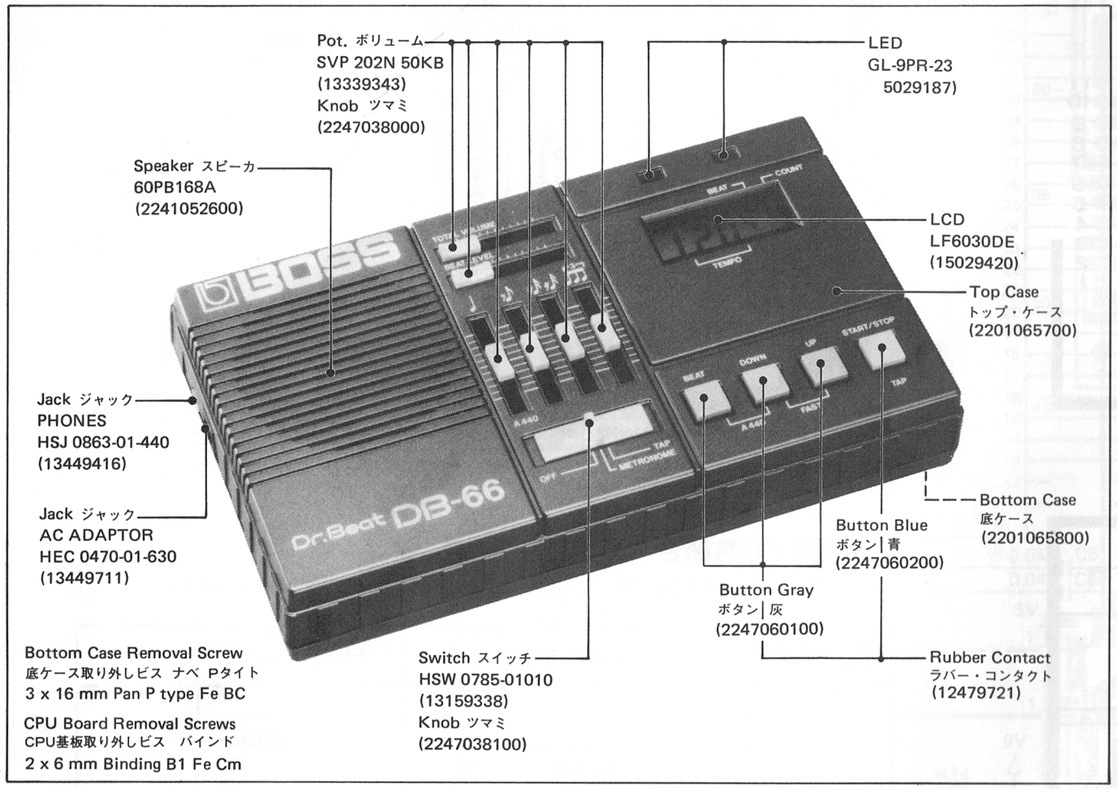
BOSS DB-66 SERVICE NOTES

First Edition

SPECIFICATIONS

Power	:	9V DC (battery or AC adaptor)
Current Draw	:	9mA @ 9V, idling
Tempo Range	:	M.M. 35 to 250
Tempo Accuracy	:	± 0.15%
Standard Pitch	:	440Hz ± 0.2 cents
Dimensions	:	170 (W) x 96(D) x 33(H) mm 6-11/16(W) x 3-3/4(D) x 1-5/16(H) in.
Weight	:	320 g/11 oz.



PARTS LIST

CASE ケース

2201065700	Top Case	トップ・ケース
2201065800	Bottom Case	底ケース
2202070000	Battery Cover	電池カバー

BUTTON, KNOB ボタン, ツマミ

2247060100	Button A Gray	ボタン 灰	BEAT,DOWN,UP
2247060200	Button B Blue	ボタン 青	START/STOP
2247038100	Knob	ツマミ	Mode switch
2247038000	Knob	ツマミ	Pot.

