

# TRANSMITTER

MODEL : REPEATER



# TRANSMITTER PROGRAMMING GUIDE

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## Getting Started

The REPEATER Programming Software provides the flexibility to program REPEATER to meet individual requirements. To obtain the best results from the product, please take a few minutes to read this instruction guide.

## Equipment Required

To install and operate the programmer, you need a system that meets the following minimum requirements:

- A personal computer (PC), or compatible
- Windows 2000 or above operating system (XP Recommended)
- 256 MB of RAM
- A serial output port with DB9 connector

## Programming Interface

The Programming interface kit, shown in following Figure, supports REPEATER programming. Items included with the interface kit consist of the following:

- REPEATER Programming software
- AD/DC adapter/power supply
- DB9 male-DB9 female connector or USB to Serial Port Adapter (Suggest you to use Prolific PL2303 USB to serial adaptor)

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# Installing Programming Software

## Installation

Install the programmer software into a PC as follows:

1. Uncompress the Repeater\_Setup.zip and save them in a temporary directory.
2. Double click the setup.exe file. Click on "Y".



3. Click "Next" on the Welcome screen.



4. Enter your user information and click "Next". (Note: you must enter at least a single character "into the company field)

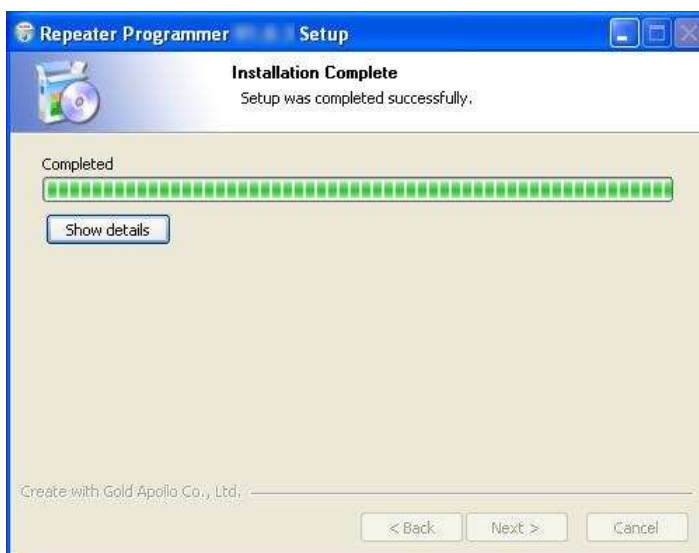


5. Choose where the program should be installed and click "Next".

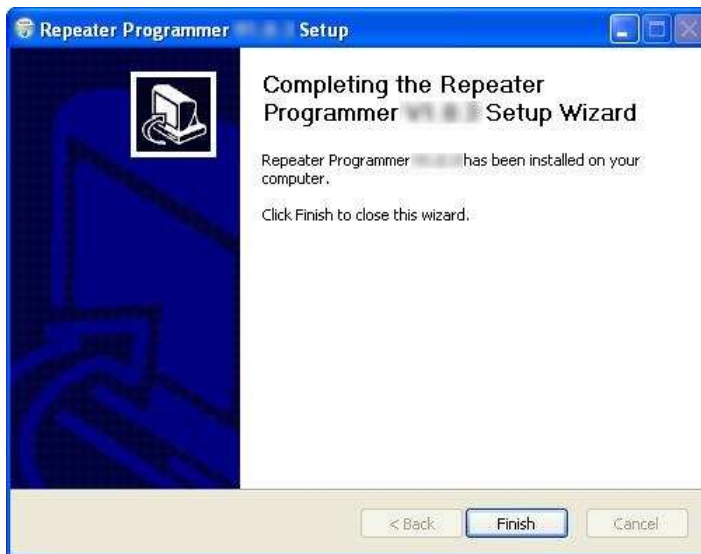


## Installing Programming Software

6. On the Select Program Folder screen, choose where you would like the program to show up in your start menu and click "Install".



