

Microsoft® Visual Basic Control Creation Edition version 5.0® **Creating Your First ActiveX Control**

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For the latest information, see <http://www.microsoft.com/vbasic>



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Creating Your First ActiveX Control

Introduction

The Visual Basic 5.0 Control Creation Edition makes creating ActiveX controls as easy as creating typical Visual Basic applications. If you have never seen just how easy it can be, you should definitely read on.

This document is designed to give you a fast track overview of the simple process involved in creating ActiveX controls with Visual Basic. If you are familiar with any of the previous versions of Visual Basic you are only about 10 minutes away from creating your first ActiveX control!

If you follow the steps below, when you reach the end you will have built what is commonly called a "spinner" control. A spinner control is a graphical ActiveX control that allows the user to increment or decrement a value using a mouse instead of using a keyboard. Here is a picture of one:

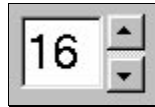


Figure 1

Now that you have an idea of what you will be building, lets get started.

Step 1: Create A Test Container

Start the Control Creation Edition, highlight Standard EXE, and click Open as shown below. This creates the host application. This host will be used as the test container for the spinner control that is about to be created.

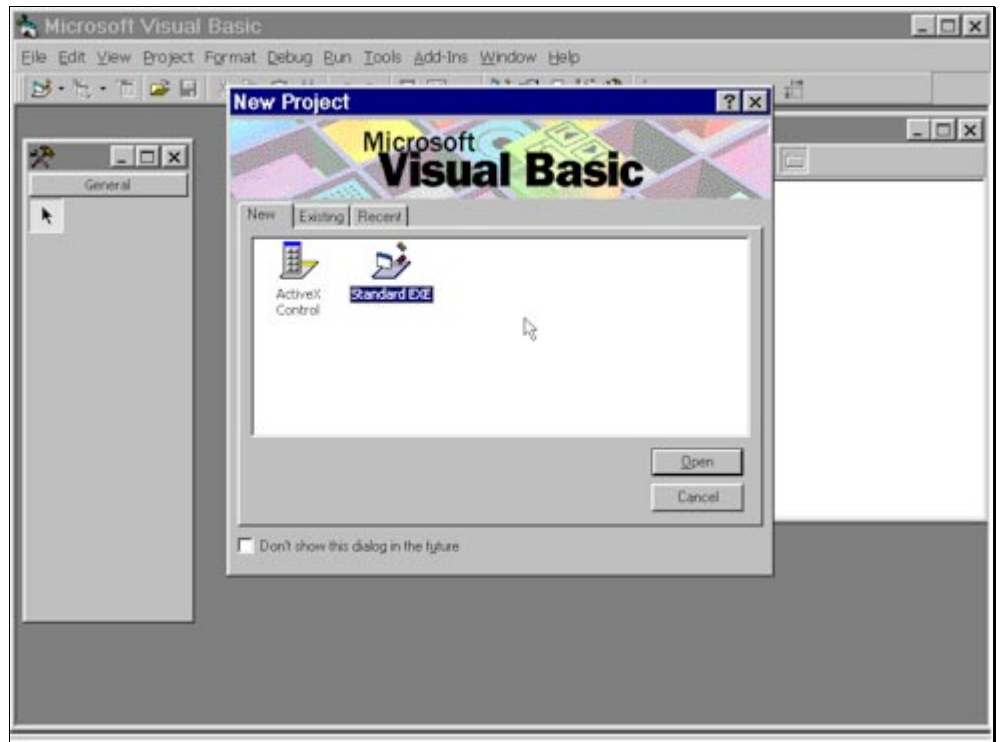


Figure 2

Step 2: Add A Blank ActiveX Control Project

From the File Menu, select the Add Project Command.

