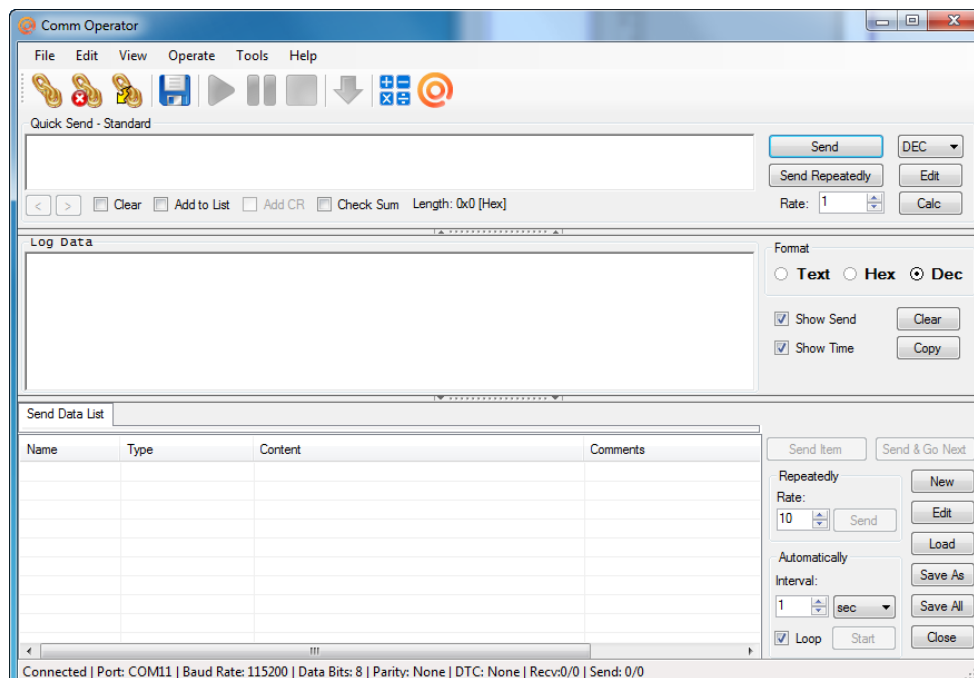


NATIONAL CONTROL DEVICES

COMM Operator Quick Start Guide



Testing and Troubleshooting Device Communications

NATIONAL CONTROL DEVICES

Comm Operator

Testing and Troubleshooting Device Communications

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Notice: Portions of this manual require internet access.

Table of Contents

Introduction	1
Using Comm Operator	2
Helpful Hints.....	6
Technical Support	8
Contact Information.....	9
Notice:	9



Introduction

Comm Operator is a powerful communication tool that can be used in testing NCD boards, in developing applications for NCD boards, and in deploying applications. The main focus of Comm Operator is on communicating with your device. It is a reliable program and can help you discover if you are able to communicate with the device in order to help pinpoint problems.

Features:

- Communicate with Serial Port, TCP/IP and UDP
- Send/receive data in Text, Hex and Decimal format
- Support sending a file
- Support specific panel for NCD relay boards
- Support terminal panel and RST/DTR control
- Support structured data and customized panel
- Send data repeatedly with specified interval automatically
- Send data automatically according to predefined rules
- Send large data in a separate thread
- Support three types of build-in checksum
- Work with multiple send data list
- Create send data list from Text, Hex and Decimal files directly
- Copy and paste data between different list
- Drag and drop to open send data list directly
- Keep log file automatically
- Detect all available COM ports automatically
- Keep all settings for later use

Getting Started:

You will need to download and install the latest version of Comm Operator software.

You may download the Comm Operator program on our website:

http://www.controlanything.com/Relay/Device/COMM_OPERATOR

Or download directly from: <http://www.serialporttool.com>

Using Comm Operator

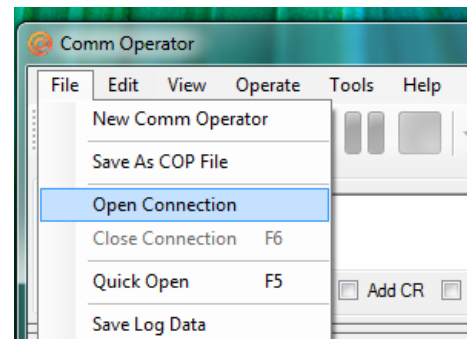
These instructions will explain how to use the Comm Operator software program with NCD devices. You may also find a tutorial on our website at the following location:

http://www.controlanything.com/Relay/Device/COMM_OPERATOR

Comm Operator can communicate with NCD devices through both the Serial Port and TCP Client.

