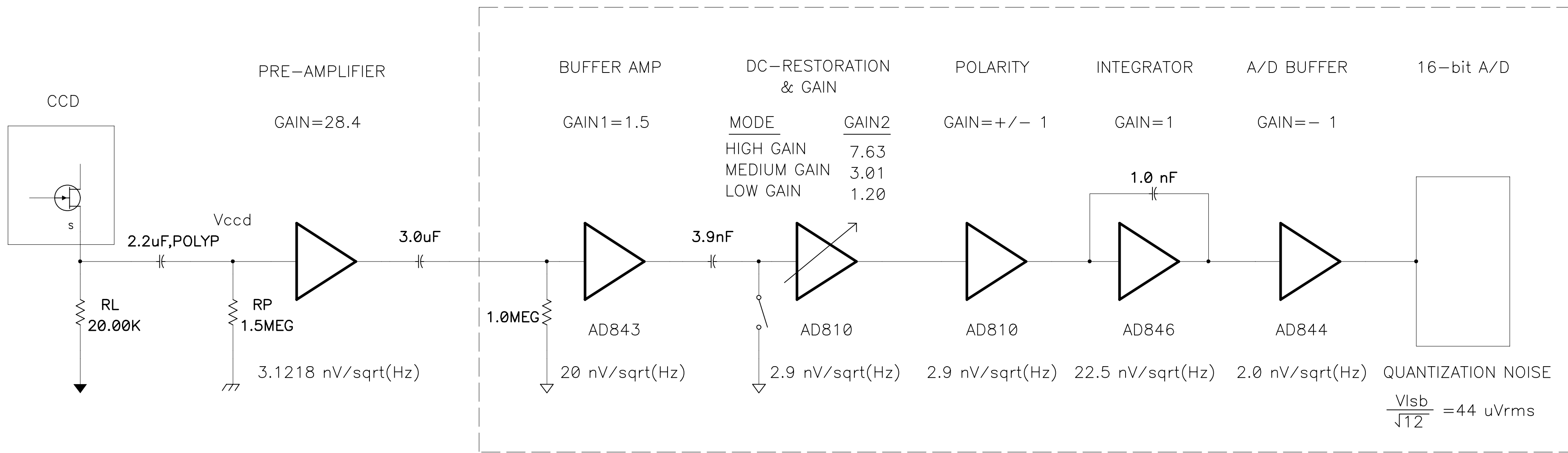


SDSU-II CCD CONTROLLER



	A/D MAXIMUM SIGNAL	ELECTRON WEIGHT	TOTAL SYSTEM GAIN	PRE-AMPLIFIER GAIN	SDSU-II CONTROLLER GAIN	
					TOTAL GAIN	GAIN1 GAIN2
HIGH-GAIN MODE	32,000 electrons	0.49 electrons/DN	325.2	28.4	11.45	1.5 7.63
MEDIUM-GAIN MODE	80,000 electrons	1.22 electrons/DN	128.4	28.4	4.52	1.5 3.01
LOW-GAIN MODE	200,000 electrons	3.05 electrons/DN	51.1	28.4	1.80	1.5 1.20

TOTAL NOISE @ CCD OUTPUT

$$V_{ccd}^2 = V_{rl}^2 + V_{rp}^2 + V_{preamp}^2 + \left[ \frac{V_{buff}}{(28.4)} \right]^2 + \left[ \frac{V_{gain}}{(28.4)*(1.5)} \right]^2 + \left[ \frac{V_{pol}}{(28.4)*(1.5)*(G2)} \right]^2 + \left[ \frac{V_{integ}}{(28.4)*(1.5)*(G2)} \right]^2 + \left[ \frac{V_{a/d-buff}}{(28.4)*(1.5)*(G2)} \right]^2 + \left[ \frac{V_{quantization}}{(28.4)*(1.5)*(G2)} \right]^2$$

Vccd @ VARIOUS SAMPLING RATES:

	50 KHz	100 KHz	312.5 KHz
HIGH-GAIN	0.77 uVrms	1.1 uVrms	1.9 uVrms
MEDIUM-GAIN	0.83 uVrms	1.1 uVrms	1.9 uVrms
LOW-GAIN	1.2 uVrms	1.4 uVrms	2.1 uVrms

CCD PARAMETERS

SENSITIVITY	1 uV/electron
NOISE	2 - 3 electrons
WELL DEPTH	200,000 electrons

REVISION

UNIVERSITY OF CALIFORNIA LICK OBSERVATORY	
CCD ELECTRONIC SIGNAL CHAIN: LOW-SENSITIVITY CCD	
DWG. NO.	EL-3170-3D
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