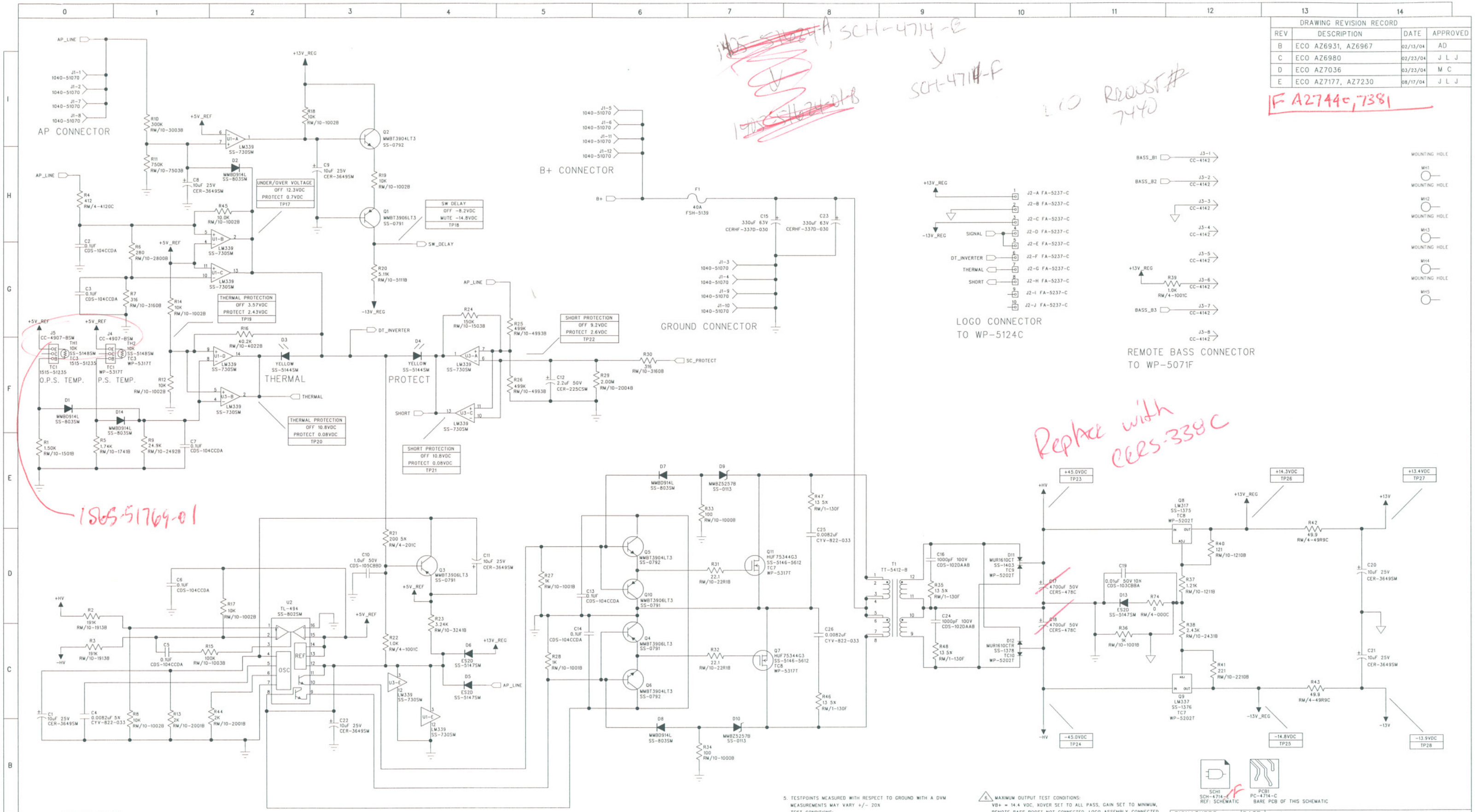
DRAWING REVISION RECORD			
REV	DESCRIPTION	DATE	APPROVED
B	ECO AZ6931, AZ6967	02/13/04	AD
C	ECO AZ6980	02/23/04	J L J
D	ECO AZ7036	03/23/04	M C
E	ECO AZ7177, AZ7230	08/17/04	J L J

