



**WEB:** [www.yorkville.com](http://www.yorkville.com)

**WORLD HEADQUARTERS**

**CANADA**

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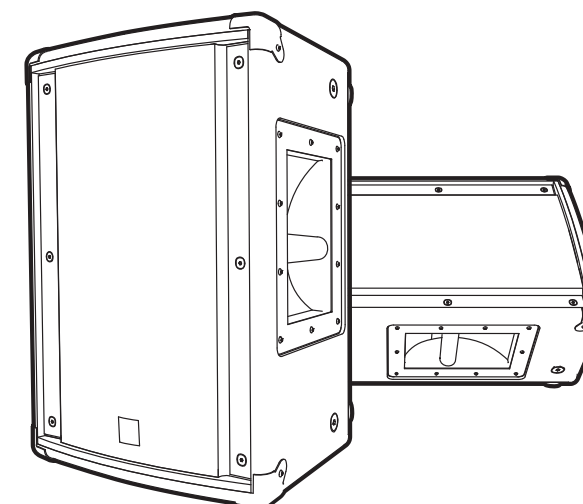
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**Quality and Innovation Since 1963**  
Printed in Canada



# ***SERVICE MANUAL***

## ***E10P***



**SMT Disclaimer**

Due to the complex nature of the use of SMT installed components in Yorkville equipment, we highly caution all service technicians in attempting to repair or replace SMT factory installed components.

Many of these components may be glued prior to initial soldering.

**Replacing SMT components requires expensive specialized de-soldering equipment and training.**

Yorkville Sound will repair and replace defective SMT components to ensure proper quality assurance and installation is maintained.



Yorkville **élite**

PWR (green LED)    LIMIT (yellow LED)    CLIP (red LED)

E10P LEVEL: 0, -∞, +

TREBLE: -18 dB, +18

BASS: -18 dB, +18

MODE: LIVE PLAYBACK, 100 Hz / 65 Hz

LF ROLLOFF

INPUT SELECT: MIC LINE

**E10P**  
350 WATT ACTIVE  
LOUDSPEAKER ENCLOSURE

Inputs in Parallel

INPUT **BAL**

LINK **BAL**

**CAUTION AVIS**

RISK OF ELECTRIC SHOCK  
DO NOT OPEN

RISQUE DE CHOC ELECTRIQUE  
NE PAS OUVRIR

CE    PS  
Certified LR1004

CAUTION: REPLACE WITH SAME TYPE FUSE AND RATING  
ATTENTION: UTILISER UN FUSIBLE DE RECHANGE DE MEME TYPE ET CALIBRE

MODEL TYPE: YS1066    A-Z960 / 2v0

|                    |                                  |
|--------------------|----------------------------------|
| 230V ~ 50 Hz 0,5A  | 120VAC 60Hz 1.0A                 |
| FUSE: T2.0A L 250V | FUSE: T3.15AL 250V <i>Sloblo</i> |

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PWR LIMIT CLIP

E10P LEVEL

LIVE PLAYBACK

100 Hz / 65 Hz

MODE LF ROLLOFF

TREBLE

-18 dB +18

MIC LINE

INPUT SELECT

BASS

-18 dB +18

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CAUTION: REPLACE WITH  
SAME TYPE FUSE AND RATING  
ATTENTION: UTILISER UN FUSIBLE DE  
RECHANGE DE MEME TYPE ET CALIBRE

E10P REV 2 A-Z961 / 1v0

|  |  |
|--|--|
| <p>CE 230V ~<br/>50Hz 0,5A<br/>FUSE: T2,0AL 250V</p> | <p>120VAC<br/>60Hz 1.0A<br/>FUSE: T3.15AL 250V <i>slabla</i></p> |
|--|--|

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OFF ON

## Specifications

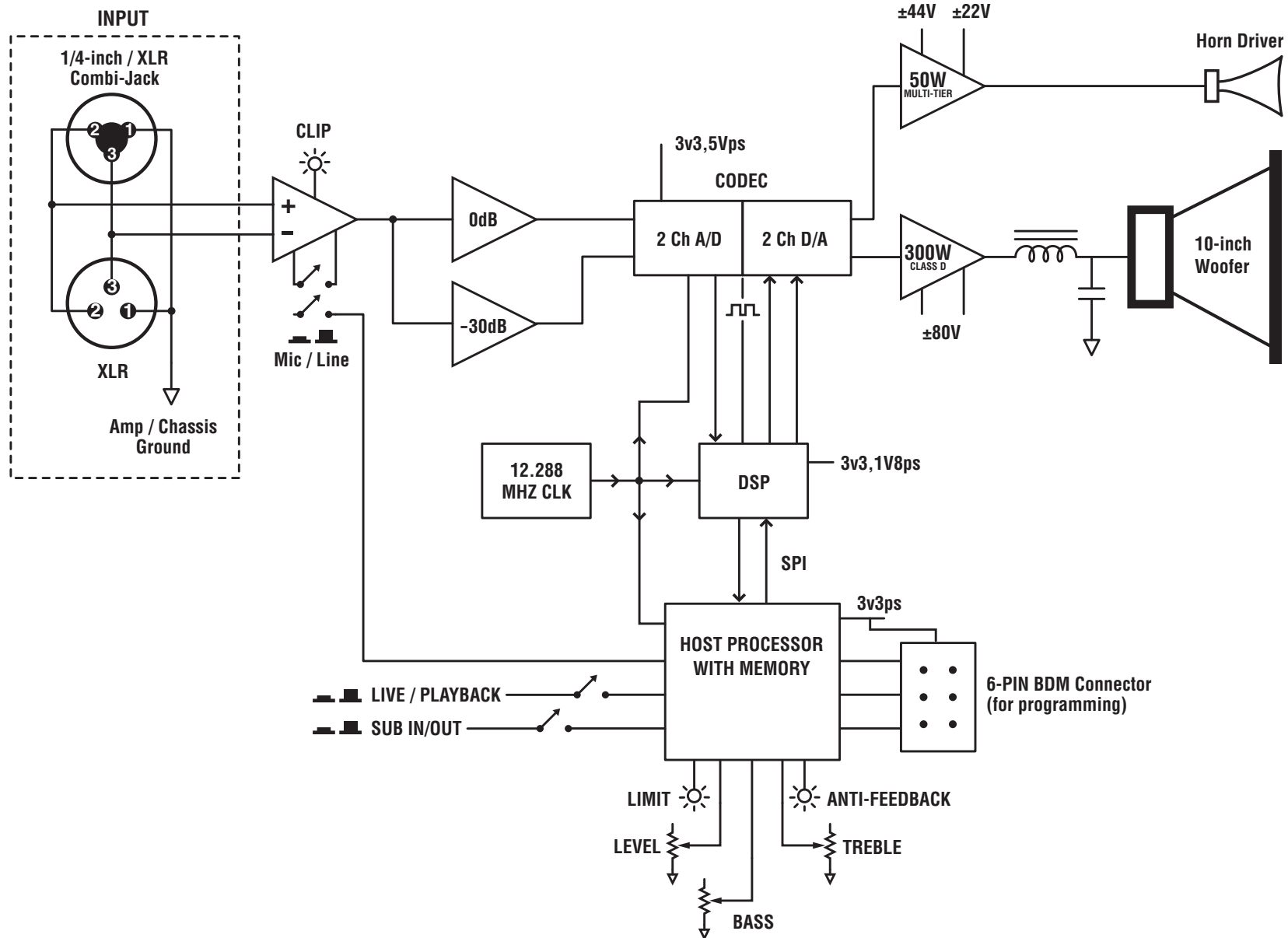
|   |   |
|---|---|
| <b>Model:</b>                                 | E10p  |
| <b>System Type:</b>                           | powered loudspeaker   |
| <b>Active or Passive:</b>                     | Active  |
| <b>Program Power (Watts):</b>                 | 350   |
| <b>Biamp Operation Only:</b>                  | Internally biamped  |
| <b>Frequency Response (Hz +/- 3db):</b>       | 65 to 20k   |
| <b>Crossover Frequency (Hz):</b>              | 1500  |
| <b>Driver Configuration:</b>                  | 2 way   |
| <b>HF Driver(s):</b>                          | 1 inch  |
| <b>HF Program Power (Watts):</b>              | 50  |
| <b>HF Impedance (ohms):</b>                   | 8   |
| <b>HF Dispersion (°H x °V):</b>               | 100 x 25  |
| <b>LF Driver(s):</b>                          | 10 inch   |
| <b>LF Program Power(Watts):</b>               | 300   |
| <b>LF Impedance(ohms):</b>                    | 4-ohms  |
| <b>LF Protection:</b>                         | excursion and RMS   |
| <b>Total Power (Watts):</b>                   | 350   |
| <b>HF Power Amplifier (Watts):</b>            | 50  |
| <b>HF Processing:</b>                         | peak and average limiting   |
| <b>LF Power Amplifier (Watts):</b>            | 300   |
| <b>LF Processing:</b>                         | peak and average limited,<br>boost limited with multi slope curve   |
| <b>Cooling Scheme:</b>                        | convection  |
| <b>Power Cable:</b>                           | removable IEC   |
| <b>Power Switch:</b>                          | yes   |
| <b>Power Consumption (typ/max):</b>           | 120 va/200va  |
| <b>Inputs - 1/4-inch Jacks:</b>               | 1 combi w xlr   |
| <b>Inputs - XLR:</b>                          | 1 combi w 1/4 inch  |
| <b>Input Impedance (Bal/UnBal):</b>           | 4k ohms / 2k ohms   |
| <b>Input Sensitivity (Vrms Sine):</b>         | Line in 1.4 w control at center 0.35 at max<br>Mic in -50 dBv @ max   |
| <b>Level Controls:</b>                        | 1, curve changes in mic or line mode  |
| <b>EQ Controls:</b>                           | Bass and Treble   |
| <b>Limiter:</b>                               | peak and average on horn and woofer,<br>boost limited with multi slope curve  |
| <b>LED Indicators:</b>                        | power, clip, limit  |
| <b>Other Controls / Features:</b>             | Dynamic 75 Hz boost, tone control frequencies<br>and slopes differ in live/rec mode, sub/no sub switch,<br>live recorded eq mode switch |
| <b>Corners:</b>                               | 8   |
| <b>Feet:</b>                                  | 4   |
| <b>Flying Hardware:</b>                       | 4 Flypoints - 2 Top + 2 Bottom + Pull back  |
| <b>Included Hardware:</b>                     | 1/4-20  |
| <b>Bar Handles:</b>                           | 1   |
| <b>Pole Mount Adapter (1 3/8-inch/3.5cm):</b> | yes   |
| <b>Enclosure Materials:</b>                   | 15mm (5/8inch) 11-ply Russian Birch   |
| <b>Port(s):</b>                               | 1, located on rear  |
| <b>Grille:</b>                                | Perforated Metal  |
| <b>Covering / Finish:</b>                     | Black Ozite (Carpet)  |
| <b>Optional Covering / Finishes:</b>          | Black Ultrathane Paint (E10PB)  |
| <b>Processor (optional):</b>                  | Internally biamped  |
| <b>Dimensions (DWH xbackW, inches):</b>       | 12 x 13 x 18.5 x 5.5  |
| <b>Dimensions (DWH xbackW, cm):</b>           | 30 x 33 x 45 x 14   |
| <b>Weight (lbs/kg):</b>                       | 34/15.5   |

## Spécifications

|  |   |
|--|---|
| <b>Modèle:</b>                                       | E10p  |
| <b>Type de Système:</b>                              | Enceinte amplifiée à haut-parleur   |
| <b>Actif ou Passif:</b>                              | Actif   |
| <b>Puissance nominale (Watts):</b>                   | 350   |
| <b>Opération en mode de Biamplication Seulement:</b> | Biamplication interne   |
| <b>Réponse en Fréquence (Hz +/- 3db):</b>            | 65 to 20k   |
| <b>Fréquence de coupure(Hz):</b>                     | 1500  |
| <b>Configuration de Drivers:</b>                     | 2 voix  |
| <b>Driver(s) Hautes Fréquences:</b>                  | 1 pouce   |
| <b>Puissance Nominale pour les HF (Watts):</b>       | 50  |
| <b>Impédance HF (ohms):</b>                          | 8   |
| <b>Dispersion HF (°H x °V):</b>                      | 100 x 25  |
| <b>Driver(s) Basses Fréquences :</b>                 | 10 pouces   |
| <b>Puissance Nominale BF (Watts):</b>                | 300   |
| <b>Impédance BF (ohms):</b>                          | 4 ohms  |
| <b>Protection BF :</b>                               | excursion et RMS  |
| <b>Puissance Totale (Watts):</b>                     | 350   |
| <b>Amplificateur De Puissance HF (Watts):</b>        | 50  |
| <b>Processing HF :</b>                               | Limitation de Pointe et de moyenne  |
| <b>Amplificateur de Puissance BF (Watts):</b>        | 300   |
| <b>Processing LF :</b>                               | Limitation de Pointe et de moyenne,<br>Limiteur boost avec multiple pente d'atténuation   |
| <b>Système de refroidissement:</b>                   | Convection  |
| <b>Cordon d'Alimentation:</b>                        | IEC amovible  |
| <b>Commutateur de mise en marche:</b>                | Oui   |
| <b>Consommation de Puissance (typ/max):</b>          | 120 va/200va  |
| <b>Entrées – Prises 1/4-pouce :</b>                  | 1 combi avec xlr  |
| <b>Entrées - XLR:</b>                                | 1 combi avec 1/4 pouce  |
| <b>Impédance d'Entrée (Sym/Asym):</b>                | 4k ohms / 2k ohms   |
| <b>Sensibilité d'entrée (Vrms Sine):</b>             | Entrée ligne 1.4 avec contrôle au centre 0.35 au max<br>Entrée Mic -50 dBv @ max  |
| <b>Contrôles de Niveau:</b>                          | 1, courbe change selon le mode utilisé (mic ou line)  |
| <b>Contrôles d'Égalisation:</b>                      | Graves et Aiguës  |
| <b>Limiteur:</b>                                     | Pointe et moyenne sur le pavillon et le woofer,<br>Limiteur boost avec multiple pente d'atténuation   |
| <b>DEL Indicatrices:</b>                             | Alimentation, clip, limit   |
| <b>Autres Contrôles / Caractéristiques:</b>          | Dynamique boost 75 Hz, fréquence des contrôles de tonalité et courbe de réponse<br>Différent en mode live/rec, sélecteur sub/sans sub,<br>Sélecteur d'égalisation pour modes Live/préenregistré |
| <b>Coins:</b>  | 8   |
| <b>Pieds:</b>  | 4   |
| <b>Quincaillerie de suspension:</b>                  | 4 point de suspension - 2 dessus + 2 dessous + tire   |
| <b>Quincaillerie incluse:</b>                        | 1/4/2020  |
| <b>Poignés:</b>                                      | 1   |
| <b>Adaptateur pour montage sur pôle (1 3/8-)</b>     | Oui   |
| <b>Matériau de construction:</b>                     | Contreplaqué de bouleau Russe<br>15 mm (5/8 pouce) 11-plie  |
| <b>Évent(s):</b>                                     | 1, situé à l'arrière  |
| <b>Grille:</b>                                       | Métal Perforé   |
| <b>Recouvrement / Finition:</b>                      | Ozite Noire (tapis)   |
| <b>Recouvrement optionnel / Finitions:</b>           | Peinture Ultra thane Noire (E10PB)  |
| <b>Processeur (optionnel):</b>                       | Bi amplifié (interne)   |
| <b>Dimensions (PLH x arrière L, pouces):</b>         | 12 x 13 x 18.5 x 5.5  |
| <b>Dimensions ( PLH x arrière L, cm):</b>            | 30 x 33 x 45 x 14   |
| <b>Poids (livres/kg):</b>                            | 34/15.5   |

# E10P Block Diagram

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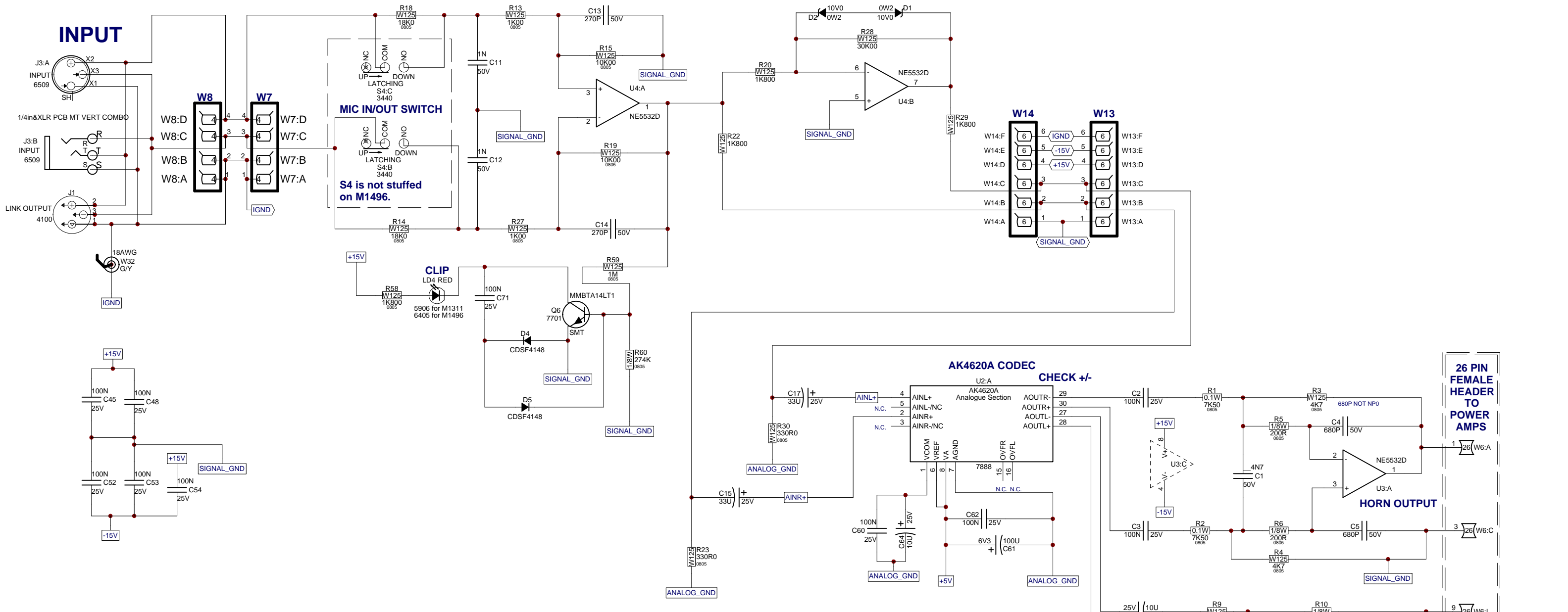
**M1495 01 Parts Reference List 9/24/2020**

| REF | YS # | Description                         | REF | YS # | Description                      | REF | YS # | Description                       |
|-----|------|-------------------------------------|-----|------|----------------------------------|-----|------|-----------------------------------|
| C1  |      | 100N 50V 5%CAP 0805 SMT X7R         | Q21 |      | MJB41C NPN D2PAK SMT TS          | R81 |      | W250 0R 1206 SMT RES              |
| C2  |      | 22P 50V 5%CAP 0805 SMT NPO          | R1  |      | W125 470R 5% 0805 SMT RES        | R82 |      | W250 0R 1206 SMT RES              |
| C3  |      | 4N7 50V 5%CAP 1206 SMT NPO          | R2  |      | 47K 5% THERMISTOR NTC 0603 SMT   | R83 |      | W250 0R 1206 SMT RES              |
| C4  |      | 10N 50V 5%CAP 1206 SMT NPO          | R3  |      | W250 0R 1206 SMT RES             | R84 |      | W250 0R 1206 SMT RES              |
| C5  |      | 10N 50V 5%CAP 1206 SMT NPO          | R4  |      | W125 100K 5% 0805 SMT RES        | R85 |      | W250 0R 1206 SMT RES              |
| C6  |      | 47P 50V 5%CAP 0805 SMT NPO          | R5  |      | W125 560R 5% 0805 SMT RES        | R86 |      | W250 0R 1206 SMT RES              |
| C7  |      | 1U 25V 20%CAP 1206 SMT X7R          | R6  |      | 10K 5% THERMISTOR NTC 0805 SMT   | R87 |      | W250 0R 1206 SMT RES              |
| C8  |      | 100N 100V 10%CAP 1206 SMT X7R       | R7  |      | W125 47R 5% 0805 SMT RES         | R88 |      | W250 0R 1206 SMT RES              |
| C9  |      | 100N 100V 10%CAP 1206 SMT X7R       | R8  |      | W250 10R 5% 1206 SMT RES         | R89 |      | W250 0R 1206 SMT RES              |
| C10 |      | 470P 50V 5%CAP 0603 SMT NPO         | R9  |      | W125 10K 5% 0805 SMT RES         | R90 |      | W250 0R 1206 SMT RES              |
| C11 |      | 470P 50V 5%CAP 0603 SMT NPO         | R10 |      | W125 1K5 5% 0805 SMT RES         | R91 |      | W125 47R 5% 0805 SMT RES          |
| C12 |      | 1U 25V 20%CAP 1206 SMT X7R          | R11 |      | W125 10K 5% 0805 SMT RES         | R98 |      | W125 10K 5% 0805 SMT RES          |
| C13 |      | 2U2 200V 20%CAP 3025 SMT CER        | R12 |      | W125 1K02 0.1% 0805 SMT RES      | R99 |      | W125 47R 5% 0805 SMT RES          |
| C14 |      | 2U2 200V 20%CAP 3025 SMT CER        | R13 |      | W250 1M0 1% 1206 SMT RES         | U1  |      | 33078 DUAL OPAMP SMT SO-8         |
| C15 |      | 2U2 200V 20%CAP 3025 SMT CER        | R14 |      | W125 1M 5% 0805 SMT RES          | U2  |      | 33078 DUAL OPAMP SMT SO-8         |
| C16 |      | 2U2 100V 20%CAP 1812 SMT X7R        | R15 |      | W125 1M 5% 0805 SMT RES          | U3  |      | IRS20124S H/L FET DRIVER SMT SO14 |
| C17 |      | 2U2 100V 20%CAP 1812 SMT X7R        | R16 |      | W125 2K2 5% 0805 SMT RES         | U4  |      | TLC555 TIMER SMT SO8 IC           |
| C18 |      | 100N 50V 5%CAP 0805 SMT X7R         | R17 |      | W125 1M 5% 0805 SMT RES          | U5  |      | LM311 COMPARATOR IC SMT SO-8      |
| C19 |      | 10N 50V 5%CAP 1206 SMT NPO          | R18 |      | W125 4K7 5% 0805 SMT RES         | W1  |      | 26 PIN 25SQ 100 PIN SIL SMT       |
| C20 |      | 100N 50V 5%CAP 0805 SMT X7R         | R19 |      | W125 10K 5% 0805 SMT RES         |     |      |                                   |
| C21 |      | 100N 50V 5%CAP 0805 SMT X7R         | R20 |      | W250 100R 5% 1206 SMT RES        |     |      |                                   |
| C22 |      | 100N 50V 5%CAP 0805 SMT X7R         | R21 |      | W125 560R 5% 0805 SMT RES        |     |      |                                   |
| C23 |      | 4U7 25V 20%CAP 4X5.5 SMT ELC        | R22 |      | W125 1K5 5% 0805 SMT RES         |     |      |                                   |
| C24 |      | 4N7 50V 5%CAP 1206 SMT NPO          | R23 |      | W125 150K 5% 0805 SMT RES        |     |      |                                   |
| C25 |      | 10P 50V 5%CAP 0402 SMT NPO          | R24 |      | W125 100K 5% 0805 SMT RES        |     |      |                                   |
| C26 |      | 10U 25V 20%CAP 5X5.4 SMT EL         | R25 |      | W125 10K 5% 0805 SMT RES         |     |      |                                   |
| C27 |      | 100N 50V 5%CAP 0805 SMT X7R         | R26 |      | W125 33K 5% 0805 SMT RES         |     |      |                                   |
| C28 |      | 47U 35V 20%CAP 6.3MM SMT ELE        | R27 |      | W125 270R 5% 0805 SMT RES        |     |      |                                   |
| C29 |      | 1U 50V 20%CAP 3.3MM SMT ELE         | R28 |      | W125 4K7 5% 0805 SMT RES         |     |      |                                   |
| C30 |      | 1U 50V 20%CAP 3.3MM SMT ELE         | R29 |      | W125 39K 5% 0805 SMT RES         |     |      |                                   |
| C31 |      | 100N 100V 10%CAP 1206 SMT X7R       | R30 |      | W250 10R 5% 1206 SMT RES         |     |      |                                   |
| C32 |      | 100N 100V 10%CAP 1206 SMT X7R       | R31 |      | W125 10K 5% 0805 SMT RES         |     |      |                                   |
| C33 |      | 100N 100V 10%CAP 1206 SMT X7R       | R32 |      | W125 3K92 1% 0805 SMT RES        |     |      |                                   |
| C34 |      | 1U 25V 20%CAP 1206 SMT X7R          | R33 |      | W125 20K 5% 0805 SMT RES         |     |      |                                   |
| C35 |      | 470P 50V 5%CAP 0603 SMT NPO         | R34 |      | W125 20K 5% 0805 SMT RES         |     |      |                                   |
| C36 |      | 100P 50V 10%CAP 0805 SMT NPO        | R35 |      | W125 20K 5% 0805 SMT RES         |     |      |                                   |
| C37 |      | 1N 50V 5%CAP 0805 SMT NPO           | R36 |      | W125 20K 5% 0805 SMT RES         |     |      |                                   |
| C38 |      | 1N 50V 5%CAP 0805 SMT NPO           | R37 |      | W125 3K92 1% 0805 SMT RES        |     |      |                                   |
| D2  |      | CDSU4148 100V 0A15 0603 SMT         | R38 |      | W250 10R 5% 1206 SMT RES         |     |      |                                   |
| D3  |      | CDSU4148 100V 0A15 0603 SMT         | R39 |      | W250 22R 5% 1206 SMT RES         |     |      |                                   |
| D4  |      | MM3Z15VT1G 15V0 0W2 5% SMT ZEN      | R40 |      | W250 22R 5% 1206 SMT RES         |     |      |                                   |
| D5  |      | CDSU4148 100V 0A15 0603 SMT         | R41 |      | W125 100K 5% 0805 SMT RES        |     |      |                                   |
| D6  |      | MURA240T3 400V 2A 403D SMT          | R42 |      | W125 100K 5% 0805 SMT RES        |     |      |                                   |
| D8  |      | MBRA340T3 40V 3A SHTKY 403D SMT     | R43 |      | W125 47R 5% 0805 SMT RES         |     |      |                                   |
| D9  |      | MBRA340T3 40V 3A SHTKY 403D SMT     | R44 |      | W125 4K7 5% 0805 SMT RES         |     |      |                                   |
| D10 |      | MM3Z15VT1G 15V0 0W2 5% SMT ZEN      | R45 |      | W100 100R 1% 0805 SMT RES        |     |      |                                   |
| D12 |      | MM3Z12VT1G 12V0 0W2 5% SMT ZEN      | R46 |      | W125 470R 5% 0805 SMT RES        |     |      |                                   |
| D14 |      | MM3Z10VT1G 10V0 0W2 5% SMT ZEN      | R47 |      | W125 1K5 5% 0805 SMT RES         |     |      |                                   |
| D15 |      | MM3Z18VT1G 18V0 0W2 5% SMT ZEN      | R48 |      | W125 33K 5% 0805 SMT RES         |     |      |                                   |
| D16 |      | 1N914 DIODE SOT23 SMT               | R49 |      | W125 10K 5% 0805 SMT RES         |     |      |                                   |
| D17 |      | MM3Z12VT1G 12V0 0W2 5% SMT ZEN      | R50 |      | W125 1K5 5% 0805 SMT RES         |     |      |                                   |
| D18 |      | 1N914 DIODE SOT23 SMT               | R51 |      | W125 1K5 5% 0805 SMT RES         |     |      |                                   |
| D19 |      | 1N914 DIODE SOT23 SMT               | R52 |      | W125 1K5 5% 0805 SMT RES         |     |      |                                   |
| D20 |      | 1N914 DIODE SOT23 SMT               | R53 |      | W125 560R 5% 0805 SMT RES        |     |      |                                   |
| D21 |      | 1N914 DIODE SOT23 SMT               | R54 |      | W125 270R 5% 0805 SMT RES        |     |      |                                   |
| D22 |      | 1N914 DIODE SOT23 SMT               | R55 |      | W500 2K2 5% 2010 SMT RES         |     |      |                                   |
| D23 |      | 1N914 DIODE SOT23 SMT               | R56 |      | W500 2K2 5% 2010 SMT RES         |     |      |                                   |
| D24 |      | MM3Z15VT1G 15V0 0W2 5% SMT ZEN      | R57 |      | W250 100R 5% 1206 SMT RES        |     |      |                                   |
| D25 |      | MURA240T3 400V 2A 403D SMT          | R58 |      | W500 2K2 5% 2010 SMT RES         |     |      |                                   |
| D26 |      | MURA240T3 400V 2A 403D SMT          | R59 |      | W500 2K2 5% 2010 SMT RES         |     |      |                                   |
| Q1  |      | MMBT5401 PNP SOT-23 SMT             | R60 |      | W250 100R 5% 1206 SMT RES        |     |      |                                   |
| Q2  |      | MMBT5401 PNP SOT-23 SMT             | R61 |      | W125 470R 5% 0805 SMT RES        |     |      |                                   |
| Q3  |      | MJD243T4G NPN DPAK3 SMT TS          | R62 |      | W125 470R 5% 0805 SMT RES        |     |      |                                   |
| Q4  |      | MMBT3904 NPN SOT-23 SMT             | R63 |      | W250 0R27 5% 1206 SMT RES        |     |      |                                   |
| Q5  |      | IRFS4227PBF NCH MFET D2PAK SMT TS   | R64 |      | W250 0R27 5% 1206 SMT RES        |     |      |                                   |
| Q6  |      | IRFS4227PBF NCH MFET D2PAK SMT TS   | R65 |      | W250 0R27 5% 1206 SMT RES        |     |      |                                   |
| Q7  |      | MC7815BDTG POS REG SMT DPAK3        | R66 |      | W250 0R27 5% 1206 SMT RES        |     |      |                                   |
| Q8  |      | MC79M15CDTG NEG REG SMT DPAK3       | R67 |      | PTC RESETTABLE 1.5A 6V 1812L SMT |     |      |                                   |
| Q9  |      | MMBT5401 PNP SOT-23 SMT             | R68 |      | W250 0R 1206 SMT RES             |     |      |                                   |
| Q10 |      | IRF530NS NCH MFET D2PAK SMT TS      | R69 |      | W250 0R 1206 SMT RES             |     |      |                                   |
| Q11 |      | IRF9530NS PCH MFET D2PAK SMT TS     | R70 |      | W250 0R 1206 SMT RES             |     |      |                                   |
| Q12 |      | MJD243T4G NPN DPAK3 SMT TS          | R72 |      | W250 0R 1206 SMT RES             |     |      |                                   |
| Q13 |      | MJD243T4G NPN DPAK3 SMT TS          | R73 |      | W250 0R 1206 SMT RES             |     |      |                                   |
| Q14 |      | MMBF4391LT1 NCH JFET SOT-23 SMT T&R | R74 |      | W250 0R 1206 SMT RES             |     |      |                                   |
| Q15 |      | MJB41C NPN D2PAK SMT TS             | R75 |      | W125 10K 5% 0805 SMT RES         |     |      |                                   |
| Q16 |      | MJB42C PNP D2PAK SMT TS             | R76 |      | W250 0R 1206 SMT RES             |     |      |                                   |
| Q17 |      | MMBT5401 PNP SOT-23 SMT             | R77 |      | W250 0R 1206 SMT RES             |     |      |                                   |
| Q18 |      | MMBT5401 PNP SOT-23 SMT             | R78 |      | W250 0R 1206 SMT RES             |     |      |                                   |
| Q19 |      | MJD253T4G PNP DPAK3 SMT TS          | R79 |      | W125 10K 5% 0805 SMT RES         |     |      |                                   |
| Q20 |      | MJB42C PNP D2PAK SMT TS             | R80 |      | W250 0R 1206 SMT RES             |     |      |                                   |