LCD

15029420	LF6030DE	LCD
2226022800	LCD Cushion クッション	
2202083200	LF-0H06	偏光板 Polarizer
2216031900	LCD Spacer スペーサ	
13439279	LF-0Z02	ラバー・コネクタ Rubber Connector

SPEAKER スピーカ

2241052600	60PB168A	直径 60mm dia.
2226035500	Cushion クッション	

PCB ASSEMBLY 基板完成品

7313751000	VR BOARD	(pcb 2292010700)
7313752000	CPU BOARD	(pcb 2292010800)

JACK ジャック

13449416	HSJ 0863-01-440	PHONES
13449711	HEC 0470-01-630	AC ADAPTOR

SWITCH スイッチ

13159338	HSW 0785-01-010	Mode
12479721	Rubber Contact ラバー・コンタクト	

POTENTIOMETER ボリューム

13339343	SVP202N 50KB	
2224013500	Mask マスク	

IC

15199518	TA7336P	OP amp
15179206	HD44790B25	CPU
15219126	LC7900	Generator/Divider

TRANSISTOR トランジスタ

15129114	2SC1815-GR	

DIODE ダイオード

15019526	RD5.6EB3 (or 15019525 RD5.6EB2)	ツェナー zener
15019519	RD4.7EB2 (or ..... RD4.7EB1)	ツェナー zener
15019209T0	S5500G	
15019125	1SS133	
15029187	GL-9PR-23	LED

CRYSTAL 発振子

12389739	4.224MHz	

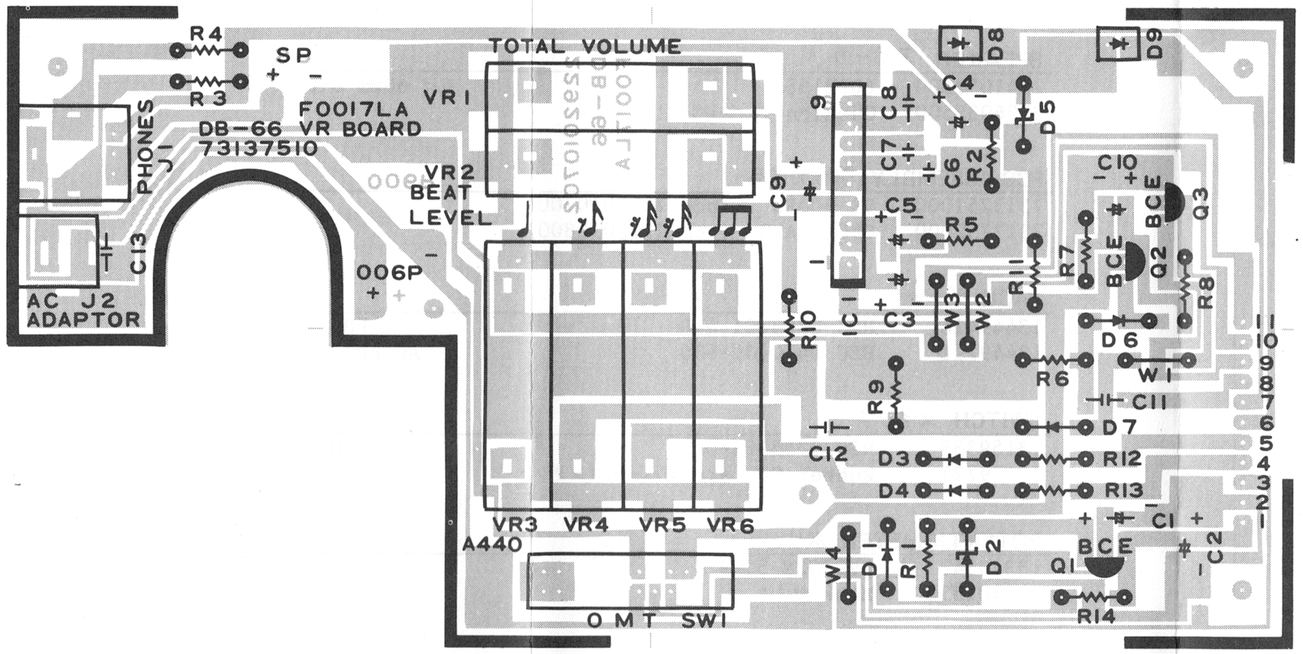
OTHERS その他

2343015800	Flat Cable 11P	フラット・ケーブル
2341041400	Battery Snap	電池スナップ 1007#24
2226035600	Battery Cushion	電池クッション
2215020200	Polycapipe A	ポリカパイプ 3.45(IN) x 12.6(L) x 2.55(T)mm
2215020300	Polycapipe B	ポリカポイプ 6(IN) x 13.8(L) x 2(T)mm
2201070800	Soft Case	ソフトケース

