axicon

THE BARCODE EXPERTS

Axicon PV-1072
portable barcode verifier
operating manual

Contents

Important information

The Axicon PV-1072 portable verifier comprises an Axicon P-72 verification read-head and a display unit. It cannot be used as a PC-based verifier.

Only use accessories supplied or approved by Axicon. Use of non-approved accessories will invalidate the warranty.

If the verifier read-head 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 for optimum accuracy all verifier read-heads should be returned every year to Axicon or an approved reseller to be serviced and re-certified.

Any attempt to dismantle the equipment or any Axicon verifier read-head will immediately invalidate the warranty. This equipment contains no user-serviceable parts.

What is in the case.

The P-72 verifier read-head.

The PV-1072 portable display unit.

Documentation wallet containing the operating manual and the calibration card.

Belt-bag to enable the unit to be carried easily around a factory or warehouse (Not supplied as standard in the U.S.).

A set of four AA-sized alkaline batteries (supplied in Europe only).

Getting started

Open the battery housing cover to check if the four AA-sized batteries have been fitted. Observe the correct polarity when inserting the batteries. Ensure their output is at least 2500 mAh.

Plug in the P-72 read-head to the USB port on the base of the PV-1072.

Switch on the verifier by pressing the on/off switch.
A light will come on but nothing will be displayed on the screen for about 15 seconds. This is the power-up and initialisation phase.
The PV-1072 will show an initialising message before showing the message:

Axicon Verifier
Ready to Scan !

If the PV-1072 is left for some time the screen will go blank to conserve battery power, but can quickly be restarted by pressing the on/off button again. The time-out period before this happens can be adjusted to suit the requirements of the user – see page 11.

Please note that a warning message will be shown if the verifier read-head has not previously been calibrated.

Calibration

The calibration card is supplied with the PV-1072 and is kept in the wallet.

With the *Ready to Scan* message showing on the screen,
Press the *Menu/select* key.
And the screen will show ► *Information*
Press the *Scroll down* button until the screen displays
► *Calibrate*
Press the *Menu/Select* Button

There will be a ♦ *Set RMin* message with a *5* below. Look at your calibration card to find the value for RMin.

Press *Menu/Select* and you can adjust the figure shown (if necessary) by using the *Scroll up* and *Scroll down* buttons. When the numbers match, press *Menu/Select* to confirm the setting. Press the *Scroll down* button again and the screen will display ♦ *Set RMax* message with a *85* below.

Look at your calibration card to find the value for RMax. Press *Menu/Select* and you can change the value by using the *Scroll up* and *Scroll down* buttons until it matches the value shown on the calibration card. Press *Menu/Select* to confirm the setting. Press the *Scroll down* button and the message will be displayed ♦ *Calibrate* Press the *Menu/ Select* button.

The message will be displayed
Calibrate
Cal. Scan (0/3)

Pick up the verifier read-head, place it over the barcode on the calibration card in such a way that all four corners of the read-head are touching the card and then press the trigger on the read-head. The message will change to read *Cal. Scan (1/3)*. Press the trigger two more times and the display will first read *Cal. Scan (2/3)* and then *Calibration Successful !*

Press the *Clear/Back* button twice to see the message
Axicon Verifier Ready to scan

Using the PV-1072

Place the verifier read-head over the barcode so that it is flat against the barcode and then press the trigger on the read-head.

The initial screen will show the decoded number followed by the overall print quality grade and a detail of the scan number in the format:

5012345678900
4.0/06/660 Scan 1/3

Using the *Scroll down* button the user can look at further information regarding the quality of the barcode, the symbology, magnification, bar gain (ink spread) etc. Using the *Scroll up* button reviews the data.

Use the *Clear/Back* button to get ready to scan the next barcode.

Multi-scan averaging

The PV-1072 allows the user to take up to 10 scans of a barcode at different points throughout the height of the barcode which will be averaged automatically to grade the barcode. This is the process defined by ISO/IEC 15416. To do this simply use the *Menu/Select* button and you will see the message ► *Information*

Use the *Scroll Down* button until you see the message ► *Setup*
Press the *Menu/Select* button and you will see:

♦ *Average No 3*

Press the *Menu/Select* button and then use the *Scroll up* and *Scroll down* buttons until you reach the desired number.
Press the *Menu/Select* button to store this scan number.
Press the *Clear/Back* button twice to return to the main menu.

When multiple scans of a barcode have been taken then the *Previous Scan* button allows the user to review all of the previous scans for that barcode.

Using the PV-1072

Print / Save Facilities

Verification reports can be printed by the PV-1072, or saved to memory for subsequent printing. Automatic saving facilities are also included as an option, and the files are saved as a text-file.

Direct Printing

Attach a suitable printer to the printer port on the verifier using the optional Axicon printer lead. Verify the barcode.
Press the *Print* button – the screen will show ♦ *Print*
Press the *Menu/Select* button – The screen will display the message *Printing* and shortly afterwards the message *Done*
Press the *Clear/Back* button to return to the main screen.

