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Overview

The Wedge software was developed to help users upload and download database(s) to or from the 60 Series indicators, including the 675 and 672 indicators.

It can also be used to collect data from an indicator (i.e. Custom transmits) into a comma-delimited format (a database format). A program such as Microsoft Excel can then view this data.

The Power of ActiveX lets you view, write data at the same time, which is coming from an indicator into an Excel spreadsheet, Access Database.

Installation

There are 2 components of Wedge to be installed. First install **Wedge Server**. This is the main Wedge program.

Then install **Wedge Active X Client**. The Active X client allows you to manipulate data using Microsoft Visual Basic. This installation is optional.

Follow the prompts to install each piece of the software.

Connecting Wedge to an indicator:

The Wedge can be connected to the indicator(s) via RS-232, RS485 or Ethernet.

Serial RS-232: Connect the indicator to the computer through any available RS232 port using a standard RS232 cable.

RS-485: The indicator must be set up for this option. RS-485 option cards are available through GSE Scale Systems.

Ethernet: The computer and the indicator must be set up for this option. The Ethernet options can be purchased through GSE Scale Systems.

When using Wedge software, make sure that the indicator has the recommended firmware version. If it does not, it may look like it's working, but it will not have full functionality. Re-flash software and files can be downloaded from the web site: www.gse-inc.com

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Toolbar: File

The **File** Menu is similar to windows. Within the **File** menu, the following choices are available:

|	
New Program:	-Start a new application
Open Program:	-Open an existing application
Save:	-Save the current application
Save As:	-Save the application as a different name
Recent Files:	-Open the most recently used files
Summary > Add Indicator:	-Add an indicator to the Wedge list. Note that File menu shows Summary when SUMMARY is highlighted in the main window. Otherwise it shows the Indicator (see examples below)
Summary > Indicator:	-Delete or Rename the selected indicator. The Indicator option is only shown when the INDICATOR is highlighted in the main window. (See examples below)
Exit:	-Exit out of Wedge
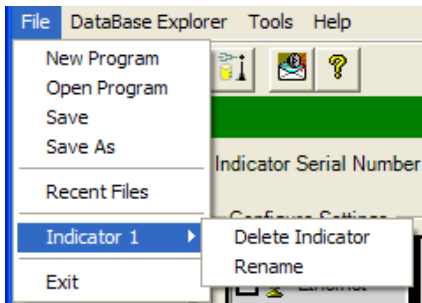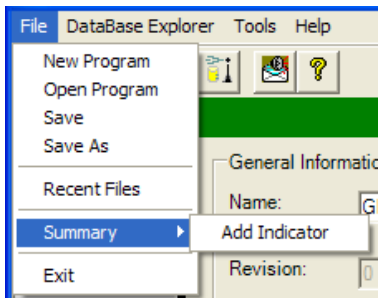
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Toolbar: Database Explorer

The **DataBase Explorer** menu allows you to receive or send databases. This menu is discussed later in the *Wedge Reference Guide.*
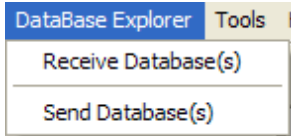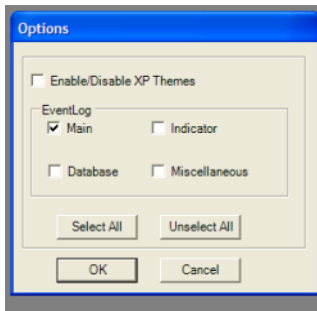

Toolbar: Tools

The **Tools…Options** menu gives a list of options.
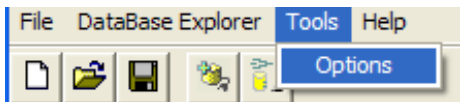
- The **EventLog** options are only used for software troubleshooting.
- The **Enable**/**disable XP Themes** allows you to enable or disable any windows XP themes on the Wedge software.
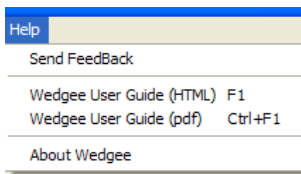
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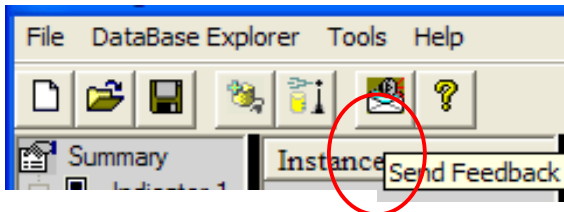
Toolbar: Help

Wedge Help has a few options:
- To send feedback
- View User's guide
- Check the software details.

Help..Send Feedback

To send feedback to GSE Scale Systems regarding the Wedge program, click on **Help…Send Feedback**

Or the **Send Feedback** button

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Help..Wedge User Guide

To see the Reference Guides, Click on **Help…Wedge user guide**
Or Click on the "*?*" button

Help..About

The **About Box** details the software name, version number, indicator firmware revision and the copyright.

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Summary Window

To use database features of Wedge, the indicators must first be set up to upload and download databases. The indicators can be set up from the main **Summary** window. The Summary window is the first window that is opened when Wedge starts up.

By default, one (1) indicator is opened. The indicator is shown on the left side of the window. More indicators can be added.

The main summary window allows you to enter in general information about the indicator(s) you are connected to.

To name the application, type in the **Name** entry (A).

For application comments, type in the (B) **Comments** entry window.
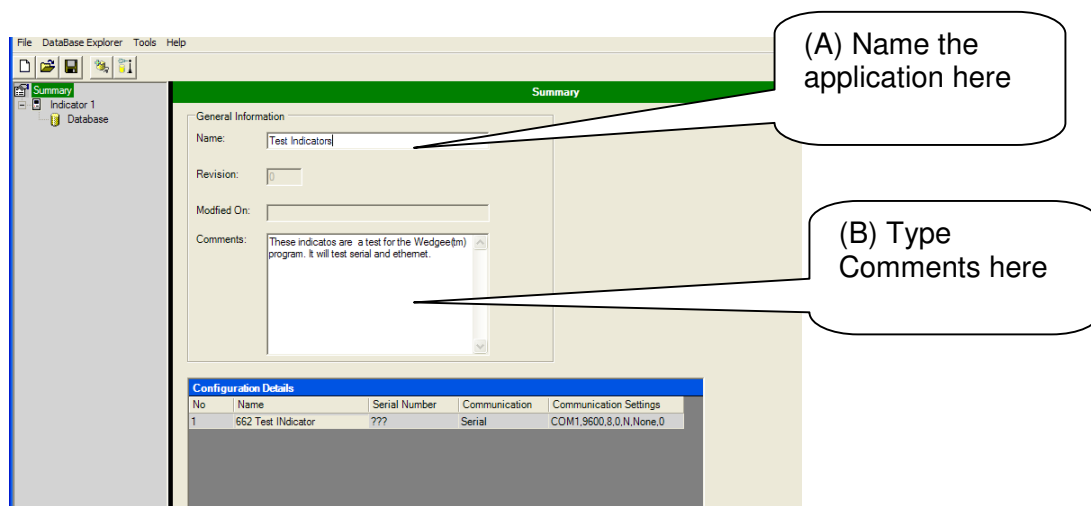

To Rename an indicator,
Highlight the indicator name on the left, and right-click the mouse. Click on **Rename.** Type in the new name for the indicator.

