



Gage Calibration Software

User Manual

The word "GAGEMAKER" is written in a bold, all-caps sans-serif font. Behind the text is a faint, light gray background graphic consisting of three overlapping wireframe globes.

GAGEMAKER

May 2012

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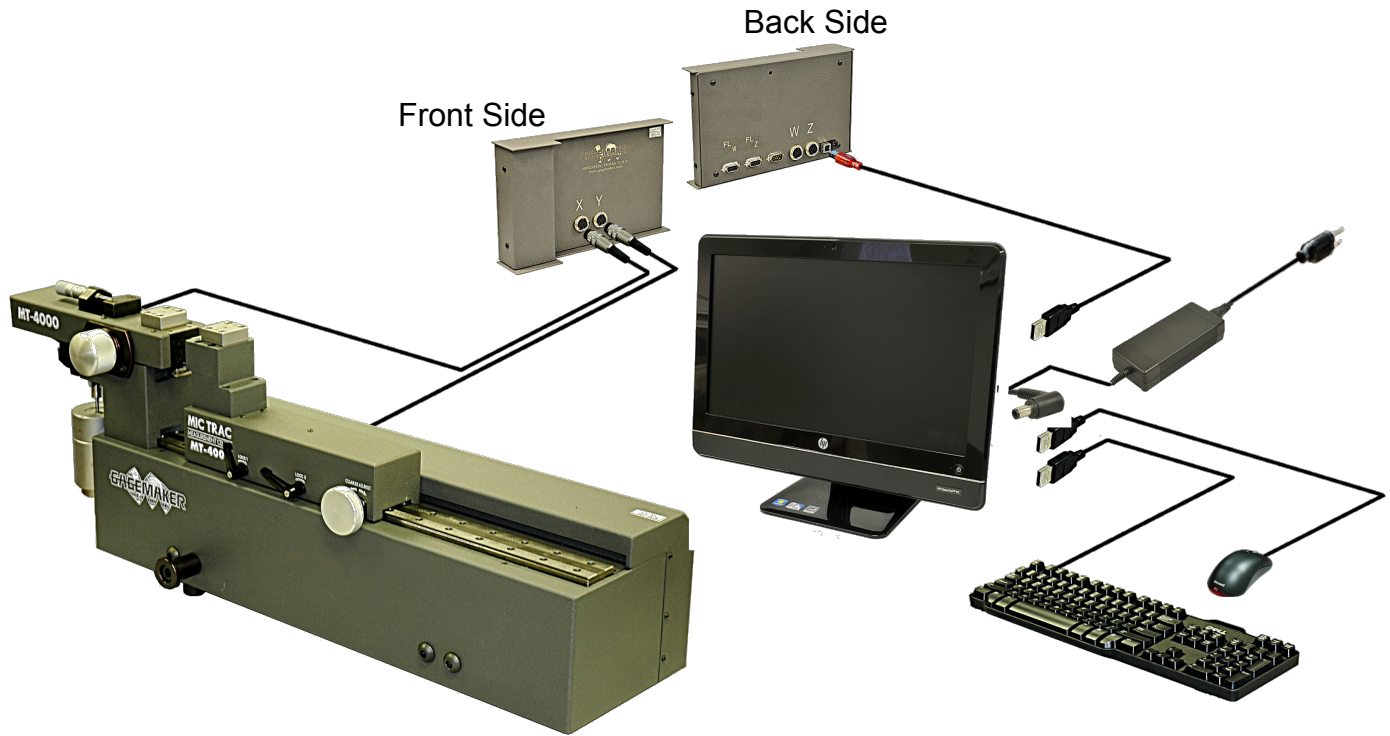
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Getting Started- MT-4000

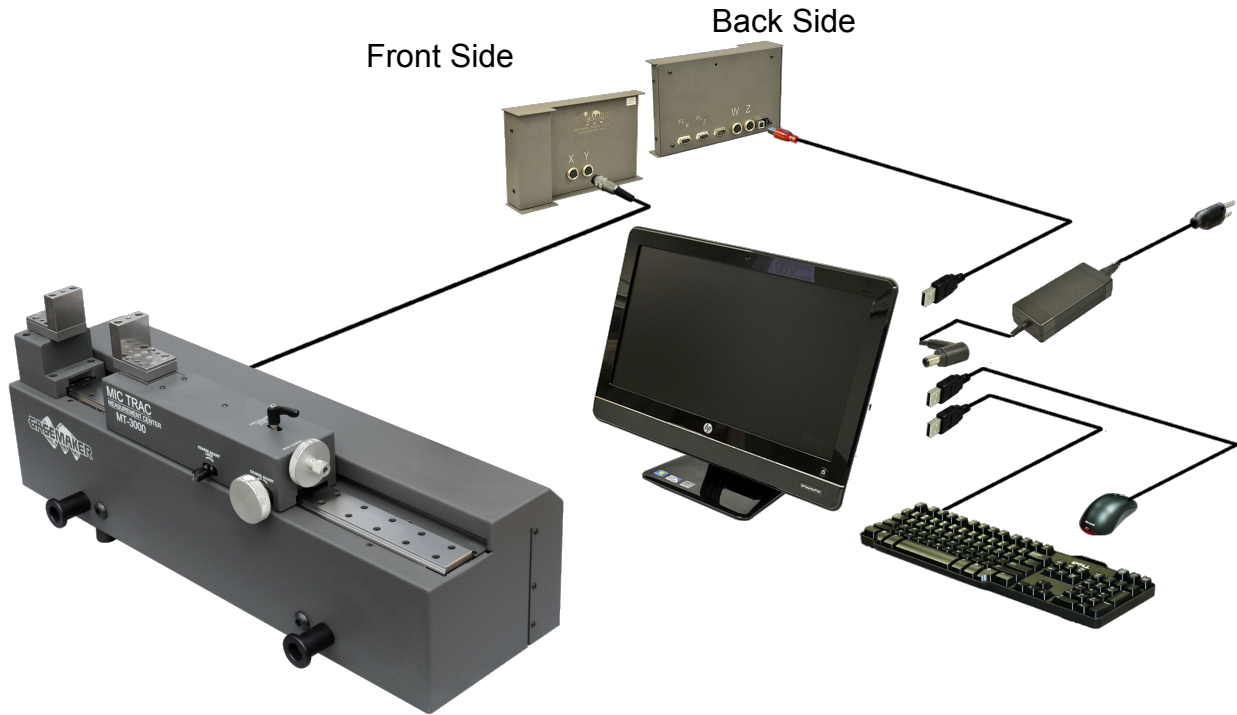


Back side- USB cable plugs in.



Front side- "X" & "Y" cables plug in.

Getting Started- MT-3000 non Force Lok

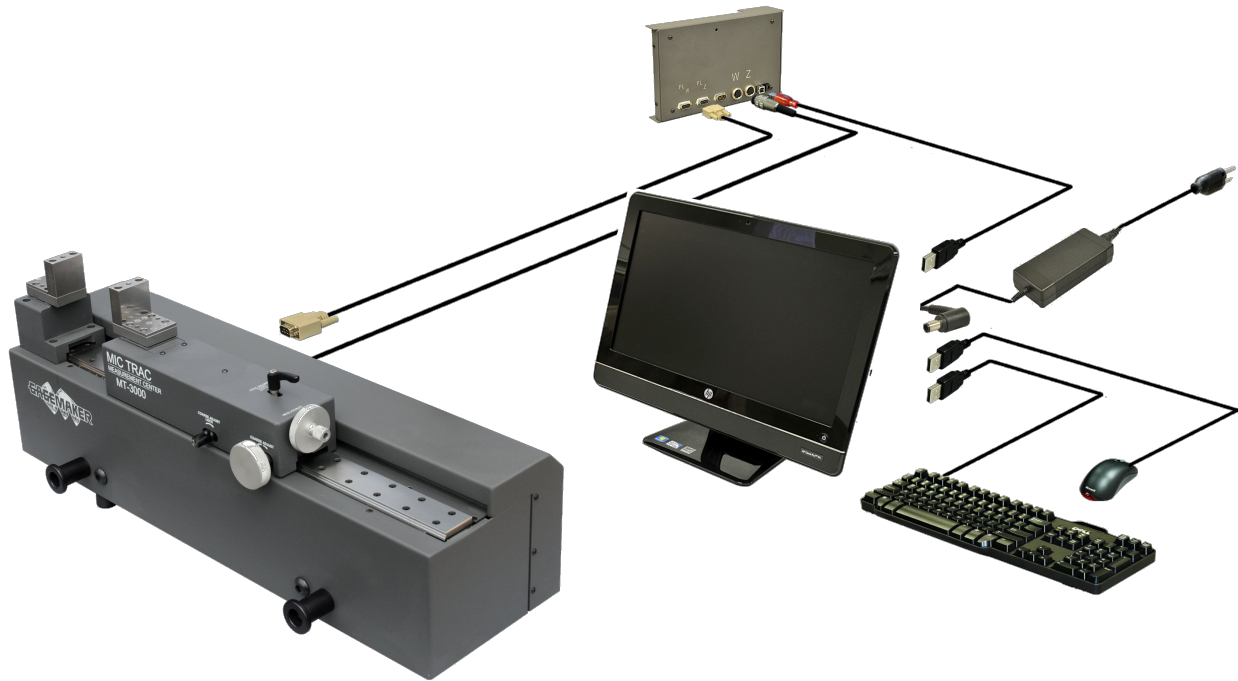


Back side- USB cable plugs in.



Front side- "X" & "Y" cables plug in.

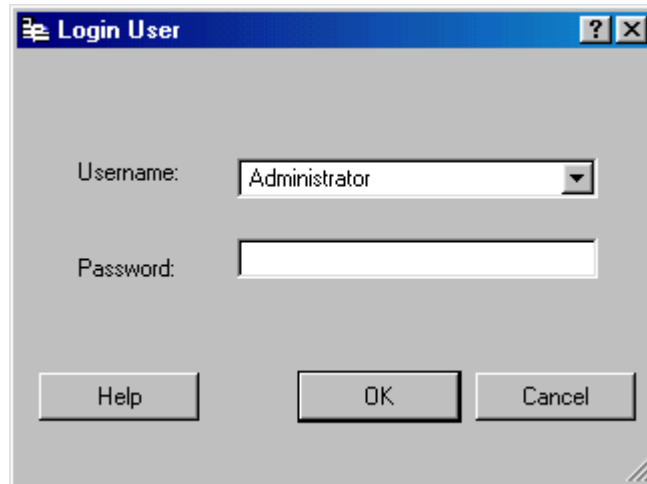
Getting Started- MT-3000 w/ Force Lok



Back side- USB, "Z", & "FL/Z"
cables plugs in.

