**Topics:**
- Two-Point Perspective, Depth, and Accuracy
- Introduction: Two-Point Proportion Method and Perspectival Montage
- Perspective Worksheets

**Two-point Perspective: Measuring Point Method**

**Synopsis**

Two-point perspectives differ from one-point perspectives in their use of a second vanishing point. They also differ in another way: two-point perspectives never have horizontal lines. All lines except verticals are drawn to a vanishing point. Their are many ways to draw two-points, the best methods being ones we can easily remember and apply to the design process with relative quickness. We will study the *measuring point method* of setting up a two-point perspective.

**Terms**

**Ground line (GL):** The ground line is primarily used as a measuring line. It is the intersection between the ground plane and the picture plane. The ground plane is often confused with the ground line. The ground plane is the horizontal reference from which vertical measurements are taken.

**Picture Plane (PP):** The transparent plane perpendicular to the observer's line of sight. In practice, the picture plane is the drawing surface in which the perspective is executed.

**Horizon Line (HL):** A horizontal line within the picture plane at the same height as the eye of the observer.

**Vanishing Point (VP):** A vanishing point is a point on the Horizon Line where all horizontal, parallel lines appear to be converging. Two-point perspectives have two VP’s on the Horizon Line.

**Station Point (SP):** This is the position of the observer. It is also the place to measure the cone of vision.

**Cone of Vision:** This should not exceed 60 degrees in plan view. Trying to draw a perspective greater than this will cause distortion toward the edges of the drawing.

**Exercises**

1. Creating a two-point perspective skeleton using measuring point method.
2. Locating and scaling all of the elements accurately in the two-point perspective.
Perspective Drawing Hints

1. Practice quickly setting up your perspective with variable locations of the horizon line, vanishing point, and station point. Even slight shifts in the location of each can produce a dramatically different perspective. The goal is to become facile with manipulating designs within the Picture Plane, using the perspective as a design tool. This requires that you become fluent in moving around and drawing in a variety of perspectival organizations. Learn to quickly critique what it is you want seen and/or studied.

2. Remember to use clear crisp lines. Twirling a continually sharpened pencil as you draw helps a great deal in the clarity of design intent in the perspective drawing.

Two-point Proportion Method : Perspectival Montage

Synopsis

The two-point proportion method differs from the measuring point method in that the drawing will not begin and end in itself. This method utilizes techniques of collage and montage to assemble images/materials from varied origins. The resulting perspective, however, may not convey depth in the same way that the classical two-point perspective does.

The perspectival montage is a composite drawing made by coordinating heterogeneous photographic elements into a cohesive composition. An important condition to note is that photographic materials already have embedded vanishing points (depth), horizon lines and heights, and scales of proportion built into them. Building perspectival representations of your design projects from such materials requires careful scrutiny of their perspectival content.

General Criteria

1. Distinct Ground Plane
2. Seamless flow of montage materials within image
3. General accuracy of perspectival space throughout the Picture Plane.
WORKSHEET 1  
LOCATING THE PICTURE PLANE

As the picture plane is moved further from the station point in relation to the object(s), the vanishing points move further off the picture plane.

ESTABLISHING PICTURE PLANE FROM CONE OF VISION

Note the grid's distortion outside the cone of vision.

TWO-POINT PERSPECTIVE: BASICS

1. horizon line

2. horizon line

3. Draw a vertical line below the HL, be sure to leave some space between the top of the vertical line (vl) and the HL. The VL does not have to be in the middle.

4. a. Draw a straight line from the top of the VL to each VP.

4. b. Draw a straight line from the bottom of the VL to each VP.

5. Draw two more vertical lines, one on each side of the first vertical line.

6. Draw two more lines, one from each VP to the top of the new VL on the far side of the central vertical line.

7. Erase all the guide lines outside of your box.
WORKSHEET 2
TWO-POINT PERSPECTIVE FROM PLAN

step 1
Draw a horizon line parallel to the picture plane. Draw a parallel ground line just below the horizon line. From the station point, draw lines parallel to the sides of the object until they strike the picture plane (these lines should have a 90 degree angle between them). Drop lines down to the horizon line to establish the two vanishing points.

step 2
Draw a vertical line from the corner of the object that touches the picture plane down to the ground line. Draw connecting lines from this point to the two vanishing points. Draw lines from the station point to the left and right corners of the plan. Where these lines intersect the picture plane, draw vertical lines down to those that extend to the vanishing points.

