

SPECIFICATION

MODEL: 011-LAP-MICROWIRE-M

PART NO: _____

VERSION: V1.08

| Approver | | Check | Design |
|----------|----|-------|--------|
| GM | PM | | |
| | | | |

| Customer Confirm |
|------------------|
| |

Content

| | |
|--------------------------------|---|
| 1 Software Register | 3 |
| 2 User Interface | 6 |
| 3 Operating Instructions | 9 |

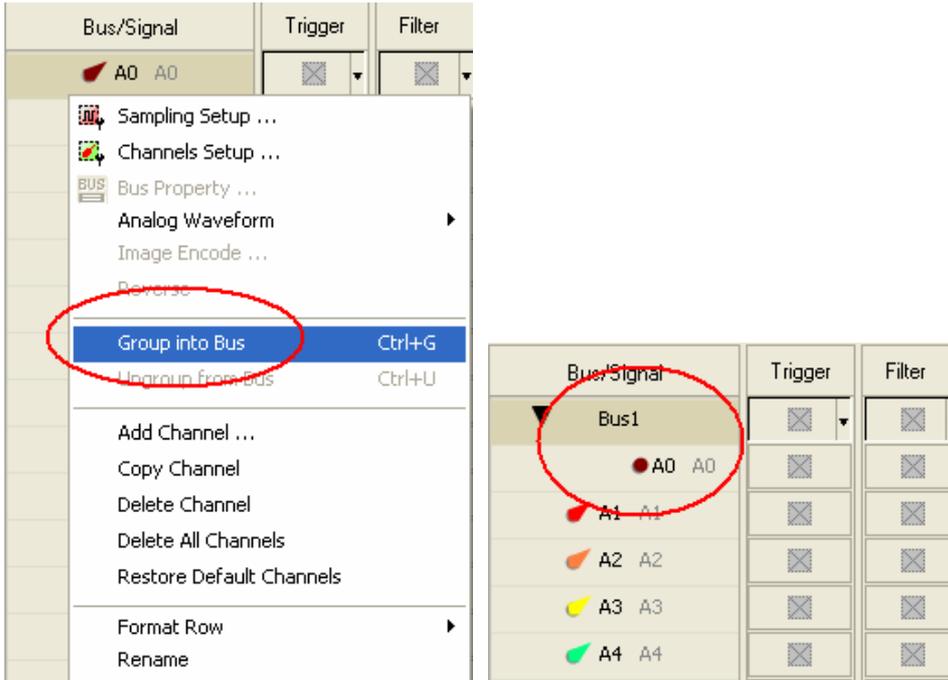
1 Software Register

Please register the software as the following steps:

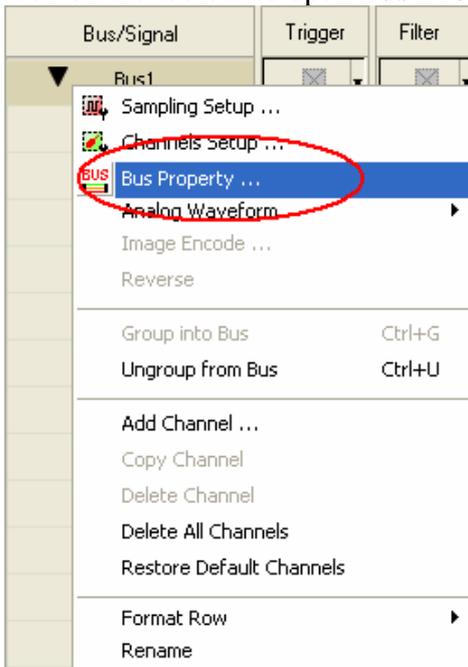
※ Remark1: The registration steps for all protocol analyzers are the same; you can complete the registration by following procedures. Following is an example on how to register the Protocol Analyzer BUS.

※ 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.

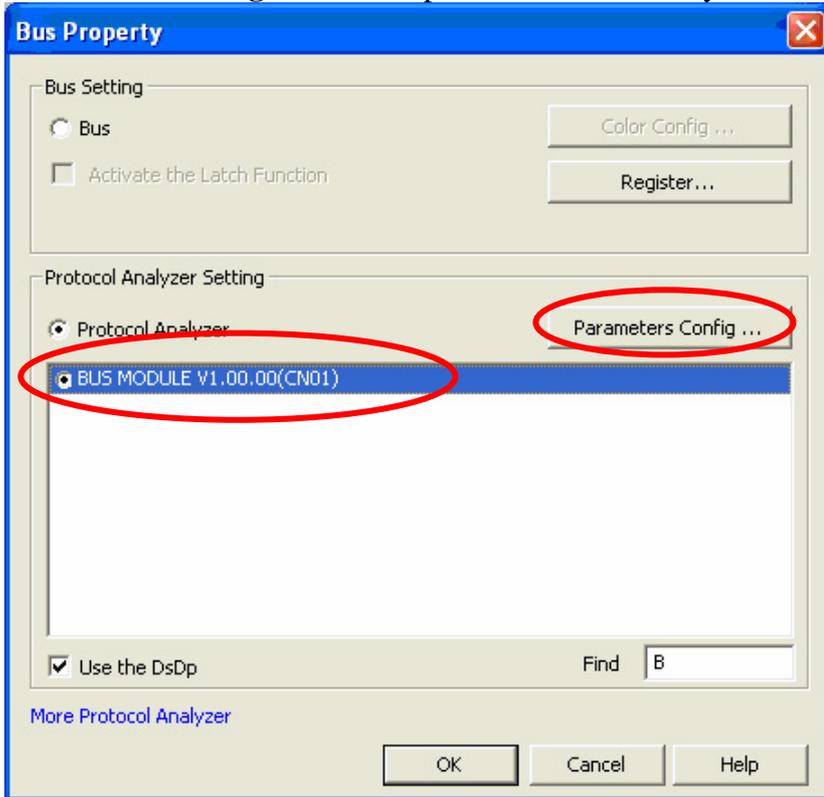
STEP 1. Open the Logic Analyzer and group the unanalyzed channels into **Bus1** by pressing the **Right Key** on the mouse.



