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Model	K-1 Mini-Korg (original)
Product:	Synthesizer
Description:	Owners & Service Manual

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UNIVOX.

MINI-KORG SYNTHESIZER

SERVICE MANUAL



UNICORD INCORPORATED

75 FROST STREET
WESTBURY, NEW YORK 11590

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MINI-KORG SYNTHESIZER OPERATING PROCEDURE

1. Connect AC line cord (found inside recessed compartment on rear of unit, figure 1) to local voltage 50/60Hz outlet.
2. Connect audio cable (shielded-type) from jack marked "Output", to input of your amplifier. Utilize jack marked "H" for high impedance use ($100K \Omega$) or jack marked "Low" for low impedance ($5K \Omega$) shown in figure 1.

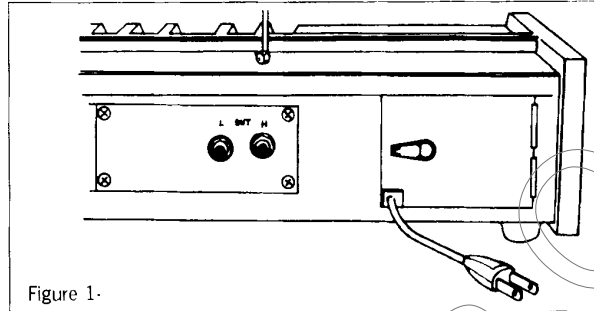


Figure 1-

3. Switch on/off control to "On" position. If pilot lamp fails to light, check fuse found in rear compartment, figure 1 and replace *With identical rating only.*
4. Install enclosed Music Rack as shown in figure 2.

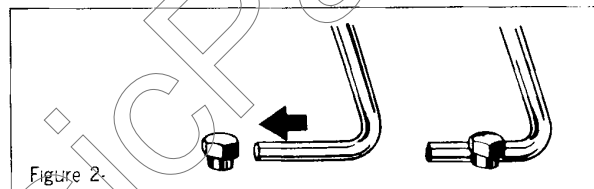


Figure 2-

5. Adjust pitch-control slide for tuning figure 10.
To adjust Pitch, set Attack-Percussion slides (figure 5) to "8", and all "Instant Set Tabs" (figure 8) to OFF position.
6. Follow the control descriptions listed next for a better understanding of the versatility of your new MINI-KORG SYNTHESIZER.
7. Unit is equipped with 2 rear adjustable legs for tilting.

Precautions:

- Be certain that power switch is turned OFF whenever plugging in or unplugging the AC connector cord.
- If fuse should need replacing, make sure that you replace with *identical* value.
- Protect the unit from excessive heat, humidity, and vibrations.

CONTROL DESCRIPTION:

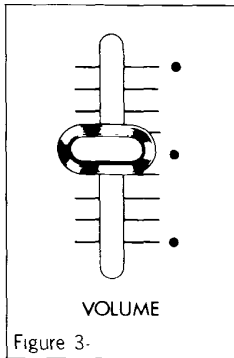


Figure 3-

VOLUME—
For adjusting overall volume level.

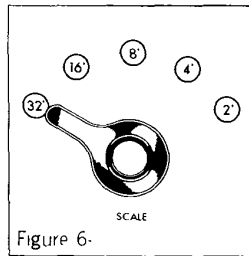


Figure 6-

SCALE—This rotary control provides the selection of a full five (5) octave range, 32', 16', 8'; 4'; 2', which extends the 37-note keyboard to a "FULL Spectrum Keyboard"

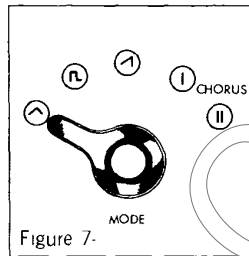


Figure 7-

MODE:
TRIANGLE—Renders a soft tonal response—Sax, Clarinet, bass guitar, etc
SQUARE—Provides a single reed gravitation bells, flutes, clarinets, malleted bar action, etc
SAW-TOOTH—Develops your double-reed, strings, brass and many modern tones. This waveform is one of the most used in synthesizer interpretations

CHORUS/PHASER—

- I Slow rotating sound with duplicating effect
- II Fast rotating sound with intensified duplication effect.

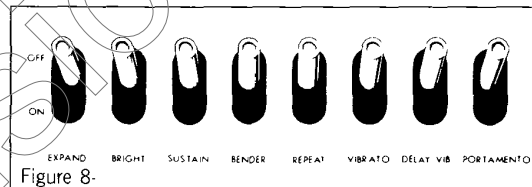


Figure 8-

"INSTANT SET" GROUP:

1. EXPAND—This control is a sub-division of the traveler circuit. It provides "capturing" effect when used in conjunction with traveler (figure 4) and Attack/ Percussion group (figure 5). Creates brass, under-water effect, bubbling effect, growl, etc
- 2 BRIGHT—Provides additional high-frequency harmonic structure, or added brilliance and presence
- 3 SUSTAIN—Couples a fixed sustain to the existing tone, when key is released
- 4 BENDER—Provides added slide to the beginning of each tone; such as Glissando, slur and other accenting generations used in synthesized music
- 5 REPEAT—This effect is used for creating simulations of flutter, trill, mandolin, triple picking, etc.
- 6 VIBRATO—Provides constant pitch change Vibrato to tone
- 7 DELAY VIBRATO—Adds a colorful realism to your playing by applying vibrato with a slight delay for additional expression
- 8 PORTAMENTO/GLIDE—Allows you to glide from last note played to the next note, in any given sequence. This control allows you to create such effects as, bowing strings, theremin, theremin, sonic wave, scanning etc

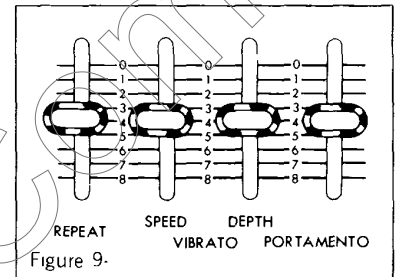


Figure 9-

SLIDE MODIFIER GROUP

REPEAT—This provides speed adjustment of the repeat "Instant Set" Control (Figure 8, # 5)

VIBRATO SPEED/DEPTH—These slides give full control over the Vibrato Speed and Depth when the Vibrato or Delay Vibrato "Instant Set" tab is utilized. (Figure 8,S #6 and # 7)

PORTAMENTO—This slide allows you to adjust your glide rate.