7. Click "Finish" on the Setup Complete screen.

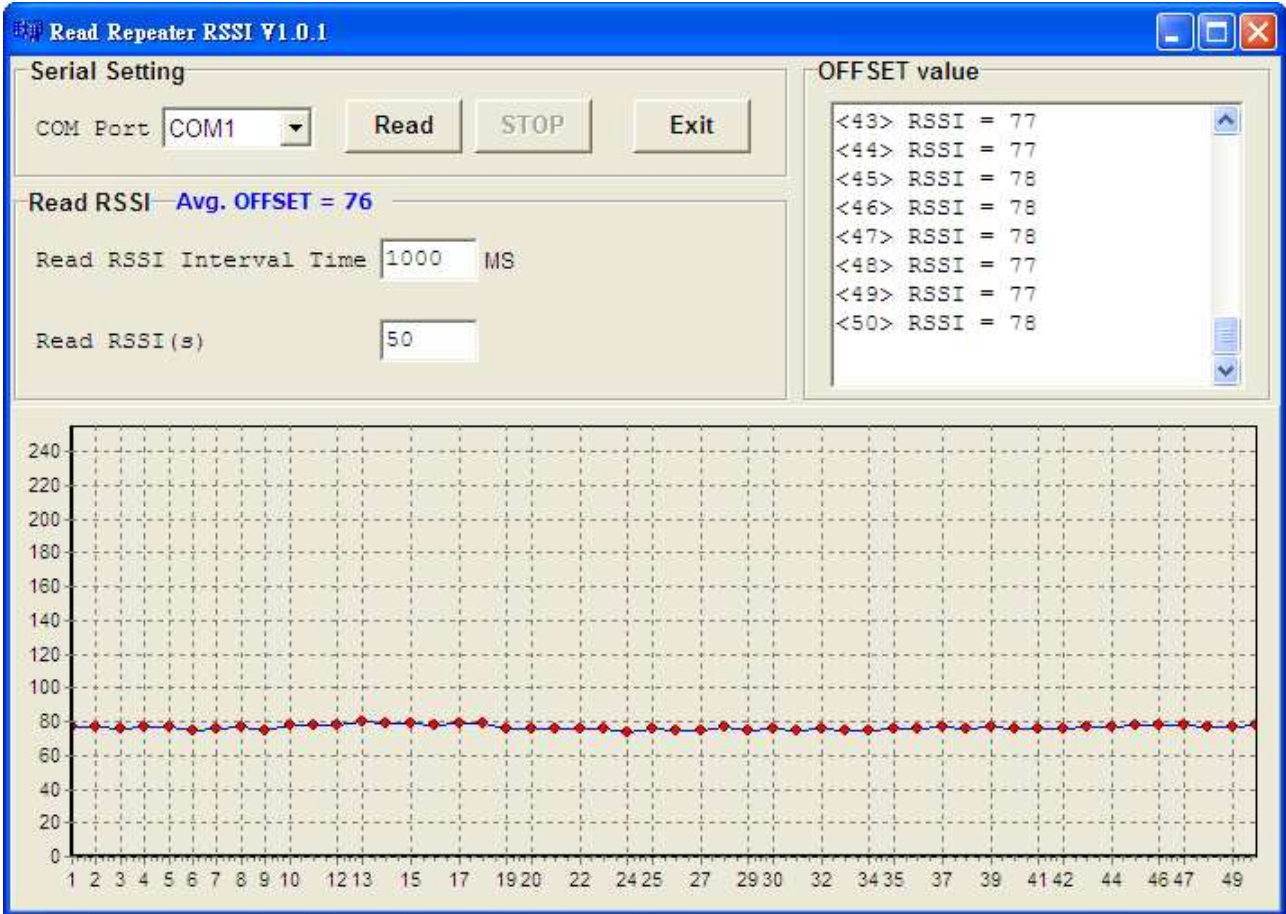


## Running

You now have the program installed. To run it from the Start menu/ Programs/ Gold Apollo /Repeater Programmer.

# S\_RSSI Setting

Please make sure to configure the S\_RSSI setting before programming your repeater.



After turning on the repeater, connect the RS-232 cable to your PC. Please be sure to run the program "Read Repeater RSSI" within 3 minutes. After you requested number of times for reading, you'll get the average offset value of the repeater.

For example, you put "50" in Read RSSI(s), then the software will read the RSSI value for 50 times and get the average offset value. If the average offset value is 76, then add 10. The S\_RSSI value for programming will be 86.



