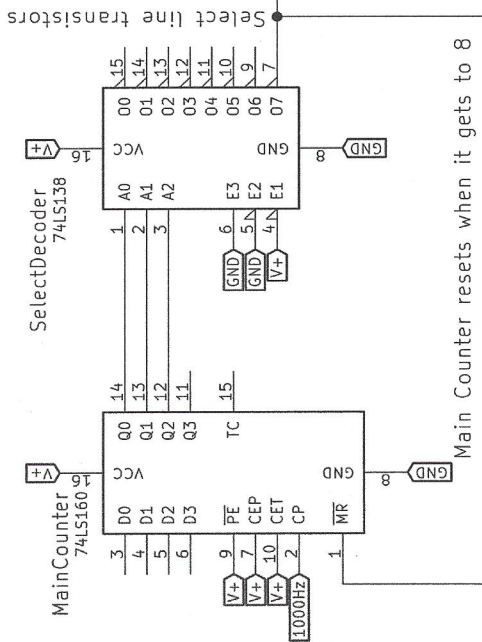


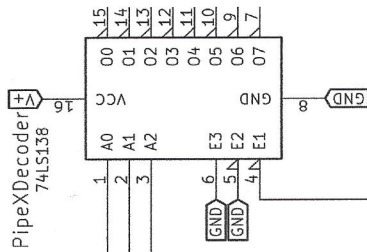
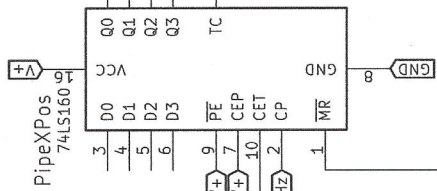
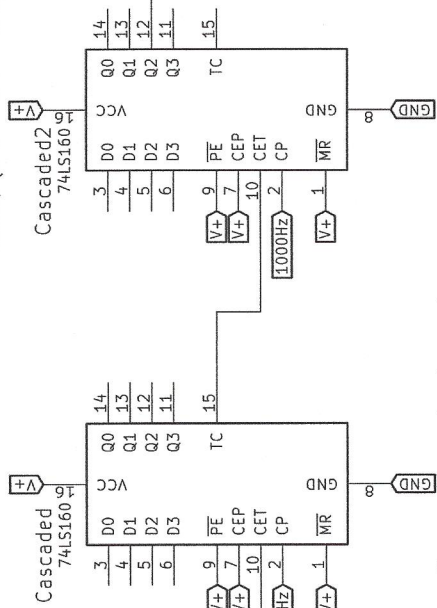
Pipe Subsystem

This counter's only purpose is to bring the 1 KHz main tick speed down. It uses the same clock input to be synchronous.

This counter's Q2 is about 1 Hz, $1000 / (2^3 * 2^4 * 2^3) = 0.98$

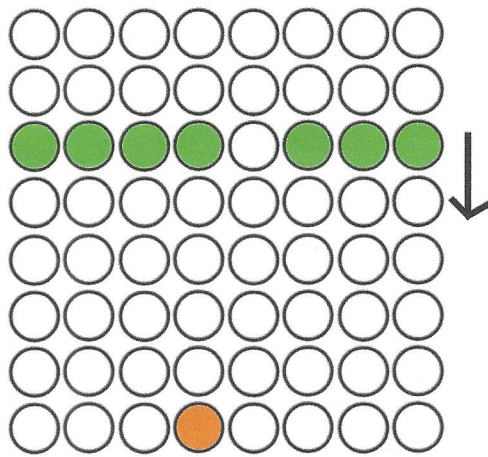


Because the main counter is reset before getting to TC, Q6 has to be used to cascade the next counter.

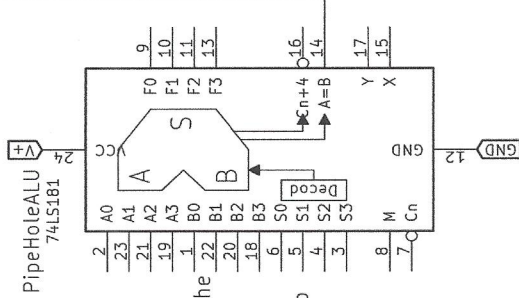


The pipe x-position resets at 8 because that is the end of the screen.

