

axicon

THE BARCODE EXPERTS



Axicon 12000 & 12500 2D barcode verifier user guide





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Introduction

An Axicon verifier is a high precision quality control device and should be handled with due care.

Only use power and data cables supplied by Axicon. Use of non-approved accessories will invalidate the warranty.

If the verifier is dropped (or subjected to similar misuse) the accuracy of the results may be affected. The unit should be returned to Axicon immediately for servicing.

Axicon recommends that the verifier is factory recalibrated annually. The unit should be returned to Axicon or to your approved Axicon reseller for this check to be performed.

The 12000 will read symbols up to 18 mm tall by 24 mm wide, while the 12500 will read those up to 24 mm tall and 40 mm wide. There must also be no more than four data regions in each symbol. In most practical applications these limitations will not be a problem, but if you need to verify larger Data Matrix symbols please contact us.

Serial Number and activation password

Verifier serial number:

Camera serial number:

Activation key:

What is in the case.

- Axicon 12000 or 12500 2D verifier.
- Power supply and fly lead.
- Mains lead.
- Wallet containing this documentation booklet, software CD and the calibration card.

Optional extras

Axicon also offer the following optional extras to be used in conjunction with the system:

- Installation qualification and operational qualification procedural documentation.
- Performance Qualification Test Kit - Comprising a set of test cards traceable to international standards and full procedural instructions.
- Set of Reference Test Cards - traceable to international standards.



Installation

System requirements

Windows Currently supported Operating System (either 32 or 64 bit)

512 MB RAM minimum

USB 2.0 port

.NET Framework version 4.0 or later

The Axicon 2D Verifier application requires the .NET Framework version 4.0 or later to be installed. The Axicon software installation process will automatically check whether the .NET framework is present, and install it if is not present.

Insert the CD into an appropriate drive and the install program should start automatically. If not run **Setup.exe**. Leave the installation CD in the drive until after the hardware has been connected so that the USB driver may be installed.

Hardware

Connect the metal connector on the end of the verifier fly lead to the metal connector on the power supply lead.

Plug the mains lead into the power supply (the switching adaptor).

Connect the mains lead to the mains power supply.

Connect the USB lead from the verifier to a USB2 port on the computer.

Wait for the USB2 drivers to be installed from the CD-ROM.

Getting started

The small green light next to the word **ON** will be illuminated once the application is running. When the application is first started, the first screen will ask you to enter the password for the particular verifier. This is provided at the beginning of this user guide.

The next window that appears, **Axicon 2D verifier**, is the command window, and it will include a message asking you to calibrate the verifier.

You will need to activate the verifier camera by pressing the **Start** button on the verifier itself, or by clicking on the **Get scan** icon at the top of the command window. The lights will flash until you press the button again, when the verifier will attempt to decode and analyse the image it sees.

You will be able to see the image that the verifier will use in the command window and you can open a separate viewing window called **Image**. Go to **View** then **Image** from the command window or press F9.

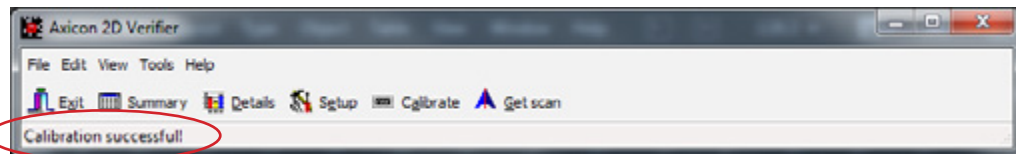


Calibration

Calibration should be carried out after installation and at regular intervals. When the software detects an un-calibrated reader the following dialogue box will appear **Reader XXXX (serial number) has not been calibrated**. You must click OK to continue. You will also need your calibration card which should be located in your documentation wallet.

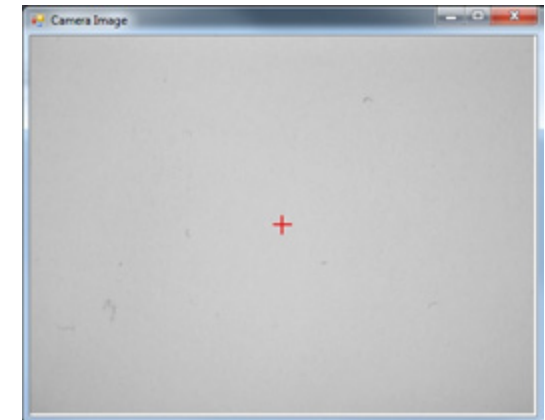
Place the verifier over a section of the calibration card that includes all or part of a linear barcode (It is not necessary to use a Data Matrix symbol for the calibration). From the command window, go to **Tools** then **Calibrate** or press F2.

