OTAP Software

User Manual

Document Version: V1.1

Release Date: 05-2014

Copyright Information

Disclaimer

As a leading supplier of professional wireless communications equipment and solutions, Hytera provides a series of software for the worldwide customers to help customers to further understand our DMR products. This software is:

-Free of charge

-Small and simple

-Easy to configure and use

-For basic use only

-Available online for download

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tools to help your business. Hytera retains the rights to change the products based on the feedbacks received.

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Contents

Documentation Information

This section describes the conventions and revision history of this document.

Documentation Conventions

Instructional Icons

Icon	Description
Tip	Indicates information that can help you make better use of your product.
Note	Indicates references that can further describe the related topics.
Caution	Indicates situations that could cause data loss or equipment damage.
Warning	Indicates situations that could cause minor personal injury.
Danger	Indicates situations that could cause major personal injury or even death.

Notational Conventions

Convention	Description
“ ”	The quotation marks enclose the name of a software interface element. For example, click “OK”.
Bold	The text in boldface denotes the name of a hardware button. For example, press the **PTT** key.
->	The symbol directs you to access a multi-level menu. For example, to select “New” from the “File” menu, we will describe it as follows: File -> New.

Revision History

Version	Release Date	Description
V1.0	03-2014	Initial release
V1.1	05-2014	The first time revise

1. Brief Introduction

OTAP (Over the Air Programming) is an application based on Hytera DMR API. It supports programming terminals through dispatch station like repeater, mobile and portable over the air. Save your time, manpower, and physical resources to program various terminals, especially when the terminals are far away from you, hard to be obtained at hand, or need to be programmed frequently. With this application, you can shift talk groups, change contact lists, and modify other parameters of target terminals conveniently and efficiently.

OTAP supports to change some common parameters such as: Radio ID, Alias, Rx/Tx Frequency, Color Code, Slot, GPS on/off and the call contact list. It allows the customer to change those parameters at present time, or on the timing you need. Timing triggered OTAP command is a feature embedded into this application to enhance the usability.

Only one free solution is allowed to connect with a dispatch station at the same time.

Note: For the OTAP to work correctly, it is recommended to turn off the computer firewall.

1.1 Typical Application Scenarios

As illustrated in figure below, when dispatch station is connected to OTAP by USB or IP, OTAP can sent command to dispatch station. Then dispatch station transmitted the command to terminals over the air. The terminals decoded the command and modified related parameters.

1.1.1 Scenario One

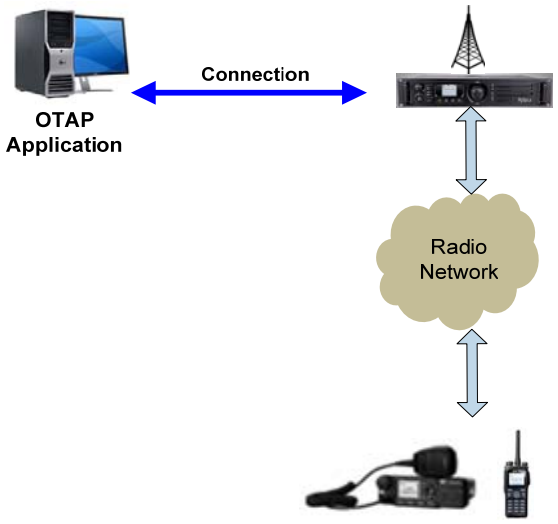


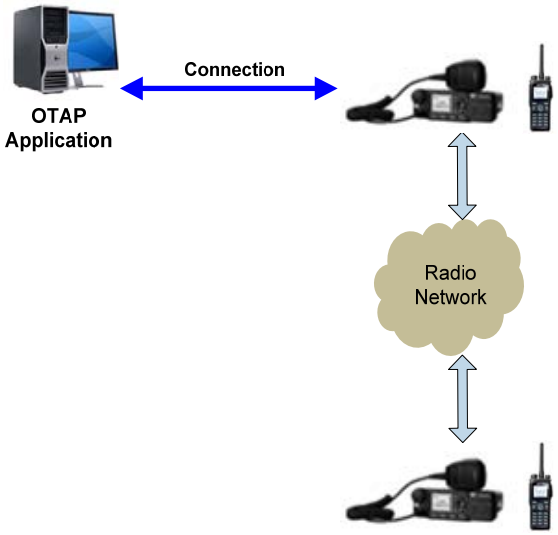
Figure above illustrates one of the use cases for OTAP.

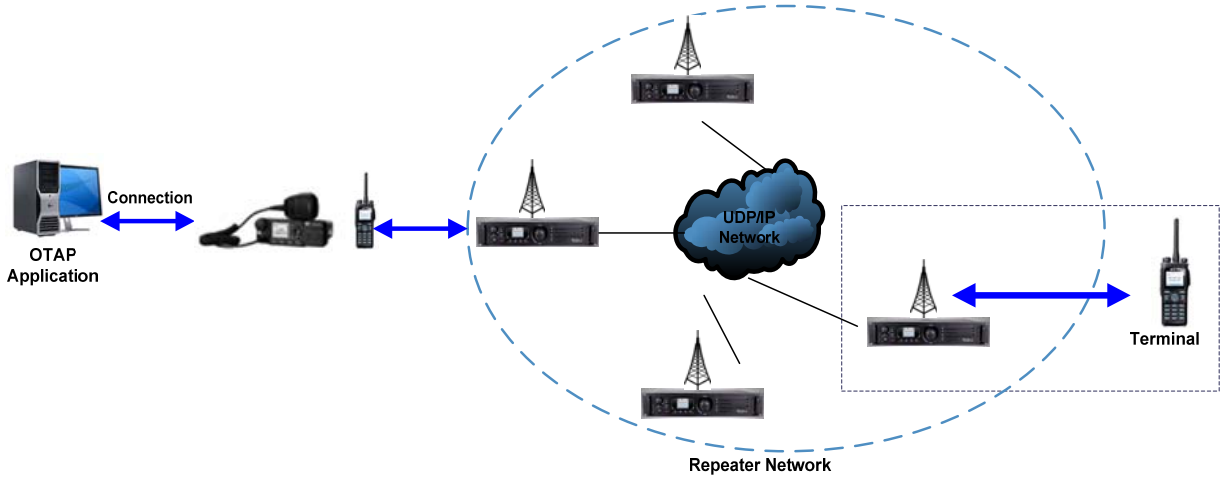
OTAP uses repeater as a dispatch station via IP network. You can use OTAP to program target terminal

(portable or mobile) by taking repeater as dispatch station. When connected OTAP with repeater, you can modify the parameters of target terminals by radio network between repeater and target terminals.

Note: OTAP does not support the repeater to modify parameters itself.

1.1.2 Scenario Two





Figures above illustrate another use case for OTAP.

OTAP uses portable or mobile as a dispatch station via USB. You can use OTAP to program target terminal (portable or mobile) by taking a portable or mobile as dispatch station. You can modify the parameters of target terminals by radio network or UDP/IP network between dispatch station and target terminals. In this kind of scenario, you can also modify parameters of the dispatch station by OTAP.

2. Before Use

2.1 Prerequisite

Please prepare the resources in the following list for actual requirements before receiving the RSSI and GPS data.

Item	Description
PC	Operating System: Windows XP/ Windows 7 This guide takes Windows 7 as the example. As for the USB driver, please refer to the Hytera USB Driver Installation User Guide of V5.30.42.0.
CPS	The OTAP software is included in the program of CPS R5.5 or above. Please make sure the CPS is installed properly before using this software. In this guide, we take CPS V5.05.xx.xxx as the example.
Mobile	The software is applicable to the mobile of R5.5 or above. This guide takes MD78X as the example.
Programming Cable for Mobile	The programming cable is used to configure the Terminal radio. The detail information, please refer to the mobile's user manual. The Third Party can get the manual from Hytera local sales.

3. Software Installation

3.1 .Net Framework 4.0 Installation

Step 1. Find dotNetfx40.exe “third party tools” file in the archive directory. Double-click Net Framework 4.0 installation package. 