Step 1: Open Connection

- Connect NCD device.
- Start Comm Operator software.
- From the main screen click “File” and then ‘Open Connection



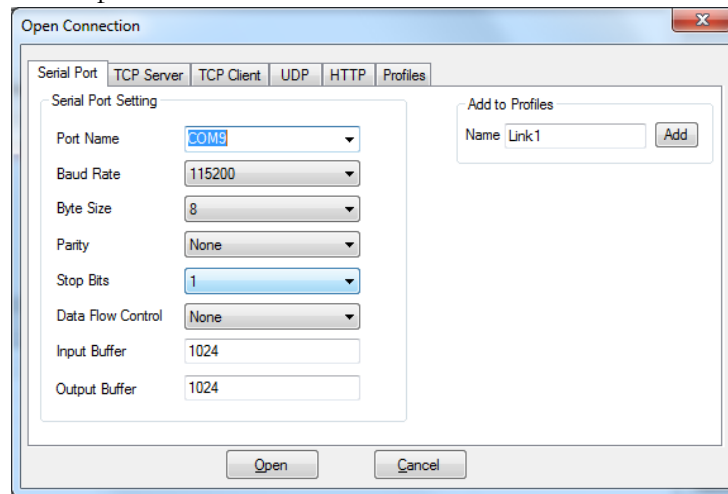
This will open the following ‘Open Connection’ dialog box.

Connect using the appropriate interface (Port or IP Address)

Option 1

Connecting through serial port

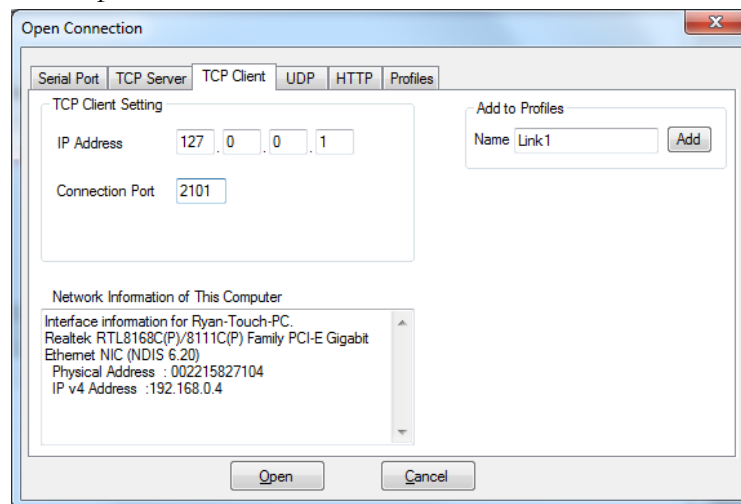
- Click on the 'Serial Port' tab.
- Select the 'Port Name' of the port that your device is connected to.
- Set the Baud Rate. (default baud rate is 115200)
- Click 'Open'



