

**KORG**



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**SIGNAL PROCESSOR SERVICE MANUAL MS-03**

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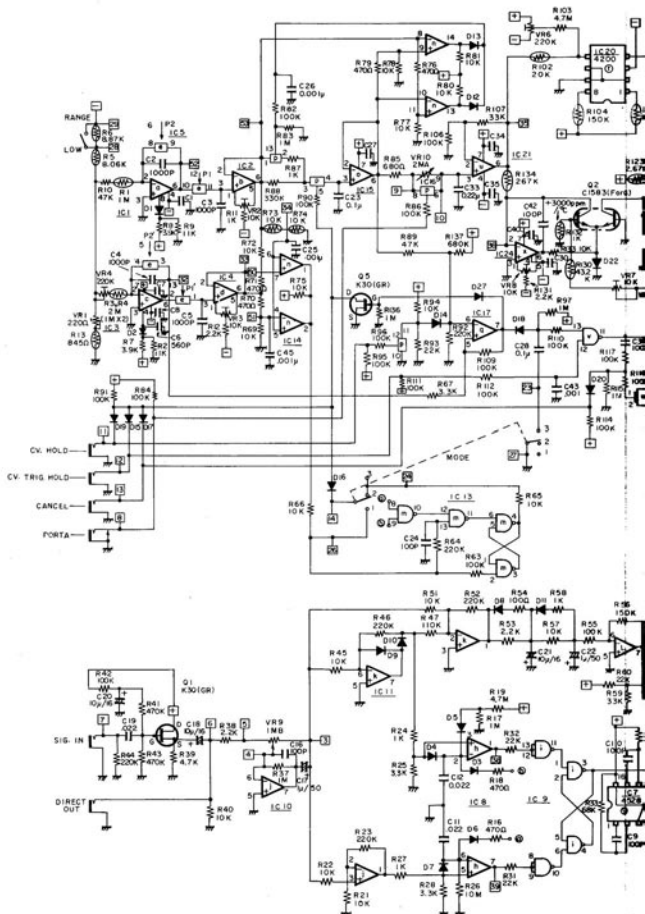
**CONTENTS**

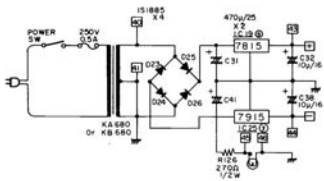
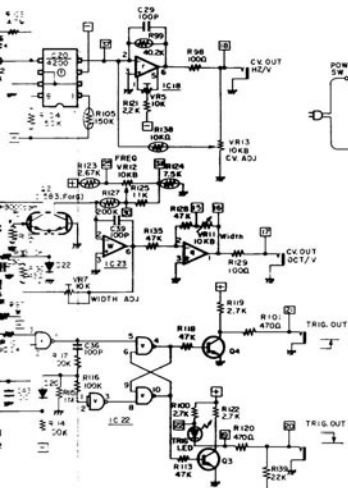
1. SPECIFICATIONS.....	2
2. CIRCUIT DIAGRAM.....	3
3. PC BOARD.....	4
4. PARTS LIST (Mechanical parts not listed).....	5
5. BLOCK DIAGRAM.....	6
6. ADJUSTMENT PROCEDURE.....	7

# 1. SPECIFICATIONS

1. CONTROL SECTION
- Input signal level
  - Range switch  
(Low: 75~1400 Hz,  
Hi: 150~2800 Hz)
  - Mode switch
  - Portamento time
  - CV hold
  - CV & Trig hold
  - Cancel switch
  - OCT/V frequency adjust  
(±600 cent)
  - OCT/V width adjust  
(0.9~1.1V/OCT)
  - Power switch
  - Portamento switch
2. INPUT & OUTPUT
- Signal In (auto pad system)  
(line level~mic level)
  - CV out (Hz/V)
  - CV out (OCT/V)
  - Trig out  $\overline{\text{GND}}$
  - Trig out  $\overline{\text{GND}}$
  - Env. out
  - Direct out
3. INDICATOR (LED)
- Peak indicator
  - Trigger indicator
4. POWER CONSUMPTION
- 5W

