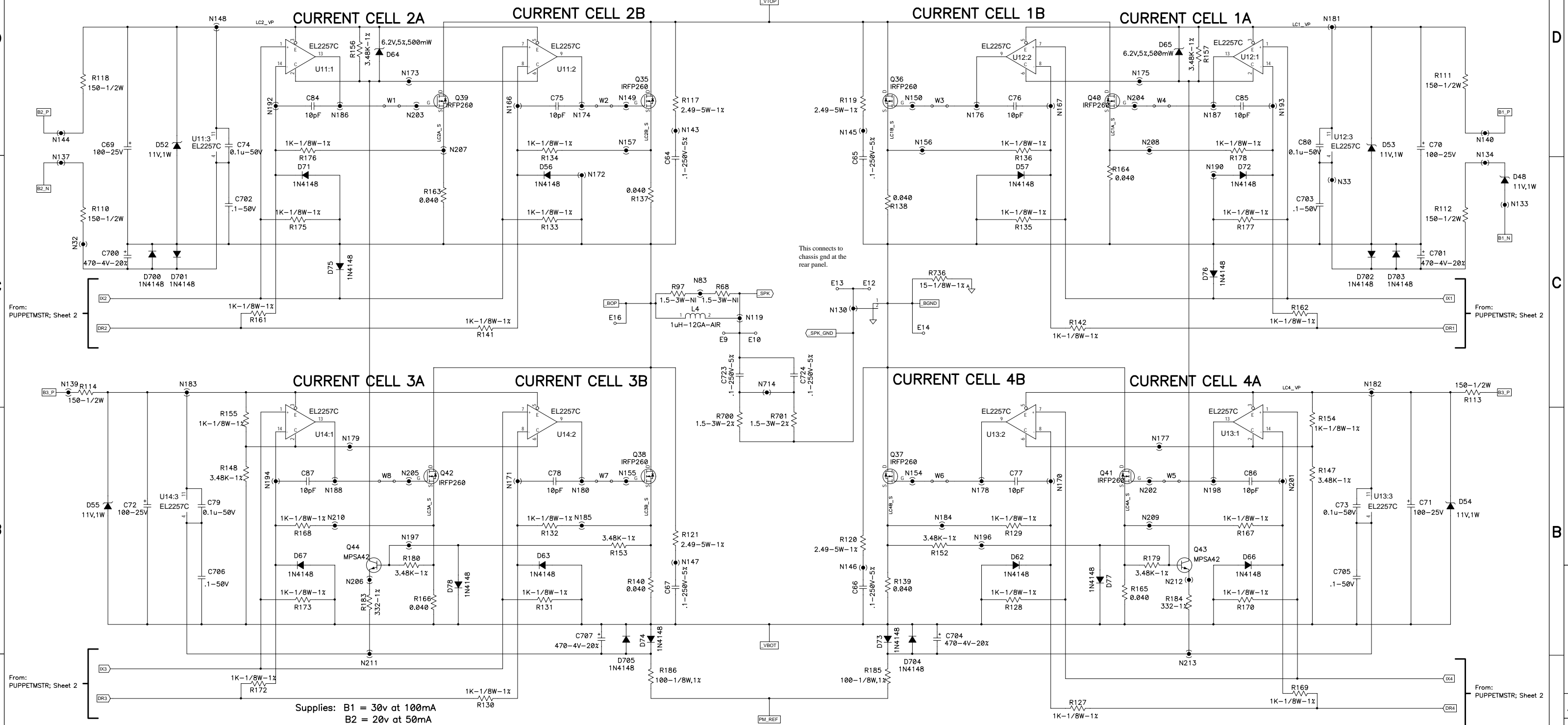


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# LC\_OUTPUTS



Supplies: B1 = 30v at 100mA  
 B2 = 20v at 50mA  
 B3 = 40v at 60mA  
 B4 = 27v at 50mA

1. THIS DRAWING USED IN CONJUNCTION WITH ASSEMBLY WP-000261-00 AND FABRICATION DRAWING PC-000171-00.
2. COMPONENTS WITH VALUE PREFIXED WITH A "\*" REPRESENT SMT COMPONENTS.
3. ALL CAPACITORS 100V, TOLERANCE 20% FOR ELECTROLYTIC TYPES, 10% ON ALL OTHERS.
4. R1 IS A POSITIVE TEMPERATURE COEFFICIENT RESISTOR MOUNTED TO HEAT SINK. RESISTANCE IS 100 MAX OHM COLD.

NOTES: UNLESS OTHERWISE SPECIFIED

QTY	ITEM NO.	PART NO.	DESCRIPTION	VENDOR
<b>PARTS LIST</b>				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. DIMENSIONS PER ANSI Y14.5-1982 TOLERANCES ARE: DECIMALS DECIMALS ANGLES .XX ± .XXX ± °			CONTRACT NO.	
DRAWN R. BALTHAZAR			DATE 1/25/99	
CHECKED			ISSUED	
NEXT ASSY			USED ON	
APPLICATION			DO NOT SCALE DRAWING	
WP-000261-00 PL 6.0			CAD SEED FILE NO.	
NEXT ASSY			USED ON	
APPLICATION			DO NOT SCALE DRAWING	
NEXT ASSY			USED ON	
APPLICATION			DO NOT SCALE DRAWING	

**QSC AUDIO PRODUCTS, INC.**  
 COSTA MESA, CALIFORNIA

**SCHEMATIC DIAGRAM**  
**MAIN PCB, PL 6.0**

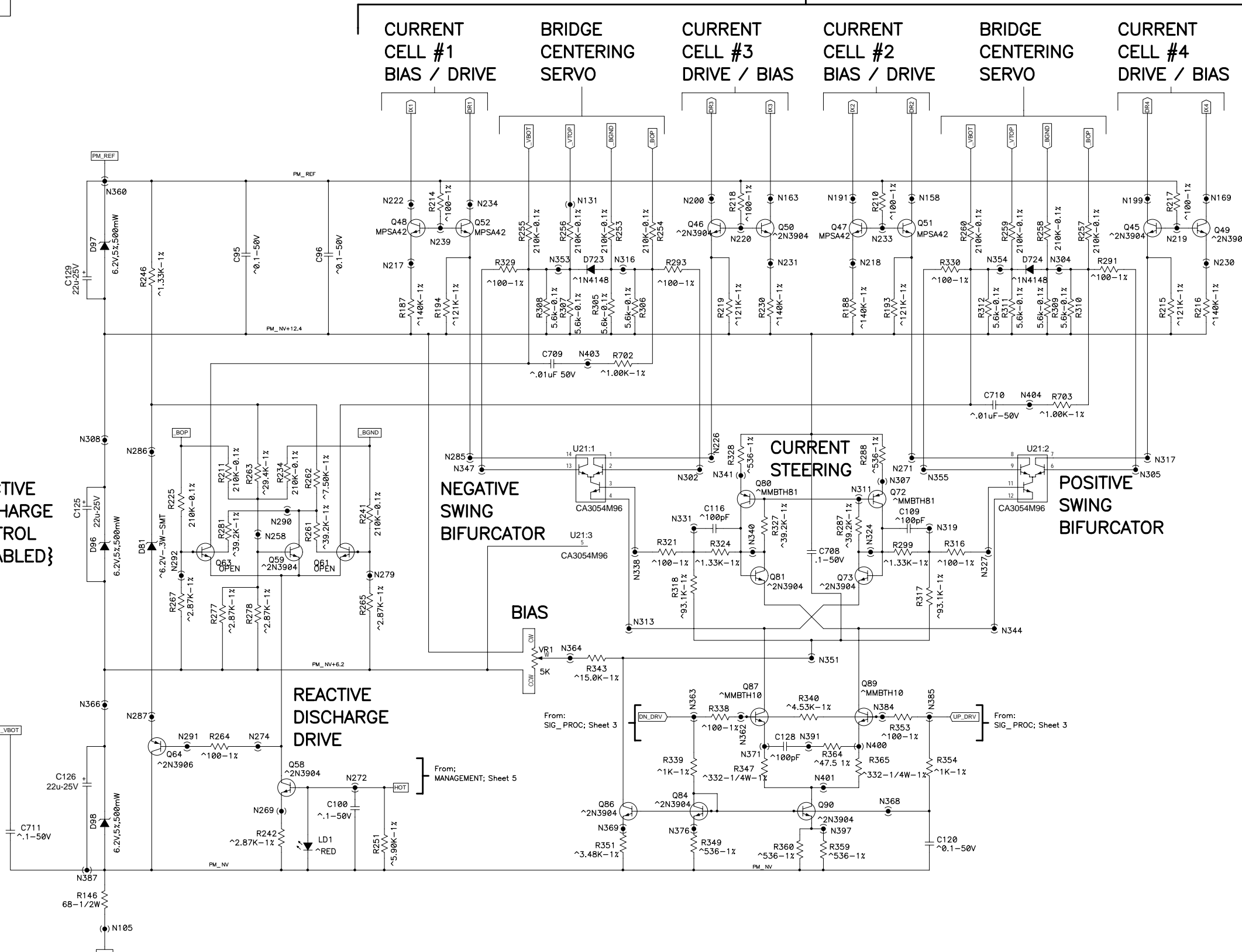
SCALE: NONE  
 DWG NO: SH-000261-00  
 SHEET 1 OF 7

