

### Introduction to Reader Download Utility

Code Corporation's Reader Download Utility (RDU) utilizes a wizard format, providing a simple user interface to accomplish the process of downloading firmware, bootloader or JavaScript files to CR2, CR3 and CR1200 Code Readers. You will step through a series of wizard windows requesting clarification for each download scenario. RDU accommodates three communication modes:

- USB
- RS232
- Virtual COM Port (VCOM)

VCOM is significantly faster than any other download method and may be the desired communication mode when upgrading several readers.

Two cabling options are available to users:

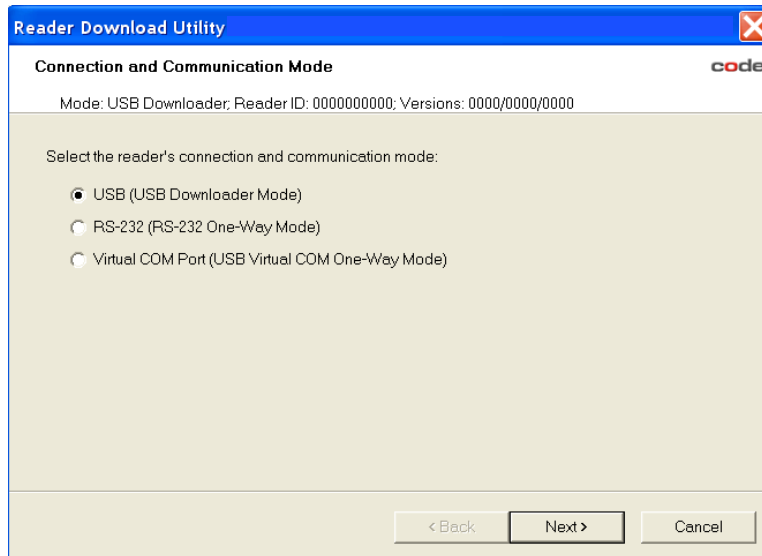
- USB
- RS232

### Important Notes:

1. Download the RDU.zip application file from Code's website (see Host Utility Downloads) at: <http://www.codecorp.com/downloads/index.htm>  
Instructions for downloading the RDU.zip file and extracting the files to your computer are included in a separate document entitled **Firmware Upgrade Instructions Using Reader Download Utility**, which is available for download at this location on Code's Website: <http://www.codecorp.com/support/specialinst.htm>
2. Please review **Firmware Upgrade Instructions Using Reader Download Utility** before attempting to use RDU to accomplish a firmware upgrade.
3. RDU replaces the **USB Reader Upgrader** utility previously available with firmware upgrade files.
4. The default language for RDU is English. The following alternate language files are available with this release: German and Japanese. Additional language files are in review and will be released in subsequent RDU upgrades. No special user action is required to initiate the use of an alternate language within RDU. RDU will automatically access the language file designated by the host computer's Windows operating system (if available) and select the appropriate language file.
5. Your reader must already be using the following versions of Firmware and Bootloader in order to utilize RDU:  
CR2/CR3 Firmware: 2016 (or greater)                      CR1200 Firmware: any version  
CR2/CR3 Bootloader: 2170 (or greater)                      CR1200 Bootloader: any version
6. If using Virtual COM Port mode you must first ensure the appropriate VCOM drivers have been installed on your computer. Driver files are available for download on Code's website at: <http://www.codecorp.com/downloads/index.htm> (listed under Host Utility Downloads) to enable your computer to utilize Virtual COM Port communication mode.
7. Distributors who are interested in customizing the branding logo should contact their Code applications engineer.