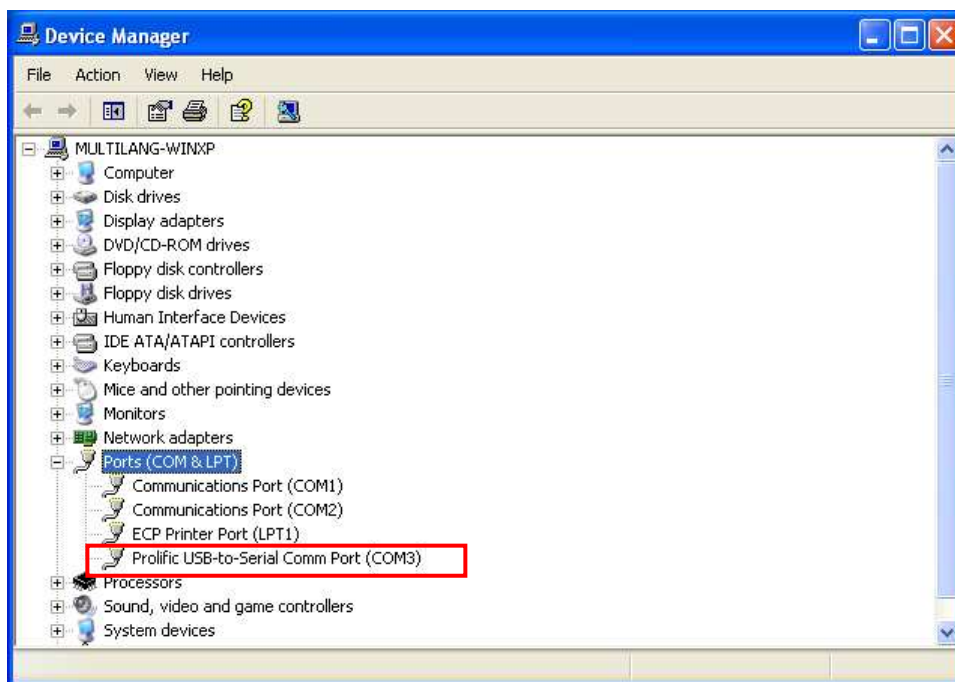
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# Repeater Programming

## Introduction

Please follow the below steps for programming Repeater :

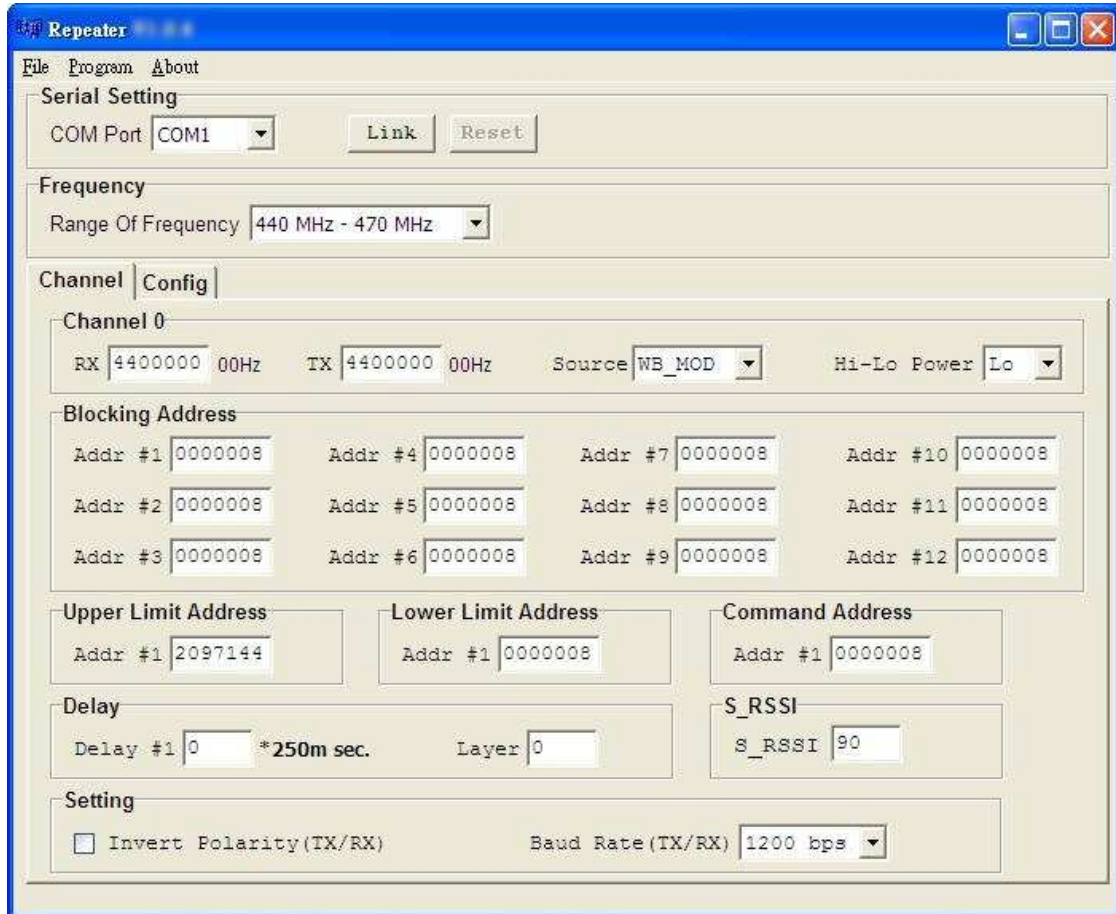
1. Connect Repeater to a PC
2. Identify the COM Port that is being connected to.
  - ◆ If you are using a Serial Port as your connection to the PC, please make sure it is connected to COM1 or COM2.
  - ◆ If you are using a USB-to-Serial connection and have installed the driver for USB-to-Serial connection, the 「Prolific USB-to-Serial Comm Port」 will appear under Ports (COM&LPT). The following screen gives an example of the systems detects a USB-to-Serial connection is being connected to COM3. It appears Prolific USB-to-Serial Comm Port (COM3).



