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<b>Brand:</b>	<b>Cordovox</b>		
<b>Model</b>	<b>CAG-1 (w/Super IV &amp; V Accordians)</b>		
<b>Product:</b>	<b>Accordian 3-piece</b>		
<b>Description:</b>	<b>Service Manual</b>	<b>Dated:</b>	<b>none</b>

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## MODELS

### Amplifier & Generator

CAG-1

CAG-1 (After No.13454)

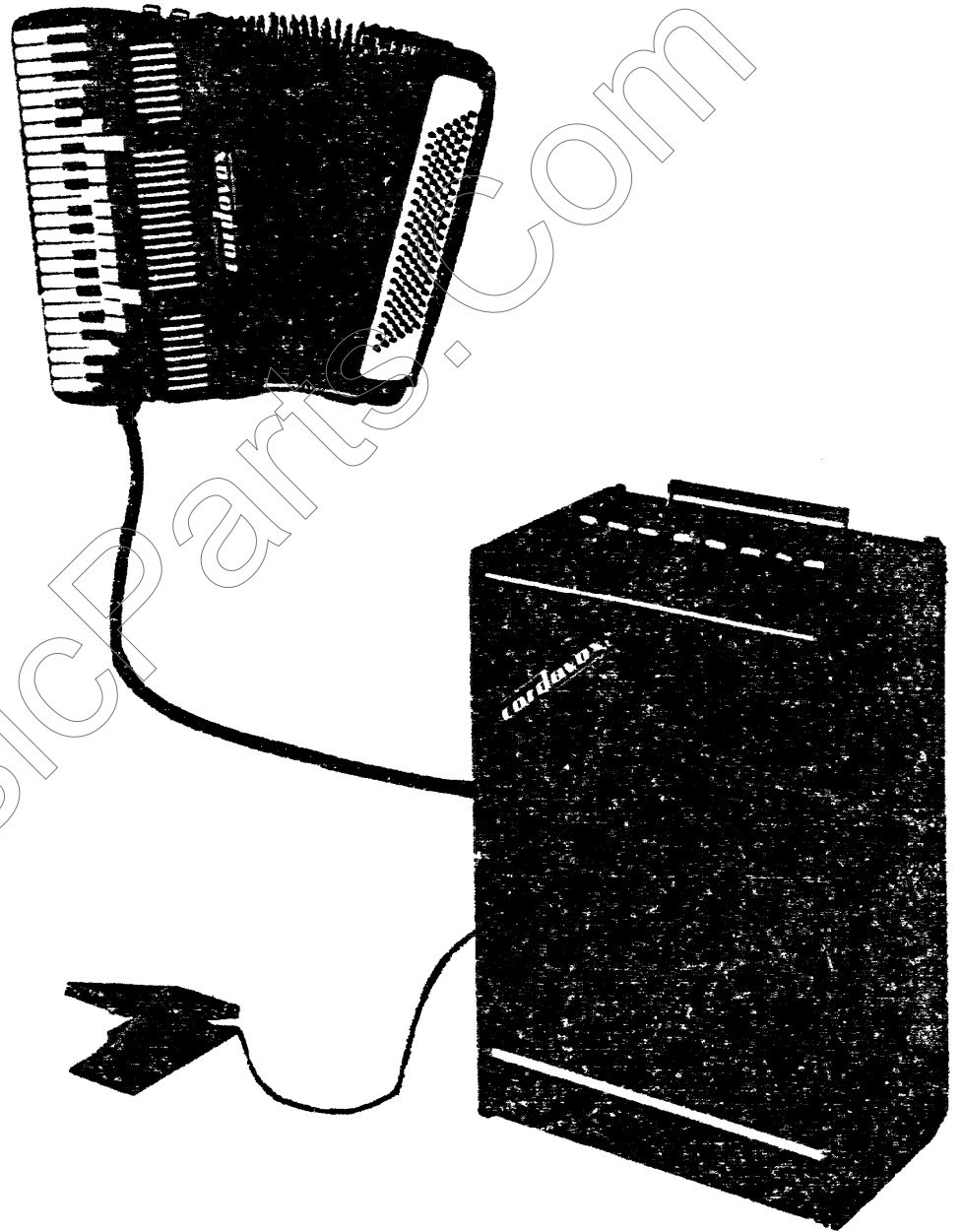
CAG-1 (After No.14700)

### Accordion

Super IV CG-4

Super V CG-5

## Service Manual



# CORDOVOX

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# SPECIFICATIONS

## Organ Voices and Controls

### Treble Voice Tabs

Clarinet 16  
Trombone 16  
Trumpet 8  
String 8  
Kinura 8  
Flute 16  
Flute 8  
Flute 5 1/2  
Flute 4  
Flute 2 1/2  
Flute 2  
Flute 1 1/2  
Flute 1

### Special Control Tabs

Reverb  
Preset I  
Preset II  
Percussion Repeat  
Percussion On/Off  
Percussion 16  
Percussion 8  
Percussion 5 1/2  
Percussion 4  
Percussion 2 1/2  
Percussion 2  
Percussion 1 1/2  
Percussion 1

### Chord Voice Tabs

Chord  
Chord Sustain

### Bass Voice Tabs

String Bass  
Bass Sustain  
**Control Tabs**  
Vibrato Off/On  
Vibrato Light/Heavy  
Vibrato Slow/Fast  
Sustain medium  
Sustain long  
Wow Wow  
Attack Normal/Slow

### Controls

Percussion Length  
Repeat Speed  
Organ Volume-Bass and Chord  
Accordion Volume-Bass and Treble  
Accordion Tone  
Wow Wow Volume

### Amplifier

Master Volume  
Auxiliary Volume Control  
Microphone Volume Control  
Bass Tone Control  
Treble Tone Control  
Reverb Control  
Vibrato Speed Control  
Off/On Polarity Switch  
Pilot Light  
Auxiliary Input Jack  
Microphone Input Jack  
Hi/Low Impedance Switch Selector  
for Microphone Input Jack

Speaker Jack for Rotating  
Sound Cabinet

### Specifications

Amplifier  
Depth: 15 1/4"  
Width: 21 3/4"  
Height: 29 3/4"  
Weight: 80 lbs. estimated  
Amplifier Output Power: 85 Watts  
Speakers: One 15" low range; one  
9" x 14" and two 3" tweeters  
Circuit Breaker Pushbutton  
Color: Black  
Expression Pedal Controls:  
Organ Volume  
Wow-Wow  
Glide

## NEW CORDOVAX AMP/GENERATOR (CAG-1)



Super V and Super IV

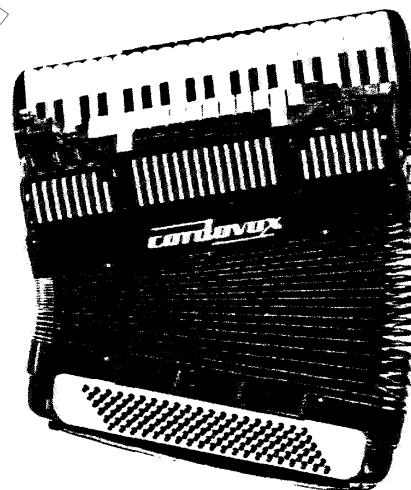
### SUPER IV (CG-4)

Super IV features include:

120 bass buttons; 41 treble keys; three sets of treble reeds with 6 treble registers including a master register; 4 sets of bass reeds and three bass registers. Jet Black.

### SUPER IV-M (CG-4M) MUSETTE TUNING

This accordion has the same number of reed blocks as the Super V (3 treble and 4 bass) however, in the treble section the Piccolo (high) reed block is replaced with a second Clarinet (middle) reed block. This reed block is tuned slightly higher so that the Musette effect is achieved when both Clarinet (middle) reed blocks are played together. The Musette effect is most desirable when playing Continental-Style songs, Polkas, and many other varieties of music.



### SUPER V (CG-5)

Super V features include:

120 bass buttons; 41 treble keys; "double tone chamber." Three sets of hand-made treble reeds with 6 treble registers including a master register; 4 sets of hand-made bass reeds and three bass registers. Jet Black.

### SUPER V-M (CG-5M) MUSETTE TUNING

This accordion has the same number of reed blocks as the Super V (3 treble and 4 bass) however, in the treble section the Piccolo (high) reed block is replaced with a second Clarinet (middle) reed block, which is positioned out of the chamber. The Musette is most desirable when playing Continental-style songs, Polkas, and many other varieties of music.

# ADJUSTMENTS

## PERCUSSION

### VR5 COURSE ADJUSTMENT

Normally, this adjustment needn't be changed from the original factory adjustment. Should Percussion Adjustment VR6 (listed below) fail to restore normal operation, then set this adjustment to a point where adjustment of VR6 produces correct operation.

### VR6 FINE ADJUSTMENT

1. Place all tabs and switches in off position.
2. Depress the Percussion "on" and 4' pushbuttons only.
3. While rapidly depressing any one key, adjust VR6 to the point where Percussion just begins to work. Add Medium Sustain and adjust if necessary. Then add Long Sustain and again adjust if necessary.
4. Set the Percussion Length Control to Short, hold any two notes and repeatedly depress a third note. Percussion should operate normal. If not, adjust slightly.
5. As a final test, repeatedly strike three notes simultaneously, checking to make sure that the Percussion does not trigger when keys are released. Also, perform this test with Sustain on Long.
6. After Percussion is adjusted, secure the adjustment potentiometers with a small drop of glue or paint. Exercise caution so as not to get the glue or paint into the internal mechanism.

## VIBRATO

### VR1 VIBRATO SPEED ADJUSTMENT

This adjustment determines the range of the Vibrato Speed Control VR19. To adjust VR1, depress the Vibrato "on" tab only and set the speed to 5-6 Hertz.

## TUNING

The 12 Tone Generator Master Oscillator circuits determine the pitch of the entire unit. Adjusting any one of the Master Oscillator tuning adjustments will tune all of the notes of that tone generator. Tuning any group of 12 notes automatically tunes all notes.

Tuning may be accomplished by using a small Phillips type screwdriver and one of the following methods:

1. Set of 12 Tuning Forks: Zero beat the note to be tuned to the sound of the corresponding tuning fork. This is a highly accurate tuning method.
2. Strobe Tuner: This is done by visual observation of a strob pattern. Simply follow directions supplied with the Strobe Tuner. This is a highly accurate tuning method.
3. Another instrument: Zero beat the note of the organ to be tuned to the sound of a corresponding note on the accordion or an "in tune" instrument (piano, organ, etc.). Accuracy is dependent upon the tuning of the other instrument. This method is especially desirable when playing with other instruments.
4. One Tuning Fork: One tuning fork is used to set the "temperment" (one note). The other eleven notes are set by ear using the number of beats between "4ths" and "5ths". This requires a trained ear. Accuracy is dependant upon the tuner.

# ACCESSORY SPEAKER

## CL20

The Cordovox Model CL20 Leslie speaker cabinet is specifically designed for the Cordovox. To connect, simply insert the CL20 connecting plug into the external speaker jack located on the Cordovox control panel.

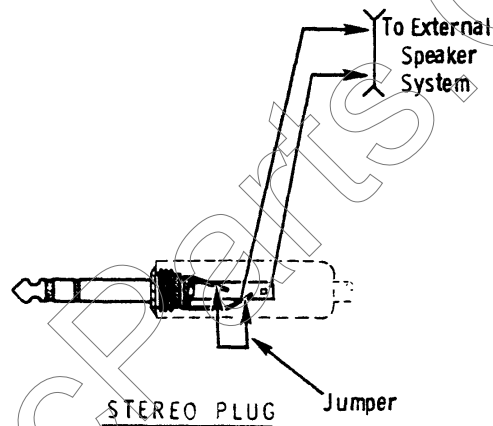
## LESLIE TONE CABINETS

Instructions for connecting Leslie tone cabinets with or without an amplifier such as models 45, 47, 145 or 147 are available upon request. Write Cordovox Service Department, c/o the address listed in the parts ordering section of this manual.

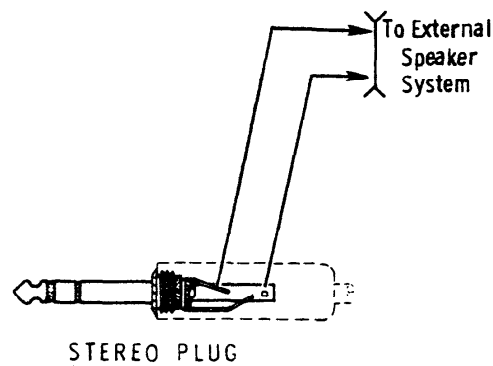
## EXTRA SPEAKERS

The external speaker jack can be used to connect most any type of speaker system capable of handling the high power of the Cordovox. The plug used to connect an external speaker system must be a stereo plug such as the Switchcraft #260P2, or its equivalent. Two methods of wiring this plug are shown below. Method one will allow the external speakers to sound with the Cordovox speakers. Method two will allow only the external speakers to sound.

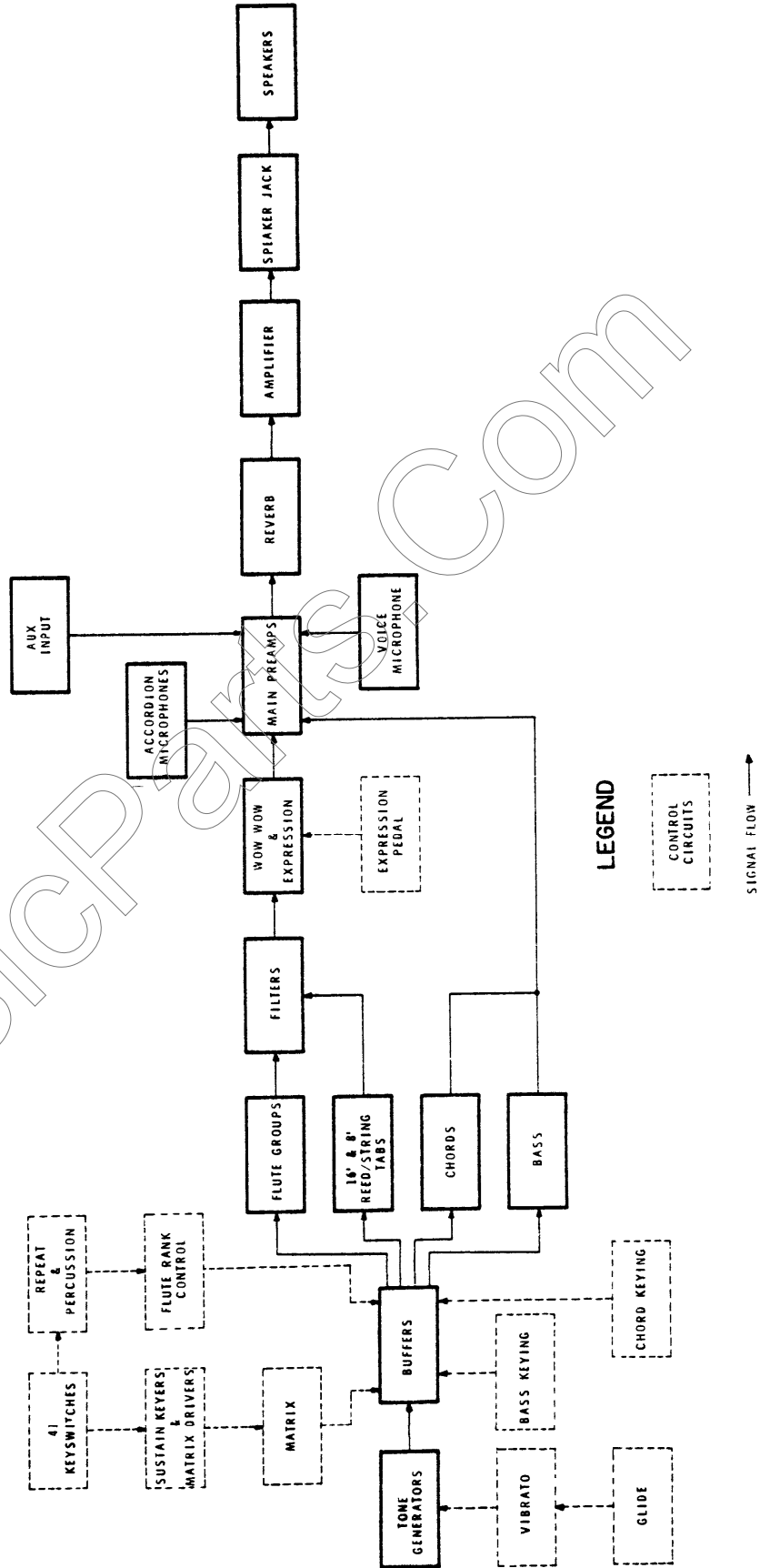
### 1. EXTERNAL AND INTERNAL SPEAKER SYSTEMS



