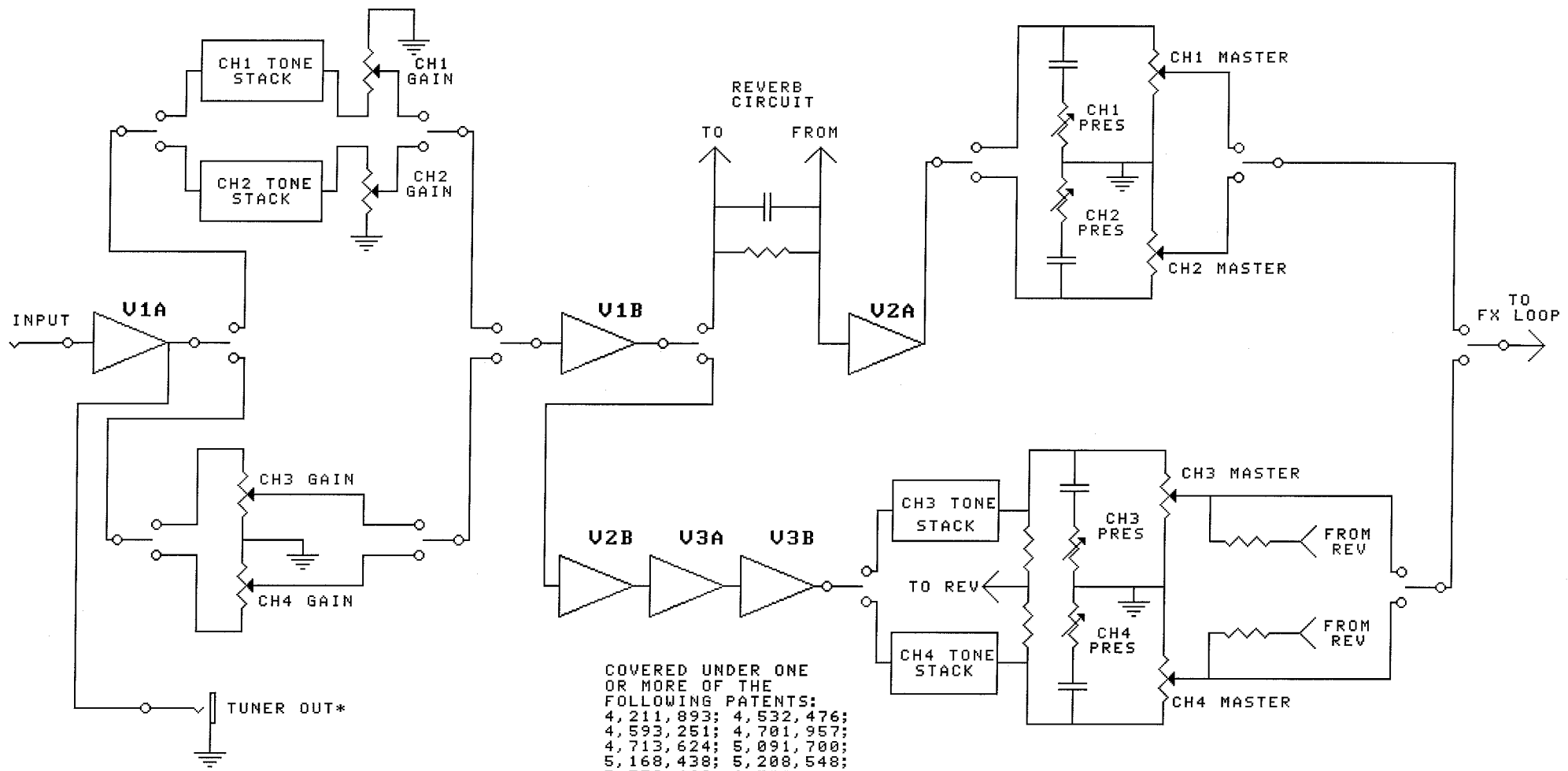




# MESA/BOOGIE ROADSTER

## BLOCK DIAGRAM PT1

FILE: RDSTRBLK.S01  
 DATE: 7/10/2006  
 DRAWN BY: JOHN M  
 PAGE: 1 OF 11  
 BOARD REV: ROADSTER 2



\*ROADSTER 2 REV

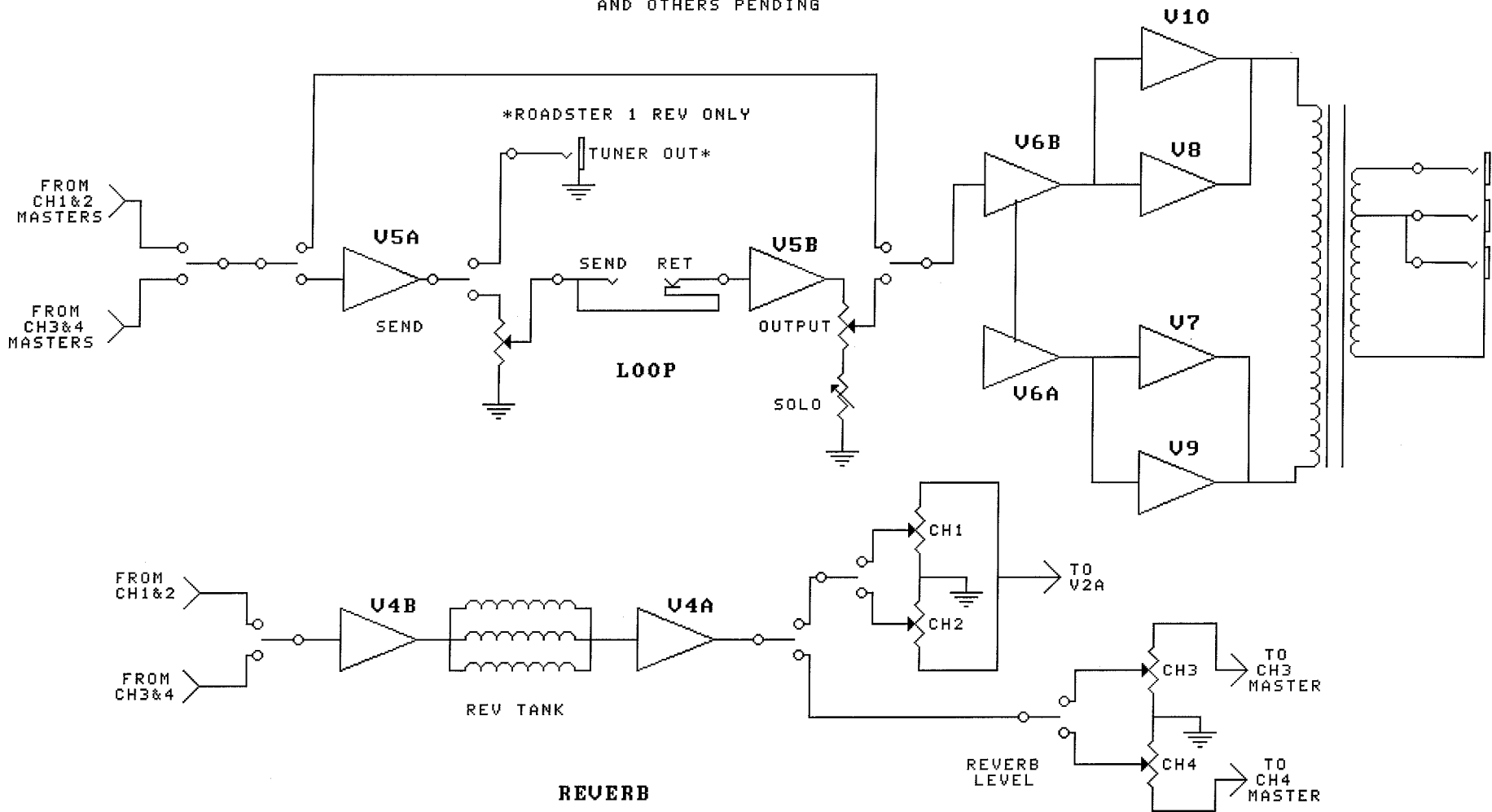
COVERED UNDER ONE  
 OR MORE OF THE  
 FOLLOWING PATENTS:  
 4,211,893; 4,532,476;  
 4,593,251; 4,701,957;  
 4,713,624; 5,091,700;  
 5,168,438; 5,208,548;  
 5,559,469; 6,522,752;  
 6,621,907; 6,724,897  
 AND OTHERS PENDING

