

WEBWatch™

Internet and TV antenna



WCT-1 & WC-1 User Guide

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INTRODUCTION

Register your Product Warranty

Please register your product for warranty and notifications for available software updates at:

<http://shakespeare-ce.com/marine/register/>
or
Scan the below QR code



See label under the device for MAC ID

Please record your device details here for future reference:

MAC ID: _____

Date of Purchase: _____

Customer ID (Will be mailed to you once registered online): _____

Download the WebWatch App

The WebWatch has both, an iOS and an Android APP that can be downloaded to manage your device more easily (Highly Recommended).



Look for the “WebWatch” app on the respective app stores.



INTRODUCTION

Congratulations on purchasing the WebWatch™. Take you entertainment wherever you go. WebWatch lets you access the internet from a Wi-Fi Hotspot or cellular network with up to 4G speeds and share it wirelessly or through Ethernet. Now, you don't need another antenna for your TV. Access your favorite local TV channels through the WebWatch's built in HDTV antenna. Web and Watch, on your boat, recreational vehicle, cabin or AnyWhere® else.

This guide contains all the information you need to get your WebWatch system up and running.

Which model do you own?

The only difference between the WCT-1 and WC-1 is the built-in HDTV antenna which is present only in the WCT-1. This manual is common to both models. Please ignore the sections regarding the TV antenna in case you own a WC-1.

Please register your product warranty at:

<http://shakespeare-ce.com/marine/register/>

We strive to keep improving the user experience for you. We will keep you posted when software updates are available for your product.

Theory of Operation

The WebWatch as its name suggests, brings to you the Web and the TV Watching experience (not in WC-1) to your boat or anywhere else that you may install it.

The device has a built in high gain Omni-directional Wi-Fi antenna and a cellular modem that allows it to access the internet either from a Wi-Fi hotspot (if in the proximity of one) or a cellular network if Wi-Fi is unavailable. The device automatically switches depending on the availability of Wi-Fi. Incase required, the device can also be switched manually using either the WebWatch phone app or the device's built-in web interface.

The internet can then be accessed locally using either its built-in Wi-Fi hotspot or over an Ethernet cable. The Wi-Fi range can be increased by either using a Wi-Fi repeaters or connecting other Wi-Fi access points/router using the Ethernet connection.

Just like any other antenna, the WebWatch will best perform with a clear line of sight with the Wi-Fi/ cellular tower.

Warning: Please read through the Compliance information section of the manual to ensure that your install is compliant with the FCC requirements.

You will Need:

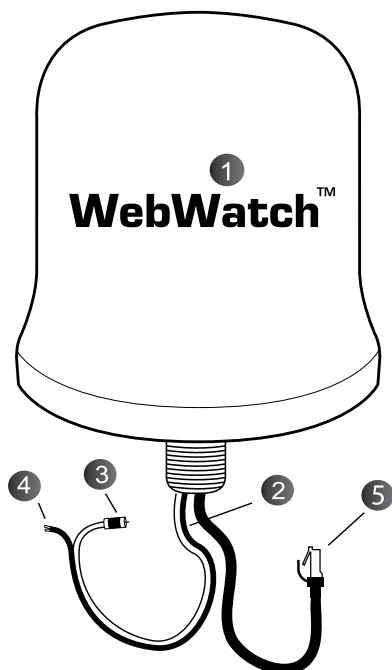
1. WebWatch
2. 1"-14 thread mount. A simple flange mount is best recommended for this device. See Shakespeare website (<http://shakespeare-ce.com/marine/>) for available mounting options

Additionally required, in case of an Ethernet installation:

Other devices and cables may be required depending on the configuration you choose. Please see "mounting notes" section of this manual to see possible configurations.

