

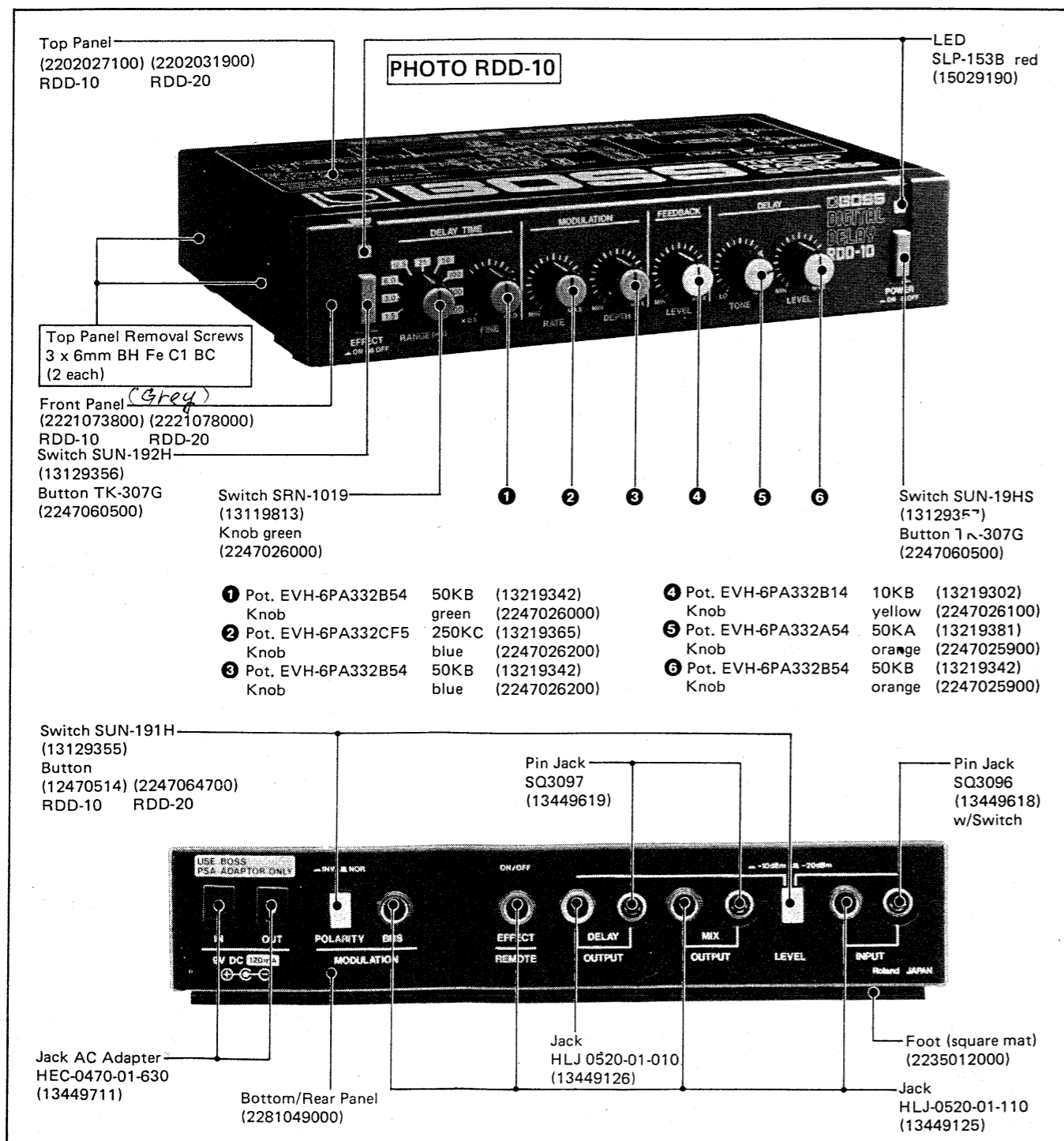
# BOSS RDD-20 / 10 SERVICE NOTES

First Edition

## SPECIFICATIONS

Power Source	: 9VDC (BOSS AC Adapter PSA-100, 120, 220 or 240)
Current Draw	: 120mA @9V
Input LEVEL/Impedance	: -20dBm/1MΩ, -10dBm/47KΩ
Output LEVEL/Impedance	: -20dBm/2KΩ, -10dBm/2KΩ
Output Load Impedance	: 10KΩ or more
Delay Time	: 0.75ms to 400ms
Frequency Response	: Direct : 10Hz to 60KHz ( +1 -3 dB) Delay : 20Hz to 15KHz ( +1 -3 dB)
Residual Noise	: -90dBm (IHF-A) or less LEVEL Switch @-120dBm
Dimensions	: 218 (W) x 44 (H) x 169 (D) mm 8-9/16" W x 1-3/4" H x 6-11/16" D
Weight	: 900g/2 lbs