Option 2

Connecting through TCP Client

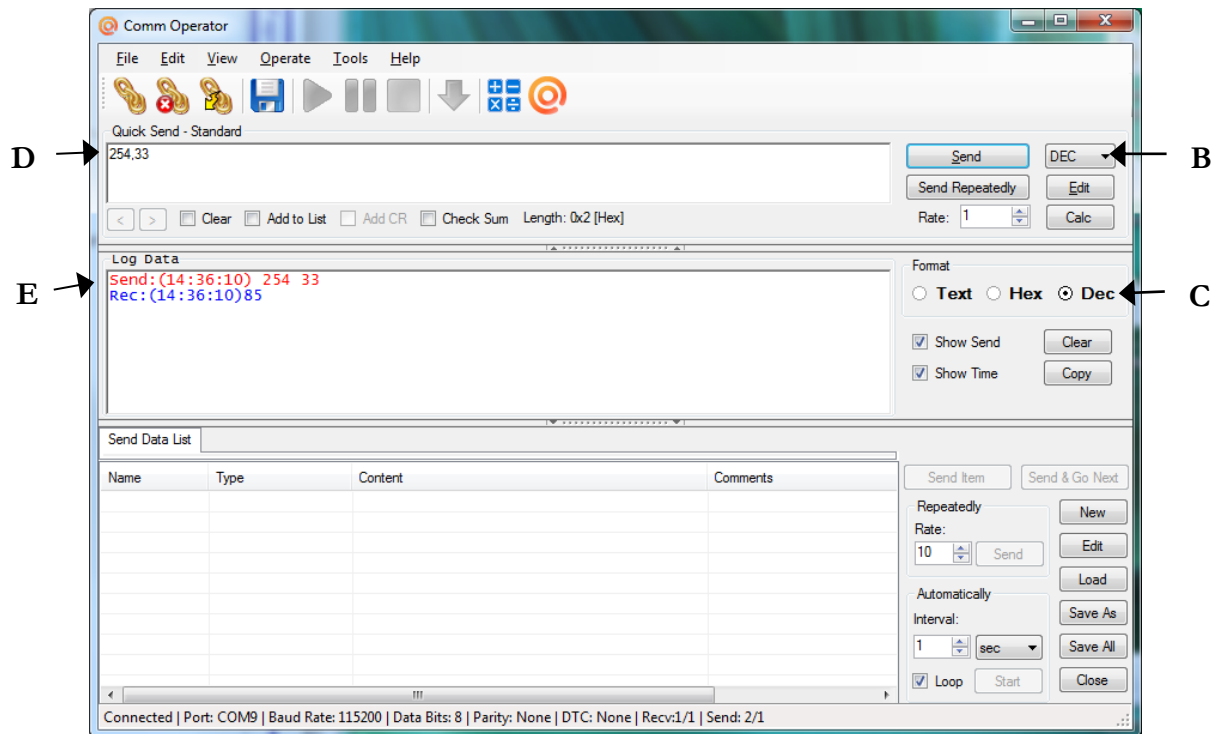
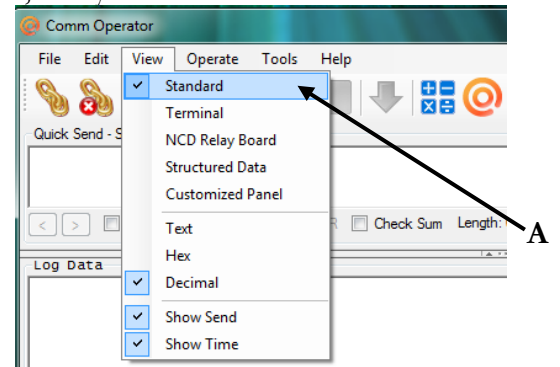
- Click on the 'TCP Client' tab.
- Enter the IP Address of your device.
- Enter the Port number (*default 2101*)
- Click 'Open'



There are two main views that will be used when communicating with NCD devices: Standard and NCD Relay Board. **The following example will be shown in standard view.** In standard view, always use decimal format.

Step 2: Comm Operator Settings

- A. Select 'Standard' from the 'View' menu
- B. Select 'DEC' at the right of 'Quick Send' box
- C. Select 'Dec' at the right of the 'Log Data' box



