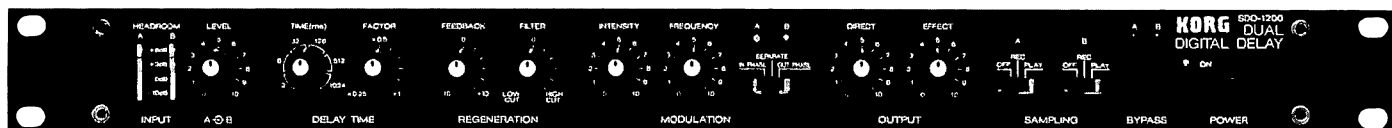


# DUAL DIGITAL DELAY

# SDD-1200

# SERVICE MANUAL



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# KORG®

# 1. SPECIFICATIONS

## 1 Input

	INPUT LEVEL	IMPEDANCE	MAX CLIP LEVEL
INPUT A	-20dBm	1M $\Omega$ (INPUT B when in use) 500k $\Omega$ (INPUT B when not in use)	+16dBm
INPUT B	-20dBm	1M $\Omega$	+16dBm
FEEDBACK IN A,B	-10dBm	1M $\Omega$	+16dBm

## 2 Output

	OUTPUT LEVEL	IMPEDANCE	MAX CLIP LEVEL
+ MIX A,B	-10dBm	1k $\Omega$	+4dBm
- MIX A,B	-10dBm	1k $\Omega$	+4dBm
EFFECT A,B	-10dBm	1k $\Omega$	+4dBm
DIRECT A,B	-10dBm	1k $\Omega$	+4dBm

## 3 Frequency response

DIRECT	20Hz ~ 20kHz $\pm$ 1dB
EFFECT	30Hz ~ 16kHz + 1dB, -3dB (when FACTOR $\times$ 0.25)

## 4 Dynamic range

EFFECT	92dB and above (IHF A)
--------	------------------------

## 5 S/N ratio

EFFECT	72dB and above (IHF A)
--------	------------------------

## 6 Distortion

DIRECT	below 0.05%
EFFECT	below 0.2%

## 7 Delay time

0.5ms ~ 1024ms	2, 8, 32, 128, 512, 1024ms (6-position), $\times$ 0.25 ~ $\times$ 1 (changes in succession)
----------------	---

## 8 Feedback

0 ~ +110%	(positive phase)
0 ~ -110%	(negative phase)

## 9 Filter (EFFECT sound)

HIGH-CUT	10kHz 0 ~ -18dB, changes in succession
LOW-CUT	100kHz 0 ~ -18dB, changes in succession

## 10 Modulation

MODULATION WAVEFORM	triangle waveform
MODULATION FREQUENCY	0.05 ~ 8Hz
DELAY TIME MOD. RANGE	4 : 1

## 11 Signal processing

SAMPLING FREQUENCY	42kHz (FACTOR = $\times$ 1) ~ 170kHz (FACTOR = $\times$ 0.25)
METHOD	12bit quantized + analog logarithm compression

## 12 Dimensions

482 (W)  $\times$  44 (H)  $\times$  340 (D) mm

## 13 Weight

4.2 kg

## 14 Power supply

100V 50/60Hz

## 15 Power consumption

11W

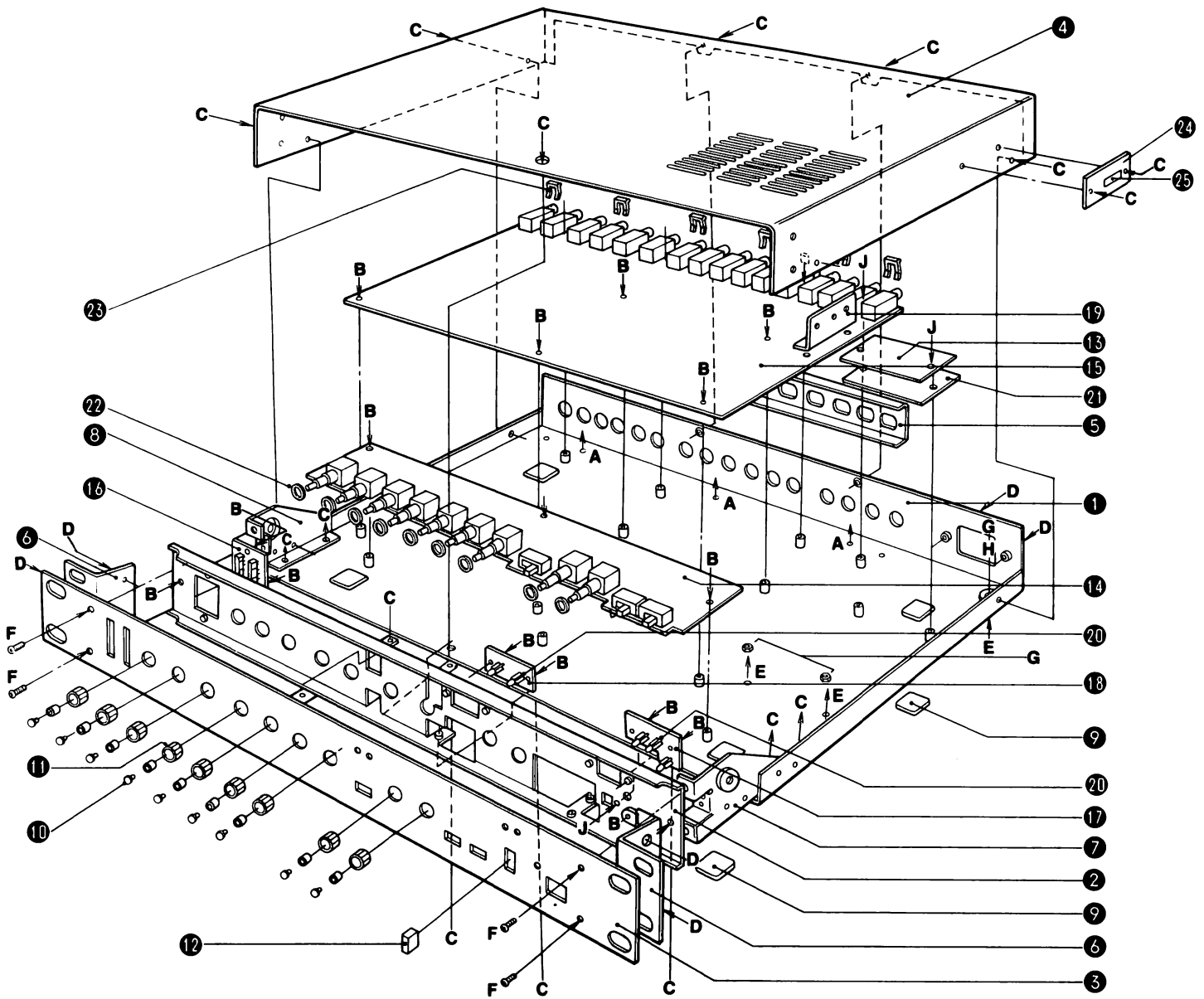
## 16 Supplied accessories

AC cord. Rack mounting screws.

