



# ***SERVICE MANUAL***

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## ***SB110/SB112/SB115***

**TYPE: YS1109**

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**Quality and Innovation Since 1963**  
Printed in Canada

# IMPORTANT SAFETY INSTRUCTIONS



This lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

Ce symbole d'éclair avec tête de flèche dans un triangle équilatéral est prévu pour alerter l'utilisateur de la présence d'un « voltage dangereux » non-isolé à proximité de l'enceinte du produit qui pourrait être d'amplitude suffisante pour présenter un risque de choc électrique.



## CAUTION AVIS

RISK OF ELECTRIC SHOCK  
DO NOT OPEN

RISQUE DE CHOC ELECTRIQUE  
NE PAS OUVRIR



Caution: hot surface  
Attention: surface chaud

IEC 60417-5041



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



Le point d'exclamation à l'intérieur d'un triangle équilatéral est prévu pour alerter l'utilisateur de la présence d'instructions importantes dans la littérature accompagnant l'appareil en ce qui concerne l'opération et la maintenance de cet appareil.

## FOLLOW ALL INSTRUCTIONS

Instructions pertaining to a risk of fire, electric shock, or injury to a person

**CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK).**

**NO USER SERVICEABLE PARTS INSIDE.**

**REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**

**THIS DEVICE IS FOR INDOOR USE ONLY!**

**Read Instructions:** The Owner's Manual should be read and understood before operation of your unit. Please, save these instructions for future reference and heed all warnings.

Clean only with dry cloth.

**Packaging:** Keep the box and packaging materials, in case the unit needs to be returned for service.

**Warning:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. *Do not use this apparatus near water!*

**Warning:** When using electric products, basic precautions should always be followed, including the following:

### Power Sources

Your unit should be connected to a power source only of the voltage specified in the owners manual or as marked on the unit. This unit has a polarized plug. Do not use with an extension cord or receptacle unless the plug can be fully inserted. Precautions should be taken so that the grounding scheme on the unit is not defeated. An apparatus with CLASS I construction shall be connected to a Mains socket outlet with a protective earthing ground. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect shall remain readily operable.

### Hazards

Do not place this product on an unstable cart, stand, tripod, bracket or table. The product may fall, causing serious personal injury and serious damage to the product. Use only with cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the product. Follow the manufacturer's instructions when installing the product and use mounting accessories recommended by the manufacturer. Only use attachments/accessories specified by the manufacturer

Note: Prolonged use of headphones at a high volume may cause health damage on your ears.

The apparatus should not be exposed to dripping or splashing water; no objects filled with liquids should be placed on the apparatus.

Terminals marked with the "lightning bolt" are hazardous live; the external wiring connected to these terminals require installation by an instructed person or the use of ready made leads or cords.

Ensure that proper ventilation is provided around the appliance. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

No naked flame sources, such as lighted candles, should be placed on the apparatus.

### Power Cord

Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet. The AC supply cord should be routed so that it is unlikely that it will be damaged. Protect the power cord from being walked on or pinched particularly at plugs. If the AC supply cord is damaged DO NOT OPERATE THE UNIT. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from the AC receptacle. The mains plug of the power supply cord shall remain readily operable.

Unplug this apparatus during lightning storms or when unused for long periods of time.

### Service

The unit should be serviced only by qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

## SUIVEZ TOUTES LES INSTRUCTIONS

Instructions relatives au risque de feu, choc électrique, ou blessures aux personnes

**AVIS: AFIN DE REDUIRE LES RISQUE DE CHOC ELECTRIQUE, N'ENLEVEZ PAS LE COUVERT (OU LE PANNEAU ARRIERE)**

**NE CONTIENT AUCUNE PIECE REPARABLE PAR L'UTILISATEUR.**

**CONSULTEZ UN TECHNICIEN QUALIFIE POUR L'ENTRETIEN**

**CE PRODUIT EST POUR L'USAGE À L'INTÉRIEUR SEULEMENT**

**Veuillez Lire le Manuel:** Il contient des informations qui devraient être comprises avant l'opération de votre appareil. Conservez. Gardez S.V.P. ces instructions pour consultations ultérieures et observez tous les avertissements.

Nettoyez seulement avec le tissu sec.

**Emballage:** Conservez la boîte au cas où l'appareil devait être retourné pour réparation.

**Avertissement:** Pour réduire le risque de feu ou la décharge électrique, n'exposez pas cet appareil à la pluie ou à l'humidité. *N'utilisez pas cet appareil près de l'eau!*

**Attention:** Lors de l'utilisation de produits électriques, assurez-vous d'adhérer à des précautions de bases incluant celle qui suivent:

### Alimentation

L'appareil ne doit être branché qu'à une source d'alimentation correspondant au voltage spécifié dans le manuel ou tel qu'indiqué sur l'appareil. Cet appareil est équipé d'une prise d'alimentation polarisée. Ne pas utiliser cet appareil avec un cordon de raccordement à moins qu'il soit possible d'insérer complètement les trois lames. Des précautions doivent être prises afin d'éviter que le système de mise à la terre de l'appareil ne soit désengagé. Un appareil construit selon les normes de CLASS I devrait être raccordé à une prise murale d'alimentation avec connexion intacte de mise à la masse. Lorsqu'une prise de branchement ou un coupleur d'appareils est utilisée comme dispositif de débranchement, ce dispositif de débranchement devra demeurer pleinement fonctionnel avec raccordement à la masse.

### Risque

Ne pas placer cet appareil sur un chariot, un support, un trépied ou une table instables. L'appareil pourrait tomber et blesser quelqu'un ou subir des dommages importants. Utiliser seulement un chariot, un support, un trépied ou une table recommandés par le fabricant ou vendus avec le produit. Suivre les instructions du fabricant pour installer l'appareil et utiliser les accessoires recommandés par le fabricant. Utilisez seulement les attaches/accessoires indiqués par le fabricant

Note: L'utilisation prolongée des écouteurs à un volume élevé peut avoir des conséquences néfastes sur la santé sur vos oreilles. .

Il convient de ne pas placer sur l'appareil de sources de flammes nues, telles que des bougies allumées.

L'appareil ne doit pas être exposé à des égouttements d'eau ou des éclaboussures et qu'aucun objet rempli de liquide tel que des vases ne doit être placé sur l'appareil.

Assurez que l'appareil est fourni de la propre ventilation. Ne procédez pas à l'installation près de source de chaleur tels que radiateurs, registre de chaleur, fours ou autres appareils (incluant les amplificateurs) qui produisent de la chaleur.

Les dispositifs marqués d'une symbole "d'éclair" sont des parties dangereuses au toucher et que les câblages extérieurs connectés à ces dispositifs de connection extérieure doivent être effectués par un opérateur formé ou en utilisant des cordons déjà préparés.

### Cordon d'Alimentation

Ne pas enlever le dispositif de sécurité sur la prise polarisée ou la prise avec tige de mise à la masse du cordon d'alimentation. Une prise polarisée dispose de deux lames dont une plus large que l'autre. Une prise avec tige de mise à la masse dispose de deux lames en plus d'une troisième tige qui connecte à la masse. La lame plus large ou la tige de mise à la masse est prévu pour votre sécurité. La prise murale est désuete si elle n'est pas conçue pour accepter ce type de prise avec dispositif de sécurité. Dans ce cas, contactez un électricien pour faire remplacer la prise murale. Évitez d'endommager le cordon d'alimentation. Protégez le cordon d'alimentation. Assurez-vous qu'on ne marche pas dessus et qu'on ne le pince pas en particulier aux prises. **N'UTILISEZ PAS L'APPAREIL** si le cordon d'alimentation est endommagé. Pour débrancher complètement cet appareil de l'alimentation CA principale, déconnectez le cordon d'alimentation de la prise d'alimentation murale. Le cordon d'alimentation du bloc d'alimentation de l'appareil doit demeurer pleinement fonctionnel.

Débranchez cet appareil durant les orages ou si inutilisé pendant de longues périodes.

### Service

Consultez un technicien qualifié pour l'entretien de votre appareil. L'entretien est nécessaire quand l'appareil a été endommagé de quelque façon que se soit. Par exemple si le cordon d'alimentation ou la prise du cordon sont endommagés, si il y a eu du liquide qui a été renversé à l'intérieur ou des objets sont tombés dans l'appareil, si l'appareil a été exposé à la pluie ou à l'humidité, si il ne fonctionne pas normalement, ou a été échappé.

**SB110 Parts Parts List 3/31/2014**

<b>YS #</b>	<b>Description</b>	<b>Qty.</b>	<b>YS #</b>	<b>Description</b>	<b>Qty.</b>	<b>YS #</b>	<b>Description</b>	<b>Qty.</b>
6405	RED 3MM LED 2V1 20MA DIFFUSD	1	8895	CAGE NUT 10-32 X 5/32 THK CLEAR ZNC	8			
6554	BLUE 3MM LED 3V9 20MA	1	4748	2W00 3R9 5% T&R RES	1			
6825	1N4148 75V 0A45 DIODE T&R	6	2009	W250 10R 2%FLAME PROOF T&R RES	1			
6440	1N750ARL 4V7 0W5 ZENER 5% T&R	2	4817	W250 47R 5% T&R RES	1			
6461	1N5240BRL 10V0 0W5 ZENER 5% T&R	1	4852	W250 100R 5% T&R RES	2			
6463	1N5251BRL 22V0 0W5 ZENER 5% T&R	1	4867	W250 270R 5% T&R RES	4			
6871	MC7915CT TO220 N 15V REG V2	1	4621	W500 470R 5% T&R RES	6			
6872	MC7815CT TO220 P 15V REG V1	1	4821	W250 470R 5% T&R RES	1			
5113	MPSA42 TO92 NPN TRAN T&R TA	1	2030	W600 681R 1%FLAME PROOF T&R RES	3			
5105	MPSA13 TO92 NPN DARL T&R TA	1	6110	W250 1K0 1%MINI MF T&R RES	10			
5122	J109 TO92 NCH JFET T&R TC	1	4854	W250 1K2 5% T&R RES	1			
6804	MC33079P IC QUAD OP AMP	4	4808	W250 2K 5% T&R RES	4			
6840	MC33078P IC DUAL OP AMP	1	4919	W250 2K05 1% T&R RES	1			
6882	TL072CP IC FET DUAL OP AMP	1	4847	W250 2K2 5% T&R RES	3			
6858	NSL-32SR2 OPTO-COUPLER LDR	1	4883	W250 2K49 1% T&R RES	3			
6621	.47K 3% THERMISTOR VISH NTC	1	4804	W250 3K 5% T&R RES	1			
5406	.33P 50V 10%CAP BLK BEAD NPO	2	4826	W250 3K3 5% T&R RES	2			
5410	100P 100V 10%CAP T&R BEAD NPO	6	4850	W250 3K9 5% T&R RES	1			
5417	330P 50V 10%CAP T&R BEAD NPO	1	4827	W250 4K7 5% T&R RES	3			
5816	680P 100V .5%CAP T&R RAD CER.2NPO	2	4639	W250 4K99 1% T&R RES	3			
5209	.4NT 250V 5%CAP T&R RAD .2FLM	1	4828	W250 6K8 5% T&R RES	2			
5204	.10N 100V 10%CAP T&R RAD .2FLM	3	4801	W250 6K98 1% T&R RES	3			
5301	.12N 50V 10%CAP T&R BEAD X7R	1	4800	W250 10K0 1% T&R RES	12			
5207	.18N 100V .5%CAP T&R RAD .2FLM	1	4830	W250 15K 5% T&R RES	1			
5210	.22N 100V 10%CAP T&R RAD .2FLM	1	6123	W250 20K0 1%MINI MF T&R RES	3			
5222	.33N 100V 10%CAP T&R RAD .2FLM	4	4832	W250 22K 5% T&R RES	1			
5224	.47N 100V 10%CAP T&R RAD .2FLM	1	4833	W250 27K 5% T&R RES	1			
5226	.68N 100V .5%CAP T&R RAD .2FLM	1	4890	W250 30K 5% T&R RES	2			
5212	100N 63V 5%CAP T&R RAD .2FLM	12	4834	W250 47K 5% T&R RES	3			
5230	180N 63V .5%CAP T&R RAD .2FLM	2	4838	W250 100K 5% T&R RES	3			
5231	220N 63V 5%CAP T&R RAD .2FLM	1	4886	W250 200K 5% T&R RES	2			
5233	330N 63V .5%CAP T&R RAD .2FLM	1	4844	W250 1M 5% T&R RES	2			
5234	470N 63V 10%CAP T&R RAD .2FLM	1	4888	W250 4M7 5% T&R RES	1			
5256	.1U 63V .5%CAP T&R RAD .2FLM	3	8729	#4 X 3/8 FLAT QUAD TYPE A JS500 BLK	2			
5257	.2U2 63V 20%CAP T&R RAD .2EL	1	8753	#10 X 1/2 PAN QUAD TY A JS500 BLACK	20			
5942	.3U3 100DC10%CAP BLK RAD POLYE FLIM	1	8756	#10 X 3/4 PAN PH TYPE A BLACK OXIDE	4			
5282	.10U 16V 20%CAP T&R 5X7MM .2NP	4	8727	#10 X 1" PAN PH TYPE A JS500 BLACK	4			
5945	.10U 63V 20%CAP T&R RAD .2EL	1	9001	4-40 X 5/16 PAN PH MS ZN C/W STARWA	4			
5631	.22U 50V 20%CAP T&R 6X7MM .2EL	2	8742	4-40 X 3/8 PAN PH TAPITIE JS500	2			
5267	100U 25V 20%CAP T&R RAD .2EL	2	8861	4-40 X 3/8 PAN PH MS JS500	2			
4499	.5K 10C 9.5MM HORIZONTAL P41	1	2367	4-40 X 5/8" PEM BLIND SPACER 0.213	4			
4493	.10K 5B LIN 9.5MM HORIZONTAL P41	1	8801	6-32 X 3/8 PAN PH TAPITIE JS500	3			
4494	.50K 1B LIN 9.5MM HORIZONTAL P41	4	8830	6-32 X 7/8 PAN PH MS JS500	4			
8426	3 X 6 ROLLED EDGE PORT TUBE	1	8912	10-32 X 1 FLAT PHIL MS JS500 BLK	2			
8522	RUBBER BUMPER WITH WASHER -SMALL-	4	8786	10-32 X 1 1/4 PAN QD MS JS500 BLACK	8			
8570	CORNER,2 LEGS NOTCHED BLACK POWDER C	8	9003	10-32 X 1 1/2 PAN QD MS JS500 BLACK	4			
3462	CLIP 110X032 18-22AWG DISCO/INSL	1	3858	3/4 PLASTIC HEX SPACER #4	2			
3463	CLIP 110X020 18-22AWG DISCO/INSL	2	7554	10" 4R ??WPGM SPEAKER	1			
3478	CLIP 205/187X032 18-22AWG DISCO/INS	2	8473	#10 BLACK CUPWASHER SWF-10BK	8			
3489	CLIP 250X032 18-22AWG DISCO/INSL	3	3436	DPDT PUSH SW PCMT H BREAK B4 MAKE	1			
3491	CLIP 205/187X020 18-22AWG DISCO/INS	3	3698	SPST ROKR SW QUIK 180° AC PWR BL/BL	1			
3601	RING TERMINAL 16AWG WIRE & #8 SCREW	2						
9925	TINNERMAN CLIP 1/8" STUD SIZE ROUND	3						
3918	1/4" JCK PCB MT HORZ SLIM W/SCREW	4						
3923	XLR MALE PCB MT HORZ MTHOLE-V SNAP	1						
2369	3 CIR PH-HEADER 2MM	1						
2370	7 CIR PH-HEADER 2MM	1						
3095	PATCH 02 18AWG 09.0 PH TWISTED	1						
3096	PATCH 02 18AWG 10.0 PH ONE END	1						
3091	PATCH 03 22AWG 06.0 PH FLAT	1						
3092	PATCH 07 22AWG 06.0 PH FLAT	1						
2371	2 CIR WS-HEADER 0.156	1						
4056	2 CIR XH-HEADER 0.098IN	2						
3084	PATCH 02 22AWG 04.0 XH FLAT	1						
4173	FAN 40MM X 10MM 4.5CFM 12VDC 5MA	1						
8451	10.0" STRAP HANDLE,BLACK METAL ENDC	1						
7552	.8R 30W TWEETER PIEZO S	1						
3645	RECEPTACLE:INLET	1						
3803	NYLON SECUR-A-TACH MINI PLASTIC TIE	1						
3810	4" NYLON CABLE TIE	1						
3558	TERM HOUSING 4 CIR .156/RAMP	1						
3596	36PIN BREAKAWAY .15GOLD .100	0.056						
3538	24 PIN BREAKAWAY LOCK .156	0.166						
3549	TRIFURCON TERM .156	3						
9704	ICEPOWER 50ASX2(BTL) INT:AMP MODULE	1						
8649	BUTTON KNOB FLAT BLACK	1						
10030	SB200H KNB BLK WHT POINTER K SHAFT	6						
3428	8' 3/18 SJT AC LINE CORD REMOVABLE	1						
8800	6-32 KEPS NUT ZINC	5						
8604	10-32 T NUT	6						



