

Forest Inventory User's Guide

DIGITECH® BT

THE BLUETOOTH® LOW ENERGY CALIPER V1.2.0

september 2025



INSTITUTO
SUPERIOR DE
AGRONOMIA





Manual Caliper



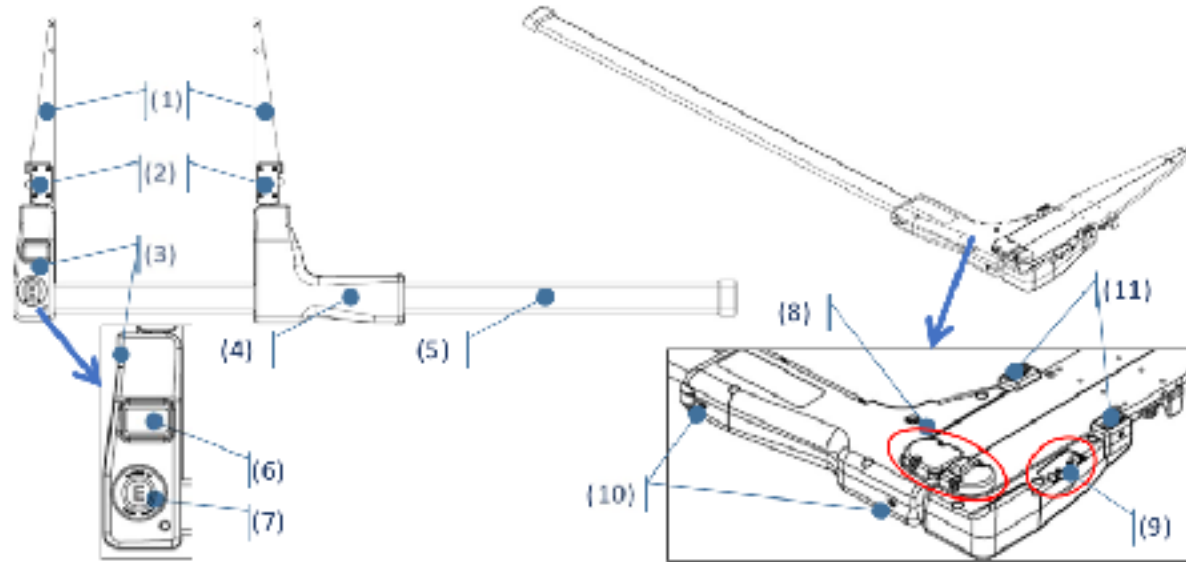
Digitech BT Caliper

CHECKLIST FOR EQUIPMENT



- (1) Digitech BT
- (2) USB Adapter, USB MINI A
- (3) Cable USB TYPE A to USB MINI A
- (4) Dual USB Charging Kit with International Plug Adapters, USB TYPE A
- (5) Carrying case

THE NAMES OF THE PARTS



Digitech BT top

- (1) Jaws (Foldable)
- (2) locking device for jaws
- (3) Electronics with battery
- (4) Movable handle
- (5) Measuring Scale
- (6) Display
- (7) E-Button

Digitech BT reverse side

- (8) Handle lock
- (9) USB Adapter connection point
- (10) Adjusting screws for the handle friction
- (11) Adjusting screws for the jaw angle

FOLDABLE JAWS

The Digitech BT measuring scale has foldable jaws. To fold the jaws, move the lock forward and fold (see image). Pull the handle as far to the side as possible. The jaws are locked into each other as shown above.

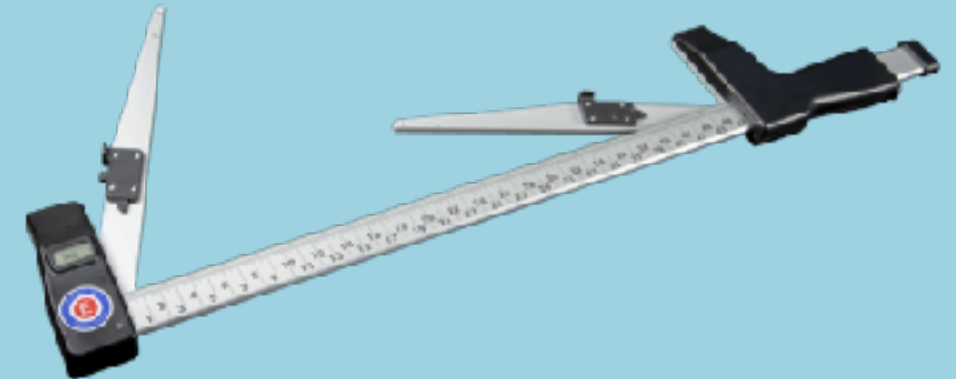


USING THE ELECTRONIC CALIPER

START THE DIGITECH BT

Press the E button  for 5 sec to turn On Digitech BT. If the Digitech BT does not start, charge the battery, see Charging the battery.

