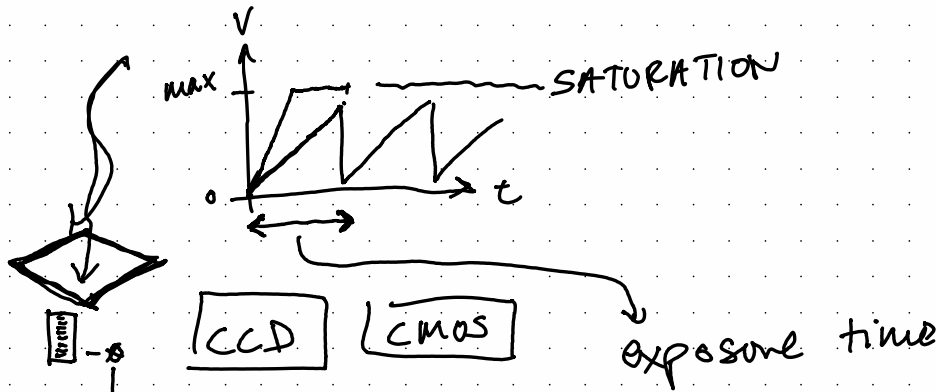




unsigned int

0	1	2	3	4	5	6	7
1	1	1	1	1	1	1	1

2 2 2 2 2 2 2 2
+ + + + + + + +
1 + 2 + 4 + 8 + 16 + 32 + 64 + 128

floating point value

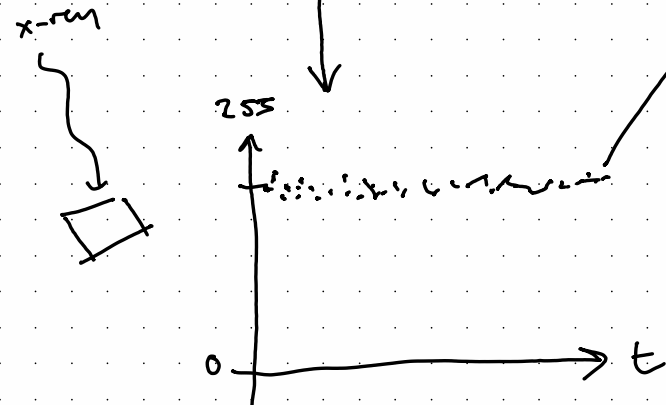
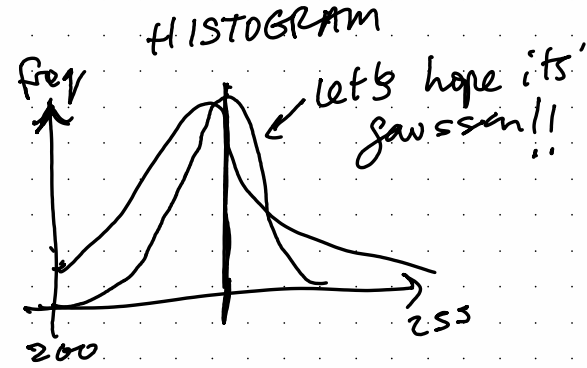
signed int	signed int
A	B

$A \times 10^B$

0 - 255

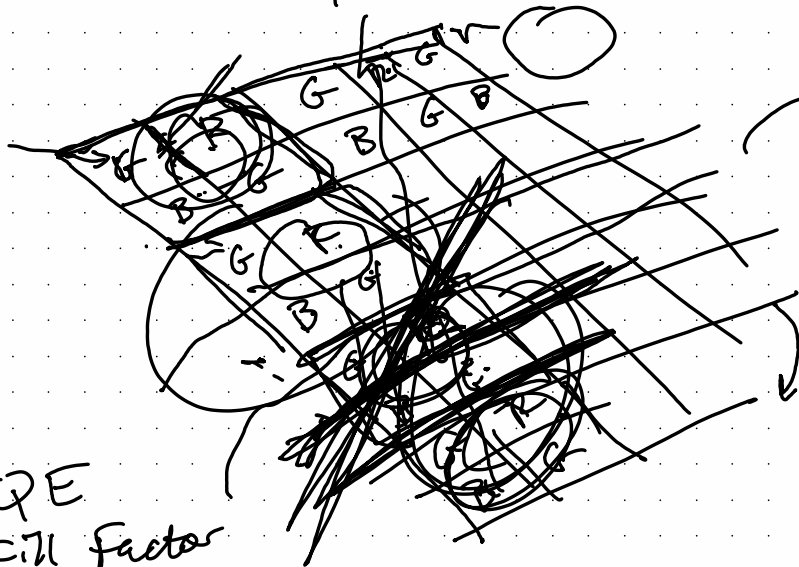
8-bit ADC 0 - 255

16-bit 0 - 65535

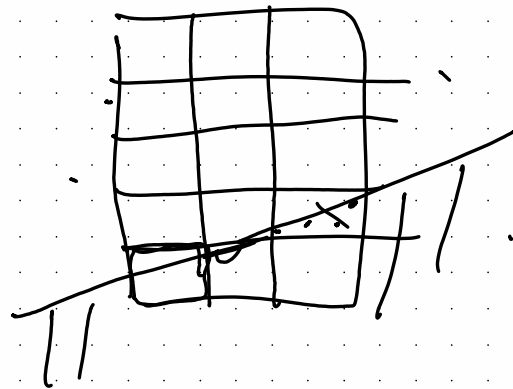
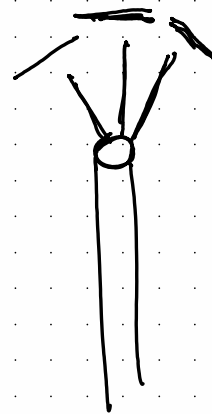


