



LIBRECAD

Getting Started—Understanding Layers

(03.05)

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ABOUT LIBRECAD

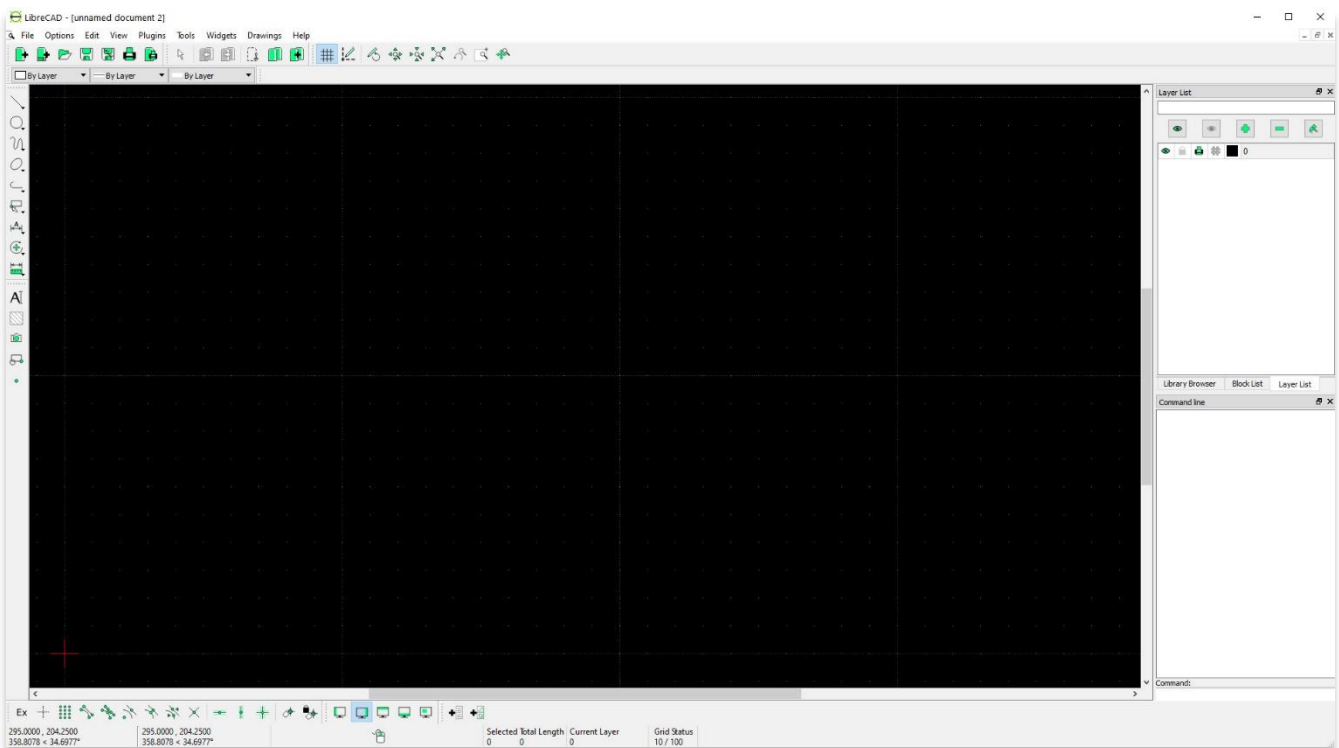
[LibreCAD](#) is a free Open Source computer-aided design (CAD) application for 2D design. LibreCAD works for Windows, Apple and Linux operating systems. Most of the interface and concepts are analogous to AutoCAD, making it easier to use for users with experience of this type of commercial CAD application. [Support and documentation](#) are free from a large, dedicated community of users, contributors and developers.

This **ASOR Tutorial (03.05)** will cover how to get started with LibreCAD by understanding how layers work. This tutorial focuses on workflows common in heritage preservation projects and is not fully comprehensive on LibreCAD's abilities in other professions and fields of study.

For more detailed documentation about LibreCAD, please consult the software's User Manual: <https://librecad.readthedocs.io/en/latest/>.

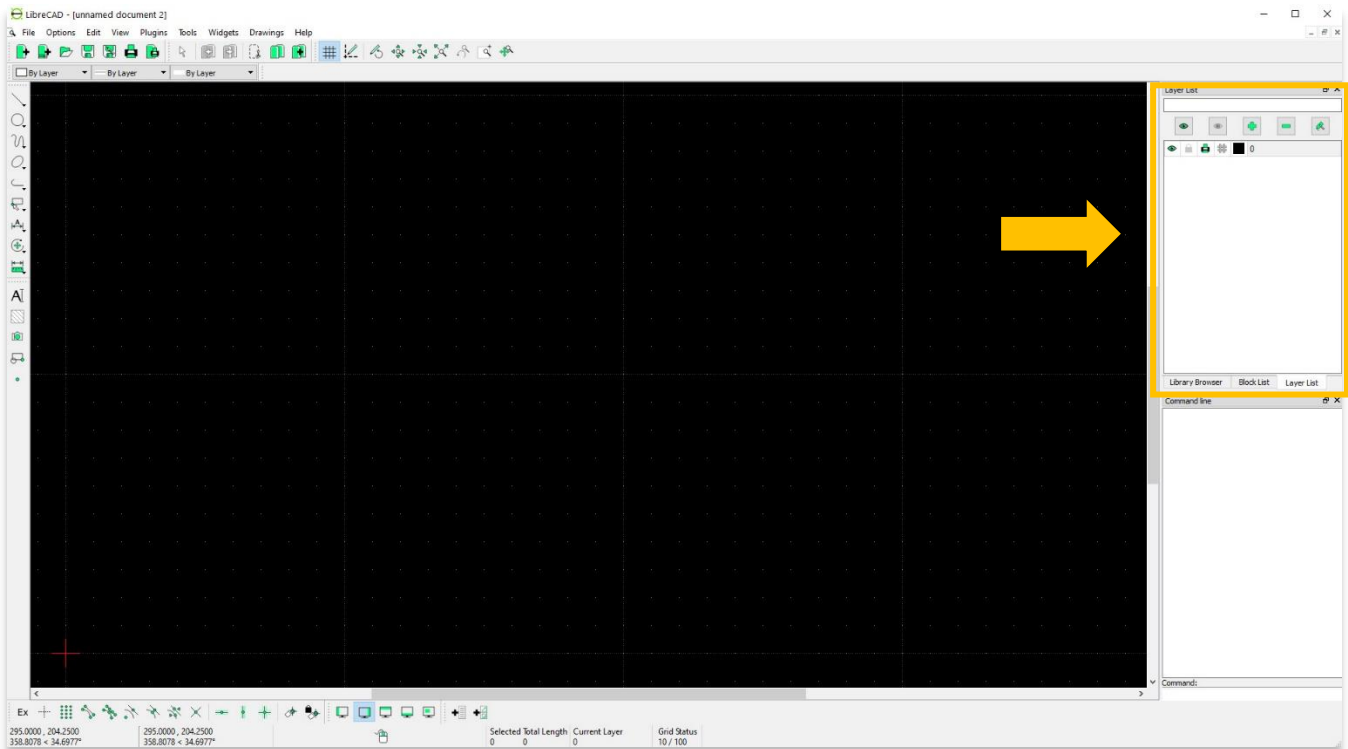
OPENING LIBRECAD

1. To open LibreCAD, search for the program by typing in "LibreCAD" in your computer-wide search function (bottom left corner of your screen). Click on the LibreCAD application in your programs window to open.

