

MC14013B

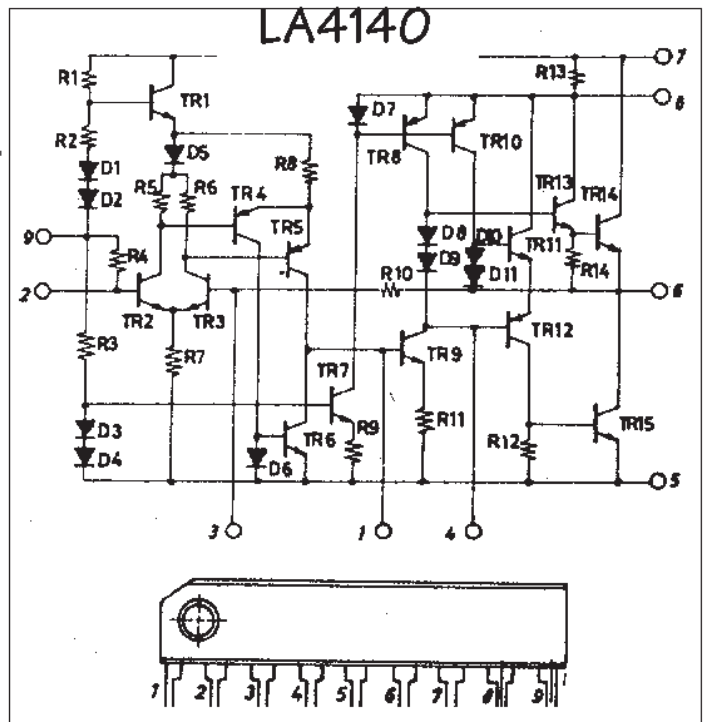
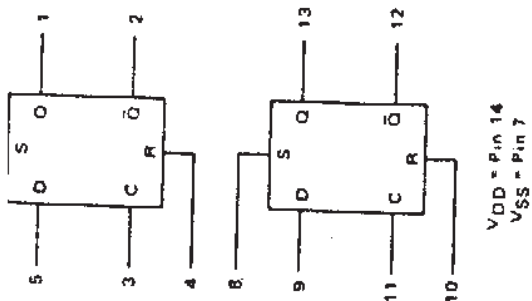
DUAL TYPE D FLIP-FLOP

TRUTH TABLE

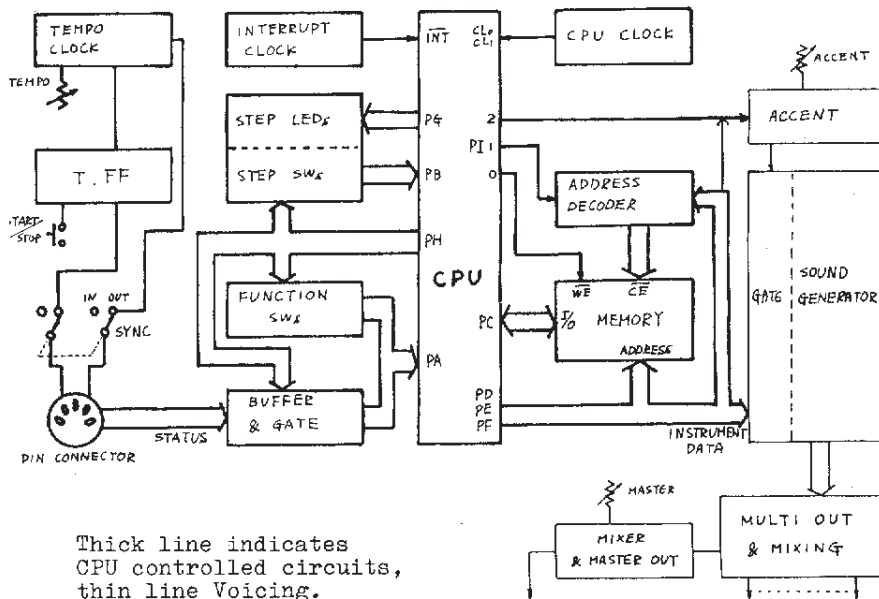
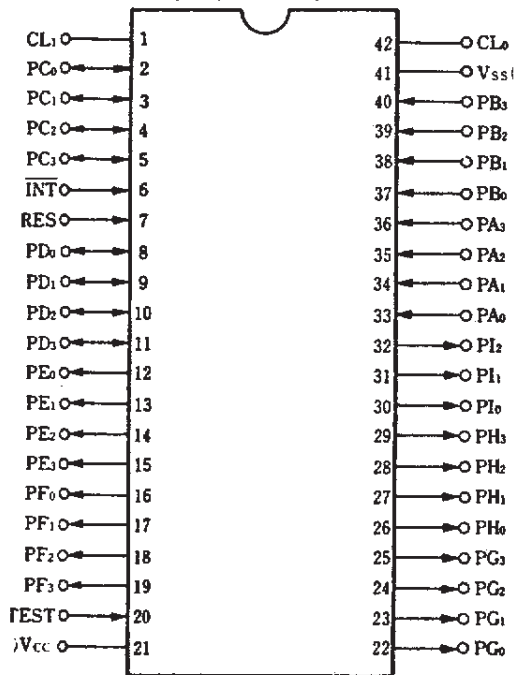
CLOCK ¹	INPUTS			OUTPUTS	
	DATA	RESET	SET	Q	\bar{Q}
	0	0	0	0	1
	1	0	0	1	0
	X	0	0	Q	\bar{Q}
X	X	1	0	0	1
X	X	0	1	1	0
X	X	1	1	1	1

