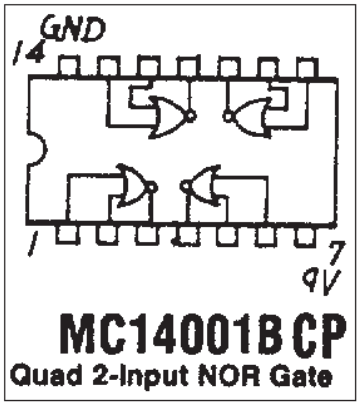
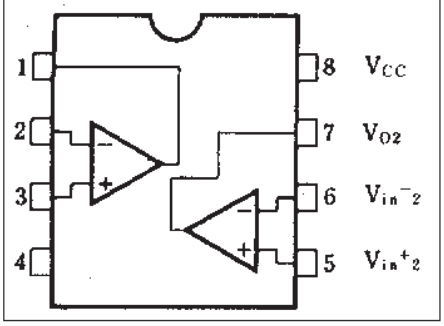


MC14001B CP

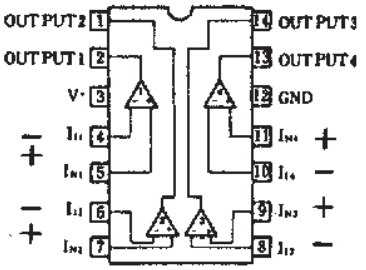
Quad 2-Input NOR Gate

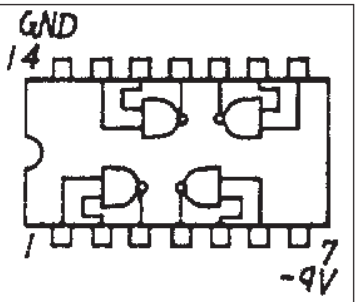
NJM2904



AN6912

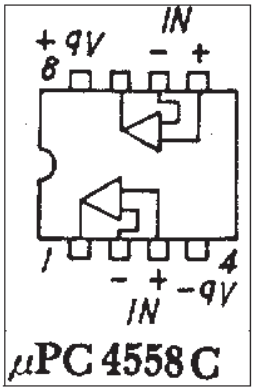
Quad Comparator





TC4011BP

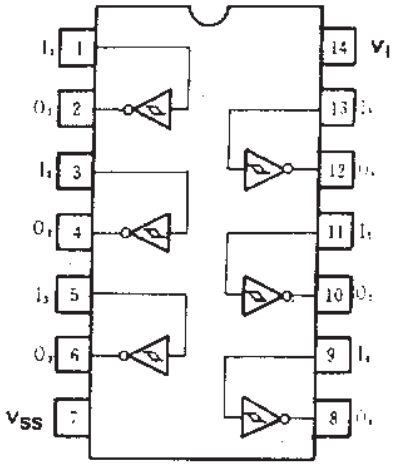