Parts in the Illustration:

1. WebWatch
2. Siamese cable (Not present in WC-1)
3. F-Connector for TV (Not present in WC-1)
4. Twin wire for power
5. Ethernet Cable

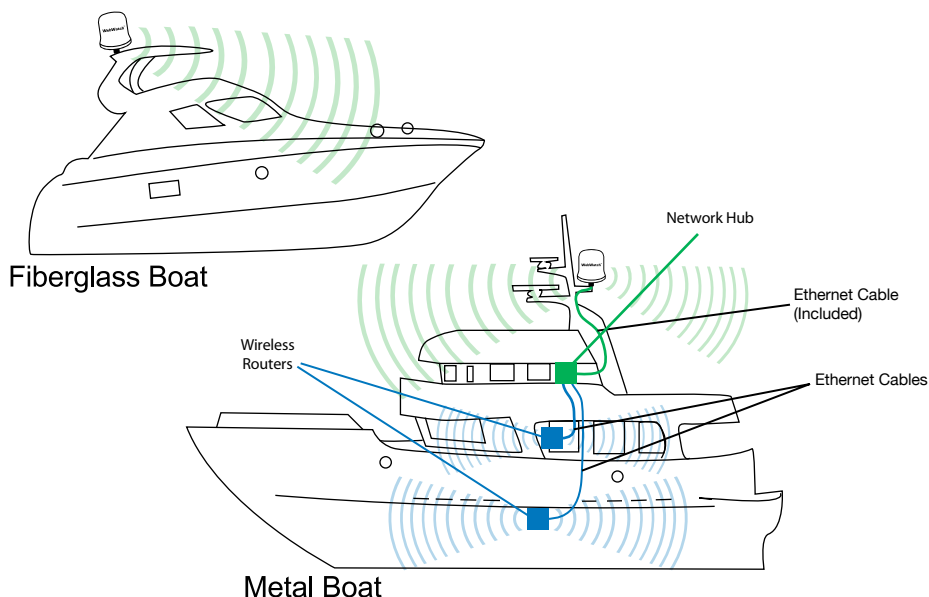


INSTALLATION

Mounting Notes:

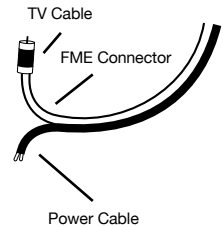
1. Due to its heavy weight, it is recommended to mount the device as close to the boat's center of gravity as possible.
2. Always mount the device such that the dome is pointing vertically upward and is in clear line of sight with the broadcasting tower.
3. Since Wi-Fi Signals are blocked by metal surfaces, on metal crafts, it is necessary to place a Wi-Fi router (up to a maximum of 2 routers, connected through a network hub) inside the boat connected to the WebWatch via its Ethernet cable.
4. The Wi-Fi router inside the WebWatch can be used for the Wi-Fi coverage outside the boat as long as there are no obstructions between the WebWatch and area of use. See below images for examples on how you can configure them.

Note: The ingress rating of this WebWatch product is IPX4. It is designed to operate safely during rains and light water sprays. It is not intended to be used where it might be subject to constant water sprays or powerful water jets. Shakespeare shall not responsible for unsafe or faulty operation due to failure to install properly. Installing the WebWatch near or above a metal surface may result in significant reduction of the Wi-Fi and 3G/4G signal strength.



Instructions:

1. Pass the cables through the mounting hole.
2. Screw the antenna onto the mount. Ensure that the cables are able to rotate freely with the device when mounting.
3. Route the power cable through your vehicle so that the end is available at the power supply/ switch. Route the TV cable so that the FME connector is available at a TV port/ TV (if applicable).
In case your WebWatch model has TV functionality, the power cable will be in the Siamese pair with the TV cable. The power and TV parts can be split to go in different directions at any length that you require by simply pulling the ends apart.
4. Open the cap under the housing of your WebWatch and insert the Simcard into the slot as shown:



5. Replace cap and snap tight to ensure that the device stays splash proof.

Power supply:

The WebWatch is rated at:

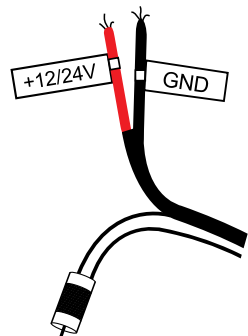
Voltage: 12V-24V

Current: 1A Max @ 12 VDC

It is recommended that the WebWatch is powered from a fused accessory panel that can fulfil the above requirements.

Warning: The red lead must be connected to the positive and black lead to negative power supply. Polarity reversal on the power supply will burn out the fuse.

Tip: It is recommended to have an easily accessible switch to turn off the device when a reboot may be required.