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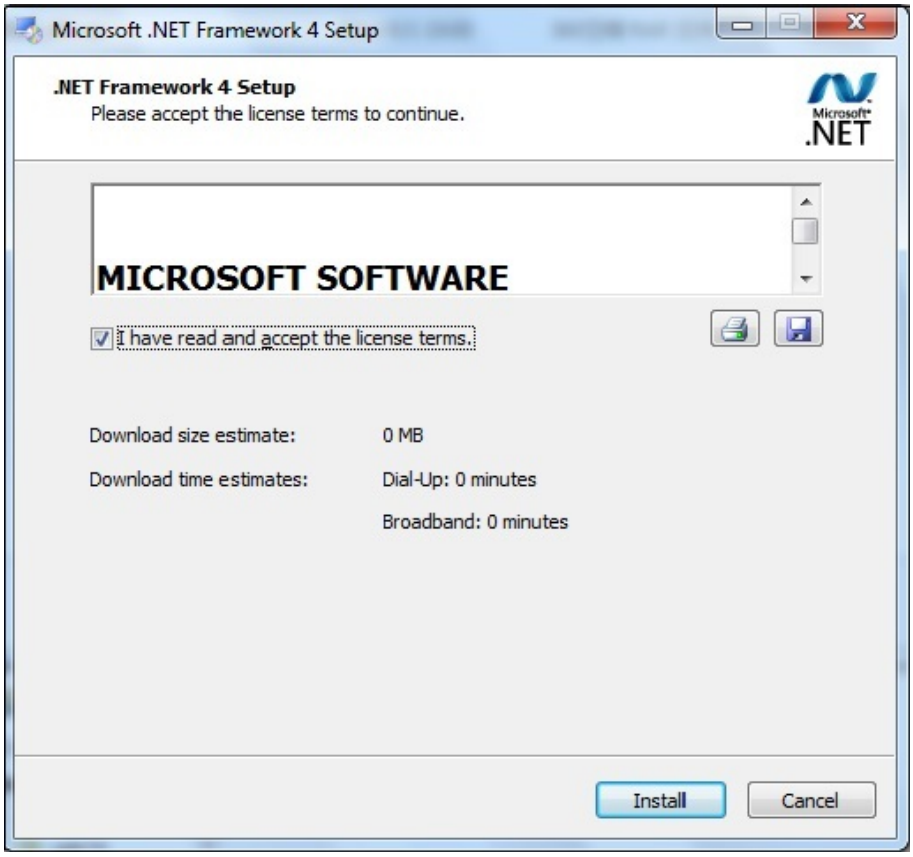
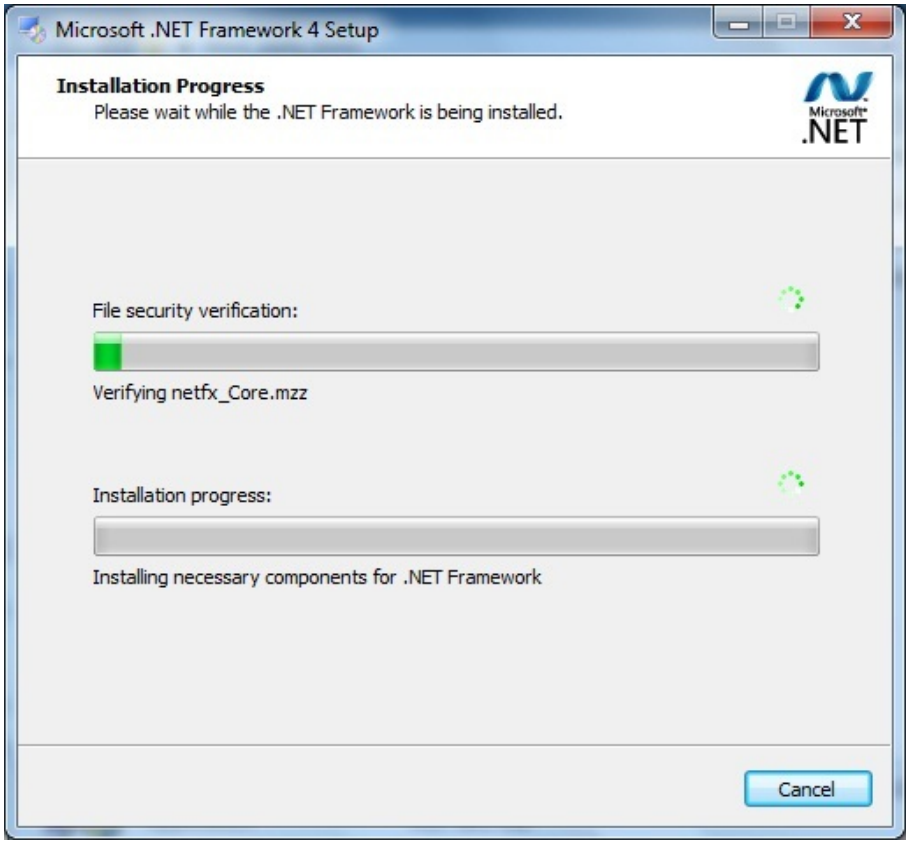
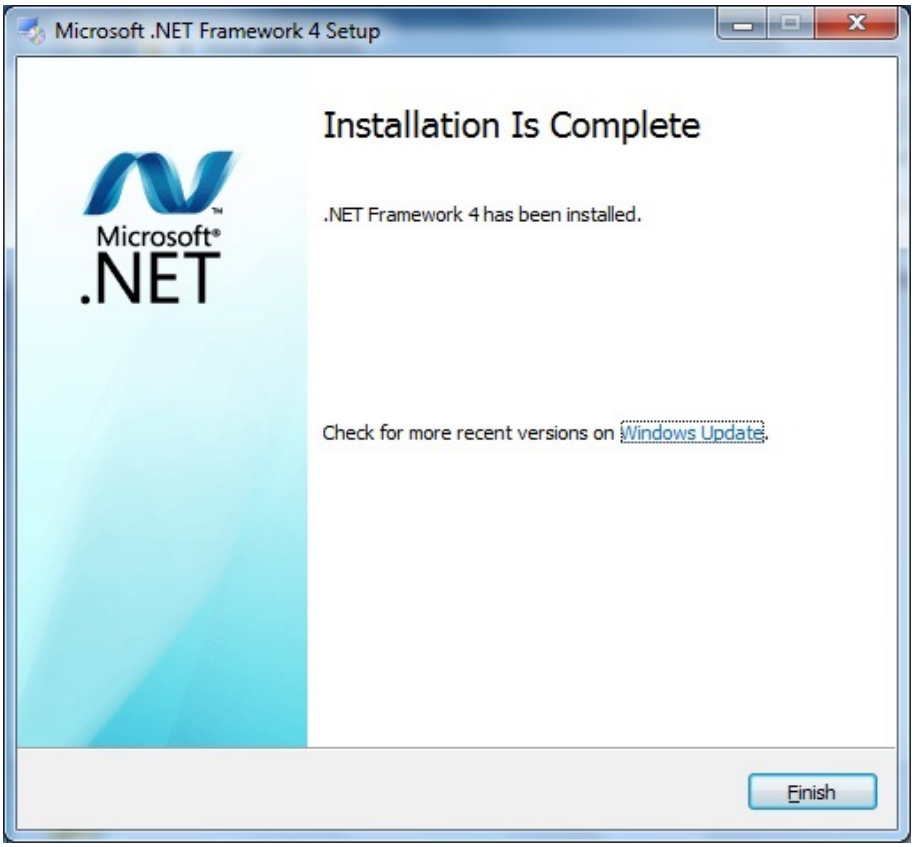
Step 2. Click "Install" to install Net Framework 4.0.





Step 3. Click "Finish" to complete the Net Framework 4.0 installation.



3.2 vcredist_2010_x86 Installation

Step 1. Find the vcredist_2010_x86 file in “third_party_tools” directory and unzip it.

