

ZONE	Dim.	ECO#	Rev.	REVISIONS	Date

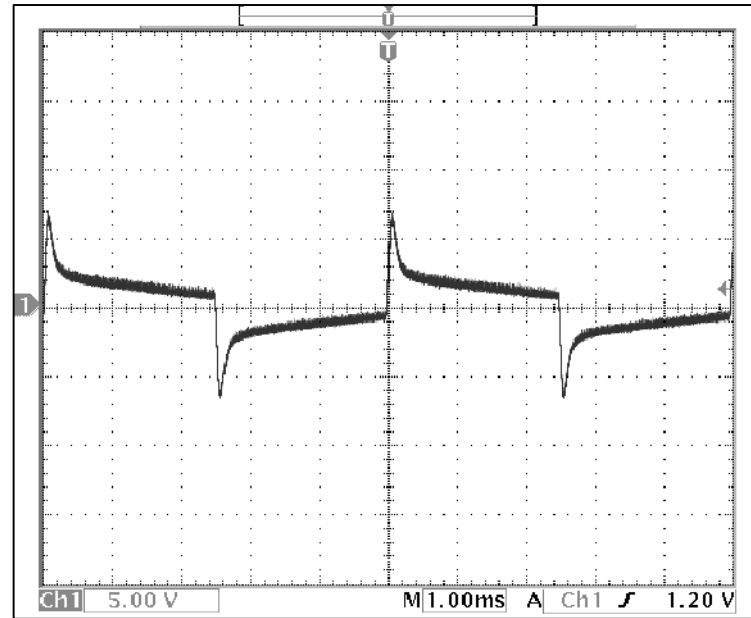
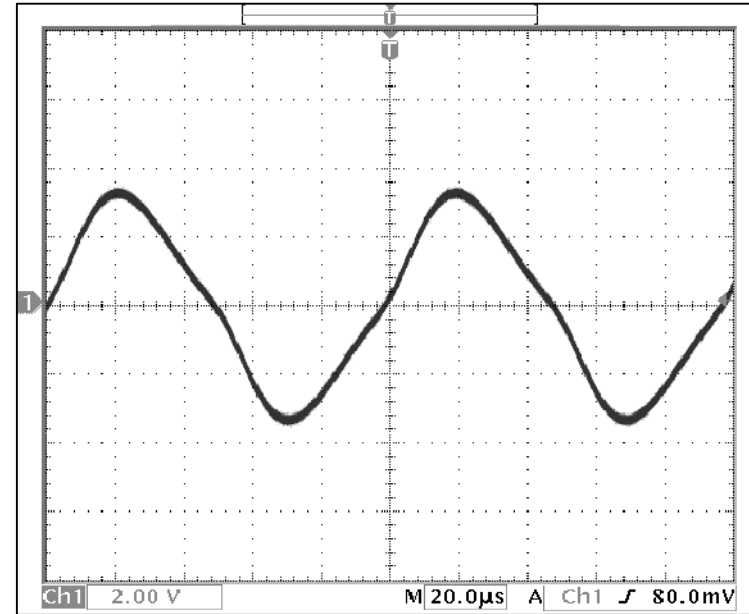
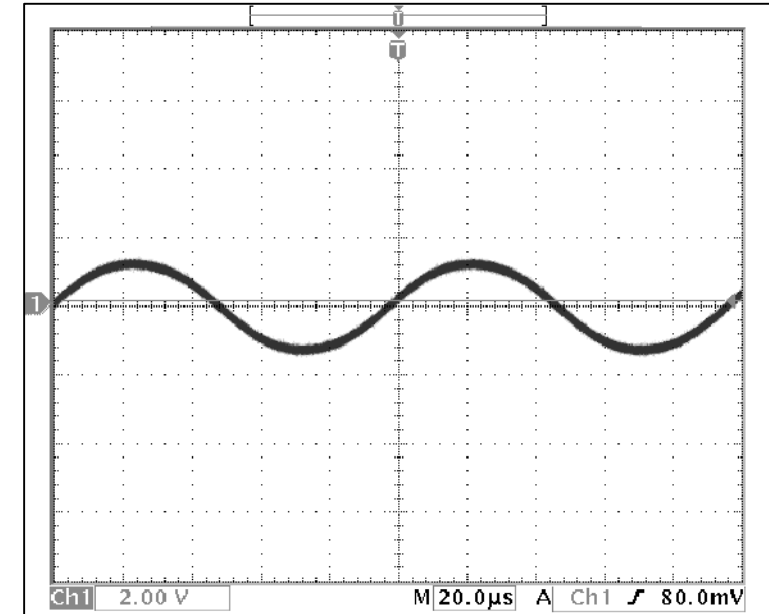


Figure 13  
Woofer X-over In



\*Figure 14  
Tweeter output 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.
PROPRIETARY		PARTS LIST		
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.		<b>gallien technology</b> 2234 INDUSTRIAL DRIVE STOCKTON, CA 95206		
UNLESS OTHERWISE INDICATED DIMENSIONS SHOWN ARE IN INCHES		TITLE: <b>700RB-II/1001RB-II</b>		
<b>APPROVALS</b> TOLERANCES FRACTION ± ANGLES ± .XX ± 0.01 .XXX ± 0.005 MATERIAL: (SEE NOTE 1) FINISH: (SEE NOTE 1)		MECH. DESIGN: DRAWN BY: <b>EAH</b> 8/20/04 ELEC: PROJ. MGR.: Q/A: RELEASED:		
SIZE: <b>B</b>		DRAWING NUMBER: PART NUMBER: <b>206-0251-A2</b>		REVISION <b>A2</b>
SCALE: NOT TO SCALE		SHEET 3 OF 3		

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ZONE	Dim.	ECO#	Rev.	REVISIONS		Date