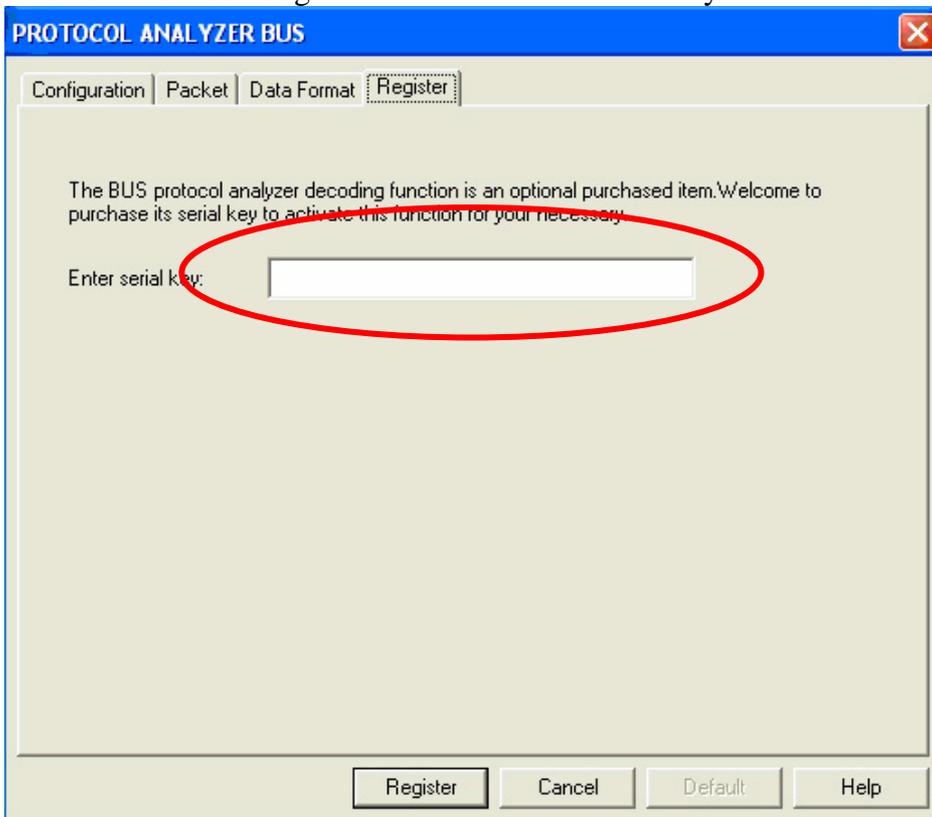
STEP 2. Select **Bus1**, and press **Right Key** on the mouse to list the menu, then click **Bus Property** or **Bus** icon on the toolbar to open **Bus Property** dialog box.



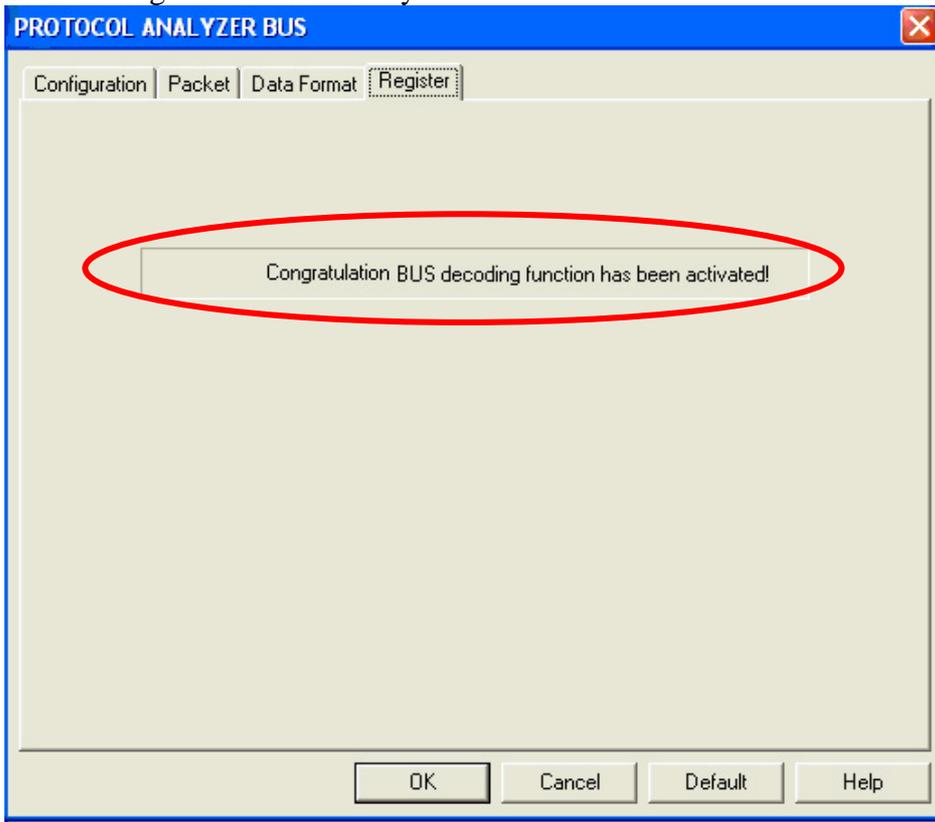
STEP 3. Select the Protocol Analyzer, and then choose **BUS MODULE V1.00.00 (CN01)**. Next click **Parameters Configuration** to open the Protocol Analyzer Bus dialog box.



