

B

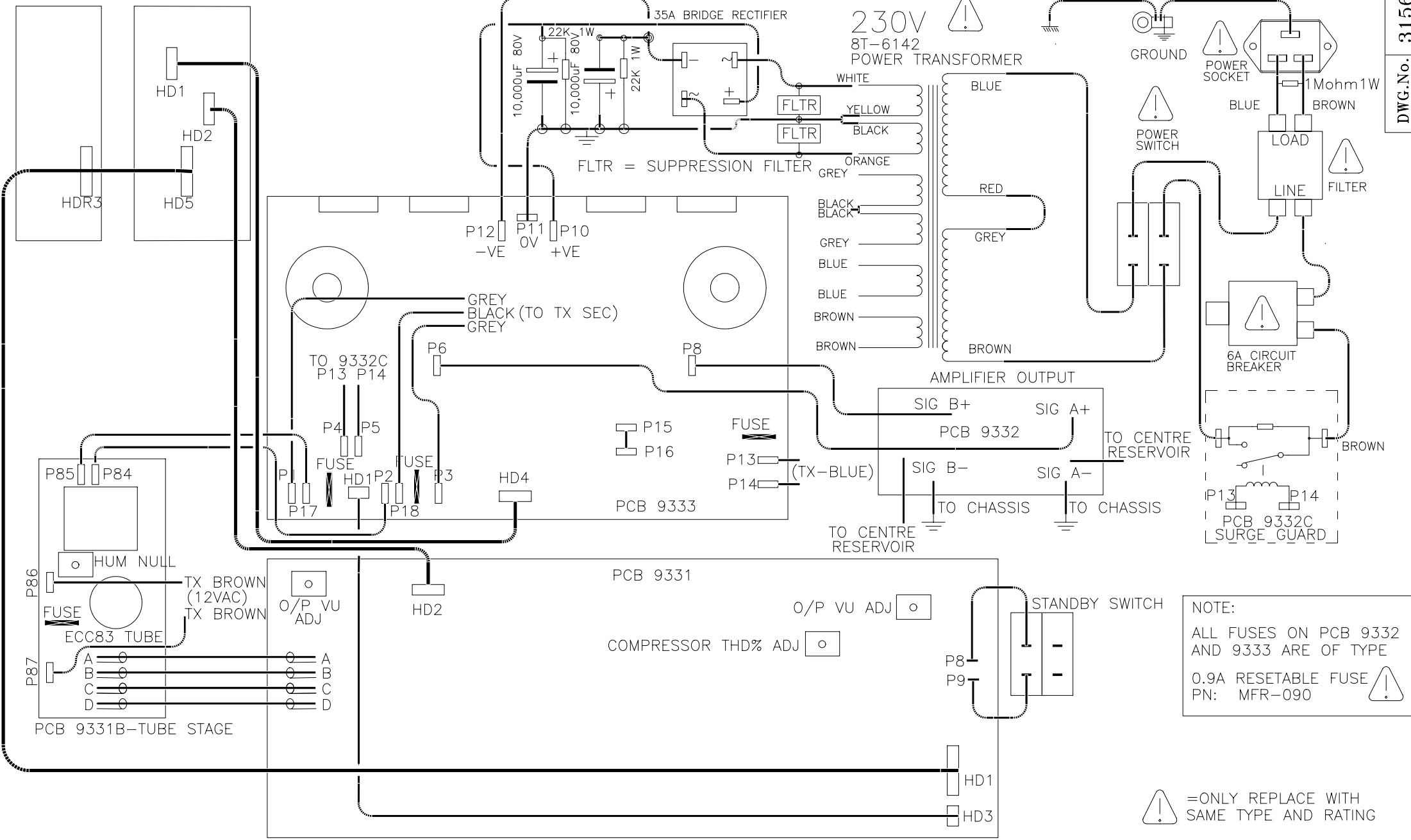
SERIES SERVICE MANUAL



B1
B2
B3

Laney

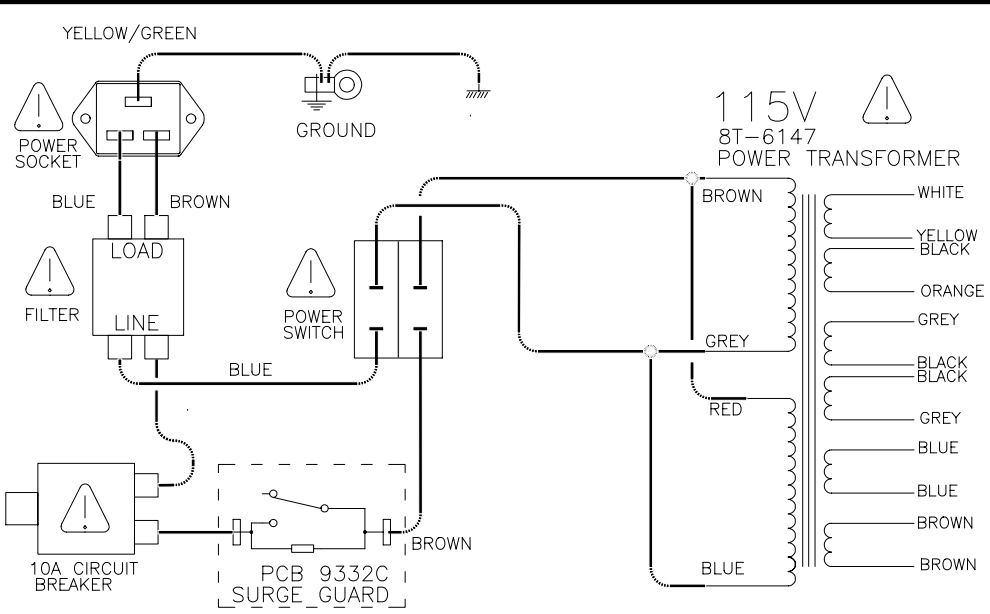
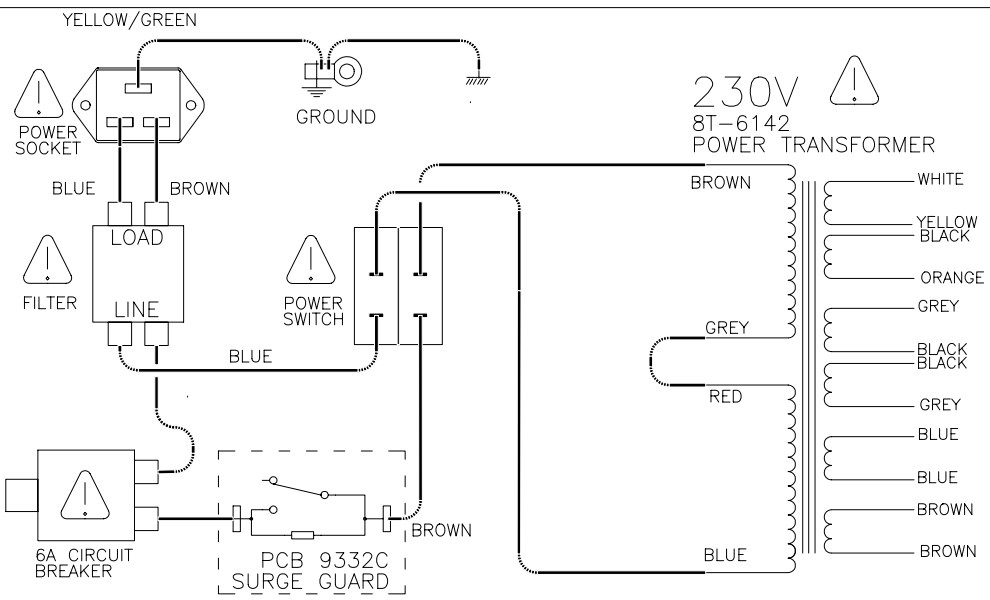
WWW.LANEY.CO.UK