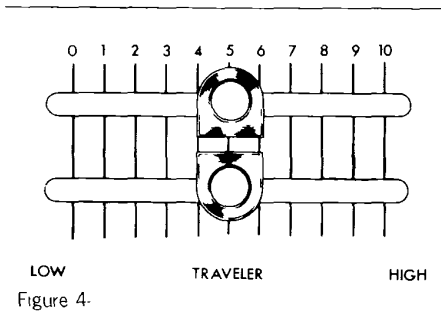


Figure 4-

TRAVELER—By the proper utilization of these controls, the operator can alter any musical character in reference to timbre, brilliance, tone, etc

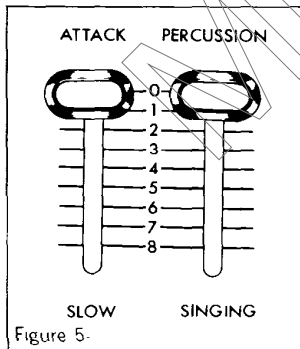


Figure 5-

ATTACK—This slide control will form the beginning of your musical voice, from a fast attack to a slow attack

PERCUSSION—This slide control will adjust the end of each note, when the key is held down

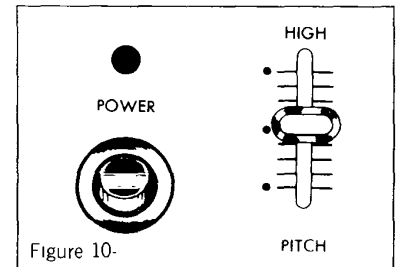


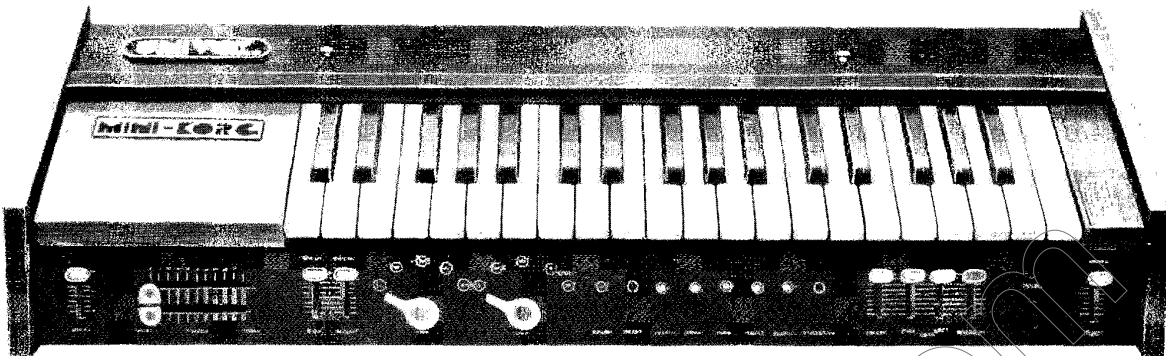
Figure 10-

CONVENIENCE GROUPS—

- I indicator lamp
- II Pitch—Allows user to pre-set his overall tuning

MINI-KORG SYNTHESIZER PREPARED INSTANT-SET CHART

It is often better to change the lever position slightly according to the type of amplifier used.