## 2. CIRCUIT DIAGRAM

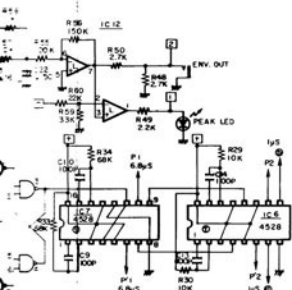




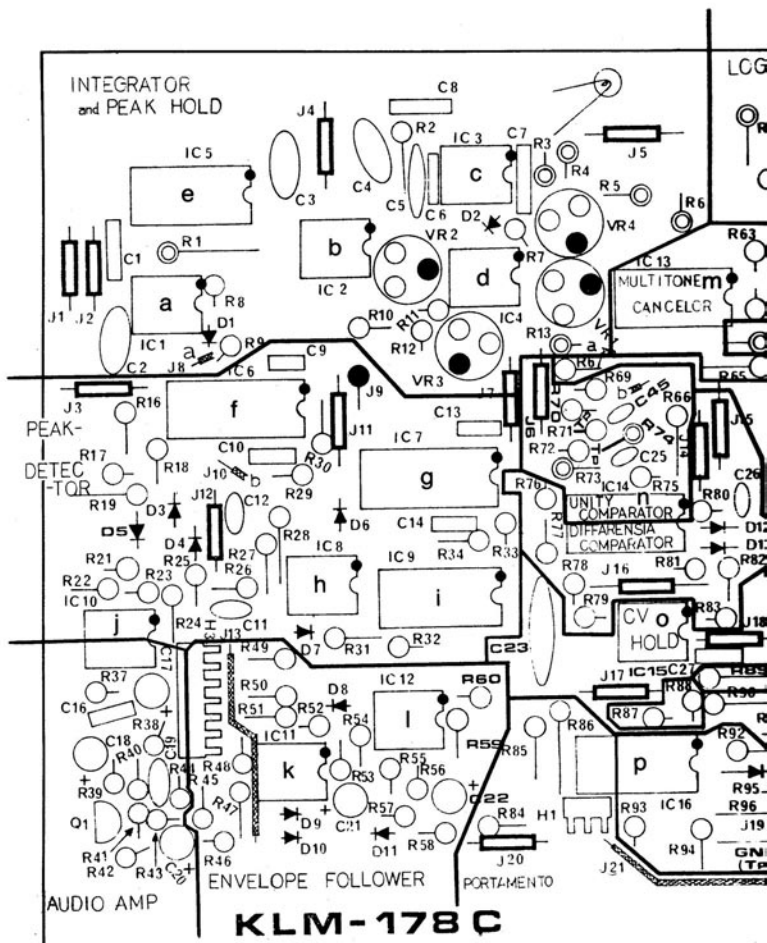
RANGE LOW

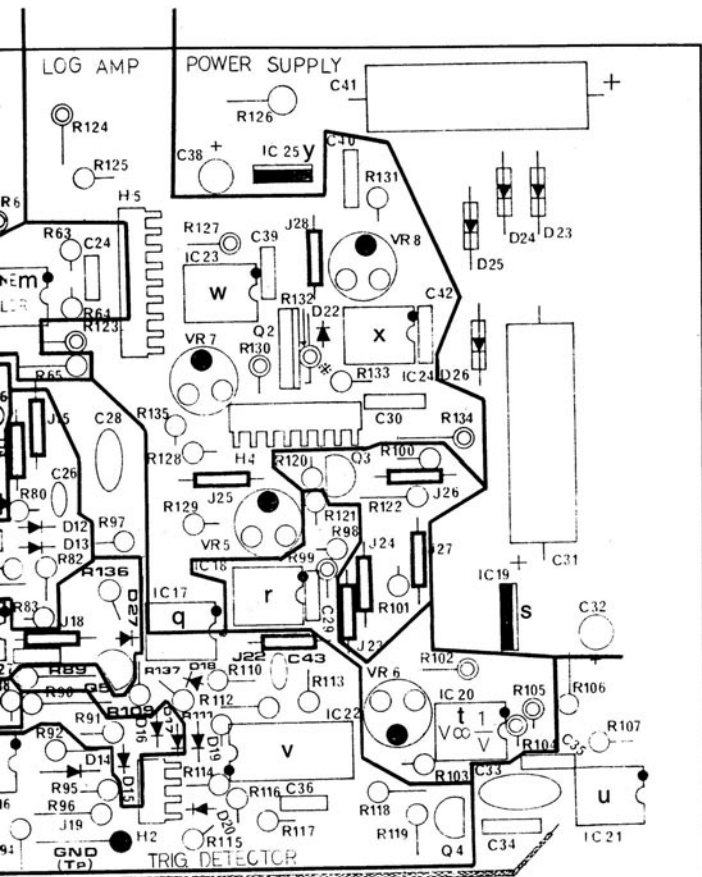
Freq	Tp 52V	Tp 35V	H <sub>Z</sub> /V	OCT/V
1 KHz	0.75	1.00	8.00	3.50
500Hz	1.50	2.00	4.00	2.50
250Hz	3.00	4.00	2.00	1.50
125Hz	6.00	8.00	1.00	0.50

