

BIAS ADJUSTMENT: WITH NO SIGNAL AND NO LOAD
 ADJUST AP101 TO OBTAIN AN AVERAGE OF $25 \pm 5\text{mV}$ ACROSS R139, 140
 R146, 147, 152, 153, 158, 159, 164, 165.
 ADJUST AP201 TO OBTAIN AN AVERAGE OF $25 \pm 5\text{mV}$ ACROSS R239, 240
 R246, 247, 252, 253, 258, 259, 264, 265.

T.P.	NO SIGNAL	40VRMS OUT @ 8 OHMS	LIMITING @ 8 OHMS	AS NOTED	WAVEFORM
1	—	0.68Urms	0.79Urms	—	~
2	—	0.68Urms	0.79Urms	—	~
3	+/-20mVdc	1.5U	1.5U	—	~
4	+/-1Vdc	2.6Vdc	2.6Vdc	AS SHOWN PER COLUMN	~
5	+7mVdc	1.9mU	2.7mU	—	~
6	+5Vdc	+4.82Vdc	+4.82Vdc	—	~
7	-5Vdc	-5.12Vdc	-5.12Vdc	—	~
8	0V	+43.6mVdc	+74mVdc	—	~

SHEETS 1, 2 & 3 OF THIS DRAWING REPRESENT ASSY P/N 07-442-03

- NOTES:
- THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
 - UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50U-10% TOL.
 - VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER.

CAUTION:
 THIS SCHEMATIC IS PROVIDED FOR USE BY QUALIFIED PERSONNEL. TO AVOID RISK OF ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING BEYOND THAT EXPLAINED IN THE OPERATING INSTRUCTIONS.

REV:	DATE:	DESCRIPTION	ECR/ECN NO:	CHG'D BY:	APP'D BY:	DATE:
7	6/20/05	R23_FABR_1K_TO_1N914_21_ASSY				
6	2/23/05	R23_FABR_1K_TO_1K_12_ASSY				
5	3/2/04	RODED_SHEETS_10_THRU_15 TO_CREATE_DRAW_4_IN_12				
4	1/08/03	DRAWING_CONNECTION_ADDED_MISSING_LINES +22V_&-22V_SHEET_3				
3	5/30/01	RODED_SHEETS_7_&_8_TO_CREATE_NEW VERSION_OUTPROF_P/N_07_442_03				
2	9-28-00	REMOVED_TWD_WIRE_SEGMENTS SCHEMATIC_DOCUMENTATION_ERROR				
1	11-30-99	CHANGED_TO_03V_11_VERSIONS				
0		CONTROL_ISSUE				

SIGNATURES:		DATE:	11800 Borman Dr. St. Louis, Missouri 63116
DRAWN: REM		6-25-98	
CHK'D:		FIRST USED ON:	
ALS'D:			
TOLERANCES:	DRAWING SIZE: D	DRAWING TITLE:	POWER_AMP
	DRAWING TYPE: - SCHEMATIC	DRAWING NO.:	07S442-XX
	CLASS CODE:		
	SCALE: NONE	SHEET: SHT 1 OF 15	

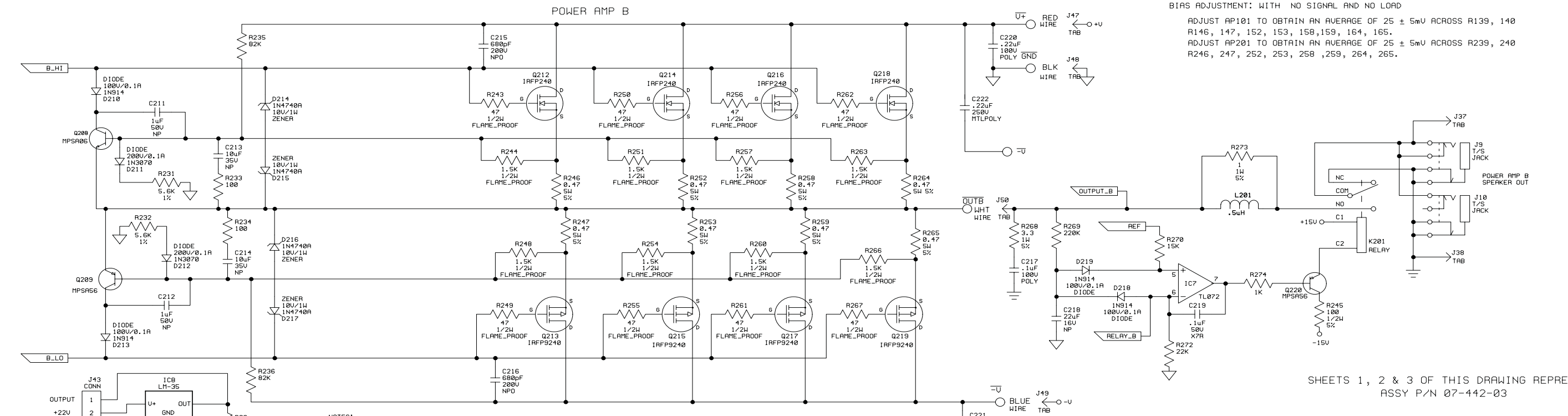
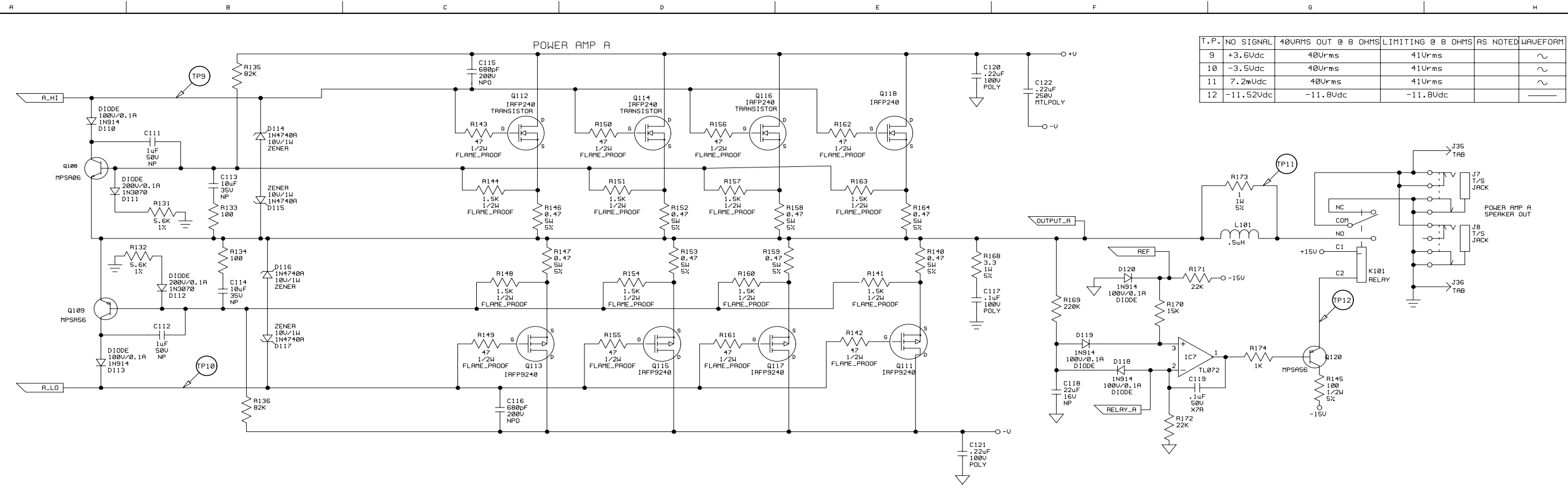


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Power Amplifier PCB Schematics

PAGE 1



BIAS ADJUSTMENT: WITH NO SIGNAL AND NO LOAD
 ADJUST AP101 TO OBTAIN AN AVERAGE OF 25 ± 5mV ACROSS R139, 140, 146, 147, 152, 153, 158, 159, 164, 165.
 ADJUST AP201 TO OBTAIN AN AVERAGE OF 25 ± 5mV ACROSS R239, 240, 246, 247, 252, 253, 258, 259, 264, 265.

SHEETS 1, 2 & 3 OF THIS DRAWING REPRESENT ASSY P/N 07-442-03

- NOTES:
- 1) THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
 - 2) UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
 - 3) VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER.

CAUTION:
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THIS INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO ST. LOUIS MUSIC, INC.						
SIGNATURES:		DATE:		11800 Borman Dr., St. Louis, Missouri 63146		
DRAWN: REM		6-25-98		FIRST USED ON:		
CHK'D:				DRAWING TITLE: POWER_AMP		
TOLERANCES:		DRAWING SIZE: D		DRAWING NO.: 07S442-XX		
		DRAWING TYPE: - SCHEMATIC		SCALE: NONE		
		CLASS CODE:		SHEET: SH2 2 OF 15		

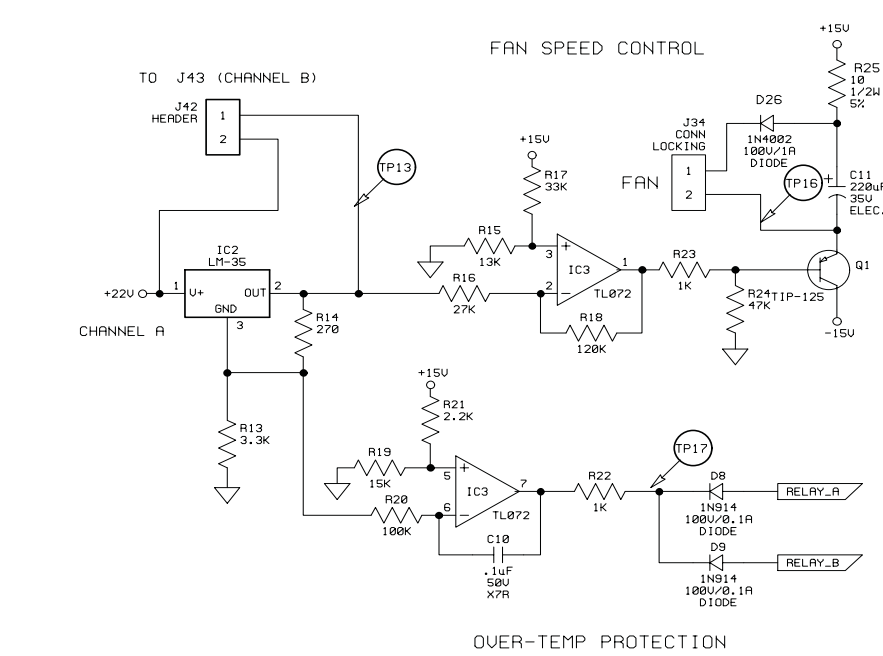
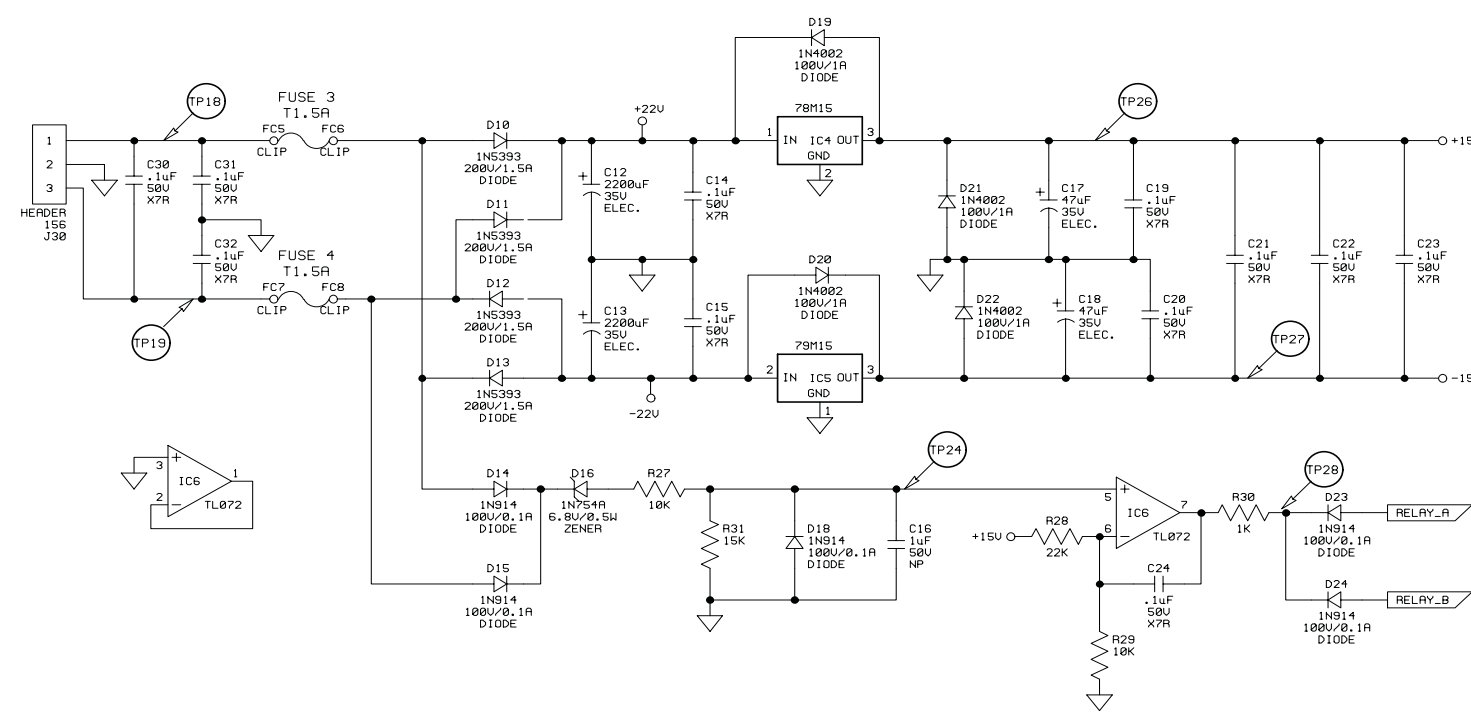
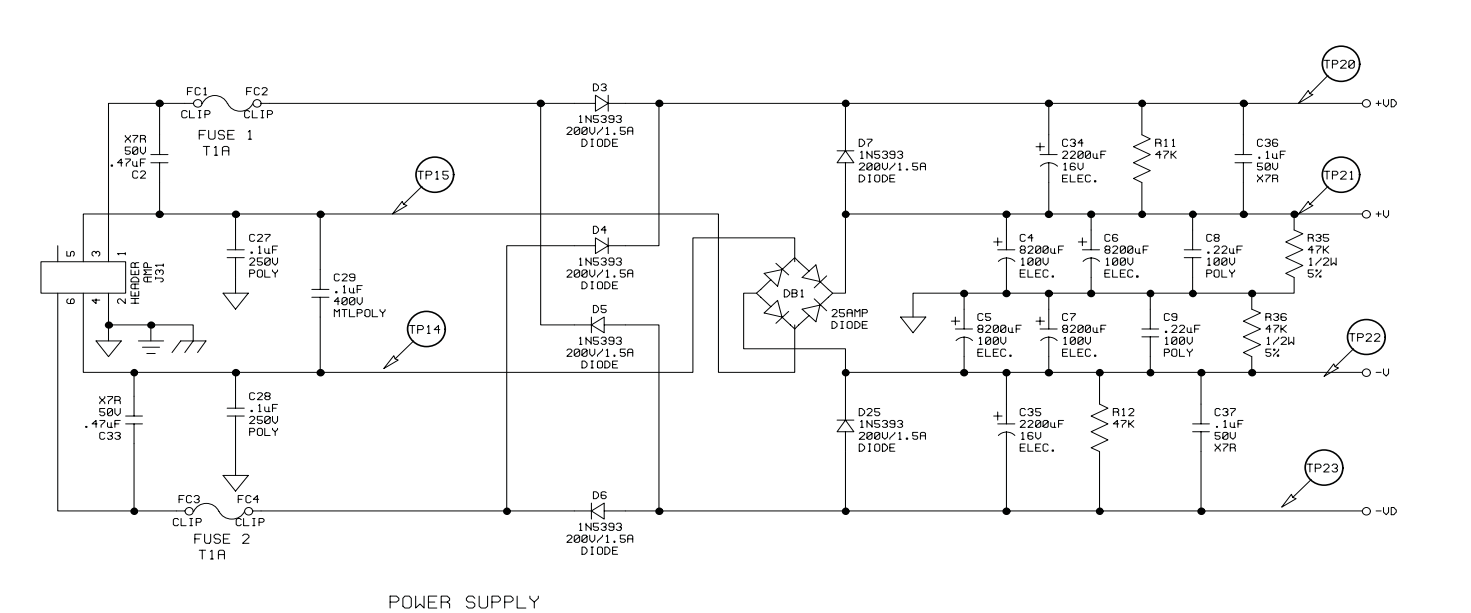
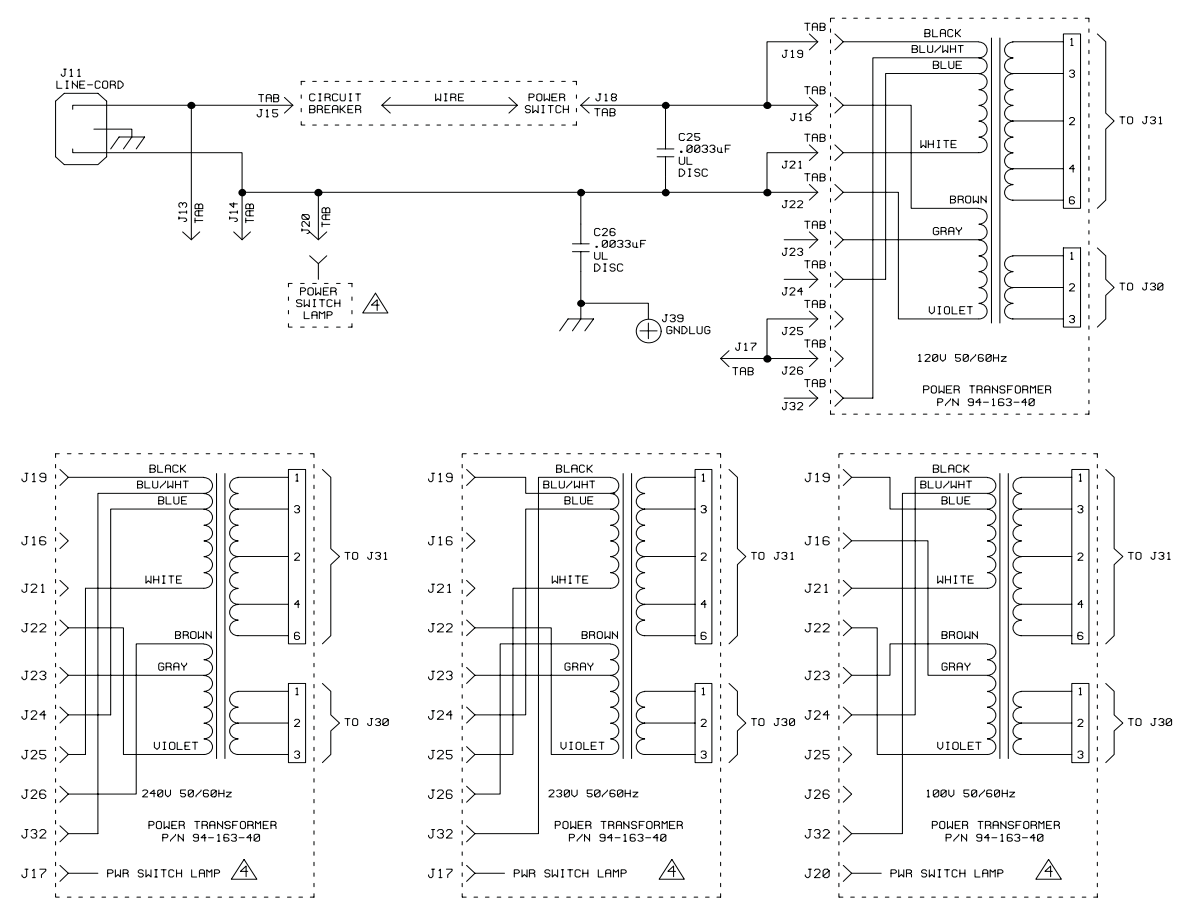


