MusicParts.Com

Technical Document Distribution

Brand:	**Acoustic**
Model	**G60T**
Product:	**Tube Guitar Amplifier**
Description:	**Service Manual**

Musicparts Document Number: 44315 TechTips: No Pages: 16 Dated: 1981

Hello,
Welcome to MusicParts.Com, Inc. your online resource for technical documents and service information. This PDF package may contain information, schematics, parts lists, images, engineering changes, previous versions, circuit descriptions, and many other unique features about the product you have chosen. This document was assembled from a variety of sources and is the result of our many years in the music repair business.

TECHTIPS: Unique to Musicparts documents are **TECHTIPS** located in critical areas on the schematics. They contain useful information about that area of the schematic such as common problems that we have found and recommended changes. Not all documents will have TechTips.

NOTE: Large original over-sized drawings will need to be taped together. We feel this is better than reducing them and losing fine details.

VIEWING: This document is utilizing PAGE-ON-DEMAND downloading. This will let you navigate to any page without waiting for the entire file to download.

PRINTING: For the best quality, we highly recommend that when the print dialog appears, please **make sure "SHRINK OVERSIZED PAGES " is checked**., otherwise you may cut off the edge of the page. Also please stay online while printing this document to make sure you get all the pages.

Visit us on the web at: http://www.musicparts.com/
Email us at: customerservice@musicparts.com

© 2005 MusicParts.Com, Inc.

SERVICE MANUAL

acoustic

G60T

MusicParts.Com

acoustic control corporation

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

G60T

I. General Information

A. Description
B. Specifications

II. Schematics and Illustrations

A. Pre-Amp Schematic
B. Power Amp Schematic
C. Power Supply Schematic
D. Front Panel
E. Rear Panel

III. Parts List

MusicParts.Com

I. General Information

A. Description

Features:

Two input jacks, dual volume controls with LED indicators for lead and rhythm settings.

Bright switch, treble, midrange and bass controls.

Output of both channels is determined by a single master volume control.

Reverb and the dual volume controls are footswitchable (footswitch provided).

Will accept 120 or 240 volt supply

Dimensions: 18" H x 22" W x 10-1/2" D

Shipping Weight: 60 pounds

MusicParts.com

G60T

1. General Information

B. Specifications

1. Power Output . . . . . 60 watts RMS at 5% THD into 4/8 ohms.

2. Input jacks

	Sensitivity for full output	Input Impedance
Volume 1, Hi-mode	45 MV	1 meg ohms
Volume 1, Low-mode	90 MV	30 K ohms
Volume 2, Hi-mode	1 MV	1 meg ohms
Volume 2, Low-mode	2 MV	30 K ohms

3. Output jacks

	Level	Output Impedance
Preamp	2.0 V	50 K ohms
Speaker	60 watts RMS	4/8 ohms

3. Signal to Noise Ratio

	Below Rated Output
Volume 1 and 2 controls, fully clockwise	-68 db in Volume 1 mode
Master Volume Control, fully clockwise	-50 db in Volume 2 mode

