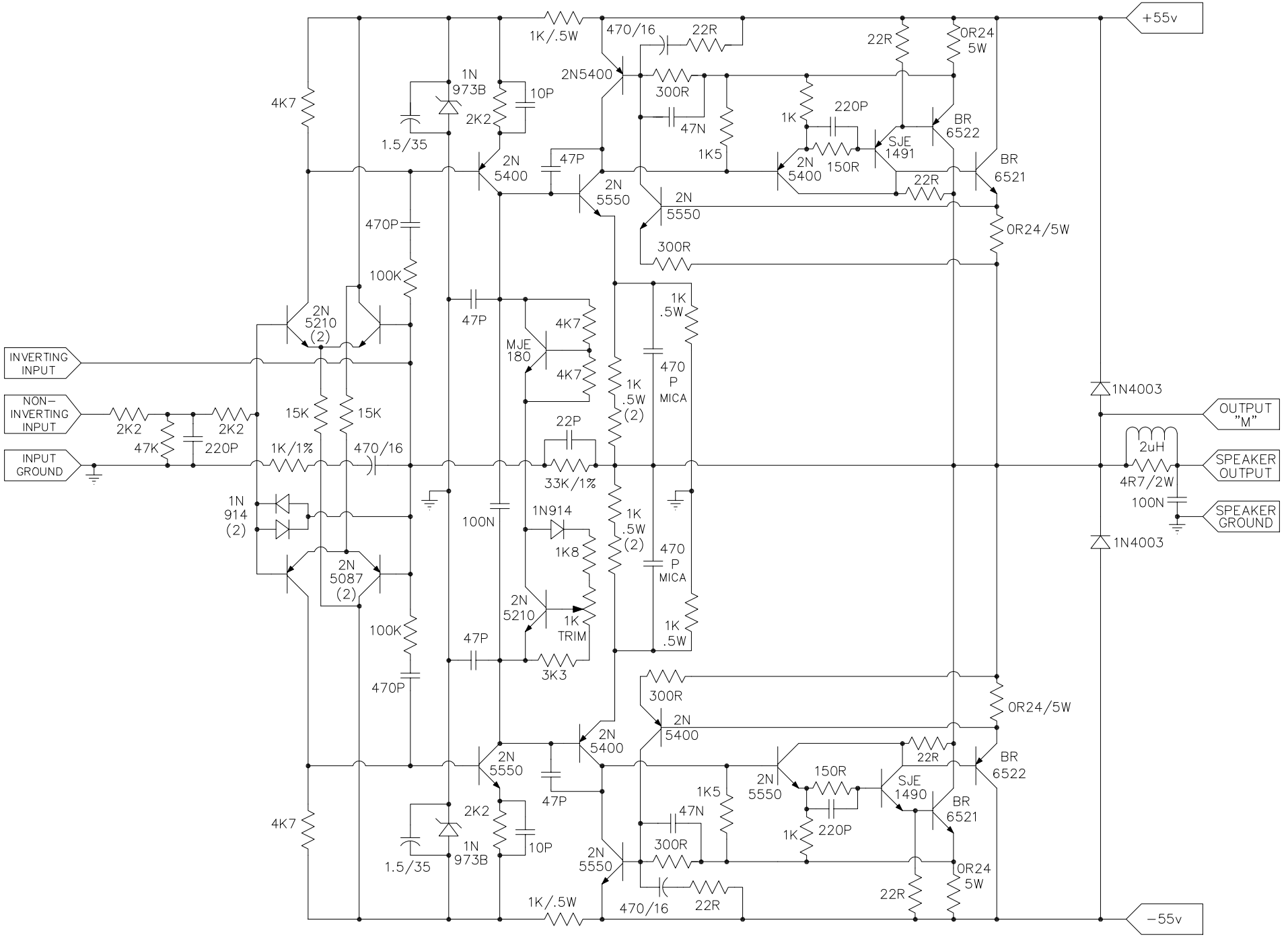
BRYSTON

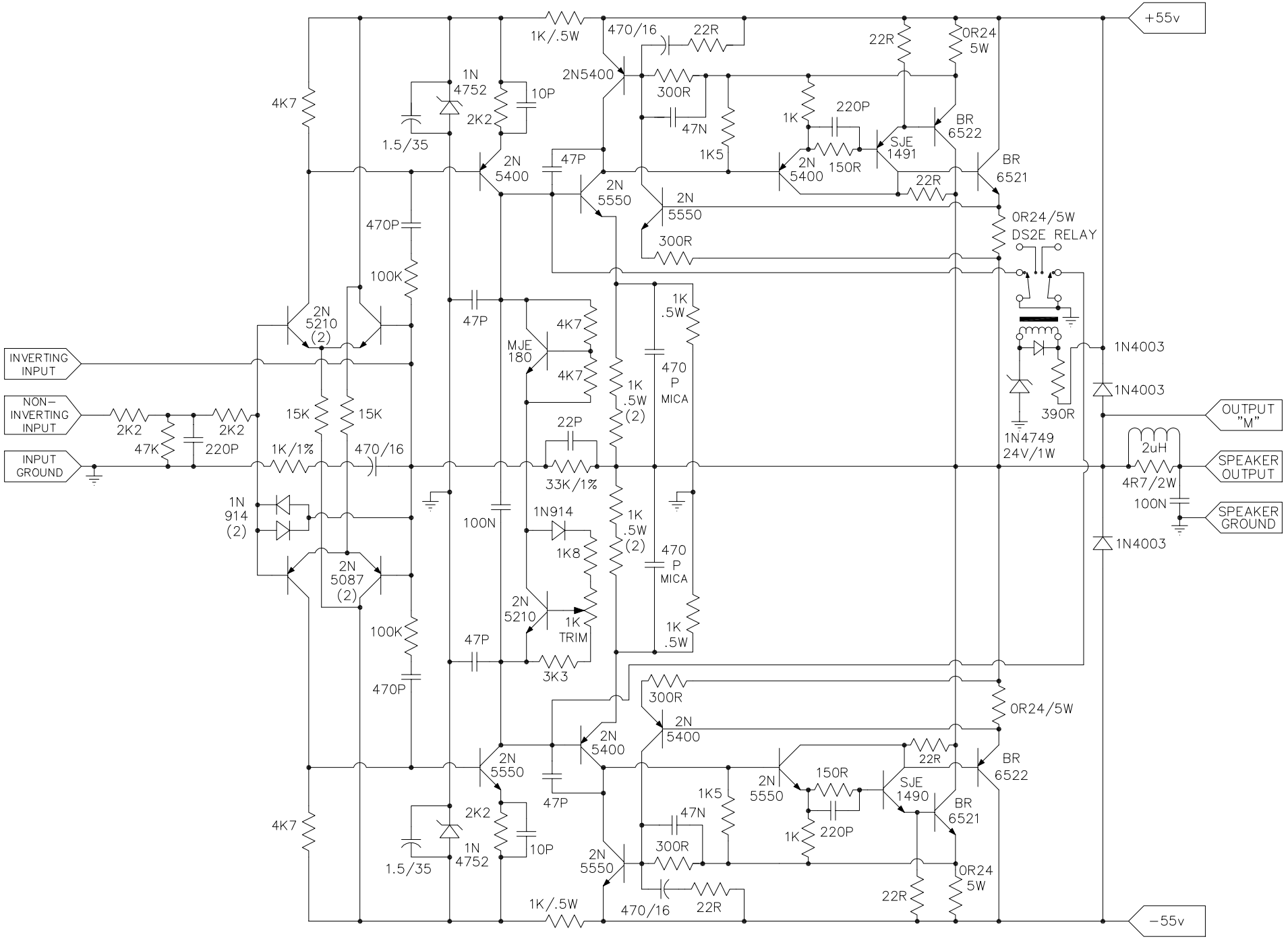
POWER AMPLIFIER SCHEMATICS

for models 3B~8B

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18	Power Amplifier Main board (PWR-MB/3.0a) Schematic, Rev 3.1	Nov 1996	PWR-MB-S.dwg	3B~8B-Channel-Schematic3_1
19	5B & 8B Overall Schematic, Rev 2.4	Dec 1996	8BSCH24.dwg	5B+8B-Overall-Schematic
20	3B-st Overall Schematic, Rev 5.0	Jan 1997	3BSCH5.dwg	3B-ST-Overall Schematic
21	4B Input Schematic, Rev 5.1	May 1997	4BINPUTSCH.dwg	4B-Input-Schematic
22	7B-st Overall Schematic, Rev 10.5	Dec 1998	7BSCH3.dwg	7B-Overall-Schematic
23	Remote Power Trigger Schematic, Rev 3a	Mar 2000	STREMSCH3A.dwg	3B~8B-Rem-Trig-Schematic
24	4B Main Board Schematic for PWR-MB, Rev 0.0	Apr 2000	PWR-MB7.dwg	4B-Channel-Schematic7
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+55v
-55v
INVERTING INPUT
NON-INVERTING INPUT
INPUT GROUND
OUTPUT "M"
SPEAKER OUTPUT
SPEAKER GROUND
1K/.5W
470/16
22R
2N5400
300R
47N
1K5
1K
220P
150R
SJE 1491
BR 6522
BR 6521
0R24 5W
0R24/5W
4K7
1N 973B
2K2
10P
1.5/35
2N 5400
47P
2N 5550
470P
100K
2N 5210 (2)
MJE 180
1K .5W
470 P MICA
1K .5W (2)
15K
2K2
47K
220P
1K/1%
470/16
22P
33K/1%
1N914
1K8
1K TRIM
3K3
100N
1N 914 (2)
2N 5087 (2)
1N4003
2uH
4R7/2W
ALL RESISTORS ARE 1/4 WATT
EXCEPT WHERE NOTED.
BRYSTON
3B POWER AMPLIFIER MAIN BOARD (3B III) SCHEMATIC
REVISION #6 13 JAN 87
DWG:
DESIGN:



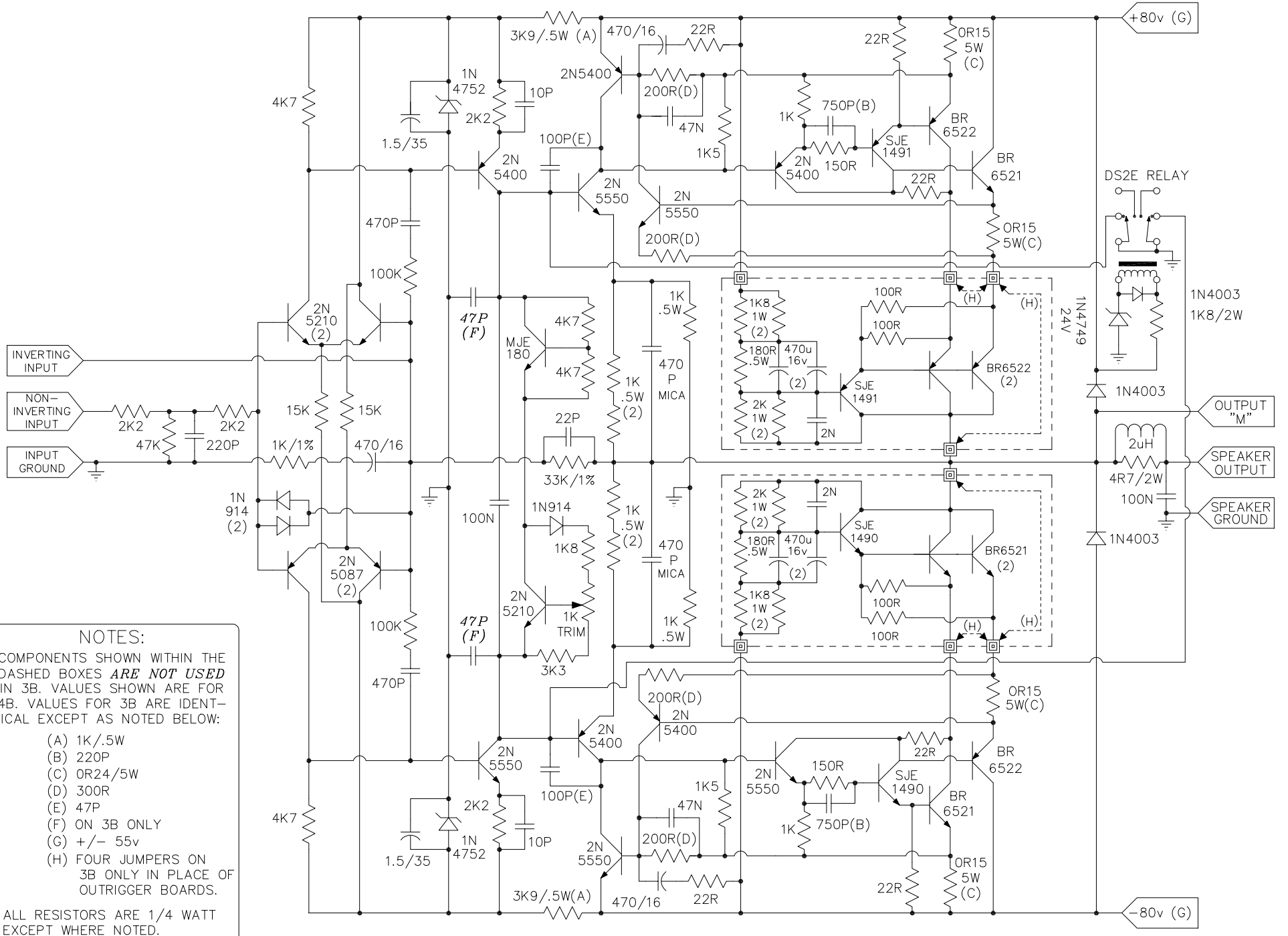
ALL RESISTORS ARE 1/4 WATT
EXCEPT WHERE NOTED.

BRYSTON

3B POWER AMPLIFIER MAIN BOARD (3B IV) SCHEMATIC

REVISION #8 20 OCT 87

DWG: DESIGN:



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.

ALL RESISTORS ARE 1/4 WATT EXCEPT WHERE NOTED.

