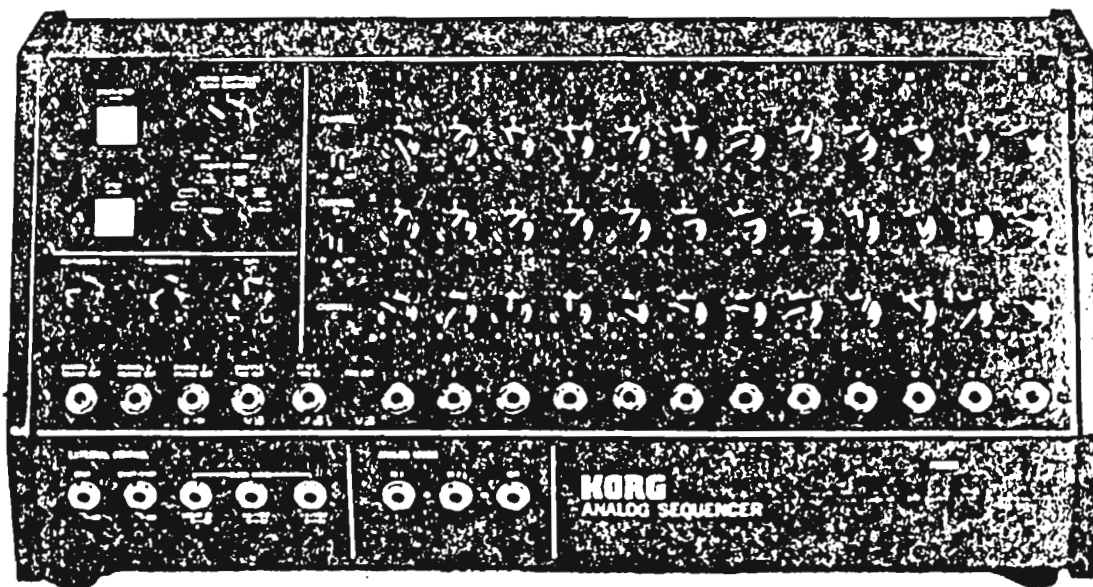


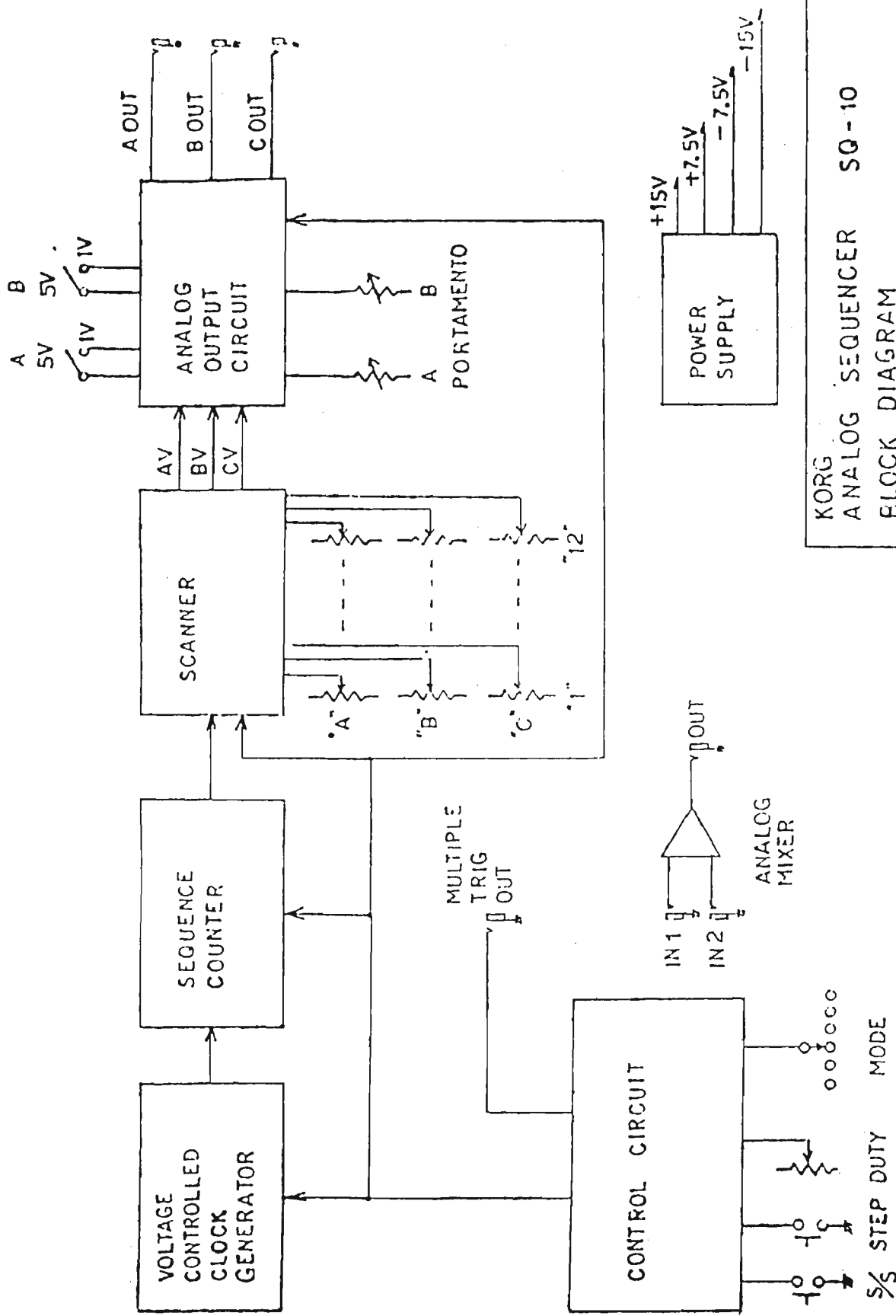
(Bad copy)