Check that the maximum and minimum figures in the **Confirm** window match those of the calibration card, and if necessary adjust them by following the instructions that are provided. The red lights will flash during this process. When calibration is successful a message will appear on the command window.



Using the verifier

A red cross indicates where the centre of the camera image lies and the verifier should be placed so that the barcode is approximately in the centre of this view. Press the **Start** button or click on the **Get scan** icon to turn on the lights. Press the **Start** button again or click on the **Get scan** icon to ask the verifier to decode the image. If this is successful the image will now be superimposed with a grid pattern and the results of the decode and the analysis will be displayed in various reporting windows.



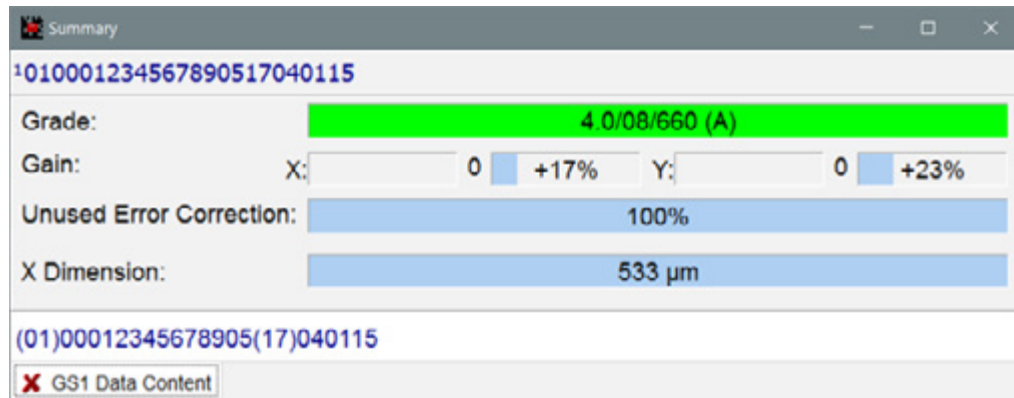
There are several windows that can be viewed when using the application.

- The command window, called **Axicon 2D Verifier**, contains the menus and controls for the application and this will always open when the application is launched.
- The **Summary** window will provide the data that has been decoded, the symbol grade, the print gain in both the x and y dimensions, the Unused Error Correction, and the x-dimension of the symbol in μm . The print gain is measured as a percentage of the x-dimension.