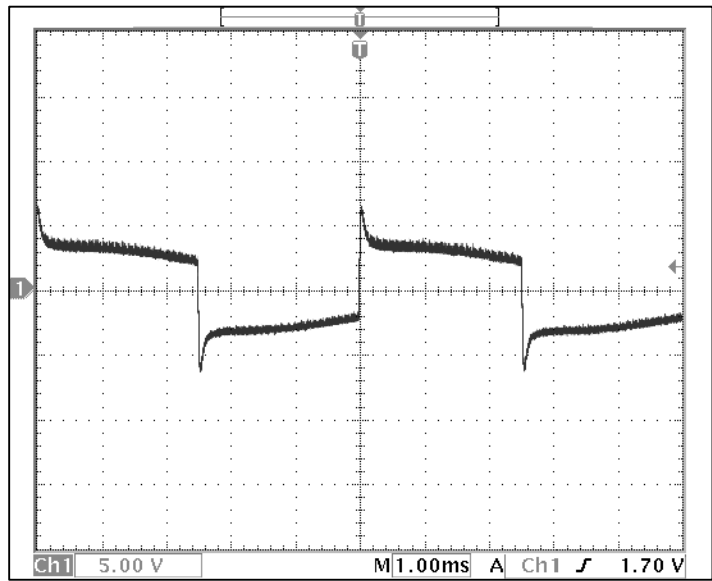


Figure 1  
Tones center, Filters off

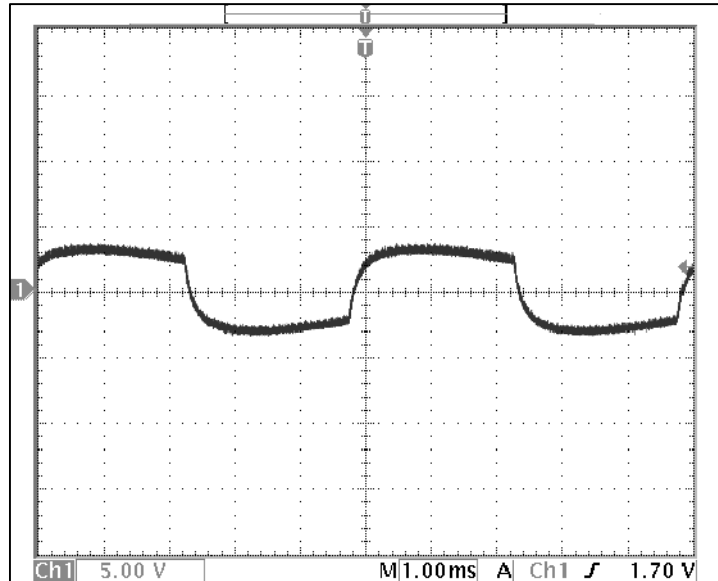


Figure 2  
Treble to 0

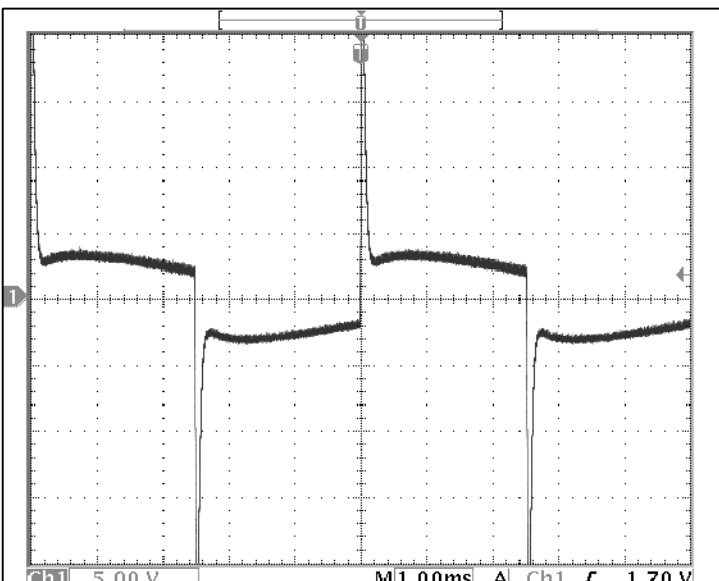


Figure 3  
Treble to 10

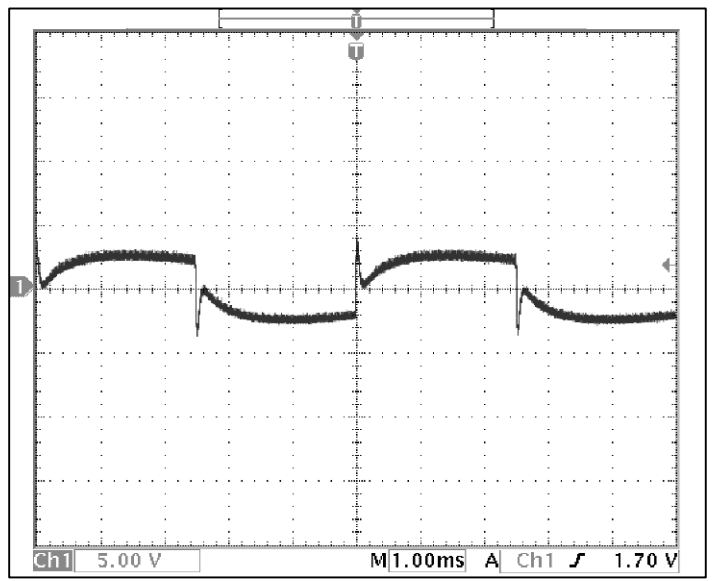


Figure 4  
Hi-Mid to 0

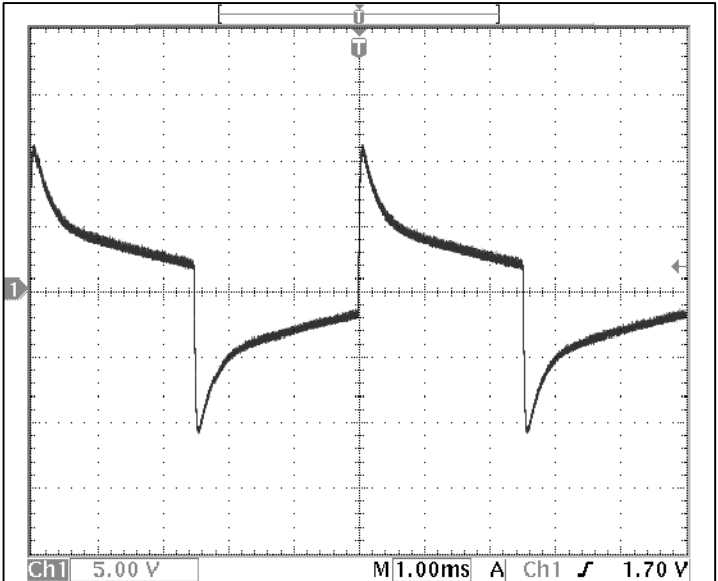


Figure 5  
Hi-Mid to 10

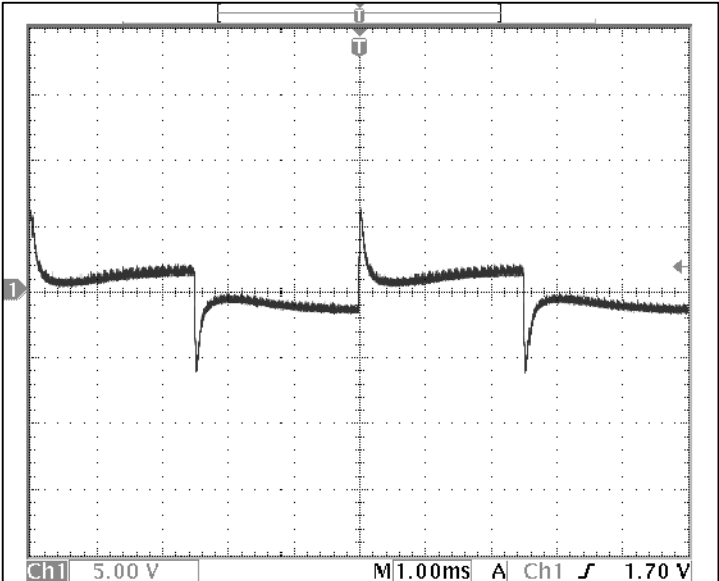


Figure 6  
Lo-Mid to 0

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		
HOLE	DESCRIPTION	QTY.

QTY PER ASSY		DESCRIPTION	DESIGNATION(S)	ITEM NO.
PROPRIETARY		PARTS LIST		
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.				
UNLESS OTHERWISE INDICATED DIMENSIONS SHOWN ARE IN INCHES		TOLERANCES		
FRACTION ±		INIT		
ANGLES ±		DATE		
.XX ± 0.01		MECH. DESIGN:		
.XXX ± 0.005		DRAWN BY: EAH 8/20/04		
MATERIAL: (SEE NOTE 1)		ELEC:		
FINISH: (SEE NOTE 1)		PROJ. MGR.:		
		Q/A:		
		RELEASED:		
TITLE: 700RB-II/1001RB-II		SIZE	DRAWING NUMBER:	REVISION
		B	206-0251-A3	A3
		FILENAME:		
		SCALE: NOT TO SCALE		SHEET 1 OF 3

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ZONE	Dim.	ECO#	Rev.	REVISIONS		Date

