

ProVetScan AS



User Manual

Introduction

Provetscan AS wireless probes are the latest generation of ultrasound equipments for reproductive diagnosis.

Unlike traditional veterinary ultrasound scanners, with a cable connected to the probe, the Provetscan AS is wireless.

The Provetscan AS probe integrates the ultrasound image processor, power supply and a wifi signal module to connect to the main unit. This has been replaced by a tablet or smartphone.

The probe works as a 2.4 and 5 GHz Wi-Fi access point and displays the image via the iLUS app.

This manual wants to provide an overview and should be read carefully before starting to use the device.

1. Features

Display: iOS or Android mobile device

Scanning: Linear Convex

Probe: 3.5 / 5 MHz Translator

Depth: 90 - 180 mm

Display Mode: B Mode

Grayscale: 256 levels

Battery working time: 5 hours

Size: 160mm x 50mm x 25mm

Weight: 300 g

2. Starting

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

2.1 Unboxing

The Provetscan AS probe is carefully packed to prevent damage during transport. Before opening the box, please note any visible damage to the outside of the box during transport.

Items should be reviewed in order to ensure that all are received. The following table shows the elements that must be included:

Articles	Included
AS Ultrasound Probe	✓
Wireless charger	✓
USB cable for charging	✓
Wrist strap	✓
Carrying case	✓
User Manual	✓

Each item should be examined to report defects or damage that may have occurred during shipping, even if it has been carefully packaged. If this happens, please contact your dealer immediately to report the problem.

2.2 Installing the app (APP)

If the iLUS app is not installed on your mobile device, go to the App Store or Google Play and search for it. You can install it for free.

2.3 Connecting the Probe

Pressing the ON/OFF button (1) will illuminate the battery indicator (2) and the Wi-Fi indicator (3). The battery is split into 4 levels that will gradually decrease until the probe runs out of charge.

Seconds after connecting the probe, the Wi-Fi connection indicator will flash, and you're ready to connect with your mobile device.

Press the ON/OFF button for 3 seconds to turn off. When the probe is turned off, the indicator lights will also be off.



2.4 Wi-Fi Connection

When the probe is waiting for a Wi-Fi connection, go to your tablet's settings and look for the probe's SSID. The SSID is for example AS3CBJA001. Connect to that network by entering the password that is the serial number of the probe. In this case, the password would be **as3cbja001**.

The letters of the password must be written in lowercase.

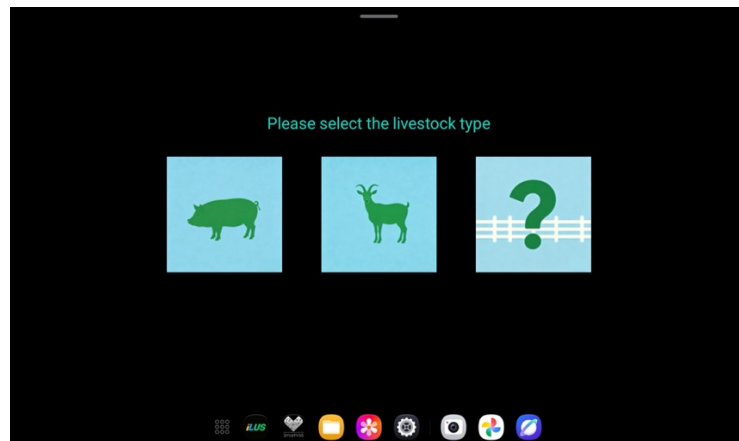
Once connected to the Wi-Fi network, launch the iLUS app. The moment we start working with the probe, the Wi-Fi signal indicator will no longer flash in the same way.

