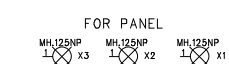
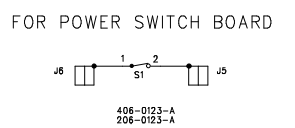
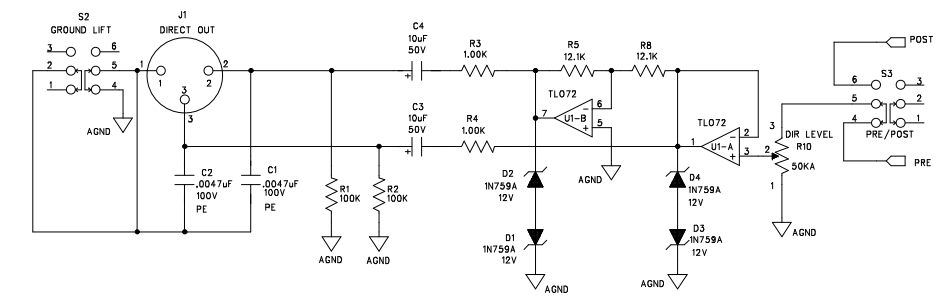
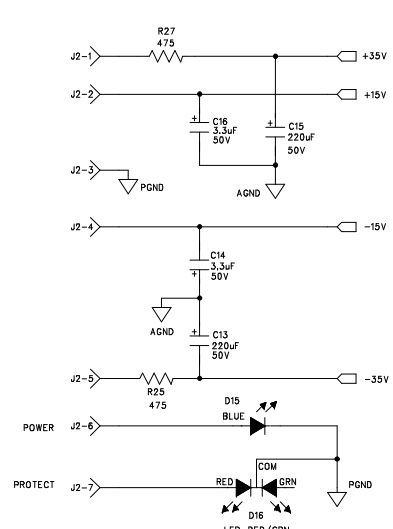
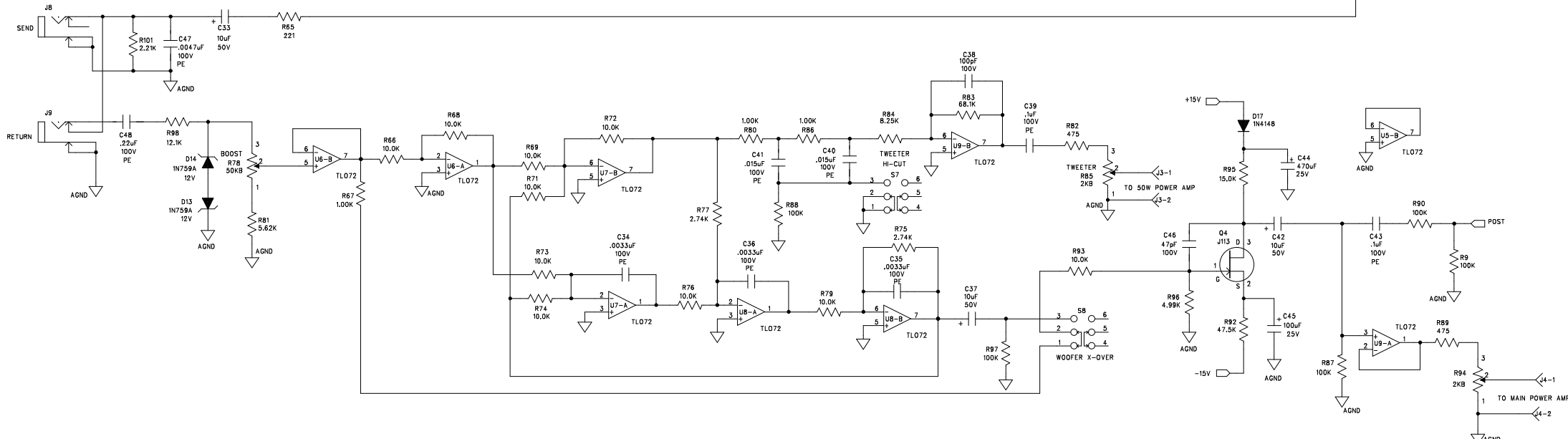
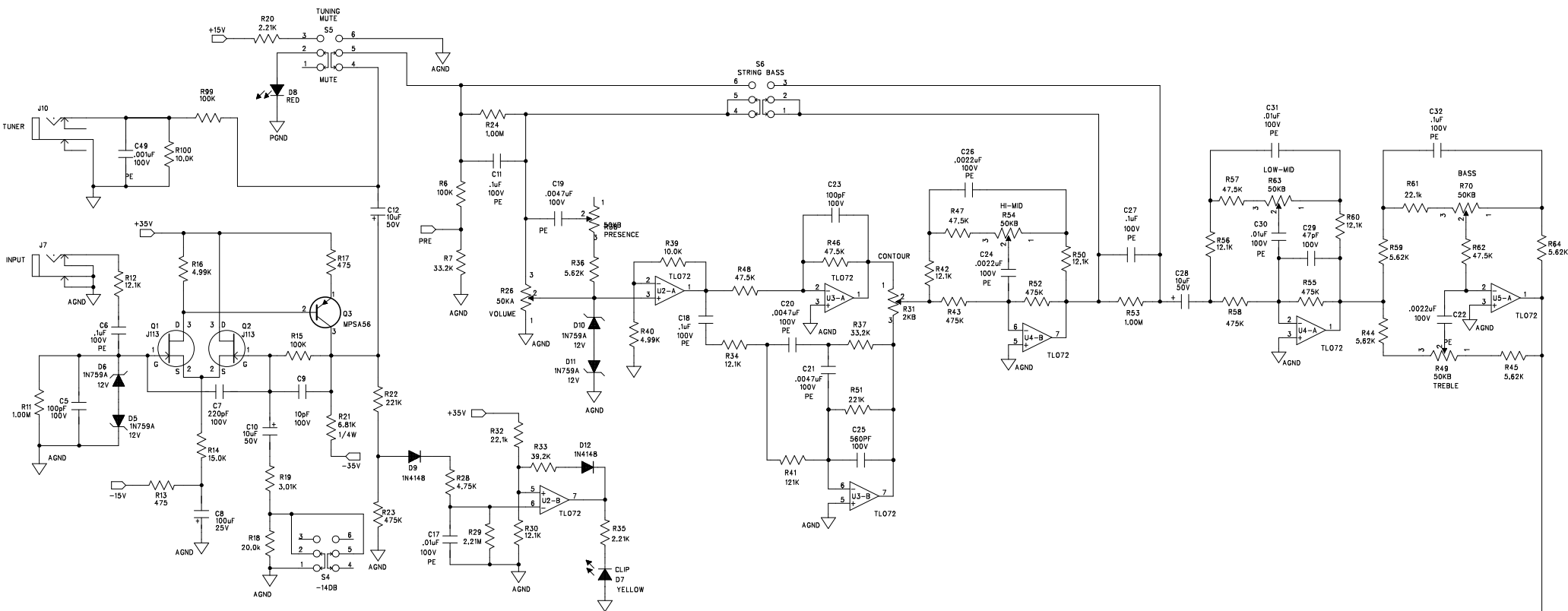


| REVISION RECORD |         |           |       |
|-----------------|---------|-----------|-------|
| LTR             | ECO NO: | APPROVED: | DATE: |
|                 |         |           |       |
|                 |         |           |       |
|                 |         |           |       |



NOT VALID UNLESS STAMP IS RED

**gallien technology**

2240 PARAGON DRIVE  
SAN JOSE CA. 95131  
VOICE: 408-441-8081  
FAX: 408-441-8085

TITLE: 700RB-II PREAMP

DESIGNED: R.A.G. 7/24/01  
DRAWN: R.A.G. 12/4/02  
ELEC: B  
MECH:  
Q/A:  
RELEASED:

REV. A

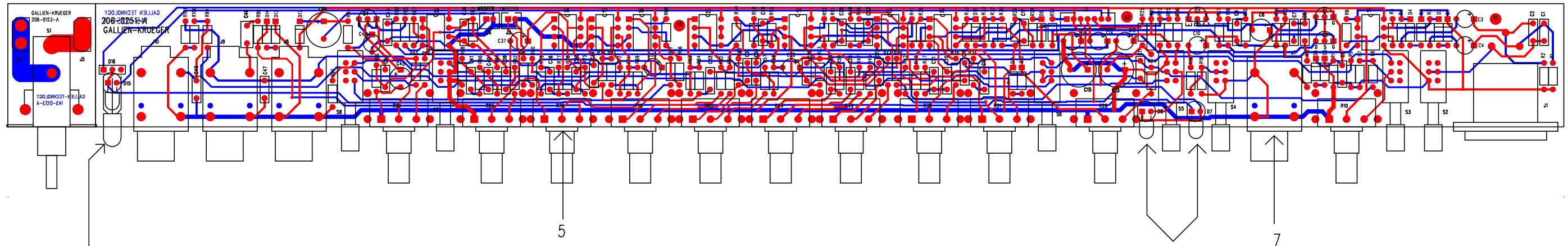
PART NO: 206-0251-A  
COMPANY: GALLIEN-KRUEGER  
FILENAME: 6251A

NOTES:  
1. CHANGE BOARD NO. TO 206-0251-A FROM 206-0105-02.  
2. CHANGE R18 TO 20.0K FROM 15.0K.  
3. CORRECT SHORTED TRACE FROM C45 TO S8.  
4. UPDATE HOLE AND PAD SIZES.

# GK GALLIEN-KRUEGER

## 1001RB-II PRE AMP 206-0251-A

| Part No.   | Reference                           | Description                          | Manufacturer     | Mfr. Part No.      |
|------------|-------------------------------------|--------------------------------------|------------------|--------------------|
| 001-1030-1 | U1-9                                | TLO72CP, LOW NOISE JFET OPAMP        | MOTOROLA         | TL072CP            |
| 010-1013-0 | Q3                                  | MPSA56 PNP 80V 500MA TO-92           | MOTOROLA         | MPS-A56            |
| 010-2010-0 | Q1-2 Q4                             | J113,N-JFET,35V,2MA,TO-92            | NATIONAL         | J113               |
| 020-0120-0 | D1-6 D10-11 D13-14                  | 1N759A, ZENER,12V,5%,400MW, DO-35    | MOTOROLA         | 1N759A             |
| 020-1000-0 | D9 D12 D17                          | 1N4148, RECT-FAST, 200MA, 100V       | MOTOROLA         | 1N4148             |
| 025-0012-0 | D16                                 | LED,RED/GRN,5MM,630NM/560NM,15MCD    | STANLEY          | VRPG5614S          |
| 025-0023-0 | D7                                  | LED,YELLOW, 3MM, 585NM, 5MCD, 10MA   | EVERLIGHT        | EL204YD            |
| 025-0030-2 | D15                                 | LED,BLUE, 10MA                       | LITEON           | LTL-42B6           |
| 025-0116-0 | D8                                  | LED,RED, 3MM, 635NM, 6MCD, 10MA      | EVERLIGHT        | EL2041D            |
| 031-1107-0 | C8 C45                              | CAP,ELEC,RAD,107,20%,25V             | UNITED CHEMI-CON | SMG25VB101M6X11LL  |
| 031-1477-0 | C44                                 | CAP, ELEC, RAD, 470uF, 20%, 25V      | UNITED CHEMI-CON | SMG25VB471M10X12LL |
| 031-2106-0 | C3,4,10,12,28,33,37,42              | CAP,ELEC,RAD, 106, 20%, 50V          | UNITED CHEMI-CON | SMG50VB10RM5X11LL  |
| 031-2227-0 | C13 C15                             | CAP, ELEC, 220uF, 20%, 50V           | UNITED CHEMI-CON | SMG50VB221M10X12LL |
| 031-2335-0 | C14 C16                             | CAP,ELEC,RAD,335,20%,50V             | UNITED CHEMI-CON | SMG50VB3R3M5X11LL  |
| 032-4102-0 | C49                                 | CAP,PE,102,5%,100V,                  | PANASONIC        | ECQB1102JF         |
| 032-4103-0 | C17 C30-31                          | CAP,PE,103,5%,100V,                  | PANASONIC        | ECQV1103JM         |
| 032-4104-0 | C6,11,18,27,32,39,43                | CAP,PE,104,5%,100V,                  | PANASONIC        | ECQV1104JM         |
| 032-4153-0 | C40-41                              | CAP,PE,153,5%,100V,                  | PANASONIC        | ECQV1153JM         |
| 032-4222-0 | C22 C24 C26                         | CAP,PE,222,5%,100V,                  | PANASONIC        | ECQB1222JF         |
| 032-4224-0 | C48                                 | CAP,PE,224,5%,100V,                  | PANASONIC        | ECQV1224JM         |
| 032-4332-0 | C34-36                              | CAP,PE,332,5%,100V,                  | PANASONIC        | ECQB1332JF         |
| 032-4472-0 | C1-2 C19-21 C47                     | CAP,PE,472,5%,100V,                  | PANASONIC        | ECQB1472JF         |
| 034-4100-0 | C9                                  | CAP, MCR,10pF,5%,100V,NPO            | TAITRON          | TMRS100J100NPOB    |
| 034-4101-0 | C5 C23 C38                          | CAP,MCR,100pF,5%,100V,               | TAITRON          | TMRS101J100NPOB    |
| 034-4221-0 | C7                                  | CAP,MCR,220pF,5%,100V,               | TAITRON          | TMRS221J100NPOB    |
| 034-4470-0 | C29 C46                             | CAP,MCR,47PF,5%,100V,NPO             | TAITRON          | TMRS470J100NPOB    |
| 034-4561-0 | C25                                 | CAP,MCR,560pF,5%,100V,               | TAITRON          | TMRS561J100NPOB    |
| 052-6812-0 | R21                                 | RES, METAL FILM, 6.81K OHM, 1/4W, 1% | ECI              | M2F1AK006.81       |
| 060-1002-0 | R3-4 R67 R80 R86                    | RES,METAL FILM, 1.00K, 1/8W, 1%      | ECI              | M1F1AK001.00       |
| 060-1003-0 | R39,66,68,69,71-74,76<br>R79,93,100 | RES,METAL FILM, 10.0K, 1/8W,1%       | ECI              | M1F1AK010.00       |
| 060-1004-0 | R1,2,6,9,15,87,88,90,97<br>R99      | RES,METAL FILM, 100K, 1/8W, 1%       | ECI              | M1F1AK100.00       |
| 060-1005-0 | R11 R24 R53                         | RES, MF, 1.00M, 1%,1/8W, 060-1005-0  | ECI              | M1F1AM001.00       |
| 060-1213-0 | R5,8,12,30,34,42,50,56<br>R60 R98   | RES,METAL FILM, 12.1K OHM, 1/8W, 1%  | ECI              | M1F1AK012.10       |
| 060-1214-0 | R41                                 | RES,METAL FILM, 121K, 1/8W, 1%       | ECI              | M1F1AK121.00       |
| 060-1503-0 | R14,95                              | RES,METAL FILM, 15.0K, 1/8W, 1%      | ECI              | M1F1AK015.00       |
| 060-2003-0 | R18                                 | RES,METAL FILM, 20.0K, 1/8W, 1%      | ECI              | M1F1AK020.00       |
| 060-2211-0 | R65                                 | RES,METAL FILM, 221 ohm, 1/8W, 1%    | ECI              | M1F1AJ221.00       |
| 060-2212-0 | R20 R35 R101                        | RES,METAL FILM, 2.21K, 1/8W, 1%      | ECI              | M1F1AK002.21       |
| 060-2213-0 | R32 R61                             | RES,METAL FILM, 22.1K, 1/8W, 1%      | ECI              | M1F1AK022.10       |
| 060-2214-0 | R22 R51                             | RES,METAL FILM, 221K, 1/8W, 1%       | ECI              | M1F1AK221.00       |
| 060-2215-0 | R29                                 | RES, METAL FILM, 2.21M, 1/8W, 1%     | ECI              | M1F1AM002.21       |
| 060-2742-0 | R75 R77                             | RES,METAL FILM, 2.74K, 1/8W, 1%      | ECI              | M1F1AK002.74       |
| 060-3012-0 | R19                                 | RES,METAL FILM, 3.01K, 1/8W, 1%      | ECI              | M1F1AK003.01       |
| 060-3323-0 | R7 R37                              | RES,METAL FILM, 33.2K, 1/8W, 1%      | ECI              | M1F1AK033.20       |
| 060-3923-0 | R33                                 | RES,METAL FILM,39.2K,1/8W,1%         | ECI              | M1F1AK039.2        |
| 060-4751-0 | R13,17,25,27,82,89                  | RES,METAL FILM, 475 ohm, 1/8W, 1%    | ECI              | M1F1AJ475.00       |
| 060-4752-0 | R28                                 | RES,METAL FILM, 4.75K, 1/8W, 1%      | ECI              | M1F1AK004.75       |
| 060-4753-0 | R46-48 R57 R62 R92                  | RES,METAL FILM, 47.5K, 1/8W, 1%      | ECI              | M1F1AK047.50       |
| 060-4754-0 | R23 R43 R52 R55 R58                 | RES,METAL FILM, 475K, 1/8W, 1%       | ECI              | M1F1AK475.00       |
| 060-4992-0 | R16 R40 R96                         | RES,METAL FILM, 4.99K, 1/8W, 1%      | ECI              | M1F1AK004.99       |
| 060-5622-0 | R36,44,45,59,64,81                  | RES,METAL FILM, 5.62K, 1/8W, 1%      | ECI              | M1F1AK005.62       |
| 060-6813-0 | R83                                 | RES,METAL FILM, 68.1K, 1/8W, 1%      | ECI              | M1F1AK068.10       |
| 060-8252-0 | R84                                 | RES,METAL FILM, 8.25K, 1/8W, 1%      | ECI              | M1F1AK008.25       |
| 070-1513-0 | R10 R26                             | POT,50K-15A,7MM,KNURL,,1W            | SONG HUEI        | 16K1-A50K-L15KC    |
| 070-1514-0 | R38,49,54,63,70,78                  | POT,50KB,7MM,KNURL,,1W               | SONG HUEI        | 16K1-B50K-L15KC    |
| 070-1522-0 | R31 R85 R94                         | POT,2KB,7MM,KNURL,,1W                | SONG HUEI        | 16K1-B2K-L15KC     |
| 090-0007-0 | S1                                  | SWITCH, 8A/128A,250V,PP,PCB          | TECX             | KDC-A04-10-B, B2-F |
| 090-0012-0 | S2-8                                | SWITCH,MIMI PP,DPDT,,1A BRK/MAKE     | ELKECTRONIC COMP | MTH2UEE-1D911      |
| 092-0069-0 | J5-6                                | FASTON, M, PC, .250",HOR             | ZIERICK          | 901                |
| 092-0081-0 | J7-10                               | JACK,1/4",MONO,PC,NON GROUNDING      | NEUTRIK          | S102-84            |
| 092-0084-0 | J1                                  | CON,XLR,MALE,PC,PL, SCREW MNT        | NEUTRIK          | X906-05            |
| 093-0051-0 | J3-4                                | HDR, 2MMX2, VERT, LOCK               | JST              | B2B-PH-K-S         |
| 093-2005-0 | J2                                  | HDR, 2MMX7, VERT, SHROUDED           | JST              | B7B-PH-K-S         |
| 145-0251-A |                                     | 700RB-II PREAMP RAW BOARD            |                  |                    |

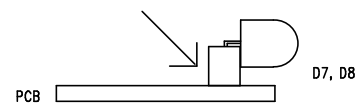


6 PCB WORK INSTRUCTIONS  
 DWG #420-0251-A

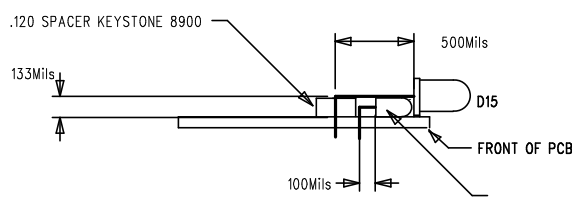
NOTES:

- UNLESS OTHERWISE SPECIFIED:
1. SQUARE PADS ON THRU HOLE PARTS (ie: CONNECTORS, DIPS, SIPS, LEDES) DENOTE PIN 1.
  2. ALL BOARDS REQUIRE A COMPLETE AND THOROUGH VISUAL INSPECTIONS.
  3. ALL BOARDS MUST BE BARE BOARD TESTED.
  4. ASSEMBLE AND SOLDER PER ANSI/IPC-A-610B.
- LOADING
5. CLIP TABS OFF ON POTS R8, R24, R30, R47, R52, R61, R68, R76, R83, R91
  6. SEE DETAIL A FOR MOUNTING D7 AND D8. SEE DETAIL B FOR MOUNTING D15 AND D16.
- FINAL QA
7. CHECK TO SEE ALL POTS, JACKS, AND SWITCHES ARE MOUNTED FLUSH AND STRAIGHT

DETAIL A  
 LED SPACER  
 GT PART# 100-0119-0



DETAIL "B"