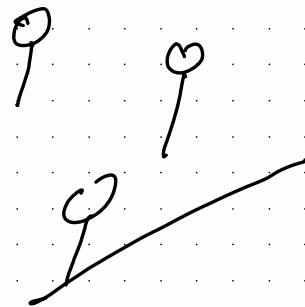
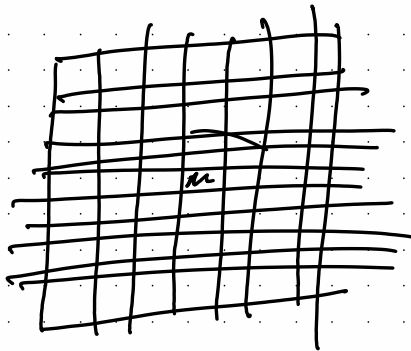
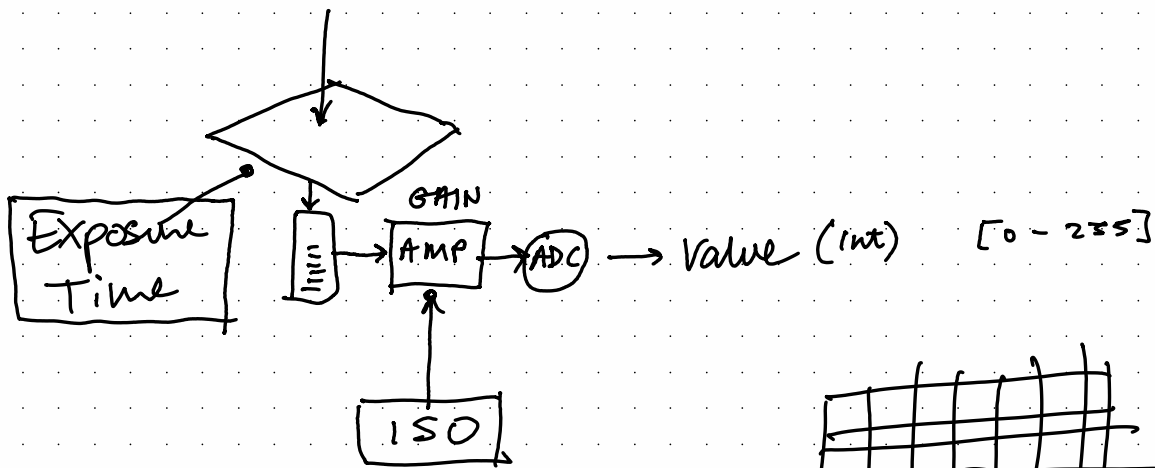
- Noise Sources**
- ADC readout error
 - Thermal noise
 - Quantization error
 - Shot & pepper noise
 - Air quality?
 - Quantum noise
- Dark Currents

Bayer Filter → "Dematrixing"
"Demosaicing"

