

Hive Heart



Congratulation on your purchase of The Hive Heart

The Hive Heart will monitor and report your hive environment, and is a great help to any any beekeeper by taking some of the guesswork out of managing your honeybee colony. It is compatible with all types of hive and very easy to use.

Features:

Internal hive humidity

Internal hive temperature

Bee colony sound analysis

Loss of the queen alert

Swarming forecasts

Excess internal humidity warning

Data collected every 10 minutes

Internal device internal memory for 2 months

Cloud archive for 5 years of data

Communication by smartphone via Bluetooth

Communication by external GSM module

Free mobile app for both iPhone and Android

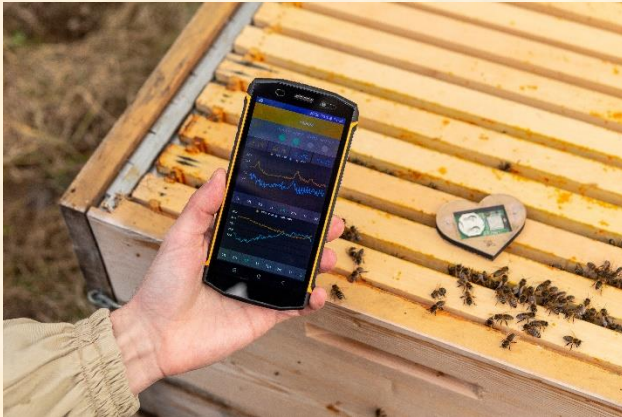
Open air communication distance 100m, after insertion into the hive 5m to 50m

Data export to Excel

Battery included

Battery life approx. 1 year

The Hive Heart



INSTALLATION IN THE HIVE


- The battery for hive heart must be a CR2032 3V. The battery cannot be recharged, so replace it when it has discharged. The battery should last about 1 year.
- Close the hive heart cover and place it on the frames with the electronics facing down on the frames and the hive heart number facing upwards.
- NEVER use the hive heart while treating bees with acids or other caustic substances, this will damage the electronics. Remove the hive heart before treating with oxalic or formic acid treatments. Wait at least 7 days before replacing in the hive.



INSTALL MOBILE APPS

- If you don't have the GSM gateway, you will have to download TWO apps to your mobile device.
- Download the BeeHive Monitoring apps on your mobile device, either from Google Play if you have a phone or tablet with Android or from AppStore if you have an iPhone or a tablet from Apple.

