

**MC14013B**

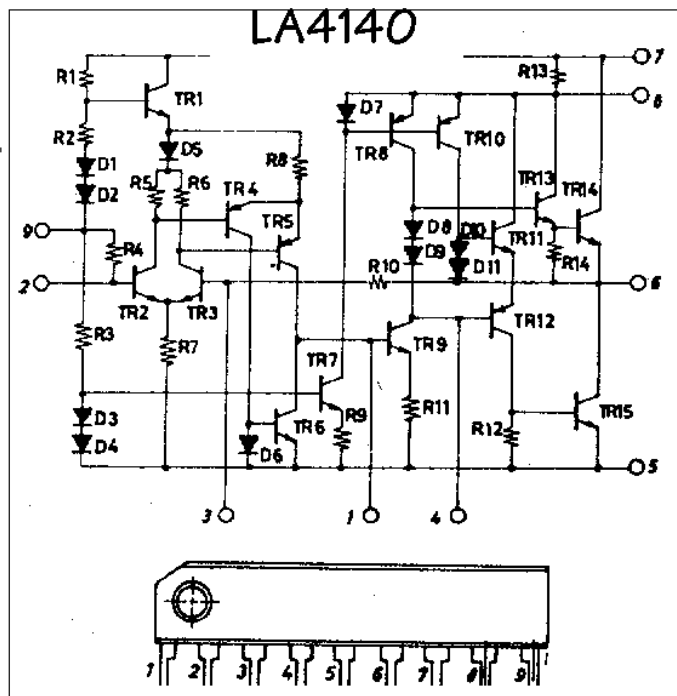
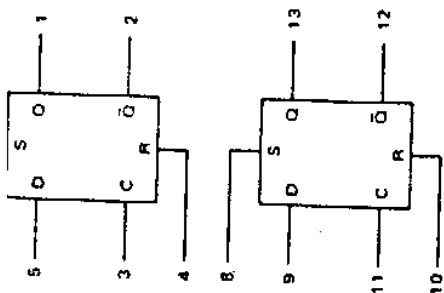
DUAL TYPE D FLIP-FLOP

TRUTH TABLE

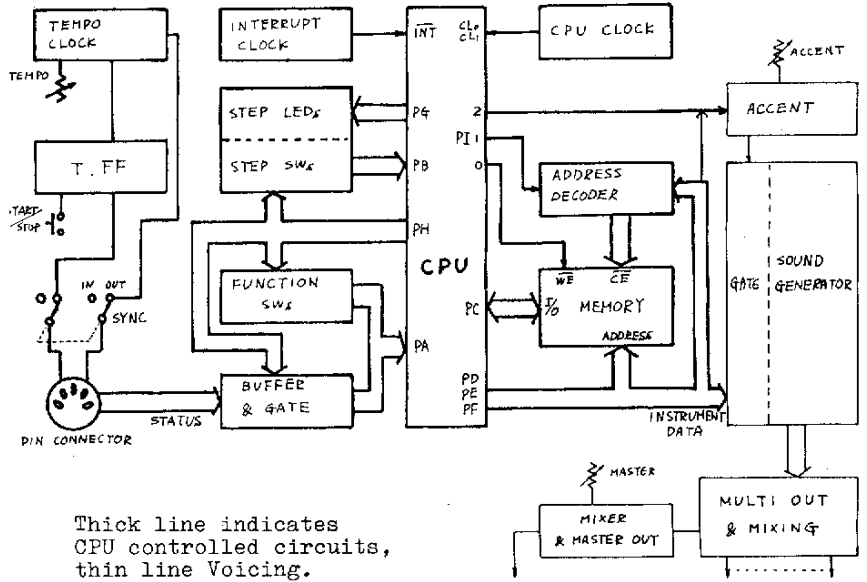
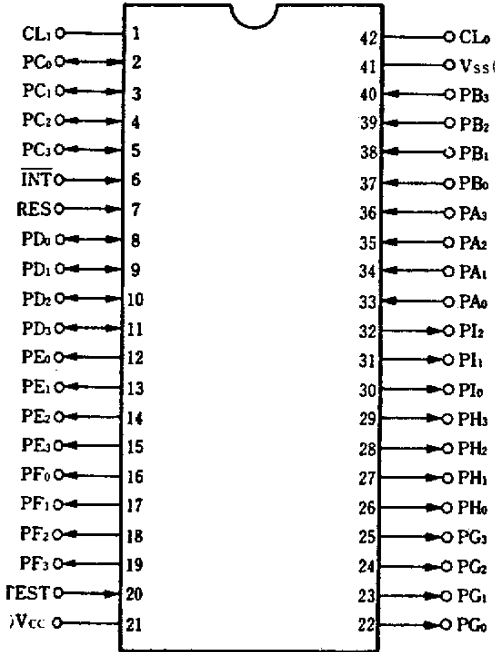
CLOCK <sup>1</sup>	INPUTS			OUTPUTS	
	DATA	RESET	SET	Q	Q̄
	0	0	0	0	1
	1	0	0	1	0
	X	0	0	Q	Q̄
X	X	1	0	0	1
X	X	0	1	1	0
X	X	1	1	1	1