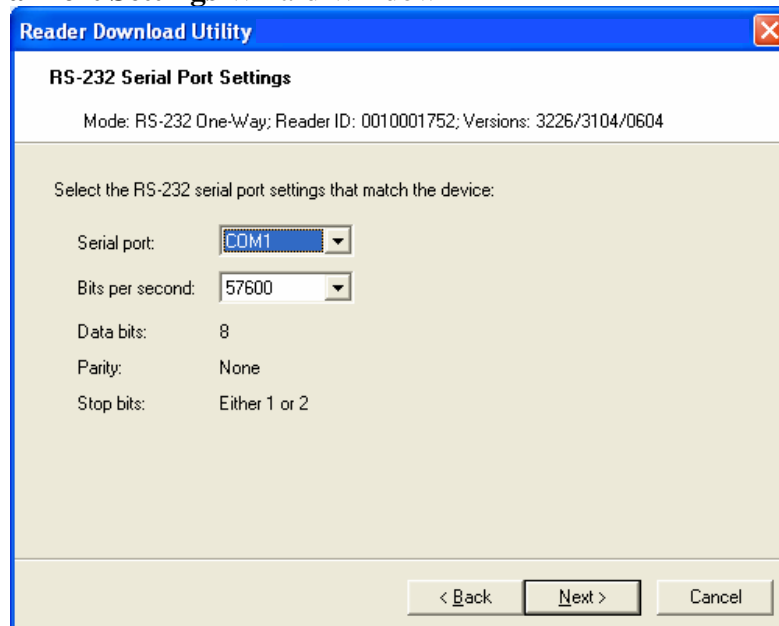
## Review of RDU Wizard Windows

### 1. Connection and Communication Mode Wizard Window



The Connection and Communication Mode wizard window allows the user to select the method by which the file download to the reader will be accomplished. Three communications methods are available: USB, RS-232 or Virtual COM Port. **Note:** You must locate and read the M-Code that corresponds to the desired Communications Mode in the reader's user manual or programming guide.

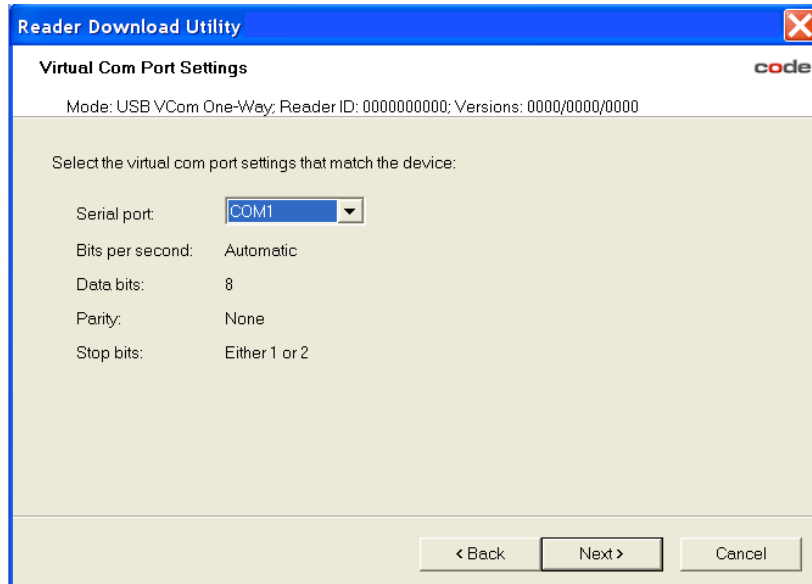
### 2. RS-232 Serial Port Settings Wizard Window



The RS-232 Serial Port Settings wizard window only appears when the RS232 mode is selected. The user must confirm the Serial port (communications port) and Bits per

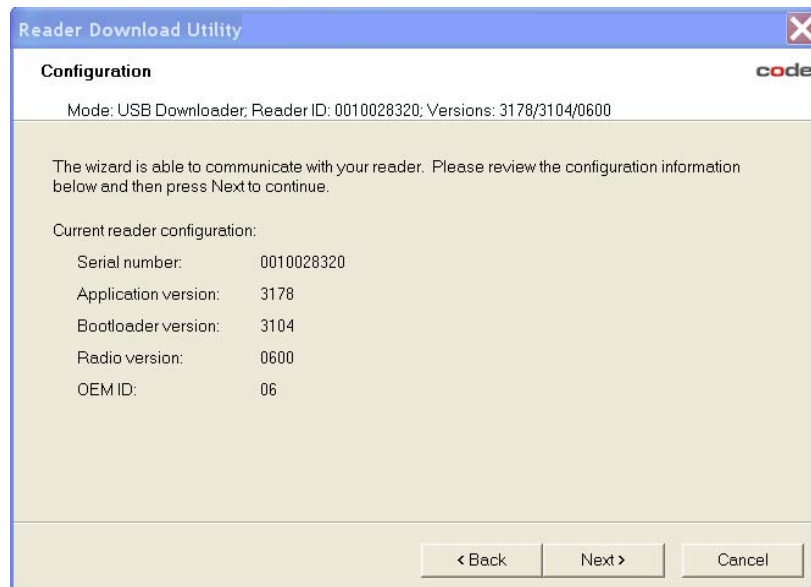
second (baud rate), using the drop down boxes provided, before continuing a download process.