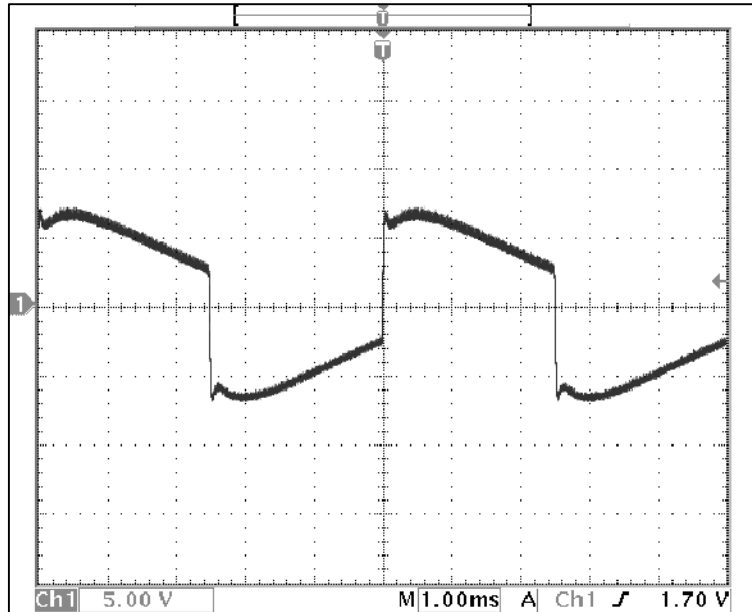


Figure 7  
Lo-Mid to 10

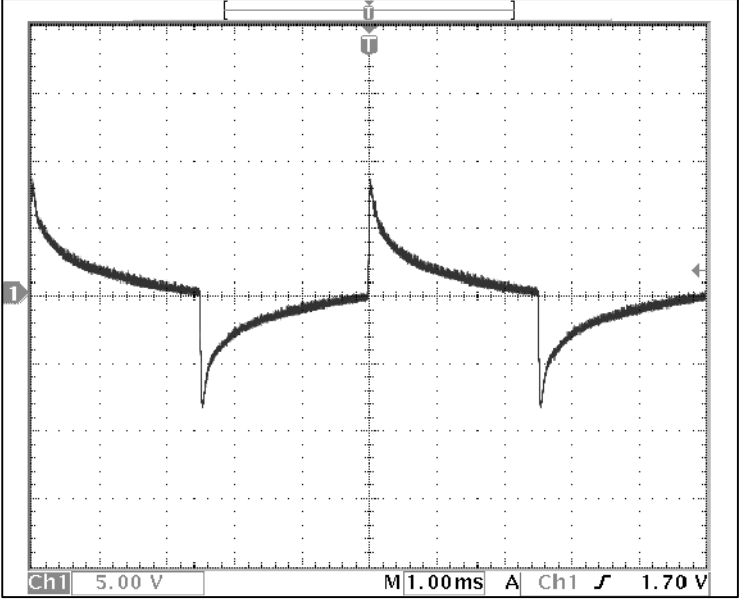


Figure 8  
Bass to 0

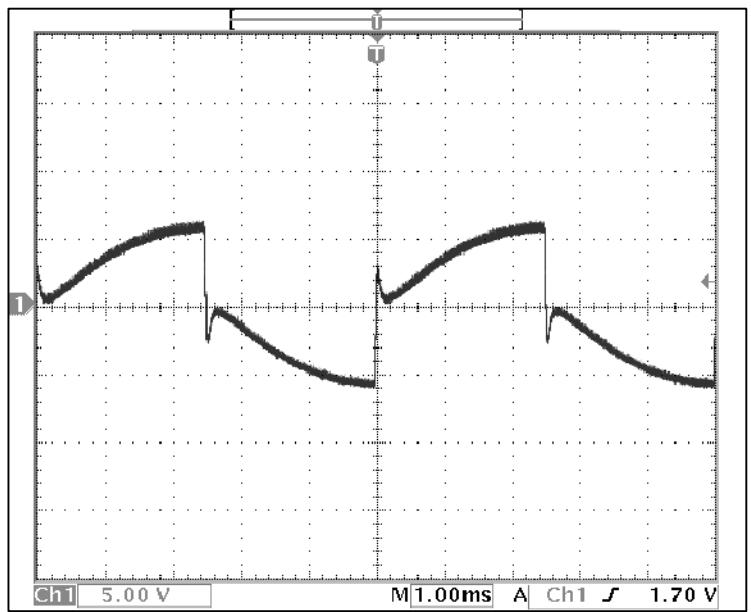


Figure 9  
Bass to 10

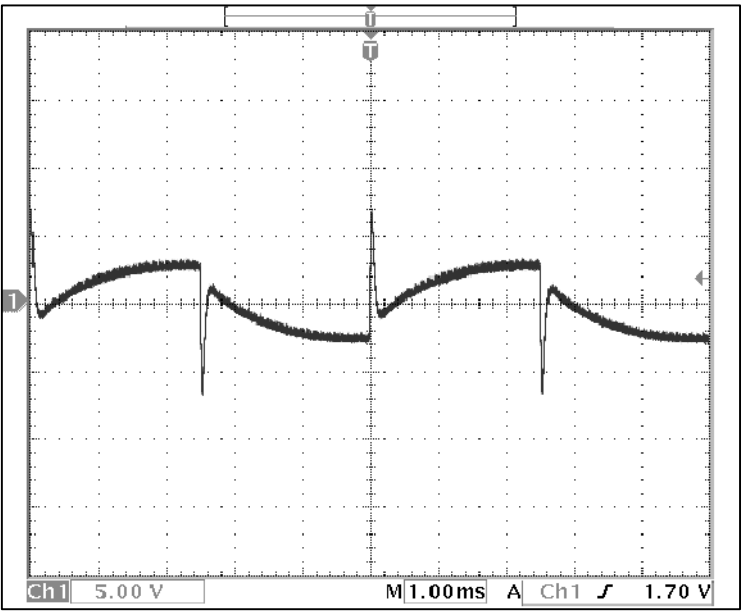


Figure 10  
Contour to 10

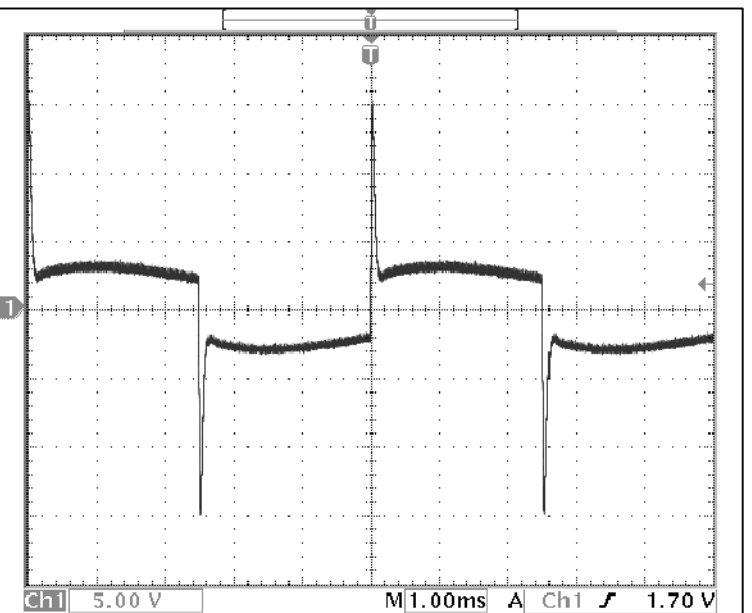


Figure 11  
Presence to 10

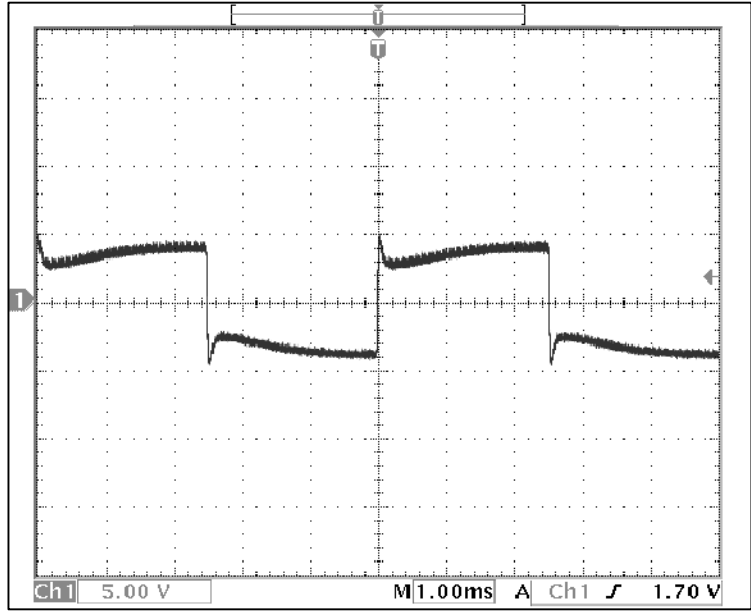


Figure 12  
String Bass Switch In

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		
HOLE	DESCRIPTION	QTY.

QTY PER ASSY		DESCRIPTION	DESIGNATION(S)	ITEM NO.
PROPRIETARY		PARTS LIST		
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UNLESS OTHERWISE INDICATED DIMENSIONS SHOWN ARE IN INCHES		 2234 INDUSTRIAL DRIVE STOCKTON, CA 95206		
APPROVALS		TITLE: 700RB-II/1001RB-II		
TOLERANCES	INIT	DATE	SIZE	DRAWING NUMBER:
FRACTION ±	MECH. DESIGN:	8/20/04	B	206-0251-A3
ANGLES ±	DRAWN BY: EAH			REVISION
.XX ± 0.01	ELEC:			A3
.XXX ± 0.005	PROJ. MGR.:			FILENAME:
MATERIAL: (SEE NOTE 1)	Q/A:			SCALE: NOT TO SCALE
FINISH: (SEE NOTE 1)	RELEASED:			SHEET 2 OF 3

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ZONE	Dim.	ECO#	Rev.	REVISIONS	Date

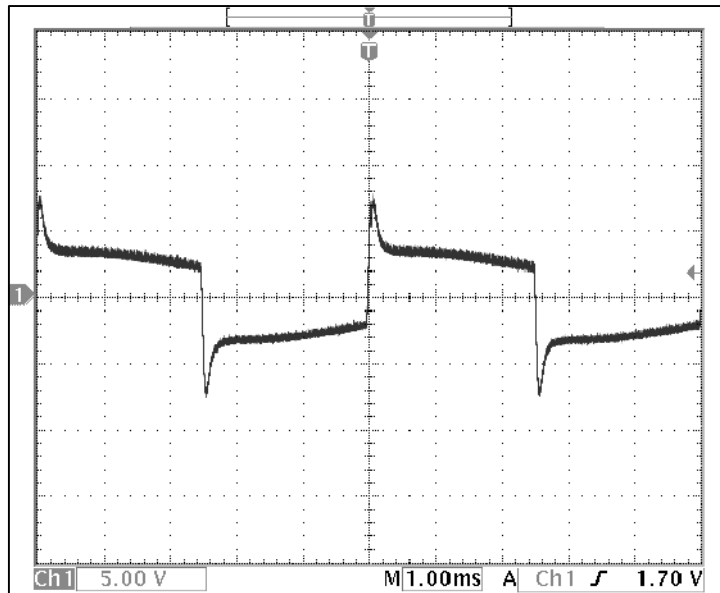
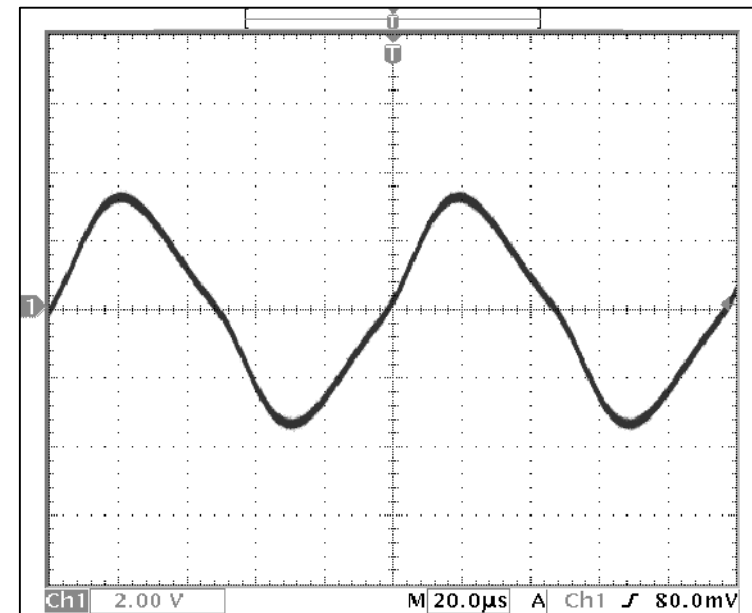
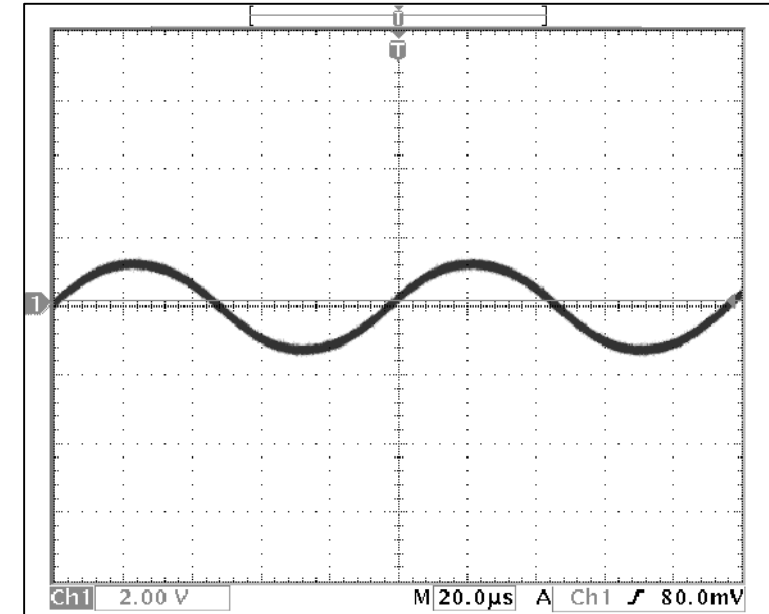