To Delete an indicator,
Highlight the indicator name on the left, and right-click the mouse. Click on **Delete Indicator**. The application must have a minimum of one indicator.
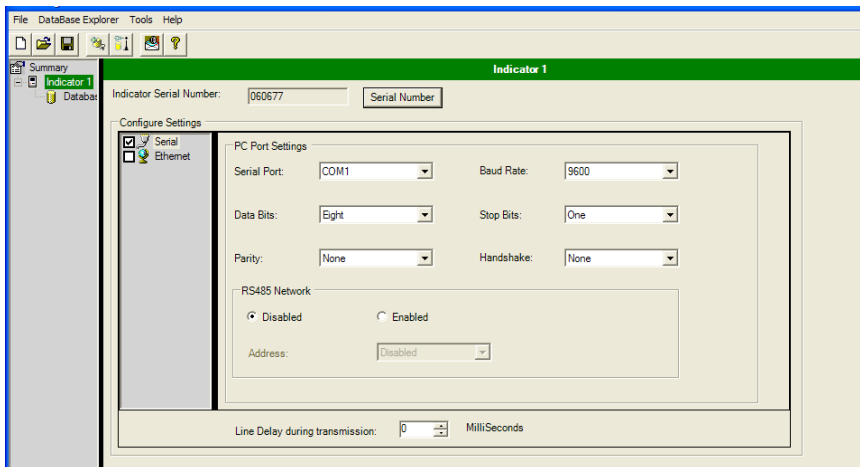
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To add an indicator,
Highlight "Summary" on the left, and right-click the mouse. Click on **Add Indicator.**
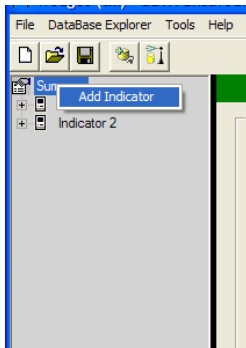
Set up a Serial Indicator

RS232
If the computer and indicator are hooked up through an RS232 port, make sure to set up the PC Port Settings to match the indicator's port settings. The default settings are set up to match the default indicator settings. To change any of the settings click on the drop down box, and select the appropriate option.


If the USB port is connected to the serial port, and an OVERRUN error occurs, change the Line Delay to 50ms or 100ms. This will slow down the information passing from Wedge to the indicator.
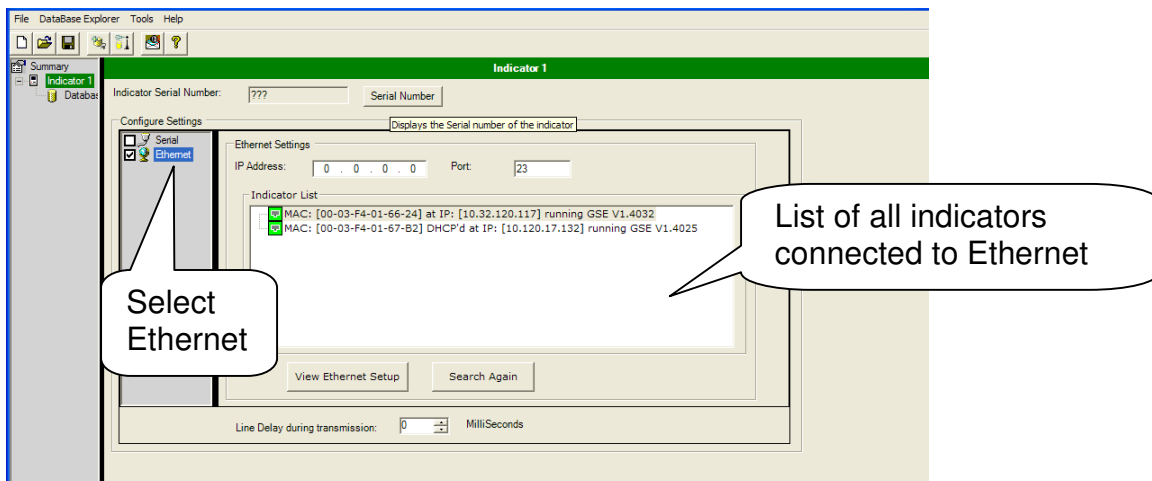
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RS485

The RS-485 option allows multi-drop communications using RF wireless module hooked up to multiple indicators with different addressing. By having single adapter connected to the PC's comm. port, this software can talk to multiple indicators with RS-485 enabled.

To use a RS485 network with Wedge, Click on the **Enabled** button, and select an address from the drop-down box.
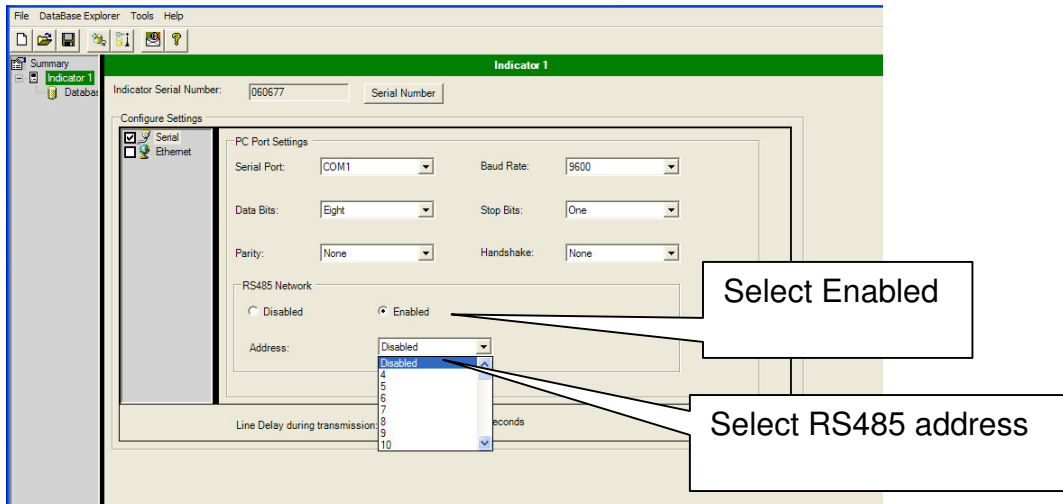
Set up an Ethernet connection

If the computer and indicator are hooked up using an ethernet connection then click on Ethernet under Configure Settings.
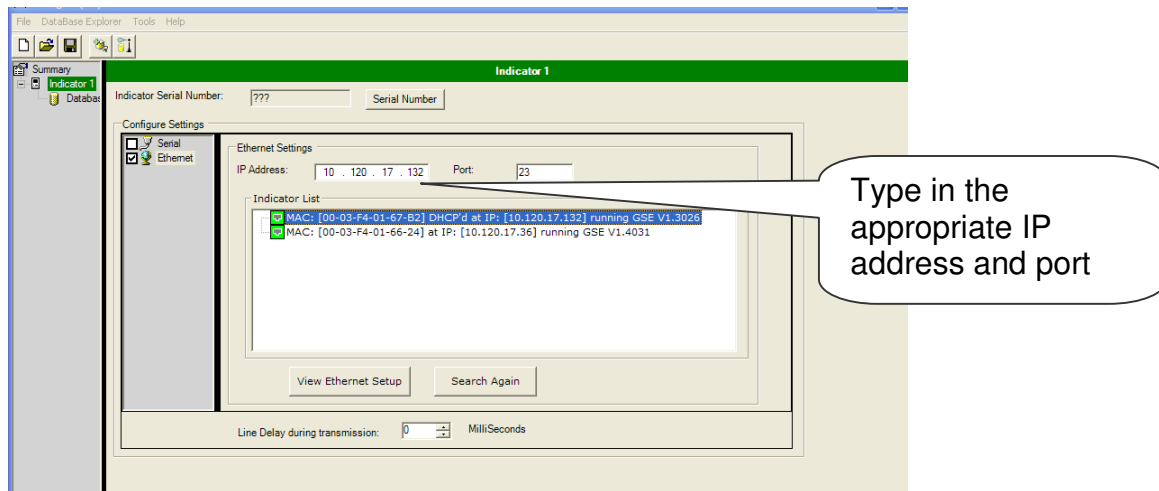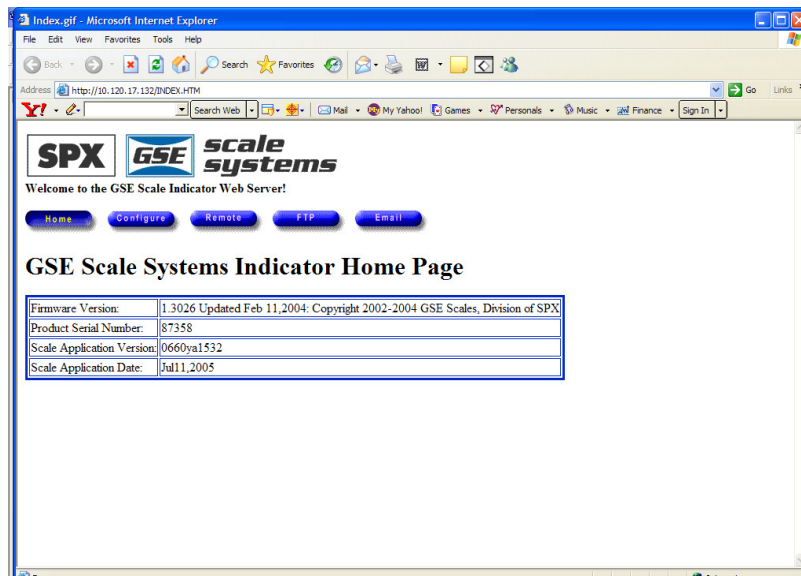
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Once Ethernet is selected, the Ethernet settings window will be opened. A list of all available Ethernet connections to indicators is in the main window

If all indicators are not listed, check to make sure they are all connected and click on **Search Again**.

