



SERVICE MANUAL

M810 / M1610

MODEL TYPE: YS1032
MODEL TYPE: YS1033

WEB ACCESS: <http://www.yorkville.com>

WORLD HEADQUARTERS CANADA

Yorkville Sound
550 Granite Court
Pickering, Ontario
L1W-3Y8 CANADA

Voice: (905) 837-8481
Fax: (905) 837-8746

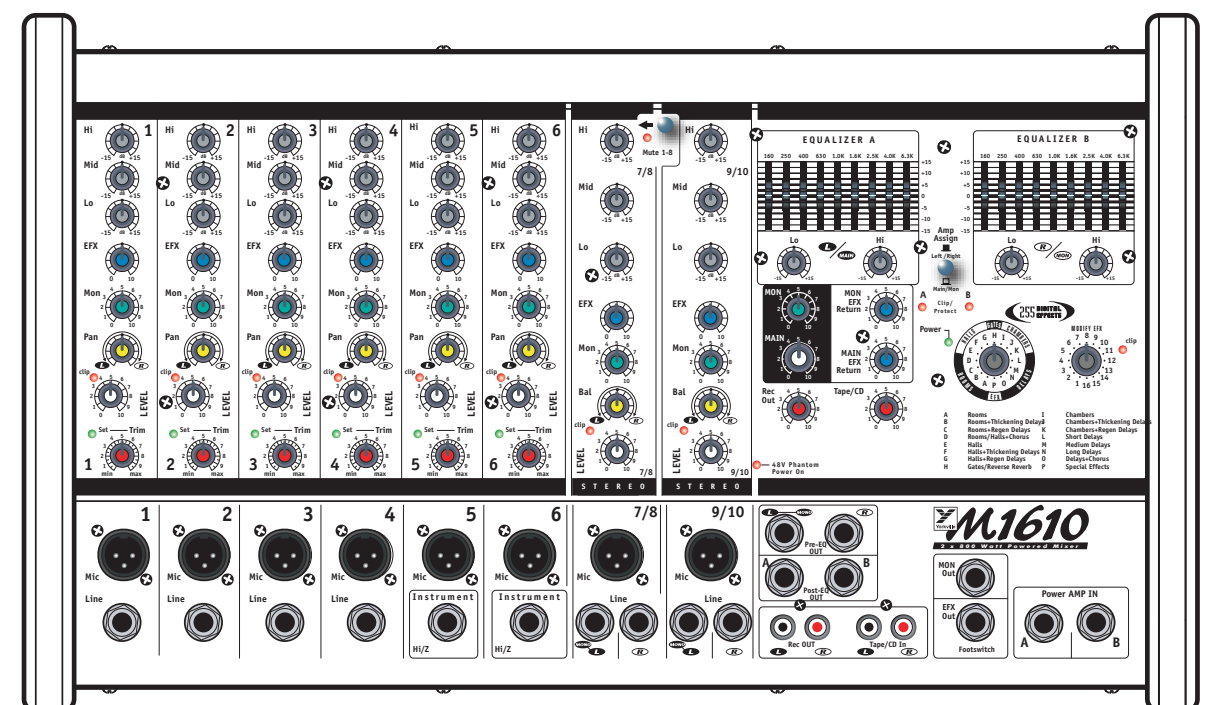
U.S.A.

Yorkville Sound Inc.
4625 Witmer Industrial Estate
Niagara Falls, New York
14305 USA

Voice: (716) 297-2920
Fax: (716) 297-3689



Quality and Innovation Since 1963
Printed in Canada



IMPORTANT SAFETY INSTRUCTIONS



INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

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.**

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**

Read Instructions

The Owner's Manual should be read and understood before operation of your unit. Please, save these instructions for future reference.

Packaging

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

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.

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.

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.

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

Power Cord

The AC supply cord should be routed so that it is unlikely that it will be damaged. If the AC supply cord is damaged DO NOT OPERATE THE UNIT.

Service

The unit should be serviced only by qualified service personnel.

Veillez Lire le Manuel

Il contient des informations qui devraient être comprises avant l'opération de votre appareil. Conservez S.V.P. ces instructions pour consultations ultérieures.

Emballage

Conservez la boîte au cas où l'appareil devait être retourner pour réparation.

Attention:

Lors de l'utilisation de produits électrique, 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.

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.

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.

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

Cordon d'Alimentation

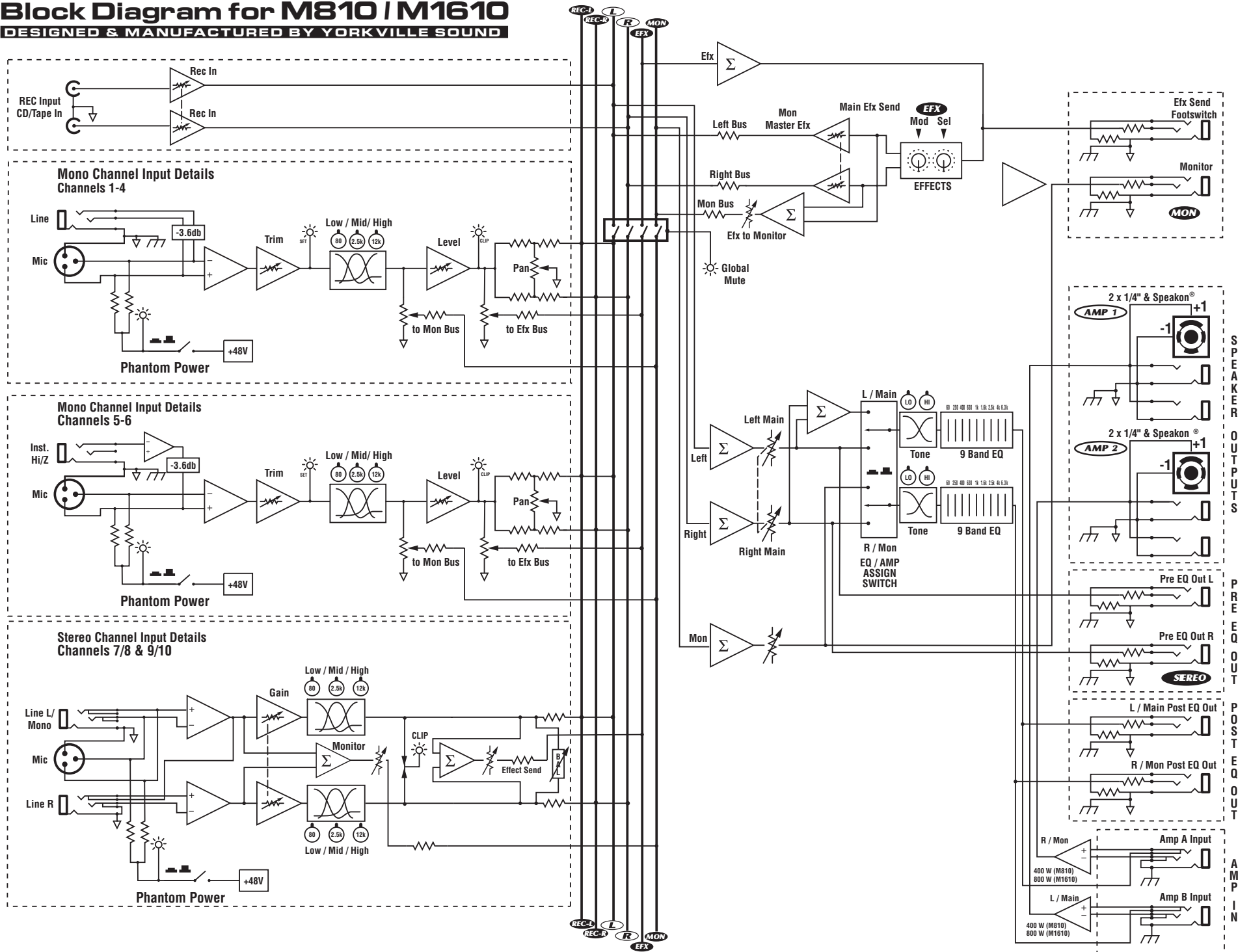
Évitez d'endommager le cordon d'alimentation. N'UTILISEZ PAS L'APPAREIL si le cordon d'alimentation est endommagé.

Service

Consultez un technicien qualifié pour l'entretien de votre appareil.

Block Diagram for M810 / M1610

DESIGNED & MANUFACTURED BY YORKVILLE SOUND

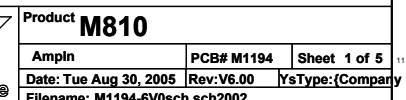
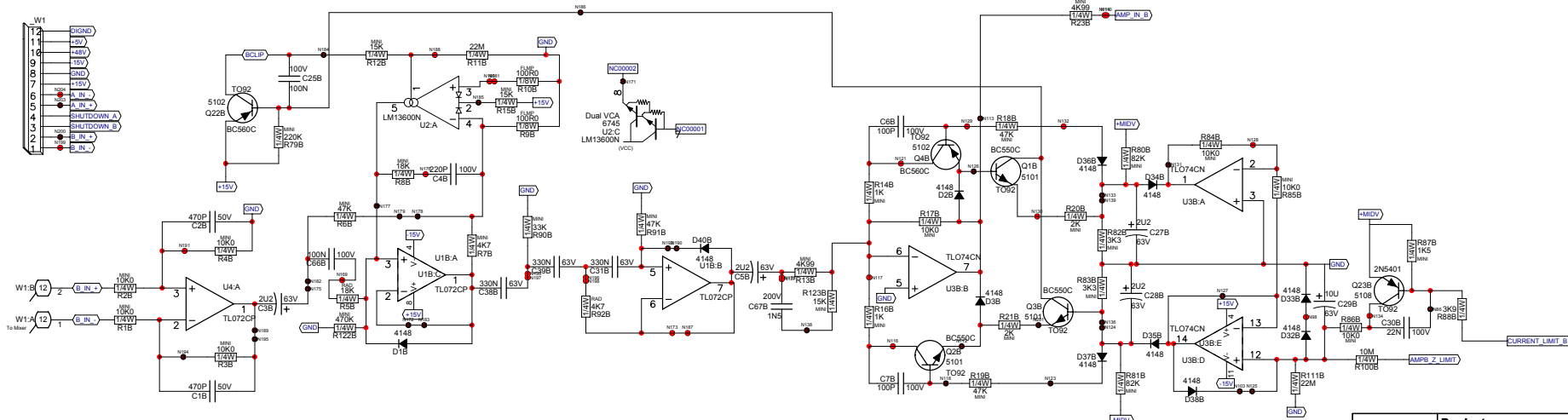


