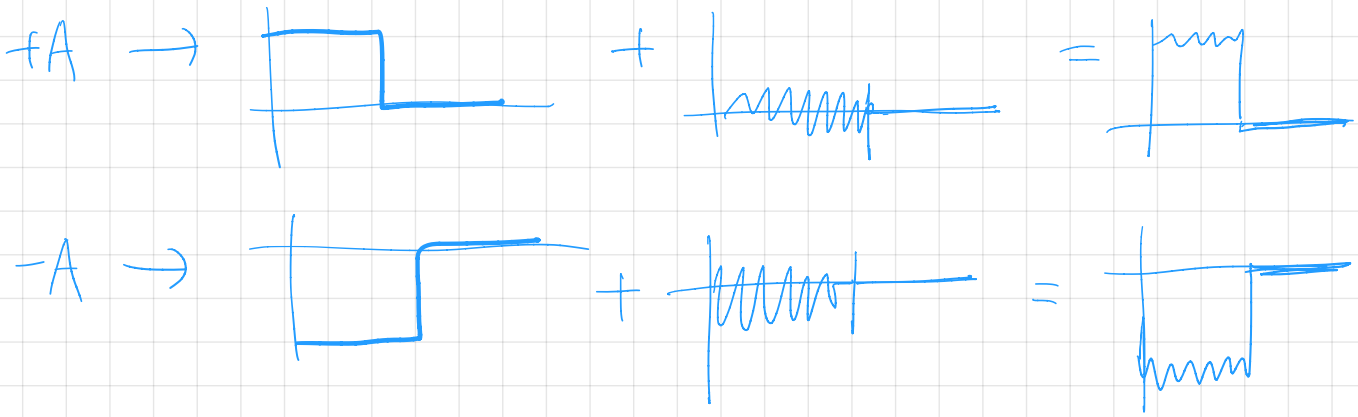
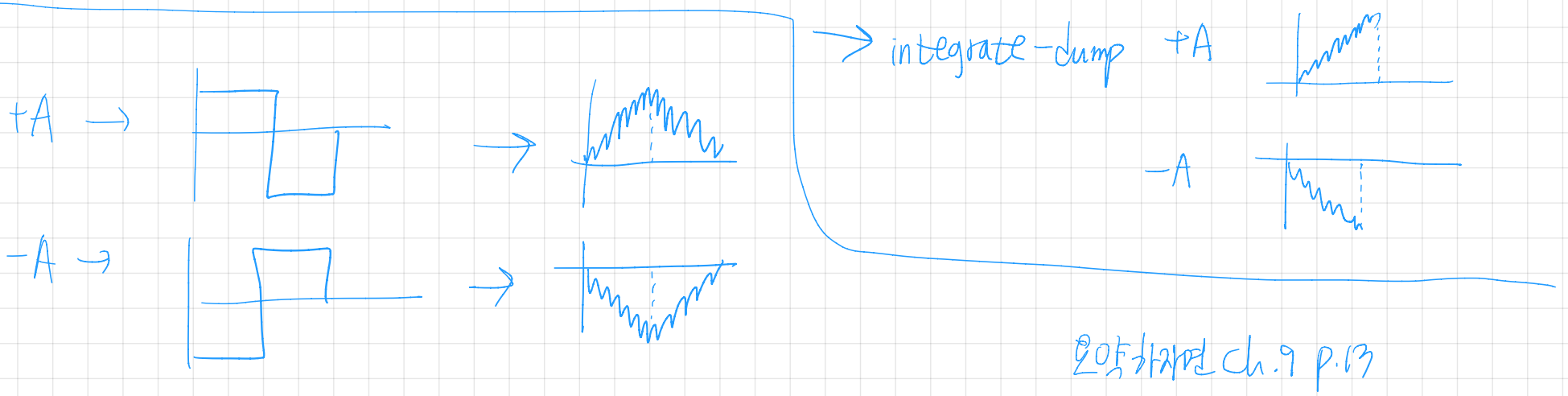
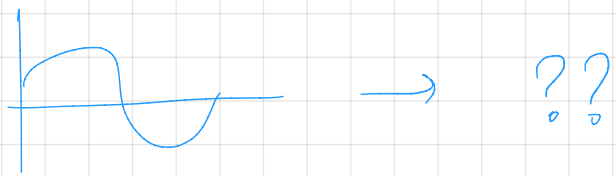
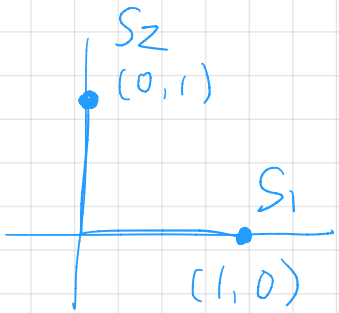






