Jaspreet's Code Zone

Parallel Port Interfacing. Parallel Port Programming. Programming in C/C++ & C#.Net

Parallel Port User Control

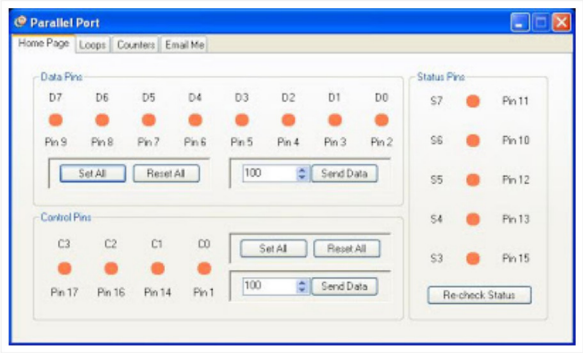
C#.Net

Introduction

A simple User Control developed in C#.Net used to control the Parallel Port.
The following tasks can be performed using it:-

- Send data to Data Pins.
- Receive data from Data Pins.
- Send data to Control Pins.
- Receive data from Control Pins.
- Read current status of Status Pins.
- Implement Synchronous and Asynchronous Loops.
- Implement UP, DOWN and UP-DOWN Counters.

The below image shows the "HOME" of my User Control. Using this page, you can send or receive data from the DATA and the CONTROL registers of the Parallel Port. You can also check the current status of the STATUS Port.

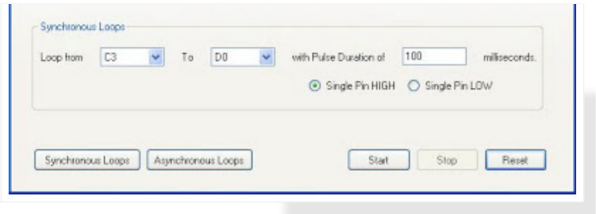


The below image shows the "Loops" Page of my User Control. You can use this page to implement synchronous loops of desired time delay on the Parallel Port.

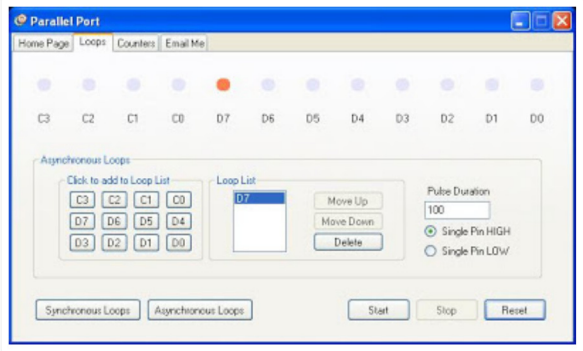
PARALLEL PORT TOPICS

BLOG VIEWS CURRENT VIEWERS

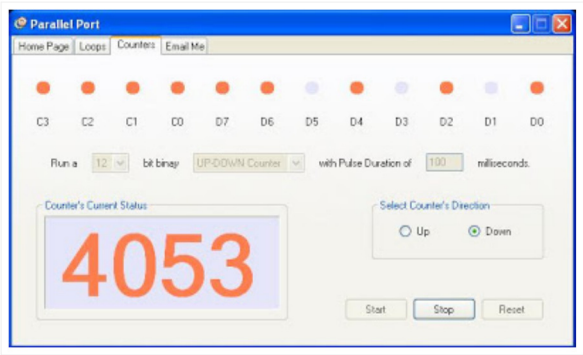
73,985



The below image shows the "Loops" Page of my User Control. You can use this page to implement asynchronous loops of desired time delay on the Parallel Port.



The below image shows the "Counters" Page of my User Control. You can use this page to implement binary counters (Up, Down, Up-Down) with desired time delay on the Parallel Port.



Background

I have used inpout32.dll for controlling parallel port. Using INPOUT32 I have made my own user control to control the Parallel Port in C#.Net. In my user control I have defined a class named "ParallelPort", in which all the methods and the properties discussed below are defined.