Step 3: Test Communication

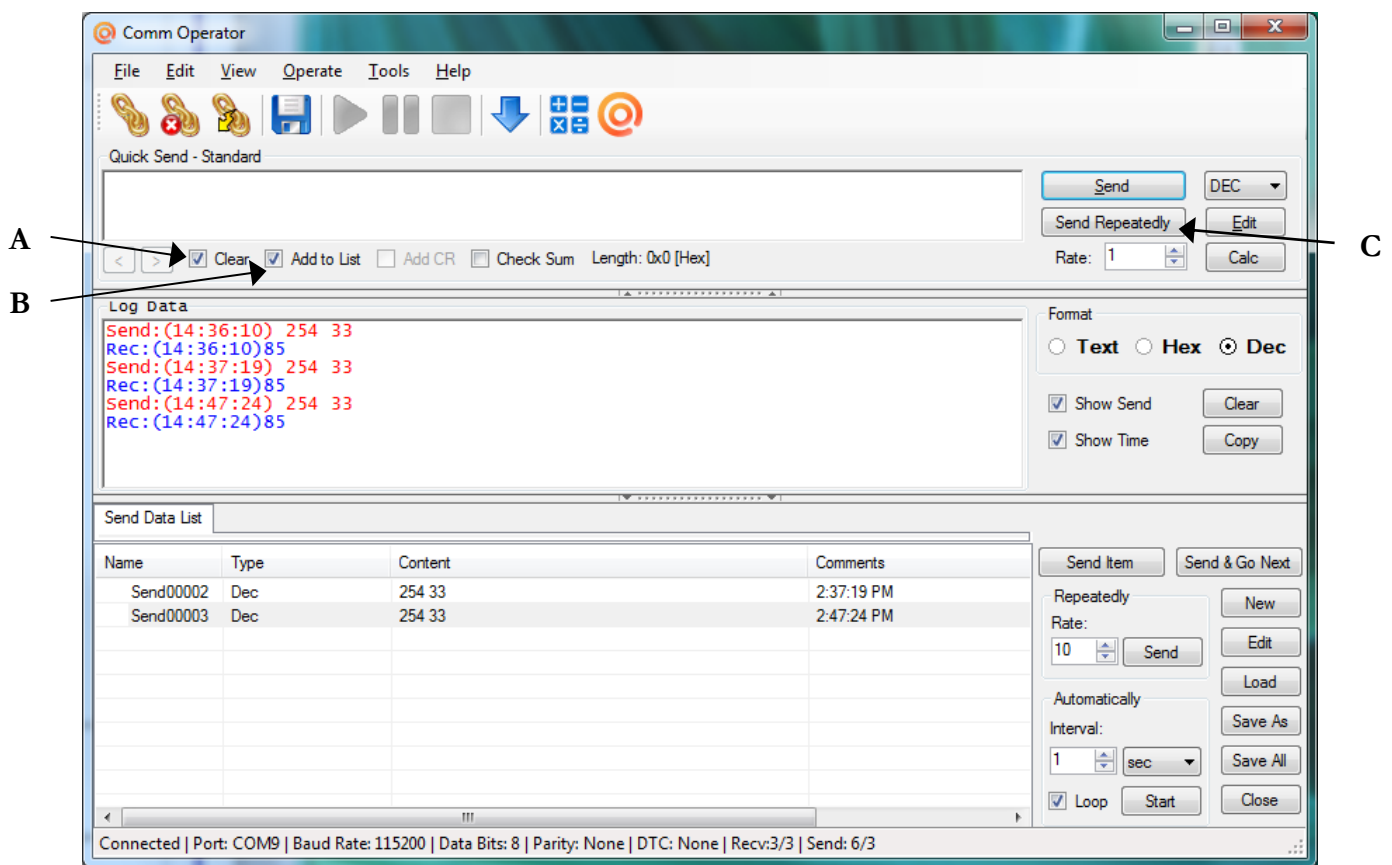
The first command sent should be 254,33 to test if Comm Operator is able to communicate with your device. It will return 85 if communication is working.

- Type 254,33 in the 'Quick Send-Standard' textbox as shown below. (marked as D)
- Click 'Send' or press 'Enter' on the keyboard to complete the command.

The results will display in the 'Log Data' textbox, as well as the current time as shown below in blue. (marked as E)

There are additional features that you may find helpful when testing communication with your device.

- A. If you click the 'Clear' checkbox located under the 'Quick Send' textbox, the program will clear the command from that box after you send it.
- B. If you click the 'Add to List' checkbox also located under the 'Quick Send' textbox, the program will record each command in the 'Send Data List' found at the bottom of the Comm Operator window.
- C. If you wish to send a command repeatedly, click the 'Send Repeatedly' button. You may adjust the frequency that the commands are sent by changing the 'Rate'.