After start, the display will show the 1st MAIN MENU option **LINE**



MAIN MENU

LINE	Send data wirelessly (ex: to Mobile Device with "Haglof Link" App)
LOCAL	Store data locally
DELETE	Delete all stored data file
INSPECT	Inspect locally stored data. The last stored data set is shown first
OFF	Turn Off Digitech BT
SEND	Send stored data file wireless (can be sent to a mobile device using "Haglof Link" or a PC)

Select between MAIN MENU options

Keep the E button pressed and change the Main Menu in the display by sliding the handle.

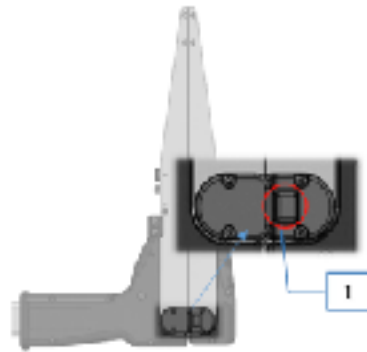
Release the E button when the desired Main Menu appears in the display.

Press E button once to execute the selected Main Menu.

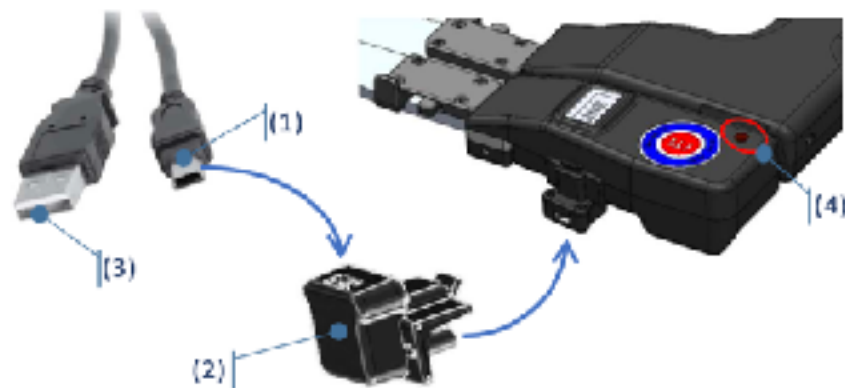
Alternatively, select the Main Menu, without sliding the handle, by pressing n number of times on the E button (ex: 6 times to select menu nr 6 [SEND]).

LOCK ON HANDLE

The movable jaw on the handle can be locked when the jaws are folded, which is practical when transporting the Digitech BT. To unlock, press on the small "hump" on the jaw lock [1] on the underside of the caliper and move the handle to the side. The lock can be removed if preferred.



CHARGING THE BATTERY



- 1 Connect the USB mini cable (1) to the USB adapter (2)
- 2 Connect the USB adapter (2) on Digitech BT
- 3 Connect the USB Type A (3) to a USB port in your PC or to a USB charger.
- 4 The LED (4) lights up and charging starts. Full charge (100%) will take up to 3h

Note: When entering menu or **LOCAL** or **LINE**, the charging level in % is presented just before measuring. If battery level is below 50%, it is recommended to recharge the battery. An additional information, a battery icon, is shown in the display if the battery level is below 30%.

SUB MENUS

Pressing E button once to execute the selected MAIN MENU, the display will navigate to It's Down Level and show a respective SUB MENU or It's functional display.

LINE by executing this MAIN MENU, the charging level (%) will be presented temporarily before the functional Measuring display is presented.

LINE > BATT % > 1 23.1^{C_M}
* ** * **

- * Species code
- ** * Diameter value
- ** Unit

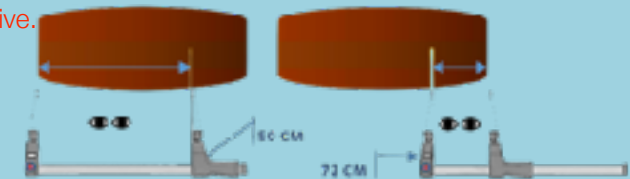


In the Measuring display, store diameter and species code by pressing the E button and the data will be sent to "Haglof Link" App. The species code can be defined by the number of presses on E button (ex: 4 short presses stores diameter for Species 4)

Digitech BT will acknowledge a data transfer with a signal, 1 beep for Species 1, 2 beeps for Species 2 etc. Then the display will be ready for the next diameter.