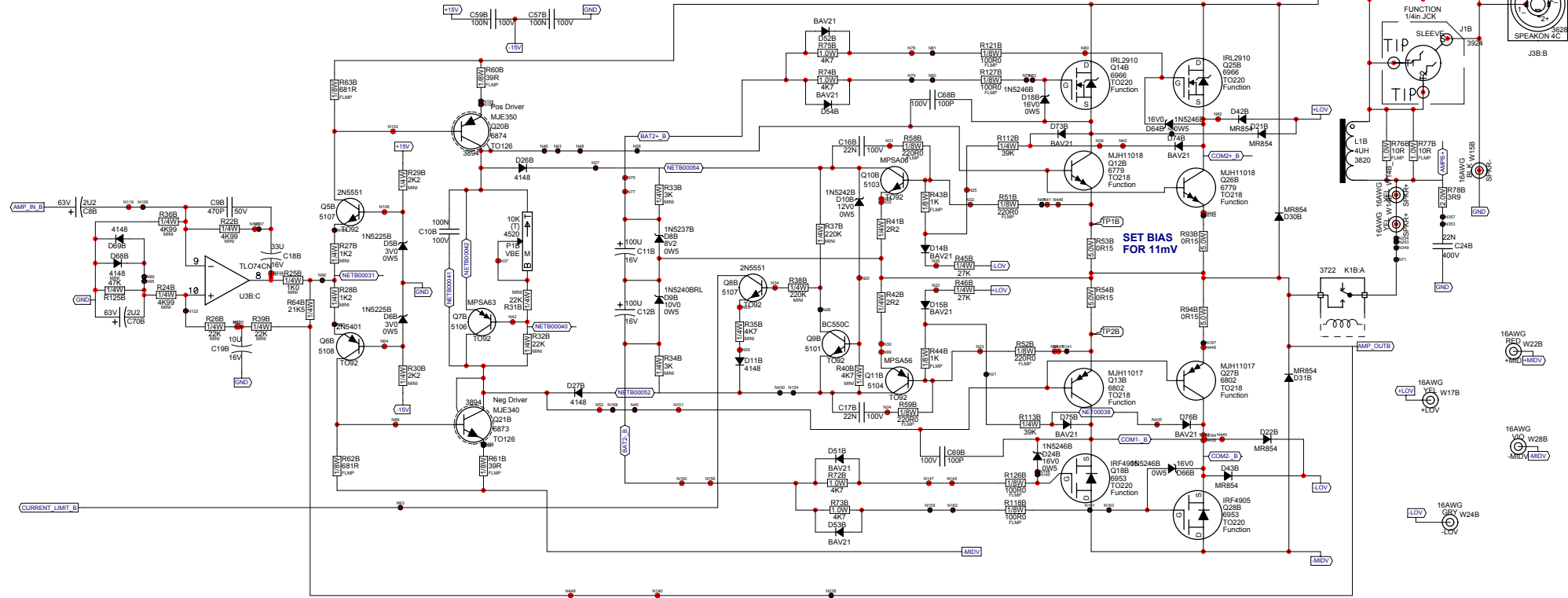
m810 Parts List 7/8/2004

YS #	Description	Qty.	YS #	Description	Qty.	YS #	Description	Qty.	YS #	Description	Qty.
3507	"28 PIN X .6" I.C DEEP SOCKET"	1	5318	220N 50V 10%CAP T&R BEAD X7R	1	2019	1/8W 100R0 1%FLAME PROOF T&R RES	12	8632	ROUND PUSH BUTTON 1/4" GREY	2
3550	44PIN I.C PLCC SOCKET	1	5233	330N 63V 5%CAP T&R RAD .2"FLM	8	4602	1/8W 100R 5% T&R RES	28	8733	5/16-18X2-1/2 GRD 5 HEX BOLT JS500	1
3557	84 PIN I.C PLCC SOCKET	1	5234	470N 63V 10%CAP T&R RAD .2"FLM	2	4921	1/4W 100R 5% 2"U T&R RES	18	3663	SNAP IEC PWR SOC W/250TAB FOR .060	1
3571	"28 PIN X .6" I.C SOCKET"	1	5240	680N 63V 10%CAP T&R RAD .2"ELM	1	4984	1/4W 150R 5%MINI T&R RES	3	3859	1/2 PLASTIC HEX SPACER #4	15
6994	44PIN I.C PLCC CRYSTAL CODEC	1	5266	680N 250V 20%CAP BLK X2' 30MM AC	1	2023	1/8W 220R0 1%FLAME PROOF T&R RES	8	8657	6-32 X 3/8" HEX SPACER ALUMINUM	7
6940	16MHZ CRYSTAL VERT 2-PIN .25"CASE	1	5257	.2U2 63V 20%CAP T&R RAD .2"EL	12	4977	1/4W 220R 5%MINI T&R RES	12	8682	#4 TEFLON WASHER .125ID .281OD .031	6
5906	RED 3MM LED 1V9 20MA .4SPCER T&R	13	5258	.4U7 63V 20%CAP T&R 8X7MM .2"EL	20	2024	1/8W 249R 2%FLAME PROOF T&R RES	4	8482	3/8 1D FLAT WASHER	16
5908	GRN 3MM LED 1V9 20MA .4SPCER T&R	7	5282	.10U 16V 20%CAP T&R 5X7MM .2"NP	35	5010	1/4W 330RX9 5% 10PIN SIP RES	1	8818	3/4 OD X 3/8 ID X .080 THICK WASHER	2
6419	BRIDGE 35A 400V WIRE LEAD G13504	2	5945	.10U 63V 20%CAP T&R RAD .2"EL	3	2028	1/8W 475R 1%FLAME PROOF T&R RES	2	3511	#6 FLAT WASHER NYLON	15
6425	BAV21 200V .0A25 DIODE T&R	12	5260	.22U 50V 20%CAP T&R RAD .2"EL	1	4980	1/4W 470R 5%MINI T&R RES	30	8485	#6 SPLIT WASHER ZINC	1
6825	1N4148 200V .0A45 DIODE T&R	94	5631	.22U 50V 20%CAP T&R 6X7MM .2"EL	14	4799	1/4W 562R 1% T&R RES	4	3524	NYLON SHWASHER ID385 OD750 T060	4
6438	1N4007 400V .1A0 DIODE T&R	1	5961	.33U 16V 20%CAP T&R RAD .2"NP	20	4922	1/4W 620R 5% 2"U T&R RES	8	3577	FIBER WASHER .625OD .380ID .03	4
6934	MR854 400V .3A0 DIODE FASREC	12	5879	.100U 16V 20%CAP T&R 8X7MM .2"EL	16	5019	1/4W 620R 5%MINI T&R RES	14	3440	4PDT MINI VERT ALT SWITCH	1
6439	1N5225B 3V0 0W5 ZENER 5% T&R	4	5618	470U 25V 20%CAP BLK 10X15MM EL	1	2030	1/8W 681R 1%FLAME PROOF T&R RES	16	3522	DPDT MINI PC VERT SNP ALT	2
6440	1N750ARL 4V7 0W5 ZENER 5% T&R	2	5896	4700U 80V 20%CAP BLK 25X50MM ELS	6	4923	1/4W 680R 5% 2"U T&R RES	4	3587	DPDT ROKR SW QUIK 250"AC/PWR ON-OFF	1
6436	1N753ARL 6V2 0W5 ZENER 5% T&R	1	5903	12000U 35V 20%CAP RAD 25X45MM ELS	2	4924	1/4W 750R 5% 2"U T&R RES	6	CH1259	M808 POWER TRFMR T&R	1
6437	1N5237B 8V2 0W5 ZENER 5% T&R	3	4581	ROT GRY 18MM 4BIT ENCODER P23	2	2031	1/8W 820R 5%FLAME PROOF T&R RES	4			
6461	1N5240BRL 10V0 0W5 ZENER 5% T&R	2	4431	.10K 5C R/A 12MM STEREO P34	2	4925	1/4W 820R 5% 2"U T&R RES	2			
6450	1N5242B 12V0 0W5 ZENER 5% T&R	4	4432	.10K B LIN 9MM P32	6	2033	1/8W 1K 2%FLAME PROOF T&R RES	4			
6486	1N5244B 14V0 0W5 ZENER 5% T&R	2	4434	.10K B LIN 9MM DETENT P32	20	4981	1/4W 1K 5%MINI T&R RES	17			
6824	1N5246B 16V0 0W5 ZENER 5% T&R	10	4438	.10K B LIN 12MM STEREO DETENTP34	4	6110	1/4W 1K0 1%MINI MF T&R RES	2			
6465	1N5250B 20V0 0W5 ZENER 5% T&R	1	4426	.20K 4B LIN 9MM P32	1	4585	1/4W 1K2 5%MINI T&R RES	25			
6475	1N5262B 51V0 0W5 ZENER 5% T&R	1	4447	.20K 15A AUD 12MM STEREO P34	1	4988	1/4W 1K5 5%MINI T&R RES	25			
6738	MC7805CT TO220 P 5V0 REG V1	1	4433	.50K B LIN 9MM P32	15	6113	1/4W 2K 5%MINI T&R RES	4			
6871	MC7915CT TO220 N 15V0 REG V2	1	4435	.50K B LIN 9MM DETENT P32	10	6104	1/4W 2K2 5%MINI T&R RES	6			
6872	MC7815CT TO220 P 15V0 REG V1	1	4437	.50K B LIN 12MM STEREO P34	2	6114	1/4W 2K49 1%MINI MF T&R RES	3			
5101	BC550C TO92 NPN TRAN T&R TB	17	4439	.50K B LIN 12MM STEREO DETENTP34	2	6124	1/4W 3K 5%MINI T&R RES	4			
5102	BC560C TO92 PNP TRANSISTOR T&R TB	38	4441	.50K 4B LIN 12MM STEREO P34	2	6136	1/4W 3K3 5%MINI T&R RES	4			
5103	MPSA06 TO92 NPN TRANSISTOR T&R TA	4	4443	.100K 5C R/A 9MM P32	8	5028	1/4W 3K74 1% T&R RES	4			
5104	MPSA56 TO92 PNP TRAN T&R TA	2	3998	.20K 1B LIN 20MM DETENT S04	18	4850	1/4W 3K9 5% T&R RES	2			
5107	2N5551 TO92 NPN TRNSISTR DARL T&RTA	4	4520	.10K TRIM POT	2	4774	1/4W 4K12 1% T&R RES	4			
5108	2N5401 TO92 PNP TRNSISTR DARL T&RTA	4	2408	8.0 AMP CIRCUIT BREAKER	1	4943	1/4W 4K7 5% 2"U T&R RES	2			
5105	MPSA13 TO92 NPN TRNSISTR DARL T&RTA	5	3820	.4UH COIL 14AWG ZOBEL HORIZONTAL	2	4982	1/4W 4K7 5%MINI T&R RES	49			
5106	MPSA63 TO92 PNP TRNSISTR DARL T&RTA	2	3489	CLIP 250X032 18-22AWG DISCO/INSL	1	6128	1/4W 4K99 1%MINI MF T&R RES	42			
6774	BD139 TO126 NPN TRAN TG	1	3490	CLIP 250X032 14-16AWG DISCO/INSL	11	6121	1/4W 6K98 1%MINI MF T&R RES	4			
6873	MJE340 TO126 NPN TRANSISTOR TG	2	3601	RING TERMINAL 16AWG WIRE & #8 SCREW	1	4926	1/4W 7K5 5% 2"U T&R RES	18			
6874	MJE350 TO126 PNP TRANSISTOR TG	2	3682	250 MALE PCB TAB REEL	11	4990	1/4W 8K2 5%MINI T&R RES	2			
6779	MJH11018(22)TO218 NPN TRAN DARL TI	4	3528	1/4" JCK PCB MT HORZ GOLD TR	2	4983	1/4W 10K 5%MINI T&R RES	109			
6802	MJH11017(23)TO218 PNP TRAN DARL TI	4	3921	1/4" JCK PCB MT VERT STER TR SWT	16	5031	1.0W 10K0 5% T&R	8			
6916	TIP107 TO220 PNP TRAN DARL TE	1	3924	1/4" JCK PCB MT VERT 2XTIP HICURNT	4	6116	1/4W 10K0 1%MINI MF T&R RES	80			
6953	IRF4905 TO220 PCH MFET	4	3466	RCA DUAL PCB MT VERT GOLD 24MM	2	4630	1/2W 15K 5% T&R RES	4			
6954	IRF3205 NCH MFET TN	4	3628	SPKON 4C PCB MT VERT 250TAB GRY #4	2	4979	1/4W 15K 5%MINI T&R RES	28			
6804	MC33079P IC QUAD OP AMP	4	4010	XLR FEMLE PCB MT VERT 24MM AA-SERIES	8	4954	1/4W 18K 5% 2"U T&R RES	12			
6882	TL072CP IC FET DUAL OP AMP	15	3451	EYELET SMALL .0089 OD PLATED	47	6125	1/4W 18K 5%MINI T&R RES	2			
6889	TL074CN IC QUAD O/A T.J ONLY	11	3856	FAN 80MM X 80MM 39CFM 12VDC 200MA	2	6123	1/4W 20K0 1%MINI MF T&R RES	5			
6745	LM13600N IC XCONDUCTANCE AMP	4	3894	AAVID 5972-B H/S W/TAB B.O.	5	4777	1/4W 21K5 1% T&R RES	2			
6943	74HC374N IC OCTAL DTYPE LATCH	1	3501	B52200F006 COMP WASH #4 SMALL	3	6118	1/4W 22K 5%MINI T&R RES	19			
6962	74HC30 IC 8-INPUT NAND GATE	1	3719	DUAL XSISTOR TO218 SPRING YEL PLTD	4	6129	1/4W 27K 5%MINI T&R RES	7			
6992	1365-102 IC DIGITAL REVERB ASIC	1	3977	QUAD XSISTOR TO220SPRING YELLOWZINC	3	6122	1/4W 33K 5%MINI T&R RES	15			
6993	1250-101 IC SRAM 32KX8	1	8889	RUBBER GROMMET #2183-034-BLK	1	4868	1/4W 36K 5% T&R RES	4			
7003	27C512 PROM IC YS M1610 16X16 PRG	1	3810	4" NYLON CABLE TIE	8	4927	1/4W 47K 5% 2"U T&R RES	4			
8812-UP	EPROM 27C512 - BLANK	1	8397	GREY STYLE 2 KNOB	2	6119	1/4W 47K 5%MINI T&R RES	26			
6467	10K 10% THERMISTOR NTC TO-92	2	8637	ROUND PUSH BUTTON 1/4" BLK 24MM	1	4928	1/4W 56K 5% 2"U T&R RES	14			
5405	27P 200V 5%CAP T&R RAD CER.2"NPO	2	9915	RED SOFT GRAY RIB KNOB 0-DEG	8	4848	1/4W 62K 5% T&R RES	4			
5408	47P 100V 10%CAP T&R BEAD NPO	33	9916	GRY SOFT GRAY RIB KNOB 0-DEG	28	6139	1/4W 62K 5%MINI T&R RES	6			
5199	100P 100V 2%CAP T&R RAD CER.2"NPO	8	9917	GRN SOFT GRAY RIB KNOB 0-DEG	9	4586	1/4W 82K 5%MINI T&R RES	4			
5412	220P 100V 10%CAP T&R BEAD NPO	14	9918	BLU SOFT GRAY RIB KNOB 0-DEG	10	4929	1/4W 82K 5% 2"U T&R RES	14			
5416	470P 50V 10%CAP T&R BEAD NPO	6	9919	YEL SOFT GRAY RIB KNOB 0-DEG	8	4942	1/4W 100K 5% 2"U T&R RES	1			
5422	1N 50V 10%CAP T&R BEAD NPO	20	9920	WHT SOFT GRAY RIB KNOB 0-DEG	9	6120	1/4W 100K 5%MINI T&R RES	1			
5273	1N5 200V 5%CAP T&R RAD CER.2"NPO	16	3426	8" 3/16 SJT AC LINE CORD REMOV-B-CSA	1	4991	1/4W 133K 1%MINI T&R RES	12			
5208	2N2 400V 5%CAP T&R RAD .2"FLM	5	3638	12 CIR CABLE HOLDER .098	1	4796	1/4W 180K 5%MINI T&R RES	4			
5274	2N2 200V 5%CAP T&R RAD CER.2"NPO	6	8701	4-40 KEPS NUT ZINC	3	6126	1/4W 220K 5%MINI T&R RES	12			
5275	3N3 100V 5%CAP T&R RAD .2"FLM	2	8800	6-32 KEPS NUT ZINC	15	6127	1/4W 470K 5%MINI T&R RES	5			
5276	3N3 200V 5%CAP T&R RAD CER.2"NPO	4	8841	10-32 KEPS NUT ZINC	7	4948	1/4W 1M 5% 2"U T&R RES	2			
5209	4N7 250V 5%CAP T&R RAD .2"FLM	4	8797	5/16-18 KEPS NUT JS500	1	4951	1/4W 4M7 5% 2"U T&R RES	7			
6451	4N7 250V 20%CAP BLK Y' 10MM AC	1	3796	ELASTOMER PAD TSIL 1.0X0.8	8	6132	1/4W 8M2 5%MINI T&R RES	6			
5204	10N 100V 10%CAP T&R RAD .2"FLM	5	3580	12 CIR WAFER WLCK VT 0.1"	1	4809	1/4W 10M 5% T&R RES	2			
5205	15N 100V 10%CAP T&R RAD .2"FLM	4	3818	EMI SUPPRESSION FERRITE BEAD T&R	2	4751	1/4W 22M 5% T&R RES	10			
5207	18N 100V 5%CAP T&R RAD .2"FLM	6	4597	22AWG STRAN TC WIR JMP	15	3519	28" 12C-26AWG RIB 1 WLCK HDR 098	1			
5210	22N 100V 10%CAP T&R RAD .2"FLM	27	4599	22AWG SOLID SC WIR T&R JMP	237	3736	RELAY 1C 10AMP DC24 017MA PC-S	2			
5840	22N 400V 10%CAP BLK RAD POLY FLM	2	4749	5.0W 0R15 5% BLK RES	8	8865	4-40 X 5/16 PAN PH MS JS500	33			
6435	22N 275V 20%CAP BLK X2' 15MM AC	1	2006	1.0W 1R 5%FLAME PROOF T&R RES	4	8729	#4 X 3/8 FLAT QUAD TYPE A JS500 BLK	4			
5222	33N 100V 10%CAP T&R RAD .2"FLM	10	4911	1/4W 2R2 5% T&R RES	4	8842	#4 X 5/16 PAN QUAD TYPE A JS500 BLK	18			
5224	47N 100V 10%CAP T&R RAD .2"FLM	6	4748	2.0W 3R9 5% T&R	2	8831	6-32 X 1/4 PAN PH TAPTITE ZN	1			
5226	68N 100V 5%CAP T&R RAD .2"FLM	2	2008	1.0W 10R 5%FLAME PROOF T&R RES	4	8832	6-32 X 1/4 PAN PH TAPTITE JS500	28			
5212	100N 63V 5%CAP T&R RAD .2"FLM	35	4605	1/8W 10R 5% T&R RES	4	8801	6-32 X 3/8 PAN PH TAPTITE JS500	1			
5228	100N 100V 5%CAP T&R RAD .2"FLM	1	2013	1/8W 22R1 1%FLAME PROOF T&R RES	4	8823	6-32 X 1 PAN PH TAPTITE JS500	3			
5314	100N 50V 10%CAP T&R BEAD X7R	12	4709	5.0W 22R 5% BLK RES	1	8809	10-32 X 1/4 PAN PH TAPTITE JS500	8			
5229	150N 63V 10%CAP T&R RAD .2"FLM	2	2016	1/8W 39R 2%FLAME PROOF T&R RES	4	8833	10-32 X 7/8 HEX CAP GRD 5 JS500	7			
5231	220N 63V 10%CAP T&R RAD .2"FLM	2	6134	1/4W 47R 5%MINI T&R RES	6	8893	10-32 X 1 FLAT PHILIPS TT JS500 BLK	10			