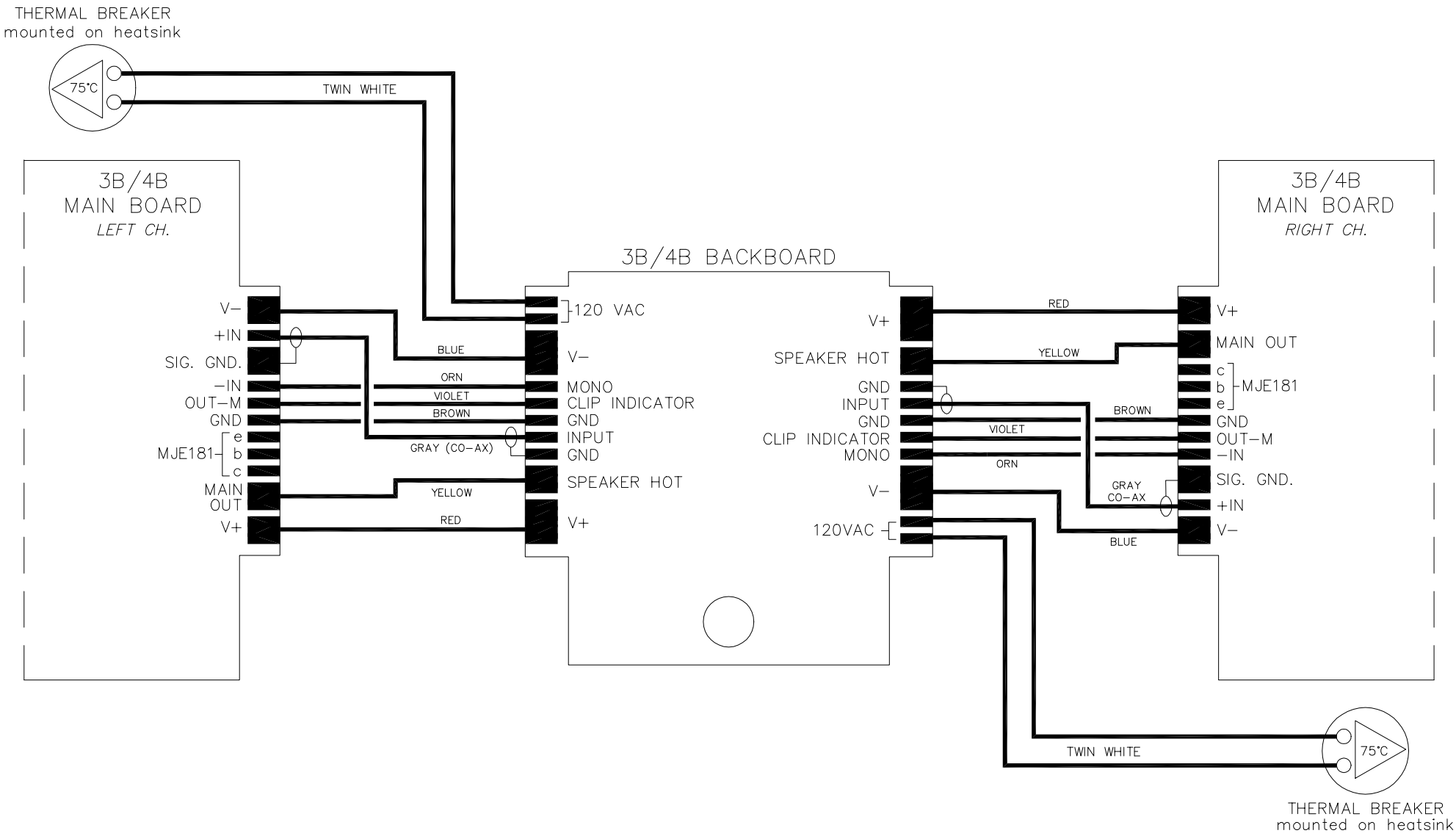
▣ SYMBOL SHOWS CONNECTIONS TO OUTRIGGER PC BOARDS

BRYSTON

3B/4B POWER AMPLIFIER MAIN BOARD (3B IV) SCHEMATIC

REVISION #8 12 JAN 88

DWG: WP DESIGN: WR



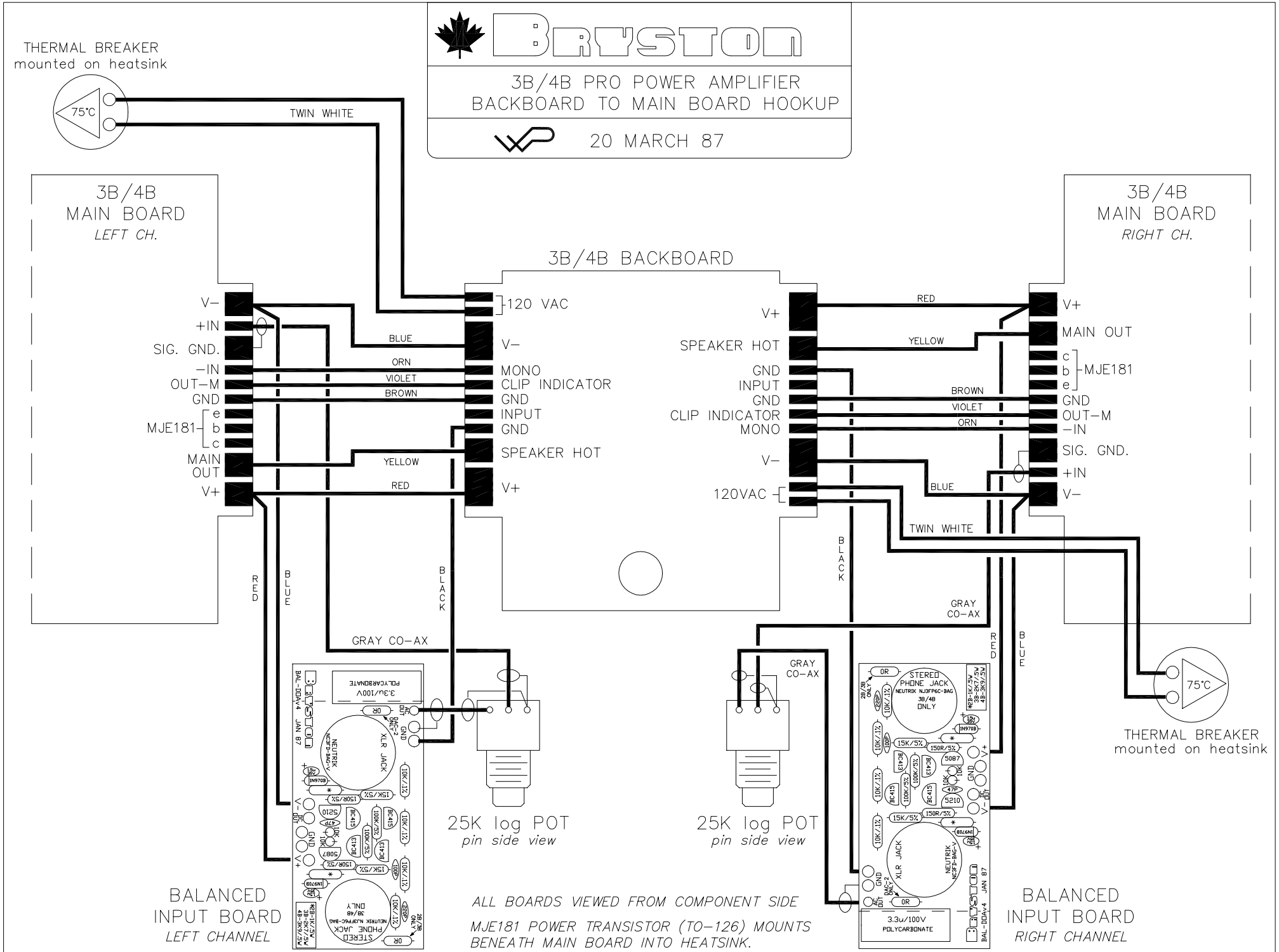
ALL BOARDS VIEWED FROM COMPONENT SIDE

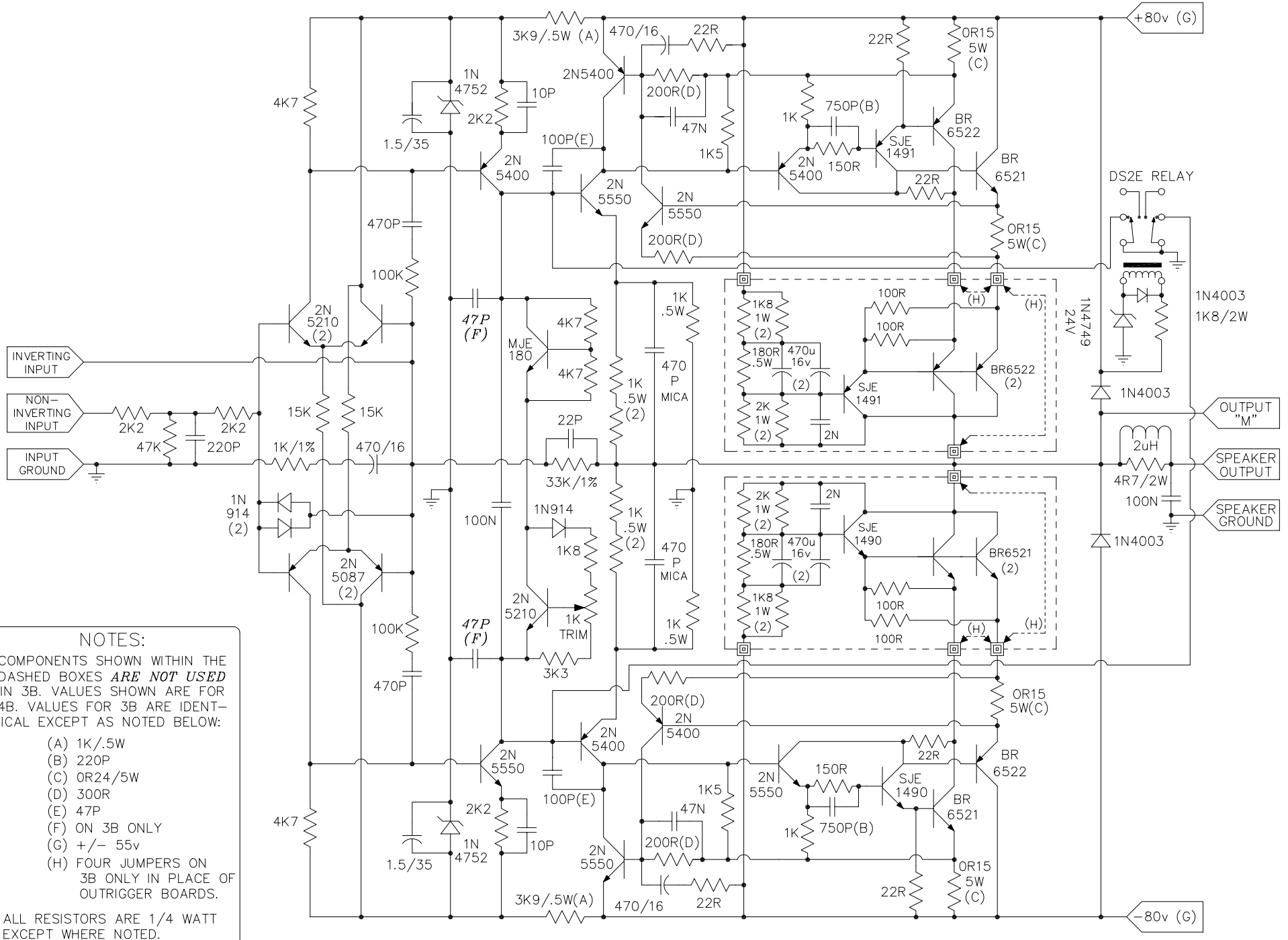
MJE181 POWER TRANSISTOR (TO–126) MOUNTS BENEATH MAIN BOARD INTO HEATSINK.

