Q-Browser User Manual

Q-Browser-2.10

3/24/2014

This document details the functions and operation of the Q-Browser software package used to communicate and interface with Xcor Quivers and with QAM Snare Navigators and Monitors

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Table of Contents

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Overview

Q-Browser is a software package that is used as an interface to communicate with several Arcom Digital field devices. Q-Browser works with Xcor Quivers, with QAM Snare Navigators and with QAM Snare Monitors.

Overview of use with Quiver

The Q-Browser software, when used with Quiver allows for transfer of stored Quiver screen images onto a PC. For Quiver software versions including and greater than 2.0.7 it also provides the ability to upload Quiver firmware updates.

Overview of use with QAM Snare Navigator

The Q-Browser software, when used with Navigator allow for the following:
- Setup of Wi-Fi SSID credentials via a computer keyboard instead of the device keypad
- Setup of IP and Dynamic DNS address
- Transfer to a PC of any stored Navigator Screenshots
- Removal of stored Navigator Screenshots
- Reading of various device configuration parameters

Overview of use with QAM Snare Monitor

The Q-Browser software, when used with Monitor allow for the following:
- Setup of Wi-Fi SSID credentials via a computer keyboard instead of the device keypad
- Setup of IP and Dynamic DNS address
- Perform Spectrum Scanner functions and transfer saved filed to a PC
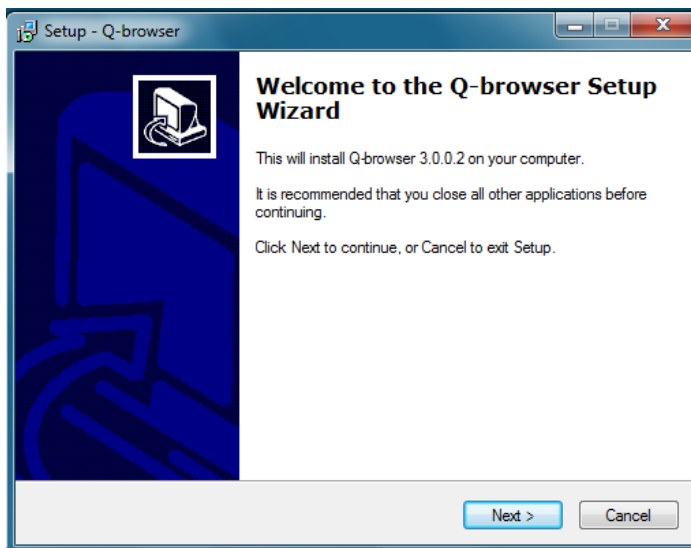- Setup of various device configuration parameters

Quiver Browser Software Installation

Step one – Load Q-Browser software:

Load the Q-Browser software onto your computer by running the set up program <u>Quiver Browser setup x.x.x.x.exe</u>. This program will launch the Setup Wizard typical with most software.

After following the setup instructions, first step is to launch the program. In order for Q-Browser to function, it needs to be connected via USB to an Arcom Digital field device – either a Quiver, a Navigator, or a Monitor. If a unit is not connected, or if it is turned off, the following message will appear. Connect, power on, then press OK.

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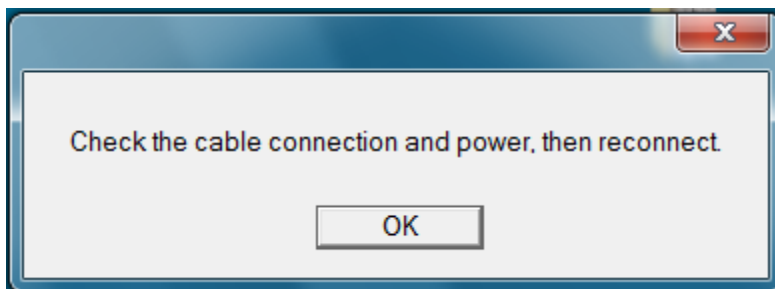
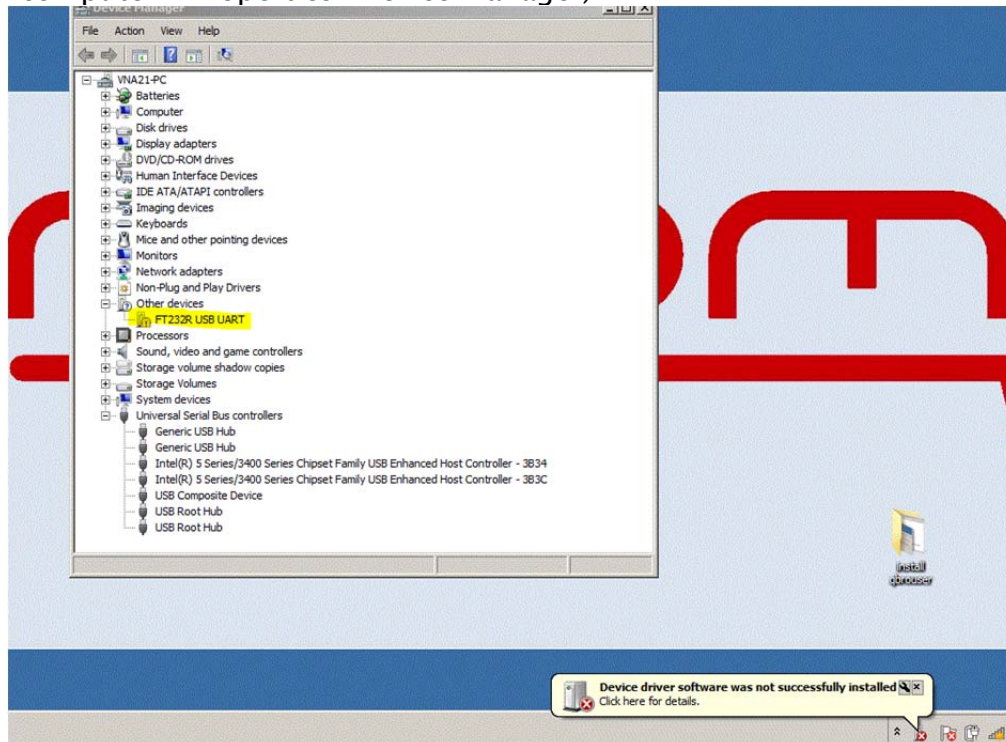## Step Two – Use the following procedure to load the Q-Browser drivers:

Q-Browser Drivers installation

1. Download latest Q-Browser installer from FTP server.

2. Install Q-Browser.

3. Connect a Qam Snare Navigator, QAM Snare Monitor, or a Quiver unit to computer via USB.

4. Open Device Manager (from start menu right click on "computer">Properties>Device Manager).

If the drivers were not successfully installed as highlighted above, and you received this error message, then
right click on FT232R USB UART and update drivers, Go to step 7.

5. If your drivers are already installed and unable to connect to your device using Q-Browser, open Device Manager:

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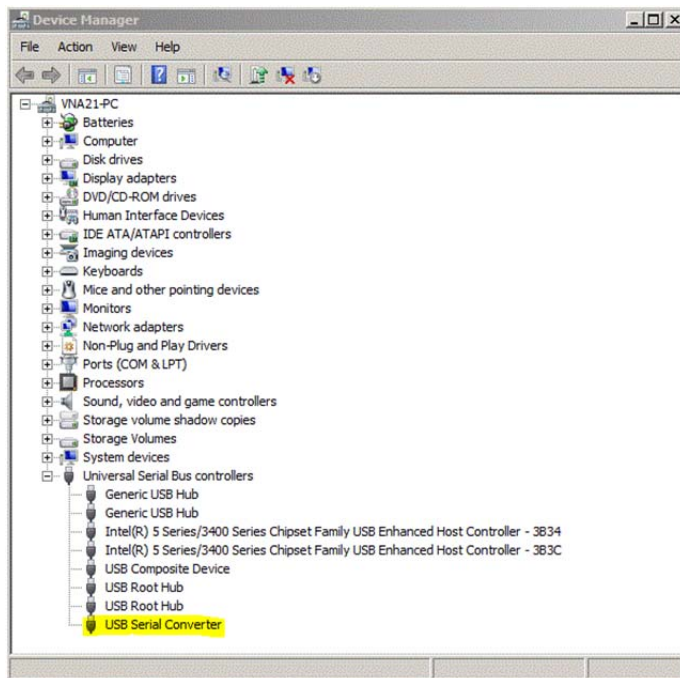
Verify the correct USB Serial Converter as highlighted by removing the USB connection the unit,

USB Serial Converter should disappear. Then reconnect USB to the unit.

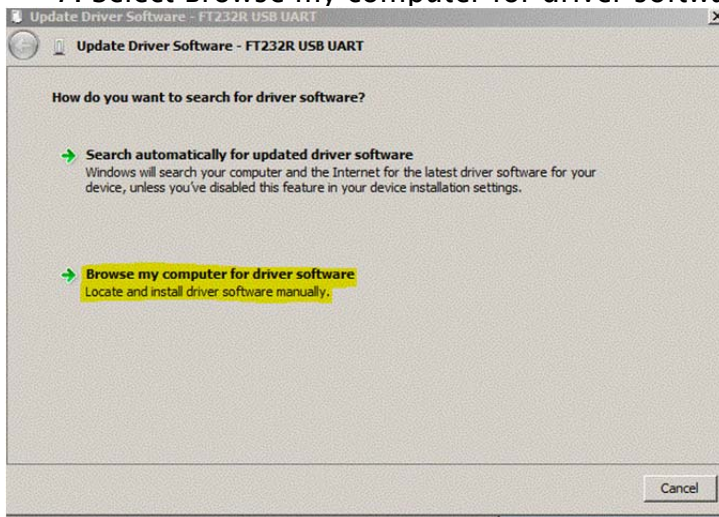6. Right click on USB Serial Converter and uninstall.