m1610 Parts List 7/8/2004

YS #	Description	Qty.	YS #	Description	Qty.	YS #	Description	Qty.	YS #	Description	Qty.
3507	28 PIN X .6" I.C DEEP SOCKET"	1	5314	100N 50V 10%CAP T&R BEAD X7R	12	2013	1/8W 22R1 1%FLAME PROOF T&R RES	2	8829	6-32 X 3/8 FLAT PH TAPTITE BOI#4 HEA	3
3550	44PIN I.C PLCC SOCKET	1	5229	150N 63V 10%CAP T&R RAD .2"FLM	2	4709	5.0W 22R 5% BLK RES	1	8761	6-32 X 1/2 PAN PHIL MS ZINC CLEAR	16
3557	84 PIN I.C PLCC SOCKET	1	5231	220N 63V 10%CAP T&R RAD .2"FLM	2	2016	1/8W 39R 2%FLAME PROOF T&R RES	4	8823	6-32 X 1 PAN PH TAPTITE JS500	3
3571	28 PIN X .6" I.C. SOCKET"	1	5318	220N 50V 10%CAP T&R BEAD X7R	1	6134	1/4W 47R 5%MINI T&R RES	6	8809	10-32 X 1/4 PAN PH TAPTITE JS500	8
6994	44PIN I.C PLCC CRYSTAL CODEC	1	5233	330N 63V 5%CAP T&R RAD .2"FLM	8	2019	1/8W 100R0 1%FLAME PROOF T&R RES	24	8833	10-32 X 7/8 HEX CAP GRD 5 JS500	6
6940	16MHZ CRYSTAL VERT 2-PIN .25"CASE	1	5234	470N 63V 10%CAP T&R RAD .2"FLM	2	4602	1/8W 100R 5% T&R RES	28	8893	10-32 X 1 FLAT PHILIPS TT JS500 BLK	10
5906	RED 3MM LED I1V9 20MA .4SPCER T&R	13	5240	680N 63V 10%CAP T&R RAD .2"FLM	1	4921	1/4W 100R 5% .2"U T&R RES	18	8632	ROUND PUSH BUTTON 1/4" GREY	2
5908	GRN 3MM LED I1V9 20MA .4SPCER T&R	7	5257	.2U2 63V 20%CAP T&R RAD .2"EL	12	4984	1/4W 150R 5%MINI T&R RES	3	8736	5/16-18X2-3/4 GRD 5 HEX BOLT JS500	1
6419	BRIDGE 35A 400V WIRE LEAD G13504	3	5258	.4U7 63V 20%CAP T&R 8X7MM .2"EL	20	2023	1/8W 220R0 1%FLAME PROOF T&R RES	8	3663	SNAP IEC PWR SOC W/.250TAB FOR .060	1
6425	BAV21 200V .0A25 DIODE T&R	20	5282	.10U 16V 20%CAP T&R 5X7MM .2"NP	35	4977	1/4W 220R 5%MINI T&R RES	12	8608	NYLON SPACER .200 OD .145 ID .110 L	16
6825	1N4148 75V .0A45 DIODE T&R	90	5945	.10U 63V 20%CAP T&R RAD .2"EL	3	2024	1/8W 249R 2%FLAME PROOF T&R RES	4	3859	1/2 PLASTIC HEX SPACER #4	5
6438	1N4007 400V 1A0 DIODE T&R	1	5260	.22U 50V 20%CAP T&R RAD .2"EL	1	5010	1/4W 330RX9 5% 10PIN SIP RES	1	8657	6-32 X 3/8" HEX SPACER ALUMINUM	17
6934	MR854 400V 3A0 DIODE FASREC	20	5631	.22U 50V 20%CAP T&R 6X7MM .2"EL	14	2028	1/8W 475R 1%FLAME PROOF T&R RES	2	8682	#4 TEFLON WASHER .125ID .28IOD .031	6
6733	BAT85 30V .0A2 DIODE SCHTKYT&R	4	5961	.33U 16V 20%CAP T&R RAD .2"NP	24	4980	1/4W 470R 5%MINI T&R RES	30	8482	3/8 1D FLAT WASHER	21
6439	1N5225B 3V0 .0W5 ZENER 5% T&R	4	5879	100U 16V 20%CAP T&R 8X7MM .2"EL	16	4799	1/4W 562R 1% T&R RES	4	8818	3/4 OD X 3/8 ID X .080 THICK WASHER	2
6440	1N750ARL 4V7 .0W5 ZENER 5% T&R	2	5618	470U 25V 20%CAP BLK 10X15MM EL	1	4922	1/4W 620R 5% .2"U T&R RES	8	3511	#6 FLAT WASHER NYLON	15
6436	1N753ARL 6V2 .0W5 ZENER 5% T&R	1	5896	4700U 80V 20%CAP BLK 25X50MM ELS	6	5019	1/4W 620R 5%MINI T&R RES	14	8485	#6 SPLIT WASHER ZINC	1
6437	1N5237B 8V2 .0W5 ZENER 5% T&R	3	5898	8200U 50V 20% CAPACITOR 25X50MM ELS	4	2030	1/8W 681R 1%FLAME PROOF T&R RES	16	3524	NYLON SHWASHER ID385 OD750 T060	4
6461	1N5240BRL 10V0 .0W5 ZENER 5% T&R	2	5903	12000U 35V 20%CAP RAD 25X45MM ELS	2	4923	1/4W 680R 5% .2"U T&R RES	4	3577	FIBER WASHER .625OD .380ID .03	4
6450	1N5242B 12V0 .0W5 ZENER 5% T&R	4	4581	ROT GRY 18MM 4BIT ENCODER P23	2	4924	1/4W 750R 5% .2"U T&R RES	6	3440	4PDT MINI VERT ALT SWITCH	1
6486	1N5244B 14V0 .0W5 ZENER 5% T&R	4	4431	.10K 5C R/A 12MM STEREO P34	2	2031	1/8W 820R 5%FLAME PROOF T&R RES	4	3522	DPDT MINI PC VERT SNP ALT	2
6824	1N5246B 16V0 .0W5 ZENER 5% T&R	20	4432	.10K B LIN 9MM P32	6	4925	1/4W 820R 5% .2"U T&R RES	2	3587	DPDT ROKR SW QUIK 250"AC/PWR ON-OFF	1
6465	1N5250B 20V0 .0W5 ZENER 5% T&R	1	4434	.10K B LIN 9MM DETENT P32	20	2033	1/8W 1K 2%FLAME PROOF T&R RES	4	CH1258	M1610 POWER TRFMR TRD	1
6475	1N5262B 51V0 .0W5 ZENER 5% T&R	1	4438	.10K B LIN 12MM STEREO DETENTP34	4	4981	1/4W 1K 5%MINI T&R RES	17			
6738	MC7805CT TO220 P 5V0 REG V1	1	4426	.20K 4B LIN 9MM P32	1	6110	1/4W 1K0 1%MINI MF T&R RES	2			
6871	MC7915CT TO220 N 15V0 REG V2	1	4447	.20K 15A AUD 12MM STEREO P34	1	4585	1/4W 1K2 5%MINI T&R RES	21			
6872	MC7815CT TO220 P 15V0 REG V1	1	4433	.50K B LIN 9MM P32	15	4988	1/4W 1K5 5%MINI T&R RES	25			
5101	BC550C TO92 NPN TRAN T&R TB	17	4435	.50K B LIN 9MM DETENT P32	10	6105	1/4W 1K8 5%MINI T&R RES	4			
5102	BC560C TO92 PNP TRANSISTOR T&R TB	38	4437	.50K B LIN 12MM STEREO P34	2	6113	1/4W 2K 5%MINI T&R RES	4			
5103	MPSA06 TO92 NPN TRANSISTOR T&R TA	4	4439	.50K B LIN 12MM STEREO DETENTP34	2	6104	1/4W 2K2 5%MINI T&R RES	6			
5104	MPSA56 TO92 PNP TRAN T&R TA	2	4441	.50K 4B LIN 12MM STEREO P34	2	6114	1/4W 2K49 1%MINI MF T&R RES	3			
5107	2N5551 TO92 NPN TRNSISTR DARL T&RTA	4	4443	100K 5C R/A 9MM P32	8	6124	1/4W 3K 5%MINI T&R RES	4			
5108	2N5401 TO92 PNP TRNSISTR DARL T&RTA	4	3998	.20K 1B LIN 20MM DETENT S04	18	5028	1/4W 3K74 1% T&R RES	4			
5105	MPSA13 TO92 NPN TRNSISTR DARL T&RTA	5	4520	.10K TRIM POT	1	4850	1/4W 3K9 5% T&R RES	2			
5106	MPSA63 TO92 PNP TRNSISTR DARL T&RTA	2	3606	12.0 AMP CIRCUIT BREAKER	1	4774	1/4W 4K12 1% T&R RES	4			
6774	BD139 TO126 NPN TRAN TG	1	3820	.4UH COIL 14AWG ZOBEL HORIZONTAL	2	4943	1/4W 4K7 5% .2"U T&R RES	2			
6808	MJE15032 TO220 NPN TRAN TE	2	3489	CLIP 250X032 18-22AWG DISCOINSL	1	4982	1/4W 4K7 5%MINI T&R RES	49			
6809	MJE15033 TO220 PNP TRAN TE	2	3490	CLIP 250X032 14-16AWG DISCOINSL	11	6128	1/4W 4K99 1%MINI MF T&R RES	42			
6873	MJE340 TO126 NPN TRANSISTOR TG	2	3601	RING TERMINAL 16AWG WIRE & #8 SCREW	1	6141	1/4W 5K6 5%MINI T&R RES	4			
6874	MJE350 TO126 PNP TRANSISTOR TG	2	3682	250 MALE PCB TAB REEL	13	6121	1/4W 6K98 1%MINI MF T&R RES	4			
6916	TIP107 TO220 PNP TRAN DARL TE	1	3528	1/4" JCK PCB MT HORZ GOLD TR	2	4926	1/4W 7K5 5% .2"U T&R RES	18			
6953	IRF4905 TO220 PCH MFET	8	3921	1/4" JCK PCB MT VERT STER TR SWT	16	4990	1/4W 8K2 5%MINI T&R RES	2			
6954	IRF3205 NCH MFET TN	8	3924	1/4" JCK PCB MT VERT 2XTIP HICURNT	4	4983	1/4W 10K 5%MINI T&R RES	109			
6909	MJ21196 TO3 NPN TRANSISTOR TH	4	3466	RCA DUAL PCB MT VERT GOLD 24MM	2	5031	1.0W 10K0 5% T&R	16			
6910	MJ21195 TO3 PNP TRANSISTOR TH	4	3628	SPKON 4C PCB MT VERT 250TAB GRY #4	2	6116	1/4W 10K0 1%MINI MF T&R RES	80			
6804	MC33079P IC QUAD OP AMP	4	4010	XLR FEML PCB MT VERT 24MM AA-SERIES	8	4630	1/2W 15K 5% T&R RES	6			
6882	TL072CP IC FET DUAL OP AMP	15	3451	EYELET SMALL .089 OD PLATED	63	4979	1/4W 15K 5%MINI T&R RES	30			
6889	TL074CN IC QUAD O/A T.I ONLY	11	3856	FAN 80MM X 80MM 39CFM 12VDC 200MA	2	4954	1/4W 18K 5% .2"U T&R RES	12			
6745	LM13600N IC XCONDUCTANCE AMP	4	3894	AAVID 5972-B H/5 W/TAB B.O.	5	6125	1/4W 18K 5%MINI T&R RES	2			
6943	74HC374N IC OCTAL DTYPE LATCH	1	3501	B52200F006 COMP WASH #4 SMALL	3	6123	1/4W 20K0 1%MINI MF T&R RES	5			
6962	74HC30 IC 8-INPUT NAND GATE	1	3977	QUAD XSISTOR TO220SPRING YELLOWZINC	6	4777	1/4W 21K5 1% T&R RES	2			
6992	1365-102 IC DIGITAL REVERB ASIC	1	8889	RUBBER GROMMET #2183-034-BLK	1	6118	1/4W 22K 5%MINI T&R RES	17			
6993	1250-101 IC SRAM 32KX8	1	3810	4" NYLON CABLE TIE	10	6129	1/4W 27K 5%MINI T&R RES	7			
7003	27C512 PROM IC YS M1610 16X16 PRG	1	8397	GREY STYLE 2 KNOB	2	6122	1/4W 33K 5%MINI T&R RES	15			
6981/2	4EPROM 27C512 - BLANK	1	8637	ROUND PUSH BUTTON 1/4" BLK 24MM	1	4868	1/4W 36K 5% T&R RES	4			
6467	10K 10% THERMISTOR NTC TO-92	2	9915	RED SOFT GRAY RIB KNOB 0-DEG	8	4927	1/4W 47K 5% .2"U T&R RES	4			
5405	27P 200V 5%CAP T&R RAD CER.2"NPO	2	9916	GRY SOFT GRAY RIB KNOB 0-DEG	28	6119	1/4W 47K 5%MINI T&R RES	26			
5408	47P 100V 10%CAP T&R BEAD NPO	33	9917	GRN SOFT GRAY RIB KNOB 0-DEG	9	4928	1/4W 56K 5% .2"U T&R RES	14			
5199	100P 100V 2%CAP T&R RAD CER.2"NPO	8	9918	BLU SOFT GRAY RIB KNOB 0-DEG	10	4848	1/4W 62K 5% T&R RES	4			
5412	220P 100V 10%CAP T&R BEAD NPO	14	9919	YEL SOFT GRAY RIB KNOB 0-DEG	8	6139	1/4W 62K 5%MINI T&R RES	6			
5416	470P 50V 10%CAP T&R BEAD NPO	6	9920	WHT SOFT GRAY RIB KNOB 0-DEG	9	4929	1/4W 82K 5% .2"U T&R RES	14			
5422	1N 50V 10%CAP T&R BEAD NPO	20	3426	8' 3/16 SJT AC LINE CORD REMOV-B-CSA	1	4942	1/4W 100K 5% .2"U T&R RES	1			
5273	1N5 200V 5%CAP T&R RAD CER.2"NPO	16	3638	12 CIR CABLE HOLDER .098	1	6120	1/4W 100K 5%MINI T&R RES	1			
5208	2N2 400V 5%CAP T&R RAD .2"FLM	5	8701	4-40 KEPS NUT ZINC	3	4991	1/4W 133K 1%MINI T&R RES	16			
5274	2N2 200V 5%CAP T&R RAD CER.2"NPO	6	8760	6-32 KEPS NUT TIN PLATED	16	4796	1/4W 180K 5%MINI T&R RES	4			
5275	3N3 100V 5%CAP T&R RAD .2"FLM	2	8800	6-32 KEPS NUT ZINC	11	6126	1/4W 220K 5%MINI T&R RES	12			
5276	3N3 200V 5%CAP T&R RAD CER.2"NPO	4	8841	10-32 KEPS NUT ZINC	6	6127	1/4W 470K 5%MINI T&R RES	5			
5209	4N7 250V 5%CAP T&R RAD .2"FLM	4	8797	5/16-18 KEPS NUT JS500	1	4948	1/4W 1M 5% .2"U T&R RES	2			
6451	4N7 250V 20%CAP BLK "Y" 10MM AC	1	3796	ELASTOMER PAD TSIL 1.0X0.8	6	4951	1/4W 4M7 5% .2"U T&R RES	7			
5204	10N 100V 10%CAP T&R RAD .2"FLM	5	8581	CUSTOM PBL TRANSISTOR SPACER	6	6132	1/4W 8M2 5%MINI T&R RES	6			
5205	15N 100V 10%CAP T&R RAD .2"FLM	4	3580	12 CIR WAFER WLCK VT 0.1"	1	4809	1/4W 10M 5% T&R RES	2			
5207	18N 100V 5%CAP T&R RAD .2"FLM	6	3818	EMI SUPPRESSION FERRITE BEAD T&R	2	4751	1/4W 22M 5% T&R RES	10			
5210	22N 100V 10%CAP T&R RAD .2"FLM	27	4597	22AWG STRAN TC WIR J&P	15	3519	28" 12C-26AWG RIB 1 WLCK HDR 098	1			
5840	22N 400V 10%CAP BLK RAD POLY FLM	2	4599	22AWG SOLID SC WIR T&R JMP	239	3722	RELAY 1A 30AMP DC24 030MA PC-C	2			
6435	22N 275V 20%CAP BLK "X2" 15MM AC	1	4745	5.0W .0R1 5% BLK RES	8	8865	4-40 X 5/16 PAN PH MS JS500	33			
5222	33N 100V 10%CAP T&R RAD .2"FLM	10	2006	1.0W 1R 5%FLAME PROOF T&R RES	4	8729	#4 X 3/8 FLAT QUAD TYPE A JS500 BLK	4			
5224	47N 100V 10%CAP T&R RAD .2"FLM	6	4911	1/4W 2R2 5% T&R RES	4	8842	#4 X 5/16 PAN QUAD TYPE A JS500 BLK	18			
5226	68N 100V 5%CAP T&R RAD .2"FLM	2	4748	2.0W 3R9 5% T&R	2	8831	6-32 X 1/4 PAN PH TAPTITE ZN	1			
5212	100N 63V 5%CAP T&R RAD .2"FLM	35	2008	1.0W 10R 5%FLAME PROOF T&R RES	4	8832	6-32 X 1/4 PAN PH TAPTITE JS500	28			
5228	100N 100V 5%CAP T&R RAD .2"FLM	1	4605	1/8W 10R 5% T&R RES	4	8801	6-32 X 3/8 PAN PH TAPTITE JS500	1			



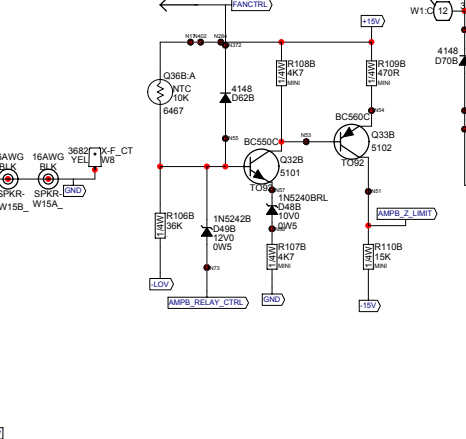
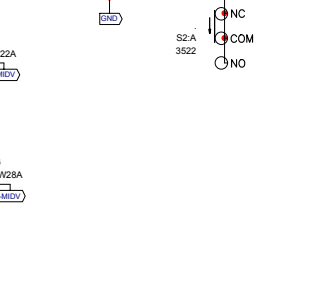
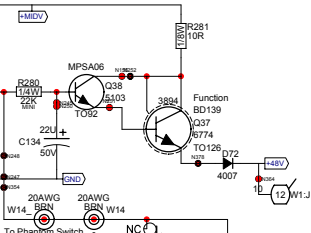


Product **M810 Amp B**

Channel B PCB# M1194 Sheet 3 of 5

Date: Tue Aug 30, 2005 Rev: V6.00 YsType: (Company)

Filename: M1194-6V0sch.sch2002



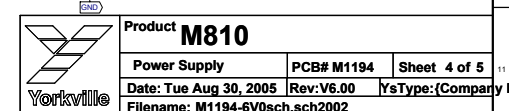
The image contains two circuit diagrams for a 100W 12V car stereo amplifier, labeled K1A.B (top) and K1B.B (bottom).