# MESA/BOOGIE ROADSTER

## BLOCK DIAGRAM PT2

FILE: RDSTRBK2.S01  
 DATE: 7/10/2006  
 DRAWN BY: JOHN M  
 PAGE: 2 OF 11  
 BOARD REV: ROADSTER 2

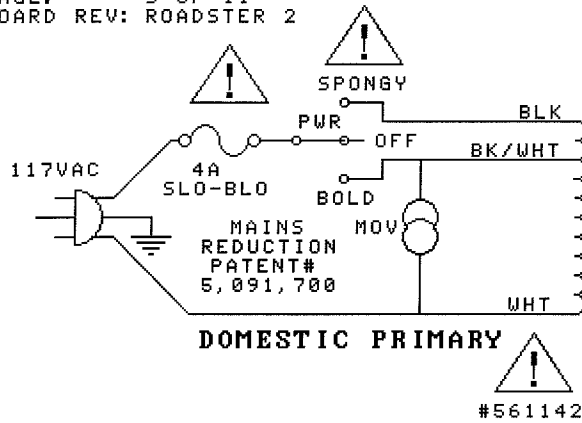
COVERED UNDER ONE  
 OR MORE OF THE  
 FOLLOWING PATENTS:  
 4,211,893; 4,532,476;  
 4,593,251; 4,701,957;  
 4,713,624; 5,091,700;  
 5,168,438; 5,208,548;  
 5,559,469; 6,522,752;  
 6,621,907; 6,724,897  
 AND OTHERS PENDING



# MESA/BOOGIE ROADSTER

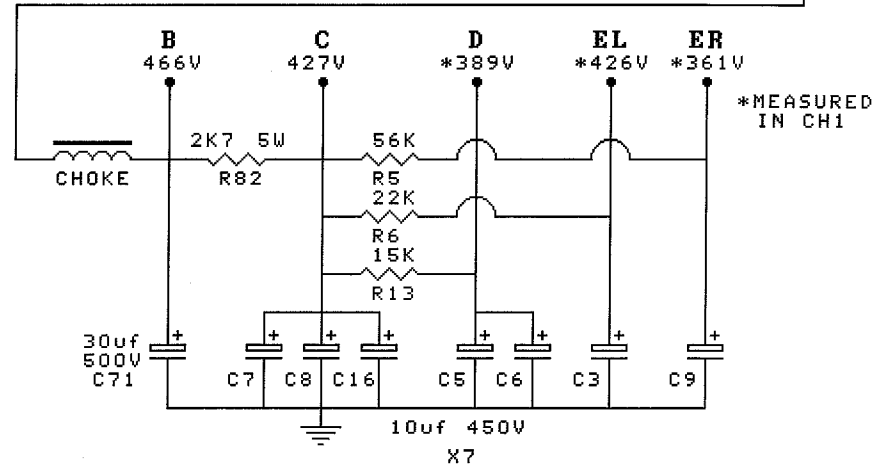
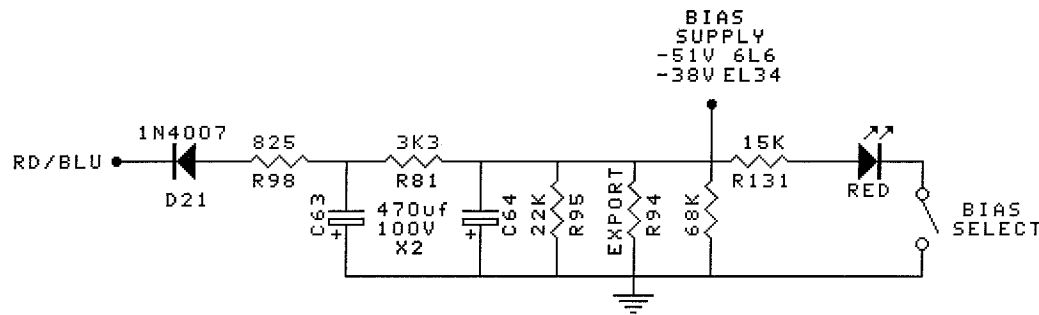
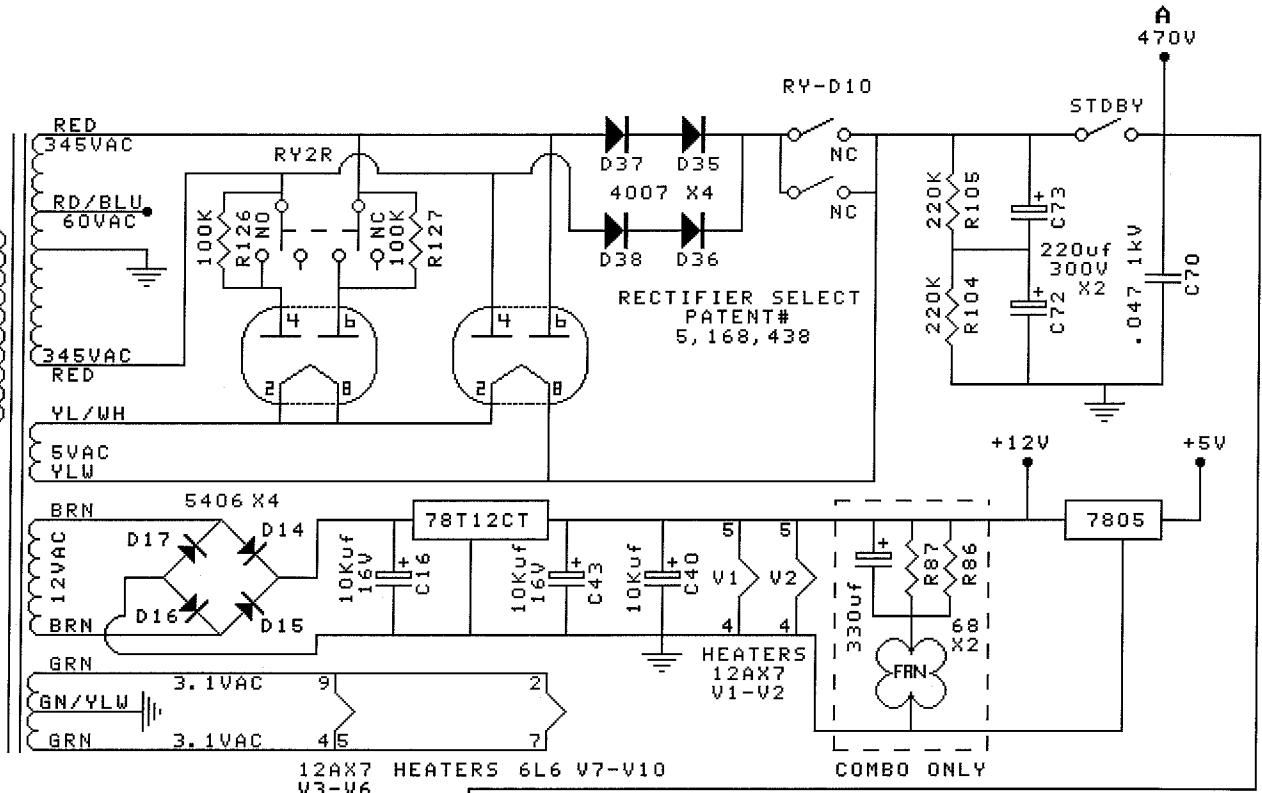
## POWER SUPPLY