Keep E button pressed and select a Sub Menu by sliding the handle at the same time. Release the E button when the desired Sub Menu appears in the display, between the following SUB MENUS:

- > **DIA+50** It is possible to virtually extend the scale to be able to measure a diameter that is physically larger than the caliper itself. Use the caliper to manually check where 50cm/18" is from the left edge of the tree and mark this place. Then use the caliper to measure from the mark to the right edge of the tree. 50cm/18" is added automatically to the diameter when pressing the E button. **It registers data on local but it's not available with "Haglof Link" App live.**



- > **2X DIA** Turn on or off the cross-measuring function by selecting this Sub Menu. Use the feature to average a tree diameter from two perpendicular measurements. Species is defined when diameter 1 is measured. **It registers data on local but it's not available with "Haglof Link" App live.**

- > **HEIGHT** Use this Sub Menu to enter a height if you wish to register with the Caliper's handle. Note that a Height is always entered after the diameter. Use the handle to adjust the height field. In metric mode, each mm in the scale equals 1dm of tree height i.e 220mm=22.0m. In Imperial mode, 12.0=120'.

- > **RETURN** To return to the Measuring display

- > **END** To end plot measurements and return to the Main Menu (Up Level)

LOCAL by executing the charging level (%) will be presented too before the functional Measuring display is presented.

LOCAL > BATT % > 1 23.1°C_M

LOCAL has the same SUB MENUS that LINE, although data are stored locally, and can be later exported in a file using the SEND menu option.

In order to delete data locally, the LOCAL menu has one extra SUB MENU:

DEL Used to delete the last stored data set (Species, Diameter 1, Diameter 2, Height). Deleting must be confirmed within 5 sec with a short press on the E button. After confirming, the total amount of dataset is decreased with 1.

DELETE MAIN MENU is used to delete all stored data in the Digitech BT. Instead of SUN MENU, the total number of data sets is shown in the display during the process.

Then, to avoid data being deleted by mistake, the user must confirm the choice twice. Confirmation is done by pressing a short press on E button within 5 sec.

DELETE - 6894

SURE? - 0

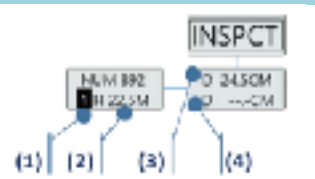
INSPCT is used to inspect stored data. The last stored data set is shown first. Press the E button once to see the previous stored data set. Leave the INSPCT with a long press on E button.

(1) Species

(2) Height

(3) Diameter 1

(4) Diameter 2



OFF executing directly this MAIN MENU closes any connection and turn Off the Digitech BT.

SEND the stored data file is sent with Bluetooth® to:

. Mobile Device, after executing SEND. The process is then managed with the “Haglof Link” App, in “Files”, with START RECEIVING > CONNECT TO DEVICE > BACK

. PC with “Haglof BLE Commander” where the transfer is managed after executing SEND.



WITH MOBILE - HAGLOF LINK

send data from Digitech BT to “Haglof Link” mobile app

LIVE DATA

Start Digitech BT and select **LINE** pressing **E**. It will show **BATT %**, press **E** again and Digitech BT is ready in the measuring display.

Start Haglof Link  on your mobile device.

In Haglof Link, select Digitech BT 

Select Tree Inventory 

Select an existing list or add a new list **ADD LIST**

Select **CONNECT TO DEVICE** and “DIGITECH_XX” when it appears in the search list.



STORED DATA

Start Haglof Link 

In Haglof Link, select Files 

Select **START RECEIVING**

Start Digitech BT and select **SEND**

Click **CONNECT TO DEVICE** to search for the unit. When it appears in the list, select the unit.

When transfer is completed, click **BACK** and the file will be listed in 

In Files, click on the file and select Open, Delete or Share.



WITH PC - HAGLOF BLE COMMANDER

send data from Digitech BT to "Haglof BLE Commander" PC application

LIVE DATA

Start Digitech BT and select **LINE** pressing E. It will show **BATT %**, press **E** again and Digitech BT is ready in the measuring display.

Start "Haglof BLE Commander", select a Digitech BT device from the Devices list.

Enable **Send Data** and check the **Settings**.

Start Excel or a similar program and data can now be transferred live to the active program in the PC.