No Change

X = Don't Care  
↑ = Level Change



**μPD650C**  
(Top View)



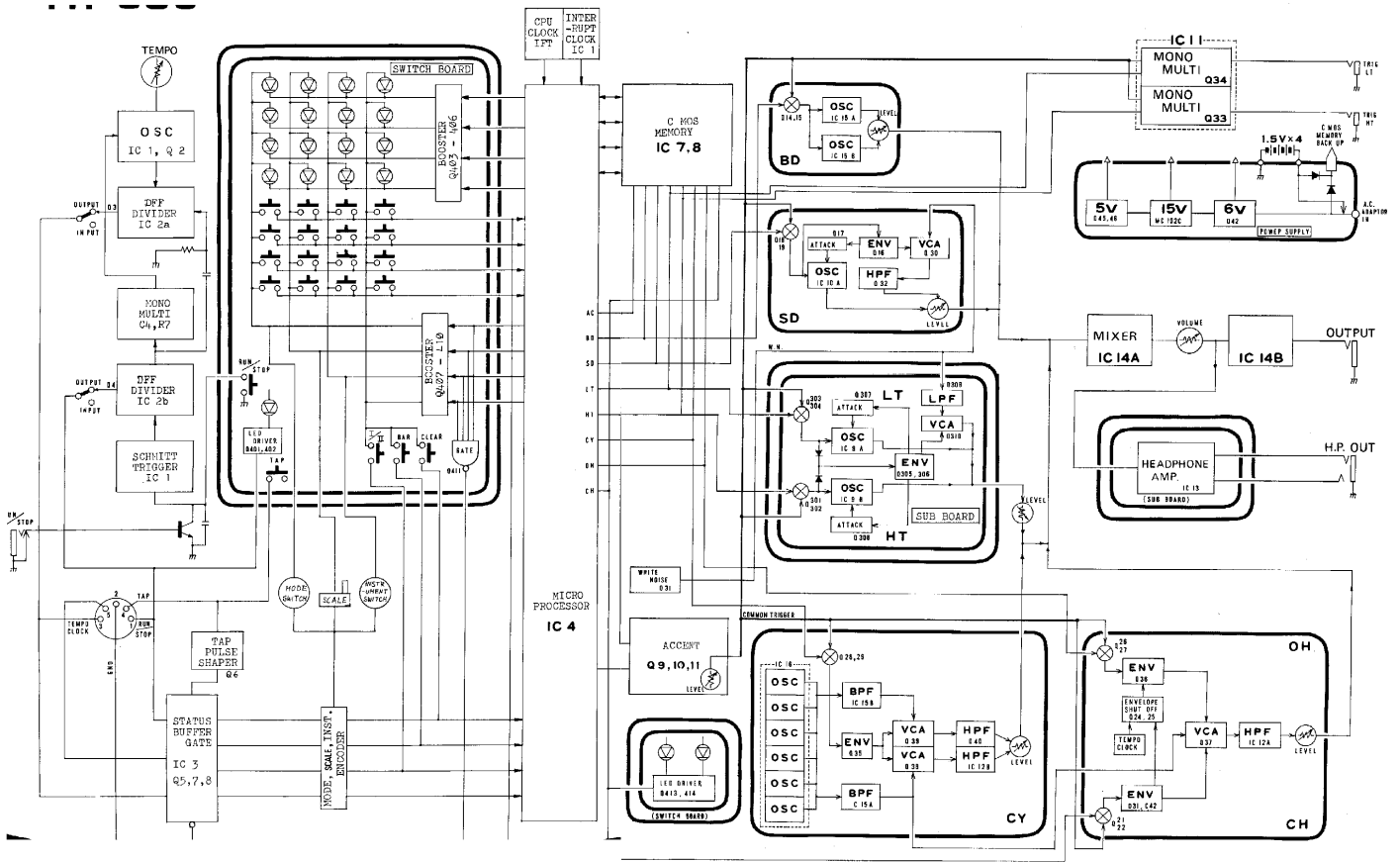
Thick line indicates CPU controlled circuits, thin line Voicing.

