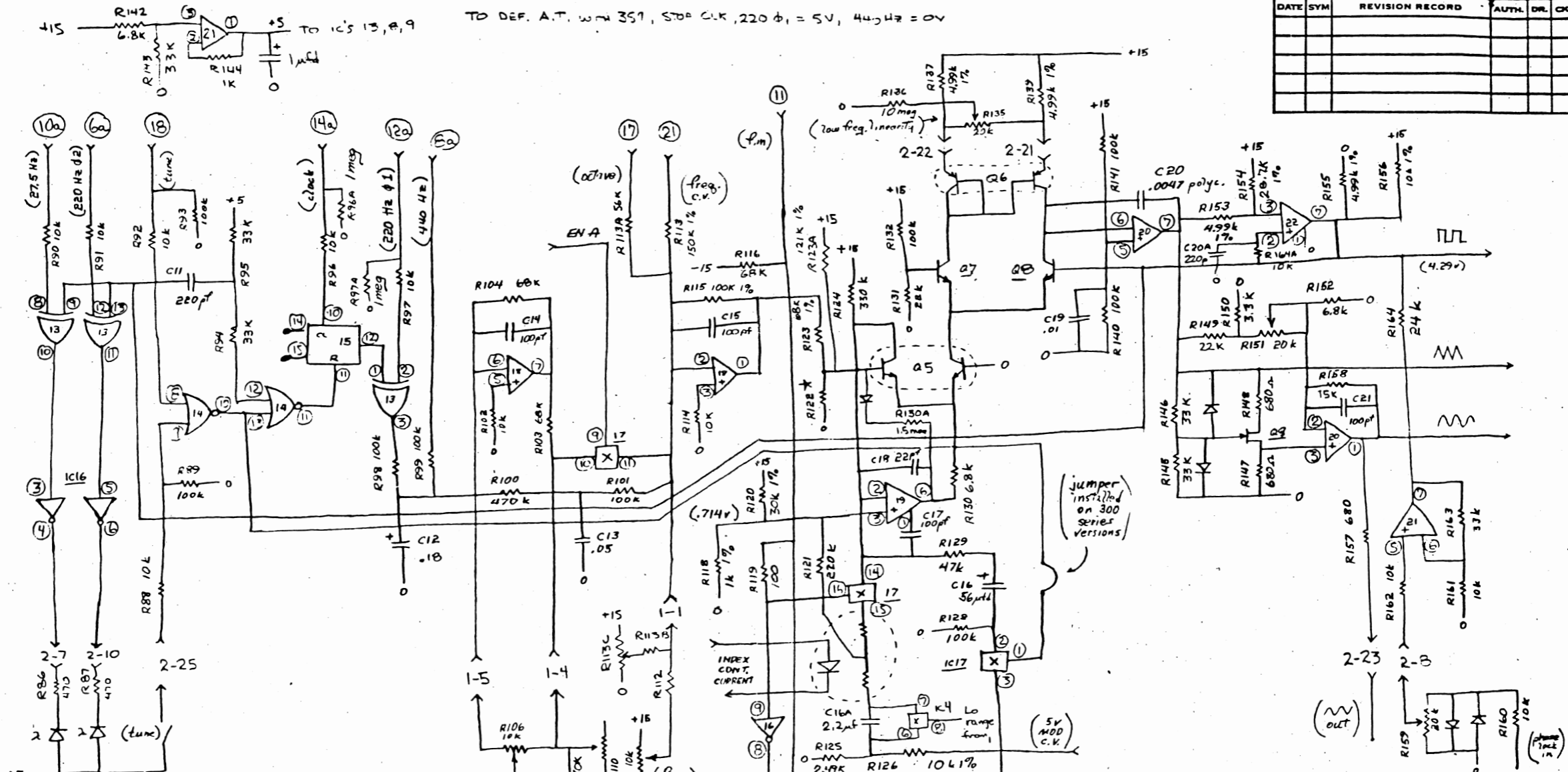


TO DEF. A.T. with 351, STD CLK, 220 ϕ , = 5V, 4.4 Hz = 0V

DATE	SYM	REVISION RECORD	AUTH.	DR.	CL.