FILE: RDSTRSUP.S01  
 DATE: 7/10/2006  
 DRAWN BY: JOHN M  
 PAGE: 3 OF 11  
 BOARD REV: ROADSTER 2



COVERED UNDER ONE OR MORE OF THE FOLLOWING PATENTS:  
 4,211,893; 4,532,476;  
 4,593,251; 4,701,957;  
 4,713,624; 5,091,700;  
 5,168,438; 5,208,548;  
 5,559,469; 6,522,752;  
 6,621,907; 6,724,897  
 AND OTHERS PENDING

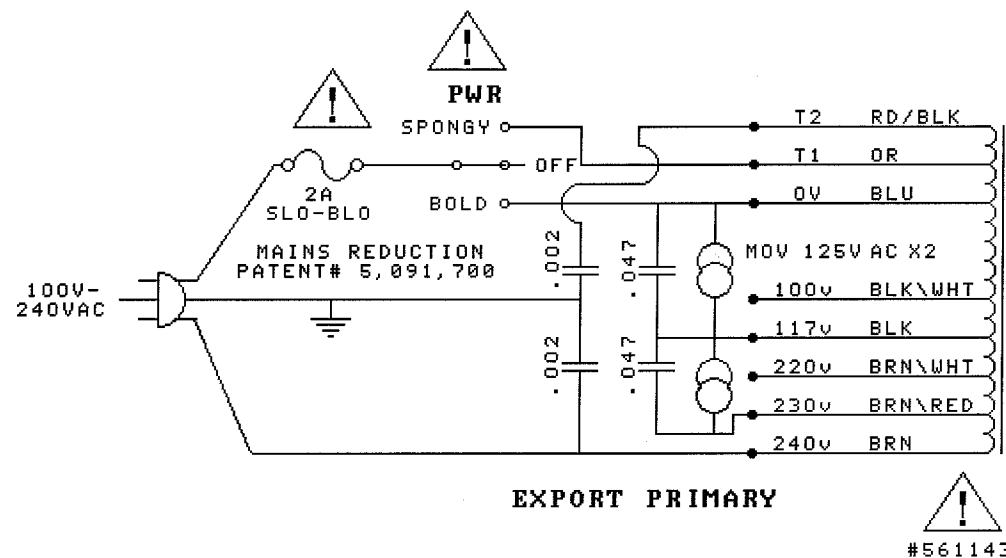
VOLTAGES MEASURED IN BOLD/DIODE



# MESA/BOOGIE ROADSTER POWER SUPPLY PT2

FILE: RDSTRSP2.S01  
 DATE: 7/10/2006  
 DRAWN BY: JOHN M  
 PAGE: 4 OF 11  
 BOARD REV: ROADSTER 2

COVERED UNDER ONE  
 OR MORE OF THE  
 FOLLOWING PATENTS:  
 4,211,893; 4,532,476;  
 4,593,251; 4,701,957;  
 4,713,624; 5,091,700;  
 5,168,438; 5,208,548;  
 5,559,469; 6,522,752;  
 6,621,907; 6,724,897  
 AND OTHERS PENDING