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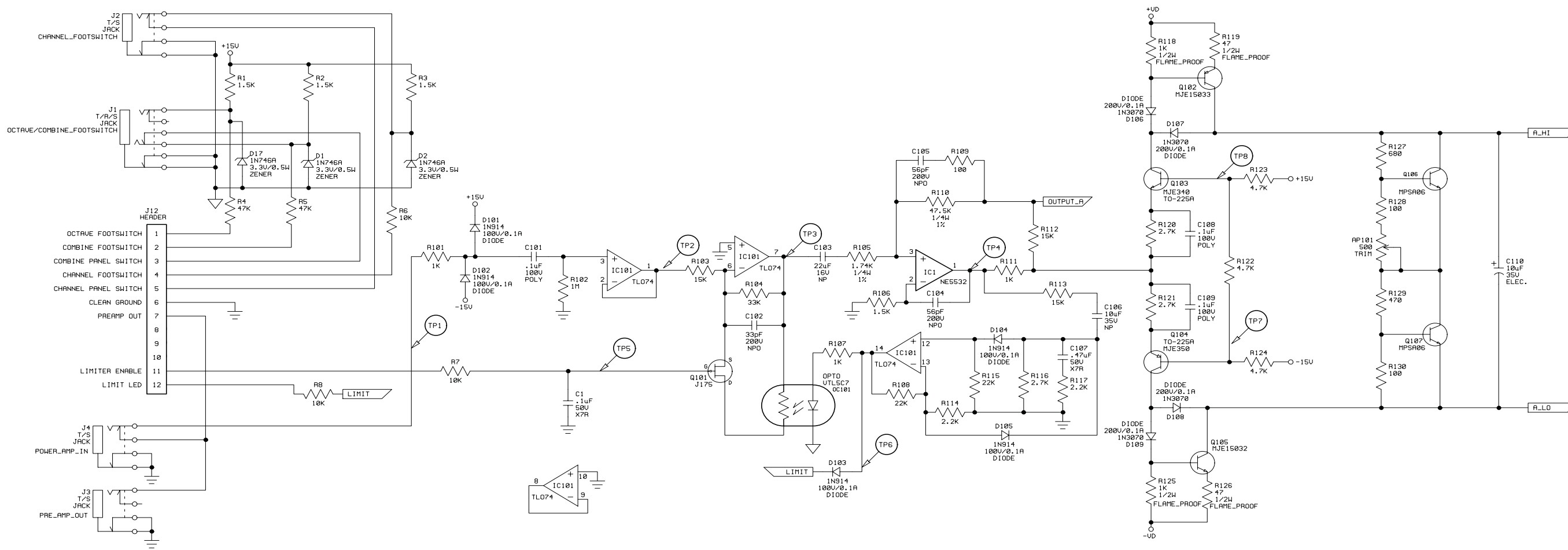
- NOTES:
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 - 2) UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
 - 3) VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER.
 - 4) IF REQUIRED FOR CHASSIS ASSY.

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SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING BEYOND
THAT EXPLAINED IN THE OPERATING INSTRUCTIONS.

TP	NO SIGNAL	40URMS OUT @ 8 OHMS	LIMITING @ 8 OHMS	AS NOTED	WAVEFORM
13	VARIES w/TEMP	Varies w/temp.	Varies w/temp.		
14	61Vac	51Vac	51Vac		~
15	61Vac	51Vac	51Vac		~
16	+14Vdc	-4.6Vdc	-4.6Vdc		
17	+14.4Vdc	+14.4Vdc	+14.4Vdc		
18	20Vac	19Vac	19Vac		~
19	20Vac	19Vac	19Vac		~
20	+71Vdc	+64.5Vdc	+64.5Vdc		~
21	+63Vdc	+59Vdc	+59Vdc		~
22	-63Vdc	-59Vdc	-59Vdc		~
23	-71Vdc	-64.5Vdc	-64.5Vdc		~
24	+6Vdc	+5.73Vdc	+5.73Vdc		
25	NOT USED				
26	+15Vdc	+15Vdc	+15Vdc		
27	-15Vdc	-15Vdc	-15Vdc		
28	+14.3Vdc	+14.3Vdc	+14.3Vdc		

SHEETS 1, 2 & 3 OF THIS DRAWING REPRESENT
ASSY P/N 07-442-03

REV:	DATE:	DESCRIPTION:	ECR/ECN NO:	CHG'D BY:	APP'D BY:	DATE:
THIS INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO ST. LOUIS MUSIC, INC.						
SIGNATURES:		DATE:		11800 Borman Dr. St. Louis, Missouri 63146		
DRAWN: REM		6-25-98		FIRST USED ON:		
CHK'D:				-		
TOLERANCES:		DRAWING SIZE: D		DRAWING TITLE: POWER_AMP		
		DRAWING TYPE: - SCHEMATIC		DRAWING NO.:		
		CLASS CODE:		07S442-XX		
		SCALE: NONE		SHEET: SHT 3 OF 15		



BIAS ADJUSTMENT: WITH NO SIGNAL AND NO LOAD
 ADJUST AP101 TO OBTAIN AN AVERAGE OF 25 ± 5mV ACROSS R139, 140
 R146, 147, 152, 153, 158, 159, 164, 165.

T.P.	NO SIGNAL	40Vrms OUT @ 8 OHMS	LIMITING @ 8 OHMS AS NOTED	WAVEFORM
1	0.68Vrms	0.68Vrms	0.79Vrms	~
2	0.68Vrms	0.68Vrms	0.79Vrms	~
3	+/-20mVdc	1.5V	1.5V	~
4	+/-1Vdc	2.6Vdc	2.6Vdc	AS SHOWN PER COLUMN
5	+7mVdc	1.9mV	2.7mV	~
6	+5Vdc	+4.82Vdc	+4.82Vdc	~
7	-5Vdc	-5.12Vdc	-5.12Vdc	~
8	0V	+43.6mVdc	+74mVdc	~

SHEETS 4, 5 & 6 OF THIS DRAWING REPRESENTS
 ASSY P/N 07-442-11

NOTES:
 1) THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
 2) UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
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DRAWN: REM		6-25-98		FIRST USED ON:		
CHK'D:				-		
ALS'D:				-		
TOLERANCES:		DRAWING SIZE: D SCHEMATIC		DRAWING TITLE: POWER_AMP		
		DRAWING TYPE: -		DRAWING NO.:		
		CLASS CODE:		07S442-XX		
		SCALE: NONE		SHEET: SHT 4 OF 15		

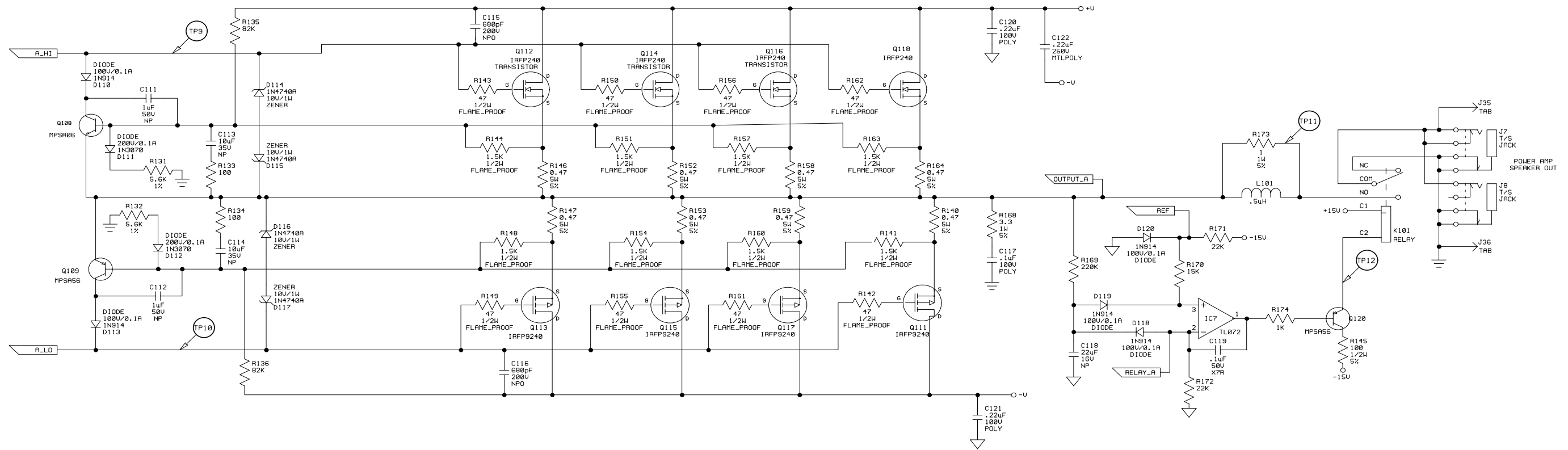


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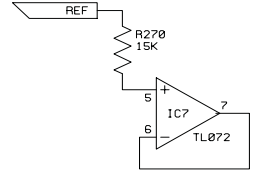
Power Amplifier PCB Schematics

PAGE 4



BIAS ADJUSTMENT: WITH NO SIGNAL AND NO LOAD
 ADJUST AP101 TO OBTAIN AN AVERAGE OF 25 ± 5mV ACROSS R139, 140
 R146, 147, 152, 153, 158, 159, 164, 165.

