

service manual

270

GUITAR AMPLIFIER

acoustic control corporation

7949 WOODLEY AVENUE
VAN NUYS, CA 91406
(213) 997-6631

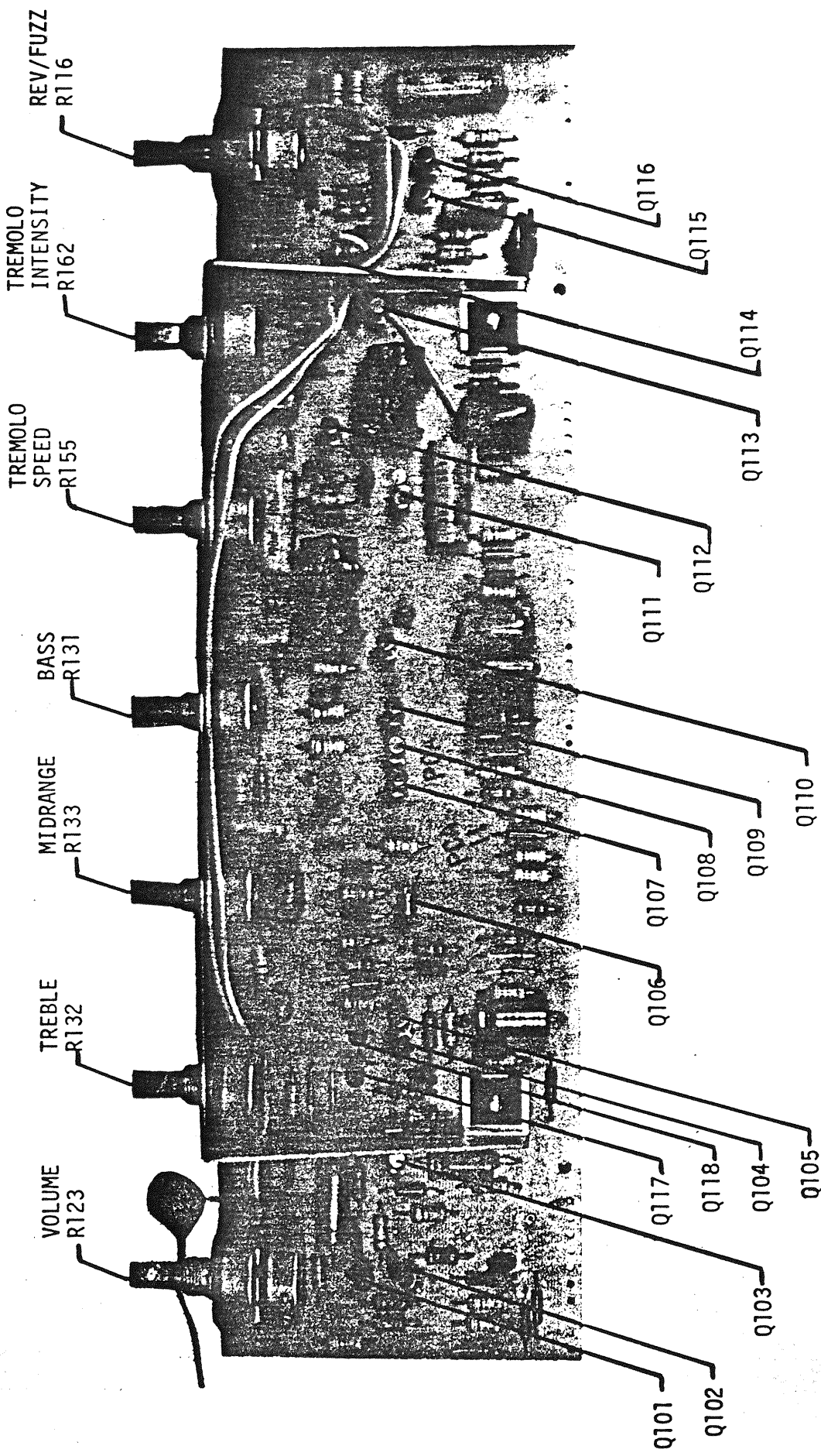
270 TECHNICAL SPECIFICATIONS

Preamp Gain	19.2X
Nominal Input Impedance	30K
Signal-to-noise Ratio	Minimum Gain -60 dB Maximum Gain -50 dB
Minimum Input Voltage for Rated Output	Input 1: 18 mv. Input 2: 56 mv.
Maximum Input Voltage	Input 1: 370 mv. Input 2: 820 mv.
Gain Difference Between Inputs	6 dB
Power Output Measured Across 2.4 Ohm Load @ 5% Distortion	235 watts RMS
Power Output Measured Across 2.4 Ohm Load @ 10% Distortion	285 watts RMS
Power Output Measured Across 1.2 Ohm Load @ 5% Distortion	340 watts RMS
Power Output Measured Across 1.2 Ohm Load @ 10% Distortion	375 watts RMS
Frequency Response	-6 dB @ 10 Hz & 17.5 KHz
Line Output Impedance	5000 ohms
Line Output Voltage	250 mv
Power Consumption @ 375 watts	750 watts
Standby Consumption	50 watts

Domestic models are designed for operation at 120 volts 60Hz.
Export models are designed for operation at 240 volts 50/60Hz.

RANGE OF TONE CONTROLS

Bass	+15 dB, -15 dB @ 50 Hz
Treble	+15 dB, -25 dB @ 10 KHz
Mid-range	+ 7 dB, -30 dB @ 400 Hz
Bright Switch Boost	6 dB per octave from 200 Hz to 5 KHz