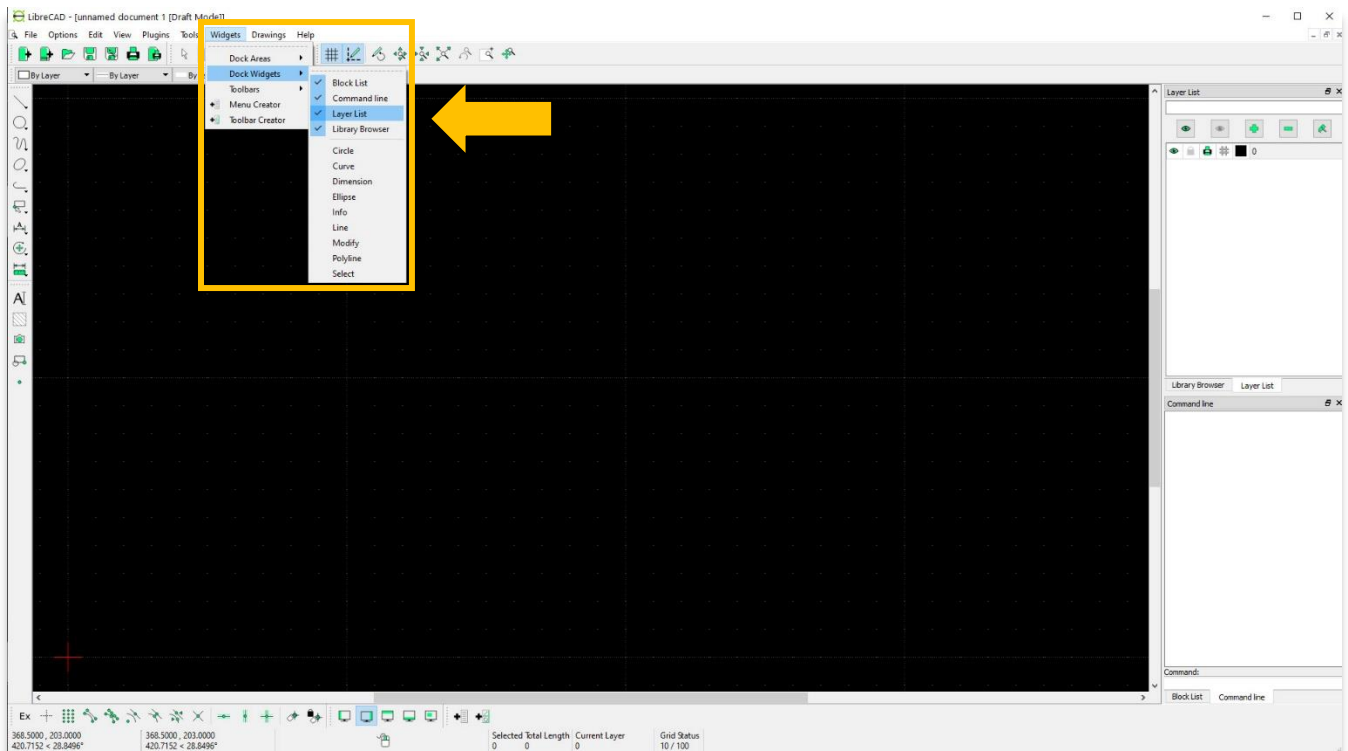


UNDERSTANDING LAYERS

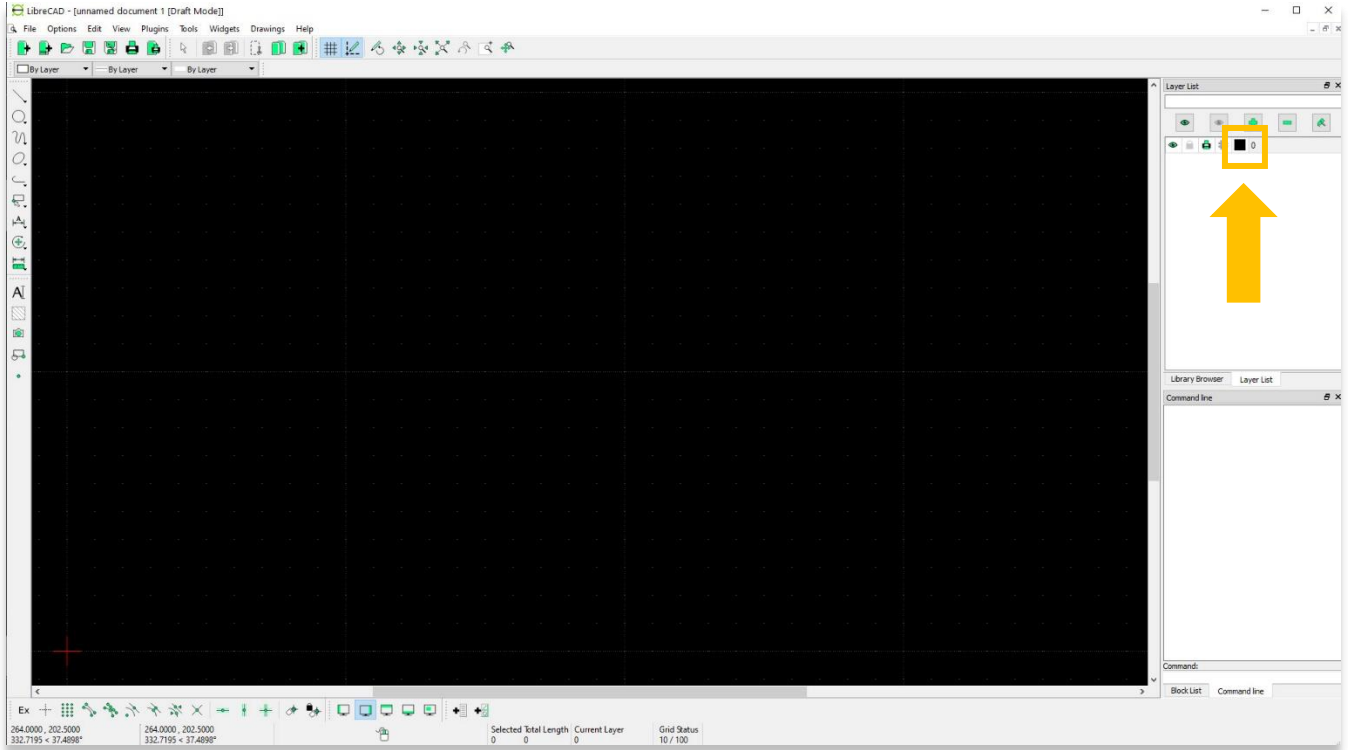
2. The **Layer List** panel is typically located in the right side of the program when you first open up LibreCAD.



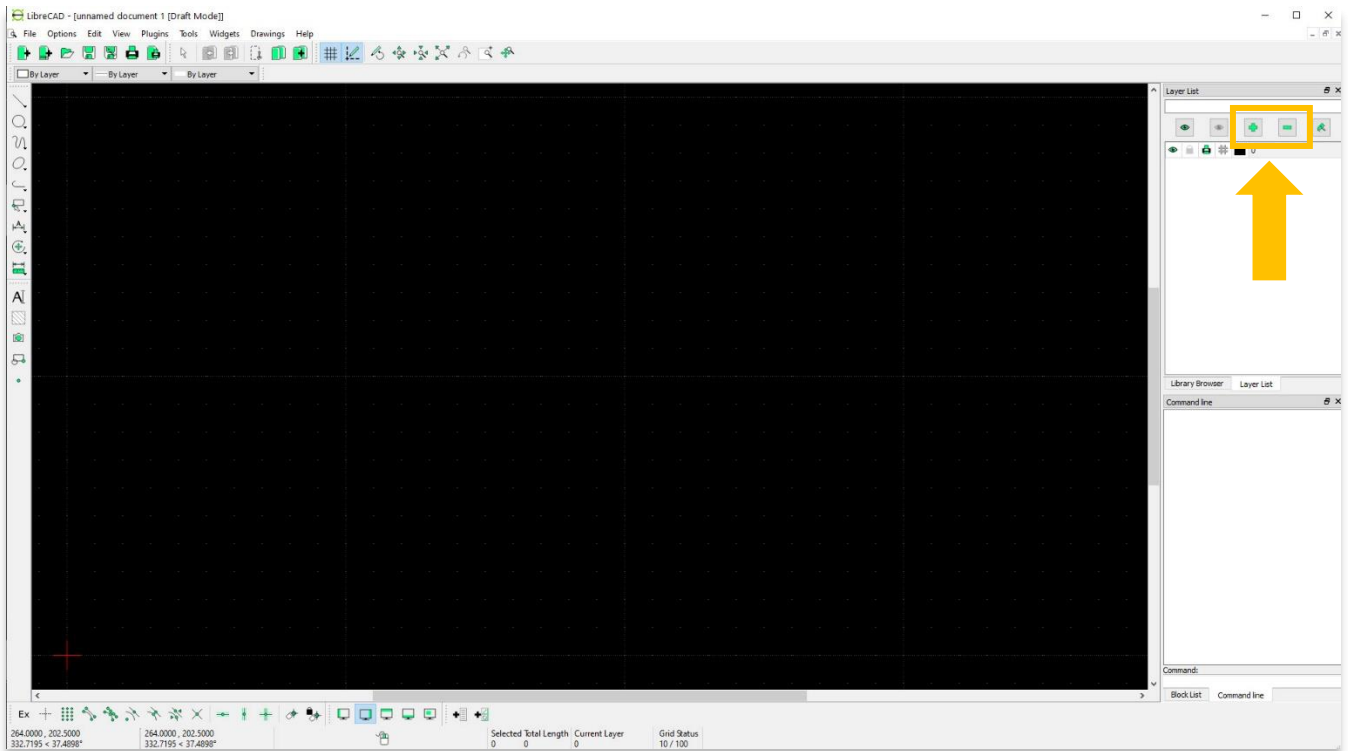
3. If the **Layer List** panel is not visible, you can activate it through **Widgets > Dock Widgets > Layer List**.