NOTE:
 ALL FUSES ON PCB 9332
 AND 9333 ARE OF TYPE
 0.9A RESETABLE FUSE
 PN: MFR-090

⚠️ = ONLY REPLACE WITH
 SAME TYPE AND RATING

ISSUE	DESCRIPTION	APPD.	DATE	TITLE	DRAWN	TRACED	CHECKED	APPROVED	DATE	
				<p align="center">BLT <i>Industries Ltd.</i></p>	<p align="center">B1 Service Schematic PART No</p>	R.S.T			16/10/00	



⚠ = ONLY REPLACE WITH SAME TYPE AND RATING

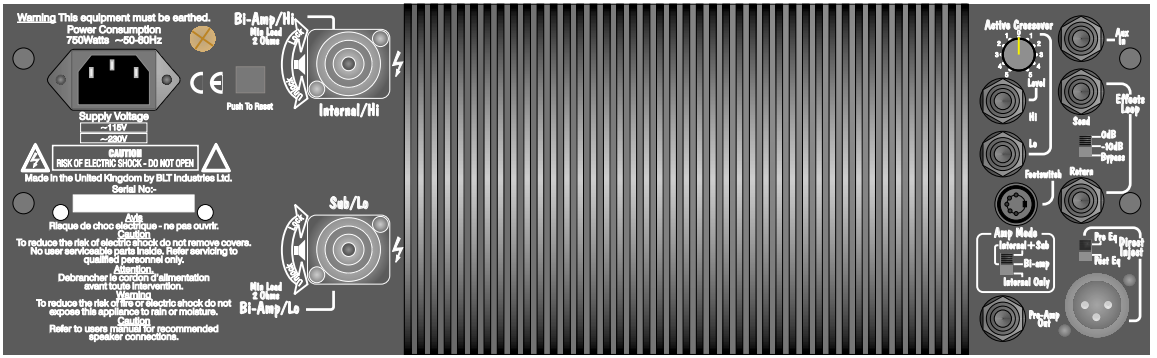
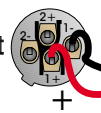
ISSUE	DESCRIPTION	APPD.	DATE

BLT
Industries Ltd.

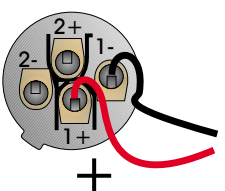
TITLE
MAINS WIRING FOR B1 115V/230V PART No

DRAWN	TRACED	CHECKED	APPROVED	DATE
R.S.T				02/10/00
DRAWING No.		3157		

To Internal / Hi Socket



B2 and B3 Cabinet Wiring Details

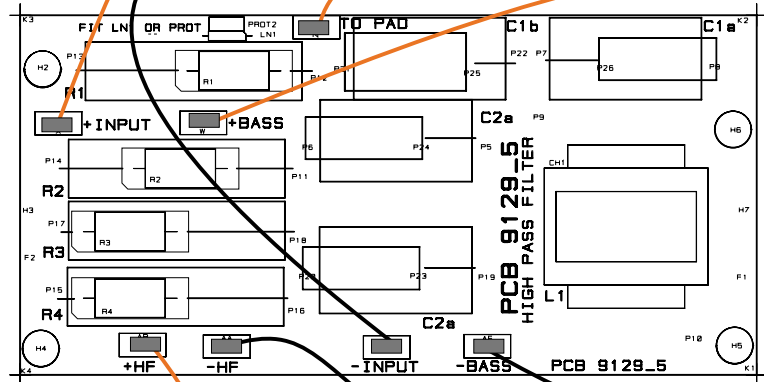
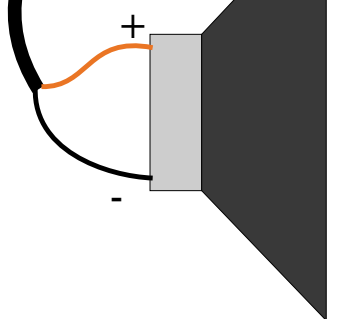


To Sub / Lo Socket

Speakon - BLT Part Nos 10682

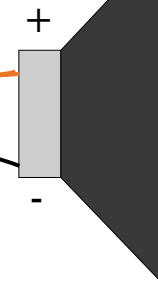
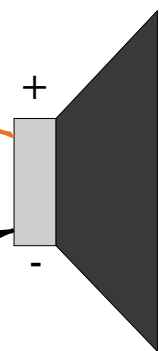
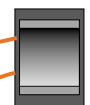
Cable U

15 inch Loudspeaker
Part Nos . 41522
(B3 only)



Cable Q

PAD

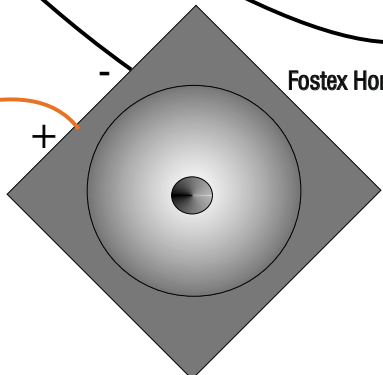


2 off 10 inch Loudspeakers
Part Nos . 41026
(B2 + B3))

