

# SPECIFICATION

**MODEL: 015-LAP-MANCHESTER-M**

**PART NO:** \_\_\_\_\_

**VERSION:** V1.06

Approver		Check	Design
GM	PM		

Customer Confirm

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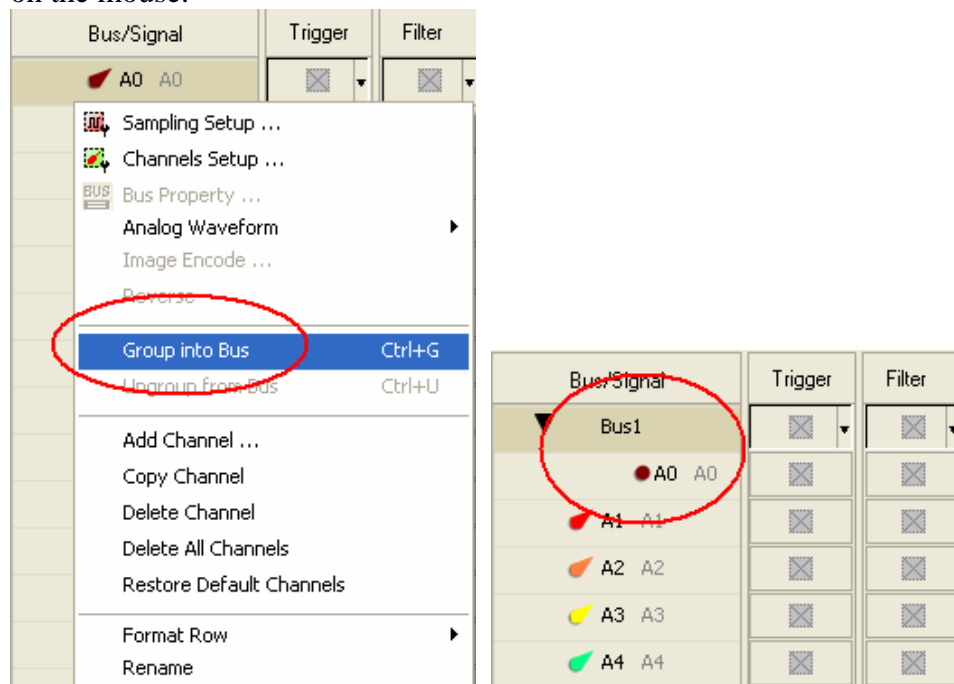
# 1 Software Register

Please register the software as the following steps:

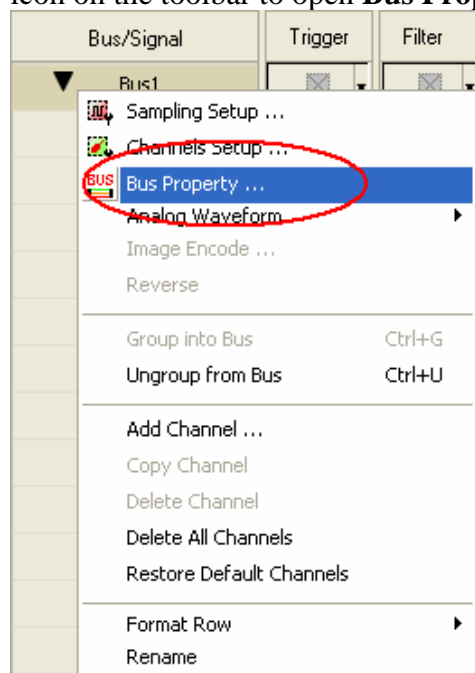
※ Remark1: The registration steps for all protocol analyzers are the same; you can complete the registration by following procedures. Following is an example on how to register the Protocol Analyzer BUS.

※ Remark2: We won't have additional notice for you, when there is any modification of the module specification. If there is some unconformity caused by the module version upgrade, users should take the module software as the standard.

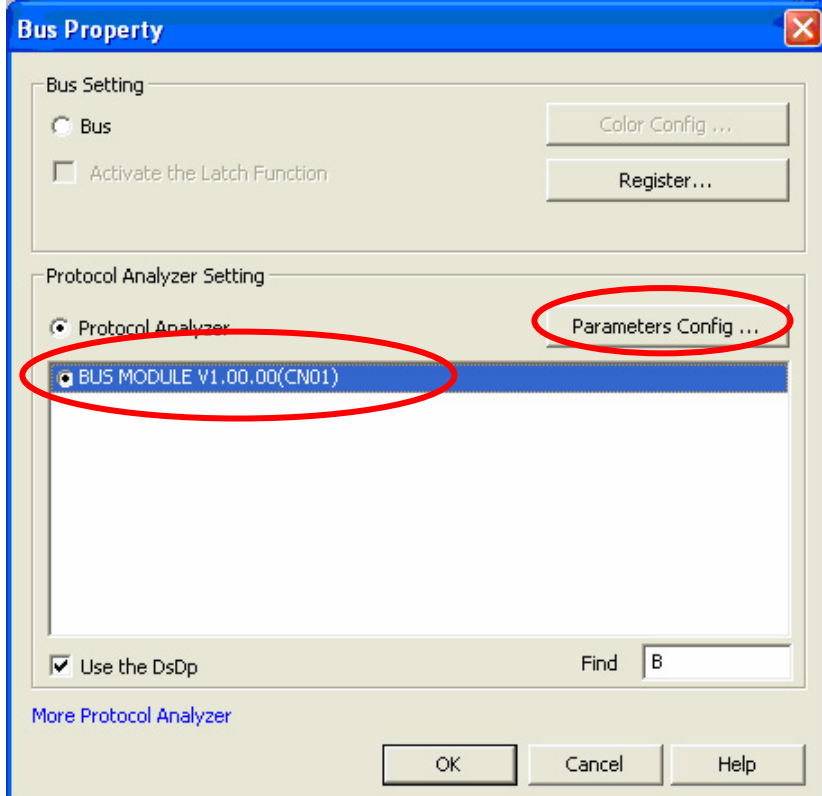
**STEP 1.** Open the Logic Analyzer and group the unanalyzed channels into **Bus1** by pressing the **Right Key** on the mouse.