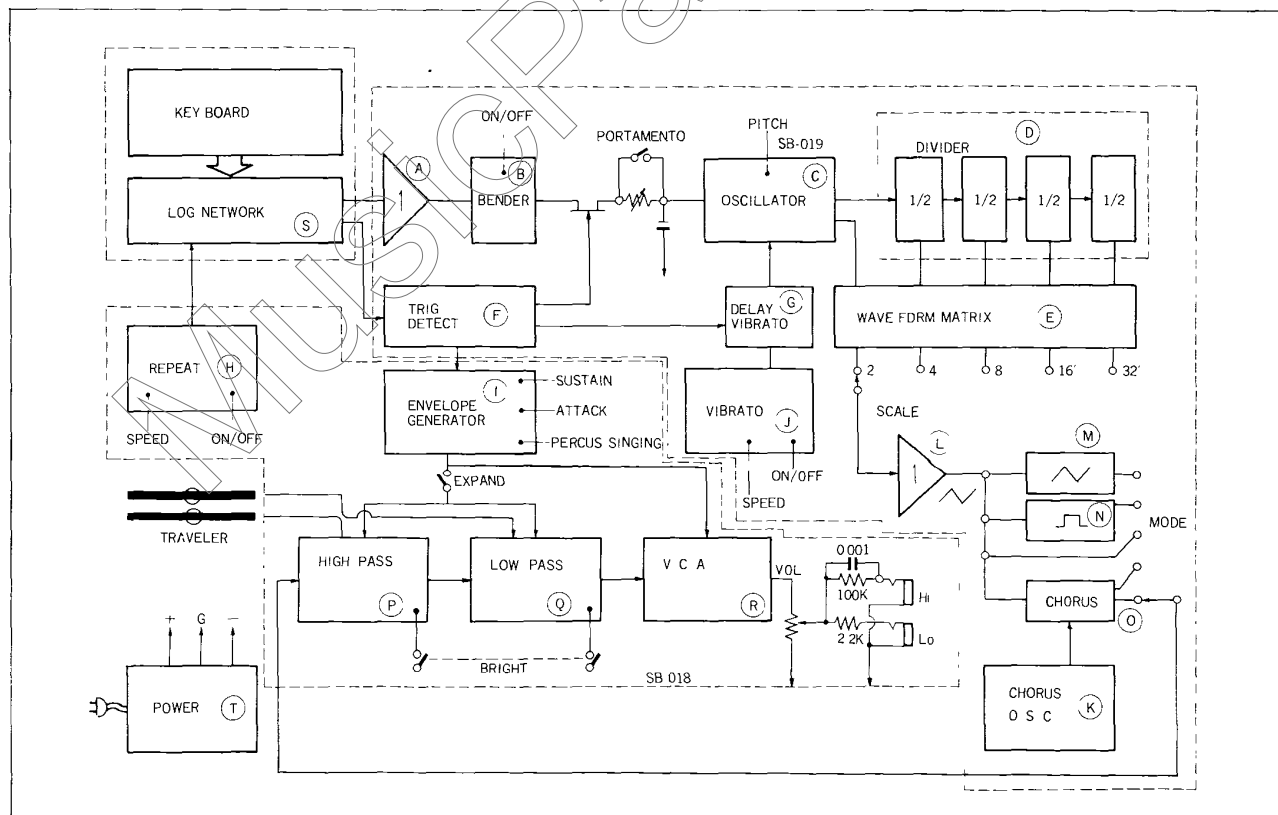


Reed 1	2 4	4-8	16'/8'	∩																		4	4		
Brass	1 3	4-8	All	∩		.				.												4	4		
Reed 2	2 7	4-8	16'	∩						.												4	4		
Banjo	0 10	0-0	8'	∩						.		.										6			
Bells	0 10	0-0	2'	∩						.	.														
Double Reed	0 10	4-8	16'/8'	∩						.												4	4		
String	10 8	8-6	2'	∩						.			.	.								4	4	2	
Finger Bass	0 0	0-2	32'	∩						.															
Accordion	5 5	6-8	16'/8'	Chorus II								.										4	4		
Fife/Piccolo	10 0	6-8	2'	∩								.										4	4		
"Tank"	0 0	1-8	32'	∩		.	.	.																	
