

MODEL
G-101

SERVICE MANUAL

Gibson

PORTABLE ORGAN

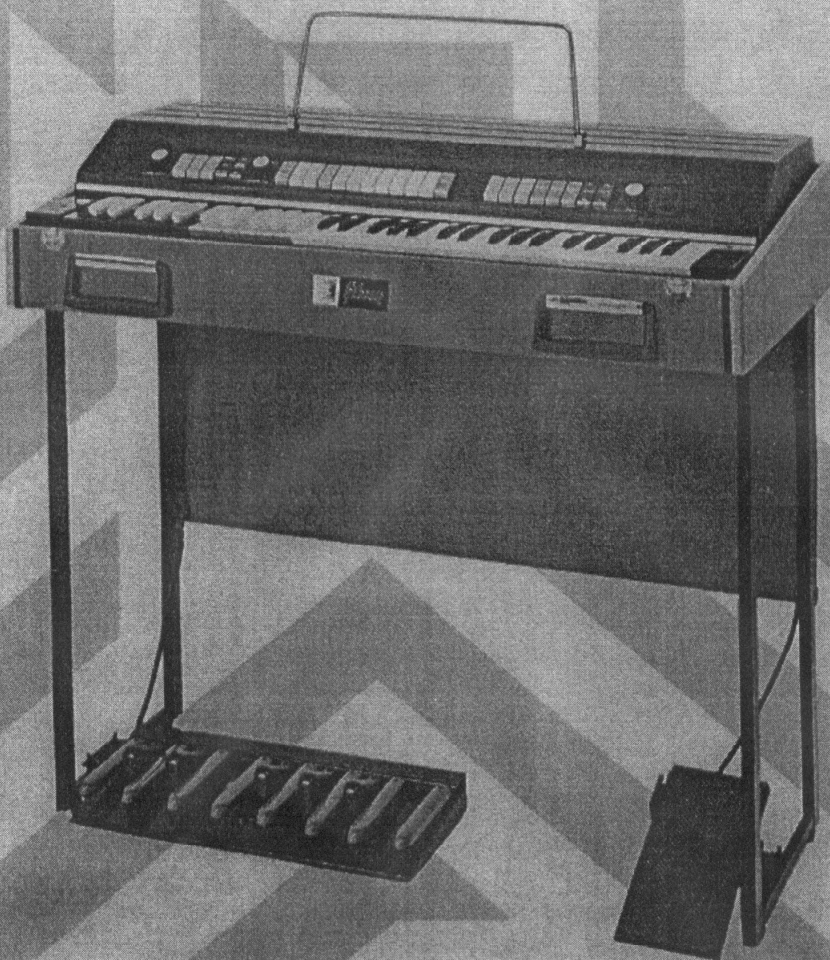


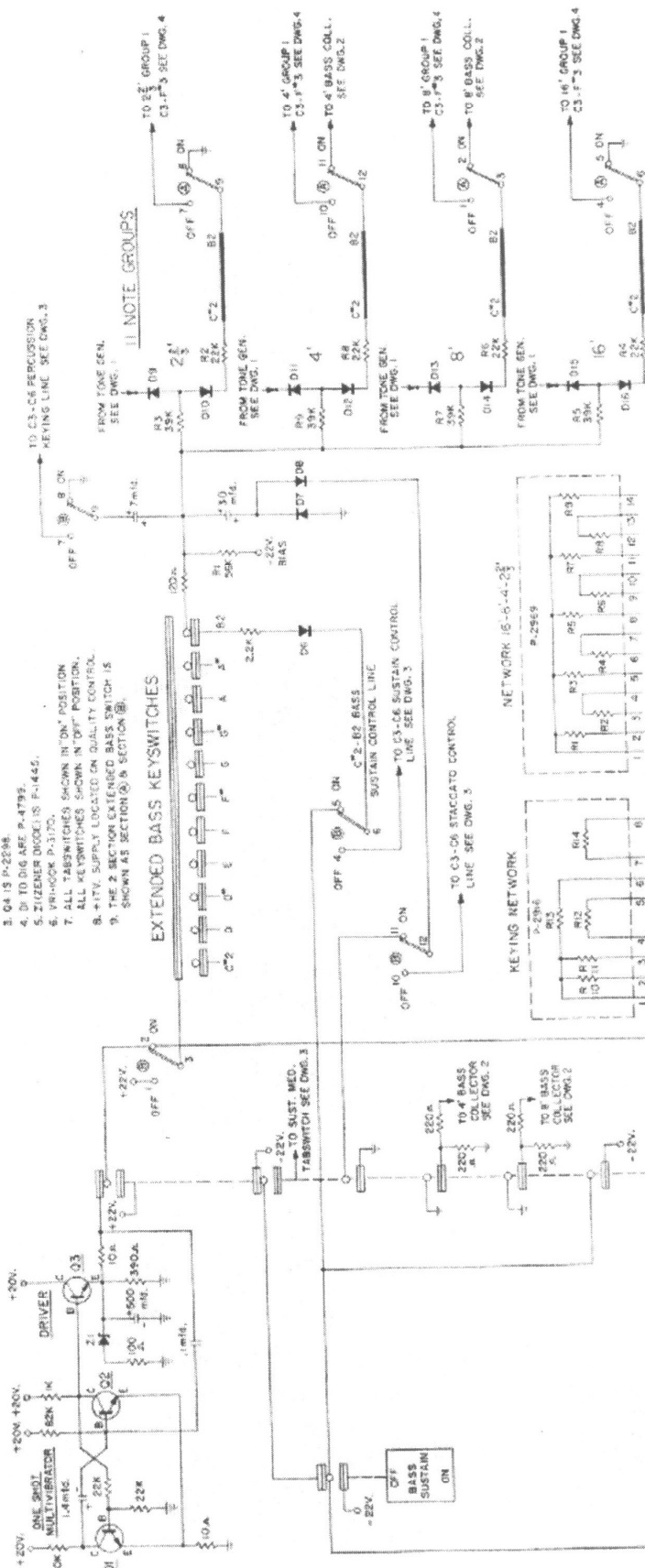
TABLE OF CONTENTS

SCHEMATIC DIAGRAMS		PAGE
Drawing #1	Power Supply, Vibrato and Tone Generators	2
Drawing #2	Bass	3
Drawing #3	Percussion, Sustain, Staccato and Diode Keying	4
Drawing #4	Tabswitching	5
Drawing #5	Quality Control	6
EXPLODED VIEWS		
Extended Bass Switch		7
DIODE LAYOUTS AND CHARTS		
Diode Layout and Chart (keyboard)		8 & 9
Diode Layout and Chart (Bass)		10
Diode Layout and Chart (Extended Bass)		11
PHOTOGRAPHS		
Service Access and Circuit Location:		
Organ		12
Organ with cover removed		13
Organ with tabswitch assembly raised		14
Organ with tone generator assembly raised		15
Organ with complete chassis assembly raised		16
Printed Circuit Boards, Chassis and Assemblies:		
Power Supply Chassis		17
Vibrato Printed Circuit Board and Tone Generator Printed Circuit Board		18
Bass Keying Printed Circuit Board		19
Percussion Printed Circuit Board and Bass Percussion Printed Circuit Board		20
Quality Control Printed Circuit Board		21
Diode Keying Boards		22
Expression Pedal Assembly		23
Bass Pedal Assembly (optional)		24

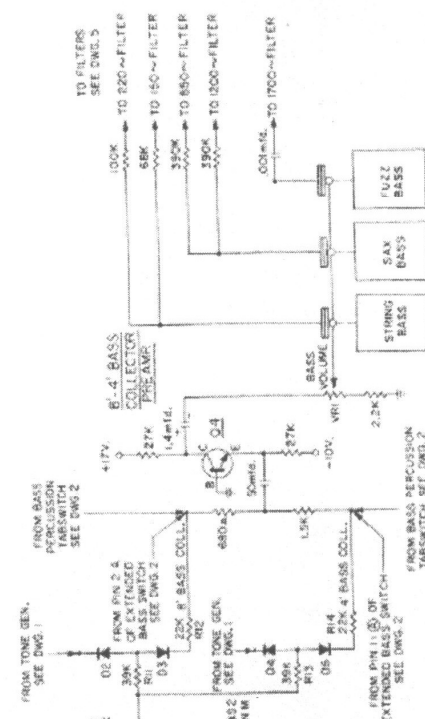
BASS PERCUSSION

NOTE:

1. Q1 A Q2 ARE P-8283.
2. Q3 IS P-3172.
3. Q4 IS P-2204.
4. D1 TO D10 ARE P-4778.
5. TRIGGER DIODE IS P-1442.
6. VIBRATOR DIODE IS P-1442.
7. ALL TABSWITCHES SHOWN IN "ON" POSITION.
8. ALL KEYSWITCHES SHOWN IN "OFF" POSITION.
9. +17V SUPPLY LOCATED ON QUALITY CONTROL.
10. THE 2 SECTOR EXTENDED BASS SWITCH IS SHOWN AS SECTION 8 & SECTION 9.

