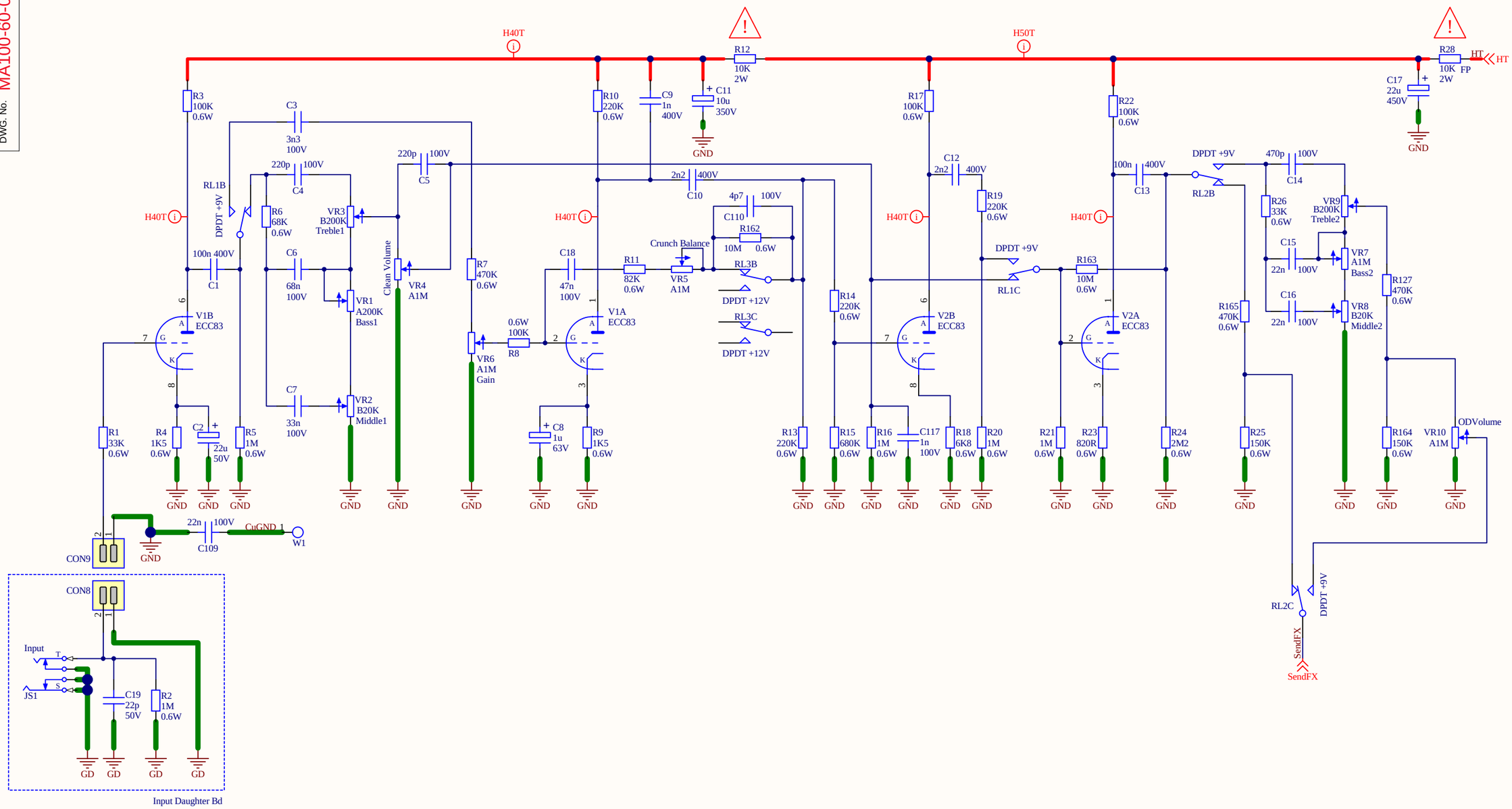
DWG. No. MA100-60-02



Input Daughter Bd

ISS	ECO NUMBER	DATE
3	MODS FOR PCB ISS 2	09-11-09
2	MODS	13-10-09
1	RELEASE	07-09-09
E1	MODS	16-06-09

SAFETY CRITICAL COMPONENTS

COMPONENTS MUST BE REPLACED WITH THE SAME TYPE AND RATING ONLY.

