

**service manual**

**370**

**BASS AMPLIFIER**

**acoustic control corporation**

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

## 370 TECHNICAL SPECIFICATIONS

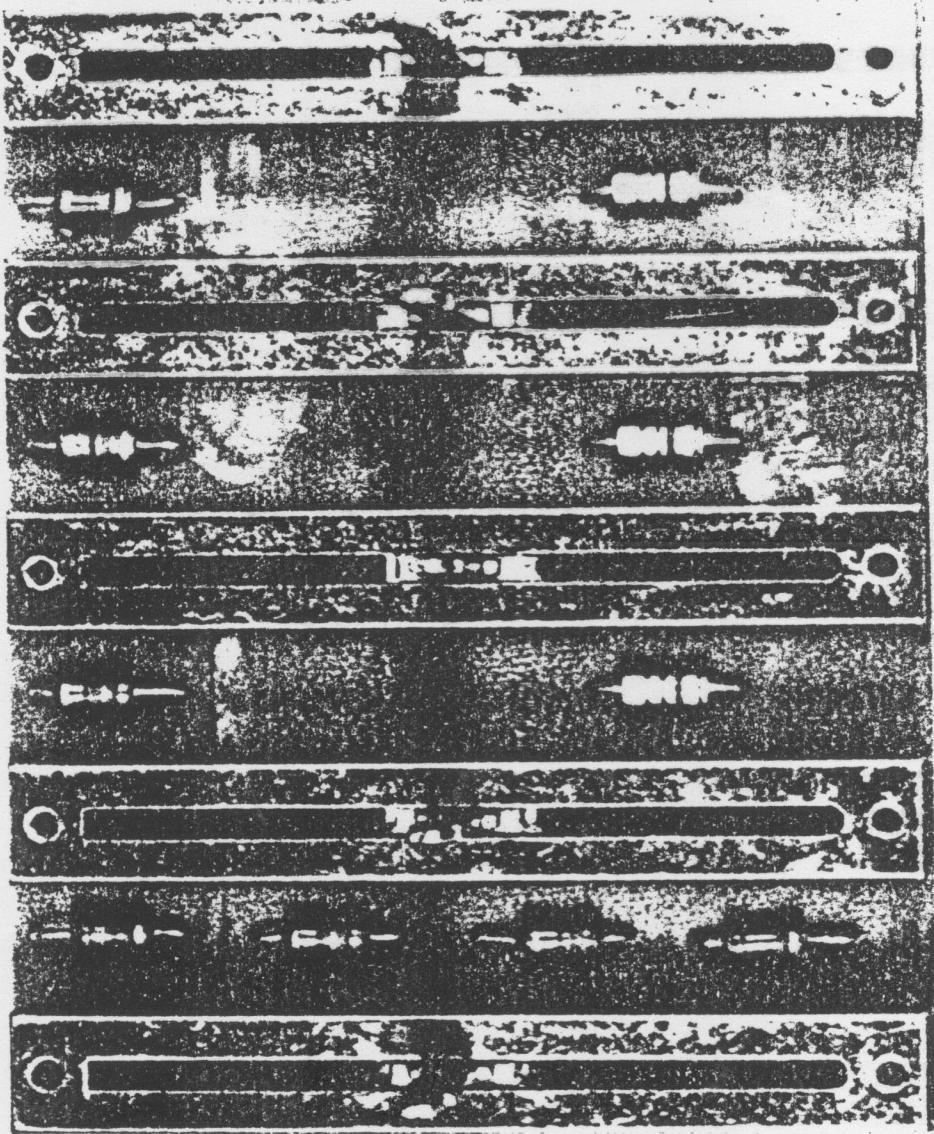
Preamp Gain	19.2X
Nominal Impedance	30K
Signal-to-noise Ratio	Minimum gain -60 dB Maximum gain -50 dB
Minimum Input Voltage for Rated Output	Input 1: 18 mv. Input 2: 56 mv.
Maximum Input Voltage	Input 1: 370 mv. Input 2: 820 mv.
Gain Difference Between Inputs	6 dB
Power Output Measured Across 3.2 Ohm Load @ 5% Distortion	205 watts RMS
Power Output Measured Across 3.2 Ohm Load @ 10% Distortion	230 watts RMS
Power Output Measured Across 1.6 Ohm Load @ 5% Distortion	325 watts RMS
Power Output Measured Across 1.6 Ohm Load @ 10% Distortion	365 watts RMS

\*Rated output on export models is measured at 240v at 60 cycles. Using any lower source will result in a slight power loss, but will not damage the unit in any way.