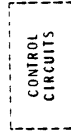
### 2. EXTERNAL SPEAKER SYSTEM ONLY



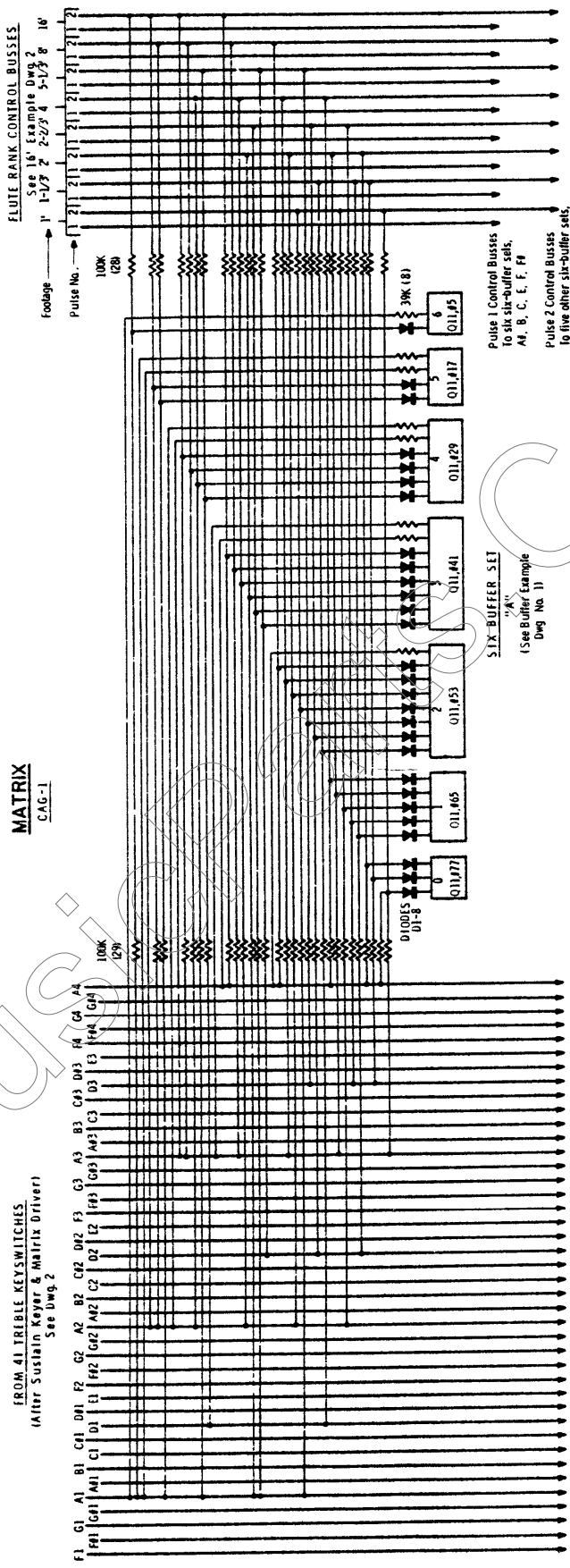
# BLOCK DIAGRAM



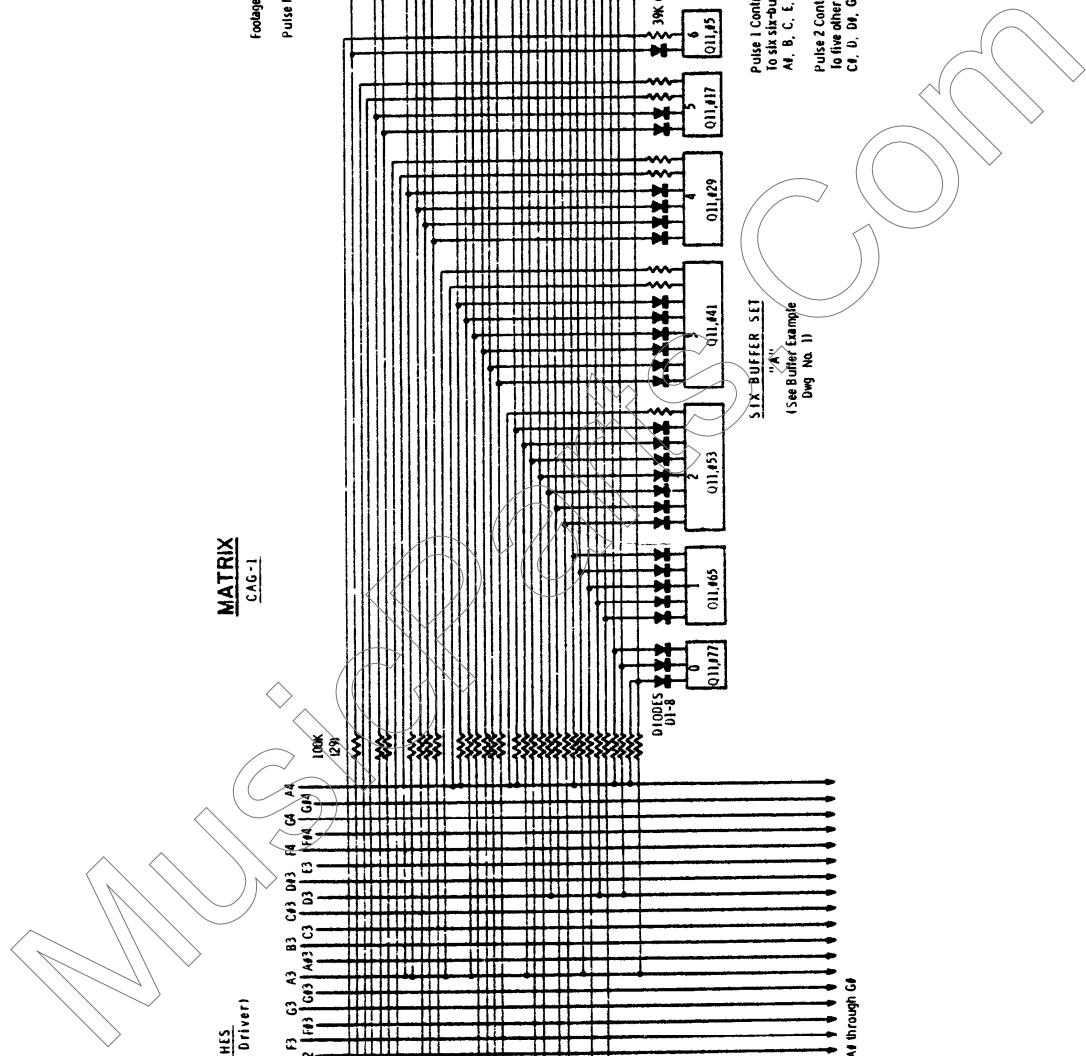
## LEGEND



# MATRIX DRAWING



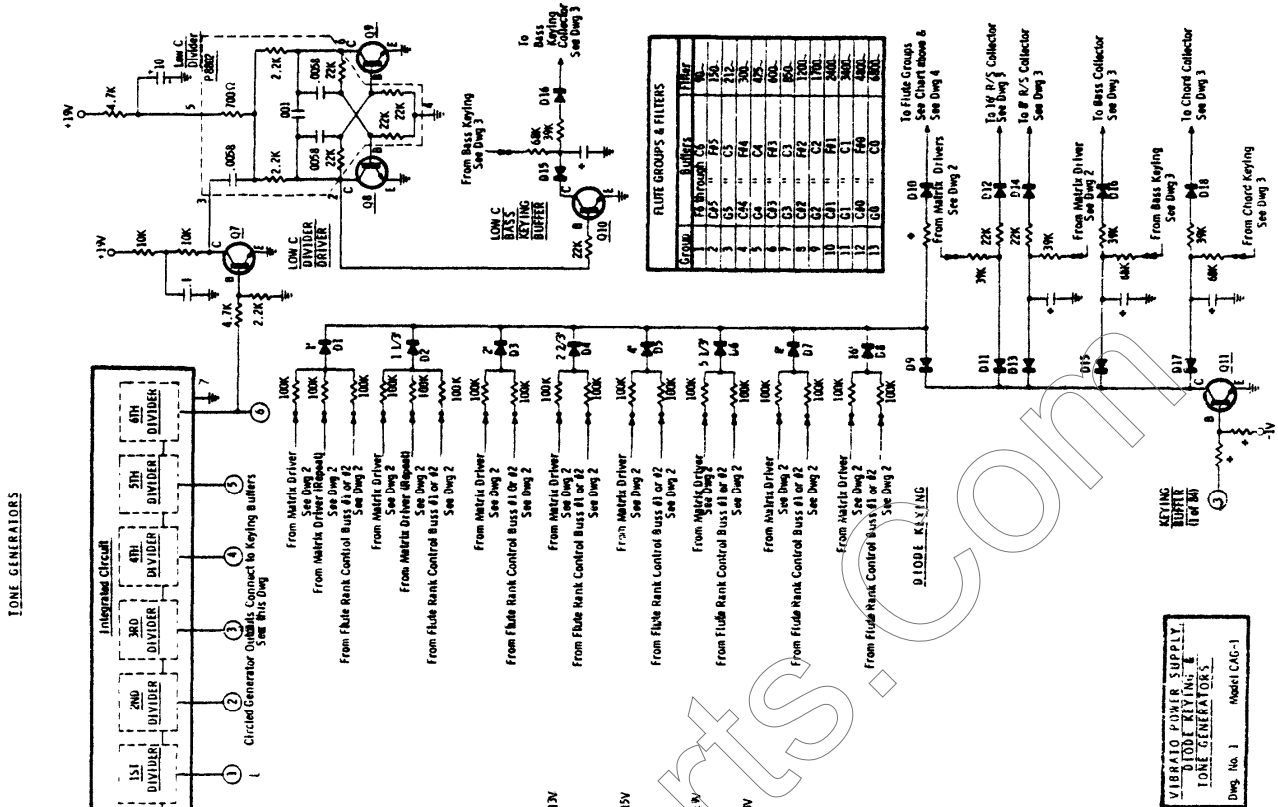
**MATRIX**  
CAG-1



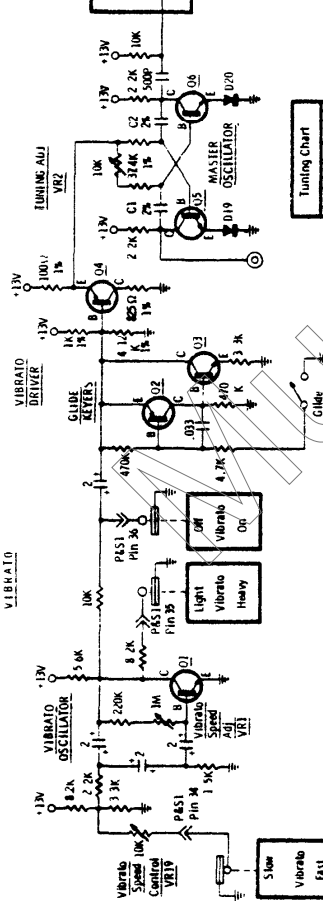


# CAG-1

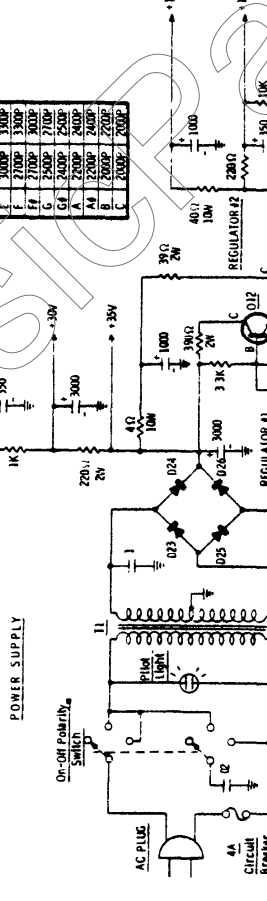
## 1. TONE GENERATORS



## 2. VIBRATO

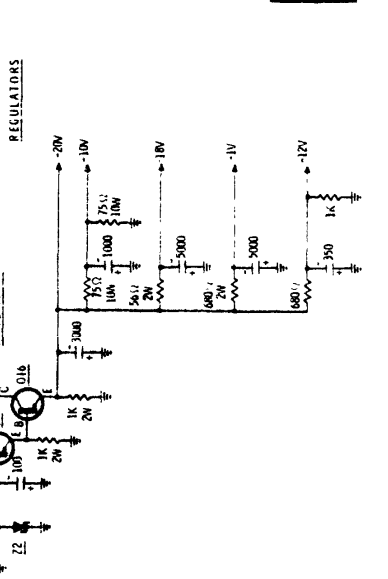


## 3. POWER SUPPLY



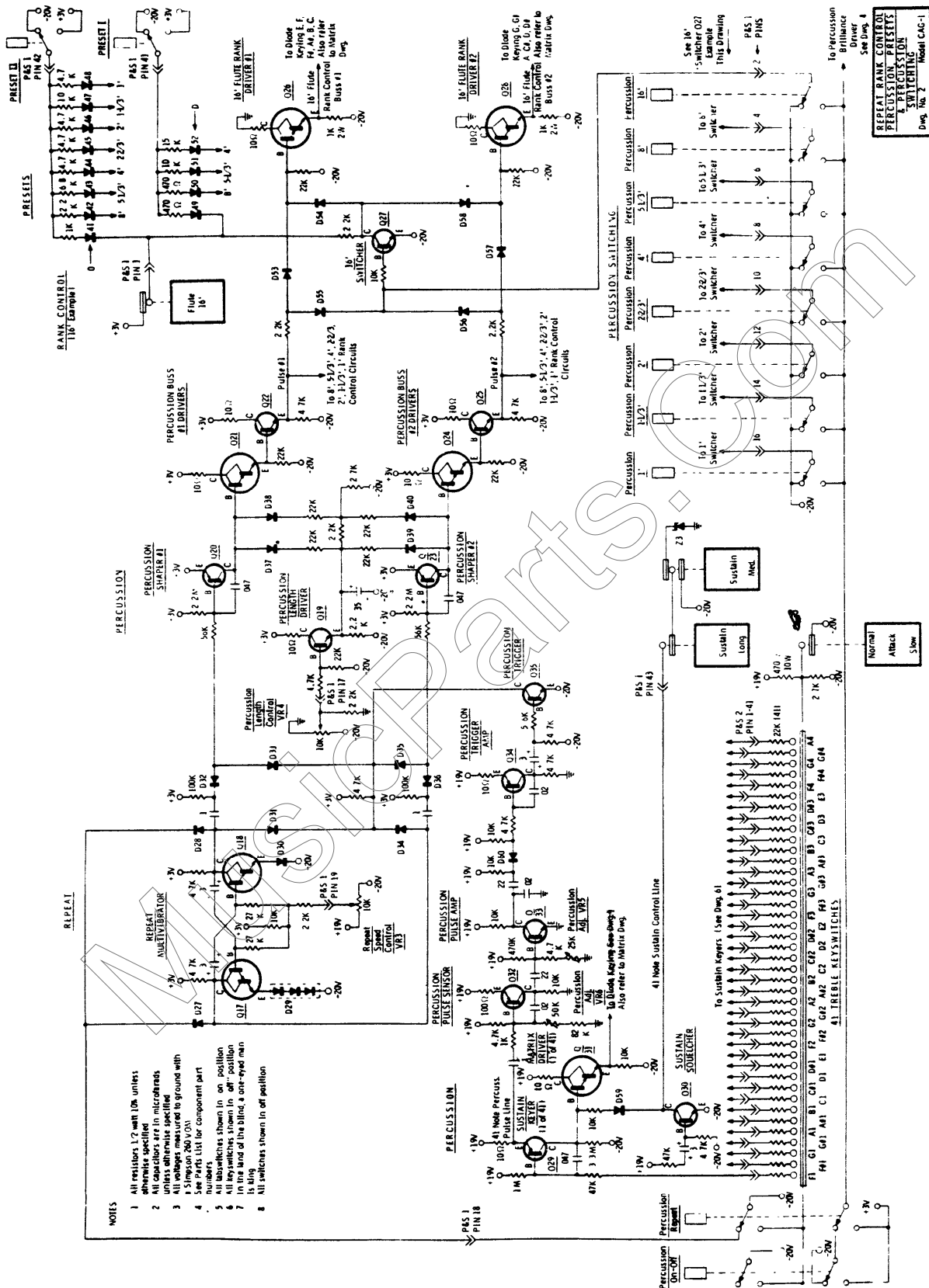
- NOTES
1. All resistors 1/2 watt 10K unless otherwise specified.
  2. All capacitors are in microfarads unless otherwise specified.
  3. 250 Volts measured to ground with a Simpson 4.
  4. See Parts List for component part numbers.
  5. All brackets are shown in the on position.
  6. Brand's factory labor component.
  7. One trouble with the world is that so many people who stand up vigorously for their rights fall down miserably on their duties.

## 4. REGULATORS



VIBRATO POWER SUPPLY  
TONE GENERATORS  
Dwg. No. 1 Model CAG-1

# CAG-1

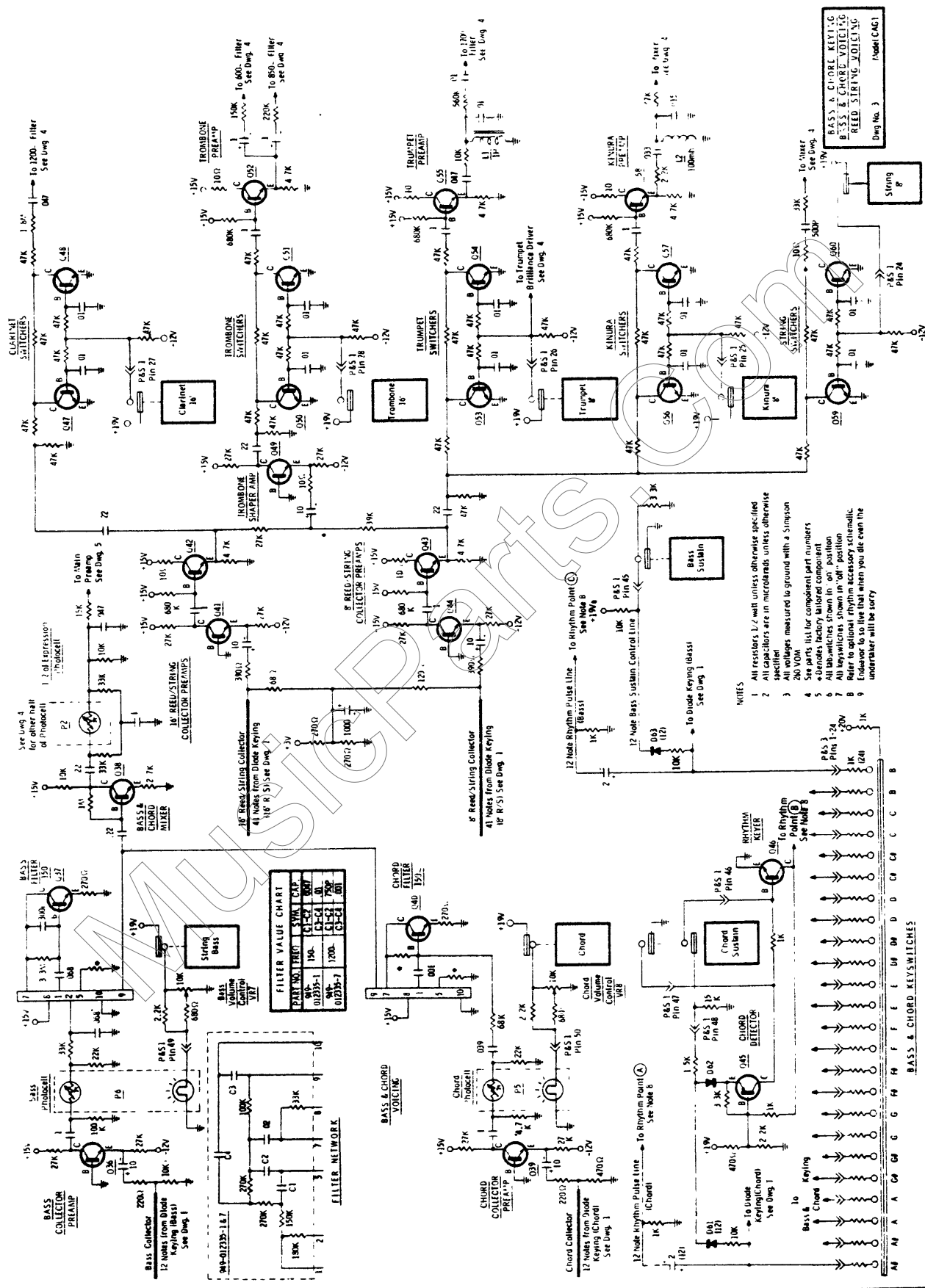


### NOTES

- 1 All resistors 1/2 watt 10% unless otherwise specified
- 2 All capacitors are in microfarads unless otherwise specified
- 3 All voltages measured to ground with common to 0V
- 4 See Part List for component part numbers
- 5 All labels shown in on position in the end of the blind, a one-eyed man
- 6 All labels shown in off position in the end of the blind, a one-eyed man
- 7 All labels shown in off position in the end of the blind, a one-eyed man
- 8 All labels shown in off position in the end of the blind, a one-eyed man

REPEAT BANK CONTROL  
PERCUSSION PRESETS  
& PERCUSSION SWITCHING  
Dwg. No. 2  
Model CAG-1

# CAG-1



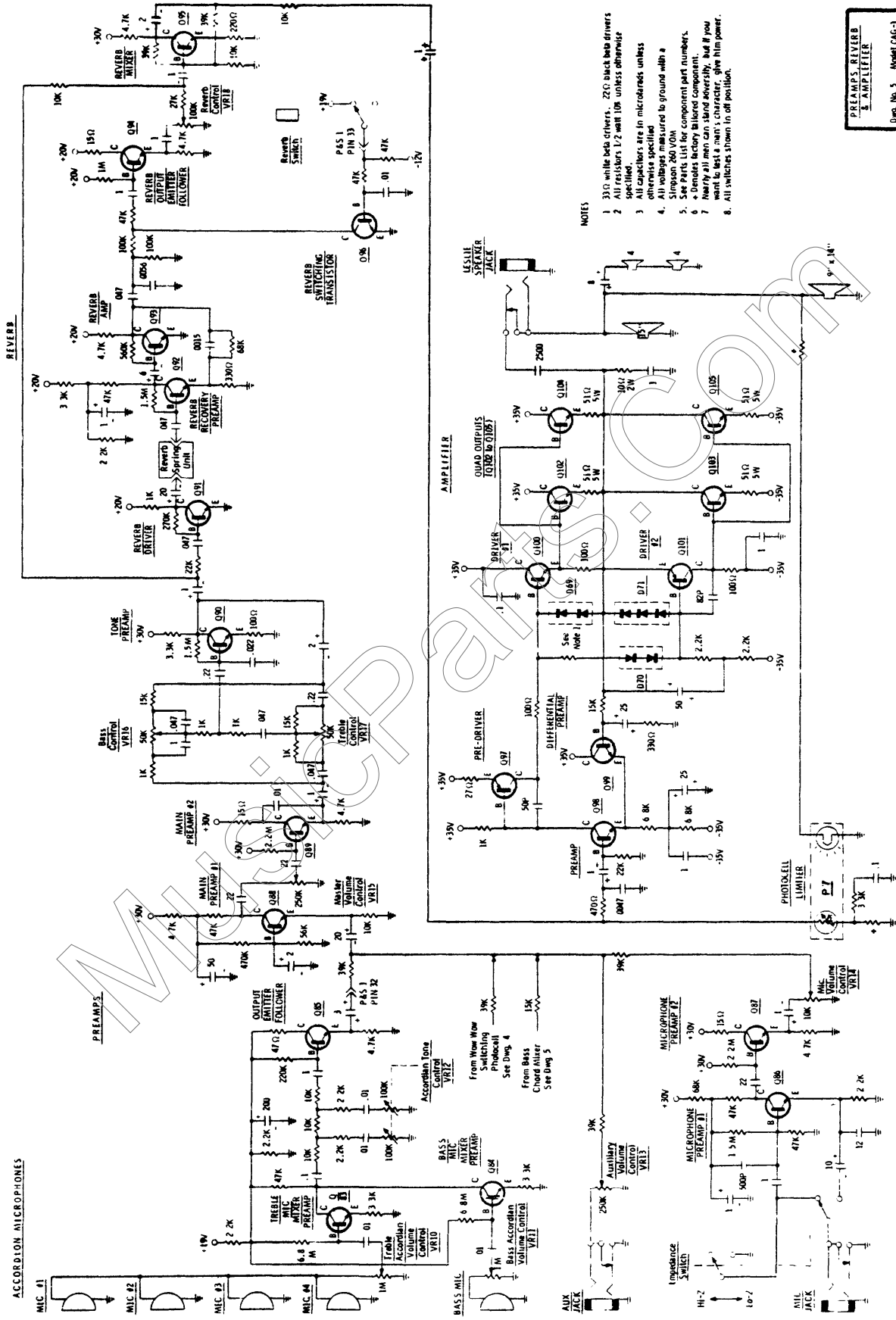
Filter No.	FREQ	STRNG CAP
04	150	0.001
05	150	0.001
06	150	0.001
07	150	0.001
08	150	0.001
09	150	0.001
10	150	0.001
11	150	0.001
12	150	0.001