No Change

X = Don't Care
1 = Level Change



μPD650C (Top View)

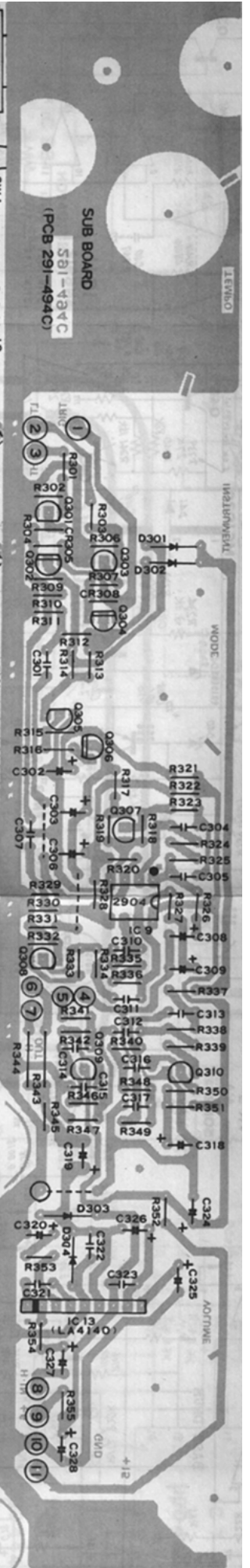
