# ZUMspot USB Quick Start Guide

The ZUMspot USB has all of the capabilities of the regular ZUMspot all packaged up in a nice clear USB dongle case. Because of the USB interface it takes up less space. It is made to work with a PC but it can also interface with a Raspberry Pi through a USB port.



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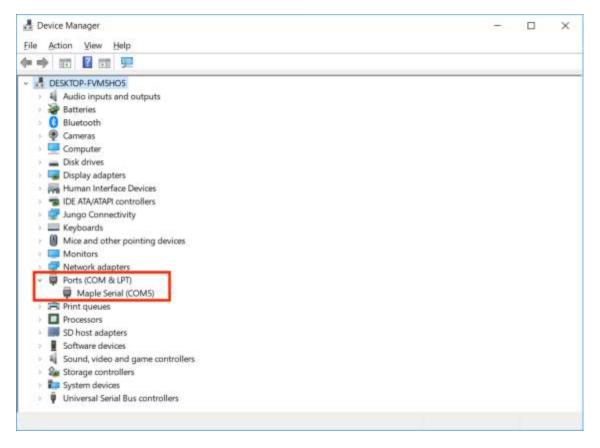
# Windows Setup:

#### **Power Up:**

- Install the antenna into the RF connector.
- Insert the ZUMspot USB into any of the USB ports on your Windows machine. All of the LEDs will flash when first powered on and the PWR LED will remain on. Also, if you have the sound enabled on your computer, you should hear the USB device enumerate twice.

#### **Device drivers:**

Once the device drivers for the board have loaded, there should be a new COM port displayed. Make a note of that port number.



You may have to manually load the drivers on machines running **Windows 7** and earlier, or if there is a yellow exclamation point. Follow the **Installing device drivers** section <u>later in this document</u>.

#### Windows Software

For more information about BlueDV, visit the website of David PA7LIM. <a href="https://www.pa7lim.nl/bluedv-windows/">https://www.pa7lim.nl/bluedv-windows/</a>

Download and install BlueDV for Windows. Be sure to download the zip file with the most recent date. <u>http://software.pa7lim.nl/BlueDV/BETA/Windows/</u>

## **Configuring BlueDV**

1. Launch the software and turn off "SERIAL" if it is already enabled.

BlueDV for !	Windows			7	x c
Menu Upda	te About				
				By David PA7UM Version 1.0	0.9548
SERIAL DMR OSTAR FUSION	Frequency DHR master CALL NAME INFO Idle	Firmware Not detected Dest TG Status None	LISTENING BER	Lastheard AMBE BM lookup Time Coll Name	APRS char Mode
	DMR Call Status Not Connected	DSTAR Call Statue Not Linked	FUSION Call Statue Yest Linked	DSTAR	AMBEXXXX

 Next select "Menu" -> "Setup". As a minimum, set "Your Call", the "Serial Port Radio", "DMR ID" and "Frequency". Next select "Save"

🛔 Device Manager 🌫 Blaefty to	> BueDV for Windows		- 🗆 X
File Action Vie Menu Upo Control Desktop Pev Austo in Butteries Micro Blustoott Dewic	General Your Cal Senal Port Radio Serve GSD Log RK/TX Colory Frequency House Timer DVMEGA power Lattude Longitude Awayo on top	DMR DMR ID strapot DMR Ito strat DMR Itose DMR Itos	AMBE
<ul> <li>Disk drivi</li> <li>Display a</li> <li>Human k</li> <li>Display a</li> <li>Junga Ca</li> <li>Junga Ca</li> <li>Keyboarts</li> <li>Monadors</li> <li>Montors</li> <li>Network adapters</li> <li>Ports (COM &amp; 1PT)</li> <li>Maple Serial (COMS)</li> <li>Procesors</li> <li>SD host adapters</li> </ul>	Language English (Active after restart ) DSTAR DSTAR DSTAR 0 APRS Bruthe at start Default reflector DCS600A (Empty is not connect) Save Cancel	Master Reunion · · · · · · · · · · · · · · · · · · ·	PTT keying Erubie Setal pot RX indicator 2: Erubie RX indicator 2: Erubie RX indicator PTT Button 9: CT3 0: DSR

3. **NOTE:** If you reconnect the ZUMspot to another USB port, it may enumerate under a different COM port. So whenever you reconnect, double check your "Setup" with the COM port under Windows Device Manager.

