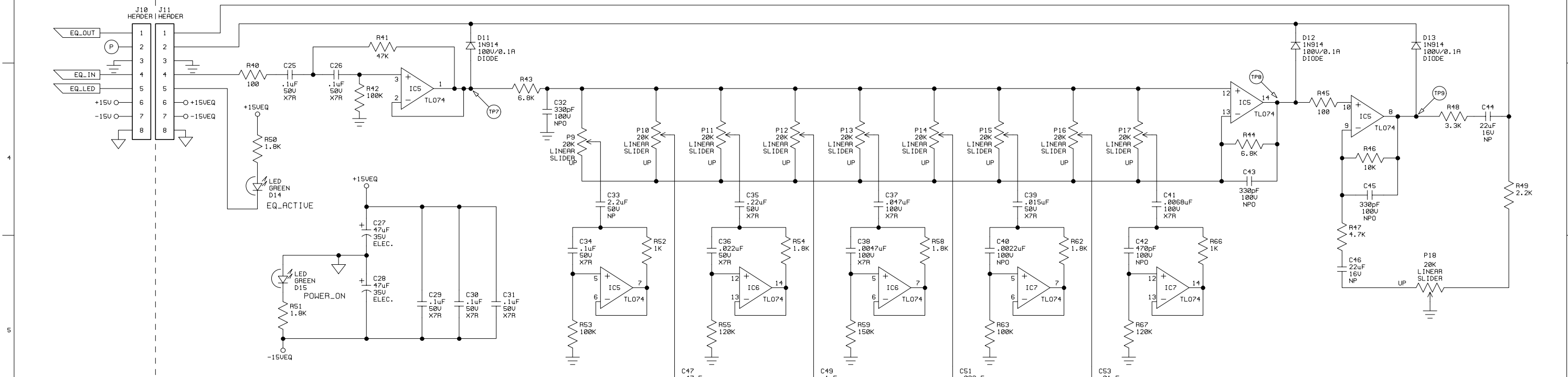
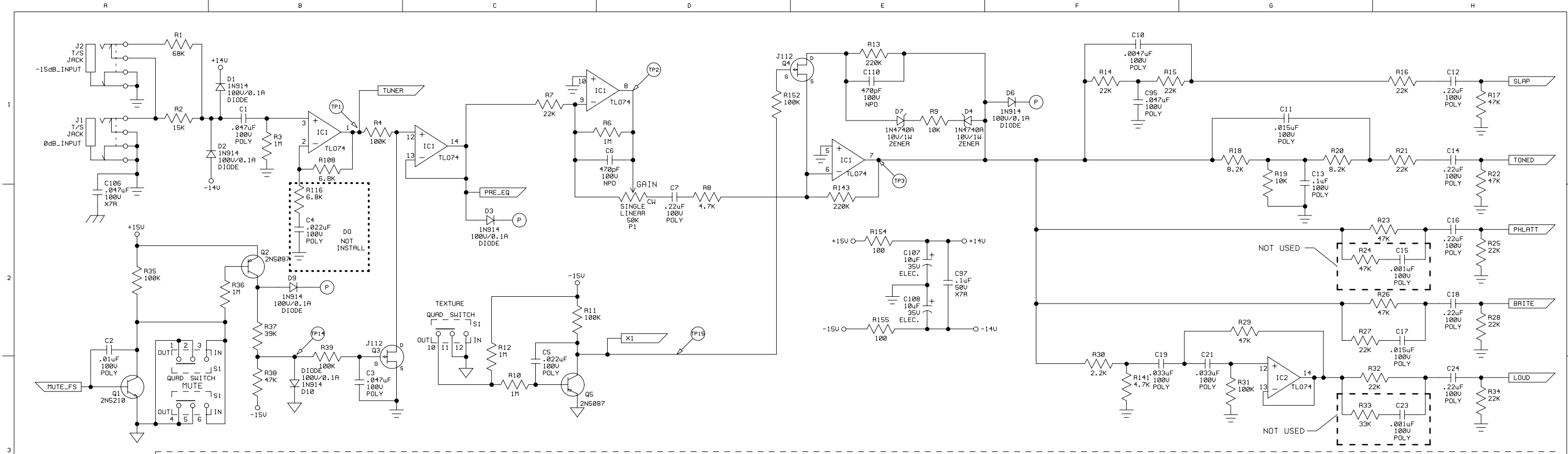