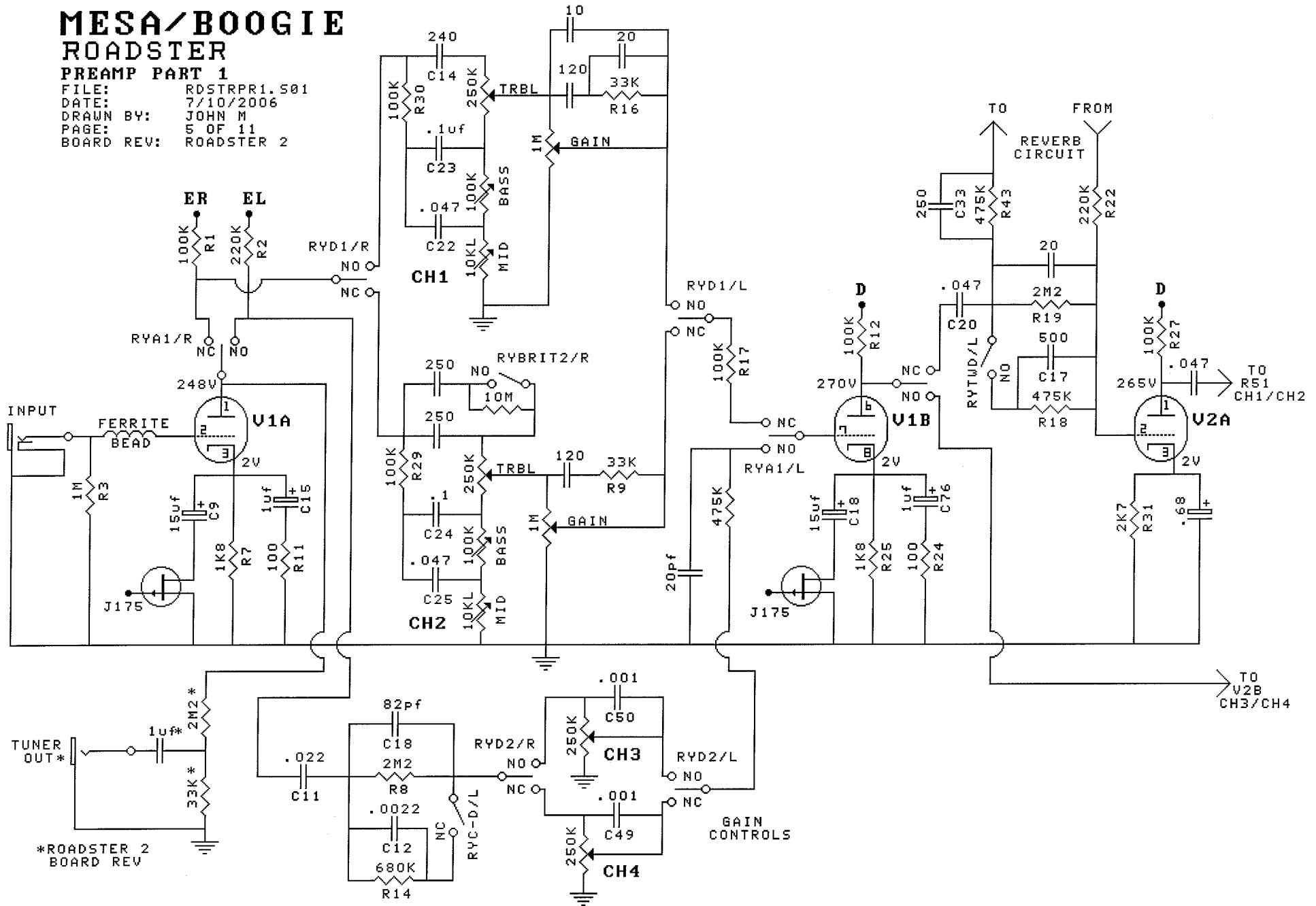


#561143

# MESA/BOOGIE ROADSTER

## PREAMP PART 1

FILE: RDSTRPR1.S01  
DATE: 7/10/2006  
DRAWN BY: JOHN M  
PAGE: 5 OF 11  
BOARD REV: ROADSTER 2