Figure 13  
Woofer X-over In



\*Figure 14  
Tweeter ouput at 10kHz square wave



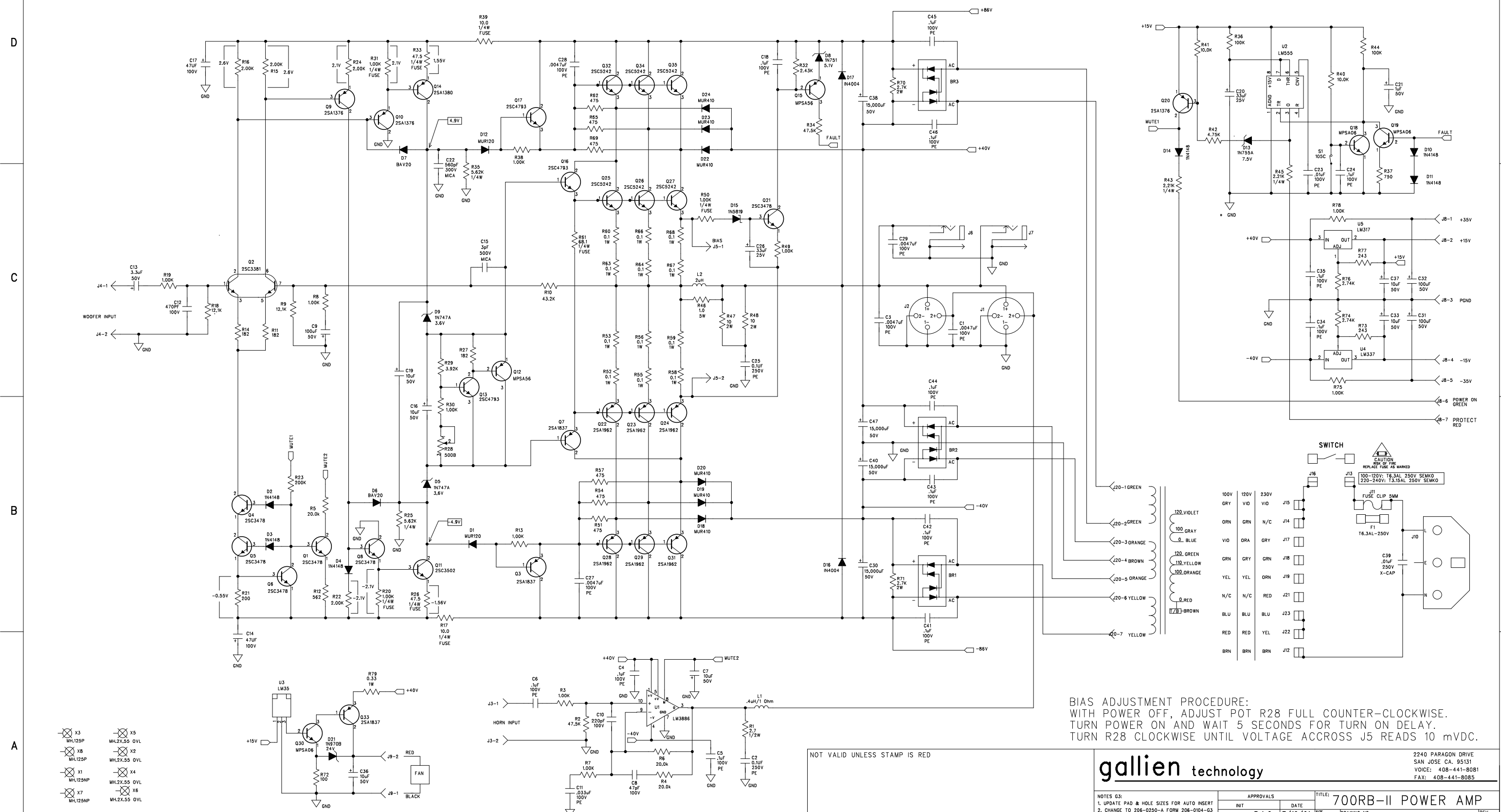
\*Figure 15  
Tweeter Hi-cut In

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.
PROPRIETARY		PARTS LIST		
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UNLESS OTHERWISE INDICATED DIMENSIONS SHOWN ARE IN INCHES		TITLE: <b>700RB-II/1001RB-II</b>		
<b>APPROVALS</b> TOLERANCES FRACTION ± ANGLES ± .XX ± 0.01 .XXX ± 0.005 MATERIAL: (SEE NOTE 1) FINISH: (SEE NOTE 1)		MECH. DESIGN: DRAWN BY: <b>EAH</b> 8/20/04 ELEC: PROJ. MGR.: Q/A: RELEASED:		
SIZE: <b>B</b>		DRAWING NUMBER: PART NUMBER: <b>206-0251-A3</b>		REVISION <b>A3</b>
SCALE: NOT TO SCALE		SHEET 3 OF 3		

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



BIAS ADJUSTMENT PROCEDURE:  
 WITH POWER OFF, ADJUST POT R28 FULL COUNTER-CLOCKWISE.  
 TURN POWER ON AND WAIT 5 SECONDS FOR TURN ON DELAY.  
 TURN R28 CLOCKWISE UNTIL VOLTAGE ACROSS J5 READS 10 mVDC.

**gallien technology**

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

TITLE: **700RB-II POWER AMP**

DESIGNED: R.A.G. 7/10/01  
 DRAWN: R.A.G. 12/2/02

DRAWING NO: 406-0250-A  
 PART NO: 206-0250-A

COMPANY: **GALLIEN KRUEGER**

FILENAME: 6250A.sch

- X3 MH.125P
- X4 MH.125NP
- X5 MH.2X.55 OVL
- X6 MH.2X.55 OVL
- X7 MH.125NP
- X8 MH.125P
- X9 MH.2X.55 OVL
- X10 MH.2X.55 OVL
- X11 MH.125NP
- X12 MH.125P
- X13 MH.2X.55 OVL
- X14 MH.2X.55 OVL
- X15 MH.125NP
- X16 MH.125P
- X17 MH.2X.55 OVL
- X18 MH.2X.55 OVL