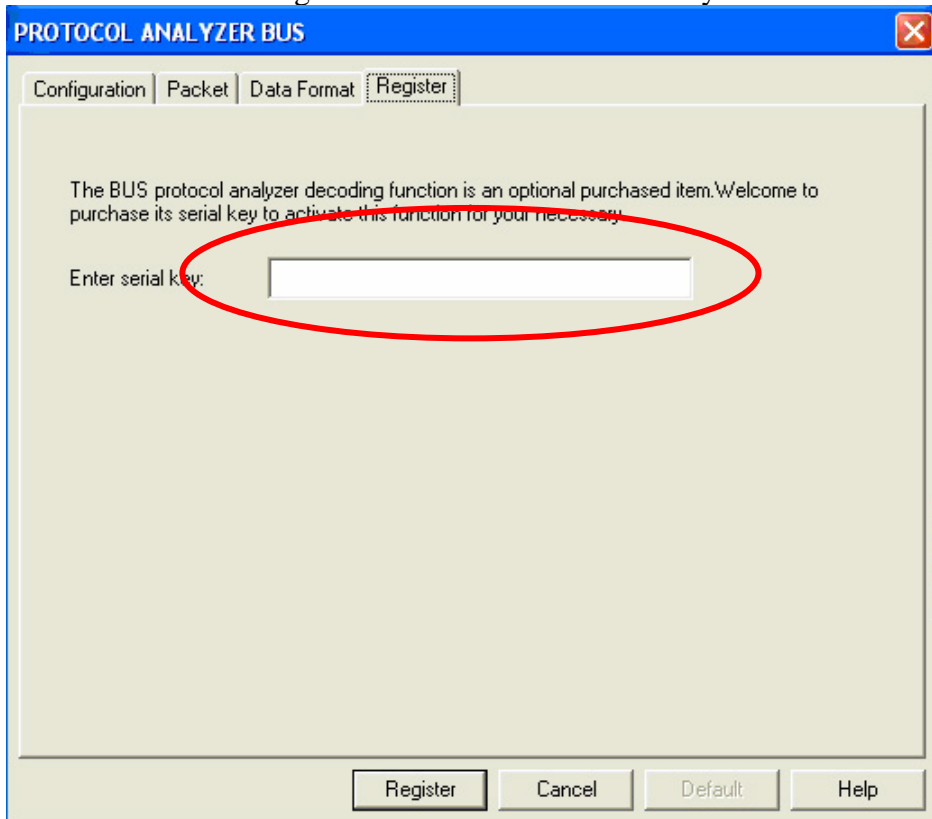
**STEP 2.** Select **Bus1**, and press **Right Key** on the mouse to list the menu, then click **Bus Property** or **Bus** icon on the toolbar to open **Bus Property** dialog box.



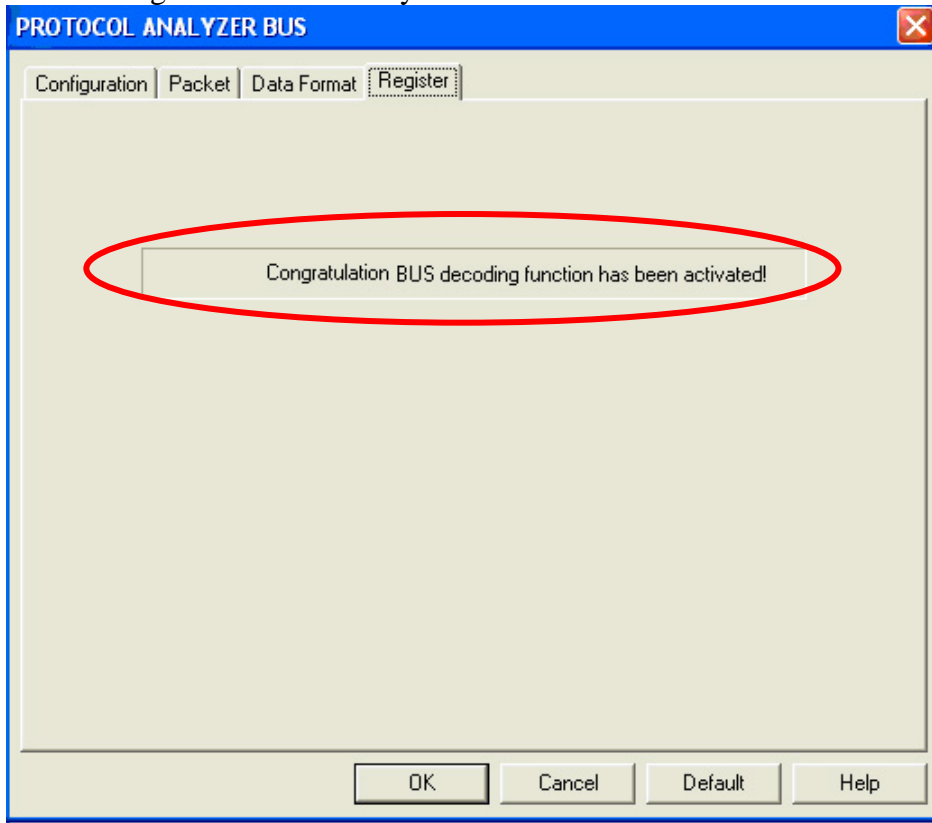
**STEP 3.** Select the Protocol Analyzer, and then choose **BUS MODULE V1.00.00 (CN01)**. Next click **Parameters Configuration** to open the Protocol Analyzer Bus dialog box.



**STEP 4.** Click the Register tab and enter the serial key of the **BUS**. Then click **Register**.



**STEP 5.** After clicking the Register button, the following dialog box will appear; it denotes that the BUS has been registered successfully.

