SPIERDIKTEMETER WIFI
EPAISSEUR MUSCLE WIFI

AGRO LOGIC

FARMING FORWARD

INTRODUCTION

SF-1 Wireless Scanner is the new generation instruments for back fat and loin depth scanning with the outstanding feature of wireless.

Different from traditional veterinary ultrasound scanner with a cable connecting from probe to main unit, no cable appears at the end of the probe of SF-1 Scanners.

The probe of a SF-1 Scanner is highly integrated with ultrasound image processing, power management and a wireless signal provider to be connected by the main unit.

The main units different with traditional devices are now changed to be any tablet. The probe acts as a Wi-Fi Access Point and can be connected by iPad. With the probe be connected through Wi-Fi and the App's running, enjoy your days of working without the trouble making cables.

This manual is intended to provide a through overview of the SF-1 Scanner and should be carefully read before starting operating the device.

Thank you for your trust in us to provide for your back fat and loin depth scanner needs.

CHARACTERISTICS

Scanning: Lineal
Probe: 5MHz
Depth: 45-120 mm
Display mode: Mode B
Grey levels: 256 levels
Battery working time: 3 hours
Size: 155mm x 60mm x 20mm
Weight: 300g

2. GETTING STARTED

FOR YOUR PROTECTION please read these safety instructions completely before applying power to, or operating the system.

2.1 UNPACKING

The SF-1 Scanner is carefully packed to prevent damage during shipment. Before unpacking, please note any visible damage to the outside of the shipping containers.

Items should be checked in order to ensure that all ordered items have been received. The following table lists the items which should be received with each particular system.

| ITEMS	INCLUDED
SF-1 wifi Ultrasound probe	✓
USB Cable for charging	✓
Wrist strap	✓
User manual	✓
Waterproof cover	✓
Wireless charger	✓

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Each item should be examined for any noticeable defects or damage that may have occurred during shipment although it is packed carefully. If any defect or damage exists, please contact to your local representative immediately to report the problem.

2.2 INSTALLING APP

If the Smartvus HD App is not installed in your tablet, open the App Store or google Play and search "Smartvus HD", when the App comes, it is free to install the App.

2.3 STARTING PROBE

The Wireless Connection Indicator and the Battery Capacity Indicator on the probe may be invisible before the probe is turned on.

3: Button for power ON / OFF and Freeze / Live

2: Battery capacity indicator

1: Wireless connection indicator
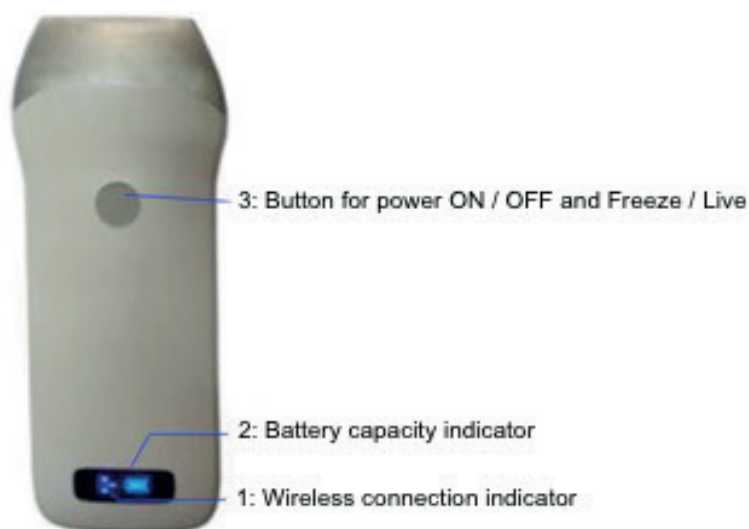
Press the button to turn on the probe. The Battery Capacity Indicator will be light to indicate the capacity of the battery. The four grids of the indicator imply the battery capacity.

Seconds after the probe turned on, the Wireless Connection Indicator will be light and blinking to notice that the probe is ready for a wireless connection from the iPad.

The probe can be turned off by hold down the button for seconds. When the probe is off, the indicators will be turned off.