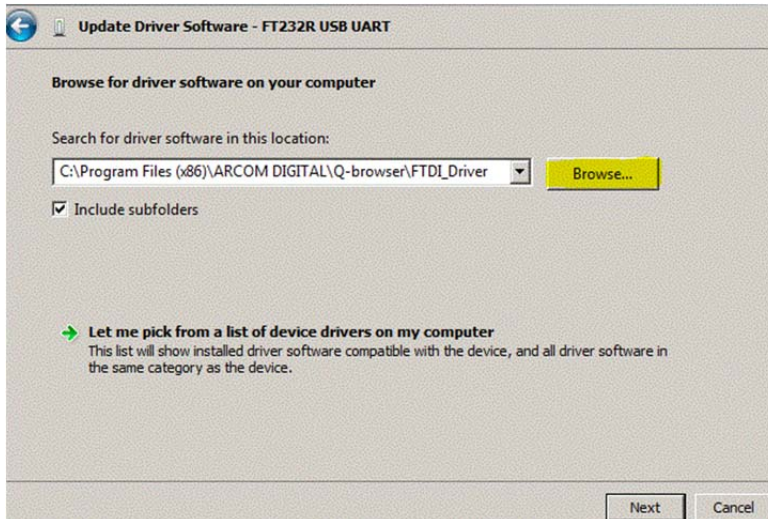Check "Delete the driver software for this device."

Disconnect USB wait 5 seconds

Reconnect USB, then go to step 4 and right click on FT232R USB UART and update drivers.

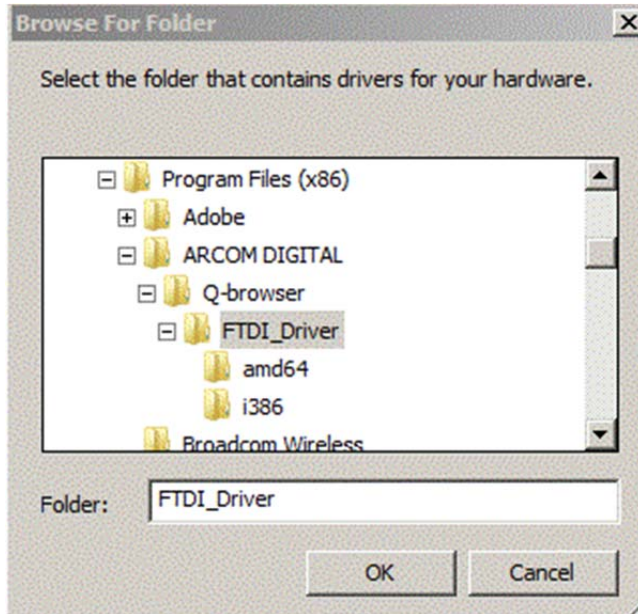## 7. Select Browse my computer for driver software:

Update Driver Software - FT232R USB UART

Update Driver Software - FT232R USB UART

How do you want to search for driver software?

→ **Search automatically for updated driver software**
Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.

→ **Browse my computer for driver software**
Locate and install driver software manually.

Cancel

8. Select Browse.

Update Driver Software - FT232R USB UART

Browse for driver software on your computer

Search for driver software in this location:

C:\Program Files (x86)\ARCOM DIGITAL\Q-browser\FTDI_Driver   Browse...

☑ Include subfolders

→ **Let me pick from a list of device drivers on my computer**
This list will show installed driver software compatible with the device, and all driver software in the same category as the device.
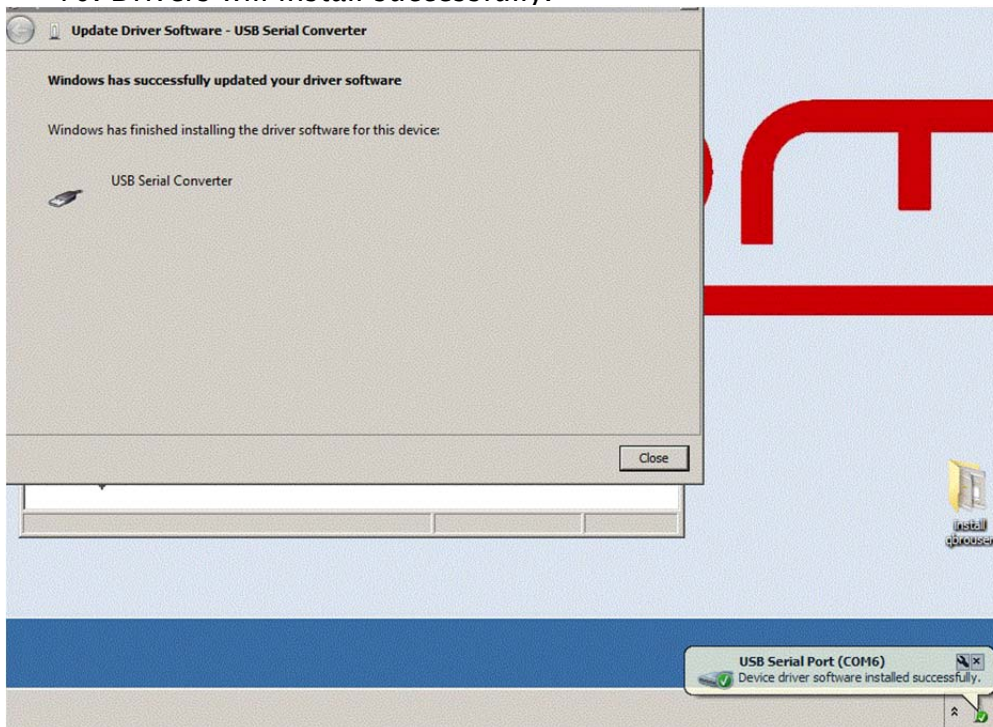
Next   Cancel

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9. Navigate to C:\Program files (x86)\ARCOM DIGITAL\Q-browser\FTDI_Driver and click ok.
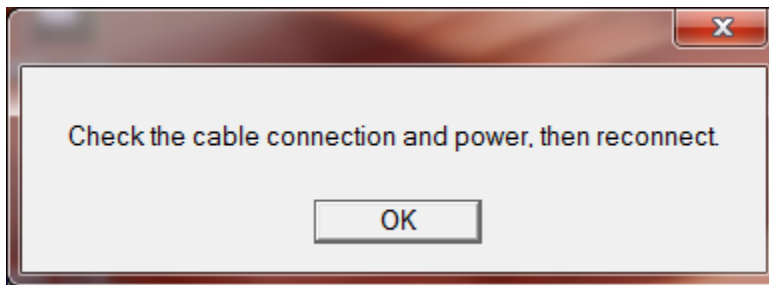

10. Drivers will install successfully.

Using Q-Browser

Connect the field device to a PC using the provided USB cables, then click on the Q-Browser desktop icon.

If the screen shown below appears, then turn power to the field device on, and check that USB cable is attached.
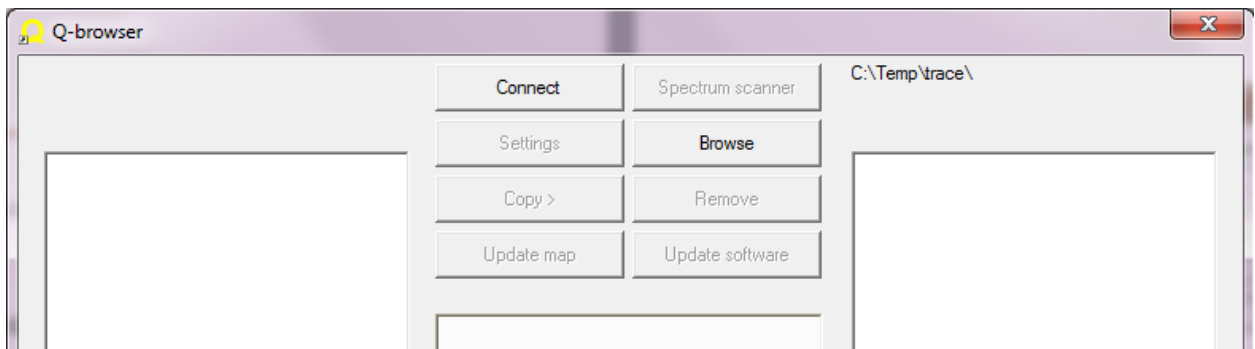

Connect button

If USB connection was not made or the unit was not turned on prior to clicking on the Q-Browser button, it is necessary to request a connection.

After clicking OK, next click on the **Connect** button.

The field device data is stored in Flash Memory and sorted by the main mode type for the particular device. The information displayed on the screen will vary depending upon the connected device and device configuration, so throughout this manual items may appear differently than on your connected device.
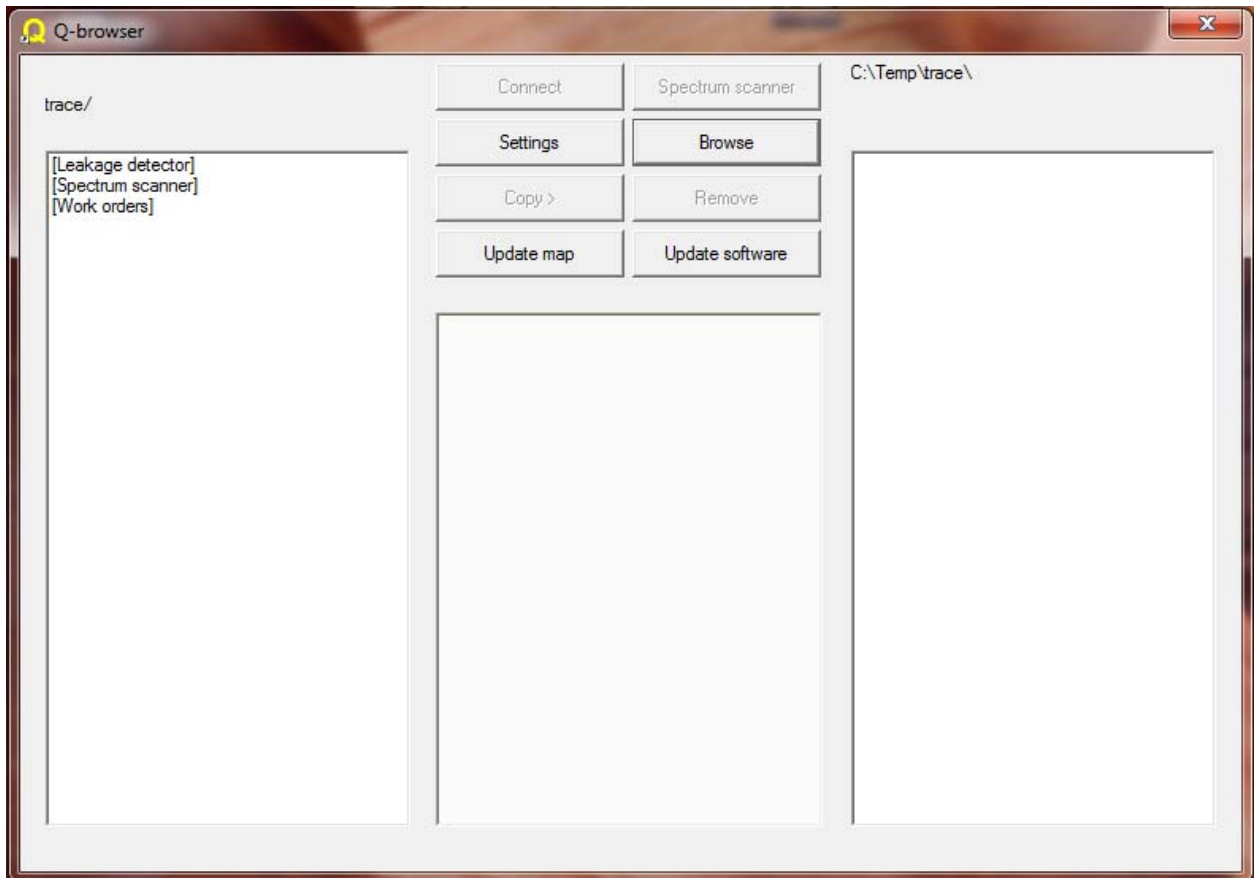