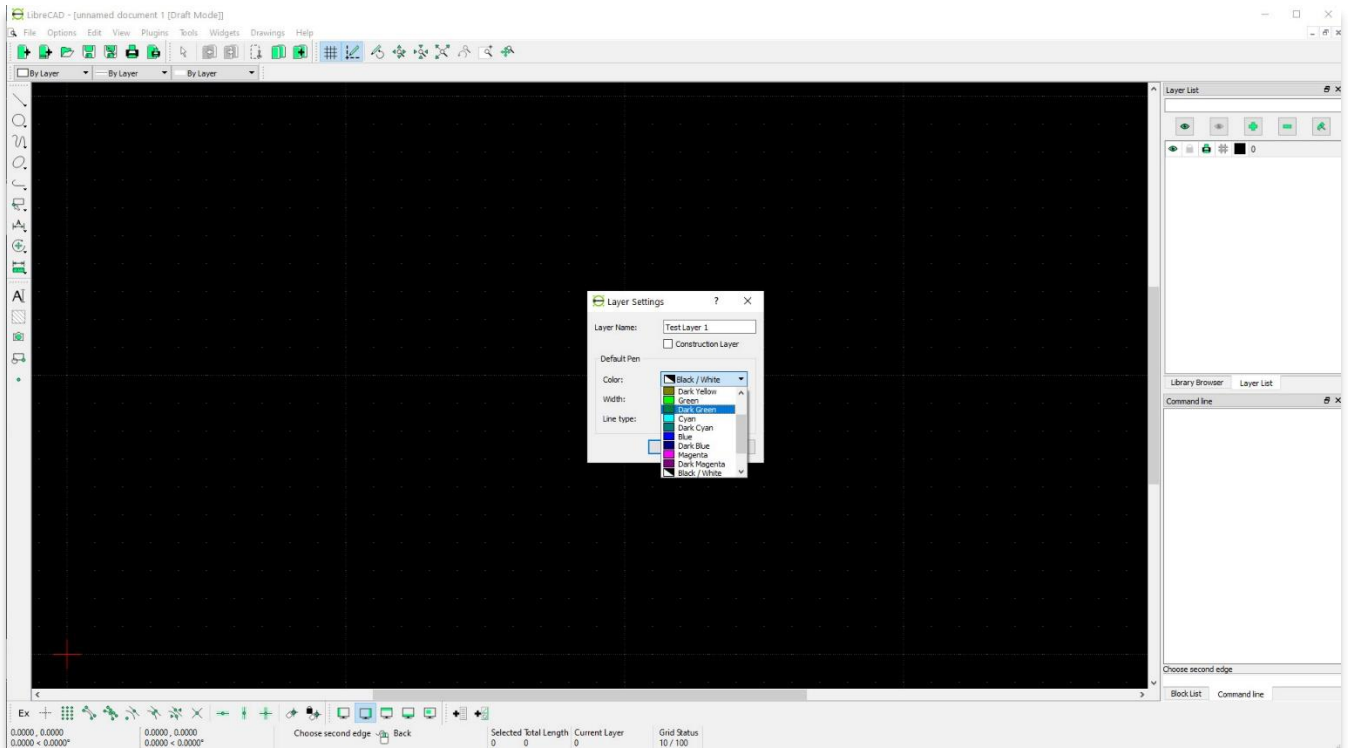
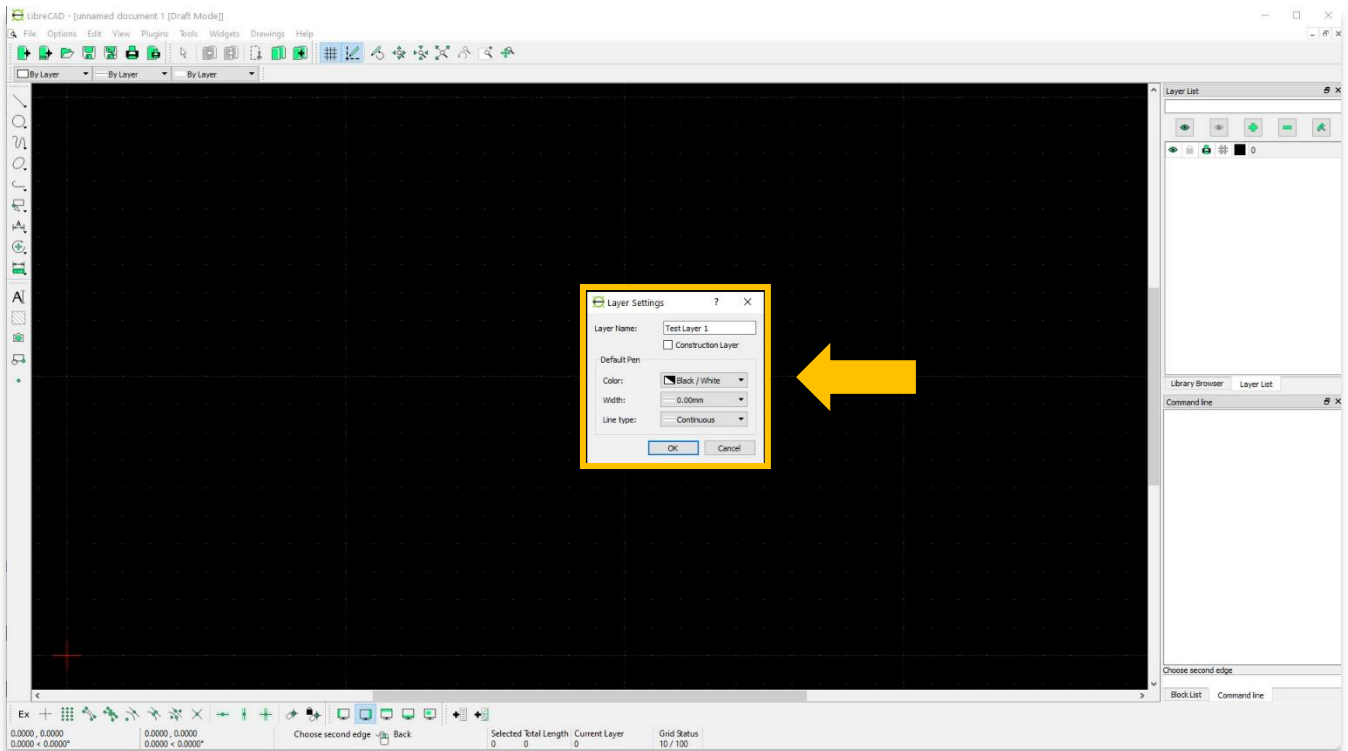
4. Every drawing begins with **Layer 0**. This layer name cannot be changed.



