Quick Start Guide for the ROV MS2200

The configuration instructions included with the ROV are for reference purposes, all ROV MS2200 laser scanners supplied by Dataman Barcode Systems have already been tested and set up to work with the supplied USB cable, the ROV DOES NOT require any further initial programming and can be used immediately.

The **extra** RS232 serial cable supplied with the ROV must be retained and could be required at a later time, especially if the additional "Time Stamp" feature of the ROV is to be exploited.

The sheet of command bar codes supplied with the instructions should be studied and may be required during the operation of the ROV MS2200, we recommend that a copy be made and laminated to provide greater durability, the original copy should be filed for reference.

Batteries do need to be fitted as per the configuration instructions (see below). The switch on the USB cable **has already been set** to the correct Kbd/HID mode.

Before using the ROV, the scanner must be powered up. If you have not already done so, please undertake the procedures described as follows.

Use alkaline **AAA** batteries or NiMH rechargeable **AAA** batteries in your scanner.
Please remove the batteries when you store your scanner for more than 30 days

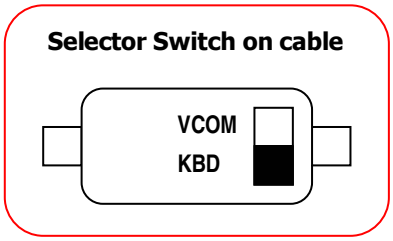
1. Press the battery cover release button, then slide and lift the battery cover.
2. Insert the batteries as shown, noting polarity.
3. To replace the battery cover, make sure that the cover tabs fit into the cover slots, and then slide the cover until it clicks into place.

Initially the ROV MS2200 scanner will be connected to the host computer using the USB cable included. (**DO NOT** connect the ROV scanner to the cable at this point).

USB cable VCOM / KBD Switch

Note: The Microvision USB cable sends bar codes directly to the computer's keyboard buffer so they appear as if they were typed from the keyboard. *For more information, see the USB Cable Quick Start Guide supplied with the cable.*

CONNECTION WITH USB CABLE IN HID or KBD MODE



Ensure the selector switch located on the USB cable is set to **KBD**.

Windows:- Connect the USB cable to a vacant USB port on your computer, the host computer *may* respond with a pop up text balloon in the bottom right of the screen indicating "NEW USB Hardware found".

Now connect the other end of the USB cable to the input port on your ROV Scanner.

Mac:- Connect the USB cable to the USB port on the Mac device. An installation wizard appears on the screen and recognises the cable as an unknown keyboard.

Now connect the other end of the USB cable to the input port on your ROV Scanner. The Mac wizard may prompt for a key to be pressed on the unknown keyboard, instead scan any convenient bar code to complete the Mac installation process.

Mac & Windows:- The bar code reader is now ready to use, simply open the application that you require to capture the bar code data and start scanning. For Windows an ideal application to test the scanner is "Notepad", this basic editor program can be found from ***Start>All Programs>Accessories>Notepad***

How to scan with the ROV Scanner:

- Hold ROV Scanner at an angle to the bar code approx 10 – 15 degrees
- Position ROV Scanner between 12 – 18 cm from the bar code
- Gently (but firmly) press the front of the scan button until it bottoms out
- Move scan beam through the bar code, while slowly bringing the ROV closer to the bar code
- Scan beam must extend at least 1 cm beyond edges of bar code

Second, let's review how to deal with worn, damaged or covered bar codes:

Many times, the bar code may be ripped, faded of poor quality or has been covered with a clear protective overlay. If a bar code does not immediately scan then slowly move the scan beam from the top of the bar code to the bottom. This gives the scanner a better chance to find “good spots” within the bar code, if the protective overlay is not completely flat or clear and gives off false reflections then permanent errors and the total inability to read the bar code underneath can result. In cases like this the solution lies with replacing the covered bar code and not with the bar code reader.

What if there's no scan at all?

- If no scan: check battery orientation & replace batteries, if needed
- Scanning distance may vary depending on bar code size and density. Scanning distances range from: 2.5 – 20 cm
- Protective overlay may be causing excessive bad reflections.
- Good Scan: LED blinks, beeps, and scan beam turns off
- Memory Full: LED blinks 3 times & scanner beeps 3 times

Dataman Barcode Systems

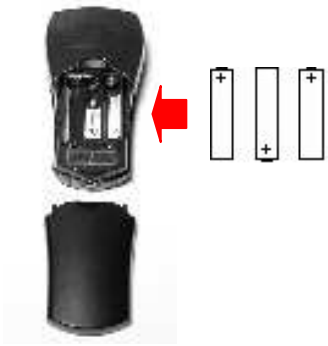
P.O. Box 855
Happy Valley, S.A. 5159
Australia

Tel:- 088 322 7675 Int Tel:- +(618) 8322 7675
Fax:- 088 322 7288 Int Fax:- +(618) 8322 7288
E-mail:- sales@datamanbarcode.com.au
Web:- www.datamanbarcode.com.au

Configuring the ROV MS2200 Laser Barcode Scanner

Before starting the configuration, the scanner must be powered up. If you have not already done so, please undertake the procedures described as follows.

