



C.SCOPE PC TOOLKIT User Guide

For use with: Microsoft® Windows XP™ - Windows Vista™ - Windows 7™ - Windows 10™



C.Scope PC Toolkit for Windows® based computers

The C.Scope PC Toolkit downloads activity records ('Records') from any of the C.Scope Data Logging Cable Avoidance Tools ('Locators') and Signal Generators/ Transmitters to a (Windows® based) computer.

The Records can be viewed in a variety of ways; as a time-stamped data format, exported for use in Excel®, exported for use into a reporting or similar computer application, or viewed in a simple pie chart format.

The Table below indicates the products that this User Guide is relevant to and the functions that are applicable to each product:

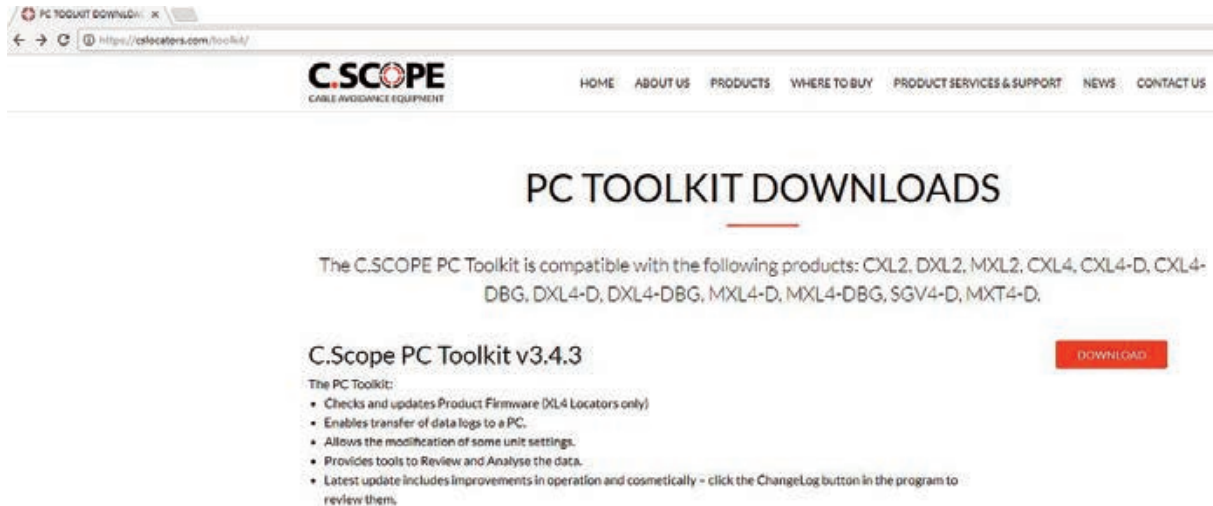
	Product Validation Certificate	Data Transfer by USB	Data Transfer by Bluetooth™
CXL2 / CXL4	●		
DXL2 / DXL4	●		
MXL2 / MXL4	●		
CXL2-D / CXL4-D	●	●	
DXL2-D / DXL4-D	●	●	
MXL2-D / MXL4-D	●	●	
CXL2-DBG / CXL4-DBG	●	●	●
DXL2-DBG / DXL4-DBG	●	●	●
MXL2-DBG / MXL4-DBG	●	●	●
SGV4-D	●	●	
MXT4-D	●	●	

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1. Getting Started

- Go to <https://cscopelocators.com/toolkit/> and download the latest version of PC Toolkit.
(The version shown is for illustration purposes only.)



PC TOOLKIT DOWNLOADS

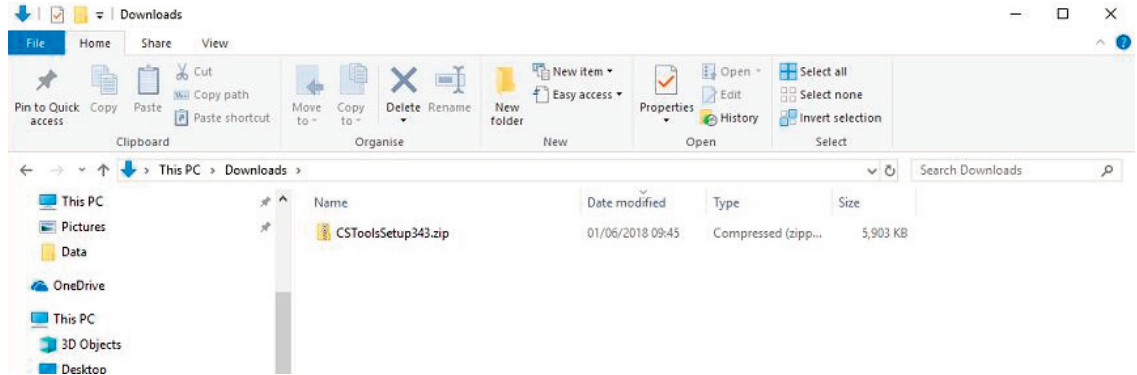
The C.SCOPE PC Toolkit is compatible with the following products: CXL2, DXL2, MXL2, CXL4, CXL4-D, CXL4-DBG, DXL4-D, DXL4-DBG, MXL4-D, MXL4-DBG, SGV4-D, MXT4-D.

C.Scope PC Toolkit v3.4.3 [DOWNLOAD](#)

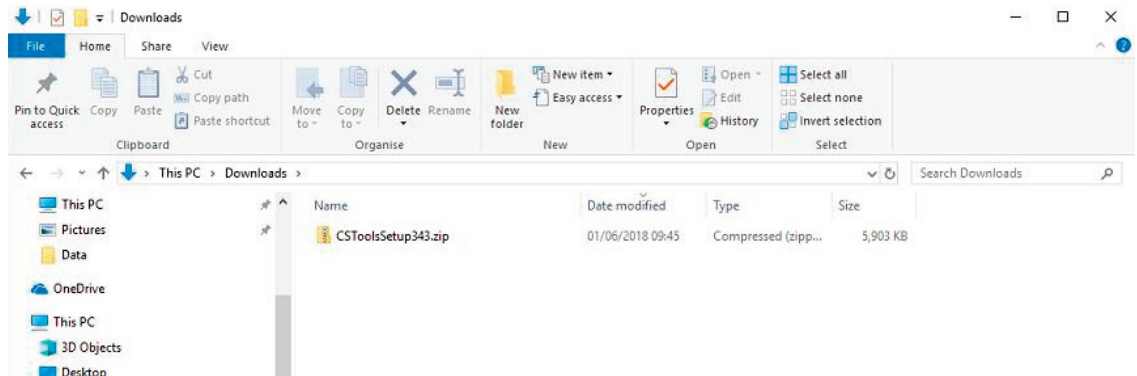
The PC Toolkit:

- Checks and updates Product Firmware (XL4 Locators only)
- Enables transfer of data logs to a PC.
- Allows the modification of some unit settings.
- Provides tools to Review and Analyse the data.
- Latest update includes improvements in operation and cosmetically - click the ChangeLog button in the program to review them.