SH-000261-00

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# PUPPETMSTR

To:  
LC\_OUTPUTS; Sheet 1



REACTIVE DISCHARGE CONTROL {DISABLED}

NEGATIVE SWING BIFURCATOR

BIAS

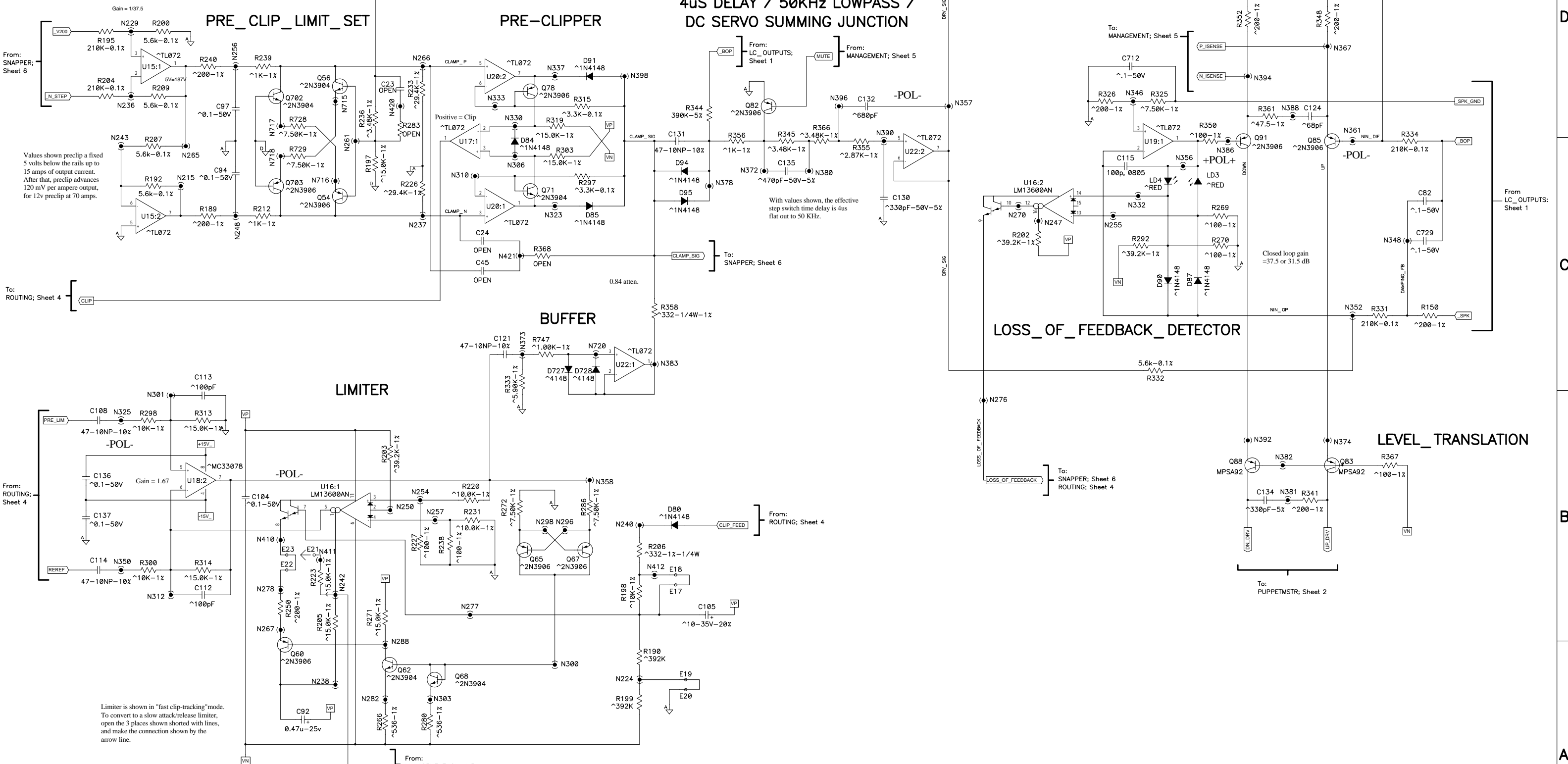
CURRENT STEERING

POSITIVE SWING BIFURCATOR

REACTIVE DISCHARGE DRIVE

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# SIG\_PROC



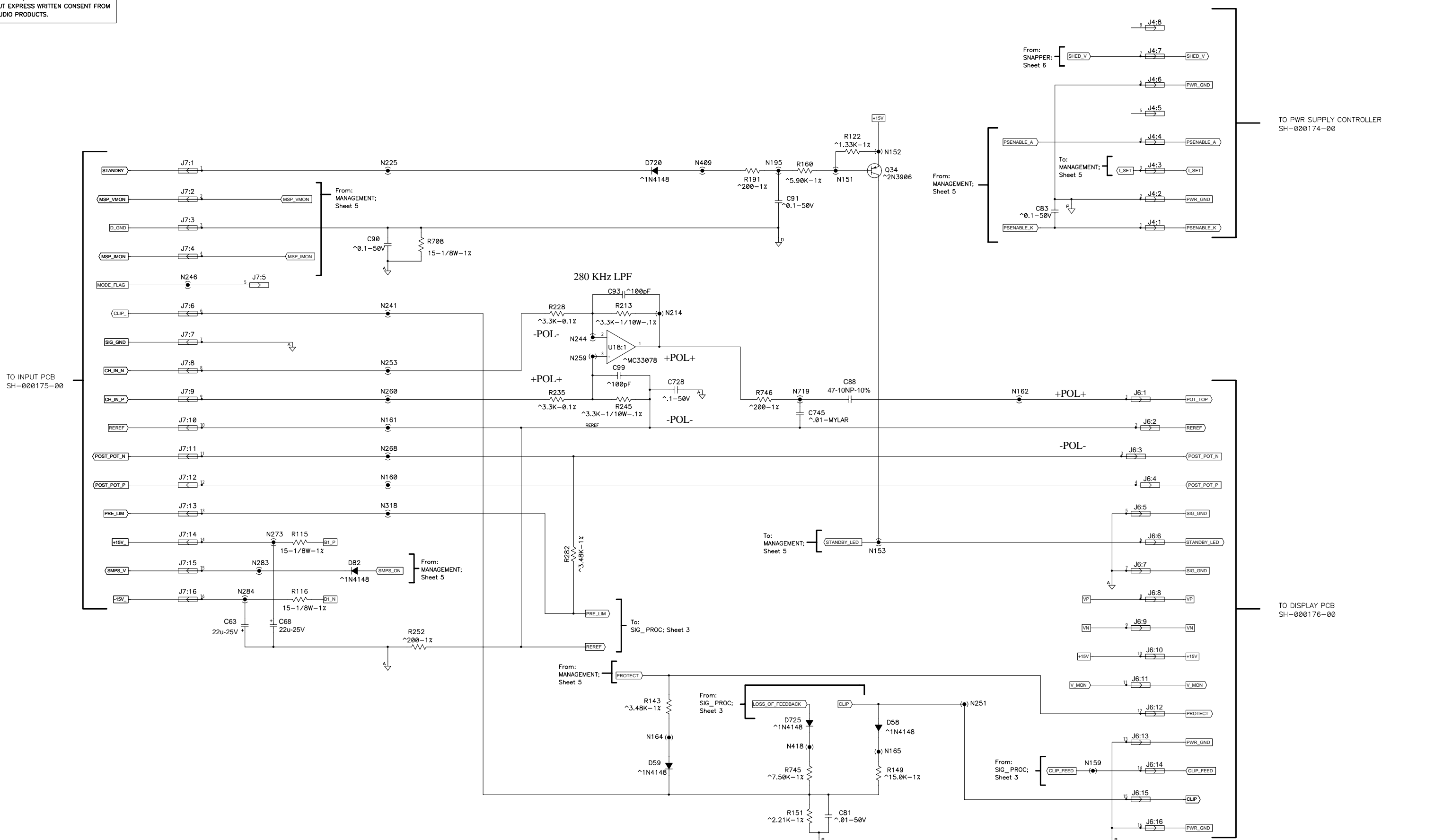
Values shown preclip a fixed 5 volts below the rails up to 15 amps of output current. After that, preclip advances 120 mV per ampere output, for 12v preclip at 70 amps.

With values shown, the effective step switch time delay is 4us flat out to 50 KHz.

Limiter is shown in "fast clip-tracking" mode. To convert to a slow attack/release limiter, open the 3 places shown shorted with lines, and make the connection shown by the arrow line.

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# ROUTING



DWG NO. SH-000261-00  
 REV. 4



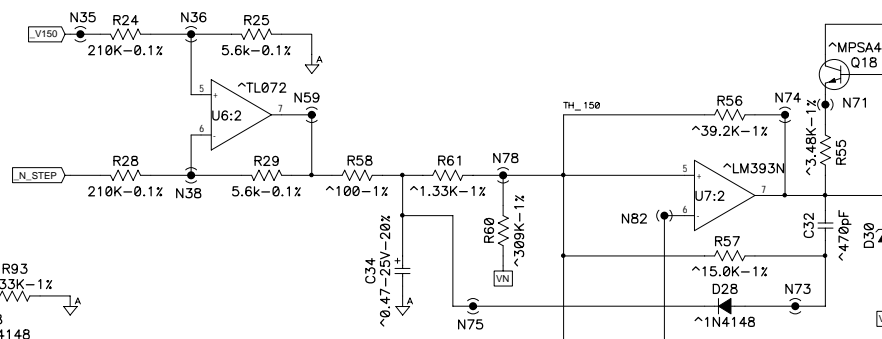
THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION WHICH IS THE PROPERTY OF QSC AUDIO PRODUCTS, THAT MAY NOT BE DISCLOSED, REPRODUCED OR USED WITHOUT EXPRESS WRITTEN CONSENT FROM QSC AUDIO PRODUCTS.

# SNAPPER

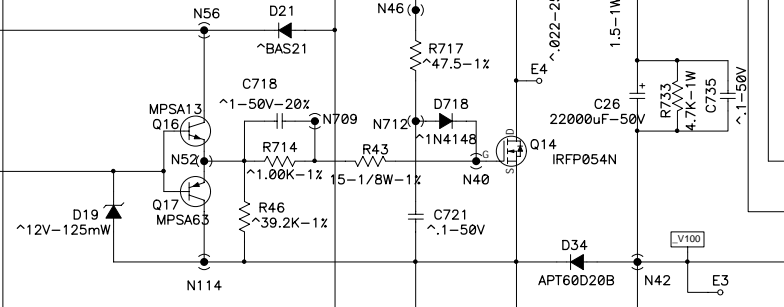
## STEP SWITCH CIRCUIT

Clamps caps to 48-54V

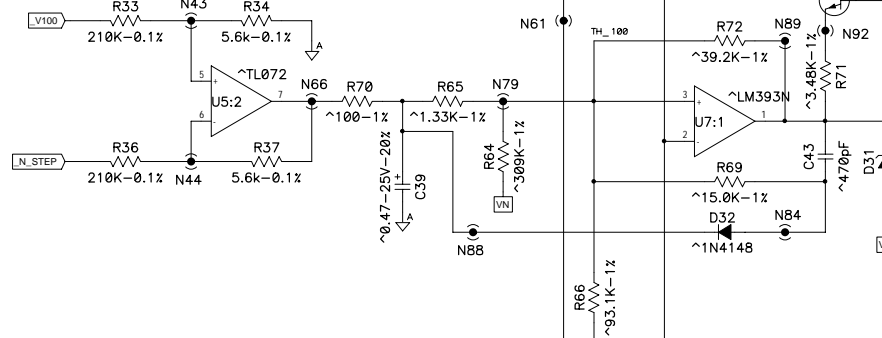
### THRESHOLD DETECTOR / COMPARATOR



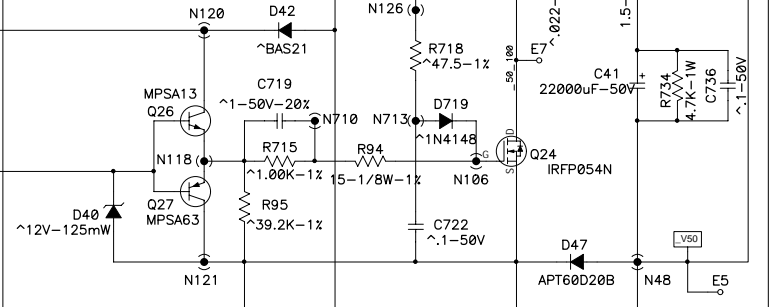
### STEP SWITCH CIRCUIT



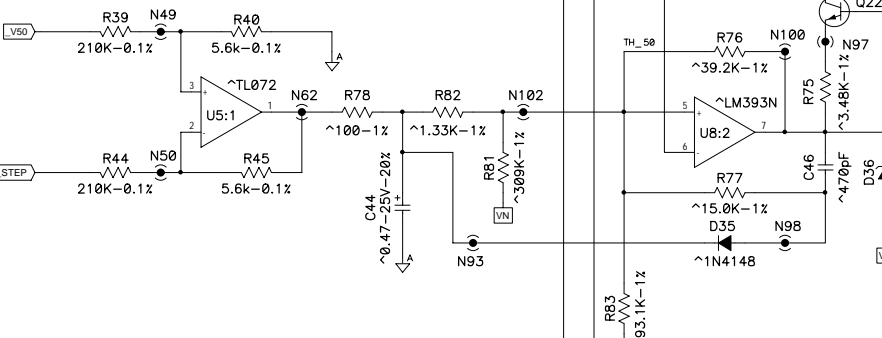
### THRESHOLD DETECTOR / COMPARATOR



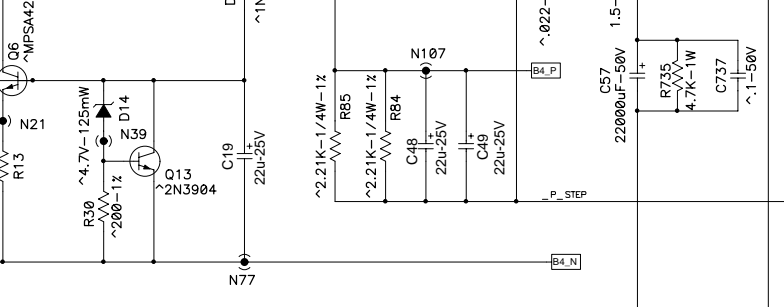
### STEP SWITCH CIRCUIT



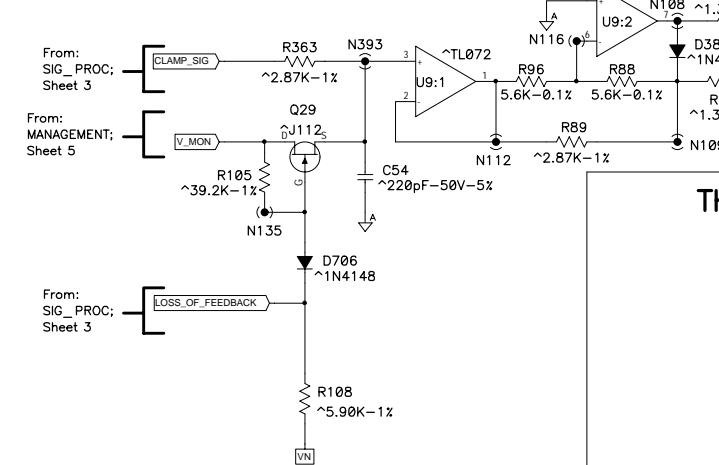
### THRESHOLD DETECTOR / COMPARATOR



### STEP SWITCH CIRCUIT



### STEP DRIVE SELECTOR / RECTIFIER

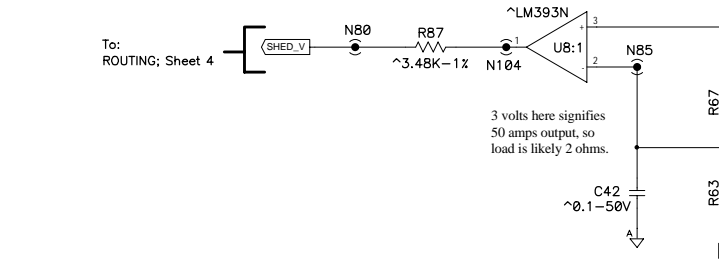


NOTE: This opamp must not clamp its input terminals together. TL072 or EQIV!!!

