





# WL70 LONG RANGE Wi-Fi ADAPTOR

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**PRODUCT HANDBOOK** 



## 1. Introduction

Congratulations on the purchase of your WL70 Wireless Adaptor/Antenna. This unit is designed for quick and simple DIY installation on a yacht or power boat and can be permanently installed on deck. The WL70 is supplied with an integral 5m USB cable that should not be cut, modified or extended.



On Window's PCs, do not plug in the WL70 until you have installed the correct USB drivers, otherwise the WL70 will be an "Unknown Device" and you will need to update the drivers in Device Manager.

## 2. Before you start

The WL70 requires that the computer it is connected to has compatible USB drivers installed on it. As computer operating systems are changing all of the time, we recommend that you visit the following website to download the latest drivers for your operating system.

http://www.digitalyachtamerica.com/index.php/en/support/support-manuals/utilities

On this site you will find two files for the WL70;

- WL70 Drivers for Windows Vista<sup>®</sup>, Windows 7<sup>®</sup> and Windows 8<sup>®</sup>
- WL70 Drivers for Apple Mac OS X 10.4, 10.5, 10.6, 10.7, 10.8, 10.9 and 10.10

Drivers for the WL70 are already built-in to all of the latest LINUX distributions and Raspberry Pi operating systems. This means that you do not need to install any drivers and can simply plug in the WL70 for easy "plug and play" operation.

## 3. Mounting the WL70 Antenna

The WL70 should be mounted outside, with the best possible line of sight of the wireless hotspot antenna that you wish to connect to. The WL70 has a standard 1" x 14TPI thread mount, the same as most VHF and GPS antennas use. A wide variety of mounts are available from chandleries and marine electronic dealers.



**Figure 1 – Examples of mounts** 

Figure 2 – WL70 on mount

When screwing the WL70 on to the mount, make sure that the USB cable does not get twisted as this will weaken and potentially damage the cable. Better to screw the mount on to the WL70 and then secure the mount in place.



## 4. Installing the WL70 on Windows

#### Windows Vista/7/8 "On-Line" Installation

By far the easiest method of installation, if your PC is running Windows Vista or Windows 7/8, is to connect the PC to the internet, as you would normally do, using the internal wireless adaptor and then plug the WL70 in to a spare USB port on the laptop.

Windows will detect the new hardware and display the message shown in Figure 3 if a Vista or Win7 installation but if Win8 you will probably just see an icon appear in the task bar. Windows will now automatically search the on-line Windows Update server for the correct drivers. Depending upon the speed of your PC and internet connection this should take between 20 seconds and a couple of minutes to complete.

You can click on the message/icon and the Window in Figure 4 should be displayed giving you the status of the driver installation.

After the correct driver has been found, downloaded and installed the WL70 will appear in the "Network Adaptor" section of the Windows Device Manager as shown in Figure 5. If it is not shown in this section or you see a "Unknown Device" or a device with a Yellow Exclaimation mark next to it, then you should try to install the drivers manually by following the procedure shown in the next section for Off-Line installation.

If the drivers, are installed correctly and you are ready to use the WL70 to find and connect to a wireless hotspot, proceed to the "Operating WL70 on Windows Vista and Windows 7/8" section.

#### Windows Vista/7/8 "Off-Line" Installation

If you cannot connect to the internet, you can install the drivers manually using the USB Driver Installer that we recommended you to download from our website (see "Before you Start" section on page 2).

Extract all of the files/folders in to a folder on your PC. To do this double click the ZIP file and then click on the "Extract All" button in the top right corner of the window (see Figure 6).

Once all of the files/folders are extracted, open the new folder and double click the Setup.exe file to start the installer.





Figure 4



Figure 6



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The drivers are supplied by Realtek who manufacture the wireless chipset that we use in the WL70. The installation is very simple, just click "Next" when prompted and the progress is shown by a green status bar as shown below.

REALTEK Wireless LAN Software - InstallShield Wizard 🛛 - 🗆 🗙	REALTEK USB Wireless LAN Driver
Preparing Setup Please wait while the InstallShield Wizard prepares the setup.	REALTEK USB Wireless LAN Driver
REALTEK Wireless LAN Software Setup is preparing the InstallShield Wizard, which will guide you through the rest of the setup process. Please wait.	The InstallShield Wizard will install REALTEK USB Wireless LAN Driver on your computer. To continue, click Next.
Cancel	< <u>B</u> ack <u>N</u> ext > Cancel
Figure 6	Figure 7
REALTEK USB Wireless LAN Driver	REALTEK USB Wireless LAN Driver
Setup Status	InstallShield Wizard Complete
REALTEK USB Wireless LAN Driver is configuring your new software installation.	USB Writeless LAN Driver. Before you can use the program, you must restart your computer.
Installing	● Yes, I want to restart my computer now.
C:\\B63CCD1C-A133-4DF8-8306-DA0387231152}\setup.exe	No, I will restart my computer later.
	Remove any disks from their drives, and then click Finish to complete setup.
Installshield Cancel	< <u>B</u> ack <b>Finish</b> Cancel

Figure 8

Figure 9

When the installation is finished you will be told that the computer now needs a Restart as shown in Fig 8.

If you have any other important programs or documents opened, save any work and close them, then click "Finish" and the computer will restart.

Once the computer has fully rebooted, plug in the WL70, the new hardware function will start and if you are using Windows Vista/7 a pop up window will appear saying that it is Installing the drivers and if you are using Windows 8 you may just see an icon appear briefly in the task bar.

When completed the pop up will change to say that the device software has been installed successfully. The WL70 is now ready to use and you can proceed to the next section on operating the WL70.