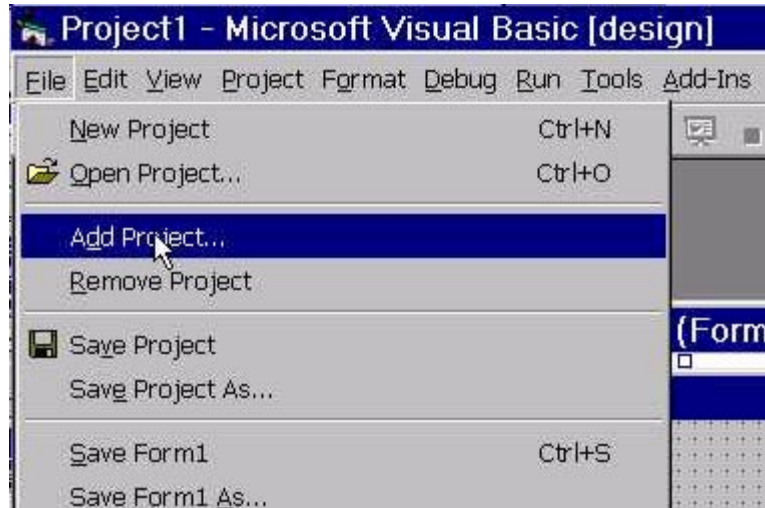


Figure 3

In the Add Project dialog, highlight ActiveX Control and Click Open.

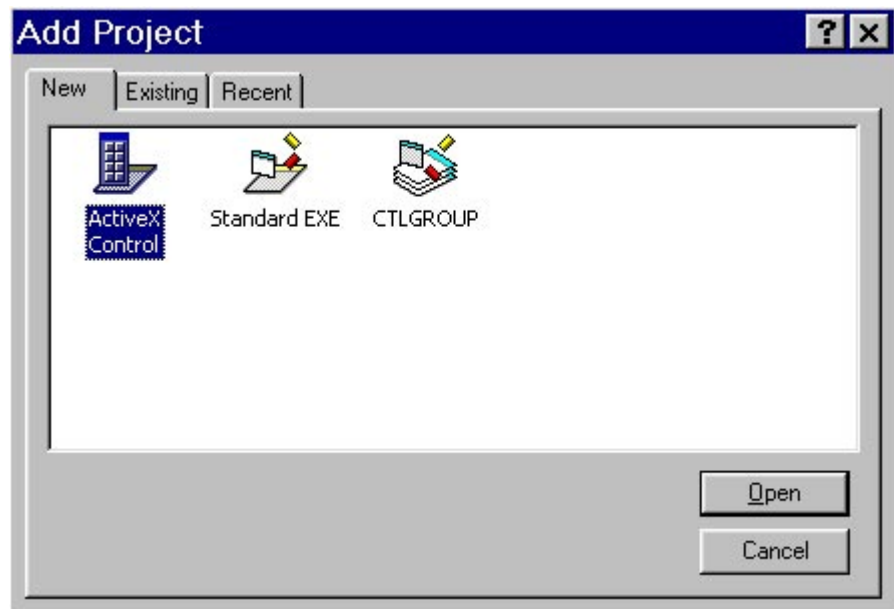


Figure 4

At this point there should be two projects open. As you can see in the following diagram, both projects look extremely similar. Also note that there is a new control that is now visible in the toolbox (highlighted in Figure 5 with the number 1). If you hover your mouse over this control in the Toolbox, the Tooltip should popup and display the current name of the control, "UserControl1". However, the icon in the Toolbox will be gray (disabled) at this point. It will become enabled a few steps from now!

Visual Basic 5.0 uses the same visual metaphor for building ActiveX Controls as it does applications. Using this metaphor you first "draw" the interface, set some properties, write some event driven code, and you are on your way.

