



## User's guide

This is a simple to understand, jargon free, tips rich guide for all new users of a Weyfringe Axicon PC Verifier.

Applies to the following verifiers:

PC6000 (x05,x10, x15), PC6500 (x05,x10, x15), PC7000 (x05,x10, x15)

### **SOFTWARE INSTALLATION**

Insert the CD Rom in the disk drive. The installation will run automatically. We recommend that you install the program as prompted by default under C:\Program Files\Axicon\Verifier.

When prompted for passwords: Enter the password for each read head as written at the back of the manual cover page. Please note that if you have purchased the basic version (eg: PC6000 as opposed to PC6015) then there is no password to enter. Depending on the version purchased you will have up to three passwords to enter. Enter the read head serial number and the passwords for this serial number. Repeat for each read head.

### **INSTALLATION OF THE AXICON VERIFIER SOFTWARE ON WINDOWS VISTA**

There have been some isolated incidents where the Verifier Software has not properly installed when running a PC with Windows Vista.

If you find that - although the software seems to install successfully - no files actually appear on your computer, the following steps can be taken to rectify this.

- 1) Insert the Axicon Verifier CD into the CD Drive. Open up My Computer, right-click on the CD Drive and select explore.
- 2) Right-click on the setup.exe file, and select Properties. In the Properties Windows, select the Compatibility tab.
- 3) Make sure the 'Run this program in compatibility mode for:' box is ticked. Select Windows XP from the drop down menu and then click Apply.

If you then run the setup.exe file, the software should install correctly.

## **SOFTWARE UPDATES**

The software is updated on a regular basis. You will find the latest version for free download on the website on <http://www.axicon.co.uk/download.htm>

To find out if you have the latest version already installed, open the program on your PC and click on the



icon. Check the software version number (example 2.0.14.1) on your software against the version for download on the website.

The file size is approx. 8 Mb. Once you have downloaded the setup.exe file, run it (double click on the file from windows explorer) and install the program update under C:\Program Files\Axicon\Verifier. This will install the new version over the old one.

## **READER INSTALLATION**

Please always handle the read head with care to avoid damaging its optics and losing its accuracy.

You plug the verifier to the serial or the USB port of your computer, depending on your verifier connection. For USB connected verifiers, you will have to install the USB drivers for each verifier that you connect to the PC. The drivers are loaded on the installation CD or can be downloaded from our web download page. If you have the installation CD, we recommend that you insert it in the PC prior to first connecting the verifier. Then you will be guided through the installation of the driver.

Once the reader has been connected to the PC and the drivers installed (for USB verifiers only), open the *Axicon PC Verifier* program. the software will identify the read head and display its serial number. Verification can start.

## **READER NOT FOUND**

If the message "reader not found" appears check that the reader is properly connected and powered, that the red L.E.D.s are on and try again. If it still fails, contact Weyfringe.

## **TWO READ HEADS CONNECTED TO THE SERIAL PORT THROUGH A SWITCH**

Please note that the switch has to be supplied by Weyfringe.

In case your equipment is configured as such, we recommend that once you have installed the equipment you proceed as follows:

Say you want to use reader A. Turn the switch on A, then open the program. Reader A will be powered and you are ready to verify. You can check that the serial number of reader A is displayed in the command window of the verifier. If you then need to use reader B, close the program down. This will stop powering reader A. Then turn the switch box to B and then open the program again to start verification with B. When you have finished, close the program. Both units should be out of power.

If the L.E.D.s of a reader are still on, make sure the switch box points to this reader, then open the program and close it. This should switch the reader off. If not then you are running an old version of the verifier and we recommend that you download the latest version.

## CALIBRATION

You must calibrate the reader when you first use it. To calibrate the reader you must use the calibration card supplied. It is kept inside the manual. Please keep it away from the light to protect its photographic properties and maintain it in pristine conditions. If at any stage the calibration card is damaged or if you think its properties might have altered, please order a fresh one from Weyfringe.



Image of the Axicon Calibration Sheet.

### To calibrate:

1. Open the program and click on Calibrate in the Options menu of the command window. The calibration dialog box will be displayed.
2. Enter the Minimum and Maximum values as written at the back of the calibration sheet. By default the values are set at 3 and 92 (or 90 for later versions) but the values of your calibration cards could be different and should be set accordingly.
3. Place the reader neatly over the calibration barcode (use the big one for the PC7000, the medium one for the PC6500, the small one for the PC 6000)
4. Read the code ten times. You do not need to move the reader when you do 10 scans for a calibration.
5. Click OK.

If you move your reader from one PC to another, you have to calibrate the reader for each PC it is used with.

## HOW OFTEN DO YOU NEED TO CALIBRATE

There is no recommended frequency for the calibration as it is dependant on how often the verifier is used and how it is stored. The reader properties will be altered by significant changes in temperature or humidity or pressure or if the ambient light at calibration is very different to the one at the verification stage. (see chapter about ambient light). To monitor you verifier and set up an adequate frequency for calibration, we recommend that after calibration, you make a 10 scan verification of the calibration code and save the results. Then at a later stage, you scan again the same calibration code and check the results against the original ones. If there are significant differences in the percentage values of for example the decodability parameter, then the time has come to re-calibrate the read head.

