

Provetscan CR

Convex rectal reproductive diagnostic
for cattle and horses



Manual User

Introduction

The CR wireless probes are cutting-edge ultrasound instruments for reproductive diagnosis.

Unlike traditional veterinarian ultrasounds with a cable connected to the probe, the CR is wireless.

The CR probe has a built-in ultrasound image processor, power source and wireless signal module to connect to the main unit.

Now, the main unit is replaced by a tablet. The probe acts as a 2,4 / 5 GHz WiFi access point and shows the image through the VetUS application.

The purpose of this manual is to provide a general overview. Read it carefully before using the device.

1. Features

Screen: iPad series

Scan: Linear

Probe: 3.2 / 5 MHz transducer

Depth: 80-240 mm

Display Mode: B Mode, BM mode

Grey scale: 256 levels

Battery life: 6 hours of continuous work, or 14 hours on stand-by.

Size of main unit: 180mm x 63mm

Examination wire length: 1.8 m.

Weight: 400 g

2. Start

For your protection, please read these safety instructions before starting up the probe.

2.1 Unpackaging

The CR probe is carefully packaged to avoid damage during transport. Before opening the case, look for any visible damage on the outside that may have occurred during transport.

Items must be verified to ensure that they were all received. The table below shows the items that must be included:

Items	Included
CR Ultrasound probe	✓
USB cable for charging	✓
Transport suitcase	✓
Wireless charger	✓

Each item must be examined to report defects or damage that may have occurred during shipping, despite careful packaging. If this occurs, please immediately contact your distributor to report the issue.

2.2 Installation the app

If the VetUS application is not installed on your tablet, please go to the App Store and search for it. Installation is free of cost.

2.3 Connecting the probe

The WiFi connection and battery life indicators must be turned off before connecting the probe.

Press the **(1)** ON/OFF button. The battery life indicator **(5)** tells you how much batter you have left. This indicator is split into four levels.

Seconds after connecting the probe, the **(6)** WiFi connection indicator will blink, showing it is ready to be connected to the mobile device.

Press the **(1)** ON/OFF button for three seconds to turn the probe off. When the probe is turned off, the light-up indicators **(5)** and **(6)** will also be turned off.

Additionally, this WiFi probe has another 3 buttons: **(2)** to modify depth, **(3)** to lower gain and **(4)** to raise gain.



2.4 WiFi Connection

When the probe is waiting for a WiFi connection, go to iPad settings and search for the probe's SSID. The SSID is, for example, "CR-2A GVCJDA001." Connect the SSID with the password, which is the serial number engraved on the bottom of the probe. The password would be, for example, "CRPCJDA001."

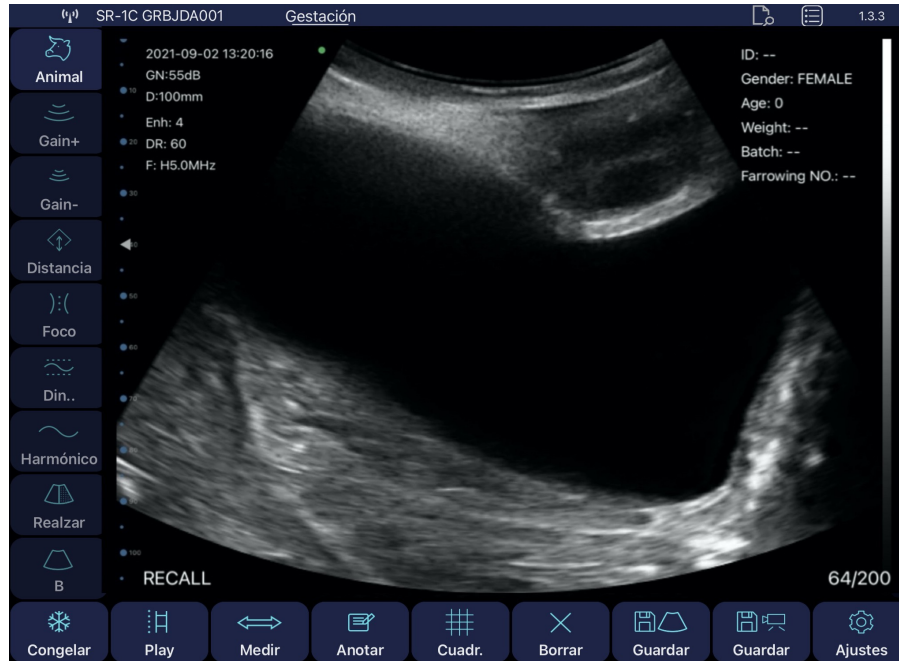
The password's letters must be input as small letters, not capital.