When first received the ROV MS2200 will require batteries to be fitted as illustrated



Use alkaline **AAA** batteries or NiMH rechargeable **AAA** batteries in your scanner.
Please remove the batteries when you store your scanner for more than 30 days

1. Press the battery cover release button, then slide and lift the battery cover.
2. Insert the batteries as shown, noting polarity.
3. To replace the battery cover, make sure that the cover tabs fit into the cover slots, and then slide the cover until it clicks into place.

The ROV MS2200 scanner can be connected to the host computer using the serial cable (included as standard) or the USB cable (sold separately).

System Requirements are:-

Windows 2000, Windows XP service pack 1 or 2 for (KBD and VCOM), Visa Mac OS X, Linux (KBD only).

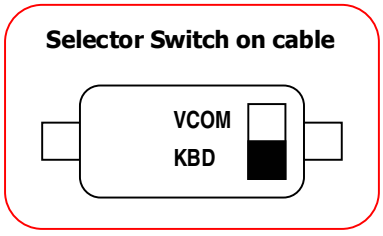
AMD or Intel Pentium 133Mhz or better: USB 1,1 or higher port.

Microvision USB cables allow the ROV MS2200 to be connected to the USB port on your Windows or Mac computer, the USB cables are available in two versions, straight for desktops or coiled for laptops.

Note: The Microvision USB cables operate in two modes: (VCOM) serial mode or keyboard mode. In (VCOM) serial mode, the USB cable emulates a serial cable. In KBD / HID mode, the USB cable sends bar codes directly to the computer's keyboard buffer so they appear as if they were typed from the keyboard. *For more information, see the USB Cable Quick Start Guide supplied with the cable.*

The simplest, preferred and recommended mode of operating the USB cable is in HID (Human Interface Device) or KBD mode described as follows. (**DO NOT** connect the ROV scanner to the cable at this point).

CONNECTION WITH USB CABLE HID or KBD MODE



Move the selector switch located on the USB cable to position **KBD**.

Windows:- Connect the USB cable to a vacant USB port on your computer, the host computer may respond with a pop up text balloon in the bottom right of the screen indicating "NEW USB Hardware found".

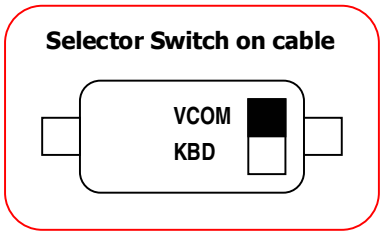
Now connect the other end of the USB cable to the serial port on your ROV Scanner.

Mac:- Connect the USB cable to the USB port on the Mac device. An installation wizard appears on the screen and recognises the cable as an unknown keyboard.

Now connect the other end of the USB cable to the serial port on your ROV Scanner. The Mac wizard may prompt for a key to be pressed on the unknown keyboard, instead scan any convenient bar code to complete the Mac installation process.

Mac & Windows:- The bar code reader is now ready to use, simply open the application that you require to capture the bar code data and start scanning. For Windows an ideal application to test the scanner is "Notepad", this basic editor program can be found from ***Start>All Programs>Accessories>Notepad***

CONNECTION WITH USB CABLE VCOM MODE



Move the selector switch located on the USB cable to position **VCOM**.

Windows Only:- Connect the USB cable to a vacant USB port on your computer, the new hardware wizard starts. At this stage wait until the message "Your hardware is installed and ready to use" is displayed.

Start a Web browser, go to www.datamanbarcode.com.au and download the Microvision USBVCOM Driver.

When the download is complete, double-click the installer, wait until the finish button is active, click Finish.

When the warning message about unsigned drivers appears, click continue.

When the installer window disappears the installation is complete.

NOTE: If the USB cable is disconnected it is important to ensure that the cable is reconnected to the same physical port. If a different port is used it will be necessary to reinstall the USBVCOM driver.

Now connect the other end of the USB cable to the serial port on your ROV Scanner.