NOT VALID UNLESS STAMP IS RED

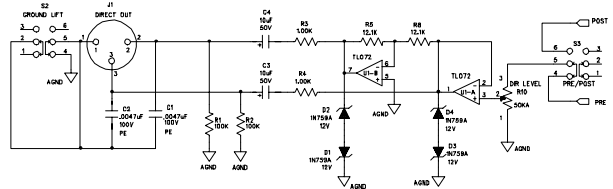
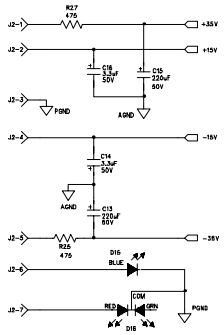
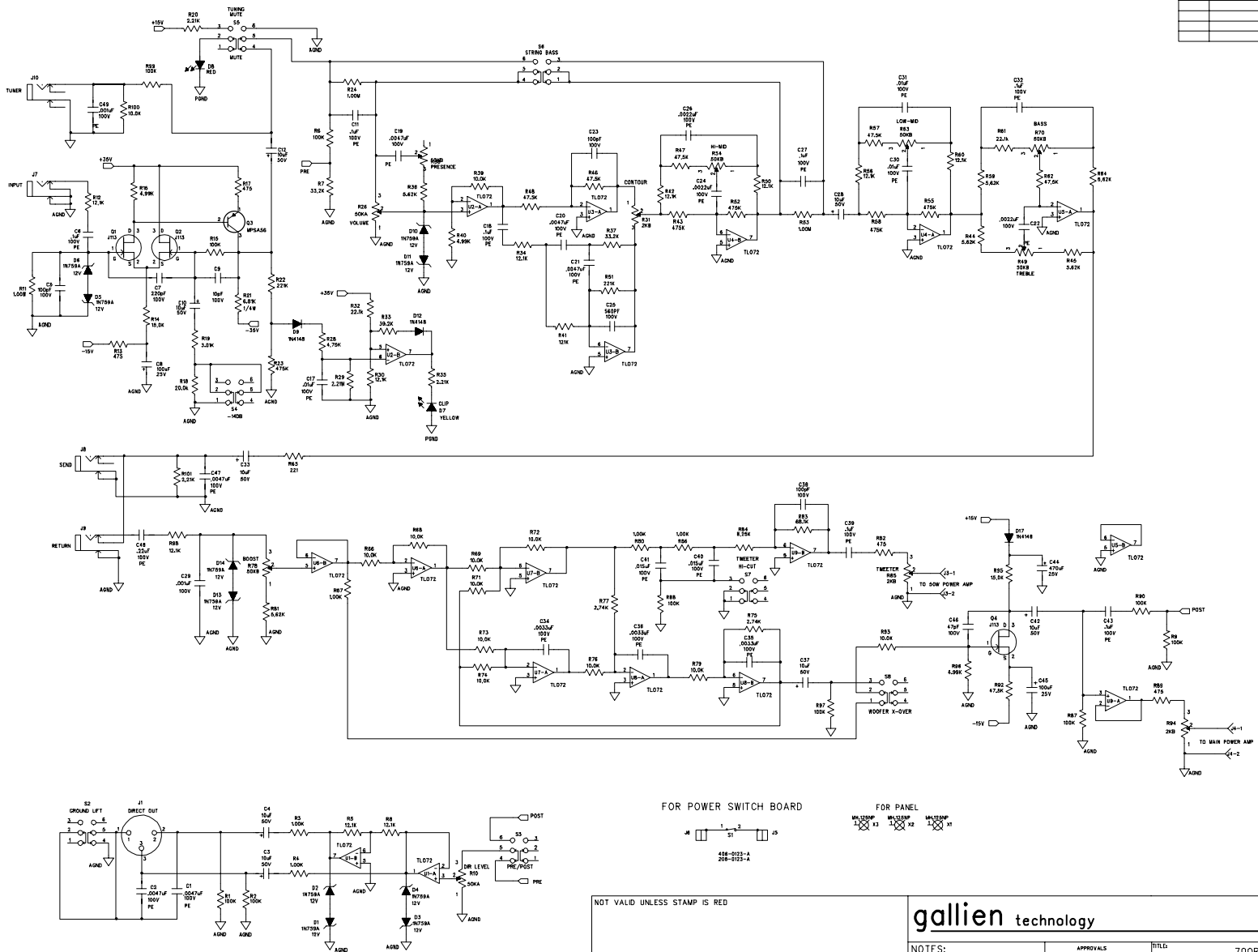
gallien technology

2240 PARAGON DRIVE  
 SAN JOSE CA, 95131  
 VOICE: 408-441-8081  
 FAX: 408-441-8085

| APPROVALS          |      | TITLE:                         |                        |
|--------------------|------|--------------------------------|------------------------|
| INIT               | DATE | 700B-II PRE-AMP BD             |                        |
| DESIGNED:          |      | SIZE                           | DRAWING NO: 405-0251-A |
| DRAWN:             |      | B                              | PART NO: 145-0251-A    |
| ELEC:              |      |                                | REV. A                 |
| LAYER DESCRIPTION: |      | COMPANY:                       |                        |
| SOP SOURCE CONTROL |      | GERBER FILE NAME: sst01209.pbo |                        |
|                    |      | FILENAME: 5251A                |                        |

| Customer Name:   |                                  | <b>Gallien-Krueger</b>              |                     | Current Rev #:                      | <b>A</b>                 | New ECO Rev #: | <b>A1</b>             |
|--|----------------------------------|-------------------------------------|---------------------|-------------------------------------|--------------------------|----------------|-----------------------|
| Model:   |                                  | 700RB-II/1001RB-II                  |                     | Distribute To:                      |                          | Page:          | <b>1</b> Of: <b>2</b> |
| Assembly Description:                                  |                                  | 700RB-II/1001RB-II preamp           |                     | Originator:                         | <b>Robert A. Gallien</b> |                |                       |
| Assembly Numbers:                                      |                                  | 206-0251-A                          |                     | Approved by:                        |                          |                |                       |
|  |                                  |                                     |                     | Effective Date:                     | <b>4/17/2003</b>         |                |                       |
| Effective  |                                  |                                     |                     | Document Update                     |                          | Date           | Initials              |
| <input checked="" type="checkbox"/>                    | All in Process                   | <input checked="" type="checkbox"/> | Next Buy            | <input type="checkbox"/>            | Artwork                  |                |                       |
| <input type="checkbox"/>                               | All in Service                   | <input checked="" type="checkbox"/> | Next Production Run | <input type="checkbox"/>            | Assembly Dwg.            |                |                       |
| <input type="checkbox"/>                               | All in Stock                     | <input type="checkbox"/>            |                     | <input type="checkbox"/>            | Board Artwork            |                |                       |
| Beginning Serial Number:                               |                                  |                                     |                     | <input checked="" type="checkbox"/> | BOM                      |                |                       |
| Reason For Change                                      |                                  |                                     |                     | <input type="checkbox"/>            | Control Form             |                |                       |
| <b>Preamp will oscillate under certain EQ settings</b> |                                  |                                     |                     | <input checked="" type="checkbox"/> | Costing                  |                |                       |
|  |                                  |                                     |                     | <input type="checkbox"/>            | Fab Drawing              |                |                       |
|  |                                  |                                     |                     | <input type="checkbox"/>            | Inspection Proc.         |                |                       |
|  |                                  |                                     |                     | <input checked="" type="checkbox"/> | Part Master File         |                |                       |
|  |                                  |                                     |                     | <input checked="" type="checkbox"/> | Schematic                |                |                       |
|  |                                  |                                     |                     | <input type="checkbox"/>            | Service Manual           |                |                       |
|  |                                  |                                     |                     | <input type="checkbox"/>            | Test Procedure           |                |                       |
|  |                                  |                                     |                     | <input type="checkbox"/>            |                          |                |                       |
|  |                                  |                                     |                     | <input type="checkbox"/>            |                          |                |                       |
| Other Affected Assemblies                              |                                  |                                     |                     |                                     |                          |                |                       |
| <b>303 &amp; 302 Assmblies</b>                         |                                  |                                     |                     |                                     |                          |                |                       |
| <input type="checkbox"/>                               | Continued on ECO Supplement Page |                                     |                     |                                     |                          |                |                       |
| Description Of Change                                  |                                  |                                     |                     | Distribution                        |                          | Date           | Initials              |
|  |                                  |                                     |                     | <input type="checkbox"/>            | Accounting               |                |                       |
| <b>Remove C29 (Figure 1)</b>                           |                                  |                                     |                     | <input type="checkbox"/>            | Assembly                 |                |                       |
|  |                                  |                                     |                     | <input type="checkbox"/>            | Customer                 |                |                       |
| <b>Add .001uf cap from D14 cathode to gnd (Fig 2)</b>  |                                  |                                     |                     | <input checked="" type="checkbox"/> | Engineering              |                |                       |
| <b>This will be referenced as C29.</b>                 |                                  |                                     |                     | <input checked="" type="checkbox"/> | Incoming Q.C.            |                |                       |
|  |                                  |                                     |                     | <input type="checkbox"/>            | Planning                 |                |                       |
| <b>This change is a mod to existing Rev A boards.</b>  |                                  |                                     |                     | <input checked="" type="checkbox"/> | Production Eng.          |                |                       |
| <b>The board artwork was not updated.</b>              |                                  |                                     |                     | <input checked="" type="checkbox"/> | Purchasing               |                |                       |
|  |                                  |                                     |                     | <input type="checkbox"/>            | Q.A.                     |                |                       |
|  |                                  |                                     |                     | <input type="checkbox"/>            | Receiving                |                |                       |
|  |                                  |                                     |                     | <input type="checkbox"/>            | Service                  |                |                       |
|  |                                  |                                     |                     | <input checked="" type="checkbox"/> | Test                     |                |                       |
|  |                                  |                                     |                     | <input type="checkbox"/>            | Vendor                   |                |                       |
|  |                                  |                                     |                     | <input type="checkbox"/>            |                          |                |                       |
|  |                                  |                                     |                     | <input type="checkbox"/>            |                          |                |                       |
| <input type="checkbox"/>                               | Continued on ECO Supplement Page |                                     |                     |                                     |                          |                |                       |
|  |                                  |                                     |                     | <input checked="" type="checkbox"/> | Drawing(s) attached      |                |                       |
| Part Number  | Description                      | Parts Added                         |                     | Parts Deleted                       |                          |                |                       |
|  |                                  | Qty                                 | Ref. Designator     | Qty                                 | Ref. Designator          |                |                       |
| 034-4470-0   | 47pf, 100V                       |                                     |                     | 1                                   | C29                      |                |                       |
| 032-4102-0   | .001UF, 100v                     | 1                                   | C29                 |                                     |                          |                |                       |
|  |                                  |                                     |                     |                                     |                          |                |                       |
|  |                                  |                                     |                     |                                     |                          |                |                       |
|  |                                  |                                     |                     |                                     |                          |                |                       |
|  |                                  |                                     |                     |                                     |                          |                |                       |
|  |                                  |                                     |                     |                                     |                          |                |                       |

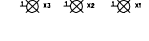
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|-----------------|---------|----------|------|
| LTR             | ECO NO. | APPROVED | DATE |
|                 |         |          |      |
|                 |         |          |      |
|                 |         |          |      |



FOR POWER SWITCH BOARD



FOR PANEL



NOT VALID UNLESS STAMP IS RED

**gallien technology**

2240 PARAGON DRIVE  
SAN JOSE CA. 95131  
VOICE: 408-441-8081  
FAX: 408-441-8083

700RB-II PREAMP

NOTES:  
1. CHANGE BOARD NO. TO 208-0251-A FROM 208-0251-01.  
2. CHANGE R18 TO 20.0K FROM 15.0K.  
3. CORRECT SHORTED TRACE FROM C45 TO S8.  
4. UPDATE HOLE AND PAD SIZES.

| APPROVALS        | DATE    | TITLE           |
|------------------|---------|-----------------|
| DESIGNER: R.A.G. | 7/24/01 | 406-0251-A      |
| ELEC: R.A.G.     | 12/4/02 | 206-0251-A      |
| MECH:            |         | GALLIEN-KRUEGER |
| RELEASED:        |         | FILENAME: 6251A |

# GK GALLIEN-KRUEGER

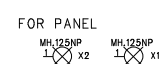
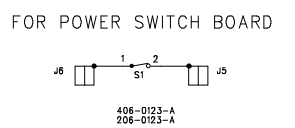
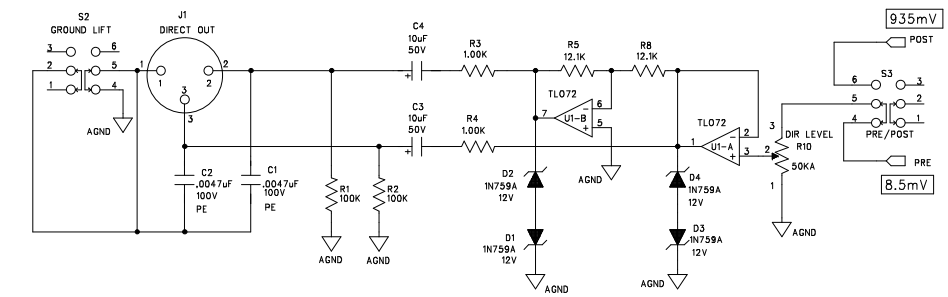
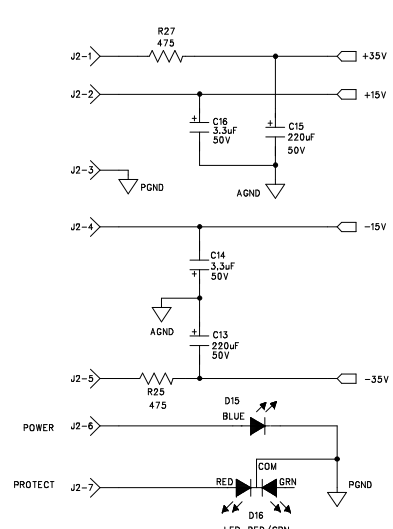
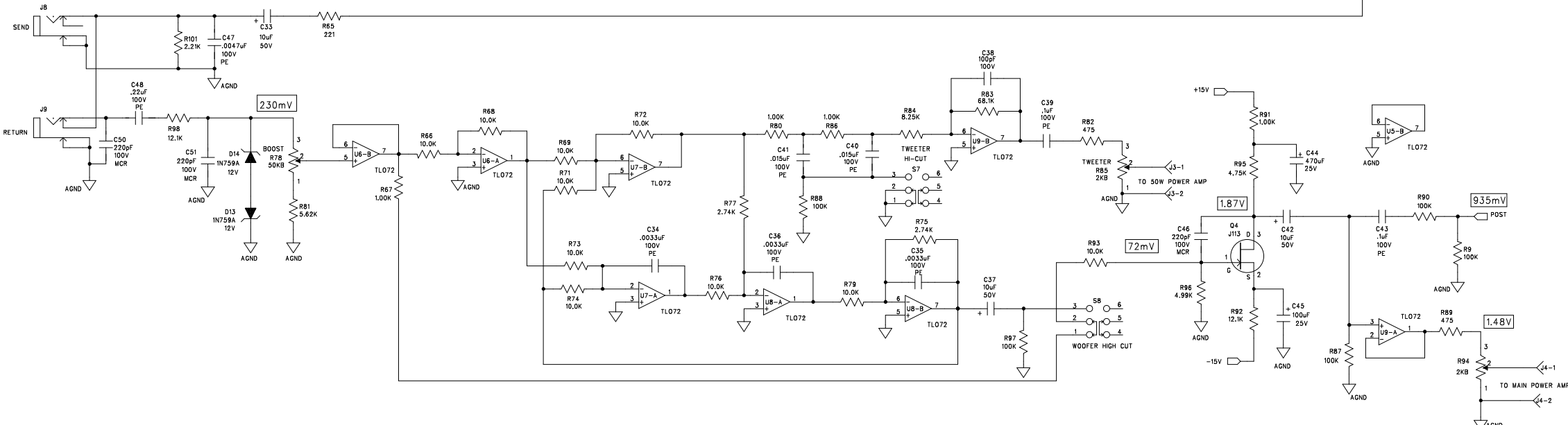
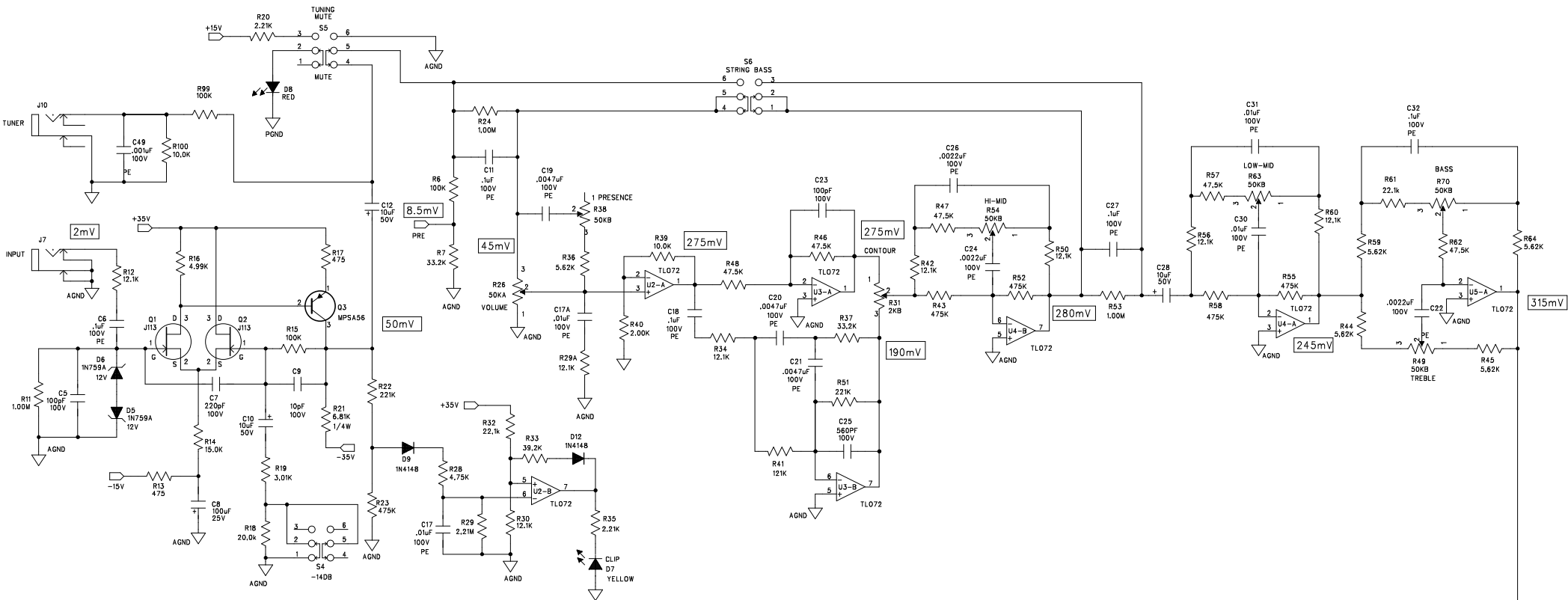
## 1001RB-II Preamp 206-0251-A1

