

# End User License Agreement

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## XTMeasure™ Features

XTMeasure™ program developed by Saramsoft is the image measurement software.

XTMeasure™ performs a variety of measurement functions by receiving stage coordinates of the measuring microscope.

XTMeasure™ has Edge Detect tool to offer a more accurate shape measurement.

In addition, measurement data transfer to Microsoft Excel for the report.

## Package (package) configuration items

- Program CD , License Key (USB type), User's Guide



Caution: if you lost license key, you must repurchase.

## Minimum System Requirements

CPU: Intel Pentium dual 2.8Ghz or higher or compatible processor

OS: Microsoft Windows Vista, Windows 7, 8, 10

RAM: 1GB or more

VGA: DirectX supported

## When you need help

Please contact dealer by phone, fax, or e-mail,

Please let them know the name of digital counter, camera, program's version for quick help.

[www.saramsoft.com](http://www.saramsoft.com)

[support@saramsoft.com](mailto:support@saramsoft.com)

# XTMeasure User's Guide


## Install

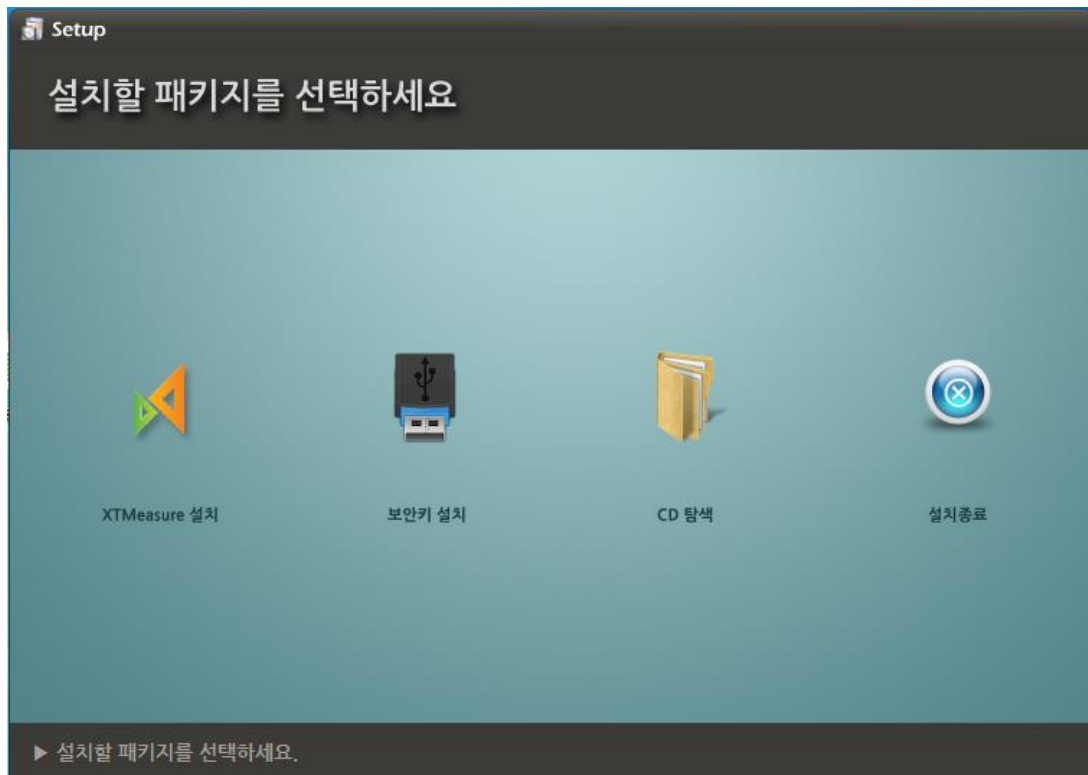
 **caution:** remove USB License Key before installation.

According to specifications of User's computer and XTMeasure version, the installation process may have some differences.

When you insert the CD into your computer, the installation program will automatically run .

### Step 1: SW installation.

If the following window appears, click  and follow some instructions to finish SW installation.



## Step 2: Dongle driver installation



In the above window, click

and follow some instructions to finish Dongle driver installation.

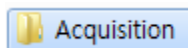
### **Insert Dongle into USB port of computer.**

Make sure License key with a green lamp in your computer's USB port.

## Step 3: Camera driver installation



In the above window, click



Find a camera driver to install.



In the above window, click

finish all installation.

perform XTMeasure>> Image Acquisition Menu>> Select Devices.

Then select the model of the device. >> When you click the play button, video appears.

