



# **NSync User Guide**

# Revision History

Version	Description	Date
V1.0.0	Initial release.	October 8, 2016

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## Overview

NSync is an auxiliary tool for NLS-BS80 barcode scanners (hereinafter referred to as “**the scanner**” or “**the BS80**”) to assist the user in performing on one or more scanners the following operations:

- ✧ View device info
- ✧ View/set date & time
- ✧ Save data to file (This feature only supports data acquired in Bluetooth/USB Batch mode )
- ✧ Delete data

NSync supports 32-bit/64-bit Microsoft WinXP/Win 7/Win 8/Win 8.1/Win 10 operating systems.

NSync can only communicate with the BS80 via Bluetooth SPP or USB virtual COM port.

**IMPORTANT: MAKE SURE ALL DATA ON THE SCANNER(S) IS ACQUIRED IN BLUETOOTH/USB BATCH MODE BEFORE SAVING DATA TO FILE(S) ON NSYNC.**

# Connecting the BS80 to PC

## Connecting the BS80 to PC via USB

Step 1: Install CDC-Virtual COM Driver on PC by following the on-screen instructions.

Step 2: Connect the BS80 to PC with a USB cable.

Step 3: Use the BS80 to scan the **USB Mode** barcode and then the **USB COM Port Emulation** barcode.

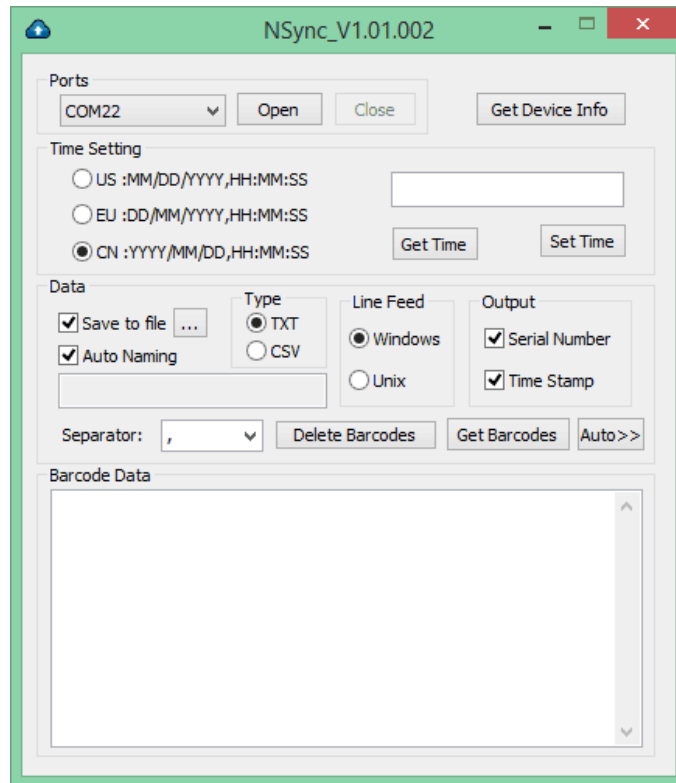


USB Mode



USB COM Port Emulation

Step 4: Double click the NSync.exe file on PC.



## Connecting the BS80 to PC via Bluetooth

If your PC is equipped with Bluetooth feature, you can connect the scanner(s) to PC via USB or Bluetooth.

Step 1: Use the BS80 to scan the **Bluetooth Mode** barcode, the **SPP** barcode and the **Delete Bluetooth Pairing** barcode.