Browse button

The browse button is used to select the destination directory when transferring stored screen shots from the device to a PC. Click on the **Browse** button, then select the destination directory from the list, then press OK.
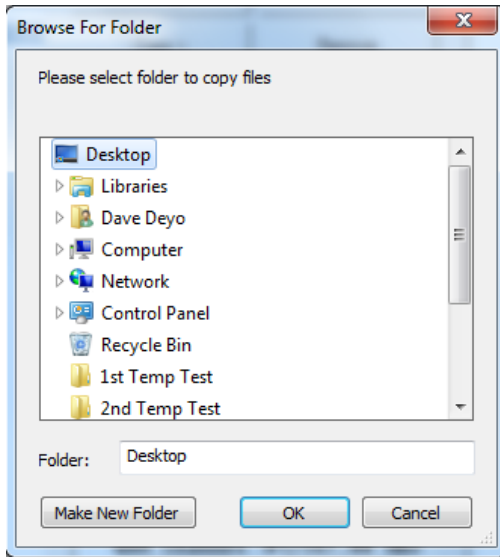
Copy saved screen captures from the device to a PC

For each device, a file directory of internal screen capture locations is shown in the left box when Q-Browser opens. Click on whichever directory is desired.
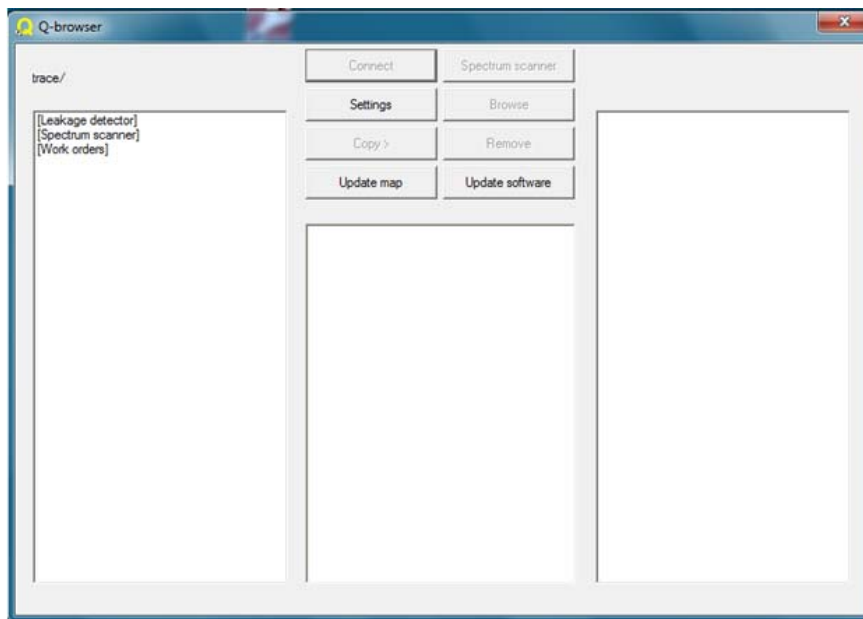
In this example, let's assume we want to copy some map location screen shots that were previous captured. Click on Leakage detector, and then maps – and the directory show in the left box changes.
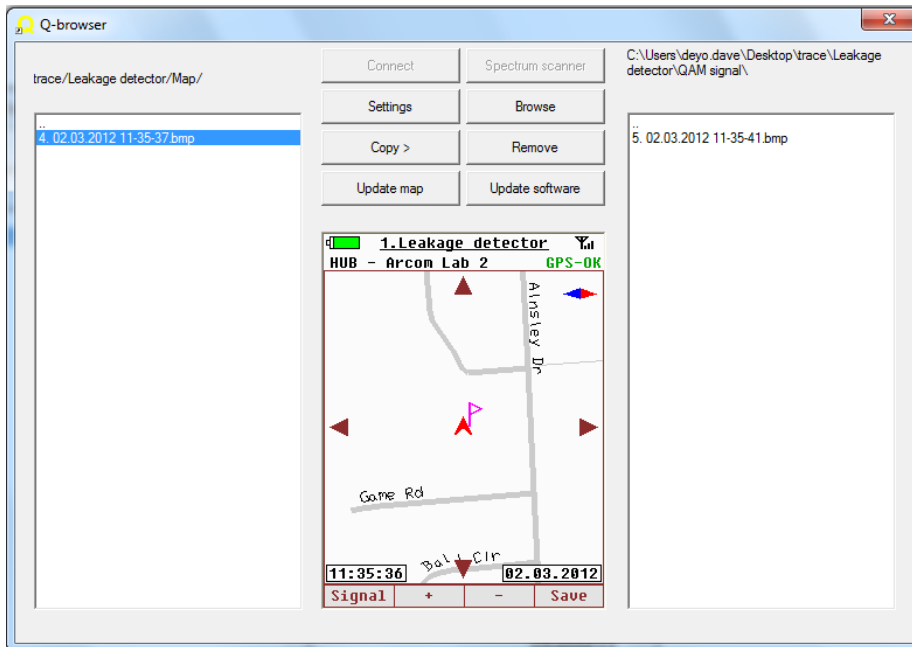
Click on the map file, and an image of the screen shot will appear in the middle screen, then simply press Copy – and the image will be transferred to the destination directory. Groups of files can be selected by highlighting multiple files and pressing Copy once – as each file it transferred, an image of the bitmap will briefly appear on the center screen.

Remove saved screen captures from the device or from PC

The Remove button is used to delete screen captures stored on the device or stored on the computer. Simply navigate to the desired file and press Remove.

Using Q-Browser with QAM Snare Monitor

Q-Browser is a necessity to use with Monitor for initial device configuration. The Wi-Fi or GSM credentials are added by using the Q-Browser, as well as user ID and other configurable settings. When the Monitor first connects to Q-Browser, a listing of the device firmware settings and current configuration is displayed.
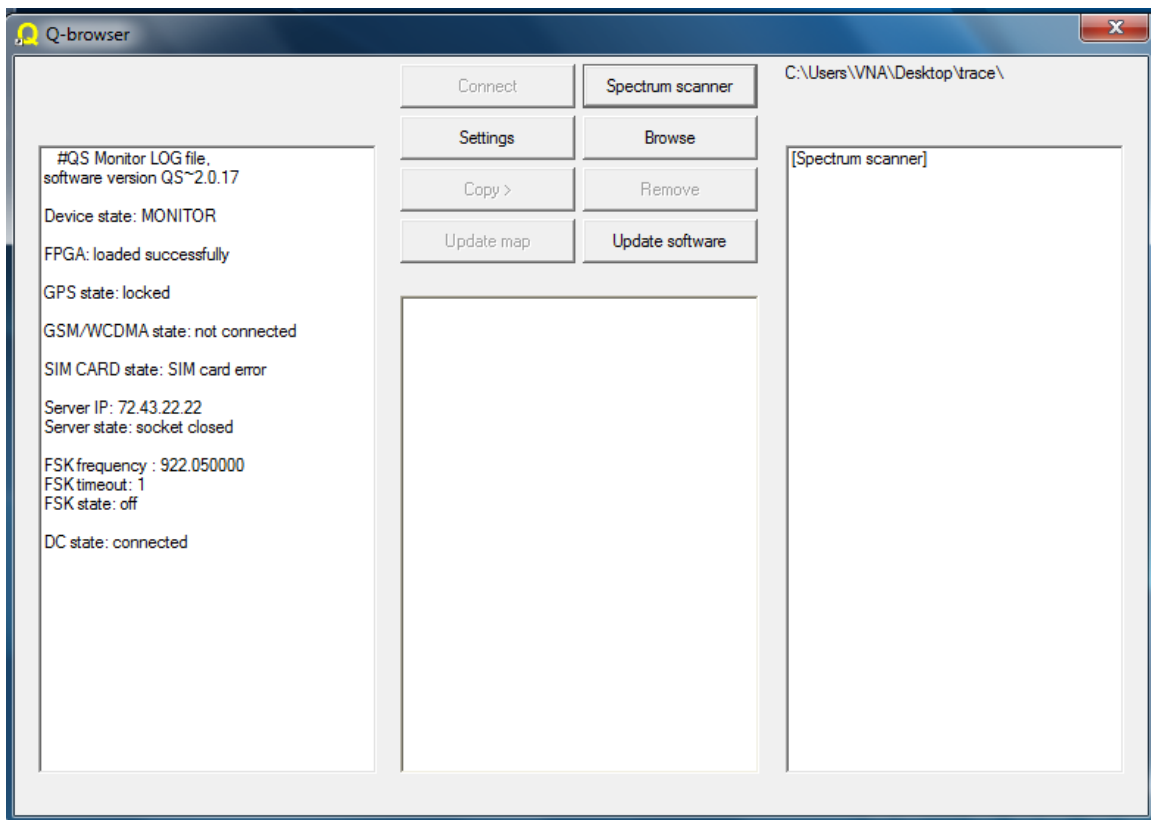
Monitor – Settings button

Configuration of all setup parameters is performed in the Settings menu item. Click on the settings button and the menu will open. After changing or entering parameters, press OK to save changes. Pressing OK will force the Monitor to reboot.

