



aerial screw it all together



ELIZA: Congratulations, you passed all of the tests! As a reward, everything you have done can be assembled into a time machine which will whisk you into the future to experience all the wonders that were invented after your time!

[Leonardo, gratified, builds the time machine]

ELIZA: Marvelous! But why did you build it into a gyrocopter??

*Leonardo: Ah, now it's **your** turn to solve a test! The answer is contained within the aircraft itself.*

To get the answer you will have to build your own gyrocopter. Use the base of the gyrocopter to get the input letters. Then use the sails like a decoder ring to turn those input letters into the solution.

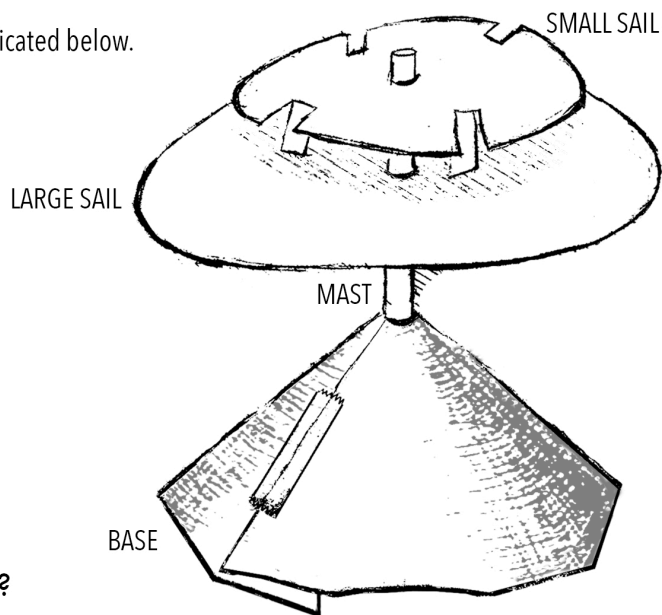
Step 1 - Gather the inputs:

1. Assemble the base and mast of the gyrocopter (Part A of the blueprints on page 2).
2. Line up the head and feet from the gyrocopter base with head #1 and feet #1 on page 3. The first input letter will then be indicated. Enter it in the first box at the bottom of this page.
3. Repeat for the other 8 letters.

Step 2 - Decode to get outputs:

1. Cut out the large and small sails and put them on the mast (Part B of the blueprints on page 2).
2. Take the first input letter from Step 1, and find that same letter on the large sail, in the array of letters closest to the mast (ignore all of the numbers on the disc).
3. Using the limb specified in the table (limb number 20), point it directly at the first input letter on the large sail.
4. The other "chosen" arm that comes from the same shoulder will point to a letter at the edge of the large sail. That is the output letter.
5. Repeat for the remaining 8 letters, using the other limbs in turn, as indicated below.

	1	2	3	4	5	6	7	8	9
INPUT									
Decode using limb #	20	5	15	10	20	5	15	15	10
OUTPUT									



Why **did** he build the time machine into a gyrocopter?
His answer is quintessentially da Vincian.

BLUEPRINTS

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PART A

Mast:

- Cut out the path of the perpetual motion car that you drew.
- Wrap the rectangle lengthwise around your pencil. Make it tight.
(if your pencil has a clip, just roll as tight a tube as you can freehand)
- Tape the edge closed at the top, middle and bottom. Remove the pencil.



a.



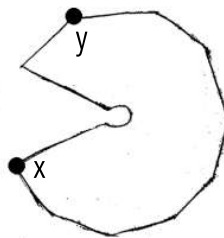
b.



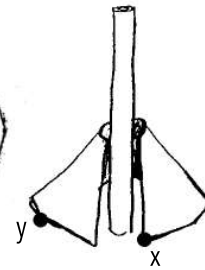
c.

Base:

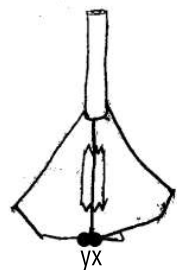
- Cut out the Pac-Man shape.
- Cut a circle in the middle of the mouth just large enough to go around the mast.
- With the picture facing up, wrap the Pac-Man around the mast until point "x" overlaps with point "y."
- Tape the edge.



a. & b.



c.

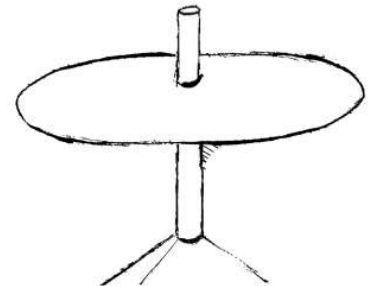


d.

PART B

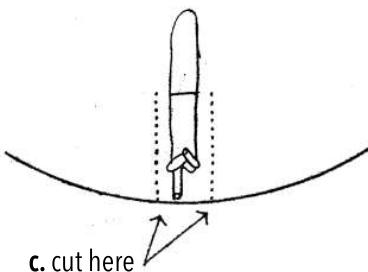
Large sail:

- Cut out the Cyborganista disc.
- Cut along the X in the center (you can fold along one line of the X while cutting the other).
- Slide the disc down over the mast, to about an inch and a half from the top.

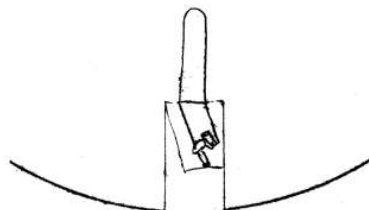


Small sail:

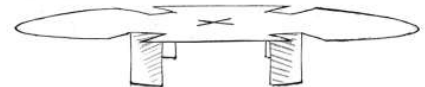
- Circle the numbers on the eight "chosen" limbs.
- Cut out the circle that surrounds the android.
- On four of the limbs – numbers 5, 10, 15, 20 – make two cuts, one on either side of the limb, from the edge of the circle down to the elbow/knee (see illustration below).
- Bend those 4 limbs down.
- Cut along the X in the center (you can fold along one line of the X while cutting the other).
- Slide the disc down over the mast, until the bent-down limbs touch the large sail (see illustration on page 1).



c. cut here



d. bend down limb



all four limbs
cut and bent down

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