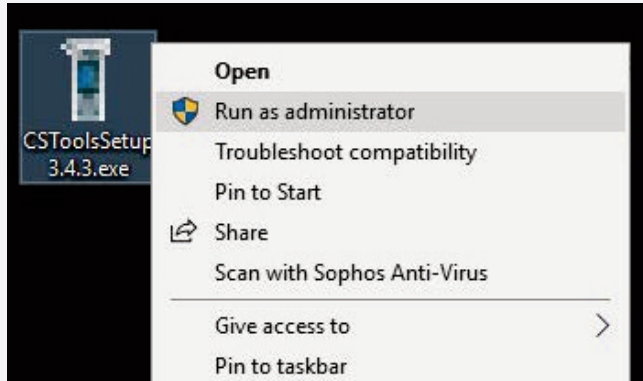
- Open the folder called 'Downloads' and then open 'CSToolsSetup.zip'.



- Extract all from this folder. We recommend extracting the file to desktop.



- Right click on 'CSToolsSetup.exe' and select 'Run as administrator'.



- Follow the onscreen installation instructions.
- Once installed you can now connect your C.Scope Locator/ Signal Generator via USB.

Installation problems:

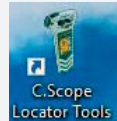
Please refer to the Troubleshooting Section.

2. Connection and ADST Certificate Download

- Using a USB Cable (A-Mini B) connect your C.Scope Cable Locator or Signal Generator to the PC as shown.
- Use only the supplied USB Lead for SGV4/MXT4.



- Double Click on the 'C.Scope Locator Tools' shortcut icon.



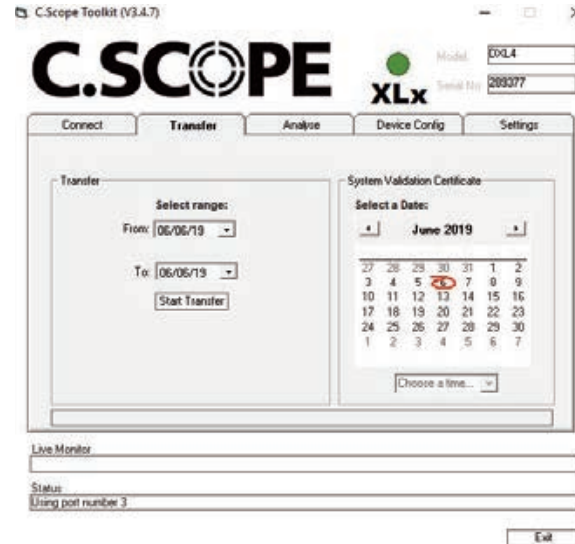
- Click on 'Scan'.



- A pop-up window opens showing the C.Scope Model and Serial Number. If correct, click on 'Yes'.



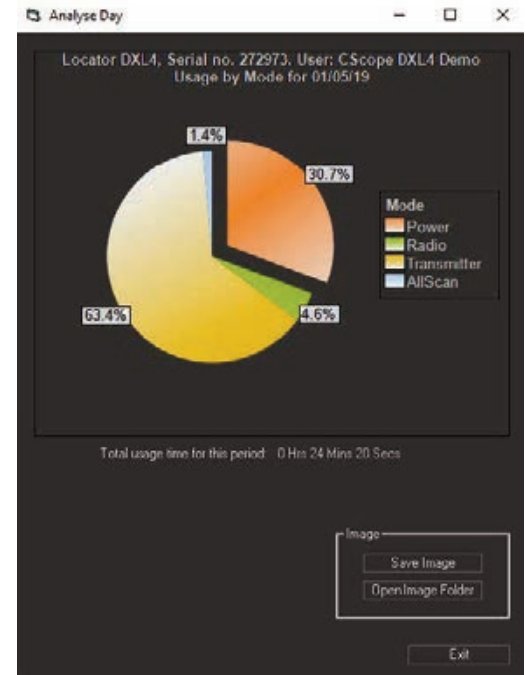
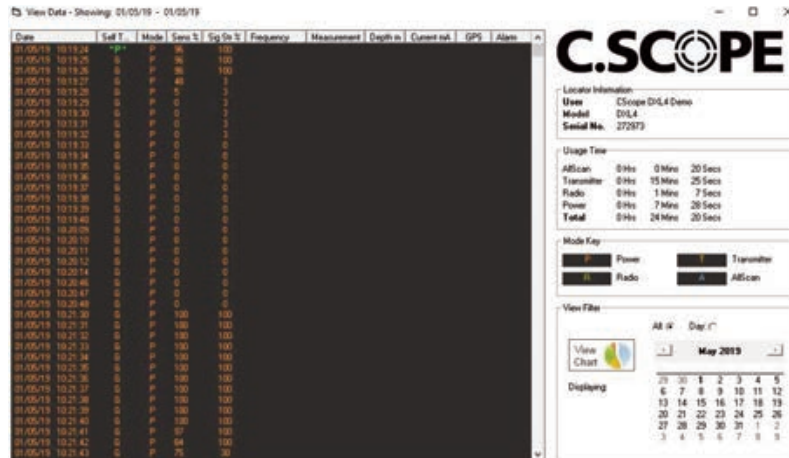
- The Transfer Tab will open automatically.