Once the correct Ethernet setting is found, type in the IP address in the top left box.

To view the Ethernet setup information about a particular indicator, click on the **View Ethernet Setup** button. The GSE Web Server website will open in a new window. The Ethernet can be verified or changed on this website.

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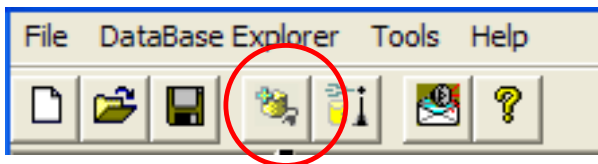
Retrieving a serial number from an indicator

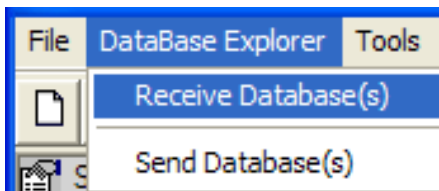To retrieve the serial number of an indicator, click on the **Serial Number** button.
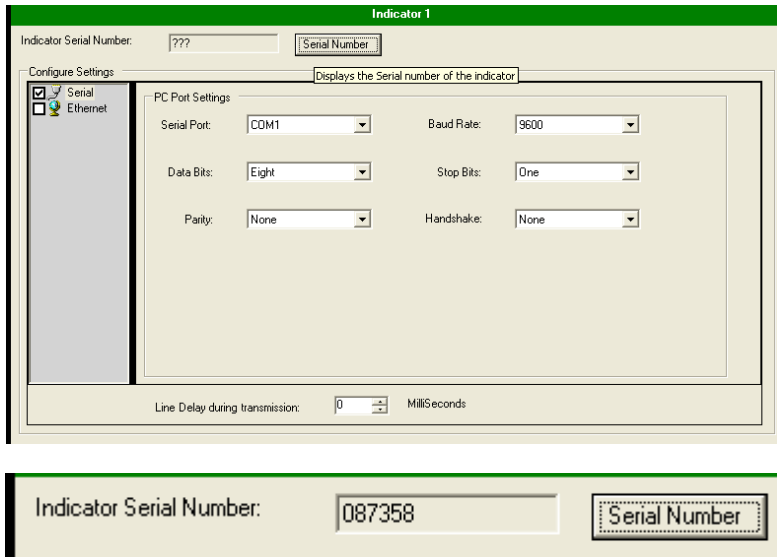
Wedge will get the serial number from the indicator and populate the entry window.

Receiving Databases

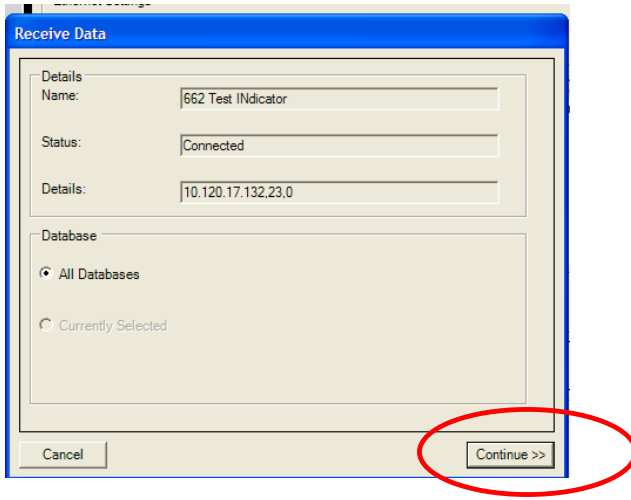To receive a database, click on the **Receive Database** button

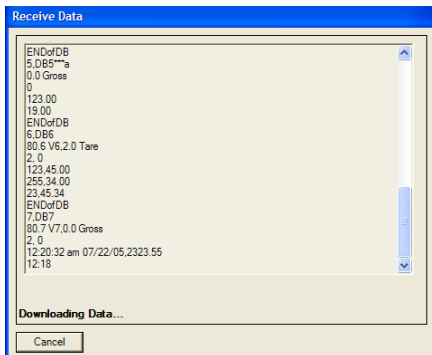Or go to **DataBase Explorer..Receive Database(s)**

A new menu will open up. The first time a database is received from an indicator, ALL databases must be downloaded (received). Once the database(s) are downloaded into Wedge, databases can be selected to upload or download.

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Verify the selections, and click on **Continue >>**
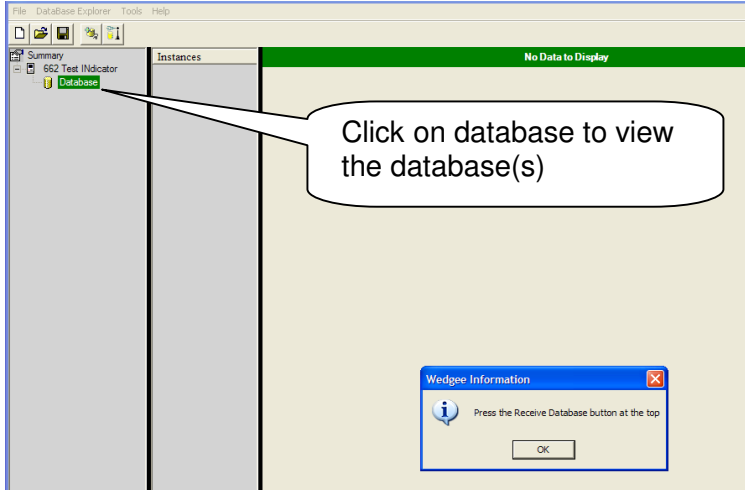

The data will download into the receive data window. Once all the data is received, this window will close and the information will be downloaded into Wedge.
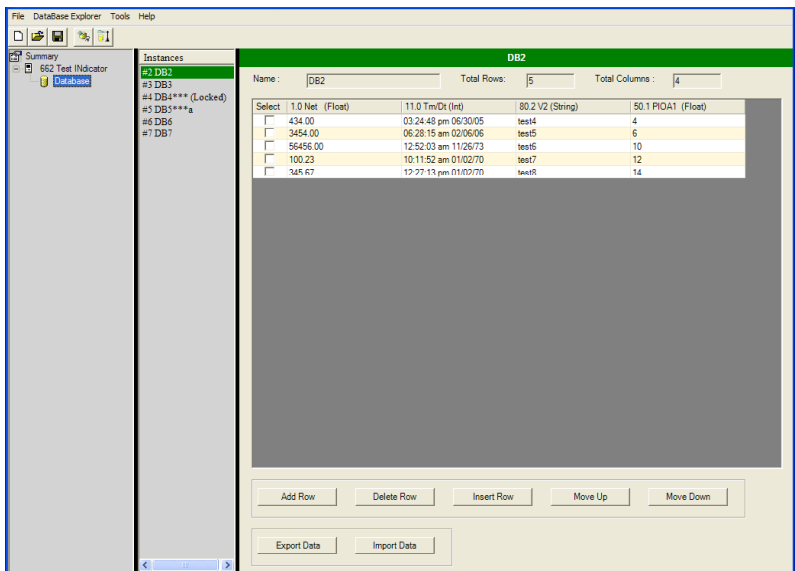
Viewing Database

To view the database(s) click on database. If no databases have been received yet, Wedge will prompt you to "**Press the Receive Database Button**".

If database(s) have been received, they will be listed under **Instances.** In this example, there are 6 databases: #2 - #7.

A database can be LOCKED so that the user can view the data, but not change it. The locked database is specified by 3 asterisks (***).