Once connected to the WiFi network, start up the VetUS application. When we begin working with the probe, the WiFi signal indicator will no longer blink the same way.

3. App functions

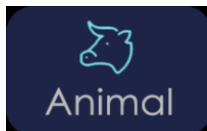
Once the probe is connected, start up the app and the main screen will appear.
No image is shown when you open the app for the first time.

3.1 Ultrasound scan



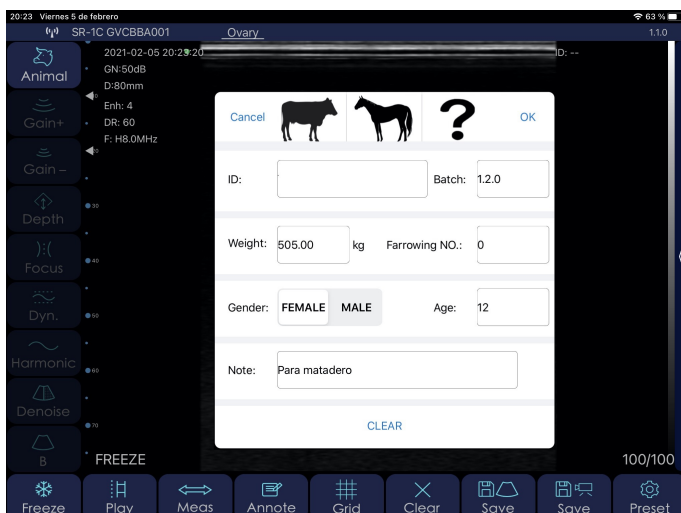
The connected probe's network is shown on the upper left.

Description of app buttons:



When you press the "Animal" button, a window pops up to enter the type of animal and the following fields:

When you press on the Animal image, three possibilities are displayed: bovine livestock, equine livestock and unspecified.



ID: ID number of animal with alphanumeric characters.

Batch: Batch number with alphanumeric characters.

Weight: Animal weight.

Farrowing No.: farrowing num. (not shown when Male is selected)

Gender: Select male or female

Age: Animal age

Note: To insert notes or diagnoses on the animal.

All this fields are recorded in the CSV file generated when you export the data stored in the application.

GAIN is the ability to modify the ultrasound's amplitude (magnitude of the ultrasound), changing the brightness of the image. General gain changes affect the entire image equally.



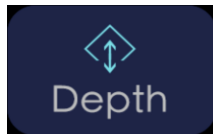
Raises scan gain up to 105 dB.



Lowers scan gain down to 30 dB.

Depth

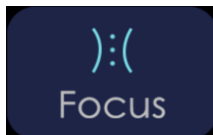
You can work with greater or lesser depth. Press the following button.



Selects the 4 zooms available: 80, 120, 160 y 240 mm.
You can also adjust this by swiping your finger in the middle of the screen, up or down.

Focus

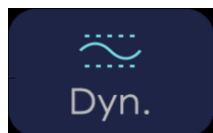
This is the maximum concentration of lines inside the ultrasound beam. This means you must place the focus in the area of interest.



Adjusts the focus to obtain the best image, raising or lowering it on the screen.

Dinamic range

This process raises or reduces the difference between ultrasounds of greater or lesser amplitude. With the Dynamic Range, you vary the amplitude of the signal shown in grey scale. At a low setting, the image has greater contrast. When increased, the image is softened.



The value range goes from 40 to 110. Lower settings increase the image's contrast.

Frequency

You must select the suitable frequency for the examination. With greater frequency, there is lesser penetration, and vice-versa. With the Harmonic Image, the return signal not only includes the base frequency, but also the frequency matching its double. The ultrasound processes both signals separately, eliminating the basic frequency with its noise.



Changes the scan frequency from 3.2 to 5 MHz

Denoise

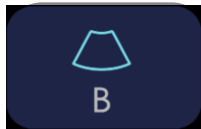
It's an algorithm to eliminate spotting, to soften the image of the organs and to make the edge of tissue softer. Lower settings increase image noise, and high settings reduce it.



