

BOSS DSD-2/3 SERVICE NOTES

First Edition

PARTS LIST

SPECIFICATIONS

Power Source	9V Battery x 1 or AC adaptor (BOSS PSA Series)
Current Draw	45mA or 60mA @9V
Sampling Time	200ms (MIN) to 800ms (MAX)
Delay Time	50ms (MIN) to 800ms (MAX)
Frequency Response	Sampling / Delay : 40Hz to 7kHz (+1 / -3 dB) Direct : 10Hz to 60kHz (+1 / -3 dB)
Residual Noise	Sampling / Delay mode : -95dBm (IHF-A) Normal mode : -100dBm or less (IHF-A)
Input Impedance	1MΩ (FET input)
Output Load Impedance	10KΩ or more
Dimensions	70(W) x 55(H) x 125(D) mm / 2-3/4"(W) x 2-3/16"(H) x 4-15/16"(D)
Weight	450g / 1lbs

*This notes includes the contents of the DSD-2 First Edition and makes it obsolete.
 *The difference between DSD-2 and DSD-3 is nothing but the pedal.
 *DSD-2のサービスノート第一版は廃版とし本サービスノートに併合します。
 *DSD-2とDSD-3の違いはペダルだけで他は全く同じです。

CASING		
2201018200	Case	
2218053800	Pedal	(DSD-2)
2218054800	Pedal	(DSD-3)
2221047200	Panel	
2202011601	Cover	bottom
2350305000	Base	bottom
2235030400	Pedal Mat	
2247038600	Knob	gray

PCB		
75228520	Effect Board	(pcb 2292016801)
Replacement Effect Board includes Volume Board and SW Board.		

75228530	Volume Board	(pcb 2292016801)
75228540	SW Board	(pcb 2292016801)
75228550	DC Supply Board	(pcb 2291097800)
.....	LED Board	(pcb 2291049600)

IC		
15229811	MB63H101	C-MOS gate array
15179348	M5K4164ANL-15	64K D-RAM ZIP
15219108	NE570	comparator NR
15169515	TC74HC00P	hi-speed NAND
15159104H0	HD14011BP	NAND
15159115H0	HD14066BP	analog switch
15189136	M5218L	OP amp
15189152	NJM5534D	OP amp
15189111J1	NJM311D	comparator
15229809	BA634	flip-flop
15119109F	μA78L05	3-terminal voltage regulator
	or 15119144	μPC78L05

TRANSISTOR		
15129104	2SC732TM-GR	
15129137	2SC2603-28-F(or 15129135	2SC2603F)
15119125	2SA1115-28-F(or 15119124	2SA1115F)
151391160Y	2SK118-Y	FET

DIODE		
15019523	RD5.1EB-3	zener
15019209T0	S5500G	
15019125	1SS133	
15029117	SLP-135B	LED
	or 15029198	LN-28RP
		red

POTENTIOMETER		
13279748	K12140 10KA	
13279759	K12140 10KB	
13299151	H0651A009-2.2KB	trimmer
13299311	EVN-31CA00B14 10KB	vertical trimmer
or		
13299140	H0651A013 10KB	horizontal trimmer