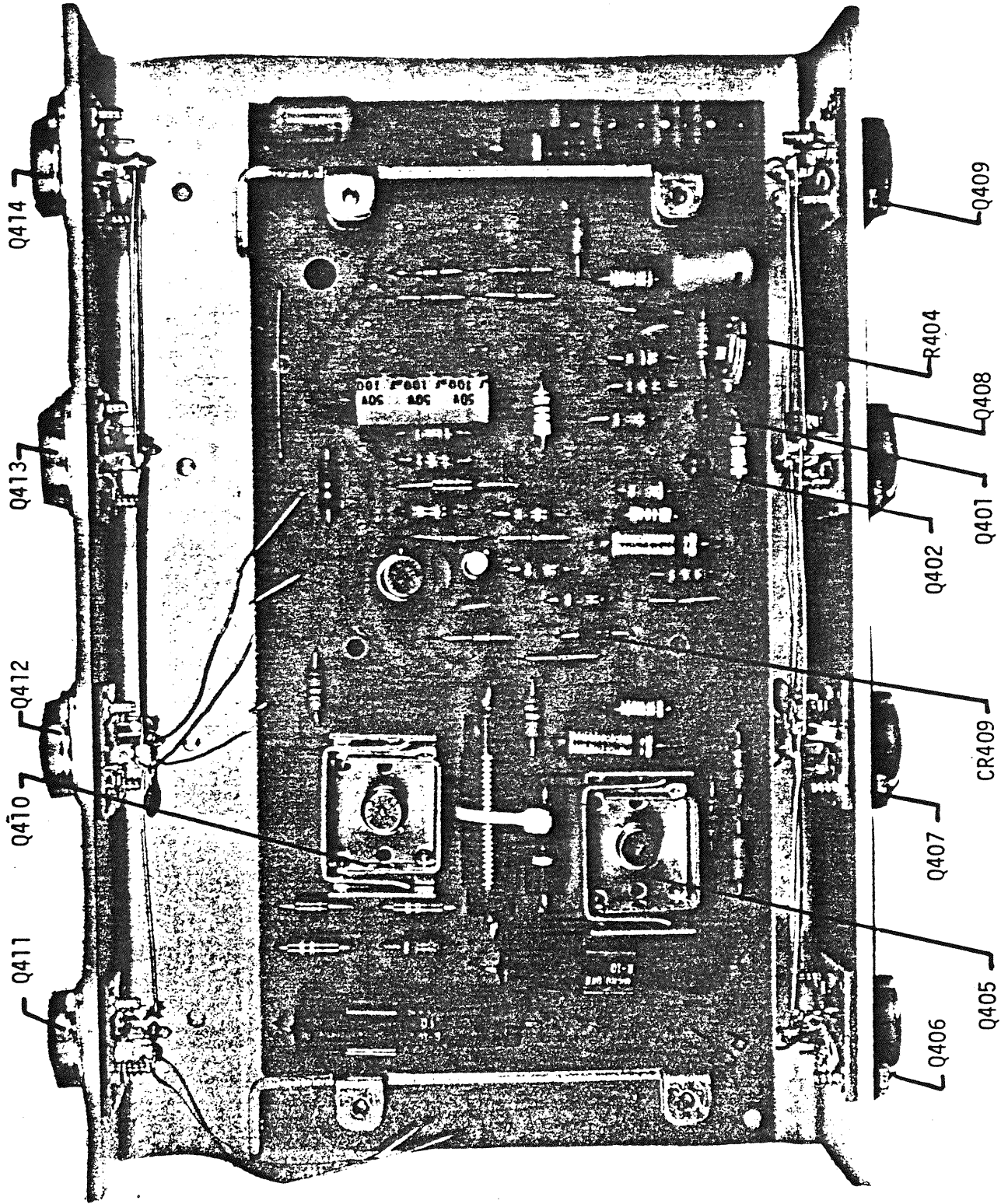
PICTORIAL
 MODEL 270 - PREAMP ASSEMBLY 830020
 SCHEMATIC 1290D

PARTS LIST
MODEL 270 - PREAMP ASSEMBLY 830020
SCHEMATIC 12900

Schematic Reference	DESCRIPTION	Acoustic Part No.	Schematic Reference	DESCRIPTION	Acoustic Part No.
PCB 1	Printed Circuit Board	170027	C 120	Capacitor, 68pf, Disc, 1KV	151002
Q 101	Transistor, NPN, 2N2484 or MPS A09	480023	C 121	Capacitor, 24pf, Disc, 1KV	151001
Q 102	Transistor, PNP, 2N4248 or 2N4249	480032	C 122	Capacitor, 1mf, Tantalum, 35V	154004
Q 103	Transistor, NPN, 2N2484 or MPS A09	480023	C 123	Capacitor, 100pf, Disc, 1KV	151003
Q 104	Transistor, PNP, 2N4248 or 2N4249	480032	C 124	Capacitor, 2.2mf, Tantalum, 35V	154005
Q 105	Transistor, NPN, 2N2484 or MPS A09	480023	C 125	Capacitor, 2.2mf, Tantalum, 35V	154005
Q 106	Transistor, NPN, 2N2484 or MPS A09	480023	C 126	Capacitor, .33mf, Mylar, 100V	152020
Q 107	Transistor, NPN, 2N2484 or MPS A09	480023	C 127	Capacitor, .03mf, Mylar, 100V	152012
Q 108	Transistor, NPN, 2N2484 or MPS A09	480023	C 128	Capacitor, 1mf, Tantalum, 35V	154005
Q 109	Transistor, NPN, 2N2484 or MPS A09	480023	C 129	Capacitor, 100pf, disc, 1KV	151003
Q 110	Transistor, NPN, 2N2484 or MPS A09	480023	C 130	Capacitor, 1mf, Tantalum, 35V	151003
Q 111	Transistor, NPN, 2N2484 or MPS A09	480023	C 131	Capacitor, 1mf, Tantalum, 35V	154004
Q 112	Transistor, NPN, 2N2484 or MPS A09	480023	C 132	Capacitor, 24pf, disc, 1KV	151001
Q 113	Transistor, NPN, 2N2484 or MPS A09	480023	C 133	Capacitor, .18mf, Mylar, 100V	152018