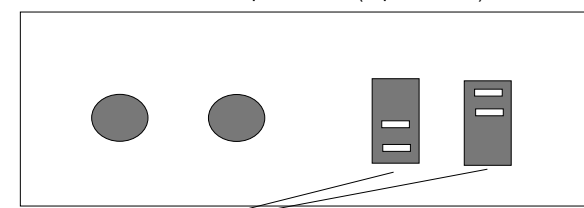
On



Fostex Horn



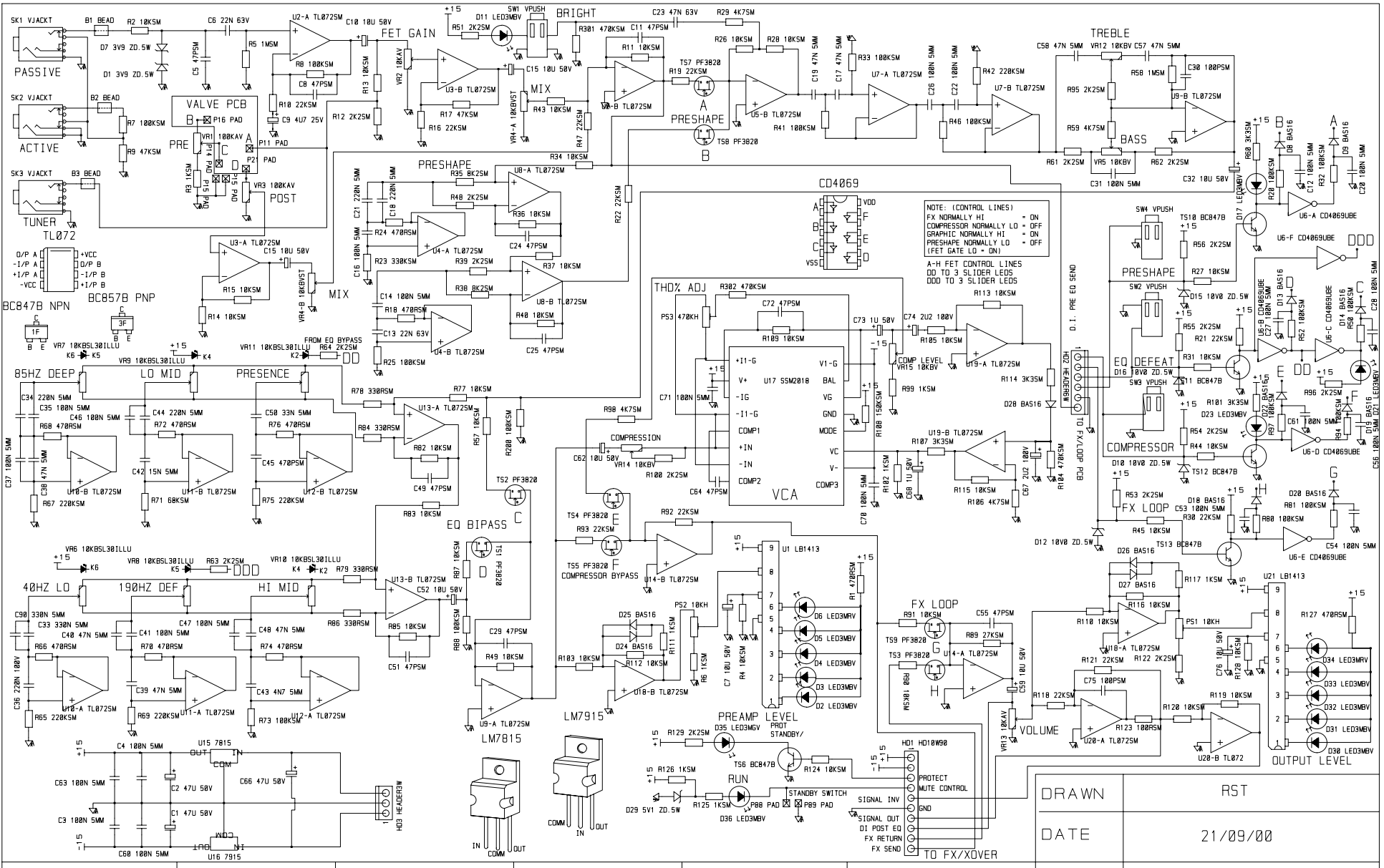
View from Rear of Speaker Plate (unprinted face)



Shows switch orientation

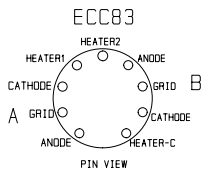
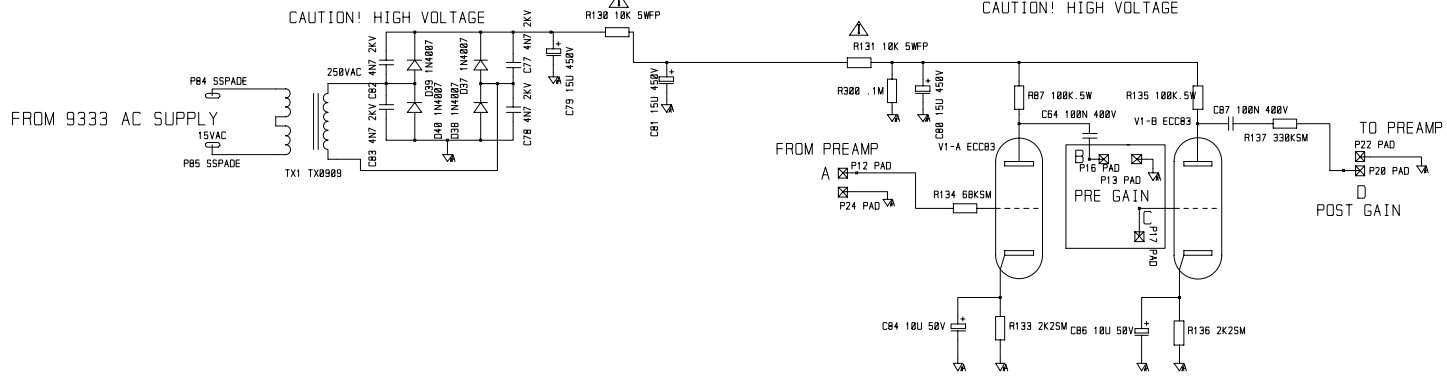
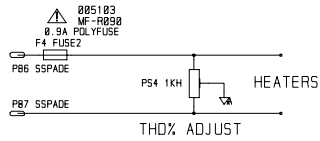
Drawing number 3189
Issue 1
Drawn by RJF
Date 05/12/00
Updated