Please note that this is a unidirectional signal transfer – if the printer is not connected properly or not switched on then the PV-1072 is not aware of this.

Manual saving of verification reports

Verify the barcode.
Press the *Print* button – the screen will show ♦ *Print*
Press the *Scroll down* button and the screen will show ♦ *Save*
Press the *Menu/Select* button – The screen will display the message *Successful*!
Press the *Clear/Back* button to return to the main screen.

Automatic saving of verification reports

From the main screen press the *Menu/Select* button and you will see the message ► *Information*
Use the *Scroll Down* button until ► *Setup* is displayed.
Press *Menu/Select*
Press the *Scroll Down* button until the screen displays the message ► *Autosave* is displayed with an *OFF* message
Press the *Menu/Select* button.
Use the *Scroll up* and *Scroll Down* buttons until the desired *On* or *Off* is displayed.
Press *Menu/Select*
Press *Clear/Back* twice to move back to the main screen.

To print saved scans

Unplug the verifier read-head from the PV-1072, and plug in a USB memory device.
From the main screen press the *Menu/Select* button and you will see the message ► *Information*
Press *Menu/Select* and the screen will display ♦ *Show Code*

Press *Scroll down* until the message ♦ *Transfer* is displayed.
Press *Menu/Select*
The message ♦ *Transferring* will be displayed followed by the message ♦ *Transfer Successful*.

The text file printout will be in a directory named *Scans* on the memory device. This file can then be opened in any suitable program such as Microsoft Word or Windows Notepad for subsequent printing.

Configuration set-up

Setting date and time

The PV-1072 has its own clock, so the user scan set the date and time which will be recorded with each record.

To set the date and time, press the *Menu/Select* button to see the message
► *Information*
Use the *Scroll Down* button until ► *Setup* is displayed.
Press *Menu/Select*
Press the *Scroll Down* button until ► *Time* is displayed
Press *Menu/Select*
The Verifier will show ♦ *Time Zone*
If the Time Zone is to be changed then press *Menu/Select* and use the *Scroll up* and *Scroll Down* buttons until the correct time zone is shown and then press *Menu/ Select* to lock the data.

Use the *Scroll Down* button and ♦ *Time* will be displayed.
Press *Menu/Select*
Use the *Scroll up* and *Scroll Down* buttons until the correct time is shown and then press *Menu/Select* to lock the data.

Use the *Scroll Down* button and ♦ *Date* will be displayed.
Press *Menu/Select*
Use the *Scroll up* and *Scroll Down* buttons until the correct time is shown and then press *Menu/Select* to lock the data.

Press *Clear/Back* until the *Ready to Scan !* message is shown

Please note that the date and time are maintained by a built-in battery that has an estimated life span of four years. It is not possible for the user to change the battery, so the PV-1072 should be returned to Axicon for servicing when this fails.

Power Management

The PV-1072 has facilities for the user to control the elapsed time before *Sleep Mode* and *Power Off* are enabled.

To set the Sleep Mode
On the main screen press the *Menu/Select* button to see the message
► *Information*
Use the *Scroll Down* button until ► *Setup* is displayed.
Press *Menu/Select*
Press the *Scroll Down* button until the screen displays the message
► *Power* is displayed.
Press *Menu/Select* The screen will display ♦ *Sleep (m)*
Press the *Menu/Select* button.
Use the *Scroll up* and *Scroll Down* buttons until the desired number of minutes before sleep mode takes effect is displayed.
Remember that if the number of minutes before *Sleep mode* is enabled is higher than the number of minutes before *Power Down* mode then *Power Down* will occur first. Note that *0* (Zero minutes) means that the sleep mode will be disabled. Press *Clear/Back* twice to move back to the main screen.

To set the Power Off option
On the main screen press the *Menu/Select* button to see the message
► *Information*
Use the *Scroll Down* button until ► *Setup* is displayed.
Press *Menu/Select*
Press the *Scroll Down* button until the screen displays the message
► *Power* is displayed.
Press *Menu/Select*
The screen will display ♦ *Sleep (m)*
Press the *Scroll down* button and the screen will display ♦ *Power Off (m)*
Press the *Menu/Select* button.
Use the *Scroll up* and *Scroll Down* buttons until the desired number of minutes before Power Off takes effect is displayed. If *0* is selected the automatic Power Off mode will be disabled. Press *Clear/Back* twice to move back to the main screen.

ISO/IEC or ANSI grades

By default the PV-1072 will display the final barcode quality grade in the ISO/IEC format such as 2.0/06/660 where the 2.0 is the print quality grade, 06 the aperture reference number and 660 is the wavelength of light used expressed in μm.

If users prefer to see the grades expressed as the letters A,B,C,D or F (the ANSI approach), the format can be changed as explained below.

