

The logo for Bryston, featuring the word "BRYSTON" in a stylized, outlined font. The letter "B" is significantly larger and more prominent than the other letters. The logo is set against a solid black rectangular background.

**BRYSTON**

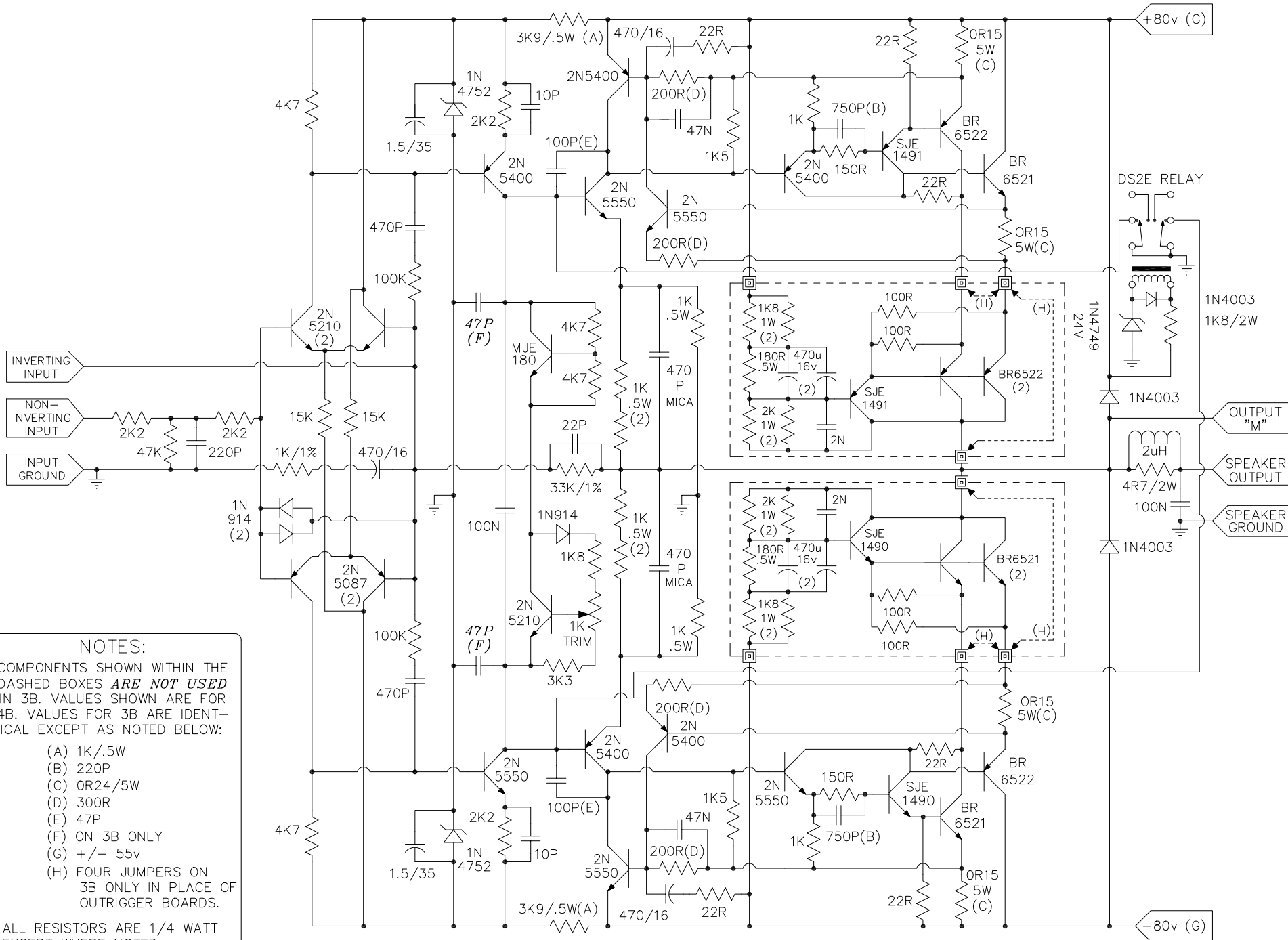
**POWER AMPLIFIER  
SCHEMATICS  
for models 3B~8B**

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**NOTES:**  
 COMPONENTS SHOWN WITHIN THE DASHED BOXES **ARE NOT USED** IN 3B. VALUES SHOWN ARE FOR 4B. VALUES FOR 3B ARE IDENTICAL EXCEPT AS NOTED BELOW:

- (A) 1K/.5W
- (B) 220P
- (C) OR24/5W
- (D) 300R
- (E) 47P
- (F) ON 3B ONLY
- (G) +/- 55v
- (H) FOUR JUMPERS ON 3B ONLY IN PLACE OF OUTRIGGER BOARDS.

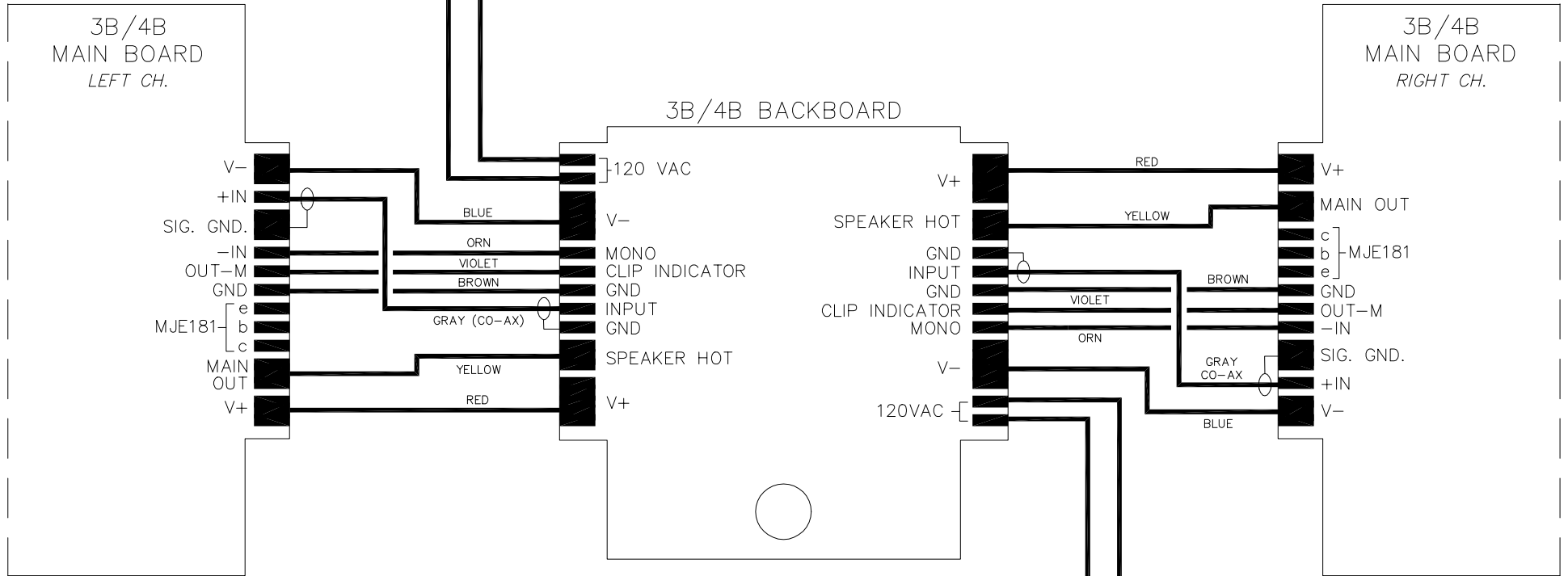
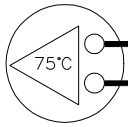
ALL RESISTORS ARE 1/4 WATT EXCEPT WHERE NOTED.

☐ SYMBOL SHOWS CONNECTIONS TO OUTRIGGER PC BOARDS

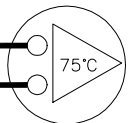


3B/4B POWER AMPLIFIER MAIN BOARD (3B IV) SCHEMATIC  
 REVISION #8 12 JAN 88  
 DWG: DESIGN:

THERMAL BREAKER  
mounted on heatsink



THERMAL BREAKER  
mounted on heatsink



ALL BOARDS VIEWED FROM COMPONENT SIDE  
MJE181 POWER TRANSISTOR (T0-126) MOUNTS BENEATH MAIN BOARD INTO HEATSINK.



3B/4B REGULAR POWER AMPLIFIER  
BACKBOARD TO MAIN BOARD HOOKUP



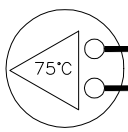
12 MARCH 87



# 3B/4B PRO POWER AMPLIFIER BACKBOARD TO MAIN BOARD HOOKUP

20 MARCH 87

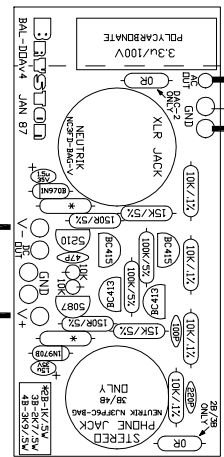
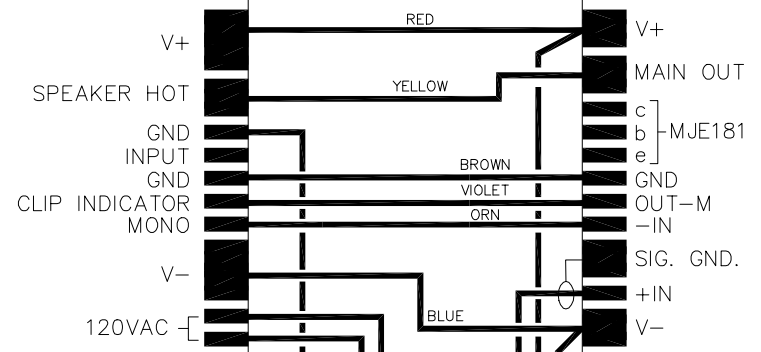
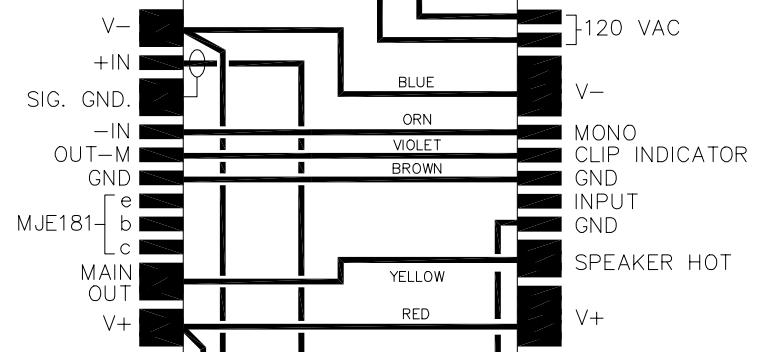
THERMAL BREAKER  
mounted on heatsink



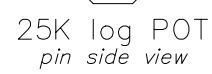
3B/4B  
MAIN BOARD  
LEFT CH.