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



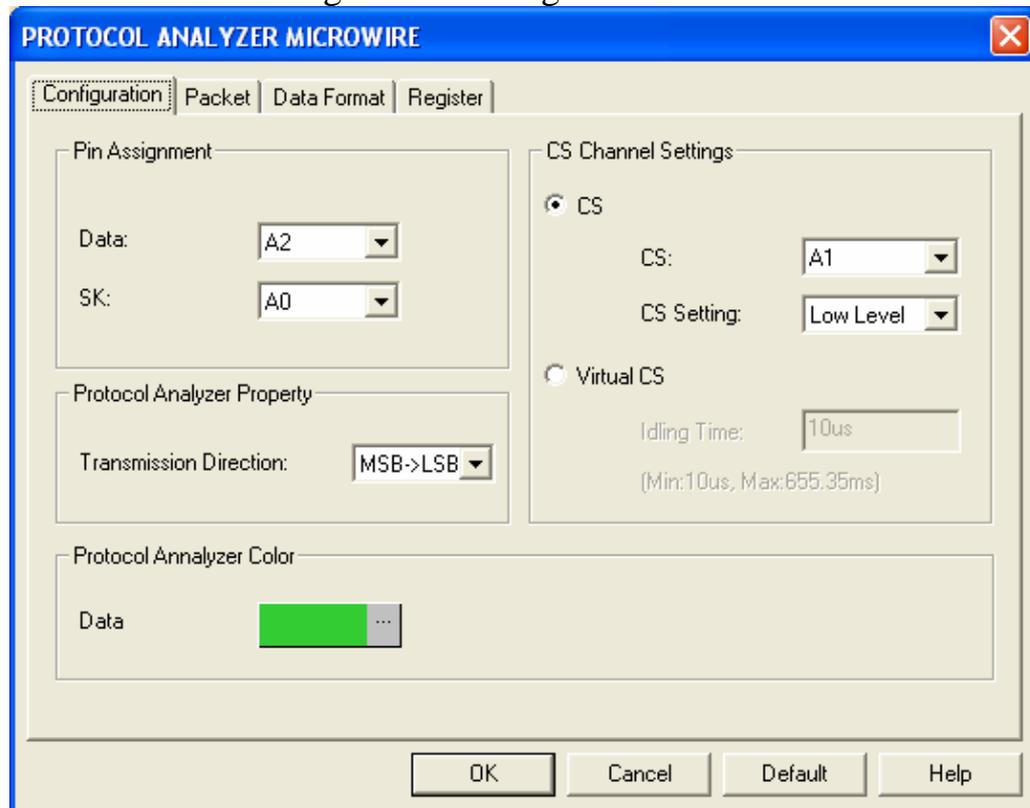
STEP 5. After clicking the Register button, the following dialog box will appear; it denotes that the BUS has been registered successfully.



2 User Interface

Please refer to below images to select options for setting **MICROWIRE**.

MICROWIRE Configuration Dialog Box



Pin Assignment:

SK: It is the Clock channel, the default is A0.

Data: It is the Data channel, the default is A2.

Protocol Analyzer Property:

Transmission Direction: Set the Transmission Direction to LSB->MSB or MSB->LSB, the default is MSB->LSB.

CS Channel Settings:

CS: The default is A1.

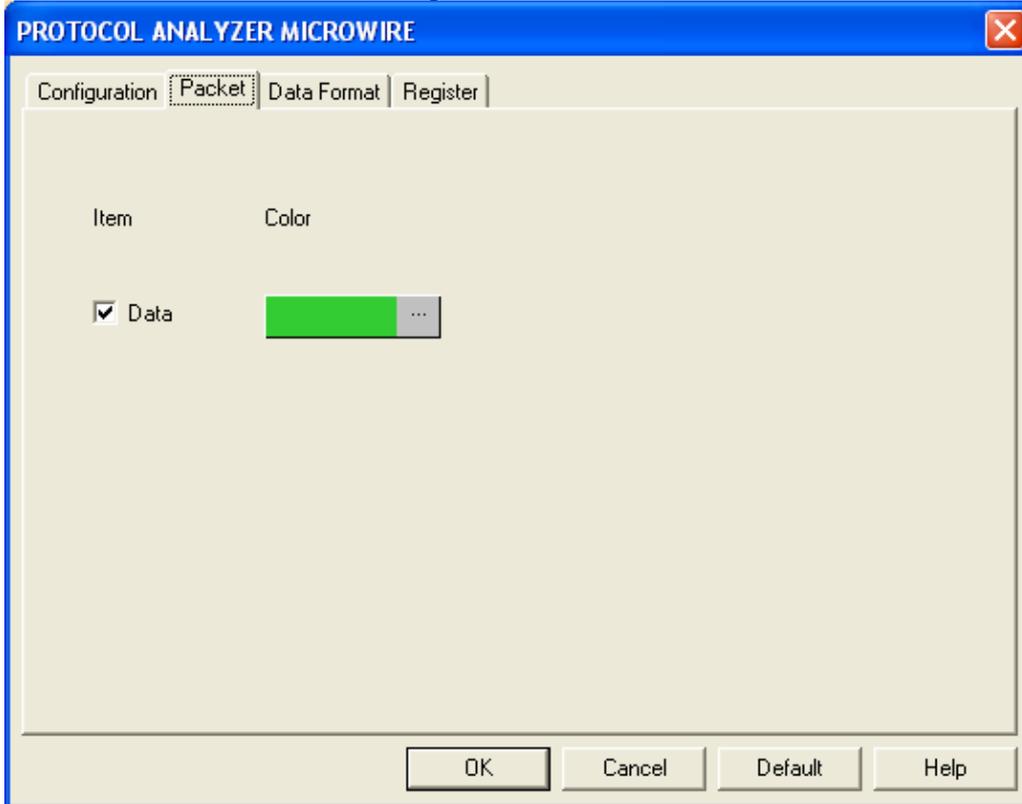
CS Setting: Set the Level to Low Level or High Level.