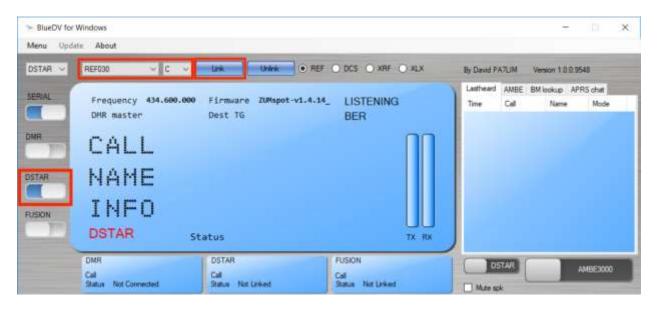
## 4. Next turn "SERIAL" back on.

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				By David PA7LIM Version 1.0.0.9548
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FUSION	INFO Idle	Status None DSTAR Cal Status Nat Linked	TX - FIX FUSION Cal Setue Net Linked	DSTAR AMERICO

5. If the USB connection to the ZUMspot USB is functional, the software should display the "Firmware" version of the ZUMspot.

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Menu Upda	le About			_	
~				By David PA7LIM	Version 1.0.0.9548
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DMR	CALL				
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FUSION	INFO				
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	DMR	DSTAR	PUSION	DSTAR	AMBEXXXX
	Call Status Not Connected	Call Status Not Linked	Call Statue Not Linked	Mute sok	

6. For DSTAR, turn on the DSTAR button, select the reflector ("REF") you wish to connect to and then select "Link"

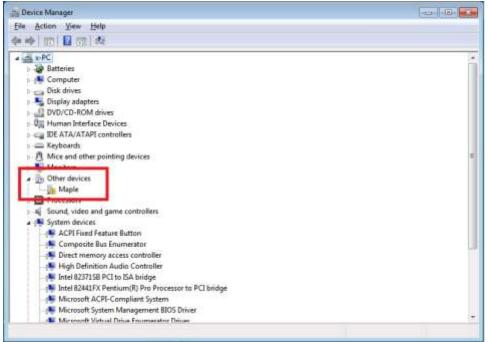


7. Once connected to the reflector, the software will display info when others are transmitting.

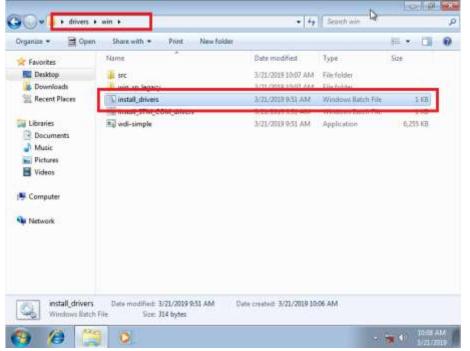
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1	DSTAR	Status	TX RX		

#### Installing device drivers

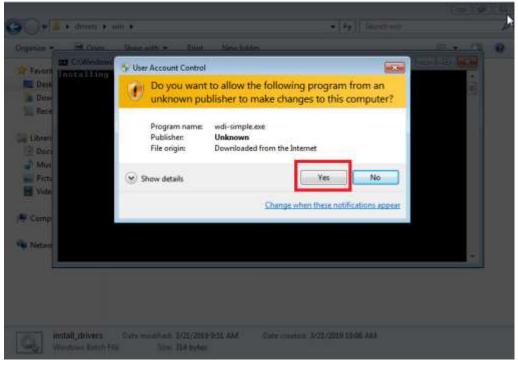
1. If there is a yellow exclamation point next to the "Maple" device, the device drivers need to be manually installed.



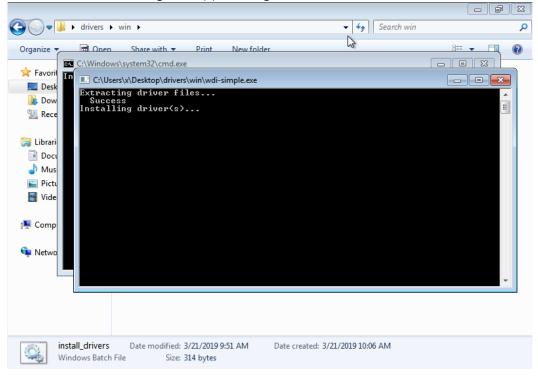
- 2. Download the drivers from GitHub:
- 3. https://github.com/rogerclarkmelbourne/Arduino\_STM32/archive/master.zip
- 4. Extract the files from the zip file and go to the "drivers\win" folder.
- 5. Run the "install\_drivers.bat" file.