\*This notes includes the contents of the RDD-10 First Edition and makes it obsolete.  
\*Check for the differences between two models on page 4.  
\*RDD-10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。  
\*両機種間の相違点については4頁参照。



## PARTS LIST

CASING			
2202027100	Top Cover	(RDD-10)	
2202031900	Top Cover	(RDD-20)	
2221073800	Front Panel Grey	(RDD-10)	
2221078000	Front Panel "	(RDD-20)	2221084100 (BF)
2281049000	Bottom/Rear Panel		
2235012000	Foot (square mat)		

KNOB, BUTTON			
2247025900	Knob	orange	TONE/LEVEL (DELAY)
2247026000	Knob	green	RANGE/FINE (DELAY TIME)
2247026200	Knob	blue	RATE/DEPTH (MODULATION)
2247026100	Knob	yellow	LEVEL (FEEDBACK)
2247060500	Button TK-307G	gray	POWER/EFFECT
12470514	Button (RDD-10)		POLARITY/LEVEL
2247064700	Button (RDD-20)		POLARITY/LEVEL

SWITCH			
13129355	SUN-191H		LEVEL/POLARITY
13129356	SUN-192H		EFFECT
13129357	SUN-19HS		POWER
13119813	SRN-1019		RANGE

POTENTIOMETER			
13219302	EVH-6PA332B14 10KB		FEEDBACK
13219381	EVH-6PA332A54 50KA		TONE
13219342	EVH-6PA332B54 50KB	DEPTH/FINE/DELAY	LEVEL
13219365	EVH-6PA332CF5 250KC		RATE
13299140	H0651 10KB		trimmer
13299158	H0651 47KB		trimmer

JACK			
13449125	HLJ-0520-01-110		phone
13449126	HLJ-0520-01-010		phone
13449618	SQ3096 w/switch		pin INPUT
13449619	SQ3097		pin OUTPUT
13449711	HEC-0470-01-630		AC adapter

PCB			
74123510	MT BOARD (pcb 2292018700)	(RDD-10)	
7413551000	MT BOARD (pcb 2292018700)	(RDD-20)	

IC			
15229811	RDD63H101P-G-SH (or MB63H101)	C-MOS gate array	
15179315	M5K4164	64K DRAM	
15219143	μPC1571C	compander NR	
15169356	SN74LS628N	VCO	
15159128H0	HD14050BP	buffer	
15159115H0	HD14066BP	analog switch	
15189136	M5218L	Op amp	
15189152	NJM5534D	Op amp	
15189111J1	NJM311D	comparator	
15199130J0	NJM78L06A	3-terminal voltage regulator	
15119109F0	HA78L05AWC	3-terminal voltage regulator	

TRANSISTOR			
15129120	2SC2240-GR		
15129108	2SC945P		
15129136	2SC2878A		
15119111	2SA970-GR		
15119105	2SA733P		
15139105	2SK68A		FET
15139101	2SK30A-Y		FET

DIODE			
15019305	RD6.8JB2		zener
15019209T0	S5500G		
15019125	1SS133		
15019103	1S2473		
15029190	SLP-153B	red	LED

RESISTOR			
13919134	RKM14L492-103F	R-2R	ladder network
13910103	RNSA-09P103	10K x 8	resistor array