a.c.c.o. : 3140  
 d.r.c.w. : 071  
 e.p. : 4066  
 s. : 072(082)  
 n. : 339  
 k.i.m. : 4011  
 j.k.i.o. : 4558



### 3. PC BOARD





# 4. PARTS LIST

(Mechanical parts not listed)

● CARBON RESISTORS  
not listed

● METAL FILM RESISTORS

1/4W 1% 845Ω	x	1
267kΩ	x	1
7.5kΩ	x	1
8.06kΩ	x	1
8.87kΩ	x	1
10kΩ	x	2
20kΩ	x	1
40.2kΩ	x	1
43.2kΩ	x	1
200kΩ	x	1
267kΩ	x	1
150kΩ	x	2
1MΩ	x	2
1MΩ	x	1

● FET

2SK 30A (GR)	x	2
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● DIODES

1S1555	x	22
1S1885	x	4

● LED

SEL 104S	x	2
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● LINEAR POSITIVE  
T.C. RESISTORS

1kΩ ± 3000 PPM/°C	x	1
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● CERAMIC CAPACITORS

50V 100pF	x	10
0.0047μF	x	8
560pF	x	1

● MYLAR CAPACITORS

50VK 0.001μF	x	4
0.022μF	x	3
0.22μF	x	1
0.1μF	x	1

● POLYPROPYLENE

1000PF 100V G	x	4
0.1μF 200V M	x	1

● ELECTROLYTIC CAPACITORS

10μF 16V	x	5
470μF 25V	x	2
1μF 50V	x	2

● SEMI-FIXED RESISTORS

SR-19D 220ΩB 10φ	x	1
10IKB 10φ	x	5
220KB 10φ	x	2

● ROTARY VARIABLE  
RESISTORS

10KB EVH-COAK 15B14	x	2
1MB EVH-COAK 15B16	x	1
2MA EVH-COAK 15A16	x	1

● SLIDE KNOB

Black L6	x	2
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● SLIDE SWITCHES

SSB-12202	x	1
SSB-12301	x	1

● SEESAW SWITCHES

1801-0121	x	1
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● FUSE

250V 0.5A	x	1
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● TRANSISTORS

2SC 1685(S)	x	2
2SC 1583F or G	x	1

● IC

TL 071	x	5
072	x	1
CA3140E	x	4
RC4200	x	1
339	x	1
4011	x	3
MC14066	x	2
4528	x	2
4558	x	4
7815	x	1
7915	x	1