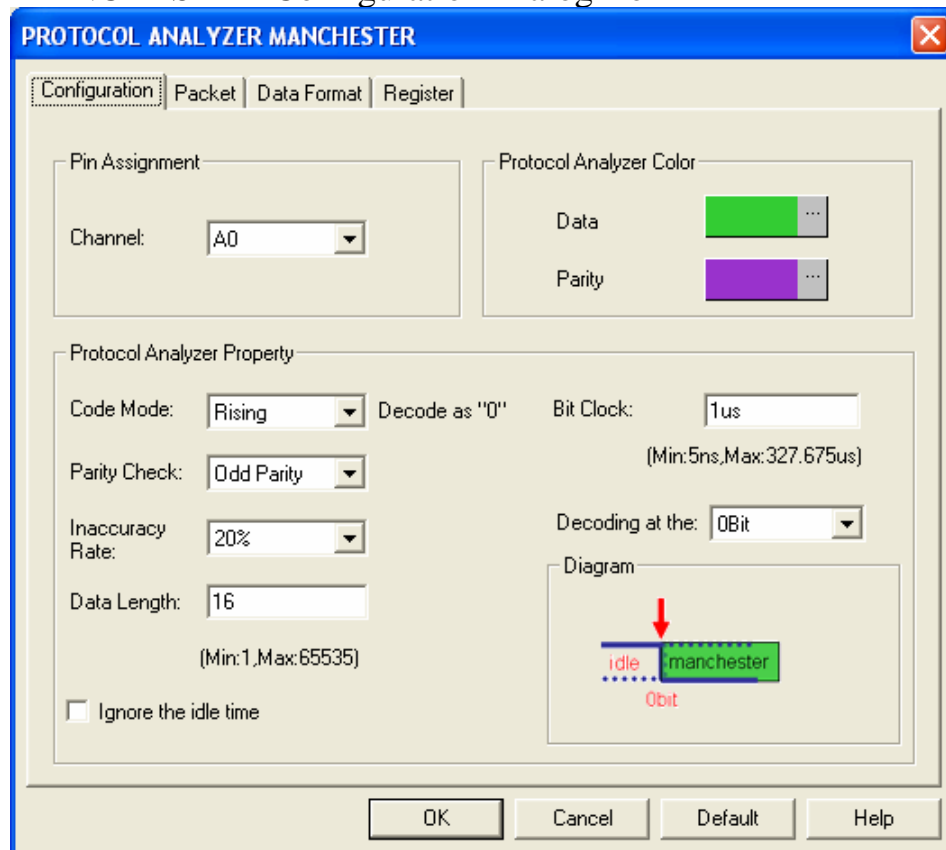


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## 2 User Interface

Please refer to below images for option selections of setting **MANCHESTER**.

### MANCHESTER Configuration Dialog Box



#### Pin Assignment:

MANCHESTER only needs one channel to decode the signals, and the default is A0.

#### Protocol Analyzer Property:

**Code Mode:** Set the Rising or Falling to decode as “0”, the Rising is set to decode as “0” by default.

**Parity Check:** Set the Parity Check to Odd Parity, Even Parity or None Parity, the default is Odd Parity.

**Inaccuracy Rate:** Set the Inaccuracy Rate to 10%, 15% and 20%, the default is 10%.

**Data Length:** Set the Data Length in the range from 1 to 65535bits, the default is 16bits.

**Bit Clock:** It is the Bit Length of the data (It doesn't include the Bit Length of the Start Bit.). Bit Clock is used to ensure the start bit, and the idle time must be longer than the frequency of two Bits (This setting is invalid when the idle time is ignored). It is unnecessary to proceed on Parity Check, because the length of the start bit is variable.

**Decoding at the:** Set the Decoding at the to Pre0.5Bit, 0Bit, After0.5Bit, After1Bit, After1.5Bit and After 2Bit, the default is 0Bit.

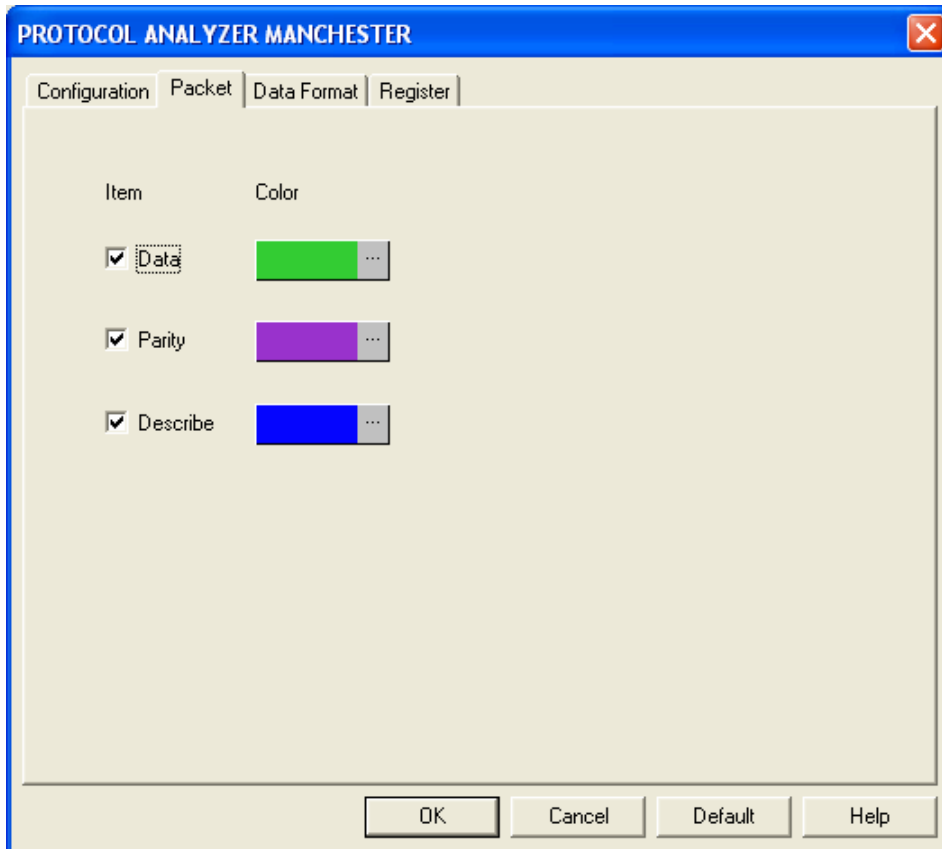
**Ignore the idle time:** When it is selected, the start bit will appear after the end bit.