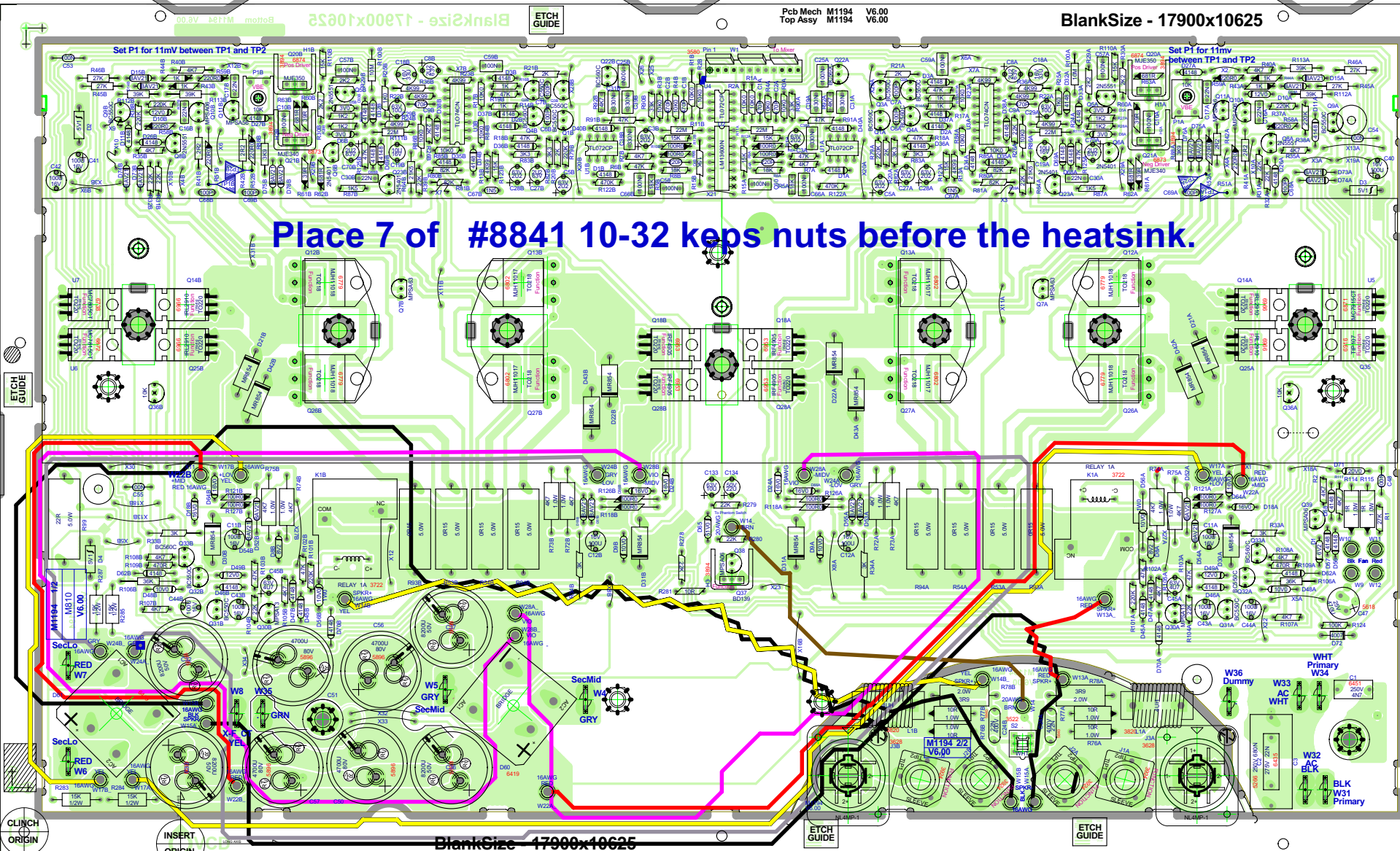
Top Circuit (K1A.B):

- Power Input:** 12V and 0V inputs connected to a 100W 16V speaker.
- Driver Stage:** MPSA13 PNP transistor, base connected to 12V via R101A (220K) and R102A (47K). Emitter to 0V, collector to 12V via R103A (47K).
- Output Stage:** BC550C NPN transistor, base connected to 12V via R101B (220K) and R102B (47K). Emitter to 0V, collector to 12V via R103B (47K).
- Relay Control:** D46A diode connected to 12V and 0V, output labeled AMPB_RELAY_CTRL.
- Other Components:** C45A (407), C44A (22K), D47A (1N4740A), D45A (1N4740A), R104A (100K), R104B (100K).

Bottom Circuit (K1B.B):

- Power Input:** 12V and 0V inputs connected to a 100W 16V speaker.
- Driver Stage:** MPSA13 PNP transistor, base connected to 12V via R101B (220K) and R102B (47K). Emitter to 0V, collector to 12V via R103B (47K).
- Output Stage:** BC550C NPN transistor, base connected to 12V via R101A (220K) and R102A (47K). Emitter to 0V, collector to 12V via R103A (47K).
- Relay Control:** D46B diode connected to 12V and 0V, output labeled AMPB_RELAY_CTRL.
- Other Components:** C45B (407), C44B (22K), D47B (1N4740A), D45B (1N4740A), R104B (100K), R104A (100K).



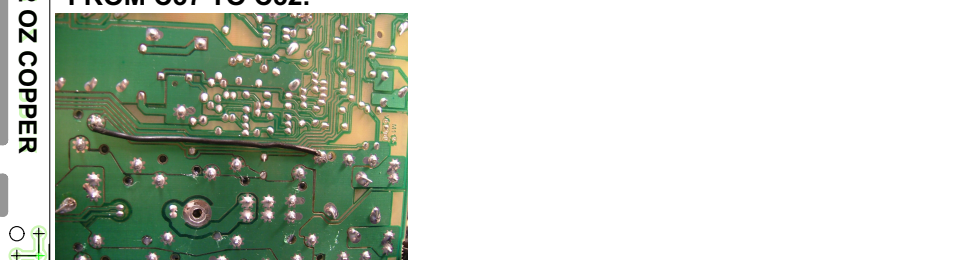


M1194.PCB_DATABASE_HISTORY			#	DATE	VER#	DESCRIPTION OF CHANGE
MODEL(S):-	M810		24			
#	DATE	VER#	25	10 Jan. 2004	1.00	Rationalize wire refiles
1	10 Jan. 2004	1.00	26	24 Feb. 2004	1.00	Add speaker jacks to output section
2	10 Mar. 2004	1.00	27	10 Mar. 2004	1.00	Enlarge cutouts for 8841 nuts
3	1-APR-2004	1.10	28	1-APR-2004	1.10	PC#6674 Change R31A,B 15k->22k (4979->6118)
4	15-APR-2004	1.20	29	15-APR-2004	1.20	PC#6678 Chg. R5A,B 56k->18k, R22A,B 56k->3k3
5	21-APR-2004	1.20	30	21-APR-2004	1.20	R33A,B 56k->3k3, R80A,B, R81A,B 133k->100k
6	5-MAY-2004	2.00	31	5-MAY-2004	2.00	PC#6681 Modified route to let grn wire pass near power cap
7	13 Sept. 2004	2.11	32	13 Sept. 2004	2.11	PC#6686 R60&R61(A,B) 100k->20k, ADDED D71, D72
8	JUN/17/2004	2.10	33	JUN/17/2004	2.10	PC# 6707 Q12 (A+B) Q26 (A+B) TIP142 -> MJH11018
9			34			Q13 (A+B), Q27 (A+B) TIP147 -> MJH11017
10			35			TC:PC#6753 Moved HS alignment hole to match HS
11			36			PC#6808 R72,R73,R74,R75 FROM 10K0 1W TO 4K7 1W
12			37			D8 A/B 12V0 TO 8V2, D9A/B 14V0 TO 10V0, D10A/B 16V0 -
13			38			TO 12V0, ADD R112A/B, R113A/B (36K), D73A/B, D74A/B
14			39			D75A/B, D76A/B (BAV21), R45A/B, R46A/B 36K TO 30K
15			40			REMOVE D16,D17, R47,R48,R49, R50 (ALL A/B)
16			41			ADD JUMPERS X1 TO X12
17			42			PC#6794: AC CLEARANCE FIX
18			43			FIXED MASK SPREAD TO 30MIL
19	MAR-24-2005	5.00	44	MAR-24-2005	5.10	CHANGE IRL3205 #6954 TO IRL2910 #6966
20	APR-13-2005	5.10	45	APR-13-2005	5.10	PLACE MICA UNDER MIDDLE TIER MOSFETS
21			46			PC#6920:GT:R106A/B #6122 33K->#4868 36K, D56A/B
22	JUN-29-2005	6.00	47	JUN-29-2005	6.00	#6400 4V7/0W5->#6484 10V1W, C32&C33#5903 12000U/
23			48			
			49			
			50			

M1194.PCB_DATABASE_HISTORY			#	DATE	VER#	DESCRIPTION OF CHANGE
MODEL(S):-	M810		24			
#	DATE	VER#	25	10-MAR-2004	V02	Enlarged routing for hex nuts
1	10-MAR-2004	V02	26	5-MAY-2004	V03	Added notch to routing to pass GRN wire from front
2	5-MAY-2004	V04	27	5-MAY-2004	V04	To match v2.00 changes
3	JAN-05-2005	V05	28	JAN-05-2005	V05	PC#6763 MOVE TOP LEFT HEATSINK LINE-UP HOLE
4	20 Apr. 2005	5.11	29	20 Apr. 2005	5.11	Corrected 'BlankSize' field for clinch program
5			30			Corrected pad orientations on 4520, 5840 and 3722
6			31			
7			32			
8			33			
9			34			
10			35			
11			36			
12			37			
13			38			
14			39			
15			40			
16			41			
17			42			
18			43			
19			44			
20			45			
21			46			
22			47			
23			48			
24			49			
25			50			

M1194.PENDING_CHANGES			#	DATE	VER#	DESCRIPTION OF CHANGE
MODEL(S):-	M810		24			
#	DATE	VER#	25			
1			26			
2			27			
3			28			
4			29			
5			30			
6			31			
7			32			
8			33			
9			34			
10			35			
11			36			
12			37			
13			38			
14			39			
15			40			
16			41			
17			42			
18			43			
19			44			
20			45			
21			46			
22			47			
23			48			
24			49			
25			50			

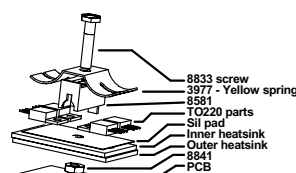
PRODUCTION NOTE 4.
PCBSA: SOLDER 3.5" 22AWG JUMPER
FROM C37 TO C32.



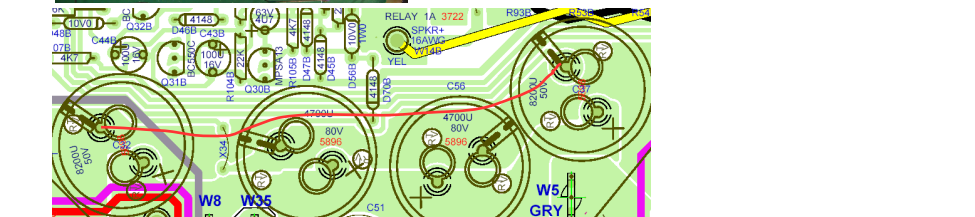
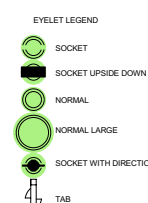
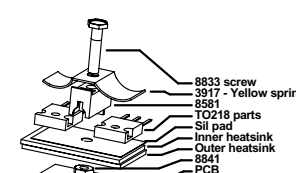
PRODUCTION NOTES

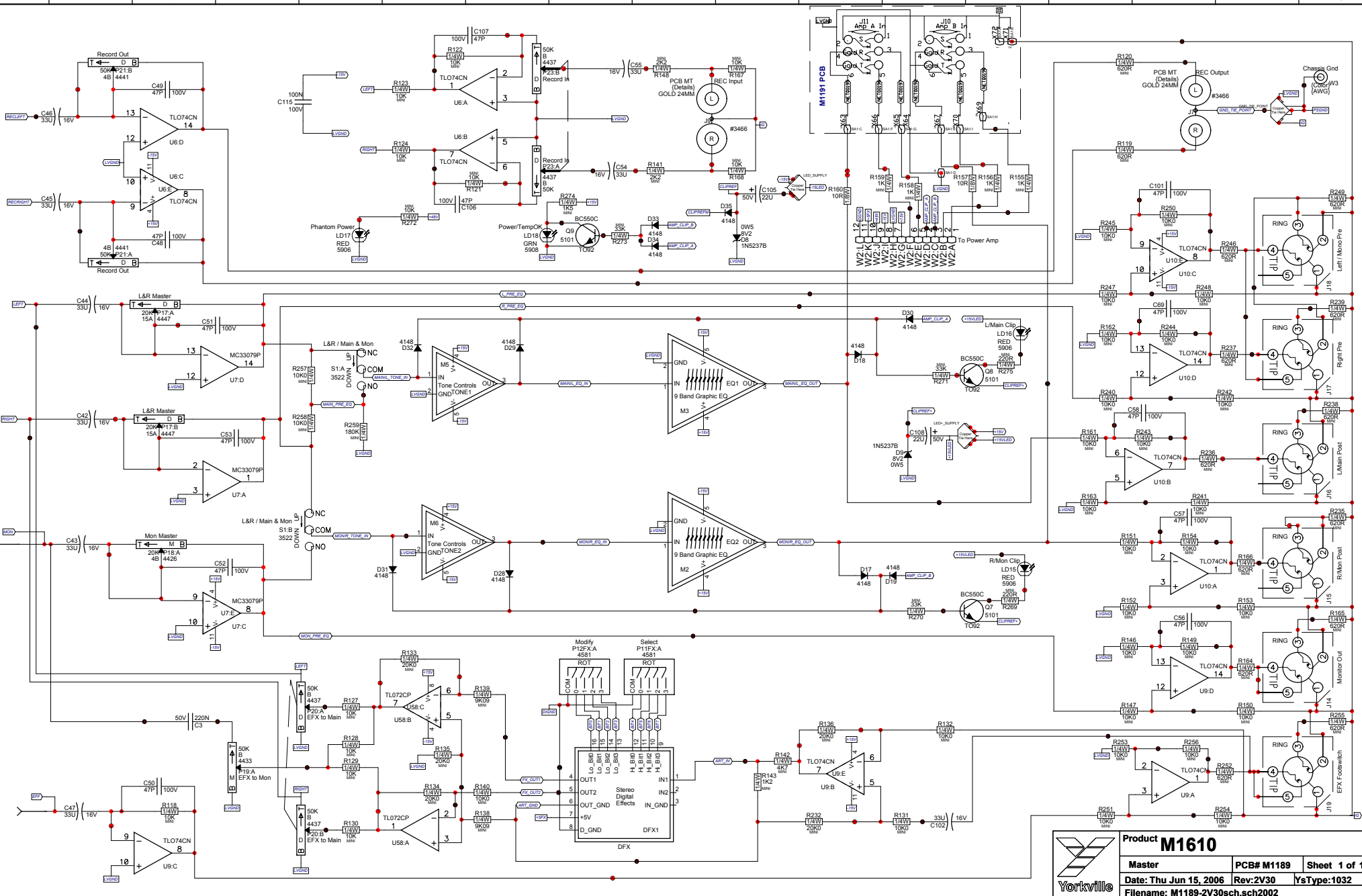
1. Use three 8832 screws to align and attach the heatsinks to the board.
2. When assembling heatsinks to Q20(A&B),Q21(A&B),Q37, ensure heatsinks are straight and sit flat against board. Add a very small amount of RTV between heatsink and board if necessary. This prevent heatsink from shorting other components.
3. Add grease under middle tier mosfets.

