Leica DX Office Shield
Quick Guide

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Getting Started
Introduction

DX Office Shield

Leica DX Office Shield is a Windows based software package for Leica Smart locators. The Software provides product configuration and usage reports.

Download and install DX Office Shield on your PC

DX Office Shield

Download (Software)
https://leica-geosystems.com/products/detection-systems/cable-locators/dd-smart-utility-locators

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Getting Started

Before you begin

System Requirements;

Windows 7(64 bit) or later

Bluetooth USB

Connectivity;

DD220 Smart, DD230 Smart locators

Digicat 600 and 700 family locators

DA Signal Transmitters

Before you begin

Notes

Bluetooth enabled Digicat locator

- Switch on and select BT1 or PC from the menu
- An external Bluetooth dongle with Toshiba drivers is recommended.

DD220 Smart, DD230 Smart locators

- Any active Bluetooth setting is compatible
- When connected to DX Office Shield the locator will remain on until disconnected

DD Smart Locators and DA Signal Transmitters

- DD Locators and DA Transmitters use Micro USB
- Refasten the USB cover to protect against ingress

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Getting Started

USB

DD Smart Locators

☞ To maintain environmental protection open and use the USB port only in dry conditions. Always reinstate the cover after use.

1. Unscrew the fastening screws of the cover and open it.

   ☞ For guidance on establishing a connection, follow the instructions on the external device or software. Refer to the manufacturer's instructions.

2. After disconnection, reinsert the cover and tighten the fastening screws.

DA Signal transmitters

1. Unscrew the fastener of the cover.

2. Lift the cover of the battery compartment to access the USB port.

   ☞ For guidance on establishing a connection, follow the instructions on the external device or software. Refer to the manufacturer's instructions.

3. After disconnection, close the cover of the battery compartment and tighten the fastener.

To maintain environmental protection open and use the USB port only in dry conditions. Always reinstate the cover after use.

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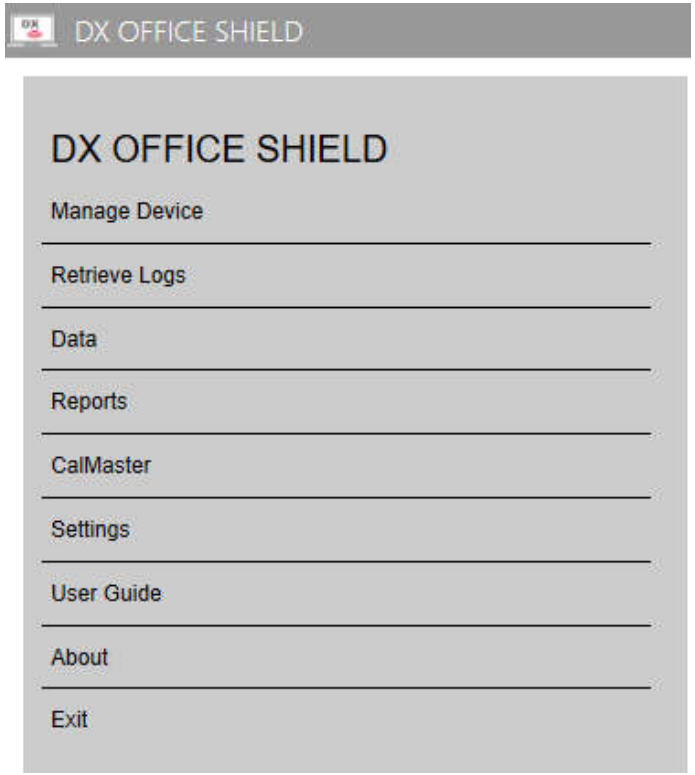
DX Office Shield

Navigation tree



Navigation Tree

The navigation tree is used to select a DX Office Shield option and is highlighted when selected

Manage Device; Is used to connect to and update locator settings

Retrieve logs; Is used to download locator logfiles

Data; Is used to provide an overview of logfile content

Reports; Is used to generate locator utilisation reports

CalMaster; is used to verify locator`s calibration and produce certification

Settings; Is used to adjust DX Office Shield settings

User Guide; Is used to display this User Guide

About; Is used to display DX Office Shield version information.

Exit; Is used to exit the application.

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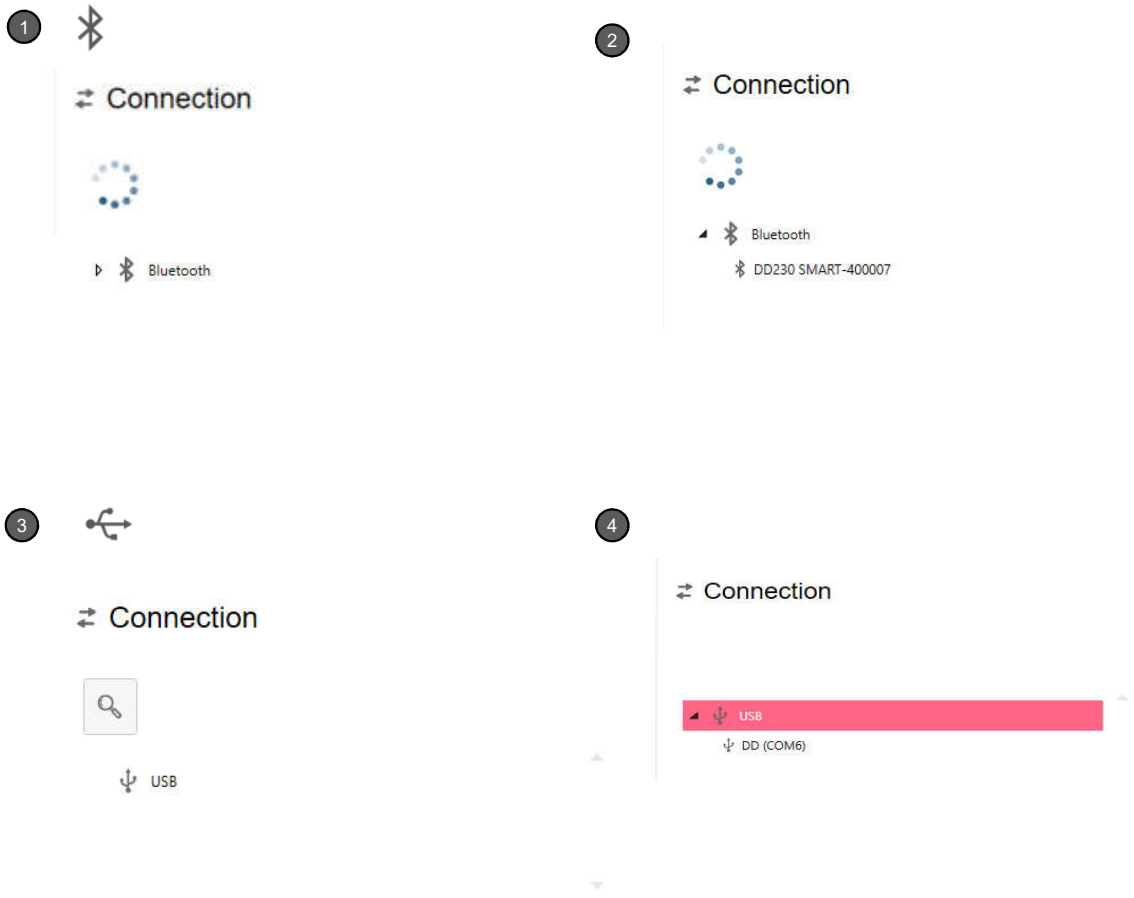
Manage Device

Connecting to a Device



Connecting to a device

Bluetooth Connection

1) Device searching is automatically activated. Available devices are shown in the device list.

2) Double Click on the required device.

USB Connection

3) Before commencing connect the PC and device via a USB cable. Power on the device. Searching is automatically activated.

4) Available devices are shown in the device list. Double Click on the listed device

When connected the Manage Device page will update and show available device settings.

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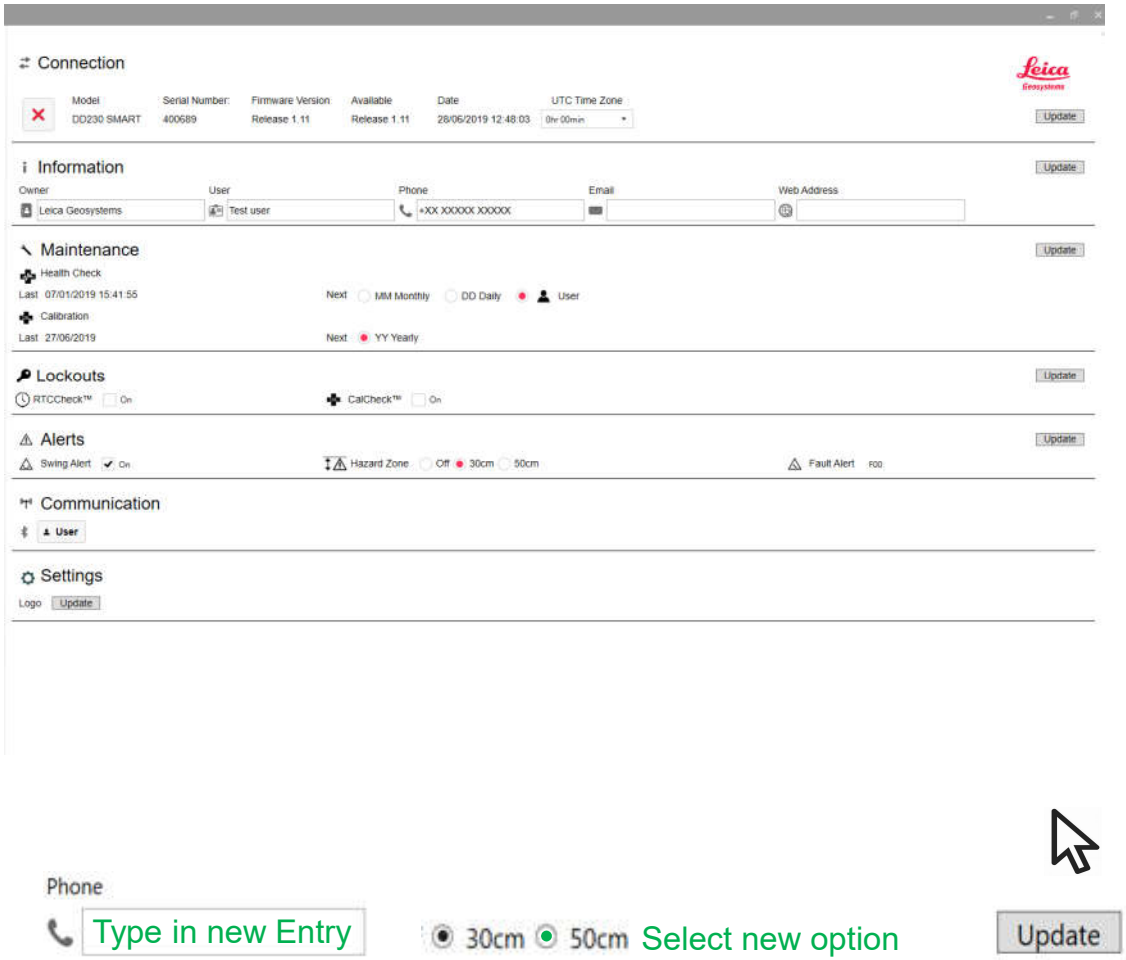
Manage Device