| Part No.   | Reference                           | Description                          | Manufacturer     | Mfr. Part No.      |
|------------|-------------------------------------|--------------------------------------|------------------|--------------------|
| 001-1030-1 | U1-9                                | TLO72CP, LOW NOISE JFET OPAMP        | MOTOROLA         | TL072CP            |
| 010-1013-0 | Q3                                  | MPSA56 PNP 80V 500MA TO-92           | MOTOROLA         | MPS-A56            |
| 010-2010-0 | J1-2 Q4                             | J113,N-JFET,35V,2MA,TO-92            | NATIONAL         | J113               |
| 020-0120-0 | D1-6 D10-11 D13-14                  | 1N759A, ZENER,12V,5%,400MW, DO-35    | MOTOROLA         | 1N759A             |
| 020-1000-0 | D9 D12 D17                          | 1N4148, RECT-FAST, 200MA, 100V       | MOTOROLA         | 1N4148             |
| 025-0012-0 | D16                                 | LED,RED/GRN,5MM,630NM/560NM,15MCD    | STANLEY          | VRPG5614S          |
| 025-0023-0 | D7                                  | LED,YELLOW, 3MM, 585NM, 5MCD, 10MA   | EVERLIGHT        | EL204YD            |
| 025-0030-2 | D15                                 | LED,BLUE, 10MA                       | LITEON           | LTL-42B6           |
| 025-0116-0 | D8                                  | LED,RED, 3MM, 635NM, 6MCD, 10MA      | EVERLIGHT        | EL2041D            |
| 031-1107-0 | C8 C45                              | CAP,ELEC,RAD,107,20%,25V             | UNITED CHEMI-CON | SMG25VB101M6X11LL  |
| 031-1477-0 | C44                                 | CAP, ELEC, RAD, 470uF, 20%, 25V      | UNITED CHEMI-CON | SMG25VB471M10X12LL |
| 031-2106-0 | C3,4,10,12,28,33,37,42              | CAP,ELEC,RAD, 106, 20%, 50V          | UNITED CHEMI-CON | SMG50VB10RM5X11LL  |
| 031-2227-0 | C13 C15                             | CAP, ELEC, 220uF, 20%, 50V           | UNITED CHEMI-CON | SMG50VB221M10X12LL |
| 031-2335-0 | C14 C16                             | CAP,ELEC,RAD,335,20%,50V             | UNITED CHEMI-CON | SMG50VB3R3M5X11LL  |
| 032-4102-0 | C49, (C29 ECOA1)                    | CAP,PE,102,5%,100V,                  | PANASONIC        | ECQB1102JF         |
| 032-4103-0 | C17 C30-31                          | CAP,PE,103,5%,100V,                  | PANASONIC        | ECQV1103JM         |
| 032-4104-0 | C6,11,18,27,32,39,43                | CAP,PE,104,5%,100V,                  | PANASONIC        | ECQV1104JM         |
| 032-4153-0 | C40-41                              | CAP,PE,153,5%,100V,                  | PANASONIC        | ECQV1153JM         |
| 032-4222-0 | C22 C24 C26                         | CAP,PE,222,5%,100V,                  | PANASONIC        | ECQB1222JF         |
| 032-4224-0 | C48                                 | CAP,PE,224,5%,100V,                  | PANASONIC        | ECQV1224JM         |
| 032-4332-0 | C34-36                              | CAP,PE,332,5%,100V,                  | PANASONIC        | ECQB1332JF         |
| 032-4472-0 | C1-2 C19-21 C47                     | CAP,PE,472,5%,100V,                  | PANASONIC        | ECQB1472JF         |
| 034-4100-0 | C9                                  | CAP, MCR,10pF,5%,100V,NPO            | TAITRON          | TMRS100J100NPOB    |
| 034-4101-0 | C5 C23 C38                          | CAP,MCR,100pF,5%,100V,               | TAITRON          | TMRS101J100NPOB    |
| 034-4221-0 | C7                                  | CAP,MCR,220pF,5%,100V,               | TAITRON          | TMRS221J100NPOB    |
| 034-4470-0 | C46                                 | CAP,MCR,47PF,5%,100V,NPO             | TAITRON          | TMRS470J100NPOB    |
| 034-4561-0 | C25                                 | CAP,MCR,560pF,5%,100V,               | TAITRON          | TMRS561J100NPOB    |
| 052-6812-0 | R21                                 | RES, METAL FILM, 6.81K OHM, 1/4W, 1% | ECI              | M2F1AK006.81       |
| 060-1002-0 | R3-4 R67 R80 R86                    | RES,METAL FILM, 1.00K, 1/8W, 1%      | ECI              | M1F1AK001.00       |
| 060-1003-0 | R39,66,68,69,71-74,76<br>R79,93,100 | RES,METAL FILM, 10.0K, 1/8W,1%       | ECI              | M1F1AK010.00       |
| 060-1004-0 | R1,2,6,9,15,87,88,90,97<br>R99      | RES,METAL FILM, 100K, 1/8W, 1%       | ECI              | M1F1AK100.00       |
| 060-1005-0 | R11 R24 R53                         | RES, MF, 1.00M, 1%,1/8W, 060-1005-0  | ECI              | M1F1AM001.00       |
| 060-1213-0 | R5,8,12,30,34,42,50,56<br>R60 R98   | RES,METAL FILM, 12.1K OHM, 1/8W, 1%  | ECI              | M1F1AK012.10       |
| 060-1214-0 | R41                                 | RES,METAL FILM, 121K, 1/8W, 1%       | ECI              | M1F1AK121.00       |
| 060-1503-0 | R14,95                              | RES,METAL FILM, 15.0K, 1/8W, 1%      | ECI              | M1F1AK015.00       |
| 060-2003-0 | R18                                 | RES,METAL FILM, 20.0K, 1/8W, 1%      | ECI              | M1F1AK020.00       |
| 060-2211-0 | R65                                 | RES,METAL FILM, 221 ohm, 1/8W, 1%    | ECI              | M1F1AJ221.00       |
| 060-2212-0 | R20 R35 R101                        | RES,METAL FILM, 2.21K, 1/8W, 1%      | ECI              | M1F1AK002.21       |
| 060-2213-0 | R32 R61                             | RES,METAL FILM, 22.1K, 1/8W, 1%      | ECI              | M1F1AK022.10       |
| 060-2214-0 | R22 R51                             | RES,METAL FILM, 221K, 1/8W, 1%       | ECI              | M1F1AK221.00       |
| 060-2215-0 | R29                                 | RES, METAL FILM, 2.21M, 1/8W, 1%     | ECI              | M1F1AM002.21       |
| 060-2742-0 | R75 R77                             | RES,METAL FILM, 2.74K, 1/8W, 1%      | ECI              | M1F1AK002.74       |
| 060-3012-0 | R19                                 | RES,METAL FILM, 3.01K, 1/8W, 1%      | ECI              | M1F1AK003.01       |
| 060-3323-0 | R7 R37                              | RES,METAL FILM, 33.2K, 1/8W, 1%      | ECI              | M1F1AK033.20       |
| 060-3923-0 | R33                                 | RES,METAL FILM,39.2K,1/8W,1%         | ECI              | M1F1AK039.2        |
| 060-4751-0 | R13,17,25,27,82,89                  | RES,METAL FILM, 475 ohm, 1/8W, 1%    | ECI              | M1F1AJ475.00       |
| 060-4752-0 | R28                                 | RES,METAL FILM, 4.75K, 1/8W, 1%      | ECI              | M1F1AK004.75       |
| 060-4753-0 | R46-48 R57 R62 R92                  | RES,METAL FILM, 47.5K, 1/8W, 1%      | ECI              | M1F1AK047.50       |
| 060-4754-0 | R23 R43 R52 R55 R58                 | RES,METAL FILM, 475K, 1/8W, 1%       | ECI              | M1F1AK475.00       |
| 060-4992-0 | R16 R40 R96                         | RES,METAL FILM, 4.99K, 1/8W, 1%      | ECI              | M1F1AK004.99       |
| 060-5622-0 | R36,44,45,59,64,81                  | RES,METAL FILM, 5.62K, 1/8W, 1%      | ECI              | M1F1AK005.62       |
| 060-6813-0 | R83                                 | RES,METAL FILM, 68.1K, 1/8W, 1%      | ECI              | M1F1AK068.10       |
| 060-8252-0 | R84                                 | RES,METAL FILM, 8.25K, 1/8W, 1%      | ECI              | M1F1AK008.25       |
| 070-1513-0 | R10 R26                             | POT,50K-15A,7MM,KNURL,.1W            | SONG HUEI        | 16K1-A50K-L15KC    |
| 070-1514-0 | R38,49,54,63,70,78                  | POT,50KB,7MM,KNURL,.1W               | SONG HUEI        | 16K1-B50K-L15KC    |
| 070-1522-0 | R31 R85 R94                         | POT,2KB,7MM,KNURL,.1W                | SONG HUEI        | 16K1-B2K-L15KC     |
| 090-0007-0 | S1                                  | SWITCH, 8A/128A,250V,PP,PCB          | TECX             | KDC-A04-10-B, B2-F |
| 090-0012-0 | S2-8                                | SWITCH,MIMI PP,DPDT,.1A BRK/MAKE     | ELKECTRONIC COMP | MTH2UEE-1D911      |
| 092-0069-0 | J5-6                                | FASTON, M, PC, .250",HOR             | ZIERICK          | 901                |
| 092-0081-0 | J7-10                               | JACK,1/4",MONO,PC,NON GROUNDING      | NEUTRIK          | S102-84            |
| 092-0084-0 | J1                                  | CON,XLR,MALE,PC,PL, SCREW MNT        | NEUTRIK          | X906-05            |
| 093-0051-0 | J3-4                                | HDR, 2MMX2, VERT, LOCK               | JST              | B2B-PH-K-S         |
| 093-2005-0 | J2                                  | HDR, 2MMX7, VERT, SHROUDED           | JST              | B7B-PH-K-S         |
| 145-0251-A |                                     | 700RB-II PREAMP RAW BOARD            |                  |                    |

| Customer Name:   |                 | <b>Gallien-Krueger</b>    |                     | Current Rev #:                      | <b>A1</b>         | New ECO Rev #: | <b>A2</b> |
|--|-----------------|---------------------------|---------------------|-------------------------------------|-------------------|----------------|-----------|
| Model:   |                 | 700RB-II/1001RB-II        |                     | Distribute To:                      |                   | Page:          | 1 Of: 1   |
| Assembly Description:  |                 | 700RB-II/1001RB-II preamp |                     | Originator:                         | Robert A. Gallien |                |           |
| Assembly Numbers:  |                 | 206-0251-A                |                     | Approved by:                        |                   |                |           |
|  |                 |                           |                     | Effective Date:                     | 8/5/2003          |                |           |
| Effective  |                 |                           |                     | Document Update                     |                   | Date           | Initials  |
| <input type="checkbox"/>   | All in Process  | <input type="checkbox"/>  | Next Buy            | <input type="checkbox"/>            | Artwork           |                |           |
| <input type="checkbox"/>   | All in Service  | <input type="checkbox"/>  | Next Production Run | <input type="checkbox"/>            | Assembly Dwg.     |                |           |
| <input type="checkbox"/>   | All in Stock    | <input type="checkbox"/>  |                     | <input checked="" type="checkbox"/> | Board Artwork     |                |           |
| Beginning Serial Number:   |                 |                           |                     | <input checked="" type="checkbox"/> | BOM               |                |           |
| Reason For Change  |                 |                           |                     | <input type="checkbox"/>            | Control Form      |                |           |
| Add Rev A1 changes to layout with other modifications to:  |                 |                           |                     | <input type="checkbox"/>            | Costing           |                |           |
| 1. Correct frequency response to match 800RB at all volume settings. The volume pot had to be loaded to behave like the 800RB. |                 |                           |                     | <input type="checkbox"/>            | Fab Drawing       |                |           |
| 2. Put 800RB Boost circuit back.   |                 |                           |                     | <input type="checkbox"/>            | Inspection Proc.  |                |           |
| 3. Reroute ground bus between U5 and U6 to eliminate hum at Boost levels, in the output and in the Post Direct Out.            |                 |                           |                     | <input checked="" type="checkbox"/> | Part Master File  |                |           |
| 4. Adjust gain to match 800RB.   |                 |                           |                     | <input checked="" type="checkbox"/> | Schematic         |                |           |
|  |                 |                           |                     | <input type="checkbox"/>            | Service Manual    |                |           |
|  |                 |                           |                     | <input checked="" type="checkbox"/> | Test Procedure    |                |           |
|  |                 |                           |                     | <input type="checkbox"/>            |                   |                |           |
|  |                 |                           |                     | Other Affected Assemblies           |                   |                |           |
| <input type="checkbox"/> Continued on ECO Supplement Page  |                 |                           |                     |                                     |                   |                |           |
| Description Of Change  |                 |                           |                     | Distribution                        |                   | Date           | Initials  |
| Board and BOM updated to incorporate changes listed below.   |                 |                           |                     | <input type="checkbox"/>            | Accounting        |                |           |
|  |                 |                           |                     | <input type="checkbox"/>            | Assembly          |                |           |
|  |                 |                           |                     | <input checked="" type="checkbox"/> | Engineering       |                |           |
|  |                 |                           |                     | <input checked="" type="checkbox"/> | Incoming Q.C.     |                |           |
|  |                 |                           |                     | <input checked="" type="checkbox"/> | Production Eng.   |                |           |
|  |                 |                           |                     | <input checked="" type="checkbox"/> | Purchasing        |                |           |
|  |                 |                           |                     | <input type="checkbox"/>            | Q.A.              |                |           |
|  |                 |                           |                     | <input type="checkbox"/>            | Service           |                |           |
|  |                 |                           |                     | <input checked="" type="checkbox"/> | Test              |                |           |
| <input type="checkbox"/> Continued on Supplement Page  |                 |                           |                     | <input type="checkbox"/>            |                   |                |           |
|  |                 | <input type="checkbox"/>  | Drawing(s) attached | <input type="checkbox"/>            |                   |                |           |
| Part Number  | Description     | Parts Added               |                     | Parts Deleted                       |                   |                |           |
|  |                 | Qty                       | Ref. Designator     | Qty                                 | Ref. Designator   |                |           |
| 034-4221-0   | 220pF/100V      | 3                         | C46, 50, 51         |                                     |                   |                |           |
| 032-4103-0   | .01uF/100V      | 1                         | C17A                |                                     |                   |                |           |
| 060-1002-0   | 1K, 1/8W MF     | 1                         | R91                 |                                     |                   |                |           |
| 060-4752-0   | 4.75K, 1/8W, MF | 1                         | R95                 |                                     |                   |                |           |
| 060-1213-0   | 12.1K, 1/8W, MF | 2                         | R29A, 92            |                                     |                   |                |           |
| 060-2002-0   | 2.00K, 1/8W, MF | 1                         | R40                 |                                     |                   |                |           |
| 020-0120-0   | 1N759A          |                           |                     | 2                                   | D10, 11           |                |           |
| 020-1000-0   | 1N4148          |                           |                     | 1                                   | D17               |                |           |
| 060-4992-0   | 4.99K, 1/8W, MF |                           |                     | 1                                   | R40               |                |           |
| 060-1503-0   | 15K, 1/8W, MF   |                           |                     | 1                                   | R95               |                |           |
| 060-4753-0   | 47.5K, 1/8W, MF |                           |                     | 1                                   | R92               |                |           |
| 034-4470-0   | 47pF/100V       |                           |                     | 1                                   | C46               |                |           |
| 032-4102-0   | .001uF/100V     |                           |                     | 1                                   | C29               |                |           |
|  |                 |                           |                     |                                     |                   |                |           |
|  |                 |                           |                     |                                     |                   |                |           |
|  |                 |                           |                     |                                     |                   |                |           |
|  |                 |                           |                     |                                     |                   |                |           |
|  |                 |                           |                     |                                     |                   |                |           |
|  |                 |                           |                     |                                     |                   |                |           |
|  |                 |                           |                     |                                     |                   |                |           |
|  |                 |                           |                     |                                     |                   |                |           |
|  |                 |                           |                     |                                     |                   |                |           |
|  |                 |                           |                     |                                     |                   |                |           |

| REVISION RECORD |         |           |       |
|-----------------|---------|-----------|-------|
| LTR             | ECO NO: | APPROVED: | DATE: |
|                 |         |           |       |
|                 |         |           |       |
|                 |         |           |       |

TEST CONDITIONS:  
 SET VOLUME, BOOST AND MASTERS ON 10.  
 SET TONE ON 10, VOICING FILTERS OFF.  
 SET INPUT ATTENUATOR AND X-OVER OFF.  
 SIGNAL 200HZ SINE SHOWN AS: 350mV  
 DC VOLTAGES SHOWN AS: 3.4V



NOT VALID UNLESS STAMP IS RED

**gallien technology**

2234 INDUSTRIAL DRIVE  
 STOCKTON CA. 95206  
 VOICE: 209-234-7300  
 FAX: 209-234-8420

TITLE: 700RB-II PREAMP

NOTES:  
 1. CHANGE BOARD NO. TO 206-0251-A2  
 2. CHANGE R40 TO 2.00K FROM 4.99K.  
 3. ADD C51- 220pF ACROSS D14 & D15.  
 4. ADD C50-220pF ACROSS J9.  
 5. CHANGE D17 TO R91-1K.  
 6. CHANGE R95-4.75K, R92-12.1K, R40-2.00K.  
 7. REPLACE D10 AND D11 WITH R29A & C17A.  
 8. RETROUTE GROUND TRACES FROM U5 TO U6.

| APPROVALS |        | DATE    | TITLE |
|-----------|--------|---------|-------|
| INIT      |        |         |       |
| DESIGNED: | R.A.G. | 7/24/01 |       |
| DRAWN:    | R.A.G. | 8/04/03 |       |
| ELEC:     |        |         |       |
| MECH:     |        |         |       |
| Q/A:      |        |         |       |
| RELEASED: |        |         |       |