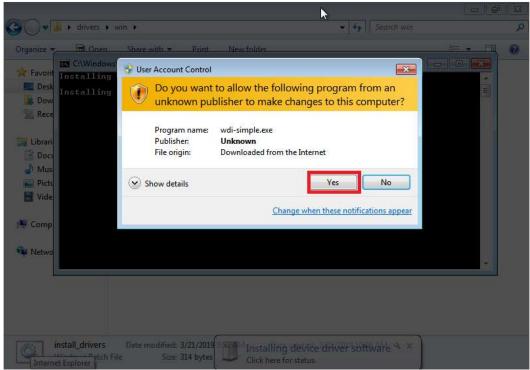
6. Click "Yes" to allow the driver installer to run.



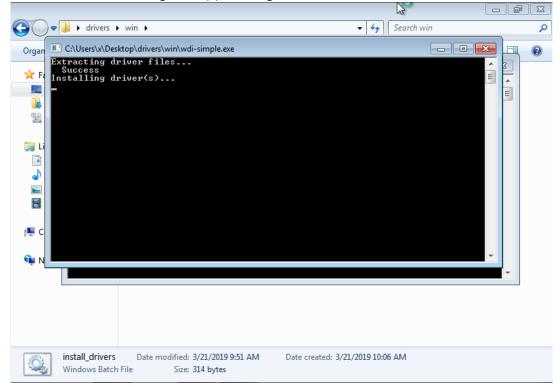
7. You will see the "installing driver(s)" message.



8. Click "Yes" to allow the second driver installer to run.



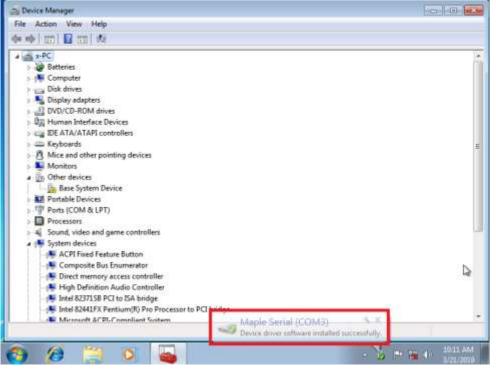
9. You will see the "installing driver(s)" message.



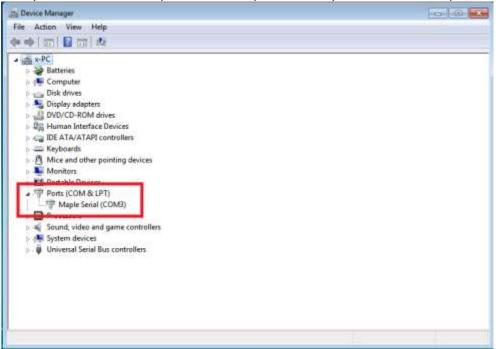
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10. When the installation is done, "Press any key to continue".

11. The drivers will now load for the ZUMspot USB. When done, you should see the "Device driver software installed successfully" message.



12. Now you should see a "Maple Serial" com port with no yellow exclamation point.



## macOS Setup:

#### Installing Crossover

To get BlueDV running on macOS, a Windows emulator is needed first.

- 1. Download Crossover from here: <u>https://www.codeweavers.com/products/crossover-mac/</u>
- 2. Use free trial or enter purchase info
- 3. Open folder where Crossover was downloaded into (Usually it's the Downloads folder)
- *4.* Unzip Crossover.zip (Double click on Crossover.zip so that Archive Utility can unzip it) if you haven't already.
- 5. Drag the file Crossover.app and drop it over Applications. This installs Crossover on your Mac.

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## **Installing BlueDV Prerequisites**

- 1. Open Crossover
  - a. Click on "Finder"
  - b. Go to the "Applications" folder
  - c. Double click on the Crossover app