3. App features.

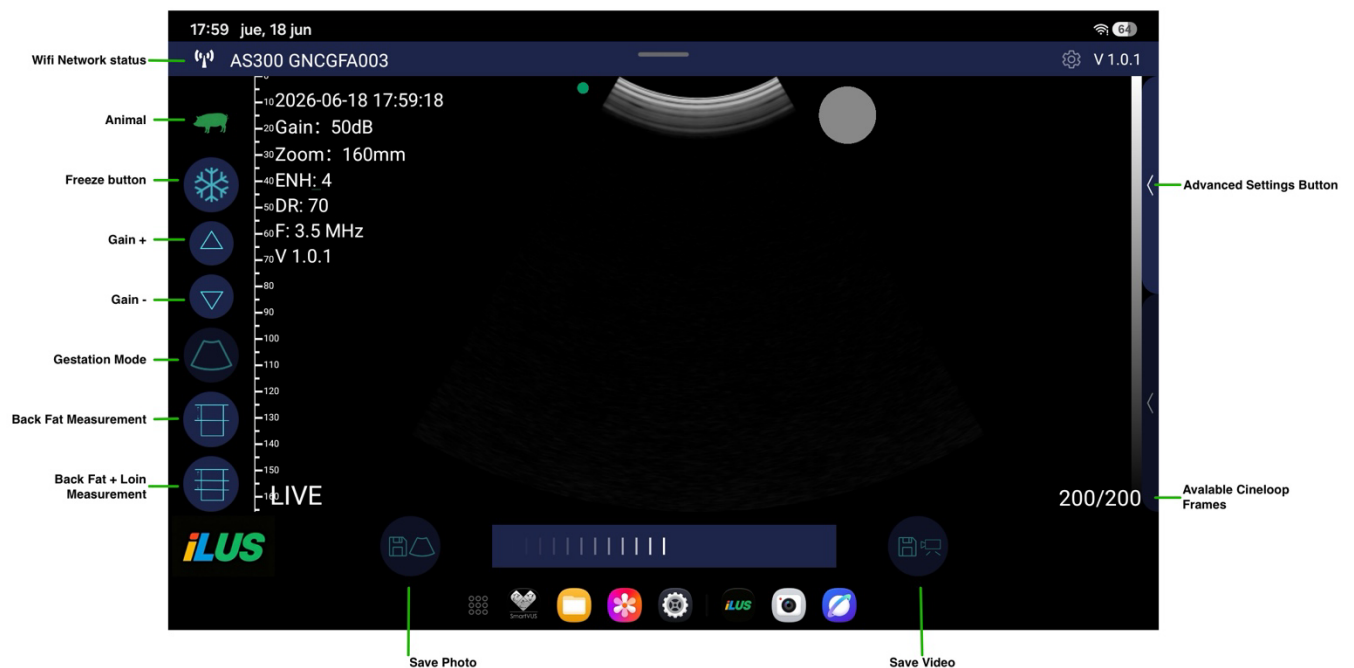
3.1 Animal Selection

Once the probe is connected, launch the app, and the Animal selection screen will be displayed.

We can select which type we want to work with to have one or the other functions:



3.2 Basic APP settings



At the bottom left of the screen you will be able to read "LIVE" when the probe is moving, or "FREEZE" will be displayed when the image is frozen. At the bottom you can see a blue bar that corresponds to the cine-loop and a number on the right, which indicates the current temporary recorded image (100/100). The user can move the slider with their finger to select the desired image.

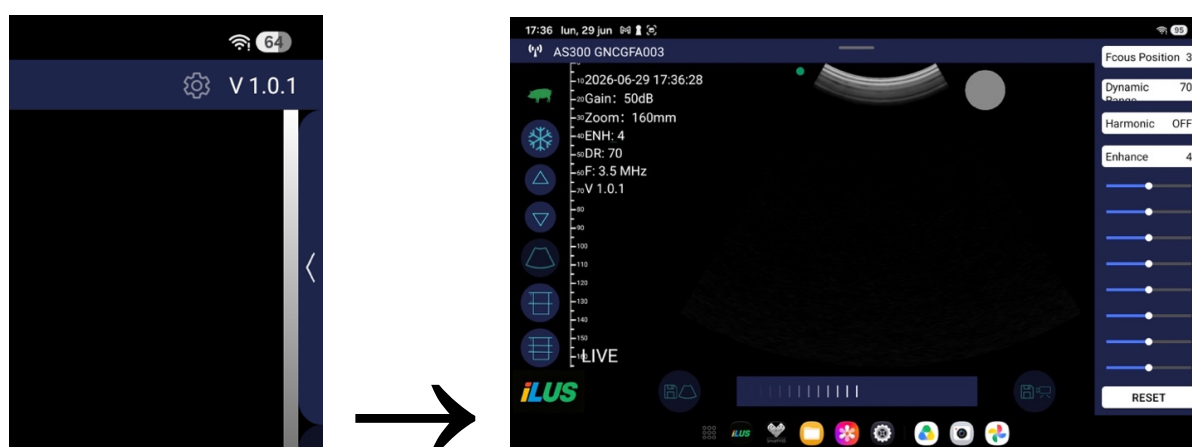
Press the FREEZE / UNFREEZE button to unfreeze the image and start the diagnosis.