SQ-10

SERVICE MANUAL



KEIO ELECTRONIC LAB., CORP.
TOKYO, JAPAN



KORG
ANALOG SEQUENCER SQ-10
BLOCK DIAGRAM

SQ-10

Checking and Adjustment


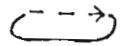


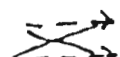

Power Check & Adjust


1. +15V; Should be 14.4V~15.6V.
2. -15V; Should be -14.4V~-15.6V.
3. +7.5V; Adjust VR46 to 7.50V.
4. -7.5V; Adjust VR47 to -7.50V.

Function Test -- Standard -- Connect MS-10 (fig 1)

Set MS-10 and SQ-10 controls (fig 2)
(fig-3)

No.	Mode Rotary switch	Check
-----	--------------------	-------

2.  Clock LED flashes on and off.
3.  '12' LED turns on first. Then 1 and 2 each time step button is pressed, so the sequence goes 12, 1, 2. A and B LED's do not turn on in this mode.
4.  LED's 1 through 12 should be off at first. When S/S switch is pressed, sequence goes 1, 2 12, 1, 2 When S/S switch is pressed again, LED's go out. A and B do not light.
5.  LED's 1 through 12 should be off at first. When you turn on the S/S switch, the sequence should automatically advance 1,2,...12... and then stop after one time, If you press the S/S switch between 1 and 12, the sequence should stop. A and B do not turn on.
6.  B and 12 are on at first. A and 1 turn on when you first press the Step switch. Press it again for 2...12; again for B 1...12; and again for A 1...
7.  A and B and 1 through 12 should all be off at the beginning. When you press the S/S switch, the sequence should go A 1...12, B 1...12, A 1... automatically. Press the S/S switch again to stop.

8.  At the beginning A and B and 1 through 12 should all be off. Press the S/S switch and there should be a single cycle of A 1...12 and B 1...12. Then it should stop. It should also stop if you press the S/S switch while the LED's are changing.



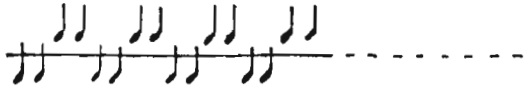
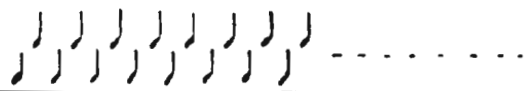

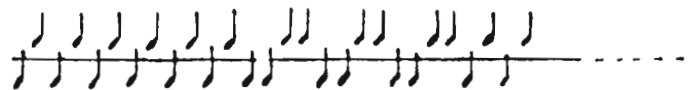
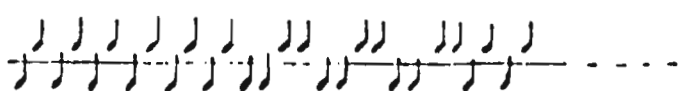
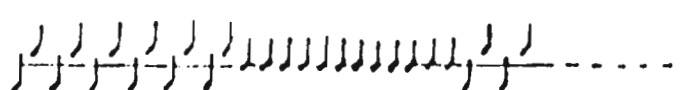
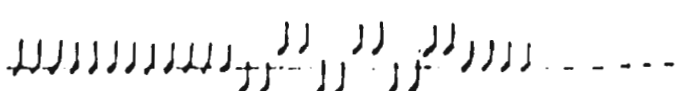
Function Test (2)

○ means the phone plug connected to the MS-10 CV IN.

⊗ means the phone plug connected to the opposite side (open).

sa-10 Check 2/4

FUNCTION TEST (2)

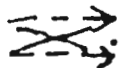

NO	MODE Rotary SW	(OUTPUT)			MUSICAL interval
		A	B	C	
9		○			
10			○		
11				○	
12		○			
13			○		
14		○	⊗		
15		⊗	○		

OUTPUT CHECK





NO.	STEP VR 3.1	MODE	5V-1V _{3W}		Digital Volt, Mt			Measure STEP	Limit	
			A	B	A	B	C			
28	"1" A B C		5V	↑	○			"1"	+4.90 ~ +5.10 V	
29			1V		5V	○			"1"	+0.95 ~ +1.05 V
30							○		"1"	+4.90 ~ +5.10 V
31					↓		○		"1"	+0.95 ~ +1.05 V
32								○	"1"	+4.90 ~ +5.10 V
33						○			"A" "1"	+4.85 ~ +5.15 V
34				5V	5V	○			"B" "1"	+4.85 ~ +5.15 V
35						○			"A" "1"	-4.85 ~ -5.15 V
36						○			"B" "1"	-4.85 ~ -5.15 V
37	"1" A B C				○			"1"	-4.90 ~ -5.10 V	
38							○		"1"	-4.90 ~ -5.10 V
39								○	"1"	-0.10 ~ +0.10 V