3B/4B BACKBOARD

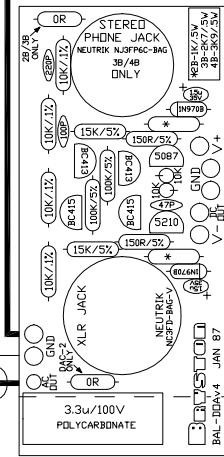
3B/4B  
MAIN BOARD  
RIGHT CH.



BALANCED  
INPUT BOARD  
LEFT CHANNEL

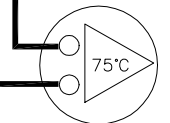


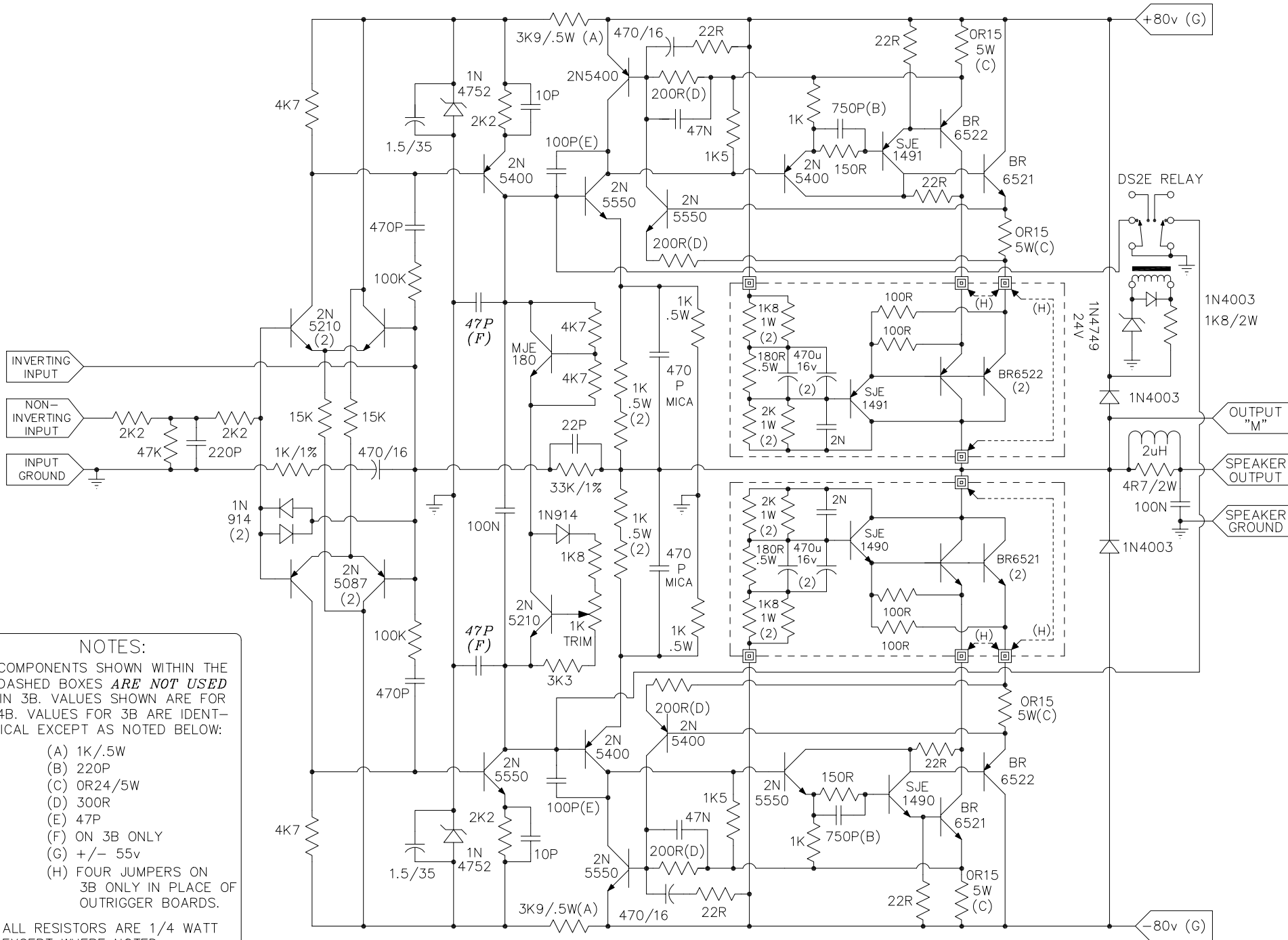
ALL BOARDS VIEWED FROM COMPONENT SIDE  
MJE181 POWER TRANSISTOR (TO-126) MOUNTS  
BENEATH MAIN BOARD INTO HEATSINK.



BALANCED  
INPUT BOARD  
RIGHT CHANNEL

THERMAL BREAKER  
mounted on heatsink





**NOTES:**  
 COMPONENTS SHOWN WITHIN THE DASHED BOXES **ARE NOT USED** IN 3B. VALUES SHOWN ARE FOR 4B. VALUES FOR 3B ARE IDENTICAL EXCEPT AS NOTED BELOW:

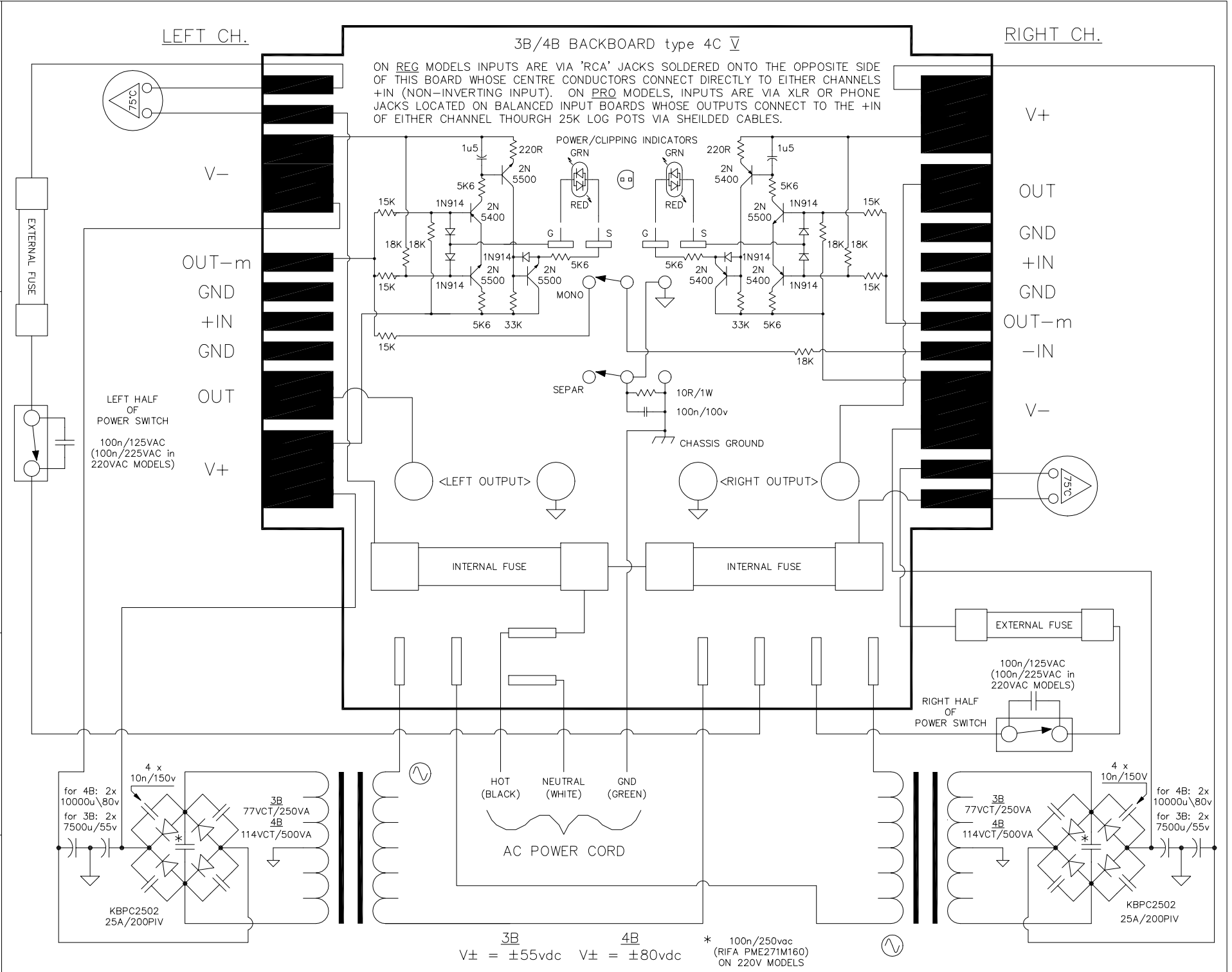
- (A) 1K/.5W
- (B) 220P
- (C) OR24/5W
- (D) 300R
- (E) 47P
- (F) ON 3B ONLY
- (G) +/- 55v
- (H) FOUR JUMPERS ON 3B ONLY IN PLACE OF OUTRIGGER BOARDS.