"Walkin"	0 6	0-8	32'	Chorus I	.	.	.																		
"Sing"	0 10	0-6	8'	∩																
"Pipe"	0 10	4-8	16'/8'/4'	Chorus II	.																				
"Water" Mute	0 8	5-8	All	∩		.	.					.										4	4		
Sonic Scan	10 0	0-0	All	All							.		.									8	0	0	8
Bass Walk	0 0	0-2	32'/16'	∩		.	.																		
Slide Bass	0 3	4-8	All	∩		.							.	.								4	4	4	
"Crimson" Bass	10 0	8-8	32'/16'	Chorus I	.	.	.																		
"Bubble" Strings	10 0	8-8	4'/2'	Chorus I												4	8	8	

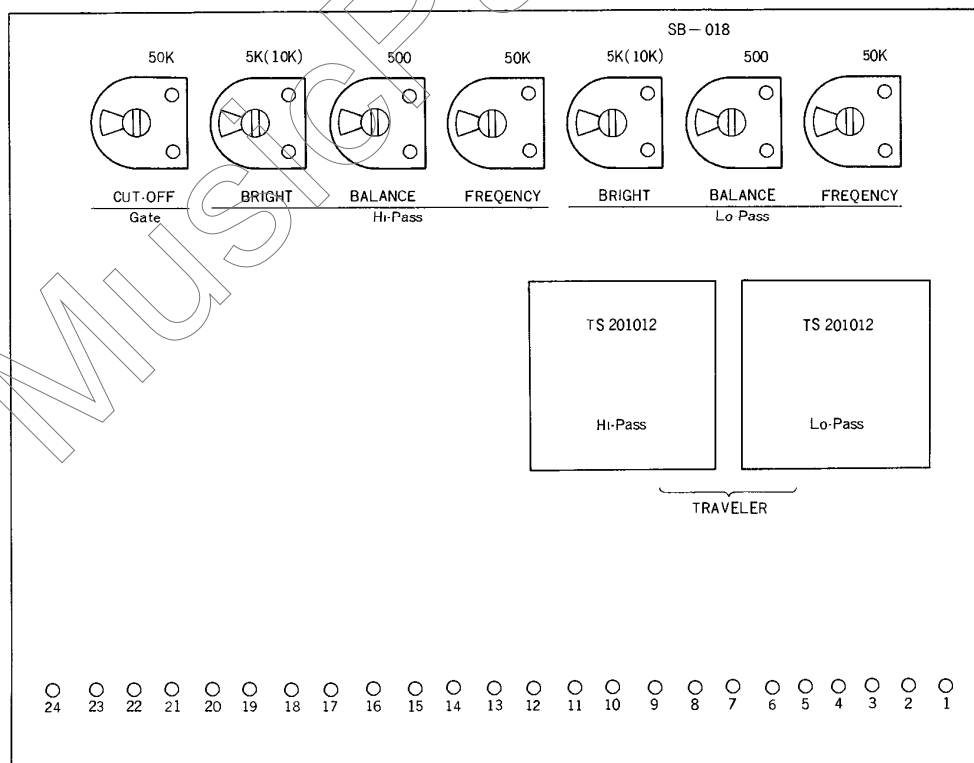
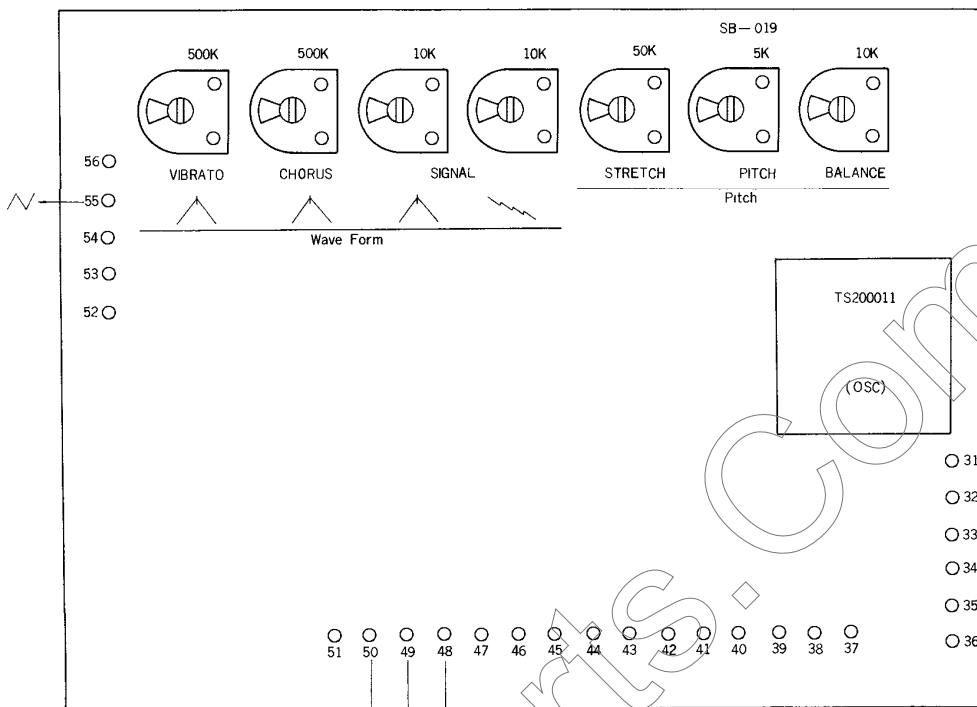
SPECIFICATIONS