○ Digital voltmeter to measure the phone jack

Function Test (3)

No.	Item	Check
16	Portamento-A	Portamento effect should only show up in the channel A output when you turn up this knob.
17.	Portamento-B	Portamento should only show up in the B channel output.
18.	Duty	Should get shorter when knob is turned counter-clockwise. Should get longer when turned clockwise.
19.	Reset, Trig Out (1~11)	Connect RESET ^{TRIG} IN jack to each of TRIG OUT jacks 1 through 11 in turn, and see that the sequence returns to 1 after reaching the proper step. Disconnect after check.
20.	Trig Out (12)	With TRIG OUT 12 connected to the MS-10 TRIG IN jack, see that there is only a sound produced at the 12th step in a sequence. Disconnect after check.
21.	Step (jack)	Set mode to MS-10  . Connect MS-10 momentary switch to STEP jack and see that steps advance when you press the MS-10 switch. Set mode back to MS-10  and disconnect after check.
22.	Start/Stop (jack)	Connect MS-10 momentary switch to S/S jack,

and see that the MS-10 switch will turn the S/S on and off.
Disconnect after check.

23. Linear In Connect MS-10 control wheel  out to
 LINEAR IN jack, and see that the clock
 speed changes with input voltage. It should
 get faster toward +5V. Disconnect after check.
24. x2/V Connect MS-10  out to x2/V jack, and see
 that clock speed changes with input voltage.
 Speed increases towards +5V. Disconnect
 after check.
25. +2/V Connect MS-10  out to +2/V jack, and see
 that clock speed changes with input voltage.
 Speed should decrease toward +5V. Disconnect
 after check.
26. Clock Turning the CLOCK knob all the way counter-
 clockwise should slow down the cycle 10sec ~ 40sec.
 Turning the knob clockwise should speed up the
 clock.
27. Analog The sum of IN 1 and IN 2 voltages should
 Mixer appear in the OUT voltage.
 For example: Connect MS-10  out to IN 1;
 Connect SQ-10 multiple trigger out to IN 2;
 Connect MS-10 CV IN to OUT.

Multiple trigger signal should modulate pitch of note
when keyboard is played (or momentary switch is pressed)
on MS-10. Changing IN 1 input voltage (from control wheel)
will vary entire pitch.

