

Introduction

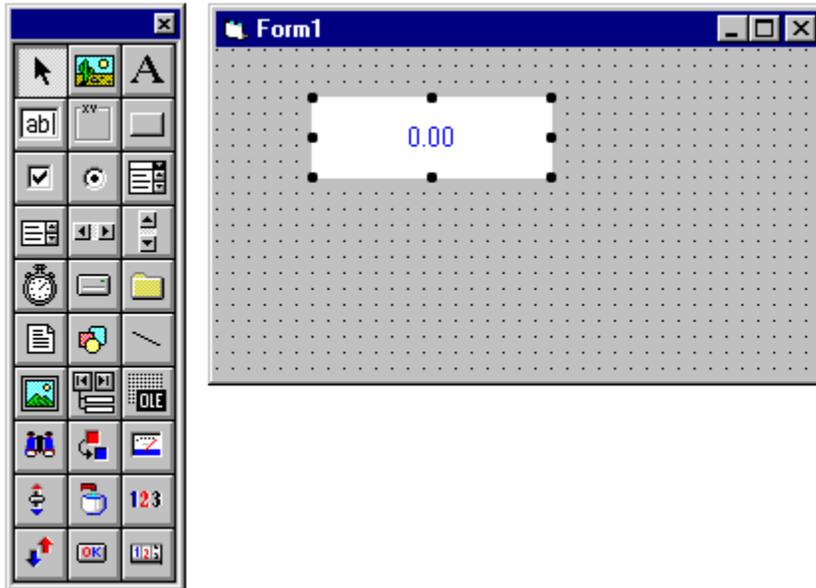
[Properties](#)

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Description

RSTools is a unique line of graphical OLE Custom Controls that let you turn any data into a dynamic picture. You can easily add a professional “custom” look to all interface and data management projects. RSTools are the fastest, easiest-to-use programming tools for developing applications for manufacturing and process control and they give you the power to build graphical database interfaces that tell the story in a flash.



File Name

RSBTN32.OCX
RSCMP32.OCX
RSDAT32.OCX
RSGGE32.OCX
RSSLD32.OCX
RSVSL32.OCX
RSWHL32.OCX

Remarks

The RSTools controls have several custom properties that allow you to monitor and control data. The RSTools controls also have custom events that allow you to be notified when data has changed, or if data has finished its request or poke.

Note When you create and distribute applications that use the RSTools controls, you should install the appropriate OCX files in the WINDOWS \SYSTEM subdirectory. A more detailed description of these files are located on page 9 of this chapter. The Setup Wizard included with Visual Basic provides tools to help you write setup programs that install your applications correctly.

Basic Concepts

- The RSTools controls are designed to be used with any Dynamic Data Exchange Server and provide enhanced performance when used with those that conform to AdvanceDDEprotocol. If you choose to write your own DDE server, the AdvanceDDE protocol can be obtained from Rockwell Software Inc., by contacting our Technical Support.
- The RSTools controls can be easily configured by setting their properties, without writing a single line of code.
- The RSTools controls can be used as a bound control. They automatically handle adding, updating and displaying data from the Data control, which supports ODBC, Microsoft Access• , dBASE• , Foxpro• , Paradox• , Btrieve and several other database types.
- The RSTools controls also support the Paste Link method from RSLinx or Wintelligent Linx, Excel or other DDE servers for transferring DDE Link data via the clipboard.
- The RSTools controls have built in error notification and handling. If an error has occurred in the data stream, the error can be displayed in the control's Caption property, or handled via code in one of the events.
- With RSTools you may consider using RSJunctionBox - Our flexible, high-speed DDE communications module. RSJunctionBox allows all of our controls to communicate with DDE Servers supporting AdvanceDDE and Excel Table formats.

Bound XE "Bound" Properties

The RSTools controls have three bound properties: **DataUpdate**, **DataField** and **DataSource**. This allows the RSTools controls to be linked to a Visual Basic Data control or Remote Data Control, and display field values for the current record in the recordset. The RSTools control can also write values to the Data control's recordset.

Note *For more information on using bound controls, refer to Accessing Databases With the Data Control, in the Visual Basic Programmers Guide.*

Properties & Events

All of the common properties, events and methods for the RSTools controls are described in chapters 5, 6 and 7 of this manual, respectively. The RSTools controls also come with many standard properties. For documentation of these properties, see "Standard Properties, Events, and Methods." in the Microsoft Visual Basic *Custom Control Reference*.

Installing the RSTools

You can install the RSTools controls on your computer using Rockwell Software's SETUP.EXE. The setup program installs all RSTools files, the Help system and other product components from the distribution disks to your hard disk.

System Requirements

Before you install RSTools, make sure that your computer meets the minimum system requirements. You must have certain hardware and software installed on your computer. The system requirements include:

Minimum Requirements

- IBM-compatible 486 or higher
- 8 MB of RAM
- 10 MB of free Hard Disk space
- A 3.5" floppy drive
- VGA Graphics Card
- Microsoft Visual Basic 4.0, Microsoft Access, or other OLE Container.

Note: This manual references Visual Basic only.

- Microsoft Windows NT 3.51 or Windows 95

Recommended Requirements

- IBM compatible Pentium
- 16 MB of RAM or more
- 30 MB of free Hard Disk space
- CD-ROM
- Color (800x600) or (1024 x 768)
- Any Microsoft compatible pointing device (mouse, trackball, touchscreen, etc.)
- Microsoft Visual Basic 4.0, Professional Edition or the Enterprise edition
- Microsoft Windows NT 3.51 or Windows 95

RSTOOLS.WRI File

The RSTOOLS.WRI file lists any last minute changes to the RSTools documentation, Help file and to the RSTools controls. To read the file, open the Windows Write application or double-click the **RSTOOLS.WRI** file using File Manager or Windows Explorer in the following directory C:\RSWKSHOP\RSTOOLBX.

Running Setup

When you run the setup program, you will create a path for RSTools.

To Start Setup:

1. Insert Disk 1 in drive A.
2. From the file menu in Program Manager or File manager, choose Run.
3. Type a:setup
4. Follow the setup instructions on the screen.

The RSTools program group is created in your Program Manager or placed in your Windows 95 Start Menu. The Help file, RSTOOLBX.WRI file and sample applications are also copied to this program group.

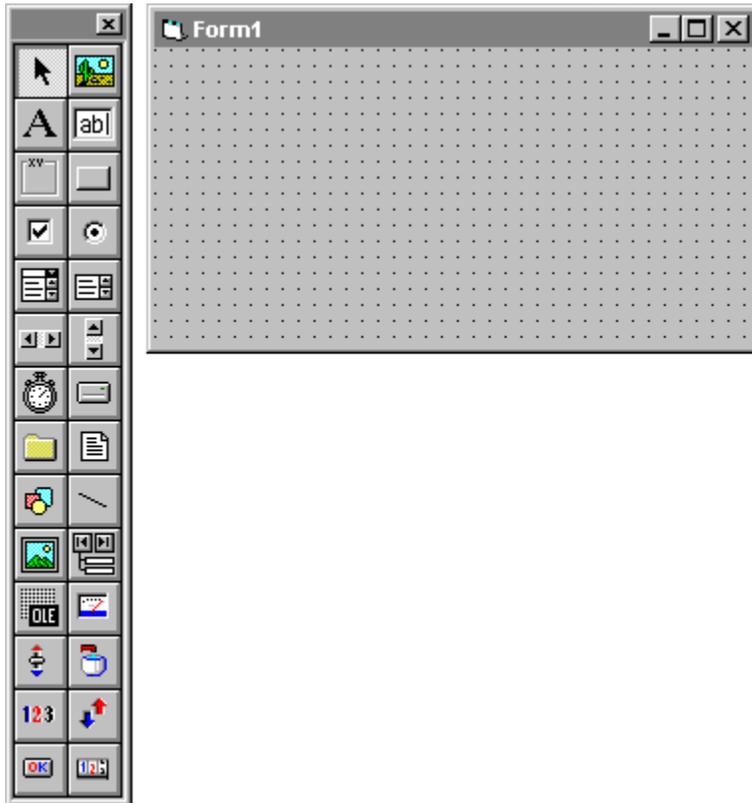
Learning To Use RSTools

The RSTools controls require very little programming to create full-featured applications. Much of the functionality is available by setting standard properties. You can even log data seamlessly through the Visual Basic Data control or Remote Data control with only a few lines of code.

Loading RSTools Controls (Adding RSTools to your VB Project)

To use RSTools in Visual Basic, you must add the RSTools controls to the Visual Basic toolbox.

1. Start Visual Basic.
2. From Visual Basic, select Tools/Custom Controls menu item.
3. Scroll down the list box until one of the "Rockwell Software" OCX tools is visible, select the desired control, and choose OK. (You may have to click the Browse button and manually search for the OCX file, which will be located in the C:\WINDOWS\SYSTEM directory.) The control is added to the project list. A list of the files are on the next page.



1. The RSTools icons are added to the Visual Basic Toolbox.

Autoloading RSTools

You can configure Visual Basic to automatically load the RSTools controls when you start a new project in Visual Basic.

To configure Visual Basic to automatically load RSTools:

1. Start Visual Basic and open AUTO32LD.VBP.
1. Choose Custom Controls from the Tools menu. (The “Custom Controls” Dialog appears.)
2. Scroll down the list box until the “Rockwell Software” OCX tools are visible, select the desired controls, and choose OK. (You may have to click the Browse button and manually search for the OCX files, which will be located in the C:\WINDOWS\SYSTEM directory). The controls are added to the project list. Here is a list of the current OCX files:

<u>1.OCX</u>	<u>Filename</u>	<u>Description</u>
RSButton	RSBTN32.OCX	Rockwell Software Button
RSCmpare	RSCMP32.OCX	Rockwell Software Compare
RSDData	RSDAT32.OCX	Rockwell Software Data
RSGauge	RSGGE32.OCX	Rockwell Software Gauge
RSSlider	RSSLD32.OCX	Rockwell Software Slider
RSVessel	RSVSL32.OCX	Rockwell Software Vessel
RSWheel	RSWHL32.OCX	Rockwell Software Wheel

1. Choose Save Project from the File menu.

Using Help

Comprehensive on-line help is available to assist you as you learn and use the RSTools controls. The complete RSTools documentation is available through on-line help. In addition, you can receive context-sensitive help for properties and events. The Help file is located in your RSTools directory.

To access the help contents page:

1. Click one of the RSTools icons in the Visual Basic toolbox.
2. Press F1.

To access context-sensitive help for properties:

1. Select an RSTools control on your form.
2. Highlight a property in the properties window.
3. Press F1.

To access context-sensitive help for events:

1. Double-Click an RSTools control on your form.
2. Pull down the procedure Combo-Box, labeled "Proc:", and select an event from the list.
3. Press F1.

Placing an RSTools Control on a Form

Creating a new instance of an RSTools control and placing it on a form is as simple as point, click and drag.

1. Select an RSTools control from the Visual Basic toolbox.
2. Position the mouse on the form at the location where you want to draw the control.
3. Click and drag to draw the outline of the RSTools control on the form.
4. When you release the mouse, the new RSTools control is placed in the location you specified.

Note

By double-clicking on the control within the toolbox, the control will automatically be placed in the center of the form.

Distributing RSTools Applications

Please read the license agreement that was shipped with this package. You are bound by the licensing restrictions contained in that document.

Redistributing Files

You can use all the files accompanying this product for development of an application. You can redistribute the run time version of the software according to the terms of the license agreement.

You will need the individual OCX file for each OCX that you use and the following table of files:

File	Description
RSTOOL32.DLL	Common code for Design & Run modes
RSCALC32.DLL *	Calculation engine for Read/Write expressions
RSJBOX32.DLL *	RSJunctionBox module
RSJBP32.DLL*	RSJunctionBox License Check DLL

Note * *These files are optional when distributing applications. The RSCALC32.DLL is used for calculating expressions in run time. The RSJBOX32.DLL is needed only if AdvanceDDE is required during runtime. And the RSJBP32.DLL is the run time license check.*

INI Files

RSTools supports its own INI file used mostly for testing purposes. It allows you specify which DDE protocol to use; AdvanceDDE, XLTABLE or TEXT mode. You have the options to turn these on or off; the default setting is True (on) for all modes. To create a INI file for RSTools, you must use a text editor and add the following lines:

```
[Values]
;Force Text mode DDE
Support Excel = False
Support PackDDE = False
```

Then save the file in the C:\WINDOWS directory as "WORKLIST.INI". The above example disables the XLTABLE and AdvanceDDE modes, leaving the TEXT mode as the only mode to operate in.

Sample Applications

In addition to the documentation, the RSTools package includes sample applications that you can load into Visual Basic. These applications are useful, and are excellent tools to learn from. You may use any part of the samples in your own applications.

Note *Throughout the documentation, you will find references to sample code and applications that illustrate programming techniques. Many of the files for these applications are included on your installation disks. If you installed the sample applications, you will find them in the C:\RSWKSHOP\RSTOOLBX\DEMO\ subdirectory, or the drive you choose for the installation. You will also find some code examples in the RSTools help file, that you can copy and paste into your forms and subroutines.*

Programming Tools

RSTools provide several custom properties and standard properties. By setting these properties, you can perform a variety of tasks, such as hiding and displaying controls, setting DDE properties or binding to a database.

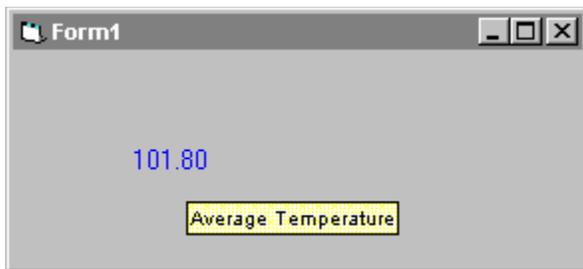
Contents

- Link Tips
- Excel Blocks
- AdvanceDDE Arrays

LinkTips

The LinkTips property can be a very useful tool during run time. It allows you to create a help balloon to display useful information. It will also display the property settings for the LinkServer, LinkTopic and LinkItem all at once. The controls have four properties associated with the LinkTips function:

- LinkTip (True\False) - The LinkTip property allows you to turn it on or off during run time.
- LinkTipText - Displays text in a popup window next to the control. (A help balloon).
- LinkTipBackColor (any color value) - The LinkTipBackColor property allows you to change the background color of the LinkTip window.
- LinkTipForeColor (any color value) - The LinkTipForeColor property allows you to change the text color of the LinkTip window.



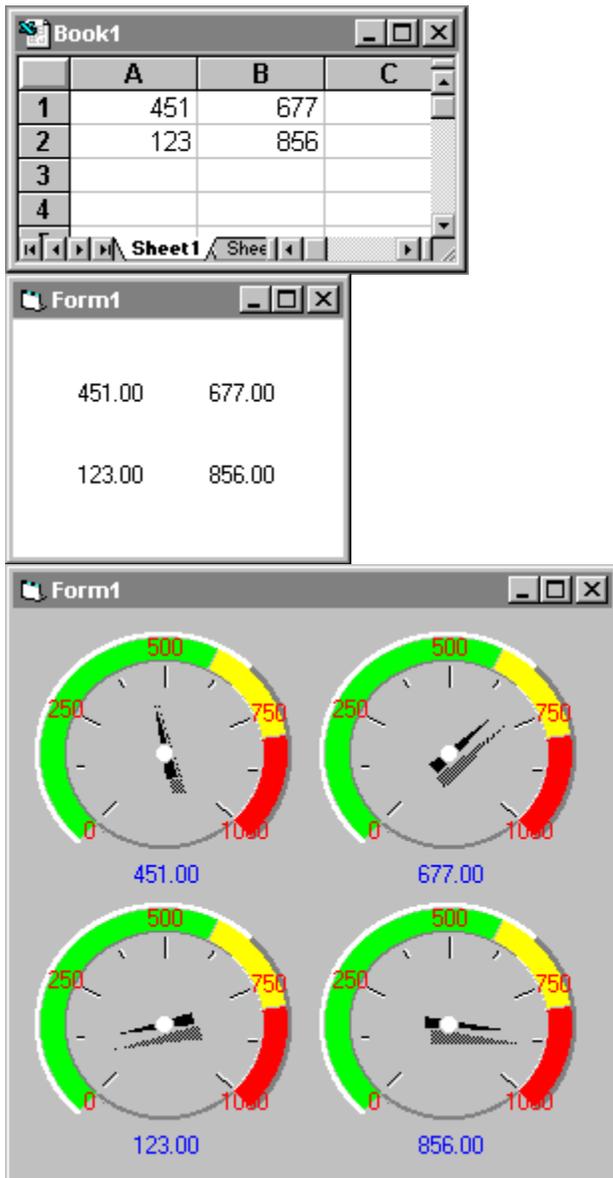
Note

Refer to the LinkTip property in the property reference for more information on the LinkTip property's attributes.

Excel Blocks

A very useful tool that the control supports is its ability to poke or request data to Microsoft Excel, one word at a time or as a large block of data. Below is one possible example for configuring a block read from Excel (Using RSDData as an example).