DRAWING NO: 406-0251-A2  
 PART NO: 206-0251-A2  
 COMPANY: GALLIEN-KRUEGER  
 FILENAME: 6251A2

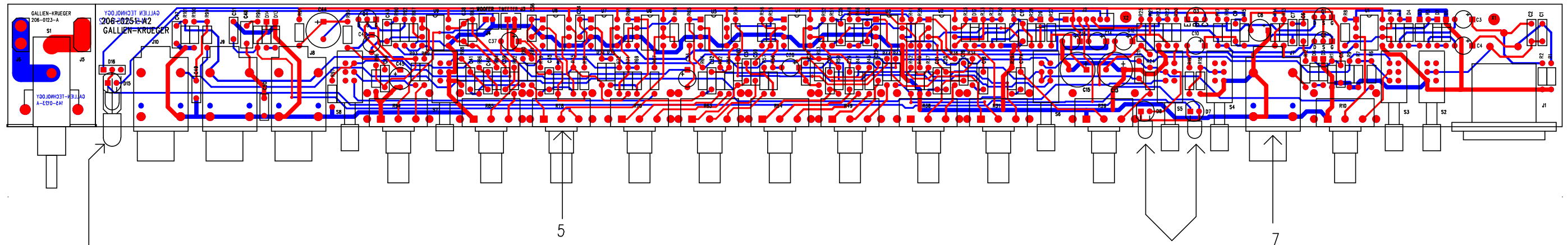
REV. A2



**1001RB-II Preamp 206-0251-A2**

| Part No.   | Reference                        | Description                          | Manufacturer     | Mfr. Part No.      |
|------------|----------------------------------|--------------------------------------|------------------|--------------------|
| 001-1030-1 | U1-9                             | TLO72CP, LOW NOISE JFET OPAMP        | MOTOROLA         | TL072CP            |
| 010-1013-0 | Q3                               | MPSA56 PNP 80V 500MA TO-92           | MOTOROLA         | MPS-A56            |
| 010-2010-0 | Q1-2 Q4                          | J113,N-JFET,35V,2MA,TO-92            | NATIONAL         | J113               |
| 020-0120-0 | D1-6 D13-14                      | 1N759A, ZENER,12V,5%,400MW, DO-35    | MOTOROLA         | 1N759A             |
| 020-1000-0 | D9 D12                           | 1N4148, RECT-FAST, 200MA, 100V       | MOTOROLA         | 1N4148             |
| 025-0012-0 | D16                              | LED,RED/GRN,5MM,630NM/560NM,15MCD    | STANLEY          | VRPG5614S          |
| 025-0023-0 | D7                               | LED,YELLOW, 3MM, 585NM, 5MCD, 10MA   | EVERLIGHT        | EL204YD            |
| 025-0030-2 | D15                              | LED,BLUE, 10MA                       | LITEON           | LTL-42B6           |
| 025-0116-0 | D8                               | LED,RED, 3MM, 635NM, 6MCD, 10MA      | EVERLIGHT        | EL2041D            |
| 031-1107-0 | C8 C45                           | CAP,ELEC,RAD,107,20%,25V             | UNITED CHEMI-CON | SMG25VB101M6X11LL  |
| 031-1477-0 | C44                              | CAP, ELEC, RAD, 470uF, 20%, 25V      | UNITED CHEMI-CON | SMG25VB471M10X12LL |
| 031-2106-0 | C3,4,10,12,28,33,37,42           | CAP,ELEC,RAD, 106, 20%, 50V          | UNITED CHEMI-CON | SMG50VB10RM5X11LL  |
| 031-2227-0 | C13 C15                          | CAP, ELEC, 220uF, 20%, 50V           | UNITED CHEMI-CON | SMG50VB221M10X12LL |
| 031-2335-0 | C14 C16                          | CAP,ELEC,RAD,335,20%,50V             | UNITED CHEMI-CON | SMG50VB3R3M5X11LL  |
| 032-4102-0 | C49                              | CAP,PE,102,5%,100V,                  | PANASONIC        | ECQB1102JF         |
| 032-4103-0 | C17 C30-31 C17A                  | CAP,PE,103,5%,100V,                  | PANASONIC        | ECQV1103JM         |
| 032-4104-0 | C6,11,18,27,32,39,43             | CAP,PE,104,5%,100V,                  | PANASONIC        | ECQV1104JM         |
| 032-4153-0 | C40-41                           | CAP,PE,153,5%,100V,                  | PANASONIC        | ECQV1153JM         |
| 032-4222-0 | C22 C24 C26                      | CAP,PE,222,5%,100V,                  | PANASONIC        | ECQB1222JF         |
| 032-4224-0 | C48                              | CAP,PE,224,5%,100V,                  | PANASONIC        | ECQV1224JM         |
| 032-4332-0 | C34-36                           | CAP,PE,332,5%,100V,                  | PANASONIC        | ECQB1332JF         |
| 032-4472-0 | C1-2 C19-21 C47                  | CAP,PE,472,5%,100V,                  | PANASONIC        | ECQB1472JF         |
| 034-4100-0 | C9                               | CAP, MCR,10pF,5%,100V,NPO            | TAITRON          | TMRS100J100NPOB    |
| 034-4101-0 | C5 C23 C38                       | CAP,MCR,100pF,5%,100V,               | TAITRON          | TMRS101J100NPOB    |
| 034-4221-0 | C7 C46 C50-51                    | CAP,MCR,220pF,5%,100V,               | TAITRON          | TMRS221J100NPOB    |
| 034-4561-0 | C25                              | CAP,MCR,560pF,5%,100V,               | TAITRON          | TMRS561J100NPOB    |
| 052-6812-0 | R21                              | RES, METAL FILM, 6.81K OHM, 1/4W, 1% | ECI              | M2F1AK006.81       |
| 060-1002-0 | R3-4 R67 R80 R86 R91             | RES,METAL FILM, 1.00K, 1/8W, 1%      | ECI              | M1F1AK001.00       |
| 060-1003-0 | R39,66,68,69,71-74,76            | RES,METAL FILM, 10.0K, 1/8W,1%       | ECI              | M1F1AK010.00       |
|            | R79,93,100                       |                                      |                  |                    |
| 060-1004-0 | R1,2,6,9,15,87,88,90,97<br>R99   | RES,METAL FILM, 100K, 1/8W, 1%       | ECI              | M1F1AK100.00       |
| 060-1005-0 | R11 R24 R53                      | RES, MF, 1.00M, 1%,1/8W, 060-1005-0  | ECI              | M1F1AM001.00       |
| 060-1213-0 | R5,8,12,30,34,42,50,56<br>R60,98 | RES,METAL FILM, 12.1K OHM, 1/8W, 1%  | ECI              | M1F1AK012.10       |
| 060-1213-0 | R92 R29A                         | RES,METAL FILM, 12.1K, 1/8W, 1%      | ECI              | M1F1AK012.10       |
| 060-1214-0 | R41                              | RES,METAL FILM, 121K, 1/8W, 1%       | ECI              | M1F1AK121.00       |
| 060-1503-0 | R14                              | RES,METAL FILM, 15.0K, 1/8W, 1%      | ECI              | M1F1AK015.00       |
| 060-2002-0 | R40                              | RES,METAL FILM, 2.00K, 1/8W, 1%      | ECI              | M1F1AK002.00       |
| 060-2003-0 | R18                              | RES,METAL FILM, 20.0K, 1/8W, 1%      | ECI              | M1F1AK020.00       |
| 060-2211-0 | R65                              | RES,METAL FILM, 221 ohm, 1/8W, 1%    | ECI              | M1F1AJ221.00       |
| 060-2212-0 | R20 R35 R101                     | RES,METAL FILM, 2.21K, 1/8W, 1%      | ECI              | M1F1AK002.21       |
| 060-2213-0 | R32 R61                          | RES,METAL FILM, 22.1K, 1/8W, 1%      | ECI              | M1F1AK022.10       |
| 060-2214-0 | R22 R51                          | RES,METAL FILM, 221K, 1/8W, 1%       | ECI              | M1F1AK221.00       |
| 060-2215-0 | R29                              | RES, METAL FILM, 2.21M, 1/8W, 1%     | ECI              | M1F1AM002.21       |
| 060-2742-0 | R75 R77                          | RES,METAL FILM, 2.74K, 1/8W, 1%      | ECI              | M1F1AK002.74       |
| 060-3012-0 | R19                              | RES,METAL FILM, 3.01K, 1/8W, 1%      | ECI              | M1F1AK003.01       |
| 060-3323-0 | R7 R37                           | RES,METAL FILM, 33.2K, 1/8W, 1%      | ECI              | M1F1AK033.20       |
| 060-3923-0 | R33                              | RES,METAL FILM,39.2K,1/8W,1%         | ECI              | M1F1AK039.2        |
| 060-4751-0 | R13,17,25,27,82,89               | RES,METAL FILM, 475 ohm, 1/8W, 1%    | ECI              | M1F1AJ475.00       |
| 060-4752-0 | R28 R95                          | RES,METAL FILM, 4.75K, 1/8W, 1%      | ECI              | M1F1AK004.75       |
| 060-4753-0 | R46-48 R57 R62                   | RES,METAL FILM, 47.5K, 1/8W, 1%      | ECI              | M1F1AK047.50       |
| 060-4754-0 | R23 R43 R52 R55 R58              | RES,METAL FILM, 475K, 1/8W, 1%       | ECI              | M1F1AK475.00       |
| 060-4992-0 | R16 R96                          | RES,METAL FILM, 4.99K, 1/8W, 1%      | ECI              | M1F1AK004.99       |
| 060-5622-0 | R36,44,45,59,64,81               | RES,METAL FILM, 5.62K, 1/8W, 1%      | ECI              | M1F1AK005.62       |
| 060-6813-0 | R83                              | RES,METAL FILM, 68.1K, 1/8W, 1%      | ECI              | M1F1AK068.10       |
| 060-8252-0 | R84                              | RES,METAL FILM, 8.25K, 1/8W, 1%      | ECI              | M1F1AK008.25       |
| 070-1513-0 | R10 R26                          | POT,50K-15A,7MM,KNURL,.1W            | SONG HUEI        | 16K1-A50K-L15KC    |
| 070-1514-0 | R38,49,54,63,70,78               | POT,50KB,7MM,KNURL,.1W               | SONG HUEI        | 16K1-B50K-L15KC    |
| 070-1522-0 | R31 R85 R94                      | POT,2KB,7MM,KNURL,.1W                | SONG HUEI        | 16K1-B2K-L15KC     |





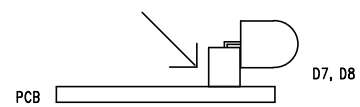
6 PCB WORK INSTRUCTIONS  
 DWG #420-0251-A2

NOTES:

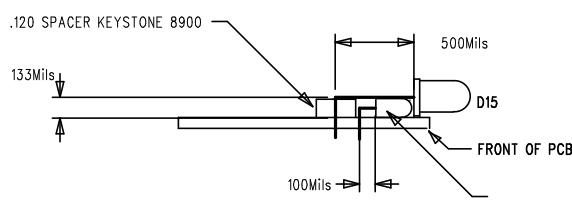
UNLESS OTHERWISE SPECIFIED:

1. SQUARE PADS ON THRU HOLE PARTS (ie: CONNECTORS, DIPS, SIPS, LEDES) DENOTE PIN 1.
  2. ALL BOARDS REQUIRE A COMPLETE AND THOROUGH VISUAL INSPECTIONS.
  3. ALL BOARDS MUST BE BARE BOARD TESTED.
  4. ASSEMBLE AND SOLDER PER ANSI/IPC-A-610B.
- LOADING
5. CLIP TABS OFF ON POTS R8, R24, R30, R47, R52, R61, R68, R76, R83, R91
  6. SEE DETAIL A FOR MOUNTING D7 AND D8. SEE DETAIL B FOR MOUNTING D15 AND D16.
- FINAL QA
7. CHECK TO SEE ALL POTS, JACKS, AND SWITCHES ARE MOUNTED FLUSH AND STRAIGHT

DETAIL A  
 LED SPACER  
 GT PART# 100-0119-0



DETAIL "B"



NOT VALID UNLESS STAMP IS RED

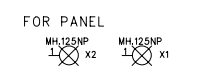
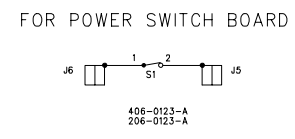
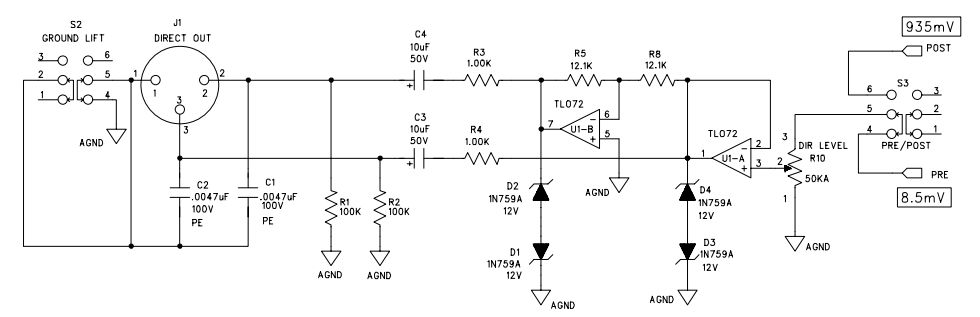
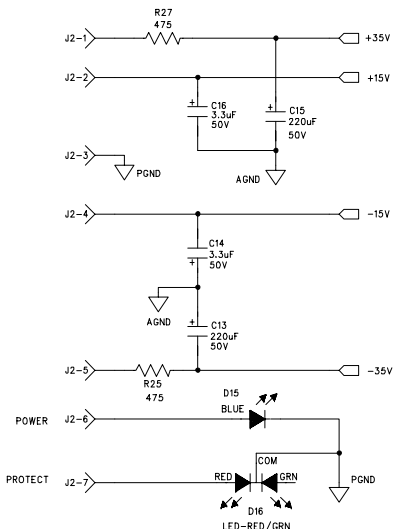
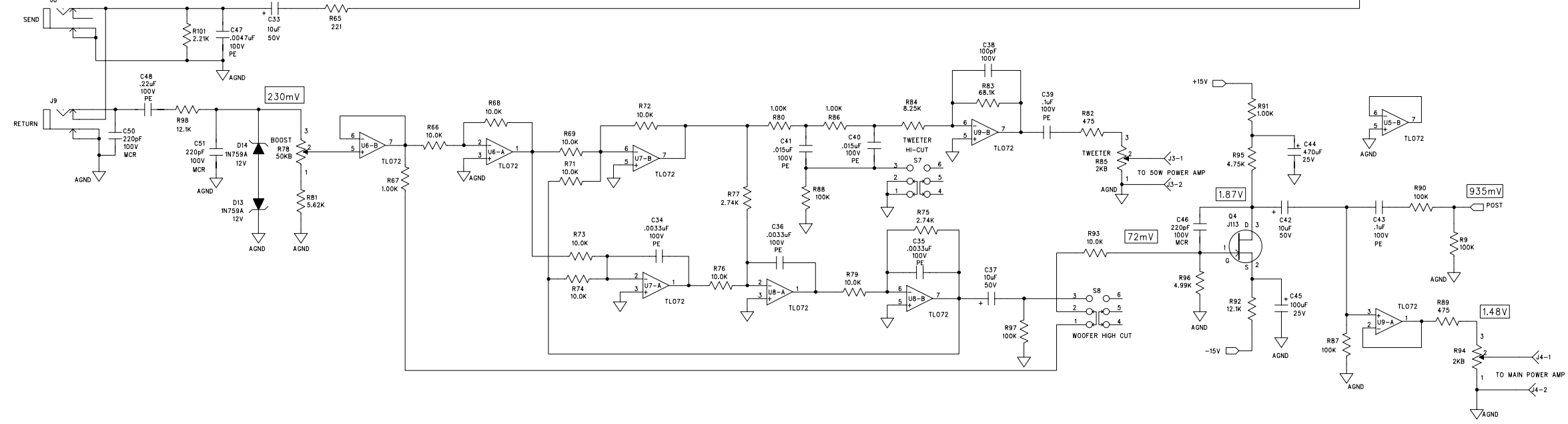
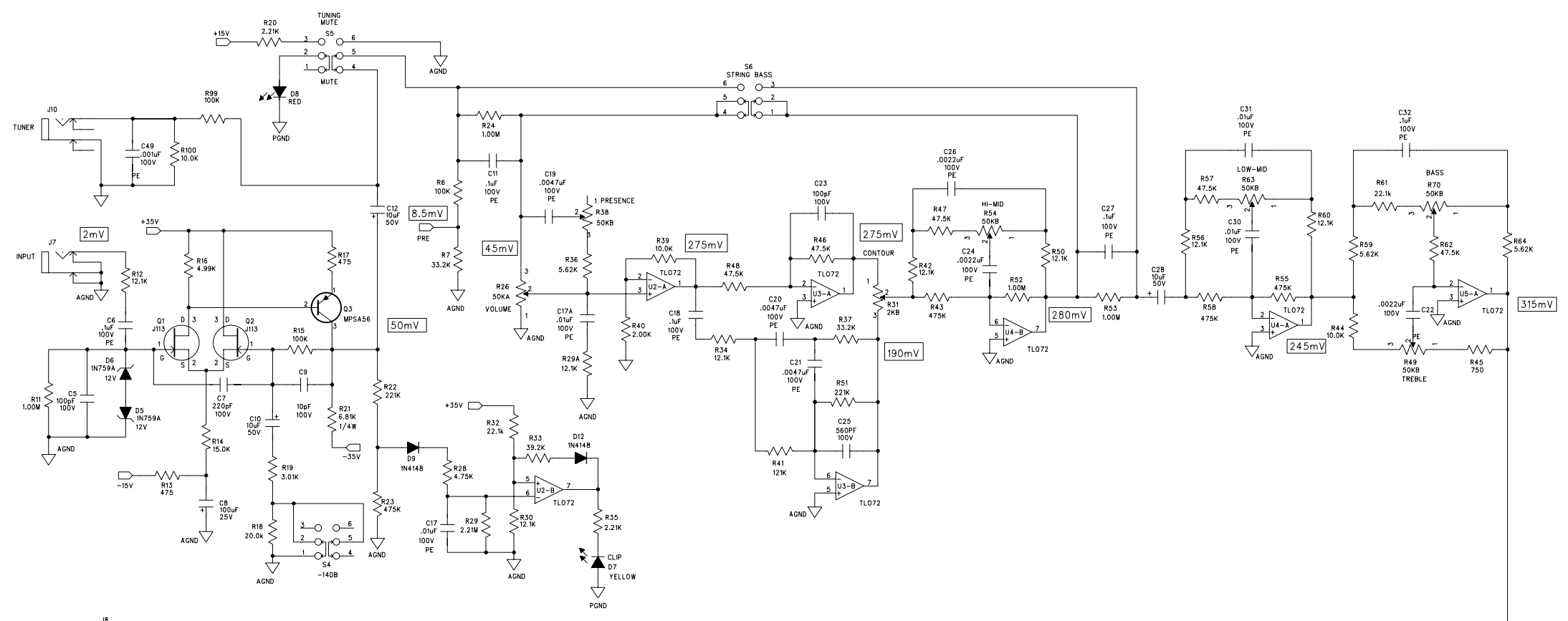
**gallien technology**

2240 PARAGON DRIVE  
 SAN JOSE CA, 95131  
 VOICE: 408-441-8081  
 FAX: 408-441-8085

|                         |      |                              |                         |
|-------------------------|------|------------------------------|-------------------------|
| APPROVALS               |      | TITLE: 700B-II PRE-AMP BD    |                         |
| INIT                    | DATE | SIZE                         | DRAWING NO: 405-0251-A2 |
| DESIGNED:               |      | B                            | PART NO: 145-0251-A2    |
| DRAWN:                  |      |                              | REV. A2                 |
| ELEC:                   |      |                              |                         |
| LAYER DESCRIPTION:      |      | COMPANY:                     |                         |
| SOP SOURCE BOARD DESIGN |      | GERBER FILE NAME: 5251A2.pbo |                         |
|                         |      | FILENAME: 5251A2             |                         |

| REVISION RECORD |         |           |       |
|-----------------|---------|-----------|-------|
| LTR             | ECO NO: | APPROVED: | DATE: |
|                 |         |           |       |
|                 |         |           |       |

TEST CONDITIONS:  
 SET VOLUME, BOOST AND MASTERS ON 10.  
 SET TONE ON 10, VOICING FILTERS OFF.  
 SET INPUT ATTENUATOR AND X-OVER OFF.  
 SIGNAL 200HZ SINE SHOWN AS: **350mV**  
 DC VOLTAGES SHOWN AS: 3.4V



NOT VALID UNLESS STAMP IS RED

**gallien technology**

2234 INDUSTRIAL DRIVE  
 STOCKTON CA. 95206  
 VOICE: 209-234-7300  
 FAX: 209-234-8420

NOTES:  
 TO REDUCE BRIGHTNESS AND BASS EFFECYENCY  
 THE VALUE OF THE FOLLOWING COMPONENT  
 WERE CHANGED:  
 1. CHANGE R44 TO 10K FROM 5.62K.  
 2. CHANGE R45 TO 750 FROM 5.62K.  
 3. CHANGE R52 TO 1M FROM 475K.  
 4. CHANGE BOARD NO. TO 206-0251-A3

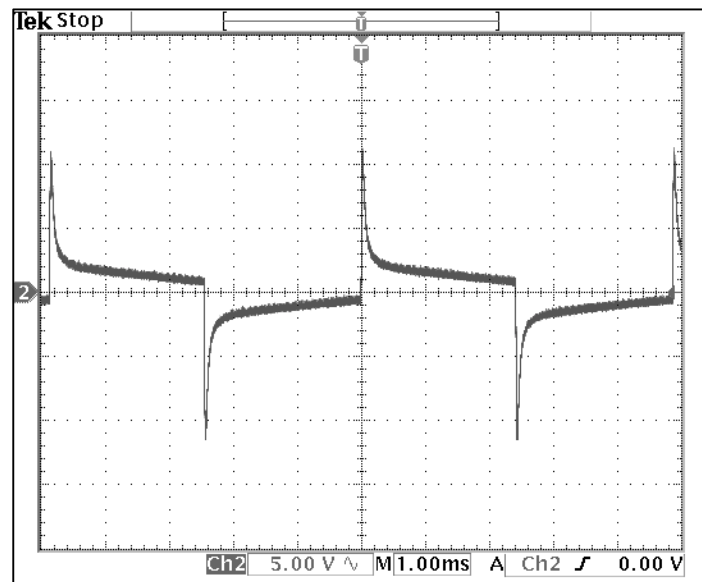
|           |         |              |                 |
|-----------|---------|--------------|-----------------|
| APPROVALS | DATE    | TITLE:       | 700RB-II PREAMP |
| INIT      | 7/24/01 | DESIGNED BY: | R.A.G.          |
| DRAWN:    | NOLI    | 8/13/04      | DRAWING NO:     |
| ELEC:     |         |              | 406-0251-A3     |
| MECH:     |         |              | 206-0251-A3     |
| Q/A:      |         |              | GALLIEN-KRUEGER |
| RELEASED: |         |              | 6251A3          |