Please note that the calibration option in the Setup screen of the software allows you to setup a warning message when calibration is required at the specified date.

## **USING THE UNIT**

### **PC7000**

Place the verifier neatly over the surface of the barcode as per the illustration. make sure the scan line is straight across the code. The scan line is about 7mm from the front of the unit. Always close the hinged flap at the front of the unit.



### **PC6500**

Place the verifier neatly over the surface of the barcode as per the illustration. make sure the scan line is straight across the code. The scan line is about 7mm from the front of the unit.



### **PC6000**

Place the verifier neatly over the surface of the barcode as per the illustration. Make sure that when possible, the 4 corners are in contact with the surface so that you minimise the possible influence of ambient light. Make sure the scan line is straight across the code. The scan line is about 3mm from the front of the unit.



**YES**

The 4 corners of the unit touch the scanning surface. The barcode is centred.



**NO**

There is no contact between the PC 6000 and the scanning surface.



**NO**

The read head is leaning backwards. The front of the unit is not in contact with the scanning surface.



**NO**

The read head is leaning frontwards. The back of the unit is not in contact with the scanning surface.

## **ABOUT THE AMBIENT LIGHT**

When we verify a printed barcode, we look at its physical properties, independently from the environment particularly the ambient light. Ambient light at the scanning stage at the retailers cannot be anticipated and should not influence the results at the verification stage.

The Axicon verifiers have been built to avoid the influence of the ambient light as much as possible. If properly used, our verifiers cover most of the barcode, thus creating an enclosed area around the barcode.

However, there is still some minimal access for the ambient light. Also with some packaging, it is impossible to cover properly the scanning area and finally some shiny or even worse non opaque materials leave us with little chance to protect the scanning from the ambient light. So we recommend that you avoid scanning too closely or directly under a source of light. particularly when scanning under sunlight, fluorescent light, high pressure sodium or mercury vapour lamps.

## **HOW MANY SCANS SHOULD YOU AVERAGE ON ?**

It is recommended to scan the barcode at different heights and average the results in order to give a more accurate overall grading. You can average up to 10 scans of the same barcode. The ISO 15416 standard does not specify how many scans should be averaged over but gives a methodology based on results achieved on previous print runs of the same symbol. The amount to average over goes from 2 scans to 10 scans as the code goes from a consistently good barcode to a consistently defective barcode.

Averaging is about consistency of the grading throughout the height of the barcode. Take 3 scans of the barcode: one at the top, one in the middle and one at the bottom. If the results are good (A or B) and very consistent (same grade each scan) then a 3 scans average is enough, if the result are not so good (C, D or F) and not so consistent (1 grade difference) then go for a 5 scan average, if the results are not consistent (results with 2 grade difference or more) then go for a 10 scan average.

## **IF A BARCODE DOES NOT READ ON YOUR VERIFIER ?**

There are several possibilities. First, make sure that the verifier is being properly used and try again at another height of the barcode, to make sure that the scanning line "catches" the barcode. If it still fails to decode, then it means that the barcode is defective. Please note that even if there is no read, you can

display the reflectance profile by clicking the relevant box at the top of the reflectance profile screen. This will give you the reflectance values of the symbol and some good indications as to where the problem might have occurred.

**CASE STUDY.** Barcodes printed on film often present problems. The usual problems occur when:

- .       •       The material is non opaque. The scanning light goes through and does not reflect properly back into the unit. In that case, scan the symbol on top of a black background and scan it also on top of a white background and keep the worst result. Alternatively, in the case of a packaging that has not been filled, if you know the colour of the product (eg:creams, lotions,..) use this colour for the background.
- .       •       The material is shiny. The reflection is distorted and gives an inaccurate perception of the dimensions.
- .       •       The barcode is printed on a film layer stuck on top of an opaque packaging: If the barcode is printed under the film, the scanning light has to go through a thickness of film before it reaches the barcode and there is a double effect of refraction and reflection of the light. The barcode is printed on top of the film, but the light that goes through is then caught by the bars when it goes back through the symbol after being reflected. The consequence is that a verifier (hence any scanner) will have an exaggerated perception of the dimension of the bars that will give a poor decodability grading.

### **SAVING THE DATA**

*Axicon PC Verifier* is dedicated to giving you all the tools to save, analyse and circulate the verification data. When you scan a barcode for verification, the results can be saved on your PC or on a disc as a .SCN file, that can then be opened on any PC where the *Axicon PC verifier* is loaded. When you open the file, all the data is displayed and can be printed off, as if you had just proceeded to verifying the barcode. This enables you to have remote diagnostic immediately (the file can be sent by email). This also allows you to store verification data for further use. The software can be set up to save all the scans automatically or this can be done manually. The manual saving allows you to retain only the important verifications and to give a relevant file name.

An optional program Scan File Data Extractor has been developed to be used in conjunction with *Axicon PC Verifier*. This program allows you to select verification files in a table and is a useful tool for statistical analysis. Contact Weyfringe for more information.