Pipe x position = 2, it goes down and then loops back to 8.



Bird y = 3. It goes up unless the player clicks; then it goes down.



A inputs are from Pipe X position counter. B inputs are from random number circuit for the y-position of the hole in the pipes.

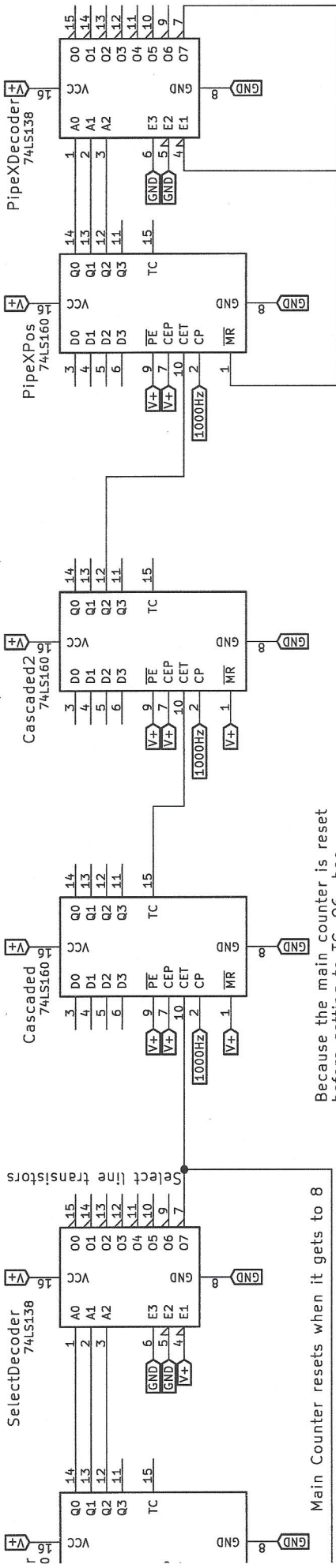
We want data line N to be high if the pipe X position is N and Select Line N is not equal to the Pipe Hole y-position.

I'm not sure how it works, but I could use Chua's circuit to get a random y-position for the pipe hole.

A = B, making all of its outputs high. This disables the decoder when high.

This counter's only purpose is to bring the 1 KHz main tick speed down. It uses the same clock input to be synchronous.

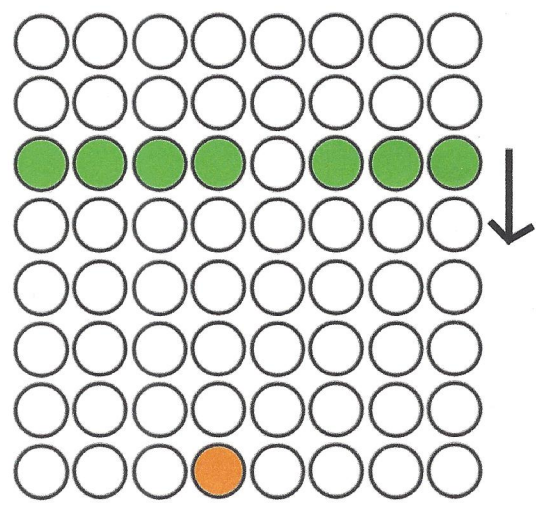
This counter's Q2 is about 1 Hz, $1000 / (2^3 * 2^4 * 2^3) = 0.98$



Because the main counter is reset before getting to TC, Q6 has to be used to cascade the next counter.

The pipe x-position resets at 8 because that is the end of the screen.

Pipe x position = 2, it goes down and then loops back to 8.

