



Leica Captivate v3.20 Software Release Notes

Product	Leica Captivate
	Field Controllers: CS20, CS35
	Total Stations: TS16, TS60, MS60
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1 Leica Captivate v3.20 Release Notes - Introduction

Please do take your time to read these Release Notes. They contain information about

- New features
- Bug fixes

General information There is a Leica Captivate v3.20 release for the following hardware

- Field Controllers: CS20, CS35
- Total Stations: TS16, TS60, MS60

The Leica GS18T will continue to use Leica Captivate v3.00

Customer Care Product (CCP) dates The Leica Captivate software version 3.20 can be loaded onto all CS Field Controllers and TS Total Stations with a CCP valid until at least 01.03.2018

Jobs, Coordinate Systems, Working Styles, RTK Profiles and other objects All Leica Captivate "objects" (such as Jobs, Coordinate Systems, Working Styles, RTK profiles etc.) created or used within previous Leica Captivate versions can be used without problems in Leica Captivate v3.20

Version compatibility between CS Field Controllers, TS Total Stations and GS Sensors The table below shows the compatibility between Leica Captivate versions

		CS20, CS35	CS20, CS35	CS20, CS35
		Leica Captivate	Leica	Leica Captivate
		v1.x	Captivate v2.x	v3.xx
TS16, TS60, MS60	Leica Captivate v1.x	Fully compatible	Not compatible	Not compatible
TS16, TS60, MS60	Leica Captivate v2.x	Not compatible	Fully compatible	Not compatible
TS16, TS60, MS60	Leica Captivate v3.xx	Not compatible	Not compatible	Fully compatible

The table below shows the compatibility between Leica Captivate and SmartWorx Viva versions

		CS20, CS35	CS20, CS35	CS20, CS35
		Leica	Leica	Leica
		Captivate	Captivate	Captivate
		v1.xx	v2.xx	v3.xx
AII TS, MS	All versions	Fully	Not compatible	Not compatible
and GS	prior to	compatible		
sensors	SmartWorx			
capable of	Viva v6.0			

running	and higher			
SmartWorx	than v5.60			
Viva	SmartWorx	Not	Fully	Not compatible
	Viva v6.x	compatible	compatible	
	SmartWorx	Not	Not compatible	Fully
	Viva v7.00	compatible		compatible

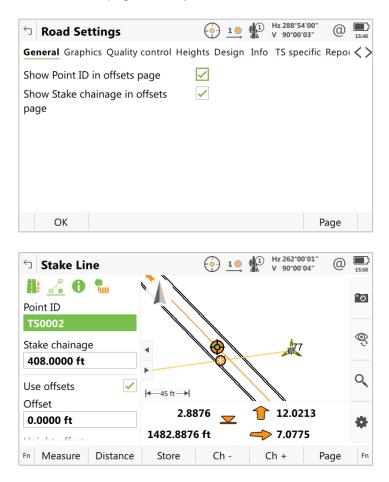
2 Leica Captivate Software Improvements – new features

Road stakeout – combine Chainage, Offset and Point ID on one page



When staking out Roads, sometimes the **Point ID**, **Stake chainage** and **Offset** values are frequently edited during stakeout.

To make this more efficient, there is now a setting to show these three values combined on the **Offsets** page to easily switch between them.



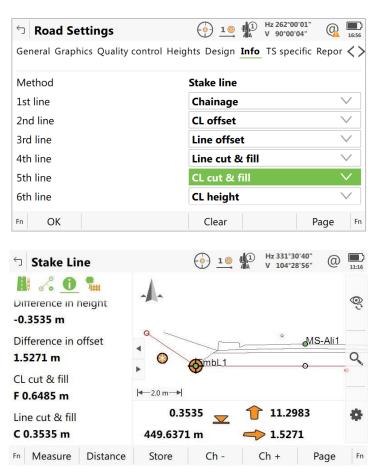
Road stakeout – show delta height as cut/fill

When a point is staked out or measured in the **Stake/Check Road** apps, the height difference is shown as a delta to the design height.

Some users are more familiar seeing the height difference as Cut & Fill values.



With Leica Captivate v3.20 it is now possible to display this value as **Delta** height or **Cut & Fill** as needed.



Start staking a point from the map view



Some road stakeout jobs require individual points to be staked out quite frequently. Therefore, a change was added to Leica Captivate v3.20 which makes this function much easier accessible.

individual point tool to directly stake a point from within the app.

In the Stake Road app, pressing Fn+F6(Tools) would allow selecting the Stake

In the latest version of Leica Captivate it is now possible to select a point in the map view, press and hold to open the context menu and select the **Stake point** option. The point selected in the map will then be staked.