Introduction



Manage Device

Is used to connect and update device settings. Screen layouts will differ depending on device type

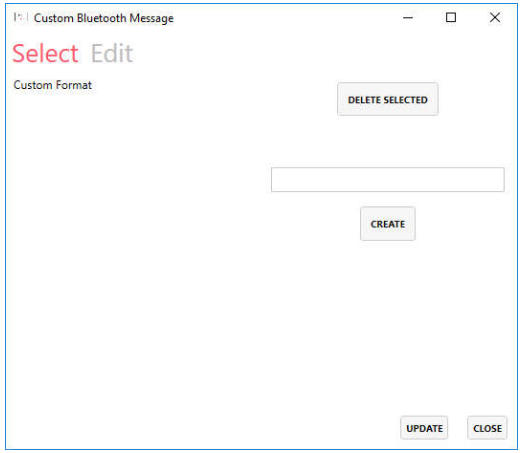
1) **Connection;** Shows the status of the connected device and allows you to update to the latest firmware.
2) **Information;** Shows the devices contact information
3) **Maintenance;** Shows the devices maintenance status
4) **Lockouts:**
   - **RTCCheck on (Real-Time Clock) -** locator will no longer function if the RTC fails, **RTCCheck off** locator will continue to function if the RTC fails
   - **CalCheck on –** locator will no longer function if the calibration due date has expired, **CalCheck off** – locator will continue to function when the calibration due date has expired.
5) **Alerts;** Shows the devices alert settings
6) **Communication;** allows you to create your own Bluetooth output
7) **Settings;** Used to update the Locator's logo. Click update & navigate to the saved image
8) **To update your device;** type in the latest information or select an option and click on the relative **Update** button - when it has to be **right**

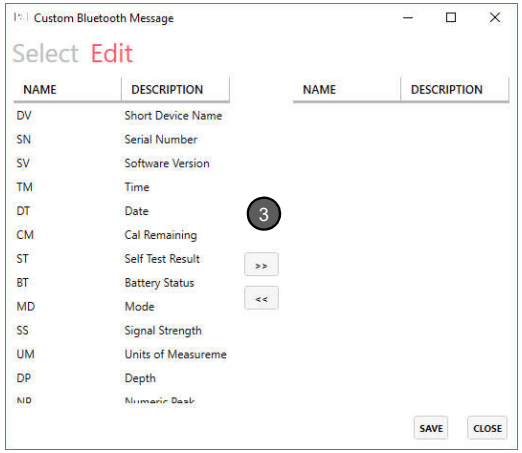
Manage Device

Bluetooth Custom Output

1

2





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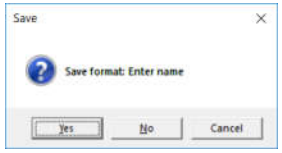

Manage Device – Bluetooth Custom Output

The Bluetooth output can be configured on DD Smart locators or

1) Select Communication > User
2) Enter a name for your Customer format and click Create
3) Edit the created custom output and use the arrows to select and deselect fields of interest. Fields of interest for your custom format are shown on the right hand side
4) Save and close

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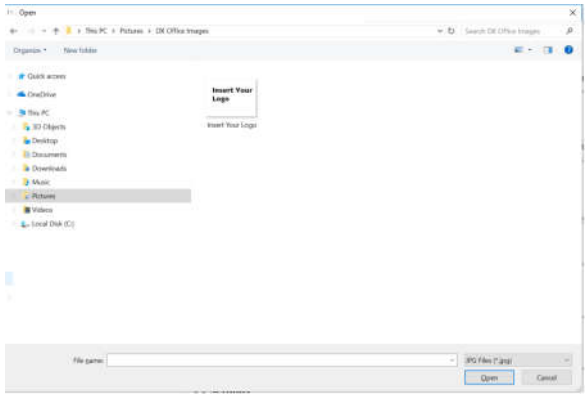
Manage Device

Updating locator Splash Screen

1

2



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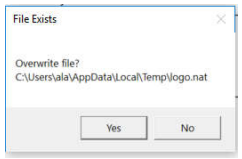

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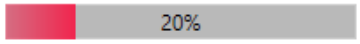

Manage Device - Updating DDSmart Locators

Splash Screen

The splash screen (Start up image) can be updated for DD Smart Locators

1) Select Options > Logo Update
2) Navigate and Select the image you want to use and click on Open.
3) Image file formats can be selected from the drop down menu
4) Confirm you want to overwrite the existing locator image
5) Progress bar shows transfer progression

Updates should be done via a USB connection cable

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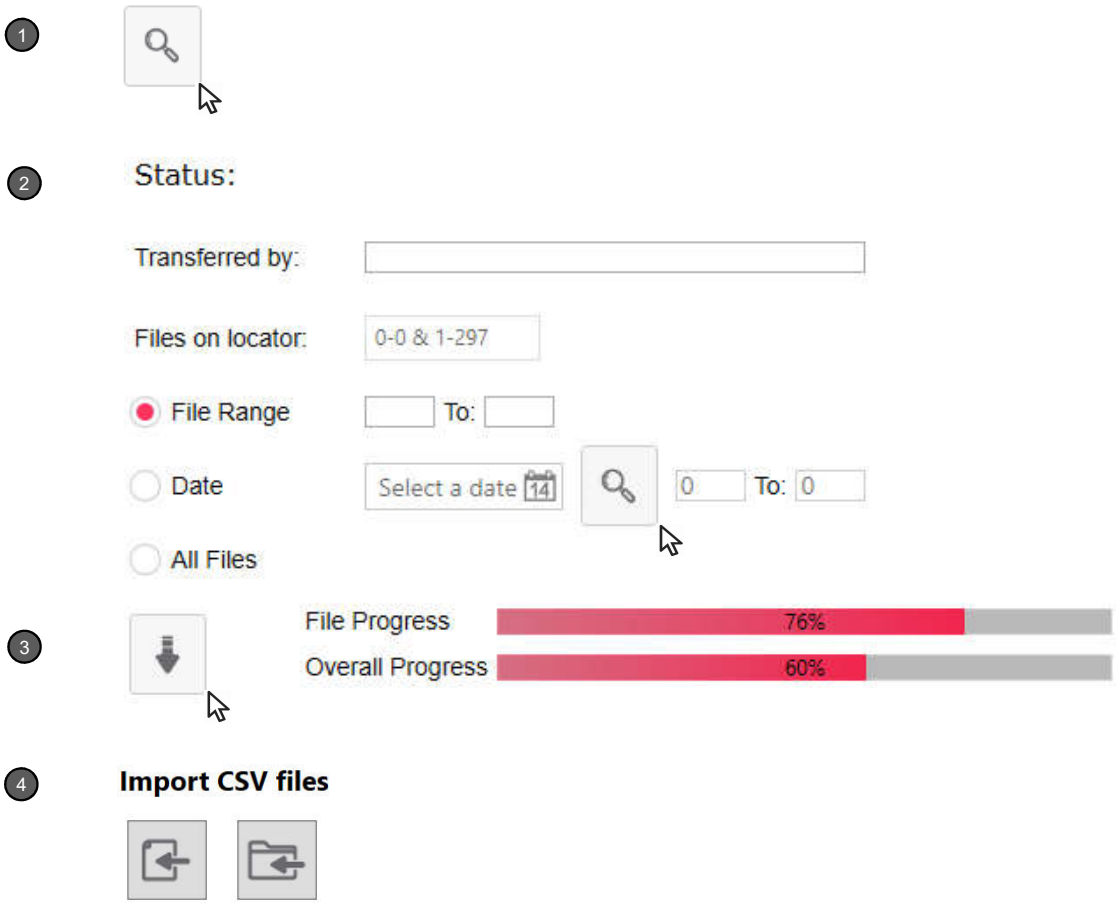
Retrieve Logs

Introduction



1) Connection; click the search icon to begin the log retrieval process

2) Download Options; enter your name or initials in the 'transferred by' box. There are 3 log retrieval options;

- **Specific file range;** select this option to download specific log files of your choice e.g. for the first 10 log files from the locator enter 1 To: 10
- **Date Specific file range;** select this option to download specific log files from a date of your choice. Select a date from the calendar and click the search icon to display the log files for this selected date.
- **All Files;** select this option to download all log files from the locator.

3) Download Locator Log Files; Click the download icon to begin the download process. Individual file progress and overall progress will be shown on the status bars.

4) Import CSV Files; import saved locator files or folders. Click on the file or folder icon and navigate to the logfile location.