FREQ CV IN

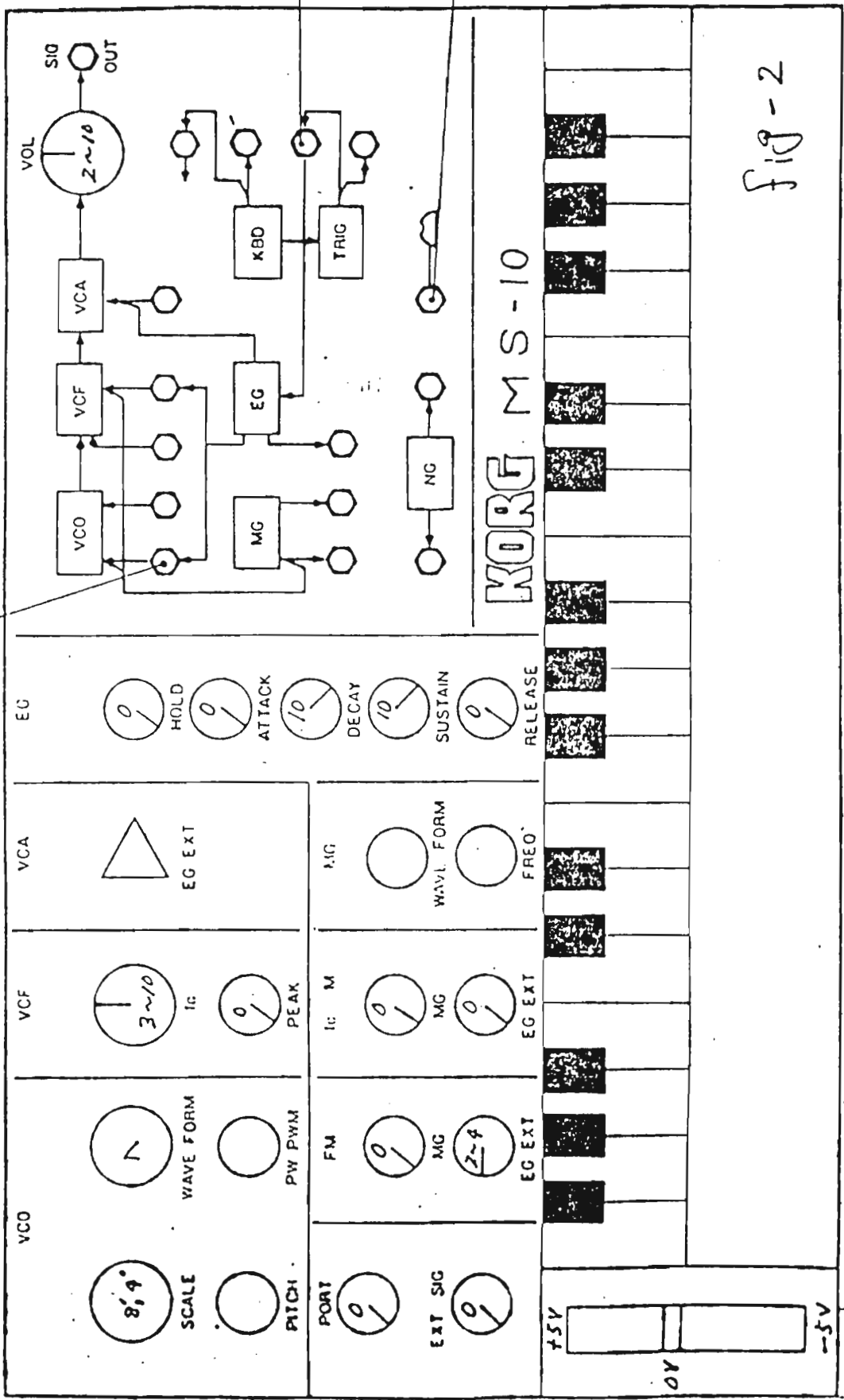
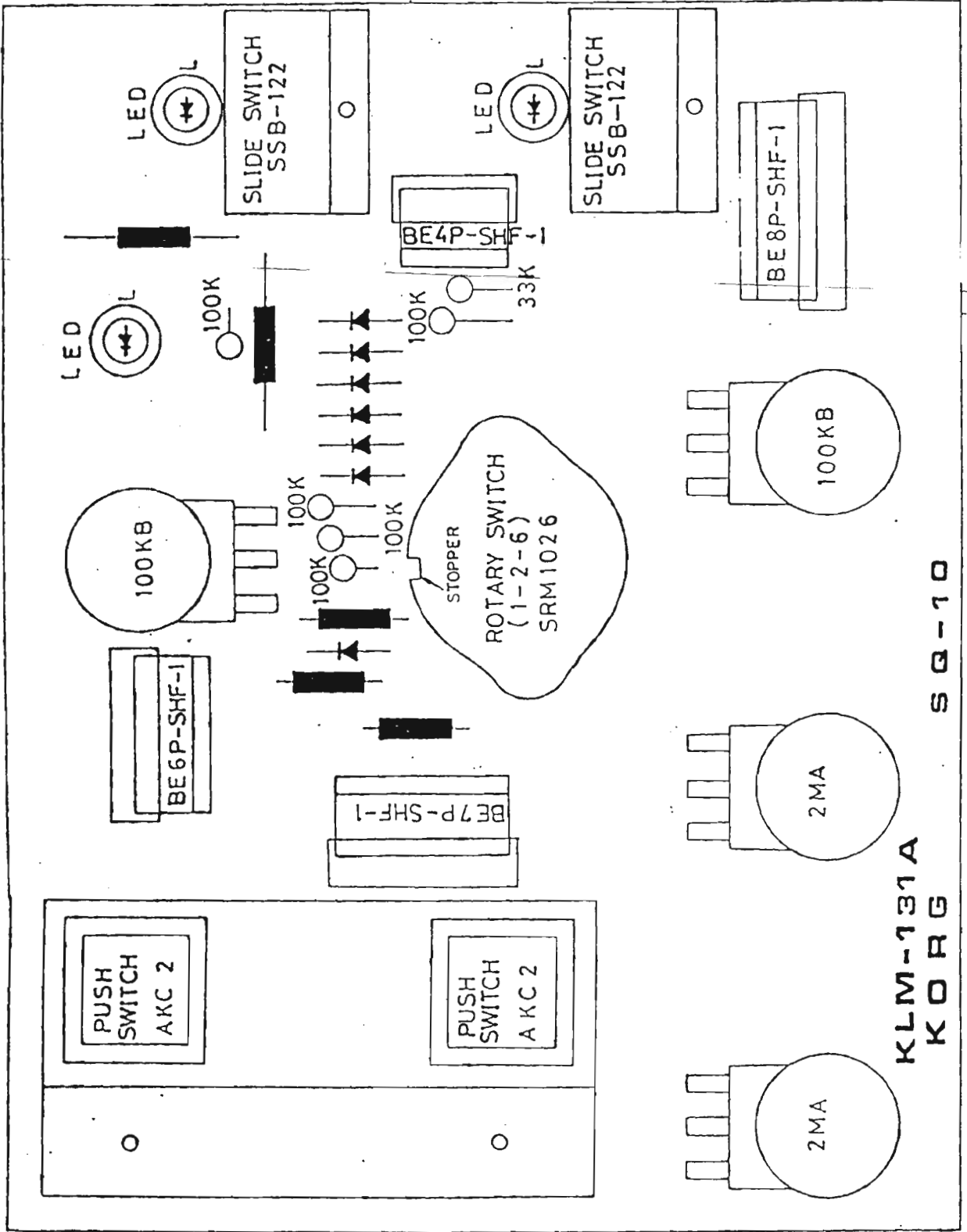


