## Troubleshooting Steps

The intent of this guide is to provide a guideline of steps to follow to connect a DataMan reader to the DataMan Set Up Tool if the user can not connect to the reader after following the basic connection steps provided in the Quick Reference Guide.

### Assumptions:
- Reader is connected to power via the appropriate DataMan power supply (If necessary for model type)
- Latest DataMan Set Up Tool software has been loaded on the customer’s PC with no errors
- If a DataMan 7550 wireless reader, the battery is fully charged (2 hours)

### Standard Connection Steps

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
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<tr>
<td>1.</td>
<td>Disconnect the USB connection cable from the PC</td>
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<td>2.</td>
<td>Disconnect power from the reader or from the base station if a cordless hand held reader</td>
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<td>3.</td>
<td>If a cabled hand held reader, ensure the connection cable is fully inserted into the reader until you hear an audible ‘click’</td>
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<td>4.</td>
<td>Plug the reader into power (or provide power to base station if cordless hand held reader)</td>
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<td>4a.</td>
<td>If the standard connection procedures (Step 1-10) do not enable the reader to connect, it may help to 'manually' reset the DataMan reader to factory defaults to eliminate possible old firmware settings that may be causing a conflict. To manually reset the reader, with no power applied to the reader, depress the trigger button on the reader and continue to hold. Plug the reader back into power (or insert the battery if a cordless reader) and continue to hold the trigger button. The reader will flash the status lights and will emit a reset tone. After several seconds when the reset is complete, release the trigger and continue with the connection steps. Note that the default settings may not get automatically applied so settings should be saved once connected</td>
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5. Scan the ‘Reset Scanner to Factory Defaults’ reader programming code

6. If cordless reader, place DataMan 7550 in base station (reader should ‘pair’ with pairing tone)
   - Note: To ensure proper connection, the “Blue” light on the back of the 7550 should blink indicating that it is communicating via Bluetooth. Also, ensure the reader stays “awake” since by default it will “go to sleep” within 3 minutes. You can set the reader to stay awake longer or even to never go to sleep once connected to the Set Up Tool.

7. Scan the appropriate reader configuration code connection type (USB-COM to connect to the Set Up Tool unless using an RS-232 connection with the cordless DataMan 7550 readers for the base station)
   - Note: A copy of the complete configuration codes document can be printed out from the reader documentation which is available from the Start menu under Programs then Cognex.
   - Note: For cordless DataMan 7550 readers, once the reader is paired to the base, it can be helpful to recover from a base station issue to scan “Reset Base To Factory Defaults” and then scan the appropriate connection type code.

8. Reinsert the USB connection cable to the PC
   - Note: Should hear an audible tone from the PC if the PC volume is not muted when the USB device is inserted.

9. Open the DataMan Set Up Tool (ensure DataMan 7550 reader is awake if cordless)

10. Select ‘Scan Ports’
    - After completion of ‘Scan Ports’ DataMan Set Up Tool will display all COM ports that a DataMan device is connected to

11. Select the COM port that has the DataMan reader associated with it. Click ‘Connect’
    - Reader should connect to the Set Up Tool and the Green ‘Connected’ will be displayed

12. Once connected, confirm that the reader has the latest firmware by selecting ‘View’ then ‘System Info’ from the Set Up Tool menu. The firmware is listed next to ‘Version’
    - Note: Save settings once connected if the reader was reset to the default setting by using the emergency “power up” mode. Also if not on the latest version of firmware, download the latest firmware from the Cognex DataMan downloads and update the firmware.
**Additional/Advanced Connection Steps (if still unable to connect)**
(Note: Steps 1-7 can be skipped if user has already followed all basic steps above)

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<tr>
<td>1.</td>
<td>Disconnect reader from PC and power as described in the steps above</td>
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<td>2.</td>
<td>Close all SetupTools or other DataMan software (e.g. documentation)</td>
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<td>3.</td>
<td>Uninstall all DataMan software (in case you have multiple versions installed)</td>
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<td>4.</td>
<td>Restart PC</td>
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<tr>
<td>5.</td>
<td>Reinstall the latest version of the DataMan Set Up Tool installer</td>
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</tbody>
</table>
| 6. | Reapply power to the reader  
   (If DataMan 7550, make sure the reader is awake and 'paired' to the base station) |
| 7. | Scan the appropriate reader configuration code connection type (USB-COM to connect to the Set Up Tool unless using an RS-232 connection with the cordless DataMan 7550 readers for the base station)  
   - Note: A copy of the complete configuration codes document can be printed out from the reader documentation which is available from the Start menu under Programs then Cognex. |
| 8. | Reinsert the USB connection cable to the PC  
   - Note: Should hear an audible tone from the PC if the PC volume is not muted when the USB device is inserted |
9. Watch task bar on bottom of PC to ensure 'New USB device' pop up is displayed and then 'Hardware was installed properly' is displayed after the USB driver is installed.