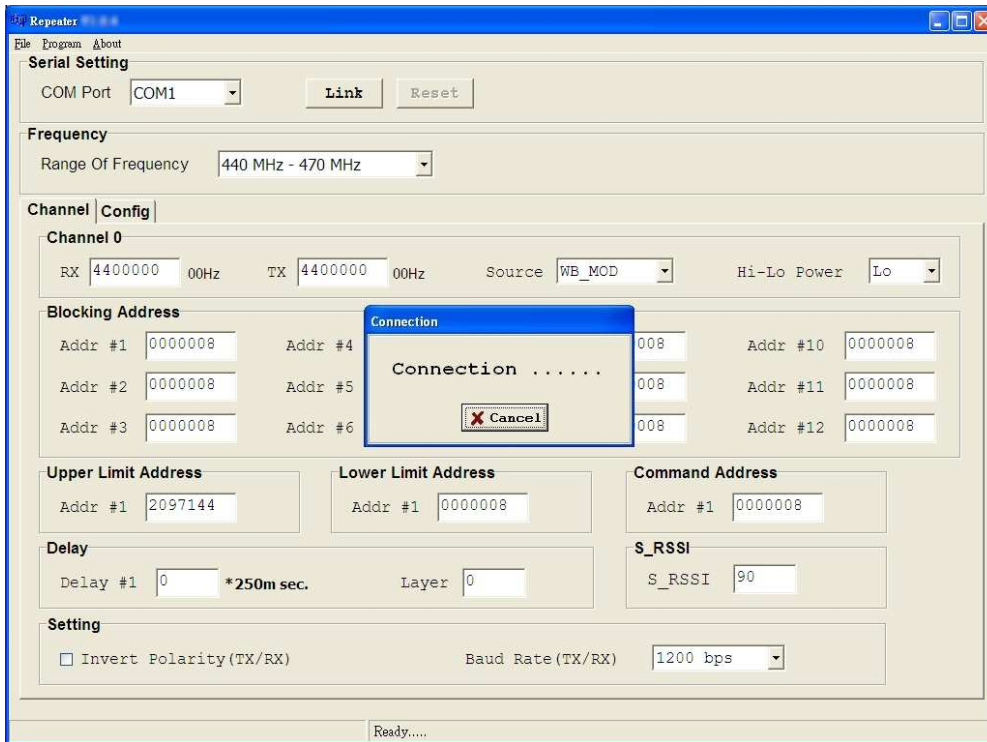
- ◆ If 「Prolific USB-to-Serial Comm Port」 does not appear, please refer to the instruction for installation on USB connection.