M1501-59 03 Parts Reference List 10/26/2020

| REF   | YS #       | Description                         | REF    | YS # | Description                      | REF | YS # | Description                       |
|-------|------------|-------------------------------------|--------|------|----------------------------------|-----|------|-----------------------------------|
| C1    |            | 470P 50V 5%CAP 0603 SMT NPO         | R10    |      | W125 3K32 1% 0805 SMT RES        | U3  |      | IRS20957S DIG AUDIO DRVR SMT SOIC |
| C2    |            | 10U 16V 20%CAP 0805 SMT X5R         | R11    |      | W125 3K32 1% 0805 SMT RES        | U5  |      | TL071CDR OPAMP JFET 3MHZ SO-8 SMT |
| C3    |            | 10U 16V 10%CAP 0805 SMT X6S         | R12    |      | 1W00 4R7 5% 2512 SMT RES         | U13 |      | OPA1652 DUAL OPAMP SMT SO8        |
| C4    |            | 10N 50V 10%CAP 0805 SMT X7R         | R13    |      | W100 7K50 1% 0805 SMT RES        | R1  |      | 26 PIN 25SQ 100 PIN SIL SMT       |
| C5    |            | 10U 16V 10%CAP 1206 SMT X7R         | R14    |      | 1W00 4R7 5% 2512 SMT RES         | 2D1 |      | MMBZ5246B 16V0 0W35 5% SMT ZEN3   |
| C6    |            | 10U 16V 20%CAP 0805 SMT X5R         | R15    |      | W125 3K32 1% 0805 SMT RES        | 2D6 |      | MM3Z15VT1G 15V0 0W2 5% SMT ZEN    |
| C7    |            | 4N7 50V 10%CAP 0805 SMT X7R         | R16    |      | 1W00 1K 5% 2512 SMT RES          | 2D7 |      | MM3Z15VT1G 15V0 0W2 5% SMT ZEN    |
| C8    |            | 4N7 50V 10%CAP 0805 SMT X7R         | R18    |      | W250 100R 5% 1206 SMT RES        | 2D8 |      | MMBZ5246B 16V0 0W35 5% SMT ZEN3   |
| C9    |            | 100N 450V 10%CAP 1206 SMT X7T       | R19    |      | W500 2K2 5% 2010 SMT RES         |     |      |                                   |
| C10   |            | 47P 100V 5%CAP 0805 SMT NPO         | R20    |      | W125 3K32 1% 0805 SMT RES        |     |      |                                   |
| C11   |            | 1U 25V 20%CAP 1206 SMT X7R          | R21    |      | W125 3K32 1% 0805 SMT RES        |     |      |                                   |
| C12   |            | 10U 25V 10%CAP 1210 SMT X7R         | R22    |      | W125 150K 5% 0805 SMT RES        |     |      |                                   |
| C13   |            | 100N 450V 10%CAP 1206 SMT X7T       | R23    |      | W125 33K 5% 0805 SMT RES         |     |      |                                   |
| C14   |            | 2U2 200V 20%CAP 3025 SMT CER        | R24    |      | W100 100K0 1% 0805 SMT RES       |     |      |                                   |
| C15   |            | 2U2 200V 20%CAP 3025 SMT CER        | R25    |      | W125 91K 5% 0805 SMT RES         |     |      |                                   |
| C16   |            | 2U2 100V 20%CAP 1812 SMT X7R        | R26    |      | W125 0R 5% 0805 SMT RES          |     |      |                                   |
| C17   |            | 2U2 100V 20%CAP 1812 SMT X7R        | R27    |      | W125 0R 5% 0805 SMT RES          |     |      |                                   |
| C18   |            | 100N 50V 5%CAP 0805 SMT X7R         | R28    |      | W125 3K32 1% 0805 SMT RES        |     |      |                                   |
| C19   |            | 1U 25V 20%CAP 1206 SMT X7R          | R29    |      | W250 0R 1206 SMT RES             |     |      |                                   |
| C21   |            | 100N 50V 5%CAP 0805 SMT X7R         | R31    |      | 1W00 47K 5% 2512 SMT RES         |     |      |                                   |
| C23   |            | 10U 25V 10%CAP 1210 SMT X7R         | R32    |      | W750 0R 1% 6A 2010 SMT JMP       |     |      |                                   |
| C25   |            | 10U 16V 20%CAP 5X5.4 SMT NP         | R34    |      | W125 0R 5% 0805 SMT RES          |     |      |                                   |
| C26   |            | 10U 16V 20%CAP 5X5.4 SMT NP         | R35    |      | W100 10K0 1% 0805 SMT RES        |     |      |                                   |
| C27   |            | 10U 25V 20%CAP 5X5.4 SMT EL         | R38    |      | 1W00 33K 5% 2512 SMT RES         |     |      |                                   |
| C28   |            | 10U 25V 20%CAP 5X5.4 SMT EL         | R39    |      | 1W00 4R7 5% 2512 SMT RES         |     |      |                                   |
| C29   |            | 100N 100V 10%CAP 1206 SMT X7R       | R40    |      | 1W00 4R7 5% 2512 SMT RES         |     |      |                                   |
| C32   |            | 100N 450V 10%CAP 1206 SMT X7T       | R41    |      | 1W00 15K 5% 2512 SMT RES         |     |      |                                   |
| C37   |            | 47P 100V 5%CAP 0805 SMT NPO         | R42    |      | W100 1K0 1% 0805 SMT RES         |     |      |                                   |
| C61   |            | 1N 50V 5%CAP 0805 SMT NPO           | R43    |      | W500 2K2 5% 2010 SMT RES         |     |      |                                   |
| C64   |            | 47P 100V 5%CAP 0805 SMT NPO         | R44    |      | W500 220R 1% 1210 SMT RES        |     |      |                                   |
| C69   |            | 100N 50V 5%CAP 0805 SMT X7R         | R45    |      | 1W00 0R27 1% 75PPM 2010 SMT RES  |     |      |                                   |
| D1    |            | BAS21L 250V 200MA SOT23 SMT         | R46    |      | W500 220R 1% 1210 SMT RES        |     |      |                                   |
| D2    |            | MURA240T3 400V 2A DIO 403D SMT      | R47    |      | W100 1K0 1% 0805 SMT RES         |     |      |                                   |
| D3    |            | MURA240T3 400V 2A DIO 403D SMT      | R48    |      | 1W00 0R27 1% 75PPM 2010 SMT RES  |     |      |                                   |
| D4    |            | 5237B 8V2 0W2 SOT-23 SMT ZEN        | R49    |      | 1W00 0R27 1% 75PPM 2010 SMT RES  |     |      |                                   |
| D5    |            | MMBZ5231B 5V1 0W35 5% SMT ZEN       | R50    |      | 1W00 0R27 1% 75PPM 2010 SMT RES  |     |      |                                   |
| D6    |            | MMBZ5231B 5V1 0W35 5% SMT ZEN       | R51    |      | W500 220R 1% 1210 SMT RES        |     |      |                                   |
| D7    |            | MM3Z18VT1G 18V0 0W2 5% SMT ZEN      | R52    |      | W500 220R 1% 1210 SMT RES        |     |      |                                   |
| D8    |            | BAV21WS 200V 0A2 SOD323 SMT         | R53    |      | W500 2K2 5% 2010 SMT RES         |     |      |                                   |
| D9    |            | BAV21WS 200V 0A2 SOD323 SMT         | R54    |      | W500 2K2 5% 2010 SMT RES         |     |      |                                   |
| D10   |            | BAS21L 250V 200MA SOT23 SMT         | R55    |      | W500 2K2 5% 2010 SMT RES         |     |      |                                   |
| D11   |            | MM3Z15VT1G 15V0 0W2 5% SMT ZEN      | R56    |      | W100 100R 1% 0805 SMT RES        |     |      |                                   |
| D12   |            | MURA240T3 400V 2A DIO 403D SMT      | R60    |      | W750 0R 1% 6A 2010 SMT JMP       |     |      |                                   |
| D13   |            | BAV21WS 200V 0A2 SOD323 SMT         | R61    |      | W250 0R 1206 SMT RES             |     |      |                                   |
| D14   |            | BAV21WS 200V 0A2 SOD323 SMT         | R61 2T |      | W125 0R 5% 0805 SMT RES          |     |      |                                   |
| D15   |            | MM3Z18VT1G 18V0 0W2 5% SMT ZEN      | R63    |      | 1W00 0R 5% 2512 SMT RES          |     |      |                                   |
| D17   |            | BAV21WS 200V 0A2 SOD323 SMT         | R64    |      | W250 0R 1206 SMT RES             |     |      |                                   |
| D30A  |            | CDSF4148 75V 0A15 1005 SMT          | R66    |      | W100 100K0 1% 0805 SMT RES       |     |      |                                   |
| D36   |            | BAS21L 250V 200MA SOT23 SMT         | R72    |      | W100 221R 1% 0805 SMT RES        |     |      |                                   |
| D42   |            | BAS21L 250V 200MA SOT23 SMT         | R76    |      | W250 0R 1206 SMT RES             |     |      |                                   |
| M1501 |            | W250 0R 1206 SMT RES                | R79    |      | W125 3K32 1% 0805 SMT RES        |     |      |                                   |
| P6    |            | 10K 25% ACP KAP TRIM POT SMT T&R    | R82    |      | W250 0R 1206 SMT RES             |     |      |                                   |
| PCB1  | X8025BLANK | 2 OZ 1SD 107.5SQIN 08PER ALUM 1.5MM | R87    |      | W250 0R 1206 SMT RES             |     |      |                                   |
| Q2    |            | MMBF5401 PNP SOT-23 SMT             | R97 2T |      | W125 0R 5% 0805 SMT RES          |     |      |                                   |
| Q3    |            | MMBF4391LT1 NCH JFET SOT-23 SMT T&R | R99    |      | 1W00 1K 5% 2512 SMT RES          |     |      |                                   |
| Q4    |            | MJD243T4G NPN DPAK3 SMT TS          | R106 2 |      | W250 0R 1206 SMT RES             |     |      |                                   |
| Q5    |            | IRFS4227PBF NCH MFET D2PAK SMT TS   | R107 2 |      | W250 0R 1206 SMT RES             |     |      |                                   |
| Q6    |            | IRFS4227PBF NCH MFET D2PAK SMT TS   | R109   |      | W125 1M 5% 0805 SMT RES          |     |      |                                   |
| Q7    |            | MC7815BDTG POS REG SMT DPAK3        | R112   |      | W125 470R 5% 0805 SMT RES        |     |      |                                   |
| Q8    |            | MC79M15CDTG NEG REG SMT DPAK3       | R113   |      | W100 10K0 1% 0805 SMT RES        |     |      |                                   |
| Q10   |            | IRF530NS NCH MFET D2PAK SMT TS      | R114   |      | W125 1K62 1% 0805 SMT RES        |     |      |                                   |
| Q11   |            | 2SC4027 NPN DPAK3 SMT TR            | R116   |      | PTC RESETTABLE 1.5A 6V 1812L SMT |     |      |                                   |
| Q12   |            | 2SC4027 NPN DPAK3 SMT TR            | R117   |      | W125 1K50 1% 0805 SMT RES        |     |      |                                   |
| Q13   |            | STB13007DT4 NPN D2PAK SMT           | R118   |      | W100 2K74 1% 0805 SMT RES        |     |      |                                   |
| Q14   |            | MMBF4391LT1 NCH JFET SOT-23 SMT T&R | R119   |      | W125 470R 5% 0805 SMT RES        |     |      |                                   |
| Q15   |            | STB13007DT4 NPN D2PAK SMT           | R120   |      | W125 14K0 1% 0805 SMT RES        |     |      |                                   |
| Q16   |            | 2SA1552 PNP DPAK3 SMT TR            | R121   |      | W100 10K0 1% 0805 SMT RES        |     |      |                                   |
| Q17   |            | MMBTA64LT1G PNP DARL SOT-23 SMT     | R125   |      | W100 15K0 1% 0805 SMT RES        |     |      |                                   |
| Q18   |            | 2SA1552 PNP DPAK3 SMT TR            | R126   |      | W125 17K8 1% 0805 SMT RES        |     |      |                                   |
| Q19   |            | STB13007DT4 NPN D2PAK SMT           | R127   |      | W125 470R 5% 0805 SMT RES        |     |      |                                   |
| Q20   |            | STB13007DT4 NPN D2PAK SMT           | R130   |      | W125 8K25 1% 0805 SMT RES        |     |      |                                   |
| Q21   |            | IRF9530NS PCH MFET D2PAK SMT TS     | R131   |      | W125 47R 5% 0805 SMT RES         |     |      |                                   |
| R1    |            | W100 2K74 1% 0805 SMT RES           | R132   |      | W125 47R 5% 0805 SMT RES         |     |      |                                   |
| R2    |            | 47K 5% THERMISTOR NTC 0603 SMT      | R134   |      | W100 221R 1% 0805 SMT RES        |     |      |                                   |
| R4    |            | W100 10K0 1% 0805 SMT RES           | R136   |      | W500 2K2 5% 2010 SMT RES         |     |      |                                   |
| R5    |            | W100 1K0 1% 0805 SMT RES            | R138   |      | W100 100R 1% 0805 SMT RES        |     |      |                                   |
| R6    |            | W500 2K2 5% 2010 SMT RES            | R141   |      | W500 2K2 5% 2010 SMT RES         |     |      |                                   |
| R7    |            | W125 1M 5% 0805 SMT RES             | TP1    |      | TEST POINT MINIATURE SMT         |     |      |                                   |
| R8    |            | W250 10R 5% 1206 SMT RES            | TP2    |      | TEST POINT MINIATURE SMT         |     |      |                                   |
| R9    |            | W125 348R0 1% 0805 SMT RES          | U1     |      | LM393D DUAL COMPARATOR SMT SO-8  |     |      |                                   |





**POTENTIOMETERS/SWITCHES AND KNOBS**

| MODEL(S):-E10P | M1311          |                 |
|----------------|----------------|-----------------|
| REF            | FUNCTION       | POT/SW YS# KNOB |
| P3             | LEVEL          | 4388 K          |
| P4             | BASS           | 4388 K          |
| P5             | TREBLE         | 4388 K          |
| S3             | LIVE/PLAYBACK  | 3522 8632       |
| S4             | MIC/LINE       | 3440 8632       |
| S8             | SUB IN/SUB OUT | 3522 8632       |
| R              | F              | P K             |
| R              | F              | P K             |
| R              | F              | P K             |
| R              | F              | P K             |
| R              | F              | P K             |
| R              | F              | P K             |
| R              | F              | P K             |
| R              | F              | P K             |
| R              | F              | P K             |

**POTENTIOMETERS/SWITCHES AND KNOBS**

| MODEL(S):-PSA1 | M1496    |                 |
|----------------|----------|-----------------|
| REF            | FUNCTION | POT/SW YS# KNOB |
| P5             | LEVEL    | 4459 8653       |
| S3             | LF CUT   | 3522 8637       |
| S8             | HF BOOST | 3522 8637       |
| R              | F        | P K             |
| R              | F        | P K             |
| R              | F        | P K             |
| R              | F        | P K             |
| R              | F        | P K             |
| R              | F        | P K             |
| R              | F        | P K             |
| R              | F        | P K             |
| R              | F        | P K             |

**M1311 / M1496 - PCB\_DATABASE\_HISTORY**

| MODEL(S):- | E10P/PSA1   |      |  |
|------------|-------------|------|--|
| #          | DATE        | VER# | DESCRIPTION OF CHANGE                                |
| 1          | 17-APR-2011 | V04  | DERIVED FROM M1311V03                                |
| 2          | 16-JUN-2011 | .    | PC82xx: XH conn DS pads, add PCB title. GG           |
| 3          | 31-OCT-2011 | V05  | PC8322: CHANGED W7 & W8 to XH CONN. - ML             |
| 4          | .           | .    | PC8318: UPDT YS#7896 - CHANGED 'C56' to 'L56' - ML   |
| 5          | 25-NOV-2011 | V05  | FORCE UPDATED SMT PARTS - FIXED LAYOUT. - ML         |
| 6          | 11-JAN-2012 | .    | PC8361: CONSOLIDATED SMT RESISTORS. - ML             |
| 7          | 06-MAR-2012 | V06  | PC8385: Replace L56 #7896 with #8108 GG              |
| 8          | D           | .    | Add SCORE lines on the sides. GG                     |
| 9          | 12-JUL-2012 | .    | PC8458 - Changed P5 from 4435 to 4459 for PSA1. - ML |
| 10         | 14-AUG-2012 | .    | PC8461: Breakers changed for PSA1 - ML               |
| 11         | 26-MAR-2013 | .    | PC8501: Updated fiducials to 50mil diameter. - ML    |
| 12         | 11-OCT-2013 | V07  | PC8578 & 8580: Replaced J3 and J4 XLR jacks. - ML    |
| 13         | 20-JAN-2015 | V08  | PC8734: Implemented on board.                        |
| 14         | 06-JUN-2017 | .    | PC9015: Change R1 and R2 to 7K5 YS#7822              |

**PARTS REFERENCE TABLE**

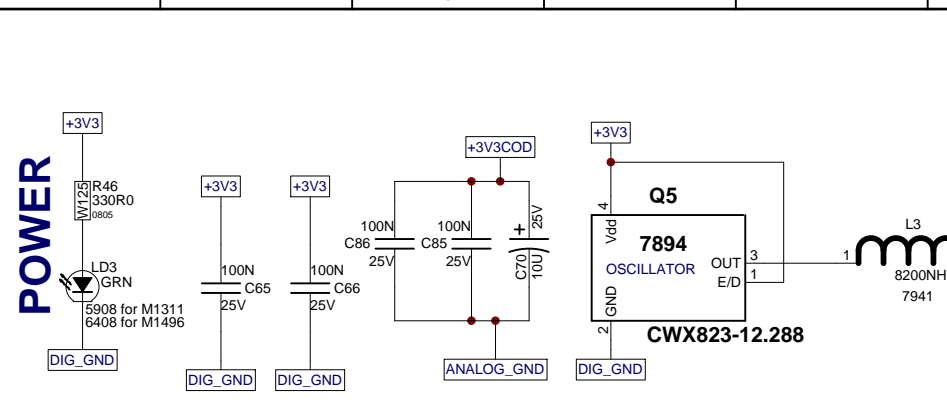
| REF DES | M1311 (E10P) | M1496 (PSA1) |
|---------|--------------|--------------|
| P3      | 4388         | DNS          |
| P4      | 4388         | DNS          |
| P5      | 4388         | 4459         |
| S4      | 3440         | DNS          |
| LD2     | 5907         | 6400         |
| LD3     | 5908         | 6408         |
| LD4     | 5906         | 6405         |
| X1      | 4599         | DNS          |
| X2      | DNS          | 4599         |