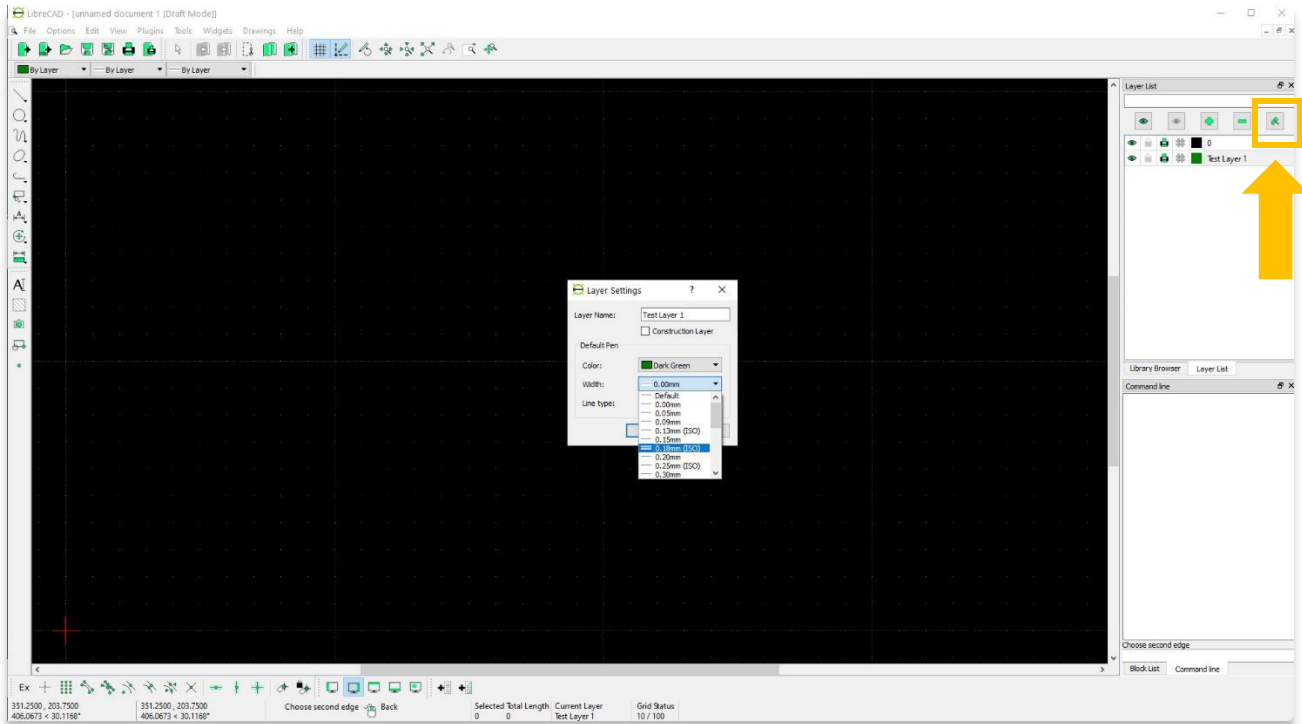
5. You can create a **new layer** or **remove a layer** using the + and – buttons in the **Layer panel**.



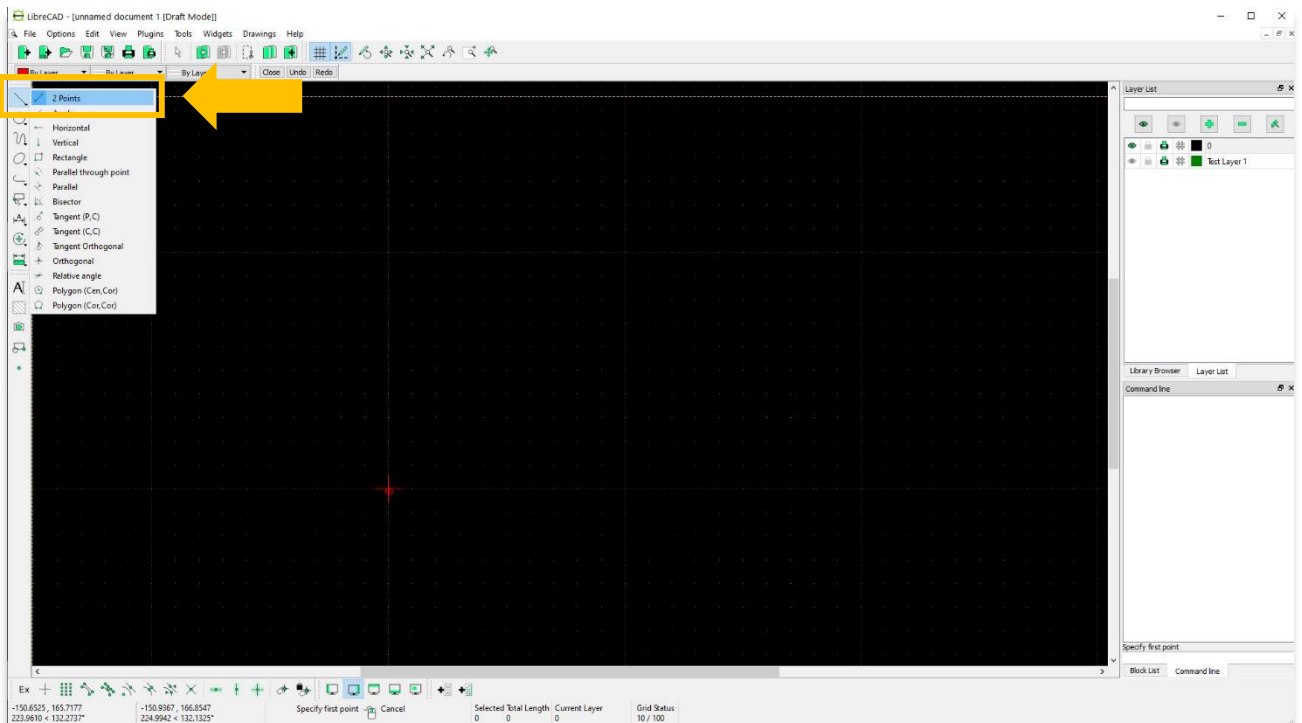
6. You may edit the layer name, pen color, width, and line type. Layer names are particularly important when a project has many layers. It is worth taking the time to devise a layer naming system that will help you organize your information.