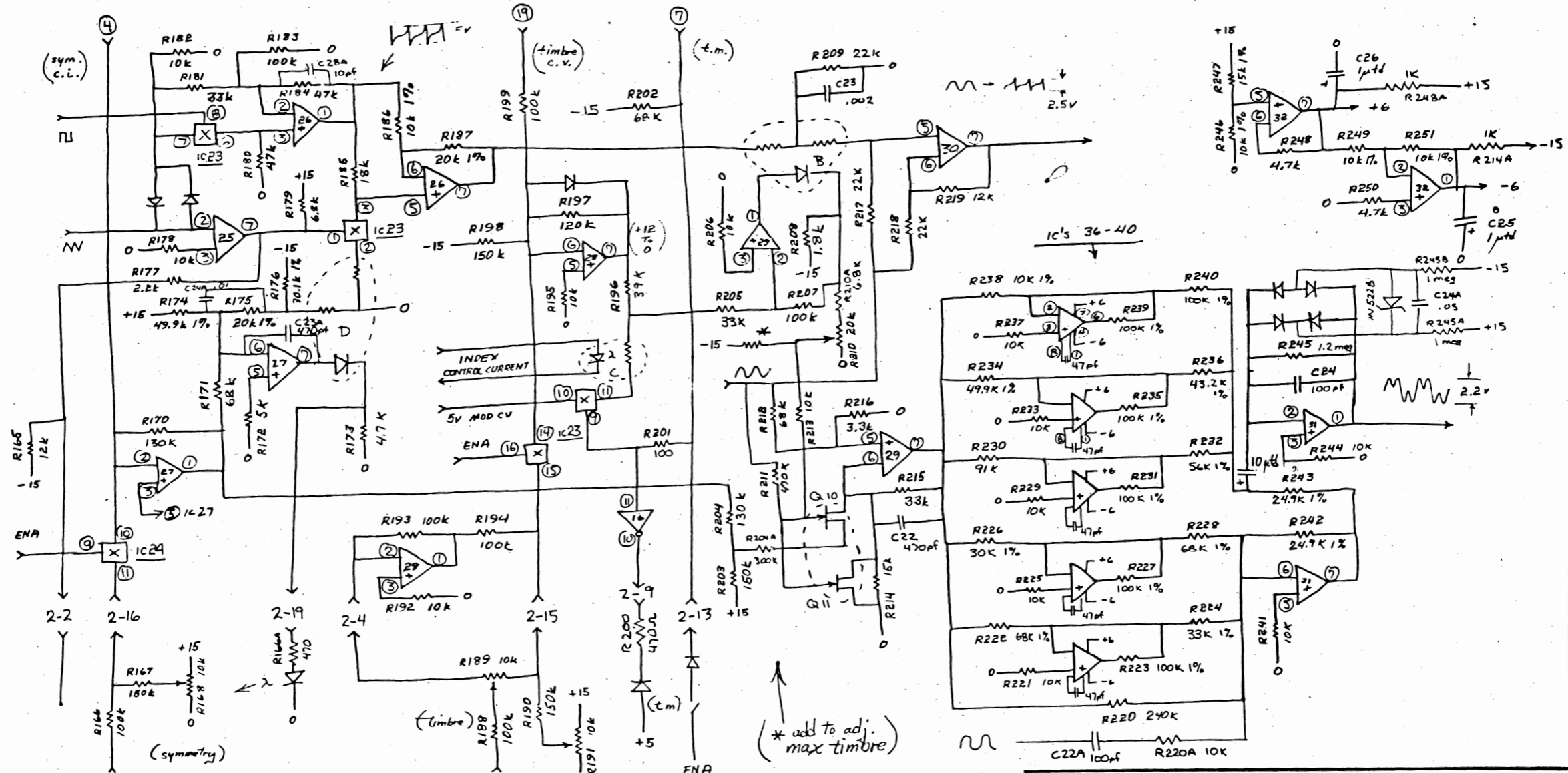
- IC 13 4030 +5V 1 section 2-25
- 14 4001 2 " "
- 15 4040
- 16 74LS05 1 sect open, len(3, 1 m 4)
- 17 LF1331 1 section 2-25
- 18,20,21 TL082 1 section 2-25
- 19 LM3014
- 22 LM311
- R122 TELLAS Q81 TEMP. COMP. 1K