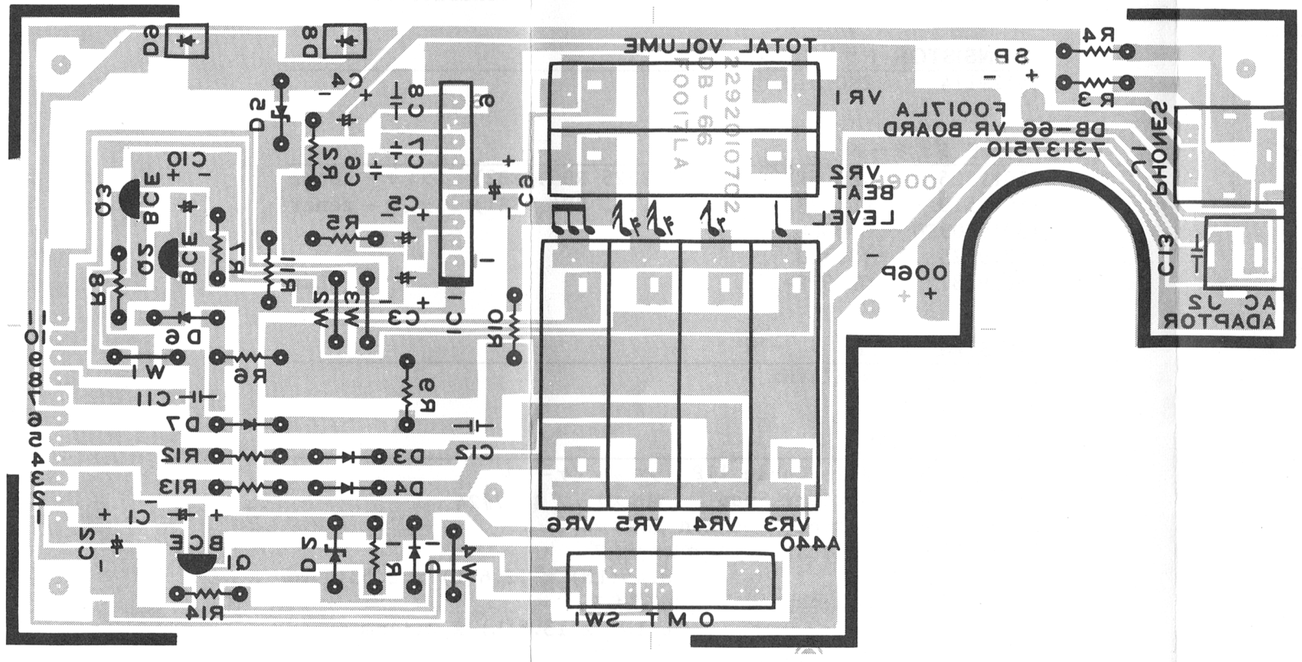
VR BOARD

7313751000 (pcb 2292010700)

View from component side



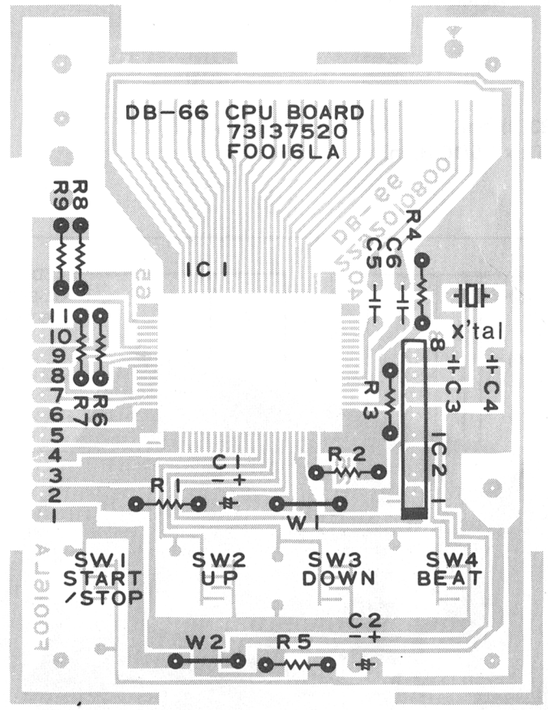
View from foil side



CPU BOARD

7313752000 (pcb 2292010800)

