The change to the y0 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.

Histogram

Description automatically generated