Q 114	Field Effect Transistor, 2N4360	480033	C 134	Capacitor, 100mf, Electrolytic, 40V	153006
Q 115	Transistor, NPN, 2N2484 or MPS A09	480023	C 135	Capacitor, .22mf, Mylar, 100V	152019
Q 116	Transistor, NPN, 2N2484 or MPS A09	480023	C 136	Capacitor, .39mf, Tantalum, 35V	154001
Q 117	Field Effect Transistor, 2N4360	480033	C 137	Capacitor, .22mf, Mylar, 100V	152019
Q 118	Field Effect Transistor, 2N5457, MPF 102	480024	C 138	Capacitor, 470pf, Disc, 1KV	151006
CR101	Diode, 1N914	480005	C 139	Capacitor, 1mf, Tantalum, 35V	154004
CR102	Diode, 1N914	480005	C 140	Capacitor, 1mf, Tantalum, 35V	154004
CR103	Diode, 1N914	480005	C 141	Capacitor, .047mf, Mylar, 100V	152013
CR104	Diode, 1N914	480005	C 142	Capacitor, 1mf, Tantalum, 35V	154014
CR105	Diode, 1N914	480005	C 143	Capacitor, .047mf, Mylar, 100V	152013
CR106	Diode, 1N914	480005	C 144	Capacitor, 100pf, Disc, 1KV	151003
CR107	Diode, 1N914	480005	C 145	Capacitor, 1mf, Tantalum, 35V	154004
L 101	Inductor, 615y	180007	C 146	Capacitor, 1mf, Tantalum, 35V	154004
L 102	Inductor, 1.51ly	180002	C 147	Capacitor, 68pf, Disc, 1KV	151002
L 103	Inductor, 750Mily	180005	C 148	Capacitor, 100mf, Electrolytic, 40V	153006
L 104	Inductor, 375Mily	180004	C 149	Capacitor, 100mf, Electrolytic, 40V	153006
L 105	Inductor, 750Mily	180005	C 150	Capacitor, 1mf, Tantalum, 35V	154004
L 106	Inductor, 375Mily	180004	C 151	Capacitor, 1mf, Tantalum, 35V	154004
C 101	Capacitor, 68pf, Disc, 1KV	151002	C 152	Capacitor, 1mf, Tantalum, 35V	154004