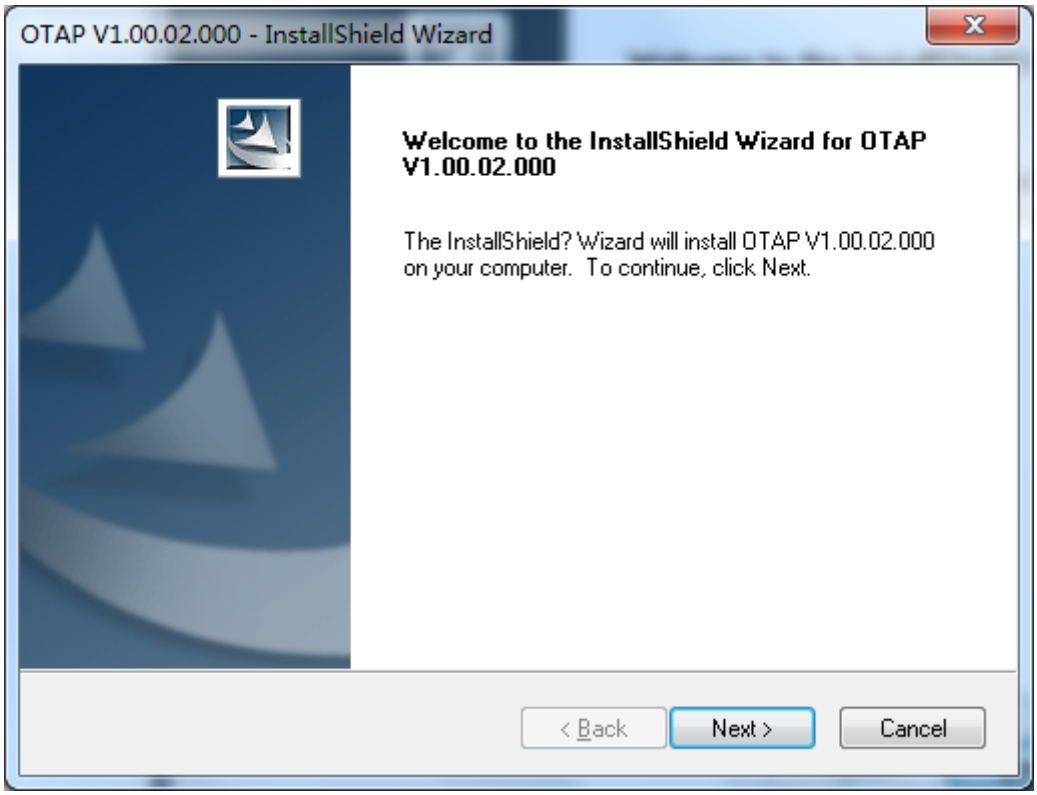
Step 2. Double-click “vcredist_2010_x86.exe”. Install it by default.

Note：In Win XP, you need to install vcredist_2008_x86.exe and vcredist_2010_x86.exe. In Win 7, you just need to install vcredist_2010_x86.exe.

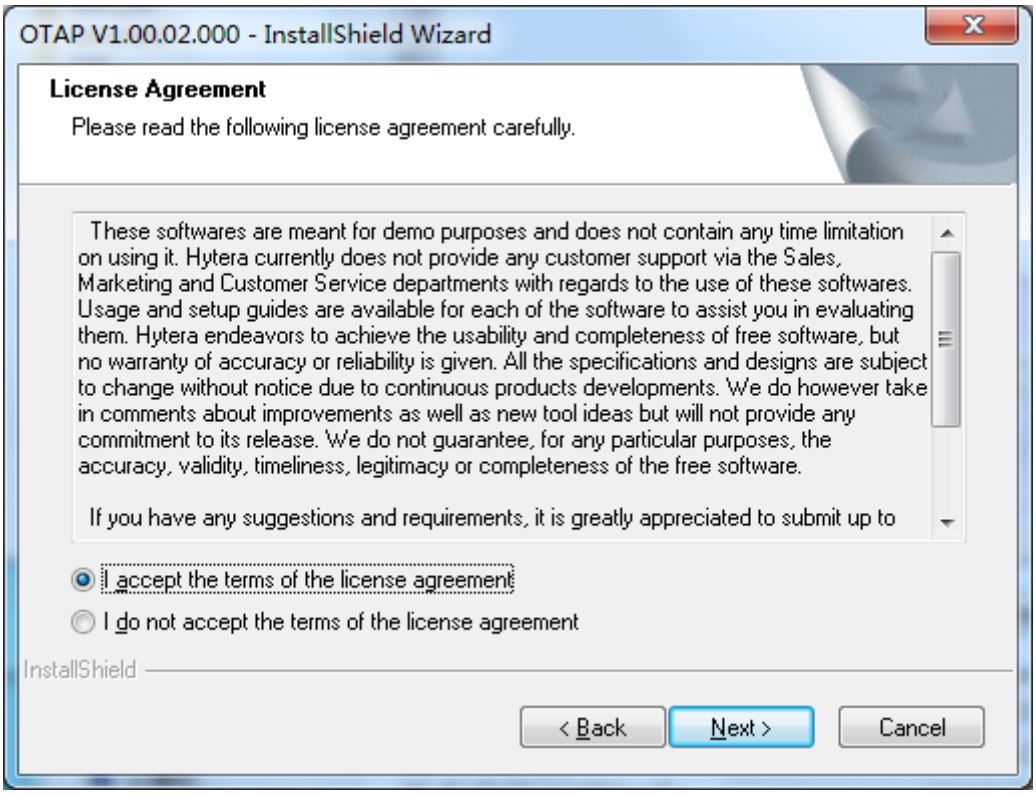
3.3 OTAP Installation

Step 1. Find Setup.exe in the compressed package, double-click Setup.exe.

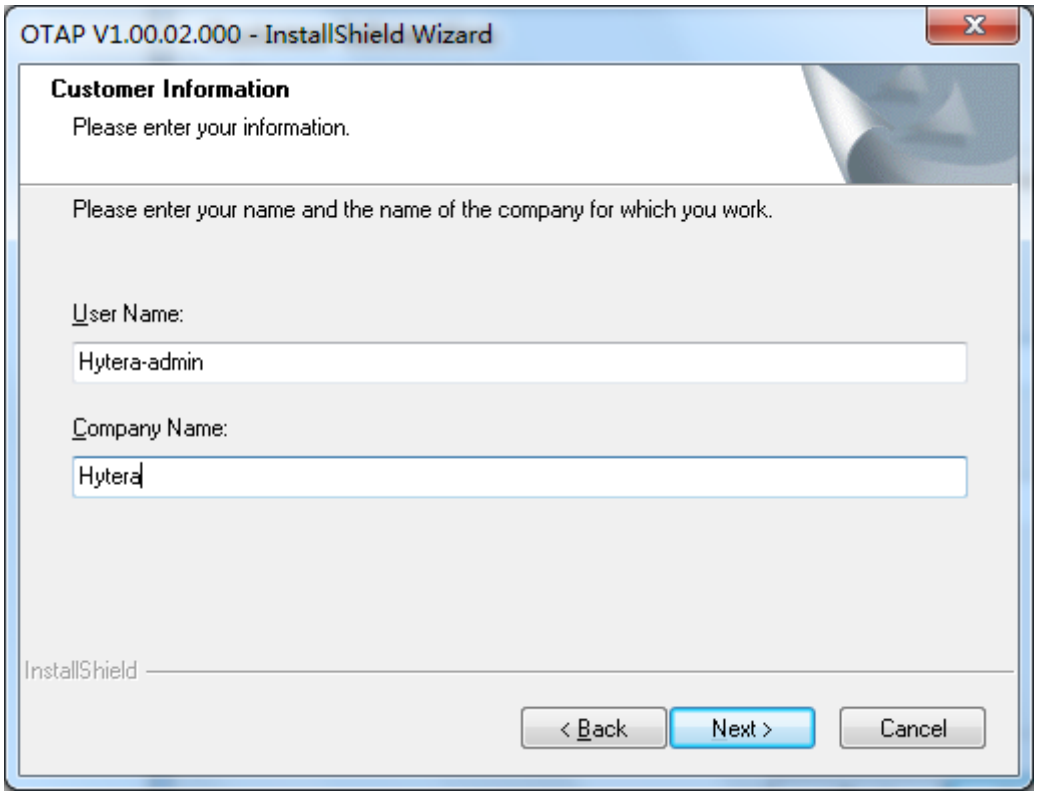
Step 2. Click "Next".