## Quick Start Guide in XTMeasure

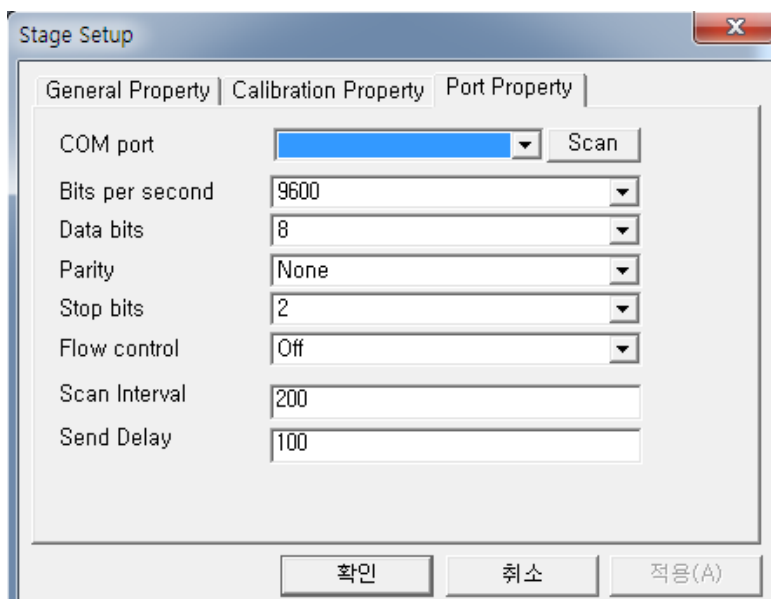
Execute XTMeasure.

### Stage Setup

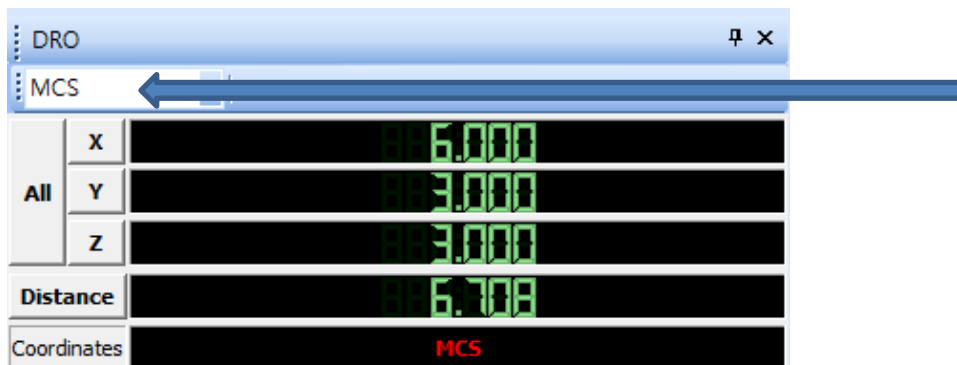
PC must be connected with the digital counter using RS232 cable.

Click [Stage] menu>> click [Select Device] >> select your Device.

Click [Stage] menu>>click [Setup Device] >> select proper COM port in the below window to get XYZ position in XTMeasure.



You can check a current XYZ position in [DRO] window.



- ※ You must keep [MCS] like the above window. [MCS] means Machine Coordinate System., that is, your Digital counter's XYZ position.

## Camera Setup

Click [Acquisition] menu>> click [Select Device] >> Select your camera

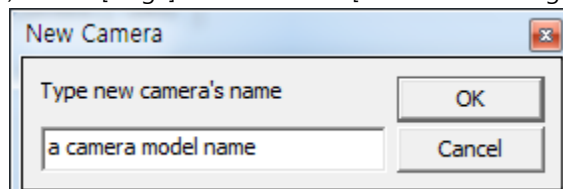
Click [Acquisition] menu>> click [Setup Device] >> Select as you want

Click [Acquisition] menu>> click [Play] to confirm for you to see live image

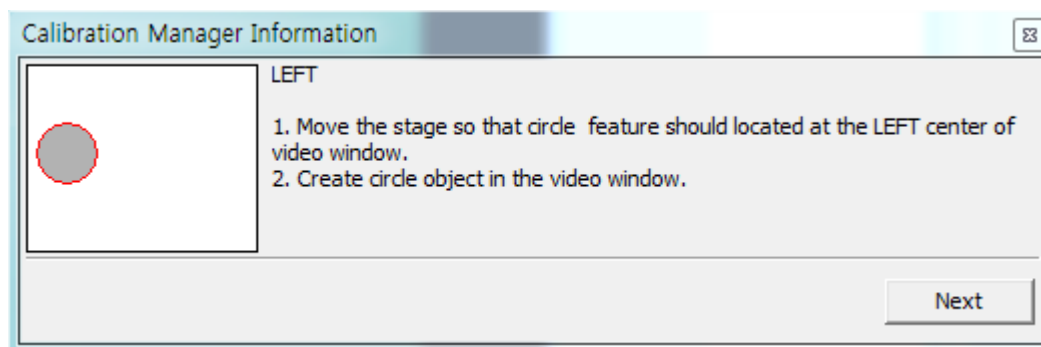
- ※ You can check a current fps(Frame per second) in right-below position of Program.