MATERIAL		DIMENSIONS IN mm	
MATERIAL THICKNESS		TOLERANCE (UNLESS OTHERWISE STATED) HOLE DIA = +/- DIMENSIONAL = +/-	
DRAWN S.B.	DATE 18-01-08	MODEL	MA100 MA50
CHECKED S.R.D.	DATE		
APPROVED	DATE		

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File: J:\MD48\100W Iss3-2\MA100-60-02-3-1.SchDoc

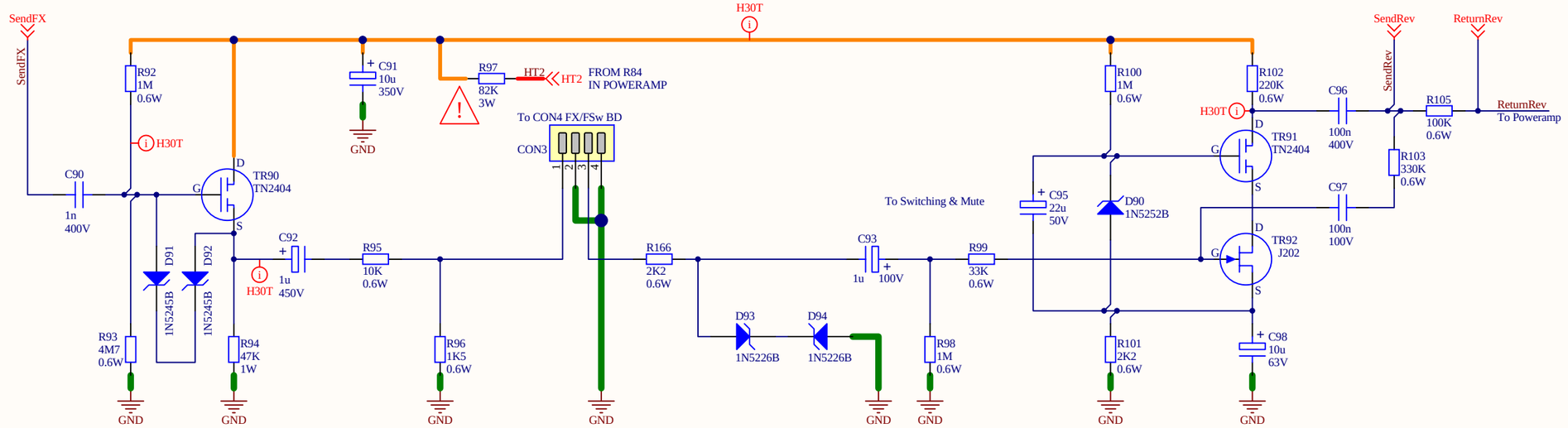
Date: 25/01/2010

TITLE: MAIN PCB PREAMP

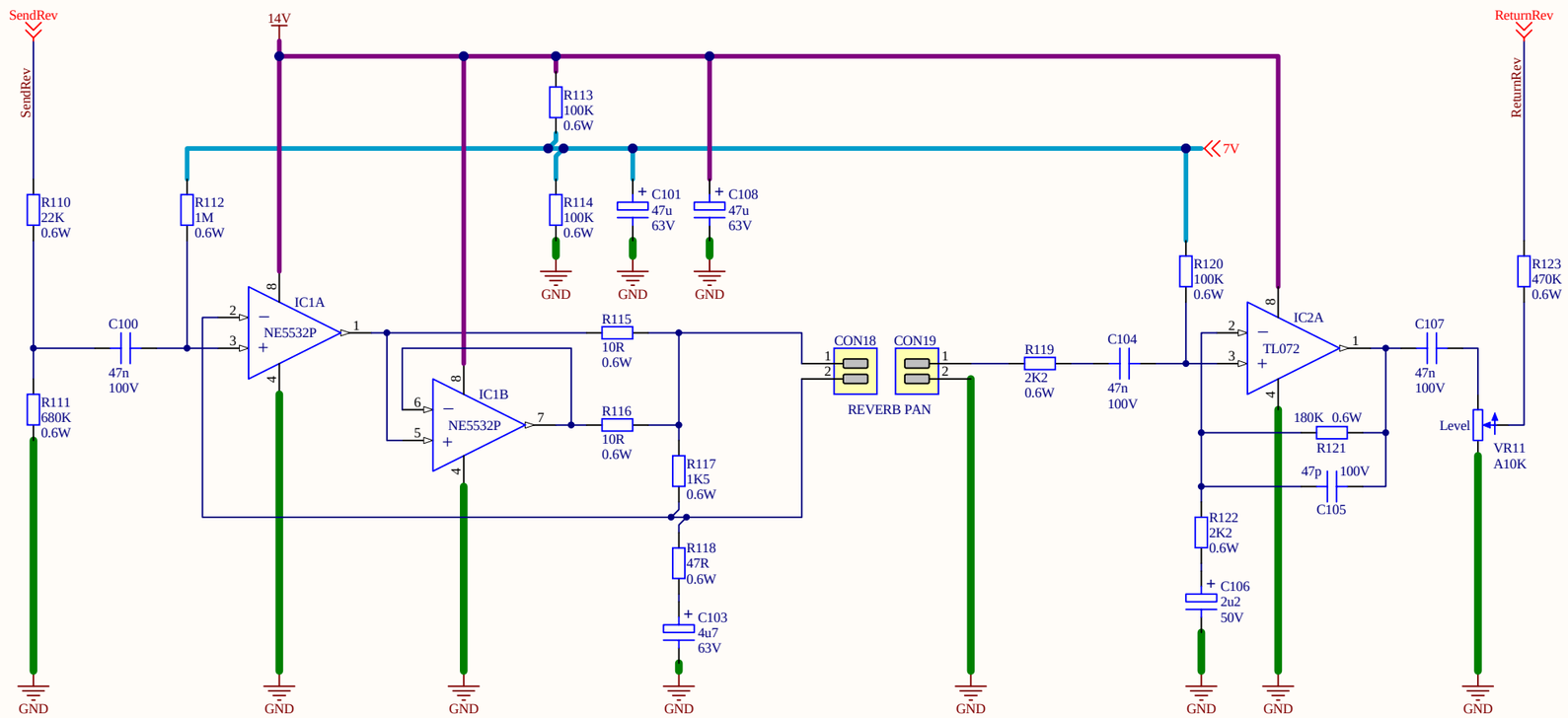
DWG. No.	ISS	Sheet
MA100-60-02	3	1 of 5

MA100-60-02

FX LOOP



REVERB



ISS	ECO NUMBER	DATE
3	MODS FOR PCB ISS 2	09-11-09
2	MODS	13-10-09
1	RELEASE	07-09-09
E1	MODS	16-06-09

SAFETY CRITICAL COMPONENTS
COMPONENTS MUST BE REPLACED WITH THE SAME TYPE AND RATING ONLY.

MATERIAL		DIMENSIONS IN mm	
MATERIAL THICKNESS		TOLERANCE (UNLESS OTHERWISE STATED) HOLE DIA = +/- DIMENSIONAL = +/-	
DRAWN S.B.	DATE 23-01-08	MODEL	MA100 MA50
CHECKED S.R.D.	DATE		
APPROVED	DATE		

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TITLE: MAIN PCB
FX LOOP & REVERB

DWG. No. MA100-60-02 | ISS 3 | Sheet 2 of 5

File: J:\MD48\100W Iss3-2\MA100-60-02-3-2.SchDoc
Date: 25/01/2010

MA100-60-02

MAINS TRANSFORMERS

	100W HEAD	100W COMBO	50W HEAD	50W COMBO
230V	TXMA-91016	TXMA-91017	TXMA-91018	TXMA-91019
120V	TXMA-91020	TXMA-91021	TXMA-91022	TXMA-91023
100V	TXMA-91024	TXMA-91025	TXMA-91026	TXMA-91027
130V	TXMA-91028	TXMA-91029	TXMA-91030	TXMA-91031