**BLOCK DIAGRAM**

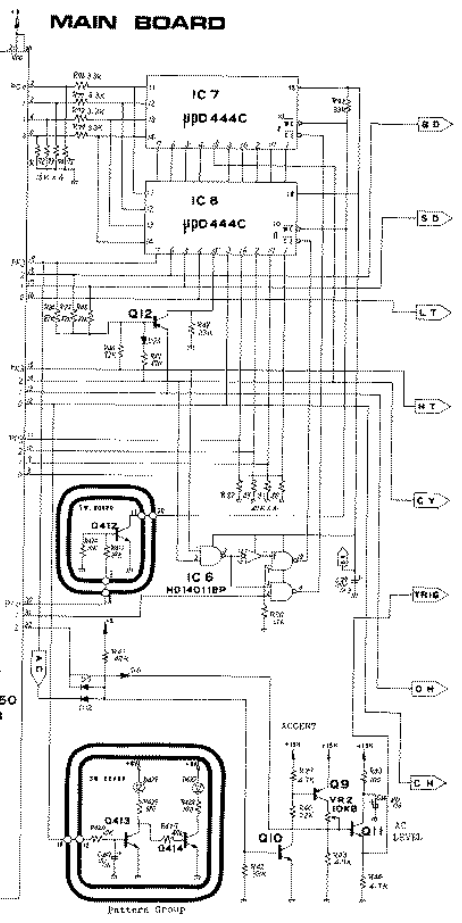
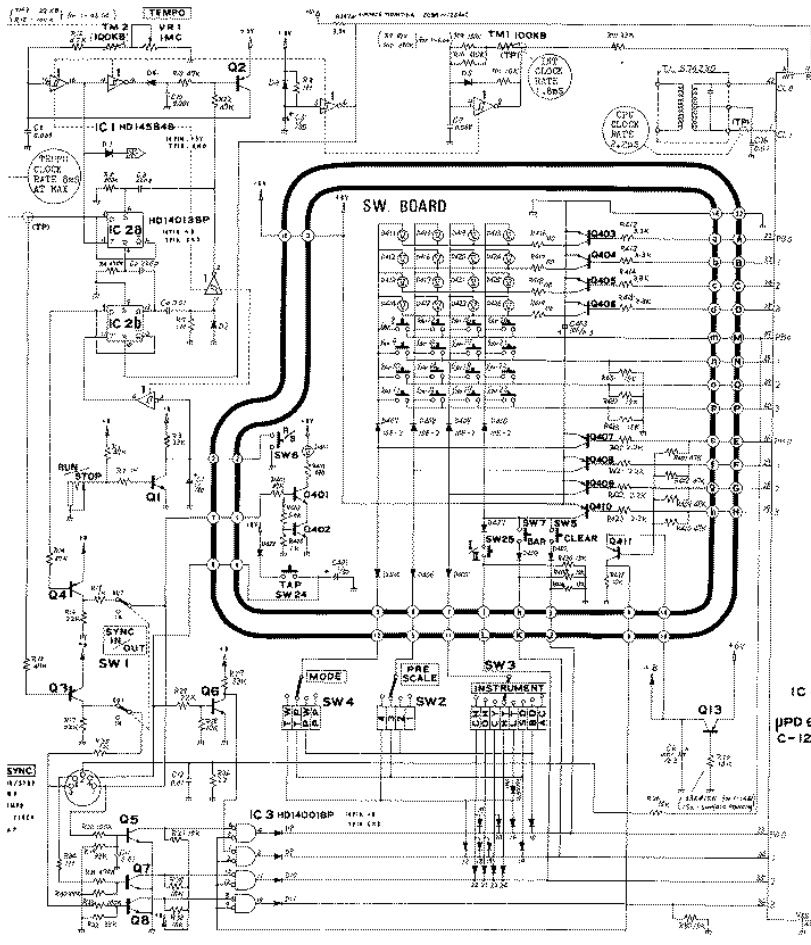
**μPD650C-085 FUNCTIONAL DESCRIPTION**