F A27440, 7381

SCH-4714-E

SCH-4714-F

ECO REQUEST # 7440



5. TESTPOINTS MEASURED WITH RESPECT TO GROUND WITH A DVM MEASUREMENTS MAY VARY +/- 20%
TEST CONDITIONS:
VB+ = 13.8 VDC, XOVER SET TO ALL PASS, GAIN SET TO MINIMUM, REMOTE BASS BOOST NOT CONNECTED, LOGO ASSEMBLY CONNECTED.
DC TEST POINTS MEASURED WITH NO INPUT SIGNAL
AC TEST POINTS MEASURED WITH 500 mVAC 1kHz UNBALANCED SINE WAVE AT INPUT JACK. 2 OHM LOAD PER CHANNEL AT OUTPUT CONNECTOR
4. ALL CAPACITORS 20% TOLERANCE.
3. ALL RESISTORS IN OHMS, 1% TOLERANCE.
2. THIS SCHEMATIC IS FOR THE FOLLOWING PCB ASSEMBLIES: WP-4714
1. THIS SCHEMATIC IS FOR THE FOLLOWING PCB FABRICATION: PC-4714
NOTES: (UNLESS OTHERWISE SPECIFIED)

6. MAXIMUM OUTPUT TEST CONDITIONS:
VB+ = 14.4 VDC, XOVER SET TO ALL PASS, GAIN SET TO MINIMUM, REMOTE BASS BOOST NOT CONNECTED, LOGO ASSEMBLY CONNECTED.
4.18 VAC 1kHz SINE WAVE AT INPUT JACK, 2 OHM LOAD AT OUTPUT CONNECTOR.
VOUT = 24.5 VAC, POWER OUT = 300 W
THD+N <= 0.08%, 10Hz - 22kHz FILTERED.

SIGNATURES		DATE
DRAWN	RJP	10/27/03
CHECKED		
DSGN ENGR		
PROD ENGR		
Q.A. ENGR		
DESIGN REVIEW		
DSGN ENGR		
DSGN ENGR		
DSGN ENGR		
COMMENTS		

ROCKFORD CORPORATION
FOSGATE DIVISION TEMPE AZ

DRAWING TITLE: 2004 PUNCH - P3001 POWER SUPPLY

SIZE	FILE NAME:	DWG/PART NO:	REV
B	SCH-4714-E.SCH	SCH-4714	E

SCALE: DO NOT SCALE DRAWING SHEET 1 OF 2

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DRAWING REVISION RECORD			
REV	DESCRIPTION	DATE	APPROVED
	SEE SHEET 1		

X-OVER 40-400Hz

SUMMER

500mVAC TP1 — INPUT_L — R187 20K RM/10-2002B
INPUT_R — R188 20K RM/10-2002B — 500mVAC TP2
R101 10K RM/10-1002B
C100 100PF 5% CDS-101CAAA
U104-A TL072 SS-4141SM
R102 20K RM/10-2002B — 500mVAC TP7
R106 32.4K RM/10-3242B
R105 10K RM/10-1002B
R109 10K RM/10-1002B — 500mVAC TP8
U102-B TL072 SS-4141SM

FREQ

RV100-A 20K ANTILOG RV-4778
C103 0.15uF 5% CYV-154-033
R117 1.00M RM/10-1004B
U100-B TL072 SS-4141SM
R108 20K RM/10-2002B
R113 2K RM/10-2001B
U100-A TL072 SS-4141SM — 500mVAC TP9

FREQ

RV100-B 20K ANTILOG RV-4778
R118 2K RM/10-2001B
C106 0.15uF 5% CYV-154-033
R120 1.00M RM/10-1004B
U102-A TL072 SS-4141SM — 3.0VAC TP10

X-OVER
HIGH PASS
ALL PASS
LOW PASS
X-OVER
S100-A SW-5222

R115 8.06K RM/10-8061B
R107 5.6K RM/10-5621B

INPUTS

INPUT — 500mVAC TP3 — J103-A CC-5131-A — C121 10uF 25V CER-36495M — R100 10K RM/10-1002B
J101-A CC-5131-A — PASS-THRU
C123 100PF 5% CDS-101CAAA
R185 10K RM/10-1002B
U103-B TL072 SS-4141SM — INPUT_L

INPUT — 500mVAC TP4 — J103-B CC-5131-A — C122 10uF 25V CER-36495M — R184 10K RM/10-1002B
J101-B CC-5131-A — PASS-THRU
C124 100PF 5% CDS-101CAAA
R186 10K RM/10-1002B
U103-A TL072 SS-4141SM — INPUT_R

