

Free Hand Sketching

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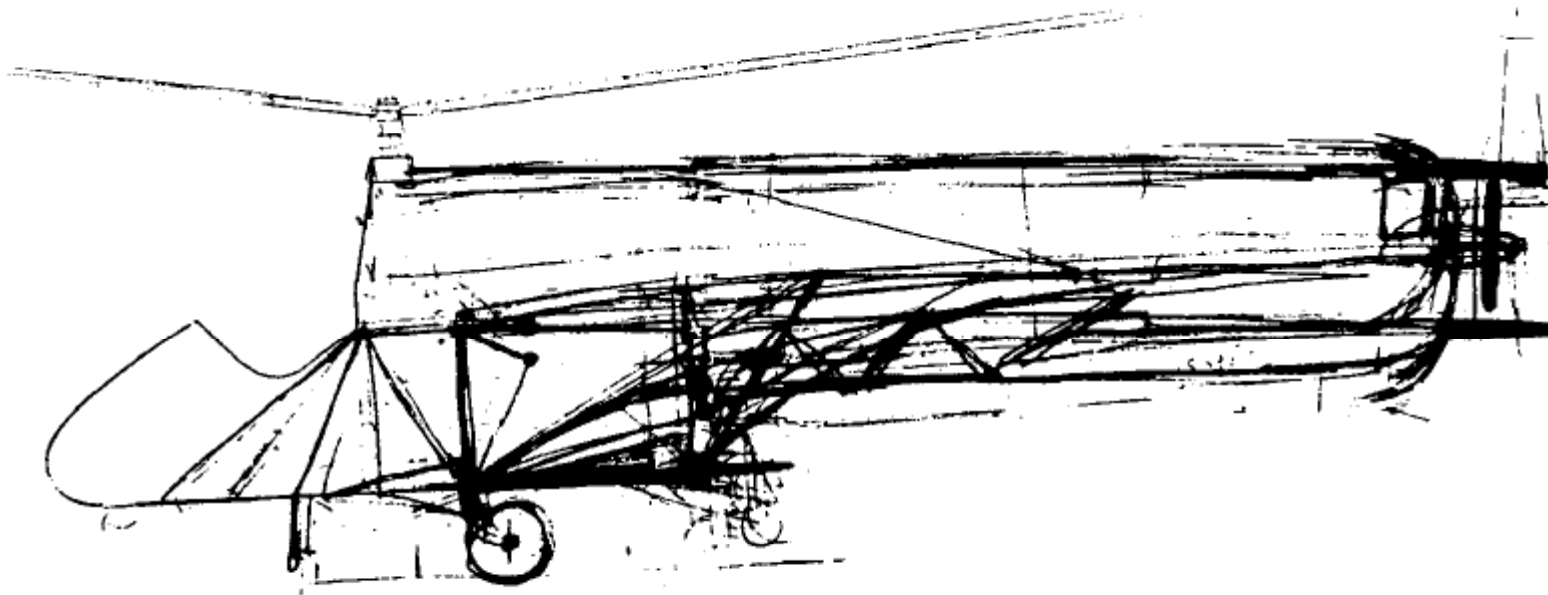
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WHY FREEHAND SKETCHES?

- An integral part of the creative design process is ideation, the generation of concepts or ideas to solve a design problem.
- freehand sketching can be used to explore and communicate mental concepts that come about in the mind's eye.
- The process of sketching can solidify and fill out rough concepts.
- sketching captures the ideas in a permanent form that can be used to communicate the concept to others.
- sketches often act as stepping stones to refine and detail the original concept or generate new ideas.
- Many great design ideas are first sketched on the back of an envelope or in a lab notebook, such as the freehand sketch of one of helicopter inventor Igor Sikorsky's designs,

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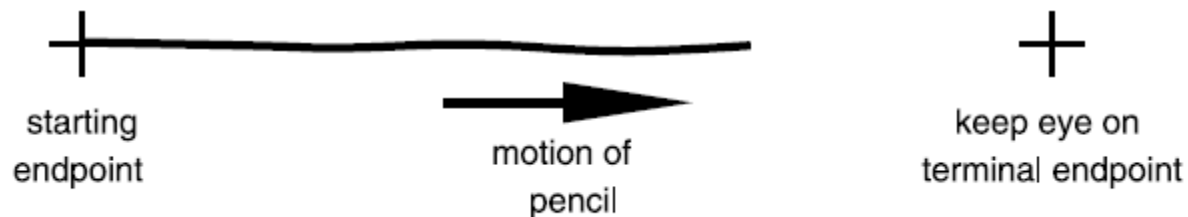


FREEHAND SKETCHING FUNDAMENTALS

- Freehand sketching requires few tools: just a pencil and paper.
- sketching has three steps:
 - ✓ First, the sketch is planned by visualizing it in the mind including the size of the sketch on the paper, the orientation of the object, and the amount of detail to be included in the sketch.
 - ✓ Second, the sketch is outlined using very light lines to establish the orientation, proportion, and major features of the sketch.
 - ✓ Finally, sharpening and darkening object lines and adding details develops the sketch.

Line sketching

- All sketches are made up of a series of arcs and lines, so the ability to draw circles and straight lines is necessary.
- A straight line sketching: First, sketch the endpoints of the line as dots or small crosses. Then place your pencil on the starting endpoint. Keeping your eyes on the terminal point, use a smooth continuous stroke to draw the line between the points as shown in the Figure



- horizontal or vertical lines are frequently easier to draw than inclined lines, so it may be helpful to shift the paper to draw the line horizontally or vertically.
- For long lines, mark two or three points along the line and use the procedure between consecutive points or to make two or three shorter passes lightly with the pencil before a final darker line.

Circle sketching

- A circle can be sketched using the following steps:
- First, draw light horizontal and vertical lines crossing at the center of the circle.
- Second, lightly mark the radius of the circle on each line.
- Finally, connect the radius marks with a curved line to form a circle.
- Another technique is to lightly draw a square box the same size as the circle diameter as shown in the Figure.

How to
draw Arc?