ARCOLECTRIC C1350VQAAK V0

STANDBY SWITCH

ON PCB

WHITE W70

WHITE W69

W62

RED

SEC 1

RED W66

ORANGE HEATERS1

SEC 2

ORANGE HEATERS2

PURPLE W67

SEC 3

BLACK W68

YELLOW W60

SEC 4

YELLOW W61

Chassis

ARCOLECTRIC C1350VQAAK V0

SUPERCOM SC-8F-23C

POWER SWITCH

L E N

FUSE

BLUE

234V

BROWN

MAINS FUSES

	100W	50W
230V	T2AE250V	T1AE250V
120V	T4AE250V	T2AE250V
100V	T4AE250V	T2AE250V
130V	T4AE250V	T2AE250V

HT HT

H50T

R60 82K 0.6W

R61 100K 0.6W

C62 47n 400V

C66 47u 450V

GND

R71 22K 2W FP

H60T

HT2

TO R97 IN FX LOOP HT2

R84 470R 7W

W69 SBY

W70 SBY

T630mAE250V - 100W

T500mAE250V - 50W

FS1

C116 100n 630V

H40T

W-V3A2

W-V3A1

C61 47n 400V

V3B ECC83

47p 500V C60

V3A ECC83

W-V3G2

W-V3K

W-V3G1

ReturnRev

C77 22n 400V

R63 1M 0.6W

R64 1M 0.6W

R62 470R 0.6W

R65 10K 0.6W

C63 100n 100V

R78* 1K 5W

W-R78

V4A* EL34

R72* 5K6

R79 1K 5W

V5A EL34

R73 5K6

W-V4KV5K

R74 1R FP 2W

W-R72R73

Bias Test Point

CON7

R75 1R 2W FP

R76 5K6

W-V6KV7K

V6A EL34

R80 1K 5W

R81* 1K 5W

V7A* EL34

R77* 5K6

W-R76R77

LINK FOR 100W ONLY

D60 1N4007P

C118 1n 1000V

D61 1N4007P

C119 1n 1000V

W65

D62 1N4007P

C120 1n 1000V

D63 1N4007P

C121 1n 1000V

SEC 1

W66

To V5-A

To V6-A

PIN D

To Output BD Pin B

To Output BD Pin F

To Output BD Pin A

OUTPUT TRANSFORMERS

100W	50W
TXOP-90001	TXOP-90002

C68 550V 100u

C69 100u 550V

HOLE1 W2

* = NOT FITTED IN 50W UNIT

Heaters1

R171 100R 1W

V4B* V5B V7B* V6B

V3C ECC83

SEC 2

EL34

Heaters2

R170 100R 1W

CHASSIS GROUND

VR12 B10K Resonance

R68 220K 0.6W

R69 220K 0.6W

7V

C64 10u 100V

100K 0.6W R90

14V

IC2B TL072

C78 10u 100V

R66 220R 0.6W

C65 10u 100V

R67 330R 0.6W

R70 4K7 0.6W

C67 680n 100V

VR13 Presence B5K

To CON2 Output BD

CON1

R86 100K 0.6W

FOR VALVE ILLUMINATION

LAMP LAMP

CHASSIS

CON6

W60

FS2 T630mAE250V - 100W & 50W

Heaters1

R87 10R 0.6W

R88 FP 10R 2W

R89 10R 0.6W

15V

14V

SEC 4

W61

Heaters2

C111 470n 63V

D65 1N4007P

D66 1N4007P

C112 470n 63V

C113 470n 63V

D67 1N4007P

D68 1N4007P

C114 470n 63V

C73 2200u 25V

C74 1000u 25V

V1C ECC83

V2C ECC83

C75 2200u 25V

C76 2200u 25V

Bias2

47K 0.6W R124

Bias1

47K 0.6W R83

D64 1N4007P

R85 15K 0.6W

W67

SEC 3

W68

R125 47K 0.6W

C79 10u 100V

TRIM1 SetBias1 47K

R82 47K 0.6W

C70 10u 100V

TRIM2 SetBias2 47K

C71 22u 160V

ISS	ECO NUMBER	DATE
3	MODS FOR PCB ISS 2	09-11-09
2	MODS	13-10-09
1	RELEASE	07-09-09
E1	MODS	16-06-09

SAFETY CRITICAL COMPONENTS

COMPONENTS MUST BE REPLACED WITH THE SAME TYPE AND RATING ONLY.