To set the ANSI standard display

On the main screen press the *Menu/Select* button to see the message
► *Information*
Use the *Scroll Down* button until ► *Setup* is displayed.
Press *Menu/Select*
Press the *Scroll Down* button until the screen displays the message
♦ *Show ANSI* is displayed.
Press *Menu/Select*
The screen will display ↕ *Show ANSI*
Use the *Scroll up* and *Scroll Down* buttons until the desired display format is shown.
Press *Menu/Select* to confirm the selection.

Press *Clear/Back* twice to move back to the main screen.

Menu screen formats

Menu level 1	Menu level 2	Menu level 3
Information	Show code	
	Encodation	
	Transfer	
Calibrate	Set Rmin	
	Set Rmax	
	Calibrate	
Setup	Average No	
	Pass grade	
	Units	
	Language	
	Autosave	
	Show ANSI	
	Time	Time zone
		Time
		Date
	Power	Sleep
		Power off
	Printer	Trailing LF

Frequently asked questions

I am verifying barcodes with a lot of data – why can't I see the full decoded number?
To see all the data encoded in the symbol press *Menu/Select* and the display will change to ► *Information*. Now press *Menu/Select* again and you will see the message ♦ *Show Code*. Press *Menu/Select* again and the full decoded number will be displayed. To return to the original display press *Clear/Back* three times.

Why do I have to wait for my PV-1072 to get to the message Ready to Scan?
The PV-1072 incorporates a Linux computer in order to facilitate upgrades and product enhancements, and this has to go through a power-up cycle before it is ready to use.

Why does my verifier keeps switching off by itself?
The power management options (*Sleep* and Power Off) need to be adjusted, as explained on page 11 to meet your requirements. If both of these are set to '*0*', the PV-1072 will stay on continuously.

Will the P-72 read-head work with the PV-1000?
The P-72 read-head can only be used with the PV-1072 display unit.

How long will a set of batteries last?
In tests with the PV-1072 remaining continuously on, a set of 2700 mAh NiMH batteries (the type supplied by Axicon as an optional extra) lasts at least ten hours on a single charge.

What sort of batteries should I use in my PV-1072?
Whether using alkaline or rechargeable batteries, make sure they have a rating of at least 2500 mAh (one that is suitable for powering a motor or similar device).

How many scans can I store in my PV-1072 before I have to transfer them to a computer?
If three-scan verifications are made, approximately 1000 text files can be saved before they need to be transferred.

The verifier is emitting a continuous high pitched squeal – what should I do?
This happens when the batteries have run low. Remove the batteries and either replace or recharge them (if rechargeable).

How do I change the language used by the PV-1072?
Switch off the verifier. Switch on the verifier and let it initialise.
Press *Menu/Select* once
Press *Scroll down* twice
Press *Menu/Select* once (you will see a number on the second line of the display which is the averaging number)
Press *Scroll down* three times
Press *Menu/Select* once
Use the *Scroll up* and *scroll down* buttons until the chosen language is shown on the second line of the display
Press *Menu/Select* to confirm the language
Press *Clear/Back* twice to return to the *Ready to scan* Message.

Technical specifications

Barcode symbologies checked:
EAN-8, EAN-13, EAN-13+2, EAN13+5, UPC-A, UPC-E, Code 39, Code 93, Code 128, GS1-128, GS1 DataBar (both linear and stacked).

Power	Four AA-sized batteries, of at least 2500 mAh output – Alkaline or re-chargeable (rechargeable batteries must be charged externally)
Size	Display Box: 180 x 95 x 40mm (7.2" x 3.8" x 1.6")
Weight	650 g (23oz) incl. batteries
Operating temperature	0ºC to 50ºC
Storage temperature	-20ºC to 70ºC
Humidity	5% to 95% RH non condensing
Regulatory approvals	CE approval

Axicon warranty

The Axicon PV-1072 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 Axicon the original case (plus appropriate packaging) must be used. If the equipment is returned without the original case, Axicon will automatically charge an additional sum for the replacement of this packaging.

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

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

Disclaimer

In the following the expression equipment means the P-72 and PV-1072 hardware and the associated software. We have taken care to ensure that this equipment is free from defects. However since we have no control over the circumstances in which you might use the equipment, you must satisfy yourself that its performance is suitable for your needs. Neither Axicon Auto ID Limited nor the vendor of this display unit can accept any liability for any loss or damage (consequential or otherwise) which may be caused by its use. If the equipment 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 product. You should bear this limitation in mind if you use this equipment 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 equipment licensed or authorised for use in any situation whatsoever where the health or safety of humans or animals might be put at risk.

Annual service

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

This annual service 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 you 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. You will then need to calibrate the verifier before you use it again. 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 of your verifier within 7-10 days.

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Church Road, Weston on the Green,
Oxfordshire, OX25 3QP, UK

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 15426-1 Barcode verifier conformance specification - Part 1: Linear symbols.

The equipment has been tested and can be calibrated using 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 ....

Signed ....

Authorised signatory ....

At or before the expiry date the verifier should be returned to Axicon for its annual servicing. This VCAS (verifier conformance and alignment service) will ensure that the verifier remains conformant to ISO/IEC 15426-1 for another year.

Contact us

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