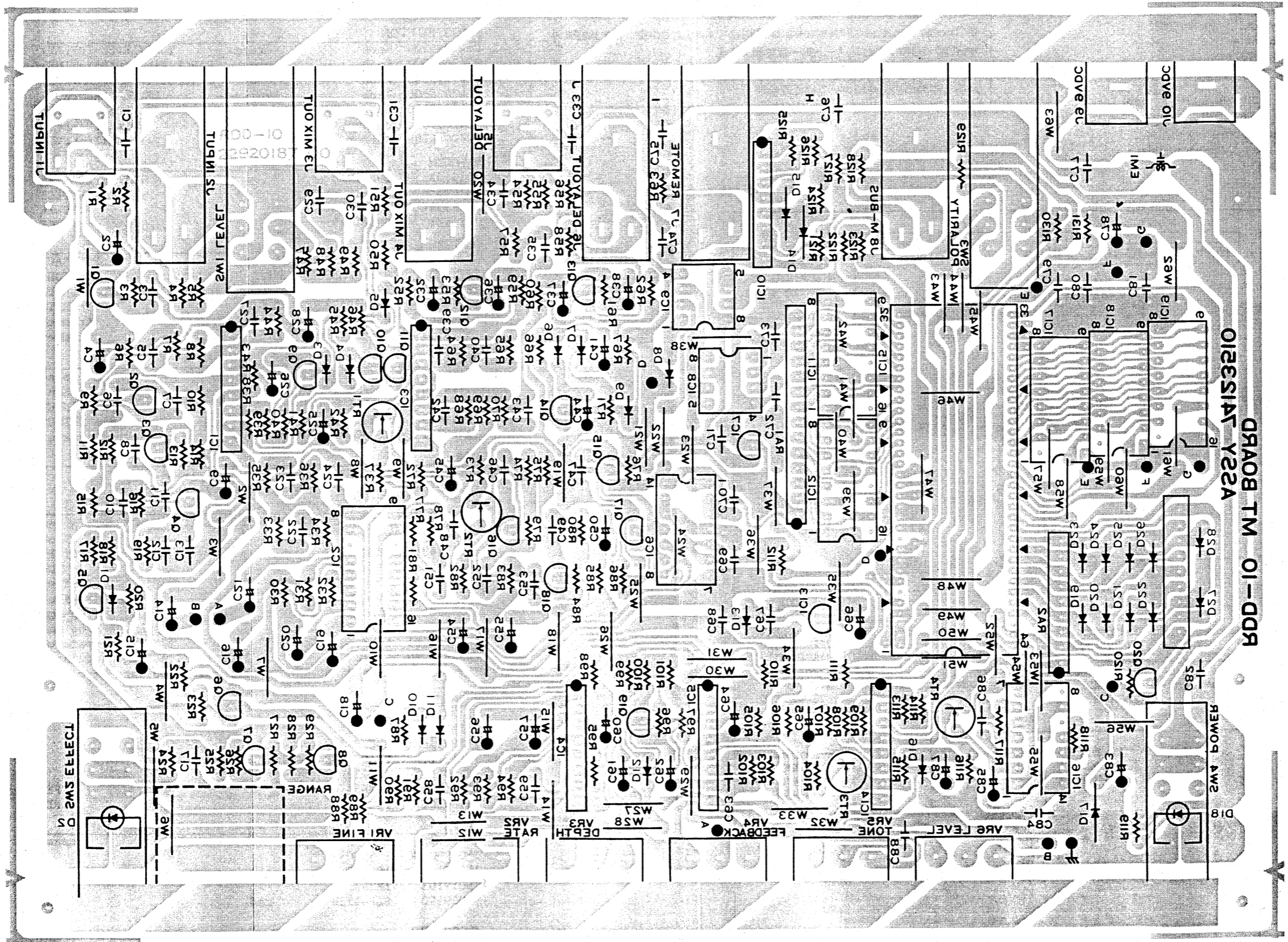
MISCELLANEOUS			
2348017400	DC Cord		0.5m
13529105	DSS310-55D223S		EMI-filter