#### Protocol Analyzer Color:

The color can be varied by users.

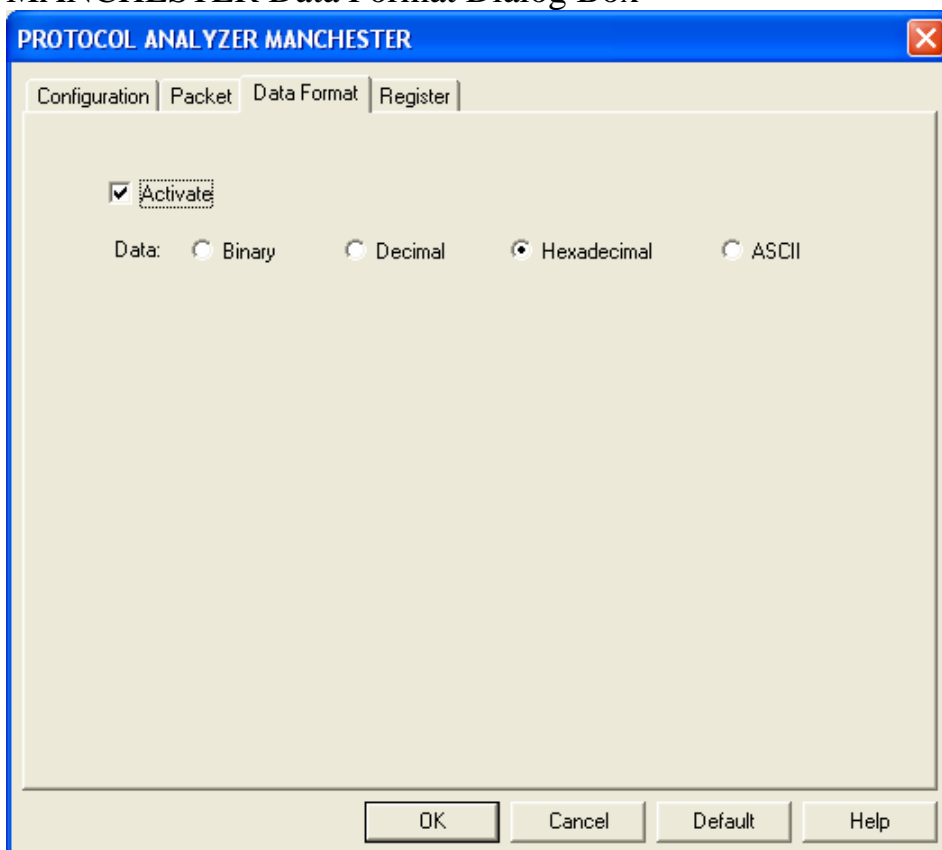
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## MANCHESTER Packet Dialog Box



In the Packet dialog box, users can vary the color of items and set the item to be displayed.

## MANCHESTER Data Format Dialog Box

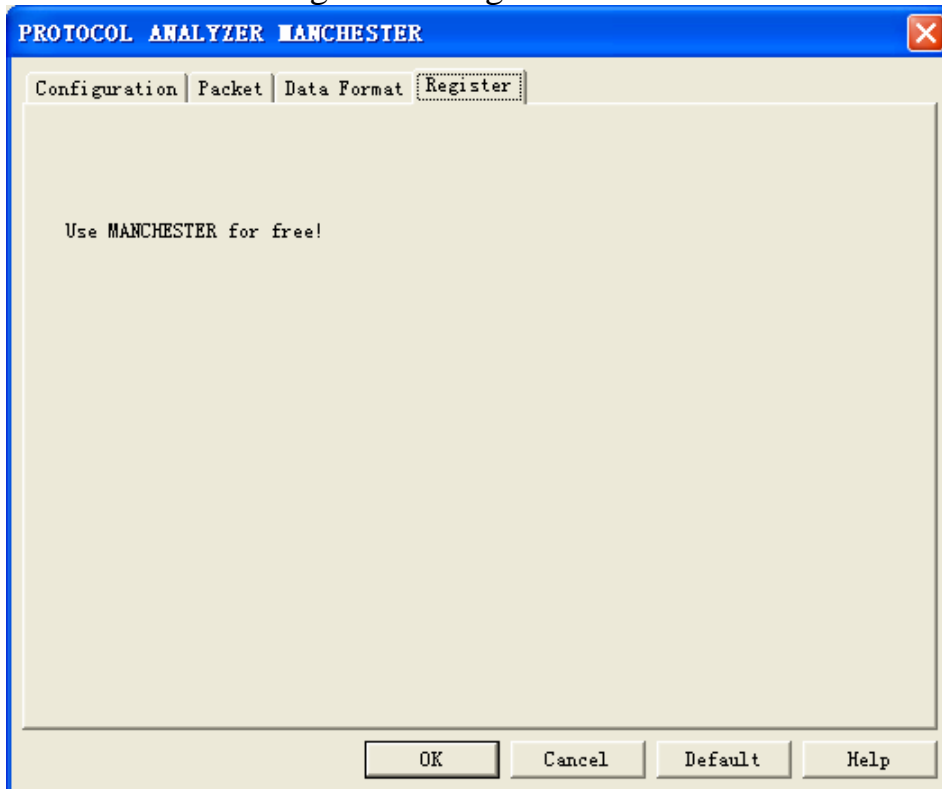


Users can set the Data Format of the item, Data, as their requirements. When selecting the option, Activate,

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the data format is decided by the settings in the Protocol Analyzer; when not selecting the option, Activate, the data format is decided by the settings in the main program.