Virtual CS: When the Virtual CS is selected, the CS channel can not be used; and users should set the Idling Time as the auxiliary condition when performing the decoding.

Protocol Analyzer Color:

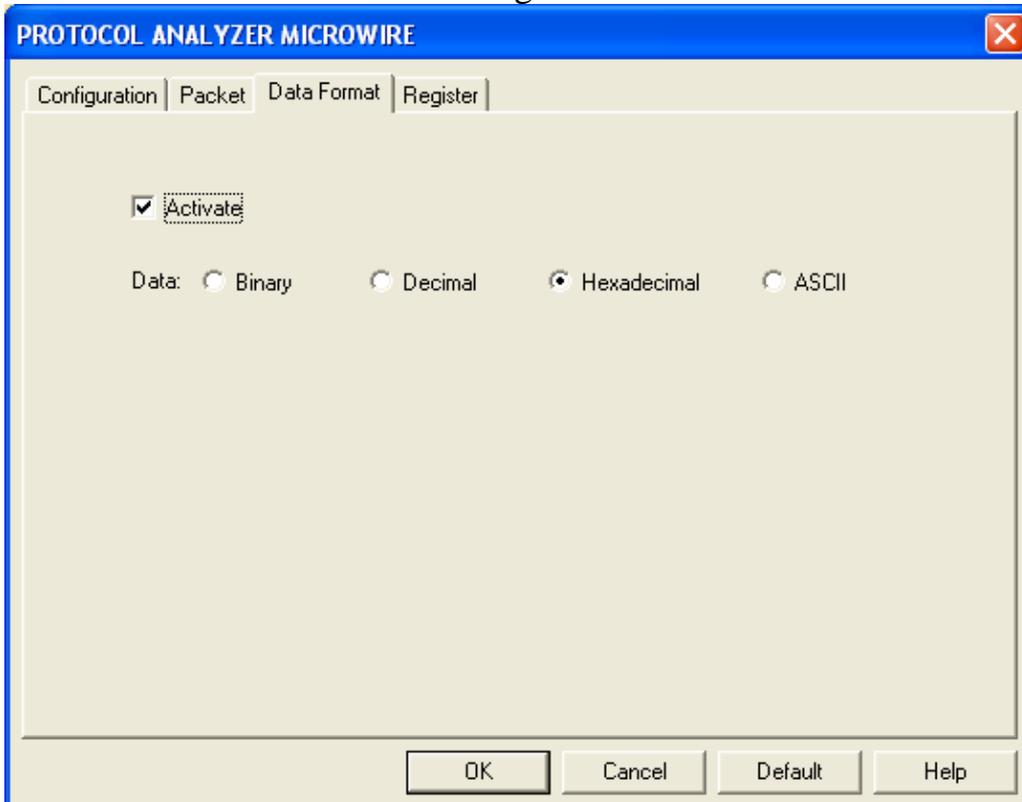
The protocol analyzer color can be varied by users.

MICROWIRE Packet Dialog Box



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

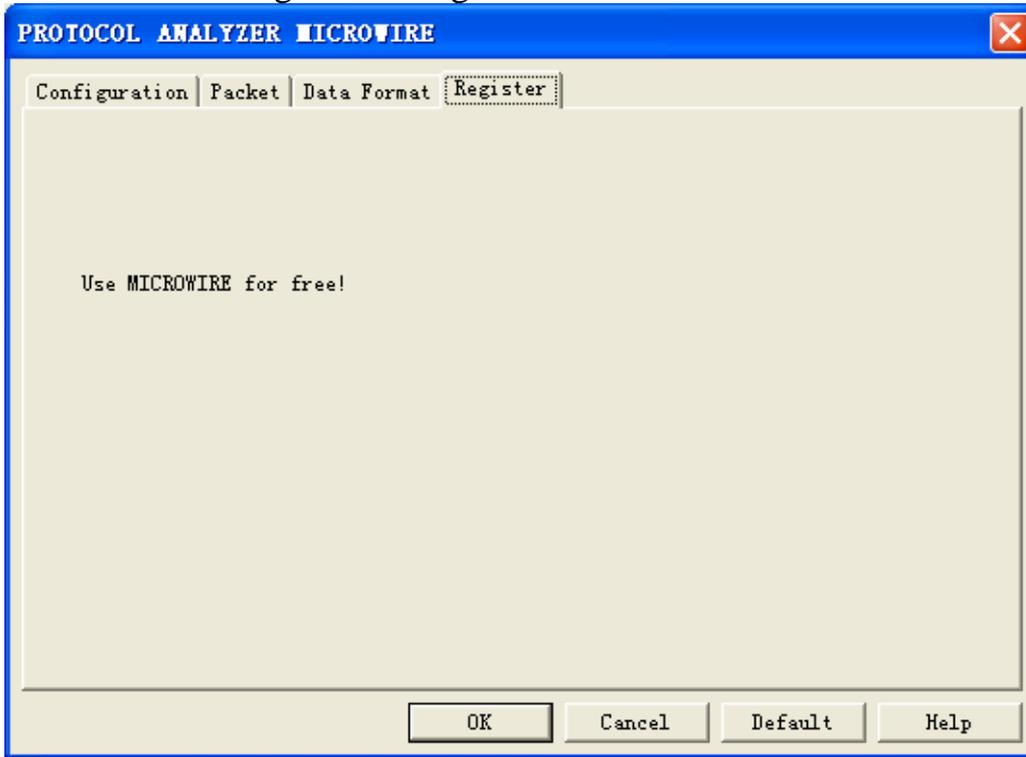
MICROWIRE Data Format Dialog Box



Users can set the Data Format of the Data as their requirements. When selecting the option, Activate, the data format is decided by the settings in the Protocol Analyzer; when not selecting the option, Activate, the