- NOTES
- 1 All resistors 1/2 watt unless otherwise specified
  - 2 All capacitors are in microfarads unless otherwise specified
  - 3 200 VOLTS
  - 4 See parts list for component part numbers
  - 5 Diodes factory tailored component
  - 6 All lab switches shown in "off" position
  - 7 Refer to optional rhythm accessory schematic.
  - 8 Endavor to tie that when you die even the undertaker will be sorry

BASS & CHORD KEYING  
BASS & CHORD VOICING  
REED STRING VOICING  
Dwg No. 3  
Model CAG1



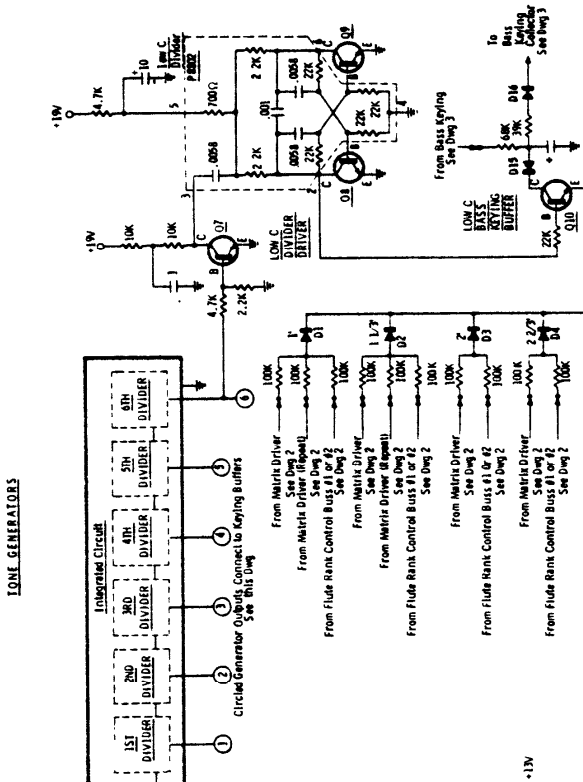
# CAG-1



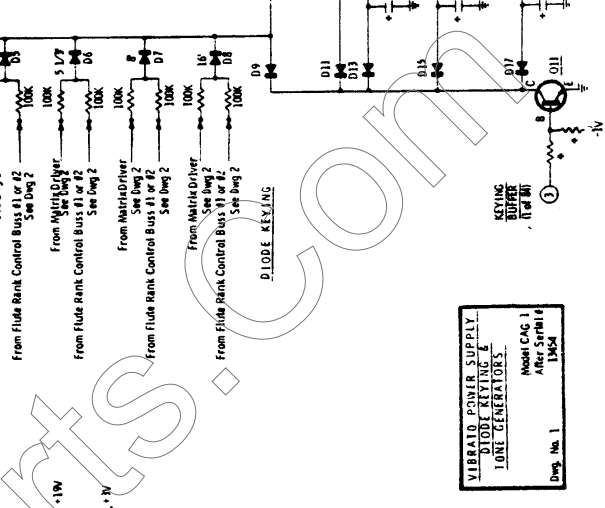
- NOTES
1. 330 Ω white beta drivers. 220 Ω black beta drivers specified.
  2. All resistors 1/2 watt 10% unless otherwise specified.
  3. All capacitors are in microfarads unless otherwise specified.
  4. All voltages measured to ground with a Simpson 260 VOM.
  5. See Parts List for component part numbers.
  6. Bendix factory labeled component.
  7. All electrolytic capacitors are 50% ripple. If you want to test a new electrolytic capacitor, give it 100V.
  8. All switches shown in off position.

PREAMPS, REVERB & AMPLIFIER  
 Dwg. No. 5 Model CAG-1

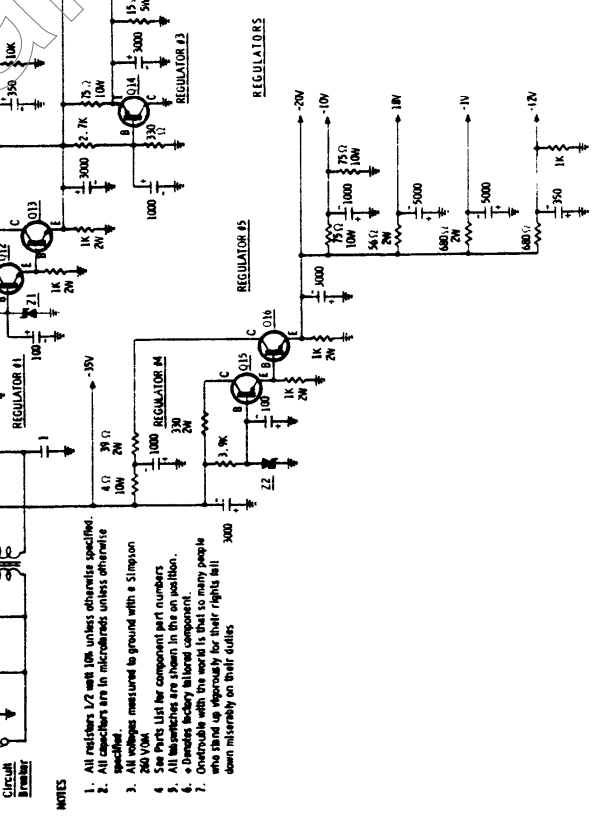
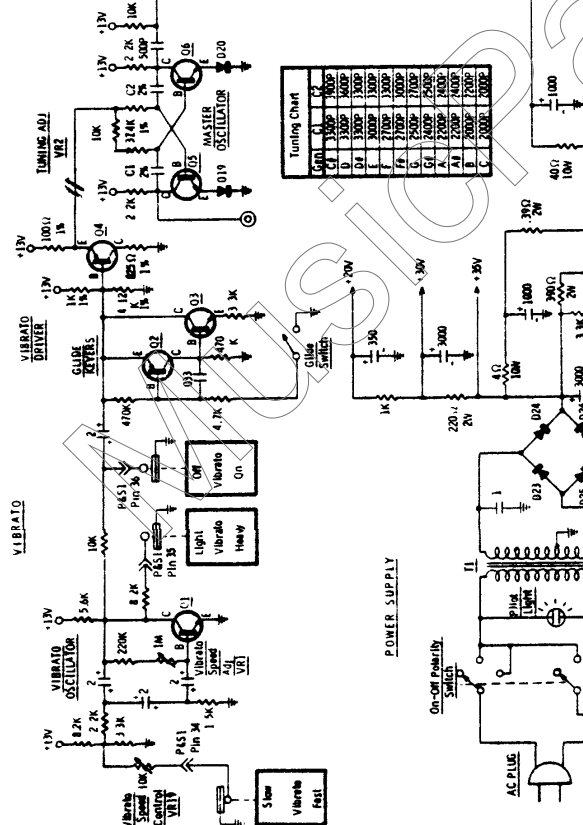
IONE GENERATORS



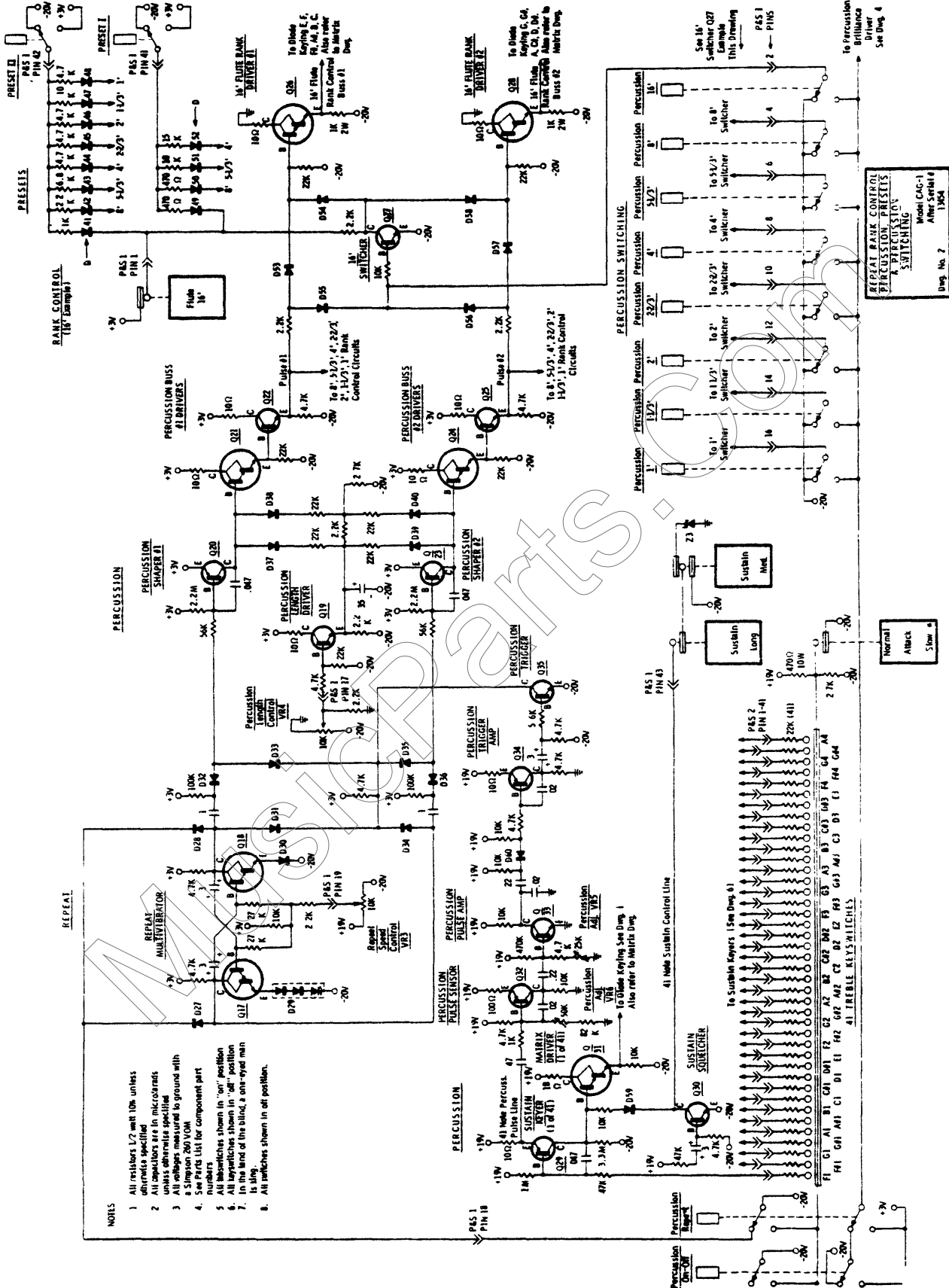
GROUP	FLUTE	FLUTE
1	1000	1000
2	1000	1000
3	1000	1000
4	1000	1000
5	1000	1000
6	1000	1000
7	1000	1000
8	1000	1000
9	1000	1000
10	1000	1000
11	1000	1000
12	1000	1000
13	1000	1000



VIBRATO POWER SUPPLY... DIODE KEYING & IONE GENERATORS  
Sheet CAG 1  
After Serial # 13454  
Dwg. No. 1



- NOTES
1. All resistors 1/2 watt 10% unless otherwise specified.
  2. All capacitors are in microfarads unless otherwise specified.
  3. All voltages measured to ground with a Simpson 240 VOM.
  4. See Parts List for component part numbers.
  5. All switches are shown in the on position.
  6. A denotes factory installed component.
  7. Compatible with the many 15 pin variety people seem mistakenly to call 15 pins.



NOTES

- 1 All resistors 1/2 watt 10% unless otherwise specified
- 2 All capacitors are in microfarms unless otherwise specified
- 3 All voltage measured to ground with Simpson 100 Volt meters
4. Schematic list for component part numbers
- 5 All brackets shown in "on" position in the line of the blind, a one-eyed man in line.
6. All brackets shown in "off" position.

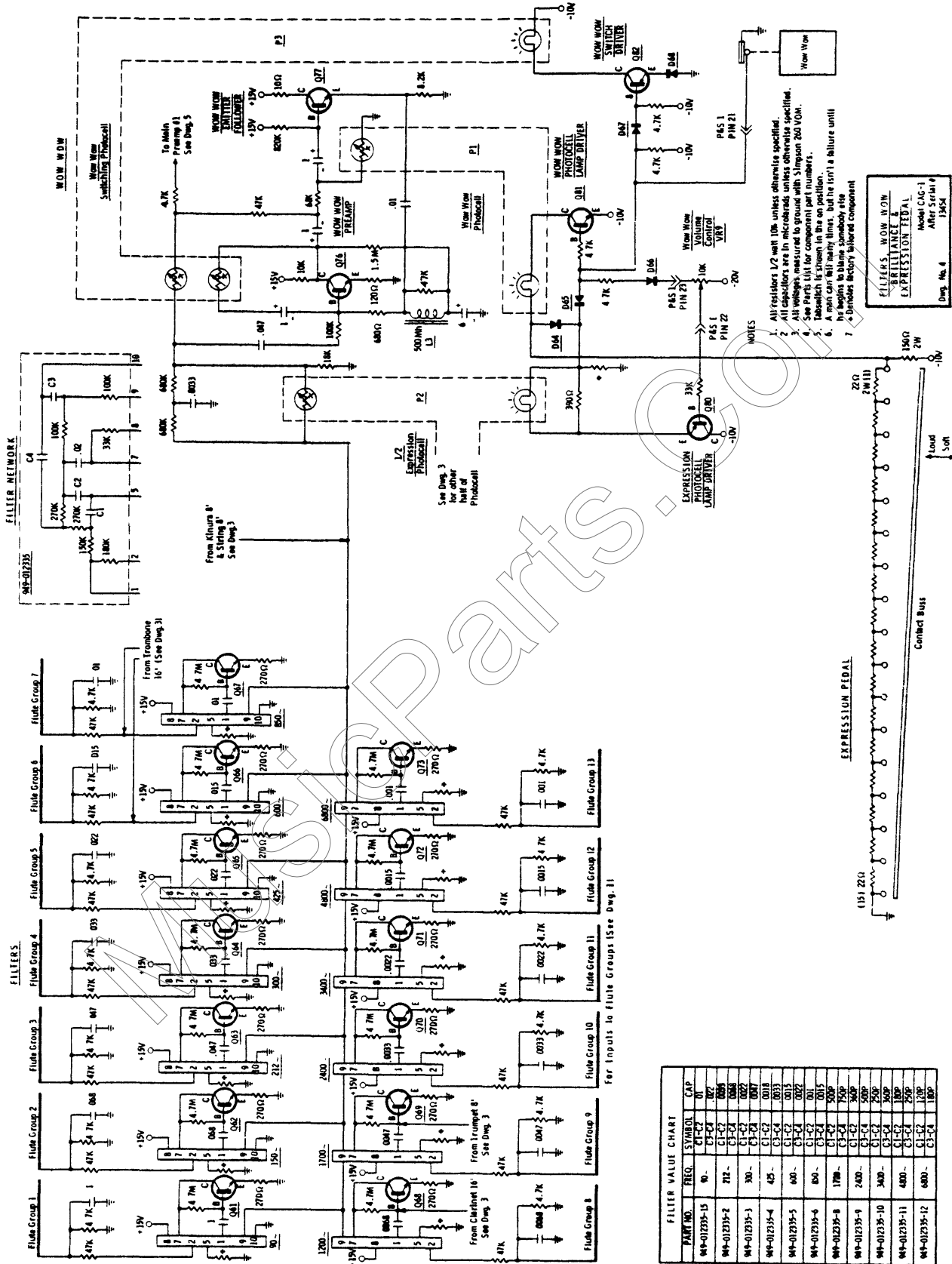
REPEAT

REPEAT BANK CONTROL PERCUSSION BUS DRIVERS PERCUSSION SWITCHING  
Model CAG-1 After Serial 13454  
Dwg. No. 2

\* Was changed to Treble Cancel after Serial Number 14,000.