## 17 Optional accessories

pedal switches (PS-1, PS-2), patch cord sets (A, B, C), IU rack case (HC-IU)

# 2. STRUCTURAL DIAGRAM

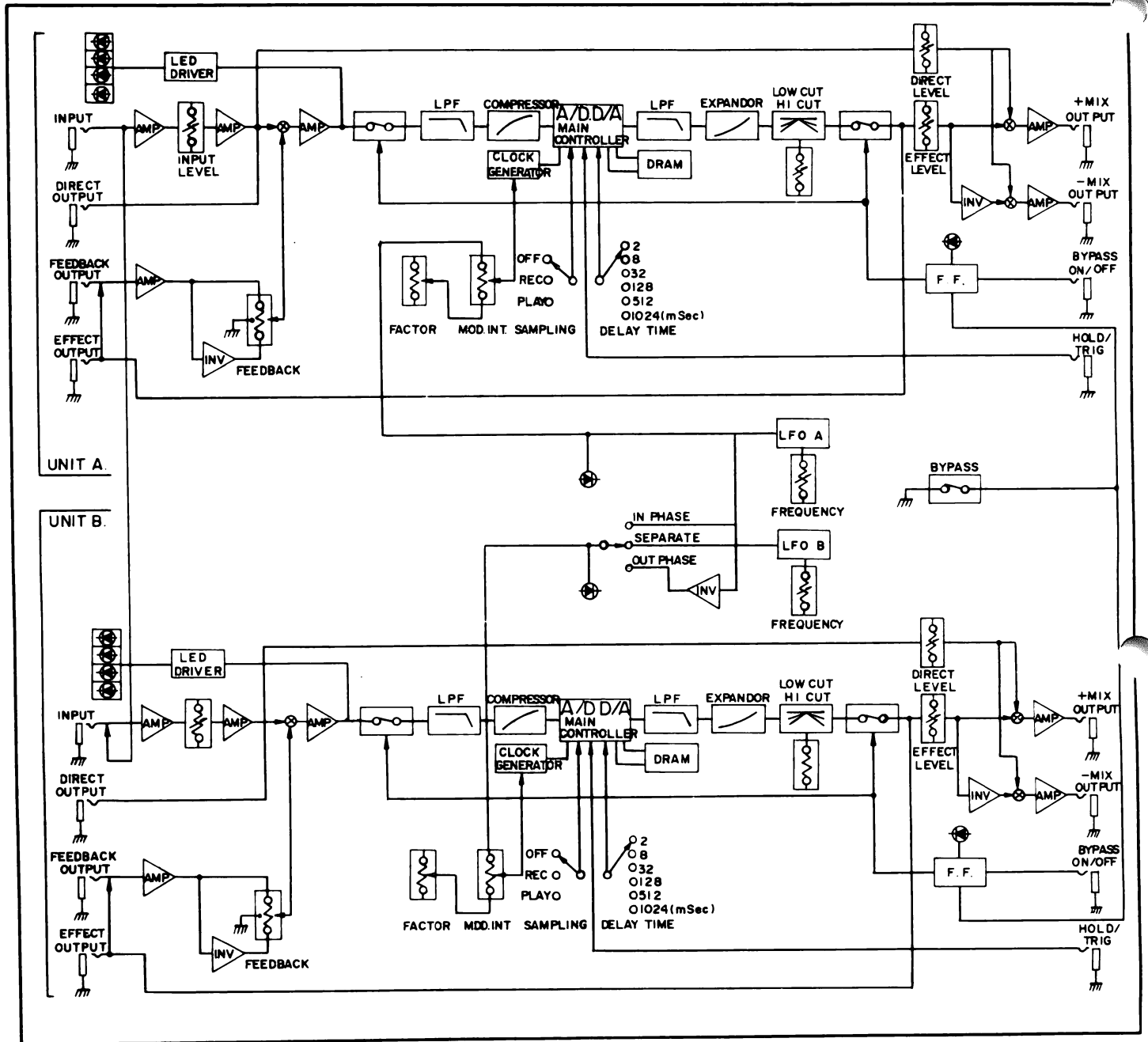


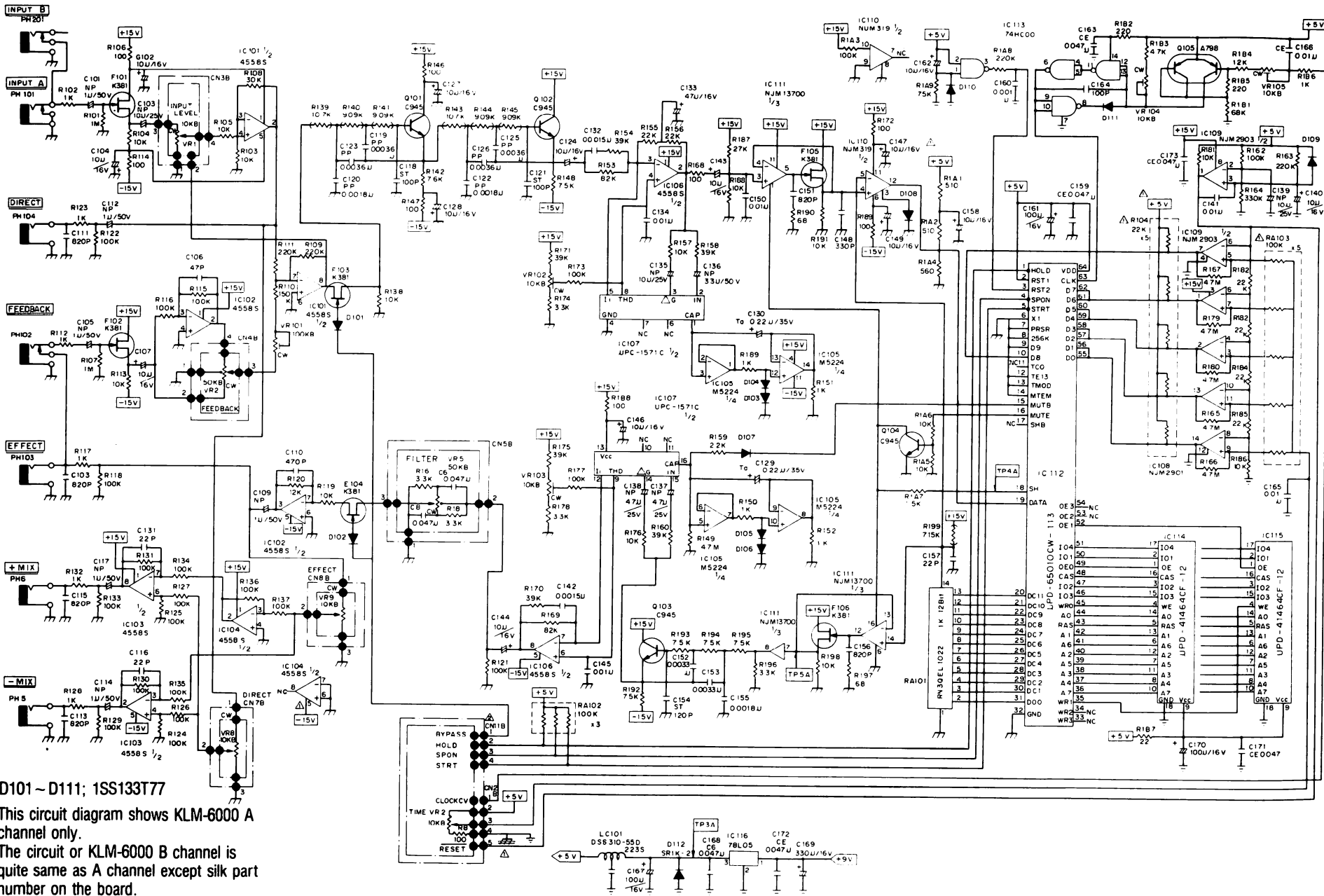
PART NO.	SCREWS. NUT	Q'TY
A	FE B BZMC 3×6	3
B	FE B ZMC 3×6	22
C	TP2G B BZMC 3×6	17
D	FE F BZMC 3×8	6
E	FE B BZMC 4×8	3
F	FE BZMC 4×8 W/HEX-HOLE	4
G	FHN ZMC 4	3
H	TWU ZMC 4	1
I	FE B ZMC 2×6	1
J	FE B ZMC 4×6	2