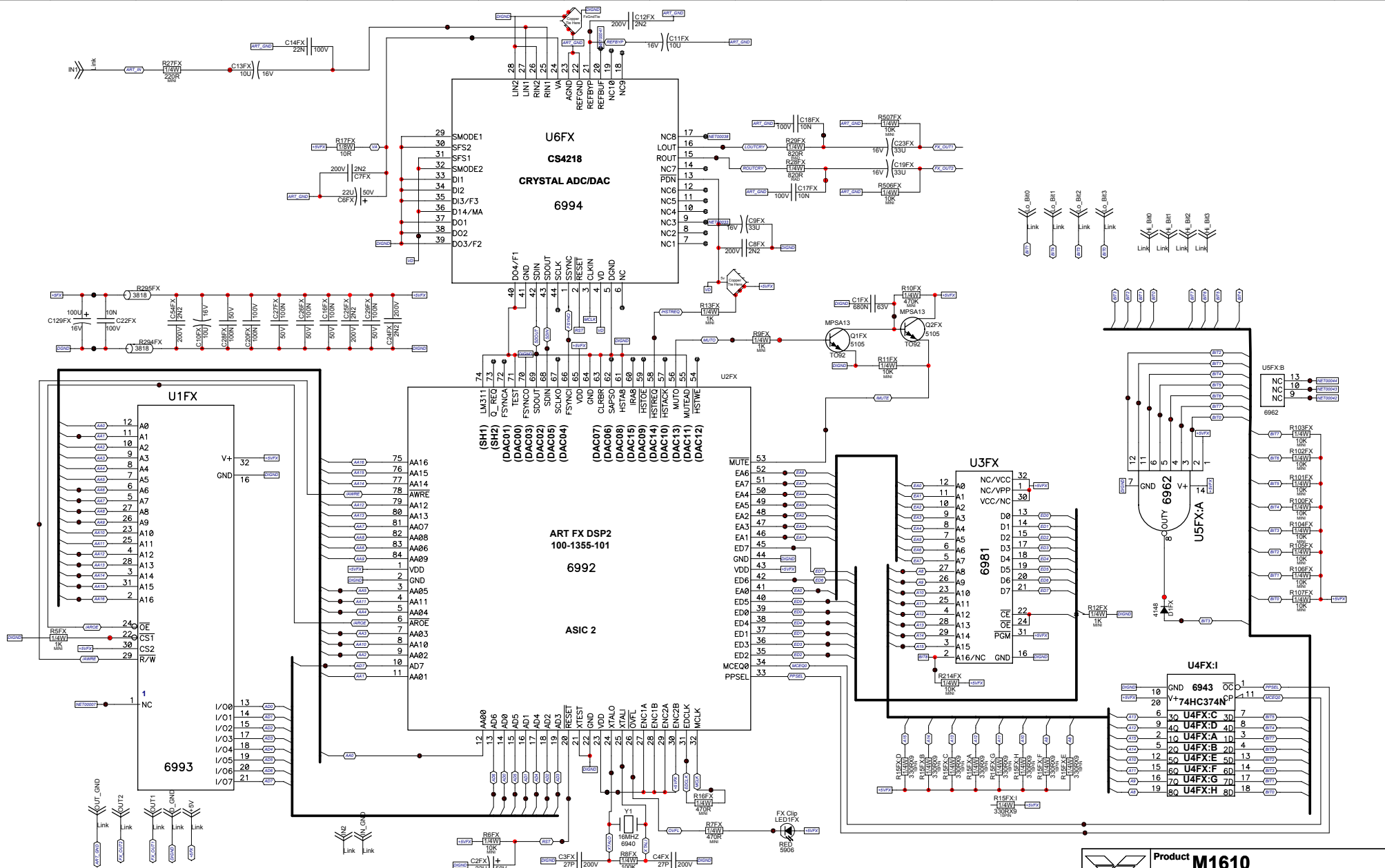
4XTO220-MTG



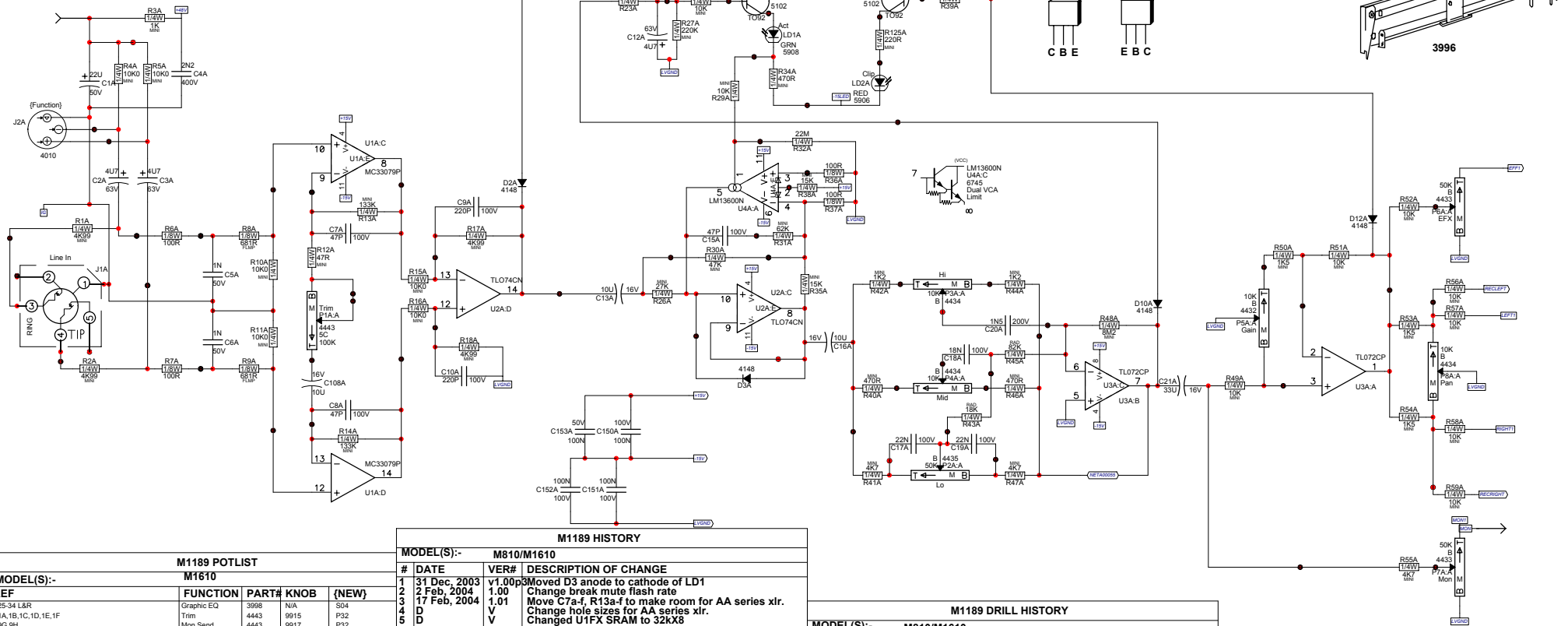
2XTO218-MTG







**Only Channel 1 is shown.
Channels 1 - 4 employ the
same circuit.**



M1189 POTLIST				
MODEL(S):-		M1610		
REF		FUNCTION	PART#	KNOB {NEW}
P25-34 L&R		Graphic EQ	3998	N/A S04
P14, 1B, 1C, 1D, 1E, 1F		Trim	4443	9915 P32
P90, 9H		Mon Send	4432	9917 P32
P5A, 5B, 5C, 5D, 5E, 5F		Level	4432	9920 P32
P15G, 15H, 6A, 6B, 6C, 6D, 6E, 6F		FX Send	4433	9918 P32
P7A, 7B, 7C, 7D, 7E, 7F		Mon Send	4433	9917 P32
P3A-F, 4A-F		Hi, Mid	4434	9916 P32
P16G, 16H, 8A-F		Bal, Pan	4434	9919 P32
P2A, 2B, 2C, 2D, 2E, 2F		Lo	4435	9916 P32
P35-36, 37, 38		Master Treble, Bass	4435	9916 P32
P17, 20		Master, FX2 Main	4437	9920 P34
P21, 23		Rec Out	4437	9920 P34
P13G, 13H, 14G, 14H		Stereo Hi, Mid	4438	9916 P34
P12G, 12H		Stereo Lo	4439	9916 P34
P11, 12X, 12FX		FX Select, Modify	4561	9388 P23
P13		TapexCD	4437	9915 P34
R		Monitor, FX2 Mon	4433	9917 P34
R		F	P	K P32
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

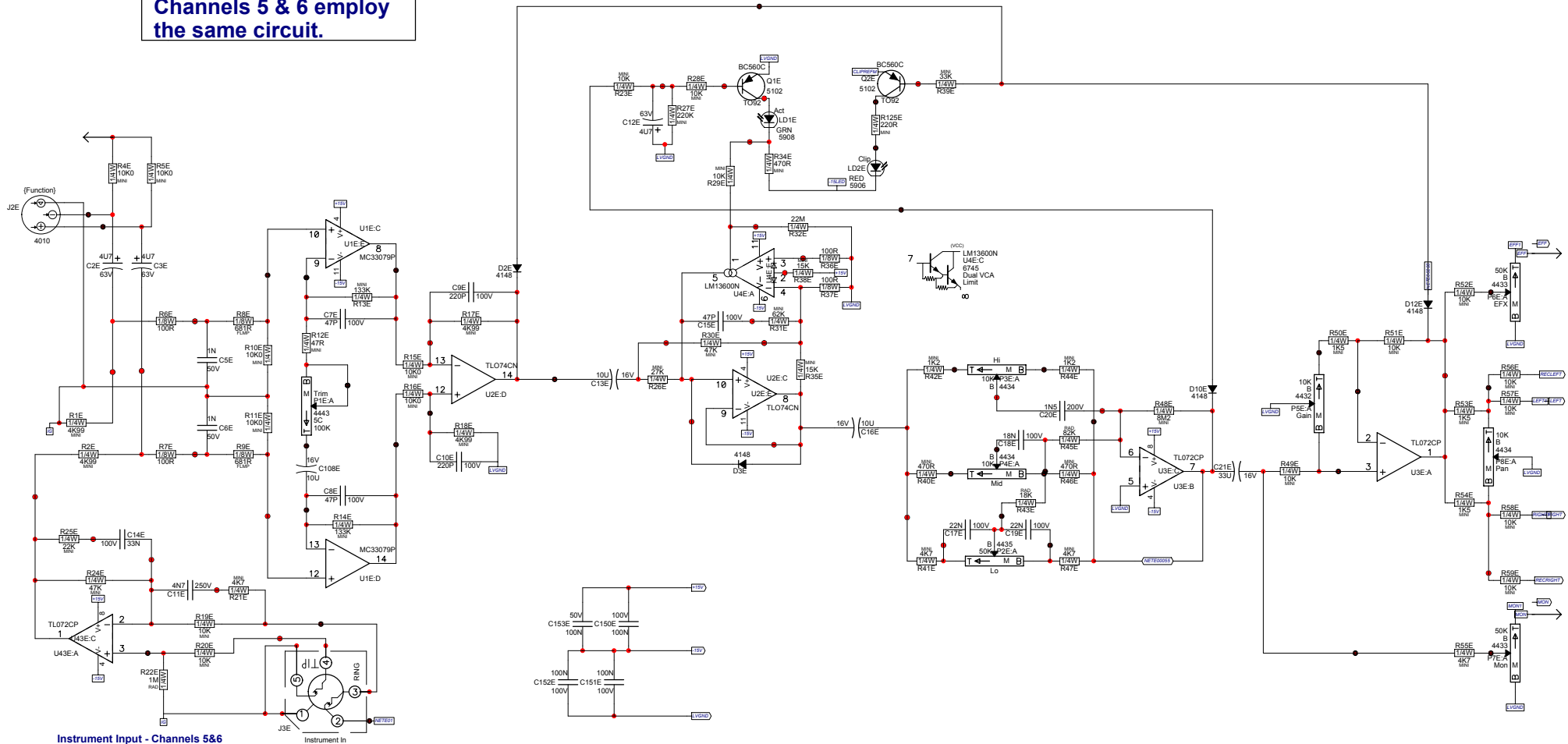
M1189 HISTORY			
MODEL(S):-		M810/M1610	
#	DATE	VER#	DESCRIPTION OF CHANGE
1	31 Dec, 2003	1.00	Moved D3 anode to cathode of LD1
2	2 Feb, 2004	1.00	Change break mute flash rate
3	17 Feb, 2004	1.01	Moved C7, R1347 to make room for AA series xlr.
4	D	1.01	Change hole sizes for AA series xlr.
5	D	1.01	Changed U1FX SRAM to 32KX8
6	24 Feb, 2004	1.02	Changed 3925 XLRs to 4010 AA series
7	APR-2004	1.02	PC#6715 Moved C150(A,C,E) to avoid hitting ICs
8	15-APR-2004	2.00	Removed routing from board - slots done on drill now
9	D	2.00	PC#6677 Chg X41 to C3(220n F), set gerber so TIE4 gets output property
10	D	2.00	PC#6678 Chg C150(A,C,E) from 470nF to 33uF
11	6-MAY-2004	2.00	PC#6686 MOVED C23FX AWAY FROM SPACER
12	Aug 4, 2004	2.00	Fixed silk screen on U6FX and U2FX
1	AUG-16-2004	2.10	PC#6718 CHANGE R140 TO 10K0 (6116), R138&R139 TO 9K09 (6112)
2	NOV-23-2004	2.10	PC#6771:#3571->#3507 SOT For #9993 SRAM (GT)
3	JAN-05-2005	2.11	PC#6792:P17 FROM 50K5 #4441 TO 20KA #4447
4	21 APR, 2005	2.11	UPDATE 3921 jacks for circuit
5	4 Aug 2005	2.20	AH, PC#6816, ADD A HOLE FOR FEEDING DRILL N
6	D	2.20	N
7	D	2.20	N
8	14 JUN 2006	2.30	AH, PC#7091, UPDTEE #5322 CHANGE DRILL SIZE TO
9	.	N	PC#6898, STRENGTHEN RCA JACK SECTION BREAKA
10	.	N	#4581 UPDATE, PROPER DRILLING ORDER
11	D	N	N
12	D	N	N
13	D	N	N
14	D	N	N

M1189 DRILL HISTORY			
MODEL(S):-		M810/M1610	
#	DATE	VER#	DESCRIPTION OF CHANGE
1	24-FEB-2004	V01	N
2	21-APR-2005	V02	N
3	4-AUG-2005	V03	PC#6818, ADDING A HOLE FOR FEEDING GREEN GN
4	D	V	N
5	D	V	N
6	D	V	N
M1189 PENDING CHANGES			
MODEL(S):-		M1610	
#	PC#	PENDING CHANGE	
1	PC	X	
2	PC	X	
3	PC	X	
4	PC	X	
5	PC	X	
6	PC	X	
*PLACE IMPLEMENTED CHANGES INTO BOARD HISTORY			



Product M1610		
Mono Ch1	PCB# M1189	Sheet 3 of 16
Date: Thu Jun 15, 2006	Rev:2V30	YsType:1032

Only Channel 5 is shown.
Channels 5 & 6 employ
the same circuit.