Reducing image grain. Range of value from 0 to 3.

B Mode

Two-dimensional representation of the ultrasounds, shown as light-up dots with variable clarity, depending on frequency and depth.



Press this button to show the ultrasound options with modes BM, Colour, PDI and PW. More information in section 3.2.

Freeze

Put the probe on stand-by by freezing the image to examine aspects more thoroughly. The probe's consumption is less than half of LIVE mode consumption.



Freeze and unfreeze (live) the image.

Play

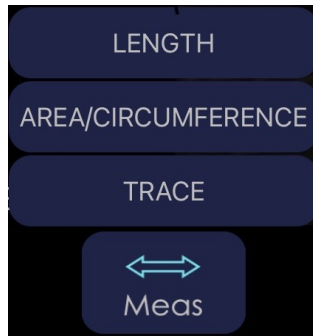
This equipment permanently records a video sequence (Cine Loop) of the last 100, 200, 500 or 1000 frames. As new photograms are recorded, the previous ones are deleted. To change the Cine Loop's size, go to the settings button.



Once the image is frozen, this plays the saved Cine Loop.

Measurements

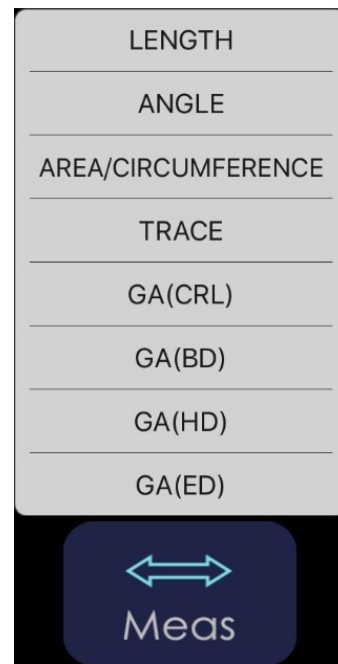
You have three measurement modes: length, area/circumference, and contour line. Once the method is selected, take the measurement with your finger on the screen, placing the cursors where you wish to measure for length mode, or by drawing the desired area for area, circumference, and contour line modes.



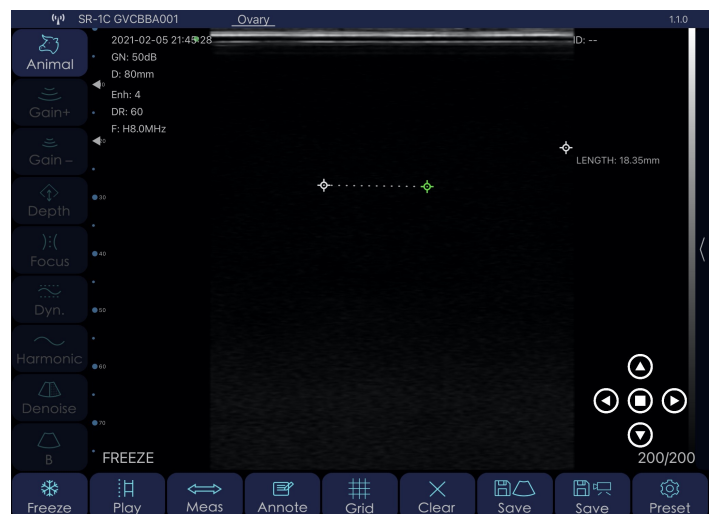
Press this button to drop-down the menu that shows length, area/ circumference and contour line measurements, and measurements to calculate gestation if you selected bovine or equine livestock.

Gestation age calculation:

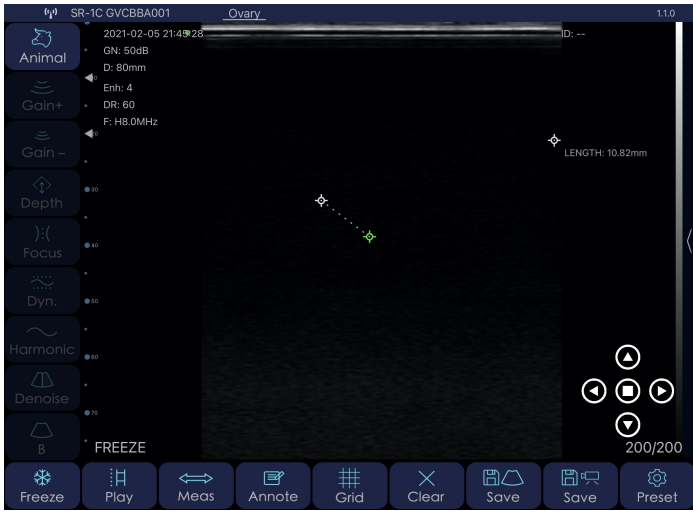
If you have selected bovine livestock, you make take the following measurements:



GA (CRL): Crown to Rump Length. This calculates the gestation age based on the distance from the crown of the head to the rump of the foetus.



GA (BD): Body Diameter. Calculates the gestation age based on the maximum diameter of the foetus' body/ thorax.



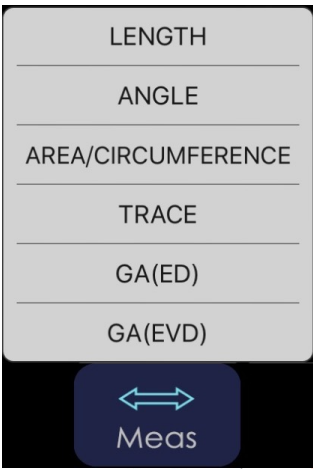
GA (HD): Head Diameter. Calculates the gestation age based on the maximum diameter of the foetus' head.



GA (ED): Eye Diameter. Calculates the gestation age based on the maximum diameter of the foetus' eye.

If you have selected equine livestock, you make take the following measurements:

Note: once the gestation measurement has been taken down, the estimated delivery date (EDD) is automatically shown



Meas Ar



GA (ED): Eye Diameter. Calculates the gestation age based on the maximum diameter of the foetus' eye.



GA (EVD): Embryonic Vesicle Diameter. Calculates the gestation age based on the maximum diameter of the embryonic vesicle.

Annotations

You can make notes anywhere on the screen. You may input alphanumeric characters. If, after leaving a comment on the screen, you save the image, then the note will be included.



This creates a window at the location on the screen where you pressed with your finger, and the keyboard pops up to write.

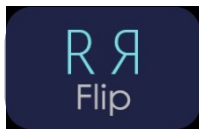
Grid To have orientation of the measurements organs may have, the size of the foetus, or other structures, you can work with a grid superimposed on the screen.



Activates or deactivates the grid on the screen.

Change scan direction

In scan mode, press this button to change the scan direction.



A green dot on the upper right or left of the ultrasound image shows this. If the dot is to the right, it means the image will be viewed starting from the right as you insert the probe into the rectum. If the dot is on the left, it is the other way around.

Clear



Press this button to clear all measurements and annotations on the screen.

Save Image and diagnostic data

Once the image is frozen, you have saved the 100, 200, 500 or 1000 images in the Cine Loop that may be saved in the film roll. Swipe your fingers in the middle of the screen to the left or the right to select the image you wish to save.



Save a screen shot of the image selected from the film roll.

At the same time an image is saved, a window pops up showing the saved diagnostic data. This window automatically closes after about three seconds.



If you wish to see the table with all diagnostic data, press the button the upper-right part of the image:

Registro

ID: Proveniencia	Sexo: Hembra	Edad: 0
Peso: --	Lote: --	2021-12-05
Número de Parto: 0	Especies: Bovino	
ID: Krimolina	Sexo: Hembra	Edad: 0
Peso: --	Lote: --	
Número de Parto: 0	Especies: Equino	2021-10-10
Ovario Ligamentado		
ID: Krimolina	Sexo: Hembra	Edad: 0
Peso: --	Lote: --	
Número de Parto: 0	Especies: Equino	2021-10-10
Ovario Ligamentado		
ID: Flyshy	Sexo: Hembra	Edad: 0
Peso: --	Lote: --	
Número de Parto: 0	Especies: Equino	2023-07-28
Ovario Ligamentado		
ID: Flyshy	Sexo: Hembra	Edad: 0
Peso: --	Lote: --	
Número de Parto: 0	Especies: Equino	2023-07-28
Ovario Ligamentado		

Exportar CSV Export Image Borrar todo

Anotar Cuadr. Borrar Guardar Guardar Ajustes

Registra

ID: New vetec:	Sexo: Hembra	Edad: 0
Peso: --	Lote: --	
Número de Parto: 0	Especies: Bovino	

2021-12-13

Hembra	Edad: 0		Editar	Compartir	Borrar
es: Bovino		2021-12-08			

Anotar

Cuadr.