- Q5 AD 811
- Q6 AD 821
- Q7,8 2N3565
- Q9 2N4339 selected

NON DIGITAL OSC MAY ELIMINATE IC'S 11,13,15

Test R 164
Test C 21

TOLERANCES (EXCEPT AS NOTED)		BUCHLA & ASSOCIATES	
DECIMAL	±	SCALE	DRAWN BY D
FRACTIONAL	±	TITLE	APPROVED BY
ANGULAR	±	SCH: PART OF MODEL 259	PRINCIPLE OSCILLATOR
DATE rev 11/78		DRAWING NUMBER B 2590-2A	



some of this is
 on a part 4

ICs 23, 24 LF 1331
 25 LM 311
 26-35 TL 082
 36-40 CA 3160

Q 10, 11 dual - 2N3958
 Q 12, 13 2N3565

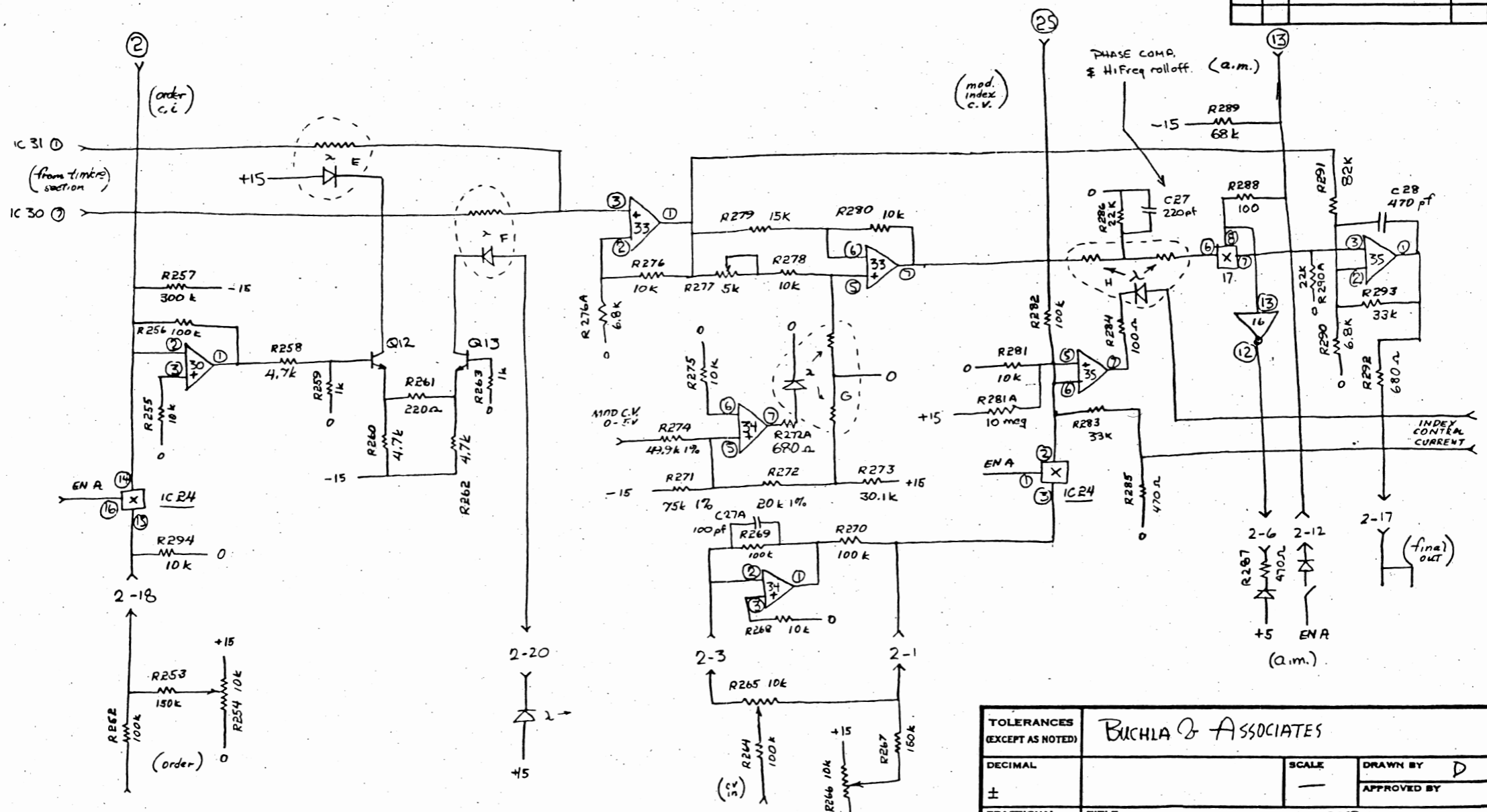
last C 26
 last R 251

R166A may be missing!