## Calibration

- 1) Put [calibration-film] on stage
- 2) Find a small black circle in [Live Image] window
- 3) Click [Stage] menu >> click [Calibration Manager]>> type name as you want>> click [OK] button.



- 4) Read the text of the below window >> move stage by when black circle is positioned at the west-middle in [Live Image] window >> click [Next] >> click a point on the edge of a black circle >> drag mouse to the opposite edge of a black circle and click the point >> You see the auto-detected red circle.

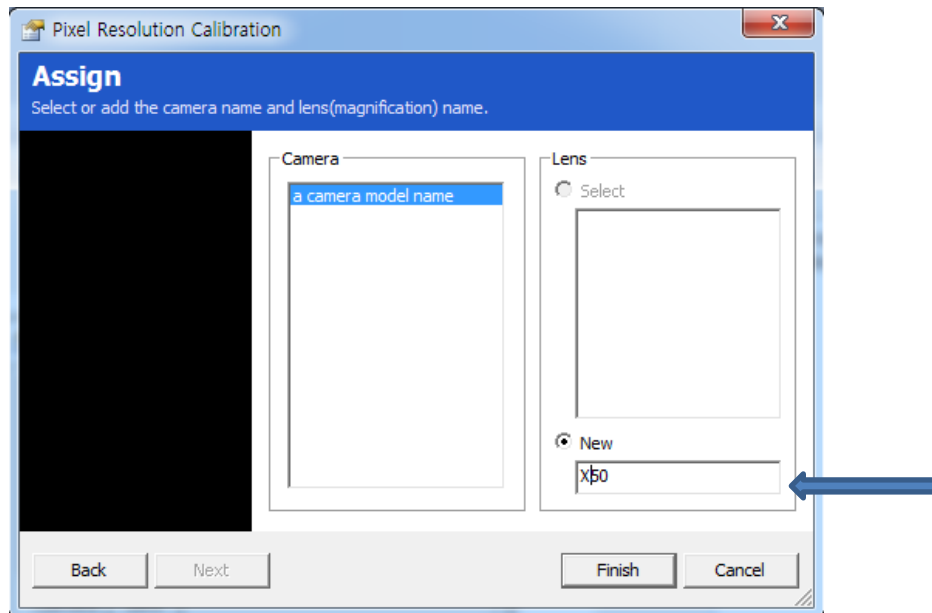


In the same way, detect three circles of east, north and south side.

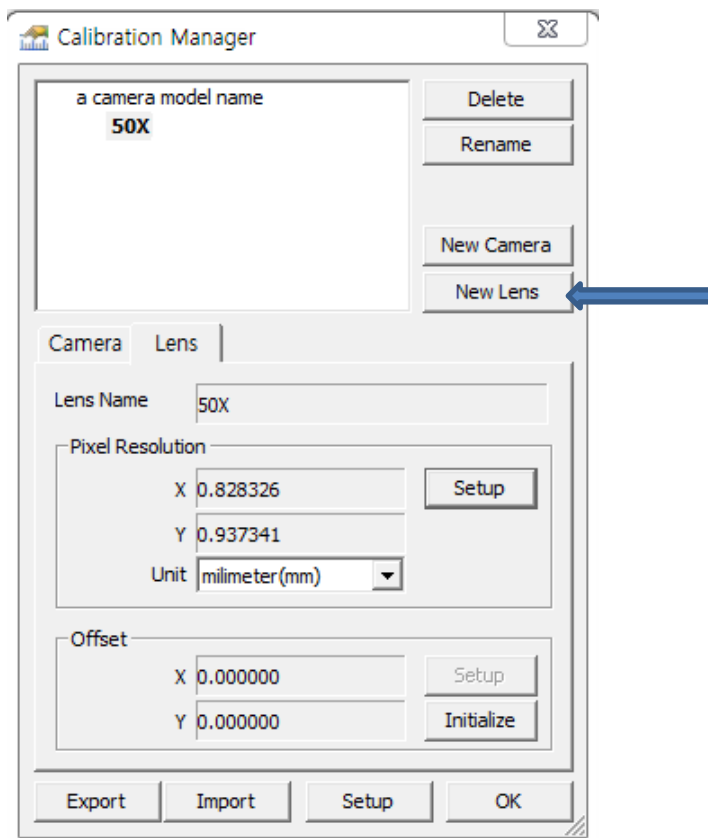


※ If you fail auto-detect, try again after adjust light and focus of microscope.

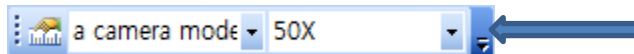
- 5) Click [Next] button in [Pixel Resolution] window appeared.
- 6) Type magnification of current lens in [New] box >> click **[Finish]**.



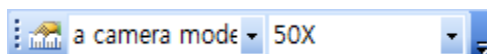
- 7) If you need another calibration for another lens, click [New Lens] in the below window >> Repeat the same auto-detect procedure.