**SB112 Parts Parts List 3/31/2014**

<b>YS #</b>	<b>Description</b>	<b>Qty.</b>	<b>YS #</b>	<b>Description</b>	<b>Qty.</b>	<b>YS #</b>	<b>Description</b>	<b>Qty.</b>
6405	RED 3MM LED 2V1 20MA DIFFUSD	1	8604	10-32 T NUT	6			
6554	BLUE 3MM LED 3V9 20MA	1	8895	CAGE NUT 10-32 X 5/32 THK CLEAR ZNC	8			
6825	1N4148 75V 0A45 DIODE T&R	6	4750	W500 10R 5% BLK RES	1			
6440	1N750ARL 4V7 0W5 ZENER 5% T&R	2	4817	W250 47R 5% T&R RES	1			
6461	1N5240BRL 10V0 0W5 ZENER 5% T&R	1	4852	W250 100R 5% T&R RES	2			
6463	1N5251BRL 22V0 0W5 ZENER 5% T&R	1	4867	W250 270R 5% T&R RES	4			
6871	MC7915CT TO220 N 15V0 REG V2	1	4621	W500 470R 5% T&R RES	6			
6872	MC7815CT TO220 P 15V0 REG V1	1	4821	W250 470R 5% T&R RES	1			
5113	MPSA42 TO92 NPN TRAN T&R TA	1	2030	W600 681R 1%FLAME PROOF T&R RES	3			
5105	MPSA13 TO92 NPN DARL T&R TA	1	6110	W250 1K0 1%MINI MF T&R RES	10			
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6840	MC33078P IC DUAL OP AMP	1	4919	W250 2K05 1% T&R RES	1			
6882	TL072CP IC FET DUAL OP AMP	1	4847	W250 2K2 5% T&R RES	3			
6858	NSL-32SR2 OPTO-COUPLER LDR	1	4883	W250 2K49 1% T&R RES	4			
6621	.47K 3% THERMISTOR VISH NTC	1	4804	W250 3K 5% T&R RES	1			
5406	.33P 50V 10%CAP BLK BEAD NPO	2	4826	W250 3K3 5% T&R RES	2			
5410	100P 100V 10%CAP T&R BEAD NPO	6	4827	W250 4K7 5% T&R RES	3			
5417	330P 50V 10%CAP T&R BEAD NPO	1	4639	W250 4K99 1% T&R RES	3			
5816	680P 100V 5%CAP T&R RAD CER.2NPO	2	4828	W250 6K8 5% T&R RES	2			
5209	.4NT 250V 5%CAP T&R RAD .2FLM	1	4801	W250 6K98 1% T&R RES	3			
5204	.10N 100V 10%CAP T&R RAD .2FLM	3	4800	W250 10K0 1% T&R RES	12			
5301	.12N 50V 10%CAP T&R BEAD X7R	1	4830	W250 15K 5% T&R RES	1			
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5224	.47N 100V 10%CAP T&R RAD .2FLM	1	4890	W250 30K 5% T&R RES	2			
5226	.68N 100V 5%CAP T&R RAD .2FLM	1	4834	W250 47K 5% T&R RES	3			
5212	100N 63V 5%CAP T&R RAD .2FLM	12	4838	W250 100K 5% T&R RES	3			
5231	220N 63V 5%CAP T&R RAD .2FLM	3	4886	W250 200K 5% T&R RES	2			
5233	330N 63V 5%CAP T&R RAD .2FLM	1	4844	W250 1M 5% T&R RES	2			
5234	470N 63V 10%CAP T&R RAD .2FLM	1	4888	W250 4M7 5% T&R RES	1			
5256	.1U 63V 5%CAP T&R RAD .2FLM	3	8729	#4 X 3/8 FLAT QUAD TYPE A JS500 BLK	2			
5257	.2U2 63V 20%CAP T&R RAD .2EL	1	8753	#10 X 1/2 PAN QUAD TY A JS500 BLACK	20			
5942	.3U3 100DC10%CAP BLK RAD POLYE FLM	1	8756	#10 X 3/4 PAN PH TYPE A BLACK OXIDE	4			
5282	.10U 16V 20%CAP T&R 5X7MM .2NP	4	8727	#10 X 1" PAN PH TYPE A JS500 BLACK	4			
5945	.10U 63V 20%CAP T&R RAD .2EL	1	9001	4-40 X 5/16 PAN PH MS ZN C/W STARWA	4			
5631	.22U 50V 20%CAP T&R 6X7MM .2EL	2	8742	4-40 X 3/8 PAN PH TAPTITE JS500	2			
5267	.100U 25V 20%CAP T&R RAD .2EL	2	8861	4-40 X 3/8 PAN PH MS JS500	2			
4499	.5K 10C 9.5MM HORIZONTAL P41	1	2367	14-40 X 5/8" PEM BLIND SPACER 0.213	4			
4493	.10K 5B LIN 9.5MM HORIZONTAL P41	1	8801	6-32 X 3/8 PAN PH TAPTITE JS500	3			
4494	.50K 1B LIN 9.5MM HORIZONTAL P41	4	8830	6-32 X 7/8 PAN PH MS JS500	4			
711	35"X50" 1.03MIL CLEAR PLASTIC BAG	1	8912	10-32 X 1 FLAT PHIL MS JS500 BLK	2			
8522	RUBBER BUMPER WITH WASHER-SMALL-	4	8786	10-32 X 1 1/4 PAN QD MS JS500 BLACK	8			
8570	CORNER,2 LEGS NOTCED BLACK POWDER C	8	9003	10-32 X 1 1/2 PAN QD MS JS500 BLACK	4			
3462	CLIP 110X032 18-22AWG DISCO/INSL	1	3858	3/4 PLASTIC HEX SPACER #	2			
3463	CLIP 110X020 18-22AWG DISCO/INSL	2	7555	12" 4R 200WPGM SPEAKER	1			
3478	CLIP 205/187X032 18-22AWG DISCO/INS	2	8473	#10 BLACK CUPWASHER SWF-10BK	8			
3489	CLIP 250X032 18-22AWG DISCO/INSL	3	3425	DPDT PUSH SW PCMT BREAK B4 MAKE	1			
3491	CLIP 205/187X020 18-22AWG DISCO/INS	3	3436	DPDT PUSH SW PCMT H BREAK B4 MAKE	1			
3601	RING TERMINAL 16AWG WIRE & #8 SCREW	2	3698	SPST ROKR SW QUIK 180" AC PWR BL/BL	1			
9925	TINNEARMAN CLIP 1/8" STUD SIZE ROUND	3						
3918	1/4" JCK PCB MT HORZ SLIM W/SCREW	4						
3923	XLR MALE PCB MT HORZ MTHOLE-V SNAP	1						
2369	3 CIR PH-HEADER 2MM	1						
2370	7 CIR PH-HEADER 2MM	1						
3095	PATCH 02 18AWG 09.0 PH TWISTED	1						
3096	PATCH 02 18AWG 10.0 PH ONE END	1						
3091	PATCH 03 22AWG 06.0 PH FLAT	1						
3092	PATCH 07 22AWG 06.0 PH FLAT	1						
2371	2 CIR WS-HEADER 0.156	1						
4056	2 CIR XH-HEADER 0.098IN	2						
3084	PATCH 02 22AWG 04.0 XH FLAT	1						
4173	FAN 40MM X 10MM 4.5CFM 12VDC 5MA	1						
8451	10.0" STRAP HANDLE,BLACK METAL ENDC	1						
7552	.8R 30W TWEETER PIEZO S	1						
9897	SPEAKER COVER,BLACK POLYPRO, 54" W	13.88						
3645	RECEPTACLE:INLET	1						
3803	NYLON SECUR-A-TACH MINI PLASTIC TIE	1						
3810	4" NYLON CABLE TIE	1						
3558	TERM HOUSING 4 CIR .156/RAMP	1						
3596	36PIN BREAKAWAY .15GOLD .100	0.056						
3538	24 PIN BREAKAWAY LOCK .156	1						
3549	TRIFURCON TERM .156	3						
9704	ICEPOWER 50ASX2(BTL) INT.AMP MODULE	1						
8636	BUTTON 230X465 RND FLAT BLK (3425)	1						
8649	BUTTON KNOB FLAT BLACK	1						
10030	SB200H KNB BLK WHT POINTER K SHAFT	6						
3428	8' 3/18 SJT AC LINE CORD REMOVABLE	1						
8800	6-32 KEPS NUT ZINC	5						