SELECTING THE RIGHT SIM CARD

This product is tested and verified to work with AT&T in the US. Although, it might be compatible with other operators, Shakespeare does not guarantee its operation with other carriers.

Here is some information that you will need to carry with you when you go to purchase your plan:

Type of connection: Data only connection

Type of plan: Prepaid recommended

Type of device: USB Modem/Mobile hotspot

IMEI number: **The IMEI number of the device can be found on the label under the product.**

Tip: You may not be asked for an IMEI number since most operators may help you activate your simcard with the IMEI number of in-store device. This is the easiest way to activate your simcard.

WEBWatch™
WCT-1

Shakespeare

SINCE 1897

Default Router Access:
http://192.168.39.1
Username: admin
Password: admin
Wi-Fi Frequency: 2.4 GHz
SSID: WebWatch_XXXXXX
Password: Shakespeare
IMEI Number: XXXXXXXXXXXXXXXX
MAC Address: XX:XX:XX:XX:XX
Power: 12/24VDC, 1A Max @12V

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



FCC ID: 140-WW01
Product: WebWatch Model: WCT-1

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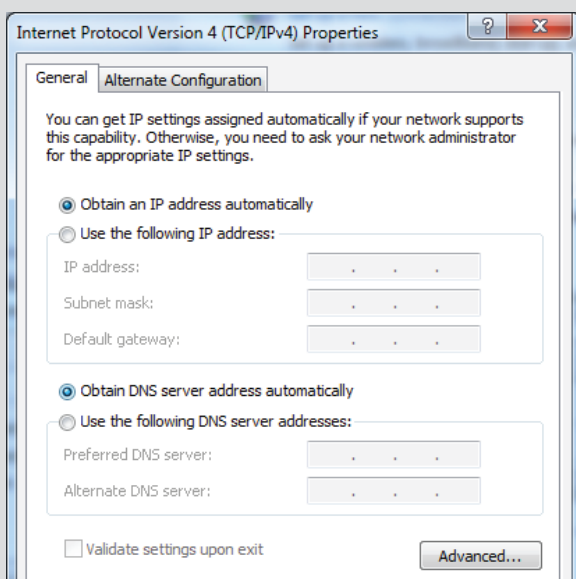
Please refer to the “Configuring cellular function” section for more details on how to configure the device for your SIM card.

WCT-1 & WC-1 / WebWatch Wi-Fi & TV antenna

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First Time Only (or if network settings have been changed recently):

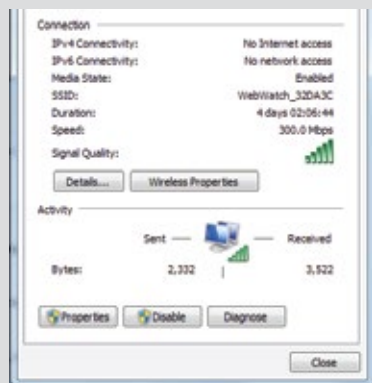
1. Enable Wi-Fi on your laptop or any other Wi-Fi enabled device.
2. If you are using a laptop, ensure that the IPV4 settings for the Wireless Network Connection is on “Obtain an IP address automatically” and “Obtain DNS server address automatically”. This is usually the default unless something was changed. (If your settings are already in automatic, you can skip to “Connect to the WebWatch” portion of this manual.)



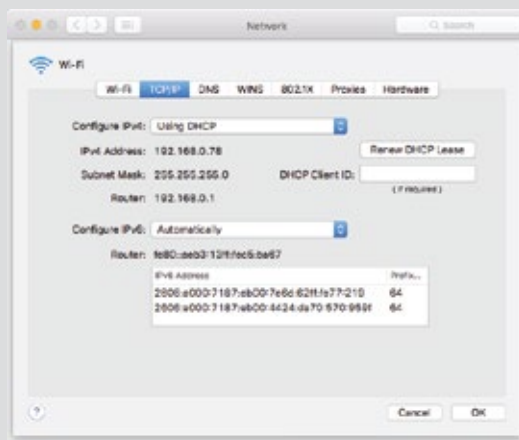
You can find it under:

Control Panel > Network and Sharing Centre > Wireless Network Connection > Properties

For PC Users:



For MAC Users:



3. Follow instructions in “Connecting To The WebWatch” section of this document

A: Connect To The WebWatch:

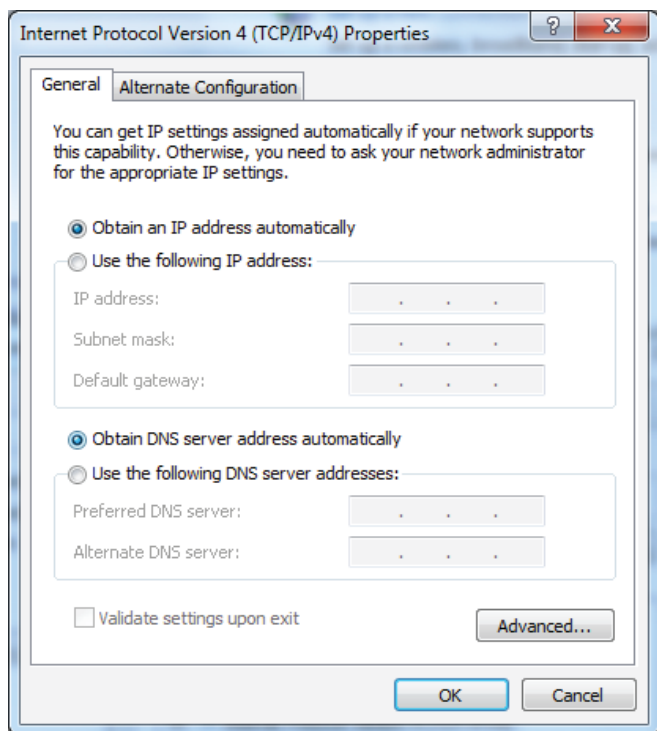
You have two options to connect to the WebWatch device- Via Wi-Fi (Recommended) and via Ethernet.

Via Wi-Fi (Recommended):

1. Ensure that the Wi-Fi is turned on your laptop or other Wi-Fi enabled device.
2. Search and connect to the Wi-Fi Network named “WebWatch_XXXXXX”.
A. Default Password: Shakespeare
3. Skip next section “Via Ethernet” and continue reading.

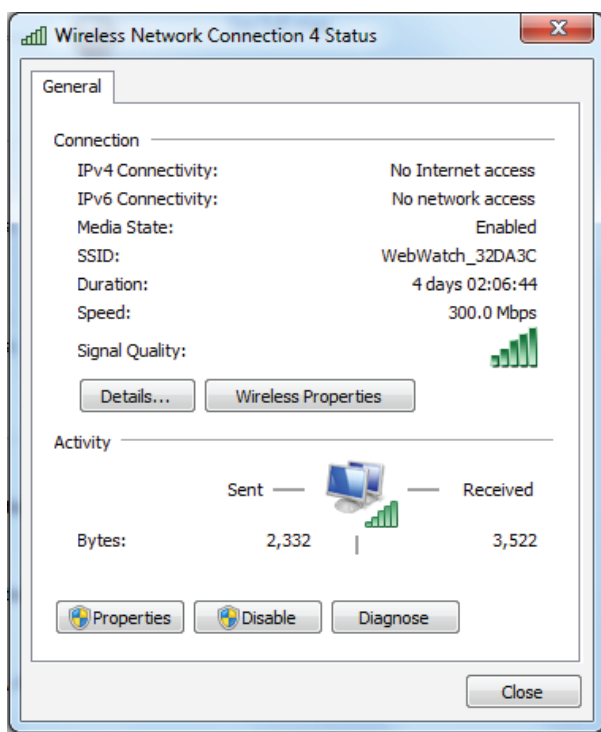
Via Ethernet (For professional installers only):

1. Ensure that Wi-Fi is disabled on your laptop (Not just turned off).
2. Ensure that the IPV4 settings of the Local area connection is on “Obtain an IP address automatically” and “Obtain DNS server address automatically”.



You can find it under:

Control Panel > Network and Sharing Centre > Local Area Connection > Properties



B: Opening The WebWatch Setup Page:

1. Using a web browser, open the page 192.168.39.1

Tip: Add page 192.168.39.1/apclient.asp to bookmark bar for fast access to the setup page



2. Follow on-screen instructions to login
Default username: admin
Default password: admin

Tip: Save login details to browser for fast access.