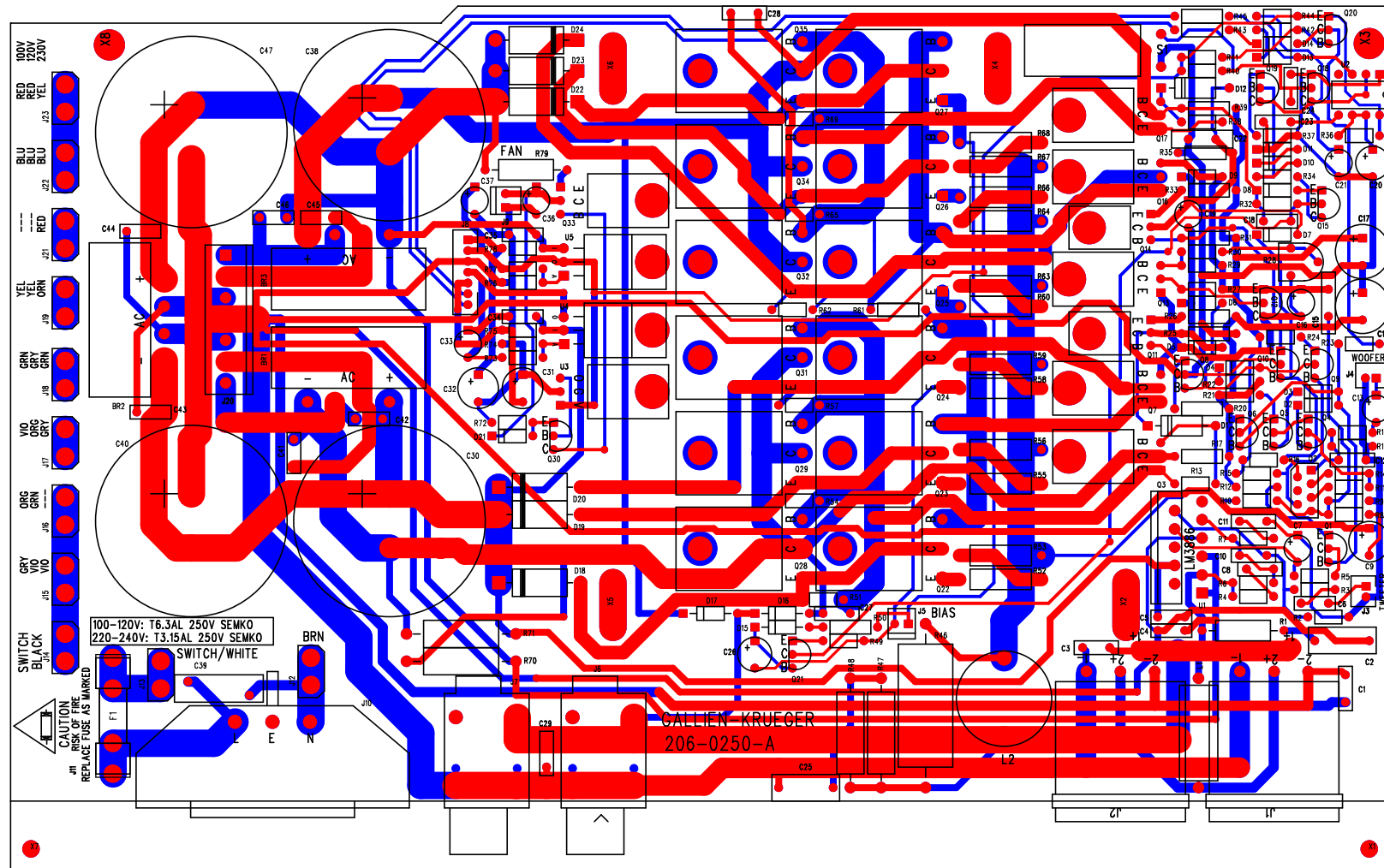
NOT VALID UNLESS STAMP IS RED

**700RB-II Power Amp 206-0250-A**

Part No.	Reference	Description	Manufacturer	Mfr. Part No.
001-2060-0	U2	LM555, TIMER	NATIONAL	LM555CN
001-3886-0	U1	LM3886 ,68W AUDIO POWER AMP	NATIONAL	LM3886T
010-0000-0	Q2	2SC3381BL,NPNX2,80V,100MA,2-10M1B	TOSHIBA	2SC3281BL
010-0001-0	Q1 Q4-6 Q8 Q21	2SC3478, NPN,180V,100MA,TO-92	NEC	2SC3478-K
010-0003-0	Q11	2SC3502-F,NPN,200V,100MA,TO-126	TOSHIBA	2SC3502
010-0012-0	Q18-19 Q30	MPSA06, NPN,80V,500MA,TO-92	MOTOROLA	MPS-A06
010-0035-0	U3	LM35DT, TEMPERATURE SENSOR, TO-220	NATIONAL	LM35DT
010-1002-0	Q9-10 Q20	2SA1376, PNP,180V,100MA,TO-92	NEC	2SA1376-K
010-1003-0	Q14	2SA1380-F,PNP,200V,100MA,TO-126	SANYO/TOSHIBA	2SA1380-F/E
010-1013-0	Q12 Q15	MPSA56 PNP 80V 500MA TO-92	MOTOROLA	MPS-A56
012-0002-0	Q13 Q16-17	2SC4793,NPN,200V,1.5A,2-10R1A	TOSHIBA	2SC4793
012-0003-0	Q25-27 Q32 Q34-35	2SC5242,NPN,230V,15A,2-16C1A	TOSHIBA	2SC5242-O
012-1002-0	Q3 Q7 Q33	2SA1837,PNP,200V,1.5A,2-10R1A	TOSHIBA	2SA1837
012-1003-0	Q22-24 Q28-29 Q31	2SA1962,PNP,230V,15A,2-16C1A	TOSHIBA	2SA1962
014-0070-0	U5	LM317	NATIONAL	LM317
014-1072-0	U4	LM337	NATIONAL	LM337
020-0004-0	D13	1N755A, ZENER,7.5V,500MW ,D035	TAITRON	1N755A
020-0036-0	D5 D9	1N747A, ZENER, 3.6V, 5%, 400MW, DO-35	TAITRON	1N747A
020-0050-0	D8	1N751, ZENER,5.1V,10%,400MW,DO-35	NATIONAL	1N751
020-0240-0	D21	1N970B, ZENER, 24V, 5%, 500MW, DO-35	TAITRON	1N970B
020-1000-0	D2-4 D10-11 D14	1N4148, RECT-FAST, 200MA, 100V	MOTOROLA	1N4148
020-1022-0	D6-7	BAV20, RECT, 200V, DO-35	NATIONAL	BAV20
020-1104-0	D15	SHOTTKY, 1A, 40V, 10NS, DO-41	MOTOROLA	1N5819
020-1120-0	D1 D12	MUR120,RECT-FAST, 1A, 200V, 25NS, 59-04	MOTOROLA	MUR120
020-1122-0	D18-20 D22-24	MUR410, RECT-FAST, 4A, 100V	MOTOROLA	MUR410
020-2106-0	D16-17	1N4004,RECT,1A,400V,DO-41	TAITRON	1N4004
023-0112-0	BR1-3	BRIDGE, 25A, 200V, VERT, PC, MO25S-02	CHENG-YI	MP25-Q2S
031-1336-0	C20 C26	CAP,ELEC,RAD,336,20%,25V	UNITED CHEMI-CON	SRG25VB33RM5X7LL
031-2105-0	C21	CAP,ELEC,RAD, 105, 20%, 50V	UNITED CHEMI-CON	C440C105M5U5CA
031-2106-0	C7,16,19,33,36,37	CAP,ELEC,RAD, 106, 20%, 50V	UNITED CHEMI-CON	SMG50VB10RM5X11LL
031-2107-0	C9 C31-32	CAP,ELEC,RAD,107, 20%, 50V	UNITED CHEMI-CON	SMG50VB101M8X11LL
031-2159-0	C30 C38 C40 C47	CAP, ELEC, RAD, 159, 20%, 50V	UNITED CHEMI-CON	SMH50VN153M35X45T2
031-2335-0	C13	CAP,ELEC,RAD,335,20%,50V	UNITED CHEMI-CON	SMG50VB3R3M5X11LL
031-4476-0	C14 C17	CAP,ELEC,RAD,476,-10%+50%,100V	UNITED CHEMI-CON	SMG100VB47RM10X12LL
032-4103-0	C23	CAP,PE,103,5%,100V,	PANASONIC	ECQV1103JM
032-4104-0	C4,6,18,24,34,35,41-46	CAP,PE,104,5%,100V,	PANASONIC	ECQV1104JM
032-4333-0	C11	CAP,PE,333,5%,100V,	PANASONIC	ECQV1333JM
032-4472-0	C1 C3 C27-29	CAP,PE,472,5%,100V,	PANASONIC	ECQB1472JF
032-7104-0	C2 C25	CAP,PE,104,10%, 250V	ILLINOIS CAPACITOR	104MSR250K
034-4221-0	C10	CAP,MCR,220pF,5%,100V,	TAITRON	TMRS221J100NPOB
034-4470-0	C8	CAP,MCR,47PF,5%,100V,NPO	TAITRON	TMRS470J100NPOB
034-4471-0	C12	CAP,MCR,470pF,5%,100V,	TAITRON	TMRS471J100NPOB
034-7103-0	C39	CAP, CERMIC DISK, 103, 10%, X-250V	PANASONIC	ECK-DRS103ZV
035-8030-0	C15	CAP MICA AXIAL , 3pF, 10%, 500V	CORNELL	CD10CD030D03
035-8561-0	C22	CAP MICA RADIAL, 561, 5%, 300V	CORNELL	CD15FC561J103
052-2212-0	R43 R45	RES,METAL FILM,2.21k,1/4W,1%	ECI	M2F1AK002.21
052-5622-0	R25 R35	RES,METAL FILM,5.62K,1/4W,1%	ECI	M5F1AK005.62
053-0270-0	R1	RES ,CARBON FILM,2.7 ,1/2W,5%	ECI	R5J3AJ002.70
054-100-0	R52,53,55,56,58,60,63 R64,66-68	RES, METAL OXIDE, 0.1, 1W, 5%	ECI	MO10J3AJ000.10
054-330-0	R79	RES, METAL OXIDE, 0.33, 1W, 5%	ECI	MO10J3AJ000.33
055-0101-0	R47-48	RES, METAL OXIDE, 10, 2W, 5%	ECI	MOM20J3AJ010.00
055-2702-0	R70-71	RES, METAL OXIDE, 2.7K, 2W, 5%	ECI	MOM20J3AK002.70
056-0100-0	R46	RES, CERAMIC WW, 1.0, 5W, 10%	ECI	WWC50J3AJ001.00
059-1000-0	R17 R39	RES,MF,FUSE, 10.0, 1/4W,1%	JUKN.OHM	FR25-10.0
059-1002-0	R20 R31 R50	RES,MF,FUSE, 1.00K,1/4W,1%	JUKN.OHM	FR25-1.00K
059-4750-0	R26 R33	RES,MF,FUSE, 47.5, 1/4W,1%	JUKN.OHM	FR25-47.5
059-6810-0	R61	RES,MF,FUSE, 68.1, 1/4W,1%	JUKN.OHM	FR25-68.1
060-1001-0	R72	RES, METAL FILM, 100, 1/8W, 1%	ECI	M1F1AJ100.00
060-1002-0	R3,7,8,13,19,30,38,49 R75 R78	RES,METAL FILM, 1.00K, 1/8W, 1%	ECI	M1F1AK001.00
060-1003-0	R40-41	RES,METAL FILM, 10.0K, 1/8W,1%	ECI	M1F1AK010.00
060-1004-0	R36 R44	RES,METAL FILM, 100K, 1/8W, 1%	ECI	M1F1AK100.00
060-1213-0	R9 R18	RES,METAL FILM, 12.1K OHM, 1/8W, 1%	ECI	M1F1AK012.10
060-1821-0	R11 R14 R27	RES,METAL FILM, 182, 1/8W, 1%	ECI	M1F1AJ182.00







PCB WORK INSTRUCTIONS

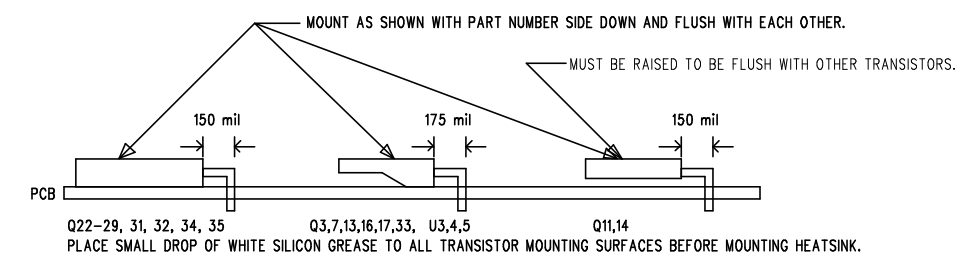
DWG 420-0250-A

NOTES:

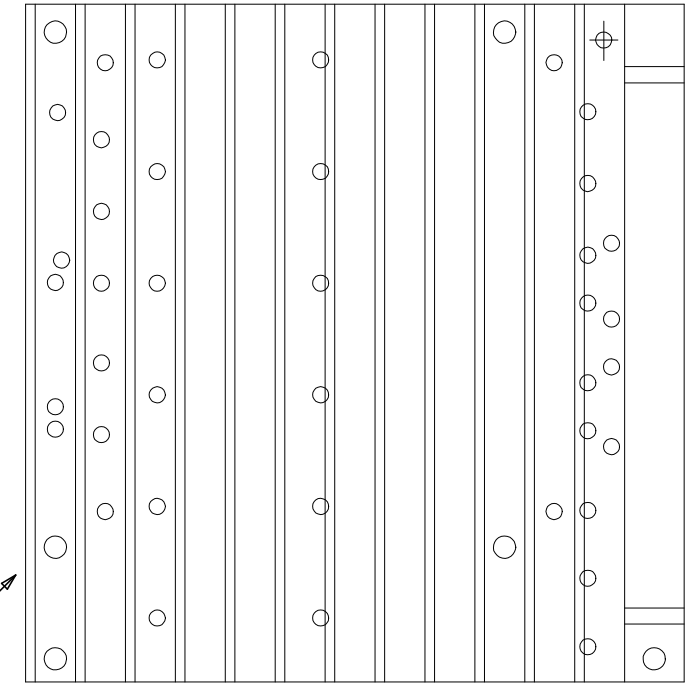
- UNLESS OTHERWISE SPECIFIED:
1. SQUARE PADS ON THRU HOLE PARTS (ie: CONNECTORS, DIPS, SIPS, LEDS) DENOTE PIN 1.
  2. ALL BOARDS REQUIRE A COMPLETE AND THOROUGH VISUAL INSPECTION.
  3. ALL BOARDS MUST BE BARE BOARD TESTED.
  4. ASSEMBLE AND SOLDER PER ANSI/IPC-A-610B.

LOADING

5. SEE FORMING AND LOADING INSTRUCTIONS BELOW FOR INSTALLING SPECIFIED COMPONENTS.
6. CHECK THAT R52,53,55,56,58,60,63,64,66,67,68 & S1 ARE FLUSH TO BOARD.
7. CHECK THAT ALL CONNECTORS AND JACKS ARE FLUSH WITH PCB.
8. MAKE CERTAIN ALL POWER TRANSISTOR MOUNTING HOLES ARE PROPERLY ALIGNED FOR HEAT SINK.



HEAT SINK ASSEMBLY



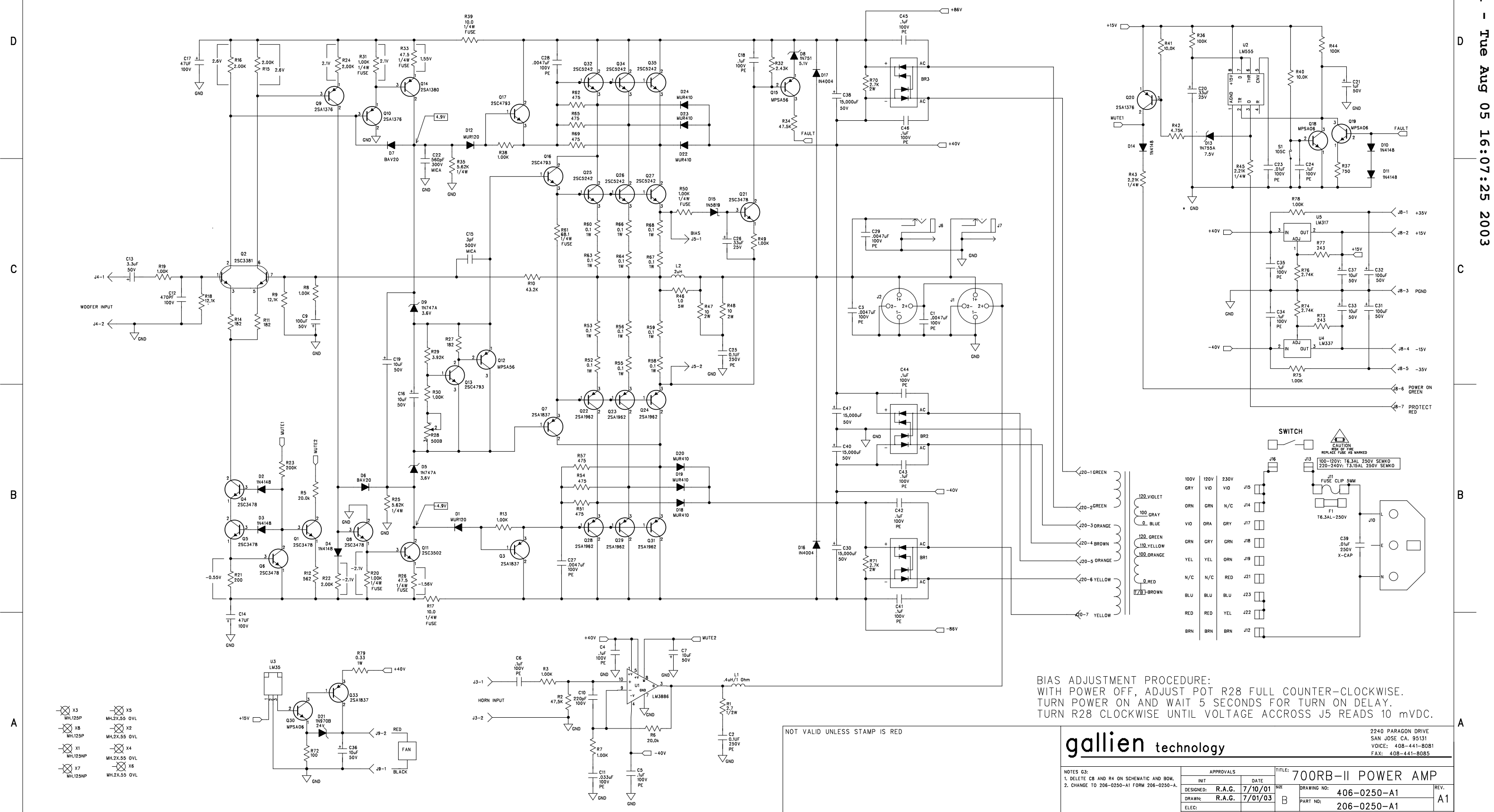
APPLY THERMAL INSULATOR TAPE (105-0014-0), AND ALIGN WITH THIS EDGE.