To LOCK the database, when you name the database at Parameter 700, add *** to the end of the name. For example, to lock database 1 that's named "Truck ID", change the name to Truck ID***.

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Manipulating Database

Once a database is downloaded into Wedge, the database can be managed. Unless the database is locked, you can:

Add Row: -Add a row to the bottom of the database
Delete Row: -Delete the selected row(s)
Insert Row: -Insert a row above the selected row
Move up: -Move the selected row up one
Move Down: -Move the selected row down one.

Note: When editing the data,

- Do not use double quotes (") in string values.
- Do not change the format of any date fields

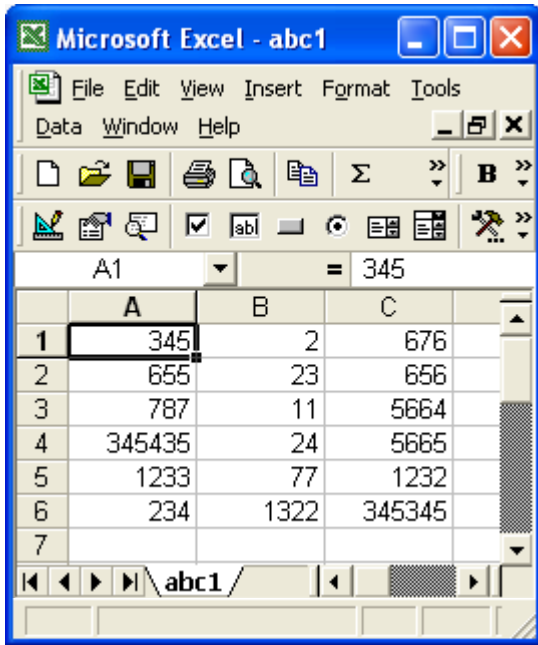If you do, the data will not transfer to the indicator correctly.

Export Data

Any one of the databases can be exported as a comma delimited file. Once saved, a spreadsheet program, such as Excel or Access, can then open this file.

To export the database, Click on **Export Data**. Wedge will prompt to save the file.
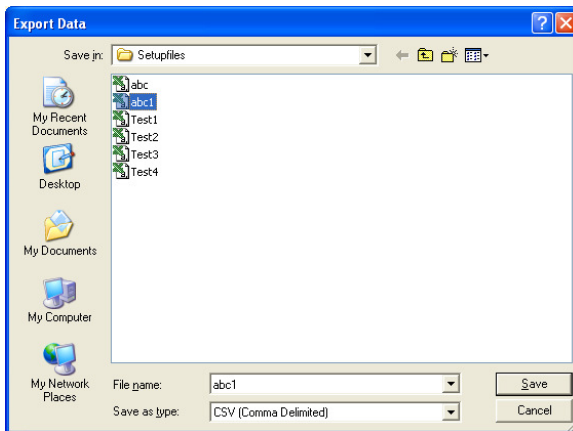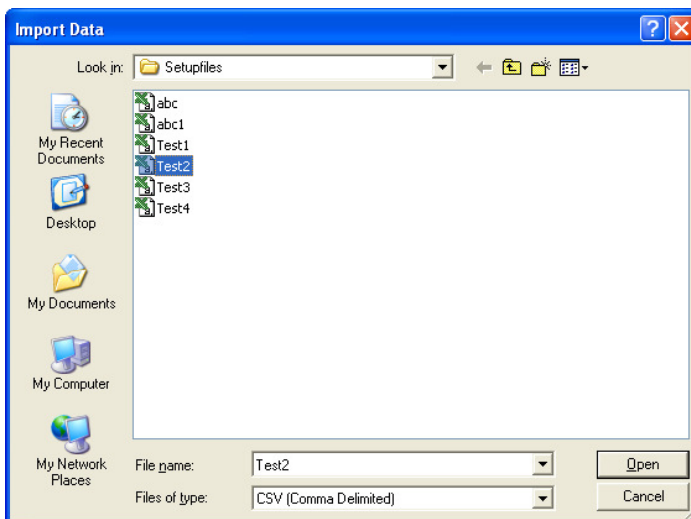
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Once the file is saved, you can open it in Excel (or Access). The data can be changed, and then sent back to Wedge.
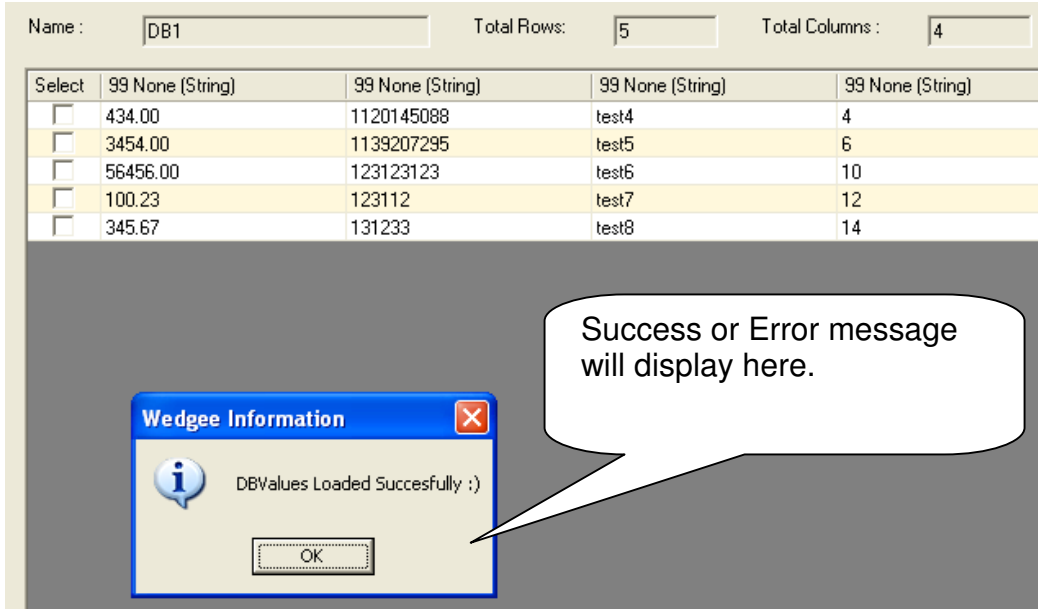
Import Data

To Import data from a comma delimited file, such as Excel, click on the **Import Data** button in Wedge.
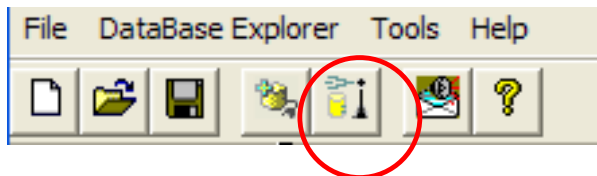

Select the correct file from the directory. The data will automatically import into Wedge. Once the data is imported, an information box will tell you that the database values were loaded successfully.

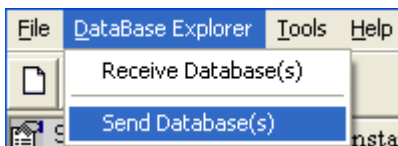Success or Error message will display here.