Frequency Response	-6 dB @ 50 Hz & 17.5 KHz
Line Output Impedance	5000 ohms
Line Output Voltage	250 mv
Power Consumption @ 365 watts	730 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.

PICTORIAL  
MODEL 370 - GRAPHIC EQ ASSEMBLY 830019  
SCHEMATIC 1297D



PARTS LIST  
MODEL 370 - CHASSIS WIRING  
SCHEMATIC 1297D

Schematic Reference	DESCRIPTION	Acoustic Part No.
T 401	Transformer, Power Supply	560014
P 401	A/C Line Cord	600054
F 401	Fuse, 7A SB	510020
F 402	Fuse, 7A Pigtail	510031
None	Fuse Holder	510003
PL401	Pilot Light	390004
S 401	BRT Switch	510017
S 402	On/Off	510022
S 403	Ground/Reverb Switch	510017
J 401	Input Jack #1, Closed	210003
J 402	Input Jack #2, Closed	210003
J 403	A/C Convenience Outlet	210052
J 404	Speaker Jack, Open	210002
J 405	Speaker Jack, Open	210002
J 406	Line Output Jack, Open	210002
J 407	Line Output Jack, Open	152024
C 401	Capacitor, .047mf, 600V	152024
C 402	Capacitor, .047mf, 600V	153013
C 403	Capacitor, 7800mf, 100V	153012
C 404	Capacitor, 3900mf, 80V	153011
C 405	Capacitor, 1000mf, 75V	

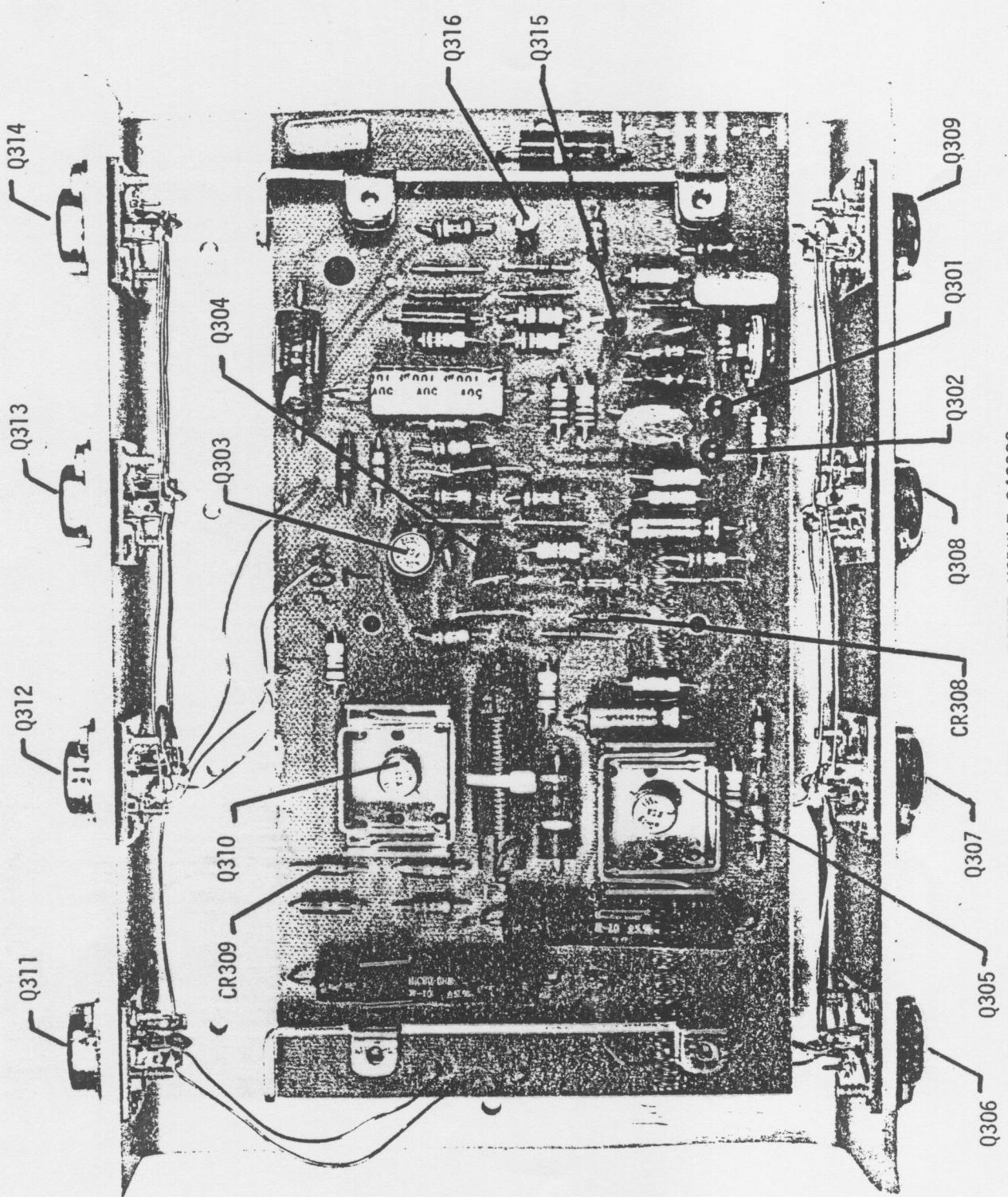
PARTS LIST  
MODEL 370 - PREAMP ASSEMBLY  
SCHEMATIC 1297D