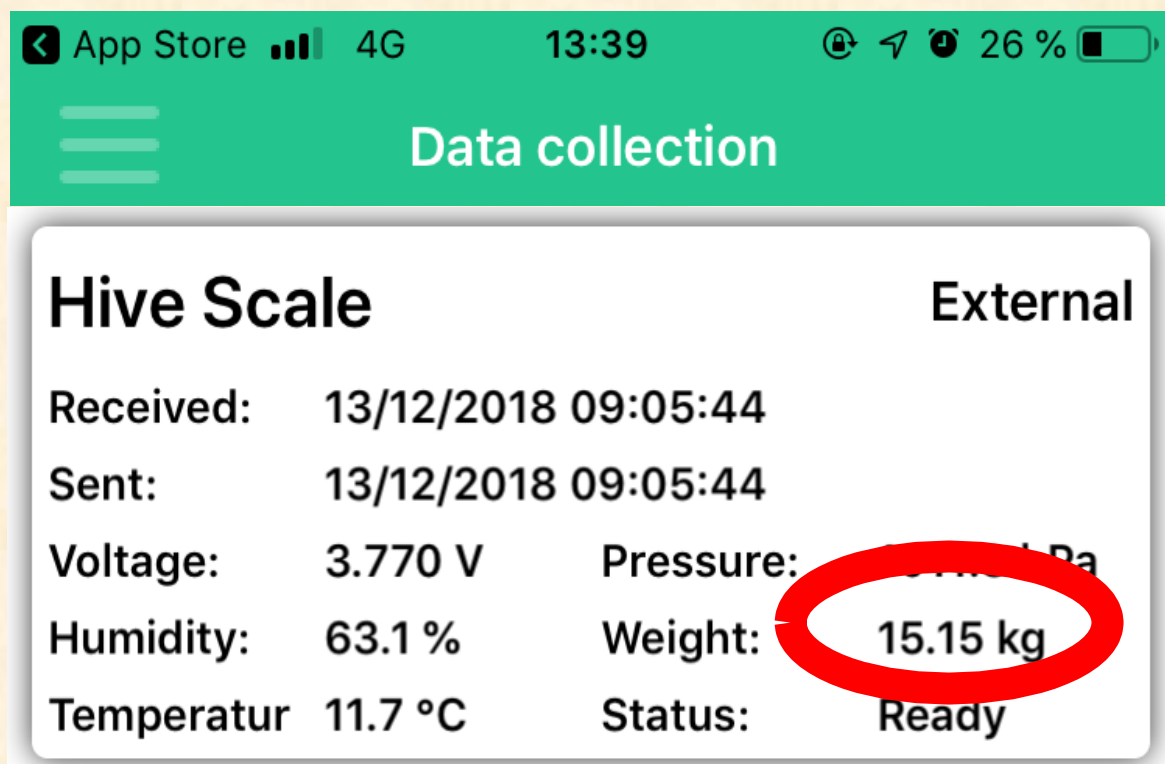
The first app is called “**Bee Hive Monitoring**” with a yellow icon 

The second app is called “**Bee Hive Monitoring Gateway**” with a green icon 

- Turn on Bluetooth on your mobile device (some phones need to turn on GPS as well).
- Place your mobile device within a couple of metres of the hive to initially locate the hive heart.
- Turn on the green app and it will start searching for your hive heart. Wait until the app finds the device and uploads the data to the cloud server. If it is not successful, restart your phone, and run the app again.
- If the device is found the STATUS will change to Ready .
- Now, you can open the yellow app and scan your QR code, which is included in your package (see page 13). You only need to scan your QR code once when initialising the app. If you uninstall the app from your device you will need to re-scan your QR code after you re-install the app.

Mobile App

Bee Hive Monitoring Gateway



You use this app only when you don't have a GSM Gateway. This app acts as a GSM Gateway and will download data from the hive heart ready for you to see your data in the Bee Hive Monitoring app (yellow).

Bee Hive Monitoring Gateway works in automatic mode.

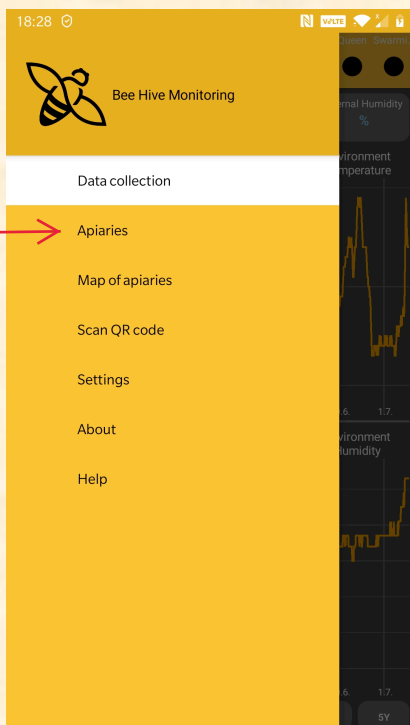
Upon starting the app, wait a few minutes for all devices to change to "Ready." If this doesn't happen, move closer to the hive containing the hive heart and swipe down to refresh.