T.P.	NO SIGNAL	40VRMS OUT @ 8 OHMS	LIMITING @ 8 OHMS	AS NOTED	WAVEFORM
9	+3.6Vdc	40Urms	41Urms		~
10	-3.5Vdc	40Urms	41Urms		~
11	7.2mVdc	40Urms	41Urms		~
12	-11.52Vdc	-11.8Vdc	-11.8Vdc		—

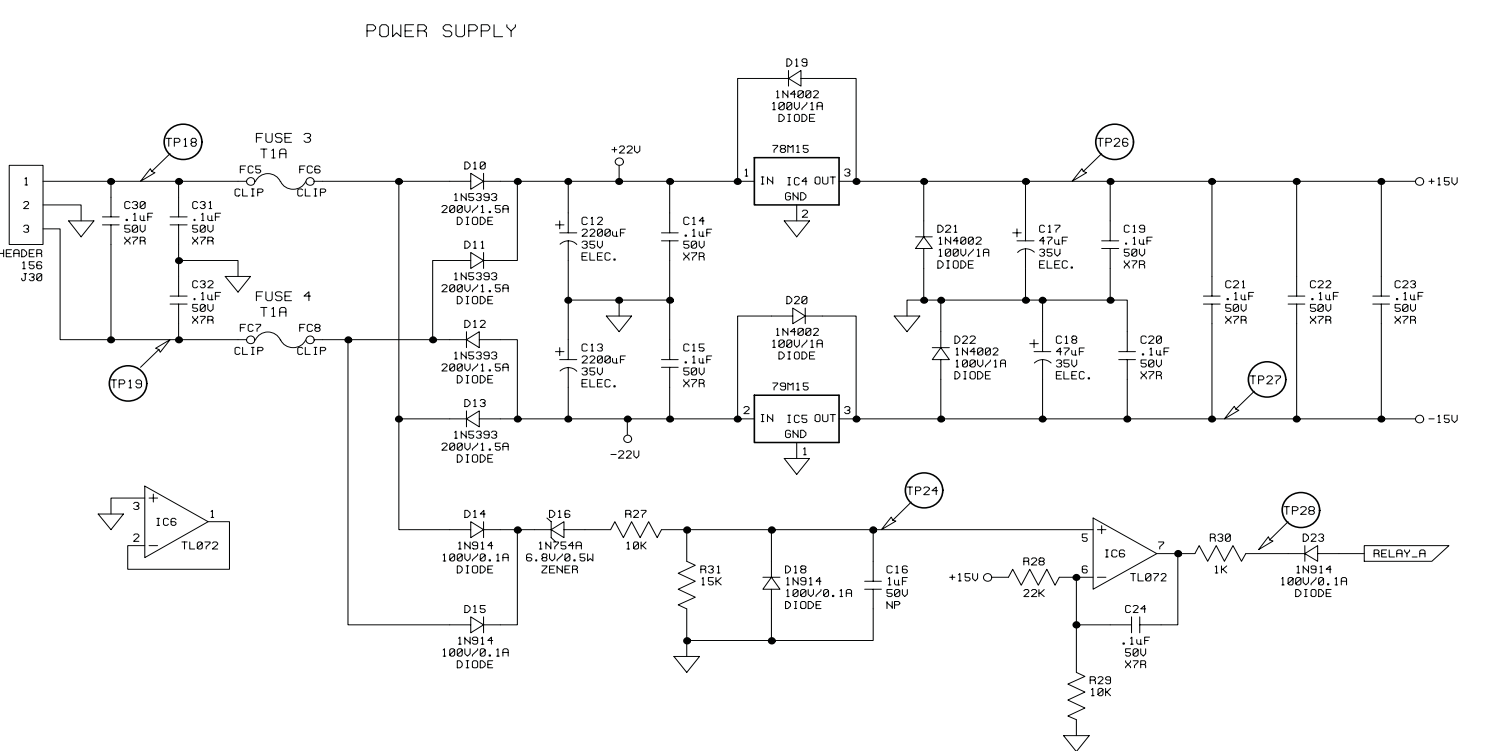
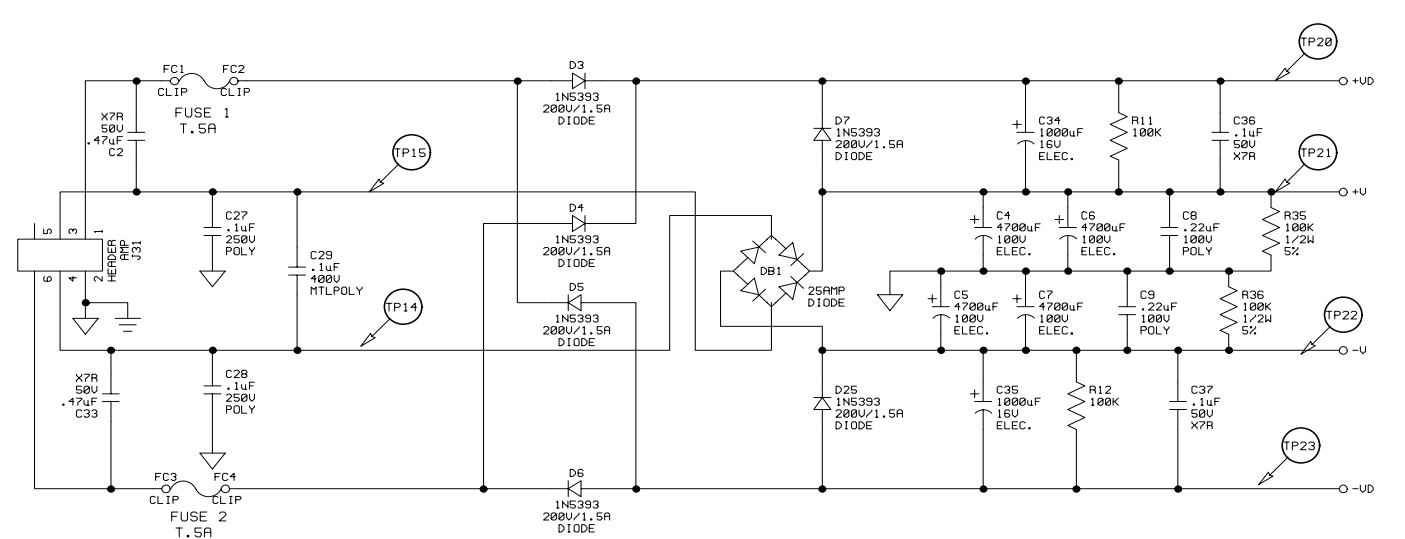
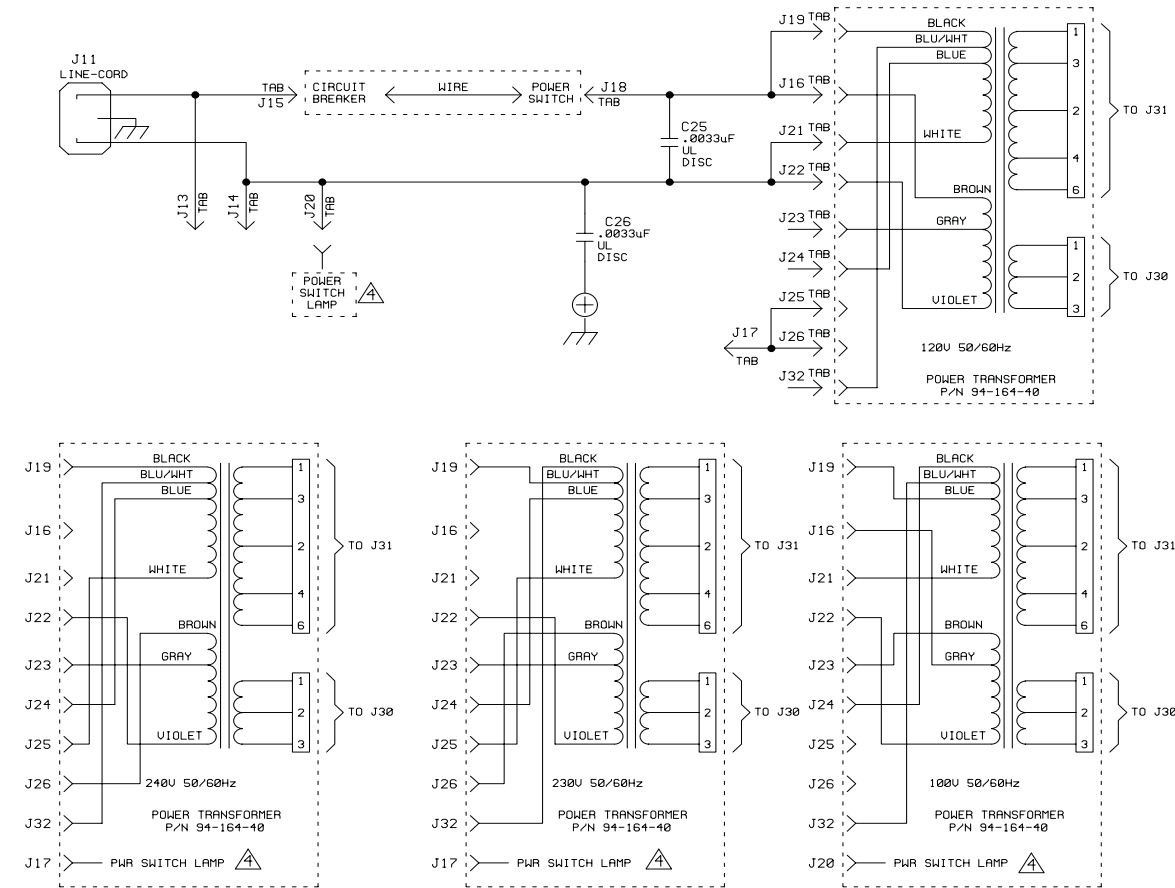


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 - 2) UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
 - 3) VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER.

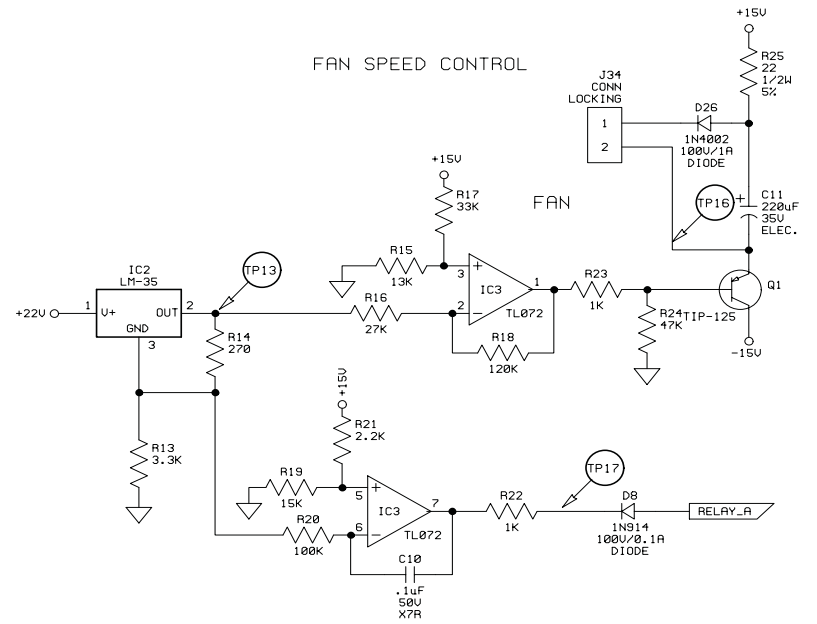
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SHEETS 4, 5 & 6 OF THIS DRAWING REPRESENTS
 ASSY P/N 07-442-11

REV:	DATE:	DESCRIPTION:	ECR/ECN NO:	CHG'D BY:	APP'D BY:	DATE:
THIS INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO ST. LOUIS MUSIC, INC.						
SIGNATURES:		DATE:		11888 Borman Dr. St. Louis, Missouri 63146		
DRAWN: REM			6-25-98			
CHK'D:			FIRST USED ON:			
RLS'D:						
TOLERANCES:	DRAWING SIZE: D	DRAWING TITLE: POWER_AMP				
	DRAWING TYPE: - SCHEMATIC	DRAWING NO.:				
	CLASS CODE:	DRAWING NO.:				
	SCALE: NONE	SHEET: SHT 5 OF 15		07S442-XX		