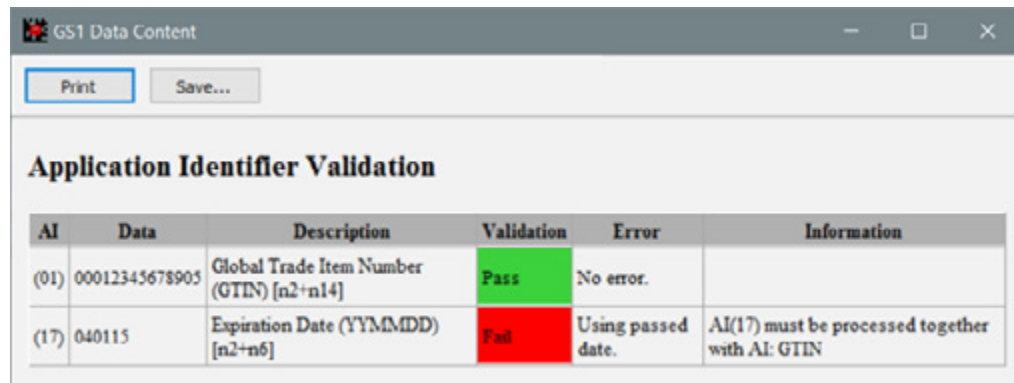


Using the verifier

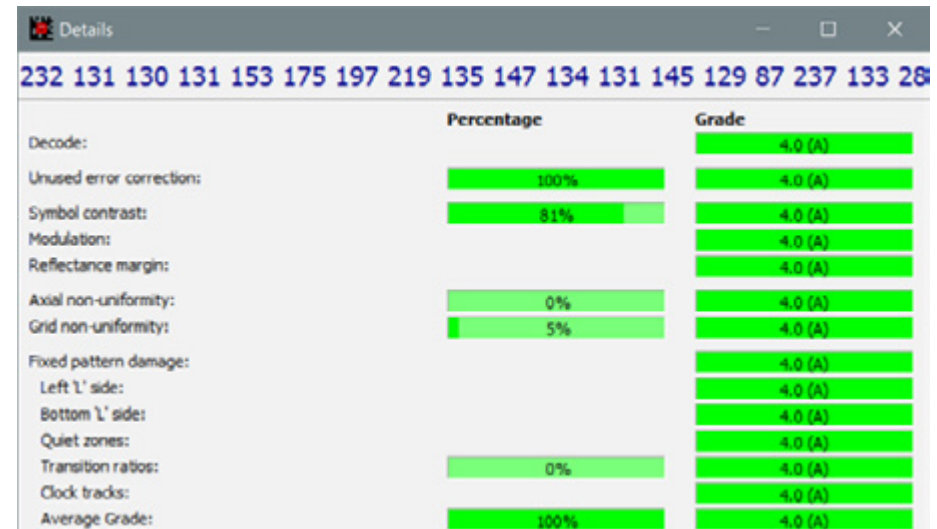
The **Summary** window provides a grade for the symbol and other information. If the data shown at the top of the window is prefixed with a superscript 1, like this, ¹10100012345..., the data is shown in a GS1 DataMatrix symbol, with ¹ representing the Function 1 character.



If the plugin for checking GS1 Data Content has been selected, the lower white panel shows the AIs in brackets, and indicates whether the data content is correct or not. Clicking in the white panel will open another window, **GS1 Data Content**, that provides more details as shown below.



The **Details** window provides all the details of the parameters that have been measured and graded by the verifier. The data shown at the top of this window is not the data content of the barcode, but is the codewords used in the symbol to represent the encoded data. If there are too many codewords to be displayed at the top of this window in one line, click on this area and a window, **Code Words**, will appear that shows them all.



Printing verification reports

When you have verified a barcode, or opened a previously saved report, you can print it from the command window. Go to **File**, and then **Print** or **Print Setup** as required. The verification report will include the grade for the symbol expressed in the format grade/aperture/wavelength of light, where grade is the overall symbol grade, aperture is the aperture reference number (or the diameter in thousandths of an inch), and wavelength of light is the peak light wavelength measured in nanometres.

The date and time of the verification, the user name, the results of any plugin that has been used, and a summary of all the individual parameters that have been graded will also be provided.



Setup

This window has eight different tabs that may be used to make changes to the software. The first concerns **Appearance** and appears below. Here you can change the colours used to indicate pass, warning or fail, and also change the measurement units. The default is to use metric measurements.

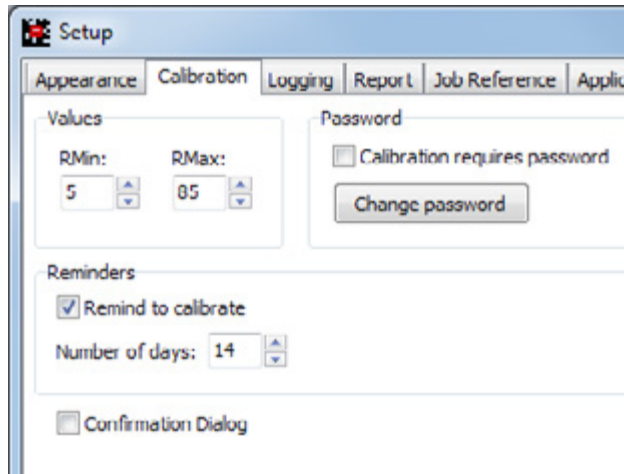
The **Calibration** tab allows you to change the maximum and minimum reflectance values to match those on the calibration card you are using, and set the interval between calibrations.

The **Logging** tab allows you to change where saved files will be saved. These will be in a .a2d (Axicon 2D Verifier Saved Scan) format. The filename to be used when files are saved automatically can be selected to be either a sequential number or formed from the decoded barcode data, and the date and time of scan.

The sequential numbering is hexadecimal and will help to meet the requirements of FDA Title 21 CFR Part 11. Further controls are also recommended if FDA Title 21 CFR Part 11 compliance is required, and these are explained on the Axicon website. If the **Data, date & time** option is chosen, the file will named like this: xxxxxx-CCYYMMDD-HHMMSS, where xxxxxx represents the encoded data.

The **Run Command when files are saved:** option allows you to run any Windows program each time a file is saved.