Borrar

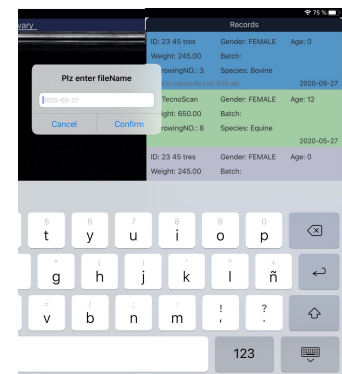
Exportar CSV

Export Image

Borrar todo

Guardar

Ajustes



The screenshot shows the iQ3 software interface. A 'FileBrowse' dialog box is open in the center, displaying a file named '2020-05-27 folder' with a yellow folder icon. The background interface is dark with various tool icons on the left and top. The top status bar shows 'iQ3 Version 3 de febrero', 'Ovary', and '110'. The bottom status bar shows icons for Freeze, Play, Meas, Annotate, Grid, Clear, Save, and Preset.

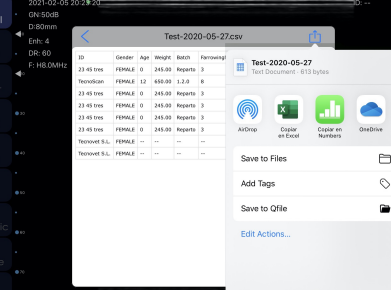
Ovary

2021-02-05 20:28:24
Q-Score
Q-Score
Enth: 4
DR: 60
F: HB,DATE

Test-2020-05-27.csv

ID	Gender	Age	Height	Weight	Batch	FarmingNO	Species	Date	Note
23 45 tms	FEMALE	0	245.00	Regatta	3		Bovine	2020-05-27	Ovario sequant
20040408	FEMALE	12	180.00	1.50	6		Bovine	2020-05-27	Ovario sequant
23 45 tms	FEMALE	0	245.00	Regatta	3		Bovine	2020-05-27	Ovario sequant
23 45 tms	FEMALE	0	245.00	Regatta	3		Bovine	2020-05-27	Ovario sequant
23 45 tms	FEMALE	0	245.00	Regatta	3		Bovine	2020-05-28	Ovario sequant
23 45 tms	FEMALE	0	180.00	Regatta	3		Bovine	2020-05-28	Ovario sequant
Notrecord S.L.	FEMALE	--	--	--	--		Other	2020-05-28	--
Notrecord S.L.	FEMALE	--	--	--	--		Other	2020-05-31	--

FREEZE 100/100



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Save Video

When you freeze the image, like in the previous case, the Cine Loop stops recording, and the entire photogram sequence can be saved. Videos will last 10, 20, 50 or 100 seconds.



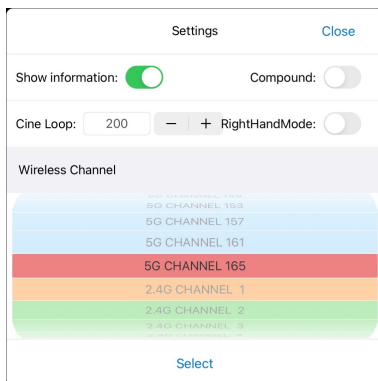
This saves in the Cine Loop you were storing until you pressed Freeze in the film roll.

Settings

Shows the settings you can adjust on the equipment.



Press this button for a pop-up window to modify the following parameters:



- Show information: shows or hides information on screen parameters.