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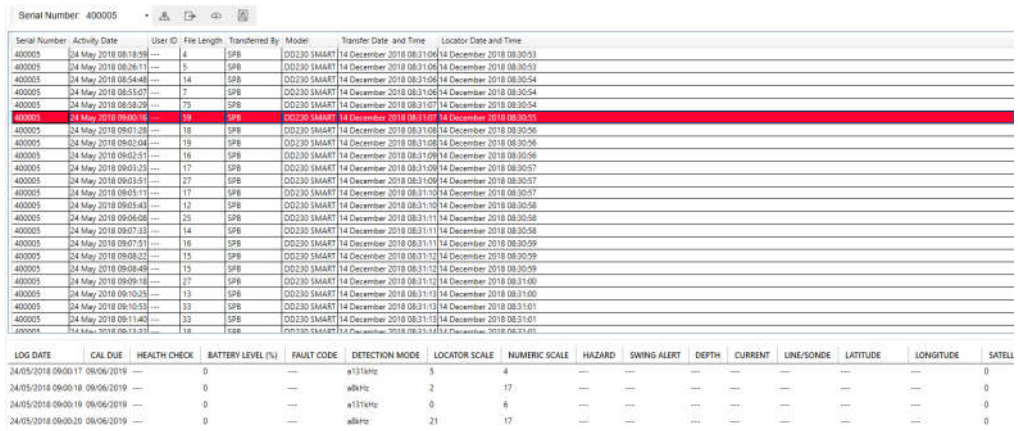
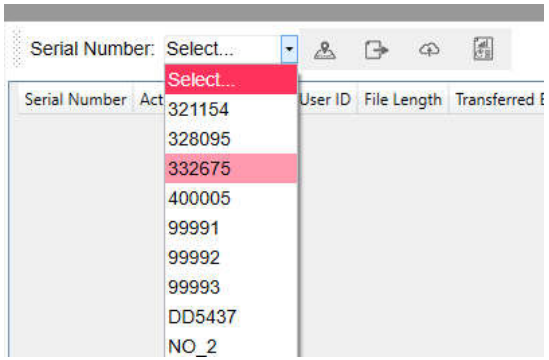
Data

Introduction



4



Data – Introduction

Data Is used to provide an overview of logfile content

1) **Option Bar;** allows you to select locators and access other menu options.
2) **Logfile title;** provides an overview of logfiles content including date, User ID, File Length (size), Locator type, and transfer information
3) **Logfile content;** shows scan information as recorded on the locator whilst in use. Entries are per second of use
4) **Locator Selection;** use the dropdown menu to select a locator

Logfile content will be different between model types

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Data

Maps

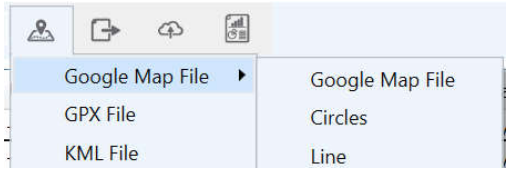
1

Serial Number	Activity Date	User ID	File Length	Transferred By	Model	Transfer Date and Time	Locator Date and Time
400005	03 January 2019 14:31:21	spb	4674	SPB	DD230 SMART	03 January 2019 15:00:01	03 January 2019 16:00:00
400005	03 January 2019 11:30:49	spb	2912	SPB	DD230 SMART	03 January 2019 14:59:38	03 January 2019 15:59:37
400005	25 May 2018 14:07:52	Jamie	1222	SPB	DD230 SMART	14 December 2018 08:31:22	14 December 2018 08:31:10
400005	02 January 2019 15:05:53	spb	1115	SPB	DD230 SMART	08 January 2019 10:58:19	08 January 2019 11:56:55

2

LOG DATE	CAL DUE	HEALTH CHECK	BATTERY LEVEL (%)	FAULT CODE	DETECTION MODE	LOCATOR SCALE	NUMERIC SCALE	HAZARD	SWINC
5/25/2018 2:09:0	5/24/2019	---	31	---	Power	45	34	-X-	-X-
5/25/2018 2:09:0	5/24/2019	---	31	---	Power	46	32	-X-	-X-
5/25/2018 2:09:0	5/24/2019	---	31	---	Power	46	35	-X-	-X-
5/25/2018 2:09:0	5/24/2019	---	31	---	Power	49	34	-X-	-X-

3



Data - Maps

Maps can be generated if logfiles contain GPS content

1) Select a logfile title that contains GPS content
2) GPS content is in the Latitude and longitude columns
3) Select Maps and then map type.

- Google Map Files open in a web browser
- GPX files can be used in GPS viewers including Open Street Maps
- KML Files can be opened in Programs such as Google Earth

- An Internet connection will be needed to view maps
- For KML Files Google Earth will need to be installed on your PC

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Data

Exporting CSV Files

1

Serial Number	Activity Date	User ID	File Length	Transferred By	Model	Transfer Date and Time	Locator Date and Time
400005	03 January 2019 14:31:21	spb	4674	SPB	DD230 SMART	03 January 2019 15:00:01	03 January 2019 16:00:00
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LOG DATE	CAL DUE	HEALTH CHECK	BATTERY LEVEL (%)	FAULT CODE	DETECTION MODE	LOCATOR SCALE	NUMERIC SCALE	HAZARD	SWINC
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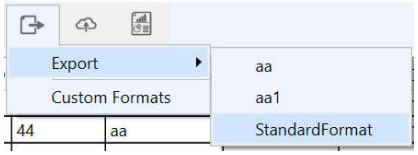
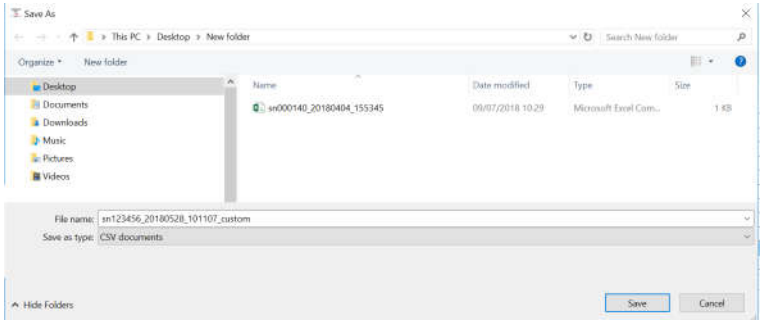
5/25/2018 2:09:0	5/24/2019	---	31	---	Power	46	32	-X-	-X-
5/25/2018 2:09:0	5/24/2019	---	31	---	Power	46	35	-X-	-X-
5/25/2018 2:09:0	5/24/2019	---	31	---	Power	49	34	-X-	-X-

2



3



Data – Exporting Files

Maps can be generated if logfiles contain GPS content

1) Select a logfile title that you want to export
2) Select Export and choose a format.
   - Standard Format is a template that exports all logfile information
   - Custom Format allows you to select fields of interest
3) Save files to your PC

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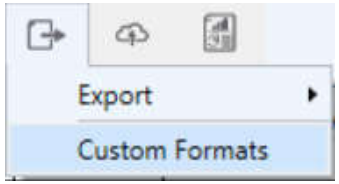
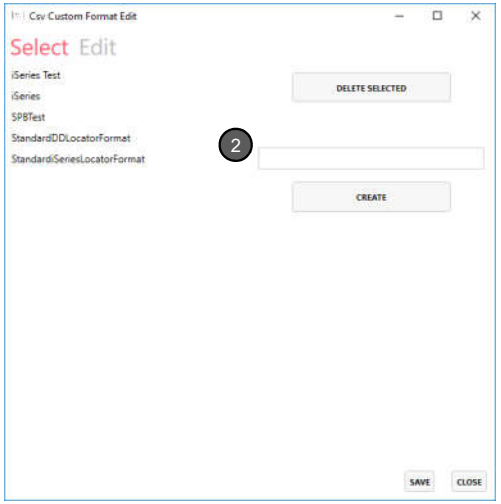
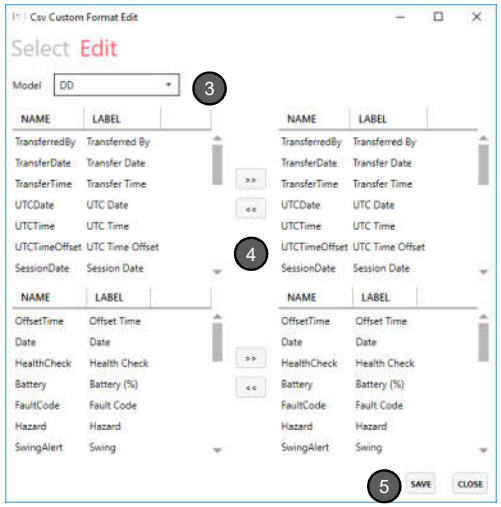
Data

Exporting CSV Files

1







Data – Exporting Files

Custom Format allows you to select fields of interest

1) Select Export and choose Custom format
2) Name your custom format and move to the Edit tab
3) Select the locator model type
4) Use the Arrows to select and deselect fields of interest. Fields of interest for your custom format are shown on the right hand side
5) Save and close, custom format will be added to the template list

- Custom formats can be updated as required.
- DD Smart Locators and iSeries locators have different formatting. The two are not compatible

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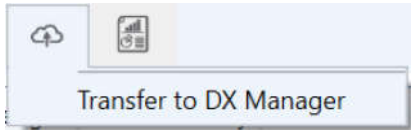
Data

Transfer to DX Manager

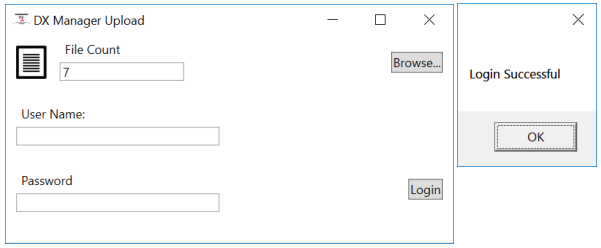
1

Serial Number	Activity Date	User ID	File Length	Transferred By	Model	Transfer Date and Time
400005	24 May 2018 08:18:59	---	4	SPB	DD230 SMART	14 December 2018 08:31:06
400005	24 May 2018 08:26:11	---	5	SPB	DD230 SMART	14 December 2018 08:31:06
400005	24 May 2018 08:54:48	---	14	SPB	DD230 SMART	14 December 2018 08:31:06
400005	24 May 2018 08:55:07	---	7	SPB	DD230 SMART	14 December 2018 08:31:06
400005	24 May 2018 08:58:29	---	75	SPB	DD230 SMART	14 December 2018 08:31:07
400005	24 May 2018 09:00:16	---	59	SPB	DD230 SMART	14 December 2018 08:31:07

2



3



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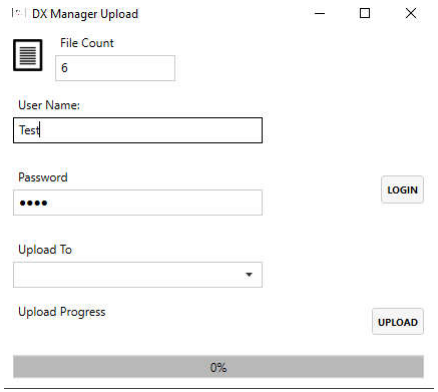

5

Data - Transfer to DX Manager Shield

Logfiles can be transferred to Account holders and users on DX Manager Shield

1) Highlight the logfiles you want to transfer
2) Select Transfer to DX Manager
3) Enter your DX Manager Shield login details and click OK
4) Select the person you want to upload files to using the Upload to box and click on upload.
5) The progress bar indicates the upload status and final confirmation is provided.