MATERIAL		DIMENSIONS IN mm	
MATERIAL THICKNESS		TOLERANCE (UNLESS OTHERWISE STATED) HOLE DIA = +/- DIMENSIONAL = +/-	
DRAWN	S.B.	DATE	22-01-08
CHECKED	S.R.D.	DATE	
APPROVED		DATE	

MODEL MA100 MA50

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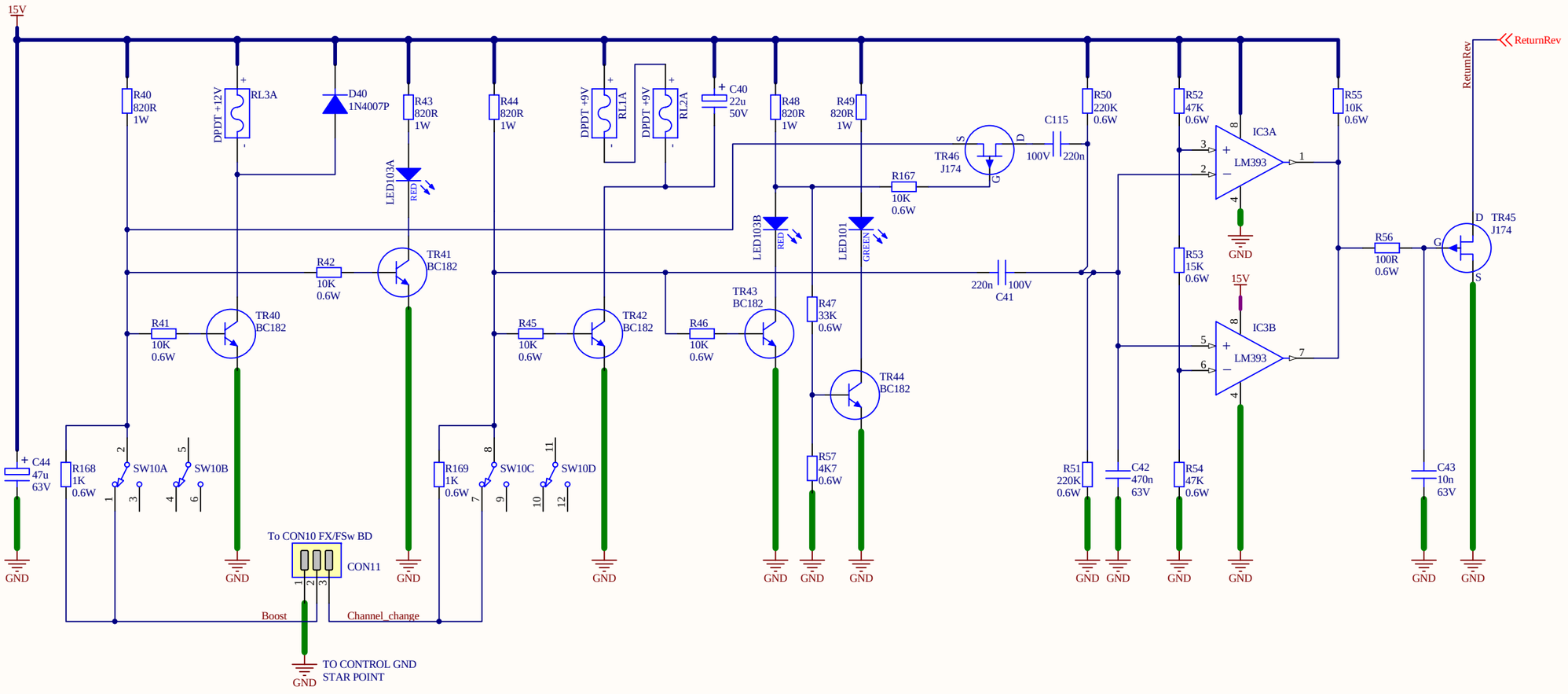
TITLE: MAIN PCB POWERAMP & PSU