 Stake Line 			1 Hz 262°00'00" V 90°00'03"	(1) 11:04
<u> </u> 🖧 🚯 犏			Stake point	
Point ID			Clear selection	
TS0002				
Target height 5.0000 ft	•	339		
Stake chainage		×,		
353.3356 ft	 4 −−45 ft →			
Chainage increment	-			
0.0000 ft	-			
Fn Measure Distance	Store	Ch -	Ch + Pa	age ^{Fn}

Link a design job to a working job automatically during import of a design



Each time a design (for instance Road, Rail, Tunnel or DTM) is imported into Leica Captivate, a new job is created. This new job needs to be linked as design job to a selected working job.

When the device holds a large number of jobs, it could be some effort to find this new design job in the list of available jobs.

With Leica Captivate v3.20 there is now an option to link the new design job to the current working job automatically during the import of the Road, Rail or Tunnel design or a DTM. This way it is no longer necessary to find the new design job in a possibly long list of existing jobs.

🕤 Import Alignment Data	1	(1) 11:24
Data type to import	DXF	\sim
From	Internal memory	\sim
From file	DXF sample data.dxf	>
Import as	Road design	\vee
To file	DXF sample data	
To device	Internal memory	\sim
Link design to current job		
Fn OK		Fn

Display the stakeout "story" when staking out catch points and offsets

In some countries, the results when staking out catch points on road alignments are written on the peg (or lath) in a very specific way.

We have added a new method to the advanced slope stakeout settings that will activate showing the stakeout results in this very specific way.

 Slope Stakeout Settings 	→ <u>1</u> Hz 121°47'21" V 94°40'56"	@ <u>18:29</u>
Use advanced slope stakeout	\checkmark	
Туре	Catch point story	\sim
	2 0	
Fn OK		Fn

Once the **Catch point story** method has been selected, staking a catch point will show the new **Catch Point Story** results page.

つ Catch Point Story	1 Hz 246°00'00" (D) 15:1
Catch point	
Hinge line	CL:Asphalt
CP Chainage	396.0273 ft
Slope cut & fill	C 0.0010 ft
Slope offset	L 0.0351 ft
Hinge cut & fill	C 2.0910 ft
Hinge offset	L 11.5641 ft
Slope design ratio	31:1 hv
OK Offset pt	1 ◎ ↓ 1 Hz 246'00'00" @ ■ V 90'00'03" ■
Catch point	
Next line	R1:Asphalt
Montinel distance	C 0.3515 ft
Vertical distance	C 0.3313 IC
Vertical distance Horizontal distance	10.1706 ft
Horizontal distance	10.1706 ft
Horizontal distance Next line	10.1706 ft R2:Asphalt
Horizontal distance Next line Vertical distance	10.1706 ft R2:Asphalt F 0.5500 ft

The **F2 (Offset pt)** button allows measuring an offset to the catch point. The **Catch Point Story** results page is shown again.

└ Catch Point Story	1 (a) Hz 246°00'00" (a) 15:12
Catch point Offset point	
Chainage	396.0527 ft
CP cut & fill	F 3.2821 ft
Distance to CP	R 12.7059 ft
Hinge line	CL:Asphalt
CP Chainage	396.0273 ft
Slope cut & fill	C 0.0010 ft
Slope offset	L 0.0351 ft
OK Offset pt	Page

The F2 (Offset pt) button would allow measuring a second offset point if needed.

These result pages allow copying the values directly onto the lath, making the stakeout task more efficient and reducing error sources that may arise if results have to be manually calculated.

Export Stakeout data to ASCII (cut sheet) from all Stakeout apps



With Leica Captivate v3.00 a new tool was introduced that allowed exporting of Stakeout data to an ASCII file (cut sheet). The content for this export can be defined directly in the tool.

This tool was available from the **Stake Points** app in Leica Captivate v3.00. With Leica Captivate v3.20 it is now available in all Stakeout apps.

In addition to this, there are now additional values that can be exported. These values include:

Cut/fill, Target height, Design offset, Design line distance, Design chainage, Staked line offset, Staked distance along line, Staked chainage, Difference in distance along line, Difference in chainage, Difference in offset

つ Define Cut Sheet Content	1 ◎ 1 □ Hz 238°27'32" V 90°00'07"	(1) 11:32
1st	Cut/fill	\vee
2nd	Target height	\vee
3rd	Design offset	\sim
4th	Design line distance	\sim
5th	Design chainage	\sim
6th	Staked line offset	\sim
7th	Staked distance along line	\sim
Fn OK	Clear	Fn

This allows exporting a very detailed stakeout report directly from the app without the need of a pre-defined format file.

