



Preliminary Product Specification

Model: Ovation Mic/Piezo Preamp
Date: 8/9/94

Overview:

(see fig. 1) This preamp features a dual pickup system. It utilizes both a Piezo transducer as well as a sub-mini condenser mic (Telex ELM-33) mounted on the guitar bridge oriented toward the sound hole. The design incorporates a crossover circuit which allows the Piezo to contribute only low frequency signal components while similarly, the microphone contributes the high frequency elements. This system reduces feedback potential and allows each transducer to operate in a range which compliments its inherent operating characteristics. The resulting sound unusually natural and "open." The system will be powered by an external 9V battery or by phantom powering through an XLR output jack.

Controls:

(see fig.2)

Volume:	Slide Pot - Controls level of blended output signal. Can be configured as either attenuator or active gain circuit.
Blend:	Slide Pot - Adjusts the level of the crossed-over mic/Piezo mix with respect to Piezo (full-range).
Treble:	Slide Pot - Increases/Decreases HF signal components ± 10 dB
Bass:	Slide Pot - Increases/Decreases LF signal components ± 14 dB
EQ Bypass:	Push-button switch engages/disengages EQ circuit.
X-over:	Push-button switch which selects high (1.8KHz) or low (900Hz) crossover point.
Mid Shape:	Push-button switch engages/disengages 8dB midrange (500Hz) cut. Q of the cut is moderate.

Indicators:

Battery Status: A single bipolar LED (red/green) will indicate both battery and phantom power status. The LED will flash red once during power-up indicating battery presence (sufficient voltage for turn-on) and will pulse (green) with approximately a 50% duty cycle to indicate phantom power presence. Continuous red on will indicate battery low.

Interface:

Inputs: 5K Ohm unbalanced mic input w/9V bias - stereo mini jack
>5M Ohm unbalanced Piezo input - sub-mini jack (mono)

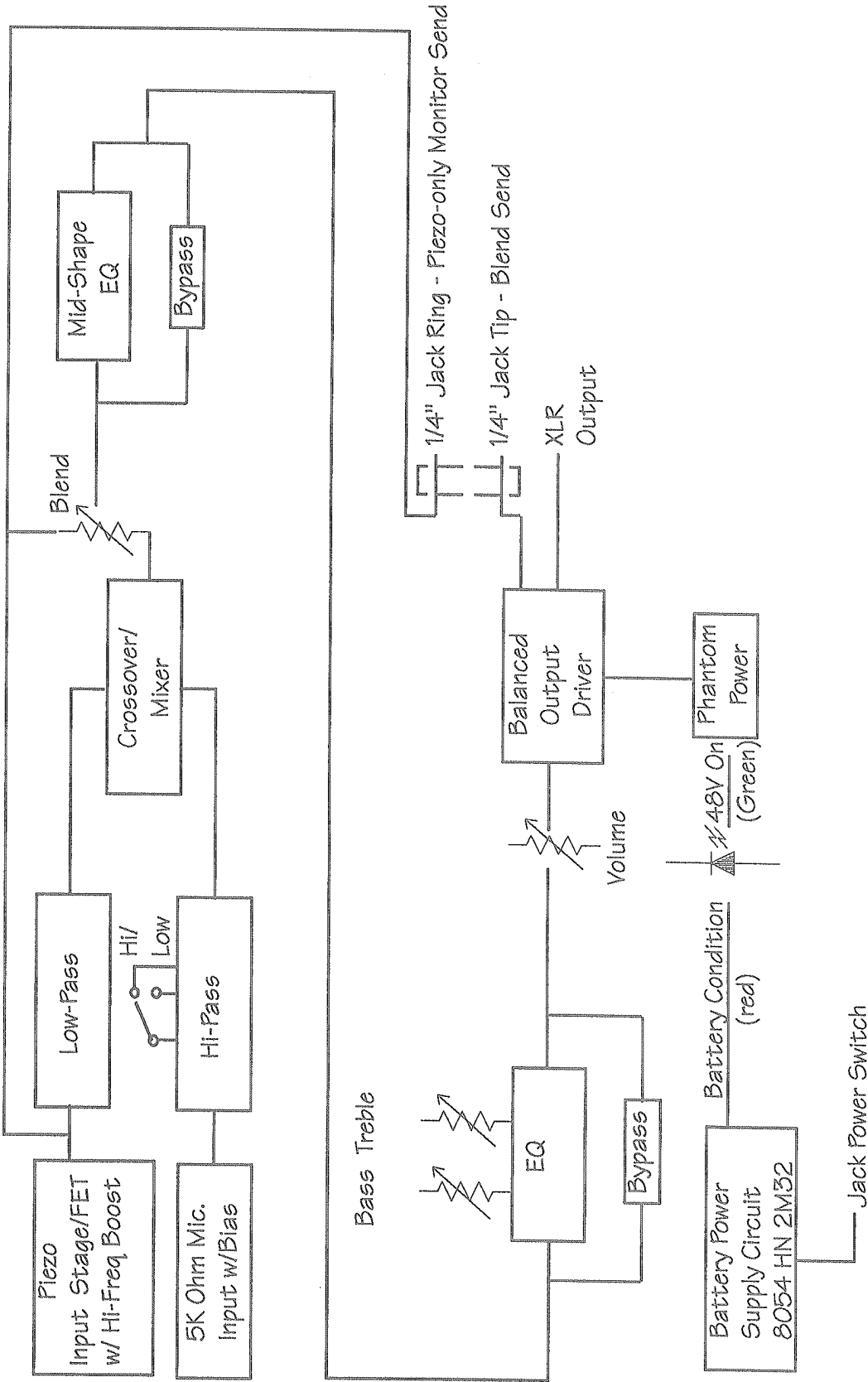
Outputs (preamp): Multi-pin molex to external output PCB

