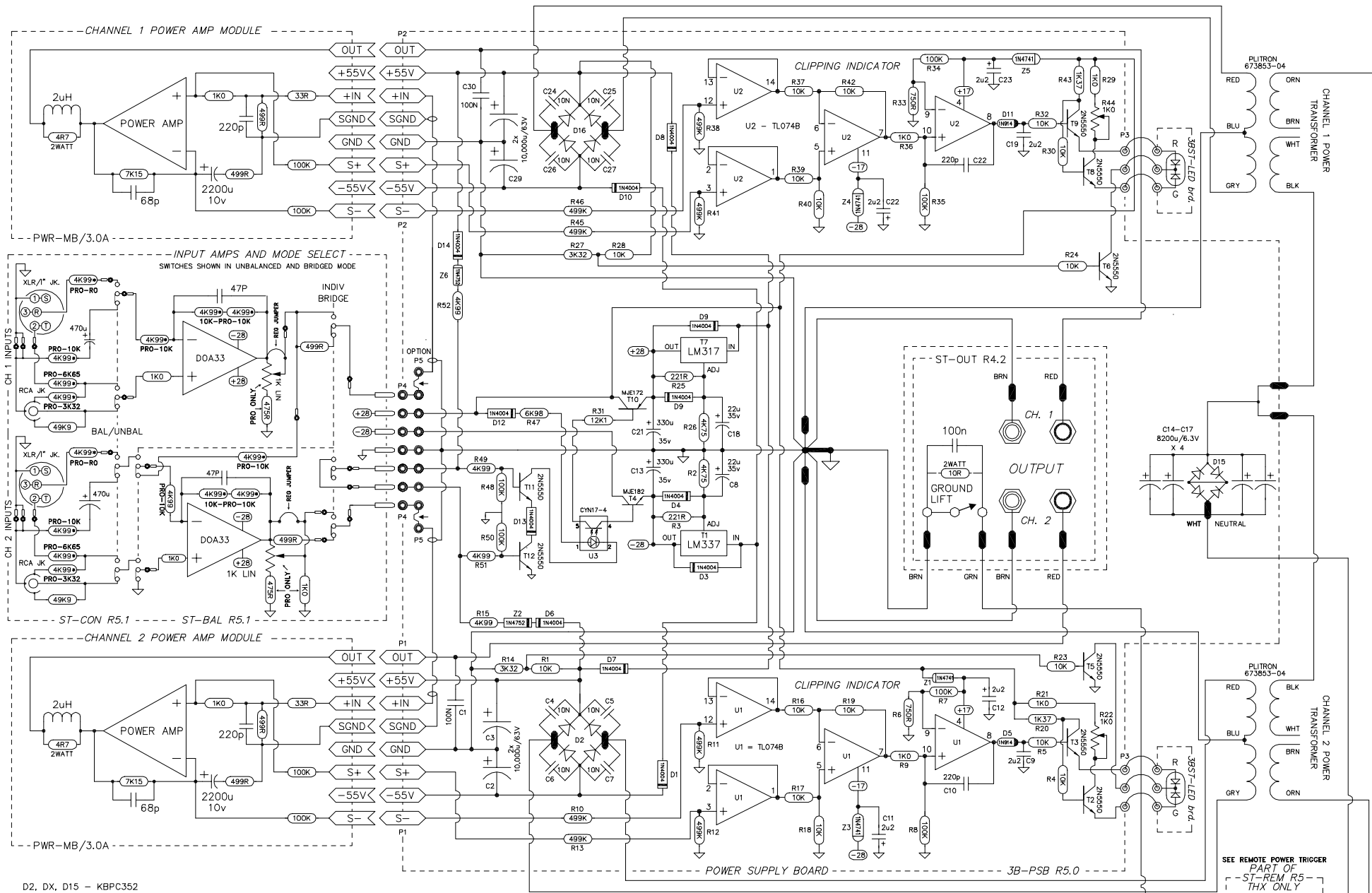


**BRYSTON**

**POWER AMPLIFIER  
SCHEMATICS**



D2, DX, D15 - KBPC352

**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

\* \* \* RESISTORS 0.1% SELECTED IN INPUT AMPS

ST-PRO BAL INPUT HAVE GAIN OF 2

ST-REG BAL INPUT HAVE UNITY GAIN

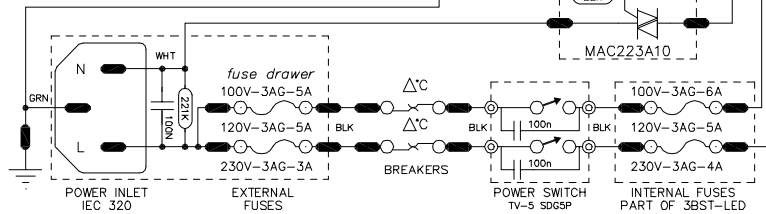
UNBAL INPUTS ALWAYS HAVE GAIN OF 2

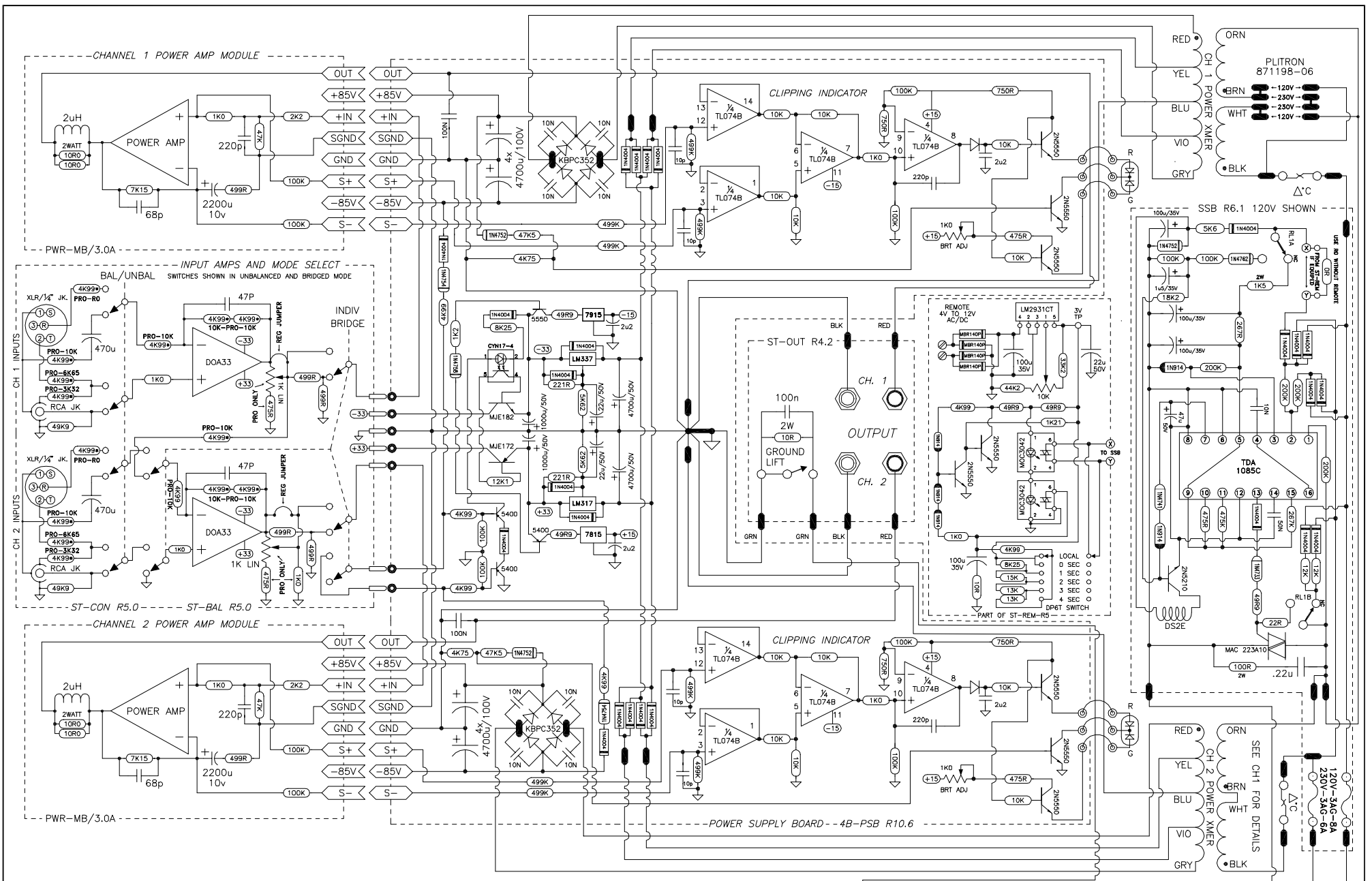


**BRYSTON** LTD  
 677 NEAL DR. PETERBOROUGH, ONTARIO CANADA K9J 7Y4  
 PHONE (705) 742-5325 FAX (705) 742-0882

**3BST AMPLIFIER**  
 OVERALL SCHEMATIC

FILE: 3BSC45 PART No: RE: 3B-PSB R5.0  
 DATE: JAN 97 DWG BY: ST REV: 5.0





**CONNECTORS**

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