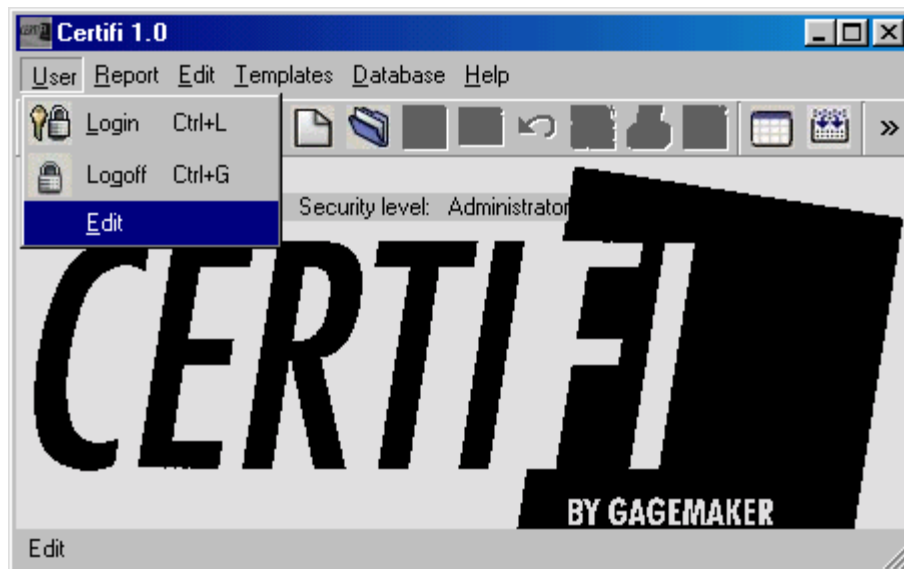
Setting Up Users

- After the installation the first thing you should do is to setup all of the users that will be utilizing the program. Different users are established for security of the reports that will be generated.

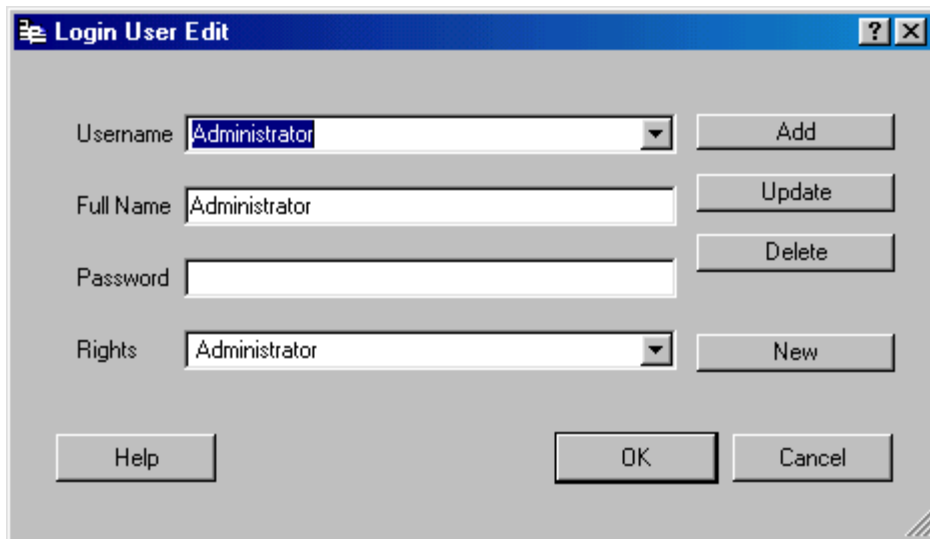


Start the program and you will be at the Login User window.

- Administrator is the only Username in the system and the default password is **certifi**. (*Passwords are case sensitive*)
- Click the OK button.
- You will then be confirmed as logged into the system.

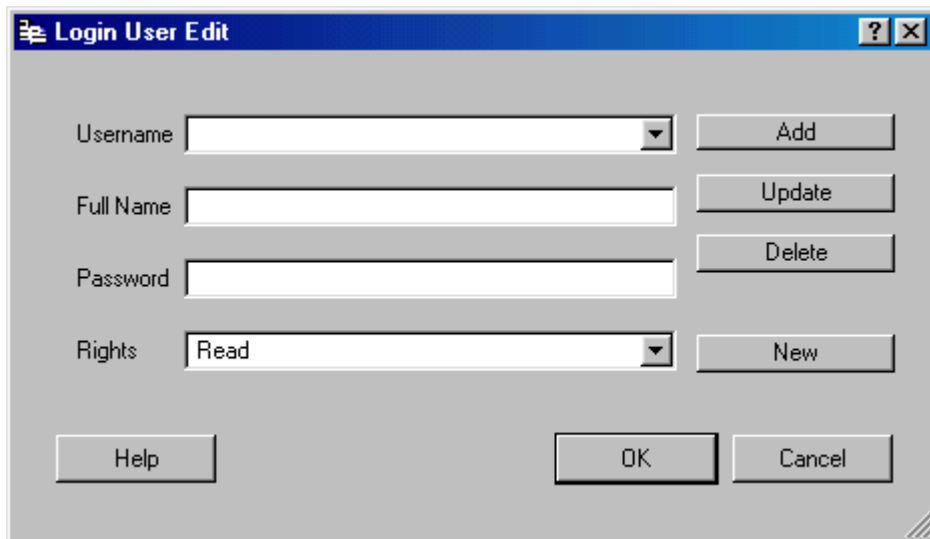


Navigate to the user menu and click on Edit.



Here in the Login User Edit window you can add, update or delete a user.

- Click the New button. This will clear all of the fields except for the rights.

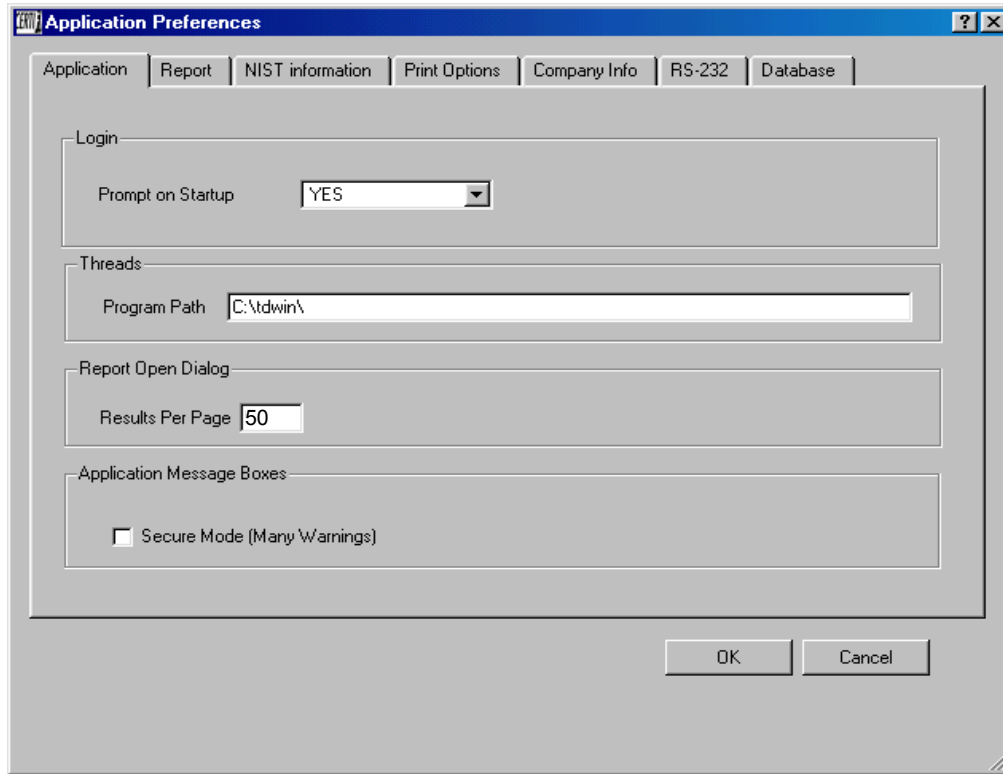


Entering users:

1. Enter the first Username. (This can be the proper name or a nickname.)
2. Enter the Full Name of the user. (This should be the proper name of the user. This will be the name that is printed out on the calibration certificate.)
3. You must enter a password. (*There must be a password you cannot leave blank and it is case sensitive.*)
4. Determine what right will be given.
 - **Administrator:** Full rights.
 - **Read/Write: Cannot**
 1. Add, edit or update users.
 2. Edit preferences.
 3. Add, edit, clone or delete templates.
 4. Archive, load, clear or delete the database.
 5. Update NIST information
 - **Read: Can only**
 1. Search for a report
 2. Open a report
 3. Print a certificate
 4. Print a tag
5. When finished with all fields click the Add button and you will see a confirmation of the addition.
 - Repeat steps 1-5 for all other users.

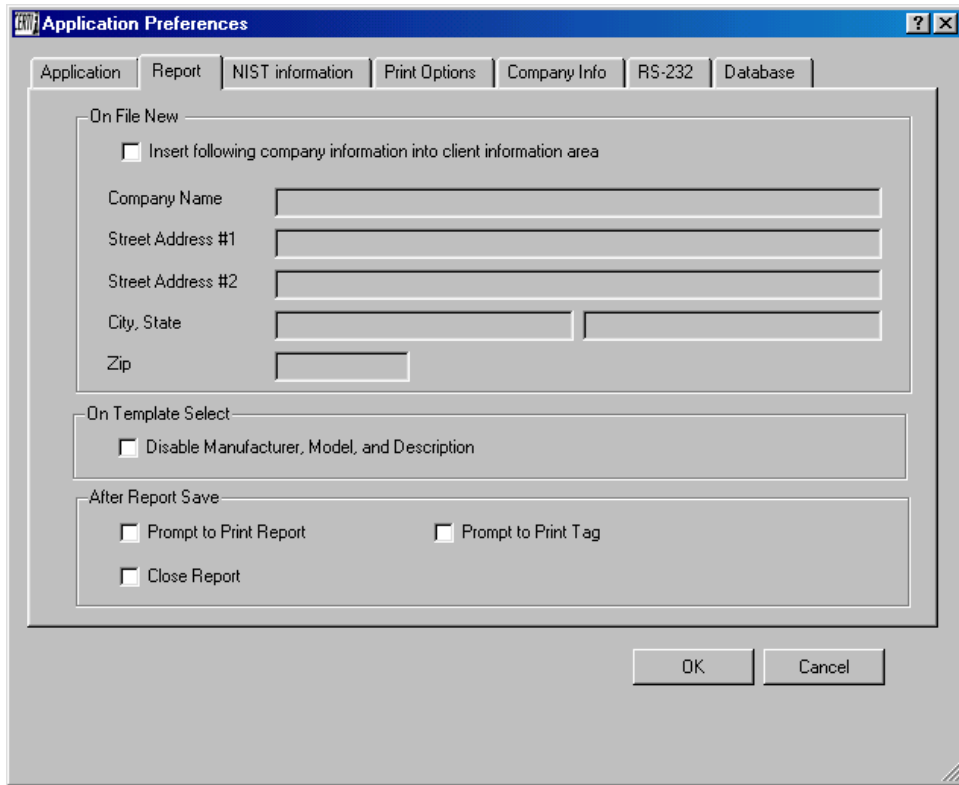
Setting Up The Preferences

Certifi comes with default preferences but there is some information that will need to be entered before you can produce a calibration certificate.