7	METAL FITTING OF FRONT PANEL (L)	64063600
8	METAL FITTING OF FRONT PANEL (R)	64063601
9	RUBBER FEET	50007800
10	ROTARY VR KNOB (SMALL)	62015401
11	ROTARY VR KNOB (LARGE)	62015301
12	TACT SW KNOB	62016500
13	P.C. BOARD KLM-6018	34360180
14	P.C. BOARD KLM-6001	34360010
15	P.C. BOARD KLM-6000	34360000
16	P.C. BOARD KLM-6004	34360040
17	P.C. BOARD KLM-6002	34360021
18	P.C. BOARD KLM-6003	34360021
19	HEATSING	56003400
20	SPACER	57504200
21	SHIELDING SHEET	63002800
22	WASHER	79040914
23	PHONE JACK SNAP PLATE	45402400
24	NAME PLATE	68600700
25	SERIAL NUMBER SEAL	

PART NO.	PART NAME	PART CODE
1	LOWER CASE	64076600
2	FRONT CHASSIS	64076400
3	FRONT PANEL	64076300
4	UPPER CASE	64076500
5	PHONE JACK PLATE	64076200
6	FRONT PANEL BOARD	64063700

# 3. BLOCK DIAGRAM



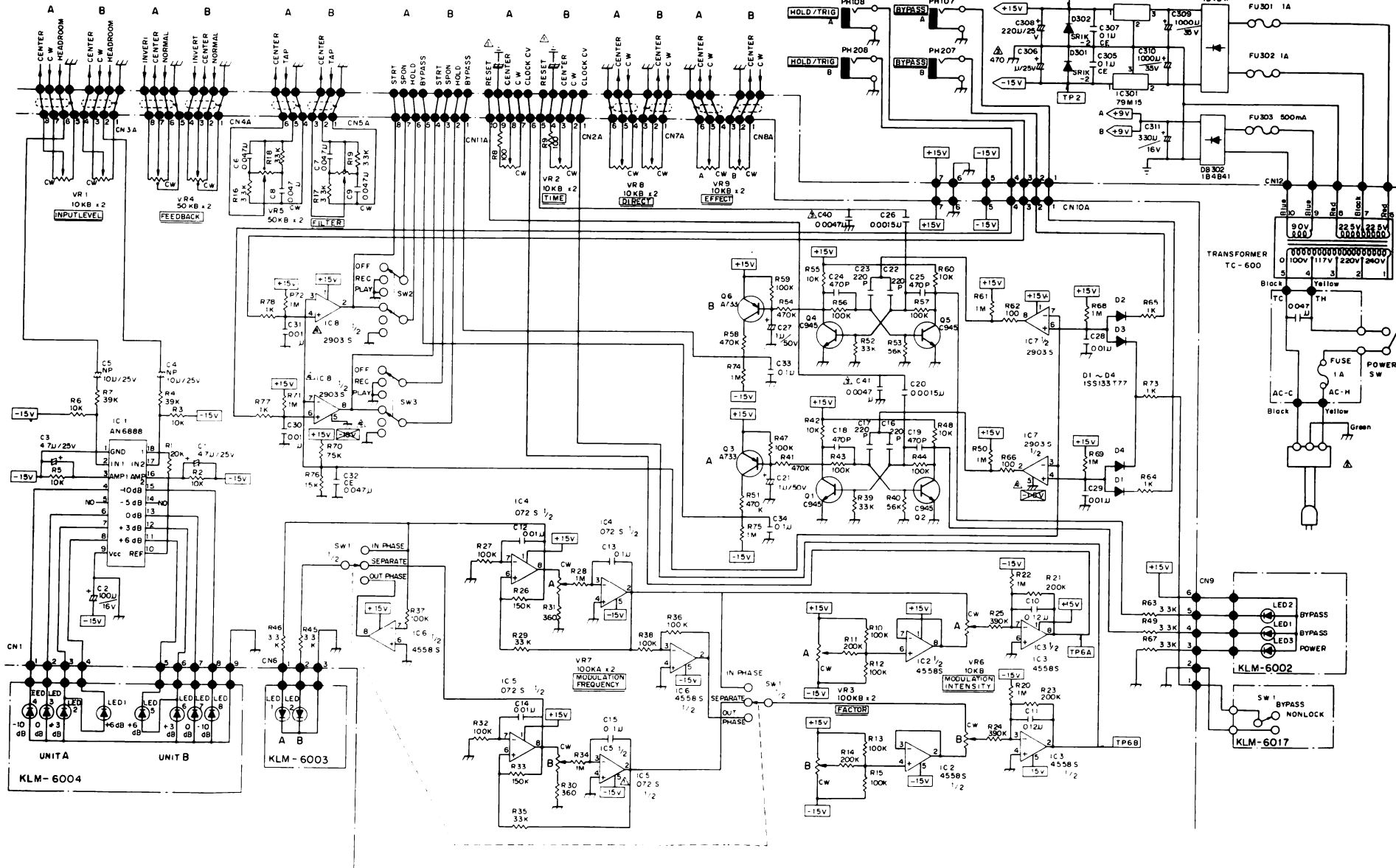


D101 ~ D111; 1SS133T77  
 This circuit diagram shows KLM-6000 A channel only.  
 The circuit or KLM-6000 B channel is quite same as A channel except silk part number on the board.