C 102	Capacitor, 1mf, Tantalum, 35V	154004	C 153	Capacitor, 1mf, Tantalum, 35V	154004
C 103	Capacitor		C 154	Capacitor, .001mf, Disc, 1KV	151008
C 104	Capacitor, 10mf, Electrolytic, 50V	153002	C 155	Capacitor, .001mf, Disc, 1KV	151008
C 105	Capacitor, 68pf, Disc, 1KV	151002	C 156	Capacitor, 1mf, Tantalum, 35V	154004
C 106	Capacitor, 1mf, Tantalum, 35V	154004	C 157	Capacitor, .01mf, Disc, 50V	151013
C 107	Capacitor, 1mf, Tantalum, 35V	154004	R 101	Resistor, 10K ohm, 1/2 watt	476310
C 108	Capacitor, 68pf, Disc, 1KV	151002	R 102	Resistor, 22K ohm, 1/2 watt	476322
C 109	Capacitor, 20mf, Electrolytic, 50V	153003	R 103	Resistor, 470K ohm, 1/2 watt	476447
C 110	Capacitor, 1mf, Tantalum, 35V	154004	R 104	Resistor, 10M ohm, 1/2 watt	476510
C 111	Capacitor, 10mf, Electrolytic, 50V	157002	R 105	Resistor, 33K ohm, 1/2 watt	476333
C 112	Capacitor, 1mf, Tantalum, 35V	154004	R 108	Resistor, 560 ohm, 1/2 watt	476156
C 113	Capacitor, 1mf, Tantalum, 35V	154004	R 109	Resistor, 10K ohm, 1/2 watt	476310
C 114	Capacitor, 1mf, Tantalum, 35V	154004	R 110	Resistor, 1K ohm, 1/2 watt	476210
C 115	Capacitor, .0022mf, Mylar, 100V	152009	R 111	Resistor, 4.7K ohm, 1/2 watt	476482
C 116	Capacitor, .0022mf, Mylar, 100V	152009	R 112	Resistor, 470K ohm, 1/2 watt	476447
C 117	Capacitor, .0022mf, Mylar, 100V	152009	R 113	Resistor, 3.3K ohm, 1/2 watt	476333
C 118	Capacitor, 1mf, Tantalum, 35V	154004	R 114	Resistor, 6.8K ohm, 1/2 watt	476268
C 119	Capacitor, 1mf, Tantalum, 35V	154004	R 115	Resistor, 39 ohm, 1/2 watt	476049