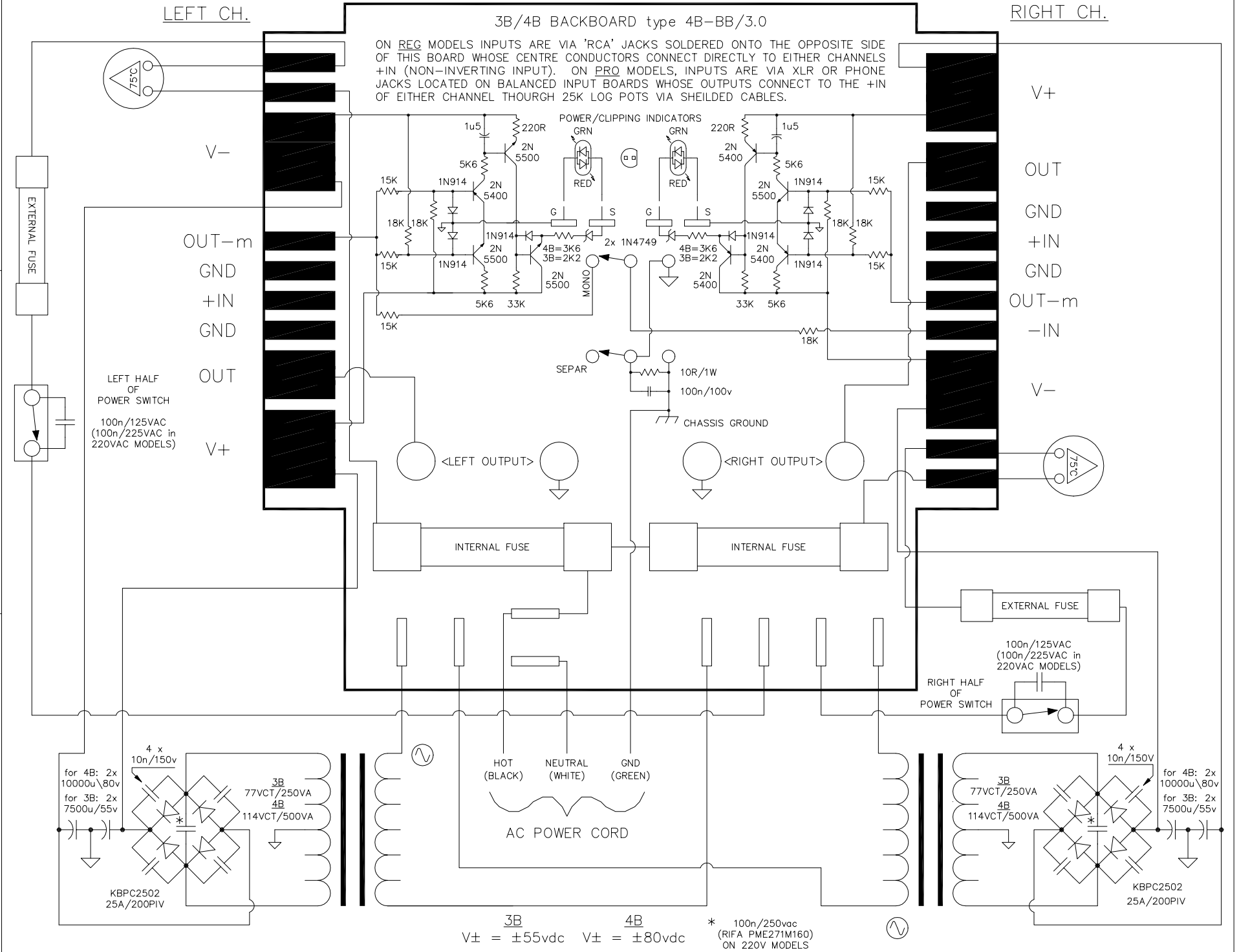
ALL RESISTORS ARE 1/4 WATT EXCEPT WHERE NOTED.

☐ SYMBOL SHOWS CONNECTIONS TO OUTRIGGER PC BOARDS

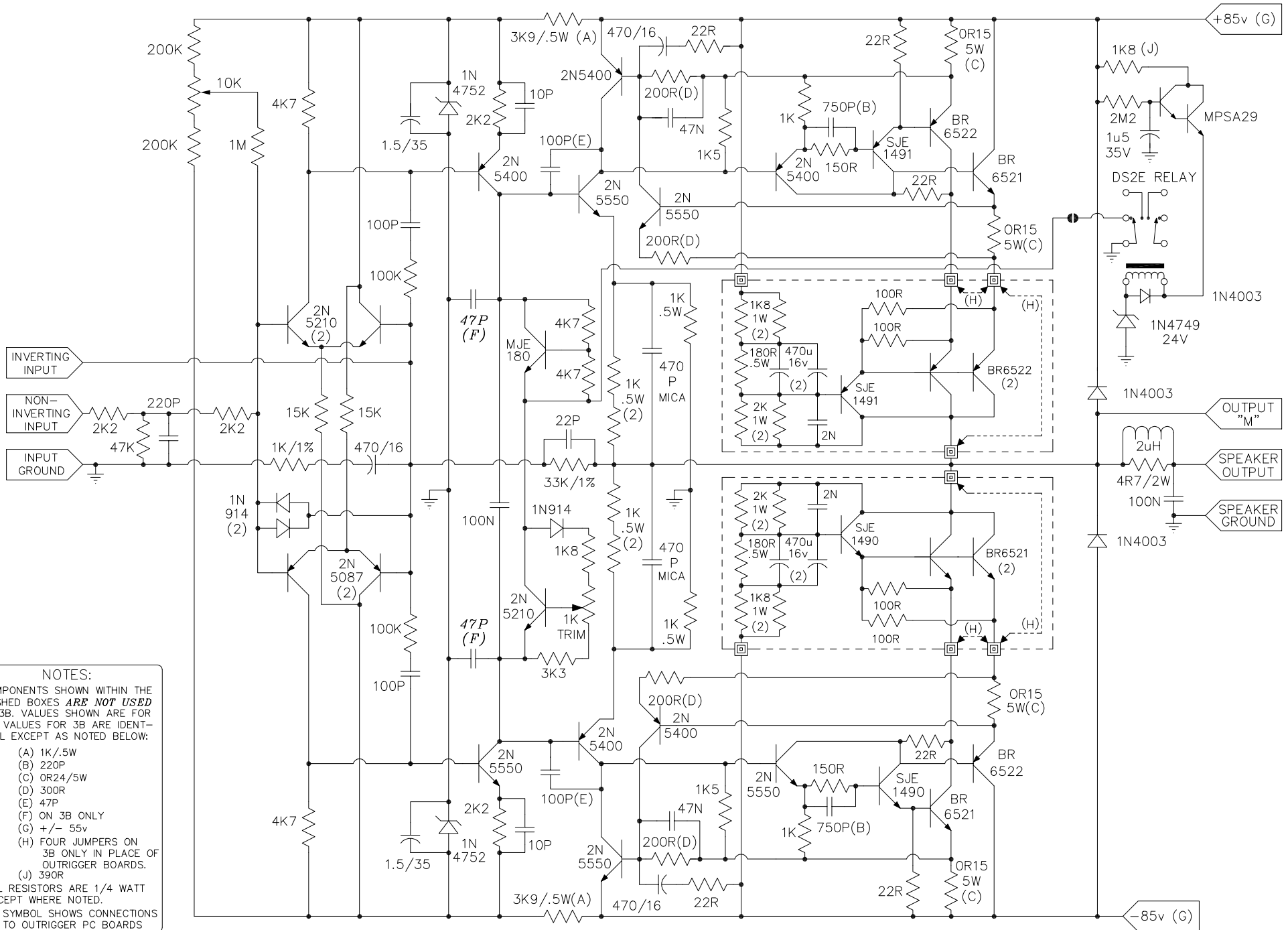












**NOTES:**  
 COMPONENTS SHOWN WITHIN THE DASHED BOXES **ARE NOT USED** IN 3B. VALUES SHOWN ARE FOR 4B. VALUES FOR 3B ARE IDENTICAL EXCEPT AS NOTED BELOW:

- (A) 1K/.5W
- (B) 220P
- (C) 0R24/5W
- (D) 300R
- (E) 47P
- (F) ON 3B ONLY
- (G) +/- 55v
- (H) FOUR JUMPERS ON 3B ONLY IN PLACE OF OUTRIGGER BOARDS.
- (J) 390R

ALL RESISTORS ARE 1/4 WATT EXCEPT WHERE NOTED.

☐ SYMBOL SHOWS CONNECTIONS TO OUTRIGGER PC BOARDS

REV 9.1 JUNE 1992  
 DC O/S adjust circuitry added; 2x 470pf chg'd to 100pf styrene



**3B/4B POWER AMPLIFIER MAIN BOARD (7B-MB/2) SCHEMATIC**  
 REV 9.1 JUNE 1992 FILE: 4B-MB-S











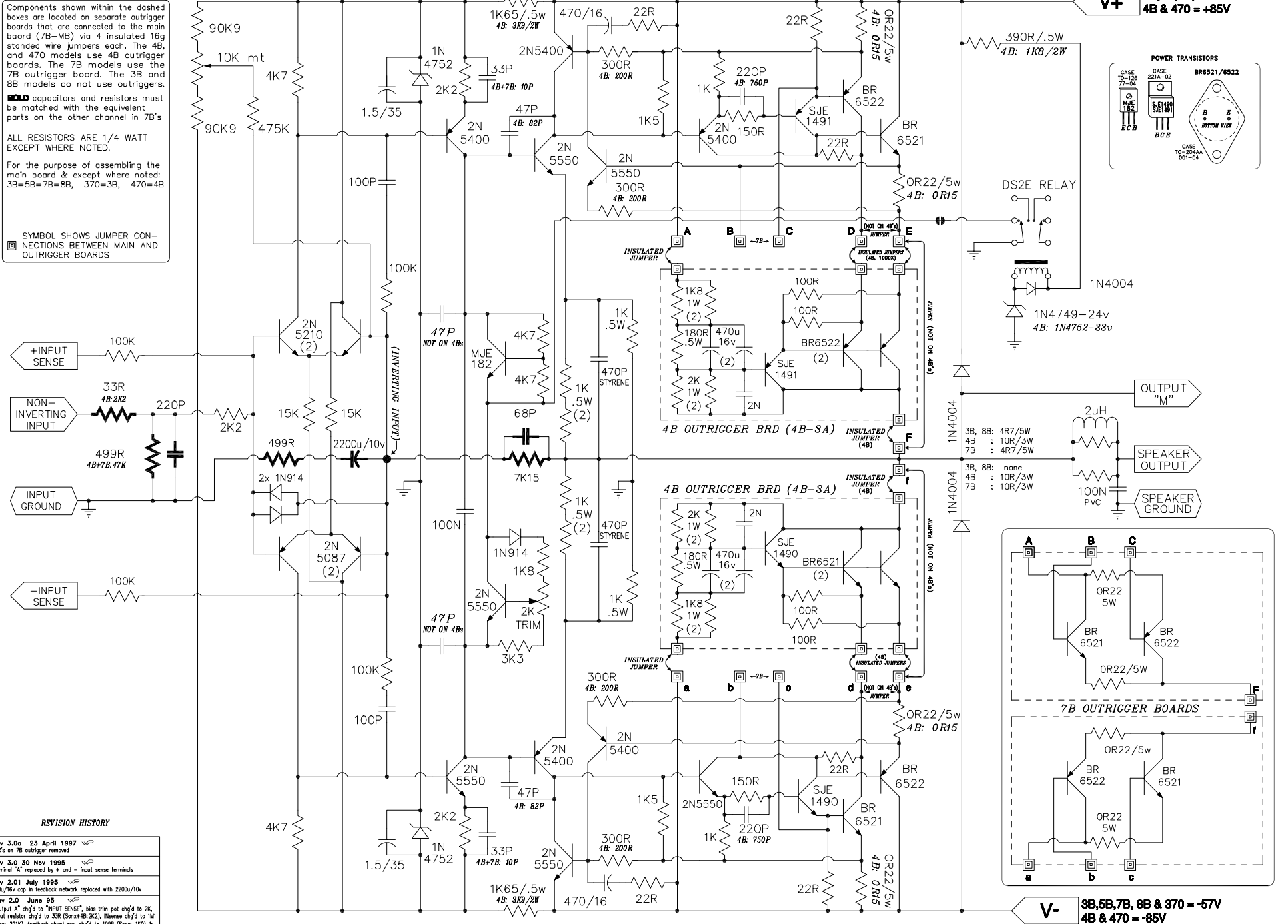
Components shown within the dashed boxes are located on separate outrigger boards that are connected to the main board (7B-MB) via 4 insulated 16g stranded wire jumpers each. The 4B and 470 models use 4B outrigger boards. The 7B models use the 7B outrigger board. The 3B and 8B models do not use outriggers.