### 3. Virtual Com Port Settings Wizard Window



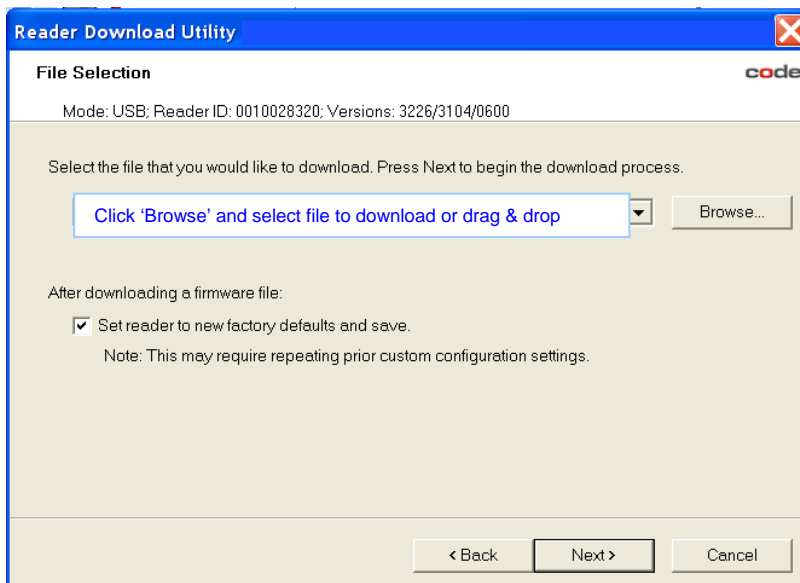
The Virtual Com Port Settings wizard window only appears when the Virtual Com communications mode is selected. The user must select the Serial port (communications port) to be used by clicking on the drop down arrow and making a COM port selection, before continuing a download process.

### 4. Configuration Wizard Window



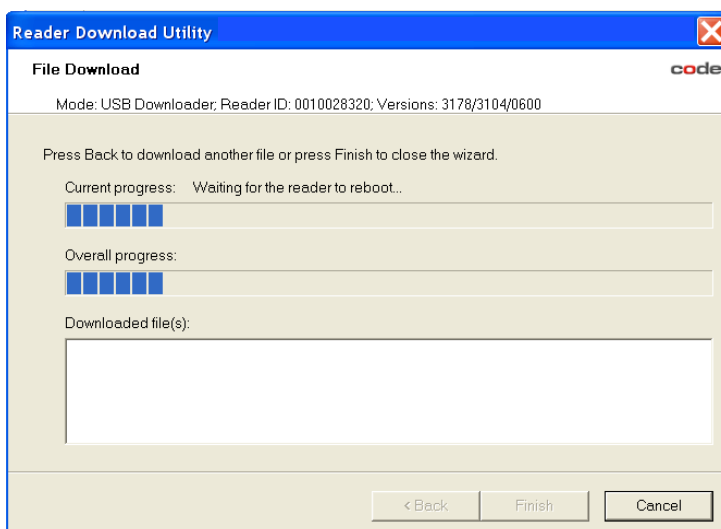
The Configuration wizard window provides valuable information in reference to current versions of firmware and bootloader installed on the reader as well as other useful facts. No actions are taken at this step; this window simply reflects the reader's current 'status.'

## 5. File Selection Wizard Window



The File Selection wizard window confirms the communications mode, the reader's serial number and firmware/bootloader versions as it allows the user to browse to the location of the file you wish to select for download or drag and drop the desired file into the selection bar. **Note:** If you do not wish the reader to be set to new factory defaults after downloading a firmware file upgrade, then you must uncheck the box as indicated.