- **Key board** Scale 37 keys 3 Octaves
- **Scale** 32' 16' 8' 4' 2' 7 Octaves
- **Wave form** Triangular Wave Square Wave
Sawtooth Wave Chorus I Chorus II
- **Effect Switch** Expand, Bright, Sustain, Bender, Repeat
Vibrato, Delay Vibrato, Portamento
- **Slide Control** Volume, Traveler, Attack-Slow, Percussion-Singing
Repeat, Vibrato-Speed, Vibrato-Depth
Portamento Pitch
- **Dimensions** Length: 29.3in. Width: 11 0in. Height: 4.3in.
- **Weight** 19.8lbs.
- **Accessories** Music Rack, Connection Cord
- **Power Supply** 117V 50/60Hz
- **Power Consumption** 15W
- **Others** Power Switch, Pilot Lamp, Output Jack (High 100KΩ Low 5KΩ)
- **Options** Case, Stand, Expression Pedal (2 channels)

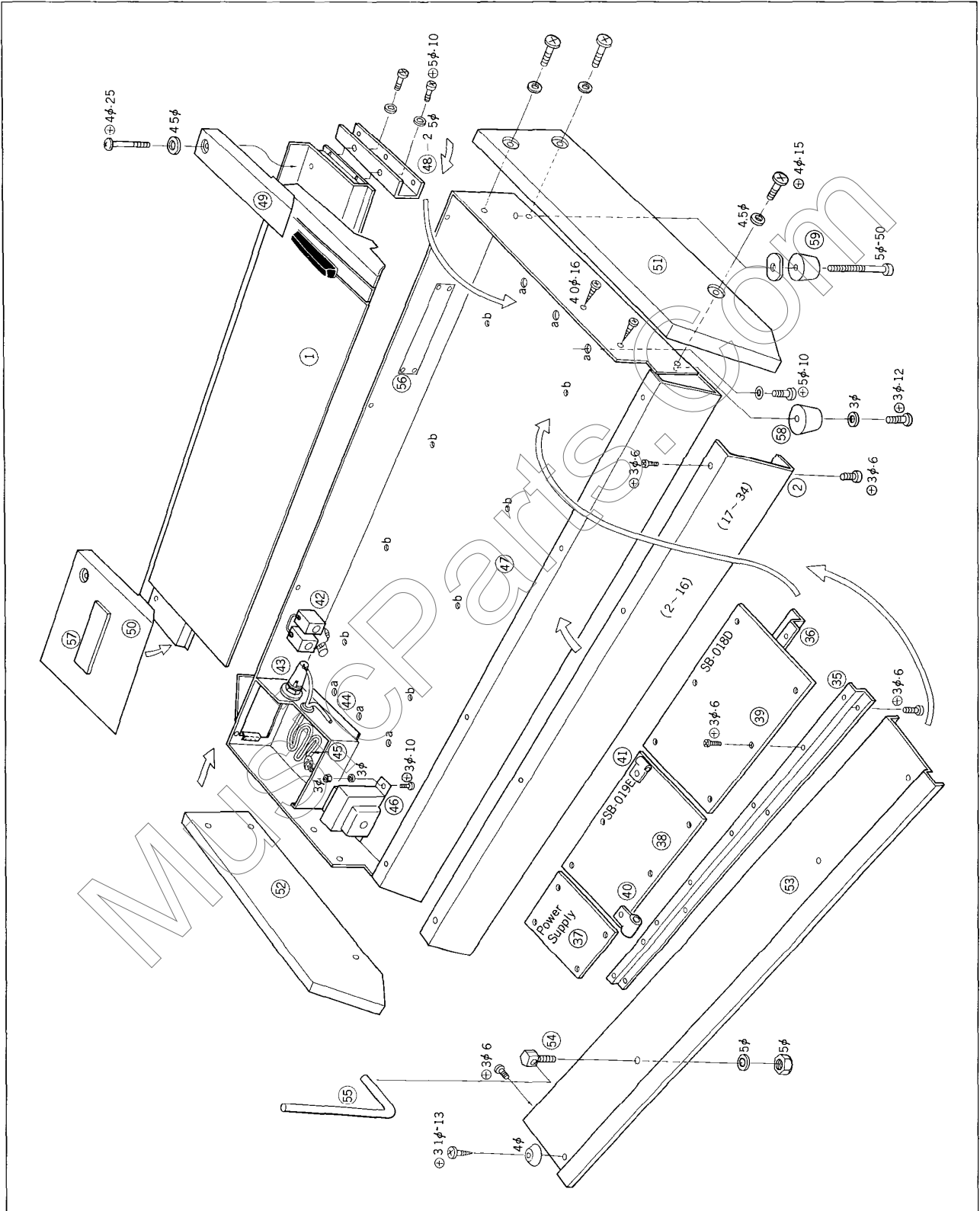
BLOCK DIAGRAM



PARTS DISTRIBUTION



MECHANICAL PARTS DIAGRAM



MECHANICAL PARTS LIST

Key NO.	Parts NO.	Description	Key NO.	Parts NO.	Description
1	212-01001	Key Board(17~25)	36	241-01003	Circuit Board Bar
2	321-01001	Front Panel	37	181-01003	Power Supply Board
3	331-05002	Volume Knob	38	181-01002	SB-019 Printed Circuit Board
4	331-05003	Traveler Knob	39	181-01001	SB-018 Printed Circuit Board
5	331-05004	Attack Knob	40	412-04002	Cord Clamp L
6	332-01001	Scale Knob	41	412-04001	Cord Clamp S
7	332-01002	Mode Knob	42	240-01001	Headphone Jack
8	331-05005	Expand, Bright Knob	43	230-01002	Fuse Holder
9	331-05006	Sustain Knob	44	412-02001	Strain Relief Bushing
10	331-05007	Bender Knob	45	410-01001	Power Supply Cords
11	331-05008	Repeat Knob	46	190-03001	Power Transformer
12	331-05009	Portamento Knob	47	241-01001	Frame
13	331-05010	Vibrato Speed Knob	48	241-01004	Key Board Rack
14	331-05010	Portamento Knob	49	311-01001	End Cover Panel (R)
15	370-01001	Lamp Holder	50	311-01002	End Cover Panel (L)
16	221-01002	Power Switch	51	311-01003	Side Board (R)
26	251-01502	Slide VR 5KA (30mm)	52	311-01004	Side Board (L)
27	251-02502	Slide VR 5KB (30mm)	53	241-01005	Top Board
28	251-01103	Slide VR 10KA (30mm)	54	351-01001	Music Rack Screw
29	251-02103	Slide VR 10KB (30mm)	55	351-01002	Music Rack
30	251-01504	Slide VR 500KA (30mm)	56	321-01002	Name Plate
31	252-02103	Slide VR 10KB (60mm)	57	321-01003	Mark MINI KORG
32	223-01245	Rotary Switches 2, 4, 5	58	380-01001	Rubber Foot (Front)
33	224-01001	Lever Switches 18LS	59	380-01002	Rubber Foot (Rear)
34	370-01001	Pilot Lamp	60	232-01001	Pin Houseing
35	241-01002	Circuit Board Bar	61	232-01002	Socket Houseing