**Yorkville**

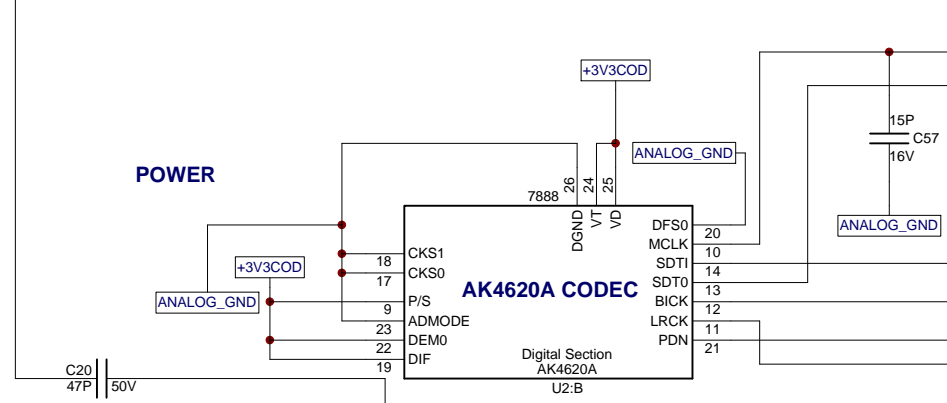
Product **E10P(M1311) / PSA1(M1496)**

|                               |                    |              |
|-------------------------------|--------------------|--------------|
| INPUT/DSP                     | PCB# M1311 / M1496 | Sheet 1 of 3 |
| Date: Mon Jun 05, 2017        | Rev:V08            | YsType:.     |
| Filename: X8019V08SCH.sch2006 |                    |              |

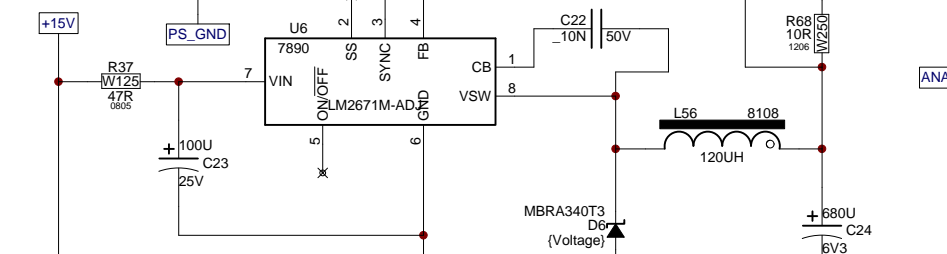
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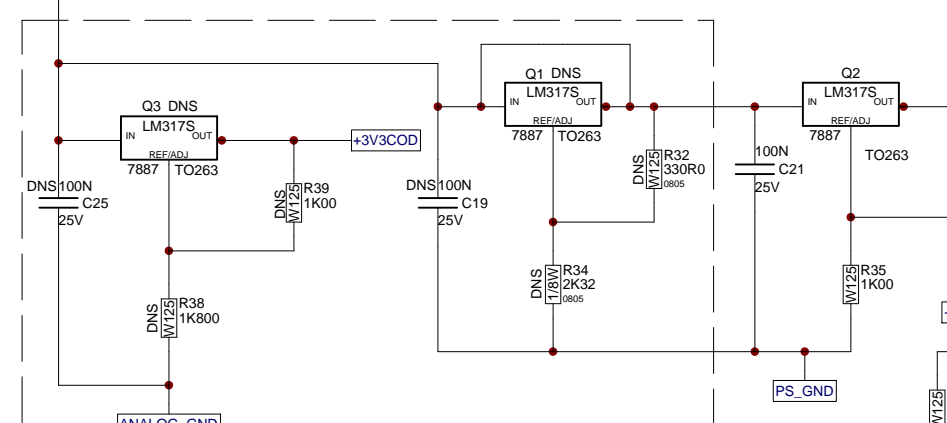
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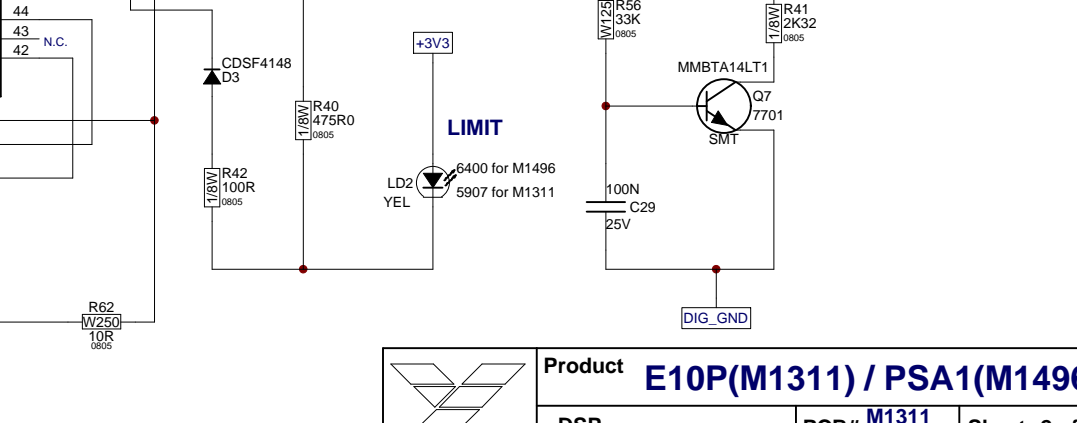
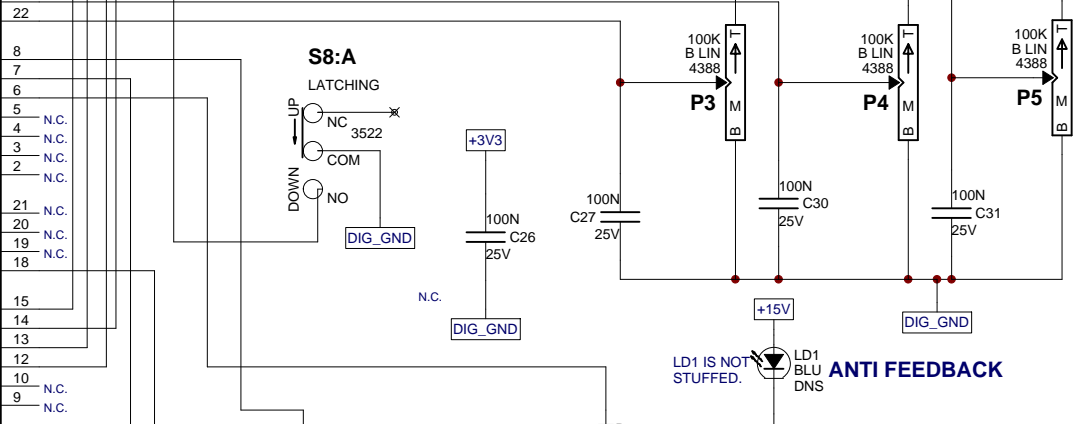
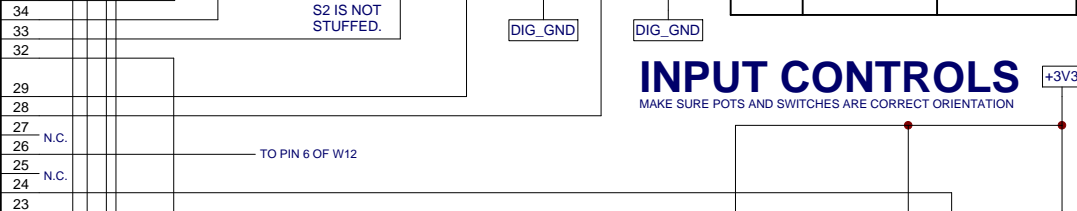
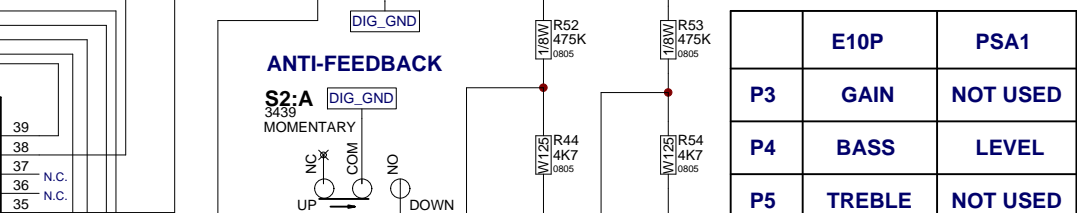
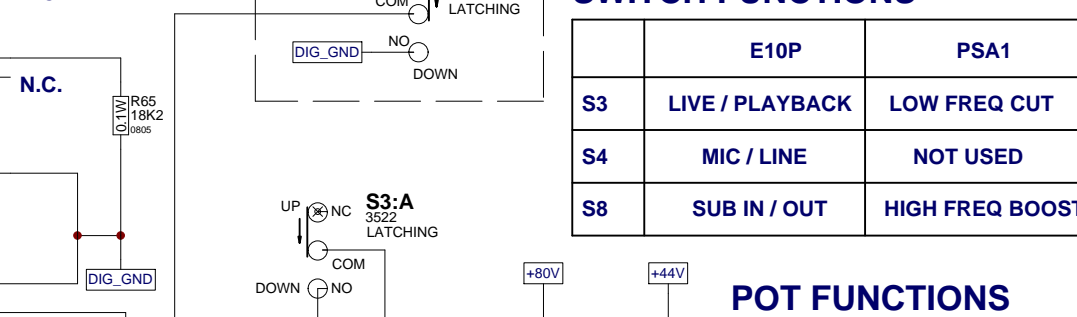
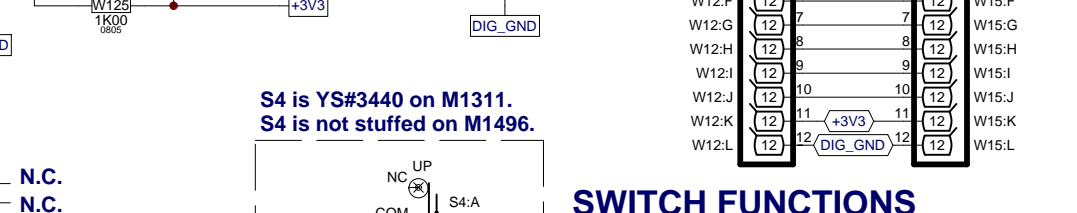
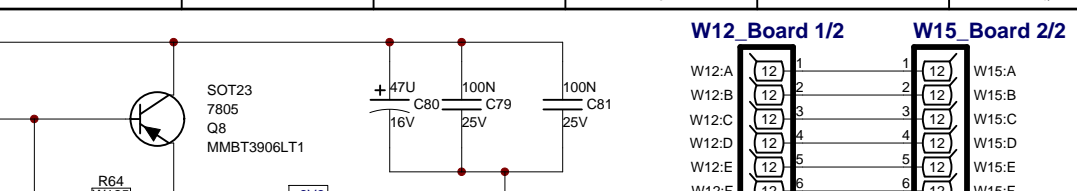
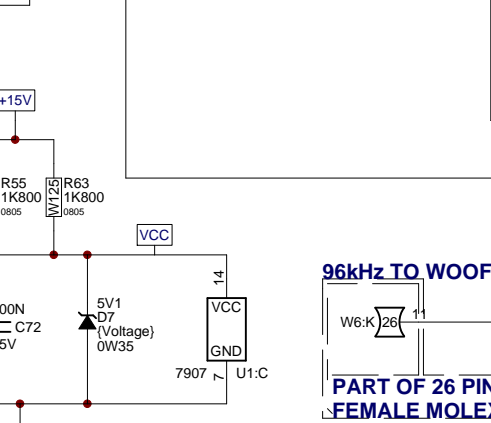
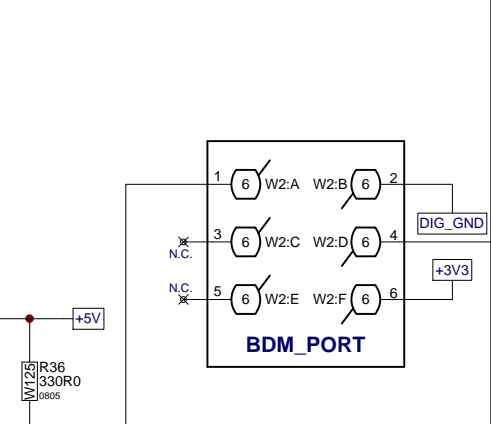
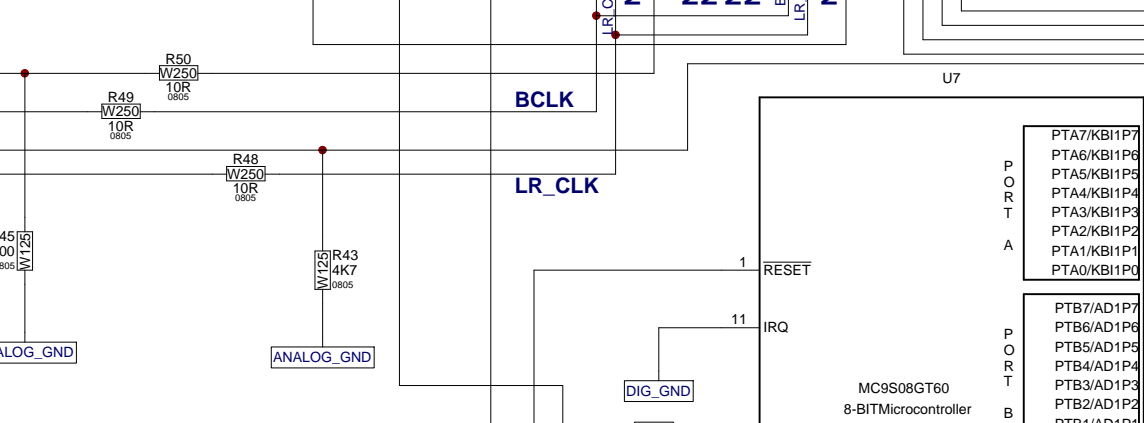
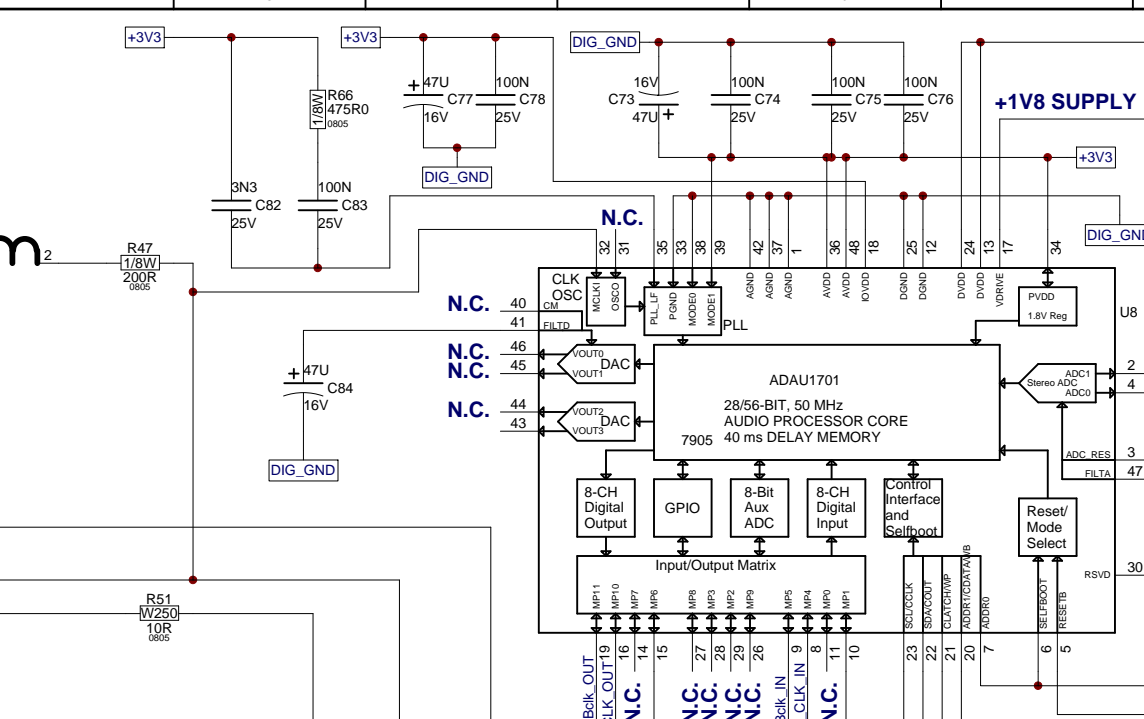
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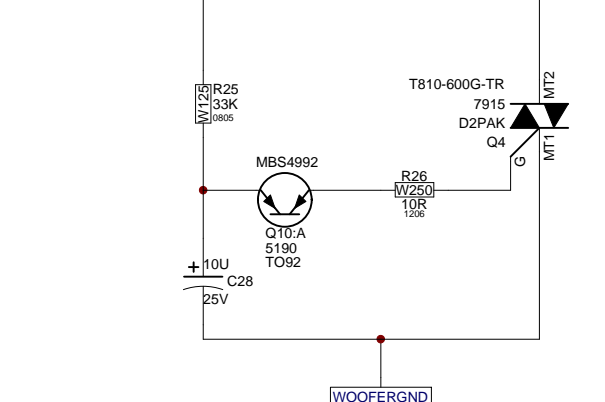
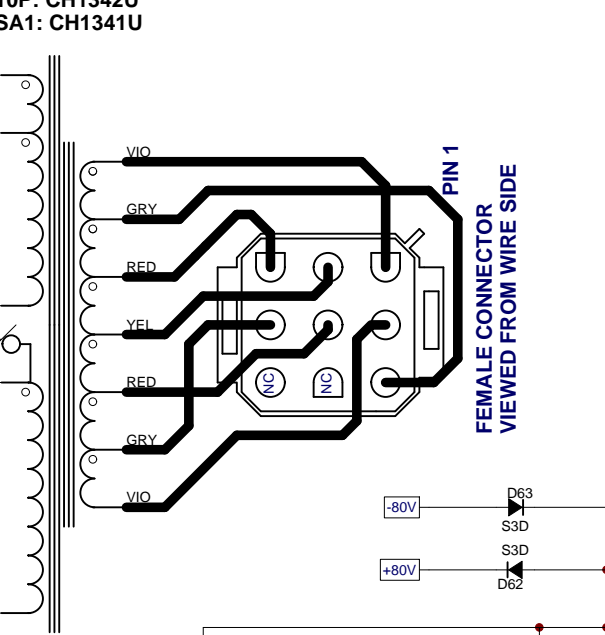
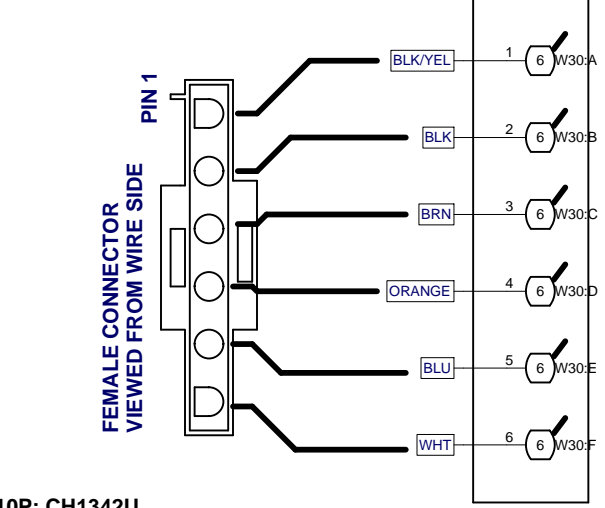
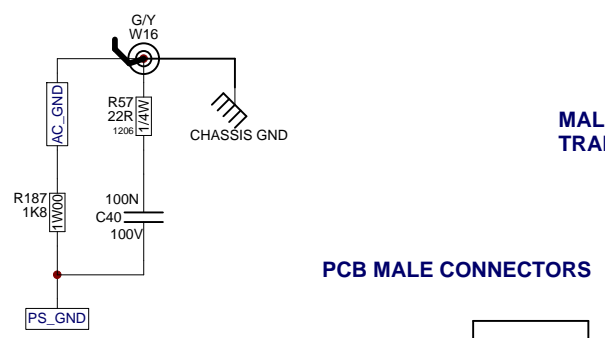
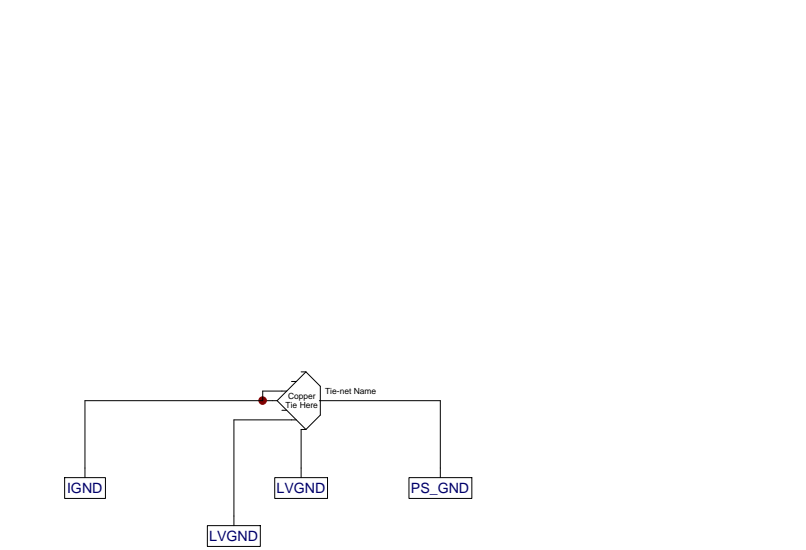
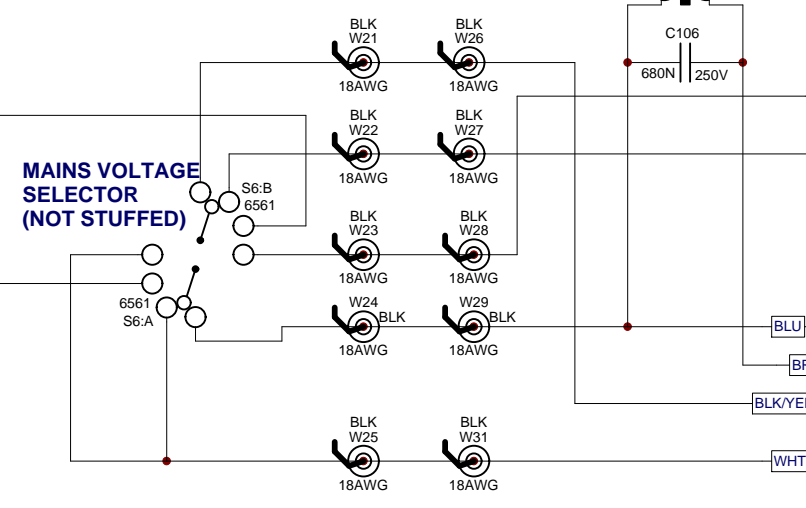
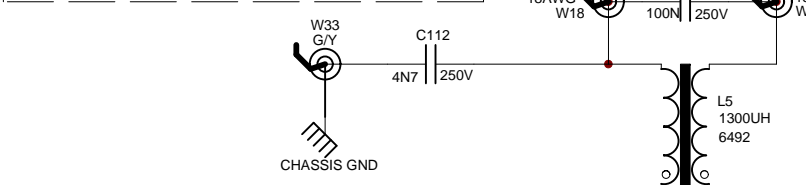
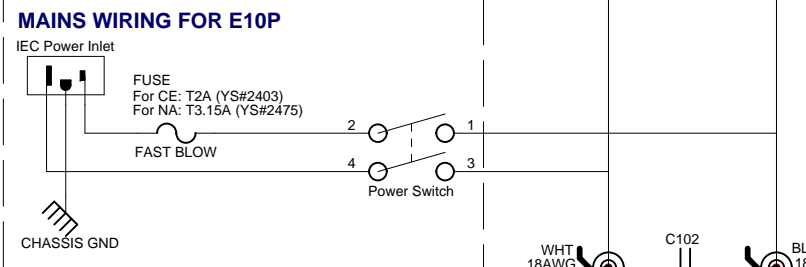
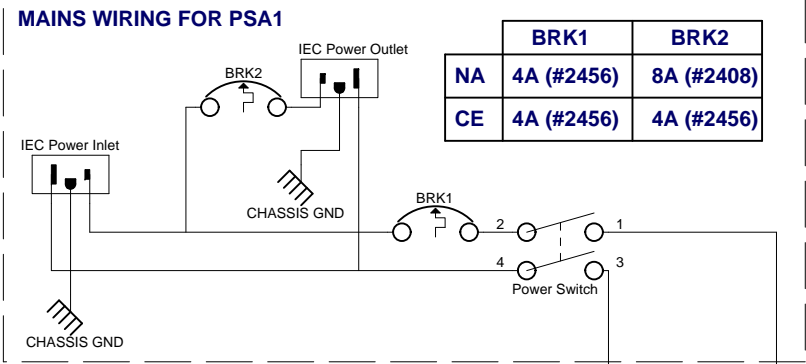


# LOW VOLTAGE SUPPLY

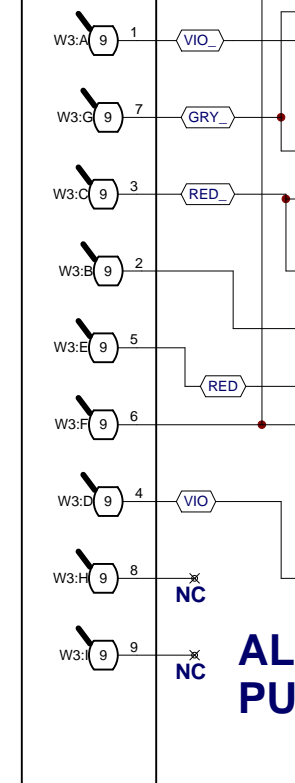


These parts are not inserted.