2.4 WIRELESS CONNECTION

When the probe is waiting for a wireless connection as described in previously, launch the Settings of the tablet, turn on the Wi-Fi (if not on), find the SSID of the probe. The SSID is like: "SF-1 GMBFLA001", the suffix after "SF-1" is a code generated from Serial Number. Connect to the SSID with the password same as the Serial Number (in lower case). The Serial Number is in the form like "WFPBFLA001" with the prefix of "WFP". It can be found on the surface of the probe. **The letters of the password must be written in lowercase.**

After Wi-Fi is connected, launch the WirelessScan App, after the connection from the app to the probe is confirmed, the Wireless Connection Indicator on the probe will be light with no blinking.

Every connection steps are done. The operations of using the system to finish ultrasonography task will be described in the next section.

3. APP OPERATIONS

3.1 SCANNING SCREEN

After the probe is connected, launch the App, the Main Screen will show similar. (No image is visible when the App is firstly launched).
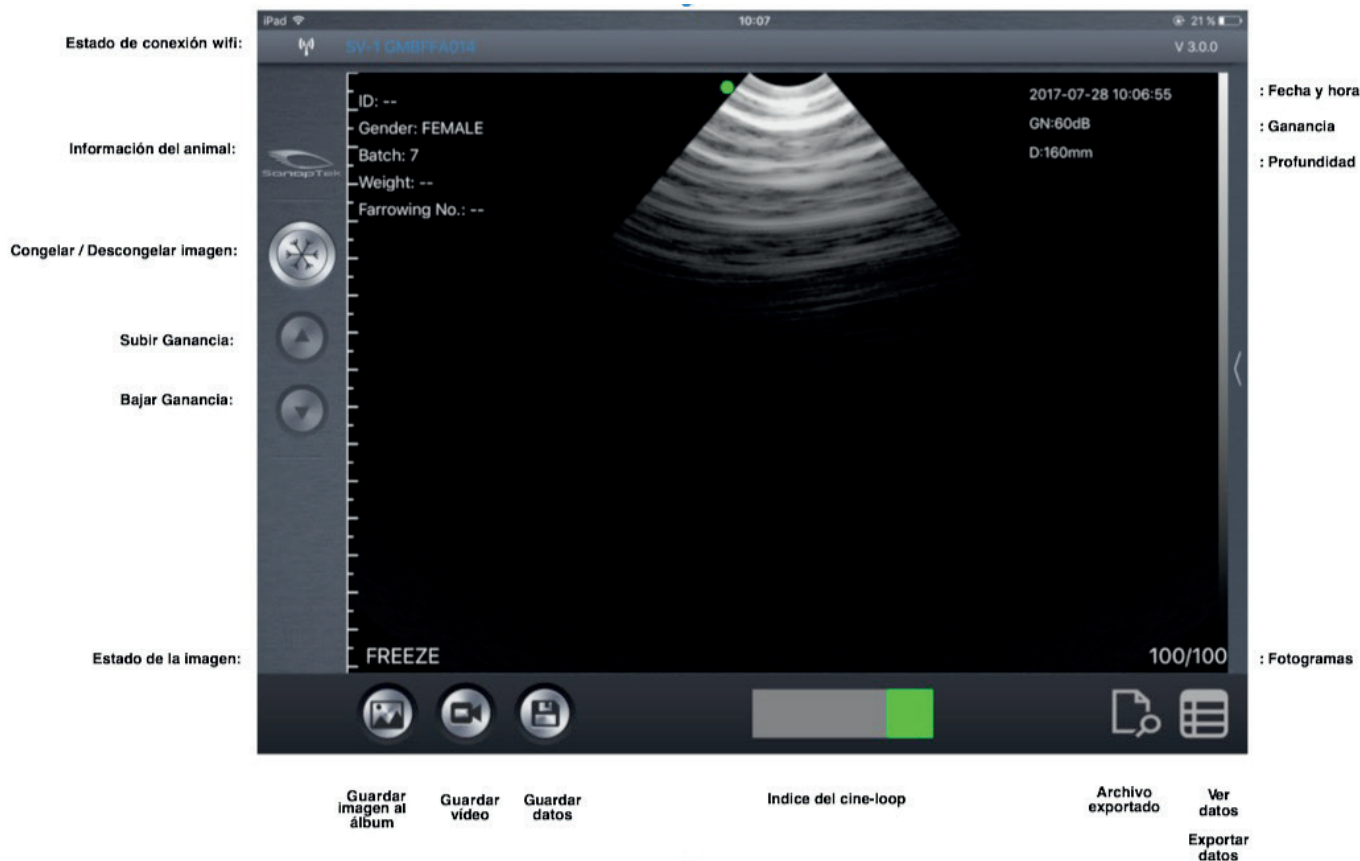
The Wireless Connection Status indicates the SSID of the Wi-Fi of the connected probe.