Sending a database

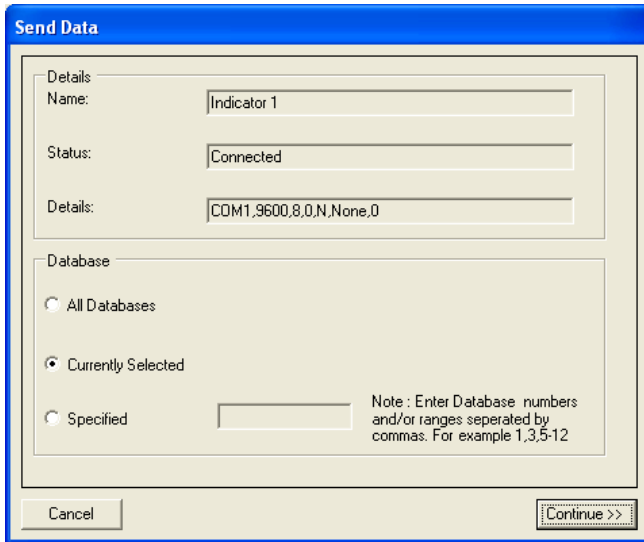To send a database to the indicator, click on the **Send Database Seed Values** button

Or go to **DataBase Explorer..Send Database(s).**
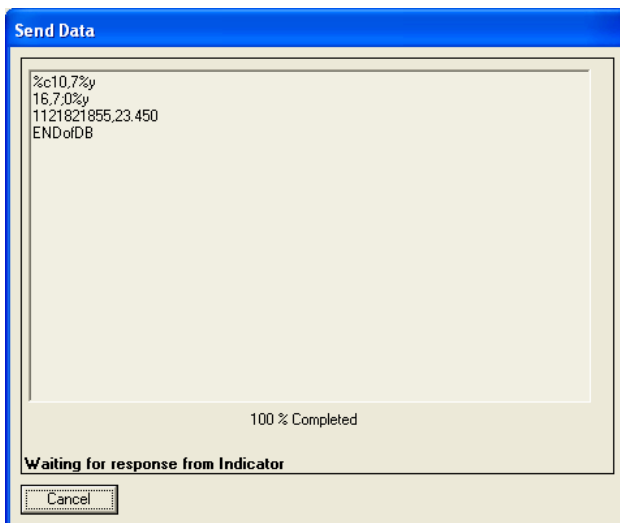
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From the Send Data box, there are few options to send the database(s) to the indicator:

- Send all databases
- Send the current database
- Specify the database(s) to send.

Remember, that if a database is locked, the values will NOT be updated in the indicator.

If any errors occur, an information box will show an appropriate error message.

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Database Errors

Below is a list of possible database errors

- Bad entry (invalid entry type)
- Invalid database specified (database not defined)
- Invalid column specified (column not defined)
- Record not found
- Not enough memory
- Checksum error (row contains corrupt data)
- List corrupt (bad link - list of stored rows not intact)
- Operation aborted (i.e. search, print, sort, upload)
- ID too long (entry exceeds maximum string length)
- Data type mismatch
- Greater than maximum number of row allowed
- Invalid data type (string stored in numeric parameter; results in '0' stored for numeric parameter)
- Extra characters found (string characters found when numeric-only data was expected)
- Not enough columns / row received during database upload
- Too many columns / row received during database upload
- Greater than maximum number of columns found (likely due to missing <CR> at end of each data row)
- Value in column could not be recalled into the column's parameter (example: invalid parameter instance such as P90.1 where macro #1 is not menu enabled and therefore cannot be assigned a name).

Data Collection

To collect data, real time, from an indicator (usually through a custom transmit), use the Data Collection tool.   It writes the data over an RS232 or Ethernet link to a .csv file. The data can be formatted to a comma-delimited format. The data can be saved to a file, or just tracked within Wedge's **Log Window**.

Setting up data collection for an indicator

To set up how the data will be collected, go to the indicator screen. The setup parameters are at the bottom half of the window.

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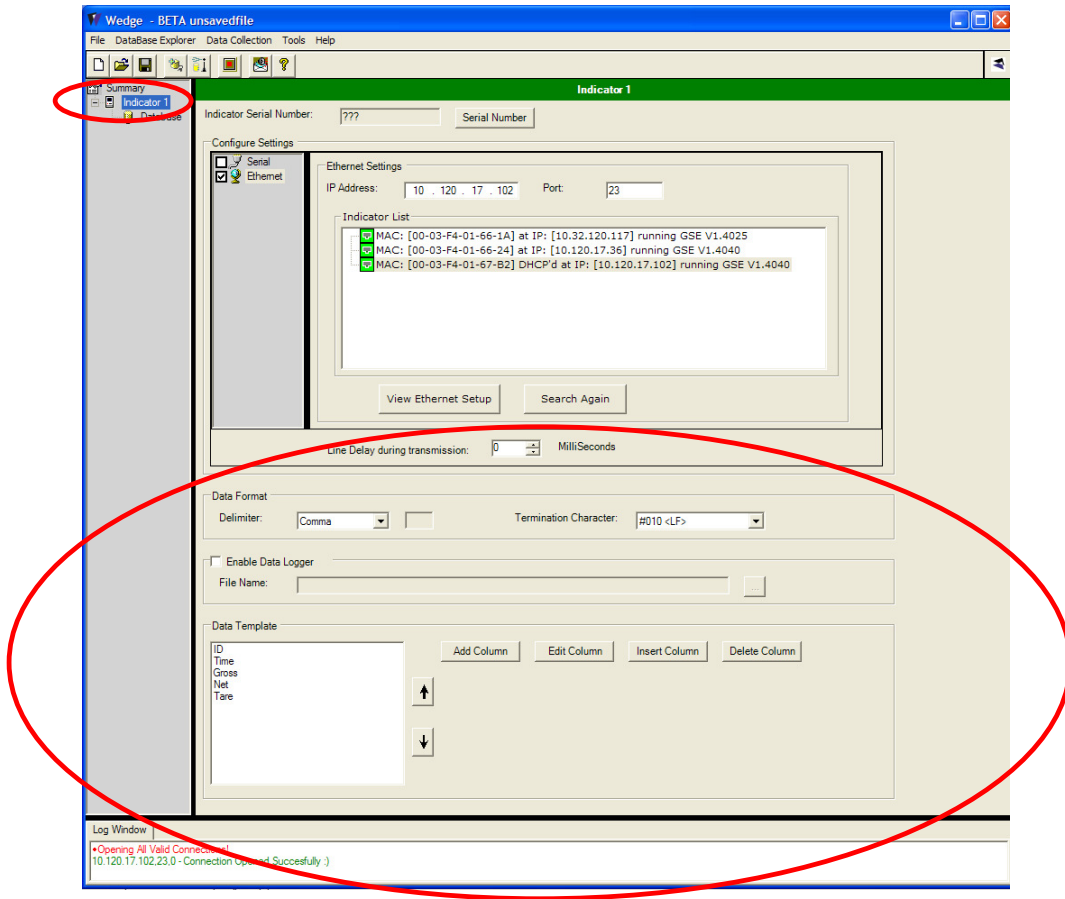
Change the parameters for the **Data Format**, the **Data Logger** and the **Data Template** as required

Data Format

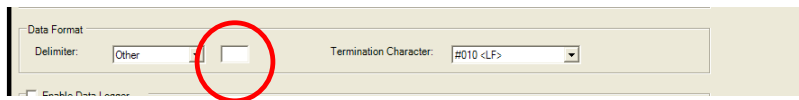To format how the data coming from the indicator is to be formatted (from text to a table format), use the Data Format parameters. The **Data Format** parameters ask for the delimiter and the Termination Character.

The choices for the Delimiter are:

- Comma
- Tab
- Semi Colon
- Space
- Other

If Other is specified, specify the character in the box to the right.

When Wedge receives the specified Termination Character from the indicator, then it will start a new line.