**SB112 M1505 V3 Parts List 3/31/2014**

**SB115 Parts Parts List 3/31/2014**

<b>YS #</b>	<b>Description</b>	<b>Qty.</b>	<b>YS #</b>	<b>Description</b>	<b>Qty.</b>	<b>YS #</b>	<b>Description</b>	<b>Qty.</b>
6405	RED 3MM LED 2V1 20MA DIFFUSED	1	8604	10-32 T NUT	6			
6554	BLUE 3MM LED 3V9 20MA	1	8895	CAGE NUT 10-32 X 5/32 THK CLEAR ZNC	8			
6825	1N4148 75V 0A45 DIODE T&R	6	4750	5W00 10R 5% BLK RES	1			
6440	1N750ARL 4V7 0W5 ZENER 5% T&R	2	4817	W250 47R 5% T&R RES	1			
6461	1N5240BRL 10V0 0W5 ZENER 5% T&R	1	4852	W250 100R 5% T&R RES	2			
6463	1N5251BRL 22V0 0W5 ZENER 5% T&R	1	4867	W250 270R 5% T&R RES	3			
6871	MC7915CT TO220 N 15V0 REG V2	1	4621	W500 470R 5% T&R RES	7			
6872	MC7815CT TO220 P 15V0 REG V1	1	4821	W250 470R 5% T&R RES	2			
5113	MPSA42 TO92 NPN TRAN T&R TA	1	2030	W600 681R 1%FLAME PROOF T&R RES	3			
5105	MPSA13 TO92 NPN DARL T&R TA	1	6110	W250 1K0 1%MINI MF T&R RES	10			
5122	J109 TO92 NCH JFET T&R TC	1	4854	W250 1K2 5% T&R RES	1			
6804	MC33079P IC QUAD OP AMP	4	4808	W250 2K 5% T&R RES	5			
6840	MC33078P IC DUAL OP AMP	2	4847	W250 2K2 5% T&R RES	3			
6882	TL072CP IC FET DUAL OP AMP	1	4883	W250 2K49 1% T&R RES	5			
6858	NSL-32SR2 OPTO-COUPLER LDR	1	4804	W250 3K 5% T&R RES	1			
6621	.47K 3% THERMISTOR VISH NTC	1	4826	W250 3K3 5% T&R RES	2			
5406	.33P 50V 10%CAP BLK BEAD NPO	2	4827	W250 4K7 5% T&R RES	3			
5410	100P 100V 10%CAP T&R BEAD NPO	6	4639	W250 4K99 1% T&R RES	5			
5417	330P 50V 10%CAP T&R BEAD NPO	1	4828	W250 6K8 5% T&R RES	2			
5816	680P 100V 5%CAP T&R RAD CER.2NPO	2	4801	W250 6K98 1% T&R RES	3			
5209	.4N7 250V 5%CAP T&R RAD .2FLM	1	4800	W250 10K0 1% T&R RES	12			
5204	.10N 100V 10%CAP T&R RAD .2FLM	3	4830	W250 15K 5% T&R RES	1			
5301	.12N 50V 10%CAP T&R BEAD X7R	1	6123	W250 20K0 1%MINI MF T&R RES	3			
5207	.18N 100V 5%CAP T&R RAD .2FLM	1	4832	W250 22K 5% T&R RES	1			
5210	.22N 100V 10%CAP T&R RAD .2FLM	1	4833	W250 27K 5% T&R RES	1			
5222	.33N 100V 10%CAP T&R RAD .2FLM	4	4890	W250 30K 5% T&R RES	2			
5224	.47N 100V 10%CAP T&R RAD .2FLM	1	4834	W250 47K 5% T&R RES	3			
5226	.68N 100V 5%CAP T&R RAD .2FLM	1	4838	W250 100K 5% T&R RES	4			
5212	100N 63V 5%CAP T&R RAD .2FLM	14	4886	W250 200K 5% T&R RES	2			
5231	220N 63V 5%CAP T&R RAD .2FLM	3	4844	W250 1M 5% T&R RES	2			
5233	330N 63V 5%CAP T&R RAD .2FLM	1	4888	W250 4M7 5% T&R RES	1			
5234	470N 63V 10%CAP T&R RAD .2FLM	1	8729	#4 X 3/8 FLAT QUAD TYPE A JS500 BLK	2			
5256	1U 63V 5%CAP T&R RAD .2FLM	3	8753	#10 X 1/2 PAN QUAD TY A JS500 BLACK	20			
5257	.2U2 63V 20%CAP T&R RAD .2EL	1	8756	#10 X 3/4 PAN PH TYPE A BLACK OXIDE	4			
5942	.3U3 100DC10%CAP BLK RAD POLYE FLM	1	8727	#10 X 1" PAN PH TYPE A JS500 BLACK	4			
5282	.10U 16V 20%CAP T&R 5X7MM .2NP	4	9001	4-40 X 5/16 PAN PH MSZN C/W STARWA	4			
5945	.10U 63V 20%CAP T&R RAD .2EL	1	8742	4-40 X 3/8 PAN PH TAPTTIE JS500	2			
5631	.22U 50V 20%CAP T&R 6X7MM .2EL	2	8861	4-40 X 3/8 PAN PH MS JS500	2			
5267	100U 25V 20%CAP T&R RAD .2EL	2	2367	4-40 X 5/8" PEM BLIND SPACER 0.213	4			
4499	5K 10C 9.5MM HORIZONTAL P41	1	8801	6-32 X 3/8 PAN PH TAPTTIE JS500	3			
4493	.10K 5B LIN 9.5MM HORIZONTAL P41	2	8830	6-32 X 7/8 PAN PH MS JS500	4			
4494	.50K 1B LIN 9.5MM HORIZONTAL P41	4	8912	10-32 X 1 FLAT PHIL MS JS500 BLK	2			
8522	RUBBER BUMPER WITH WASHER -SMALL-	4	8786	10-32 X 1 1/4 PAN QD MS JS500 BLACK	8			
8570	CORNER,2 LEGS NOTCHED BLACK POWDER C	8	9003	10-32 X 1 1/2 PAN QD MS JS500 BLACK	4			
8593	4.00 X 4.50 ROLLED EDGE PORT TUBE	1	3858	3/4 PLASTIC HEX SPACER #4	2			
3462	CLIP 110X032 18-22AWG DISCO/INSL	1	7556	15" 4R 200WPGM SPEAKER BASS	1			
3463	CLIP 110X020 18-22AWG DISCO/INSL	2	8473	#10 BLACK CUPWASHER SWF-10BK	8			
3478	CLIP 205/187X032 18-22AWG DISCO/INS	2	3425	DPDT PUSH SW PCMT BREAK B4 MAKE	2			
3489	CLIP 250X032 18-22AWG DISCO/INSL	3	3436	DPDT PUSH SW PCMT H BREAK B4 MAKE	1			
3491	CLIP 205/187X020 18-22AWG DISCO/INS	3	3698	SPST ROKR SW QUIK 180° AC PWR BL/BL	1			
3601	RING TERMINAL 16AWG WIRE & #8 SCREW	2						
9925	TINNERMAN CLIP 1/8" STUD SIZE ROUND	3						
3918	1/4" JCK PCB MT HORZ SLIM W/SCREW	4						
3923	XLR MALE PCB MT HORZ MTHOLE-V SNAP	1						
2369	3 CIR PH-HEADER 2MM	1						
2370	7 CIR PH-HEADER 2MM	1						
3095	PATCH 02 18AWG 0.90 PH TWISTED	1						
3096	PATCH 02 18AWG 10.00 PH ONE END	1						
3091	PATCH 03 22AWG 06.00 PH FLAT	1						
3092	PATCH 07 22AWG 06.00 PH FLAT	1						
2371	2 CIR WS-HEADER 0.156	1						
4056	2 CIR XH-HEADER 0.098IN	2						
3084	PATCH 02 22AWG 04.00 XH FLAT	1						
4173	FAN 40MM X 10MM 4.5CFM 12VDC 5MA	1						
8451	10.0" STRAP HANDLE, BLACK METAL ENDC	1						
7552	.8R 30W TWEETER PIEZO S	1						
9897	SPEAKER COVER,BLACK POLYPRO. 54" W	13.875						
3645	RECEPTACLE:INLET	1						
3803	NYLON SECUR-A-TACH MINI PLASTIC TIE	1						
3810	4" NYLON CABLE TIE	1						
3558	TERM HOUSING 4 CIR .156/RAMP	1						
3596	36PIN BREAKAWAY .15GOLD .100	0.056						
3538	24 PIN BREAKAWAY LOCK .156	0.167						
3549	TRIFURCON TERM .156	3						
9704	ICEPOWER 50ASX2(BTL) INT.AMP MODULE	1						
8636	BUTTON 230X465 RND FLAT BLK (3425)	2						
8649	BUTTON KNOB FLAT BLACK	1						
10030	SB200H KNB BLK WHT POINTER K SHAFT	7						
3428	8' 3/18 SJT AC LINE CORD REMOVABLE	1						
8800	6-32 KEPS NUT ZINC	5						

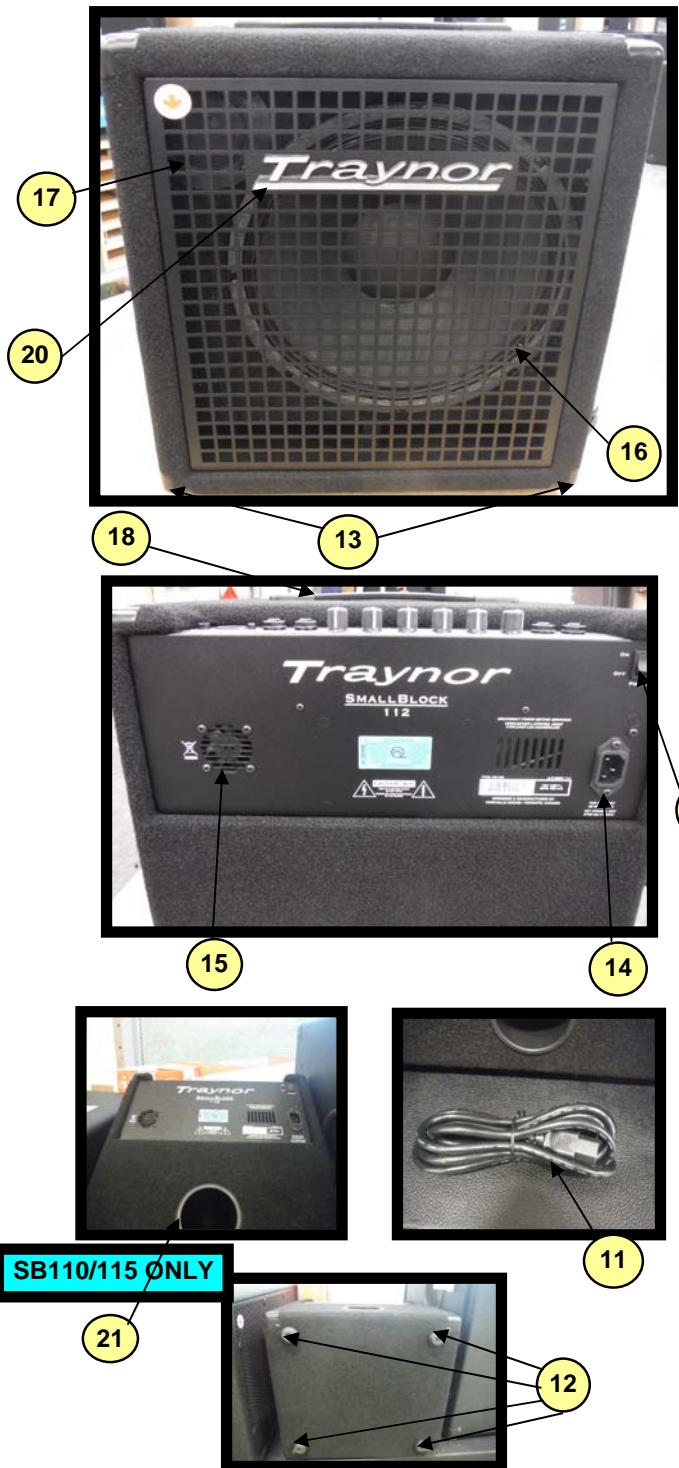
## SB115 M1507 V3 Parts List 3/31/2014

REF	PART DESCRIPTION	REF	PART DESCRIPTION	REF	PART DESCRIPTION	REF	PART DESCRIPTION	REF	PART DESCRIPTION
BUT1	8649 BUTTON KNOB FLAT BLACK	P8	4493 10K 5B LIN 9.5MM HORIZONTAL	P41	R69 4838 W250 100K 5%	T&R RES			
BUT2	8636 BUTTON 230X465 RND FLAT BLK (3425)	PCB1	507BLANH2_CZ 2SD 128.25SQIN 03PER SB115		R7 6123 W250 20K 1%MINI MF	T&R RES			
BUT3	8636 BUTTON 230X465 RND FLAT BLK (3425)	Q1	5113 MPSA42 TO92 NPN TRAN T& TA		R70 4639 W250 4K99 1%	T&R RES			
C1	5410 100P 100V 10%CAP T&R BEAD NPO	Q2	5105 MPSA13 TO92 NPN DARL T& TA		R71 4852 W250 100R 5%	T&R RES			
C10	5234 470N 63V 10%CAP T&R RAD .2FLM	Q9	5122 J108 TO92 NCH JFET T&R TC		R72 4639 W250 4K99 1%	T&R RES			
C101	5212 100N 63V 5%CAP T&R RAD .2FLM	R1	4838 W250 100K 5%	T&R RES	R74 6110 W250 1K0 1%MINI MF	T&R RES			
C102	5212 100N 63V 5%CAP T&R RAD .2FLM	R10	4844 W250 1M 5%	T&R RES	R75 4801 W250 6K98 1%	T&R RES			
C11	5282 10U 16V 20%CAP T&R 5X7MM .2NP	R11	4800 W250 10K0 1%	T&R RES	R76 4800 W250 10K0 1%	T&R RES			
C12	5207 18N 100V 5%CAP T&R RAD .2FLM	R113	6123 W250 20K0 1%MINI MF	T&R RES	R79 6110 W250 1K0 1%MINI MF	T&R RES			
C13	5816 680P 100V 5%CAP T&R RAD CER.2NPO	R117	6110 W250 1K0 1%MINI MF	T&R RES	R8 4852 W250 100R 5%	T&R RES			
C14	5410 100P 100V 10%CAP T&R BEAD NPO	R12	4828 W250 6K8 5%	T&R RES	R80 4808 W250 2K 5%	T&R RES			
C15	5224 .47N 100V 10%CAP T&R RAD .2FLM	R13	4828 W250 6K8 5%	T&R RES	R81 4800 W250 10K0 1%	T&R RES			
C16	5816 680P 100V 5%CAP T&R RAD CER.2NPO	R132	6110 W250 1K0 1%MINI MF	T&R RES	R86 6110 W250 1K0 1%MINI MF	T&R RES			
C17	5204 .10N 100V 10%CAP T&R RAD .2FLM	R136	4800 W250 10K0 1%	T&R RES	R87 6110 W250 1K0 1%MINI MF	T&R RES			
C18	5204 10N 100V 10%CAP T&R RAD .2FLM	R14	4827 W250 4K7 5%	T&R RES	R9 4834 W250 47K 5%	T&R RES			
C19	5410 100P 100V 10%CAP T&R BEAD NPO	R15	4826 W250 3K3 5%	T&R RES	R99 4800 W250 10K0 1%	T&R RES			
C2	5210 .22N 100V 10%CAP T&R RAD .2FLM	R150	4890 W250 30K 5%	T&R RES	S1 3425 DPDT PUSH SW PCMT BREAK B4 MAKE				
C20	5406 33P 50V 10%CAP BLK BEAD NPO	R16	4827 W250 4K7 5%	T&R RES	S2 3436 DPDT PUSH SW PCMT H BREAK B4 MAKE				
C21	5945 10U 63V 20%CAP T&R RAD .2EL	R167	4808 W250 2K 5%	T&R RES	S3 3425 DPDT PUSH SW PCMT BREAK B4 MAKE				
C22	5406 33P 50V 10%CAP BLK BEAD NPO	R168	4833 W250 27K 5%	T&R RES	U1 6882 TL072CP IC FET DUAL OP AMP				
C23	1U 63V 5%CAP T&R RAD .2FLM	R169	4830 W250 15K 5%	T&R RES	U14 6840 MC33078P IC DUAL OP AMP				
C24	5256 1U 63V 5%CAP T&R RAD .2FLM	R17	4826 W250 3K3 5%	T&R RES	U2 6804 MC33079P IC QUAD OP AMP				
C25	5212 100N 63V 5%CAP T&R RAD .2FLM	R172	4800 W250 10K0 1%	T&R RES	U3 6804 MC33079P IC QUAD OP AMP				
C26	5212 100N 63V 5%CAP T&R RAD .2FLM	R174	2030 W600 681R 1%FLAME PROOF T&R RES		U4 6872 MC7815CT TO220 P 15V0 REG V1				
C27	5212 100N 63V 5%CAP T&R RAD .2FLM	R175	4821 W250 470R 5%	T&R RES	U5 6858 NSL-32SR2 OPTO-COUPLER LDR				
C28	5212 100N 63V 5%CAP T&R RAD .2FLM	R176	6110 W250 1K0 1%MINI MF	T&R RES	U6 6871 MC7915CT TO220 N 15V0 REG V2				
C29	5212 100N 63V 5%CAP T&R RAD .2FLM	R177	4821 W250 470R 5%	T&R RES	U7 6840 MC33078P IC DUAL OP AMP				
C3	5267 100U 25V 20%CAP T&R RAD .2EL	R178	4827 W250 4K7 5%	T&R RES	U8 6804 MC33079P IC QUAD OP AMP				
C30	5212 100N 63V 5%CAP T&R RAD .2FLM	R18	4834 W250 47K 5%	T&R RES	U9 6804 MC33079P IC QUAD OP AMP				
C31	5631 .22U 50V 20%CAP T&R 6X7MM .2EL	R181	6110 W250 1K0 1%MINI MF	T&R RES	W1 3538 24 PIN BREAKAWAY LOCK .156				
C32	5212 100N 63V 5%CAP T&R RAD .2FLM	R19	4883 W250 2K49 1%	T&R RES	W2 2369 3 CIR PH-HEADER 2MM				
C33	5208 .4N7 250P 5%CAP T&R RAD .2FLM	R2	4867 W250 270R 5%	T&R RES	W3 2371 2 CIR WS-HEADER 0.156				
C34	5410 100P 100V 10%CAP T&R BEAD NPO	R20	4800 W250 10K0 1%	T&R RES	W4 2370 7 CIR PH-HEADER 2MM				
C35	5212 100N 63V 5%CAP T&R RAD .2FLM	R21	6123 W250 20K0 1%MINI MF	T&R RES	W5 4056 2 CIR XH-HEADER 0.098IN				
C36	5226 .68N 100V 5%CAP T&R RAD .2FLM	R22	4639 W250 4K99 1%	T&R RES	W6 4056 2 CIR XH-HEADER 0.098IN				
C37	5222 .33N 100V 10%CAP T&R RAD .2FLM	R23	4800 W250 10K0 1%	T&R RES	ZD3 6440 1N750ARL 4V7 0W5 ZENER 5% T&R				
C38	5231 220N 63V 5%CAP T&R RAD .2FLM	R232	4808 W250 2K 5%	T&R RES	ZD4 6440 1N750ARL 4V7 0W5 ZENER 5% T&R				
C39	5231 220N 63V 5%CAP T&R RAD .2FLM	R233	4750 5W00 10R 5%	BLK RES	ZD5 6461 1N5240BRL 10V0 0W5 ZENER 5% T&R				
C4	5417 330P 50V 10%CAP T&R BEAD NPO	R24	6110 W250 1K0 1%MINI MF	T&R RES					
C40	.10N 100V 10%CAP T&R RAD .2FLM	R25	4847 W250 2K2 5%	T&R RES					
C41	100P 100V 10%CAP T&R BEAD NPO	R26	4639 W250 4K99 1%	T&R RES					
C42	5212 100N 63V 5%CAP T&R RAD .2FLM	R27	4639 W250 4K99 1%	T&R RES					
C43	5212 100N 63V 5%CAP T&R RAD .2FLM	R28	4838 W250 100K 5%	T&R RES					
C44	.33N 100V 10%CAP T&R RAD .2FLM	R29	4621 W500 470R 5%	T&R RES					
C45	.33N 100V 10%CAP T&R RAD .2FLM	R3	4800 W250 10K0 1%	T&R RES					
C46	5282 10U 16V 20%CAP T&R 5X7MM .2NP	R30	4888 W250 4M7 5%	T&R RES					
C47	5631 .22U 50V 20%CAP T&R 6X7MM .2EL	R31	4621 W500 470R 5%	T&R RES					
C5	5267 100U 25V 20%CAP T&R RAD .2EL	R32	4801 W250 6K98 1%	T&R RES					
C52	5233 330N 63V 5%CAP T&R RAD .2FLM	R33	4867 W250 270R 5%	T&R RES					
C54	5231 220N 63V 5%CAP T&R RAD .2FLM	R34	4817 W250 47R 5%	T&R RES					
C55	.2U 63V 20%CAP T&R RAD .2EL	R35	4847 W250 2K2 5%	T&R RES					
C56	5410 100P 100V 10%CAP T&R BEAD NPO	R36	4838 W250 100K 5%	T&R RES					
C6	.3U 100DC10%CAP BLK RAD POLYE FLM	R37	4834 W250 47K 5%	T&R RES					
C69	5212 100N 63V 5%CAP T&R RAD .2FLM	R38	4832 W250 22K 5%	T&R RES					
C7	.33N 100V 10%CAP T&R RAD .2FLM	R39	4844 W250 1M 5%	T&R RES					
C70	.1U 63V 5%CAP T&R RAD .2FLM	R4	4867 W250 270R 5%	T&R RES					
C71	5212 100N 63V 5%CAP T&R RAD .2FLM	R40	4847 W250 2K2 5%	T&R RES					
C8	5282 10U 16V 20%CAP T&R 5X7MM .2NP	R41	4804 W250 3K 5%	T&R RES					
C81	5301 12N 50V 10%CAP T&R BEAD X7R	R42	4808 W250 2K 5%	T&R RES					
C9	5282 10U 16V 20%CAP T&R 5X7MM .2NP	R43	4621 W500 470R 5%	T&R RES					
D1	6825 1N4148 75V 0A45 DIODE T&R	R45	4621 W500 470R 5%	T&R RES					
D23	6825 1N4148 75V 0A45 DIODE T&R	R46	4621 W500 470R 5%	T&R RES					
D3	6463 N5251BRL 22V0 0W5 ZENER 5% T&R	R47	4621 W500 470R 5%	T&R RES					
D4	6825 1N4148 75V 0A45 DIODE T&R	R48	4621 W500 470R 5%	T&R RES					
D6	6825 1N4148 75V 0A45 DIODE T&R	R49	4800 W250 10K0 1%	T&R RES					
D7	6825 1N4148 75V 0A45 DIODE T&R	R5	4808 W250 2K 5%	T&R RES					
D8	6825 1N4148 75V 0A45 DIODE T&R	R50	4800 W250 10K0 1%	T&R RES					
J1	3918 1/4 JCK PCB MT HORZ SLIM W/SCREW "	R51	4890 W250 30K 5%	T&R RES					
J2	3918 1/4 JCK PCB MT HORZ SLIM W/SCREW "	R53	4886 W250 200K 5%	T&R RES					
J3	3918 1/4 JCK PCB MT HORZ SLIM W/SCREW "	R54	4886 W250 200K 5%	T&R RES					
J4	3923 XLR MALE PCB MT HORZ MTHOLE-V SNAP	R55	4801 W250 6K98 1%	T&R RES					
J6	3918 1/4 JCK PCB MT HORZ SLIM W/SCREW "	R57	2030 W600 681R 1%FLAME PROOF T&R RES						
LD1	6554 BLUE 3MM LED 3V 20MA	R58	4854 W250 1K2 5%	T&R RES					
LD2	6405 RED 3MM LED 2V 20MA DIFFUSD	R59	4883 W250 2K49 1%	T&R RES					
P1	.5K 10K 9.5MM HORIZONTAL P41	R6	4800 W250 10K0 1%	T&R RES					
P2	4493 10K 5B 5LN 9.5MM HORIZONTAL P41	R60	4883 W250 2K49 1%	T&R RES					
P3	4494 .50K 1B LIN 9.5MM HORIZONTAL P41	R61	4883 W250 2K49 1%	T&R RES					
P4	4494 .50K 1B LIN 9.5MM HORIZONTAL P41	R63	4883 W250 2K49 1%	T&R RES					
P5	4494 .50K 1B LIN 9.5MM HORIZONTAL P41	R64	2030 W600 681R 1%FLAME PROOF T&R RES						
P6	4494 .50K 1B LIN 9.5MM HORIZONTAL P41	R65	6110 W250 1K0 1%MINI MF	T&R RES					