Schematic Reference	Acoustic Part No.	DESCRIPTION
PCB 1	170029	Printed Circuit Board, Pre-Amp.
Q 101	40002J	Transistor, NPN, 2N2404 or MPSA01
Q 102	480032	Transistor, PNP, 2N2428 or 2N4249
Q 103	480023	Transistor, NPN, 2N2484 or MPSA09
Q 104	480023	Transistor, NPN, 2N2484 or MPSA09
Q 105	480023	Transistor, NPN, 2N2484 or MPSA09
Q 106	480023	Transistor, NPN, 2N2484 or MPSA09
Q 107	480023	Transistor, NPN, 2N2484 or MPSA09
Q 108	480023	Transistor, NPN, 2N2484 or MPSA09
Q 109	480023	Transistor, NPN, 2N2484 or MPSA09
C 101	151002	Capacitor, 68pf, Disc, 1KV
C 102	153002	Capacitor, 10mf, Electrolytic, 50V
C 103	154004	Capacitor, 1mf, Tantalum, 35V
C 104	154004	Capacitor, 1mf, Tantalum, 35V
C 105	151002	Capacitor, 68pf, Disc, 1KV
C 106	154004	Capacitor, 1mf, Tantalum, 35V
C 107	154004	Capacitor, 1mf, Tantalum, 35V
C 108	154004	Capacitor, 1mf, Tantalum, 35V
C 109:	152012	Capacitor, .039mf, Mylar, 100V
C 110	152004	Capacitor, .0047, Mylar, 100V
C 111	152013	Capacitor, .047, Mylar, 100V
C 112	154004	Capacitor, 1mf, Tantalum, 35V
C 113	151002	Capacitor, 68pf, Disc, 1KV
C 114	151002	Capacitor, 68pf, Disc, 1KV
C 115	154004	Capacitor, 1mf, Tantalum, 35V
C 116	154004	Capacitor, 1mf, Tantalum, 35V
C 117	151002	Capacitor, 68pf, Disc, 1KV
C 118	154005	Capacitor, 2.2mf, Tantalum, 35V
C 119	154005	Capacitor, 2.2mf, Tantalum, 35V
C 120	152028	Capacitor, .39mf, Mylar, 100V
C 121	152019	Capacitor, .22mf, Mylar, 100V
C 122	154004	Capacitor, 1mf, Tantalum, 35V
C 123	151002	Capacitor, 68pf, Disc, 1KV
C 124	154004	Capacitor, 1mf, Tantalum, 35V
C 125	154004	Capacitor, 1mf, Tantalum, 35V
C 126	152017	Capacitor, .15mf, Mylar, 100V
C 127	153006	Capacitor, 100mf, Electrolytic, 50V
C 128	153006	Capacitor, 100mf, Electrolytic, 50V
C 129	151008	Capacitor, .001mf, Disc, 500V
C 130	154004	Capacitor, 1mf, Tantalum, 35V
L 101	180007	Choke, 6H <sub>V</sub> , {41}
L 102	180007	Choke, 6H <sub>V</sub> , {41}
L 103	180002	Choke, 1.5H <sub>V</sub> , (7197)
L 104	180005	Choke, 750MH, (44)
L 105	180006	Choke, 3H <sub>V</sub> , (45)
L 106	180002	Choke, 1.5H <sub>V</sub> , (7197)
R 101	467310	Resistor, 10K ohm, 1/2 watt
R 102	476322	Resistor, 22K ohm, 1/2 watt