PARTS LIST
MODEL 270 - POWER MODULE 843030
SCHEMATIC 1290D

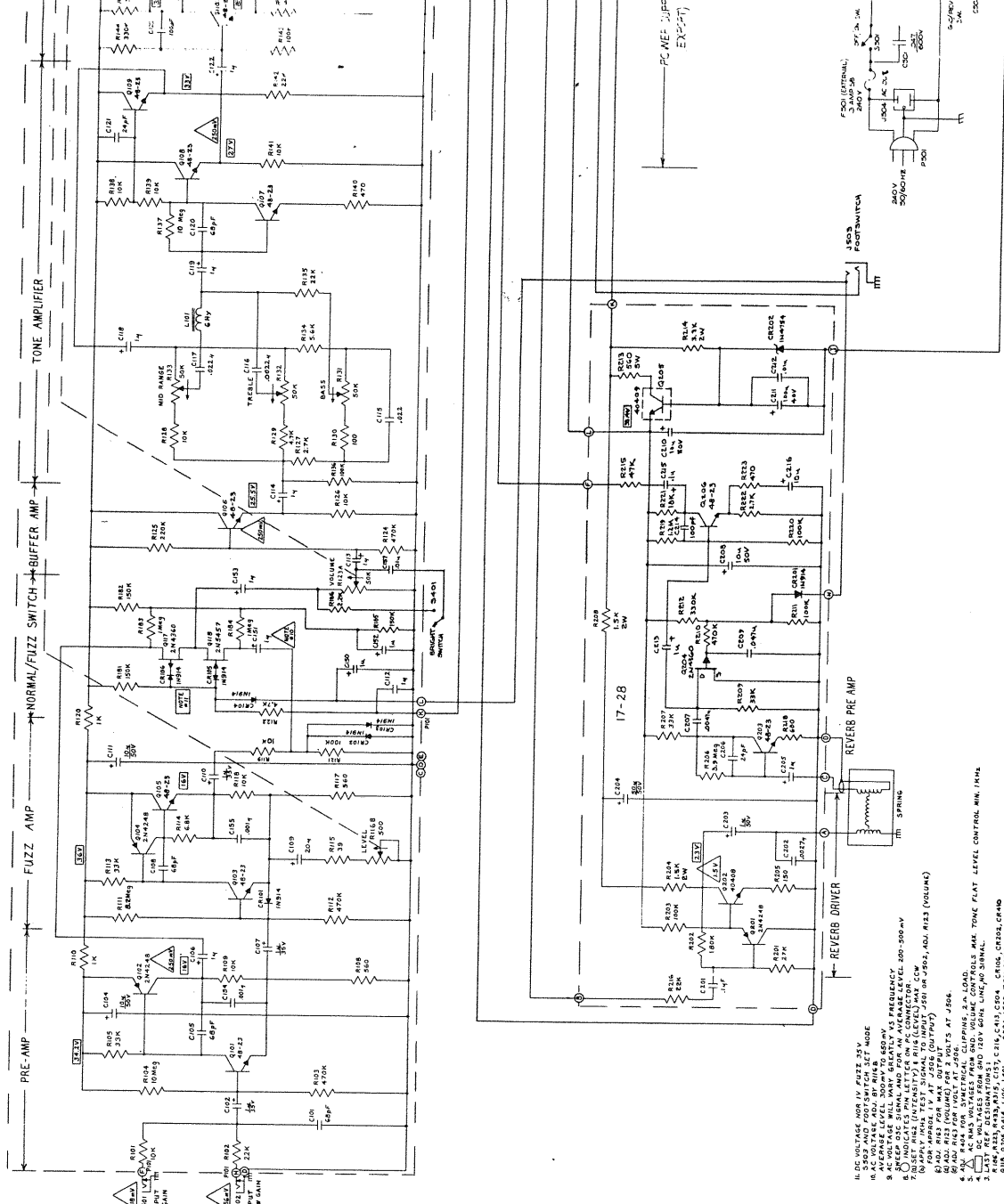
Schematic Reference	DESCRIPTION	Acoustic Part No.	Schematic Reference	DESCRIPTION	Acoustic Part No.
PCB 4	Printed Circuit Board	170019F	R 409	Resistor, 1K ohm, 1/2 watt	476210
Q 401	Transistor, PNP, 2N4248	480032	R 410	Resistor, 56K ohm, 1/2 watt	476356
Q 402	Transistor, PNP, 2N4248	480032	R 411	Resistor, 100K ohm, 1/2 watt	476410
Q 403	Transistor, NPN, 40408	480003	R 412	Resistor, 100K ohm, 1/2 watt	476410
Q 404	Transistor, NPN, 2N2484	480023	R 413	Resistor, 4.7K ohm, 1/2 watt	476247
Q 405	Transistor, NPN, 40409	480006	R 414	Resistor, 270K ohm, 1/2 watt	476427
Q 406	Transistor, NPN, 2N3055	480015	R 415	Resistor, 4.7K ohm, 1/2 watt	476247
Q 407	Transistor, NPN, 2N3055	480015	R 416	Resistor, 3.3K ohm, 1/2 watt	476233
Q 408	Transistor, NPN, 2N3055	480015	R 417	Resistor, 3.3K ohm, 1/2 watt	476233
Q 409	Transistor, NPN, 2N3055	480015	R 418	Resistor, 1.5K ohm, 1/2 watt	476215
Q 410	Transistor, NPN, 2N3055	480015	R 419	Resistor, 680 ohm, 1/2 watt	476168
Q 411	Transistor, NPN, 40410	480007	R 420	Resistor, 100 ohm, 1/2 watt	476110
Q 412	Transistor, NPN, 2N3055	480015	R 421	Resistor, 1 ohm, 1/2 watt	478001
Q 413	Transistor, NPN, 2N3055	480015	R 422	Resistor, .1 ohm, 10 watt	468810
Q 414	Transistor, NPN, 2N3055	480015	R 423	Resistor, .1 ohm, 10 watt	468810
CR401	Diode, 1N914	480005	R 424	Resistor, 1 ohm, 1/2 watt	478001
CR402	Diode, 1N914	480005	R 425	Resistor, 100 ohm, 1/2 watt	476110