Quad 2-Input NAND Gate



μPC4558C

HD14584B

Hex Schmitt Trigger



MC14013B

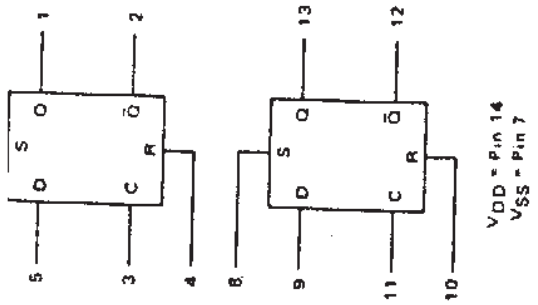
DUAL TYPE D FLIP-FLOP

TRUTH TABLE

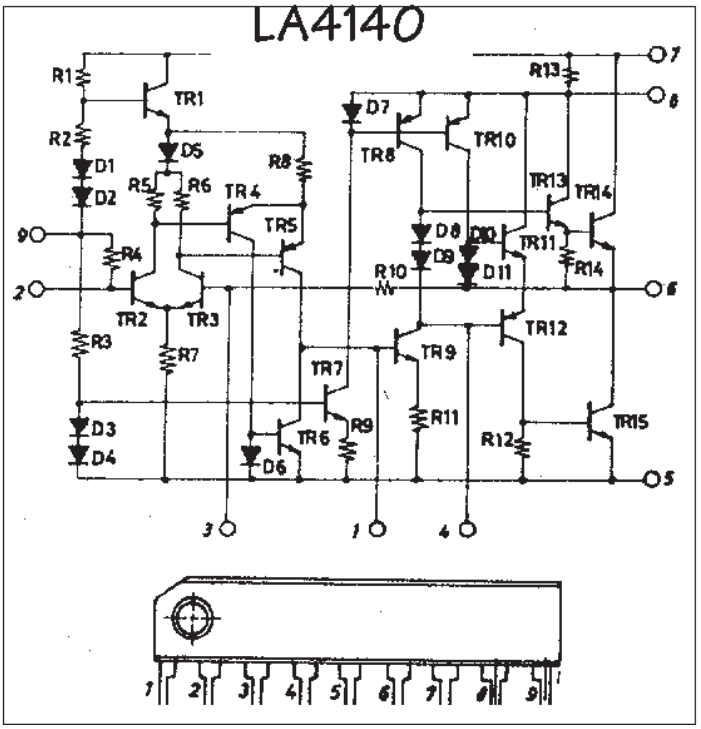
INPUTS				OUTPUTS	
CLOCK[1]	DATA	RESET	SET	Q	Q̄
⌐⌐	0	0	0	0	1
⌐⌐	1	0	0	1	0
⌐⌐	X	0	0	Q	Q̄
X	X	1	0	0	1
X	X	0	1	1	0
X	X	1	1	1	1