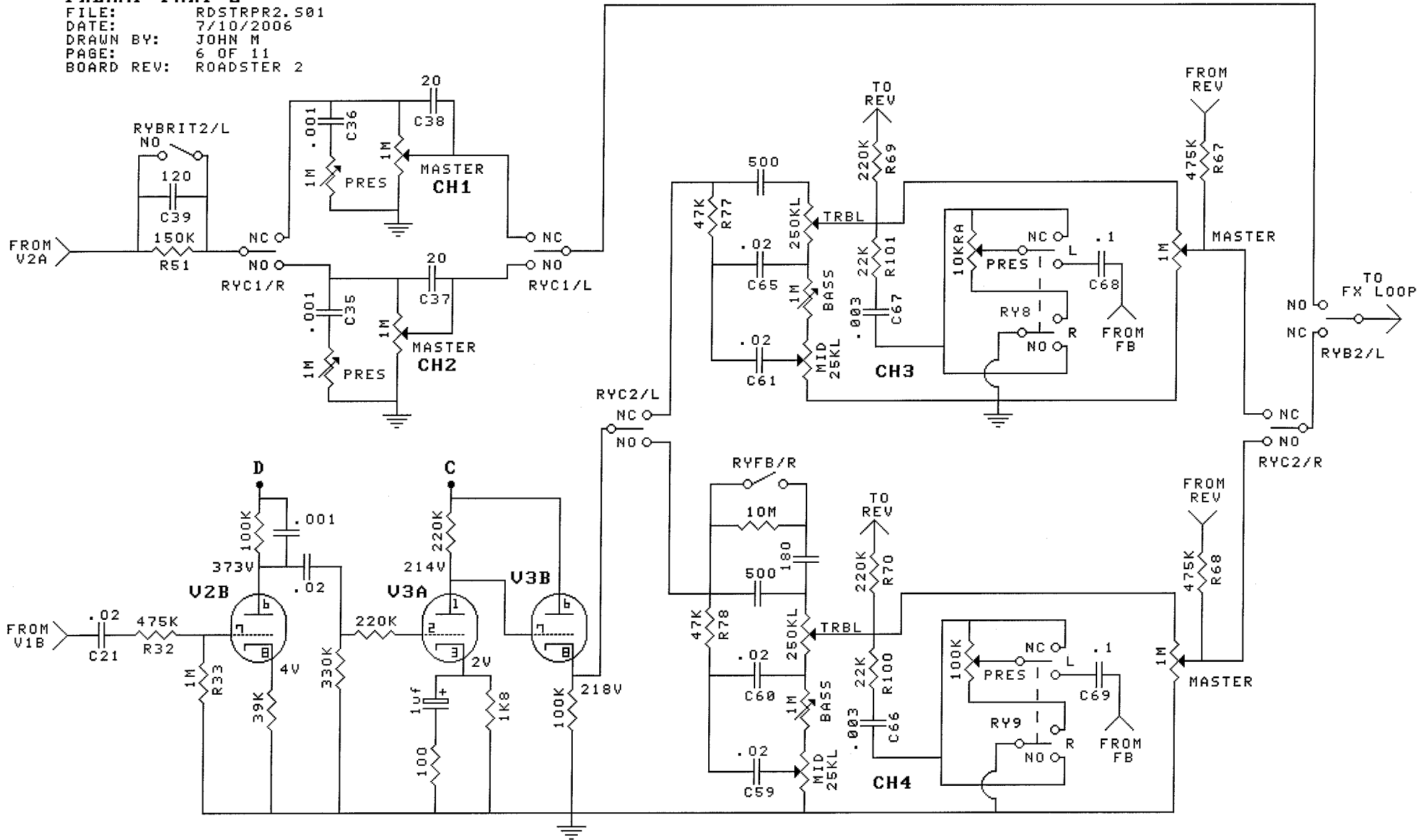


\*ROADSTER 2  
BOARD REV

# MESA/BOOGIE ROADSTER

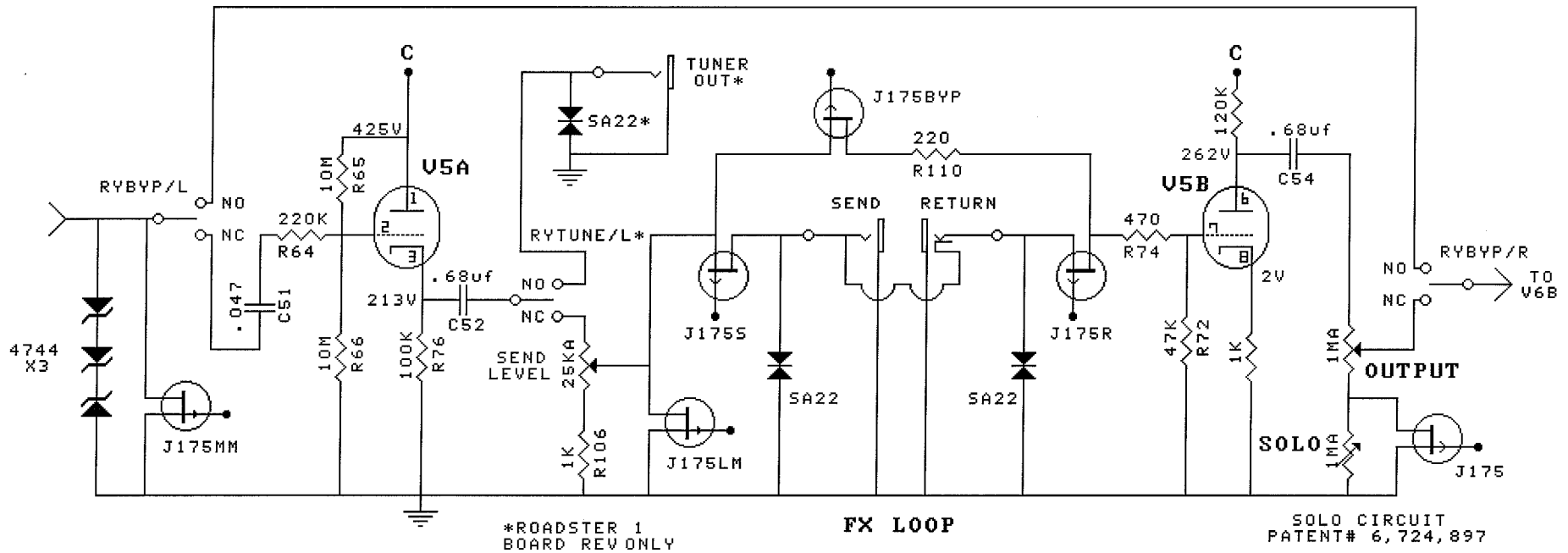
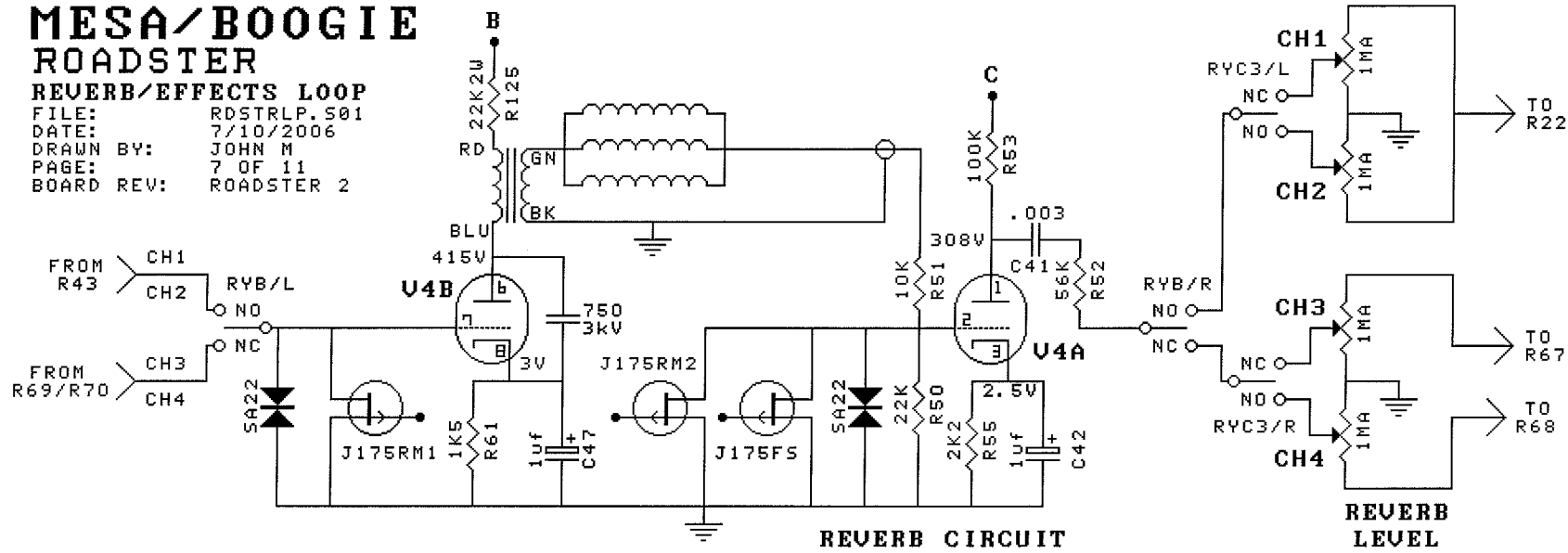
## PREAMP PART 2