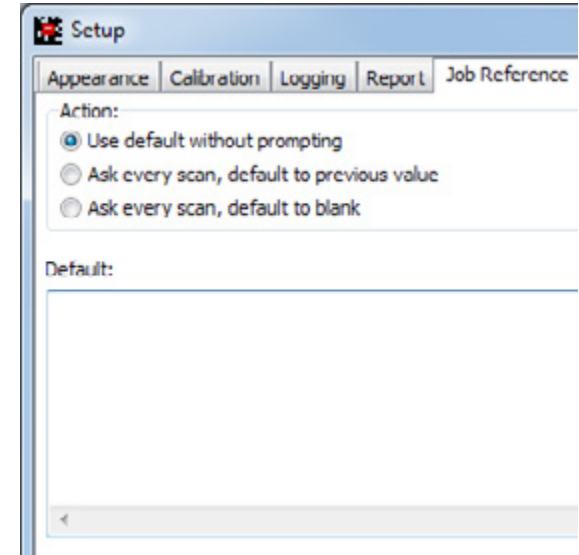
If **Show 'Save As...' Dialogue** is ticked, a standard Windows dialogue box will appear when a file is automatically saved, allowing you to choose a different file name from the automatically generated one.



The Report tab

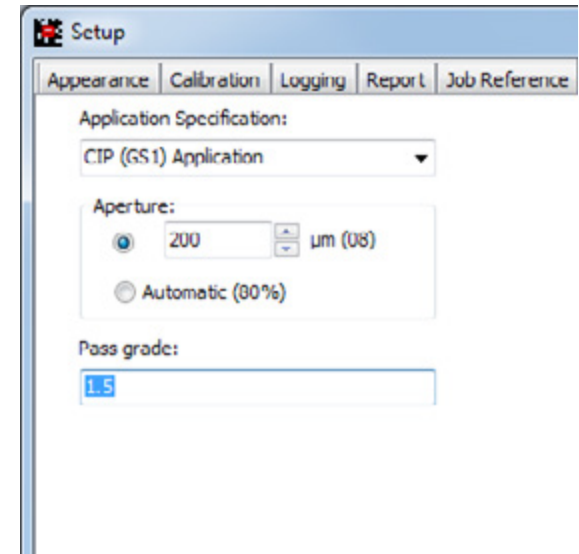
This is intended to be used with a Report Generator file which you will have specially requested from Axicon.

The **Job Reference** tab allows you to add the user's name, or other details about the barcodes being verified to the saved verification report.



The Application specification tab

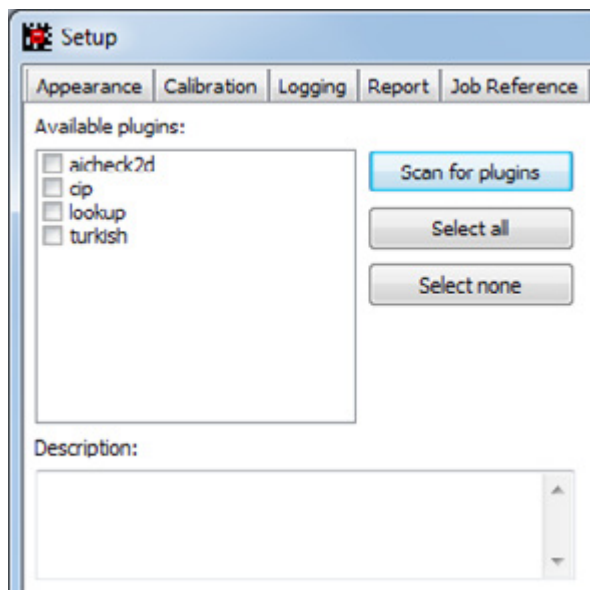
This tab allows you to change the aperture size (in effect, the size of the sampling area) if you do not want to use the default for any particular application. The default will be 200 µm (8 mils), as defined by the GS1 General Specifications. The pass grade may also be changed from the default value of 1.5.





Setup

The **Plugins** tab allows you to select which, if any, of the plugins should be used to check the data content of the symbol. If the **aicheck2d** is ticked, the data content will be checked against the requirements of the GS1 General Specifications. **cip** will check the data content in accordance with the French Club Inter-Pharmaceutique requirements for pharmaceuticals, **lookup** will check the data against a database you have established for this purpose, and **turkish** will check for compliance with the Turkish Ministry of Health requirements.



The **Advanced** tab allows you to change the password, if you require one, for the setup. The option for averaging five scans is now redundant as the standard, ISO/IEC 15415, no longer requires this for the verification process.

Axicon warranty

The Axicon 12000 or 12500 is sold with a one year parts and labour warranty against manufacturing defects. This is a return to bench warranty with shipping costs in one direction being borne by the customer/distributor.