When you finish calibration works, you can see [calibration tool bar] like the below picture.

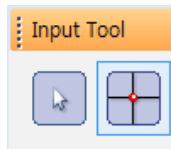


★ **Caution:** If you change lens magnification of microscope from 10X to 50X, you must select 50X in the [calibration tool bar]



## Start Basic Measurement

1. In [Input Tool] window, select [Crosshair Central Point] tool.

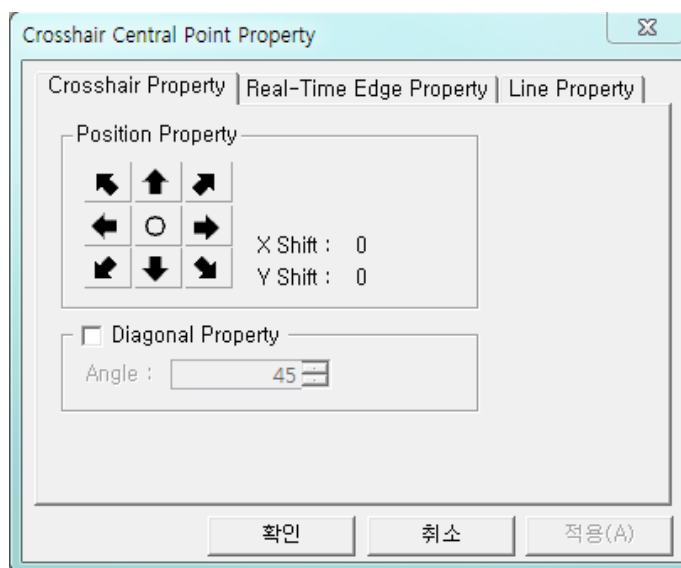
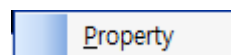


★ **Caution:** You must select only [Crosshair Central Point] tool in order to get precise measurement result.

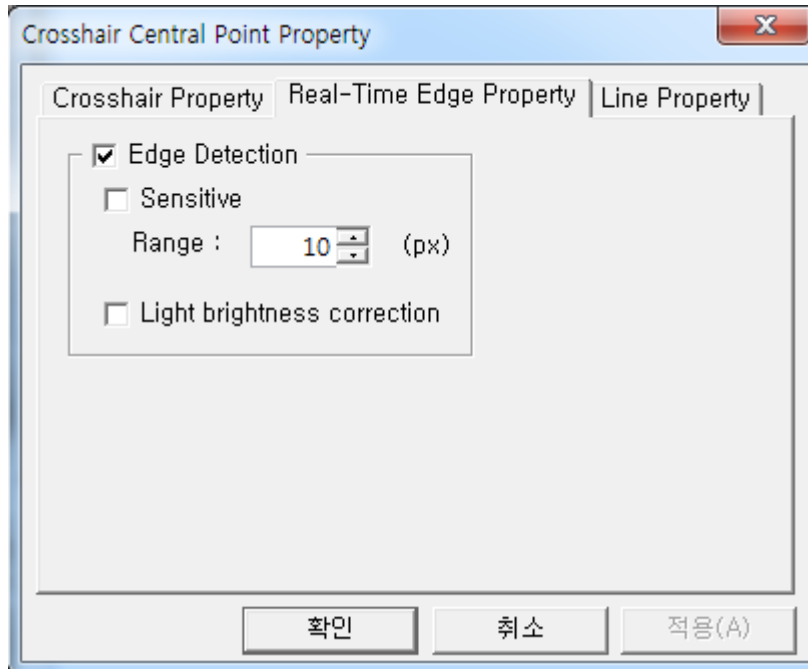
※ **Option: setup [Input Tool]**

If you want, you can setup each [Input Tool].

Click the right button in the mouse on [Input Tool] >> click



In the above window, you can adjust the crosshairs position by clicking [Arrow] button. It is used to match the [crosshairs center] with reticle of Crosshair of the microscope lens,

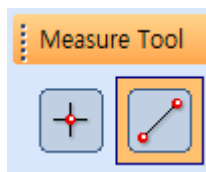


In the above window, you can adjust a range of edge detection.

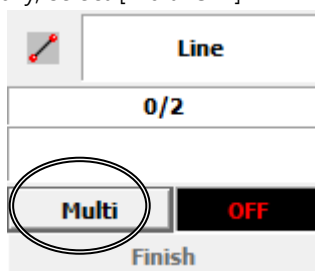
Edge detect means that the color of crosshair is automatically changed when crosshair is contacted on the edge of object.