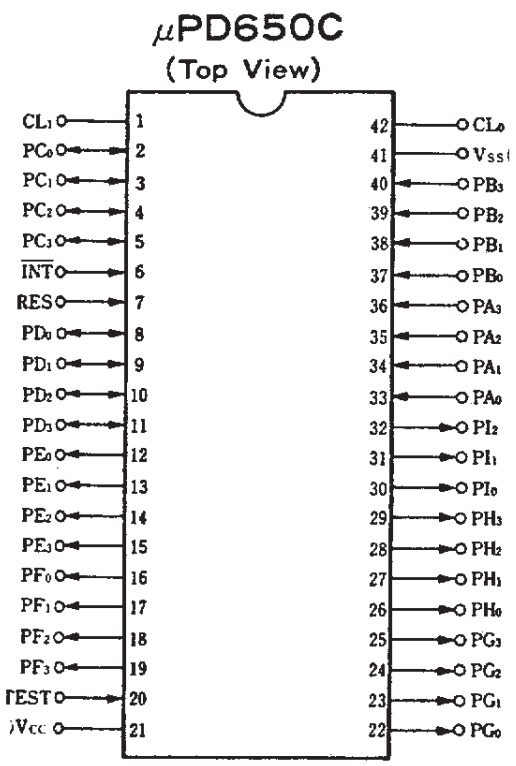
No Change

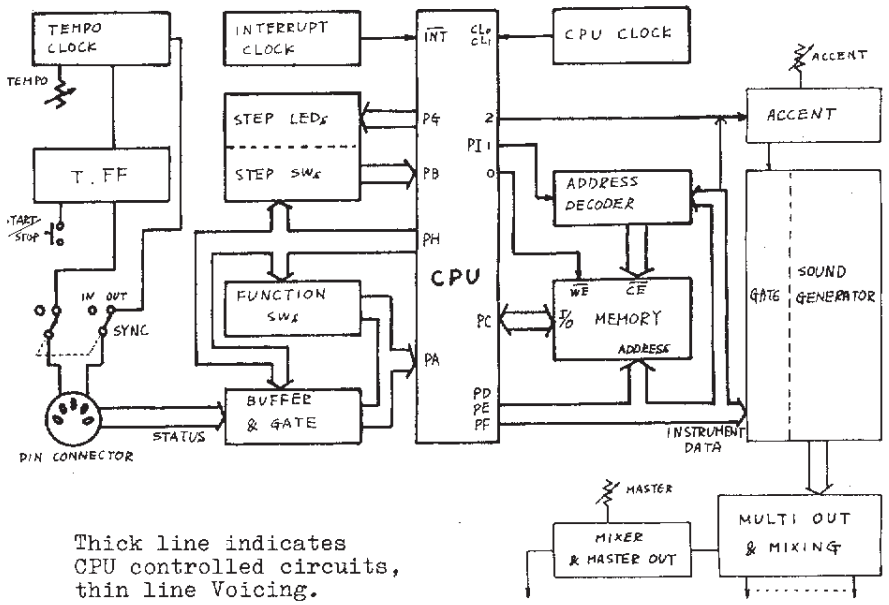
X = Don't Care
↑ = Level Change



LA4140







Thick line indicates
CPU controlled circuits,
thin line Voicing.