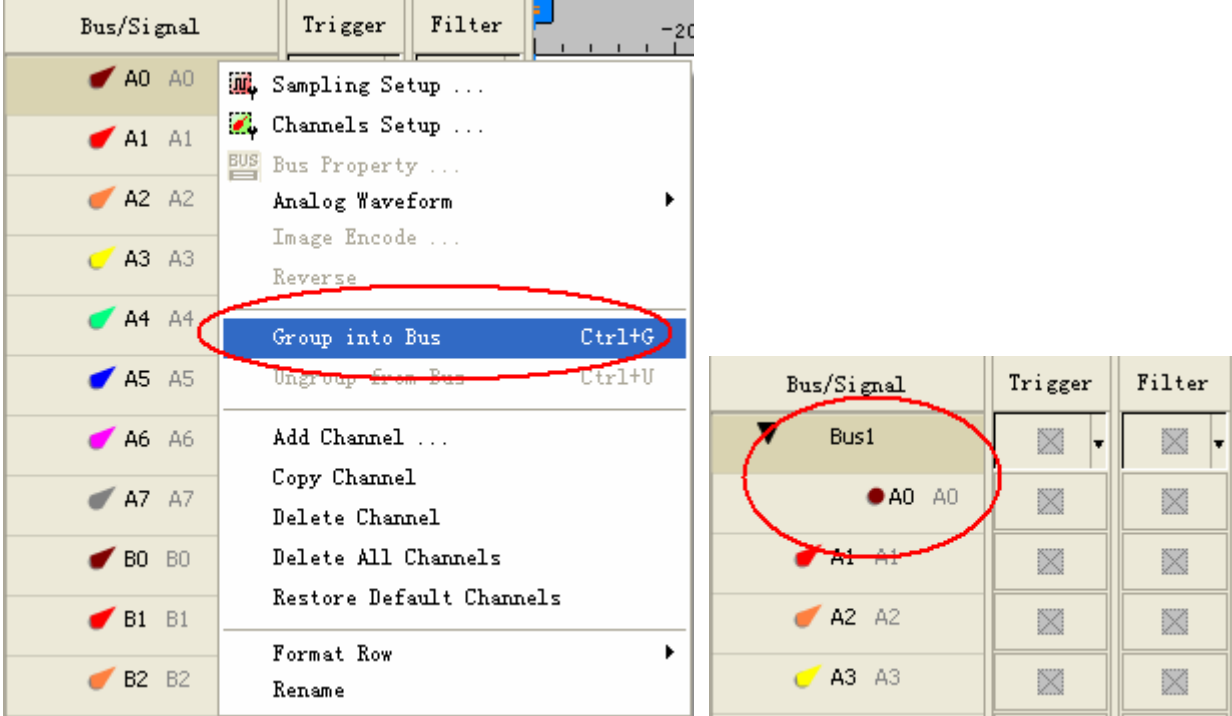
## MANCHESTER Register Dialog Box



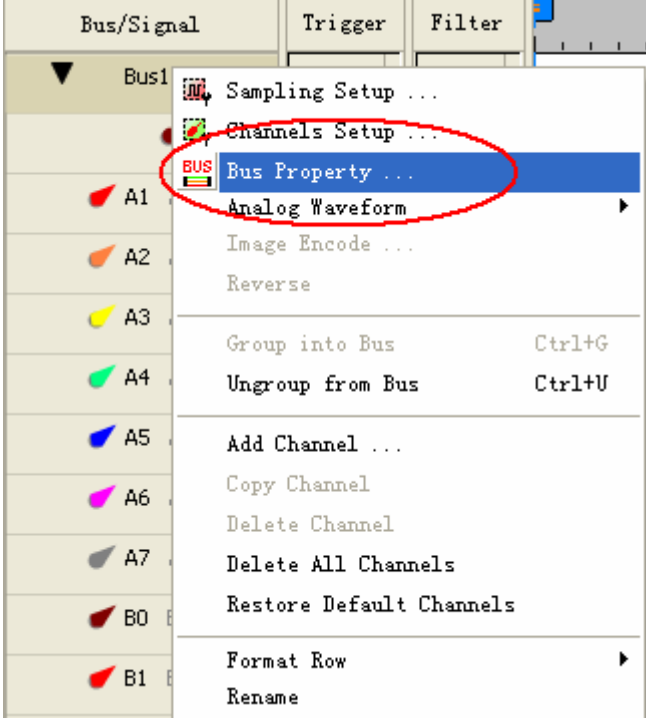


### 3 Operating Instructions

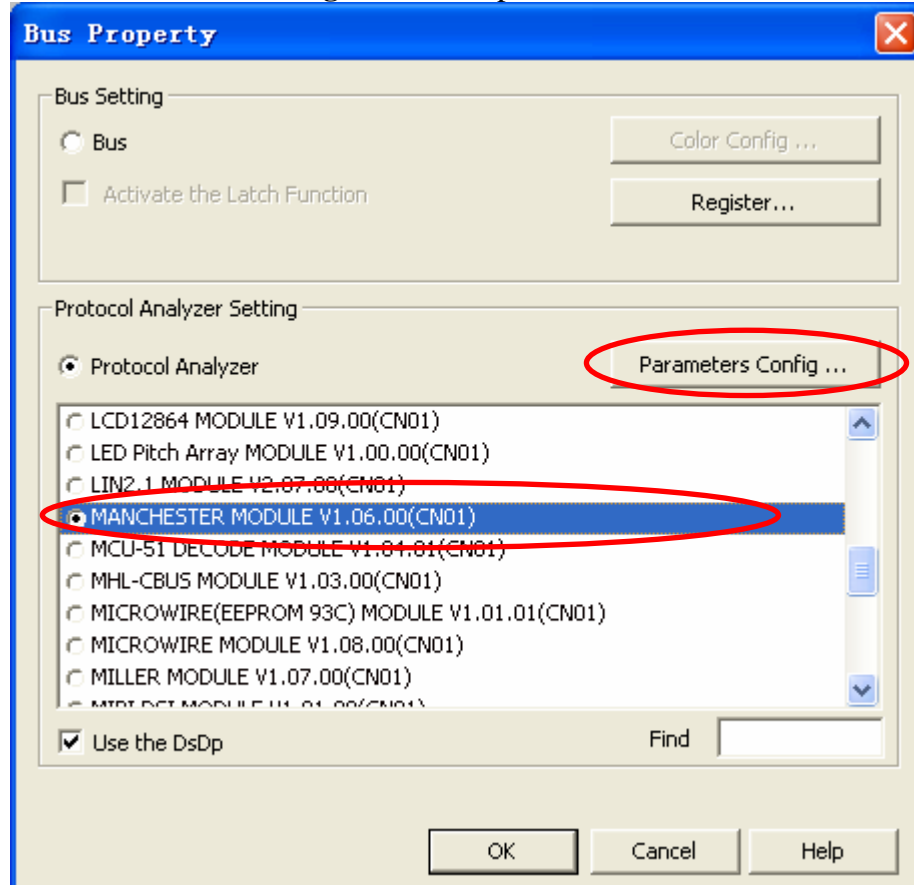
**STEP 1.** Group A0 into **Bus1** by pressing the **Right Key** on the mouse. **MANCHESTER** only needs one channel to decode signals, so it is necessary to group one or more channels into a Bus.