STORED DATA

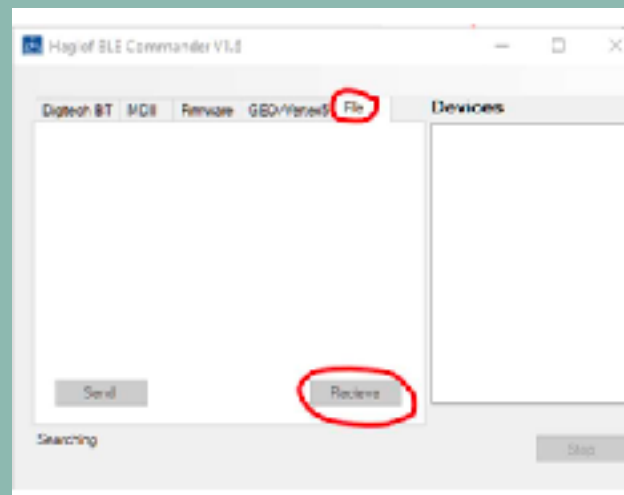
Start "Haglof BLE Commander".

Select a Digitech BT device from the Devices list.

Select **File** and press the Receive button.

In Digitech BT, select menu **SEND** and press Enter to start the file transfer.

When transfer is completed, click on the filename to open the directory where the file is stored.

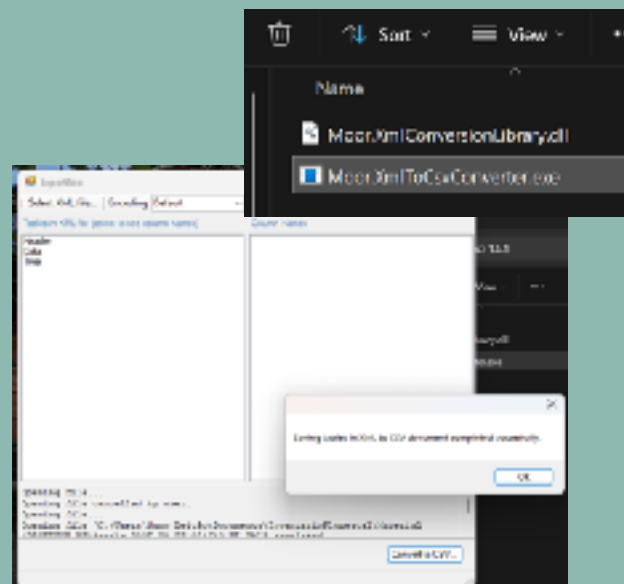


XML TO CSV

The XML default files from Digitech BT can be handled with non-haglof tools.

As for importing to a database or a CSV file with an XML reader application.

Or converting to CSV with a converter application like Moor.XmlToCsvConverter.



SHARE DATA

Share data from "Haglof Link"



The Digitech BT data is sent as an XML file.

Default file format is XML, If a binary file is preferred, select menu **SEND** in Digitech BT before connecting and press 3 times on the E button as the WAIT message appears in display. This will set up a binary format with 16 byte data structure per tree.

Share Data from Tree Inventory

Start Haglof Link  on your mobile device.

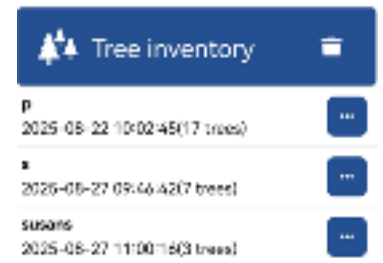
In Haglof Link, select Digitech BT .

Select Tree Inventory .

From the Tree Inventory's Lists, choose the List to share, clicking .

Among the options (Delete, Export, Edit) choose **Export**.

In **Export** we have the following options:



Save - save to the mobile device's files

Upload* - upload directly to **DIGITECH CLOUD** (page 7)

Delete - delete the chosen XML file (<=> stored List)

Share* - share by email, Google Drive, etc.

Send to Device - send by BLUETOOTH® to another device

* with the mobile device connected to the Internet

Note: this same options can be used in Haglof Link, selecting Digitech BT > Files, and clicking in the XML file to share.





DIGITECH CLOUD

upload data to Digitech Cloud account

Haglöf Sweden provides a Cloud service for managing data from Digitech BT, MD II and Haglof Link. This service is called Digitech Cloud and can be found at www.haglof.app.

The service Digitech Cloud can be used for free, but it is also possible to subscribe to the service: with the free service, it is possible to edit data and print standard reports; with the subscription service, all data is processed and stored.