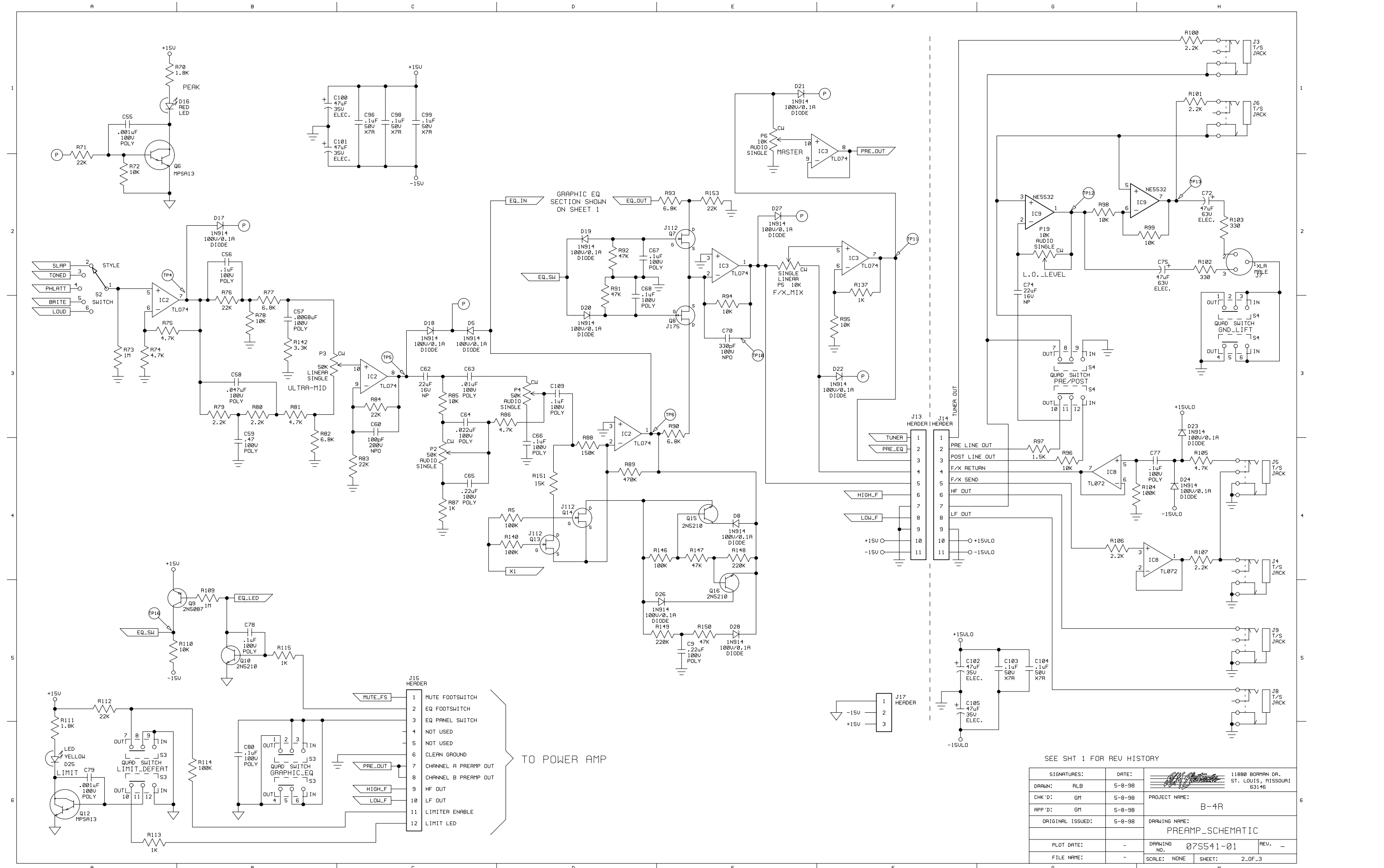