❖ Application

- **Login:** Prompt on Startup will either pull up the Login User window when you first start Certifi or not.
- **Threads:** Program Path is the path that the Thread Disk .exe is stored on your system. The default path you see here (C:\tdwin\) is the default path with which Thread Disk installation program would have stored it. If you have already installed Thread Disk and did not change this default then do not change it here. If you did change this path during the install of Thread Disk then change this path to match that path.
- **Report Open Dialog:** This is the number of reports search data that will load into the Select Report to Open dialog window when it is launched to search for a report to open. *We recommend that you leave this defaulted to 50.*
- **Application Message Boxes:** This is used buy us for debugging purposes. *We recommend you leave this unchecked.*

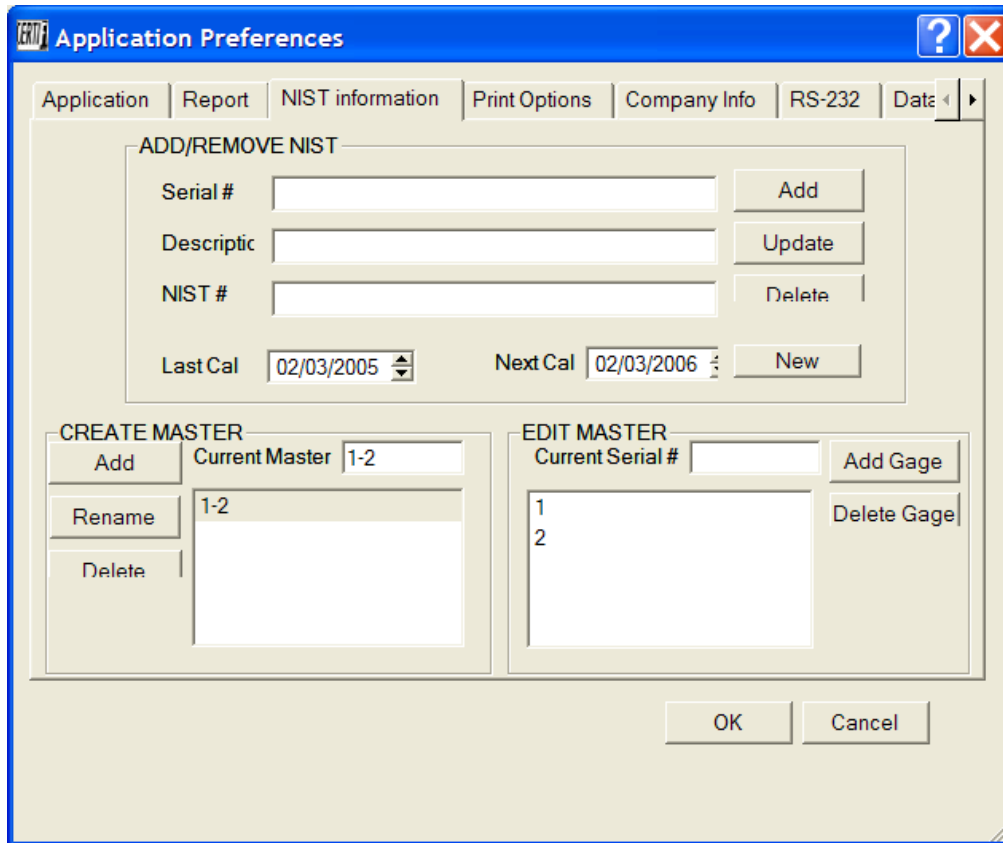


❖ Report

- **On File New:** This is where if you are only performing in house calibrations you could enter your company information that would be printed out on the calibration certificates in the customer information section. This way you would not have to fill this information in every calibration you perform. (Time saver)
- **On Template Select:** This is a security feature that if checked the manufacturer, model and description would not be able to be changed when performing a calibration from a template.

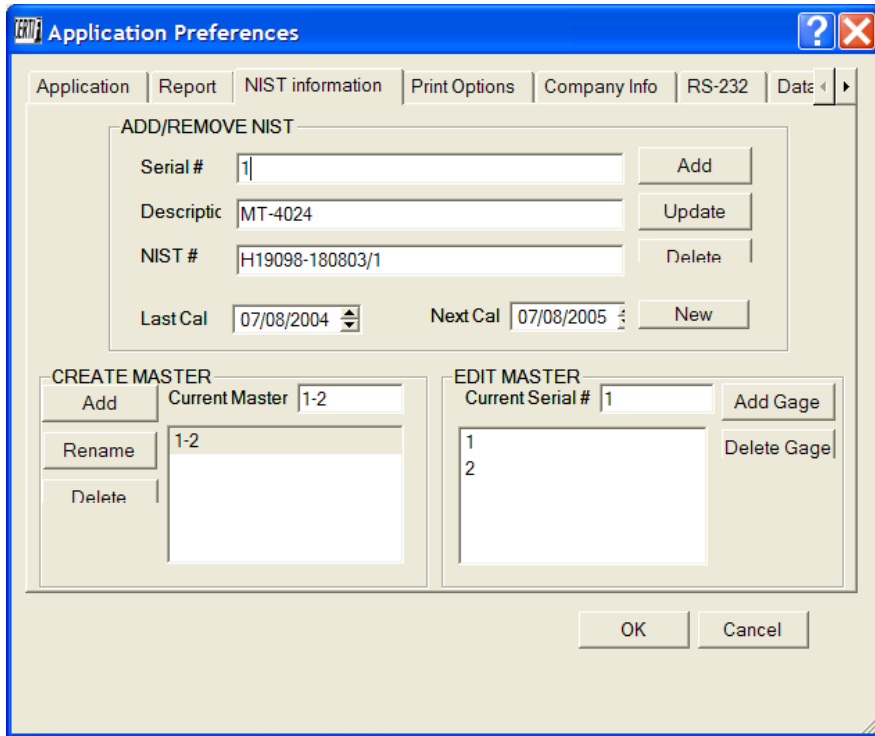
❖ After Report Save

- **Prompt To Print Report:** Checking this will pop up a message asking you if you want to print a calibration certificate yes or no.
- **Prompt To Print Tag:** Checking this will pop up a message asking you if you want to print a calibration sticker yes or no.
- **Close Report:** Checking this will close the report and put you back at the startup screen.



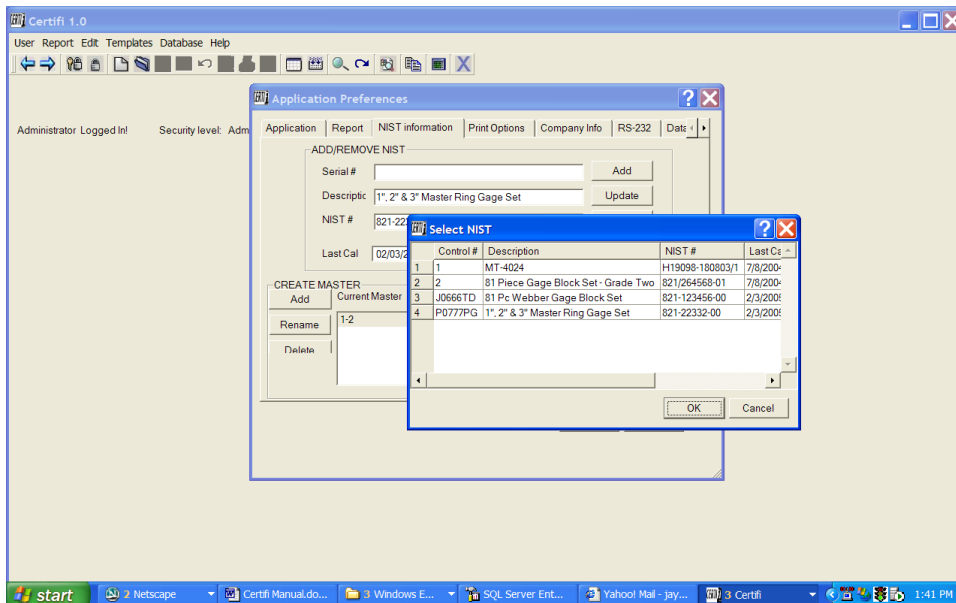
❖ NIST – Set Up

- After clicking “edit”, “Preferences”, “NIST tab” you will see NIST dialog box. The cursor will be in the serial number field. Hit the “Enter Key” to see all your NIST traceable gages stored.
- For first time user after loading the program there will only be two samples serial numbers “1” & “2”. You will delete this one after you entered in your master gages.
- Enter in the appropriate information for your traceable masters in the Serial#, Description, NIST traceable #'s and calibration dates .



❖ Master Gage Sets

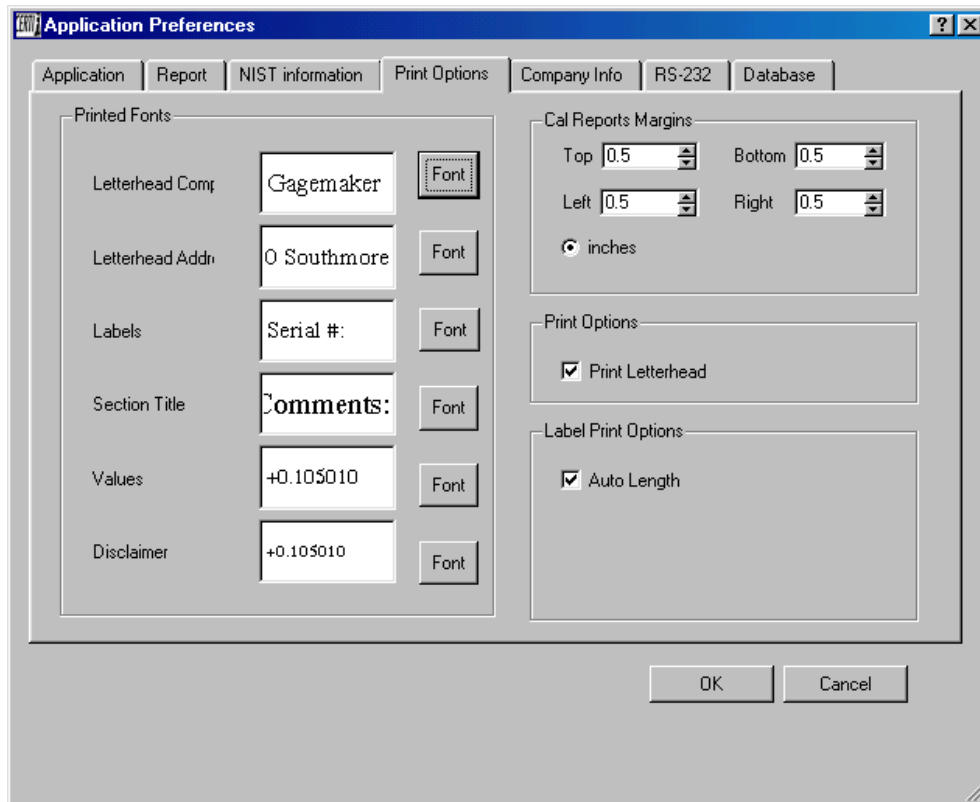
- In the Create Master? Field type in an abbreviated name for a master set. This name will be associated with two master gages use during the calibration. The Serial#, Description and NIST traceable #'s of both gages will be printed on the calibration certificate.