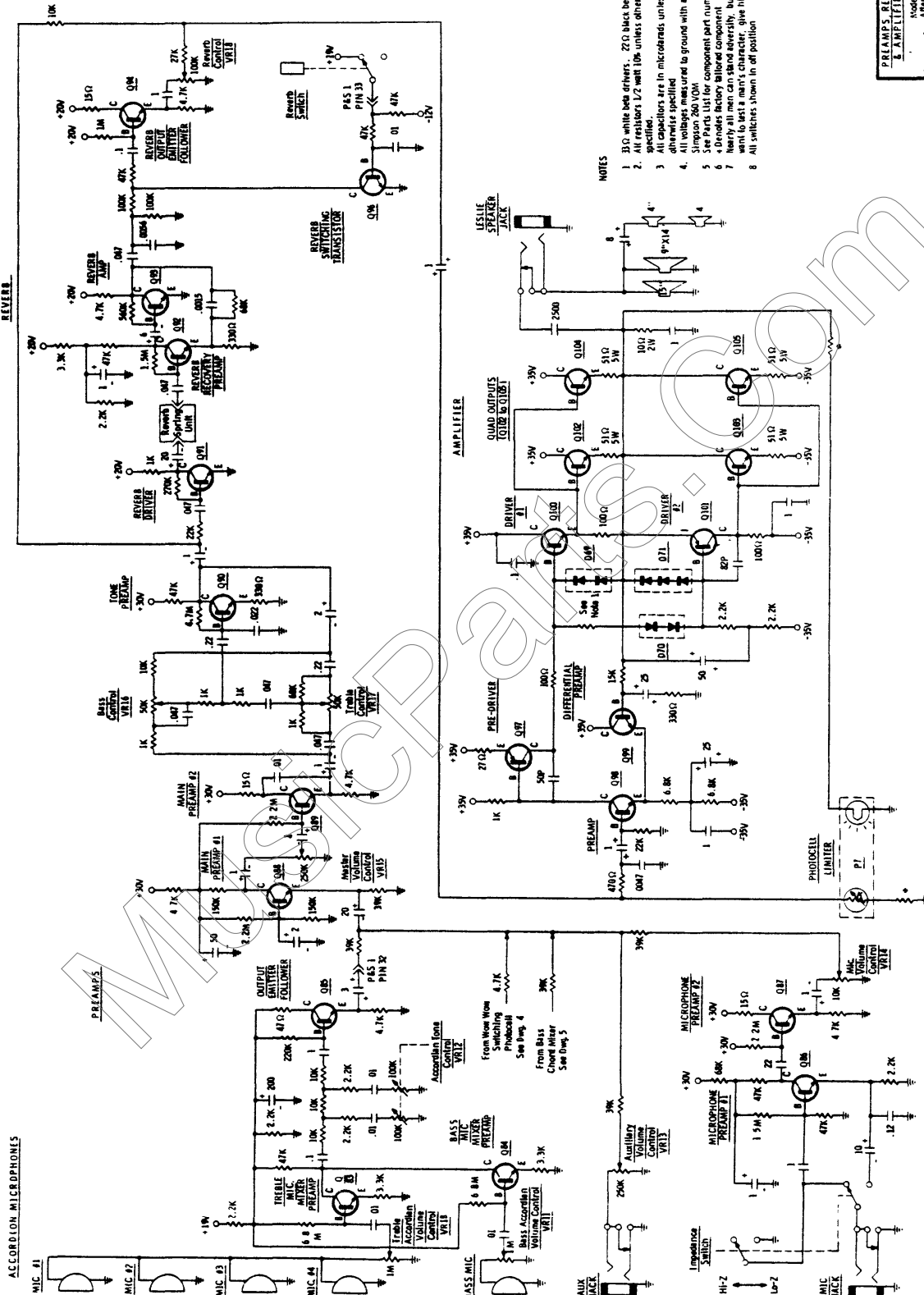






FILTER NO.	FREQ.	SYMBOL	CAP.
W-012315	90.	C1-C2	01
W-012315-2	212.	C1-C2	005
W-012315-3	300.	C1-C2	005
W-012315-4	425.	C1-C2	001
W-012315-5	600.	C1-C2	001
W-012315-6	850.	C1-C2	001
W-012315-9	1700.	C1-C2	500P
W-012315-10	2400.	C1-C2	300P
W-012315-11	3400.	C1-C2	200P
W-012315-12	4800.	C1-C2	100P
W-012315-13	6800.	C1-C2	100P

# CAG-1 #13454

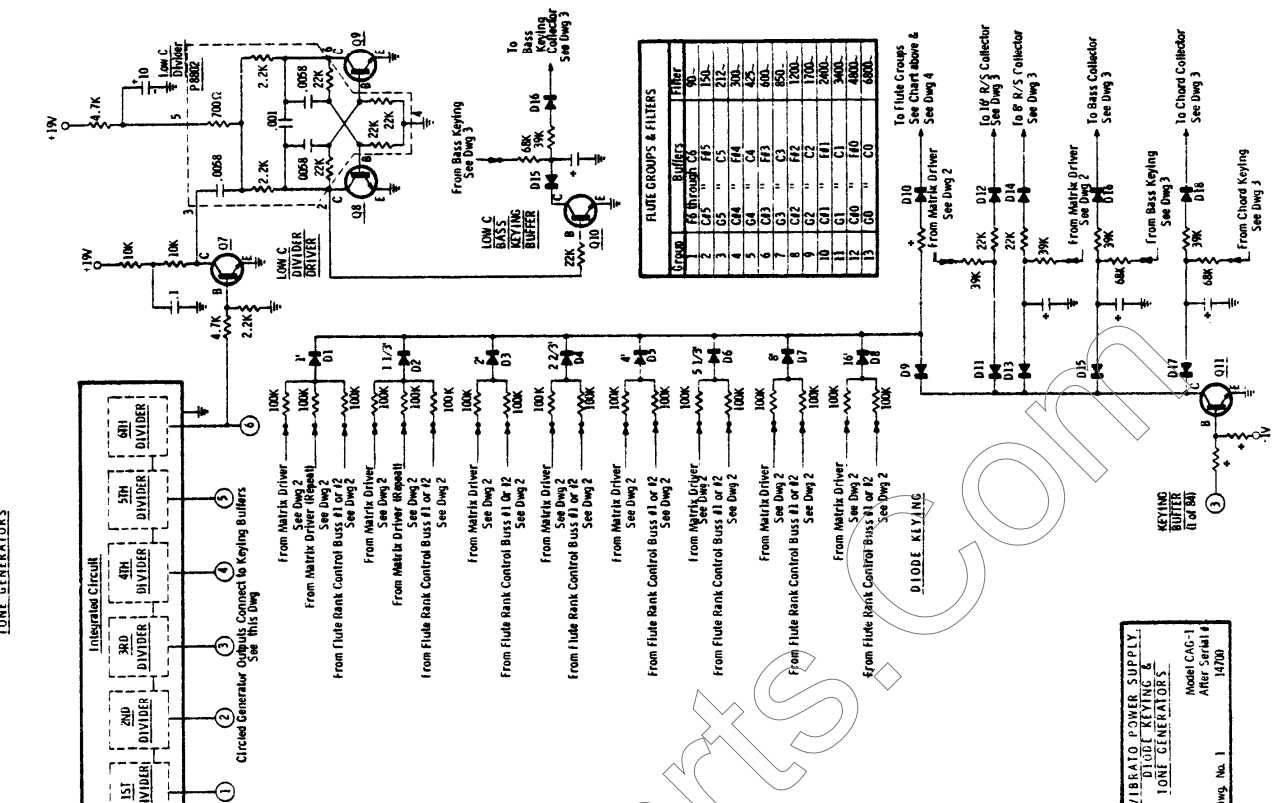


- NOTES
1. 33.0 white beta drivers. 2Z 0 black beta drivers specified.
  2. All resistors 1/2 watt 10% unless otherwise specified.
  3. All capacitors are in microfarads unless otherwise specified.
  4. All voltages measured to ground with a Simpson 260 VOM.
  5. See Parts List for component part numbers.
  6. 4 Denotes factory tailored component.
  7. Heavily all men can stand adversity, but if you want to test a man's character, give him power.
  8. All switches shown in all position.

PREAMPS, REVERB & AMPLIFIER  
Model CAG-1  
Alt. Part # 13454  
Dwg. No. 5

# CAG - 1 #14700

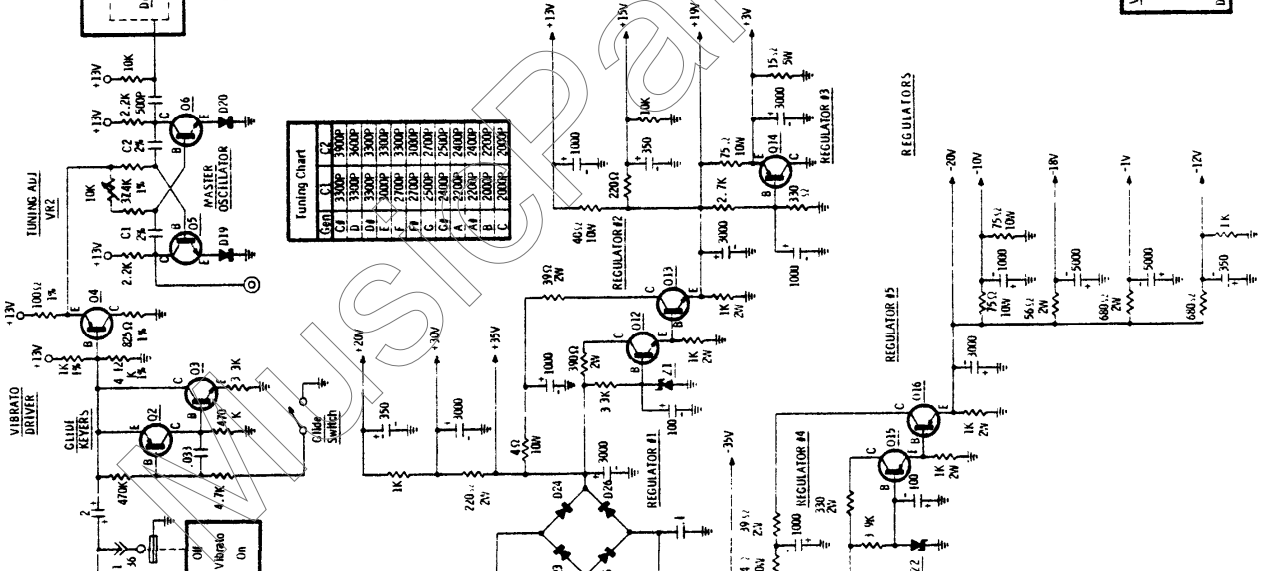
## DIODE KEYING



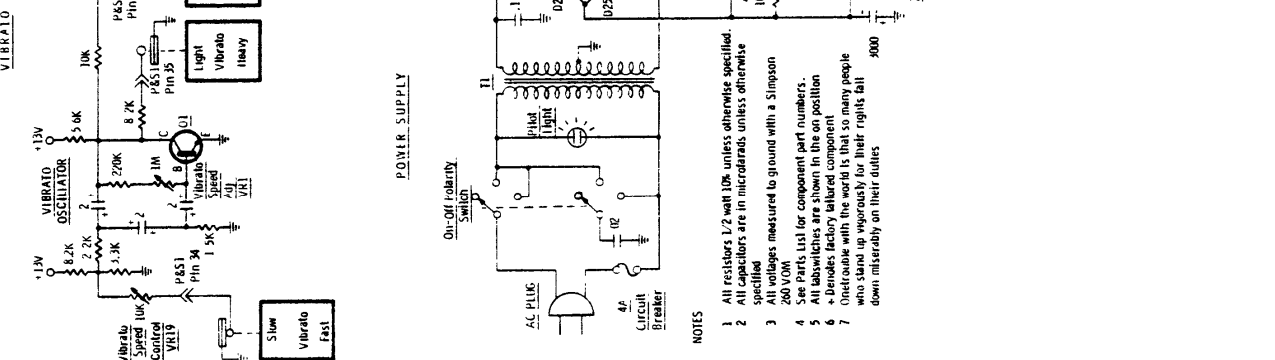
Group	Flute	Filters
1	FS	Through C6
2	CF5	F#5
3	CF5	F#5
4	CF4	F#4
5	CF4	F#4
6	CF3	F#3
7	CF3	F#3
8	CF2	F#2
9	CF2	F#2
10	CF1	F#1
11	CF1	F#1
12	CF0	F#0
13	CF0	F#0

VIBRATO POWER SUPPLY  
DIODE KEYING &  
TONE GENERATORS  
Model CAG-1  
After Serial #  
14700  
Dwg. No. 1

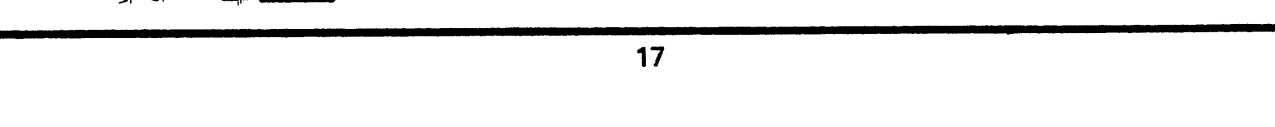
## TONE GENERATORS



## VIBRATO DRIVE

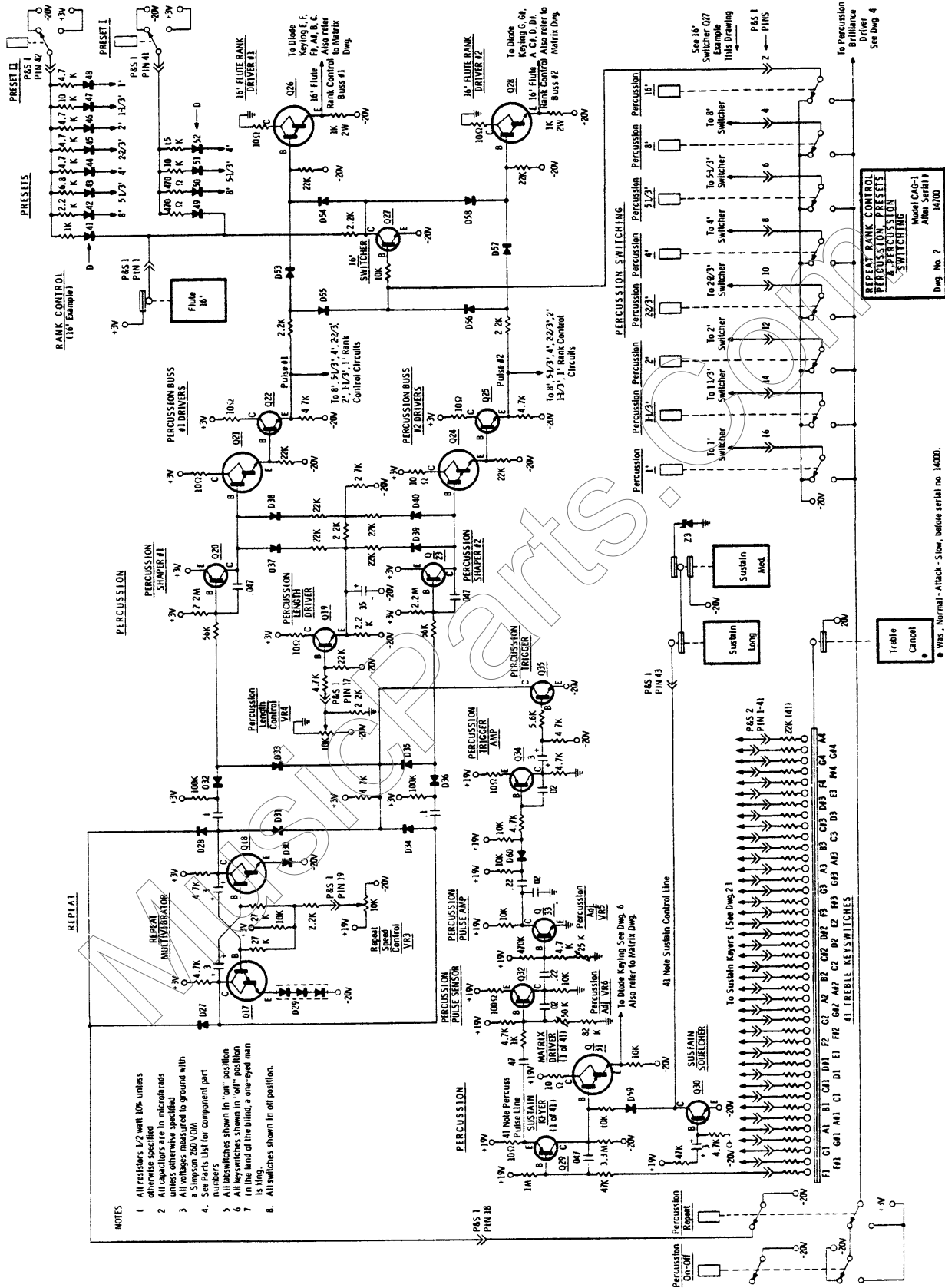


## VIBRATO



- NOTES
- 1 All resistors 1/2 watt 10K unless otherwise specified.
  - 2 All capacitors are in microfarads unless otherwise specified.
  - 3 All voltages measured to ground with a Simpson 200 VOM.
  - 4 See PARTS LIST for component part numbers.
  - 5 All switches are shown in the on position.
  - 6 All diodes are with the cathode to their case unless otherwise specified.
  - 7 One stand up warning for their rights fall down miserably on their duties.

# CAG-1 #14700

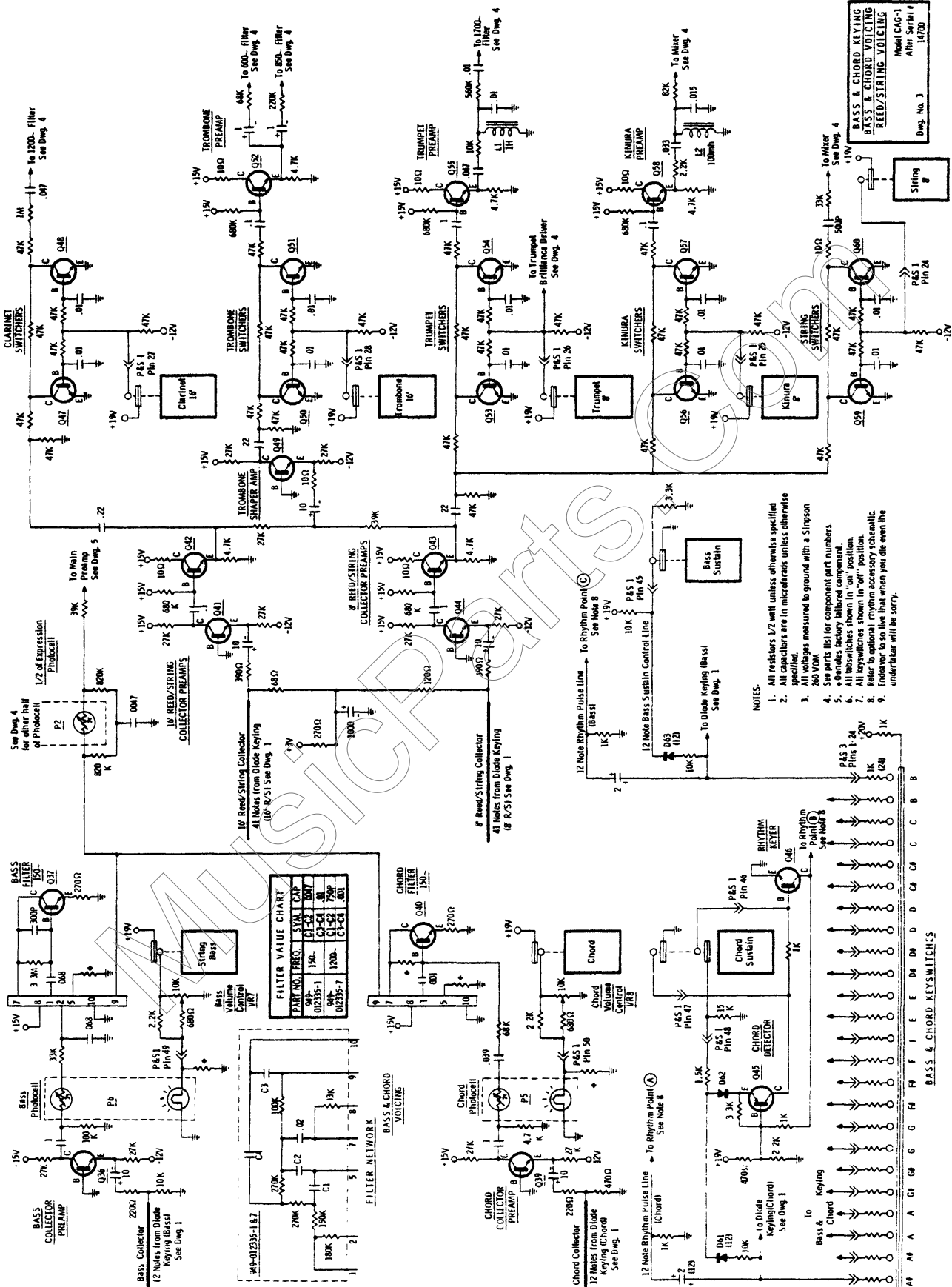


- NOTES**
- 1 All resistors 1/2 watt 10% unless otherwise specified
  - 2 All capacitors are in microfarads unless otherwise specified
  - 3 All diodes are in silicon except a Simpson 200 VOM
  - 4 See Parts list for component part numbers
  - 5 All labels shown in "on" position
  - 6 All keyswitches shown in "off" position
  - 7 In the band of the blind, a one-eyed man is blind.
  - 8 All switches shown in off position.

REPEAT BANK CONTROL PERCUSSION PRESETS SWITCHING  
Model CAG-1  
Alt. Serial #  
14700  
Dwg. No. 7

• WBS - Normal - Attack - Slow, before serial no. 14000.