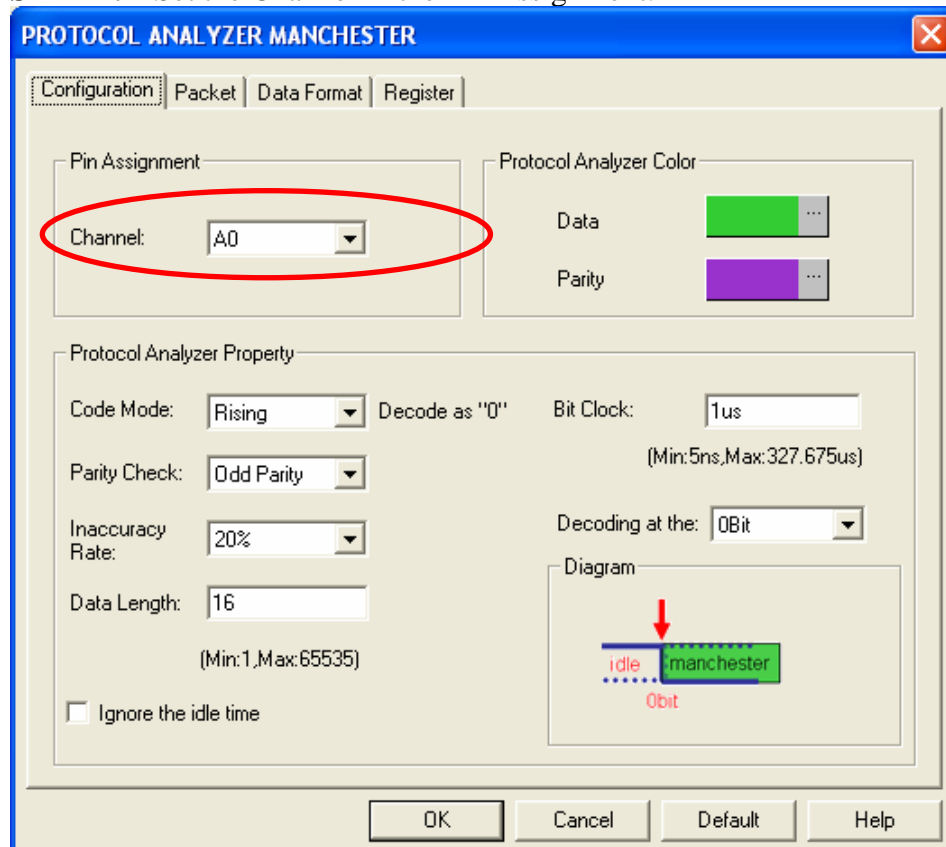
**STEP 2.** Select **Bus1**, and press **Right Key** on the mouse to list the menu, then press **Bus Property** or **Bus** icon on the toolbar to open **Bus Property** dialog box.



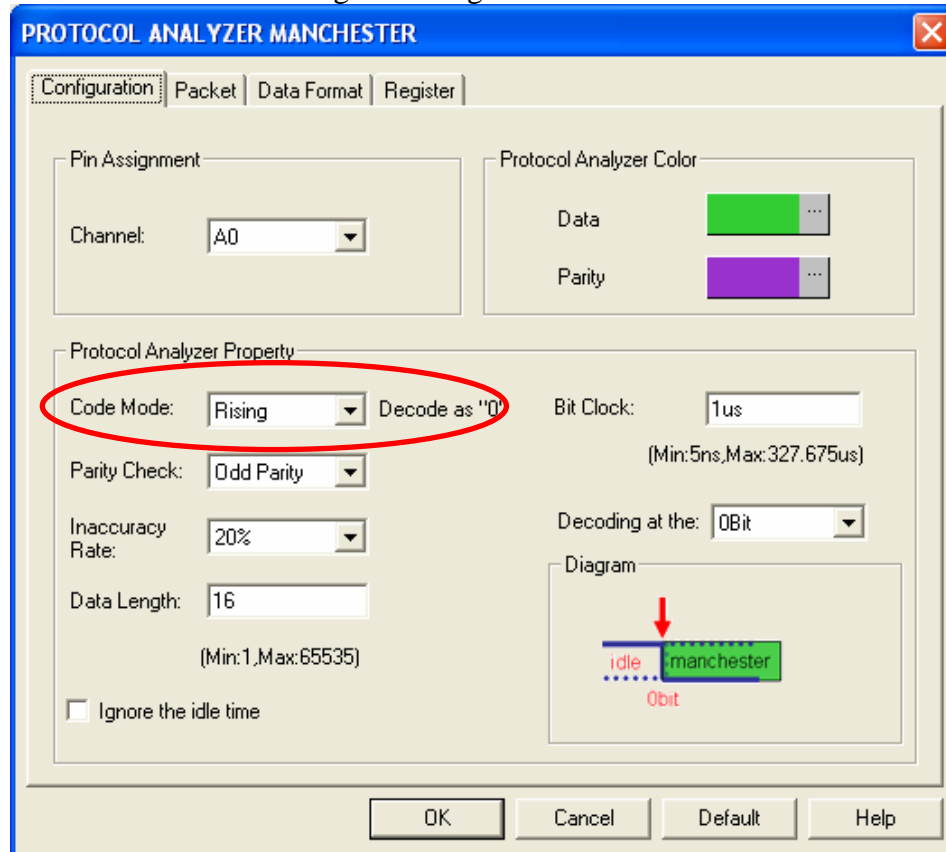
**STEP 3.** Select Protocol Analyzer, and then choose **MANCHESTER MODULE V1.06.00(CN01)**. Next click **Parameters Configuration** to open the **PROTOCOL ANALYZER MANCHESTER** dialog box.