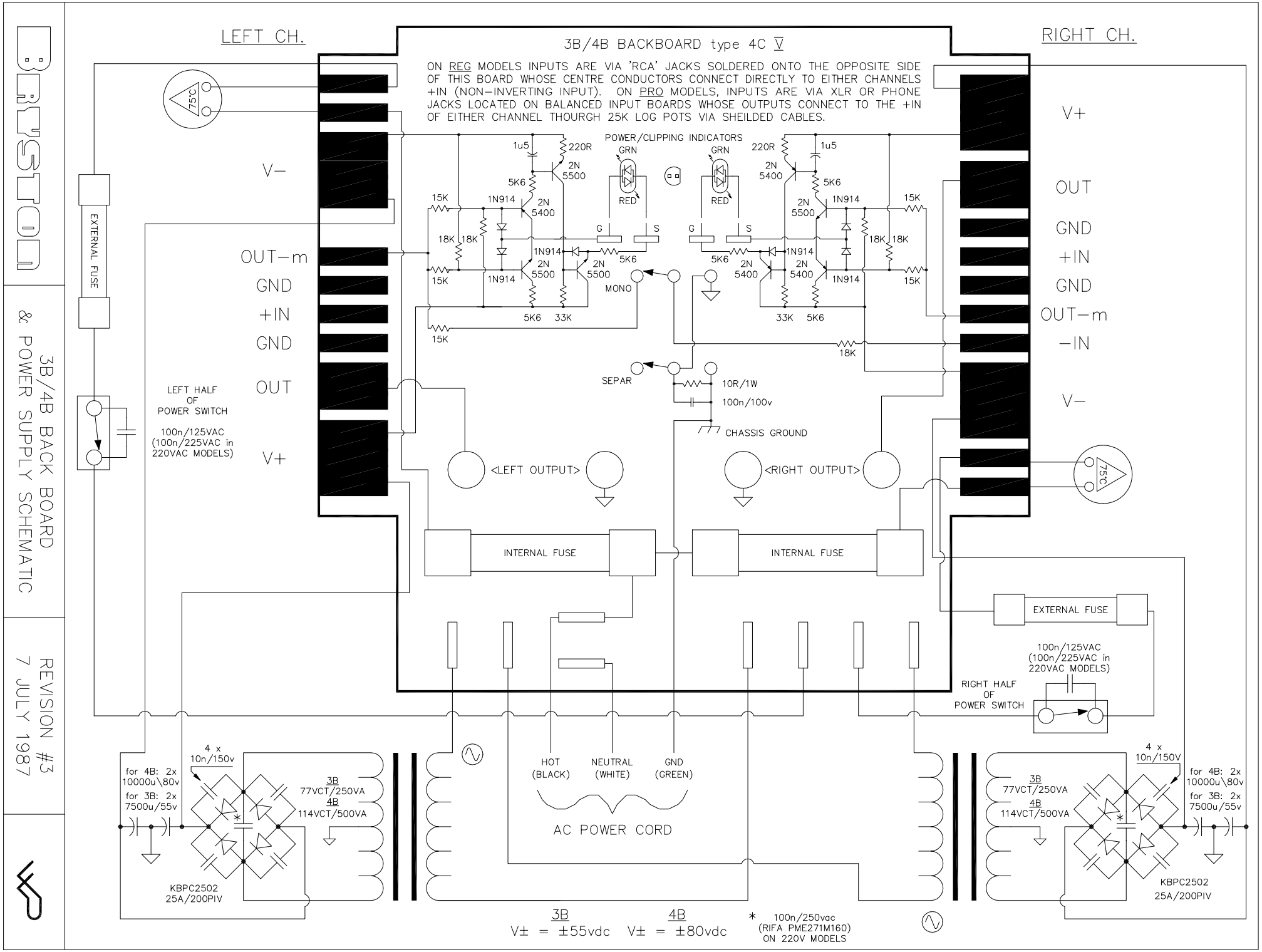
BRYSTON

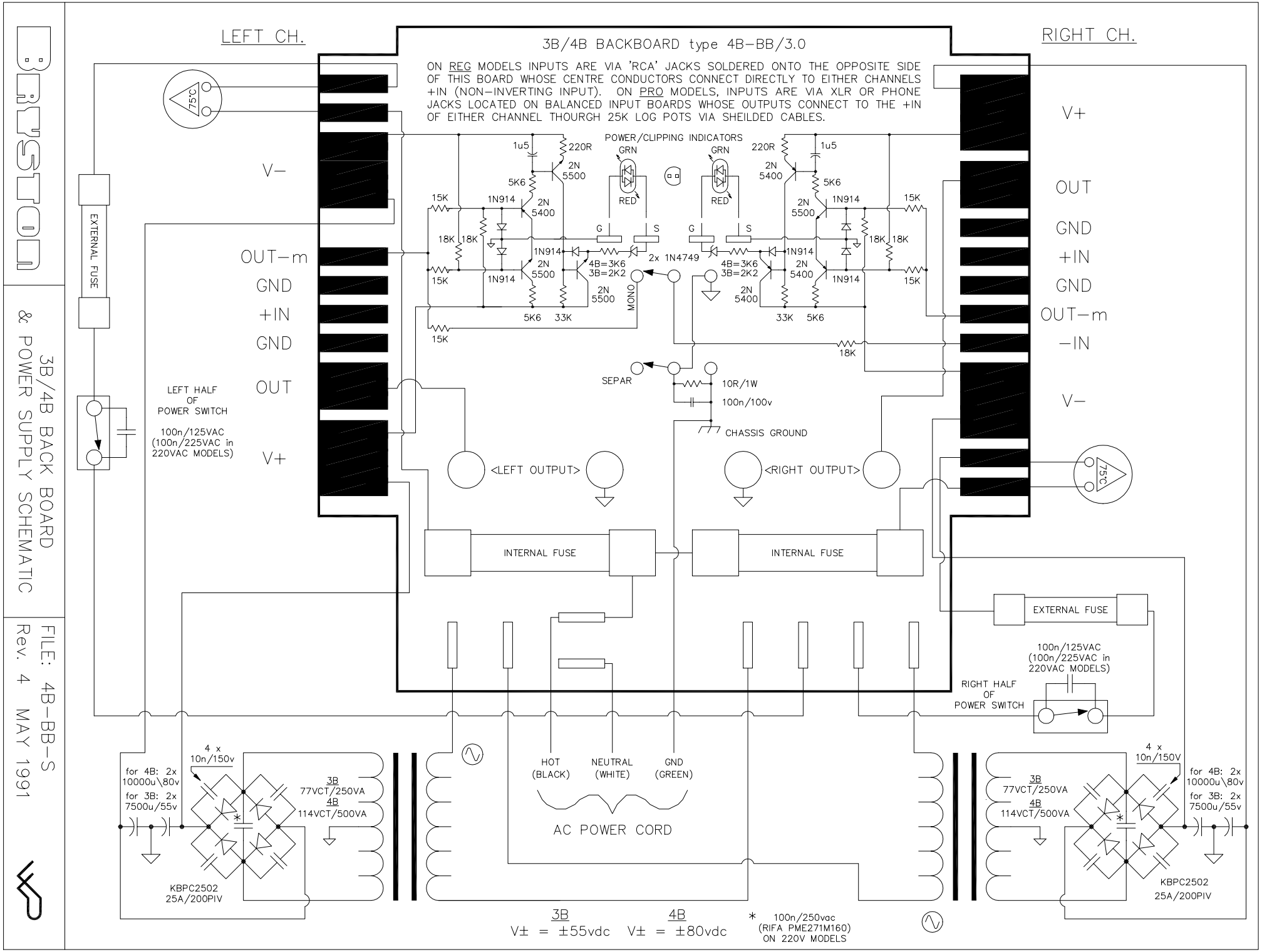
3B/4B REGULAR POWER AMPLIFIER
BACKBOARD TO MAIN BOARD HOOKUP

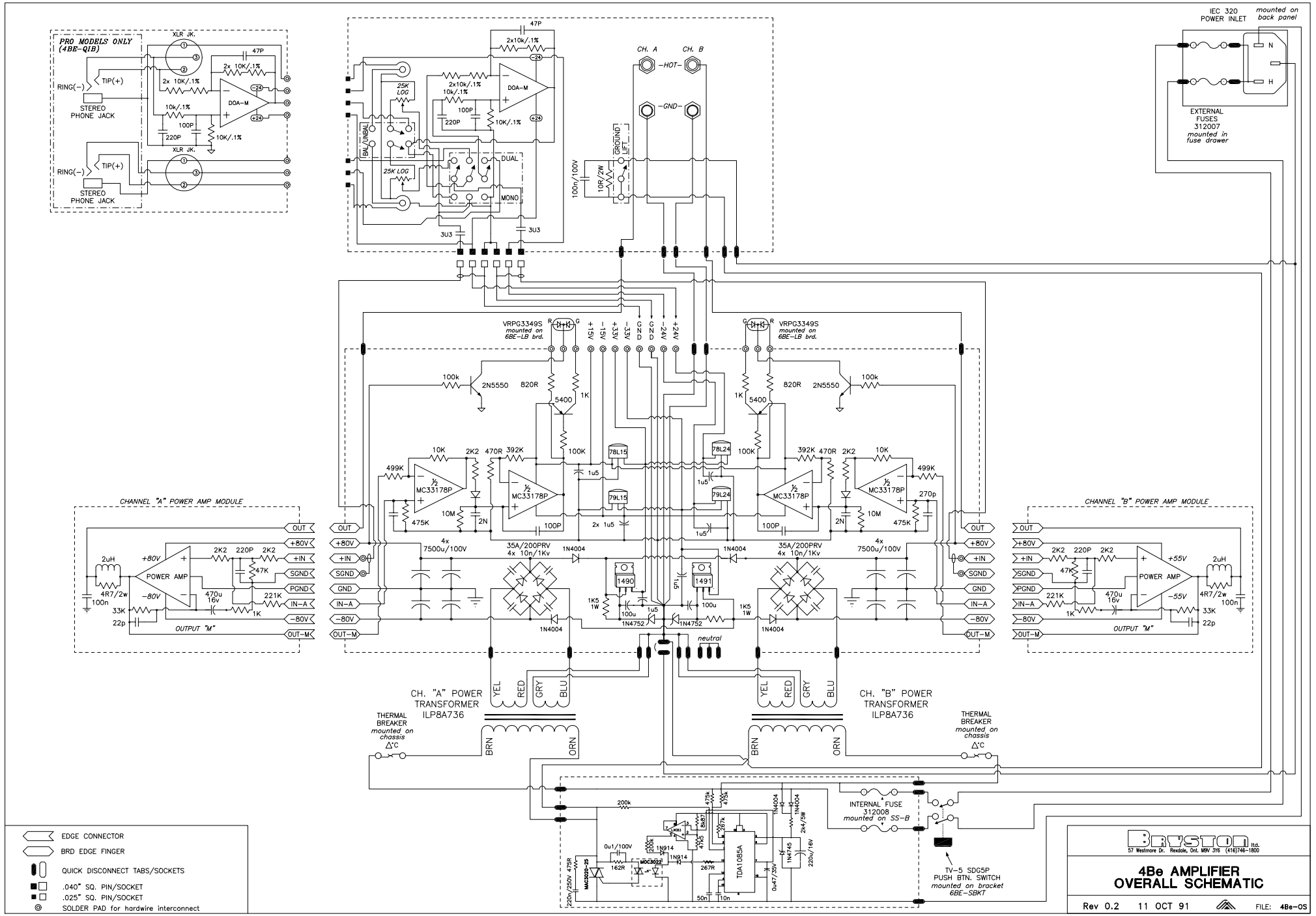
12 MARCH 87

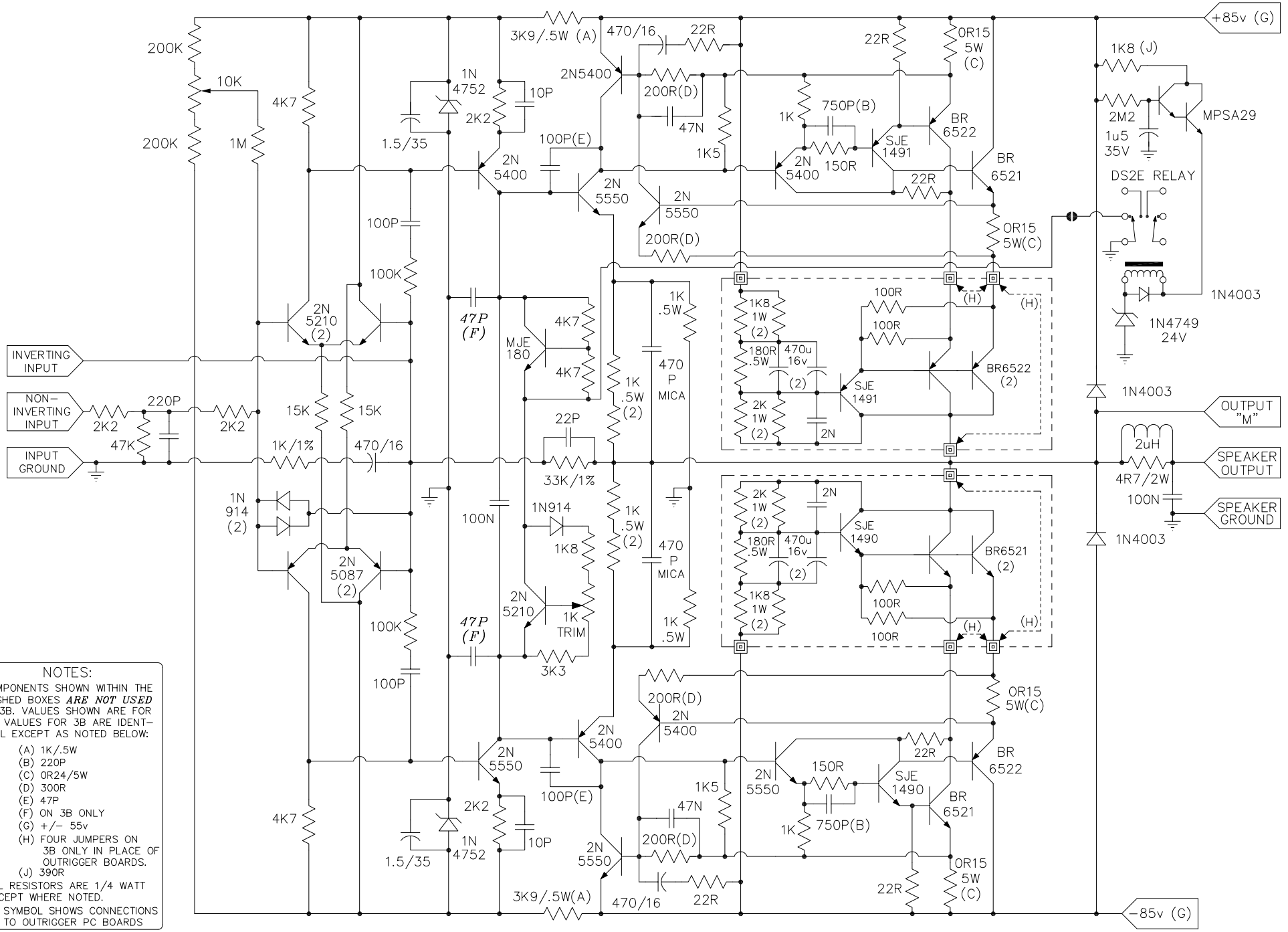

BRYSTON
3B/4B PRO POWER AMPLIFIER
BACKBOARD TO MAIN BOARD HOOKUP
20 MARCH 87
THERMAL BREAKER
mounted on heatsink
75°C
TWIN WHITE
3B/4B
MAIN BOARD
LEFT CH.
3B/4B BACKBOARD
3B/4B
MAIN BOARD
RIGHT CH.
V–
+IN
SIG. GND.
–IN
OUT–M
GND
MJE181
e
b
c
MAIN OUT
V+
120 VAC
V–
MONO
CLIP INDICATOR
GND
INPUT
GND
SPEAKER HOT
V+
BLUE
ORN
VIOLET
BROWN
YELLOW
RED
V+
SPEAKER HOT
GND
INPUT
GND
CLIP INDICATOR
MONO
V–
120VAC
RED
YELLOW
BROWN
VIOLET
ORN
BLUE
TWIN WHITE
V+
MAIN OUT
c
b
e
MJE181
GND
OUT–M
–IN
SIG. GND.
+IN
V–
RED
BLUE
BLACK
BLACK
GRAY CO–AX
GRAY CO–AX
RED
BLUE
25K log POT
pin side view
25K log POT
pin side view
THERMAL BREAKER
mounted on heatsink
BALANCED
INPUT BOARD
LEFT CHANNEL
BALANCED
INPUT BOARD
RIGHT CHANNEL
ALL BOARDS VIEWED FROM COMPONENT SIDE
MJE181 POWER TRANSISTOR (TO–126) MOUNTS
BENEATH MAIN BOARD INTO HEATSINK.