9a. If the standard install new hardware behaviour does not initiate or if there is an error, take the following steps:

- Verify that COM port shows up in Device Manager
  - Start->Settings->Control Panel->System->Hardware->Device Manager->Ports (COM & LPT): DataMan xxx COM port (COMn)
- Verify that icon is connector symbol (not e.g. exclamation mark)
  - ...
  - Retry connection / Scan Ports

If there is an exclamation mark:
- Disable/Enable USB COM port (if an exclamation mark)
  - Sometimes it is sufficient to just shortly deactivate the USB port
  - Device Manager: Right-click->Disable, then Right-click->Enable
  - Retry connection / Scan Ports

If Disable/Enable is not sufficient:
- Re-Install USB COM port
  - This uninstalls the virtual COM driver and should newly install when the reader gets detected
  - Device Manager: Right-click->Uninstall
  - Unplug reader, plug reader
  - -> bottom right pop-up message should indicate new device detected
  - Retry connection / Scan Ports

If COM Port for DataMan is available but can not connect to the DataMan with the Set Up Tool, you can confirm that the reader is communicating to the PC by connecting via Hyperterminal: Start->Programs->Accessories->Communication->Hyperterminal:

- Is HyperTerminal able to open the COM port and connect to it?
  - Read codes with the DataMan reader- Do code string show up in HyperTerminal?
Advanced Steps for USB Driver Debugging:

If still unsuccessful with Disable/Enable and re-installing the USB driver steps, in rare cases, the following steps may be used:

- **Show hidden devices/Re-Install USB COM port**
  - If the below method is not possible for any reason (e.g. COM port not selectable, no re-enumeration, etc.) there is a way to show all hidden devices if the DataMan reader is not visible in Device Manager.
  - Start->Settings->Control Panel->System->Advanced->Environment Variables
  - Select New (For User Variables in top window)
  - Enter Variable name=DEVMGR_SHOW_NONPRESENT_DEVICES, Variable value=1
  - Return to Device Manager and select View->Show hidden devices
  - Now when the LPT/COM ports icon is selected under Device Manager you will see grayed out symbols of DataMan systems (and other systems) not currently connected
  - Now run re-install USB driver process as above if a ‘hidden’ DataMan COM port is visible that is assigned to the DataMan reader

- **Move COM port**
  - It is possible that there can be a COM port conflict (e.g. duplicate with internal Bluetooth ports in Dell laptops for instance)
  - In Device Manager for COM port assigned to reader: Right-click->Properties->Port Settings->Advanced->COM Port Number
  - Select a COM port not indicated as being “in use” which you can tell if you have enabled the view hidden devices feature above – To test, it is best to try a high COM port number say > 20 to avoid a conflict
  - Retry connection / Scan Ports

10. Open the DataMan Set Up Tool (ensure DataMan 7550 reader is awake if cordless)
| 11. | Select ‘Scan Ports’  
|     | - After completion of ‘Scan Ports’ DataMan Set Up Tool will display all COM ports that a DataMan device is connected to |
| 12. | Select the COM port that has the DataMan reader associated with it. Click ‘Connect’  
|     | - Reader should connect to the Set Up Tool and the Green ‘Connected’ will be displayed |
| 13. | Once connected, confirm that the reader has the latest firmware by selecting ‘View’ then ‘System Info’ from the Set Up Tool menu. The firmware is listed next to ‘Version’ |

In the vast majority of cases, these troubleshooting steps will enable users to correct any initial installation issues with the DataMan readers configured for USB COM communications. If an issue still exists however, please contact your local Cognex representative or distributor who can assist you in filling out the DataMan Communication Analysis Form which can be used to make a recommendation to correct the communication issue. You can also contact Cognex Technical Service for assistance with the form at (508) 650-4100.