- Internet Access is needed.
- DX Manager Shield can be found at;

http://dxmanagershield.leica-geosystems.com

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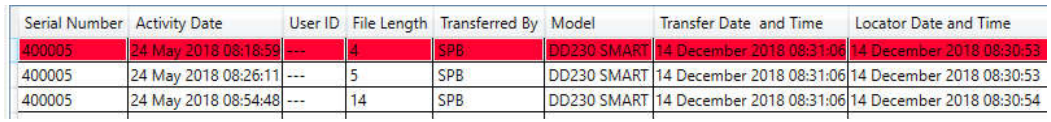
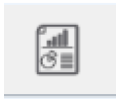
Data

Reports



Serial Number	Activity Date	User ID	File Length	Transferred By	Model	Transfer Date and Time	Locator Date and Time
400005	24 May 2018 08:18:59	---	4	SPB	DD230 SMART	14 December 2018 08:31:06	14 December 2018 08:30:53
400005	24 May 2018 08:26:11	---	5	SPB	DD230 SMART	14 December 2018 08:31:06	14 December 2018 08:30:53
400005	24 May 2018 08:54:48	---	14	SPB	DD230 SMART	14 December 2018 08:31:06	14 December 2018 08:30:54

1



2

3

Data - Reports

Reports takes you to the Report Page and updates fields for report generation.

1) Select a logfile you want to create reports on
2) Click on Reports
3) Reports system opens and is updated with the Serial number and chosen date, ready for report generation

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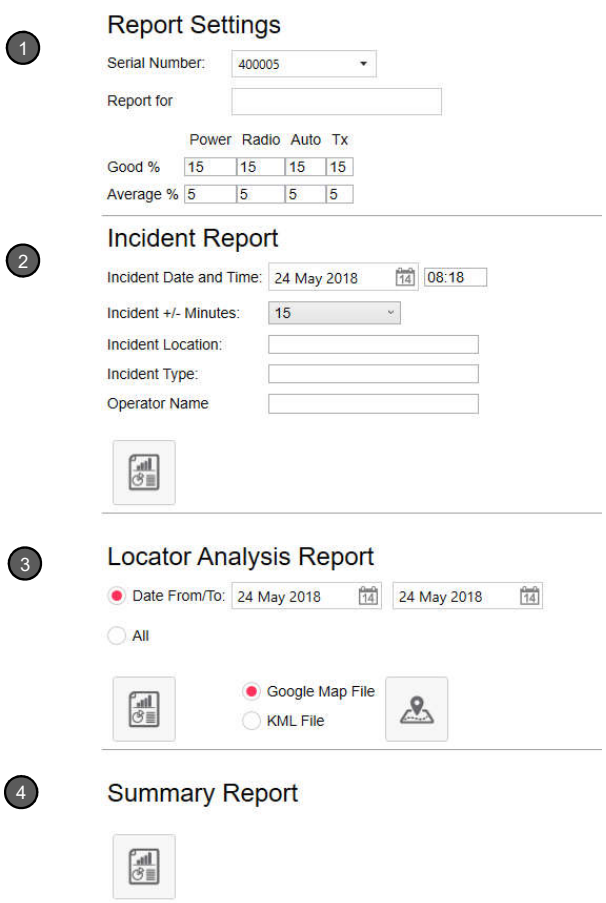
Reports
Introduction



Reports - Introduction

Generate reports using the options provided

1) **Report Settings;** allows you to select a locator for report generation, add a name to a report and set a global scaling for performance measures
2) **Incident Report;** Provides an overview of how a device (locator) has been used for a specific date and time. The report returns information focussed on the specified time and for the whole day.
3) **Locator Analysis;** Provides an overview of how a device (locator) has been used over a period of time
4) **Summary;** Provides a summary of logfiles.

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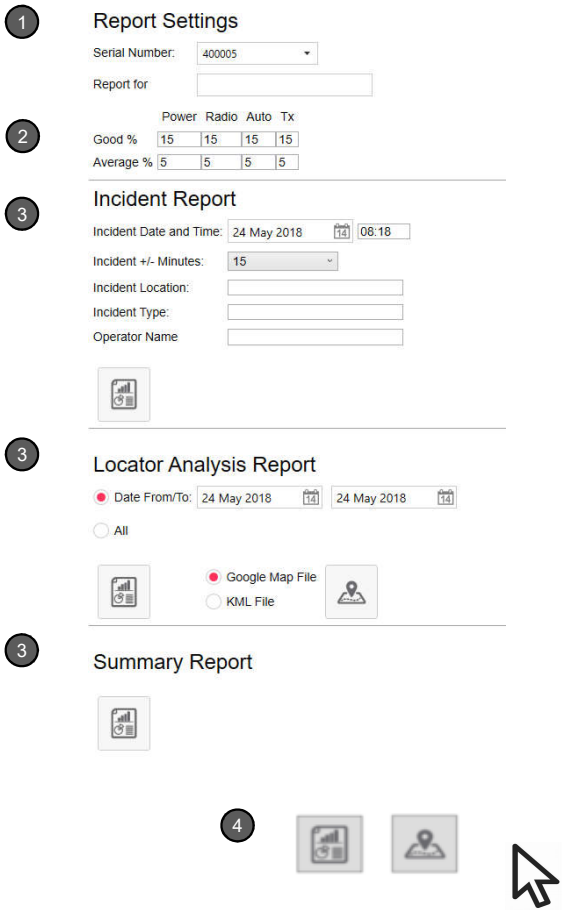
Reports
Generation



Reports – Generation

Generate reports using the options provided

1) **Select Locator from the list**
2) **Update the performance thresholds**

   Good, Sets the threshold to indicate good use in reports.

   Average, Sets the threshold for average use.

   Scores between average and good are marked as average. Scores below the average threshold are seen as below average.

3) Select a Report
4) Click on Report or Map option

- Internet connection will be required for Map generation

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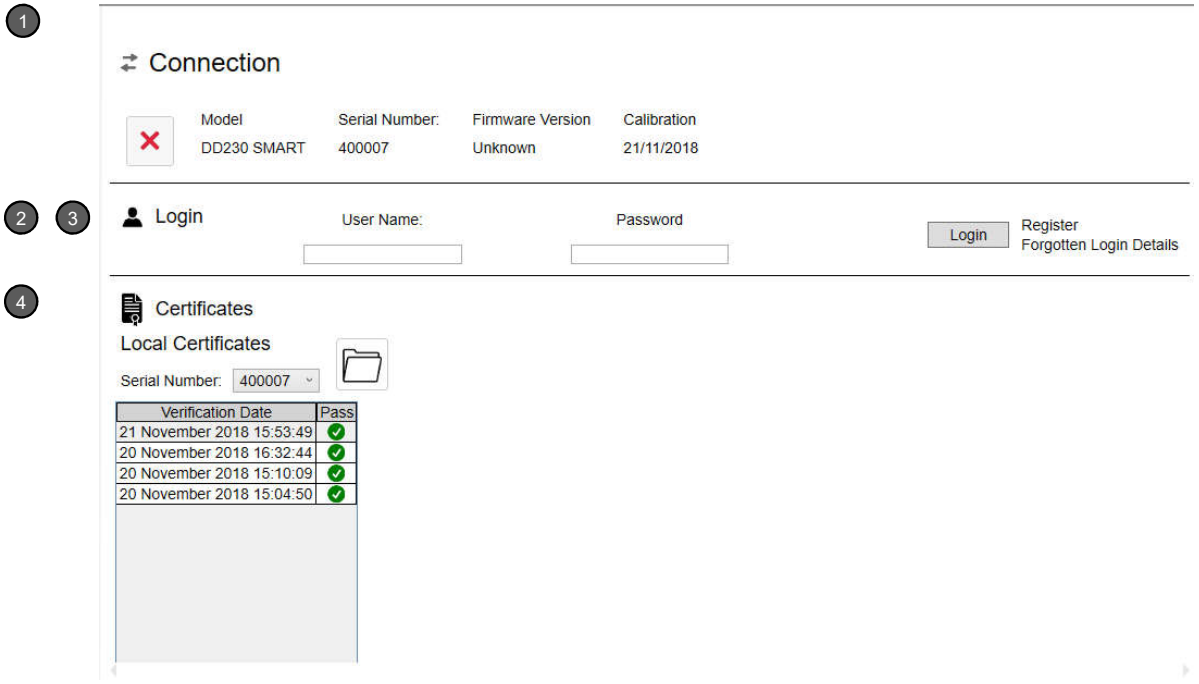
CalMaster
Introduction



CalMaster - Introduction

CalMaster is used to activate the DD220/DD230 SMART locators Calibration Verification. An account is required for this service.

1) **Connection;** Allows you to connect to a device
2) **Login;** User Registration or Login to DX Office Shield CalMaster
3) **Verification Section;** Provides access to purchase Calibration Verification credits and to activate a device Calibration Verification
4) **Certificates;** Provides access to test certificates saved on your PC or certificates saved to DX Field Shield server.

For all enquiries email the support desk

dxshield.support@leica-geosystems.com

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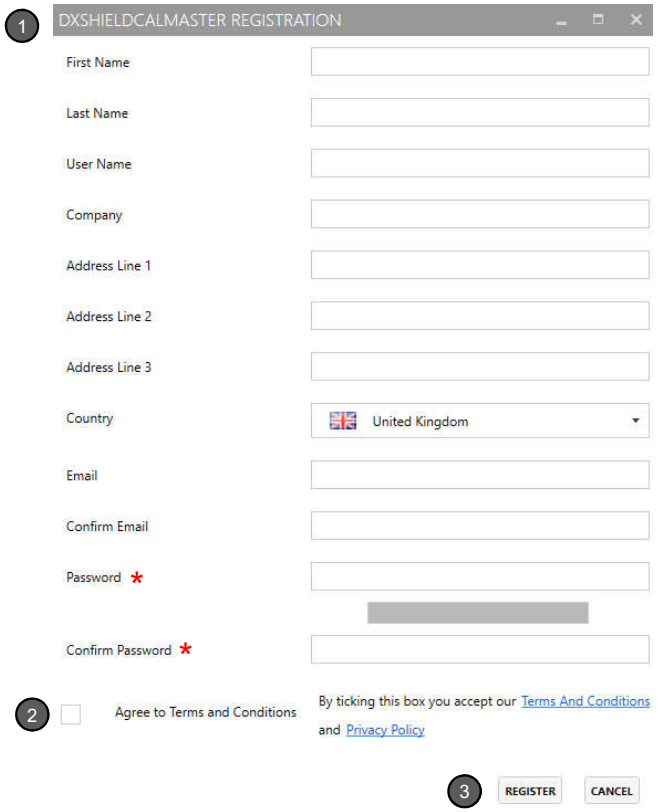
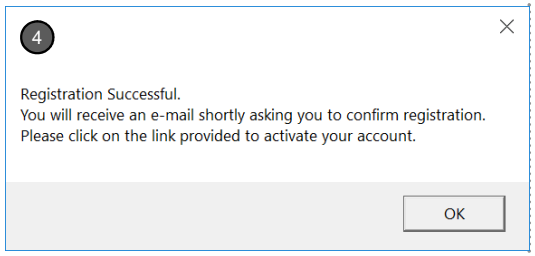
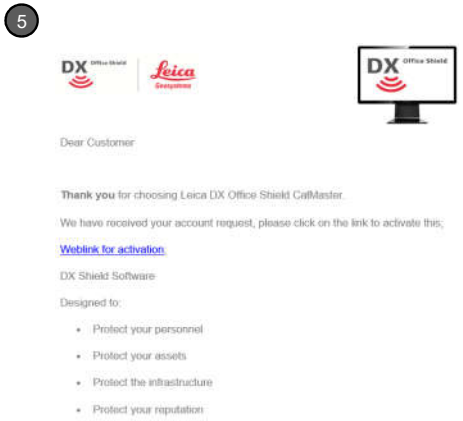
CalMaster
Registration







* Note when generating password:
The password must be at least 6 characters in length, must contain an upper and lower case letter and must contain at least one number

CalMaster– Registration

Registration creates an account for DX Office CalMaster.