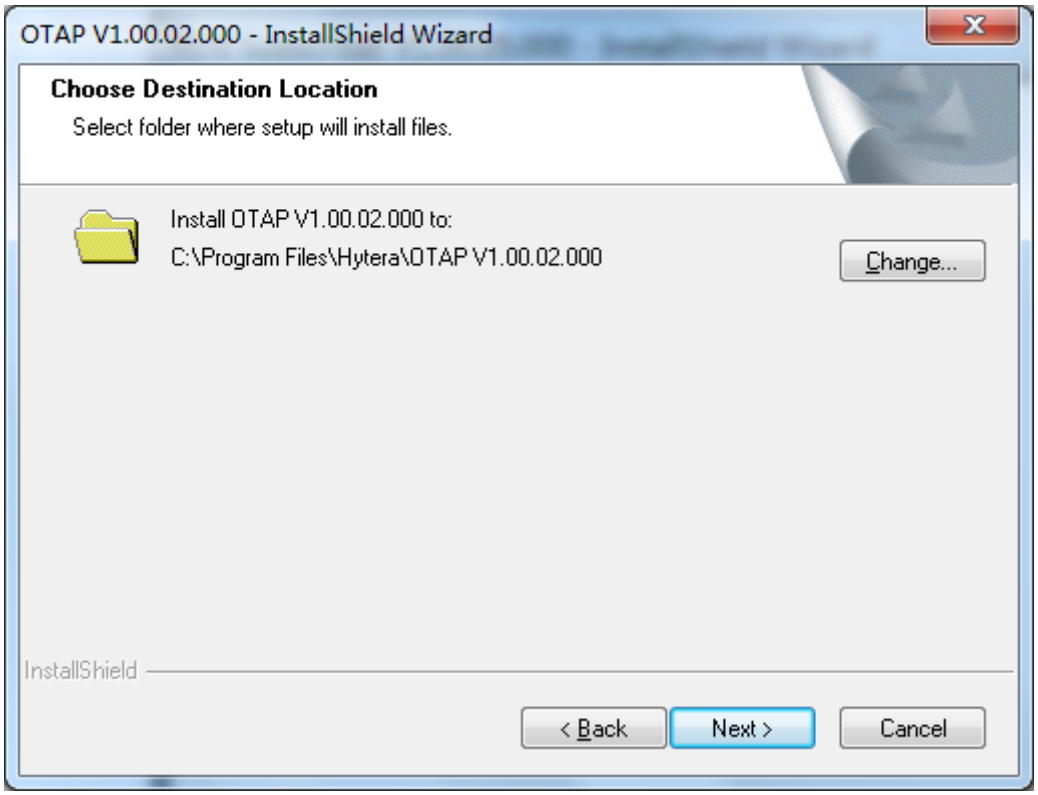
Step 3. Choose consent statement, click "Next".



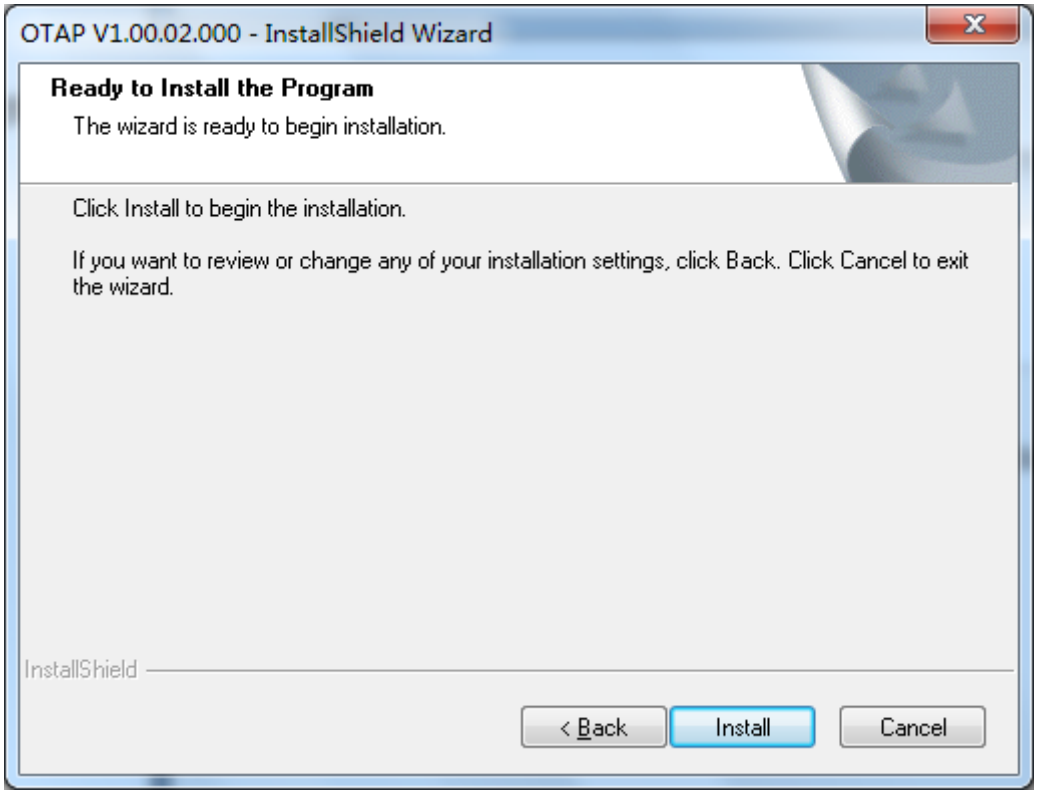
Step 4. Enter the User Name and Company Name, click "Next".



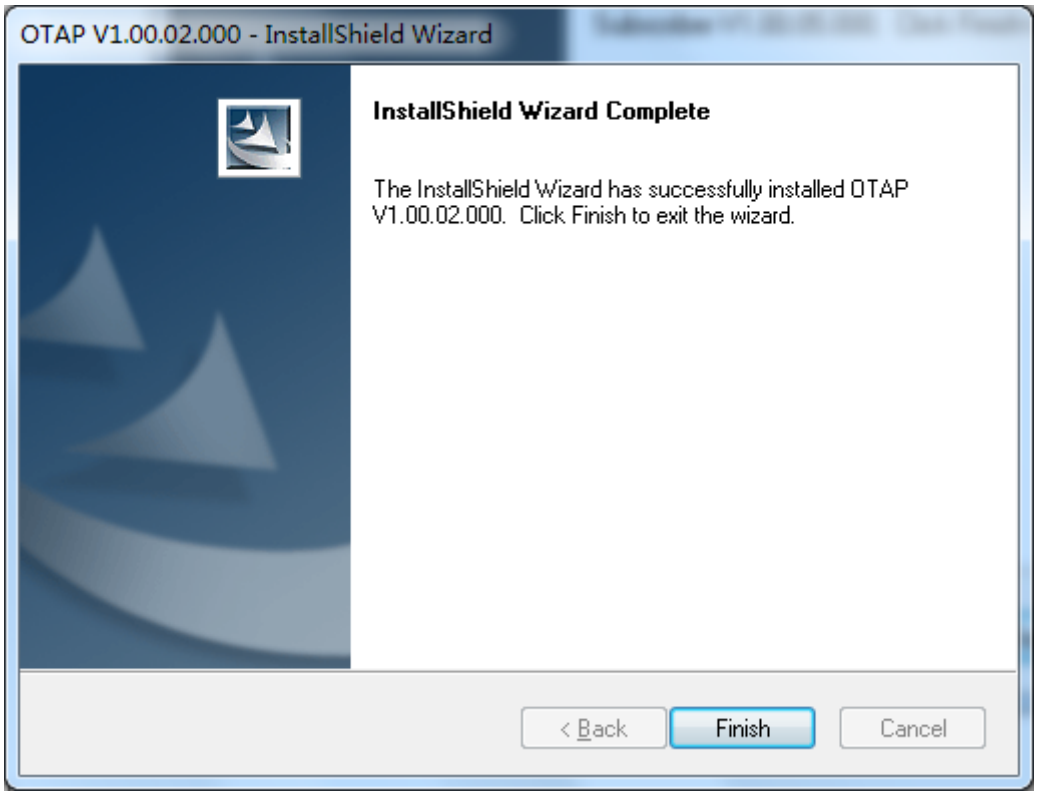
Step 5. Select the installation path, click "Next".



Step 6. Click "Install".



Step 7. Click "Finish" to complete the installation.