+80v (G)
-80v (G)
INVERTING INPUT
NON-INVERTING INPUT
INPUT GROUND
OUTPUT "M"
SPEAKER OUTPUT
SPEAKER GROUND
DS2E RELAY
1N4003
1K8/2W
1N4749 24V
2uH
4R7/2W
100N
3K9/.5W (A)
470/16
22R
2N5400
200R(D)
47N
1K5
1K
750P(B)
SJE 1491
BR 6522
BR 6521
0R15 5W (C)
150R
100P(E)
2N 5550
2N 5400
1N 4752
2K2
10P
1.5/35
4K7
470P
100K
2N 5210 (2)
47P (F)
MJE 180
1K .5W
470 P MICA
15K
2K2
47K
220P
1K/1%
22P
33K/1%
1N 914 (2)
1N914
1K8
1K TRIM
3K3
2N 5087 (2)
1K8 1W (2)
180R .5W
470u 16v
2K 1W (2)
100R
BR6522 (2)
SJE 1490
2N
(H)
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.
ALL RESISTORS ARE 1/4 WATT EXCEPT WHERE NOTED.
SYMBOL SHOWS CONNECTIONS TO OUTRIGGER PC BOARDS
BRYSTON
3B/4B POWER AMPLIFIER MAIN BOARD (3B IV) SCHEMATIC
REVISION #8 12 JAN 88
DWG:
DESIGN:


BRYSTON
3B/4B BACK BOARD & POWER SUPPLY SCHEMATIC
REVISION #3
7 JULY 1987
LEFT CH.
RIGHT CH.
3B/4B BACKBOARD type 4C V
ON REG MODELS INPUTS ARE VIA 'RCA' JACKS SOLDERED ONTO THE OPPOSITE SIDE OF THIS BOARD WHOSE CENTRE CONDUCTORS CONNECT DIRECTLY TO EITHER CHANNELS +IN (NON-INVERTING INPUT). ON PRO MODELS, INPUTS ARE VIA XLR OR PHONE JACKS LOCATED ON BALANCED INPUT BOARDS WHOSE OUTPUTS CONNECT TO THE +IN OF EITHER CHANNEL THOURGH 25K LOG POTS VIA SHEILDED CABLES.
75C
V-
OUT-m
GND
+IN
GND
OUT
V+
EXTERNAL FUSE
LEFT HALF OF POWER SWITCH
100n/125VAC (100n/225VAC in 220VAC MODELS)
POWER/CLIPPING INDICATORS
GRN
RED
1u5
220R
2N 5500
2N 5400
5K6
15K
1N914
18K
G
S
MONO
SEPAR
10R/1W
100n/100v
CHASSIS GROUND
<LEFT OUTPUT>
<RIGHT OUTPUT>
INTERNAL FUSE
INTERNAL FUSE
EXTERNAL FUSE
100n/125VAC (100n/225VAC in 220VAC MODELS)
RIGHT HALF OF POWER SWITCH
4 x 10n/150v
for 4B: 2x 10000u\80v
for 3B: 2x 7500u/55v
3B 77VCT/250VA
4B 114VCT/500VA
KBPC2502 25A/200PIV
HOT (BLACK)
NEUTRAL (WHITE)
GND (GREEN)
AC POWER CORD
3B V± = ±55vdc
4B V± = ±80vdc
* 100n/250vac (RIFA PME271M160) ON 220V MODELS


BRYSTON
3B/4B BACK BOARD & POWER SUPPLY SCHEMATIC
FILE: 4B-BB-S
Rev. 4 MAY 1991
LEFT CH.
RIGHT CH.
3B/4B BACKBOARD type 4B-BB/3.0
ON REG MODELS INPUTS ARE VIA 'RCA' JACKS SOLDERED ONTO THE OPPOSITE SIDE OF THIS BOARD WHOSE CENTRE CONDUCTORS CONNECT DIRECTLY TO EITHER CHANNELS +IN (NON-INVERTING INPUT). ON PRO MODELS, INPUTS ARE VIA XLR OR PHONE JACKS LOCATED ON BALANCED INPUT BOARDS WHOSE OUTPUTS CONNECT TO THE +IN OF EITHER CHANNEL THOURGH 25K LOG POTS VIA SHEILDED CABLES.
75°C
V-
OUT-m
GND
+IN
GND
OUT
V+
EXTERNAL FUSE
LEFT HALF OF POWER SWITCH
100n/125VAC (100n/225VAC in 220VAC MODELS)
POWER/CLIPPING INDICATORS
GRN
RED
1u5
220R
2N 5500
2N 5400
5K6
15K
1N914
18K
G
S
2x 1N4749
4B=3K6
3B=2K2
MONO
33K
SEPAR
10R/1W
100n/100v
CHASSIS GROUND
<LEFT OUTPUT>
<RIGHT OUTPUT>
INTERNAL FUSE
INTERNAL FUSE
EXTERNAL FUSE
RIGHT HALF OF POWER SWITCH
100n/125VAC (100n/225VAC in 220VAC MODELS)
V+
OUT
GND
+IN
GND
OUT-m
-IN
V-
4 x 10n/150v
for 4B: 2x 10000u\80v
for 3B: 2x 7500u/55v
3B 77VCT/250VA
4B 114VCT/500VA
KBPC2502 25A/200PIV
HOT (BLACK)
NEUTRAL (WHITE)
GND (GREEN)
AC POWER CORD
3B V± = ±55vdc
4B V± = ±80vdc
* 100n/250vac (RIFA PME271M160) ON 220V MODELS


PRO MODELS ONLY
(4BE-QIB)
XLR JK.
TIP(+)
RING(-)
STEREO PHONE JACK
47P
2x 10K/.1%
10k/.1%
100P
220P
DOA-M
+24
-24
25K LOG
BAL/UNBAL
DUAL
MONO
3U3
CH. A
CH. B
-HOT-
-GND-
GROUND LIFT
100n/100V
10R/2W
IEC 320 POWER INLET
mounted on back panel
EXTERNAL FUSES 312007
mounted in fuse drawer
N
H
VRPG3349S
mounted on 6BE-LB brd.
+15V
-15V
+33V
-33V
GND
-24V
+24V
2N5550
820R
5400
1K
100k
78L15
79L15
78L24
79L24
MC33178P
499K
392K
470R
2K2
10K
10M
475K
100P
1u5
2N
270p
CHANNEL "A" POWER AMP MODULE
CHANNEL "B" POWER AMP MODULE
OUT
+80V
+IN
SGND
PGND
GND
IN-A
-80V
OUT-M
2uH
4R7/2w
100n
33K
22p
POWER AMP
+80V
-80V
+55V
-55V
2K2
220P
47K
470u 16v
221K
1K
OUTPUT "M"
4x 7500u/100V
35A/200PRV 4x 10n/1Kv
1N4004
1N4752
1K5 1W
100u
1490
1491
neutral
CH. "A" POWER TRANSFORMER ILP8A736
CH. "B" POWER TRANSFORMER ILP8A736
YEL
RED
GRY
BLU
BRN
ORN
THERMAL BREAKER mounted on chassis Δ°C
INTERNAL FUSE 312008
mounted on SS-B
TV-5 SDG5P PUSH BTN. SWITCH
mounted on bracket 6BE-SBKT
200k
47k
8k87
267k
2k4/5W
0u1/100V
1N914
MOC3022
MAC320-8S
162R
475R
220n/250V
TDA1085A
50n
10n
0u47/35V
1N4745
220u/16V
EDGE CONNECTOR
BRD EDGE FINGER
QUICK DISCONNECT TABS/SOCKETS
.040" SQ. PIN/SOCKET
.025" SQ. PIN/SOCKET
SOLDER PAD for hardwire interconnect
BRYSTON Ltd.
57 Westmore Dr. Rexdale, Ont. M9V 3Y6 (416)746-1800
4Be AMPLIFIER
OVERALL SCHEMATIC
Rev 0.2 11 OCT 91
FILE: 4Be-OS



NOTES:

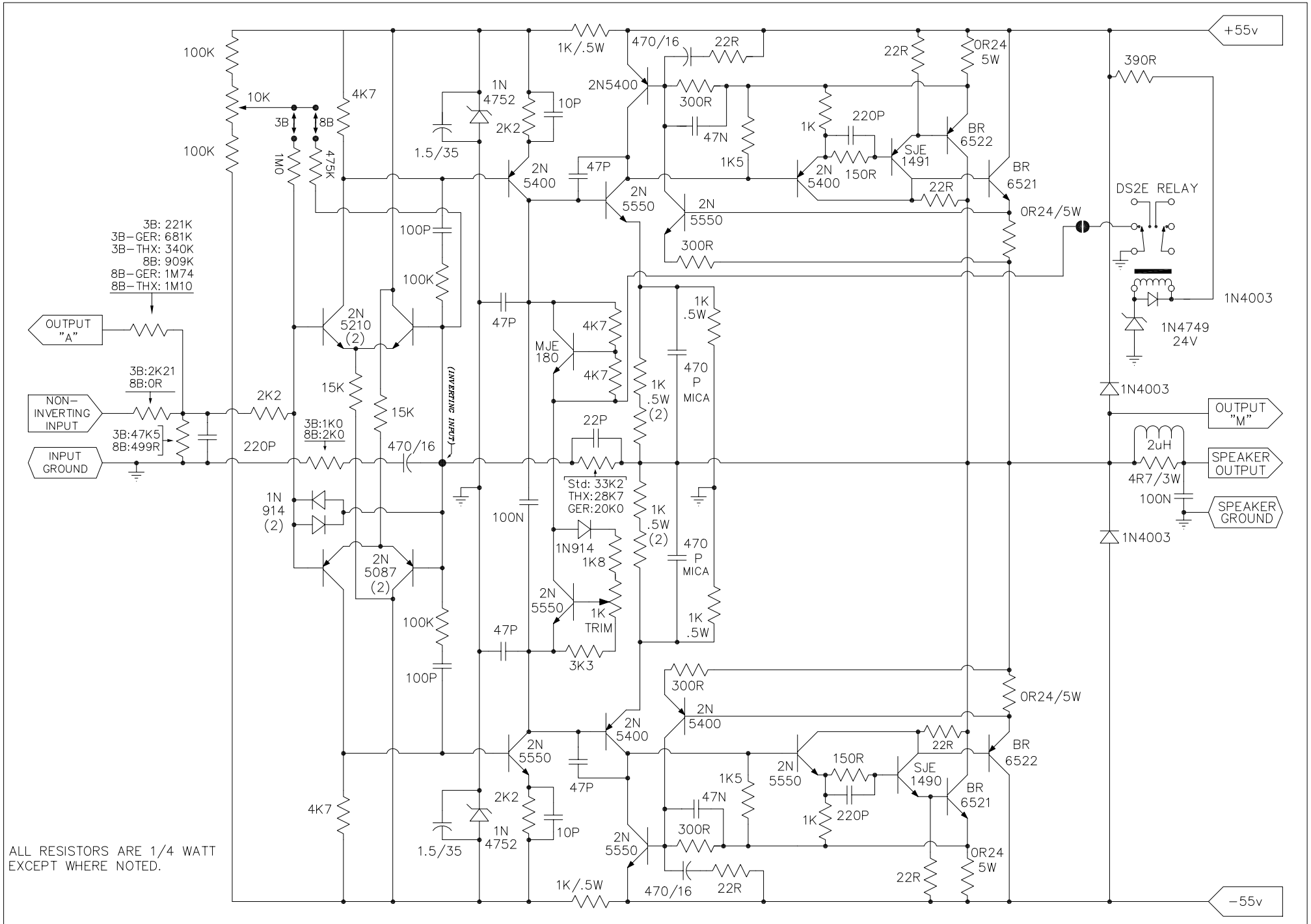
COMPONENTS SHOWN WITHIN THE DASHED BOXES ***ARE NOT USED*** IN 3B. VALUES SHOWN ARE FOR 4B. VALUES FOR 3B ARE IDENTICAL EXCEPT AS NOTED BELOW:

- (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

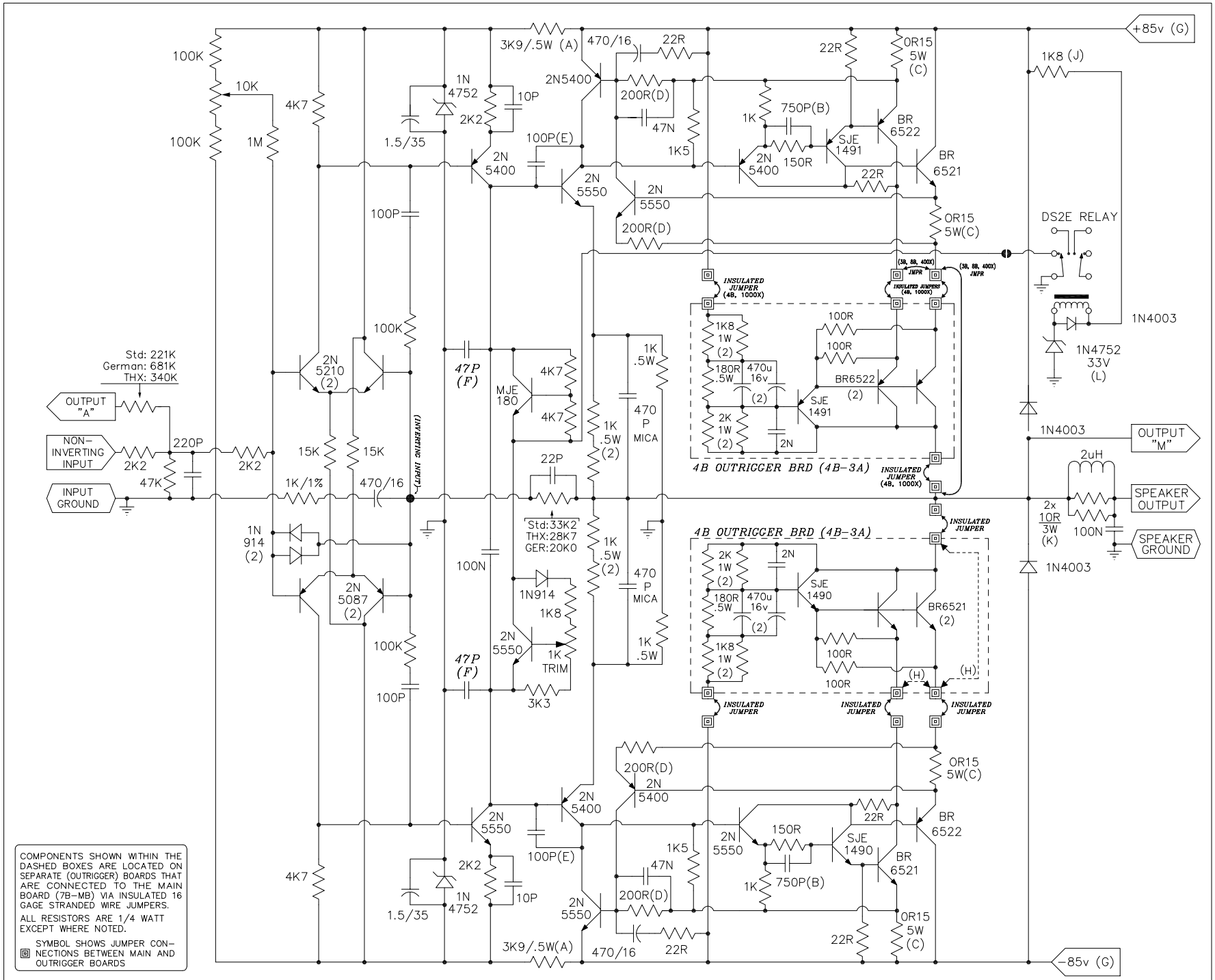
ALL RESISTORS ARE 1/4 WATT EXCEPT WHERE NOTED.