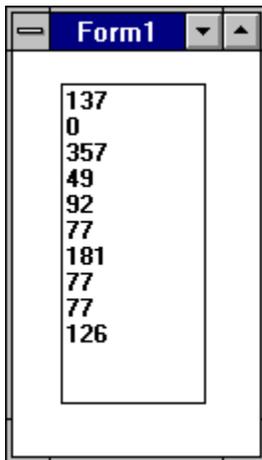
```
rsdata1.LinkServer = "Excel"  
rsdata1.LinkTopic = "[Book1]Sheet1"  
rsdata1.LinkItem = "R1C1:R2C2" 'Read 4 cells of data  
rsdata1.DoRequest = True
```



AdvanceDDE Arrays (Optional: Requires RSJunctionBox)

AdvanceDDE arrays are very useful when accessing large amounts of data from a server. The easiest method is to use DDE block arrays as shown below.

```
rsdata1.LinkServer = "icomwdrv"  
rsdata1.LinkTopic = "testsol"  
rsdata1.Linkitem = "N7:0,L10"  
rsdata1.LinkMode = 1
```



Note

This functionality (AdvanceDDE) requires a Rockwell Software serve product, RSServer Toolkit partner server product, or a self-built AdvanceDDE server as the data link source.

Using DDE (Linking)

DDE stands for “Dynamic Data Exchange”. It is a feature of the Microsoft Windows operating system that enables two applications to “talk” to each other by continuously and automatically exchanging data.

Rockwell Software has created a DDE format called AdvanceDDE. AdvanceDDE packetizes information, which greatly increases the speed at which data can be exchanged.

Contents

- Sources and Destinations
- Applications, Topics and Items
- Linking DDE within RSTools Controls
- DDE Links
- Link Modes
- Creating Links
- Requesting and Poking Data
- DDE Arrays
- RSTools Control Arrays
- Using DDE Block Arrays with RSTools

Sources and Destinations

Two applications exchange information using a DDE conversation. This is similar to a conversation between two people. The application that initiates the conversation is called the **destination (client)** application, the application that responds to the client is the **source (server)** application. An application can be engaged in several conversations at the same time, acting as the destination in some and the source in others. The RSTools controls are designed to be used as clients only.

Applications, Topics and Items

When a destination application begins a DDE conversation, it must specify three things:

1. The name of the source application (program), called the *application*.
2. The subject of the conversation, called the *topic*.
3. The specific data requested, called the *item*.

When a source application receives a request for a conversation concerning a topic it recognizes, it responds and a conversation is started. Once established, a conversation cannot change application or topics. The application and topic remain constant for the duration of the conversation. You must first deactivate any links to change the application or topic.

Data values are passed through *items*. Items are references to data that is meaningful to both applications. Either the destination or the source can change the value of the item without affecting the state of the conversation.

Application name

Any application that can be a DDE source has a unique *application name*. Some examples are shown below.

Application	DDE application name
RSLinx or Wintelligent Linx	ICOMWDRV
Microsoft Excel	EXCEL
Microsoft Word	WINWORD

To set the application name for a control, you must set its **LinkServer** property to valid server name. One example for the **LinkServer** name could be “ICOMWDRV”; another would be “EXCEL”.

Topic

The topic defines the subject of a DDE conversation. In the case of Rockwell Software’s RSLinx or Wintelligent Linx, a topic name would most likely be the name of a PLC program running somewhere on your PLC network. If you were using Excel the LinkTopic would be “[Book1]Sheet1”.

You can specify a control’s topic by setting its **LinkTopic** property.

Item

The item defines the piece of data actually being passed during the DDE conversation. An example would be a programmable controller address from RSLinx or Wintelligent Linx such as N7:0, T4:11.ACC or B3/100, for Excel it could be a spreadsheet cell R1C1, or R1C1:R2C2

You can specify a control’s item by setting its **LinkItem** property.

DDE Links

A DDE conversation is often called a link because the two applications in the conversation are linked by the data they are exchanging. The RSTools controls support 3 different types of links, set by its LinkMode property:

1. **Automatic (Hot) link:** The source supplies the data to the control every time the data changes, or on a predefined interval.
2. **Manual (Cold) link:** The source supplies data only when it is requested. (See DoRequest in appendix A)
3. **Notify link:** The source notifies the control when the data changes, but supplies data only when it is requested.

Note

For more information on Dynamic Data Exchange (DDE), refer to Microsoft Visual Basic's Programmer's Guide.

DDE Formats

The RSTools controls supports three different DDE formats, these are; AdvanceDDE, XLTABLE and TEXT mode. When the control attempts to establish a link it first tries the AdvanceDDE mode; if it cannot establish a link with this mode it then tries XLTABLE and then TEXT mode.

RSJunctionBox

RSJunctionBox boosts your communications by adding Rockwell Software's Advanced DDE or Microsoft's Excel Table DDE formats. These enhanced DDE formats provide RSTools with high-volume, high-speed data transfer and extended error detection. When added to your application, RSJunctionBox negotiates with each DDE sever for the best common format (AdvanceDDE, Excel Table, Text).

RSJunctionBox provides each control with notification of important communication events (Change, PokeCompleted, RequestCompleted, LinkError), and utilizes High-speed, real world data access utilizing RSLinx or other AdvanceDDE capable DDE servers. RSJunctionBox is required on each run-time node when the application is utilizing RSTools High Speed (non-Text) DDE communications functionality.

Linking DDE with an RSTools Control

The "Best Common Format" Approach

RSTools can communicate through a variety of formats, and utilizes the "Best Common Format" approach when establishing links to source or "server" applications.

Rockwell Software's AdvanceDDE is a binary, packetized data format that allows blocks of contiguous and non-contiguous data to be encoded into a message, sent through the DDE link and decoded by the receiving application. AdvanceDDE also allows the transfer of arrays of data as single items. Many of these array items can be encoded within a single AdvanceDDE message. AdvanceDDE is used when linked to Rockwell Software's RSLinx or Wintelligent Linx family of products or any other applications utilizing this format.

XL_Table format allows the transfer of a spreadsheet-like blocks of data in a single message. This format also supports specifying an array of cells in a single item. It is used when linked to Microsoft Excel or other applications providing XL_Table services.

TEXT format is the most common format and is used if no other format is supported by the DDE Server.

How AdvanceDDE works

AdvanceDDE compresses multiple DDE messages into a single message. In TEXT mode each control's data is sent in it's own message. If you have 10 controls using TEXT mode there can be as much as 10 times the message traffic required for AdvanceDDE.

Windows Message Flow to Exchange 5 Requested Data Items
(TEXT Mode)

Windows Message Flow to Exchange 10 Requested Data Items (AdvancedDDE Mode)

As can be seen, twice as much data was transferred in the second example with less than half of the messages or overhead.

LinkModes

The control's **LinkMode** properties are very much like Visual Basic's label control. The **LinkMode** property has 4 different modes:

- 0-None
- 1-Automatic
- 2-Manual
- 3-Notify

When the **LinkMode** is set to Automatic the control will attempt to initiate a conversation. If the source application specified in the **LinkServer** and **LinkTopic** properties is not running, will generate an error, during run time.

When the **LinkMode** is set to 1-Automatic, and when the data changes, the control receives the new data and a **Change** event is generated for that control. The **AllowChangeEvent** property must be set to True, if you want to use the **Change** event. If it is set to False then the event will not get generated. The **AllowChangeEvent** property can be toggled at run time to disable the event.

If you set the **LinkMode** to 2-Manual or 3-Notify, then the control will not automatically update, and you must use the **LinkRequest** method (**DoRequest** property. See Creating Manual Link).

Manual or "Cold" Links

Manual Links require that Visual Basic code in the application containing the control requests the data from the source or server. Manual Links are often used to poke or write data back to the server or source application. The controls are designed so that when they are used in control arrays, blocks of data can be Requested or Poked with a single line of Visual Basic code. This is the most efficient way to write data with the RSTools controls.

Automatic or "Hot" Links

Automatic links are the easiest way to move information with the controls, and does not require any Visual Basic code to transfer data . The link can be made entirely by setting properties at design time.

When data in the source or server application changes, it is automatically updated in the control. Automatic Links can be set up as array items. Refer to "Using DDE Block Arrays with RSTools" later in this chapter.

Creating an Automatic Link

There are three ways to create an automatic link. These are

- Paste & Set LinkMode
- Design Time - set link properties
- At run time

If you have a valid **LinkServer**, such as RSLinx or Wintelligent Linx, and a valid **LinkTopic** and **LinkItem**, then you can establish an automatic link by setting the **LinkMode** property for that control to Automatic.

The following code for a Form_Click event attempts to establish an automatic link at run time between RSTools controls and RSLinx or Wintelligent Linx when the form is clicked.

Paste & Set LinkMode:

1. In RSLinx or Wintelligent Linx, select Copy to Clipboard from the Edit menu.
2. Select a valid Data Table Address and Topic name.
3. Click Ok.
4. Go back to VB, select or place a RSData control (or any RSTools control) on the form. Then select Paste Link.
5. Press Run (F5).

Design time - Set Link properties:

1. Drop an RSData (or any RSTools control) control on a form, and bring up the properties window for the control. (Or use the LinkInfo custom property tab.)
2. Set the **LinkServer** Property to "ICOMWDRV", "EXCEL" or another DDE server.
3. Set the **LinkTopic** Property to "TESTSOL", or to the name of the topic you configured.
4. Set the **LinkItem** Property to "N7:0", or any valid item name.
5. Set the **LinkMode** Property to 1 - Automatic.
6. Press Run (F5).

Run time (Using Code):

1. Double click on a form that has a RSData or another RSTools control on it, and add the following code. (If using a control other than RSData, substitute that control's name for *RSData1*.)

```
Sub Form_Click ()  
  
    Const AUTOMATIC = 1, NONE = 0  
  
    'Set LinkMode properties  
    rsdata1.LinkMode = NONE  
  
    rsdata1.LinkServer = "ICOMWDRV"  
  
    rsdata1.LinkTopic = "Testsol"  
  
    rsdata1.Linkitem = "T4:0.ACC"  
  
    rsdata1.LinkMode = AUTOMATIC  
  
End Sub
```

1. Press Run (F5).

Note

For the above sample to work, you must be running Rockwell Software's RSLinx or Wintelligent Linx and WINtelligent EMULATE 5, running the sample PLC ladder logic program called ICOM5DM7.X5.

Creating a Manual Link

There are three ways to create an manual link. Two don't even require you to write any VB code. These are as follows: 1) Paste & Set **LinkMode**, 2) Design Time - set link properties, and 3) At run time.

To create a manual link, you must set the **LinkMode** property to 2-Manual. When **LinkMode** is manual, a conversation will exist, but you must update the link by using the **LinkRequest** method (or **DoRequest** property). By setting the **LinkRequest** method, you will update the control.

The properties **DoPoke** and **DoRequest** are identical to LinkPoke and LinkRequest. They are here strictly for backwards compatibility with the RSData VBX. Use the LinkPoke and LinkRequest methods, not the DoPoke or DoRequest properties. When using LinkPoke and LinkRequest the UseInPoke/UseInRequest properties should be checked.

The following code for a **Form_Click** event will establish a manual link at run time between an RSData control and Rockwell Software's RSLinx or Wintelligent Linx server when the form is clicked. Each time the form is clicked a request will be made:

```
Sub Form_Click()  
  Const MANUAL=2, NONE=0  
  'Establish Link with the LinkServer  
  If rsdata1.LinkMode = NONE then  
    rsdata1.LinkServer = "ICOMWDRV"  
    rsdata1.LinkTopic = "TESTSOL"  
    rsdata1.LinkItem = "N7:21"  
    rsdata1.LinkMode = MANUAL  
  End If  
  'Retrieve data  
  rsdata1.LinkRequest  
End Sub
```

Note

For the above sample to work, you must be running Rockwell Software's RSLinx or Wintelligent Linx and WINTelligent EMULATE 5, running the sample PLC ladder logic program called ICOM5DM7.X5.

Efficient Requests

The properties affecting requests are **RequestLength**, **RequestMode**, **RequestStartIndex** and **LinkRequest**. When creating an array of controls, the **LinkRequest** property comes in handy for requesting information into the array from the appropriate **LinkItems**. These properties allow the user to read a block of data by setting a **RequestStartIndex** and a **RequestLength**, and initiating a **LinkRequest**. For example, let's say you want to request information into 10 RSDData (or any RSTools control) controls on a form from a DDE server. Instead of requesting each one separately, set the **RequestLength** to 10 and set the **LinkRequest** property. Once the **LinkRequest** is initiated, the request will start from the RSDData control that was specified in the **RequestStartIndex**.

The following example uses controls RSDData1(0) through RSDData1(9):

```
Sub Form_Click ()  
    rsdata1(0).RequestStartIndex = 0  
    rsdata1(0).RequestLength = 10  
    'Request data  
    rsdata1(0).LinkRequest  
End Sub
```

You can also set which one of the RSDData controls get updated in the array request, by setting the **UseInRequest** property. If any one of the control's **UseInRequest** property is set to false, then that control will not get updated.

Note *The above example references the RSDData control, any one of the RSTools controls may be used in the same manner.*

Efficient Pokes

The properties affecting pokes are **PokeLength**, **PokeStartIndex** and **LinkPoke**. When creating an array of controls, the **LinkPoke** property comes in handy for Poking information in the array to the appropriate **LinkItems**. These properties allow the user to set up a block of data by setting a **PokeStartIndex** and a **PokeLength**, and initiating a **LinkPoke**. For example, let's say you want to poke the information in 10 RSDData (or any RSTools control) controls on a form to another application. Instead of poking each one separately, set the **PokeLength** to 10 and set the **LinkPoke** property. Once the **LinkPoke** is initiated, the poke will start from the RSDData control that was specified in the **PokeStartIndex**.

The following example uses controls RSDData1(0) through RSDData1(9):

```
Sub Form_Click ()
    rsdata1(0).PokeStartIndex = 0
    rsdata1(0).PokeLength = 10
    'Poke data
    rsdata1(0).LinkPoke
End Sub
```

As with the **UseInRequest** property, you can also set which one of the RSDData controls in the array are included in the DoPoke, by setting the **UseInPoke** property. If any one of the control's **UseInPoke** property is set to false, then that control will not get poked.

Note *The above example references the RSDData control, any one of the RSTools controls may be used in the same manner.*

Creating a Notify Link

The Notify Link is 3-Notify, it is similar to 2-Manual except that the source application notifies your application when the data changes. The notification occurs in your application through the **LinkNotify** event.

The sample below will wait until a **LinkNotify** event has occurred, after you click the form, and will then execute a **DoRequest**:

```
Sub Form_Click()  
    Const NOTIFY = 3, NONE = 0  
    'Establish Link with the LinkServer  
    If rsdata1.LinkMode = NONE then  
        rsdata1.LinkServer = "ICOMWDRV"  
        rsdata1.LinkTopic = "TESTSOL"  
        rsdata1.LinkItem = "T4:0.ACC"  
        rsdata1.LinkMode = NOTIFY  
    End if  
End Sub  
  
Sub RSData1_LinkNotify()  
    'Retrieve Data  
    rsdata1.LinkRequest  
    rsdata1.LinkMode = None  
End Sub
```

Note

For more information on the common types of LinkModes and properties, refer to the Visual Basic Programmers Guide on DDE.

Working with DDE Arrays

One of the most important functions of the RSTools controls is optimization of DDE communications. Rich array manipulation activities are supported to accomplish this optimization. There are three important concepts to understand:

- Control arrays are the most efficient way to move “non-contiguous” data as all writes or reads to a topic are completed simultaneously in XL_Table and AdvanceDDE messages.
- Array data types are the most efficient way to move “contiguous” data to/from servers that support them. Entire arrays are moved in one item.
- For highest data density per DDE message, array data types can be used in control arrays.

RSTools Control Arrays

An efficient method for requesting or poking data is to use an array of RSDData (or any RSTools) controls. For example, if you want to request 20 items of data from a particular server and topic. You could set up a control array on your form in run time, then set the **LinkRequest** method, which will then retrieve all 20 items from that server and topic. If, for instance, you wanted to poke data rather than request data, then all you would have to do is set the **LinkPoke** method to True, instead of the **LinkRequest** property. Try the following example below.

1. Place an RSDData control on a blank form.
2. Set the **Index** = 0.
3. Set the **RequestLength** = 20, **RequestMode** = 0 - Start with Data, **RequestStartIndex** = 0 and **UseInRequest** = True.
4. Type in the following code below.

