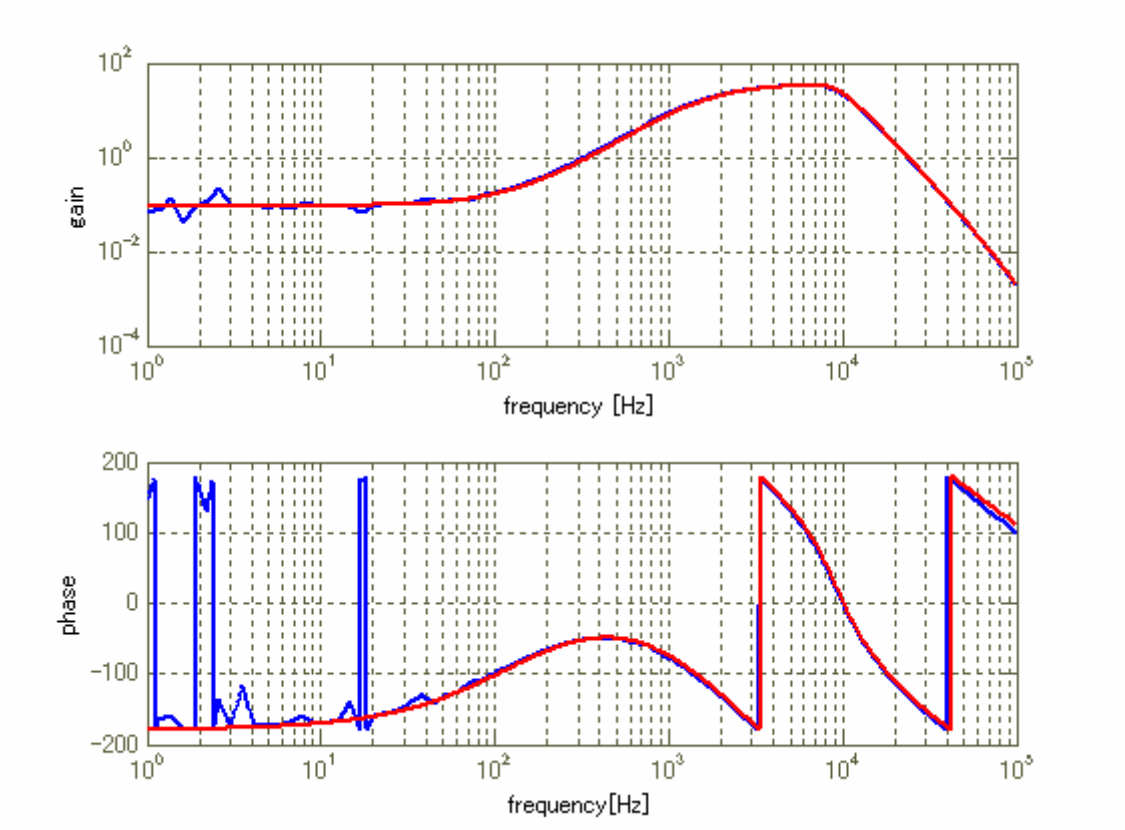
Transfer function for Secondary Servo

The blue line and the red line in a following figure show measured transfer function of a secondary servo and fitted curve by a following equation, respectively. The measured data was obtained on May 31 2007. Fitted Curve was obtained by calculation from the circuit diagram except for C0. In this transfer function, we didn't include the gain-up filter.



Fitted curve:

$$H(f) = C0 \times \frac{(1+if/f1)(1+if/f4)(1+if/f6)}{(1+if/f2)(1+if/f3)(1+if/f5)(1+if/f7)(1+if/f8)} \times \frac{1}{(1+if/q9/f9+(if/f9)^2)(1+if/q10/f10+(if/f10)^2)}$$