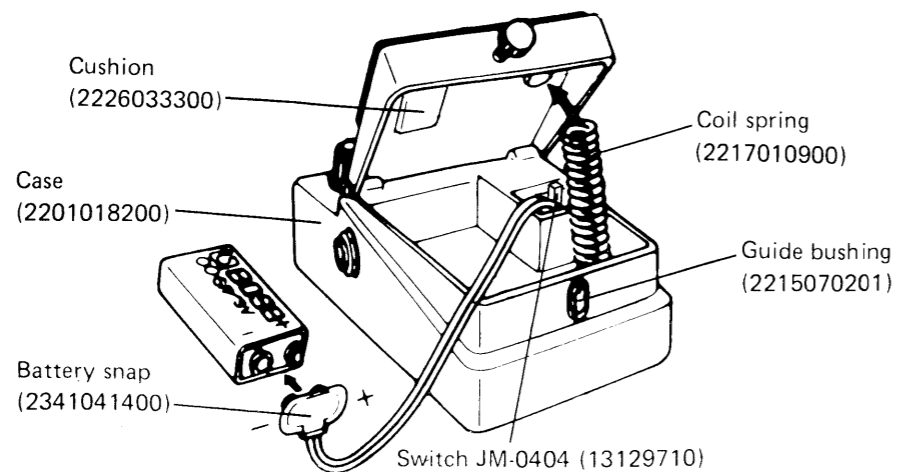
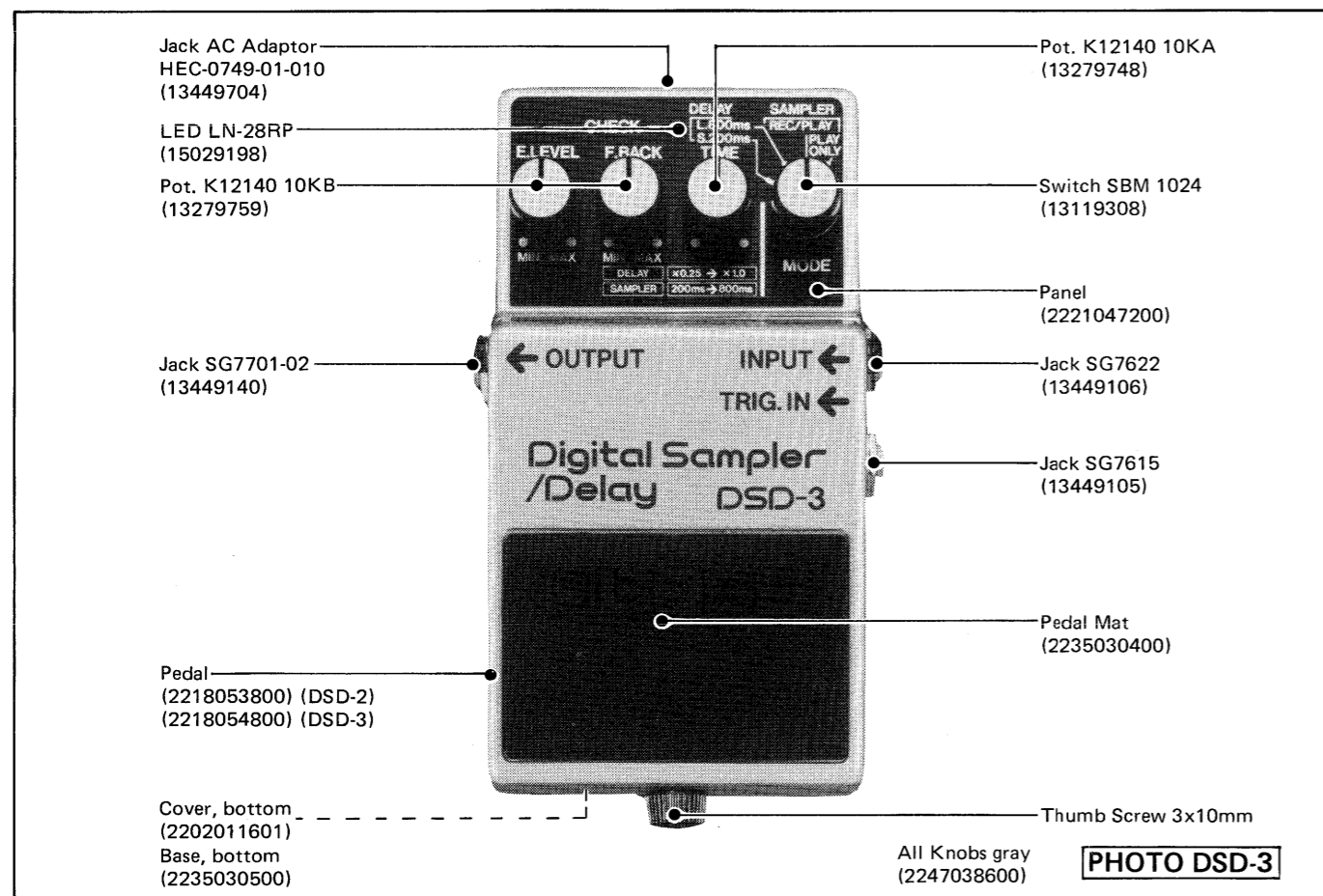
JACK		
13449105	SG7615	TRIG
13449140	SG7701-02	OUTPUT
13449106	SG7622	INPUT
13449704	HEC-0749-01-010	AC adaptor