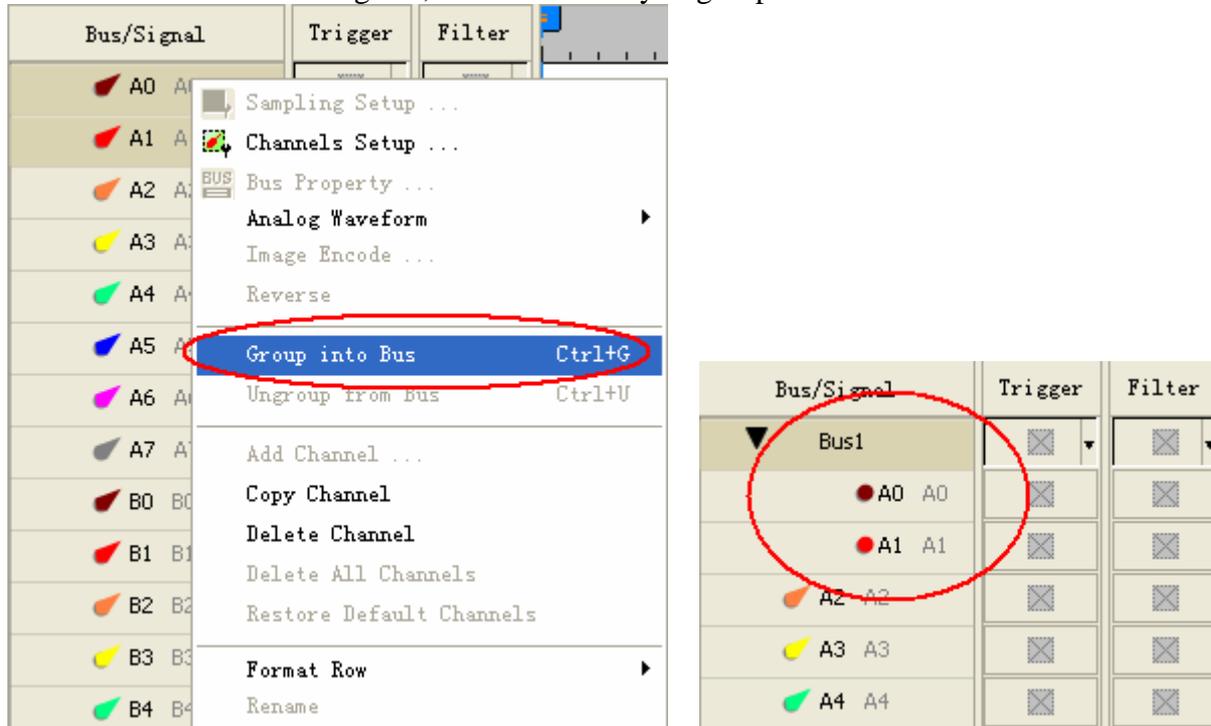
data format is decided by the settings in the main program.