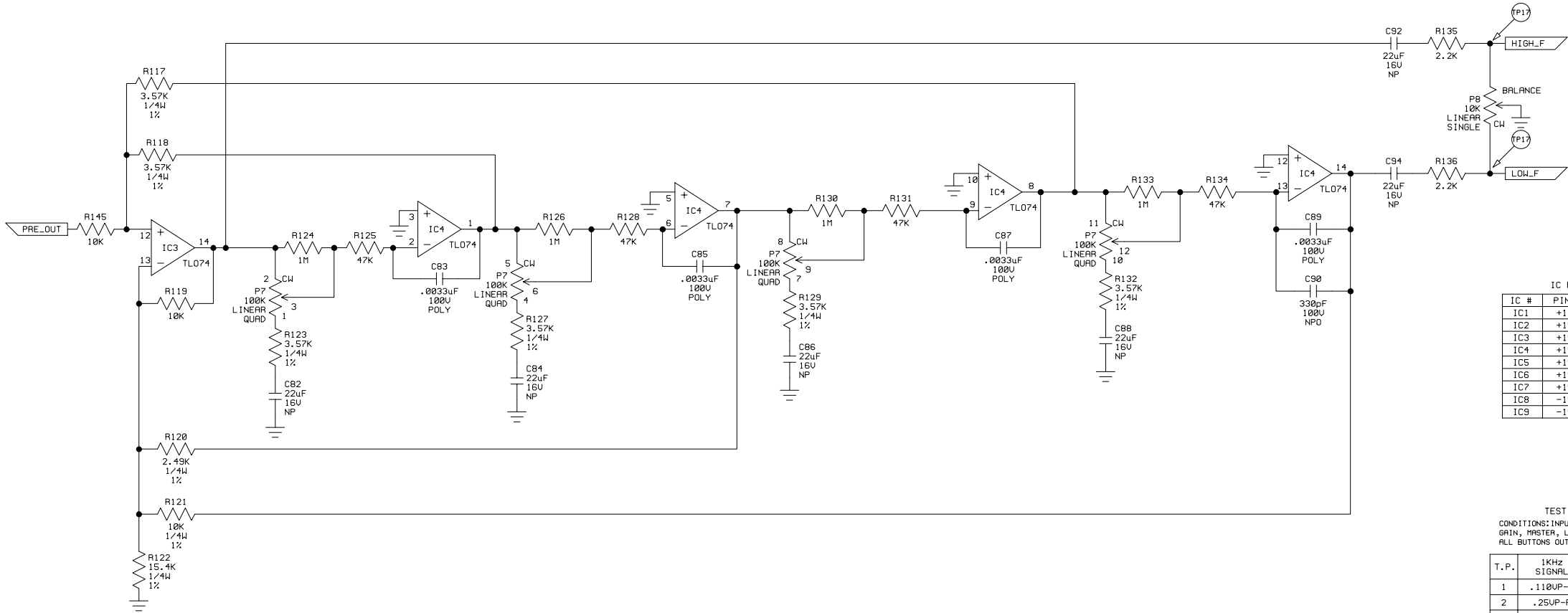
CAUTION:
THIS SCHEMATIC IS PROVIDED FOR USE BY QUALIFIED PERSONNEL.
TO AVOID RISK OF ELECTRIC SHOCK, REFER SERVICING TO QUALIFIED
SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING BEYOND
THAT EXPLAINED IN THE OPERATING INSTRUCTIONS.