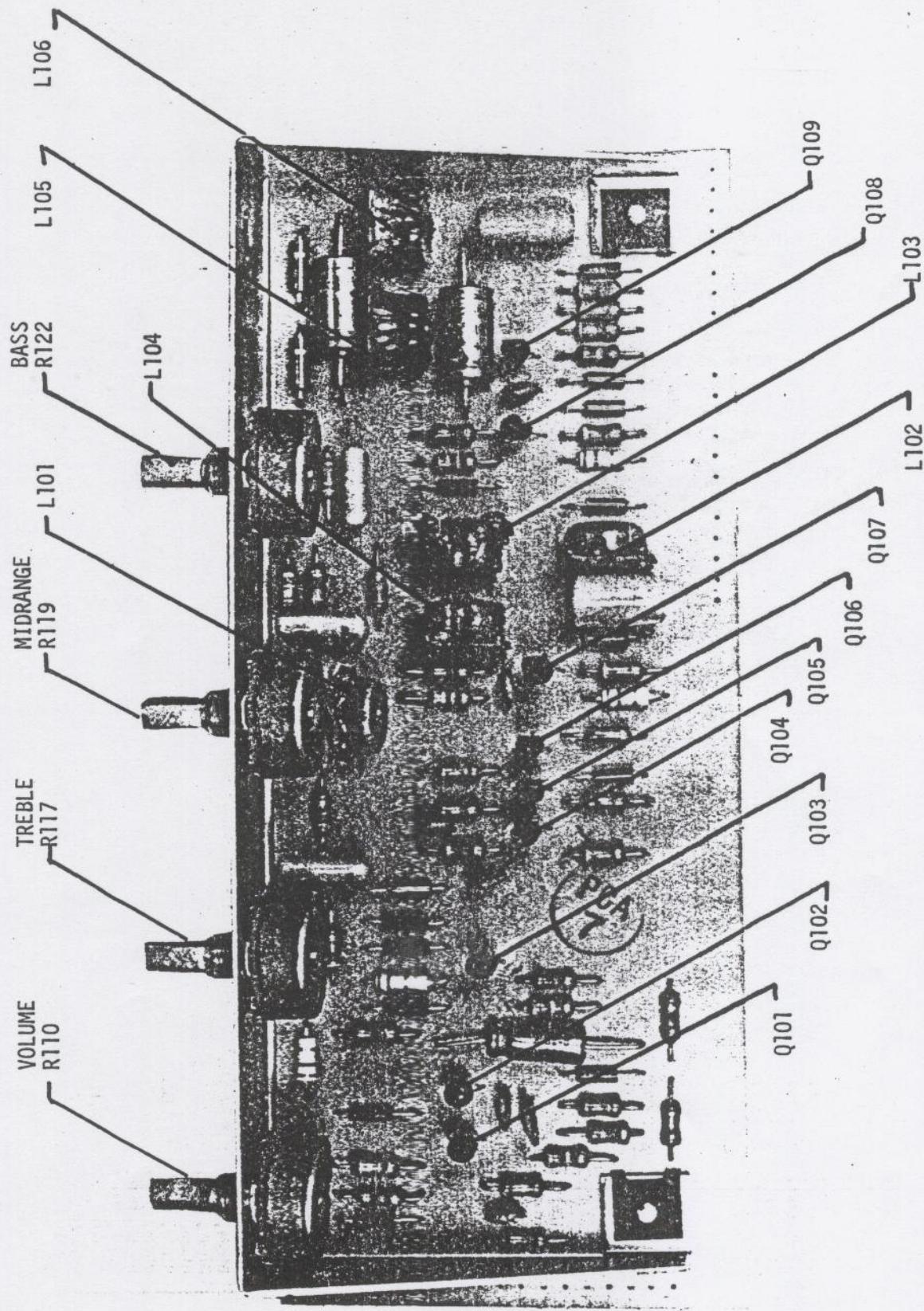
Schematic Reference	Acoustic Part No.	DESCRIPTION
R 103	476447	Resistor, 470K ohm, 1/2 watt
R 104	476610	Resistor, 10M ohm, 1/2 watt
R 105	476056	Resistor, 56 ohm, 1/2 watt
R 106	476310	Resistor, 10K ohm, 1/2 watt
R 107	476333	Resistor, 33K ohm, 1/2 watt
R 108	476310	Resistor, 10K ohm, 1/2 watt
R 109	476156	Resistor, 560 ohm, 1/2 watt
R 110	475019	Potentiometer, 50K ohm, Linear
R 111	476282	Resistor, 8.2K ohm, 1/2 watt
R 112	476422	Resistor, 220K ohm, 1/2 watt
R 113	476447	Resistor, 470K ohm, 1/2 watt
R 114	476310	Resistor, 10K ohm, 1/2 watt
R 115	476310	Resistor, 10K ohm, 1/2 watt
R 116	476233	Resistor, 3.3K ohm, 1/2 watt
R 117	476247	Resistor, 4.7K ohm, 1/2 watt
R 118	476310	Resistor, 10K ohm, 1/2 watt
R 119	475019	Potentiometer, 50K ohm, Linear
R 120	476322	Potentiometer, 50K ohm, Linear
R 121	476247	Resistor, 22K ohm, 1/2 watt
R 122	476256	Potentiometer, 50K ohm, Linear