MICROWIRE Register Dialog Box

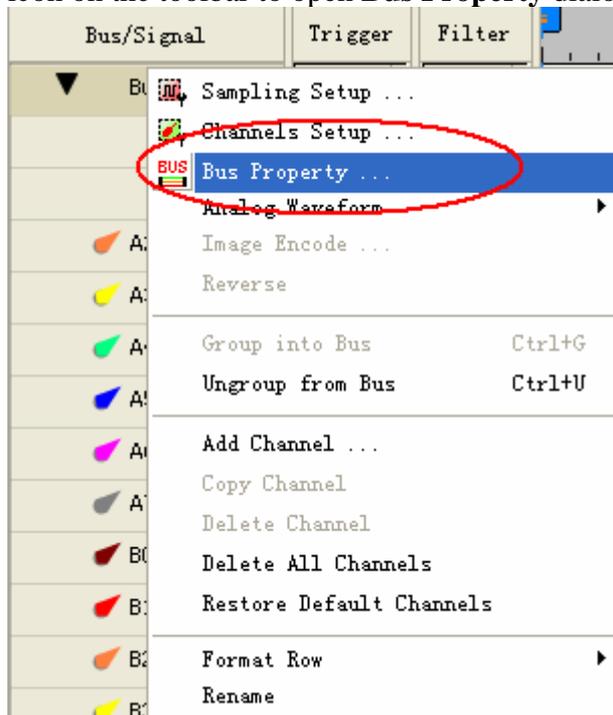


3 Operating Instructions

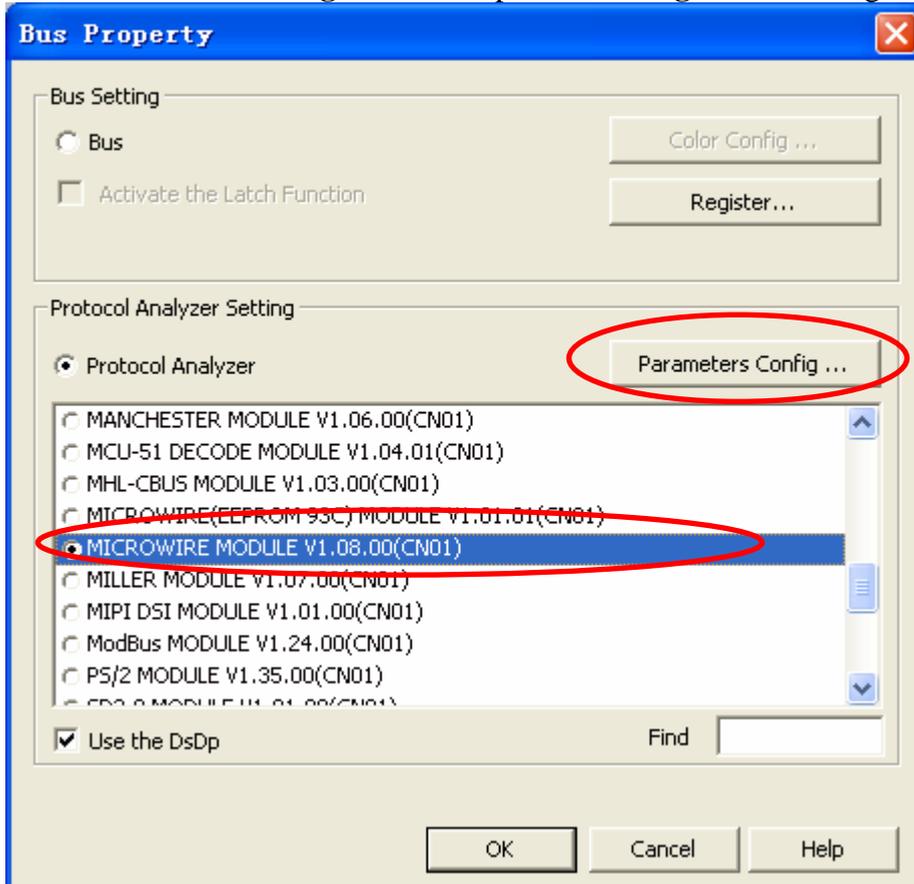
STEP 1. Group A0-A1 into **Bus1** by pressing the **Right Key** on the mouse. **MICROWIRE** needs two or three channels to decode signals, so it is necessary to group two or more channels into a Bus.



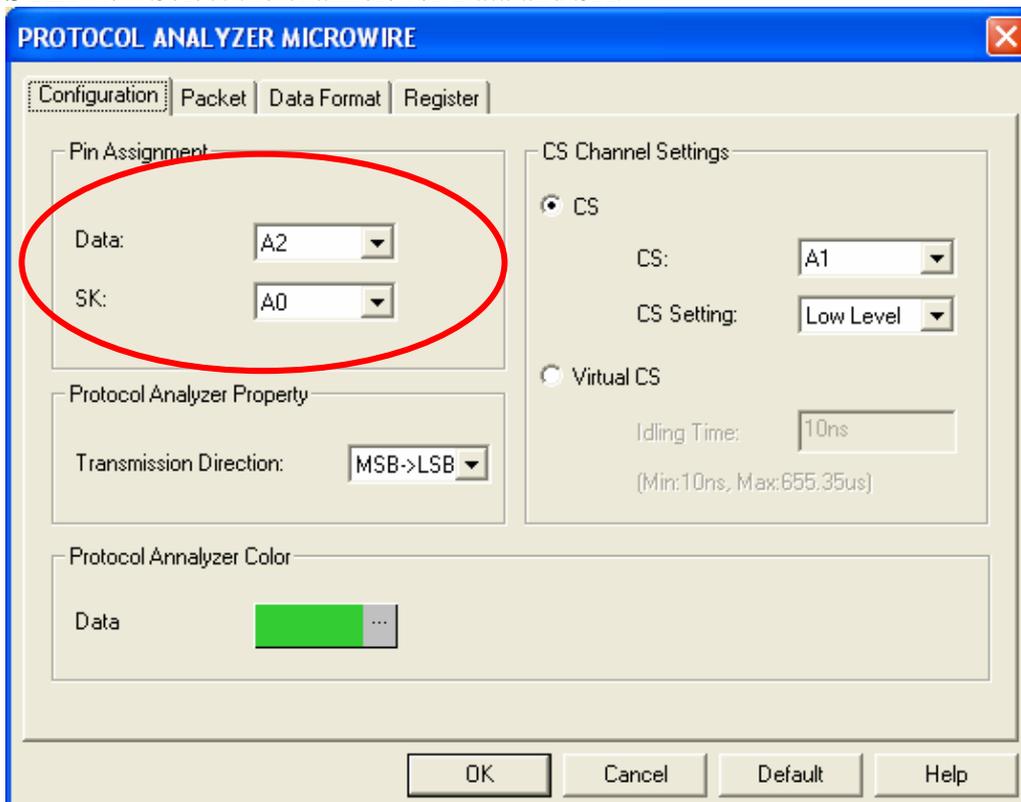
STEP 2. Select **Bus1**, and press **Right Key** on the mouse to list the menu, then press **Bus Property** or **Bus** icon on the toolbar to open **Bus Property** dialog box.