**Bluetooth Mode**




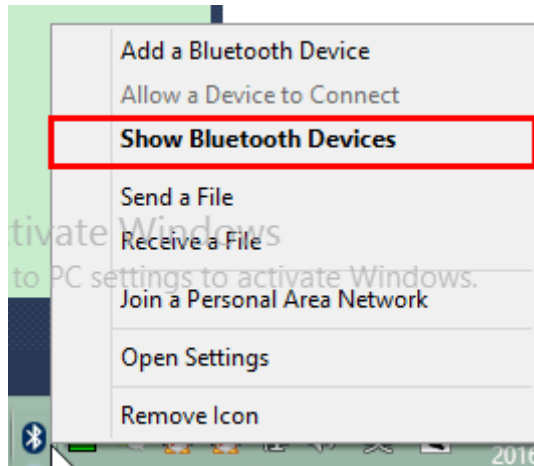
**SPP**



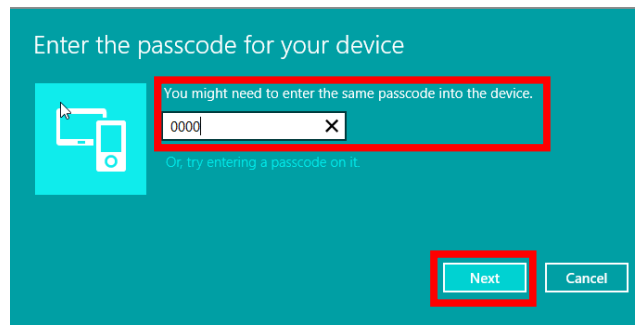
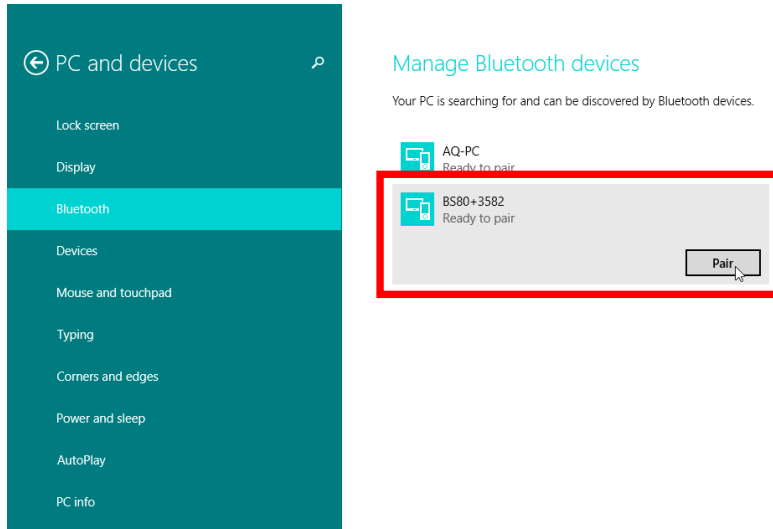
**Delete Bluetooth Pairing**

Step 2: Connect the BS80 to a Bluetooth-enabled PC. Make sure that Bluetooth is turned on.

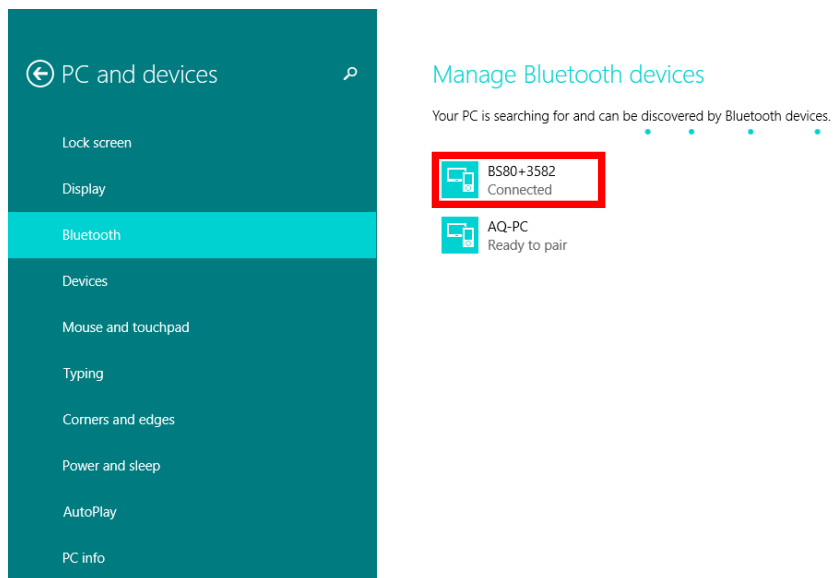
(1) Right click on  on the status bar of PC. On the pop-up menu, select “Show Bluetooth Devices”.



(2) Select “BS80XXXX” and click on “Pair”. Enter the password “0000” and then click on “Next”.