Mobile App

Bee Hive Monitoring

- After installation scan your QR code (see page 13).
- Graphs can be viewed in different ranges by tapping on desired range below the bottom graph line.
- The hive heart should be within 200m of free space under ideal conditions. If there is an obstacle between the devices, the range of communication can be significantly shortened from several dozen meters to several meters.
- The Gateway app (green) will send data to the cloud server once per hour or according to the settings in your Bee Hive Monitoring app (yellow). You must have the Gateway app open on your mobile device for it to upload data to the server. The hive heart will read data within the hive every 10 minutes.
- Navigation through the app is done by swiping screens left or right.

Open menu
and
select
Apiaries



← Add your apiary

Bee Hive Monitoring App - Screenshots

You can upload a picture of your apiary

Name your Apiary

Enter the co-ordinates of your Apiary OR Select from the interactive map

Add and manage hives in the Apiary

You can upload a picture of your hive

Hive name

Hive type e.g National, Langstroth etc.

If you have marked queens, you can enter details here

Create and record hive inspections

Record honey harvested from hive

Record tasks or to do's

Bee Hive Monitoring App - Screenshots

You can upload a picture of your inspection

19:34

📶🔋📶🔋📶🔋

📶🔋📶🔋📶🔋

←Add Inspection✓

Load image

Save

Date

02/07/2021

☐

Queen

☐

Larva

☐

Eggs

☐

Brood

Colony Condition

Good

Temperament

Neutral

Queen Cels

Frame Numbers

HoneyBroodOpen CombFoundation

You can upload a picture of your honey harvest

19:39

📶🔋📶🔋📶🔋

📶🔋📶🔋📶🔋

←Add Honey Harvest✓

Load image

Save

Weight

Date

02/07/2021

Notes

19:43

📶🔋📶🔋📶🔋

📶🔋📶🔋📶🔋

←Add To Do✓

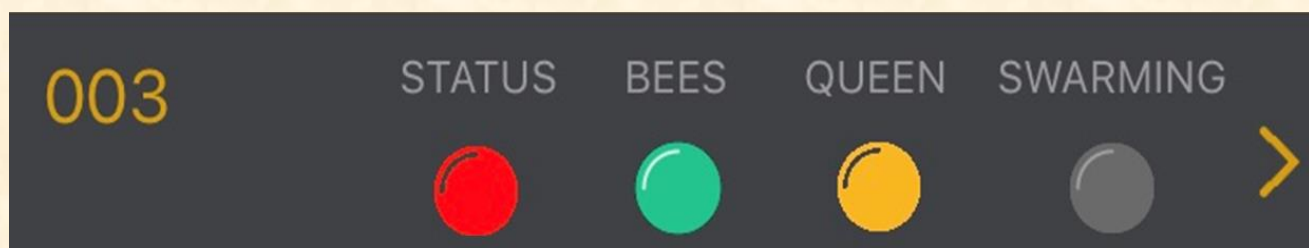
Date

02/07/2021

Notes

Status and Reporting

Red:	Major issue requires immediate action
Green:	Everything is OK
Yellow:	Small issue - investigate
Grey:	Insufficient data



STATUS:

- Indicates the overall state of the colony and the hive heart technology. If anything changes the status buttons change colour. e.g. problem with the colony, swarming preparations, low battery etc. You can find details on the 4th screen of the mobile app in the yellow information array.

BEES:

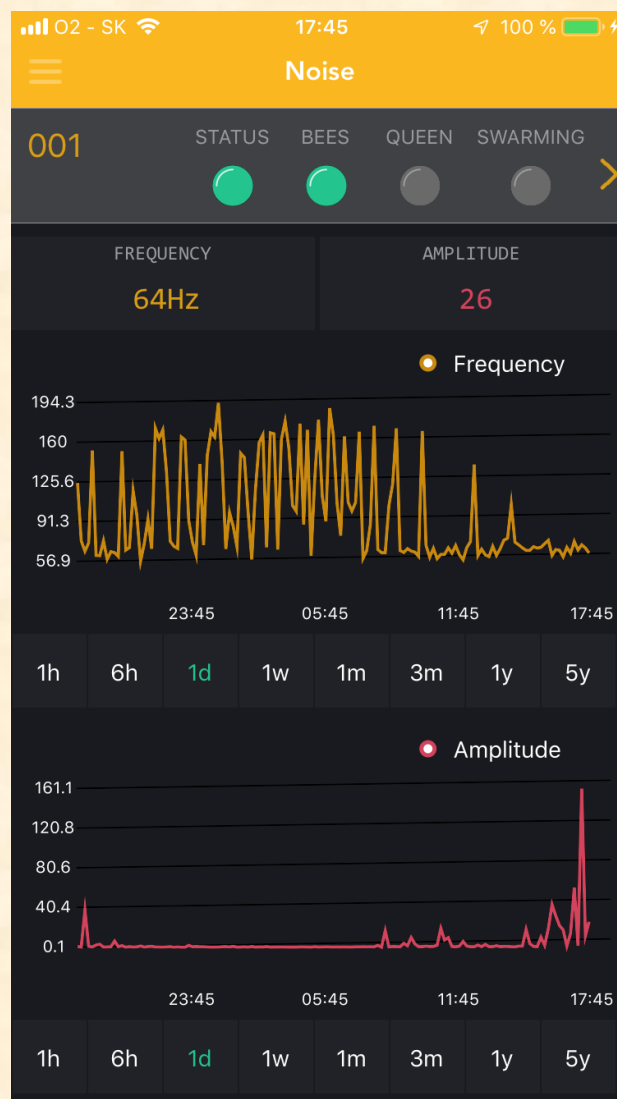
- Indicates low or high, unusual or critical values of internal temperature and humidity. Details on the 4th screen of mobile app in the yellow information array.

QUEEN:

- Based on analysis of sound frequencies within the hive can indicate problems with the queen. Details on the 4th screen of mobile app in the yellow information array.

SWARMING:

- Based on sound frequency analysis, this indicates different stages of swarming preparation. Red indicates there is a high risk of an imminent swarm. Yellow means bees are making preparations to swarm. Details on the 4th screen of mobile app in the yellow information array.