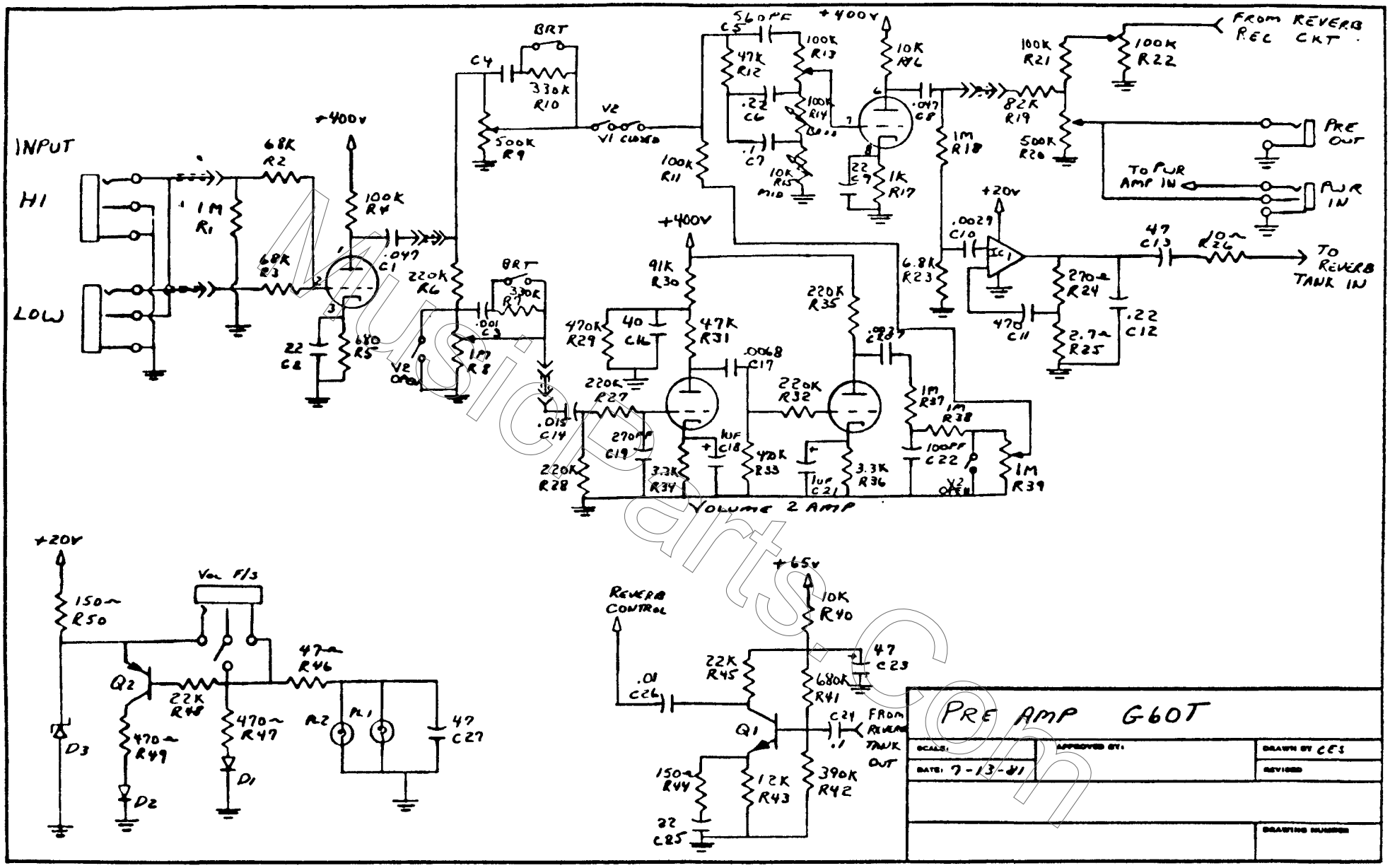
Tone controls at mid position (12 o'clock)