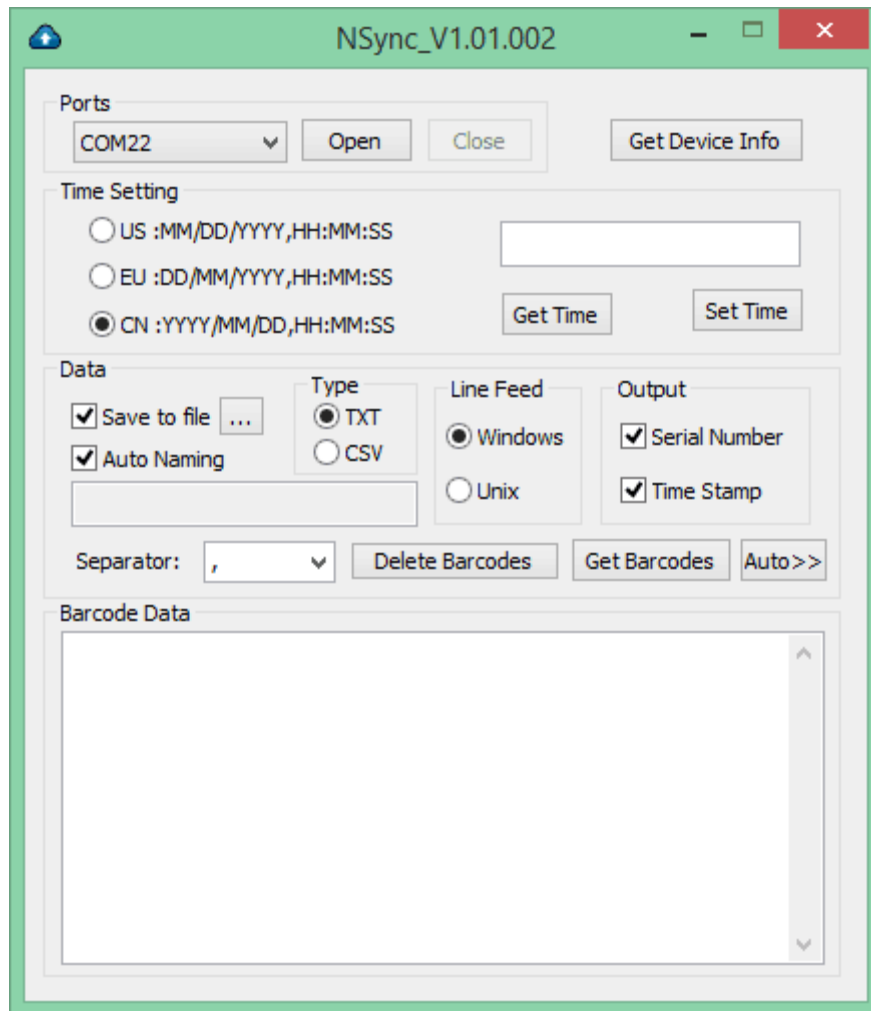


(3) The “Connected” message means the connection is OK.





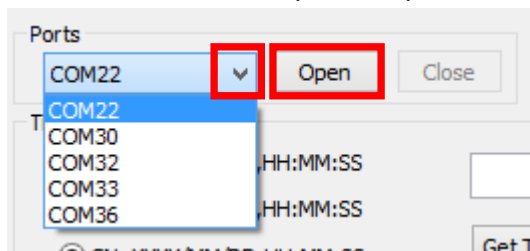
Step 3: Double click the NSync.exe file on PC.



## Detecting Connected Device(s)

When one or more scanners are properly connected to PC via USB or Bluetooth, as described in the previous sections, you can find the COM ports used in “Ports” dropdown list on NSync.

If you want to operate on one scanner, click on the arrow icon, select the COM port used to connect the scanner from the dropdown list and click on “Open” to open the COM port.



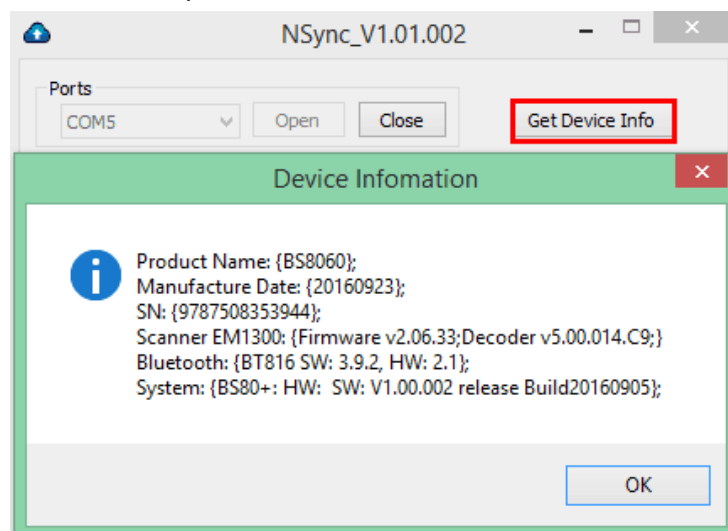
Then you can follow the instructions in the following sections to display/set the date & time of the scanner and to save/delete data on it.