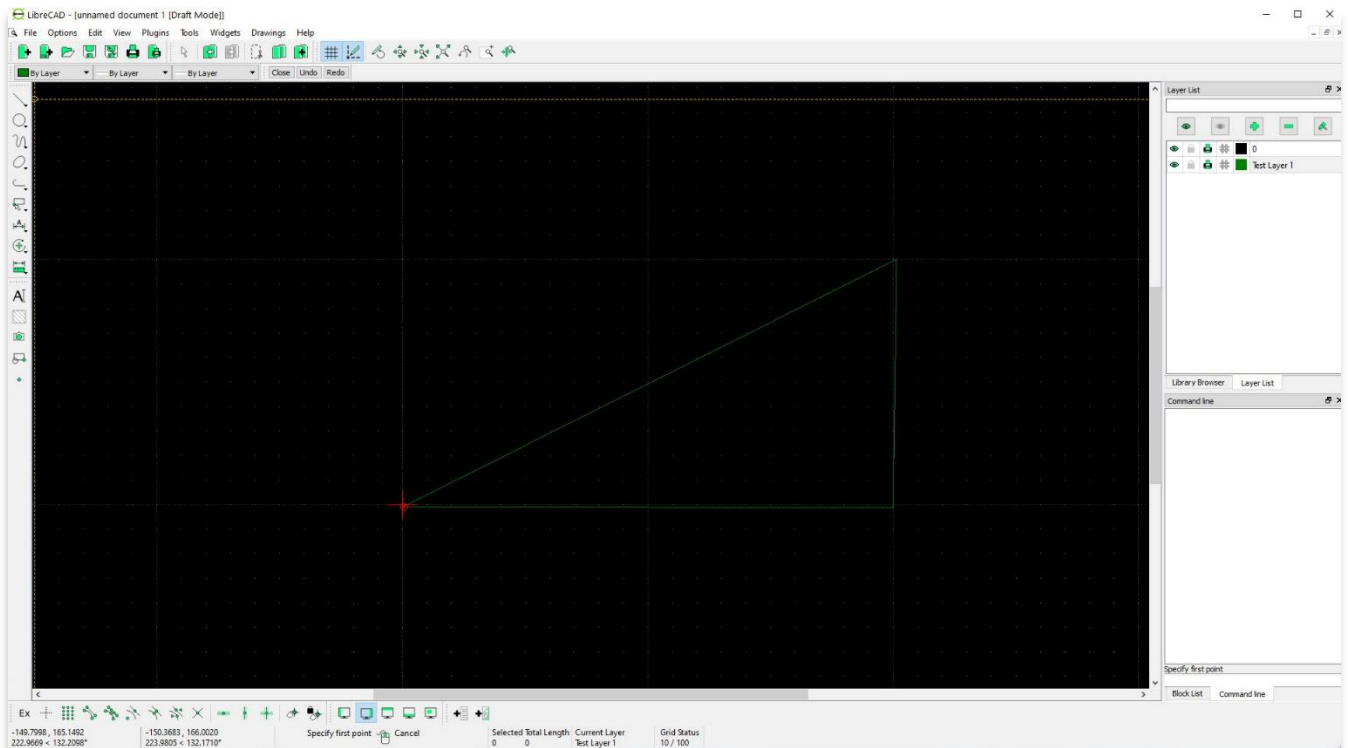
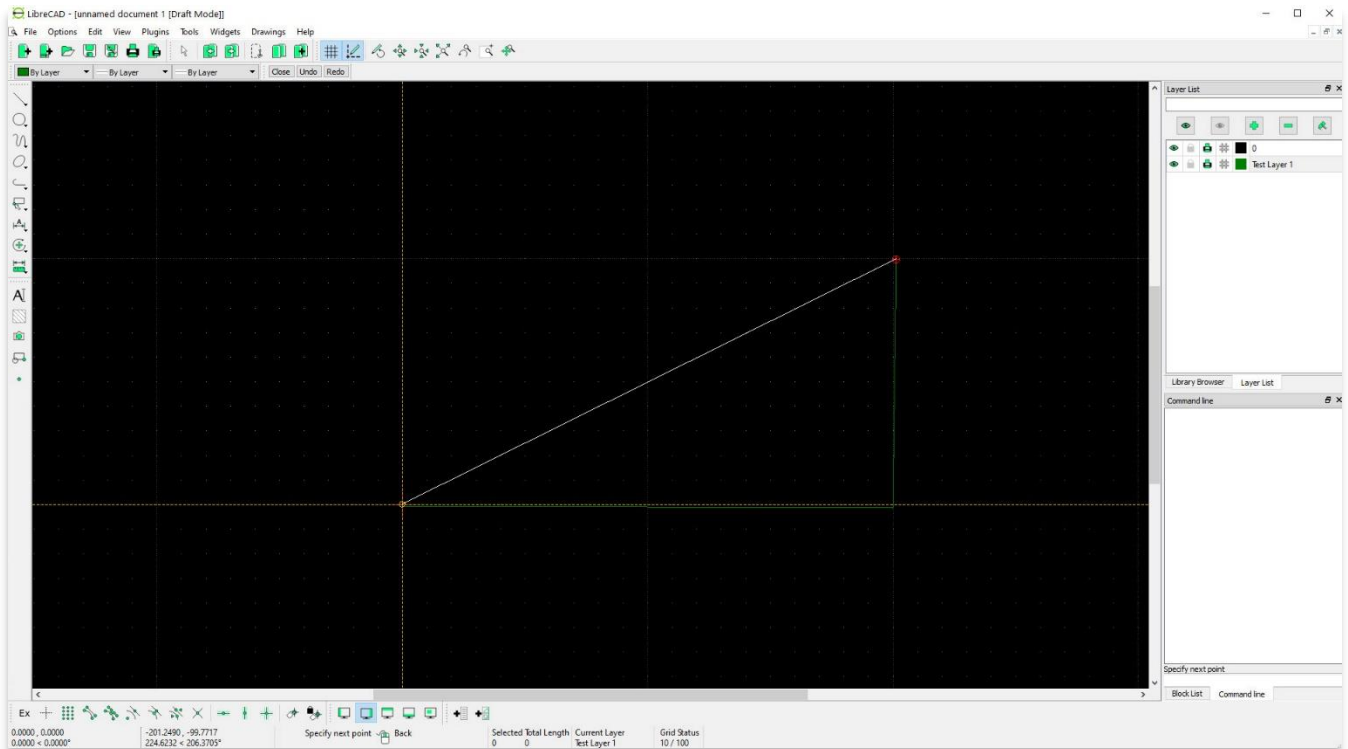
7. To rename or edit a layer, click the **Modify Layer Attributes/Rename** button in the **Layer** panel.



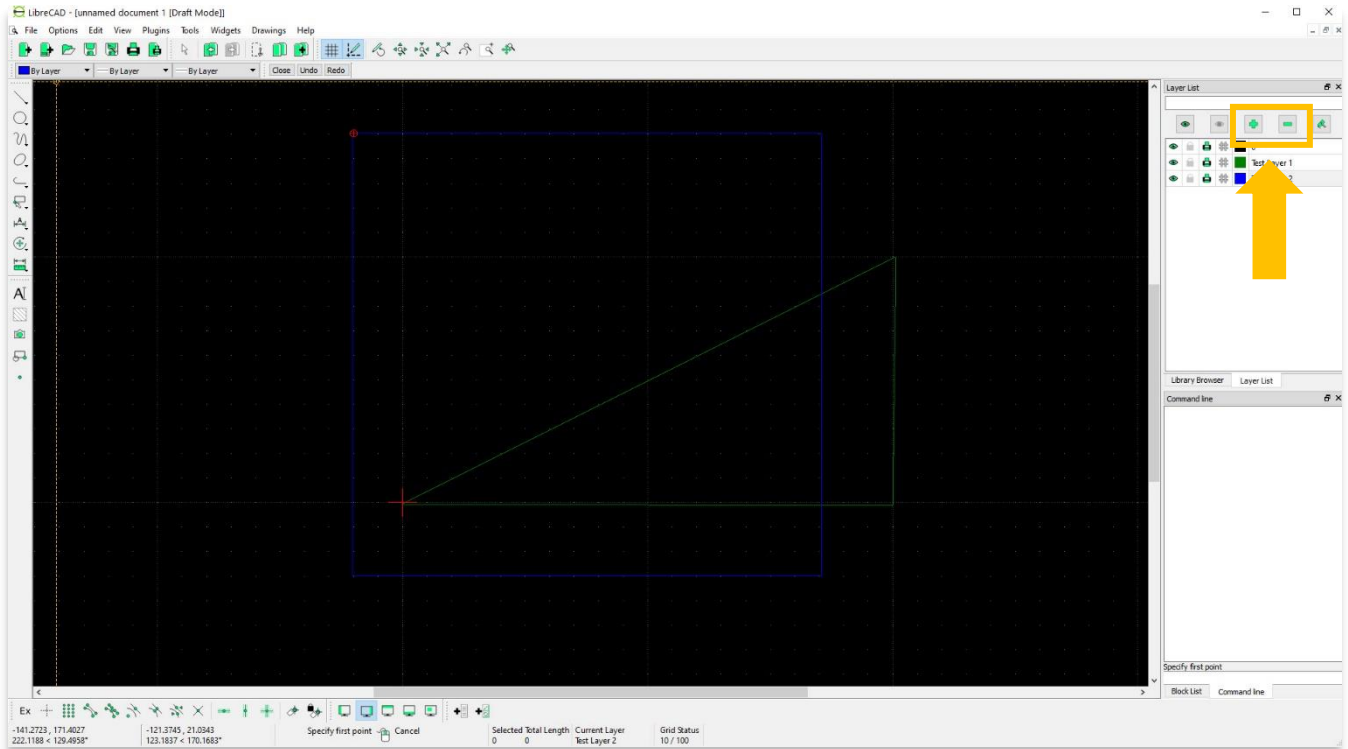
8. All layers that are currently visible for this project are listed in the **Layers** pane. The layers will appear in the order they are listed. As an example, create a triangle using the **2 Points Line** tool. Ensure that you have selected **Test Layer 1**. You will see that the drawing is in **Dark Green** based on the pen style settings assigned in the previous step. If the pen is white, you may have the **0 Layer** selected.