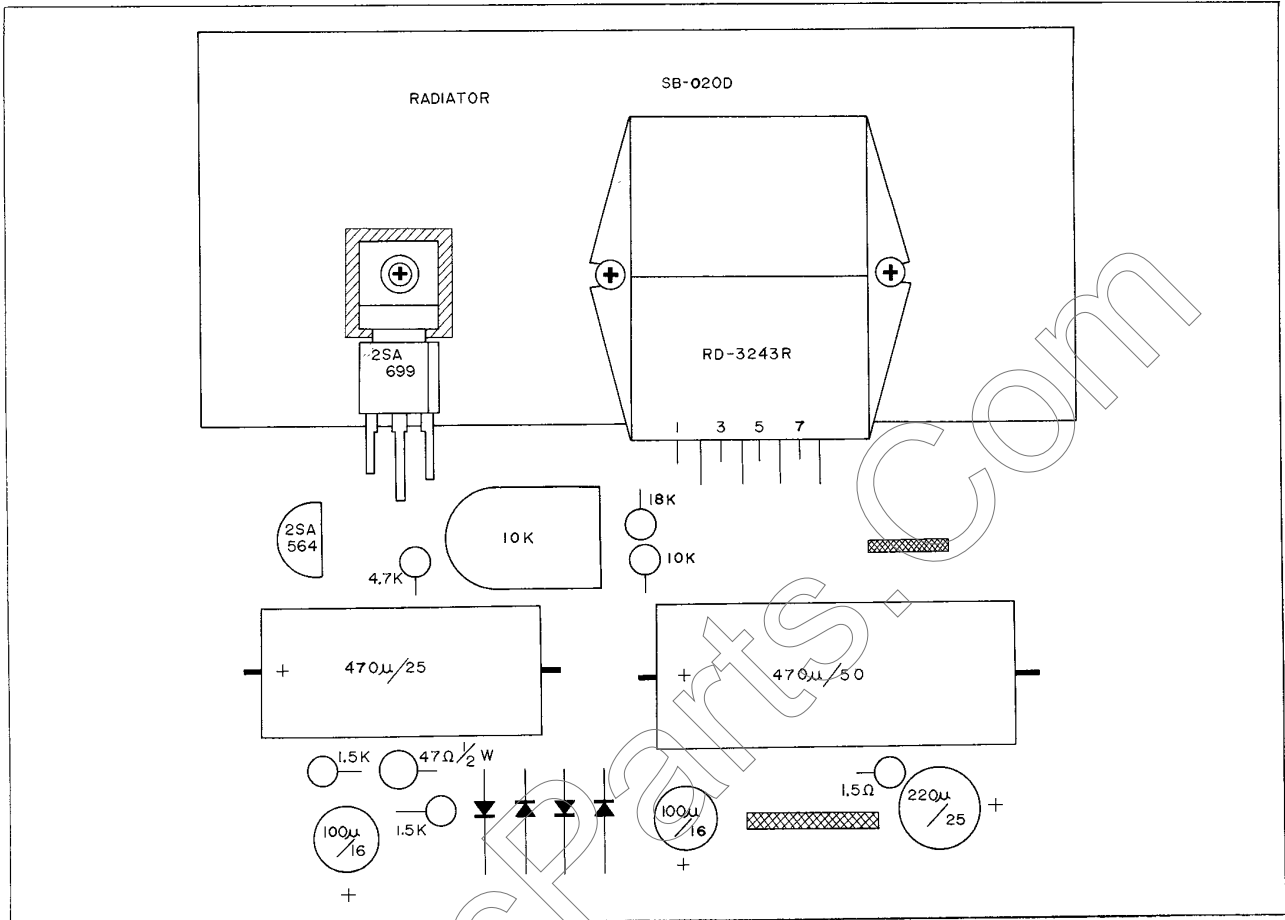
SB-018 PARTS LIST

Key NO.	Parts NO.	Description	Key NO.	Parts NO.	Description
	Fixed Carbonfilm Resistors ¼ W 5%			Polyester Film Capacitors 10%	
	120-02100	Rh 10Ω		130-01102	50V .001μF
	-02101	100Ω		01222	.0022
	-02221	220Ω		01103	.01
	331	330Ω		01473	.047
	102	1KΩ		Tantalum Electrolytic Capacitors	
	122	1.2KΩ		142-35470	20% 35V-.47μ
	222	2.2K		142-16102	20% 16V-10μ
	332	3.3KΩ		143-35101	10% 35V-1μ
	392	3.9KΩ		143-25331	10% 25V-3.3μ
	472	4.7KΩ		Aluminum Electrolytic Capacitors	
	562	5.6KΩ		140-25331	A 25V-3.3μ
	103	10KΩ		-25102	25V-10μ
	153	15KΩ		-16332	16V-33μ
	223	22KΩ		-16103	16V-100μ
	333	33KΩ		-25103	25V-100μ
	473	47KΩ		-25223	25V-220μ
	104	100KΩ		Transistors	
	224	220KΩ		110-05003	2SA56A (S-T)
	334	330KΩ		-05002	2SC64A (S-T)
	474	470KΩ		-05001	2SC828 (S-T)
	105	1MΩ		IC	
	2%			112-01002	TS201012
	120-03472	4.7KΩ		FET	
	Fixed Resistors			110-04001	2SK-30Y
	123-02225	5% 2.2MΩ		Diodes	
	Semifixed Resistors			170-01004	IS1555
	160-05501	500Ω		170-01004	IS1555 (4P)
	-05502	5KΩ		-01005	IN-60
	-05503	50KΩ		Zener Diodes	
	Disc Type Ceramic Capacitors			170-03001	02Z 5.6A
	135-01101	50V 100PF		170-03002	02Z 9.1A

SB-019 PARTS LIST

Key NO.	Parts NO.	Description	Key NO.	Parts NO.	Description
				-01223	.022
		Fixed Carbonfilm Resistors ¼ W 5%		-01473	.047
	120-02100	10 Ω		-01823	.082
	120-02101	100 Ω		-01334	.33
	-02221	150 Ω		Tantalum Electrolytic Capacitors	
	471	470 Ω		143-25332	10% 25V-3.3 μ
	681	680 Ω		142-16102	20% 16V-10 μ
	102	1K Ω		Aluminum Electrolytic Capacitors	
	222	2.2K Ω		140-50101	A 50V-1 μ
	272	2.7K Ω		140-25102	25V-10 μ
	332	3.3K Ω		-16332	16V-33 μ
	392	3.9K Ω		-16103	16V-100 μ
	472	4.7K Ω		Polystilene Capacitors	
	562	5.6K Ω		137-01122	± 5% 12000P
	682	6.8K Ω		Fixed Carbonfilm Resistors ¼ W 2%	
	103	10K Ω		120-03103	10K
	153	15K Ω		-03153	15K Ω
	183	18K Ω		-03303	30K Ω
	223	22K Ω		-03603	60K Ω
	273	27K Ω		-03124	120K Ω
	333	33K Ω		-03244	240K Ω
	393	39K Ω		Metalfilm Resistors	
	473	47K Ω		122-03392	1/8W ± 1% 3.9K Ω
	563	56K Ω		122-03472	4.7K Ω
	104	100K Ω		-03623	62K Ω
	224	220K Ω		Transistors	
	474	470K Ω		110-05003	2SA-564 (S-T)
	105	1M Ω		110-05002	2SC-644 (S-T)
		Fixed resistors		110-05001	2SC-828 (S-T)
	123-02225	5% 2.2M		FET	
	-02106	10M Ω		110-04001	2SK-30Y
	Semifixed Resistors			111-05002	IC 741
	160-05502	5K Ω		-05001	MN 131
	-05103	10K Ω		112-01001	TS 200011
	-05503	50K Ω		Diode	
	-05504	500K Ω		170-1004	IS 1555
	Disc Type Ceramic Capacitors			Key Board parts	
	135-01101	50V 100P		Metalfilm Resistors 1/8W 1%	
	Polyester film Capacitors 10%			122-03401	400 Ω
	130-01102	50V .001 μF		-03431	430 Ω
	-01472	.0047 μF		-03682	6.8K Ω
	-01123	.012		-03623	62K Ω