CR403	Diode, 1N914	480005	R 426	Resistor, 1 ohm, 1/2 watt	478001
CR404	Diode, 1N914	480005	R 427	Resistor, 10 ohm, 2 watt	472010
CR405	Diode, 1N914	480005	R 428	Resistor, 22 ohm, 2 watt	472022
CR406	Diode, 1N914	480005	R 429	Resistor, 120K ohm, 1/2 watt	476412
CR407	Diode, 1N914	480005	R 430	Resistor, 100 ohm, 1/2 watt	476110
CR408	Diode, Zener, 1N4731	480036	R 431	Resistor, 100 ohm, 1/2 watt	476110
CR409	Diode, 1N4933, 1N4003	480028	R 432	Resistor, 100 ohm, 1/2 watt	476110
CR410	Diode, 1N914	480005	R 433	Resistor, 18 ohm, 1/2 watt	476018
CR411	Diode, 1N914	480005			
L 401	Choke, 2MHy	180008			
C 401	Capacitor, 1mf, Tantalum, 35V	154004			
C 402	Capacitor, 330pf, Disc, 1KV	151005			
C 403	Capacitor, .1mf, Mylar, 100V	152015			
C 404	Capacitor, 100mf, Electrolytic, 50V	153006			
C 405	Capacitor, 10mf, Electrolytic, 50V	153002			
C 406	Capacitor, 2.2mf, Tantalum, 35V	154005			
C 407	Capacitor, 10mf, Electrolytic, 50V	153002			
C 408	Capacitor, .001mf, Disc, 1KV	151008			
C 409	Capacitor, 24pf, Disc, 1KV	151001			
C 410	Capacitor, .002mf, Disc	151010			
C 411	Capacitor, .002mf, Disc	151010			
C 412	Capacitor, .1mf, Mylar, 100V	152015			
C 413	Resistor, 27K ohm, 1/2 watt	476327			
R 401	Resistor, 33K ohm, 1/2 watt	476333			
R 402	Resistor, 180K ohm, 1/2 watt	476418			
R 403	Tri-impot, 100K ohm	475009			
R 404	Resistor, 2.2K ohm, 1/2 watt	476222			
R 405	Resistor, 100K ohm, 1/2 watt	476410			
R 406	Resistor, 6.8 ohm, 1/2 watt	476268			
R 407	Resistor, 2.2K ohm, 1/2 watt	476222			
R 408	Resistor, 2.2K ohm, 1/2 watt	476222			