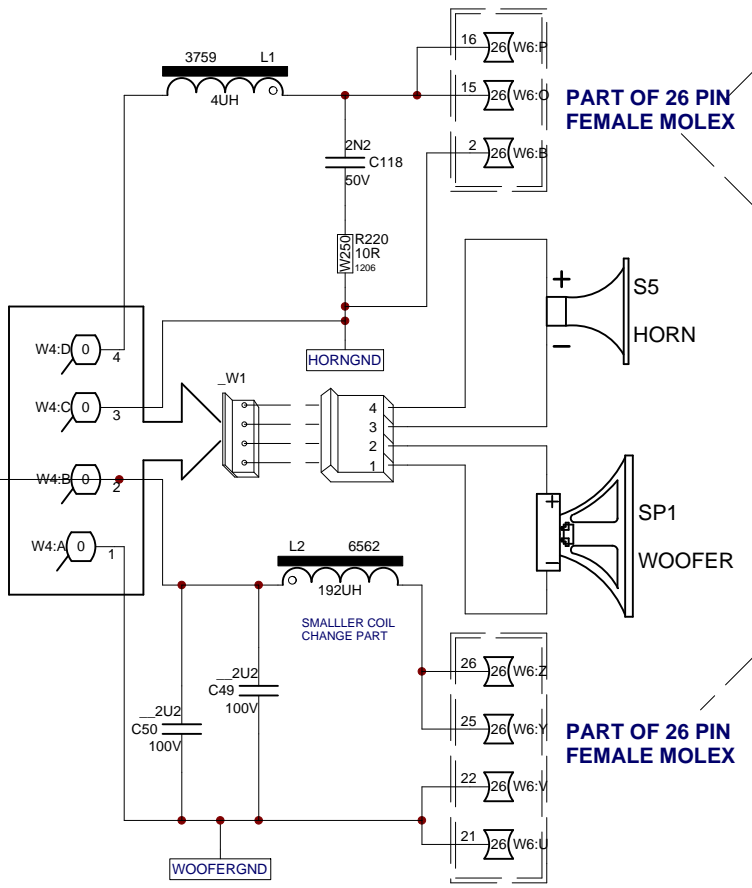
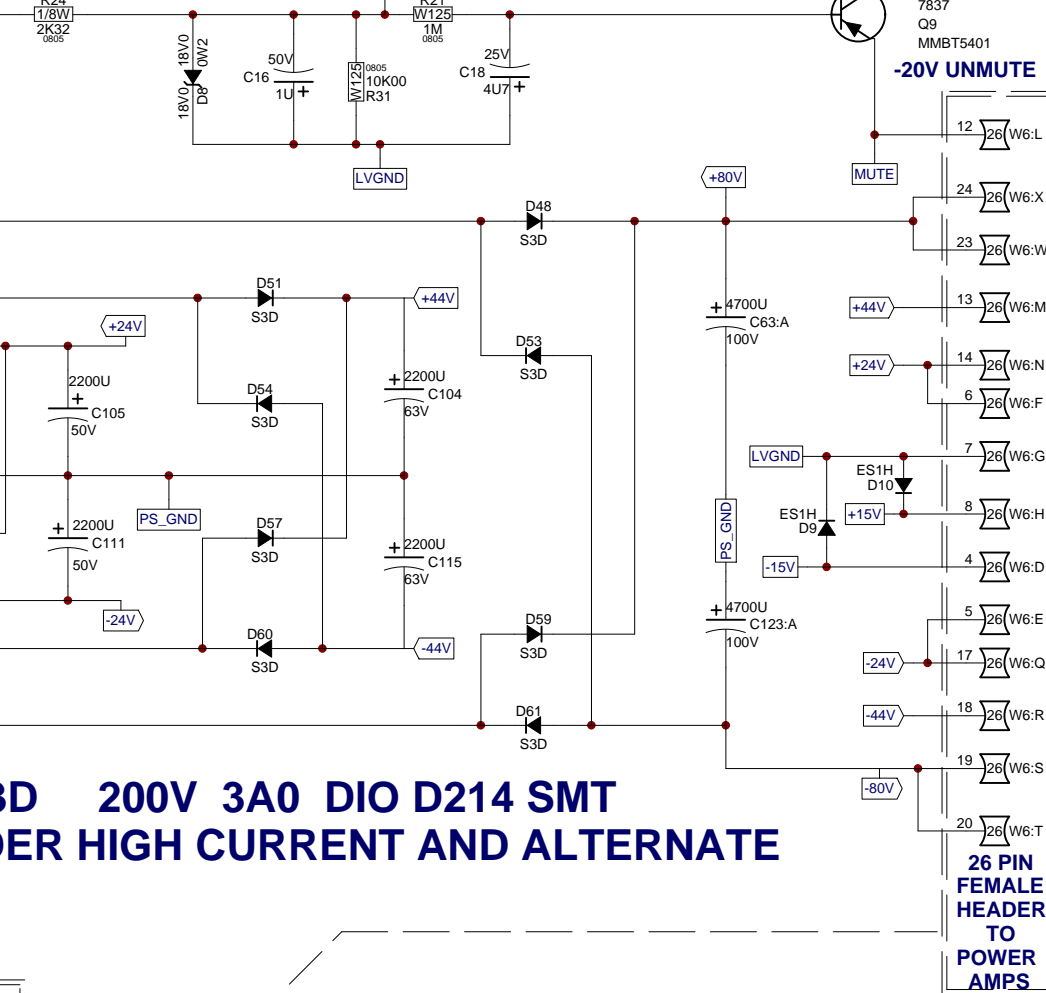


### MALE 9 PIN CONNECTOR FOR TRANSFORMER SECONDARY



**ALL DIODES S3D 200V 3A0 DIO D214 SMT  
PUT PADS UNDER HIGH CURRENT AND ALTERNATE**

### MUTE ON/OFF

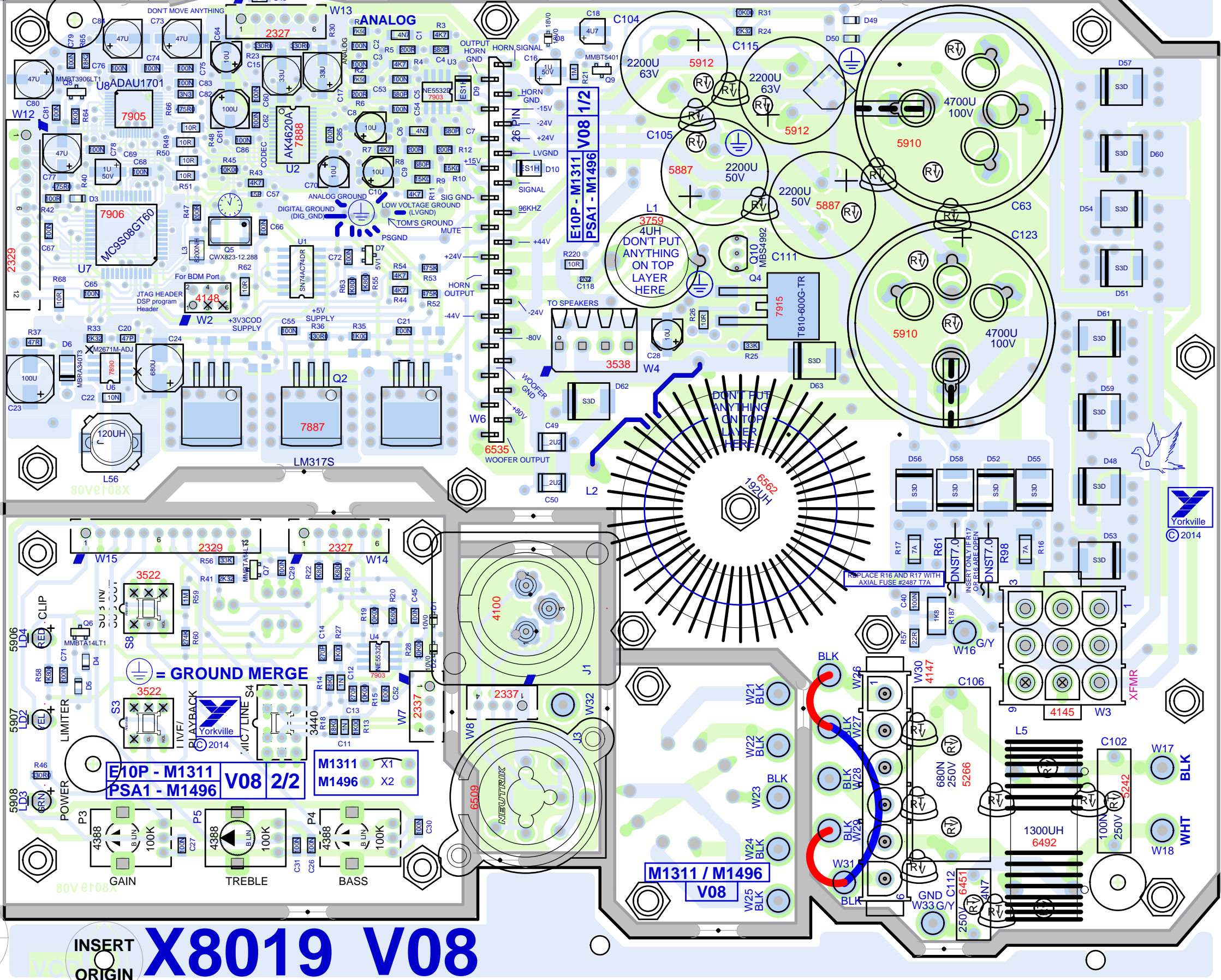


**OUTPUT**



13 20 JAN 2015 V08 PG8734: Implemented on board.

BlankSize - 9200x7100



**X8019 V08**

**M1311 V08**

↙ **SEE PRODUCTION NOTES**

↙ **E10P**



SEE LAYOUT DIAGRAM



# M1311 V08 PRODUCTION NOTES

1. B.A. STUFF X1 FIRST.
2. B.A. ADD RTV BETWEEN C106, C112 AND W30 THE POWER CONNECTOR
3. B.A. ADD RTV UNDER J3 XLR.
4. B.A. DO NOT STUFF S2 AND LD1.
5. B.A. ADD YS#3822 1.25" HEATSHRINK AROUND J3
6. B.A. DO NOT STUFF S6
7. B.A. FOR N.A. BOARDS ADD 18AWG JUMPER FROM W26 TO W27 AND FROM W29 TO W31
8. B.A. FOR CE BOARDS ADD 18AWG JUMPER FROM W27 TO W31
9. PCB SA: DO NOT BREAK OUT BOARD BEFORE TESTING
10. PCB SA: ADD M1607 CLIP TO YS#4100 XLR WITH RTV AS SHOWN.

## X8019 PARTS REFERENCE TABLE

| REF DES | M1311<br>(E10P) | M1496<br>(PSA1) |
|---------|-----------------|-----------------|
| P3      | 4388            | DNS             |
| P4      | 4388            | DNS             |
| P5      | 4388            | 4459            |
| S4      | 3440            | DNS             |
| LD2     | 5907            | 6400            |
| LD3     | 5908            | 6408            |
| LD4     | 5906            | 6405            |
| X1      | 4599            | DNS             |
| X2      | DNS             | 4599            |





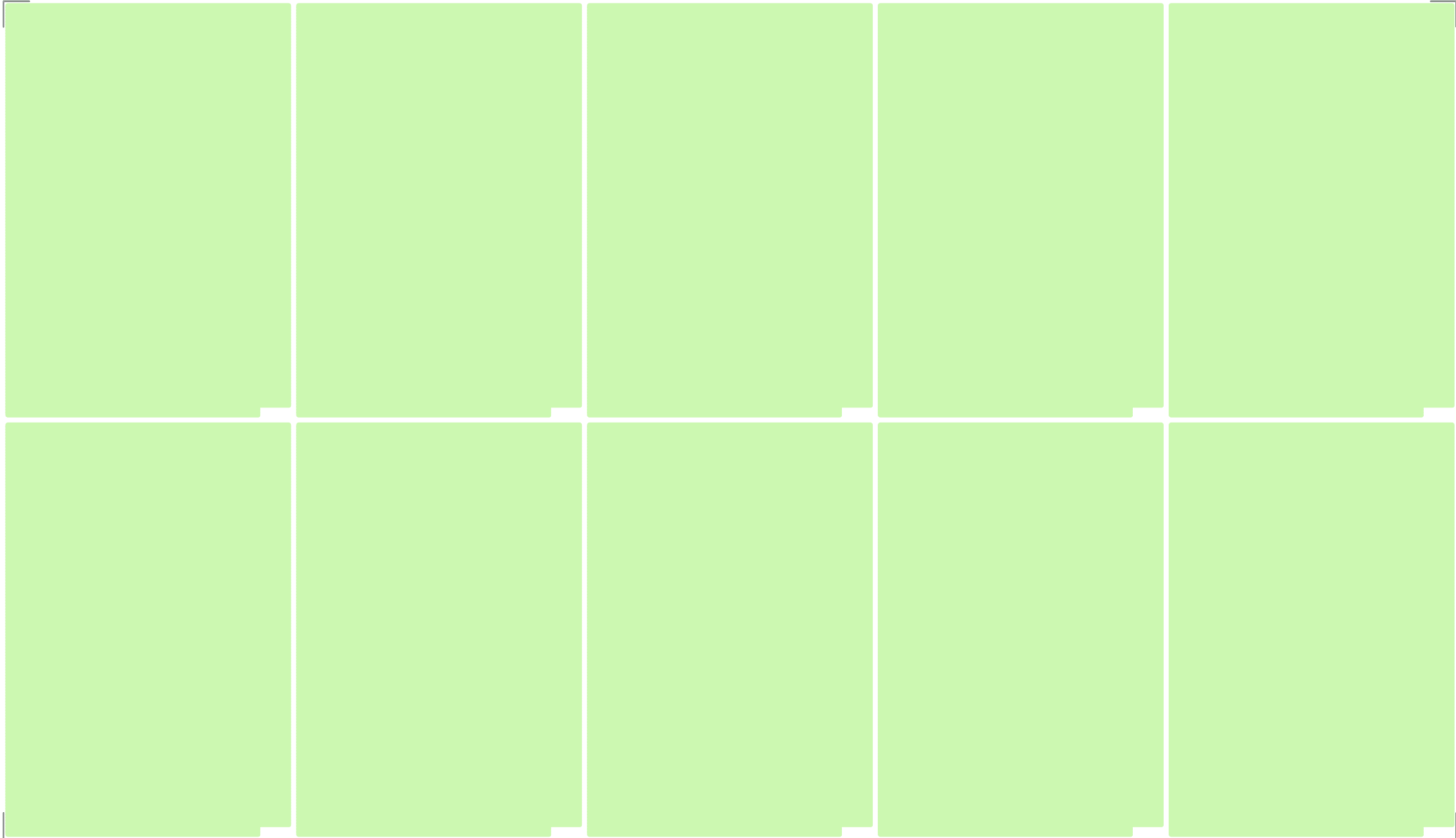
↑ ↑ **SEE PRODUCTION NOTES** ↑ ↑

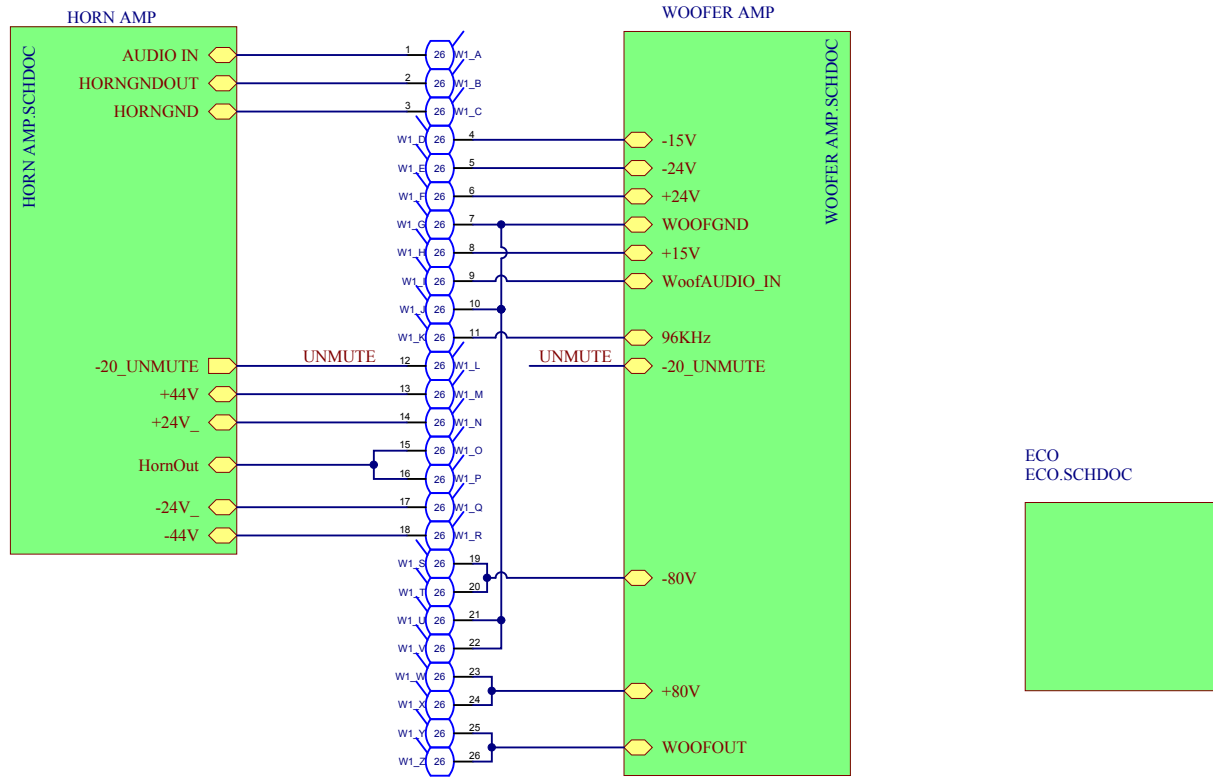
| <b>POTENTIOMETERS/SWITCHES AND KNOBS</b> |                 |                   |             |
|--|-----------------|-------------------|-------------|
| <b>MODEL(S):-E10P</b>                    |                 | <b>M1311 .</b>    |             |
| <b>REF</b>                               | <b>FUNCTION</b> | <b>POT/SW YS#</b> | <b>KNOB</b> |
| P3                                       | LEVEL           | 4388              | K           |
| P4                                       | BASS            | 4388              | K           |
| P5                                       | TREBLE          | 4388              | K           |
| S3                                       | LIVE/PLAYBACK   | 3522              | 8632        |
| S4                                       | MIC/LINE        | 3440              | 8632        |
| S8                                       | SUB IN/SUB OUT  | 3522              | 8632        |
| R  | F               | P                 | K           |
| R  | F               | P                 | K           |
| R  | F               | P                 | K           |
| R  | F               | P                 | K           |
| R  | F               | P                 | K           |

| <b>M1311 - PCB_DATABASE_HISTORY</b> |             |             |  |
|-------------------------------------|-------------|-------------|--|
| <b>MODEL(S):- E10P</b>              |             |             |  |
| <b>#</b>                            | <b>DATE</b> | <b>VER#</b> | <b>DESCRIPTION OF CHANGE</b>                         |
| 1                                   | 17-APR-2011 | V04         | DERIVED FROM M1311V03. PC 8242                       |
| 2                                   | 16-JUN-2011 | .           | PC82xx: XH conn DS pads, add PCB title. GG           |
| 3                                   | 31-OCT-2011 | V05         | PC8322: CHANGED W7 & W8 TO XH CONN. - ML             |
| 4                                   | .           | .           | PC8318: UPDT YS#7896 - CHANGED 'C56' to 'L56' - ML   |
| 5                                   | 25-NOV-2011 | V05         | FORCE UPDATED SMT PARTS - FIXED LAYOUT. - ML         |
| 6                                   | 11-JAN-2012 | .           | PC8361: CONSOLIDATED SMT RESISTORS. - ML             |
| 7                                   | 06-MAR_2012 | V06         | PC8385: Replace L56 #7896 with #8108 GG              |
| 8                                   | D           | .           | Add SCORE lines on the sides GG                      |
| 9                                   | 12-JUL-2012 | .           | PC8458 - Changed P5 from 4435 to 4459 for PSA1. - ML |
| 10                                  | 14-AUG-2012 | .           | PC8461: Breakers changed for PSA1 - ML               |
| 11                                  | 26-MAR-2013 | .           | PC8501: Updated fiducials to 50mil diameter. - ML    |
| 12                                  | 11-OCT-2013 | V07         | PC8578 & 8580: Replaced J3 and J4 XLR jacks. - ML    |
| 13                                  | 20-JAN-2015 | V08         | PC8734: Implemented on board.                        |
| 14                                  | 06-JUN-1017 | .           | PC9015: Change R1 and R2 to 7K5 YS#7822              |

M1312 E10P Shield

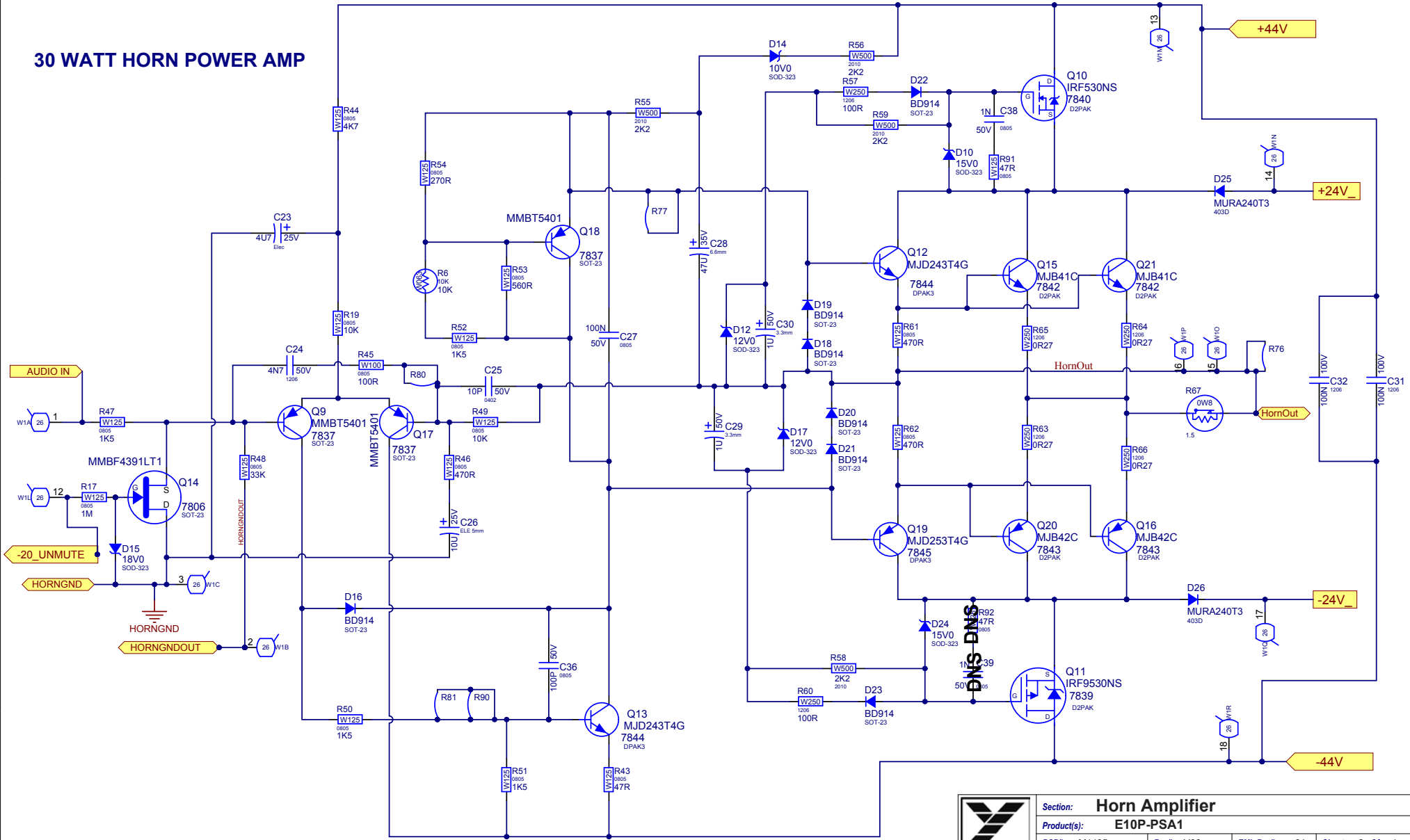
**BlankSize=11300x6520**





|   |                               |
|---|-------------------------------|
| <b>Product(s):</b> E10P-PSA1                |                               |
| <b>Description:</b> Powered speaker cabinet |                               |
| <b>PCB#:</b> M1495                          | <b>Rev#:</b> V06              |
| <b>Modified:</b> 3/22/2016                  | <b>File:</b> Top Sheet.SchDoc |
| <b>EML Rev#:</b> 01                         | <b>Sheet</b> 1 <b>Of</b> 4    |
| <b>Tmp Rev:</b> V032                        |                               |