Parts number of A channel 100 ~ 199  
 Parts number of B channel 200 ~ 299

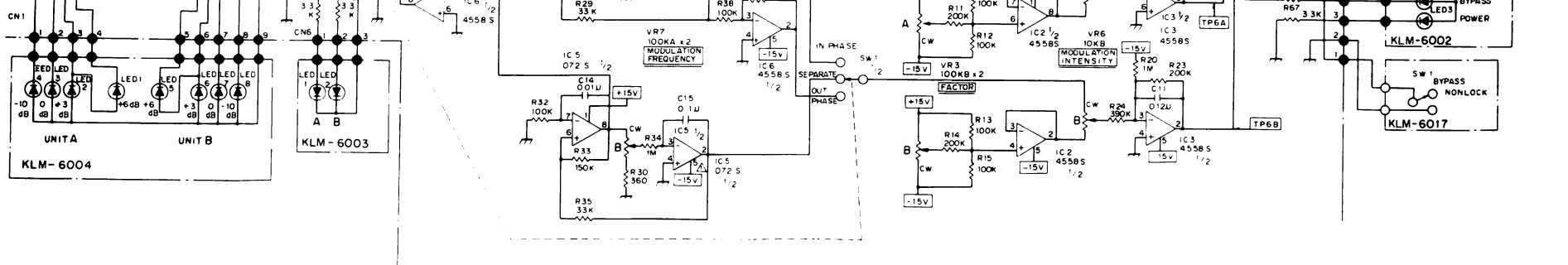
# 4. CIRCUIT DIAGRAM

# KLM-6000 MAIN BOARD



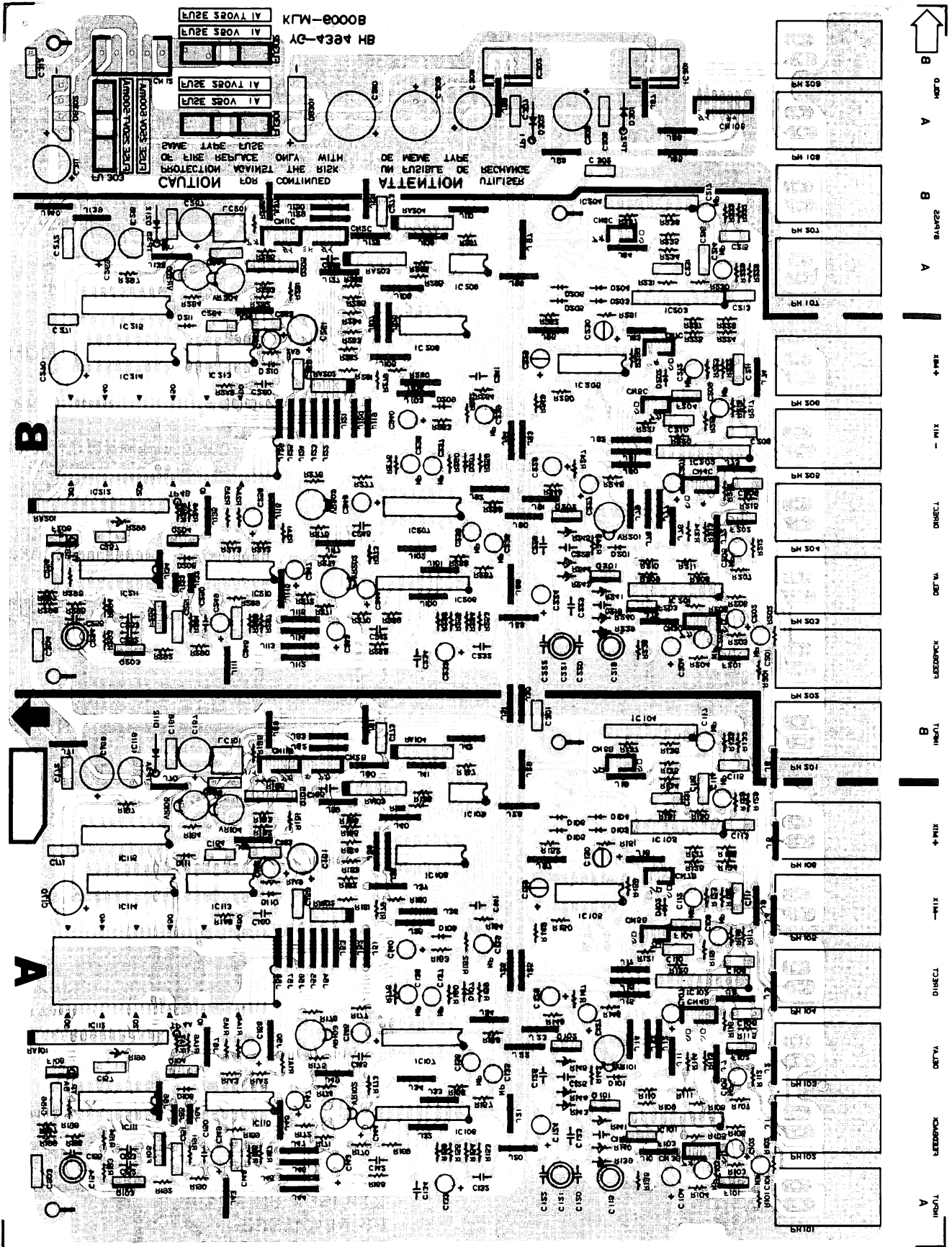
KLM-6000, 1, 2, 3, 4, 17, 18

# KLM-6001 PANEL BOARD



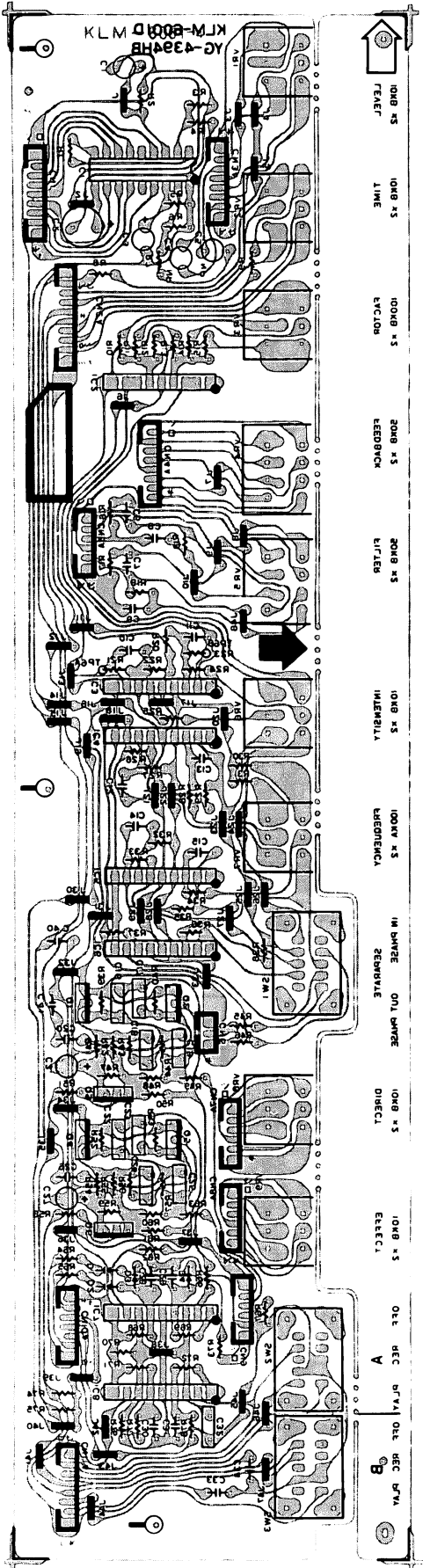
# 5. P.C. BOARD

KLM-6000

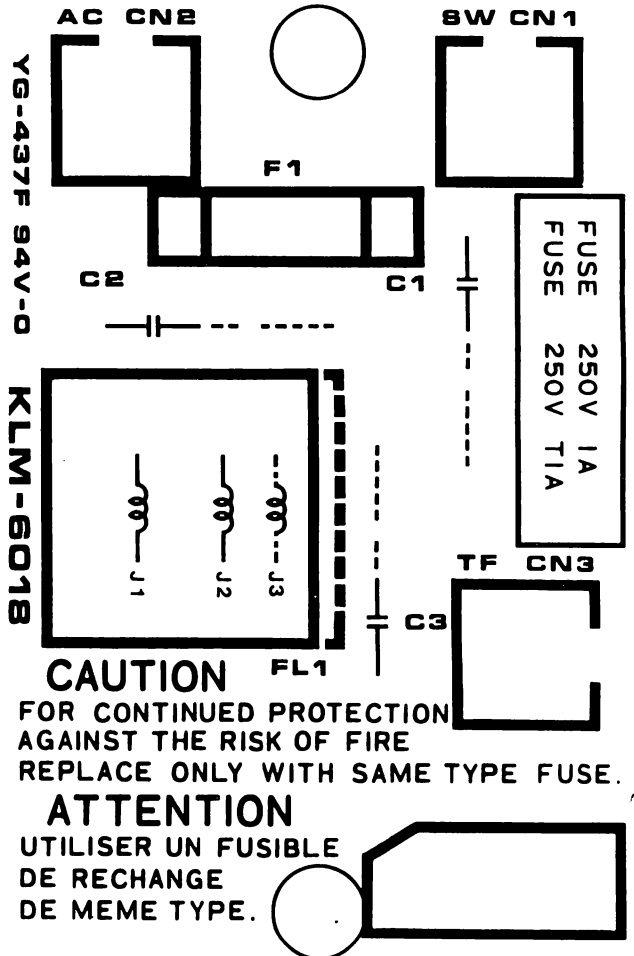
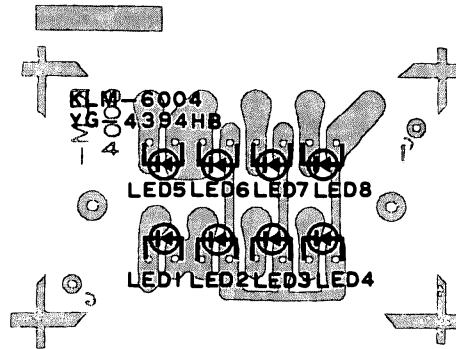
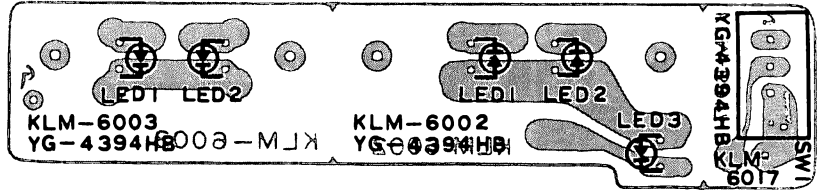