MODEL 270 - POWER AMP ASSEMBLY 843030
SCHEMATIC 1290D

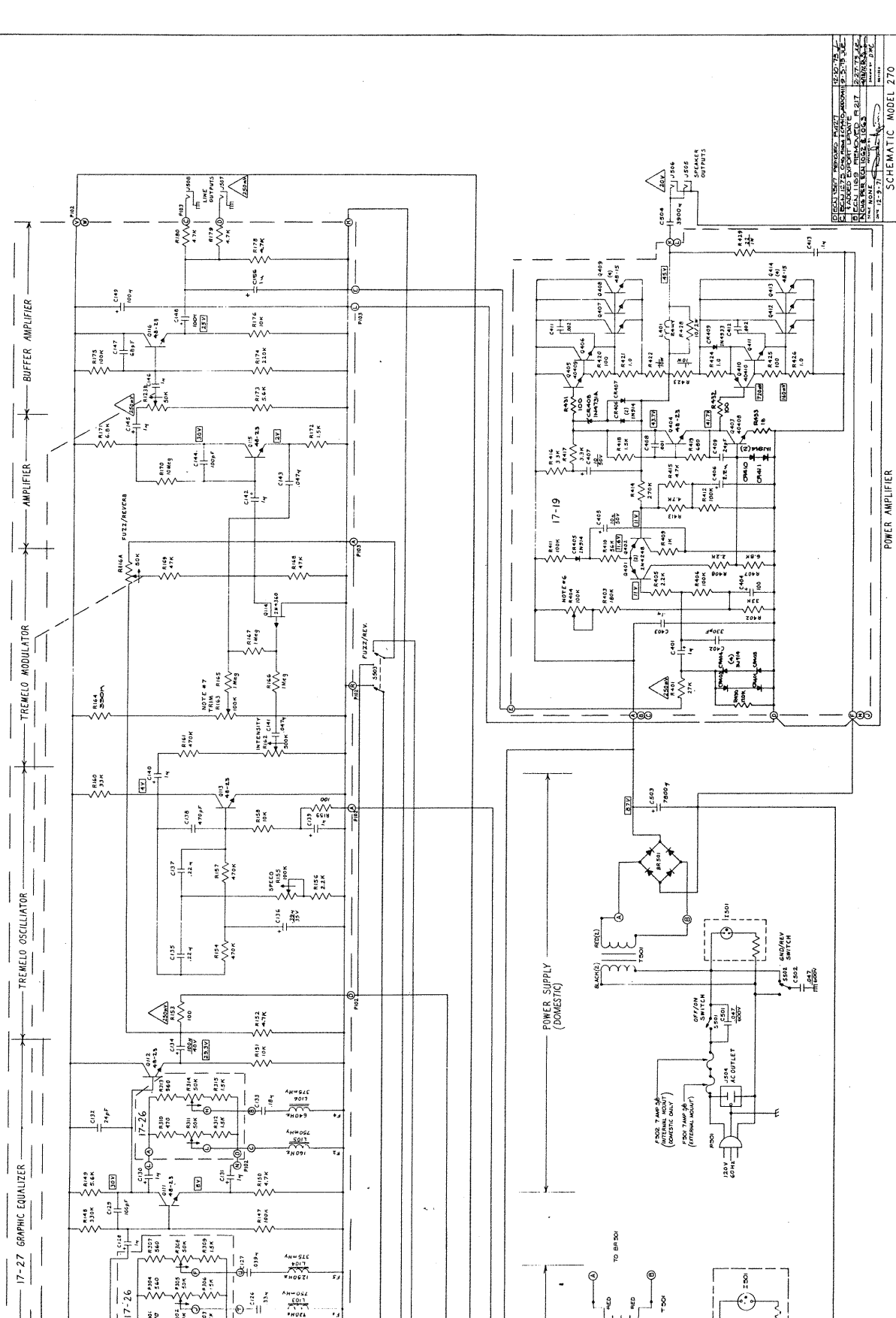
PARTS LIST
 MODEL 270 - POWER SUPPLY, REVERB 830021
 SCHEMATIC 1290D

Schematic Reference	DESCRIPTION	Acoustic Part No.
PCB 2	Printed Circuit Board	170028
Q 201	Transistor, PNP, 2N4248	480032
Q 202	Transistor, NPN, 40408	480003
Q 203	Transistor, NPN, 2N2484	480023
Q 204	Field Effect Transistor, P-Channel, 2N4360	480033
Q 205	Transistor, NPN 40409	480006
Q 206	Transistor, NPN, 2N2484	480023
CR201	Diode, 1N914	480005
CR202	Diode, Zener, 1N4754	480022
C 201	Capacitor, .1mf, 100V, Mylar	152015
C 202	Capacitor, .0027, 100V, Mylar	152002
C 203	Capacitor, 1mf, 50V, Electrolytic	153001
C 204	Capacitor, 50mf, 50V, Electrolytic	153005
C 205	Capacitor, 1mf, 35V, Tantalum	154004
C 206	Capacitor, 24pf, 1KV, Disc	151001
C 207	Capacitor, .0047mf, 100V, Mylar	152004
C 208	Capacitor, 10mf, 50V, Electrolytic	153002
C 209	Capacitor, .047mf, 100V, Mylar	152013
C 210	Capacitor, 10mf, 50V, Electrolytic	153002
C 211	Capacitor, 100mf, 40V	153006
C 212	Capacitor, .01mf, 100V, Mylar	152006
C 213	Capacitor, 1mf, 35V, Tantalum	154004
C 214	Capacitor, 100pf, 1KV, Disc	151003
C 215	Capacitor, .1mf, 100V, Mylar	152015
C 216	Capacitor, 10mf, 50V, Electrolytic	153002
R 201	Resistor, 27K ohm, 1/2 watt	476327
R 202	Resistor, 180K ohm, 1/2 watt	476418
R 203	Resistor, 100K ohm, 1/2 watt	476410
R 204	Resistor, 1.5K ohm, 2 watt	472215
R 205	Resistor, 150 ohm, 1/2 watt	476115
R 206	Resistor, 3.9M ohms, 1/2 watt	476539
R 207	Resistor, 33K ohm, 1/2 watt	476333
R 208	Resistor, 1.5 ohm, 2 watt	472215
R 209	Resistor, 33K ohm, 1/2 watt	476333
R 210	Resistor, 470K ohm, 1/2 watt	476447