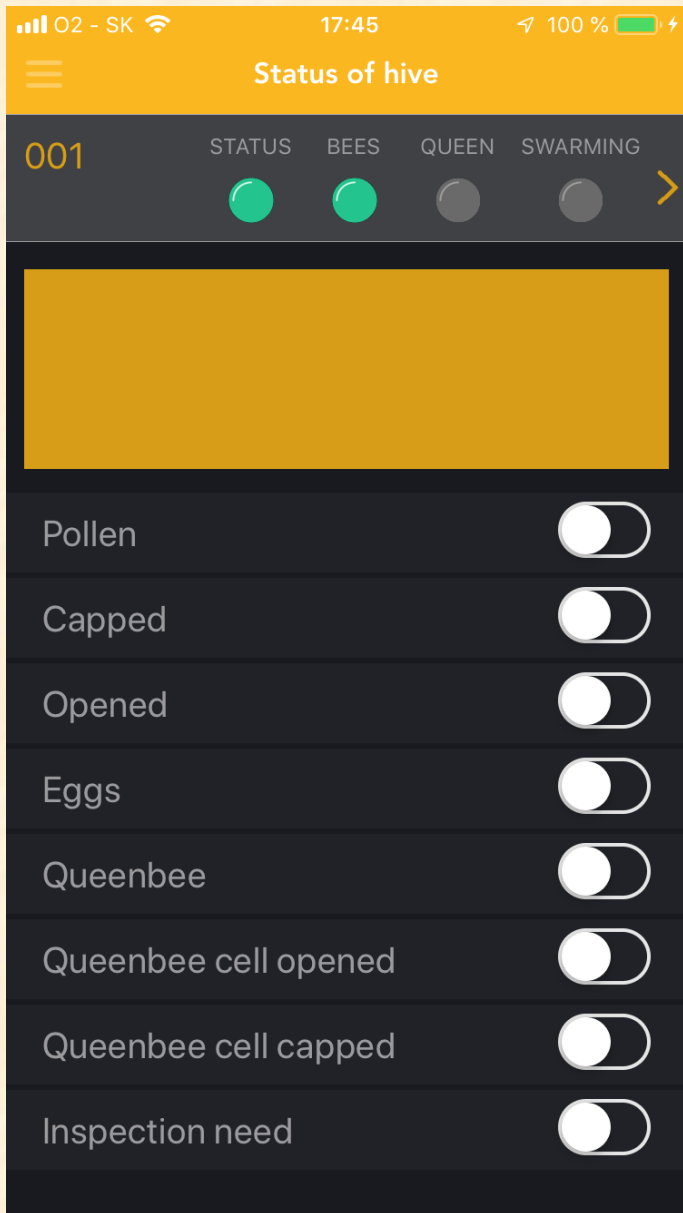


FREQUENCY:

Bees communicate by buzzing, mainly by changing the frequency. From this change, we can identify a missing queen (bees cry)). Also, we can determine when they are ready for swarming. The standard frequency of a bee colony is 200 Hz. If they are ready for swarming they change to 240Hz. In swarming mood it is around 270Hz and by 300Hz you only have a short period until they swarm (depending on the weather).

AMPLITUDE:

The overall noise (loudness) of the colony. From this number, we can monitor the activity of colony and it's excitement from different events (healing, nectar harvesting or intruder attack i.e Wasps, hornets etc...). The range starts at singles in the winter through tenths up to hundreds with a strong bee colony in the summer.

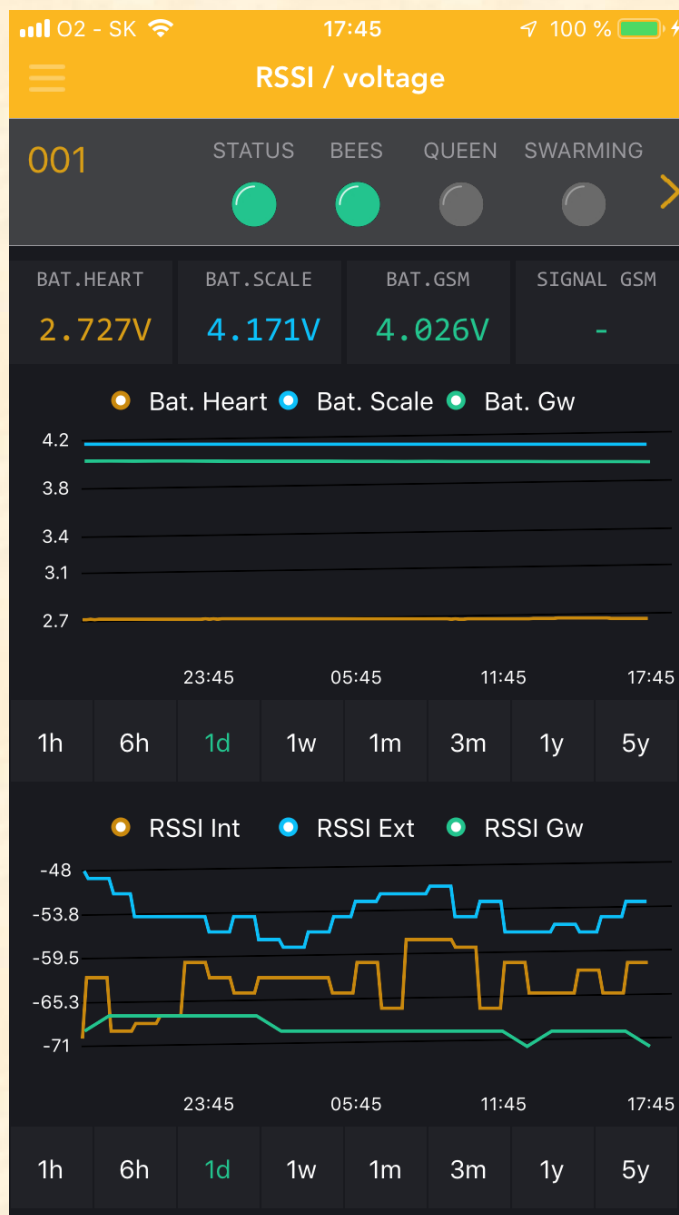


YELLOW MESSAGE ARRAY:

In this field, you will see text information, explaining red and yellow status button alerts and informing you about other anomalies.