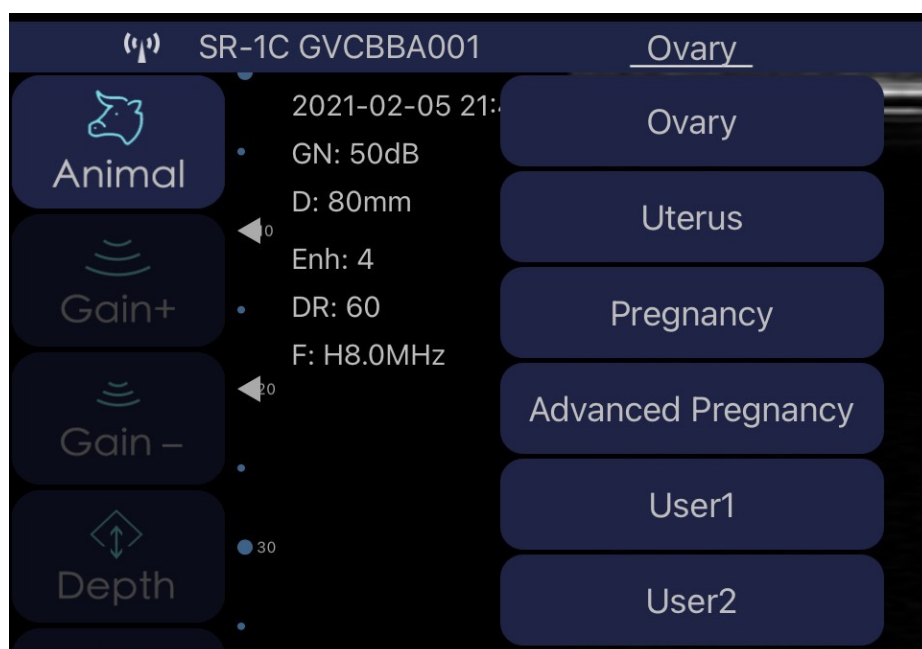
- RightHand: If you activate this, the buttons that are shown by default on the left will be shown on the right. This is more comfortable for users who conduct the examination with their left hand.

- Compound: Processes the image more so it appears softer, but the image is slower.

- Cine Loop: temporary recording made as you conduct the ultrasound. The last 100, 200, 500 or 1000 photograms will be saved.

- Adjusting WiFi, 2.4 GHz or 5 GHz channels. In the event of conflict with other WiFi network channels nearby, the channel can be changed to prevent interference. If you change the channel, you will lose the probe password and you will need to enter it again. See point 2.4 of this manual.

In addition to these buttons, there is a drop-down menu on the upper left where you can select up to 6 pre-settings.



The first 4, **OVARY**, **UTERUS**, **PREGNANCY** and **ADVANCED PREGNANCY** are factory settings. Although you can modify them, every time you press one of them, you will return to the memorised values.

The next 2, **USER1** and **USER2**, can be adjusted by users. The last values right before closing the app are always memorised, so that the latest settings are shown when you return to work.



Finally, if you press the vertical bar on the right-hand side, you can drop down the 8 sections of the **TGC** to adjust gain as desired for each zone.

If you slide each one of the buttons to the right, you increase gain at that screen height. Sliding it to the left decreases gain. If you press **RESET**, you return the factory TGC settings.

Note: Only buttons lit up in white are available. On the lower right, you can see a number that shows the current image recorded in the Cine Loop (100/100). The user can swipe their finger in the middle of the screen to the left or the right to select the desired image. This means that any photogram, from 1/100 to 100/100, may be saved by pressing the button "Save image."

The lower left of the screen will read "LIVE" when the probe is in motion or will show "FREEZE" when the image is frozen.

3.2 Special functions: Settings in BM mode



As explained in point 3.1, if you press the “B” button, you access the rest of the ultrasound machine’s special functions: BM, Colour, PDI and PW modes.

3.2.1 BM Mode



The M Mode shows the movement of all information collected along a line we place over the image. This provides for a graphic analysis of surfaces that are in movement, and to quantify them. This button combines the B (2D ultrasound) and M (in movement) modes. M signals are shown on the monitor’s horizontal axis.

4. Maintenance

4.1 Charging the probe

When the battery runs out, you must recharge it. You can do this with a wireless charger. Not included as part of the series is the loading platform. Connect its USB cable to it, and the mobile device charger.

When the charger is connected to the USB cable, the platform's LED light turns green.

We recommend using a 2A and 5V charger and the original cable for the wireless charging base.

When the battery is being charged, the indicator levels will blink until charging is complete. At this point, the four levels will be visible, without blinking. Charging the battery can take up to 6 hours.



The battery duration is 6 hours under constant operation, and 14 hours on stand-by. As such, if you are not examining between one animal and the other, we highly recommend freezing the image to save battery if you need to work for many hours throughout the day.