Sub Form_Load ()

```
    const manual = 2
    'set properties for server, topic and item
    rsdata1(0).LinkServer = "icomwdrv"
    rsdata1(0).LinkTopic = "testsol"
    rsdata1(0).LinkItem = "n12:0"
    For j% = 1 To 19
        'load 19 more rsdata control on the form
        Load rsdata1(j%)
        rsdata1(j%).LinkItem = "N12:" & LTrim$(Str$(j%))
        Select Case j%
            Case 10
                rsdata1(j%).Left = rsdata1(j% - 10).Left +
                    rsdata1(j% - 10).Width
                rsdata1(j%).Top = rsdata1(0).Top
            Case Else
                rsdata1(j%).Left = rsdata1(j% - 1).Left
                rsdata1(j%).Top = rsdata1(j% - 1).Top +
rsdata1(j% - 1).Height
        End Select
        rsdata1(j%).Visible = True
    Next j%
    For j% = 0 To 19
        rsdata1(j%).LinkMode = Manual
    Next j%
    'request the data
```

```
rsdata1(0).LinkRequest
```

End Sub

1. After typing in the above code, run the Visual Basic program. It should create 19 more RSData controls on the form. And then fill them with data via the LinkRequest method.

Note

For this example to work properly you must have RSLinx or Wintelligent Linx and WINtelligent EMULATE 5 running with the sample ladder logic program ICOM5DM7.X5.

The previous example can be modified slightly to do a control array poke. The example below will poke data to the same **LinkItem's** as the previous example. We must first populate each of the controls in the array with data. To do this, create a For/Next loop to fill in random sample data.

1. Place a Button control on the form and set the caption = "Poke Data".
2. Place an RSDData (or any RSTools) control on a blank form.
3. Set the **Index** = 0.
4. Set **AlwaysDisplayData** = True
5. Set the **PokeLength** = 20, **PokeStartIndex** = 0 and **UseInPoke** = True.
6. Type in the following code below for each appropriate event.

Sub Form_Load ()

```
Const manual = 2
' set properties for server, topic and item
rsdata1(0).LinkServer = "icomwdrv"
rsdata1(0).LinkTopic = "testsol"
rsdata1(0).LinkItem = "n7:0"
For j% = 1 To 19
' load 19 more rsdata control on the form
Load rsdata1(j%)
rsdata1(j%).LinkItem = "N7:" & LTrim$(Str$(j%))
Select Case j%
Case 10
rsdata1(j%).Left = rsdata1(j% - 10).Left +
rsdata1(j% - 10).Width
Continued on next page
```

```

        rsdata1(j%).Top = rsdata1(0).Top
    Case Else
        rsdata1(j%).Left = rsdata1(j% - 1).Left
        rsdata1(j%).Top = rsdata1(j% - 1).Top +
rsdata1(j% - 1).Height
    End Select
    rsdata1(j%).Visible = True
Next j%
End Sub
Sub Command1_Click ()
    'Set the LinkMode to manual for each control
    For j% = 0 To 19
        rsdata1(j%).LinkMode = manual
    Next j%
    'Generate random data for RSData captions
    For j% = 0 To 19
        rsdata1(j%).Caption = Int(Rnd(j% + 1) * 1000)
    Next j%
    'Poke the data
    rsdata1(0).LinkPoke
End Sub

```

Run the program, but before you click the “Poke Data” button, switch to RSLinx or Wintelligent Linx and view the N7:0 data table. This allows you to view the changes in the data table when you click the “Poke Data” button. When both the Visual Basic window and the RSLinx or Wintelligent Linx windows are up, click the “Poke Data” button.

Note *For this example to work properly you must have RSLinx or Wintelligent Linx and WINtelligent EMULATE 5 running with the sample ladder logic program ICOM5DM7.X5.*

Using DDE Block Arrays with RSTools

Using DDE block arrays is a very efficient method of retrieving data from a server when using a single control. Each piece of data can then be retrieved out of the DDE block array using the **DataValue(index)** run time-only property. The **NumberOfDataValues** property, allows access to the number of elements in an array item.

Below is an example that retrieves 30 words (Pieces) of data from RSLinx or Wintelligent Linx. Then displays several of the word values in bargraphs and a label that displays how many words are in the Link itself.

1. Place one-RSData control, two-Label controls and two-3DPanel controls on the form.
2. For the RSData control, set the **AllowChangeEvent** = True and **LinkTip**=True.
3. For Label1, set the caption = "Number of Data Values".
4. For Panel3D1, set the FloodColor = Green (&HC000&), FloodShowPct = True and FloodType = 1 - Left To Right.
5. For Panel3D2, set the FloodColor = Red (&HFF&), FloodShowPct = True and FloodType = 1 - Left To Right.
6. Type in the following code.

Sub Form_Load ()

```
Const Automatic = 1
'Set properties for the server, topic and item
rsdata1.LinkServer = "icomwdrv"
rsdata1.LinkTopic = "testsol"
'Set LinkItem to T4:0.ACC with a length of 30 words
Continued on next page
rsdata1.LinkItem = "T4:0.acc,L30"
rsdata1.LinkMode = Automatic
```

End Sub

Sub RSData1_Change (NewData As String)

```
'set the floodpercent properties using the DataValue
'If the value of DataValue is greater than 100, then
Divide by 10
panel3d1.FloodPercent = rsdata1.DataValue(0) / 10
panel3d2.FloodPercent = rsdata1.DataValue(3) / 10
'Set label2's caption to the Number of Data
values(i.e. 30)
label2.Caption = rsdata1.NumberOfDataValues
```

End Sub

1. After typing in the code, run the program.

Notice that as you move the mouse cursor over the RSData control and leave it there for more than one second, the **LinkTip** box is displayed. You should see something similar to this:

```
icomwdrv!testsol!t4:0.acc,130
```

The **L30** signifies a length of 30 words. You can also change the BackColor and ForeColor of the **LinkTip** box, by setting the **LinkTipBackColor** and **LinkTipForeColor** properties.

Note

For this example to work properly you must have RSLinx or Wintelligent Linx or Wintelligent Linx and WINTelligent EMULATE 5 running with the sample ladder logic program ICOM5DM7.X5.

Binding to the Data Control

With the RSTools controls and Visual Basic's Data control, you can create an application to display edit, and update (log) information from many types of existing databases. Creating a data-aware application with Visual Basic can be done easily through a few steps, and requires very little code.

The first thing you need to do to make a "data-aware" application is to add the Visual Basic Data control or the Remote Data control to your form. Next, you will have to specify the database you would like to get the information from. Once you have decided on the database, you must place the RSTools controls on the form and set their properties to "bind" to Visual Basic's Data control. Depending on the property settings you choose for DataUpdate, when you run the application you will be able to view data coming from your server, view data from a database, or log data to the database.

The RSTools controls combined with Visual Basic's Data control give you seamless access to many standard databases, including Microsoft Access, Btrieve, dBASE, Microsoft FoxPro, and Paradox. If the Remote Data control is used, ODBC databases such as SQL Server and Oracle are accessible anywhere on a network.

Contents

- Quick Start - Using RSTools to read from DataSource.
- Using RSTools to log to DataSource.
- Time-Based Logging• .
- Working with other types of Databases

Quick Start

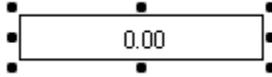
The following procedure gives you a brief overview of how to “bind” or use the RSDData control (one of the RSTools controls) and Visual Basic’s data control in your application. Below we will use the COLOR.MDB sample database that comes with RSTools.

How to use the RSDData (or any RSTools control) control as a “Database” tool.

1. Select the RSDData control in the toolbox and draw a RSDData control on the form. The RSDData control icon looks like this:



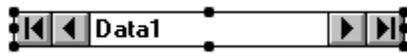
Click and drag the control on your form. It will look like a label control. The default name of the control is RSDData1.



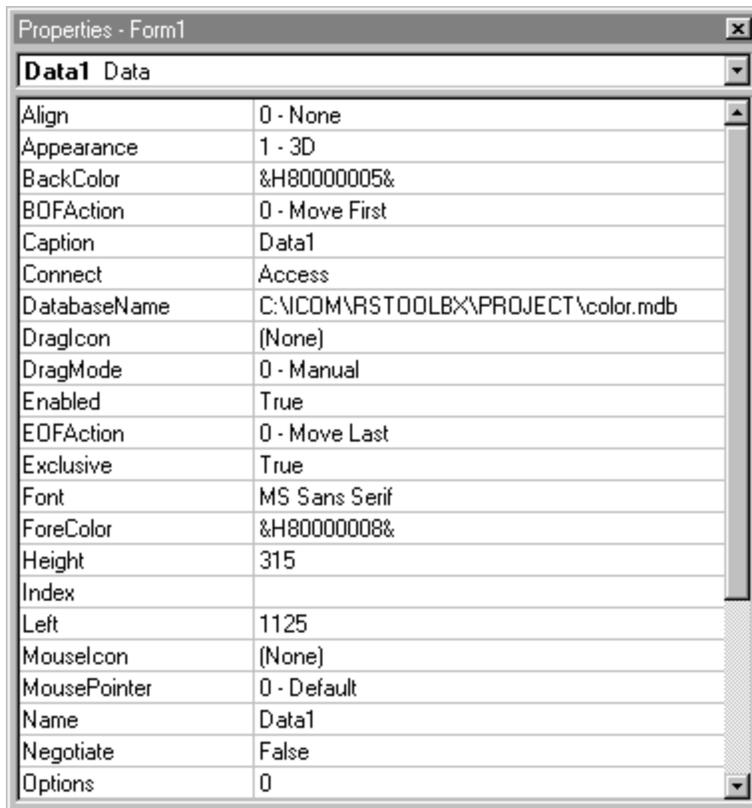
1. Select the Visual Basic Data control and draw a control on the form. The Data control icon looks like this:



After you have drawn the control on the form, it will look like this, with the default caption as Data1.



1. In the properties window for the Visual Basic Data control, set the DatabaseName property to the filename you want to connect to C:\RSWKSHOP\RSTOOLBX\DEMO\COLOR.DBF.



1. For the **Connect** property, you must specify “Access” Then set **RecordSource** = “COLORS”. The RecordSource is the name of the database table.
1. Click once on the RSDData control and bring up it’s property window. In the properties window, set the **DataSource** = Data1, the **DataField** = COLORNAME, and set the **DataUpdate** = 2- Data Source.

The screenshot shows a standard Windows application window titled "Form1". Inside the window, there is a rectangular text box containing the value "0.00" in blue text. Below the text box is a data control component. This control consists of a white rectangular area with the text "Data1" in the center, flanked by four small arrow buttons: a double left arrow, a single left arrow, a single right arrow, and a double right arrow.

The screenshot shows the "Properties - Form1" window. At the top, there is a dropdown menu showing "RSDData1 RSDData". Below this, there is a table of properties and their values:

CaptionY	6
DataField	ColorName
DataSource	Data1
DataUpdate	2 - Data Source
DecimalPlaces	2

1. Now run the application. The RSTools control displays the data in the "COLOR" field based on which database record you display. You can use the arrow buttons in the data control to move through the records.

Working with other types of Databases

The RSTools controls support all database types that Visual Basic's Data control and Remote Data control supports. These include: Microsoft Access, dBASE, Paradox, FoxPro, and many other ODBC compliant drivers.

If you used any database other than Access, in earlier versions of Microsoft Visual Basic, you would have had to create an initialization file (*.INI) for your application. This INI file would need to contain ISAM information for the database type you have chosen, and would have the same name as your Visual Basic EXE name. The INI file would be placed in your C:\WINDOWS directory. With Visual Basic 4.0, you no longer have to be concerned with creating your own INI files for the ISAM drivers; Visual Basic will take care of connecting to these databases.

Note *Refer to the Visual Basic Programmers Guide for more information on other types of databases.*

AllowChangeEvent Property

Applies To RSTButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel

Description Enables the firing of a Change event when data in the control changes.

Visual Basic *object.AllowChangeEvent*[= *setting %*]

Settings The following table lists the AllowChangeEvent property settings for the control.

Settings	Description
False	Do not allow the Change event to occur.
True	Allow the Change event to occur.

Data Type Integer

AutoColumns Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Creates the correct number of columns to be displayed based on the LinkItem.
Custom	No access via custom property page.
Visual Basic	<i>object.AutoColumns</i> [= <i>setting %</i>]
Remarks	AutoColumns will work only if the LinkItem length divided by the number of columns leaves a remainder of zero. For example, a LinkItem of "C5:0,L11,C2" would display as only one column because eleven divided by two leaves a remainder of one. AutoColumns will only work with AdvancedDDE, which requires RSJunctionBox.
Data Type	Integer

BackColor Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the background color for the control.
Custom	Display section.
Visual Basic	<i>object</i> .BackColor[= <i>setting</i> %]
Settings	Visual Basic uses the Microsoft Windows operating environment red-green-blue (RGB) color scheme. The settings for color are:

<u>Setting</u>	<u>Description</u>
Normal RGB colors	Colors specified by using the Color palette or by using the RGB or QBColor functions in code.
System default colors	Colors specified by system color constants listed in the Visual Basic (VB) object library in the Object Browser. The Windows operating environment substitutes the user's choices as specified in the Control Panel settings.

Data Type	Color
------------------	-------

BackStyle Property

Applies To RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel

Description Determines if the control will be transparent or opaque.

Custom No access via custom property page.

Visual Basic *object*.BackStyle[=*setting %*]

Settings	Settings	Description
	0	Sets the control to transparent.
	1	Sets the control to opaque.

Data Type Integer

BevelHeight Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the height of the top and bottom beveled edges around the control.
Custom	No access via custom property page.
Visual Basic	<i>object</i> . BevelHeight [= <i>setting %</i>]
Data Type	Integer

BevelHighlight Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the highlight color of the control's beveled border.
Custom	Display section.
Visual Basic	<i>object</i> . BevelHighlight [= <i>setting</i> %]
Remarks	BevelHighlight is dependent on the bevel style chosen for the control. If BevelStyle is set to either 1 (indented) or 3 (beveled), the control's outside border will be given a 3 dimensional appearance by displaying a bevel highlight and a bevel shadow.
Data Type	Color

BevelShadow Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the shadow color of the control's beveled border.
Custom	Display section.
Visual Basic	<i>object</i> .BevelShadow[= <i>setting %</i>]
Remarks	BevelShadow is dependent on the bevel style chosen for the control. If BevelStyle is set to either 1 (indented) or 3 (beveled), the control's outside border will be given a 3 dimensional appearance by displaying a bevel highlight and a bevel shadow.
Data Type	Color

BevelStyle Property

Applies To RSTButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel

Description Determines the style of the beveled area around the control object. A beveled appearance is one that has a three dimensional look. This property controls the beveled appearance of the outside border around the control.

Custom Adjusted in the Display section of the custom properties page. The BevelStyle list box in the lower right hand corner has a drop drop down menu with six styles available for the bevel:

<u>Settings</u>	<u>Description</u>
0	None
1	Indented
2	Marble
3	Beveled
4	Thick
5	Stripe

Visual Basic *object.BevelStyle[=setting %]*

Remarks If a bevel does not appear when this property is set to True, make sure that the BevelWidth and BevelHeight properties are set to a value greater than zero.