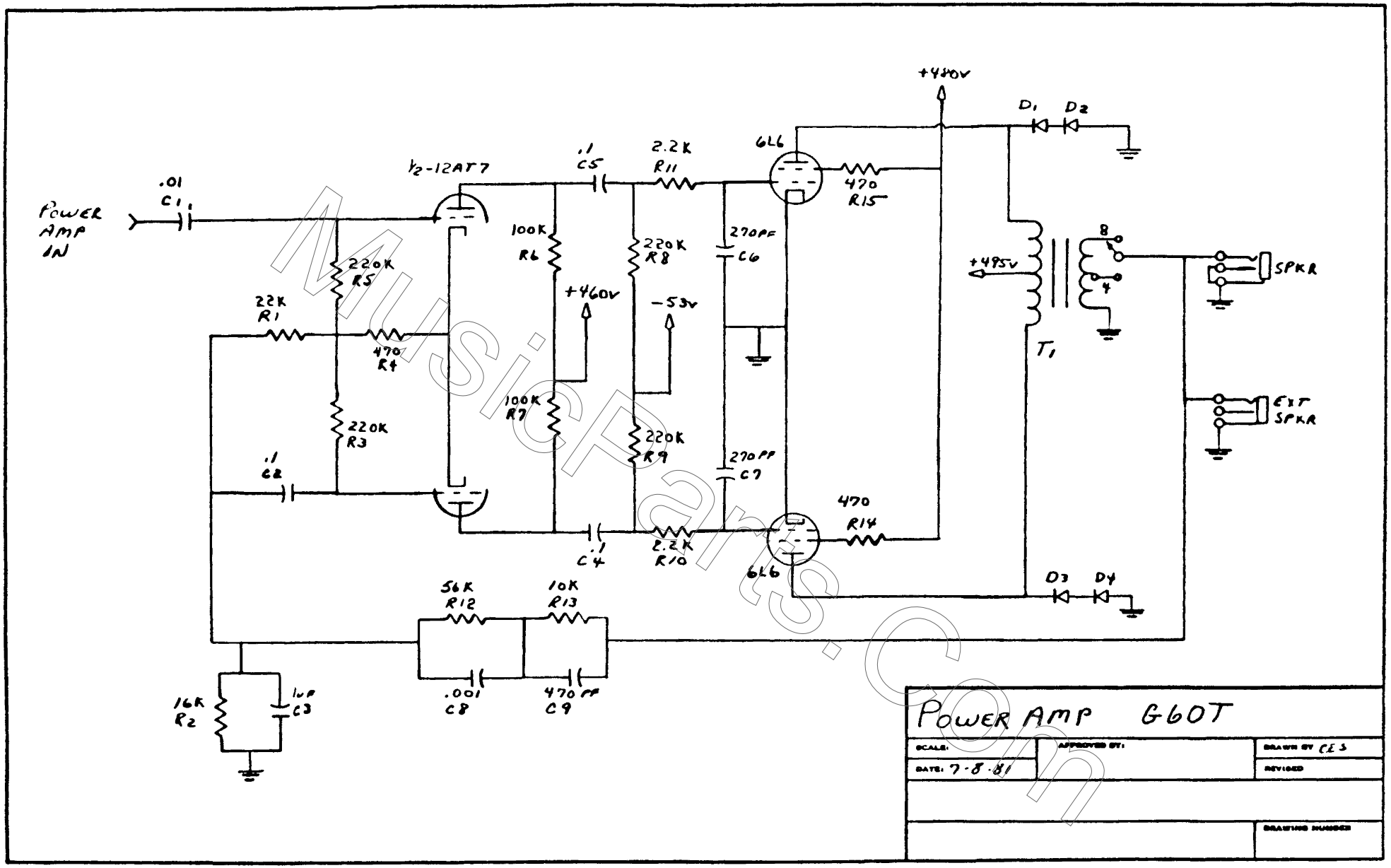
Reverb Off

Master Volume Control

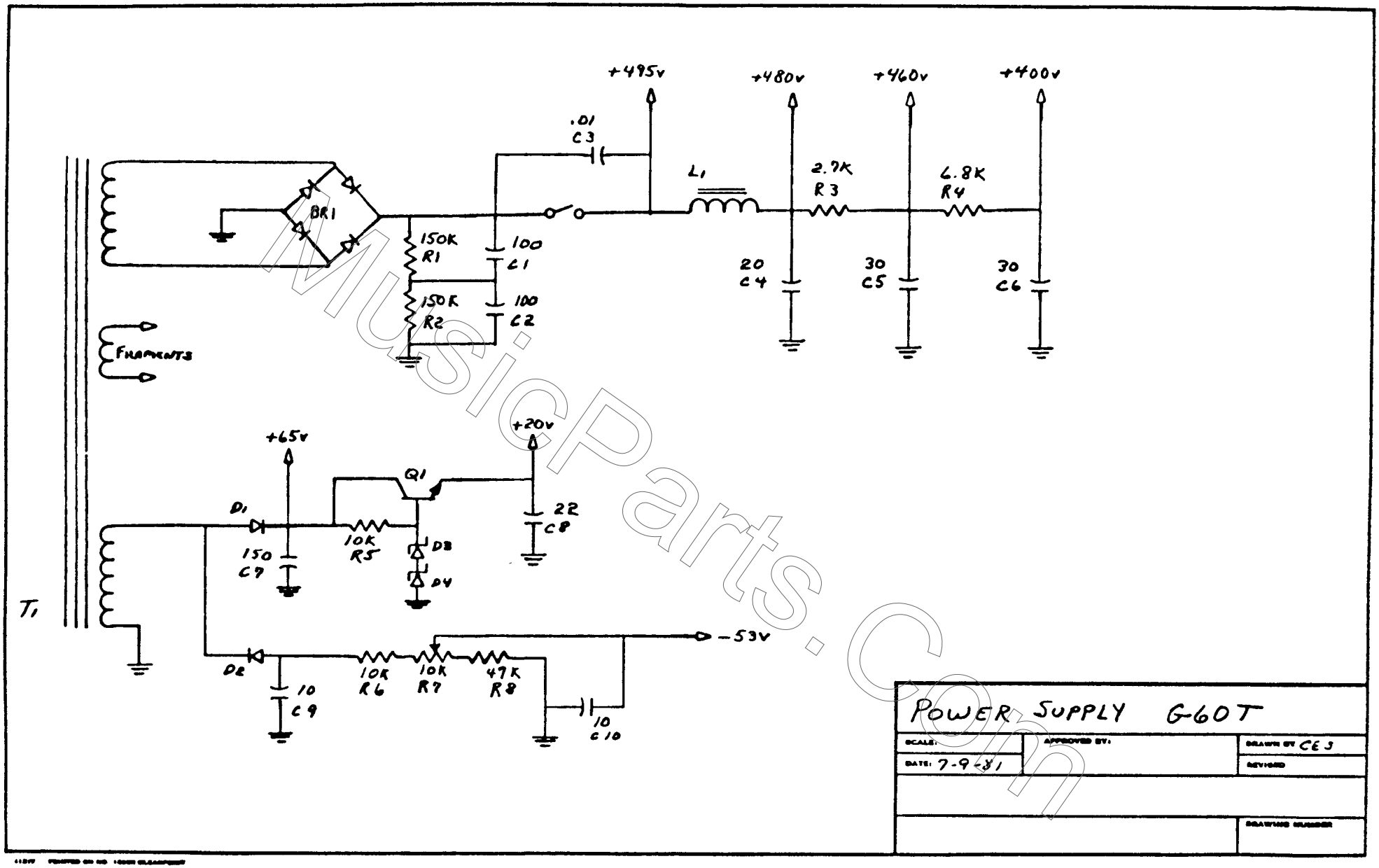
Set at fully counter-clockwise position -86 db in either Volume 1 or Volume 2 mode.

MusicParts.com


INPUT
HI
LOW
1M R1
68K R2
68K R3
100K R4
.047 C1
220K R6
680 R5
22 C2
+400V
BRT
C4
330K R10
500K R9
V2
V1 CLOSED
V2 OPEN
.001 C3
330K R7
1M R8
100K R11
560PF C5
47K R12
100K R13
.22 C6
100K R14
.1 C7
10K R15
MID
10K R16
.047 C8
22 C9
1K R17
1M R18
82K R19
100K R21
100K R22
500K R20
FROM REVERB REC CKT.
PRE OUT
TO PWR AMP IN
PWR IN
+20V
.0029 C10
470 C11
6.8K R23
270Ω R24
2.7Ω R25
.22 C12
47 C13
10Ω R26
TO REVERB TANK IN
91K R30
470K R29
40 C16
47K R31
220K R27
.0068 C17
.015 C14
270PF C19
1UF C18
220K R28
3.3K R34
47K R33
220K R35
.022 C15
220K R32
1M R37
1M R38
100PF C22
1UF C21
3.3K R36
1M R39
V2 OPEN
VOLUME 2 AMP
+20V
150Ω R50
VOL F/S
47Ω R46
Q2
22K R48
470Ω R49
470Ω R47
D3
D2
D1
R2
PL1
47 C27
+65V
REVERB CONTROL
10K R40
22K R45
680K R41
47 C23
.01 C26
Q1
C24
.1
FROM REVERB TANK OUT
150Ω R44
12K R43
390K R42
22 C25
PRE AMP G60T
SCALE:
APPROVED BY:
DRAWN BY CES
DATE: 7-13-81
REVISED
DRAWING NUMBER