FAN SPEED CONTROL



OVER-TEMP PROTECTION

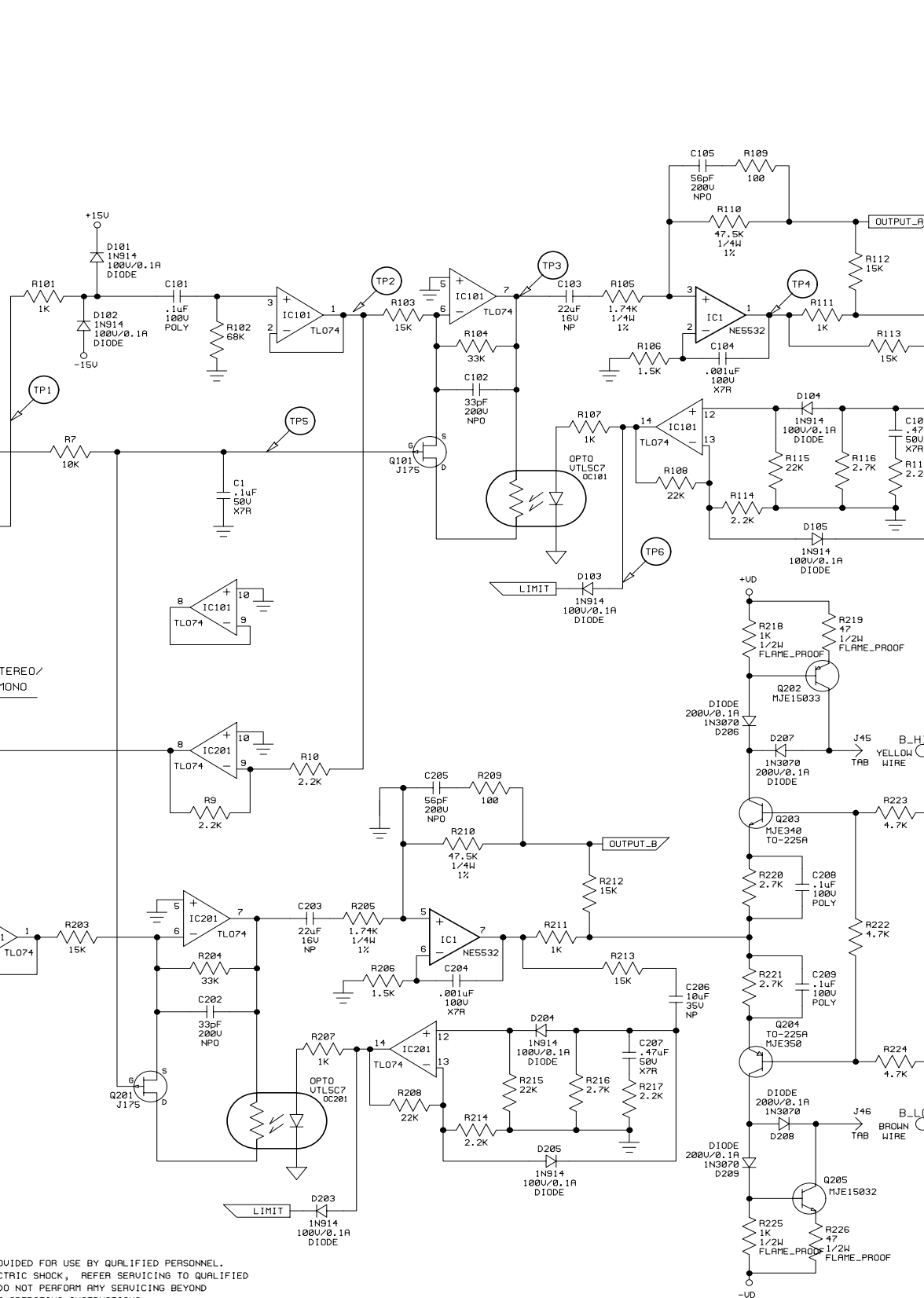
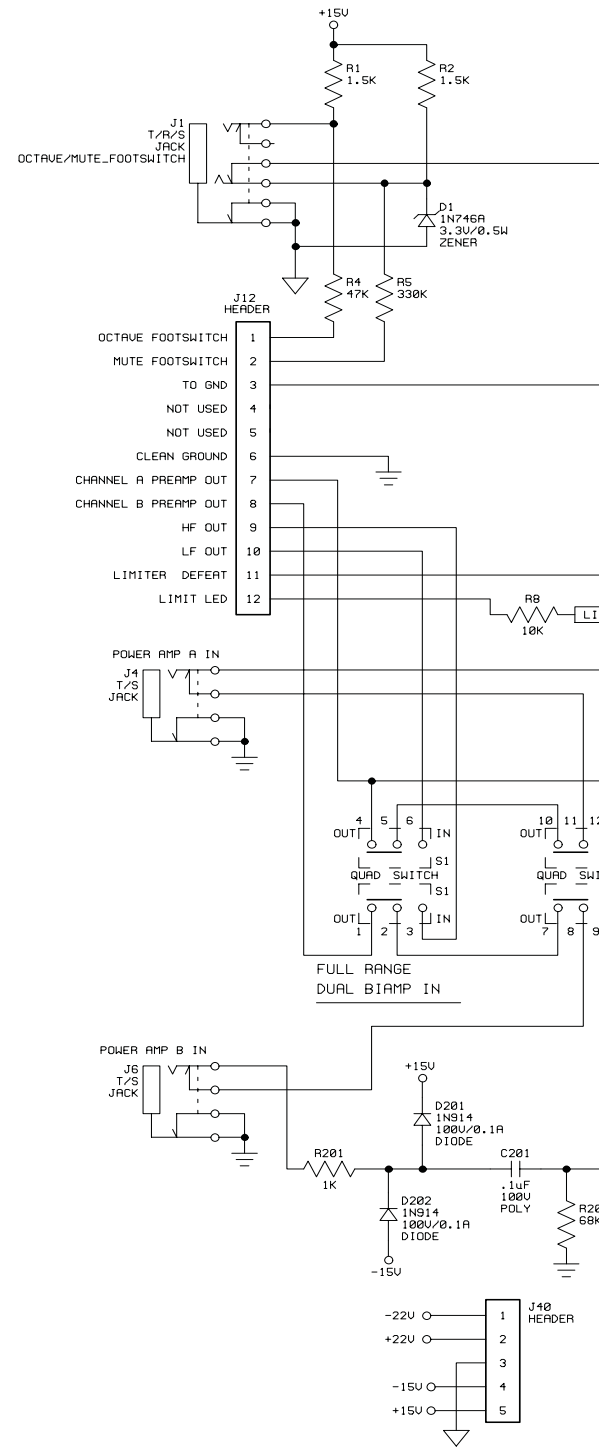
NOTES:
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TP	NO SIGNAL	40VRMS OUT @ 8 OHMS	LIMITING @ 8 OHMS	AS NOTED	WAVEFORM
13	VARIES w/TEMP	Varies w/temp.	Varies w/temp.		
14	61Uac	51Uac	51Uac		~
15	61Uac	51Uac	51Uac		~
16	+14Vdc	-4.6Vdc	-4.6Vdc		
17	+14.4Vdc	+14.4Vdc	+14.4Vdc		
18	20Uac	19Uac	19Uac		~
19	20Uac	19Uac	19Uac		~
20	+71Vdc	+64.5Vdc	+64.5Vdc		∩
21	+63Vdc	+59Vdc	+59Vdc		∩
22	-63Vdc	-59Vdc	-59Vdc		∪
23	-71Vdc	-64.5Vdc	-64.5Vdc		∪
24	+6Vdc	+5.73Vdc	+5.73Vdc		
25	NOT USED				
26	+15Vdc	+15Vdc	+15Vdc		
27	-15Vdc	-15Vdc	-15Vdc		
28	+14.3Vdc	+14.3Vdc	+14.3Vdc		

SHEETS 4, 5 & 6 OF THIS DRAWING REPRESENTS ASSY P/N 07-442-11

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THIS INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO ST. LOUIS MUSIC, INC.						
SIGNATURES:		DATE:		11800 Borman Dr. St. Louis, Missouri 63146		
DRAWN: REM				FIRST USED ON:		
CHK'D:						
ALS'D:						
TOLERANCES:	DRAWING SIZE: D	DRAWING TITLE: POWER_AMP				
	DRAWING TYPE: SCHEMATIC	DRAWING NO.:				
	CLASS CODE:	DRAWING NO.:				
	SCALE: NONE	SHEET: SHT 6 OF 15				



BIAS ADJUSTMENT: WITH NO SIGNAL AND NO LOAD
 ADJUST AP101 TO OBTAIN AN AVERAGE OF 25 ± 5mV ACROSS R139, 140
 R146, 147, 152, 153, 158, 159, 164, 165.
 ADJUST AP201 TO OBTAIN AN AVERAGE OF 25 ± 5mV ACROSS R239, 240
 R246, 247, 252, 253, 258, 259, 264, 265.

T.P.	NO SIGNAL	40VRMS OUT @ 8 OHMS	LIMITING @ 8 OHMS	AS NOTED	WAVEFORM
1	---	0.68Urms	0.79Urms	---	~
2	---	0.68Urms	0.79Urms	---	~
3	+/-20mVdc	1.5V	1.5V	---	~
4	+/-1Vdc	2.6Vdc	2.6Vdc	---	AS SHOWN PER COLUMN
5	+7mVdc	1.9mV	2.7mV	---	---
6	+5Vdc	+4.82Vdc	+4.82Vdc	---	---
7	-5Vdc	-5.12Vdc	-5.12Vdc	---	---
8	0V	+43.6mVdc	+74mVdc	---	~

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SHEETS 7, 8 & 9 OF THIS DRAWING REPRESENT ASSY P/N 07-442-21

REV:	DATE:	DESCRIPTION:	ECR/ECN NO:	CHK'D BY:	APP'D BY:	DATE:
THIS INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO ST. LOUIS MUSIC, INC.						
SIGNATURES:		DATE:		11800 Borman Dr., St. Louis, Missouri 63146		
DRAWN: REM		6-25-98		FIRST USED ON:		
CHK'D:				DRAWING TITLE: POWER_AMP		
TOLERANCES:		DRAWING SIZE: D		DRAWING NO.: 07S442-XX		
		DRAWING TYPE: SCHEMATIC		DRAWING NO.:		
		CLASS CODE:		SHEET: SHT 7 OF 15		
		SCALE: NONE				

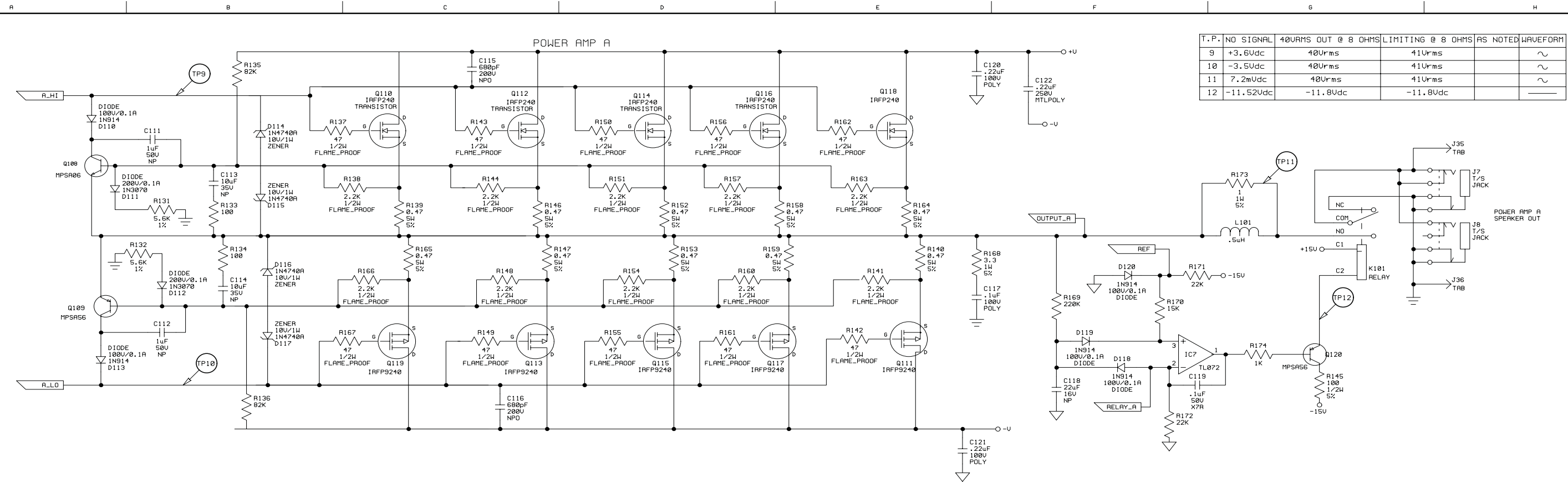


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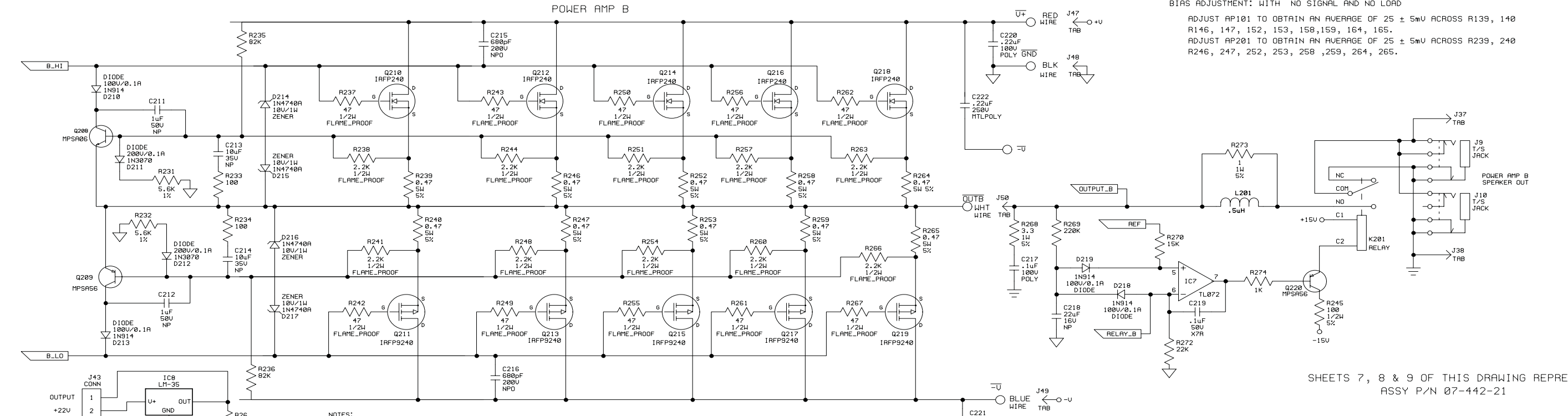
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Power Amplifier PCB Schematics

PAGE 7



T.P.	NO SIGNAL	40VRMS OUT @ 8 OHMS	LIMITING @ 8 OHMS	AS NOTED	WAVEFORM
9	+3.6Vdc	40Urms	41Urms		~
10	-3.5Vdc	40Urms	41Urms		~
11	7.2mVdc	40Urms	41Urms		~
12	-11.52Vdc	-11.8Vdc	-11.8Vdc		—