**BOLD** capacitors and resistors must be matched with the equivalent parts on the other channel in 7B's

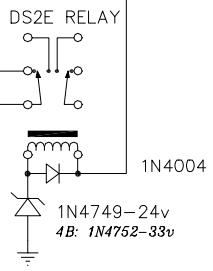
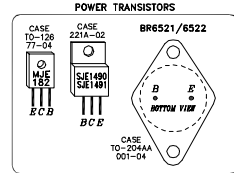
ALL RESISTORS ARE 1/4 WATT EXCEPT WHERE NOTED.

For the purpose of assembling the main board & except where noted: 3B=5B=7B=8B, 370=3B, 470=4B

SYMBOL SHOWS JUMPER CONNECTIONS BETWEEN MAIN AND OUTRIGGER BOARDS

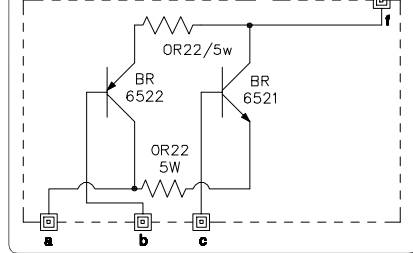
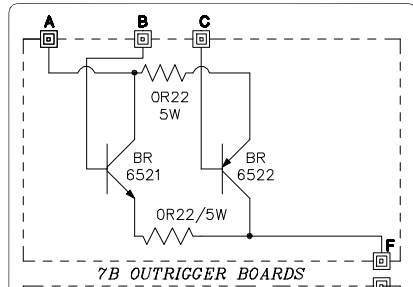
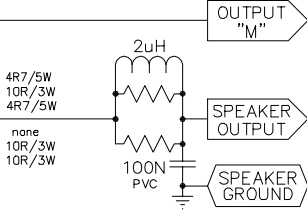


V+ 3B,5B,7B, 8B & 370 = +57V  
4B & 470 = +85V



3B, 8B: 4R7/5W  
4B : 10R/3W  
7B : 4R7/5W

3B, 8B: none  
4B : 10R/3W  
7B : 10R/3W



V- 3B,5B,7B, 8B & 370 = -57V  
4B & 470 = -85V

REVISION HISTORY

Rev 3.0a	23 April 1997	22R's on 7B outrigger removed
Rev 3.0	30 Nov 1995	Terminal "A" replaced by + and - input sense terminals
Rev 2.01	July 1995	470u/16v cap in feedback network replaced with 2200u/10v
Rev 2.0	June 95	"Output A" chgd to "INPUT SENSE", bias trim pot chgd to 2K, input resistor chgd to 33R (Sens+4B:2K2), in sense chgd to 1M1 (Sens: 221K), feedback short res. chgd to 499R (Sens: 110) & shunt cap chgd to 100u; emitter res's chgd to 3022/5w for 4B; feedback cap chgd to 68p(Sens: 22p) & res chgd to 7K15 (Sens: 33K2), DC OS limit resistors chgd from 100K to 90K9 and from 1M1 to 475K & DC OS injection chgd from non-inv to inverting input, low voltage limit chgd to 1K65/.5w (4B: 3K9/2w)
Rev 2.0	June 95	200K (2) in DC-0/S chgd to 100K; 2N5210 in bias chgd to 2N5550; output res chgd to 6W; output "A" added

**BRYSTON** Ltd.  
P.O. Box 2170, Peterborough, Ont., Canada K9J-7Y4 (705)742-5325

File: PWR-MESS  
Part No: PWR-MB-S/3.0a  
Date: 23 APRIL 97  
Revision: 3.0a  
By: [Signature]

**POWER AMPLIFIER MAIN BOARD SCHEMATIC for PWR-MB/3.0a**  
used in Bryston 3B, 4B, 5B, 7B, 8B, 370 & 470 amplifiers  
and in Lexicon 212, 225, 312, 412, & 501 amplifiers

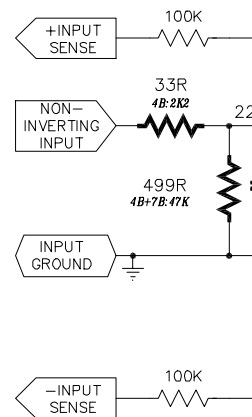
Components shown within the dashed boxes are located on separate outrigger boards that are connected to the main board (7B-MB) via 4 insulated 16g stranded wire jumpers each. The 4B, and 470 models use 4B outrigger boards. The 7B models use the 7B outrigger board. The 3B and 8B models do not use outriggers.

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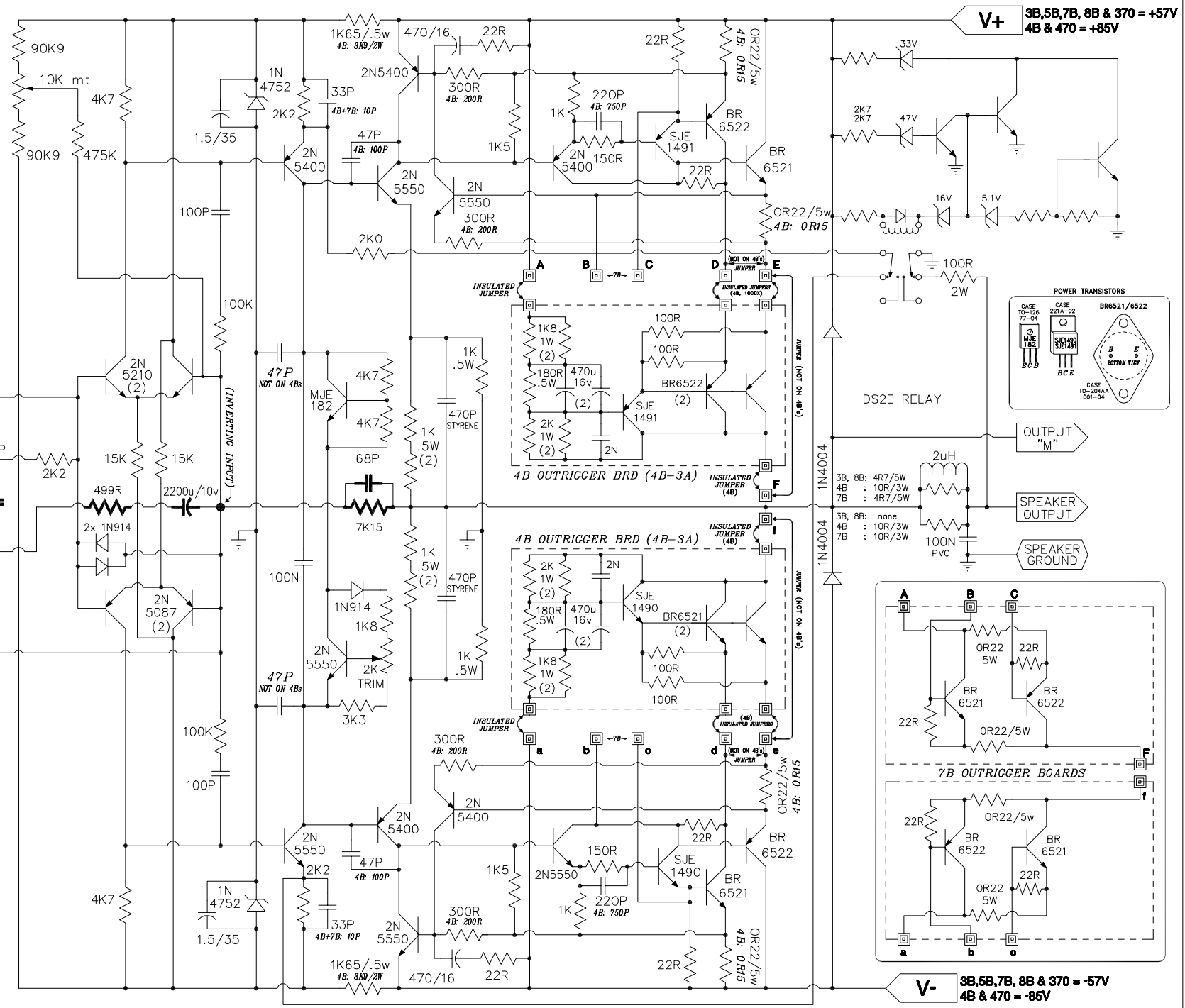
For the purpose of assembling the main board & except where noted: 3B=5B=7B=8B, 370=3B, 470=4B

SYMBOL SHOWS JUMPER CONNECTIONS BETWEEN MAIN AND OUTRIGGER BOARDS

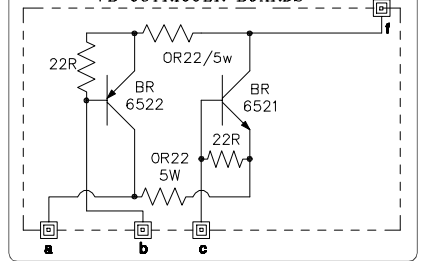
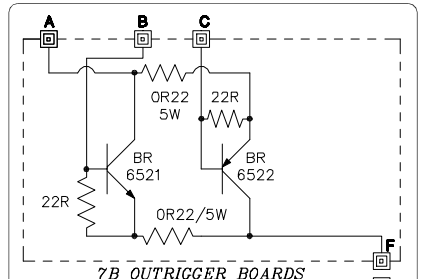
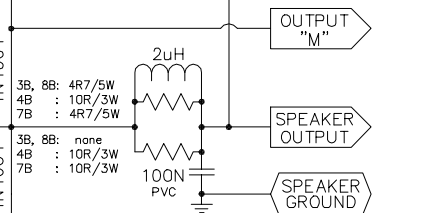
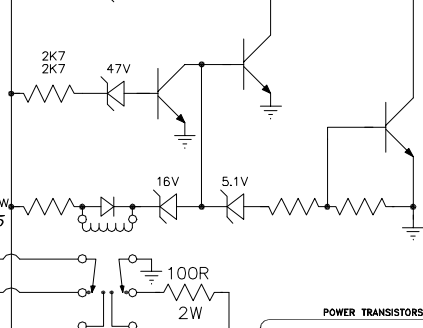
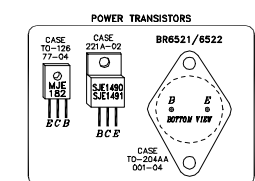