- ❖ Highlight and delete the serial number shown in the Serial # Field and press the Enter Key.

- This will bring up a dialog box showing all your stored Master gage information.

- Select the one you want to put into another “Master Gage Set” and click OK
- In the “Edit Masters” Field you will see the serial number of the master gage above. By clicking the add button this master will be added to your new “Master Set”.
- Repeat these steps again and select another serial number master to add to your new “Master Set”.



❖ Print Report

- **Printed Fonts:** Here you can change the font printed out on the calibration certificate.
- **Cal Reports Margin:** Here you can set the margins on the calibration certificate.
- **Print Options:** Print Letterhead should be checked if you will be using Certifi to produce calibration certificates for other companies. This will print your company information as the letterhead. This is entered on the next tab (Company Information).
- **Label Print Option:** Checking Auto Length will set the calibration sticker length automatically per the text that will be printed. *We recommend that you leave this checked.*

The screenshot shows a Windows-style dialog box titled "Application Preferences" with a blue title bar. It has several tabs: "Application", "Report", "NIST information", "Print Options", "Company Info" (which is selected), "RS-232", and "Database". The "Company Info" tab contains two main sections: "Letterhead Information (Print Header)" and "Disclaimer (Print Footer)".

Letterhead Information (Print Header)

Company Name	Gagemaker	
Street Address #1	710 East Southmore Ave	
Street Address #2		
City, State	Houston	TX
Zip	77502	

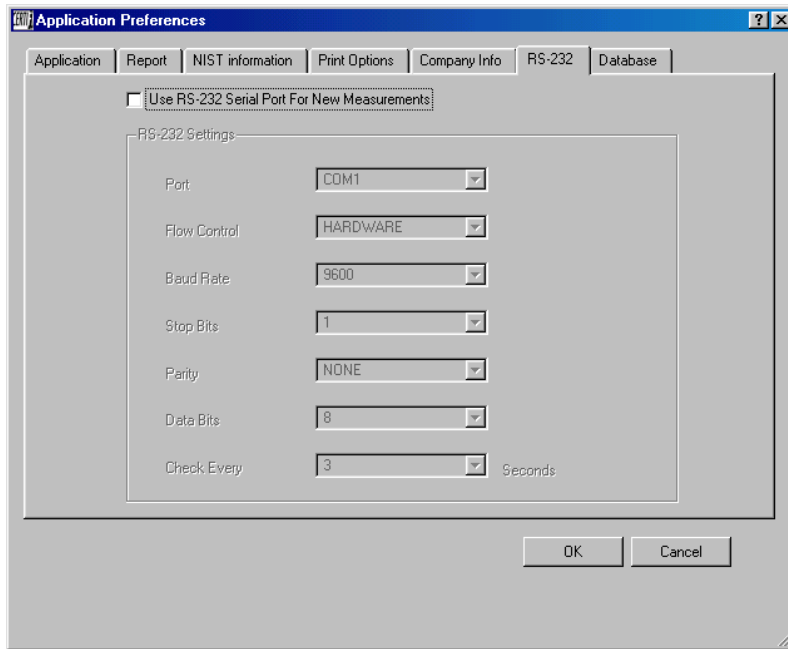
Disclaimer (Print Footer)

We hereby certify that this product has been calibrated and found to be in accordance with the applicable specifications set forth by Gagemaker and/or its customers. Equipment used in the calibration of this product has traceable accuracy to the National Institute of Standards and Technology.

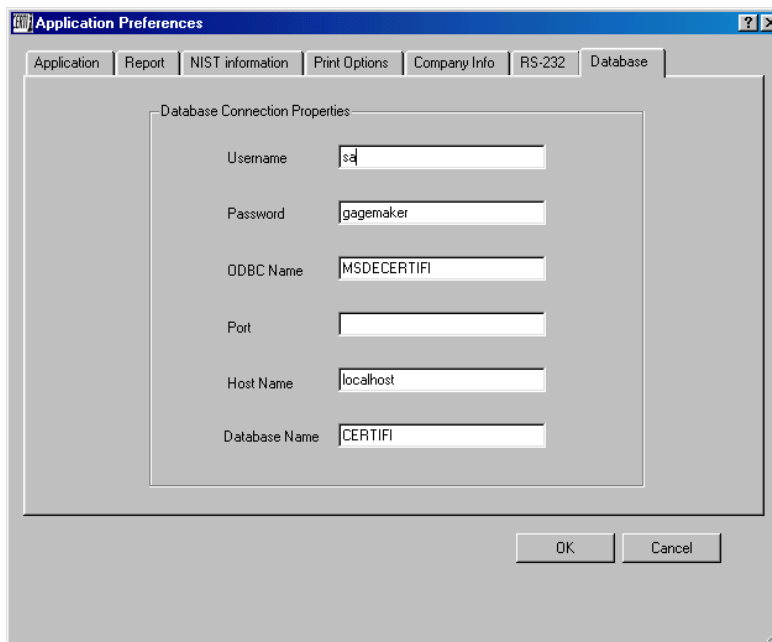
At the bottom right of the dialog box are "OK" and "Cancel" buttons.

❖ Company Info

- **Letterhead Information:** Enter your company information here if you are going to want your company information printed as the header on the calibration certificates. (Also make sure that you have checked **Print letterhead** on the **Print Options** tab.)
- **Disclaimer:** Enter your disclaimer here that will be printed on the bottom of the calibration certificates.



- ❖ **RS-232:** With Certifi you have the ability input a RS-232 signal from any devise with this signal output. Check the check box and set the setting per the output of the devise to be used. The default settings you see here are set for the output of the RSF CPU that is used with the Gagemaker MT-3000 gage. If you will be using this gauging system then just check the check box and you are ready to input the signal.



- ❖ **Database**

- **Database Connection Properties:** This should already be set correctly from the installation procedure performed earlier in this user manual.

Start Using Certifi

Templates

Certifi comes with two templates (**Generic and Thread**) that cannot be edited or deleted. The generic template is an ON THE FLY unformatted template. With this template you enter all information such as model, description, data sets, tolerances, etc... as you perform the calibration. This can be used for a quick certificate. The thread template is a very powerful template that will figure your wire size, data sets, pitch diameters, etc...

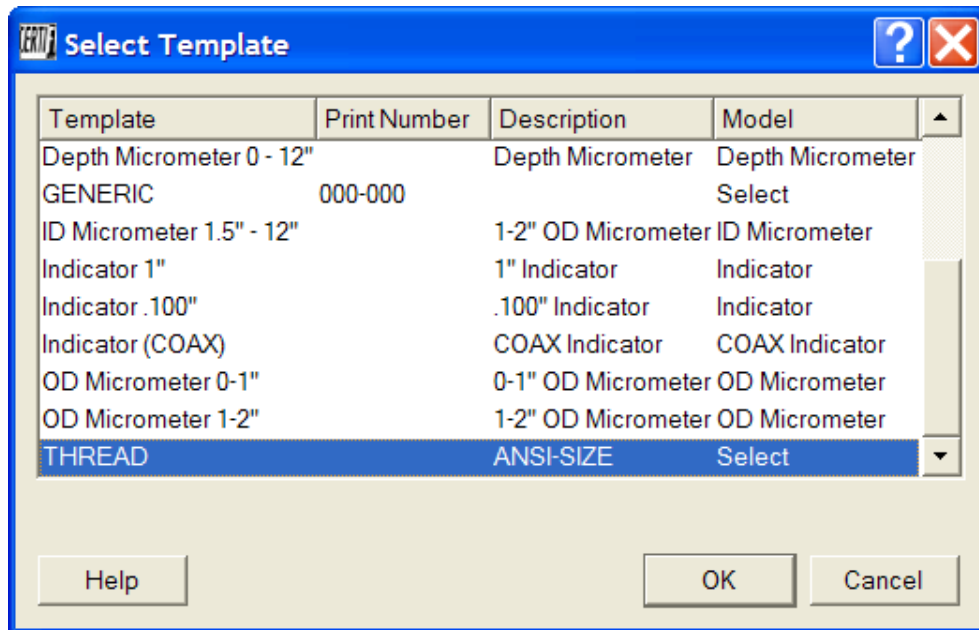
You can use one of the templates provided with Certifi or in most cases at least when you first start using Certifi you will need to create your own templates.

Using The Thread Template

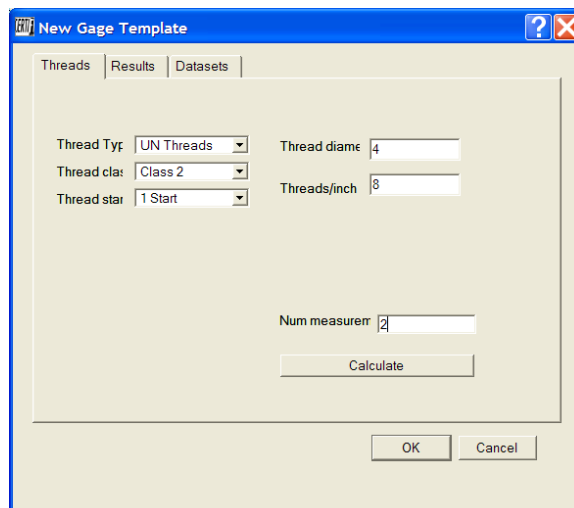
You must have Gagemaker's TD-WIN thread disk installed on your machine in order to use this template.

❖ Thread Template

- Navigate to the menu Report>New to open a new report.
- Place the cursor in the Gage Template field in the main window and press the enter key on your keyboard. The Select Template dialog will appear.



- Select the **THREAD** template and click OK.



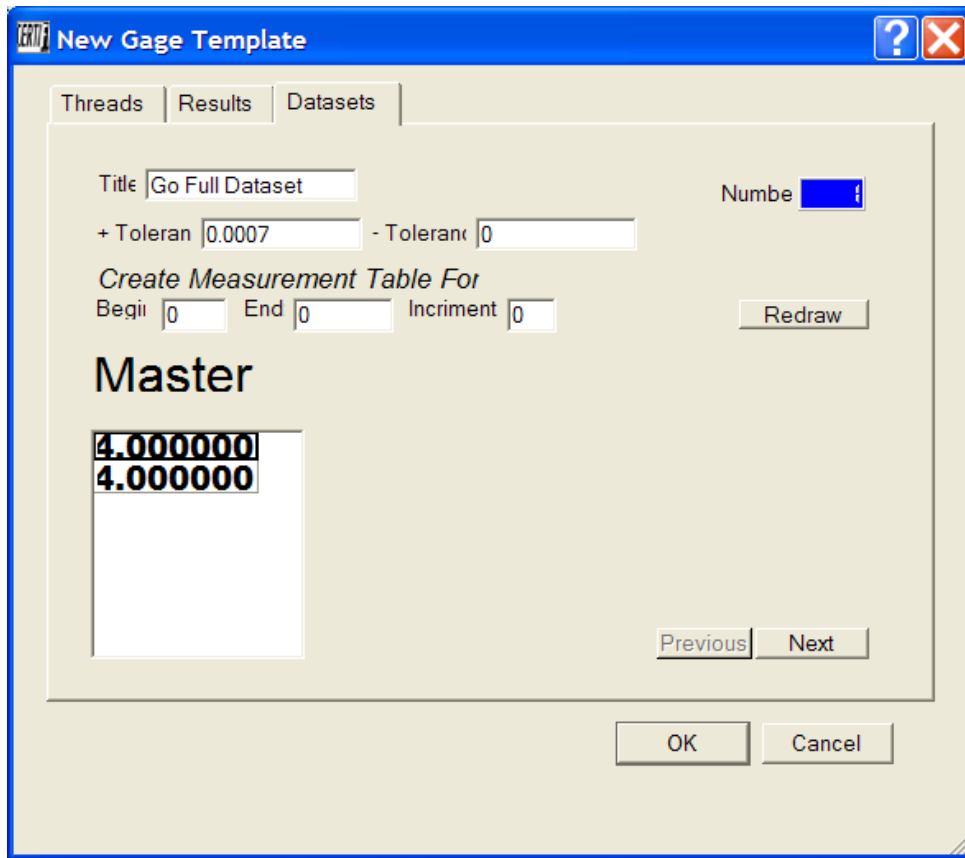
❖ Threads

- Just like in the Gagemaker's TD WIN thread disk software, you will select the thread type, thread class, thread starts, thread diameter, threads / inch and the number of measurements you wish to take during the calibration of each feature.
 - Click the Calculate button.