**KLM-6001**

**KLM-6001, 2, 3, 4, 17, 18**



**KLM-6003, 2, 17**





# 6. CIRCUIT DESCRIPTIONS

## 1. SYSTEM EXPLANATION

The SDD-1200 is a Dual Digital Delay that includes KORG's custom LSI uPD65010CW-133 (Gate Array) and consists of 2 independent systems. Since using two dynamic RAM of 256K bits (4 bits × 64 words for each unit), there is totally 128K words. It uses 12 bits (3 words) per sampling. That is, if the sampling frequency is 42.66KHz, SDD-1200 provides a maximum delay time of 1024msec.

## 2. MAIN CIRCUIT EXPLANATION

### ■ SIGNAL INPUTS

The audio signal input to INPUT A is buffered at FET (F101), and adjusted to the adequate level by INPUT LEVEL VR (VR1) on the front panel, and then amplified about 4 times as much by OP AMP (1/2 IC101). This signal goes through the MIXER (1/2 IC101) mixing with Feedback Input, and the mixed signal is filtered by the FILTER ( $f_c = 16\text{KHz}$ ), consists of transistors (Q101, Q102), then compressed at Compressor Circuit, consists of Compressor (1/2 IC107) and OP AMP (1/2 IC106), and pre-emphasized by CR which consists of C132, R153 and R154.

The output signal from Compressor Circuit goes through the S/H Circuit, which consists of 13700 (1/2 IC111) and FET (F105) and digitalized at the A/D Converting Comparator (IC110). Then it inputs to Gate Array (IC112) as digital data.

#### Note:

1. IC 13700 is a high-speed analog switch controlled by the signal from SH terminal of the Gate Array. The frequency of the signal is the sampling frequency.
2. Most part of the circuit to convert S/H signal from analog to digital is in the Gate Array. Only high-speed Comparator (IC110) is in external.

### ■ SIGNAL OUTPUT

The effect signal conducted at the Gate Array outputs from D00 - D011 of the Gate Array (IC112) as a 12-bit digital data and converted to analog data by the Block Resistor (RA101), which consists of R-2R, and goes through the S/H Circuit, which consists of 13700 (1/2 IC111) and FET (F106).

Then it goes through LPF (consists of Q103) to eliminate the clock signal used for sampling, then pass through Expander Circuit, which consists of expander (1/2 IC107), and OP AMP (1/2 IC106) to bring the compressed dynamic range back to normal.

This signal is output after passing through the Filter Circuit (Hi-cut, Lo-cut) and Output Mixer Circuit.

### ■ CONTROL

Since a normal Rotary VR is used for selecting Delay Time range (2ms, 8ms, 32ms, 128ms, 512ms, 1024ms), the Range Selecting Circuit consists of Comparators (IC 109, IC108). See below for details.

GATE ARRAY TERMINAL	DELAY TIME					
	2ms	8ms	32ms	128ms	512ms	1024ms
D0	L	H	H	H	H	H
D1	L	H	H	H	H	H
D2	L	L	H	H	H	H
D3	L	L	H	H	H	H
D4	L	L	L	H	H	H
D5	L	L	L	H	H	H
D6	L	L	L	L	H	H
D7	L	L	L	L	H	H
D8	L	L	L	L	H	H

To prevent noise when unit is turned on or when the delay time is changed, the Gate Array outputs mute signal.

MUTE...for stopping S/H                    "H" is active  
MUTB...for stopping Expander           "L" is active

Clock Oscillation Circuit consists of 74HC00 (IC113) and oscillates 32 times faster than the Sampling Frequency. A transistor (Q105) is used as Fixed Current Circuit to change frequency logarithmically by linear control voltage (signal modulated by Factor + Modulation).

# 7. CHECK AND ADJUSTMENT PROCEDURE

## 1. Power Supply Voltage Check

Connect a Digital Volt Meter (DVM) to TPs on KLM-6000 and confirm if the voltage at each test point is within the ranges as shown below.

Supply	Test Points	Voltage (V)
+15v	TP-1 (D302)	+14.75 ~ +15.75
-15v	TP-2 (D301)	-14.75 ~ -15.75
+5v	TP-3A (D112)	+4.75 ~ +5.25
+5V	TP-3B (D212)	+4.75 ~ +5.25

## 2. Modulation Check

The settings are as follows. Mode Sw. = separate

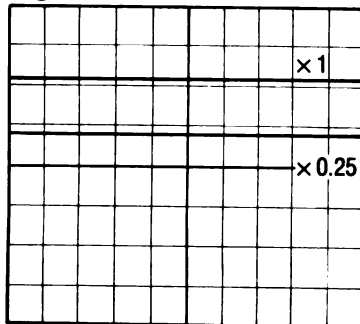
LEVEL	D. TIME	FACTOR	FEEDBACK	FILTER
0	2ms	Adj.	0	0
INTEN.	FREQ.	DIRECT	EFFECT	SAMPLING
Adj.	Adj.	0	0	Off

### 1) Modulation

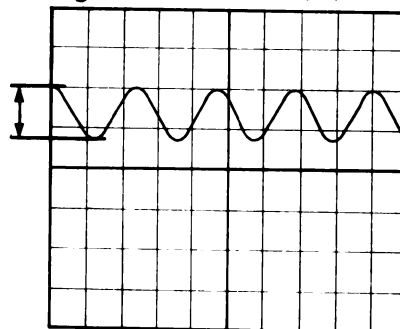
Connect an Oscilloscope (DC 2v/div, 50ms/div) to TP-6A and TP-6B on KLM-6001 and confirm modulation waveform referring to the chart below.

TEST POINTS	SYN'TIME	FACTOR	INTEN	FREQ	WAVEFORM
TP6A (R21)	0.5ms'/div	$\times 0.25 \sim \times 1$	0	0	Fig. 1
	50ms'/div	$\times 0.25$	0~10	10	Fig. 2
	50ms'/div	$\times 0.25$	10	0~10	Fig. 3
TP6B (R23)	0.5ms'/div	$\times 0.25 \sim \times 1$	0	0	Fig. 1
	50ms'/div	$\times 0.25$	0~10	10	Fig. 2
	50ms'/div	$\times 0.25$	10	0~10	Fig. 3

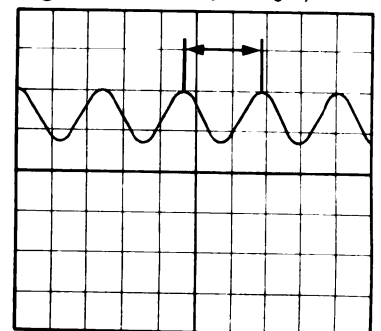
**Fig. 1** (DC Changes)



**Fig. 2** (Amplitude changes)



**Fig. 3** (Frequency changes)



### 2) Modulation LED lighting

Adjust the FREQ volume of UNIT A and B to "5", and check each LED by following procedure below.