In this way, many people can measure with the same result. The best for edge detection depends on the focus and lighting

2. In [Measure Tool] window, select **[Line]** tool.




3. In [Observer] window, you can select how many points to get line.  
 If you select [Multi-OFF], you can get line when you get two points.  
 If you select [Multi-ON], you can get line when you get many points and only when you click [Finish] button, you can get line.  
 Usually, select [Multi-OFF]



## Get point to measure

1. Move stage to the first position to measure in [Live Image] window >> Put down [Enter] of keyboard or foot switch. You can see the one point acquired in [Live Image] window.
2. Move stage to the second position to measure in [Live Image] window >> Put down [Enter] of keyboard or foot switch. You can see the second point acquired in [Live Image] window.
3. At the same time, you can see the line in [Diagram] window. And you can see the result of measurement in [Basic Result] window.

Basic Result														✕
Tool	Primitive	X	Y	Position	Polar ...	Polar ...	Distan...	Distan...	Distan...	Angle	Straig...	Profile...	Profile	
 Line 2	Line	-124.8...	228.899	0.000	260.764	118.3...	386.655	-386.0...	-22.496	3.20.6	0.000	0.000	0.000	

## Report

After measure, you can get measurement data by EXCEL..

※ In order to use this function, you install EXCEL 2007 version or more.

Click [Report] menu >> click [Send to Excel] , then you can see the result in EXCEL.

## Live Report

You can get measurement data by EXCEL in live with your own report format.

First of all, let's make your own report format in EXCEL.

Execute EXCEL >> Type a format as you want freely like below picture

	A	B	C
1			
2	company	SaramSoft	
3	when	01-Jan-16	
4	what ara you doing	Making my own report format	
5	measure what?	Distance of line	
6			
7			
8			

Whenever you start EXCEL, you can see Live Report in the menu of EXCEL since this button is created automatically in EXCEL when you install XTMeasure.

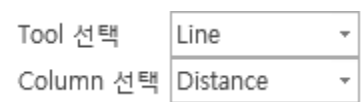
Using [Live Report] button, you can make your own report format and you can see measurement result in EXCEL in real time.



Click [Live Report] button. You can see the below buttons.



Let's make simple example to show the distance of line in EXCEL horizontally.

Select [Tool] & [Column] like below picture.



Click  >> click the left-button of mouse at A7, then drag to D11 in EXCEL. >> click 

You can see the below picture.

	A	B	C	D
1				
2	company	SaramSoft		
3	when	01-Jan-16		
4	what ara you doing	Making my own report format		
5	measure what?	Distance of line		
6				
7				
8				
9				
10				
11				
12				
13				


Save and finish EXCEL. >> execute XTMeasure >> click [Report menu >> Launch Live Report] >> open your saves EXCEL file >> measure some lines in XTMeasure

You can see the result in real time like below picture.

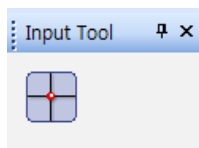
	A	B	C	D
1				
2	company	SaramSoft		
3	when	01-Jan-16		
4	what ara you doing	Making my own report format		
5	measure what?	Distance of line		
6				
7	158.943	151.688	155.77	197.493
8	223.143	124.957	146.76	117.293
9	140.163	118.499	263.714	114.931
10	235.555	189.786	304.541	297.605
11	235.2	123.829	123.829	88.144

## Start Advanced Measurement

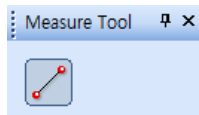
### To use [Construct Tool]

For example, let's measure distance between line and line by using construct tool 