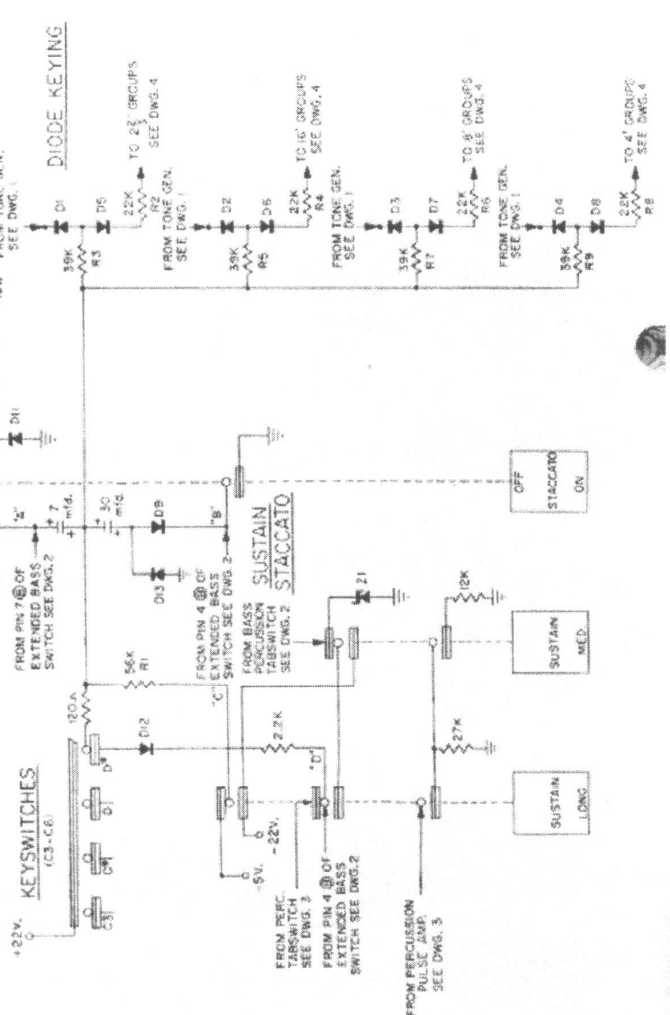
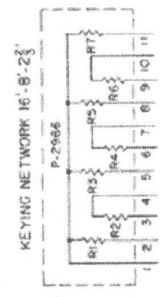
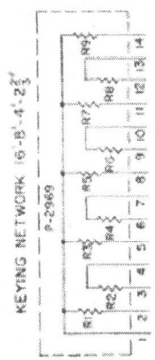
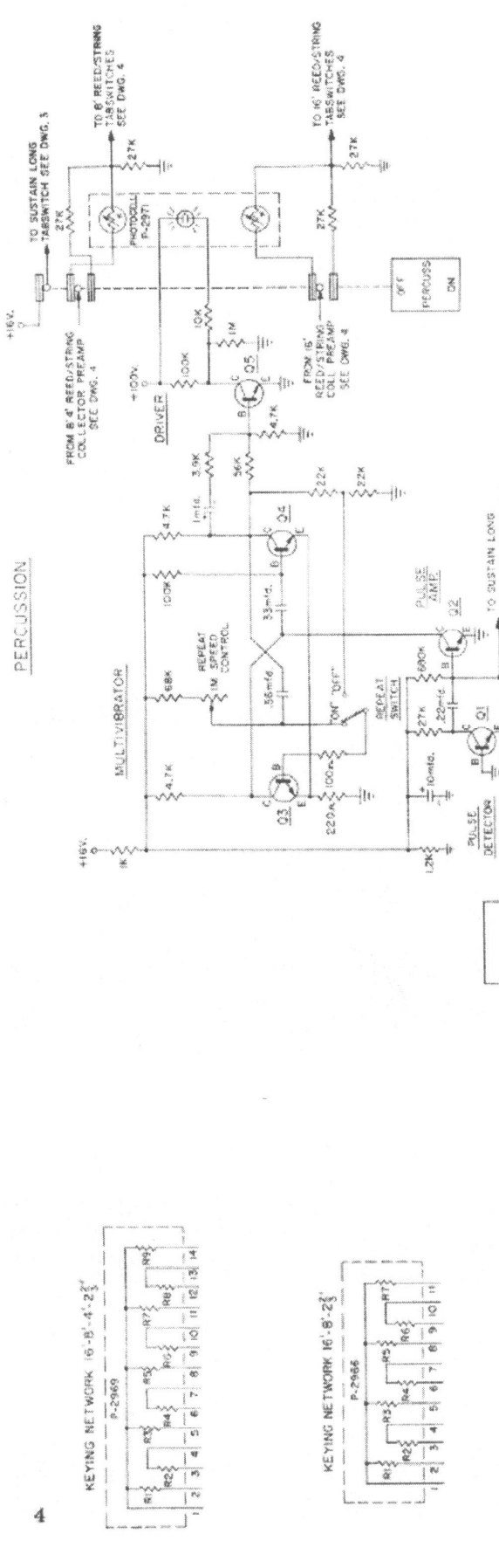


PLUG PIN NO.	NOTE OR INFORMATION
1	TO PEDAL RETURN
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	



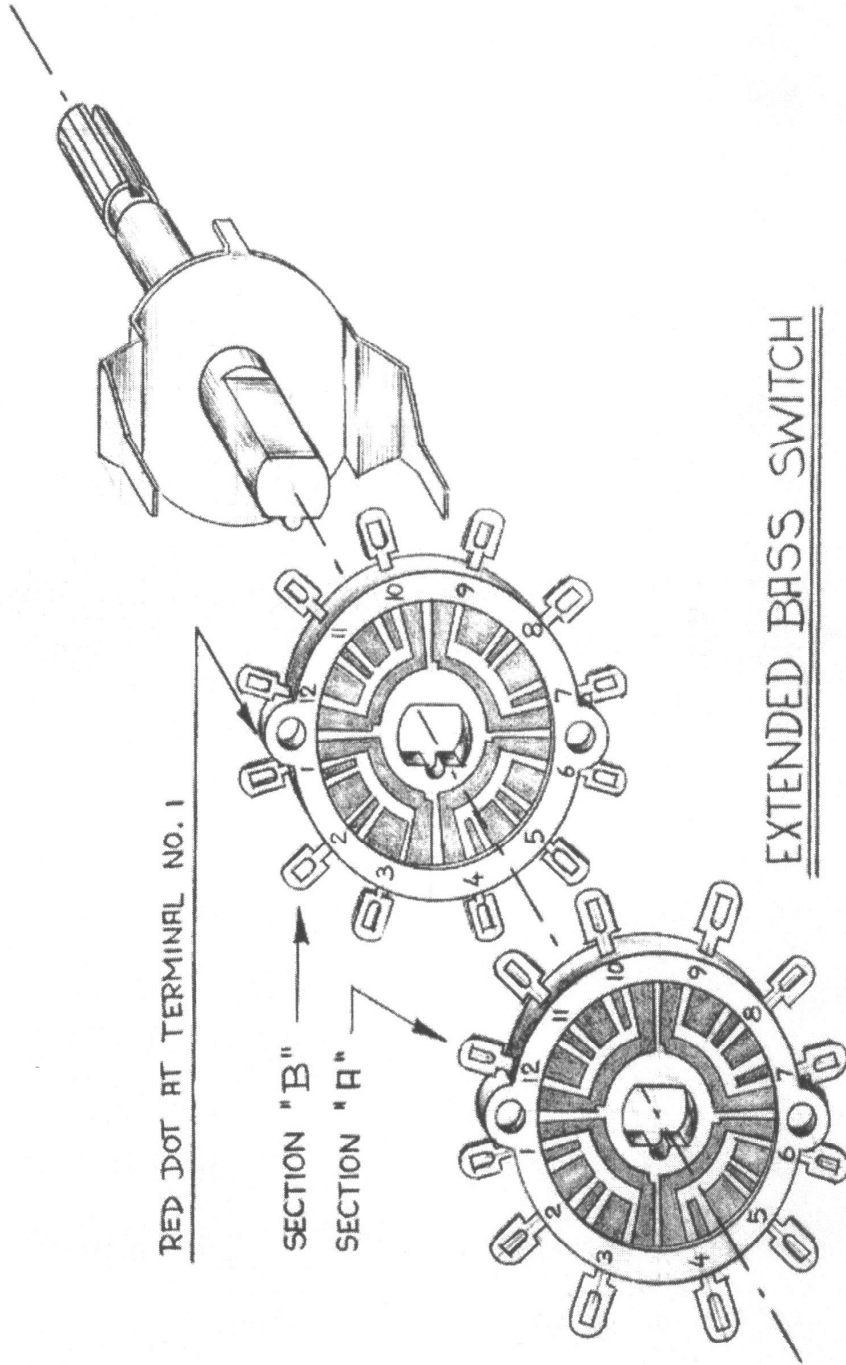
BASS
DWG. NO. 2
MODEL GUIDE

PERCUSSION

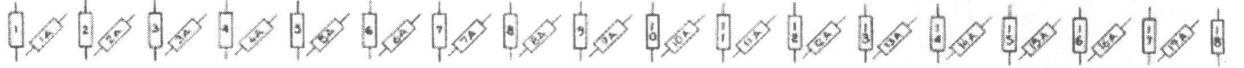


- NOTE:
1. R1 TO R9 ARE CONTAINED IN A NETWORK P-2969 OR P-2966
 2. D1 TO D3 ARE P-4795.
 3. ZENER DIODE IS P-445.
 4. D1 TO D4 ARE P-8393, 50 IS P-2888.
 5. 'A' PERCUSSION KEYING LINE-ONE 7mfd. CAPACITOR FROM EACH NOTE CONNECTS AT THIS POINT.
 6. 'B' STACCATO CONTROL LINE. ONE DIODE FROM EACH NOTE CONNECTS AT THIS POINT.
 7. 'C' BIAS VOLTAGE-ONE 56K RESISTOR FROM EACH NOTE CONNECTS AT THIS POINT.
 8. 'D' SUSTAIN CONTROL LINE-ONE 3.3K RESISTOR FROM EACH NOTE CONNECTS AT THIS POINT.
 9. ALL TABSWITCHES SHOWN IN 'ON' POSITION.
 10. ALL KEYSWITCHES SHOWN IN 'OFF' POSITION.