The screenshot shows the 'New Gage Template' dialog box with the following data:

Section	Parameter	Value	Tolerance
GO	Pitch Diameter	3.9188	+0.0005
	MOW Size	4.02705	+0.0005
	Major Diameter	4.0000	+0.0007
NOGO	Pitch Diameter	3.9288	-0.0005
	MOW Size	4.03705	-0.0005
	Major Diameter	3.9830	-0.0007
Wire Size	Wire Size	0.07217	

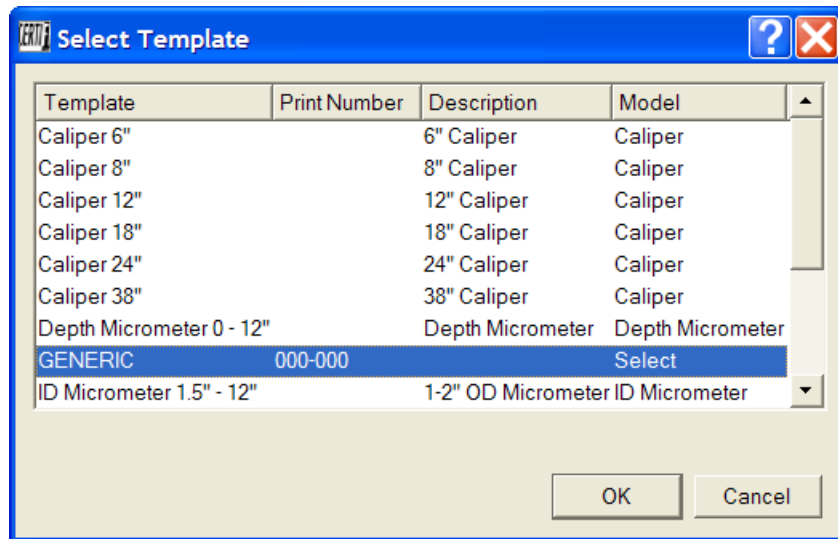
- ❖ **Results:** Here the gage's critical dimensions for both Go & NoGo members are displayed.
 - On this page you use the radio buttons select the dimensions you want to measure in the inspection report. Verify the calculated values against the stamped dimensions on the gage. The tolerances are ANSI values.
 - Click the "Create Datasets" button and the program will move you to the "Datasets" page.



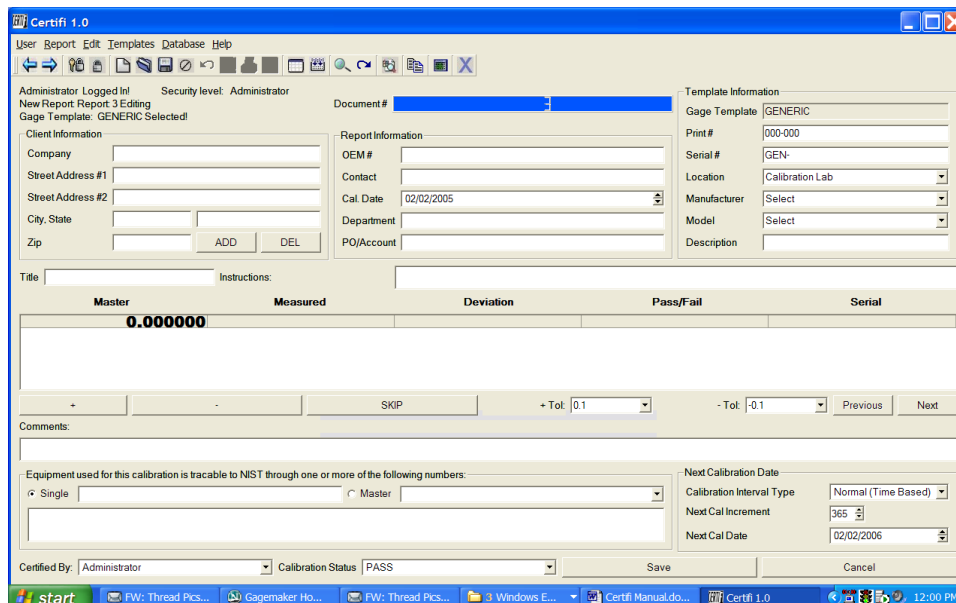
❖ **Datasets:** Shows the title of the data set, tolerances and master values for the measurement. Click the “Next” button to see the other data sets.

➤ Click “OK” to return to the report and proceed the calibration.

Generic Templates



Select the “Generic” template and click OK.



❖ **Report Screen:** Here you can type in the Serial #, Manufacture, Model, Description, Dataset Title and Master Values.

- Generic templates are for special one of a kind gages that you will not want to create a dedicated template for.
- Refer to the “Performing A Calibration” to continue.

Creating a Template

To create a template first navigate to the menu bar and select **Templates>New**.

The screenshot shows a software dialog box titled "New Gage Template". It has three tabs: "Gage Properties", "Datasets", and "Label Options". The "Gage Properties" tab is selected. The dialog contains the following fields and controls:

- Gage Title: [Text Box]
- Description: [Text Box]
- Serial # Prefix: [Text Box]
- Print #: [Text Box]
- Manufacturer: [Dropdown Menu] (Bowers)
- Cal Interval Type: [Dropdown Menu] (Normal (Time Based))
- Model: [Dropdown Menu]
- Next Cal Increment: [Spin Box] (365)
- Comments: [Text Area]
- Instructions: [Text Area]
- Do NOT require taking measurements for datasets
- OK [Button]
- Cancel [Button]

❖ Gage Properties

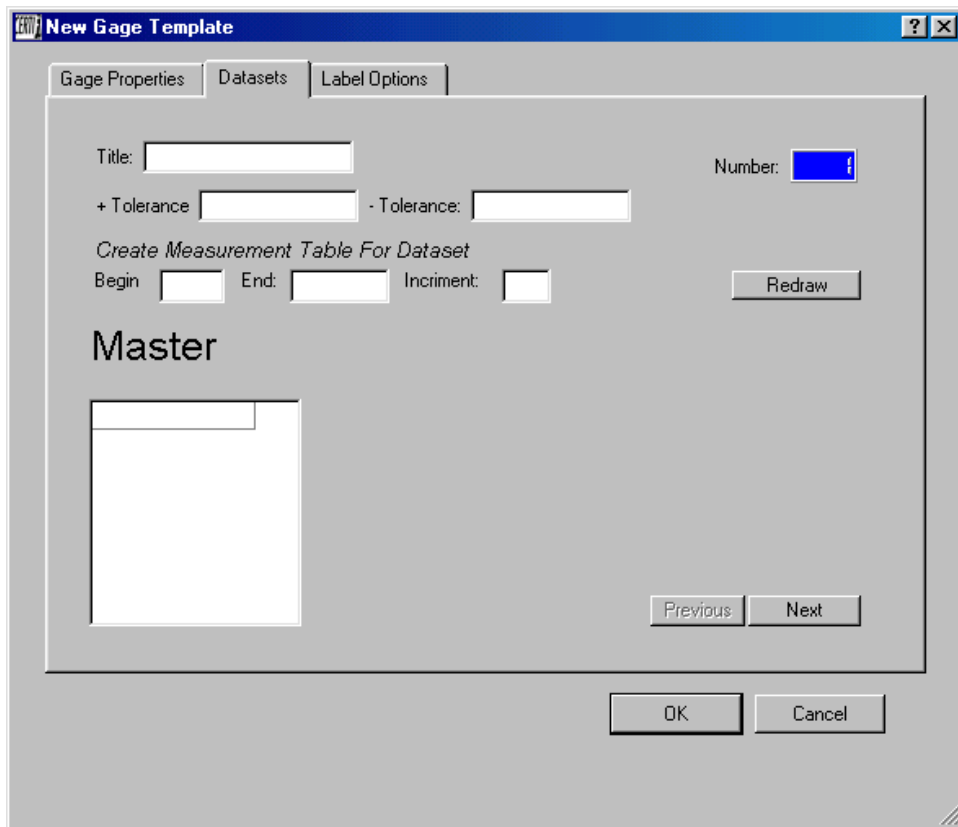
- **Gage Title:** Give the template a name that you will be selecting it buy when selecting a template. **(This will not be printed on the calibration certificate.)**
- **Description:** Enter a description of the gage or standard being calibrated.
- **Serial # Prefix:** Only enter a prefix if lets say that all of you gages or standards of this type will have any preceding characters in the serial number. This will populate the serial # text box with this prefix. Then the user can enter the Serial extension.
- **Print #:** Enter a print # if you wish.
- **Manufacturer:** Enter the manufacturer.
- **Model:** Enter the model.

- **Cal Interval Type/ Next Cal Increment:** These two together will compute the next time the gage or standard should be calibrated.
 - **Normal (Time Based):** This is the number of days until the next calibration should be performed.
 - **Actual Usage Based:** The number of hours the gage has been used by the next calibration should be performed.
 - **Part Number Based:** The number of times the gage has been used before the next calibration should be performed.