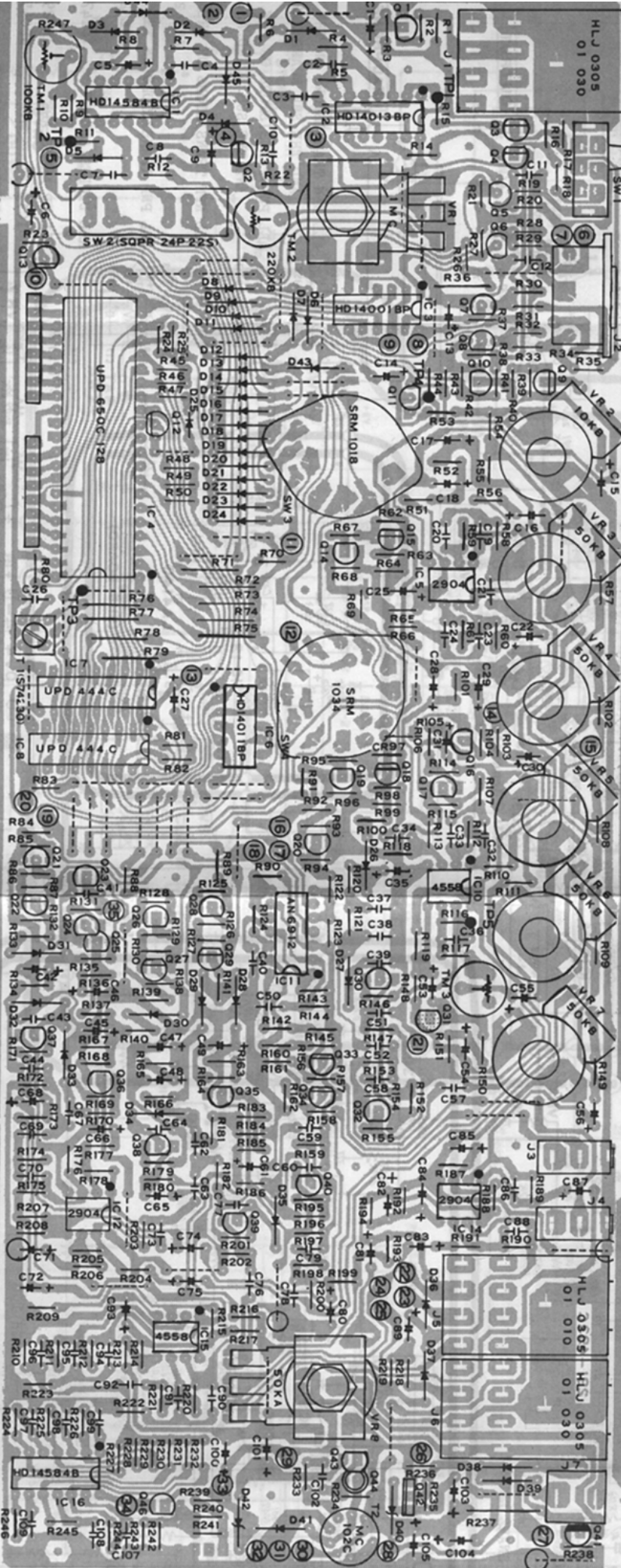
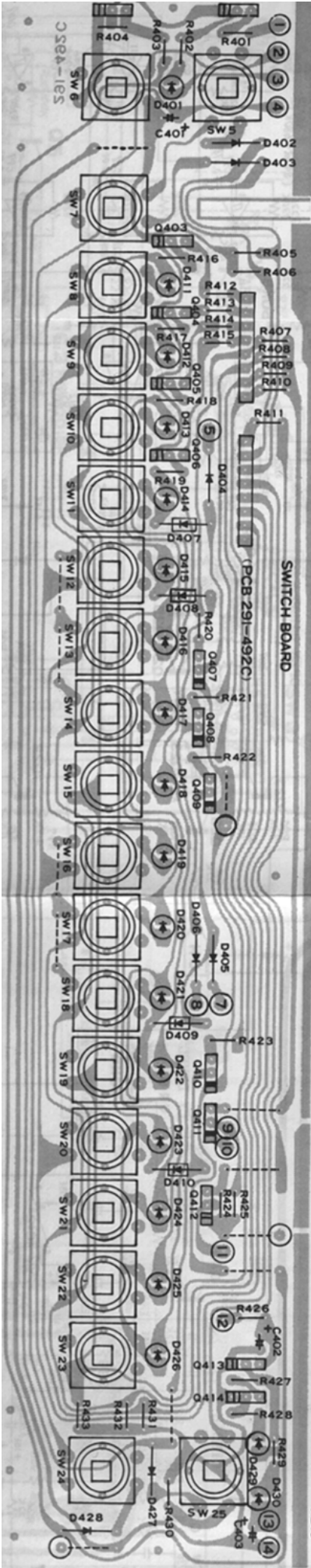