Data Type Integer

BevelWidth Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the width of the left and right beveled edges around the control.
Custom	No access via custom property page.
Visual Basic	<i>object</i> .BevelWidth[= <i>setting %</i>]
Data Type	Integer

BorderBeveled Property

Applies To	RSCmpare, RSVessel
Description	Toggles display of BorderHighlight and BorderShadow.
Custom	Adjusted in the General section of the custom properties page with a checkbox in the Options window.
Visual Basic	<i>object</i> . BorderBeveled [= <i>setting %</i>]
Remarks	When set to False in the RSVessel control, the BorderHighlight and BorderShadow are not displayed, but PolyBorderColor is displayed. When True, all three are shown. When set to False in the RSCmpare control, BorderHighlight and BorderShadow are not displayed, while DownBorderColor, EqualBorderColor, and UpBorderColor are still shown. When set to True, all are shown.
Data Type	Integer

BorderColor Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines the color of the border around the control object.
Custom	Display section.
Visual Basic	<i>object</i> .BorderColor[= <i>setting %</i>]
Remarks	The BorderColor property can be set to any color in the palette or to a hex integer value that represents a color.
Data Type	Color

BorderHighlight Property

Applies To	RSCompare, RSVessel
Description	Sets the Highlight color for the three-dimensional border of the applicable controls' graphic shapes.
Custom	Display section.
Visual Basic	<i>object</i> . BorderHighlight [= <i>setting %</i>]
Remarks	For the RSCompare control, this property sets the BorderHighlight color for all of its states - Up, Equal, and Down.
Data Type	Color

BorderInner Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines if the inner border is displayed around the control object.
Custom	No access via custom property page.
Visual Basic	<i>object</i> . BorderInner [= <i>setting %</i>]
Remarks	This property is dependent upon the BevelStyle property in that the inner border is displayed only when a BevelStyle other than 0 (none) is chosen.
Data Type	Integer

BorderInnerColor Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines the color of the inner border around the control object.
Custom	Display section.
Visual Basic	<i>object</i> . BorderInnerColor [= <i>setting %</i>]
Remarks	The BorderInnerColor property can be set to any color in the palette or to a hex integer value that represents a color.
Data Type	Color

BorderShadow Property

Applies To	RSCmpare, RSVessel
Description	Sets the Shadow color for the three-dimensional border of the applicable controls' graphic shapes.
Custom	Display section.
Visual Basic	<i>object</i> . BorderShadow [= <i>setting %</i>]
Remarks	For the RSCmpare control, this property sets the BorderShadow color for all of its states - Up, Equal, and Down.
Data Type	Color

BorderStyle Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines the type of border displayed around the control object.
Custom	No access via custom property page.
Visual Basic	<i>object</i> . BorderStyle [= <i>setting %</i>]
Remarks	There are two border styles available: 0 = None and 1 = Fixed Single.
Data Type	Integer

BorderWidth Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines the width of the border displayed around the control object.
Custom	No access via custom property page.
Visual Basic	<i>object</i> . BorderWidth [= <i>setting</i> %]
Remarks	The BorderStyle property needs to be set to 1 (Fixed Single) in order to make changes in BorderWidth visible.
Data Type	Integer

BottomBorder Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the distance between bottom external border of the control and bottom of the control.
Custom	Adjusted in the General section of the custom properties page. Placing the mouse pointer over either of the control graphic's lower corners will cause a sizing pointer to appear. Clicking and holding the left mouse button allows the bottom border for the control to be adjusted to the appropriate position with respect to the bottom external border of the control. Releasing the mouse button will then set the BottomBorder property.
Visual Basic	<i>object</i> . BottomBorder [= <i>setting %</i>]
Remarks	The BottomBorder property controls the distance between the outside border of the control and the lower edge of the control. Use this property to adjust the space available for displaying a caption or value.
Data Type	Integer

ButtonBorderWidth Property

Applies To	RSCmpare, RSVessel
Description	Sets the width of the BorderHighlight and BorderShadow properties for applicable controls.
Custom	No access via custom property page.
Visual Basic	<i>object</i> . ButtonBorderWidth [= <i>setting</i> %]
Remarks	Sets the width of the three-dimensional border (shown with the BorderHighlight and BorderShadow properties) around the RSVessel and RSCmpare controls' graphic shapes. For these two controls there is not a corresponding ButtonBorderHeight property as in the RSButton control.
Data Type	Integer

ButtonFaceColor Property

Applies To	RSButton, RSSlider, RSWheel
Description	Sets the color for the face of the control's buttons.
Custom	Display section.
Visual Basic	<i>object</i> . ButtonFaceColor [= <i>setting %</i>]
Remarks	For the RSButton control, the Button's (all styles) face color is set with ButtonFaceColor, for the RSSlider control, the face color of the its two scroll buttons is set with ButtonFaceColor, and for the RSWheel control ButtonFaceColor sets the face color for the up and down scroll arrow buttons.
Data Type	Color

ButtonHighlight Property

Applies To	RSButton, RSlider, RSWheel
Description	Sets the highlight color for the control's three-dimensional button(s) effect.
Custom	Display section.
Visual Basic	<i>object</i> . ButtonHighlight [= <i>setting</i> %]
Remarks	ButtonHighlight sets the highlight color for the Button control's three-dimensional outside border, sets the highlight color on the scroll buttons for the Slider, and sets the highlight color for the up and down scroll arrow buttons for the Wheel.
Data Type	Color

ButtonShadow Property

Applies To	RSButton, RSSlider, RSWheel
Description	Sets the shadow color for the control's three-dimensional button(s) effect.
Custom	Display section.
Visual Basic	<i>object</i> . ButtonShadow [= <i>setting</i> %]
Remarks	ButtonShadow sets the shadow color for the Button control's three-dimensional outside border, sets the shadow color on the scroll buttons for the Slider, and sets the shadow color for the up and down scroll arrow buttons for the Wheel.
Data Type	Color

Caption Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the caption to be displayed on the control.
Custom	Set in the Value section of the custom properties page with the "Caption" text box. Text entered in this text box will appear as the control's caption.
Visual Basic	<i>object.Caption</i> [= <i>setting %</i>]
Remarks	The DisplayCaption property must be set to True in order for the Caption to be shown.
Data Type	String

CaptionBackColor Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the background color of the caption for the control.
Custom	Display section.
Visual Basic	<i>object</i> .CaptionBackColor[= <i>setting %</i>]
Remarks	The CaptionBackColor property can be set to any color in the palette or to a hex integer value representing a color. If the CaptionTransparent property is set to True, CaptionBackColor will not be shown.
Data Type	Color

CaptionColor Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the color of the caption text for the control.
Custom	Display section.
Visual Basic	<i>object</i> .CaptionColor[= <i>setting %</i>]
Remarks	The CaptionColor property can be set to any color in the palette or to a hex integer value representing a color. The DisplayCaption property must be set to True in order for this property to have any effect.
Data Type	Color

CaptionShadow Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Enables/disables the shadow behind the caption for the control.
Custom	Adjusted in the General section of the custom properties page with a checkbox in the Options window.
Visual Basic	<i>object</i> .CaptionShadow [=setting %]
Remarks	The DisplayCaption property must be True before this property will have any visible effect. When set to True, a shadow will be displayed behind the caption text; when set to False, the shadow will not be displayed.
Data Type	Integer

CaptionShadowColor Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the color of the caption's shadow for the control.
Custom	Display section.
Visual Basic	<i>object.CaptionShadowColor</i> [= <i>setting %</i>]
Remarks	The CaptionShadowColor property can be set to any color in the palette or to a hex integer value representing a color. The DisplayCaption and the CaptionShadow properties must be set to True before this property will have any visible effect.
Data Type	Color

CaptionTransparent Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Enables/disables display of the CaptionBackColor.
Custom:	Adjusted in the General section of the custom properties page with a checkbox in the Options window.
Visual Basic	<i>object.CaptionTransparent</i> [= <i>setting %</i>]
Remarks	When set to True, the CaptionBackColor is transparent and will not be displayed; when set to False the CaptionBackColor will be displayed. DisplayCaption must be set to True before this property will have any visible effect.
Data Type	Integer

CaptionX Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the horizontal position of the caption with respect to the left edge of the control object.
Custom	Adjusted in the General section of the custom properties page. The red square caption position indicator on the control graphic shows the relative position of the caption. To change the caption position, click, drag, and drop the red square in the desired location. If the red square is not displayed, the DisplayCaption property needs to be set to True.
Visual Basic	<i>object.CaptionX</i> [=setting %]
Remarks	The range for the CaptionX property is from 0 to 100 with zero being the left edge and 100 being the right edge of the control. The DisplayCaption property must be set to True before this property will have any visible effect.
Data Type	Integer

CaptionY Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the vertical position of the caption with respect to the top edge of the control object.
Custom	Adjusted in the General section of the custom properties page. The red, square caption position indicator on the control graphic shows the relative position of the caption. To change the caption position, click, drag, and drop the red square in the desired location. If the red square is not displayed, the DisplayCaption property needs to be set to True.
Visual Basic	<i>object.Control.CaptionY</i> [= <i>setting %</i>]
Remarks	The range for the CaptionY property is from 0 to 100 with zero being the top edge and 100 being the bottom edge of the control. The DisplayCaption property must be set to True before this property will have any visible effect.
Data Type	Integer

Clip Property

Applies To RSTool, RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel

Description Returns or sets the contents of the data elements in a control. Not available at design time.

Visual Basic *object.Clip [= string]*

The Clip property syntax has these parts:

Part	Description
object	An object expression that evaluates to an object in the Applies To list.
string	A string expression containing the element contents.

Remarks The string can contain the contents of multiple rows and columns. In the string, a tab character (ANSI character 9) indicates a new element in a row, and a carriage return (ANSI character 13) indicates the beginning of a new row. Use the Chr function to embed these characters in strings. For example, the following line of code puts text into 4 Gauge controls that are displayed in 2 rows by 2 columns:

```
RSGauge1.Clip = "231" & Chr(9) & "400" & Chr(13) & "278" & Chr(9) & "58"
```

Compiling a string and setting a control's **Clip** property is an excellent way to programmatically use a single instance of a control to display multiple values.

The clip property works in a similar fashion for the other RSTool controls.

Data Type String

DataChanged Property

Description	Returns or sets a value indicating that RSDData in a control has changed by some process other than by retrieving RSDData from the current record.
Visual Basic	<i>object.Control.RSDDataChanged</i> [= <i>setting</i>]
Remarks	The Visual Basic Data control will record changes made to a bound database as you move through its records. In order to avoid recording changes made to the database's records, set the DataChanged property to False in the Data control's Validate event. When the Data control is moved to the next record, the Validate event is fired and if DataChanged is True, changes made to the database are recorded.
Applies To	RSTButton, RSTCompare, RSTData, RSTGauge, RSTSlider, RSTWheel, RSTVessel

DataField Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Binds the control to a particular field in a database. Used for reading from and writing to a database. The DataSource property must be set prior to this property to enable browsing.
Custom	No access via custom property page.
Visual Basic	<i>object</i> .DataField[= <i>setting %</i>]
Remarks	The DataField, DataSource, and DataUpdate properties work together with the Visual Basic Data control to bind the RSTools control to a database.
Data Type	String

DataSource Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Binds the control to the particular Visual Basic data control which is bound directly to a database. The available data controls appear in a drop-down list next to the property name in the properties window
Custom	No access via custom property page.
Visual Basic	<i>object.DataSource</i> [= <i>setting %</i>]
Remarks	DataSource is read/write at design time; not available at run time. The DataField, DataSource, and DataUpdate properties work together with the Visual Basic Data control to bind the RSTool control to a database.
Data Type	String

DataUpdate Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines the primary source of displayed data as well as which data triggers a Change event.
Visual Basic	<i>object.DataUpdate</i> [= <i>setting %</i>]
Remarks	Available settings for the DataUpdate property are 0 = Data Link, which displays only the data specified by the LinkItem; 1 = Data Source, which displays only the data (field in database) that the control is bound to; 2 = Data Link, Log To Data Source, which logs data to the Data Source specified by the data control; and 3 = No Update. When DataUpdate is set to 1 (Data Source), you will be able to view the contents of the field that the control is bound to. When DataUpdate is set to 2 (Data Link, Log to Data Source) and LinkMode is set to Automatic, the data control will add new records to the database whenever the control's value changes.
Data Type	Integer

DataValue(Index) Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSWheel, RSVessel
Description	When requesting an array of data by using the block method (i.e. LinkItem = t4:0.acc, L25), you can use the DataValue property to select the specified element in the array. DataValue(0) for a single item data link is valid as well, even though it is not an array. DataValue(n) is an array property and must have an index.
Visual Basic	<i>object</i> .DataValue(<i>item number</i>)
Remarks	Specifying array items in your LinkItem string makes it very easy to move large blocks of data with only one control. If you want to use element 25, simply specify that number. (i.e. rsdata1.datavalue(24)).
Data Type	Integer

DecimalPlaces Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines the number of decimal places that will be shown when the value is displayed on the control.
Custom	Adjusted in the Value section of the custom properties page by changing the value in the "Decimals" text box. This value can be changed either by typing the number directly or by using the up and down scroll buttons.
Visual Basic	<i>object</i> . DecimalPlaces [= <i>setting</i>]
Remarks	The range for the DecimalPlaces property value is from 0 to 9. TheDisplayValue property must be set to True before this property will have any visible effect, however the setting affects the Value and DataValue(n) properties whether visible or not.
Data Type	Integer

DisplayBorder Property

Applies To	RSCompare, RSVessel
Description	Enables/disables all borders for the control's graphic shape.
Custom	Enabled/disabled in the Options window of the General section of the properties page.
Visual Basic	<i>Object</i> . DisplayBorder [= <i>setting</i>]
Remarks	In the case of the RSCompare control, when set to True a three-dimensional border will be displayed around the control's graphic shapes using the DownBorderColor , EqualBorderColor , UpBorderColor , BorderHighlight , and BorderShadow properties; when set to False none of those properties will be displayed. In the case of the RSVessel control, when set to True, a three-dimensional border around the fill area will be displayed using the PolyBorderColor , BorderHighlight , and BorderShadow properties; when set to False none of those properties will be displayed.
Data Type	Integer

DisplayCaption Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines if the caption will be displayed on the control.
Custom	Adjusted in the General section of the custom property page. Place the mouse pointer inside the setup frame of the General Tab and right-click to display the popup property menu. Clicking on "Caption" on this menu will toggle a check mark on and off which represents the True state for the DisplayCaption property. When the DisplayCaption is True, a red square caption position indicator appears on the control graphic in the General section.
Visual Basic	<i>object</i> .DisplayCaption[= <i>setting %</i>]
Remarks	When set to True the Caption will be displayed; when set to False the Caption will not be displayed.
Data Type	Integer

DisplayCaptionVertically Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines if the caption will be displayed vertically on the control.
Custom	Adjusted in the General section of the property page. The red indicator (square) on the control graphic represents the relative position of the caption on the control. Double clicking on the red indicator toggles the caption display between horizontal and vertical. When the caption is vertical the red indicator becomes a rectangle, and when the caption is horizontal the red indicator is a square.
Visual Basic	<i>object</i> .DisplayCaptionVertically[= <i>setting</i>]
Remarks	When set to True, the caption will be displayed vertically; when set to False, the caption will be displayed horizontally.
Data Type	Integer

DisplayPicture Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines if a picture will be displayed on the control.
Custom	Adjusted in the General section of the custom properties page with a checkbox in the Options window.
Visual Basic	<i>object</i> . DisplayPicture [= <i>setting %</i>]
Remarks	When set to True, the picture designated in the Picture property will be displayed; when set to False, the picture will not be displayed. Because the RSCompare control has three possible picture properties (PictureUp, PictureEqual, PictureDown), this property applies to all three.
Data Type	Integer

DisplayValue Property

Applies To	RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines if the control's current value will be displayed.
Custom	Adjusted in the General section of the custom property page. Place the mouse pointer inside the setup frame of the General Tab and right-click to display the popup property menu. Clicking on "Value" on this menu will toggle a check mark on and off which represents the True state for the DisplayValue property.
Visual Basic	<i>object</i> . DisplayValue [= <i>setting %</i>]
Remarks	When set to True, the value will be displayed; when set to False the value will not be displayed.
Data Type	Integer

DrawDisabledShadow Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines if a shadow will be displayed over the entire control when it is disabled.
Custom	Adjusted in the General section of the custom properties page with a checkbox in the Options window.
Visual Basic	<i>object</i> .DrawDisabledShadow[= <i>setting</i> %]
Remarks	When set to True, a shadow will be displayed when the control's Enabled property is set to False. When set to False, the shadow will not be displayed if the Enabled property is set to False. The shadow is not displayed if the control's Enabled property is set to True.
Data Type	Integer

EndValue Property

Applies To	RSCmpare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the maximum for the value range of the control.
Custom	Adjusted in the "End Value" text box in the Value section of the custom properties page.
Visual Basic	<i>object</i> .EndValue[= <i>setting %</i>]
Remarks	For the RSGauge and RSSlider controls, EndValue applies to both the Scale1 and Scale2 value ranges. For the RSCmpare, RSData, and RSWheel controls, the EndValue will be ignored if the UseStartEndValue property is set to False.
Data Type	Double

ExpressionForRead Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines the mathematical expression that will be performed on the link item value when the control reads that value.
Custom	Adjusted in the LinkInfo section of the custom property page. When the "Expression" button is pressed another form appears with two input boxes. Input the appropriate mathematical expression into the "Read Expression" text box. The expression must be in the form item[mathematical expression]. For example, "item+5" would add 5 to the LinkItem value.
Visual Basic	<i>object.ExpressionForRead</i> [= <i>setting %</i>]
Remarks	<p>This property allows you to perform a mathematical function on the link item as it is read by the control. The expression must be in the form item[mathematical expression]. For example, "item+5" would add 5 to the LinkItem value.</p> <p>Optional Calculation/Math module required, RSCALC32.DLL.</p>
Data Type	String

ExpressionForWrite Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines the mathematical expression that will be performed on the link item when the control writes that value.
Custom	Adjusted in the LinkInfo section of the custom property page. When the "Expression" button is pressed another form appears with two input boxes. Input the appropriate mathematical expression into the "Write Expression" text box. The expression must be in the form item[mathematical expression]. For example, "item+5" would add 5 to the LinkItem value.
Visual Basic	<i>object.ExpressionForWrite</i> [= <i>setting %</i>]
Remarks	<p>This property allows you to perform a mathematical function on the link item as a write is performed by the control. The expression must be in the form item[mathematical expression]. For example, "item+5" would add 5 to the LinkItem value.</p> <p>Optional Calculation/Math module required, RSCALC32.DLL.</p>
Data Type	String

FaceBorderColor Property

Applies To	RSGauge, RSlider, RSWheel
Description	Sets the color of the face border for the control.
Custom	Display section.
Visual Basic	<i>object</i> . FaceBorderColor [= <i>color</i>]
Remarks	The FaceBorderColor property can be set to any color in the palette or a hex integer value representing a color. The DisplayFace property must be True before this property will have any visible effect.
Data Type	Color

FaceColor Property

Applies To	RSGauge, RSSlider, RSWheel
Description	Sets the color of the face for the control.
Custom	Display section.
Visual Basic	<i>object</i> . FaceColor [= <i>setting %</i>]
Remarks	The FaceColor property can be set to any color in the palette or a hex integer value representing a color. The DisplayFace property must be True before this property will have any visible effect.
Data Type	Color

