Output table

A table of numbers and symbols

Description automatically generated with medium confidence

Note that some of the Data\_in values and buffer values are missing. Below is the Bitwave show all Data\_in values and buffer values. The table above is a little misleading because of the equation below

* buffer = Previous Data\_in
* Data\_out = Data\_in – previous Data\_in

Bitwave

A screenshot of a computer

Description automatically generated

Summary:

**@ high reset the following will occur**

* buffer goes to zero
* Data\_in will keep its value since it is an external input but the buffer will remain zero
* Data\_out will still be [Data\_in - buffer] but since buffer is zero therefore Data\_out will be Data\_in
* This Means that no filtering is occurring at high reset

**@ low rest and hold = 1 the following will happen**

* buffer Keeps it current value
* Data\_in is not transferred to buffer
* Data\_out is still equal to [Data\_in - buffer] but
* therefore @ hold = 1 the buffer is not updated

**@ hold = 0 and reset = 0 the following will occur**

* buffer will store the previous Data\_in value
* Data\_out will be (Data\_in - buffer)
* therefore, the buffer is update when hold is low and reset is low