| 700RB-II Preamp |  | Bill Of Material                         | 206-0251-A3        |                    |      |
|-----------------|--|--|--------------------|--------------------|------|
| Part No.        | Reference                              | Description                              | Manufacturer       | Mfr. Part No.      | Quan |
| 032-4102-0      | C49                                    | CAP,PE,102,5%,100V,                      | PANASONIC          | ECQB1102JF         | 1    |
| 032-4222-0      | C22 C24 C26                            | CAP,PE,222,5%,100V,                      | PANASONIC          | ECQB1222JF         | 3    |
| 032-4332-0      | C34-36                                 | CAP,PE,332,5%,100V,                      | PANASONIC          | ECQB1332JF         | 3    |
| 032-4472-0      | C1-2 C19-21 C47                        | CAP,PE,472,5%,100V,                      | PANASONIC          | ECQB1472JF         | 6    |
| 032-4153-0      | C40-41                                 | CAP,PE,153,5%,100V,                      | PANASONIC          | ECQV1153JM         | 2    |
| 032-4103-0      | C17 C30-31 C17A                        | CAP,PE,103,5%,100V,                      | PANASONIC          | ECQV1103JM         | 4    |
| 032-4104-0      | C6 C11 C18 C27 C32 C39 C43             | CAP,PE,104,5%,100V,                      | PANASONIC          | ECQV1104JM         | 7    |
| 032-4224-0      | C48                                    | CAP,PE,224,5%,100V,                      | PANASONIC          | ECQV1224JM         | 1    |
| 034-4101-0      | C5 C23 C38                             | CAP,MCR,100pF,5%,100V,                   | TAITRON            | TMRS101J100NPOB    | 3    |
| 031-1107-0      | C8 C45                                 | CAP,ELEC,RAD,107,20%,25V                 | UNITED CHEMI-CON   | SMG25VB101M6X11LL  | 2    |
| 034-4100-0      | C9                                     | CAP, MCR,10pF,5%,100V,NPO                | TAITRON            | TMRS100J100NPOB    | 1    |
| 031-2106-0      | C3-4 C10 C12 C28 C33 C37 C42           | CAP,ELEC,RAD, 106, 20%, 50V              | UNITED CHEMI-CON   | SMG50VB10RM5X11LL  | 8    |
| 034-4221-0      | C7 C46 C50-51                          | CAP,MCR,220pF,5%,100V,                   | TAITRON            | TMRS221J100NPOB    | 4    |
| 031-2227-0      | C13 C15                                | CAP, ELEC, 220uF, 20%, 50V               | UNITED CHEMI-CON   | SMG50VB221M10X12LL | 2    |
| 031-2335-0      | C14 C16                                | CAP,ELEC,RAD,335,20%,50V                 | UNITED CHEMI-CON   | SMG50VB3R3M5X11LL  | 2    |
| 031-1477-0      | C44                                    | CAP, ELEC, RAD, 470uF, 20%, 25V          | UNITED CHEMI-CON   | SMG25VB471M10X12LL | 1    |
| 034-4561-0      | C25                                    | CAP,MCR,560pF,5%,100V,                   | TAITRON            | TMRS561J100NPOB    | 1    |
| 092-0081-0      | J7-10                                  | JACK,1/4",MONO,PC,NON GROUNDING          | NEUTRIK            | S102-84            | 4    |
| 092-0069-0      | J5-6                                   | FASTON, M, PC, .250",HOR                 | ZIERICK            | 901                | 2    |
| 092-0084-0      | J1                                     | CON,XLR,MALE,PC,PL, SCREW MNT            | NEUTRIK            | X906-05            | 1    |
| 020-1000-0      | D9 D12                                 | 1N4148, RECT-FAST, 200MA, 100V           | MOTOROLA           | 1N4148             | 2    |
| 020-0120-0      | D1-6 D13-14                            | 1N759A, ZENER,12V,5%,400MW, DO-35        | MOTOROLA           | 1N759A             | 8    |
| 093-0051-0      | J3-4                                   | HDR, 2MMX2, VERT, LOCK                   | JST                | B2B-PH-K-S         | 2    |
| 093-2005-0      | J2                                     | HDR, 2MMX7, VERT, SHROUDED               | JST                | B7B-PH-K-S         | 1    |
| 001-1030-1      | U1-9                                   | TLO72CP, LOW NOISE JFET OPAMP            | MOTOROLA           | TL072CP            | 9    |
| 025-0030-2      | D15                                    | LED,BLUE, 10MA                           | LITEON             | LTL-42B6           | 1    |
| 025-0012-0      | D16                                    | LED,RED/GRN,5MM,630NM/560NM,15MCD/15MCD  | STANLEY            | VRPG5614S          | 1    |
| 025-0116-0      | D8                                     | LED,RED, 3MM, 635NM, 6MCD, 10MA, 40DEG   | EVERLIGHT          | EL2041D            | 1    |
| 025-0023-0      | D7                                     | LED,YELLOW, 3MM, 585NM, 5MCD, 10MA       | EVERLIGHT          | EL204YD            | 1    |
| 000-0000-0      | X1-2                                   | .125 HOLE, NON-PLATED                    |                    |                    | 2    |
| 070-1522-0      | R31 R85 R94                            | POT,2KB,7MM,KNURL,.1W                    | SONG HUEI          | 16K1-B2K-L15KC     | 3    |
| 070-1513-0      | R10 R26                                | POT,50K-15A,7MM,KNURL,.1W                | SONG HUEI          | 16K1-A50K-L15KC    | 2    |
| 070-1514-0      | R38 R49 R54 R63 R70 R78                | POT,50KB,7MM,KNURL,.1W                   | SONG HUEI          | 16K1-B50K-L15KC    | 6    |
| 060-1002-0      | R3-4 R67 R80 R86 R91                   | RES,METAL FILM, 1.00K, 1/8W, 1%          | ECI                | M1F1AK001.00       | 6    |
| 060-1005-0      | R11 R24 R53                            | RES, MF, 1.00M, 1%,1/8W, 060-1005-0      | ECI                | M1F1AM001.00       | 3    |
| 060-1005-0      | R52                                    | RES, METAL FILM, 1.00M, 1/8W, 1%         | ECI                | M1F1AK475.00       | 1    |
| 060-1003-0      | R39 R66 R68-69 R71-74 R76 R79 R93 R100 | RES,METAL FILM, 10.0K, 1/8W,1%           | ECI                | M1F1AK010.00       | 12   |
| 060-1003-0      | R44                                    | RES,METAL FILM, 10.0K, 1/8W,1%           | ECI                | M1F1AK005.62       | 1    |
| 060-1004-0      | R1-2 R6 R9 R15 R87-88 R90 R97 R99      | RES,METAL FILM, 100K, 1/8W, 1%           | ECI                | M1F1AK100.00       | 10   |
| 060-1213-0      | R5 R8 R12 R30 R34 R42 R50 R56 R60 R98  | RES,METAL FILM, 12.1K OHM, 1/8W, 1%      | ECI                | M1F1AK012.10       | 10   |
| 060-1213-0      | R92 R29A                               | RES,METAL FILM, 12.1K, 1/8W, 1%          | ECI                | M1F1AK012.10       | 2    |
| 060-1214-0      | R41                                    | RES,METAL FILM, 121K, 1/8W, 1%           | ECI                | M1F1AK121.00       | 1    |
| 060-1503-0      | R14                                    | RES,METAL FILM, 15.0K, 1/8W, 1%          | ECI                | M1F1AK015.00       | 1    |
| 060-2002-0      | R40                                    | RES,METAL FILM, 2.00K, 1/8W, 1%          | ECI                | M1F1AK002.00       | 1    |
| 060-2212-0      | R20 R35 R101                           | RES,METAL FILM, 2.21K, 1/8W, 1%          | ECI                | M1F1AK002.21       | 3    |
| 060-2215-0      | R29                                    | RES, METAL FILM, 2.21M, 1/8W, 1%         | ECI                | M1F1AM002.21       | 1    |
| 060-2742-0      | R75 R77                                | RES,METAL FILM, 2.74K, 1/8W, 1%          | ECI                | M1F1AK002.74       | 2    |
| 060-2003-0      | R18                                    | RES,METAL FILM, 20.0K, 1/8W, 1%          | ECI                | M1F1AK020.00       | 1    |
| 060-2213-0      | R32 R61                                | RES,METAL FILM, 22.1K, 1/8W, 1%          | ECI                | M1F1AK022.10       | 2    |
| 060-2214-0      | R22 R51                                | RES,METAL FILM, 221K, 1/8W, 1%           | ECI                | M1F1AK221.00       | 2    |
| 060-2211-0      | R65                                    | RES,METAL FILM, 221 ohm, 1/8W, 1%        | ECI                | M1F1AJ221.00       | 1    |
| 060-3012-0      | R19                                    | RES,METAL FILM, 3.01K, 1/8W, 1%          | ECI                | M1F1AK003.01       | 1    |
| 060-3323-0      | R7 R37                                 | RES,METAL FILM, 33.2K, 1/8W, 1%          | ECI                | M1F1AK033.20       | 2    |
| 060-3923-0      | R33                                    | RES,METAL FILM,39.2K,1/8W,1%             | ECI                | M1F1AK039.2        | 1    |
| 060-4752-0      | R28 R95                                | RES,METAL FILM, 4.75K, 1/8W, 1%          | ECI                | M1F1AK004.75       | 2    |
| 060-4992-0      | R16 R96                                | RES,METAL FILM, 4.99K, 1/8W, 1%          | ECI                | M1F1AK004.99       | 2    |
| 060-4753-0      | R46-48 R57 R62                         | RES,METAL FILM, 47.5K, 1/8W, 1%          | ECI                | M1F1AK047.50       | 5    |
| 060-4754-0      | R23 R43 R55 R58                        | RES,METAL FILM, 475K, 1/8W, 1%           | ECI                | M1F1AK475.00       | 4    |
| 060-4751-0      | R13 R17 R25 R27 R82 R89                | RES,METAL FILM, 475 ohm, 1/8W, 1%        | ECI                | M1F1AJ475.00       | 6    |
| 060-5622-0      | R36 R59 R64 R81                        | RES,METAL FILM, 5.62K, 1/8W, 1%          | ECI                | M1F1AK005.62       | 4    |
| 052-6812-0      | R21                                    | RES, METAL FILM, 6.81K OHM, 1/4W, 1%     | ECI                | M2F1AK006.81       | 1    |
| 060-6813-0      | R83                                    | RES,METAL FILM, 68.1K, 1/8W, 1%          | ECI                | M1F1AK068.10       | 1    |
| 060-7501-0      | R45                                    | RES,METAL FILM, 750, 1/8W, 1%            | ECI                | M1F1AK005.62       | 1    |
| 060-8252-0      | R84                                    | RES,METAL FILM, 8.25K, 1/8W, 1%          | ECI                | M1F1AK008.25       | 1    |
| 090-0012-0      | S2-8                                   | SWITCH,MIMI PP,DPDT,.1A BRK/MAKE,PC TERM | ELKELECTRONIC COMP | MTH2UEE-1D911      | 7    |

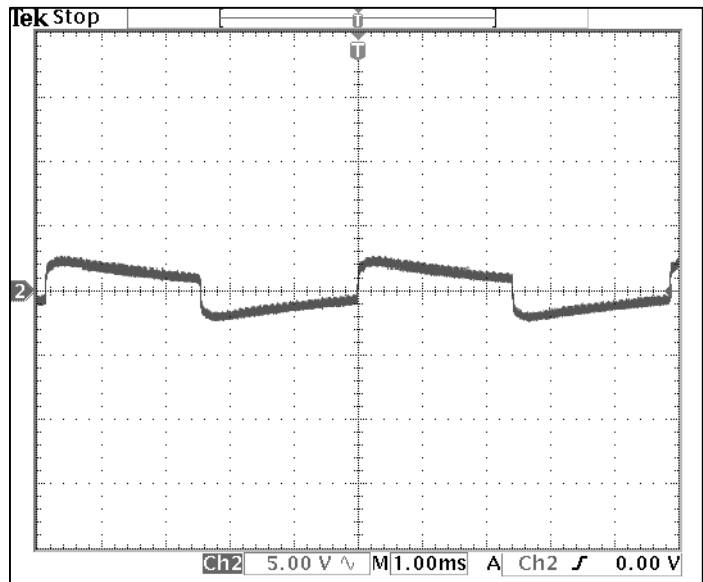




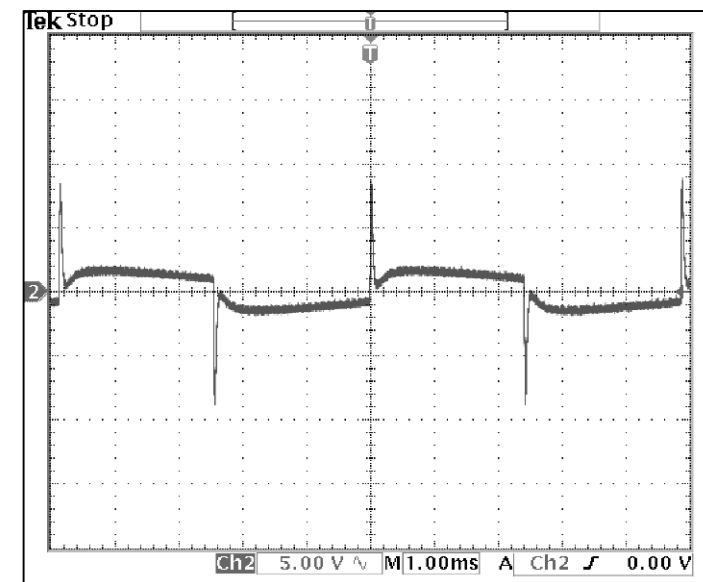
| ZONE | Dim. | ECO# | Rev. | REVISIONS |  | Date |
|------|------|------|------|-----------|--|------|
|      |      |      |      |           |  |      |



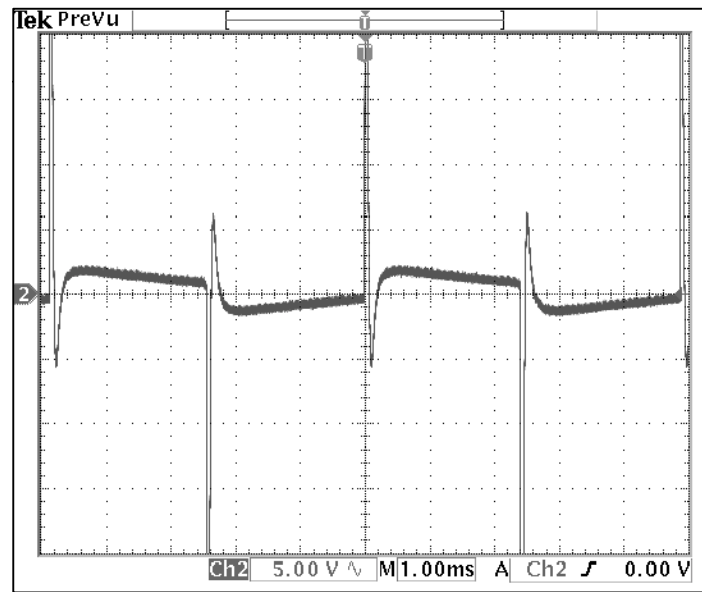
**Figure 1**  
Tones center, Filters OFF



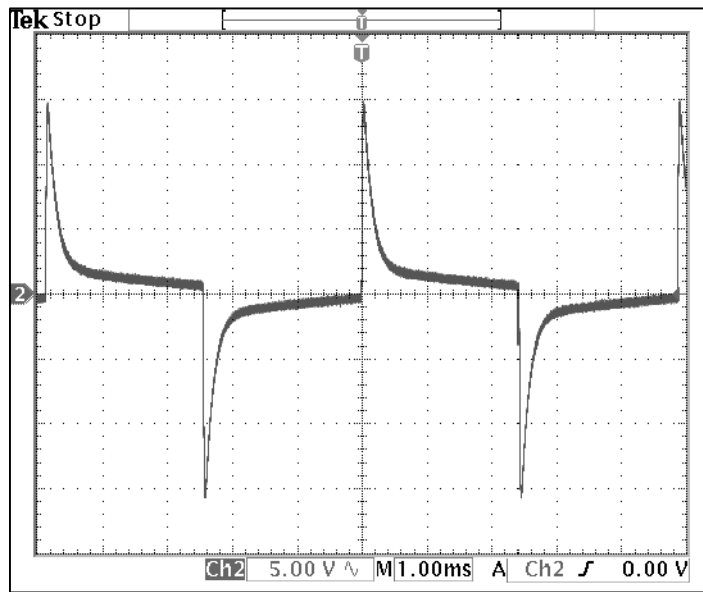
**Figure 3**  
TREBLE to 0



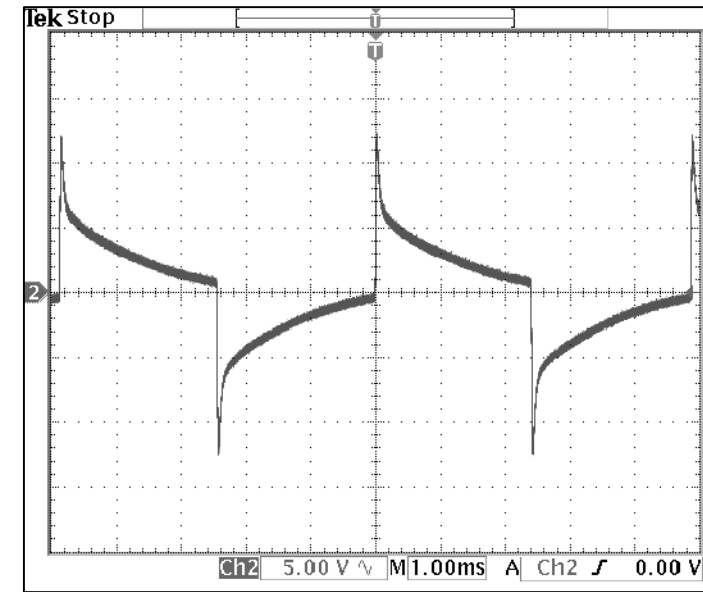
**Figure 5**  
HI-MID to 0



**Figure 2**  
TREBLE to 10



**Figure 4**  
HI-MID to 10



**Figure 6**  
LO-MID to 10

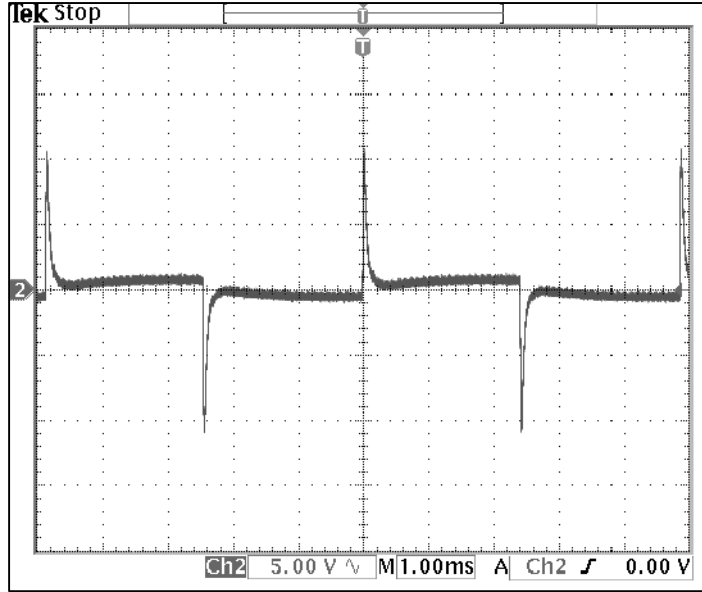
**Set up:**

1. Apply signal into the input with 200Hz square wave @ -46dBV(5mVrms).
2. Set VOLUME, all ACTIVE EQ's, BOOST, TWEETER, and WOOFER to center(half way). CONTOUR and PRESENCE to 0.
3. Look at output with scope set on 1mS/div and 5V/div.

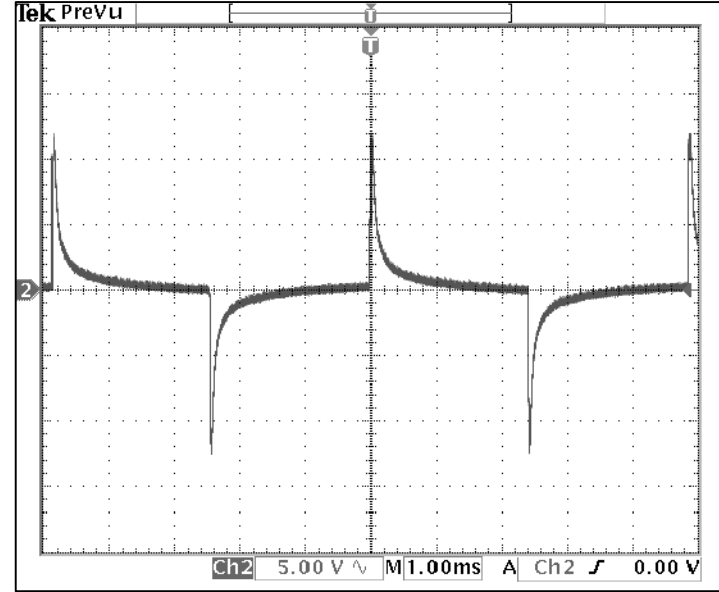
| QTY PER ASSY  | PART NUMBER | DESCRIPTION         | DESIGNATION(S) | ITEM NO.        |
|---|-------------|---------------------|----------------|-----------------|
| <b>PROPRIETARY</b>  |             |                     |                |                 |
| THIS DRAWING CONTAINS INFORMATION WHICH IS PROPRIETARY TO GALLIEN TECHNOLOGY CORPORATION. DO NOT REPRODUCE IN ANY FORM OR DISTRIBUTE IN ANY FASHION WITHOUT THE EXPRESS WRITTEN PERMISSION OF GALLIEN TECHNOLOGY CORPORATION. |             |                     |                |                 |
| <small>UNLESS OTHERWISE INDICATED DIMENSIONS SHOWN ARE IN INCHES</small><br>TOLERANCES<br>FRACTION ±<br>ANGLES ±<br>.XX ± 0.01<br>.XXX ± 0.005  |             | <b>APPROVALS</b>    |                |                 |
|   |             | INIT                | DATE           |                 |
| MATERIAL: (SEE NOTE 1)  |             | MECH. DESIGN:       | SIZE           | DRAWING NUMBER: |
| FINISH: (SEE NOTE 1)  |             | ELEC:               | B              | 206-0251-A1     |
| PROJ. MGR.:   |             | Q/A:                | RELEASED:      | REVISION        |
| FILENAME:   |             | SCALE: NOT TO SCALE |                | A1              |
| SHEET 1 OF 2  |             |                     |                |                 |



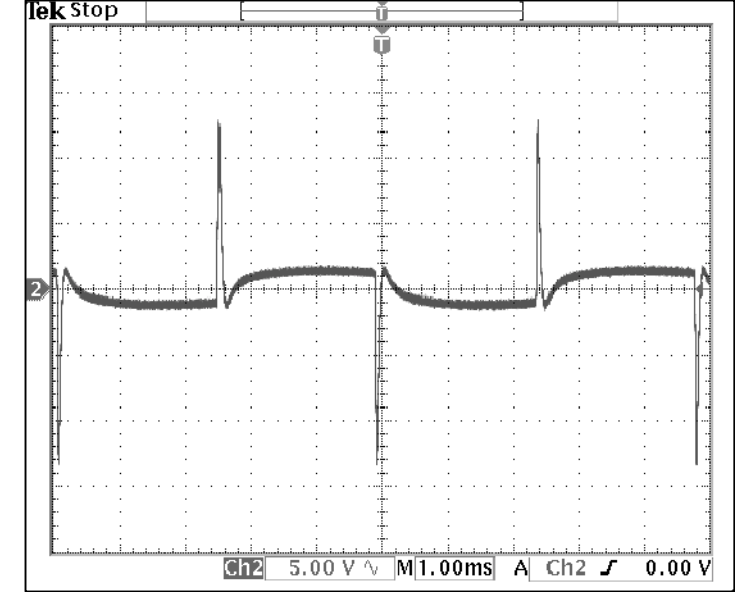
| ZONE | Dim. | ECO# | Rev. | REVISIONS |  | Date |
|------|------|------|------|-----------|--|------|
|      |      |      |      |           |  |      |