- ① Mode Sw.: IN PHASE  
Add modulation on both channels and confirm if both are synchronized in same phase.
- ② Mode Sw.: SEPARATE  
Confirm if the modulation on each unit is controlled independently.
- ③ Mode Sw.: OUT PHASE  
Add modulation on both channels and confirm if both are synchronized in inverted phase.

### 3. Muting Effect Check

1) Power On Mute

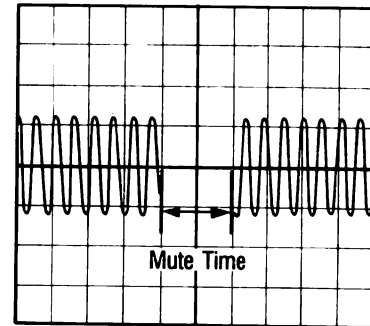
Confirm if POWER LED, BYPASS LED A and B are lit 3.5 seconds ( $\pm 1$  second) later when the unit is turned on.

2) Muting Effect at delay time change

<b>LEVEL</b>	<b>TIME</b>	<b>FACTOR</b>	<b>FEEDBACK</b>	<b>FILTER</b>
10	Adj.	X1	0	0
<b>INTEN.</b>	<b>FREQ.</b>	<b>DIRECT</b>	<b>EFFECT</b>	<b>SAMPLING</b>
0	0	0	10	Off

Set as above and supply 1KHz, -24dBm, sine wave for Standard Signal Generator (SG) to SDD-1200, and observe MIX OUTPUT with an Oscilloscope (DC 0.5v/div, 5ms/div). to confirm if Mute effects on sounds/waveform (fig. 4) when delay time is changed.

Fig. 4



### 4. S/N Check

Set as above and connect a Noise Meter (1HF-A filter, -80dBm) to MIX OUTPUT. And check S/N referring to the chart below.

<b>LEVEL</b>	<b>TIME</b>	<b>FACTOR</b>	<b>FEEDBACK</b>	<b>FILTER</b>
10	2ms	$\times 0.25$	0	0
<b>INTEN.</b>	<b>FREQ.</b>	<b>DIRECT</b>	<b>EFFECT</b>	<b>SAMPLING</b>
0	0	0	10	Off

	<b>DIRECT VR</b>	<b>EFFECT VR</b>	<b>S/N</b>
<b>A ch EFFECT</b>	0	10	-88dBm or Less
<b>A ch DIRECT</b>	10	0	-88dBm or Less
<b>B ch EFFECT</b>	0	10	-88dBm or Less
<b>B ch DIRECT</b>	10	0	-88dBm or Less

## 5. Clock Check and Adjustment

Set as above, then:

- 1) Set FACTOR A to  $\times 0.25$
- 2) Connect a FREQUENCY COUNTER to TP-4A on KLM-6000 and confirm if the value is  $170.64\text{KHz} \pm 8\text{KHz}$ .
- 3) Adjust VR105 if necessary.
- 4) Set FACTOR A to  $\times 1$  and confirm if the value is  $42.66\text{KHz} \pm 2\text{KHz}$ .
- 5) Adjust VR104 if necessary.
- 6) Change FACTOR A from  $\times 0.25$  to  $\times 1$  to confirm if the value are in the range specified as above. Repeat 2) - 4) till you get correct value.
- 7) Do the same adjustment for UNIT B usng VR204 and VR205.

LEVEL	TIME	FACTOR	FEEDBACK	FILTER
0	2ms	Adj.	0	0
INTEN.	FREQ.	DIRECT	EFFECT	SAMPLING
0	0	0	0	Off

**Note:**

Above values are for under  $20^{\circ}\text{C}$ . In case of  $0^{\circ}$  -  $40^{\circ}\text{C}$ ,  $\pm 10\%$  deviation is allowable.

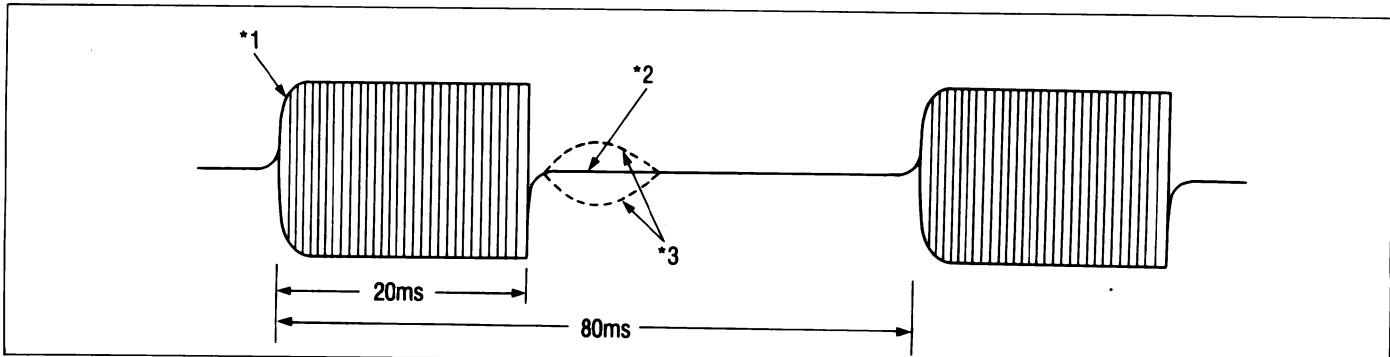
## 6. Analog Compressor/Expnder Check and Adjustment

Set as above, then:

- 1) Input a Tone Burst wave (400Hz,  $-40\text{dBm}$ , sine waveform) to SDD-1200 UNIT A and confirm waveform (fig. 5) with an Oscilloscope (DC  $0.5\text{v/div}$ ,  $10\text{ms/div}$ ) connecting to MIX OUTPUT.
- 2) Confirm if the DC fluctuation of \*3 shown in Fig. 5 is minimized. Adjust VR102 on KLM-6000 if necessary.
- 3) Confirm if the linearity of \*2 shown in fig. 5 is almost linear. Adjust VR103 on KLM-6000 if necessary.

LEVEL	TIME	FACTOR	FEEDBACK	FILTER
0	2ms	$\times 0.25$	0	0
INTEN.	FREQ.	DIRECT	EFFECT	SAMPLING
0	0	0	10	Off

**Fig. 5**



- 4) Do the same adjustment for UNIT B with VR202 and VR203.

**Note 1:**

Distortion in the EFFECT OUTPUT increases if adjustment 2) and 3) are not correct.

**Note 2:**

If you have a Distortion Meter, you can confirm distortion ratio as shown below by inputting sine wave of 400Hz, -10dBm to SDD-1200 UNIT A.

- 1) DIRECT VR 0, EFFECT VR 10: Distortion ratio = less than 0.5%.
- 2) DIRECT VR 10, EFFECT VR 0: Distortion ratio = less than 0.05%

## 7) Feedback Check and Adjustment

Set as above, then;

- 1) Input sine waveform of 400Hz, -24dBm from a Standard Signal Generator (SG) to SDD-1200.
- 2) Confirm if it does not feedback when FEEDBACK VR is set to ±8 and feedbacks at ±10.
- 3) If necessary adjust VR101 for UNIT A and VR201 for UNIT B.