오양하과면 ch.9 p.13

10:47AM



$y = S_i + n$

$z = \langle y, w \rangle$ ← our designed detector

$\langle (1,0), (0,1) \rangle = 0$ (X)

$\langle (1,0), (1,0) \rangle = 1$ (성공)

$\langle (0,1), (1,0) \rangle = 0$ (X)

$\langle (0,1), (0,1) \rangle = 1$ (성공)

(noise part (+n)이 있긴 하겠지만 생략)

$\langle f(x), g(x) \rangle = \int_T f(x)\, g^*(x)\, dx$, ↘ real 만 다룰때

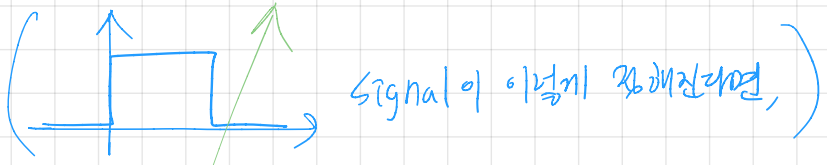
$= \int_T f(x)\, g(x)\, dx$.

CS inq 에 의해

$\leq \|f\|_2 \cdot \|g\|_2$

(쓰다가 날아갈)

$f(x) * h(x) = \int_{-\infty}^{\infty} f(\tau)\, h(x-\tau)\, d\tau = \int_T f(\tau)\, h(x-\tau)\, d\tau$



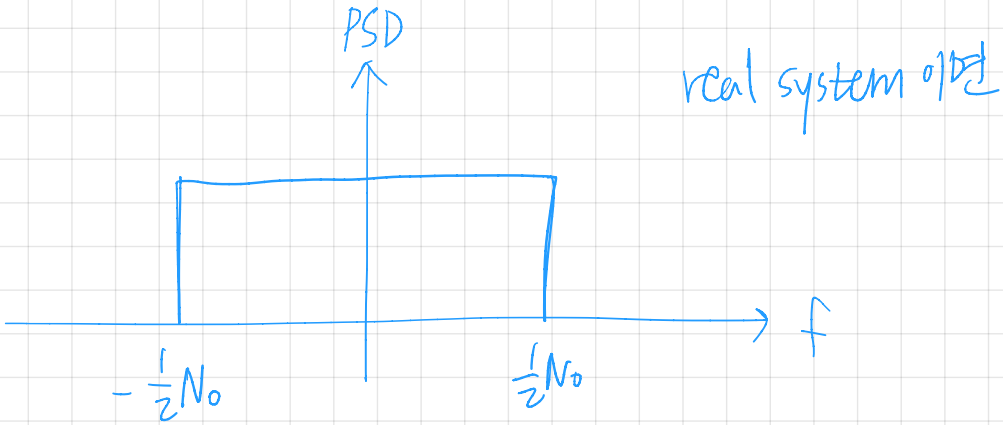
(signal 이 이렇게 생겨먹었다면,

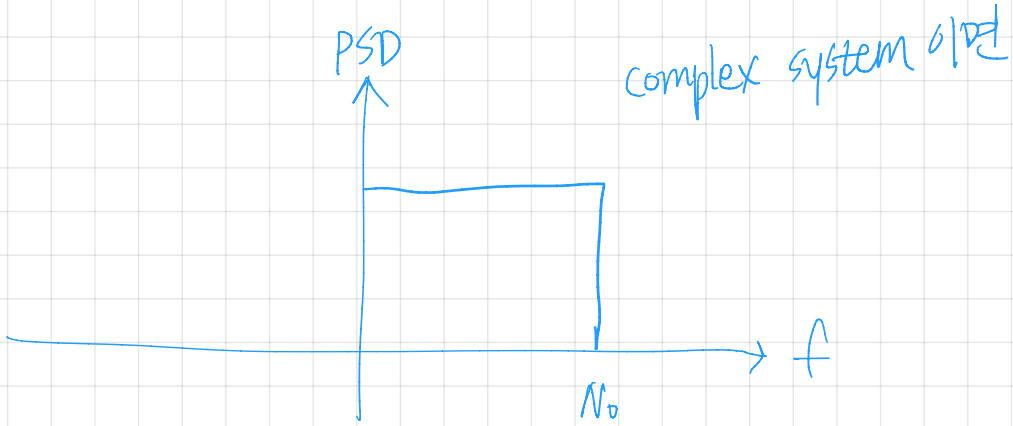
이 부분이 $f(\tau)$랑 딱 맞아떨어지면 (??)

matched filtering (??)

(오늘 할 거)

질문


PSD
real system 이면
f
$-\frac{1}{2}N_0$
$\frac{1}{2}N_0$


PSD
complex system 이면
f
N_0