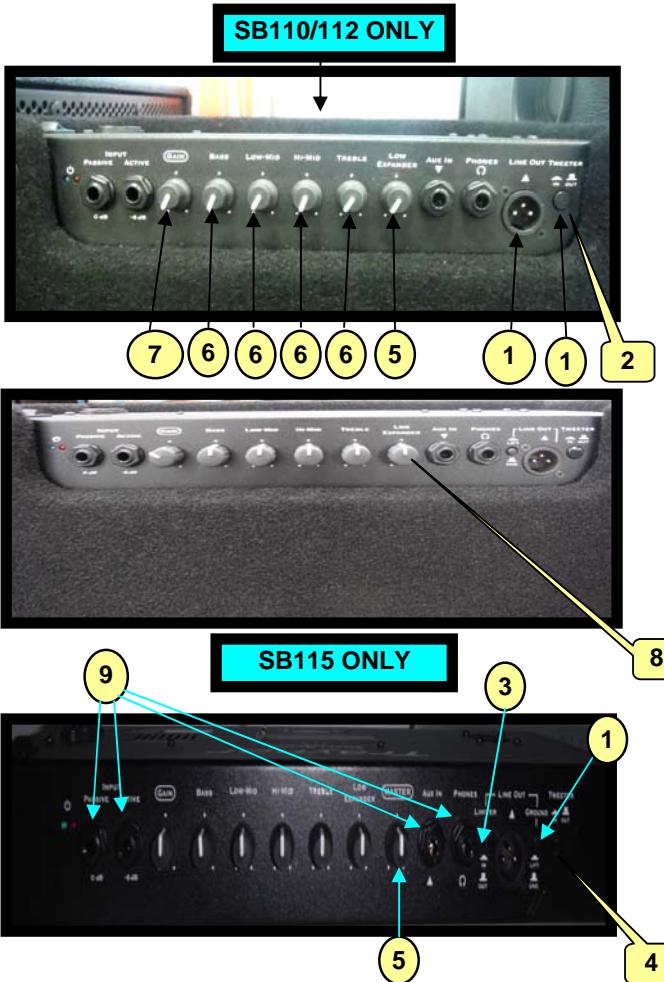


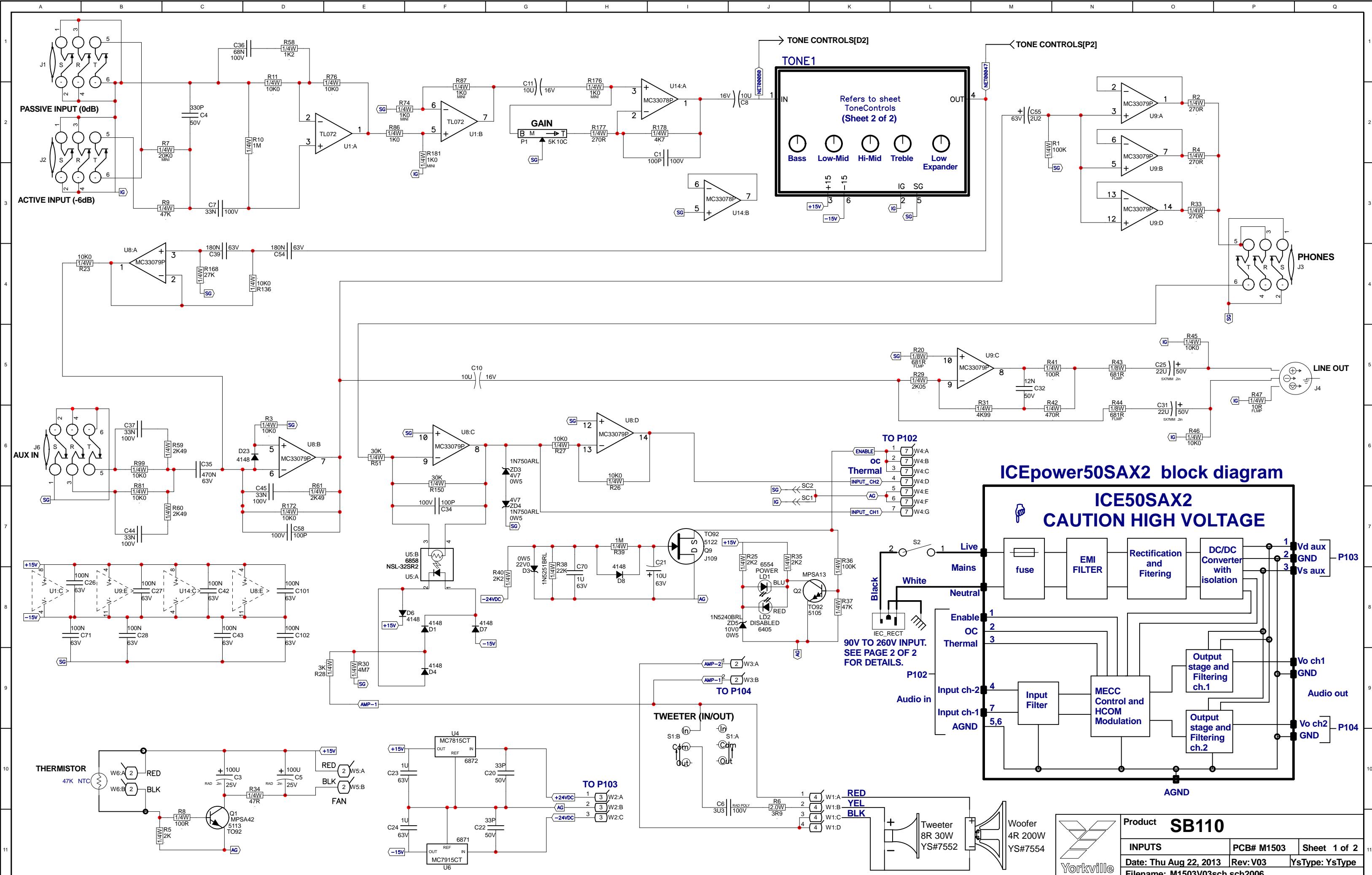
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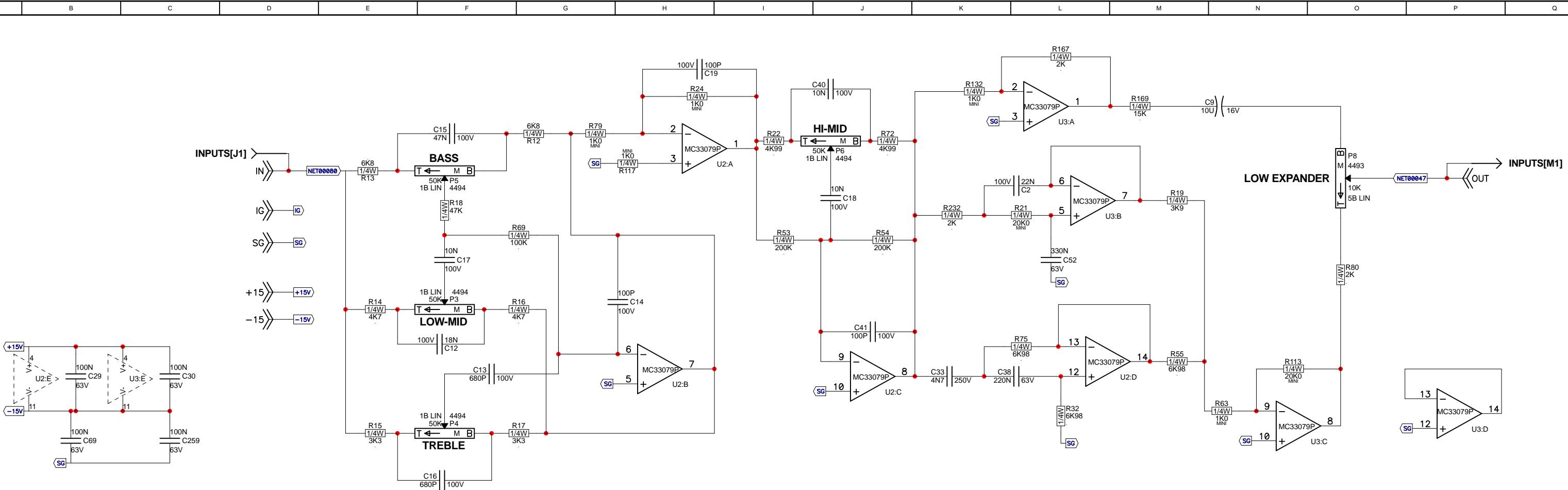
## BASS GUITER AMPLIFIERS