Using the code

Before using the code copy "ParallelPort.dll" to :-

- "system32" folder if using XP ;
- "winnt" folder if using Windows 2000 ;
- "win98" folder if using Win98;

To use my Parallel Port User Control follow the steps written below:-

1. Make a "New Project" in Visual Studio. You use any language like C#, VB, J#, C++ etc.
2. Goto "Project" Menu, and click "Add Reference...".
3. In the "Add Reference" window, click the "Browse" tab and find "Jaspreets Parallel

Port Control.dll" in the source code provided and then click "Ok".

4. Goto "Tools" Menu, and click "Choose ToolBox Items...".
5. In the "Choose ToolBox Items" window, find "ParallelPort" and click "Ok".
6. Now, you will see my user control in your toolbox. Drag n Drop it to the window form.
7. Press F5 to run the project.

But in case if you to use a different user interface then you can design your own interface and use the following methods and properties of "ParallelPort" class to control the Parallel Port:-

```
/***C#.NET CODE****/

/*
Create a new instance of ParallelPort class.
*/
ParallelPort PaPort = new ParallelPort();

/*
To set the Parallel Port address. 888 is decimal equivalent of 0x0378h.
*/
PaPort.PortAddress = 888;

PaPort.D0 = true; //To set D0 (Pin no. 2)
PaPort.D0 = false; //To reset D0 (Pin no. 2)

PaPort.D1 = true; //To set D1 (Pin no. 3)
PaPort.D1 = false; //To reset D1 (Pin no. 3)

PaPort.D2 = true; //To set D2 (Pin no. 4)
PaPort.D2 = false; //To reset D2 (Pin no. 4)

PaPort.D3 = true; //To set D3 (Pin no. 5)
PaPort.D3 = false; //To reset D3 (Pin no. 5)

PaPort.D4 = true; //To set D4 (Pin no. 6)
PaPort.D4 = false; //To reset D4 (Pin no. 6)

PaPort.D5 = true; //To set D5 (Pin no. 7)
PaPort.D5 = false; //To reset D5 (Pin no. 7)

PaPort.D6 = true; //To set D6 (Pin no. 8)
PaPort.D6 = false; //To reset D6 (Pin no. 8)

PaPort.D7 = true; //To set D7 (Pin no. 9)
PaPort.D7 = false; //To reset D7 (Pin no. 9)

PaPort.C0 = true; //To set C0 (Pin no. 1)
PaPort.C0 = false; //To reset C0 (Pin no. 1)

PaPort.C1 = true; //To set C1 (Pin no. 14)
PaPort.C1 = false; //To reset C1 (Pin no. 14)

PaPort.C2 = true; //To set C2 (Pin no. 16)
PaPort.C2 = false; //To reset C2 (Pin no. 16)

PaPort.C3 = true; //To set C3 (Pin no. 17)
PaPort.C3 = false; //To reset C3 (Pin no. 17)

/*
Returns true if input at S3 (Pin no. 10) is HIGH, else returns false.
*/
bool b = PaPort.S3;
```

```
/*
Returns true if input at S4 (Pin no. 11) is HIGH, else returns false.
*/
bool b = PaPort.S4;

/*
Returns true if input at S5 (Pin no. 12) is HIGH, else returns false.
*/
bool b = PaPort.S5;

/*
Returns true if input at S6 (Pin no. 13) is HIGH, else returns false.
*/
bool b = PaPort.S6;

/*
Returns true if input at S7 (Pin no. 15) is HIGH, else returns false.
*/
bool b = PaPort.S7;

/*
Returns the current status of all the Data Pins as an integer whose bits give the
current status of each Data Pin (D0 to D7) with D0 being the LSB and D7 being the
MSB.
*/
PaPort.ReadFromDataBus();

/*
Writes 123(or any other integer as provided in argument) to Data Pins.
*/
PaPort.WriteToDataBus(123);

PaPort.SetDataBus() //Sets all Data Pins.
PaPort.ResetDataBus() //Resets all Data Pins.

/*
Checks the current status of the Status Pins and assign value to S3-S7 accordingly.
*/
PaPort.UpdateStatusBus();

/*
Returns the current status of all the Status Pins (including the HIDDEN ones also) as
an integer whose bits give the current status of each Status Pin (S0 to S7) with S0
being the LSB and S7 being the MSB.
*/
PaPort.ReadFromStatusBus() ;

/*
Returns the current status of all the Control Pins (including the HIDDEN ones also) as
an integer whose bits give the current status of each Control Pin (C0 to C7) with C0
being the LSB and C7 being the MSB.
*/
PaPort.ReadFromControlBus() ;

/*
Writes 135(or any other integer as provided in argument) to Control Pins.
*/
PaPort.WriteToControlBus(135) ;

PaPort.SetControlBus() //Sets all Control Pins.
PaPort.ResetControlBus() //Resets all Control Pins.
```

```
/*
Loops from Pin D0 to Pin D7, setting the desired pin HIGH and all other LOW after a
duration of 1000ms or 1sec.
*/
PaPort.StartSynchronousLoop(ParallelPort.Pin.D0, ParallelPort.Pin.D7, 1000,
true);

/*
Loops from Pin D0 to Pin D7, setting the desired pin LOW and all other HIGH after a
duration of 1000ms or 1sec.
*/
PaPort.StartSynchronousLoop(ParallelPort.Pin.D0, ParallelPort.Pin.D7, 1000,
false);

/*
Loops through the pins specified by array LoopPins, setting the desired pin HIGH and
all other LOW after a duration of 1000ms or 1sec.
*/
ParallelPort.Pin[] LoopPins = new ParallelPort.Pin[] {
ParallelPort.Pin.C1,
ParallelPort.Pin.D0,
ParallelPort.Pin.D3,
ParallelPort.Pin.C2,
ParallelPort.Pin.D1,
ParallelPort.Pin.D7,
ParallelPort.Pin.C1,
ParallelPort.Pin.D5
};
PaPort.StartAsynchronousLoop(LoopPins, 1000, true);

/*
Loops through the pins specified by array LoopPins, setting the desired pin LOW and
all other HIGH after a duration of 1000ms or 1sec.
*/
ParallelPort.Pin[] LoopPins = new ParallelPort.Pin[] {
ParallelPort.Pin.C1,
ParallelPort.Pin.D0,
ParallelPort.Pin.D3,
ParallelPort.Pin.C2,
ParallelPort.Pin.D1,
ParallelPort.Pin.D7,
ParallelPort.Pin.C1,
ParallelPort.Pin.D5
};
PaPort.StartAsynchronousLoop(LoopPins, 1000, false);

PaPort.EndLoop(); //Stops all running LOOPs.

/*
Counts uptill 12 bits from 0 to 4096.
*/
PaPort.StartCounter(ParallelPort.CountBits._12,
ParallelPort.CounterType.UPCounter,1000);

PaPort.EndCounter(); //Stops all running COUNTERs.

/*
Returns true if Parallel Port is busy implementing LOOP or COUNTER Operation.
*/
PaPort.IsBusy;
```

```
/*
Resets all Data and Control Pins. Stops all running LOOPs and COUNTERs.
*/
PaPort.ResetAll();
```