Settings – General

Here information specific to the device is entered – Device and Technician ID, FSK carrier for communicating to Isolator, FSK battery power timeout, and operating standard. *Note– all these parameters are of a lower priority and can be overridded by setting changes made within the QAM Snare Manager Program.*

Device ID	Monitor00007
Technician ID	arcom
FSK carrier, MHz	915.000
FSK timeout, min	1
Standard	NTSC

Settings – Profile

Here information specific to the wireless communication protocol configured for the device is entered. The screens will vary dependant upon GSM or Wi-Fi version.

Wi-Fi

Profile

List	ArcomWIFI
Name	ArcomWIFI
Network SSID	ExitOnly
User name	
Password	qamsnareadmin8
GSM band	GSM 900MHz + DCP 1800MHz
WCDMA band	2100MHz

Create profile

Delete profile
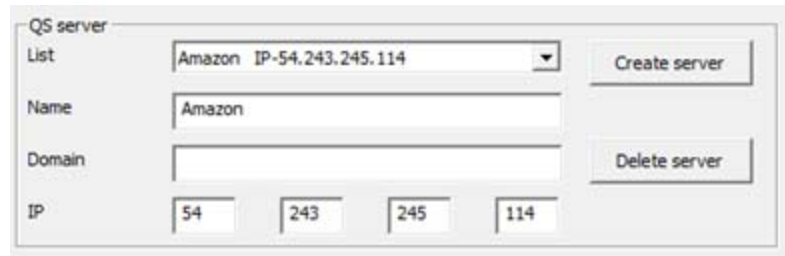
GSM

Profile

List	att
Name	att
APN	isp.cingular
User name	
Password	
GSM band	GSM 850MHz + PCS 1900MHz
WCDMA band	2100MHz / 1900MHz / 850MHz

Create profile

Delete profile

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Settings – QS Server

Here the setting for the QAM Snare server that the device will communicate with is configured. Enter the Dynamic DNS or IP address of the QAM Snare server.
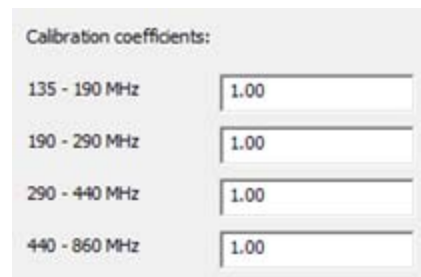
Settings – Calibration coefficients

Calibration coefficients should only by adjusted by personel trained on the calibration process. Default setting should be 1.
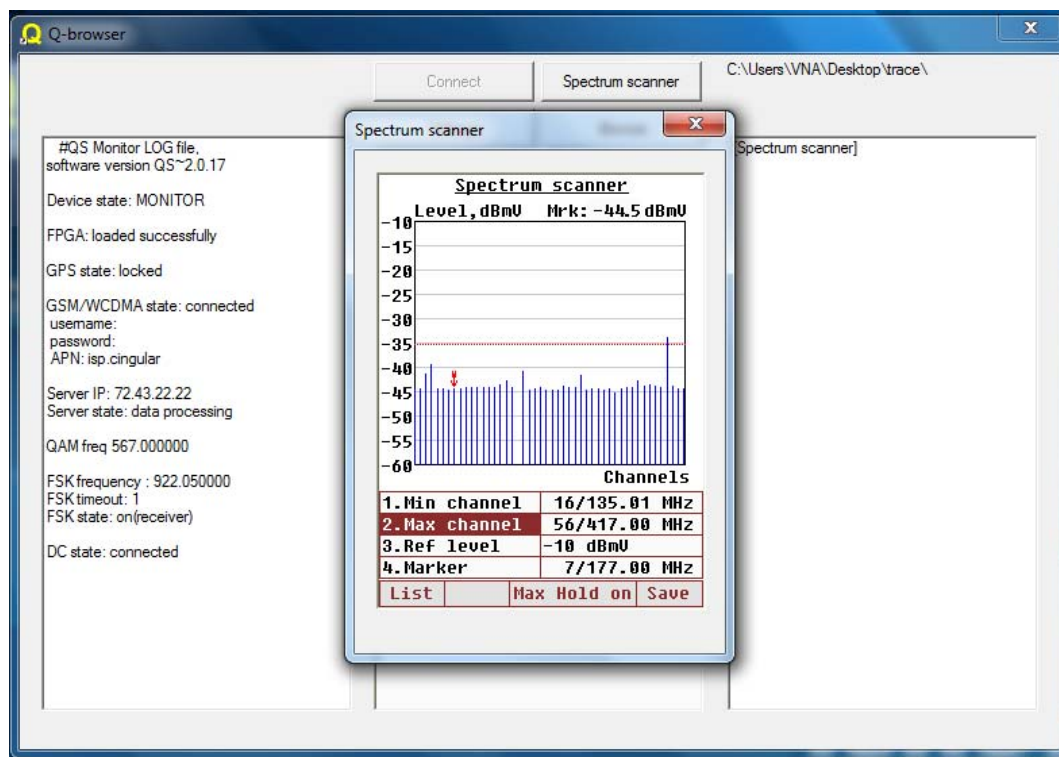
Monitor – Spectrum scanner

The Spectrum scanner button provides Monitor with the ability to perform spectrum scans. Click on the Spectrum scanner button and the Spectrum scanner will open.

By putting your mouse over the List, Max Hold, or Save button, the mode can be changed. Also by clicking on Min or Max channel, ref. level, or Marker – the setting can be adjusted accordingly.
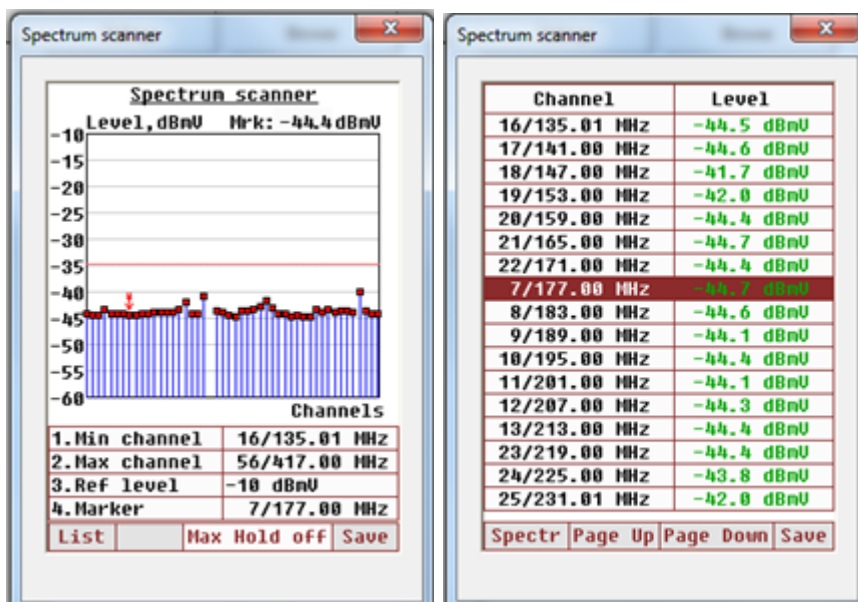
Monitor – map update

The map update button allows for updating the street maps stored on the internal SD card that originally ships with the product. If it is desired to update these maps, after acquiring new software files from Arcom Digital, follow the same update procedure as outlined in the **Update Software procedure** section of this manual, except alternatively click on the Update Map button instead of the Update Software botton.

Using Q-Browser with QAM Snare Navigator

Use of Q-Browser with Navigator is not required for device setup.

Navigator – Settings button

Q-Browser provides an alternative to using the Navigator keypad to enter device configuration settings. It is useful when entering long Wi-Fi password names, and the only option to enter passwords that contain non-standard characters that are not

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present on the Navigator keyboard. All non-blanked out fields are able to be entered using Q-Browser. Calibration coefficients are read-only and display the current device configuration. Settings pages are shown below for GSM and Wi-Fi models, the screen will be different for each of these two configurations due to differing requirements.

Using Q-Browser with Quiver

The Q-Browser software, when used with Quiver allows for transfer of stored Quiver screen as per the procedure outlined in the **Copy button** section of this manual. For Quiver software versions including and greater than 2.0.7 it also provides the ability to upload Quiver firmware updates.

Update software procedure

The internal software for Navigators greater than software version 3.0.10, for all Monitors, and for Quivers including and greater than 2.0.7 – is able to be updated using the Q-Browser. Use the following procedure to update the software file that you have received from Arcom Digital, either from the Arcom FTP site, or the software downloads section of our website.

This update process will require that you cycle the power two times. The first time is to install the new software. The second time is to save the new install and other settings you may change. Each time you power down make sure you wait one full minute before turning the power back on again.

1. Make sure you have latest version of Q-Browser installed on your Windows PC.
2. Retrieve the correct update from email, the Software Downloads section of our website http://arcomlabs-public.sharepoint.com, or from the Arcom FTP server. Download EXE updates located on the FTP server can be found in the following locations:
    a. For Quiver: /From Arcom/Public/Quiver/Updates
    b. For Navigator and Monitor: /From Arcom/Public/QAM Snare/Updates

    Update files sent by email will be in a ZIP format. Save the ZIP file in a location you desire. Right click on the ZIP file, select "Extract All" and save the file into a location you desire. Navigate to the EXE file in the extracted folder and continue with this procedure.

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3. The Software Update package is in the form of a self-extracting archive. Once the file is transferred to your computer you will double click on the EXE file to extract the actual files to be updated. This will create the folder C:\QAMSnare. Additional folders containing the actual updates will be added to C:\QAMSnare
    a. If the folder and/or file already exists always append the folder and copy and replace the files.