A common example would be to have the Termination Character set to a Carriage Return. Then every time the custom transmits sends a carriage returns, the data coming into wedge will start a new line.
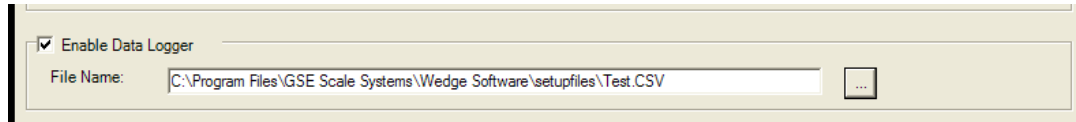
The data will be collected in the **Log Window** at the bottom of the window.
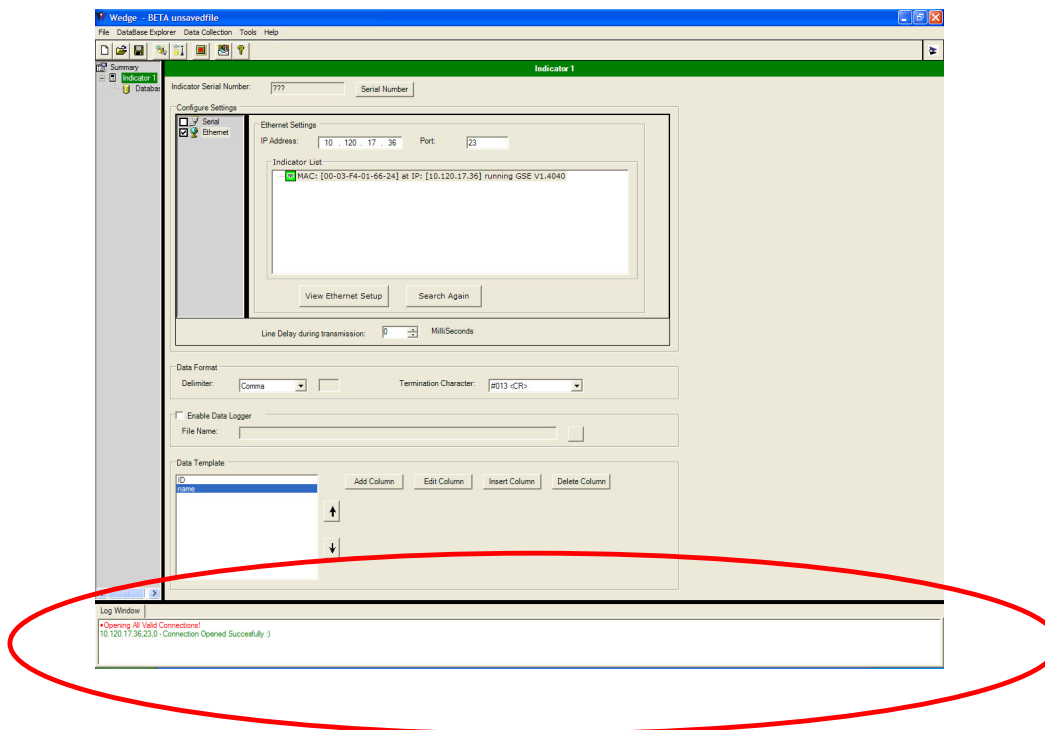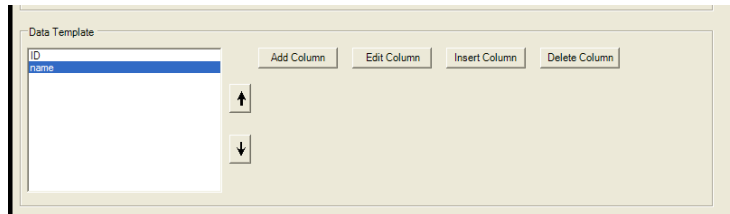
Enable Data Logger

To save the incoming data to a file, enable the **DataLogger**, and provide a file name.

Data Template

The **Data Template** allows you to format the incoming data into a table-format, including column headings.

To add column headings, click on the **Add Column** button.
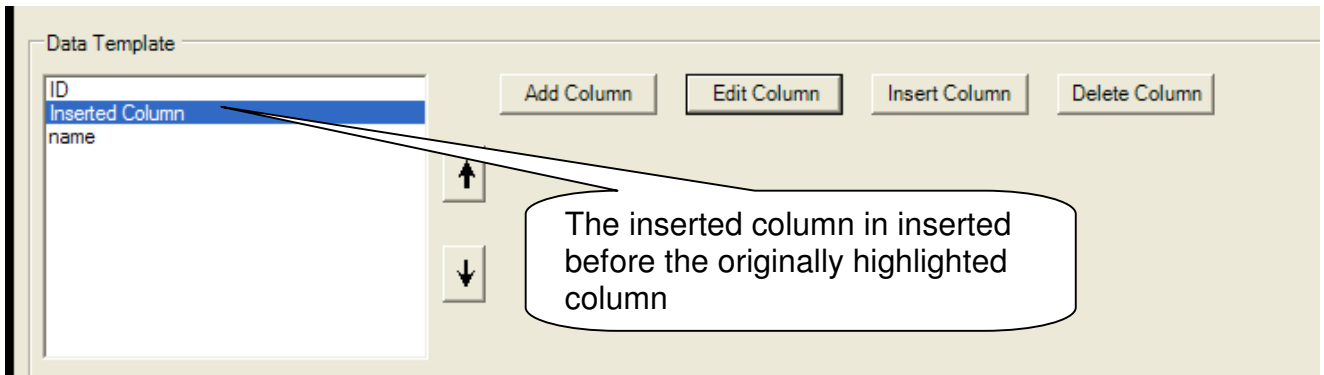
To change or edit a column heading, highlight the column you want to change and click on **Edit Column***.*

To insert a column, highlight the column that's just below where you want to insert the column, then click **Insert Column**.

For example, to insert a column between ID and name, highlight name and click on **Insert Column***.*

Click on **Insert Column**

Add the new column name

The inserted column in inserted before the originally highlighted column
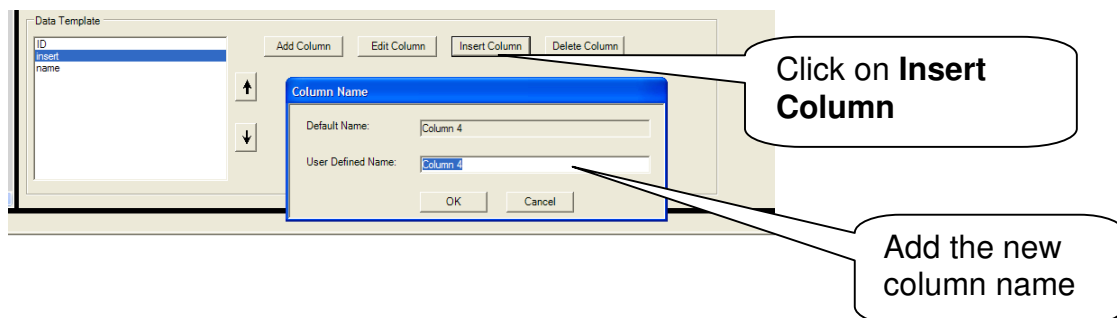
To delete a column, highlight the column you want to delete, and click on **Delete Column.**

Start Data Collection
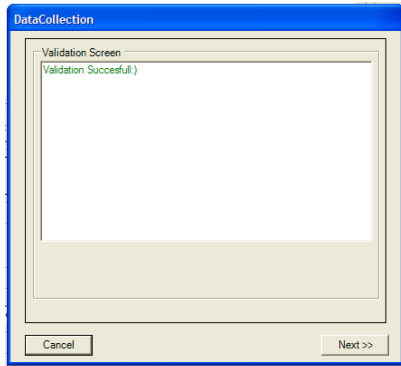To start collecting data go to Data Collection in the toolbar, or click on the **Data Collection** button.
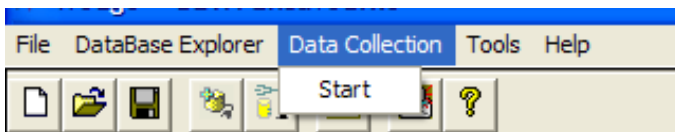
The Data Collection window will open. Select the indicator from the Indicator List, then click on the **Next>>** button.

Select the desired indicator, and then click **Next>>**
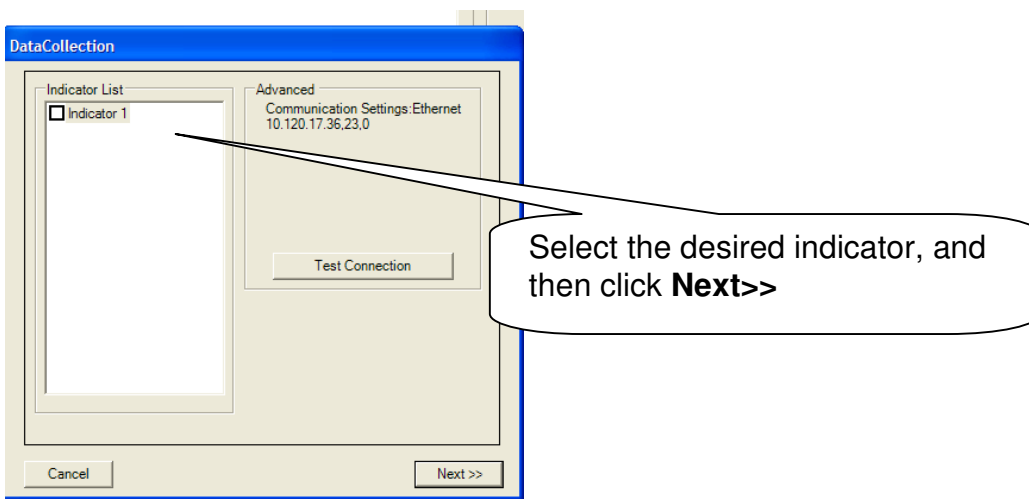
The Data Collection window will then show if the connection was successful.
Click on the **Next>>** button.