## Starting the Programming

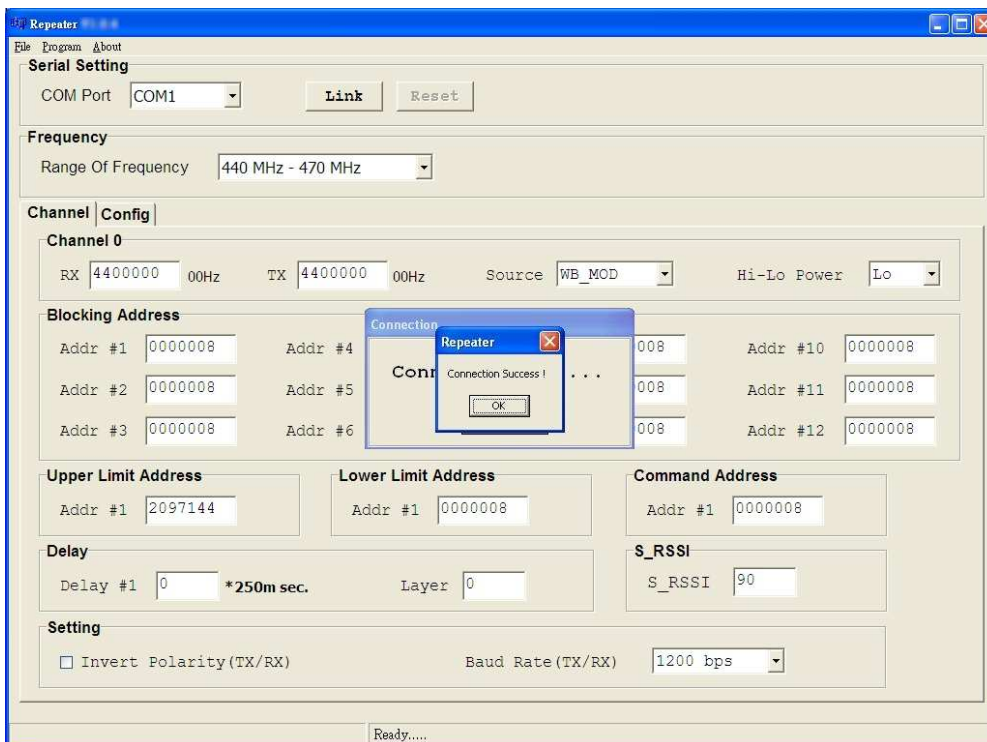
1. The application can be launched from Start → Programs → Gold Apollo → Repeater Programming. The Main Menu appears:



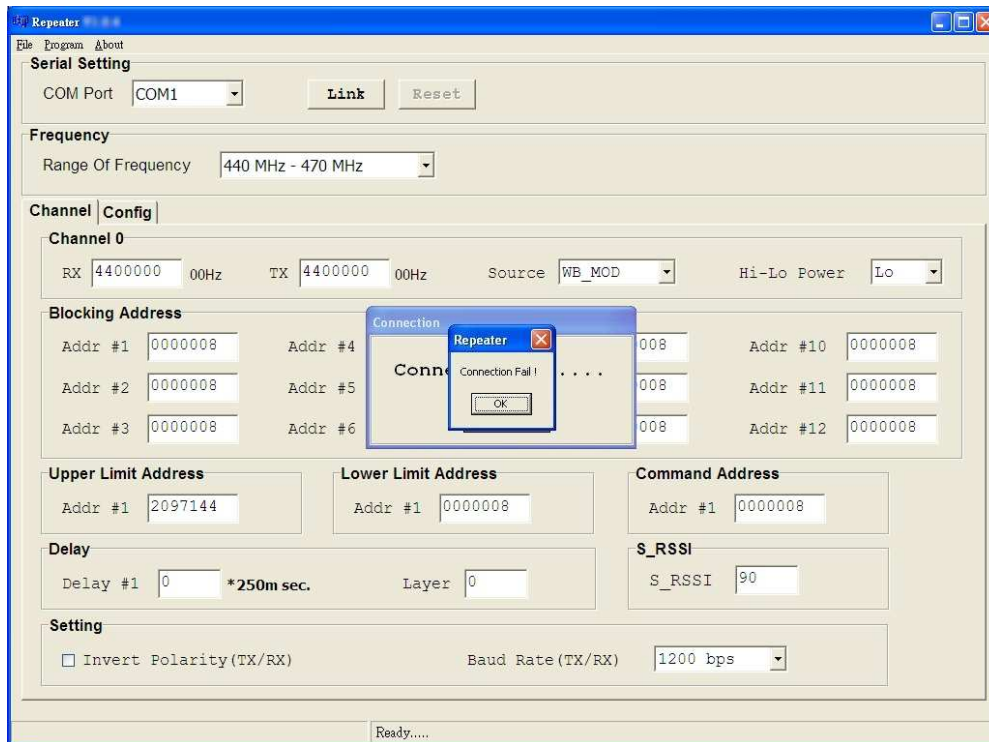
2. Choose your Com Port, then click "Link". Wait for Repeater to establish connection to the PC.



3. Turn on the power for REPEATER, wait for REPEATER to establish connection to the PC. If it is successfully connected, the following screen will appear.