**NOTES:**

4BST = LEXICON 225 AMPLIFIER

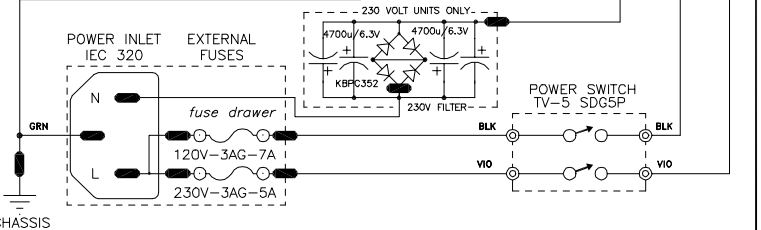
ST-REM (REMOTE POWER ON/OFF) USED IN "THX" MODELS ONLY

\*"R" 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

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

**4BST AMPLIFIER  
OVERALL SCHEMATIC**



CHASSIS

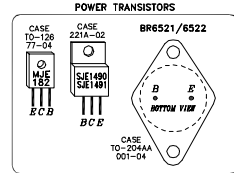
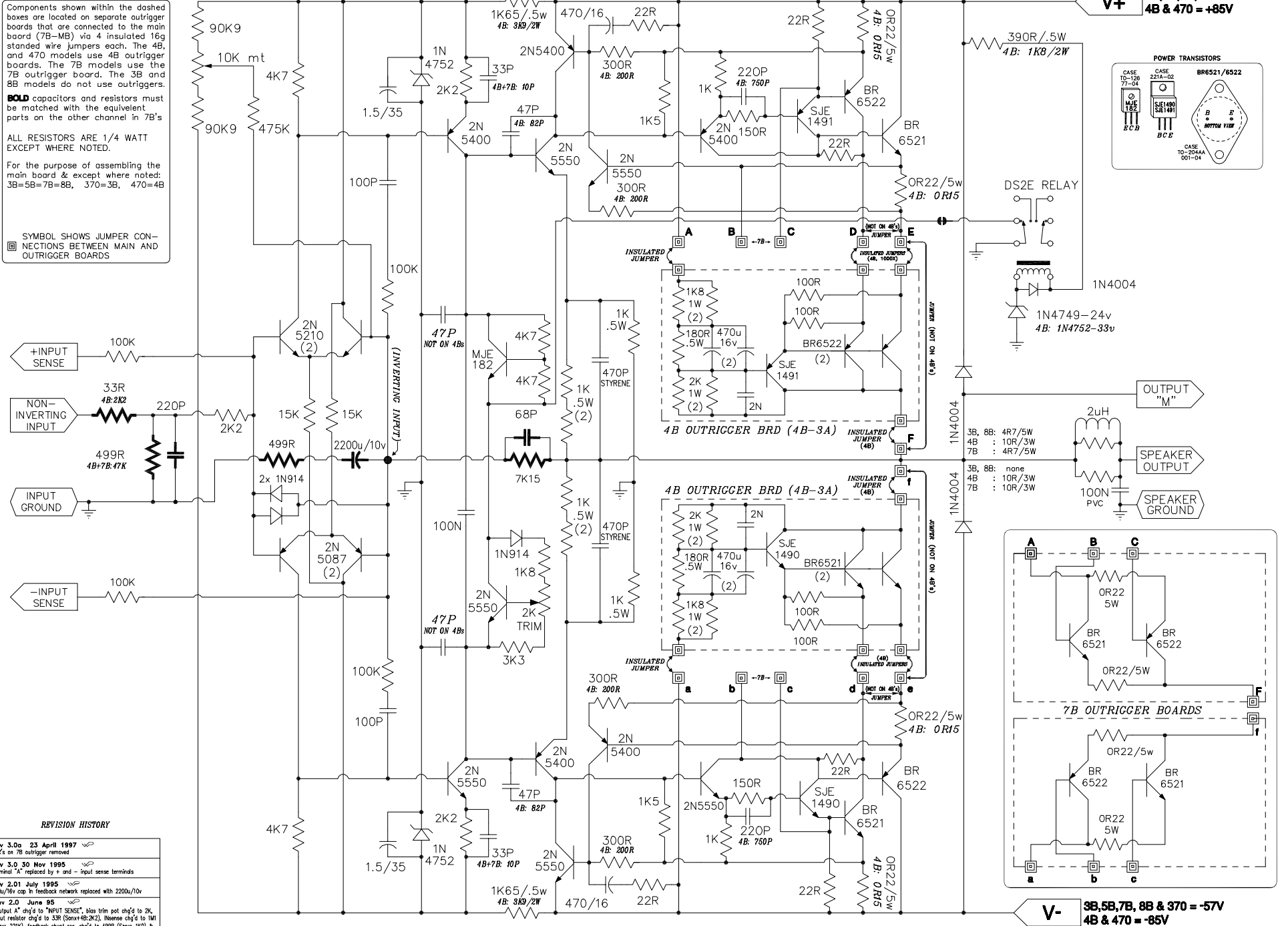
Components shown within the dashed boxes are located on separate outrigger boards that are connected to the main board (7B-MB) via 4 insulated 16g stranded wire jumpers each. The 4B and 470 models use 4B outrigger boards. The 7B models use the 7B outrigger board. The 3B and 8B models do not use outriggers.