WARNING: When using the USB cable for interfacing the ROV MS2200 scanner it is recommended that the mode of operation (KBD or VCOM) is carefully selected and adhered to. If the mode of operation is switched frequently it can lead to system errors that may require restarting the system.

CONNECTION WITH SERIAL CABLE

Connect the serial cable to a vacant serial port on your host computer.

Connect the other end of the serial cable to the serial port on your ROV Scanner. (That's it).

NOTE: Before using the serial cable or the USB cable in VCOM serial mode, ensure that your host application is able to communicate with the serial port to receive the bar code data. If the host application is unable to communicate with the serial port it may be necessary to use the USB cable in KBD mode or to use Scanner Wedge software.

The Microvision Scanner Wedge Software Utility

Microvision's Scanner Wedge software will enable you to connect the ROV MS2200 scanner to a host computer and capture bar code data. Scanner Wedge receives the bar code data from the ROV scanner and translates the data into keyboard input. Essentially Scanner Wedge acts as an intermediary between the ROV scanner and the Windows® application when the scanner is either interfaced with the serial cable or the USB cable set to VCOM serial mode.

Microvision's freely available Scanner Wedge software can be downloaded from Dataman Barcode System's web site at www.datamanbarcode.com.au. See page for Portable Barcode Readers.

NOTE: If Scanner Wedge is engaged to communicate with a Windows® application it will be necessary to always ensure that Scanner Wedge is started and running before the Windows® application is used.

In contrast this requirement becomes unnecessary when the ROV scanner is interfaced using the USB cable in HID KBD mode. Scanner Wedge **is not required** for USB in HID KBD mode.

For instruction on operation of Microvision "Scanner Wedge" see separate manual,

Even if the serial cable is not used for normal day to day operation it should still be retained. Periodic revisions and updates to the ROV firmware can occur, updates can be undertaken by the user and are accessed from Microvision's web site and are directly communicated to the ROV via the serial cable.

OPERATING THE ROV MS2200 BAR CODE SCANNER

Before you start scanning barcodes in HID KBD or VCOM serial mode, complete the following steps.

Firstly, scan the “RFS” control bar code followed by “ROV Download Delay 500 Milliseconds” control bar code, these bar codes can be located on the page 4 (last page) of this *Configuration Guide*.

These two commands reset the ROV scanner and then instruct it to add a 500-millisecond delay between each bar code downloaded when operating the ROV in data download batch mode.

Lastly and importantly, scan the “ROV Bar Code Prefix (STX) is False” bar code also located on page 4 of this *Configuration Guide*.

This command prevents the scanner from adding unwanted data to the bar codes, for Windows applications this stops characters in bold. For Mac applications this stops unwanted cursor movements from being added to bar codes.

When the ROV MS2200 scanner is connected to the host computer any bar code scanned is transmitted immediately to the computer. However, when the ROV scanner is disconnected from the cable the ROV automatically enters into batch mode and every bar code scanned is stored in non-volatile memory.

The actual number of bar codes that can be stored in memory varies and depends upon the length of the bar code. When the scanner’s memory is full the LED blinks three times and the beeper sounds three times. The scanner cannot perform any additional scans when it is full.

Extended Memory Capacity

Extended memory scanners contain 64KB of non-volatile memory and can store roughly 4000 bar codes.

This table shows the stored bar code capacity for specific types of bar codes

	Bar Codes Stored	
Symbology	No Timestamps	With Timestamps
UPC-A	4349	2965
UPC-E	6523	3837
EAN-8	5930	3624
EAN-13	4077	2836
Code 39,	7249 (6 characters)	4077 (6 characters)
Code 128, ITF	3624 (15 characters)	2609 (15 characters)
	2836 (20 characters)	2174 (20 characters)
RSS-14	3837	2718

Data that is held in the ROV scanner’s non-volatile memory is automatically uploaded to the host computer when the ROV scanner is reconnected to the interface cable if set to do so.

WARNING: Data in non-volatile memory is automatically cleared upon data uploading, make sure the receiving host application is prepared correctly before reconnecting the ROV scanner or the bar code data in scanner memory could be lost.

Good Scan	1 blink	1 beep
Memory Full	3 blinks	3 beeps
Uploading	2 blinks every second	None
Upload Complete	1 blink	3 different beeps
Sleeping	None	None
Low Battery (after good scan) or other error	2 blinks	2 different beeps (be-boop)
Dead Battery	Double-blinks 3 times	2 different beeps 3 times (be-boop)

TO BEGIN SCANNING

1. Point the scanner at the bar code to be read.

2. Press and hold the Scan button and make sure that the red laser line appears.

3. Aim the laser line so that it crosses the entire bar code. The scanner beeps and the LED indicator flashes when the scan is successful.