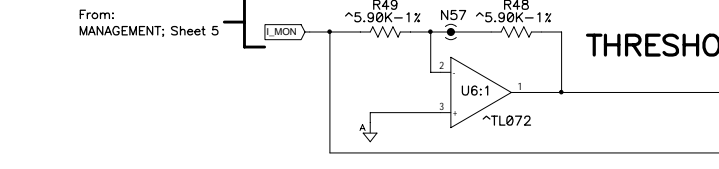
### STEP SHUTDOWN



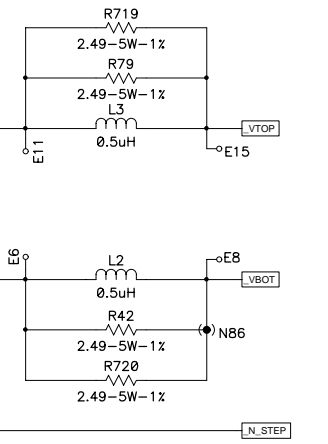
### Power Limiter {Disabled via SMPS}



### THRESHOLD COMPENSATION



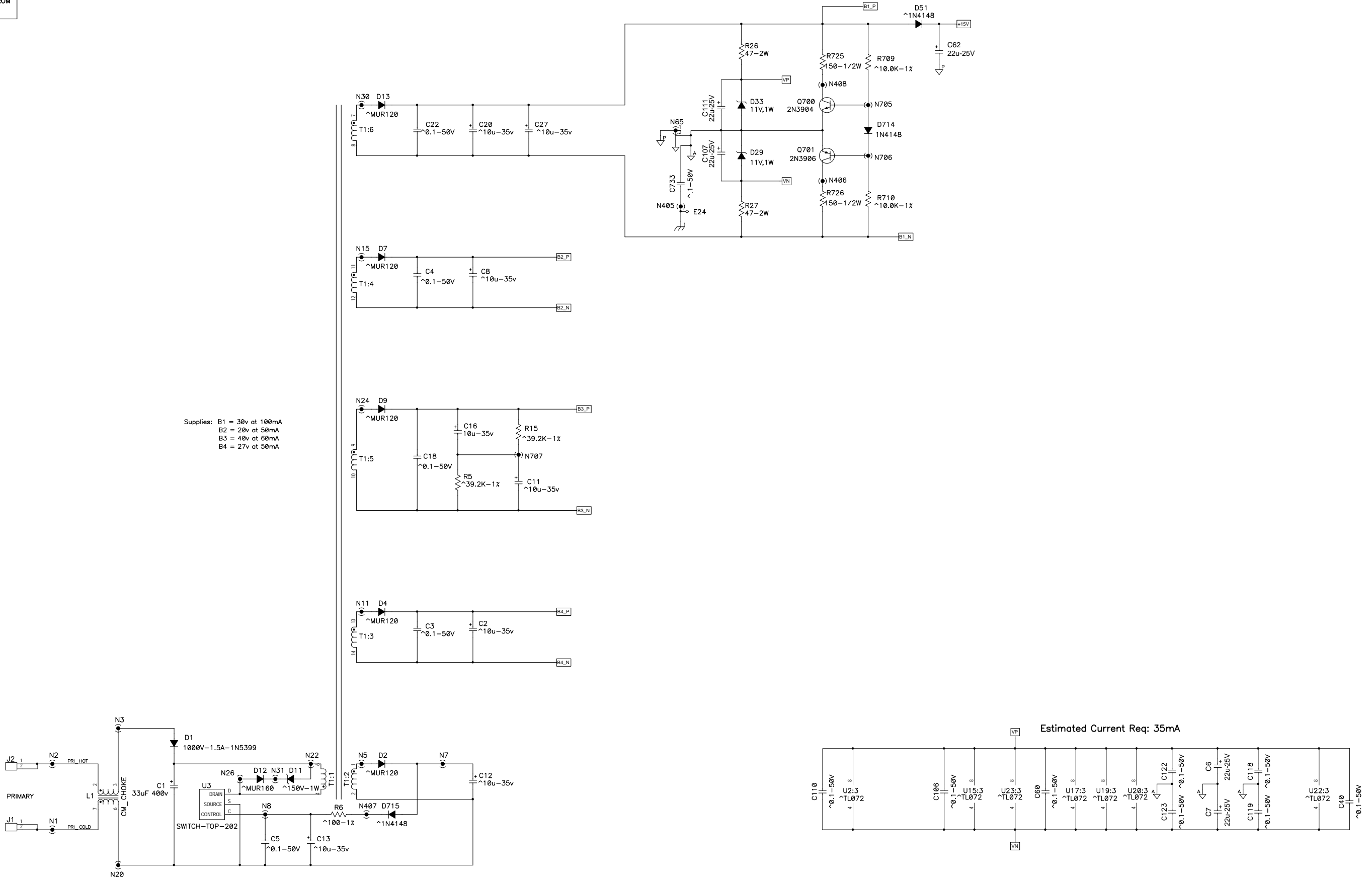
### ISOLATION



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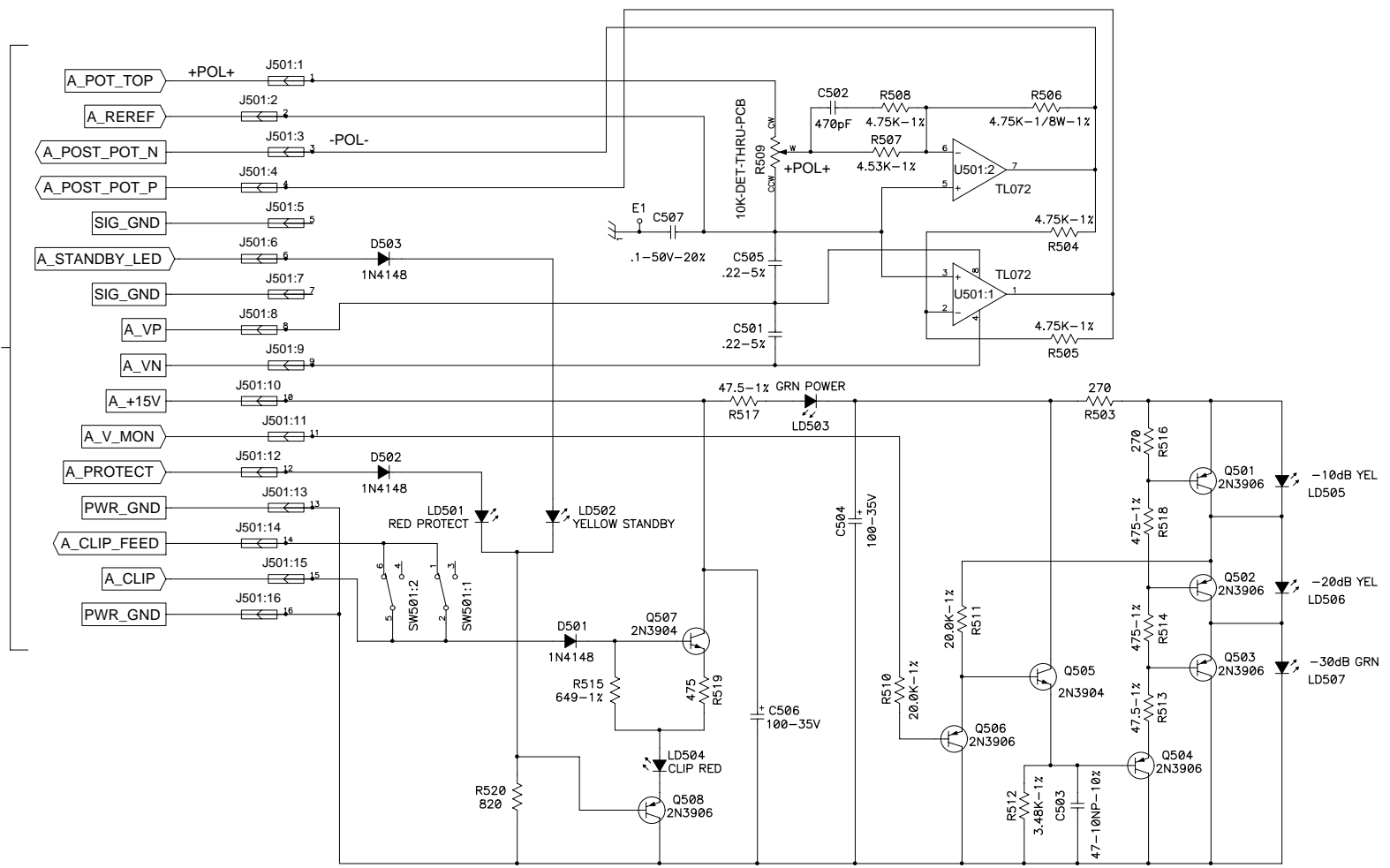
# HK\_SUPPLY

Supplies: B1 = 30v at 100mA  
 B2 = 20v at 50mA  
 B3 = 40v at 60mA  
 B4 = 27v at 50mA



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TO MAIN PCB  
SH-000171-00  
SHEET 4



- 4. CH 1 COMPONENTS NUMBERED 501-599.  
CH2 COMPONENTS NUMBERED 601-699.
  - 3. ALL CAPACITORS ARE IN MICROFARADS.
  - 2. ALL RESISTORS ARE IN OHMS, 1/4W, 5%.
  - 1. THIS DRAWING USED IN CONJUNCTION WITH ASSEMBLY WP-000176-00  
AND FABRICATION DRAWING PC-000176-00.
- NOTES: UNLESS OTHERWISE SPECIFIED

QTY	ITEM NO.	PART NO.	DESCRIPTION	VENDOR
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. DIMENSIONS PER ANSI Y14.5-1982 TOLERANCES ARE: DECIMALS    DECIMALS    ANGLES .XX ±        .XXX ±        °			CONTRACT NO.	
MATERIAL			APPROVALS    DATE	
FINISH			DRAWN P. Ierymenko    11-30-95	
NEXT ASSY			CHECKED RCM    5-13-98	
APPLICATION			ISSUED TIM SHOOK    5-15-98	
DO NOT SCALE DRAWING			CAD SEED FILE NO.    PLOT DATE: The May 04, 2000	
SCALE NONE		CAD FILE NO. SH176-b.sch		SHEET 1 OF 2

**QSC AUDIO PRODUCTS, INC.**  
COSTA MESA, CALIFORNIA

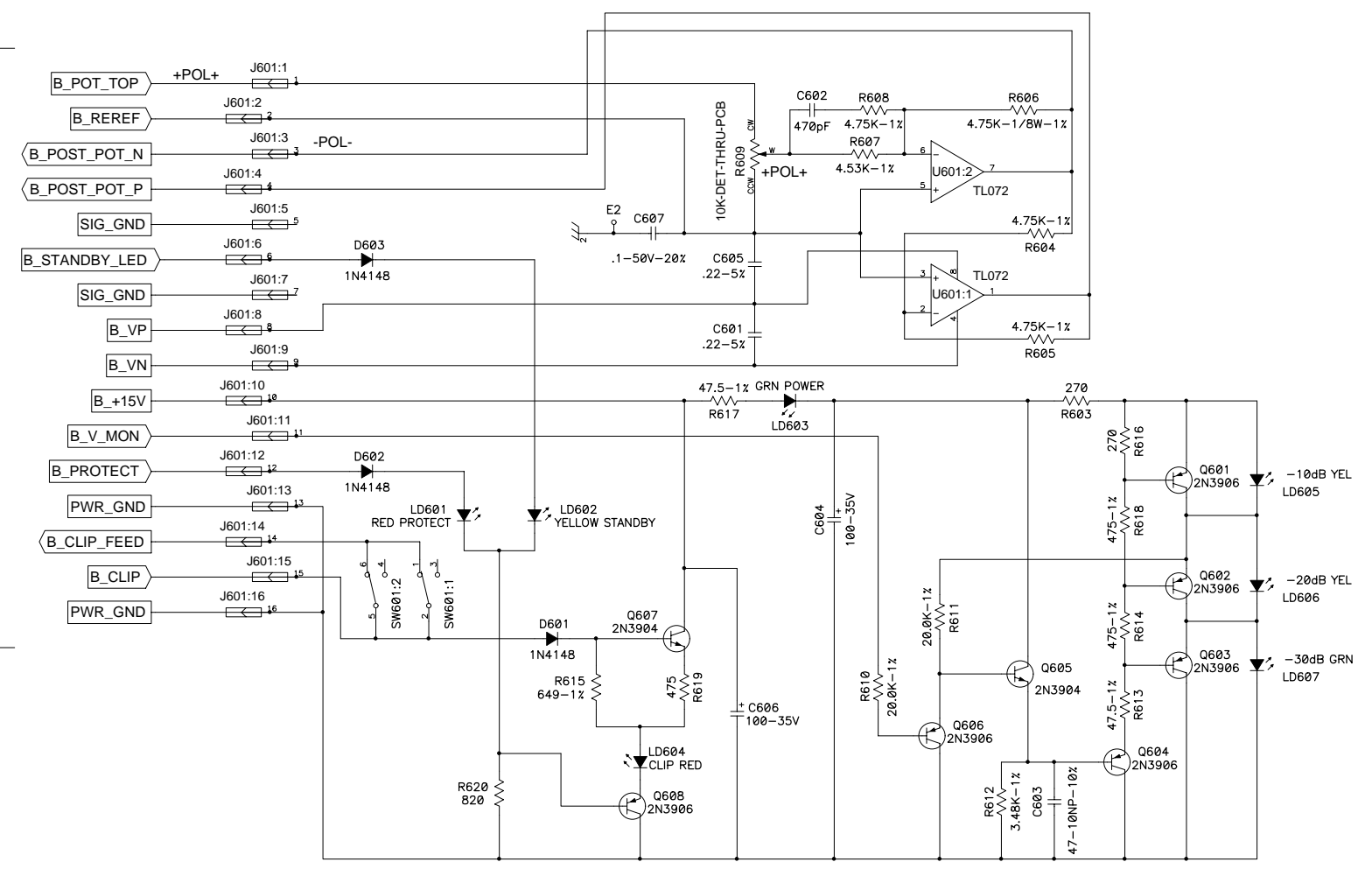
**SCHEMATIC DIAGRAM**  
**DISPLAY PCB, PL 9.0 & 6.0**