**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



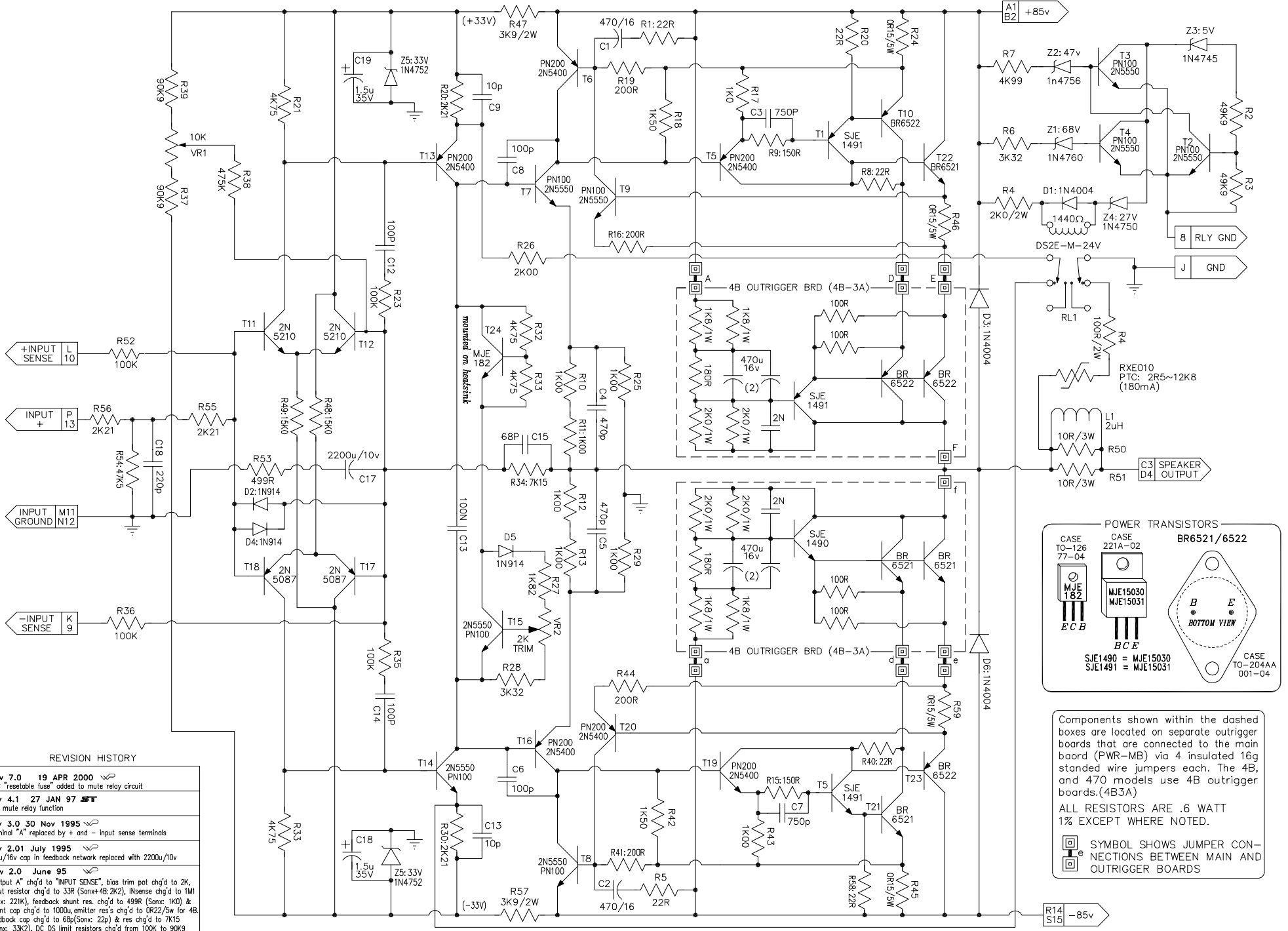
- 3B, 8B: 4R7/5W
- 4B : 10R/3W
- 7B : 4R7/5W
- 3B, 8B: none
- 4B : 10R/3W
- 7B : 10R/3W

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 (Sens+4B:2K2), in sense chg'd to 1M1 (Sens: 221K), feedback short res. chg'd to 499R (Sens: 110) & short cap chg'd to 100u; emitter res's chg'd to 3922/5w for 4B; feedback cap chg'd to 68p(Sens: 22p) & res chg'd to 7K15 (Sens: 33K2), DC OS limit resistors chg'd from 100K to 90K9 and from 1M1 to 475K & DC OS injection chg'd from non-lev 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: **PWR-MESS**  
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**



**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" 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 DR22/5w 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

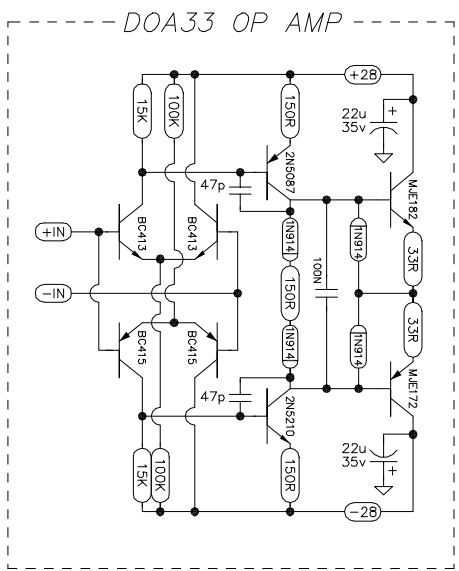
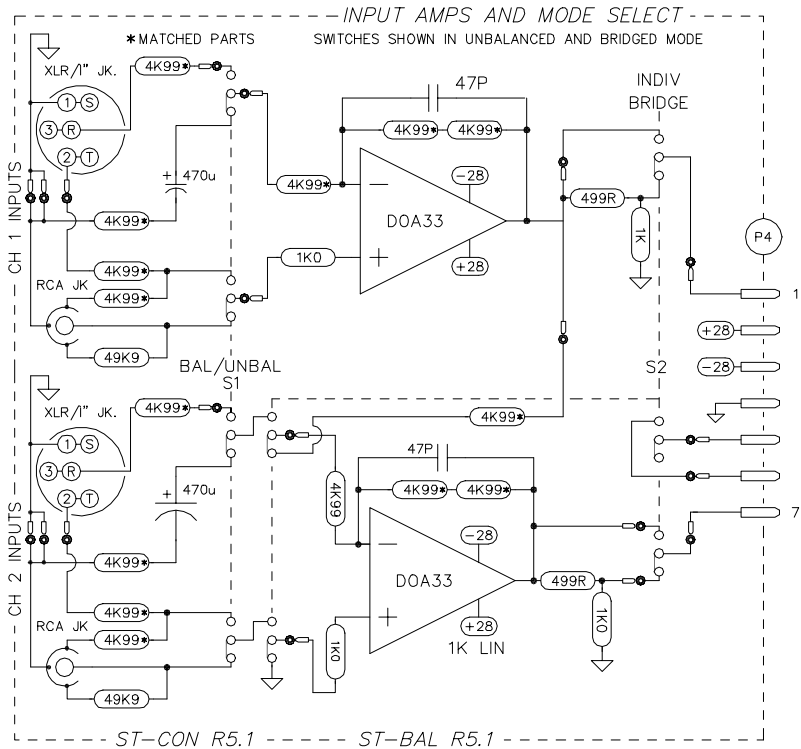
**BRUSTON** Ltd.  
P.O. Box 2170, Peterborough, Ont., Canada K9J-7Y4 (705)742-5325