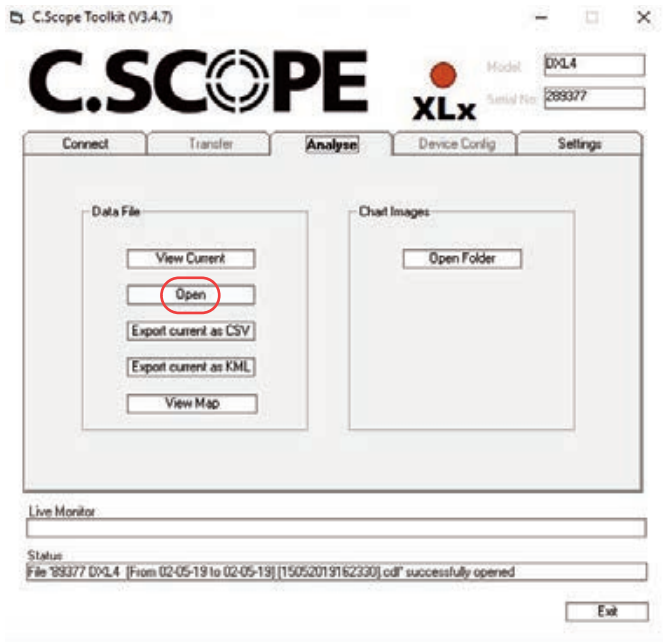
- Self-Test results can be checked by retrieving the certificates from the Locator or Signal Generator for specific dates. Select the date required from the calendar. If the Locator or Signal Generator was used on that day, the certificate will be retrieved and opened as a .pdf document for review. The certificate is also stored in the folder accessed from the 'Connect' tab.

3. Data-Log Download

- To download Data-Logs from a C.Scope Locator or Signal Generator, first select 'From' date on the 'Transfer Tab', next select 'To' date then click on 'Start Transfer'.
- There will be a short delay before the transfer starts as the C.SCOPE PC Toolkit locates and verifies the selected data. The transfer is indicated by the progress of the blue bar. The Live Monitor window will show the Records as they are being stored on your computer.
- Once the data has downloaded it will be saved to your computer's hard drive and displayed immediately as a new window.
- You may now select dates from the records transferred and review the information either in a second by second list or in a pie chart summary. Pie charts may be saved and reviewed later using the 'Analyse' tab.



4. Data Analysis Tab



- If you wish to look at data from a previously transferred data log file then select 'Open' in the Data File section of the window and select the file you wish to view.

- Select 'View Current' on the 'Analyse' tab to show how and when the Locator or Signal Generator was used each day over the selected period. The screen shows the date, time and mode of detection as well as the indicated signal strength for every second of usage.

- In the case of the SGV4-D Signal Generator or MXT4-D Transmitter the screen will show date and time of activation, power setting, frequency setting (for MXT4-D Transmitter) and which method of signal transfer was used.

Note: All instances of the Automatic Daily Self-Test (ADST) are stored. They are shown in the 'Self-Test' column of the 'View Data' window.

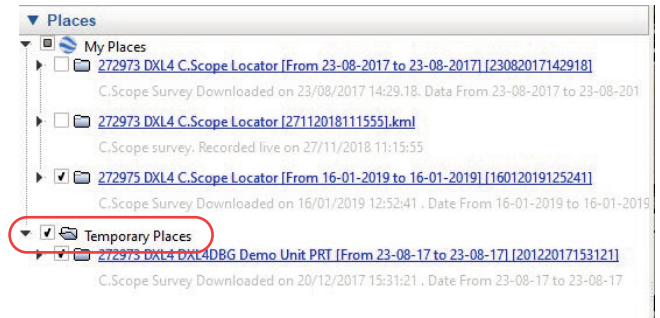
- Any data log file can be transferred into a .csv file (a raw data file) and used to create any number of tables, graphs or pie charts in Microsoft® Excel or another application.
- C.Scope's XL4-DBG Locators have in-built GPS technology. Using the 'Analyse' tab, GPS data can be saved as a .kml file which may be viewed in Google Earth.
- GPS data may also be viewed in Google Maps by clicking on 'View Maps'
- Saved pie charts may be reviewed using the Chart Images section of the 'Analyse' tab.

5. View and Review of GPS Data

- C.Scope's XL4-DBG Locators have in-built GPS technology. Using the 'Analyse' tab, GPS data can be saved as a .kml file which may be viewed in Google Earth. Internet access will be required.
- To view a saved GPS data file:
 - i. Open 'C.Scope' file in my documents.
 - ii. Open 'kml' file.
 - iii. Double click on the required .kml file.
- The file will automatically open in Google Earth.



- To view detailed data, zoom in to the survey area using + / - control on right of the Google Earth window.
- Current survey details will be shown in 'Temporary Places' in the 'Places' log located in the upper left of the Google Earth window.

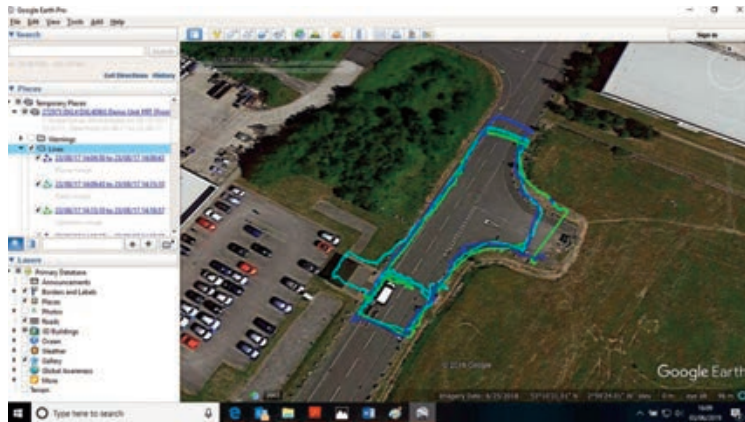


- To view itemised sections of the data, click on the small arrow pointing to the file name. New pointers will appear named 'Warnings', 'Lines' and 'Markers'



- **Lines** To view the lines followed during the survey, uncheck the 'Warnings' and 'Markers' pointers by clicking on the ticks. Click on the small arrow pointing to 'Lines' and a drop down list of each part of the survey will appear. Each section is defined by 'Mode' and 'Time'. To view each mode separately, uncheck the 'Lines' section, then select as required by clicking in the empty boxes.

