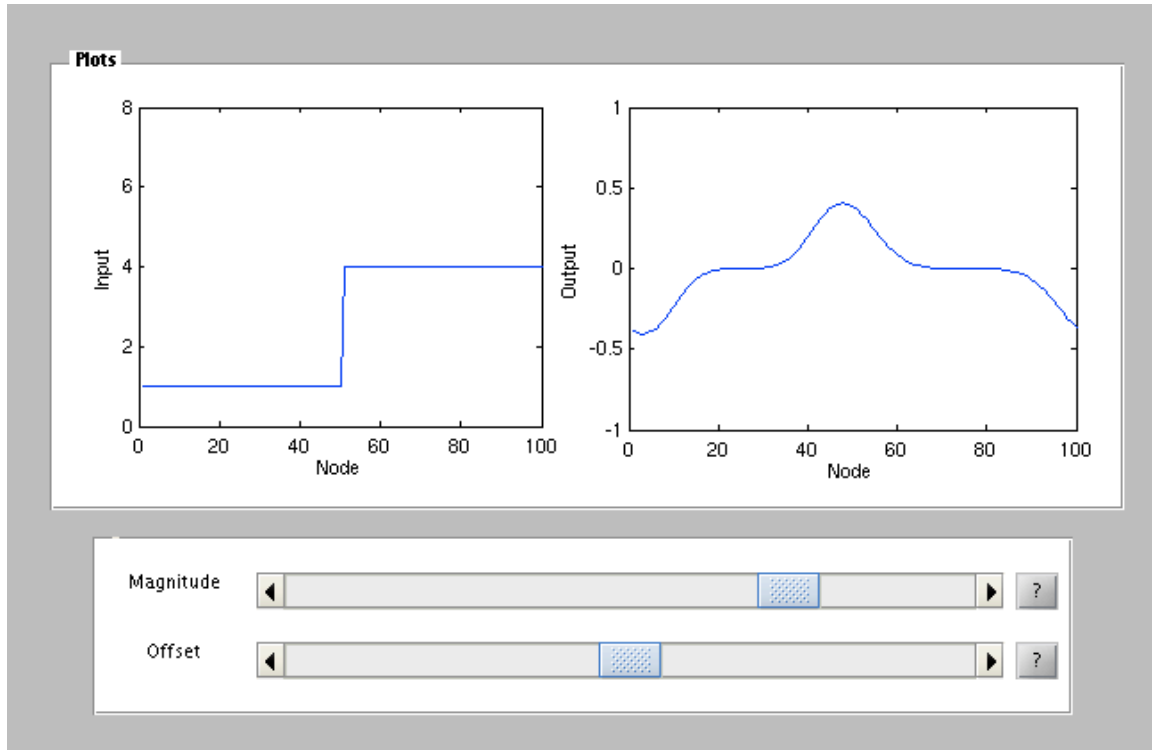


Simple Cell Example

To run the included example, call `run_example` from Matlab while in the `simplecell` directory, or use the example menu option from `main_gui`. The initial view should look something like that below.

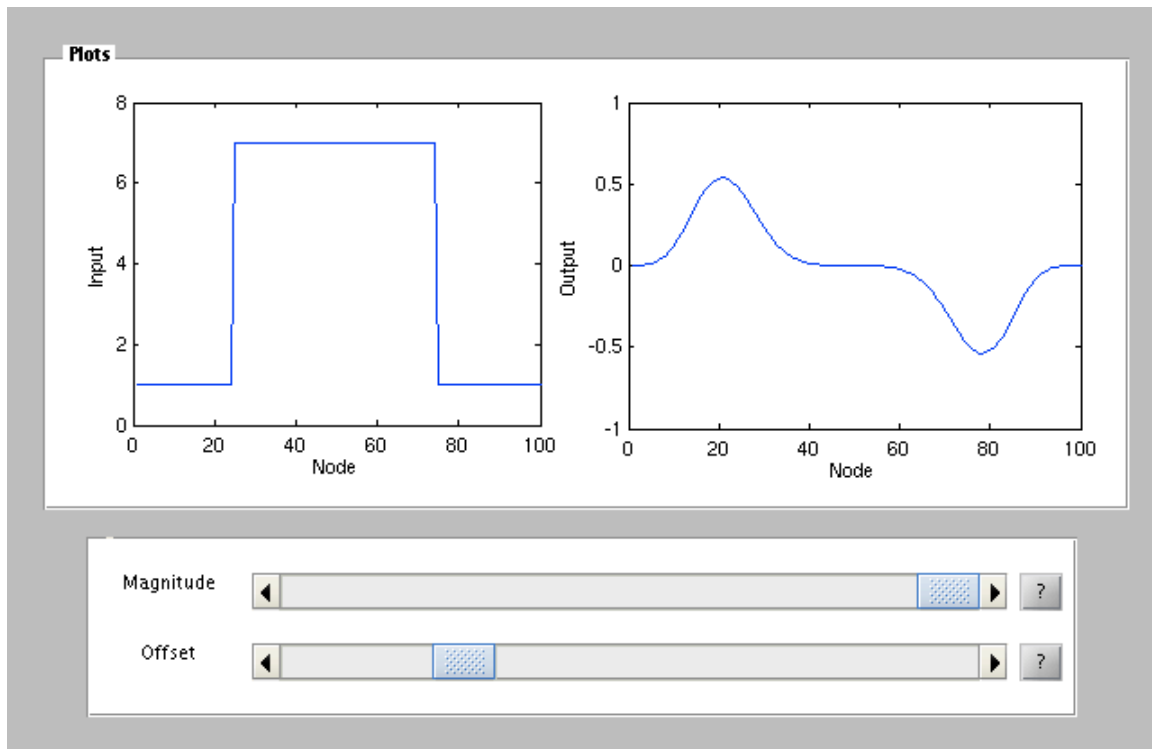


The two graphs across the top of the window are the input and output for the network. The two sliders at the bottom of the window control the shape of the input. The output will automatically update as the sliders are changed.

The sliders control the size and the position of the step in the input function, respectively. Moving the magnitude slider to the right of the center increases the magnitude of the right half of the input pattern while leaving the left half intact. When centered, the input pattern is uniform and flat. Moving the slider to the left of the center position increases the magnitude of the left half of the input pattern while leaving the right intact.

The offset slider shifts the input pattern to the left or right of the center. Since the network is structured as a loop, the left and right edges connect.

The clearest demonstration of the qualitative properties of the network is when the sliders are set as shown below.



In this configuration, the network is centered on right- and left-polarity edges of high magnitude. With the default set of parameters, the network is sensitive to right-polarity edges, but inhibited by left-polarity edges. The shows up as a strong positive bump in the output around the position of the right-polarity edge and strong negative bump in the output around the position of the left-polarity edge.