GAIN

X-OVER — U104-B TL072 SS-4141SM — 500mVAC TP5
R112 3.92K RM/10-3921B
GAIN — 20K LINEAR RV101-A RV-4785 — +3 CW
R110 100 RM/10-1000B
R116 10K RM/10-1002B

45Hz BASS BOOST

BASS_B1 — R103 12.1K RM/10-1212B — C101 0.68uF 5% CYV-684-033 — C102 0.047uF 5% CYV-473-033 — R111 1.00K RM/10-1001B — U101-A TL072 SS-4141SM
R104 20K RM/10-2002B
R183 182K RM/10-1823B
R114 10.0M RM/10-1005B
BASS_B2
BASS_B3
U101-B TL072 SS-4141SM — 500mVAC TP6 — SIGNAL
C104 150PF 5% CDS-151CAAA
R119 8.66K RM/10-8661B

+13V — U104-C U102-C U100-C U101-C U103-C TL072 SS-4141SM — -13V

SC_PROTECT — D100 MMBD914L SS-8035M
Q100 MMBT3906LT3 SS-0791 — R128 499 RM/10-4990B
Q105 MMBT3906LT3 SS-0791 — R135 499 RM/10-4990B
R139 1K RM/10-1001B — R140 1K RM/10-1001B — Q107 MMBT3904LT3 SS-0792
R130 249K RM/10-2493B
C111 0.1uF 5% CDS-104CABA

+13V_REG — R123 49.9 RM/4-49R9C — C108 10uF 25V CER-36495M
+13V_L

R132 300 RM/10-3010B — Q102 MMBT3906LT3 SS-0791
R137 300 RM/10-3010B — Q106 MMBT3906LT3 SS-0791

D103 MMBD914L SS-8035M
R145 1K RM/10-1001B — R151 47.5 RM/10-47R5B — Q109 MMBT3906LT3 SS-0791 — 680mVAC TP11
C115 270PF 5% CDS-271CAAA — R148 510 RM/10-5110B

D108 BAV99L SS-2605M
C105 10uF 25V CER-36495M — R121 3.32K RM/10-3321B — R122 20K RM/10-2002B — C107 4.7PF 5% CDS-047CAAA
Q121 MMBT5088LT1 SS-0114 — Q103 MMBT5088LT1 SS-0114
R126 34 RM/10-0340B — R131 34 RM/10-0340B

SW_DELAY — R124 100 RM/10-1000B — Q101 MMBT3904LT3 SS-0792
SW DELAY: OFF -8.9VDC; MUTE -14.8VDC; TP16
R129 3.24K RM/10-3241B — R125 49.9 RM/4-49R9C — -13V_REG
C109 10uF 25V CER-36495M — -13V_L

R136 20K RM/10-2002B — C113 4.7PF 5% CDS-047CAAA — R133 3.32K RM/10-3321B — OUTPUT
C112 CER-36495M 10uF 25V

BIAS

R142 5.11K RM/10-5111B
R195 665 RM/10-6650B — R143 2K RM/10-2023 CW — R144 301 RM/10-3010B
J100 CC-4907-BSM TRK100 — MMBT5521LT SS-5149SM — TC5 1515-51235 — TC4 1515-51235
R152 10 RM/10-0100B
C114 270PF 5% CDS-271CAAA — R147 510 RM/10-5110B — 680mVAC TP12
Q110 MMBT3904LT3 SS-0792
R146 1K RM/10-1001B — R150 47.5 RM/10-47R5B — -13V_L

+HV
Q112 MMBT3906LT3 SS-0791 — R149 10K RM/10-1002B — R153 1.5K RM/10-1501B
C116 10uF 63V CER-1060SM
Q113 MMBT3904LT3 SS-0792 — D104 MMBD914L SS-8035M

R158 1K RM/10-1001B — R155 7.5K RM/10-7152B — R160 5.11K RM/10-5111B — D105 MMBD914L SS-8035M — +13V_L
Q117 MMBT3906LT3 SS-0791 — R161 1K RM/10-1001B — R169 154K RM/10-1543B — -13V_L