Outputs (user): Low impedance XLR balanced with phantom power capability. Shell shunt auto activation with grounded shell cables. Stereo 1/4" high impedance with tip providing full preamp output, ring providing direct Piezo only output (for foldback purposes).

Mechanical :

Chassis: Similar to OP-24Plus with exception of control punches (see attached)

Output PCB: Same as Optima (see attached)



Ovation Hybrid Mic/Piezo Pickup System - 7/18/94

Fig. 1

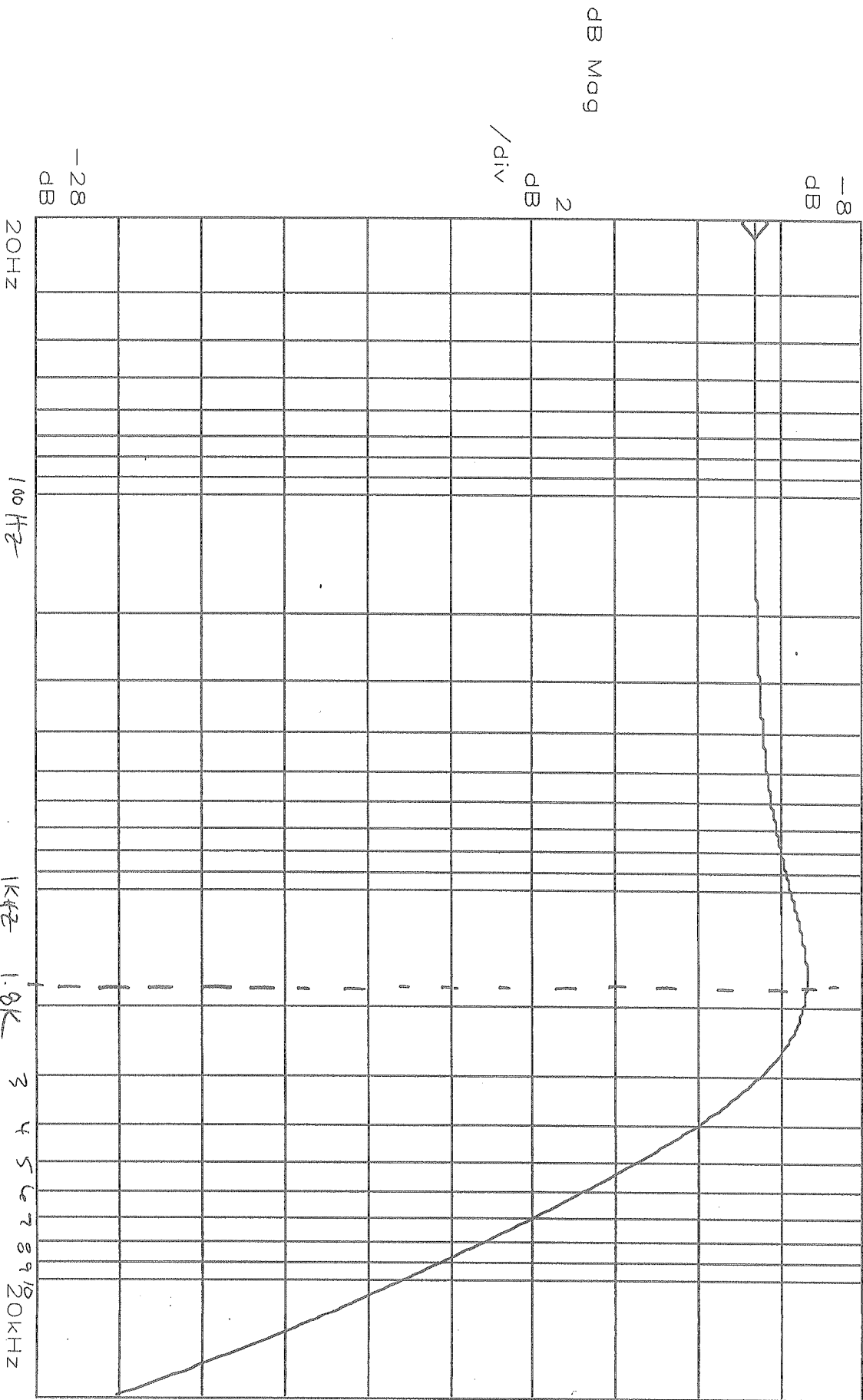
XFIELD - LO PASS RESPONSE

Date: 08/08/94 Time: 10:13:00 AM

A: Freq Resp2/1

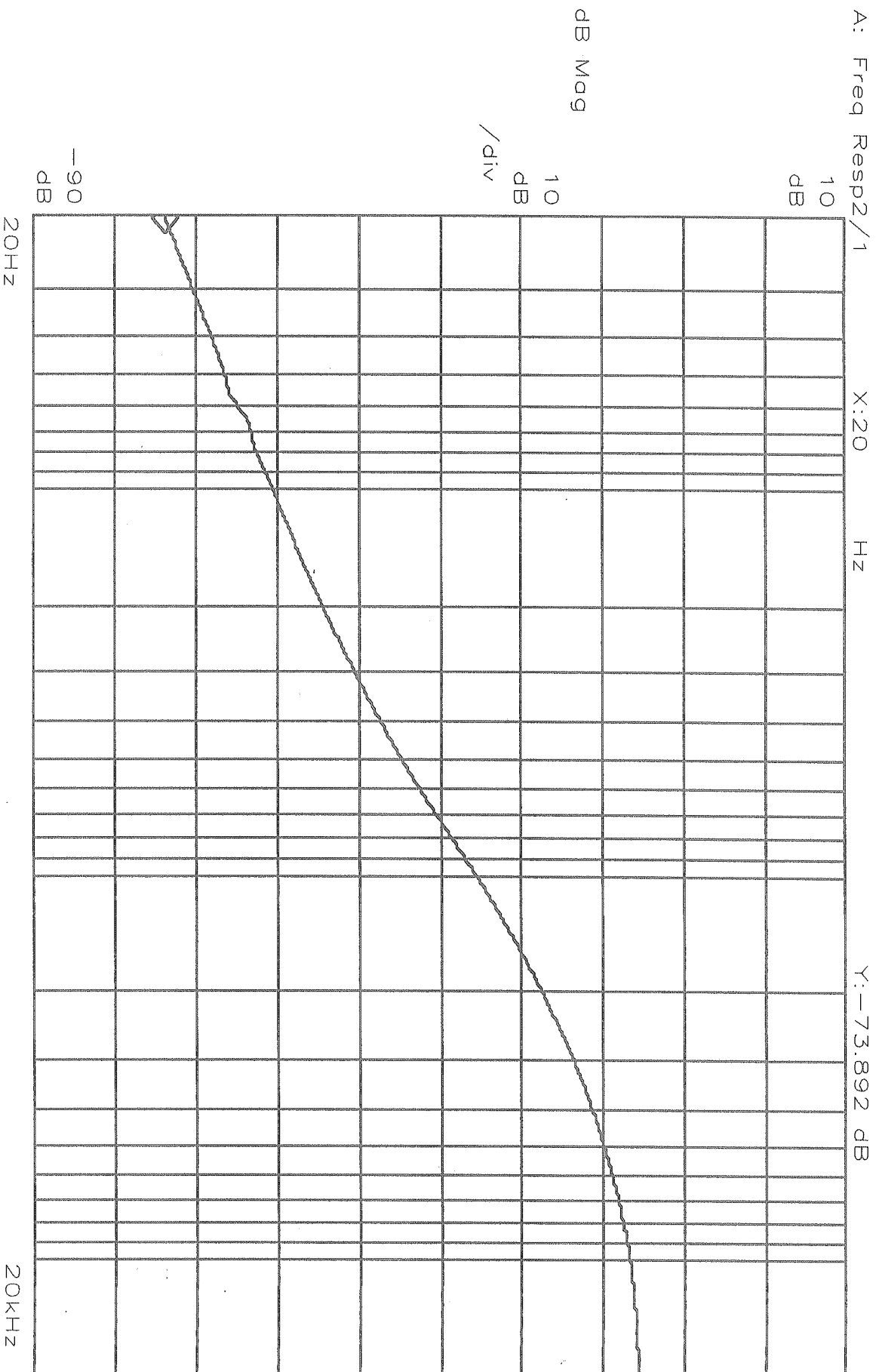
X:20 HZ