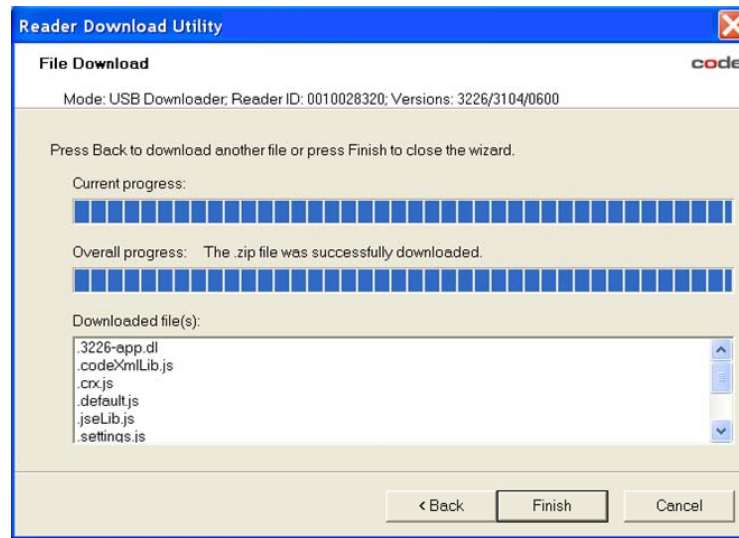
## 6. File Download Wizard Window



Once the file for download has been selected, the File Download wizard window provides feedback reflecting progress of the download process. Several subsequent

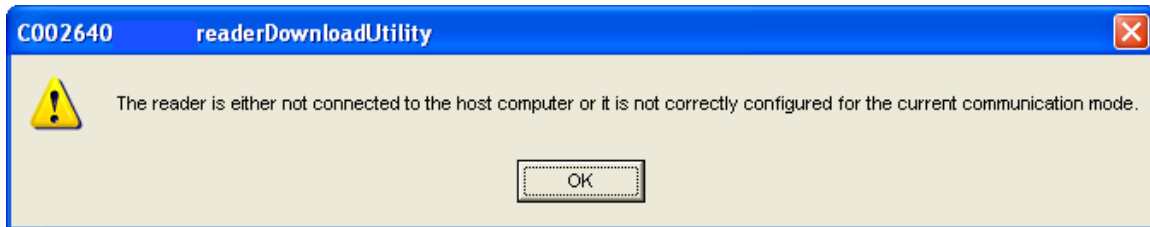
processes may be initiated by virtue of downloading a file to the reader. For this purpose there are two progress bars reflected. The Current progress bar provides feedback about the current 'in-progress' download process. The Overall progress bar provides feedback about the overall process taking place on the reader.

Once the file download is complete, a message is displayed indicating download completion (see Overall progress:). The successfully downloaded files are listed in the Downloaded file(s) window and the 'Finish' button is available.



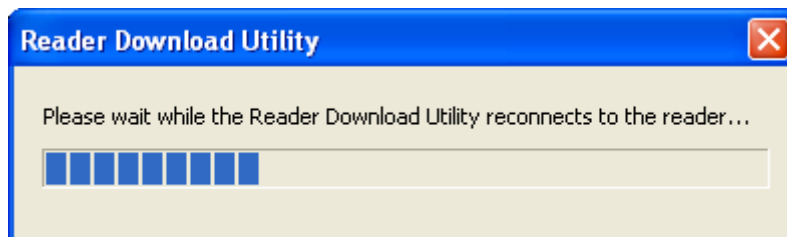
**Troubleshooting Common Error Messages:**

1. Occasionally the user will change a configuration during a download process. Sometimes, this action results in the computer not recognizing that the reader is connected to the computer and the following error message will appear.