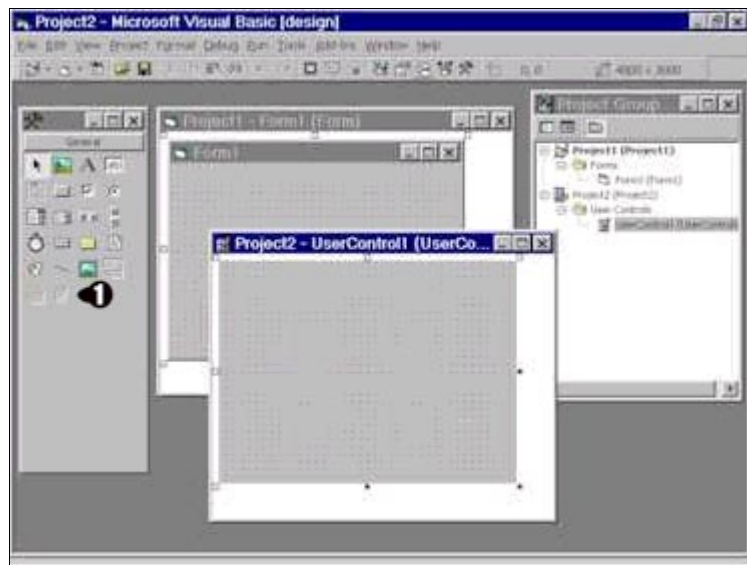


Figure 5

Step 3: Draw The Visual Interface For The Control

Get your mouse ready, it is time to create the visual interface for the spinner control. The spinner control can be created using a powerful new feature of the Control Creation Edition - the ability to combine existing controls into new, more specialized controls. To create the spinner control, a standard textbox and a vertical scrollbar will be combined.

First, click on the textbox control in the Visual Basic toolbox. The textbox control is identified with the number 1 in the figure below. Using the mouse, draw a small textbox in the upper left hand corner of the Project2 window. Second, click on the vertical scrollbar control in the toolbox and draw it just to the right of the textbox control. The vertical scrollbar control is identified with the number 2 in the figure below. Finally, drag the control sizing handle to surround the newly drawn controls. The control sizing handle is identified with the number 3 in the figure below. Your ActiveX spinner control should now look similar to the diagram below.

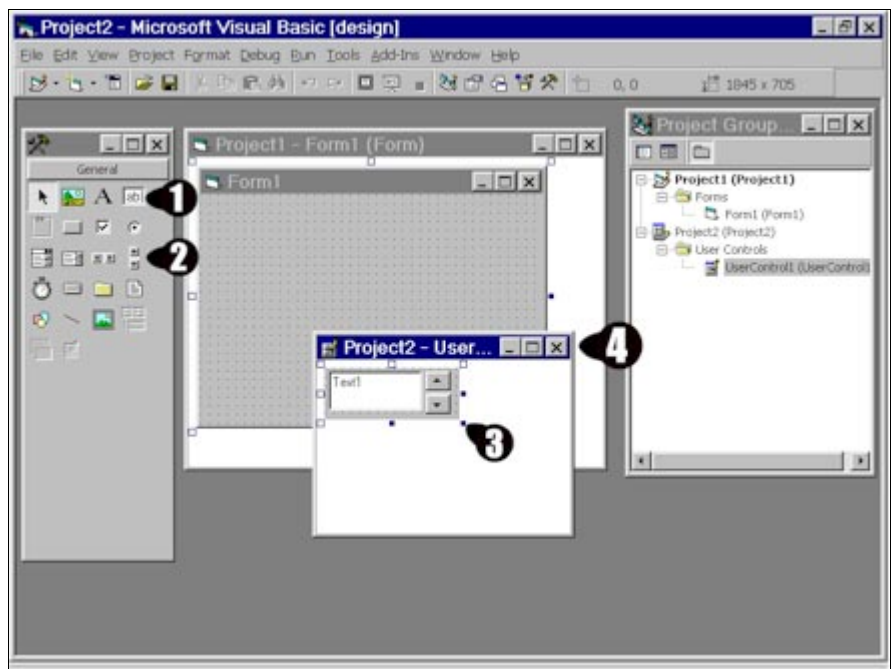


Figure 6

Step 4: Write Event Driven Code

At this point we now have a visual interface for a spinner control. The next step is to write some event driven code that will place the current value of the vertical scrollbar into the textbox. When the user clicks on the up or down arrow of the vertical scrollbar, the value displayed in the textbox needs to increment or decrement. To make this happen, some code needs to be written in the *Change* event of the vertical scrollbar. Double click on the vertical scrollbar that you just drew. This will display the code window. In the code window, type the following line of code:

```
text1.text = vscroll1.value
```

Hopefully you were surprised as you began to type the line of code. You just experienced a small glimpse of the new "intelligence" added to the Visual Basic 5.0, Control Creation Edition development environment. As soon as you typed the "dot", Visual Basic 5.0 displayed a list of all allowable properties for the textbox. All ActiveX components contain this type of information and Visual Basic makes it automatically available when needed.

