

## Visual Basic Serial Communication

Associated files:

- MSCommTestVB: Send move command and display ACK
- MRT-POL: Send move command and poll for move complete
- LRP-POL: Send Load And Run Program command and poll for program complete
- LRP-POL-RRG: Send Load And Run Program command, poll for program complete, and display contents of register 1 (Actual Position).

Each visual basic program consists of three files:

- Form File, .frm
- Visual Basic Program, .vbp
- Visual Basic Workplace, .vbw

## Required Software

QuickControl

Rev 4.6 or higher

## Overview

This application demonstrates serial communications using MSComm.ocx (Microsoft Communications Controller), an Active X Control supplied by Microsoft. There are 4 simple example programs provide. In each of the examples the COM port is initialized, various commands are sent to the device and the device's response is displayed.

It is assumed the reader is familiar with Windows, Visual Basic, QuickControl®, programming QuickSilver products, and QuickSilver's serial communication (see technical document "QCI-TD053 Serial Communications").

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## Setup

The following assumptions are made about the QuickSilver device:

- 1) The device has already been initialized (using QuickControl) and connected to COM 1.
- 2) 8 Bit Protocol.
- 3) 57600 Baud Rate
- 4) Unit ID of 16.

## Applications Overview

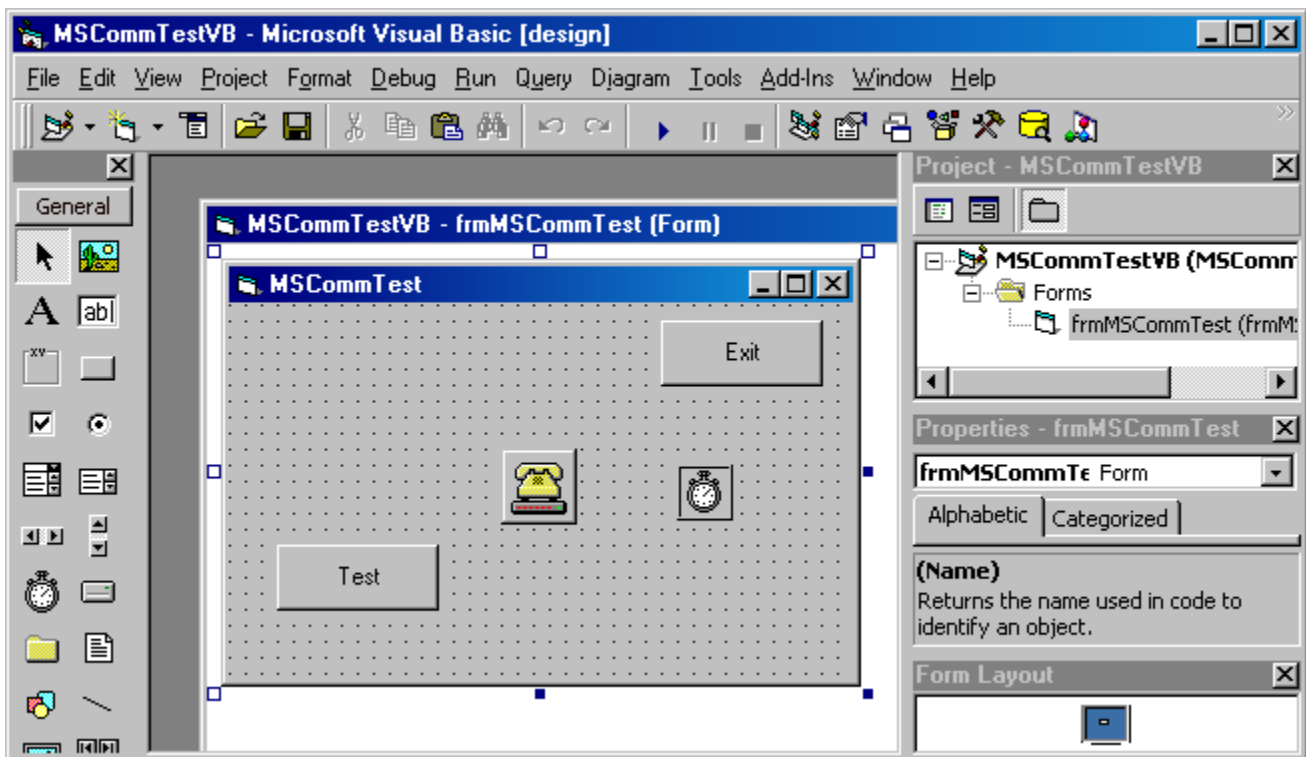
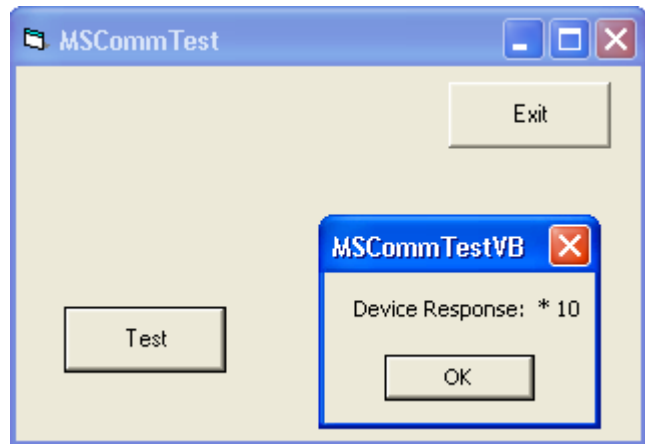
### MSCommTestVB.vbp

#### MSCommTest Dialog Box

Pressing the 'Test' button will test the serial communications and perform a move.