- **Comments:** Here you can enter any comments that you want on the calibration certificate. **(This will be printed on the certificate.)**

- **Instructions:** This is for any calibration procedures that you the user can follow as they are performing the calibration. **(This will NOT be printed on the certificate.)**

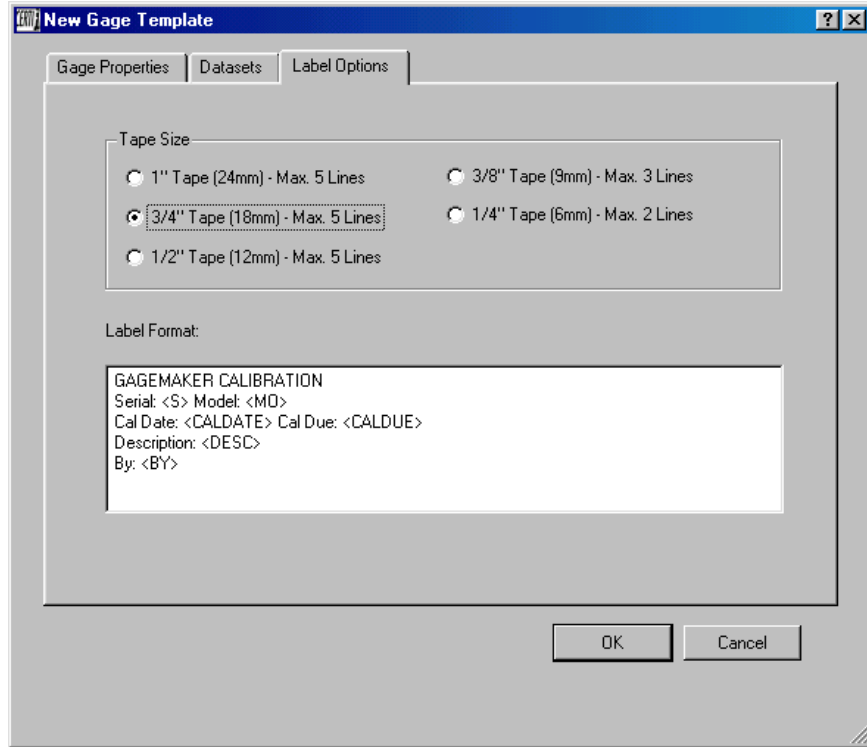
- **Do NOT require taking measurements for datasets:** Check this if the calibration certificate will contain no measurements. *(Short form certificate)*



❖ Datasets

- **Title:** Enter the data set name.
- **Tolerances:** Enter the \pm tolerances for this dataset.
- **Master:** There are two ways to create the master values.
 - 1) **Create Measurement Table For Dataset:** Use this to have Certifi populate the master values quickly for you if they will be in even increments (1.0000, 2.0000, 3.0000, etc...).
 - (a) Enter the beginning measurement.
 - (b) Enter the ending measurement.
 - (c) Enter the increment in which the measurements will be taken.
 - (d) Click the Redraw button and Certifi will build your masters.
 - 2) In most cases you will be entering the master values manually. Simply click in the Master table box to activate it and type the first measurement and press the enter key using the keyboard. This will store the value and give another box in the table. **Important: When you get to the last measurement make sure that you do press the enter key to store the value. Do not just enter a value and click the OK button. The value will not be stored if you do this.**

To create another dataset click the next button and repeat these steps.



❖ **Label Options**

Here you can setup to print calibration stickers using a Brother P-Touch label printer.

- **Tape Size:** Select the size tape that you will be using in the label machine.
- **Label Format:** Set your label up how you want it to look. Any text not in <> will be printed as seen. Use the flags to have Certifi print information from the certificate created.

Item	Flag
Next Cal Date	<CALDUE>
Calibration Date	<CALDATE>
Certified By	<BY>
Serial	<SERIAL>
OEM Number	<OEM>
Print Number	<PRN>
Description	<DESC>
P.O. Number	<PO>
Contact	<CON>
Location	<LOC>
Department	<DEPT>
NIST	<NIST>
Model	<MO>
Manufacture	<MFG>

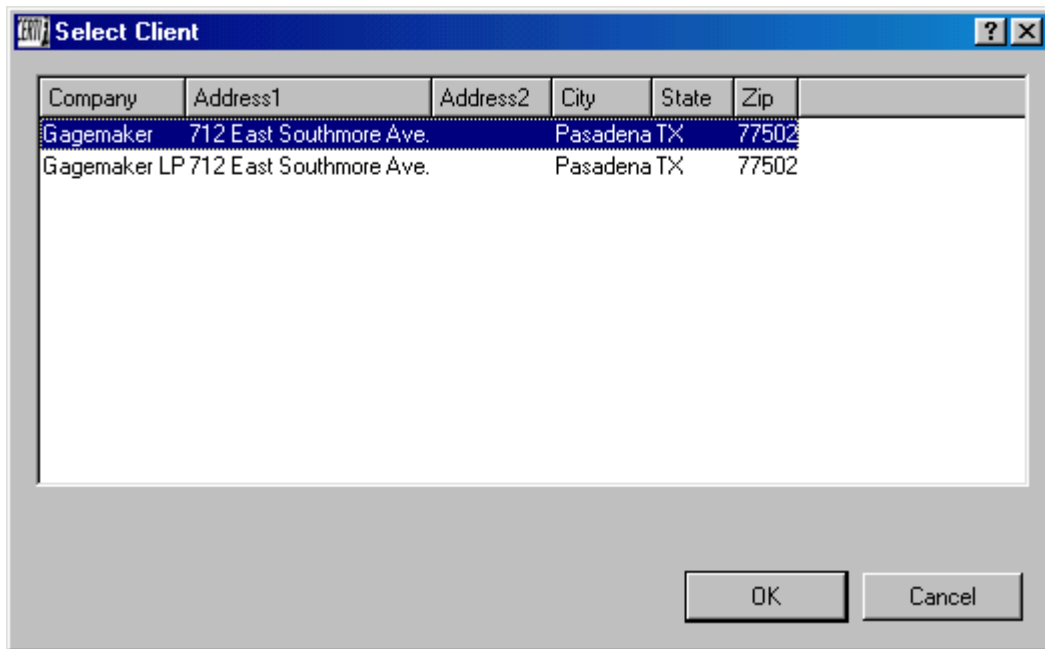
Performing A Calibration

- ❖ Navigate to the menu Report>New. This will open a new calibration report.

The screenshot shows the Certifi 1.0 software window. The title bar reads "Certifi 1.0". The menu bar includes "User", "Report", "Edit", "Templates", "Database", and "Help". The toolbar contains various icons for navigation and editing. The main interface is divided into several sections:

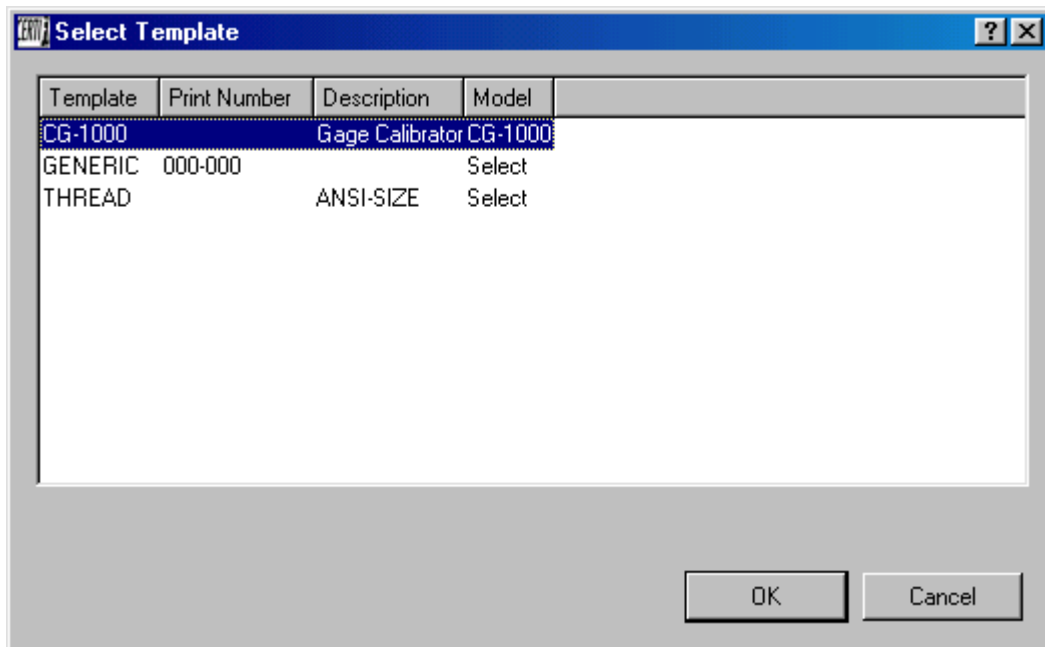
- User Information:** "Paul Logged In!", "Security level: Administrator", "New Report: 8 Editing", "No Template Selected".
- Document #:** A blue input field.
- Client Information:** Fields for Company (Gagemaker LP), Street Address #1 (712 East Southmore Ave.), Street Address #2, City, State (Pasadena TX), and Zip (77502). Includes "ADD" and "DEL" buttons.
- Report Information:** Fields for OEM #, Contact, Cal. Date (02/03/2005), Department, and PO/Account.
- Template Information:** Fields for Gage Template, Print #, Serial #, Location (Calibration Lab), Manufacturer, Model, and Description.
- Title and Instructions:** Two text input fields.
- Table:** A table with columns: Master, Measured, Deviation, Pass/Fail, and Serial. The table is currently empty.
- Controls:** Buttons for "+", "-", "SKIP", and dropdowns for "+ Tol: 0.1" and "- Tol: -0.1". "Previous" and "Next" buttons.
- Comments:** A text area for notes.
- Calibration Details:** Radio buttons for "Single" and "Master", a text field for "Equipment used for this calibration is traceable to NIST through one or more of the following numbers", and a section for "Next Calibration Date" with dropdowns for "Calibration Interval Type" (Normal (Time Based)), "Next Cal Increment" (365), and "Next Cal Date" (02/03/2006).
- Footer:** "Certified By: Paul Gaines", "Calibration Status: PASS", and "Save" and "Cancel" buttons.

- ❖ Certifi will store all of your customers for you so you will not have to type them in each calibration. When using Certifi for the first time the only customer that is stored is Gagemaker, LP To store your customer type the customer information into their fields and click the Add button. To pick out a customer that has been stored place your cursor in the Company field and press the enter key on your keyboard. The Select Client dialog will appear.




Select the customer and click OK.

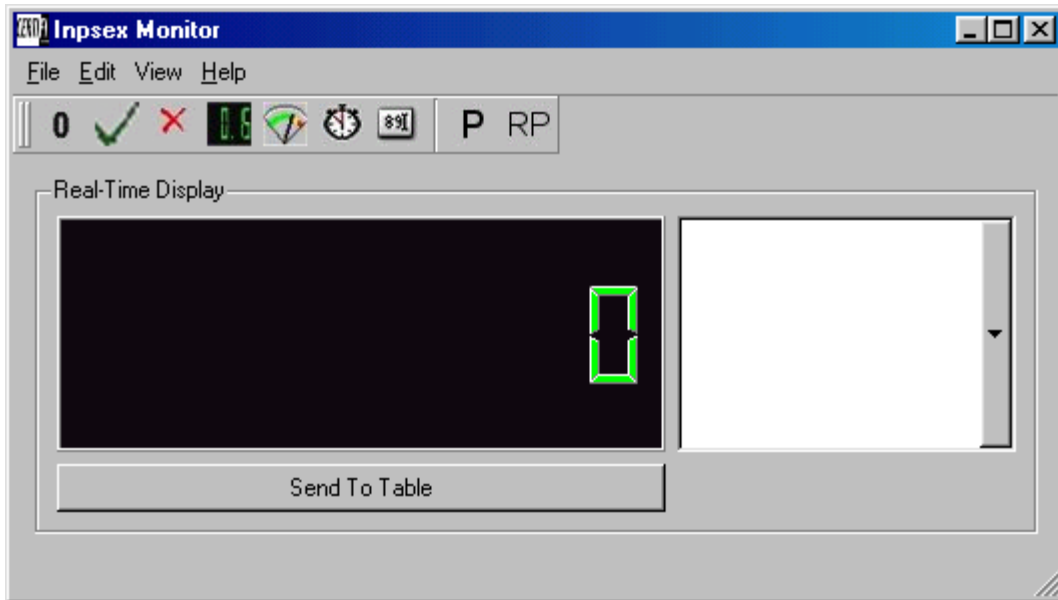
- ❖ Enter your report information. (OEM#, Contact, Department, PO/Account)
- ❖ Now you are ready to pick out a template. Place the cursor into the Gage Template field and press the enter key on your keyboard. The Select Template dialog will appear.



