Before installation:

- Call owners to inform them about the visit
- Close Nestbox the night before installing with a sponge

Installation of the device:

Nestbox on the outside of the building:

1. Remove old perch and attach Smart nestbox perch to Nestbox. Make sure to slide perch as close as possible to nestbox without touching it
2. Attach hardware box on bottom of the nestbox, make sure to protect it as good as possible from weather
3. Mount hardware box such as the WLAN button faces the wall, to protect it against rain.
4. Attach cables as good as possible but **make sure there is no tension on them, this would falsify the weight measure**
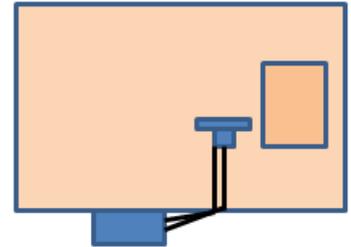
Nestbox on the inside of the building:

1. Remove old perch and attach new. If attachment is not possible from outside remove nestbox and if not already existent make a quadratic hole into the wall with the size of around 3x3 cm where the perch will be placed. This by making several holes with the big drill until the hole is big enough for the saw. Insert perch from outside by passing it through entrance hole and screw it to the wall from inside. Pass cables trough the same hole.

Make sure it doesn't touch here!!
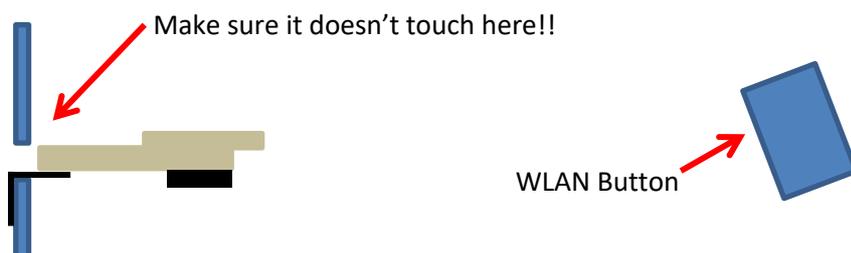
WLAN Button

2. Attach hardware box on the inside of the barn. Make sure it is protected from weather influences and mount it a slight angle such that the WLAN button points slightly downwards.
3. Start calibrating of the system before reattaching the nestbox, this way you can place the test weights more easily on the scale

Calibration procedure:

1. Open the Nestbox Control Center – HTML file in a browser, enable the Wi-Fi on the Nestbox by pressing the external button (blue light should turn on). Then connect to the newly appearing Wi-Fi network (called Nextbox_"ID").
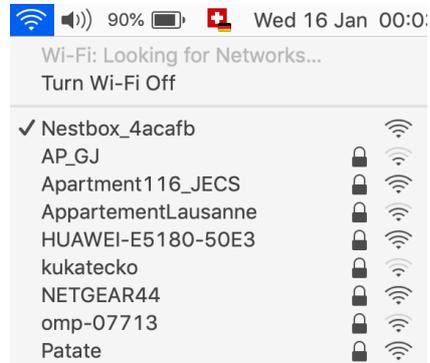

Nestbox Control Center

Please connect to the Nestbox Wi-Fi.

Nestbox ID: *?*

Current time on your Computer: *15/01/2019, 23:59:12*

2. Wait until it says "Device online!" and the ID is being displayed. If this is the first time you set up the device, write down this ID for future reference.

2a. Copy ID for future reference	**Device online!**
	Nestbox ID: *ce50e34acafb*
2b. Set the time in the Nestbox	**Current time on your Computer:** *16/01/2019, 00:06:57*
	Current time on the Nestbox: *16/01/2019, 00:06:08*
2c. If desired, change the daily shut-down and wake-up times by using the sliders **and** confirming with the set button.	

3. Quickly verify that the battery is in good condition. A fully charged battery should have at least 5.2 V. A nearly empty battery has 3.6 V.

4. [Optional: RFID reader test]: Place a test weight onto the perch. A green lamp should start to flash every 1 – 2 seconds. Now hold a RFID tag above the antenna pad. If the green lamp stops flashing, the tag got successfully detected.

5. Enter calibration mode:

Weight measurement

measured ADC sensor value: *316914*	measured ADC offset value: *?*
ADC calculated slope: 0	ADC calculated offset: 0

[Get new weight measurement.] [Get last offset value.]

Estimated weight: *Infinity*

[Start Calibration mode] [Stop Calibration mode]

Calibration mode STARTED

ID	ADC sensor value	Weight (g)	Insert from above
N°1	?	110	Insert ADC value
N°2	?	219	Insert ADC value
N°3	?	328	Insert ADC value
N°4	?	438	Insert ADC value
N°5	?	547	Insert ADC value

[Calculate]

	Results
Slope	
Intercept	
Correlation	

5b. Place a test weight on the perch and fetch a new measurement.

5a. Click the start-button and ensure that the calibration mode was started

5c. In the corresponding row, click "Insert" in order to copy the latest measurement to this row. Repeat with at least two test weights.

5d. Click "Calculate" to get the linear regression values. Note them down for future reference.

6. The estimated weight is now calculated according to this regression. You may place some more test weights to confirm the correctness (or make a sanity check of the numbers (i.e. aim to obtain a correlation > 0.999)

7. You may now leave the calibration mode and completely turn of the Wi-Fi mode by deactivating the external button (blue lamp should turn off)