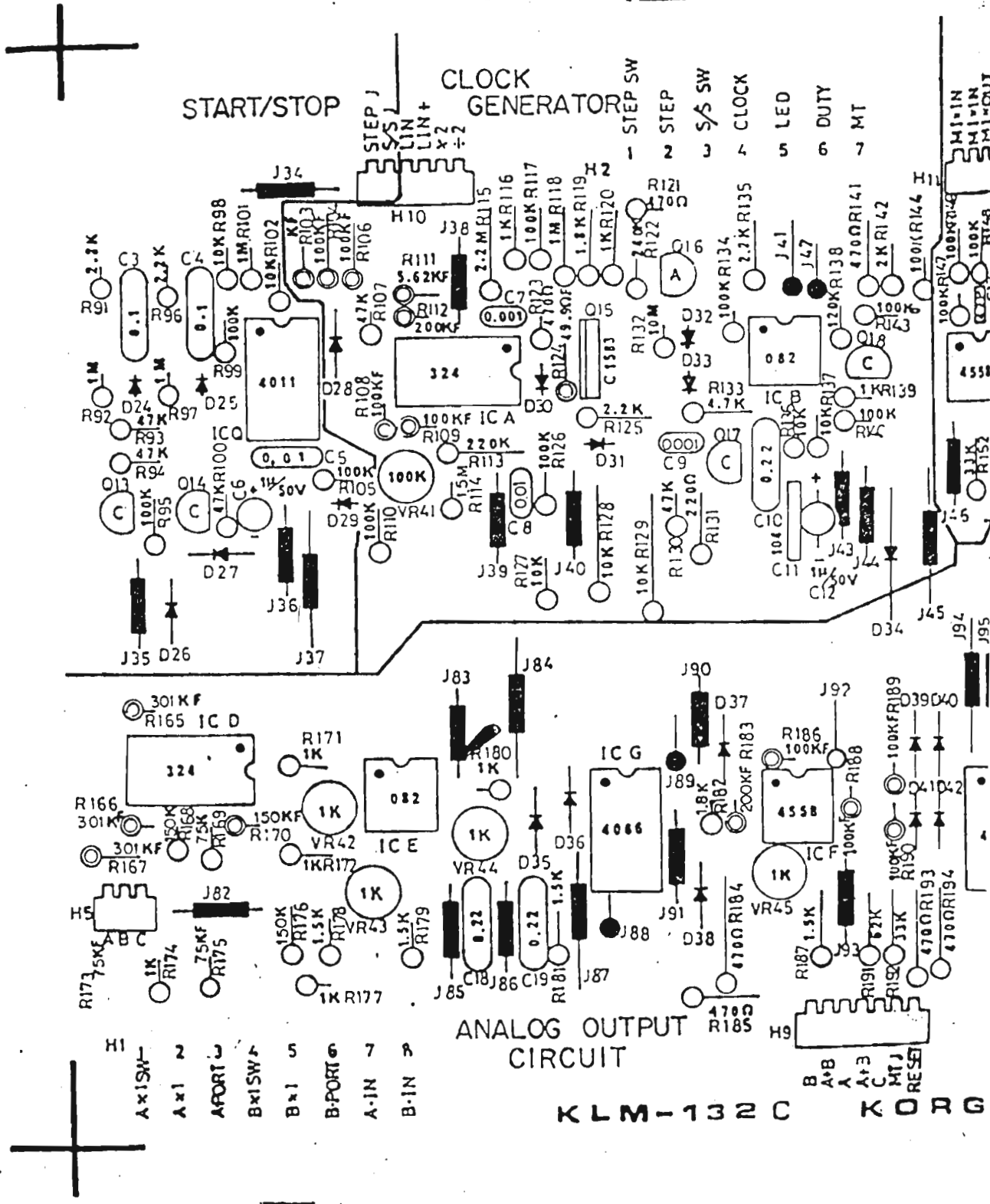
Fig-2

MS K

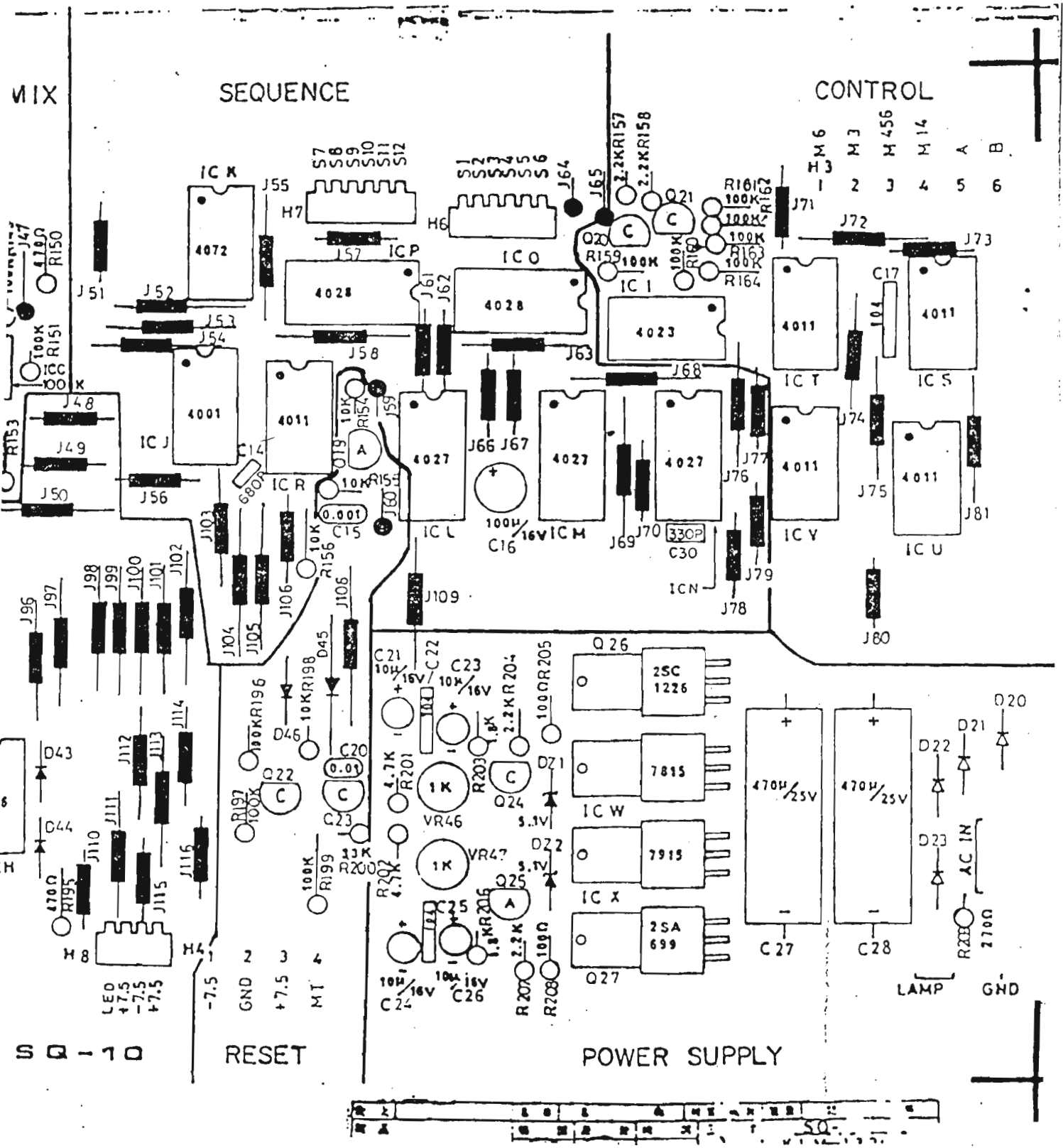


KLM-131A
KORG SG-10

SQ 10 KLM-132C



KLM-132C KORG