4. Begin with the power off. The NAV/QVR LCD screen must be dark, and the Monitor Power LED must be off. If the Monitor is installed in a vehicle the ignition must be off and the key should be removed.
    a. **For Monitor only, unscrew the GPS connector.** *This process is required in order to prevent inadvertent connection to the server during the update process.*
5. Connect the USB cable from your PC to the product being updated.
6. Now turn the power on and make note of the current Software Version and all "General", "Connections", and "Measurement" settings.
    a. For the Monitor you will need to use q-browser to see these settings discussed in the steps below.
7. Open Q-Browser when the NAV/QVR LCD displays the main menu, or after the Monitor Power LED turns on.
    a. If Q-browser indicates the device is not connected then click the "Connect" button.
8. For the Navigator and Monitor a list of parameters should appear on the left side of the screen.
    a. Note the current software version. For example, the monitor might say "software version QS~3.1.8"
    b. **For the Monitor, it is important that the software update is not attempted while connected to the QAM Snare Server.** To be sure the Monitor is not connected,


```
#QS Monitor LOG file,
software version QS~3.1.8

Device state: INIT

FPGA: loaded successfully

GPS state: unlocked

GSM/WCDMA/WiFi state: not connected

Server state: socket closed

FSK frequency : 915.000000
FSK timeout: 1
FSK state: off

DC state: connected
```

verify the two statements "GSM/WCDMA/WiFi state: not connected" and Server state: socket closed" are visible in the monitor parameters. *If a software update is attempted while the Monitor is connected to the server, the Linux software image may become corrupt.*
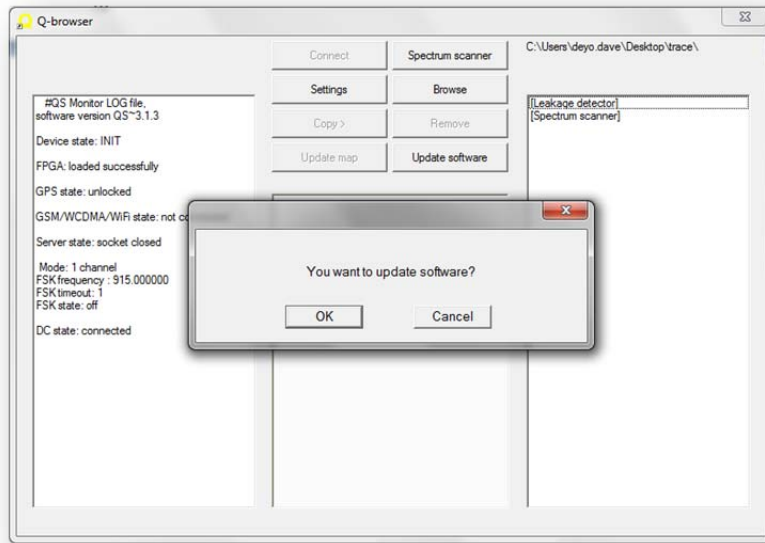
Click the "Update software" button. Follow the prompts to select the folder unzipped in step 3. Click OK.

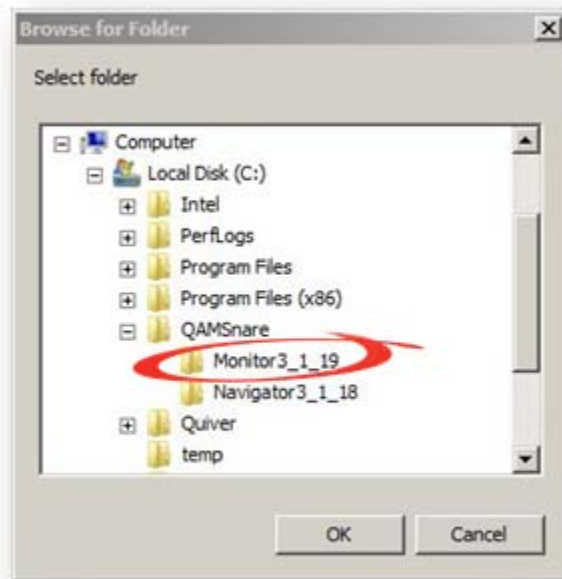Q–browser update screen when connected to a Navigator.
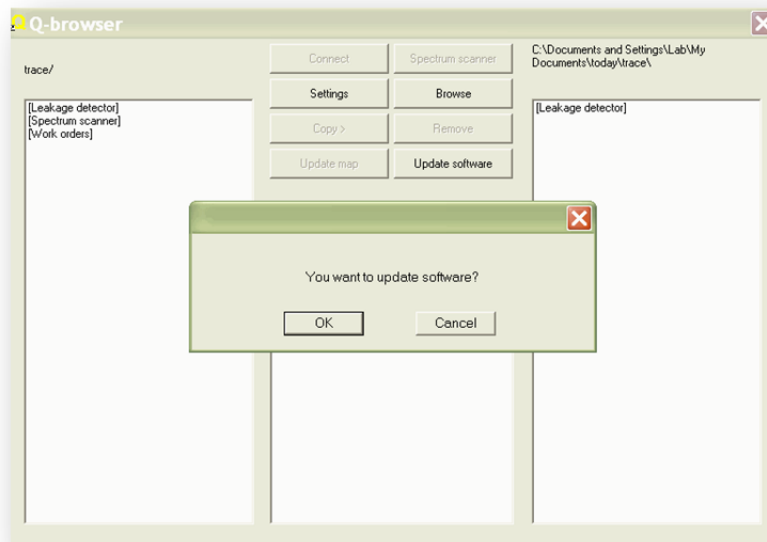
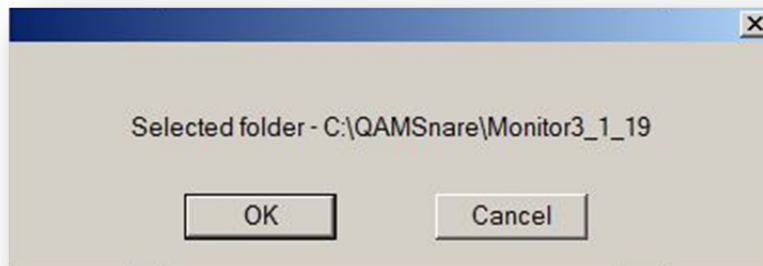Q–browser update screen when connected to a Monitor.

Select the **folder** containing the file(s) to be updated located in C:\QAMSnare or C:\Quiver. In this example you would choose "Monitor3_1_19". Be sure to select the correct folder for your update.   Click "OK" after you have selected your update folder.
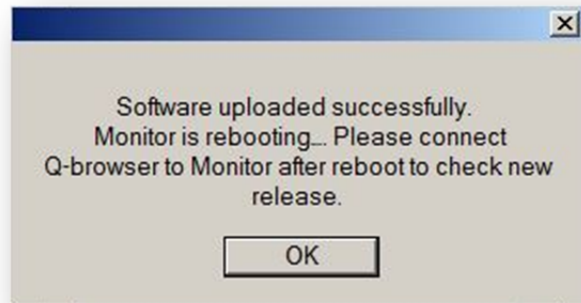
9. *Confirm the selected folder and click OK.*

10. Updating should only take a few moments. Q-Browser will display each file as being transferred. In the middle of the screen below you can see file QSnareBlackBox is *being transferred.* Each update package may contain different files to be updated.
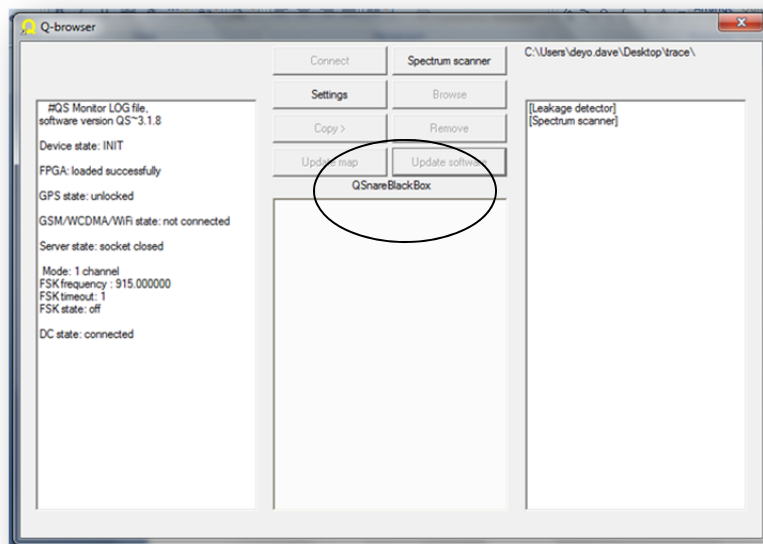
11. When the transfer is complete a specific message will appear. It is very important to follow the instructions shown on the message.

When the transfer is **successful** the following message will appear:

<u>Monitor:</u>   <u>Navigator:</u>

Software uploaded successfully.
Monitor is rebooting…. Please connect
Q-browser to Monitor after reboot to check new
release.

OK

Software uploaded successfully.
Please power down Navigator and restart to
enable software update.

OK

When the transfer is **unsuccessful** the following message will appear:

Copy Error!

Please don't switch off power to QAM Snare
device, connect Q-browser and try again.

OK

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12. Exit Q-browser and remove the USB cable.
    a. For a Navigator - close Q-browser, remove the USB cable.
    b. For Monitor, select "Settings" and Click OK. The Monitor LED should turn off momentarily. Disconnect the Monitor power as soon as the LED turns off. **If the monitor is installed in a vehicle, turn off the ignition and remove the key.** Re-connect the GPS cable and operate normally.
13. Reboot the device after following the messages in Step 11:
    a. For the NAV/QVR, **Wait approximately one minute**, attach the USB cable, repower the device and reopen Q-Browser described starting with step 6.
    b. A Monitor will reboot automatically – indicated by the LED on the monitor top turns off. Wait approximately 45 seconds for the LED to turn back on. Click the "Connect" button on Q-browser to reconnect to the monitor.

NOTE: Navigator version 3.3.4 and above includes an "Auto-On" feature. This will cause the Navigator to immediately launch the Leakage Detector the first time the Navigator is turned on after an update. Simply press **EXIT** to close the Leakage Detector and continue.