BUCHLA & ASSOCIATES

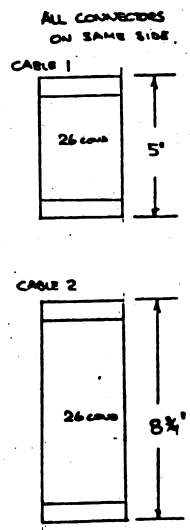
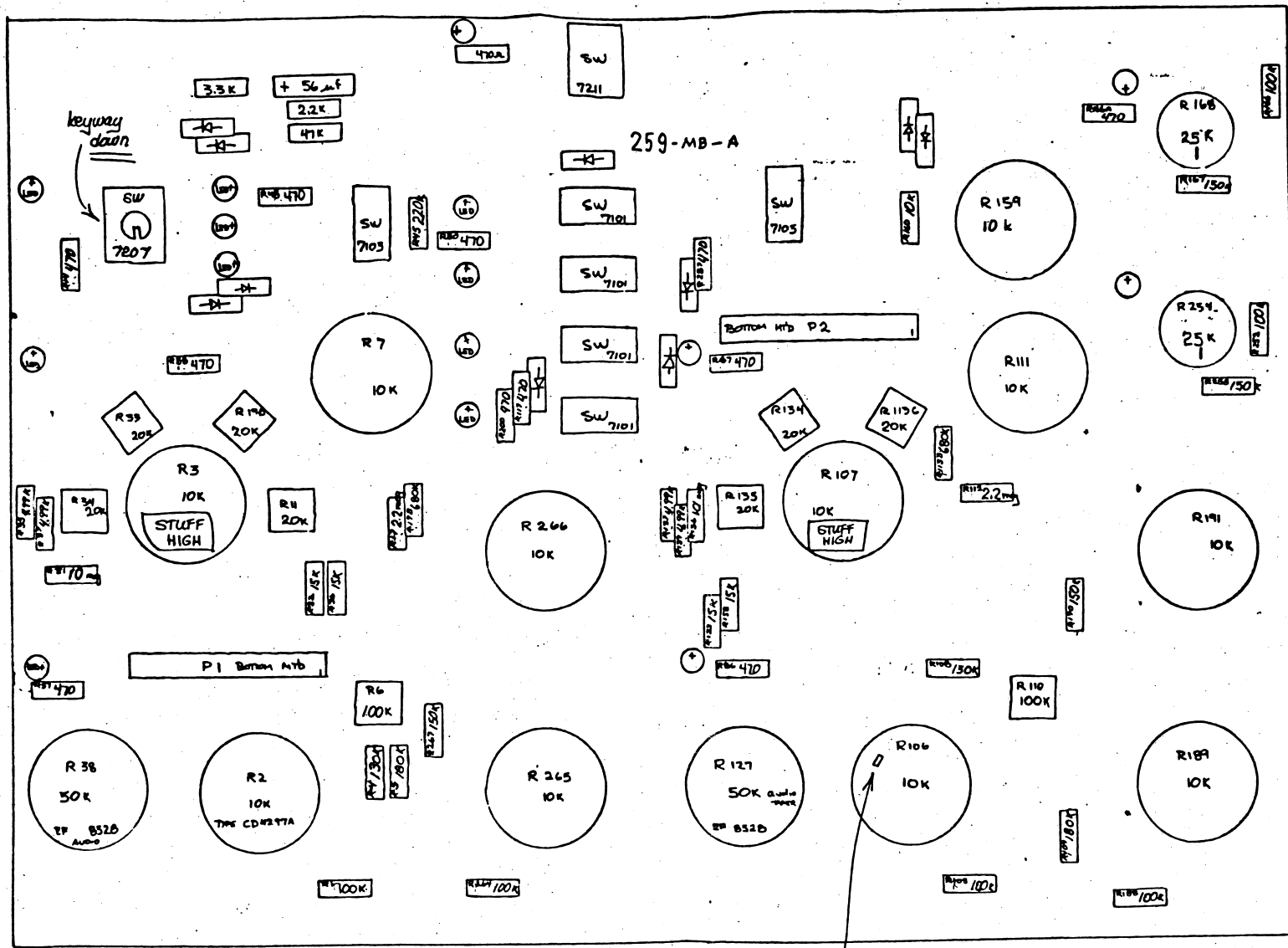
SCALE: —	APPROVED BY:	DRAWN BY
DATE:		REVISED
SCH: PART OF MODEL 259 PROGRAMMABLE COMPLEX WAVEFORM GEN.		SYMMETRY + TIMBRE
rev 11/78		DRAWING NUMBER B 2590 - 3A

DATE	SYM	REVISION RECORD	AUTH.	DR.	CL.