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

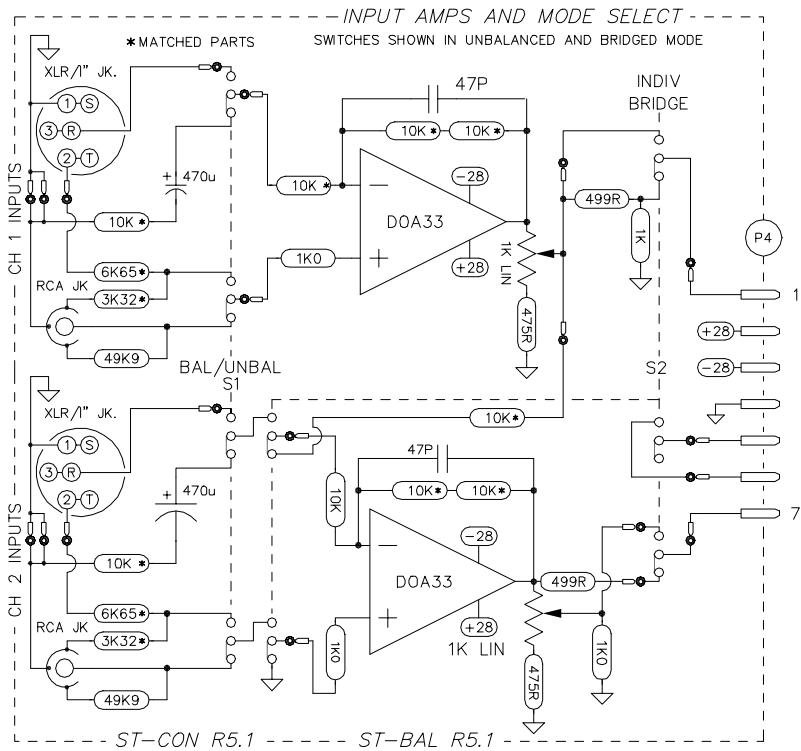
**4B POWER AMPLIFIER CHANNEL  
MAIN BOARD SCHEMATIC**

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

## 4BST REG INPUT CONFIGURATION



## 4BST PRO INPUT CONFIGURATION



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

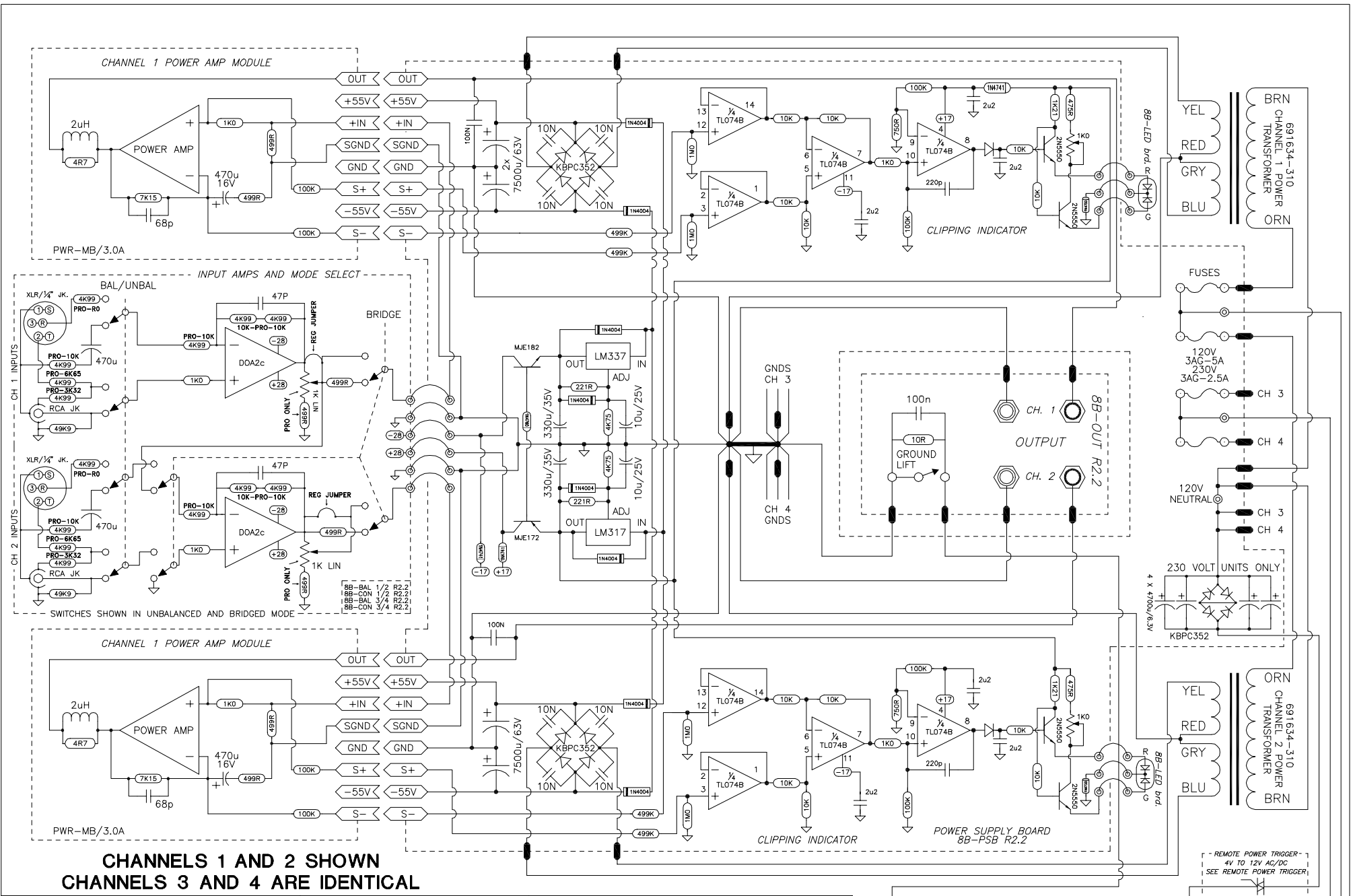


BRYSTON<sup>LTD</sup>

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	
FILE: 4BINPUTSCH	PART No: ST BAL R 5.1
DATE: MAY 97	REV: 5.1



**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

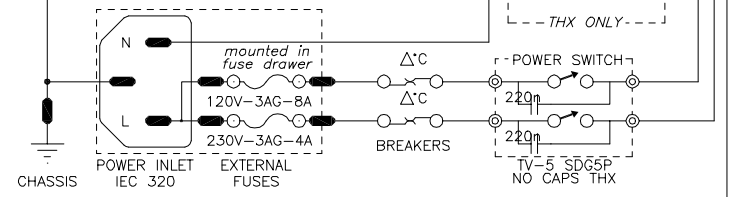
**NOTES:**  
8BST=LEXICON 412 AMPLIFIER  
5BST=LEXICON 312 AMPLIFIER  
5B AMPLIFIER DOES NOT POPULATE CH 3 ON THE PSB, AND CH 3 ON THE INPUT BOARDS. CH 4 SILKSCREEN IS RELABELLED AS CH 3 HOWEVER.