R163 511 RM/10-5110B
Q124 PZTA06 SS-5150SM — R175 10.0 RM/10-0100B — R176 34 RM/10-0340B — R180 0.10 5% 3W 1205-51419
D107 BAV99L SS-2605M — R198 22.1 RM/10-22R1B — R196 0 RM/10-000B
Q125 PZTA56 SS-5151SM — R199 22.1 RM/10-22R1B — +13V_L
580mVAC TP14 — R170 10.0 RM/10-0100B — Q118 FQA36P15 SS-53997-5612 TC7 WP-5319T
R189 0.10 5% 3W 1205-51419 — R190 34 RM/10-0340B — +HV — C120 10uF 63V CER-1060SM

BIAS SET
MEASURE ACROSS R180 = 2.0mVDC
MEASURE ACROSS R189 = 2.0mVDC
MEASURE ACROSS R181 = 2.0mVDC
MEASURE ACROSS R193 = 2.0mVDC

R191 10.0 RM/10-0100B — Q122 FQA36P15 SS-53997-5612 TC8 WP-5319T — OUTPUT (+)
Q114 PZTA06 SS-5150SM — C125 150pF 50V 5% CDS-151CAAA
R156 7.5K RM/10-7152B — R164 604 RM/10-6040B
3.00VAC TP15 — OUTPUT
C118 0.1uF 50V CYV-104-033 — C127 0.1uF 50V CYV-104-033 — R182 5.11K RM/4-5111C
R157 7.5K RM/10-7152B — R165 604 RM/10-6040B — C126 150pF 50V 5% CDS-151CAAA
Q115 PZTA56 SS-5151SM — R172 5.1 5% 1W RM1-5R1F — R173 5.1 5% 1W RM1-5R1F — R1002 2.7 5% RM/4-027D
Q126 PZTA06 SS-5150SM — -13V_L
R1000 22.1 RM/10-22R1B — R171 22.1 RM/10-22R1B — Q120 FQA28N15 SS-5145T-5612 TC7 1515-51235 — Q123 FQA28N15 SS-5145T-5612 TC8 1515-51235 — R192 22.1 RM/10-22R1B
D109 BAV99L SS-2605M — R197 0 RM/10-000B — R1001 22.1 RM/10-22R1B — 580mVAC TP13
Q127 PZTA56 SS-5151SM — R162 511 RM/10-5110B
R178 34 RM/10-0340B — R177 10.0 RM/10-0100B — R181 0.10 5% 3W 1205-51419 — R194 34 RM/10-0340B — R193 0.10 5% 3W 1205-51419
-HV — C119 10uF 63V CER-1060SM

J9-5 CC-4919-A — J9-6 CC-4919-A — J9-1 CC-4919-A — J9-2 CC-4919-A — J9-3 CC-4919-A — J9-4 CC-4919-A — J9-7 CC-4919-A — J9-8 CC-4919-A — GROUND (-)

D101 MMBD914L SS-8035M — D102 MMBD914L SS-8035M
Q111 MMBT3906LT3 SS-0791 — C117 10uF 63V CER-1060SM — -HV
R154 1.5K RM/10-1501B — R159 10K RM/10-1002B
R168 5.11K RM/10-5111B — D106 MMBD914L SS-8035M — -13V_L
R166 7.5K RM/10-7152B — R179 162K RM/10-1623B — +13V_L
R174 1K RM/10-1001B — R167 1K RM/10-1001B
Q116 MMBT3904LT3 SS-0792 — Q119 MMBT3904LT3 SS-0792 — -HV

C110 0.1uF 5% CDS-104CABA — R127 249K RM/10-2493B
Q104 MMBT3904LT3 SS-0792 — R134 499 RM/10-4990B — Q108 MMBT3906LT3 SS-0791
R138 1K RM/10-1001B — R141 1K RM/10-1001B — -HV

1515-51769-01

NOTES --> SEE SHEET 1 FOR NOTES.

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SIGNATURES		DATE
DRAWN	RJP	10/27/03
CHECKED		
DESIGN ENGR		
PROD ENGR		
QA ENGR		
DESIGN REVIEW		
DESIGN ENGR		
PROD ENGR		
QA ENGR		
COMMENTS		

ROCKFORD CORPORATION
FOSGATE DIVISION — TEMPE AZ

DRAWING TITLE:
2004 PUNCH - 3001
MONO AMPLIFIER

SIZE	FILE NAME:	DWG/PART NO:	REV.
B	SCH-4714-E.SCH	SCH-4714	E
SCALE:	DO NOT SCALE DRAWING	SHEET 2 OF 2	