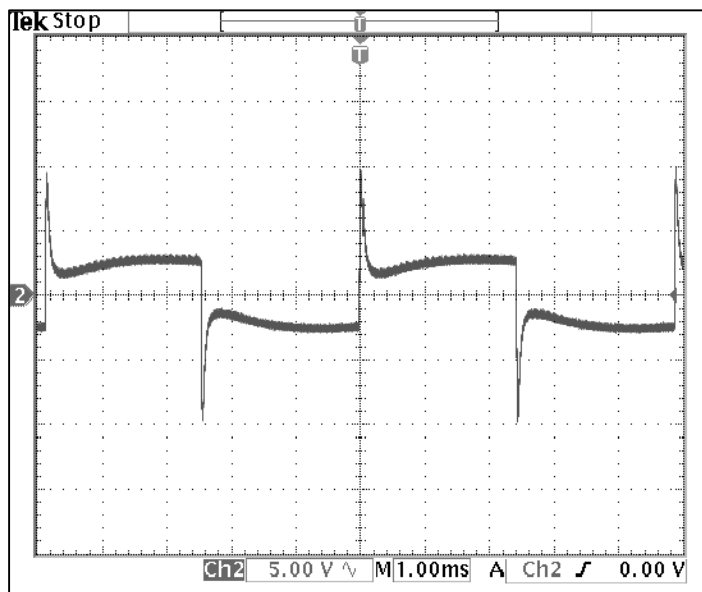
**Figure 7**  
LO-MID to 0



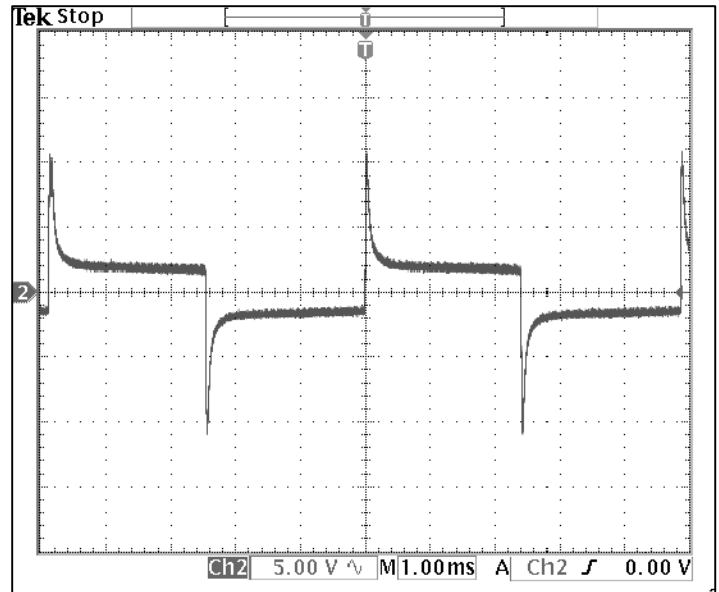
**Figure 9**  
BASS to 0



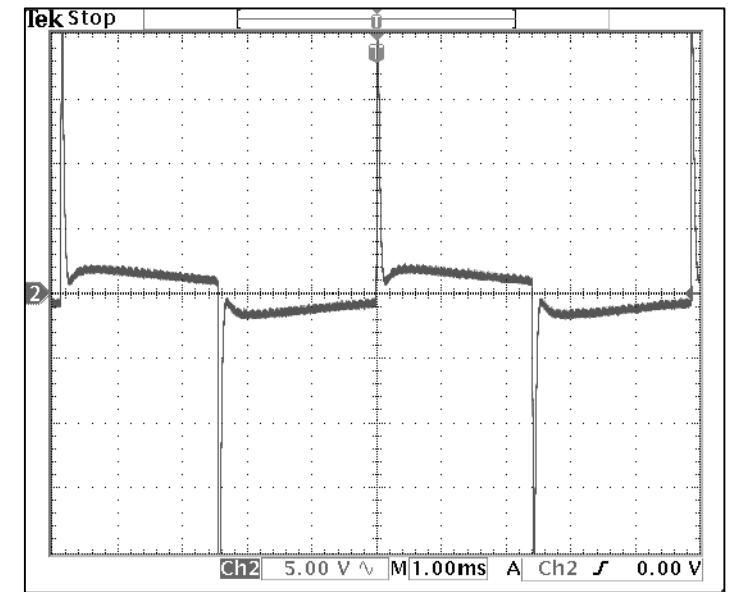
**Figure 11**  
CONTOUR to 10



**Figure 8**  
BASS to 10



**Figure 10**  
STRING BASS SWITCH IN



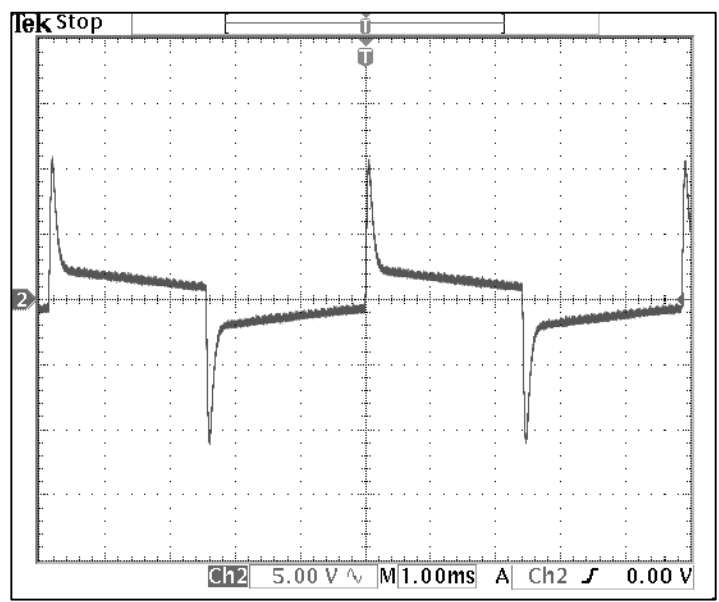
**Figure 12**  
PRESENCE to 10

**Set up:**

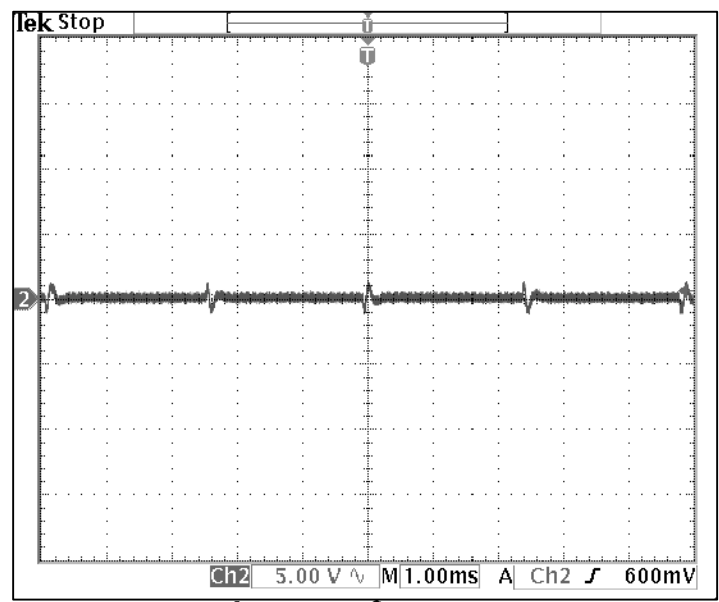
1. Apply signal into the input with 200Hz square wave @ -46dBV(5mVrms).
2. Set VOLUME, all ACTIVE EQ's, BOOST and MASTER to center(half way), CONTOUR and PRESENCE to 0.
3. Look at output with scope set on 1mS/div and 5V/div.

| QTY PER ASSY  | PART NUMBER | DESCRIPTION      | DESIGNATION(S)           | ITEM NO. |
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| <b>PROPRIETARY</b>  |             |                  |                          |          |
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| <small>TOLERANCES UNLESS OTHERWISE INDICATED DIMENSIONS SHOWN ARE IN INCHES</small><br>FRACTION ±<br>ANGLES ±<br>.XX ± 0.01<br>.XXX ± 0.005   |             | <b>APPROVALS</b> |                          |          |
|   |             | INIT             | DATE                     |          |
| MATERIAL: (SEE NOTE 1)  |             | MECH. DESIGN:    | SIZE                     |          |
| FINISH: (SEE NOTE 1)  |             | DRAWN BY: ATM    | DRAWING NUMBER:          |          |
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|   |             |                  | SHEET 2 OF 2             |          |

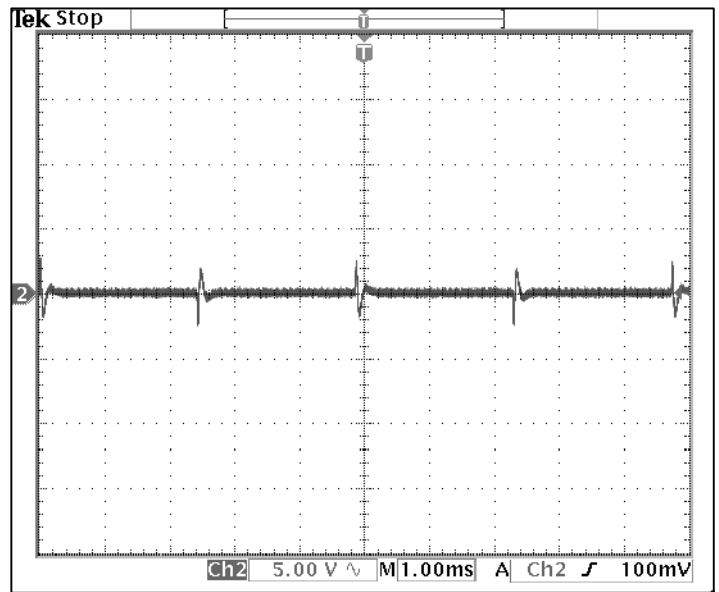
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**Figure 7**  
WOOFER HI-CUT SWITCH IN



**Figure 9**  
TWEETER HI-CUT SWITCH IN



**Figure 8**  
TWEETER

**Set up:**

1. Apply signal into the input with 200Hz square wave @ -46dBV(5mVrms).
2. Set VOLUME, all ACTIVE EQ's, BOOST and MASTER to center(half way), CONTOUR and PRESENCE to 0.
3. Look at output with scope set on 1mS/div and 5V/div.

| QTY PER ASSY  | PART NUMBER | DESCRIPTION      | DESIGNATION(S) | ITEM NO.                                    |
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|   |             | INIT             | DATE           |   |
| MATERIAL: (SEE NOTE 1)  |             | MECH. DESIGN:    | SIZE           | DRAWING NUMBER:                             |
| FINISH: (SEE NOTE 1)  |             | ELEC:            | B              | 700RB-II/1001RB-II<br>PREAMP TEST WAVEFORMS |
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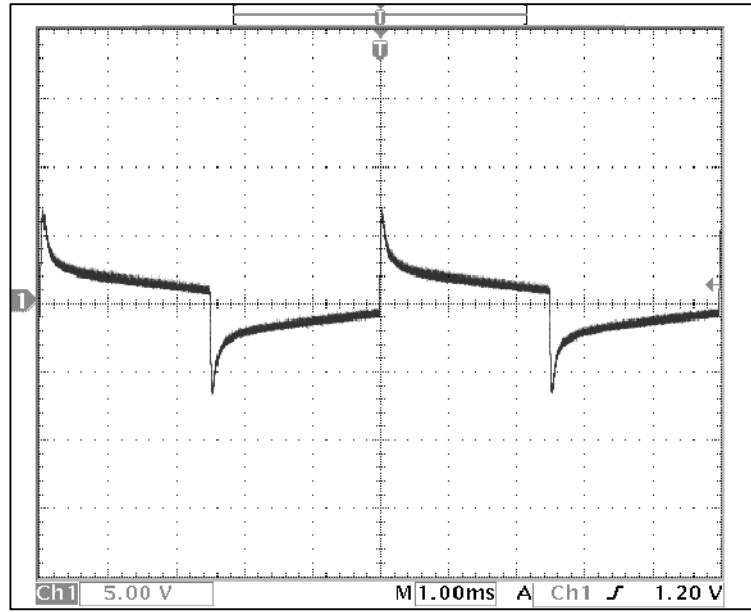


Figure 1  
Tones center, Filters off

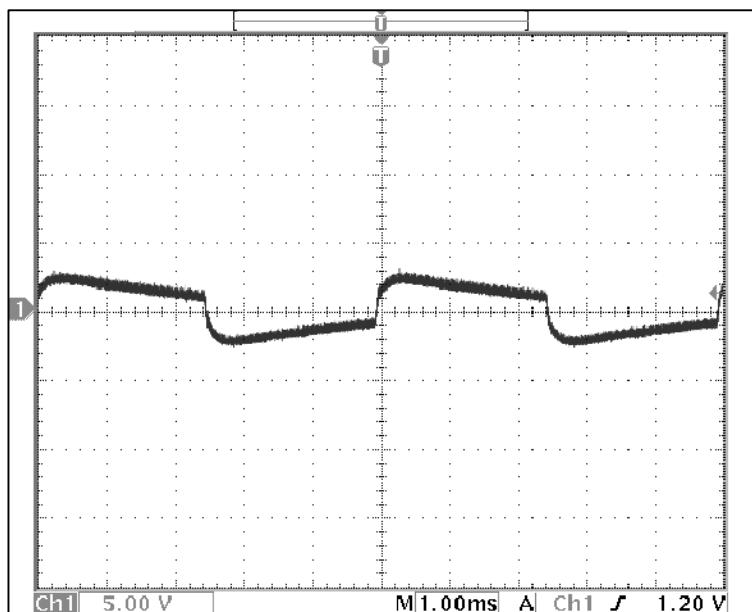


Figure 2  
Treble to 0

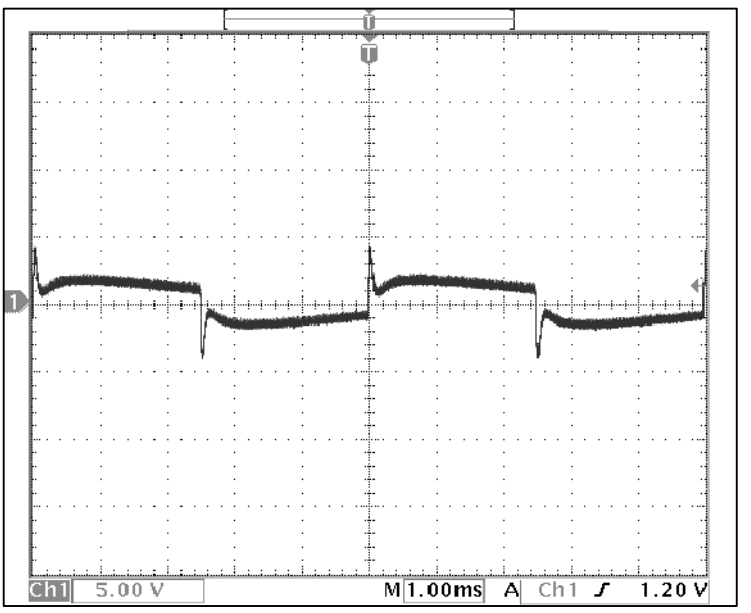
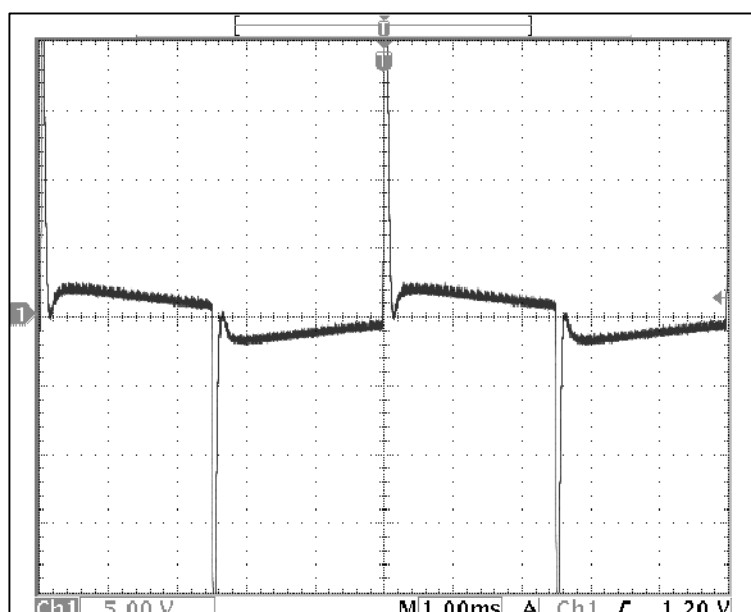


Figure 4  
Hi-Mid to 0

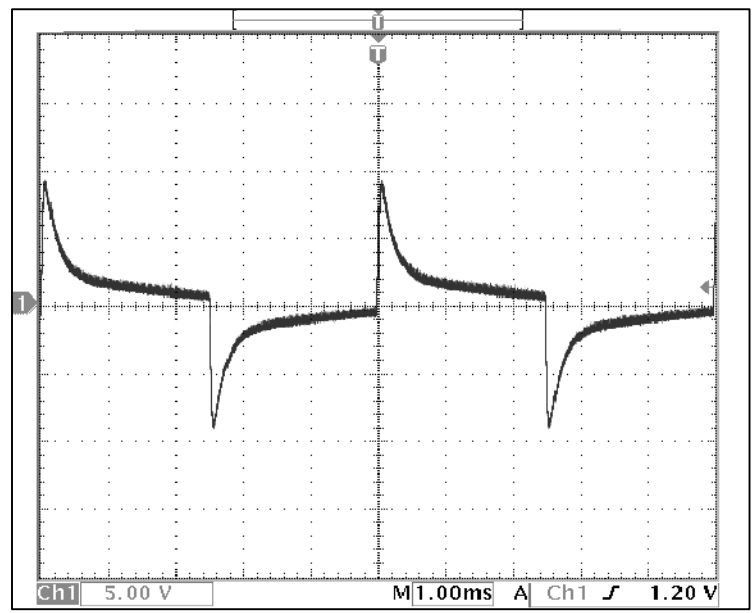


Figure 5  
Hi-Mid to 10

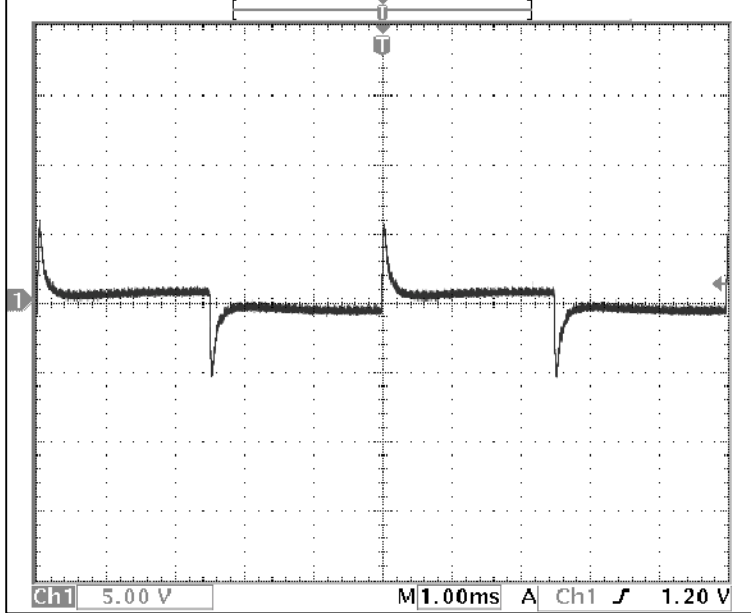


Figure 6  
Lo-Mid to 0

1. Apply signal into the input with 200Hz square wave @ -46dBV(5mVrms).
2. Set Volume, all Active EQ's, Boost, Tweeter and Master to center(halfway), Contour and Presence to 0.
3. Look at output with scope set on 5V/div and 1ms/div.