MusicParts.com



POWER SUPPLY G-60T

SCALE:	APPROVED BY:	DRAWN BY CE J
DATE: 7-9-81		REVISED
		DRAWING NUMBER

MusicParts.com

Front Panel

1. & 2.	Input Jacks	Both are standard 1/4" phone jacks, the number one input (hi-gain) is for single guitar usage. (Input impedance is one megohm). The number two jack (low gain is minus 6 db. When using only 1 guitar one input impedance is 150 K ohms. When using both inputs at the same time, the jacks are equal.
3.	Volume 1 Indicator . .	When this red LED is lit, the amp is in the rhythm or clean mode. Volume 1 control is activated and the drive/Volume 2 control is deactivated.
4.	Volume 1 Control . . .	A continuously variable pre-volume control that works in conjunction with the master volume control (13).
5.	Volume 2 Control . . .	A continuously variable volume control that works in conjunction with the drive (6) and master (13) controls.
6.	Drive Control	A continuously variable control that adjusts the amount of distortion and/or gain in the Volume 2 mode.
7.	Volume 2 Indicator . .	When this red LED is lit, the amp is in the lead or overdrive mode. The drive and Volume 2 controls are activated and the Volume 1 control is deactivated.
8.	Brite Switch	When depressed, boosts the high frequencies in Volume 1 mode. Becomes less effective as Volume 1 or drive control is increased, depending on mode.
9.	Trebles	From the mid position (12 o'clock) cuts the high frequencies in the counter-clockwise direction, boosts the high frequencies in the clockwise direction.
10.	Midrange	From the mid position (12 o'clock) cuts the midranged frequencies in the counter-clockwise direction, boosts the midrange frequencies in the clockwise direction.

MusicParts.com

Front Panel (continued)

11. Bass . . . . . From the mid position (12 o'clock) cuts the low frequencies in the counter-clockwise direction and boosts the low frequencies in the clockwise direction.

12. Reverb . . . . . A footswitchable control that varies the amount of reverberation.

13. Master Volume Control. Controls the volume of the amplifier in either Volume 1 or Volume 2 mode.

14. Volume Selector Switch. Sets mode of amplifier desired. Volume 1 position being clean or rhythm and Volume 2 being overdrive or lead.