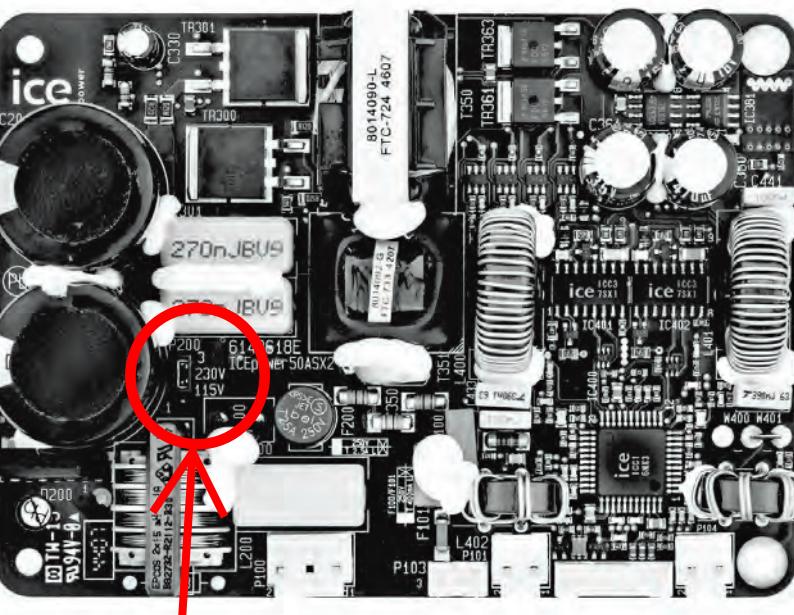
#	Part#	Description	qty
Labeled Components			
1	3436	DPDT PUSH SW PCMT H BREAK B4 MAKE	1
2	8649	BUTTON KNOB FLAT BLACK	1
3	3425	DPDT PUSH SW PCMT BREAK B4 MAKE	1
4	8636	BUTTON 230X465 RND FLAT BLK (3425)	1
5	4493	.10K 5B LIN 9.5MM HORIZONTAL P41	1--2
6	4494	.50K 1B LIN 9.5MM HORIZONTAL P41	4
7	4499	.5K 10C 9.5MM HORIZONTAL P41	1
8	10030	SB200H KNB BLK WHT POINTER K SHAFT	6--7
9	3918	1/4" JCK PCB MT HORZ SLIM W/SCREW	4
10	3923	XLR MALE PCB MT HORZ MTHOLE-V SNAP	1
11	3428	8' 3/16 SJT AC LINE CORD REMOVABLE	1
12	8522	RUBBER BUMPER WITH WASHER -SMALL-	4
13	8570	CORNER,2 LEGS NOTCED BLACK POWDER	8
14	3645	RECEPTACLE:INLET	1
15	4173	FAN 40MM X 10MM 4.5CFM 12VDC 5MA	1
16	7555	12" 4R 200WPGM SPEAKER	1
17	7552	.8R 30W TWEETER PIEZO S	1
18	8451	10.0" STRAP HANDLE,BLACK METAL ENDC	1
19	3698	SPST ROKR SW QUIK 180" AC PWR BL/BL	1
20	10019	TRAYNOR ALUMINUM LOGO DIE CAST	1
21	8426	3 X 6 ROLLED EDGE PORT TUBE	1







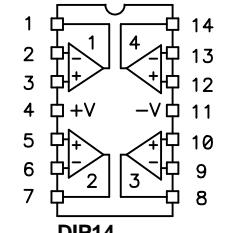
### MAINS VOLTAGE INPUT SETTING (NA<->CE)



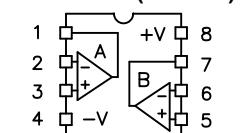
SET JUMPER P200 TO "115V" FOR NORTH AMERICA.  
SET IT TO "230V" FOR EUROPE.

### LEADS & PINS REFERENCE

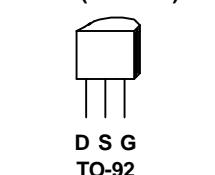
MC33079P (YS#6804)



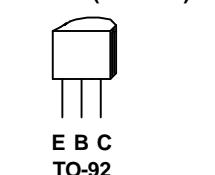
TL072CP (YS#6882)  
MC33078P (YS#6840)



J109 (YS#5122)



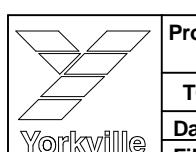
MPSA13 (YS#5105)  
MPSA42 (YS#5113)



### POTENTIOMETERS AND KNOBS

M1503 - POTS LIST				
MODEL(S):- SMALL BLOCK - SB110				
REF	FUNCTION	PART#	KNOB	STYLE
P1	GAIN	4486	10020	P41
P3	LOW-MID	4494	10020	P41
P4	TREBLE	4494	10020	P41
P5	BASS	4494	10020	P41
P6	HI-MID	4494	10020	P41
P8	LOW EXPANDER	4493	10020	P41
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N

M1503 DATABASE HISTORY			
MODEL(S):- SMALL BLOCK - SB110			
#	DATE	VER#	DESCRIPTION OF CHANGE
1	08-JAN-2013	V01	FIRST PRODUCTION RELEASE
2	13-MAY-2013	V02	PC8540: Several changes. See PC.
3	09-JUL-2013	V03	PC8550: Routed auxiliary signal to headphones. - ML
4	D	V	
5	D	V	
6	D	V	
7	D	V	
8	D	V	
9	D	V	
10	D	V	
11	D	V	
12	D	V	
13	D	V	



Product **SB110**

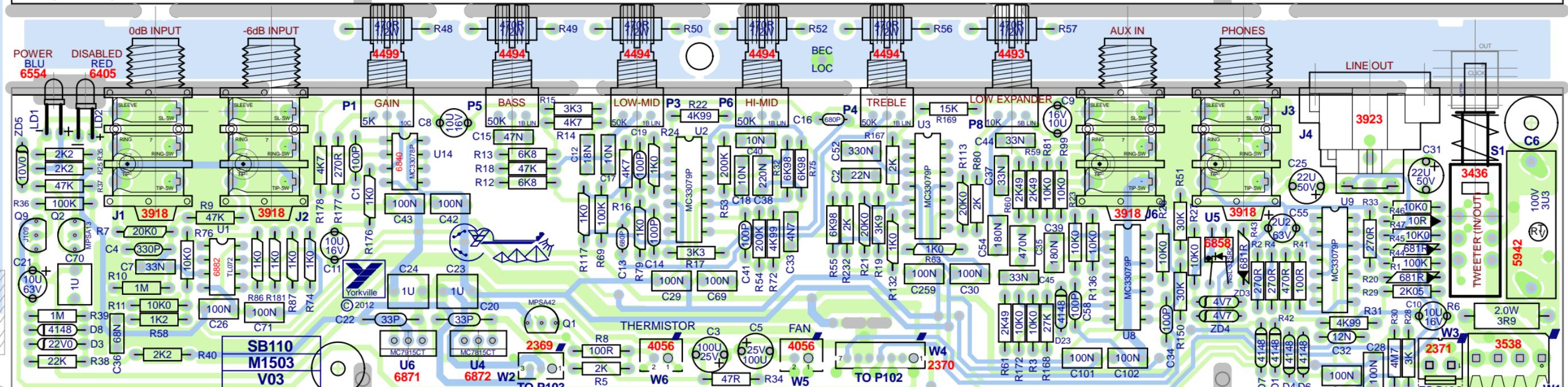
TONE CONTROLS PCB# M1503 Sheet 2 of 2

Date: Thu Aug 22, 2013 Rev: V03 YsType: YsType

Filename: M1503V03sch.sch2006

**BlankSize - 12000x9000**

**ClinchRepeats - X1 @0.000Y3 @2.800**  
**StepAndRepeat - X1 @0.000Y3 @2.800**



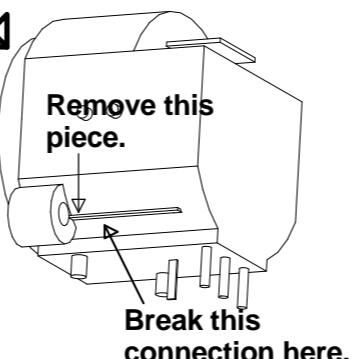
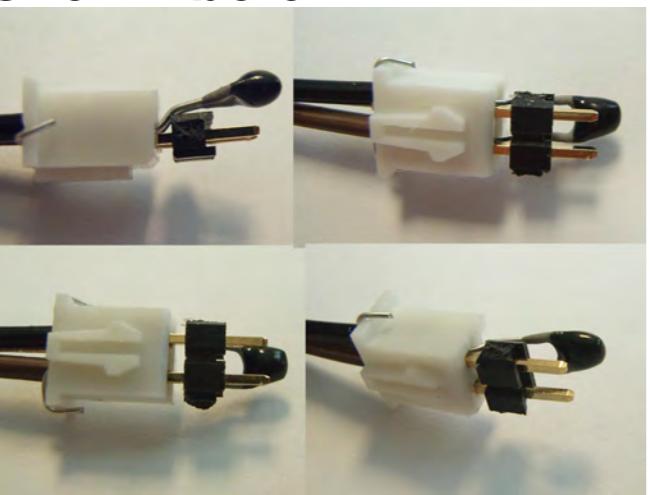
M1503 V03

**SB110**

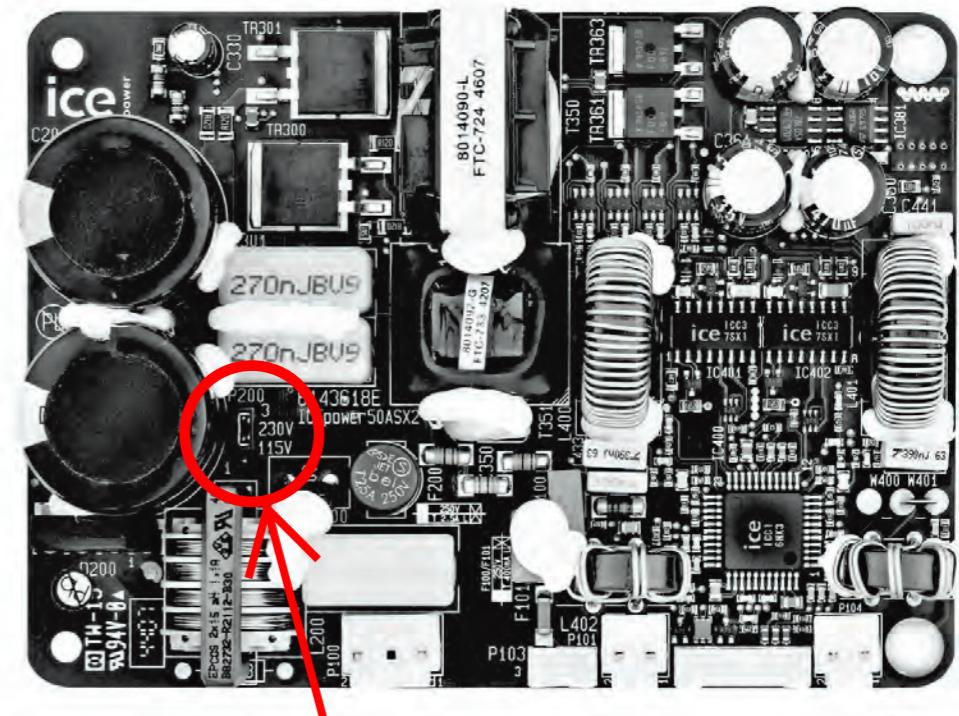
**SEE LAYOUT DOCUMENTATION**

↑ SEE LAYOUT DIAGRAM ↑

# M1503 V03 PRODUCTION NOTES

- 1 - Add RTV to C6.
- 2 - R48, R49, R50, R52, R56 and R57 are used to level up their respective pots during wave soldering.
- 3 - Break the connection of XLR J4 as per diagram. →  

- 4 - Do not forget to add a 2-pin header to the thermistor harness assembly as shown below:  


## MAINS VOLTAGE INPUT SETTING (NA<->CE)

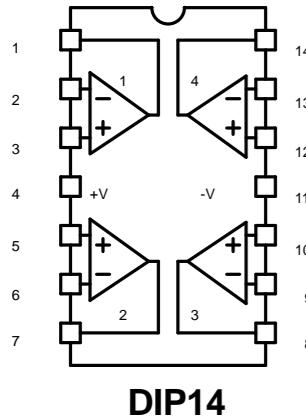


SET JUMPER P200 TO "115V" FOR NA.  
SET IT TO "230V" FOR CE.

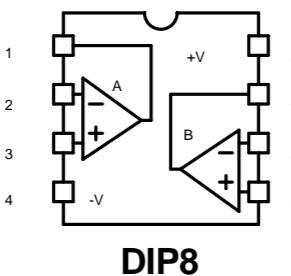
# ↑ SEE LAYOUT DIAGRAM ↑

## LEADS & PINS REFERENCE

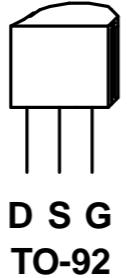
**MC33079P (YS#6804)**



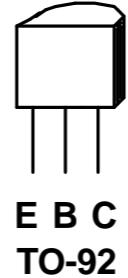
**TL072CP (YS#6882)  
MC33078P (YS#6840)**