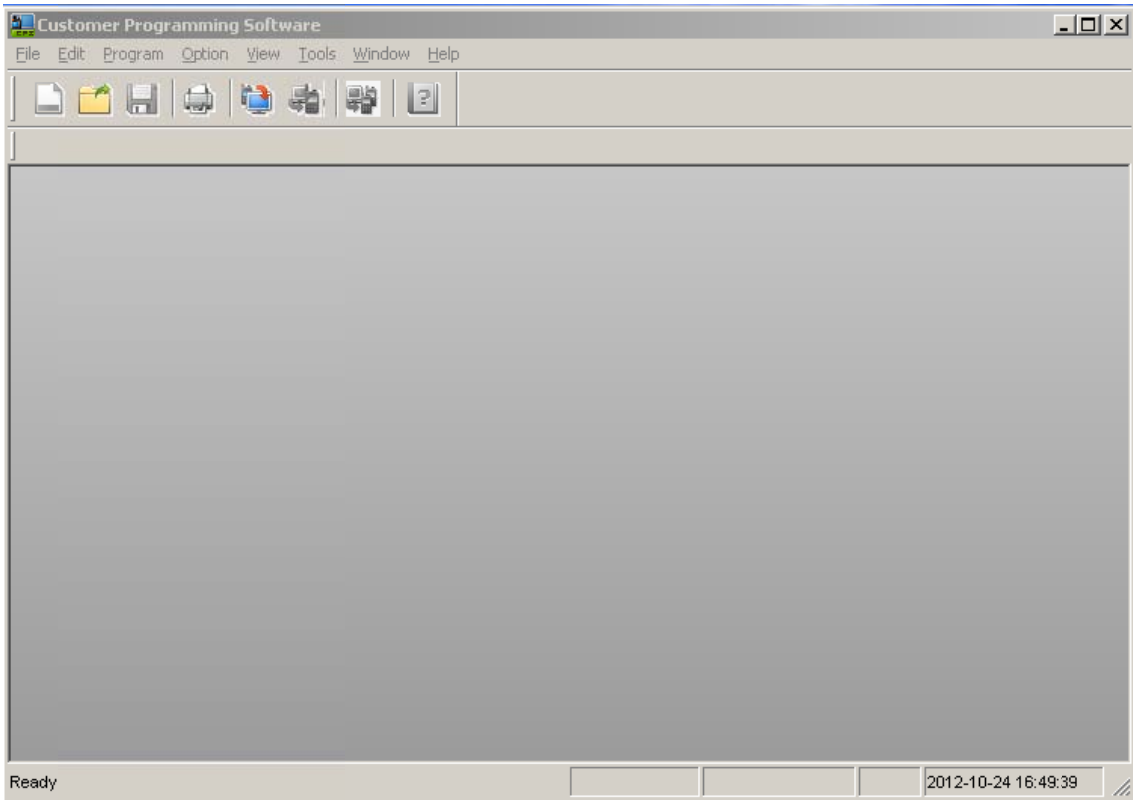


4. OTAP Configuration

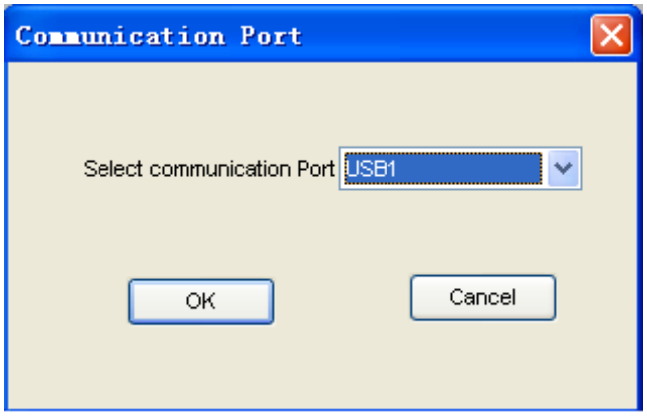
4.1 Dispatch Station Configuration

4.1.1 Dispatch Station - Mobile Configuration

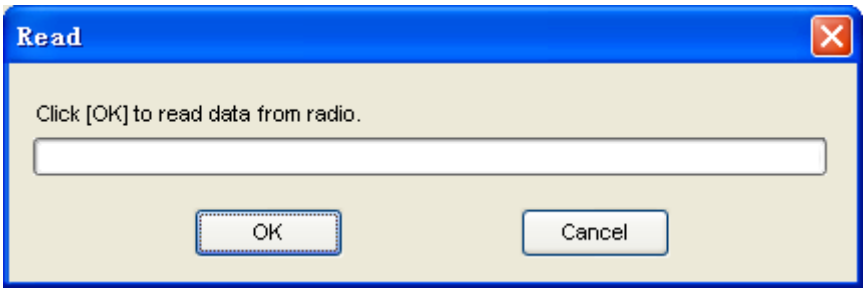
Step 1. Run the CPS and enter its main interface.



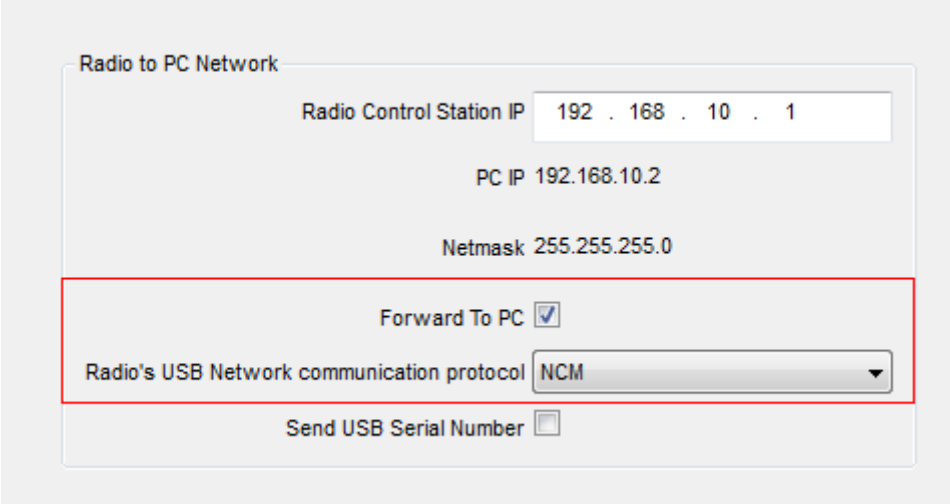
Step 2. Select “Program -> Read From Radio” or click  , you will see the pop-up “Communication Port” dialogue box.



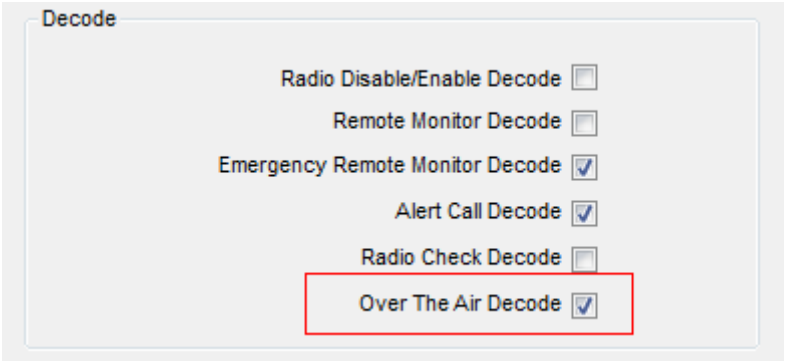
Step 3. Select the corresponding USB port (e.g.: USB1) for the PD78X, and click “OK” to enter the “Read” dialogue box.



Step 4. Select "Conventional -> General Setting -> Network", in the "Network" area check the box "Forward to PC", "Radio's USB Network communication protocol" select "NCM".