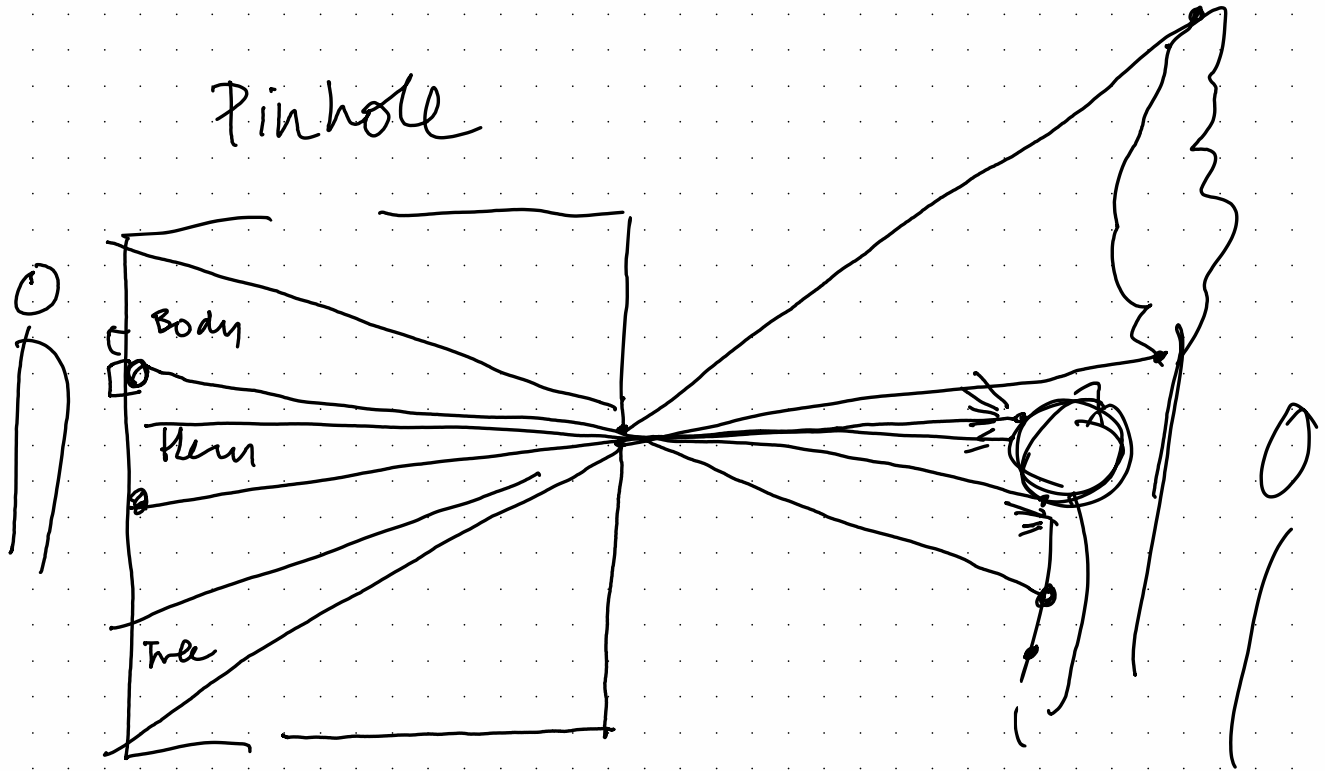


- QE
- Fill Factor
- insensitive to angle
to freq (invisible).





Pinhole

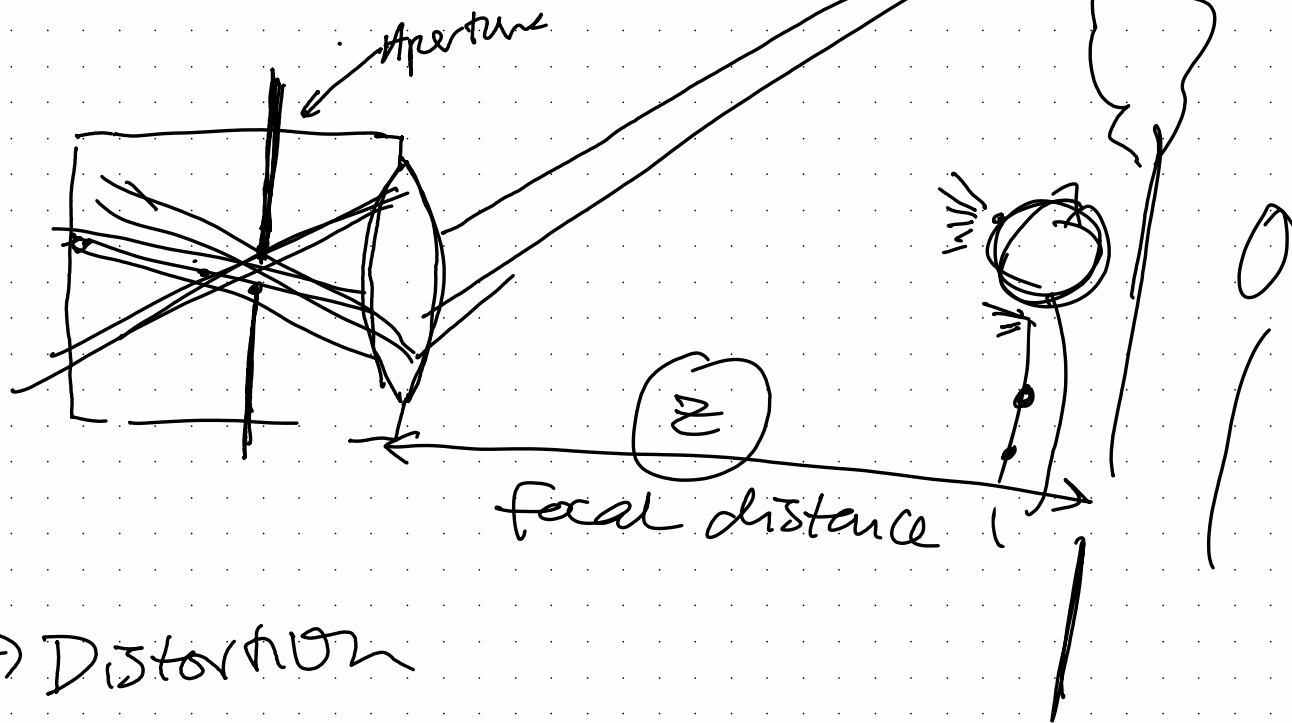


LENS

○ Aperture

○ focal distance

⊗ zoom



→ Distortion