PERCUSSION/SUSTAIN/STACCATO
8. DIODE KEYING
DWG. NO. 5
MODEL 601

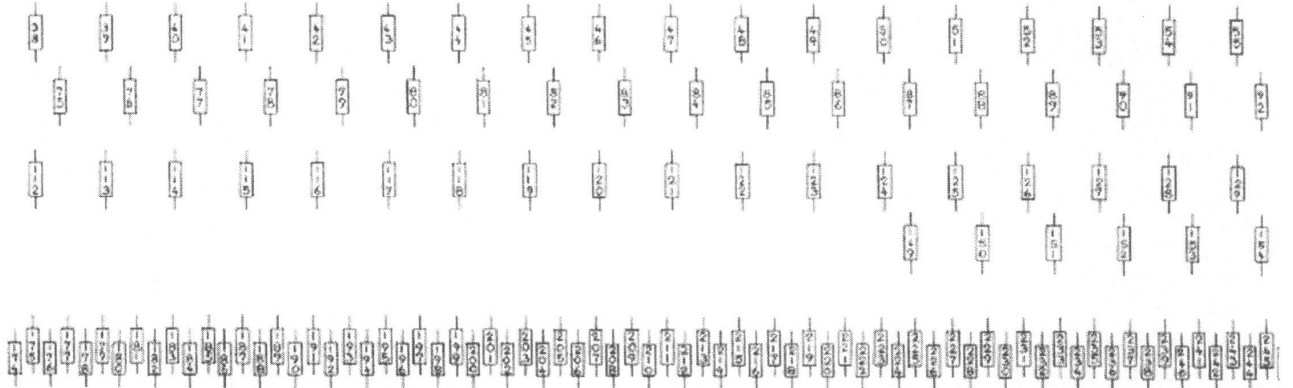


FRONT



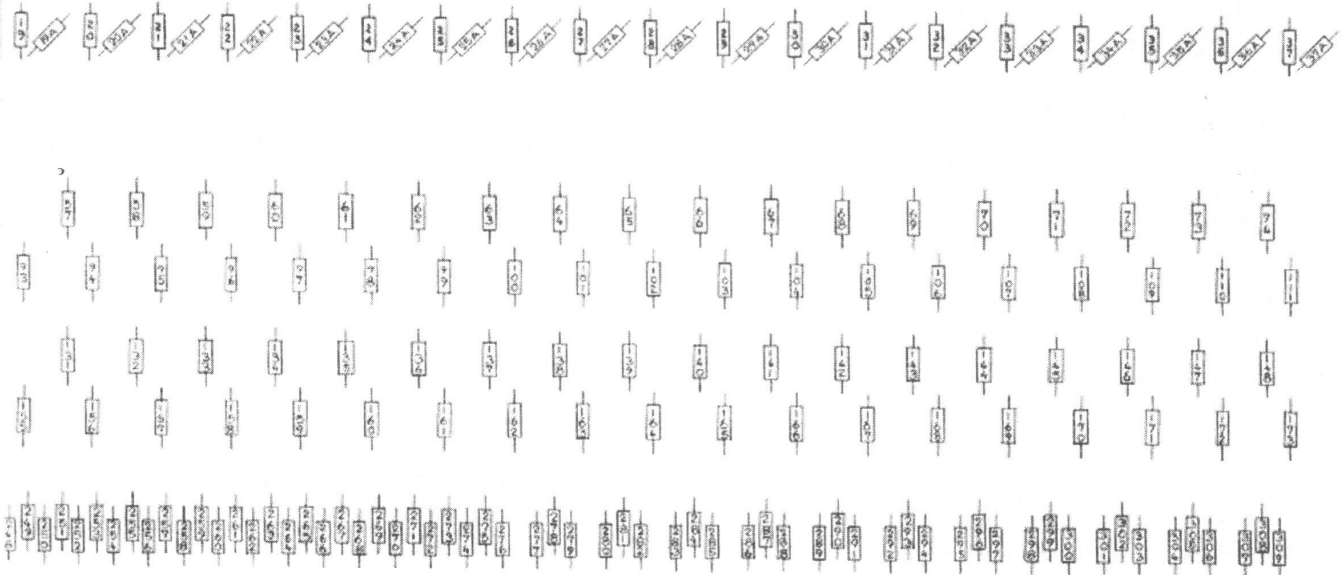
DIODE LAYOUT

DIODE KEYING CIRCUIT BOARD



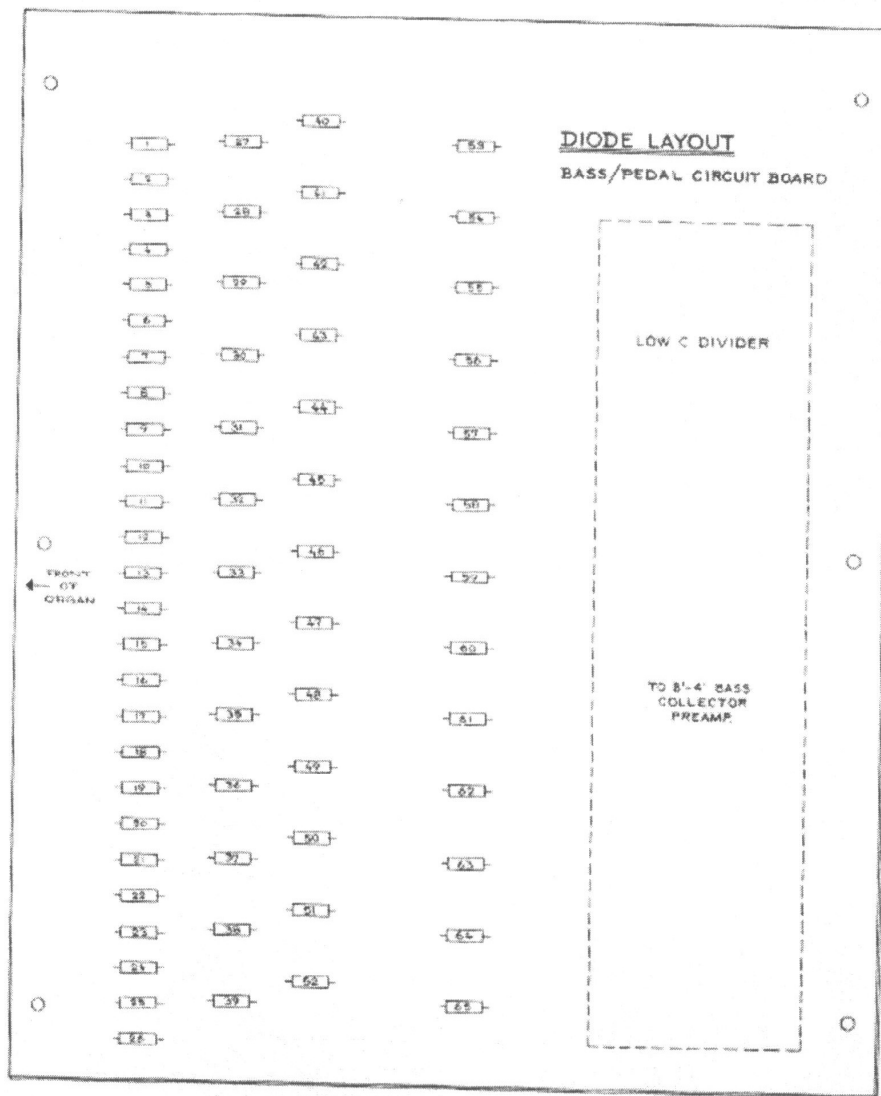
DIODES KEYED					
KEY	16'	8'	4'	2 2/3'	STACCATO
C ₂	309 & 111	308 & 173	271 & 148	249 & 74	37 & 37A
C ₃	306 & 110	305 & 172	248 & 147	245 & 73	36 & 36A
D ₂	303 & 109	302 & 171	245 & 146	241 & 72	35 & 35A
D ₃	300 & 108	299 & 170	242 & 145	237 & 71	34 & 34A
E ₂	297 & 107	296 & 169	239 & 144	233 & 70	33 & 33A
F ₂	294 & 106	293 & 168	236 & 143	229 & 69	32 & 32A
F ₃	291 & 105	290 & 167	233 & 142	225 & 68	31 & 31A
G ₂	288 & 104	287 & 166	231 & 141	220 & 67	30 & 30A
G ₃	285 & 103	284 & 165	227 & 140	215 & 66	29 & 29A
A ₂	282 & 102	281 & 164	225 & 137	210 & 65	28 & 28A
A ₃	279 & 101	278 & 163	223 & 138	205 & 64	27 & 27A
B ₂	276 & 100	275 & 162	220 & 137	200 & 63	26 & 26A
C ₄	307 & 99	272 & 161	221 & 136	195 & 62	25 & 25A
C ₄	304 & 98	269 & 160	217 & 135	191 & 61	24 & 24A
D ₄	301 & 97	266 & 159	212 & 134	187 & 60	23 & 23A
D ₄	298 & 96	263 & 158	217 & 133	183 & 59	22 & 22A
E ₄	295 & 95	260 & 157	212 & 132	179 & 58	21 & 21A
F ₄	292 & 94	257 & 156	207 & 131	175 & 57	20 & 20A
F ₄	289 & 93	254 & 155	202 & 130	171 & 56	19 & 19A