C: Changing Settings Of The Wi-Fi Hotspot And Ethernet:

The settings of the WebWatch's hotspot can be change in the WIFI/Ethernett Settings page, including the hotspot name and password.

SSID: Hotspot Name

WPA-PSK KEY: Password

The screenshot shows the 'Shakespeare WebWatch' configuration page. On the left is a dark sidebar with navigation options: 'Connect to A Network', 'Manage Networks', 'WIFI/LAN Settings' (highlighted in blue), 'Advanced', 'Management', and 'Status'. The main area has two tabs: 'BASIC' and 'LAN'. Under the 'BASIC' tab, there are several settings:

- Radio:** ☒ Enable ☐ Disable
- SSID:** Text box containing 'WebWatch_32DA3C'
- Channel:** Dropdown menu showing '2412MHz (Channel 1)'
- Wireless Mode:** Dropdown menu showing '11b/g/n mixed mode'
- Bandwidth:** Radio buttons for '20 MHz' and ☒ '20/40 MHz'
- Encryption Type:** Dropdown menu showing 'WPA2PSK/WPA3PSK'
- WPA Password policy:** Radio buttons for ☐ TKIP, ☒ AES, and ☐ TKIPAES
- WPA-PSK Key:** Text box containing 'Shakespeare'

At the bottom of the settings area are two buttons: 'Apply' and 'Cancel'.

Other advanced settings for WIFI can be found on this same page and settings for the Ethernet connection (If Ethernet is connected) can be found on the Ethernet tab.

The basic settings can also be changed on the app at:

Router Settings>Wireless Settings

D: Selecting Between Wi-Fi, Cellular And Auto Source Picking:

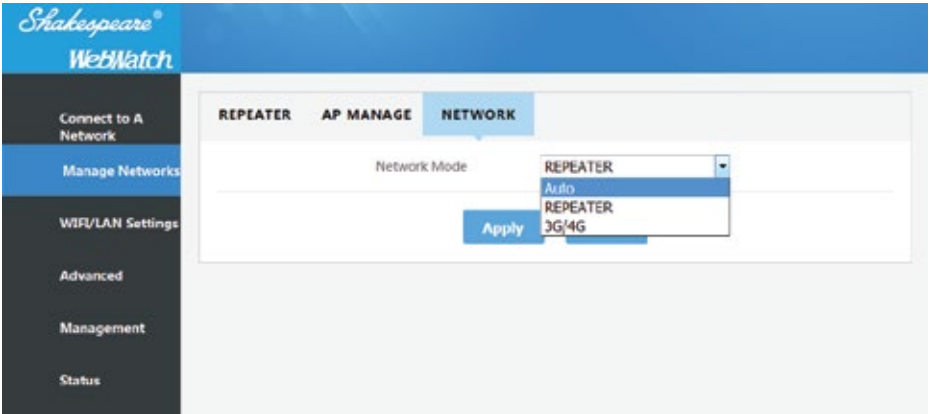
Auto mode: The device automatically searches and connects to available WI-FI connections that have previously been used and saved. If none are available, the device automatically switches over to a cellular network.

Cellular: The WebWatch will stay connected only to cellular networks.

WI-FI: The WebWatch will only connect to WI-FI connections that have previously been used and saved.

USAGE

These three options can be found on the WebWatch Setup site at Manage Networks>Network>Network Mode



After changing the network mode, allow about 10 seconds for the change to take effect.

The network mode can be found on the app at Internet Setting> Internet source

E: Configuring Cellular Function:

If you have not yet purchased a SIM card for this device, please read the section “Selecting the right SIM card” of this manual.

To get the WebWatch to connect to a cellular network, just like a phone, the WebWatch needs APN settings. These settings may change with operator and geographical region. You will need to get these APN settings from your cell operator.

The APN settings required to be filled in are as below:

The APN settings required to be filled in are as below:

* The settings listed in the above image were tested with AT&T.

This page can be found on the WebWatch setup page at Connect to a network>WAN. It can also be found in the app at Internet Settings>Cellular Settings

Defaults of various settings:

WAN connection type: 3G/4G

APN: Will depend on your operator and location

Pin: Not required unless SIM card is locked with a pin

Dial Num: Usually *99#. May vary with operator and location

User Name: Not required unless operator requires it

Password: Not required unless operator requires it

MTU: 1492 (Leave at this default)

F: Connecting To A WI-FI Network:

You can find the list of all available networks in the WebWatch setup page at Manage Networks>Repeater.