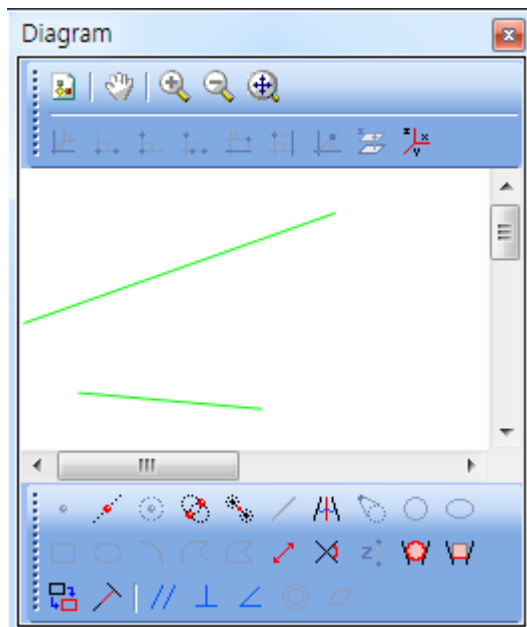
1. Click




2. Click

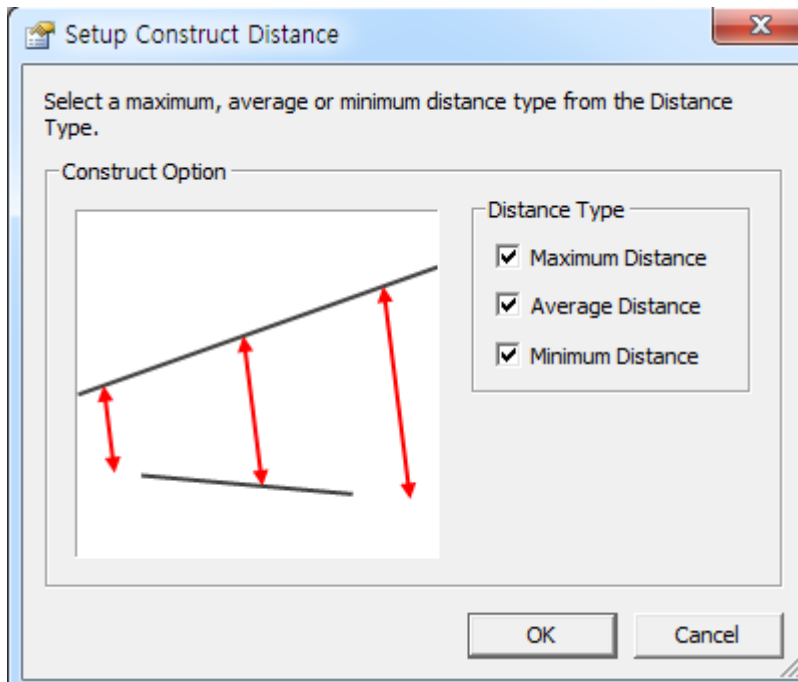


3. We learned how to make line. So, make the **first line**.
4. Make the **second line**.
5. Click the **first line** in [Diagram] window >> Click the **second line** in [Diagram] window, then you can see the change of color from black to green in [Diagram] window like below picture.



6. Click [Distance] construct tool  in the above [Diagram] window
7. You can see the below window >> Click [Distance] as you want. >> Click [OK] button.

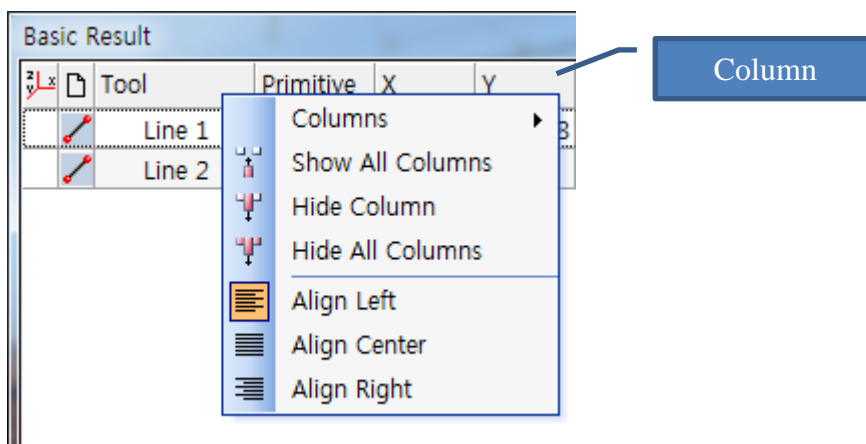




You can see the results in [Result] window

Basic Result						
	Tool	Primitive	Position	Polar ...	Polar ...	Distance
	Line 6	Line	0.000	418.672	133.3...	115.115
	Line 7	Line	0.000	388.851	138.3...	64.029
	Distanc...	Distance				45.612
	Distanc...	Distance				64.649
	Distanc...	Distance				26.575

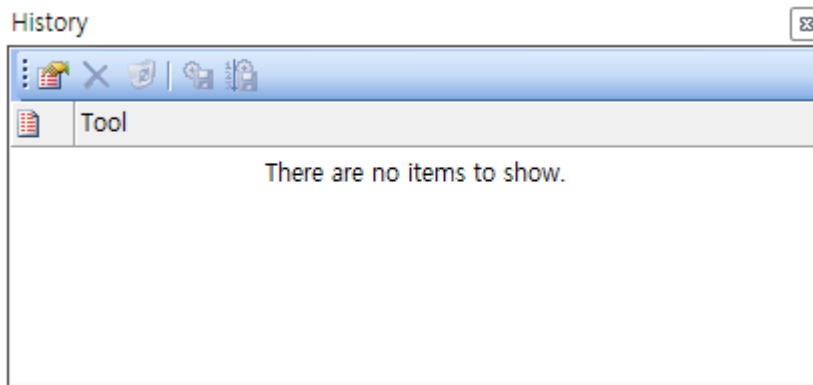
- ※ If you want to show or hide some Columns, put mouse on a Columns >> click your mouse-right button >> you can see popup window like below picture>> select as you want.




## To make [Part Program Tool]

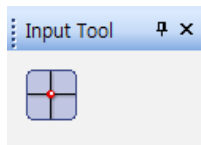
You can make your own new tool to measure fast when there is the repeated same measurement works daily. The below method is an example.

Click [Window] menu >> click [History window]

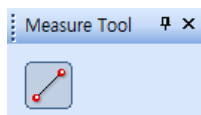


※ If there are some data, click  to delete all.