Measure app shows a warning when storing a duplicate point

When a point ID is used more than once to measure a point, the measured coordinates are averaged when the average limits are not exceeded.

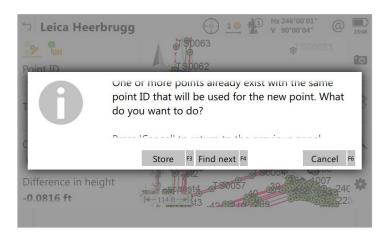


Sometimes it would happen that a point ID has been re-used and a point was averaged accidentally without being intended as a double measurement.

With Leica Captivate v3.20 a new setting in the Duplicate points page allows to configure a message being shown each time a point ID is re-used.

5 Duplicate Points	→ <u>1 ⊚</u> Hz 246°00'00" V 90°00'03"	Q 15:25		
When a point is stored with same point ID as existing point	Show warning message	\wedge		
As a point is stored the user will be w point ID is already in the same job.	Check the average Show warning message			
	Check the abs diff Don't check			
	Don't check			

If a point ID is now measured a second time, a message is shown, asking the user how to handle the duplicate point.



Pressing **F3(Store)** will store the point and calculate an average.

Pressing **F4(Find next)** will find the next not used numerical Point ID which can then be set and stored by pressing **F3(Store)** without repeating the measurement.

F6(Cancel) also keeps the measurement results. When entering a different point ID manually and pressing **F3(Store)**, the point will be stored with the new ID.

When using Coding and Linework, it is always necessary to have the focus on the code that is to be used.

However, when working on a job where the target height or attributes frequently need to be changed while continuously using the same code (e.g. measuring a line), highlighting the code after every change is inefficient. It would be necessary to constantly switch between the code box and the entry fields.

Easier toggle between code boxes and data input fields



With Leica Captivate v3.20 it will be possible to edit the entry fields while the code is remembered, and the code box does not have the focus. It will also be possible to use the left arrow to easily jump from the code box to the entry field.

🕤 Leica Heerbi	rugg			1 Hz 246°00 Λ V 90°00		15:2
الله الله المعالم معالم						
Manhole	Q,	Hedge (H	lec 🗢 4 🕀	Bus She	lter 1	
Point ID		• ^{.0} . o ^{.4}	0	• ^{,0} ,0	.0	
TS0007		Tree (Tree	e P	Manhol	e (N	
Target height		•		•	J.	-
6.0000 ft		Gully (Gu	lly	Kerb (Ke	erb 🗢 25 🕀	1
		•		• ^{.0} .0		
Code description		Lamp pos	st (Benchm	ark	1
Manhole Point		•		•		
La dina natal alta na an	- L					1
En Measure Dist	tance	Store	Define	Multi on	Page	l F
		Store				
Leica Heerbi		Store		Hz 246°00 V 90°00		
Leica Heerbi					0'00" @ [03" @	
ি Leica Heerbı ॐ <u>ী</u> ⊞ Manhole	rugg			1 Hz 246°00 V 90°00	0'00" @ [03" @	
ি Leica Heerbı ॐ <u>ী</u> ⊞ Manhole	rugg			1 Hz 246°00 V 90°00	0'00" @ [03" @ [/•]	
Leica Heerbi > Manhole Point ID TS0007	rugg	Hedge (H		Hz 246°00 V 90°00 Bus She	0'00" @ [03" @ [/•]	
 ☐ Leica Heerbi ≫ [™] Manhole Point ID TS0007 Target height 	rugg	Hedge (H • • • • • Tree (Tree		Hz 246°00 V 90°00 Bus She	0'00" @ [03" @ [♪	15:
Leica Heerbi	rugg	Hedge (H		Hz 246°00 V 90°00° Bus She	0'00" @ [03" @ [♪	15:
Leica Heerbi * • Manhole Point ID TS0007 Target height 6.0000 ft Code description	rugg	Hedge (H Tree (Tree Gully (Gu	1 € 1 €	Hz 246°00 V 90°00° Bus She	000" @ [03" @ [
Leica Heerbi	rugg	Hedge (H • • • • • Tree (Tree	1 € 1 €	Hz 246°00 V 90°00° Bus She Manhol Kerb (Ke	000" @ [03" @ [15:
Leica Heerbi Manhole Point ID TS0007 Target height 6.0000 ft Code description Manhole Point	rugg	Hedge (H Tree (Tree Gully (Gu	1 € 1 €	Hz 246°00 V 90°00° Bus She Manhol Kerb (Ke	000" @ [03" @ [15:

Since the code is remembered, it is now also possible to start a measurement while on the entry fields.