FillColor Property

Applies To	RSGauge, RSVessel
Description	Determines the color of the filled area on the control.
Custom	Display section.
Visual Basic	<i>object.FillColor</i> [= <i>setting %</i>]
Remarks	The FillColor property can be set to any color in the palette or a hex integer value representing a color. For the Gauge control this property is only used with the LED-style, Vertical and Horizontal Gauge types (4-7).
Data Type	Color

FlashEnabled Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines if the control will flash when its value changes.
Custom	Enabled / disabled in the Display section of the properties page with the "Flash on New Data" check box.
Visual Basic	<i>object</i> .FlashEnabled[= <i>setting %</i>]
Data Type	Integer

FlashOn Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines if the control will continuously flash from visible to invisible.
Custom	Enabled / disabled in the Display section of the properties page with the "Flash Always On" check box.
Visual Basic	<i>object</i> .FlashOn [= setting %]
Remarks	When set to True the control flashes continuously; when set to False the control does not flash. The FlashSpeed property adjusts the rate that the control flashes on and off.
Data Type	Integer

FlashSpeed Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines the rate that the control flashes on and off.
Custom	Set on the Display section of the custom properties page with the "FlashSpeed" text box.
Visual Basic	<i>object</i> .FlashSpeed[= <i>setting %</i>]
Remarks	The setting for FlashSpeed is in milliseconds.
Data Type	Long

FlashTime Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines how long the control should flash when server sends new data and FlashEnabled is True.
Custom	Set on the Display section of the custom properties page with the "FlashTime" text box.
Visual Basic	<i>object</i> .FlashTime[= <i>setting</i> %]
Remarks	Enabled only when the "Flash On New Data" check box is checked. The setting for FlashTime is in milliseconds.
Data Type	Long

Font Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines the font name, style, and size of text that will be used for the control's caption and value.
Custom	Set on the Fonts section of the custom properties page.
Visual Basic	<i>object</i> .Font[= <i>setting</i>]
Remarks	Available effects on the Fonts section of the custom properties page are Strikeout and Underline. These can be enabled and disabled with check boxes on the Font section.
Data Type	Font

KnobWidth Property

Applies To	RSGauge, RSlider
Description	Determines the width of the knob displayed on the control.
Custom	The knob width can be changed on the General section of the custom properties page by clicking the mouse on the knob graphic and drag-dropping the knob outline to the desired width.
Visual Basic	<i>object</i> . KnobWidth [= <i>setting %</i>]
Remarks	<p>For the Gauge control, KnobWidth will have a visible effect only when the NeedleType property is set to a knob-type setting (3 = Knob; 4 = Knob-Plate; 5 = NeedleKnob; 6 = Needle-Knob-Plate). For the Slider, the KnobWidth property will affect both the button and pointed style knobs.</p> <p>For the Gauge control, KnobWidth is represented as Diameter.</p>
Data Type	Integer

LeftBorder Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the distance between left external border of the control and left edge of the control.
Custom	Adjusted in the General section of the custom properties page. Placing the mouse pointer over either of the control graphic's left corners will cause a sizing pointer to appear. Clicking and holding the left mouse button allows the bottom border for the control to be adjusted to the appropriate position with respect to the left external border of the control. Releasing the mouse button will then set the LeftBorder property.
Visual Basic	<i>object</i> . LeftBorder [= <i>setting %</i>]
Remarks	The LeftBorder property controls the distance between the outside border of the control and the left edge of the control. Use this property to adjust the space available for displaying a caption or value.
Data Type	Integer

LinkErrorDisplay Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines if an error message will be displayed in a control if an error has occurred when attempting to establish a DDE conversation with a LinkItem.
Custom	No access via custom property page.
Visual Basic	<i>[Form1.]Control.LinkErrorDisplay[=setting %]</i>
Remarks	When set to True, link error messages will be displayed; when set to False link error messages will not be displayed.
Data Type	Integer

LinkErrorNumber Property (Run Time Only)

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Returns the error number associated with its LinkItem. Not available at design time and read only at run time.
Custom	No access via custom property page.
Visual Basic	<i>[Form1.]Control.LinkErrorNumber</i>
Remarks	Use the LinkErrorNumber property along with a label control to display the error number. For example: Label1.caption = rsdata1.LinkErrorNumber.
Data Type	Integer

LinkErrorString Property (Run Time Only)

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Returns the error string associated with its LinkItem. Not available at design time and read only at run time.
Custom	No access via custom property page.
Visual Basic	<i>[Form1.]Control.LinkErrorString</i>
Remarks	Use the LinkErrorString property along with a label control to display the error string. For example: Label1.Caption = rsdata1.LinkErrorString.
Data Type	String

LinkItem Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the item portion of the data link string to which the control is linked.
Custom	Adjusted in the LinkInfo section of the custom property page.
Visual Basic	<i>object.LinkItem</i> [= <i>setting %</i>]
Remarks	Depending upon which type of DDE link is being established, the LinkItem can have many different formats, for example: "N7:1" is an integer address from a PLC datatable; "T4:0.ACC,L10" is a DDE block array, with a length of 10 items; "B3/0" is a binary address from a PLC datatable; "T4:11.ACC" is a timer address from a PLC datatable; and "r1c1" or "R2C2" are row and column addresses from a Microsoft Excel table.
Data Type	String

LinkMode Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the type of link to be used for a DDE conversation and activates the connection.
Custom	Adjusted in the LinkInfo section of the custom properties page.
Visual Basic	<i>object</i> . LinkMode [= <i>setting %</i>]
Remarks	Available options for the LinkMode property are: 0 = None; 1 = Automatic; 2 = Manual; and 3 = Notify.
Data Type	Integer

LinkServer Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines the application or server name that the control is linked to.
Custom	Adjusted in the LinkInfo section of the custom properties page.
Visual Basic	<i>object.LinkServer</i> [= <i>setting %</i>]
Remarks	Depending upon which type of DDE link is being established, the LinkServer can have different formats, for example: "ICOMWDRV" is the DDE server name for WINTelligent Linx and "EXCEL" is the DDE server name for Microsoft Excel.
Data Type	String

LinkTip Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel						
Description	Determines if a pop up LinkTip will be displayed whenever the mouse pointer is positioned above the control. The message in the LinkTip will either be the address that the control is linked to or a message specified by the LinkTipText property.						
Custom	Enabled / disabled in the Display section of the custom properties page with the "Link Tip" check box.						
Visual Basic	<i>object.LinkTip</i> [= <i>setting %</i>]						
Settings	<table><thead><tr><th><u>Settings</u></th><th><u>Description</u></th></tr></thead><tbody><tr><td>True</td><td>Displays LinkTip window.</td></tr><tr><td>False</td><td>Disables LinkTip window.</td></tr></tbody></table>	<u>Settings</u>	<u>Description</u>	True	Displays LinkTip window.	False	Disables LinkTip window.
<u>Settings</u>	<u>Description</u>						
True	Displays LinkTip window.						
False	Disables LinkTip window.						
Remarks	When set to True, the LinkTip popup box will appear whenever the mouse pointer is positioned above the control; when set to False the LinkTip popup box will not appear. If there is not a string value entered for the LinkTipText property, the LinkTip popup message box will display the Link Server, Topic, and Item to which the control is connected.						
Data Type	Integer						

LinkTipBackColor Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the background color of the LinkTip popup box.
Custom	Color is set in the Display section of the custom properties page by choosing LinkTipBackColor in the properties Combo Box and then selecting a color in the color Combo Box.
Visual Basic	<i>object</i> . LinkTipBackColor [= <i>setting</i>]
Remarks	The LinkTipBackColor property can be set to any color in the palette or a hex integer value representing a color. The LinkTip property must be set to True before this property will have any visible effect.
Data Type	Color

LinkTipForeColor Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines the color of the LinkTip message text.
Custom	Color is set in the Display section of the custom properties page by choosing LinkTipForeColor in the properties Combo Box and then selecting a color in the color Combo Box.
Visual Basic	<i>object</i> .LinkTipForeColor[= <i>setting %</i>]
Remarks	The LinkTipForeColor property can be set to any color in the palette or a hex integer value representing a color. The LinkTip property must be True before this property will have any visible effect.
Data Type	Color

LinkTipText Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Displays a text string that will be displayed in the LinkTip popup box, or the symbol name of a DDE address or the actual DDE address (i.e. LinkServer, LinkTopic, LinkItem).
Custom	No access via custom property page.
Visual Basic	<i>object</i> . LinkTipText [=setting %]
Remarks	This property will only be effective when the LinkTip property is set to True. The LinkTip window has an order of precedence as follows: If there is not any string value entered for this property, then the LinkTip popup window will display the Symbol name associated with the DDE address. If a Symbol name is not used then the actual DDE address will be displayed (i.e. LinkServer, LinkTopic, and LinkItem) to which the control is connected.
Data Type	String

LinkTopic Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines the topic portion of a data link string to which the control is linked.
Custom	Adjusted in the LinkInfo section of the custom property page.
Visual Basic	<i>object</i> . LinkTopic [= <i>setting %</i>]
Remarks	Depending upon which type of DDE link is being established, the LinkTopic can have different. Formats, for example: "testsol" would be a DDE topic created for the WINtelligent Linx driver and "sheet1.xls" would be a DDE topic name for Microsoft Excel.
Data Type	String

MoveRefresh Property

Applies To	RSGauge, RSSlider
Description	Determines if the Windows repaint commands called messages will be acted upon immediately upon mouse movement over the control or if the Windows system will decide when to send the messages and repaint the control.
Custom	No access via custom properties page.
Visual Basic	<i>object</i> . MoveRefresh [= <i>setting %</i>]
Remarks	When set to True the repaint messages will be acted upon immediately; when set to False the Windows system will decide the most appropriate time to send the message. On a fast machine there will probably not be a visible difference, therefore most users can set this property to False.
Data Type	Integer

NotFilledColor Property

Applies To	RSGauge, RSVessel
Description	Determines the color of the not-filled area on the control.
Custom	Display section.
Visual Basic	<i>object</i> .NotFilledColor[= <i>setting %</i>]
Remarks	The NotFilledColor property can be set to any color in the palette or a hex integer value representing a color. For the Gauge control this property is only used with the LED-style, Vertical and Horizontal Gauge types (4-7).
Data Type	Color

NumberOfDataValues Property (Run Time Only)

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Returns the total number of individual data values represented by the control. Not available at design time. Read only at run time.
Visual Basic	<i>object</i> .NumberOfDataValues
Data Type	Integer

NumberOfSegments Property

Applies To	RSCompare, RSVessel
Description	Sets the number of line segments to be drawn between the green bezier nodes in the control shape. (Green bezier nodes are visible on the custom properties page.) The higher the number of segments, the more round the control's shape will appear.
Custom	Segments text box on General page.
Visual Basic	<i>object</i> .NumberOfSegments[= <i>setting</i> %]
Data Type	Integer

NumbersColor Property

Applies To	RSVessel, RSWheel
Description	Sets the color of the Start and End values within the control's display area. This only applies when the DisplayStartEndValues property is set to True.
Custom	Display Section
Visual Basic	<i>object</i> .NumbersColor[= <i>setting</i> %]

Data TypeColor

Picture Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Any file of the *.bmp, *.wmf, *.ico format may be displayed on the control by defining the picture file.
Custom	Display Section.
Visual Basic	<i>object</i> . Picture [= <i>filename</i>]
Remarks	Bitmaps, Windows metafiles, and icon files may be used as pictures for the control. The RSTools controls also support drag and drop of pictures from the optional RSWorkbench Visual Basic Add-In.
Data Type	String

PictureStretch Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Stretches the picture to fit the control boundaries.
Custom	Check box in General Tab.
Visual Basic	<i>object</i> .PictureStretch[= <i>setting %</i>]
Remarks	True stretches the Picture. False lets the picture be displayed in its original size.
Data Type	Integer

PictureUp Property

Applies To	RSTButton, RSCompare
Description	Sets the filename of a picture to be displayed within the control when the control is not depressed. (Or in the case of the RSCompare control, when the control is in its Up state.)
Custom	Display section.
Visual Basic	<i>object</i> . PictureUp [= <i>file</i>]
Remarks	Picture files of the format *.bmp, *.wmf, and *.ico may be used. The RSCompare has several other picture properties including PictureUp; PictureDown, PictureEqual and Picture. Refer to the RSCompare documentation for information on these properties.
Data Type	String

PokeLength Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Defines the number of controls in a control array to be used in a LinkPoke starting from the PokeStartIndex in a control array.
Custom	No access via custom property page.
Visual Basic	<i>object.PokeLength</i> [= <i>setting%</i>]
Remarks	The number of controls to be used in single message transaction if AdvanceDDE is used.
Data Type	Integer

PokeStartIndex Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the starting index value of the controls in a control array to be used in a poke to the DDE server (source).
Custom	No access via custom property page.
Visual Basic	<i>object</i> . PokeStartIndex [= <i>setting</i> %]
Data Type	Integer

RequestLength Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Defines the number of controls in a control array for a LinkRequest from the DDE server (source).
Custom	N/A on the Custom properties page
Visual Basic	<i>object</i> .RequestLength[= <i>setting</i> %]
Remarks	This property applies if the control is part of an array.
Data Type	Integer

RequestStartIndex Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the starting index value of the controls in a control array to be used in a request from the DDE server (source).
Visual Basic	<i>object</i> . RequestStartIndex [= <i>setting</i> %]
Data Type	Integer

ReverseDirection Property

Applies To	RSGauge, RSSlider, RSWheel
Description	This property reverses the start and end values.
Custom	General section.
Visual Basic	<i>object.ReverseDirection</i> [= <i>setting%</i>]
Remarks	Setting to False uses the defined start and end values. Setting to True reverses the start and end values.
Data Type	Integer

RightBorder Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the distance between right external border of the control and right edge of the control.
Custom	Adjusted in the General section of the custom properties page. Placing the mouse pointer over either of the control graphic's right corners will cause a sizing pointer to appear. Clicking and holding the left mouse button allows the bottom border for the control to be adjusted to the appropriate position with respect to the right external border of the control. Releasing the mouse button will then set the RightBorder property.
Visual Basic	<i>object</i> . RightBorder [= <i>setting %</i>]
Remarks	The RightBorder property controls the distance between the outside border of the control and the left edge of the control. Use this property to adjust the space available for displaying a caption or value.
Data Type	Integer

Scale1DecimalPlaces Property

Applies To	RSGauge, RSSlider
Description	Sets or returns the number of decimal places used for the Scale 1 numerals.
Custom	Key in or Use the spin buttons next to 'Decimal' on the Scale Tab.
Visual Basic	<i>object</i> .Scale1DecimalPlaces[= <i>setting</i> %]
Data Type	Integer

Scale1End Property

Applies To	RSGauge, RSlider
Description	Sets or returns the End position and value of the Scale 1 markings.
Custom	Key in or click on the # sign to bring up the key pad on 'Place Scale1 @' settings box on the Scale Tab.
Visual Basic	<i>object</i> .Scale1End[= <i>setting</i> %]
Data Type	Double

Scale1Length Property

Applies To	RSSlider, RSGauge
Description	Determines the physical length of the markings for Scale 1.
Custom	General Section. Can be edited directly on the picture.
Visual Basic	<i>object</i> .Scale1Length[= <i>setting</i> %]
Data Type	Integer

Scale1Major Property

Applies To	RSSlider, RSGauge
Description	Sets the number of major scale divisions for Scale 1.
Custom	Key in or Use the spin buttons next to 'Major' on the Scale Tab.
Visual Basic	<i>object</i> .Scale1Major[= <i>setting</i> %]
Data Type	Integer

Scale1MajorColor Property

Applies To	RSSlider, RSGauge
Description	Sets the major scale color of Scale 1.
Custom	Display section.
Visual Basic	<i>object</i> .Scale1MajorColor[= <i>setting</i> %]
Data Type	Color

Scale1Minor Property

Applies To	RSGauge, RSSlider
Description	Sets the number of minor scale divisions for Scale 1.
Custom	Key in or Use the spin buttons next to 'Minor' on the Scale Tab.
Visual Basic	<i>object</i> .Scale1Minor[= <i>setting</i> %]
Data Type	Integer

Scale1MinorColor Property

Applies To	RSGauge, RSSlider
Description	Sets the minor scale mark color of Scale 1.
Custom	Display section.
Visual Basic	<i>object</i> .Scale1MinorColor[= <i>setting %</i>]
Data Type	Color

Scale1NumbersVisible Property

Applies To	RSGauge, RSSlider
Description	Determines whether or not Scale 1 numbers are visible.
Custom	Check Box on the Scale Tab.
Visual Basic	<i>object</i> .Scale1NumberVisible[= <i>setting %</i>]
Remarks	True makes the numbers visible. False hides the numbers.
Data Type	Integer

Scale1Offset Property

Applies To	RSGauge, RSSlider
Description	Defines the offset of the Scale 1 markings from the inside border.
Custom	Double Click on the # mark next to scale in the Setup Area on the General Tab.
Visual Basic	<i>object</i> .Scale1Offset[= <i>setting</i> %]
Data Type	Integer