● PILOT LAMP

14V 0.04A	x	1
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● LAMP HOLDER

BFE-R	x	1
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● PC BOARD

KLM-178C	x	1
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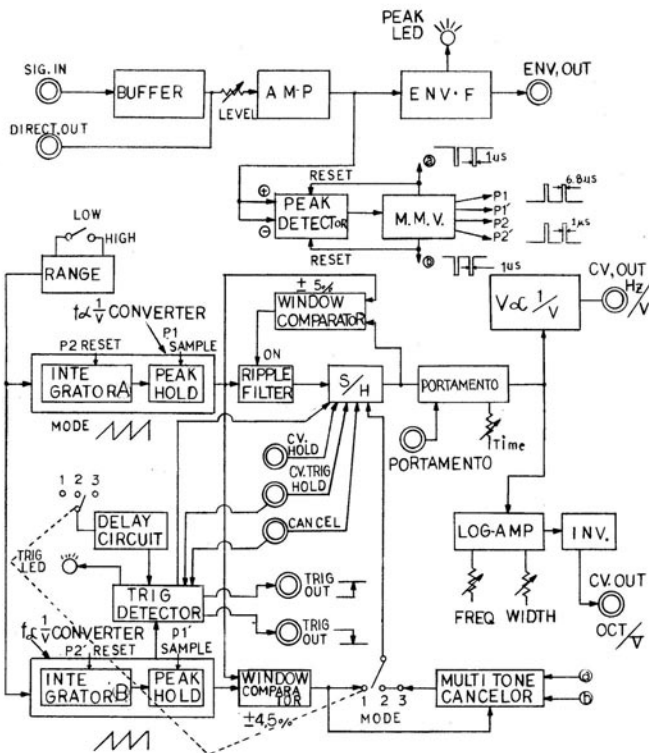
● CONNECTORS

MS-0301	x	1
MS-0302	x	1
MS-0303	x	1
MS-0304	x	1
TRC-100	x	1
3P	x	1
4P	x	1
7P	x	1
8P	x	1
9P	x	1

● POWER TRANSFORMER

KA680 100V, 220V, 240V	x	6
KB680 UL, CSA, 117V	x	2

## 5. BLOCK DIAGRAM





## 6. ADJUSTMENT PROCEDURE

Settings MS-03		
Sig in	←	WT-10A out or Freq. OSC
CV out	→	Digital voltmeter (4-1/2)
Range	→	Low
Peak	→	On
Settings WT-10A		
Sound/meter SW	→	Sound
Chromatic Dial	→	B
Meter	→	+ 20 cent

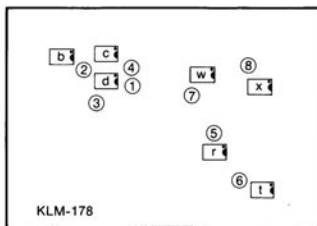


Fig. 1

- Turn CV OUT Hz/V ADJUST knob at the rear panel all the way clockwise to the KORG CV position.
- Please refer to fig. -1 concerning Adjust Vr. No.
- The value indicated in ( ) show you frequency and voltage which you get when you put Frequency OSC into the Sig.-In.
- Please refer to the circuit diagram regarding Test Point No. (TP).
- You must make adjustment again and again until you get the same value of Output Voltage indicated in the list below.
- Please note this adjustment process is mentioned when WT-10A is used.

	WT-10A OCT	TP	Digi.Vol. (4-1/2)		Adjust Vr. No.	Note	
Hz/V	(1 kHz) H	18	(8.00V)	8.00V	6	Accuracy: - 10 cent + 5 cent	
	(500 Hz) M	18	(4.00V)	4.00V	1		
	(250 Hz) L	18	(2.00V)	2.00V	5		
OCT/V	(250 Hz) L	17	(1.50V)	1.50V	Freq. Vr. → 0		
	(1 kHz) H	17	(3.50V)	3.50V	8		
	(500 Hz) M	17	(2.50V)	2.50V	7		
Peak Hold-1	(125 Hz) L	53	(6.00V)	3.00V	1		When you cannot make adjustment, please make it as indicated in the list on the left.
Peak Hold-1	(125 Hz) L	34	(3.00V)	1.50V	1		
	(1 kHz) H	34	(0.375V)	0.375V	2		
Peak Hold-2	(125 Hz) L	33	(3.00V)	1.50V	4		
	(1 kHz) H	33	(0.375V)	0.375V	3		
V $\propto$ 1/V	(125 Hz)	35	(8.00V)		Check		
	(250 Hz) L	35	(4.00V)	4.00V			
	(500 Hz) M	35	(2.00V)	2.00V			
	(1 kHz) H	35	(1.00V)	1.00V			