Step 5. Select “Conventional ->DMR Services ->Basic”, in the “Decode” area check the box “Over The Air Decode”

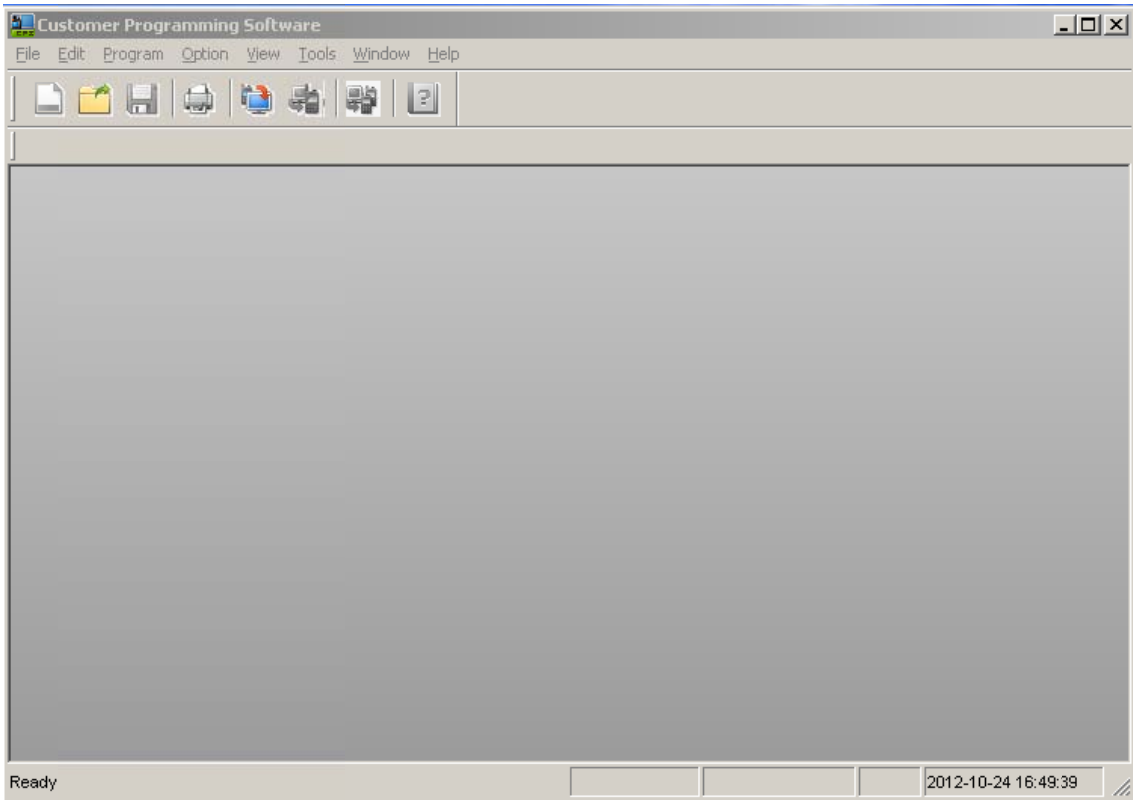


Step 6. Select “Program -> Write To Radio” or click  , and the “Communication Port” box will pop up.

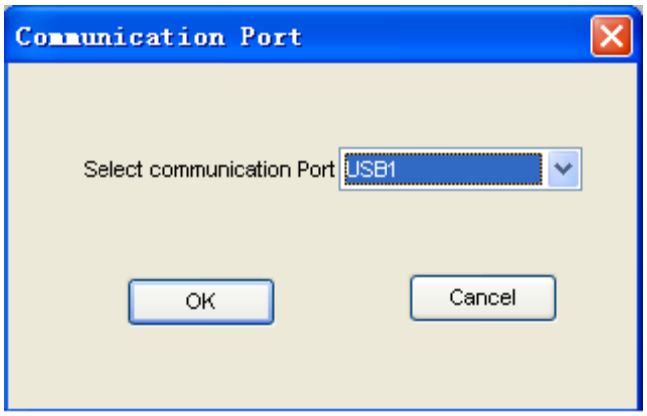
Step 7. Click “OK” to write the configure information into the PD78X. When the information is written, the PD78X will restart automatically to make the setting effective.

4.1.2 Dispatch Station - Repeater Configuration

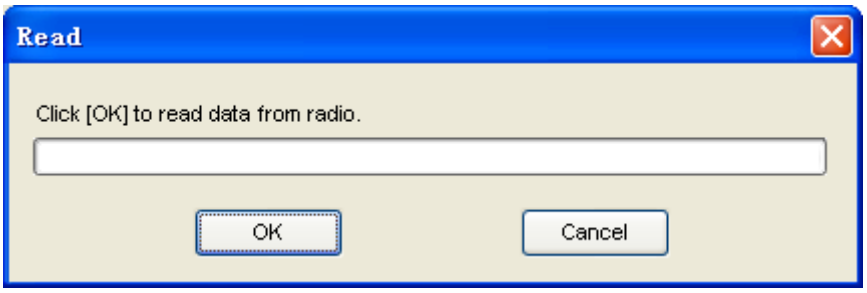
Step 1. Run the CPS and enter its main interface.



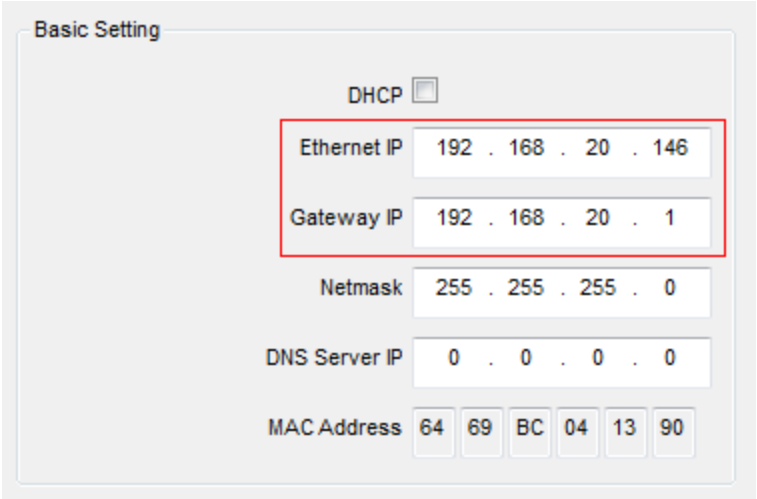
Step 2. Select “Program -> Read From Radio” or click  , you will see the pop-up “Communication Port” dialogue box.



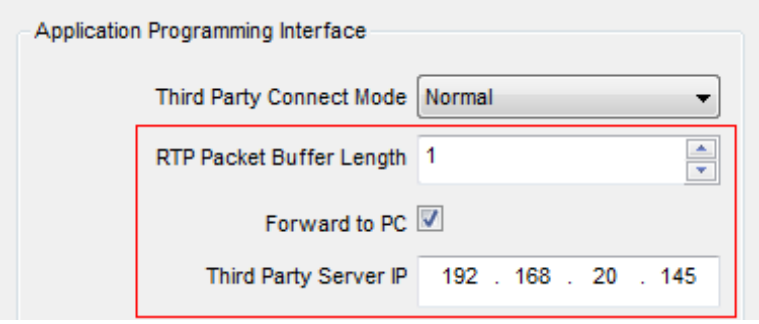
Step 3. Select the corresponding USB port (e.g.: USB1) for the RD98X, and click “OK” to enter the “Read” dialogue box.



Step 4. Select "Conventional -> General Setting -> Network", Ethernet IP is the IP address of repeater. Gateway IP should be correct. Following figure shows normal IP settings.



Step 5. Select "Conventional -> General Setting -> Network". In the "Network" area, check the box "Forward to PC". The default value of “RTP Packet Buffer Length” is 1. If it is in Ethernet, you can set to 3 or above. “Third Party Server IP” is the IP address of PC.