Pressing **Enter** or the **Down arrow** in the last attribute field or, if the code has not attributes, in the **Target Height** field, will bring the focus back to the code box.

With this new workflow, the coding and linework functionality can be used more efficiently when target height, point IDs and attributes need to be changed frequently.

When working in changing environments (sometime close to the instrument, sometimes further away but with lots of line-of-sight interruptions), it may be required to adapt the **Target Search** settings of the Total Station to suit the environment.

Until now, to change these settings, it was necessary to leave the currently used app and then 3 additional button presses to change the settings for **Target Prediction**, **PowerSearch Window** and **Fine Search Window**.

New hotkey to easily adapt Target Search settings



With Leica Captivate v3.20, the **Target Search** settings can be accessed via a hotkey to make the required changes without leaving the currently used app.

つ TS Hot Keys	1 ◎ Hz 179.6903 g V 99.0579 g	@ <u>09:03</u>
TS - Setup information		
TS - Single auto focus		
🞯 TS - Target search		
TS - Toggle PowerSearch fi	lter on/off	
TS - Toggle Search & lock/	Target lock off	
TS - Toggle V angle		
Fn OK		Fn

Trigger anti-theft alarm manually from the CS20



With Leica Captivate v2.30 a new anti-theft alarm feature was released. When activated, this would trigger an alarm on the Total Station, when the TS was going out of level.

To have even more control over the alarm feature, it is now possible to trigger the alarm on the Total Station from a connected CS20 controller at any time via a new hotkey. When the hotkey is configured on the CS20 controller, it can be pressed at any time and starts the alarm sound on the connected TS.

The anti-theft license key is needed on the TS for the hotkey to be used on the CS20 controller and the CS must be working in TS mode.

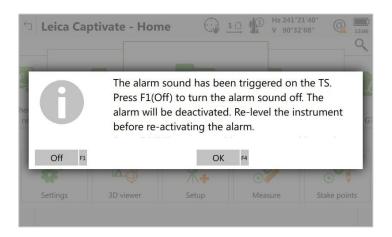
ر ا ر	rs Hot Keys	1	Hz 185°00'00" V 90°00'03"	(2) 11:16
7	User - Toggle Quick Codin	g on/off		
	User - Toggle anti-theft fu	inction on/off		
N.	User - Toggle between Az	imuth/Brng		
ft	User - Toggle between m/	Int ft		
ft	User - Toggle between m/	US <mark>ft</mark>		
((4)) User - Toggle trigger/siler	ice alarm		
Fn	ОК			Fn

Show a message on the CS20 when the alarm is triggered on the TS



On large building sites with lots of traffic and noise and working in one-personmode at a distance from the instrument, it may not be possible to hear the alarm on the TS being triggered.

Therefore, with Leica Captivate v3.20 a message is now shown on the CS20 connected to the Total Station when the alarm is triggered on the TS.



The message then gives the option to turn off the alarm on the TS if needed.

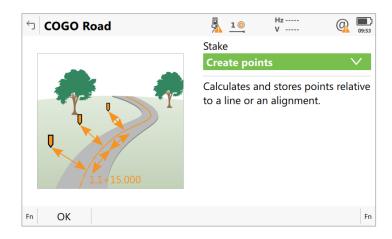
Access Apps on the CS without being connected to a TS



When out in the field, it is sometimes necessary to enter new data or change settings in an app, before even starting a setup.

To make this possible, Leica Captivate v3.20 now allows access to all apps without being connected to a TS Total Station.

This way it is possible, for instance, to access the COGO Road tool in the Stake Road application to create points based on a road alignment, before the TS Total Station has even been set up.



Since in most apps valid instrument setup information is needed to work, it is for those applications necessary to exit and re-enter to start working once connected to Total Station.

When using Favourites or opening Apps, it was always necessary to open the Favourite bubble and tap on the function to use or scroll through the App carousel and tap on the App to use.

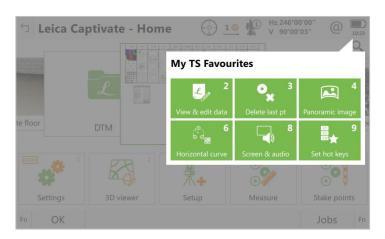
This could be inefficient when having a number of apps available and when primarily working with the keyboard instead of the touch screen.