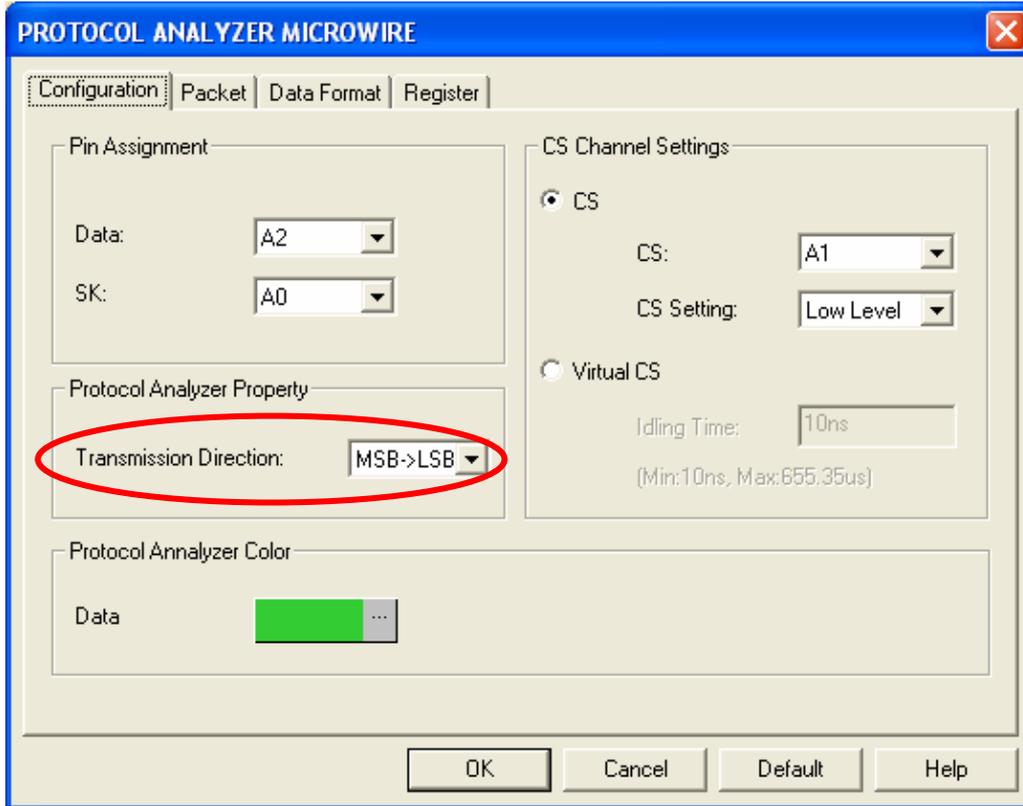
STEP 3. Select Protocol Analyzer, and then choose **MICROWIRE MODULE V1.08.00(CN01)**. Next click **Parameters Configuration** to open the **Configuration** dialog box.



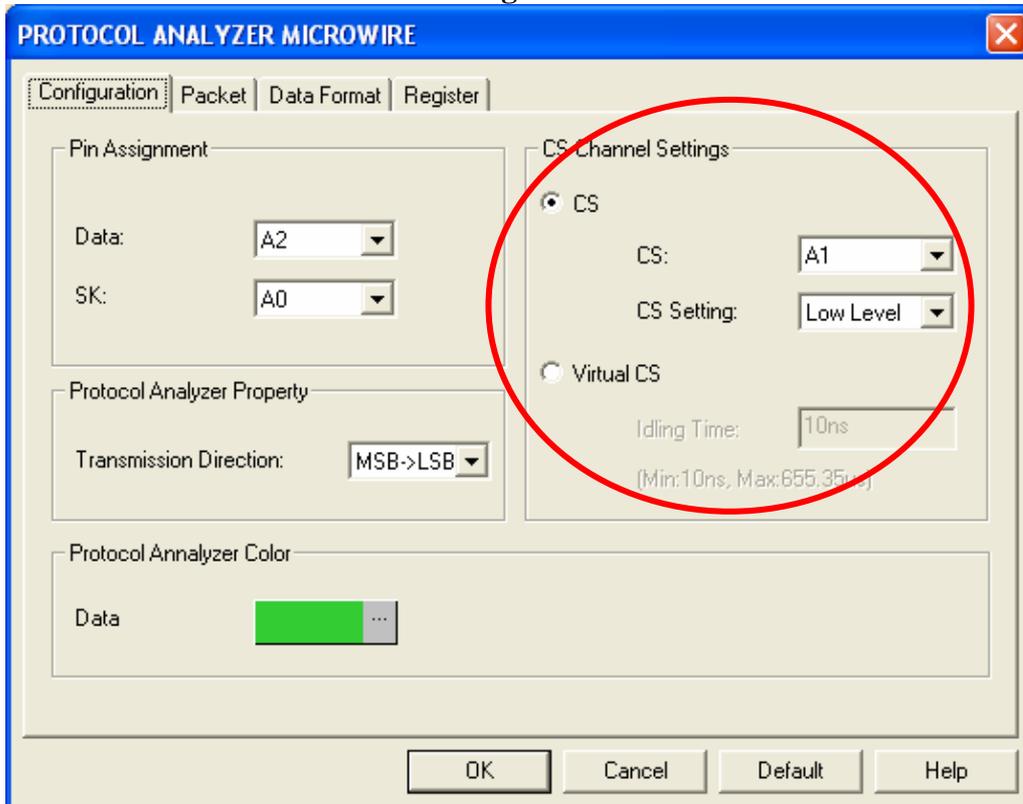
STEP 4. Select the channels for Data and SK.



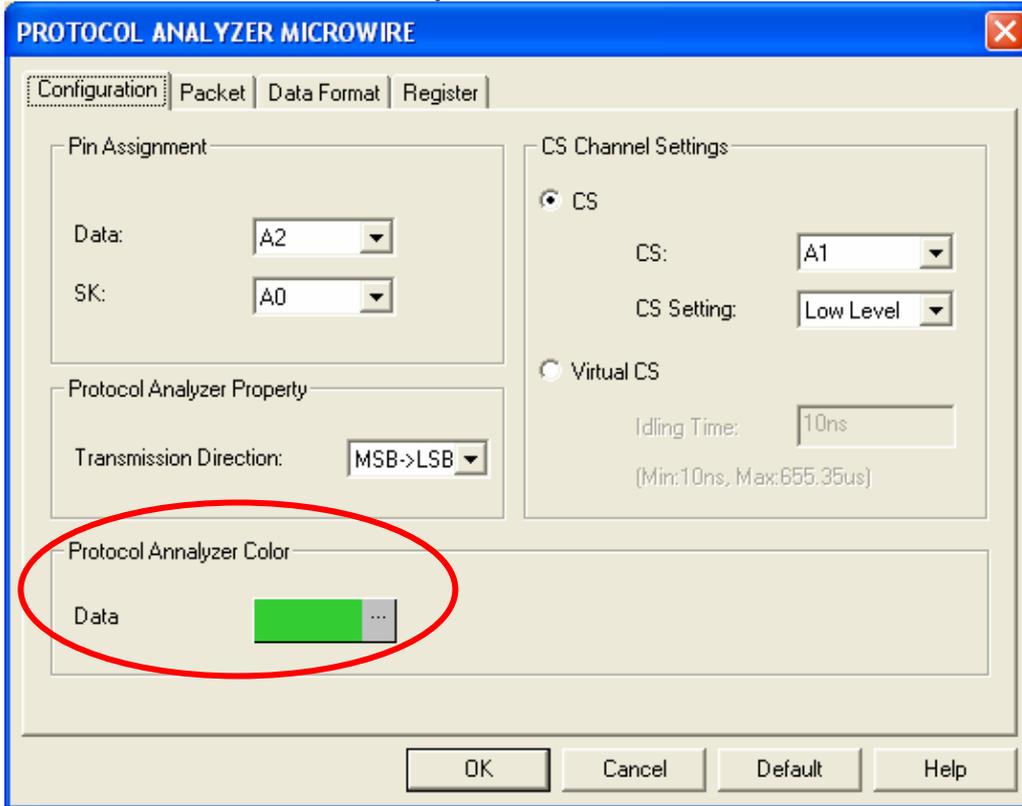
STEP 5. Set the **Transmission Direction** to LSB->MSB or MSB->LSB.