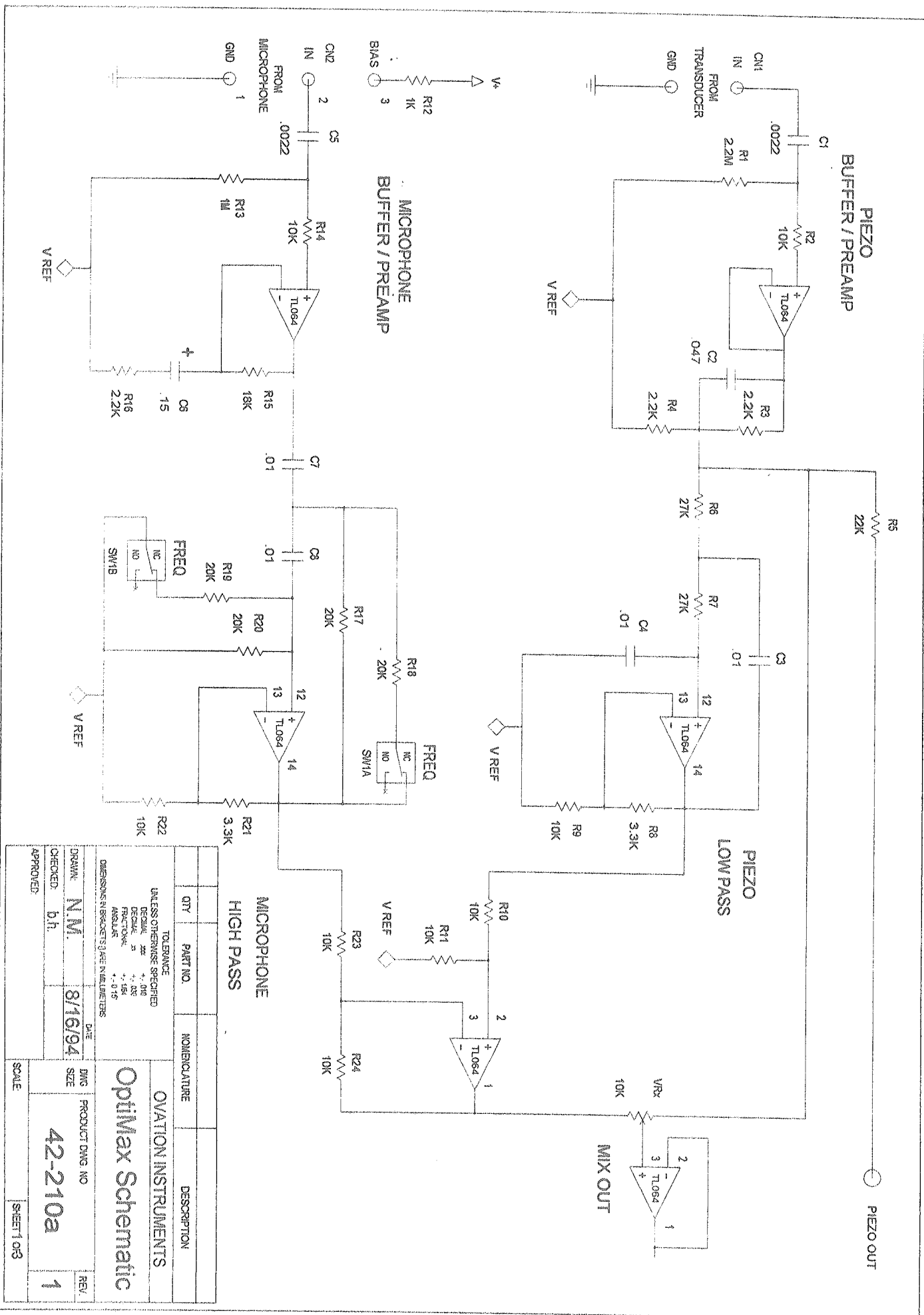
Y:-10.545 DB



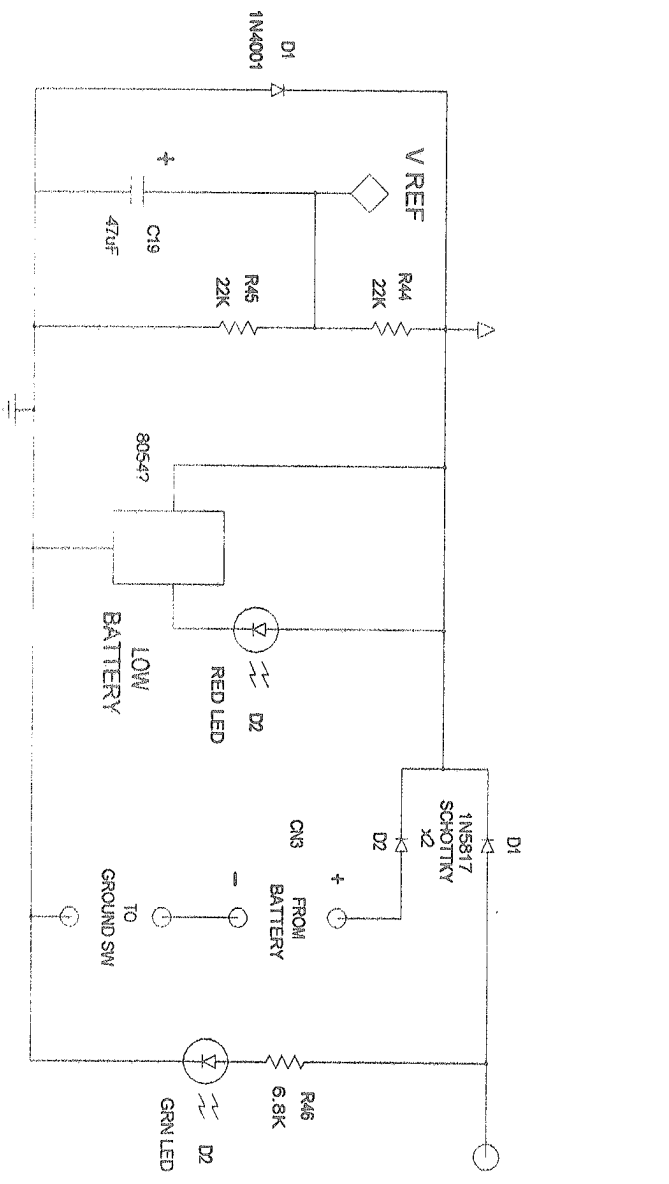
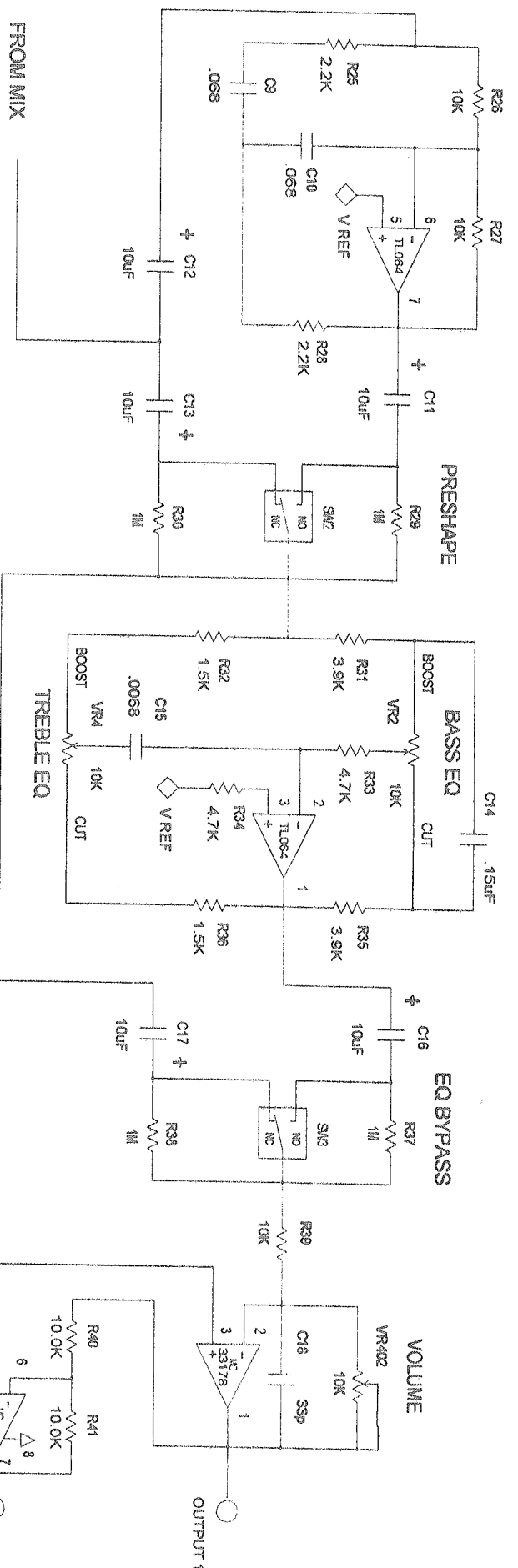
XFIELD -- HI-PASS RESPONSE