If you want to operate on another scanner, you need to close the current COM port by clicking on “Close” and then open the corresponding COM port.

## Viewing Device Info

You can view the device information of a scanner on NSync, including product name, manufacture date, serial number (SN) and hardware/firmware version of scanner/Bluetooth module (To view hardware/firmware version of Bluetooth module, the scanner must be in Bluetooth SPP mode).

To view device info, click on the arrow icon, select the COM port used to connect the scanner from the dropdown list, and click on “Open” then “Get Device Info”.



## Time Settings

Time Setting

US :MM/DD/YYYY,HH:MM:SS

EU :DD/MM/YYYY,HH:MM:SS

CN :YYYY/MM/DD,HH:MM:SS

Get Time Set Time

## Viewing Date & Time

To view the time of a scanner, open the corresponding COM port and then click on “Get Time”.

Time Setting

US :MM/DD/YYYY,HH:MM:SS

EU :DD/MM/YYYY,HH:MM:SS

CN :YYYY/MM/DD,HH:MM:SS

09/23/2016, 16:54:41

Get Time Set Time

Data

Save to file

Auto Naming

Separator: ,

Barcode Data

Information

Get Time Succeed!

OK

## Setting Date & Time on the BS80

To set the date & time, choose the desired format, enter the date and time in the chosen format and then click on “Set Time”. Note that this operation will also set the date format of the scanner.

Time Setting

US :MM/DD/YYYY,HH:MM:SS

EU :DD/MM/YYYY,HH:MM:SS

CN :YYYY/MM/DD,HH:MM:SS

2016/09/23, 12:05:56

Get Time Set Time

Data

Save to file ...

Auto Naming

Separator: ,

Type

TXT

CSV

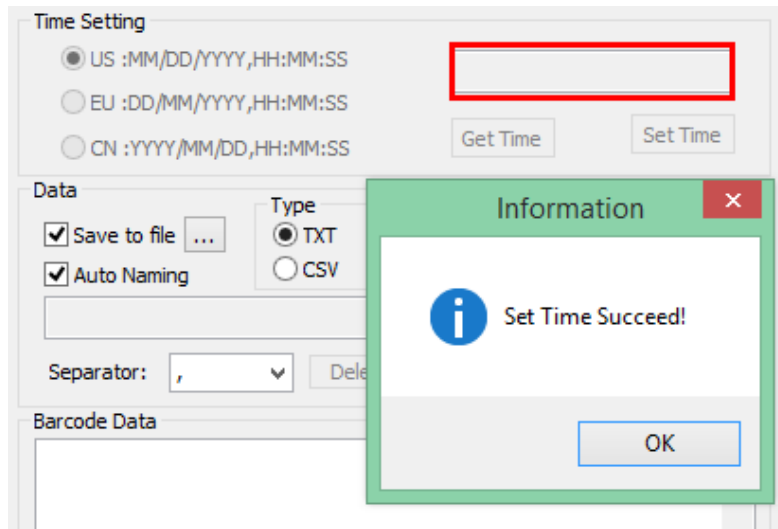
Barcode Data

Information

Set Time Succeed!