TOLERANCES (EXCEPT AS NOTED)		BUCHLA & ASSOCIATES	
DECIMAL	±	SCALE	DRAWN BY D
FRACTIONAL	±	APPROVED BY	
ANGULAR	±	TITLE	ORDER +
rev. 11/78	±	SCH: PART OF MODEL 259	PROGRAMMABLE COMPLEX WAVEFORM GEN. MODULATOR
DATE	2/2/77	DRAWING NUMBER	B 2590-4A

last c 28
last R 293

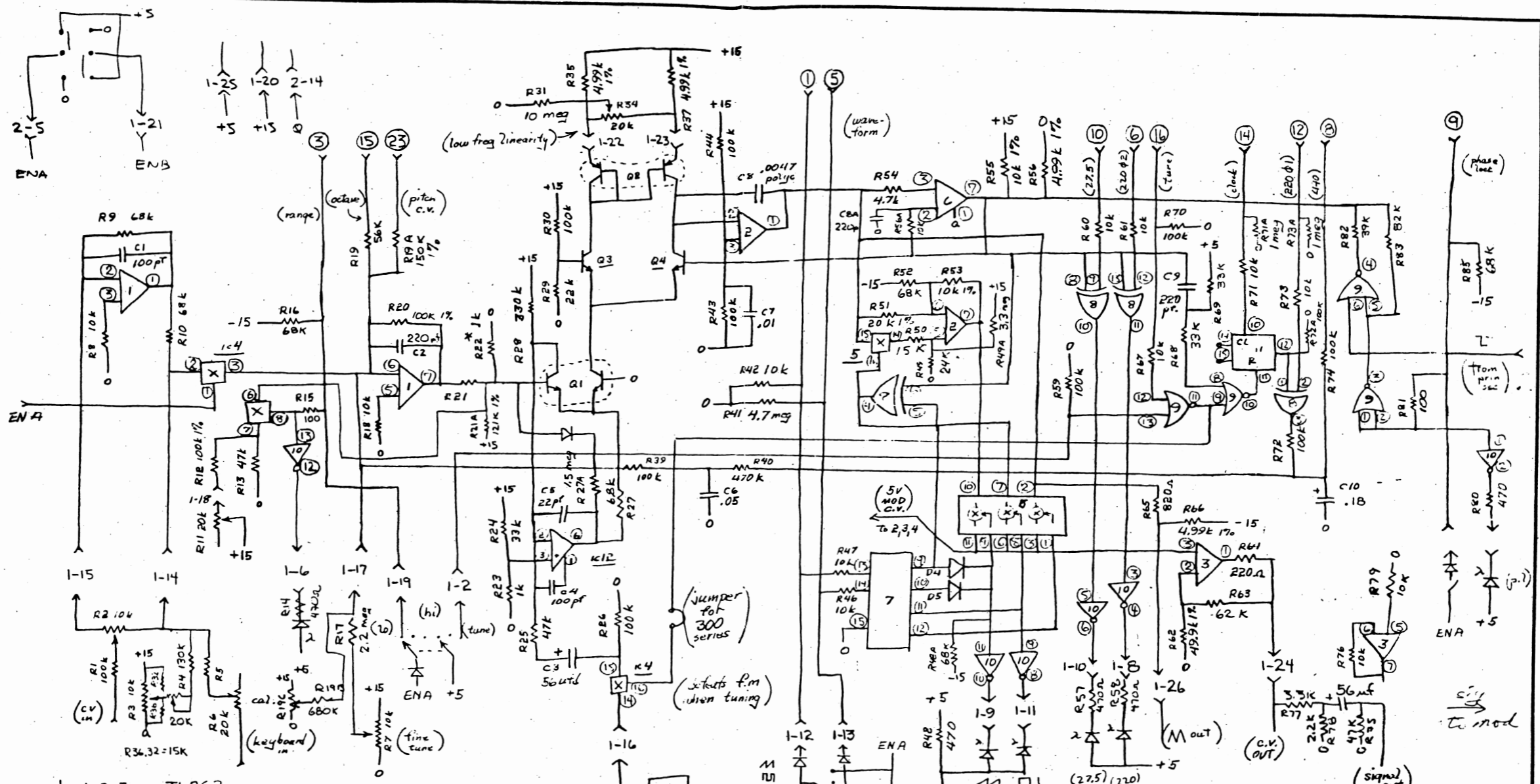


ALL 4.99K R's → 12
DOORS = 1N457
R3, R107 must be high

LED ANODE (+) : long lead
clip bracket a.n. to avoid short with trace

4 SIN 125 C

BUCHLA & Assoc.		
SCALE: 2X	APPROVED BY: 200 SERIES	DRAWN BY: CMM
DATE: 9/77		REVISED: EMM 10/77
LAYOUT: MODEL 259A MOTHER BOARD PROGRAMMABLE COMPACT WAVEFORM GENERATOR		
REV 11/78		DRAWING NUMBER: C-259-MB-1A