Press the Run/Freeze Button to run and Freeze the probe. This button has the same function as the button on the probe in running or freezing the image. When running, Gain buttons can be up/down to adjust the gain of the image.

When the Image come to shown on the Image Area, the Imaging Date & Time, the Depth of Image and the Gain will be shown together with the ultrasound image.

The depth of scanning or Depth (D) can be adjusted by sliding your finger up or down in the middle of the screen. The value, which ranges between 45 and 120 mm, is shown below the Gain.

In the lower left part of the screen you can read "LIVE" when the probe is working, or "FREEZE" will be displayed when the image is frozen.
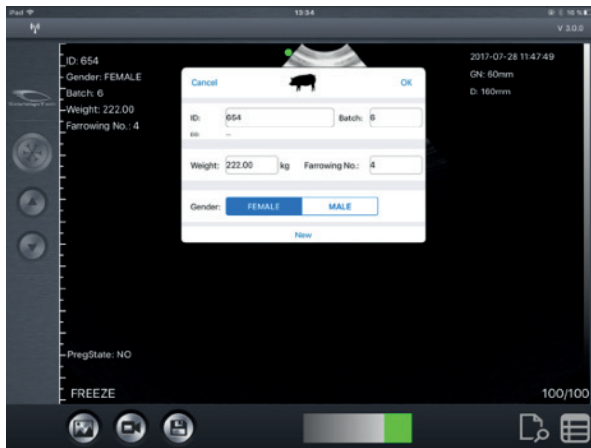
In the lower part you can see a green bar that corresponds to the cine-loop and a number, on the right, that indicates the current recorded image (100/100). The user can move the slider with his finger to select the desired image.

The Wireless Connection Status indicates the SSID of the Wi-Fi of the connected probe. Key in animal info in part by clicking the data part:

3.2 SAVE IMAGES

When image is showing in image area, Save Image Button can be pressed to save the image to the album of the tablet.

The saved images can be exported with same method as photos exporting using iTunes or other equivalent methods.

When the image is FREEZE Label shows the count of image in the loop and button shows the index of current image of the loop. Users can swipe left/right in image area to select the image in the loop. Every image of frames ace be stored.

3.3 SAVE VIDEO

When the image is frozen, press the "Save video" button to save a sequence of about 10 seconds on the device.

3.4 IMAGE MEASUREMENT

When the image is frozen, double-click the image area to obtain a measurement as shown in the image on the left. Three horizontal lines and one vertical line appear on the screen automatically.
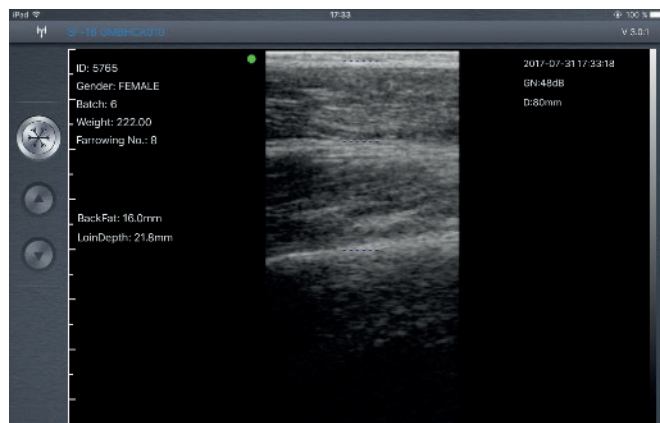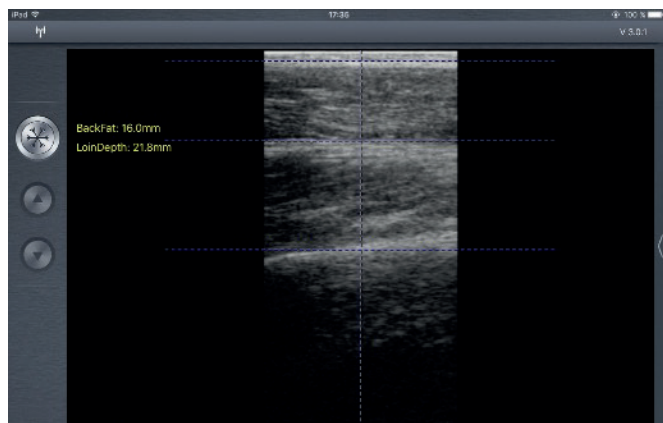
The first horizontal line indicates the setting of the applicator value that can be changed in the settings menu. The second horizontal line indicates the line of back fat, while the third line indicates the depth of the loin. The value of the two measurements appears on the left side.