Shakespeare®
WebWatch

Connect to A Network

Manage Networks

WIFI/LAN Settings

Advanced

Management

Status

REPEATER

AP MANAGE

NETWORK

SSID

Netcore_

AP Channel

1

MAC Address

08:10:79:60:ad:5a

Security

WPA2PSK

Encryption Type

AES

Pass Phrase

netcore_

Select	AP Channel	SSID	MAC Address	Security	RSSI	WMode
☐	2		00:1bd5:6bfa:c10	WEP	29	11b/g
☐	4		00:1bd5:6bfa:c50	WEP	39	11b/g
☐	6	JAMGuest	00:12:43:25:42:c0	NONE	100	11b/g
☐	8		00:0f:61:8d:3b:30	WEP	100	11b/g
☐	9		00:1bd5:6bfa:c20	WEP	50	11b/g
☐	11	SETUP	82:63:fb:c7:dd:3f	NONE	34	11b

Apply

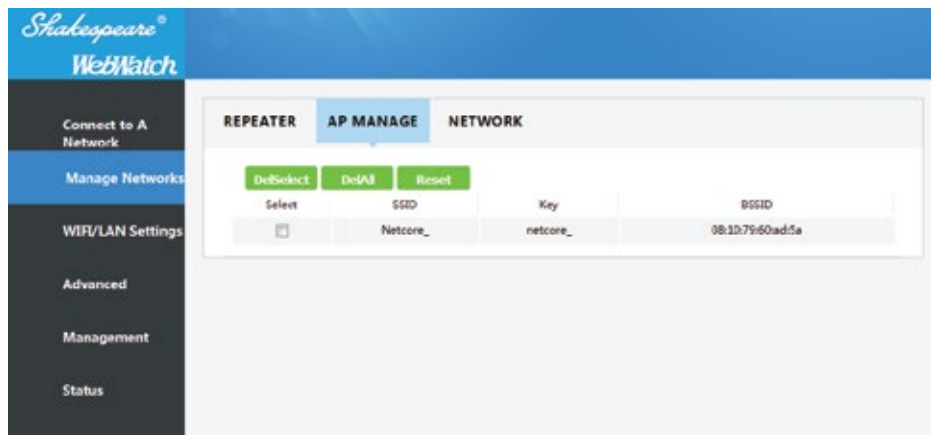
Cancel

1. **Select the network** of choice by clicking an option under the “Select” column.
2. **Enter in the password** for the WI-FI network into the “Pass Phrase” field.
3. Select **Apply**.

Note: This can also be found in the app at Internet Setting> Wi-Fi Networks

G: Deleting A Saved Network:

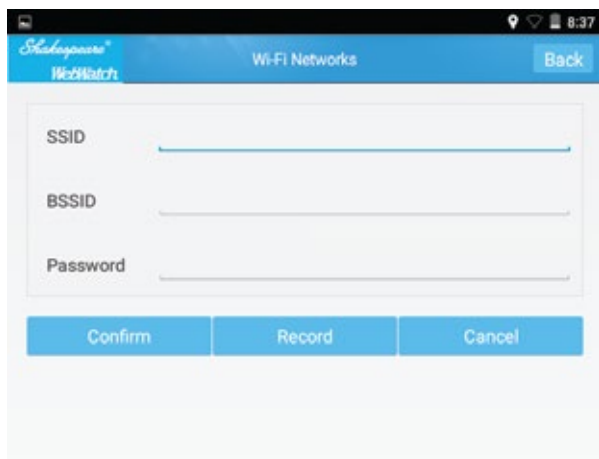
You can manage your saved networks on the WebWatch setup site by going to Manage Networks> AP Manage



1. **Select the network(s)** that you would like to delete by clicking the “select” check box.

2. Click “**DelSelect**”

You can find this on the app by going to Internet Setting> Wi-Fi Networks> Record



H: Changing Admin Password:

1. **If you have forgotten your password**, you may try the default password to verify if you may not have changed the password earlier.

