

The change to the y_0 add more echo into the sound.

When the value is greater than one, the sounds get louder.

The difference equation would be

$$Y(n) = x(n) + 0.8x(n - 800)$$

After the transformation, the transfer function would be:

$$Y(z) / X(z) = 1 + 0.8z^{-800}$$

Impulse response.