Note: If the software identifies another echo by mistake, or the user judges that the position of the line is not correct, the edit can be adjusted vertically up or down with the finger.

The vertical line is used to assist the user in understanding and adjusting the image.

When confirming the measurement, double click on the image area to see the reading as indicated by the image on the right. At this time, if we want, we can store the measurement (see section 3.5 Data Storage).

If we want to measure only the back fat, you can select the depth to 45 mm on the screen.

3.5 DATA STORE

Press the "Save Data" button to save the measurement data to the application memory. This data can be displayed by pressing the "View Data" button, and can be exported by pressing the "ExportFile" button to a CSV file (to be able to open, for example, with Excel or Numbers). The data is deleted in "RemoveAll".

Data can be re-edited or deleted by swiping the desired data to the left (within the "View Data" window).
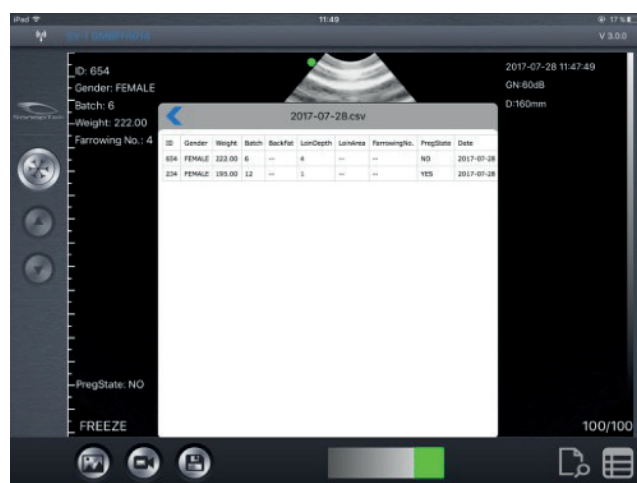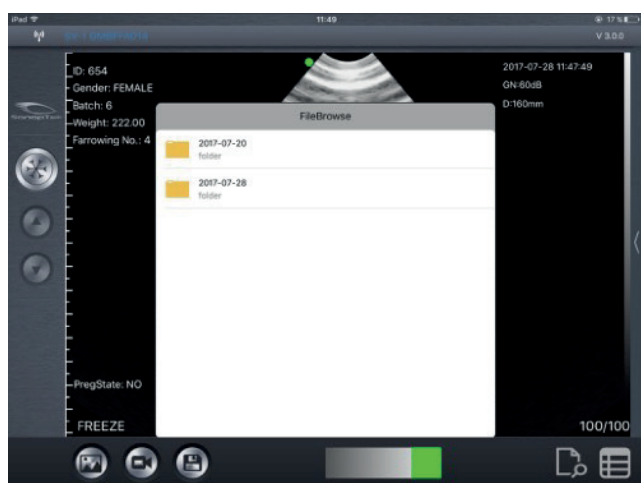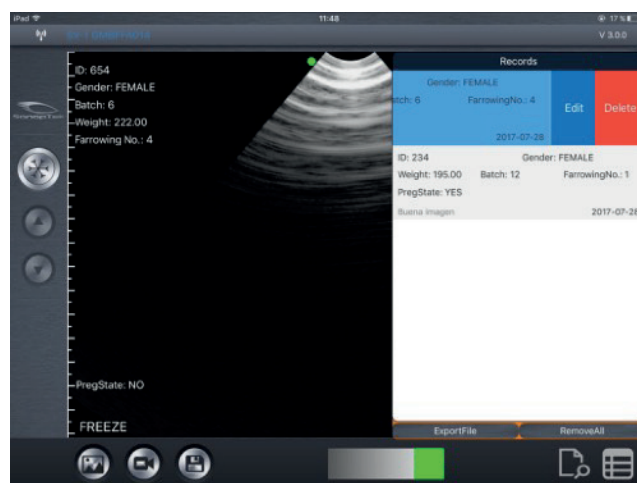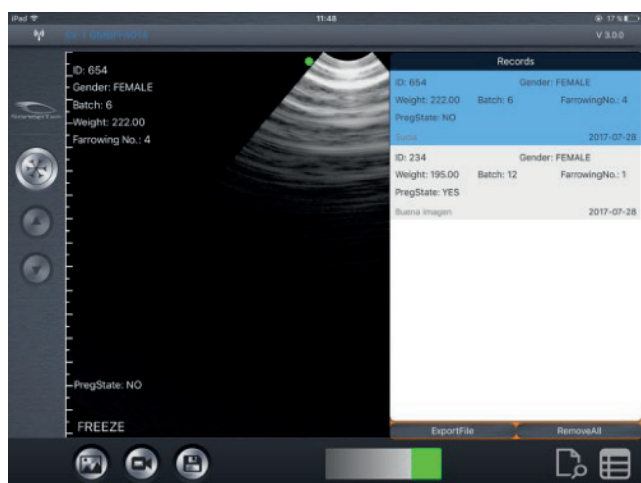
Important note:

ID is required when saving data.
***500 IDs can be saved. If they are saved more, the first ones will be written.***

3.6 EXPORT FILES

1. Export files from the tablet.

After pressing the "Save Data" button to save them in the records, click "View data" and then "ExportFile" to export to a "CSV" file. A pop-up window will appear to enter the name of the CSV file and it will be included in a folder with the date of the current day. Several files can be saved on the same day:
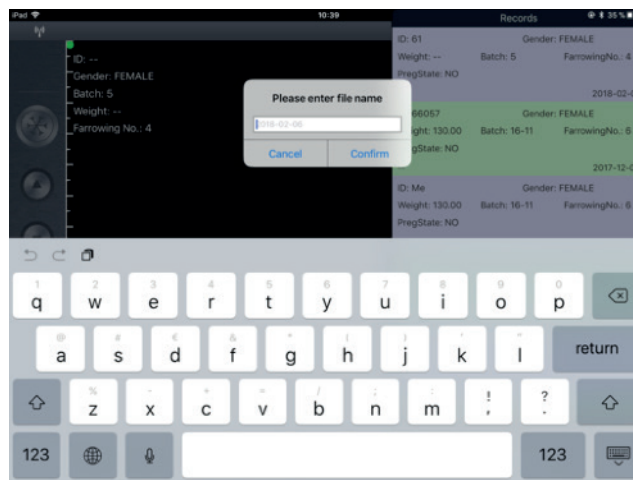
If we open the CSV file, we have the option to open and share the file in other app like Excel or Numbers.
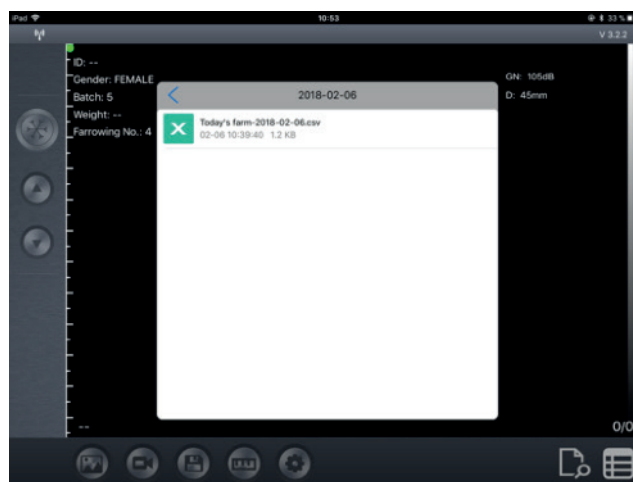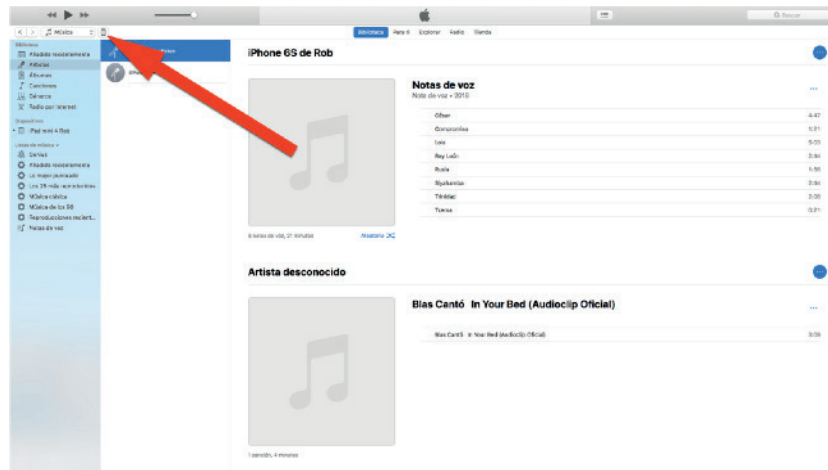