B2/B3 Combo
Wiring Details



ISSUE	
TYPE	

DRAWN	RST
DATE	21/09/00
TITLE	B1 PREAMP
DRW. NO.	9331_5



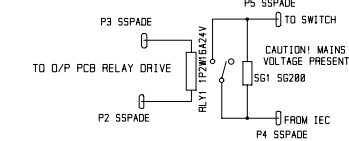
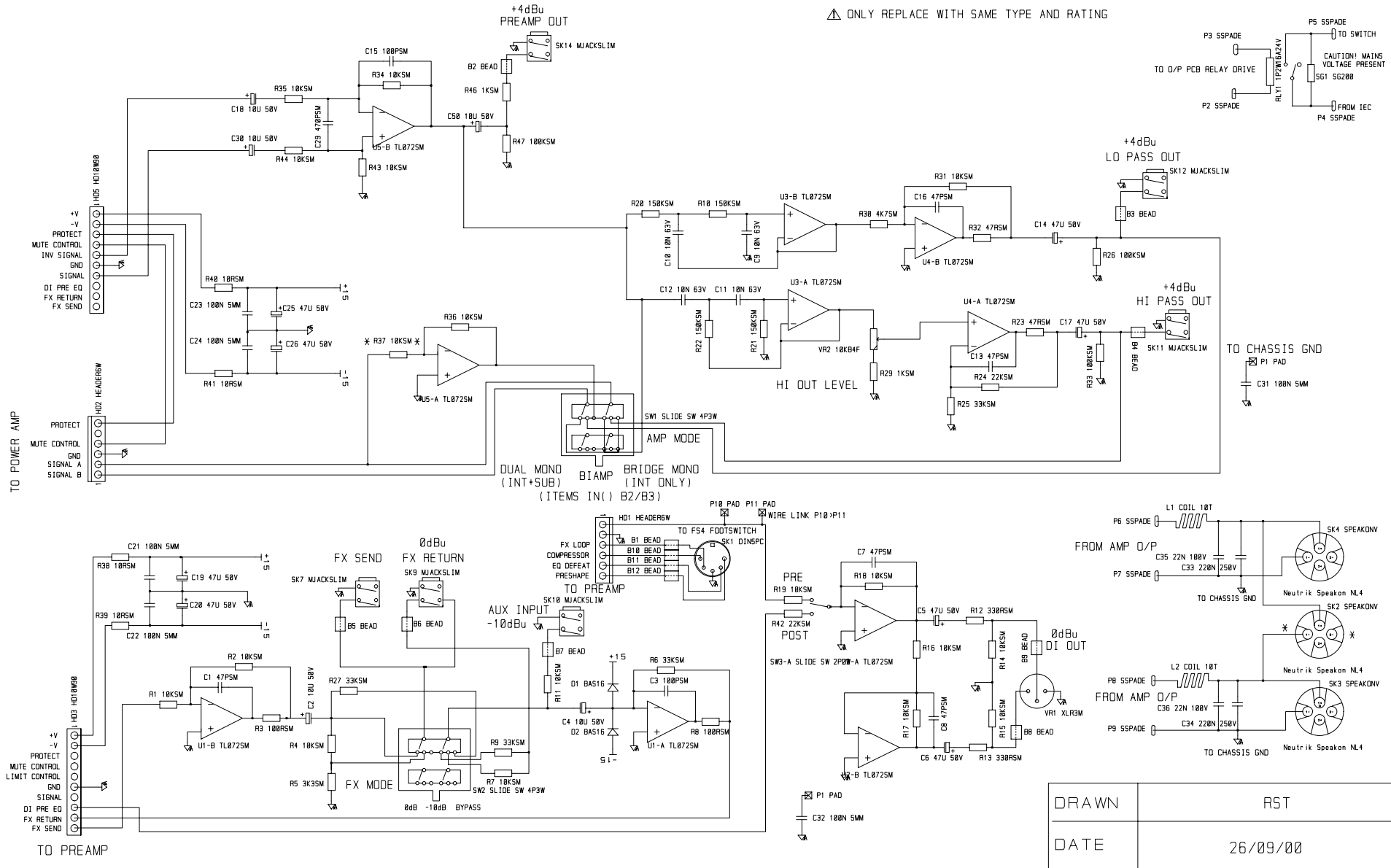
⚠ SAFETY CRITICAL COMPONENT
REPLACE ONLY WITH SAME TYPE AND RATING

FLAME PROOF RESISTOR

DRAWN	RST
DATE	21/09/00
TITLE	B1 VALVE STAGE
DRW. NO.	9331_5

ISSUE						
TYPE						

⚠ ONLY REPLACE WITH SAME TYPE AND RATING

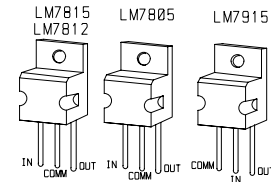
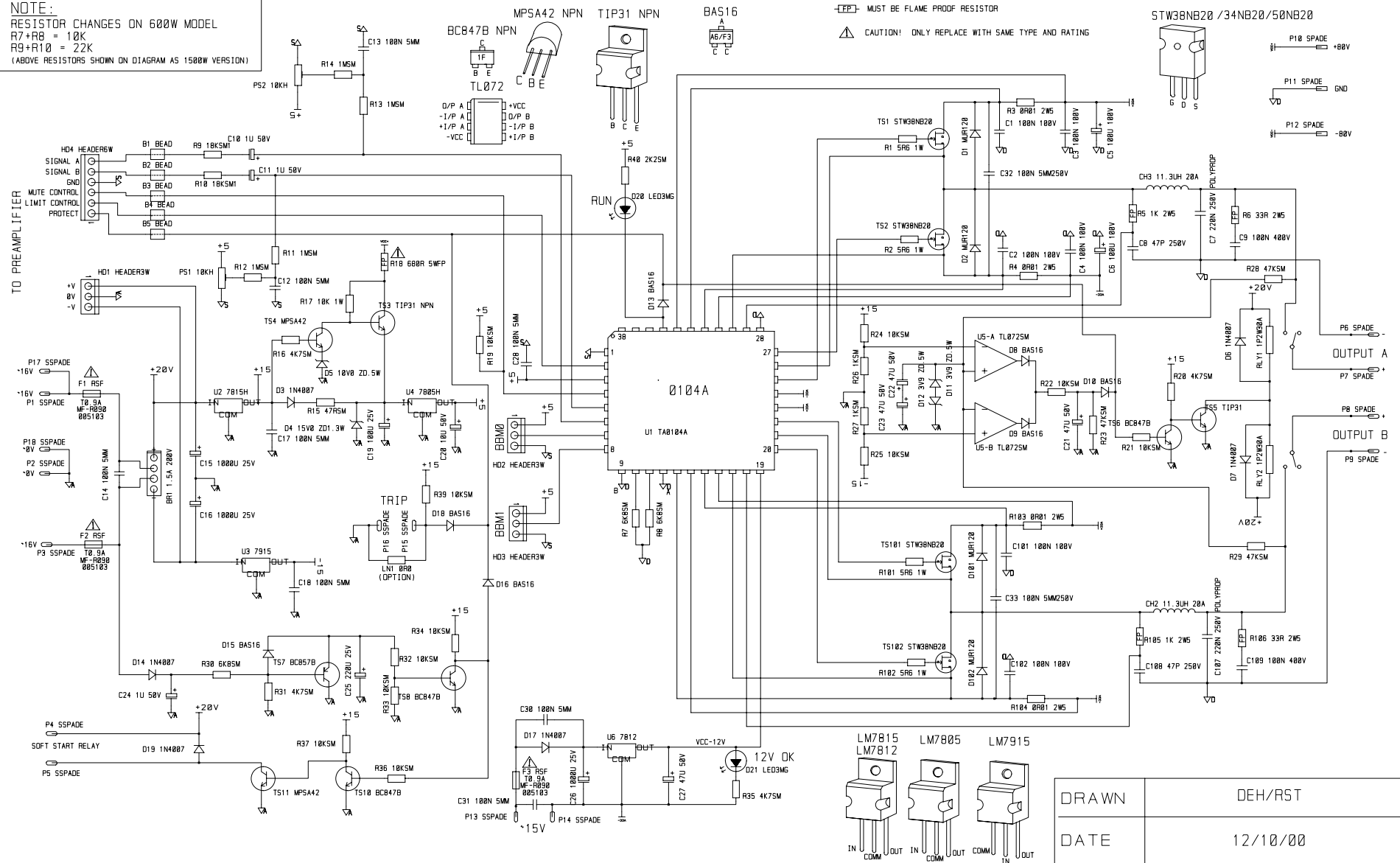