**PRELIMINARY**

REVISION HISTORY	
Rev. 3.1	27 Nov 1996 <b>SFT</b> New mute relay function
Rev. 3.0	30 Nov 1995 Terminal "A" replaced by + and - input sense terminals
Rev. 2.01	July 1995 470u/16v cap in feedback network replaced with 2200u/10v
Rev. 2.0	June 95 "Output A" chgd to "INPUT SENSE", bias trim pot chgd to 2K, input resistor chgd to 33R (Sovix+4B:2K2), inphase chgd to 1M1 (Sovix: 221K), feedback short res. chgd to 499R (Sovix: 110) & short cap chgd to 100u, emitter res. chgd to 3922/5w for 4B, feedback cap chgd to 68p (Sovix: 22p) & res chgd to 7K15 (Sovix: 33K2), DC OS limit resistors chgd from 100K to 90K9 and from 1M to 475K & DC OS injection chgd from non-inv to inverting input, low voltage limit chgd to 16S/5w (4B: 3K9/2w)
Rev. 2.0	June 95 200K (2) in DC-0/S chgd to 100K; 2N5210 in bias chgd to 2N5550; output res chgd to 6W; output "A" added



V+ 3B,5B,7B, 8B & 370 = +57V  
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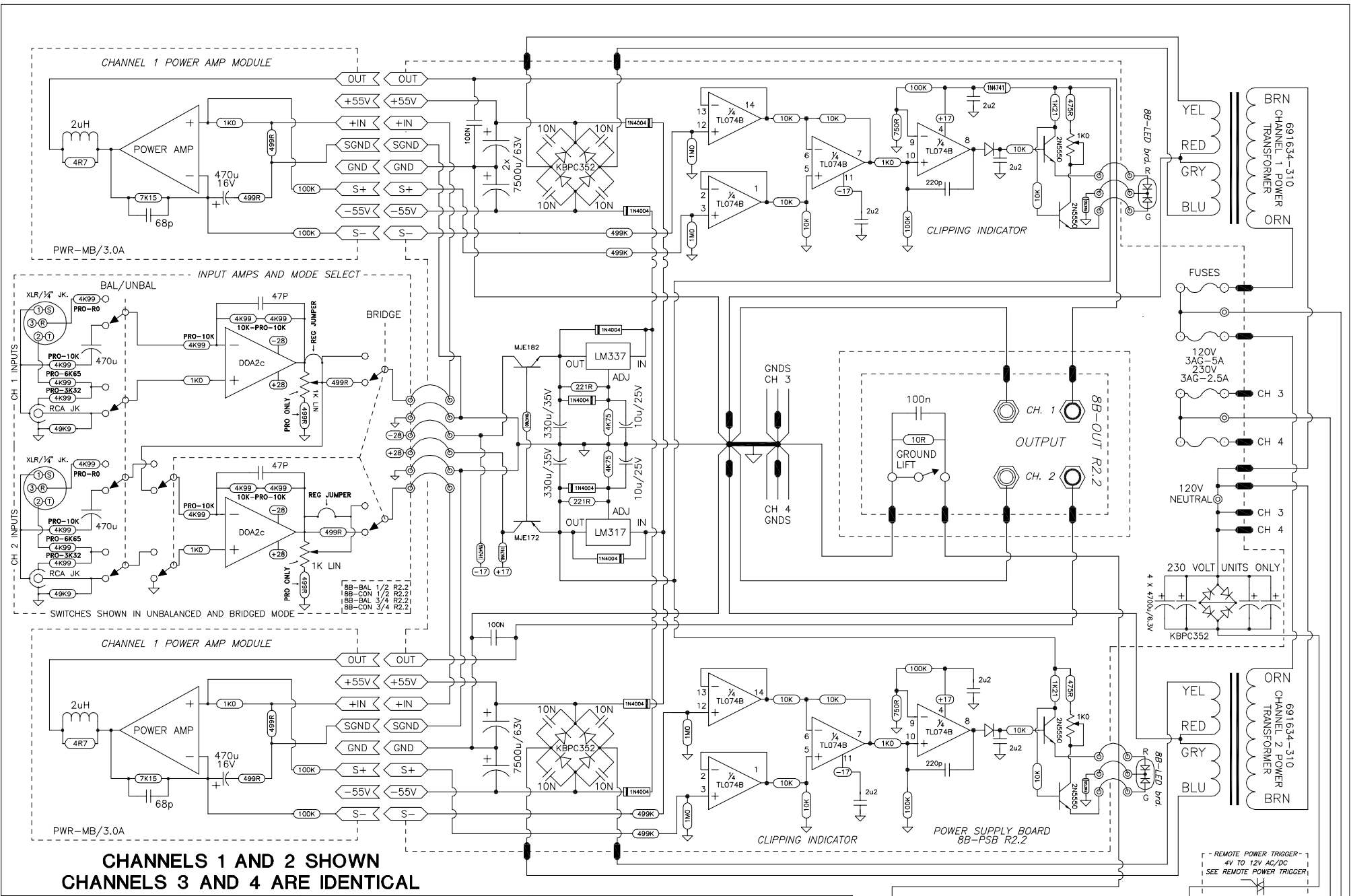


V- 3B,5B,7B, 8B & 370 = -57V  
4B & 470 = -85V

**BRUSTON** Ltd.  
P.O. Box 2170, Peterborough, Ont., Canada K9J-7Y4 (705)742-5325

File: **PWR-MB-S**  
Part No: **PWR-MB-S/3.1**  
Date: **27 NOV 1996**  
Revision: **3.1**  
By:

**POWER AMPLIFIER MAIN BOARD SCHEMATIC**  
for the PWR-MB/3.0a PCB  
used in 3B, 4B, 5B, 7B, 8B, 370 & 470 amplifiers



**CHANNELS 1 AND 2 SHOWN  
CHANNELS 3 AND 4 ARE IDENTICAL**

**CONNECTORS**

- EDGE CONNECTOR
- BOARD EDGE FINGER
- QUICK DISCONNECT TABS/SOCKETS
- SOLDER PAD FOR FLATWIRE INTERCONNECT

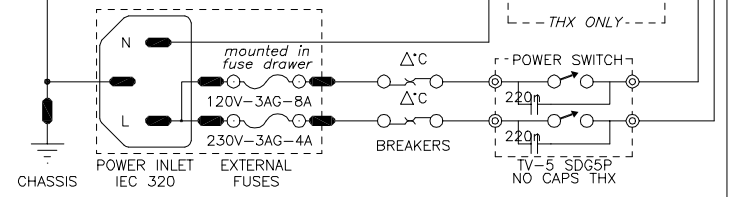
**NOTES:**  
 8BST=LEXICON 412 AMPLIFIER  
 5BST=LEXICON 312 AMPLIFIER  
 5B AMPLIFIER DOES NOT POPULATE CH 3 ON THE PSB, AND CH 3 ON THE INPUT BOARDS. CH 4 SILKSCREEN IS RELABELED AS CH 3 HOWEVER.

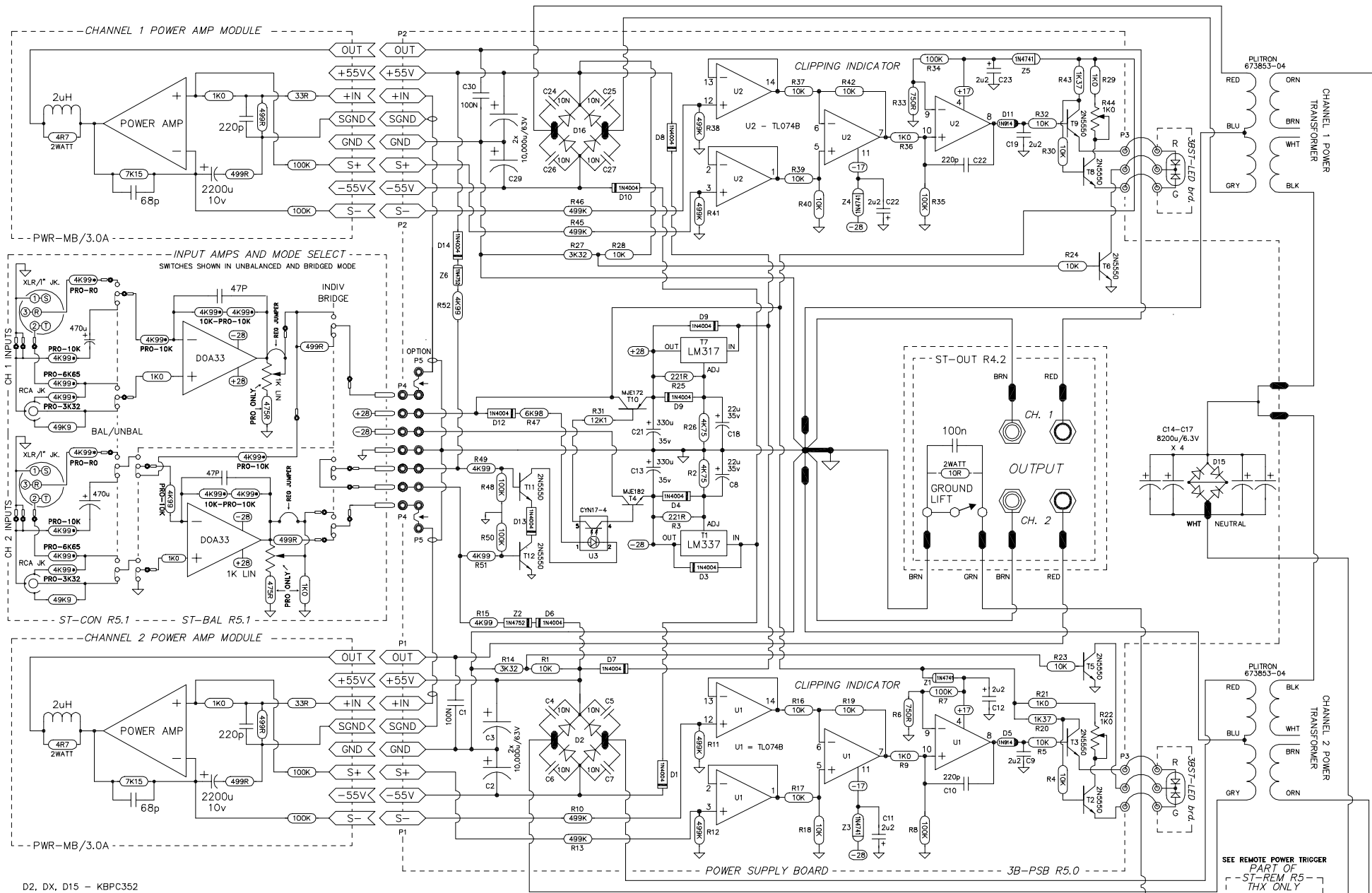
**PART #**  
 8B-IPSB R2.2  
 8B-OUT R2.2  
 8B-BAL 1/2 R2.2  
 8B-CON 1/2 R2.2  
 8B-BAL 3/4 R2.2  
 8B-CON 3/4 R2.2  
 8B-LED R2.2