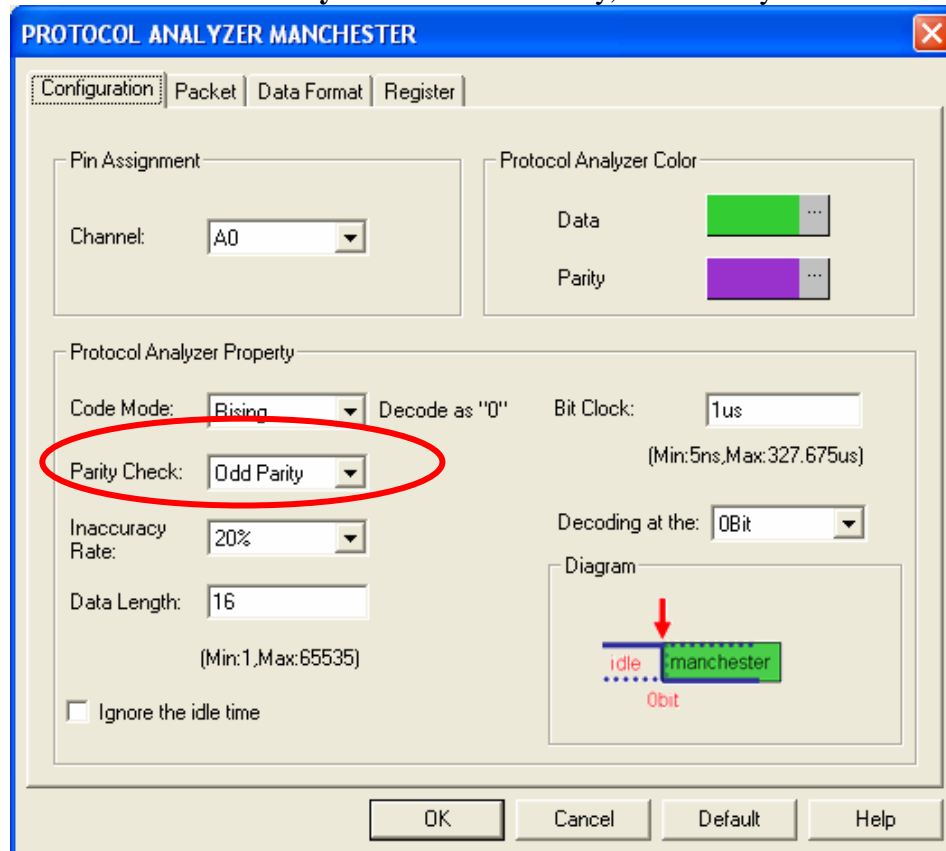
**STEP 4.** Set the Channel in the Pin Assignment.



**STEP 5.** Set the Rising or Falling to decode as “0”.



**STEP 6.** Set the **Parity Check** to Odd Parity, Even Parity or None Parity.



**STEP 7.** Set the **Inaccuracy Rate** to 10%, 15% and 20%.

The screenshot shows the 'PROTOCOL ANALYZER MANCHESTER' window with the 'Configuration' tab selected. The 'Pin Assignment' section shows 'Channel: A0'. The 'Protocol Analyzer Color' section shows 'Data' as a green bar and 'Parity' as a purple bar. The 'Protocol Analyzer Property' section contains several settings: 'Code Mode' is 'Rising', 'Decode as "0"' is selected, 'Bit Clock' is '1us' (with a note '(Min:5ns,Max:327.675us)'), 'Parity Check' is 'Odd Parity', 'Inaccuracy Rate' is '20%' (circled in red), 'Data Length' is '16' (with a note '(Min:1,Max:65535)'), and 'Decoding at the:' is '0Bit'. There is an unchecked checkbox for 'Ignore the idle time'. A 'Diagram' section shows a timeline with a red arrow pointing to a green 'manchester' block, with 'idle' and '0bit' labels below it. At the bottom are 'OK', 'Cancel', 'Default', and 'Help' buttons.

**STEP 8.** Set the **Data Length** in the range from 1 to 65535bits.

This screenshot is identical to the one above, showing the same 'PROTOCOL ANALYZER MANCHESTER' window. In this step, the 'Data Length' is set to '16' and is circled in red. All other settings, including the 'Inaccuracy Rate' of '20%', remain the same.

**STEP 9.** Set the **Ignore the idle time**.

**PROTOCOL ANALYZER MANCHESTER**

Configuration | Packet | Data Format | Register

Pin Assignment

Channel: A0

Protocol Analyzer Color

Data

Parity

Protocol Analyzer Property

Code Mode: Rising Decode as "0" Bit Clock: 1us  
(Min:5ns,Max:327.675us)

Parity Check: Odd Parity

Inaccuracy Rate: 20%

Data Length: 16  
(Min:1,Max:65535)

Decoding at the: 0Bit

Diagram

☐ Ignore the idle time

OK Cancel Default Help

**STEP 10.** Set the **Bit Clock**.

**PROTOCOL ANALYZER MANCHESTER**

Configuration | Packet | Data Format | Register

Pin Assignment

Channel: A0

Protocol Analyzer Color

Data

Parity

Protocol Analyzer Property

Code Mode: Rising Decode as "0" Bit Clock: 1us  
(Min:5ns,Max:327.675us)

Parity Check: Odd Parity

Inaccuracy Rate: 20%

Data Length: 16  
(Min:1,Max:65535)