# MT BOARD

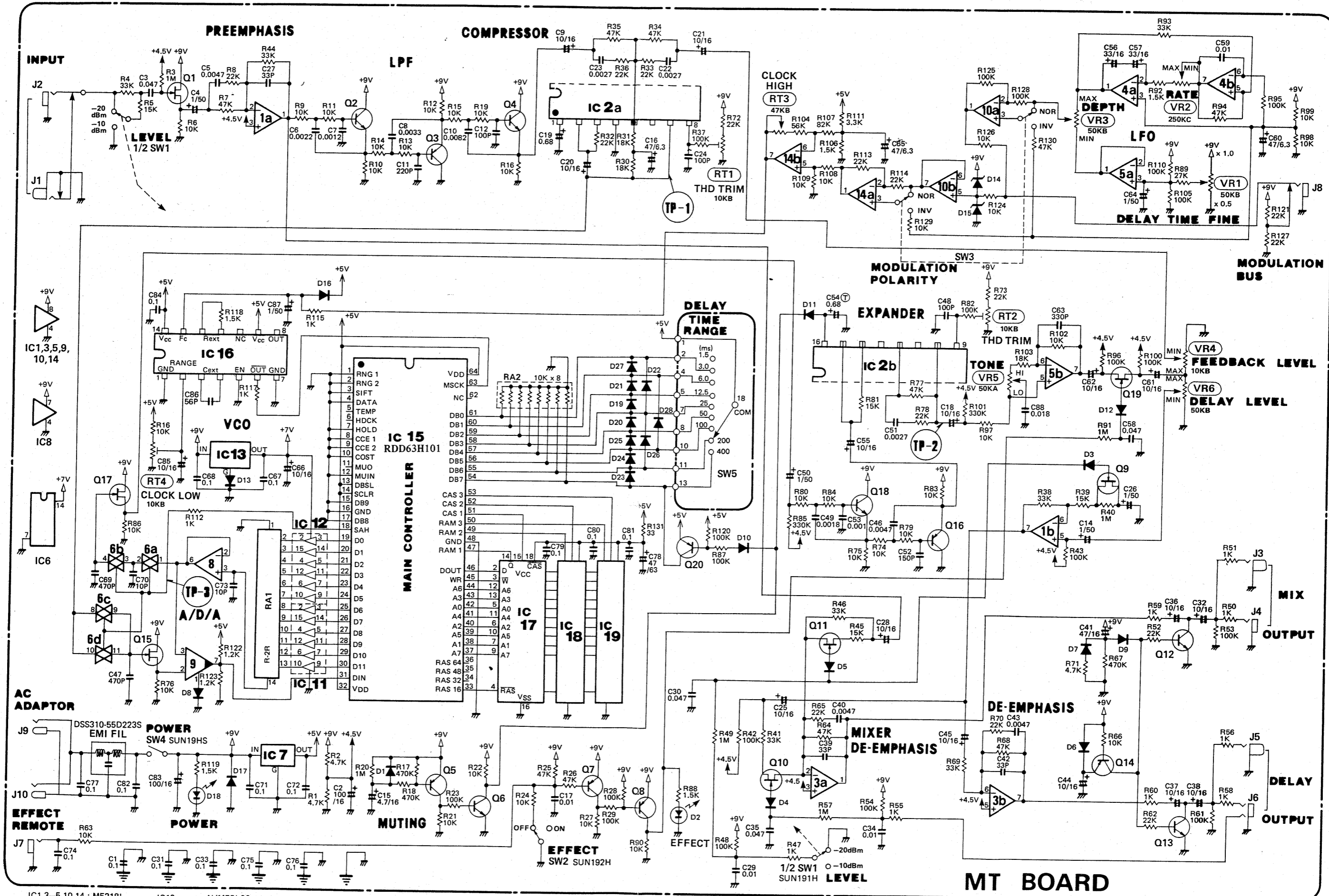
74123510 (pcb 2292018700) RDD-10

74135510 (pcb 2292018700) RDD-20

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36



View from foil side



- IC1,3-5,10,14 : M5218L
- IC2 : μPC1571C
- IC6 : HD14066BP
- IC7 : μPC78L05
- IC8 : NJM5534D
- IC9 : NJM311D
- IC11,12 : HD14050BP
- IC13 : NJM78L06
- IC15 : RDD63H101
- IC16 : SN74LS628N
- IC17-19 : M5K4164NP
- Q1,15,17 : 2SK68A
- Q2,4,18 : 2SC2240-GR
- Q3,16 : 2SA970-GR
- Q5,7,8,14,20 : 2SA733P
- Q6 : 2SC945P
- Q12,13 : 2SC2878A
- Q9-11,19 : 2SK30AY
- D1,3-13,16,19-28 : 1SS 133
- D14,15 : RD6.8JB2
- D17 : S-5500G
- D2,18 : SLP-153B (LED)
- RA1 : RKM14L492-103F
- RA2 : RNSA-09P103 (10K x 8)
- Ⓢ : Tantalum

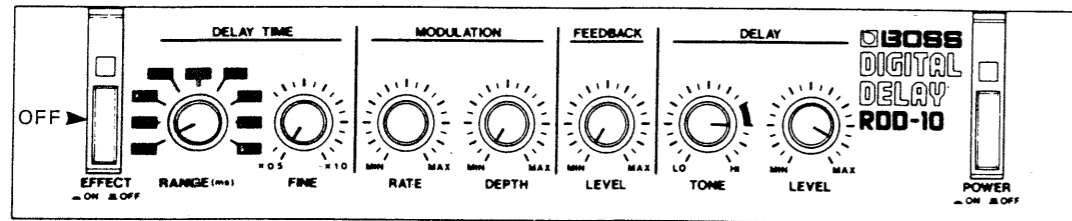
**RDD-20/10  
CIRCUIT DIAGRAM**

**MT BOARD 74123510 RDD-20  
74135510 RDD-10**

**ADJUSTMENT (RDD-20/10)**

**調整**

Set the front panel switches and controls as follows: 正面パネルセッティング



DIFFERENCES BETWEEN RDD-20 AND RDD-10

RDD-20とRDD-10の相違点

\* The two models are the same except for those parts listed in the table below.