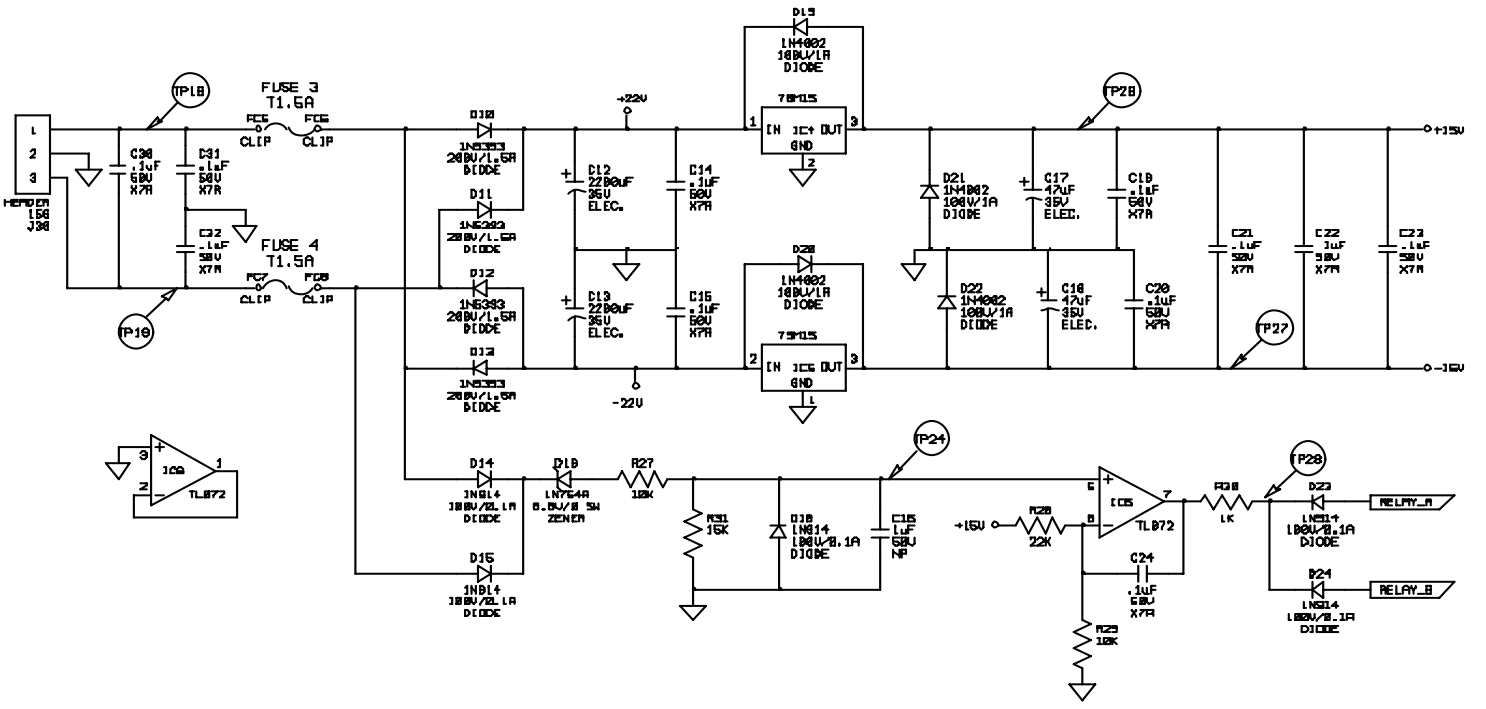
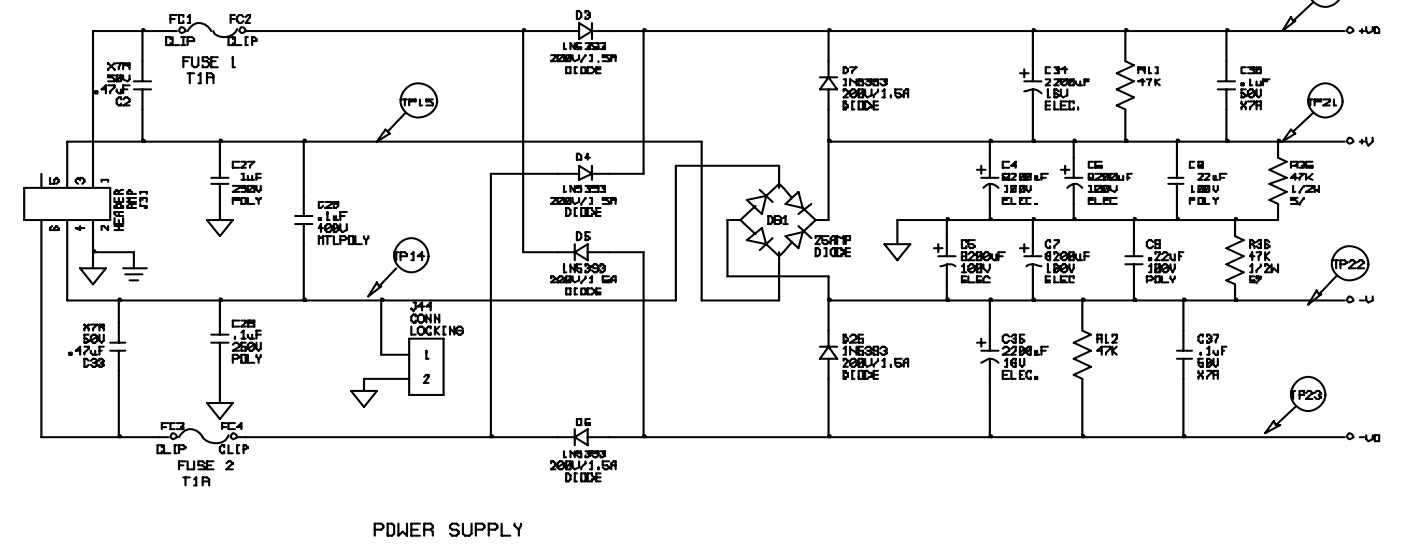
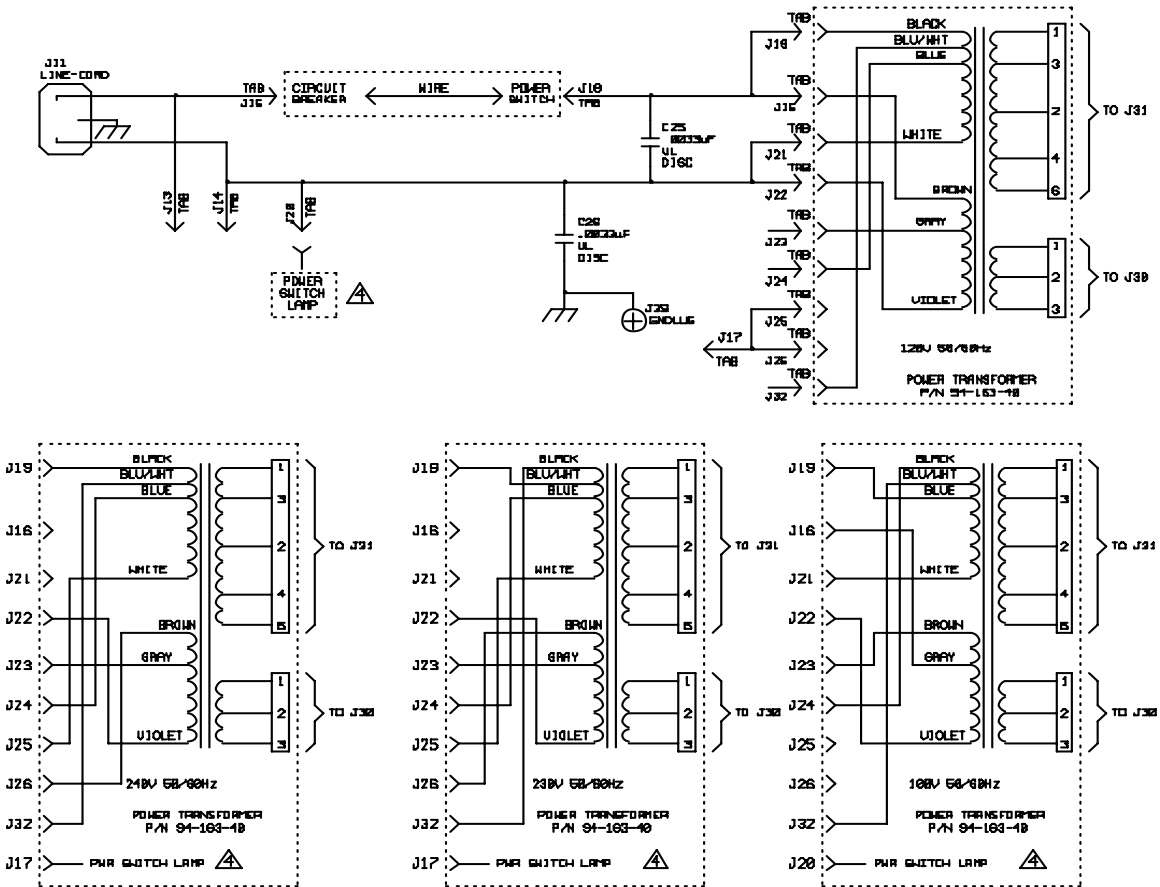


BIAS ADJUSTMENT: WITH NO SIGNAL AND NO LOAD
 ADJUST AP101 TO OBTAIN AN AVERAGE OF 25 ± 5mV ACROSS R139, 140, 146, 147, 152, 153, 158, 159, 164, 165.
 ADJUST AP201 TO OBTAIN AN AVERAGE OF 25 ± 5mV ACROSS R239, 240, 246, 247, 252, 253, 258, 259, 264, 265.

SHEETS 7, 8 & 9 OF THIS DRAWING REPRESENT ASSY P/N 07-442-21

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 - 2) UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
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DRAWN: REM			6-25-98			
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RLS'D:			DRAWING TITLE:		POWER_AMP	
DRAWING SIZE: D		DRAWING TYPE: - SCHEMATIC		DRAWING NO.:		
CLASS CODE:		SCALE: NONE		DRAWING NO.:		
SHEET: SH1 8 OF 15		DRAWING NO.: 07S442-XX				



- NOTES:**
- THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
 - UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
 - VOLTAGES ARE MEASURED WITH A MEDIUM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER.
 - IF REQUIRED FOR CHASSIS ASSY

CAUTION:
THIS SCHEMATIC IS PROVIDED FOR USE BY QUALIFIED PERSONNEL. TO PREVENT RISK OF ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING BEYOND THAT EXPLAINED IN THE OPERATING INSTRUCTIONS.

TP	NO SIGNAL	10Vrms OUT @ 8 OHMS (LIMITING @ 8 OHMS) AS NOTED	WAVEFORM
13	VARIES w/TEMP	Varies w/TEMP	Varies w/TEMP
14	51Vdc	51Vdc	51Vdc
15	51Vdc	51Vdc	51Vdc
16	+14Vdc	-4.6Vdc	-4.6Vdc
17	+14.4Vdc	+14.4Vdc	+14.4Vdc
18	20Vdc	19Vdc	19Vdc
19	20Vdc	19Vdc	19Vdc
20	+71Vdc	+64.5Vdc	+64.5Vdc
21	+63Vdc	+69Vdc	+69Vdc
22	-63Vdc	-69Vdc	-69Vdc
23	-71Vdc	-64.5Vdc	-64.5Vdc
24	+6Vdc	+5.73Vdc	+5.73Vdc
25	NOT USED		
26	+16Vdc	+16Vdc	+16Vdc
27	-16Vdc	-16Vdc	-16Vdc
28	+14.3Vdc	+14.3Vdc	+14.3Vdc

SHEETS 7, 8 & 9 OF THIS DRAWING REPRESENT ASSY P/N 07-442-21

REV.	DATE	DESCRIPTION	EDR/DCN NO.	DRG'D BY	APP'D BY	DATE

THIS INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO THE LOUD GROUP, INC.

SIGNATURES: _____ **DATE:** 6-26-08

DRAWN: REI **DATE:** 6-26-08

CHK'D: _____ **FIRST USED ON:** _____

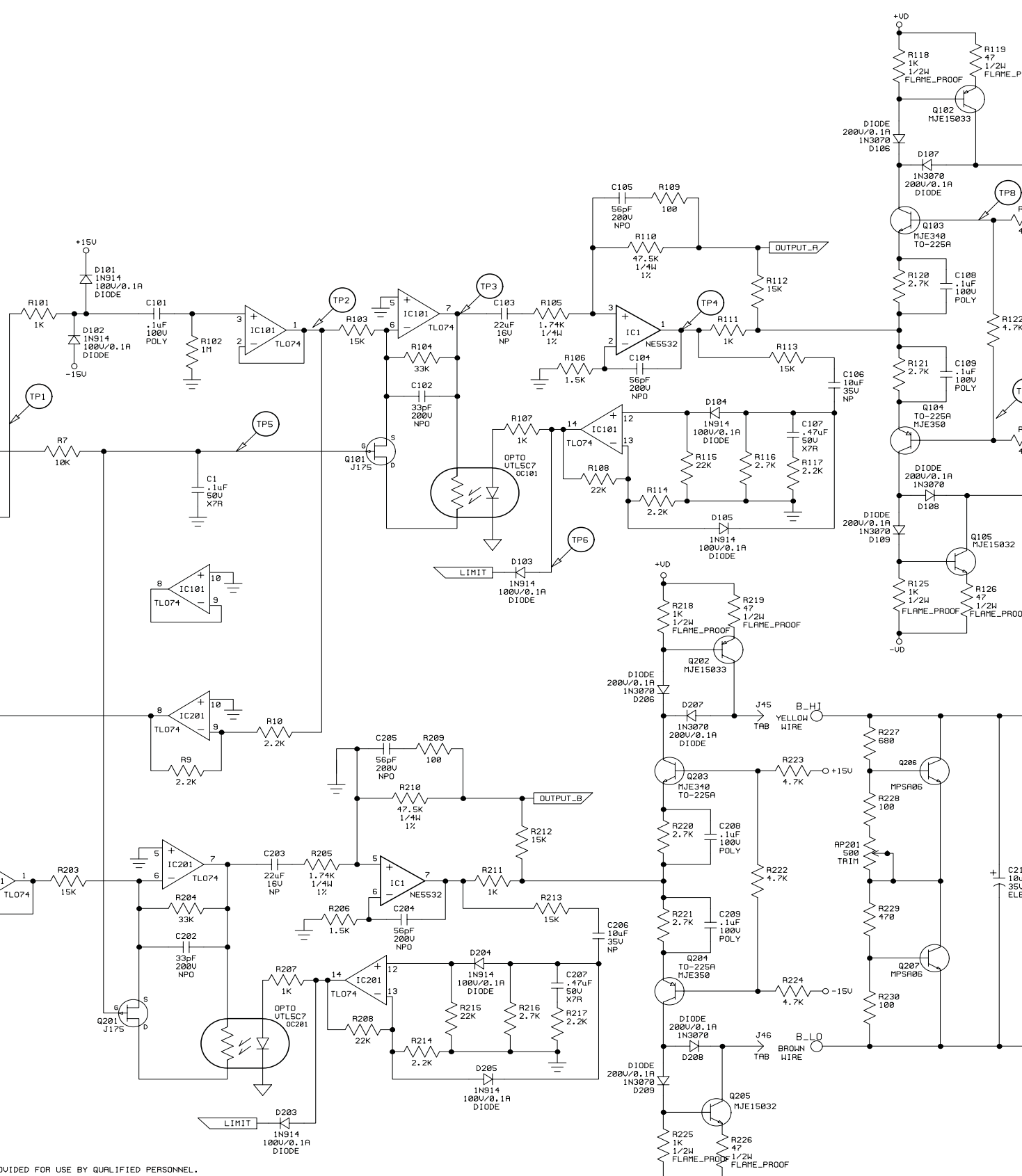
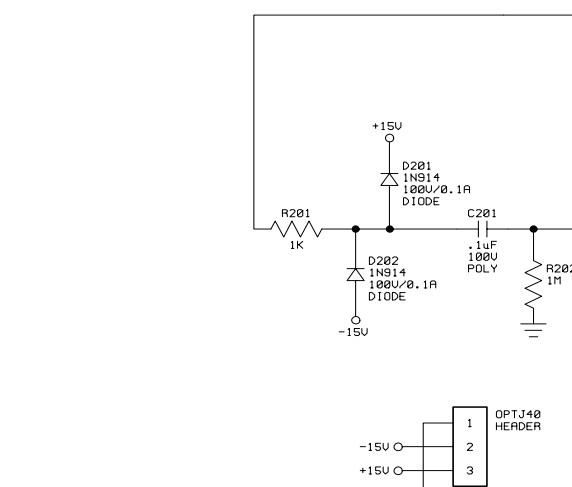
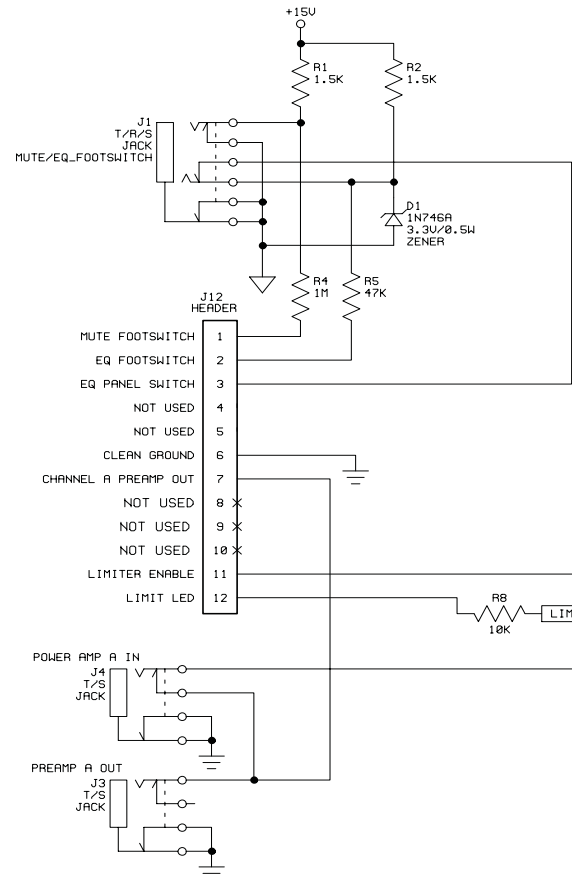
PLS'D: _____

TOLERANCES: DIMENSIONS: 0.0005" UNLESS OTHERWISE SPECIFIED

DRAWING TITLE: POWER AMP

CLASS CODE: _____ **DRAWING NO.:** 07S442-XX

SCALE: NONE **SHEET:** 9 OF 15



BIAS ADJUSTMENT: WITH NO SIGNAL AND NO LOAD
 ADJUST AP101 TO OBTAIN AN AVERAGE OF $25 \pm 5\mu\text{V}$ ACROSS R139, 140
 R146, 147, 152, 153, 158, 159, 164, 165.
 ADJUST AP201 TO OBTAIN AN AVERAGE OF $25 \pm 5\mu\text{V}$ ACROSS R239, 240
 R246, 247, 252, 253, 258, 259, 264, 265.