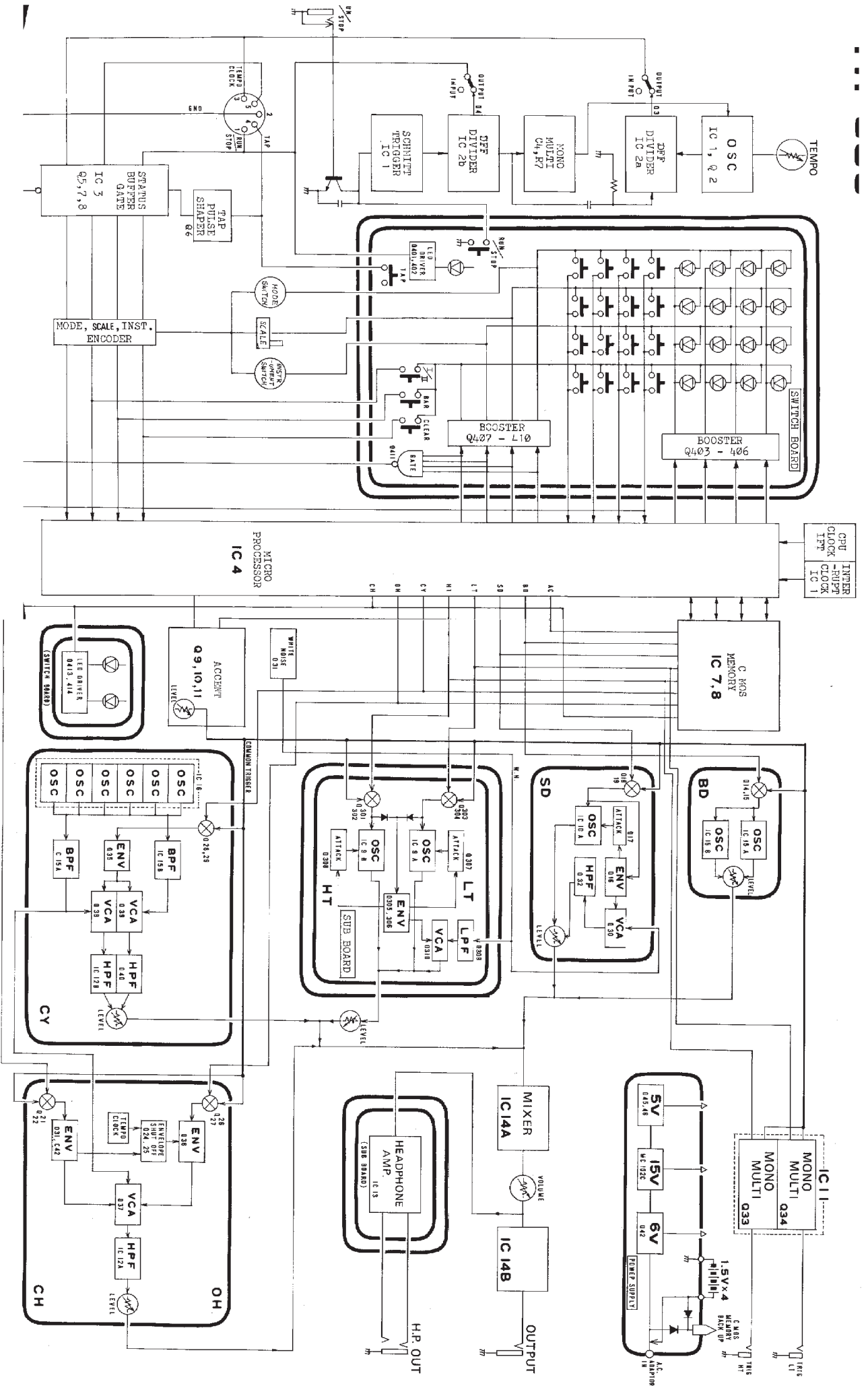
Thick line indicates CPU controlled circuits, thin line Voicing.

BLOCK DIAGRAM

μPD650C-085 FUNCTIONAL DESCRIPTION

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





TEMPO

OSC
IC 1, Q 2

OUTPUT 03
IN PORT

DPF
DIVIDER
IC 2A

MONO
MULTI
IC 4, R7

DPF
DIVIDER
IC 2B

SCHMITT
TRIGGER
IC 1

TAP

TAP
PULSE
SHAPER
IC 3
Q5,7,8

MODE, SCALE, INSTR.
ENCODER

SWITCH BOARD

BOOSTER
Q403 - 406

BOOSTER
Q407 - 410

LED DRIVERS
Q410, Q411

MODE
SCALE
INSTR.

