

HW200 USB Demo

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1 Introduction

HW200 USB device is manufactured by Hemisphere West. It is a USB interface for coin and bill validators.

HW200 software component is a Limnor performer providing a codeless and visual programming interface for HW200 USB device.



This document describes a sample program demonstrating how HW200 is used for application development.

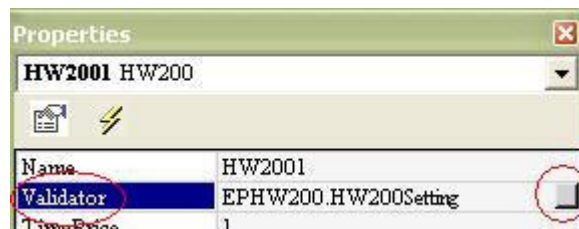
2 Use HW200

Drag the HW200 to a page to create an instance of HW200 performer:

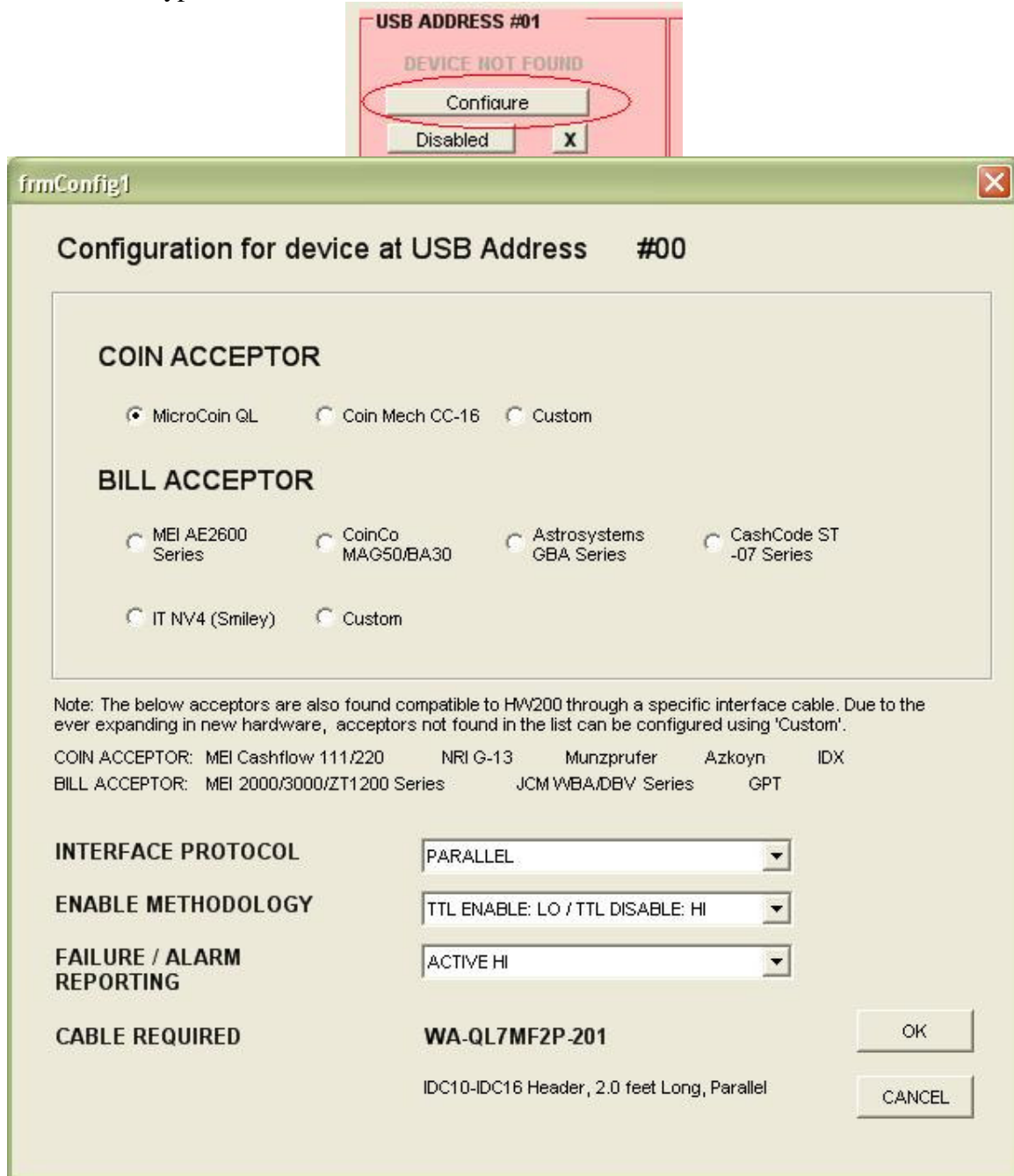


2.1 Select Validator

Right-click it and choose “Properties” to open its properties window. Set its Validator property:



It may support 4 USB devices. For each USB device, click “Configure” button to select the validator type:



2.2 Channel Value Configuration

Each USB device has 16 channels. We need to find out which channel is for which coin/bill.