While we had the saved data, these can be edited to modify the diagnosis, add comments or delete the record.
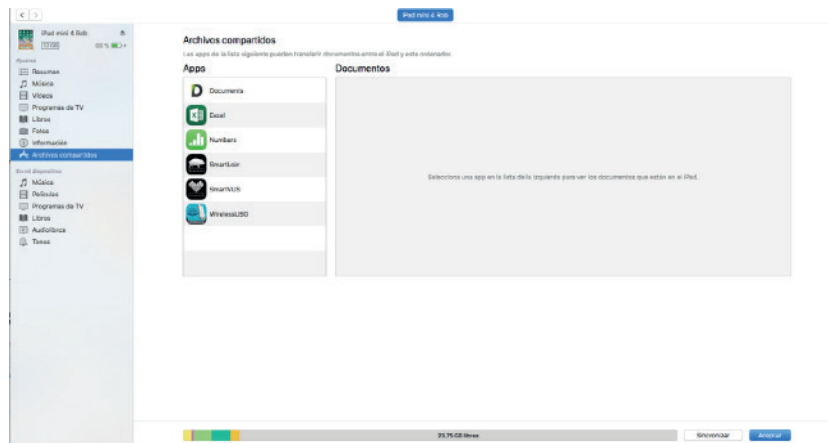
**2. Export files to the computer through iTunes with iPad.**

Connect the iPad to the computer, open iTunes, click the iPad symbol to connect via iTunes.

Click on Applications to show Smartvus HD App on the right.

Click Smartvus HD App, the exported CSV file is listed on the right in Smartvus HD documents. Choose the file you want to export to the computer and click "save to ..." to export it.
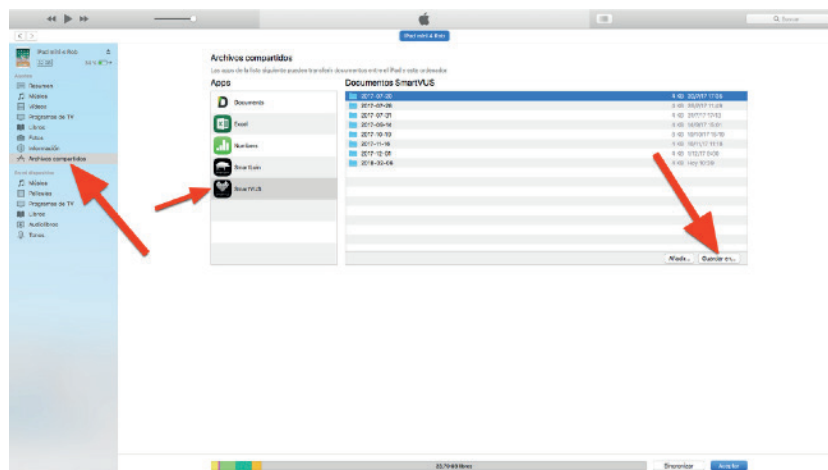
After performing the export process, review the data on the computer.