- Lines will be displayed as follows:



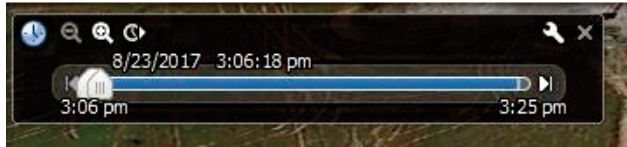
- Survey Lines may also be viewed in 'Street View' however there may be inaccuracies in position. This may be due to the variation in imagery used by Google Earth or because the inbuilt GPS is recording the position of the Locator rather than the buried pipe or cable.



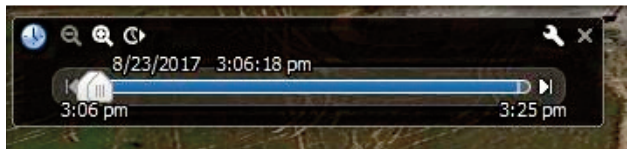
- **Warnings**

To view recorded alarm Warnings such as Swing or Overload, uncheck the 'Markers' pointers by clicking on the tick. Click on the small arrow pointing to 'Warnings' and a drop down list of each recorded Warning will appear. Each section is defined by 'Type' and 'Time'. To view each Warning separately, uncheck the 'Warnings' section, then select as required by clicking in the empty boxes.

- It will be necessary to select the entire time line by adjusting the sliders on the timeline bar (top centre left of viewing pane).

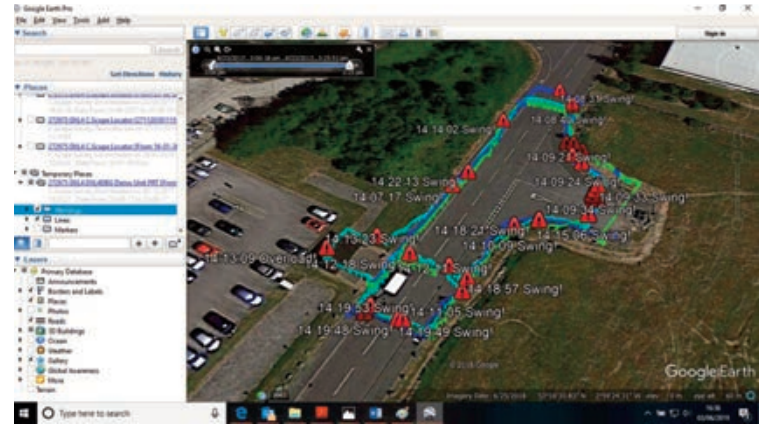


- Click and hold on front slider (identified by 3 vertical lines) and drag fully to the right.



- Click and hold on rear slider and drag fully to the left.
- The full time line is now shown.

- **Warnings** will be displayed as follows:



- To display more information about each Warning point, click on the red Warning triangle. A pop up window will appear showing details of the Warning.

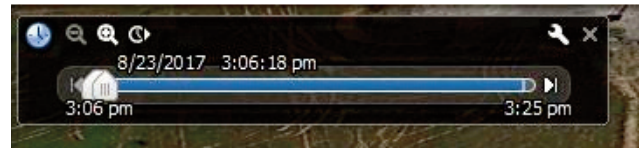
Details include:

Date, Time, Model, Serial Number, Warning Type and Locator settings.

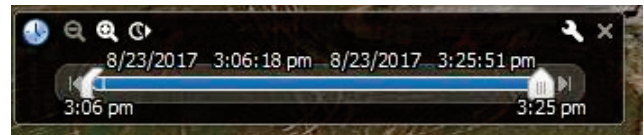


- **Markers** To view the point data recorded during the survey, uncheck the 'Warnings' pointer by clicking on the tick. Click on the small arrow pointing to Markers', a drop down list of each part of the survey will appear. Each section is defined by 'Time'. To view each point separately, uncheck the 'Markers' section, then select as required by clicking in the empty boxes.

- It will be necessary to select the entire time line by adjusting the sliders on the timeline bar (top centre left of viewing pane).



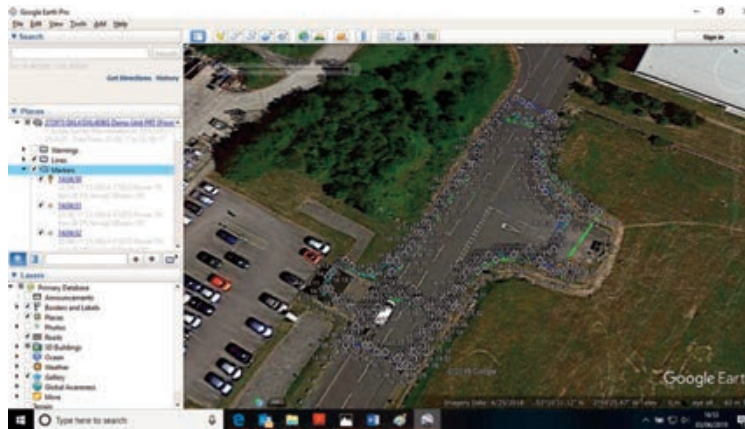
- Click and hold on front slider (identified by 3 vertical lines) and drag fully to the right.



- Click and hold on rear slider and drag fully to the left.

- The full time line is now shown.

- Markers will be displayed as follows:



- To display more information about each marker point, click one of the white edged diamonds. A pop up window will appear showing details of the marker point.

Details include:

Date, Time, Model, Serial Number and Locator settings.



6. Device Configuration

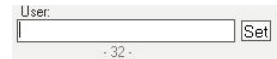
- Various settings available on C.Scope XL4 Locators can be configured using the 'Device Configuration Tab'.



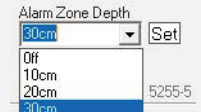
- Date and Time settings within the Locator, can be manually set to match the connected PC clock. Click on 'Set Date' or 'Set Time' to input the correct date and time.



- Company / User / Asset No. can all be entered using the 'User' text field. Type the required text (up to 32 characters) into the field then click 'Set'. 'User Set' will be displayed in the Status Field. Entered text will appear on Self-Test Certificates, Data Logs and Pie Chart Images.



- AlarmZone™ settings can be adjusted by selecting the required depth from the drop down list. AlarmZone™ may also be disabled either temporarily or permanently.



- 'To activate 'Tilt Detection' click in the grey shaded box. The box will turn green when Tilt Detection is active - For more information, please refer to the Locator Instruction Manual.