Date: 08/08/94 Time: 11:13:00 AM





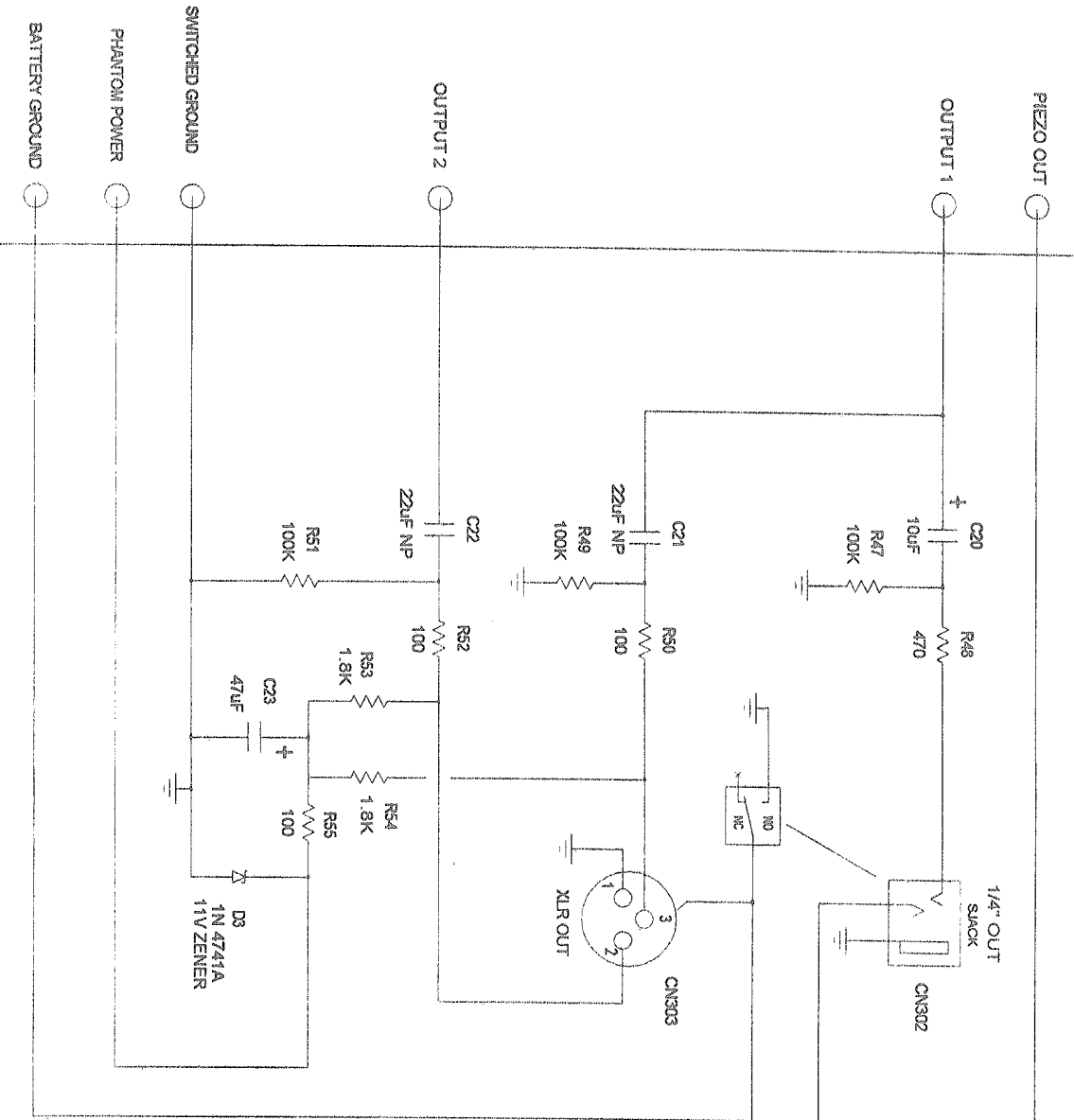
QTY	PART NO.	NOMENCLATURE	DESCRIPTION
			OVATION INSTRUMENTS
OptiMax Schematic			
TOLERANCE UNLESS OTHERWISE SPECIFIED DECIMAL ±.001 FRACTIONAL ±.05 ANGULAR ±.015 DIMENSIONS IN BRACKETS ARE IN MILLIMETERS		DATE 8/16/94	
DRAWN: N.M.		DMG PRODUCT DMG NO	
CHECKED: d/h		42-210a	
APPROVED:		SCALE	
		SHEET 1 OF 3	