\* 両機種間の相違点は下表に示す部品のみで、他は全て同じです。

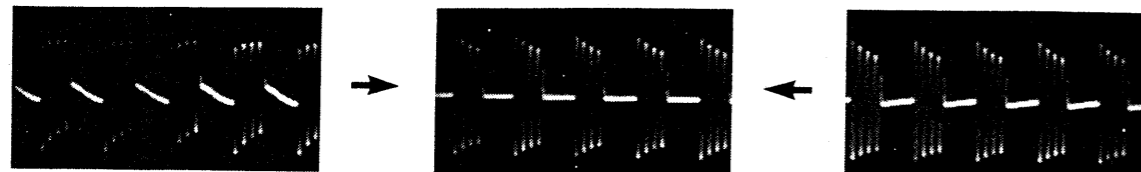
PARTS NAME	RDD-20	RDD-10
Top Cover	2202031900	2202027100
Front Panel	2221078000	2221073800
Button (POLARITY/LEVEL)	2247064700	12470514
MT Board	7413551000 (pcb 2292018700)	74123510 (pcb 2292018700)
	<p>* 7413551000 is upword compatible with 74123510, that is, 7413551000 can be used as a replacement for 74123510. The reverse does not hold true.</p> <p>* 7413551000は74123510の上位互換チップで74123510の代用として使用出来ます。しかし、逆には使用出来ません。</p>	

**1. COMPRESSOR**

- 1-1. Apply a 50mVp-p, 1kHz, 4-0-4 cycle burst tone signal to INPUT jack.
- 1-2. Connect a scope to TP-1.
- 1-3. Adjust RT1 (THD) for a straight DC level.

**1. コンプレッサ**

- 1-1 INPUTジャックに、1kHz、50mVp-pの4-0-4波バースト信号を加える。
- 1-2 TP-1にオシロスコープを接続する。
- 1-3 DCレベルが水平になる様に、RT1 (THD)を調整する。

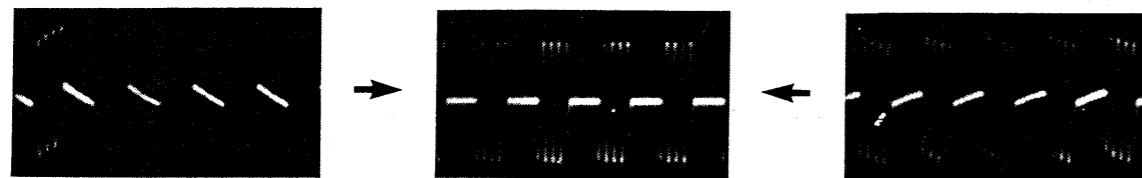


**2. EXPANDER**

- 2-1. Apply a 50mVp-p, 1kHz, 4-0-4 cycle burst signal to INPUT jack
- 2-2. Connect the scope to TP-2.
- 2-3. Adjust RT2 (THD) for a straight DC level.

**2. エキスパンダ**

- 2-1 INPUTジャックに、1kHz、50mVp-pの4-0-4波バースト信号を加える。
- 2-2 TP-2にオシロスコープを接続する。
- 2-3 DCレベルが水平になる様に、RT2 (THD)を調整する。



**3. CLOCK FREQUENCIES**

- 3-1. Connect a frequency counter or the scope to TP-3.
- 3-2. Set FINE at x1.0 and adjust RT4 (CLOCK LOW) for 40 ± 0.5kHz or 24.7-25.3μs.
- 3-3. Set FINE at x0.5 and adjust RT3 (CLOCK HIGH) for 82.5 ± 1.0kHz or 12.0-12.3μs.

**3. クロック周波数**

- 3-1 TP-3に周波数カウンタかオシロスコープを接続する。
- 3-2 FINEをx1.0にして、周波数が40±0.5kHz (24.7-25.3μs)になる様にRT4(CLOCK LOW)を調整する。
- 3-3 FINEをx0.5にして、周波数が82.5±1.0kHz (12.0-12.3μs)になる様にRT3(CLOCK HIGH)を調整する。