Should you need to return the unit to us the original case (plus appropriate packaging) must be used. If the equipment is returned without the original case, we will automatically charge an additional sum for the replacement of this packaging.

We reserve the right to charge an inspection fee for any equipment returned under warranty for which no fault is found.

Please contact us to obtain an RMA (return to manufacturer authorisation) number before returning any equipment. This number must be quoted on all documentation. We cannot accept responsibility for equipment returned without a RMA number.



Software licence agreement

This software is Copyright © 2008-2016 Axicon Auto ID Limited.

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No disassembly or decryption

You may not disassemble or decompile the software without prior written consent from Axicon.

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Your licence will automatically terminate upon any transfer of the equipment/ software. Upon transfer, you must deliver the software, including any copies and related documentation, to the transferee. The transferee must accept these licence terms as a condition of the transfer.

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Axicon may terminate your licence upon notice of failure to comply with any of these licence terms. Upon termination, you must immediately destroy the software, together with all copies, adaptations and merged portions in any form.

Export requirements

You may not export or re-export the software in contravention of any applicable laws or regulations.

This agreement should be construed in accordance with the laws of England.

Disclaimer

In the following the expression 'verifier' means the Axicon hardware and the associated software. We have taken care to ensure that this verifier is free from defects. However since we have no control over the circumstances in which you might use the verifier, you must satisfy yourself that its performance is suitable for your needs. Neither Axicon Auto ID Limited nor the vendor of this verifier can accept any liability for any loss or damage (consequential or otherwise) which may be caused by its use. If the verifier or any part of it is defective in any way, or in some other way does not meet your expectations, the liability of Axicon Auto ID Limited is limited to the cost of the verifier. You should bear this limitation in mind if you use this verifier in any situations where the acceptance or rejection of shipments of goods or your reputation may depend upon the quality of a barcode.

Under no circumstances is this verifier licensed or authorised for use in any situation whatsoever where the health or safety of humans or animals might be put at risk.



Factory re-calibration

All verifiers need servicing every year to ensure that they measure barcode quality in accordance with the relevant ISO/IEC standards. This verifier calibration and alignment service (VCAS) ensures that the verifier is internally dust-free, checks that it is focused correctly, and re-calibrates the hardware to account for any change in the brightness of the LEDs used to illuminate the barcodes.

This factory re-calibration is not the same as user calibration, as it looks at the output of the LEDs and corrects for any variance in their evenness of illumination across the whole field of view. Over time the LEDs will fade but they will not fade uniformly. User calibration ensures that the verifier is measuring the darkest and brightest reflectances correctly but it cannot correct for any variance in the illumination.

After your verifier has been serviced, we will return it with the latest version of the software on CD together with a new calibration card, and a new user guide that will include the new certificate of ISO/IEC conformance. The latest software can always be downloaded free of charge from our website, www.axicon.com.

To arrange for your verifier to be serviced:

1. Contact us on
Telephone: +44 (0) 1869 351155 | Fax +44 (0) 1869 352404
Email: vcas@axicon.com
2. We will provide you with an RMA number (Return to Manufacturer Authority) and an RMA form.
3. Please fill in all details requested on the RMA form, including the RMA number.
4. Return the verifier (including all cables) in its original case with the completed RMA form, purchase order and your payment details to us at Axicon Auto ID Ltd, Church Road, Weston on the Green, Oxfordshire OX25 3QP. We cannot take responsibility for units returned in alternative packaging.
5. We will normally complete the service and re-calibration of your verifier within 7-10 days.



Certificate of ISO/IEC conformance

We, Axicon Auto ID Limited, of Church Road, Weston on the Green, Oxfordshire, OX25 3QP, UK, hereby declare, that the following barcode verifier(s):

Model number(s)

Serial number(s)

has been designed and manufactured at our address in the UK to verify barcode quality and to conform to: ISO/IEC 15426-2 Barcode verifier conformance specification - Part 2: Two-dimensional symbols.

The equipment has been tested and calibrated using primary reference test symbols traceable to the USA's National Institute of Standards and Technology's reflectance standards. We also state that this equipment, when used with the latest verifier software, and configured appropriately has the features to meet the requirements of the United States Food and Drug Administration regulation, Title 21 CFR Part 11.

This verifier has been quality assurance checked today, and conforms to this ISO/IEC standard. This declaration of conformity is valid for a year.

Issue date

Expiry date

Authorised signatory

Signatory Name

At or before the expiry date the verifier should be returned to Axicon for its annual servicing and factory re-calibration. This VCAS (verifier calibration and alignment service) will ensure that the verifier remains conformant to ISO/IEC 15426-2 for another year.



Contact us

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