- IC's 1, 2, 3 TL062
- IC's 4, 5 LF 13331
- 6 LM311
- 7 4555
- 8 4030
- 9 4001
- 10 74LS05
- 11 4040 (AUTO TUNE SYSTEMS ONLY)
- 12 301A

- Q1 AD 811
 - Q2 AD 821
 - Q3, 4 EN3565
 - Q5-6 1N457
- power from 5V ref.
- * R22 TEL LABS Q81 1K TEMP COEA.

last c : 10
 last R : 85
 R12A, B, C

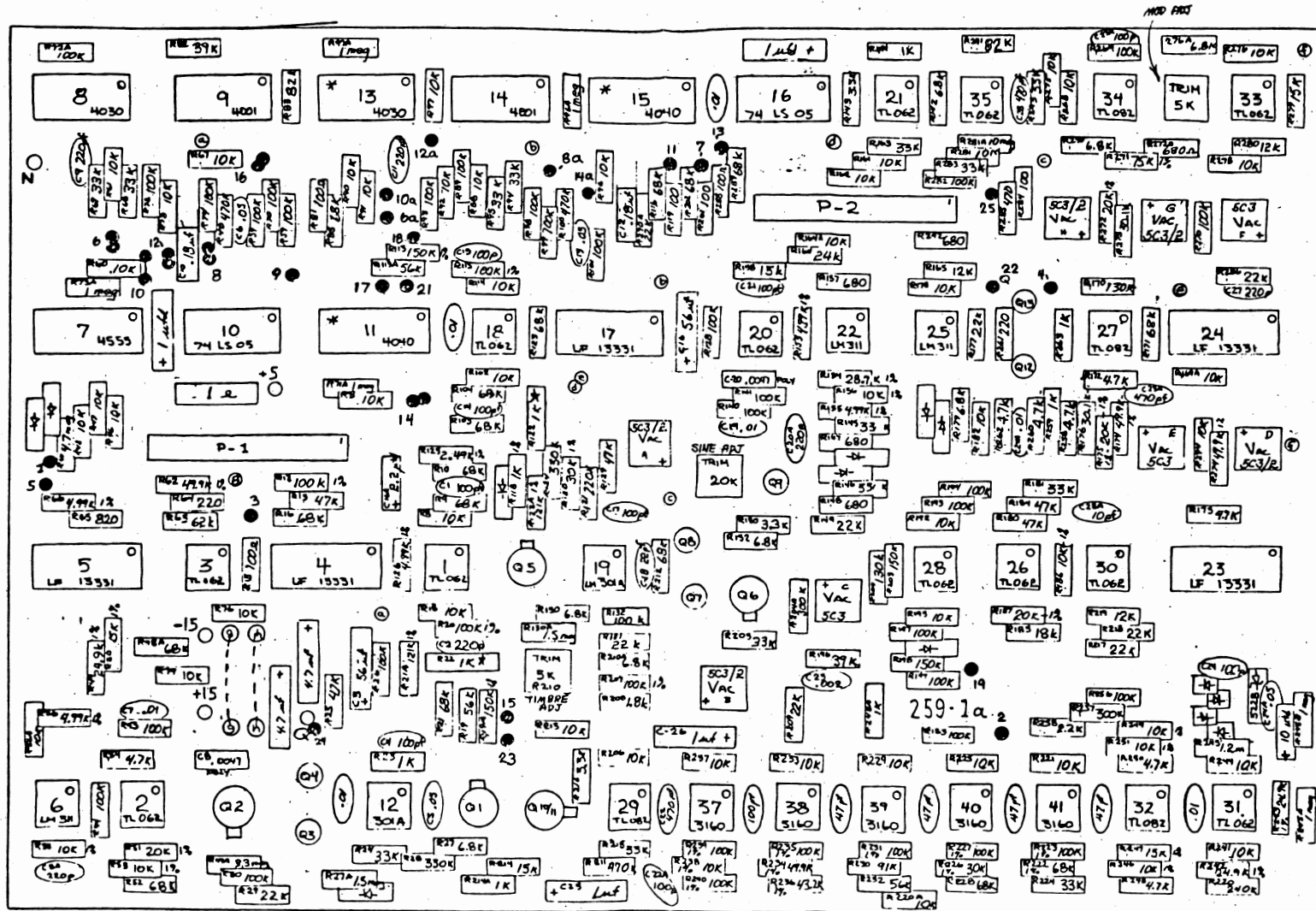
BUCHLA & ASSOCIATES

SCALE: —	APPROVED BY:	DRAWN BY
DATE:		REVISED
SCH: PART OF MODEL 259a		MODULATION
PROGRAMMABLE COMPLEX WAVEFORM GEN.		OSCILLATOR
REV 11/78		DRAWING NUMBER B2590-1A