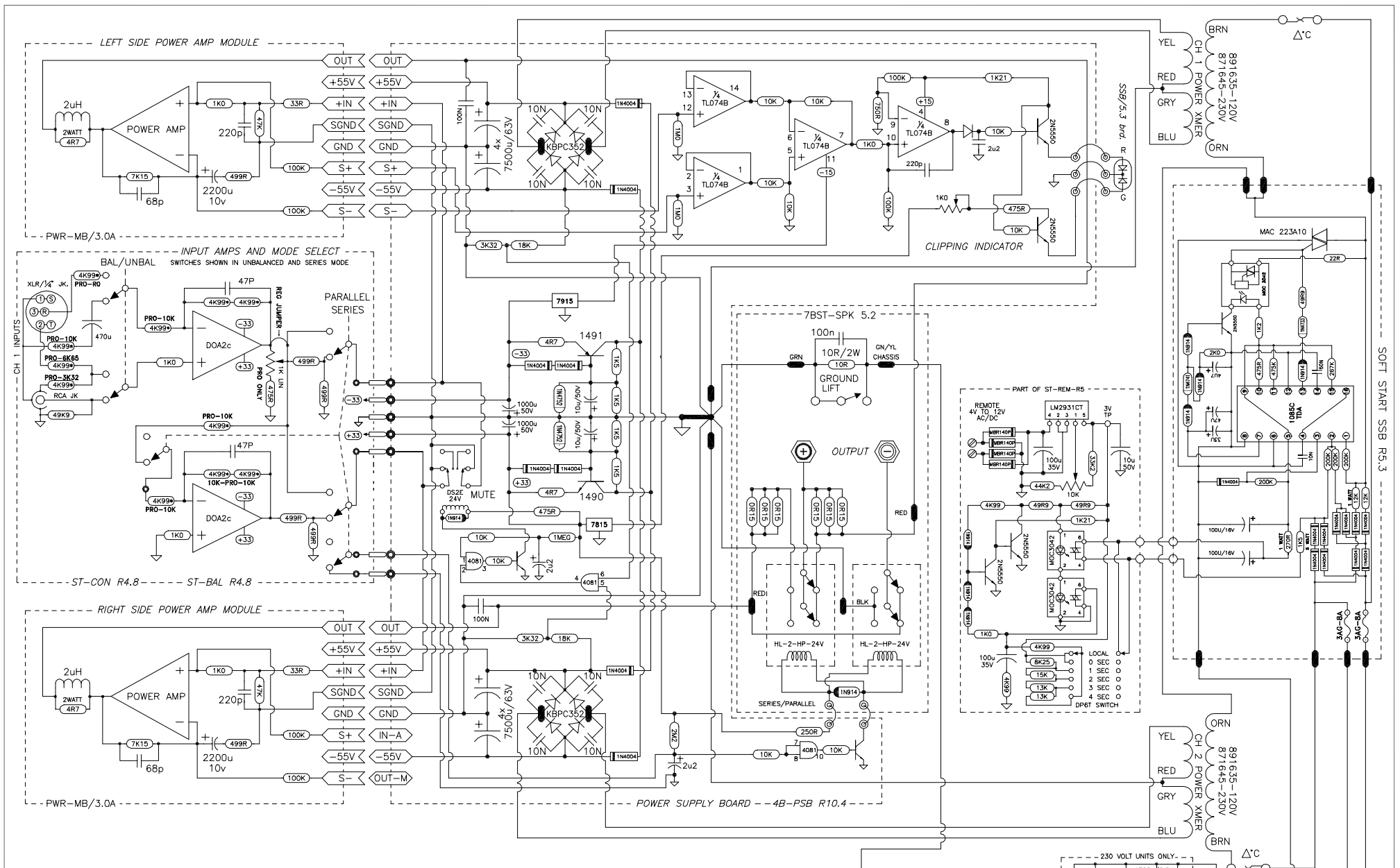
**PART #**  
8B-PSB R2.2  
8B-OUT R2.2  
8B-BAL 1/2 R2.2  
8B-CON 1/2 R2.2  
8B-BAL 3/4 R2.2  
8B-CON 3/4 R2.2  
8B-LED R2.2

**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





SOFT START SSB R5.3

**CONNECTORS**

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

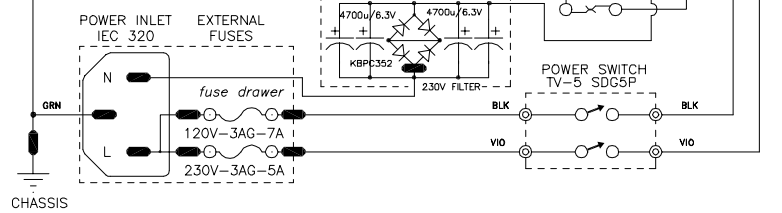
**NOTES:**

7BST = LEXICON 501  
 ST-REM (REMOTE POWER ON/OFF)  
 USED IN "THX" MODELS 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