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Applications	🕹 Cocktail	Oct 3, 3018 et 6:37 AM	0.7 M
	CoccaRestClient	Jul 10, 2018 at 11:25 AM	13.6 M
Desktop	Contacts	Oct 23, 2018 at 4:40 PM	21.4 M
Documents	CrossOver 1000	Dec 3, 2018 at 10:27 AM	530-M
C Downloads	Cube Print	Apr 18, 2016 at 2:48 AM	147.3 M
Con commondo	😳 DalsyDisk	Sep 14, 2018 at 3:45 AM	10,1 M
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Cloud Drive	Dictionary	Oct.18, 2018 at 6:59 PM	3,1 M
	👹 Docker	Jan 14, 2019 at 3:54 AM	1.84/6
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O Remote Disc	-D eDrawings	Mar 5, 2019 at 8-37 AM	208.8 M
• Himour Dire	Receffine	Feb 9, 2019 at 1:43 PM	8.9 M
Tags	📑 Font Book	Aug 17, 2018 at 8:05 PM	13.2 M
Work	Ocogie Chrome	Feb 28, 2019 at 4:38 PM	406.6 M
Contract	Google Drive File Stream	Feb 22, 2010 at 10:55 AM	217.2 M

2. Click on "Install a Windows Application"



3. Under the "Select Application" tab, type in "NET 4.5" and select "Microsoft .NET Framework 4.5". Then press "Continue"

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4. Select "New Windows 7 64-bit Bottle...". Then change bottle name to something like "NET for BlueDV" or whatever you would like to call it. Then press "Continue"

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5. Press "Install"



6. Click "Next"

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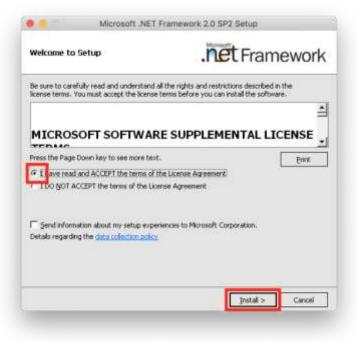
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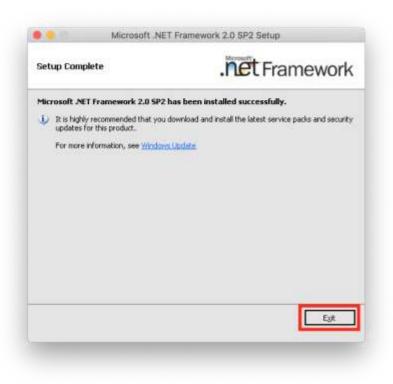
8. Click "Finish"

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For more inform	ation, visit the following Web site:	
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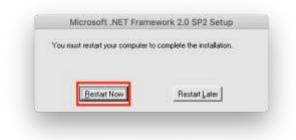
9. Click check box to accept license agreement, and then click "Install"



10. Press "Exit"



#### 11. Click "Restart Now"



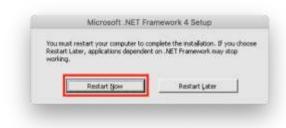
12. Click check box to accept license agreement, and then click "Install"



13. Click "Finish"

Microsoft" .NET	Installation Is Complete
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1	

#### 14. Click "Restart Now"



15. Click "Continue"

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2. Setup may not run computer.	property, because the l	Windows Modules In	staller Service is r	not available on the

16. Click check box to accept license agreement, and then click "Install"

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#### 17. Click "Finish"

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18. Click "Restart Now"

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19. Click "Done" to conclude the installation

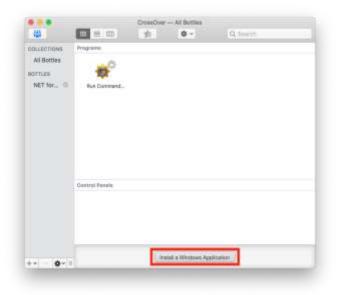


20. You should see something like this. If so, then you have successfully installed .NET 4.5

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### **Installing BlueDV**

- 1. Download the latest version of BlueDV for Windows from this page: <u>http://software.pa7lim.nl/BlueDV/BETA/Windows</u>
- 2. Extract the .MSI from the .zip file (Double click on BlueDV-09548-preBETA.zip so that Archive Utility can unzip it)
- 3. Click on "Install a Windows Application"



4. Under the "Select Application" tab, type in "BlueDV" and select "Unlisted application BlueDV". Then press "Continue"

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5. Click on "Choose Installer File..."

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ø	Choose Installer File
	Choose Installer Folder
2	Cancel Continue

6. Navigate to where you downloaded BlueDV. Select the BlueDV MSI file and press "Use this Installer". Then press "Continue".