SWITCH		
13129710	JM-0404	push
13119308	SBM1024	rotary

RESISTOR		
13919134	RKM14L492-103F	R-2R ladder network

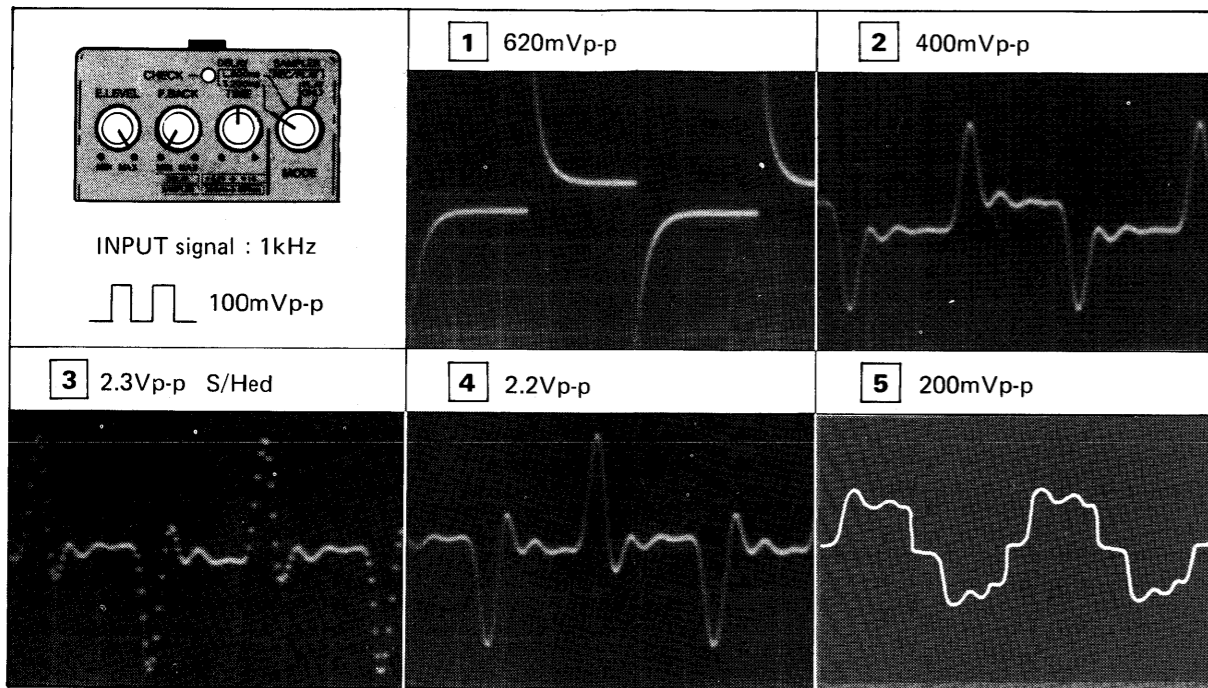
FLAT CABLE		
2347016300	4P 180L	
2347016400	3P 90L	
2347014900	4P 150L	
2347015000	3P 180L	

MISCELLANEOUS		
2215070201	Guide Bushing	
2226033300	Cushion	
2217010900	Coil Spring	
2341041400	Battery Snap	
2225021801	Shield Sheet	
2216052900	Plastic Sheet	clear
13529105	DSS310-55D223S	EMI-filter