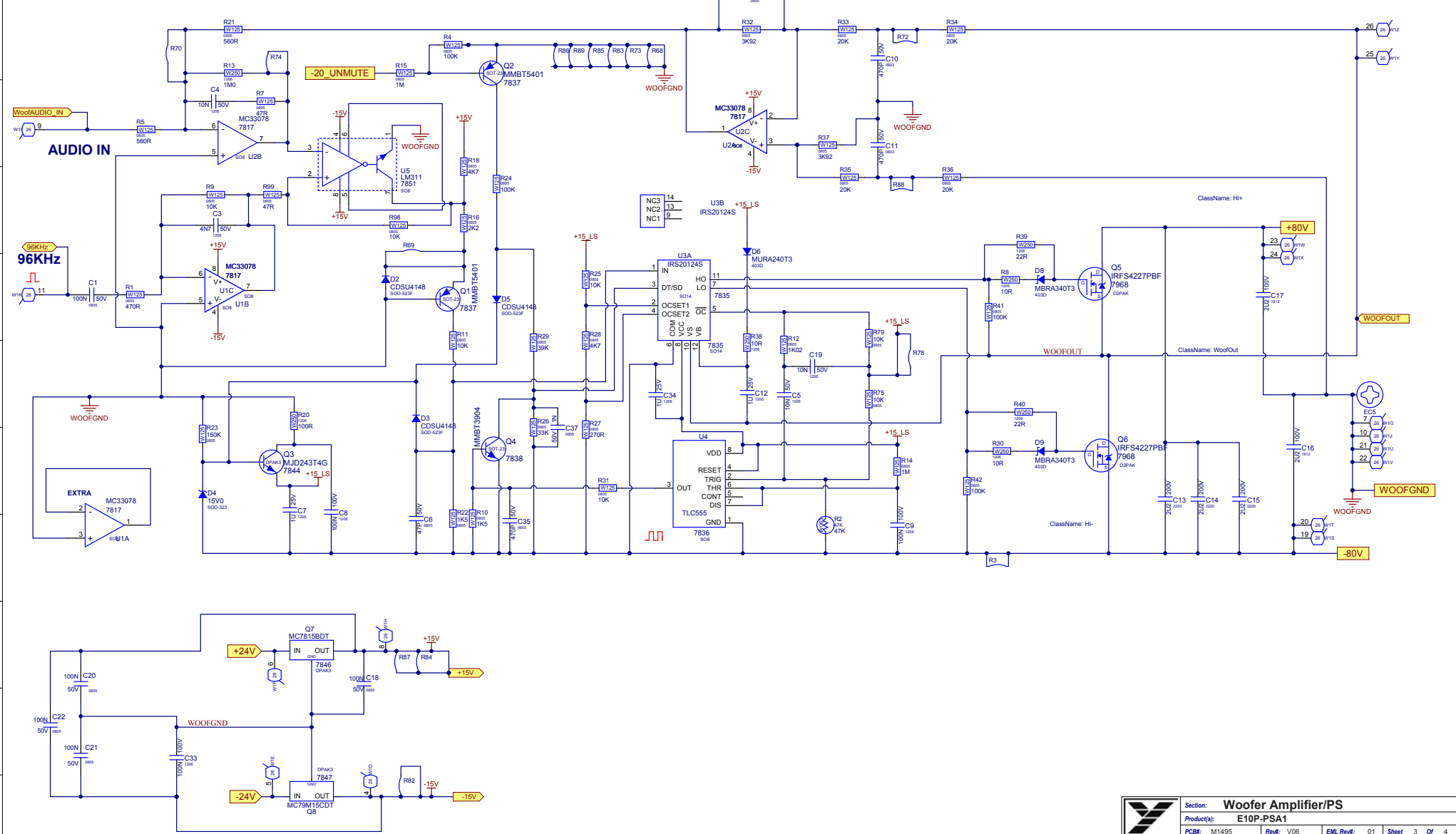
# 30 WATT HORN POWER AMP



|                                |                       |               |              |
|--------------------------------|-----------------------|---------------|--------------|
| Section: <b>Horn Amplifier</b> |                       |               |              |
| Product(s): <b>E10P-PSA1</b>   |                       |               |              |
| PCB#: M1495                    | Rev#: V06             | EML Rev#: 01  | Sheet 2 Of 4 |
| Modified: 3/22/2016            | File: HORN AMP.SCHDOC | Tmp Rev: V032 |              |

# WOOFER

## ▶ 325W NON INVERTING CLASS D AMPLIFIER



|  |                     |                         |                |              |
|--|---------------------|-------------------------|----------------|--------------|
|  | Section:            | Woofers Amplifier/PS    |                |              |
|  | Product(s):         | E10P-PSA1               |                |              |
|  | PCB#: M1495         | Rev: V06                | EML Rev: 01    | Sheet 3 Of 4 |
|  | Modified: 3/22/2016 | File: WOOFER AMP.SCHDOC | Temp Rev: V032 |              |

# DESIGN HISTORY AND INFORMATION

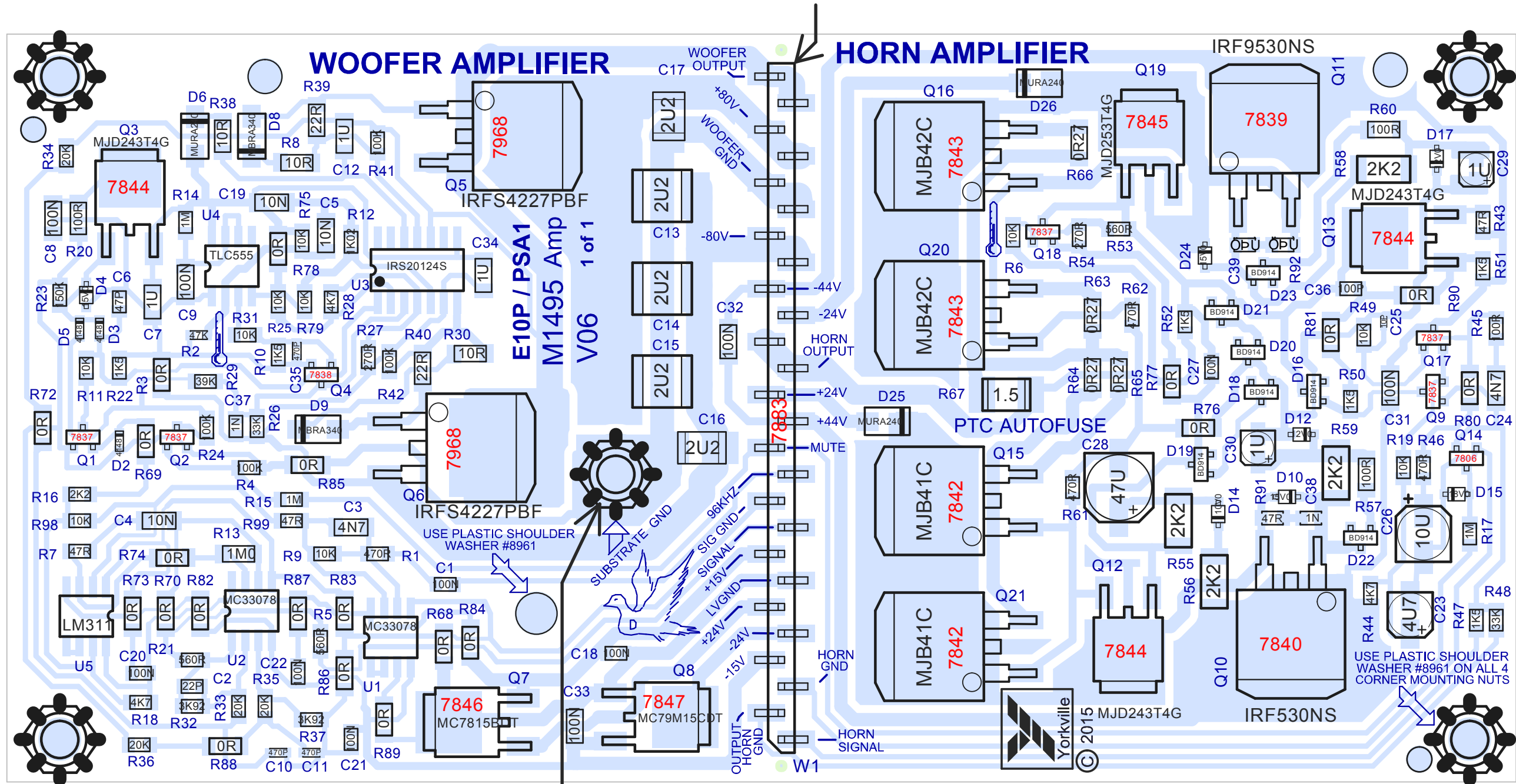
## CHANGE HISTORY

| #  | DATE        | VER# | PC#  | DESCRIPTION OF CHANGE   |
|----|-------------|------|------|---|
| 1  | 2015-06-24  | V05  | 8782 | Translate V04 PCAD to AD. PC#8782 added C38,39. Moved D10,14,R58. |
| 2  | .           | .    | .    | Moved D4 up 6mil. Changed all D0704 footprints to SOD-523F.       |
| 3  | 2015-08-27  | V06  | 8817 | Add 47R 0805 #7854 in series with C38 and C39 GG                  |
| 4  | .           | .    | .    | Replace all #7613 with #5979 GG                                   |
| 5  | .           | .    | .    | Increase board width by 10mil each side GG                        |
| 6  | 22-MAR-2016 | .    | 8818 | #7613 100n 25V replaced with #5979 100n 50V                       |
| 7  | .           | .    | .    | .   |
| 8  | .           | .    | .    | .   |
| 9  | .           | .    | .    | .   |
| 10 | .           | .    | .    | .   |
| 11 | .           | .    | .    | .   |
| 12 | .           | .    | .    | .   |
| 13 | .           | .    | .    | .   |
| #  | DATE        | VER# | PC#  | DESCRIPTION OF CHANGE   |
| 1  | .           | .    | .    | .   |
| 2  | .           | .    | .    | .   |
| 3  | .           | .    | .    | .   |
| 4  | .           | .    | .    | .   |
| 5  | .           | .    | .    | .   |
| 6  | .           | .    | .    | .   |
| 7  | .           | .    | .    | .   |
| 8  | .           | .    | .    | .   |
| 9  | .           | .    | .    | .   |
| 10 | .           | .    | .    | .   |
| 11 | .           | .    | .    | .   |
| 12 | .           | .    | .    | .   |
| 13 | .           | .    | .    | .   |
| #  | DATE        | VER# | PC#  | DESCRIPTION OF CHANGE   |
| 1  | .           | .    | .    | .   |
| 2  | .           | .    | .    | .   |
| 3  | .           | .    | .    | .   |
| 4  | .           | .    | .    | .   |
| 5  | .           | .    | .    | .   |
| 6  | .           | .    | .    | .   |
| 7  | .           | .    | .    | .   |
| 8  | .           | .    | .    | .   |
| 9  | .           | .    | .    | .   |
| 10 | .           | .    | .    | .   |
| 11 | .           | .    | .    | .   |
| 12 | .           | .    | .    | .   |
| 13 | .           | .    | .    | .   |

## POTENTIOMETERS AND KNOBS

## PINOUT DIAGRAMS

# HAND PLACE W1 BEFORE REFLOW OVEN



**M1495 V06**

**8701 + 8877 SEE NOTE 1.**

**E10P / PSA1**

## PANEL INFO

BlankSize - 6250x11750  
 # of boards per panel: 4  
 Step & Repeat: X4@2.820Y1@0.0

# PCB ASSEMBLY DOCUMENTATION

## SPECIAL PRODUCTION NOTES

1. PLACE GROUNDING SCREW (#8877) AND NUT (#8701) IN SUBSTRATE GND HOLE AFTER REFLOW OVEN.

## PCB HARDWARE

SCREWS AND BOLTS



THIS SHEET CONTAINS SPECIAL PRODUCTION NOTES AND A LIST OF PCB HARDWARE PARTS REQUIRED FOR THE BUILD.



|  |                       |               |              |
|--|-----------------------|---------------|--------------|
| Section: <b>Assembly Documentation</b> |                       |               |              |
| Product(s): <b>E10P / PSA1</b>         |                       |               |              |
| PCB#: M1495                            | Rev#: V06             | EML Rev#: 01  | Sheet 1 Of * |
| Modified: 8/28/2015                    | File: Assembly.SchDoc | Tmp Rev: V032 |              |



# DESIGN HISTORY AND INFORMATION

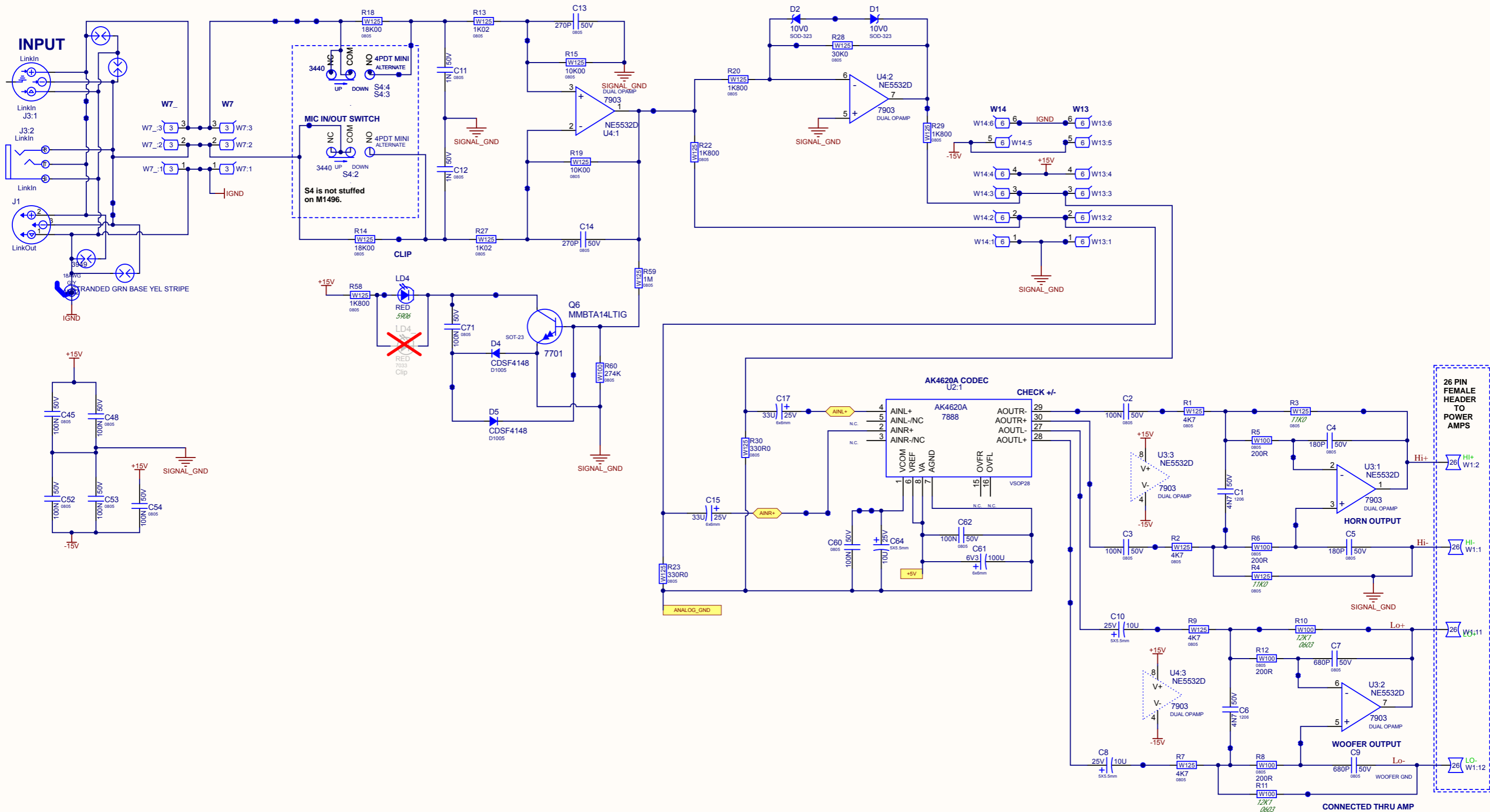
## CHANGE HISTORY

| #  | DATE       | VER# | PC#  | DESCRIPTION OF CHANGE   |
|----|------------|------|------|---|
| 1  | 2015-06-24 | V05  | 8782 | Translate V04 PCAD to AD. PC#8782 added C38,39. Moved D10,14,R58. |
| 2  | .          | .    | .    | Moved D4 up 6mil. Changed all D0704 footprints to SOD-523F.       |
| 3  | 2015-08-27 | V06  | 8817 | Add 47R 0805 #7854 in series with C38 and C39 GG                  |
| 4  | .          | .    | .    | Replace all #7613 with #5979 GG                                   |
| 5  | .          | .    | .    | Increase board width by 10mil each side GG                        |
| 6  | .          | .    | .    | .   |
| 7  | .          | .    | .    | .   |
| 8  | .          | .    | .    | .   |
| 9  | .          | .    | .    | .   |
| 10 | .          | .    | .    | .   |
| 11 | .          | .    | .    | .   |
| 12 | .          | .    | .    | .   |
| 13 | .          | .    | .    | .   |
| #  | DATE       | VER# | PC#  | DESCRIPTION OF CHANGE   |
| 1  | .          | .    | .    | .   |
| 2  | .          | .    | .    | .   |
| 3  | .          | .    | .    | .   |
| 4  | .          | .    | .    | .   |
| 5  | .          | .    | .    | .   |
| 6  | .          | .    | .    | .   |
| 7  | .          | .    | .    | .   |
| 8  | .          | .    | .    | .   |
| 9  | .          | .    | .    | .   |
| 10 | .          | .    | .    | .   |
| 11 | .          | .    | .    | .   |
| 12 | .          | .    | .    | .   |
| 13 | .          | .    | .    | .   |
| #  | DATE       | VER# | PC#  | DESCRIPTION OF CHANGE   |
| 1  | .          | .    | .    | .   |
| 2  | .          | .    | .    | .   |
| 3  | .          | .    | .    | .   |
| 4  | .          | .    | .    | .   |
| 5  | .          | .    | .    | .   |
| 6  | .          | .    | .    | .   |
| 7  | .          | .    | .    | .   |
| 8  | .          | .    | .    | .   |
| 9  | .          | .    | .    | .   |
| 10 | .          | .    | .    | .   |
| 11 | .          | .    | .    | .   |
| 12 | .          | .    | .    | .   |
| 13 | .          | .    | .    | .   |

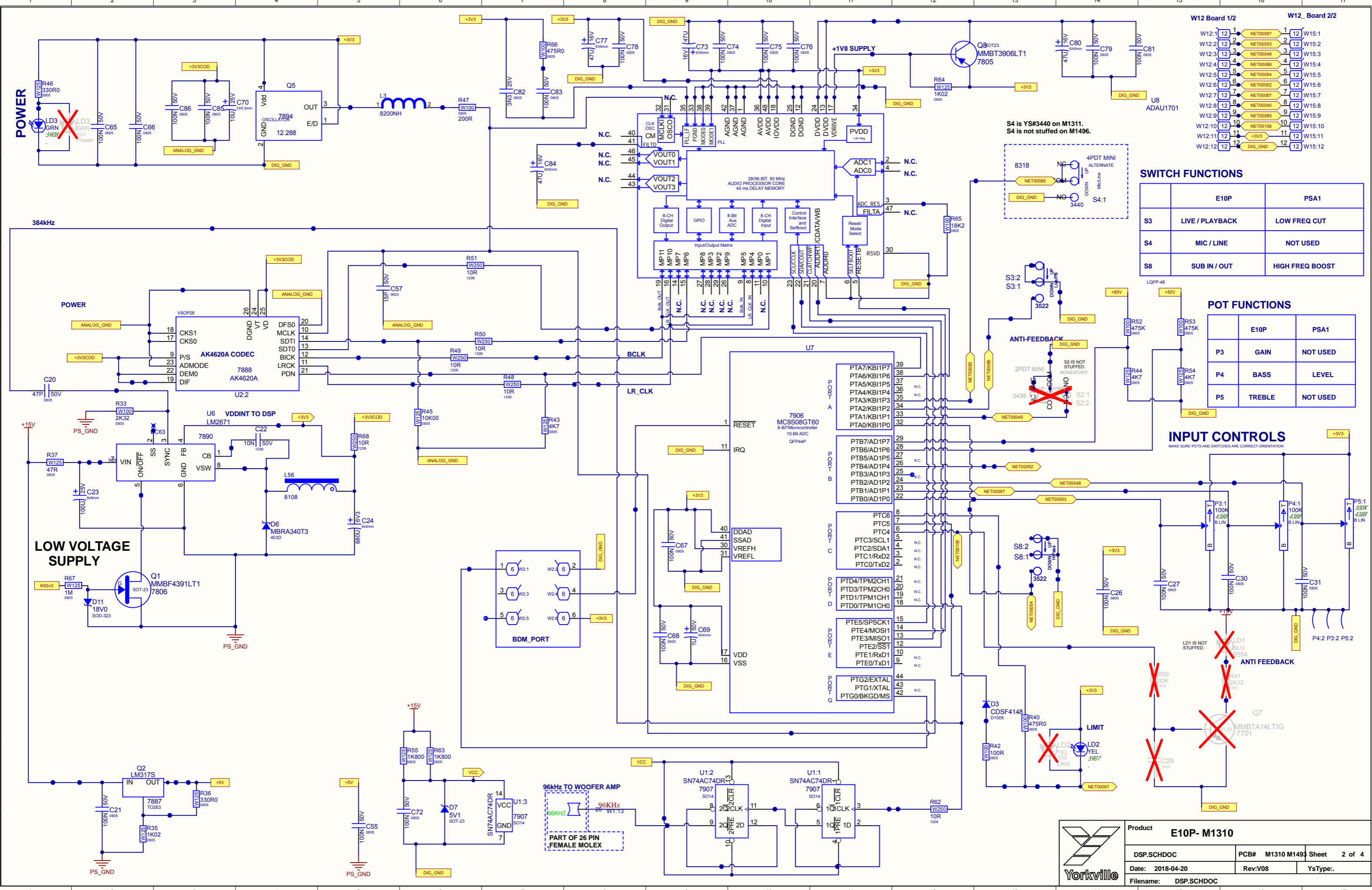
## POTENTIOMETERS AND KNOBS

## PINOUT DIAGRAMS





|                            |            |              |  |
|----------------------------|------------|--------------|--|
| Product <b>E10P- M1310</b> |            |              |  |
| INPUT_DSP.SCHDOC           | PCB# M1310 | Sheet 1 of 4 |  |
| Date: 2018-04-23           | Rev:V03    | YsType:..    |  |
| Filename: INPUT_DSP.SCHDOC |            |              |  |



**W12 Board 1/2**

|        |    |          |    |        |
|--------|----|----------|----|--------|
| W12:1  | 1  | NET00097 | 1  | W15:1  |
| W12:2  | 2  | NET00053 | 2  | W15:2  |
| W12:3  | 3  | NET00048 | 3  | W15:3  |
| W12:4  | 4  | NET00086 | 4  | W15:4  |
| W12:5  | 5  | NET00054 | 5  | W15:5  |
| W12:6  | 6  | NET00052 | 6  | W15:6  |
| W12:7  | 7  | NET00087 | 7  | W15:7  |
| W12:8  | 8  | NET00045 | 8  | W15:8  |
| W12:9  | 9  | NET00085 | 9  | W15:9  |
| W12:10 | 10 | NET00106 | 10 | W15:10 |
| W12:11 | 11 | +3V3     | 11 | W15:11 |
| W12:12 | 12 | DIG_GND  | 12 | W15:12 |

**SWITCH FUNCTIONS**

|    | E10P            | PSA1            |
|----|-----------------|-----------------|
| S3 | LIVE / PLAYBACK | LOW FREQ CUT    |
| S4 | MIC / LINE      | NOT USED        |
| S8 | SUB IN / OUT    | HIGH FREQ BOOST |

**POT FUNCTIONS**

|    | E10P   | PSA1     |
|----|--------|----------|
| P3 | GAIN   | NOT USED |
| P4 | BASS   | LEVEL    |
| P5 | TREBLE | NOT USED |