NOT VALID UNLESS STAMP IS RED		2240 PARAGON DRIVE SAN JOSE CA. 95131 VOICE: 408-441-8081 FAX: 408-441-8085	
<b>gallien technology</b>		TITLE: 700RB-II POWER AMP BD	
APPROVALS		SIZE: B	DRAWING NO: 405-0250-A
INIT	DATE	REV.:	A
DESIGNED: R.A.G.	7/16/01	PART NO:	145-0250-A
DRAWN: R.A.G.	12/02/02		
ELEC:		COMPANY: GALLIEN-KRUEGER	
MECH:		FILENAME: 5250A	
GERBER FILE NAME: sst01289ppbo			
LAYER DESCRIPTION: SILKSCREEN			



Customer Name:		<b>Gallien-Krueger</b>		Current Rev #:	<b>A0</b>	New ECO Rev #:	<b>A1</b>
Model:		<b>700RB-II</b>		Distribute To:		Page:	<b>1</b>
Assembly Description:		<b>700RB-II power amp board</b>		Originator:	<b>A . R . V .</b>		
Assembly Numbers:		<b>206-0250-A</b> <b>145-0250-A</b>		Approved by:			
				Effective Date:	<b>6/26/2003</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 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>Horn amp oscillates when approaching full power</b>				<input checked="" type="checkbox"/>	Costing		
				<input type="checkbox"/>	Fab Drawing		
				<input type="checkbox"/>	Inspection Proc.		
				<input type="checkbox"/>	Part Master File		
				<input checked="" type="checkbox"/>	Schematic		
				<input type="checkbox"/>	Service Manual		
				<input checked="" type="checkbox"/>	Test Procedure		
				<input type="checkbox"/>			
				<input type="checkbox"/>			
Other Affected Assemblies							
<input type="checkbox"/> Continued on ECO Supplement Page							
Description Of Change				Distribution		Date	Initials
				<input type="checkbox"/>	Accounting		
<b>Remove loop compensation R4 (20.0k) and C8 (47pf)</b>				<input type="checkbox"/>	Assembly		
<b>For boards in production clip out R4.</b>				<input type="checkbox"/>	Customer		
<b>Layout not updated.</b>				<input checked="" type="checkbox"/>	Engineering		
				<input checked="" type="checkbox"/>	Incoming Q.C.		
				<input type="checkbox"/>	Planning		
				<input checked="" type="checkbox"/>	Production Eng.		
				<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 type="checkbox"/>	Drawing(s) attached		
Part Number	Description	Parts Added		Parts Deleted			
		Qty	Ref. Designator	Qty	Ref. Designator		
<b>060-2003-0</b>	<b>20.0k 1/8W 1%</b>			<b>1</b>	<b>R4</b>		
<b>034-4470-0</b>	<b>47pf 100V</b>			<b>1</b>	<b>C8</b>		

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



BIAS ADJUSTMENT PROCEDURE:  
 WITH POWER OFF, ADJUST POT R28 FULL COUNTER-CLOCKWISE.  
 TURN POWER ON AND WAIT 5 SECONDS FOR TURN ON DELAY.  
 TURN R28 CLOCKWISE UNTIL VOLTAGE ACROSS J5 READS 10 mVDC.

NOT VALID UNLESS STAMP IS RED

**gallien technology**

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

TITEL: 700RB-II POWER AMP		REV. A1
DESIGNED: R.A.G.	DATE: 7/10/01	DRAWING NO: 406-0250-A1
DRAWN: R.A.G.	DATE: 7/01/03	PART NO: 206-0250-A1
ELEC:		
MECH:		
Q/A:		
RELEASED:		

COMPANY: GALLIEN KRUEGER  
 FILENAME: 6250A1.sch

NOTES C3:  
 1. DELETE C8 AND R4 ON SCHEMATIC AND BOM.  
 2. CHANGE TO 206-0250-A1 FORM 206-0250-A.

- X3 MH.125P
- X5 MH.2X.55 OVL
- X8 MH.125P
- X2 MH.2X.55 OVL
- X1 MH.125NP
- X4 MH.2X.55 OVL
- X7 MH.125NP
- X6 MH.2X.55 OVL

