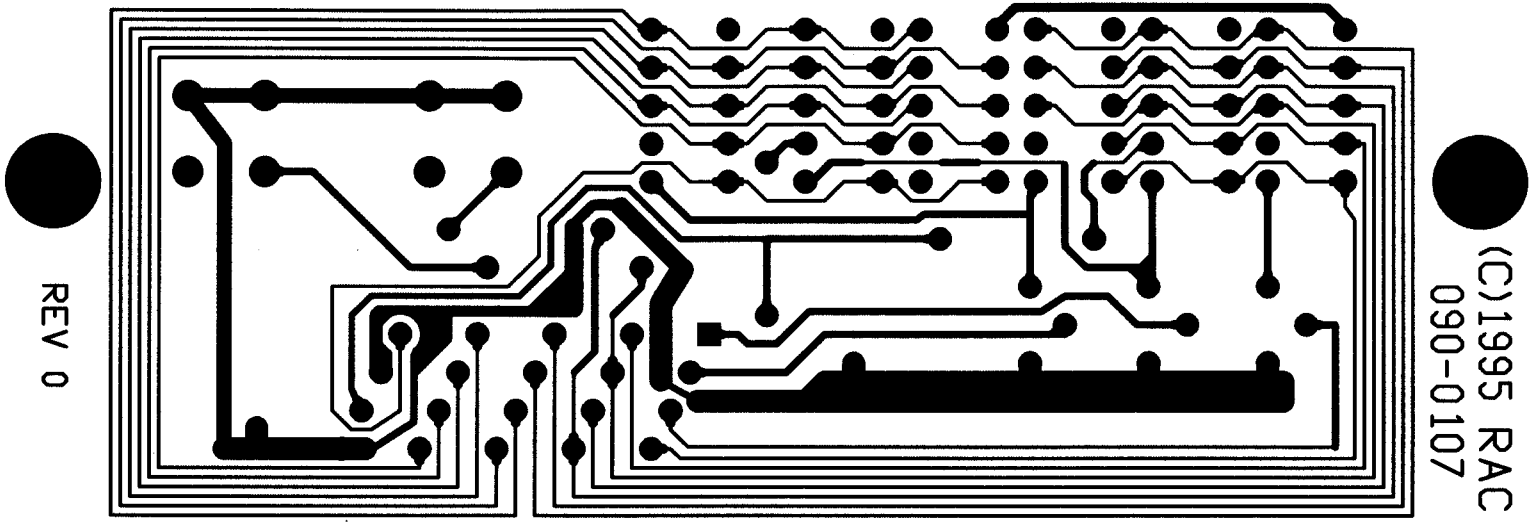


6 Digit Frequency Counter/Digital Dial BK-172

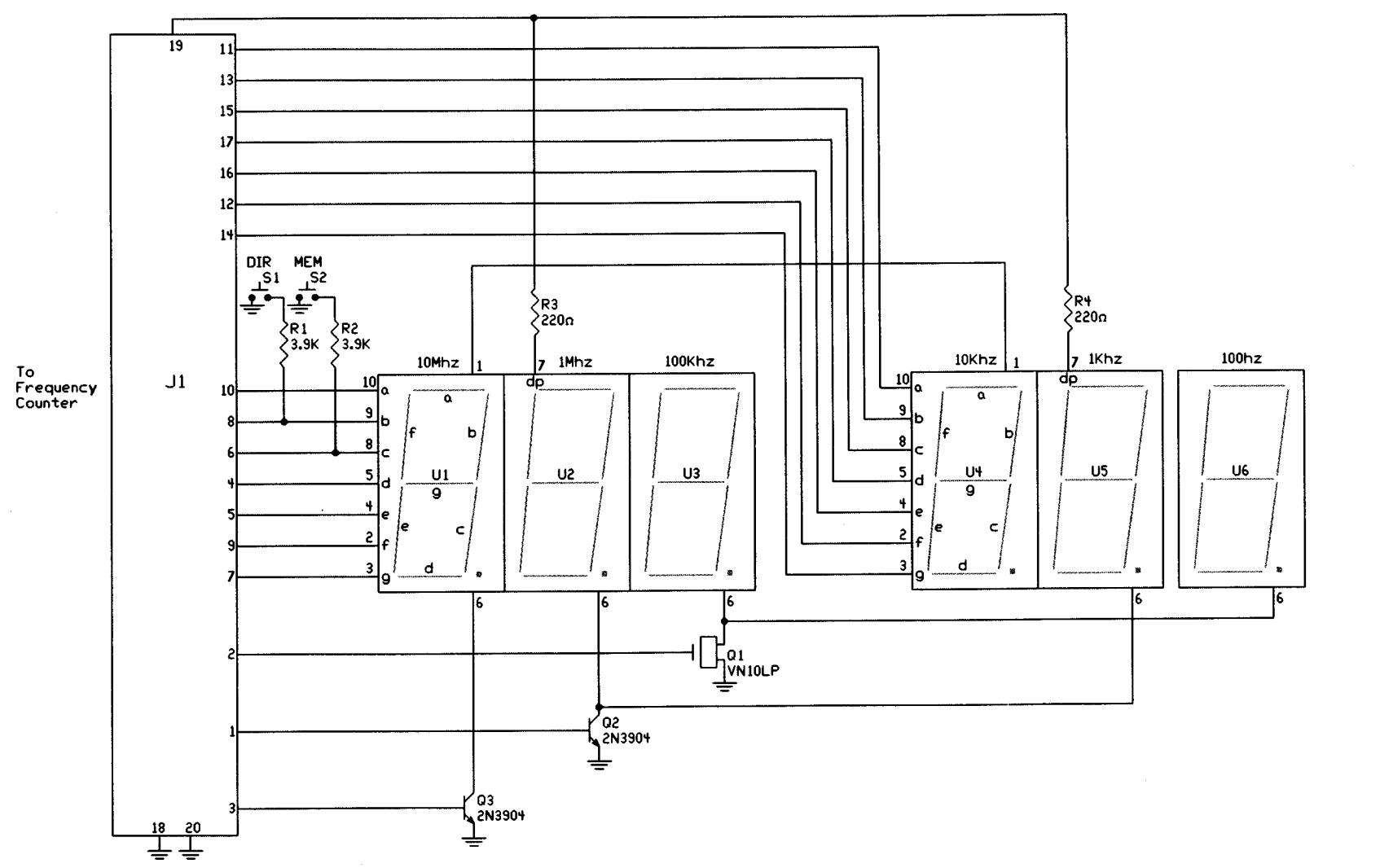
Date 14 March 1996



Assembly Drawing 200-0171
Six Digit Display 6 Mar '96

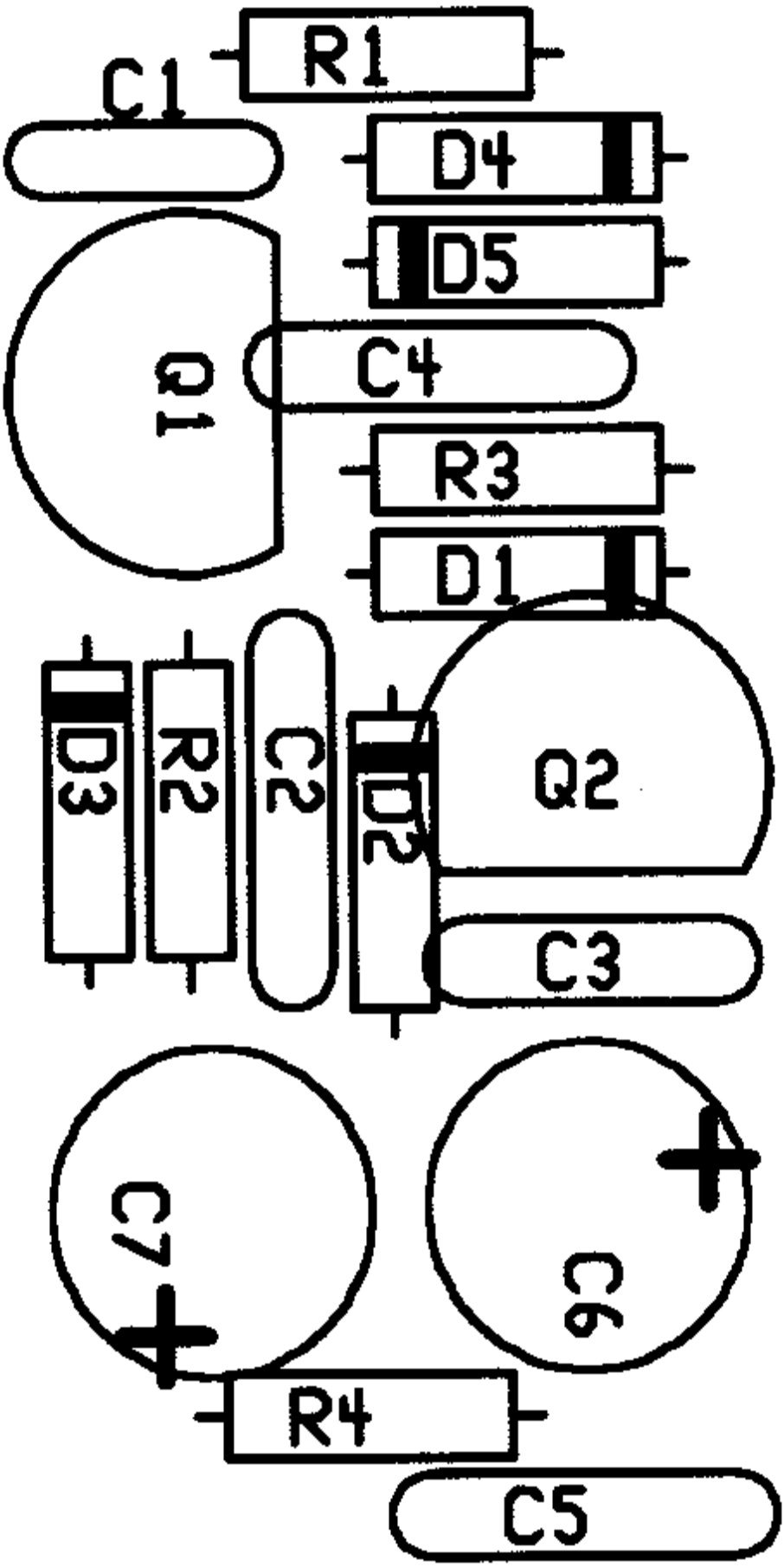


Bottom copper 2X

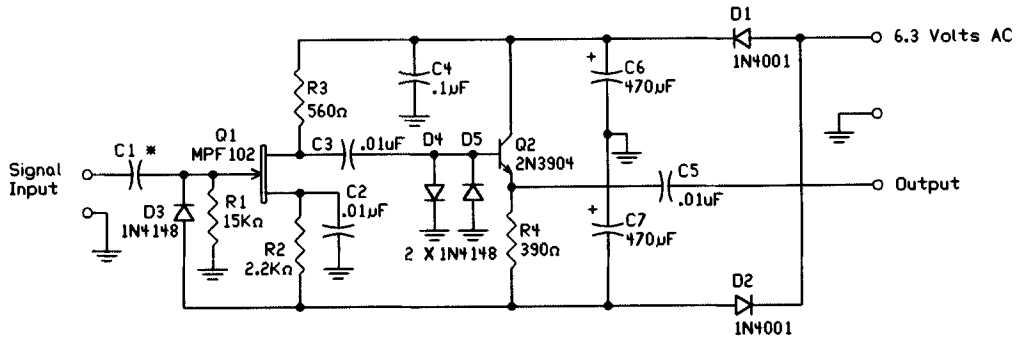


6 Digit Display Assembly BK-171

Date 5 January 1996


R1
C1
D4
D5
Q1
C4
R3
D1
D3
R2
C2
D2
Q2
C3
C7
C6
R4
C5

R1
D4
C4
R3
D1
C3
R2