MIX

SEQUENCE

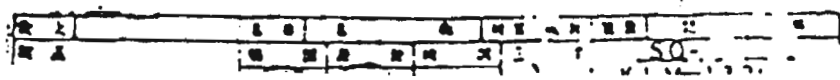
CONTROL

S Q - 1 0

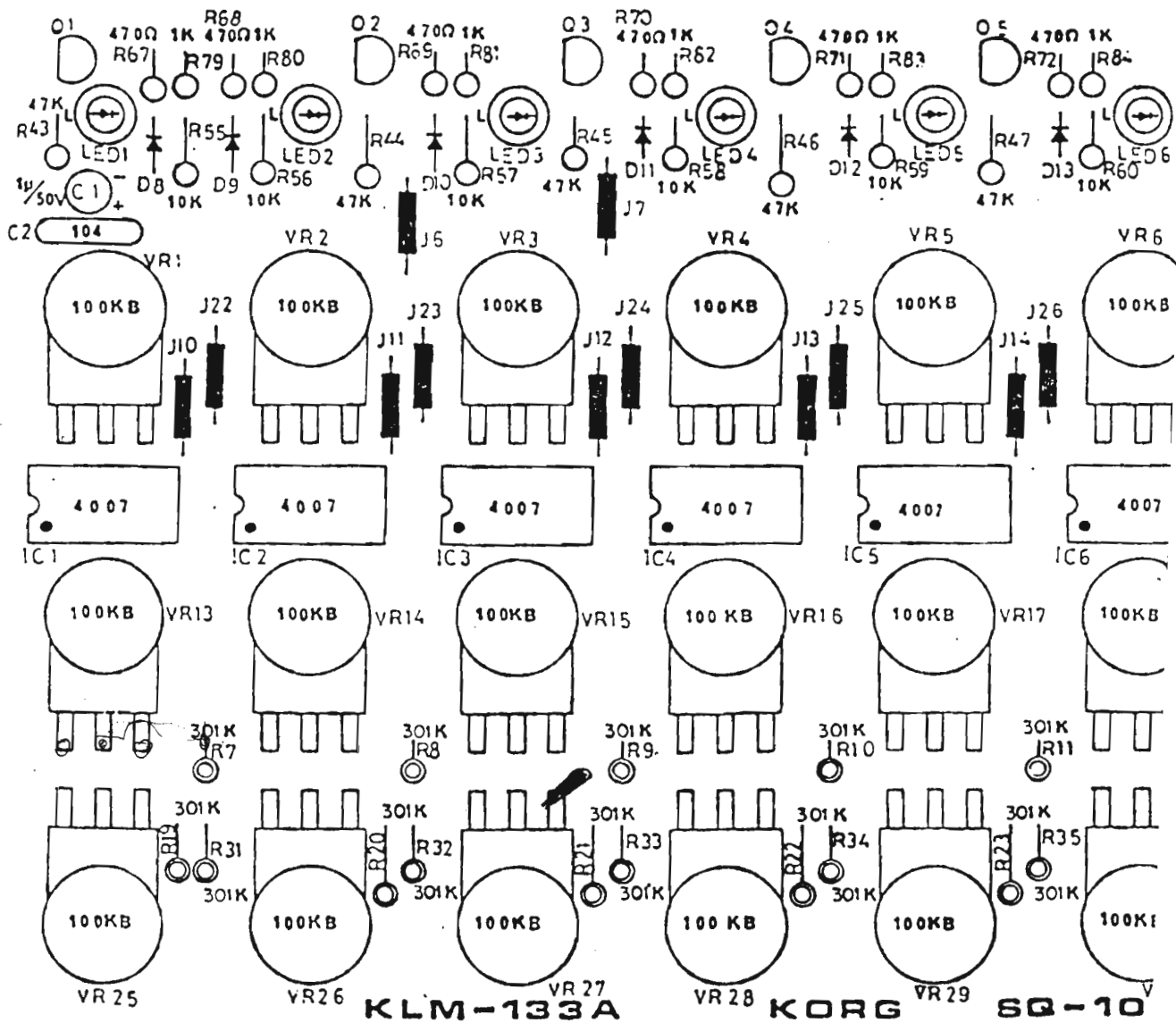
RESET

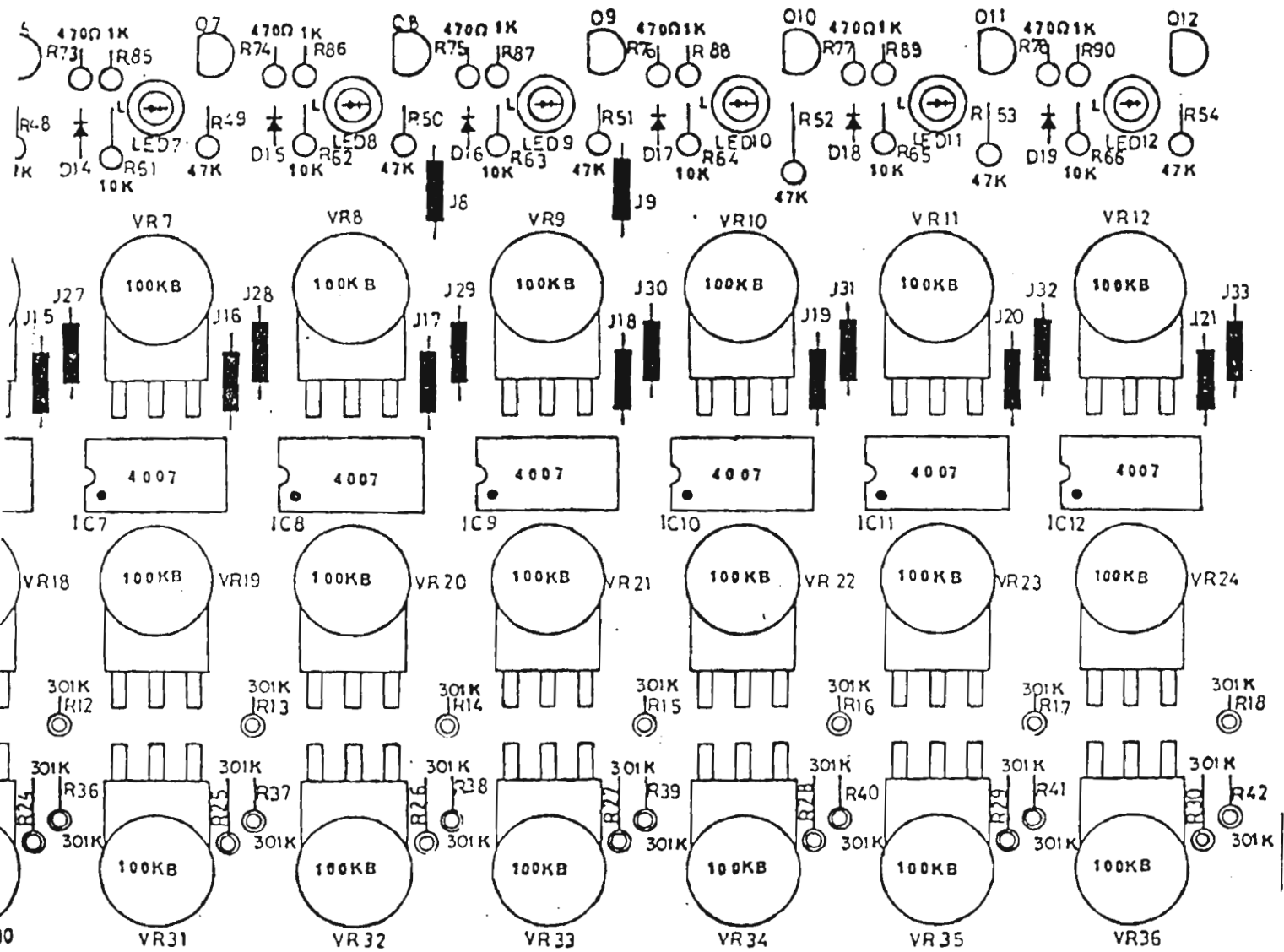