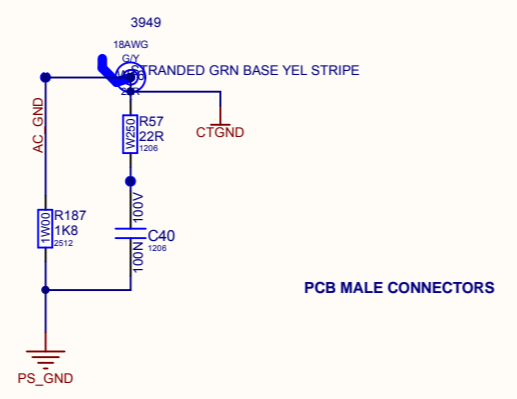
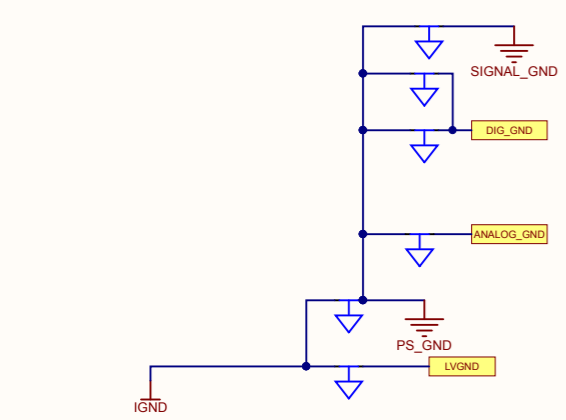
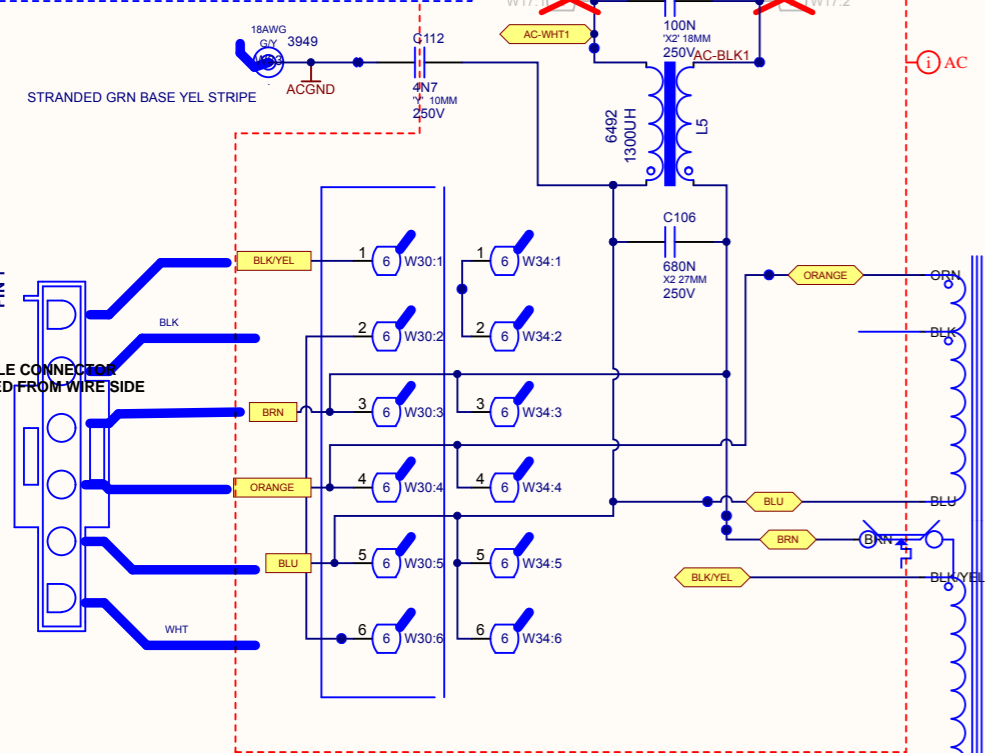
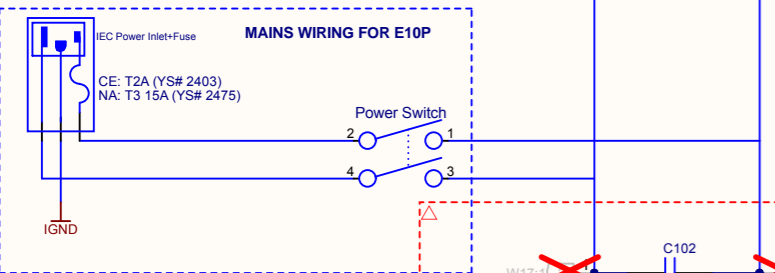
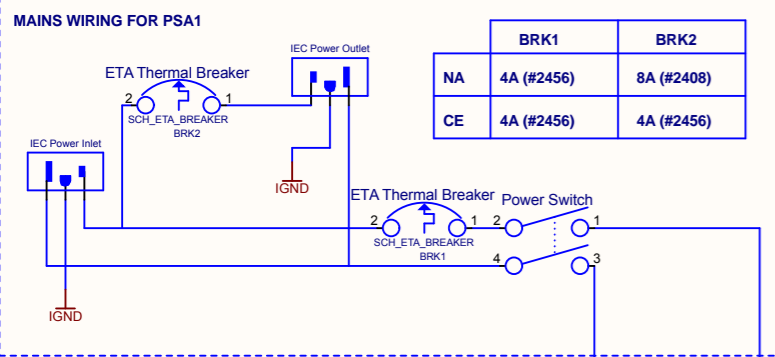
**INPUT CONTROLS**  
MAKE SURE POTS AND SWITCHES ARE CORRECT ORIENTATION

S4 is YS3440 on M1311.  
S4 is not stuffed on M1496.

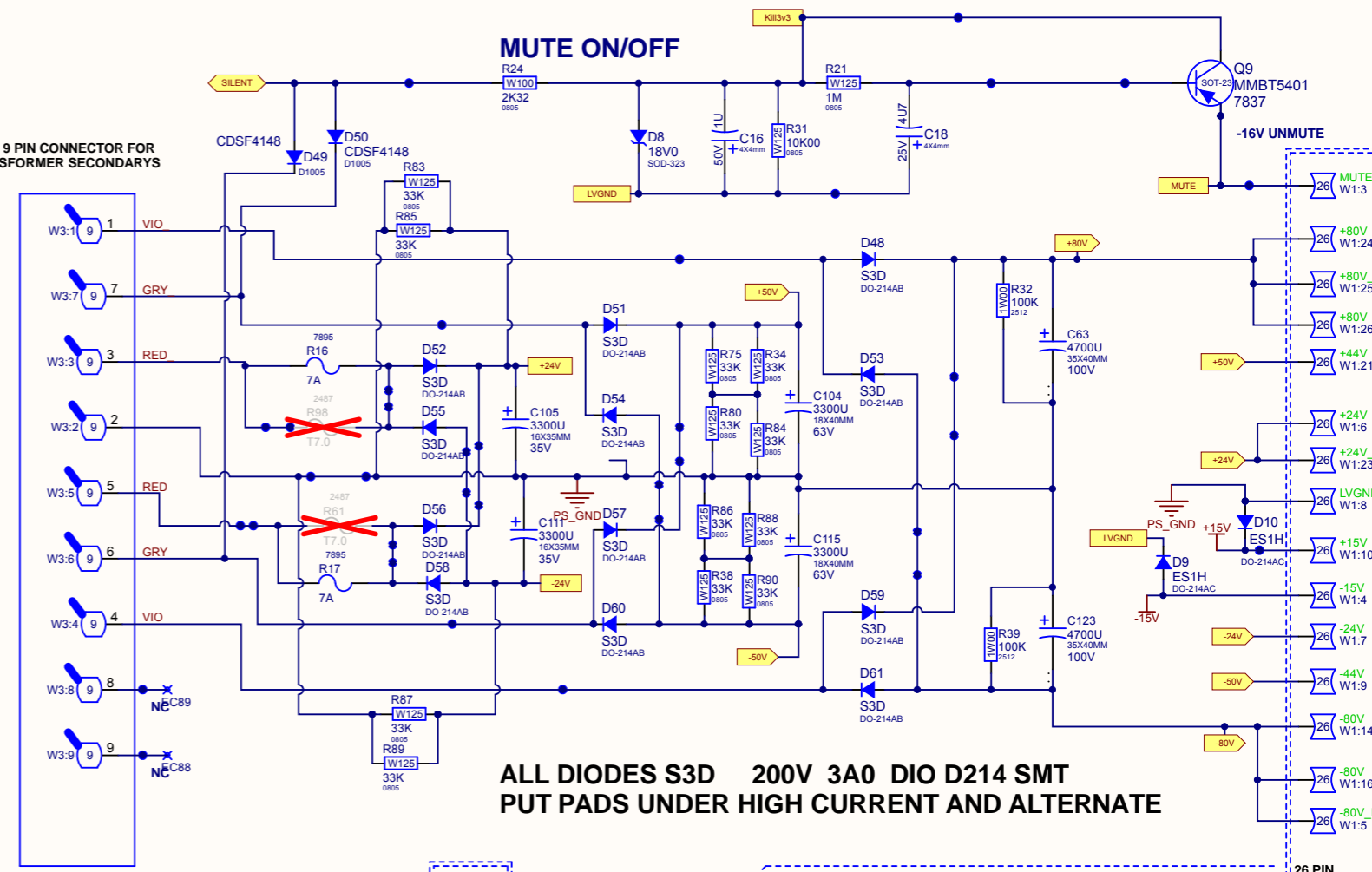
LD1 IS NOT STUFFED.



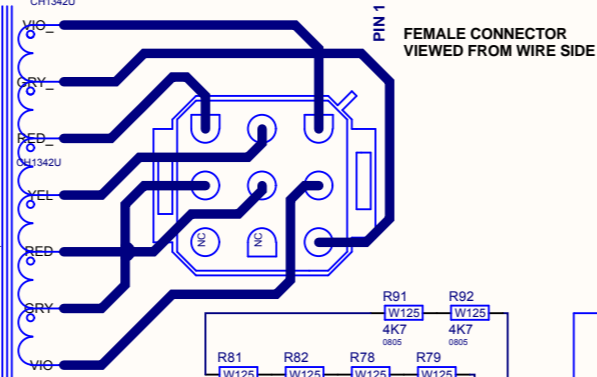
|                            |                               |
|----------------------------|-------------------------------|
| Product <b>E10P- M1310</b> |                               |
| DSP.SCHDOC                 | PCB# M1310 M1493 Sheet 2 of 4 |
| Date: 2018-04-20           | Rev:V08 YsType:..             |
| Filename: DSP.SCHDOC       |                               |



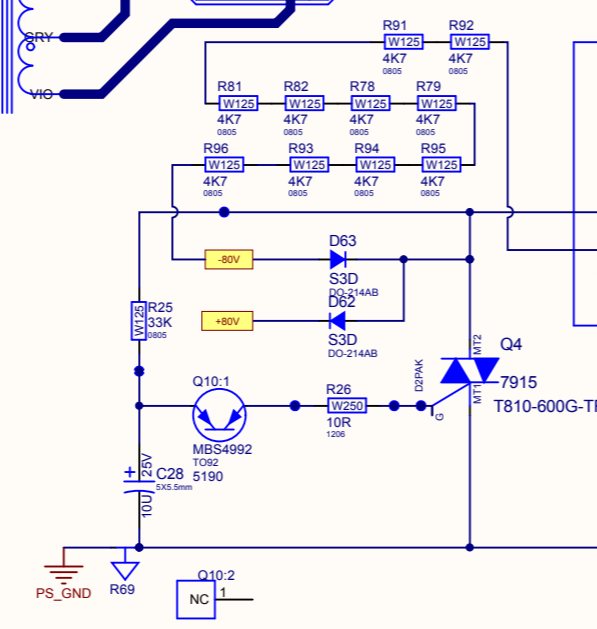
MALE 9 PIN CONNECTOR FOR TRANSFORMER SECONDARIES



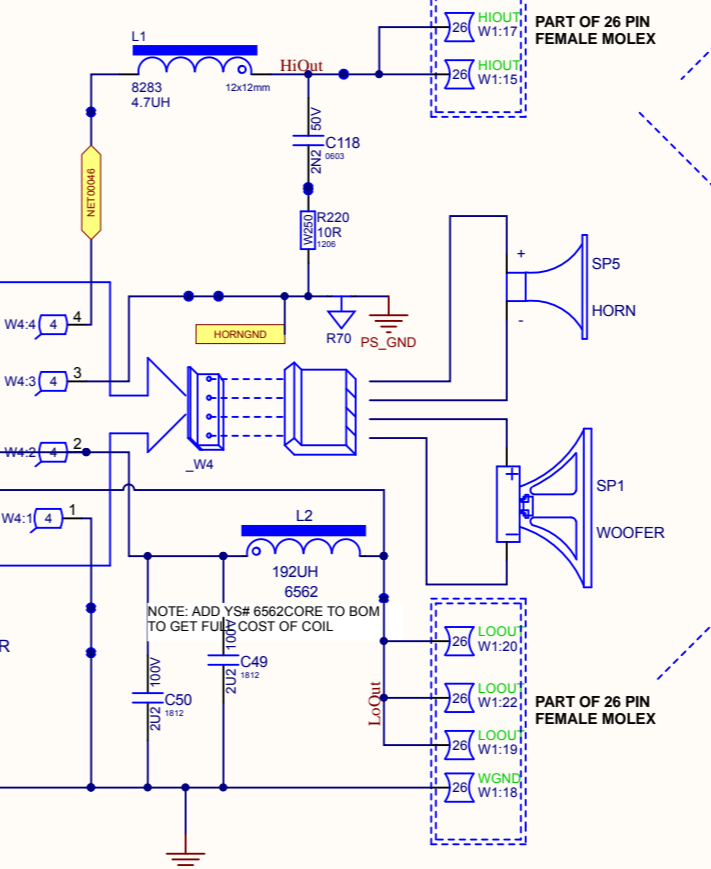
ALL DIODES S3D 200V 3A0 DIO D214 SMT  
PUT PADS UNDER HIGH CURRENT AND ALTERNATE



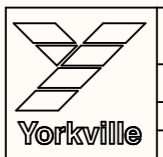
FEMALE CONNECTOR VIEWED FROM WIRE SIDE



NOTE: ADD YS# 6562CORE TO BOM TO GET FULL COST OF COIL



OUTPUT



|                               |                  |              |
|-------------------------------|------------------|--------------|
| Product <b>E10P- M1310</b>    |                  |              |
| POWER SUPPLY.SCHDOC           | PCB# E10P- M1310 | Sheet 3 of 4 |
| Date: 2019-07-23              | Rev:V03          | YsType:..    |
| Filename: POWER SUPPLY.SCHDOC |                  |              |

# DESIGN HISTORY AND INFORMATION

## CHANGE HISTORY

| #  | DATE        | VER# | PC#  | DESCRIPTION OF CHANGE   |
|----|-------------|------|------|---|
| 1  | 04-OCT-2017 | V02  | .    | RELEASED VERSION 2.   |
| 2  | 12-OCT-2017 | .    | .    | Created new variant list showing parts with different values. |
| 3  | 18-APR-2018 | V03  | 9162 | Added bleeder resistors to +/-24v and woofer output.          |
| 4  | .           | .    | 9163 | Add more vias to 80V net                                      |
| 5  | .           | .    | .    | .   |
| 6  | .           | .    | .    | .   |
| 7  | .           | .    | .    | .   |
| 8  | .           | .    | .    | .   |
| 9  | .           | .    | .    | .   |
| 10 | .           | .    | .    | .   |
| 11 | .           | .    | .    | .   |
| 12 | .           | .    | .    | .   |
| 13 | .           | .    | .    | .   |

| #  | DATE | VER# | PC# | DESCRIPTION OF CHANGE |
|----|------|------|-----|-----------------------|
| 1  | .    | .    | .   | .                     |
| 2  | .    | .    | .   | .                     |
| 3  | .    | .    | .   | .                     |
| 4  | .    | .    | .   | .                     |
| 5  | .    | .    | .   | .                     |
| 6  | .    | .    | .   | .                     |
| 7  | .    | .    | .   | .                     |
| 8  | .    | .    | .   | .                     |
| 9  | .    | .    | .   | .                     |
| 10 | .    | .    | .   | .                     |
| 11 | .    | .    | .   | .                     |
| 12 | .    | .    | .   | .                     |
| 13 | .    | .    | .   | .                     |

| #  | DATE | VER# | PC# | DESCRIPTION OF CHANGE |
|----|------|------|-----|-----------------------|
| 1  | .    | .    | .   | .                     |
| 2  | .    | .    | .   | .                     |
| 3  | .    | .    | .   | .                     |
| 4  | .    | .    | .   | .                     |
| 5  | .    | .    | .   | .                     |
| 6  | .    | .    | .   | .                     |
| 7  | .    | .    | .   | .                     |
| 8  | .    | .    | .   | .                     |
| 9  | .    | .    | .   | .                     |
| 10 | .    | .    | .   | .                     |
| 11 | .    | .    | .   | .                     |
| 12 | .    | .    | .   | .                     |
| 13 | .    | .    | .   | .                     |

## POTENTIOMETERS AND KNOBS

| POTENTIOMETERS/SWITCHES AND KNOBS |          |            |       |       |
|-----------------------------------|----------|------------|-------|-------|
| REF                               | FUNCTION | POT/SW YS# | STYLE | KNOB# |
| P3                                | LEVEL    | 4388       | P30   | .     |
| P4                                | .        | 4388       | .     | .     |
| P5                                | .        | 4388       | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |

## PINOUT DIAGRAMS

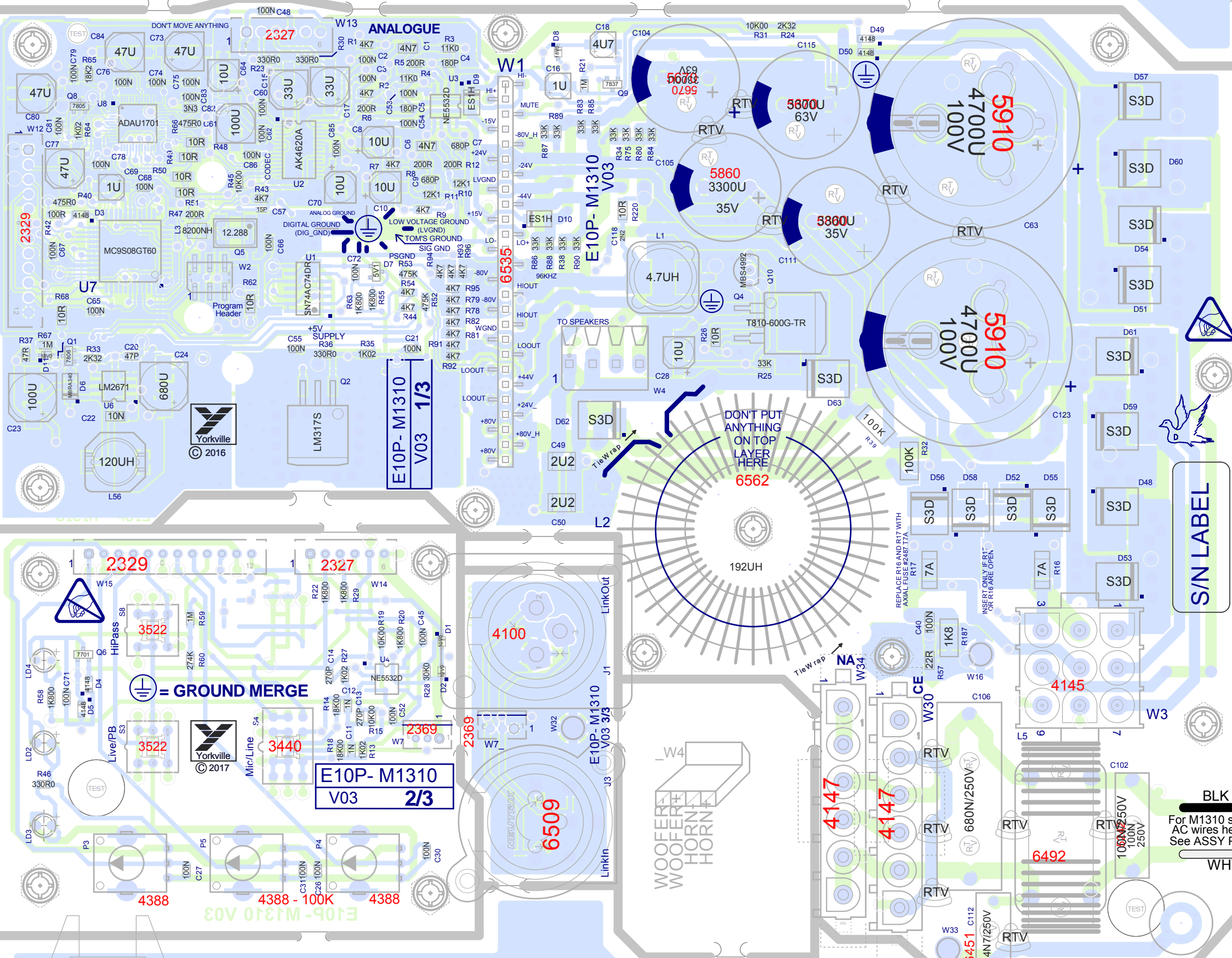
THIS SHEET CONTAINS A CHANGE HISTORY LOG, A LIST OF THE POTS & KNOBS AND A LEADS & PINS REFERENCE SECTION.

|  |  |                            |               |              |
|--|--|----------------------------|---------------|--------------|
|  | <b>Section: Design Information And History</b> |                            |               |              |
|  | <b>Product(s): E10P</b>                        |                            |               |              |
|  | PCB#: M1310                                    | Rev#: V03                  | EML Rev#: 01  | Sheet 4 Of 4 |
|  | Modified: 2019-07-24                           | File: M1310_History.SchDoc | Tmp Rev: V031 |              |

2oz Copper

Into Wave

BlankSize - 233.0mmX180.0mm(9170x7090)



S/N LABEL

BLK  
 For M1310 solder  
 AC wires here  
 See ASSY Page  
 WHT

E10P- M1310 V03

VCD

CLINCH  
ORIGIN

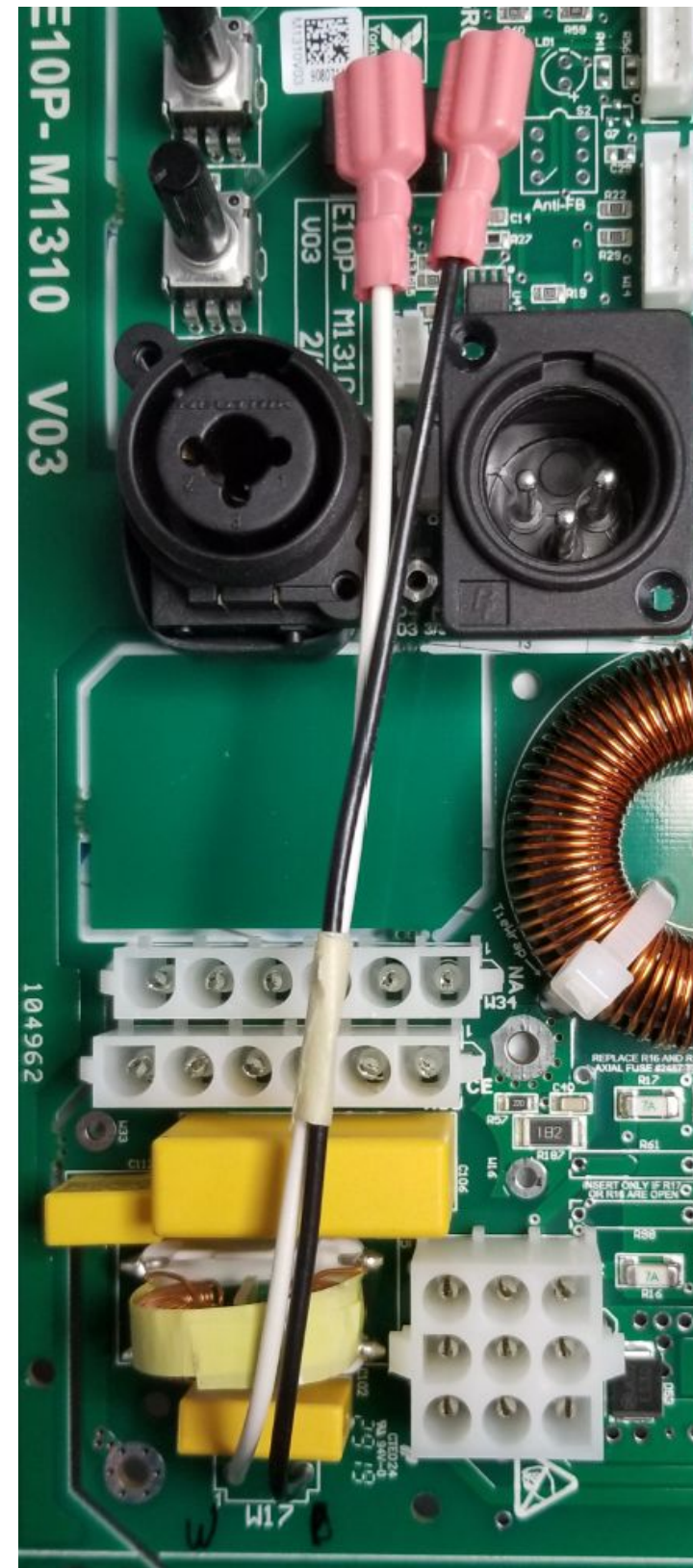
# PCB ASSEMBLY DOCUMENTATION

## SPECIAL PRODUCTION NOTES

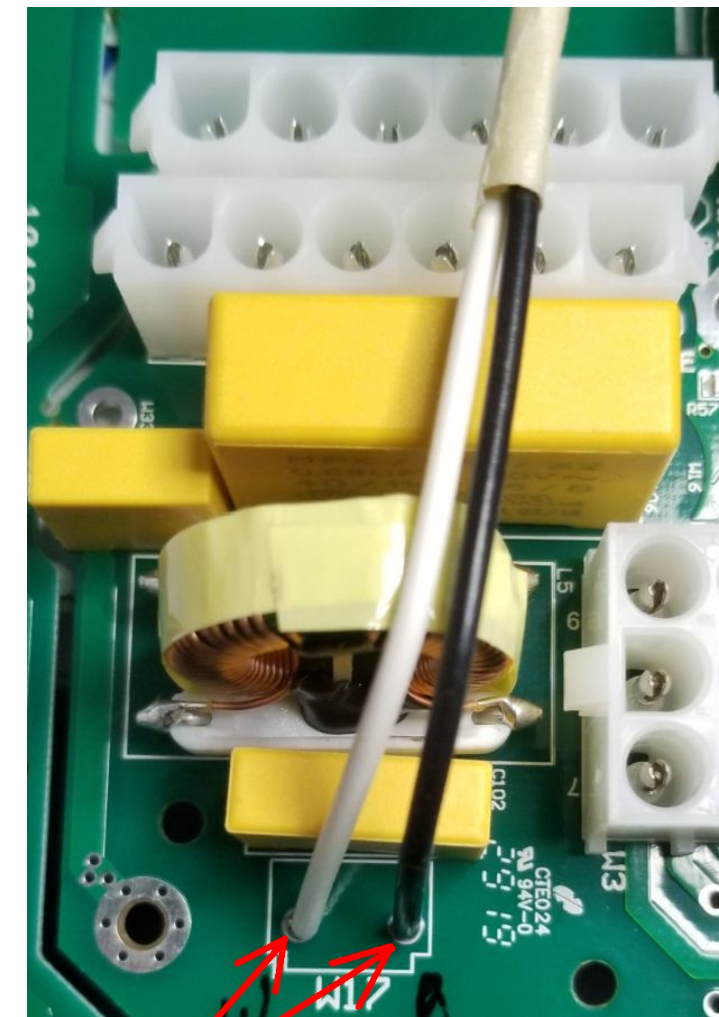
- ADD RTV BETWEEN C106, C112 AND W30 THE POWER CONNECTOR
- ADD YS#3822 1.25" HEATSHRINK AROUND J3
- PCBSA: DO NOT BREAK OUT BOARD BEFORE TESTING
- PCBSA: ADD M1607 CLIP TO YS#4100 XLR WITH RTV AS SHOWN.



| RefDes | M1310       |
|--------|-------------|
| C29    | DNS         |
| LD1    | DNS         |
| LD2    | 5907        |
| LD3    | 5908        |
| LD4    | 5906        |
| P3     | Place Part  |
| P4     | Place Part  |
| P5     | 4388 - 100K |
| Q7     | DNS         |
| R3     | 11K0        |
| R4     | 11K0        |
| R10    | 12K1        |
| R11    | 12K1        |
| R41    | DNS         |
| R56    | DNS         |
| R61    | DNS         |
| R98    | DNS         |
| S2     | DNS         |
| S4     | Place Part  |
| W17    | DNS         |



## PCB HARDWARE



SOLDER AC WIRES HERE

THIS SHEET CONTAINS SPECIAL PRODUCTION NOTES AND A LIST OF PCB HARDWARE PARTS REQUIRED FOR THE BUILD.