**Note:**

If each value of plus and minus is different, you can use the one that is easier to feedback.

- 4) Set the input signal to "0" and confirm if it does not feedback when FEEDBACK VR is set to ±10.

LEVEL	TIME	FACTOR	FEEDBACK	FILTER
10	32ms	× 0.25	Adj.	0
INTEN.	FREQ.	DIRECT	EFFECT	SAMPLING
0	0	0	10	Off

PARTS CODE	PARTS NAME SPECIFICATIONS	P.C. BOARD	IDENTIFICATION NO. FUNCTION	Q'TY
<b>CARBON RESISTORS</b>				
10416000	1/6JTP 0 OHM	KLM-6000		4
		KLM-6001		48
		KLM-6018		2
10416222	1/6JTP 22 OHM	KLM-6000		2
10416268	1/6JTP 68 OHM			4
10416310	1/6JTP 100 OHM			16
		KLM-6001		4
10416322	1/6JTP 220 OHM	KLM-6000		4
10416336	1/6JTP 360 OHM	KLM-6001		2
10416351	1/6JTP 510 OHM	KLM-6000		4
10416356	1/6JTP 560 OHM			2
10416410	1/6JTP 1.0K			22
		KLM-6001		5
10416415	1/6JTP 1.5K	KLM-6000		2
10416422	1/6JTP 2.2K			2
10416433	1/6JTP 3.3K			6
		KLM-6001		9
10416447	1/6JTP 4.7K	KLM-6000		2
10416475	1/6JTP 7.5K			12
10416510	1/6JTP 10K			30
		KLM-6001		8
10416512	1/6JTP 12K	KLM-6000		4
10416515	1/6JTP 15K	KLM-6001		1
10416520	1/6JTP 20K			1
10416522	1/6JTP 22K	KLM-6000		12
10416527	1/6JTP 27K			2
10416530	1/6JTP 30K			2
10416533	1/6JTP 33K	KLM-6001		4
10416539	1/6JTP 39K	KLM-6000		12
		KLM-6001		2
10416556	1/6JTP 56K			2
10416568	1/6JTP 68K	KLM-6000		2
10416575	1/6JTP 75K			2
		KLM-6001		1
10416582	1/6JTP 82K	KLM-6000		4
10416610	1/6JTP 100K			42
		KLM-6001		15
10416615	1/6JTP 150K	KLM-6000		2
		KLM-6001		2
10416620	1/6JTP 200K			4
10416622	1/6JTP 220K	KLM-6000		8
10416633	1/6JTP 330K			2
10416639	1/6JTP 390K	KLM-6001		2

PARTS CODE	PARTS NAME SPECIFICATIONS	P.C. BOARD	IDENTIFICATION NO. FUNCTION	Q'TY
10416647	1/6JTP 470K	KLM-6001		4
10416710	1/6JTP 1.0M	KLM-6000		4
		KLM-6001		12
10416747	1/6JTP 4.7M	KLM-6000		12
<b>METAL FILM RESISTORS</b>				
12514715	S1/6W 7.15K	KLM-6000		2
12514909	S1/6W 9.09K			8
12515107	S1/6W 10.7K			4
<b>BLOCK RESISTORS</b>				
13503610	RKC1/8B3J 100K $\Omega$	KLM-6000		2
13505522	RKC1/8B5J 22K			2
13505610	RKC1/8B5J 100K			2
13807004	RN3QEL 102Z (1K $\Omega$ $\times$ 12bit)			2
<b>MYLAR CAPACITORS</b>				
20402410	50V 0.001UF	KLM-6000		2
20402415	50V 0.0015UF			4
		KLM-6001		2
20402418	50V 0.0018UF	KLM-6000		2
20402433	50V 0.0033UF			4
20402447	50V 0.0047UF	KLM-6001		2
20402510	50V 0.01UF	KLM-6000		10
		KLM-6001		6
20402547	50V 0.047UF			4
20402610	50V 0.1UF			4
20402612	50V 0.12UF			2
<b>STYROL CAPACITORS</b>				
20502310	50V GT 100PF	KLM-6000		4
20502312	50V GT 120 PF			2
<b>CERAMIC CAPACITORS</b>				
21452220	50V 22PF TP	KLM-6000		6
21452470	50V 47PF TP			2
21453100	50V 100PF TP			2
21453220	50V 220PF TP	KLM-6001		4
21453330	50V 330PF TP	KLM-6000		2
21453470	50V 470PF TP			2
		KLM-6001		4
21453820	50V 820PF TP	KLM-6000		12
21455100	50V 0.01UF TP			2
21455470	50V 0.047UF TP			12
		KLM-6001		
<b>SPAR KILLER</b>				
900600	ECQ-U2A473MN	KLM-6018		8

PARTS CODE	PARTS NAME SPECIFICATIONS	P.C. BOARD	IDENTIFICATION NO. FUNCTION	Q'TY
<b>EMI FILTER</b>				
21950100	DSS310-55D223S	KLM-6000		2
<b>TAMTALUM CAPACITORS</b>				
22425022	35V 0.22UF	KLM-6000		4
<b>ELECTROLYTIC CAPACITORS</b>				
23511347	25V 470UF	KLM-6000		1
23513410	35V 1000UF			2
25403210	16V 10UF			28
25403247	16V 47UF			2
25403310	16V 100UF			6
		KLM-6001		1
25403333	16V 330UF	KLM-6000		3
25404147	25V 4.7UF	KLM-6001		2
25404322	25V 220UF	KLM-6000		1
25406110	50V 1UF	KLM-6001		2
25464147	25V 4.7UF	KLM-6000		4
25464210	25V 10UF			6
		KLM-6001		2
25466110	50V 1UF	KLM-6000		12
25466133	50V 3.3UF			2
<b>P.P.C</b>				
26401418	100V 0.0018UF	KLM-6000		4
26401436	100V 0.0036UF			8
<b>TRANSISTORS</b>				
30001007	2SA798 F/G	KLM-6000		2
30400050	2SA1175	KLM-6001		2
30420120	2SC945	KLM-6000		8
		KLM-6001		4
<b>FET</b>				
30460021	2SK381-34-C	KLM-6000		12
<b>BRIDGE DIODE</b>				
31010100	1B4B41	KLM-6000		2
<b>LED</b>				
31201400	PR 3932S	KLM-6002		3
		KLM-6003		2
31203900	SLB-26VR3F RED	KLM-6004		4
31204000	SLB-26MG3F GREEN			4
<b>DIODES</b>				
31001500	SR1K-2	KLM-6000		4
31401300	1SS-133	KLM-6000		22
		KLM-6001		4