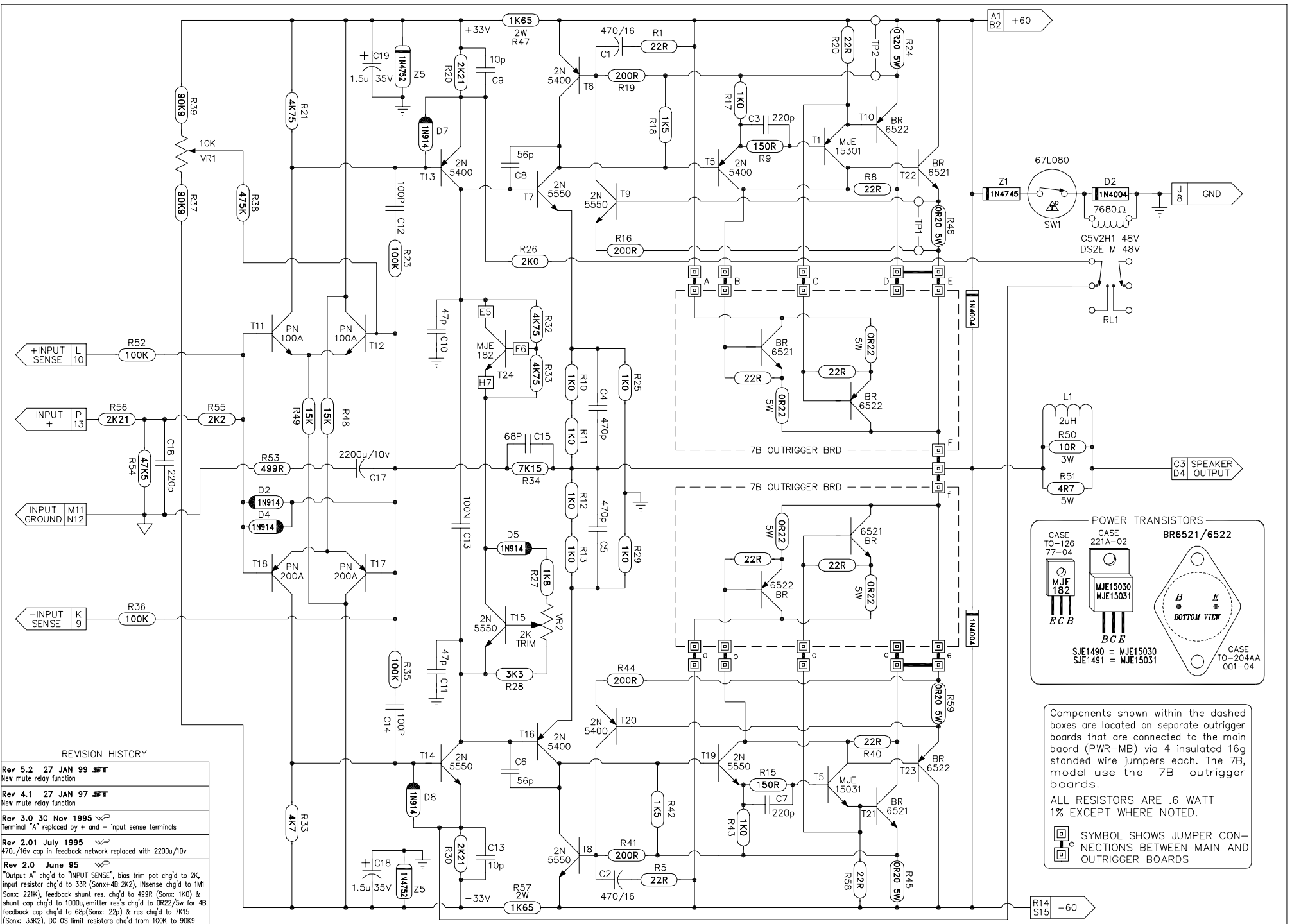
**BRUYSTON LTD**  
 677 NEAL DR. PETERBOROUGH, ONTARIO CANADA K9J 7Y4  
 PHONE (705) 742-5325 FAX (705) 742-0882

**7BST AMPLIFIER  
 OVERALL SCHEMATIC**

Rev 10.5 DEC 98 **ST SERIES** FILE: 7BSCH3







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 0R22/5w 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** Ltd.  
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

**POWER TRANSISTORS**  
**BR6521/6522**

CASE TO-126 77-04  
CASE 221A-02

SJE1490 = MJE15030  
SJE1491 = MJE15031

CASE TO-204AA 001-04

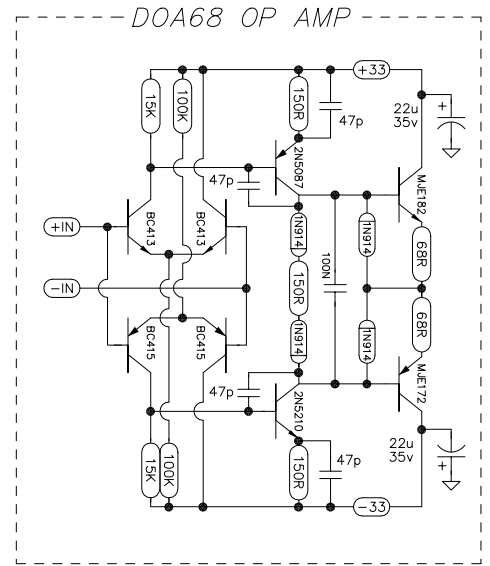
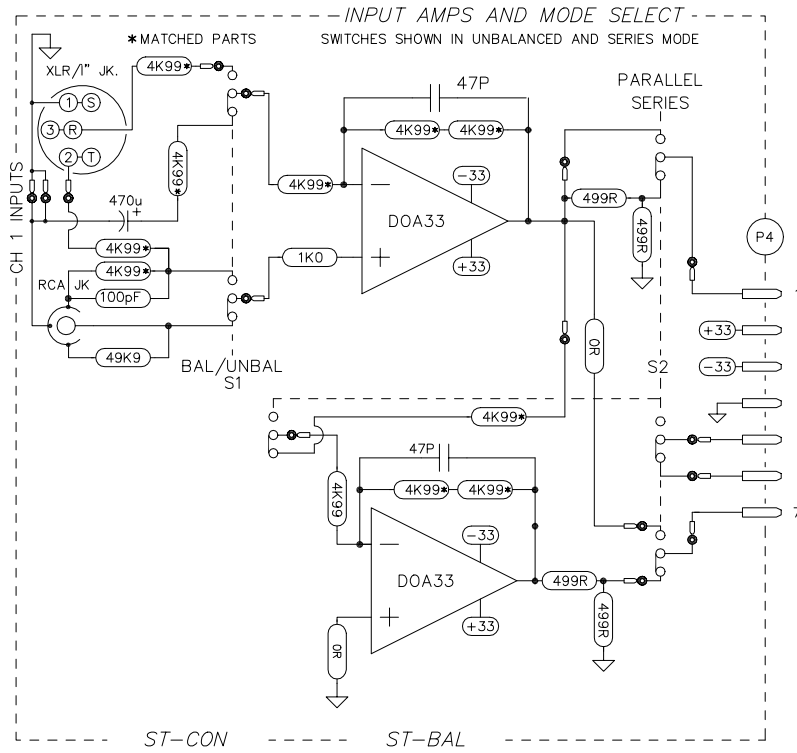
Components shown within the dashed boxes are located on separate outrigger boards that are connected to the main board (PWR-MB) via 4 insulated 16g stranded wire jumpers each. The 7B model use the 7B outrigger boards.

