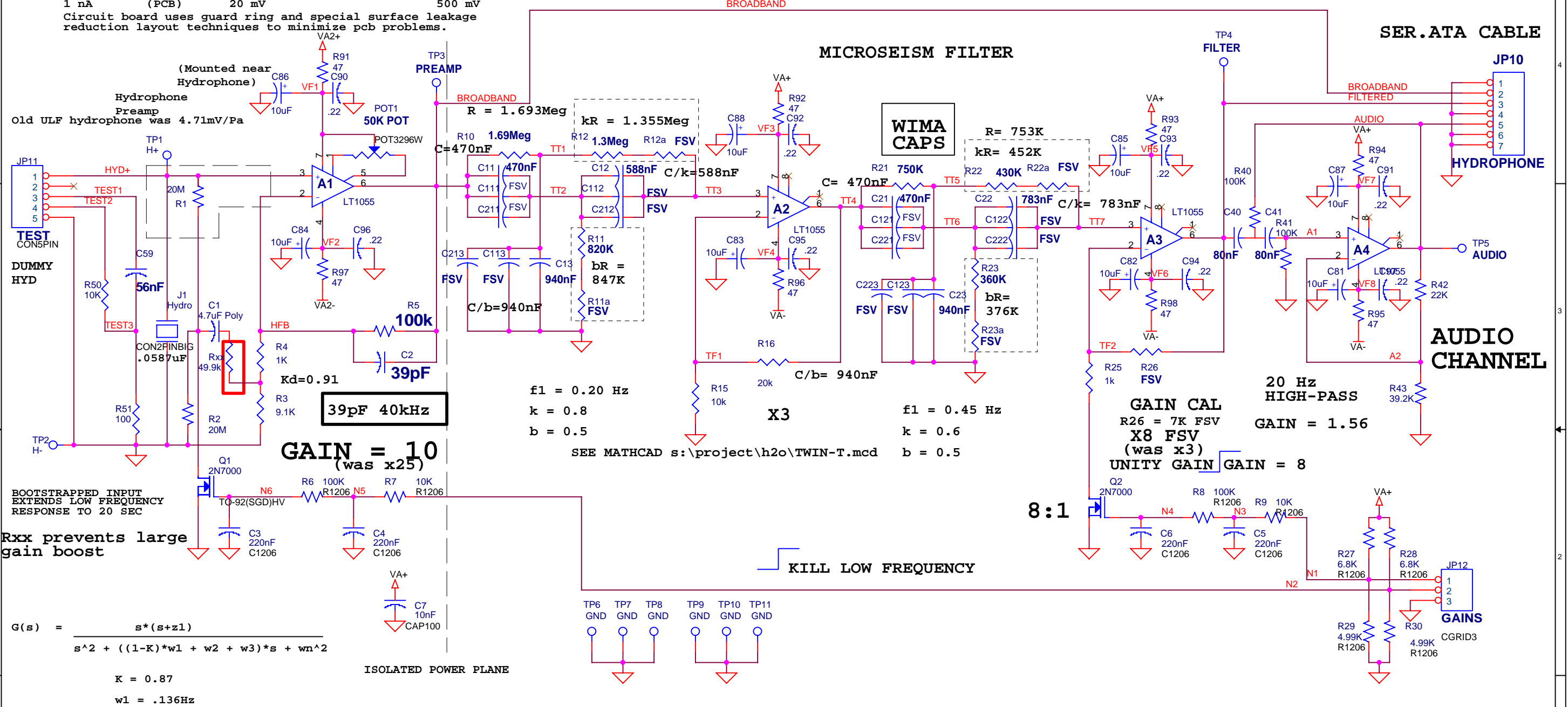


Leakage	==>>	Offset	==>>	Output
10 pA (LT1055)		200 uV		5 mV
1 nA (PCB)		20 mV		500 mV

Circuit board uses guard ring and special surface leakage reduction layout techniques to minimize pcb problems.



GAIN = 10
(was x25)

$f1 = 0.20 \text{ Hz}$
 $k = 0.8$
 $b = 0.5$
SEE MATHCAD s:\project\h2o\TWIN-T.mcd

$f1 = 0.45 \text{ Hz}$
 $k = 0.6$
 $b = 0.5$

GAIN CAL
R26 = 7K FSV
(was x3)
UNITY GAIN GAIN = 8

20 Hz HIGH-PASS
GAIN = 1.56

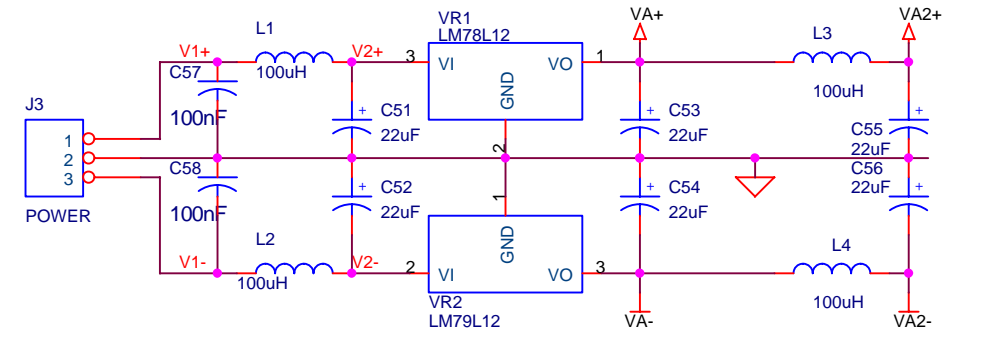
BOOTSTRAPPED INPUT EXTENDS LOW FREQUENCY RESPONSE TO 20 SEC

Rxx prevents large gain boost

$$G(s) = \frac{s*(s+z1)}{s^2 + ((1-K)*w1 + w2 + w3)*s + wn^2}$$

$K = 0.87$
 $w1 = .136\text{Hz}$
 $w2 = .0017\text{Hz}$
 $w3 = .0017\text{Hz}$
 $wn = .0152\text{Hz}$

ISOLATED POWER PLANE



Description: Wideband and High Pass Hydrophone Preamplifier board

DATE	COMMENT
9/20/06	PDF FILE
	REV2 HAS GAIN & BANDWIDTH CONTROLS

UNIVERSITY OF HAWAII Aloha Observatory Engineering Support Facility 2525 Correa Road Honolulu, HI 96822		
Title	Proof Module - Wideband Hhydrophone	
Size	File Name: HYD_FLT3.dsn	Engineer: J Jolly
Date:	Wednesday, September 20, 2006	Rev A
Sheet	1	of 1