SWITCHES:

You can save your hive observations by switching these switches. For example: Do the bees have pollen frames, do they have capped brood, open brood, fresh eggs, is the hive queen right, are queen cells present and the status of any present queen cells.



BATTERY STATUS:

The hive heart battery voltage range is from 2.5V to 3.5V. The battery lasts for approx. one year and then needs changing as it is not possible to recharge. Please replace with battery CR 2032.

SIGNAL STRENGTH:

The device signal should be in the range from 0 to -90. The closer to 0 the stronger the signal is from the hive heart.

Using the web application

The URL for your web application is:

The web application replicates the data that can be seen in the Bee Hive Monitoring App, however, there are some operations that can only be achieved by using the web application.

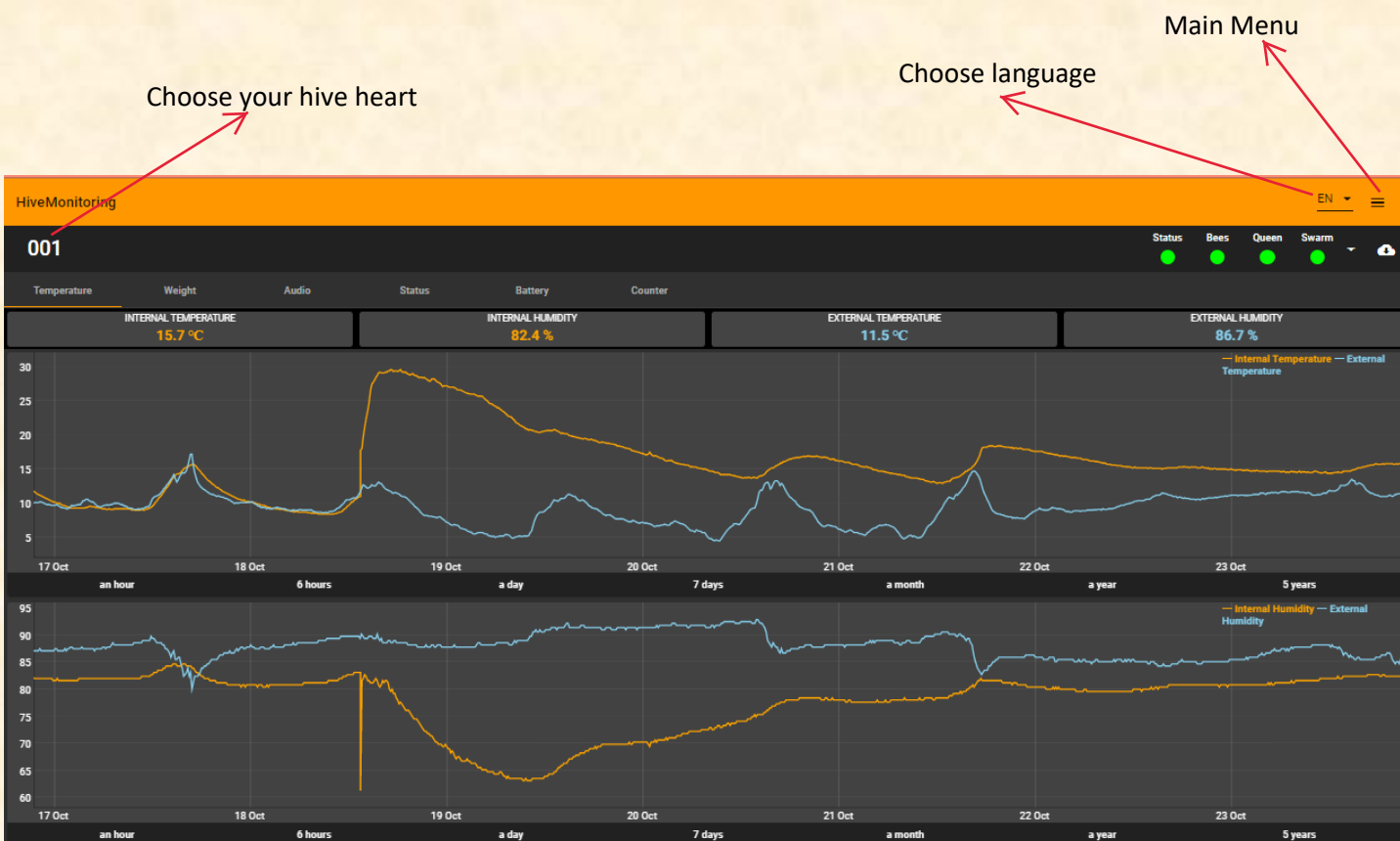
Your hive heart will have arrived with a number assigned to it. This number shows in both the mobile app and the web application. If you wish to rename your hive heart to match the name of the hive that it is located in, you can do so by accessing the main menu and selecting Hive Settings.