# DESIGN HISTORY AND INFORMATION

## CHANGE HISTORY

| #  | DATE        | VER# | PC#  | DESCRIPTION OF CHANGE   |
|----|-------------|------|------|---|
| 1  | 04-OCT-2017 | V02  | .    | RELEASED VERSION 2.   |
| 2  | 12-OCT-2017 | .    | .    | Created new variant list showing parts with different values. |
| 3  | 18-APR-2018 | V03  | 9162 | Added bleeder resistors to +/-24v and woofer output.          |
| 4  | .           | .    | 9163 | Add more vias to 80V net                                      |
| 5  | .           | .    | .    | .   |
| 6  | .           | .    | .    | .   |
| 7  | .           | .    | .    | .   |
| 8  | .           | .    | .    | .   |
| 9  | .           | .    | .    | .   |
| 10 | .           | .    | .    | .   |
| 11 | .           | .    | .    | .   |
| 12 | .           | .    | .    | .   |
| 13 | .           | .    | .    | .   |

| #  | DATE | VER# | PC# | DESCRIPTION OF CHANGE |
|----|------|------|-----|-----------------------|
| 1  | .    | .    | .   | .                     |
| 2  | .    | .    | .   | .                     |
| 3  | .    | .    | .   | .                     |
| 4  | .    | .    | .   | .                     |
| 5  | .    | .    | .   | .                     |
| 6  | .    | .    | .   | .                     |
| 7  | .    | .    | .   | .                     |
| 8  | .    | .    | .   | .                     |
| 9  | .    | .    | .   | .                     |
| 10 | .    | .    | .   | .                     |
| 11 | .    | .    | .   | .                     |
| 12 | .    | .    | .   | .                     |
| 13 | .    | .    | .   | .                     |

| #  | DATE | VER# | PC# | DESCRIPTION OF CHANGE |
|----|------|------|-----|-----------------------|
| 1  | .    | .    | .   | .                     |
| 2  | .    | .    | .   | .                     |
| 3  | .    | .    | .   | .                     |
| 4  | .    | .    | .   | .                     |
| 5  | .    | .    | .   | .                     |
| 6  | .    | .    | .   | .                     |
| 7  | .    | .    | .   | .                     |
| 8  | .    | .    | .   | .                     |
| 9  | .    | .    | .   | .                     |
| 10 | .    | .    | .   | .                     |
| 11 | .    | .    | .   | .                     |
| 12 | .    | .    | .   | .                     |
| 13 | .    | .    | .   | .                     |

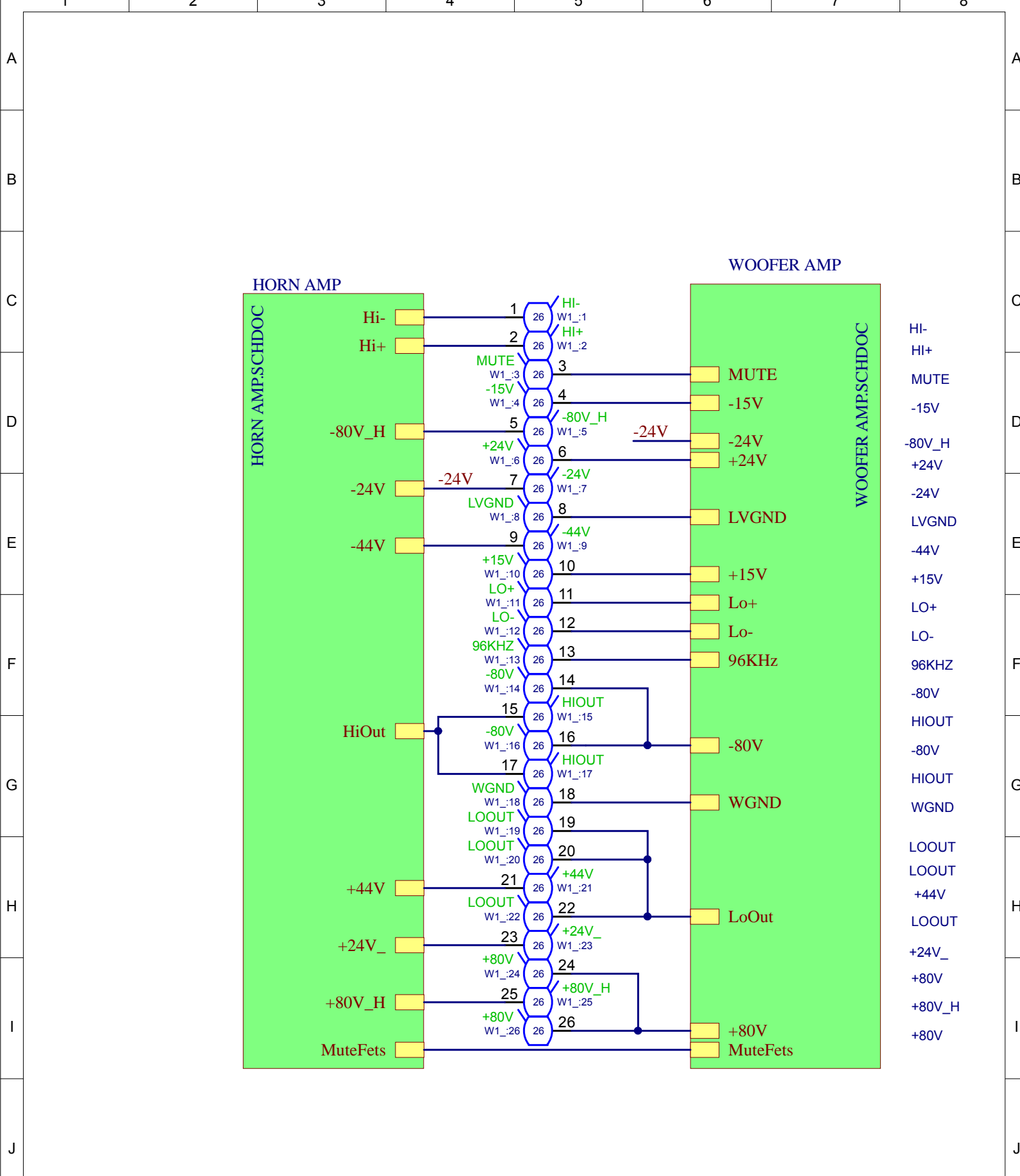
## POTENTIOMETERS AND KNOBS

| POTENTIOMETERS/SWITCHES AND KNOBS |          |            |       |       |
|-----------------------------------|----------|------------|-------|-------|
| REF                               | FUNCTION | POT/SW YS# | STYLE | KNOB# |
| P3                                | LEVEL    | 4388       | P30   | .     |
| P4                                | .        | 4388       | .     | .     |
| P5                                | .        | 4388       | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |
| .                                 | .        | .          | .     | .     |

## PINOUT DIAGRAMS

THIS SHEET CONTAINS A CHANGE HISTORY LOG, A LIST OF THE POTS & KNOBS AND A LEADS & PINS REFERENCE SECTION.

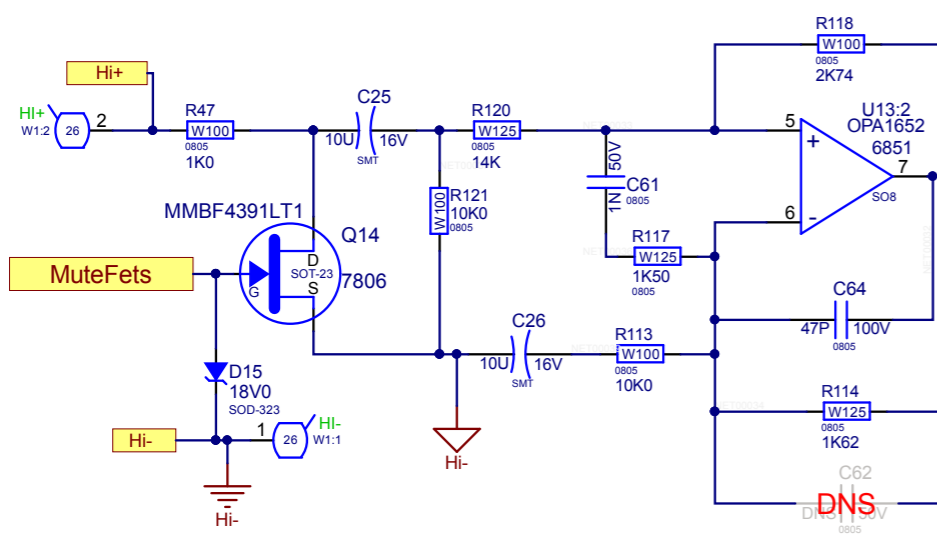




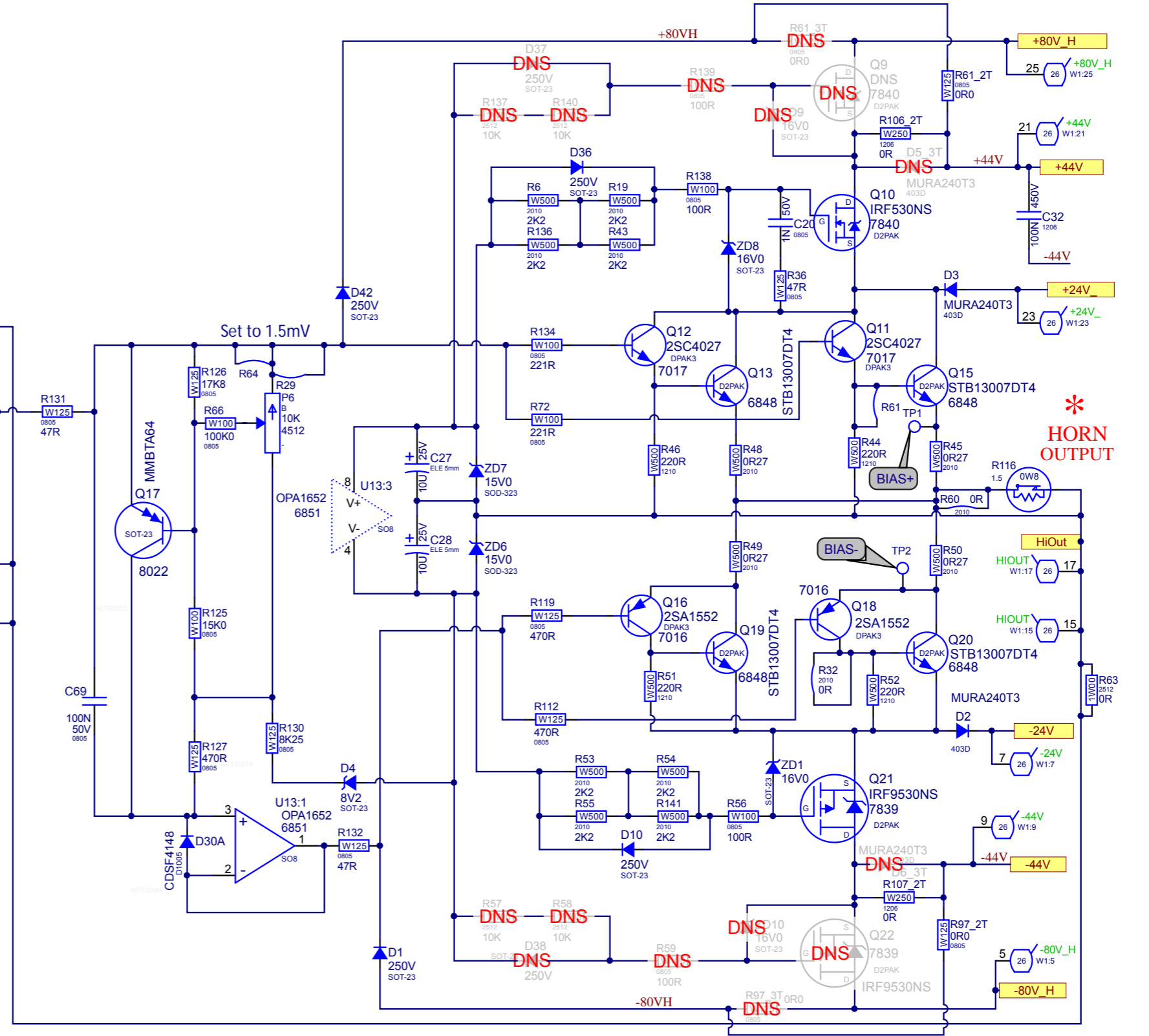
\*  
\*  
\*  
\*

|  |                  |                               |                            |
|--|------------------|-------------------------------|----------------------------|
| <i>Product(s):</i> <b>EF10P-E10P</b>               |                  |                               |                            |
| <i>Description:</i> <b>Powered speaker cabinet</b> |                  |                               |                            |
| <i>PCB#:</i> <b>M1501</b>                          | <i>Rev#:</i> V05 | <i>EML Rev#:</i> 01           | <i>Sheet</i> 1 <i>Of</i> 5 |
| <i>Modified:</i> 2020-02-03                        |                  | <i>File:</i> Top Sheet.SchDoc |                            |
| <i>Tmp Rev:</i> V032                               |                  |                               |                            |

# 200 WATT HORN POWER AMP



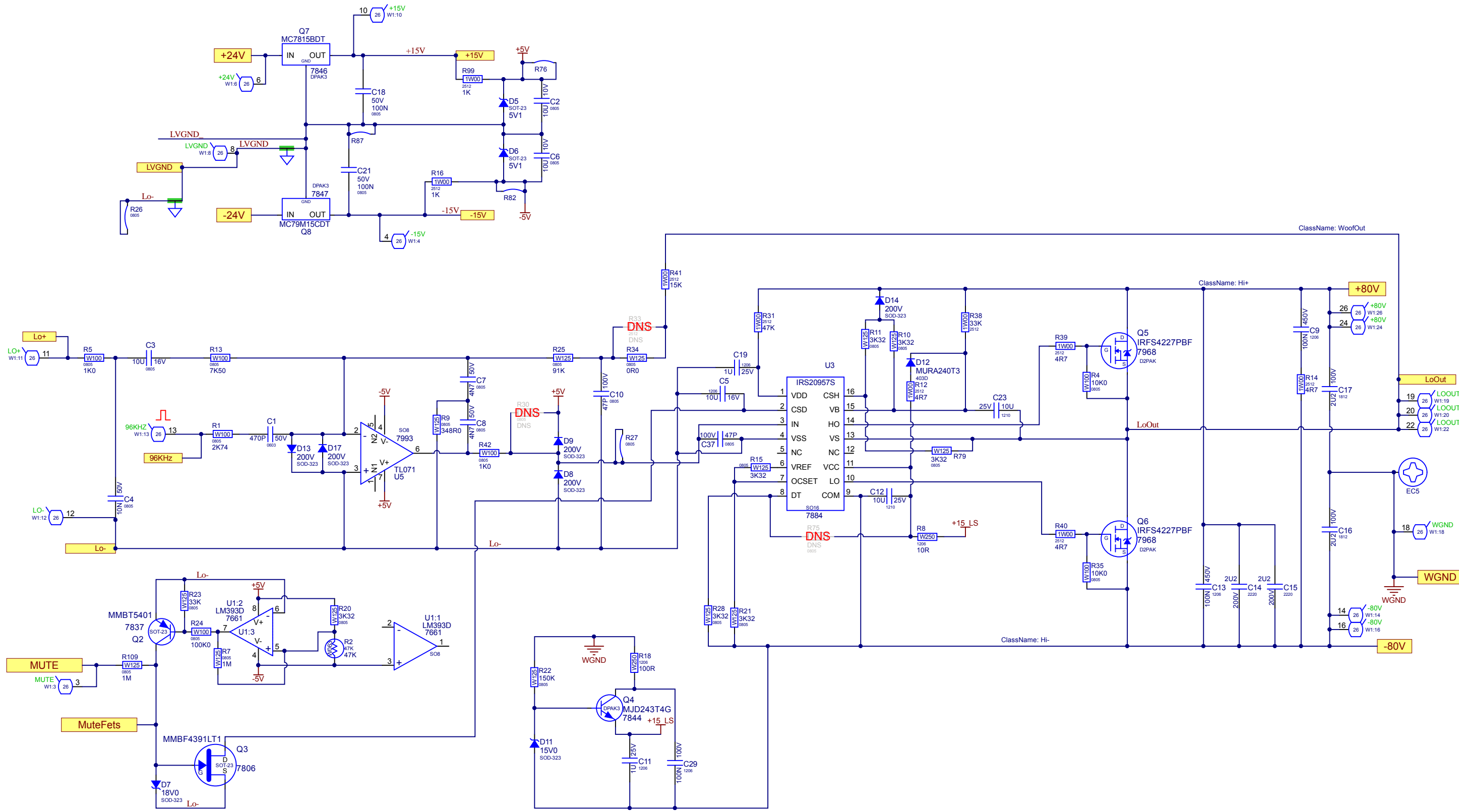
**\*NOTE:**  
OUTPUT FILTER ON POWER SUPPLY PCB



**\* HORN OUTPUT**



|                                |                              |
|--------------------------------|------------------------------|
| Section: <b>Horn Amplifier</b> |                              |
| Product(s): <b>EF10P-E10P</b>  |                              |
| PCB#: <b>M1501</b>             | Rev#: <b>V05</b>             |
| Modified: <b>2020-02-03</b>    | File: <b>HORN AMP.SCHDOC</b> |
| EML Rev#: <b>01</b>            | Sheet <b>2</b> Of <b>5</b>   |
| Tmp Rev: <b>V032</b>           |                              |



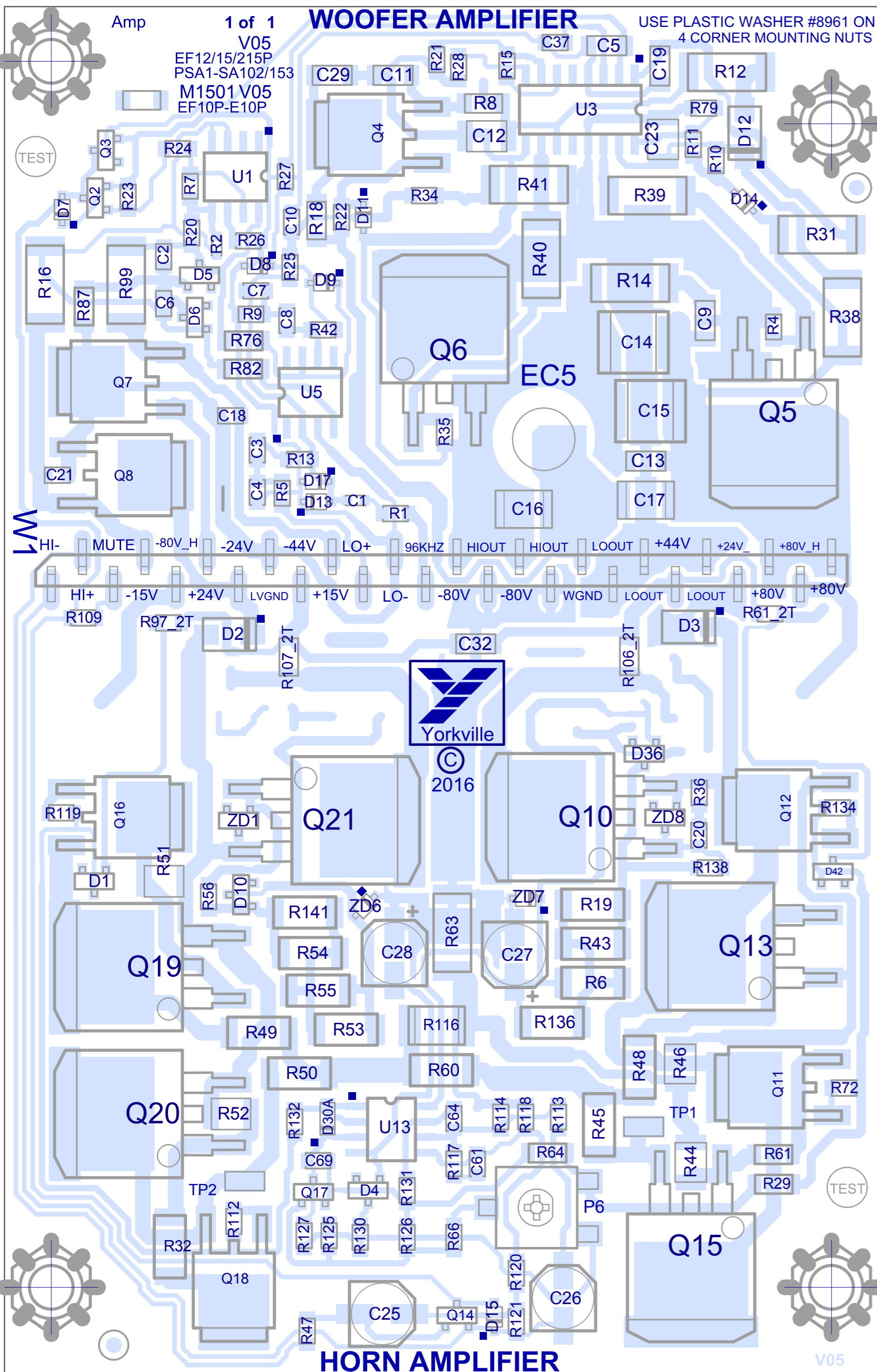
# DESIGN HISTORY AND INFORMATION

## CHANGE HISTORY

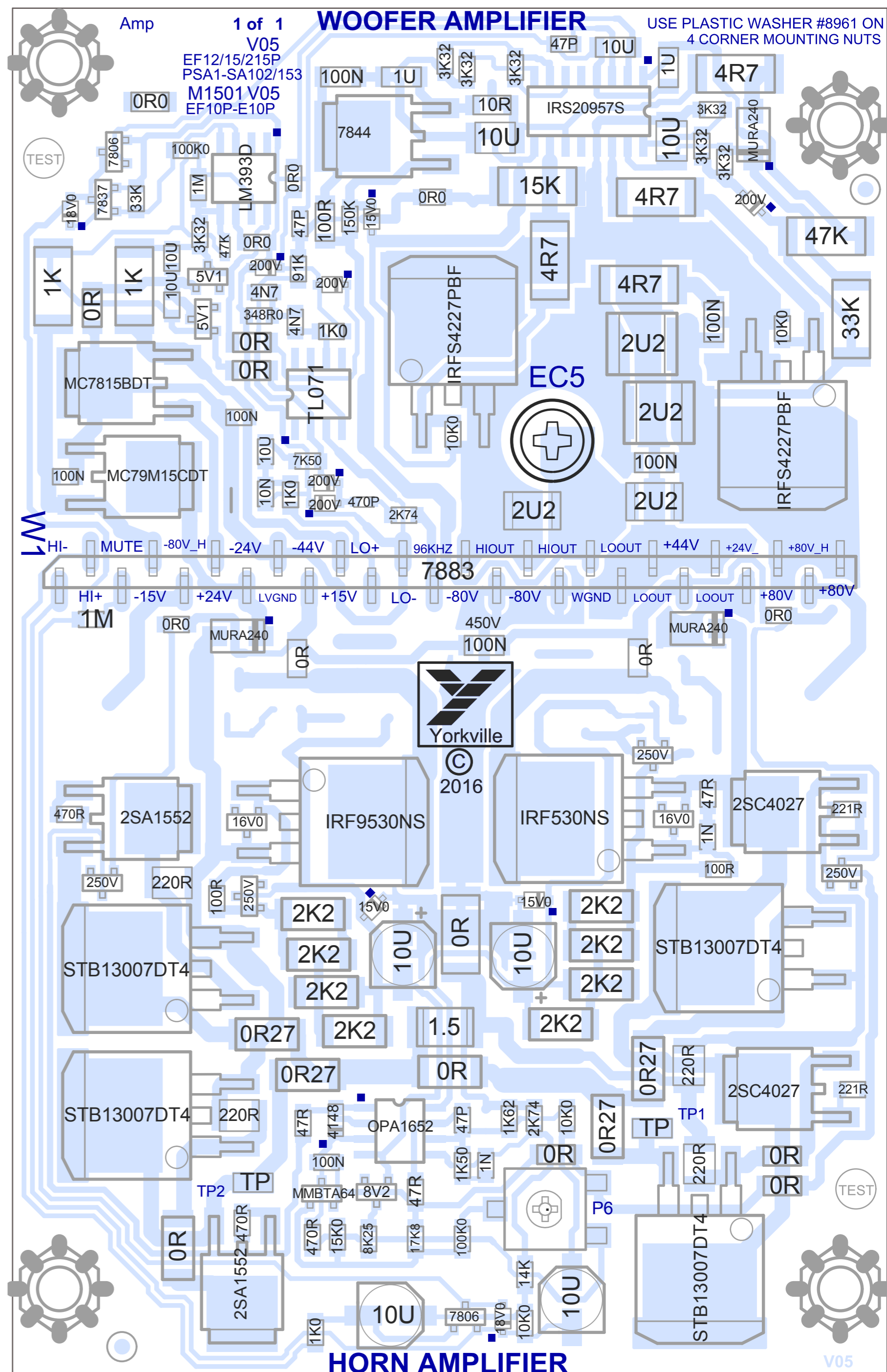
| #  | DATE        | VER# | PC#  | DESCRIPTION OF CHANGE  |
|----|-------------|------|------|--|
| 1  | OCT-4-2017  | V02  | .    | RELEASED VERSION 2.  |
| 2  | APR-27-2018 | V03  | 9129 | MOVED R61_3T AWAY FROM 80V CONNECTOR PAD   |
| 3  | Aug-08-2019 | V04  | 9449 | C12&C23 to 10U/25V. Change VBE res to center trim pot. Add D4 to cut turn off noise. |
| 4  | FEB-03-2020 | V05  | 9508 | Added 1N cap and 47R resistor between gate and source of Q10                         |
| 5  | .           | .    | .    | .  |
| 6  | .           | .    | .    | .  |
| 7  | .           | .    | .    | .  |
| 8  | .           | .    | .    | .  |
| 9  | .           | .    | .    | .  |
| 10 | .           | .    | .    | .  |
| 11 | .           | .    | .    | .  |
| 12 | .           | .    | .    | .  |
| 13 | .           | .    | .    | .  |
| #  | DATE        | VER# | PC#  | DESCRIPTION OF CHANGE  |
| 1  | .           | .    | .    | .  |
| 2  | .           | .    | .    | .  |
| 3  | .           | .    | .    | .  |
| 4  | .           | .    | .    | .  |
| 5  | .           | .    | .    | .  |
| 6  | .           | .    | .    | .  |
| 7  | .           | .    | .    | .  |
| 8  | .           | .    | .    | .  |
| 9  | .           | .    | .    | .  |
| 10 | .           | .    | .    | .  |
| 11 | .           | .    | .    | .  |
| 12 | .           | .    | .    | .  |
| 13 | .           | .    | .    | .  |
| #  | DATE        | VER# | PC#  | DESCRIPTION OF CHANGE  |
| 1  | .           | .    | .    | .  |
| 2  | .           | .    | .    | .  |
| 3  | .           | .    | .    | .  |
| 4  | .           | .    | .    | .  |
| 5  | .           | .    | .    | .  |
| 6  | .           | .    | .    | .  |
| 7  | .           | .    | .    | .  |
| 8  | .           | .    | .    | .  |
| 9  | .           | .    | .    | .  |
| 10 | .           | .    | .    | .  |
| 11 | .           | .    | .    | .  |
| 12 | .           | .    | .    | .  |
| 13 | .           | .    | .    | .  |