$C0 = 0.092485$

$f1 = 146.14779$

$f2 = 1607.62569$

$f3 = 106.10330k$

$f4 = 486.71236$

$f5 = 1560.34258$

$f6 = 96.45754$

$f7 = 1061.03295$

$f8 = 106.10330k$

$f9 = 10730.22407$

$q9 = 0.49441$

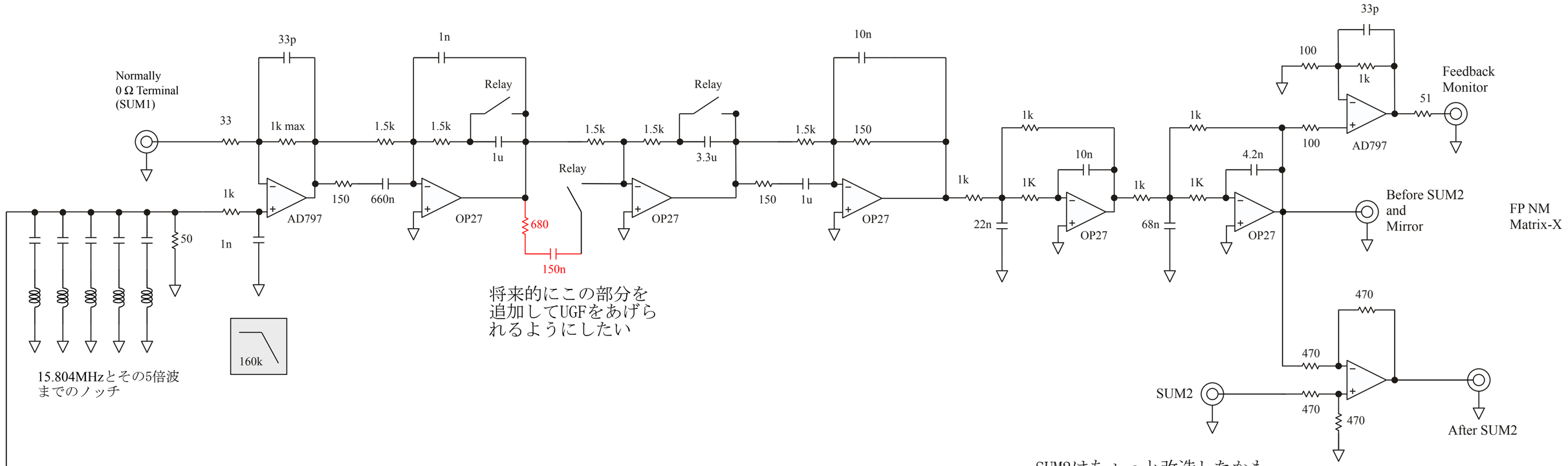
$f10 = 9417.61712$

$q10 = 1.34125$

FP Arm Servo
2006/10/2

10 kHz 4Pole LPF

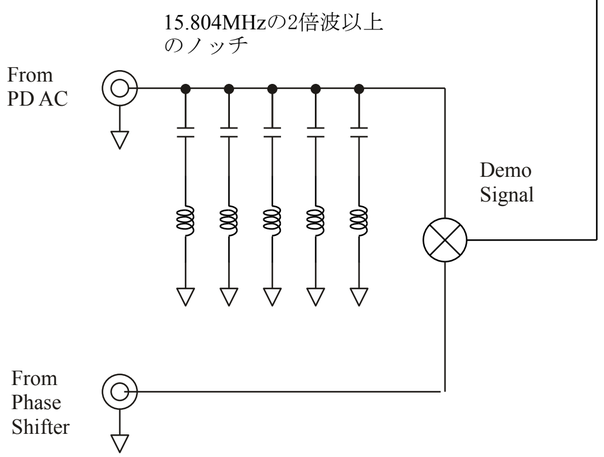
Gain = 11



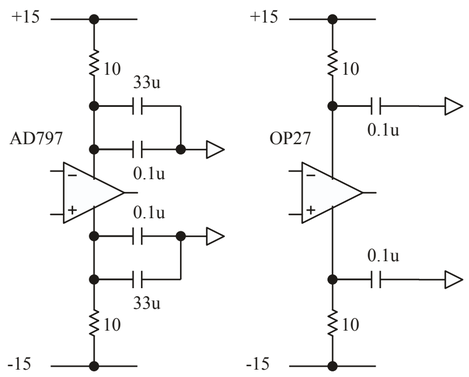
15.804MHzとその5倍波
までのノッチ

SUM2はちょっと改造したかも
しれないので要確認

将来的にこの部分を
追加してUGFをあげら
れるようにしたい



Power Supply for IC



Power Supply