# CAG-1 #14700



FILTER VALUE CHART	
PART NO.	SYM. CAP.
01235-1	150
01235-2	100
01235-3	100
01235-4	100
01235-5	100
01235-6	100
01235-7	100

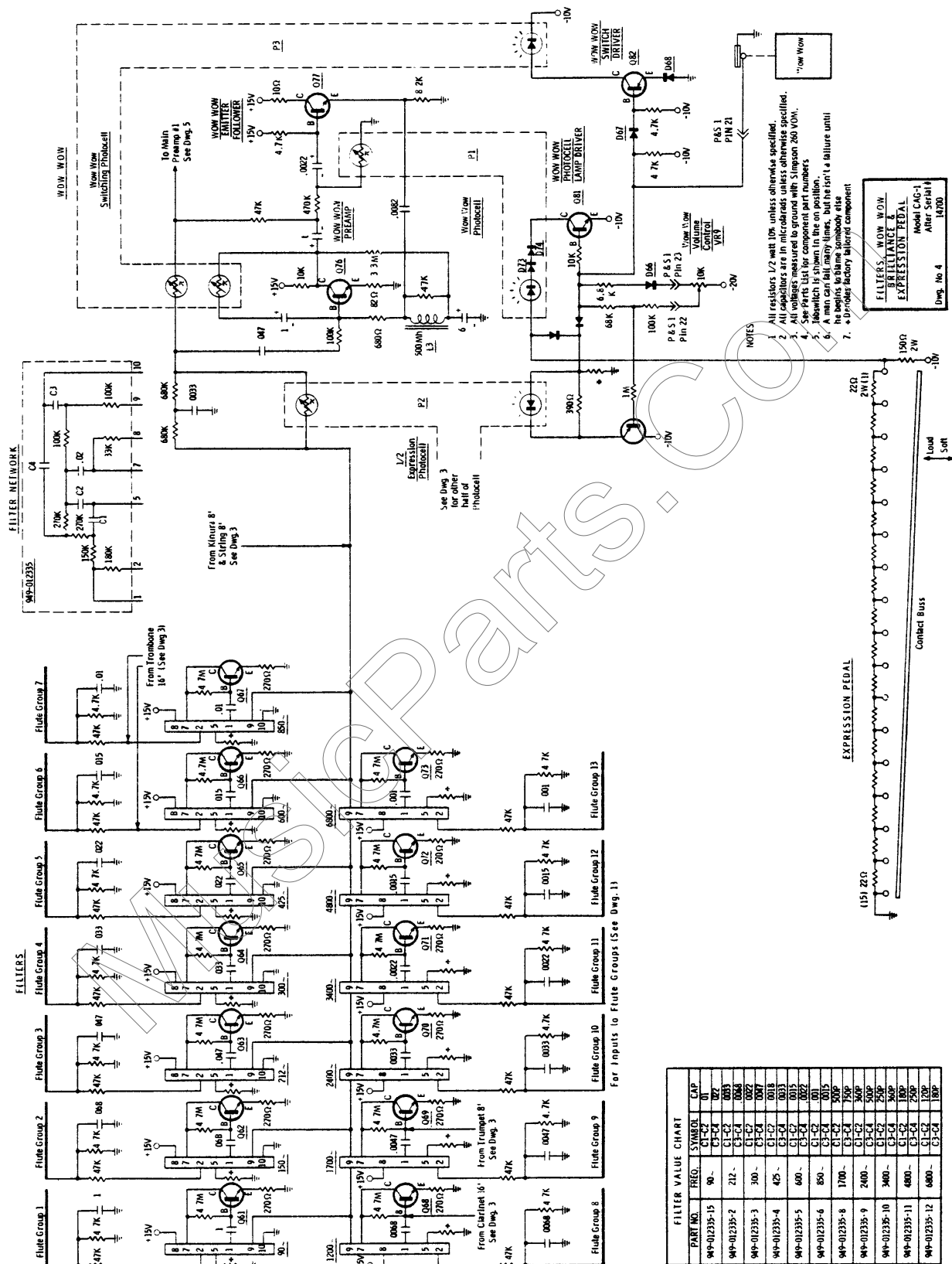
- NOTES:
1. All resistors 1/2 watt unless otherwise specified.
  2. All capacitors are in microfarads unless otherwise specified.
  3. All voltages measured to ground with a Simpson 260 VOM.
  4. See parts list for component part numbers.
  5. \* denotes factory balanced component.
  6. All resistances shown in "ohm" position.
  7. All resistances shown in "ohm" position.
  8. Resistor values in "ohm" position are in ohms.
  9. Resistor to be used when you do not even the underbar will be sorry.

BASS & CHORD KEYING  
BASS & CHORD VOICING  
REED/STRING VOICING

Mount CAG-1  
After Serial #  
14700

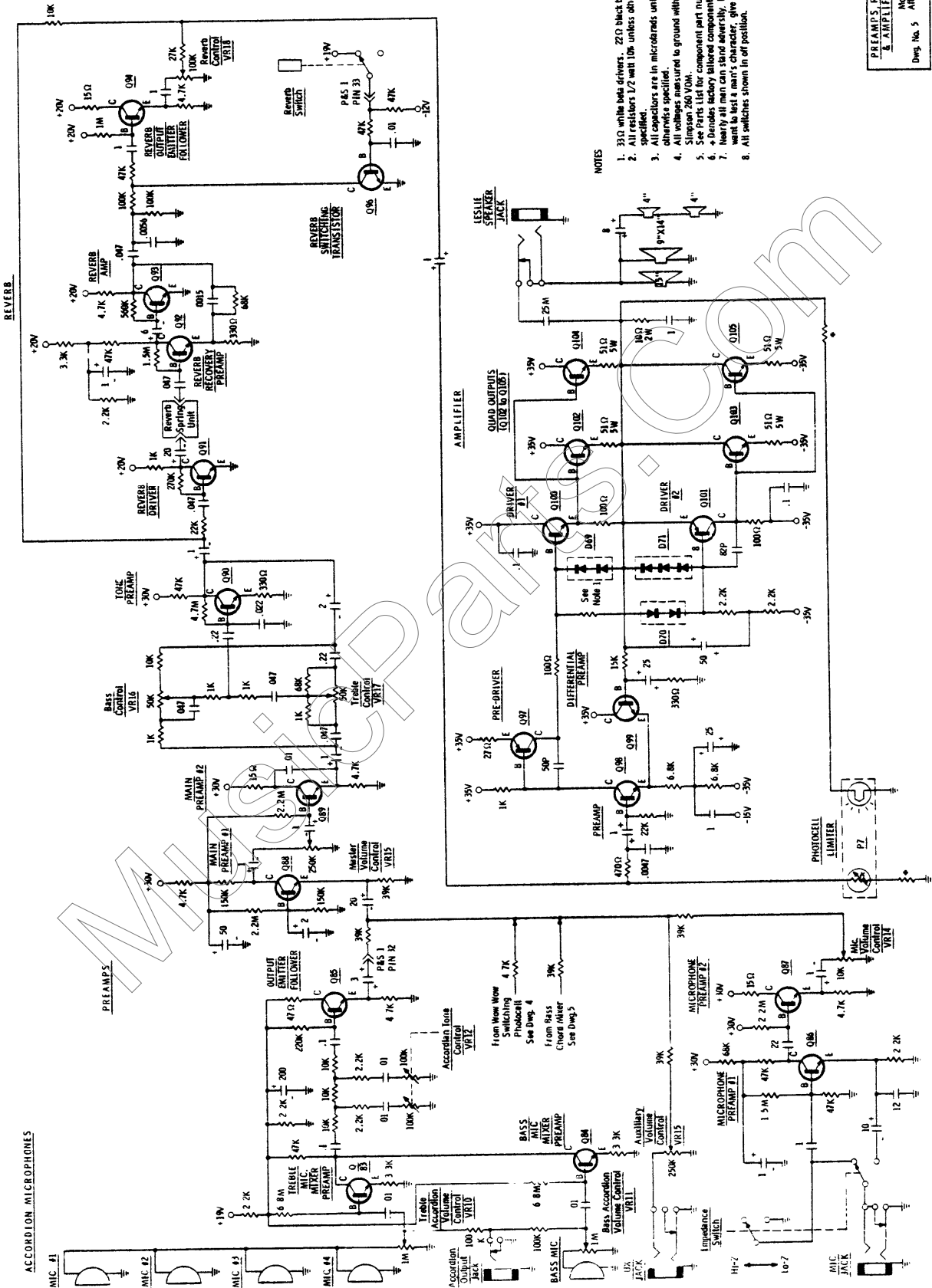
Dwg. No. 3

# CAG-1 #14700



FILTER VALUE CHART		
PART NO.	FREQ.	SYMBOL CAP
94P-012335-15	90	C1-C2 .01
		C3-C4 .02
94P-012335-2	212	C1-C2 .0033
		C3-C4 .0068
94P-012335-3	300	C1-C2 .0027
		C3-C4 .0054
94P-012335-4	425	C1-C2 .0033
		C3-C4 .0067
94P-012335-5	600	C1-C2 .0022
		C3-C4 .0044
94P-012335-6	850	C1-C2 .0015
		C3-C4 .0030
94P-012335-7	1700	C1-C2 .0007
		C3-C4 .0014
94P-012335-8	2400	C1-C2 .0005
		C3-C4 .0010
94P-012335-9	3400	C1-C2 .0004
		C3-C4 .0008
94P-012335-10	4800	C1-C2 .0003
		C3-C4 .0006
94P-012335-11	6800	C1-C2 .0002
		C3-C4 .0004
94P-012335-12	9800	C1-C2 .0001
		C3-C4 .0002

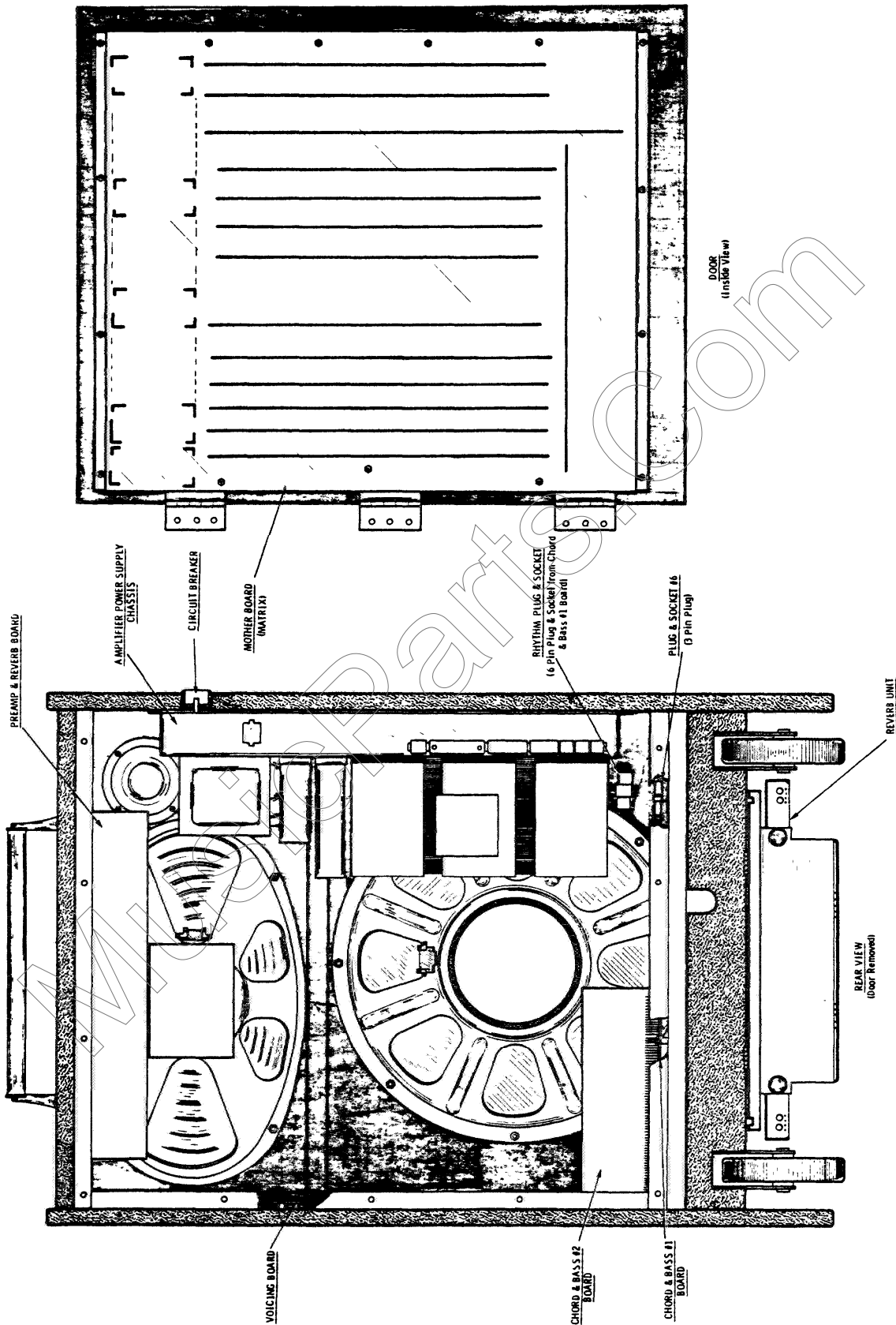
# CAG-1 #14700



- NOTES**
1. 330 white beta drivers, 220 black beta drivers.
  2. All resistors 1/2 watt 10% unless otherwise specified.
  3. All capacitors are in microfarads unless specified.
  4. All tubes are measured to ground with a Simpson 240 VOM.
  5. See Parts List for component part numbers.
  6. Donates factory allowed component.
  7. Nearly all men can stand adversity, but if you want to test a man's character, give him power.
  8. All switches shown in off position.

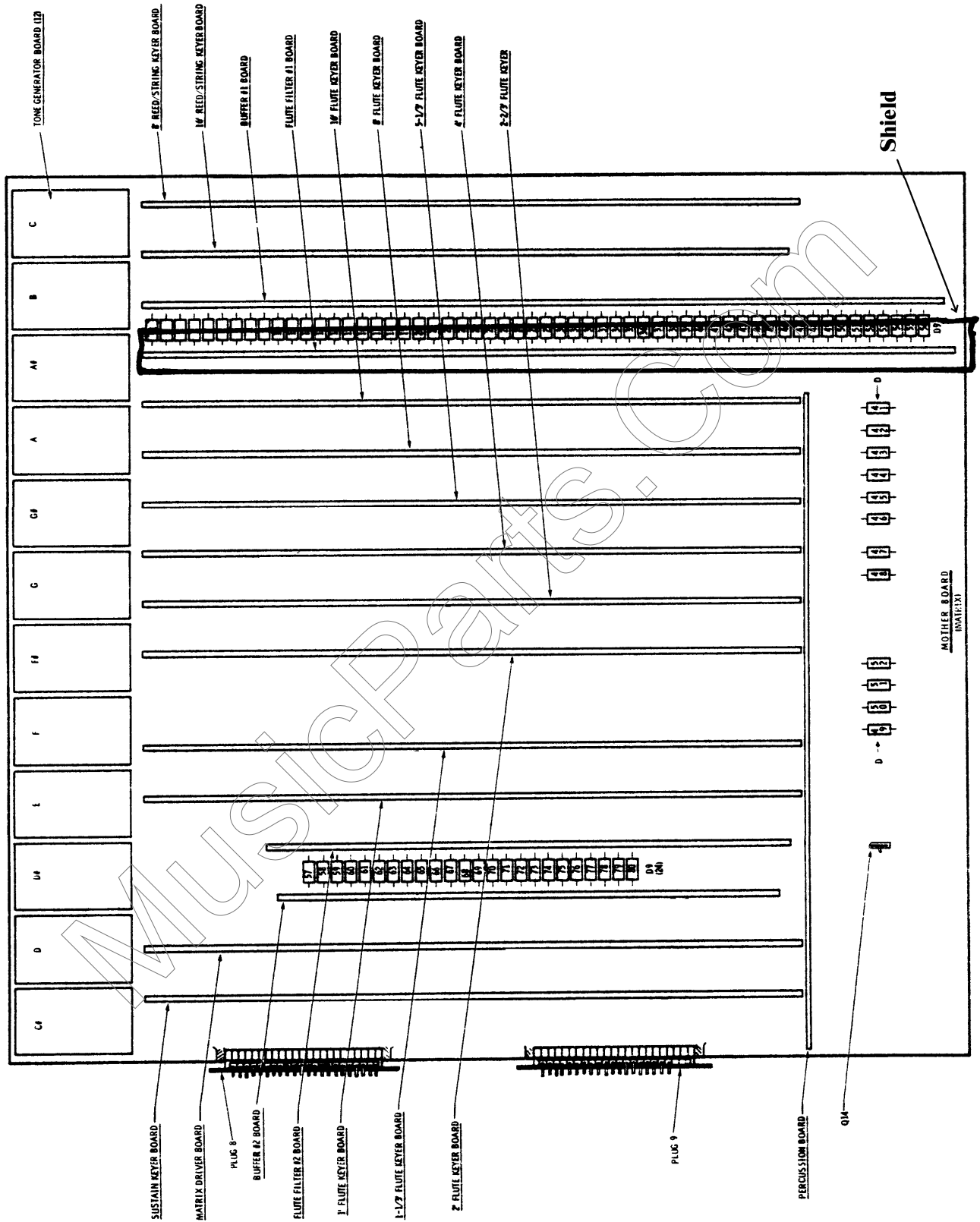
**PREAMPS REVERB & AMPLIFIER**  
 Model CAG-1  
 Alteration # 1  
 Dwg. No. 5  
 14700