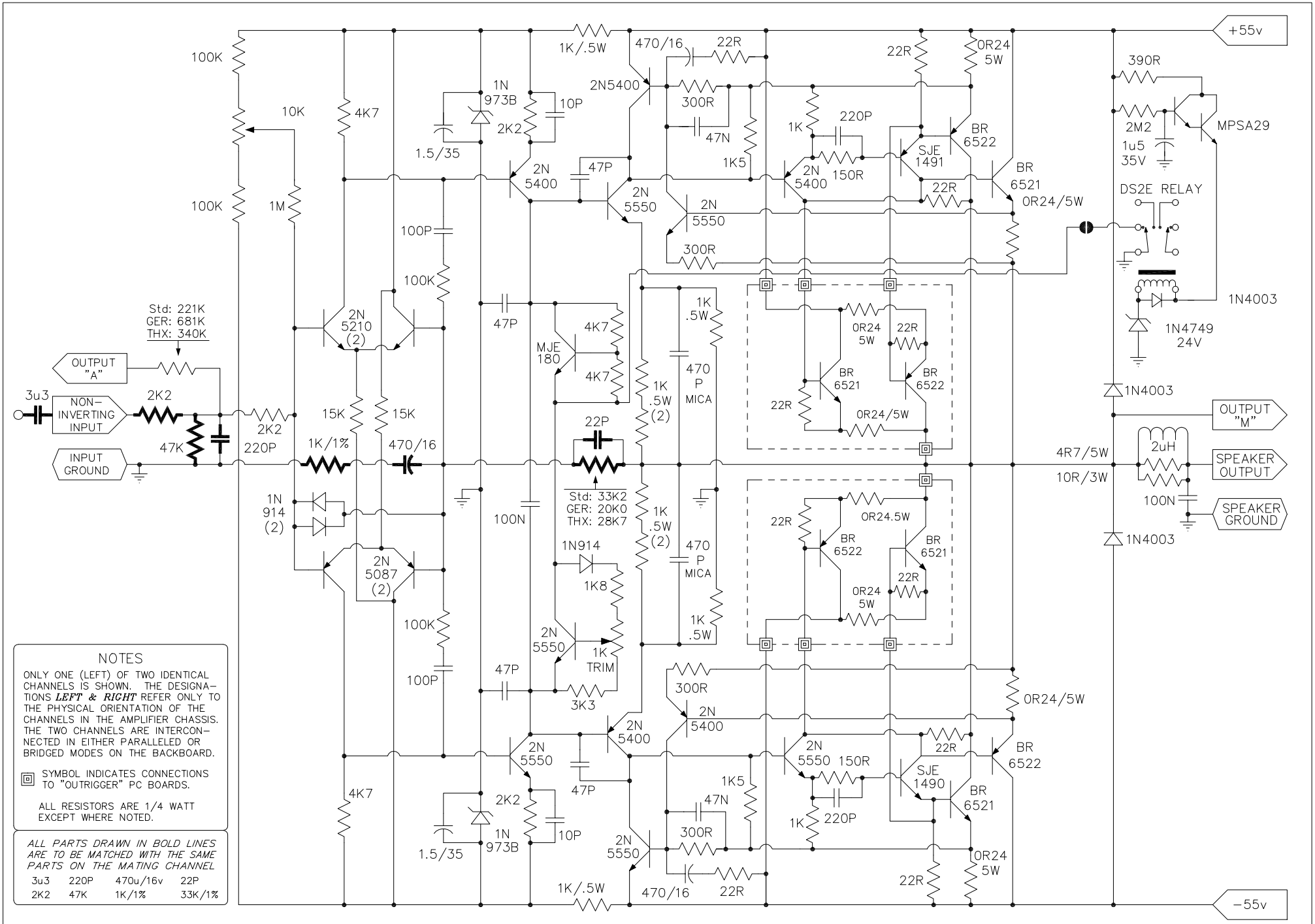
▣ SYMBOL SHOWS CONNECTIONS TO OUTRIGGER PC BOARDS

REV 9.1 JUNE 1992 DC O/S adjust circuitry added; 2x 470pf chg'd to 100pf styrene				BRYSTON	3B/4B POWER AMPLIFIER MAIN BOARD (7B-MB/2) SCHEMATIC
					REV 9.1 JUNE 1992 / FILE: 4B-MB-S



Rev 0 29 June 1992 Derived from 3B–MB–S/9.1 Rev 1 May 94 200K(2) in DC–O/S chg'd to 100K 2N5210 bias transistor chg'd to 2N5550; 8B data added.				3Be/8B POWER AMPLIFIER MAIN BOARD (7B-MB/2.51) SCHEMATIC	
			BRYSTON	REVISION #1 MAY 94	FILE: 3BE–MBS


+85v (G)
-85v (G)
100K
10K
100K
1M
4K7
1N 4752
2K2
10P
1.5/35
3K9/.5W (A)
470/16
22R
2N5400
200R(D)
47N
1K5
100P(E)
2N 5400
2N 5550
100P
200R(D)
22R
0R15 5W (C)
1K
750P(B)
2N 5400
150R
SJE 1491
BR 6522
BR 6521
0R15 5W(C)
1K8 (J)
DS2E RELAY
1N4003
1N4752 33V (L)
OUTPUT "M"
2uH
2x 10R 3W (K)
100N
SPEAKER OUTPUT
SPEAKER GROUND
Std: 221K
German: 681K
THX: 340K
OUTPUT "A"
NON-INVERTING INPUT
INPUT GROUND
220P
2K2
47K
2N 5210 (2)
15K
15K
1K/1%
470/16
(INVERTING INPUT)
47P (F)
MJE 180
4K7
4K7
22P
1K .5W (2)
470 P MICA
1K .5W
Std:33K2
THX:28K7
GER:20K0
1N 914 (2)
2N 5087 (2)
100N
1N914
1K8
2N 5550
1K TRIM
3K3
47P (F)
100K
100P
INSULATED JUMPER (4B, 1000X)
(3B, 8B, 400X) JMPR
4B OUTRIGGER BRD (4B-3A)
1K8 1W (2)
180R .5W
470u 16v
(2)
2K 1W (2)
100R
BR6522
SJE 1491
2N
4B OUTRIGGER BRD (4B-3A)
2K 1W (2)
SJE 1490
BR6521
(H)
INSULATED JUMPER
COMPONENTS SHOWN WITHIN THE DASHED BOXES ARE LOCATED ON SEPARATE (OUTRIGGER) BOARDS THAT ARE CONNECTED TO THE MAIN BOARD (7B-MB) VIA INSULATED 16 GAGE STRANDED WIRE JUMPERS.
ALL RESISTORS ARE 1/4 WATT EXCEPT WHERE NOTED.
SYMBOL SHOWS JUMPER CONNECTIONS BETWEEN MAIN AND OUTRIGGER BOARDS
REV 1.0 MAY 1994
200K(2) in DC-O/S chg'd to 100K; 2N5210 in bias chg'd to 2N5550; output res. chg'd to 6w, out "A" added.
BRYSTON
4Be POWER AMPLIFIER MAIN BOARD (7B-MB/2.51) SCHEMATIC
REV 1.0 MAY 1994
FILE: 4BE-MBS



NOTES

ONLY ONE (LEFT) OF TWO IDENTICAL CHANNELS IS SHOWN. THE DESIGNATIONS ***LEFT & RIGHT*** REFER ONLY TO THE PHYSICAL ORIENTATION OF THE CHANNELS IN THE AMPLIFIER CHASSIS. THE TWO CHANNELS ARE INTERCONNECTED IN EITHER PARALLELED OR BRIDGED MODES ON THE BACKBOARD.

▣ SYMBOL INDICATES CONNECTIONS TO "OUTRIGGER" PC BOARDS.

ALL RESISTORS ARE 1/4 WATT EXCEPT WHERE NOTED.

ALL PARTS DRAWN IN BOLD LINES ARE TO BE MATCHED WITH THE SAME PARTS ON THE MATING CHANNEL

3u3	220P	470u/16v	22P
2K2	47K	1K/1%	33K/1%

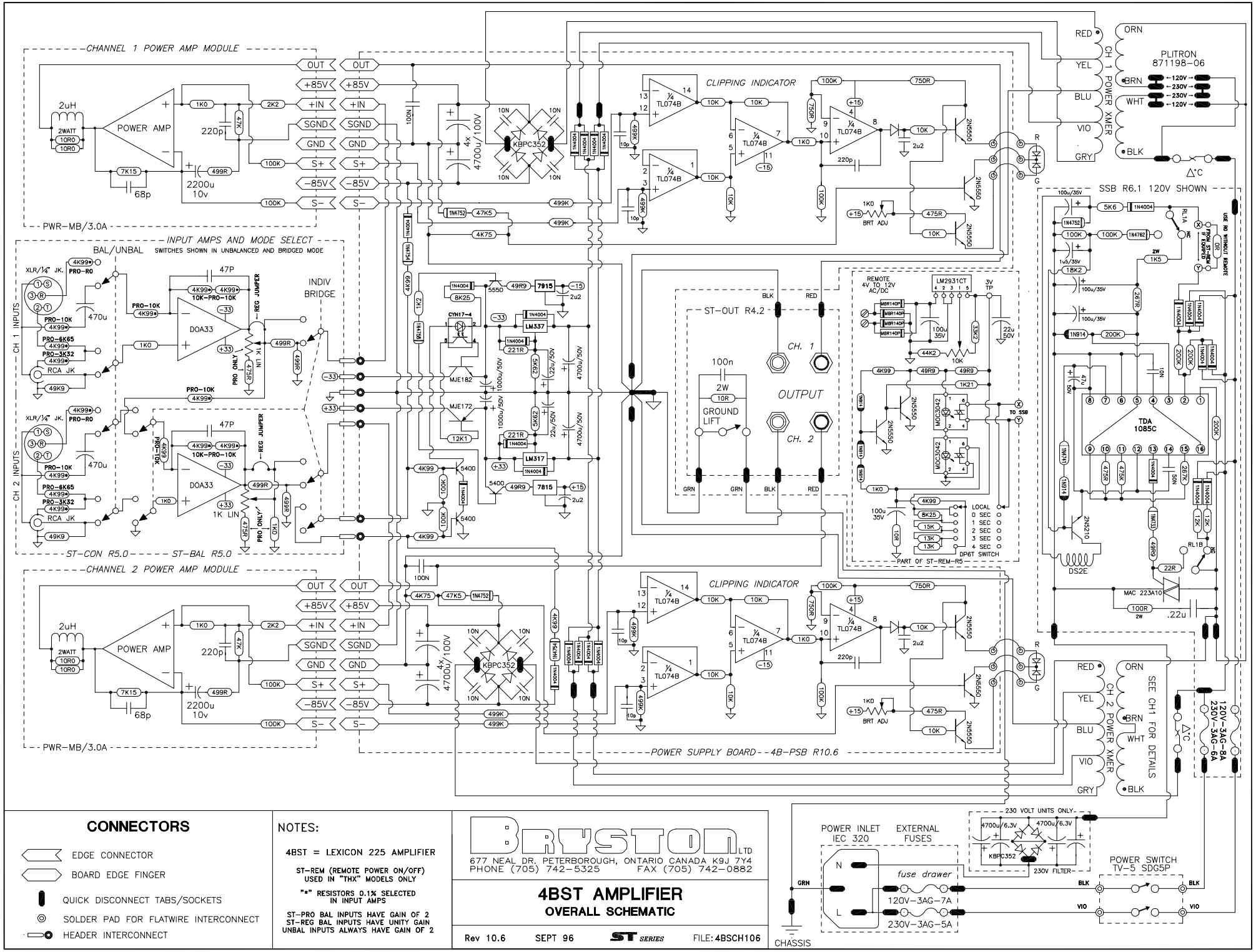
Rev 1.0 May 94
200K(2) in DC-O/S circuit chg'd to 100K. Inverting input removed. Bias transistor chg'd to 2N5550