FILE: RDSTRPR2.501  
DATE: 7/10/2006  
DRAWN BY: JOHN M  
PAGE: 6 OF 11  
BOARD REV: ROADSTER 2



# MESA/BOOGIE ROADSTER

**REVERB/EFFECTS LOOP**  
 FILE: RDSTRLP.S01  
 DATE: 7/10/2006  
 DRAWN BY: JOHN M  
 PAGE: 7 OF 11  
 BOARD REV: ROADSTER 2

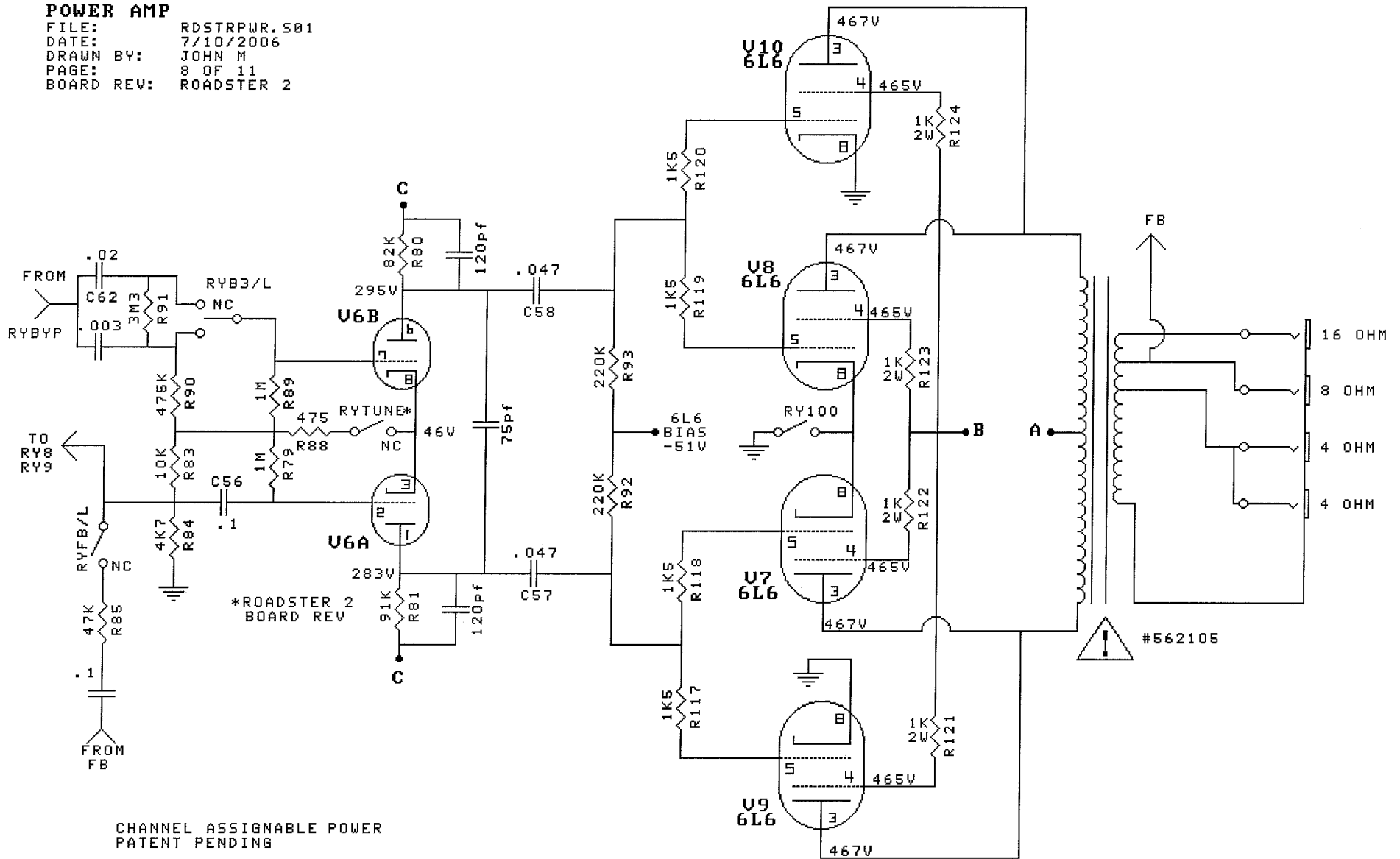




# MESA/BOOGIE ROADSTER

## POWER AMP

FILE: RDSTRPWR.501  
 DATE: 7/10/2006  
 DRAWN BY: JOHN M  
 PAGE: 8 OF 11  
 BOARD REV: ROADSTER 2

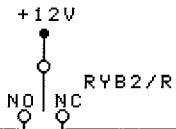


CHANNEL ASSIGNABLE POWER  
 PATENT PENDING

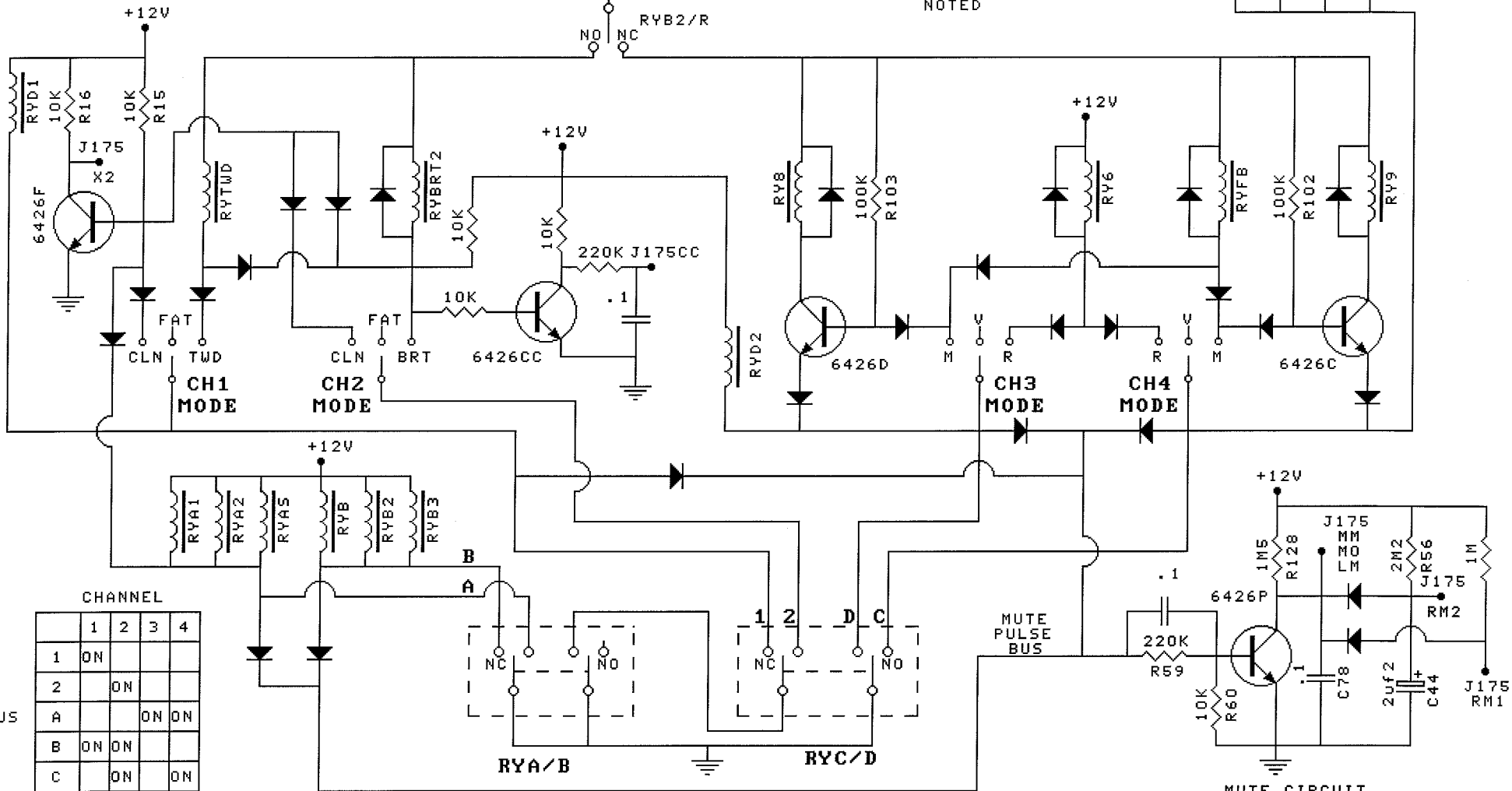
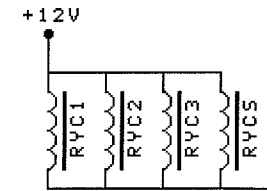
# MESA/BOOGIE ROADSTER