R 123	476410	Resistor, 5.6K ohm, 1/2 watt
R 124	476410	Resistor, 100K ohm, 1/2 watt
R 125	476582	Resistor, 8.2M ohm, 1/2 watt
R 126	476147	Resistor, 470 ohm, 1/2 watt
R 127	476310	Resistor, 10K ohm, 1/2 watt
R 128	476310	Resistor, 10K ohm, 1/2 watt
R 129	476310	Resistor, 10K ohm, 1/2 watt
R 130	476322	Resistor, 22K ohm, 1/2 watt
R 131	476410	Resistor, 100K ohm, 1/2 watt
R 132	476433	Resistor, 330K ohm, 1/2 watt
R 133	476256	Resistor, 5.6K ohm, 1/2 watt
R 134	476247	Resistor, 4.7K ohm, 1/2 watt
R 135	476410	Resistor, 100K ohm, 1/2 watt
R 136	476433	Resistor, 330K ohm, 1/2 watt
R 137	476256	Resistor, 5.6K ohm, 1/2 watt
R 138	476247	Resistor, 4.7K ohm, 1/2 watt
R 139	476310	Resistor, 10K ohm, 1/2 watt
R 140	476247	Resistor, 4.7K ohm, 1/2 watt
R 141	476247	Resistor, 4.7K ohm, 1/2 watt
R 142	476247	Resistor, 4.7K ohm, 1/2 watt
R 143	476247	Resistor, 4.7K ohm, 1/2 watt
R 144	476222	Resistor, 2.2K ohm, 1/2 watt
R 145	476222	Resistor, 2.2K ohm, 1/2 watt