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 Go to the "Select Bottle" tab. Select the "NET for BlueDV" bottle from previous steps. Then press "Continue"

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8. Press "Install"

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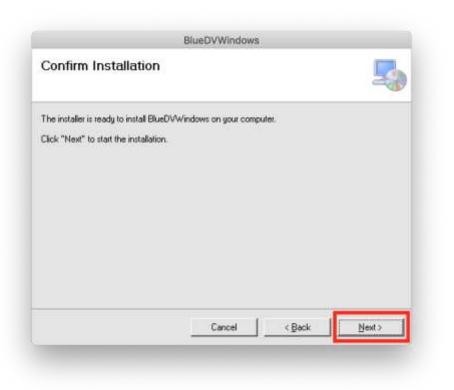
9. Click on "Next"



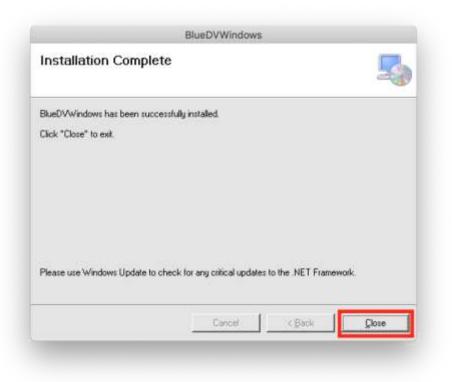
10. Select "Just me" and then press "Continue"

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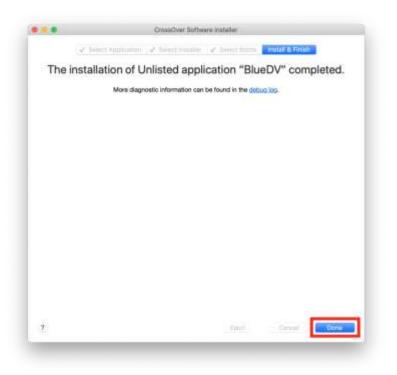
11. Click on "Next"



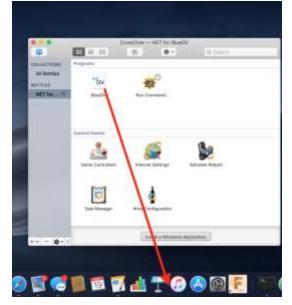
12. Press "Close" on the last pop up window



13. Once installation is finished press "Done"



14. You can add the BlueDV icon to the taskbar by dragging and dropping it there.



15. To run BlueDV just click on the icon in the taskbar or double-click from within Crossover

#### **Modifying COM Port**

- 1. Open Crossover
- 2. Select the bottle where you installed the .NET 4.5 and BlueDV.

3. Double-click on "Run Command"

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4. Type in "Regedit" into the Command section. Then click on "Run"

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5. Within Regedit, navigate to: *HKEY\_LOCAL\_MACHINE -> Software -> Wine -> Ports* 

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6. Right-click (For trackpad users press down with two fingers) on "Ports". Then go to New -> String Value

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7. Type in "com1" into the string value

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8. Open the Terminal app. Easiest way to do it is by clicking on the Spotlight icon on the top right corner of your screen. Then type "Terminal" and then press Enter

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9. Go back to Regedit and right-click on "com1" and select "Modify..."

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odifies the value's data	100 March 100 Ma				-

- 10. Plug in the ZUMspot USB into one of the USB ports on your Mac.
- 11. Go back to Terminal and type in *ls /dev/tty.usb\** and press Enter. The following line will show you the full name macOS gives to your ZUMspot. Copy that line and paste it into the "Value data:" field. Then click "OK"

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12. Now you should see something like this:

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**A.** NOTE!! - If you remove the ZUMspot and insert it into a different USB port on the same computer, it will enumerate under a different name. So always insert it into the same USB port or you will have to go through the previous steps all over again to set it up with a different name.

### Finishing the setup of BlueDV

- 1. Open BlueDV by clicking on the icon in the taskbar or double-click from within Crossover
- 2. Launch the software and turn off "SERIAL" if it is already enabled.

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				By David P/	A7LIM V	esion 1.0.0.9	540	
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3. Next select "Menu" -> "Setup". As a minimum, set "Your Call", the "Serial Port Radio", "DMR ID" and "Frequency". Next select "Save"

👌 Device Manager 🌫 BlaeOV S	The DiveDV for Windows		- 0 ×
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NOTE: If you reconnect the ZUMspot to another USB port, it may enumerate under a different COM port. If so you will need to update the settings.