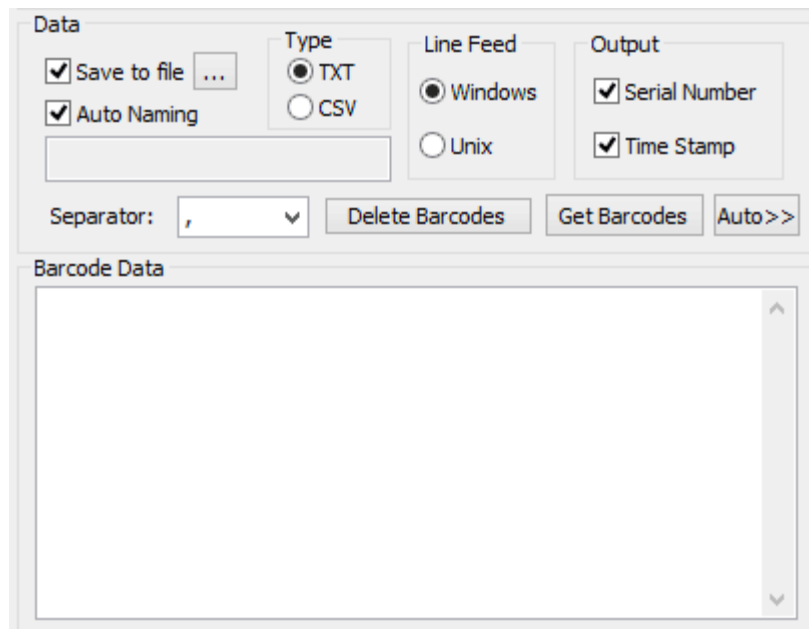
OK

To synchronize scanner's clock with PC's clock, choose the desired format, leave the box blank and then click on "Set Time". Note that this operation will also set the date format of the scanner.



Note: If you want to set the date&time of a scanner, you need to open the corresponding COM port first; if you want to set the date&time of all scanners, you need to click on "Auto>>" to enter the Auto mode first.

## Data Handling




## Saving Data to File

Data can be saved to file(s) in one of the following formats:

- ✧ [Serial Number] + [Separator] + [Time Stamp] + [Separator] + [Barcode Data] + [Line Ending]
- ✧ [Serial Number] + [Separator] + [Barcode Data] + [Line Ending]
- ✧ [Time Stamp] + [Separator] + [Barcode Data] + [Line Ending]
- ✧ [Barcode Data] + [Line Ending]

You can set the file path/type/name, line ending and separator, and choose whether or not to output serial number/time stamp as per your needs.

**Save to file:** Check it to enable the **Save to file** feature. To set the file path, click  next to Save to file, and navigate to the desired directory. The default file path is where the NSync.exe lies.

**Auto Naming:** Check it to use the default file name {xxx}\_yyyymmdd\_nnn where xxx is scanner's serial number, yyyymmdd is file creation date and nnn is file number that will autoincrement, starting from 001 (for example, {6957303822102}\_20160921\_001), or uncheck it to use a user-defined file name. To specify file name, uncheck "Auto Naming" and enter the desired file name in the box beneath Auto Naming.

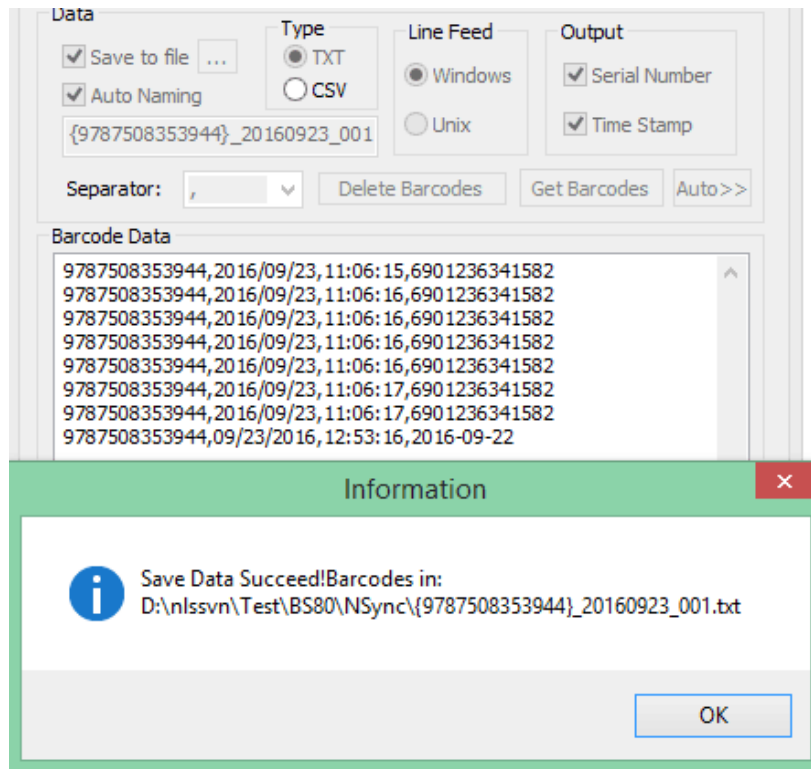
**Type:** Choose "TXT" or "CSV" as the file type.

**Line Feed:** Choose "Windows" to use Windows line ending or choose "Unix" to use Unix line ending.

**Separator:** Click on the arrow beneath **Delete Barcodes** and select a separator character from the dropdown list, or enter the desired separator character(s) in the box next to Separator. Separator can be one or more visible characters or one tab.

**Output:** Check/uncheck "Serial Number"/"Time Stamp" to enable/disable the output of corresponding data.

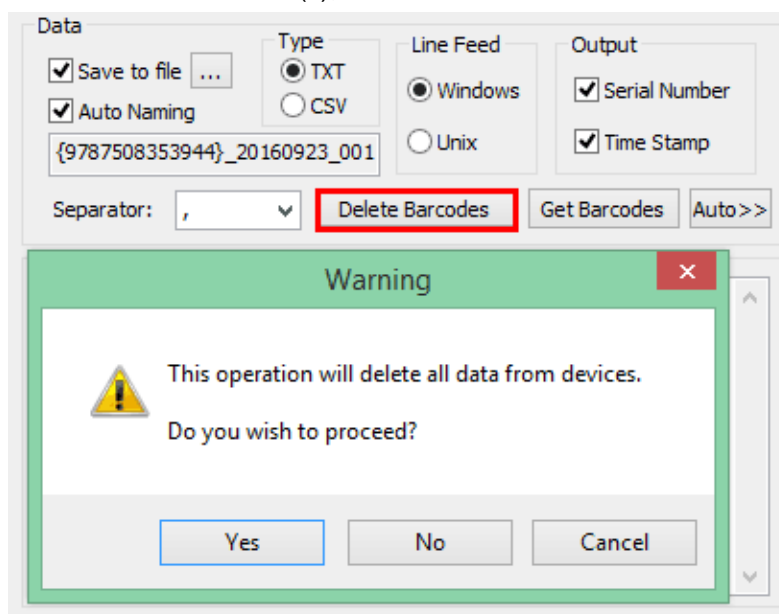
After finishing the settings above, click on "Get Barcodes" to generate a file. If everything is OK, the "Save Data Succeed" message will be displayed.



If there is no data on the scanner(s), you will get the error message “No Data!”.

## Deleting Data

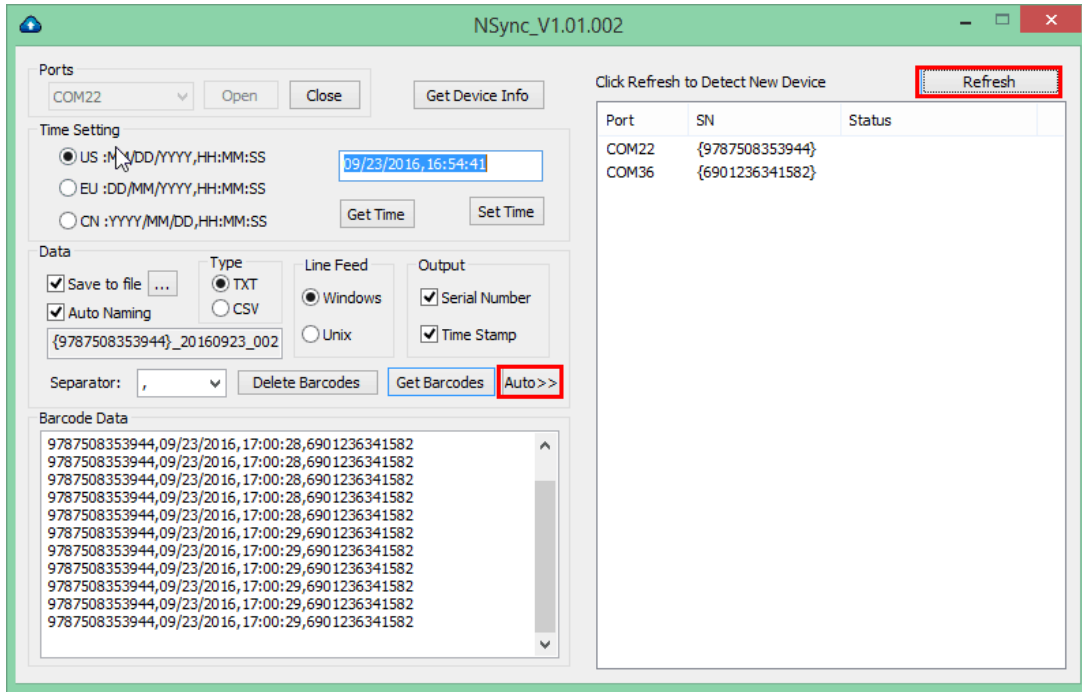
To remove stored data from the scanner(s), click on “Delete Barcodes” then “Yes”.



## Auto Mode

If you wish to operate on all connected scanners, click on “Auto>>” to enter the Auto mode. Then you can follow the instructions in the previous sections to set the date & time and to save/delete data on all connected scanners.

To detect new devices, click on “Refresh”.



## NSyncCmd

You may use the following parameters when running NSyncCmd.exe in Command Prompt or other program such as Visual Studio 2010. Examples are given in the following sections to illustrate these two cases respectively.

**Parameter Table**

Parameter	Function	Example
-help > [file name]	Obtain the help message in a file	NSyncCmd.exe -help > help.txt Obtain the help message in help.txt
-l	Enumerate the COM ports connected to BS80	NSyncCmd.exe -l Enumerate the COM ports connected to BS80 scanners

<p>-n [file name] (This parameter cannot be used together with -csv)</p>	<p>Set the file name</p>	<p>NSyncCmd.exe -n BS80Data.txt Save data to BS80Data.txt If -n parameter is omitted, then {xxx}_yyyymmdd_nnn.txt will be used as the file name. If -n parameter is omitted and -csv parameter used, then {xxx}_yyyymmdd_nnn.csv will be used as the file name. xxx: scanner's serial number yyyymmdd: file creation date nnn: file number that will autoincrement, starting from 001.</p>
<p>-csv (This parameter cannot be used together with -n)</p>	<p>Set the file type to csv</p>	<p>NSyncCmd.exe -csv Save data to .csv file(s) If -csv parameter is omitted, then data will be saved to a .txt file.</p>
<p>-c [COM port number]</p>	<p>Open a COM port</p>	<p>NSyncCmd.exe -c 11 Save data on the scanner connected to COM11 to a file <b>Note: -c is a required parameter and cannot be omitted.</b></p>
<p>-p [path]</p>	<p>Set the file path</p>	<p>NSyncCmd.exe -p D:\test\ Save data to file(s) at D:\test\ If -p parameter is omitted, then current path will be used.</p>
<p>-s [separator]</p>	<p>Set the separator (Separator can be one or more visible characters or one tab.)</p>	<p>NSyncCmd.exe -s tab Save data to file(s) using tab as separator. If -s parameter is omitted, then comma (",") will be used as separator.</p>
<p>-u</p>	<p>Use Unix line ending</p>	<p>NSyncCmd.exe -u Save data to file(s) using Unix line ending. If -u parameter is omitted, then Windows line ending will be used.</p>
<p>-rm [COM port number]</p>	<p>Remove data from the scanner connected to a specific COM port</p>	<p>NSyncCmd.exe -rm 11 Remove data from the scanner connected to COM11</p>



## Error Codes

Error	Code	Remark
ERRORNBS80	1001	No BS80 detected.
ERRORCOMSELECTWRONG	1002	The device connected to the COM port was not BS80.
ERRORCOMNOSELECT	1003	-c parameter was missing.
ERRORPATH	1004	Path was missing in -p parameter.
ERRORNWITHCSV	1005	Parameters -n and -csv were used together.
ERRORFILENAME	1006	File name was missing in -n parameter.
ERRORSEPARATOR	1007	Invalid separator.
ERROROPENCOM	1008	Failed to open the COM port.
ERRORSEND CMD	1009	Failed to send the command.
ERRORREADDATA	1010	Failed to read the data.
ERROROPENFILE	1011	Failed to open the file.
ERRORNOSEP	1012	Separator was missing in -s parameter.
ERRORDELETENOSELECT	1013	COM port number was missing in -rm parameter.
ERRORDELETEFAILED	1014	Delete operation failed.

## Running NSyncCmd in Command Prompt

NSyncCmd.exe is at C:\Users\Tank\Desktop\NSync.

Step 1: Open the Start menu and then click Run. In the Run dialog box, type cmd and press Enter.

Step 2: In the Command Prompt window, type **cd C:\Users\Tank\Desktop\NSync** and press Enter.

Step 3: In the Command Prompt window, type the command you want and then press Enter. Refer to **Parameter Table** above for the information about commands.

Example 1: To obtain the help message, you can type **NSyncCmd.exe -help > help.txt**

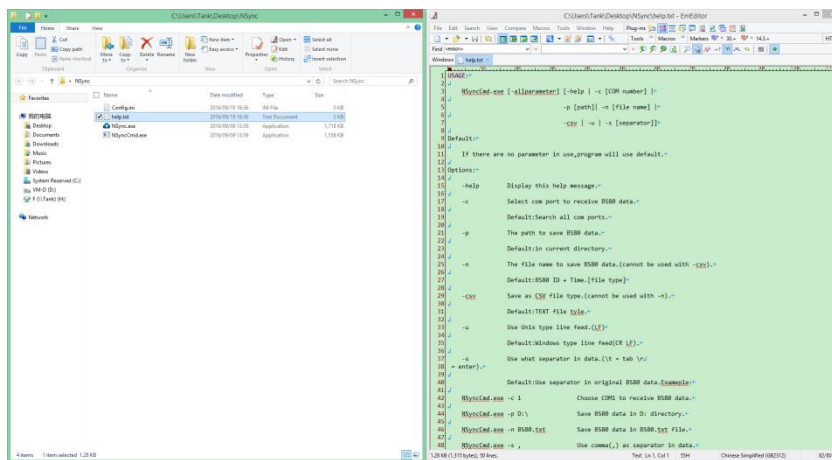
The help message obtained will be in the help.txt file whose location is where NSyncCmd.exe lies (i.e. C:\Users\Tank\Desktop\NSync)

```

C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Users\tank>cd C:\Users\tank\Desktop\NSync
C:\Users\tank\Desktop\NSync>NSyncCmd.exe -help > help.txt
C:\Users\tank\Desktop\NSync>

```



Example 2: To save data on the scanner connected to COM22 to BS80Data.txt at D:\ and using tab as separator, you can type **NSyncCmd.exe -n BS80Data.txt -c 22 -p D:\ -s tab**

```

C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Users\tank>cd C:\Users\tank\Desktop\NSync
C:\Users\tank\Desktop\NSync>NSyncCmd.exe -help > help.txt
C:\Users\tank\Desktop\NSync>NSyncCmd.exe -n BS80Data.txt -c 22 -p D:\ -s tab
C:\Users\tank\Desktop\NSync>

```

ID	Timestamp	String
9787508353944	2016/09/08,14:48:50	VC02408328086
9787508353944	2016/09/08,14:48:51	VC02408328086-1-1-
9787508353944	2016/09/19,16:51:59	6901236341582
9787508353944	2016/09/19,16:51:59	6901236341582
9787508353944	2016/09/19,16:51:59	6901236341582
9787508353944	2016/09/19,16:52:00	6901236341582
9787508353944	2016/09/19,16:52:00	6901236341582
9787508353944	2016/09/19,16:52:00	6901236341582
9787508353944	2016/09/19,16:52:00	6901236341582
9787508353944	2016/09/19,16:52:01	6901236341582
9787508353944	2016/09/19,16:52:01	6901236341582
9787508353944	2016/09/19,16:52:01	6901236341582
9787508353944	2016/09/19,16:52:01	6901236341582
9787508353944	2016/09/19,16:52:02	6901236341582
9787508353944	2016/09/19,16:52:02	6901236341582
9787508353944	2016/09/19,16:52:02	6901236341582
9787508353944	2016/09/19,16:52:02	6901236341582
9787508353944	2016/09/19,16:52:02	6901236341582
9787508353944	2016/09/19,16:52:03	6901236341582
9787508353944	2016/09/19,16:52:03	6901236341582

## Running NSyncCmd in Visual Studio 2010

Example: NSyncCmd.exe is at C:\Users\Tank\Desktop\NSync. Save data on the scanner connected to COM22 to BS80Data.txt at D:\ and using tab as separator.

Header file:

```
#include<stdlib.h>
```

Add the following code:

```
system("C:\\Users\\Tank\\Desktop\\NSync\\NSyncCmd.exe -n BS80Data.txt -c 22 -p D:\\ -s tab ");
```

Note that you should use double backslashes in file path instead of single backslashes and absolute path instead of relative path.

If NSyncCmd.exe is in the project directory, file path can be omitted:

```
system("NSyncCmd.exe -n BS80Data.txt -c 22 -p D:\\ -s tab ");
```



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