**J109 (YS#5122)**



**MPSA13 (YS#5105)  
MPSA42 (YS#5113)**



## POTENTIOMETERS AND KNOBS

**M1503 - POTS LIST**

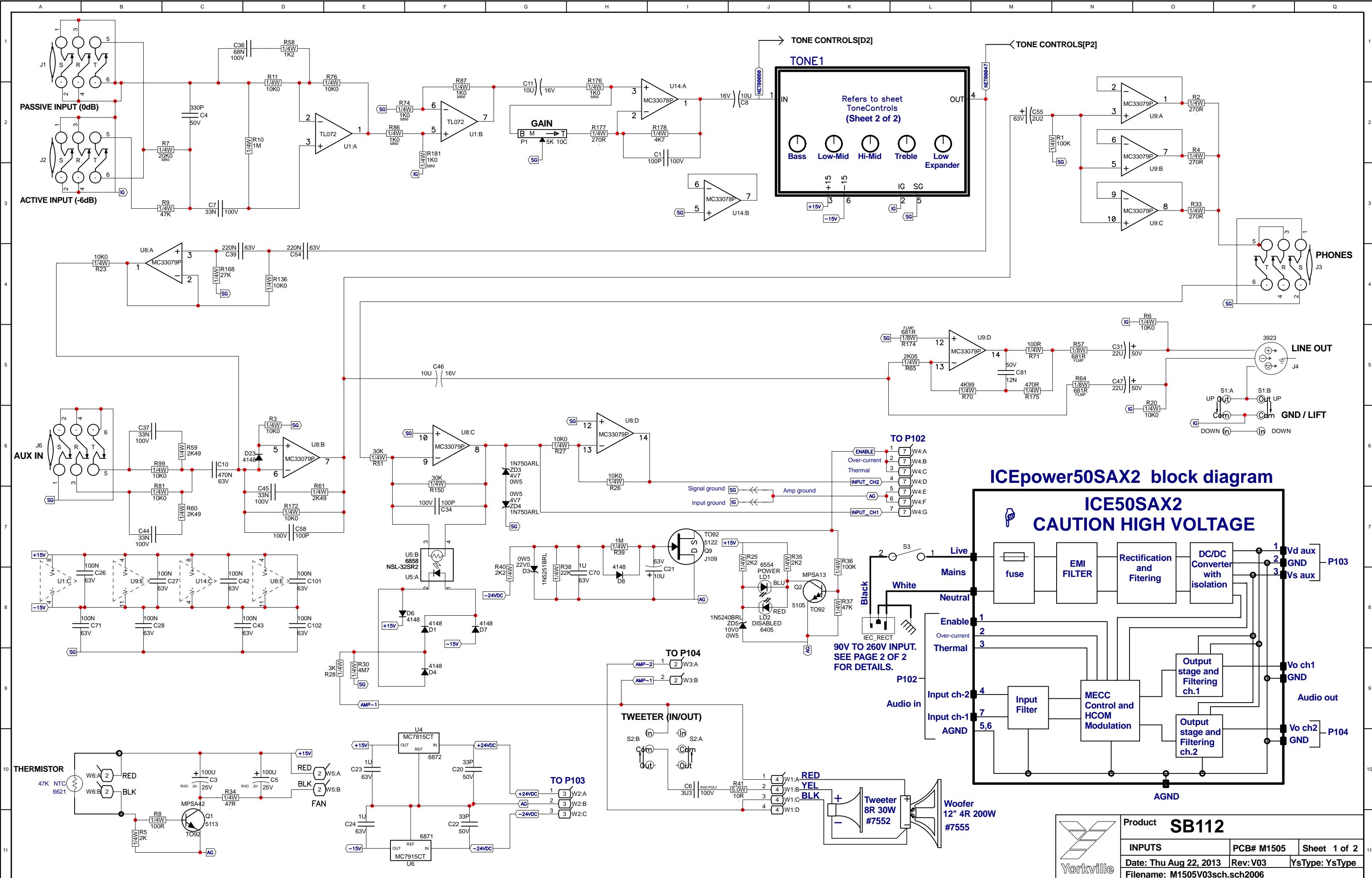
**MODEL(S):- SMALL BLOCK - SB110**

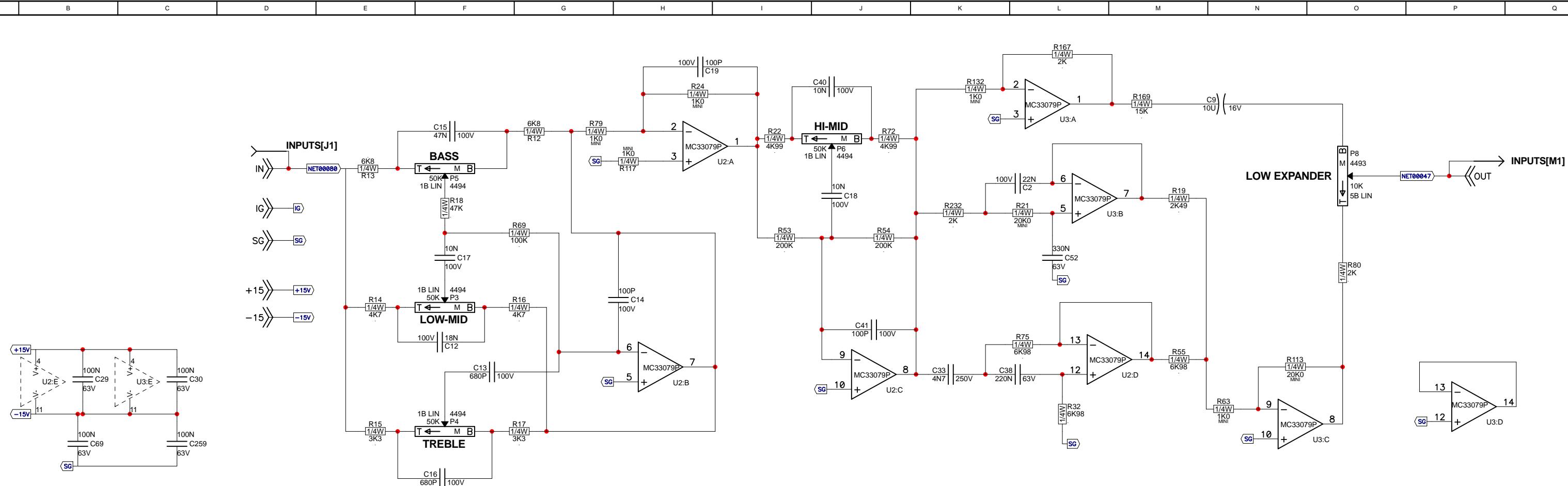
REF	FUNCTION	PART#	KNOB	STYLE
P1	GAIN	4486	10020	P41
P3	LOW-MID	4494	10020	P41
P4	TREBLE	4494	10020	P41
P5	BASS	4494	10020	P41
P6	HI-MID	4494	10020	P41
P8	LOW EXPANDER	4493	10020	P41
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N

## M1503 DATABASE HISTORY

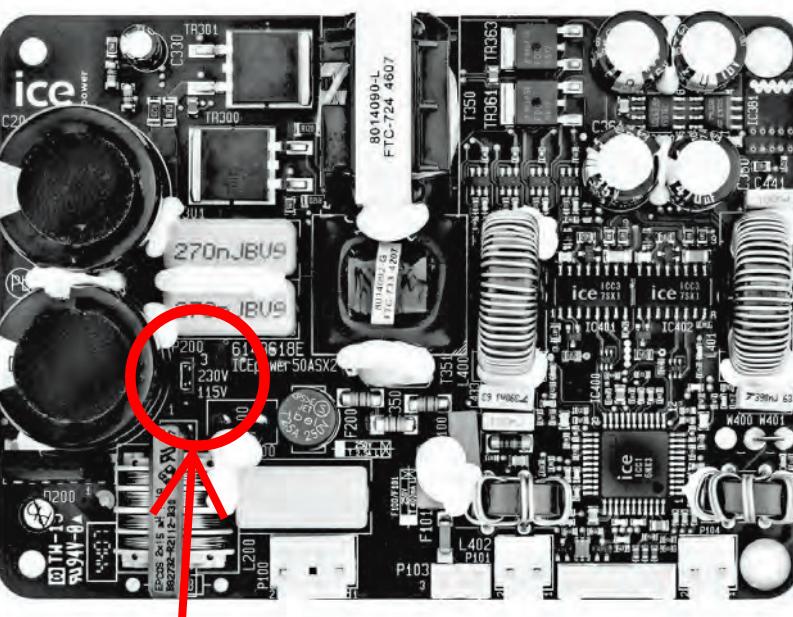
**MODEL(S):- SMALL BLOCK - SB110**

#	DATE	VER#	DESCRIPTION OF CHANGE
1	08-JAN-2013	V01	FIRST PRODUCTION RELEASE
2	13-MAY-2013	V02	PC8540: Several changes. See PC.
3	09-JUL-2013	V03	PC8550: Routed auxiliary signal to headphones. - ML
4	D	V	N
5	D	V	N
6	D	V	N
7	D	V	N
8	D	V	N
9	D	V	N
10	D	V	N
11	D	V	N
12	D	V	N
13	D	V	N





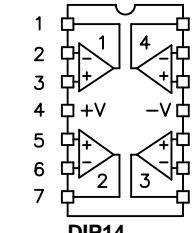
## MAINS VOLTAGE INPUT SETTING (NA<->CE)



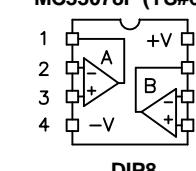
SET JUMPER P200 TO "115V" FOR NORTH AMERICA.  
SET IT TO "230V" FOR EUROPE.

## LEADS & PINS REFERENCE

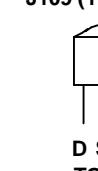
MC33079P (YS#6804)



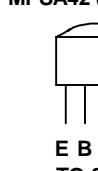
TL072CP (YS#6882)  
MC33078P (YS#6840)



J109 (YS#5122)



MPSA13 (YS#5105)  
MPSA42 (YS#5113)



## POTENTIOMETERS AND KNOBS

M1505 - POTS LIST				
MODEL(S):- SMALL BLOCK - SB112				
REF	FUNCTION	PART#	KNOB	STYLE
P1	GAIN	4499	10020	P41
P3	LOW-MID	4494	10020	P41
P4	TREBLE	4494	10020	P41
P5	BASS	4494	10020	P41
P6	HI-MID	4494	10020	P41
P8	LOW EXPANDER	4493	10020	P41
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N

M1505 DATABASE HISTORY			
MODEL(S):- SMALL BLOCK - SB112			
#	DATE	VER#	DESCRIPTION OF CHANGE
1	JAN-08-2013	V01	FIRST PRODUCTION RELEASE. - ML
2	02-MAY-2013		Modified schematic to reflect rework done on all V01 PCBs. - ML
3			PC8540: Rework on V01 included. GG
4	13-MAY-2013	V02	PC8550: Routed auxiliary signal to headphones. - ML
5	09-JUL-2013	V03	
6	D	V	
7	D	V	
8	D	V	
9	D	V	
10	D	V	
11	D	V	
12	D	V	
13	D	V	



Product **SB112**

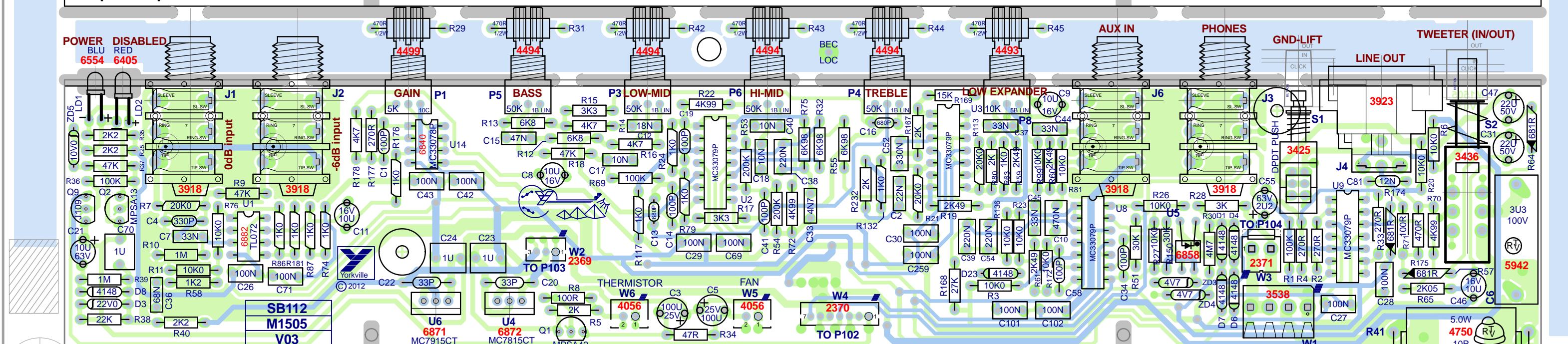
TONE CONTROLS PCB# M1505 Sheet 2 of 2

Date: Thu Aug 22, 2013 Rev: V03 YsType: YsType

Filename: M1505V03sch.sch2006

**ClinchRepeats - X1@0.000Y3@2.800**  
**StepAndRepeat - X1@0.000Y3@2.800**

**BlankSize - 13000x900**



# M1505

vo3

**SB112**

**SEE LAYOUT DOCUMENTATION**

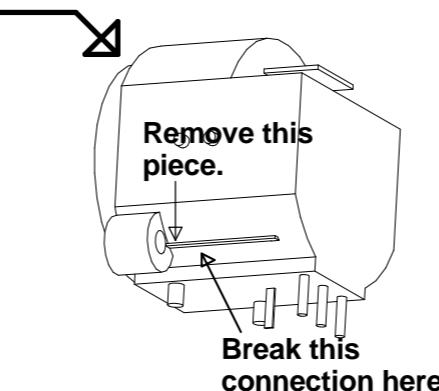
↑ SEE LAYOUT DIAGRAM ↑

# M1505 V03 PRODUCTION NOTES

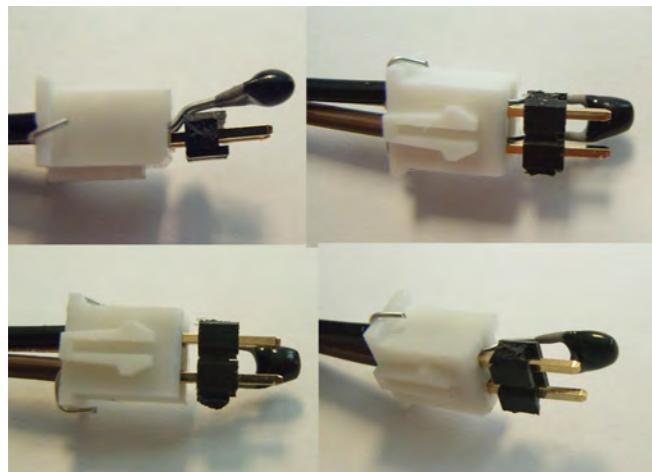
1 - Add RTV to C6 and R41.

2 - R29, R31, R42, R43, R44 and R45 are used to level up their respective pots during wave soldering.

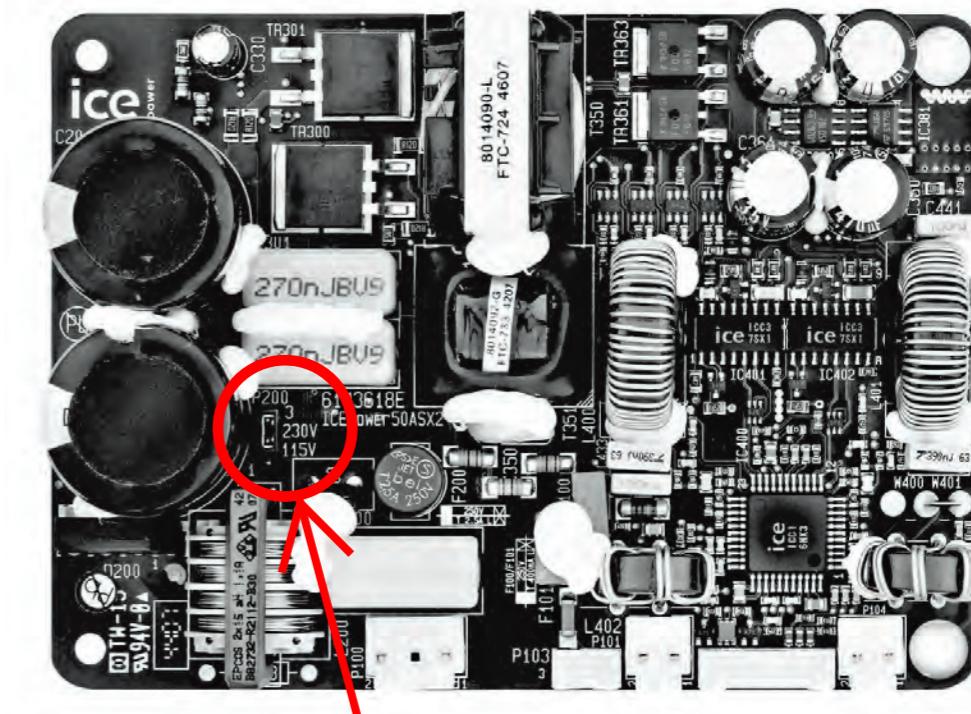
3 - Break the connection of XLR J4 as per diagram.