FUNCTION	Pin #	wire color	259-1 P.C. hole #	259-1a P.C. hole #
waveshape (msb)	1	brown	4	1
order	14	red	23	2
range	2	orange	1	3
symmetry	15	yellow	25	4
waveshape (lsb)	3	green	5	5
220 Hz ϕ 2	16	blue	7, 15	6, 6a
timbre mod.	4	violet	26	7
440 Hz	17	grey	10, 19	8, 8a
phase lock	5	white	27	9
27.5 Hz	18	black	6, 14	10, 10a
pitch mod.	6	brown	20	11
220 Hz ϕ 1	19	red	9, 17	12, 12a
amp. mod.	7	orange	24	13
clock (112.64 kHz)	20	yellow	8, 18	14, 14a
freq. offset	8	green	2	15
TUNE	21	blue	11	16
pitch offset	9	violet	12	17
TUNE	22	grey	16	18
timbre c.v.	10	white	21	19
	23	black		
pitch c.v.	11	brown	13	21
	24	red	Q	22
freq. c.v.	12	orange	3	23
	25	yellow	Q	(24) Q
mod. index c.v.	13	green	22	25
remote (B) enable	26	blue	B	26

BUCHLA & ASSOCIATES

SCALE: _____	APPROVED BY: _____	DRAWN BY: <u>DP</u>
DATE: _____		REVISED
SCH: REMOTE WIRING for MODEL 259 P.C.W.G. # MODEL 259-1a		
		DRAWING NUMBER B 2590-5



Dc → IN457
 Q1,5 → AD 811
 Q2,6 → AD 821
 Q3,4,7,8,12,13 2N3565
 Q9 → 2N4339 - SELECTED
 Q10 → 2N5958

* R22, R222 TEL LABS Q81 1K
 * omit IC's 11, 13, 15 in non digital vers.

JUMPERS: a-a, b-b, c-c, d-d, e-e, f-f, Q(24) - Q(22).
 PWR. PROTECTION g-g, h-h.