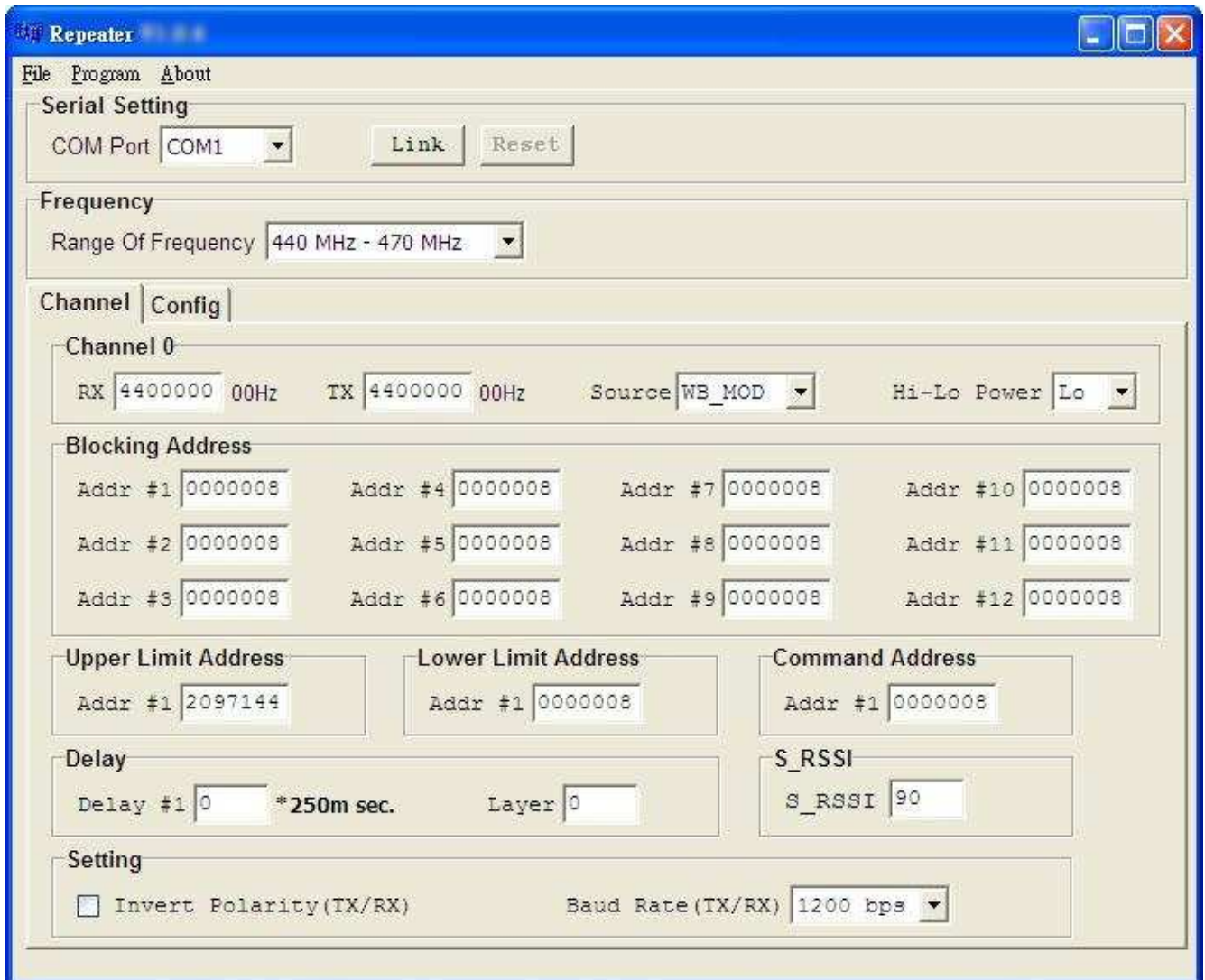


4. If any questions, the following window appears:



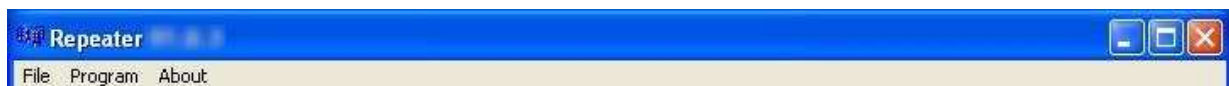
Please re-check the REPEATER and COM port are well installed or not.

## Main Menu



## Menu bar

In the menu bar, there are main menus with submenus like those conventionally used in Windows applications.