# GALLIEN-KRUEGER

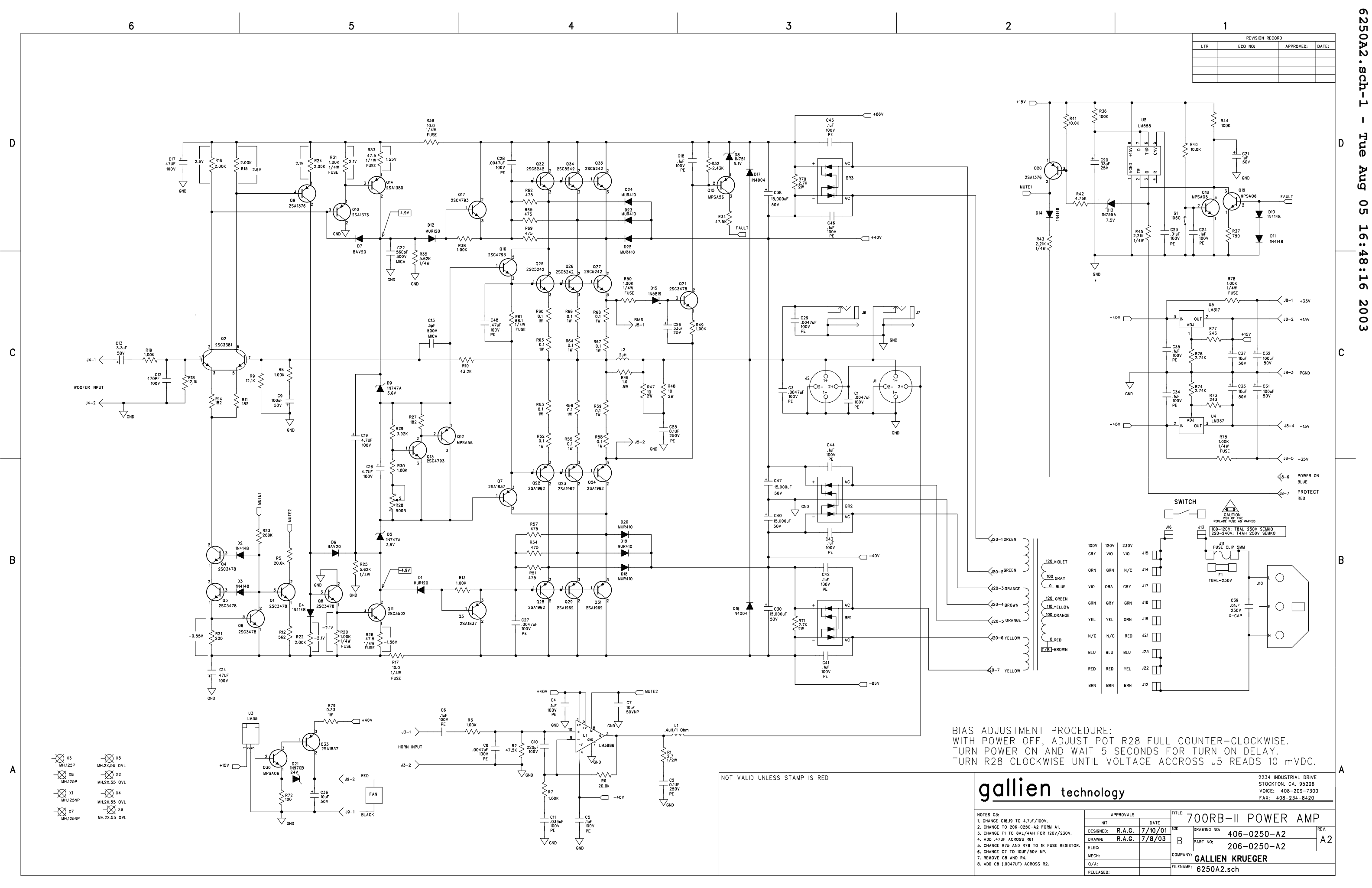
## 700RB-II Power Amp 206-0250-A1

Part No.	Reference	Description	Manufacturer	Mfr. Part No.
001-2060-0	U2	LM555, TIMER	NATIONAL	LM555CN
001-3886-0	U1	LM3886 ,68W AUDIO POWER AMP	NATIONAL	LM3886T
010-0000-0	Q2	2SC3381BL,NPNX2,80V,100MA,2-10M1B	TOSHIBA	2SC3281BL
010-0001-0	Q1 Q4-6 Q8 Q21	2SC3478, NPN,180V,100MA,TO-92	NEC	2SC3478-K
010-0003-0	Q11	2SC3502-F,NPN,200V,100MA,TO-126	TOSHIBA	2SC3502
010-0012-0	Q18-19 Q30	MPSA06, NPN,80V,500MA,TO-92	MOTOROLA	MPS-A06
010-0035-0	U3	LM35DT, TEMPERATURE SENSOR, TO-220	NATIONAL	LM35DT
010-1002-0	Q9-10 Q20	2SA1376, PNP,180V,100MA,TO-92	NEC	2SA1376-K
010-1003-0	Q14	2SA1380-F,PNP,200V,100MA,TO-126	SANYO/TOSHIBA	2SA1380-F/E
010-1013-0	Q12 Q15	MPSA56 PNP 80V 500MA TO-92	MOTOROLA	MPS-A56
012-0002-0	Q13 Q16-17	2SC4793,NPN,200V,1.5A,2-10R1A	TOSHIBA	2SC4793
012-0003-0	Q25-27 Q32 Q34-35	2SC5242,NPN,230V,15A,2-16C1A	TOSHIBA	2SC5242-O
012-1002-0	Q3 Q7 Q33	2SA1837,PNP,200V,1.5A,2-10R1A	TOSHIBA	2SA1837
012-1003-0	Q22-24 Q28-29 Q31	2SA1962,PNP,230V,15A,2-16C1A	TOSHIBA	2SA1962
014-0070-0	U5	LM317	NATIONAL	LM317
014-1072-0	U4	LM337	NATIONAL	LM337
020-0004-0	D13	1N755A, ZENER,7.5V,500MW ,D035	TAITRON	1N755A
020-0036-0	D5 D9	1N747A, ZENER, 3.6V, 5%, 400MW, DO-35	TAITRON	1N747A
020-0050-0	D8	1N751, ZENER,5.1V,10%,400MW,DO-35	NATIONAL	1N751
020-0240-0	D21	1N970B, ZENER, 24V, 5%, 500MW, DO-35	TAITRON	1N970B
020-1000-0	D2-4 D10-11 D14	1N4148, RECT-FAST, 200MA, 100V	MOTOROLA	1N4148
020-1022-0	D6-7	BAV20, RECT, 200V, DO-35	NATIONAL	BAV20
020-1104-0	D15	SHOTTKY, 1A, 40V, 10NS, DO-41	MOTOROLA	1N5819
020-1120-0	D1 D12	MUR120,RECT-FAST, 1A, 200V, 25NS, 59-04	MOTOROLA	MUR120
020-1122-0	D18-20 D22-24	MUR410, RECT-FAST, 4A, 100V	MOTOROLA	MUR410
020-2106-0	D16-17	1N4004,RECT,1A,400V,DO-41	TAITRON	1N4004
023-0112-0	BR1-3	BRIDGE, 25A, 200V, VERT, PC, MO25S-02	CHENG-YI	MP25-02S
031-1336-0	C20 C26	CAP,ELEC,RAD,336,20%,25V	UNITED CHEMI-CON	SRG25VB33RM5X7LL
031-2105-0	C21	CAP,ELEC,RAD, 105, 20%, 50V	UNITED CHEMI-CON	C440C105M5U5CA
031-2106-0	C7,33,36,37	CAP,ELEC,RAD, 106, 20%, 50V	UNITED CHEMI-CON	SMG50VB10RM5X11LL
031-2107-0	C9 C31-32	CAP,ELEC,RAD,107, 20%, 50V	UNITED CHEMI-CON	SMG50VB101M8X11LL
031-2159-0	C30 C38 C40 C47	CAP, ELEC, RAD, 159, 20%, 50V	UNITED CHEMI-CON	SMH50VN153M35X45T2
031-2335-0	C13	CAP,ELEC,RAD,335,20%,50V	UNITED CHEMI-CON	SMG50VB3R3M5X11LL
031-4475-0	C16,19	CAP,ELEC,RAD,475,-10%+50%,100V	UNITED CHEMI-CON	SMG100VB4R7M5X11LL
031-4476-0	C14 C17	CAP,ELEC,RAD,476,-10%+50%,100V	UNITED CHEMI-CON	SMG100VB47RM10X12LL
032-4103-0	C23	CAP,PE,103,5%,100V,	PANASONIC	ECQV1103JM
032-4104-0	C4-6,18,24,34,35,41-46	CAP,PE,104,5%,100V,	PANASONIC	ECQV1104JM
032-4333-0	C11	CAP,PE,333,5%,100V,	PANASONIC	ECQV1333JM
032-4472-0	C1 C3 C27-29	CAP,PE,472,5%,100V,	PANASONIC	ECQB1472JF
032-4474-0	C48	CAP,PE,474,10%, 100V	PANASONIC	ECQV1474JM
032-7104-0	C2 C25	CAP,PE,104,10%, 250V	ILLINOIS CAPACITOR	104MSR250K
034-4221-0	C10	CAP,MCR,220pF,5%,100V,	TAITRON	TMRS221J100NPOB
034-4470-0	C8	CAP,MCR,47PF,5%,100V,NPO	TAITRON	TMRS470J100NPOB
034-4471-0	C12	CAP,MCR,470pF,5%,100V,	TAITRON	TMRS471J100NPOB
034-7103-0	C39	CAP, CERMIC DISK, 103, 10%, X-250V	PANASONIC	ECK-DRS103ZV
035-8030-0	C15	CAP MICA AXIAL , 3pF, 10%, 500V	CORNELL	CD10CD030D03
035-8561-0	C22	CAP MICA RADIAL, 561, 5%, 300V	CORNELL	CD15FC561J103
052-2212-0	R43 R45	RES,METAL FILM,2.21k,1/4W,1%	ECI	M2F1AK002.21
052-5622-0	R25 R35	RES,METAL FILM,5.62K,1/4W,1%	ECI	M5F1AK005.62
053-0270-0	R1	RES ,CARBON FILM,2.7 ,1/2W,5%	ECI	R5J3AJ002.70
054-.100-0	R52,53,55,56,58,60,63 R64,66-68	RES, METAL OXIDE, 0.1, 1W, 5%	ECI	MO10J3AJ000.10
054-.330-0	R79	RES, METAL OXIDE, 0.33, 1W, 5%	ECI	MO10J3AJ000.33
055-0101-0	R47-48	RES, METAL OXIDE, 10, 2W, 5%	ECI	MOM20J3AJ010.00
055-2702-0	R70-71	RES, METAL OXIDE, 2.7K, 2W, 5%	ECI	MOM20J3AK002.70
056-0100-0	R46	RES, CERAMIC WW, 1.0, 5W, 10%	ECI	WWC50J3AJ001.00
059-1000-0	R17 R39	RES,MF,FUSE, 10.0, 1/4W,1%	JUKN.OHM	FR25-10.0
059-1002-0	R20 R31 R50	RES,MF,FUSE, 1.00K,1/4W,1%	JUKN.OHM	FR25-1.00K
059-4750-0	R26 R33	RES,MF,FUSE, 47.5, 1/4W,1%	JUKN.OHM	FR25-47.5
059-6810-0	R61	RES,MF,FUSE, 68.1, 1/4W,1%	JUKN.OHM	FR25-68.1
060-1001-0	R72	RES, METAL FILM, 100, 1/8W, 1%	ECI	M1F1AJ100.00
060-1002-0	R3,7,8,13,19,30,38,49 R75 R78	RES,METAL FILM, 1.00K, 1/8W, 1%	ECI	M1F1AK001.00
060-1003-0	R40-41	RES,METAL FILM, 10.0K, 1/8W,1%	ECI	M1F1AK010.00
060-1004-0	R36 R44	RES,METAL FILM, 100K, 1/8W, 1%	ECI	M1F1AK100.00
060-1213-0	R9 R18	RES,METAL FILM, 12.1K OHM, 1/8W, 1%	ECI	M1F1AK012.10
060-1821-0	R11 R14 R27	RES,METAL FILM, 182, 1/8W, 1%	ECI	M1F1AJ182.00



Customer Name:		<b>Gallien-Krueger</b>		Current Rev #:	<b>A1</b>	New ECO Rev #:	<b>A2</b>
Model:		700RB-II		Distribute To:		Page:	1 Of: 1
Assembly Description:		700RB-II power amp board		Originator:	R.A.G.		
Assembly Numbers:		206-0250-A 145-0250-A		Approved by:			
				Effective Date:	7/8/2003		
Effective				Document Update		Date	Initials
<input type="checkbox"/>	All in Process	<input checked="" 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		
Update for CSA requirements C16,19,F1,C7.				<input type="checkbox"/>	Costing		
Incorporate changes from A1 into layout.				<input type="checkbox"/>	Fab Drawing		
Roll off signal to horn amp at 30kHz with C8.				<input type="checkbox"/>	Inspection Proc.		
Add C48 to improve high freq dist from comutation.				<input checked="" type="checkbox"/>	Part Master File		
Make R75 and R78 fuse resistors.				<input checked="" type="checkbox"/>	Schematic		
				<input type="checkbox"/>	Service Manual		
				<input type="checkbox"/>	Test Procedure		
				<input type="checkbox"/>			
				<input type="checkbox"/>			
Other Affected Assemblies							
<input type="checkbox"/> Continued on ECO Supplement Page							
Description Of Change				Distribution		Date	Initials
Change parts and indicated below, and update layout to A2.				<input type="checkbox"/>	Accounting		
				<input type="checkbox"/>	Assembly		
				<input type="checkbox"/>	Customer		
				<input checked="" type="checkbox"/>	Engineering		
				<input checked="" type="checkbox"/>	Incoming Q.C.		
				<input type="checkbox"/>	Planning		
				<input checked="" type="checkbox"/>	Production Eng.		
				<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 type="checkbox"/>	Drawing(s) attached		
Part Number	Description	Parts Added		Parts Deleted			
		Qty	Ref. Designator	Qty	Ref. Designator		
031-4475-0	4.7uF/100V	2	C16,19				
032-4474-0	.47uF/100V	1	C48				
031-2106-a	10uF/50V-NP	1	C7				
032-4472-0	.0047uF/100V	1	C8				
091-0016-0	Fuse T10AL/250V	1	F1				
059-1002-0	1.00K,1/4W fuse	2	R75,78				
031-2106-0	10uF/50V			3	C7,16,19		
034-4470-0	47pF/100V			1	C8		
060-1002-0	1.00K,1/8W			2	R75,78		
060-2003-0	20.0K,1/8W			1	R4		
091-0028-0	Fuse T8AL/250V			1	F1		

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



Color	Voltage	Terminal
GRY	100V	J15
DRN	120V	J14
VIO	230V	J17
GRN	N/C	J18
YEL	DRN	J19
BLU	N/C	J21
RED	RED	J22
BRN	BRN	J12
GRN	GRN	J16
ORNG	ORNG	J17
BRO	BRO	J18
YEL	YEL	J19
BLU	BLU	J20
RED	RED	J21
BRN	BRN	J22

BIAS ADJUSTMENT PROCEDURE:  
 WITH POWER OFF, ADJUST POT R28 FULL COUNTER-CLOCKWISE.  
 TURN POWER ON AND WAIT 5 SECONDS FOR TURN ON DELAY.  
 TURN R28 CLOCKWISE UNTIL VOLTAGE ACROSS J5 READS 10 mVDC.

