

Music Note Music Note' $x(t) ; x(0) = x_0$

$$\begin{bmatrix} D4 \\ E2 \\ D4 \\ \vdots \end{bmatrix} \xrightarrow{\text{Expanded Rhythm}} \begin{bmatrix} D4 \\ D4 \\ E2 \\ E2 \\ D4 \\ D4 \\ \vdots \end{bmatrix} \xrightarrow{T} \begin{bmatrix} 1.00 \\ 1.27 \\ 2.13 \\ \vdots \end{bmatrix}$$

Music Note* $x(t) ; x(0) = x_0^* \neq x_0$

$$\begin{bmatrix} E2 \\ F4 \\ C3 \\ \vdots \end{bmatrix} \xleftarrow{T^{-1}} \begin{bmatrix} 1.05 \\ 1.15 \\ 2.20 \\ \vdots \end{bmatrix}$$

$$x'(t) = f(x(t)) ; x(0) = x_0$$