Product **M1610**

Mono Ch5

PCB# M1189

Sheet 7 of 16

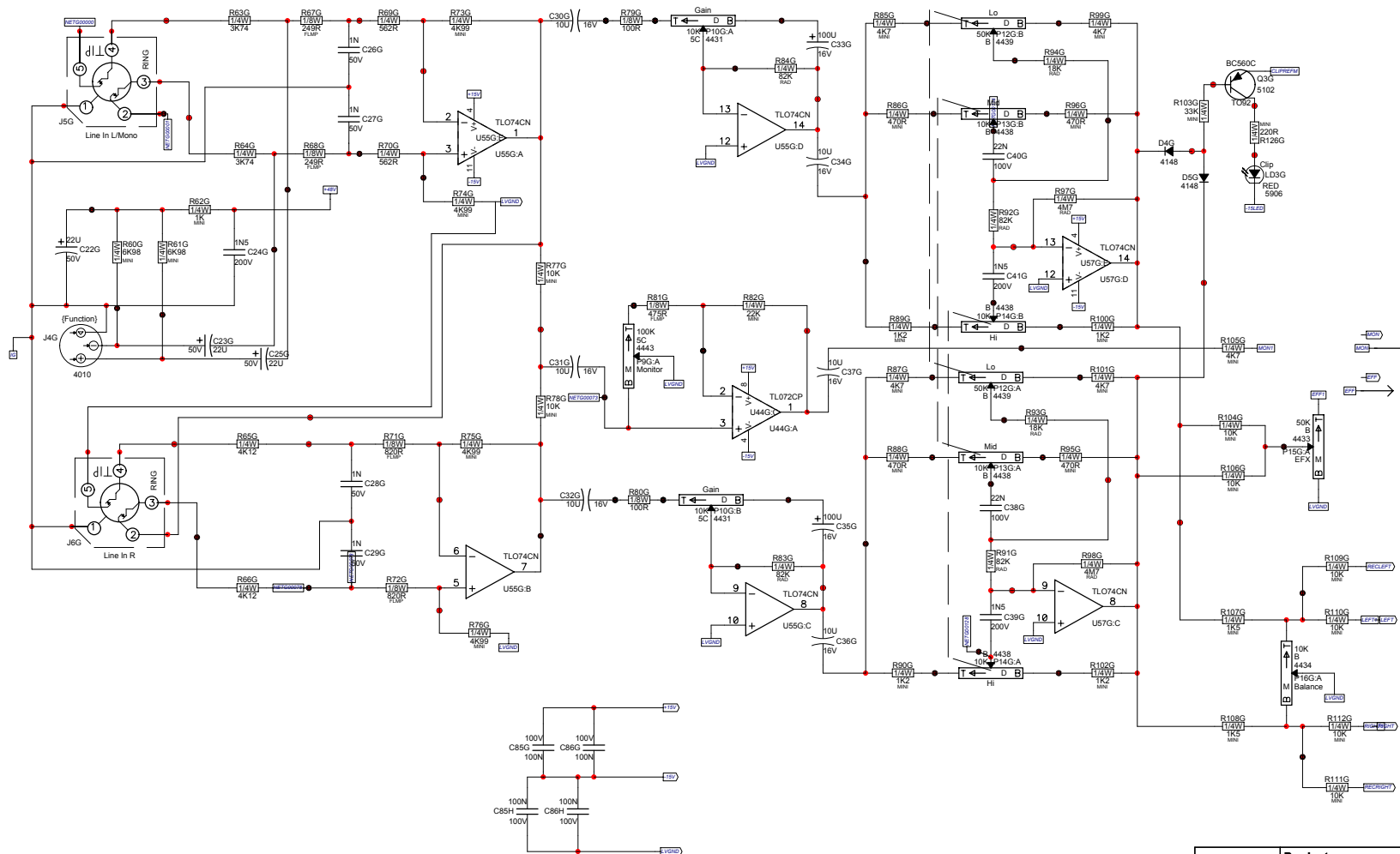
Date: Thu Jun 15, 2006

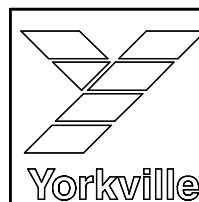
Rev:2V30

YsType:1032

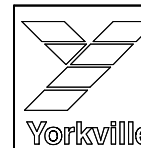
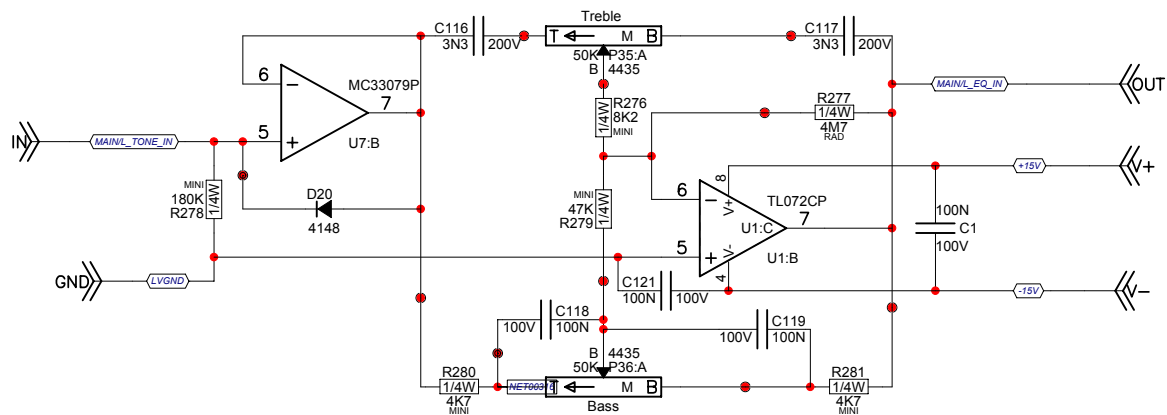
Filename: M1189-2V30sch.sch2002

Only channels 7&8 are shown.
Channels 9&10 employ
the same circuit.

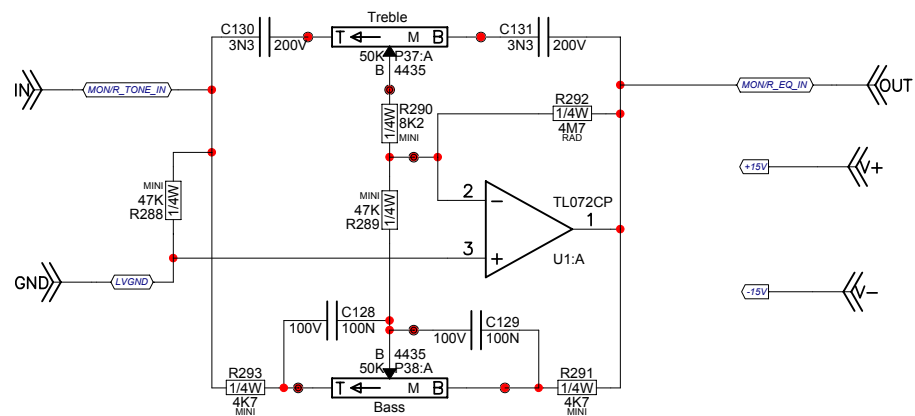




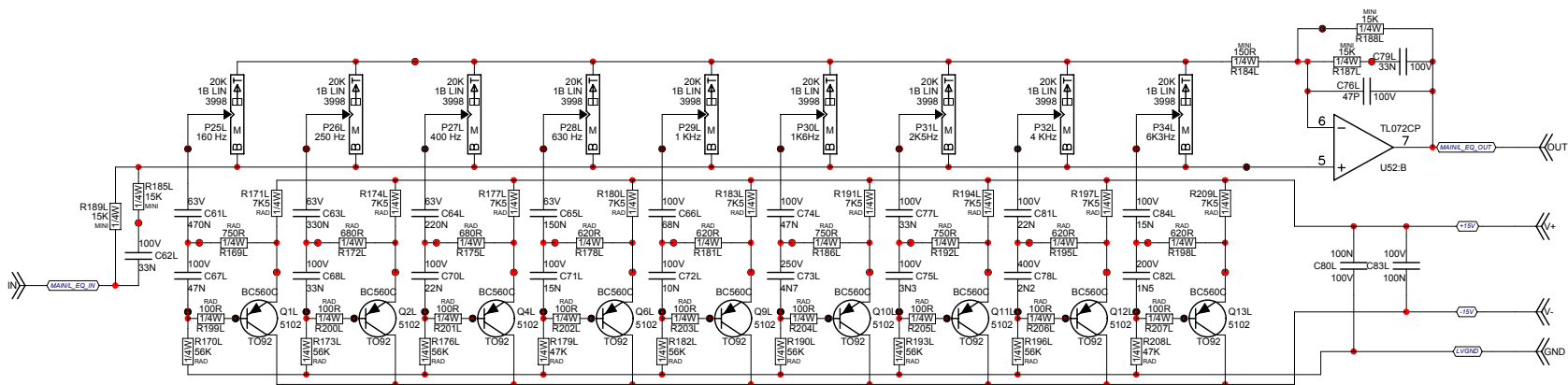
Filename: M1189-2V30sch.sch2002



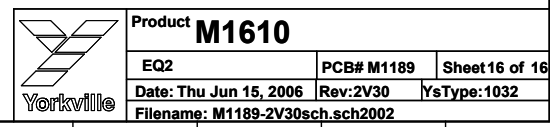
Product M1610		
TONE1	PCB# M1189	Sheet 13 of 16
Date: Thu Jun 15, 2006	Rev: 2V30	YsType: 1032
Filename: M1189-2V30sch.sch2002		



Product M1610		
TONE2	PCB# M1189	Sheet 14 of 16
Date: Thu Jun 15, 2006	Rev.:2V30	YsType:1032
Filename: M1189-2V30sch.sch2002		

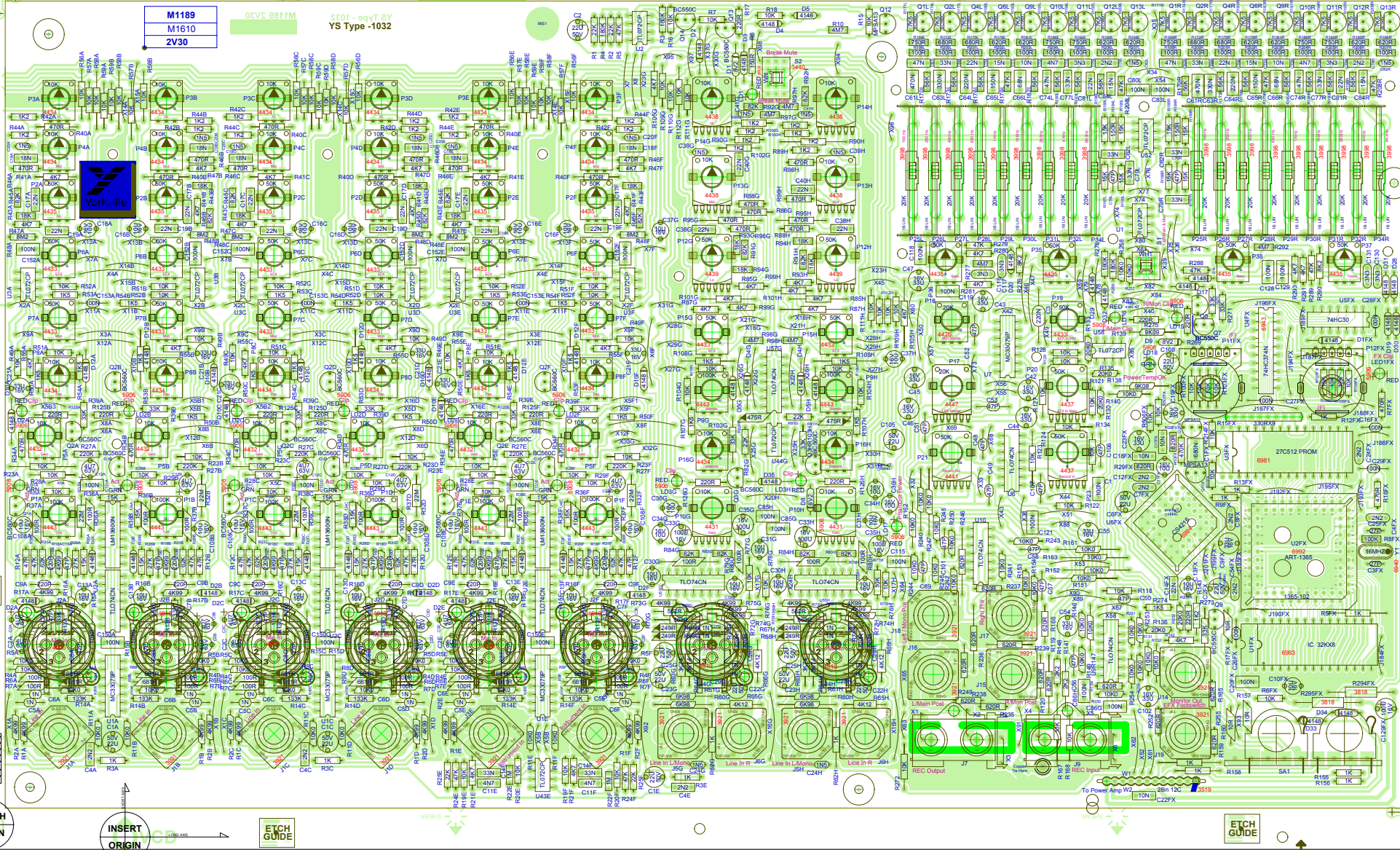


Product M1610		
EQ1	PCB# M1189	Sheet15 of 16
Date: Thu Jun 15, 2006	Rev:2V30	YsType:1032
Filename: M1189-2V30sch.sch2002		





[↴ SEE LAYOUT DOCUMENTATION ↴](#)



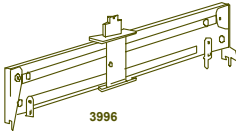


SEE LAYOUT DIAGRAM



PRODUCTION NOTES

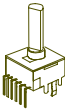
1. Stuff 1 M1191 pcb here.
2. U3FX & U1FX - Mount 28 pin IC sockets to the RIGHT side of the 32 holes.