View from component side



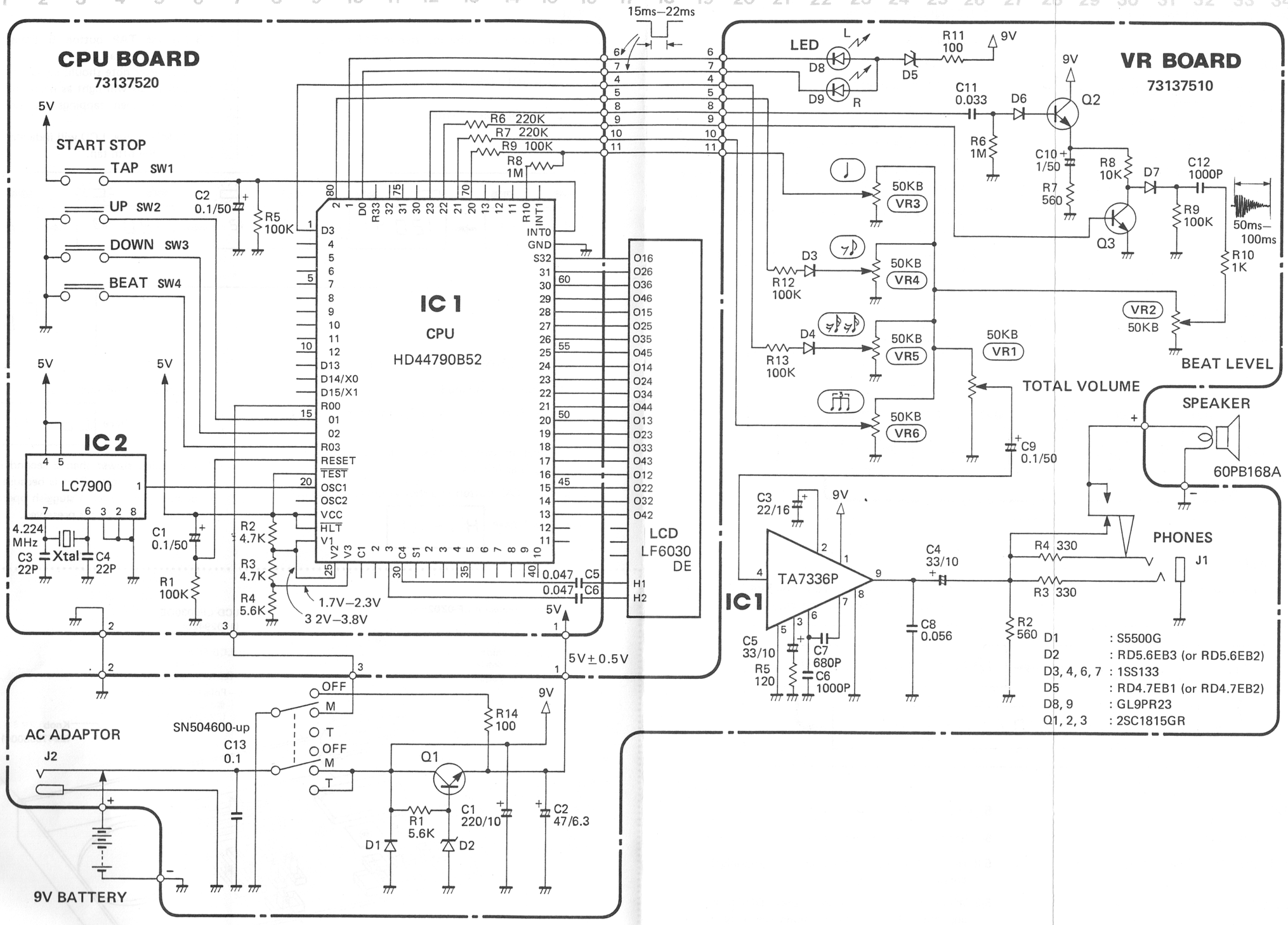
WAVEFORMS

MODE SELECT: METRONOME TEMPO:120 BEAT: 4 START/STOP: START

H: 4.0–5.5V
L: 0–0.8V

CPU BOARD Terminal	WAVEFORM	FREQUENCY	NOTE
10	H L 6 pulses	0.98KHz ± 0.05KHz	
4	H L 7 pulses	1.15KHz ± 0.05KHz	
5	H L 10 pulses	1.55KHz ± 0.07KHz	
11	H L 12 pulses	1.96KHz ± 0.09KHz	
9	H L 150ms–300ms	2.93KHz ± 0.13KHz	Beat
8	H L 5ms–10ms	——	Beat Trigger