# PICTORALS

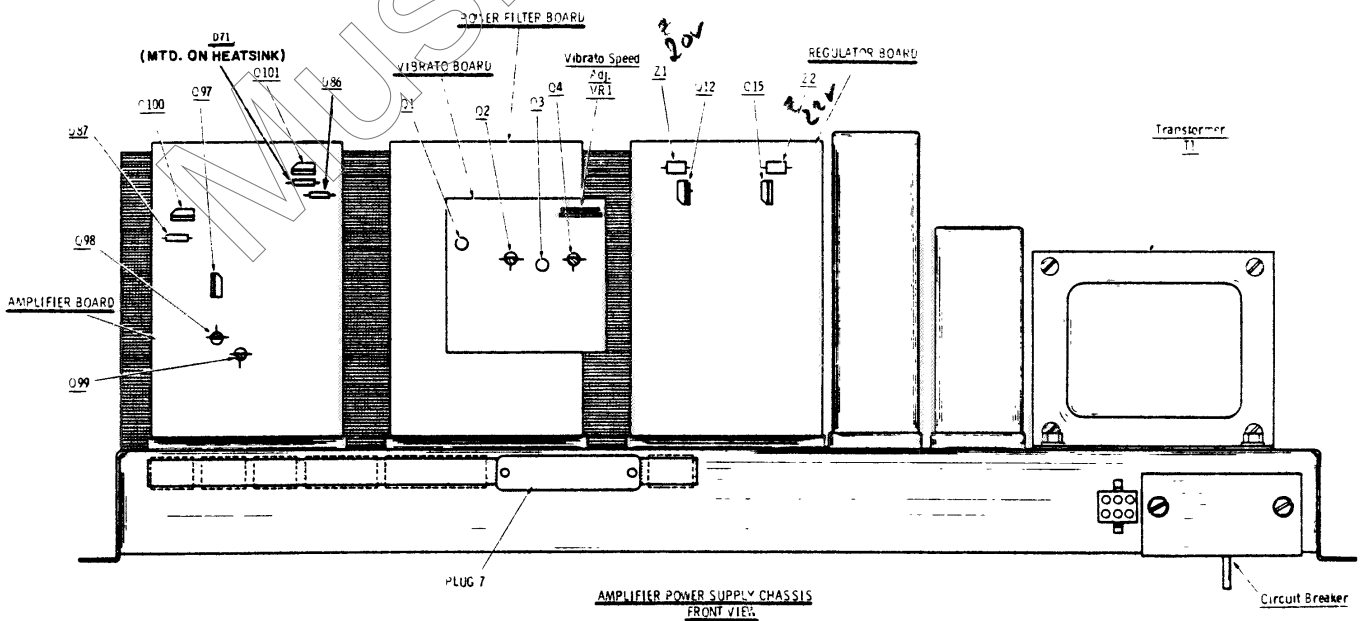
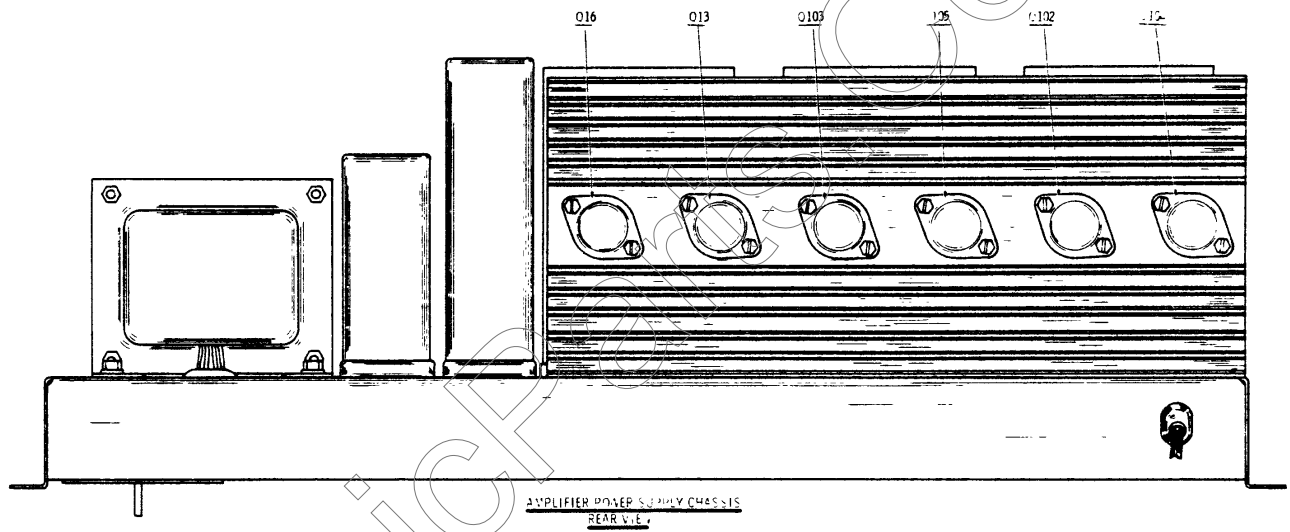
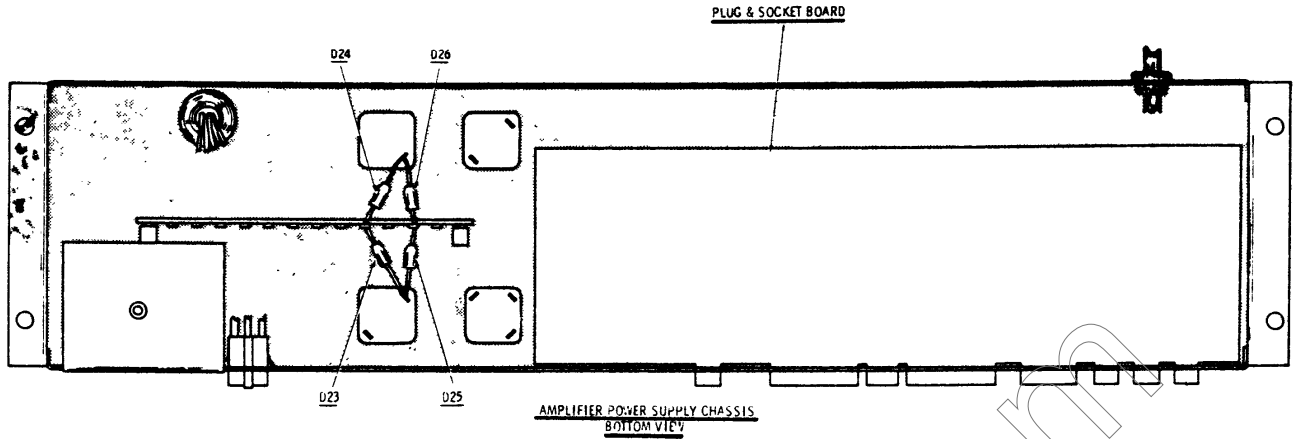




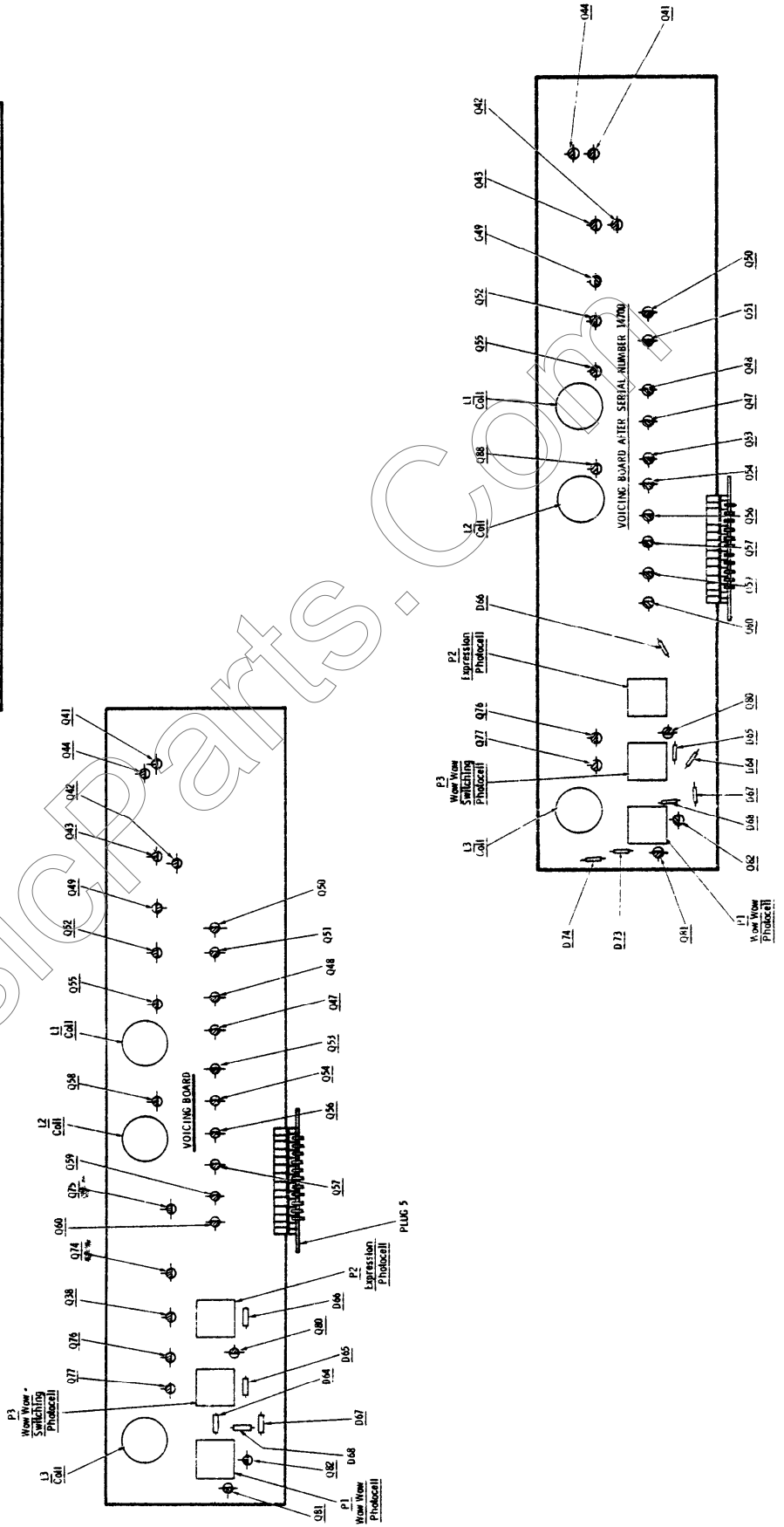
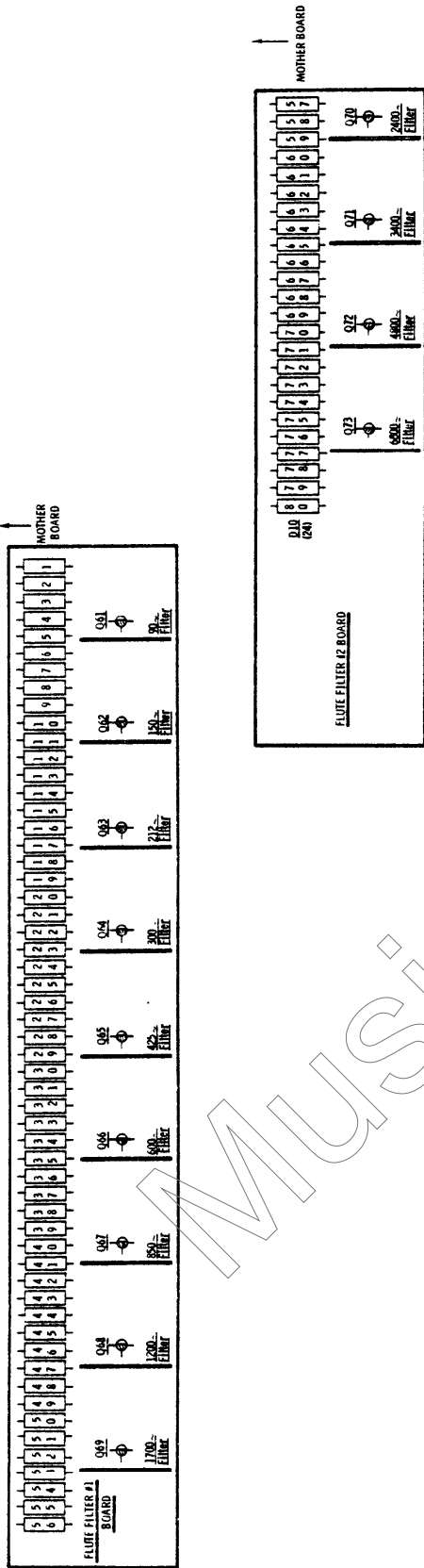
# PICTORALS



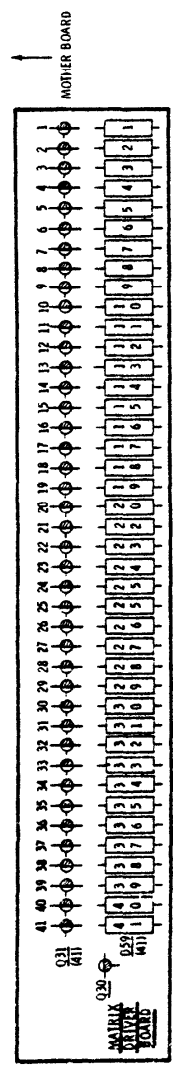
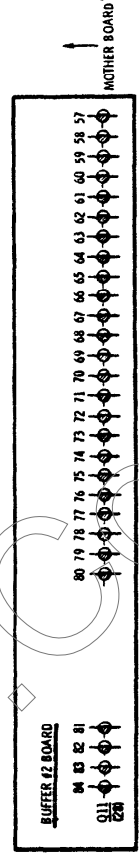
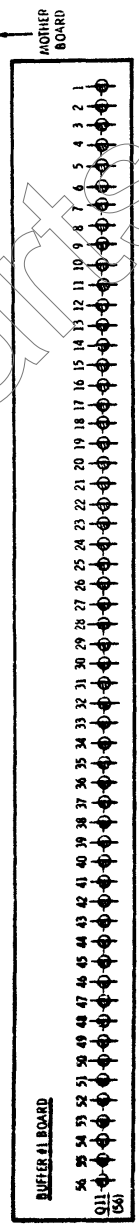
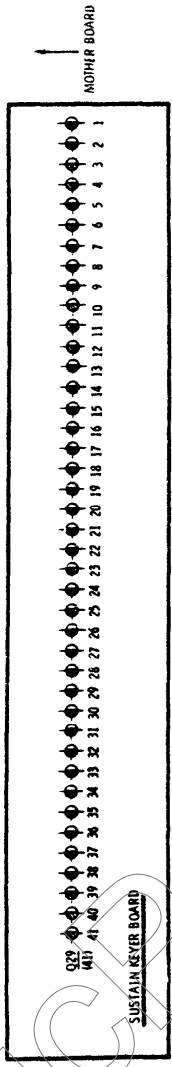
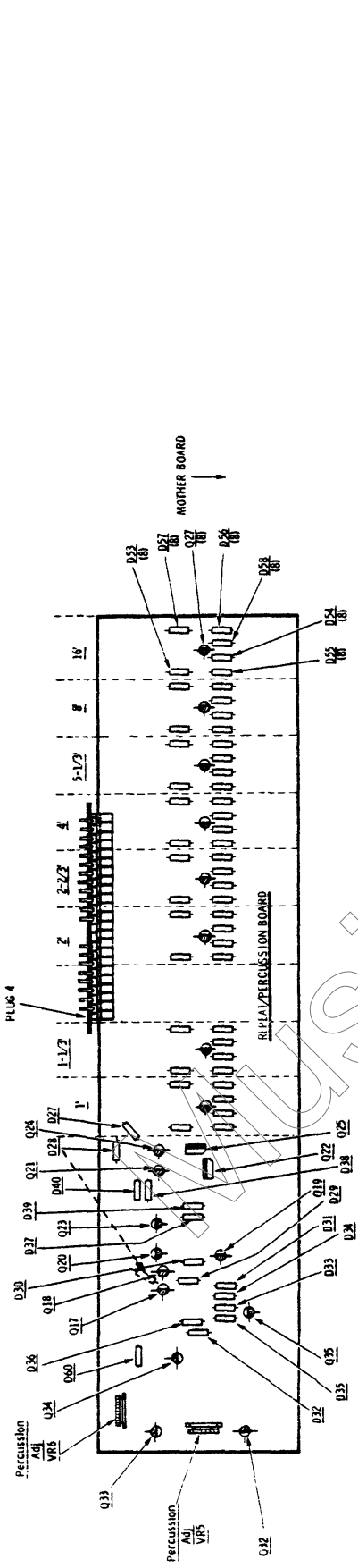
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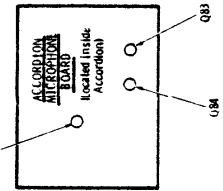
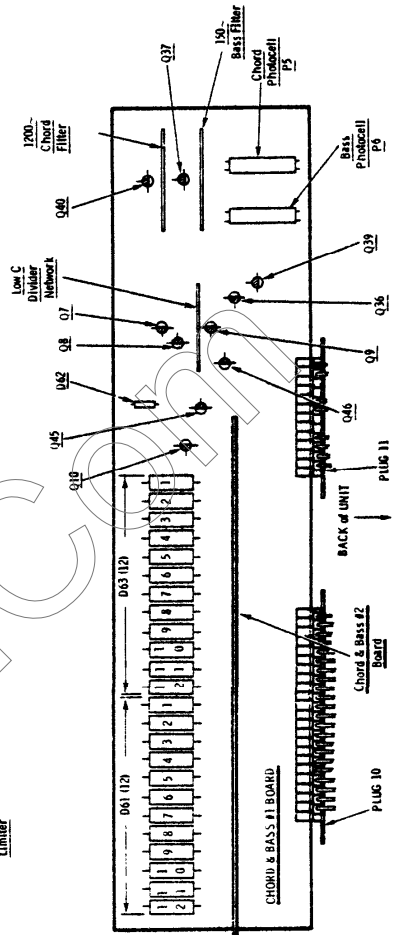
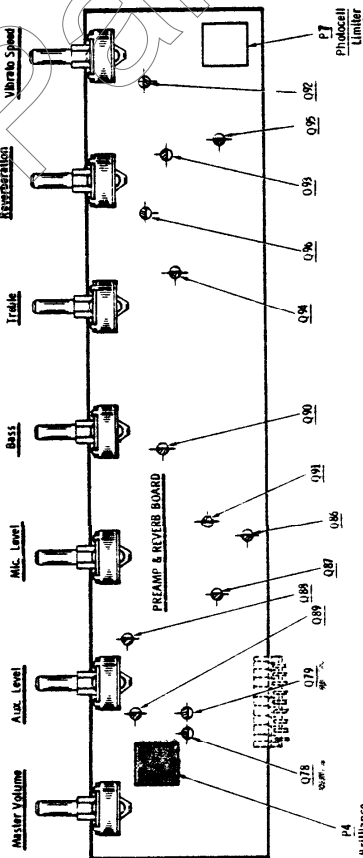
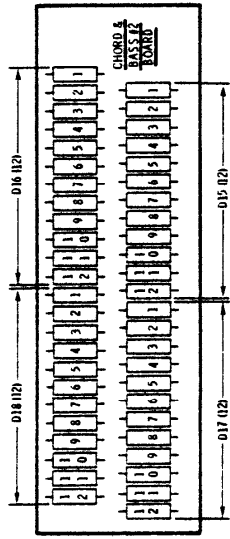
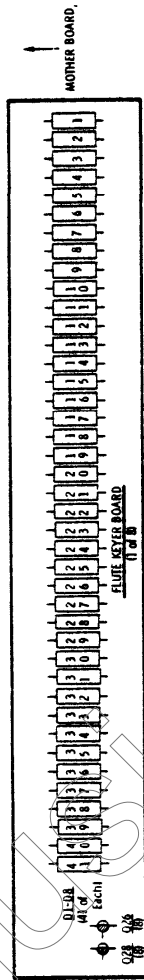
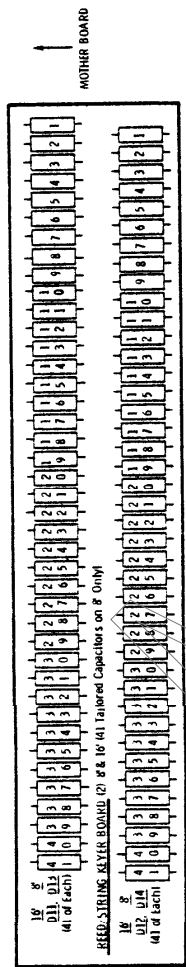
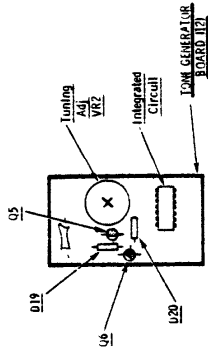
# PICTORALS