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

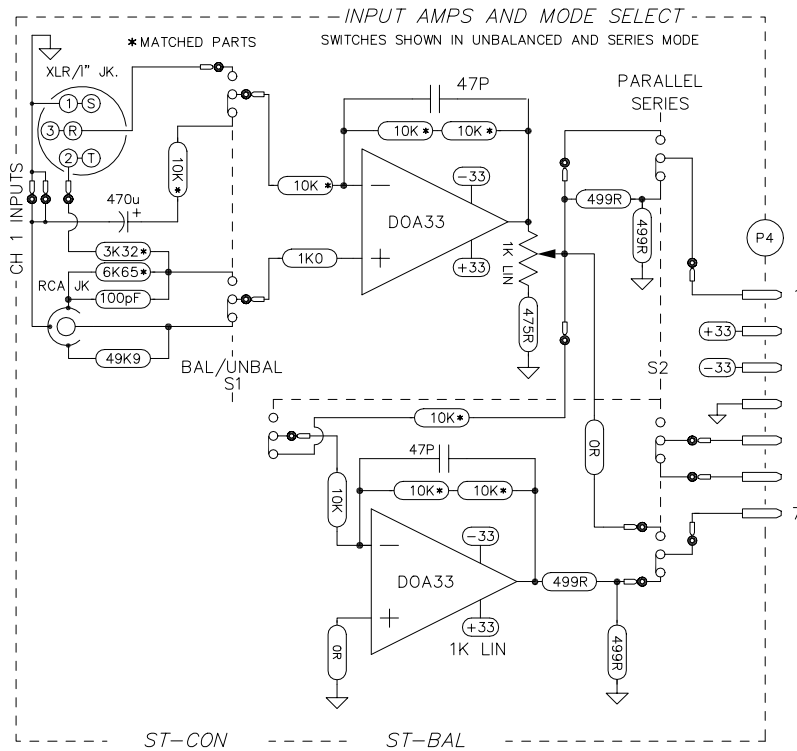
SYMBOL SHOWS JUMPER CONNECTIONS BETWEEN MAIN AND OUTRIGGER BOARDS

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

## 7BST REG INPUT CONFIGURATION



## 7BST PRO INPUT CONFIGURATION



- = HEADER INTERCONNECT
- = BOARD TO BOARD INTERCONNECT



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

## 7BST INPUT SCHEMATIC

SCHEMATIC OF ST-BAL & ST-CON BOARDS

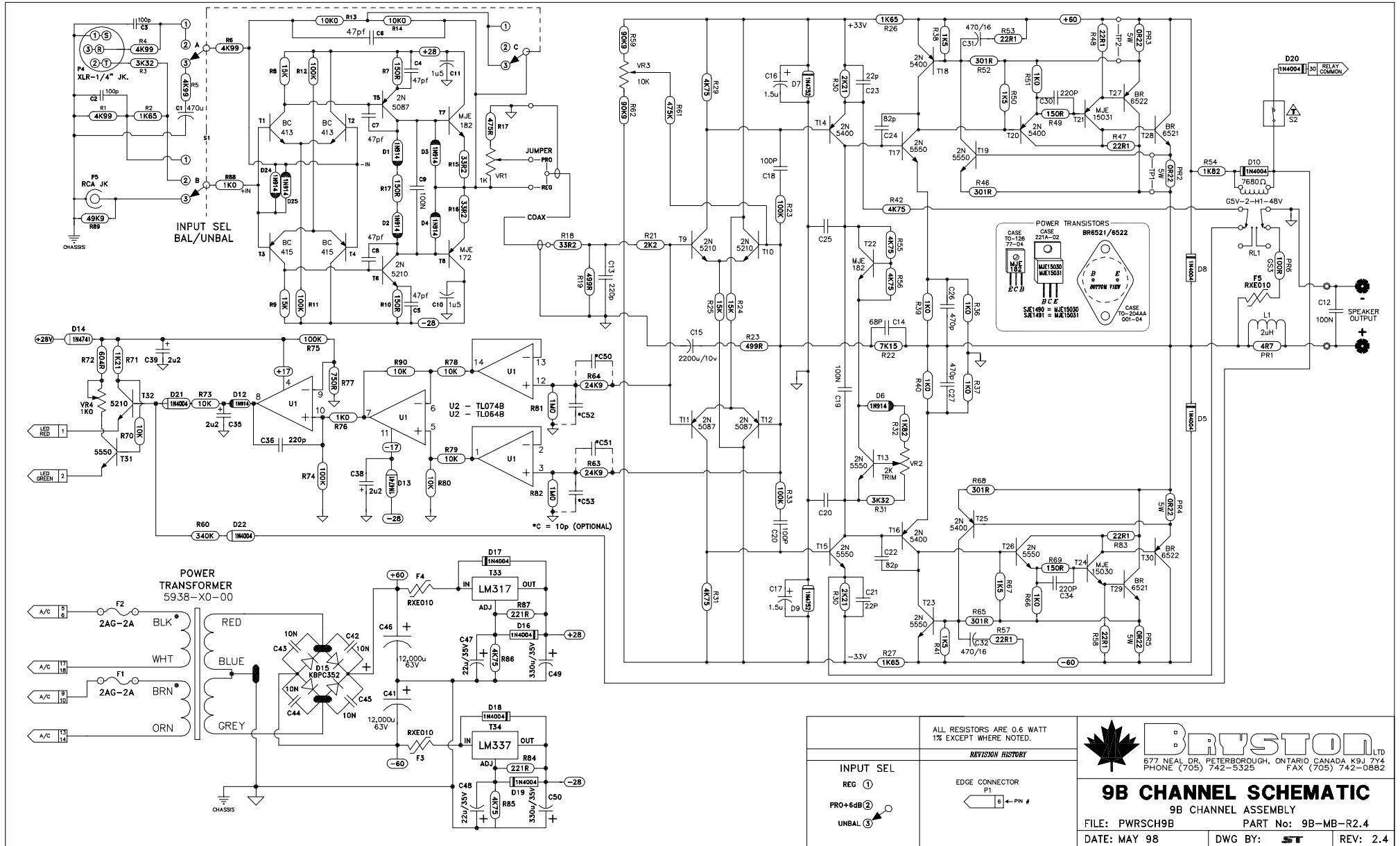
FILE: 7BINPUTSCH

PART No: ST BAL R 5.3

DATE: MAY 2000

DWG BY: ST

REV: 5.3



ALL RESISTORS ARE 0.6 WATT 1% EXCEPT WHERE NOTED.	
<b>REVISION HISTORY</b>	
INPUT SEL REG ① PRO+6dB ② UNBAL ③	EDGE CONNECTOR P1 ① ← PN #

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

**9B CHANNEL SCHEMATIC**  
 9B CHANNEL ASSEMBLY  
 FILE: PWRSCH9B PART No: 9B-MB-R2.4  
 DATE: MAY 98 DWG BY: **ST** REV: 2.4