PARTS CODE	PARTS NAME SPECIFICATIONS	P.C. BOARD	IDENTIFICATION NO. FUNCTION	Q'TY
<b>ICs</b>				
32001034	UPC-1571 C	KLM-6000	Campander	2
32001067	74HC00C		Gate	2
32001085	UPD65010CW-113		Gate array	2
32001087	UPC319C		Comparator	2
32001104	UPD-41464 CF-12		D-RAM	4
32002027	AN6888	KLM-6001	LED driver	1
32009004	NJM-78L05A	KLM-6000	+5V regulator	2
32009005	NJM-4558 S		OP AMP	10
		KLM-6001		3
32009014	NJM-2901 N	KLM-6000	Comparator	2
32009015	NJM-2903 D		Comparator	2
32009026	NJM-137000-D		Transconduc- tance AMP	2
32009033	NJM-78M15A		+15V regulator	1
32009034	NJM-79M15A		-15V regulator	1
32009050	NJM-072S	KLM-6001	OP AMP	2
32009051	NJM-2903S		Comparator	2
32011020	M5224P	KLM-6000	OP AMP	2
<b>P.C.BOARD</b>				
34360000	KLM-6000	KLM-6000		1
34360010	KLM-6001	KLM-6001		1
34360021	KLM-6002/3/17	KLM-6002		1
34360040	KLM-6004	KLM-6004		1
34360180	KLM-6018	KLM-6018		1
<b>SEMI FIXED VRs</b>				
35002310	RH0615C14 10K	KLM-6000		8
35002410	RH0615C15 100K			2
<b>VRs</b>				
36019800	PK1242210B14 10KB x 2	KLM-6001		5
36019900	PK1242210B54 50KB x 2			2
36020000	PK1242210A15 100KA x 2			1
36020100	PK1242210B15 100KB x 2			1
<b>SLIDE SW</b>				
37306100	SSSP12	KLM-6001		3
<b>POWER SW</b>				
37506100	SDL-1P			1
<b>TACT SW</b>				
37508300	SPPJ31	KLM-6017		1
<b>POWER TRANSFORMER</b>				
40010000	TC-600			1

PARTS CODE	PARTS NAME SPECIFICATIONS	P.C. BOARD	IDENTIFICATION NO. FUNCTION	Q'TY
<b>PHONE JACK</b>				
45402000	HLJ0520-01-110	KLM-6000		16
<b>PHONE JACK SNAP PALATE</b>				
45402000				6
<b>FUSE</b>				
46411701	250V 0.5A UL		100V 117 US JAM	1 1 1
46412003	250V 1.0A UL		117 2P 100V 117 US JAM	1 3 3 3
46461701	250V T500MA		117 2P 220 GE 220 SE 240 AF 240 AU 240 GE GAF FIMKO	3 1 1 1 1 1 1 1
46462001	250V T1.0A		240 RME 220 WG 220 GE 220 SE 240 AF 240 AU 240 GE GAF FIMKO 240 RME 220 WG	1 1 3 3 3 3 3 3 3 3 3
<b>CONNECTOR TOP</b>				
47190200	5096-02C	KLM-6018		3
<b>CONNECTOR</b>				
47150500	B5P-VH	KLM-6000		1
47191030	PI22A-03M	KLM-6001		1
47191060	PI22A-06M			4
47191070	PI22A-07M			1
47191080	PI22A-08M			3
47191090	PI22A-09M			1
47191100	PI22A-10M			1
<b>HARNESS</b>				
47506000	HNS-6000	KLM-6000		1
47506001				1

PARTS CODE	PARTS NAME SPECIFICATIONS	P.C. BOARD	IDENTIFICATION NO. FUNCTION	Q'TY
47506002	HNS-6002	KLM-6000		1
47506003	HNS-6003			1
47506004	HNS-6004			1
47506005	HNS-6005			1
47506006	HNS-6006			1
47506007	HNS-6007			1
47506008	HNS-6008			1
47506009	HNS-6009			1
47506010	HNS-6010			1
47506011	HNS-6011			1
47506012	HNS-6012			2
<b>RUBBER FEET</b>				
50007800	25 x 25 x 4.5BLK			4
<b>FUSE HOLDER</b>				
51502300	S-N5057 #01	KLM-6000 KLM-6018		6 2
<b>WIRE BAND</b>				
54007200	PLT-1M			10
<b>ISOLATING WASHER</b>				
54007300	B-1725K	KLM-6000		2
<b>CLUMP</b>				
54011100	CK-07H			1
<b>INLET SOCKET</b>				
54012300	PA-125-BS		240 RME	1
54012400	PA-125-CU		100V 117 US JAM 117 2P 220 GE 220 SE 240 AF 240 AU 240 GE GAF FIMKO 220 WG	1 1 2 1 1 1 1 1 1 2 1 1
<b>SLIDE SW. MASK</b>				
55005400				3
<b>HEATSINK</b>				
56003400		KLM-6000		1



PARTS CODE	PARTS NAME SPECIFICATIONS	P.C. BOARD	IDENTIFICATION NO. FUNCTION	Q'TY
<b>RADIATION SHEET</b>				
56500300	BFG-30			2
<b>SPACER</b>				
57504200	NO.5 L = 5.3	KLM-6002		3
		KLM-6003		2
<b>GND SEAL</b>				
58001900			117 US	1
			JAM	1
			220 GE	1
			220 SE	1
			240 AF	1
			240 AU	1
			240 GE	1
			GAF	1
			FIMKO	1
			240 RME	1
			220 WG	2
<b>AC CORD</b>				
60003200	UC-948-S01		117 US	1
60003300	UC-953-S01		JAM	1
60003400	EC-423-S01		220 SE	2
60003500	SC-304-S01		240 AU	1
60003600	EC-606-E01		220 GE	1
			240 AF	1
			240 GE	1
			GAF	1
			FIMKO	1
			220 WG	1
60003700	BH-309-S01		240 RME	1
60003800	DC-480-S01		100V	1
			117 2P	1
<b>POWER SW KNOB</b>				
62011100	SUE55102 BLK			1
<b>ROTARY VR KNOB LARGE</b>				
62015301				9
<b>ROTARY VR KNOB SMALL</b>				
62015401				9
<b>TACT SW KNOB</b>				
62016500	MK-15 BLK			1
<b>SHIELDING SHEET</b>				
63002800				1

PARTS CODE	PARTS NAME SPECIFICATIONS	P.C. BOARD	IDENTIFICATION NO. FUNCTION	Q'TY
<b>METAL FITTING OF FRONT PANEL (L)</b>				
64063600				1
<b>METAL FITTING OF FRONT PANEL (R)</b>				
64063601				1
<b>FRONT PANEL BOARD</b>				
64063700				2
<b>PHONE JACK PLATE</b>				
64076200				1
<b>FRONT PANEL</b>				
64076300				1
<b>FRONT CHASSIS</b>				
64076400				1
<b>UPPER CASE</b>				
64076500				1
<b>LOWER CASE</b>				
64076600				1
<b>LUG</b>				
67200201	4PHY N3			1
<b>NAME PLATE</b>				
68600600			100V	1
68600700			117 US	1
			JAM	1
			117 2P	1
			220 GE	1
			220 SE	1
			240 AF	1
			240 AU	1
			240 GE	1
			GAF	1
			240 RME	1
			220 WG	1
<b>SCREW</b>				
70060512	FE P BZMC 5×12			4
70530204	FE B ZMC 2×4			1
70530306	FE B ZMC 3×6			26
70530308	FE B ZMC 3×8			2
70560408	FE B ZMC 4×8			3
72160308	TP2G F BZMC 3×8			4
72560306	TP2G B BZMC 3×6			20
72560308	TP2G B BZMC 3×8			2

PARTS CODE	PARTS NAME SPECIFICATIONS	P.C. BOARD	IDENTIFICATION NO. FUNCTION	Q'TY
<b>NUT</b>				
77030400	FHN ZMC 4			3
77330900	VN ZMC 9			9
<b>WASHER</b>				
78060500	WM BZMC 5×12			4
78160400	WK BZMC 4			4
78430400	TWU ZMC 4			1
<b>PHONE JACK WASHER</b>				
79040914	N-3 9×14×0.5			9
<b>SCREW W/HEX. HOLE</b>				
79090408	4×8 BZMC			4

**KORG<sup>®</sup> KORG INC.**

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