The top left of the iLUS app screen displays Wi-Fi, date and time, gain, image depth, and advanced settings.

Once the image is moving, the Gain setting can be modified up and down with the arrows.

The scan depth is adjusted by swiping in the middle of the screen, up to increase the depth, and down to decrease it. The values are: 90, 140, 160 and 180 mm.

To modify the advanced settings, press the arrow at the top right, as shown in the photo:



3.3 Advanced APP Settings

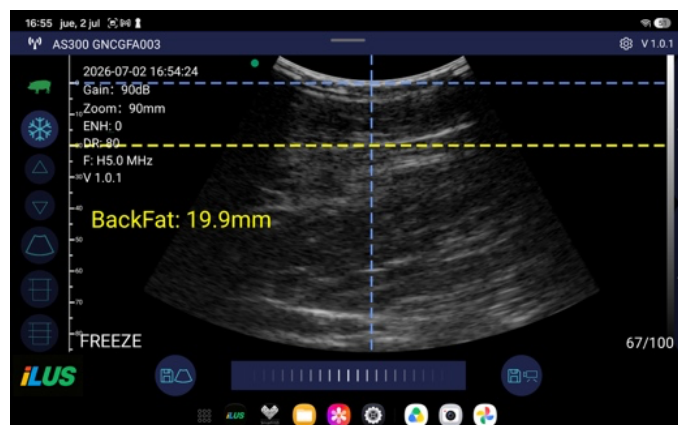
The advanced settings are as follows:

- **Focus position:** Adjustments of the image focus to place them more proximal or distal to the probe.
- **Dynamic Range (DR):** Dynamic range adjustment to achieve a contrast image.
- **Harmonic (F):** Adjustment of harmonics to increase to a frequency of 3.5 to 5 MHz.
- **Enhance (ENH):** Adjusts the image by enhancing the sharpness of the organs while the ultrasound is being performed.
- **TGC Control:** Gain adjustment in 8 sections, independent of the general Gain setting on the main display.
- **Reset:** Restores the TGC's factory setting values.

3.4 APP Scanning Modes

At the bottom left of the app we can find 3 buttons depending on the way we want to work:

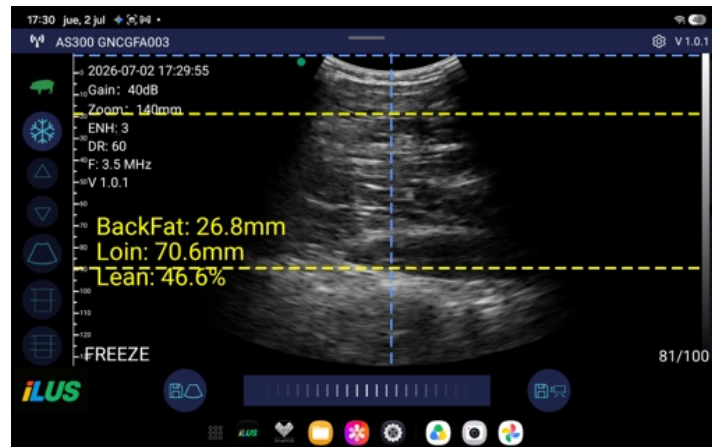
- **Gestation mode:** When the pig is previously selected as an animal, a circle will appear in the upper right part of the scan that, depending on the color, will determine by artificial intelligence whether the sow is pregnant or not.
 - Light green: pregnant
 - Dark green: probably pregnant
 - Gray: doubtful
 - Orange: probably not pregnant
 - Red: non-pregnant
- **Back fat measurement:** a fixed measurement line appears which is the Bias (line located at the height of the probe crystals). It can be changed from the settings button  at the top right. The second line refers to fat measurement.



In addition, we can adjust the fat measurement line to appear while performing the scan, to measure automatically by Artificial Intelligence and to freeze the image by Artificial Intelligence. All from the settings button.

Finally, within the configuration window it allows us to return to factory settings by pressing "Reset Probe Parameters".