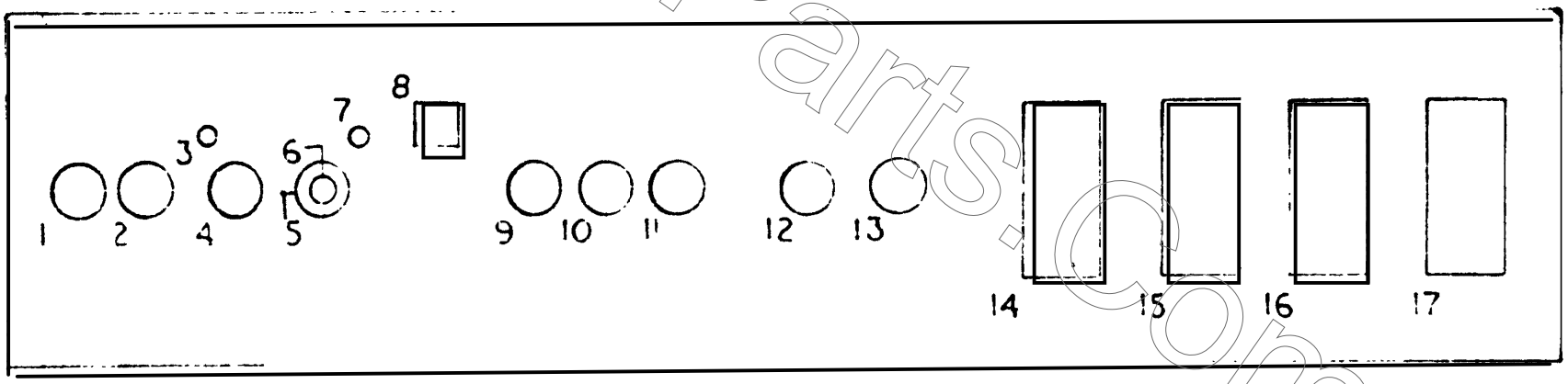
15. Ground Reverse Switch.. This switch can, under some conditions, reduce or eliminate a persistant hum or click in the strings. Set the switch in whichever position that reduces or eliminates the problem.

16. Standby Switch . . . . This switch activates the amplifier if the power switch has been turned on. The purpose of this switch is to conserve energy consumption when not in actual use. This is accomplished by removing the B+ but allowing a voltage to all tubes. This allows the immediate usage of the amplifier without awaiting a warm-up period.

17. Power Switch . . . . An A/C on/off switch.

MusicDoctor.com

FRONT PANEL MODEL G60T



MusicParts.com

REAR PANEL

1. AC Line Fuse . . . . . A 1-1/2 amp Slo-Blow fuse

2. Spare Fuse Holder . . . . . A 1-1/2 amp Slo-Blow fuse holder, which is not connected. This is provided as a convenience to store a spare fuse.

3. Reverb Footswitch Jack . . A phone jack is provided for connection of a footswitch to enable remote on/off operation of the reverb.

4. Volume Footswitch Jack . . A phone jack is provided for connection of a footswitch to enable activation or deactivation of Volume 2 remotely.

5. Preamp Output Jack . . . A phone jack is provided for an additional power amp or recording output connections. This output is designed to drive a load impedance of 50 K ohms or greater.

6. Power-In . . . . . A 1/4" switching jack is provided for external accessory connection, such as pre-recorded material or another preamp. Insertion of a plug into this connector will break the normal connection between the preamp and power amp. The input level required at this jack for full output is 2 volts.

7. External Speaker . . . . . A 1/4" phone jack is provided for connection to an external speaker. This jack should not be used without a speaker connected to the normal speaker jack. The impedance at this jack should not be less than 8 ohms.

   Note: When a 8 ohm external speaker is used, in conjunction with the normal speaker, the impedance selector switch should be in the 4 ohm position.