| HOLE REFERENCE CHART |             |      |
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| UNLESS OTHERWISE INDICATED DIMENSIONS SHOWN ARE IN INCHES   |  | TITLE: <b>700RB-II/1001RB-II</b>   |                |              |
| <b>APPROVALS</b><br>TOLERANCES FRACTION ± .XX ± 0.01 .XXX ± 0.005<br>ANGLES ±<br>MATERIAL: (SEE NOTE 1)<br>FINISH: (SEE NOTE 1)   |  | MECH. DESIGN: EAH 8/20/04<br>DRAWN BY: EAH<br>PROJ. MGR.:<br>Q/A:<br>RELEASED: |                |              |
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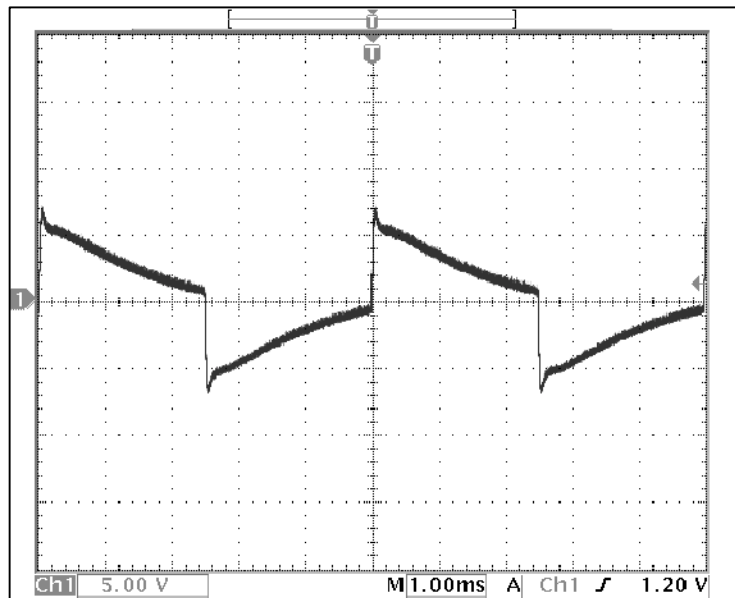


Figure 7  
Lo-Mid to 10

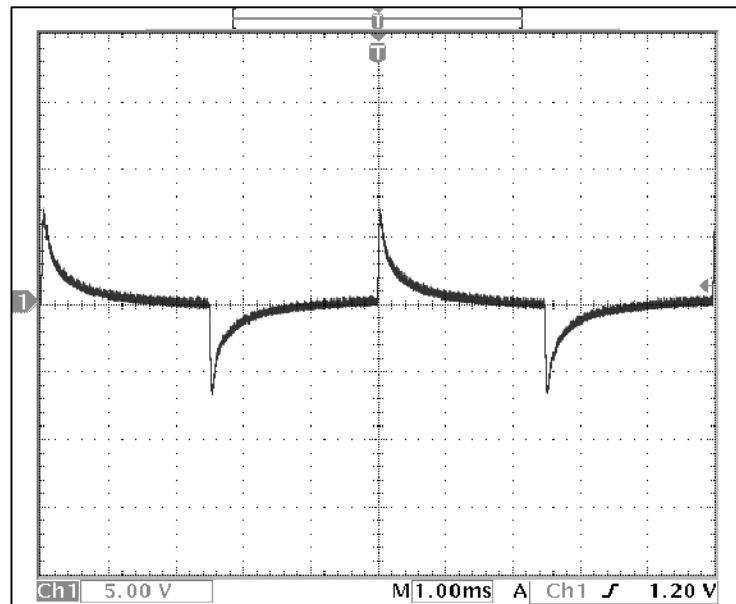


Figure 8  
Bass to 0

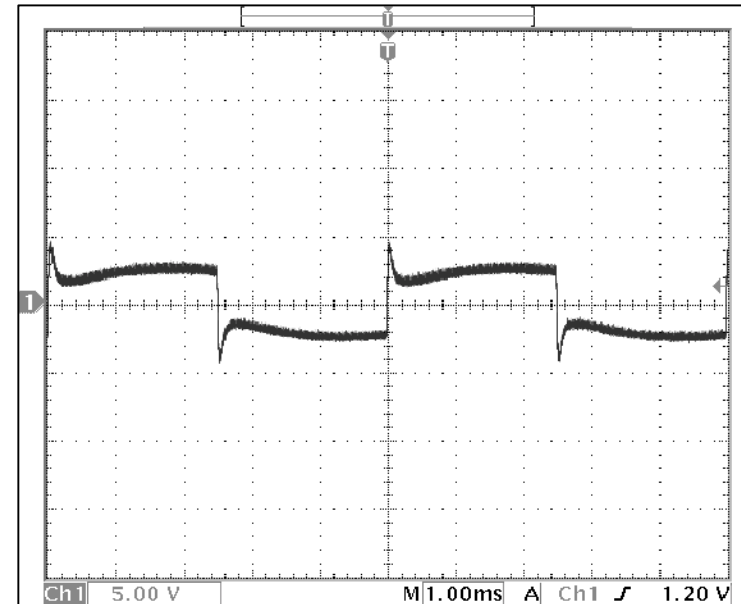


Figure 9  
Bass to 10

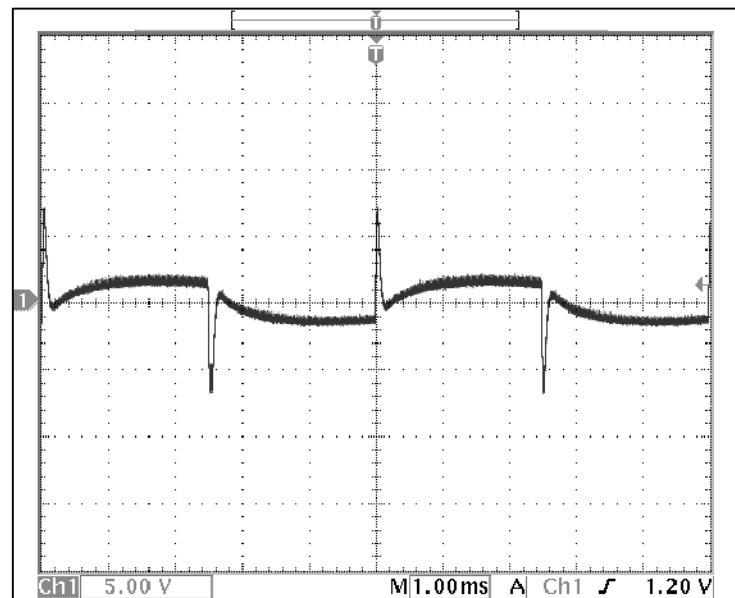


Figure 10  
Contour to 10

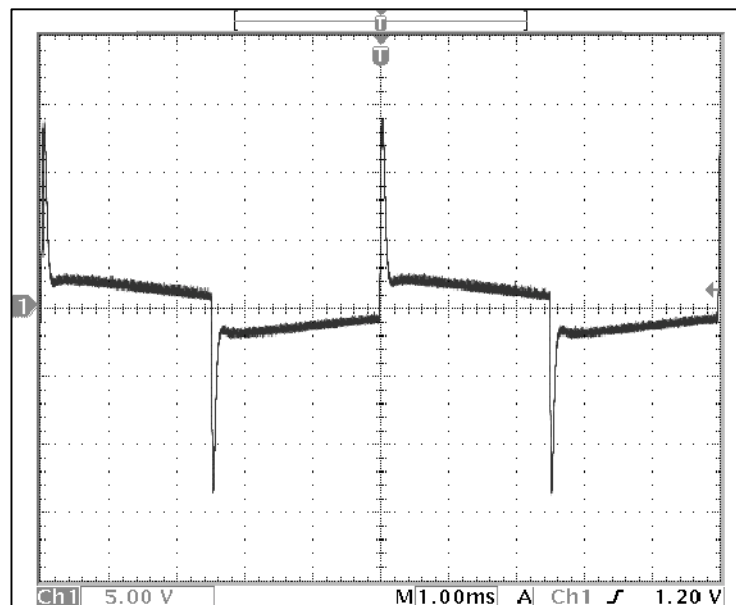


Figure 11  
Presence to 10

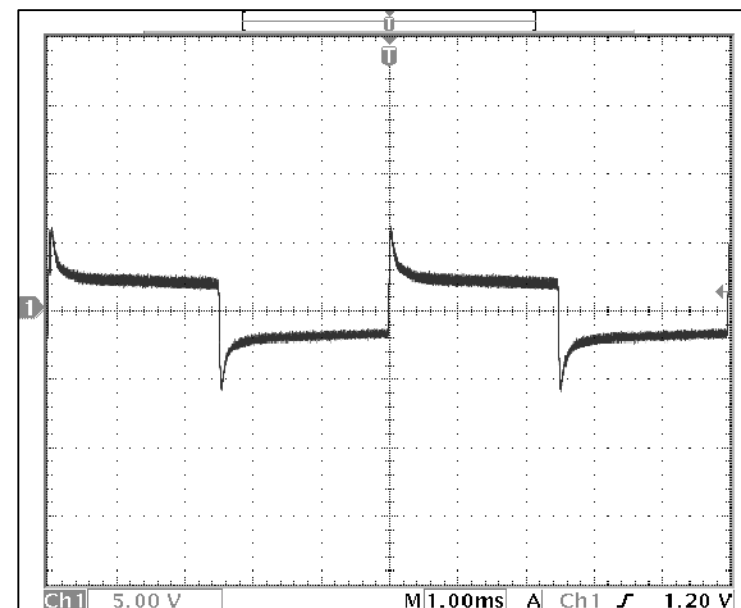


Figure 12  
String Bass Switch In

1. Apply signal into the input with 200Hz square wave @ -46dBV(5mVrms).
2. Set Volume, all Active EQ's, Boost, Tweeter and Master to center (halfway), Contour and Presence to 0.
3. Look at output with scope set on 5V/div and 1ms/div.

| HOLE REFERENCE CHART |             |      |
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| UNLESS OTHERWISE INDICATED DIMENSIONS SHOWN ARE IN INCHES   |  | TITLE: <b>700RB-II/1001RB-II</b>  |                |                       |
| <b>APPROVALS</b><br>TOLERANCES<br>FRACTION ±<br>ANGLES ±<br>.XX ± 0.01<br>.XXX ± 0.005<br>MATERIAL: (SEE NOTE 1)<br>FINISH: (SEE NOTE 1)  |  | MECH. DESIGN:<br>DRAWN BY: <b>EAH</b> 8/20/04<br>PROJ. MGR.:<br>Q/A:<br>RELEASED: |                |                       |
| SIZE: <b>B</b>  |  | DRAWING NUMBER:<br>PART NUMBER: <b>206-0251-A2</b>                                |                | REVISION<br><b>A2</b> |
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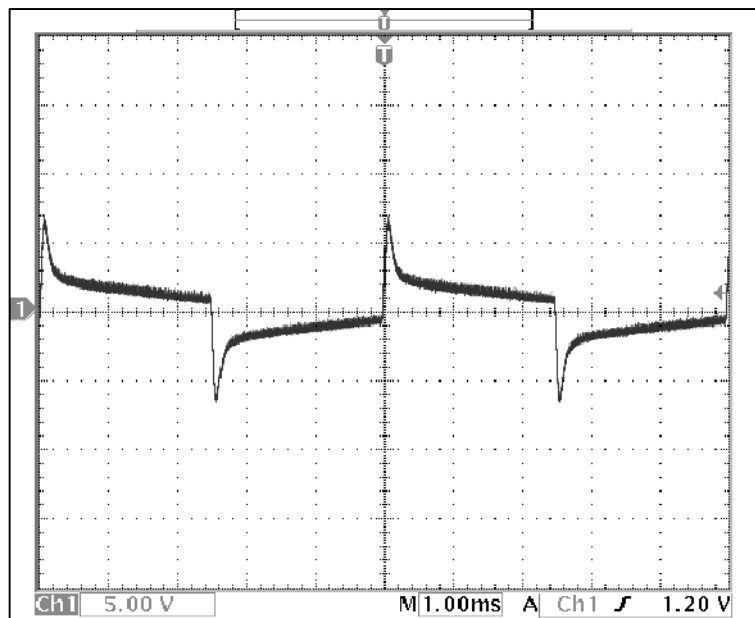
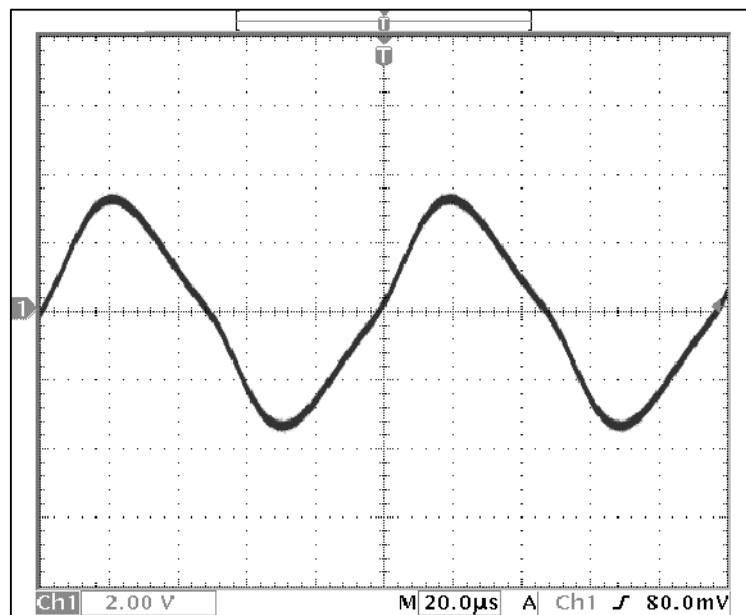
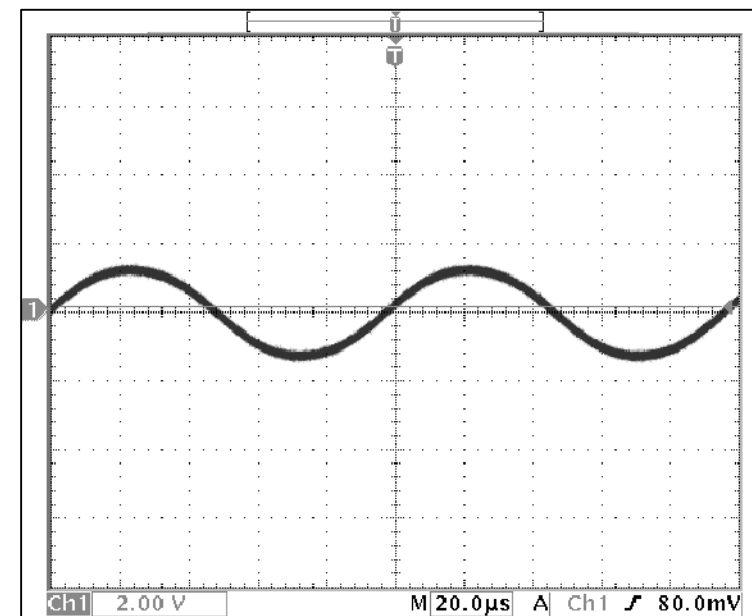


Figure 13  
Woofer X-over In



\*Figure 14  
Tweeter ouput at 10kHz square wave



\*Figure 15  
Tweeter Hi-cut In

1. Apply signal into the input with 200Hz square wave @ -46dBV(5mVrms).
  2. Set Volume, all Active EQ's, Boost, Tweeter and Master to center(halfway), Contour and Presence to 0.
  3. Look at output with scope set on 5V/div and 1ms/div.
- \*Change oscilloscope time base to 20us and 2V/div.

| HOLE REFERENCE CHART |             |      |
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| <b>gallien technology</b><br>2234 INDUSTRIAL DRIVE<br>STOCKTON, CA 95206  |         |   |                |                     |               |      |                      |         |       |  |             |  |      |  |           |  |
| TITLE: <b>700RB-II/1001RB-II</b>  |         |   |                |                     |               |      |                      |         |       |  |             |  |      |  |           |  |
| UNLESS OTHERWISE INDICATED DIMENSIONS SHOWN ARE IN INCHES   |         | <b>APPROVALS</b>  |                |                     |               |      |                      |         |       |  |             |  |      |  |           |  |
| TOLERANCES<br>FRACTION ±<br>ANGLES ±<br>.XX ± 0.01<br>.XXX ± 0.005  |         | <table border="1"> <tr> <th>INIT</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> </tr> </table>   |                |                     | INIT          | DATE |                      |         |       |  |             |  |      |  |           |  |
| INIT  | DATE    |   |                |                     |               |      |                      |         |       |  |             |  |      |  |           |  |
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| MATERIAL: (SEE NOTE 1)<br>FINISH: (SEE NOTE 1)  |         | <table border="1"> <tr> <td>MECH. DESIGN:</td> <td> </td> </tr> <tr> <td>DRAWN BY: <b>EAH</b></td> <td>8/20/04</td> </tr> <tr> <td>ELEC:</td> <td> </td> </tr> <tr> <td>PROJ. MGR.:</td> <td> </td> </tr> <tr> <td>Q/A:</td> <td> </td> </tr> <tr> <td>RELEASED:</td> <td> </td> </tr> </table> |                |                     | MECH. DESIGN: |      | DRAWN BY: <b>EAH</b> | 8/20/04 | ELEC: |  | PROJ. MGR.: |  | Q/A: |  | RELEASED: |  |
| MECH. DESIGN:   |         |   |                |                     |               |      |                      |         |       |  |             |  |      |  |           |  |
| DRAWN BY: <b>EAH</b>  | 8/20/04 |   |                |                     |               |      |                      |         |       |  |             |  |      |  |           |  |
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| SIZE: <b>B</b>  |         | DRAWING NUMBER: <b>206-0251-A2</b>  |                | REVISION: <b>A2</b> |               |      |                      |         |       |  |             |  |      |  |           |  |
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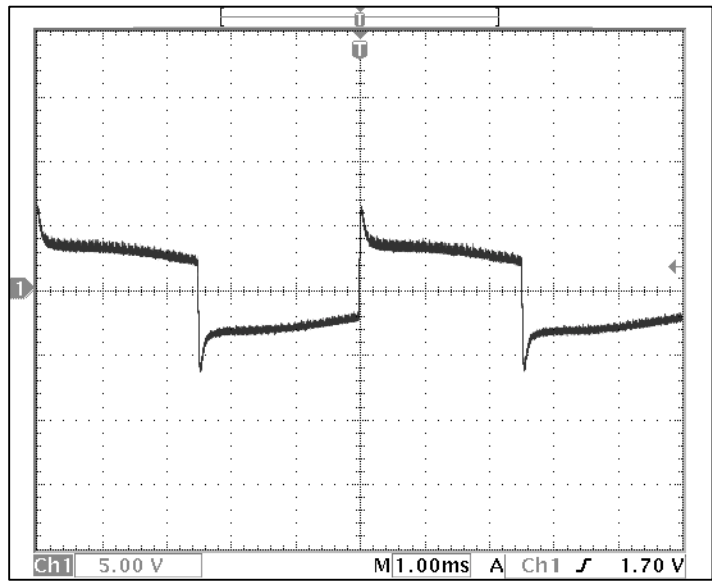