#### Microsoft Communications Controller

Microsoft Communications Controller is an ActiveX Control supplied by Microsoft. The Communications Controller provides serial communications through a serial port. You can add this control to your project by selecting Project-> Components, select 'Controls' tab, select 'Microsoft Comm Control 6.0', click 'OK'. This inserts the Communications Controller into the toolbox (appearing as a yellow telephone), which you can now 'double click' to add to your form and make it part of your project. All of the functions of the Communications Controller are now available to your project.



#### CmdTest\_Click() Subroutine

This is a subroutine of the MSCommTest form.

When the 'Test' button is pressed, the COM Port is set up and an MRT command is sent. The subroutine then looks for a response and displays this response in a Message Box. See source code for details.

## MRT-POL.vbp

### cmdStart\_Click () Subroutine

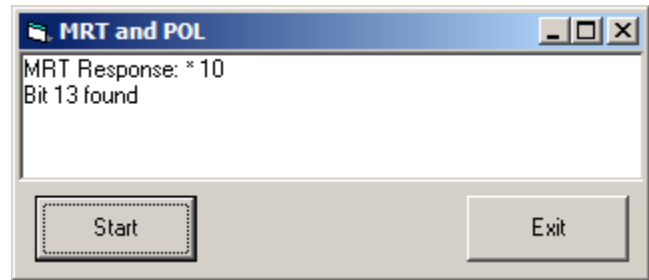
When the 'Start' button is pressed, the CPL command is sent to clear any latched data in the Polling Status Word (PSW).

The Move Relative, Time Based (MRT) command is then sent and the response from the controller, "\* 10 <CR>", is received and added to the text box.

After sending the MRT command, a POR command is sent and the response is read from the controller. This command requests status information about the controller in the form of the Polling Status Word (PSW). The subroutine will continue the POR loop until bit 13 of the PSW is TRUE (b13=Program Buffer Cmd Done), and "Bit 13 found" is added to the text box. See source code for details.

### cmdExit\_Click() Subroutine

This command will close the communication port and end the program.

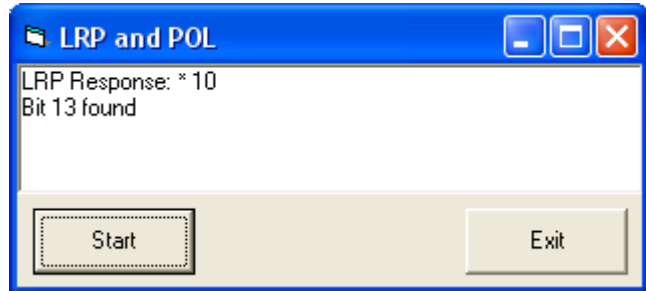


### LRP-POL.vbp

#### cmdStart\_Click() Subroutine

When the 'Start' button is pressed, the CPL command is sent to clear any latched data in the Polling Status Word (PSW).

The Load and Run Program (LRP) command is then sent to load and run the program at non-volatile memory location 512 (usual starting location for application programs). The response from the controller, "\* 10 <CR>", is received and added to the text box.



After sending the LRP command, a POR command is sent and the response is read from the controller. This command requests status information about the controller in the form of the Polling Status Word (PSW). The subroutine will continue the POR loop until bit 13 of the PSW is TRUE (b13=Program Buffer Cmd Done), and "Bit 13 found" is added to the text box. See source code for details.

#### cmdExit\_Click() Subroutine

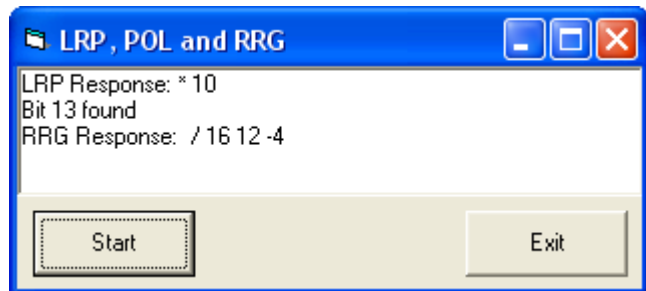
This command will close the communication port and end the program.

### LRP-POL-RRG.vbp

#### cmdStart\_Click() Subroutine

This is same program as LRP-POL.vbp with the addition of a Read Register (RRG) command.

Once the program completes, an RRG command is sent. This command requests the data from register '1', Actual Position, and displays in the response in the text box. See source code for details.



#### cmdExit\_Click() Subroutine

This command will close the communication port and end the program.