Port	No.	Description
PH (Port H)	0	Scanning signal outputs to switches
	1	Switching signal outputs to STATUS BUFFER & GATE
	2	Switching signal outputs to STATUS BUFFER & GATE
PA (Port A)	0	Switch scanning signal inputs
	1	STATUS (TEMPO CLOCK, START/STOP, TAP) inputs
	2	STATUS (TEMPO CLOCK, START/STOP, TAP) inputs
PB (Port B)	0	Inputs from STEP Switches (RHYTHM SELECT Switches)
	1	Inputs from STEP Switches (RHYTHM SELECT Switches)
	2	Inputs from STEP Switches (RHYTHM SELECT Switches)
PG (Port G)	0	Drive signals to STEP LEDs
	1	Drive signals to STEP LEDs
	2	Drive signals to STEP LEDs
PE (Port E)	0	I/O
	1	Memory bank select
	2	Memory bank select
PD (Port D)	0	MEMORY ADDRESSES
	1	These pins use CE from ADDRESS Decoder to select cells in RAM to be accessed
	2	These pins use CE from ADDRESS Decoder to select cells in RAM to be accessed
PF (Port F)	0	Rhythm numbers
	1	Rhythm numbers
	2	Rhythm numbers
PC (Port C)	0	Step numbers
	1	Step numbers
	2	Step numbers
PI (Port I)	0	INSTRUMENT DATA
	1	These data need COMMON TRIG to trigger Sound Generators being designated
	2	These data need COMMON TRIG to trigger Sound Generators being designated
PI (Port I)	0	Memory WE
	1	Memory CE (associated with PE-2, 3 at ADDRESS DECODER)
	2	Trigger Pulse (INSTRUMENT) output