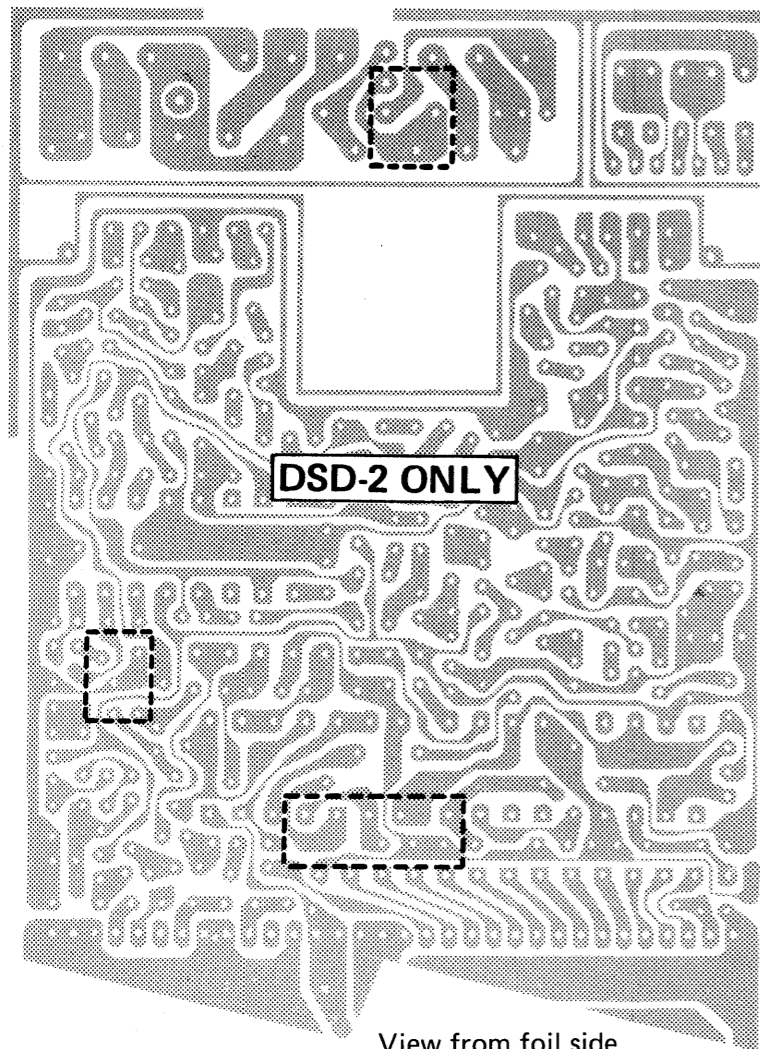
WAVEFORMS

Boxed numbers correspond to those (check point) on the schematic diagram.
 枠内の番号は回路図上のチェック・ポイントの番号に対応しています。

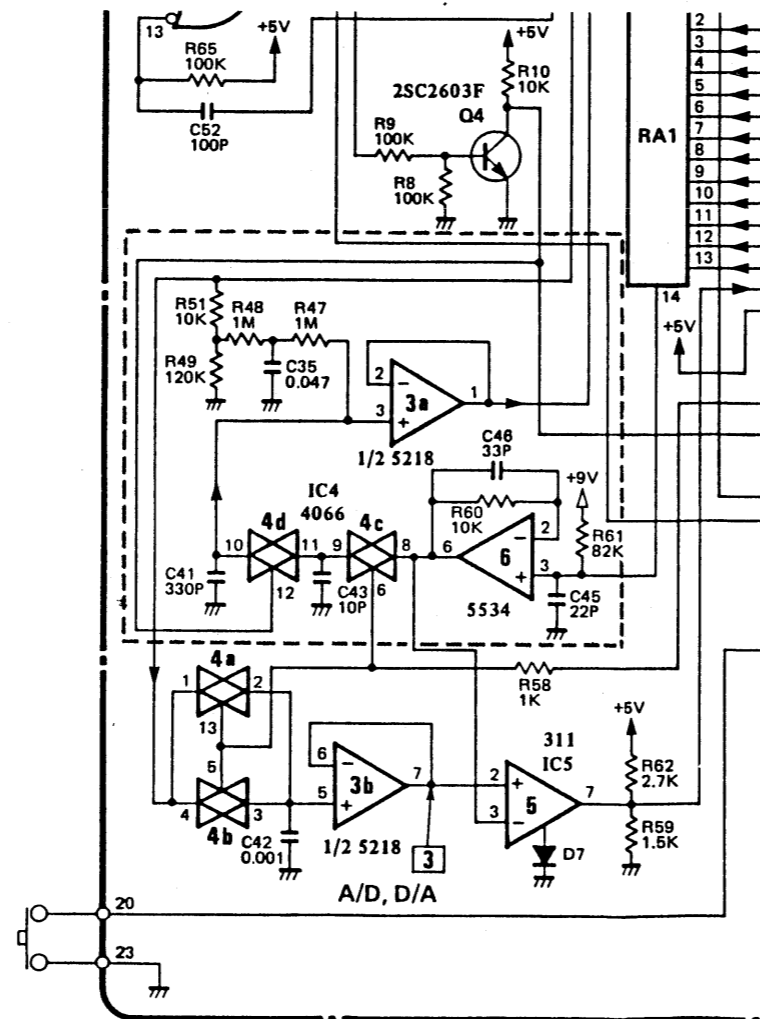


Prior to SN573100 SN573100未満
 (pcb 2292016800) **DSD-2 ONLY**

The circuit is changed due to factory requirements -no performance difference between this and modified one.
 SN573100以降, 点線内の部分が変わっています。しかし性能上の違いはありません。