4. When you hear the scanner beep, or see the LED indicator flash, release the Scan button.

5. If the scanner is already connected to the host computer the bar code data is immediately transmitted to the host computer.

6. If the scanner **is not** connected to the host computer the ROV enters into batch mode and every bar code that is scanned is stored in the ROV's non-volatile memory and can be downloaded later.

7. If the ROV has been preset for "Auto Download ON" then all bar codes stored in non-volatile memory will be transmitted to the host computer immediately upon reconnecting the scanner to the interface cable **that must already be attached** to the host computer.

The following information should be noted

If the ROV has been preset for "Auto Download ON" then the USB interface cable must be attached to the host computer **before** the ROV scanner is connected to achieve a successful data download from batch mode. If the interface cable is attached to the ROV scanner prior to connecting to the host computer the data will not be automatically downloaded. If the ROV has been preset for "Auto Download OFF" then data downloading is controlled by scanning the "Download Batch Data" command bar code located on the separately supplied Bar Code Control Chart.

Scanner Battery Information

The scanner was designed for maximum battery life. With three fresh **AAA** alkaline batteries the scanner should deliver 24,000+ scans, or roughly 100-scans / day for 12 months. The ROV MS220-BT Cordless Scanner, with three fresh **AAA** alkaline batteries, should deliver 16,000+ scans, or about 100-scans / day for 8 months.

RFS (Restore Factory Settings)

ROV Download Delay 500 Milliseconds

ROV Set Prefix (STX) False

Dataman Barcode Systems

P.O. Box 855
Happy Valley, S.A. 5159
Australia

Tel:- 088 322 7675 Int Tel:- +(618) 8322 7675
Fax:- 088 322 7288 Int Fax:- +(618) 8322 7288
E-mail:- dmbarcod@bigpond.net.au
Web:- www.datamanbarcode.com.au

ROV Santoprene Boot Protection from accidental knocks and drops.

Also used as cable restraint

DATAMAN ROV-MS2200 Standard Setup Control Chart

Return to Factory Setting

Clear Stored Data

Download Delay Setting 1

Set Prefix (STX), 0

Download Delay Setting 2

Auto Download ON

Set DecodeSupps, False

Auto Download OFF

In order to prepare the ROV MS2200 to operate on the Microvision USB S-Cable that has been set to Kbd/HID mode the above command bar codes must be used to initialise the ROV and set it to the required configuration.

Firstly scan the "**Return to Factory Setting**" bar code at the top of the left hand column to effectively return the ROV to default. Next scan **ONE** only of the Download Delay bar codes.

Selecting the appropriate download delay for your program can be done by choosing to scan one of the above (2) Download Delay bar codes. Initially use Delay Setting 1 (500 ms), this should be adequate for most applications.

Download Delay Setting 1 = 500 Milliseconds

Download Delay Setting 2 = 1100 Milliseconds

Scan **"Set DecodeSupps, False"** bar code to prevent reading any supplimentary bar codes when scanning ISBN's for SCIS.

Finally scan the **"Set Prefix (STX), 0"** bar code to avoid unwanted commands being accepted.

The remaining bar codes in the second column dictate how the ROV behaves when used for batch mode data downloads. If the "**Auto Download ON**" (Default) is chosen then the ROV will automatically download all bar codes stored in it's memory as soon as it is reconnected to it's cable.

If the "**Auto Download OFF**" is chosen then the ROV will **NOT** automatically download the bar codes stored in it's memory when it is reconnected to it's cable. Instead the "**DownLoad Batch Data**" command bar code will need to be scanned to initiate the download once the ROV has been reconnected to it's cable.

******** The **"Undelete Batch Data"** command can be used to recover the previously downloaded batch of data so that the data can be downloaded again. For this command to work however, the **"Undelete Batch Data"** command bar code must be scanned immediately after a previous download of data and with the ROV untethered ie: **NOT** connected to the USB cable.

If you wish to immediately resend the previously downloaded data, firstly disconnect the ROV from the USB cable, scan the command bar code **"Undelete Batch Data**" then reconnect the ROV to the cable and scan the **"DownLoad Batch Data"** command bar code to resend the data.

DaTaMaN Barcode Systems

Tel:- 088 322 7675
Fax:- 088 322 7288
P.O. Box 855
Happy Valley S.A. 5159

Email:- sales@datamanbarcode.com.au
Web:- www.datamanbarcode.com.au

******** UnDelete Batch Data

DownLoad Batch Data