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

# POWER / REMOTE / MUTE

POWER SUPPLY AND LOGIC FOR 9BST R6




FILE: 9BSSBSCH6

PART No: 9BREMSSB6

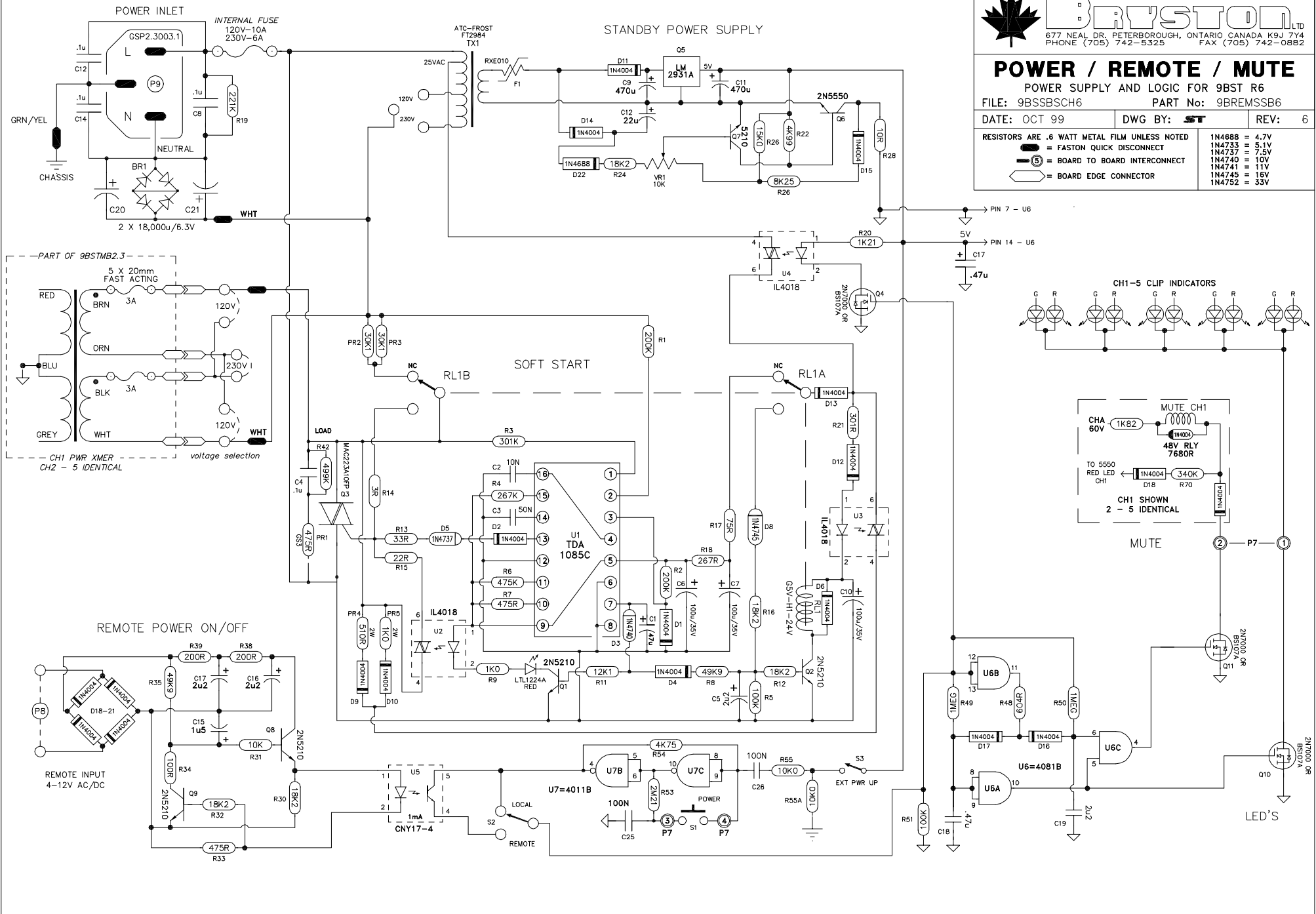
DATE: OCT 99

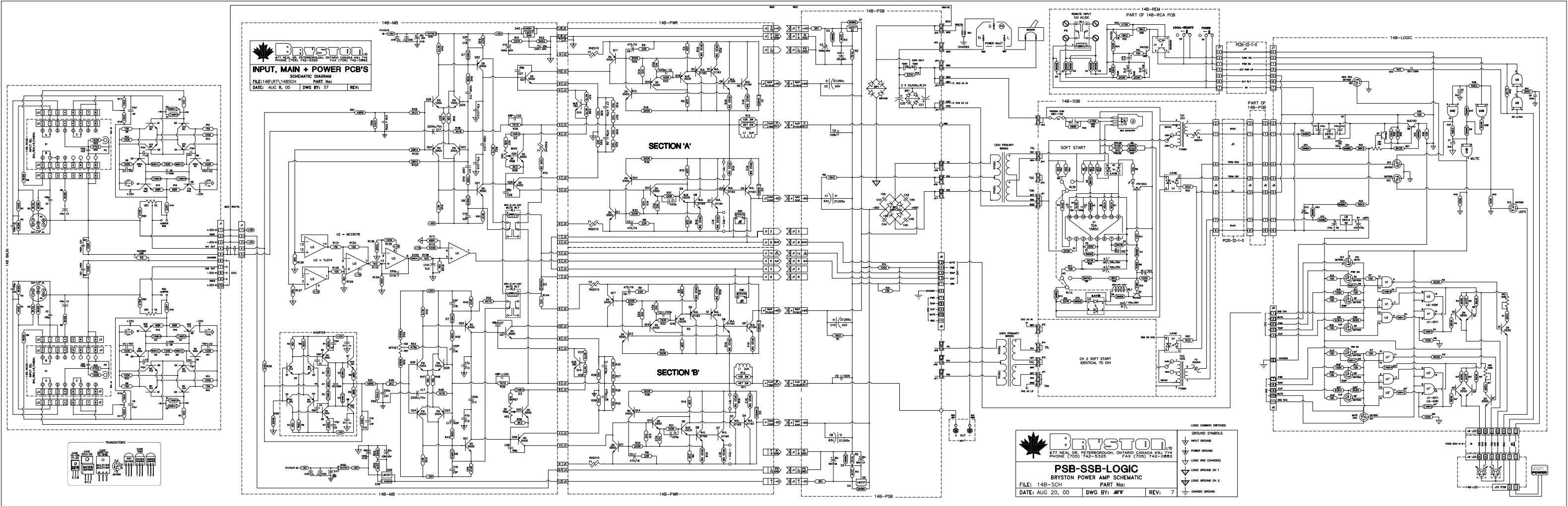
DWG BY: **ST**

REV: 6

RESISTORS ARE .6 WATT METAL FILM UNLESS NOTED  
 = FASTON QUICK DISCONNECT  
 = BOARD TO BOARD INTERCONNECT  
 = BOARD EDGE CONNECTOR

1N4688 = 4.7V  
 1N4733 = 5.1V  
 1N4737 = 7.5V  
 1N4740 = 10V  
 1N4741 = 11V  
 1N4745 = 15V  
 1N4752 = 33V





**BRYSTON**  
 817, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

**INPUT, MAIN + POWER PCB'S**  
 SCHEMATIC DIAGRAM PART No:  
 FILE: 14B-148SCH DATE: AUG 8, 00 DWG BY: ST REV: 1

SECTION 'A'

SECTION 'B'

**BRYSTON**  
 877 NEAL CR. PETERBOROUGH, ONTARIO CANADA K9J 7Y4  
 PHONE (705) 742-5325 FAX (705) 742-0842

**PSB-SSB-LOGIC**  
 BRYSTON POWER AMP SCHEMATIC  
 FILE: 14B-SCH PART No:  
 DATE: AUG 20, 00 DWG BY: JST REV: 7

LOGIC COMMON SWITCHED  
 GROUND SYMBOLS  
 INPUT GROUND  
 POWER GROUND  
 LOGIC AND (PHASED)  
 LOGIC GROUND CH 1  
 LOGIC GROUND CH 2  
 CHASSIS GROUND