**BRYSTON** LTD  
 677 NEAL DR. PETERBOROUGH, ONTARIO CANADA K9J 7Y4  
 PHONE (705) 742-5325 FAX (705) 742-0882

**8B + 5B AMPLIFIER**  
 AMPLIFIER SCHEMATIC

FILE: 8BSCH24 PART No: 8BPSB  
 DATE: DEC 96 DWG BY: ST REV: 2.4





### CONNECTORS

- EDGE CONNECTOR
- BOARD EDGE FINGER
- QUICK DISCONNECT TABS/SOCKETS
- SOLDER PAD FOR FLATWIRE INTERCONNECT
- HEADER BOARD TO BOARD INTERCONNECT

### NOTES:

- 3BST(THX) R4.8 = LEXICON 212 R4.8
- ST-REM (REMOTE POWER ON/OFF) USED IN THX MODES ONLY
- \*"R" RESISTORS 0.1% SELECTED IN INPUT AMPS
- ST-PRO BAL INPUT HAVE GAIN OF 2
- ST-REG BAL INPUT HAVE UNITY GAIN
- UNBAL INPUTS ALWAYS HAVE GAIN OF 2

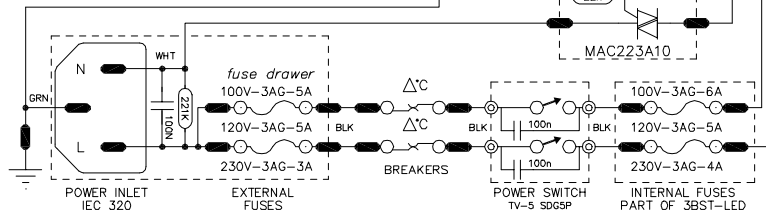


**BRYSTON** LTD  
 677 NEAL DR. PETERBOROUGH, ONTARIO CANADA K9J 7Y4  
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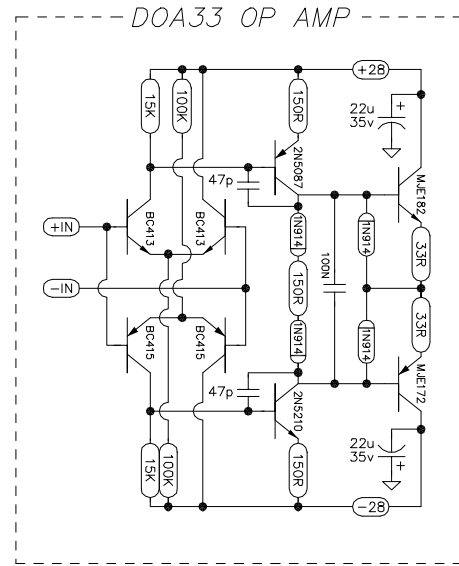
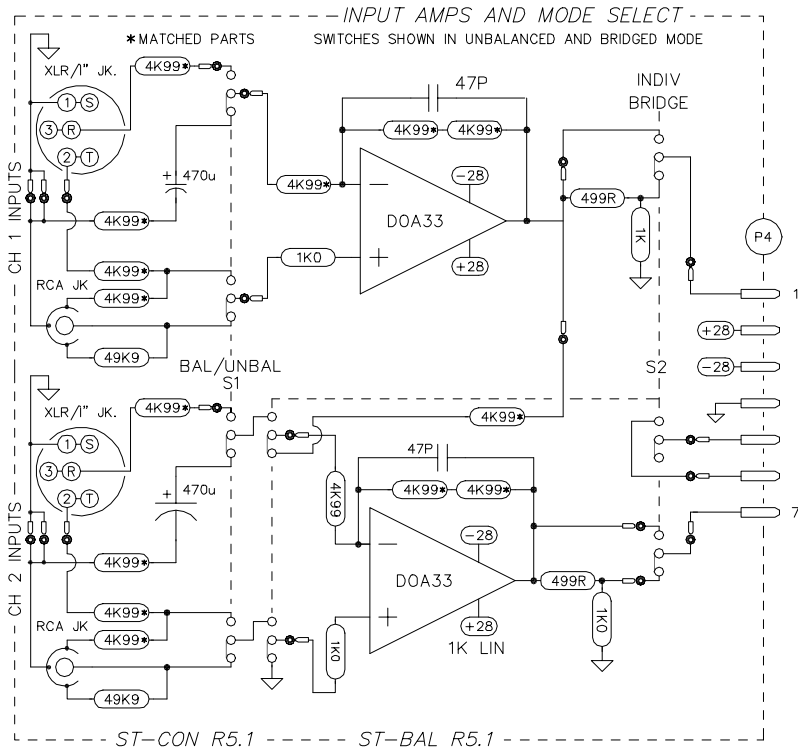
## 3BST AMPLIFIER

OVERALL SCHEMATIC

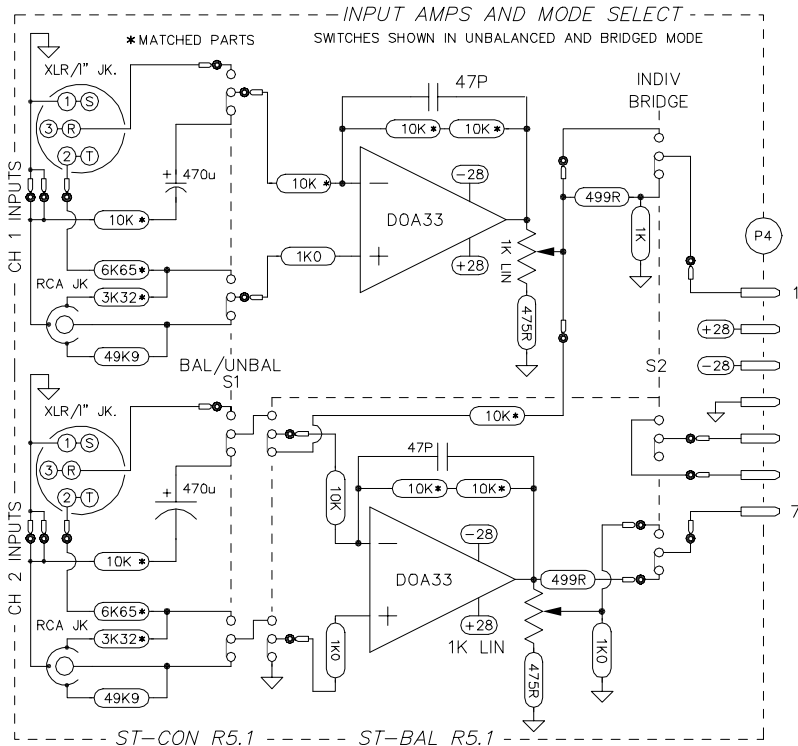
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 DATE: JAN 97 DWG BY: ST REV: 5.0





## 4BST REG INPUT CONFIGURATION



## 4BST PRO INPUT CONFIGURATION



 = HEADER INTERCONNECT  
 = BOARD TO BOARD INTERCONNECT  
 S1 & S2 = 6PDT SLIDE SWITCH



**BRYSTON** LTD  
 677 NEAL DR. PETERBOROUGH, ONTARIO CANADA K9J 7Y4  
 PHONE (705) 742-5325 FAX (705) 742-0882

## 4BST INPUT SCHEMATIC

SCHEMATIC OF ST-BAL & ST-CON BOARDS

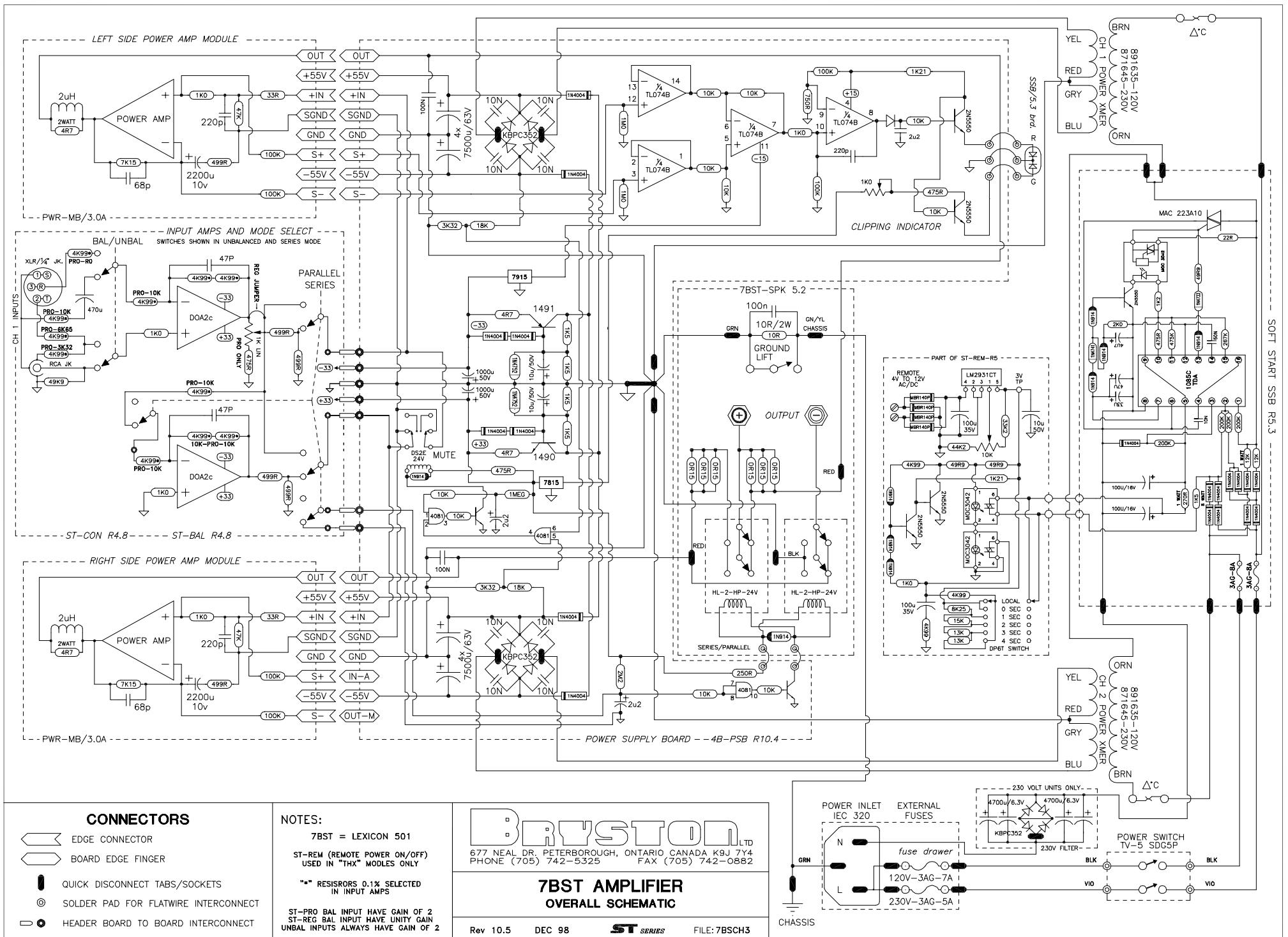
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PART No: ST BAL R 5.1