PARTS LIST  
MODEL 370 - GRAPHIC EQ ASSEMBLY 830019  
SCHEMATIC 1297D

Schematic Reference	DESCRIPTION	Acoustic Part No.
PCB	Printed Circuit Board, Equalizer	170026
R 201	Resistor, 470 ohm, 1/2 watt	476147
R 202	Slide Pot, 50K ohm, Linear	475028
R 203	Resistor, 1K ohm, 1/2 watt	476210
R 204	Resistor, 560 ohm, 1/2 watt	476156
R 205	Slide Pot, 50K ohm, Linear	475028
R 206	Resistor, 1K ohm, 1/2 watt	476210
R 207	Resistor, 680 ohm, 1/2 watt	476168
R 208	Slide Pot, 50K ohm, Linear	475028
R 209	Resistor, 1.5K ohm, 1/2 watt	476215
R 210	Resistor, 470 ohm, 1/2 watt	476147
R 211	Slide Pot, 50K ohm, Linear	475028
R 212	Resistor, 1K ohm, 1/2 watt	476210
R 213	Resistor, 680 ohm, 1/2 watt	476168
R 214	Slide Pot, 50K ohm, Linear	475028
R 215	Resistor, 1.5K ohm, 1/2 watt	476215



MODEL 370 - POWER MODULE 843032  
SCHEMATIC 1297D



PICTORIAL  
MODEL 370 - PREAMP ASSEMBLY 830022  
SCHEMATIC 129D

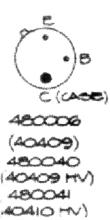
PICTORIAL  
MODEL 370 - POWER MODULE 843032  
SCHEMATIC 1297D

Schematic Reference	DESCRIPTION	Acoustic Part No.
PCB	Printed Circuit Board	
Q 301	Transistor, PNP, 2N4248	170019
Q 302	Transistor, PNP, 2N4248	480032
Q 303	Transistor, NPN, 40408	480032
Q 304	Transistor, NPN, 2N2484 or MPSA09	480003
Q 305	Transistor, NPN, 40409	480023
Q 306	Transistor, NPN, 2N3055	480006
Q 307	Transistor, NPN, 2N3055	480015
Q 308	Transistor, NPN, 2N3055	480015
Q 309	Transistor, NPN, 2N3055	480015
Q 310	Transistor, PNP, 40410	480007
Q 311	Transistor, NPN, 2HJ055	480015
Q 312	Transistor, NPN, 2N3055	480015
Q 313	Transistor, NPN, 2N3055	480015
Q 314	Transistor, NPN, 2N3055	480015
Q 315	Field Effect Transistor, P-Channel, 2N4360	480033
Q 316	Transistor, NPN, 2N2484 or MPSA09	480023
L 301	Choke, 2MHz	180008
C 301	Capacitor, 1mf, Tantalum, 35V	154004
C 302	Capacitor, 330pf, Disc, 1KV	151005
C 303	Capacitor, 1mf, Mylar, 100V	152015
C 304	Capacitor, 100mf, Electrolytic, 50V	153006
C 305	Capacitor, 10mf, Electrolytic, 50V	153002
C 306	Capacitor, 2.2mf, Tantalum, 35V	154005
C 307	Capacitor, 10mf, Electrolytic, 50V	153002
C 308	Capacitor, 24pf, Disc, 1KV	151001
C 309	Capacitor, .001mf, Disc, 1KV	151008
C 311	Capacitor, .002, Disc, 1KV	151010
C 312	Capacitor, .002, Disc, 1KV	151010
C 313	Capacitor, .1mf, Mylar, 100V	152015
C 314	Capacitor, .003mf, Disc, 1KV	151012
C 315	Capacitor, 6.8mf, Tantalum, 35V	154006
CR301	Diode, 1N914	480005
CR302	Diode, 1N914	480005
CR303	Diode, 1N914	480005
CR304	Diode, 1N914	480005
CR305	Diode, 1N914	480005
CR306	Diode, 1N914	480005
CR307	Diode, 1N914	480005
CR308	Diode, 1N4731A CR 1N5229	480036
CR309	Diode, 1N4933	480028
CR310	Diode, 1N914	480005
CR311	Diode, 1N914	480005
R 301	Resistor, 27K ohm, 1/2 watt	476327
R 302	Resistor, 33K ohm, 1/2 watt	476333
R 303	Resistor, 180K ohm, 1/2 watt	476418
R 304	Triimpot, 100K ohm, Linear	475009
R 305	Resistor, 100K ohm, 1/2 watt	476410