DRAWN	RST
DATE	26/09/00
TITLE	B SERIES FX/XOVER
DRW. NO.	9332_4

NOTE:
 *R37 AND SK2 MISSING ON B2/B3 MODELS
 ITEMS IN () ON MODE SWITCH APPLY TO B2/B3 ONLY

ISSUE	ISSUE 4
TYPE	LAYOUT DETAIL

NOTE:
 RESISTOR CHANGES ON 600W MODEL
 $R7+R8 = 10K$
 $R9+R10 = 22K$
 (ABOVE RESISTORS SHOWN ON DIAGRAM AS 1500W VERSION)

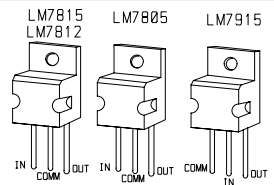
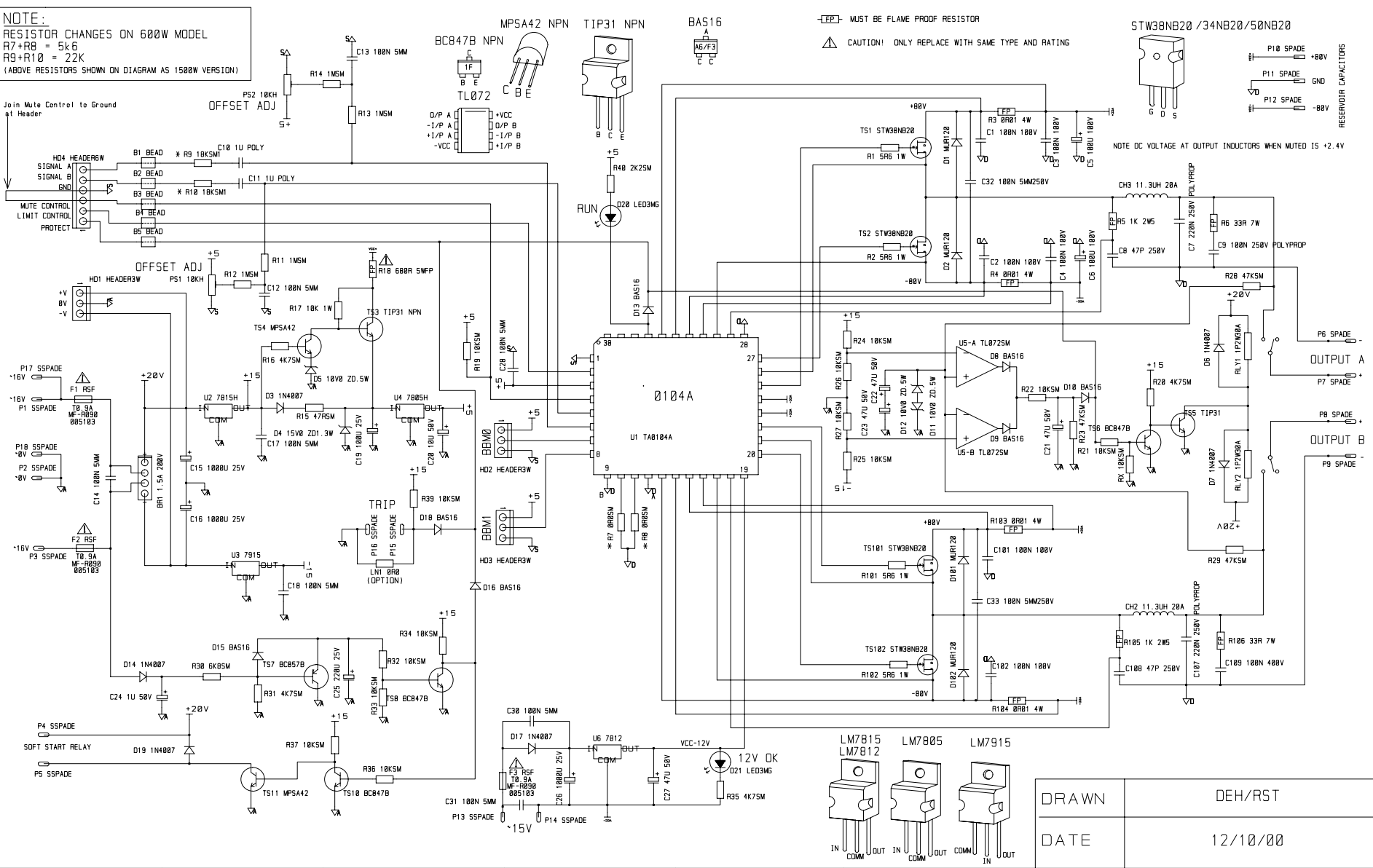


DRAWN	DEH/RST
DATE	12/10/00
TITLE	B1/CA POWER AMP
DRW. NO.	9333_5

ISSUE
 TYPE

NOTE:
 RESISTOR CHANGES ON 600W MODEL
 * R7+R8 = 5k5
 * R9+R10 = 22K
 (ABOVE RESISTORS SHOWN ON DIAGRAM AS 1500W VERSION)

Join Mute Control to Ground at Header



DRAWN	DEH/RST
DATE	12/10/00
TITLE	B1/CA POWER AMP
DRW. NO.	9333_6

ISSUE	6_16/01/01 C10,C11 TO BOX POLY TYPE R3/4/103/104 2W5 TO 4WFP	7/08/2001
TYPE	R6/106 TO 5W TO 7WFP R26/27 TO 1K TO 10KSM D11/12 TO 3V9 TO 10V	C9 and C109 to Polyprop type 10K base resistor added to T56 CA600 R7 and R8 changed to 5K5

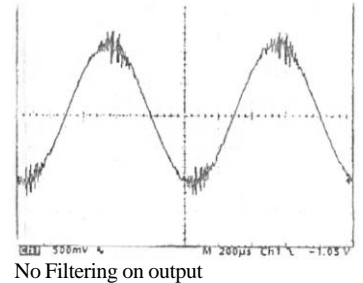
B Series Bass Amplifiers

Traditionally, Class A and Class A-B amplifiers have dominated the amplifier marketplace. These purely analogue devices have low power efficiency and most integrated circuit Class A-B amplifiers fall short of true high-fidelity audio quality.

Class D amplifiers however, solve the efficiency problem by using switching pulse-width modulation technology. However, this produces audio quality that is far inferior to class A or AB, so efficiency is gained at the expense of audio fidelity. The 'Holy Grail' of amplification: High audio quality AND high power efficiency has long eluded the market. Enter the B range of Bass Amplifiers delivering audiophile performance and very high efficiency.