Default username: Admin

Default password: Admin

If this doesn't work, follow the "Conduct a physical factory reset" method outlined in this manual.

2. **If you have not forgotten your password** and need to change it,

A. Go to the "Management" menu.

B. Select the "Admin" tab.

C. Type in the new password and repeat it once more in the "confirm password" field.

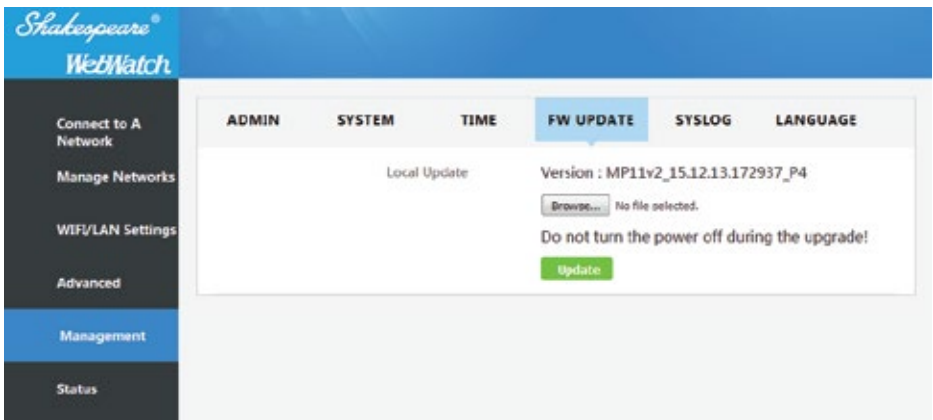
D. Select "Apply"

The screenshot displays the Shakespeare WebWatch web interface. On the left is a dark sidebar with a menu: 'Connect to A Network', 'Manage Networks', 'WIFI/LAN Settings', 'Advanced', 'Management' (highlighted in blue), and 'Status'. The main content area has a blue header with the 'Shakespeare WebWatch' logo. Below the header is a tabbed interface with tabs for 'ADMIN', 'SYSTEM', 'TIME', 'FW UPDATE', 'SYSLOG', and 'LANGUAGE'. The 'ADMIN' tab is selected. The form within the 'ADMIN' tab contains three input fields: 'Account' (with 'admin' entered), 'New Password' (with six dots), and 'Confirm Password' (with six dots). At the bottom of the form are two buttons: 'Apply' and 'Cancel'.

For your WebWatch device:

In case you would like to update your device with the latest firmware that you received with by mail or from the Shakespeare website, you will need to

1. Download the latest firmware file onto your computer
2. Connect to the WebWatch and open the WebWatch setup page
3. Go to Management> FW update
4. Click the browse button to select the location of the firmware file
5. Once you have selected the file, select “Update”



Note: Please note that when you update the firmware on your WebWatch, all your preference and saved networks may be lost.

WEBWATCH APP

The “WebWatch” app can be downloaded from the apple app store and google play stores. Various functions of the WebWatch can be controlled through the WebWatch app. The instructions are laid out in respective sections of this manual.



This is a status bar. If connected to the WebWatch, this space will read “Connected”. Depending on whether an internet source is connected to the WebWatch, the status bar may show:

Connected(Unknown): No Internet source connected

Connected(Cellular):
Connected to Cellular

Connected(Repeater):
Connected to WI-FI

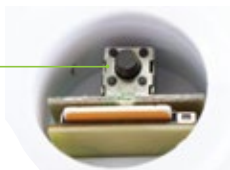
Frequent Problems and their resolution:

Problem	Possible Cause	Resolution
Wi-Fi signal strength from hotspot is varying abnormally/ internet connection is consistently intermittent	Interference from other devices: Other radio equipment, microwave ovens, cordless phones, wireless headsets, Bluetooth devices, surveillance cameras operating in the 2.4 gigahertz (GHz) range	1. Increase distance of separation between WebWatch and other devices that may be causing interference. 2. Change channel of operation of Wi-Fi hotspot. Find the settings on the setup page > WIFI/ Ethernet Settings> Basic> Channel.
Internet connection from a Wi-Fi source is intermittent	Wi-Fi source strength is poor	Visit the lists of available Wi-Fi networks on the WebWatch setup page and select a Wi-Fi hotspot with the best signal strength. You can find a list of available Wi-Fi networks on the Setup page> Manage Networks> Repeater. The signal strength of various connections is listed under the "RSSI" column on a scale of 0-100, 100 being high and 0 being low.
Don't know if the WebWatch is connected to Cellular or Wi-Fi		On Webwatch Setup Page: Go to Status>Net Status. See the "connection type" field. On App: The blue status bar on the home page, in the middle of the screen will read- Connected(Repeater), if connected to Wi-Fi Connected(Cellular), if connected to 3G/4G.
Don't know if the WebWatch successfully connected to the internet		Once connected via Wi-Fi or Cellular, to the internet, a non-zero WAN IP will populate in "WAN IP" field on the Status page of the WebWatch setup site.
App not responding/ app not showing that WebWatch is connected	If you recently made a change to the settings, the device may be restarting	If the WebWatch doesn't reconnect within 30 seconds, 1. Exit the app (not just close it using the home button) 2. Go back to your device's Wi-Fi settings and connect to the WebWatch 3. Restart the WebWatch app.
WebWatch is not responding through setup page and app	Device may need to be restarted	Restart the device by turning off power supply and wait 15 seconds before turning it back ON.
Forgot Wi-Fi hotspot password and cannot log in		Either connect the WebWatch to a Laptop via a Ethernet cable and access the setup site else, conduct a physical factory reset by following the instructions in the "Conduct a physical factory reset" section of this manual.

Conduct a physical factory reset:

With the device connected to the power, push the small black reset button next to the SIM card slot under the cap at the bottom of the device and hold for about 10 secs until the WebWatch Wi-Fi hotspot disappears from the list of available networks on your laptop or mobile device.

Black Reset Button ◀



Conduct a physical factory reset:

If the device is responding and you are able to connect our Laptop or Phone app to the WebWatch, you can restore the factory defaults of the device by going to the WebWatch setup page, then

Management > System > Reset To Factory Configuration

On the app, this option can be found under, Router Setting > Advanced Setting > Restore Factory Defaults

If the device is not responding, you will need to conduct a physical reset as described in the “conduct a physical factory reset” section of this manual.

Reboot Device:

If the device is responding and you are able to connect our Laptop or Phone app to the WebWatch, you can reboot the device by going to the WebWatch setup page, then

Management > System > Reboot

On the app, this option can be found under, Router Setting > Advanced Setting > Reboot

If the device is not responding, you will need to turn of the power supply to the device, wait for about 15s and then turn it back ON.

COMPLIANCE INFORMATION

Federal Communication Commission (FCC) Statements

Exposure Statement:

When operating the product, you **MUST** maintain a distance of 20cm from the body to ensure compliance with RF exposure requirements.

FCC statements:

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications or changes could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

Warning:

You **MUST** cease operating this device immediately if requested by the FCC or a licensed wireless service provider.

Receiver Technical Specs

Model No.	WCT-1 & WC-1
Power Supply & Consumption	DC12V/24V, 1A Max @12 VDC
Device Management	iOS app, Android app and web browser
Internet access through	Wi-Fi hotspot or Ethernet portt
Number of Users	Up to 32 on Wi-fi and cellular
Connectors	WCT-1: 1 x male "F" connector (TV), 1 x Ethernet (WAN), 1 x Ethernet (LAN) WC-1: 1 x Ethernet (WAN), 1t x Ethernet (LAN)
Wire	WCT-1: 25ft (7.62m) RG-59 coax cable/power cable WC-1: 25ft (7.62m) DC power cable
RoHS Compliant	Yes
Dimensions	Dia. 11.75 in x 13 in (29.84cm x 33.02cm)
Weight	3.85lbs (1.74kg)
Wireless Approvals & Certifications	FCC
Operating Frequencies	LTE FDD bands: B2/B4/B5/B17, all bands with diversity DC-HSPA+/HSPA+/HSPA/WCDMA B2/B4/B5 (1900MHz/1700MHz/850MHz) with diversity Wi-Fi : 2.4 GHz TV antenna (INCT-1 only): AM: 520-1719 KHz FM: 88-108MHz VHF: 87.5-230MHz UHF: 470-700MHz

Product: WebWatch
FCC ID: I4O-WW01