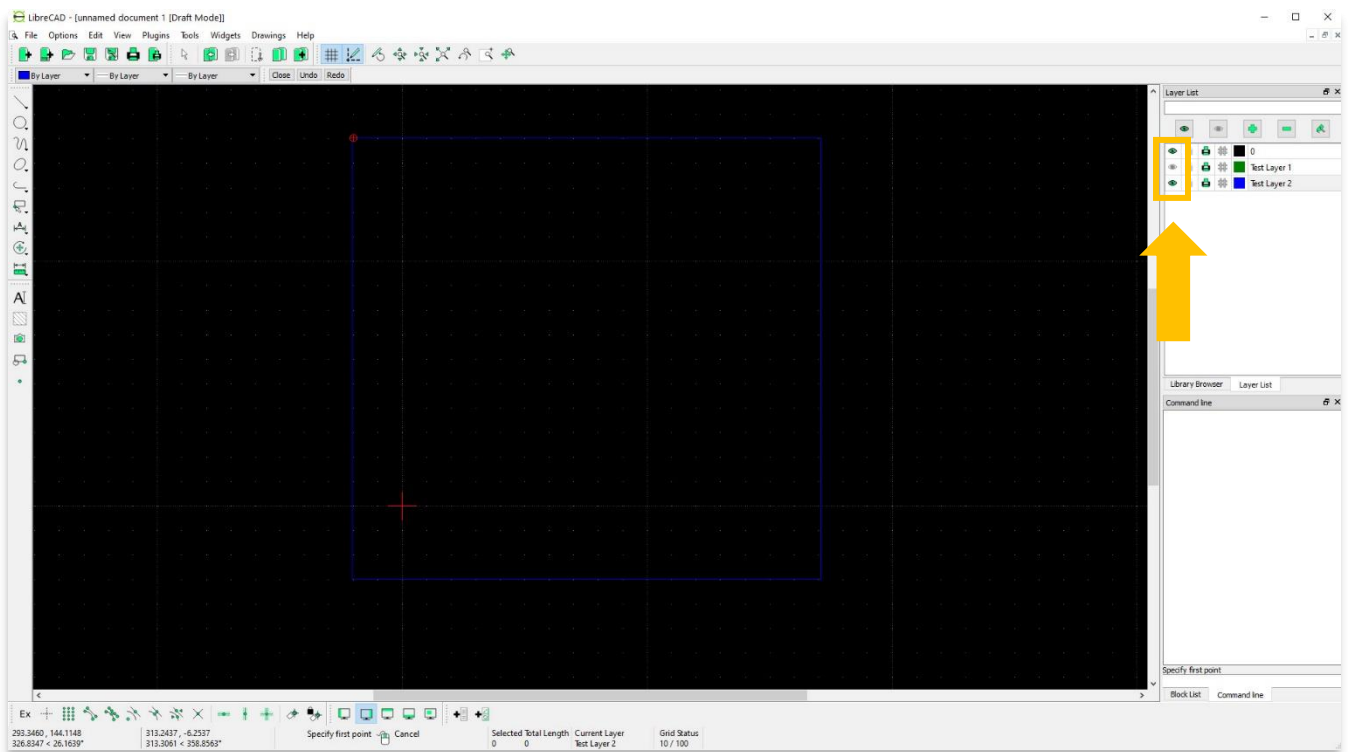
9. Once you have connected all three sides of the triangle, right click on your mouse to complete the drawing.



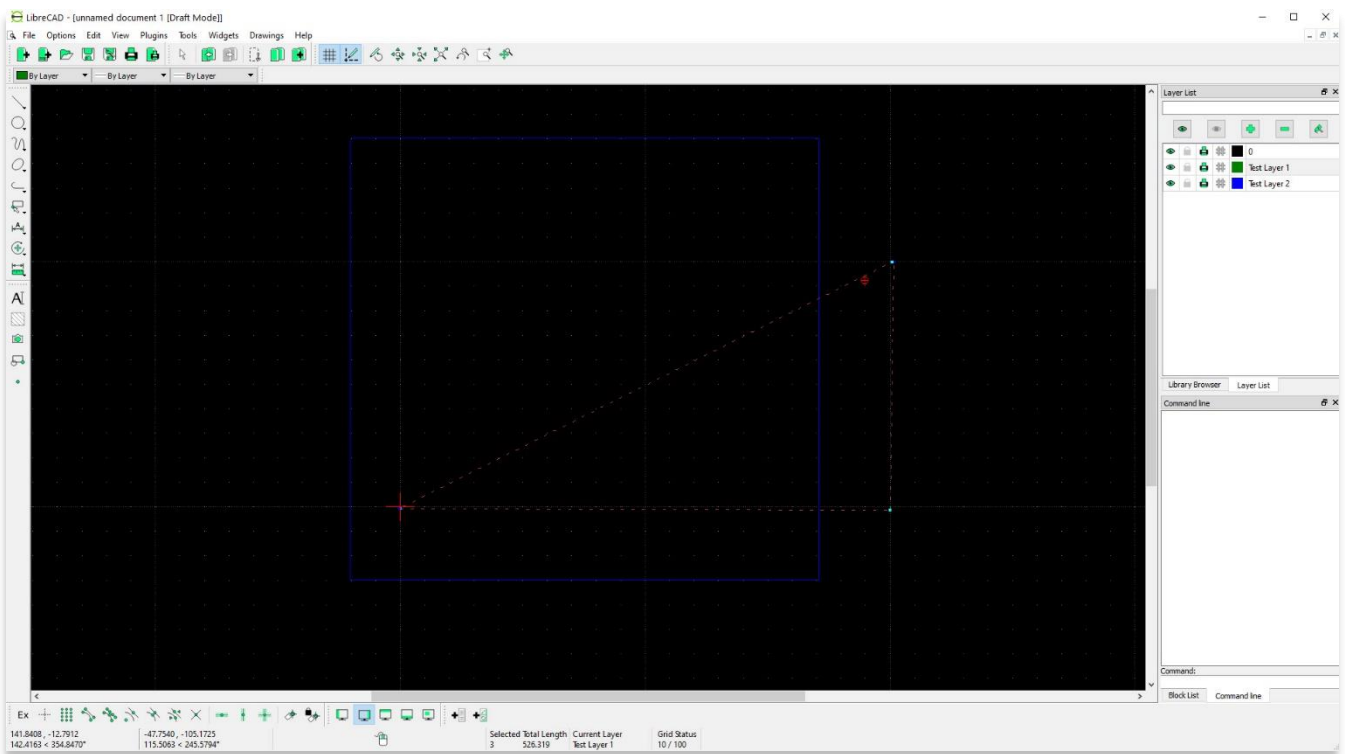
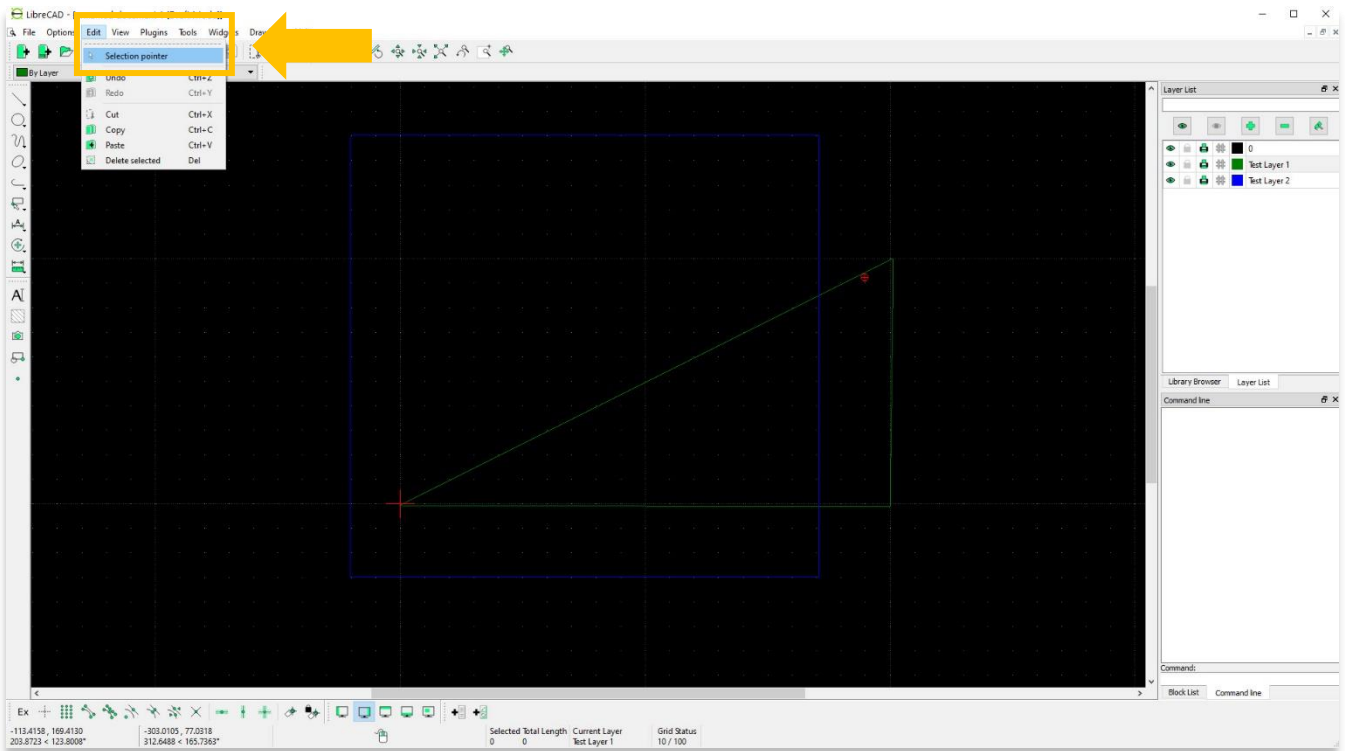
10. Create another layer named Test layer 2. This time draw a **blue square** in that layer.