4 - Do not forget to add a 2-pin header to the thermistor harness assembly as shown below:



## MAINS VOLTAGE INPUT SETTING (NA<->CE)

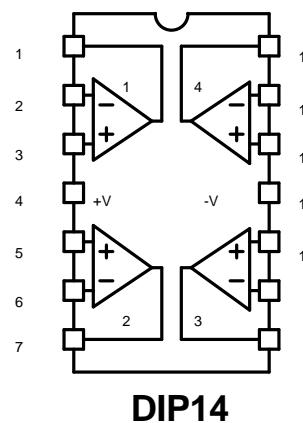


SET JUMPER P200 TO "115V" FOR NA.  
SET IT TO "230V" FOR CE.

# SEE LAYOUT DIAGRAM

## LEADS & PINS REFERENCE

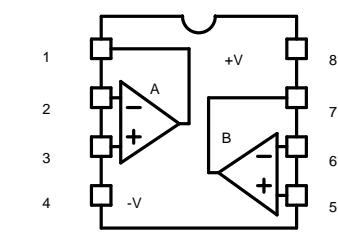
**MC33079P (YS#6804)**



DIP14

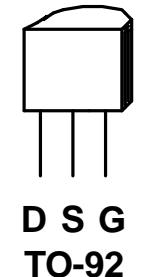
**TL072CP (YS#6882)**

**MC33078P (YS#6840)**



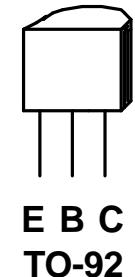
DIP8

**J109 (YS#5122)**



D S G  
TO-92

**MPSA13 (YS#5105)  
MPSA42 (YS#5113)**



E B C  
TO-92

## POTENTIOMETERS AND KNOBS

### M1505 - POTS LIST

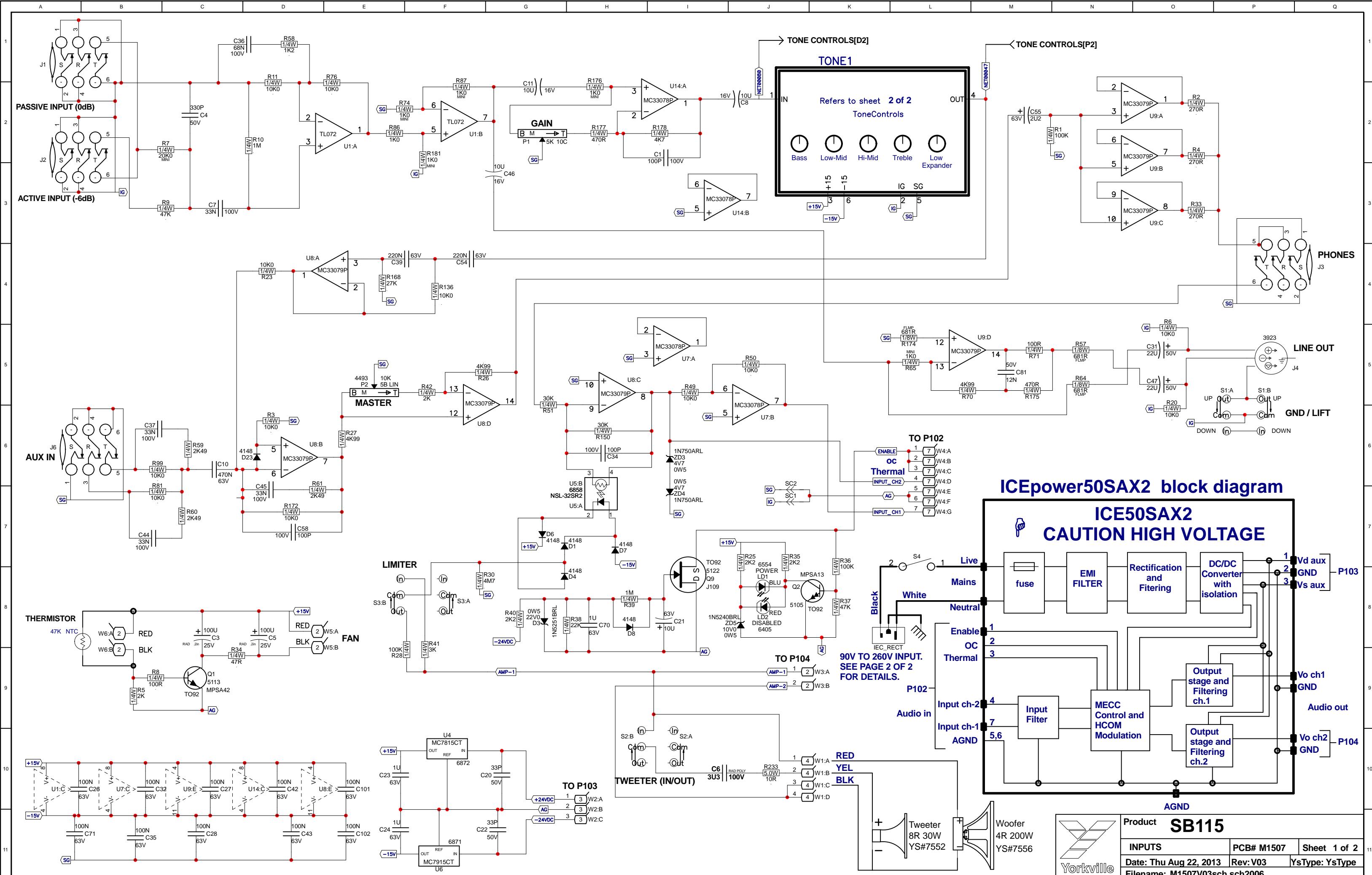
#### MODEL(S):- SMALL BLOCK - SB112

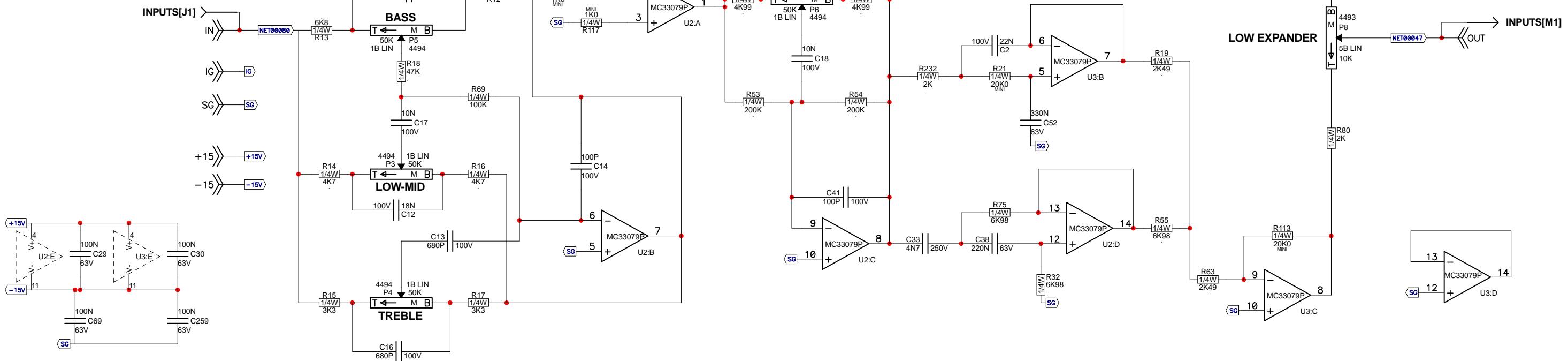
REF	FUNCTION	PART#	KNOB	STYLE
P1	GAIN	4499	10020	P41
P3	LOW-MID	4494	10020	P41
P4	TREBLE	4494	10020	P41
P5	BASS	4494	10020	P41
P6	HI-MID	4494	10020	P41
P8	LOW EXPANDER	4493	10020	P41
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N

### M1505 DATABASE HISTORY

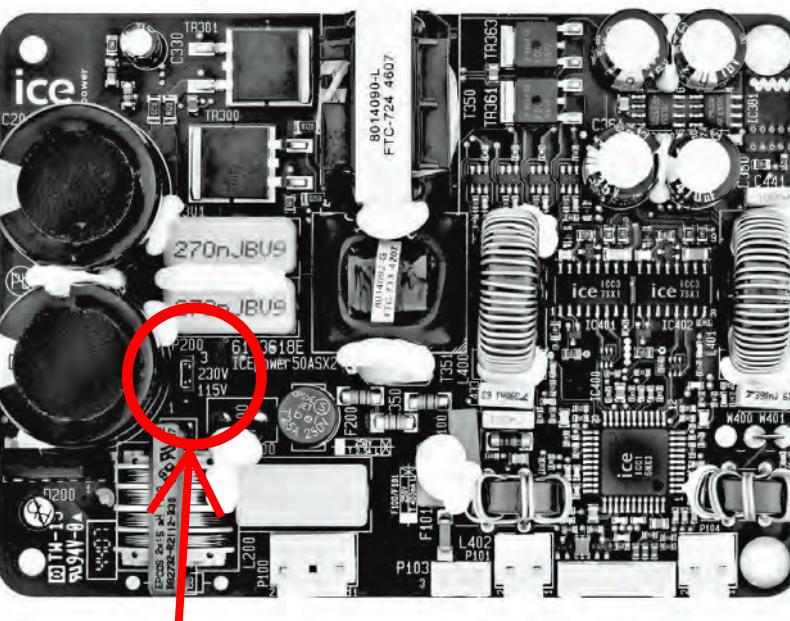
#### MODEL(S):- SMALL BLOCK - SB112

#	DATE	VER#	DESCRIPTION OF CHANGE
1	JAN-08-2013	V01	<b>FIRST PRODUCTION RELEASE.</b> - ML
2	02-MAY-2013	V	Modified schematic to reflect rework done
3	D	V	on all V01 PCBs. - ML
4	13-MAY-2013	V02	PC8540: Rework on V01 included. GG
5	09-JUL-2013	V03	PC8550: Routed auxiliary signal to headphones. - ML
6	D	V	N
7	D	V	N
8	D	V	N
9	D	V	N
10	D	V	N
11	D	V	N
12	D	V	N
13	D	V	N





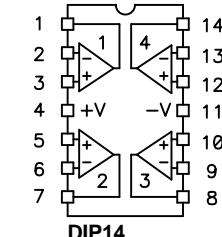
## MAINS VOLTAGE INPUT SETTING (NA<->CE)



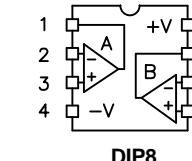
SET JUMPER P200 TO "115V" FOR NORTH AMERICA.  
SET IT TO "230V" FOR EUROPE.

## LEADS & PINS REFERENCE

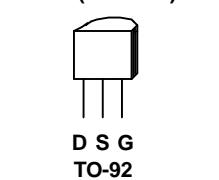
MC33079P (YS#6804)



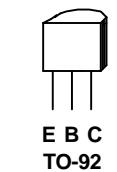
TL072CP (YS#6882)  
MC33078P (YS#6840)



J109 (YS#5122)



MPSA13 (YS#5105)  
MPSA42 (YS#5113)



## POTENTIOMETERS AND KNOBS

M1507 - POTS LIST				
MODEL(S):- SMALL BLOCK - SB115				
REF	FUNCTION	PART#	KNOB	STYLE
P1	GAIN	4499	10020	P41
P2	MASTER	4493	10020	P41
P3	LOW-MID	4494	10020	P41
P4	TREBLE	4494	10020	P41
P5	BASS	4494	10020	P41
P6	HI-MID	4494	10020	P41
P8	LOW EXPANDER	4493	10020	P41
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N

## M1507 DATABASE HISTORY

MODEL(S):- SMALL BLOCK - SB115			
#	DATE	VER#	DESCRIPTION OF CHANGE
1	08-JAN-2013	V01	FIRST PRODUCTION RELEASE
2	13-MAY-2013	V02	PC8540: Several changes. See PC.
3	11-JUL-2013	V03	PC8550: Routed auxiliary signal to headphones. - ML
4	D	V	
5	D	V	
6	D	V	
7	D	V	
8	D	V	
9	D	V	
10	D	V	
11	D	V	
12	D	V	
13	D	V	



Product **SB115**

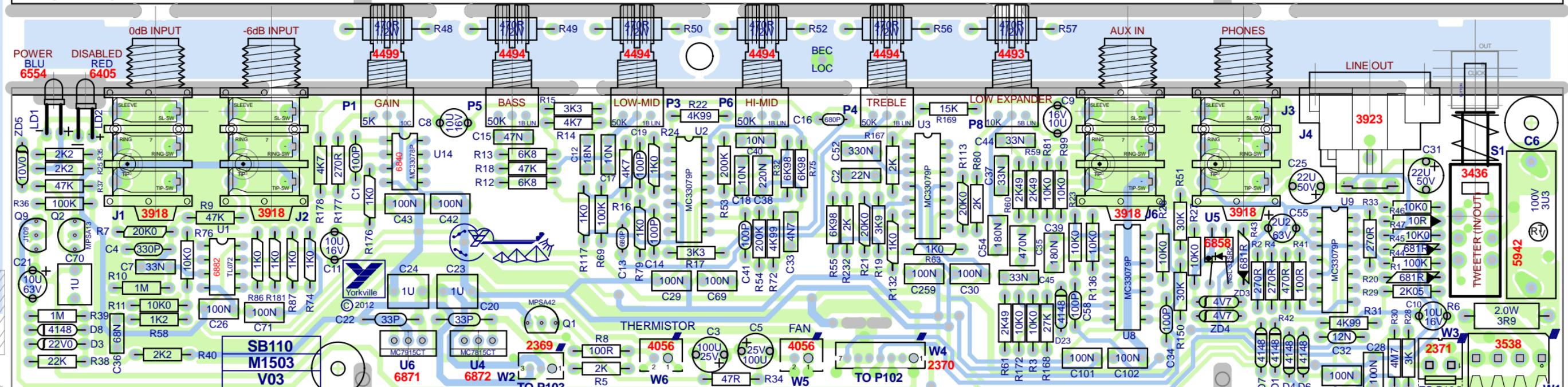
TONE CONTROLS PCB# M1507 Sheet 2 of 2

Date: Thu Aug 22, 2013 Rev: V03 YsType: YsType

Filename: M1507V03sch.sch2006

**BlankSize - 12000x9000**

**ClinchRepeats - X1@0.000Y3@2.800**  
**StepAndRepeat - X1@0.000Y3@2.800**



M1503 V03

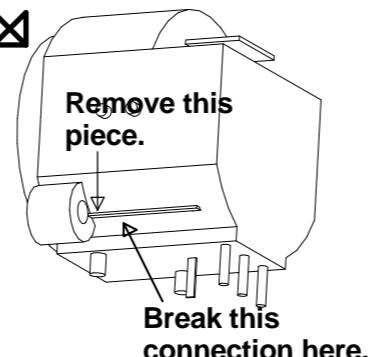
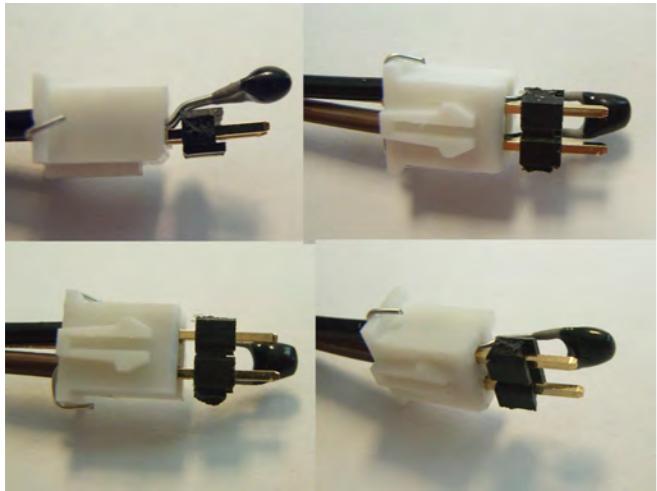
SB110