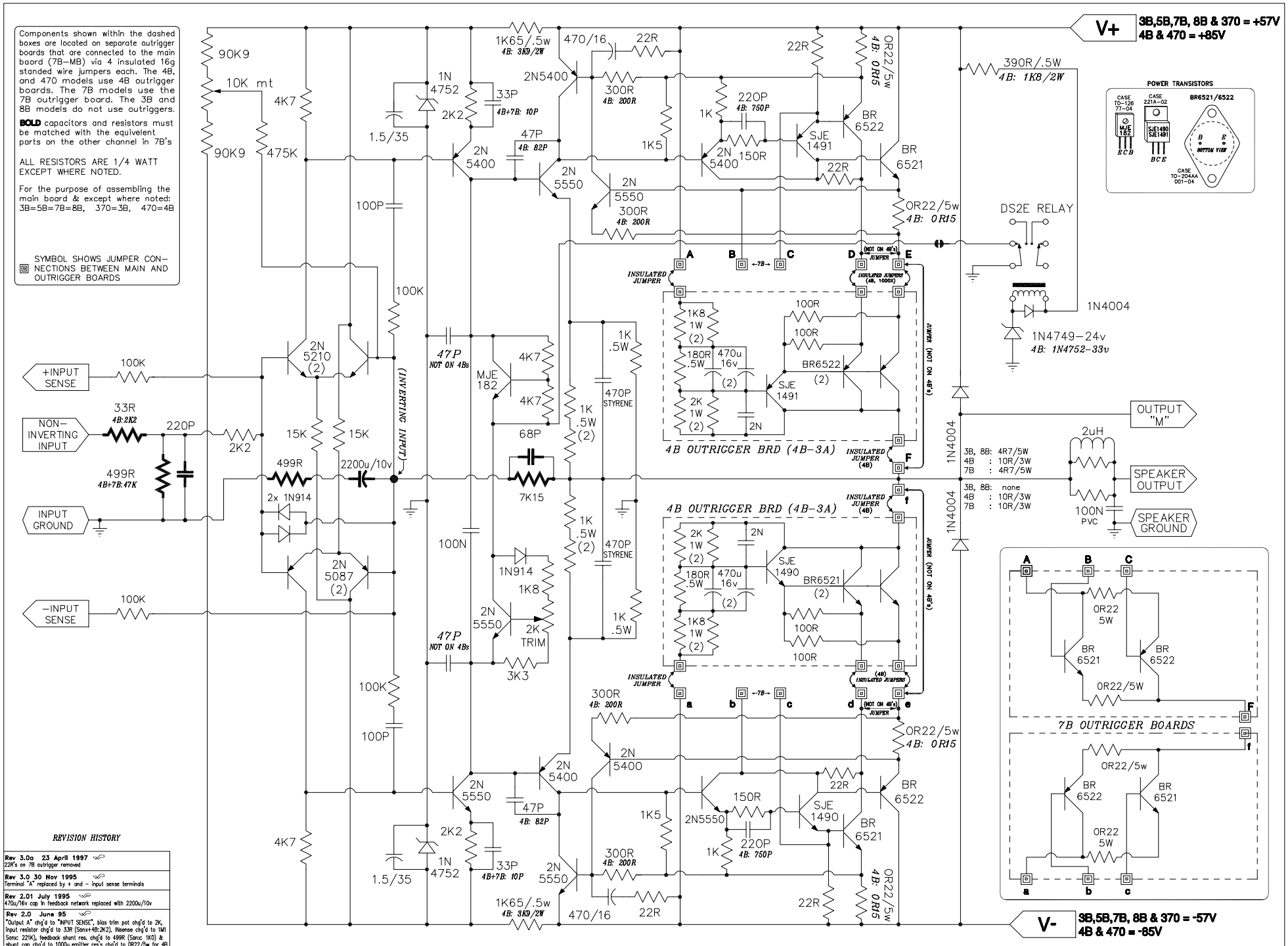
BRYSTON

7B MONO POWER AMPLIFIER MAIN BOARD (7B-MB/2.51) SCHEMATIC

REV 1.0 MAY 94

FILE: 7B–MBS


CHANNEL 1 POWER AMP MODULE
PWR-MB/3.0A
INPUT AMPS AND MODE SELECT
BAL/UNBAL
SWITCHES SHOWN IN UNBALANCED AND BRIDGED MODE
CH 1 INPUTS
CH 2 INPUTS
INDIV BRIDGE
ST-CON R5.0
ST-BAL R5.0
CHANNEL 2 POWER AMP MODULE
CLIPPING INDICATOR
ST-OUT R4.2
OUTPUT
CH. 1
CH. 2
GROUND LIFT
REMOTE 4V TO 12V AC/DC
PART OF ST-REM-R5
DP6T SWITCH
TDA 1085C
SSB R6.1 120V SHOWN
PLITRON 871198-06
CH 1 POWER XMER
CH 2 POWER XMER
SEE CH1 FOR DETAILS
120V-3AG-8A
230V-3AG-6A
POWER SUPPLY BOARD--4B-PSB R10.6
POWER INLET IEC 320
EXTERNAL FUSES
fuse drawer
120V-3AG-7A
230V-3AG-5A
230 VOLT UNITS ONLY
230V FILTER
POWER SWITCH TV-5 SDG5P
CHASSIS
CONNECTORS
EDGE CONNECTOR
BOARD EDGE FINGER
QUICK DISCONNECT TABS/SOCKETS
SOLDER PAD FOR FLATWIRE INTERCONNECT
HEADER INTERCONNECT
NOTES:
4BST = LEXICON 225 AMPLIFIER
ST-REM (REMOTE POWER ON/OFF) USED IN "THX" MODELS ONLY
"*" RESISTORS 0.1% SELECTED IN INPUT AMPS
ST-PRO BAL INPUTS HAVE GAIN OF 2
ST-REG BAL INPUTS HAVE UNITY GAIN
UNBAL INPUTS ALWAYS HAVE GAIN OF 2
BRYSTON LTD
677 NEAL DR. PETERBOROUGH, ONTARIO CANADA K9J 7Y4
PHONE (705) 742-5325 FAX (705) 742-0882
4BST AMPLIFIER
OVERALL SCHEMATIC
Rev 10.6 SEPT 96 ST SERIES FILE: 4BSCH106



REVISION HISTORY

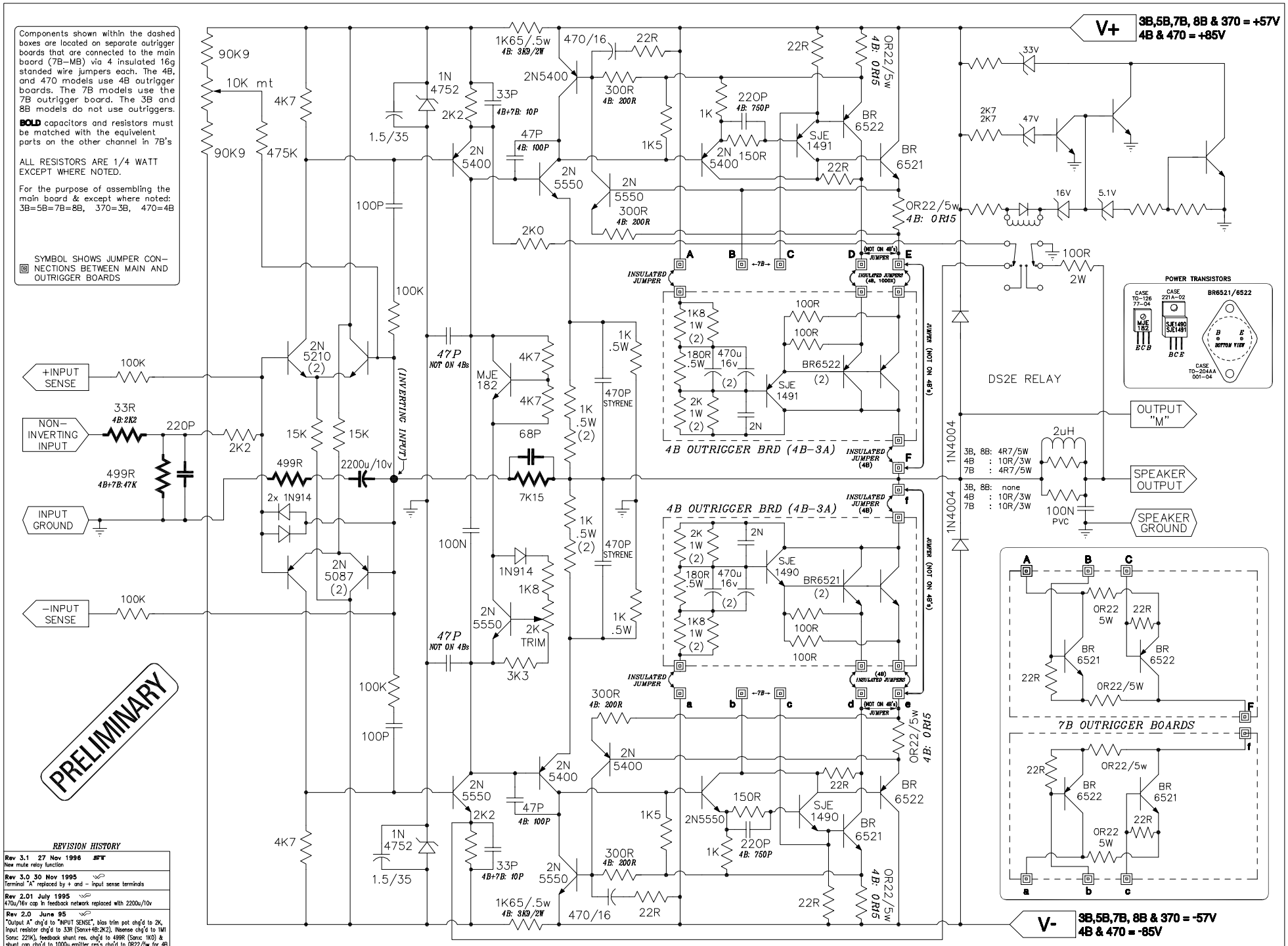
Rev 3.0a 23 April 1997	22R's on 7B outrigger removed
Rev 3.0 30 Nov 1995	Terminal "A" replaced by + and − input sense terminals
Rev 2.01 July 1995	470u/16v cap in feedback network replaced with 2200u/10v
Rev 2.0 June 95	"Output A" chg'd to "INPUT SENSE", bias trim pot chg'd to 2K, Input resistor chg'd to 33R (Sonx+4B:2K2), INsense chg'd to 1M! Sonx: 221K), feedback shunt res. chg'd to 499R (Sonx: 1K0) & shunt cap chg'd to 1000u,emitter res's chg'd to OR22/5w for 4B. feedback cap chg'd to 68p(Sonx: 22p) & res chg'd to 7K15. (Sonx: 33K2), DC OS limit resistors chg'd from 100K to 180K3 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

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

File: **PWR-MB3S**
Part No: **PWR-MB-S/3.0a**
Date: **23 APRIL 97**
Revision: **3.0a**
By:

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



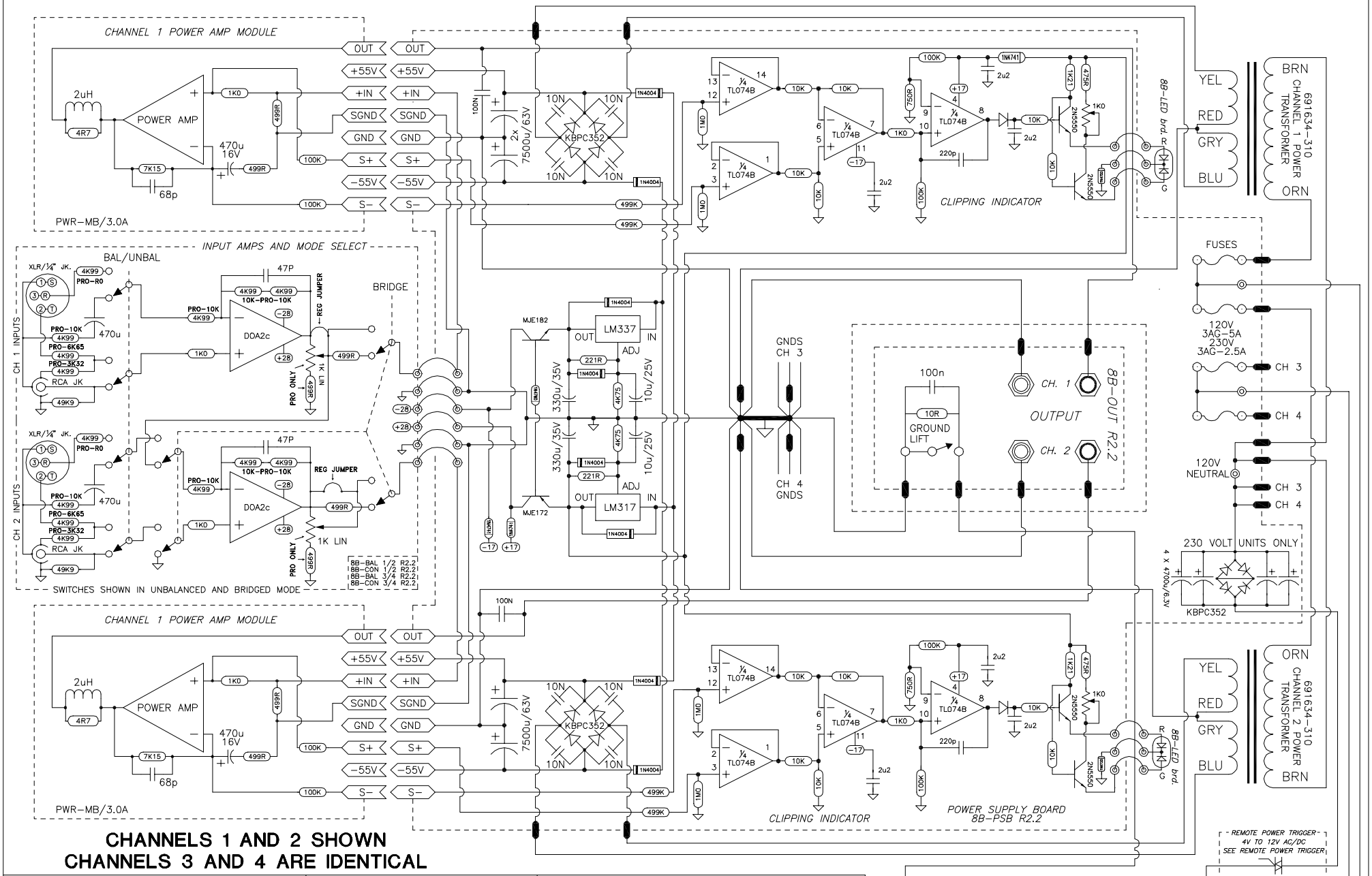
REVISION HISTORY

Rev 3.1 27 Nov 1996 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 (Sonx+4B:2K2), INsense chg'd to 1M! Sonx: 221K), feedback shunt res. chg'd to 499R (Sonx: 1K0) & shunt cap chg'd to 1000u,emitter res's chg'd to OR22/5w for 4B. feedback cap chg'd to 68p(Sonx: 22p) & res chg'd to 7K15 (Sonx: 33K2), DC OS limit resistors chg'd from 100K to 180K3 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

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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 RELABLED AS CH 3 HOWEVER.

PART #
8B-PSB 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

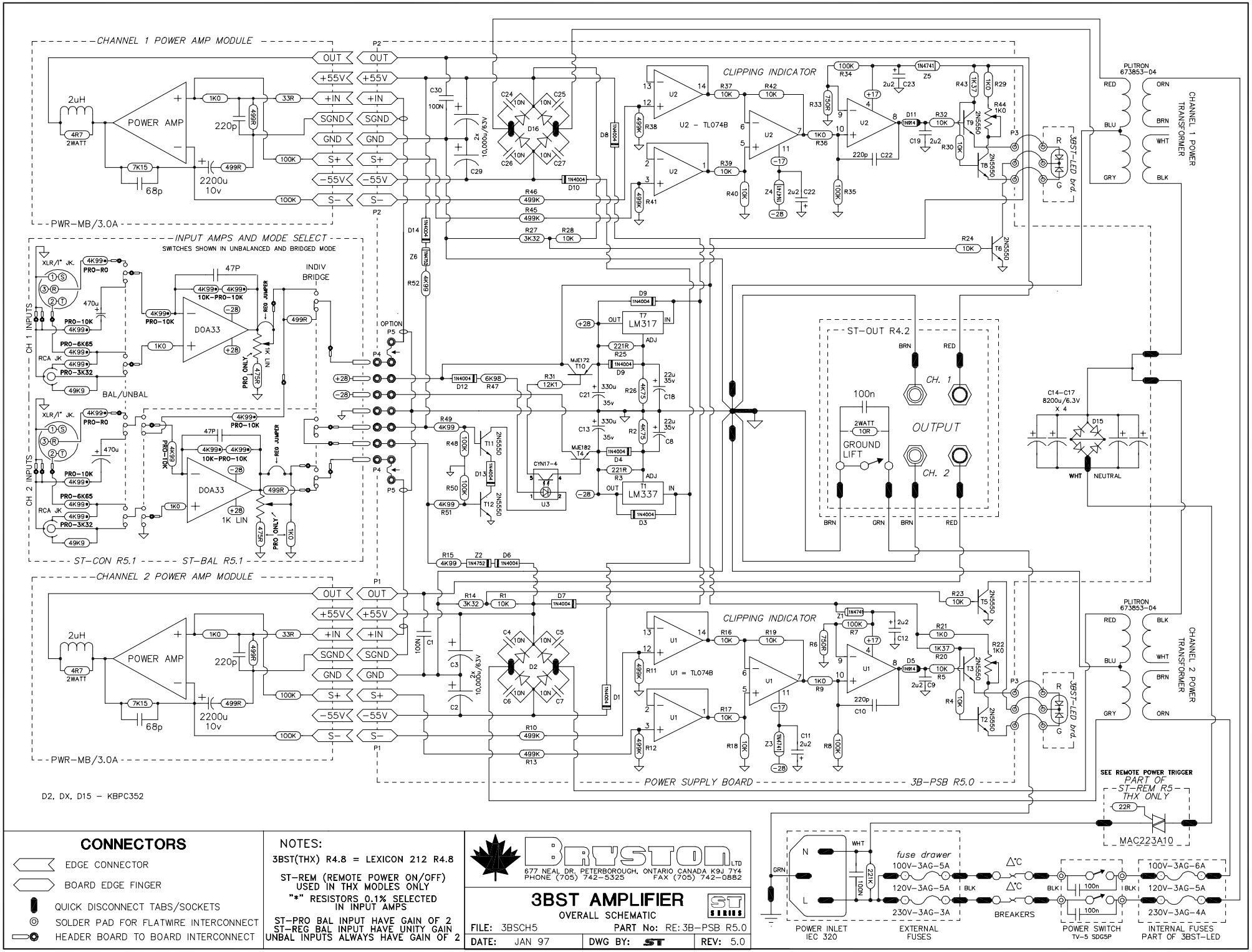
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8B + 5B AMPLIFIER