## SWITCH MATRIX PT1

FILE: RDSTRSM1.S01  
 DATE: 7/10/2006  
 DRAWN BY: JOHN M  
 PAGE: 9 OF 11  
 BOARD REV: ROADSTER 2



ALL DIODES 1N4448  
 UNLESS OTHERWISE  
 NOTED



CHANNEL

	1	2	3	4
1	ON			
2		ON		
A			ON	ON
B	ON	ON		
C		ON		ON
D	ON		ON	

BUS

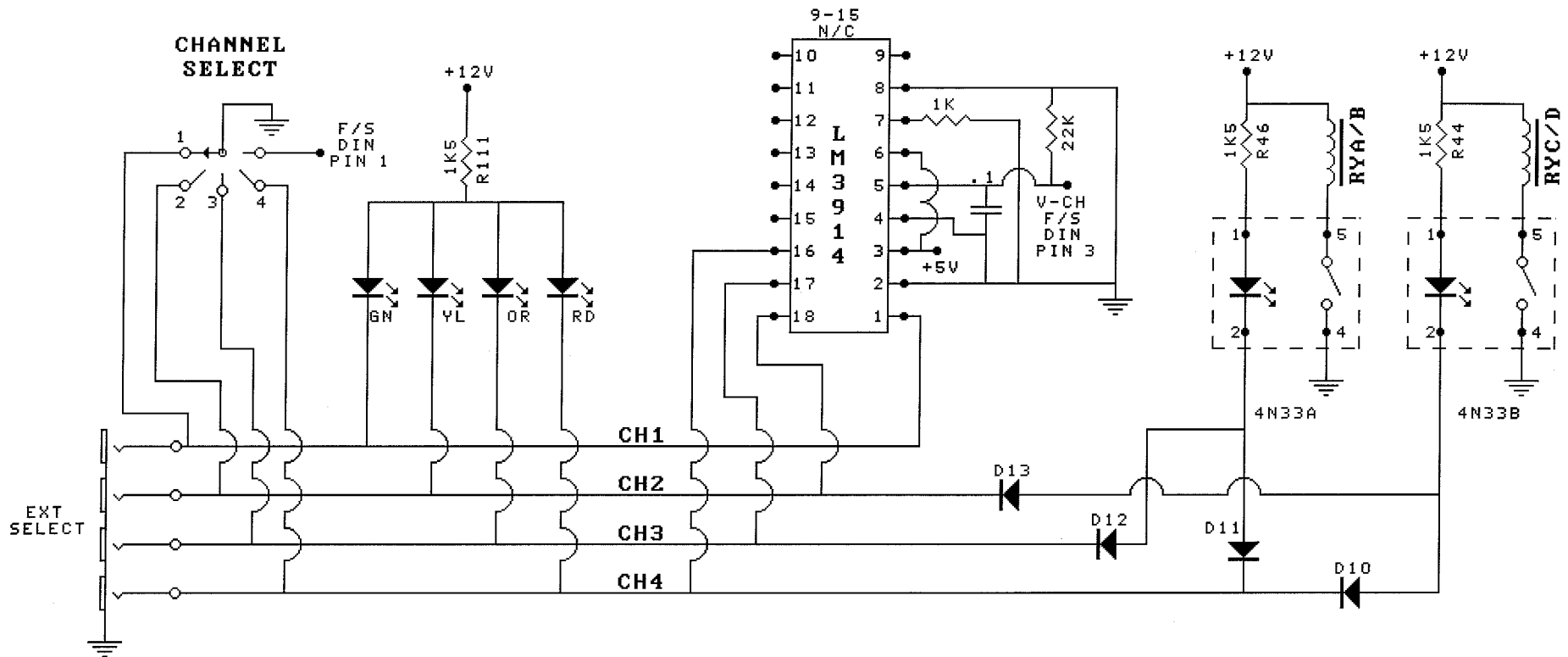
LOGIC CHART

MUTE CIRCUIT  
 PATENT# 6,621,987

# MESA/BOOGIE ROADSTER

## SWITCH MATRIX PT2

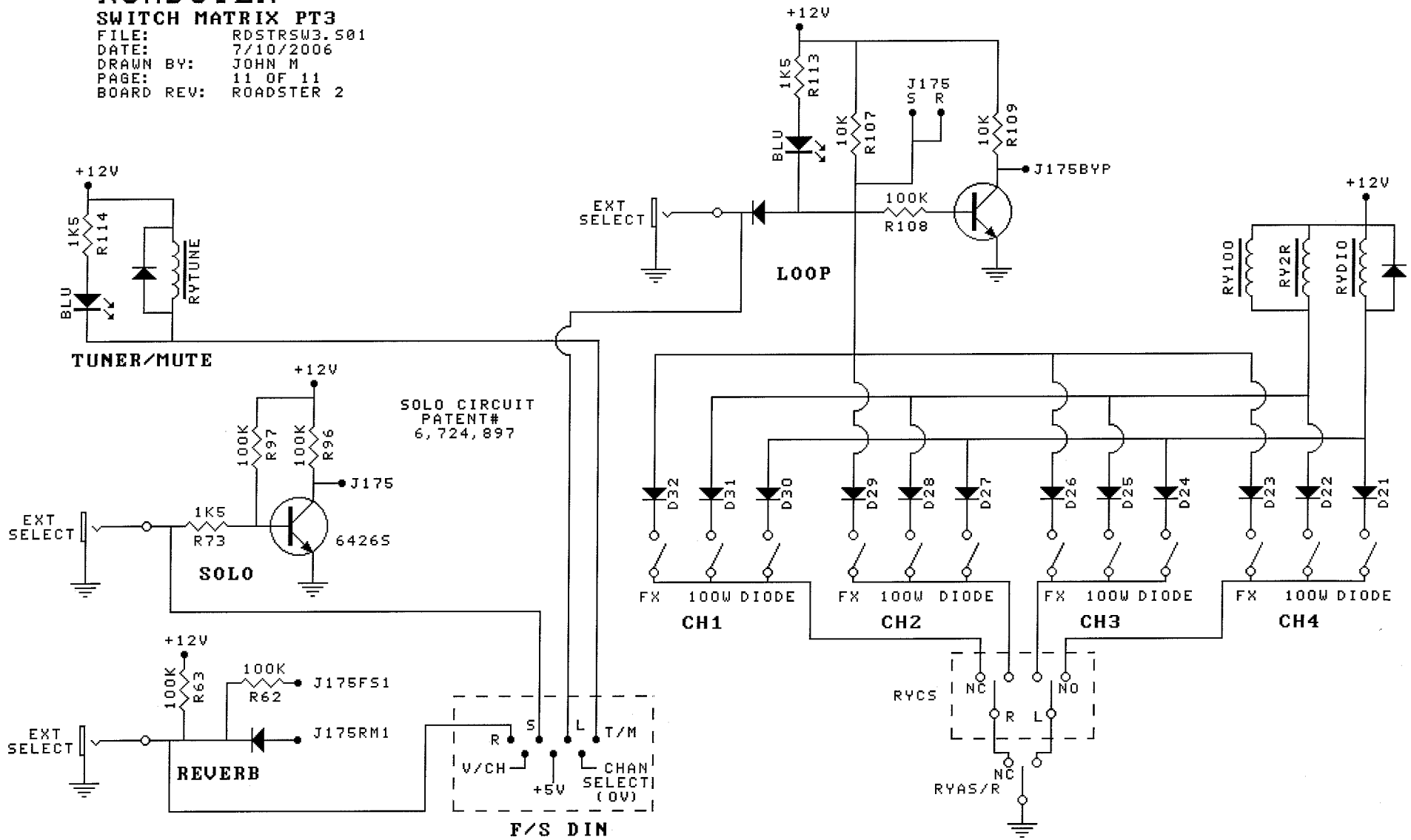
FILE: RDSTRSM2.S01  
DATE: 7/10/2006  
DRAWN BY: JOHN M  
PAGE: 10 OF 11  
BOARD REV: ROADSTER 2



# MESA/BOOGIE ROADSTER

## SWITCH MATRIX PT3

FILE: RDSTRSW3.S01  
 DATE: 7/10/2006  
 DRAWN BY: JOHN M  
 PAGE: 11 OF 11  
 BOARD REV: ROADSTER 2



SOLO CIRCUIT  
 PATENT#  
 6,724,897



IMPORTANT SERVICE ADVISORY

August 23, 2006

For Roadster Amplifiers  
Serial Numbers VR-00001 through VR-00669

As soon as possible, please take your Roadster Amplifier to an Authorized Mesa/Boogie Service Center for a very simple but important update. The purpose of this update is to insure a proper voltage balance in the power supply for future reliability. There will be no change in the sound or performance of your Roadster and no charge to you. The update should take a technician only a few minutes to perform.

To date there has not been a single instance of failure but over time, the likelihood of trouble occurring will increase so we urge you to let us eliminate this situation before it can cause failure and damage to the amplifier.

We apologize for the inconvenience and thank you for your understanding that we are looking out for your long-term satisfaction.

Thank You,  
Mesa/Boogie Ltd.

Randall Smith  
Designer & President

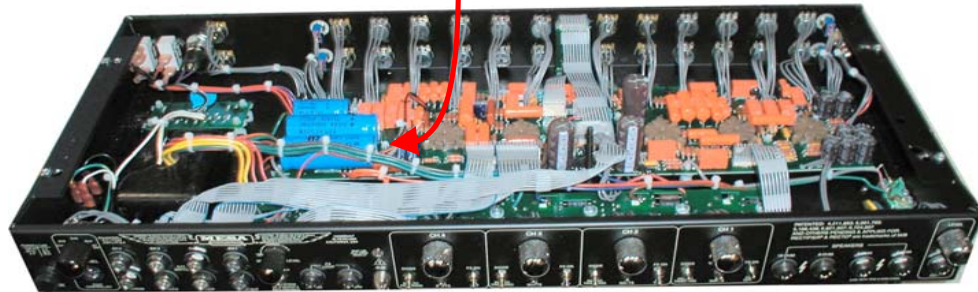
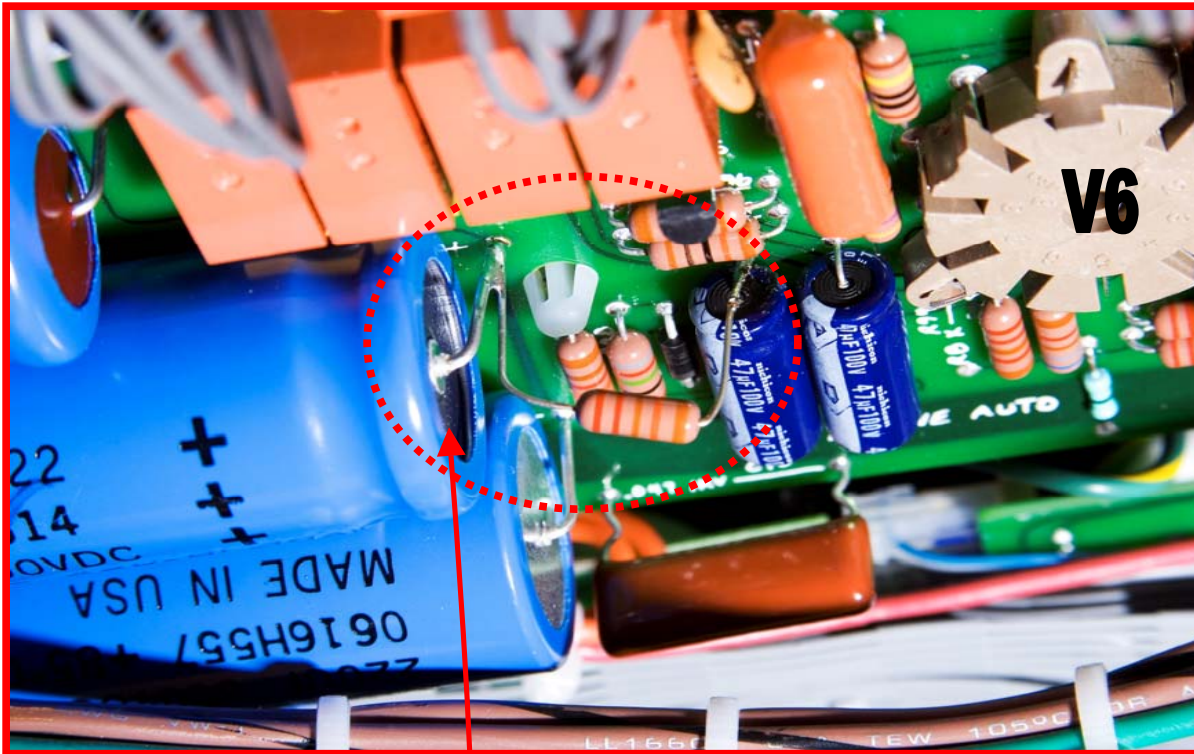