View from foil side



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
U
V
W

EFFECT BOARD
 75228520
 (pcb 2292016801)
 SN573100-UP... (DSD-2)

VOLUME BOARD →
 75228530
 (pcb 2292016801)

EFFECT BOARD →
 75228520
 (pcb 2292016801)

DC SUPPLY BOARD
 75228550
 (pcb 2291097800)

LED BOARD
 (pcb 2291049600)

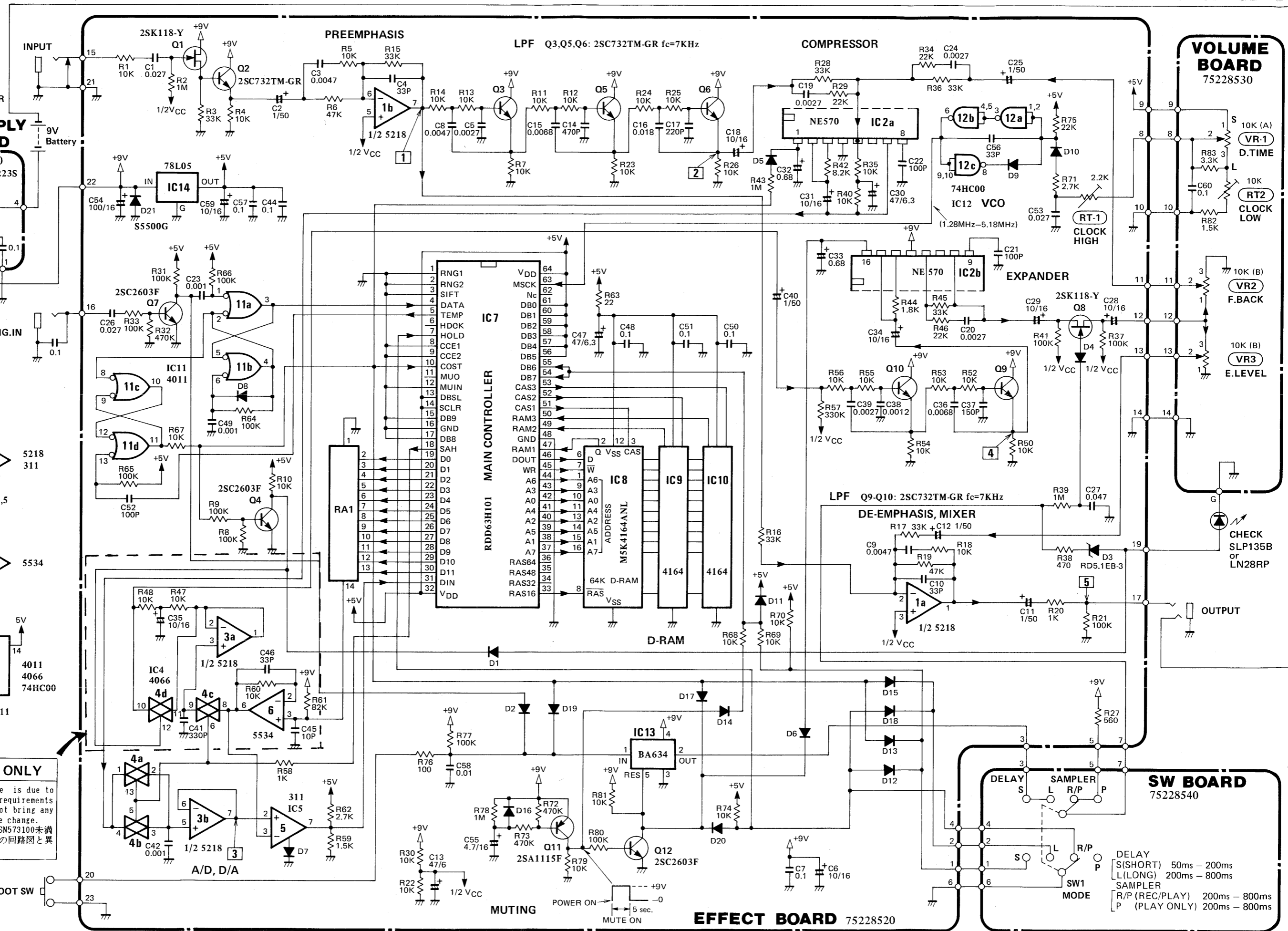
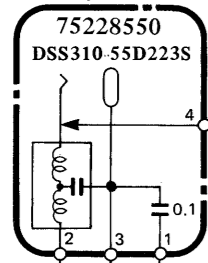
Replacement PCB is supplied in a set of three PCBs as shown below.
 補修用基板としては下記に示す三種の基板を含む一枚基板です。