Registration is accessed from the CalMaster Login section.

1) **Complete the Form,** please note that the information you enter is used to populate the Calibration Verification certificate. **The Password** needs to be at least 6 characters, contain a combination of upper and lower case characters and include at least one number.
2) **Review and agree** to the Terms and Conditions
3) **Click on Register**
4) **Notification of Registration** is displayed, click OK to close this. For security reasons you will need to activate your account by clicking a weblink sent to your e-mail address.
5) **Final confirmation** is required using a link sent to your e-mail address. Please click the link to activate your account

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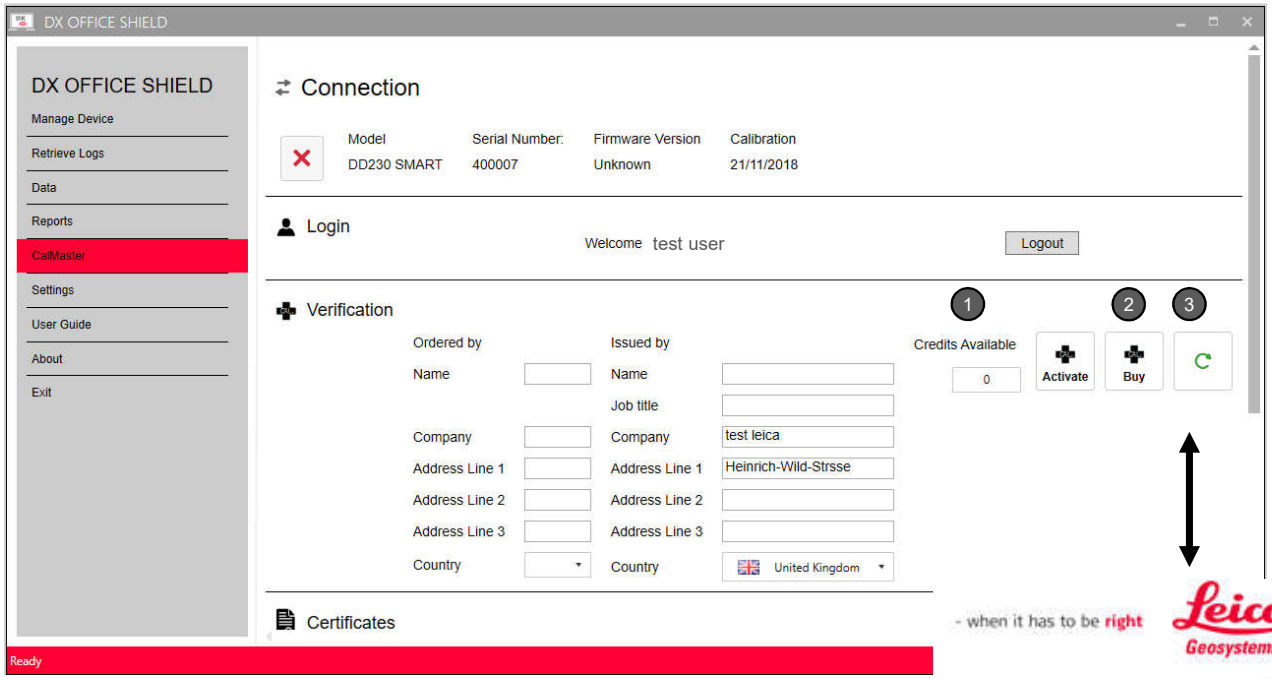
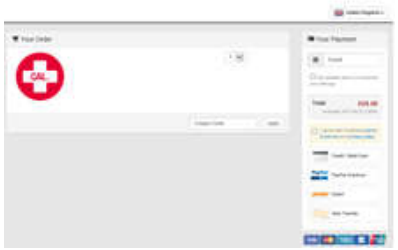
CalMaster
Purchasing Credits





CalMaster – Purchasing Credits

Calibration Verification credits can be purchased and these are saved to your account. A credit is used to activate Calibration Verification.

1) **Credits Available;** displays the number of available Calibration Verification credits
2) **Click on Buy;** this will take you to an eCommerce site where credits can be purchased. Purchased credits will be loaded to your account within 60 minutes
3) **Refresh;** Click on Refresh to update and display recently purchased credits.

Note,

Your DX Office Shield email address is used to identify your account throughout the purchase process. Please ensure that this is entered correctly.

For support enquires contact;

dxshield.support@leica-geosystems.com

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CalMaster

Purchasing Calibration Verification Credits – Article Numbers

DX Office Shield

Calibration Verification Credits

Article	Description
5004666	DD220, DD230 CAL Verification Credit x 1. To be used in DX Office Shield CalMaster for calibration verification of a single DD220/DD230 locator.
5004665	DD220, DD230 CAL Verification Credit x 50. To be used in DX Office Shield CalMaster for calibration verification of DD220/230 locators.

- Calibration verification is a process for dealers and end users, in which user can verify if DD220/230 SMART holds its calibration against factory calibration.
- Calibration verification credits can be purchased via SU using article number (discounts apply) or using credit card through DX Office Shield (no discount applied). To utilise calibration verification credits, user must run DX Office Shield software and connect a locator to a PC via USB. With each successful verification one credit is consumed and customer receives Calibration Certificate Bronze.
- There are two calibration verification credit options –1 pc and 50 pcs.
- Prerequisite to use calibration verification credits: customer must have created account in DX Office Shield and have an Internet connection.

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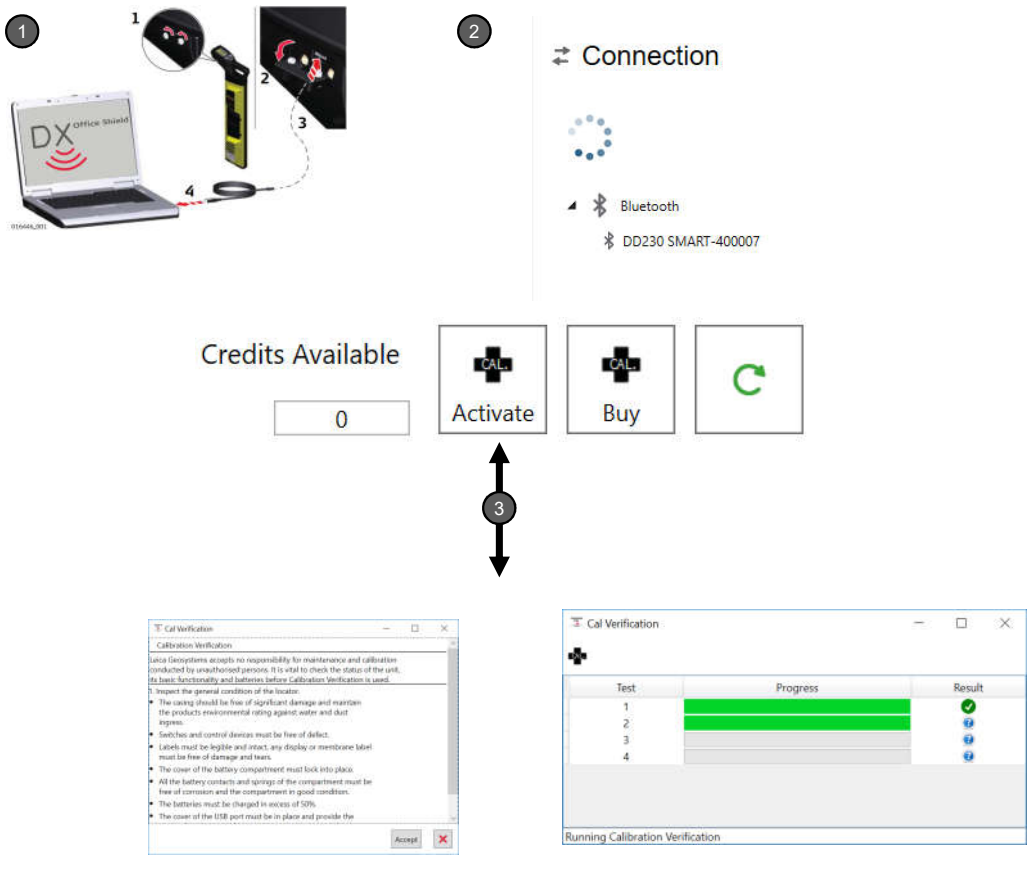
CalMaster

Activating Calibration Verification



CalMaster– Activating Calibration Verification

Calibration Verification can be activated providing that you have sufficient credits and that the locator is connected to a PC via USB

1) **Device Connection;** connect the device to the PC via USB. The PC must be connected to the internet and the device battery level must be over 50%
2) **Connection;** power on the device and then double click on the discovered device. Once a connection is established, the device will remain on without the need to maintain trigger pressure
3) **Activate;** complete ordered by (optional) and issued by (mandatory) fields then click on Activate, Calibration verification commences once the advisory notes have been accepted

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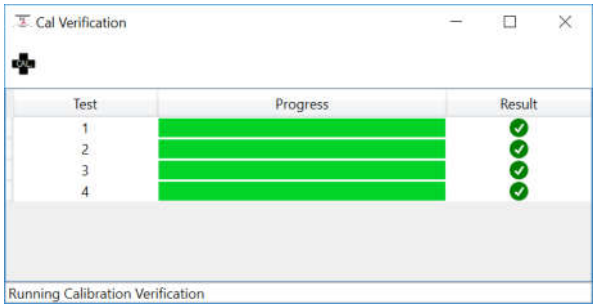
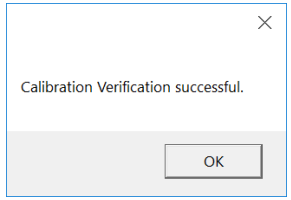
CalMaster