7. Settings

- Various settings available on C.Scope PC Toolkit can be configured using the 'Settings Tab'



- **Folder Locations**

To change the default data storage folder locations, click on the 'Folder Locations' tab.

Folder Locations

- A new window opens.

- From the new window, click on the square with 3 dots, to choose new file locations.

File Locations

Data file paths

Choose the location for the C.Scope folder:

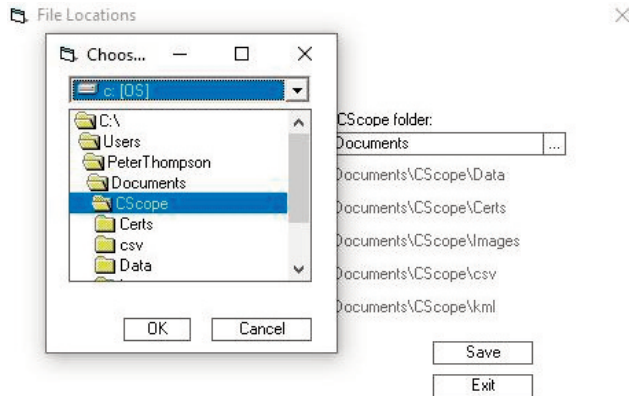
C:\Users\PeterThompson\Documents

Data C:\Users\PeterThompson\Documents\C.Scope\Data
Certificates C:\Users\PeterThompson\Documents\C.Scope\Certs
Chart Images C:\Users\PeterThompson\Documents\C.Scope\Images
csv Files C:\Users\PeterThompson\Documents\C.Scope\csv
kml Files C:\Users\PeterThompson\Documents\C.Scope\kml

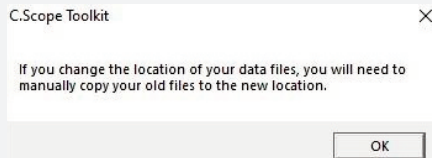
Save

Exit

- A new window will open.
- From the new window, select your preferred location for the storage folders, click 'OK' and the window will close.



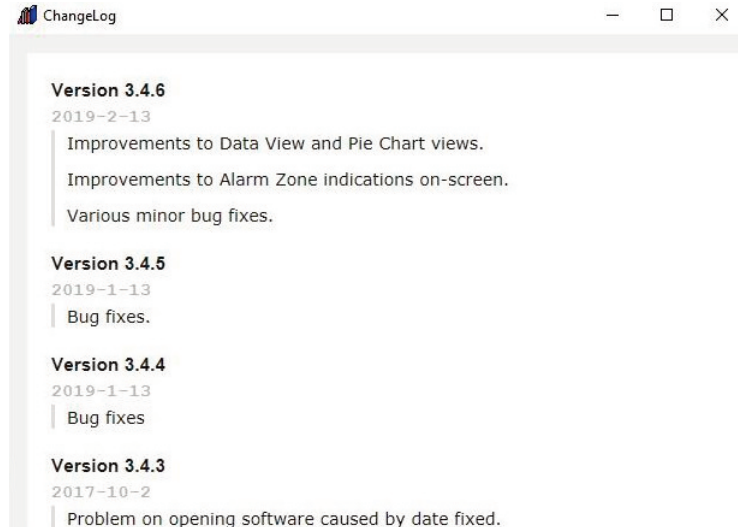
- From the 'File Locations' window, click 'Save' and a new window will open.



- If a new data file location has been selected, it will be necessary to manually copy any old files still required to the new location.

• Change Log

To view a list of updates to the C.Scope PC Toolkit click 'Change Log'. A list of updates will be displayed as follows.



• Check for Updates

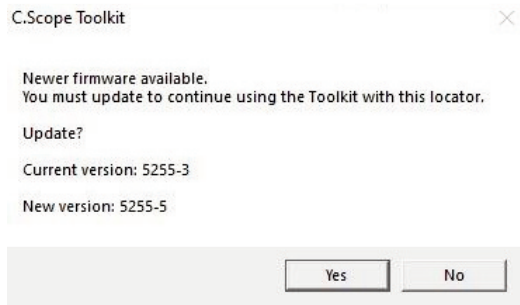
To manually check for updates to the C.Scope PC Toolkit, click on 'Check for Updates'.

• About

To view information about the C.Scope PC Toolkit or to view the firmware version installed on your Locator, click on 'About'.

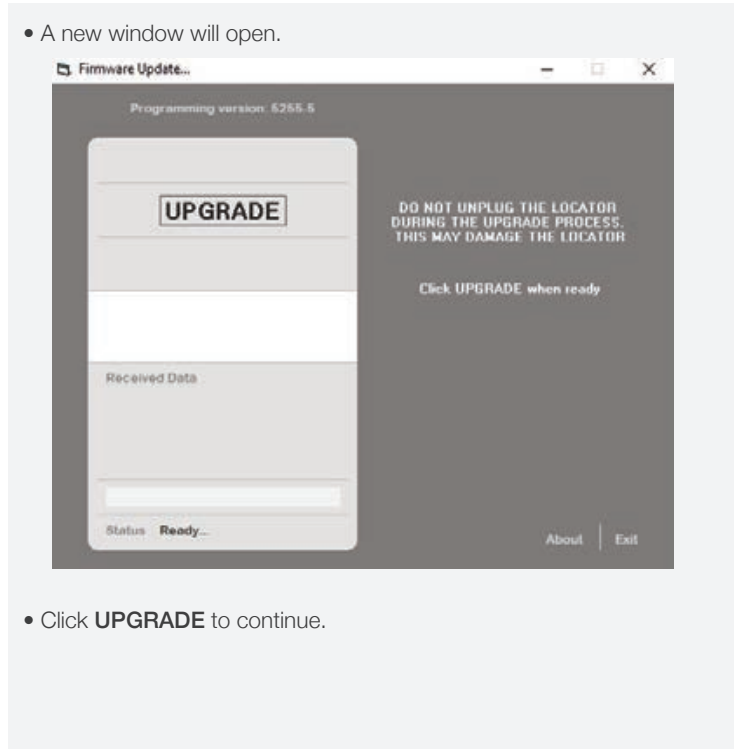
8. Firmware Update

- When a C.Scope Locator is connected to the C.Scope PC Toolkit, the firmware version is automatically checked. If a newer version is available, a warning window will open.