BLOCK DIAGRAM

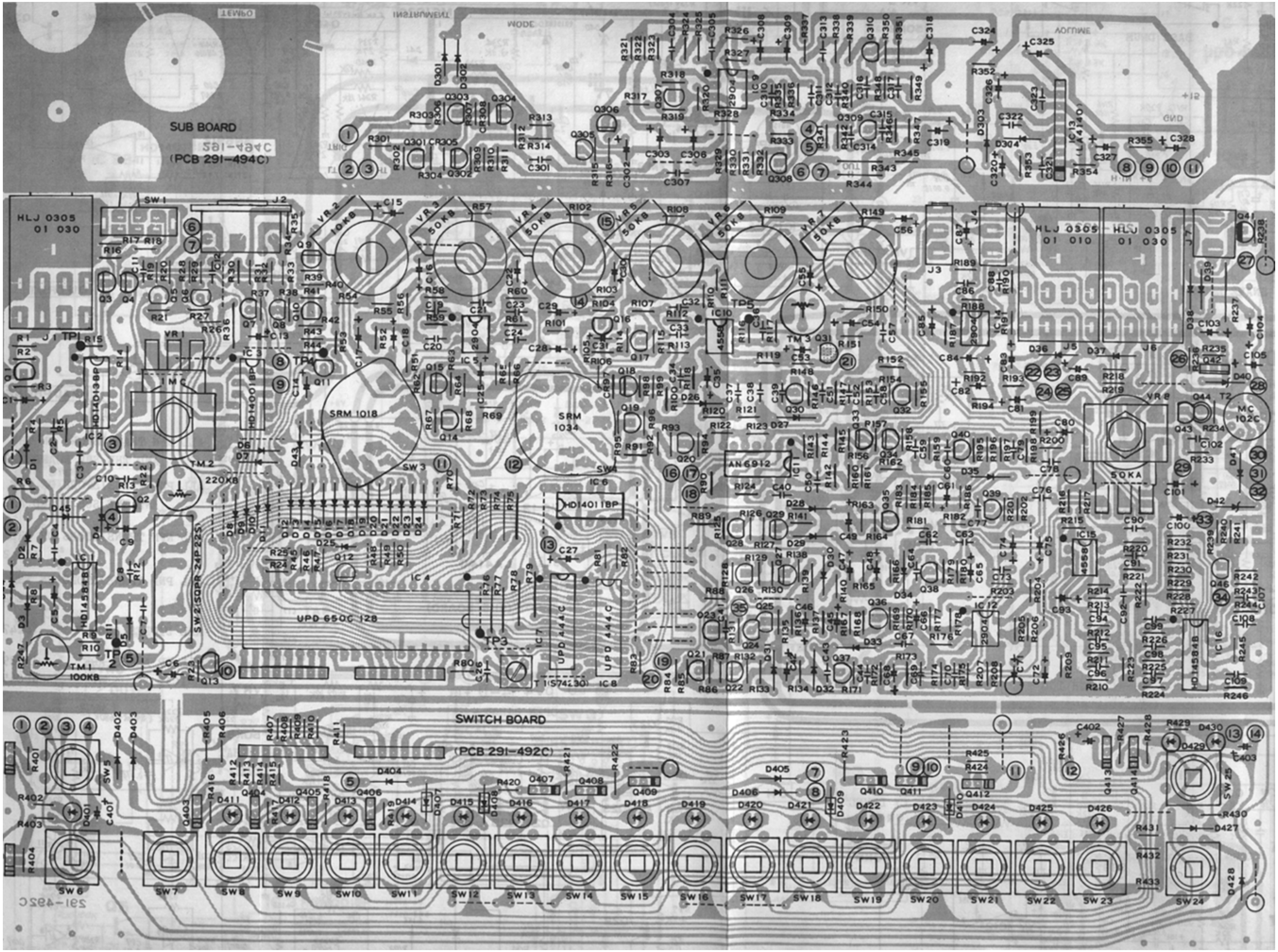
μPD650C–085 FUNCTIONAL DESCRIPTION

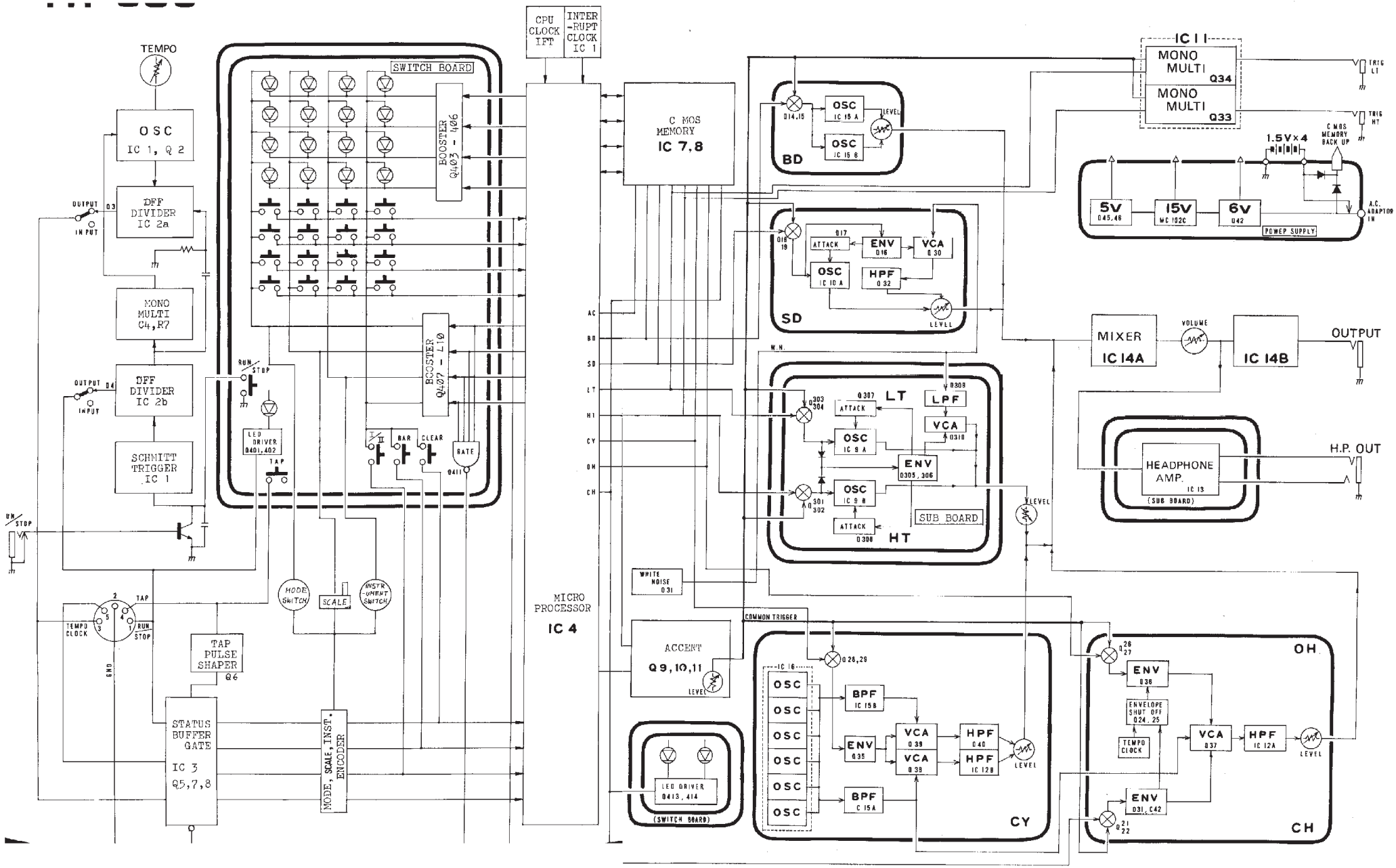
		No.	
PH (Port H)	0	26	Scanning signal outputs to switches
	1	27	
	2	28	Switching signal outputs to STATUS BUFFER & GATE
	3	29	
PA (Port A)	0	33	Switch scanning signal inputs
	1	34	
	2	35	STATUS (TEMPO CLOCK. START/STOP. TAP) inputs
	3	36	
PB (Port B)	0	37	Inputs from STEP Switches (RHYTHM SELECT Swtiches)
	1	38	
	2	39	
	3	40	
PG (Port G)	0	22	Drive signals to STEP LEDs
	1	23	
	2	24	
	3	25	
PE (Port E)	0	12	I/II Memory bank select
	1	13	
	2	14	
	3	15	
PD (Port D)	0	8	MEMORY ADDRESSES These pins use CE from ADDRESS Decoder to select cells in RAM to be accessed
	1	9	Rhythm numbers
	2	10	
	3	11	
PF (Port F)	0	16	Step numbers
	1	17	
	2	18	
	3	19	
PC (Port C)	0	2	Data Inputs/Outputs
	1	3	
	2	4	
	3	5	
PI (Port I)	0	30	Memory WE
	1	31	Memory CE (associated with PE-2, 3 at ADDRESS DECODER)
	2	32	Trigger Pulse (INSTRUMENT) output