T.P.	NO SIGNAL	40URMS OUT @ 8 OHMS	LIMITING @ 8 OHMS	AS NOTED	WAVEFORM
1		0.68Urms	0.79Urms		~
2		0.68Urms	0.79Urms		~
3	+/-20mUdc	1.5U	1.5U		~
4	+/-1Udc	2.6Udc	2.6Udc		AS SHOWN PER COLUMN
5	+7mUdc	1.9mU	2.7mU		
6	+5Udc	+4.82Udc	+4.82Udc		
7	-5Udc	-5.12Udc	-5.12Udc		
8	0U	+43.6mUdc	+74mUdc		~

- NOTES:
- THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
 - UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
 - VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER.

CAUTION:
 THIS SCHEMATIC IS PROVIDED FOR USE BY QUALIFIED PERSONNEL. TO AVOID RISK OF ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING BEYOND THAT EXPLAINED IN THE OPERATING INSTRUCTIONS.

SHEETS 10, 11 & 12 OF THIS DRAWING REPRESENT ASSY P/N 07-442-04

REV:	DATE:	DESCRIPTION:	ECR/ECN NO:	CHK'D BY:	APP'D BY:	DATE:
THIS INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO ST. LOUIS MUSIC, INC.						
SIGNATURES:		DATE:		11888 Borman Dr. St. Louis, Missouri 63116		
DRAWN: REM		6-25-98		FIRST USED ON:		
CHK'D:				DRAWING TITLE: POWER_AMP		
TOLERANCES:		DRAWING SIZE: D		DRAWING NO.:		
DRAWING TYPE: - SCHEMATIC		CLASS CODE:		DRAWING NO.:		
SCALE: NONE		SHEET: SHT 10 OF 15		DRAWING NO.:		

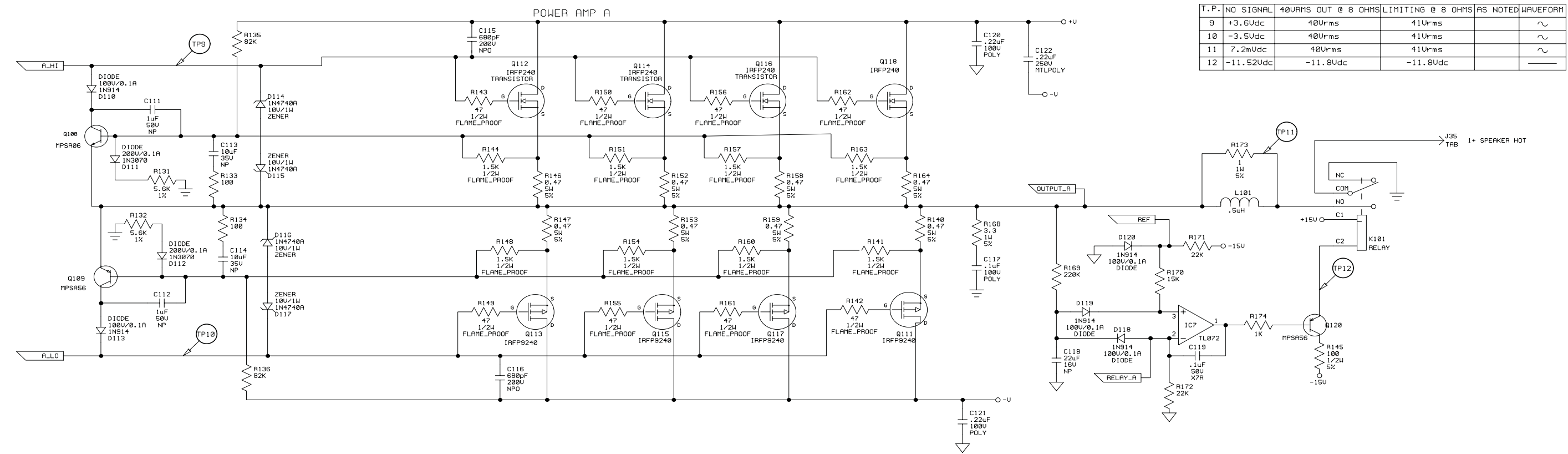


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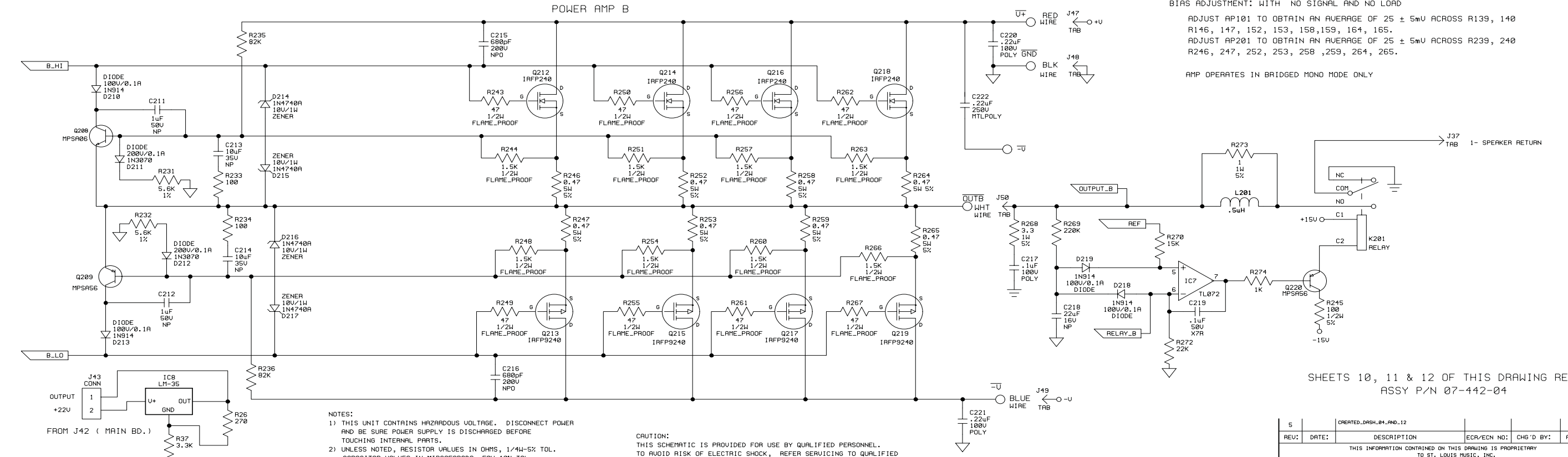
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Power Amplifier PCB Schematics

PAGE 10



T.P.	NO SIGNAL	40VRMS OUT @ 8 OHMS	LIMITING @ 8 OHMS	AS NOTED	WAVEFORM
9	+3.6Udc	40Urms	41Urms		~
10	-3.5Udc	40Urms	41Urms		~
11	7.2mUdc	40Urms	41Urms		~
12	-11.52Udc	-11.8Udc	-11.8Udc		—



BIAS ADJUSTMENT: WITH NO SIGNAL AND NO LOAD
 ADJUST AP101 TO OBTAIN AN AVERAGE OF 25 ± 5mV ACROSS R139, 140, 146, 147, 152, 153, 158, 159, 164, 165.
 ADJUST AP201 TO OBTAIN AN AVERAGE OF 25 ± 5mV ACROSS R239, 240, 246, 247, 252, 253, 258, 259, 264, 265.

AMP OPERATES IN BRIDGED MONO MODE ONLY

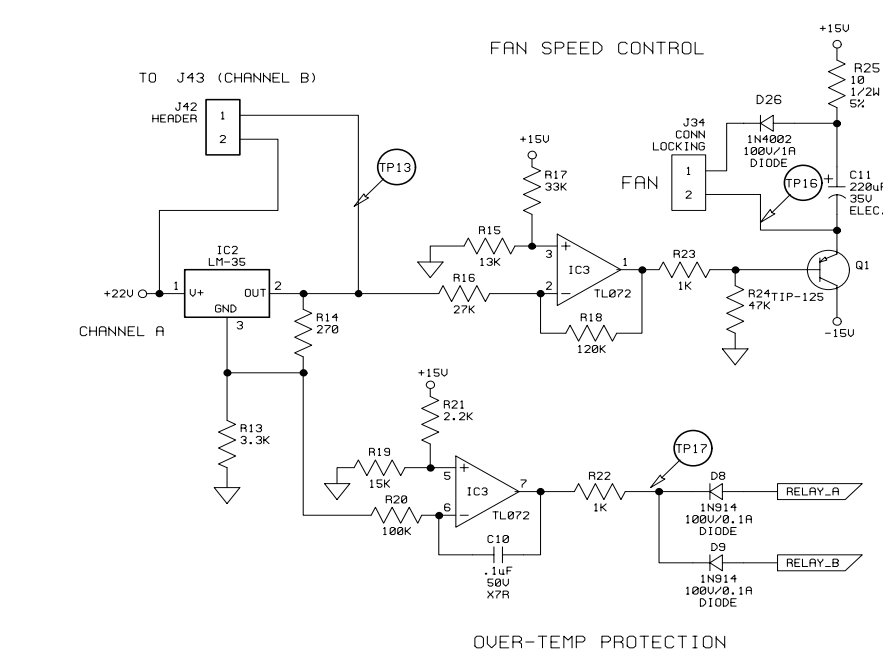
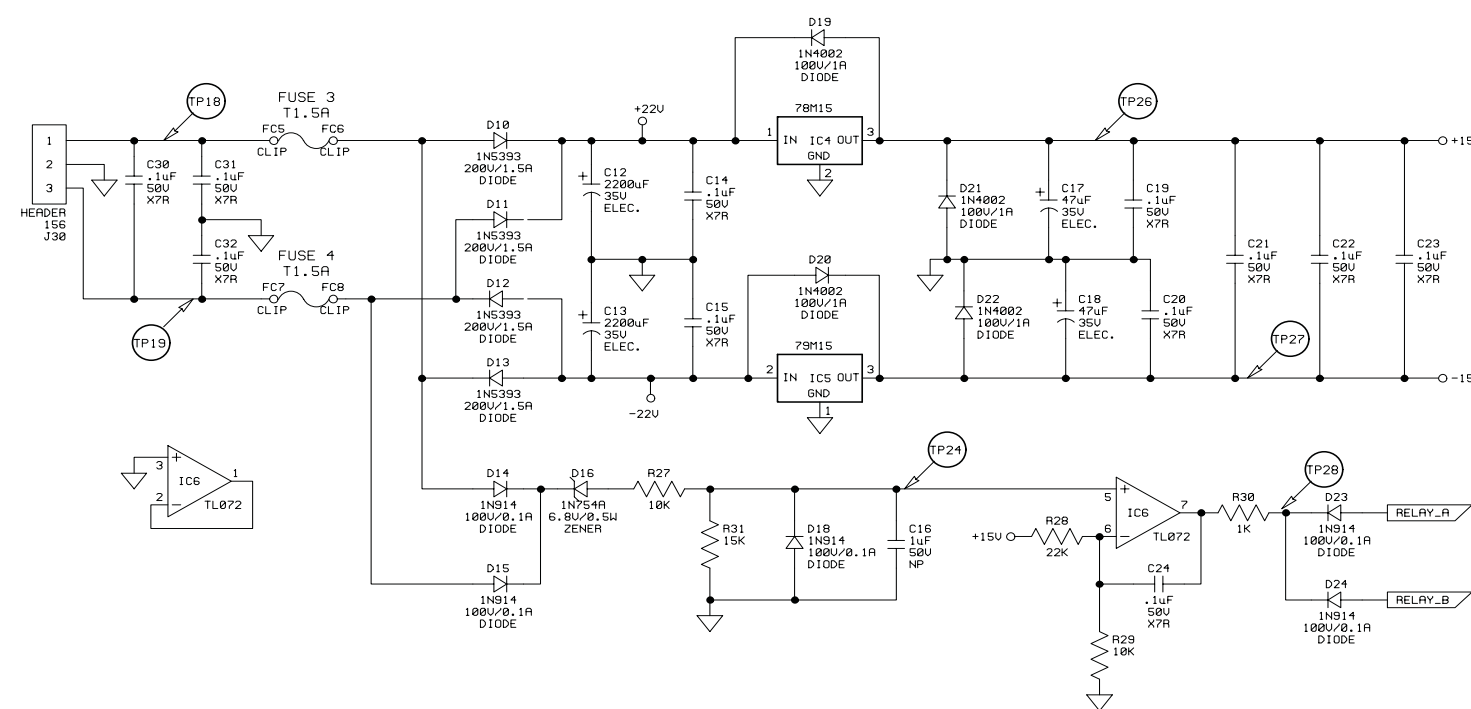
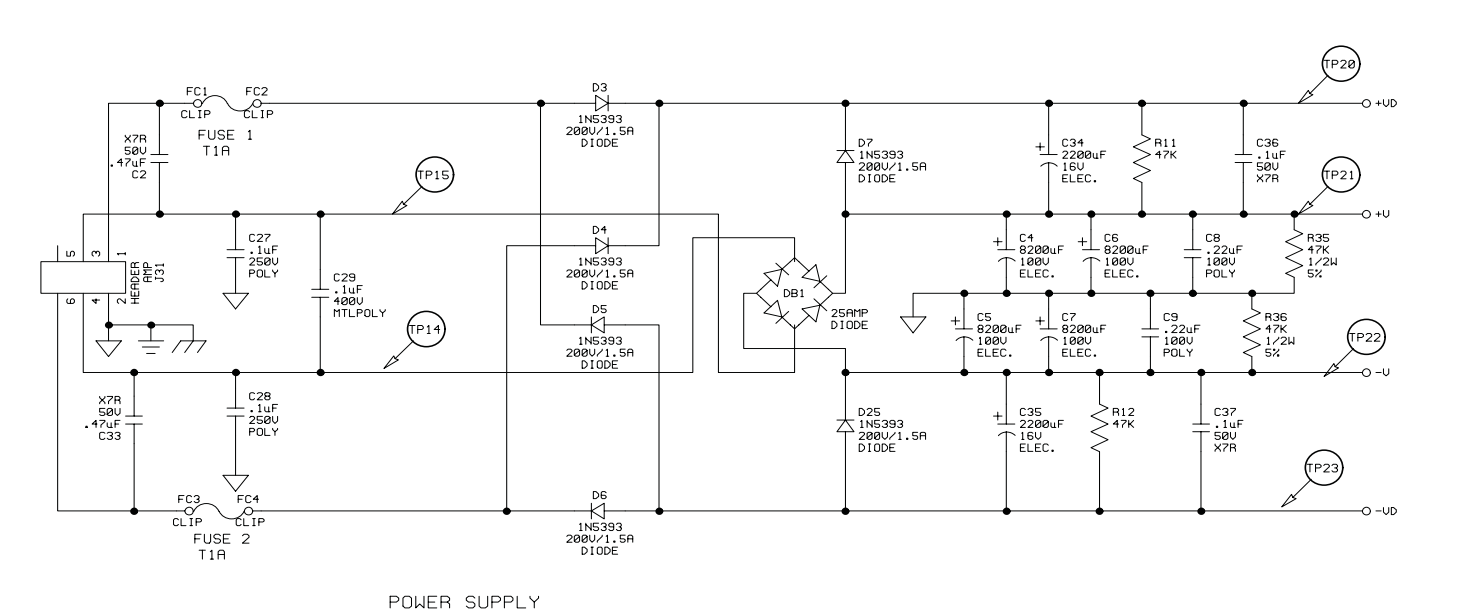
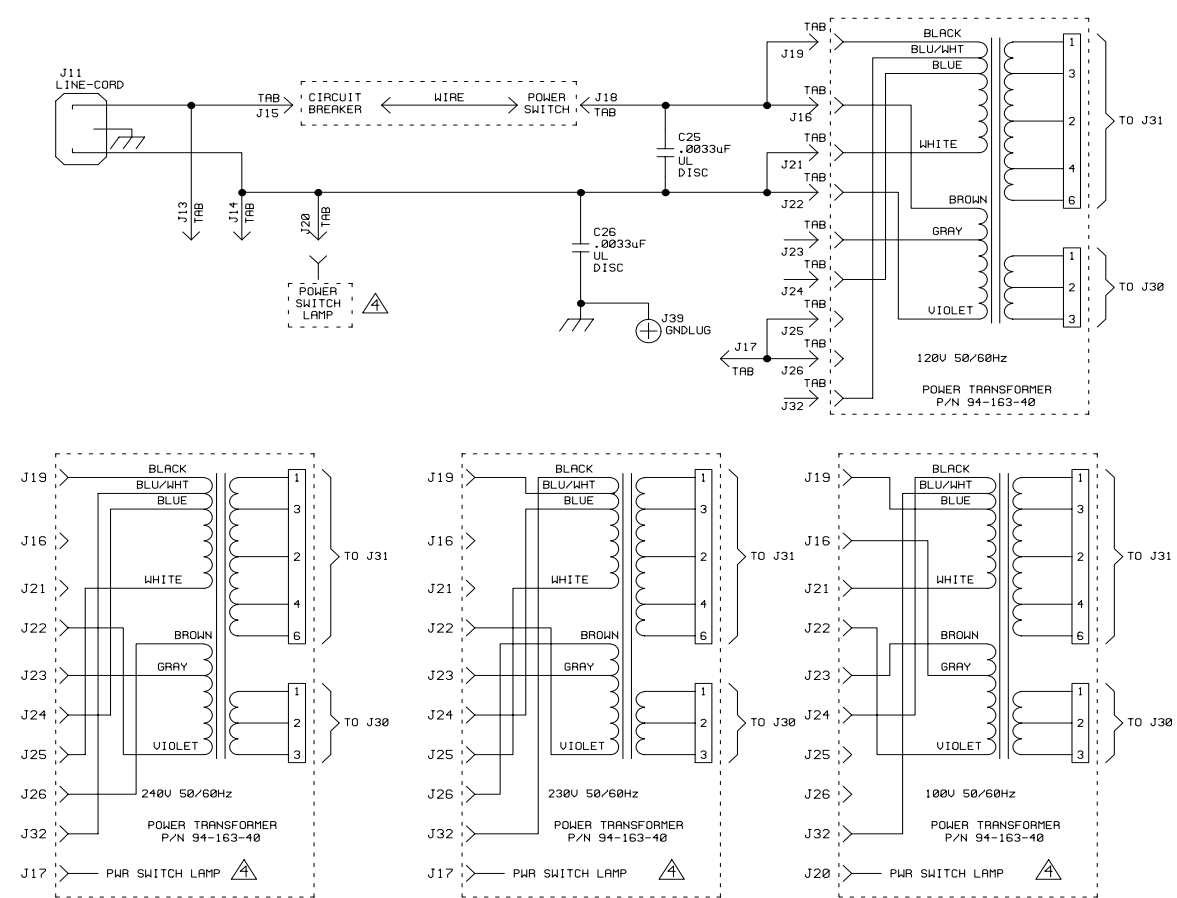
SHEETS 10, 11 & 12 OF THIS DRAWING REPRESENT ASSY P/N 07-442-04