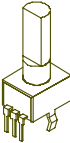
3996



"STYLE_P23"



"STYLE_P34"



"STYLE_P32"



MPSA13, 56

E B C

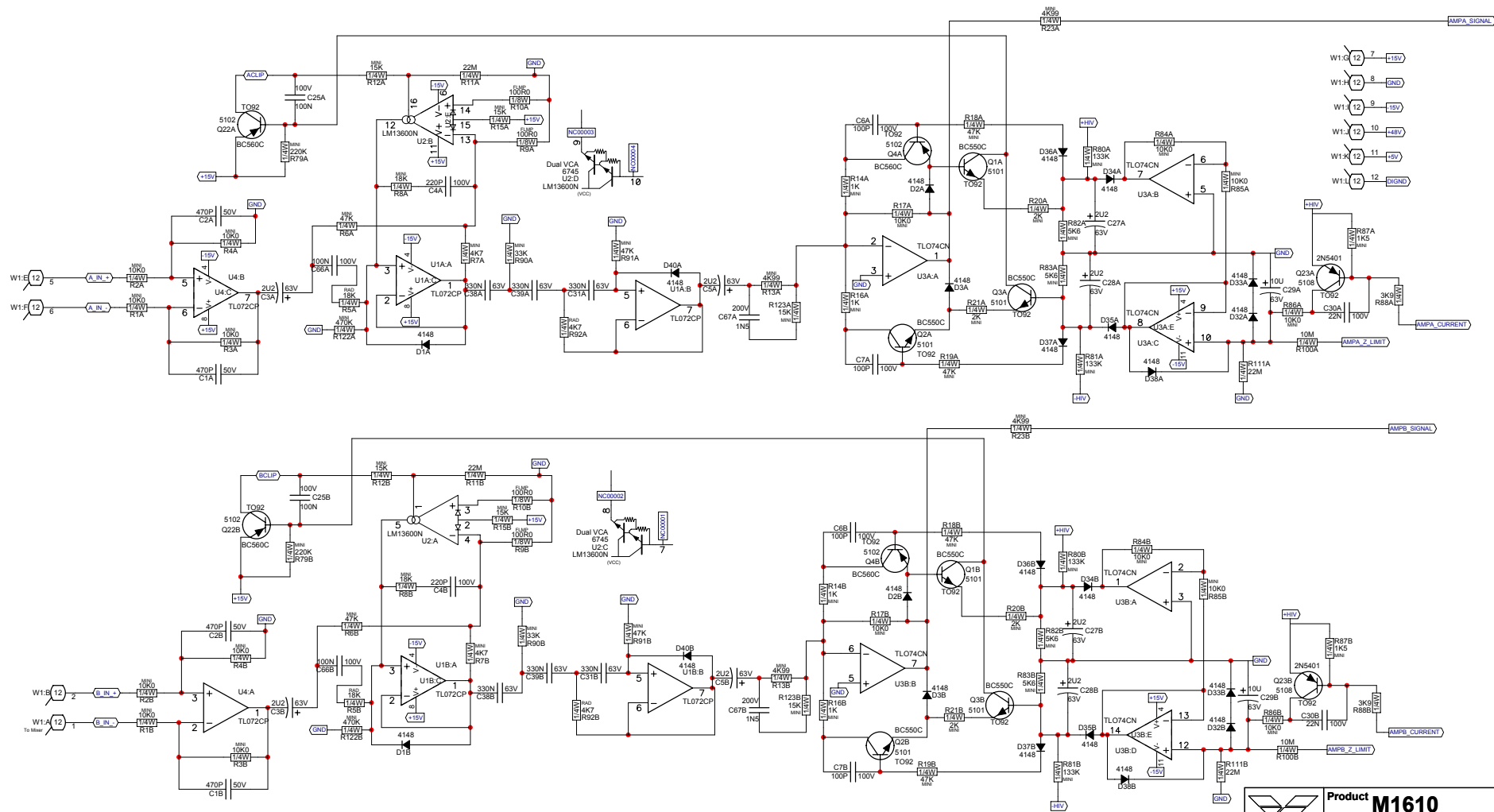


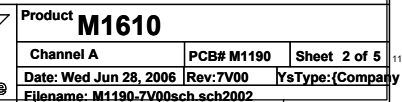
BC550, 560

C B E

M1189 HISTORY				M1189 POTLIST				
MODEL(S):- M1610				MODEL(S):- M1610				
#	DATE	VER#	DESCRIPTION OF CHANGE	REF	FUNCTION	PART#	Knob	{NEW}
1	31 Dec, 2003	v1.00	Moved D3 anode to cathode of LD1	P25-34 L&R	Graphic EQ	3998	N/A	N
2	2 Feb, 2004	1.00	Change break mute flash rate	P1A,1B,1C,1D,1E,1F	Trim	4443	9915	N
3	17 Feb, 2004	1.01	Move C7a-f, R13a-f to make room for AA series xlr.	P9G,9H	Mon Send	4443	9917	N
4	.	.	Change hole sizes for AA series xlr.	P5A,5B,5C,5D,5E,5F	Level	4432	9920	N
5	.	.	Changed U1FX SRAM to 32kX8	P15G,15H,6A,6B,6C,6D,6E,6F	FX Send	4433	9918	N
6	24 Feb, 2004	1.02	Changed 3925 XLRs to 4010 AA series	P7A,7B,7C,7D,7E,7F	Mon Send	4433	9917	N
7	7-APR-2004	2.00	PC#6675 Moved C150(A,C,E) to avoid hitting ICs	P3A-F,4A-F	Hi, Mid	4434	9916	N
8			Removed routing from board - slots done on drill now	P16G,16H, 8A-F	Bal, Pan	4434	9919	N
9	15-APR-2004	2.00	PC#6677 Chg X41 to C3(220n 50V), set gerber	P2A,2B,2C,2D,2E,2F	Lo	4435	9916	N
10			so TIE4 gets output properly	P35,36,37,38	Master Treble, Bass	4435	9916	N
11			PC#6679 Chg. C21(A,B,C,D,E,F) from 470nF to 33uF	P17,20	Master, Rec Out	4441	9920	N
12	6-MAY-2004	2.00	PC#6686 MOVED C23FX AWAY FROM SPACER	P21	FX2 Main	4437	9920	N
13	Aug 4, 2004	2.00	Fixed silk screen on U6FX and U2FX	P13G,13H,14G,14H	Stereo Hi, Mid	4438	9916	N
1	AUG-16-2004	2.10	PC#6718 CHANGE R140 TO 10K0 (6116),	P12G,12H	Stereo Lo	4439	9916	N
2	D	V	R138&R139 TO 9K09 (6112)	P11FX,12FX	FX Select, Modify	4581	8398	N
3	NOV-23-2004	.	PC#6771:#3571->#3507 SKT FOR #6993 SRAM (GT)	P23	Tape/CD	4437	9915	N
4	JAN-05-2005	.	GT:PC#6792:P17 FROM 50KB #4441 TO 20KA #4447	P18	Monitor	4441	9917	N
5	21 Apr, 2005	2.11	Updated 3921 jacks for clinch.	P19	FX2 Mon	4433	9917	N
6	4 Aug 2005	2.20	AH, PC#6816, ADD A HOLE FOR FEEDING GREEN	R	F	P	K	N
7			GROUND WIRE.	R	F	P	K	N
8	14 JUN 2006	2.30	AH, PC#7091, UPDTAE #5322 CHANGE DRILL SIZE TO 40	R	F	P	K	N
9	.	.	PC#6989, STRENGTHEN RCA JACK SECTION BREAKAWAY	R	F	P	K	N
10	.	.	#4581 UPDATED, PROPER DRILLING ORDER	R	F	P	K	N
11	D	V	N					
12	D	V	N					
13	D	V	N					
M1189 DRILL HISTORY				M1189 PENDING CHANGES				
MODEL(S):- M810/M1610				MODEL(S):- M1610				
#	DATE	VER#	DESCRIPTION OF CHANGE	#	PC#	PENDING CHANGE		
1	24-FEB-2004	V01	N	1	PC	UPDATE R15FX FOR CLINCH -> DEAL WITH CLEARANCES		
2	21-APR-2005	V02	N	2	PC	X		
3	4-AUG-2005	V03	N	3	PC	X		
4	D	V	N	4	PC	X		
5	D	V	N	5	PC	X		
6	D	V	N	6	PC	X		

*PLACE IMPLEMENTED CHANGES INTO BOARD HISTORY





Set P1 for 8mv
between TP1 and TP2

Set P1 for 8mv
between TP1 and TP2

Place 6 of #8841 10-32 keps nuts before the heatsink.

ETCH GUIDE

CLICK ORIGIN

INSERT ORIGIN

ETCH GUIDE

ETCH GUIDE



SEE LAYOUT DIAGRAM



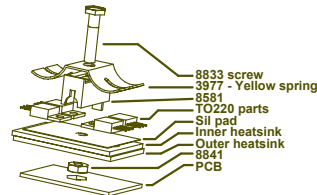
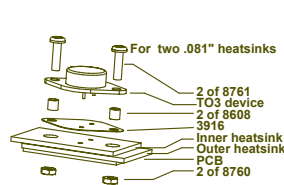
M1190.PCB_DATABASE_HISTORY				#	DATE	VER#	DESCRIPTION OF CHANGE
MODEL(S):- M1610				24	.	.	R79A&B #6127 470K->#6127 220K
				25	.	.	ADDED D4 #5124 5V1/5W, R97&R98 #2006 1R/1W->#5124
				26	.	.	Corrected the position of some test nodes.
# DATE VER# DESCRIPTION OF CHANGE				27	.	.	Fixed BlankSize field
1	7 Jan, 2004	1.00	Rationalize wire refdes	28	Jun-15-2006	7.00	AH, PC#7021, SPACE BETWEEN R96 AND R53
2	24 Feb, 2004	1.00	Add speakon jacks to output section	29	.	.	PC#6983, WIDEN TRACE BETWEEN C32 AND C37
3	10 Mar, 2004	1.00	Enlarge cutouts for 8841 nuts	30	.	.	PC#7091, ENLARGE HOLE SIZE FOR #3522
4	21-APR-2004	1.00	PC#6681 Modify route to let grn wire pass board near p	31	D	V	N
5	6-MAY-2004	2.00	PC#6684 R83(A,B)->5K6,R5(A,B)6K8->18K,	32	D	V	N
6			D16&D17(A,B) 4148->BAT85,R47&R48(A,B)22R1->100R	33	D	V	N
7			ADDED D71, D72	34	D	V	N
8	DEC-14-2004	3.00	GT:PC#6787: Fixed AC clearance, and W2&W3 tab label	35	D	V	N
9	FEB-07-2005	4.00	PC#6809 Remove D17,D16,D12,D13, R47,R48,R49,R50,C3	36	D	V	N
10	D	V	C15 (All A/B) R45,R46 A/B 36K->43K, D10 16V->12V	37	D	V	N
11	D	V	D9 A/B 14V->10V0, D8 A/B 12V->8V2. ADD R95 A/B	38	D	V	N
12	D	V	ADD R96 A/B, R97 A/B, R98 A/B, D71 A/B, D72 A/B	39	D	V	N
13	D	V	D73 A/B, D74 A/B, X1 ,X2 ,X3 ,X4 X5 AND X6	40	D	V	N
14	MAR-30-2005	5.00	RECREATED MASK LAYER TO FIX TESTPADS	41	D	V	N
15	MAR-13-2005	5.10	CHANGE IRF3205 #6954 TO IRL2910 #6966	42	D	V	N
16	.	.	PLACE MICA UNDER MIDDLE TIER MOSFETS	43	D	V	N
17	21 Apr, 2005	5.11	Force update parts to fix pad orientation	44	D	V	N
18	JUN-08-2005	6.00	PC#6919:GT:MOVED R95B AVOID HEATSINK COLLISION	45	D	V	N
19	.	.	XFORMER -> CH1302/E, ADDED 2x#4599, SWAPPED W	46	D	V	N
20	.	.	W35,R106A&B #6122 33K->#4868 36K, D56A&B #6440	47	D	V	N
21	.	.	4V7/0.5W->#6484 10V/1W, C32&C33 #5903 12000UF/35V	48	D	V	N
22	.	.	#5898 8200UF/50V, C36&C37 #5896 4700UF/80V->#5898	49	D	V	N
23	.	.	C25A&B #5224 47N/100V->#5212 100N/63V	50	D	V	N

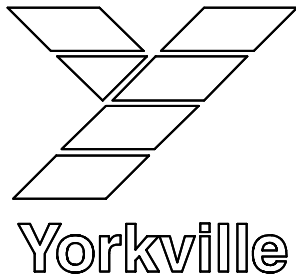
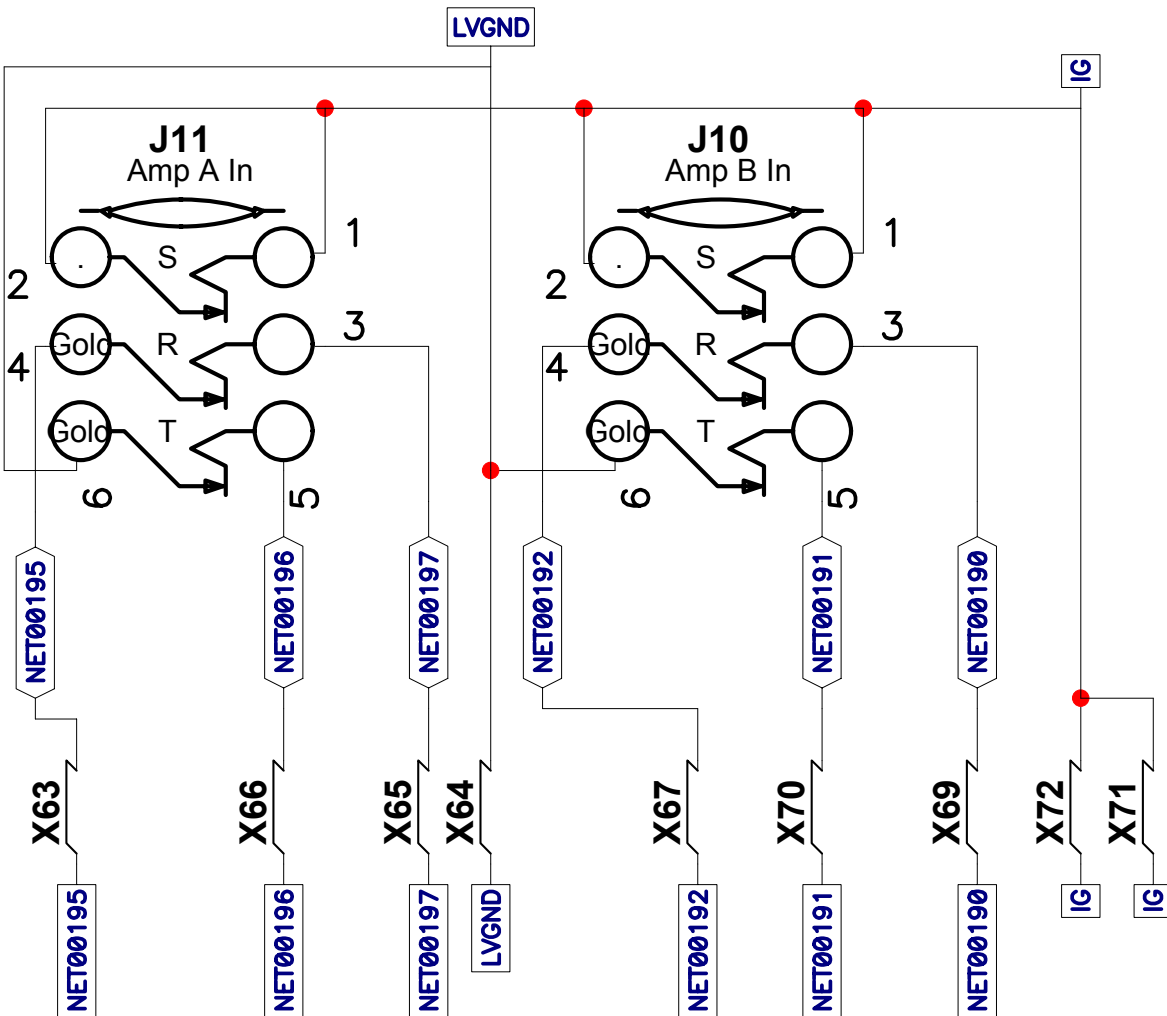
M1190 Drill History				M1190 PENDING CHANGES			
MODEL(S):- M1610				MODEL(S):- M1610			
#	DATE	VER#	DESCRIPTION OF CHANGE	#	PC#		PENDING CHANGE
1	5-MAY-2004	V03	Added notch to pass GRN wire from front	1	PC	X	
2	6-MAY-2004	V04	To match V2.00 changes	2	PC	X	
3	NOV-05-2004	V05	HG:PC#6730:REMOVED EXTRA ROUTING BITS	3	PC	X	
4	AUG-26-2005	V07	GT:CHANGES FOR 6V00 RELEASE. SEE HISTORY BOX	4	PC	X	
5	D	V	N	5	PC	X	
6	D	V	N	6	PC	X	

*PLACE IMPLEMENTED CHANGES INTO BOARD HISTORY

PRODUCTION NOTES

1. Use three 8832 screws to allign and attach the heatsinks to the board.
2. When assembling heatsinks to Q20(A&B),Q21(A&B), Q37, ensure heatsinks are straight and sit flat against board. Add a very small amount of RTV between heatsink and board if necessary. This prevent heatsink from shorting other components.





