


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	3/11/99	VALUE_CHGS.&JACK_P/N...PER_EC0990083_&	EC0990065	
-	-	RELOCATED_S2	E980595	
2	9/14/98	C4,R116_DO_NOT_INSTALL	EC0980542	
1	6-23-98	ADDED_SLOT_IN_GROUND_PAD	E980408	
REV	DATE	DESCRIPTION	ECO#	
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_PRE-AMP	
ORIGINAL ISSUED:	00/00/00	DRAWING NAME:	PICTORIAL	
PLOT DATE:	-	DRAWING NO.	07P541-01	REV. _
PLOT TIME:	-	SCALE: 1:1	SHEET: 1_OF_2	
FILE NAME:	54101B3_			

A				B				C				D				E			
REF	DES	PART #	DESCRIPTION	REF	DES	PART #	DESCRIPTION	REF	DES	PART #	DESCRIPTION	REF	DES	PART #	DESCRIPTION	REF	DES	PART #	DESCRIPTION
C1		10R473-03	.047uF 100V	D1		21A914-01	1N914 100V/0.1A	R1		76-683-01	68K	R100		76-222-01	2.2K				
C2		10R103-03	.01uF 100V	D2		21A914-01	1N914 100V/0.1A	R2		76-153-01	15K	R101		76-222-01	2.2K				
C3		10R473-03	.047uF 100V	D3		21A914-01	1N914 100V/0.1A	R3		76-105-01	1M	R102		76-331-01	330				
C4		NOT USED		D4		21A440-01	1N4740A 10V/1W	R4		76-104-01	100K	R103		76-331-01	330				
C5		10R223-02	.022uF 100V	D5		21A914-01	1N914 100V/0.1A	R5		76-104-01	100K	R104		76-104-01	100K				
C6		10A471-11	470pF 100V	D6		21A914-01	1N914 100V/0.1A	R6		76-105-01	1M	R105		76-472-01	4.7K				
C7		10F224-03	.22uF 100V	D7		21A440-01	1N4740A 10V/1W	R7		76-223-01	22K	R106		76-222-01	2.2K				
C8		10F224-03	.22uF 100V	D8		21A914-01	1N914 100V/0.1A	R8		76-472-01	4.7K	R107		76-222-01	2.2K				
C9		10R472-01	.0047uF 100V	D9		21A914-01	1N914 100V/0.1A	R9		76-103-01	10K	R108		76-682-01	6.8K				
C10		10R153-03	.015uF 100V	D10		21A914-01	1N914 100V/0.1A	R10		76-105-01	1M	R109		76-105-01	1M				
C11		10F224-03	.22uF 100V	D11		21A914-01	1N914 100V/0.1A	R11		76-104-01	100K	R110		76-103-01	10K				
C12		10R104-03	.1uF 100V	D12		21A914-01	1N914 100V/0.1A	R12		76-105-01	1M	R111		76-182-01	1.8K				
C13		10F224-03	.22uF 100V	D13		21A914-01	1N914 100V/0.1A	R13		76-224-01	220K	R112		76-223-01	22K				
C14		10F224-03	.22uF 100V	D14		21-510-01	GREEN LED	R14		76-223-01	22K	R113		76-102-01	1K				
C15		NOT USED		D15		21-510-01	GREEN LED	R15		76-223-01	22K	R114		76-104-01	100K				
C16		10F224-03	.22uF 100V	D16		21-501-01	RED LED	R16		76-223-01	22K	R115		76-102-01	1K				
C17		10R153-03	.015uF 100V	D17		21A914-01	1N914 100V/0.1A	R17		76-473-01	47K	R116		NOT USED					
C18		10F224-03	.22uF 100V	D18		21A914-01	1N914 100V/0.1A	R18		76-822-01	8.2K	R117		76-352-02	3.57K	1%			
C19		10R333-02	.033uF 100V	D19		21A914-01	1N914 100V/0.1A	R19		76-103-01	10K	R118		76-352-02	3.57K	1%			
C20		10R333-02	.033uF 100V	D20		21A914-01	1N914 100V/0.1A	R20		76-822-01	8.2K	R119		76-103-01	10K				