1 SH-000176-00  
REV.    DWG. NO.



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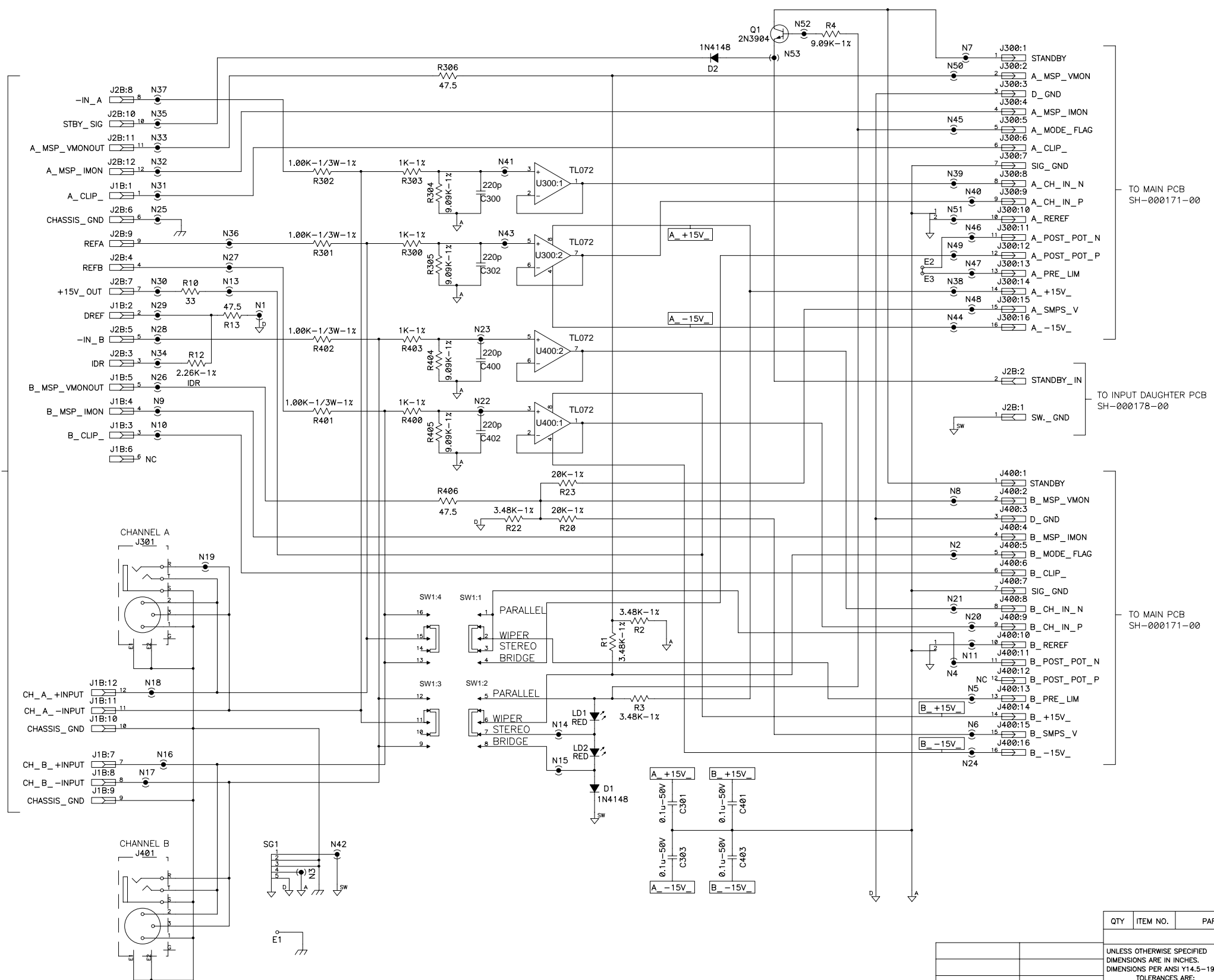
TO MAIN PCB  
SH-000171-00  
SHEET 4



SIZE	FSCM NO.	DWG NO.	REV
D		SH-000176-00	
SCALE	CAD FILE NO.	SHEET	2 OF 2
	Sh176-b.sch		

REV 2 SH-000176-00 DWG NO.

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1. THIS DRAWING USED IN CONJUNCTION WITH ASSEMBLY WP-000265-00 AND FABRICATION DRAWING PC-000175-00.  
 NOTES: UNLESS OTHERWISE SPECIFIED

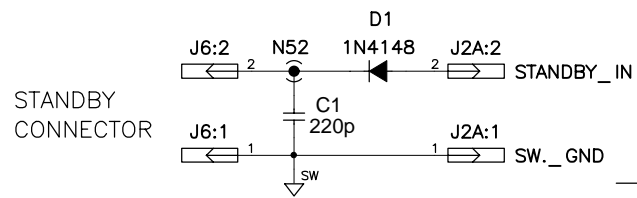
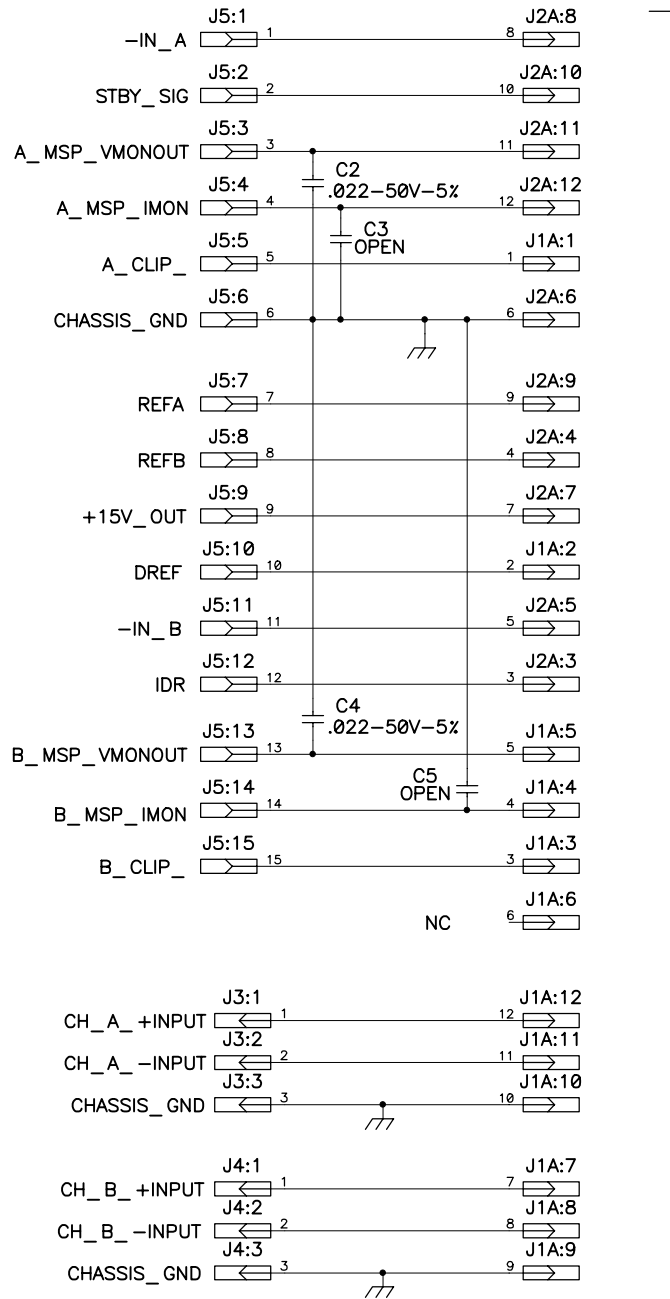
QTY	ITEM NO.	PART NO.	DESCRIPTION	VENDOR
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. DIMENSIONS PER ANSI Y14.5-1982 TOLERANCES ARE:			CONTRACT NO.	
DECIMALS	DECIMALS	ANGLES	APPROVALS	DATE
.XX ±	.XXX ±	0	DRAWN	1/25/99
DEBURR EDGES .XXX R MAX MATERIAL			CHECKED	
WP-000265-00	PL 6.0	FINISH	ISSUED	SIZE FSCM NO.
NEXT ASSY	USED ON			D
APPLICATION		DO NOT SCALE DRAWING	CAD SEED FILE NO.	DWG NO. SH-000265-00
			PLOT DATE: Thu May 04, 2000	REV
			SCALE NONE	SHEET 1 OF 1
			CAD FILE NO. SH0265-a.sch	P:6.0

**QSC AUDIO PRODUCTS, INC.**  
 COSTA MESA, CALIFORNIA

**SCHEMATIC DIAGRAM**  
**INPUT PCB, PL 6.0**

1 SH-000265-00  
 REV 1

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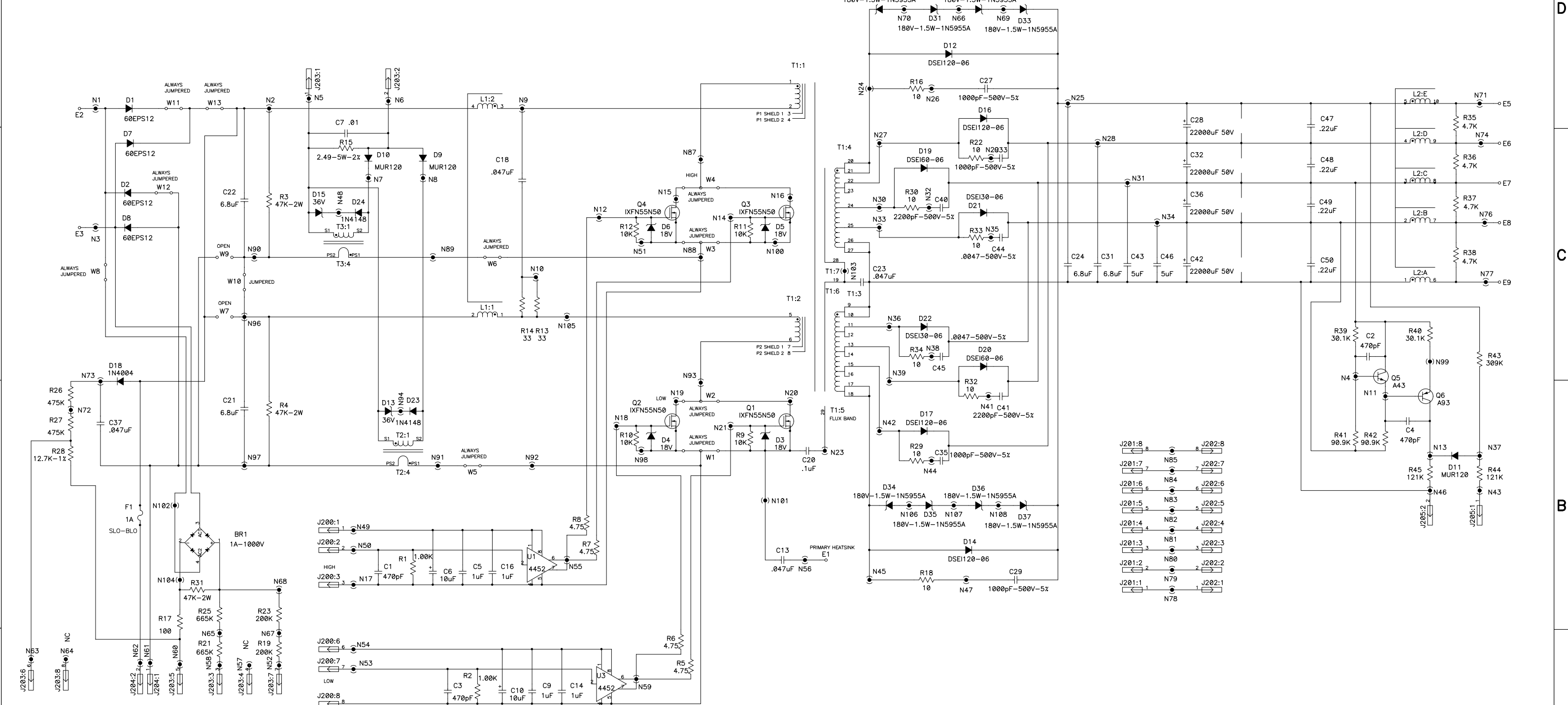
TO INPUT PCB  
SH-000175-00