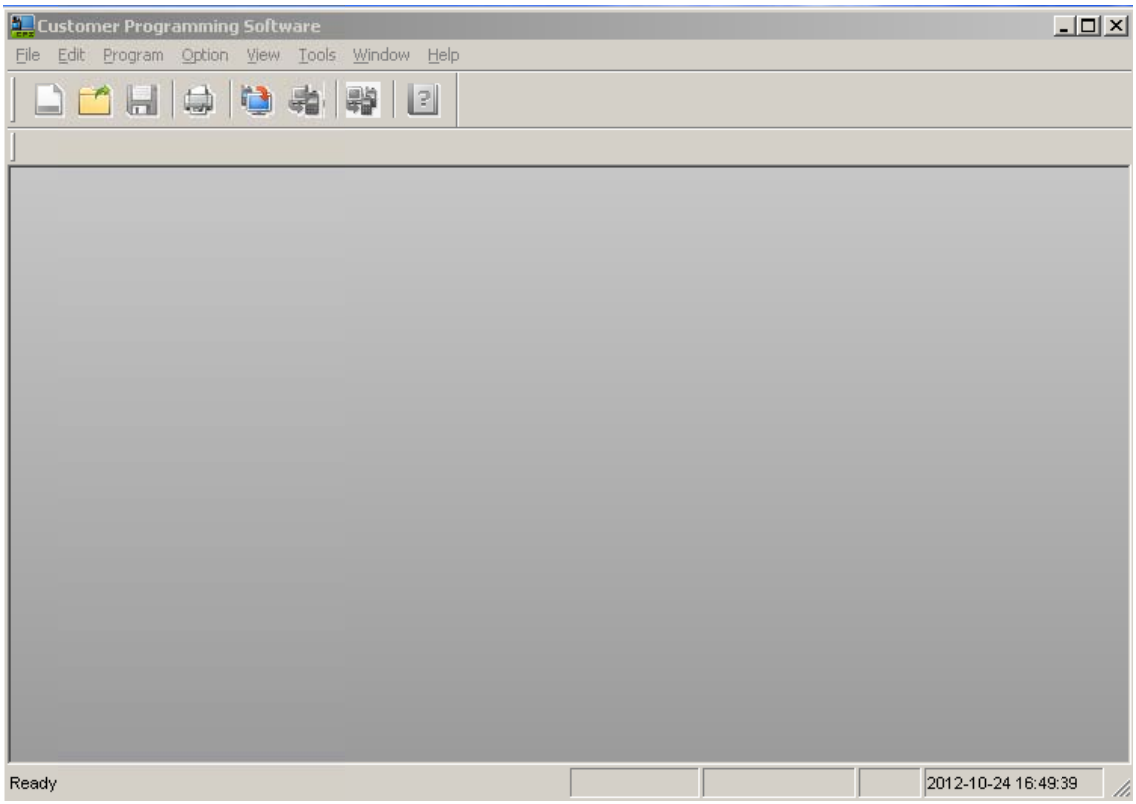


Step 6. Select “Program -> Write To Radio” or click  , and the “Communication Port” box will pop up.

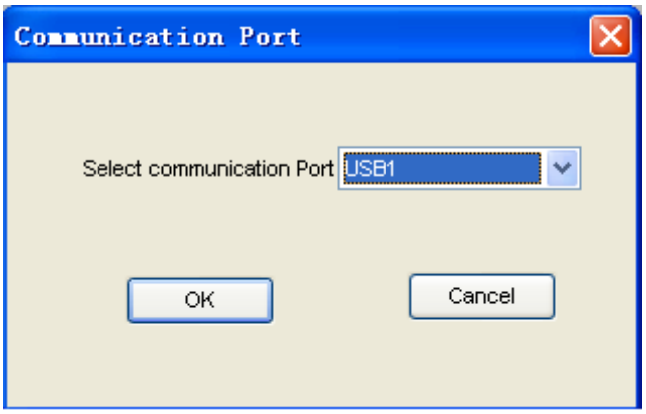
Step 7. Click “OK” to write the configure information into the RD98X. When the information is written, the RD98X will restart automatically to make the setting effective.

4.2 Terminal Configuration

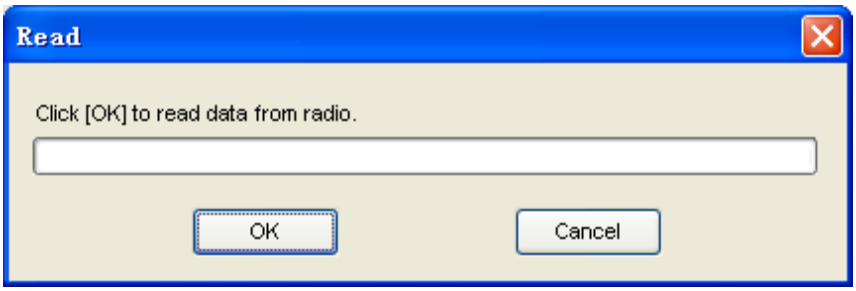
Step 1. Run the CPS and enter its main interface.



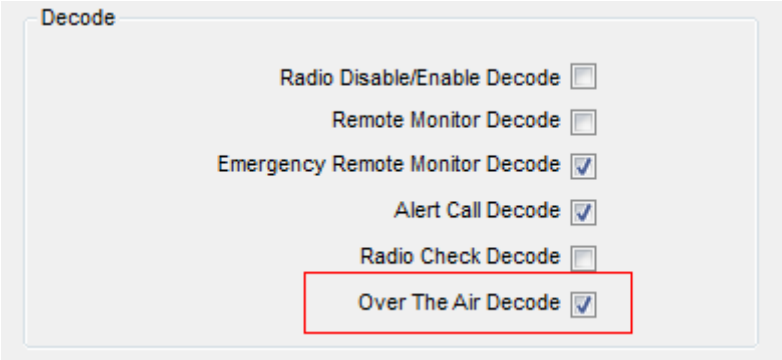
Step 2. Select “Program -> Read From Radio” or click  , you will see the pop-up “Communication Port” dialogue box.



Step 3. Select the corresponding USB port (e.g.: USB1) for the PD78X, and click “OK” to enter the “Read” dialogue box.



Step 4. Select “Conventional ->DMR Services ->Basic”, in the “Decode” area check the box “Over The Air Decode”



Step 5. Select “Program -> Write To Radio” or click  , and the “Communication Port” box will pop up.

Step 6. Click “OK” to write the configure information into the PD78X. When the information is written, the PD78X will restart automatically to make the setting effective.

5. OTAP

5.1 Main Interface of OTAP

Default view layout introduction:

Area 1: Title bar (click  to display information of version).

Area 2: Dispatch Station's ID. If taking repeater as dispatch station, slot is selectable.

Area 3: Information of parameters.

Area 4: Target radio's ID. If "Schedule" is unchecked, it will send command in real-time.

Area 5: Add/Delete contact.

Area 6: Add/Delete group to RX Group List.

Area 7: Result list of parameters programming and status bar.

5.2 Configuration Guide

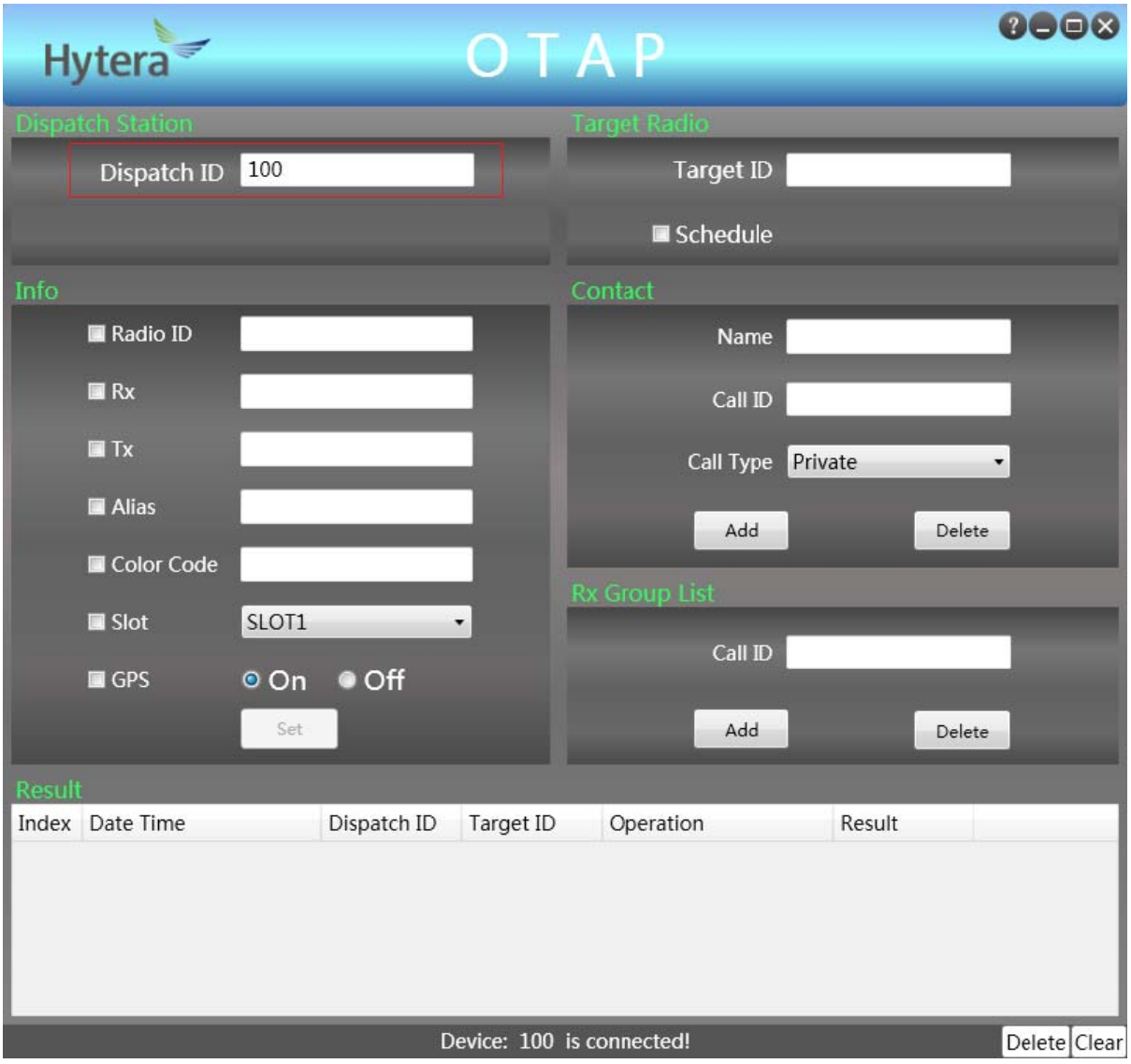
Below are the step by step guides to configure the OTAP to be used with the radio

Note: The following operation is an example taking mobile as the dispatch station.

