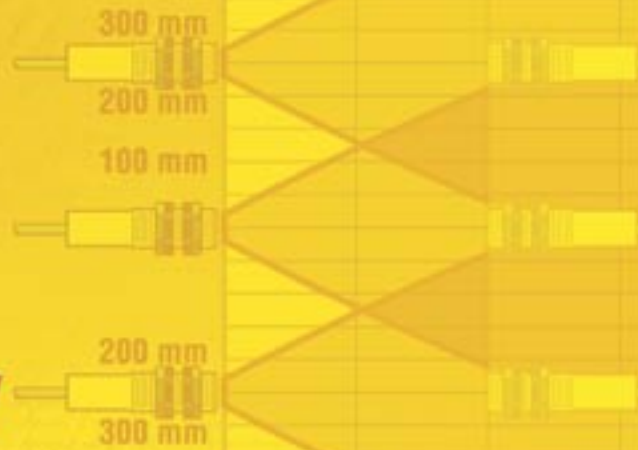
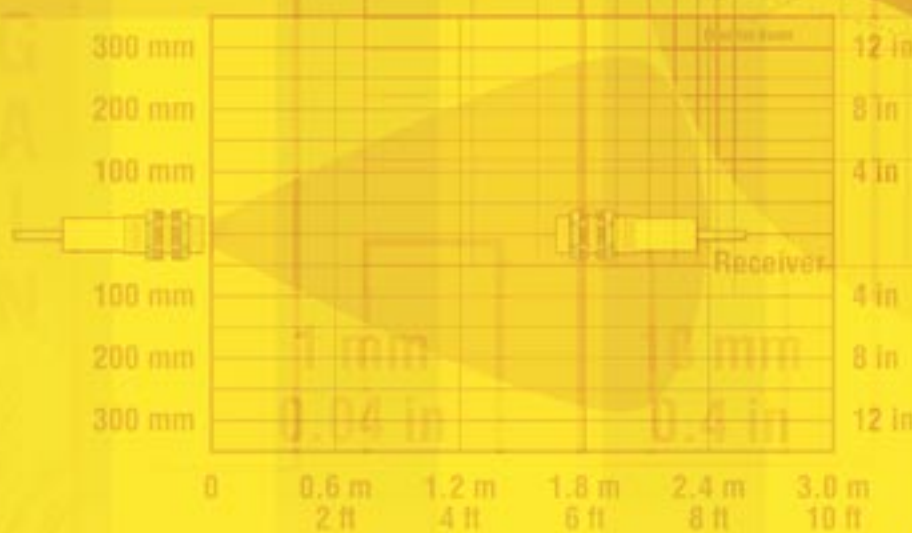
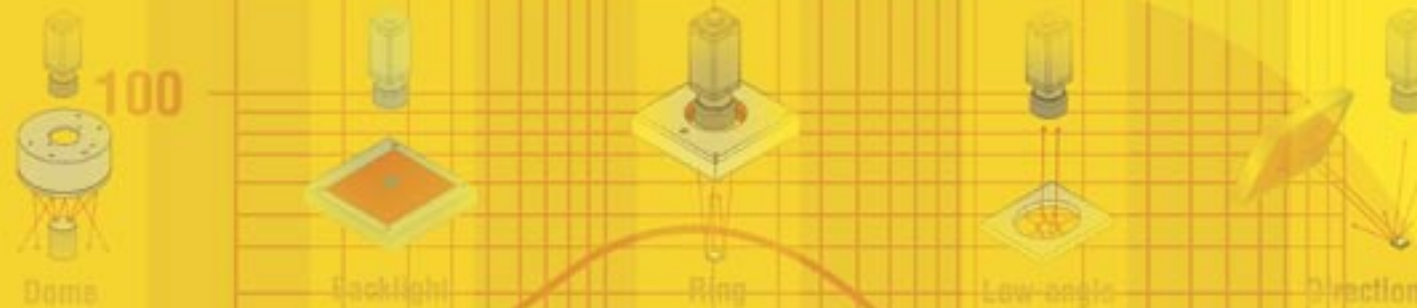




VISION SENSOR SOFTWARE TRAINING



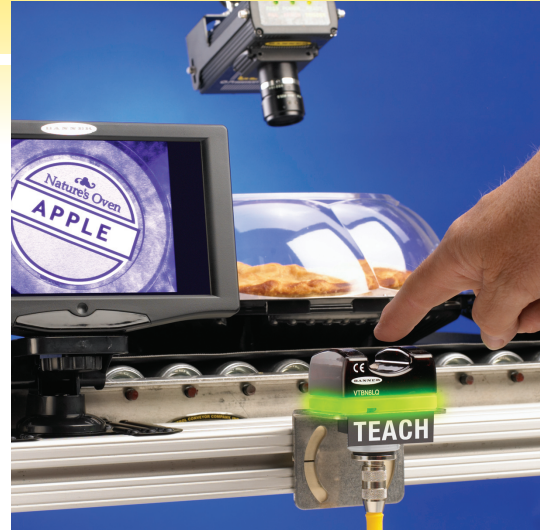
Setting Up a P4 GEO Basic Inspection



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PresencePLUS[®] P4 GEO

Setting Up a Basic Inspection



Purpose:

Creating a P4 GEO inspection requires the user to configure the inspection via interface software. The following steps guide the user through setup of a basic inspection.