QTY	ITEM NO.	PART NO.	DESCRIPTION	VENDOR
<b>PARTS LIST</b>				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. DIMENSIONS PER ANSI Y14.5-1982 TOLERANCES ARE: DECIMALS    DECIMALS    ANGLES .XX ±        .XXX ±        0 DEBURR EDGES .XXX R MAX MATERIAL			CONTRACT NO.	
FINISH			<b>AUDIO PRODUCTS, INC.</b> COSTA MESA, CALIFORNIA	
NEXT ASSY    USED ON			APPROVALS	DATE
APPLICATION			DRAWN A. CERRILLO	3-18-96
DO NOT SCALE DRAWING			CHECKED	
			ISSUED	
			SIZE	FSCM NO.
			<b>C</b>	
			DWG NO. <b>SH-000178-00</b>	
			CAD SEED FILE NO. SH0178-1.SCH	Thu May 04, 2000
			SCALE	CAD FILE NO. sh178-a3.sch
			SHEET	1 OF 1

**SCHEMATIC DIAGRAM  
INPUT DAUGHTER PCB, PL9.0**

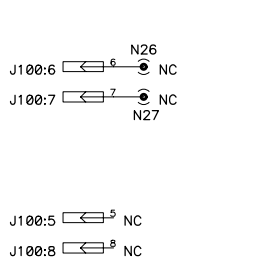
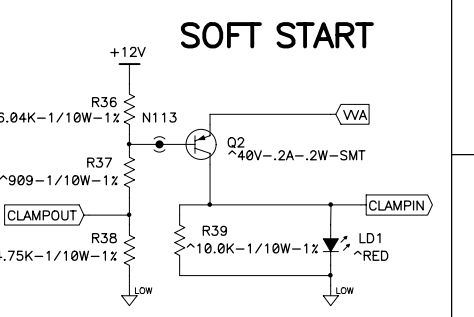
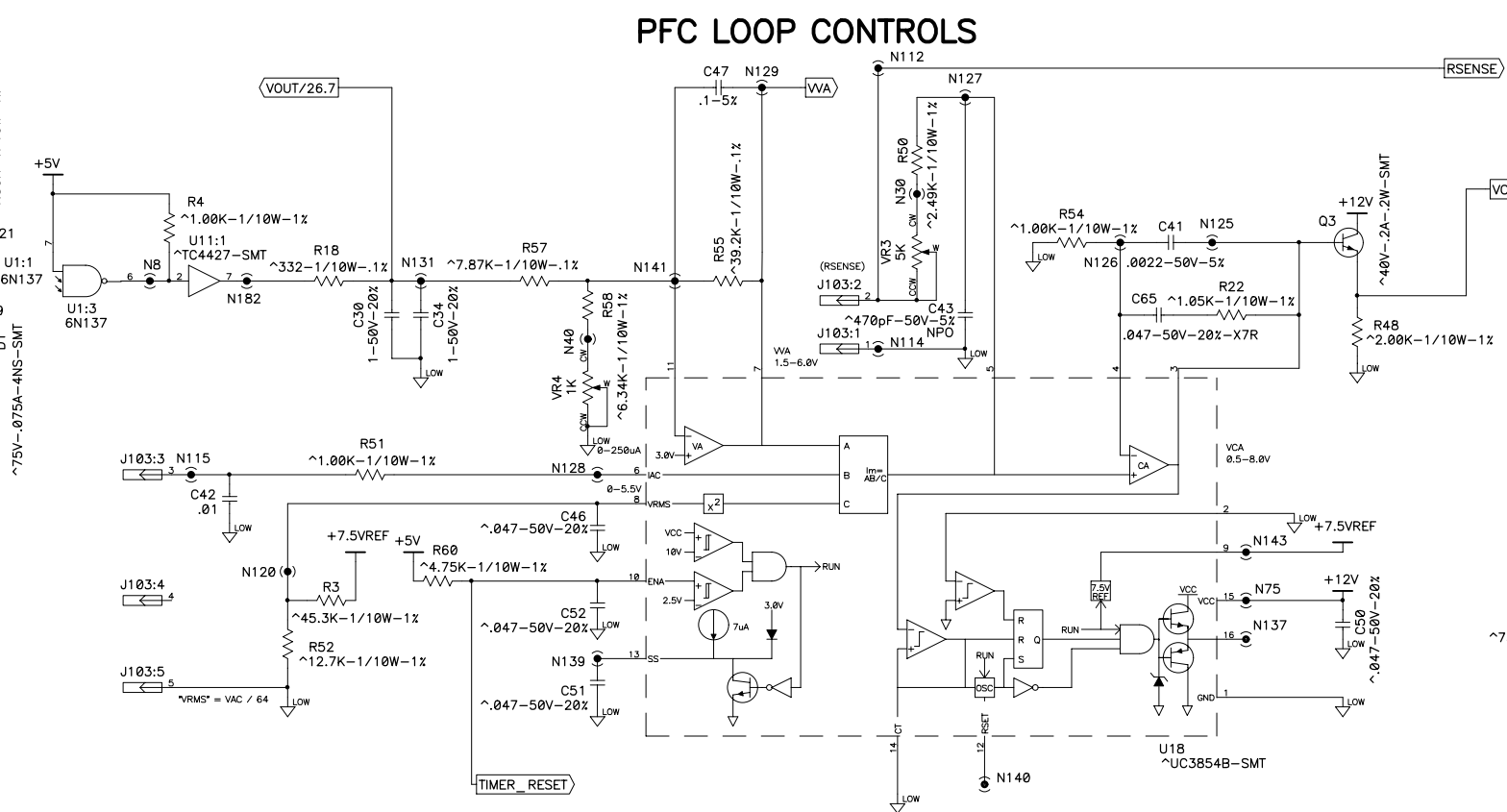
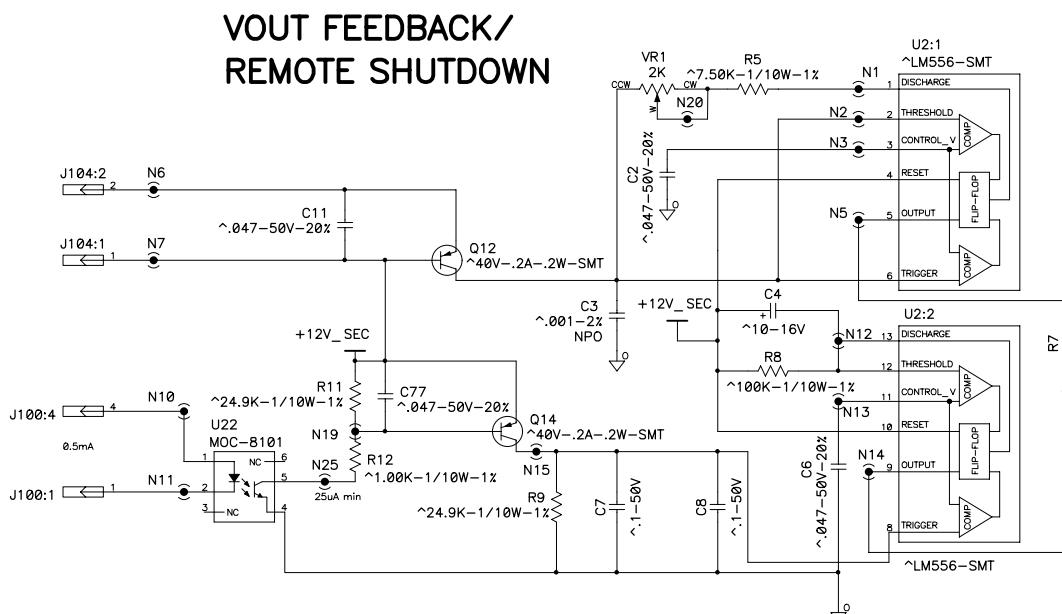
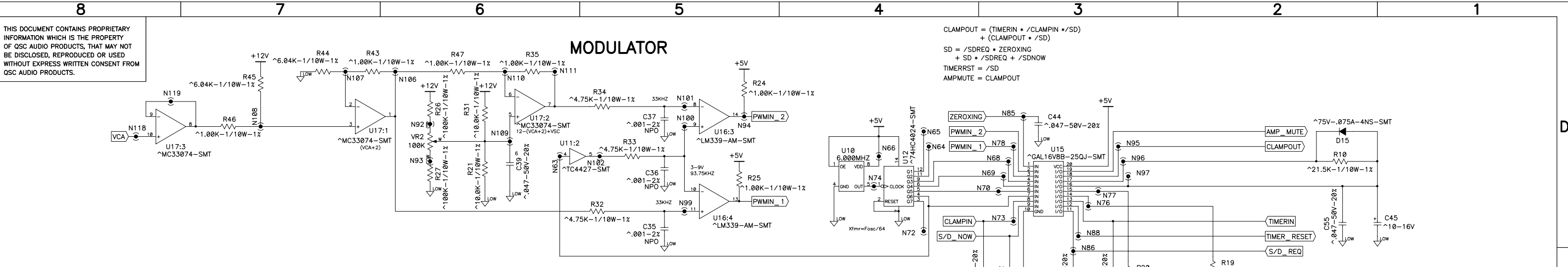
DWG NO. **SH-000178-00**

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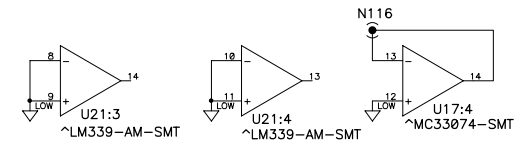
- J201:8 N85
- J201:7 N84
- J201:6 N83
- J201:5 N82
- J201:4 N81
- J201:3 N80
- J201:2 N79
- J201:1 N78
- J202:8 N85
- J202:7 N84
- J202:6 N83
- J202:5 N82
- J202:4 N81
- J202:3 N80
- J202:2 N79
- J202:1 N78

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2. SYMBOL "\*" BEFORE A COMPONENT VALUE DENOTES THAT COMPONENT IS SURFACE MOUNT.
1. THIS DRAWING USED IN CONJUNCTION WITH ASSEMBLY WP-000263-00 AND FABRICATION DRAWING PC-000174-00.