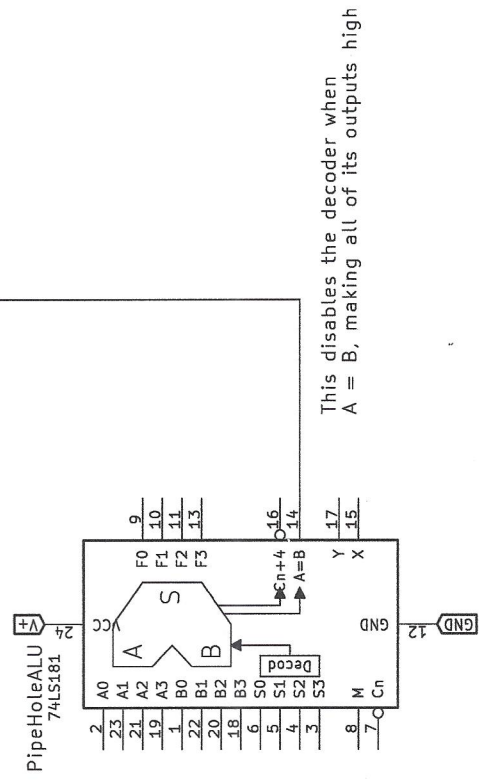


Pipe hole y position = 4. It is randomly generated when pipes reach the end of the screen.

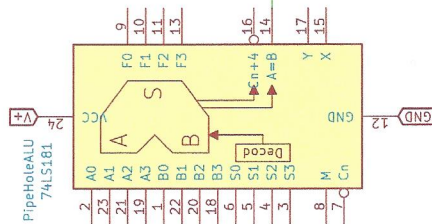
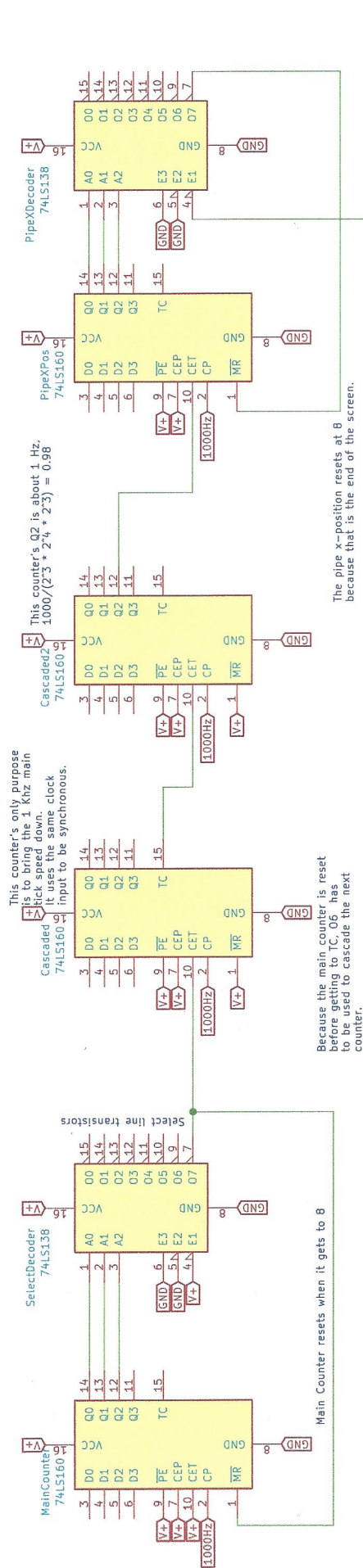
A inputs are from Pipe X position counter. B inputs are from random number circuit for the y-position of the hole in the pipes.

We want data line N to be high if the pipe X position is N and Select Line N is not equal to the Pipe Hole y-position.

I'm not sure how it works, but I could use Chua's circuit to get a random y-position for the pipe hole.



This disables the decoder when A = B, making all of its outputs high



A inputs are from Pipe X position counter.
B inputs are from random number circuit for the y-position of the hole in the pipes.

We want data line N to be high if the pipe X position is N and Select Line N is not equal to the Pipe Hole y-position.

I'm not sure how it works, but I could use Chua's circuit to get a random y-position for the pipe hole.

This disables the decoder when A = B, making all of its outputs high.