CIRCUIT DIAGRAM

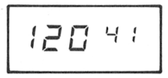


D1 : S5500G
D2 : RD5.6EB3 (or RD5.6EB2)
D3, 4, 6, 7 : 1SS133
D5 : RD4.7EB1 (or RD4.7EB2)
D8, 9 : GL9PR23
Q1, 2, 3 : 2SC1815GR

CHECKING

Use BOSS AC Adaptor, PSA-100 for stabilized power supply.

STANDBY MODE

When MODE SELECTOR is in METORONOME and LCD is displaying 

, the unit is in the standby mode. To enter this mode, simply slide MODE SELECTOR knob to OFF, then to METRONOME.

1. STANDARD PITCH

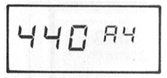
1-1. Set the unit to standby mode.

1-2. Set panel controls.

TOTAL VOLUME: Center

♩ VOLUME : Center

1-3. Depress BEAT and DOWN buttons simultaneously.

An A4 of 440Hz should be heard and should appear on the LCD. 

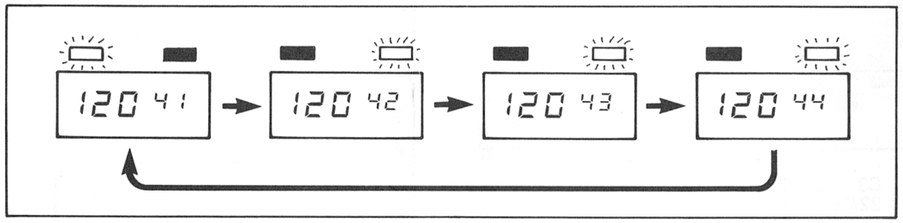
1-4. Verify the frequency with frequency counter; tolerance ± 0.01%.

1-5. Depress BEAT button; the unit should return back to the standby mode.

2. METRONOME START/STOP

2-1. Set the unit to standby mode.

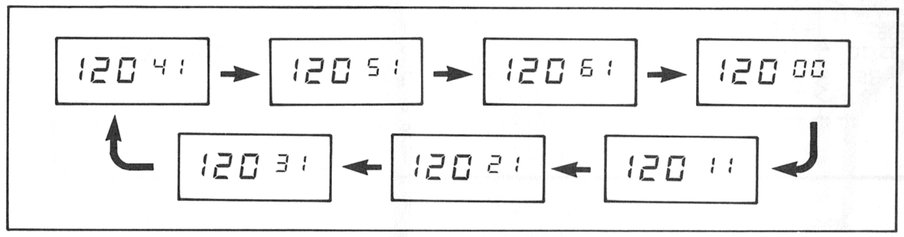
2-2. Depress START/STOP button. LCD and LEDs (flash) should repeat the following display.



3. BEAT INCREMENT

3-1. Set the unit to standby mode.

3-2. Tap BEAT button repeatedly. The BEAT should increase by one for each tap and cycle 0–6.

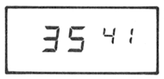


4. TEMPO DOWN

4-1. Set the unit to standby mode.

4-2. Hold DOWN button. The TEMPO should gradually decrease.

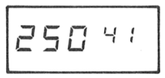
4-3. While holding DOWN button, depress UP button. The TEMPO down should become faster.

The lowest LCD counting will be 

5. TEMPO UP

5-1. Set the unit to standby mode.

5-2. Hold UP button. The TEMPO should gradually increase.

5-3. While holding UP button, depress DOWN button and the TEMPO counting should speed up. It will reach 