C21		NOT USED		D21		21A914-01	1N914 100V/0.1A	R21		76-223-01	22K	R120		76-242-02	2.49K	1%			
C22		10F224-03	.22uF 100V	D22		21A914-01	1N914 100V/0.1A	R22		76-473-01	47K	R121		76-103-02	10K	1%			
C23		10A104-01	.1uF 50V	D23		21A914-01	1N914 100V/0.1A	R23		76-473-01	47K	R122		76-153-02	15.4K	1%			
C24		10A104-01	.1uF 50V	D24		21A914-01	1N914 100V/0.1A	R24		NOT USED		R123		76-352-02	3.57K	1%			
C25		10A104-01	.1uF 50V	D25		21-503-01	YELLOW LED	R25		76-223-01	22K	R124		76-105-01	1M				
C26		10A104-01	.1uF 50V	D26		21A914-01	1N914 100V/0.1A	R26		76-473-01	47K	R125		76-473-01	47K				
C27		12R476-35	47uF 35V	D27		21A914-01	1N914 100V/0.1A	R27		76-223-01	22K	R126		76-105-01	1M				
C28		12R476-35	47uF 35V	D28		21A914-01	1N914 100V/0.1A	R28		76-223-01	22K	R127		76-352-02	3.57K	1%			
C29		10A104-01	.1uF 50V	IC1		37-074-01	TL074	R29		76-473-01	47K	R128		76-473-01	47K				
C30		10A104-01	.1uF 50V	IC2		37-074-01	TL074	R30		76-222-01	2.2K	R129		76-352-02	3.57K	1%			
C31		10A104-01	.1uF 50V	IC3		37-074-01	TL074	R31		76-104-01	100K	R130		76-105-01	1M				
C32		10A331-11	330pF 100V	IC4		37-074-01	TL074	R32		76-223-01	22K	R131		76-473-01	47K				
C33		12R225-51	2.2uF 50V	IC5		37-074-01	TL074	R33		NOT USED		R132		76-352-02	3.57K	1%			
C34		10A104-01	.1uF 50V	IC6		37-074-01	TL074	R34		76-223-01	22K	R133		76-105-01	1M				
C35		10A224-01	.22uF 50V	IC7		37-074-01	TL074	R35		76-104-01	100K	R134		76-473-01	47K				
C36		10A223-01	.022uF 50V	IC8		37-074-01	TL074	R36		76-105-01	1M	R135		76-222-01	2.2K				
C37		10A473-11	.047uF 100V	IC9		37-072-01	TL072	R37		76-393-01	39K	R136		76-222-01	2.2K				
C38		10A472-11	.0047uF 100V	J1		39-119-01	T/S JACK	R38		76-473-01	47K	R137		76-102-01	1K				
C39		10A153-01	.015uF 50V	J2		39-119-01	T/S JACK	R39		76-104-01	100K	R140		76-104-01	100K				
C40		10A222-11	.0022uF 100V	J3		39-116-01	T/S JACK	R41		76-473-01	47K	R141		76-472-01	4.7K				
C41		10A682-01	.0068uF 100V	J4		39-116-01	T/S JACK	R42		76-104-01	100K	R142		76-332-01	3.3K				
C42		10A471-11	470pF 100V	J5		39-116-01	T/S JACK	R43		76-682-01	6.8K	R143		76-224-01	220K				
C43		10A331-11	330pF 100V	J6		39-116-01	T/S JACK	R44		76-682-01	6.8K	R144		76-104-01	100K				
C44		12R226-82	22uF 16V	J7		39-321-01	MALE XLR	R45		76-101-01	100	R145		76-473-01	47K				
C45		10A331-11	330pF 100V	J8		39-116-01	T/S JACK	R46		76-103-01	10K	R146		76-224-01	220K				
C46		12R226-82	22uF 16V	J9		39-116-01	T/S JACK	R47		76-472-01	4.7K	R147		76-224-01	220K				
C47		10A474-01	.47uF 50V	J10		17-105-08	HEADER	R48		76-332-01	3.3K	R148		76-473-01	47K				