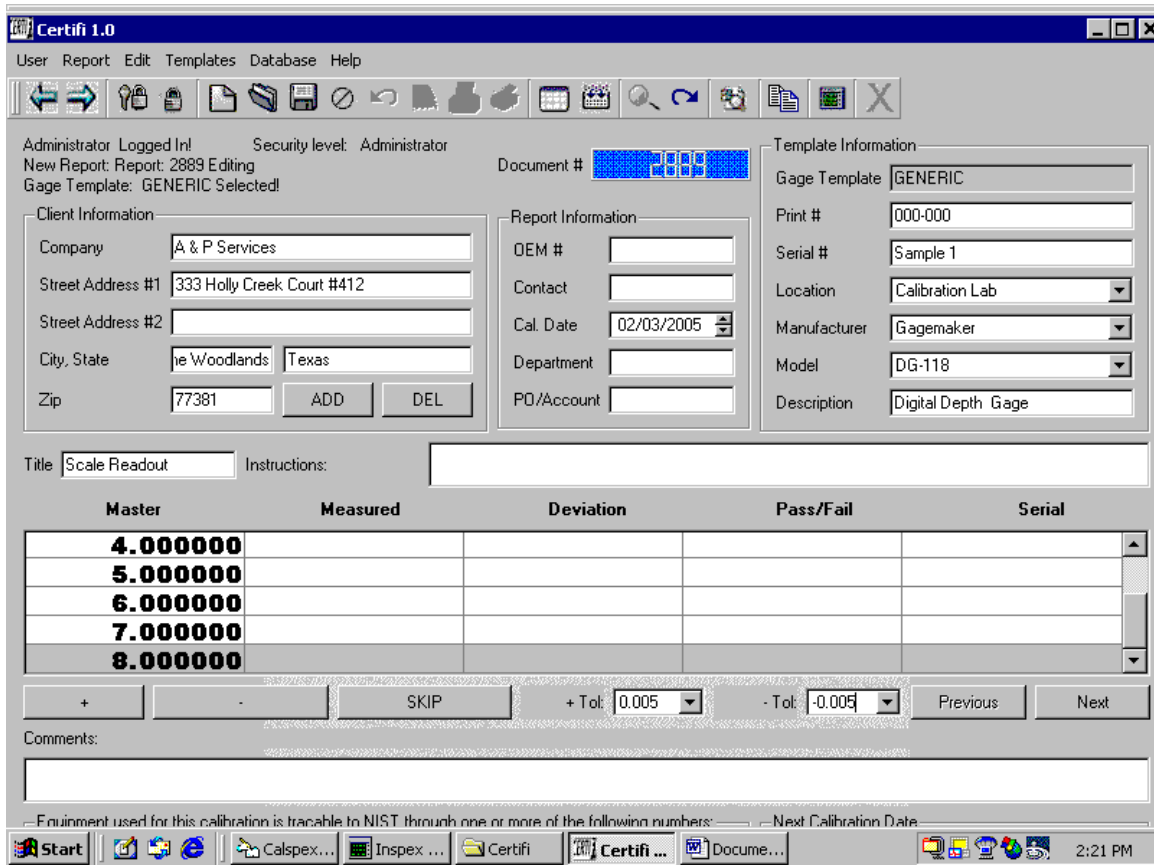
Select the template and click OK.

- ❖ Now you are ready to take the measurements. There are three ways to get your measured values into Certifi.

- You can manually enter a measurement by placing the cursor into the first “Measured” cell of the table, enter your numbers and press the enter key on your keyboard. **(You must press the enter key for the value to be stored. Make sure you press enter even on the last measurement entered before you move on.)** If there are more than one dataset then click the Next button to bring up the next set.
- If you are using a Gagemaker MIC TRAC then you will get the values through it. To do this click the Inspex Monitor button  on the toolbar.

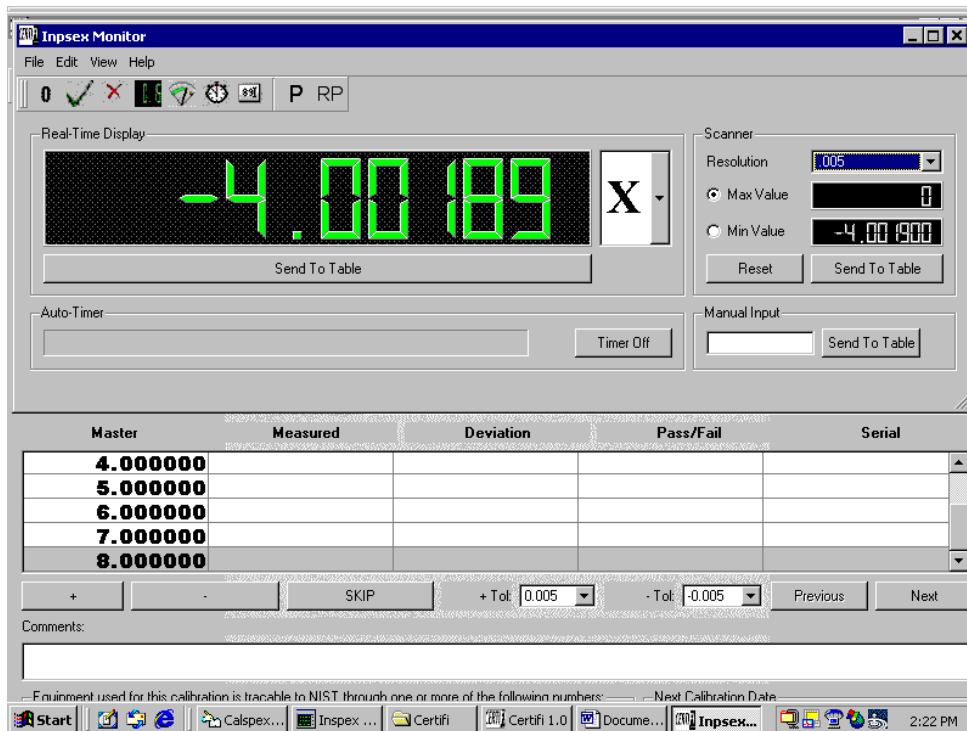


- When using an RS232 device the value will be sent directly to the main window table. Simple push the enter button or take measurement button on the RS232 device to store the value to Certifi. If there is more than one dataset then click the Next button to bring on the next set.




❖ Inspex Digital Readout

- First minimize the Certifi program.
- Start the Inspex program. Latch both marker pluses as always and then minimize the main Certifi window.

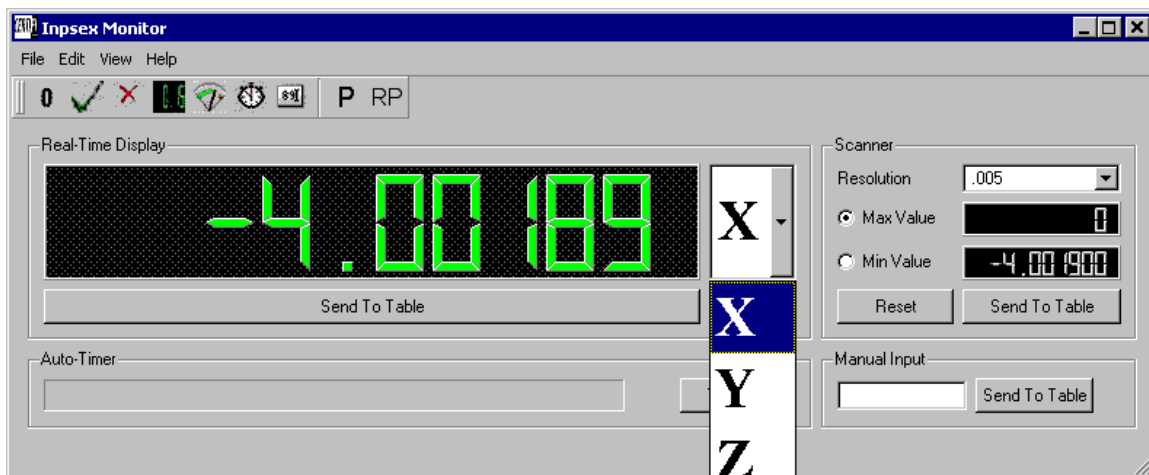


❖ Open the Inpex Monitor

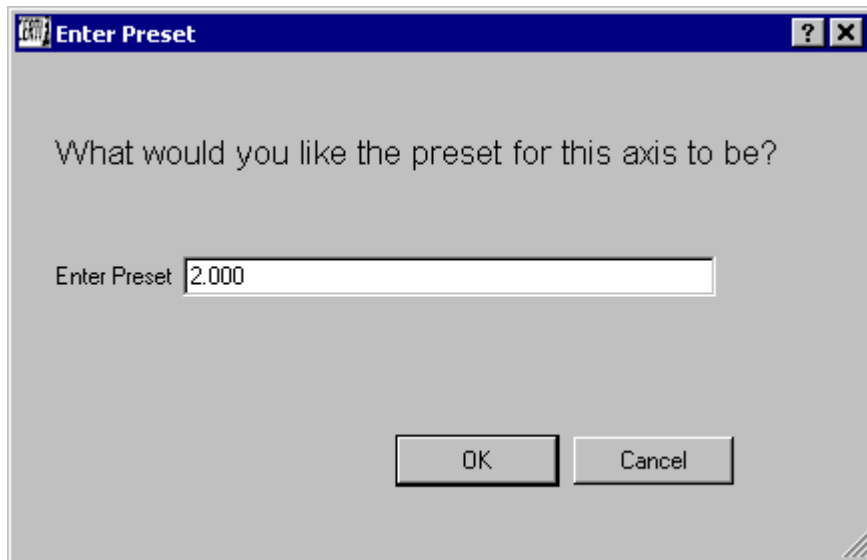
- After starting a new report and filling in all the header information. You are ready to

start taking measurements. Click on the Inpex icon  in the tool bar to open the Inpex Monitor.