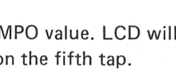
6. TAP

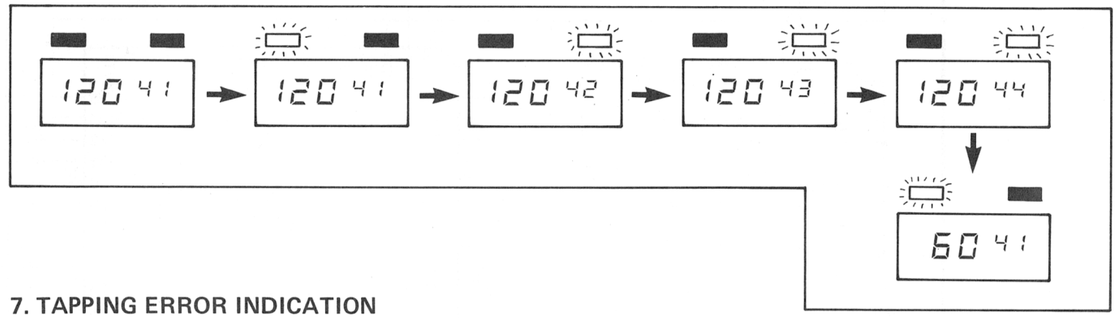
6-1. Set the unit to standby and then to TAP modes.

6-2. Set controls.

TOTAL VOLUME: Center

♩ VOLUME: Center

6-3. Depress TAP button 5 times; approximately 1 second intervals.
A quarter note should sound at every tapping; LCD and LEDs will light as illustrated below. The intervals between tappings are being converted into TEMPO value. LCD will indicate upon the fifth tap. 

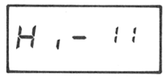


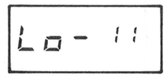
7. TAPPING ERROR INDICATION

7-1. Set the unit to TAP mode.

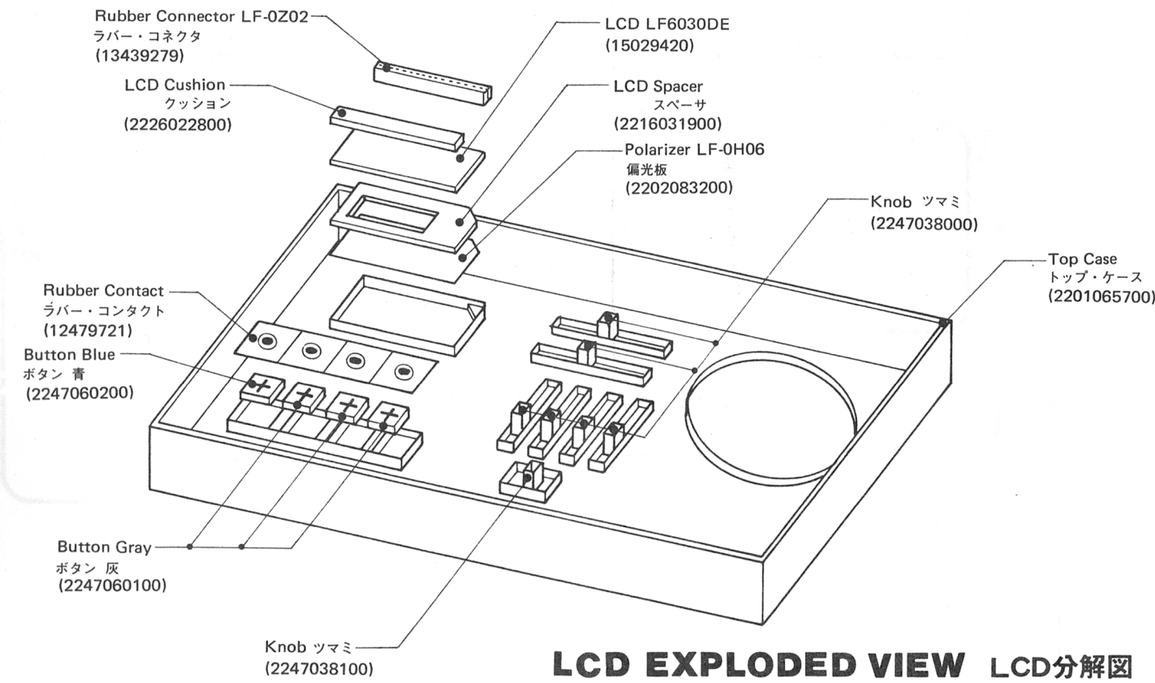
7-2. Display BEAT 1 on the LCD by tapping BEAT button.

7-3. The relation between tapping intervals and LCD readings is as follows.

* Depressing TAP button in a shorter intervals than 0.2 seconds will have 

* Depressing TAP button at an interval of 1.8 to 2.0 seconds will have 

* Depressing slower than 2 second intervals will have unchanged display. This is because the tempo sensor circuit ignores such a sluggish operation, and the previous tempo setting is preserved.



LCD EXPLODED VIEW LCD分解図