## 4. Operating the WL70 on Windows

**IMPORTANT NOTE** - It is always best to turn off (disable) the internal wireless adaptor on your laptop before using the WL70. The exact method to do this, varies from PC to PC, but some laptops have a dedicated button in or around the keyboard area or a special keyboard combination e.g. pressing the Fn + F8 keys.

#### Operating the WL70 on Windows Vista/7/8

Click on the Wireless Networks icon in the task bar (lower right hand side of the screen) and a list of the available wireless networks (hotspots) will be displayed. Your laptops internal wireless adaptor is usually named "Wireless Network Connection" and the WL70 will automatically be named "Wireless Network Connection 2" or possibly another number if other adaptors have been used previously.

It is possible to rename this connection to something more meaningful by going in to the "Network and Sharing Center" and then clicking in the "Change Adaptor Settings" option. From this screen you can right click on the WiFi 2 network adaptor (or whatever name the WL70 has been given) and select the Rename option, just like renaming a file. Giving the new Network Adaptor a name like "WL70 Wi-Fi Adaptor" or similar, will make it much easier to differentiate the WL70 from the internal wireless adaptor – as shown in Fig 11.



Click on the wireless network you wish to connect to and click the "Connect" button that will appear. You may be asked to enter a password or confirm if the network is a Public, Work or Private network (to set security levels) and then the wireless connection should be made and you will be able to connect to the internet.

## 5. Installing and Operating the WL70 on a Mac

Mac OSX has been regularly updated over the last few years and it is important that you install the correct driver that matches the version of OSX that you are using on your Mac. The WL70 Mac Driver file that we that we recommended you to download from our website (see "Before you Start" section on page 2), includes the drivers for all versions of OSX since 10.4 up to the latest 10.10 (Yosemite).

Unzip the file that you downloaded and inside you will find a series of ZIP files, one for each OSX version. Select the file that matches your version of OSX and unzip it.

Included in each of these zip files is an Installer.pkg and an Unistaller.pkg file. Double click on the Installer.pkg file to start the driver and Wireless Utility installation.

When you run the Installer.pkg file, the first screen that you see will be the one shown in Fig 12. Click "Continue" for this screen and the next couple of screens that are displayed. You will be asked to enter your Administrator password and then the installation will start and you will see a progress bar as shown in Fig 13.



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Once the installation is completed you will see the screen shown in Fig 14. Make sure any important programs or documents are saved and closed properly and then click "Restart". The Mac will now close down and restart again.





Figure 15



Once the Mac has restarted, plug the WL70 in to a free USB port on the Mac and two things will happen. A new Icon will appear in the Dock – as shown in Fig 15. Also a new application will open and a window similar to the one in Fig 16 will be displayed – this is the Realtek Wireless Network Utility.

Make sure that your internal Airport wireless adaptor is turned off and then click on the Available Networks tab to display a list of the wireless networks that can be detected, like the one shown in Fig 17.

000	Wireless Network Utility	0 0		Wirele	ess Network Utilit	y	
Link Status Profiles	Available Network Advanced Setting WPS Information	Link Statu	is Profiles Av	ailable Ne	twork Advance	d Setting WPS	Information
		Associated	SSID	Channel	Network Type	Encryption	BSSID
MAC Address :	0026ce03df14		TP-LINK_E136AE	4	Infrastructure	WPA2-PSK AES	74ea3ae136ae
SSID :		_	Good virginmedia383817	1 L 1	Infrastructure Infrastructure	WPA(2)-PSK AES WPA(2)-PSK AES	30469a7baf31 841b5e9f247c
BSSID :		_	netgear	6	Infrastructure	WPA-PSK TKIP	00223f1ba0dc
Security :	None	_					
Connection :	Disconnected	_					
Network Type :		_					
Channel :							
Link Speed(Mbps) :	TX RX	_					
HT Info :							
Signal Strength :	0%						
	Turn Radio OFF		Refre	sh	Connect	Add to	Profile







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Select the wireless network that you want to connect to and click "Connect". You will now see a window like the one shown in Fig 18. Enter the password of the network (if applicable) and click "OK". The WL70 should now connect to the selected wireless network and display the General Status tab shown in Fig 19.

Wireless Network Security Properties	00	Wireless Network Utility
Profile Name : TP-LINK_E136AE	Link Status Profiles	Available Network   Advanced Setting   WPS   Information
SSID : TP-LINK_E136AE	MAC Address : 00	26ce03df14
□ This is a computer-to-computer (AdHoc) network; wireless access points are not used.	SSID : TP-	-LINK_E136AE
Channel : 1 ‡	BSSID : 74	ea3ae136ae
Wireless Network Security Properties	Security : WP	A2-PSK AES
This network requires a key for the following :	Connection : Co	nnected
Network Authentication : WPA2_PSK \$	Network Type : Inf	rastructure
Data Encryption : AES \$	Channel : 4	
ASCII	Link Speed(Mbps) : TX	( 150 RX 150
	HT Info : BW	:40MHz GI:long MCS:0
Key index (advanced) : 1 ‡	Signal Strength :	100%
Network key :		Turn Radio OFF
Confirm network key : ••••••		
Cancel OK		Figure 19

Figure 18

The network details plus the password are stored as a profile which is remembered in case you return to the network again. Click on the "Profiles" tab to display a list of the profiles you have created, as shown in Fig 20. When you return to a network, simply select it in the profile list and click "Apply".

0	00			۷	Vireless Net	work Ut	ility		
ł	Link S	tatus	Profiles	Availabl	e Network	Adva	nced Setting	WPS	Information
	Default	Default   Profile Name			SSID			Network Ty	/pe
	*	TP-LIN	NK_E136AE	TP-LINK_E136AE				Infrastruc	ture
		Add		dit	Remov	e	Duplicate		Apply

Figure 20