ORGAN

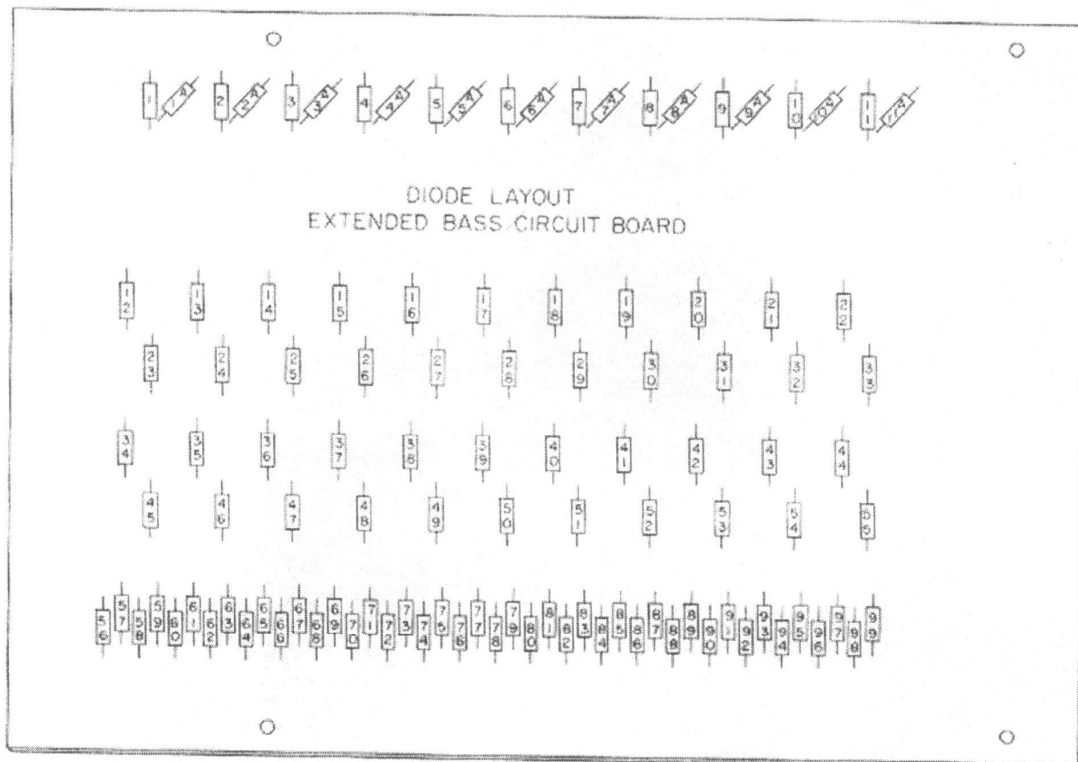


DIODES KEYED

KEY	16'	8'	4'	2 2/3'	STACCATO
G ₄	286 to 72	256 to 184	197 to 129	223 to 55	18 to 18A
G ₄ [♯]	283 to 71	246 to 153	192 to 128	218 to 54	17 to 17A
A ₄	280 to 90	242 to 152	188 to 127	213 to 53	16 to 16A
A ₄ [♯]	277 to 89	238 to 151	184 to 126	208 to 52	15 to 15A
B ₄	274 to 88	234 to 150	180 to 125	203 to 51	14 to 14A
C ₅	273 to 87	230 to 149	176 to 124	198 to 50	13 to 13A
C ₅ [♯]	270 to 86	226 to 123	226 to 123	193 to 49	12 to 12A
D ₅	267 to 85	219 to 122	219 to 122	189 to 48	11 to 11A
D ₅ [♯]	264 to 84	214 to 121	214 to 121	185 to 47	10 to 10A
E ₅	261 to 83	209 to 120	209 to 120	181 to 46	9 to 9A
F ₅	259 to 82	204 to 119	204 to 119	177 to 45	8 to 8A
F ₅ [♯]	255 to 81	199 to 118	199 to 118	226 to 44	7 to 7A
G ₅	252 to 80	194 to 117	194 to 117	221 to 43	6 to 6A
G ₅ [♯]	248 to 79	190 to 116	190 to 116	216 to 42	5 to 5A
A ₅	244 to 78	186 to 115	186 to 115	211 to 41	4 to 4A
A ₅ [♯]	240 to 77	182 to 114	182 to 114	206 to 40	3 to 3A
B ₅	236 to 76	178 to 113	178 to 113	201 to 39	2 to 2A
C ₆	232 to 75	174 to 112	174 to 112	196 to 38	1 to 1A

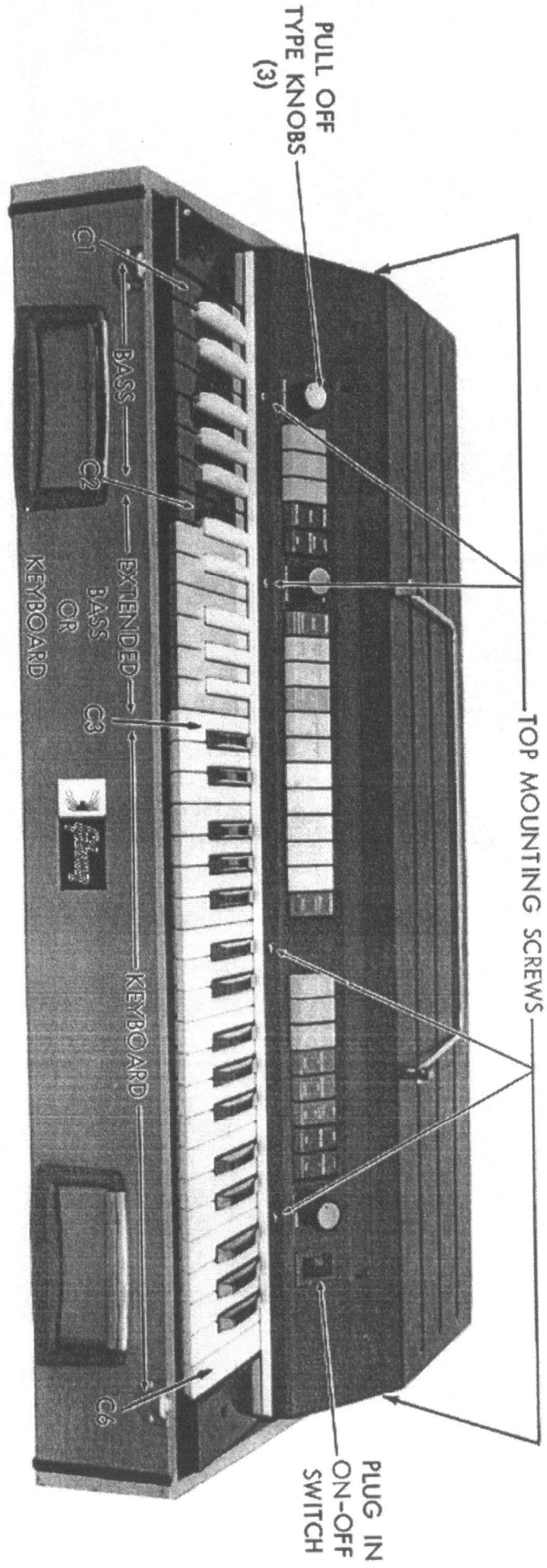


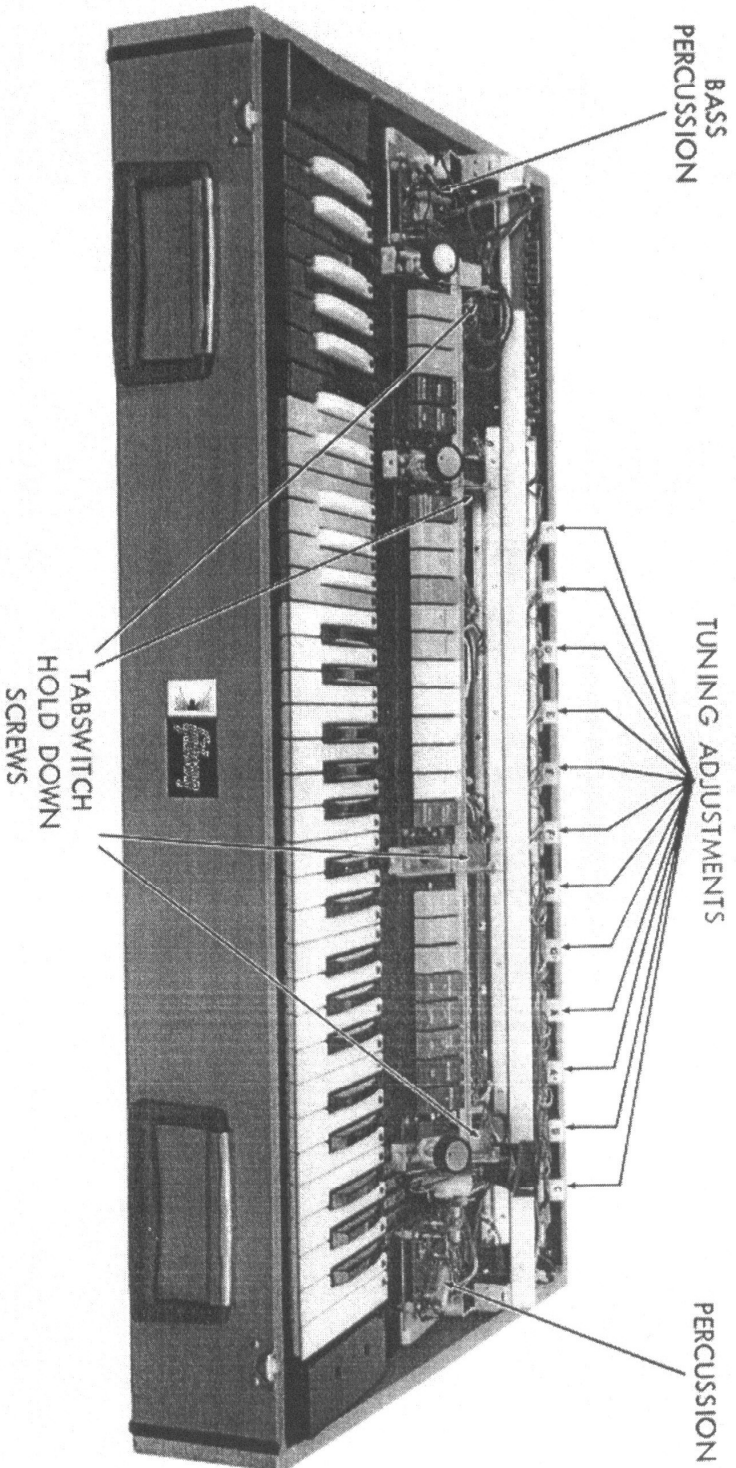
DIODES KEYED			
PEDAL & BASS	B' CONTENT	4' CONTENT	SUSTAIN CONTROL
C ₁	1 & 40	2 & 27	53
C [#]	3 & 41	4 & 28	54
D	5 & 42	6 & 29	55
D [#]	7 & 43	8 & 30	56
E	9 & 44	10 & 31	57
F	11 & 45	12 & 32	58
F [#]	13 & 46	14 & 33	59
G	15 & 47	16 & 34	60
G [#]	17 & 48	18 & 35	61
A	19 & 49	20 & 36	62
A [#]	21 & 50	22 & 37	63
B	23 & 51	24 & 38	64
C ₂	25 & 52	26 & 39	65