You can also enter the weight of your empty hive and alter the data upload frequency.

If you misplace your QR code, you can regenerate it by selecting QR Code from the main menu.

Data from the Hive Heart can be exported to Excel spreadsheets for further analysis. Select Export Excel from the main menu.

Graphs of your data can be embedded into your website pages. Select Graph Links from the main menu, then Add graph link, and select the data you wish to display. The URL will be generated for you to include in your embedding code.

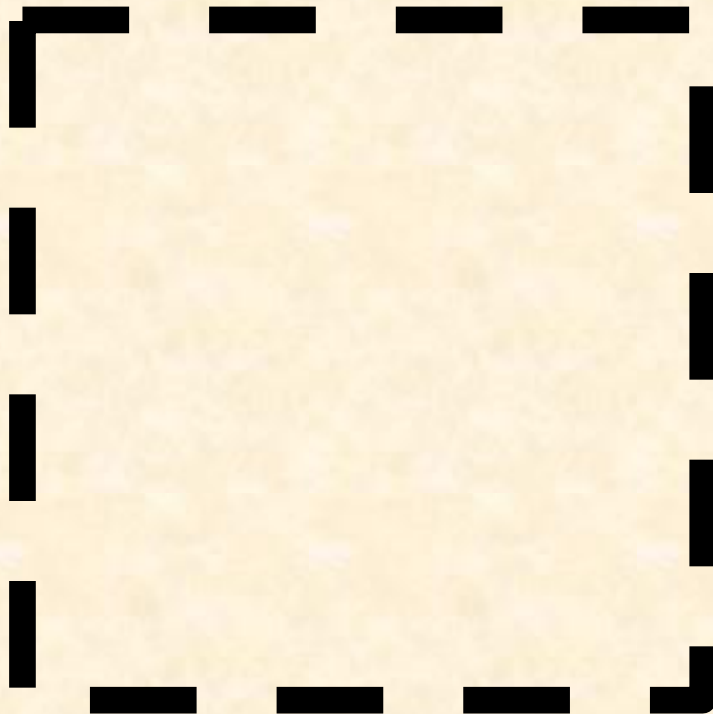


Navigating the screen in the web application

Press the Shift button on the keyboard and the left mouse button in the graph area, you can move the graph to the left and right.

Left-click on a graph to see more details about that period.

Your QR code



Notes

For all enquiries regarding your purchase, please contact UK

Bees Email: support@ukbees.uk

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