The data will start being shown in the **DataLog** at the bottom of the window.

Stop Data Collection

To stop the data collection, click on the **Data Collection** button or the **Data Collection Menu…Stop**.
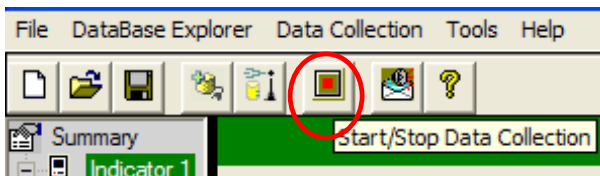
Wedge ActiveX Client

The Power of ActiveX lets you view, and write data at the same time, which is coming from an indicator into an Excel spreadsheet, or Access Database. ActiveX Client uses Visual Basic (VBA) commands supported by Microsoft office at the same time.

To use the Active X control, start Excel or MS Access.

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Control Toolbox

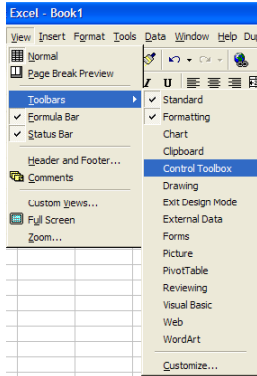If the control toolbox is not visible, turn it on by using the **View** menu. Go to the **Toolbars** submenu and select the **Control Toolbox** (it should have a check beside it if it is selected).

A toolbar with several control buttons should appear. These are the standard controls and tool buttons from Visual Basic in Excel.

Use the design mode button
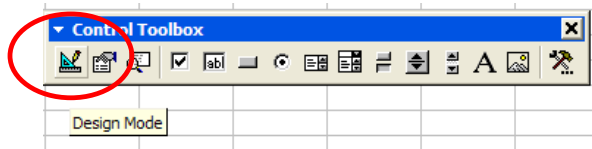
To switch to design mode (it should change appearance when you click on it and the tool tip should read "Exit Design mode" now because it will exit design mode if you click on it again!)

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Once you are in design mode, click on the **More Controls** button (hammer and wrench).
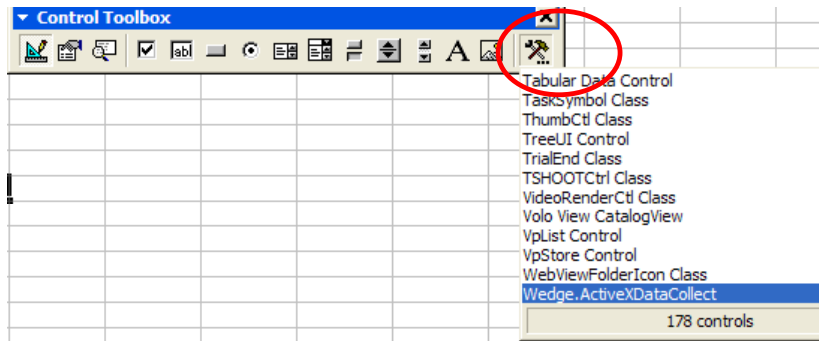
ActiveX Controls

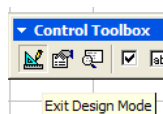A list of all of the ActiveX controls registered to the PC will appear. You should be able to scroll through the list and find '**Wedge.ActivexDataCollect**' control

To add a control, double click on the **Wedge.ActiveXDataCollect.** A copy of the control should then appear in the spreadsheet. (The box handles indicate that you are still in design mode and the control has focus)

Box handles
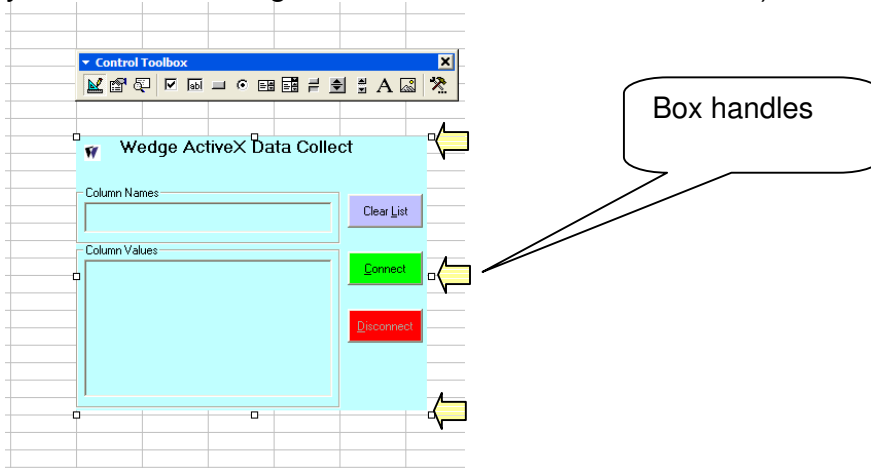
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When the control has focus, you should be able to click on the **Properties** button (the finger pointing to the page) and the properties for the selected control should appear.

Click these 3 dots to view the Property Page of ActiveX
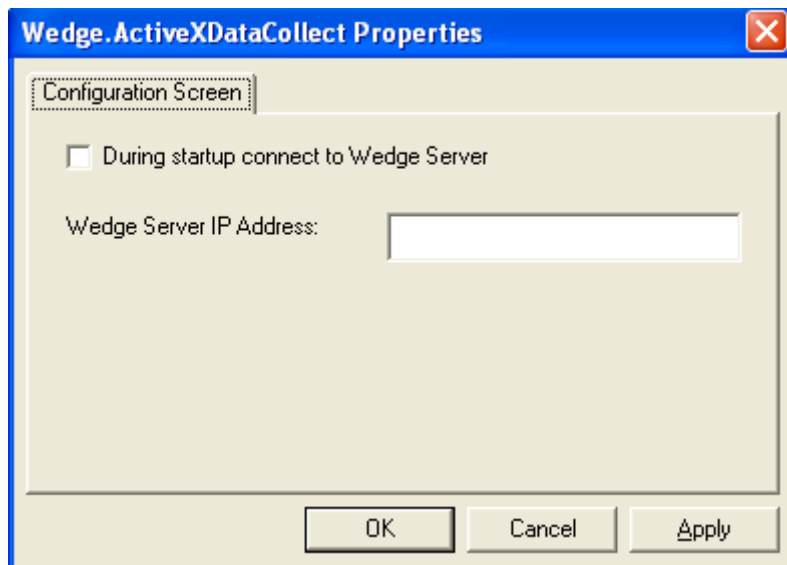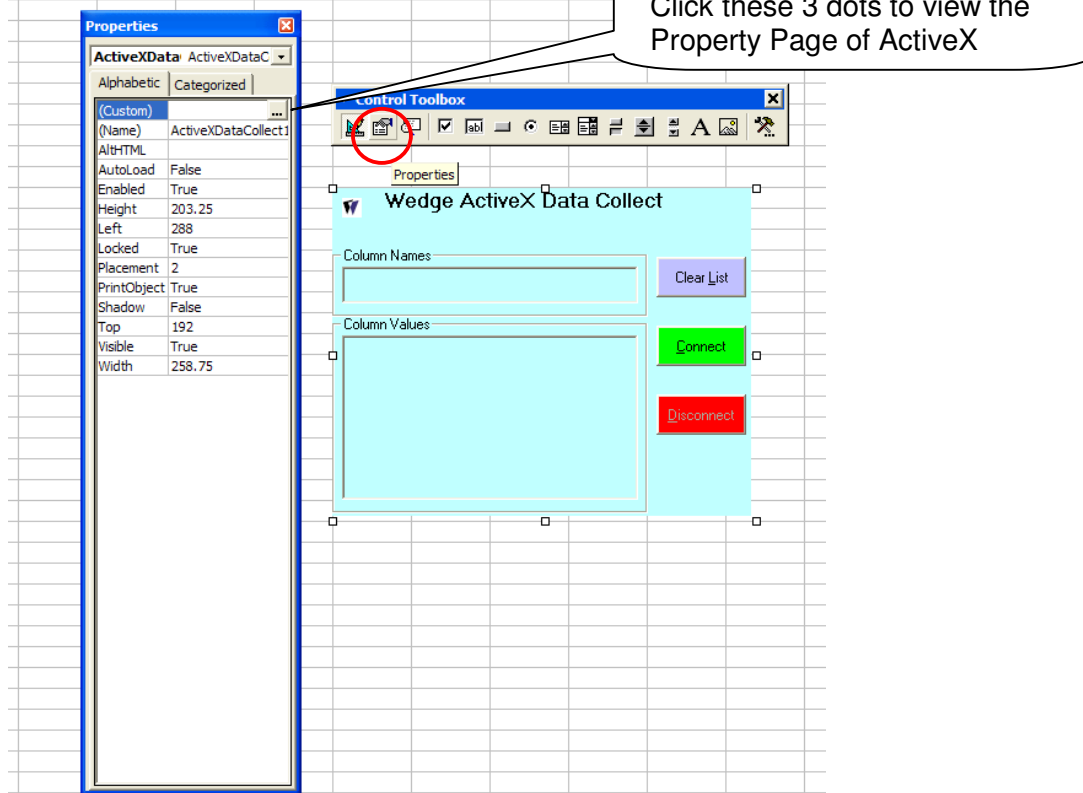
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The Wedge ActiveX Property page contains Configuration Screen that has 2 properties.