Scale1Start Property

Applies To	RSGauge, RSlider
Description	Determines the Start position and value of the Scale 1 markings on the control.
Custom	Key in or click on the # sign to bring up the key pad on 'Place Scale1 @' settings box on the Scale Tab.
Visual Basic	<i>object.Scale1Start</i> [= <i>setting</i> %]
Data Type	Double

Scale1String Property

Applies To	RSSlider, RSGauge
Description	Determines the String Caption to be displayed next to Scale 1.
Custom	Not Available on Custom Property Pages.
Visual Basic	<i>object.Scale1String</i> [=setting%]
Data Type	String

Scale1StringEnabled Property

Applies To	RSSlider, RSGauge
Description	Enables / Disables the display of String caption next to Scale 1.
Custom	Not Available on Custom Property Pages.
Visual Basic	<i>object</i> .Scale1StringEnabled[= <i>setting</i> %]
Data Type	Integer

Scale1Style Property

Applies To	RSGauge, RSSlider
Description	Defines the position of the Scale 1 numbers on the control.
Custom	Drop down combo box on the Scale Tab.
Visual Basic	<i>object</i> .Scale1Style[= <i>setting %</i>]
Remarks	Valid styles are 0=Next Scale, 1=Inside Border and 2=Outside Border
Data Type	enumScaleStyles

Scale1TextColor Property

Applies To	RSGauge, RSSlider
Description	Defines the text color for Scale 1.
Custom	Display Section
Visual Basic	<i>object</i> .Scale1TextColor[= <i>setting</i> %]
Remarks	Color can be chosen form the color palette or specified as RGB in Hex.
Data Type	Color

Scale1TrailingZeros Property

Applies To	RSGauge, RSSlider
Description	Defines the number of trailing zeros for Scale 1.
Custom	Check Box on the Scale Tab.
Visual Basic	<i>object</i> .Scale1TrailingZeros[= <i>setting</i> %]
Data Type	Integer

Scale1Type Property

Applies To	RSGauge, RSlider
Description	Specifies the Scale 1 marking type.
Custom	Drop down combo box on the Scale Tab.
Visual Basic	<i>object</i> .Scale1Type[= <i>setting %</i>]
Remarks	Valid style are 0=Normal, 1=Indented and 2=Bevel
Data Type	Integer

Scale1Visible Property

Applies To	RSGauge, RSSlider
Description	Specifies if Scale 1 is visible or hidden.
Custom	Check Box on the Scale Tab.
Visual Basic	<i>object</i> .Scale1Visible[= <i>setting %</i>]
Data Type	Integer

Scale1Width Property

Applies To	RSGauge, RSSlider
Description	Sets the width of the Scale 1 markings.
Custom	Edit directly on the setup area of the General custom properties tab.
Visual Basic	<i>object</i> .Scale1Width[= <i>setting</i> %]
Data Type	Integer

Scale2DecimalPlaces Property

Applies To	RSGauge, RSSlider
Description	Sets or specifies the number of decimal places used for the Scale 2 numerals.
Custom	Key in or Use the spin buttons next to 'Decimal' on the Scale Tab.
Visual Basic	<i>object</i> .Scale2DecimalPlaces[= <i>setting</i> %]
Data Type	Integer

Scale2End Property

Applies To	RSGauge, RSlider
Description	Sets or returns the End position and value of the Scale 2 markings on the control.
Custom	Key in or click on the # sign to bring up the key pad on 'Place Scale1 @' settings box on the Scale Tab.
Visual Basic	<i>object</i> .Scale2End[= <i>setting</i> %]
Data Type	Double

Scale2EndNumber Property

Applies To	RSGauge, RSlider
Description	Sets or returns the end number value of the numerals on Scale 2.
Custom	Key in or Use the spin buttons next to 'Scale 2 Numbering' on the Scale Tab.
Visual Basic	<i>object</i> .Scale2EndNumber[= <i>setting %</i>]
Remarks	The Scale2End property value is the physical location of the end scale marking with respect to Scale1; Scale2EndNumber represents the text (number) that will be displayed at that end marking.
Data Type	Double

Scale2Length Property

Applies To	RSGauge, RSSlider.
Description	Sets the length of the Scale 2 markings.
Custom	General section. Edit directly on the setup area.
Visual Basic	<i>object</i> .Scale2Length[= <i>setting</i> %]
Data Type	Integer

Scale2Major Property

Applies To	RSGauge, RSSlider
Custom	Key in or Use the spin buttons next to 'Major' on the Scale Tab.
Description	Sets the number of major scale divisions for Scale 2.
Visual Basic	<i>object</i> .Scale2Major[= <i>setting %</i>]
Data Type	Integer

Scale2MajorColor Property

Applies To	RSGauge, RSSlider
Description	Sets the major scale color for Scale 2.
Custom	Display section.
Visual Basic	<i>object</i> .Scale2MajorColor[= <i>setting %</i>]
Data Type	Color

Scale2Minor Property

Applies To	RSGauge, RSSlider
Description	Sets the number of scale divisions for the minor scale of Scale 2.
Custom	Key in or Use the spin buttons next to 'Minor' on the Scale Tab.
Visual Basic	<i>object</i> .Scale2Minor[= <i>setting %</i>]
Data Type	Integer

Scale2MinorColor Property

Applies To	RSGauge, RSSlider
Description	Sets Scale 2 minor scale color.
Custom	Display section.
Visual Basic	<i>object</i> .Scale2MinorColor[= <i>setting %</i>]
Data Type	Color

Scale2NumbersVisible Property

Applies To	RSGauge, RSlider
Description	Determines whether Scale 2 numbers are visible or not.
Custom	Check Box on the Scale Tab.
Visual Basic	<i>object</i> .Scale2NumbersVisible[= <i>setting %</i>]
Remarks	True sets the numbers to be visible. False hides the numbers.
Data Type	Integer

Scale2Offset Property

Applies To	RSGauge, RSSlider
Description	Defines the offset of Scale 2 markings from the outside border.
Custom	No access via custom property page.
Visual Basic	<i>object</i> .Scale2Offset[= <i>setting</i> %]
Data Type	Integer

Scale2Start Property

Applies To	RSGauge, RSSlider
Description	Sets or returns the Start position and value of the Scale 2 markings on the control.
Custom	Key in or click on the # sign to bring up the key pad on 'Place Scale2 @' settings box on the Scale Tab.
Visual Basic	<i>object</i> .Scale2Start[= <i>setting %</i>]
Data Type	Double

Scale2StartNumber Property

Applies To	RSGauge, RSlider
Description	Sets or returns the Scale 2 start number value of the scale numerals.
Custom	Key in or Use the spin buttons next to 'Scale 2 Numbering' on the Scale Tab.
Remarks	The Scale2Start property value is the physical location of the start scale marking with respect to Scale1; Scale2StartNumber represents the text (number) that will be displayed at that start marking.
Visual Basic	<i>object</i> .Scale2StartNumber[= <i>setting %</i>]
Data Type	Double

Scale2String Property

Applies To	RSSlider, RSGauge
Description	Determines the String Caption to be displayed next to Scale 1.
Custom	No access via custom property page.
Visual Basic	<i>object.Scale1String</i> [=setting%%]
Data Type	String

Scale2StringEnabled Property

Applies To	RSSlider, RSGauge
Description	Enables / Disables the display of String caption next to Scale 1.
Custom	No access via custom property page.
Visual Basic	<i>object</i> .Scale1StringEnabled[= <i>setting</i> %]
Data Type	Integer

Scale2Style Property

Applies To	RSGauge, RSSlider
Description	Defines the position of the Scale 2 numbers on the control.
Custom	Drop down combo box on the Scale Tab.
Visual Basic	<i>object</i> .Scale2Style[= <i>setting</i> %]
Remarks	Valid styles are 0=Next Scale, 1=Inside Border and 2=Outside Border.
Data Type	Integer

Scale2TextColor Property

Applies To	RSGauge, RSSlider
Description	Define the text color for Scale 2.
Custom	Display section.
Visual Basic	<i>object</i> .Scale2TextColor[= <i>setting</i> %]
Data Type	Color

Scale2TrailingZeros Property

Applies To	RSGauge, RSSlider
Description	Sets the number of trailing zeros for Scale 2.
Custom	Check Box on the Scale Tab.
Visual Basic	<code>object.Scale2TrailingZeros[=setting %]</code>
Data Type	Integer

Scale2Type Property

Applies To	RSGauge, RSSlider
Description	Specifies the scale marking type for Scale 2.
Custom	Drop down combo box on the Scale Tab.
Visual Basic	<i>object</i> .Scale2Type[= <i>setting %</i>]
Remarks	Valid types are 0=Normal, 1=Indented and 2=Bevel
Data Type	Integer

Scale2Visible Property

Applies To	RSGauge, RSSlider
Description	Decides whether Scale 2 is visible or hidden.
Custom	Check Box on the Scale Tab.
Visual Basic	<i>object</i> .Scale2Visible[= <i>setting %</i>]
Remarks	True makes the scale visible. False hides it.
Data Type	Integer

Scale2Width Property

Applies To	RSGauge, RSlider
Description	Sets the width of the scale markings for Scale 2.
Custom	General Section. Edit the picture directly in the setup area.
Visual Basic	<i>object</i> .Scale2Width[= <i>setting %</i>]
Data Type	Integer

ScaleBorderColor Property

Applies To	RSGauge, RSlider
Description	Sets the scale marking border color.
Custom	Display section.
Visual Basic	<i>object</i> .ScaleBorderColor[= <i>setting</i> %]
Remarks	This property is active with a Scale Type of 1. Color can be chosen from the color palette or specified in RGB format.
Data Type	Color

ScaleHighlight Property

Applies To	RSGauge, RSlider
Description	Set the scale marking highlight color.
Custom	Display section.
Visual Basic	<i>object</i> .ScaleHighlight[= <i>setting</i> %]
Remarks	This property is active with a Scale Type of 2. Color can be chosen from the color palette or specified in RGB format.
Data Type	Color

ScaleShadow Property

Applies To	RSGauge, RSSlider
Description	Displays a shadow of the scale.
Custom	Check Box in the General section.
Visual Basic	<i>object</i> .ScaleShadow[= <i>setting %</i>]
Remarks	This property is active when the Scale Type = 2. True displays the Shadow and False disables Shadow display.
Data Type	Color

ScreenPriority Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines if the Windows dispatch commands called messages will be acted upon immediately or the Windows system will decide when to send the messages.
Visual Basic	<i>object</i> .ScreenPriority[= <i>setting</i> %]
Remarks	When set to True the messages will be acted on immediately. When set to False the Windows system decides the most appropriate time to send the message.
Data Type	Integer

Shadow Property

Applies To	RSCompare, RSGauge, RSSlider, RSVessel
Description	Specifies if the control's knob or graphic shadow is visible or hidden.
Custom	Check box in General section.
Visual Basic	<i>object</i> . Shadow [= <i>setting</i> %]
Remarks	True sets the shadow visible. False hides the shadow.
Data Type	Integer

ShadowOffsetX Property

Applies To	RSCompare, RSGauge, RSSlider, RSVessel
Description	Sets the horizontal offset of the control's knob or graphic shadow.
Custom	General section. Edit the picture directly in the setup area.
Visual Basic	<i>object</i> .ShadowOffsetX[= <i>setting</i> %]
Data Type	Integer

ShadowOffsetY Property

Applies To	RSCompare, RSGauge, RSSlider, RSVessel
Description	Sets the vertical offset of the control's knob or graphic shadow.
Custom	General section. Edit the picture directly in the setup area.
Visual Basic	<i>object</i> .ShadowOffsetY[= <i>setting</i> %]
Data Type	Integer

StartValue Property

Applies To	RSCmpare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Specifies the starting value for the control.
Custom	Adjusted in the “Start Value” text box in the Value section of the custom properties page.
Visual Basic	<i>object.StartValue</i> [= <i>setting</i> %]
Remarks	For the RSGauge and RSSlider controls, StartValue applies to both the Scale1 and Scale2 value ranges. For the RSCmpare, RSData, and RSWheel controls, the StartValue will be ignored if the UseStartEndValue property is set to False.
Data Type	Double

Symbol Property

Applies To	RSButton, RSCompare, RSDData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Serves as an alias name for the server, topic and item to be used in a DDE link.
Custom	LinkInfo Section.
Visual Basic	<i>object.Symbol</i> [= <i>setting %</i>]
Remarks	<p>To establish a symbol go to the LinkInfo tab on the control's custom property page. Select manage symbols and enter the symbol name, server, topic and item. After applying this data to the control, enter the Symbol name on the property sheet. The Linkserver, LinkTopic and LinkItem properties will be updated according to the symbol name entered.</p> <p>See also: <i>LinkTip</i> property.</p>
Data Type	String

TabIndex Property

Applies To	RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the tab index for the control.
Custom	No access via custom property page.
Visual Basic	<i>object</i> . TabIndex [= <i>setting %</i>]
Remarks	TabIndex is always one less than the total number of controls.
Data Type	Integer

TabStop Property

Applies To	RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Adds or removes the control from the form's Tab order at run time.
Custom	No access via custom property page.
Visual Basic	<i>object</i> . TabStop [= <i>setting %</i>]
Remarks	Setting to True adds the control to the form's tab order. False removes the control from the tab order.
Data Type	Integer

Tag Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets or returns an expression that stores any extra data needed in the application.
Custom	No access via custom property page.
Visual Basic	<i>object.Tag[=setting %]</i>
Remarks	This is a user defined property that does not affect other VB properties.
Data Type	String

Top Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines the distance between the top edge of a control and the top edge of its container.
Custom	No access via custom property page.
Visual Basic	<i>object</i> . Top [= <i>setting</i> %]
Data Type	Single

TopBorder Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines the distance between the top external border of the control and the top of the control.
Custom	Adjusted in the General section of the custom properties page. Placing the mouse pointer over either of the control graphic's lower corners will cause a sizing pointer to appear. Clicking and holding the left mouse button allows the top border for the control to be adjusted to the appropriate position with respect to the top external border of the control. Releasing the mouse button will then set the TopBorder property.
Visual Basic	<i>object</i> . TopBorder [= <i>setting</i> %]
Data Type	Integer

TrailingZeros Property

Applies To	RSCompare, RSData, RSGauge, RSSlider, RSVessel
Description	Determines if the value is displayed with trailing insignificant zeros.
Custom	Check box in General section.
Visual Basic	<i>object</i> . TrailingZeros [= <i>setting</i> %]
Remarks	True displays the value with trailing zeros. False displays the value without trailing zeros.
Data Type	Integer

UseInPoke Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	A flag to signify that the control should be used in a LinkPoke or DoPoke.
Custom	No access via custom property page.
Visual Basic	<i>object</i> . UseInPoke [= <i>setting %</i>]
Remarks	True sets the control to be used in a poke. False sets the control not to be used. This property may be set for each element of a control array, which allows individual controls to be “skipped” in a block write action.
Data Type	Integer

UseInRequest Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	A flag to signify that the control should be used in a LinkRequest or DoRequest.
Custom	No access via custom property page.
Visual Basic	<i>object</i> .UseInRequest[= <i>setting %</i>]
Remarks	True sets the control to be used in a request. False sets the control not to be used. This property may be set for each element of a control array, which allows individual controls to be “skipped” in a block read action.
Data Type	Integer

UseStartEndValue Property

Applies To	RSCompare, RSData, RSWheel
Description	Enables / disables use of a minimum and maximum value range for the applicable controls, with the minimum and maximum being the values of the StartValue and EndValue properties.
Custom	Adjusted in the General section of the custom properties page with a checkbox in the Options window.
Visual Basic	<i>object</i> .UseStartEndValue[= <i>setting %</i>]
Remarks	When set to True, the control will not allow its Value to fall outside of the StartValue to EndValue range. When set to False, the control will allow Values outside of that range.
Data Type	Integer

Value Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Contains the value of the control at runtime.
Custom	Value section.
Visual Basic	<i>object.Value</i> [= <i>setting %</i>]
Remarks	<p>Since the RSTools controls are capable of displaying multiple LinkItem addresses with an array of controls, you can preview an array of controls at design time with the Value property by setting the Value to a comma-separated string of values. For instance, a Value setting of “0,1,2,3,4” will display an array of 5 controls within the one instance of the RSTools control, each with the corresponding Value displayed.</p> <p>See also: <i>Clip</i> property.</p>
Data Type	String

ValueBackColor Property

Applies To	RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the back color for the control's value.
Custom	Display section.
Visual Basic	<i>object.ValueBackColor</i> [= <i>setting %</i>]
Remarks	Is visible only if the VALUE is set to transparent.
Data Type	Color

ValueColor Property

Applies To	RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the foreground color of the control's value.
Custom	Display section.
Visual Basic	<i>object</i> .ValueColor[= <i>setting</i> %]
Data Type	Color