8. Speaker . . . . . A 1/4" phone jack is provided for connection to the internal speaker or any speaker load.

MusicPartsCom

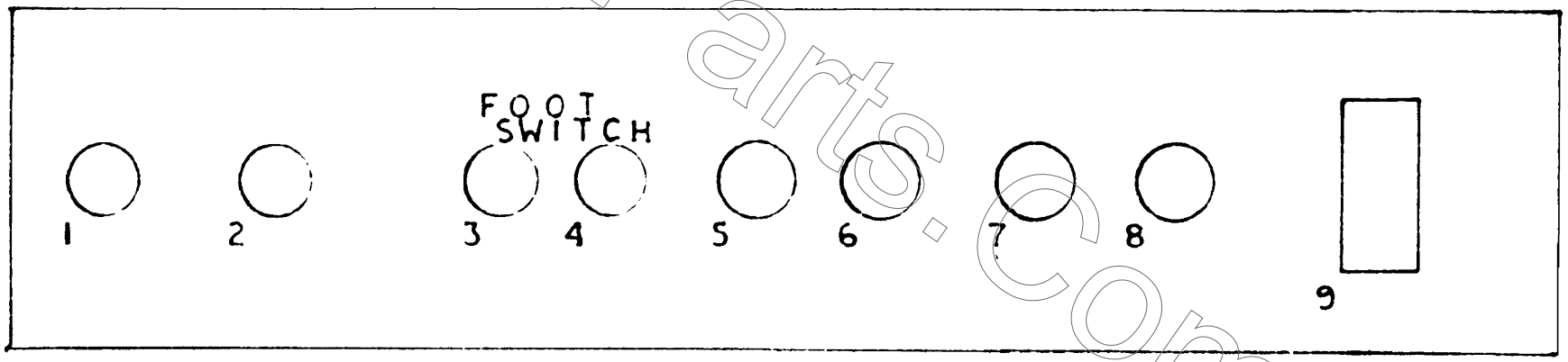
9. Speaker Impedance Switch . This switch should set in accordance with the total load impedance between the speaker and external speaker jacks.

   Note: The amplifier should be turned off when changing position of this switch.

Note: A speaker must be plugged into the speaker jack for the amplifier to work. If a speaker is plugged into the extension jack only, NO SOUND WILL COME OUT.

MusicParts.com

REAR PANEL G60T



MusicParts.com

PART LIST

MODEL G60T (Pre-Amp)

SCHEMATIC REFERENCE	DESCRIPTION	ACOUSTIC PART NO.
R1, 18, 37, 38	Resistor, 1/2W, 1 meg, 5%	476510
R2-3	Resistor, 1/2W, 68K, 5%	476368
R4, 11, 12	Resistor, 1/2W, 100K, 5%	476410
R5	Resistor, 1/2W, 680ohms, 5%	476168
R6, 27, 28, 32, 35	Resistor, 1/2W, 220K, 5%	476422
R7-10	Resistor, 1/2W, 330K, 5%	476433
R8-39	Pot, Rotary, Dual 1meg	475064
R9	Pot, Rotary, 500K Lin	475071
R12, 31	Resistor, 1/2W, 47K, 5%	476347
R13, 14	Pot, Rotary, 100K Log	475062
R15	Pot, Rotary, 10K Log	475067
R16, 40	Resistor, 1/2W, 10K, 5%	476310
R17	Resistor, 1/2W, 1K, 5%	476210
R19	Resistor, 1/2W, 82K, 5%	476382
R20	Pot Rotary, 500K, Lin	475071
R22	Pot Rotary, 100K, Lin	475056
R23	Resistor, 1/2W, 6.8K, 10%	474268
R24	Resistor, 1/2W, 270ohm, 5%	476127
R25	Resistor, 1/2W, 2.7ohms, 5%	476927
R26	Resistor, 2W, 10 ohm, 10%	472010
R29 & 33	Resistor, 1/2W, 470K, 5%	476147
R30	Resistor, 1/2W, 91K, 5%	476391
R34, 36	Resistor, 1/2W, 3.3K, 5%	476233
R41	Resistor, 1/2W, 680K, 5%	476468
R42	Resistor, 1/2W, 39K, 5%	476339
R43	Resistor, 1/2W, 1.2K, 5%	476212
R44 & 50	Resistor, 1W, 150 ohm, 5%	461014
R45, 48	Resistor, 1/2W, 22K, 5%	476322
R46	Resistor, 1/2W, 47 ohm, 5%	476047
R47, 49	Resistor, 1/2W, 470 ohm, 5%	476147