- NOTES:
- THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
 - UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
 - VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER.
- CAUTION:
 THIS SCHEMATIC IS PROVIDED FOR USE BY QUALIFIED PERSONNEL. TO AVOID RISK OF ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING BEYOND THAT EXPLAINED IN THE OPERATING INSTRUCTIONS.

REV:	DATE:	DESCRIPTION	ECR/ECN NO:	CHG'D BY:	APP'D BY:	DATE:
5		CREATED_DASH_04_RND_12				

THIS INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO ST. LOUIS MUSIC, INC.

SIGNATURES:	DATE:	11888 Borman Dr. St. Louis, Missouri 63146
DRAWN: REM	6-25-98	
CHK'D:		FIRST USED ON:
ALS'D:		
TOLERANCES:	DRAWING SIZE: D	DRAWING TITLE: POWER_AMP
	DRAWING TYPE: - SCHEMATIC	DRAWING NO.:
	CLASS CODE:	
	SCALE: NONE	SHEET: SH1 11 OF 15



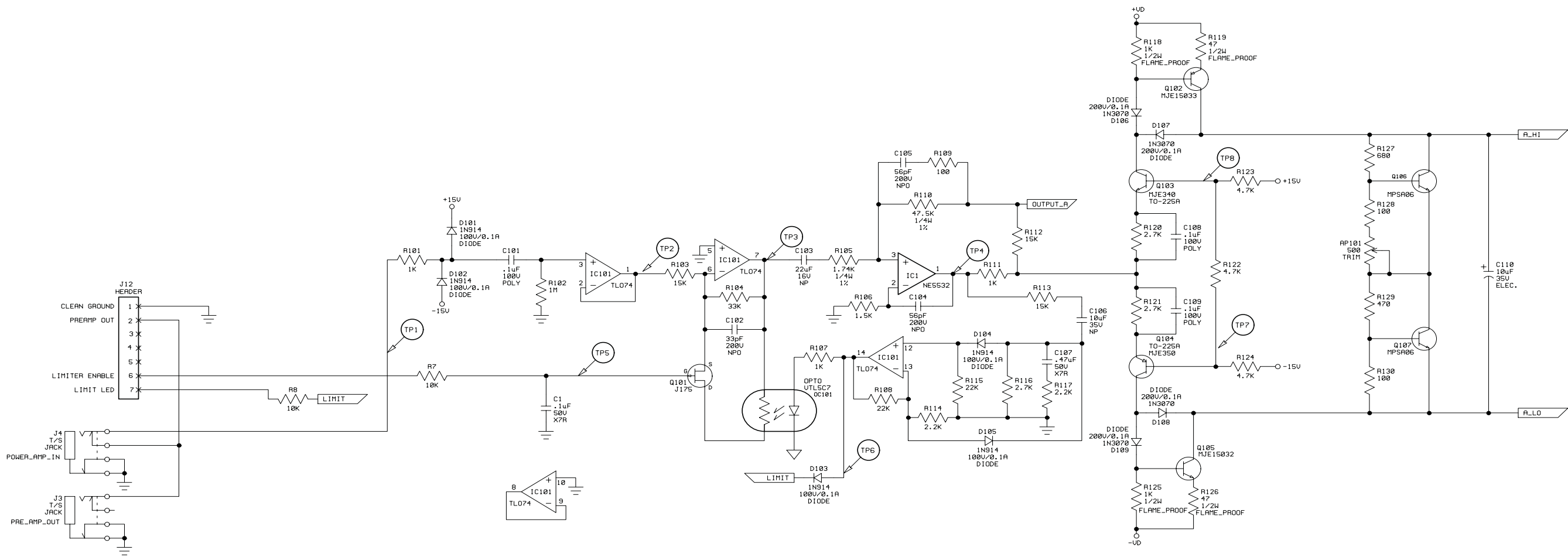
- NOTES:
- 1) THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
 - 2) UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
 - 3) VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER.
 - 4) IF REQUIRED FOR CHASSIS ASSY.

CAUTION:
THIS SCHEMATIC IS PROVIDED FOR USE BY QUALIFIED PERSONNEL.
TO AVOID RISK OF ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED
SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING BEYOND
THAT EXPLAINED IN THE OPERATING INSTRUCTIONS.

TP	NO SIGNAL	40VRMS OUT @ 8 OHMS	LIMITING @ 8 OHMS	AS NOTED	WAVEFORM
13	VARIES w/TEMP	Varies w/TEMP.	Varies w/TEMP.		
14	61Vac	51Vac	51Vac		~
15	61Vac	51Vac	51Vac		~
16	+14Vdc	-4.6Vdc	-4.6Vdc		
17	+14.4Vdc	+14.4Vdc	+14.4Vdc		
18	20Vac	19Vac	19Vac		~
19	20Vac	19Vac	19Vac		~
20	+71Vdc	+64.5Vdc	+64.5Vdc		~
21	+63Vdc	+59Vdc	+59Vdc		~
22	-63Vdc	-59Vdc	-59Vdc		~
23	-71Vdc	-64.5Vdc	-64.5Vdc		~
24	+6Vdc	+5.73Vdc	+5.73Vdc		~
25	NOT USED				
26	+15Vdc	+15Vdc	+15Vdc		
27	-15Vdc	-15Vdc	-15Vdc		
28	+14.3Vdc	+14.3Vdc	+14.3Vdc		

SHEETS 10, 11 & 12 OF THIS DRAWING REPRESENT
ASSY P/N 07-442-04

5	CREATED: DASH_01_RND_12				
REV:	DATE:	DESCRIPTION:	ECR/ECN NO:	CHG'D BY:	APP'D BY:
THIS INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO ST. LOUIS MUSIC, INC.					
SIGNATURES:		DATE:	11800 Borman Dr. St. Louis, Missouri 63146		
DRAWN: REM	6-25-98		FIRST USED ON:		
CHK'D:			-		
RLS'D:			-		
TOLERANCES:	DRAWING SIZE: D	DRAWING TITLE: POWER_AMP		DRAWING NO.:	
	DRAWING TYPE: - SCHEMATIC			07S442-XX	
	CLASS CODE:			SHEET: SHT 12 OF 15	
	SCALE: NONE				



BIAS ADJUSTMENT: WITH NO SIGNAL AND NO LOAD
 ADJUST AP101 TO OBTAIN AN AVERAGE OF 25 ± 5mV ACROSS R139, 140
 R146, 147, 152, 153, 158, 159, 164, 165.

T.P.	NO SIGNAL	40Vrms OUT @ 8 OHMS	LIMITING @ 8 OHMS	AS NOTED	WAVEFORM
1	—	0.68Vrms	0.79Vrms	—	~
2	—	0.68Vrms	0.79Vrms	—	~
3	+/-20mVdc	1.5V	1.5V	—	~
4	+/-1Vdc	2.6Vdc	2.6Vdc	—	AS SHOWN PER COLUMN
5	+7mVdc	1.9mV	2.7mV	—	—
6	+5Vdc	+4.82Vdc	+4.82Vdc	—	—
7	-5Vdc	-5.12Vdc	-5.12Vdc	—	—
8	0V	+43.6mVdc	+74mVdc	—	~

SHEETS 13, 14 & 15 OF THIS DRAWING REPRESENTS
 ASSY P/N 07-442-12

- NOTES:
- THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
 - UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
 - VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER.

CAUTION:
 THIS SCHEMATIC IS PROVIDED FOR USE BY QUALIFIED PERSONNEL. TO AVOID RISK OF ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING BEYOND THAT EXPLAINED IN THE OPERATING INSTRUCTIONS.

5	CREATED_DASH_L04_RND_12					
REV:	DATE:	DESCRIPTION	ECR/ECN NO:	CHG'D BY:	APP'D BY:	DATE:
THIS INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO ST. LOUIS MUSIC, INC.						
SIGNATURES:		DATE:		11888 Borman Dr. St. Louis, Missouri 63146		
DRAWN: REM		6-25-98		FIRST USED ON: —		
CHK'D:						
ALS'D:						
DRAWING SIZE: D SCHEMATIC		DRAWING TITLE: POWER_AMP				
DRAWING TYPE: —		DRAWING NO.: 07S442-XX				
CLASS CODE:						
SCALE: NONE		SHEET: SHT 13 OF 15				

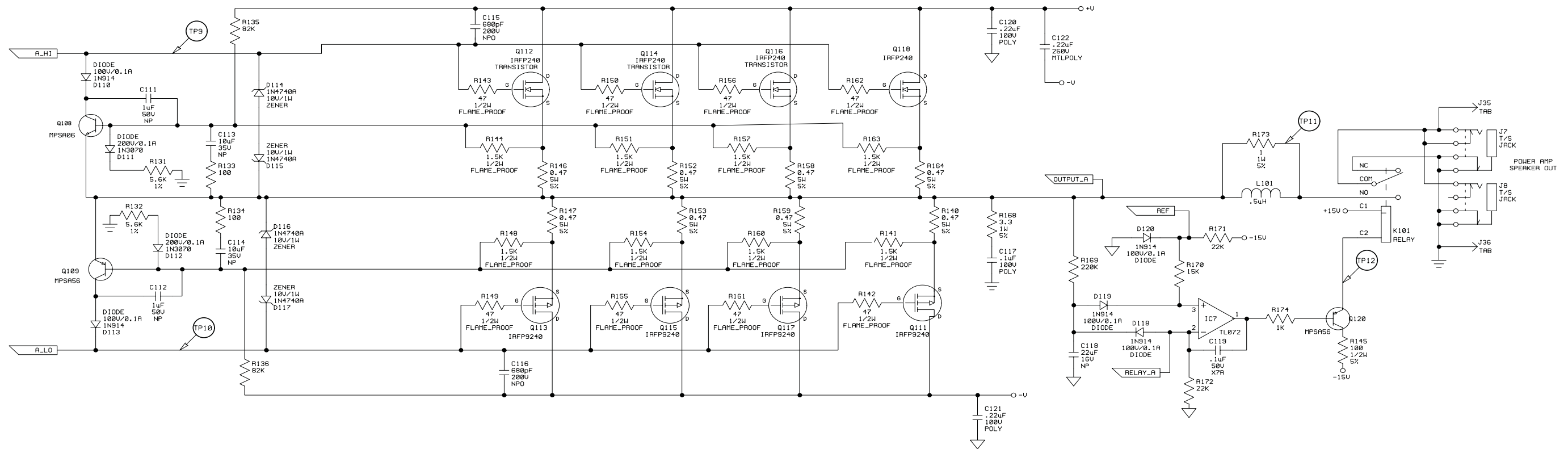


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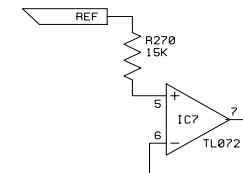
Power Amplifier PCB Schematics

PAGE 13



BIAS ADJUSTMENT: WITH NO SIGNAL AND NO LOAD
 ADJUST AP101 TO OBTAIN AN AVERAGE OF $25 \pm 5\mu\text{V}$ ACROSS R139, 140
 R146, 147, 152, 153, 158, 159, 164, 165.