ValuePadDownload Property

Applies To	RSCompare, RSData, RSVessel
Description	Enables / disables the number entry pad from being activated when the control is clicked on at run time.
Custom	Check box in the General section.
Visual Basic	<i>object.ValuePadDownload</i> [= <i>setting %</i>]
Data Type	Integer

ValueShadow Property

Applies To	RSCmpare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Turns On/Off the value shadow.
Custom	Check box in General section.
Visual Basic	<i>object.ValueShadow</i> [= <i>setting %</i>]
Remarks	True displays the shadow and False hides it.
Data Type	Integer

ValueShadowColor Property

Applies To	RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines the color of the value's shadow.
Custom	Display section.
Visual Basic	<i>object</i> .ValueShadowColor[= <i>setting</i> %]
Data Type	Color

ValueTransparent Property

Applies To	RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines if the value background is transparent or opaque.
Custom	Check box in General section.
Visual Basic	<i>object</i> .ValueTransparent[= <i>setting %</i>]
Remarks	True sets it to transparent. False sets it to opaque.
Data Type	Integer

ValueX Property

Applies To	RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the horizontal position of the Value display within the control.
Custom	General section. Edit the picture directly.
Visual Basic	<i>object.ValueX</i> [=setting %]
Remarks	The position can be set from 0 to 100. The CenterOnKnob property of the RSSlider should be False to display the value somewhere other than the knob.
Data Type	Integer

ValueY Property

Applies To	RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets the vertical position of the Value display within the control.
Custom	General section. Edit the picture directly.
Visual Basic	<i>object.ValueY</i> [=setting %]
Remarks	The position can be set from 0 to 100. The CenterOnKnob property for the RSSlider should be False to display the value somewhere other than the knob.
Data Type	Integer

Visible Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines if the control is visible at run-time.
Visual Basic	<i>object.Visible</i> [= <i>setting %</i>]
Remarks	True sets the control to be visible and False hides it.
Data Type	Integer

WhatsThisHelpID Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets or returns the associated WhatsThisHelp context number.
Visual Basic	<i>object</i> . WhatsThisHelpID [= <i>number</i>]
Remarks	These context numbers are associated with Windows help files.
Data Type	Long

Width Property

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Sets or returns the width of the control.
Custom	General section. Edit the picture directly.
Visual Basic	<i>object</i> . Width [= <i>setting %</i>]
Data Type	Single

WriteStyle Property

Applies To	RSButton, RSGauge, RSSlider, RSWheel
Description	Sets the write style to the DDE server.
Custom	Value section.
Visual Basic	<i>object</i> .WriteStyle[= <i>setting</i> %]
Remarks	Options are: 0 - ReadOnly; 1- Continuous, 2- Release.
Data Type	Integer

WriteValue Property

Applies To	RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Determines if the value will be downloaded to a database or LinkItem.
Custom	The WriteValue is used when a person programmatically changes a value.
Visual Basic	<i>object</i> .WriteValue[= <i>setting</i> %]
Data Type	Integer

Event Reference

This chapter provides a complete alphabetical reference for the RSTools common controls' events. Refer to Chapter 2, Programming Tools, for additional information about using events.

Change Event

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Indicates that the contents of a control's Value property have changed.
Visual Basic	Private Sub <i>object_Change</i> (<i>index As Integer</i>)
Remarks	<p>The Change event procedure can synchronize or coordinate data display among controls.</p> <p>For additional information, refer to the description of the Change event in the Microsoft Visual Basic Language Reference Manual.</p>

Click Event

Applies To	RSCmpare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Occurs when the user presses and then releases a mouse button over an object.
Visual Basic	Private Sub <i>object_Click</i> (<i>[index As Integer]</i>)
Remarks	<p>Typically, you attach a Click event procedure to a CommandButton control, Menu object, or PictureBox control to carry out commands and command-like actions. For the other applicable controls, use this event to trigger actions in response to a change in the control.</p> <p>For additional information, refer to the description of the Click event in the Microsoft Visual Basic Language Reference Manual.</p>

Clicks Event

Applies To	RSButton, RSCmpare, RSVessel
Description	The Clicks event occurs when the user presses and releases the mouse button while the pointer is in the control's window and the control's ActsLikeButton property is set to True.
Visual Basic	Sub RSButton1_Click ([ByVal dValue As Double, ByVal iButtonIndex As Integer])
Remarks	Differs from the click event in that when the RSVessel (RSButton or RSCmpare) control is linked to an array of data items, the index of the RSVessel that is clicked on within that array is passed to the event as well as that RSVessel's value. The ActsLikeButton property must be set to True for this event to fire

DbIcClick Event

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Occurs when the user presses and releases a mouse button and then presses and releases it again over an object.
Visual Basic	Private Sub <i>object</i>_DbIcClick (<i>index As Integer</i>)
Remarks	<p>The argument <i>Index</i> uniquely identifies a control if it's in a control array. You can use a DbIcClick event procedure for an implied action, such as double-clicking an icon to open a window or document.</p> <p>For additional information, refer to the description of the DbIcClick event in the Microsoft Visual Basic Language Reference Manual.</p>

DragDrop Event

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Occurs when a drag-and-drop operation is completed as a result of dragging a control over a form or control and releasing the mouse button or using the Drag method with its action argument set to 2 (Drop).
Visual Basic	Private Sub <i>object</i>_DragDrop(<i>index</i> As Integer, <i>source</i> As Control, <i>x</i> As Single, <i>y</i> As Single)
Remarks	<p>Use a DragDrop event procedure to control what happens after a drag operation is completed.</p> <p>For additional information, refer to the description of the DragDrop event in the Microsoft Visual Basic Language Reference Manual.</p>

DragOver Event

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Occurs when a drag-and-drop operation is in progress. You can use this event to monitor the mouse pointer as it enters, leaves, or rests directly over a valid target. The mouse pointer position determines the target object that receives this event.
Visual Basic	Private Sub <i>object</i>_DragOver(<i>[index As Integer,</i>]<i>source As Control, x As Single, y As Single, state As Integer</i>)
Remarks	<p>Use a DragOver event procedure to determine what happens after dragging is initiated and before a control drops onto a target.</p> <p>For additional information, refer to the description of the DragOver event in the Microsoft Visual Basic Language Reference Manual.</p>

EndMove Event

Applies To	RSGauge, RSlider
Description	Occurs when the user releases the mouse button after using the mouse pointer to position the RSGauge needle or RSlider knob to a new value.
Visual Basic	Private Sub <i>object</i>_EndMove ([byVal <i>Value</i> As Double, ByVal <i>Index</i> As Integer])
Remarks	<p>The EndMove event can be used to dictate what should happen after the RSGauge needle or RSlider knob has been moved to a new value using the mouse pointer.</p> <p>Note: This event is unavailable when using a RSGauge type with fill boxes unless you apply a needle to it.</p>

GotFocus Event

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Occurs when an object receives the focus, either by user action, such as tabbing to or clicking the object, or by changing the focus in code using the SetFocus method.
Visual Basic	Private Sub <i>object</i>_GotFocus(<i>[index As Integer]</i>)
Remarks	<p>Typically, you use a GotFocus event procedure to specify the actions that occur when a control or form first receives the focus.</p> <p>For additional information, refer to the description of the GotFocus event in the Microsoft Visual Basic Language Reference Manual.</p>

KeyDown, KeyUp Events XE " KeyUp Event"

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Occur when the user presses (KeyDown) or releases (KeyUp) a key while an object has the focus.
Visual Basic	Private Sub <i>object</i>_KeyDown(<i>[index As Integer,]keycode As Integer, shift As Integer</i>) Private Sub <i>object</i>_KeyUp(<i>[index As Integer,]keycode As Integer, shift As Integer</i>)
Remarks	For both events, the object with the focus receives all keystrokes. For additional information, refer to the description of the KeyDown,KeyUp events in the Microsoft Visual Basic Language Reference Manual.

KeyPress Event

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Occurs when the user presses and releases an ANSI key.
Visual Basic	Private Sub <i>object</i> _ KeyPress (<i>[index As Integer,</i> <i>keyascii As Integer]</i>)
Remarks	The object with the focus receives the event. For additional information, refer to the description of the KeyPress event in the Microsoft Visual Basic Language Reference Manual.

LinkError Event

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Occurs when there is an error during a DDE conversation. This event is recognized only as the result of a DDE-related error that occurs when no Visual Basic code is being executed. The error number is passed as an argument.
Visual Basic	Private Sub <i>object</i>_LinkError(ByVal <i>iRet</i> As Integer, ByVal <i>ErrorString</i> As String)
Remarks	Use a LinkError event procedure to notify the user of the particular error that has occurred. For additional information, refer to the description of the LinkError event in the Microsoft Visual Basic Language Reference Manual.

LinkItemNotSupported Event

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Occurs when the control's LinkItem has an incorrect format.
Visual Basic	Private Sub <i>object</i> _LinkItemNotSupported ()

LinkItemSupported Event

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Occurs when the control's LinkItem has a correct format.
Visual Basic	Private Sub <i>object</i>_LinkItemSupported ()

LinkNotify Event

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Occurs when the source has changed the data defined by the DDE link if the LinkMode property of the destination control is set to 3 (Notify).
Visual Basic	Private Sub <i>object</i>_LinkNotify([ByVal <i>index</i> As Integer])
Remarks	Typically, in the LinkNotify event your code notifies the user, gets the new data immediately, or defers getting the data until later. You can use the LinkRequest method to obtain the new data from the source. For additional information, refer to the description of the LinkNotify event in the Microsoft Visual Basic Language Reference Manual.

LinkOutOfMemory Event

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Occurs when the client (control) has exhausted its memory resources.
Visual Basic	Private Sub <i>object</i>_DbClick ([ByVal <i>Index</i> As Integer])

LinkServerDisconnected Event

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Occurs when the control is connected to a server and that server becomes unavailable..
Visual Basic	Private Sub <i>object</i> _LinkServerDisconnected ()

LinkUnableToConnectToServer Event

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Occurs when the control attempts to connect to a server that is unavailable.
Visual Basic	Private Sub <i>object</i> _LinkUnableToConnectToServer ()

LostFocus Event

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Occurs when an object loses the focus, either by user action, such as tabbing to or clicking another object, or by changing the focus in code using the SetFocus method.
Visual Basic	Private Sub <i>object</i>_LostFocus(<i>index</i> As Integer)
Remarks	A LostFocus event procedure is primarily useful for verification and validation updates. Using LostFocus can cause validation to take place as the user moves the focus from the control. For additional information, refer to the description of the Click event in the Microsoft Visual Basic Language Reference Manual.

MouseDown, MouseUp Events

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Occur when the user presses (MouseDown) or releases (MouseUp) a mouse button.
Visual Basic	Private Sub <i>object</i> _MouseDown(<i>index</i> As Integer,<i>button</i> As Integer, <i>shift</i> As Integer, <i>x</i> As Single, <i>y</i> As Single) Private Sub <i>object</i> _MouseUp(<i>index</i> As Integer,<i>button</i> As Integer, <i>shift</i> As Integer, <i>x</i> As Single, <i>y</i> As Single)
Remarks	Use a MouseDown or MouseUp event procedure to specify actions that will occur when a given mouse button is pressed or released. For additional information, refer to the description of the MouseDown, MouseUp events in the Microsoft Visual Basic Language Reference Manual.

MouseMove Event

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	Occurs when the user moves the mouse.
Visual Basic	Private Sub <i>object</i> _MouseMove(<i>index As Integer</i>,<i>button As Integer</i>, <i>shift As Integer</i>, <i>x As Single</i>, <i>y As Single</i>)
Remarks	The MouseMove event is generated continually as the mouse pointer moves across objects. For additional information, refer to the description of the MouseMove event in the Microsoft Visual Basic Language Reference Manual.

PokeCompleted Event

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	The PokeCompleted event occurs when a poke action has completed
Visual Basic	Private Sub <i>object</i>_PokeCompleted ([ByVal <i>iRet</i> As Integer])
Remarks	The argument <i>iRet</i> returns error numbers

RequestCompleted Event

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSVessel, RSWheel
Description	The RequestCompleted event occurs when a request action has completed.
Visual Basic	Private Sub <i>object</i>_RequestCompleted ([ByVal <i>iRet</i> as Integer])
Remarks	The argument <i>iRet</i> returns error numbers

StartMove Event

Applies To	RSGauge, RSlider
Description	Occurs when the RSlider's knob or RSGauges Needle begins to move.
Visual Basic	Private Sub <i>object</i>_StarMove([ByVal <i>Value</i> As Double, ByVal <i>Index</i> as Integer])

Methods Reference

This chapter provides a reference for the RSTools common methods. Refer to the individual component manuals in Chapter 2, Programming Tools, for additional information about using methods.

Container Method

Applies To	RSButton, RSCompare, RSData, EventMaster, RSGauge, RSSlider, RSWheel
Description	Returns or sets the container of a control.
Visual Basic	<i>object.Control.Container</i> [= <i>setting</i>]
Remarks	Not available at design time. A control's parent (container) may be changed at run time with the Container method.

DoPoke Method

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSWheel, RSVessel
Description	Writes the values of all controls in an array to the server in a DDE conversation. To work successfully the control's UseInPoke property must be set to True.
Visual Basic	<i>object</i> .Control. DoPoke
Remarks	The control's LinkMode property must be set to 2 - Manual. See also: <i>PokeStartIndex</i> and <i>PokeLength</i> properties, <i>LinkPoke</i> method.

DoRequest Method

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSWheel, RSVessel
Description	Requests the source application in a DDE conversation to update an array of control values. LinkMode should be set to either None(0) or Manual(2). To work successfully, the control's UseInRequest property must be set to True.
Visual Basic	<i>object.Control.DoRequest</i>
Remarks	The control's LinkMode property must be set to 2 - Manual. See also: <i>RequestStartIndex</i> and <i>RequestLength</i> properties, <i>LinkRequest</i> Method.

Drag Method

Applies To RSTButton, RSCompare, RSData, RSGauge, RSSlider, RSWheel, RSVessel

Description Begins, ends, or cancels a drag operation of any control except the Line, Menu, Shape, Timer, or CommonDialog controls.

Visual Basic *object*.Drag action

Settings The settings for action are:

<u>Constant</u>	<u>Value</u>	<u>Description</u>
vbCancel	0	Cancels drag operation.
vbBeginDrag	1	Begins dragging object.
vbEndDrag	2	Ends dragging and drop object.

Remarks Using the Drag method to control a drag-and-drop operation is required only when the DragMode property of the object is set to Manual (0). However, you can use Drag on an object whose DragMode property is set to Automatic (1 or vbAutomatic).

For more information refer to the Microsoft Visual Basic Language Reference.

LinkPoke Method

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSWheel, RSVessel
Description	Transfers the value of a control to the source application in a DDE conversation. To work successfully the control's UseInPoke property must be set to True.
Visual Basic	<i>object</i> . LinkPoke
Remarks	Typically, information in a DDE conversation flows from source to destination. However, LinkPoke allows a destination object to supply RSData to the source. See also: <i>PokeStartIndex</i> and <i>PokeLength</i> properties, <i>DoPoke</i> method.

LinkRequest Method

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSWheel, RSVessel
Description	Requests the source application in a DDE conversation to update the value of the control. LinkMode should be set to either None(0) or Manual(2). To work successfully the control's UseInRequest property must be set to True.
Visual Basic	<i>object</i> . LinkRequest
Remarks	LinkRequest causes the source application to send the most current RSData to object. See also: <i>RequestStartIndex</i> and <i>RequestLength</i> properties, <i>DoRequest</i> method.

Move Method

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSWheel, RSVessel
Description	Moves an MDIForm, Form, or control.
Visual Basic	<i>object</i> . Move left, top, width, height
Remarks	<p>Only the left argument is required. However, to specify any other arguments, you must specify all arguments that appear in the syntax before the argument you want to specify.</p> <p>For more information refer to the Microsoft Visual Basic Language Reference.</p>

Object Method

Applies To	RSButton, RSCompare, RSDData, RSGauge, RSWheel, RSVessel, RSSlider
Description	Returns an object in a control.
Visual Basic	<i>object.Control</i> . Object [.property .method][=value]
Remarks	For more information refer to the Microsoft Visual Basic Language Reference.

Parent Method

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSWheel, RSVessel
Description	Returns the container on which an object is located.
Visual Basic	<i>object</i> .Control. Parent
Remarks	For more information refer to the Microsoft Visual Basic Language Reference.

SetFocus Method

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSWheel, RSVessel
Description	Moves the focus to the specified control or form.
Visual Basic	<i>object</i> . SetFocus
Remarks	<p>The object (control) that can receive the focus. After invoking the SetFocus method, any user input is directed to the specified control.</p> <p>For more information refer to the Microsoft Visual Basic Language Reference.</p>

ShowWhatsThis Method

Applies To	RSButton, RSCompare, RSData, RSGauge, RSSlider, RSWheel, RSVessel
Description	Displays a selected topic in a Help file using the What's This popup provided by Windows 95 Help.
Visual Basic	<i>object</i> . ShowWhatsThis
Remarks	The ShowWhatsThis method is very useful for providing context-sensitive Help from a context menu in your application. The method displays the topic identified by the WhatsThisHelpID property of the object specified in the syntax.