With Leica Captivate v3.20, the Favourites and Apps now each have a number assigned.

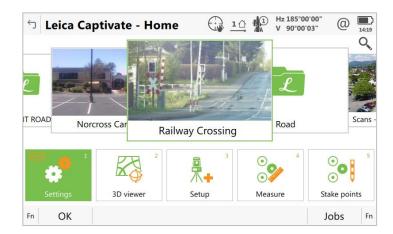
Access Favourites and Apps by pressing a number on the keyboard



For using the Favourites, this means it is now possible to press the * button and then a number on the keyboard to open the function.



For the Apps it is now possible to use the down arrow to highlight the App carousel and then press a number to open the App.



These changes make navigating in the **Leica Captivate - Home** panel and working with the keyboard much more efficient.

Configure which fraction to use for entering ft/inches



When entering data in ft and inches (US or International) in Leica Captivate, the fraction had always been fixed to 8th. This meant that data given in other fractions had to be converted first before being entered.

With Leica Captivate v3.20 it is now possible to select the fraction that is to be used.

 ☐ Regional 	1 ⊗ Hz 246°00'01" (Ω) V 90°00'03" (Ω)
Distance Slope Angle Time Coordina	tes Language Others Device ID
Distance	US ft/inch (ft) \vee
Fraction	8
Chainage format	2
Area	4
Volume	8
volume	16
	32
	64

Distance data given in ft/inches can now be entered without any conversions needed.

When using Leica Exchange, it is necessary to enter the login details and log in, each time the instrument had been powered down.

To make this workflow more convenient, there is now a check box that allows to choose to stay logged in to Leica Exchange even after the device was turned off.

🕤 Leica Exchange Login	Hz 185°00'01" @ □ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	[]) 34
Enter user name & password.		
User name	HACE_Data	
Password	••••	
Display password		
Keep me logged in		
ОК		

When the instrument is restarted, the log in to Leica Exchange will be done automatically.

ASCII files for import Each company stores their job-related data in a certain folder structure on the PC in their office. When importing the data into Leica Captivate, it was always any folder on the SD necessary to copy each file in a flat structure into the Data folder on the SD card or USB device. This makes file handling inefficient and also makes it more difficult to keep track of the files on the SD card.

> With Leica Captivate v3.20 it is now possible for importing files such as ASCII, DXF, alignment and XML to place them in any user defined folder on the memory device.

The importer then allows to browse the folders on the SD card or USB device to find the relevant files.

Stay Logged in to Leica Exchange



can be placed into

card or USB device

つ ASCII Files			Hz 246°00'00" V 90°00'03"	@	09:40
•• Size (MB)	Date				
XML Size (MB)	Date 30.01.18				
circle 10m.dxf Size (MB) 0.2	Date 24.10.17				
HAUL1.CL Size (MB) 0.0	Date 16.10.17				
HAUL1.SCT Size (MB) 0.0	Date 16.10.17				
HAUL_PRF-100_Kole.p	Date 16.10.17				
Fn OK					Fn

Start Job transfer from the Job menu

Transferring a job has always been possible from a Tool in the Settings menu.

To make this faster and require less navigation in the software, the **Transfer job** option has been added to the menu of each job with Leica Captivate v3.20.

🕤 Leica Capti	vate - Home		Hz 246°0 V 90°00	
				Q
	Railway view & eait job pi	Crossing roperties		
	View & edit data			
I +	Import data		>	
IT ROAD Norci 🕇	Export data		>	Scans -
1	Send data			
DEMO 👥 1	Transfer job			• • ⁵
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Delete			
Settings	3D viewer Se	etup	Measure	Stake points
Fn OK				Jobs Fn

Turn the map 180°



Some countries work with a coordinate system that is rotated 180°. In this case,
the map view was always shown "upside down".

つ Object Display		Hz 246°00'00" V 90°00'03"	@	16:04
General Points Lines & alignments S	cans DTM Backgı	ound image	9	
Include RTK Base station within the zoom extent				
Rotate data in 2D map by 180°				
ОК			Page	

For Leica Captivate v3.20 an option was added that rotates the 2D map view by 180° when activated. This new setting can be found when accessing the **Object Display** settings by pressing **Fn+F2(Display)** in any panel showing the map view.

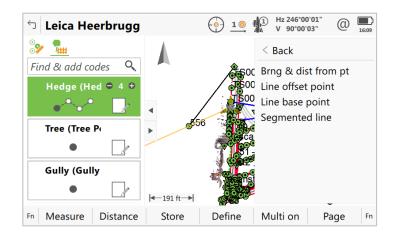
Since the 3 D map view has a free orientation, the setting does not apply here.