14. Verify the software version is different than originally noted at the beginning. Also verify that all settings in the General, Connections, and Measurement profiles are correct. **Finally, turn the power off once again.** This will save all settings made by the update.   **Wait approximately one minute** before turning the power on again.
15. End of Procedure.

Procedure for loading network maps into Quiver for Navigator Mode

There are three steps involved in updating maps onto Quiver. First, the necessary files must be downloaded from the FTP onto your PC. There are two components that must be downloaded, the street maps (geographic) and the maps showing the cable network elements. After this is done, the street maps must be loaded onto Quiver using the Q-browser program. The Quiver must be shut down and restarted, and then the cable network maps are then loaded onto Quiver. After another Quiver shut down, the device will be ready to be used.

Downloading necessary files from the FTP site

1. It is first necessary to load generic street maps. From FTP server download geographic (Open street) map for the location where the Hunter is installed and where Quiver will be used.

Attention! This is the same map as used for QAM Snare Navigator. They are located in the below folder of the FTP server:

(/From Arcom/Public/QAM Snare/Maps/Navigator/Spain/spain.zip, for example**)**
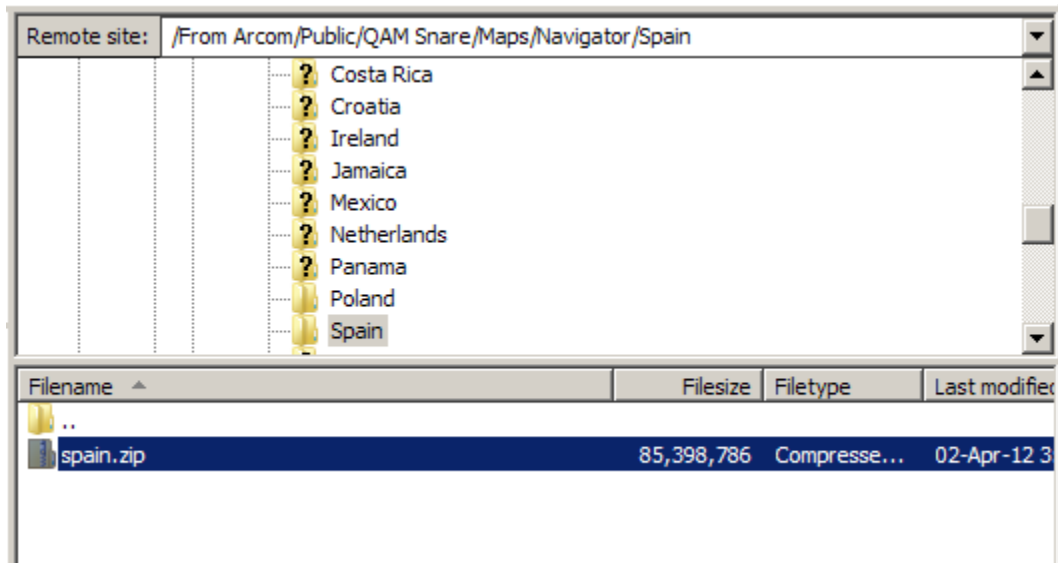

2. Open downloaded zip file and create the necessary folders on your laptop.

Make sure you create a C:\Update\HUB\ folders. This name and path will be critical for installing the node schematic map of the hub sites.

The C:\Update\ should contain the \HUB folder and a folder named with geographical map of the area for example C:\Update\Spain\

In the next step you will place into the \HUB folder, the subfolders with unzipped node schematics for the particular hub sites.

Below is example of properly created folders with maps for the state of Pennsylvania:
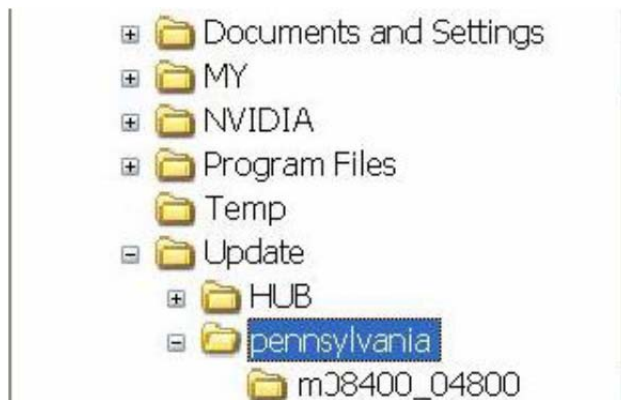
3. Next, the network schematics must be downloaded from the FTP site. These are found in the /From Arcom/ private section of the FTP site. Each hub has the Quiver Navigator map zip files with the hub node schematics located in the folder:
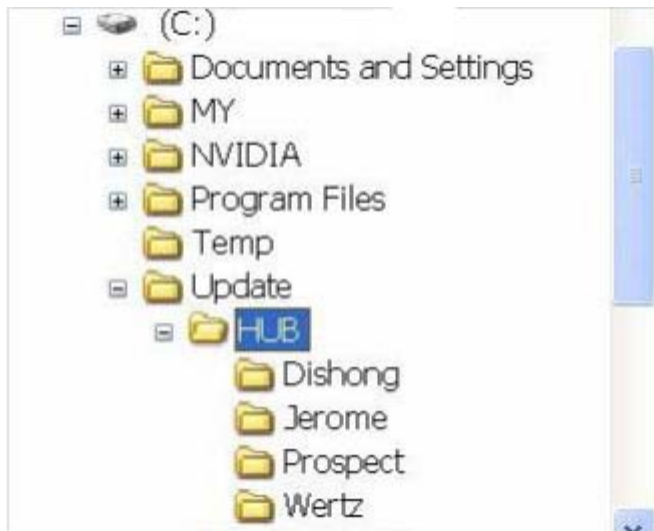
 /From Arcom/Private/Spain/Hubs/ as in this example for Amara site**:**
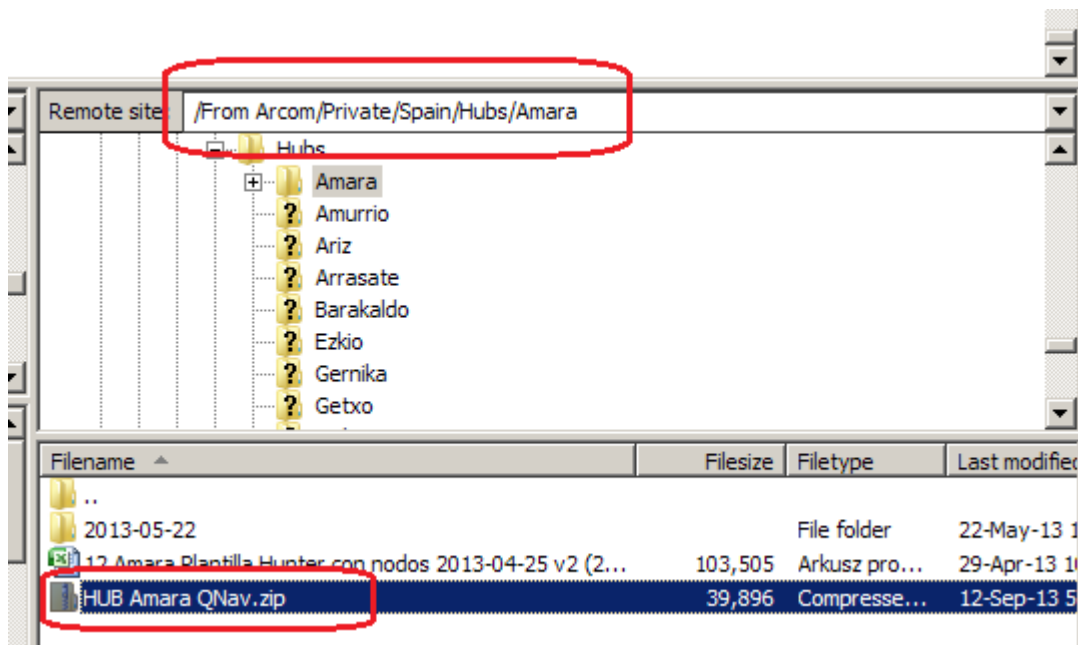
After downloading and unzipping, rename the file lto just the shortened hub name (ie. file **HUB Amara QNav** must be renamed to **Amara).** Place that file (folder) into the C:\Update\HUB\ folder.

Below is example of properly created directory with the hub map (schematics) files (folders):

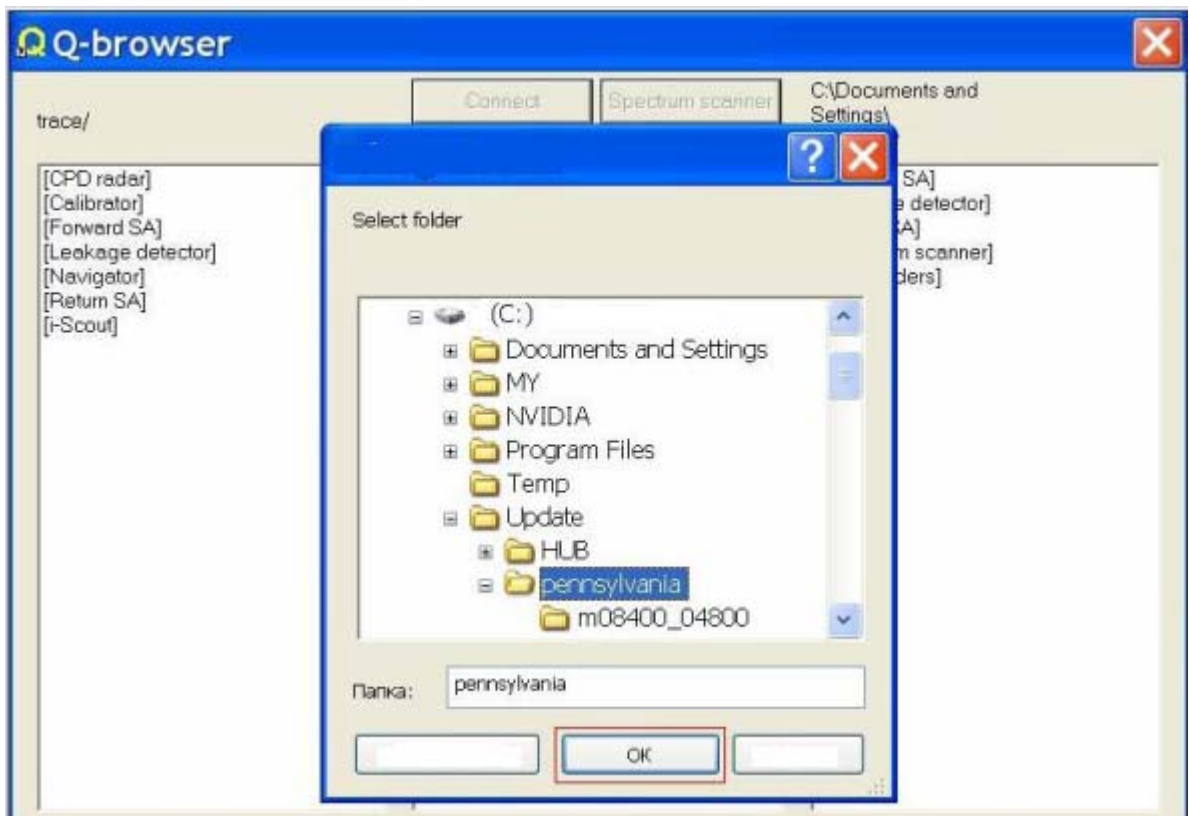## Step 1: Loading the street maps onto the Quiver using Q-browser

