



Figure 1. Pictured above is the top view of the current prototype of Rubel's extended analog computer, the EAC. It is constructed on a single circuit board using the upper side for the integrated circuits, and the opposite side for the conductive foam sheet. For portability, both the top and the bottom sides are covered with clear Plexiglas to protect the components. The translucent Plexiglas square on top diffuses the light emitted from the five-by-five blue LED array giving a rough indication of how the output, a voltage gradient, is changing. Four holes in the middle of each edge of the translucent Plexiglas provide access to a small pin, visible as a dark spot. The pins allow multiple EACs to be directly connected at the north, south, east and west edges for use as a cellular automaton, to be or stacked to model three-dimensional systems with layers of two-dimensional sheets.