DATE: MAY 97

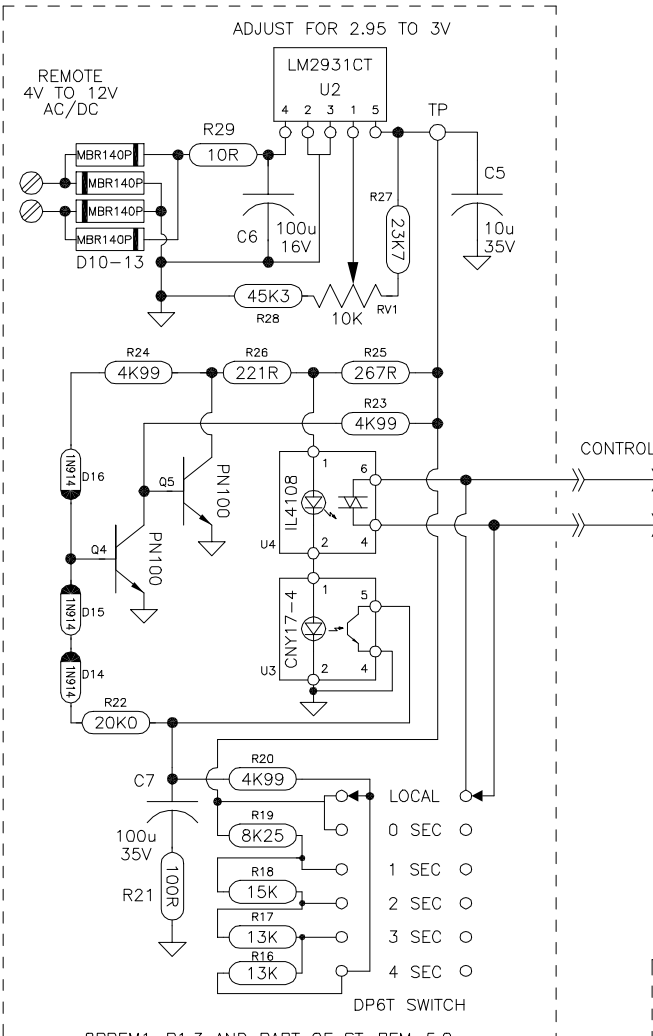
DWG BY:

REV: 5.1



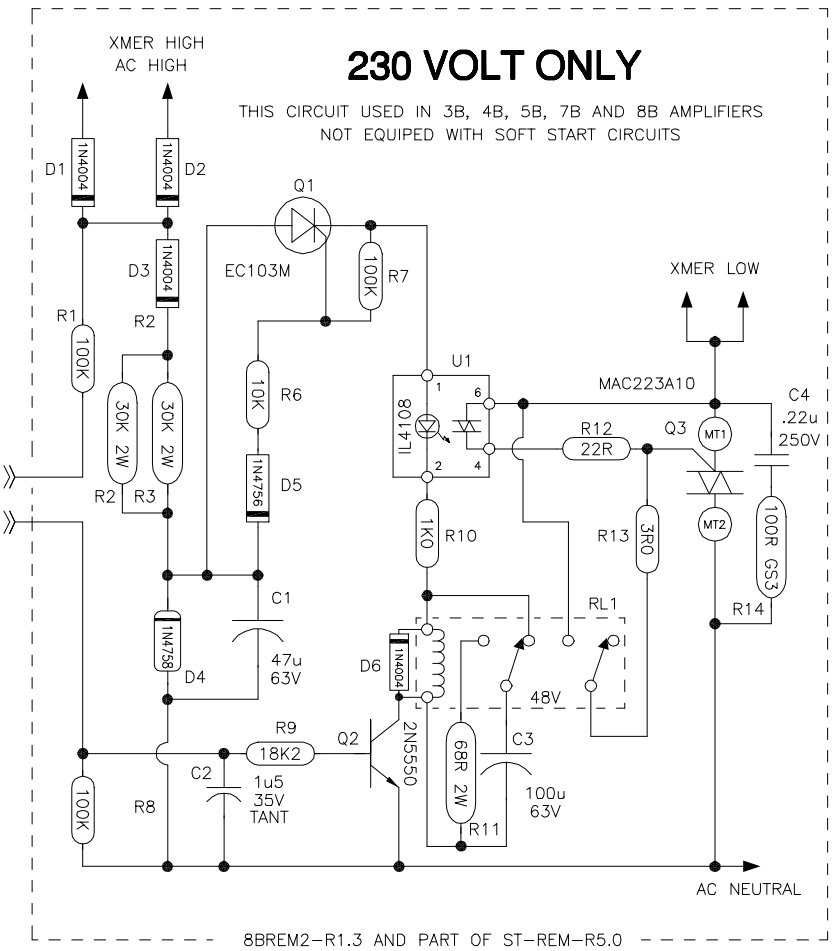
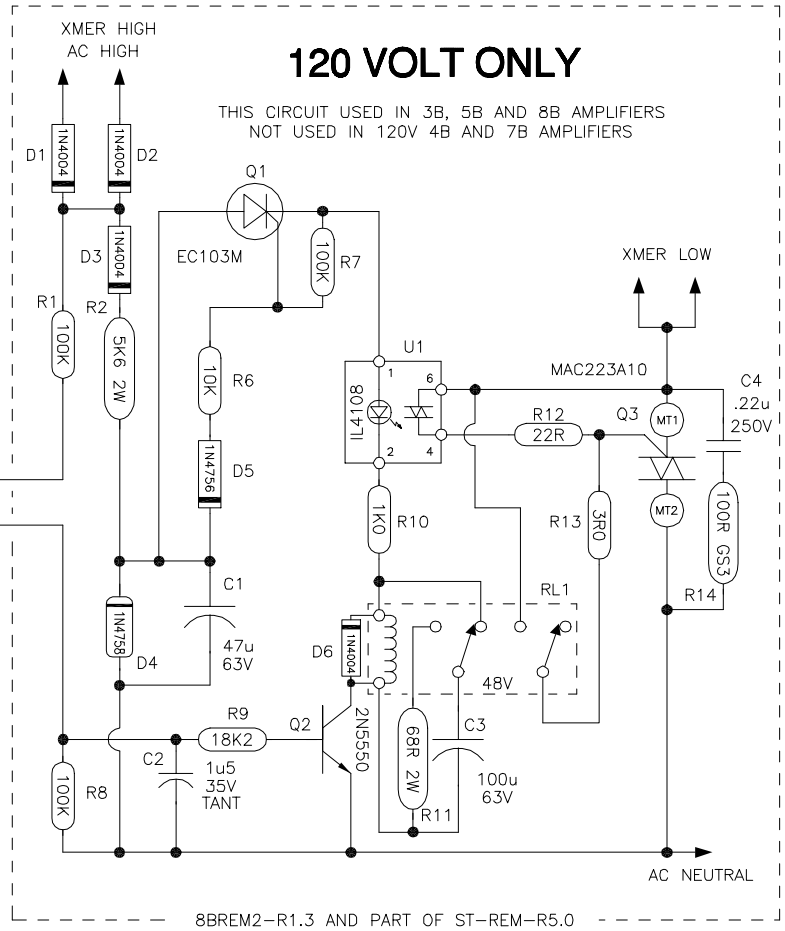