- **File | Open**

Open a REPEATER code-plug file. The file has the extension “.tbl”.

- **File | Save**

Save the current code-plug data to a file. If the code-plug data file has already been saved, REPEATER suggests the same filename to you click on Save, the file is overwritten.

- **File | Save As**

Save the current code-plug data to a file with different filename. If you saved the code-plug data file previously and don't need to change the file name, you can use the Save command instead.

- **Program | Write**

Write the current code-plug data to the REPEATER.

- **Program | Read**

Read code-plug data from the REPEATER.

- **About**

Information about the REPEATER programming version.

## Serial Setting



- **COM Port**

After the program is executed, the system will automatically load the available COM Port into the menu and set COM1 as the primary COM Port.

- **Link**

Press "Link" to wait for the connection between REPEATER and PC.

- **Reset**

Note that all the changes will only be effected after the REPEATER is being reset. To rest REPEATER, press "Reset" after it is successfully programmed.

## Frequency

- **Ranger Of Frequency**

Select your desired frequency range.



## Channel Setting

Channel
Config

**Channel 0**

RX  00Hz    TX  00Hz    Source     Hi-Lo Power

**Blocking Address**

Addr #1 <input type="text" value="0000008"/>	Addr #4 <input type="text" value="0000008"/>	Addr #7 <input type="text" value="0000008"/>	Addr #10 <input type="text" value="0000008"/>
Addr #2 <input type="text" value="0000008"/>	Addr #5 <input type="text" value="0000008"/>	Addr #8 <input type="text" value="0000008"/>	Addr #11 <input type="text" value="0000008"/>
Addr #3 <input type="text" value="0000008"/>	Addr #6 <input type="text" value="0000008"/>	Addr #9 <input type="text" value="0000008"/>	Addr #12 <input type="text" value="0000008"/>

**Upper Limit Address**

Addr #1

**Lower Limit Address**

Addr #1

**Command Address**

Addr #1

**Delay**

Delay #1  \*250m sec.    Layer

**S\_RSSI**

S\_RSSI

**Setting**

Invert Polarity(TX/RX)    Baud Rate (TX/RX)

➤ **Channel 0**

**Channel 0**

RX  00Hz    TX  00Hz    Source     Hi-Lo Power

- **RX**  
Enter the receiver frequency.
- **TX**  
Enter the transmit carrier frequency.
- **Source**  
Select one of the source. The option has WB\_MOD (deviation 4 K) and NB\_MOD (deviation 2K).
- **Hi-Lo Power**  
Select High Power (5W) or Low Power (1W)

➤ **Blocking Address**

Blocking Address			
Addr #1	<input type="text" value="0000008"/>	Addr #4	<input type="text" value="0000008"/>
Addr #2	<input type="text" value="0000008"/>	Addr #5	<input type="text" value="0000008"/>
Addr #3	<input type="text" value="0000008"/>	Addr #6	<input type="text" value="0000008"/>
Addr #7	<input type="text" value="0000008"/>	Addr #8	<input type="text" value="0000008"/>
Addr #10	<input type="text" value="0000008"/>	Addr #11	<input type="text" value="0000008"/>
Addr #9	<input type="text" value="0000008"/>	Addr #12	<input type="text" value="0000008"/>

● **Addr #1**

You can block the repeating of signals for up to 12 capcodes.

➤ **Upper / Lower Limit Address**

Upper Limit Address	Lower Limit Address
Addr #1 <input type="text" value="2097144"/>	Addr #1 <input type="text" value="0000008"/>

The signals will only repeat for the capcodes within this range.

➤ **Command Address**

Command Address
Addr #1 <input type="text" value="0000008"/>

To set the layer for Multi-layer repeating.

➤ **Delay**

Delay	
Delay #1 <input type="text" value="0"/> *250m sec.	Layer <input type="text" value="0"/>

● **Delay #1**

To set the time delay for repeating after receiving a signal. The unit is based on 250ms. For example, if you would like to delay the repeating for 1 second, then enter "4".



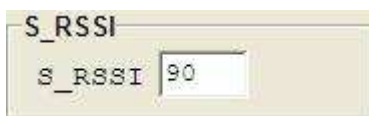
- **Layer**

To set the capcode for Multi-layer repeating. Enter “0” for single layer and “1~7” for multi-layer repeating.

For multi-layer repeating, “1” means the first layer is the master repeater. Only the master repeater can receive signals from the transmitter. Then it will repeat the signals to the next layer “2” and so on.