Click “Disable” button to make it show “Enabled” and click “Start” button to start testing the validator channels:

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INSTRUCTIONS: _____

Limnor support provided by **Longflow Enterprises Ltd.**

Now insert coin or bill to see which channel gets response. Suppose we insert a 25 cent coin and channel 3 shows a number 1; and we insert a 50 cent coin and channel 4 shows number 1:

CHANNELS	METERS	Value
1st	0	0
2nd	0	0
3rd	1	1
4th	1	1
5th	0	0
6th	0	0

By such responses we know that channel 3 is for 25-cent coin and channel 4 is for 50-cent coins. We need to record these findings in the “value” boxes:

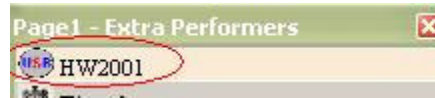
CHANNELS	METERS	Value
1st	0	0
2nd	0	0
3rd	1	25
4th	1	50
5th	0	0
6th	0	0

Use this way to set all channels.

Note that you may use different units for the channel values. For example, you may use “250” and “500” instead of “25” and “50”. The unit to use depends on the price precision of your applications. The money-unit you use affects the meaning of TimePrice and UsagePrice properties. See section below.

2.3 Use Online Help

With HW200 selected:



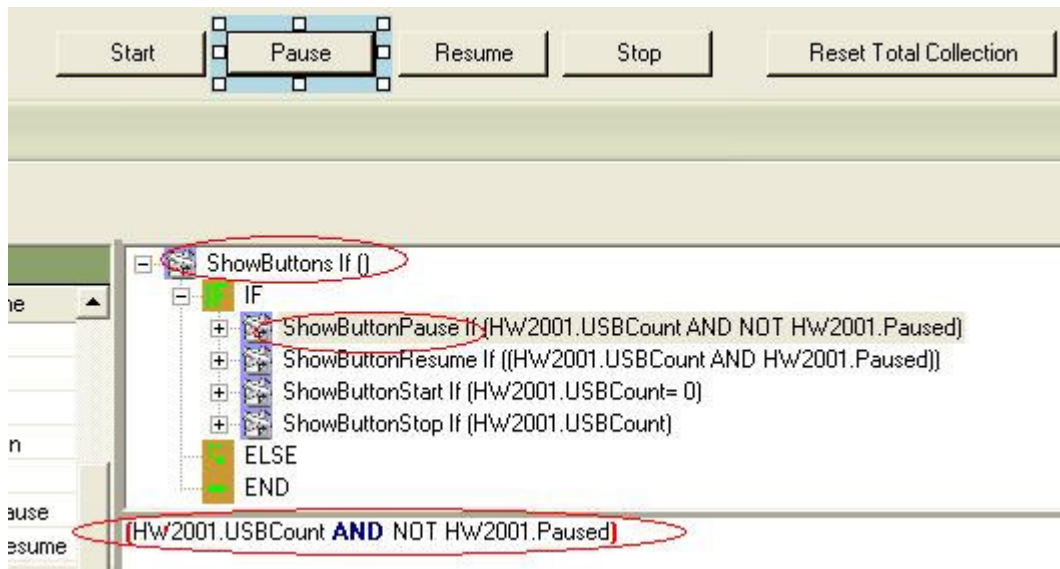
Press F1 to open the online help and read its properties, events and methods.

3 Application Programming

3.1 Control Buttons

In the sample application we use 4 buttons to control the HW200. In your applications you may use your application logic to control the USB device.

We created an action list, ShowButtons, to enable/disable each button according to the status of the HW200:



Suppose our HW200 USB is connected with a Microcoin QL coin acceptor, clicking the Start button, the LED on the QL coin validator will turn green. The USBCount property will change from 0 to the number of USB validators available, for example, 1. Now inserting coins and bills, the TotalValue and CurrentValue properties will increase. Clicking Resume button, the CurrentValue property will start decrease according to the TimePrice property. For this sample, we set TimePrice to 1. That is, for every second, the CurrentValue property will decrease by 1.

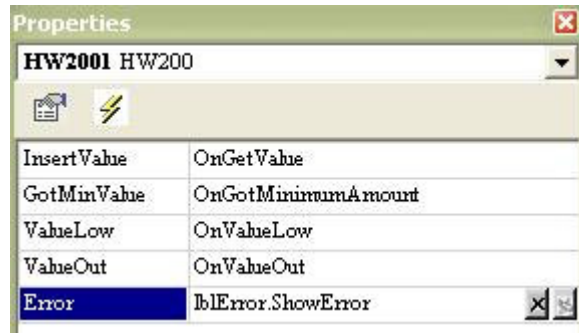
Note that the money unit of the TimePrice depends on the money unit you use when setting the channels. See section above for setting channels. If you use 25 for a quarter-coin then TimePrice=1 means the price is one cent per second. If you use 250 for a quarter-coin then TimePrice=1 means the price is one cent per 10-second.

Clicking Pause button, the CurrentValue property will stop decreasing.

Clicking Stop button, the validators will stop accepting coins and bills. The USBCount property will be 0.

3.2 Events

For each event generated by HW200, in this demo program we created an action list to handle the event:



When a coin/bill is inserted, the InsertValue event occurs. OnGetValue action list shows the CurrentValue in a label and use a bar to visually show the value. The TotalValue property is also displayed in a label.

When the CurrentValue is increased over the MinimumValue property, GotMinValue event occurs. The action list OnGotMinimumAmount makes the label “Got minimum value” label flashing.

When the CurrentValue is decreased below the LowValue property, ValueLow event occurs. The action list OnValueLow makes the label “Amount is low” flashing.

When the CurrentValue is decreased to 0, the ValueOut event occurs. The action list OnValueOut makes the label “No amount” red.