- **Measurement of back fat and loin diameter:** 3 lines appear. One for the Bias, another for the measurement of back fat and another for measurement of loin diameter. Once the image is frozen, we will place the lines of back fat and loin wherever we consider.



3.5 Image Storage



When the image is frozen, we can press on the button to save the image to the tablet / smartphone. At the bottom right, e.g. 100/100, it shows the count of images stored in the cine-loop. Users can swipe left / right on the image area or slider bar to select the pre-saved image. Any cine-loop image can be saved.

The images will be available in the Photos app or Gallery.

3.6 Video Storage.



When the image is frozen, press the "Save Video" button to save a sequence of about 10 - 100 seconds on the device. We configure this in the settings > Cine-Loop.

4. Maintenance

4.1 Probe Charging

When the battery runs out, we will need to recharge it. It can be done with a wireless charger: a USB cable and the 2A charger are connected to the charging pad, which is not included as standard.

The probe display will light up, showing the charge levels, which will be flashing. Up to 4 charge levels will be displayed. This will be the time when the probe is fully charged.

The charging duration can be up to 5 hours.



It is recommended to use a charger of at least 2A and 5V.

Warning: Do not replace the battery. Only the manufacturer or authorized service is authorized for such replacement.

Failure to comply with this warning may trigger a risk of fire or explosion.

4.3 Cleaning

Regular cleaning of the probe is required. We can use a cloth, paper or wet wipes. The probe has a water and dust protection rating of IP68, which means it resists the ingress of dust and water jets.

Although it is waterproof, it is recommended not to submerge it in water.

4.3 Storage

During probe storage, it is strongly recommended that the temperature is not less than 10°C and not higher than 40°C

Recommendation: If the catheter and mobile device are not going to be used for a long time, it is recommended to store them with a FULL CHARGE.

4.3 Addendum

For environmental protection and in accordance with current regulations, the product and its electronic accessories must not be disposed of with other household waste at the end of its useful life. For information on recycling this product, please contact your local authorities, waste collection service or manufacturer.

In our firm commitment to the environment, we offer the user the free collection of the equipment to dispose of it according to current regulations. The user will be given a certificate of said recycling process. For more information, please consult your sales assistant.

5. Declaration of Conformity

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

	Technical File	
	PROVETSCAN AS Ultrasound System	November 2021
		Issue 1



EU DECLARATION OF CONFORMITY
(in accordance with ISO/IEC 17050-1:2004)
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(according to ISO/IEC 17050-1:2004)

Product manufacturer: New VeTec S.L.
Product manufacturer



Address: Calle Moisés de León nº 52 Bajo. 24006 de León.
Address

DECLARE UNDER THEIR RESPONSIBILITY THAT THE PRODUCT

Name: HIGH RESOLUTION ULTRASOUND SYSTEM FOR PIGS, SHEEP AND GOATS
Name: HIGH RESOLUTION ULTRASOUND SCANNER FOR DIAGNOSIS IN PORCINE, OVINE AND CAPRINE

Make/Model: New VeTec S.L. / PROVETSCAN AS
Model/Reference

MEETS THE REQUIREMENTS OF THE REGULATION:
CONFORMS WITH THE REQUISITES OF THE REGULATION

Directive 2014/53/EU on Radio Equipment
Electromagnetic Compatibility Directive 2014/30/EU
RoHS Directive 2011/65/EU
Directive 2014/53/EU relating RED
Directive 2014/30/EU relating EMC
Directive 2011/65/EU relating RoHS

APPLICABLE REGULATIONS:
APPLICABLE STANDARDS:

ETSI EN 301 489-17 V3.2.2	UNE-EN 62321:2009	UNE-EN 62321-1:2009
UNE-EN 62321-2:2014	UNE-EN 62321-3-1:2014	UNE-EN 55032:2015
A-EN 61000-6-3:2007+A1:2012	UNE-EN IEC 61000-6-2:2019	UNE-EN 61000-4-2:2009
A-EN 61000-4-3:2006+A1:08+A2:10	A-EN 61000-4-8:2011	

January 2022, Madrid
Fecha y lugar (Date and place)

Name, Title, and Signature
(Name, position and signature)



New Vetec, S.L.

CIF: B42834465

Calle Moisés de León, 52 Bajo - León (Spain)

Tel. +34 633 913 164 e-mail: info@provetscan.com

www.newvetec.com

www.provetscan.com