QTY	PART NO.	NUMERICAL	DESCRIPTION
			OVATION INSTRUMENTS
OptiMax Schematic			
DRAWN: N.M.		DATE: 8/16/94	
CHECKED: b.h.		PRODUCT DWG. NO: 42-210b	
APPROVED:		SCALE: SHEET 2 OF 3	
TOLERANCE UNLESS OTHERWISE SPECIFIED		REV: 1	
DECIMAL: ±.015			
FRACTIONAL: ±.005			
ANGULAR: ±.015°			
DIMENSIONS IN BRACKETS BASE IN MILLIMETERS			

TO INPUT BOARD CN301

OUTPUT BOARD



QTY	PART NO.	NOMENCLATURE	DESCRIPTION
TOLERANCE UNLESS OTHERWISE SPECIFIED DECIMAL .25% FRACTIONAL 1/16" ANGULAR ±.015° DIMENSIONS IN BRACKETS ARE IN MILLIMETERS			
		OVATION INSTRUMENTS OptiMax Schematic	
DRAWN: N.M.	CITE: 8/16/94	DWG. NO. 42-210c	PRODUCT DWG. NO.
CHECKED: b.h.		SCALE	REV: 1
APPROVED:			SHEET 3 OF 3

PICKING LIST BY BILL

Qty-Requested	Item-No	Description	Pick Seq	U/M
1.00	706550-A	OPTIMAX PRE-AMP ASSEMBLY- COMPLETE W/INSTALLATION PARTS		
		***** Components *****	TS	
				<i>Quantities for 1 unit</i>
	536202-A-00	SCREW-M4-40X5/8 PHILLIPS FLAT		PC
	Bom Level = 1	HEAD TYPE F STEEL BLACK OXIDE	Quantity	4.000000
	541002-A-00	SCREW - M3 X .5 X 1/2" OR 12MM		PC
	Bom Level = 1	PHILLIPS PAN HEAD, BLACK OXIDE	Quantity	2.000000
	706500-A	OPTIMAX PRE-AMP		AS
	Bom Level = 1		Quantity	1.000000
	900075-A	OPTIMAX SLIDER DUST COVER-		PC
	Bom Level = 1	FELT	Quantity	1.000000
	940122-0-00	KNOB-SLIDE POT-HATTE FINISH		PC
	Bom Level = 1	-BLACK (EQ)	Quantity	4.000000
	940193-A-00	HARNESS CLIP-SELF ADHESIVE B-K		PC
	Bom Level = 1	KBK 3/8" BLACK	Quantity	1.000000
	940202-A-00	KNOB - PUSH-BUTTON ON, BLACK		PC
	Bom Level = 1	2.8 MM SELCO #PB04/51/000	Quantity	3.000000
	940222-A-00	BEZEL-OPTIMAX FRONT PANEL		PC
	Bom Level = 1		Quantity	1.000000
	940224-A	OPTIMAX GRAPHICS CONTROL PANEL		PC
	Bom Level = 1	OVERLAY	Quantity	1.000000