Figure 1  
Tones center, Filters off

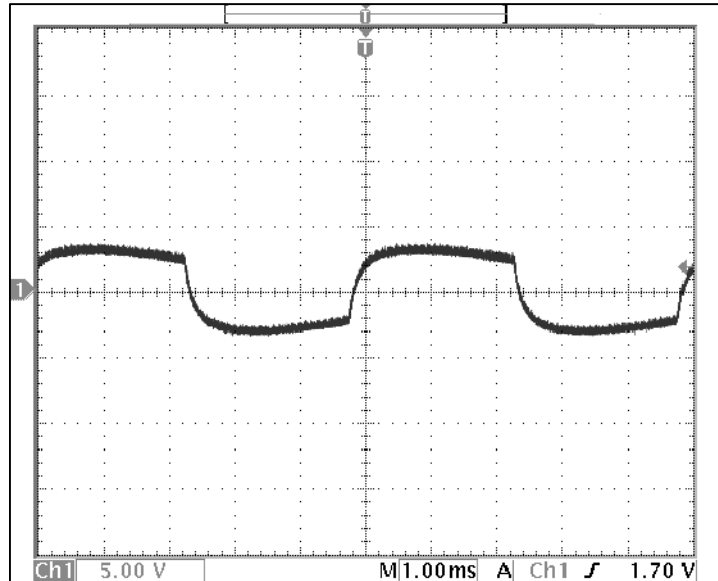


Figure 2  
Treble to 0

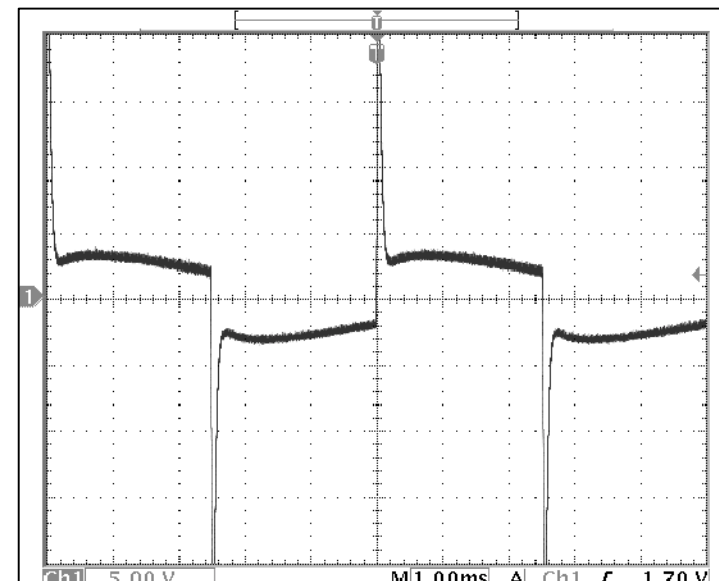


Figure 3  
Treble to 10

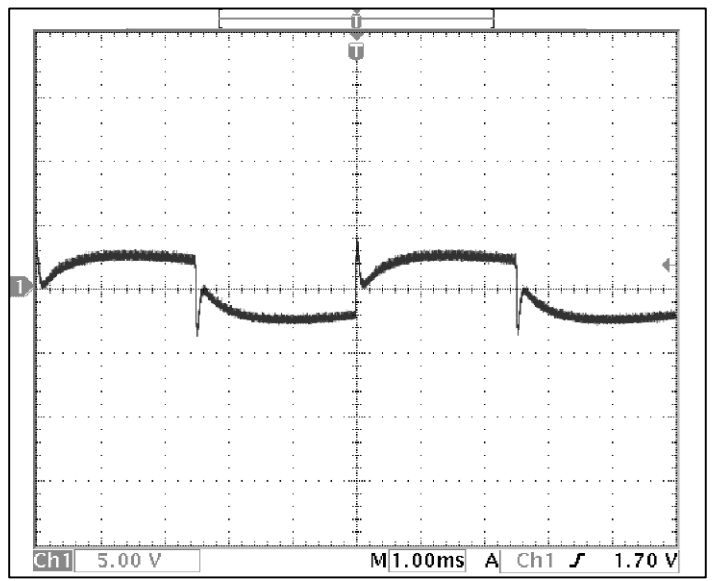


Figure 4  
Hi-Mid to 0

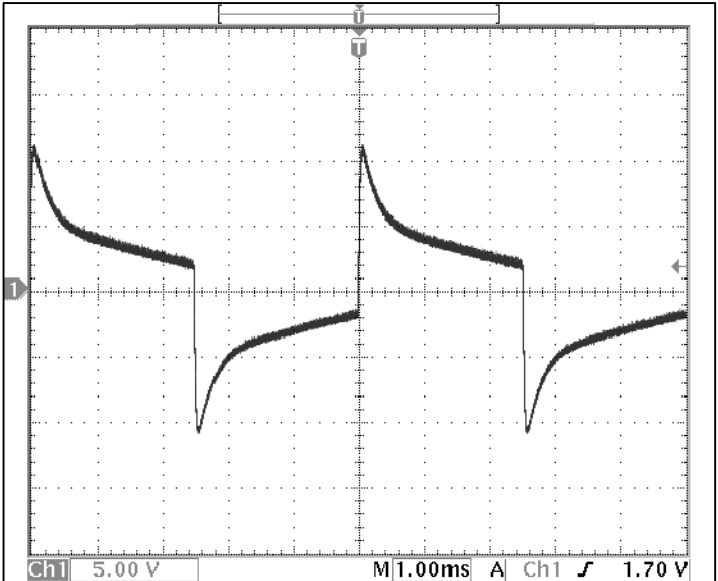


Figure 5  
Hi-Mid to 10

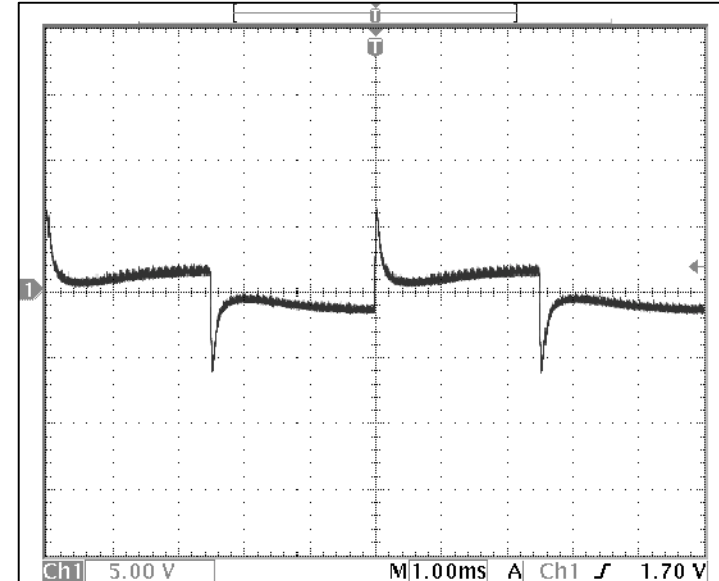


Figure 6  
Lo-Mid to 0

1. Apply signal into the input with 200Hz square wave @ -46dBV(5mVrms).
2. Set Volume, all Active EQ's, Boost, Tweeter and Master to center(halfway), Contour and Presence to 0.
3. Look at output with scope set on 5V/div and 1ms/div.

| HOLE REFERENCE CHART |             |      |
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| TOLERANCES<br>FRACTION ±<br>ANGLES ±<br>.XX ± 0.01<br>.XXX ± 0.005  |  | <b>TITLE:</b><br><b>700RB-II/1001RB-II</b>  |                |          |
| MATERIAL:<br>(SEE NOTE 1)   |  | <b>APPROVALS</b><br>INIT DATE<br>MECH. DESIGN:<br>DRAWN BY: <b>EAH</b> 8/20/04<br>ELEC:<br>PROJ. MGR.:<br>Q/A:<br>RELEASED: |                |          |
| FINISH:<br>(SEE NOTE 1)   |  | SIZE DRAWING NUMBER:<br><b>B</b><br>PART NUMBER:<br>206-0251-A3<br>REVISION<br><b>A3</b>                                    |                |          |
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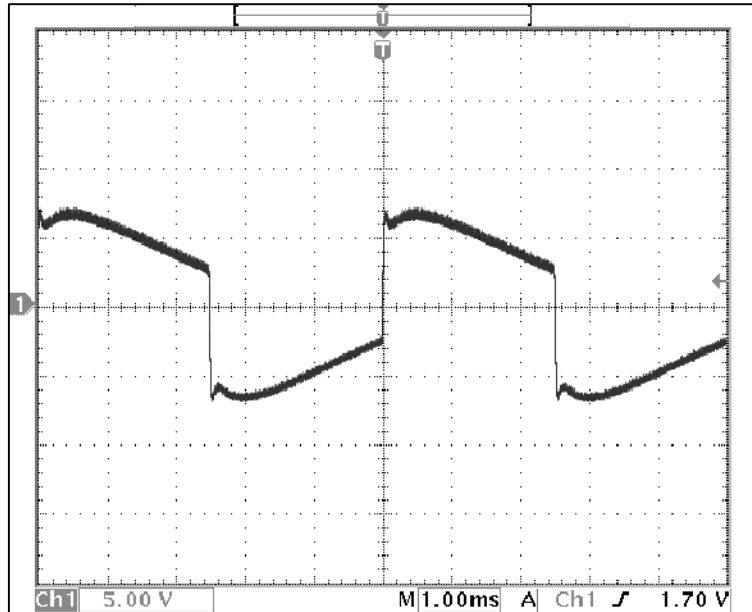


Figure 7  
Lo-Mid to 10

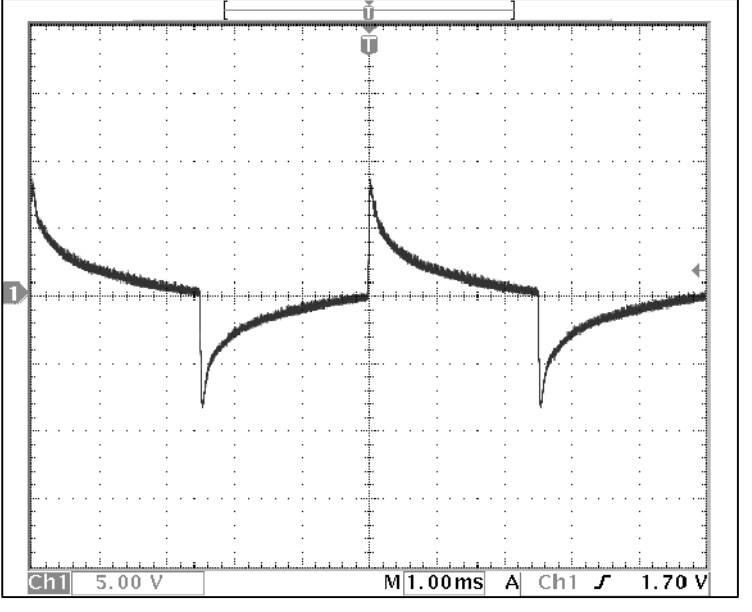


Figure 8  
Bass to 0

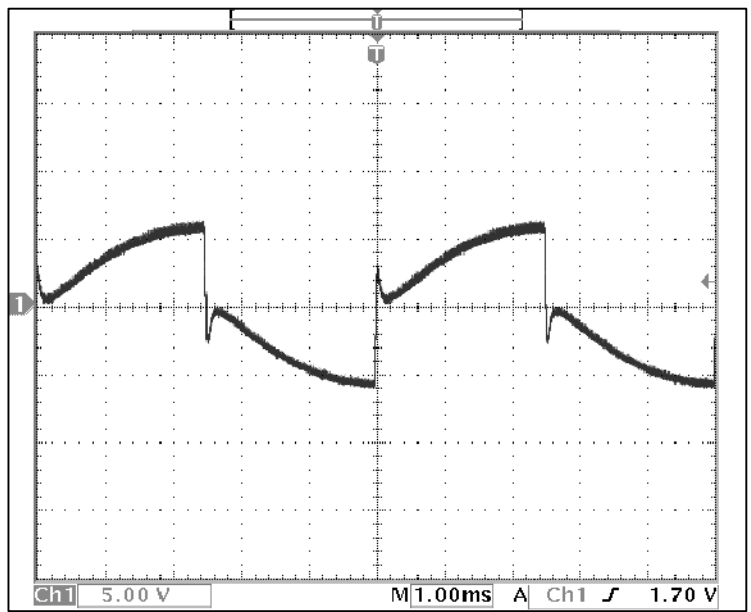


Figure 9  
Bass to 10

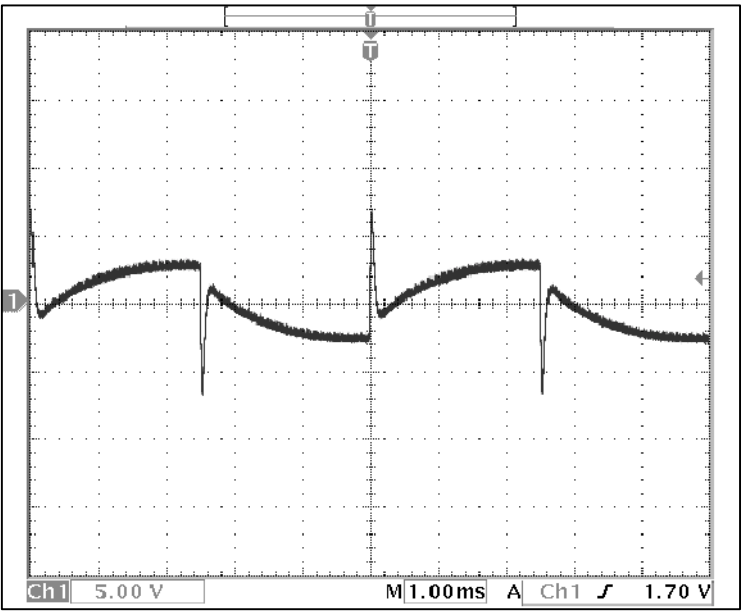


Figure 10  
Contour to 10

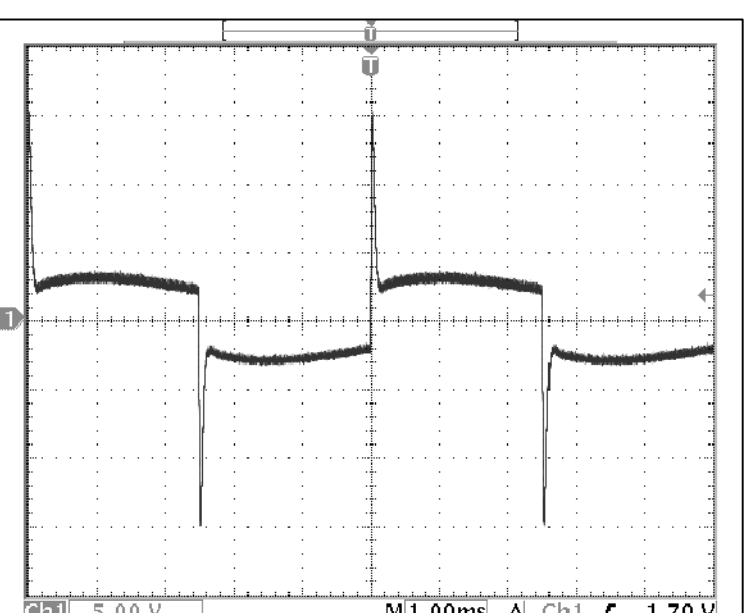


Figure 11  
Presence to 10

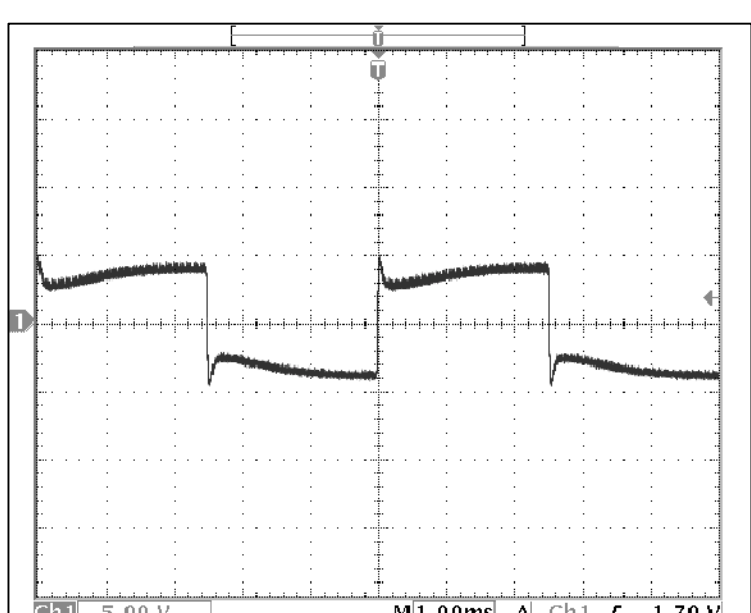


Figure 12  
String Bass Switch In

1. Apply signal into the input with 200Hz square wave @ -46dBV(5mVrms).
2. Set Volume, all Active EQ's, Boost, Tweeter and Master to center(halfway), Contour and Presence to 0.
3. Look at output with scope set on 5V/div and 1ms/div.

| HOLE REFERENCE CHART |             |      |
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| TOLERANCES  |                      | TITLE: <b>700RB-II/1001RB-II</b>   |                |                 |
| FRACTION ±  | INIT                 | DATE   | SIZE           | DRAWING NUMBER: |
| ANGLES ±  | MECH. DESIGN:        | 8/20/04  | B              | 206-0251-A3     |
| .XX ± 0.01  | DRAWN BY: <b>EAH</b> |  |                | REVISION        |
| .XXX ± 0.005  | ELEC:                |  |                | A3              |
| MATERIAL: (SEE NOTE 1)  | PROJ. MGR.:          |  | FILENAME:      |                 |
| FINISH: (SEE NOTE 1)  | Q/A:                 |  | RELEASED:      |                 |
| SCALE: NOT TO SCALE   |                      |  | SHEET 2 OF 3   |                 |

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| ZONE | Dim. | ECO# | Rev. | REVISIONS | Date |
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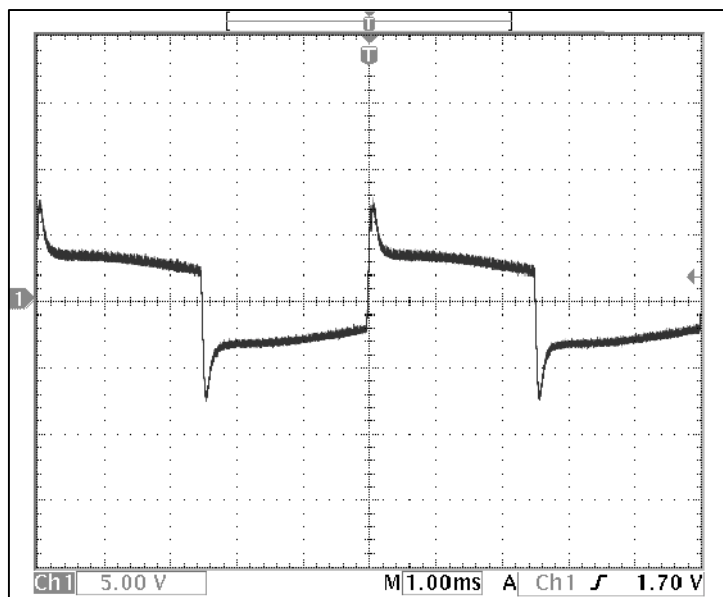
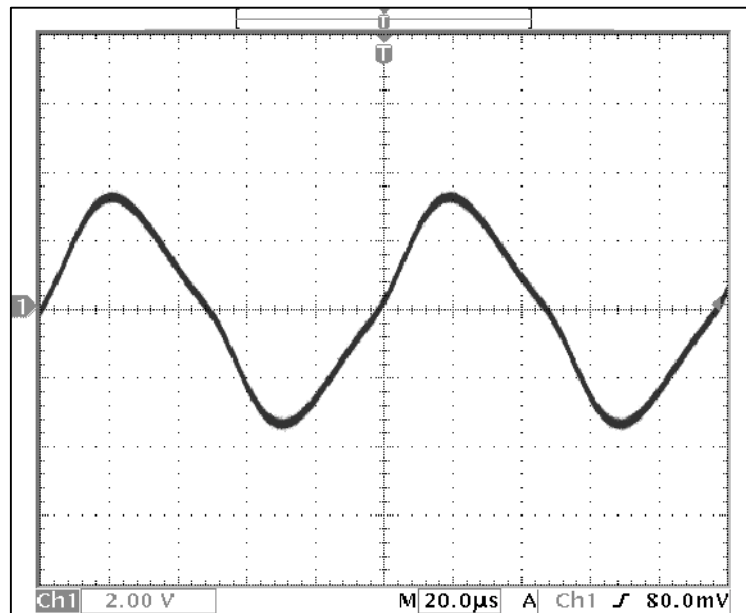
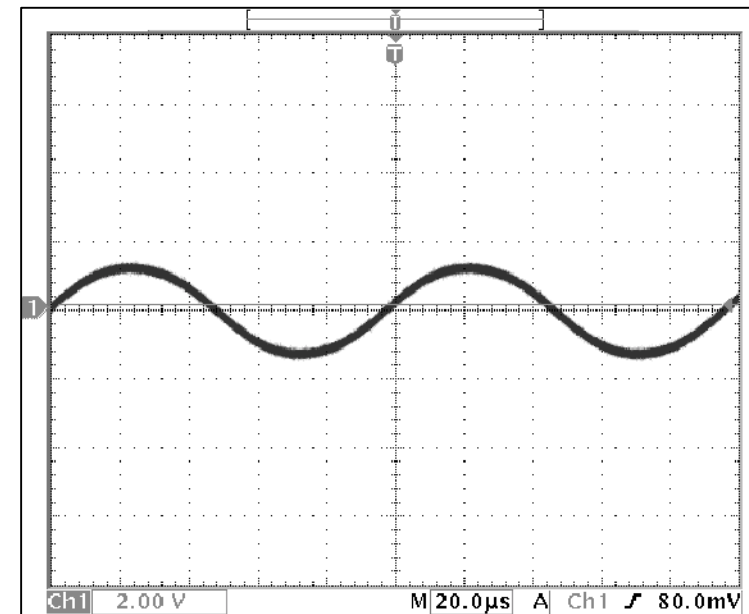


Figure 13  
Woofer X-over In



\*Figure 14  
Tweeter ouput at 10kHz square wave



\*Figure 15  
Tweeter Hi-cut In

1. Apply signal into the input with 200Hz square wave @ -46dBV(5mVrms).
  2. Set Volume, all Active EQ's, Boost, Tweeter and Master to center(halfway), Contour and Presence to 0.
  3. Look at output with scope set on 5V/div and 1ms/div.
- \*Change oscilloscope time base to 20us and 2V/div.

| HOLE REFERENCE CHART |             |      |
|----------------------|-------------|------|
| HOLE                 | DESCRIPTION | QTY. |
|                      |             |      |
|                      |             |      |
|                      |             |      |
|                      |             |      |

| QTY PER ASSY  |                      | DESCRIPTION  | DESIGNATION(S)      | ITEM NO.        |
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| .XX ± 0.01  | ELEC:                |  |                     | A3              |
| .XXX ± 0.005  | PROJ. MGR.:          |  | FILENAME:           |                 |
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