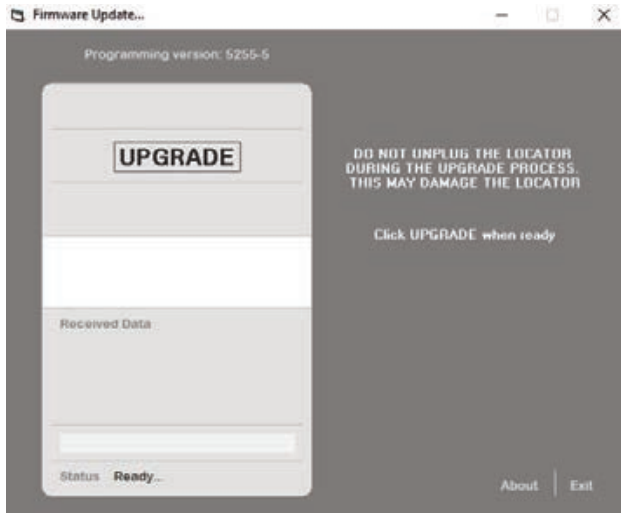
- The Locator will not connect to the C.Scope PC Toolkit until the update is installed. To proceed with the update, click 'Yes'.

- A new window will open.



- Click **UPGRADE** to continue.

- The **UPGRADE** window will display the progress of the update.



- After a successful firmware update is complete a new window will open.

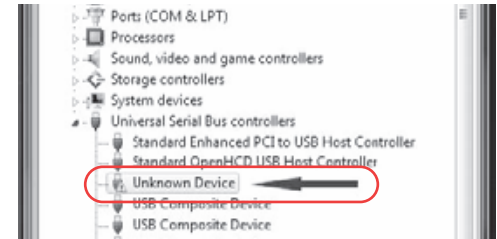


- Click 'OK'. Restart the C.Scope PC Toolkit, then disconnect and reconnect the USB cable to continue.

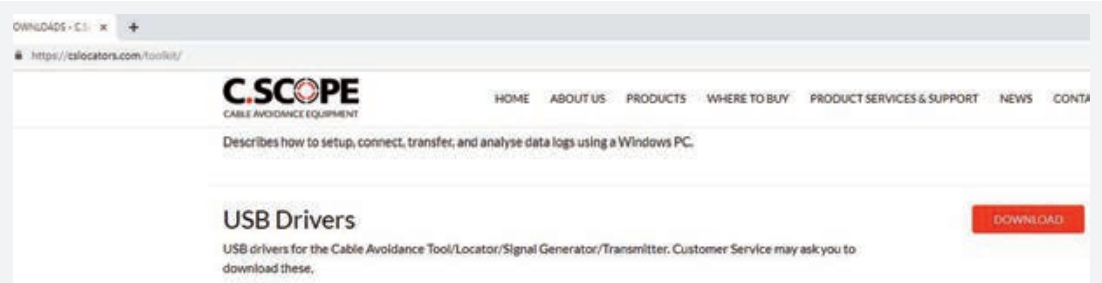
9.1. Troubleshooting - Connection Issues

9.1.1 Unknown Device

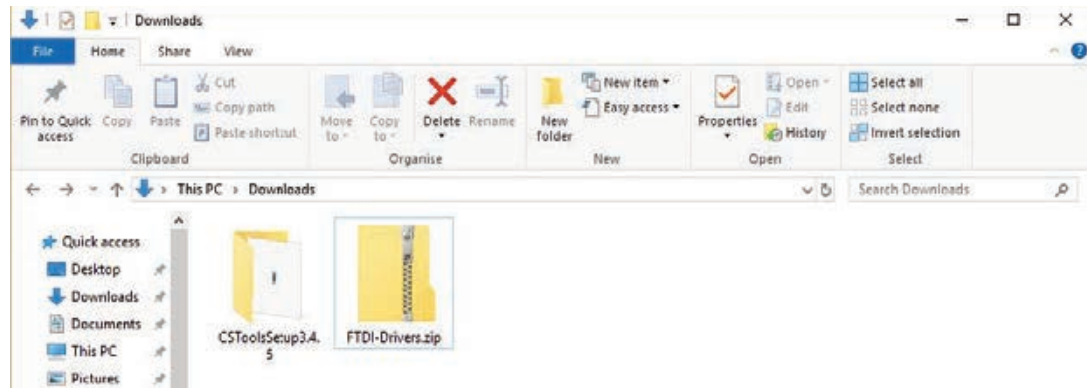
- If no Locator is found, check Device Manager / Universal Serial Bus Controllers.
- If there is an unknown device, as shown, then the driver software requires updating.



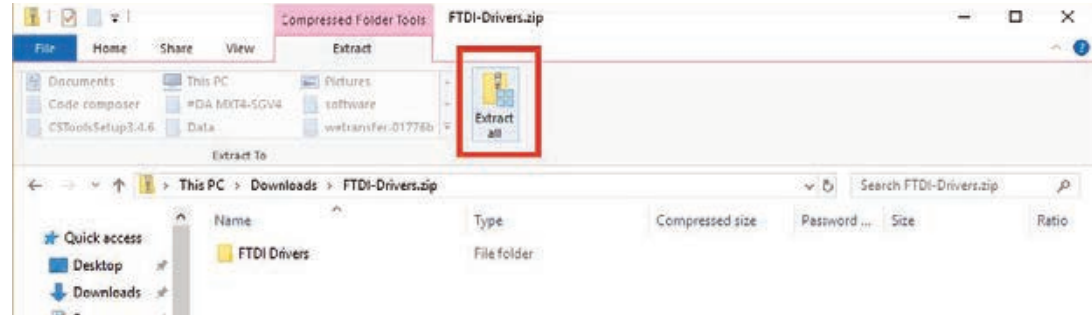
- Go to cscopelocators.com/toolkit/ and download USB Drivers.



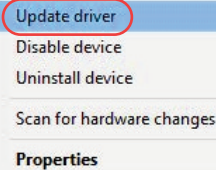
- Open the folder called 'Downloads' and then open FTDI-Drivers.zip.