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 MODLES ONLY

"*" 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

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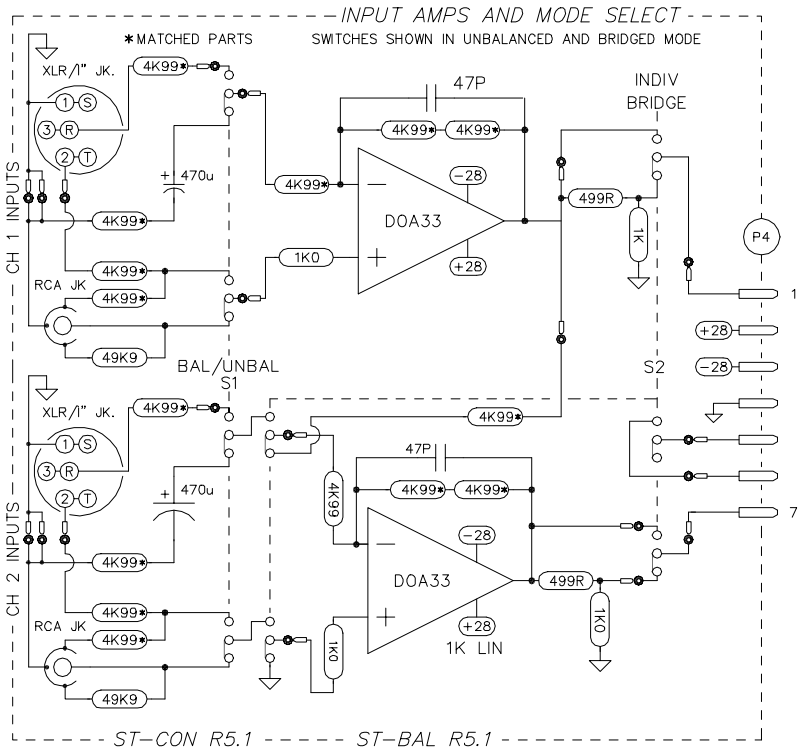
3BST AMPLIFIER

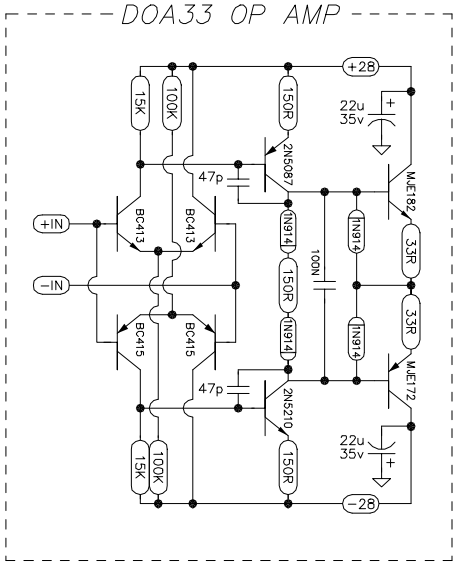
OVERALL SCHEMATIC

ST SERIES

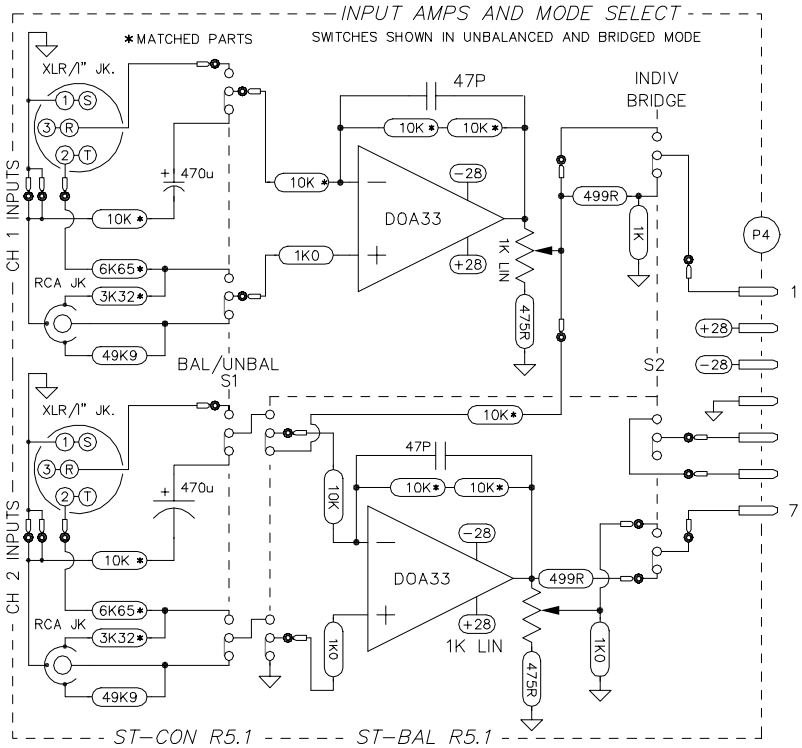
FILE: 3BSCH5	PART No: RE:3B-PSB R5.0	
DATE: JAN 97	DWG BY: ST	REV: 5.0

4BST REG INPUT CONFIGURATION





4BST PRO INPUT CONFIGURATION



= HEADER INTERCONNECT

= BOARD TO BOARD INTERCONNECT

S1 & S2 = 6PDT SLIDE SWITCH

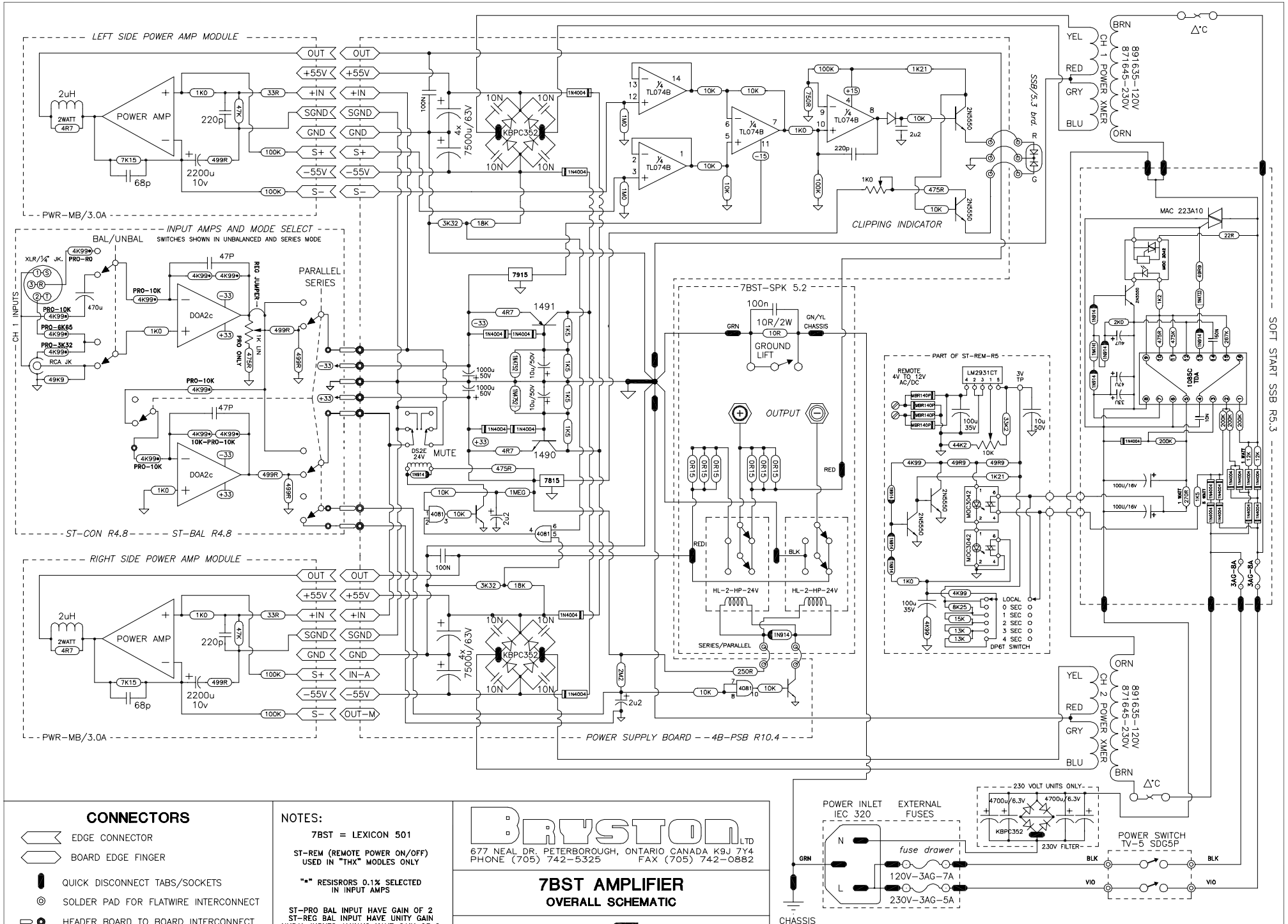
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PHONE (705) 742-5325 FAX (705) 742-0882

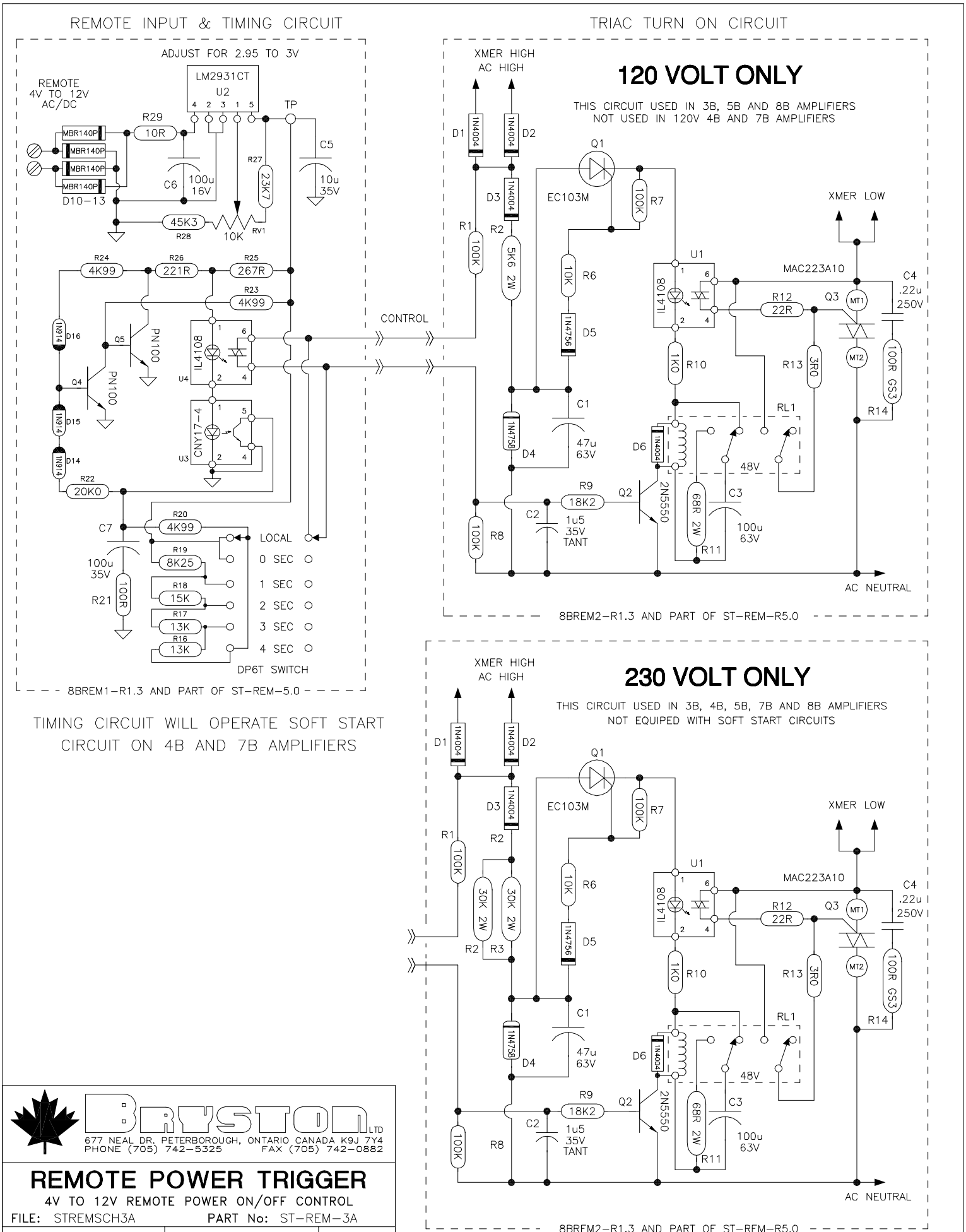
4BST INPUT SCHEMATIC

SCHEMATIC OF ST-BAL & ST-CON BOARDS

FILE: 4BINPUTSCH PART No: ST BAL R 5.1

DATE: MAY 97	DWG BY:	REV: 5.1


LEFT SIDE POWER AMP MODULE
PWR-MB/3.0A
INPUT AMPS AND MODE SELECT
BAL/UNBAL
SWITCHES SHOWN IN UNBALANCED AND SERIES MODE
PARALLEL
SERIES
ST-CON R4.8
ST-BAL R4.8
RIGHT SIDE POWER AMP MODULE
PWR-MB/3.0A
POWER SUPPLY BOARD --4B-PSB R10.4
7BST-SPK 5.2
CLIPPING INDICATOR
SSB/5.3 brd.
MUTE
OUTPUT
GROUND LIFT
SERIES/PARALLEL
PART OF ST-REM-R5
MAC 223A10
SOFT START SSB R5.3
CH 1 POWER XMER
CH 2 POWER XMER
891635-120V
871645-230V
230 VOLT UNITS ONLY-
POWER INLET IEC 320
EXTERNAL FUSES
fuse drawer
120V-3AG-7A
230V-3AG-5A
POWER SWITCH TV-5 SDG5P
CHASSIS
CONNECTORS
EDGE CONNECTOR
BOARD EDGE FINGER
QUICK DISCONNECT TABS/SOCKETS
SOLDER PAD FOR FLATWIRE INTERCONNECT
HEADER BOARD TO BOARD INTERCONNECT
NOTES:
7BST = LEXICON 501
ST-REM (REMOTE POWER ON/OFF) USED IN "THX" MODLES ONLY
"*" RESISRORS 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
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677 NEAL DR. PETERBOROUGH, ONTARIO CANADA K9J 7Y4
PHONE (705) 742-5325 FAX (705) 742-0882
7BST AMPLIFIER
OVERALL SCHEMATIC
Rev 10.5 DEC 98 ST SERIES FILE: 7BSCH3