**Let's make new Part Program Tool which measure distance between two lines.**



1. Click

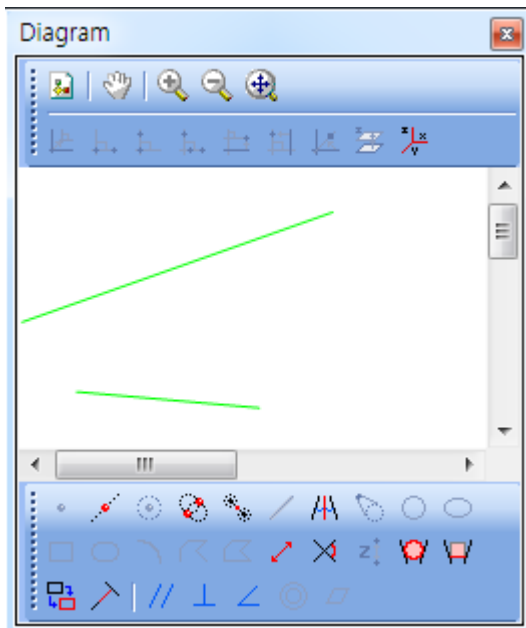



2. Click

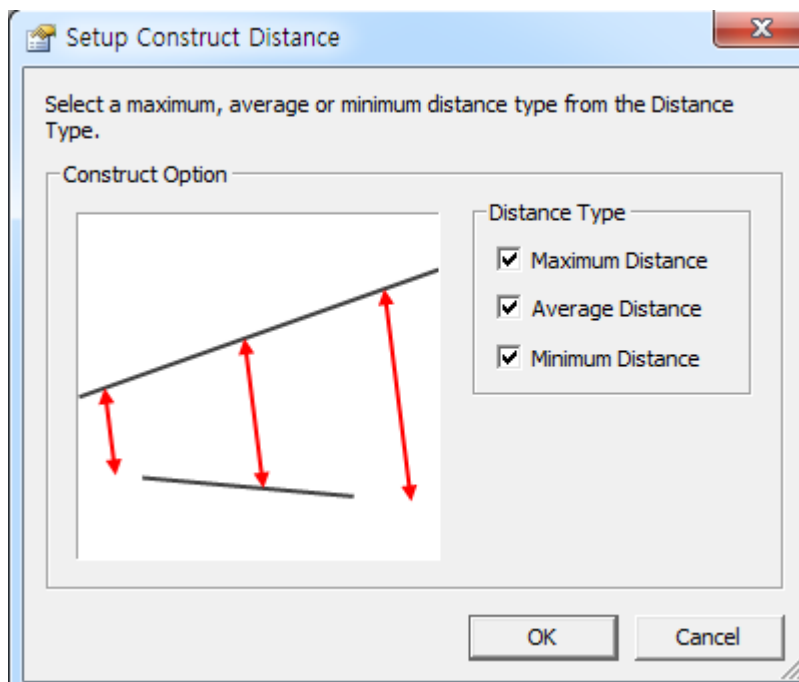
3. We learned how to make line. So, make the **first line**.

4. Make the **second line**.

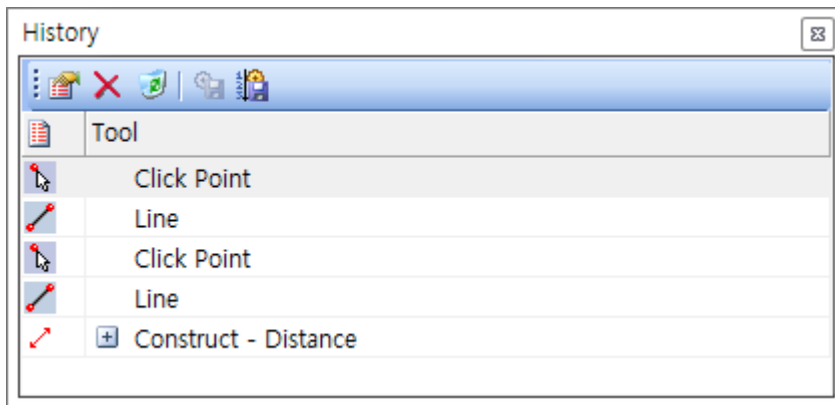
5. Click the **first line** in [Diagram] window >> Click the **second line** in [Diagram] window, then you can see the change of color from black to green in [Diagram] window like below picture.