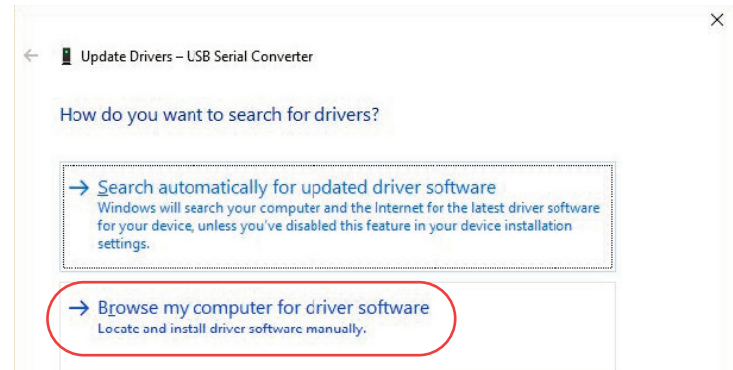
- Extract all files from this folder. Once extracted this should open the folder.



- Go back into 'Device Manager', right click on the unknown device.
- Select 'Update driver'.



- Select 'Browse my computer for driver software'.



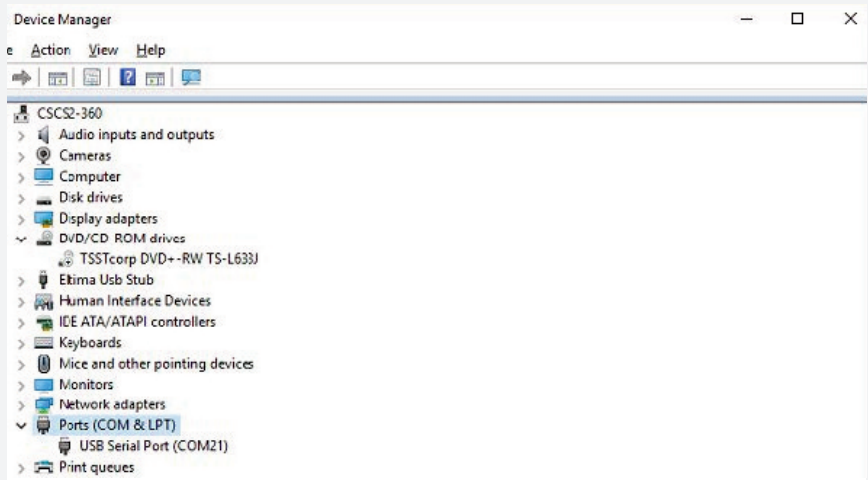
- Select the folder location for what was just extracted.



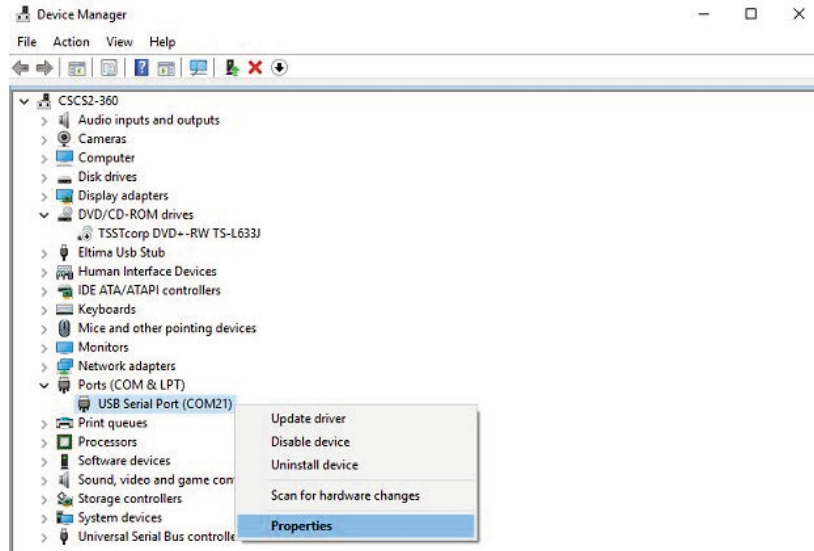
- Click 'Next', this will now scan the folder and find the correct driver.
- The device should now be visible in Ports (COM & LPT).

9.1.2 Com Port

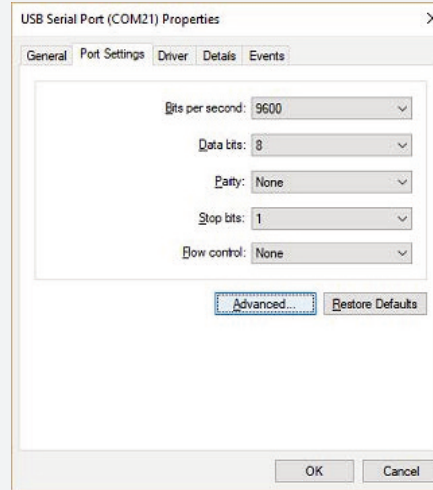
- If PC Toolkit fails to find the Locator/ Signal Generator, remove the USB lead.
- Either right click on the Windows icon and select Device Manager or use the search box and search for Device Manager and then expand Ports(COM&LPT).



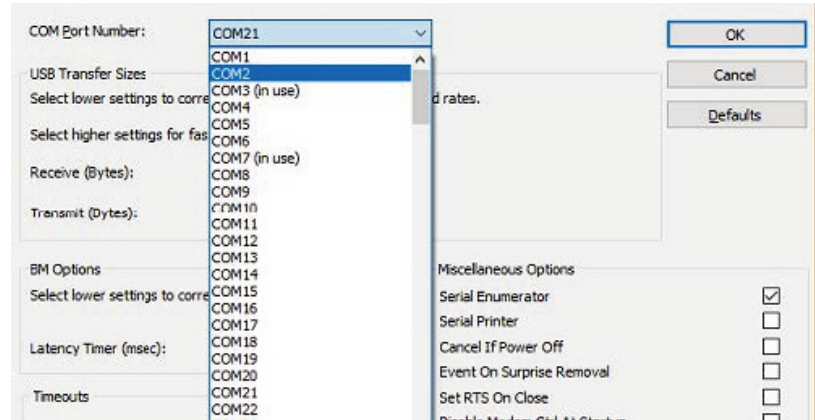
- Plug the USB lead in and a new USB Serial Port will appear. (Image shows COM21).
- The C.Scope PC Toolkit will only find the device when the device is connected to a port numbered between 1 and 16.
- To change the port settings, right click on the device and select 'Properties'.