Product **M1610**

Amp in Jacks

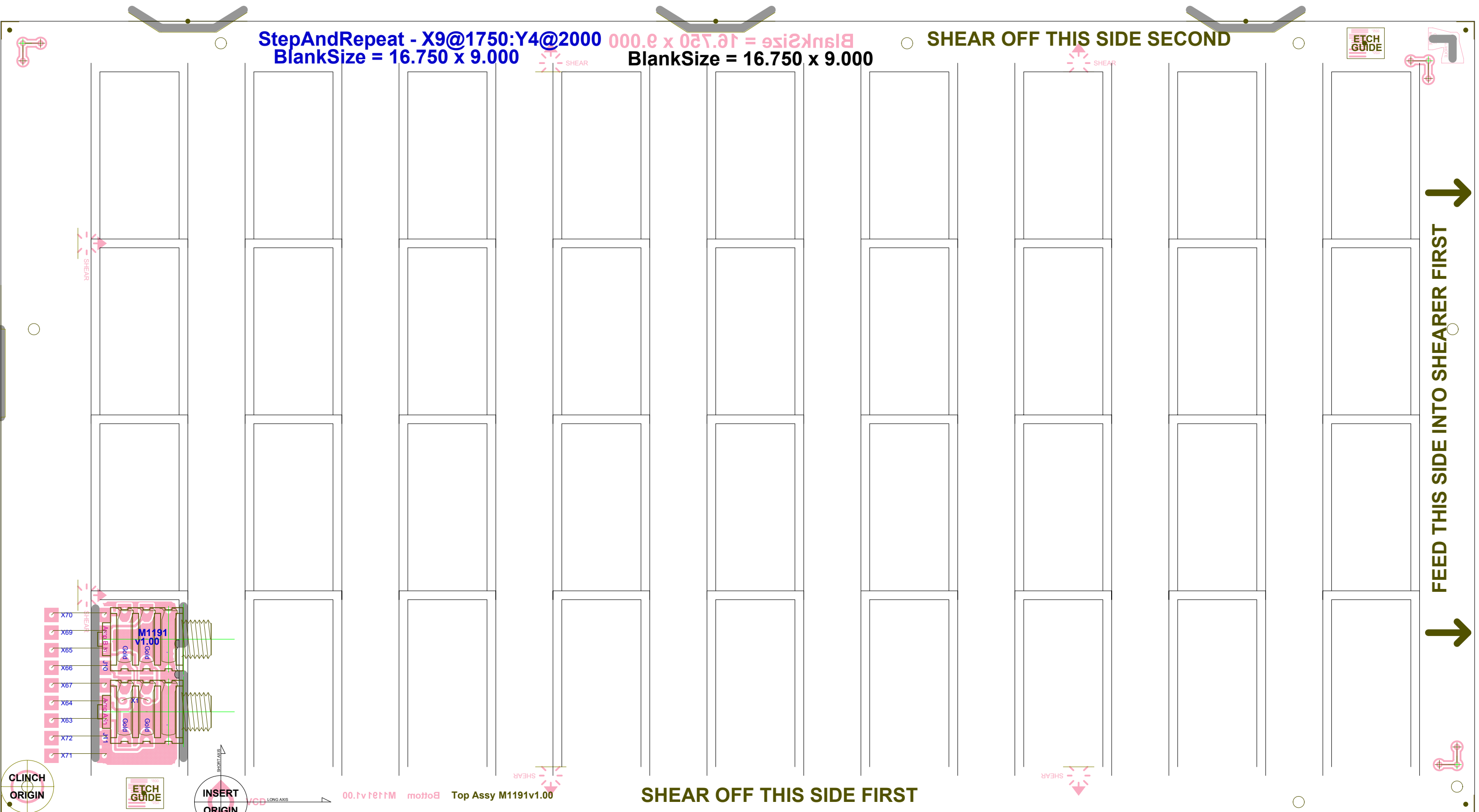
PCB# M1191

Sheet 1 of 2

Date: Tue Feb 10, 2004

Rev: V1.00

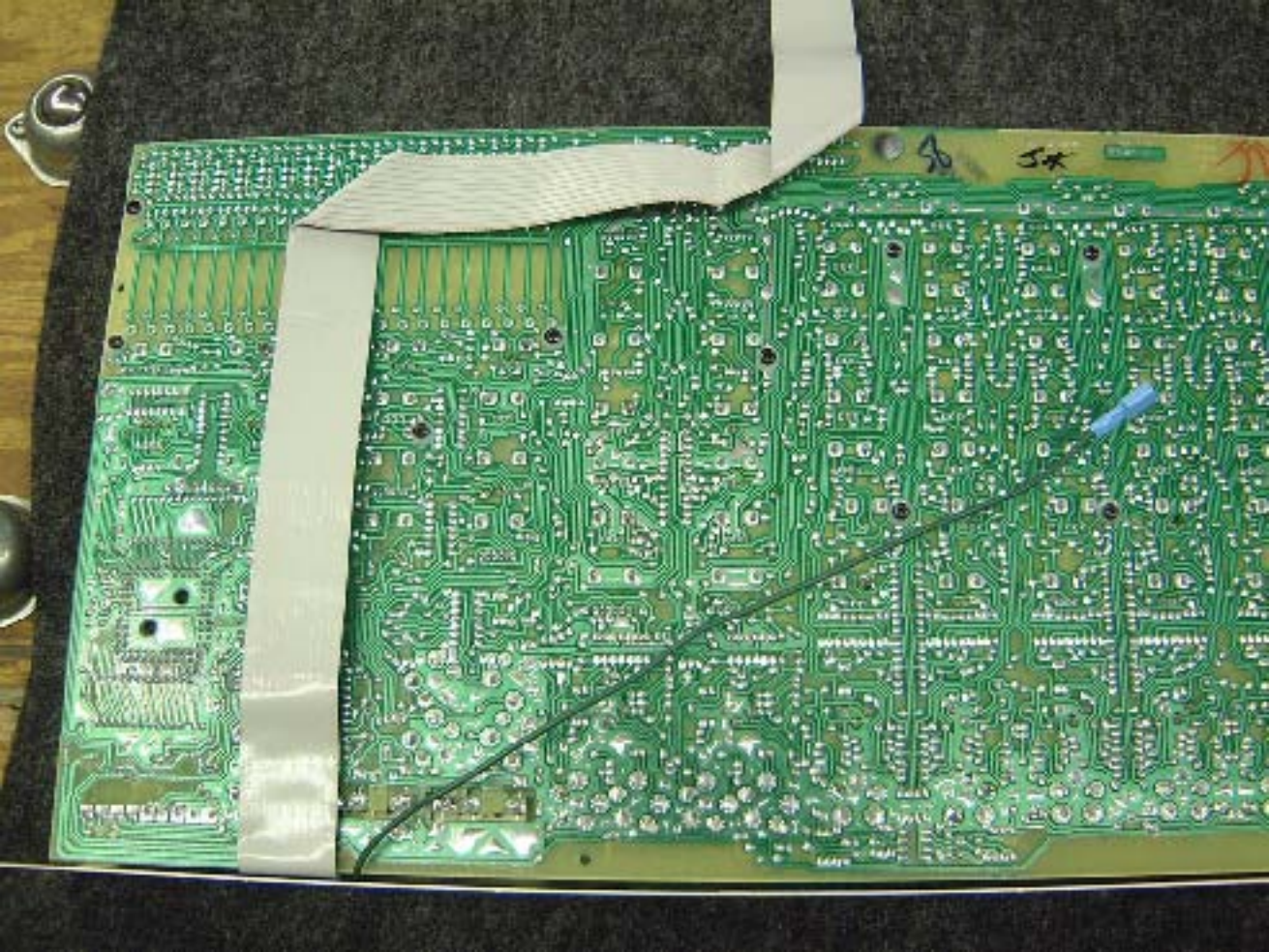
Filename: m1191 sch .sch2002



PRODUCTION NOTES

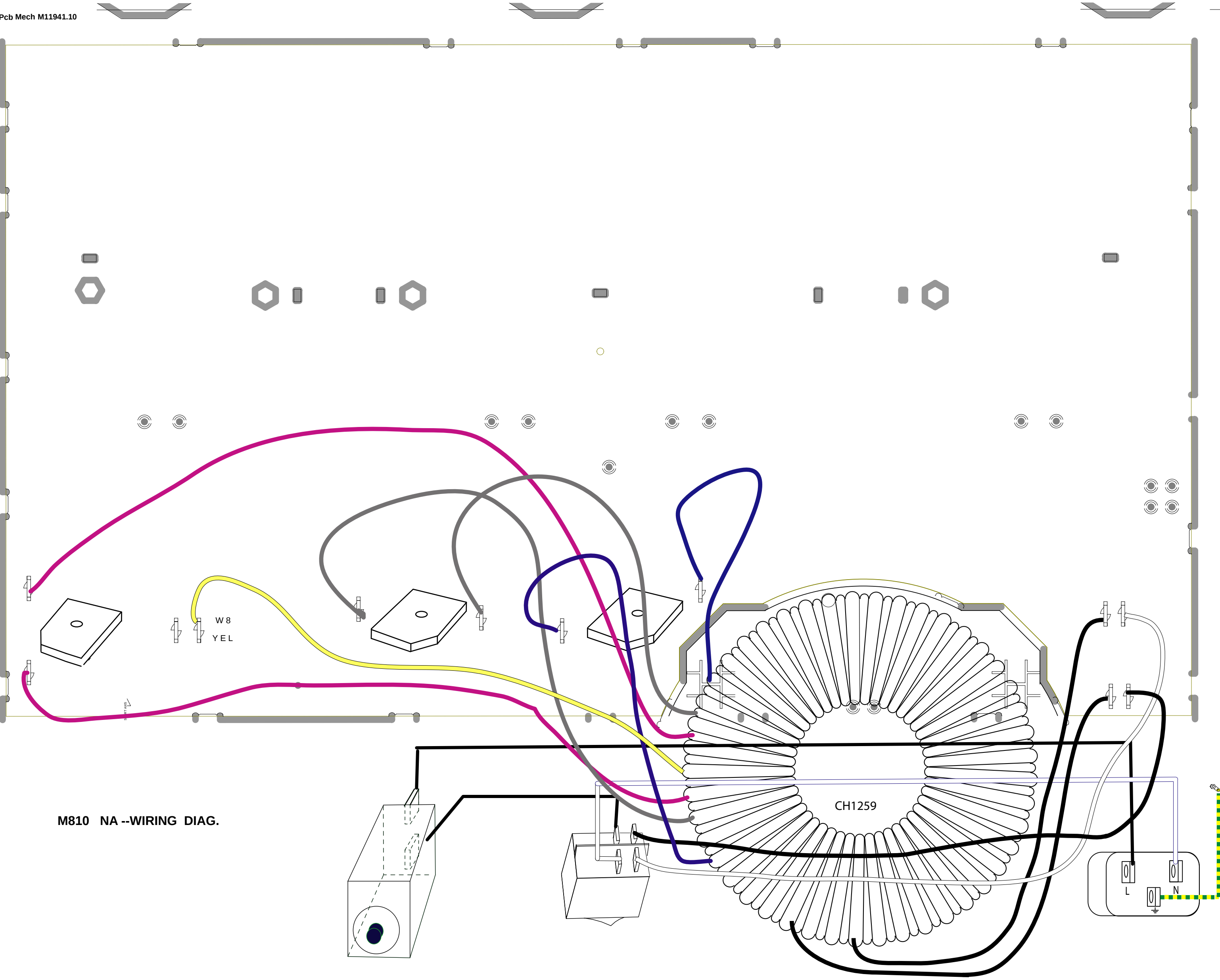
1. Shear off sides containg VCD origin and VCD finger tabs (top and bottom sides) before shearing the board into rows.
2. Feed board into shearer in the direction shown.
3. DO NOT remove the strip of board attached to each set of jumpers. It will keep the jumpers straight until they arrive in wiring.





Blank Size - 17900 x 10625

Pcb Mech M11941.10





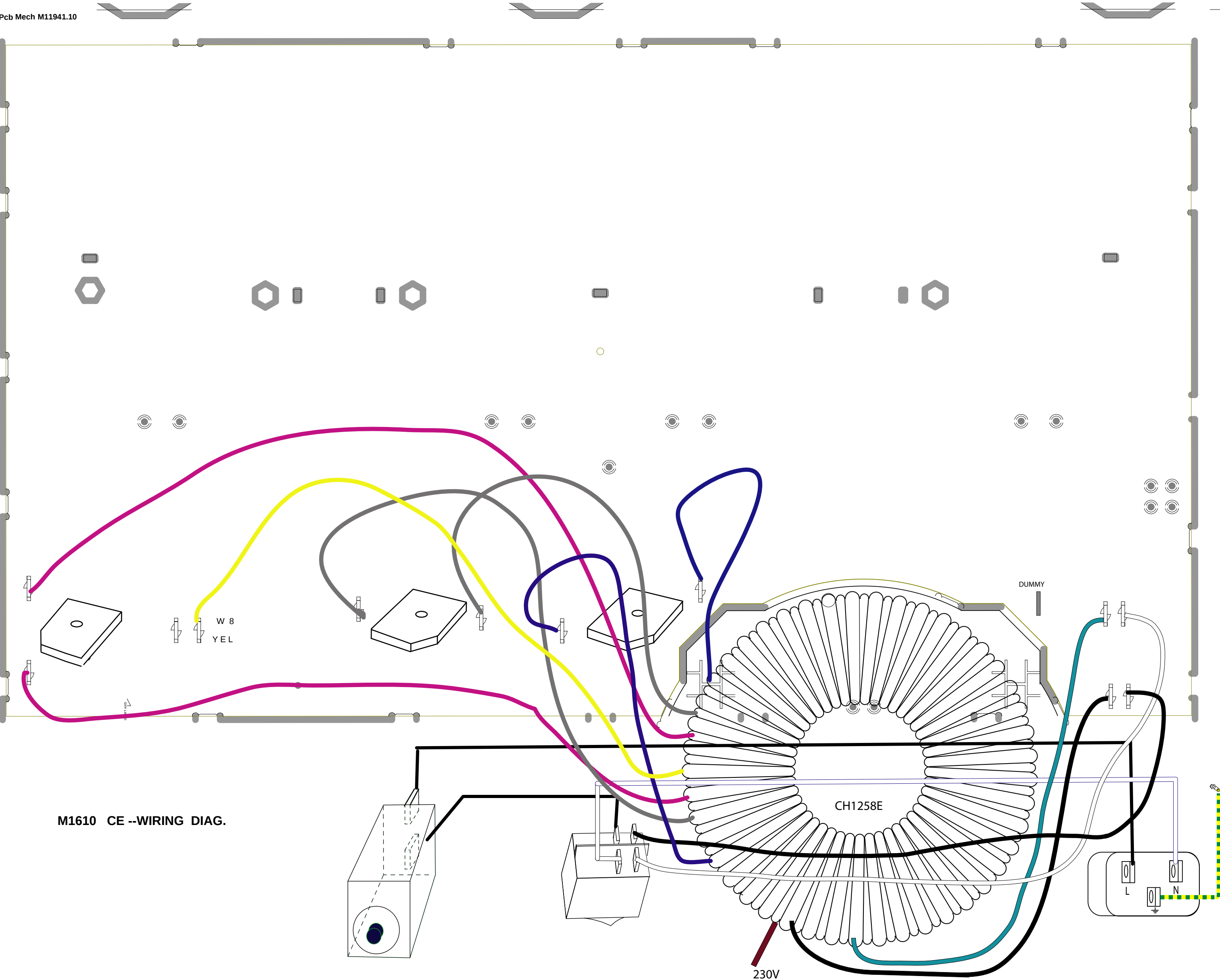
CH1258E

245V

SHOWN AS 230V OPERATION

Blank Size - 17900 x 10625

Pcb Mech M11941.10



M1610 CE --WIRING DIAG.

SHOWN AS 245V OPERATION
FOR 245V: USE BLUE AND BLACK PRIMARY WIRES