R 211	Resistor, 100K ohm, 1/2 watt	476410
R 212	Resistor, 330k ohm, 1/2 watt	476433
R 213	Resistor, 560 ohm, 5 watt	463156
R 214	Resistor, 3.3K ohm, 2 watt	472233
R 215	Resistor, 47K ohm, 1/2 watt	476347
R 216	Resistor, 22K ohm, 1/2 watt	476322
R 218	Resistor, 680 ohm, 1/2 watt	476168
R 219	Resistor, 1.2M ohm, 1/2 watt	476512
R 220	Resistor, 100K ohm, 1/2 watt	476410
R 221	Resistor, 18K ohm, 1/2 watt	476318
R 222	Resistor, 2.7K ohm, 1/2 watt	476227
R 223	Resistor, 470 ohm, 1/2 watt	467147



1. DC VOLTAGE MORE IN FUZZ 3.5V
2. AC VOLTAGE ADD BY R105
3. AC VOLTAGE WILL VARY GREATLY W/ FREQUENCY
4. LOGIC SIGNAL AND FOR AN AVERAGE LEVEL 500-500mV
5. FUZZ INTENSITY IS R105 LEVEL MAX CW
6. FOR APPROX 1V AT J502 (OUTPUT)
7. ADD R113 (VOLUME) FOR 1 VOLT AT J504
8. 4V 400 FOR VOLTAGE DRIPPING 3A LOAD
9. 4V 400 FOR VOLTAGE DRIPPING 3A LOAD
10. 4V 400 FOR VOLTAGE DRIPPING 3A LOAD
11. 4V 400 FOR VOLTAGE DRIPPING 3A LOAD
12. 4V 400 FOR VOLTAGE DRIPPING 3A LOAD
13. 4V 400 FOR VOLTAGE DRIPPING 3A LOAD
14. 4V 400 FOR VOLTAGE DRIPPING 3A LOAD
15. 4V 400 FOR VOLTAGE DRIPPING 3A LOAD
16. 4V 400 FOR VOLTAGE DRIPPING 3A LOAD
17. 4V 400 FOR VOLTAGE DRIPPING 3A LOAD
18. 4V 400 FOR VOLTAGE DRIPPING 3A LOAD
19. 4V 400 FOR VOLTAGE DRIPPING 3A LOAD
20. 4V 400 FOR VOLTAGE DRIPPING 3A LOAD

NOTES:
 1. ALL COMPONENTS IN W/D UNLESS NOTED OTHERWISE.
 2. ALL RESISTORS IN W/D UNLESS NOTED OTHERWISE.



DESIGNED BY	REVISION	DATE
W. J. MOSE	1	12-10-75
CHECKED BY	REVISION	DATE
W. J. MOSE	1	12-10-75
APPROVED BY	REVISION	DATE
W. J. MOSE	1	12-10-75
DATE	BY	REVISION
12-10-75	W. J. MOSE	1

SCHEMATIC MODEL 270
ACOUSTIC CONTROL CORP.

1250 D