SW BOARD
 75228540
 (pcb 2292016801)

View from foil side

CIRCUIT DIAGRAM

DC SUPPLY BOARD



DSD-2 ONLY
 This change is due to factory requirements and does not bring any performance change.
 この部分がSN573100未満(2頁参照)の回路図と異なります。

DELAY → EFFECT ON/OFF
 SAMPLER → TRIGGER

D1, D2 : ISS133
 D4 - D20 : ISS133
 RA1 : R-2R RESISTOR ARRAY RKM14L492-103F

IC1, 3 : M5218L
 IC2 : NE570
 IC4 : HD14066B
 IC5 : NJM311D

IC6 : NJM5534D
 IC7 : RDD63H101
 (MB) : (MB)
 IC8, 9, 10 : M5K4164ANL-15

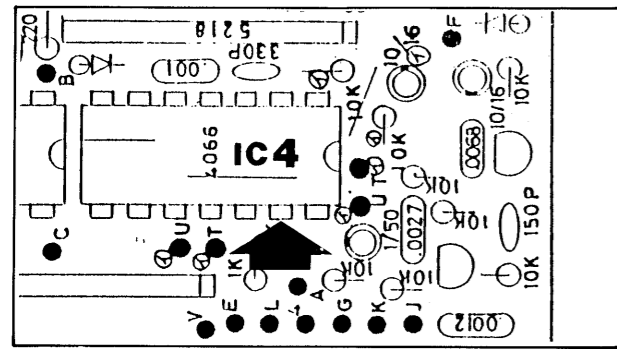
IC11 : HD14011BP
 IC12 : TC74HC00P
 IC13 : BA634
 IC14 : BA78L05

Boxed Number : Waveform Check Point

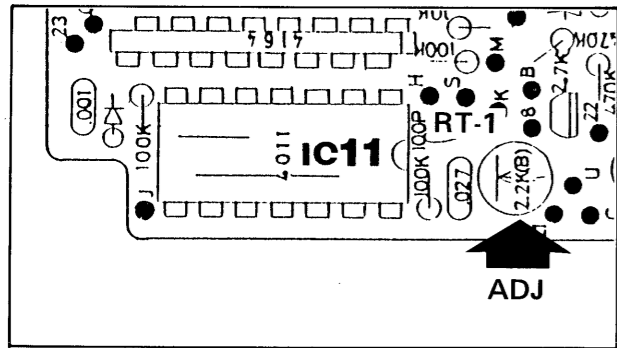
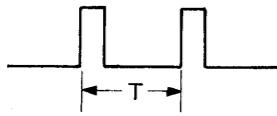
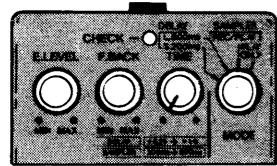
ADJUSTMENT

CLOCK FREQUENCY VCO周波数レンジ設定

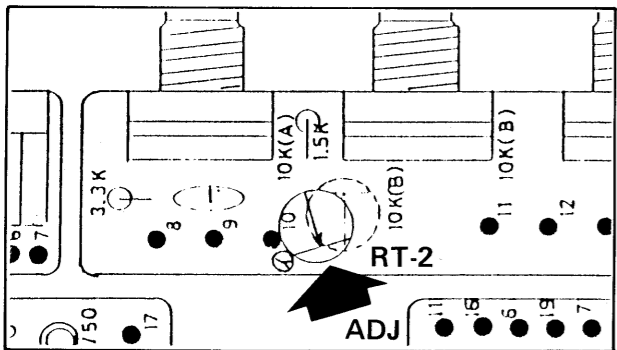
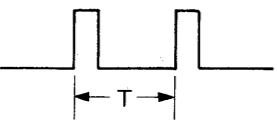
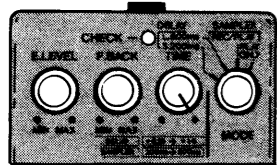
This adjustment is to set the range of Master Clock (MSCK) frequency at IC12 VCO.