**SEE LAYOUT DOCUMENTATION**

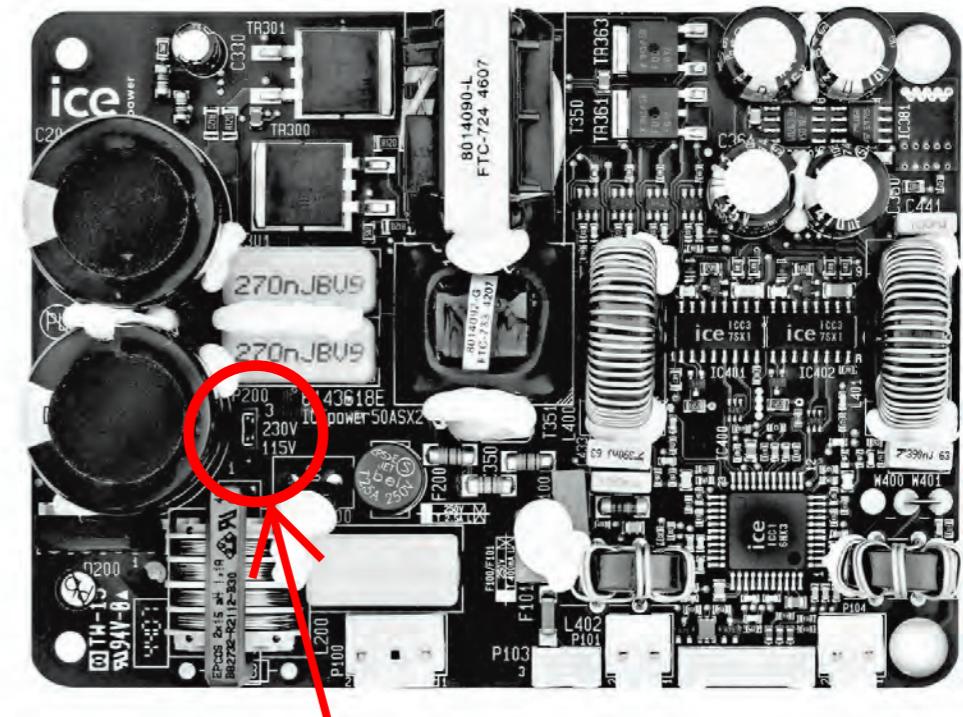
↑ SEE LAYOUT DIAGRAM ↑

# M1503 V03 PRODUCTION NOTES

- 1 - Add RTV to C6.
- 2 - R48, R49, R50, R52, R56 and R57 are used to level up their respective pots during wave soldering.
- 3 - Break the connection of XLR J4 as per diagram.
- 4 - Do not forget to add a 2-pin header to the thermistor harness assembly as shown below:



## MAINS VOLTAGE INPUT SETTING (NA<->CE)

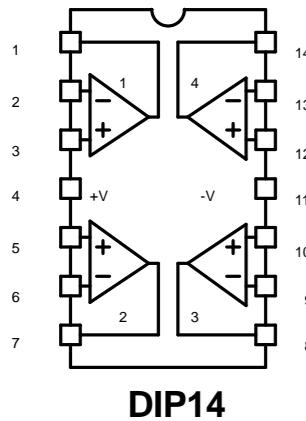


SET JUMPER P200 TO "115V" FOR NA.  
SET IT TO "230V" FOR CE.

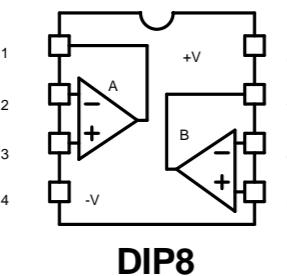
# ↑ SEE LAYOUT DIAGRAM ↑

## LEADS & PINS REFERENCE

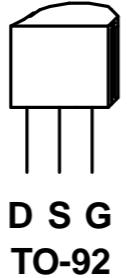
**MC33079P (YS#6804)**



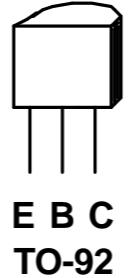
**TL072CP (YS#6882)  
MC33078P (YS#6840)**



**J109 (YS#5122)**



**MPSA13 (YS#5105)  
MPSA42 (YS#5113)**



## POTENTIOMETERS AND KNOBS

**M1503 - POTS LIST**

**MODEL(S):- SMALL BLOCK - SB110**

REF	FUNCTION	PART#	KNOB	STYLE
P1	GAIN	4486	10020	P41
P3	LOW-MID	4494	10020	P41
P4	TREBLE	4494	10020	P41
P5	BASS	4494	10020	P41
P6	HI-MID	4494	10020	P41
P8	LOW EXPANDER	4493	10020	P41
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N

## M1503 DATABASE HISTORY

**MODEL(S):- SMALL BLOCK - SB110**

#	DATE	VER#	DESCRIPTION OF CHANGE
1	08-JAN-2013	V01	FIRST PRODUCTION RELEASE
2	13-MAY-2013	V02	PC8540: Several changes. See PC.
3	09-JUL-2013	V03	PC8550: Routed auxiliary signal to headphones. - ML
4	D	V	N
5	D	V	N
6	D	V	N
7	D	V	N
8	D	V	N
9	D	V	N
10	D	V	N
11	D	V	N
12	D	V	N
13	D	V	N

ICEpower50ASX2

2x50W or 1x170W ICEpower Amplifier  
with integrated ICEpower Supply

## Block Diagram

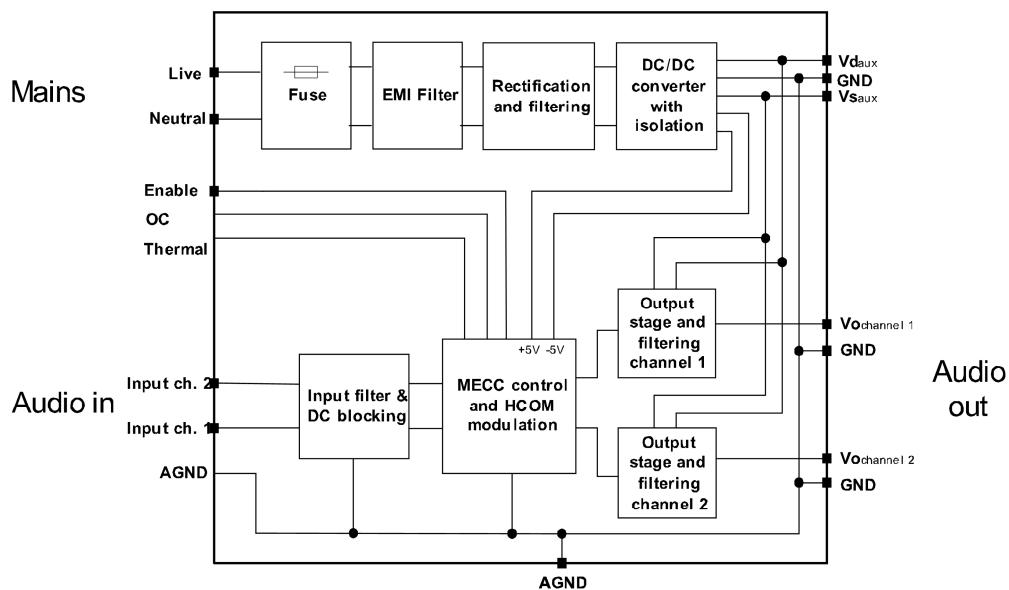


Figure 1: ICEpower50ASX2 block diagram

## Connection Diagram

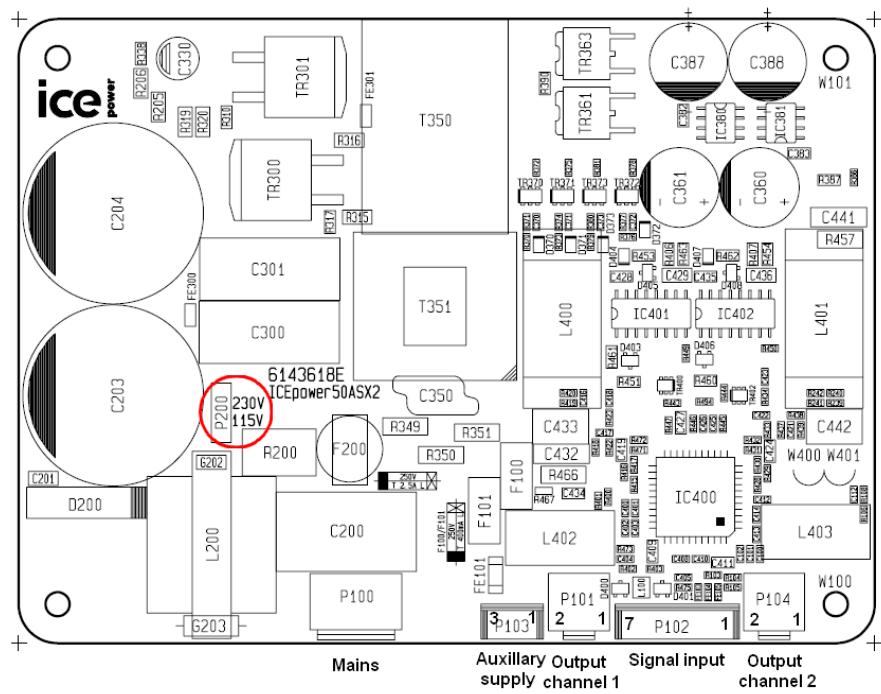


Figure 2: ICEpower50ASX2 connections

ICEpower50ASX2

2x50W or 1x170W ICEpower Amplifier  
with integrated ICEpower Supply

## Block Diagram

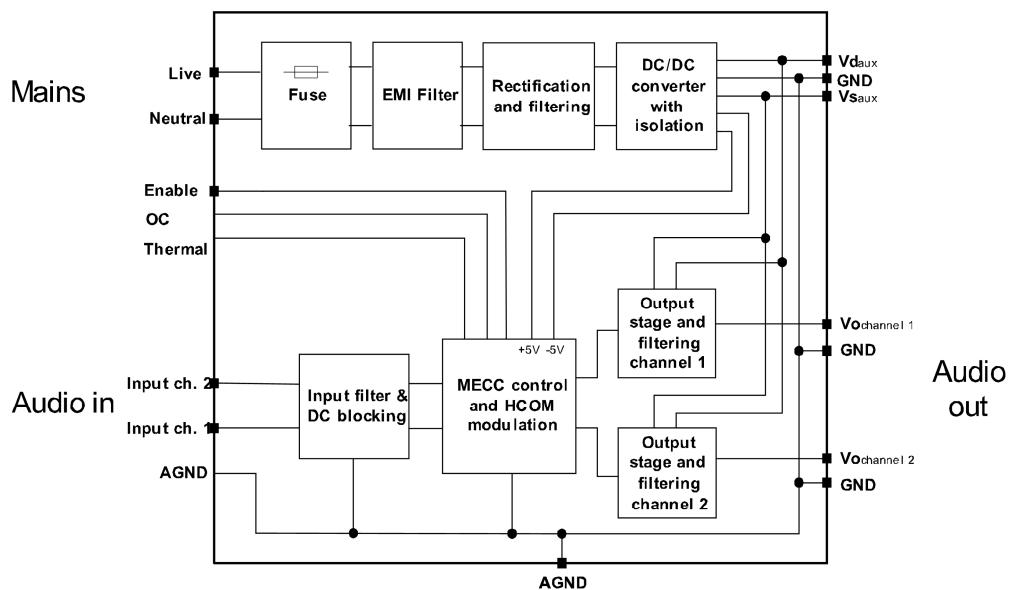


Figure 1: ICEpower50ASX2 block diagram

## Connection Diagram

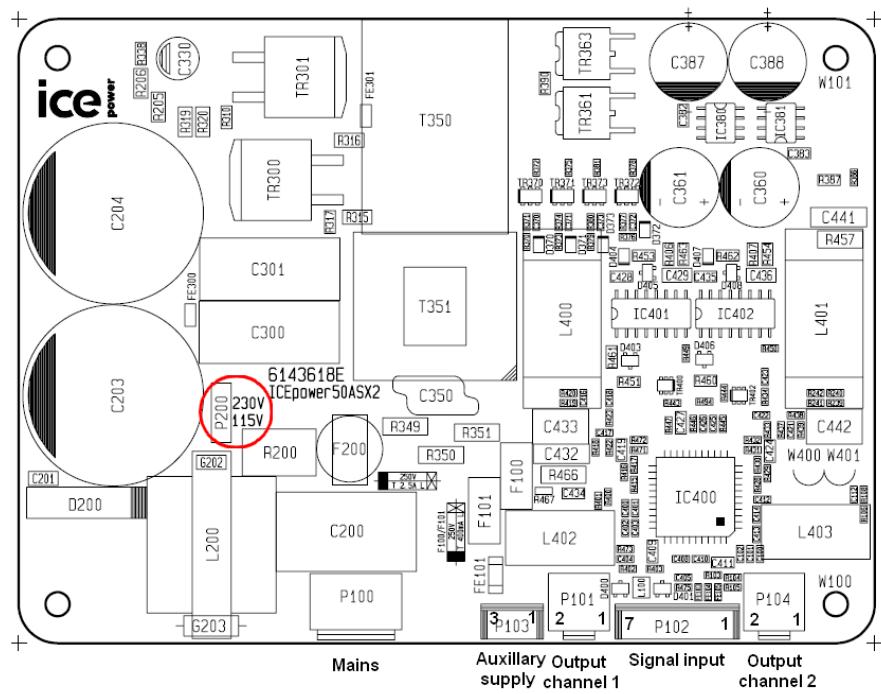


Figure 2: ICEpower50ASX2 connections