Visual Basic TCP/IP Communications

Overview

This application demonstrates Ethernet communications using MSWINSCK.OCX (Microsoft Winsock Control), an Active X Control supplied by Microsoft. This simple program, initializes the socket and sends a Move Relative, Time Based (MRT) command to the attached QuickSilver Device. The device's response is received and displayed.

It is assumed the reader is familiar with Windows, Visual Basic, QuickControl® , programming QuickSilver E-485 Bridge products, TCP/IP and QuickSilver's serial communication. For more information see:

- QCI-TD053 Serial Communications
- QCI-TD056 E-485 Bridge-Ethernet
- SilverLode User Manual

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Setup

The following assumptions are made about the QuickSilver device:
1) The device has an E-485 Bridge (i.e. QCI-D2-IG8-E)
2) The device has already been initialized (using QuickControl) over the E-485 Bridge.
3) Unit ID of 16.
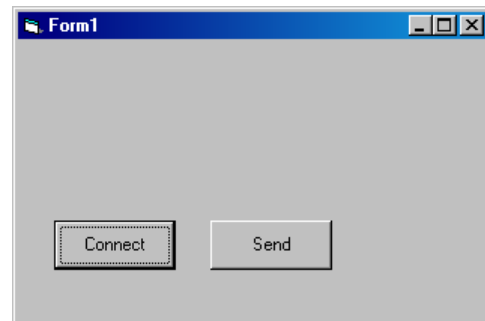4) IP Address 10.10.13.160 (see below to a use different address)

Included Files

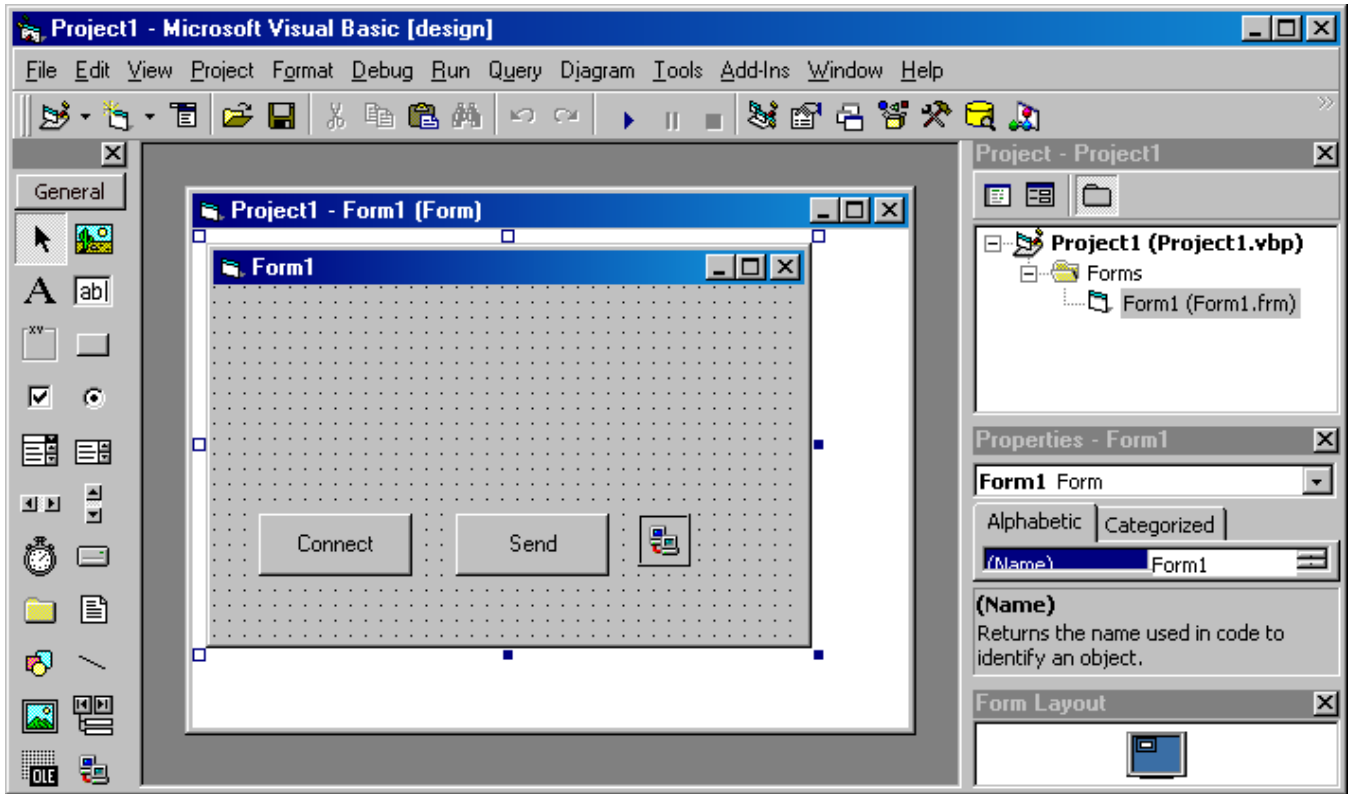| File/Folder	Description
Project1.vbp	Visual Basic project file
Form1.frm	Source Code

Project1 Dialog Box

Press Connect to establish a TCP connection to the E-485 Bridge.

Press Send to send the MRT command.

Microsoft Winsock Control

Microsoft Winsock Control is an ActiveX Control supplied by Microsoft. The Control provides TCP/IP communications. You can add this control to your project by selecting Project-> Components, select 'Controls' tab, select 'Microsoft Winsock Control 6.0' , click 'OK'. This inserts the Control into the toolbox (appearing as a network icon), which you can now add to your form and make it part of your project. All of the functions of the control are now available to your project.

cmdConnect_Click () Subroutine

Press Connect to establish a socket connection from the PC to the E-485 bridge. This is where you can change the default IP Address from something other than "10.10.13.160". The port must remain at 10001.

```
Private Sub cmdConnect_Click()
   ' Setup and open socket
   Winsock1.Protocol = sckTCPProtocol
   Winsock1.RemoteHost = "10.10.13.160"
   Winsock1.RemotePort = 10001
   Winsock1.Connect
End Sub
```

cmdSend_Click() Subroutine

Press Send to send the MRT command to the controller. Once a connection is established (see above), the Send button can be pressed repeatedly without pressing Connect again.

```
Private Sub cmdSend_Click()
   ' Send MRT Command
   Dim strOut As String
   strOut = "@16 177 40000 833 8333 0 0" & Chr(13)
   Winsock1.SendData strOut
End Sub
```

Winsock1_DataArrival Subroutine

This subroutine is called anytime data arrives. Just copy and paste it into your application.

```
Private Sub Winsock1_DataArrival(ByVal bytesTotal As Long)
   ' Winsock Message Handler called when socket get some data
   Dim strMsg As String
   Dim strIn As String
   Winsock1.GetData strIn
   If strIn = "" Then
      strMsg = "Device did not respond"
   Else
      strMsg = "Device Response:  " & strIn
   End If
   MsgBox (strMsg)
End Sub
```