DWG. No. MA100-60-02 | ISS 3 | Sheet 3 of 5

File: J:\MD48\100W Iss3-2\MA100-60-02-3-3.SchDoc Date: 25/01/2010

MA100-60-02



3	MODS FOR PCB ISS 2	09-11-09
2	MODS	13-10-09
1	RELEASE	07-09-09
E1	MODS	16-06-09
ISS	ECO NUMBER	DATE

MATERIAL		DIMENSIONS IN mm
MATERIAL THICKNESS		TOLERANCE (UNLESS OTHERWISE STATED) HOLE DIA = +/- DIMENSIONAL = +/-
DRAWN S.B.	DATE 22-01-08	
CHECKED S.R.D.	DATE	MODEL MA100 MA50
APPROVED	DATE	

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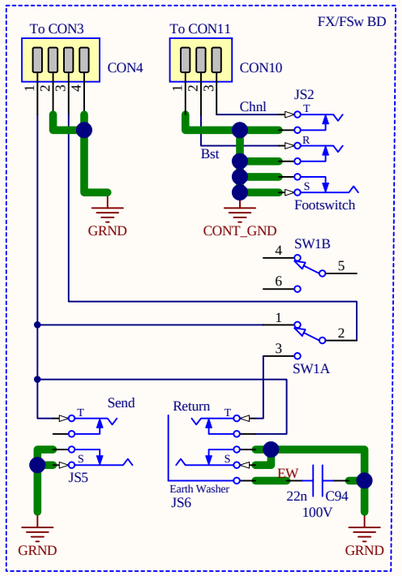
File: J:\MD48\100W Iss3-2\MA100-60-02-3-4.SchDoc

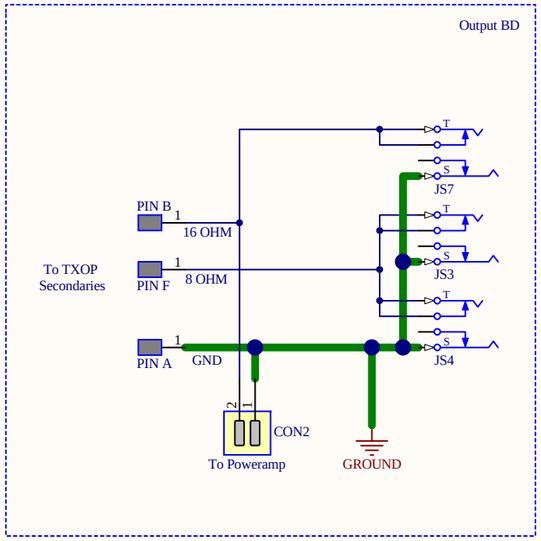
Date: 25/01/2010

TITLE
MAIN PCB SWITCHING & MUTE

DWG. No.	ISS	Sheet
MA100-60-02	3	4 of 5

MA100-60-02





ISS	ECO NUMBER	DATE
3	MODS FOR PCB ISS 2	09-11-09
2	MODS	13-10-09
1	RELEASE	07-09-09
E1	MODS	16-06-09

SAFETY CRITICAL COMPONENTS
COMPONENTS MUST BE REPLACED WITH
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MATERIAL THICKNESS		TOLERANCE (UNLESS OTHERWISE STATED) HOLE DIA = +/- DIMENSIONAL = +/-	
DRAWN S.B.	DATE 22-01-08		
CHECKED S.R.D.	DATE	MODEL MA100 MA50	
APPROVED	DATE		

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File: J:\MD48\100W Iss3-2\MA100-60-02-3-5.SchDoc
Date: 25/01/2010

TITLE
MAIN PCB
DAUGHTER BOARDS

DWG. No.	ISS	Sheet
MA100-60-02	3	5 of 5