SWITCH

SWITCH

SWITCH

SWITCH

SWITCH

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SWITCH

GPU
CLOCK
-RUFF
CLOCK
IC 1

INTER
CLOCK
-RUFF
CLOCK
IC 1

MICRO
PROCESSOR
IC 4

C ROS
MEMORY
IC 7, 8

BD
OSC
IC 18 A
IC 18 B

SD
OSC
IC 10 A
IC 9 A
IC 9 B

HT
OSC
IC 8 A
IC 8 B

CY
OSC
IC 15 A
IC 15 B

OH
OSC
IC 12 A
IC 12 B

ENV
IC 18 A
IC 18 B

ENV
IC 10 A
IC 9 A
IC 9 B

ENV
IC 8 A
IC 8 B

ENV
IC 15 A
IC 15 B

ENV
IC 12 A
IC 12 B

VCA
IC 18 A
IC 18 B

VCA
IC 10 A
IC 9 A
IC 9 B

VCA
IC 8 A
IC 8 B

VCA
IC 15 A
IC 15 B

VCA
IC 12 A
IC 12 B

HPF
IC 18 A
IC 18 B

HPF
IC 10 A
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IC 9 B

HPF
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HPF
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HPF
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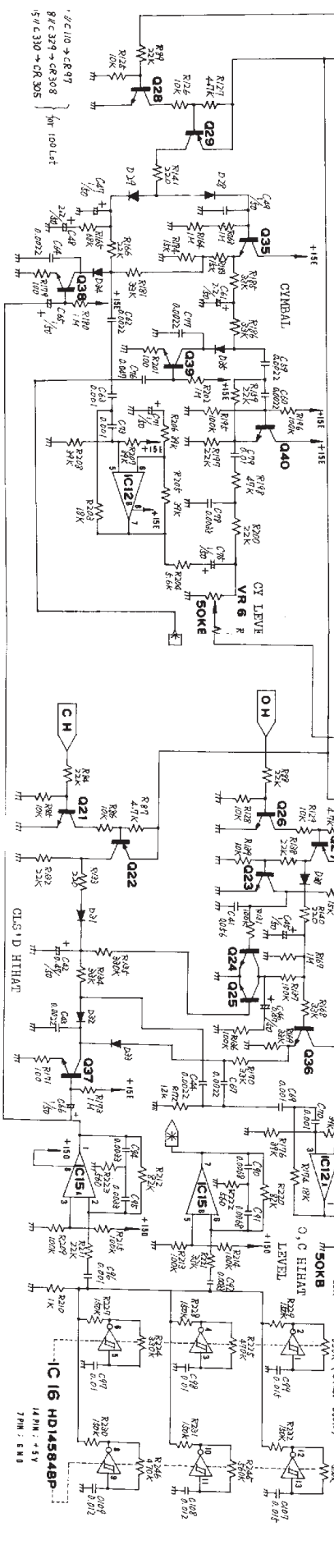
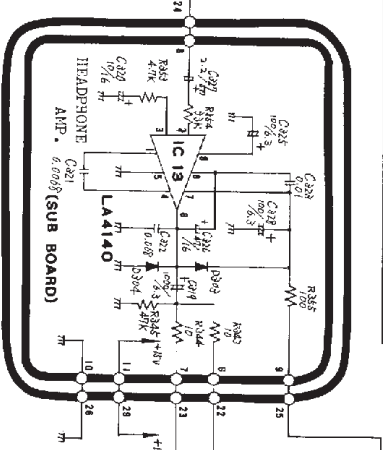
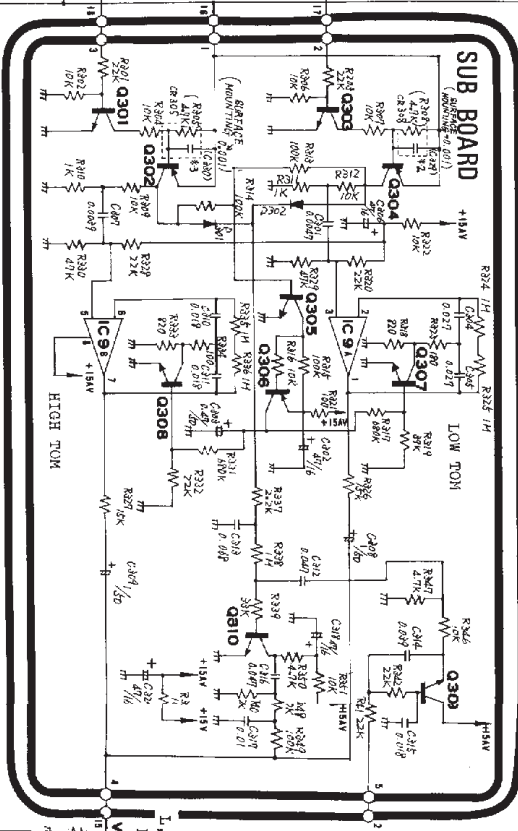
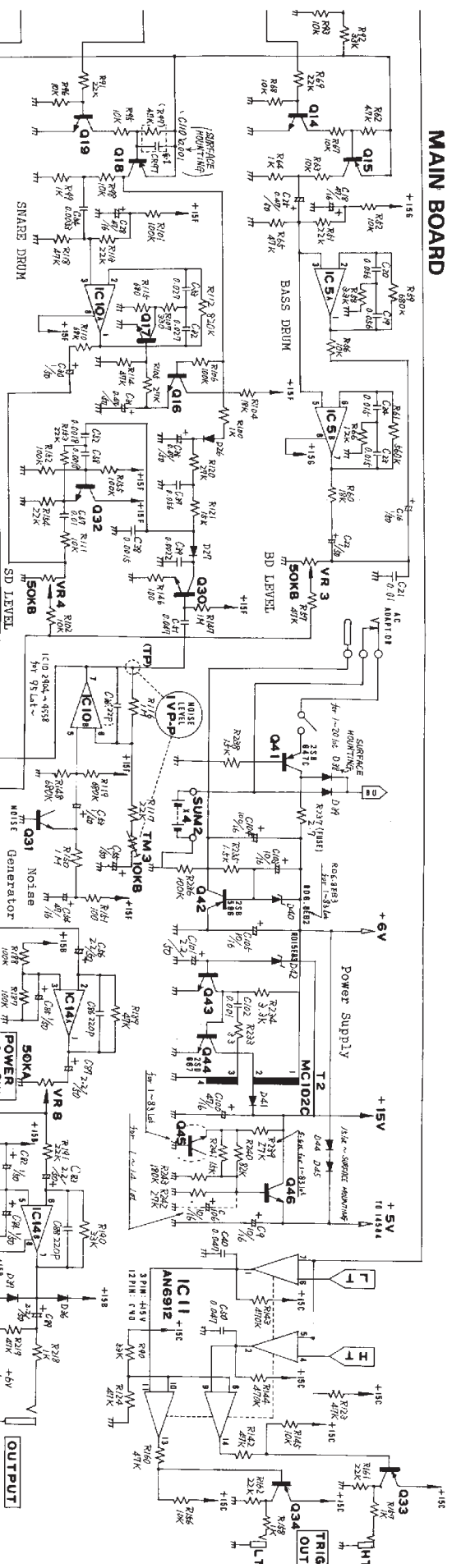
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MAIN BOARD



ALL NEW TRANSISTORS ON THE MAIN !
AND THE SUB BOARD ARE 28C9.

ALL PNP TRANSISTORS ON THE MAIN !
AND THE SUB BOARD ARE 28A7.

ALL NEW TRANSISTORS ON THE SW. BR
ARE 28C202

ALL PNP TRANSISTORS ON THE SW. BR
ARE 28A37.

ALL DIODES ARE
1S2475

ALL OP AMP'S ARE
JRC2904

IC15
MPC4558

IC16 HD14584P

14 PIN : +5V

7 PIN : 5B

* IC10 → CR97
R/C 329 → CR308
5V C330 → CR305