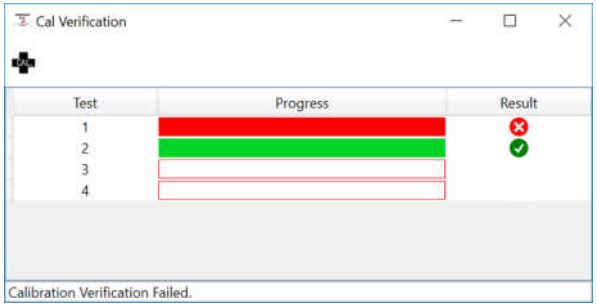
Calibration Verification Outcome

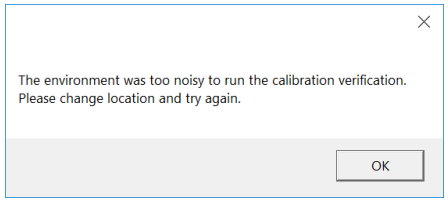
1



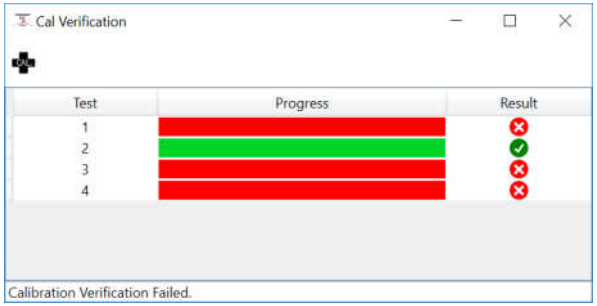


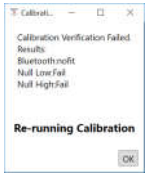
2

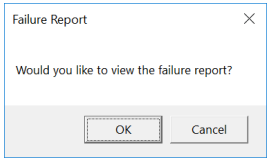




3







CalMaster – Calibration Verification Outcome

The Calibration Verification outcome is displayed throughout testing

1) **Calibration Verification Pass;** all test progression bars infilled green and Calibration Verification successful displayed. Certificate issued and locator updated
2) **Calibration Verification Fail;** external electrical interference too high to conduct tests. Test is halted and advisory displayed. Reposition locator away from electrical sources and retest.
3) **Calibration Verification Fail;** device fault detected. Advisory displayed noting the fault and the test is repeated. If the device fails the repeated test a failure report is issued.

A Calibration Verification credit is only deducted if the tests are successful and a certificate has been issued

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CalMaster

Calibration Certificate Bronze

1

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Calibration Certificate Bronze

Calibration Verification Certificate Bronze with measurement values.

Product	DD230 SMART	**Certificate No.**	400007-02052019142804
Article No.	850270	**Inspection Date**	02.05.2019
Serial No.	400007		
Ordered by	Test Person Test Company Test Street United Kingdom	**Issued by**	Test Person Test Company Test Street Switzerland

Certificate

We hereby certify that the product described has been tested with the following result:

☑ **Compliance** The test results are within the specification of the product.
☐ Non-Compliance The test results are not within the specification of the product.

Test results and outcomes are detailed on page two.

Leica Geosystems 02.05.2019

Jamie Cordwell
Service Department Manager

Test Person
Test Engineer

Certificate No. 400007-02052019142804
Art. No. 850270
This Certificate may not be reproduced other than in full, except with prior written approval of the issuing authority.
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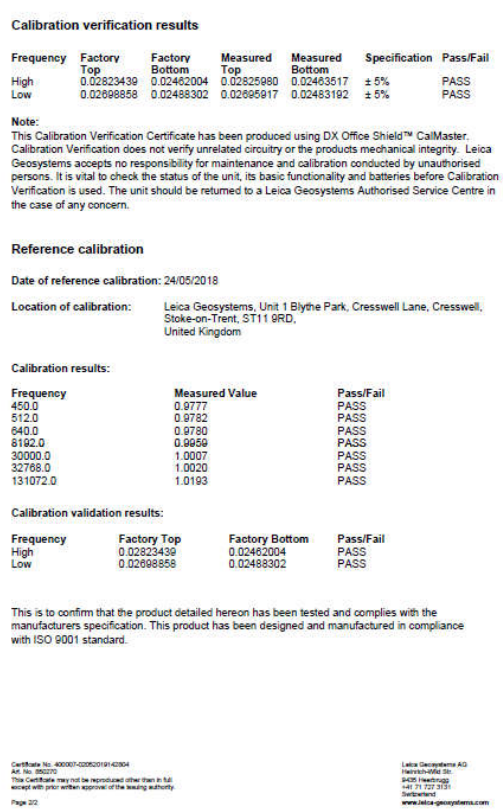
Leica Geosystems AG
Heinrich-Wild-Str.
9435 Heerbrugg
+41 71 727 3131
Switzerland
www.leica-geosystems.com



Calibration verification results

Frequency	Factory Top	Factory Bottom	Measured Top	Measured Bottom	Specification	Pass/Fail
High	0.02823439	0.02462004	0.02825980	0.02463517	± 5%	PASS
Low	0.02698858	0.02488302	0.02695917	0.02483192	± 5%	PASS

Note:
This Calibration Verification Certificate has been produced using DX Office Shield™ CalMaster. Calibration Verification does not verify unrelated circuitry or the products mechanical integrity. Leica Geosystems accepts no responsibility for maintenance and calibration conducted by unauthorised persons. It is vital to check the status of the unit, its basic functionality and batteries before Calibration Verification is used. The unit should be returned to a Leica Geosystems Authorised Service Centre in the case of any concern.

Reference calibration

Date of reference calibration: 24/05/2018

Location of calibration: Leica Geosystems, Unit 1 Blythe Park, Cresswell Lane, Cresswell, Stoke-on-Trent, ST11 9RD, United Kingdom

Calibration results:

Frequency	Measured Value	Pass/Fail
450.0	0.9777	PASS
512.0	0.9782	PASS
640.0	0.9780	PASS
8192.0	0.9959	PASS
30000.0	1.0007	PASS
32768.0	1.0020	PASS
131072.0	1.0193	PASS

Calibration validation results:

Frequency	Factory Top	Factory Bottom	Pass/Fail
High	0.02823439	0.02462004	PASS
Low	0.02698858	0.02488302	PASS

This is to confirm that the product detailed hereon has been tested and complies with the manufacturers specification. This product has been designed and manufactured in compliance with ISO 9001 standard.

Certificate No. 400007-02052019142804
Art. No. 850270
This Certificate may not be reproduced other than in full, except with prior written approval of the issuing authority.
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Leica Geosystems AG
Heinrich-Wild-Str.
9435 Heerbrugg
+41 71 727 3131
Switzerland
www.leica-geosystems.com

Calibration Certificate Bronze

1) **Calibration Certificate;** After calibration verification is completed successfully a Calibration Certificate Bronze is displayed as pdf and stored

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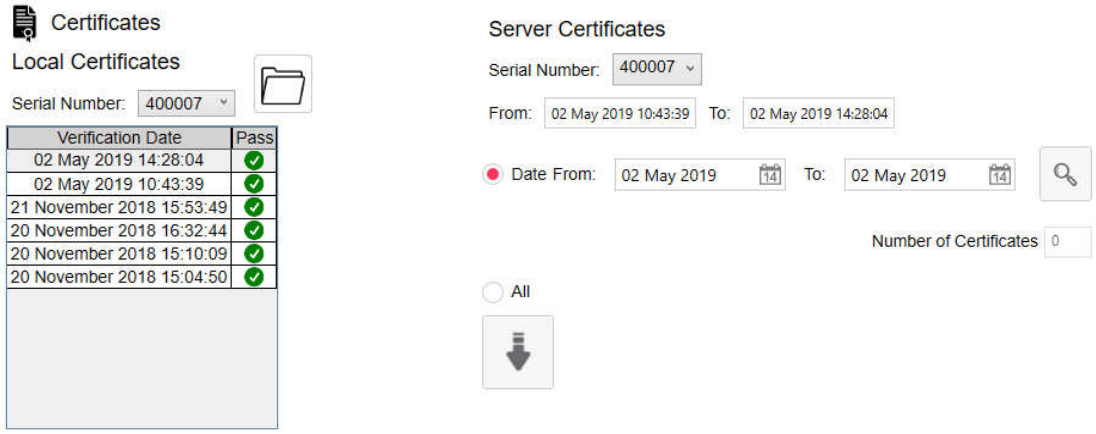
CalMaster

Calibration Certificate Bronze

1



Calibration Certificate Bronze

After calibration verification is completed successfully a Calibration Certificate Bronze is provided

1) **Calibration Certificate Storage;** successfully completed calibration verifications - certificates are stored
   - Stored in Local Certificates
   - Stored in Server Certificates

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Calibration Verification Outcome

1

☞	To maintain environmental protection open and use the USB port only in dry conditions. Always reinstate the cover after use.
1.	Unscrew the fastening screws of the cover and open it. ☞ For guidance on establishing a connection, follow the instructions on the external device or software. Refer to the manufacturer's instructions. 14470_001
2.	After disconnection, reinsert the cover and tighten the fastening screws. 14471_001

CalMaster – Calibration Verification Outcome

Following the Calibration Verification remove the USB cable and secure the device's USB cover in place

1) To maintain environmental protection open and use the USB port only in dry conditions. Always reinstate the cover after use.

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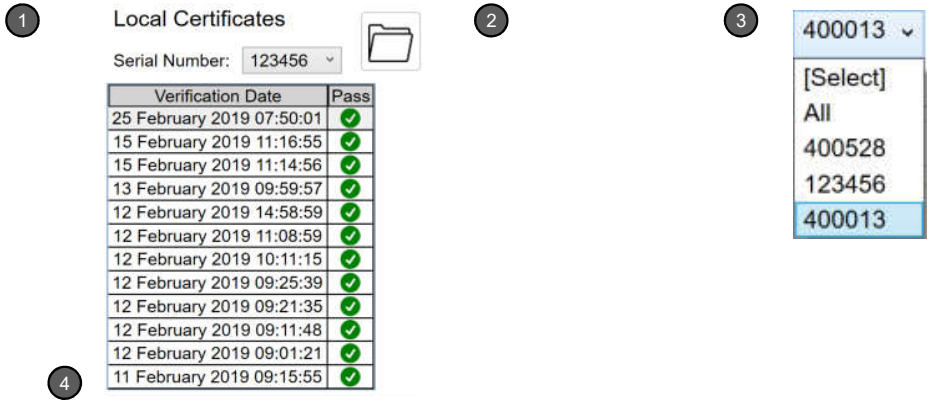
CalMaster
Local Certificates



CalMaster– Local Certifcates

Calibration Verification certificates and failure reports are saved to your PC and to DX Office Shield's server.