1. Switch ON Quiver, connect Quiver via USB cable to laptop, and open the Q-browser program.
2. Upload State geographic map as shown below by pressing the **Update Map button**
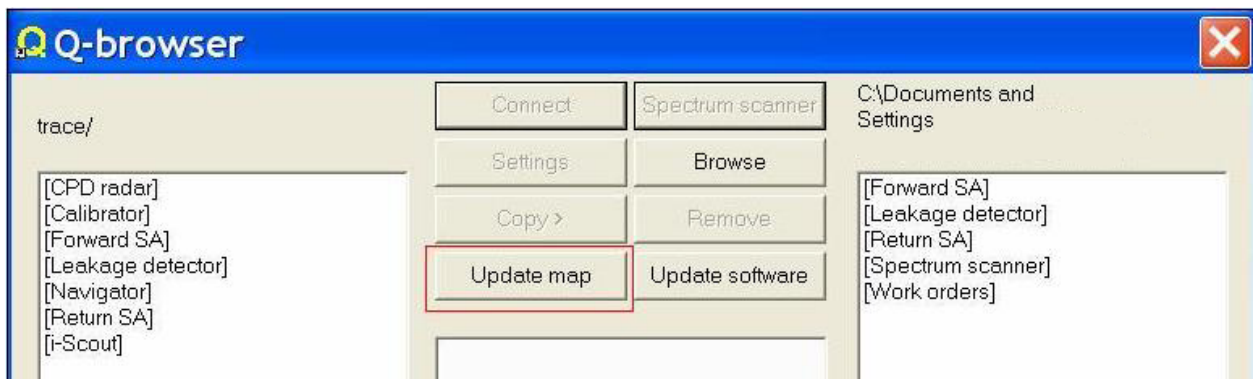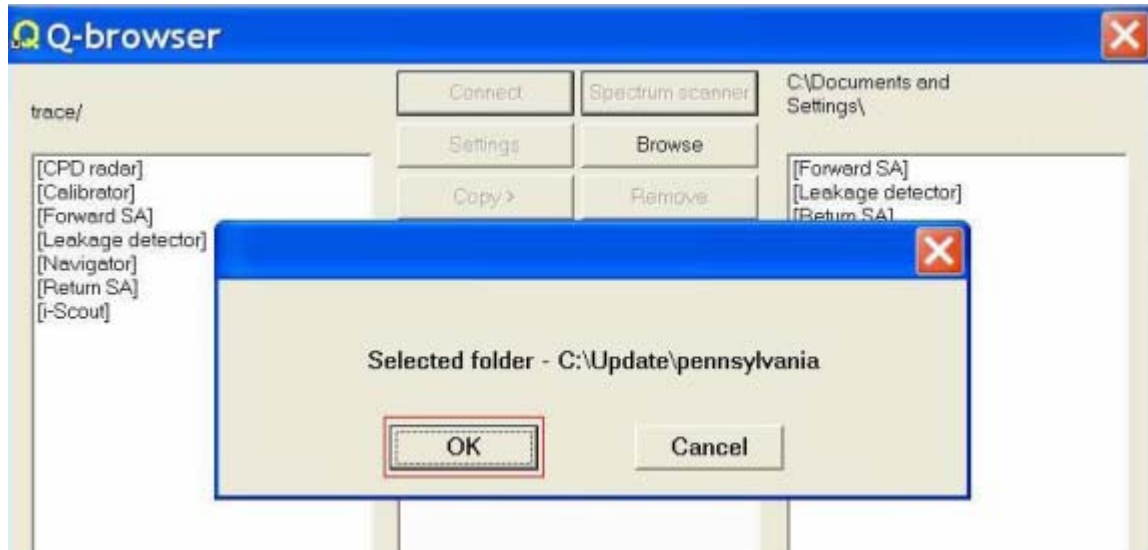

In the following screen press OK button to confirm the action.
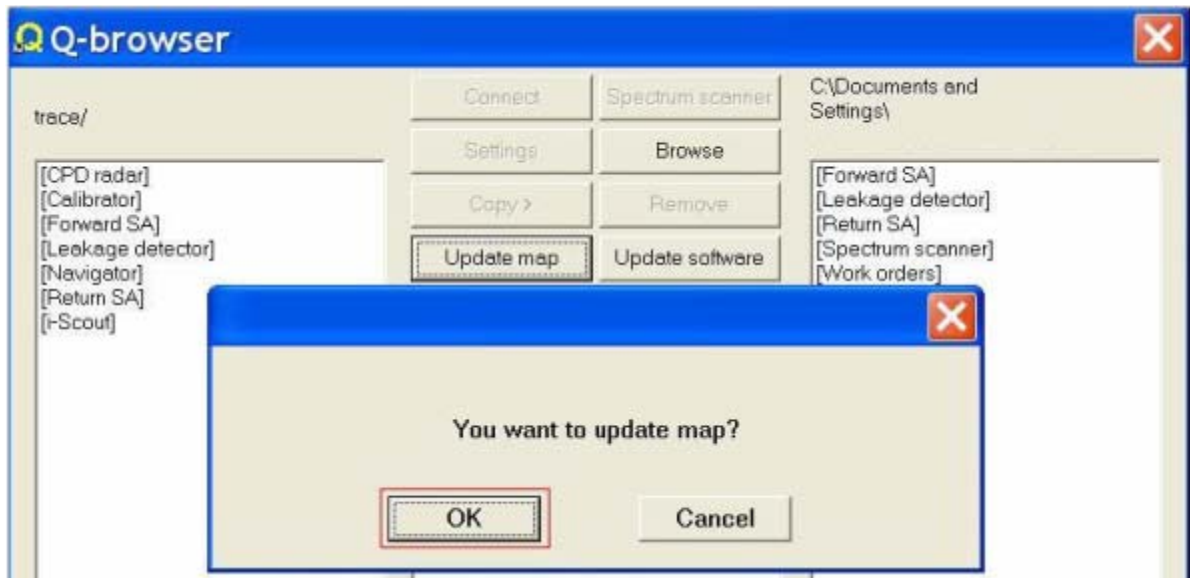
Select folder where the desired geographic map is located.

Press OK on the next screen to confirm the action:

Wait until the map will be uploaded – this can take even over one hour depending on the file size of the geographical map. **Attention! Make sure the Quiver battery is fully charged before updating maps!**