Start calculating line offset and line base points from the context menu



When measuring points in the Measure app, it can be useful to have a selection of COGO functions easily accessible. With Leica Captivate v3.20 some additional COGO functions have been added to the context menu of the 3D viewer.

Select a point and then tap and hold, to see the new COGO option in the context menu. Open it to find the **Bearing and distance from point** option, which had been in the context menu before.



In addition, it is now possible to select to calculate a **Line offset point**, **Line base point** and to **Segment a line** from the context menu.

This is an easy way to start the calculation with the start point of the used line already selected. Enter Azimuth, distance and offsets to calculate the offset or base point. Enter the number of segments or segment length to segment a line.

 └ Create Line 	1 ◎ Hz 246°00'00"
Input 3D viewer	
Create line using	Point, bearing & distance \sim
Start point	TS0046 >
Azimuth	0°00'00"
Horizontal distance	0.0000 ft
Horizontal distance	0.0000 ft
Fn OK	Page F

Edit a line when creating it from the context menu In the 3D viewer a line can be created by selecting 2 points and then, with tap and hold, selecting **Create line** from the context menu. In this case, the line would always be stored with the next line ID according to the configured line ID template.



🕤 Heerbrugg north		1 Hz 185°00'01" (2) (10:54)
<u>°</u> ≱ ⁹ ⊞		Delete point(s)
Point ID		Create line
TS0008	TOO	Calculate inverse
Target height		Clear selection
6.0000 ft	•	
Horizontal distance		
Difference in height		
	 ← 157 ft → 	
Fn Measure Distance	Store	Page Fn

With v3.20, Leica Captivate now shows a panel that allows renaming the line, adding a code or adding more points.

් Line0002	10 Hz 100°00'00" @ 10:59
General Geometry Code Images	
Line ID	Line0002
Style	V
Colour	\checkmark
Number of points	2
Length	33.3827 ft
Start date	16.02.18
Start time	10:59:20
Store	More Page

With this change it is not necessary anymore to access the data management to edit a line after it had been created from the context menu.

CS35 ASCII input supported



With Leica Captivate v3.20 it is possible on the CS35 to receive ASCII data fro	om
a data stream.	

← Connection Settings		<u>10</u>	Hz V	<u>@</u>	07:50
Total station Device TS16 BT	Port Bluetooth				
ASCII input Device -	Port -				
Fn OK	Edit				Fn

With this new feature the CS35 can be connected to external devices (for instance a cable locator) and data from the device can be matched with the measurement data stored in Leica Captivate.

3 Leica Captivate Software Improvements – Bug fixes

Point search is not triggered when the user presses the OK/Enter button too quickly	When searching for a point in the Point ID field and pressing the OK/Enter button very quickly, immediately after typing the point ID, it would sometimes happen that the search is not triggered.This issue is fixed in Leica Captivate v3.20 and the point ID search is triggered reliably.			
Arcs imported from DXF are sometimes drawn in the wrong direction	When importing arcs from a DXF, it would sometimes happen that the imported arcs were drawn in the wrong direction. This was caused by the 3 rd coordinate of the extrusion vector being a value other than 1, 0 or -1.			
	With Leica Captivate v3.20, this behaviour is fixed by only showing arcs with an extrusion vector with the 3 rd coordinate being 1, -1 or 0 to avoid wrong displaying of DXF elements.			
Create arc function from context menu does not work for GS points	In the 3D Viewer app, when selecting 3 GS measured points, selecting the Create arc function from the context menu would show an error and not calculate the arc.			
points	This behaviour is fixed in Captivate v3.20 and arcs can be created from GS and TS measured points.			
Error when importing alignments with lines that are almost circles	Importing alignments that contain string lines which are circular arcs with start and end points very close together, would cause an error being shown.			
	This issue is fixed in Leica Captivate v3.20 and the string lines can be imported without an error.			
Toggle tilt on/off hot key missing from the Working style wizard	The Toggle tilt on/off hot key allows to define if the GS18 T GNSS rover is to be used with the tilt functionality enabled or disabled. While the hot key was configurable in the Hot keys & favourites page in the Settings menu, it was not configurable in the Working style wizard .			
	With Leica Captivate v3.20, the hot key is also available within the Working style wizard.			
Reversing a line in Stake/Measure to line does not work reliably	In the Stake to line and Measure to line apps, in the Define Line panel, it is possible to select a line either in the Line ID field or from the 3D Viewer . The 3D Viewer allows changing the direction of the selected line with the F3(Reverse) button. This would not always work reliably and in some cases the line was not reversed.			
	This issue is fixed with Leica Captivate v3.20.			
Code search box not highlighted when the map view was hidden	This bug happened in the Measure app, Coding page tab if the map view was hidden. When a code box is highlighted, and characters are being typed, the focus should jump to the code search field, show the available codes and start searching for a code in the list.			

