

# QUASAR AS3150ZIF - USB FLASH PIC PROGRAMMER + ICSP (v25EP)

## General Guidelines for Electronic Kits and Assembled Modules

Thank you for choosing one of our products. Please take some time to carefully read the important information below concerning use of this product. The assembly and operating instructions are on the following pages. Help with component identification can be found on our website at [www.quasarelectronics.co.uk/component-identification-help](http://www.quasarelectronics.co.uk/component-identification-help). If you are unsure about any aspect of the assembly or use of this product please contact our Support Team before proceeding.



### WEEE Directive (Waste Electrical and Electronic Equipment)

#### Notice To All European Union Citizens. Important environmental information about this product.

The crossed out wheeled bin symbol on this product, package or documentation indicates that disposal of this product after its lifecycle could harm the environment. Do not dispose of this product (or batteries if used) as unsorted municipal waste. It should be disposed by a specialized company for recycling.

The unit should be returned to your distributor or to a local recycling service. Please respect the local environmental rules. If in doubt contact your local authorities about

waste disposal rules.

### Safety: General rules concerning safe use of our Kits or Modules.

To ensure your safety, please observe these safety measures. In no way are these complete. As safety requirements vary, please check with your local authorities, in order to comply with local requirements. If in doubt, seek the help of a qualified person.

**Battery or wall-adaptor operated devices are safe devices. They do not require special attention unless mains voltage is connected to an output e.g. a relay.**



To ensure electrical safety, and also protection from fire or personal injury, make sure your mains operated equipment complies with these safety hints:

- Use a suitable plastic enclosure. If a metal enclosure is used, make sure it is properly earthed.
- Use a power switch if the device consumes more than 10W. Use a double pole switch for mains operated, transformer-less kits.
- Mount a fuse in series with the mains switch. Use a slow blow (T) 50mA fuse for transformers up to 10W and a 100mA fuse for transformers up to 20W.
- Use a mains input connector, or a robust power cord with a clamp.
- Internal wiring carrying mains voltages must have a minimum cross-sectional area of 0.5mm<sup>2</sup>.

If supplied, attach the power rating label near the power cord of the device and fill-out the mains voltage, frequency, power consumption and fuse values.

### Troubleshooting and Support

90% of non working kits are due to poor soldering.

We operate a Get-You-Going service for non-working kits but there is a charge based on the time and components needed to complete the repair. Quite often it is not economically viable for us to repair and it is cheaper to supply a new ready made product at full cost.

### Disclaimer

Quasar Electronics reserves the right to change product specifications or to discontinue products without notice. Quasar Electronics cannot be held responsible for any loss or damage, direct or indirect, which might occur from the use of a product. Quasar Electronics Kits or Modules are intended for educational and demonstration purposes only. They are not intended for use in commercial applications. If they are used in such applications the purchaser assumes all responsibility for ensuring compliance with all local laws. In addition, they are not suitable for use as or as a part of life support systems, or systems that might create a hazardous situation of any kind.

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This documentation was written 09 August 2014.

## PLEASE READ IN FULL BEFORE ROCEEDING!!

**WARNING! To avoid damaging your programmer, please ensure devices are placed in the programming socket with the correct orientation and position as indicated by the MicroBurn software interface. The programming socket should be empty when powering the programmer up or down or applying a reset. Extreme caution should be exercised when using the ICSP header to avoid incorrect connection and damage to your programmer.**



The AS3150ZIF is a USB Flash PIC® Microcontroller Programmer with ZIF programming socket and 6-pin ICSP connector. It is supplied fully assembled and ready to use with our free Windows programming software interface.

### Software

Please download the 3150 drivers and software from [www.quasarelectronics.co.uk/zip/3150software.zip](http://www.quasarelectronics.co.uk/zip/3150software.zip)

### !! DO NOT USE ANY OTHER SOFTWARE !!

When putting a PIC in the ZIF (Zero Insertion Force) socket, the PIC Programming software will indicate how it should be positioned. Pin 1 on the ZIF socket is located next to the locking lever.