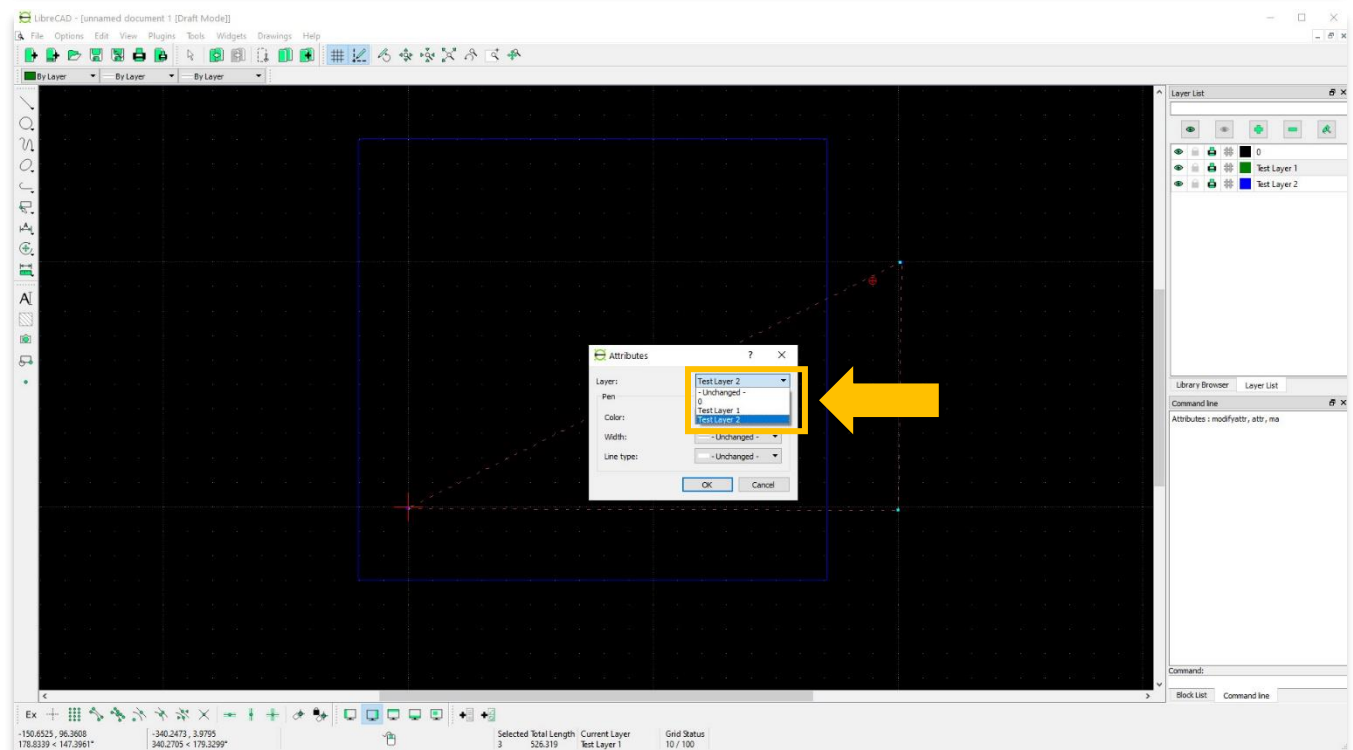
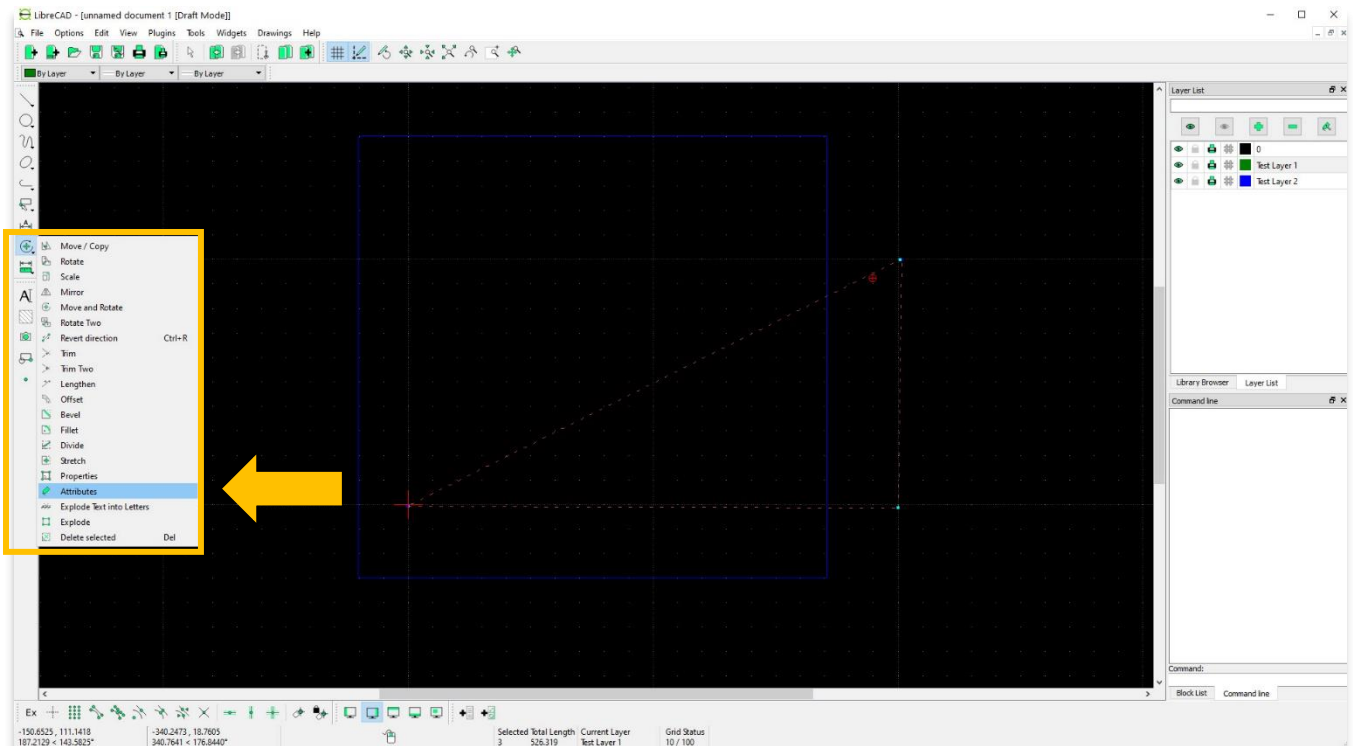
11. Layers can be turned off by selecting the eye icon next to each layer.