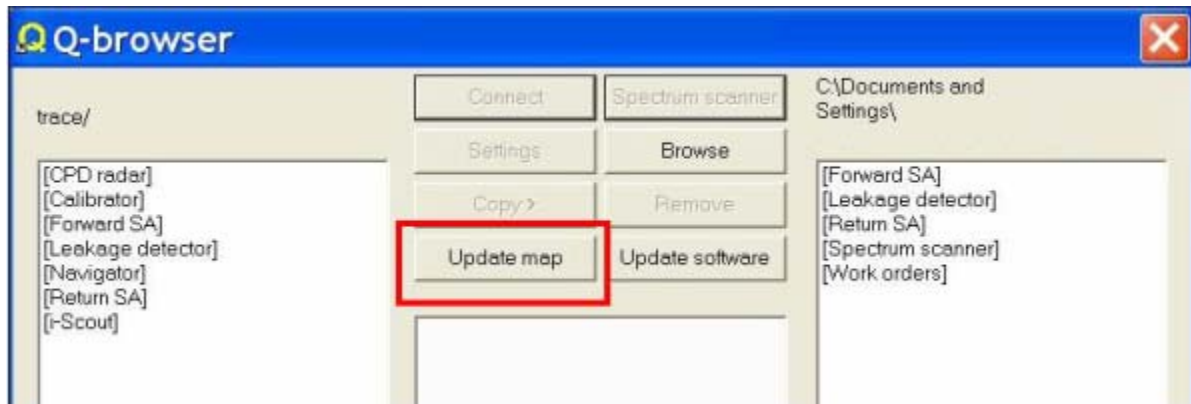The process is finished when the Update Map button appears again:
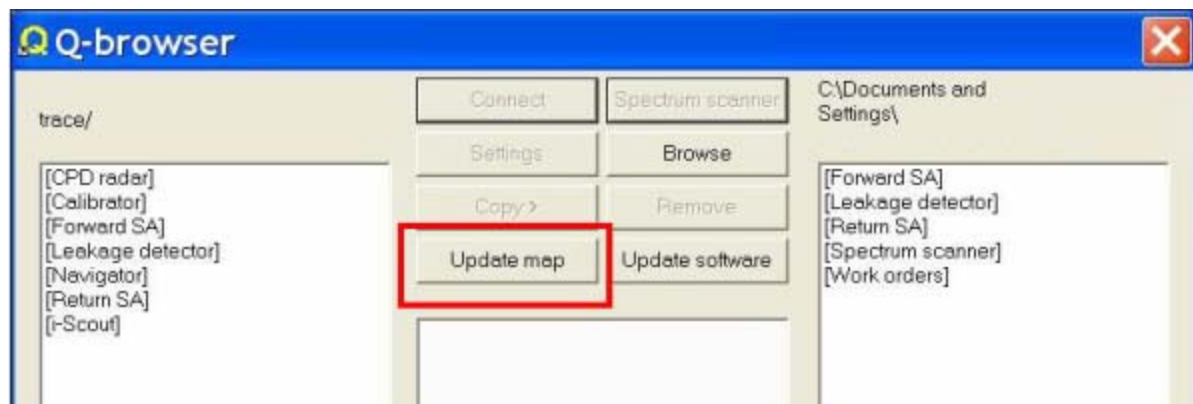
Important! Disconnect the Quiver and restart it prior to continuing with the next step of the update process.
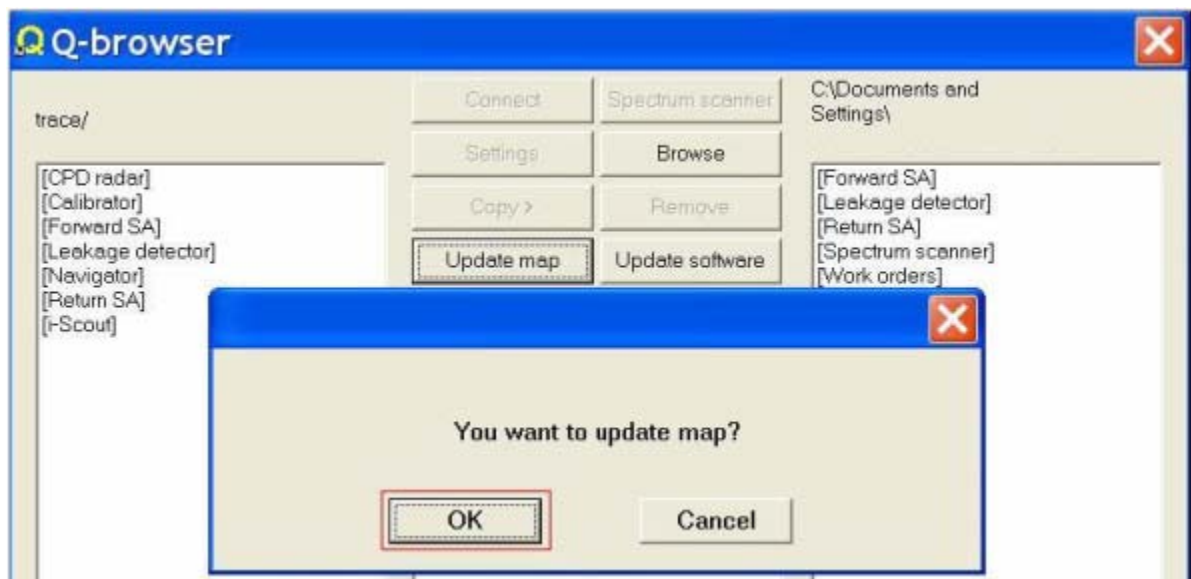
Step 2: Loading the hub maps (schematics) onto the Quiver

For the next step in the process, **after restarting Quiver**, Upload the Hub network maps as shown below:
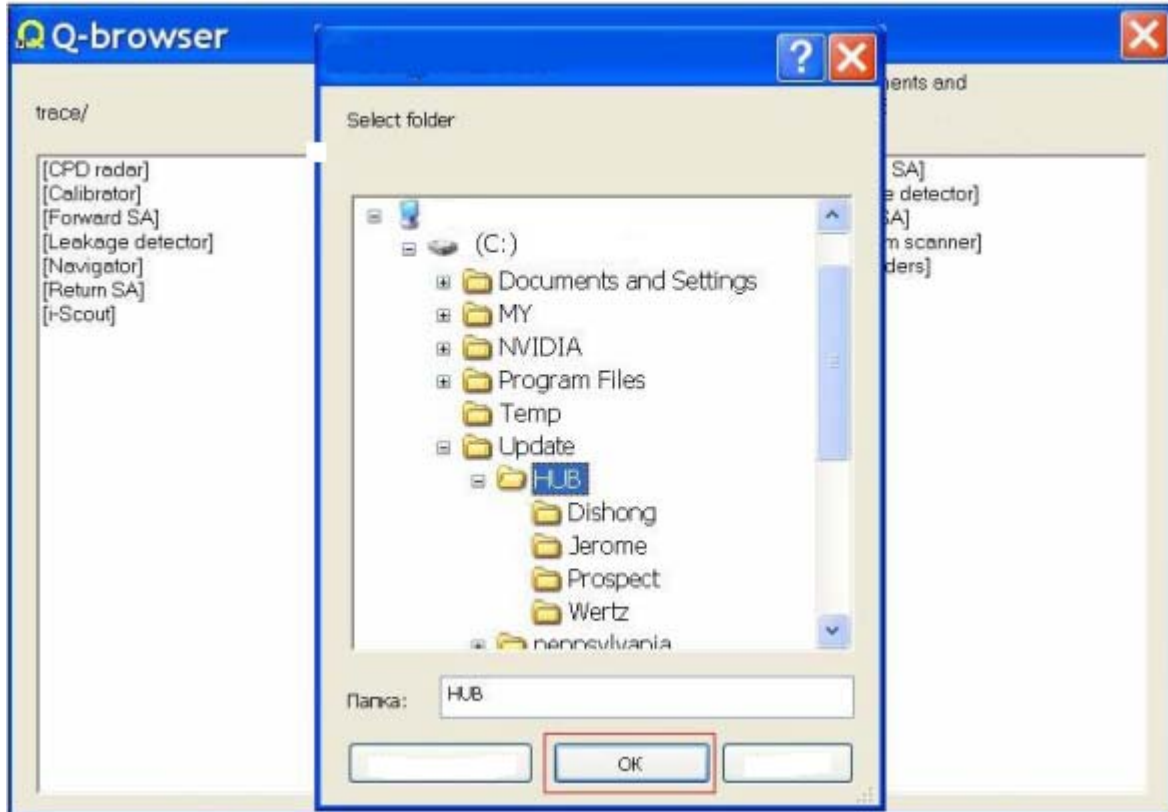
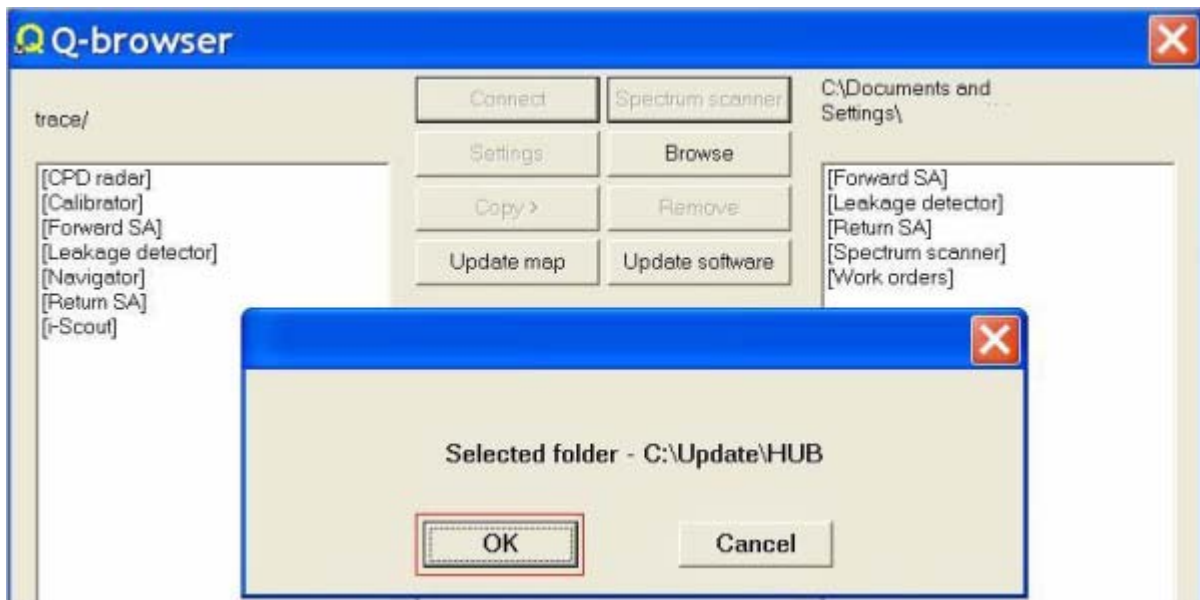Press the Update map button:

Press OK to confirm the action:

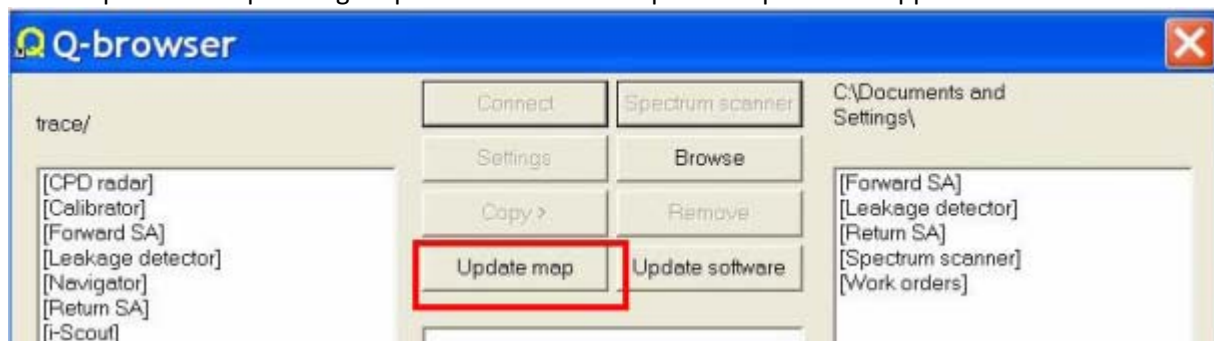Browser to desired folder \HUB and press OK to select.

Press OK to confirm the action:

Wait until the network maps files for all hubs are uploaded.

The process of uploading maps is over when the Upload map buttons appears as active.

Power down and restart   Quiver after uploading maps (Important!) and then go into Quiver Navigator mode within the Quiver to verify that the new hubs were uploaded.

Note: the node schematics will appear only after the street (geographical) and node maps have both been uploaded.