1. High End 1. 上限



2. Low End 2. 下限



Connect the scope to pin 13 of IC4 (or IC7 pin 18 SAH).

オシロスコープをIC 4のピン13かIC7のピン18に接続する。

Adjust RT-1 on Effect Board for $T = 12.12\mu s$ ($82.5K \pm 1kHz$).

エフェクト基板上のRT-1を調整して $T=12.12\mu s$ ($82.5k\pm 1kHz$)にする。

The MSCK should be $5.28MHz \pm 64kHz$.

この時マスタ・クロックは $5.28MHz\pm 64kHz$ になる。

Adjust RT-2 on Volume Board for $T = 50\mu s$ ($20K \pm 0.2kHz$).

ボリューム基板上のRT-2を調整して $T=50\mu s$ ($20k\pm 0.2kHz$)にする。

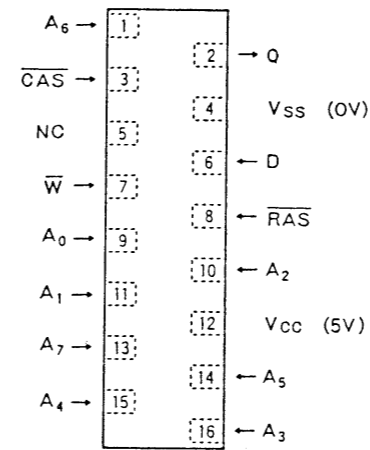
The MSCK should be $1.28M \pm 12.8kHz$.

この時マスタ・クロックは $1.28MHz\pm 12.8kHz$ になる。

IC DATA

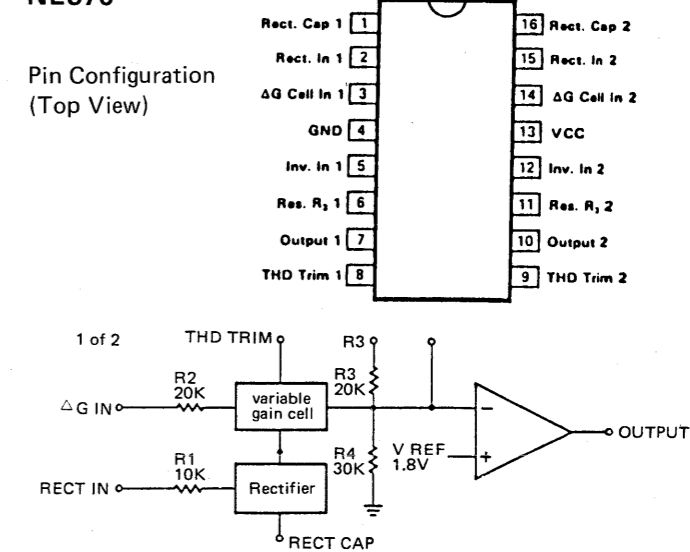
M5K4164ANL-15

Pin Configuration (Top View)



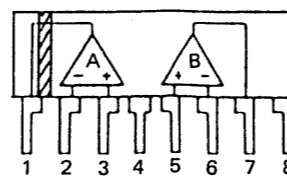
NE570

Pin Configuration (Top View)



M5218L

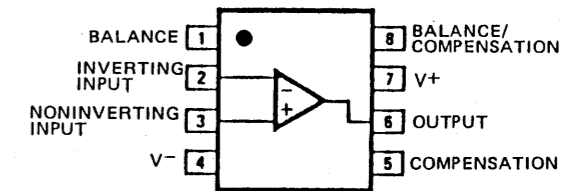
Pin Configuration



1. A OUTPUT
2. A-INPUT
3. A+INPUT
4. V-
5. B+INPUT
6. B-INPUT
7. B OUTPUT
8. V+

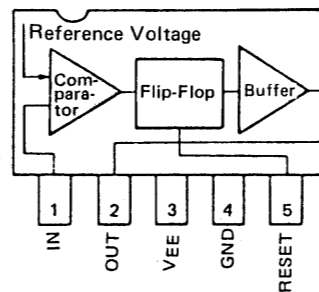
NJM311D

Pin Configuration (Top View)



BA634

Pin Configuration



311

Pin Configuration (Top View)