After the code is entered, close the code window by clicking on the close box (#1 in Figure 7 below). Finally, close the spinner control form by clicking on its close box (#2 in Figure 7 below)

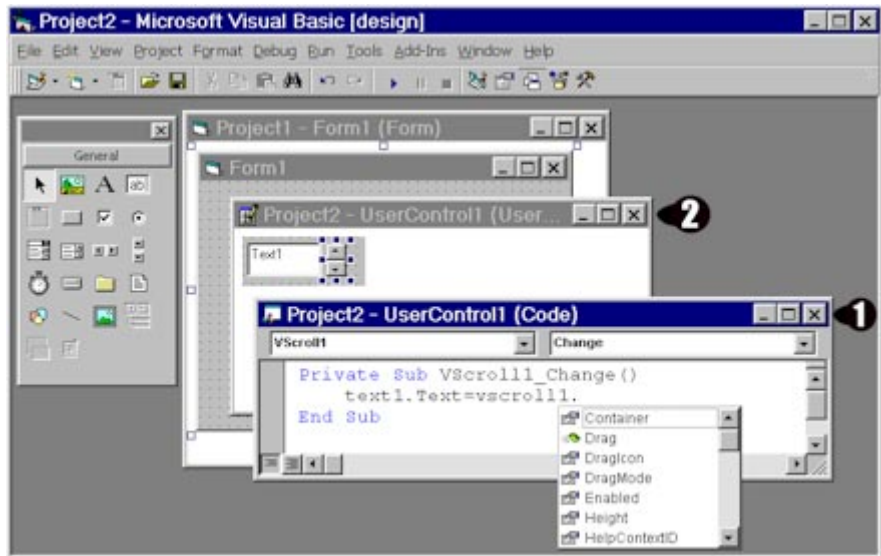


Figure 7

Step 5: Use And Test The Control

At this point, if all has gone well and you closed the spinner form, the spinner control no longer appears gray in the toolbox and is ready to be used/tested (#1 in Figure 8 below). Your environment should now look similar to the figure below.

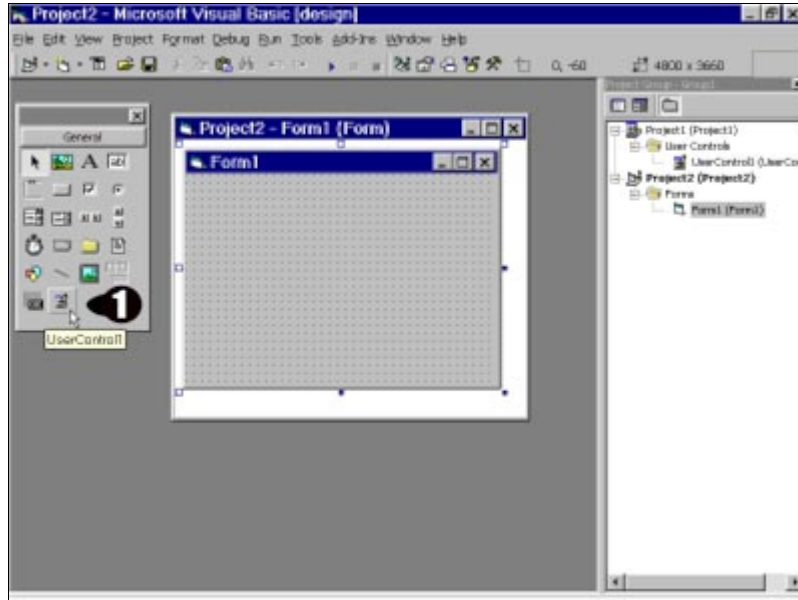


Figure 8

To test the newly created control, click on it in the toolbox and draw it on Form1 as shown below. Press F5 to run the application. As you click the up and down arrow in the spinner control, the value in the textbox changes, just as we coded it.