If you have measured the output waveforms of B Series Bass Amplifiers using traditional equipment and methods, you may have observed an unusual characteristic in the output waveform when the amplifier is driven close its maximum output. This characteristic appears to be a high frequency oscillation near the waveform peaks.

In reality, this apparent oscillation is an audio quality enhancement characteristic of the B series amplifier. The apparent oscillations are well outside the audio bandwidth, and are a unique feature of the digital power processor.

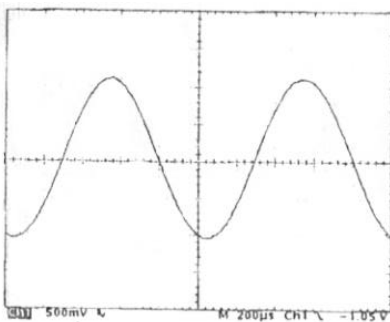


As the input signal, to any conventional amplifier is increased, at some point the output of the amplifier will distort/clip i.e. 'Square' off. This is bad news because for a split second the loudspeaker is not moving at all but still dissipating potentially huge power levels, this is the main cause of (expensive) compression driver failure.

When the B Series Bass Amplifier goes into this distortion region, it exhibits high frequency break-up of the peaks as shown above. This is actually the amplifier resetting the control processor overloads at a *frequency far above the audible range*. This is not instability or oscillation, nor does it degrade the performance of the amplifier in any way. In addition the B Series Bass Amplifiers also have the ability to run almost rail-to-rail, and thus will not lose negative feedback. In other words, it will retain control of the loudspeaker at all times.

Measurement of THD%+N

Unless your distortion analyser is designed to reject out of band noise when measuring THD (And very few are), the THD measurement actually reflects harmonic distortion plus any noise present up to the bandwidth of the analyser and so is actually a measurement of THD+N. Since the B Series range of amplifiers have energy far outside the audible frequency range (As do inferior class D amplifiers), a test designed for linear amplifiers (such as class A, AB) will not yield valid results when applied to a B Series amplifier. A sharp cut-off low-pass filter must be inserted between the amplifiers outputs and the test equipment's inputs prior to making any distortion measurements. Some measurement equipment (Such as Audio Precision2) have high quality low pass filters which can be used to limit the test bandwidth. Using these filters (as shown below) you will achieve what 'looks' like a high quality linear amplifier. Even though there appears to be 'lots going on' outside the audio bandwidth, the B amplifier is designed to be well within current and future EMC guidelines, and as such is quieter than most linear amplifiers.



Output with 30Khz Low-pass filter

10702	SPECIAL MAINS LEAD	1
10958	B1 USER MANUAL	1
20480	B1 CABINET ASSY	-1
7904	B1 CHASSIS ASSY	1

7904	B1 CHASSIS ASSY EURO/UK	-1
->001048	10M .25W RESISTOR	1
->001401	22K 1W RESISTOR	2
->002022	10000UF 100V CAPACITOR/SAMWHA	2
->002204	680NF 250V 22.9mm	3
->003043	3MM BLUE DIFFUSED LED	6
->005632	M3*20 PLASTIC SPACER HEX	2
->005320	CHASSIS MOUNT MAINS FILTER	1
->005319	3A FILTERED MAINS INLET	1
->005321	3A THERMAL RELEASE SWITCH	1
->005503	7.5mm ROUND BLACK	4
->005510	3MM SOLDER TAG	1
->005511	5MM SOLDER TAG	11
->005512	6mm SOLDER TAG	2
->005536	LARGE GRIPPA CLIP	2
->005548	ECC83 VALVE	1
->005558	100mm TIE WRAP	20
->005574	10 WAY (T) CONNECTOR	3
->005625	NOB P670-90F SPLINE	1
->005659	SHORT BOARD SPACER 12.7MM	14
->005660	DB SERIES LARGE KNOB/30MM	1
->005664	RBG CHROME KNOB 18mm	8
->005664/CP	18MM KNURLED KNOB	8
->009150	3mm HEX NUT	4
->009151	3mm INT SHAKEPROOF	4
->009154	3*12mm Z/B PAN POZI	4
->009160	4mm HEX NUT	13
->009161	4mm INT. SHAKEPROOF	19
->009163	4*20mm PAN POZI	5
->009166	4*25 CSK BLACK POZI	2
->009167	4*8 PAN POZI TAPTE	12
->009173	5*12mm PAN POZI	1
->009181	5mm BRASS HEX NUT	1
->009189	5mm CAGE NUT	4
->009190	6 WAY END CONNECTOR	4
->009199	3 WAY IDC CONNECTOR	2
->009200	NO 6*3/8 FLANGE POZI	6
->009204	NO 4*1/4 PLASTITE	22
->009217	4mm NUTSERT	8
->522032	35A BRIDGE RECTIFIER	1
->530027	DPST EQ MAINS SWITCH	2
->530066	SPEAKON SOCKET	3
->540038	EARTH WARNING LABEL	1
->541004	HC25/50 4.8 FASTON	18
->541053	1/4" LG RECEPTACLE	17
->541071	POZI LOCK NYLON BOOT	12
->582007	4*10mm SMALL F/H	18
->586003	M8 * 60 COACH BOLT	1
->586023	8mm SHKPRF WASHER	1
->588006	POP RIVET (BLACK)	6
->589041	50mm CAPACITOR CLAMP	2
->5P-50036	MX500 CAP STRAP	-1
->8P-9244	B1 FACIA DWG NO 3057	-1
->8P-9245	B1 REAR DWG NO 3135	-1
->8P-9246	B1 CHASSIS DWG NO 3107	-1
->8P-9248	B1 HEATSINK EXTR DWG NO 3148	-2
->8T-6142A	B1 MAINS TX + CRIMPS	-1
->>8T-6142	B1 MAINS 115/230 TX	-1

->007905	B1 PREAMP ASSY PCB 9331	-1
->>001046	27KSM 1206 1% RESISTOR	1
->>001207	100K .5W 1% RESISTOR	2
->>001300	ORO SHORTING LINK	47
->>001303	100R 5% RESISTOR	1
->>001305	2K2 5% RESISTOR	20
->>001306	10K 5% RESISTOR	38
->>001308	68K 5% RESISTOR	2
->>001309	1M 5% RESISTOR	2
->>001310	100K 5% RESISTOR	17
->>001311	470R 5% RESISTOR	10
->>001312	4K7 5% RESISTOR	4
->>001314	8K2 5% RESISTOR	2
->>001315	47K 5% RESISTOR	2