NOT VALID UNLESS STAMP IS RED

**gallien technology**

2234 INDUSTRIAL DRIVE  
 STOCKTON, CA. 95206  
 VOICE: 408-209-7300  
 FAX: 408-234-8420

NOTES C3:		APPROVALS		TITLE: 700RB-II POWER AMP	
1.	CHANGE C16,19 TO 4.7uF/100V.	INIT	DATE	REV.	REV.
2.	CHANGE TO 206-0250-A2 FORM A1.	DESIGNED:	R.A.G. 7/10/01	SIZE	B
3.	CHANGE F1 TO 8A/4AH FOR 120V/230V.	DRAWN:	R.A.G. 7/8/03	DRAWING NO:	406-0250-A2
4.	ADD .47UF ACROSS R81	ELEC:		PART NO:	206-0250-A2
5.	CHANGE R75 AND R78 TO 1K FUSE RESISTOR.	MECH:		COMPANY:	GALLIEN KRUEGER
6.	CHANGE C7 TO 10uF/50V NP.	Q/A:		FILENAME:	6250A2.sch
7.	REMOVE C8 AND R4.	RELEASED:			
8.	ADD C8 (.0047UF) ACROSS R2.				

- X3 MH.125P
- X4 MH.125NP
- X5 MH.2X.55 OVL
- X6 MH.2X.55 OVL
- X7 MH.125NP
- X8 MH.125P
- X9 MH.2X.55 OVL
- X10 MH.2X.55 OVL
- X11 MH.125NP
- X12 MH.125P
- X13 MH.2X.55 OVL
- X14 MH.2X.55 OVL
- X15 MH.125NP
- X16 MH.125P
- X17 MH.2X.55 OVL
- X18 MH.2X.55 OVL

**700RB-II Power Amp 206-0250-A2**

Part No.	Reference	Description	Manufacturer	Mfr. Part No.
001-2060-0	U2	LM555, TIMER	NATIONAL	LM555CN
001-3886-0	U1	LM3886 ,68W AUDIO POWER AMP	NATIONAL	LM3886T
010-0000-0	Q2	2SC3381BL,NPNX2,80V,100MA,2-10M1B	TOSHIBA	2SC3281BL
010-0001-0	Q1 Q4-6 Q8 Q21	2SC3478, NPN,180V,100MA,TO-92	NEC	2SC3478-K
010-0003-0	Q11	2SC3502-F,NPN,200V,100MA,TO-126	TOSHIBA	2SC3502
010-0012-0	Q18-19 Q30	MPSA06, NPN,80V,500MA,TO-92	MOTOROLA	MPS-A06
010-0035-0	U3	LM35DT, TEMPERATURE SENSOR, TO-220	NATIONAL	LM35DT
010-1002-0	Q9-10 Q20	2SA1376, PNP,180V,100MA,TO-92	NEC	2SA1376-K
010-1003-0	Q14	2SA1380-F,PNP,200V,100MA,TO-126	SANYO/TOSHIBA	2SA1380-F/E
010-1013-0	Q12 Q15	MPSA56 PNP 80V 500MA TO-92	MOTOROLA	MPS-A56
012-0002-0	Q13 Q16-17	2SC4793,NPN,200V,1.5A,2-10R1A	TOSHIBA	2SC4793
012-0003-0	Q25-27 Q32 Q34-35	2SC5242,NPN,230V,15A,2-16C1A	TOSHIBA	2SC5242-O
012-1002-0	Q3 Q7 Q33	2SA1837,PNP,200V,1.5A,2-10R1A	TOSHIBA	2SA1837
012-1003-0	Q22-24 Q28-29 Q31	2SA1962,PNP,230V,15A,2-16C1A	TOSHIBA	2SA1962
014-0070-0	U5	LM317	NATIONAL	LM317
014-1072-0	U4	LM337	NATIONAL	LM337
020-0004-0	D13	1N755A, ZENER,7.5V,500MW ,D035	TAITRON	1N755A
020-0036-0	D5 D9	1N747A, ZENER, 3.6V, 5%, 400MW,	TAITRON	1N747A
020-0050-0	D8	1N751, ZENER,5.1V,10%,400MW,DO-35	NATIONAL	1N751
020-0240-0	D21	1N970B, ZENER, 24V, 5%, 500MW,	TAITRON	1N970B
020-1000-0	D2-4 D10-11 D14	1N4148, RECT-FAST, 200MA, 100V	MOTOROLA	1N4148
020-1022-0	D6-7	BAV20, RECT, 200V, DO-35	NATIONAL	BAV20
020-1104-0	D15	SHOTTKY, 1A, 40V, 10NS, DO-41	MOTOROLA	1N5819
020-1120-0	D1 D12	MUR120,RECT-FAST, 1A, 200V, 25NS,	MOTOROLA	MUR120
020-1122-0	D18-20 D22-24	MUR410, RECT-FAST, 4A, 100V	MOTOROLA	MUR410
020-2106-0	D16-17	1N4004,RECT,1A,400V,DO-41	TAITRON	1N4004
023-0112-0	BR1-3	BRIDGE, 25A, 200V, VERT, PC,	CHENG-YI	MP25-Q2S
031-1336-0	C20 C26	CAP,ELEC,RAD,336,20%,25V	UNITED CHEMI-CON	SRG25VB33RM5X7LL
031-2105-0	C21	CAP,ELEC,RAD, 105, 20%, 50V	UNITED CHEMI-CON	C440C105M5U5CA
031-2106-0	C33 C36-37	CAP,ELEC,RAD, 106, 20%, 50V	UNITED CHEMI-CON	SMG50VB10RM5X11LL
031-2106-A	C7	CAP,ELEC,RAD, 106, 20%, 50VNP	UNITED CHEMI-CON	SMEBP50VB10RM6X11LL
031-2107-0	C9 C31-32	CAP,ELEC,RAD,107, 20%, 50V	UNITED CHEMI-CON	SMG50VB101M8X11LL
031-2159-0	C30 C38 C40 C47	CAP, ELEC, RAD, 159, 20%, 50V	UNITED CHEMI-CON	SMH50VN153M35X45T2
031-2335-0	C13	CAP,ELEC,RAD,335,20%,50V	UNITED CHEMI-CON	SMG50VB3R3M5X11LL
031-4475-0	C16 C19	CAP,EL-R,4.7UF/100V, M	UNITED CHEMI-CON	SMG100VB4R7M5X11LL
031-4476-0	C14 C17	CAP,ELEC,RAD,476,-10%+50%,100V	UNITED CHEMI-CON	SMG100VB47RM10X12LL
032-4103-0	C23	CAP,PE,103,5%,100V,	PANASONIC	ECQV1103JM
032-4104-0	C4-6,18,24,34,35,41-46	CAP,PE,104,5%,100V,	PANASONIC	ECQV1104JM
032-4333-0	C11	CAP,PE,333,5%,100V,	PANASONIC	ECQV1333JM
032-4472-0	C1 C3 C8 C27-29	CAP,PE,472,5%,100V,	PANASONIC	ECQB1472JF
032-4474-0	C48	CAP,PE,474,5%,100V,	PANASONIC	ECQV1474JM
032-7104-0	C2 C25	CAP,PE,104,10%, 250V	ILLINOIS CAPACITOR	104MSR250K
034-4221-0	C10	CAP,MCR,220pF,5%,100V,	TAITRON	TMRS221J100NPOB
034-4471-0	C12	CAP,MCR,470pF,5%,100V,	TAITRON	TMRS471J100NPOB
034-7103-0	C39	CAP, CERMIC DISK, 103, 10%, X-250V	PANASONIC	ECK-DRS103ZV
035-8030-0	C15	CAP MICA AXIAL , 3pF, 10%, 500V	CORNELL	CD10CD030D03
035-8561-0	C22	CAP MICA RADIAL, 561, 5%, 300V	CORNELL	CD15FC561J103
052-2212-0	R43 R45	RES,METAL FILM,2.21k,1/4W,1%	ECI	M2F1AK002.21
052-5622-0	R25 R35	RES,METAL FILM,5.62K,1/4W,1%	ECI	M5F1AK005.62
053-0270-0	R1	RES ,CARBON FILM,2.7 ,1/2W,5%	ECI	R5J3AJ002.70
054-.100-0	R52,53,55,56,58-60,63 R64,66-68	RES, METAL OXIDE, 0.1 Ohm, 1W, 5%	ECI	MO10J3AJ000.10
054-.330-0	R79	RES, METAL OXIDE, 0.33 OHM, 1W, 5%	ECI	MO10J3AJ000.33
055-0101-0	R47-48	RES, METAL OXIDE, 10 OHM, 2W, 5%	ECI	MOM20J3AJ010.00
055-2702-0	R70-71	RES, METAL OXIDE, 2.7K OHM, 2W, 5%	ECI	MOM20J3AK002.70
056-0100-0	R46	RES, CERAMIC WW, 1.0 OHM, 5W, 10%	ECI	WWC50J3AJ001.00
059-1000-0	R17 R39	RES,MF,FUSE,10.0, 1/4W,1%	JUKN.OHM	FR25-10.0
059-1002-0	R20 R31 R50 R75 R78	RES,MF,FUSE,1.00K,1/4W,1%	JUKN.OHM	FR25-1.00K
059-4750-0	R26 R33	RES,MF,FUSE,47.5, 1/4W,1%	JUKN.OHM	FR25-47.5
059-6810-0	R61	RES,MF,FUSE,68.1, 1/4W,1%	JUKN.OHM	FR25-68.1
060-1001-0	R72	RES, METAL FILM, 100, 1/8W, 1%	ECI	M1F1AJ100.00
060-1002-0	R3,7,8,13,19,30,38,49	RES,METAL FILM, 1.00K, 1/8W, 1%	ECI	M1F1AK001.00
060-1003-0	R40-41	RES,METAL FILM, 10.0K, 1/8W,1%	ECI	M1F1AK010.00
060-1004-0	R36 R44	RES,METAL FILM, 100K, 1/8W, 1%	ECI	M1F1AK100.00
060-1213-0	R9 R18	RES,METAL FILM, 12.1K, 1/8W,1%	ECI	M1F1AK012.10