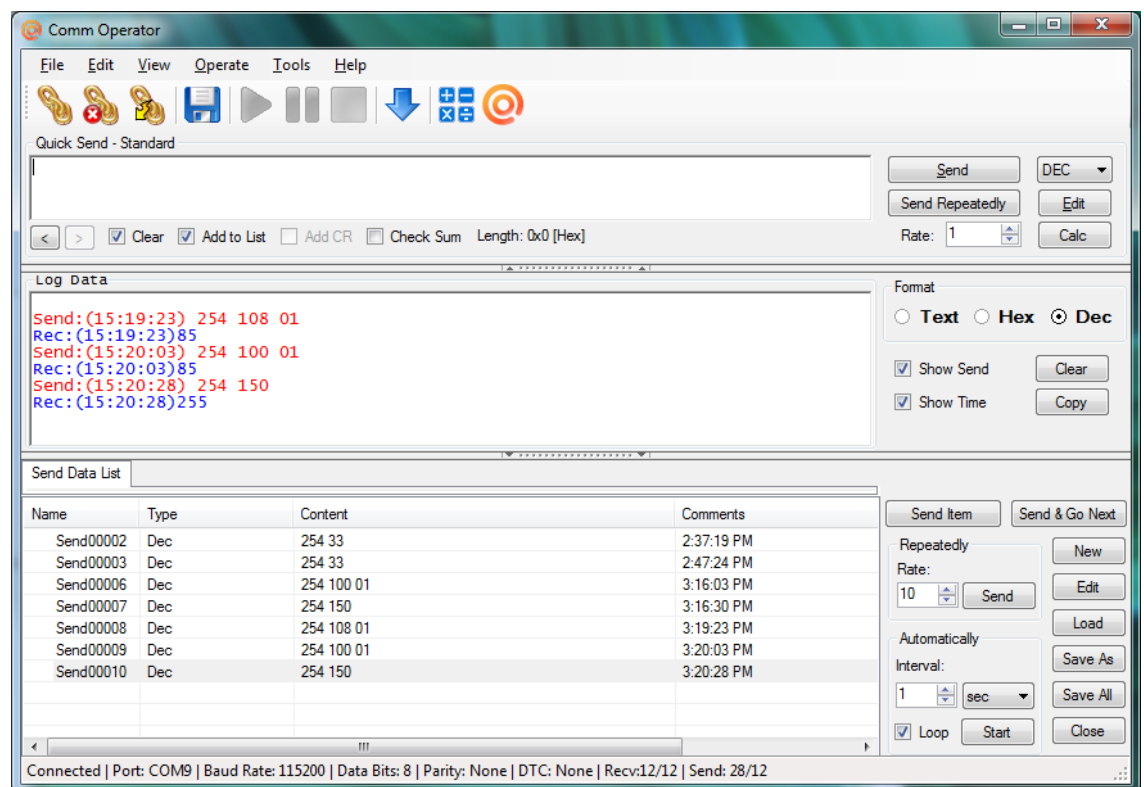


Helpful Hints

For the ProXR relay board, send 254,108,1 to turn on first relay in bank 1. The program will return 85 if it works correctly and you should hear a click on your relay board.

Next send 254,100,1 to turn off the first relay in bank 1. The program will again return 85.

Send 254, 150 to read input on AD1. You will receive a value from 0-255. Please refer to the command set in the Quick Start Guide for your device for additional command information