POWER SUPPLY

H M 6	M 3	M 4 5 6	M 1 4	A	B
1	2	3	4	5	6



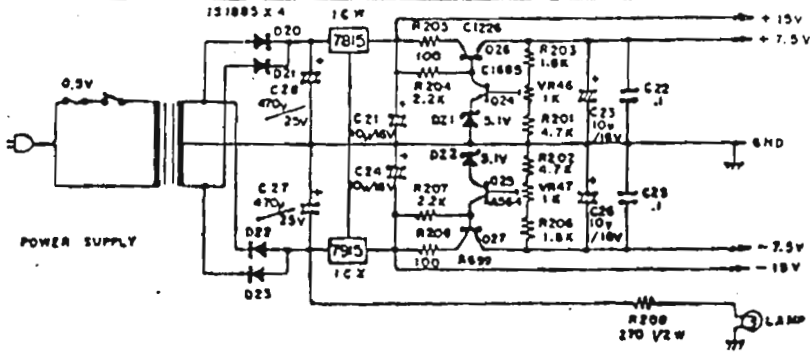
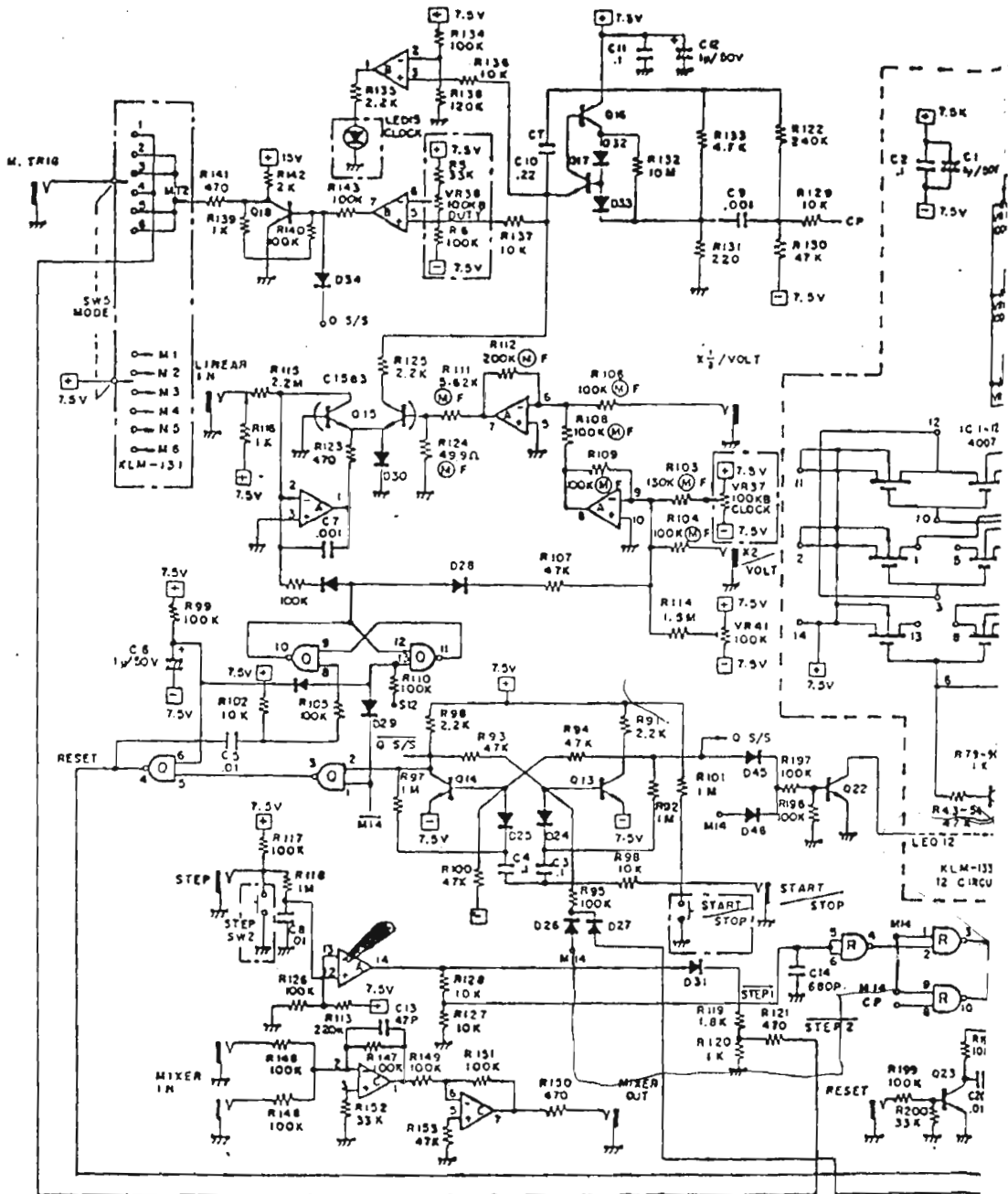
3010 KLM-133A





⑤ ⊙ = 250-1625

SQ-10	
KLM-133A	
KOD-F10004	
KODENSHI ELECTRIC CO., LTD.	



IC	CHART	CNOS
1	A	32
2	B	32
3	C	32
4	D	32