NOTES: UNLESS OTHERWISE SPECIFIED

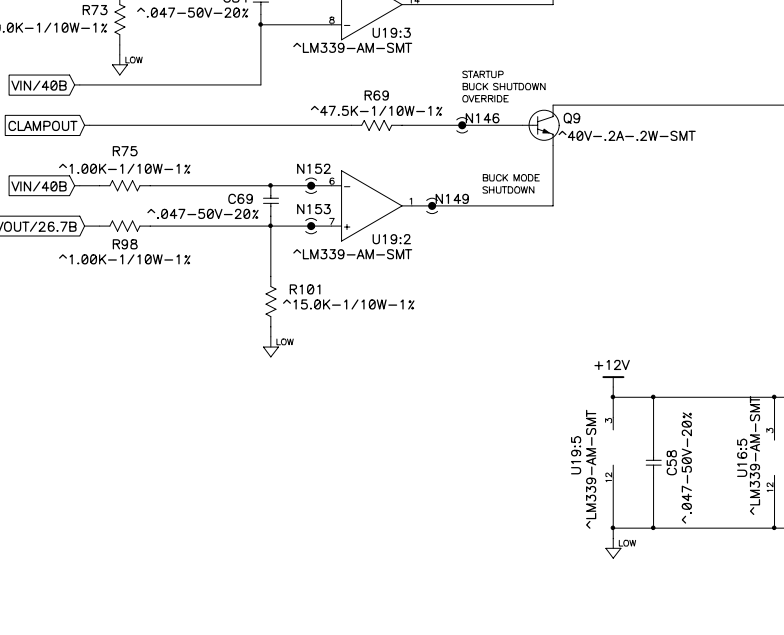
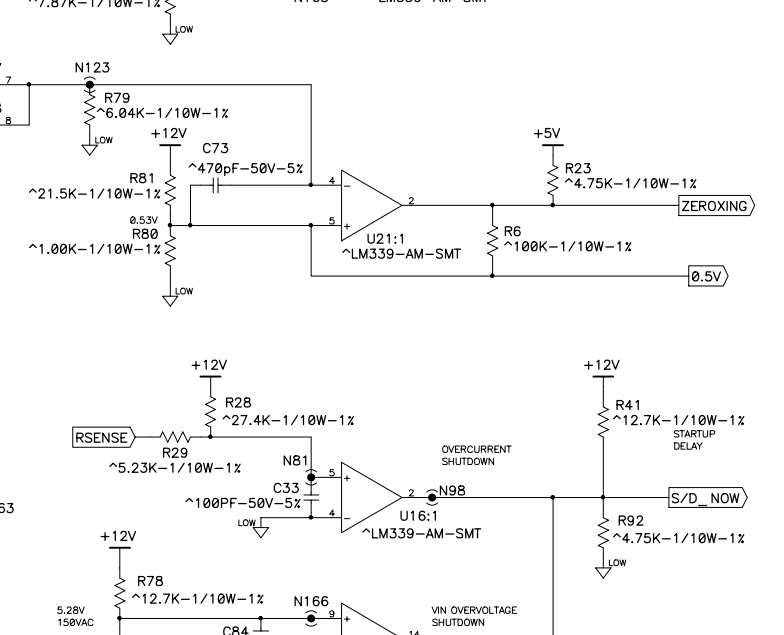
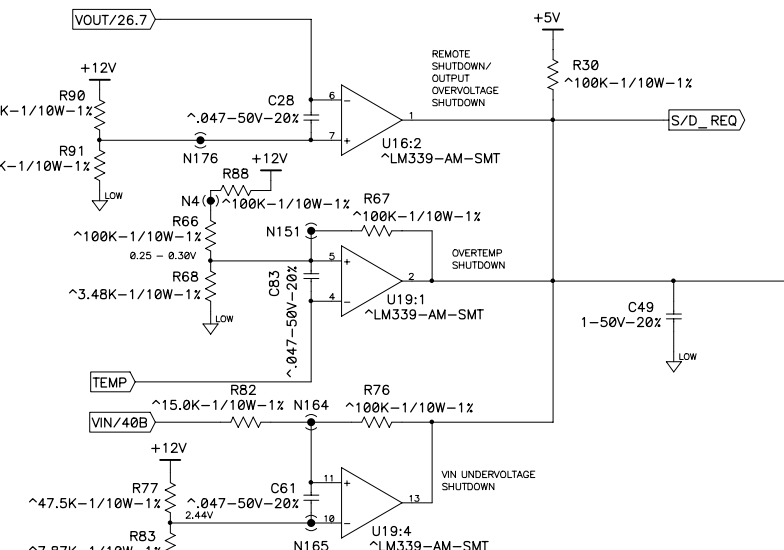
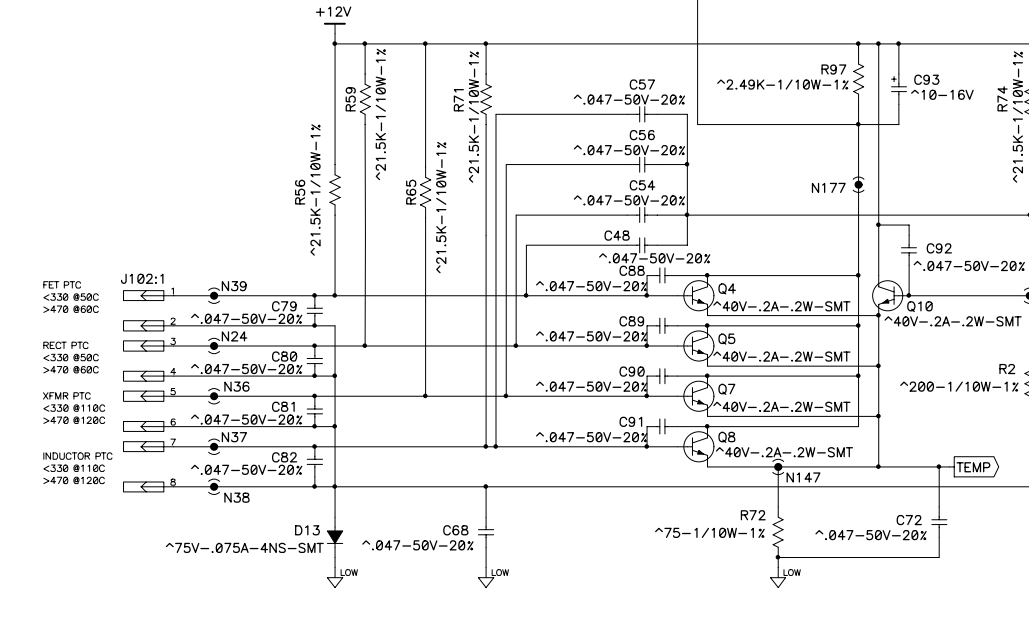
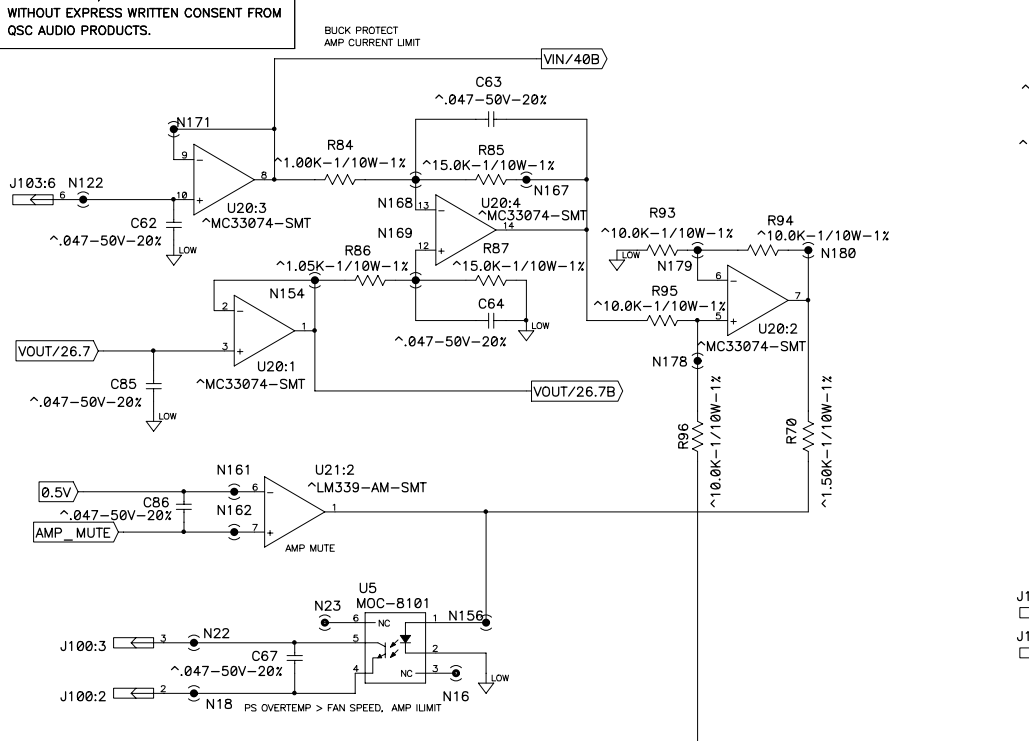


QTY	ITEM NO.	PART NO.	DESCRIPTION	VENDOR
<b>PARTS LIST</b>				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. DIMENSIONS PER ANSI Y14.5-1982 TOLERANCES ARE:			<b>QSC AUDIO PRODUCTS, INC.</b> COSTA MESA, CALIFORNIA	
DECIMALS	DECIMALS	ANGLES		
.XX ±	.XXX ±	0	<b>SCHEMATIC DIAGRAM</b> <b>PL6.0 PWR SUPPLY CONTROLLER</b>	
DEBURR EDGES .XXX R MAX				
MATERIAL		W. RULAND	5-27-99	SIZE FSCM NO. <b>D</b>
FINISH		TIM SHOOK	6-9-99	
ISSUED	TIM SHOOK	6-9-99	DATE	DWG NO.
CAD SEED FILE NO.	USED ON	PL 6.0	SCALE	SH-000263-00
APPLICATION		DO NOT SCALE DRAWING	CAD FILE NO.	SH0263-B.sch
NEXT ASSY		USED ON	PLOT DATE:	Thu May 04, 2000
SCALE		NONE	SHEET	1 OF 2

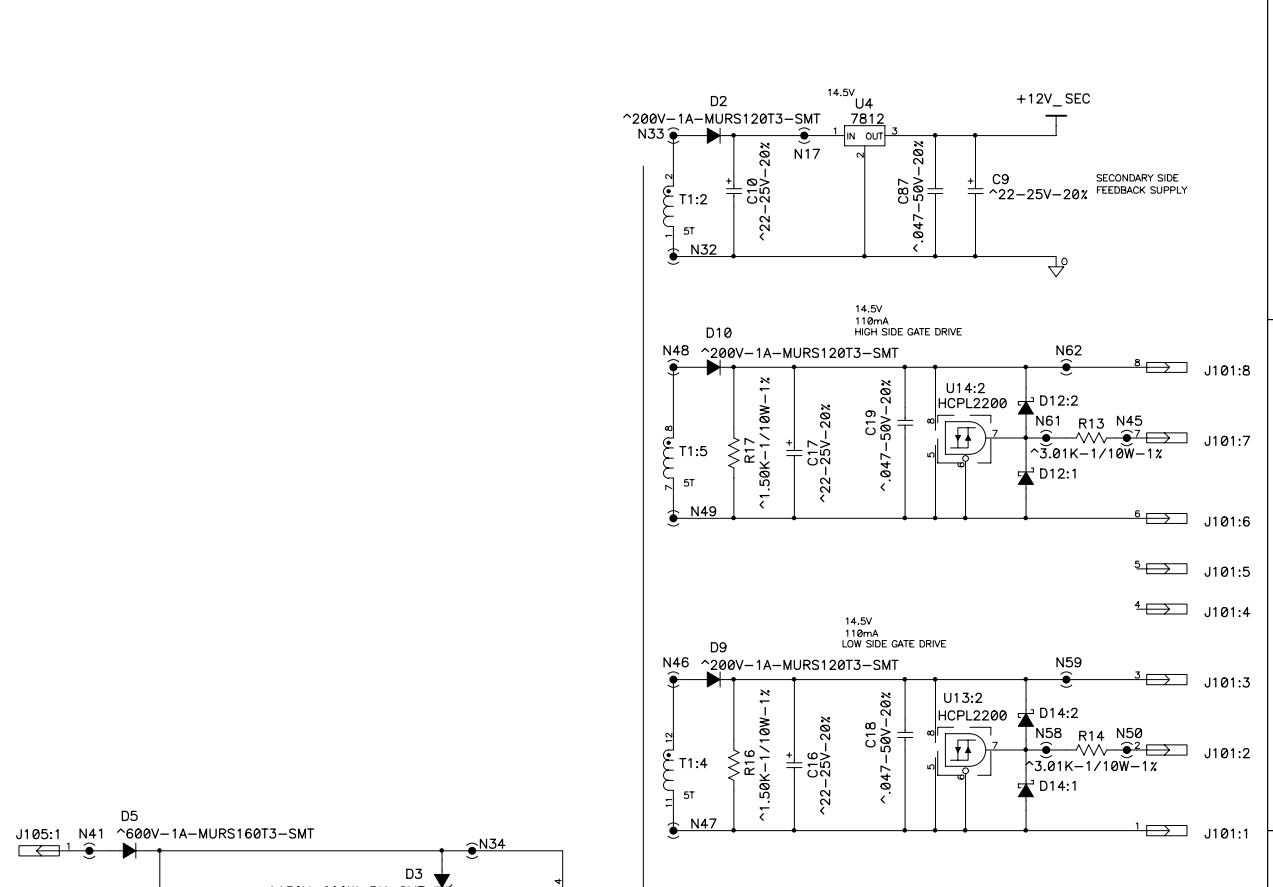
1 SH-000263-00 DWG NO.

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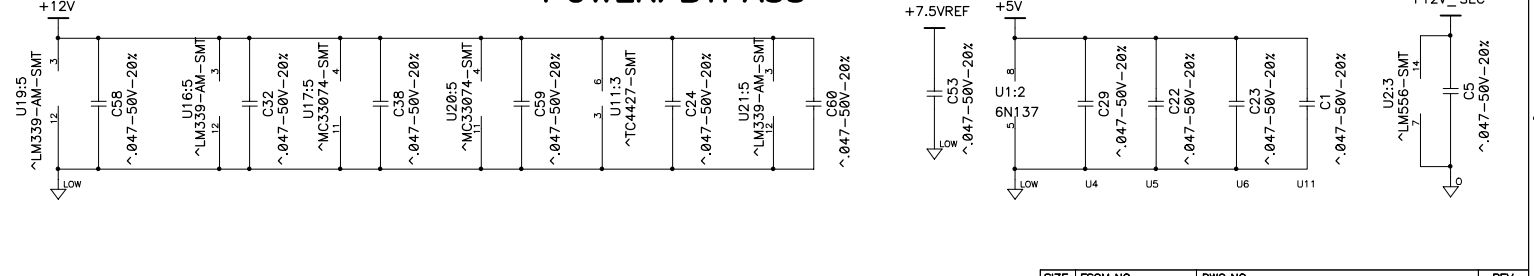
# PROTECTION