Note: after rebooting your repeater, the TX LED will flash according to the number of the layers of the repeater.

- **S\_RSSI**

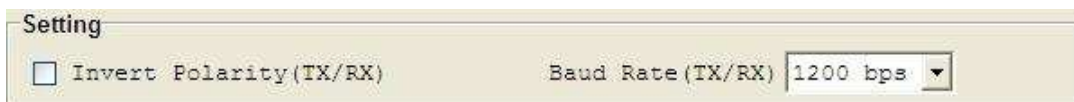


A screenshot of a software window titled "S\_RSSI". Inside the window, there is a label "S\_RSSI" followed by a text input field containing the number "90".

- **S\_RSSI**

It will trigger repeating when the RSSI is below this value. Please refer to page 6 for instructions on how to set the S\_RSSI value.

- **Setting**



A screenshot of a software window titled "Setting". It contains two settings: a checkbox labeled "Invert Polarity(TX/RX)" which is currently unchecked, and a dropdown menu labeled "Baud Rate(TX/RX)" which is currently set to "1200 bps".

- **Invert Polarity (TX/RX)**

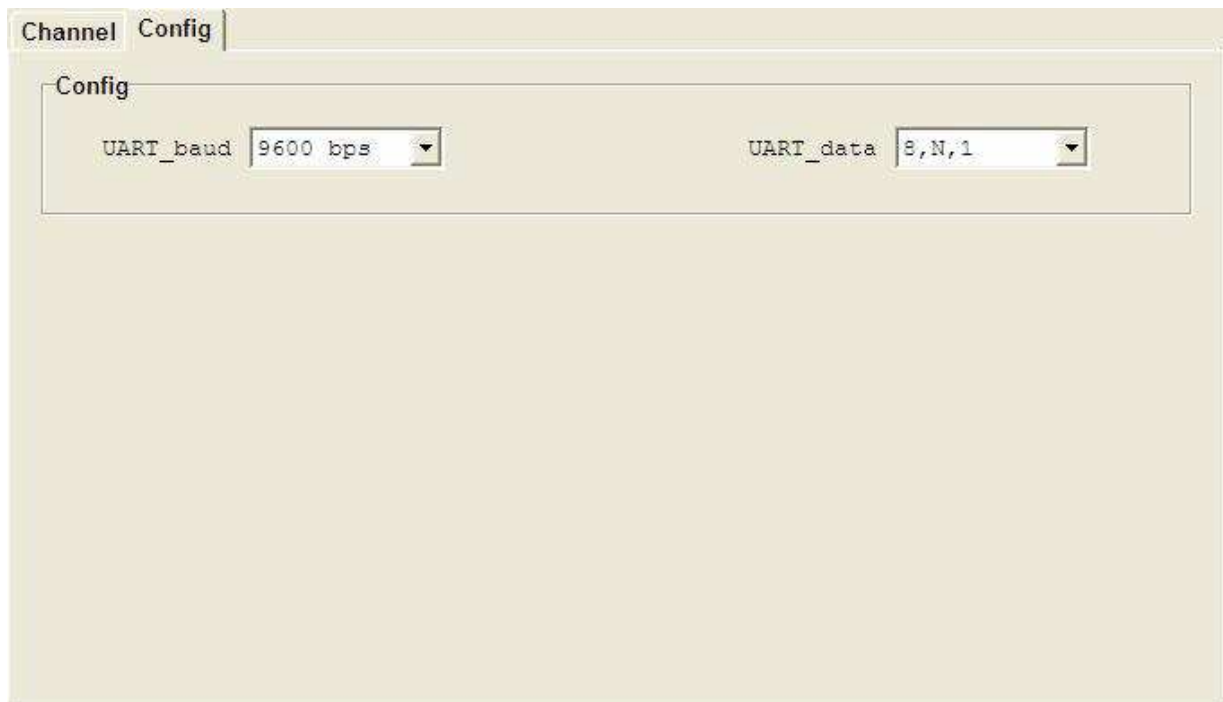
Choose to Invert Polarity.

- **Baud Rate (TX/RX)**

POCSAG Signal Baud Rate.

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## Configuration



The screenshot shows a software window titled 'Channel Config'. The 'Config' tab is selected. Within this tab, there are two dropdown menus. The first is labeled 'UART\_baud' and is set to '9600 bps'. The second is labeled 'UART\_data' and is set to '8,N,1'.

➤ **Config**

- **UART\_baud**  
The baud rate is on which the Transmitter operates.
- **UART\_data**  
The data format is on which the Transmitter operates.