



Compute $f_{SL}(t), n_{NL}(t)$



Compute

$$\underline{s}_{NL,0}(t) = s(t, \alpha_{NL}^*),$$
$$\underline{s}_{NL,SL}(t) = s(t, \alpha_{NL}^* + \Delta\alpha_{SL})$$



No

$H_{Hearing\ Aids}(z) \neq 1?$

Yes



$$P_{in}(t) = \underline{s}_{NL,SL}^{Input}(t)$$
$$= \underline{s}_{NL,SL}(t)$$



$$h_{Hearing\ Aids}(t) = \mathcal{F}^{-1}\{H_{Hearing\ Aids}(z)\}$$



$$P_{in}(t) = \underline{s}_{NL,SL}^{Input}(t) = \underline{s}_{NL,SL}^{HA}(t)$$
$$= h_{Hearing\ Aids}(t) * \underline{s}_{NL,SL}(t)$$