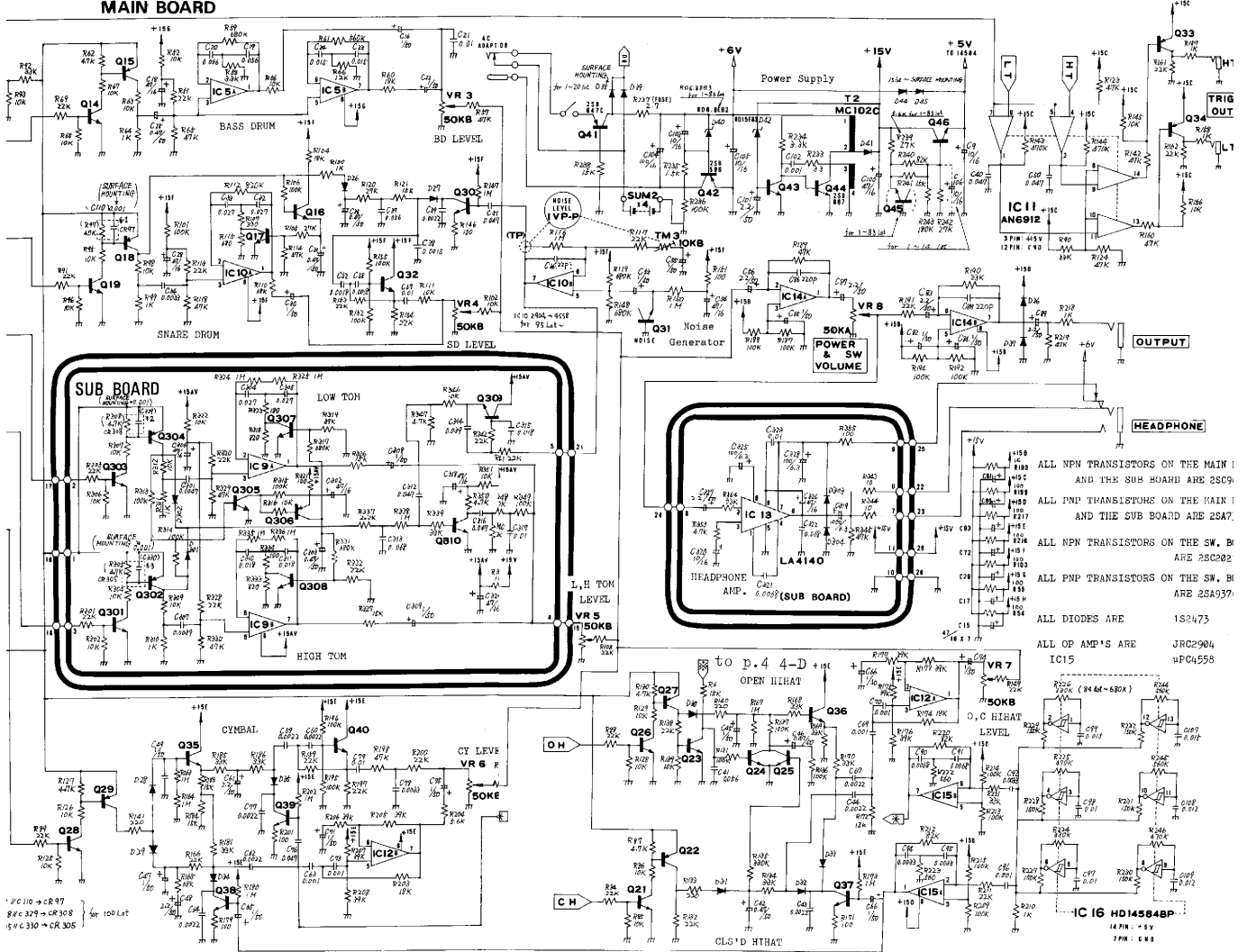








**MAIN BOARD**



- ALL NPN TRANSISTORS ON THE MAIN BOARD AND THE SUB BOARD ARE 2SC99
- ALL PNP TRANSISTORS ON THE MAIN BOARD AND THE SUB BOARD ARE 2SA7
- ALL NPN TRANSISTORS ON THE SW. BOARD ARE 2SC282
- ALL PNP TRANSISTORS ON THE SW. BOARD ARE 2SA937
- ALL DIODES ARE 1S2475
- ALL OP AMP'S ARE JRC2904
- IC15 WPC4558

\* IC110 → CR97  
 \* IC329 → CR308  
 \* IC330 → CR305  
 See 100 Lot