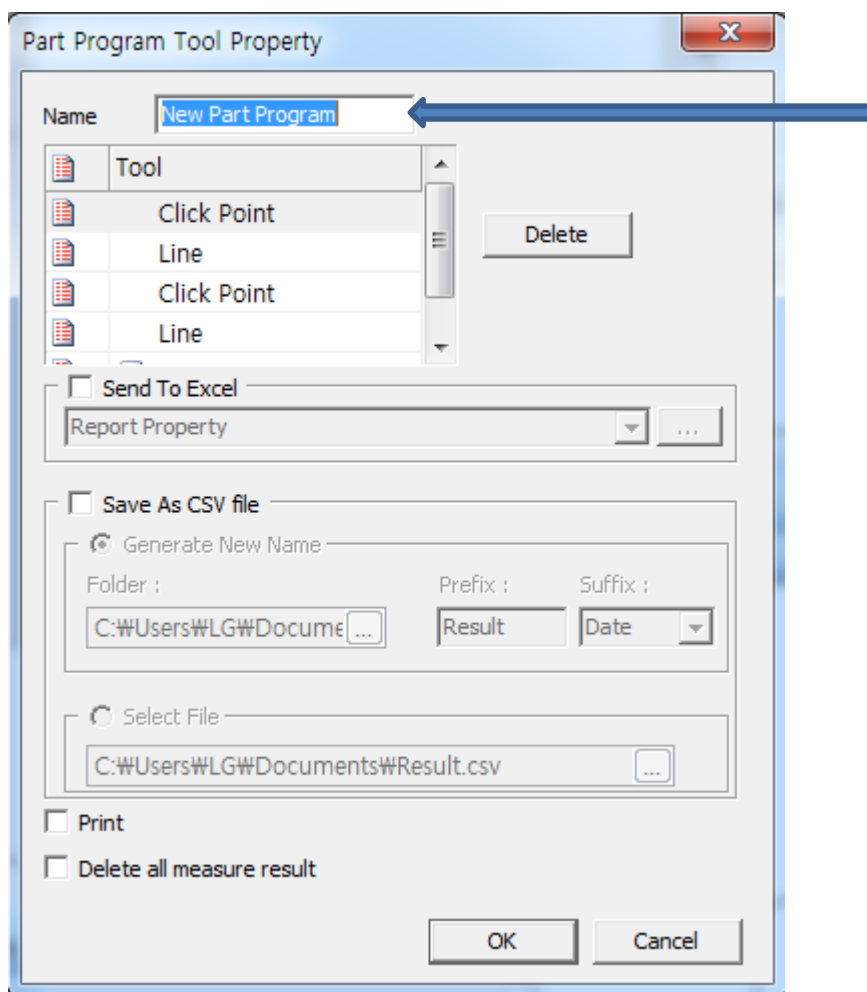
6. Click [Distance] construct tool  in the above [Diagram] window
7. You can see the below window >> Click [Distance] as you want. >> Click [OK] button.



8. You can see history of works in [History] window like below window.

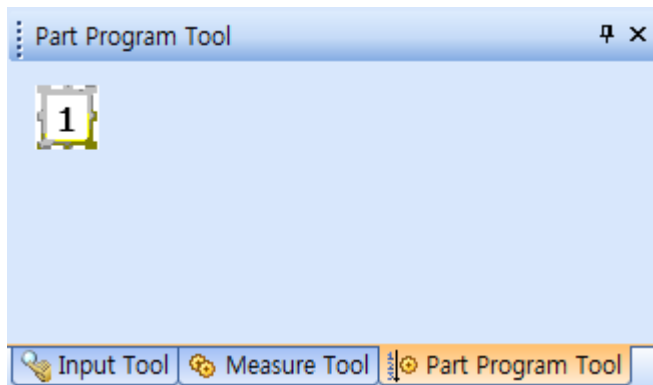


9. Click [part Program Tool] button  >> The below window is appeared..





10. Type a name in a [Name] box as you want. >> click [OK]

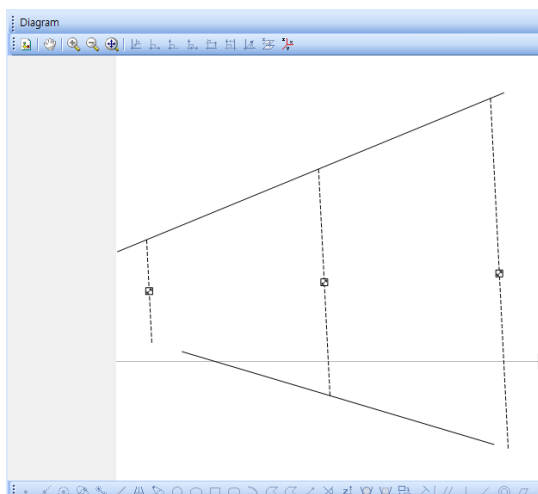
11. You can see new Part Program Tool in [Part Program Tool] window like the below.



**Let's use Part Program Tool you made.**

Before doing this work, let's delete all in [Diagram] window. Click [New Diagram]  in [Diagram] window.

1. Click 
2. Make two lines in [Live Image] window.
3. You can see the quick result in [Diagram] window.



## [Window] menu

You can decide to show or hide which [Tool] and [Window] through [Window] menu.