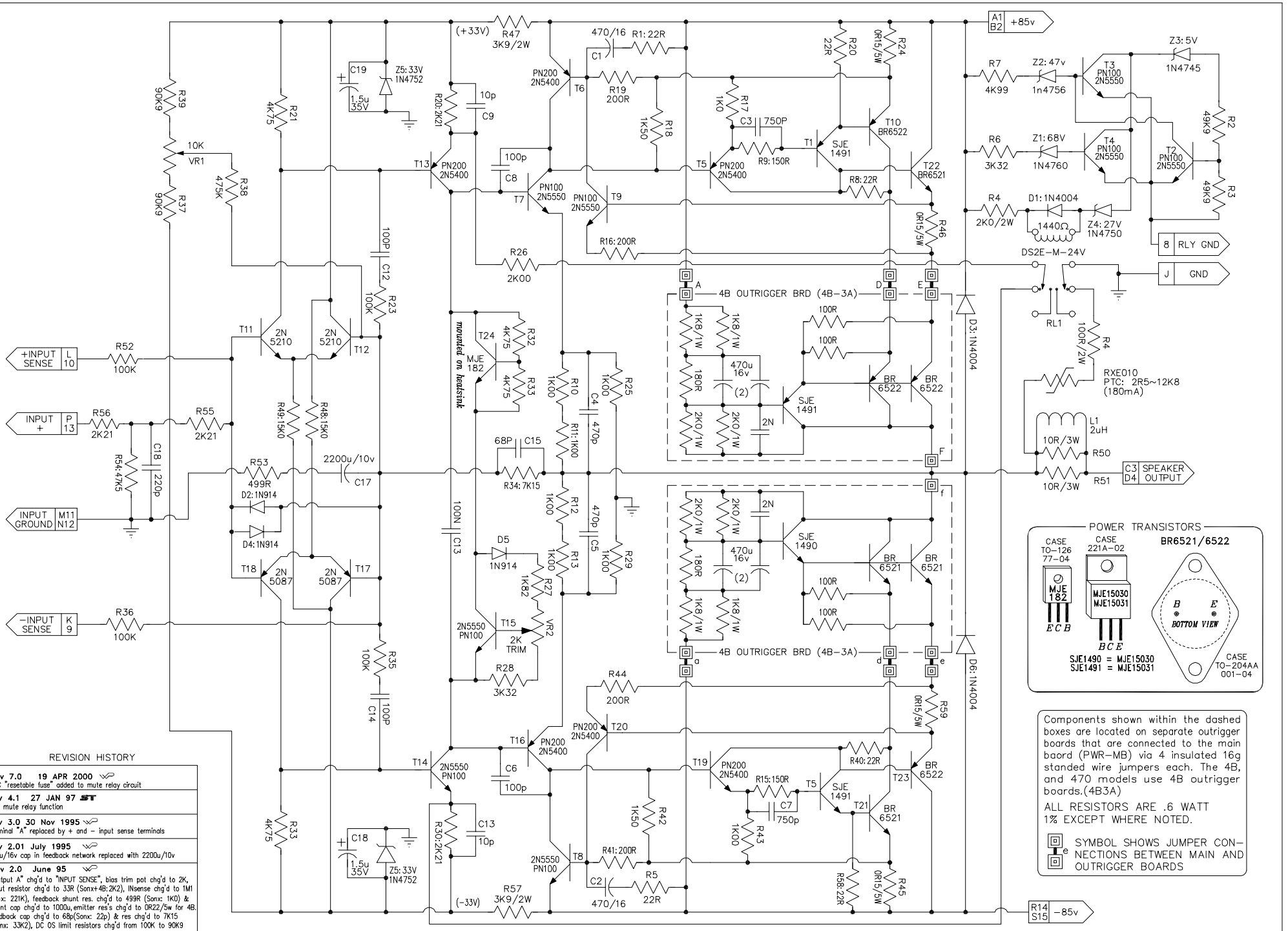
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PHONE (705) 742–5325 FAX (705) 742–0882

REMOTE POWER TRIGGER

4V TO 12V REMOTE POWER ON/OFF CONTROL

FILE: STREMSCH3A PART No: ST–REM–3A

DATE: MAR 08 00	DWG BY: EJG ST	REV: 3A



REVISION HISTORY

Rev 7.0 19 APR 2000
PTC "resetable fuse" added to mute relay circuit

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 (Sonx+4B:2K2), INsense chg'd to 1M1 Sonx: 221K), feedback shunt res. chg'd to 499R (Sonx: 1K0) & shunt cap chg'd to 1000u,emitter res's chg'd to 0R22/5w for 4B. feedback cap chg'd to 68p(Sonx: 22p) & res chg'd to 7K15 (Sonx: 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)

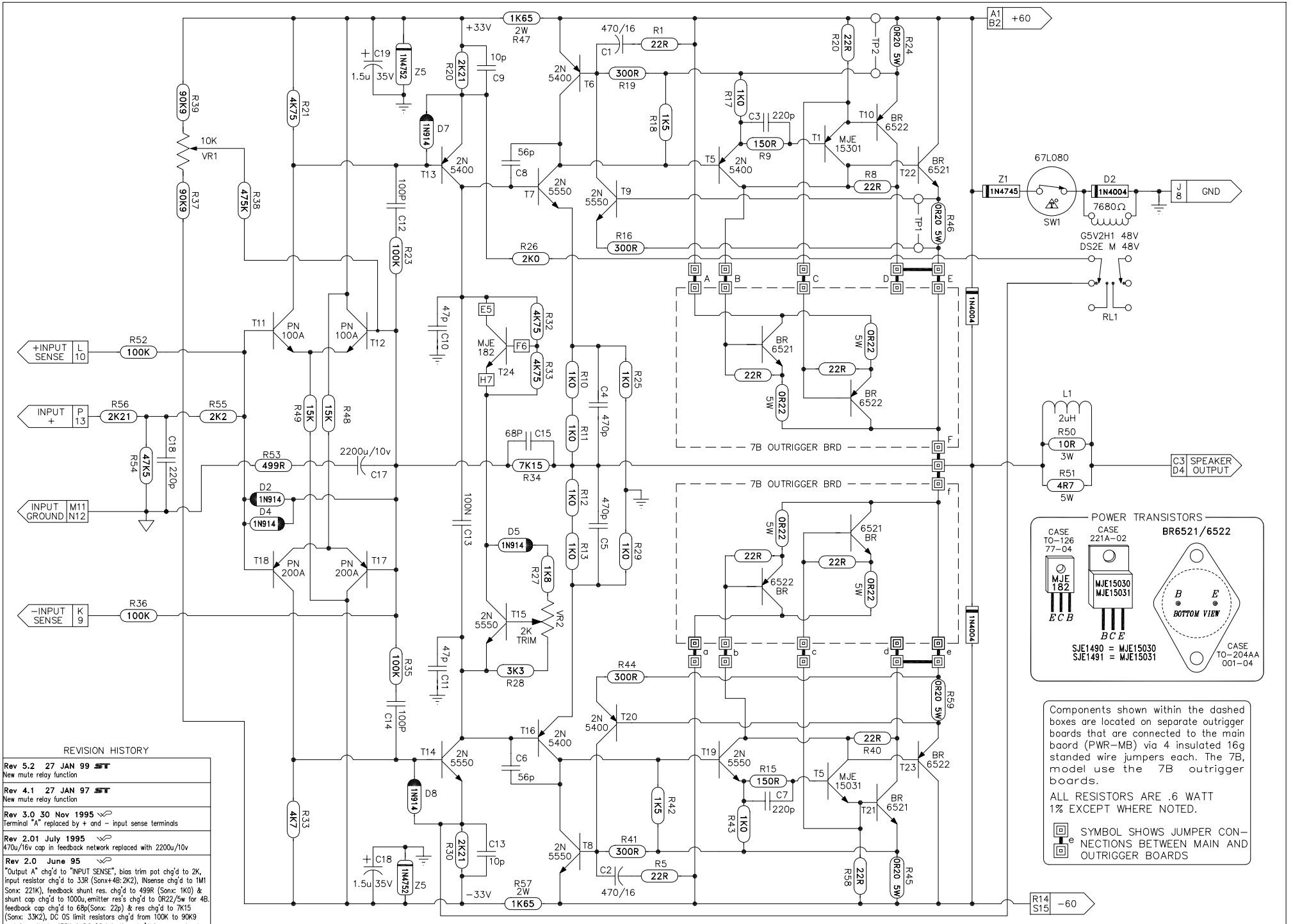
Rev 2.0 June 95
200K (2) in DC−O/S chg'd to 100K; 2N5210 in bias chg'd to 2N5550; output res chg'd to 6W; output "A" added

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File/Rev: **PWR-MB7-Schematic/0.0**
Date: **19 April 2000**
Revision: **19 April 2000**
By: ST

4B POWER AMPLIFIER CHANNEL MAIN BOARD SCHEMATIC

Circuitry located on printed circuit boards (PCB's) PWR-MB/7.0 and 4B-IIIa



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 (Sonx+4B:2K2), INsense chg'd to 1M1 Sonx: 221K), feedback shunt res. chg'd to 499R (Sonx: 1K0) & shunt cap chg'd to 1000u,emitter res's chg'd to 0R22/5w for 4B. feedback cap chg'd to 68p(Sonx: 22p) & res chg'd to 7K15 (Sonx: 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

BRYSTON ltd.
P.O. Box 2170, Peterborough, Ont., Canada K9J−7Y4 (705)742−5325

File: PWRSCH7B
Part No: PWR−MB−S/7.0
Revision: MAY 2000
By: ST

7B CHANNEL ASSEMBLY

for the PWR-MB/7.0 PCB adapted for 7B amplifiers

ST SERIES

Amplifiers

Designed

to

Last

a

Lifetime

Bryston ST Series Specifications

	3B ST SPECIFICATIONS	4B ST SPECIFICATIONS	7B ST SPECIFICATIONS	8B ST SPECIFICATIONS
Watts	120 watts per channel, 8 ohms	250 watts per channel, 8 ohms	500 watts mono, 2 or 8 ohms	Four channels at 120 watts, 8 ohms
	200 watts per channel, 4 ohms	400 watts per channel, 4 ohms	800 watts mono, 1 or 4 ohms	Two channels at 400 watts, 8 ohms
	400 watts, bridged, 8 ohms	800 watts, bridged, 8 ohms		One channel at 400 watts, 2 channels at 120 watts, 8 ohms
Distortion	Less than 0.007% from 20Hz to 20kHz at 120 watts, IM or THD	Less than 0.007% from 20Hz to 20kHz at 250 watts, IM or THD	Less than 0.007% from 20Hz to 20kHz at 500 watts, IM or THD	Less than 0.007% from 20Hz to 20kHz at 120 watts or 400 watts, IM or THD
Noise	>106dB below full output	>106dB below full output	>106dB below full output	>106dB below full output
Slewing rate	Greater than 60 volts per microsecond	Greater than 60 volts per microsecond	Greater than 60 volts per microsecond, parallel	Greater than 60 volts per microsecond in 4 channel mode
		Greater than 120 volts per microsecond, bridged	Greater than 120 volts per microsecond, bridged	Greater than 120 volts per microsecond in 2 channel mode
Power bandwidth	Less than 1Hz to over 100kHz	Less than 1Hz to over 100kHz	Less than1Hz to over 100kHz	Less than 1Hz to over 100kHz
Damping factor	Over 500 at 20Hz, ref. 8ohms	Over 500 at 20Hz, ref. 8ohms	Over 300 at 20Hz, ref. 8 ohms	Over 500 at 20Hz ref. 8 ohms
Input sensitivity and impedance	1.0V in for full output, 50k unbalanced 2.0V in for full output, 20k balanced	1.4V in for full output, 50k unbalanced 2.8V in for full output, 20k balanced	1.0V in for full output, 50k unbalanced 2.0V in for full output, 20k balanced	1.0V in for full output, 50k unbalanced 2.0V in for full output, 20k balanced
Features	Stereo/mono switch	Stereo/mono switch	Series/parallel switch	Two independent stereo/mono switches
	Over 3,200cm^2 of heat-sinking; over 5,000cm^2 with chassis	Over 6,400cm^2 of heat-sinking; over 9,600cm^2 with chassis	Over 6,400cm^2 of heat-sinking; over 9,600cm^2 with chassis	Over 6,400 cm^2 of heat-sinking, over 9,600 cm^2 with chassis
	Regulated power supplies to all voltage gain stages	Regulated power supplies to all voltage gain stages	Regulated power supplies to all voltage gain stages	Regulated power supplies to all voltage gain stages
	Gold plated input and output connectors	Gold plated input and output connectors	Gold plated input and output connectors	Gold plated input and output connectors
	Switchable balanced XLR-1/4 inch and RCA unbalanced inputs	Switchable balanced XLR-1/4 inch and RCA unbalanced inputs	Switchable balanced XLR-1/4 inch and RCA unbalanced inputs	Switchable balanced XLR-1/4 inch and RCA unbalanced inputs
	Warranty: 20 years parts, labour, shipping one way	Warranty: 20 years parts, labour, shipping one way	Warranty: 20 years parts, labour, shipping one way	Warranty: 20 years parts and labour, shipping one way
Dimensions	19 x 5.25 x 9 inches, 48.25 x 13.33 x 22.8 cm, wt: 22lbs, 10kg	19 x 5.25 x 15.5 inches, 48.25 x 13.33 x 39.4 cm, wt: 42lbs, 18kg	19 x 5.25 x 15.5 inches, 48.25 x 13.33 x 39.4 cm, wt: 42lbs, 18kg	19 x 5.25 x 15.5 inches 48.25 x 13.33 x 39.4 cm. wt. 44lbs, 20kg

All ST amplifiers are available in 17" versions with or without handles.

All ST amplifiers available in THX versions, include remote power on/off function.

***5B-ST – three (3) channel 120 watt per channel amplifier also available.**

Environmental responsibility is a high priority at Bryston. We have taken considerable steps in producing this literature to ensure we meet or exceed recognized environmental standards concerning paper, inks, and printing.

BRYSTON

20 Year Warranty – A Generation of Music

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