EXE and Source Code Downloads

1. Download and install Microsoft .NET Framework Version 2.0.
2. Now download and install My Parallel Port Control Setup.
3. Download C#.Net source code.

75 comments:

Aleksandar said...

You nowere hawe class for download.I wont make Rc car to work via pc on parallel port.Can you make only Class for download, i work in C#.

30 April 2008 17:46

Aleksandar said...

Where is your class Parallel Port man, did you hide her somwere ?
Make it for download !?

30 April 2008 18:04

Jaspreet Singh Kaleka said...

@Aleksandar
Parallel Port Class is present in the code for "user control", download link for which is provided at the end of the article.

1 May 2008 10:56

Black Hawk said...

hello,

when data bits are doing all work, if sent 1 they become hight, when sent 0 they become low, then why to use status bits??? i cant understand and i want to implement it widout making it complex, i mean just by using databits, can it be done?

15 August 2008 22:05

Jaspreet Singh Kaleka said...

Status bits are input bits. We can't send data to Status Bits. But DATA BITS can be used as Output or Input Bits(if port is bi-directional). So, its up to ones choice and as per requirement that status bits are required or not. If we want to send and receive data at same instant then we will require data pins as output pins and status pins will be used to read data. Otherwise, generally DATA PINS are required.

16 August 2008 06:28

Black Hawk said...

how that circuit is possible,