The user can use the Digitech Cloud to generate volume reports, tally reports and convert data to a set of different formats. (Stand Table 1cm, Stand Table 2cm, Stand Table 5cm, Circumference 10cm, Circumference 5cm, Circumference mid 5cm, Class 5cm, Class 2.5/5cm). The reports can then be saved as different file formats as PDF, Excel, Word and more.

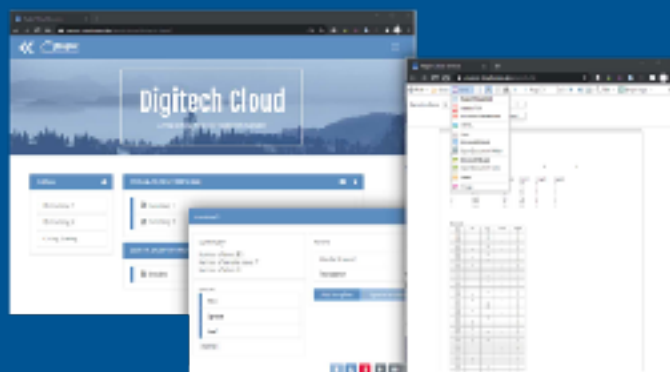
DATA FROM HAGLOF LINK TO DIGITECH CLOUD

With "Haglof Link" data can be directed uploaded to the Haglof Cloud service "Digitech Cloud", for further processing, choosing option **Upload** (page 6).

DATA FROM PC TO DIGITECH CLOUD

In the data Files on PC (page 6), go to the Cloud Service: <https://applications.haglof.app/> and log in to your account. Select the service Digitech Cloud and Click on + (1) to create a new Folder or select a Folder

- Click upload (2)
- In the Upload file (3) dialog click Browse and select the file.
- Before Upload, check mark the options (4) and click Preview (5) to control and edit the data.
- When ready, click Upload (6) and the data will be in the Digitech Cloud.



WORK WITH AN INVENTORY IN DIGITECH CLOUD

Open the inventory by clicking on the name.

- (1) Reports to select from > Select a report and click (3)
- (2) Species. Click to edit species name, Form factor and Form height
- (3) Run a selected report
- (4) Download a CSV file with the data
- (5) Delete the inventory
- (6) Settings for the inventory > Name, Units, Plots or not, Volume function and Area.
- (7) Edit the trees in the inventory
- (8) Close the inventory



DOCUMENTATION

THIS GUIDE

2025. Forest Inventory User's Guide: DIGITECH® BT.

Leitão, N. & Barreiro, S.

FORCHANGE - CEF - ISA - UL

DOCUMENTS

Haglöf Sweden AB (2021). Haglof Link.*

Haglöf Sweden AB (2021). Digitech BT - Quick Guide.*

Haglöf Sweden AB (2020). Digitech® BT - Advanced User's Guide.*

RESOURCES

Digitech Cloud: www.haglof.app

Xml To Csv Converter tool: **Moor.XmlToCsvConverter.exe** <https://www.softpedia.com/get/Programming/Other-Programming-Files/XML-To-CSV.shtml>

Haglof BLE Commander*: **Haglof BLE Commander.exe**

Haglof Link mobile App:



*available with DIGITECH BT's pen drive



FIELD EXAMPLE

MEASURING 1 PLOT



1 Start Digitech BT and select **LINE** pressing E. It will show **BATT %**, press E again and Digitech BT is ready in the measuring display.

8 Measure tree diameter and transfer data to Haglof Link with a  E button short press. Digitech BT will acknowledge a data transfer with a bip signal.

11 Repeat the measurement for the remaining trees.

13 When all the trees in the Plot are measured, keep the E button pressed and change the SUB MENU in the display by sliding the handle until you find **END** and release the E button. Execute **END** with a short press on THE E button and go to THE Up Level menu.

14 In the Main Menu, keep the E button pressed and change the option to **OFF**, to turn off the Digitech BT.



2 Start “Haglof Link”  on your mobile device.

3 In “Haglof Link”, select Digitech BT .

4 Select Tree Inventory .

5 Select an existing list or add a new list **Add List** .

6 Select **Connect to Device** and “DIGITECH_XX” when it appears in the search list.

7 When **Connected**, the app is ready to receive data.

9 “Haglof link” receives data with diameter value (and species code).

10 If the tree’s Height is measured add the value to the field In the mobile app. Wait for new Digitech BT new data.

12 For each Digitech BT data sent, the App screen will show a new Tree and it’s diameter value.

15 Click **Back** to return to Tree Inventory Lists.

16 Click  on the list to share when the mobile device is on-line and use Export > Share, to send the XML file by email.

17 End “Haglof Link” App.