- NOTES:
- 1) CAUTION: SHOCK HAZARD!!
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.

3	3/11/98	VALUES_&_JACK_F/N_PER_EC0990083_AND	EC0990085	
-	-	RELOCATED_S2_BN_ASSY	EC0980595	
2	9/14/98	C4-&R116-DO_NOT_INSTALL	EC0980542	
1	6-23-98	UPDATE_TO_AGREE_WITH_PICTORIAL	E980408	
REV	DATE	DESCRIPTION	ECOM	
SIGNATURES:		DATE:	11880 BORMAN DR. ST. LOUIS, MISSOURI 63146	
DRAWN:	RLB	5-8-98	PROJECT NAME: B-4R	
CHK'D:	GM	5-8-98		
APP'D:	GM	5-8-98	DRAWING NAME: PREAMP_SCHEMATIC	
ORIGINAL ISSUED:		5-8-98	DRAWING NO. 07S541-01	
PLOT DATE:	-		REV. -	
FILE NAME:	S4101C3_	SCALE: NONE	SHEET: 1_OF_3	



SEE SHT 1 FOR REV HISTORY			
SIGNATURES:		DATE:	 11880 BORMAN DR. ST. LOUIS, MISSOURI 63146
DRAWN:	RLB	5-8-98	
CHK'D:	GM	5-8-98	
APP'D:	GM	5-8-98	PROJECT NAME:
ORIGINAL ISSUED:		5-8-98	B-4R
		DRAWING NAME:	
		PREAMP_SCHEMATIC	
PLOT DATE:	-	DRAWING NO.	07S541-01
FILE NAME:	-	SCALE:	NONE
		SHEET:	2_OF_3
		REV.	-



IC POWER CHART			
IC #	PIN 4	PIN 11	PIN 8
IC1	+14V	-14V	-
IC2	+15V	-15V	-
IC3	+15V	-15V	-
IC4	+15V	-15V	-
IC5	+15V	-15V	-
IC6	+15V	-15V	-
IC7	+15V	-15V	-
IC8	-15V	-	+15V
IC9	-15V	-	+15V

TEST POINT CHART
CONDITIONS: INPUT 75mV-P (26mVRMS) @ 1KHz
GAIN, MASTER, LINE OUT LEVEL @ 10; TONES @ 5;
ALL BUTTONS OUT

T. P.	1KHz SIGNAL	D.C. (V)	-
1	.110VP-P	0	
2	.25VP-P	0	
3	12VP-P	0	
4	7VP-P	0	
5	5.5VP-P	0	
6	1.8VP-P	0	
7	1.8VP-P	0	
8	1.8VP-P	0	
9	2.5VP-P	0	
10	2.7VP-P	0	
11	3VP-P	0	
12	.75VP-P	0	
13	.75VP-P	0	
14	MUTE_OFF	-15	
14	MUTE_ON	0.6	
15	TEXTURE_OUT	-15	
15	TEXTURE_IN	-0.2	
16	EQ_OUT	-12	
16	EQ_IN	15	
17	-3dB FROM PREAMP OUT IN PASS BAND	0	

NOTES:
1) CAUTION: SHOCK HAZARD!!
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.

LAST USED DESIGNATOR
R155
C110
D28

SEE SHT 1 FOR REV HISTORY

SIGNATURES:		DATE:	 11880 BORMAN DR. ST. LOUIS, MISSOURI 63146	
DRAWN:	RLB	5-8-98		
CHK'D:	GM	5-8-98	PROJECT NAME:	
APP'D:	GM	5-8-98	B-4R	
ORIGINAL ISSUED:		5-8-98	DRAWING NAME:	
			PREAMP_SCHEMATIC	
PLOT DATE:	-		DRAWING NO.	07S541-01
FILE NAME:	-		REV.	-
			SCALE:	NONE
			SHEET:	3_OF_3