SCHEMATIC REFERENCE	DESCRIPTION	ACOUSTIC PART NO.
C1, 8	Capacitor, Poly, .047UF, 400 V	151021
C2, 25	Capacitor, Elect, 22UF, 50 V	159005
C3	Capacitor, Disc, .001UF, 500 V	157011
C4	Capacitor, Disc, .0015UF, 500V	157012
C5	Capacitor, Disc, 560PF, 500 V	157017
C6, 12	Capacitor, Poly, .22UF, 100 V	152027
C7	Capacitor, Poly, .1UF, 100 V	158005
C9	Capacitor, Elect, 22UF, 50 V	159005
C10, 20	Capacitor, Disc, .0027UF, 500 V	157013
C11	Capacitor, Elect, 500UF, 6V	153009
C13, 27	Capacitor, Elect, 47UF, 50 V	159006
C14	Capacitor, Poly, .015UF, 100 V	158001
C16	Capacitor, Elect, 40UF, 350 V	159017
C17	Capacitor, Disc, .0068UF, 500 V	157015
C18, 21	Capacitor, Elect, 1UF, 50 V	159001
C19	Capacitor, Disc, 270PF, 500 V	157008
C22	Capacitor, Disc, 100PF, 500 V	157006
C23	Capacitor, Elect, 47UF	159006
C24	Capacitor, Poly, .1UF, 400 V	151022
C26	Capacitor, Disc, .01UF, 500 V	157016
Q 1	Transistor, Signal	480038
Q 2	Transistor, Signal	480032
IC 1	IC Power Amp	480070
D 1, 2	Rectifier, Diode	480048
PL-1	Vactec Uptoisolator	370002

Mcintosh Parts.com

PART LIST

MODEL G60T (Power Amp)

SCHEMATIC REFERENCE	DESCRIPTION	ACOUSTIC PART NO.	SCHEMATIC REFERENCE	DESCRIPTION	ACOUSTIC PART NO.
C 1	Capacitor, Disc, .01UF, 500V	157016	R 1	Resistor, 1/2W, 22K, 5%	476322
C 2	Capacitor, Poly, .1UF, 100V	158001	R 2 & 13	Resistor, 1/2W, 10K, 5%	476310
C 3	Capacitor, Elect, 1UF, 50V	159001	R 3,5,8,9	Resistor, 1/2W, 220K, 5%	476422
C 4-5	Capacitor, Elect, .1UF, 400V	151022	R 4, 14,15	Resistor, 1/2W, 470K, 5%	476447
C 6-7	Capacitor, Disc, 270PF, 500V	157008	R 6 - 7	Resistor, 1/2W, 100K, 5%	476410
C 8	Capacitor, Disc, .001UF, 500V	157011	R 10-11	Resistor, 1/2W, 2.2K, 5%	476222
C 9	Capacitor, Disc, 470PF, 500V	151006	R 12	Resistor, 1/2W, 56K, 5%	476356
T1	Transformer, Output	560039	D 1,2,3,4	Rectifier, Diode	480048

MusicParts.Com

PART LIST

MODEL G60T (Power Supply)

SCHEMATIC REFERENCE	DESCRIPTION	ACOUSTIC PART NO.	SCHEMATIC REFERENCE	DESCRIPTION	ACOUSTIC PART NO.
T 1	Transformer	560040	C 1-2	Capacitor, Elect, 100UF, 300 V	159016
BR1	Rectifier, Bridge	480081	C 3	Capacitor, Elect, .01UF, 1.4KV	151015
D 1-2	Rectifier, Diode	480028	C 4	Capacitor, Elect, 20UF, 500 V	153039
D 3-4	Rectifier, Zener	480086	C 5-6	Capacitor, Elect, Dual 40UF, 500V	153038
L 1	Transformer, Filter	560032	C 7	Capacitor, Elect, 150UF, 80 V	159022
R 1-2	Resistor, 1W, 150K, 10%	474415	C 8	Capacitor, Poly	152027
R 3	Resistor, 5W, 2.7K, 10%	463227		22UF, 100 V	
R 4	Resistor, 1W, 6.8K, 10%	474268			
R 5-6	Resistor, 1/2W, 10K, 5%	476310	C 9-10	Capacitor, Elect	159008
R 7	Pot, Trim, 10K, Lin	475008		10UF, 100 V	
R 8	Resistor, 1/2W, 47K, 5%	476347	Q 1	Transistor, Drive	480056

AcousticParts.Com