DIODES KEYED

KEY	16'	18'	4'	28'	STACCATO
	B' CONTENT		BASS 4' CONTENT		
C ₂	96 B 33	97 B 35	98 B 44	99 B 22	11 B 11A
D ₂	82 B 32	93 B 34	34 B 43	95 B 21	10 B 10A
D ₂	88 B 31	89 B 53	90 B 42	91 B 20	9 B 9A
E ₂	84 B 30	85 B 52	86 B 41	87 B 19	8 B 8A
F ₂	80 B 29	81 B 51	82 B 40	83 B 18	7 B 7A
F ₂	76 B 28	77 B 50	78 B 39	79 B 17	6 B 6A
G ₂	72 B 27	73 B 49	74 B 38	75 B 16	5 B 5A
G ₂	68 B 26	69 B 48	70 B 37	71 B 15	4 B 4A
A ₂	64 B 25	65 B 47	66 B 36	67 B 14	3 B 3A
A ₂	60 B 24	61 B 46	62 B 35	63 B 13	2 B 2A
B ₂	56 B 23	57 B 45	58 B 34	59 B 12	1 B 1A



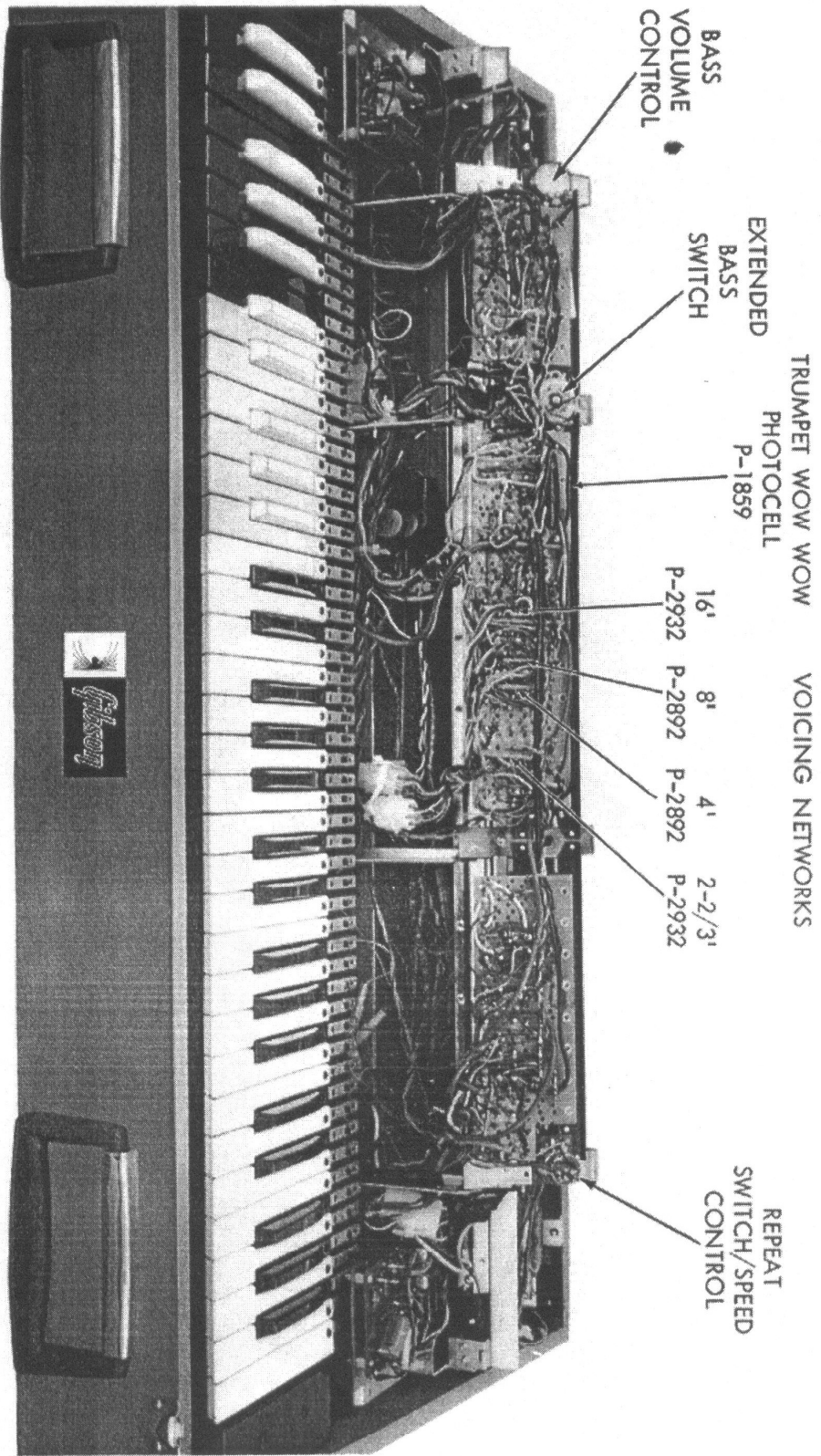


BASS
PERCUSSION

TUNING
ADJUSTMENTS

PERCUSSION

TABSWITCH
HOLD DOWN
SCREWS



BASS
VOLUME
CONTROL

EXTENDED
BASS
SWITCH

TRUMPET WOW WOW
PHOTOCELL
P-1859

16"
P-2932

8"
P-2892

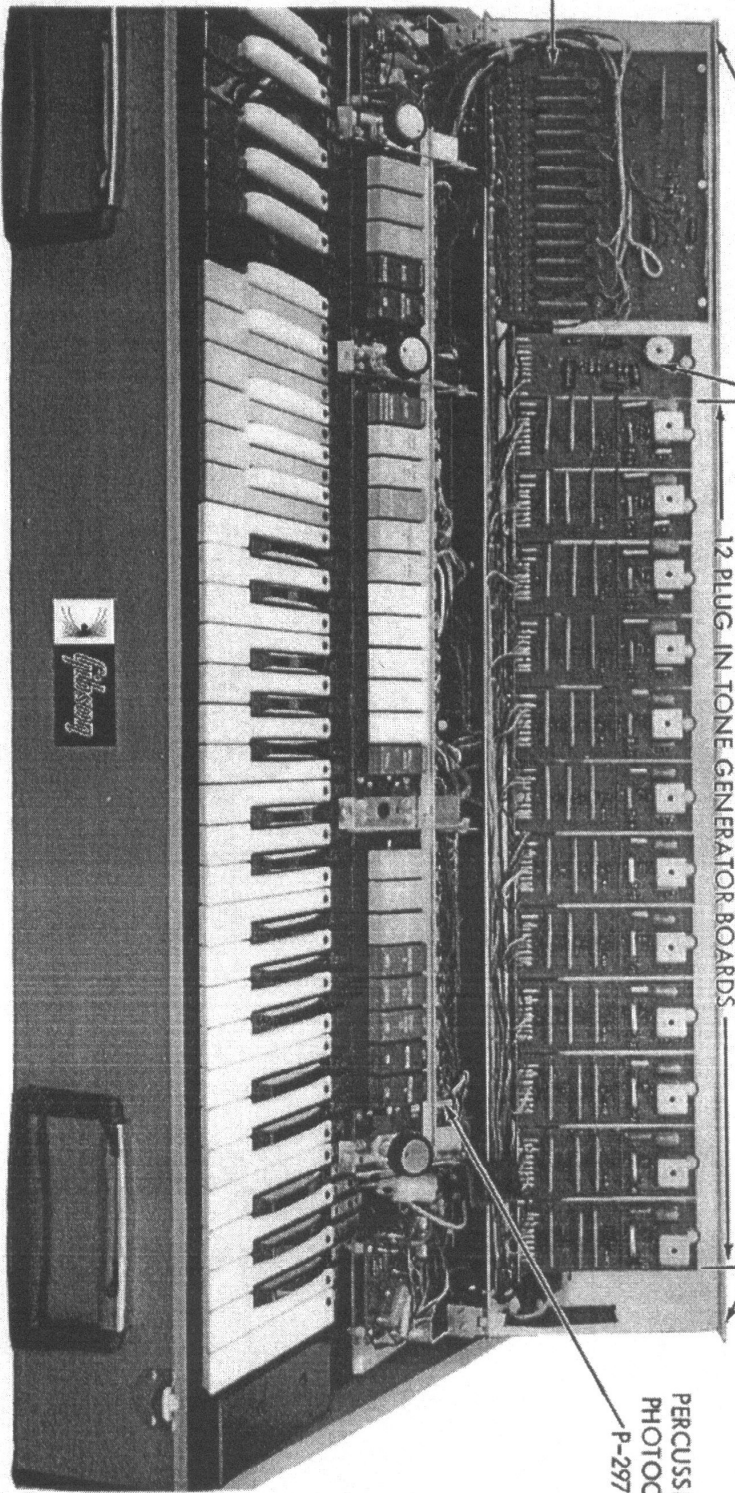
4"
P-2892

2-2/3"
P-2932

VOICING NETWORKS

REPEAT
SWITCH/SPEED
CONTROL





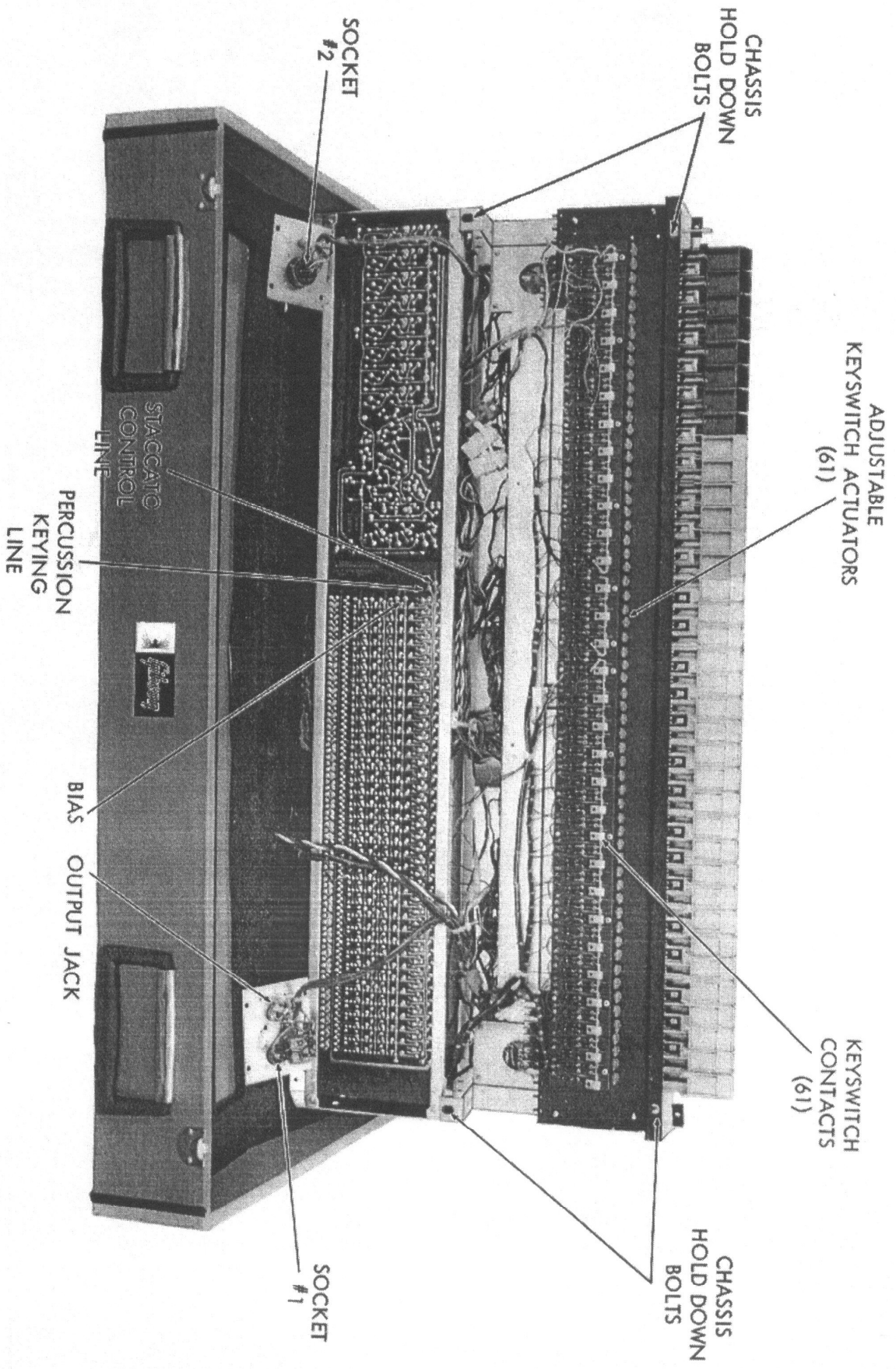
BASS
DIODE
KEYING
BOARD

PLUG IN
VIBRATO