1) **Local Certificates;** provides access to certificates saved to your PC
2) **Certificate Folder;** click on the folder to view all PDF certificates
3) **Certificate Selection;** from the drop down menu select the device that you want to display certificates for.
4) **Certificate – Failure Report;** double click on a row entry to display the certificate or failure report.

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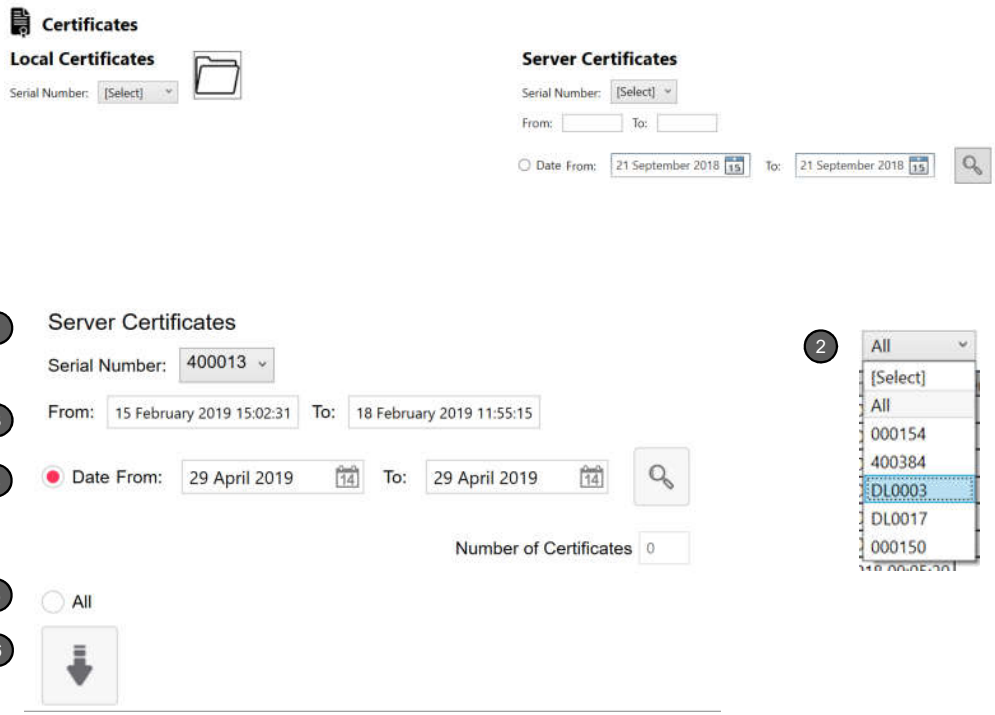
CalMaster
Server Certificates



CalMaster– Server Certificates

Server Certificates can only be accessed when you are logged in.

1) **Server Certificates;** provides access to backup certificates saved on DX Office Shield server
2) **Certificate Selection;** from the drop down menu select the device that you want to retrieve certificates for.
3) **Date Information;** displays the date range of certificates for the selected device
4) **Date retrieval;** click the date option and enter a date range, click Search. The number of certificates for this period is displayed. Click the Download icon to retrieve these
5) **All;** click the All option and then download to retrieve all certificates for the selected device
6) **Download;** click to download certificates. Downloaded certificates are saved to the Local certificate folder

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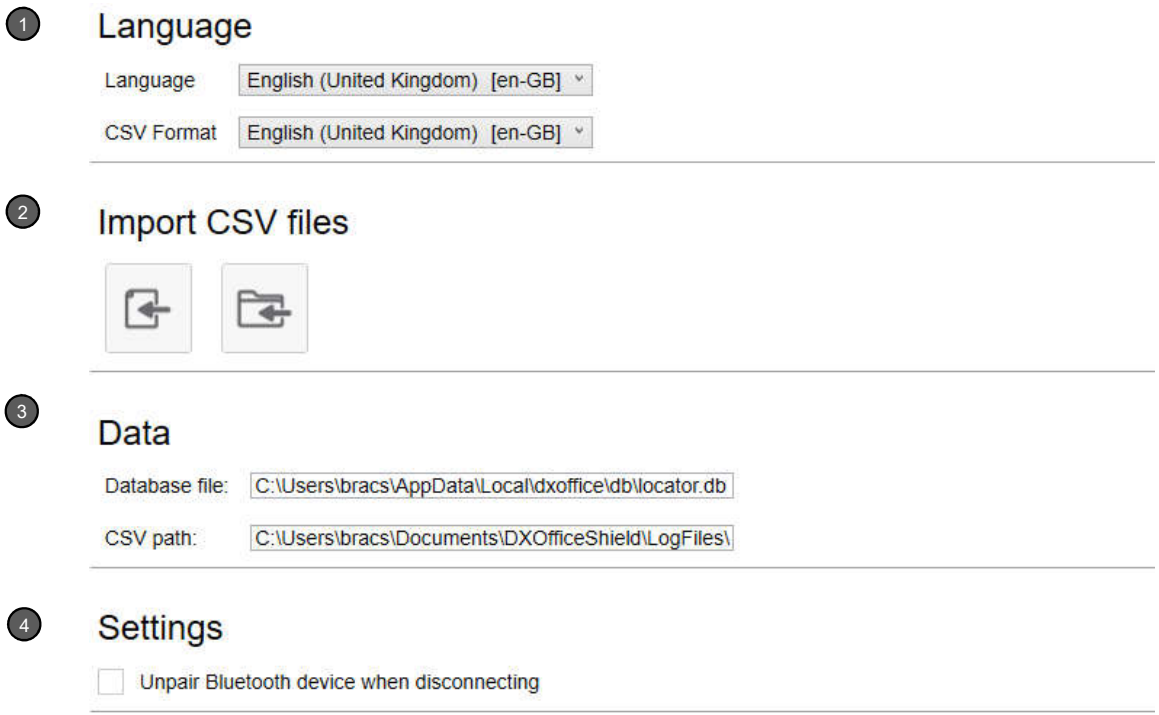
Settings
Introduction



Settings – Introduction

The settings page allows you to apply global setting to DX Office Shield

1) **Language;**
- Select a language type from the dropdown menu
- Select a CSV format you wish to use to import/export CSV files in

2) **Import Locator files;** import saved Digicat or DD locator files or folders. Click on the file or folder icon and navigate to the logfile location.

3) **Data;** shows where information is saved to

4) **Settings;** Select "unpair the Bluetooth device when disconnecting" to ensure device closure

For importing legacy logfiles the CSV format needs to be set to English

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Logfile Content

Locator Logfiles

DD SMART

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	Transferred By	AA																				
2	Transfer Date	09/04/2018																				
3	Transfer Time	11:04:02																				
4	UTC Date	09/04/2018																				
5	UTC Time	11:03:57																				
6	UTC Time Offset	1hr 00min																				
7	Session Date	04/04/2018																				
8	Session Time	09:18:09																				
9	File Length	2371																				
10	Model	DD230 SMART																				
11	Serial No	164																				
12	Firmware Ver	1.08																				
13	Cal Due	01/01/1970																				
14	Maintenance sched	On																				
15	Company Name	Leica Geosystems																				
16	Company Telephon	+44(0)1782384630																				
17	email	---																				
18	Web	www.Leica-Geosystems.com																				
19	User ID	---																				
20	User Tel																					
21	Notes																					
22	Offset Time	Date	Health Check	Battery (%)	Fault Code	Hazard	Swing	Mode	Locator Scale	Numeric Scale	Overload Protectio n	Depth	Current	Unit	Line / Sonde	Latitude	Longitude	GPS Satellites	Point Of Interest	Trigger Release	Cal Test	Comm
23	10:18:09	04/04/2018	---	61	---	---	yes	Power	71	16	---	0.45	1.28	M	L	52.95037	-2.035398	6	-X-	---	---	DD
24	10:18:10	04/04/2018	---	61	---	<0.3	---	Power	73	9	---	---	---	---	---	52.95037	-2.0354	6	-X-	---	---	DD
25	10:18:11	04/04/2018	---	61	---	<0.3	---	Power	73	10	---	---	---	---	---	52.95037	-2.035398	6	-X-	---	---	DD
26	10:18:12	04/04/2018	---	61	---	---	---	Power	73	12	---	---	---	---	---	52.95038	-2.035391	6	-X-	---	---	DD
27	10:18:13	04/04/2018	---	61	---	---	---	Power	73	12	---	---	---	---	---	52.95039	-2.035395	6	-X-	---	---	DD

iSeries

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Transferred By	AA											
2	Transfer Date	15/06/2018	Transfer Time	10:06:32									
3	RTC Date	15/06/2018	RTC Time	10:06									
4	FileIndex	305											
5	FileStartAddr	951											
6	FileLength	34											
7	SerialNo	320053											
8	UserID	AA											
9	Firmware Ver	9.12											
10	Model	750xf											
11	Time	Date	Cal Due	EST	Battery(0-9)	Mode	Signal	Hazard	Unit	Line/Sonde	Depth	Latitude	Longitude
18	09:04:17	15/06/2018	10	No	6	Power	16	Yes	M	L	---	5257.027	-202.168
19	09:04:18	15/06/2018	10	No	6	Power	8	Yes	M	L	---	5257.027	-202.168
20	09:04:19	15/06/2018	10	No	6	Power	19	Yes	M	L	---	5257.027	-202.168
21	09:04:20	15/06/2018	10	No	6	Radio	44	Yes	M	L	---	5257.027	-202.168
22	09:04:21	15/06/2018	10	No	6	Radio	44	No	M	L	---	5257.027	-202.168
23	09:04:22	15/06/2018	10	No	6	Radio	44	No	M	L	---	5257.027	-202.168

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Logfile Content

DD SMART Locators

LogFile Content

DD Smart Locator logfiles (known as sessions) can be retrieved for analysis. Retrieved sessions are saved as an Excel CSV file.