T.P.	NO SIGNAL	40VRMS OUT @ 8 OHMS	LIMITING @ 8 OHMS AS NOTED	WAVEFORM
9	+3.6Vdc	40Urms	41Urms	~
10	-3.5Vdc	40Urms	41Urms	~
11	7.2mVdc	40Urms	41Urms	~
12	-11.52Vdc	-11.8Vdc	-11.8Vdc	—

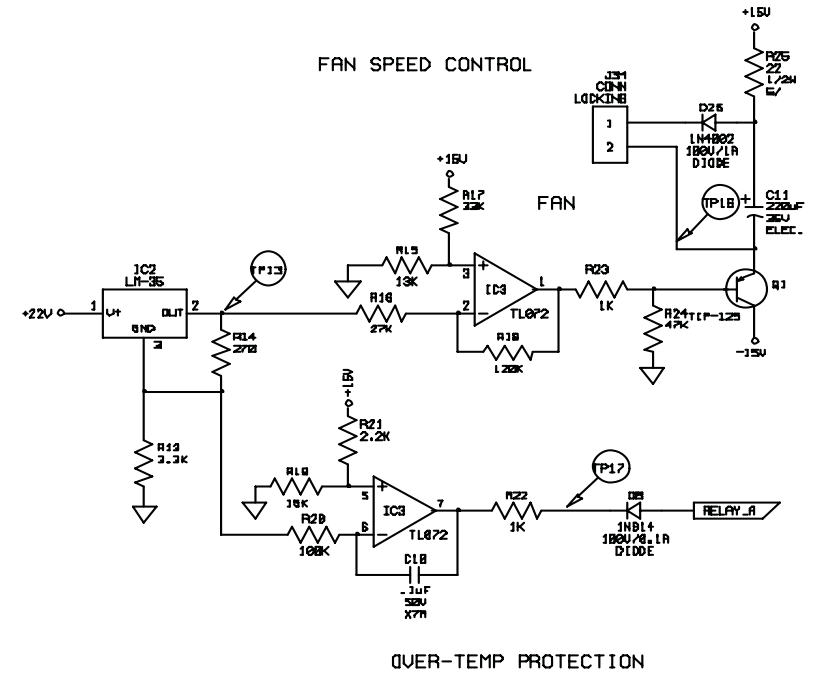
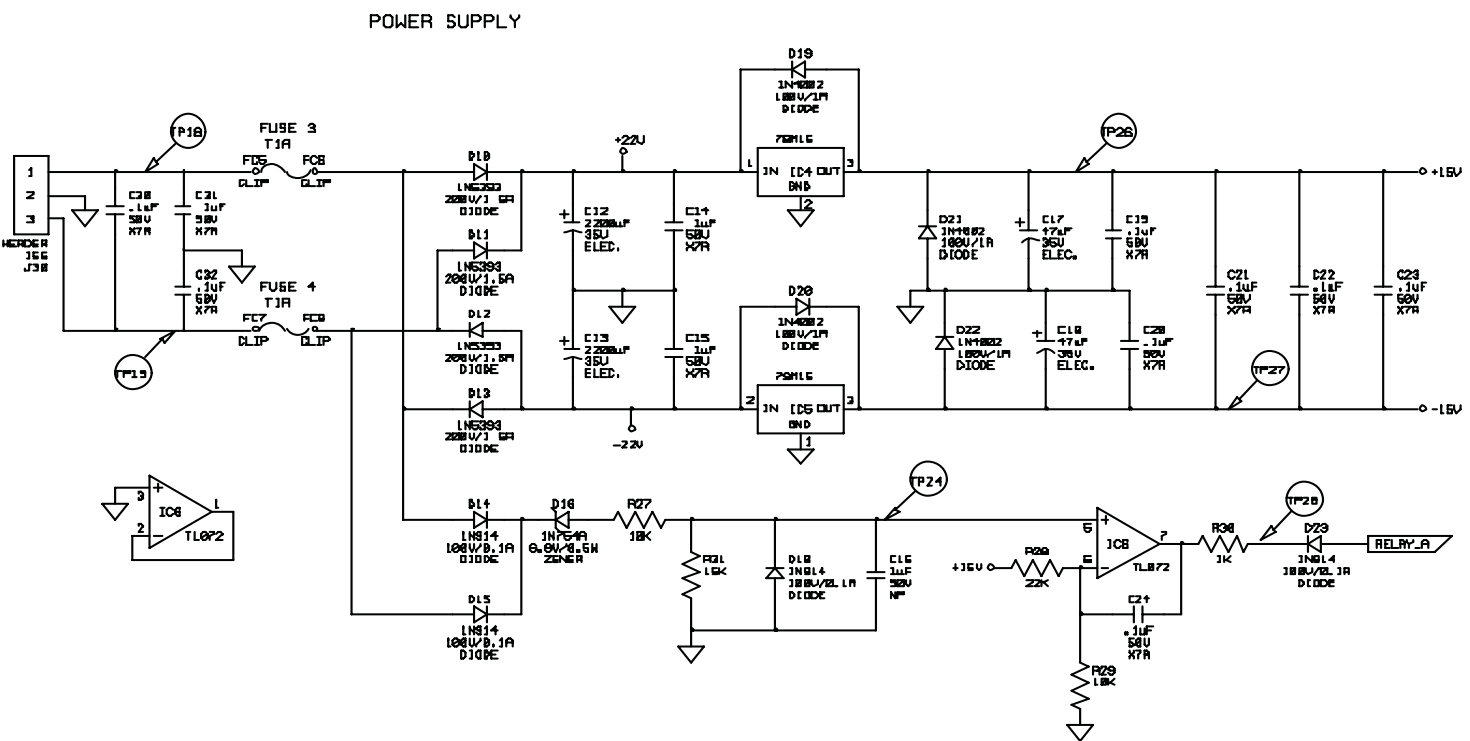
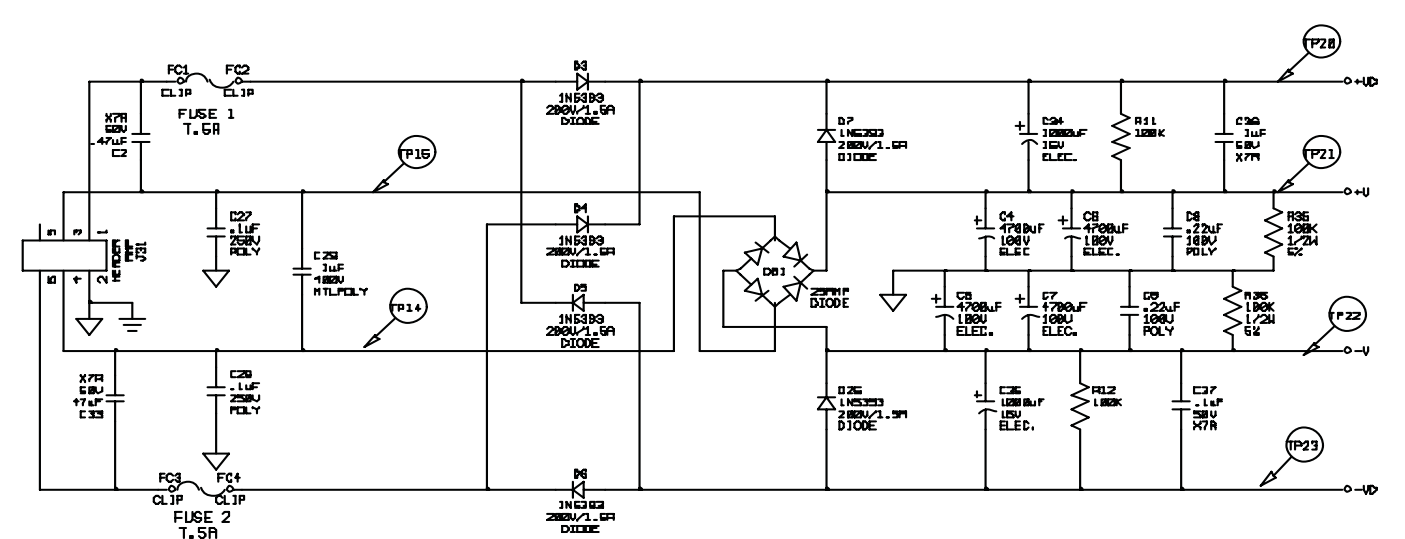
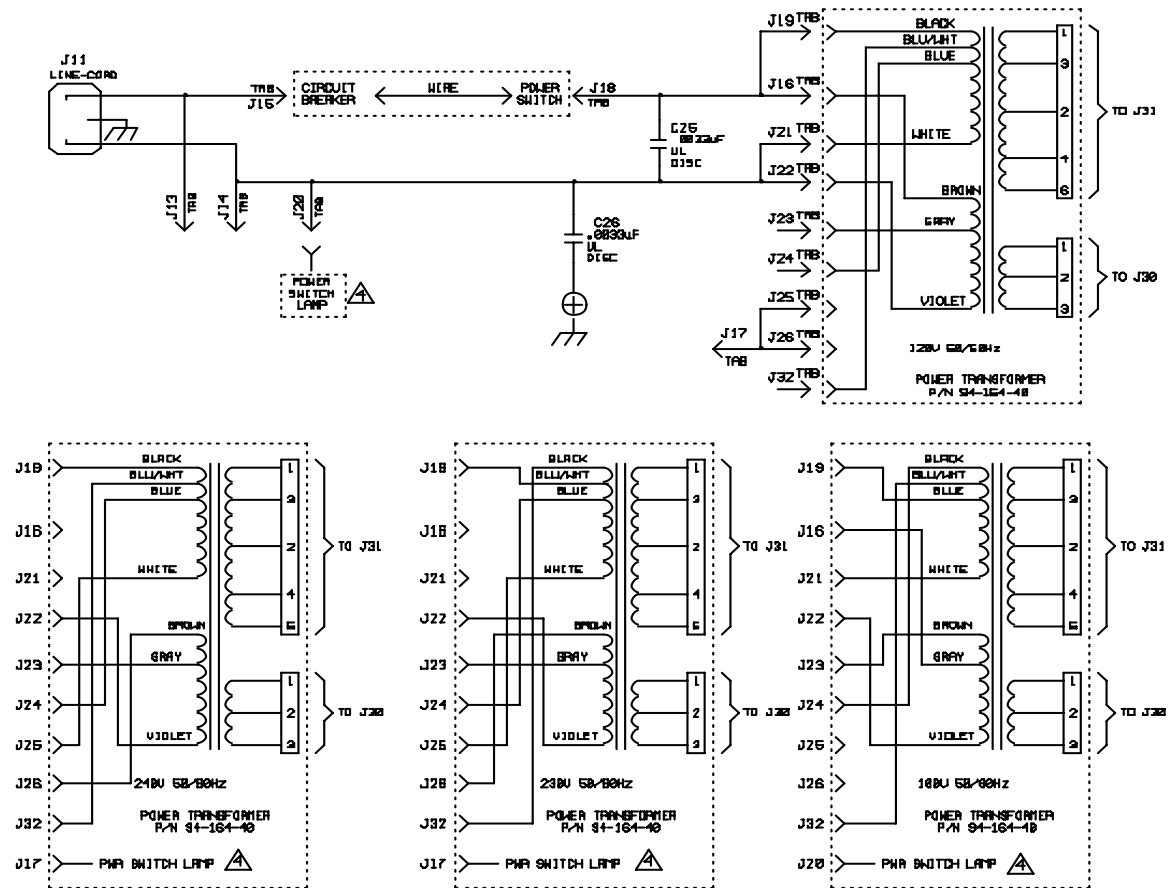


- NOTES:
- 1) THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
 - 2) UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
 - 3) VOLTAGES ARE MEASURED WITH 1 MEGOHM OSCILLOSCOPE AND 10 MEGOHM DIGITAL VOLTMETER.

CAUTION:
 THIS SCHEMATIC IS PROVIDED FOR USE BY QUALIFIED PERSONNEL.
 TO AVOID RISK OF ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING BEYOND THAT EXPLAINED IN THE OPERATING INSTRUCTIONS.

SHEETS 13, 14 & 15 OF THIS DRAWING REPRESENTS
 ASSY P/N 07-442-12

REV	DATE	DESCRIPTION	ECR/ECN NO	CHG'D BY	APP'D BY	DATE
5		CREATED_DASH_01_RND_12				
THIS INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO ST. LOUIS MUSIC, INC.						
SIGNATURES:		DATE:		11888 Borham Dr. St. Louis, Missouri 63116		
DRAWN:	REM	6-25-98		FIRST USED ON:		
CHK'D:				-		
ALS'D:				-		
DRAWING SIZE: D		DRAWING TITLE:		POWER_AMP		
DRAWING TYPE: - SCHEMATIC		DRAWING NO.:		07S442-XX		
CLASS CODE:		SCALE: NONE		SHEET: SHT 14 OF 15		



- NOTES**
- THIS UNIT CONTAINS HAZARDOUS VOLTAGE. DISCONNECT POWER AND BE SURE POWER SUPPLY IS DISCHARGED BEFORE TOUCHING INTERNAL PARTS.
 - UNLESS NOTED, RESISTOR VALUES IN OHMS, 1/4W-5% TOL. CAPACITOR VALUES IN MICROFARADS, 50V-10% TOL.
 - VOLTAGES ARE MEASURED WITH A MESHOM OSCILLOSCOPE AND A MESHOM DIGITAL VOLTMETER.
 - IF REQUIRED FOR CHASSIS ASSY.

CAUTION
THIS SCHEMATIC IS PROVIDED FOR USE BY QUALIFIED PERSONNEL TO AVOID RISK OF ELECTRIC SHOCK. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING BEYOND THAT EXPLAINED IN THE OPERATING INSTRUCTIONS.

TP	NO SIGNAL	+20Vrms OUT @ 8 OHMS	LIMITING @ 8 OHMS	AS NOTED	WAVEFORM
13	VARIES W/TEMP	Varies w/temp.	Varies w/temp.		
14	61Vac	51Vac	51Vac		~
15	61Vac	51Vac	51Vac		~
16	+14Vdc	-4.6Vdc	-4.6Vdc		
17	+14.4Vdc	+14.4Vdc	+14.4Vdc		
18	20Vac	19Vac	19Vac		~
19	20Vac	19Vac	19Vac		~
20	+71Vdc	+84.5Vdc	+84.5Vdc		^^
21	+69Vdc	+59Vdc	+59Vdc		^^
22	-63Vdc	-68Vdc	-68Vdc		^^
23	-71Vdc	-64.5Vdc	-64.5Vdc		^^
24	+6Vdc	+5.73Vdc	+5.73Vdc		^^
25	NOT USED				
26	+15Vdc	+15Vdc	+15Vdc		
27	-15Vdc	-15Vdc	-15Vdc		
28	+14.3Vdc	+14.3Vdc	+14.3Vdc		

SHEETS 13, 14 & 15 OF THIS DRAWING REPRESENTS ASSY P/N 07-442-12

REV	DATE	DESCRIPTION	ED/VEEN	CHK'D BY	APP'D BY	DATE
16		REV SHEET 1				
THIS INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO QLS LOUIS RUSSELL, INC.						
SIGNATURES:			DATE:		13888	
DRM:	ASH	0-26-98			Dr. Louie, Missouri 63108	
CHK':					P3871 WED INC	
FILE #						
TELEPHONE	MARKING SIZE: D	DRAWING TITLE: POWER AMP				
	DRAWING TYPE: SCHEMATIC	DRAWING NO.: 075442-XX				
	CLASS CODES					
	SCALE: NONE	SHEET: 15				