ZOrder Method

Applies To RSTButton, RSCompare, RSData, RSGauge, RSSlider, RSWheel, RSVessel

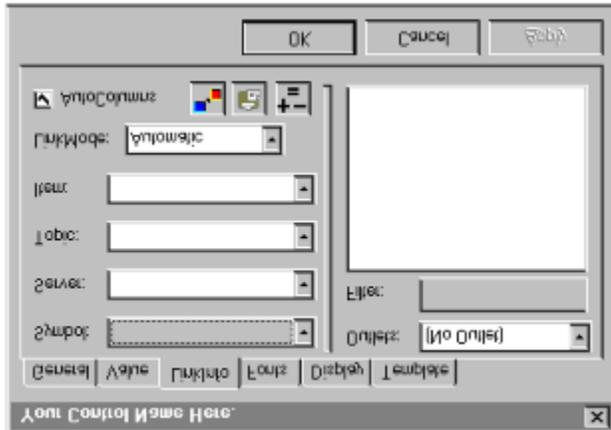
Description Places a specified MDIForm, Form, or control at the front or back of the z-order within its graphical level.

Visual Basic *object.ZOrder* position

Remarks The ZOrder method syntax has these parts:

<u>Part</u>	<u>Description</u>
object	Optional. An object expression that evaluates to an object in the Applies To list. If object is omitted, the form with the focus is assumed to be object.
position	Optional. Integer indicating the position of object relative to other instances of the same object. If position is 0 or omitted, object is positioned at the front of the z-order. If position is 1, object is positioned at the back of the z-order.

LinkInfo Tab



- Symbol.** This combo box is used to choose the name of a Symbol, that has been previously defined for a specific Server, Topic and Item, in a DDE link. To define Symbols for different DDE links see the section on Manage Symbols to follow. If the Symbol has been previously defined select it from the combo box list or enter the name of the Symbol in the combo box directly. When a defined Symbol is chosen, the Server, Topic and Item combo boxes on the LinkInfo page will automatically be filled in with the appropriate data.
- Server.** This combo box determines the application or Server name that the RSGauge control is linked to. If the Server name has been previously used it can be chosen from the combo box list or enter the name of a new Server into the combo box directly. (For more information on the Server property see the RSTools Common Reference Guide.)
- Topic.** This combo box determines the Topic portion of the data link string, which the RSGauge control uses for addressing in a DDE link. If the topic has been previously used it can be chosen from the combo box list or enter the name of a new Topic into the combo box directly. (For more information on the Topic property see the RSTools Common Reference Guide.)
- Item.** This combo box determines the Item portion of the data link string, which the RSGauge control uses for addressing in a DDE link. If the Item has been previously used it can be chosen from the combo box list or enter the name of a new Item into the combo box directly. (For more information on the Item property see the RSTools Common Reference Guide.)
- AutoColumns.** This check box is used to enable or disable the AutoColumns property for the control. AdvanceDDE servers can provide data in block format.
- LinkMode.** Sets the type of link to be used for a DDE conversation and activates the connection. Available options for the LinkMode property are:
 - 0 = None** - No DDE connection is established between the control and **Server**.
 - 1= Automatic** - A "HOT link". The **Server** automatically updates the control when data changes.
 - 2 = Manual** - A "COLD link". The client has to issue a DOREQUEST method to get data from the **Server**.
 - 3 = Notify** - Causes Visual Basic to Fire the LINKNOTIFY event which the user can respond to.
- Manage Symbols.** This button is used to display the Manage Symbols dialog (see below), which is used to define Symbols for DDE links to the control. (See the section on Symbols above.)

To define a new Symbol for a specific Server, Topic, and Item in a DDE Link, place the name for the new Symbol in the text box labeled Symbol. Then place the DDE Link Server name in the text box labeled Server, the DDE Link Topic name in the text box labeled Topic, and the DDE Link Item name in the text box labeled Item.

Press the **Add/Change** button to add the new Symbol name to the Symbol list box.

Press **Delete** to delete an existing Symbol.

Press **Export** to write the symbol information to a .RSS file (Rockwell Software Symbol)

This file is a text file with the following format:

[SYM]

RSI=icomwdrv|testsol|n7:0

icom=icomwdrv|testsol|n7:22

excel=excel|[book1]sheet1|R1C1

This is essentially a .ini file format with a separate *entry=* line for each symbol. This file can be read by a programmer to utilize symbol information in an application.

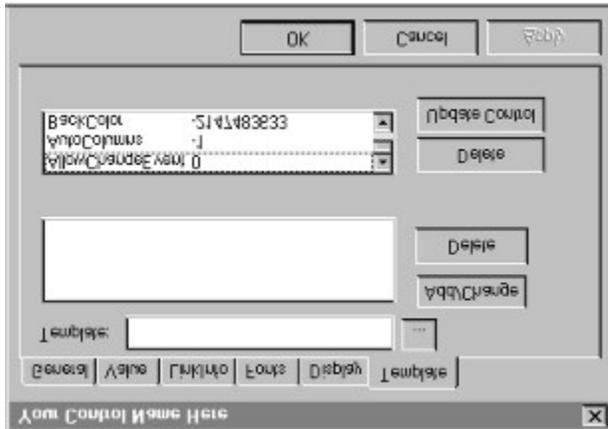
Click **Import** to import symbol information from an existing .RSS file.

Click **Select All** to select all symbols displayed.

When finished, press the **Close** button to close the dialog box and save any changes.

- **Paste Link.** This button is enabled when the user has copied specific DDE Link information from another application (example: Excel) to the clipboard. Pressing this button will then fill in the appropriate DDE Link information for the Server, Topic and Item.
- **Expression.** Optional, requires RSJunctionBox.
When finished, press the **OK** button to save any changes or the **Cancel** button to exit without saving changes.

Template Tab

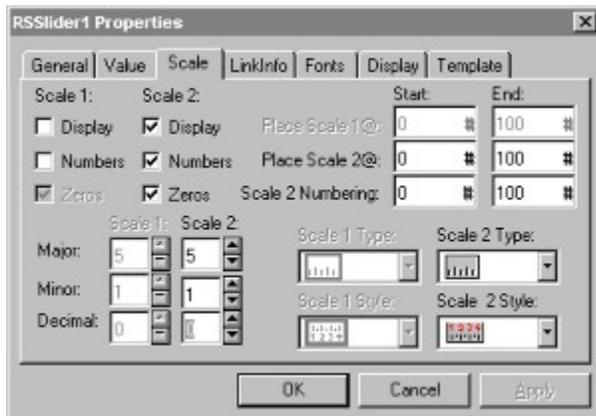


You can save the property settings of a control and apply them again to different controls using templates. Once a template of properties has been saved, it can be applied to any control and the properties settings applicable to that control are changed as per the template. Using this Custom Property Page Tab, templates can be Added , Changed and Managed. These property templates are saved in a file with *.rwc extension. Each set of properties template is saved with a distinct name. Duplicate name would replace any other template in that file.

Note : Properties have to be set using the other property pages and then saved in templates. Property values cannot be set on this property page.

- **Template.** This field displays the name of the template to be applied, added or changed. The template file can be selected by clicking on the ellipsis button (three dot button) next to the field. Available templates names are displayed in the list below this field and can be selected by clicking on the template name (selected template is highlighted).
- **Add/Change Button.** New templates or changes in an existing template can be saved by clicking on this button. The template is saved in the selected *.rwc file. The template file can be selected as described above.
- **Delete Template Button.** To delete a template from the file, this button is used. When you delete a template, you remove a set of properties settings saved as a template from the template file. A template file may contain more than one template in it. Only the template is removed from the file and the file still remains with all other templates in that file.
- **Properties.** This field, below the template list, describes the properties and their settings for the selected template. Properties may be deleted if not required to be in the template.
- **Delete Property Button.** If you want to remove a property from the template, select the property from the list (selected property is highlighted) and click on this button.
- **Update Control Button.** To apply an existing template to the control, select the template and click on this button. This is the only button that applies the property settings to the control.
- **OK / Cancel / Apply Buttons.** These buttons are for the whole custom property page. The **OK** button applies the property settings made so far. Note : Templates are only applied by clicking on the Update Control button. Selecting a template and clicking the OK button would not update the control with template settings.
The **Cancel** button cancels the property changes since the last apply. Once you apply the property changes by hitting the apply button , they cannot be canceled.
The **Apply** button accepts the property changes that you make. Like the OK button, template settings are not applied using this button.

Scale Tab



Various properties dealing with the scales of the RSSlider control can be set using this custom property Tab. There are two distinct scales available. Scale2 is the main scale that takes its values from the SliderStart and SliderEnd Values. The other scale, Scale 1, is an additional scale whose sole purpose is to provide for the display of different units. Example: Main scale - Celsius , Additional scale - Fahrenheit.

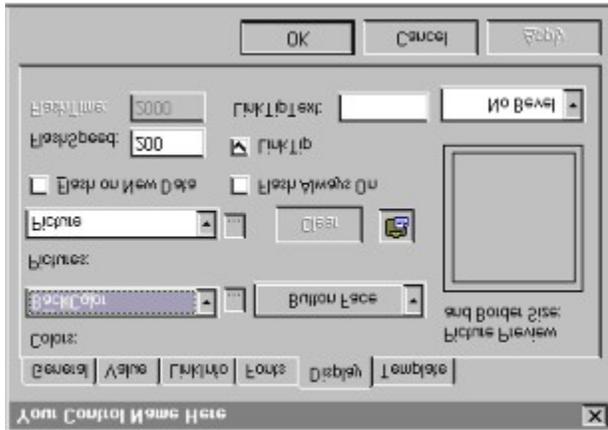
Important note: Both scales have almost all of the same changeable properties and it can be confusing if both scales are displayed at once, initially. It is better to get all the properties set for Scale 2, and then turn on Scale 1 and adjust its properties. (For more scale options, such as position of marks, see the General Tab section of this chapter.)

Scale1 or Scale2 check boxes

- **Display.** Marking these check boxes will cause Scale1 and/or Scale 2 to be displayed. (For more information see Scale1Visible• in the RSSlider Property Reference chapter.)
- **Numbers.** Marking these check boxes will cause the numbers or text for Scale 1 and/or Scale 2 to be displayed. (For more information see Scale1NumbersVisible• in the RSSlider Property Reference chapter.)
- **Zeros.** Enabled when the appropriate Display check box is marked. Marking these check boxes will cause Scale1 and/or Scale 2 to display trailing zeroes on their numbers when appropriate. (For more information see Scale1TrailingZeros• in the RSSlider Property Reference chapter.)
- **Major.** This box is where you define the number of major (larger size) marks that a scale will have. You can type the major mark value in the box or you can use the spin buttons to increase or decrease the number of major marks. (For more information see Scale1Major• in the RSSlider Property Reference chapter.)
- **Minor.** This box is where you define the number of minor (smaller size) marks a scale will have. You can type the minor mark value in the box or you can use the spin buttons to increase or decrease the number of minor marks. (For more information see Scale1Minor• in the RSSlider Property Reference chapter.)
- **Decimal.** This box is where you define the number of decimal places that the scale numbers will have. You can type the decimal place value in the box or you can use the spin buttons to increase or decrease the number of decimal places. (For more information see Scale1DecimalPlaces• in the RSSlider Property Reference chapter.)
- **Place Scale (1 or 2) @ Start.** These boxes are where you define the position of the scale marks in reference to the Start Value (see Value Tab section of this chapter). You can type this value in the box or if you click on the “#” symbol in the box, a numeric keypad will be displayed which can be used to enter the starting position for the scale marks. (For more information see Scale1Start• in the RSSlider Property Reference chapter.)
- **Place Scale (1 or 2) @ End.** These boxes are where you define the position of the scale marks in reference to the End Value• (see Value Tab section of this chapter). You can type scale end position value in the box or if you click on the “#” symbol in the box, a numeric keypad will be displayed which can be used to define the end position of the scale marks. (For more information see Scale1End• in the RSSlider Property Reference chapter.)
- **Scale 2 Numbering Start.** This box is where you define the number for the Scale2 starting mark. You can type the Scale2 start number value in the box or if you click on the number symbol in the box, a numeric keypad will be displayed which you can use to define the “#” for the Scale2 starting mark. (For more information see Scale2StartNumber• in the RSSlider Property Reference chapter.)

- **Scale 2 Numbering End.** This box is where you define the number for the Scale2 end mark. You can type the Scale2 end number value in the box or if you click on the number symbol in the box, a numeric keypad will be displayed which you can use to define the number for the Scale2 end mark. (For more information see [Scale2EndNumber](#) in the RSlider Property Reference chapter.)
- **Scale(1 or 2)Style.** These boxes allow you to choose between 3 different styles for the scale marks. The available options are normal, indented and beveled. (For more information see [Scale1Style](#) in the RSlider Property Reference chapter.)
- **Scale(1 or 2)Type.** These boxes allow you to choose between 5 different positions for the scale numbers or text. The available options are inside, outside or centered on the scale mark, and inside or outside the RSlider face border. (For more information see [Scale1Type](#) in the RSlider Property Reference chapter.)

Display Tab



Display properties of the control can be set using this custom property page tab. Display properties include properties like various colors, pictures, bevel styles etc. This section describes the setting of these properties using this tab. Description of fields and buttons:

- Colors.** Setting of colors involves selecting the color property (Example : BackColor) and then selecting the color. Both of these can be selected from the pull down combo boxes labeled Colors. Basic Colors can also be selected by clicking on the Ellipsis Button next to the color property combo box. This brings up the color palette from which either the predefined colors or custom colors can be selected.

Color properties that can be set using Display Tab are :

<i>BackColor</i>	<i>CaptionColor</i>	<i>ValueBackColor</i>
<i>BevelHighlight</i>	<i>CaptionShadowColor</i>	<i>ValueColor</i>
<i>BevelShadow</i>	<i>GridColor</i>	<i>ValueShadowColor</i>
<i>BorderColor</i>	<i>LinkTipBackColor</i>	
<i>CaptionBackColor</i>	<i>LinkTipForeColor</i>	

Select the color property by highlighting it from the drop down list and then set the color you want it to be from either the basic color palette (activated by clicking on the ellipsis button) or the drop down list of colors. The drop down list of colors includes windows default color scheme colors in addition to standard colors. If you want your control to inherit the colors of the desktop scheme settings of your Windows, then use this drop down list and select the Window's desktop color. The color properties set to Windows Desktop Scheme colors would automatically take up the new desktop colors when you change your desktop colors' setting (If the project is compiled and made into an executable, then also the control colors would inherit new desktop colors if so set.)

Example :

If you want the back ground color of your control to be the active window title bar color, then select BackColor and from the list of colors select Active Caption. This would make the background of the control same as the active window title bar.

- Picture.** RSDData supports background pictures. Picture files of type *.bmp, *.ico and *.wmf are supported by RSDData. To select the background picture, select the picture property from the drop down combo box. The next step is to choose a picture file which can be done by clicking on the ellipsis button which brings up the file directory and the file can be selected. Selected picture can be previewed in the *Picture Preview and Border Size* box. This box shows the preview of the picture selected in the drop down combo.
- Clear Button.** This button clears the picture for the picture property (*Picture*) selected. Remember, this only removes the picture from the RSDData background and does not delete the picture file.
- Picture Preview and Border Size Box.** This box serves two functions. It gives you a preview of picture that you selected for the RSDData background or knob and also you can size the control border from here. The selected picture from the drop down combo box is displayed in this area.

When you select a bevel for the control, the size of the bevel (width) and the control can be adjusted using this box. The control border is shown as thick black box which can be grabbed by the mouse and moved. To do this, position the mouse pointer over the inner thick black box (the mouse pointer changes when you are in the hot zone.) Click and hold the left mouse button and resize the box to desired size. The effects of the changes can be viewed in the preview window dynamically.

- Paste Button.** This button may be used to paste a bitmap or metafile from the clipboard to the picture property.
- Flash On New Data.** To make the control flash on new data, check this check box. For more detailed explanation of the

Flash properties, see the property reference.

- **Flash Always On.** To make the control flash always flash, check this check box. For more detailed explanation of the Flash properties, see the property reference.
- **Flash Speed.** The Flash Speed property can be set in this box. The default is 200 milliseconds. For more detailed explanation of the Flash properties, see the property reference.
- **Flash Time.** The Flash Time property can be set in this box. The default is 2000 milliseconds. For more detailed explanation of the Flash properties, see the property reference.
- **Link Tip.** RSDData provides the user the ability to add tool tips for the control. The tool tip can be turned on by checking this check box. Text for the tool tip is entered in the text box below the check box. If no text is entered, then the tool tip defaults to the DDE Link details or *Symbol* name for the control if any.
- **Bevel Style.** This combo box allows you to select a bevel style for the control if desired. The available bevel styles are:

<i>Bevel</i>	<i>Indented</i>	<i>Marble</i>
<i>No Bevel</i>	<i>Stripe</i>	<i>Thick</i>

The effect of the selected bevel can be previewed in the preview window.