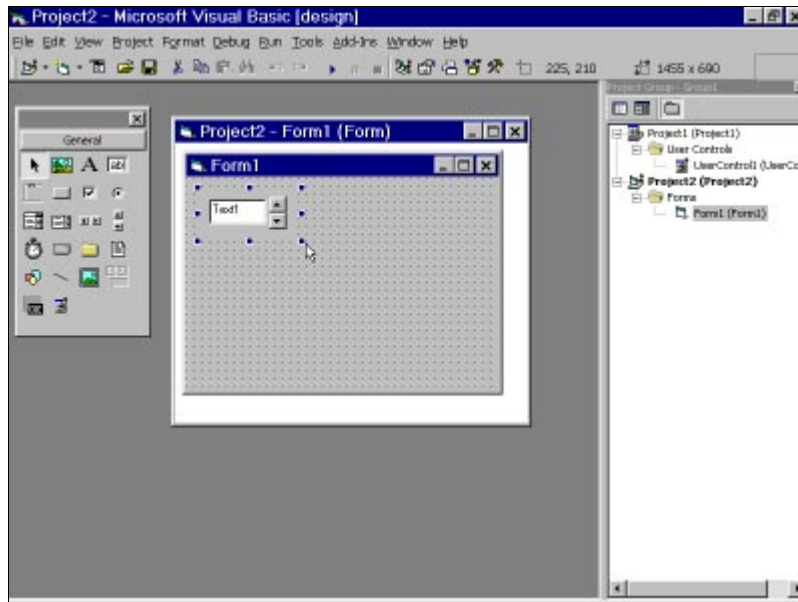


Figure 9

Congratulations, you have just created your first ActiveX control and you only wrote a single line of code!

Where to go from here?

Your next steps at this point should be to review the documentation located on <http://www.microsoft.com/vbasic/controls> and learn more about the great new features that can easily be built into your ActiveX controls. Some of these include custom property pages, making your controls data aware, and placing your controls on Web pages as an alternative to writing Java applets.

Once your ActiveX control is created you can immediately put it to use in all Microsoft ActiveX control hosts including:

Office '97
Visual Basic 4.0
Visual C++
Front Page 2.0

If you would like to place your ActiveX Controls on web pages then you should use the ActiveX Control Pad. The ActiveX Control Pad ships as a part of the Visual Basic 5.0, Control Creation Edition and can also be freely downloaded from the following location:

<http://www.microsoft.com/workshop/author/cpad/download.htm>

Additionally, ActiveX controls can be hosted by all applications that have licensed the Visual Basic For Applications environment. As of the creation of this document, these include:

- Adobe Systems, <http://www.adobe.com/>
- Autodesk, <http://www.autodesk.com/>
- B&C Microsystems Inc., <http://www.bcmicro.com/>
- HAHT Software, Inc., <http://www.haht.com/>
- Micrografx, <http://www.micrografx.com/>
- NetManage, <http://www.netmanage.com/>
- Onpoint Technologies, Inc., <http://www.onpoint.com/>
- OSI Software, Inc., <http://www.osisoft.com/>
- Rockwell Software, <http://www.software.rockwell.com/>
- Sagent Technology, Inc., <http://www.sagenttech.com/>
- SAP, <http://www.sap.com/>
- StarBase Corporation, <http://www.starbasecorp.com/>
- Systems Modeling, Inc., <http://www.sm.com/>
- Tandata Corp., <http://www.tandata.com/>
- The EC Company, <http://www.eccompany.com/>
- Vantive, <http://www.vantive.com/>
- Visio Corporation, <http://www.visio.com/>

For the most up to date list, see the following web location:

<http://www.microsoft.com/vba/vbawho.htm>

If you would like to use your ActiveX controls on Web pages you can use the ActiveX Control Pad to script the interaction between ActiveX controls and VBScript. The ActiveX Control Pad ships as a part of the Visual Basic 5.0, Control Creation Edition and FrontPage '97. Frontpage can be downloaded from the following location:

<http://www.microsoft.com/frontpage/97beta/>