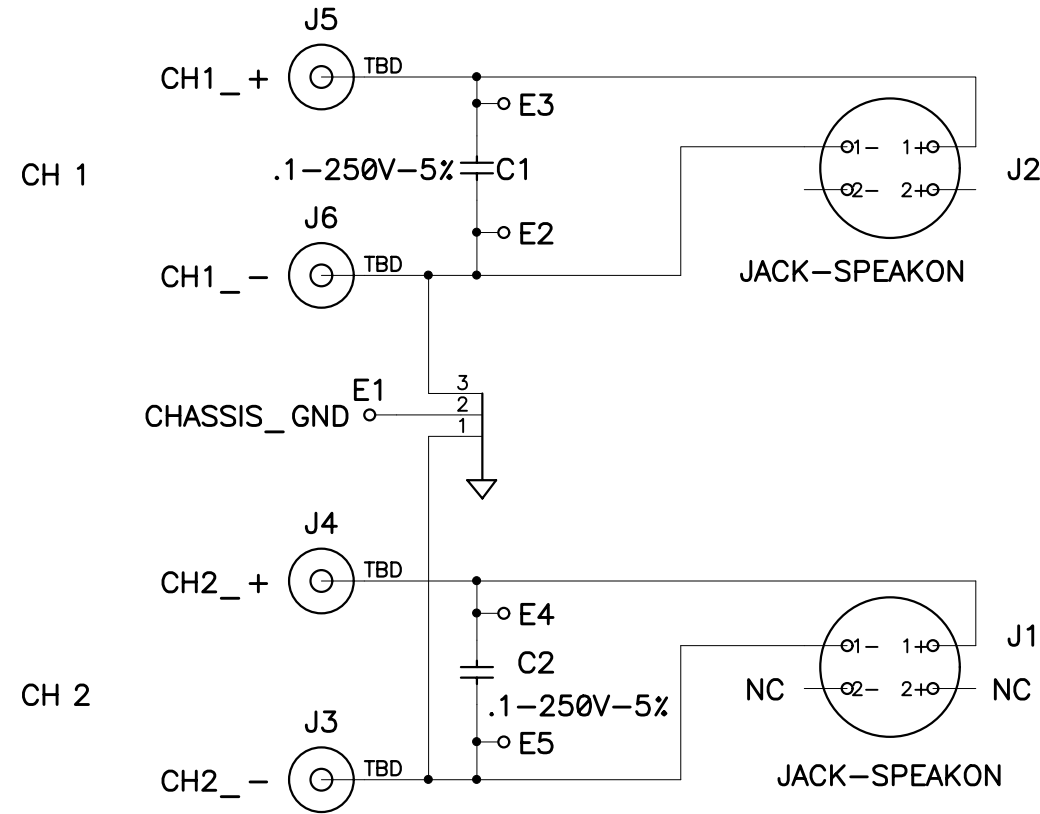
# HOUSEKEEPING SUPPLY



# POWER/BYPASS



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1. THIS DRAWING USED IN CONJUNCTION WITH ASSEMBLY WP-000179-00 AND FABRICATION DRAWING PC-000179-00.

NOTES: UNLESS OTHERWISE SPECIFIED

QTY	ITEM NO.	PART NO.	DESCRIPTION	VENDOR		
<b>PARTS LIST</b>						
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. DIMENSIONS PER ANSI Y14.5-1982 TOLERANCES ARE: DECIMALS    DECIMALS    ANGLES .XX ±        .XXX ±        0 DEBURR EDGES .XXX R MAX MATERIAL			CONTRACT NO.	<b>QSC AUDIO PRODUCTS, INC.</b> COSTA MESA, CALIFORNIA		
APPROVALS			DATE			
DRAWN A. CERRILLO			6-11-97	<b>SCHEMATIC DIAGRAM OUTPUT PCB</b>		
CHECKED						
ISSUED						
WP-000179-00	PL 9.0	FINISH	SIZE B	FSCM NO.	DWG NO. SH-000179-00	REV
NEXT ASSY	USED ON		SCALE NONE	CAD FILE NO. sh0179-A.sch	SHEET 1 OF 1	
APPLICATION		DO NOT SCALE DRAWING		PLOT DATE: Thu May 04, 2000		

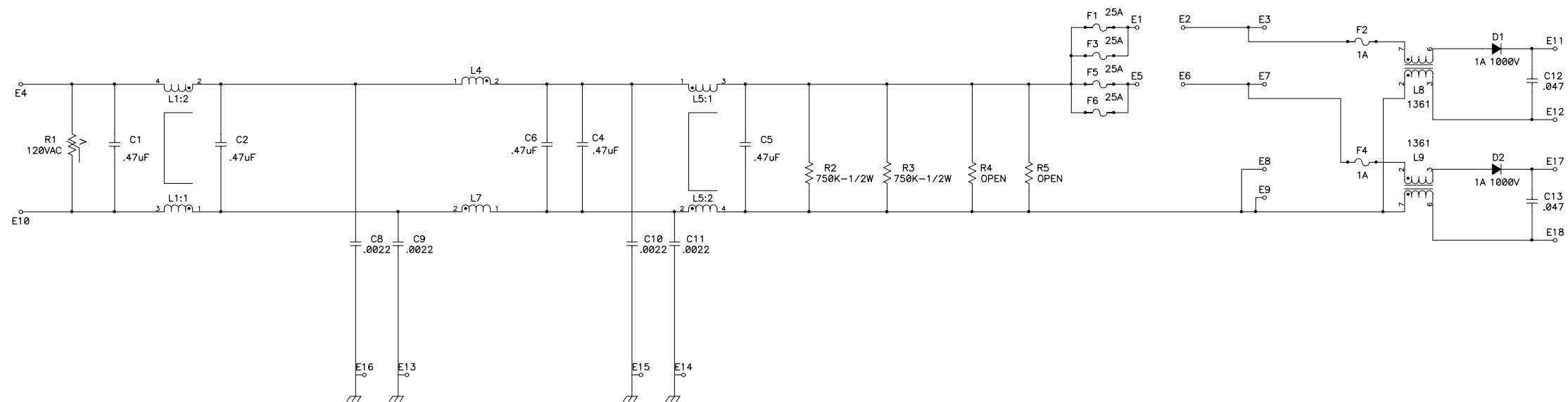
A

B

C

P:\MEGAMP\tANGO\OUTPUT D

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1. THIS DRAWING USED IN CONJUNCTION WITH ASSEMBLY WP-000177-00 AND FABRICATION DRAWING PC-000177-00.  
 NOTES: UNLESS OTHERWISE SPECIFIED

QTY	ITEM NO.	PART NO.	DESCRIPTION	VENDOR
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. DIMENSIONS PER ANSI Y14.5-1982 TOLERANCES ARE: DECIMALS    DECIMALS    ANGLES .XX ±        .XXX ±        °			CONTRACT NO.	
DEBURR EDGES .XXX R MAX			APPROVALS    DATE	
MATERIAL			DRAWN ERIC MENDENHALL    2-9-98	
FINISH			CHECKED RCM    5-13-98	
WP-000177-00	PL 9.0		ISSUED TIM SHOOK    5-15-98	
NEXT ASSY	USED ON		PLOT DATE: Thu May 04, 2000	
APPLICATION			DO NOT SCALE DRAWING	
			SIZE    FSCM NO.    DWG NO.    REV	
			D        NONE        SH-000177-00    1	
			SCALE    NONE    CAD FILE NO.    SH177-B.sch    SHEET 1 OF 1	

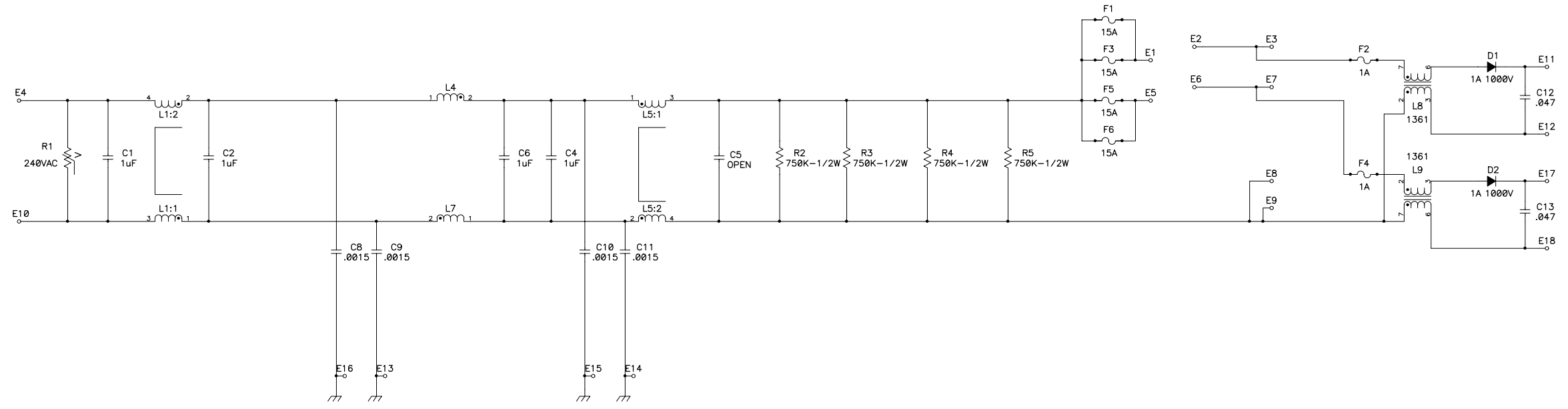
**QSC** AUDIO PRODUCTS, INC.  
COSTA MESA, CALIFORNIA

**SCHEMATIC DIAGRAM**  
**PL9.0 LINE FILTER 120VAC**

1 SH-000177-00 DWG NO.



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1. THIS DRAWING USED IN CONJUNCTION WITH ASSEMBLY WP-000181-00 AND FABRICATION DRAWING PC-000177-00.  
 NOTES: UNLESS OTHERWISE SPECIFIED

QTY	ITEM NO.	PART NO.	DESCRIPTION	VENDOR
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. DIMENSIONS PER ANSI Y14.5-1982 TOLERANCES ARE: DECIMALS    DECIMALS    ANGLES .XX ±        .XXX ±        0			CONTRACT NO.	
DRAWN ERIC MENDENHALL			APPROVALS    DATE	
CHECKED RCM			5-14-98	
ISSUED TIM SHOOK			5-15-98	
CAD SEED FILE NO.			Thu May 04, 2000	
APPLICATION DO NOT SCALE DRAWING			SCALE	
WP-000181-00    PL 9.0			SIZE    FSCM NO.    DWG NO.    REV	
NEXT ASSY    USED ON			D    SH-000181-00	
			SHEET 1 OF 1	

**QSC** AUDIO PRODUCTS, INC.  
 COSTA MESA, CALIFORNIA

**SCHEMATIC DIAGRAM  
 PL9.0 LINE FILTER 230VAC**

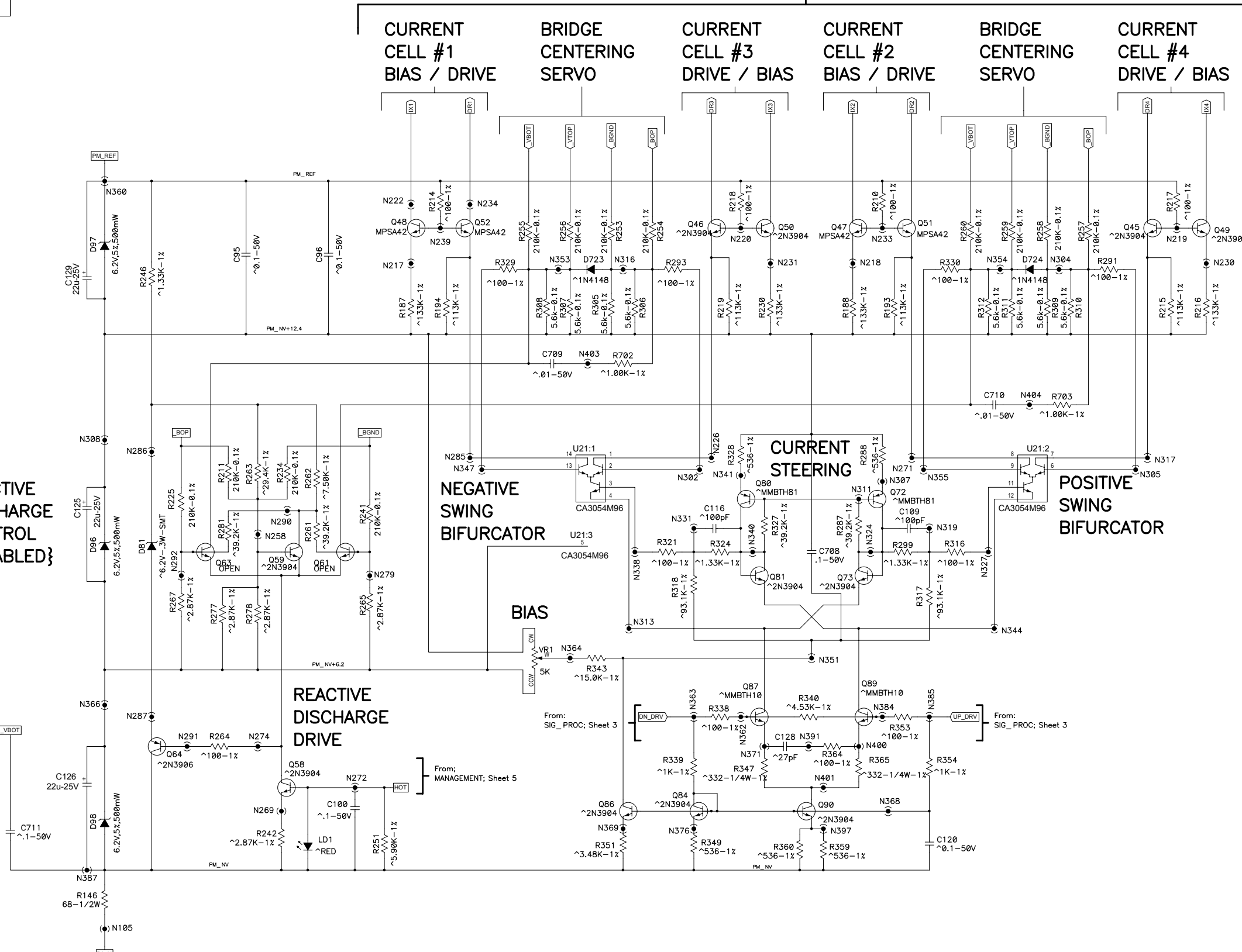
1 SH-000181-00  
 REV    DWG NO.