	Instead it would jump to the antenna height field.
	This issue is fixed with Leica Captivate v3.20.
Instrument would not turn back to Face 1 after using a 2-	When using a 2-face measurement in the Orientate to line setup method, the instrument would measure the backsight points in face 2 but would then not turn back to face 1 after measuring the 2 nd point.
face measurement in the Orientate to line setup method.	This issue is fixed with Leica Captivate v3.20 and the instrument now turns back to face 1 reliably.
3D Viewer selection tool not working correctly after attaching a CAD file	This bug would happen after attaching a CAD file to a job and switching the distance unit while attaching the file. In this case, when using the multi selection tool, some points outside the selected area would be selected or some points inside the area would not be selected.
	This issue is fixed with Leica Captivate v3.20.
Using the volume button on the CS35 would delete edit field content.	This would happen for some of the edit fields on the CS35. When the edit field had the focus but was not in edit mode and the volume up or down buttons were used, the field was set to edit mode and the content of the field was overwritten.
	This issue is fixed with Leica Captivate v3.20.
Data overlay not stored to image when crosshair was turned off	When configuring to Store data shown in camera view when taking an image, the points and lines would be shown on the image, if the Store crosshairs on all captured images setting was activated. However, when the Store crosshairs on all captured images setting was deactivated, the data would not be shown on the stored image.
	This issue is fixed in Leica Captivate v3.20 and the measured data is reliably stored when taking an image.
Last used attributes	This issue would happen when using newly created free codes with attributes.
are used while Default value is configured	When the Suggested attribute values field is set to Default in the Coding settings, Leica Captivate would still fill the attributes values with the last used values instead of the default values.
	This issue is fixed with Leica Captivate v3.20.
Attributes are not shown when using free codes from a codelist	This issue would happen when using free codes with attributes from a codelist. In this case the attributes would not be shown when using the code and no attribute values could be entered.
	This issue is fixed with Leica Captivate v3.20 and attributes are shown reliably.
For an attached DXF with a special name, the content was not shown	For an attached DXF file with an apostrophe in the name, the content of the file was not shown in the 3D Viewer and no layers are visible in the CAD Layer Management panel.
	This issue is fixed with Leica Captivate v3.20.

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Point search not working when using '-' or '.' in the point	When using '-' or '.' in a Point ID, the point search would not work properly when typing the characters very quickly in the search field.			
name	This issue is fixed with Leica Captivate v3.20.			
Export to DXF in 2D would export height values when creating Point ID labels	When exporting a job to DXF with the Dimension set to 2D should export all heights as 0. This does not work when defining to create labels during the export. In this case all Point ID labels and lines are exported with the height from the job.			
	This issue is fixed with Leica Captivate v3.20 and the 2D export now sets all heights to 0.			
3D chainage in Measure to line shown incorrectly when the line was	In the Measure to line app it is possible to reverse the selected line direction to switch the starting chainage to the end of the line. In this case, when displaying the 3D chainage, the chainage values would be shown with the wrong sign (+/-).			
reversed	This issue is fixed with Leica Captivate v3.20.			
Internet connection is lost when switching from base to rover mode	When connecting the same CS20 controller to a GS rover and configuring an internet connection via the CS modem, then a GS base and configuring an internet connection via the GS modem and then back to the rover, the CS internet connection would be interrupted.			
	The internet connection on the CS controller could then also not be re- established unless a work-around was used.			
	This issue is fixed with Leica Captivate v3.20.			
CS20 controller does not reconnect to a GS after waking up from standby	This issue could be seen on a CS20 controller which is connected to a GS rover if an internet connection was configured on the CS20. When the CS20 was set into standby mode, the connection to the GS rover was not re-established when the CS20 was used again.			
	This issue is fixed with Leica Captivate v3.20.			

4 Obtaining and loading the new software using myWorld (CS20 Field Controller and TS/MS instruments)

It is strongly recommended to use myWorld to load the new software to the CS20 Field Controller and TS/MS instruments.



The myWorld online update cannot be used to load the new software to the CS35 tablet and GS18T GNSS rover-

Once your Controllers and Instruments have been registered in myWorld, connect the hardware to your PC, navigate to your products page in myWorld and follow the on-screen instructions. The latest software versions will be loaded as required.