C2
C1
Vcc
Vout



* - Value selected to produce 0.5 volts or more peak to peak at output terminal.

Figure DD

Co:	Radio Adventures Corp.	
Title:	Digital Dial Buffer/Clipper	
Board:	200-0174	Revision:
Drawn:	Lee M. Richey	Size:
Date:	29 Januray 1996	Sheet 1 of 1

Buffer Clipper Bill of Material

ITEM	MFGNO	DESC	
C2 C3 C5	CD50Z6-103M	.01 uF 50V 20% Disk Capacitor	Mouser
C4	CD100U5-104M	.1uF 50V 5% Disk Capacitor	Mouser
C6 C7	XRL10V470	470 uF 10V 20% Electrolytic Capacitor	Mouser
D1 D2	1N4001	Power Diode	
D3 D4 D5	1N4148	Switching Diode	
PCB	090-0113	Buffer/Clipper PC board	Radio Adventures
Q1	MPF102	JFET Transistor T092	
Q2	2N3904	2N3904 NPN Transistor TO-92	
R1	CF 1/4 15K 5%	15K 1/4W 5% Carbon Film Resistor	
R2	CF 1/4 2.2K 5%	2.2K 1/4W 5% Carbon Film Resistor	
R3	CF 1/4 560 OHM 5%	560 OHM 1/4W 5% Carbon Film Resistor	
R4	CF 1/4 330 OHM 5%	330 OHM 1/4W 5% Carbon Film Resistor	