## CruciBox



Designed and made with a 3D printer by Diniar Namdarian, 2018. (plastic box $6.9 \times 7.9 \times 2+3 / 8$ inches, 39 plastic pieces, directions for 30 problems)
A puzzle box where the lid is a 2-layer sliding piece puzzle, where the top layer pieces may poke into the edges of the box, but must avoid stops that can be placed. Problem 1 is to remove the lid from the shipped puzzle; on the right above is the lid off with all ten stops removed. Below on the left is the bottom layer, and the second diagram is the middle layer with the stops placed as shipped. The half width projections of corner pieces could just as well be full width and still avoid stops (since stops fully block a row), but can in some cases allow a closer fit to the cross (which has angled inside corners to keep out a full $1 \times 1$ tile), as shown in the third diagram below, which is also an example of how the cross may also project into the box side. Different problems may have different stops or no stops; for example, the fourth diagram below shows Problem 2 (same start position as Problem 1) that has no stops.


Here are 12 basic steps to solve the first problem in a total of 55 sliding motions, where each motion pushes a line of one or more tiles in a horizontal or vertical direction:


The 30 Problems that come with CruciBox:


