

Using the Nexa CM-500M Portable with Bar-Key.Exe

The CM-500M's accompanying Scanner Operation Guide provides all of the necessary instructions and information to use the CM-500M for basic bar code scanning and storage.

The additional instructions provided here are to assist those users who wish to exploit the CM-500M's inbuilt TimeStamp feature and to engage the CM-500M with the Dataman Bar-Key USB Wedge software.

With the use of the supplied sheet of Dataman command bar codes the CM-500M can be configured to record a time and date for each bar code scanned while the CM-500M is being operated remotely.

The Dataman generated sheet of command bar codes that accompanies the CM-500M can be folded and used as an A5 size document, it is suggested the sheet be laminated to provide greater durability.

Operating the Nexa CM-500M scanner with TimeStamp....

Important...

Before the TimeStamp feature can be used the CM-500M's on board clock must be set for the regional time & date.

Follow the instructions provided on the Dataman command bar code chart and set the **Year Month-Date Time** as necessary. Then, if intending to use Dataman's Bar-Key USB Wedge software set the Date Format & Time Format for compatibility with Bar-Key.

If the CM-500M's TimeStamp feature is enabled and the CM-500M used in its default mode a typical native data download will look as follows:-

```
<Memory>
2007/05/17 06:30:15 B5412003288
2007/05/17 06:30:16 B5412003385
2007/05/17 06:30:17 B5412003482
2007/05/17 06:30:18 B5412003539
2007/05/17 06:30:19 B5412003589
<End>
```

The Optional Download Headers **<Memory>** and **<End>** can be disabled if required.

In many cases this native output format will be adequate for most basic text applications.

However, if the CM-500M's output records are required in CSV (Comma Separated Values) mode or TSV (Tab Separated Values) format then the Dataman Bar-Key utility can be utilized to intercept the downloaded data and rearrange the output to the layout required before being directed to the intended destination (application).

Bar-Key can be set to output the time and date in a variety of formats including time only or date only as well as forwarding the time and date before the main data or after the main data.

Eg:- B5412002884 06:47 PM Thu, Nov 12, 2009

B5412002850,06:49 PM,11-12-2009

11-12-09,06:50:46 PM,B5412002834

Here we describe a real world Time and Attendance example where the CM-500M can be used to record the movement of Cleaners/Janitors as they attend to their rounds, this example can also apply to Security Patrols, Students, Nurses, Drivers etc. The collection of these types of records is becoming increasingly necessary to ensure compliance with health and safety requirements and other legal and workplace issues.

In the above scenario it can be envisaged that a unique bar code representing each location of a building or route to be followed etc is discretely placed at that location. During the course of the Cleaner/Patrol Officer/Nurse going about their duties the CM-500M is used to scan and record the unique location bar code as well as the time and date the bar code was scanned.

When finally downloaded, the data collected by the CM-500M is evidence that the user of the CM-500M did attend at the specific location at a specific time and date. In the case of two recordings made at the same specific location the difference in time of the recordings is evidence of the time spent at that location.

The unique bar code representing the location should be made with discretion to thwart any fraudulent attempt to cheat. By way of suggestion, the bar codes could be produced using Code 93 symbology which is not easily reproducible without special software, the bar codes could also be changed periodically to reinforce the above. (See Bar-Key PRO options).

The following hypothetical standard text format download example (below) from the CM-500M shows that the user (USER ID 123) was issued the CM-500M at 6:10am 17/5/2007.

The user attended site ID Room 3456 at 6:30am 17/5/2007 and left site ID Room 3456 at 6:56am 17/5/2007, the user then attended site ID Room 3734 at 7:01am 17/5/2007 and left site ID Room 3734 at 7:30am 17/5/2007, etc etc.

```
<Memory>
2007/05/17 06:10:04 USER ID 123
2007/05/17 06:30:15 Room 3456
2007/05/17 06:56:56 Room 3456
2007/05/17 07:01:17 Room 3734
2007/05/17 07:30:28 Room 3734
2007/05/17 07:34:39 Room 3522
2007/05/17 08:00:19 Room 3522
<End>
```

In many cases a report of this type may be sufficient to requirements. However, should a more easily readable and storable report be required (Excel Format), Dataman's Bar-Key USB Wedge software can be used in conjunction with the download to create an Excel Spreadsheet record similar to the example below.

The screenshot shows a Microsoft Excel spreadsheet titled "CM-500M Time Sheet Sup 2.xls". The spreadsheet has the following data:

	A	B	C	D	E
1	User I.D.	Location	Time	Date	
2	USER ID 123	Room 3456	6:30:15 AM	May 17, 2007	
3	USER ID 123	Room 3456	6:56:56 AM	May 17, 2007	
4	USER ID 123	Room 3734	7:01:17 AM	May 17, 2007	
5	USER ID 123	Room 3734	7:30:28 AM	May 17, 2007	
6	USER ID 123	Room 3522	7:34:39 AM	May 17, 2007	
7	USER ID 123	Room 3522	8:00:19 AM	May 17, 2007	
8					
9					

Without too much change the above example can be subtly altered to implement a Loan Register, for this application we want to record the User I.D. the Asset plus Time and Date of issue. Standard text format download from the CM-500M would look similar to that below.

```
<Memory>
2009/10/21 09:15:04 USER ID 123
2009/10/21 09:15:07 Asset No 145
2009/10/21 09:21:18 USER ID 114
2009/10/21 09:21:20 Asset No 121
2009/10/21 10:10:04 USER ID 104
2009/10/21 10:14:15 Asset No 138
<End>
```

However, by incorporating Bar-Key in conjunction with the downloaded data an Excel Spreadsheet report can be produced as per example below.

	A	B	C	D	E
1	User I.D.	Asset	Time	Date	
2	USER ID 123	Asset No 145	9:15:07 AM	21-Oct-09	
3	USER ID 114	Asset No 121	9:21:20 AM	21-Oct-09	
4	USER ID 104	Asset No 138	10:14:15 AM	21-Oct-09	
5					
6					

Finally the application most widely realised with the CM-500M is Asset Collection reporting, in the CM-500M's most basic mode asset number bar codes can be scanned in succession with or without Time and Date stamping.

In the real world however it is often required to record the location of the asset at the same time. In one example it could be envisaged that the user carry an A4 tablet with them, on the tablet would be a sheet of **unique** bar codes representing the various locations to be audited.

**** Contact Dataman for required formatting details for above unique bar codes ****

Prior to recording (scanning) the assets at a particular location the bar code representing that location is scanned by the CM-500M, it would only be necessary to scan this once. Following this the asset bar codes at this location are then scanned, if or when a location is changed the **unique** bar code representing the new location is scanned (once) by the CM-500M followed by the asset bar codes at the new location. Time and Date reporting is optional.

	A	B	C	D	E
1	Location	Asset	Time	Date	
2	Shelf ID 24	Asset No 145	9:15:07 AM	21-Oct-09	
3	Shelf ID 24	Asset No 15	9:18:09 AM	21-Oct-09	
4	Shelf ID 24	Asset No 95	9:22:17 AM	21-Oct-09	
5	Shelf ID 24	Asset No 115	9:25:28 AM	21-Oct-09	
6	Shelf ID 24	Asset No 103	9:36:29 AM	21-Oct-09	
7	Shelf ID 25	Asset No 121	9:40:02 AM	21-Oct-09	
8	Shelf ID 25	Asset No 11	9:45:07 AM	21-Oct-09	
9	Shelf ID 25	Asset No 22	9:48:21 AM	21-Oct-09	
10	Shelf ID 25	Asset No 123	9:52:14 AM	21-Oct-09	
11	Shelf ID 26	Asset No 18	10:14:15 AM	21-Oct-09	
12	Shelf ID 26	Asset No 72	10:19:41 AM	21-Oct-09	
13	Shelf ID 26	Asset No 81	10:25:11 AM	21-Oct-09	
14					
15					

These instructions and the accompanying bar code command charts have been created by Dataman Barcode Systems and are copyright. Copies should be made and laminated.

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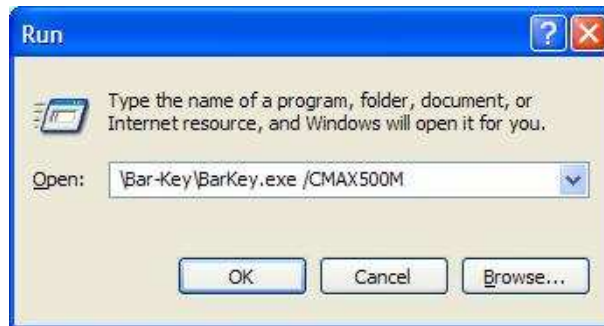
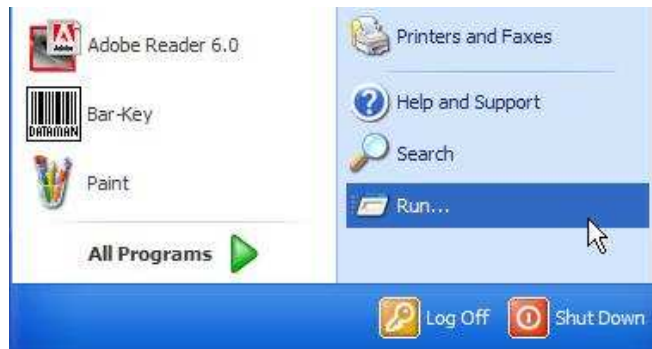
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Operating the Nexa CM-500M scanner with Bar-Key USB Wedge

Once Bar-Key has been installed it must be configured using a directive command to work with the CM-500M scanner.

A command line directive can be appended to the Bar-Key startup command in two ways:-

a). From the Start and Run Task Bar.



Enter the full appropriate path and program name with the command line directive /CMAX500M, note the **space** between **.exe** and **/CMAX500M**. Then start the Bar-Key program by clicking the OK button.

OR

b). From the Desktop using the shortcut icon.

Using the right mouse button click on the Desktop Bar-Key shortcut icon to show the Bar-Key Properties.



Select Properties.



Add the command line directive /CMAX500M to the Target Text Box as shown below, note the **space** between **.exe** and **/CMAX500M**.

Not all systems will display the path and program names within "quotes", for those systems that do as shown here add the command line directive outside of the quotes.

Click the Apply button to confirm the NEW properties settings, the Bar-Key shortcut icon can now be used to start Bar-Key with the required command line directive which in this case is **/CMAX500M**.

Once the command line directive has been set all subsequent start ups of the Bar-Key program will default to using the desired bar code reader. Should a different model of bar code reader be needed to work with Bar-Key then the command line directive will have to be edited/changed accordingly.

Bar-Key must be operating and resident in the background in order for it to process the incoming barcode data from the bar code reader and pass it on to the user's recipient application. If the Bar-Key program is minimised the Bar-Key icon will be located on the Windows System Tray, clicking on the icon will cause the program's form to reassume its normal dimensions on the desktop.



Warning:- If the bar code scanner is to be used with the Bar-Key program for the very first time it must be **prepared** and **initialised** with the appropriate configuration settings.

Using the accompanying bar code command charts page titled **Bar-Key CM-500M Instruction Commands** locate the column of bar codes with the header **Configure for use with Bar-Key**. Scan each bar code from top to bottom beginning with the bar code titled **Start Instruction Mode** and ending with the bar code titled **Finish**.

This will allow the Bar-Key utility to recognise data sent from the CM500M. If not already done note on the same sheet the set of command bar codes that allow the CM500M's internal clock to be initialised with the correct regional time and date. Once the correct time and date has been set the adjacent command bar codes to configure the CM500M's time and date formats for use with Bar-Key should be set.

Using the accompanying bar code command charts page titled **Bar-Key CM-500M Extended Asset Entry Chart** locate the column of bar codes with the header **Inter Record Download Delay**. Scan each bar code from top to bottom to set the CM500M to include an additional inter record download delay period to provide sufficient time for the receiving application program to process the downloaded data.

In order to use the CM500M to create reports like those identified at the beginning of this supplemental guide the Bar-Key Help File should be consulted. By incorporating the Bar-Key **Include Prefix Data** and **Include Postfix Data** options sophisticated and meaningful records can be constructed.

When Bar-Key is used to create reports where the individual record contains multiple fields similar to the examples at the beginning of this guide.

ie: LOCATION, ASSET, TIME, DATE,

The Bar-Key **Prefix** array feature is used to manage the LOCATION field and the Bar-Key **Postfix** array feature is used to manage the optional TIME & DATE fields.

The way this is accomplished is by entering in the Bar-Key Prefix arrays with the location data and entering in the designated/selected Postfix array with the required time & date format. (Reference the Bar-Key Help file).

As a result of completing the above, when the CM-500M portable scanner is used with Bar-Key to store asset data the currently selected Prefix array will hold the associated location.

During the course of recording assets the accompanying bar code command chart page titled **Bar-Key CM-500M Extended Asset Entry Chart** can be utilised to select and change the designated Prefix array and hence the current location data.

For users of the standard version of Bar-Key the maximum number of location fields is limited to 16 (the number of prefix arrays available). In cases where the limit of 16 possible locations is insufficient an upgrade to Bar-Key version 3.17 PRO or later will permit an unlimited number of field variations for the location I.D. This is accomplished by using an A4 tablet of **unique** bar codes representing the various locations to be audited or by scanning a specially formatted Bar-Key PRO compatible bar code at the location where the asset is located.

**** Contact Dataman for formatting details of the above unique bar codes & Bar-Key PRO ****

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Bar-Key CM-500M Extended Asset Entry Chart



Barcode by Dataman





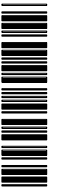











When using the CM-500M to work with Bar-Key's remote Prefix array selection feature an additional Inter Record download delay period is recommended, scan each bar code in the column below from top to bottom to program in the required delay period.

Prefix Array Selection (1 - 16)	Inter Record Download Delay
1 	
2 	10 
3 	11 
4 	12 
5 	13 
6 	14 
7 	15 
8 	16 

Bar-Key CM-500M Instruction Commands

Barcode by Dataman

To enable the CM-500M to function with Bar-Key scan each bar code in the column below from top to bottom.

<p>Enable Code 93</p> 	<p>IBM PC ONLY</p> 	<p>Download Data to Host Computer</p> 
<p>Start Instruction Mode</p>  <p>Enable Code 93</p>  <p>Finish</p> 	<p>CLEAR</p> 	<p>SEND</p> 
<p>Disable Download Header</p> 	<p>Start Instruction Mode</p>  <p><Memory></p>	<p>Finish</p>  <p><Ends></p>
<p>Disable TimeStamp</p> 	<p>Start Instruction Mode</p> 	<p>Enable TimeStamp</p> 
<p>Finish</p> 	<p>SEND</p> 	

Warning:- Timestamp must be enabled to report correct recorded time and date of data.