C48		10A473-11	.047uF 100V	J11		17-106-08	HEADER	R49		76-222-01	2.2K	R149		76-153-01	15K				
C49		10A104-01	.1uF 50V	J12		17-105-08	HEADER	R50		76-182-01	1.8K	R150		76-104-01	100K				
C50		10A103-11	.01uF 100V	J13		17-105-11	HEADER	R51		76-182-01	1.8K	R151		76-153-01	15K				
C51		10A333-01	.033uF 50V	J14		17-105-11	HEADER	R52		76-102-01	1K	R152		76-104-01	100K				
C52		10A332-01	.0033uF 100V	J15		17-105-12	HEADER	R53		76-104-01	100K	R153		76-223-01	22K				
C53		10A103-11	.01uF 100V	J16		17-105-03	HEADER	R54		76-182-01	1.8K	R154		76-101-01	100				
C54		10A681-11	680pF 100V	J17		17-105-03	HEADER	R55		76-124-01	120K	R155		76-101-01	100				
C55		10R102-03	.001uF 100V	JW1-JW85		76-000-05	JUMPER WIRE	R56		76-152-01	1.5K	S1		88-303-02	QUAD SWITCH				
C56		10R104-03	.1uF 100V	OPT1		NOT USED		R57		76-104-01	100K	S2		88-108-01	SWITCH				
C57		10R682-03	.0068uF 100V	P1		70-133-01	50K LINEAR	R58		76-182-01	1.8K	S3		88-303-02	QUAD SWITCH				
C58		10R473-03	.047uF 100V	P2		70-503-22	50K AUDIO	R59		76-154-01	150K	S4		88-303-02	QUAD SWITCH				
C59		10-474-03	.47 100V	P3		70-133-01	50K LINEAR	R60		76-182-01	1.8K								
C60		10A101-21	100pF 200V	P4		70-503-22	50K AUDIO	R61		76-182-01	1.8K								
C61		12R226-82	22uF 16V	P5		70-103-24	10K LINEAR	R62		76-182-01	1.8K								
C62		10R103-03	.01uF 100V	P6		70-103-22	10K AUDIO	R63		76-182-01	1.8K								
C63		10R223-02	.022uF 100V	P7		70-104-54	100K LINEAR	R64		76-182-01	1.8K								
C64		10F224-03	.22uF 100V	P8		70-103-24	10K LINEAR	R65		76-104-01	100K								
C65		10F224-03	.22uF 100V	P9		70-203-54	20K LINEAR	R66		76-102-01	1K								
C66		10R104-03	.1uF 100V	P10		70-203-54	20K LINEAR	R67		76-124-01	120K								
C67		10R104-03	.1uF 100V	P11		70-203-54	20K LINEAR	R68		76-152-01	1.5K								
C68		10R104-03	.1uF 100V	P12		70-203-54	20K LINEAR	R69		76-124-01	120K								
C69		10R102-03	.001uF 100V	P13		70-203-54	20K LINEAR	R70		76-182-01	1.8K								
C70		10A331-11	330pF 100V	P14		70-203-54	20K LINEAR	R71		76-223-01	22K								
C71		12R476-62	47uF 63V	P15		70-203-54	20K LINEAR	R72		76-103-01	10K								
C72		12R226-82	22uF 16V	P16		70-203-54	20K LINEAR	R73		76-105-01	1M								
C73		12R476-62	47uF 63V	P17		70-203-54	20K LINEAR	R74		76-472-01	4.7K								
C74		12R226-82	22uF 16V	P18		70-203-54	20K LINEAR	R75		76-472-01	4.7K								
C75		12R476-62	47uF 63V	P19		70-203-54	20K LINEAR	R76		76-223-01	22K								
C76		10R104-03	.1uF 100V	P10		70-103-24	10K LINEAR	R77		76-682-01	6.8K								
C77		10R104-03	.1uF 100V	P11		70-104													