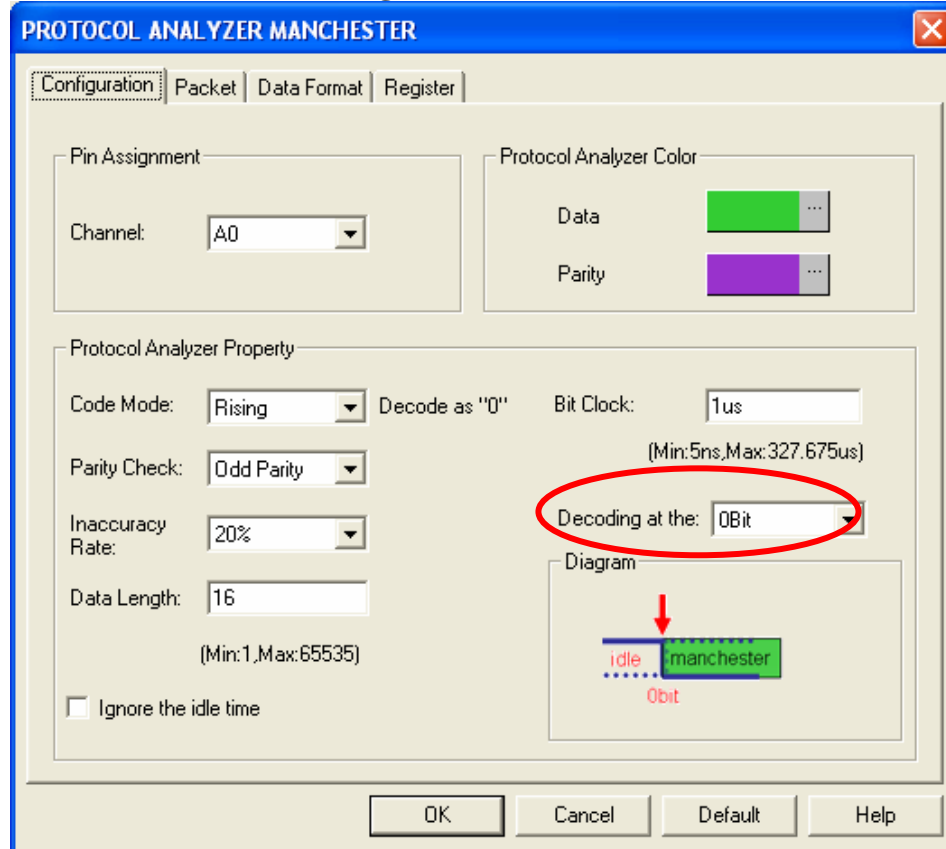
Decoding at the: 0Bit

Diagram

☐ Ignore the idle time

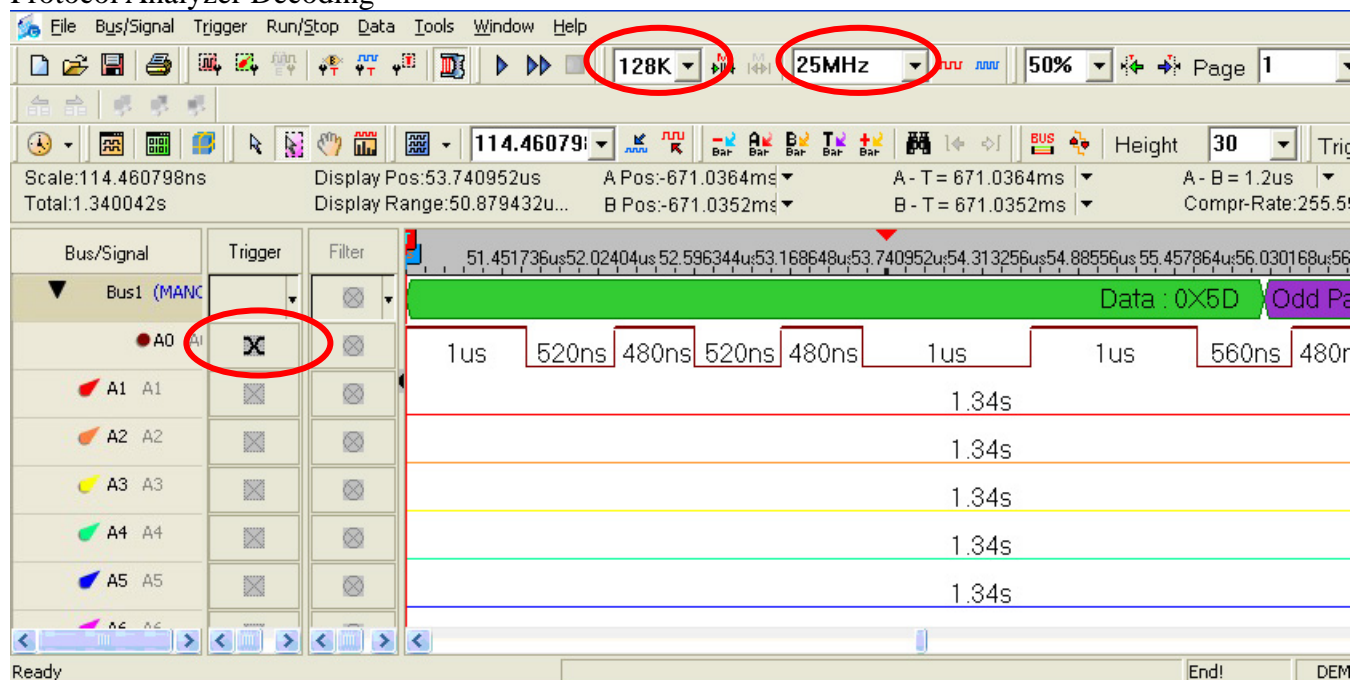
OK Cancel Default Help

**STEP 11.** Set the **Decoding at the** to Pre0.5Bit, 0Bit, After0.5Bit, After1Bit, After1.5Bit and After 2Bit.



**STEP 12.** Following pictures show the completion of the protocol analyzer decoding and packet list. The trigger condition is set as Either Edge; the memory depth is 128K; the sampling frequency is 25MHz (the sampling frequency should be more than four times higher than the signal to be tested).

### Protocol Analyzer Decoding



## Packet List