->>001316	22K 5% RESISTOR	11
->>001326	3K3 5% RESISTOR	4
->>001327	1K 5% RESISTOR	7
->>001329	330R 5% RESISTOR	4
->>001330	220K 5% RESISTOR	5
->>001332	330K 5% RESISTOR	2
->>001334	150K 5% RESISTOR	1
->>001336	470K 5% RESISTOR	2
->>001714	10K 5W RESISTOR	2
->>001920	ZERO OHM RESISTOR	26
->>002004	47UF 50V RADIAL	3
->>002013	10UF 50V CAPACITOR	11
->>002015	10uf 400V RADIAL	3
->>002024	2.2UF 63V RADIAL	2
->>002025	1UF 63V RADIAL	2
->>002027	4.7UF 63V RADIAL	1
->>002037	220N 5MM BOX POLY CAPACITOR 63V	6
->>002038	330N 5MM BOX POLY CAPACITOR 63V	1
->>002410	100NF 400V 15MM	2
->>002417	4.7NF 100V 5mm	1
->>002419	100NF 63V 5mm	24
->>002420	22NF 100V 5mm	2
->>002425	47NF 100V 5mm	9
->>002426	15NF 100V 5mm	1
->>002428	33N 100V 5MM	1
->>002602	47PF 50V 10% COG	11
->>002603	100PF 50V 10% COG	2
->>002605	470PF 50V 10% COG	1
->>002804	4N7 1000V CERAMIC	4
->>003000	1N4007 DIODE	4
->>003007	3V9 .5W ZENER DIODE	2
->>003011	5V1 .5W ZENER DIODE	1
->>003018	10V .5W ZENER DIODE	4
->>003022	3mm GREEN LED	1
->>003033	3mm LED RED	2
->>003041	5MM FERRITE BEAD	3
->>003043	3MM BLUE DIFFUSED LED	13
->>003500	BAS16 DIODE	13
->>003503	BC847B TRANSISTOR	5
->>003506	TMPF3820 TRANSISTOR	8
->>003508	34072 IC (SMD TL072)	15
->>003805	LB1413 BARGRAPH DRIVER	2
->>003901	7815 IC VOLT'REGULATOR	1
->>003902	7915 IC VOLT'REGULATOR	1
->>003910	CD4069UBE IC	1
->>003932	0-9/9V PCB MOUNT TRANSFORMER	1
->>004000	1K HORIZ PRESET	1
->>004016	470K HORIZ PRESET	1
->>004019	10K HORIZ PRESET	2
->>004103	A100K 27.5mm POT	2
->>004104	A10K 27.5mm POT	2
->>004109	B10K DUAL 27.5MM POT	1
->>004110	B10K 27.5MM POT	4
->>004112	B10K ILLUMINATED SLIDER	6
->>005030	HEATSINK TV5	2
->>005035	90o 10 WAY HEADER	1
->>005062	6W 90o LOCKING HEADER	1
->>005072	3 WAY 90 DEGREE LOCKING HEADER	1
->>005103	0.9A POLY SWITCH/MF-R090	1
->>005304	8.5mm VERTICAL PUSH SWITCH	4
->>005309	6.3MM PHONE JACK	3
->>005579	B9A VALVE BASE	1
->>005657	LED SPACER 12.7mm	16
->>005686	4.8MM TERMINAL SPADE	4
->>009331	B1 PREAMP ISSUE 6	1
->>521010	SSM2018P VOLT'CONTROL AMP'	1
->>541004	HC25/50 4.8 FASTON	2
->>588006	POP RIVET (BLACK)	2
->007907	B1 EFFECTS LOOP ASSY PCB 9332	-1
->>001300	ORO SHORTING LINK	12
->>001301	10R 5% RESISTOR	4
->>001302	47R 5% RESISTOR	2
->>001303	100R 5% RESISTOR	2
->>001306	10K 5% RESISTOR	20
->>001310	100K 5% RESISTOR	3
->>001316	22K 5% RESISTOR	1
->>001326	3K3 5% RESISTOR	1

->>001327	1K 5% RESISTOR	2
->>001329	330R 5% RESISTOR	2
->>001331	33K 5% RESISTOR	4
->>001334	150K 5% RESISTOR	4
->>002004	47UF 50V RADIAL	6
->>002013	10UF 50V CAPACITOR	7
->>002401	22NF 400V 10MM	2
->>002402	220NF 250V 15MM DIPPED POLYESTER	2
->>002419	100NF 63V 5mm	6
->>002421	10NF 100V 5mm	4
->>002603	100PF 50V 10% COG	3
->>002605	470PF 50V 10% COG	2
->>003031	SURGE GUARD SCK20-10-8A	1
->>003041	5MM FERRITE BEAD	12
->>003500	BAS16 DIODE	2
->>003508	34072 IC (SMD TL072)	5
->>004082	4mm 10K LIN POT	1
->>005016	5 WAY DIN SOCKET	1
->>005032	SLIM JACK SOCKET-S1BNB	6
->>005035	90o 10 WAY HEADER	2
->>005036	6 WAY LOCKING HEADER	2
->>005047	16A 24V RELAY	1
->>005610	2 POLE 2 WAY (MX)	1
->>005624	XLR SKT MALE 90DEG	1
->>005686	4.8MM TERMINAL SPADE	4
->>009332	B1 FX LOOP PCB ARRAY	1
->>530023	4P 3W SLIDE SWITCH	2
->>571014	10 TURN CHOKE	2

->>007906	B1/CA OUTPUT ASSY PCB 9333	-1
->>001068	5R6 1W 5% WW RESISTOR	4
->>001069	OR01 2W5 5% WIREWOUND RESISTOR	4
->>001070	18KSM 1206 1% RESISTOR	2
->>001073	33R 2W5 5% RESISTOR	2
->>001300	ORO SHORTING LINK	2
->>001302	47R 5% RESISTOR	1
->>001305	2K2 5% RESISTOR	1
->>001306	10K 5% RESISTOR	11
->>001309	1M 5% RESISTOR	4
->>001312	4K7 5% RESISTOR	4
->>001315	47K 5% RESISTOR	3
->>001318	6K8 5% RESISTOR	1
->>001327	1K 5% RESISTOR	2
->>001400	10K 1W RESISTOR	1
->>001511	1K 2.5W RESISTOR	2
->>001705	680R 5W RESISTOR	1
->>001920	ZERO OHM RESISTOR	1
->>002004	47UF 50V RADIAL	4
->>002009	1000UF 25V RADIAL	3
->>002013	10UF 50V CAPACITOR	1
->>002014	100UF 35V RADIAL	1
->>002025	1UF 63V RADIAL	3
->>002029	220UF 25V CAPACITOR	1
->>002035	100N 100V 5MM BOX POLY	6
->>002036	100UF 100V RADIAL CAP	2
->>002039	220N 250V POLYPROPYLENE CAP	2
->>002041	100N 250V 5MM POLYESTER CAPACITOR	2
->>002410	100NF 400V 15MM	2
->>002419	100NF 63V 5mm	8
->>002818	47PF 500V CERAMIC	2
->>003000	1N4007 DIODE	6
->>003007	3V9 .5W ZENER DIODE	2
->>003014	15V 1.3W ZENER	1
->>003017	1.5A 200V BRIDGE	1
->>003018	10V .5W ZENER DIODE	1
->>003022	3mm GREEN LED	2
->>003041	5MM FERRITE BEAD	5
->>003042	BYW100-200-FAST RECOVERY DIODE	4
->>003411	MPSA42/43 TRANSISTOR	2
->>003422	STW38NB20 N CHANNEL MOSFET T0247	4
->>003423	TA0104A TRIPATH DIGITAL AMPLIFIER	2
->>003424	LM7812 12V REGULATOR	1
->>003500	BAS16 DIODE	7
->>003503	BC847B TRANSISTOR	3
->>003504	BC857B TRANSISTOR	1
->>003508	34072 IC (SMD TL072)	1
->>003610	TIP31C TRANSISTOR	2
->>003901	7815 IC VOLT'REGULATOR	1