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# PUPPETMSTR

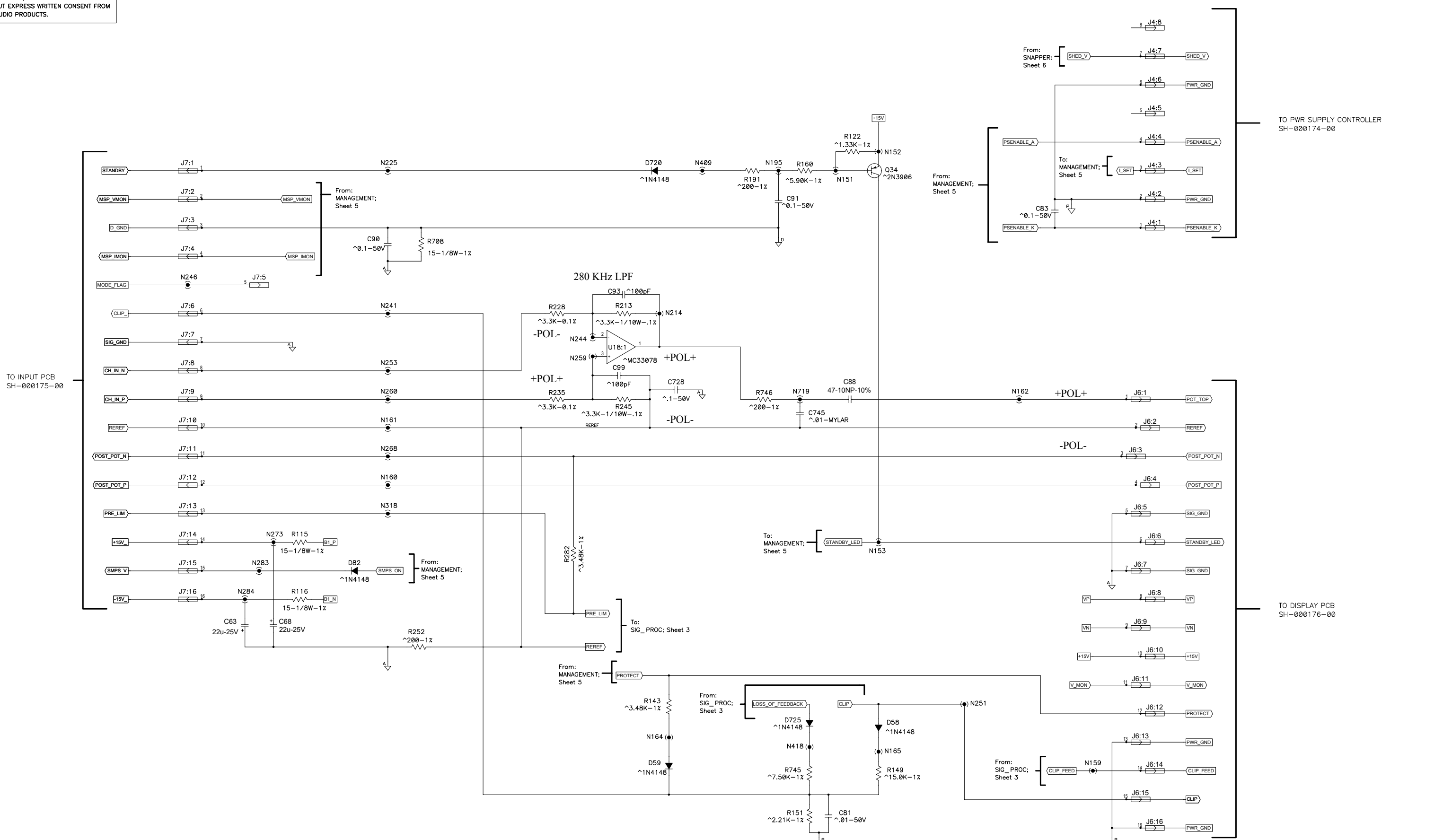
To:  
LC\_OUTPUTS; Sheet 1





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# ROUTING



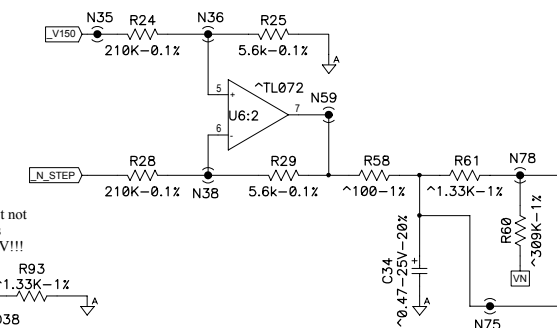
DWG NO. SH-000276-00  
 REV. 4



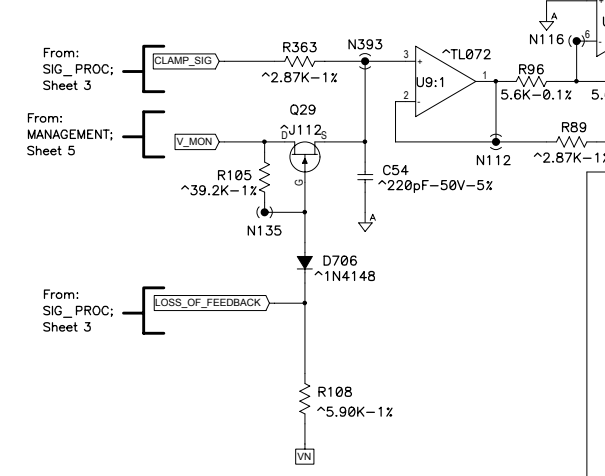
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# SNAPPER

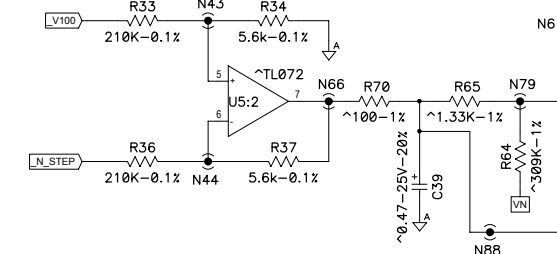
## THRESHOLD DETECTOR / COMPARATOR



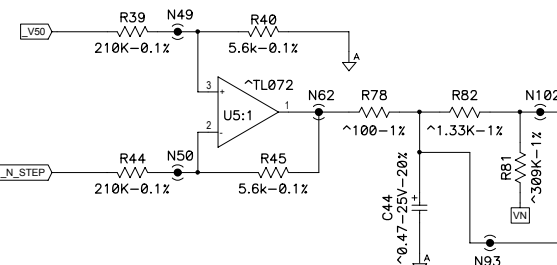
## STEP DRIVE SELECTOR / RECTIFIER



## THRESHOLD DETECTOR / COMPARATOR



## THRESHOLD DETECTOR / COMPARATOR

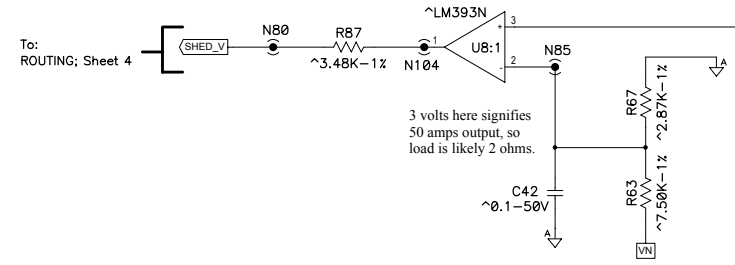


## STEP SHUTDOWN

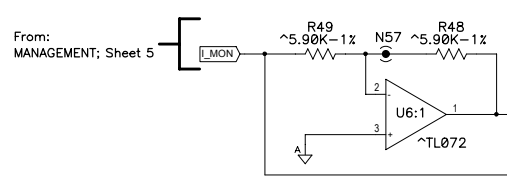


## Power Limiter {Disabled via SMPS}

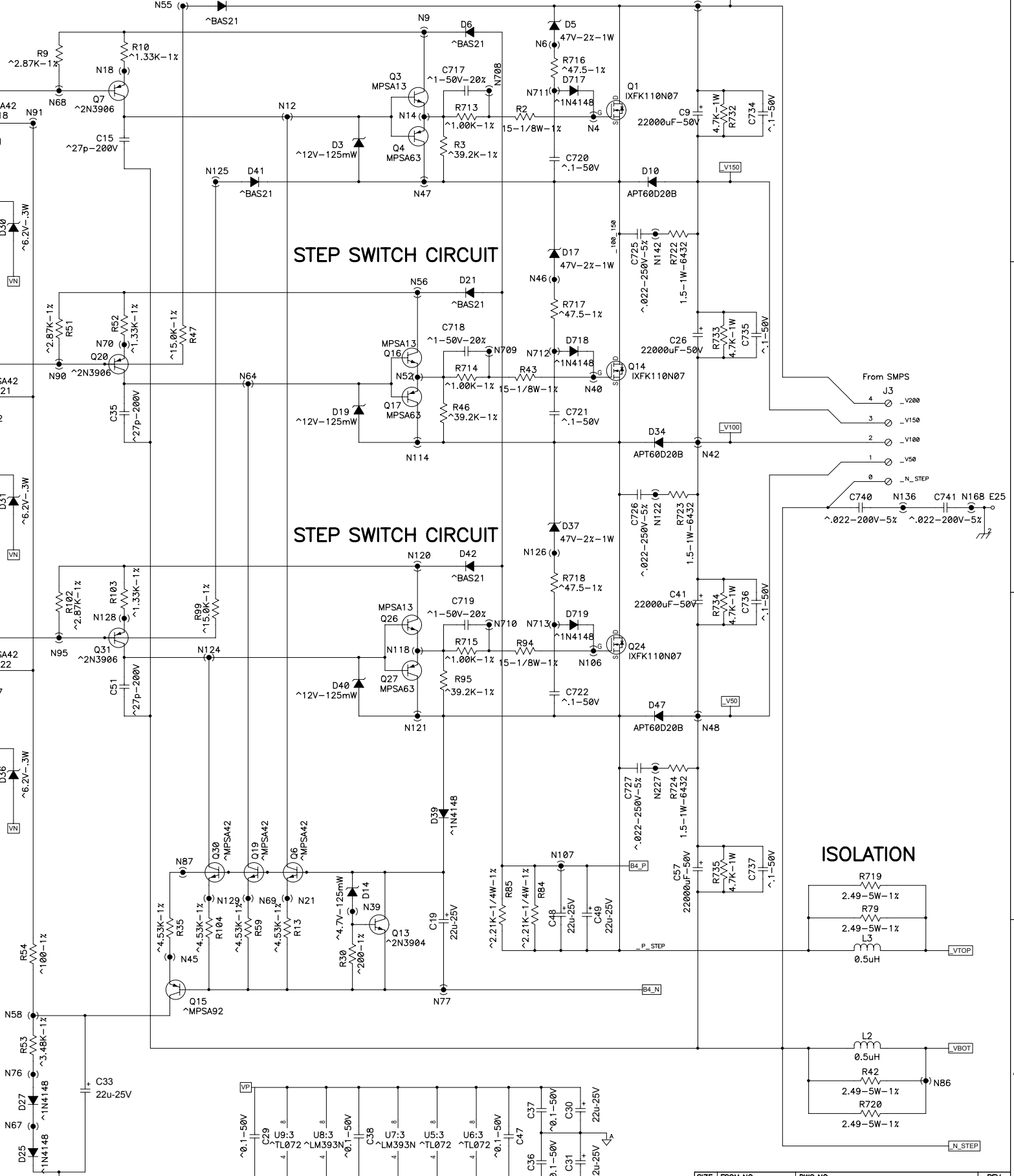
3 volts here signifies 50 amps output, so load is likely 2 ohms.



## THRESHOLD COMPENSATION



## STEP SWITCH CIRCUIT



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# HK\_SUPPLY

Supplies: B1 = 30v at 100mA  
 B2 = 20v at 50mA  
 B3 = 40v at 60mA  
 B4 = 27v at 50mA