4. Next turn "SERIAL" back on.

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				By David PA	7LIM Version 1.0.5	0.9548
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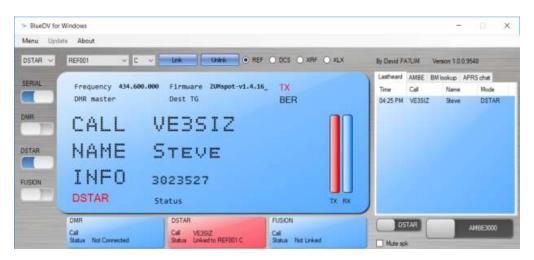
5. If the USB connection to the ZUMspot USB is functional, the software should display the "Firmware" version of the ZUMspot.



6. As an example, for DSTAR, turn on the DSTAR button, select the reflector ("REF") you wish to connect to and then select "Link"



7. Once connected to the reflector, the software will display info when others are transmitting.



# Setup Pi-Star:

#### WiFi:

- Plug in the ZUMspot USB, to one of the USB ports on the Raspberry Pi.
- Power up the Raspberry Pi
- After 3 minutes, scan for WiFi access points from your phone or laptop. One should appear with the name "**Pi-Star-Setup**"
- Connect to it. When asked for the Wi-Fi password type in: raspberry
- After 3 minutes, go to your web browser (Chrome, Firefox, etc.) and connect to the website: <u>http://pi-star</u> (for Windows, Linux and Android devices <u>http://pi-star.local</u> (for OS X and iOS devices)
- You should see this page.

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	Pi-Sta	r Digital Voice Dashboard for H: 	IABC	
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- Go to *Configuration* 
  - You will be asked to put in the default username which is "**pi-star**" and the default password which is "**raspberry**"

• Select "Configure WiFi" and then click on "Scan for Networks (10 secs)"

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• Select your WiFi SSID and enter your password.

• Click on "Save (and connect)" to save the WiFi configuration

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- Reboot your Raspberry Pi
- Now you can continue on the "Configuration" section below.

#### Ethernet:

- Plug in the ZUMspot USB, to one of the USB ports on the Raspberry Pi.
- Connect an Ethernet cable to the Raspberry Pi and then turn on the power.
- After 3 minutes, go to your web browser (Chrome, Firefox, etc.) and connect to the website: <u>http://pi-star</u> (for Windows, Linux and Android devices <u>http://pi-star.local</u> (for OS X and iOS devices)
- You should see this page.

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Pi-Star Digital Voice Dashboard for H3ABC	
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- Go to "Configuration"
  - You will be asked to put in the default username which is "**pi-star**" and the default password which is "**raspberry**"

#### **Configuration:**

• Change the Node Callsign to your own, set the "Radio/Modem Type" to "ZumSpot - USB Stick", set the "System Time Zone" to your timezone, and set the "Dashboard Language" to the language you prefer.

Setting	Value
Hostname:	pi-star Do not add suffixes such as .local
Node Callsign:	KHZUM
Nadio Frequency:	ASSAUDION MIL
Latitude:	bood degrees (positive value for North, negative for South)
Longltude:	-100 degrees (positive value for East, negative for West)
Town:	Titee, LDC4709
Country:	Country
IRL:	Muto Manual
Radio/Modem Type:	Zuerfaur - Utili Stick
Node Type:	PERFECTATION PROTOCOL
System Time Zune:	Arranica/Los_Arspatas
Dashboard Language:	angkol, us

- Click "Apply Changes" when you are done
- When everything reloads, you will need to re-set the "Radio/Modem Type" to "ZumSpot -Raspberry Pi Hat (GPIO)" and click "Apply Changes" again.

## Configuration (example to enable D-Star):

• Now you can turn on D-Star by selecting the "D-Star Mode" switch and clicking "Apply Changes"

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Node Type:	OPrivate			
System Time Zone:	America/Lo			
Dashboard Language:	english,us	79		

# Finished:

Once you have completed any of the configuration steps above you can start using the ZUMspot USB to connect to D-Star, DMR and other networks.

There is more information on configuring and using Pi-Star in this document. <u>https://amateurradionotes.com/images/1-Playing\_with\_Pi-Star.pdf</u>

# Support:

MMDVM Yahoo group: https://groups.yahoo.com/neo/groups/mmdvm/conversations/messages

Pi-Star support forum: https://forum.pistar.uk/

Pi-Star Facebook support group: https://www.facebook.com/groups/pistar/

Pi-Star Wiki: http://wiki.pistar.uk

ZUM Radio Facebook group: https://www.facebook.com/groups/249802742395450/