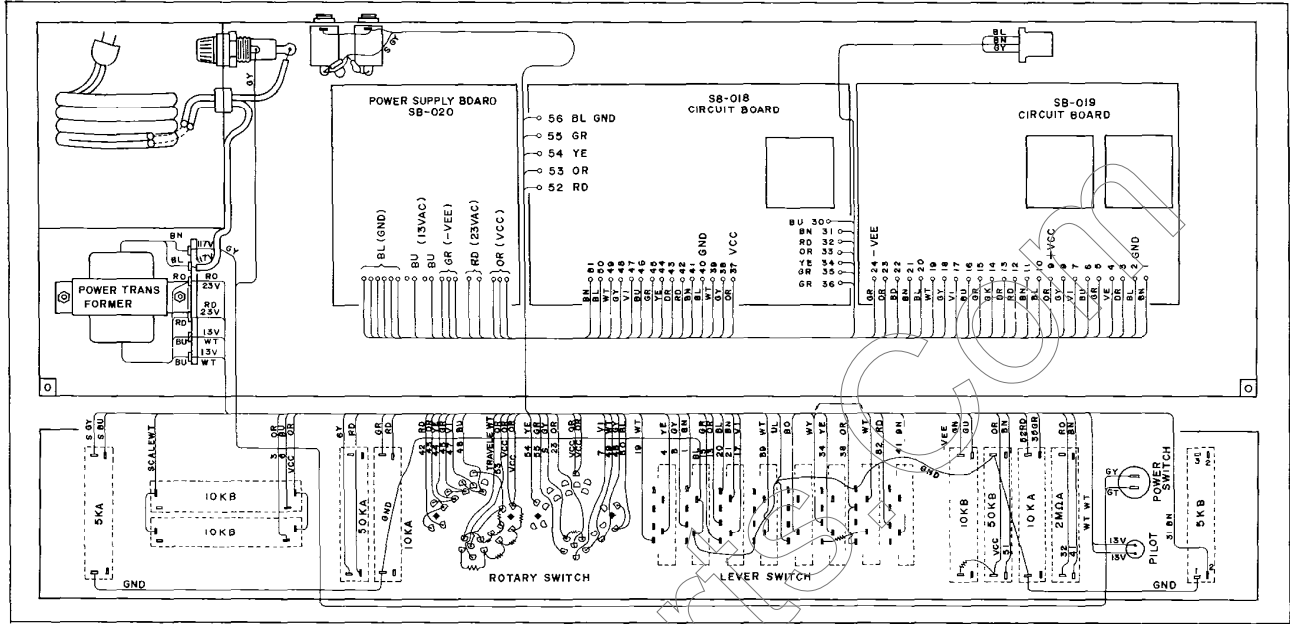
SB-020 CIRCUIT BOARD



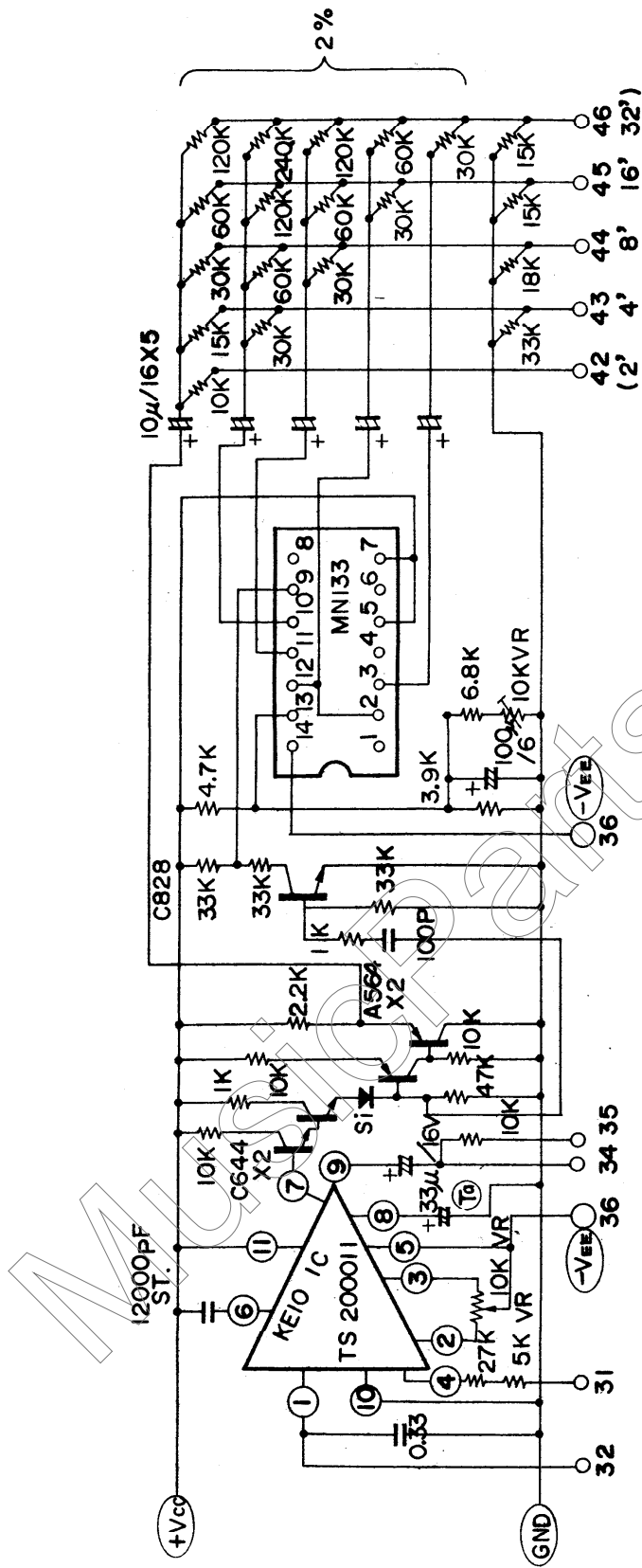
NOTE

- A IC
- B BENDER
- C OSCILLATOR
- D DIVIDER
- E WAVE FORM MATRIX
- F TRIG. DETECT
- G DILAY VIBRATO
- J VIBRATO
- L MODE
- M MODE
- N MODE
- O CHORUS
- K CHORUS OSC
- H REPEAT
- I ENVELOPE GENERATOR
- P HIGH PASS
- Q LOW PASS
- R VCA