BOARD

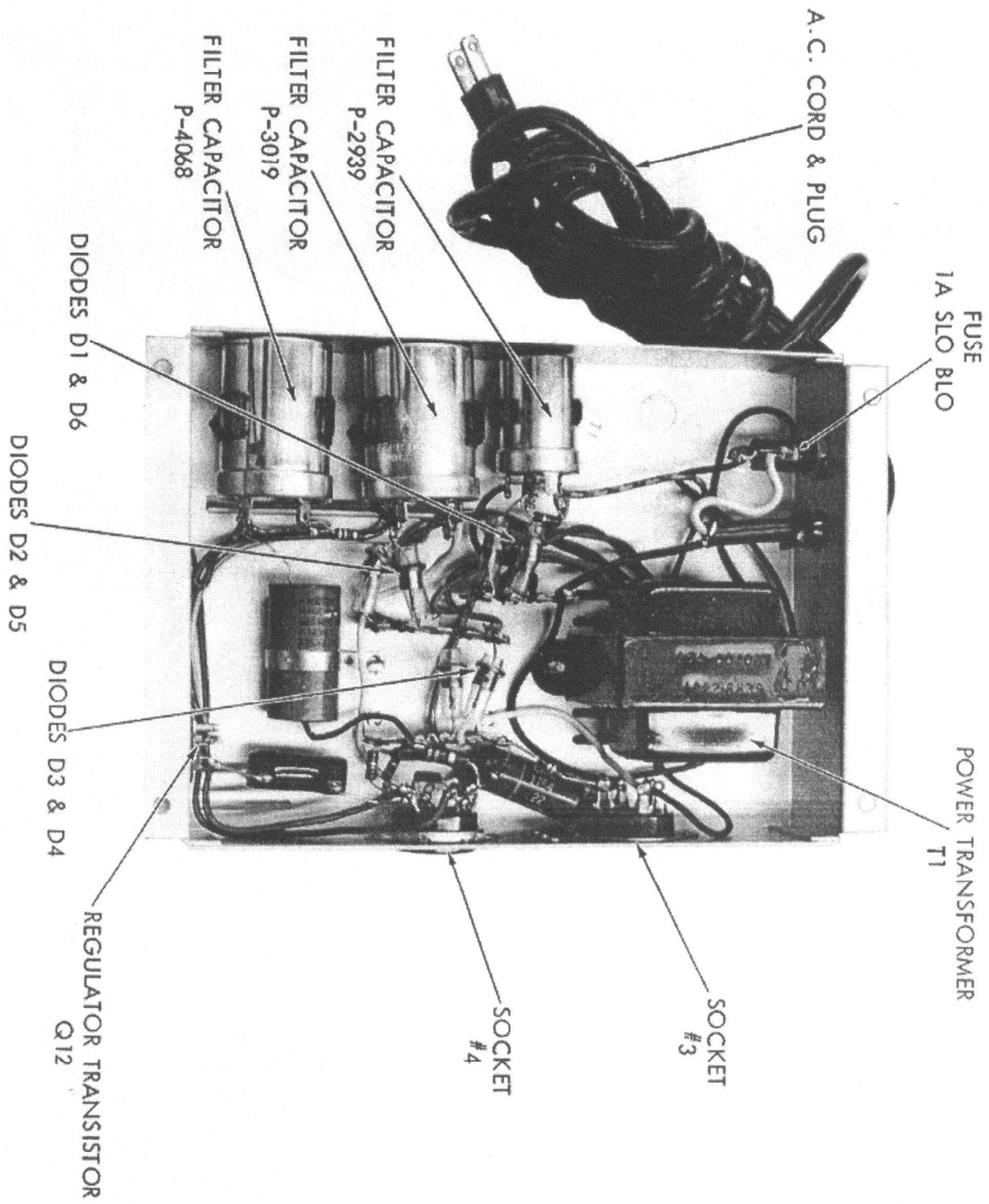
12 PLUG-IN TONE GENERATOR BOARDS

GENERATOR RACK
HOLD DOWN SCREWS

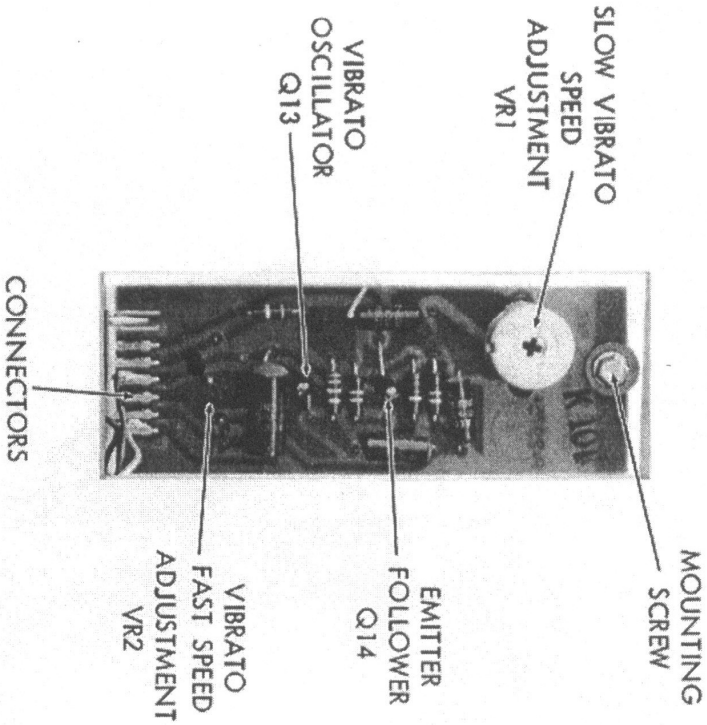
PERCUSSION
PHOTOCELL
P-2971



POWER SUPPLY

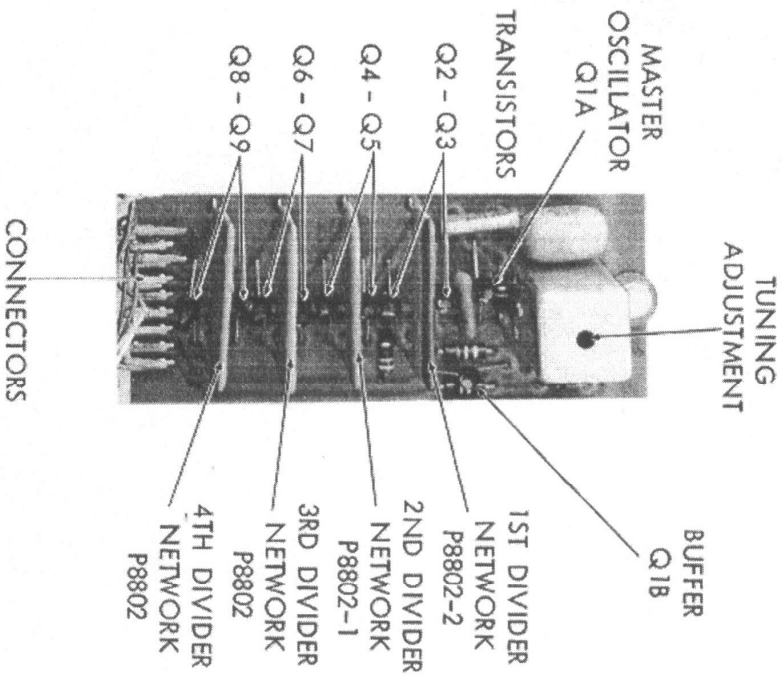


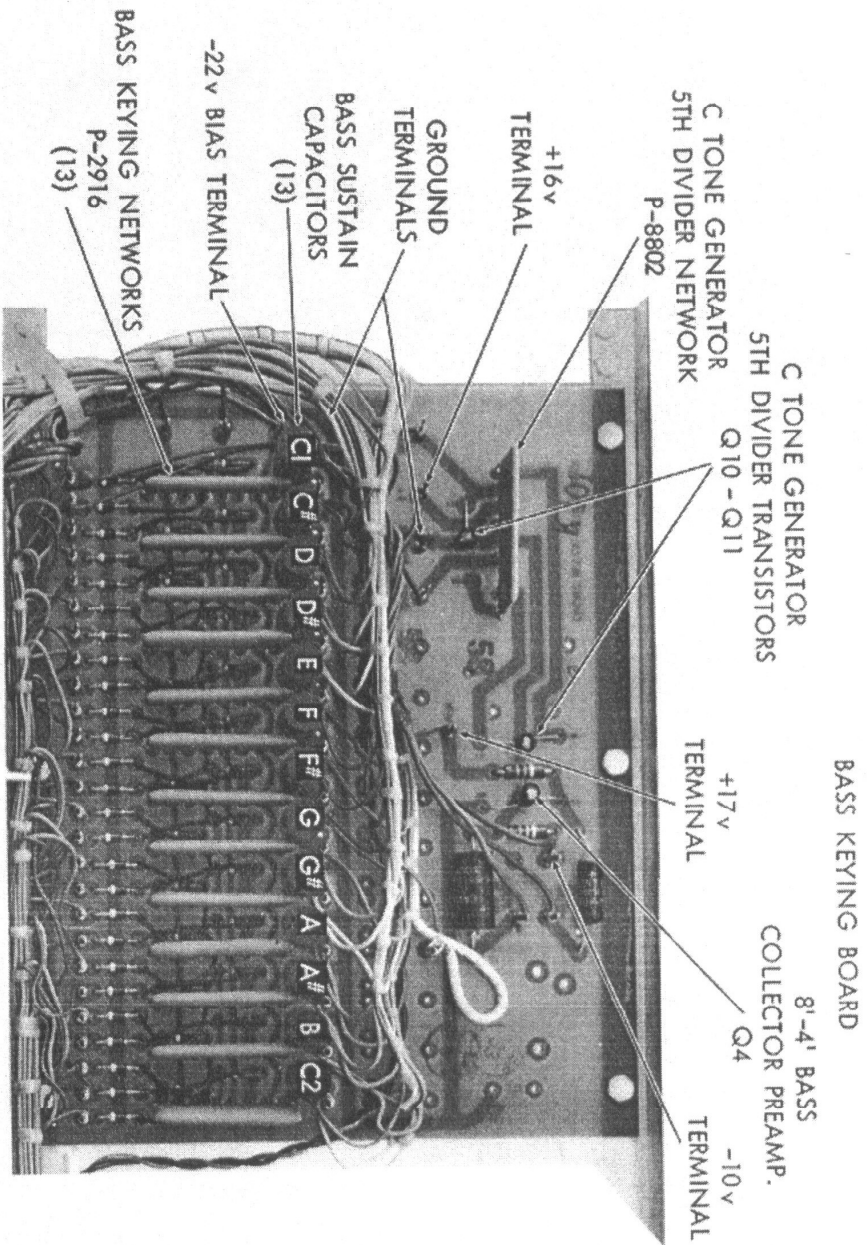
PLUG IN
VIBRATO
BOARD



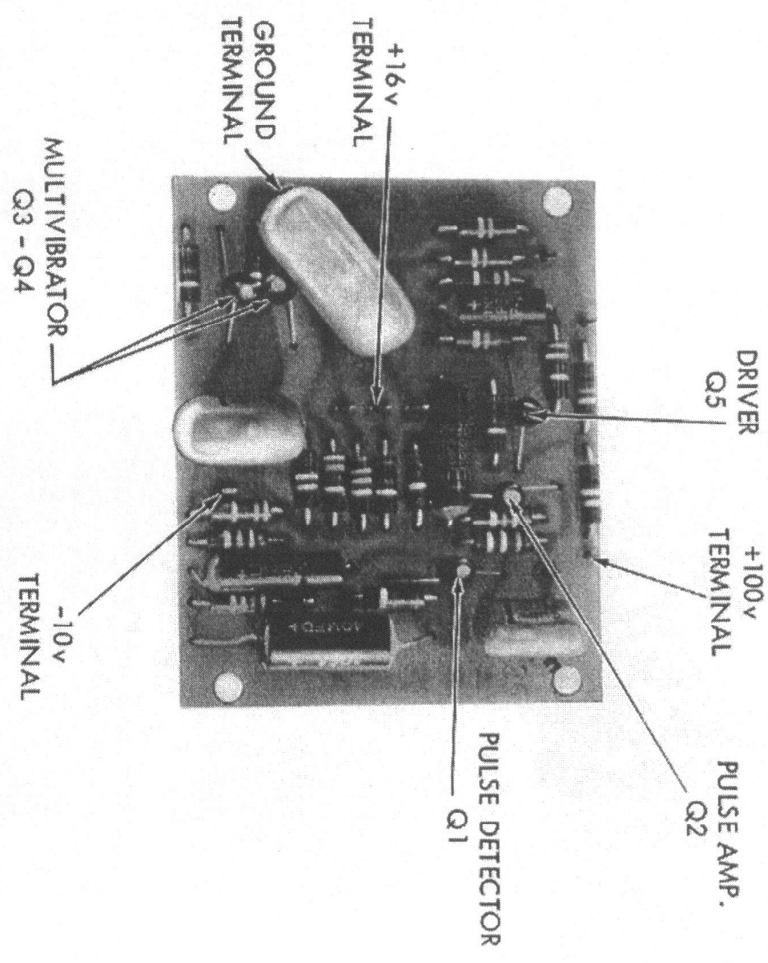
IMPORTANT:
Adjust Vibrato slow speed before adjusting
Vibrato fast speed. Q13 will not oscillate
if either adjustment is extreme.