To connect CS20 Field Controller and TS/MS instruments to the PC you need to first install the USB drivers. These drivers are available for download at myWorld.

5 Obtaining and loading the new software using manual loading (CS20 Field Controller and TS/MS instruments)

If you prefer not to use the myWorld online update, it is also possible to "manually" load the new software – in this case, please carefully read the notes below.

Obtaining the new software	 The new software, language files and apps can be obtained from the following sources: the myWorld web site (it is also possible to manually download the files from the myWorld web site as well as automatically upgrading your controllers and sensors with myWorld) your local Leica Selling Unit or Dealer 			
Files which need to be obtained for upgrading a CS20 Field Controller	The following file needs to be obtained to upgrade a CS Field Controller - CS20LeicaCaptivate_v3_20.fw This file contains all Leica Captivate and WinEC languages and apps			
Files which need to be obtained for upgrading a TS/MS instrument	The following file needs to be obtained to upgrade a TS/MS instrument - TSxxMS60LeicaCaptivate_v3_20.fw This file contains all Leica Captivate and WinEC languages and apps			
How to load the Leica Captivate files to a CS20 Field Controller or TS/MS instrument	 Insert the SD card into your PC or card reader and copy the necessary file to be uploaded to the instrument to the System directory of the card. This can be done with Windows Explorer or any other suitable PC software. (it is NOT possible to use a USB stick to upgrade your CS20 Field Controller or TS/MS instrument) Insert the SD card into the CS20 Field Controller or TS/MS instrument and turn on. Ensure the battery is fully charged. From the main menu, choose Settings and then choose menu item Tools and then choose Update software. The Update software screen is now visible. 			

	5.	In the File to load list box ensure the correct file name is visible. If the file name is not visible then check you have correctly copied the firmware file to the System directory of the SD card. Press $F1(OK)$ – a message will appear to remind you the controller will turn off and on during the process. Press $F6(Yes)$ to begin the loading process. The loading process will take a few minutes and the controller will turn off and on several times during the process.
Obtaining sample data	simulat	eica Captivate v2.0, the sample data is no longer included in each or build. The sample data can be installed using a separate installer. The age of this is that it is no longer needed to download several large files.
	During the installation, it is possible to select for which simulators the sample dat can be installed – the sample can be installed for all 4 simulators (SmartWorx Viva CS simulator, SmartWorx Viva TS simulator, Leica Captivate CS20 simulator and the Leica Captivate TS/MS simulator).	
	is provi	mple data installer can be downloaded from myWorld. An installation guide ded along with the sample data installer though the installation process is sy to follow.

6 Obtaining and loading the new software using manual loading (CS35 Tablet)

The CS35 Tablet can only be upgraded manually. Follow the instructions below.

Obtaining the new software	 The new software, language files and apps can be obtained from the following sources: the myWorld web site (it is also possible to manually download the files from the myWorld web site as well as automatically upgrading your controllers and sensors with myWorld) your local Leica Selling Unit or Dealer 			
Files which need to be obtained for	The following file must be downloaded to upgrade the CS35 tablet			
upgrading a CS35 tablet	LeicaCaptivate_CS35_v3_20.zip			
	The file contains Leica Captivate languages and apps.			
How to load the Leia Captivate files to the CS35 tablet	 On your PC unpack the files from the .zip file to a USB stick Insert the USB stick into the CS35 Tablet Using the File Explorer app within Windows 8.1 on the CS35 tablet, browse to the USB stick. Double tap the Setup.exe file Follow the instructions 			
	Note that this procedure will need to be performed twice – once to uninstall the existing Leica Captivate software and then a second time to install the new software.			

Obtaining sampleSince Leica Captivate v2.0, the sample data is no longer included in the CS35datafirmware but will be provided separately via the sample data installer.

The sample data installer can be downloaded from myWorld. An installation guide is provided along with the sample data installer though the installation process is very easy to follow.

7 Summary of Leica Captivate Software Files

Listed below is a summary of the files available relating to the new Leica Captivate software. The version number for all files is v3.20.

File name	Description	File date	Build no.	Maintenance date
CS20LeicaCaptivate_v3_20.fw	CS20 Field Controller Leica Captivate software file	01.03.2018	130	01.03.2018
TSxxMS60LeicaCaptivate_ v3_20.fw	TS/MS instrument Leica Captivate software file	01.03.2018	130	01.03.2018
LeicaCaptivate_CS35_ v3_20.fw	CS35 tablet Leica Captivate software file (without sample jobs)	01.03.2018	130	01.03.2018