The iPad lasts around 9 hours, depending on ambient light. If there is much light, the iPad's brightness will turn up to offset it, leading to higher consumption.

WARNING: Do not replace the battery. Only the manufacturer will be authorised for such replacement. In case of non-compliance with this warning, you may trigger a risk of fire or explosion.

4.2 Tablet resistance

To prevent the tablet from becoming dirty from dust, it's included a cover that it is also fall-resistant up to 1.2 m.

4.3 Cleaning

The probe must periodically be cleaned. The part of the probe that is inserted into the rectum has IP68 water- and dust-protection, meaning it resists dust and water, but the (beige) electronic part **cannot be submerged**. You may use a damp cloth or paper to clean it.

4.4 Storage

While storing the probe, we highly recommend that the temperature be no lower than 15°C. If the probe or the mobile device's temperature is lower, you must warm them before use.

Another recommendation: regarding battery charge, if the probe and the tablet will not be used for a long period, we recommend storing them with a full charge.

5. Anexo

For the protection of the environment and in accordance with current regulations, the product and its electronic accessories should not be disposed of with other household waste at the end of its useful life. For information on the recycling of this product, please contact local authorities, the waste collection service or the manufacturer. In our firm commitment to the environment, we put at the service of the user the free collection of the equipment to discard it according to current regulations. The user will be given a certificate of this recycling process. For more information, consult your sales assistant.

6. Declaration of Conformity

NEW VETEC SL hereby declares that the type of radio equipment (probe model) is in accordance with Directive 2014/53/EU.



EU DECLARATION OF CONFORMITY

DECLARACIÓN UE DE CONFORMIDAD

DECLARATION "UE" DE CONFORMITÉ

The undersigned, on behalf of the manufacturer:



NEW VETEC S.L.,

CALLE MOISES DE LEON, 52 BAJO, 24006-LEON (SPAIN)

+34 987622878

www.newvetec.com

Declares that the design and construction of the PRODUCT/
Declara que el diseño y fabricación del PRODUCTO/
Déclare que le dessin et construction du produit/
Dichiari che la progettazione e la fabbricazione del PRODOTTO/
Sie erklären, dass das Design und die Herstellung des PRODUKTS/
Você declara que o projeto e fabricação do PRODUTO:

PRODUCT: Ultrasound Scanner

BRAND: PROVETSCAN

MODEL: CR/ SS

This declaration of conformity is issued the sole responsibility of the manufacturer.

Complies with the relevant Union harmonisation legislation /
Cumple con la legislación de armonización de la Unión pertinente/
Conforme à la législation d'harmonisation de l'Union applicable/
Conforme alla pertinente normativa di armonizzazione dell'Unione/
Entspricht den einschlägigen Harmonisierungsvorschriften der Union/
Cumpe a legislação de harmonização relevante da União :

2014/53/UE – RED

2011/65/UE – ROHS amended by

2015/863/UE

Reglamento (CE) n° 1907/2006

Reglamento UE 2019/1021

References to the relevant harmonised standards used or references
to the other technical specifications / Referencias a las normas
armonizadas pertinentes utilizadas o referencias a otras
especificaciones técnicas / Références aux normes harmonisées
pertinentes utilisées ou références aux autres spécifications
techniques / Riferimenti alle pertinenti norme armonizzate utilizzate o
riferimenti ad altre specifiche tecniche / Verweise auf relevante
verwendete harmonisierte Normen oder Verweise auf andere
technische Spezifikationen / Referências a normas harmonizadas
relevantes utilizadas ou referências a outras especificações técnicas:

Safety (Art. 3.1 (a) of RE Directive):

EN IEC 62368-1:2020+A11:2020

EMC (Art. 3.1 (b) of RE Directive):

EN 55032:2015+A11:2020

EN 55035:2017+A11:2020

EN 301 489-1 V2.2.3

EN 301489-3 V2.1.1

EN 301 489-17 V3.2.6

EN IEC 61000-6-1:2019

EN IEC 61000-6-3:2021

Radio (Art. 3.2 of RE Directive):

EN 300 328 V2.2.2

ROHS:

EN IEC 63000:2018

In (Spain), of 2025

SIGNATURE (Name and position of the signatory)





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