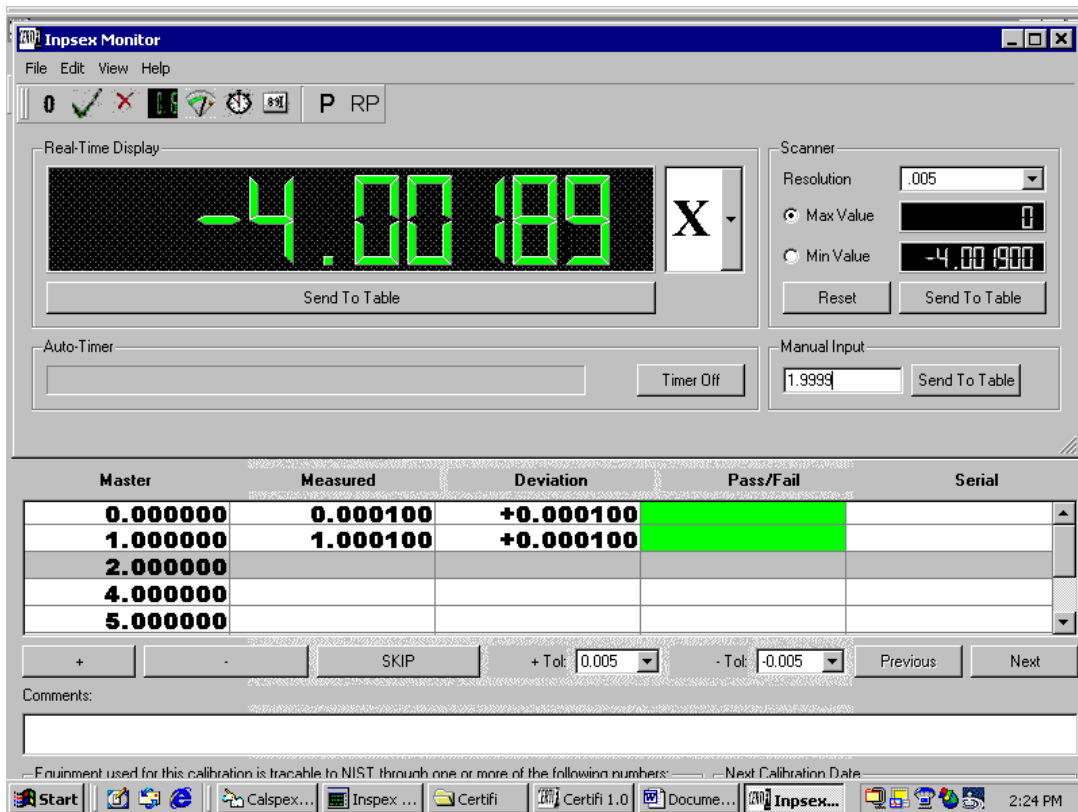
- Using your mouse click on the axis and select the axis you will be using.
- Size the window to be above the data sets.



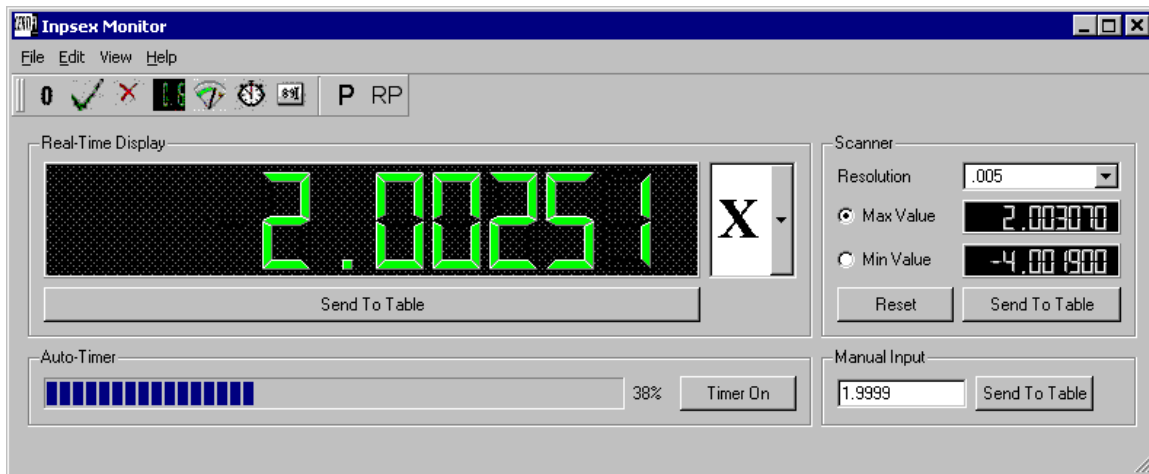
- Click on the axis visible and a drop down box will appear. Select the axis you will be using.



- Click on the “P” icon to preset in a value. Click on the “RP” icon to Recall the preset value. After

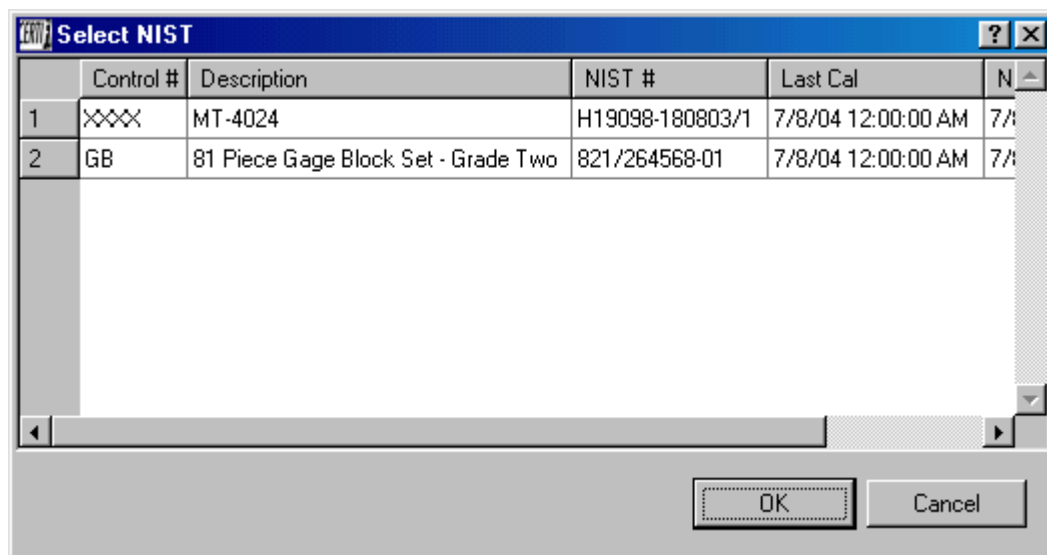


- Click on the send to table under the digital readout and store your values.
- Click on the RED “X” to delete the value.



- Click on the Stop Watch Icon to display the auto timer. The auto timer is used to store measurement quickly without having to use the send to table button. Every 2.5 seconds after the active axis stops moving the Inpex Monitor will automatically send the display to the table.

- ❖ Enter any comment you might have.
- ❖ Next pick out the NIST information for the equipment used to perform the calibration.
- If you used a single piece activate the Single radio button. Then place the cursor in the Single field and press the enter key on your keyboard. The “Select NIST” dialog appears.



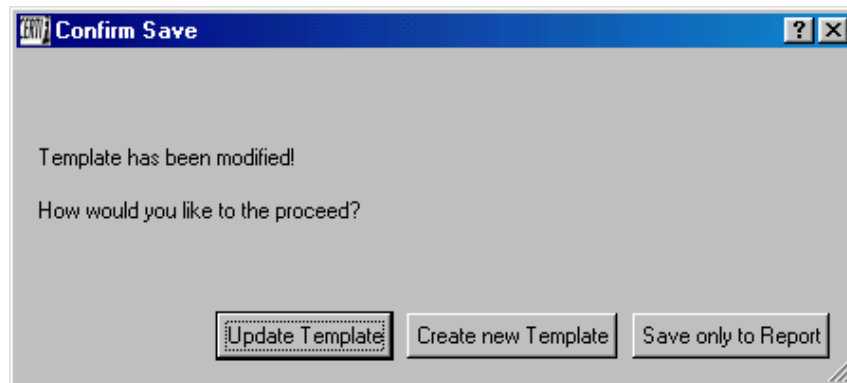
Simply select the equipment and click OK.

- If you used a Master set then activate the Master radio button. Then use the pull down combo box to pick out the equipment used.

Certi insures that a calibration has not been performed with any out of calibration equipment. You cannot save a report if

the NIST due date is before the date the calibration is being performed.

- The Certified BY should be whoever is logged into the system. If the user logged in has Administrator privileges then they can change the Certified By to anyone that is setup in the system. Someone with Read/Write or Right Only cannot change this name. It will only be the user logged in.
 - The Calibration Status is controlled by the Pass/Fail fields in the measurements table. If any one of the Measured values are out of tolerance then this would already be set to Fail by Certifi. Only users with Administrator privileges can change this. All other users cannot change the status.
 - The Next Calibration Data information is controlled by the template. If you need to change any of this information you can. If a Generic or Thread template is being used than the defaults are.
 - **Calibration Interval Type:** Normal (Time Based)
 - **Next Cal Increment:** 365
 - **Next Cal Date:** Is computed from the Cal Date.
- ❖ Click the Save button. If no information that comes in from the template has been changed then you will get a save conformation window. If ant information that comes in from the template has been changed then you will see this window.

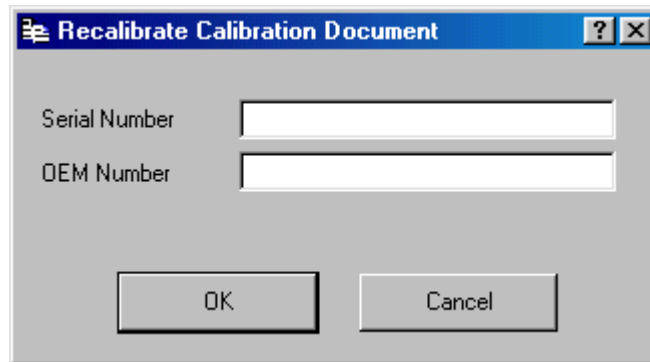


- This is a special save option. Sense some information in the report is different than the template, you have these three options.
 - **Update Template:** This will update the template that was used for the report with the information that has been changed.
 - **Create new Template:** This will create a new template with the information from the report. After clicking this and another window will appear where you will name the new template.
 - **Save only to Report:** This will save the changes to the report only.

Recalibrating A Gage

Certifi can only have a serial number used once. In order to calibrate a gage the following calibration cycle and keep records of certifications back as far as you wish to you can use the Recalibrate a Gage.

- ❖ Navigate to the Menu Report>Recalibrate. This window will appear.



The image shows a dialog box titled "Recalibrate Calibration Document". It contains two text input fields labeled "Serial Number" and "OEM Number". At the bottom of the dialog are two buttons: "OK" and "Cancel".

- Enter the serial number or the OEM number and click OK.
- Certifi will find the last certification, which template was used and open a new report. The company information, template information and serial number will be populated for you. Just continue with the calibration just as described in the Performing A Calibration section.

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