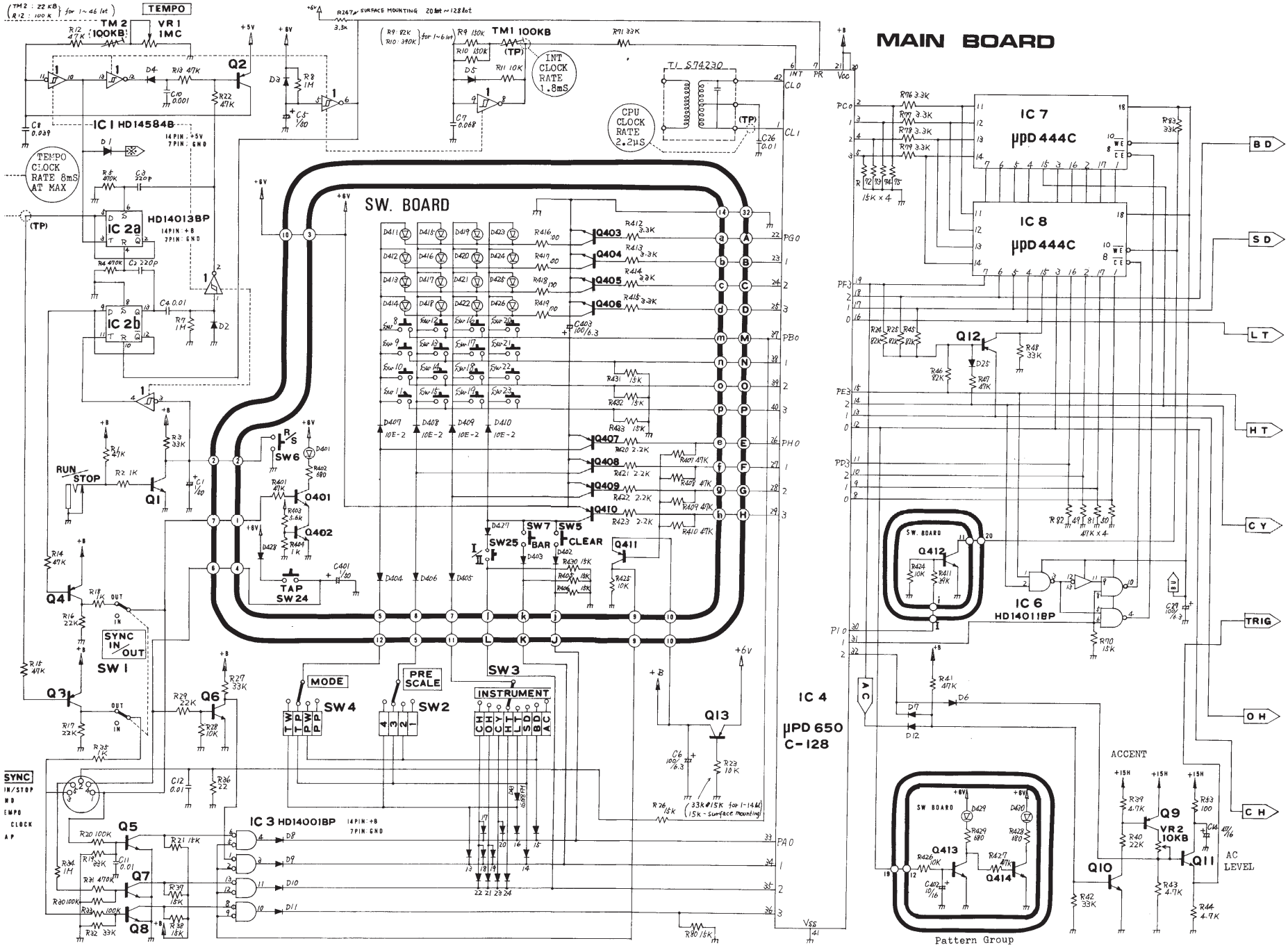
CH
OH
CY
HT

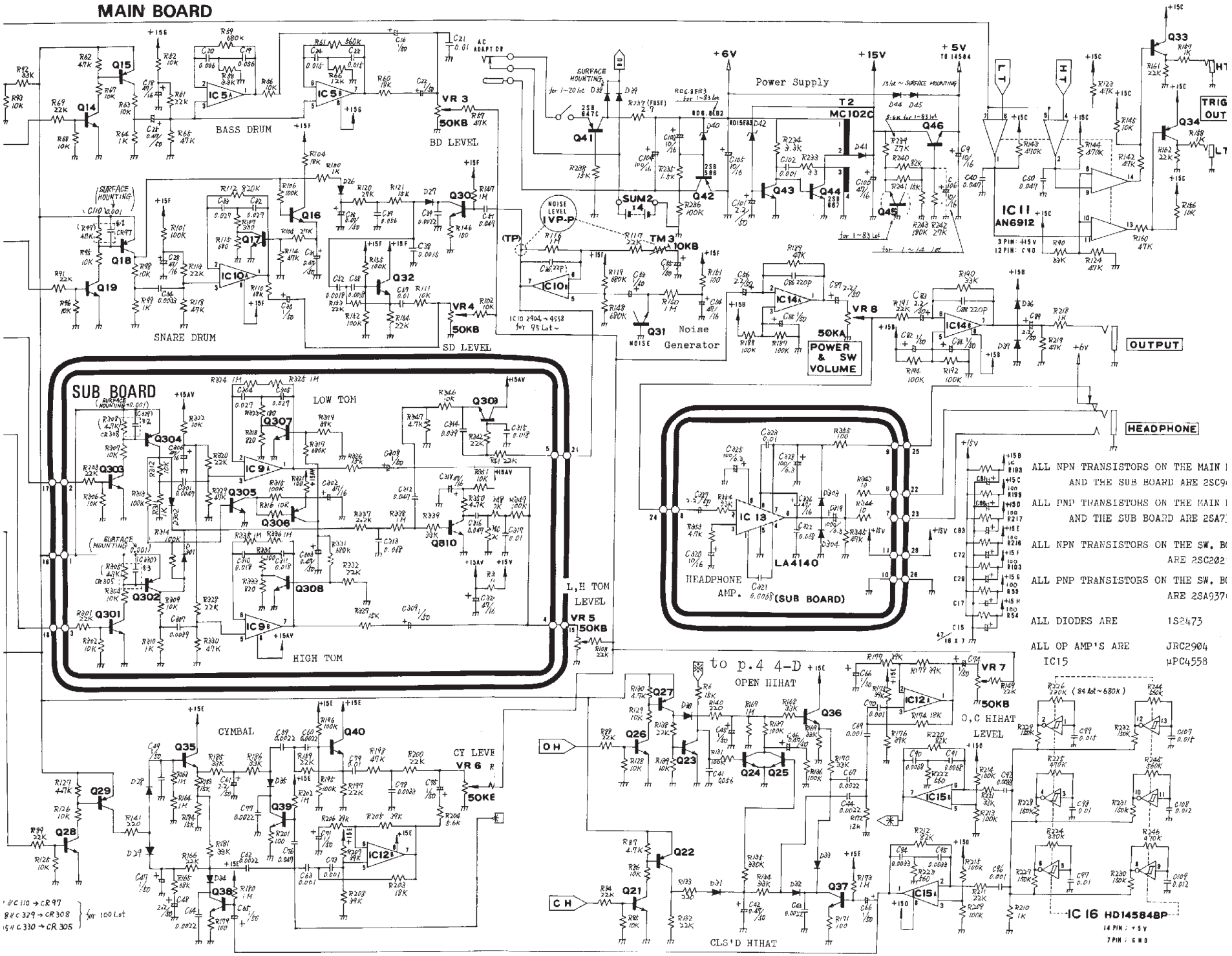
INSTRUMENT DATA
These data need COMMON TRIG to trigger Sound Generators being designated

LT
SD
BD
AC


SUB BOARD
(PCB 291-494C)
TEMPO
INSTRUMENT
MODE
VOLUME
SRM 1018
SRM 1034
UPD 650C 128
UPD 444C
AN6912
HD14013BP
HD14001BP
HD14011BP
HD14584B
SWITCH BOARD
(PCB 291-492C)
291-492C