Schematic Reference	DESCRIPTION	Acoustic Part No.
R 306	Resistor, 2.2K ohm, 1/2 watt	476222
R 307	Resistor, 6.8K ohm, 1/2 watt	476268
R 308	Resistor, 2.2K ohm, 1/2 watt	476222
R 309	Resistor, 56K ohm, 1/2 watt	476356
R 310	Resistor, 100K ohm, 1/2 watt	476410
R 311	Resistor, 1K ohm, 1/2 watt	476210
R 312	Resistor, 100K ohm, 1/2 watt	476410
R 313	Resistor, 4.7K ohm, 1/2 watt	476247
R 314	Resistor, 270K ohm, 1/2 watt	476427
R 315	Resistor, 4.7K ohm, 1/2 watt	476247
R 316	Resistor, 3.3K ohm, 1/2 watt	476233
R 317	Resistor, 3.3K ohm, 1/2 watt	476233
R 318	Resistor, 1.5K ohm, 1/2 watt	476121
R 319	Resistor, 680 ohm, 1/2 watt	476168
R 320	Resistor, 100 ohm, 1/2 watt	476110
R 321	Resistor, 1 ohm, 1/2 watt	478001
R 322	Resistor, 1 ohm, 10 watt	468810
R 323	Resistor, 1 ohm, 10 watt	468810
R 324	Resistor, 1 ohm, 1/2 watt	478001
R 325	Resistor, 100 ohm, 1/2 watt	476110
R 326	Resistor, 1 ohm, 1/2 watt	478001
R 327	Resistor, .05 ohm, 5 watt	467750
R 328	Resistor, 10 ohm, 2 watt	472010
R 329	Resistor, 22 ohm, 2 watt	472022
R 330	Resistor, 6.8M ohm, 1/2 watt	476568
R 331	Resistor, 1M ohm, 1/2 watt	476510
R 332	Resistor, 1M ohm, 1/2 watt	476510
R 333	Resistor, 10K ohm, 1/2 watt	476310
R 334	Resistor, 1M ohm, 1/2 watt	476310
R 335	Resistor, 27K ohm, 1/2 watt	476327
R 336	Resistor, 390 ohm, 1/2 watt	476139
R 337	Resistor, 270 ohm, 1/2 watt	476127
R 338	Resistor, 120K ohm, 1/2 watt	476412
R 339	Resistor, 100 ohm, 1/2 watt	476110
R 340	Resistor, 100 ohm, 1/2 watt	476110
R 341	Resistor, 18 ohm, 1/2 watt	476018

for Acoustic amps:

RCA transistors



480006  
(40409)  
480040  
(40409 HV)  
480041  
(40410 HV)



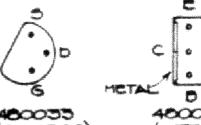
480023



480024  
(2N3457)  
(MPF102)



480032  
(CN4248)



480033  
(2N4360)



480059  
(MJE341)

TRANSISTOR  
VIEWS

BOTTOM

Information on this page is provided "as is" and no guarantee is implied including "suitability of purpose". Use this information at your own risk. Certain facts or details may have been omitted in order to provide abbreviated information.

2n2448 can be replaced with 2n4401

2n4246 can be replaced with 2n5401

Always replace bias servo transistor if output(s) were shorted.

EQ PCB # 170076 to 170084: there may be intermittent low f oscillation (motor boating)

after unit is turned off. Change R8, R9 from 100k to 22k.

Acoustic 220 notes: The model has the preamp stage of the 370 and the output stage of the 320.

Original 300 series amps develop intermittent crackling or odd distortions.

- replace all tantalum decoupling caps on all PCBs.

Output transistors are RCA 2n3055 do not substitute high speed transistors - can use 2n3773

Some units do not have CR310 mr2361 dual diode, but have two 1n914 diodes in series. Dual diode sub is 1n3886

REMEMBER the amp output is capacitor coupled and will have a DC offset unless it is slightly loaded to discharge the cap.

Adjust R 304 for even clipping on waveform in 8 ohms. Adjustment will float and takes time to stabilize.

40408 sub is 2n3053

2n4360 pfet sub is 2n5462

100-ohm resistors to driver transistors tend to open or change value with shorted outputs.

370 notes: Q304 is 2n2222

If amp 'motorboats' at the Q section check R 131- may be out of tolerance.

Transistor cross-references:

480037=2N3773

480056=2N6474

480057=2N6476

480059=MJE341

480060=originally 2N3055 select / upgrade with 2N3773 (match preferred)

480071=2N5416

480072=2N3440

480073=2N6211

480074=2N3584

480075=2SD555 or MJ15024 (used on B series amps not older versions)

480076=MPSA56