The back planes can be drawn by connecting the left and right side intersections to the vanishing points.

TWO-POINT PERSPECTIVE: BASICS

1. horizon line

2. horizon line

3. Draw a vertical line below the HL, be sure to leave some space between the top of the vertical line (VL) and the HL. The VL does not have to be in the middle.

4. a. Draw a straight line from the top of the VL to each VP.

   b. Draw a straight line from the bottom of the VL to each VP.

5. Draw two more vertical lines, one on each side of the first vertical line.

6. Draw two more lines, one from each VP to the top of the new VL on the far side of the central vertical line.

7. Erase all the guide lines outside of your box.
WORKSHEET 3A
TWO-POINT PERSPECTIVE FROM PLAN: MEASURING POINT

1. Set up the point of view and establish the vanishing points with lines parallel to the plan's rotation. This example has the plan rotated at 30-60 degrees with the point of view to the right of the plan.

2. Now establish your measuring points. To find a measuring point (mp), first measure the distance from the left vanishing point to the station point with a compass. Mark this distance with the compass on the horizon line (hl). This mark will be the measuring point for the left vanishing point.

3. Draw a vertical line below the HL, be sure to leave some space between the top of the vertical line (vl) and the HL. The VL does not have to be in the middle.

4. a. Draw a straight line from the top of the VL to each VP.

b. Draw a straight line from the bottom of the VL to each VP.

5. Draw two more vertical lines, one on each side of the first vertical line.

6. Draw two more lines, one from each VP to the top of the new VL on the far side of the central vertical line.

7. Erase all the guide lines outside of your box.
WORKSHEET 3B
TWO-POINT PERSPECTIVE FROM PLAN : MEASURING POINT

step 4
Draw a vertical line from where the corner of the plan intersects the picture plan down to the ground line. Mark this line as 0 (zero) and mark off both the left and right sides in equal units. It may become necessary to extend the ground line and units beyond the drawing frame.

step 5
Draw lines from point 0 to the vanishing points. These lines can be marked to scale by connecting a point on the ground line scale to its appropriate measuring point (the left scale uses the right measuring point and the left scale uses the right measuring point).

step 6
Repeat step 5 for the right scale. The points where these lines intersect the vanishing point lines will become the start of a measured grid.

TWO-POINT PERSPECTIVE : BASICS

1 horizon line

2

3 Draw a vertical line below the HL, be sure to leave some space between the top of the vertical line (vl) and the HL. The VL does not have to be in the middle.

4 a. Draw a straight line from the top of the VL to each VP.

4 b. Draw a straight line from the bottom of the VL to each VP.

5 Draw two more vertical lines, one on each side of the first vertical line.

6 Draw two more lines, one from each VP to the top of the new VL on the far side of the central vertical line.

7 Erase all the guide lines outside of your box.
step 7
Connect these receding line points to their respective vanishing points. Draw in the diagonal for the grid scale to establish the 45-degree vanishing point. The 45-degree vanishing point is helpful in checking and extending the grid system.

step 8
Draw additional receding lines to the measuring point from the left ground scale. When these points are extended to their vanishing points the perspective grid begins to form.
step 9
Connect the receding lines from the right grid to their respective vanishing points. An 8' x 8' grid is formed.

step 10
Draw a vertical measuring line from point 0 at the same scale as the ground line scale. The points of this vertical scale can be transferred to any point over the base grid by connecting a given point to its correct vanishing point. In this example, the 8' height has been connected to the left vanishing point.

By transferring the points on the vertical measuring line to other vertical lines on the grid, vertical grids can be easily drawn across the picture plane. The entire 3-dimensional space of the perspective can be gridded with this method.