STEP 6. Set the **CS Channel Settings**.

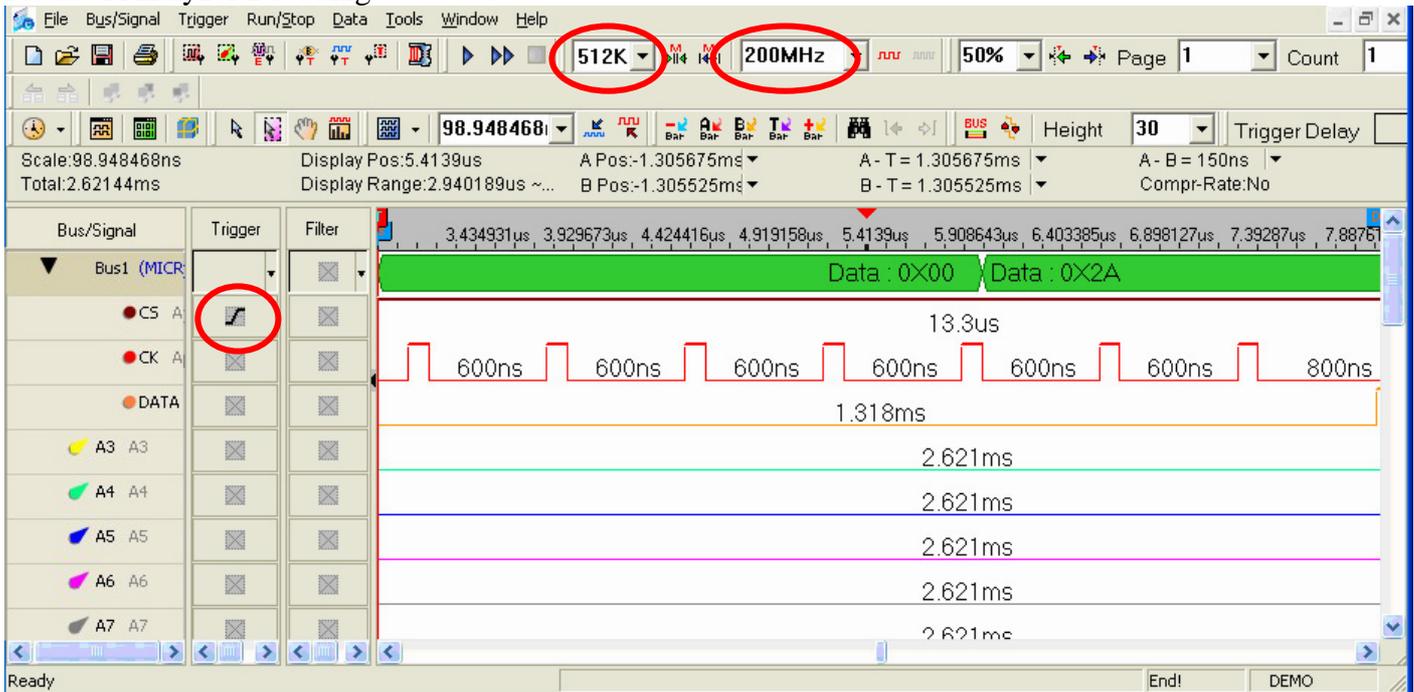


STEP 7. Set the Protocol Analyzer Color.



STEP 8. Following pictures show the completion of the protocol analyzer decoding and packet list. The trigger condition is set as Rising Edge; the memory depth is 512K; the sampling frequency is 200MHz (the sampling frequency should be more than four times higher than the signal to be tested).

Protocol Analyzer Decoding



Packet List

The screenshot displays a logic analyzer interface with a packet list at the bottom and a timing diagram above it. The packet list shows four packets on the Bus1(MICROWIRE) bus. The timing diagram shows the signals CS, CK, DATA, A3, and A4 over time, with various time intervals marked.

| Packet # | Name | TimeStamp | Data |
|----------|-----------------|-----------|---------|
| 1 | Bus1(MICROWIRE) | 0ns | 00 2A 2 |
| 2 | Bus1(MICROWIRE) | 43.895us | 00 00 0 |
| 3 | Bus1(MICROWIRE) | 118.99us | FF 3 |
| 4 | Bus1(MICROWIRE) | 157.09us | FF 3 |

Timing Diagram Details:

- Scale: 214.608049ns
- Display Pos: 7.640215us
- Display Range: 2.275013us ~...
- Frequency: 200MHz
- Height: 30
- Trigger Delay: []
- Time Intervals: 800ns, 1.318ms, 700ns, 2.621ms, 13.3us