## POTENTIOMETERS AND KNOBS

## PINOUT DIAGRAMS



Designators



Values

# PCB ASSEMBLY DOCUMENTATION

## SPECIAL PRODUCTION NOTES

1-Place Connector (#7883) on all boards on panel BEFORE Reflow Oven.

## PCB HARDWARE

SCREWS AND BOLTS

THIS SHEET CONTAINS SPECIAL PRODUCTION NOTES AND A LIST OF PCB HARDWARE PARTS REQUIRED FOR THE BUILD.



|                                 |                              |                       |                            |
|---------------------------------|------------------------------|-----------------------|----------------------------|
| Section: <b>Assembly</b>        |                              |                       |                            |
| Product(s): <b>.M1498/M1501</b> |                              |                       |                            |
| PCB#: <b>2020-02-03</b>         | Rev#: <b>V05</b>             | EML Rev#: <b>01</b>   | Sheet <b>3</b> Of <b>3</b> |
| Modified: <b>2020-02-03</b>     | File: <b>Assembly.SchDoc</b> | Trjg Rev: <b>V032</b> |                            |

# DESIGN HISTORY AND INFORMATION

## CHANGE HISTORY

| #  | DATE        | VER# | PC#  | DESCRIPTION OF CHANGE  |
|----|-------------|------|------|--|
| 1  | OCT-4-2017  | V02  | .    | RELEASED VERSION 2.  |
| 2  | APR-27-2018 | V03  | 9129 | MOVED R61_3T AWAY FROM 80V CONNECTOR PAD   |
| 3  | Aug-08-2019 | V04  | 9449 | C12&C23 to 10U/25V. Change VBE res to center trim pot. Add D4 to cut turn off noise. |
| 4  | FEB-03-2020 | V05  | 9508 | Added 1N cap and 47R resistor between gate and source of Q10                         |
| 5  | .           | .    | .    | .  |
| 6  | .           | .    | .    | .  |
| 7  | .           | .    | .    | .  |
| 8  | .           | .    | .    | .  |
| 9  | .           | .    | .    | .  |
| 10 | .           | .    | .    | .  |
| 11 | .           | .    | .    | .  |
| 12 | .           | .    | .    | .  |
| 13 | .           | .    | .    | .  |
| #  | DATE        | VER# | PC#  | DESCRIPTION OF CHANGE  |
| 1  | .           | .    | .    | .  |
| 2  | .           | .    | .    | .  |
| 3  | .           | .    | .    | .  |
| 4  | .           | .    | .    | .  |
| 5  | .           | .    | .    | .  |
| 6  | .           | .    | .    | .  |
| 7  | .           | .    | .    | .  |
| 8  | .           | .    | .    | .  |
| 9  | .           | .    | .    | .  |
| 10 | .           | .    | .    | .  |
| 11 | .           | .    | .    | .  |
| 12 | .           | .    | .    | .  |
| 13 | .           | .    | .    | .  |
| #  | DATE        | VER# | PC#  | DESCRIPTION OF CHANGE  |
| 1  | .           | .    | .    | .  |
| 2  | .           | .    | .    | .  |
| 3  | .           | .    | .    | .  |
| 4  | .           | .    | .    | .  |
| 5  | .           | .    | .    | .  |
| 6  | .           | .    | .    | .  |
| 7  | .           | .    | .    | .  |
| 8  | .           | .    | .    | .  |
| 9  | .           | .    | .    | .  |
| 10 | .           | .    | .    | .  |
| 11 | .           | .    | .    | .  |
| 12 | .           | .    | .    | .  |
| 13 | .           | .    | .    | .  |

## POTENTIOMETERS AND KNOBS

## PINOUT DIAGRAMS



# PROPOSAL FOR CHANGE

|                                    |                         |                         |               |                         |
|------------------------------------|-------------------------|-------------------------|---------------|-------------------------|
| <b>PRIORITY</b>                    | <b>NORM</b>             | <b>X-JOB</b>            | <b>PC No.</b> | <b>TEMP</b>             |
| <input checked="" type="radio"/> P | <input type="radio"/> N | <input type="radio"/> X | 7640          | <input type="radio"/> T |
| Date Required: _____               |                         |                         |               |                         |

**REJECTED** The Proposal for Change has been reviewed and considered but will *not* be implemented. **DATE** \_\_\_\_\_

|                    |               |                    |                  |   |             |
|--------------------|---------------|--------------------|------------------|---|-------------|
| PCBSA #57          | Wiring #55    | T&R #70            | WACM #52         | P/Engineering #25                           | Sales #10   |
| PCBM #58           | Metal Fab #50 | Finishing #65      | Board & Test #53 | <input checked="" type="checkbox"/> LAB #20 | Service #09 |
| Auto Insertion #59 | W/Shop #60    | Chas Screening #51 | QC #65           |   |             |

| MODEL | PCB/CHAS | VERSION | TASK ORDER | APPROVAL |                    | ORIGINATOR                                 |             |
|-------|----------|---------|------------|----------|--------------------|--|-------------|
| E10P  | M1311    |         |            | SL       | <i>[Signature]</i> | FROM                                       | Tom Wood    |
|       |          |         |            | BW       |                    | DEPT                                       | LAB         |
|       |          |         |            | TW       | <i>TW</i>          | DATE                                       | Aug 20 2008 |
|       |          |         |            | PM       |                    | Customer's Signature _____ UPON COMPLETION |             |
|       |          |         |            |          | <i>TW</i>          | Customer's Signature _____ UPON COMPLETION |             |

**DESCRIPTION OF CHANGE**

*1)*

*200R - U8 P32*

*Q5p3 - mmm - 47 P44*

*8N2 - 42 P20*

*PCD1263CT-ND digitek*

*ELJ-FA8R2KF panasonic*

*This replaces R 65, 67, 47 with short. Adds 8n2 inductor and 200R resistor in series with stock line.*

**DOCUMENT UPDATE/CORRECTION**  **PROGRAM UPDATE/CORRECTION**

**REASON FOR CHANGE**

*Reduce EMI # 7708 200R <sup>0.1W</sup> #*

Update units coming in for SERVICE?

Update FINISHED units in warehouse?

UPDATE WIP?

Electrical compliance affected?

Will a model or prototype be needed?  YES  NO

Will the current test fixtures be affected?  YES  NO

If yes, what is the estimated cost of fixture? \_\_\_\_\_

Before serial number \_\_\_\_\_

By doing this change, are units currently out in field compatible?  YES  NO  MAYBE

| PART | DESCRIPTION | OLD | NEW | D | M | A | COST/UNIT | TOTAL |
|------|-------------|-----|-----|---|---|---|-----------|-------|
|      |             |     |     |   |   |   |           |       |
|      |             |     |     |   |   |   |           |       |
|      |             |     |     |   |   |   |           |       |
|      |             |     |     |   |   |   |           |       |

**PRIORITY** Priority will be given to these PC's and will be implemented by the date required.

**NORM** These PC's will be collected and processed normally, executed when time and manpower permits.

**X-JOB** These PC's will be collected and implemented in the future when or if other PC's are being executed for the product.

**TEMP** Temporary changes will be made for the stated run only!

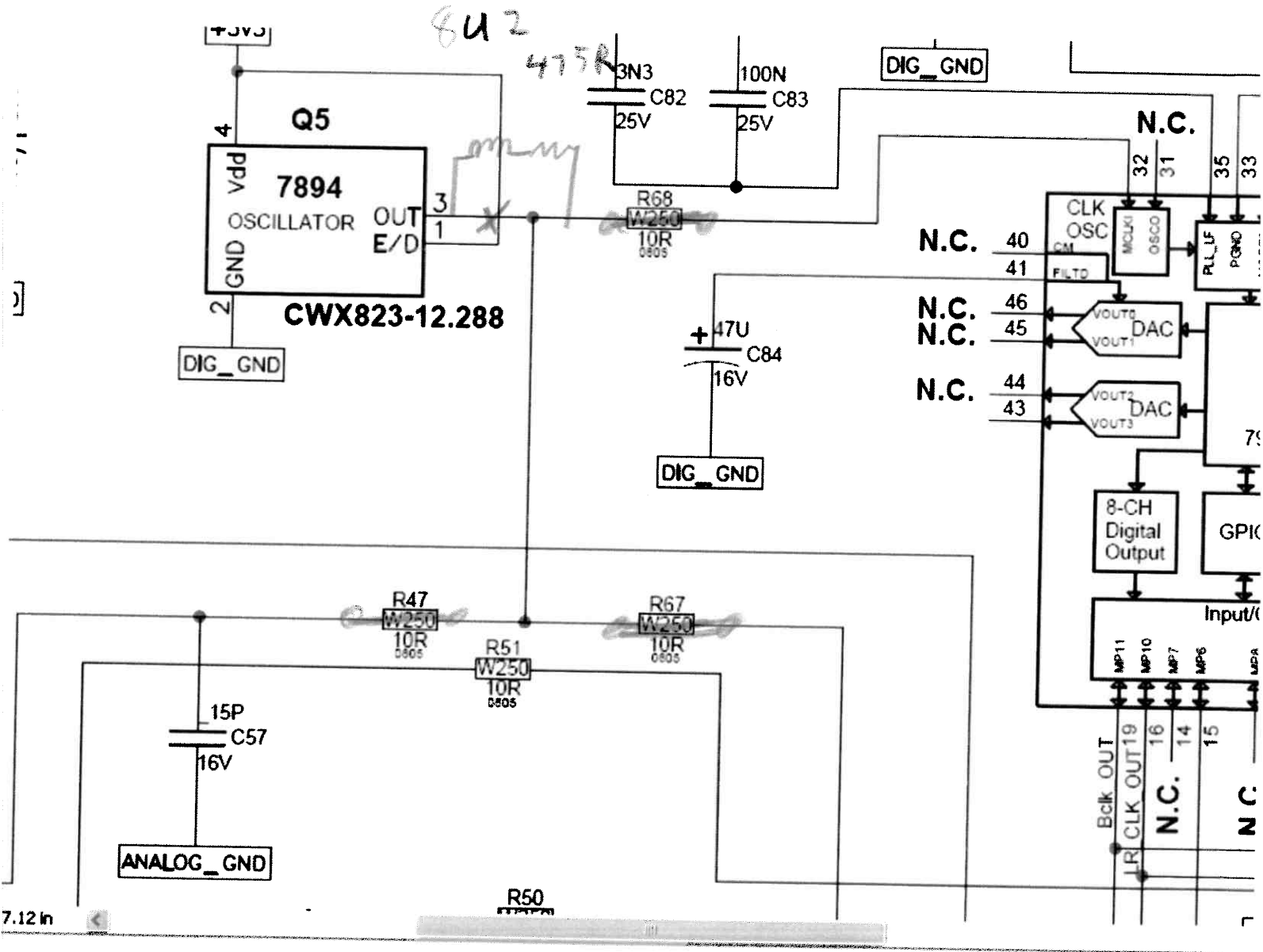
**NOTICE: ORIGINAL PCs MUST NOT GO OUT INTO PRODUCTION**

Peter Afshin  
George Andrew  
Adel Henry  
James Carl L.

**MAKE A NEW COPY EVERYTIME. CHANGES ARE BEING MADE ALL THE TIME**



# PC 7640



MAKE A NEW COPY EVERYTIME. CHANGES ARE BEING MADE ALL THE TIME

- Carl L.
- James
- Henry
- Adel
- Andrew
- George
- Pete
- Afshin
- Peter



# PROPOSAL FOR CHANGE

|          |      |       |        |      |
|----------|------|-------|--------|------|
| PRIORITY | NORM | X-JOB | PC No. | TEMP |
| P        | N    | X     | 8361   | T    |

REJECTED The Proposal for Change has been reviewed and considered but will *not* be implemented. DATE

|                    |               |                    |                  |                   |             |
|--------------------|---------------|--------------------|------------------|-------------------|-------------|
| PCBSA #57          | Wiring #55    | T&R #70            | WACM #52         | P/Engineering #25 | Sales #10   |
| PCBM #58           | Metal Fab #50 | Finishing #65      | Board & Test #53 | LAB #20           | Service #09 |
| Auto Insertion #59 | W/Shop #60    | Chas Screening #51 | QC #65           |                   |             |

| MODEL | PCB/CHAS | VERSION | TASK ORDER |
|-------|----------|---------|------------|
| E109  | X8019-59 | 4.00    |            |
| PSA1  | M1311    |         |            |
|       |          |         |            |
|       |          |         |            |

|    |  |
|----|--|
| SL |  |
| BW |  |
| TW |  |
| PM |  |

**ORIGINATOR**

FROM: SHAHIN  
 DEPT: LAB  
 DATE: DEC 7, 2011

UPON COMPLETION

DESCRIPTION OF CHANGE  DOCUMENT UPDATE/CORRECTION  PROGRAM UPDATE/CORRECTION

R33, R24 2k2 → 2k32 (#7632)  
 R45, R31 10k → 10k0 (#7928)  
 R46 270Ω → 330Ω (#7897)  
 R58 1k5 → 1k8 (#7899)

Completed Jan 25/2012

- MM2 updated
- Layout updated
- Schem updated
- Viewer updated

V04  
A  
V05  
ML

**REASON FOR CHANGE**

Reduce number of parts to allow board to fit on SMT machine.

Update units coming in for SERVICE?  YES  NO

Update FINISHED units in warehouse?  YES  NO

UPDATE WIP?  YES  NO

Electrical compliance affected?  YES  NO

Will the current test fixtures be affected?  YES  NO

If yes, what is the estimated cost of fixture? \_\_\_\_\_

Before serial number \_\_\_\_\_

By doing this change, are units currently out in field compatible?  YES  NO  MAYBE

| PART | DESCRIPTION | OLD | NEW | D | M | A | COST/UNIT | TOTAL |
|------|-------------|-----|-----|---|---|---|-----------|-------|
|      |             |     |     |   |   |   |           |       |
|      |             |     |     |   |   |   |           |       |
|      |             |     |     |   |   |   |           |       |

**P** PRIORITY Priority will be given to these PC's and will be implemented by the date required.

**N** NORM These PC's will be collected and processed normally, executed when time and manpower permits.

**X** X-JOB These PC's will be collected and implemented in the future when or if other PC's are being executed for the product.

**T** TEMP Temporary changes will be made for the stated run only!



# PROPOSAL FOR CHANGE

|  |                                   |                                   |               |                                   |
|--|-----------------------------------|-----------------------------------|---------------|-----------------------------------|
| <b>PRIORITY</b>                              | <b>NORM</b>                       | <b>X-JOB</b>                      | <b>PC No.</b> | <b>TEMP</b>                       |
| <b>P</b> <input checked="" type="checkbox"/> | <b>N</b> <input type="checkbox"/> | <b>X</b> <input type="checkbox"/> | 8578          | <b>T</b> <input type="checkbox"/> |
| <b>DATE REQUIRED:</b>                        |                                   |                                   |               |                                   |

**REJECTED** The Proposal for Change has been reviewed and considered but will *not* be implemented. **DATE**

|                    |               |                    |                  |                   |             |
|--------------------|---------------|--------------------|------------------|-------------------|-------------|
| PCBSA #57          | Wiring #55    | T&R #70            | WACM #52         | P/Engineering #25 | Sales #10   |
| PCBM #58           | Metal Fab #50 | Finishing #65      | Board & Test #53 | LAB #20           | Service #09 |
| Auto Insertion #59 | W/Shop #60    | Chas Screening #51 | QC #65           |                   |             |

| MODEL | PCB/CHAS | VERSION | TASK ORDER | APPROVAL             |                    | ORIGINATOR             |                    |
|-------|----------|---------|------------|----------------------|--------------------|------------------------|--------------------|
| E10P  | M1496    | V06     |            | SL                   |                    | FROM                   | Mike Lebon         |
| PSA1  | M1311    | V06     |            | BW                   |                    | DEPT                   | PENG               |
|       | X8019    | V06     |            | TW                   | <i>[Signature]</i> | DATE                   | Aug 26, 2013       |
|       |          |         |            | PM                   | <i>[Signature]</i> | ORIGINATOR'S SIGNATURE | <i>[Signature]</i> |
|       |          |         |            | DESIGNER'S SIGNATURE |                    |                        |                    |

**DESCRIPTION OF CHANGE** DOCUMENT UPDATE/CORRECTION  PROGRAM UPDATE/CORRECTION

- Change XLR Male jack from 3453 to 4100.

Completed 16-OCT-13  
 → New layout V07  
 → MML updated M.L.

**REASON FOR CHANGE**

XLR 3453 is obsolete. YS#4100 is closest substitute.

Update units coming in for SERVICE?  **Will a model or prototype be needed?** YES  NO

Update FINISHED units in warehouse?  Will the current test fixtures be affected? YES  NO

UPDATE WIP?  If yes, what is the estimated cost of fixture? \_\_\_\_\_

Electrical compliance affected?  Before serial number \_\_\_\_\_

By doing this change, are units currently out in field compatible? YES  NO  MAYBE

| PART | DESCRIPTION | OLD | NEW | D | M | A | COST/UNIT | TOTAL |
|------|-------------|-----|-----|---|---|---|-----------|-------|
|      |             |     |     |   |   |   |           |       |
|      |             |     |     |   |   |   |           |       |
|      |             |     |     |   |   |   |           |       |
|      |             |     |     |   |   |   |           |       |

**P**  **PRIORITY** Priority will be given to these PC's and will be implemented by the date required. **X**  **X-JOB** These PC's will be collected and implemented in the future when or if other PC's are being executed for the product

**N**  **NORM** These PC's will be collected and processed normally, executed when time and manpower permits. **T**  **TEMP** Temporary changes will be made for the stated run only!

**NOTICE: ORIGINAL PC'S MUST NOT GO OUT INTO PRODUCTION**

- George K
- Carl L.
- James
- Henry
- Adel
- Andrew
- George G
- Mike
- Pete
- Peter

**MAKE A NEW COPY EVERYTIME. CHANGES ARE BEING MADE ALL THE TIME**



# PROPOSAL FOR CHANGE

|  |                                   |                                   |               |                                   |
|--|-----------------------------------|-----------------------------------|---------------|-----------------------------------|
| <b>PRIORITY</b>                              | <b>NORM</b>                       | <b>X-JOB</b>                      | <b>PC No.</b> | <b>TEMP</b>                       |
| <b>P</b> <input checked="" type="checkbox"/> | <b>N</b> <input type="checkbox"/> | <b>X</b> <input type="checkbox"/> | 8580          | <b>T</b> <input type="checkbox"/> |
| <b>DATE REQUIRED:</b>                        |                                   |                                   |               |                                   |

**REJECTED** The Proposal for Change has been reviewed and considered but will *not* be implemented. **DATE**

|   |  |   |   |  |                                      |
|---|--|---|---|--|--------------------------------------|
| <input checked="" type="checkbox"/> PCBSA #57 | <input type="checkbox"/> Wiring #55    | <input type="checkbox"/> T&R #70            | <input type="checkbox"/> WACM #52         | <input type="checkbox"/> P/Engineering #25 | <input type="checkbox"/> Sales #10   |
| <input type="checkbox"/> PCBM #58             | <input type="checkbox"/> Metal Fab #50 | <input type="checkbox"/> Finishing #65      | <input type="checkbox"/> Board & Test #53 | <input type="checkbox"/> LAB #20           | <input type="checkbox"/> Service #09 |
| <input type="checkbox"/> Auto Insertion #59   | <input type="checkbox"/> W/Shop #60    | <input type="checkbox"/> Chas Screening #51 | <input type="checkbox"/> QC #65           |  |                                      |

| MODEL | PCB/CHAS | VERSION | TASK ORDER | APPROVAL |                    | ORIGINATOR             |                 |
|-------|----------|---------|------------|----------|--------------------|------------------------|-----------------|
| PSA1  | M1496    | V06     |            | SL       |                    | FROM                   | Peter Mahoney   |
| E10P  | M1311    | V06     |            | BW       |                    | DEPT                   | P. ENG          |
|       |          |         |            | TW       | <i>TW</i>          | DATE                   | Sep 3, 2013     |
|       |          |         |            | PM       | <i>[Signature]</i> | ORIGINATOR'S SIGNATURE | UPON COMPLETION |
|       |          |         |            | DESIGNED |                    | DESIGNER'S SIGNATURE   | UPON COMPLETION |

**DESCRIPTION OF CHANGE**  DOCUMENT UPDATE/CORRECTION  PROGRAM UPDATE/CORRECTION

Find a suitable replacement that holds the jack with more tension.  
 Replace Belton Combo XLR connector YS# 3416 with Neutrik NCJ6FI-V-0 YS# 6509

*Completed 16-Oct-13  
 → New lay V07  
 → MML updated*

### REASON FOR CHANGE

Combo xlr does not hold the 1/4 inch jack with enough tension causing the jack to rattle or become unplugged.

Update units coming in for SERVICE?  Will a model or prototype be needed?  YES  NO

Update FINISHED units in warehouse?  Will the current test fixtures be affected?  YES  NO

UPDATE WIP? If yes, what is the estimated cost of fixture? \_\_\_\_\_

Electrical compliance affected? Before serial number \_\_\_\_\_

By doing this change, are units currently out in field compatible?  YES  NO  MAYBE

| PART | DESCRIPTION | OLD | NEW | D | M | A | COST/UNIT | TOTAL |
|------|-------------|-----|-----|---|---|---|-----------|-------|
|      |             |     |     |   |   |   |           |       |
|      |             |     |     |   |   |   |           |       |
|      |             |     |     |   |   |   |           |       |
|      |             |     |     |   |   |   |           |       |

|   |   |
|---|---|
| <b>P</b> <input checked="" type="checkbox"/> <b>PRIORITY</b> Priority will be given to these PC's and will be implemented by the date required. | <b>X</b> <input type="checkbox"/> <b>X-JOB</b> These PC's will be collected and implemented in the future when or if other PCs are being executed for the product |
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