Note: The exported file only contains data, not images.

3.7 SETTINGS

Adjust the value of the applicator before starting the measurement. It can be changed from 0.5-10 mm depending on the animal in which it is used. The recommended value is 2 mm. This value will be discounted within the software and the actual value of the measurement will be displayed.
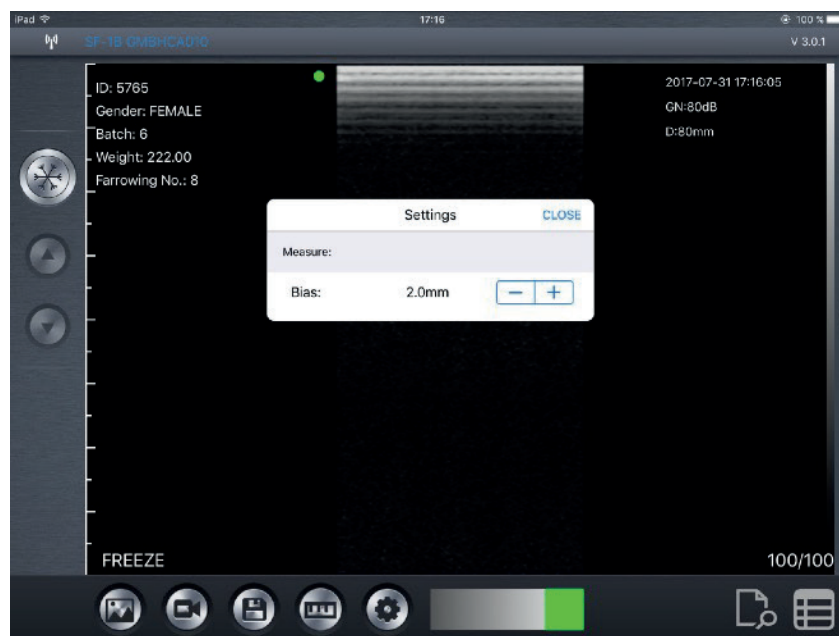
4. MAINTENANCE

4.1 PROBE CHARGING

When the battery runs out we will need to recharge it. It is done with a wireless charger. The charging platform, which is included as standard, is connected to your USB cable and the charger of the mobile device.

When the charger is connected, via the USB cable, a green LED lights up on the platform. When the probe is placed over it and charging starts, the led turns blue.

If it flashes green to blue constantly, the charging base does not work properly. It is recommended to use a 2A charger and the original cable of the wireless charging dock.

When the battery is being charged the indicator levels will be blinking until full charge occurs. Then the four levels will be visible and not blinking. Battery charging time can last up to 5 hours.

4.2 TABLET RESISTANCE

To prevent the tablet from getting dirty with dust and that can be moistened or wet, a waterproof cover is included. It is submersible and resistant to dust.

As a particular recommendation, we suggest the purchase of the LIFEPROOF © case for iPad mini or Griffin case for Galaxy Tab A which, in addition, to being resistant to withstands 1.2 m drops.

4.3 CLEANING

Periodic cleaning of the probe is required. We can use a damp cloth or paper. The probe has a level of protection against water and dust of IPX5, so, it resists the entry of dust and light jets of water. NOT SUBMERSIBLE.

4.4 STORAGE

During the storage of the probe it is strongly recommended that the **temperature is not lower than 15 °C**. In the event that the temperature of the probe or iPad drops, we should warm them before using them.

Another recommendation is regarding battery charge: If the probe and iPad are not going to be used during a long season, it is recommended to store them with **full charge.**

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EC declaration of conformity

TECNOVET, S.L.
Ronda de la Font Grossa, 22
08540-Centelles, Barcelona (Spain)

We declare under our responsibility, that the product mentioned below complies with the requirements of the following Directive.

SF-1 Wifi ultrasound probe for reproductive diagnostic

It is in accordance with:

Article 3.1b of Radio Equipment Directive **2014/53/EU**

having been submitted to the following standards,

Product-family and generic standards applied:

ETSI EN 301 489-17 V3.1.1, as modules of communication
EN 61000-6-2:2005 and **EN 61000-6-3:2007 + A1:2011** as combined equipment

$C\epsilon$

Centelles, January 13th of 2018