Overview: Inspection Process using P4 Software

Before You Start:

- Install Software
- Confirm PC & Sensor are communicating
- Fixture Sensor & Target



SET UP

The Setup Menu captures a reference image and sets the trigger options

SCREEN	USER ACTION	NOTES
	<ol style="list-style-type: none"> 1 Click Start 2 Click Next 3 Select Create a new inspection 4 Click OK 	<ul style="list-style-type: none"> • In Auto Exposure, the sensor adjusts exposure and gain level for optimum contrast. If the Auto Exposure routine does not produce the desired results, manually adjust the exposure time and gain. • If the image is not updating, click Continuous under Trigger Options. • Use the Focus number to optimize the image quality. The higher the number, the better. • If the Focus number remains at zero, disable firewall software on the computer. • Clicking Next exits the Setup screen to enter the Tools screen.
	<ol style="list-style-type: none"> 3 4 	

TOOLS

The Tools Menu allows the user to build, view, and modify an inspection

SCREEN

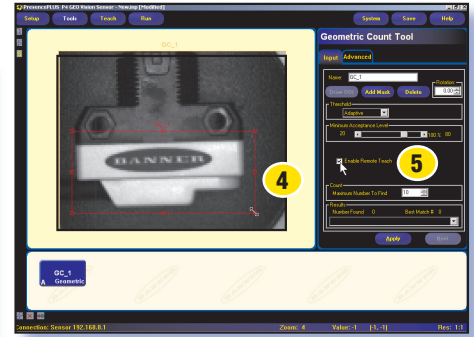
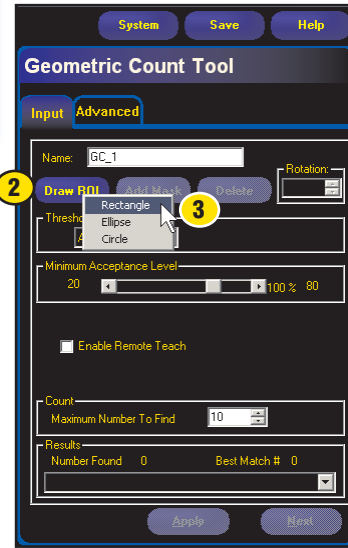


USER ACTION

- 1 Click **Geometric Count**
- 2 Click **Draw ROI**
- 3 Select **Rectangle**
- 4 Click, Hold, and Drag ROI around the feature to be inspected.
- 5 Select **Enable Remote Teach**
- 6 Click **Advanced** tab

NOTES

- Geometric Count will add a geometric count tool to the tool list in the Navigation/Results window.
- **Region of Interest (ROI)** indicates the feature the sensor will search in its **Field of View (FOV)**.
- Enlarge or reduce the ROI by clicking the outer edge of the ROI.



TOOLS >> Advanced Tab

SCREEN

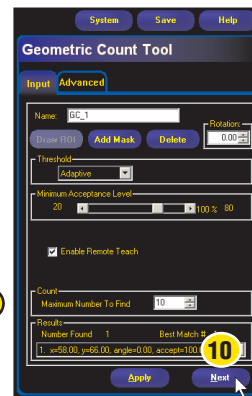


USER ACTION

- 7 Enter **Rotation Range** values
- 8 Click **Apply**
- 9 Click **Back**
- 10 Click **Next**

NOTES

- The default **Rotation Range** is +45, -45. For a full 360 degree rotation, +180, -180 should be used.
- By clicking **Apply**, the edges (in blue) that constitute the geometric pattern and the edges in the search area are shown.
- The sensor has now been told to find a pattern.
- Clicking **Next** exits the Geometric Count Tool.



TOOLS >> Test

SCREEN

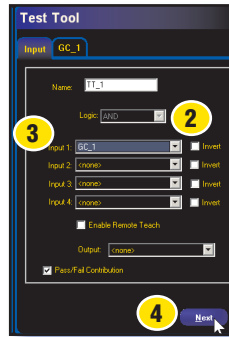


USER ACTION

- 1 Click **Test**
- 2 Click **Input 1 Drop-Down Arrow**
- 3 Select **GC_1**
- 4 Click **Next**

NOTES

- The Test Tool determines the pass/fail condition of the inspection and can drive an output.
- Clicking **Next** exits the Test Tool to enter the Tools screen.



TOOLS >> Quick Teach

Quick Teach sets the Test Tool so that it will pass the reference image

SCREEN

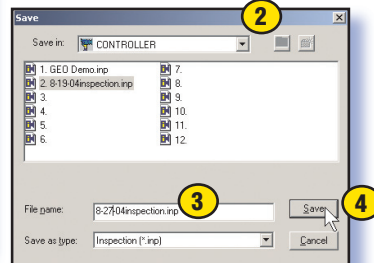


USER ACTION

- 1 Click **Quick Teach**
- 2 Select **Inspection Location**
- 3 Type **Inspection Name**
- 4 Click **Save**

NOTES

- Quick Teach takes the current number of patterns found from GC_1 tool and imports those values (min = 1, max = 1) into the Test Tool automatically.
- The user can manually set the min/max values in the Test Tool GC_1 tab.
- The P4 GEO sensor has 12 inspection locations.



RUN

The Run Menu monitors the inspections

SCREEN



USER ACTION

- 1 Click **Start** at the bottom of the run window.
- 2 Select **Next** from **Display** section.
- 3 Close Software Program in the Run Mode by clicking the **X** in the upper right corner.

NOTES

- After the inspection is saved to the sensor, the RUN screen is displayed.
- Trigger the sensor with an external trigger.
- = Pass = Fail
- The sensor continues to run after the software is closed.