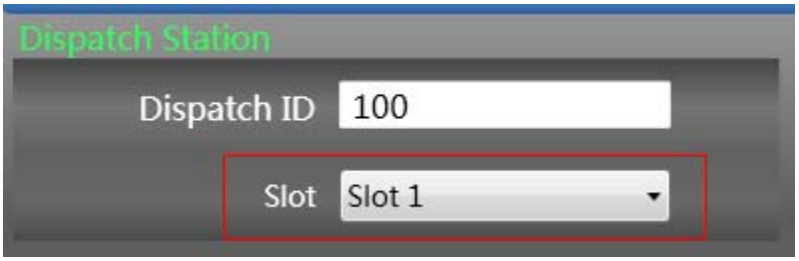
Step 1. Please connect the Dispatch Station – Mobile to PC via USB. (If taking repeater as the dispatch station, please connect it via IP network).

Step 2. Run the OTAP and enter its main interface.

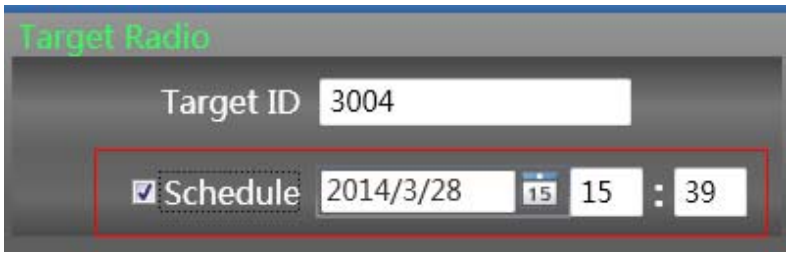
Step 3. The application will automatically connect the Dispatch Station. When it is online, it will prompt "Device: XX is connected". ”XX” indicates the Dispatch Station ID.



If taking repeater as dispatch station, you can choose slot to modify terminal parameters.



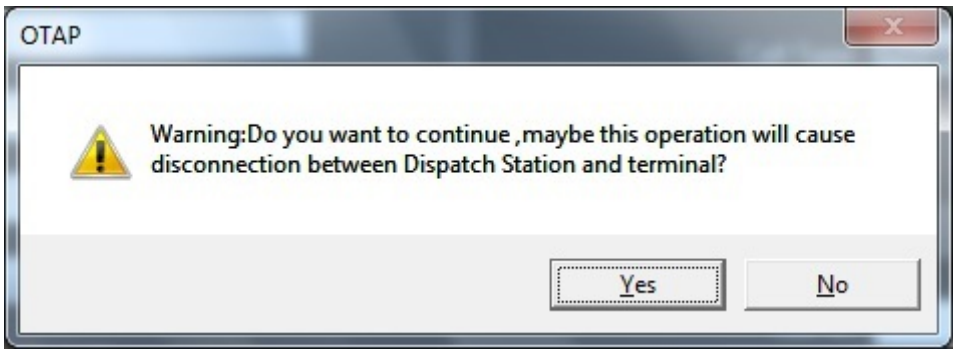
Step 4. In the "Target Radio" area, enter Target ID. If you uncheck the "Schedule", the command will be sent in real time. If you check the "Schedule", enter the time you want, the command will be regularly sent depending on the configuration.



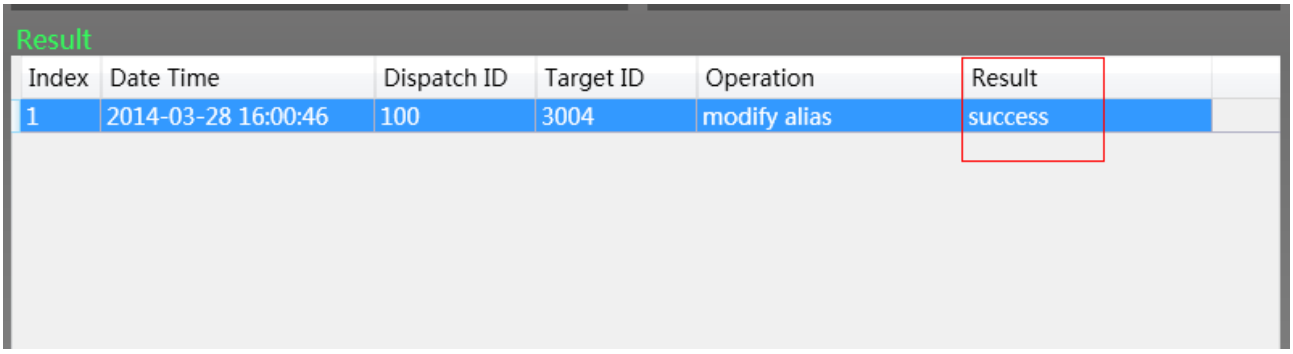
Tips: 1. Uncheck "Schedule", and then click the action button, the modified parameters will be sent in real time to the destination terminal. It is necessary to wait until the ACK reply before they can proceed.

2. Check the "Schedule", and then click the action button, it will send the parameters which need to be modified to target terminals according to the time set by user.

Step 5. In the "Info" section, you can modify the parameters Radio ID, RX, TX, Alias, Color Code, Slot, and GPS. Check parameters which need to be modified, and then click "Set", a "Warning" message box will pop up.



Click "OK" will continue to modify the parameters, click "No" to cancel this operation. Modification result will be shown in "Result" area.



Tip: If modify more than one parameters, you can see corresponding results in “Result” area.

Step 6. In the "Contact" area, enter the Name and Call ID, select "Call Type", "Add" or "Delete" contacts. The results will be showed in the "Result" area.

Step 7. In the "Rx Group List" area, enter Call ID, "Add" or "Delete" Group. The results will be showed in the "Result" area.

Step 8. In the bottom, click "Delete" to delete the selected result. Click "Clear" to clear all results in this area.

Step 9. "Result" area will automatically be saved in the Data folder under the installation directory.

Tip ： If you want to see more historical data, open the file (csv format) in folder “Data” under installation directory.

6. FAQ

6.1 Opening the OTAP software failed

Phenomenon

Select “Start -> All Programs -> Hytera RCPs -> OTAP r -> OTAP”, but OTAP cannot be opened.

Analysis

. Net Framework 4.0, vcredist_2008_x86 or vcredist_2010_x86 not installed correctly.

Solution

Need to be properly installed. Net Framework 4.0, vcredist_2008_x86 or vcredist_2010_x86.

Please refer to 3.1 and 3.2.

6.2 Dispatch Station is connected to the PC, but display offline

Phenomenon

Dispatch Station is connected to the PC, but it display offline still (about 1 minute later).

Analysis

1. USB Driver is not installed correctly.
2. Dispatch Station CPS setting is not correct. Make sure "Network/Forward To PC" is checked.

Solution

1. Need to install USB Driver properly.
2. Check "Network/Forward To PC" in CPS. Please refer to 4.1 for detail.
3. Plug in the USB again or restart mobile.

6.3 OTAP result is unable to be saved

Phenomenon

OTAP result is unable to be saved.

Analysis

Software does not run as administrator in Win 7 or higher OS. Software installation directory has not written permission.

Solution

Software runs as administrator in Win 7 or higher OS. Software installation directory must have written permission.