REMOTE INPUT & TIMING CIRCUIT



TIMING CIRCUIT WILL OPERATE SOFT START CIRCUIT ON 4B AND 7B AMPLIFIERS

TRIAC TURN ON CIRCUIT



**BRYSTON** LTD  
 677 NEAL DR. PETERBOROUGH, ONTARIO CANADA K9J 7Y4  
 PHONE (705) 742-5325 FAX (705) 742-0882

**REMOTE POWER TRIGGER**

4V TO 12V REMOTE POWER ON/OFF CONTROL

FILE: STREMSCH3A

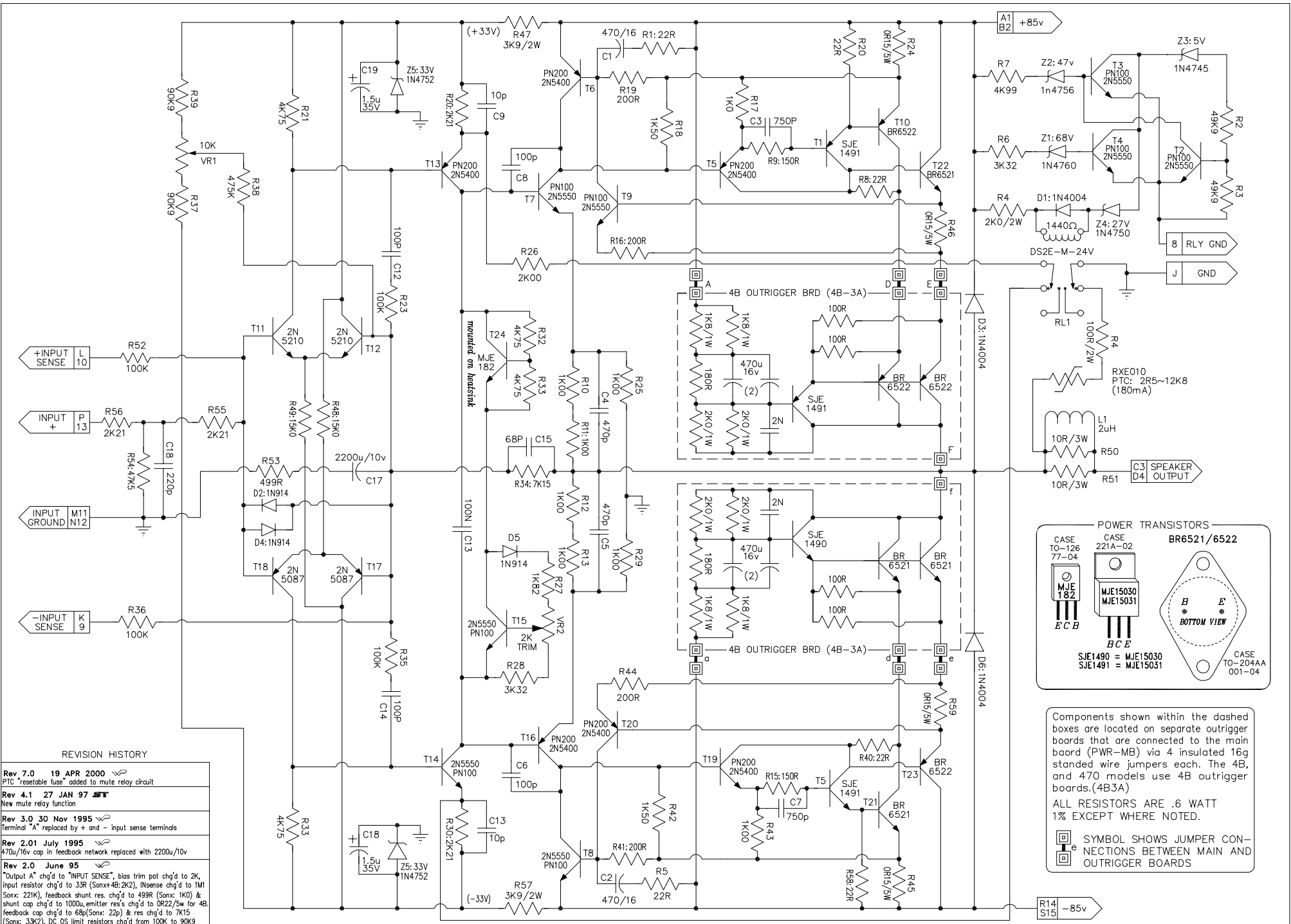
PART No: ST-REM-3A

DATE: MAR 08 00

DWG BY: E J G



REV: 3A



**POWER TRANSISTORS**

CASE TO-126 77-04  
MJE 182  
E C B

CASE 221A-02  
MJE15030  
MJE15031  
B E  
BOTTOM VIEW

CASE TO-204AA 001-04

SJE1490 = MJE15030  
SJE1491 = MJE15031

Components shown within the dashed boxes are located on separate outrigger boards that are connected to the main board (PWR-MB) via 4 insulated 16g stranded wire jumpers each. The 4B, and 470 models use 4B outrigger boards.(4B3A)

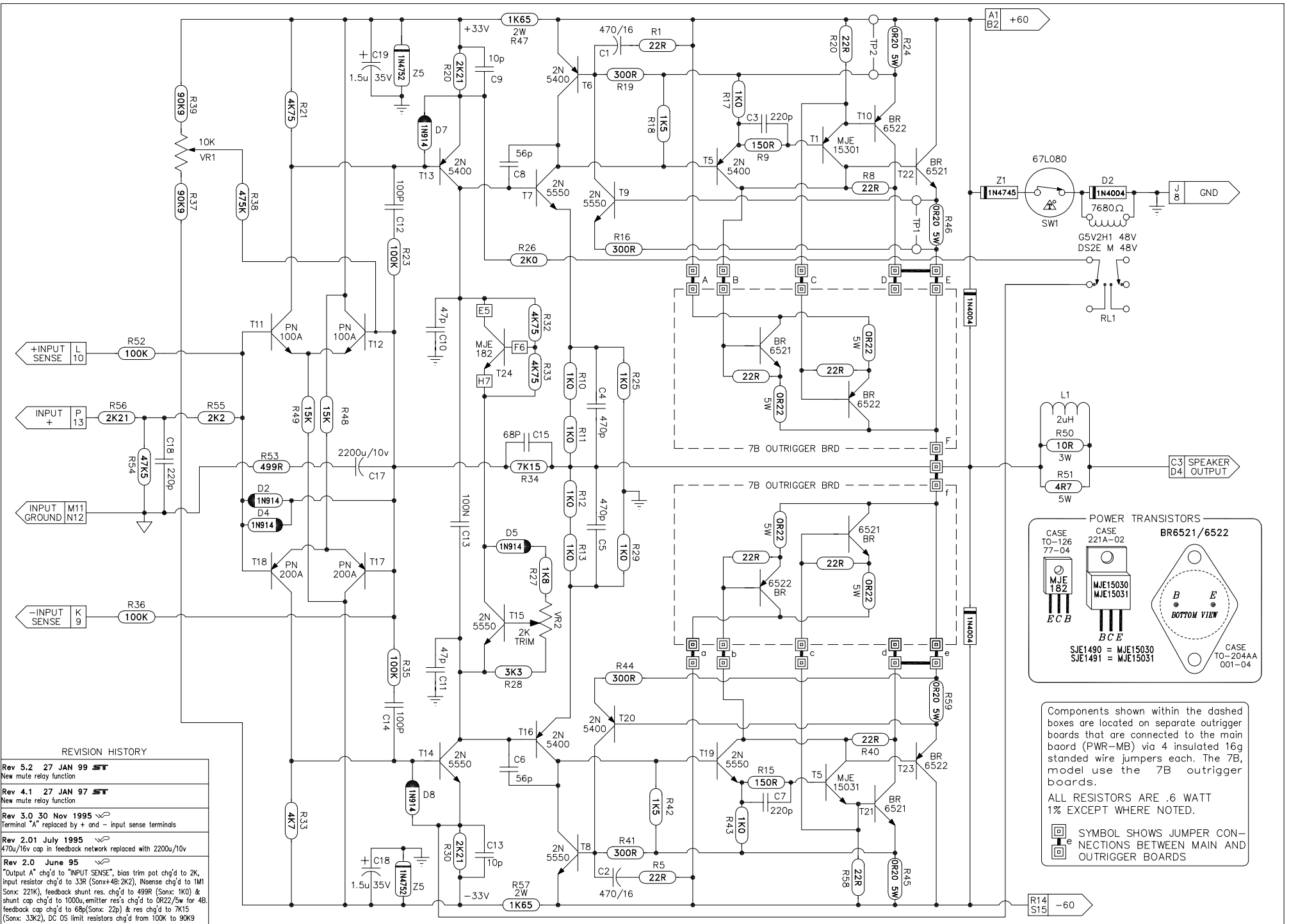
ALL RESISTORS ARE .6 WATT  
1% EXCEPT WHERE NOTED.

⊠ SYMBOL SHOWS JUMPER CONNECTIONS BETWEEN MAIN AND OUTRIGGER BOARDS

**REVISION HISTORY**

Rev 7.0	19 APR 2000	PTC "resettable fuse" added to mute relay circuit
Rev 4.1	27 JAN 97	New mute relay function
Rev 3.0	30 Nov 1995	Terminal "A" replaced by + and - input sense terminals
Rev 2.01	July 1995	470u/16v cap in feedback network replaced with 2200u/10v
Rev 2.0	June 95	"Output A" ch'g'd to "INPUT SENSE", bias trim pot ch'g'd to 2K, input resistor ch'g'd to 33R (Sonz+4B:2K2), INsense ch'g'd to 1M1 (Sonz: 221K), feedback shunt res. ch'g'd to 499R (Sonz: 1K0) & shunt cap ch'g'd to 1000u,emitter res's ch'g'd to DR22/5w for 4B, feedback cap ch'g'd to 68p(Sonz: 22p) & res ch'g'd to 7K15 (Sonz: 33K2), DC OS limit resistors ch'g'd from 100K to 90K9 and from 1M1 to 475K & DC OS injection ch'g'd from non-inv to inverting input, low voltage limit ch'g'd to 1K65/1w (4B: 3K9/2w)
Rev 2.0	June 95	200K (2) in DC-O/S ch'g'd to 100K; 2N5210 in bias ch'g'd to 2N5550; output res ch'g'd to 6W; output "A" added





REVISION HISTORY

Rev 5.2	27 JAN 99	ST	New mute relay function
Rev 4.1	27 JAN 97	ST	New mute relay function
Rev 3.0	30 Nov 1995		Terminal "A" replaced by + and - input sense terminals
Rev 2.01	July 1995		470u/16v cap in feedback network replaced with 2200u/10v
Rev 2.0	June 95		"Output A" chg'd to "INPUT SENSE", bias trim pot chg'd to 2K, input resistor chg'd to 33R (Sonz+4B:2K2), INsense chg'd to 1M1 (Sonz: 221K), feedback shunt res. chg'd to 499R (Sonz: 1K0) & shunt cap chg'd to 1000u, emitter res's chg'd to OR22/5w for 4B, feedback cap chg'd to 68p(Sonz: 22p) & res chg'd to 7K15 (Sonz: 33K2), DC OS limit resistors chg'd from 100K to 90K9 and from 1M to 475K & DC OS injection chg'd from non-inv to inverting input, low voltage limit chg'd to 1K65/.5w (4B: 3K9/2w)
Rev 2.0	June 95		200K (2) in DC-O/S chg'd to 100K; 2N5210 in bias chg'd to 2N5550; output res chg'd to 6W; output "A" added

**BRISTON**  
P.O. Box 2170, Peterborough, Ont., Canada K9J-7Y4 (705)742-5325

File: **PWRSCH7B**  
Part No: **PWR-MB-S7.0**  
Revision: **MAY 2000**  
By: **ST**

# 7B CHANNEL ASSEMBLY

Components shown within the dashed boxes are located on separate outrigger boards that are connected to the main board (PWR-MB) via 4 insulated 16g stranded wire jumpers each. The 7B, model use the 7B outrigger boards.

ALL RESISTORS ARE .6 WATT 1% EXCEPT WHERE NOTED.

SYMBOL SHOWS JUMPER CONNECTIONS BETWEEN MAIN AND OUTRIGGER BOARDS

**POWER TRANSISTORS BR6521/6522**

CASE TO-126 77-04  
MJE 182  
E C B

CASE 221A-02  
MJE15030  
MJE15031  
B C E

SJE1490 = MJE15030  
SJE1491 = MJE15031

CASE TO-204AA 001-04