# PICTORALS



# PICTORALS



DIODE & TRANSISTOR KEYING CHART

GEN	OSC./DIV	BUFFER			KEYSWITCH & FOOTAGE							
		011	010	09	16'	8'	5-1/3'	4'	2-2/3'	2'	1-1/3'	1'
F	6	1	1	1	F1	-	-	-	-	-	-	-
F#	6	2	2	2	F#1	-	-	-	-	-	-	-
G	6	3	3	3	G1	-	-	-	-	-	-	-
G#	6	4	4	4	G#1	-	-	-	-	-	-	-
A	6	5	5	5	A	-	-	-	-	-	-	-
A#	6	6	6	6	A#1	-	-	-	-	-	-	-
B	6	7	7	7	B1	-	-	-	-	-	-	-
C	6	8	8	8	C1	-	-	-	-	-	-	-
C#	5	9	9	9	C#1	-	-	-	-	-	-	-
D	5	10	10	10	D1	-	-	-	-	-	-	-
D#	5	11	11	11	D#1	-	-	-	-	-	-	-
E	5	12	12	12	E1	-	-	-	-	-	-	-
F	5	13	13	13	F2	F1	-	-	-	-	-	-
F#	5	14	14	14	F#2	F#1	-	-	-	-	-	-
G	5	15	15	15	G2	G1	-	-	-	-	-	-
G#	5	16	16	16	G#2	G#1	-	-	-	-	-	-
A	5	17	17	17	A2	A1	-	-	-	-	-	-
A#	5	18	18	18	A#2	A#1	-	-	-	-	-	-
B	5	19	19	19	B2	B1	-	-	-	-	-	-
C	5	20	20	20	C2	C1	F1	-	-	-	-	-
C#	4	21	21	21	C#2	C#1	F#1	-	-	-	-	-
D	4	22	22	22	D2	D1	G1	-	-	-	-	-
D#	4	23	23	23	D#2	D#1	G#1	-	-	-	-	-
E	4	24	24	24	E2	E1	A1	-	-	-	-	-
F	4	25	25	25	F3	F2	A#1	F1	-	-	-	-
F#	4	26	26	26	F#3	F#2	B1	F#1	-	-	-	-
G	4	27	27	27	G3	G2	C1	G1	-	-	-	-
G#	4	28	28	28	G#3	G#2	C#1	G#1	-	-	-	-
A	4	29	29	29	A3	A2	D1	A1	-	-	-	-
A#	4	30	30	30	A#3	A#2	D#1	A#1	-	-	-	-
B	4	31	31	31	B3	B2	E1	B1	-	-	-	-
C	4	32	32	32	C3	C2	F2	C1	F1	-	-	-
C#	3	33	33	33	C#3	C#2	F#2	C#1	F#1	-	-	-
D	3	34	34	34	D3	D2	G2	D1	G1	-	-	-
D#	3	35	35	35	D#3	D#2	G#2	D#1	G#1	-	-	-
E	3	36	36	36	E3	E2	A2	E1	A1	-	-	-
F	3	37	37	37	F4	F3	A#2	F2	A#1	F1	-	-
F#	3	38	38	38	F#4	F#3	B2	F#2	B1	F#1	-	-
G	3	39	39	39	G4	G3	C2	G2	C1	G1	-	-
G#	3	40	40	40	G#4	G#3	C#2	G#2	C#1	G#1	-	-
A	3	41	41	41	A4	A3	D2	A2	D1	A1	-	-
A#	3	42	42	42	-	A#3	D#2	A#2	D#1	A#1	-	-
B	3	43	43	43	-	B3	E2	B2	E1	B1	-	-
C	3	44	44	44	-	C3	F3	C2	F2	C1	F1	-
C#	2	45	45	45	-	C#3	F#3	C#2	F#2	C#1	F#1	-
D	2	46	46	46	-	D3	G3	D2	G2	D1	G1	-
D#	2	47	47	47	-	D#3	G#3	D#2	G#2	D#1	G#1	-
E	2	48	48	48	-	E3	A3	E2	A2	E1	A1	-
F	2	49	49	49	-	F4	A#3	F3	A#2	F2	A#1	F1
F#	2	50	50	50	-	F#4	B3	F#3	B2	F#2	B1	F#1
G	2	51	51	51	-	G4	C3	G3	C2	G2	C1	G1
G#	2	52	52	52	-	G#4	C#3	G#3	C#2	G#2	C#1	G#1
A	2	53	53	53	-	A4	D3	A3	D2	A2	D1	A1
A#	2	54	54	54	-	-	D#3	A#3	D#2	A#2	D#1	A#1
B	2	55	55	55	-	-	E3	B3	E2	B2	E1	B1
C	2	56	56	56	-	-	F4	C3	F3	C2	F2	C1
C#	1	57	57	57	-	-	F#4	C#3	F#3	C#2	F#2	C#1
D	1	58	58	58	-	-	G4	D3	G3	D2	G2	D1
D#	1	59	59	59	-	-	G#4	D#3	G#3	D#2	G#2	D#1
E	1	60	60	60	-	-	A4	E3	A3	E2	A2	E1
F	1	61	61	61	-	-	-	F4	A#3	F3	A#2	F2
F#	1	62	62	62	-	-	-	F#4	B3	F#3	B2	F#2
G	1	63	63	63	-	-	-	G4	C3	G3	C2	G2
G#	1	64	64	64	-	-	-	G#4	C#3	G#3	C#2	G#2
A	1	65	65	65	-	-	-	A4	D3	A3	D2	A2
A#	1	66	66	66	-	-	-	-	D#3	A#3	D#2	A#2
B	1	67	67	67	-	-	-	-	E3	B3	E2	B2
C	1	68	68	68	-	-	-	-	F4	C3	F3	C2
C#	0	69	69	69	-	-	-	-	F#4	C#3	F#3 & 4	C#2
D	0	70	70	70	-	-	-	-	G4	D3	G3 & 4	D2 & 3
D#	0	71	71	71	-	-	-	-	G#4	D#3	G#3 & 4	D#2 & 3
E	0	72	72	72	-	-	-	-	A4	E3	A3 & 4	E2 & 3
F	0	73	73	73	-	-	-	-	-	F4	A#3	F3 & 4
F#	0	74	74	74	-	-	-	-	-	F#4	B3	F#3 & 4
G	0	75	75	75	-	-	-	-	-	G4	C3	G3 & 4
G#	0	76	76	76	-	-	-	-	-	G#4	C#3	G#3 & 4
A	0	77	77	77	-	-	-	-	-	A4	D3	A3 & 4
A#	0	78	78	78	-	-	-	-	-	-	D#3	A#3
B	0	79	79	79	-	-	-	-	-	-	E3	B3
C	0	80	80	80	-	-	-	-	-	-	F4	C3

DIODE KEYING CHART		
KEY	Flute 1'-16'	R/S 8' & 16'
	Diode D1-D8	D11, 12 & 13, 14
F1	1	1
F#1	2	2
G1	3	3
G#1	4	4
A1	5	5
A#1	6	6
B1	7	7
C1	8	8
C#1	9	9
D1	10	10
D#1	11	11
E1	12	12
F2	13	13
F#2	14	14
G2	15	15
G#2	16	16
A2	17	17
A#2	18	18
B2	19	19
C2	20	20
C#2	21	21
D2	22	22
D#2	23	23
E2	24	24
F3	25	25
F#3	26	26
G3	27	27
G#3	28	28
A3	29	29
A#3	30	30
B3	31	31
C3	32	32
C#3	33	33
D3	34	34
D#3	35	35
E3	36	36
F4	37	37
F#4	38	38
G4	39	39
G#4	40	40
A4	41	41

BASS & CHORD KEYING CHART								
GEN.	Divider	BUFFER	BASS			CHORD		
			KEYING	SUST.	KEYING	SUST.		
		D11	D15	D16	D63	D17	D18	D#1
B	5	19	12	12	12	7	77	7
A#	5	18	11	11	11	6	6	6
A	5	17	10	10	10	5	5	5
G#	5	16	9	9	9	4	4	4
G	5	15	8	8	8	3	3	3
F#	5	14	7	7	7	2	2	2
F	5	13	6	6	6	1	1	1
E	4	24	5	5	5	12	12	12
D#	4	23	4	4	4	11	11	11
D	4	22	3	3	3	10	10	10
C#	4	21	2	2	2	9	9	9
C	5	20	1	1	1	8	8	8

CHORD BUTTON CHART				
CHORD	MAJOR	MINOR	SEVENTH	DIMINISHED
A	A, C#, E	A, C, E	A, C#, G	A, C, F#
F#	F#, Ab, Cb	F#, G, Cb	F#, Ab, D	F#, G, Db
Cb	Cb, Eb, Gb	Cb, D, Gb	Cb, Eb, A	Cb, D, Ab
Gb	Gb, Bb, Db	Gb, A, Db	Gb, Bb, Fb	Gb, A, Eb
Db	Db, F, Ab	Db, Fb, Ab	Db, F, B	Db, Fb, Bb
Ab	Ab, C, Eb	Ab, B, Eb	Ab, C, Gb	Ab, B, F
Eb	Eb, G, Bb	Eb, Gb, Bb	Eb, G, Db	Eb, Gb, C
Bb	Bb, D, F	Bb, Db, F	Bb, D, Ab	Bb, Db, G
F	F, A, C	F, G#, C	F, A, D#	F, G#, D
C	C, E, G	C, Eb, G	C, E, A#	C, Eb, A
G	G, B, D	G, Bb, D	G, B, F	G, Bb, E
D	D, F#, A	D, F, A	D, F#, C	D, F, B
A	A, C#, E	A, C, E	A, C#, G	A, C, Gb
E	E, G#, B	E, G, B	E, G#, D	E, G, Db
B	B, D#, F#	B, D, F#	B, D#, A	B, D, G#
F#	F#, A#, C#	F#, A, C#	F#, A#, E	F#, A, D#
C#	C#, F, G#	C#, E, G#	C#, F, B	C#, E, A#
G#	G#, C, D#	G#, B, D#	G#, C, F#	G#, B, F
D#	D#, F#, A#	D#, F#, A#	D#, G, C#	D#, F#, C
A#	A#, D, F	A#, C#, F	A#, D, G#	A#, C#, G

# CHARTS

TRANSISTOR LOCATION CHART		BOARD	
Q	CIRCUIT	Pin	Color
1	Vibrato Oscillator	1	Brown
2	Slide Keyer	1	Red
3	Slide Keyer	2	Orange
4	Vibrato Driver	3	Yellow
5	Tone Generator	4	Green
6	Master Oscillator (1 of 12)	5	Blue
7	Master Oscillator (1 of 12)	6	Purple
8	Low C Divider Driver	7	Gray
9	Low C Divider	8	White
10	Low C Bass Keying Buffer	9	Black
11	Keying Buffer (1 of 24)	10	Brown
12	Regulator #1	11	Red
13	Regulator #2	12	Yellow
14	Regulator #3	13	Green
15	Regulator #4	14	Blue
16	Regulator #5	15	Purple
17	Repeat Multivibrator	16	Gray
18	Repeat Multivibrator	17	White
19	Percussion Length Driver	18	Black
20	Percussion Shaper #1	19	Brown
21	Percussion Buss #1 Driver	20	Red
22	Percussion Buss #2 Driver	21	Yellow
23	Percussion Buss #2 Driver	22	Green
24	Percussion Buss #2 Driver	23	Blue
25	16' Flute Rank Driver #1	24	Purple
26	16' Flute Rank Driver #1	25	Gray
27	16' Switcher	26	Black
28	16' Flute Rank Driver #2	27	Brown
29	Sustain Keyer (1 of 4)	28	Red
30	Sustain Keyer	29	Yellow
31	Matrix Driver	30	Green
32	Matrix Driver	31	Blue
33	Percussion Pulse Sensor	32	Purple
34	Percussion Pulse Amp	33	Gray
35	Percussion Trigger Amp	34	Black
36	Percussion Trigger	35	Brown
37	Bass Filter 150 ~	36	Red
38	Bass & Chord Mixer	37	Yellow
39	Chord Collector Preamp	38	Green
40	Chord Filter 1200 ~	39	Blue
41	16' Reed/String Collector Preamp	40	Purple
42	16' Reed/String Collector Preamp	41	Gray
43	8' Reed/String Collector Preamp	42	Black
44	8' Reed/String Collector Preamp	43	Brown
45	Chord Detector	44	Red
46	Rhythm Keyer	45	Yellow
47	Chord & Bass #1	46	Green

PLUG & SOCKET CHART		Circuits		Function		Color	
Accordian	Plug Pin	Plug Pin	Pin	Function	Color	Accordian	Pin
1	1	1	1	Flute 16'	Brown	1	1
1	2	2	2	Percussion Sw. 10'	Red	2	2
1	3	3	3	Flute 8'	Orange	3	3
1	4	4	4	Percussion Sw. 8'	Yellow	4	4
1	5	5	5	Flute 5 1/3'	Green	5	5
1	6	6	6	Percussion Sw. 5 1/3'	Blue	6	6
1	7	7	7	Flute 4'	Purple	7	7
1	8	8	8	Percussion Sw. 4'	Gray	8	8
1	9	9	9	Flute 2 2/3'	White	9	9
1	10	10	10	Percussion Sw. 2 2/3'	Black	10	10
1	11	11	11	Flute 2'	Brown	11	11
1	12	12	12	Percussion Sw. 2'	Red	12	12
1	13	13	13	Flute 1 1/3'	Yellow	13	13
1	14	14	14	Percussion Sw. 1 1/3'	Green	14	14
1	15	15	15	Flute 1'	Blue	15	15
1	16	16	16	Percussion Sw. 1'	Purple	16	16
1	17	17	17	Repeat Length Control	Gray	17	17
1	18	18	18	Repeat On/Off	White	18	18
1	19	19	19	Repeat Speed Control	Black	19	19
1	20	20	20	+3 Voits	Brown	20	20
1	21	21	21	Wow Wow On/Off	Red	21	21
1	22	22	22	Wow Wow Control	Yellow	22	22
1	23	23	23	Wow Wow Control	Orange	23	23
1	24	24	24	String 8'	Green	24	24
1	25	25	25	Kinura 8'	Blue	25	25
1	26	26	26	Trumpet 8'	Purple	26	26
1	27	27	27	Clarinet 16'	Gray	27	27
1	28	28	28	Trombone 16'	White	28	28
1	29	29	29	Brilliance	Black	29	29
1	30	30	30	Spare	Brown	30	30
1	31	31	31	Mic. Ground	Red	31	31
1	32	32	32	Accordian Output	Orange	32	32
1	33	33	33	Reverb On/Off	Yellow	33	33
1	34	34	34	Vibrato Fast/Slow	Green	34	34
1	35	35	35	Vibrato Light/Heavy	Blue	35	35
1	36	36	36	Vibrato On/Off	Purple	36	36
1	37	37	37	Tabswitch Ground	Gray	37	37
1	38	38	38	+20 Volts	White	38	38
1	39	39	39	+19 Volts	Black	39	39
1	40	40	40	Spare	Brown	40	40
1	41	41	41	Presel II	Red	41	41
1	42	42	42	Presel II	Orange	42	42
1	43	43	43	Sustain Control Line	Yellow	43	43
1	44	44	44	Spare	Green	44	44
1	45	45	45	Bass Sustain	Blue	45	45
1	46	46	46	Chord Pathway Control	White	46	46

PLUG & SOCKET CHART		Circuits		Function		Color	
Accordian	Plug Pin	Plug Pin	Pin	Function	Color	Accordian	Pin
2	32	9	10	Treble Keying C3	Red	2	32
2	33	9	11	Treble Keying C3	Orange	2	33
2	34	9	12	Treble Keying D3	Yellow	2	34
2	35	9	13	Treble Keying D3	Green	2	35
2	36	9	14	Treble Keying E3	Blue	2	36
2	37	9	15	Treble Keying F4	Purple	2	37
2	38	9	16	Treble Keying F4	Gray	2	38
2	39	9	17	Treble Keying G4	White	2	39
2	40	9	18	Treble Keying G4	Black	2	40
2	41	9	19	Treble Keying A4	Brown	2	41
2	42	-	-	Spare	Red	2	42
2	43	-	-	Spare	Yellow	2	43
2	44	-	-	Spare	Green	2	44
2	45	-	-	Spare	Blue	2	45
2	46	-	-	Spare	Purple	2	46
2	47	-	-	Spare	Gray	2	47
3	1	10	1	Chord E	Black	3	1
3	2	10	2	Chord D#	Brown	3	2
3	3	10	3	Chord D	Red	3	3
3	4	10	4	Chord C#	Orange	3	4
3	5	10	5	Chord C	Yellow	3	5
3	6	10	6	Chord B	Green	3	6
3	7	10	7	Chord A#	Blue	3	7
3	8	10	8	Chord A	Purple	3	8
3	9	10	9	Chord G#	Gray	3	9
3	10	10	10	Chord G	White	3	10
3	11	10	11	Chord F#	Black	3	11
3	12	10	12	Chord F	Brown	3	12
3	13	10	13	Bass B	Red	3	13
3	14	10	14	Bass A#	Orange	3	14
3	15	10	15	Bass A	Yellow	3	15
3	16	10	16	Bass G#	Green	3	16
3	17	10	17	Bass G	Blue	3	17
3	18	10	18	Bass F#	Purple	3	18
3	19	10	19	Bass F	Gray	3	19
3	20	10	20	Bass E	White	3	20
3	21	10	21	Bass D#	Black	3	21
3	22	10	22	Bass D	Brown	3	22
3	23	11	1	Bass C#	Red	3	23
3	24	11	2	Bass C	Yellow	3	24
3	25	-	-	Spare	Green	3	25



47	Clarinet Switcher	Voicing
48	Clarinet Switcher	Voicing
49	Trombone Shaper Amp	Voicing
50	Trombone Switcher	Voicing
51	Trombone Switcher	Voicing
52	Trombone Preamp	Voicing
53	Trumpet Switcher	Voicing
54	Trumpet Switcher	Voicing
55	Trumpet Preamp	Voicing
56	Kinura Switcher	Voicing
57	Kinura Preamp	Voicing
58	Kinura Preamp	Voicing
59	String Switcher	Voicing
60	String Switcher	Voicing
61	90 - Filter	Flute Filter #1
62	150 - Filter	Flute Filter #1
63	212 - Filter	Flute Filter #1
64	300 - Filter	Flute Filter #1
65	425 - Filter	Flute Filter #1
66	600 - Filter	Flute Filter #1
67	850 - Filter	Flute Filter #1
68	1200 - Filter	Flute Filter #1
69	1700 - Filter	Flute Filter #1
70	2400 - Filter	Flute Filter #2
71	3400 - Filter	Flute Filter #2
72	4800 - Filter	Flute Filter #2
73	6800 - Filter	Flute Filter #2
74	Filter Preamp	Voicing
75	Mixer	Voicing
76	Wow Wow Preamp	Voicing
77	Wow Wow Emitter Follower	Voicing
78	Percussion Brilliance Driver	Preamp & Reverb
79	Trumpet Brilliance Driver	Preamp & Reverb
80	Exp. Photocell Lamp Driver	Voicing
81	Wow Wow Photocell Lamp Driver	Voicing
82	Wow Wow Switch Driver	Voicing
83	Treble Microphone Mixer Preamp	Accordion Microphone
84	Bass Microphone Mixer Preamp	Accordion Microphone
85	Output Emitter Follower	Accordion Microphone
86	Microphone Preamp #1	Preamp & Reverb
87	Microphone Preamp #2	Preamp & Reverb
88	Main Preamp #1	Preamp & Reverb
89	Main Preamp #2	Preamp & Reverb
90	Tone Preamp	Preamp & Reverb
91	Reverb Driver	Preamp & Reverb
92	Reverb Recovery Preamp	Preamp & Reverb
93	Reverb Amp	Preamp & Reverb
94	Reverb Output Emitter Follower	Preamp & Reverb
95	Reverb Mixer	Preamp & Reverb
96	Reverb Switching	Preamp & Reverb
97	Pre-Driver	Amplifier
98	Preamp	Amplifier
99	Differential Preamp	Amplifier
100	Driver #1	Amplifier
101	Driver #2	Amplifier
102	Output	Heatsink
103	Output	Heatsink
104	Output	Heatsink
105	Output	Heatsink

1	46	11	4	Chord Rhythm Keying	Blue
1	47	11	7	Chord Rhythm Keying	Purple
1	48	11	8	Chord Sustain Control Line	Gray
1	49	11	11	Bass Volume Control	White
1	50	11	12	Chord Volume Control	Black
2	1	6	1	Treble Keying F1	Brown
2	2	6	2	Treble Keying F#1	Red
2	3	6	3	Treble Keying G1	Orange
2	4	6	4	Treble Keying G#1	Yellow
2	5	6	5	Treble Keying A1	Green
2	6	6	6	Treble Keying A#1	Blue
2	7	6	7	Treble Keying B1	Purple
2	8	6	8	Treble Keying C1	Gray
2	9	6	9	Treble Keying C#1	White
2	10	6	10	Treble Keying D1	Black
2	11	6	11	Treble Keying D#1	Brown
2	12	6	12	Treble Keying E1	Red
2	13	6	13	Treble Keying F2	Orange
2	14	6	14	Treble Keying F#2	Yellow
2	15	6	15	Treble Keying G2	Green
2	16	6	16	Treble Keying G#2	Blue
2	17	6	17	Treble Keying A2	Purple
2	18	6	18	Treble Keying A#2	Gray
2	19	6	19	Treble Keying B2	White
2	20	6	20	Treble Keying C2	Black
2	21	6	21	Treble Keying C#2	Brown
2	22	6	22	Treble Keying D2	Red
2	23	6	23	Treble Keying D#2	Orange
2	24	6	24	Treble Keying E2	Yellow
2	25	6	25	Treble Keying F3	Green
2	26	6	26	Treble Keying F#3	Blue
2	27	6	27	Treble Keying G3	Purple
2	28	6	28	Treble Keying G#3	Gray
2	29	6	29	Treble Keying A3	White
2	30	6	30	Treble Keying A#3	Black
2	31	6	31	Treble Keying B3	Brown

### RHYTHM PLUG & SOCKET CHART

Pin Voltage	Description
1	Grd.
2	+19V
3	Pulse
4	Pulse
5	Pulse
6	-

Ground
B+
Rhythm keying point C
Rhythm keying point B
Rhythm keying point A
Not Used

• Schematic shows one of eight Rank Control circuits.