- **During startup connect to Wedge Serve**r: As the name implies this property will let the Wedge ActiveX Client try to connect to the Wedge Server during Startup if is running.
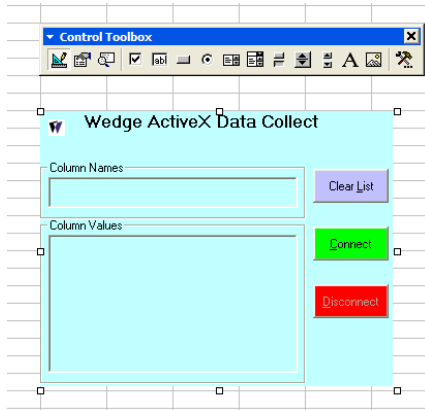- **Wedge Server IP Address:** The Wedge ActiveX client can run in the same machine where the Server is running or in a different machine. For it to run in a different machine the user has to specify the IP Address of the PC on which Wedge Server is running before clickin the Connect Button.

View Code
The **View Code** (magnifying glass over a page) is used to write commands back (by using command button "click" events) to the indicator through the **Wedge.ActivexDataCollect.**
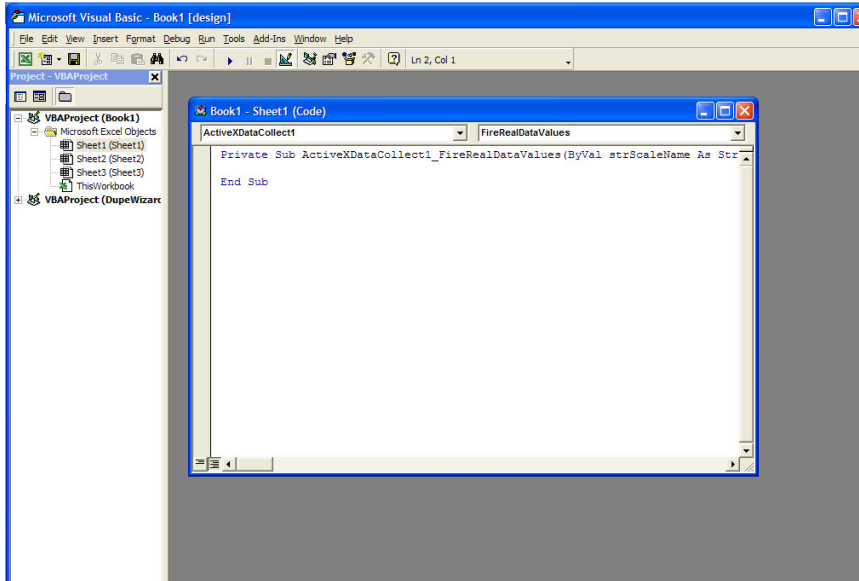
Click on the **View Code** button.

The display window will switch to a VBA code view. The cursor will appear in the command button code area.

It will read something like:
"Private Sub ActiveXDataCollect1_FireRealDataValues(ByVal strScaleName As String, ByVal arrValues As Variant)".

The cursor will be inside this code area.

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You can now write code to execute the required command. This is standard VB syntax for code written for any ActiveX control.

To return to the Excel spreadsheet, click on the **Excel** button on the toolbar under the menu bar.
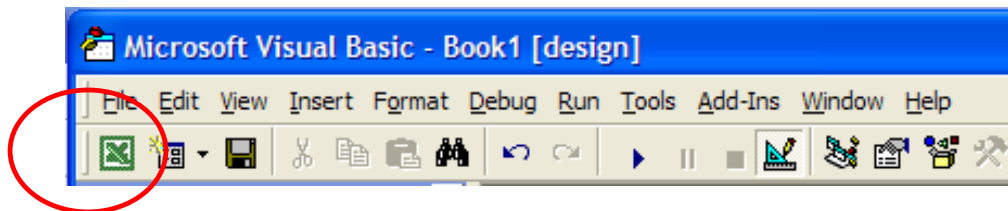
Once you have added all the controls and code that you wish to use, exit the design mode by clicking on the Design Mode button again. Click the **Connect button** that takes the ActiveX control to "live" mode and you should receive data.

Sample VBA Code for Excel & Access:

Below are examples of Visual Basic code. One is for Excel, and the next one is for Access.

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Sample VBA Code for Excel:

```vba
Dim nSheetRow1
Dim CellRange
Dim RowCount, ColumnCount
Private Sub ActiveXDataCollect1_FireColumnNames(ByVal strScaleName As
String, ByVal arrColumns As Variant)
Dim FirstCol As Integer

Dim nColRow As Integer
Dim strColName As String
FirstCol = 1
nColRow = 1
Dim element As Variant
For Each element In arrColumns
    strColName = element
    Sheet1.Cells(nColRow, FirstCol) = strColName
    FirstCol = FirstCol + 1
Next element
End Sub


Private Sub ActiveXDataCollect1_FireRealDataValues(ByVal strScaleName As
String, ByVal arrValues As Variant)
Dim StartCol As Integer
Dim strColVal As String
StartCol = 1
Set CellRange = Sheet1.UsedRange
RowCount = CellRange.Rows.Count
ColumnCount = CellRange.Columns.Count

If nSheetRow1 = 0 Then
nSheetRow1 = 2
End If
If nSheetRow1 = RowCount Then
Debug.Print "Reached Maximum"
GoSub 1
End If
Dim element As Variant
For Each element In arrValues
 strColVal = element
    Sheet1.Cells(nSheetRow1, StartCol) = strColVal
    StartCol = StartCol + 1
Next element
nSheetRow1 = nSheetRow1 + 1
Worksheets("Sheet1").Activate
```

```
ActiveWindow.SmallScroll down:=1
1: 'Don't do anything
End Sub


Private Sub ActiveXDataCollect1_FireServerStatus(ByVal bRunning As Boolean)
If (bRunning = False) Then
Debug.Print "Server is Down"
End If
End Sub
```

Sample VBA Code for Access:

```
Option Compare Database
Private Sub GeneralInfo1_FireRealDataValues(ByVal strScaleName As String,
ByVal arrValues As Variant)
Dim db As DAO.Database
Dim rs As DAO.Recordset

Set db = CurrentDb
Set rs = db.OpenRecordset("General")
If (rs.RecordCount > 0) Then
rs.MoveLast
End If

rs.AddNew
rs("ScaleName") = strScaleName
Dim element As Variant
Dim strTemp As String
For Each element In arrValues
If strTemp = "" Then
strTemp = element
Else
strTemp = strTemp + "," + element
End If
Next element
rs("ScaleValues") = strTemp
rs.Update
rs.Close
db.Close
End Sub


Private Sub GeneralInfo1_FireServerStatus(ByVal bRunning As Boolean)
If (bRunning = False) Then
MsgBox "Server is Down"
End If
End Sub
```