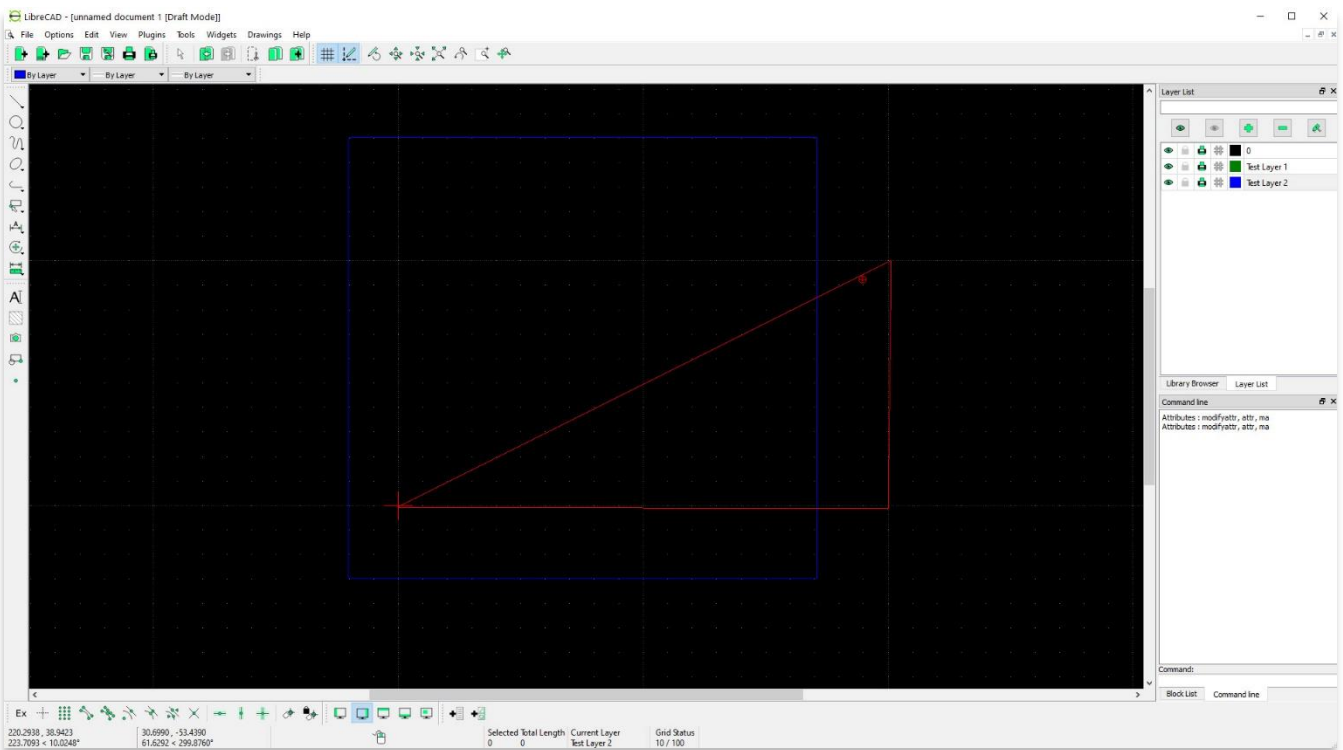
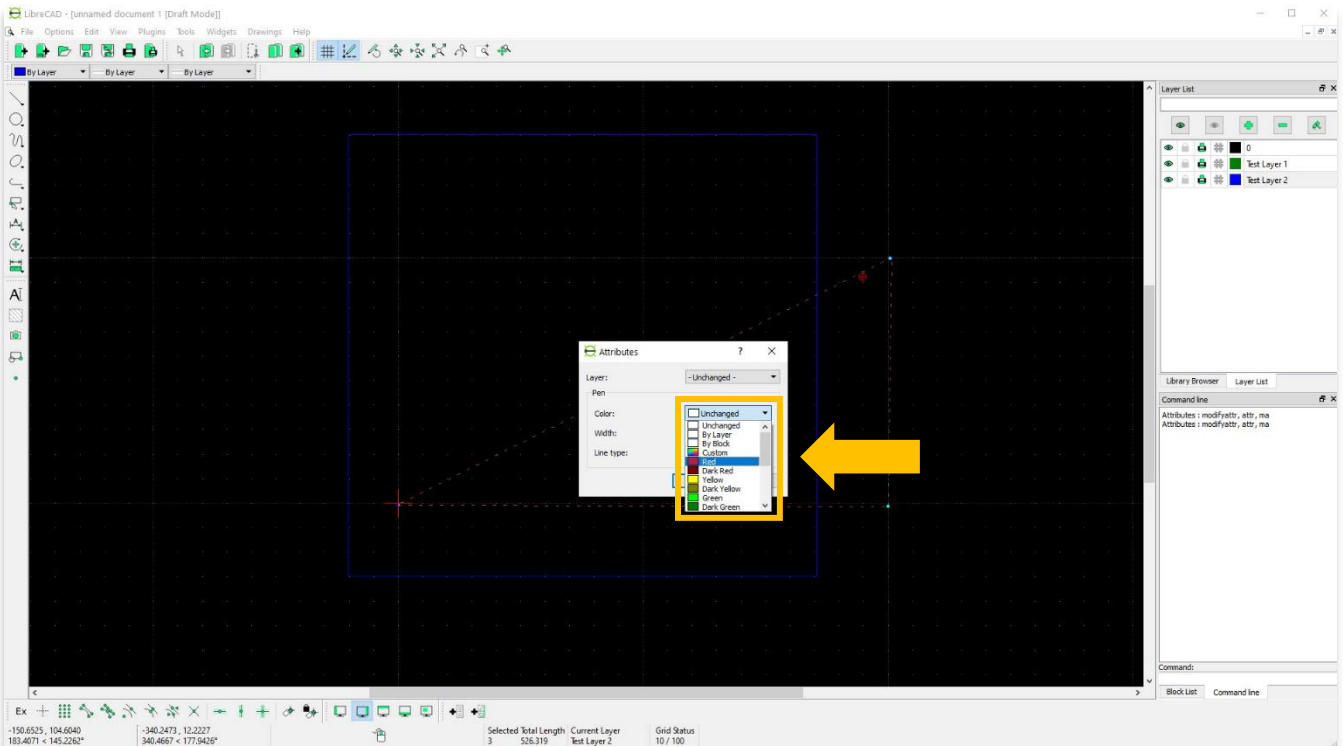
12. Elements within layers can be moved to different layers as well. First highlight the layer that contains the element you wish to move. Then click on the element using the **Selector Pointer** (in this case the **green triangle** in **Test Layer 1**). The element will appear as a dotted line when selected.



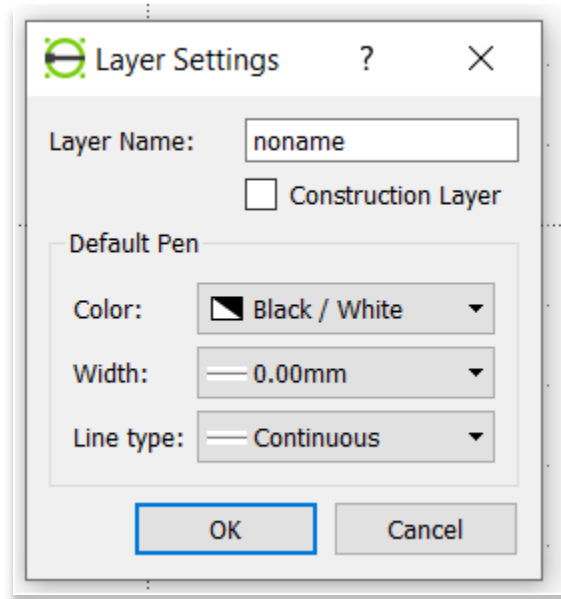
13. Select **Attributes** from the toolbar shown below. In the **Attributes** pop-up, you can reassign the **green triangle** element (currently in **Test Layer 1**) to **Test Layer 2**. You will notice that the triangle becomes **blue** automatically based on the layer settings that you created in Step 10 of this tutorial.



14. Individual elements within the same layer can have different attributes. Select the element you wish to edit, click **Attributes** from the toolbar shown below. In the **Attributes** pop-up, you can reassign the same **blue triangle** element to become **red**.



15. Making the decision for selecting the line weight for each layer must be based on technical considerations as it will affect the appearance of the drawing. Each line weight should match the decided line weight in the printed copy.



16. According to architectural drawings, line weights are essential in creating understandable graphical language for each drawing. The image below shows the use of different layers in which also the line weights could be varied.



17. In addition to the line weight, the line types are used based on the need to explain something in the resulted printed drawing. For example, the use of continuous lines is completely different from the use of dashed lines. These preferences are based on the need to create a good technical drawing.



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