

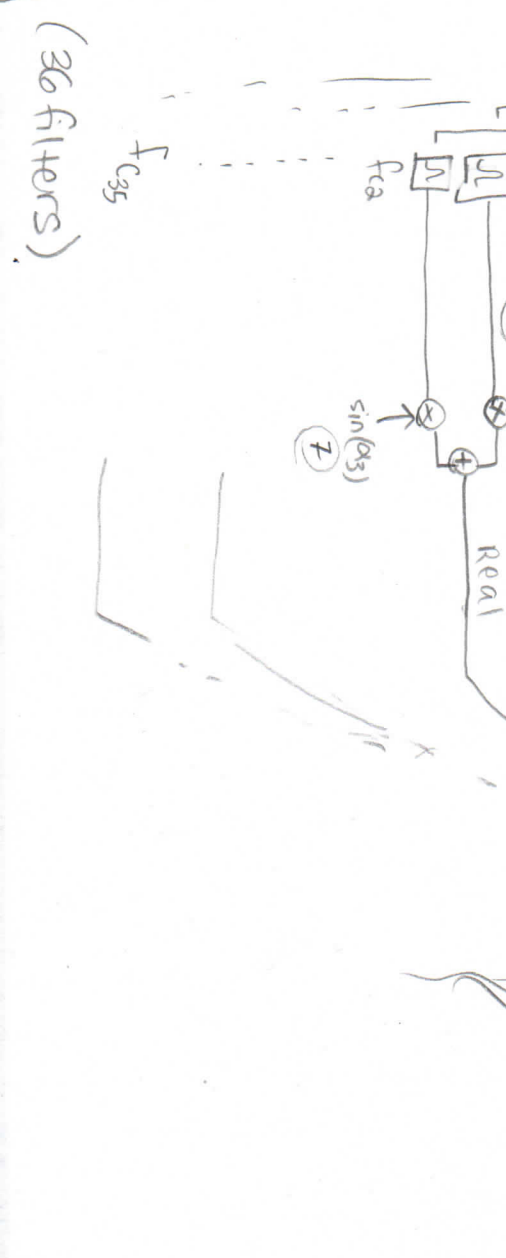
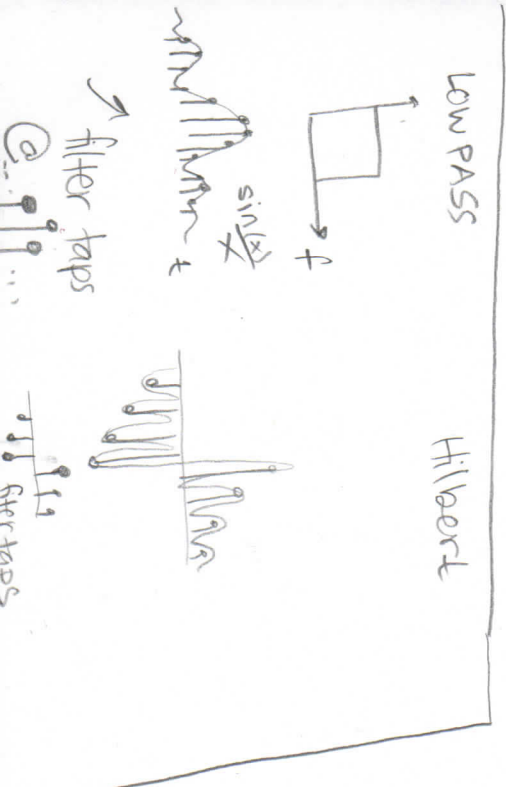
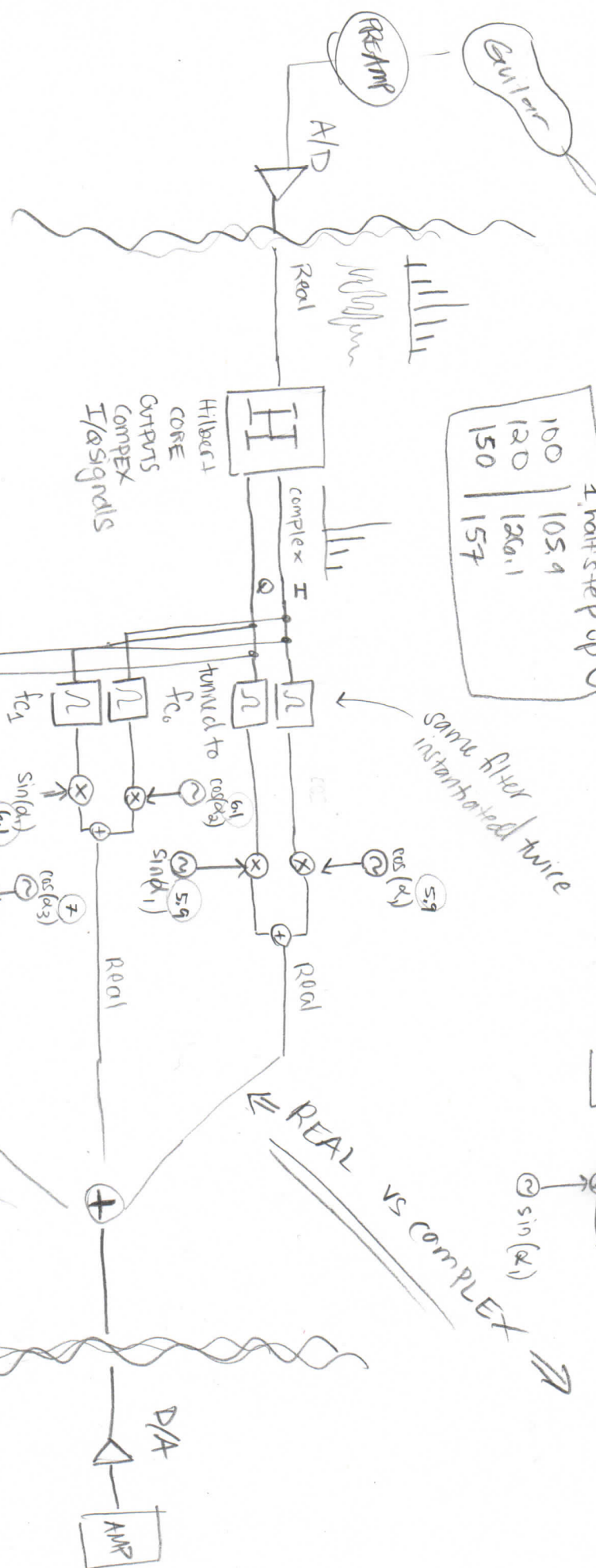
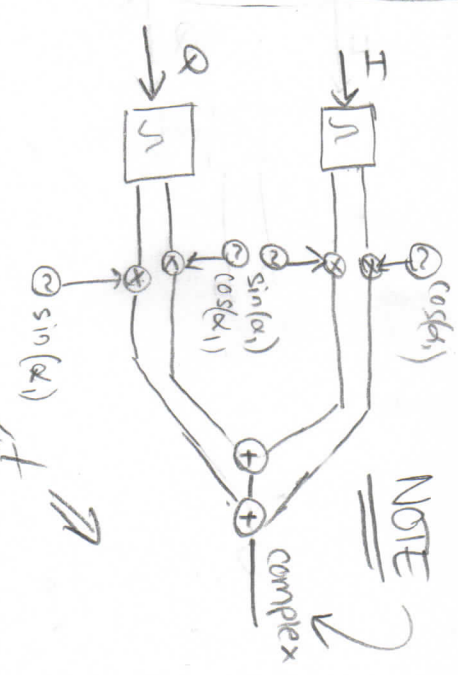
CONVOLUTION for each signal(i) we multiply

filter(i) + running sum  

$$\text{filter}(i) + \text{running sum}$$
  

$$\text{filter}(i) = [s(i) * f(i)] + [s(i) * f(i+1)] + [s(i) * f(i+2)] + \dots$$
  
 then add to  $[s(i+1) * f(i)] + [s(i+2) * f(i+1)] + \dots$   
 all the way through

| 1. half step up |       |
|-----------------|-------|
| 100             | 105.9 |
| 120             | 120.1 |
| 150             | 157   |



REAL vs COMPLEX