Mesa Boogie Roadster update. 8/23/2006

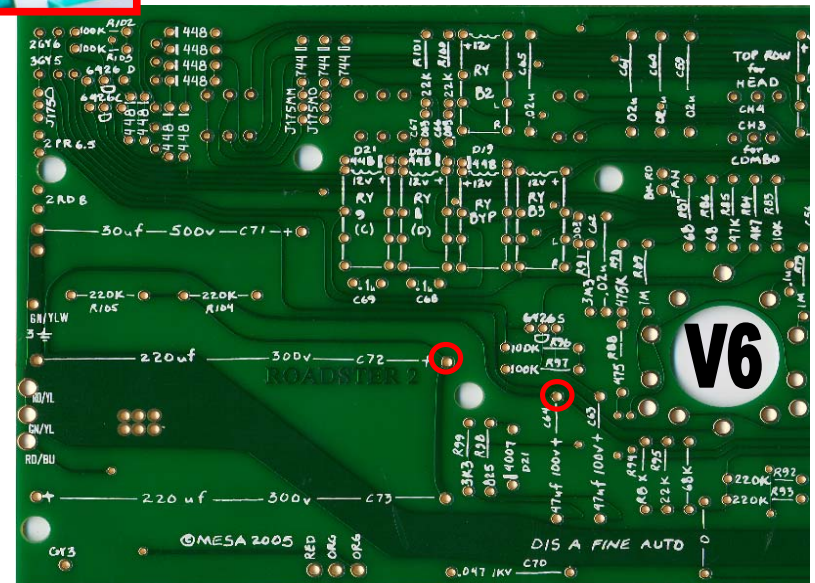
1. Remove amplifier chassis from cabinet
2. Looking into the chassis from the rear, place one end of a 220k 1/2W Resistor on the (+) side of C64-47uf @ 100v cap, and the other end of the resistor to the (+) side of C72- 220uf 300v cap.

Only part needed is a 220k 1/2W metal film resistor.  
Mesa PN# 505220

See below for part locations.

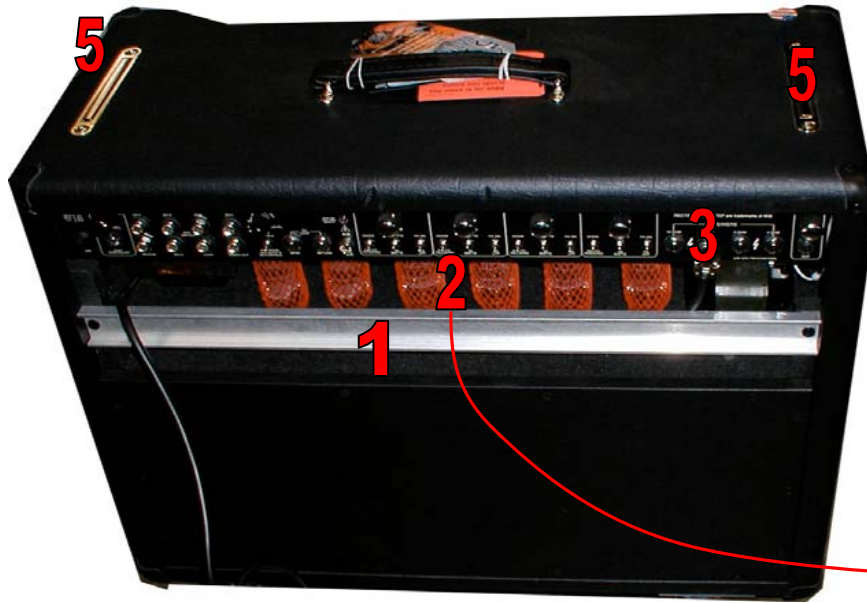


Looking in from rear of chassis. Power toggle facing forward





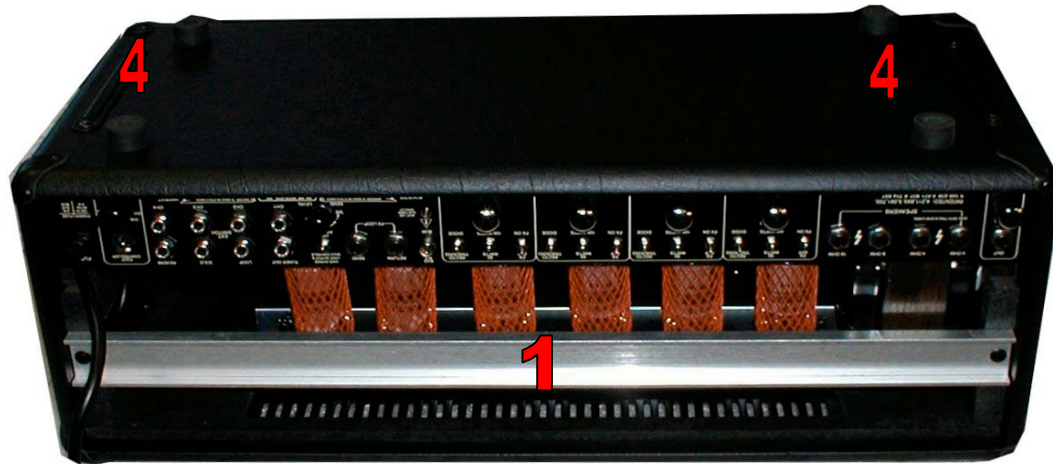
## Removing Roadster combo chassis



1. Remove tube bar
2. Remove two middle 6L6 tubes and loosen chassis tension screw
3. Unplug speaker
4. Unplug power cord
5. Unscrew chassis bolts and remove straps
6. Grab chassis by transformer and rock up and down while pulling back gently.
7. Once chassis is partially out remove Reverb cables.



## Removing Roadster Head chassis



Place Head upside down on table with handle down and feet facing up.

1. Remove tube bar
2. Unplug power cord
3. Remove reverb cables located just behind and to the right of the output transformer.
4. Unscrew chassis bolts and remove straps
5. Grab chassis by transformers and rock up and down while pulling back gently.
6. Remove chassis once it is completely unplugged.







## SOUND “DROP-OUTS” / INTERMITTENT SIGNAL One Possible Cause

Most (but not all) Mesa/Boogie amplifiers have one or two “cathode follower” tube stages in their preamps. Tube selection is CRITICAL in these stages.

Specifically, in a 12AX7 tube used as a “cathode follower”, the voltage difference between that present at the cathode, as compared with the heater voltage, can be withstood or tolerated by certain types of tubes, whereas other tubes will fail. The failure of a “cathode follower” tube will cause sound dropouts or signal loss.

For the past few years, Mesa has been using two types of 12AX7 tubes: ones originating in Russia (Sovtek EH), and ones originating in China. The Russian (Sovtek) tube is NOT reliable as a cathode follower. Of the tubes we are using today (March 2008), ONLY THE CHINESE 12AX7 IS RELIABLE AS A CATHODE FOLLOWER.

In conclusion, if you are troubleshooting for signal dropout in a Mesa/Boogie amp, suspect a cathode follower, and try replacing it with a Mesa 12AX7 that says “CHINESE” (silk-screened on the tube itself).

Below is a partial list of Mesa amps and cathode follower tube locations:

### GUITAR AMPS

Lone Star & LS Special: V3  
Stiletto: V3 & V4  
Road King: V3 & V5  
Roadster: V3 & V5  
Dual & Triple Rec (3 ch): V3 & V4\_  
Dual & Triple (older/2ch): V3 & V4  
Tremoverb: V3 & V4

### BASS AMPS

Bass 400+ : V2  
M-Pulse: V2  
Venture: V2  
Big Block 750: V4  
Titan: V4  
M2000: V2

Another possible scenario may occur in the “SPONGY” (or on some models, “TWEED”) power setting: the reduced filament voltage may cause very low output from a RUSSIAN preamp tube. Again, the recommended fix is to replace the “sagging” tube with the CHINESE type of Mesa 12AX7 - which are more immune to this type of failure.