->->003902	7915 IC VOLT REGULATOR	1
->->003905	7805 IC	1
->->004019	10K HORIZ PRESET	2
->->005030	HEATSINK TV5	3
->->005036	6 WAY LOCKING HEADER	1
->->005038	1/4" SPADE TERMINAL	7
->->005063	3 WAY LOCKING HEADER	3
->->005076	290MM TIE WRAP	1
->->005103	0.9A POLY SWITCH/MF-R090	3
->->005316	8W PCB SOCKET	2
->->005317	11.3UH 20A INDUCTOR	2
->->005318	12W PCB SOCKET	2
->->005322	ALUMINIUM OXIDE FET WASHER	4
->->005558	100mm TIE WRAP	2
->->005609	30A RELAY	2
->->005686	4.8MM TERMINAL SPADE	6
->->009150	3mm HEX NUT	7
->->009151	3mm INT SHAKEPROOF	7
->->009333	CA/B1 DIGITAL OUTPUT PCB	1
->->543508	SHORTING LINK (IDC)	2
->->581018	3*20mm PAN POZI	7
->->588006	POP RIVET (BLACK)	3
->->588058	M3*10mm HEX TAPPED	5
->->8P-9243	CA/B1 OUTPUT TRAY DWG NO 3130	-1
->->8P-5071	CA1500/600/B1 FET CLAMPING BAR	2

B2 CABINET

005560	SPST MINI ROCKER	2.000
008645	DB X'VER PCB	1.000
10039	CORNER C1839K	6.000
10044	C1823K CORNER	2.000
10057	SMALL LANEY BADGE	1.000
10059	RUBBER CABINET FOOT	8.000
10116	CASTOR	2.000
10117	RUBBER CUP	4.000
10118	BOTTOM HANDLE	1.000
10120	SIDE HANDLE RECESS	2.000
10200	M5 x 10mm TEENUT	8.000
10204	5mm X 25mm PAN POZI	20.000
10224	35mm FINISHED NAILS	40.000
10231	NO8x1/2" FLANGE POZI	26.000
10232	NO10x1 1/2 FLANGE HD	6.000
10233	M5*30 FLANGE POZI BK	4.000
10240	10 * 1 CSK POZI	4.000
10241	NO8x1 1/4" FLANGE	4.000
10243	NO4*1/2 TYPE B CSK	2.000
10244	FLAT SPIRE CLIP	2.000
10247	NO8*1/2 FLANGE POZI	4.000
10256	8*1 FLANGE POZI	4.000
10312	15mm PLYWOOD	0.450
10314	18mm MDF	0.100
10326	BLACK CARPET	2.000
10502	DB FOSTEX HORN	1.000
10600	32/18 STAPLES	12.000
10622	POLY BAG 48(0) X 48	1.000
10680	GROMET	1.000
10681	SPEAKER CABLE	0.480
10682	NL2 SPEAKON	1.000
10804	CARTON B210/TE700	1.000
41026	10" LOUDSPEAKER	2.000
541004	HC25/50 4.8 FASTON	4.000
541051	1/4" SML RECEPTACLE	18.000
582007	4*10mm SMALL F/H	6.000
80050	B2 CHASSIS(USE B1)	1.000
8G-B2	GRILL	1.000
8P-5034	B2/B3 SIDE WING	2.000
8P-5083	SPEAKER PLATE	1.000
8P-8502	CABINET VENT PLATE	1.000
8P-8857	BLACK CR VENT	1.000

B3 CABINET

005560	SPST MINI ROCKER	2.000	
008645	DB X'VER PCB	1.000	
10039	PENN CORNER C1839K	6.000	
10044	C1823K CORNER	2.000	
10057	SMALL LANEY BADGE	1.000	
10059	RUBBER CABINET FOOT	8.000	
10109	DB115 PORT HOLE	2.000	
10116	CASTOR	2.000	
10120	SIDE INSERT HANDLE	2.000	
10200	M5 x 10mm TEENUT	36.000	
10204	5mm X 25mm PAN POZI	36.000	
10224	35mm FINISHED NAILS	40.000	
10231	No8x1/2" FLANGE POZI	26.000	
10232	NO10x1 1/2 FLANGE HD	4.000	
10233	M5*30 FLANGE POZI BK	4.000	
10240	10 * 1 CSK POZI	4.000	
10243	NO4*1/2 TYPE B CSK	2.000	
10244	FLAT SPIRE CLIP	2.000	
10247	NO8*1/2 FLANGE POZI	4.000	
10312	15mm PLYWOOD	1.000	
10314	18mm MDF	0.200	
10326	BLACK CARPET	2.500	
10502	DB FOSTEX HORN	1.000	
10600	32/18 STAPLES	20.000	
10622	POLY BAG 48(0) X 48	1.000	
10680	GROMET	2.000	
10681	CABLE	1.500	
10682	NL2 SPEAKON	2.000	
10804X	carton		1.000
41026	10" LOUDSPEAKER	2.000	
41522	CS115 LOUDSPEAKER	1.000	
541004	HC25/50 4.8 FASTON	2.000	
541051	1/4" SML RECEPTACLE	20.000	
582007	4*10mm SMALL F/H	6.000	
80050	B2 CHASSIS(USE B1)	1.000	
8G-B3	GRILL	1.000	
8P-5034	WING	2.000	
8P-5084	SPEAKER PLATE	1.000	
8P-8502	CABINET VENT PLATE	1.000	
8P-8857	BLACK CR VENT	1.000	

B1CAB

10039	PENN C1839K	8	
10055	PLASTIC CABINET FOOT	4	
10100	STRAP HANDLE	1	
10200	M5 x 10mm TEENUT	2	
10202	5mm X 25mm CSK POZI	2	
10224	35mm FINISHED NAILS	12	
10225	STAPLES 97/12	3	
10234	No 8 X 3/4 CSK POZI	16	
10250	M5*45 FLANGE	4	
10301	18mm CHIPBOARD	0.1	
10326	BLACK CARPET	0.35	
10600	32/18 STAPLES	12	
10621	POLY. BAG 30(0) X 36	1	
10629	MASKING TAPE 1.5"	0.02	
10880	CARTON CR120	1	
10893	CR120/CR150 INSERT	1	
584000	NO6*1/2 FLANGE POZI	8	
8P-8857	BLACK CR VENT	-2	