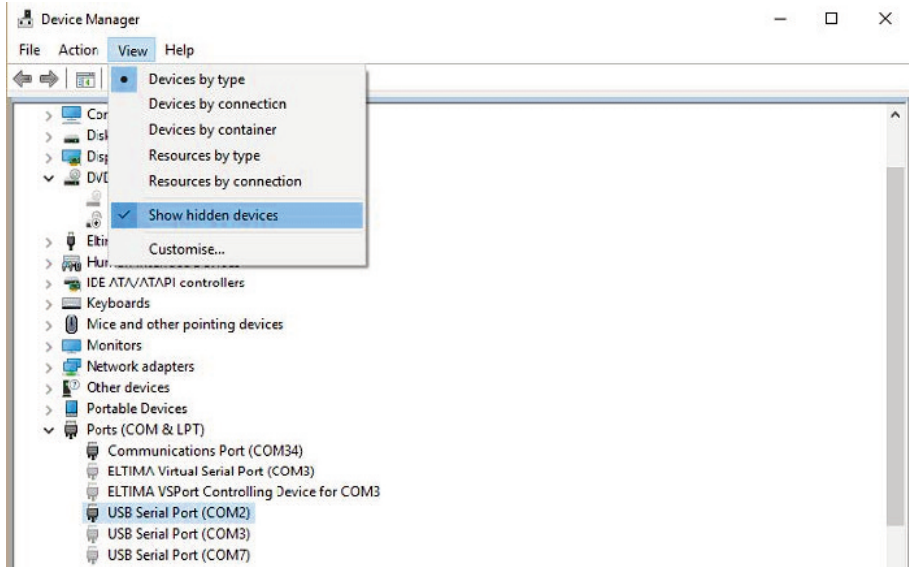
- Open tab 'Port Settings' and click 'Advanced'.



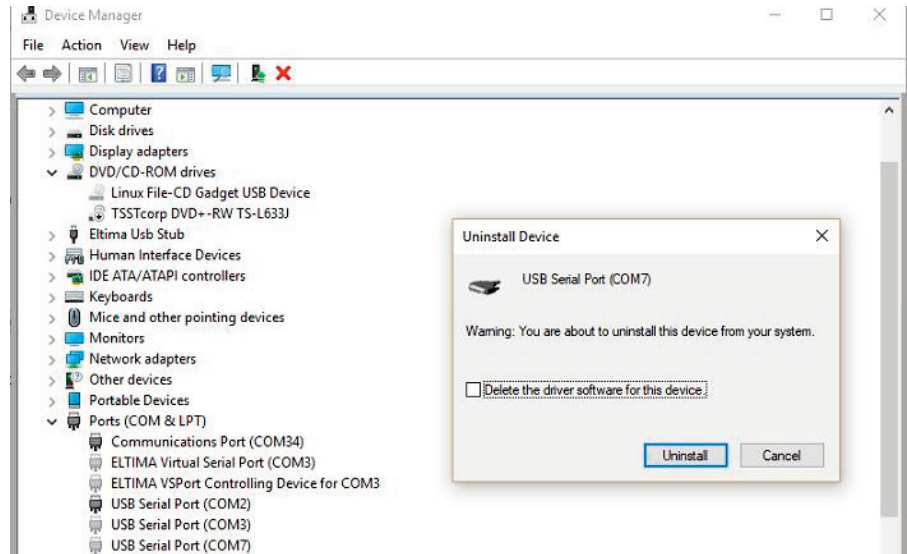
- Change the COM Port Number to one between 1 and 16.



- If none are available follow these instructions.
- Open Device Manager click 'View' and then 'Show hidden devices'.



- Select a light grey USB Serial Port between 1 and 16 (COM7 for this example) and check 'Delete the driver software for this device' and then click 'Uninstall'.

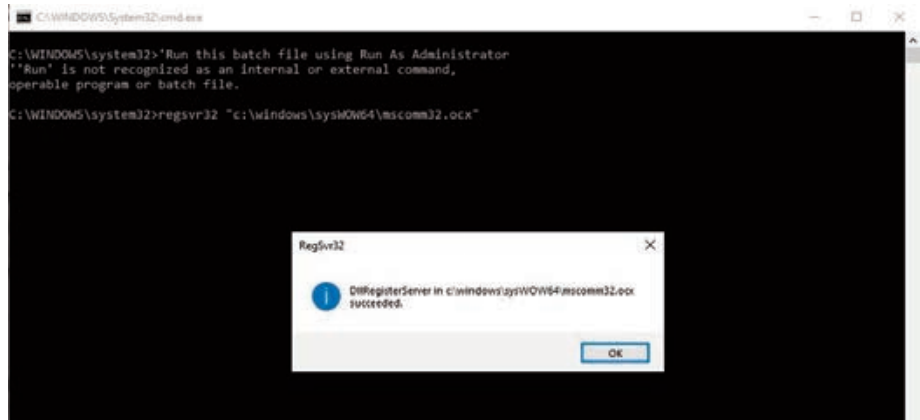


- You can now go back and change the COM port settings for the device to this number

9.2. Troubleshooting - Component Installation Issues

9.2.1 Pie Chart

- If a pie chart fails to open together with a 'SimpleChart5.dll' error message, it will be necessary to run 'Register (Win10).bat'.
- Navigate to 'C / Program Files / CScope'.
- Right click on 'Register (Win10).bat' and click 'Run As Administrator'.
- A command prompt window will open as shown.
- Click on 'OK' to register the component and continue to click 'OK' as new windows open.



- Some components will display this message:
- Continue to click 'OK' until the command prompt window closes. All components should now be registered and functioning correctly.



10. Glossary of Terms

PC TOOLKIT

C.Scope PC Application that updates Locator firmware and transfers Activity Records to a Windows™ based computer.

MODE

Describes the various modes of location available to use on the Locator.

ACTIVITY RECORDS

The data that is stored on the Locator or Signal Generator / Transmitter that is a record of the activity of that product.

GPS

Geographical Positioning System.

COMPUTER

Windows based Computer using Microsoft® Windows XP™, Windows Vista™, Windows 7™ and Windows 10™ only.

FIRMWARE

Operating software embedded in the Locator / Signal Generator / Transmitter.

PORT

The name given to the connection between the connected device and the PC. It is assigned a number for reference and is used for sending and receiving data to and from the connected device.



B1096 0120 v4

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