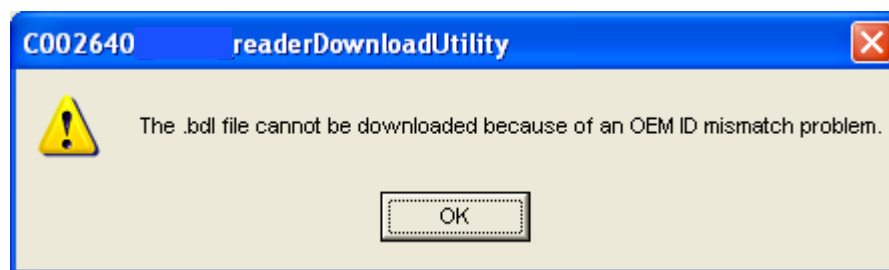
Uncable and recable the reader to re-establish a connection to the host computer.

2. If in USB mode, the following message may appear if any of the following happen:
  - a. The user changes communication settings on the reader to match the communication mode of RDU, such as when the reader is placed in 'Bootloader Mode.'
  - b. The user disconnects and re-connects the reader to the computer while RDU is open and running.
  - c. The user disconnects one reader and re-connects a different reader to the host computer that matches the configuration communication mode for which RDU is configured.



Simply wait a few seconds while the reader and computer establish a connection before continuing.

3. The following error message will occur if the user is attempting to download a bootloader (.bdl) file but the reader is not in 'Bootloader Mode.'



**Note:** Downloading a bootloader (.bdl) file can only be accomplished using RDU in USB or RS232 communication modes only.

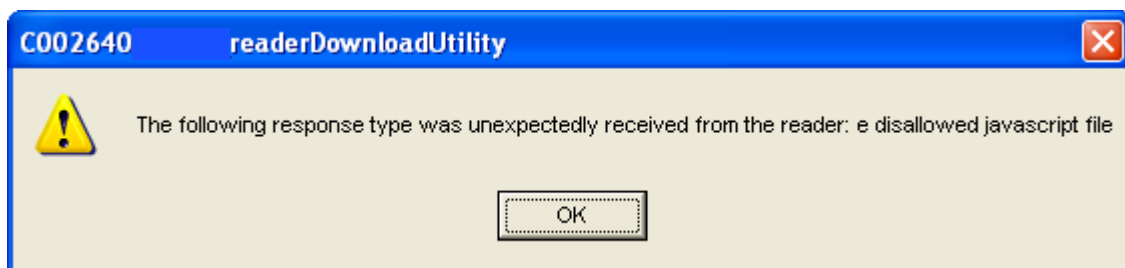
How to put the reader in Bootloader Mode:

- The CR2 is in Bootloader Mode if the left LED is red and the right LED is green. If both LEDs are red, push either button to change the right LED to green.
- The CR3 is in Bootloader Mode when the LED is solid green. Push either button to cycle through modes.
- For either CR2 and CR3, you can scan the M-692\_01 code below to ensure the reader is in Bootloader mode.

Bootloader Mode



4. The following error message occurs when a user is attempting to download a JavaScript file and the reader does not have a JavaScript license loaded.



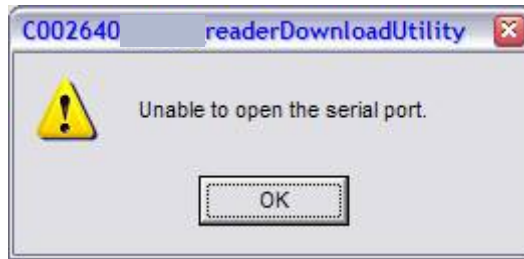
Contact Code Technical Support to obtain a JavaScript license.

5. The following error message occurs when a user is attempting to download a JavaScript license that does not match the reader identification number to which is was assigned.



Contact Code Technical Support to obtain a JavaScript license.

6. The following error message occurs when a user is attempting to use a COM port currently in-use by another software application.



Close the application utilizing the same COM port designation before continuing with the download process.

7. The following error will appear when downloading a '.crb' file containing commands that are not supported by RDU.



Following are the commands supported by RDU:

# \* + - . / : = ? ~ B J N O P Q W Z

To fix: Using crb2code software, convert '.crb' file to a .tif image. Print this .tif image file and scan with reader.

For further assistance, call Code Technical Support: 801 495 2200; or email [support@codecorp.com](mailto:support@codecorp.com)