Send Data List

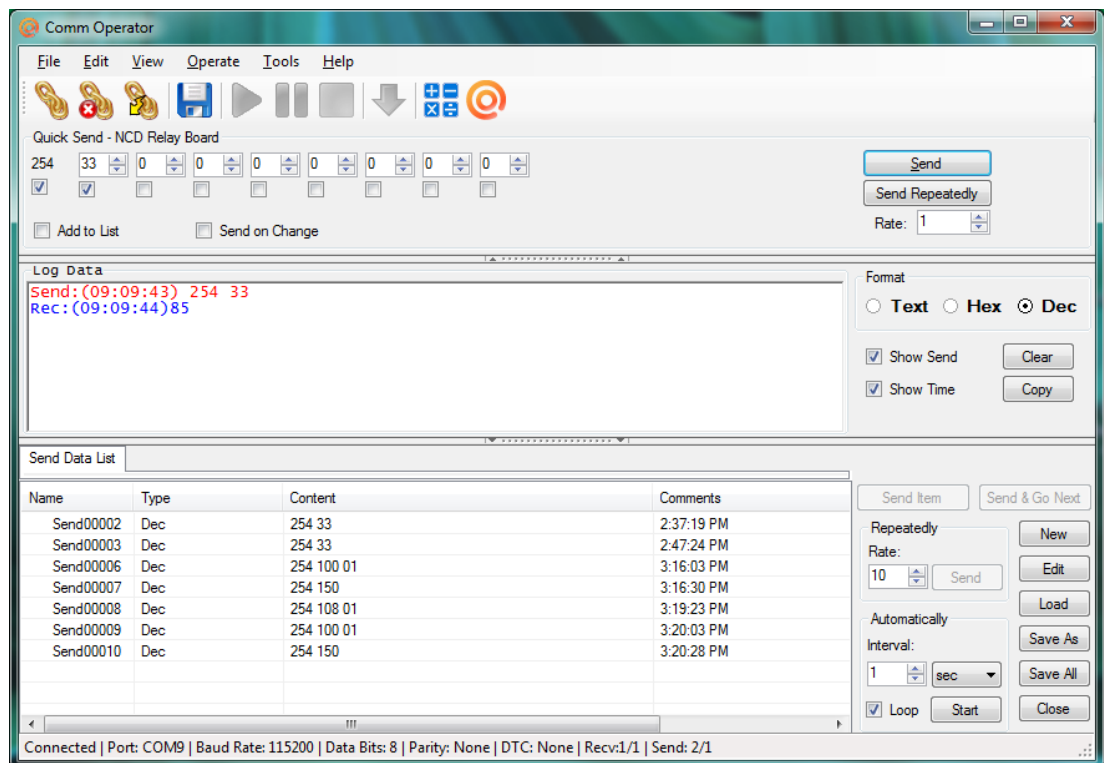
Notice in the screen shot above that the last set of commands are recorded. You may save this list and load again to use the same set of commands for testing. This will save you time by allowing you to send the same commands again without having to retype them. You can also set the command list to send automatically at a set interval.

There are files that have saved useful ProXR commands from the 'Send Data List' that you may download from our website, save, and then load into the Comm Operator program.

As mentioned earlier, there are two main views that you will use with NCD devices. Up to this point, the instructions have been shown from Standard view.

NCD Relay Board View

The NCD Relay Board view is a view dedicated for use with NCD devices. It contains presets that eliminate a few steps for the user. For example, the first part of the command set (254) has already been entered. Also, it is set to the default decimal format. You will enter the remainder of the desired command in the open boxes under the ‘Quick Send-NCD Relay Board’ heading, as shown below.



Technical Support

Technical support is available through our website, controlanything.com. **AccessNCD** is the way we connect NCD engineers to our customers.



*Click on the **AccessNCD** button located on the top right of the header of each page of our website.*

For technical support and application information, contact Travis Elliott, our technical engineer. If you feel that you have discovered a bug in the firmware of our controllers, contact Ryan Sheldon, our hardware developer. If you have programming-related questions or have discovered a bug in our software, please contact Shirui Xu, our software engineer.



Click the 'Tech Support Staff' tab and click on the appropriate engineer link for assistance. Click on our 'Forum' tab if you would like to post publicly or review problems that other customers have had and our recommended solutions.

Our engineers monitor questions and respond continually throughout the day. Before requesting telephone technical support, we ask that customers please try to resolve their problems through **AccessNCD** first. However, for persistent problems, NCD technical support engineers will schedule a phone consultation.

Contact Information

National Control Devices, LLC
PO Box 455
Osceola, MO 64776
417-646-5644 phone
866-562-0406 fax
Open 9 a.m. - 4 p.m. CST

All orders *must* be placed online at our website, www.controlanything.com

Notice:

The only authorized resellers of NCD products are

- www.controlanything.com
- www.relaycontrollers.com
- www.relaypros.com
- www.amazon.com

All other websites are not authorized dealers; we have noticed some retailers offering our products fraudulently.