PLUG IN
TONE GENERATOR
BOARD

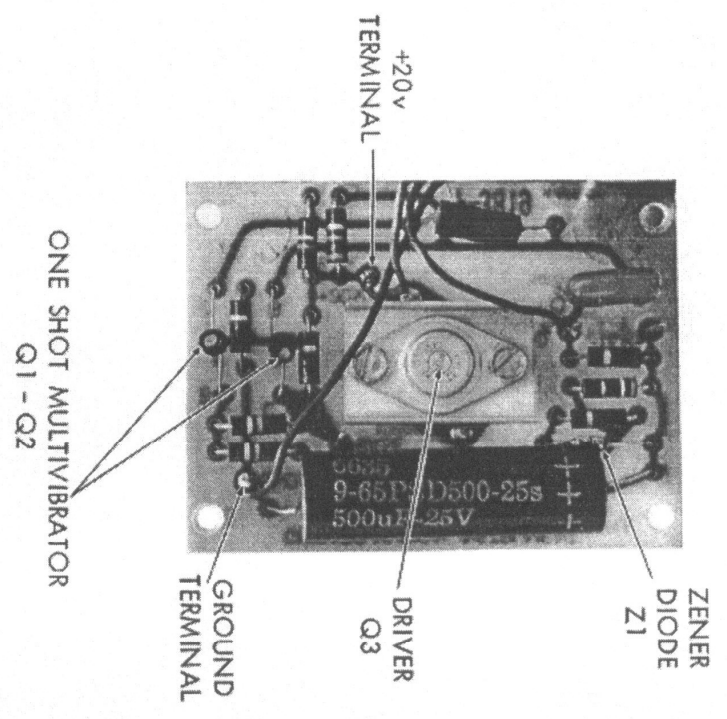




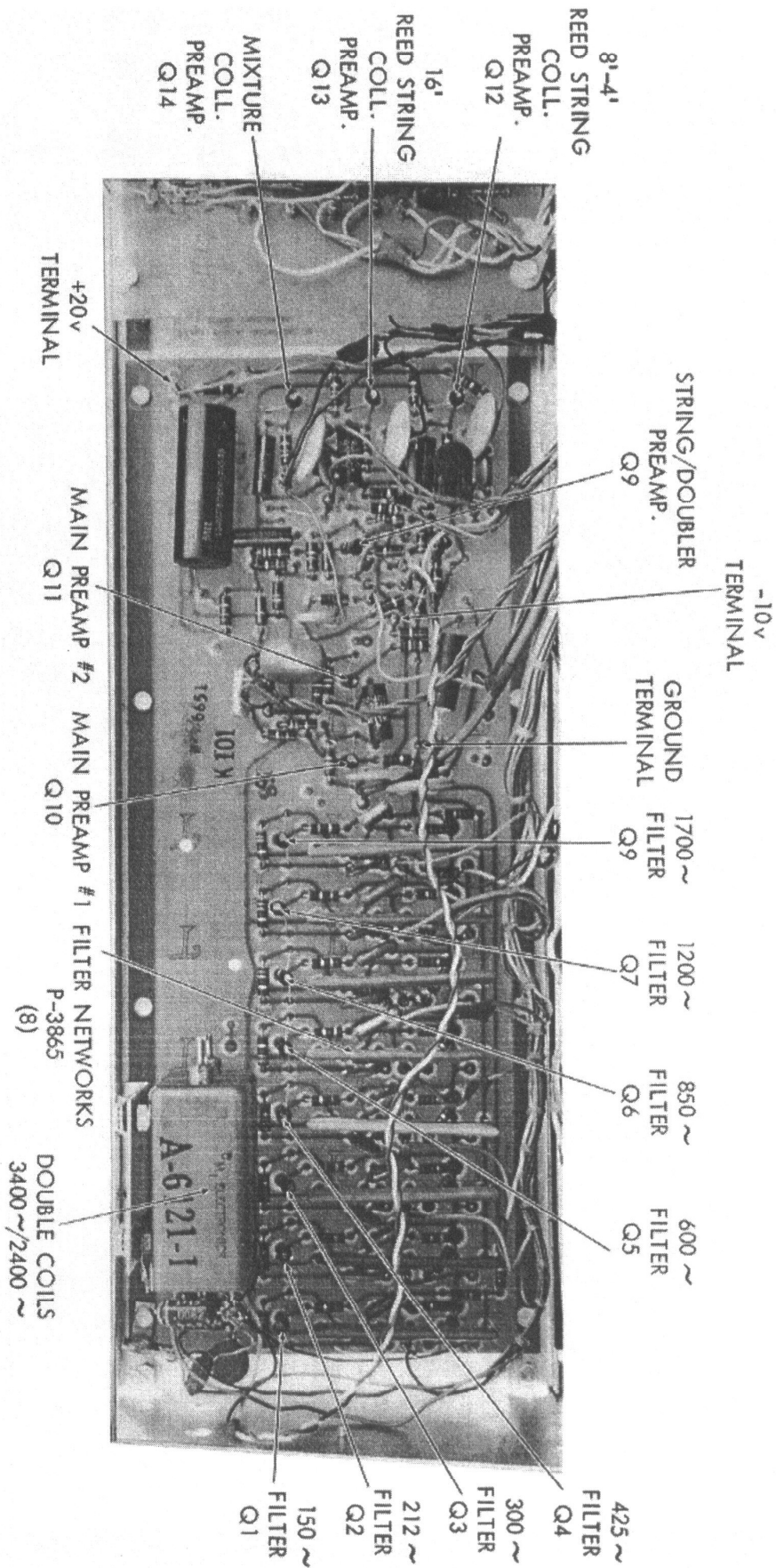
PERCUSSION BOARD

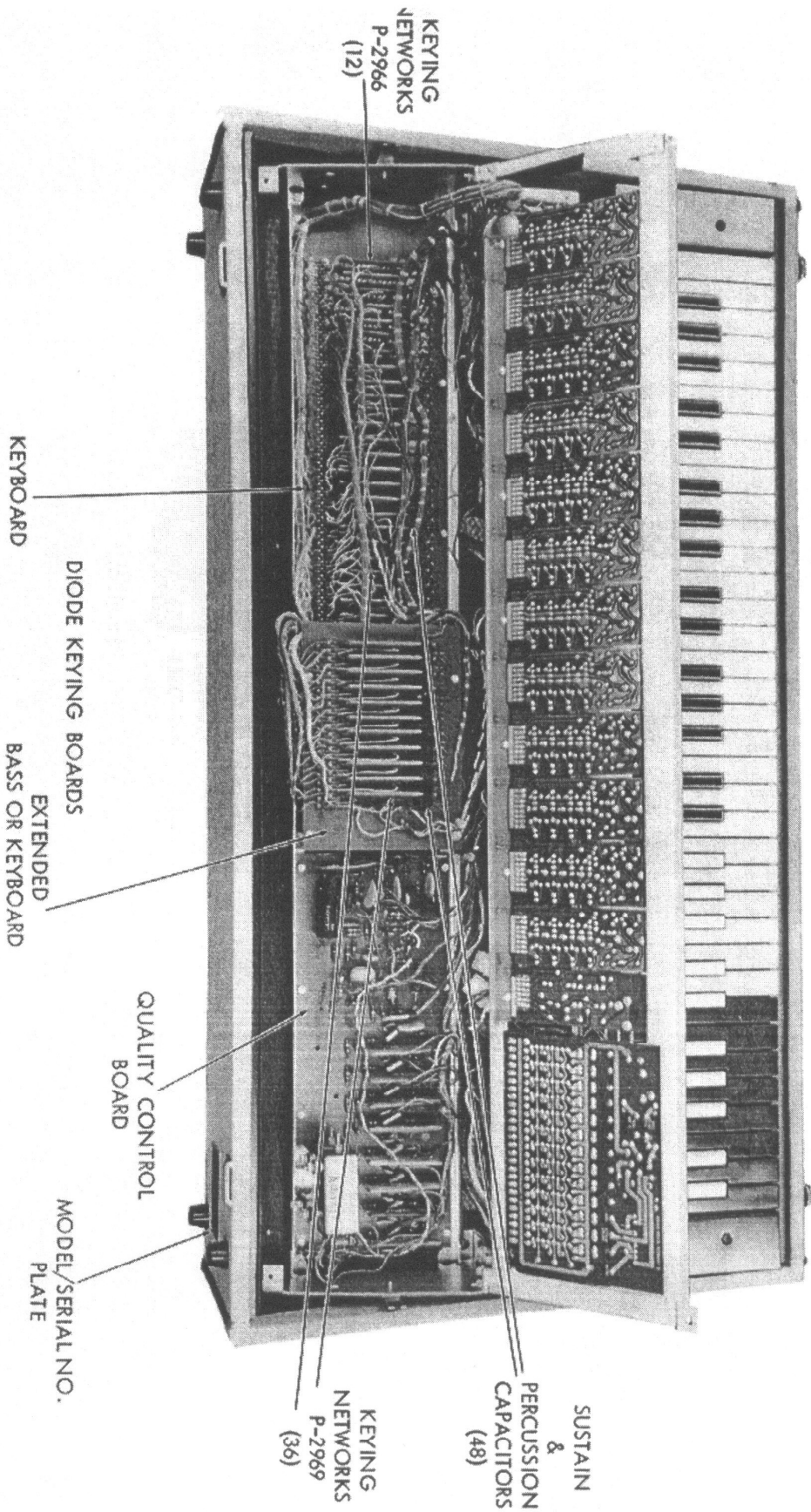


BASS PERCUSSION BOARD

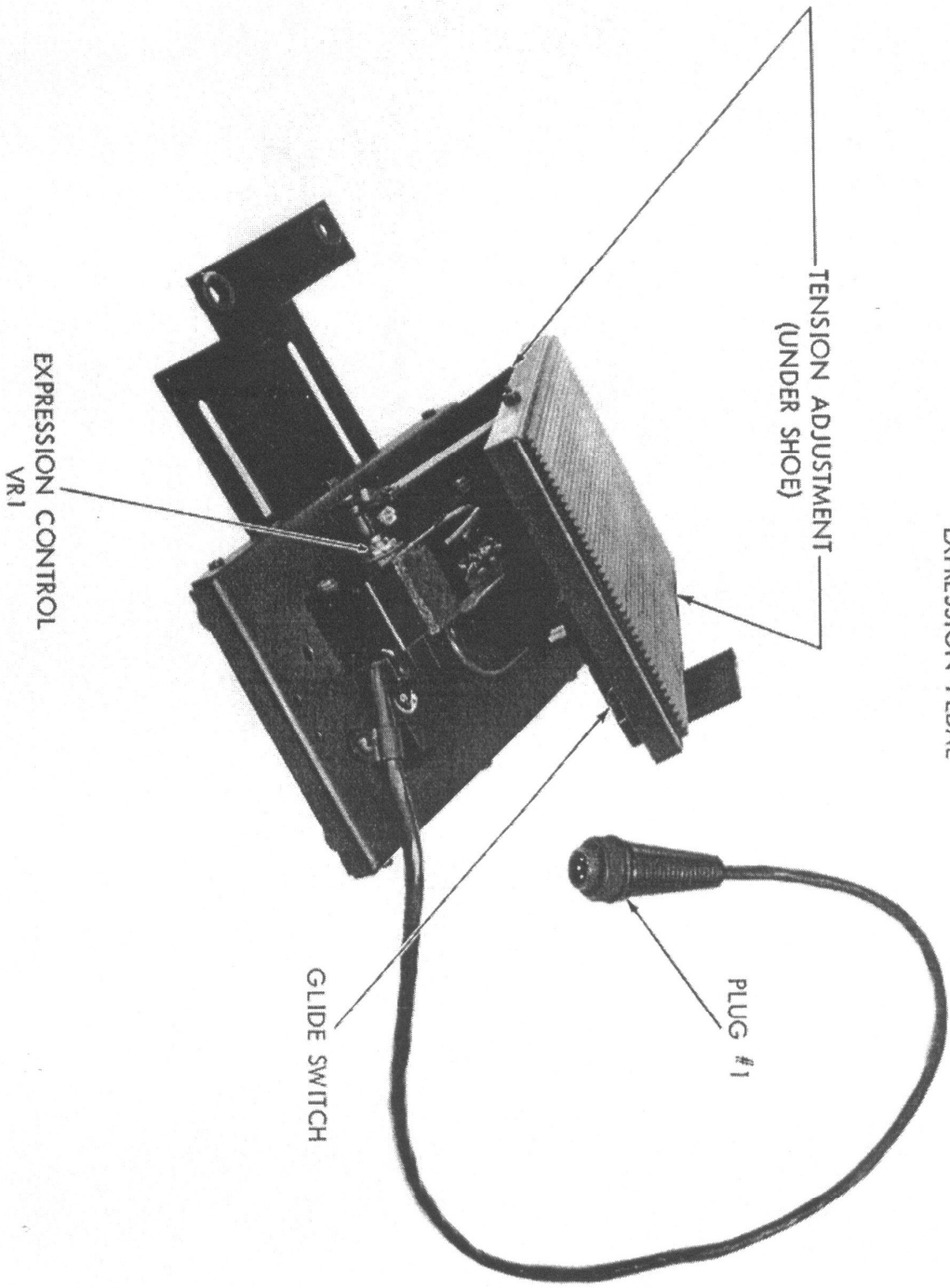


QUALITY CONTROL BOARD





EXPRESSION PEDAL



TENSION ADJUSTMENT
(UNDER SHOE)

EXPRESSION CONTROL
VR1

GLIDE SWITCH

PLUG # 1

OPTIONAL BASS PEDAL KEYBOARD