1. Run the "PL2303\_Prolific\_DriverInstaller\_v1.7.0.exe" program in the "PIC Programmer Drivers" folder to install the driver.
2. Plug in your PIC Programmer.
3. Go to Start, and right click on "Computer". Click "Properties".
4. Click on the "Hardware" tab, and then click on "Device Manager".
5. Click the + next to "Ports (COM & LPT)". There should be an item labelled "Prolific USB-to-Serial Comm Port". There will be

some text in brackets - such as "COM3". Make a note of the number.

**NB Only COM PORT numbers 1 to 9 are supported by the programmer due to hardware limitations.** If you find the driver is allocated a COM Port number higher than this you just need to plug the programmer into a different USB socket and a new number will be allocated.

6. Run the 3150MicroBrn25ep.exe installer program in the "PIC Programmer Software" folder to install the software.
7. Run the MicroBurn25EP software from "Windows Start Menu > Quasar Electronics > MicroBurn25ep" or the new desktop shortcut. It will usually fail to reset the programmer correctly the first time it is started - the correct Serial port has not yet been selected. This is normal.
8. Click on the "File" menu, and choose "Programmer". Now choose "K150".
9. Click on the "File" menu, and choose "Port". Enter the value you noted down earlier and click OK.

The programming software should now reset your programmer and you are ready to go!

### Notes

Please note that on Windows 7, the "Reset Programmer" option on the "Programmer" menu may not function correctly. All other functions work as expected. This is due to an issue between the Prolific USB to Serial drivers and the Microburn software on Windows 7. This option works OK on older operating systems such as Windows XP.

The 'Fly Window' under Options that allows the programmer to be used with MPLAB when a new hex file is compiled.

### MicroChip C Compiler Error

MicroChip's C compilers have a problem in that they create hex files based on 8-bit words. Never in Microchip's history have ANY of the PICs had 8-bit words. So naturally, MicroBurn gets choked up on them because it never expected them to be used. This same problem afflicted several other popular programmers as well. We have written a "corrector" which changes 8-bit references to word references and allows MicroBurn to accept the data. The program can be downloaded from our website at: <http://www.quasarelectronics.co.uk/zip/fixhex.zip>

Just run FIXHEX before trying it in MicroBurn and it will fix the "problem".

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## No-Keypress Programming

Flash chips are automatically erased in this mode if they are not blank.

## ICSP

**!! YOUR BOARD MAY USE DIFFERENT WIRE COLOURS TO THOSE SHOWN IN THE MICROBURN SOFTWARE – USE PCB OVERLAY TO DETERMINE CORRECT CONNECTIONS!!**

ICSP is still a 'black' art for some PIC chips. It is not the purpose of this product to teach ICSP. That is assumed. **Remember to proceed with caution at all times to avoid any damage!**

This programmer does **not support** low voltage programming. The LOW pin is an open collector output, which will pull the LOW pin to ground. It can be used in ICSP to hold the LVP pin low while programming, or OSC1 pin, or any part of the target board which may need control in the manner) during programming. Click Options/ICSP Mode to use. Refer to the MicroBurn software help file for detailed operational and safety advice before using ICSP mode.

## Product Support

We offer free Technical Support by email for a period of 12 months following the purchase of a new PIC Programmer or PIC Programmer Firmware Upgrade from us.

Please submit your Support Questions to [support@quasarelectronics.co.uk](mailto:support@quasarelectronics.co.uk) ensuring that you provide the **invoice number** relating to the product purchase. This mailbox is protected by SpamArrest – please follow the one-time verification procedure in the Challenge Email to ensure we receive your message.

Please visit our website for details of our complete kit range: <http://www.quasarelectronics.co.uk>.

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**Trade discounts are available for bulk quantity purchases of this product. Please contact our Sales Team to discuss your requirements.**