TEMPO
OSC
IC 1, Q 2
DFF DIVIDER IC 2a
MONO MULTI C4, R7
DFF DIVIDER IC 2b
SCHMITT TRIGGER IC 1
OUTPUT
IN PUT
Q3
Q4
RUN STOP
LED DRIVER Q401, 402
TAP
SWITCH BOARD
BOOSTER Q403 - 406
BOOSTER Q407 - L10
II
BAR
CLEAR
GATE
Q411
TEMPO CLOCK
GND
TAP PULSE SHAPER Q6
MODE SWITCH
SCALE
INSTR-UMENT SWITCH
STATUS BUFFER GATE IC 3 Q5,7,8
MODE, SCALE, INST. ENCODER
CPU CLOCK IFT
INTER-RUPT CLOCK IC 1
MICRO PROCESSOR IC 4
C MOS MEMORY IC 7,8
AC
BD
SD
LT
HT
CY
OH
CH
W.N.
WHITE NOISE Q31
ACCENT Q9, 10, 11
LEVEL
COMMON TRIGGER
LED DRIVER Q413, 414
(SWITCH BOARD)
BD
OSC IC 15 A
OSC IC 15 B
Q14, 15
SD
ATTACK
ENV Q16
VCA Q30
OSC IC 10 A
HPF Q32
Q17
Q18 19
LT
LPF
VCA Q310
ENV Q305, 306
OSC IC 9 A
OSC IC 9 B
Q303 304
Q301 302
Q307
Q308
Q309
HT
SUB BOARD
IC 11
MONO MULTI Q34
MONO MULTI Q33
TRIG LT
TRIG HT
1.5V×4
C MOS MEMORY BACK UP
5V Q45, 46
15V MC 102C
6V Q42
POWER SUPPLY
A.C. ADAPTOR IN
MIXER IC 14A
VOLUME
IC 14B
OUTPUT
HEADPHONE AMP. IC 13
(SUB BOARD)
H.P. OUT
IC 16
OSC
BPF IC 15B
ENV Q35
VCA Q39
VCA Q38
HPF Q40
HPF IC 12B
BPF C 15A
Q28, 29
CY
Q26 27
ENV Q36
ENVELOPE SHUT OFF Q24, 25
TEMPO CLOCK
VCA Q37
HPF IC 12A
ENV Q31, C42
Q21 22
OH
CH


MAIN BOARD
TEMPO
TM 2 100KB
VR 1 1MC
IC 1 HD14584B
IC 2a HD14013BP
IC 2b
TEMPO CLOCK RATE 8mS AT MAX
TM1 100KB
INT CLOCK RATE 1.8mS
TI S74230
CPU CLOCK RATE 2.2µS
SW. BOARD
RUN STOP
SW6
Q1
Q401
Q402
TAP SW24
SYNC IN/OUT
SW1
Q4
Q3
Q6
MODE
SW4
PRE SCALE
SW2
SW3
INSTRUMENT
Q13
IC 4 µPD 650 C-128
IC 3 HD14001BP
Q5
Q7
Q8
IC 7 µPD444C
IC 8 µPD444C
Q12
IC 6 HD14011BP
Q412
Q413
Q414
Pattern Group
ACCENT
Q9
VR2 10KB
Q11
Q10
AC LEVEL
BD
SD
LT
HT
CY
OH
TRIG
CH


MAIN BOARD
SUB BOARD
BASS DRUM
BD LEVEL
SNARE DRUM
SD LEVEL
LOW TOM
HIGH TOM
L,H TOM LEVEL
CYMBAL
CY LEVEL
OPEN HIHAT
CLS'D HIHAT
O,C HIHAT LEVEL
Power Supply
Noise Generator
POWER & SW VOLUME
OUTPUT
HEADPHONE
HEADPHONE AMP. (SUB BOARD)
LA4140
IC11 AN6912
IC 16 HD145848P
to p.4 4-D
ALL NPN TRANSISTORS ON THE MAIN
AND THE SUB BOARD ARE 2SC9
ALL PNP TRANSISTORS ON THE MAIN
AND THE SUB BOARD ARE 2SA7
ALL NPN TRANSISTORS ON THE SW. B
ARE 2SC202
ALL PNP TRANSISTORS ON THE SW. B
ARE 2SA937
ALL DIODES ARE 1S2473
ALL OP AMP'S ARE JRC2904
IC15 μPC4558