

At Concrete Imaging Inc., we're always trying to introduce the best technology to the industry. This allows us to provide our clients with the best results and the confidence to complete their projects. Major updates in recent years has created an influx of information and technology.

We no longer deal with film, hours of developing, and the "interesting" smell of chemicals on your project. This has increased production substantially. There is no more mailing packets of film to everyone and waiting for approvals from all concerned parties. We know within minutes if a penetration is feasible. We can complete a project much faster with minimal remobilizations.

Along the way, we realized we've removed the ability for the client to manipulate the film onsite and see what we're interpreting. The film can no longer be positioned on a light. The engineers can no longer pull measurements on the film. This has caused uncertainties and loss of confidence for some of our clients.

We've shared our concerns with our vendor, NOVO, and are happy to announce a solution. We can now offer a version of the software we use to interpret the exposure completed on your project. Some of the features have been removed as this requires a software license. The major functions are still available.

We assembled this as a basic guide to operation of the software. With a brief explanation of its parameters.

When exposures are completed, they are saved as a **TIFF** format. **TIFF** formats are used for high resolution, multi-layered, images. They aren't compressed to preserve quality. As a result, this format is much larger.

When images are completed on a project, they are saved as **JPEG** format. **JPEG** formats are the universal image format. When converting to a **JPEG** some image quality is lost. This file format is smaller, allowing us to copy them to a flash drive.

The software we use can read both files but can only edit the **TIFF** format since this is the original format the images were obtained as.

We will share a link via email of the images taken from your project. The link will be to a folder containing two **ZIP** files. One will be labeled as **JPEG** and the other will be labeled as **TIFF**. The **JPEG** folder is to view the image as they were saved. The **TIFF** folder is used for the software. This is the file you will download to your computer. Keep the file as a **ZIP**, this is how the software verifies the files origin.

First, you will need to download the software:

[NOVO Viewer Software](#)

Now you can install the software. It installs like a normal program. It will only operate on a Windows PC. The installer will install a desktop icon. Open the program from this icon.



When you open the program, it will verify permissions, like it did during installation. This is from NOVO and not us. Once the program is open, you will have a few options.



The **Tablet** icon is used to show charging process/connectivity on the device.

The **Gear Cogs** is the settings menu.

The **Enhancing** menu open the image processing screen.

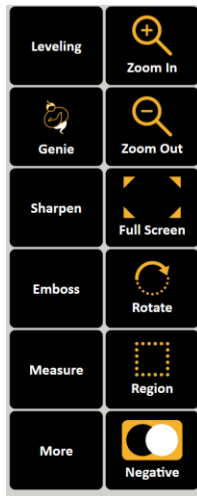
The **Gallery** is all images imported into the software.

To import the images from your project, select the **Gear Cogs** and choose **Open**. Select the **ZIP** file saved on your computer earlier. A message will be displayed verifying importing images. Select **Continue**. All images will be added to the **Gallery**.

Before viewing images, it is recommended you select the **Gear Cogs**, then **Settings**, and change the **Measurement Units** to Inches. **Zoom Step** allows you to set zoom-in and zoom-out intervals. The remaining options can't be modified because they are for the XRay process.

Select **Gallery** and choose an image to view. Ensure you loaded the **TIFF** files into the program. If you open an image and the **Leveling** option is dimmed out, it is likely the **JPEG** version.

The options and their purpose are as follows:



The “**Leveling**” icon allows you to edit brightness/contrast.

The “**Genie**” icon is a propriety image processing tool and locked out due to software licensing.

The “**Sharpen**” icon sharpens the image.

The “**Emboss**” icon allows you to transform grayscale to 3D.

The “**Measure**” icon opens the measuring tool.

The “**More**” icon opens additional NDT tools not used in concrete testing.

Zoom In, **Zoom Out**, and **Full Screen** serve obvious functions.

The **Region** icon allows you to select a particular area to **Sharpen**.

The **Negative** icon allows you to invert the image colors.

The **Genie** function cannot be used as it’s a key component of the NOVO system thus requiring a software license. The **Genie** is a filter that automatically creates the images based on radiation levels at all points of the detector. We apply a Genie filter after every exposure so there is no additional use for this feature by the client.

We recommend you explore the various features of the software to adjust the image as you see fit. The key features are **Leveling**, **Measuring**, **Negative**, and **Emboss**. We don’t highlight the **Sharpen** feature because it makes the images grainier with each click of the button. We feel this takes away from the definition of the image.

Leveling is the most beneficial option for the software. In the **Leveling** menu, a slider will appear on the left side of the image. The entire slider can be moved to adjust the image brightness. The top/bottom arrow allows you to adjust contrast.

The **Measuring** tool allows you to measure from one point to another. This is how our layouts are completed. The lead indicators act as different axis allowing us to pinpoint objects and then account for the angle of deflection. This is also beneficial in determining sizing of embedded items.

The **Negative** option allows for the image to be converted to the positive form. This means the items that are denser will appear dark rather than lighter. This is extremely helpful in identifying PT Cables due to the plastic sheathing protecting the cables. This also helps locate PVC/Smurf Conduits positioned under rebar.

The **Emboss** feature is an interesting tool used to convert the image into a 3D style image. This feature takes some time to get used to, especially since every image is different in regard to item depth/placement. We recommend adjusting the **Elevation** option up until the items are revealed. Then the other sliders can be manipulated as needed. While this can be helpful in determining top and bottom rebar, we still recommend GPR be completed to give a definitive depth.

We hope giving you access to this software gives you more confidence in our work and some transparency of the interpretation of exposures completed at your project. The industry has gone through minimum changes up to this point. We feel processing the changes together will build professional relationships and result in a better understanding of our work.

If you have any questions or concerns, please feel free to reach out to us!!

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