4 1 P 2 1

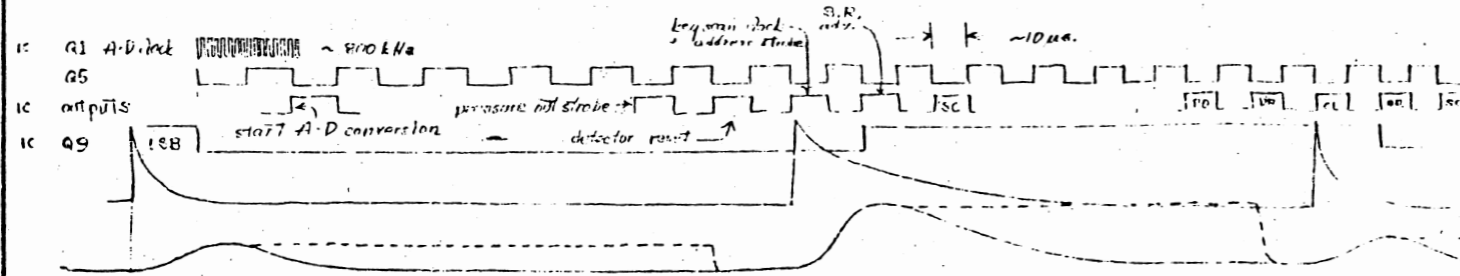
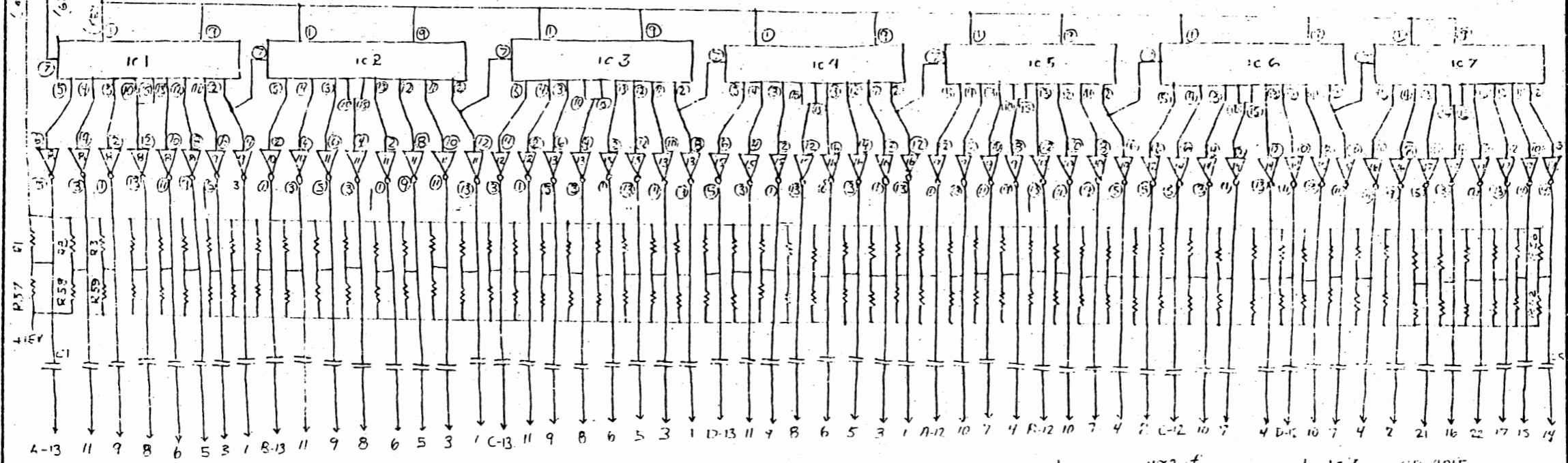
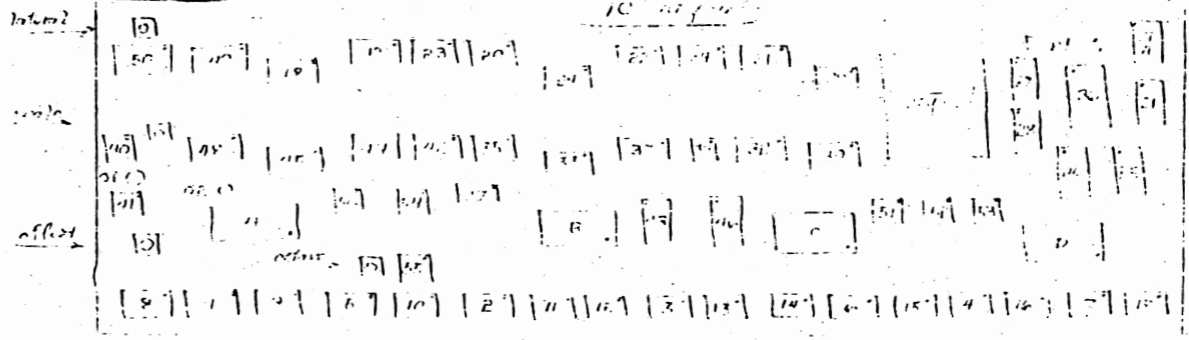
ICs			
TL062	12	CD 4001	2
TL082	4	CD 4030	2 (1 in non dig)
LM301A	2	CD 4040	2 (0 in non dig)
LM311	3	CD 4555	1
3130	5	74 LS 05	2
LF 13331	5		

Buchla & Assoc		
SCALE: 2X	APPROVED BY:	DRAWN BY: <i>DLH</i>
DATE: 9/77		REVISED DATA: 10/77
LAYOUT: MODEL 259-1A PROGRAMMABLE COMPLEX WAVEFORM GENERATOR		
REV. 11/79		DRAWING NUMBER C-259-1a.1

DIGIT PL OUTPUT ENCODING

00 0 X X X X X = invalid data
 00 1 P P P P P = pressure
 01 A A A A A A = key address (reaction)
 10 A A A A A A = key closure
 11 A A A A A A = key release

with jumper c installed non-zero pressures are outputted followed by addresses.
 with jumper d, only actions are outputted



C's 1-56 470 pF
 R's 1-56 150K
 R's 57-112 150K
 C's 1-7 00 4015
 IC's 8-17 74C906
 non-polarized battery

BUCHTA (b) ASSOCIATES

SCALE: ---	APPROVED BY:	DRAWN BY: D
DATE:		REVISED:
TITLE: MINISTATIC INPUT PORT MODEL 221		DRAWING NUMBER: B2210-1
LIV' CORN + USING DIAGRAM		