ACCORDIAN CHORD & BASS PUSHBUTTONS

A#	D#	G#	C#	F#	B	E	A	D	G	C	F	Bb	Eb	Ab	Db	Gb	Fb	A	Diminished Chords	
A#	D#	G#	C#	F#	B	E	A	D	G	C	F	Bb	Eb	Ab	Db	Gb	Fb	A	Seventh Chords	
A#	D#	G#	C#	F#	B	E	A	D	G	C	F	Bb	Eb	Ab	Db	Gb	Fb	A	Minor Chords	
A#	D#	G#	C#	F#	B	E	A	D	G	C	F	Bb	Eb	Ab	Db	Gb	Fb	A	Major Chords	
A#	D#	G#	C#	F#	B	E	A	D	G	C	F	Bb	Eb	Ab	Db	Gb	Fb	A	Bass	
C#	F#	B#	E#	A#	D#	G#	C#	F#	B	E	A	D	G	C	F	Bb	Eb	Ab	Db	Counter Bass

# PARTS LIST

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### THE PARTS LIST CONTAINS THE FOLLOWING INFORMATION:

1. Name of Part.
2. Value, Tolerance and Code (when important).
3. Brief description.
4. Where the part is found (assembly, printed circuit board, etc.)
5. Schematic Reference Number.
6. PART NUMBER – USE IT!

The Parts List includes all standard stock replacement parts. No attempt has been made to include every nut, bolt and screw. If the necessity for a non-listed part arises, please write describing the part's location and function as well as model and serial number.

# PARTS LIST

Part	Description	Schematic Reference	Part Number
<b>AMPLIFIER/POWER SUPPLY CHASSIS ASSEMBLY</b>			
Assembly	Amplifier Power Supply . . . . .		997-018513
Assembly	Plug & Socket Board . . . . .		996-015891
Assembly	Regulator Board . . . . .		996-018515
Assembly	Power Filter Board . . . . .		996-018508
Assembly	Vibrato Board . . . . .		996-015896
Assembly	Amplifier Board . . . . .		996-018512
Capacitor	Electrolytic 3000 UF 50V Can Neg . . . . .		945-015576
Capacitor	Electrolytic 1000-3000 UF 40V-30V Can Neg . . . . .		945-015577
Capacitor	Electrolytic 1000-3000 UF 40V-30V Can Pos . . . . .		945-015578
Capacitor	Electrolytic 3000 UF 50V Can Pos . . . . .		945-015579
Capacitor	Electrolytic 100 UF 25V . . . . .		945-008895-45
Capacitor	Electrolytic 1000 UF 15V . . . . .		945-008895-61
Capacitor	Electrolytic 2 UF 20V . . . . .		945-008895-32
Capacitor	Electrolytic 1 UF 35V NP . . . . .		945-008895-15
Capacitor	Electrolytic 50 UF 50V . . . . .		945-008895-59
Capacitor	Electrolytic 25 UF 25V NP . . . . .		945-008895-60
Circuit Breaker	4 Amp . . . . .		939-015626
Cord	Power . . . . .		989-008717-5
Diode	Rectifier . . . . .	D23-26	919-010459
Diode	Zener 20V . . . . .	Z1	919-015618-1
Diode	Zener 22V . . . . .	Z2	919-015618-2
Diode	Dual . . . . .	D69-70	919-010454
Diode	Triple . . . . .	D71	919-010454-1
Insulator	Power Transistor . . . . .		908-002346
Potentiometer	1M Vibrato Speed Adj. . . . .	VR1	925-004349-4
Resistor	WW 1000 Ohm 2W . . . . .		924-010471-102
Resistor	WW 330 Ohm 2W . . . . .		924-010471-331
Resistor	WW 390 Ohm 2W . . . . .		924-010471-391
Resistor	WW .39 Ohm 2W . . . . .		924-015325-7
Resistor	WW 75 Ohm 10W . . . . .		924-008896-25
Resistor	WW 40 Ohm 10W . . . . .		924-008896-26
Resistor	Glass Film 100 Ohm . . . . .		924-013178-2
Resistor	Glass Film 1000 Ohm . . . . .		924-013178-3
Resistor	Glass Film 4120 Ohm . . . . .		924-013178-4
Resistor	Glass Film 825 Ohm . . . . .		924-013178-5
Resistor	WW 10 Ohm 2W . . . . .		924-010471-100
Resistor	WW 4 Ohm 10W . . . . .		924-008896-24
Resistor	WW .51 Ohm 5W . . . . .		924-008896
Socket	Transistor . . . . .		906-013174
Transistor	Regulator #5 PNP . . . . .	Q16	992-016669
Transistor	Regulator #2 Amplifier . . . . .	Q13, 102-105	992-017169
Transistor	Regulator #1 Driver . . . . .	Q12	991-015001
Transistor	Regulator #4 Driver . . . . .	Q15	991-015000
Transistor	Vibrato Oscillator . . . . .	Q1	991-008394
Transistor	Glide Keyer, Vibrato Driver PNP . . . . .	Q2, 4	991-012328
Transistor	Glide Keyer . . . . .	Q3	991-008393
Transistor	Pre-Driver, Driver #2 PNP . . . . .	Q97, 101	991-015062
Transistor	Preamp . . . . .	Q98, 99	991-013544
Transistor	Driver #1 . . . . .	Q100	991-015063

# PARTS LIST

Part	Description	Schematic Reference	Part Number
<b>CABINET ASSEMBLY</b>			
Assembly	Reverb Spring Unit		984-012419
Assembly	Umbilical Cable (Accordion to Cabinet)		997-016035
Capacitor	Electrolytic 8 UF 35V NP		945-008895-14
Capacitor	Electrolytic 2500 MFD 40V		945-018242
Speaker	9x14-inch Oval		985-015597
Speaker	15-inch		985-015598
Speaker	4-inch		985-015599
<b>CHORD &amp; BASS #1 AND #2 BOARDS</b>			
Assembly	Chord & Bass #1 Board		996-015884
Assembly	Chord & Bass #2 Board		996-015700
Capacitor	Electrolytic 2 UF 25V NP		945-015619
Capacitor	Electrolytic 10 UF 20V		945-008895-9
Capacitor	Electrolytic 350 UF 15V		945-008895-42
Diode		D61-63	919-004799
Diode		D15-18	919-010873
Network	Divider		949-008802
Network	150 Cycle Bass Filter		949-012335-1
Network	1200 Cycle Chord Filter		949-012335-7
Photocell	Chord & Bass	P5, 6	948-001859
Transistor	Driver, Dividers, Keyer	Q7-10, 46	991-008393
Transistor	Preamps & Filters	Q36, 37, 39, 40	991-013544
Transistor	Chord Detector	Q45	991-010098
<b>CONTROL PANEL ASSEMBLY</b>			
Assembly	Control Panel Complete		997-018514
Capacitor	Electrolytic 3000 UF 30V		945-015613
Capacitor	Electrolytic 6 UF 20V		945-008895-7
Capacitor	Electrolytic 10 UF 20V		945-008895-9
Capacitor	Electrolytic 1 UF 35V		945-008895-15
Capacitor	Electrolytic 20 UF 25V		945-008895-30
Capacitor	Electrolytic 2 UF 20V		945-008895-32
Capacitor	Tantalum 1 UF 35V		946-013560-1
Capacitor	Electrolytic 350 UF 15V		945-008895-42
Capacitor	Electrolytic 50 UF 50V		945-008895-59
Jack	Phono		910-013556-4
Knob	Control		915-015604
Light	Pilot		939-010862-6
Panel	Control		966-015342
Photocell	Limitier-Brilliance	P4, 7	948-015584-2
Potentiometer	250K Auxiliary & Master Volume Control	VR13, 15	925-015622-1
Potentiometer	100K Reverb Control	VR18	925-015622-2
Potentiometer	50K Bass & Treble Control	VR16, 17	925-015622-3
Potentiometer	10K Microphone Volume, Vibrato Speed	VR14, 19	925-015622-4
Resistor	WW 220 Ohm 2W		924-010471-221
Switch	Hi-Lo Z (Impedance)		960-015387-1
Switch	On/Off Polarity		960-015637
Transistor	Preamp, Driver, Mixer	Q86-95	991-013544
Transistor	Reverb Switching	Q79, 96	991-008393
Transistor	Brilliance Driver	Q78	991-010098

# PARTS LIST

Part	Description	Schematic Reference	Part Number
<b>MOTHER BOARD (MATRIX)</b>			
Assembly	Buffer # 1 Board . . . . .		996-015707
Assembly	Buffer #2 Board . . . . .		996-015703
Assembly	Flute Filter #1 Board . . . . .		996-015706
Assembly	Flute Filter #2 Board . . . . .		996-015704
Assembly	Flute Keyer Board (7) . . . . .		996-015705
Assembly	Generator Board A# . . . . .		996-017212-A#
Assembly	Generator Board C# . . . . .		996-015711-C#
Assembly	Generator Board D . . . . .		996-015712-D
Assembly	Generator Board D# . . . . .		996-015713-D#
Assembly	Generator Board E . . . . .		996-015714-E
Assembly	Generator Board F . . . . .		996-015715-F
Assembly	Generator Board F# . . . . .		996-015716-F#
Assembly	Generator Board G . . . . .		996-015717-G
Assembly	Generator Board G# . . . . .		996-015718-G#
Assembly	Generator Board A . . . . .		996-015719-A
Assembly	Generator Board B . . . . .		996-015720-B
Assembly	Generator Board C . . . . .		996-015721-C
Assembly	Matrix Driver Board . . . . .		996-015702
Assembly	Mother Board (Matrix) . . . . .		996-018507
Assembly	Percussion Control Board . . . . .		996-015710
Assembly	Reed/String Keyer Board 8' . . . . .		996-015709
Assembly	Reed/String Keyer Board 16' . . . . .		996-015708
Assembly	Sustain Keyer Board . . . . .		996-015701
Capacitor	Electrolytic 3 UF 50V NP . . . . .		945-008895-6
Capacitor	Electrolytic 3 UF 50V NP (Plug In) . . . . .		945-015616
Capacitor	Electrolytic 35 UF 30V . . . . .		945-015617
Capacitor	Electrolytic 500 UF 25V . . . . .		945-008895-19
Capacitor	Electrolytic 1000 UF 3V . . . . .		945-008895-62
Capacitor	Electrolytic 3000 UF 6V . . . . .		945-008895-63
Capacitor	Electrolytic 5000 UF 3V . . . . .		945-008895-64
Capacitor	Polystyrene 3900 P 2% 33V . . . . .		946-013181-392
Capacitor	Polystyrene 3600 P 2% 33V . . . . .		946-013181-362
Capacitor	Polystyrene 3300 P 2% 33V . . . . .		946-013181-332
Capacitor	Polystyrene 3000 P 2% 33V . . . . .		946-013181-302
Capacitor	Polystyrene 2700 P 2% 33V . . . . .		946-013181-272
Capacitor	Polystyrene 2500 P 2% 33V . . . . .		946-013181-252
Capacitor	Polystyrene 2400 P 2% 33V . . . . .		946-013181-242
Capacitor	Polystyrene 2200 P 2% 33V . . . . .		946-013181-222
Capacitor	Polystyrene 2000 P 2% 33V . . . . .		946-013181-202
Capacitor	Tantalum 1 UF 35V . . . . .		946-013560-1
Diode	. . . . .	D1-8, 11-14, 27-53, 58-60	919-004799
Diode	Triple . . . . .	D29	919-010454-1
Diode	. . . . .	D9, 10, 19	919-010873
I.C.	Divider . . . . .		991-013182-1
Network	90 Cycle Filter . . . . .		949-012335-15
Network	150 Cycle Filter . . . . .		949-012335-1
Network	212 Cycle Filter . . . . .		949-012335-2
Network	300 Cycle Filter . . . . .		949-012335-3
Network	425 Cycle Filter . . . . .		949-012335-4
Network	600 Cycle Filter . . . . .		949-012335-5
Network	850 Cycle Filter . . . . .		949-012335-6
Network	1200 Cycle Filter . . . . .		949-012335-7
Network	1700 Cycle Filter . . . . .		949-012335-8

# PARTS LIST

Part	Description	Schematic Reference	Part Number
Network	2400 Cycle Filter . . . . .		949-012335-9
Network	3400 Cycle Filter . . . . .		949-012335-10
Network	4800 Cycle Filter . . . . .		949-012335-11
Network	6400 Cycle Filter . . . . .		949-012335-12
Potentiometer	10K Tuning Adj. . . . .	VR2 . . . . .	925-008894
Potentiometer	25K Percussion Adj. . . . .	VR5 . . . . .	925-004349-6
Potentiometer	50K Percussion Adj. . . . .	VR6 . . . . .	925-004349-7
Resistor	Fixed Carbon 2.2K . . . . .		923-012844-222
Resistor	Glass Film 38.3K . . . . .		924-013178-1
Resistor	WW 15 Ohm 5W . . . . .		924-008896-1
Resistor	WW 56 Ohm 2W . . . . .		924-010471-560
Resistor	WW 75 Ohm 10W . . . . .		924-008896-25
Resistor	WW 680 Ohm 2W . . . . .		924-010471-681
Transistor	Keying Buffer, Master Oscillator . . . . .	Q5, 6, 11 . . . . .	991-008393
Transistor	Filters . . . . .	Q61-70, 73 . . . . .	991-013544
Transistor	Regulator #3 PNP . . . . .	Q14 . . . . .	991-015000
Transistor	Drivers . . . . .	Q22, 25 . . . . .	991-015001
Transistor	Driver, Switchers . . . . .	Q19, 27 . . . . .	991-015587
Transistor	Sustain Keyer, Shapers, Sensors, Trigger Amp . . . . .	Q20, 23, 29, 32, 34 . . . . .	991-015614
Transistor	Sustain Squeicher, Pulse Amp, Trigger . . . . .	Q30, 33, 35 . . . . .	991-015615
Transistor	Matrix Driver, Flute Rank Drivers, Multivibrator . . . . .	Q17, 18, 21, 24, 26, 28, 31 . . . . .	991-015663

## SWELL PEDAL ASSEMBLY

Assembly	Contact Board & Bracket . . . . .		997-015725
Assembly	Swell Pedal (Plug-In) . . . . .		997-017042
Board	Actuator (Comb) . . . . .		961-009956
Cable	Swell Pedal . . . . .		994-016532
Circlip	Pivot Shaft . . . . .		976-013151
Feet	Rubber . . . . .		916-013135-1
Mat	Swell Pedal . . . . .		959-008052
Shaft	Pivot . . . . .		974-012359
Spring	Compression . . . . .		975-011747
Spring	Contact . . . . .		917-009989-2
Switch	Glide . . . . .		960-008102
Washer	Friction . . . . .		904-012674

## VOICING BOARD

Assembly	Voicing Board . . . . .		996-018511
Capacitor	Electrolytic 1 UF 35V NP . . . . .		945-008895-15
Capacitor	Electrolytic 6 UF 20V . . . . .		945-008895-7
Capacitor	Electrolytic 10 UF 20V . . . . .		945-008895-9
Capacitor	Electrolytic 350 MFD 15V . . . . .		945-008845-42
Capacitor	Electrolytic 1000 UF 3V . . . . .		945-008895-62
Capacitor	Tantalum 1 UF 35V . . . . .		946-013560-1
Coil	1 H . . . . .	L1 . . . . .	952-010092-3
Coil	100 MH . . . . .	L2 . . . . .	952-010092-5
Coil	500 MH . . . . .	L3 . . . . .	952-010092-2
Diode	Keying . . . . .	D64-68 D73 D74 . . . . .	919-004799
Photocell	Wow Wow . . . . .	P1 . . . . .	948-018299-1
Photocell	Wow Wow & Expression . . . . .	P2, 3 . . . . .	948-018299-2
Resistor	WW 150 Ohm 2W . . . . .		924-010471-151
Transistor	Switchers, Wow Wow Lamp Driver . . . . .	Q47, 48, 50, 51, 53, 54, 56 57, 59, 60, 81 . . . . .	991-008393
Transistor	Mixers, Preamps . . . . .	Q38,41-44,49,52,55,58,74-76	991-002298
Transistor	Lamp & Switch Driver . . . . .	Q80, 82 . . . . .	991-010098
Transistor	Wow Wow & Emitter Follower . . . . .	Q77 . . . . .	991-018238

# ACCORDION PARTS LIST

Part	Description	Schematic Reference	Part Number
Actuator	Tabswitch. . . . .		964-017032
Assembly	Accordion Microphone Board (PA254). . . . .		996-017027
Assembly	Chord & Bass Cover (Include Feet) . . . . .		935-017012
Bellows	. . . . .		935-017020
Buttons	Plastic, Pushbuttons, Presets, etc. . . . .		915-017007
Cable	Bellows . . . . .		957-017009
C-Clip	Umbilical Cord Hold-Down Thumbscrew . . . . .		976-015922
Contact	Chord & Bass Pushbuttons . . . . .		917-017030
Contact	Tabswitch . . . . .		917-017033
Cover	Chord & Bass . . . . .		964-017011
Diode	Zener 7.5V . . . . .	Z3	919-001445-1
Feet	Chord & Bass Cover . . . . .		916-017010
Grill	CG4 . . . . .		935-017013
Grill	CG5 . . . . .		935-017014
Holder	Shoulder Strap . . . . .		967-017031
Knob	Organ & Accordion Bass Volume. . . . .		915-017005
Knob	Organ Chord, Accordion Treble . . . . .		915-017006
Knob	Percussion Length, Repeat Speed, etc. . . . .		915-017004
Microphone	Bass & Treble . . . . .		985-017021
Nut	Umbilical Cord Thumbscrew . . . . .		977-017026
Pad	Back . . . . .		914-017019
Pad	CG4 Key Valves . . . . .		935-017028
Pad	CG5 Key Valves . . . . .		935-017029
Pins	Umbilical Cable Socket . . . . .		910-017023
Potentiometer	1M Accordion Bass, Treble Volume . . . . .	VR10, 11	925-017001
Potentiometer	10K Organ Bass, Chord Volume . . . . .	VR7, 8	925-017002
Potentiometer	10K Percussion, Repeat & Wow Wow . . . . .	VR3, 4, 9	925-017000
Potentiometer	100K Accordion Tone Control . . . . .	VR12.	925-017003
Resistor	WW 470 Ohm 10W . . . . .		924-017024
Strap	Bass . . . . .		935-017016
Strap	Bellows . . . . .		935-017015
Strap	Shoulder. . . . .		935-017017
Switch	Pushbutton, Presets, etc. . . . .		960-017008
Tab	Attack Normal/Slow . . . . .		915-017034-24
Tab	Bass Sustain . . . . .		915-017034-16
Tab	Chord . . . . .		915-017034-17
Tab	Chord Sustain . . . . .		915-017034-18
Tab	Clarinet 16' . . . . .		915-017034-3
Tab	Flute 1' . . . . .		915-017034-15
Tab	Flute 1-1/3' . . . . .		915-017034-14
Tab	Flute 2' . . . . .		915-017034-13
Tab	Flute 2-2/3' . . . . .		915-017034-12
Tab	Flute 4' . . . . .		915-017034-11
Tab	Flute 5-1/3' . . . . .		915-017034-10
Tab	Flute 8' . . . . .		915-017034-9
Tab	Flute 16' . . . . .		915-017034-8
Tab	Kinura 8' . . . . .		915-017034-7
Tab	String 8' . . . . .		915-017034-6
Tab	String Bass . . . . .		915-017034-1
Tab	Sustain Long . . . . .		915-017034-23
Tab	Sustain Med . . . . .		915-017034-22
Tab	Trombone 16' . . . . .		915-017034-4
Tab	Trumpet 8' . . . . .		915-017034-5
Tab	Vibrato Light/Heavy . . . . .		915-017034-20
Tab	Vibrato Off/On . . . . .		915-017034-21
Tab	Vibrato Slow/Fast . . . . .		915-017034-19
Tab	Wow Wow . . . . .		915-017034-2
Thumbscrew	Grill . . . . .		903-017025
Thumbscrew	Umbilical Cord . . . . .		903-015919
Transistor	Accordion Microphone Board . . . . .	Q83-85	991-013544
Washer	Umbilical Cord Thumbscrew . . . . .		904-002815-1