The session's filename is structured by the locator's Serial number and the session date (yyyymmdd) and time e.g; sn000150_20180604_053736

Once opened the Log files will display the following information;

Header detail

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	Transferred By	AA																				
2	Transfer Date	09/04/2018																				
3	Transfer Time	11:04:02																				
4	UTC Date	09/04/2018																				
5	UTC Time	11:03:57																				
6	UTC Time Offset	1hr 00min																				
7	Session Date	04/04/2018																				
8	Session Time	09:18:09																				
9	File Length	2371																				
10	Model	DD230 SMART																				
11	Serial No	164																				
12	Firmware Ver	1.08																				
13	Cal Due	01/01/1970																				
14	Maintenance sched	On																				
15	Company Name	Leica Geosystems																				
16	Company Telephon	+44(0)1782384630																				
17	email	---																				
18	Web	www.Leica-Geosystems.com																				
19	User ID	---																				
20	User Tel																					
21	Notes																					

Session detail

22	Offset Time	Date	Health Check	Battery (%)	Fault Code	Hazard	Swing	Mode	Locator Scale	Numeric Scale	Overload Protection	Depth	Current	Unit	Line / Sonde	Latitude	Longitude	GPS Satellites	Point Of Interest	Trigger Release	Cal Test	Comm
23	10:18:09	04/04/2018	---	61	---	---	yes	Power	71	16	---	0.45	1.28	M	L	52.95037	-2.035398	6	-X-	---	---	DD
24	10:18:10	04/04/2018	---	61	---	<0.3	---	Power	73	9	---	---	---	---	---	52.95037	-2.0354	6	-X-	---	---	DD
25	10:18:11	04/04/2018	---	61	---	<0.3	---	Power	73	10	---	---	---	---	---	52.95037	-2.035398	6	-X-	---	---	DD
26	10:18:12	04/04/2018	---	61	---	---	---	Power	73	12	---	---	---	---	---	52.95038	-2.035391	6	-X-	---	---	DD
27	10:18:13	04/04/2018	---	61	---	---	---	Power	73	12	---	---	---	---	---	52.95039	-2.035395	6	-X-	---	---	DD

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Logfile Content

DD SMART Locators

LogFile Content

Header Detail	Description
Transferred By	Displays the details of the person who downloaded the locators scan session
Transfer Date	Displays the computers or mobile device date when the locators scan session was downloaded
Transfer Time	Displays the computers or device time when the locators scan session was downloaded
UTC Date	Displays the locators date when the locators scan session was downloaded.
UTC Time	Displays the locators time when the locators scan session was downloaded.
UTC Offset	Displays the locators time zone offset as set up on initial configuration or by DX Office Shield
Session Date	Date of the locators scan session
Session time	Time of locators scan session recorded in UTC format. The UTC time is automatically updated by the GPS
File Length	Number of entries in the locators scan session (recorded in seconds)
Model	Displays the locators model number
Serial No	Displays the locators Serial Number
Firmware Ver	Displays the locators Firmware version
Cal Due	Displays the calibration due date as seen on the locator
Maintenance scheduler	Displays if the locators maintenance scheduler is switched on or off
Company Name	Displays the locators owner information
Company Tel	Displays the locators telephone information
email	Displays the locators email information
Web	Displays the locators web address information
User ID	Displays the locators user name information.
User tel	Displays the locators telephone number
Notes	

UTC;
Universal Time Coordinate is the primary time standard by which the world regulates clocks.
The time is not adjusted for daylight saving time.

The offset time recorded in the scan session is based on the UTC time with an adjustment made for the UTC offset
The UTC offset is based on the entry made during the initial configuration or a subsequent update in DX Office Shield

Session detail

Offset Time	Date	Health Check	Battery (%)
10:18:09	04/04/2018	---	61
10:18:10	04/04/2018	---	61
10:18:11	04/04/2018	---	61

Offset Time =
Session time +/- UTC offset

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Logfile Content

DD SMART Locators

LogFile Content

Scan Session	Description
Offset Time	Displays the locators time of use (scan session), based on the Session time plus the Offset adjustment
Date	Displays the date the locator was in use.
Health Check	Displays the status of the Health Check test --- = test not performed Yes/ = Test in progress Yes/Pass = Test passed Yes/ERR = Test failed Yes/Halt = Test started and could not commence due to a high level of interference
Battery(%)	Displays the battery power level as a percentage
Fault Code	Displays notification of a fault --- = No Fault recorded 123 = Fault Code Note, Refer to User Manual for Fault Codes
Hazard	Displays Hazard Zone status --- = Hazard Zone on and not alarming < 0.3 or < 0.5 = Hazard Zone Alarming -X- = Hazard Zone switched off
Swing	Displays Swing Alert status --- Swing Alert on and not alarming Yes = Swing Alert alarming -X- = Swing Alert switched off

Scan Session	Description
Mode	Displays the locators mode of use. **Passive modes;** Power = Power mode Radio = Radio mode A0 = Auto passive mode with nothing detected AP = Auto Power signal detected AR = Auto Radio signal detected **Transmitter Modes;** TX0 = Auto transmitter mode selected with nothing detected. TX512Hz = 512Hz selected TX640Hz = 640Hz selected TX8kHz = 8kHz selected TX33kHz = 33kHz selected TX131kHz = 131kHz selected TX33kHz-131kHz = Avoid (combined) selected with 33kHz dominant TX 131kHz-33kHz = Avoid (combined) selected with 131kHz dominant Note, Auto transmitter prefixes the frequency the letter "a" e.g a33kHz = Auto TX mode detecting a 33kHz signal a8kHz - Auto TX mode detecting an 8kHz signal Sonde Modes; S512 = 512Hz selected S640 = 640Hz selected S8K = 8kHz selected S33kHz = 33kHz selected

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Logfile Content

DD SMART Locators

LogFile Content

Scan Session	Description
Locate Scale	Displays the Detection status as seen on the locators locate scale 0 to 75
Numeric signal	Displays the value of Numeric signal reading range 0 to 999
Overload Protection	Displays if the mode overload protection has activated indicating the presence of a strong signal source --- Normal operation Yes = overload protection active
Depth	Displays the depth estimation --- No depth recorded < depth = Depth exceeds minimum depth range > depth = Depth exceeds maximum depth range low = Signal source to low to take a reading high = Signal source to high to take a reading
Current	Displays the current reading measured in mill amperes (mA)
Unit	Displays the depth estimation measurement shown on the locator M = metric I = Imperial
Line/Sonde	Displays if a measurement was to a Line (cable/pipe) or a Sonde L = Line S = Sonde
Latitude and Longitude	Displays the geographical position of use, shown in decimal degrees --- = No position recorded (GPS Status white) 4851.29, 2174.03 = GPS position recorded (GPS status green) -X- = Function not available (Fault with GPS, status Red)

Scan Session	Description
GPS Satellites	Displays the number of satellites available
Point of Interest	Displays the reference to a Point of Interest --- = POI on but not recorded -X- = POI switched off 01 = POI reference recorded
Trigger release	Displays if the trigger has been released --- = Trigger on -X- trigger released and locator down powering
Cal Test	Displays the status of the Calibration testing --- = test not performed Yes/ = Test in progress Yes/Pass = Test passed Yes/ERR = Test failed Yes/Halt = Test started and could not commence due to a high level of interference (prohibit on screen)
Comm	Displays method of communication DD = Bluetooth DD output selected BT1 = Bluetooth BT1 output selected BT2 = Bluetooth BT2 selected User = User configured -X- Communications off

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Logfile Content

iSeries Locators

LogFile Content

iSeries Locator logfiles can be retrieved for analysis. Retrieved log are saved as an Excel CSV file.

The logfile filename is structured by the locators Serial number, log file number, date of use e.g; sn320053_f0305_150618

Once opened the Log files will display the following information;

Header detail

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Transferred By	AA											
2	Transfer Date	15/06/2018	Transfer Time	10:06:32									
3	RTC Date	15/06/2018	RTC Time	10:06									
4	FileIndex	305											
5	FileStartAddr	951											
6	FileLength	34											
7	SerialNo	320053											
8	UserID	AA											
9	Firmware Ver	9.12											
10	Model	750xf											

Session detail

	A	B	C	D	E	F	G	H	I	J	K	L	M
11	Time	Date	Cal Due	EST	Battery(0-9)	Mode	Signal	Hazard	Unit	Line/Sonde	Depth	Latitude	Longitude
18	09:04:17	15/06/2018	10	No	6	Power	16	Yes	M	L	---	5257.027	-202.168
19	09:04:18	15/06/2018	10	No	6	Power	8	Yes	M	L	---	5257.027	-202.168
20	09:04:19	15/06/2018	10	No	6	Power	19	Yes	M	L	---	5257.027	-202.168
21	09:04:20	15/06/2018	10	No	6	Radio	44	Yes	M	L	---	5257.027	-202.168
22	09:04:21	15/06/2018	10	No	6	Radio	44	No	M	L	---	5257.027	-202.168
23	09:04:22	15/06/2018	10	No	6	Radio	44	No	M	L	---	5257.027	-202.168

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Logfile Content

iSeries Locators

LogFile Content

Header Notes	Description
Transferred By	Displays the details of the person who downloaded the Log file
Transfer Date & Time	Displays the computers or device date and time when the Log file was downloaded
RTC Date & Time	Displays the locators date and time when the Log file was downloaded. (the difference between these two dates can be used to take into account time zone or time saving differences)
File Index	Record number as saved in the locators memory
File Start Addr	Record location within the locators memory
File Length	Number of entries of use on the Log file (recorded in seconds)
SerialNo	Displays the locators Serial Number
UserID	Displays the locators User ID
Firmware	Displays the locators Firmware version
Model	Displays the locator model number

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Logfile Content

iSeries Locators

LogFile Content

LogFile detail	Description
Time	Displays the time of the locator scan
Date	Displays the date the locator was in use.
Cal Due	Displays the number of months to the next service
EST	Displays the status of the Health Check test No = test not performed Yes/ = Test in progress Yes/Pass = Test passed Yes/ERR = Test failed
Battery	Displays the battery power level from 0 (min) to 9 (Max)
Mode	Displays the locators mode of use. Passive modes; Power = Power mode Radio = Radio mode Auto = Auto mode Active Modes; 8kHz = Locator used with and Transmitter or Sonde in 8kHz mode 33kHz = Locator used with and Transmitter or Sonde in 33kHz mode 640Hz = Locator used with and Transmitter or Sonde in 640Hz mode 512Hz = Locator used with and Transmitter or Sonde in 512Hz mode

LogFile detail	Description
Signal	Displays the detection status as seen on the locators display from 0 (min) to 47 (max)
Hazard	Displays Hazard Zone status Yes = Hazard Zone alarming No = Hazard Zone not alarming
Unit	Displays the depth estimation measurement shown on the locator M = metric I = Imperial
Line/Sonde	Displays if a measurement was to a Line (cable/pipe) or a Sonde L = Line S = Sonde
Depth	Displays the depth estimation
Latitude and Longitude	Displays the geographical position of use, shown in decimal degrees 4851.294, 2174.0300 = GPS ON, geographical position available and recorded (GPS fix) 0, 0 = GPS ON, geographical position not available (No GPS fix) X = GPS OFF, and Bluetooth activated.

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DX Office Shield – Support

Support enquires and questions please email;

dxshield.support@leica-geosystems.com

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