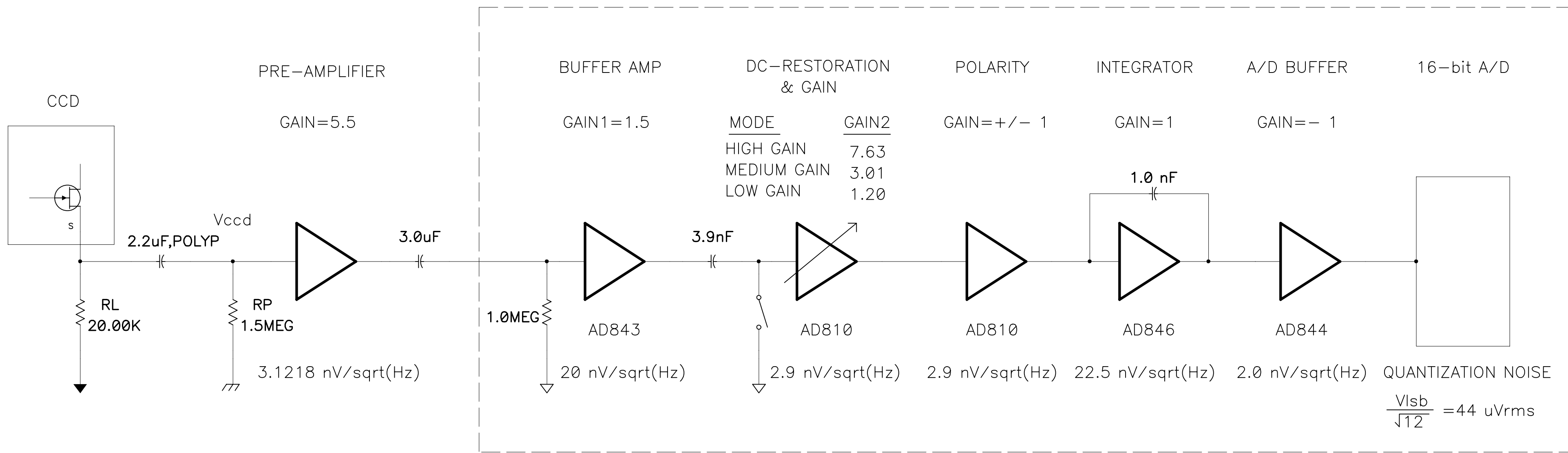


SDSU-II CCD CONTROLLER



	A/D MAXIMUM SIGNAL	ELECTRON WEIGHT	TOTAL SYSTEM GAIN	PRE-AMPLIFIER GAIN	SDSU-II CONTROLLER GAIN	
					TOTAL GAIN	GAIN1 GAIN2
HIGH-GAIN MODE	16,000 electrons	0.24 electrons/DN	63.0	5.5	11.45	1.5 7.63
MEDIUM-GAIN MODE	40,000 electrons	0.61 electrons/DN	25.0	5.5	4.52	1.5 3.01
LOW-GAIN MODE	100,000 electrons	1.53 electrons/DN	9.9	5.5	1.80	1.5 1.20

TOTAL NOISE @ CCD OUTPUT

$$V_{ccd}^2 = V_{rl}^2 + V_{rp}^2 + V_{preamp}^2 + \left[ \frac{V_{buff}}{(5.5)} \right]^2 + \left[ \frac{V_{gain}}{(5.5)*(1.5)} \right]^2 + \left[ \frac{V_{pol}}{(5.5)*(1.5)*(G2)} \right]^2 + \left[ \frac{V_{integ}}{(5.5)*(1.5)*(G2)} \right]^2 + \left[ \frac{V_{a/d-buff}}{(5.5)*(1.5)*(G2)} \right]^2 + \left[ \frac{V_{quantization}}{(5.5)*(1.5)*(G2)} \right]^2$$

Vccd @ VARIOUS SAMPLING RATES:

	50 KHz	100 KHz	312.5 KHz
HIGH-GAIN	1.2 uVrms	1.7 uVrms	2.8 uVrms
MEDIUM-GAIN	2.1 uVrms	2.4 uVrms	3.3 uVrms
LOW-GAIN	4.6 uVrms	4.8 uVrms	5.4 uVrms

CCD PARAMETERS

SENSITIVITY	10 uV/electron
NOISE	1 electron
WELL DEPTH	100,000 electrons

REVISION

UNIVERSITY OF CALIFORNIA LICK OBSERVATORY	
CCD ELECTRONIC SIGNAL CHAIN: HI-SENSITIVITY CCD	
DWG. NO.	EL-3169-3D
DES'N BY: Chris Wright	ORIGIN DATE: MAY 15, 1997
DRAWN BY:	MODIFY DATE: OCTOBER 17, 1997
PATH: deimos\ccdsg1-hisense.sch	SHEET 1 OF 1