OVERALL WIRING DIAGRAM



NOTE
 BN- BROWN
 RD- RED
 OR- ORANGE
 YE- YELLOW
 GR- GREEN
 BU- BLUE
 VI- VIOLET
 GY- GRAY
 WT- WHITE
 BL- BLACK



10µ/16X5

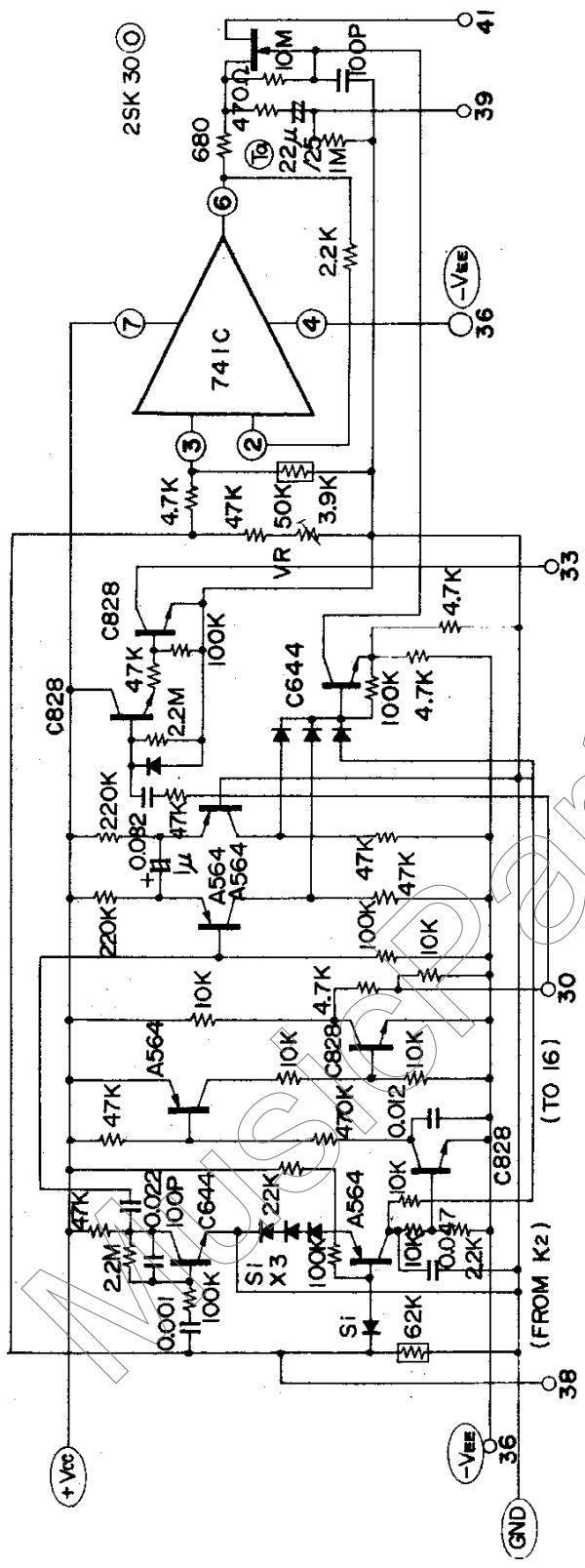
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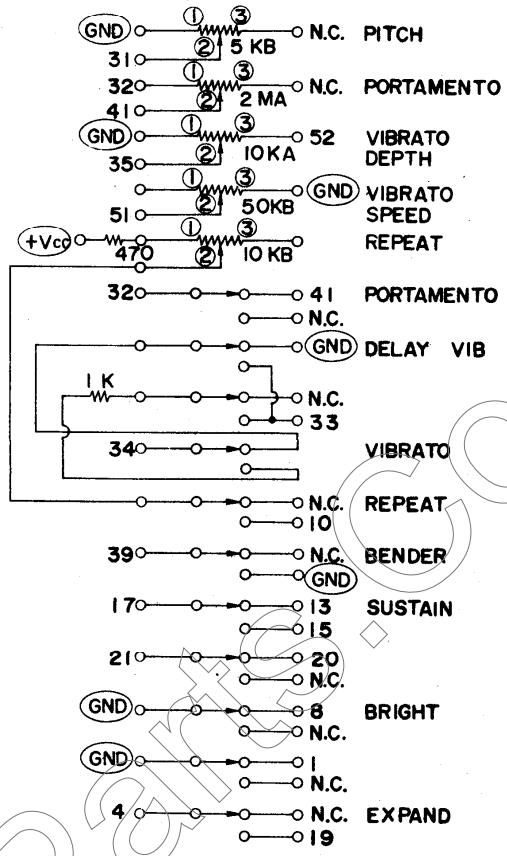
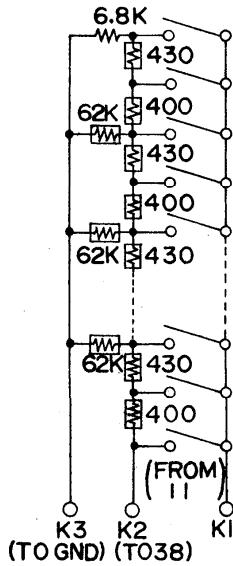
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